
DOBBINS AIR RESERVE BASE

JOINT LAND USE STUDY



Prepared by:



February 2015

This study was prepared under contract with Cobb County, Georgia, with financial support from the Office of Economic Adjustment, Department of Defense and contributions from Cobb County and the cities of Marietta and Smyrna. The content reflects the views of the key JLUS partners involved in the development of this study and does not necessarily reflect the views of the Office of Economic Adjustment.



Acknowledgements

Policy Committee

The Policy Committee (PC) served an active and important role in providing policy direction during the development of the Dobbins Air Reserve Base (ARB) Joint Land Use Study (JLUS). The Policy Group comprised the following individuals:

-
- **Timothy Lee**, *Chairman*
Cobb County
 - **David Hankerson**, *County Manager*
Cobb County
 - **Rob Hosack**, *Director*
Cobb County
 - **David Connell**, *President*
Cobb Chamber of Commerce
 - **Steve Tumlin**, *Mayor*
City of Marietta
 - **Johnny Walker**, *Mayor Pro Tempore*
City of Marietta
 - **Stewart Fleming**, *Councilman*
City of Marietta
 - **Max Bacon**, *Mayor*
City of Smyrna
 - **Melleny Pritchett**, *Mayor Pro Tempore*
City of Smyrna
-

PC Technical Advisors

-
- **Dana Johnson**, *Deputy Director*
Cobb County
 - **Keehren Baah**, *Intergovernmental Coordinator*
Cobb County
-

PC Ex-Officio Members

-
- **COL Brett Clark**, *Commanding Officer, 94th Airlift Wing*
Dobbins ARB
 - **COL Marshall Irvin**, *Commander, 94th Mission Support Group*
Dobbins ARB
-



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Advisory Committee

The Advisory Committee (AC) served a key role in the development of the Dobbins ARB JLUS, providing the overall advisory support, review, and guidance of the study. The Advisory Committee comprised the following individuals:

-
- **Dana Johnson**, *Deputy Director*
Cobb County
 - **Keehren Baah**, *Intergovernmental Coordinator*
Cobb County
 - **Brian Binzer**, *City Manager*
City of Marietta
 - **Rusty Roth**, *Planning and Zoning Manager*
City of Marietta
 - **Beth Sessoms**, *Economic Development Manager*
City of Marietta
 - **Ken Suddreth**, *Community Development Director*
City of Smyrna
 - **Slade Gulledge**, *Government Relations Director*
Cobb Chamber of Commerce
 - **Richard Crim, AICP**, *Base Planner*
Dobbins ARB
 - **Kenneth Williams**, *Base Civil Engineer*
Dobbins ARB
-

JLUS Consultant / Technical Advisors



-
- **Celeste Boccieri-Werner, AICP**
Project Manager
 - **Mike Hrapla**
Deputy Project Manager
 - **Rick Rust, AICP**
Technical Manager
 - **Patrick Small, AICP**
Planning Lead
-



Table of Contents

1.	Introduction	1
1.1	What is a Joint Land Use Study?.....	1
1.2	Why Prepare a Joint Land Use Study?.....	1
1.3	Public Outreach	2
1.4	JLUS Study Area	3
2.	Community Profiles	5
2.1	Dobbins ARB Regional Overview.....	5
2.2	Current Development Overview within the Study Area	7
3.	Military Profile	9
3.1	Regional Economic Impact	9
3.2	Installation Setting	9
3.3	Military Operations	10
3.4	Dobbins Air Reserve Base Mission Footprint	11
4.	Compatibility Tools.....	21
4.1	Federal	21
4.2	Dobbins Air Reserve Base.....	22
4.3	State of Georgia.....	23
4.4	Local Jurisdictions.....	24
4.5	Other Tools and References	30



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

5. Compatibility Assessment.....	33
5.1 Identification of Compatibility Issues.....	33
5.2 Issues	33
5.3 Setting Priorities	33
5.4 Dobbins ARB Compatibility Issues by Factor	34
6. Implementation Plan.....	41
6.1 Implementation Plan.....	41
6.2 Implementation Plan Guidelines.....	41
6.3 Dobbins ARB Military Compatibility Influence Area (MCIA)	42
6.4 How to Read the Implementation Plan.....	45

Figures and Tables

Figure 1 Study Area	4
Figure 2 Safety and Noise Composite Map	13
Figure 3 Imaginary Surfaces and Part 77 Composite Map	14
Figure 4 Training Routes Composite Map	15
Figure 5 Military Compatibility Influence Area	43
Figure 6 Military Compatibility Influence Area with Safety and Noise Subareas	44
Table 1. Population Trends, 2000 – 2010	6
Table 2. Strategy Key.....	46
Table 3. Dobbins ARB Strategies	47



Acronyms

A

AASHTO	American Association of State Highway and Transportation Officials
AC	Advisory Committee
AF	Air Force
AFB	Air Force Base
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
AFRC	Air Force Reserve Command
AGL	Above Ground Level
AICUZ	Air Installation Compatibility Use Zone
ALUCP	Airport Land Use Compatibility Plan
ANG	Air National Guard
APZ	Accident Potential Zone
AQ	Air Quality
AQCR	Air Quality Control Regions
AR	Army Regulation
ARB	Air Reserve Base
ARC	Atlanta Regional Commission
ARMAC	Atlanta Regional Military Affairs Council
ARNG	Army National Guard
ARTCC	Air Route Traffic Control Center
AS	Airlift Squadron
AT/FP	Antiterrorism/ Force Protection
ATC	Air Traffic Control
AW	Airlift Wing

B

BAH	Base Allowance for Housing
BASH	Bird Air Strike Hazard
BCE	Base Civil Engineer

BHWG
BRAC
BRT

Bird Hazard Warning Group
Base Realignment and Closure
Bus Rapid Transit

C

CA	Climate Adaptation
CAA	Clean Air Act
CAC	Community Activity Center
CAN	Center for Naval Analyses
CASAC	Clean Air Scientific Advisory Committee
CATM	Combat Arms Training and Maintenance
CBD	Central Business District
CDS	Container Delivery System
CCDOT	Cobb County Department of Transportation
CCID	Cumberland Community Improvement District
CCT	Cobb Community Transit
CFR	Code of Federal Regulations
CID	Community Improvement District
COM	Communication / Coordination
CP	Comprehensive Plan
CR	Cultural Resources
CRC	Community Retail Commercial
CRP	Cultural Resource Program
CSRIC	Communication Security, Reliability, and Interoperability Council
CSX	CSX Corporation
CTC	Chattahoochee Technical College
CTP	Comprehensive Transportation Plan
CWA	Clean Water Act
CZ	Clear Zone



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

D

dB	dB- decibel
dBA	A-weighted decibel
DARBI	Dobbins Air Reserve Base Instruction
DCA	Department of Community Affairs
DNL	Day-Night Level
DNR	Department of Natural Resources
DOD	Department of Defense
DODI	Department of Defense Instruction
DOT	Department of Transportation
DZ	Drop Zone

E

EA	EA- Environmental Assessment
EA	EA- Exclusion Area
EAE	EAE- Established Airfield Elevation
ECS-TCC	ECS-TCC- Expeditionary Combat Support Training - Certification Center
EIS	EIS- Environmental Impact Statement
EOD	EOD- Explosives Ordnance Disposal
EPA	EPA- Environmental Protection Agency
ESA	ESA- Endangered Species Act
ESQD	ESQD- Explosive Safety Quantity Distance
EZ	EZ- Enterprise Zone

F

FDC	Flight Data Center
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FCC	Federal Communications Commission
FHA	Federal Highway Administration

FONSI
FSCT
FSI
FY

Finding of No Significant Impact
Force Support Combat Training School
Frequency Spectrum Impedance / Interference
Fiscal Year

G

GA	Georgia/ Georgia State Route
GAR	Georgia Association of Realtors
GDOT	Georgia Department of Transportation
GIS	Geographic Information Systems
GLCP	Georgia Land Conservation Program
GMACC	Georgia Military Affairs Coordinating Committee
GP	General Plan
GRTA	Georgia Regional Transportation Authority
GTRI	Georgia Tech Research Institute

H

HI	Heavy Industrial
HUD	Housing and Urban Development

I

I	Interstate
IAIA	International Association for Impact Assessment
IAP	International Airport
IBC	International Building Code
IBM	International Business Machines (Corporation)
IC	Industrial Compatible
ICEMAP	Installation Complex Encroachment Management Action Plan
ICRMP	Integrated Cultural Resources Management Plan
IGA	Intergovernmental Agreement

Acronyms

IM	Industrial Manufacturing
INRMP	Integrated Natural Resources Management Plan
IT	Information Technology

J

JLUS	Joint Land Use Study
JPADS	Joint Precision Air Drop System

K

KHz	Kilohertz
KSU	Kennesaw State University

L

LATN	Low Altitude Tactical Navigation Airspace
LCI	Livable Centers Initiative
LG	Light and Glare
LI	Light Industrial
LMIG	Local Maintenance and Improvement Grants
LOS	Line of Sight
LTAP	Local Technical Assistance Program
LU	Land Use
LZ	Landing Zones

M

MAB	Military Advisory Board
MARTA	Metropolitan Atlanta Rapid Transit Authority
MCIA	Military Compatibility Influence Area
MHz	Megahertz
MILCON	Military Construction
MLB	Major League Baseball
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding

MOUT	Military Operations in Urban Terrain
MPH	Miles per Hour
MSL	Mean Sea Level
MSG	Mission Support Group
MTR	Military Training Route
MU2	Marietta University Enhancement District

N

NAAQS	National Ambient Air Quality Standards
NACo	National Association of Counties
NAS	Naval Air Station
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NGO	Non-Governmental Organization
NHPA	National Historic Preservation Act
NM	Nautical Mile
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOI	Noise
NOSC	Navy Operational Support Center
NOTAM	Notice to Airmen
NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NTIA	National Telecommunications and Information Administration

O

O&M	Operation and Maintenance
OEA	Office of Economic Adjustment
OCGA	Official Code of Georgia
OHR	Office High-Rise
OMR	Office Mid-Rise
ONMP	Operational Noise Management Program



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

OSD Office of Secretary of Defense
OSM Office of Spectrum Management
OZ Opportunity Zone

SR State Route
SR Slow Speed Training Route
STEM Science, Technology, Engineering, and Math
SZ- Safety Zones

P

P3 Public-Private Partnership
P4 Public-Public and Public Private Partnership
PAA Primary Assigned Aircraft
PACE Property-Assessed Clean Energy
PAO Public Affairs Office
PC Policy Committee
PL Public Law
PPM Parts per Million
PVC Planned Village Community

T

TAD Tax Allocation District
TBD To Be Determined
TCU Transportation/ Communication/ Utilities
TEP Transportation Enhancement Program
TERPS Terminal Instrument Procedures
TNC The Nature Conservancy
TOD Transit Oriented Development
TRACON Terminal Radar Approach Facilities

R

R Residential
RAC Regional Activity Center
Richard B. Russell Regional Airport
RC Roadway Capacity
REPI Readiness and Environmental Protection Initiative
ROD Record of Decision
RRC Regional Retail Commercial

U

UAV Unmanned Aerial Vehicle
UAS Unmanned Aircraft Systems
UC Urban Condominium Residential
UFC United Facilities Criteria
US United States/ United States Route
USAF United States Air Force
USAHAS United States Avian Hazard Advisory System
USAR United States Army Reserve
USFWS United States Fish and Wildlife Service
UVC Urban Village Commercial

S

SATB Simulated Airdrop Training Bundles
SDWA Safe Drinking Water Act
SIP State Implementation Plan
SLUCM Standard Land Use Coding Manual
SOI Sphere of Influence
SOP Standard Operation Procedure
SPLOST Special Purpose Local Optional Sales Tax
SPSU Southern Polytechnic State University

V

VFR	Visual Flight Rule
VHF	Very High Frequency
VO	Vertical Obstruction
VOC	Volatile Organic Compounds

W

WWII	WWII- World War II
------	--------------------



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Please see the next page.



Introduction

1

Military installations are critical to local economies, generating thousands of jobs and millions of dollars in annual economic activity and tax revenue. Historically, incompatible development has been a factor in the loss of training operations and restructuring of mission-critical components to other various military installations. To protect the missions of military installations and the health of economies and industries that rely on them, encroachment must be addressed through collaboration and joint planning between installations and local communities. This Joint Land Use Study (JLUS) attempts to facilitate the mitigation of future issues and improve coordination between the local communities and the Dobbins Air Reserve Base (ARB).

The JLUS advocates a proactive approach to encourage increased communication about decisions relating to land use regulation, conservation and natural resource management issues affecting both the community and the military. This study seeks to avoid conflicts previously experienced between the United States (US) military and local communities in other areas of the US and throughout the world by engaging the military and local decision-makers in a collaborative multi-agency planning process.

1.1 What is a Joint Land Use Study?

A JLUS is a planning process accomplished through the collaborative efforts of a comprehensive list of stakeholders in a defined study area. These stakeholders include local, state, and federal officials, residents, business owners, nongovernmental organizations, and the military. Through the JLUS process, these interests come together to identify existing and potential future threats, and the potential actions that might be carried out to eliminate, mitigate or avoid compatibility conflicts. In addition, the process is intended to establish and encourage a formal, permanent working relationship between local jurisdictions, agencies and Dobbins ARB.

JLUS Goal

The goal of the Dobbins ARB JLUS is to protect the viability of current and future operations, while simultaneously guiding community growth, sustaining the environmental and economic health of the region, and protecting public health, safety, and welfare.

To help meet this goal, three primary guiding principles provide the foundation for the JLUS effort:

- **Understanding.** Convene community and military representatives to identify, confirm, and understand the issues in an open forum, taking into consideration both community and Dobbins ARB perspectives and needs.
- **Collaboration.** Encourage cooperative land use and resource planning among Dobbins ARB and surrounding communities so that future community growth and development are compatible with the training and operational missions at Dobbins ARB, while at the same time seeking ways to reduce operational impacts on adjacent land within the Study Area.
- **Actions.** Provide a set of mutually supported tools, activities, and procedures from which local jurisdictions, agencies, and Dobbins ARB can select, prepare, approve / adopt and use to implement the recommendations developed during the JLUS process.

1.2 Why Prepare a Joint Land Use Study?

Although military installations and nearby communities may be separated by a fence line, they often share natural and manmade resources such as land use, airspace, water, and infrastructure. Despite the many positive interactions among local jurisdictions, agencies and the military, conflicts still occur. The activities or actions of one entity can impose unintended negative impacts upon another because so many resources are shared. For



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

instance, as communities develop and expand in response to growth and market demands, land use decisions can authorize potentially incompatible development closer to military installations and operational / training areas. This can create new, or exacerbate existing, land use and other compatibility issues and have negative impacts on community safety, economic development, and the ability to sustain military activities and readiness. This threat to military readiness is currently one of the military's greatest concerns.

Recognizing the close relationship that should exist between installations and adjacent communities, the OEA implemented the JLUS program to mitigate existing and future conflicts and enhance communication and coordination among all affected stakeholders. This program aims to preserve the viability of local communities while protecting current and future operational and training missions at Dobbins ARB.

1.3 Public Outreach

The JLUS process was designed to create a locally relevant document reflecting consensus and support from the stakeholders involved. The Dobbins ARB JLUS achieved its goals and objectives through a process that included a public outreach program which provided a variety of opportunities for interested parties to contribute to its development.

Stakeholders

An early step in any planning process is the identification of stakeholders. Involving them early in the project is instrumental to identifying the issues they consider the most important to address and resolve. Stakeholders include individuals, groups, organizations, and governmental entities interested in, affected by, or affecting the outcome of the JLUS project.

Policy Committee and Advisory Committee

The development of the Dobbins ARB JLUS was guided by two committees, comprising personnel from participating county and city governments, Dobbins ARB, federal and state agencies, and representatives of other organizations, such as business and industry groups.

JLUS Policy Committee. The Policy Committee (PC) consisted of elected officials and leadership from participating jurisdictions, military installation leadership, and the Chamber of Commerce. The PC was responsible for guiding the direction of the JLUS, preparation and approval of the study design, approval of policy recommendations, and approval of draft and final JLUS documents. The PC was a critical component to the success of the JLUS process by providing key insights on local and regional issues and developing and maintaining relationships with key stakeholders and interested community members.

JLUS Advisory Committee. Membership of the Advisory Committee (AC) included representatives from local jurisdictions, agencies, and Dobbins ARB with technical expertise in one or more of the compatibility factor issue areas. The AC was responsible for identifying and studying technical issues and assisted in data gathering, provided technical input, and reviewed the JLUS issues and recommendations. The AC identified and addressed technical issues, provided feedback on report development, and assisted in the development and evaluation of implementation strategies and tools.

Public Meetings

In addition to the PC and AC meetings, a series of public meetings were held throughout the development of the JLUS. These meetings provided an opportunity for the exchange of information with the greater community, assisted in identifying the issues to be addressed in the JLUS, and provided public input on the proposed strategies. Each meeting included a traditional presentation and a facilitated exercise providing a "hands on," interactive opportunity for the public to participate in the development of the plan. A brief summary of these meetings is provided below.



Public Meeting #1, July 9, 2014

Public Outreach Materials

JLUS Overview / Compatibility Factors Fact Sheet / Updates. At the beginning of the JLUS project, a Fact Sheet, or JLUS Update, was developed describing the JLUS program, objectives, methods for the public to provide input into the process, an overview of the 25 compatibility factors that were analyzed throughout the project, and the proposed Dobbins ARB JLUS Study Area. This Fact Sheet was made available at the workshops for review by interested members of the public and posted on the website for download.

Website. A project website was developed and maintained to provide stakeholders, the public, and media representatives with access to project information. This website was maintained for the entire duration of the project to ensure information was easily accessible. Information on the website included program points of contact, schedules, documents, maps, public meeting information, and downloadable comment forms. The project website is located at www.dobbinsjlus.com. At the completion of the project, all information on the www.dobbinsjlus.com website will be transferred to a Cobb County maintained environment to ensure future public access to the information.

Public Workshop #2 Held

The second public workshop for the Dobbins ARB JLUS was held on October 30, 2014 at Marietta High School in Marietta, GA. This workshop provided the public with a project update and an opportunity for the community to increase their understanding of issues and the Dobbins ARB influence areas being addressed through the JLUS. During the workshop, the project team gave an overview of the current status of the JLUS project, discussed how public involvement is integrated in the JLUS process, provided an overview of the Dobbins ARB operational areas, discussed the development of compatibility issues that have been identified to date, and answered questions from participants. The public also had an opportunity to provide their input on the prioritization of the issues and pose new issues previously not considered.

[Click here](#) to download the Public Forum #2 presentation.

[Click here](#) to download the results of the public prioritization of issues.

Updates:
[Public Workshop 2 Held](#)

For more Information:

JLUS Project Manager
Mr. Dana Johnson, AICP
Deputy Director of Community Development
[Click here](#) to email
Cobb County Government
100 Cherokee Street
Marietta, GA 30090
P. 770.528.2018

Welcome

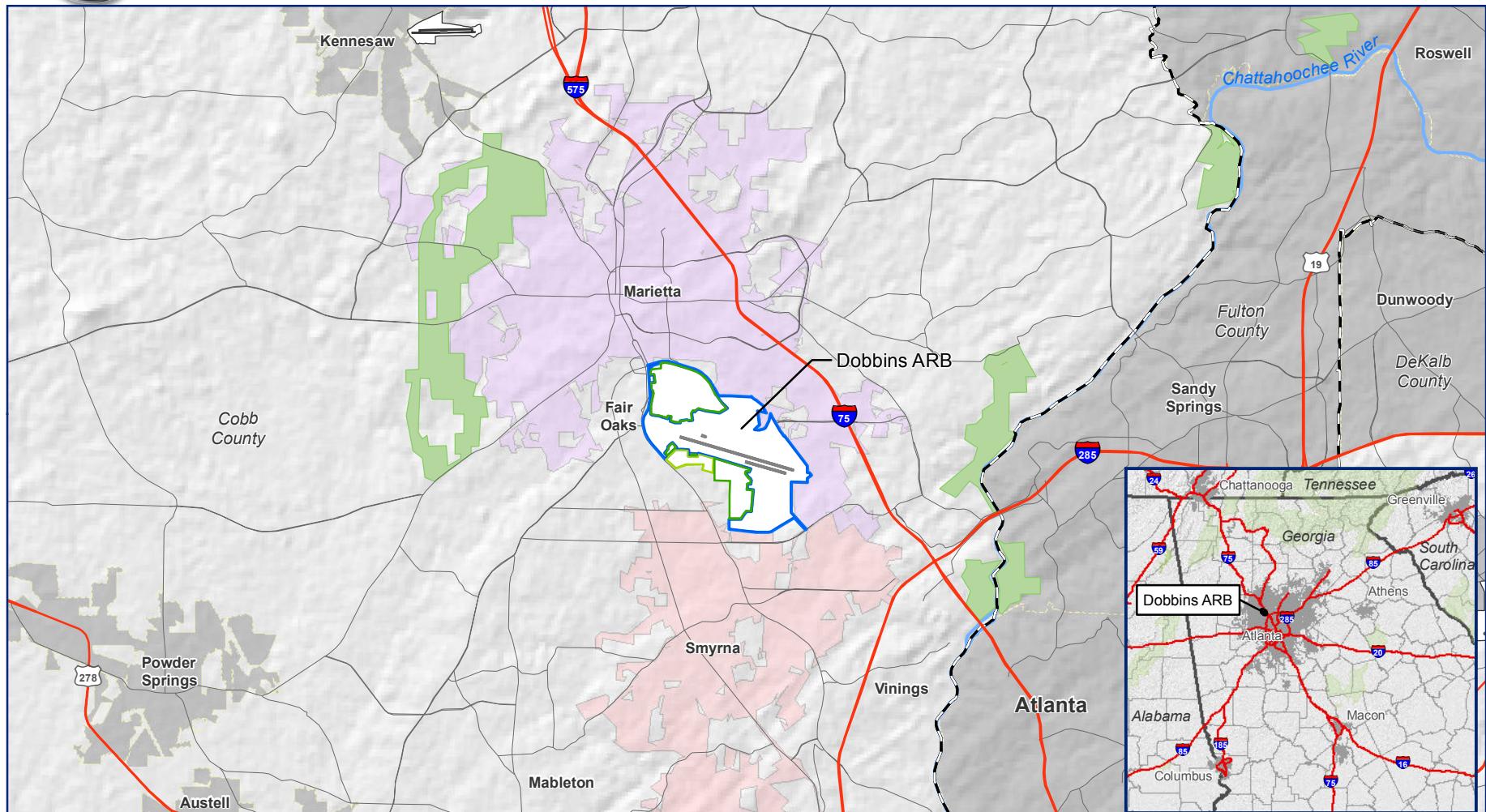
Dobbins ARB JLUS Website

1.4 JLUS Study Area

Dobbins ARB is located in metropolitan Atlanta, approximately 20 miles northwest of the City of Atlanta, in Cobb County, Georgia. The Base occupies over 1,600 acres of land adjacent to the cities of Marietta and Smyrna. The area around Dobbins ARB continues to experience economic growth and development. The jurisdictions surrounding Dobbins ARB that participated as partners in this JLUS include Cobb County and the cities of Marietta and Smyrna. For the purpose of this study and because of proximity, compatible missions, and shared use of the airfield at Dobbins ARB, this JLUS includes the Georgia National Guard and Lockheed Aeronautical Plant #6 when referring to Dobbins ARB. The Dobbins ARB JLUS Study Area encompasses all land near Dobbins ARB that may impact current or future military operations or be impacted by military operations. Figure 1 illustrates the Dobbins ARB JLUS Study Area.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY



Legend

■ Dobbins ARB Complex	■ JLUS Partners	□ County Boundary	■ Park
■ Lockheed Martin	■ Cobb County	■ Other County / City	✓ Highway
■ Clay National Guard Center	■ City of Marietta	□ Airport Area	△ Major Road
— Runways	■ City of Smyrna	— Major Road	— Major River



0 1 2 Miles

Sources: ESRI, 2014; Dobbins AFB, 2011

Figure 1
Study Area



Community Profiles

2

This Chapter provides an overview of the civilian communities within the Dobbins ARB JLUS Study Area including profiles of community growth, development trends, and a description of the general setting. The Study Area for this JLUS includes Dobbins ARB and the affected areas of Cobb County and the cities of Marietta and Smyrna.

Understanding the socio-economic characteristics of the surrounding JLUS communities is essential to providing a baseline context from which informed decisions can be made when developing compatibility strategies. The purpose of this section is to provide information that will enable stakeholders to understand population and development trends that have the potential to affect the future of Dobbins ARB. This information, combined with the other factors presented is intended to help decision-makers develop consistent, informed planning policies about future development and economic growth, before compatibility issues arise.

This section is also designed to enhance the Base's understanding of the types of activities occurring "outside the fence" so that, military leadership can apply those insights when considering future missions and operations.

2.1 Dobbins ARB Regional Overview

Cobb County

Cobb County covers over 339 square miles of land northwest of Atlanta in northwest Georgia. It is accessible by four interstate highways along with state highways, roads and commercial rail lines. The 2010 County population was 688,078 – over a 13 percent increase from the 2000 census population.

The Cherokee Nation initially settled in the region that now comprises Cobb County, which was officially formed in 1832. The county was the site of many Civil War campaigns. After the war, the county invested much of its

resources in the manufacturing of cotton. However, the deflation of cotton prices during the great depression in the early 1920s took a toll on the regional economy. After the depression, Georgia built the state's first four lane highway, Route 41, through the county. This infrastructure helped in part to attract the Bell Aircraft Corporation to Marietta in 1942. The site of this plant is now the location of Dobbins ARB. Lucius Clay, the chair of the President's Advisory Committee for the Federal Aid Highway Act of 1956, was a Marietta native. His political influence led to a vast array of highway building within Cobb County which provided the framework for the suburban development that now characterizes the region.

City of Marietta

The City of Marietta is located in within central Cobb County and accessible via Interstate (I-) 75 and US Highway 41. The 2010 population of the city was approximately 56,569 – a 3.69 percent decrease from the 2000 census. It is the largest city in Cobb County by population and serves as the county seat.

The city was originally settled in the early 1800s as a small cluster of homes and incorporated in 1834. In the mid-1800s, the city became a tourist destination from the horse racing that occurred north of the town. The city experienced significant fires on two occasions - the first in 1854 and then again 1864, both destroying much of the city. While the recovery process took a few decades, Marietta had regained much of its economic significance by the turn of the century. World War II brought major change to the city when a Bell Bomber plant was constructed in the city. After the war ended and Bell left the facility, Lockheed Martin acquired the facility to construct aircraft for the military. Lockheed Martin is the principal employer in the city, representing over 25 percent of the workforce in Fiscal Year (FY) 2013.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

City of Smyrna

The City of Smyrna is located within southeast Cobb County and accessible via I-75 and I-285 bordering the south end of Dobbins ARB. The 2010 population of the city was approximately 51,271, more than a 25 percent increase from the 2000 census. It has been one of the fastest growing cities in the state of Georgia over the last decade.

Settlers first moved to Smyrna soon after individuals arrived to claim land redistributed through the Georgia land lotteries. After the Western & Atlantic railroad was completed through the region in 1842, homes began to cluster around railroad stops, creating a more permanent community. The town served as a location for a Confederate officer's training camp during the Civil War. The city was officially incorporated in 1872. The early 1900s brought significant technological progress with the town opening its first trolley service, phone office, and bank. However, the town remained mostly agricultural until World War II, when the Bell Bomber aircraft plant in Marietta employed thousands of Smyrna residents. Post-war suburban development brought thousands of new residents into the municipality during the 1950s and 1960s, many of whom worked in the aerospace industry. Much of the late 20th century development was based on the concept of livable communities, organized around public service centers and green space. The city's economy is driven by high-quality jobs with the largest percentage in professional, scientific, and technical services.

Higher Education

A number of universities are located proximate to Dobbins ARB. The continued development of the programs offered and growth of these institutions have both an impact on the character and demographics surrounding Dobbins ARB, and provide opportunities for synergistic relationships through programs geared to support the technology and mission needs of Dobbins ARB. The following schools have a campus or facilities nearby Dobbins ARB:

- Kennesaw State University - Marietta Campus
- Embry-Riddle Aeronautical University
- Life University

- Chattahoochee Technical College
- The Georgia Tech Research Institute
- Georgia Highlands College

Study Area Growth Trends

The following section provides a profile of the Study Area population growth and housing trends. This information helps define the regional context and growth potential for the JLUS Study Area.

Population

Population figures indicate the growth or decline within a geographical area. Table 2-1 illustrates the recent totals and percent change in populations of Georgia, Cobb County, and the cities of Marietta and Smyrna between 2000 and 2010. These numbers do not reflect temporary population surges associated with the region's tourism industry or migration from seasonal employment or transient workers.

Table 2-1. Population Trends, 2000 – 2010

Jurisdiction	2000	2010	Number Change	Percent Change
Georgia	8,186,453	9,687,653	1,501,200	18.34%
Cobb County	607,751	688,078	80,327	13.22%
City of Marietta	58,748	56,579	-2,169	-3.69%
City of Smyrna	40,999	51,271	10,272	25.05%

Sources: 2000 and 2010 US Census data

Housing Value Trends

Housing value trends illustrate the changes in land and home values relative to market fluctuations which can be indicative of development activity or inactivity as well as the location or migration patterns of populations.

Median housing values have experienced substantial growth throughout the JLUS Study Area. These increasing values translate into higher rents and mortgages as well as an increase in the cost of living for area residents. Greater housing values create a challenge for the affordability of housing near Dobbins ARB, especially due to the increases experienced in the cities

of Marietta and Smyrna, and can result in Base personnel pursuing home ownership further from Dobbins ARB. A portion of the financial cost saved from locating further from the Base is offset by the time and cost of greater commuting distances.

Economy

Cobb County

Cobb County, the home of three Fortune 500 companies, has positioned itself as a diverse economic engine as a result of proximity to the Atlanta metropolitan region. Cobb County is able to sustain a high proportion of high quality jobs due to the education of its workforce. The county boasts a workforce with over 45.1 percent of individuals over 25 years old possessing at least a bachelor's degree. Cobb County is the most educated county in Georgia and 12th amongst all counties in the United States.

Sources: Cobb Chamber of Commerce Economic Development Guide 2013, Georgia Department of Labor

City of Marietta

Marietta's economy benefits from its proximity to both the Atlanta metropolitan region and Dobbins ARB. Lockheed Martin Aeronautical Systems – a tenant at Dobbins ARB, is a vital economic tool for the city and principal employer within the city as of FY 2013. Education serves as another economic driver for Marietta through both K-12 schools and several higher education institutions including Kennesaw State University - Marietta Campus, Embry-Riddle Aeronautical University, Life University, and the Georgia Highlands College. Located adjacent to Dobbins ARB, Kennesaw State University employed over one thousand people in FY 2013 adding highly-skilled, educated graduates to the Marietta workforce annually.

Sources: City of Marietta, The Board of Regents of the University System of Georgia, Cobb County Department of Transportation

City of Smyrna

The City of Smyrna benefits from its exposure to a concentration of high quality jobs and low unemployment. The city is able to attract successful industries due to its ability to offer large tracts of land near the City of Atlanta. Professional, scientific, and technical services are the top industries within the city. Of Smyrna's population above age 25, over 91 percent have high school degrees and over 52 percent have bachelor's degrees. The top employers within the city represent a diversity of industry led by IBM with over 775 employees.

Source: City of Smyrna

2.2 Current Development Overview within the Study Area

Land use within the JLUS Study Area ranges from forest preserves and wildlife refuges to residential developments, employment cores, and commercial districts. The City of Marietta lies primarily to the north of Dobbins ARB with the City of Smyrna and the Cumberland Community Improvement District situated south and southeast of Dobbins ARB. Cobb County envelops Dobbins ARB and includes areas to the north, west, and south. Development adjacent to Dobbins ARB is characterized as follows:

North

The City of Marietta lies immediately to the north of Dobbins ARB. The Kennesaw State University – Marietta Campus, Embry-Riddle Aeronautical University, Georgia Highlands College, and Life University campuses are situated north of the Base across South Cobb Drive.

While single-family residential uses comprise the majority of the city's land use to the north and west, areas closest to Dobbins ARB are zoned for commercial, office-institutional and industrial uses. The City of Marietta's future land use map proposes regional activity centers along I-75.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

These areas can be described as high intensity development of high-rise office buildings, commercial malls, and residential development of a variety of densities.

Source: Marietta Official Zoning Map, 2013; Marietta Future Land Use Map, 2014

East

Cobb County and the City of Marietta are east of Dobbins ARB. The land adjacent to the east of Dobbins ARB is zoned for commercial, office-institutional and industrial uses. A variety of uses are proposed to the east of Dobbins ARB per the county and city future land use map , including community and regional activity centers, industrial warehousing, mixed use development and high density residential. The mixture of uses, combined with the proximity to Dobbins ARB and the Kennesaw State University campus, will enable diverse future development for this area.

Source: Marietta Official Zoning Map, 2013; Marietta Future Land Use Map, 2014; Cobb County Zoning Map online; Cobb County Future Land Use Map 2013

South

The northern-most tip of the City of Smyrna lies south of Dobbins ARB. The parcels of land adjacent to the Base are zoned for varying densities of residential use. While a golf course currently occupies land directly to the south of the Base, much of the land surrounding it is identified for potential annexation, according to the Smyrna future land use map.

Source: Smyrna Official Zoning Map, 2009; Smyrna Comprehensive Plan, 2007

West

The census-designated community of Fair Oaks in unincorporated Cobb County lies immediately to the west of Dobbins ARB. According to the Cobb County future land use map, the land west of the Base is targeted for a mix of uses including varying densities of residential, commercial along major corridors, and industrial immediately adjacent to Dobbins ARB. The land adjacent to Dobbins ARB on the west is currently single-family residential uses and commercial properties. The divergence between the

future land use as industrial and the residential usage is due to land use policies recommended from previous AICUZ studies conducted for Dobbins ARB and implemented into the policy framework of Cobb County.

Source: Air Installation Compatible Use Zone Study, 2011; Marietta Future Land Use Map, 2014; Cobb County Future Land Use Map, 2011



Military Profile

3

This chapter provides an overview of the military operational profile including an overview of the history and current operations at Dobbins Air Reserve Base (ARB).

Identifying and describing the various activities performed on the installation provides valuable insight into the regional importance of Dobbins ARB. This information enables stakeholders to make informed decisions about the future development and economic growth of communities proximate to the Base, which could potentially impact the existence and future role of the installation.

3.1 Regional Economic Impact

Dobbins ARB is a significant economic engine for the surrounding region and one of the largest employers in the region.

The following economic data pertains to Dobbins ARB proper. In FY 13, Dobbins ARB had an estimated economic impact of \$282,894,745 comprising an annual payroll of \$72,814,338, contract expenditures of \$164,421,807, and job creation value of \$45,658,600. During this same period, Dobbins ARB employed 2,558 personnel and created upwards of 850 indirect jobs.

While economic data is not available for the Georgia National Guard Clay National Guard Center, the Center employs over 1,100 full-time employees and the equivalent of 2,030 full-time service members, civilians, and contractors who contribute to the local economy. Economic data is also not available for Lockheed Martin; however, Air Force Plant #6 employs over 7,500 personnel who contribute to the local economy. An additional 1,600 reservists from the Army, Navy, and Marine Corps also support the local economy.

*Source: Dobbins Air Reserve Base / 94th Airlift Wing Economic Impact Statement
Fiscal Year 2013*

3.2 Installation Setting

Dobbins ARB is located in Cobb County Georgia, between the cities of Marietta and Smyrna, 20 miles northwest of downtown Atlanta. The installation is situated on 1,654 acres generally bounded by US Route 41 (Cobb Parkway South) to the east, South Cobb Drive to the north, Atlanta Road SE to the west, and Windy Hill Road to the south. Pockets of development separate these roadways from the installation perimeter.

A portion of Dobbins ARB occupied by the Navy Operational Support Center (NOSC), Air Force Reserve Command (AFRC) Service School, Expeditionary Combat Support Training - Certification Center (ECS-TCC), Force Support Combat Training School (FSCT), and Fitness Center, is physically separated from the main portion of Dobbins ARB to the northeast by South Cobb Drive. An overpass unifies the two Base areas and provides the only access to these facilities.

The topography of the area is characterized by rolling hills sloping throughout the installation, with an overall gradual slope toward the southeast. The elevation of Dobbins ARB is approximately 1,068 feet above mean sea level. Two creeks run through Dobbins ARB – Rottenwood Creek to the north and Poorhouse Creek to the south. Small portions of the Base lie within the Rottenwood and Poorhouse Creek floodplains.

Source: Dobbins Air Reserve Base General Plan (June 2010)



3.3 Military Operations

Dobbins ARB is home to two Wing organizations – the 94th Airlift Wing (AW) and the 700th Airlift Squadron (AS). The 94th AW, the host organization at Dobbins ARB, is responsible for providing security, civil engineering, fire protection, air traffic control, and numerous other services to the Base and tenant organizations at the installation. This includes, but is not limited to, the maintenance of the airfield used by tenants including Lockheed Martin, the Georgia Army and Air National Guard, and Army Reserve. Approximately 50,000 flight operations occur annually, making the installation an active facility with various air traffic operations from all branches of the military and other US government agencies. This air traffic takes place proximate to one of the busiest airports in the world, Atlanta Hartsfield-Jackson International Airport.

Dobbins Air Reserve Base Mission

The 94th AW, the host unit at Dobbins ARB, has eight assigned C-130H Hercules aircraft. The 94th AW provides highly trained aviators capable of executing versatile and tactical C-130 operations in both daylight and nighttime environments. Members of the 94th AW train daily to conduct worldwide airlift for a wide range of US military and humanitarian operations. The 94th AW comprises three groups, ten squadrons, and five flights.

Source: Dobbins Air Reserve Base General Plan; 2011 AICUZ Study for Dobbins Air Reserve Base

Dobbins Air Reserve Base Tenants

Dobbins ARB is the largest multi-service reserve training base in the world, hosting several other military, government and private organization tenants.

Hosted Military Tenants

Several military tenants are stationed at Dobbins ARB.

22nd Air Force

The 22nd Air Force (AF), headquartered at Dobbins ARB, is one of three numbered air forces in the Air Force Reserve Command. The 22nd AF is responsible for recruiting and training reservists and for maintaining subordinate units at the highest level of combat readiness. The 22nd AF's mission is to provide combat-ready support units and set personnel requirements to Air Mobility Command in the United States.

Georgia National Guard

The Georgia National Guard is the primary military tenant at Dobbins ARB occupying the Clay National Guard Center. The Center, which comprises 107 acres and 65 buildings, is headquarters for the Georgia DOD and home to several units of the Army National Guard (ARNG), Air National Guard (ANG), and the Georgia Language Training Center. The Georgia National Guard can be called up for active duty to help respond to domestic emergencies and disasters, such as those caused by hurricanes, floods, and earthquakes.

Navy Operational Support Center

The Navy Operational Support Center (NOSC) is the training facility for the United States Navy Reserve. The mission of the Navy Reserve is to deliver strategic depth and operational capability to the Navy, Marine Corps, and Joint Forces. The NOSC provides operational, training, and administrative support to the Navy Reserve mission including mission-capable units and individuals comprising the Navy's active duty component throughout the full range of operations during peacetime and war. The facility accommodates full-time command and administrative staff and reservists during drill weekends.

US Army Reserve

The mission of the US Army Reserve (USAR) is to provide trained, equipped, and ready soldiers and organized units to meet global demands. The USAR occupies several facilities including an administration building, hangar, aircraft parking ramp, and motor pool situated in the southeast portion of the Base in the vertex created by the eastern end of the runway and

abandoned taxiway Alpha. The USAR has five assigned UC-35B Citation Encore aircraft.

Other Military Tenants

Other military tenants at Dobbins ARB include:

- 622nd Civil Engineering Group Expeditionary Combat Support Training & Certification Center
- 951st Reserve Support Squadron – AFRC Service School
- AFRC Individual Mobilization Augmentee Travel Office
- Civil Air Patrol
- Force Support Silver Flag Training Site
- Marine Corps Reserve Center
- Psychological Health Advocacy Program
- Transportation Proficiency Center
- US Northern Command Medical

Source: 2011 AICUZ Study for Dobbins Air Reserve Base; Georgia DOD Info for Clay National Guard Center, Dobbins ARB and Cobb County PPT Presentation by Mr. Russel Carlson, Deputy Adjutant General; Dobbins ARB Team Dobbins PPT Presentation; Whole Building Design Guide

Hosted Government Tenants

Dobbins ARB is also host to numerous hosted military tenants and government tenants including:

- Air Force Office of Special Investigations
- Army and Air Force Exchange
- Defense Contract Management Agency
- Federal Bureau of Investigations
- USAF Installations, Environment and Logistics (Eastern Region)
- Selective Service System – Region 2 and Regional Headquarters

Hosted Private Organizations

A handful of private organizations are hosted at Dobbins ARB:

- Lockheed Martin Air Force Plant #6
- AT&T
- Federal Employees Credit Union
- Georgia Tech Research Institute

Lockheed Martin

Lockheed Martin maintains two campuses adjacent to the installation – a large production facility to the northwest of Dobbins ARB referred to as Plant #6 and a campus to the south. Activities conducted at these facilities include the avionics and engine modernization programs for the C-5 Galaxy strategic transport, P-3 Orion program operations (including the new wing production line), and the center wing assembly for all three variants of the F-35 Lightning II.

The Lockheed Martin Corporation currently produces aircraft wings and wing assemblies and conducts modernization of C-5 aircraft at the Lockheed Martin/Air Force Plant #6.

*Source: Dobbins ARB Team Dobbins PPT Presentation;
<http://www.lockheedmartin.com/us/aeronautics/about-aeronautics/locations.html>*

3.4 Dobbins Air Reserve Base Mission Footprint

Primary operations at Dobbins ARB include flight training, aircraft testing, and disaster response to support the 94th AW, Georgia National Guard, and Lockheed Martin missions.

Several elements are associated with these missions. These elements are either tangible, meaning that they are either physically seen and / or heard, or intangible, meaning that they exist within space without being seen or heard. These tangible and intangible elements comprise the mission footprint and are often not contained within the confines of the military installation. The mission footprint can potentially affect areas adjacent to or near the installation. Conversely, activities occurring in communities near or adjacent to a military installation can potentially affect the mission footprint.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Elements associated with the Dobbins ARB mission are both localized and regional in nature. Localized elements include:

- Airfield Safety Zones
- Airfield Noise Contours
- Imaginary Surfaces
- Bird and Wildlife Air Strike Hazards
- Vertical Obstructions
- Flight Tracks
- Range and Training Areas

Regional elements include:

- Military Training Routes
- Low Level Training Routes
- Low Altitude Tactical Navigation

Maintaining and sustaining these local and regional elements plays a significant role in the long-term viability of Dobbins ARB and continued mission readiness of the Air Force Reserves and Georgia National Guard.

Figures 2, 3, and 4 illustrate the localized and regional mission footprints at Dobbins ARB which are described below.

Local Footprint Elements Relevant to Dobbins Air Reserve Base Operations

The maximum potential for aircraft accidents, noise levels, and structure height are three factors that are controlled to the extent practicable through the following local footprint elements.

The airfield at Dobbins ARB includes one runway (Runway 11/29) and one assault strip (Runway 110/290). Both runways are oriented in an east/west direction. Runway 11/29 is 10,000 feet long and 300 feet wide, while the assault strip is 3,500 feet long and 60 feet wide. The airfield rests at a general elevation of 1,068 feet above mean sea level (MSL). This elevation or height above MSL is based on vertical distance measured from the average surface level of the ocean.

Airfield Safety Zones

Based on historical data and incidents associated with airfields, including aircraft collisions, the DOD has defined several areas where aircraft accidents are more likely to occur. These areas are known as airfield safety zones and are typically rectangular areas approximately 3,000 feet wide and 15,000 feet long located at the ends of all military airfield runways.

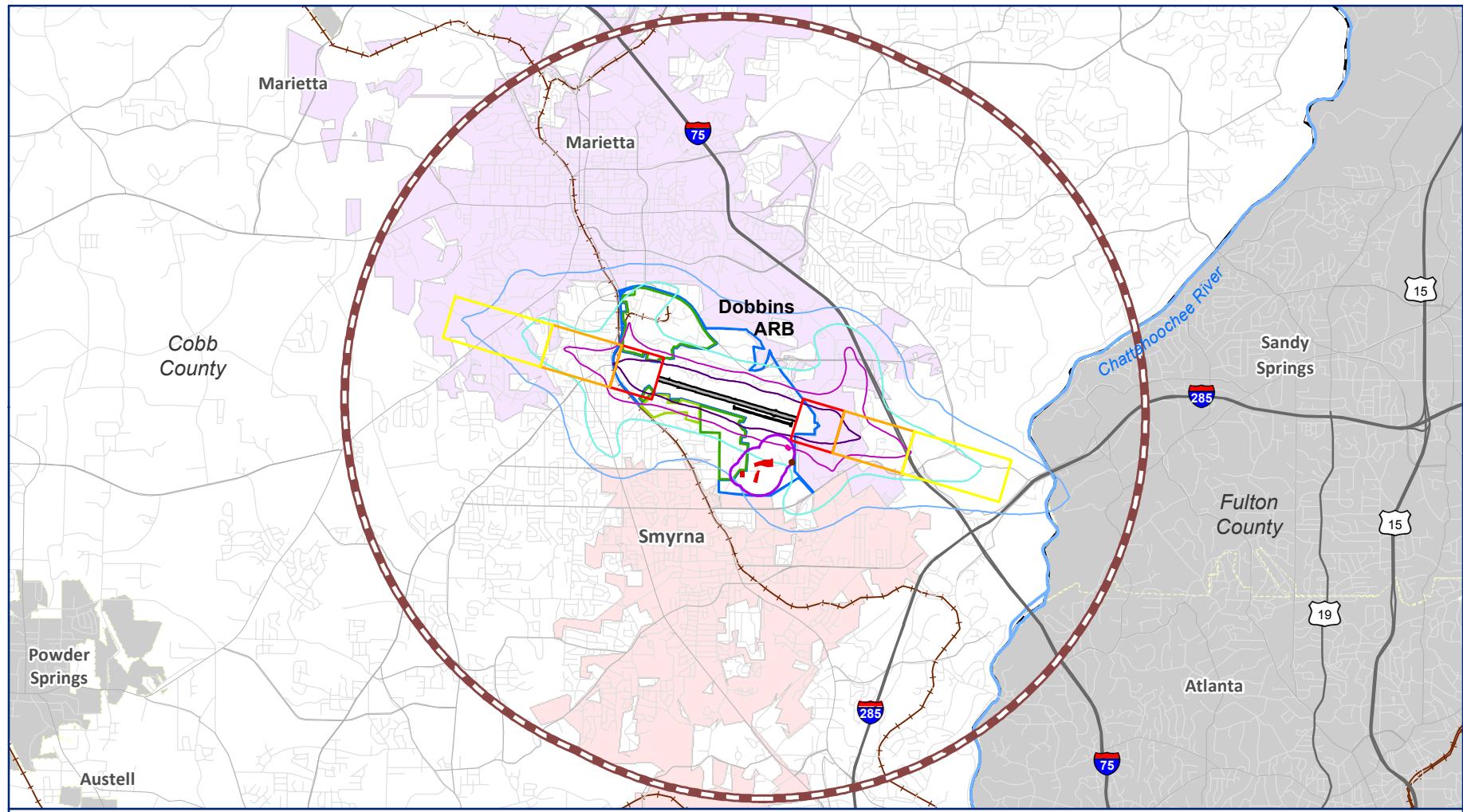
The individual areas that comprise the safety zone for military airfields are the:

- Clear Zone (CZ)
- Accident Potential Zone I (APZ I)
- Accident Potential Zone II (APZ II)
- Accident Potential Zone (APZ-LZ)
- Exclusion Area (EA)

The Clear Zone (CZ) is the area that begins at the end of each runway and measures 3,000 feet wide and 3,000 feet long. The center point of the zone corresponds to the center line of the runway. This is the area where an aircraft accident is most likely to occur due to aircraft flying at slower speeds and lower altitudes. It is recommended that development of any type be prohibited in these areas. At Dobbins ARB, the CZs at the western end of Runway 11/29 extend into Cobb County and the CZ at the eastern end of the runway extends into the City of Marietta.

The assault strip CZ is a trapezoid measuring 270 feet wide at the runway end flaring uniformly to a width of 500 feet over a distance of 500 feet. The CZs for the assault strip are contained entirely within Dobbins ARB.

Accident Potential Zone I (APZ I) is the area that begins at the end of the CZ. It is 3,000 feet wide and extends for a length of 5,000 feet. The potential for an accident in the APZ I is less than that of the CZ, so some development is recommended, but is limited to specific types of development with low occupancy levels. At Dobbins ARB, the APZ I areas at both ends of Runway 11/29 are in Cobb County and the City of Marietta.

**Legend**

Runway 11/29 (Primary Runway)	Noise Contour	I-75 5-mile BASH Relevancy Area	JLUS Partners
CZ			Dobbins ARB Complex
APZ I	65 dBA DNL		Lockheed Martin
APZ II	70 dBA DNL		Clay National Guard Center
	75 dBA DNL		Cobb County
	80 dBA DNL		City of Marietta
		EOD Range	City of Smyrna
		Weapons Storage Area	Fulton County
		Live Fire Range Area	Sandy Springs
		ESQD Arcs	Atlanta
			Austell
			Other County / City



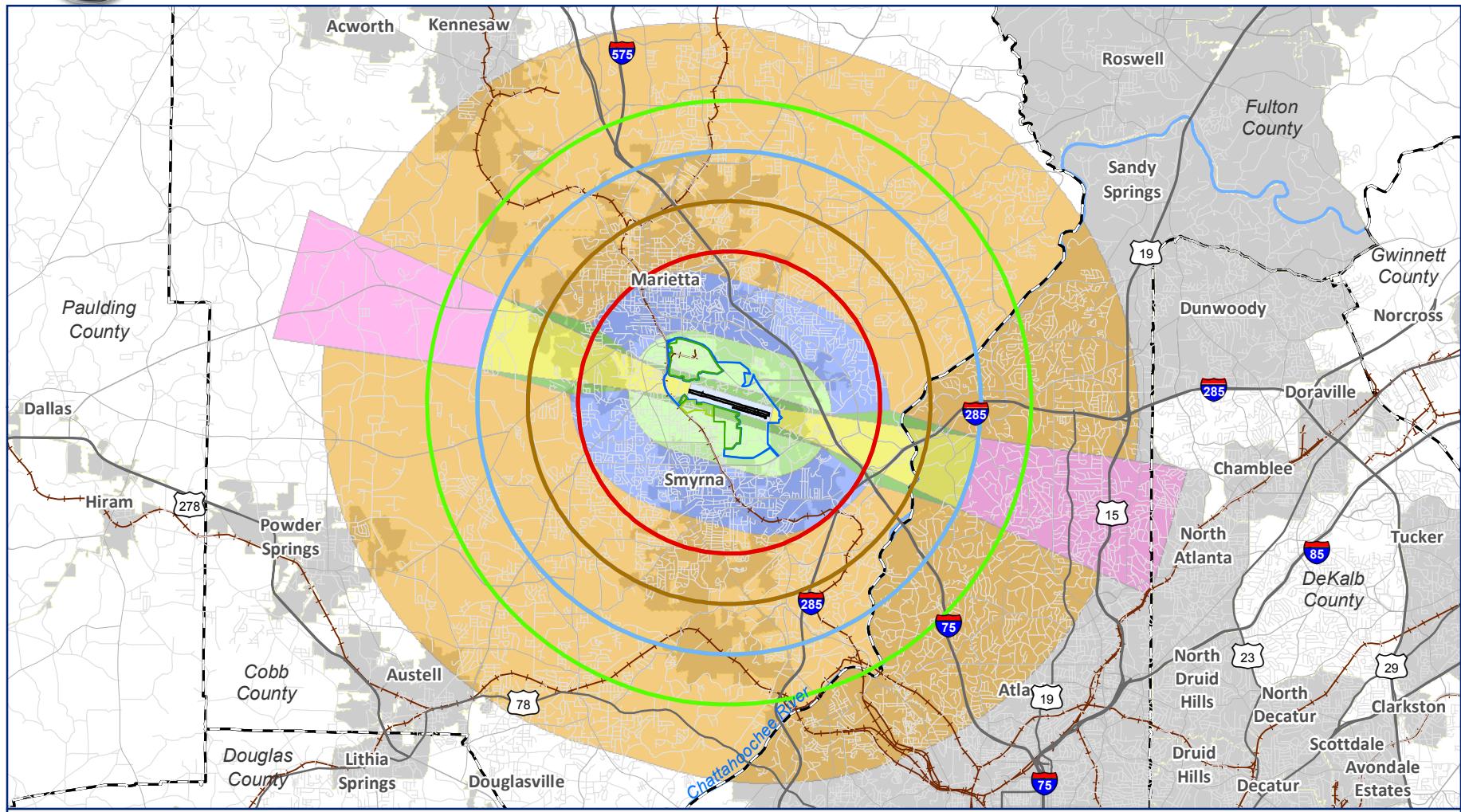
0 2 4 Miles

Sources: ESRI, 2014; Dobbins AFB, 2011

Figure 2
Safety and Noise Composite Map



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY



Legend

Airfield Imaginary Surface

- Primary Surface
- Approach/Departure Clearance
- Surface (glide angle) = 50 ft to 1 ft up to 500 ft
- Approach/Departure Clearance
- Surface (horizontal) = 500 ft

FAA Part 77

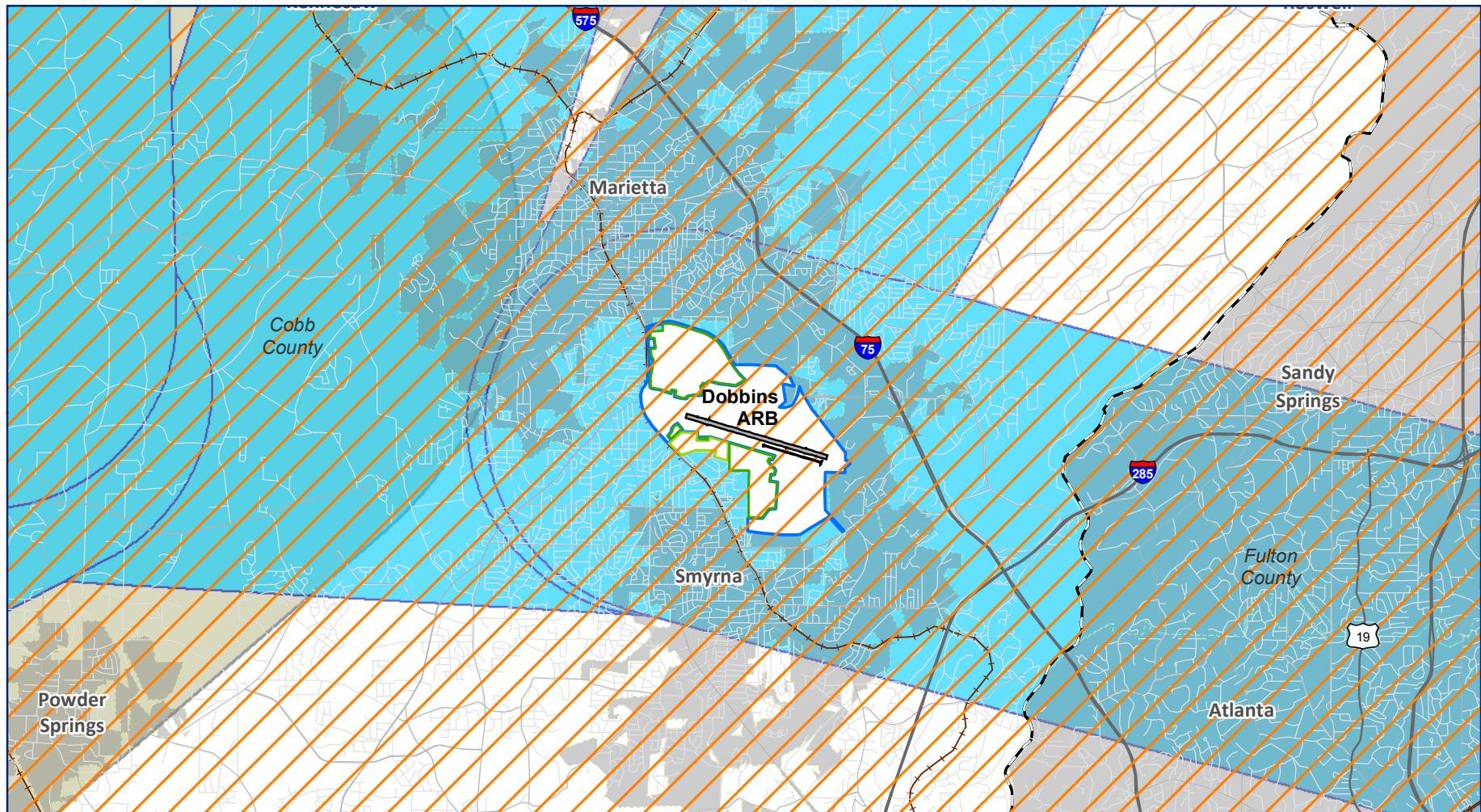
- Inner Horizontal Surface = 150 ft
- Conical Surface = 20 ft to 1 ft
- Outer Horizontal Surface = 500 ft
- Transitional Surface = 7 ft to 1 ft
- Up to 200' @ 3NM
- Up to 300' @ 4NM
- Up to 400' @ 5NM
- Up to 500' @ 6NM
- Dobbins ARB Complex
- Lockheed Martin
- Clay National Guard Center
- Up to 200' @ 3NM
- Up to 300' @ 4NM
- Up to 400' @ 5NM
- Up to 500' @ 6NM
- Highway
- Major Road
- Railroads
- County Boundary
- Major River
- City Area



0 2 4 Miles

Sources: ESRI, 2014; Dobbins AFB, 2011

Figure 3
Imaginary Surfaces and Part 77 Composite Map

**Legend**

Slow Speed Low Level Training Routes,	 	Dobbins ARB Complex	 	Highway
Floor Level 300' AGL Daytime, 1000' AGL Nighttime, No Ceiling	 	Lockheed Martin	 	Major Road
Local Training Routes	 	Clay National Guard Center	 	Railroads
Low Altitude Tactical Navigation, From Surface to 1500' AGL	 	County Boundary	 	County Boundary
			 	City/County areas



0 2 4 Miles

Sources: ESRI, 2014; Dobbins AFB, 2011

Figure 4
Training Routes Composite Map



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Accident Potential Zone II (APZ II) is the area that starts at the end of the APZ I. It is 3,000 feet wide and extends for a length of 7,000 feet. The potential for an accident in APZ II is less than that of the CZ and the APZ I. Recommended development is still restricted, but APZ II standards are less restrictive than the CZ and the APZ I. The APZ II area at the west end of Runway 11/29 is in both Cobb County and the City of Marietta, while the APZ II area at the east end of the runway is in Cobb County.

Accident Potential Zone (APZ-LZ) is the area that starts at the end of the CZ. It is 500 feet wide and 2,500 feet long. The western APZ-LZ is within the installation boundary and a portion of the eastern APZ-LZ extends into the City of Marietta.

Exclusion Area (EA) is 700 feet wide, and 4,000 feet long (the length of the assault strip [3,500 feet] plus the length of the CZ [500 feet]). All development is prohibited within the EZ except operational surfaces such as taxiways and aprons, NAVAIDs, aircraft and support equipment, and cargo loading and unloading areas and equipment. The EA is entirely within the Dobbins ARB installation boundary.

Airfield Noise Contours

Aircraft noise is one of the most common intrusive factors associated with airfield operations. Generally, aircraft approaching and departing an airfield generate the greatest noise due to greater engine thrust and proximity. Whether or not the noise from the aircraft is considered to be a nuisance depends on the land use receiving the noise. Noise associated with aircraft is usually considered annoying where land uses are incompatible with the aircraft activity.

The noise contours associated with Dobbins ARB flight activities extend out from Dobbins ARB in a general east-west direction conforming to the runway orientation:

- 80 dBA DNL is contained within Dobbins ARB except at the east end of Dobbins ARB where it extends approximately 0.5 miles outwards into Cobb County.

- 75 dBA DNL noise contour extends west of Dobbins ARB approximately 0.75 miles into Cobb County and approximately 1.5 miles north and east into the City of Marietta and Cobb County east of Dobbins ARB.
- 70 dBA DNL noise contour extends approximately one mile south and west into Cobb County and the City of Marietta west of Dobbins ARB, and approximately two miles west and one mile north into Cobb County and the cities of Marietta and Smyrna east of Dobbins ARB.
- 65 dBA DNL noise contour extends outside Dobbins ARB in all directions impacting Cobb and Fulton Counties and the cities of Marietta and Smyrna. The contour extends as far east as Fulton County and beyond Powder Springs Street to the west.
- 60 dBA DNL noise contour extends outside Dobbins ARB in all directions impacting Cobb and Fulton Counties and the cities of Marietta and Smyrna. This contour extends east as far as Kennesaw Mountain National Battlefield Park and one mile into Fulton County to the east.

Airfield Imaginary Surfaces

To further reduce the potential for accidents surrounding an airfield, a series of imaginary surfaces have been identified around the perimeter of the entire airfield to identify acceptable height limits. Height limits are acceptable when they allow for the safe transit of aircraft in the areas around an airfield. When structures like communication towers or objects like trees exceed this acceptable height limit, they are characterized as vertical obstructions.

- Primary Surface is an area in the immediate vicinity of the landing or takeoff area forming a large rectangle around the entire active runway area. It extends 200 feet in length past the end of the runway surface and has a varied width depending on the runway requirements, but is typically 1,000 to 2,000 feet wide. The primary surface associated with the Dobbins ARB runways is 2,000 feet wide, which means that the surface measures 1,000 feet wide on either side of the runway centerline.

- Inner Horizontal Surface is an oval-shaped area that surrounds the runway at a height of 150 feet above the established airfield elevation (EAE). It measures a total of 15,000 feet wide, including the area above the runway. It extends 7,500 feet out from the centerline of the runway and forms a half-circle at the runway ends.
- Conical Surface is an oval-shaped area 7,000 feet wide, connecting the outside edge of the Inner Horizontal Surface to the inside edge of the Outer Horizontal Surface. It slopes from the Inner Horizontal Surface to the Outer Horizontal Surface at a ratio of 20 to one meaning that it extends 20 horizontal feet for every one vertical foot.
- Outer Horizontal Surface is an oval-shaped area that measures 30,000 feet in width out from the farthest edge of the conical surface. The height of the Outer Horizontal Surface is 500 feet above the EAE.
- Transitional Surfaces include several vertical and vertically-sloped areas that connect all of the previously mentioned surfaces together. One set of transitional surfaces connects the outside edge of the primary surface to the inside edge of the inner horizontal surface. This connection is sloped at a ratio of seven to one, meaning that it extends seven horizontal feet for every one vertical foot. The second set of transitional surfaces connects the approach-departure clearance surfaces with the inner horizontal, conical, and outer horizontal surfaces. This connection is also sloped at a seven to one ratio.

The airfield imaginary surfaces cover an extensive area; the JLUS study area for Dobbins ARB was specifically sized to fit this footprint. Cobb County and the cities of Marietta and Smyrna are included within one or more of the imaginary surfaces.

Vertical Obstructions

In addition to the DOD-established imaginary surfaces, the FAA has also established guidance to reduce the potential for accidents surrounding an airfield. This guidance is codified in the Code of Federal Regulations Title 14, Part 77.13 (commonly referred to as "Part 77") and is used by the FAA to evaluate obstructions. This regulation determines compatibility based on the height of proposed structures or natural features in relation to their distance from the ends of a runway. The guidance and process for obstruction evaluation is more fully detailed in Section 4: Existing Tools as it is not a military-specific element and is not a direct result of Dobbins ARB operations. It is included here, within the military profile because of its association with Dobbins ARB.

Bird / Wildlife Air Strike Hazard

Birds and wildlife can represent a significant hazard to military training and flight operations. Certain types of land uses attract birds and wildlife such as standing water and grasslands. While there have been an insignificant number of fatalities associated with bird / wildlife air strike hazards (BASH) in the past 30 years, the concern associated with BASH is the significant amount of damage a BASH incident can cost the federal government.

Per the United States Avian Hazard Advisory System, the North Paces Lake Dam, Camp Bert Adams Dam, Plant Atkinson Transfer Station, Cobb County Farm Rd Transfer Station, Marble Mill Transfer Station, and Fox Creek Golf Course present the greatest sources of BASH risk.

Source: <http://www.usahas.com/>

Flight Tracks

Flight tracks are prescribed flying routes. Prescribed flight tracks or routes are typically implemented by all airfields / airports within a set area to ensure predictable flight operations. These routes act similarly to surface highways and establish consistent routes for all active aircraft. The flying routes are designed to coordinate airspace use with other aircraft not affiliated with Dobbins ARB, including aircraft associated with civilian airports within the Atlanta region.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

A flight operation consists of either a single operation (either a takeoff or a landing) or two operations (takeoff and landing). Thus, flight tracks are created using these flight operations and other information gathered from air traffic controllers and pilots, and other variables such as weather and the presence of development and incorporated communities. Typically, when flight tracks are developed they attempt to avoid being established over urban development to reduce impacts and risk to the general public and commercial or general aviation activities.

Range and Training Areas

The Dobbins ARB mission includes combat range training and the training for and disposal of unexploded ordnance. These activities are conducted at the Combat Arms Training and Maintenance (CATM) Range and Explosive Ordnance Disposal (EOD) Range. Munitions for these ranges and for Dobbins ARB tenants are stored in magazines. Each of these facilities generates explosive safety quantity distance (ESQD) arcs and must be isolated from other facilities to ensure the safety of surrounding uses.

The Combat Arms Training and Maintenance (CATM) Range is located in the southeast corner of Dobbins ARB and provides onsite small arms training for Air Force personnel. The range is managed and operated by the 94th Security Forces Squadron. Reservists assigned to the 94th AW must fire weapons periodically to maintain readiness and deployment qualification status. Security Forces must train and qualify firing with night vision equipment in low-light conditions.

Equipment used at the range varies from rifles to grenade launchers. The types and number of rounds fired during FY 13 at the CATM included a total of 125,543 rounds comprising:

The Explosive Ordnance Disposal (EOD) Range was constructed in 1995 and is located in the southwest corner of Dobbins ARB. The EOD Range provides proficiency training of EOD personnel who deploy in support of joint warfighters and for any emergency detonations of military munitions coming from communities surrounding Dobbins ARB. The Range can support explosives up to 2.5 pounds which results in a 300-foot Explosive Safety

Quantity Distance (ESQD) arc. This area constrains much of the south side of Dobbins ARB from development.

The explosive safety quantity distance (ESQD) arcs are the area where risk has been assessed based on the impacts of the types of explosives being stored. Munitions are stored in the southern portion of the installation isolated from the developed areas of the Base. The ESQD arcs do not extend off the installation, and therefore do not create increased risk to adjacent or proximate land uses.

However, it is important to note that while there is no immediate risk, in the case of munitions detonation in the area of the ESQD arcs, impacts could be experienced off installation near this area. For the purposes of this planning process, further assessment of this component of the military profile is not needed.

Regional Footprint Elements Relevant to Dobbins ARB Operations

The regional footprint of Dobbins ARB operations represents the influence area from aviation missions originating at the Base. The elements that comprise this footprint include the controlled airspace, slow speed low level training routes, local low level training routes, and low altitude tactical navigation airspace. Many of these elements extend outside the JLUS Study Area to mission areas such as drop zones and training areas throughout Georgia.

Controlled Airspace

Dobbins ARB is approximately 19 nautical miles (NM) northwest of Atlanta Hartsfield-Jackson International Airport, the country's busiest airport by aircraft operations. Atlanta Hartsfield-Jackson International Airport is surrounded by Class B airspace which extends to a 35 NM radius around the airport encompassing Dobbins ARB.

Class D airspace extends in a 5.5 NM radius around Dobbins ARB and from the airfield surface to an elevation up to and including 3,300 feet MSL between the hours of 0800-0000 local time. Outside of these hours, the

airspace is Class G uncontrolled airspace up to an elevation of 1,200 feet above ground level (AGL).

Dobbins ARB Air Traffic Control provides assistance to aircraft within the Dobbins ARB airspace. There is no restricted or special use airspace within the Dobbins ARB Class D airspace.

Training Routes

Slow Speed Low Level Training Routes

Slow speed, low altitude training routes (SR) are generally not considered a military training route (MTR), but are treated much the same as an MTR. These routes are typically flown under 1,500 feet AGL and designated for aircraft speeds not exceeding 250 knots (one knot is equivalent to approximately 1.15 miles per hour).

Dobbins ARB is the originating activity for three low-level training routes, though only one, SR040, is within the JLUS Study Area. The 94th Operations Support Squadron schedules use of SR040. This route originates near Dobbins ARB and vectors in a southwest trajectory into Alabama.

Local Low Level Training Routes

Flight operations originating from Dobbins ARB utilize several local training routes to reach training assets not owned or managed by the 94th AW including a drop zone (DZ) at Richard B. Russell Regional Airport (RBRRA) in Rome, Georgia, and the Preston DZ at Fort Gordon. The 94th AW maintains a Limited Maneuver License to conduct airdrop training with 15-pound Simulated Airdrop Training Bundles (SATB) at RBRRA. The 94th AW can drop the four-feet-by-eight-feet Container Delivery System (CDS) and train with the Joint Precision Air Drop System (JPADS) at the Preston DZ. Local training routes also are charted for flights to Camp Merrill and the US Army Ranger Mountain Training Area in north Georgia. These local training routes provide direct support to, and are scheduled and managed by, units based at Dobbins ARB. These training routes run north, west, and east through the JLUS Study Area.

Low Altitude Tactical Navigation

Low Altitude Tactical Navigation airspace (LATN) is a large, clearly defined area where units from Dobbins ARB practice random tactical navigation typically ranging from surface to 1,500 AGL. These areas are flown at, or below, 250 knots. These speeds allow the aircraft to merge safely with general aviation traffic, complying with FAA regulations to see and avoid other aircraft and obstacles. The Dobbins ARB LATN extends throughout the JLUS Study Area and includes most of Georgia and parts of Alabama, North Carolina, and Tennessee.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Please see the next page.



Compatibility Tools

4

There are many existing tools that can be used to encourage, promote, and manage compatibility between military installations and their neighboring communities. This chapter provides an overview of compatibility tools currently used or applied in evaluating and addressing compatibility issues in the Dobbins ARB JLUS Study Area. Relative to compatibility planning, there are a number of existing plans and programs which are either designed to address compatibility directly or which indirectly address compatibility issues through the topics they cover.

This summary provides an overview of key plans and programs that impact compatibility planning organized by level of government. There are three types of planning tools evaluated relative to their applicability: permanent, semi-permanent, and conditional. Permanent planning tools include acquisition programs, either fee simple purchase of property or the purchase of development rights. Semi-permanent tools include regulations such as zoning or adopted legislation.

The tools listed in this section are not exhaustive, but are meant to provide a general overview of the primary tools currently utilized in the JLUS Study Area. The overview of plans and programs is organized by level of government in the following order:

- Federal
- Dobbins ARB
- State of Georgia
- Cobb County
- City of Marietta
- City of Smyrna
- Other Tools and References

4.1 Federal

Federal policy, laws and programs have evolved to impact almost every aspect of land use. This is particularly true in metropolitan areas that host major military facilities like Dobbins ARB. A broad range of Federal plans, programs, and actions impact Dobbins ARB both directly and indirectly. However, depending on the subject area, opportunities for vertical integration and cross jurisdictional collaboration vary widely. The following federal programs and policies were evaluated to assist in determining where areas of improvement could enable better land use compatibility planning at the local level.

Air Force Instruction 90-2001

Air Force Instruction 90-2001 was published in September 2014 to implement the Encroachment Management Program. The Instruction applies to all Air Force installations to address encroachment issues and prevent or reduce the impacts of encroachment. The Instruction includes an Encroachment Management Framework, which includes four element (Organize, Assess, Act, and Monitor), to address the variety of challenges. Organization involves leadership involvement, a cross-functional management structure, an issue evaluation structure, a designated Executive Director at the installation level, and a geographic scope. Assessment includes studying internal and external relationships and developing encroachment studies, such as Installation Complex Encroachment Management Action Plans (ICEMAP).

Air Installation Compatible Use Zone Program

The Air Installation Compatible Use Zone (AICUZ) program was created by the Department of Defense (DOD) in 1973 to address noise and safety hazards associated with aviation operations. The AICUZ program was established to minimize impacts from aviation operations (noise and accidents) through specific attention to development and land uses. The AICUZ framework evaluates noise from military aircraft, and applies the



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

concept of clear zones / accident potential zones, with corresponding development / building densities and intensities designed to encourage compatibility between military operations and communities.

Federal Aviation Act

An important outcome of the Act is FAA Regulation Title 14 Part 77, commonly known as Part 77, which provides the basis for evaluation of vertical obstruction compatibility. This regulation determines compatibility based on the height of proposed structures or natural features in relation to their distance from the ends of a runway. Using a distance formula from this regulation, local jurisdictions can easily assess the height restrictions near airfields. Additional information on Part 77 is located on the Federal Aviation Administration Internet site at <http://www.faa.gov/>.

The FAA has also identified certain imaginary surfaces around runways that are used to determine how structures and facilities are evaluated. The levels of imaginary surfaces build upon one another and are designed to eliminate obstructions to air navigation and operations, either natural or man-made. The dimension or size of an imaginary surface depends on the runway classification.

Telecommunications Act of 1996 and the Federal Communications Commission

The Telecommunications Act of 1996 was the first comprehensive update to federal telecommunication law in over six decades and was in large partially intended to open up the marketplace to greater competition. New telecommunication tower siting requires compliance with the Federal Communications Commission's (FCC) environmental review standards and procedures, including NEPA and ESA compliance, National Historic Preservation Act compliance, adherence to any applicable FAA requirements and structure registration with the FCC. The actual approval of physical installations is subject to state and local permits and approvals; however, state and local authority is limited by FCC law.

4.2 Dobbins Air Reserve Base

The Dobbins ARB tools provide guidance for land uses and development activities on and adjacent to the installation. These tools may influence land use decisions that occur inside the fenceline or within the boundary of the military mission footprint in relation to the military mission or proposed military mission.

Air Installation Compatibility Use Zone Study

The basic objective of the AICUZ Program is to achieve compatible uses of public and private lands in the vicinity of military airfields by controlling incompatible development through local actions. The AICUZ study is designed to aid in the development of local planning mechanisms that can protect public safety, health and preserve the operational capabilities at Dobbins ARB. The AICUZ land use guidelines reflect land use recommendations for Clear Zones (CZs), Accident Potential Zones (APZs) I and II, and four noise zones.

The 2011 Dobbins ARB AICUZ Study is an update to the Dobbins ARB AICUZ Study completed in 1998. It presents a description of the current safety and noise environment surrounding Dobbins ARB. It reaffirms the Air Force policy of promoting public health, safety, and general welfare in areas in close proximity to Air Force installations. This study identifies changes in flight operations that have occurred since the 1998 study, and provides current noise zones and compatible use guidelines for land areas adjacent to the installation. It is provided as a tool to assist local communities in future planning and zoning activities.

Source: Dobbins ARB AICUZ Study, 2011

Dobbins Air Reserve Base General Plan

The Dobbins ARB General Plan (GP) was published in 2010 and provides a breakdown of the installations present and future capability to support its mission. The GP was prepared in response to Air Force Instruction (AFI) 32-7062: Air Force Comprehensive Planning, the Air Force directive for planning future development and protecting the environment. The GP provides important characteristics of the Base, discusses plans in accordance

with Dobbins ARB such as the Integrated Cultural Resources Management Plan (ICRMP), Integrated Natural Resources Management Plan (INRMP), and AICUZ study, and additionally assesses development potential while providing direction to installation leaders and decision makers. The GP is intended to guide the installation's long-range development by providing the installation Commander, Base Civil Engineer (BCE), and other decision-makers with the key information to achieve future development objectives. Future goals are included in the plan to guide future development of the Base and to provide improved resource management at the installation.

Source: Dobbins ARB General Plan, 2010

Dobbins Air Reserve Base Instruction 13-201

Dobbins ARB Instruction (DARBI) 13-201 is titled Airfield Operations Instruction and the directives for this publication are outlined in Air Force Policy Directive (AFPD) 13-2 Air Traffic Control, Airspace, Airfield, and Range Management. Dobbins ARB Instruction 13-201 institutes procedures and methods that will be used in air operations missions at the Base, and defines requirements and tasks of support agencies for the necessary services provided and required. Procedures outlined in DARBI 13-201 apply to all assigned base and tenant units but are not envisioned to replace the exercise of sound judgment in the interest of flying safety. Dobbins ARB Instruction 13-201 was issued to help promote the safe, orderly, and prompt movement of air traffic at Dobbins ARB.

Source: Dobbins ARB Instruction 13-201, 2013

Integrated Cultural Resources Management Plan

Required by DOD Instruction 4715.16 Cultural Resources Management, Air Force Policy Directive 32-70 Environmental Quality, and Air Force Instruction 32-7065 Cultural Resources Management, the 2013 Dobbins ARB ICRMP provides guidance and procedures to enable the Base to meet its legal responsibilities for identification, evaluation, and treatment of cultural resources in a manner consistent with the military mission of the 94th Airlift Wing (94 AW) and tenant commands.

The 2013 ICRMP is an update of the installation's previous Cultural Resources Management Plan, prepared for the period 2007–2011, is the implementing document for the cultural resources program (CRP) on Dobbins ARB, and is an integral component of Base comprehensive planning. Cultural resources under the stewardship of Dobbins ARB consist of archeological sites and individual historic properties.

Source: Integrated Cultural Resources Management Plan for Fiscal Years 2012-2016, Dobbins ARB, 2013

Integrated Natural Resources Management Plan

The 2012 Dobbins ARB INRMP was prepared in accordance with regulations, standards, and procedures of the DOD, the Air Force, and the Sikes Act in cooperation with the United States Fish and Wildlife Service (USFWS) and the Georgia Department of Natural Resources. The INRMP provides for management and stewardship of all natural resources present on the base.

Specified within the INRMP, Dobbins ARB proposes to continue several management programs currently in place and to carry out the set of resource-specific management measures developed in the INRMP. These programs will enable Dobbins ARB personnel to effectively manage the use and condition of natural resources on the installation.

Source: Integrated Natural Resource Management Plan/ Environmental Assessment for Dobbins ARB, 2012

4.3 State of Georgia

The state tools listed here authorize or mandate local counties and cities to provide for the protection of the State's valuable industries including the DOD. The State tools also require communities and developers to protect and preserve the State's natural resources, including land and water, by establishing further regulatory measures to ensure the natural environment is preserved and protected from excess consumptive practices.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Georgia Military Affairs Coordinating Committee

The Georgia Military Affairs Coordinating Committee (GMACC) was founded in 1994 as a partnership between the Georgia Chamber of Commerce and the Governor's Office. Supported by the Georgia Chamber, GMACC serves to support military communities and their significant contributions to Georgia's economy and national security. The GMACC mission is to better serve the military installations in Georgia and to improve their quality of life.

Source: <http://www.gachamber.com/GMACC/>

Georgia Department of Community Affairs

The Georgia Department of Community Affairs (DCA) main mission is partnering with communities to help create a successful environment for Georgia's families and businesses. The DCA helps to promote and implement local government assistance, community and economic development, and safe and affordable housing. With the help of state and federal resources, DCA helps communities with job creation, planning implementation, downtown development, and creation of affordable housing solutions. The DCA also assists low and moderate income residents of Georgia to buy homes, rent housing, and prevent homelessness or foreclosure.

Source: <http://www.dca.state.ga.us/>

Georgia Department of Transportation

The Georgia Department of Transportation (DOT) has several programs and studies in place that affect the compatibility of land around Dobbins ARB including the 2013 Strategic Plan. This plan guides the Department's priorities for the next three to four years, providing a broad roadmap, outlining where the agency currently stands, where the agency wants to be in the future, and what actions it must take to get there. Georgia DOT has a range of transportation programs, plans and services that aid local government agencies in maintaining and operating their local transportation systems.

Source: <http://www.dot.ga.gov/Pages/default.aspx>

4.4 Local Jurisdictions

In Georgia, authority to regulate land use is delegated by the State to counties and municipalities. For instance, counties and cities are legally bound by statute to adopt comprehensive plans. The counties and municipalities are not always required to exercise these regulatory authorities, but if these powers are exercised, they must be exercised in accordance with specific provisions of state law.

There are three incorporated jurisdictions within the Dobbins ARB JLUS Study Area – Cobb County and the cities of Marietta and Smyrna. While the missions conducted at Dobbins ARB have the potential to intermittently affect different parts of adjacent and nearby jurisdictions at one time or another, this JLUS focuses on the specific areas most affected by Dobbins ARB activities and conversely, the areas that have the most potential to pose compatibility or mission issues for Dobbins ARB.

Cobb County

Cobb County has used a variety of planning tools to achieve its goals for organized development and a safe environment for its residents. The following is a review of the existing planning tools (policies, programs and plans) used by the county.

Cobb County 2030 Comprehensive Plan

The Cobb County Comprehensive Plan is a policy document that assists in guiding the long range development plans of the county. The Plan establishes goals and guiding principles upon which county officials' base decisions regarding development. The 2014 update of the Comprehensive Plan contains elements outlining the community vision, issues and opportunities, policies and implementation program. The Community Issues and Opportunities chapter includes common elements such as economic development, transportation and community facilities. The guidelines and policies outlined in the plan are important because of their potential impacts on operations at Dobbins ARB, which is located within Cobb County.

The following deficiencies concerning military compatibility are based on a review of the Comprehensive Plan:

- Although there is a mention of all supplementary plans that have findings and policies relevant to the Comprehensive Plan document, the Dobbins ARB General Plan, AICUZ study, or any plans from the Dobbins ARB are not referenced.
- Within the Appendix is the AICUZ map for Dobbins ARB, although no mention of the study, safety zones, noise contours or compatible use recommendations are within the document itself.
- The goals and policies of some elements, such as land use and transportation, do not take the military installation presence or mission into consideration.

Cobb County Zoning Code

Chapter 134 of the Official Code of Cobb County contains the zoning code which has been amended through 2013. The zoning code categorizes the land and provides development regulations for forty-four districts. Cobb County does not include a stand-alone district provision for airport or military zoning, although a Military Airport Hazard District was adopted specifically for Dobbins ARB detailed in the Supplementary Regulations. The Code contains maximum heights for structures, telecommunication facility regulations, maximum densities and intensities for residential and non-residential development, and outdoor lighting regulations.

The height limitations set forth in the Zoning Code are applicable to buildings and structures and do not apply to towers and antennae which are governed by the special use permit procedure.

All industrial districts have height maximums of four stories tall, while most residential districts have height maximums of 35 feet or two stories. Multi-family residential districts have height maximums of 40 feet and other residential districts have higher height maximums due to higher density allowances, such as 75 feet or 16 stories. The Urban Condominium district has no height maximums. Commercial and office district height maximums are typically 35 feet however some districts permit heights of 50 feet or four stories, eight stories, 75 feet, or 100 feet. The Office High Rise district allows for 23 story heights but any buildings over nine stories requires special use approval.

For almost every zoning district, lighting regulations state that any project permitted within the district which proposes any outdoor lighting, except individual residential lots, must have a county department of transportation approved lighting plans including details of height, wattage, and mounting. They are minimum requirements, based on Chapter 106, Article II of the County Code, pertaining to street lighting and do not mandate features like full cut off fixtures or other elements intended to reduce or eliminate light trespass and light pollution (“sky glow”).

Sound attenuation is specified frequently within the zoning code and includes several specific mentions to noise abatement. However, noise abatement is limited to buffering between land uses typically considered incompatible such as residential from industrial uses.

Airport Land Use Compatibility

Sections 134.275.1 Military Airport Hazard District was established to contribute to the safe operation of Dobbins ARB and to facilitate orderly development and the control and mitigation of noise around it.

Three primary determinants are used in promoting compatibility between the airfield and nearby areas: accident potential to land users, aircraft noise, and hazards to operations from land uses (height, obstructions, etc.). The Military Airport Hazard District establishes use restrictions, recommended noise reduction measures, and height limitations as necessary to produce compatible land uses in each of these three areas: Clear Zones, Accident Potential Zone I, and Accident Potential Zone II.

- Height zoning. Height limitation zoning applies to structures and natural growth objects within the airspace as defined by the Federal Aviation Regulations Part 77 Airspace Surfaces and Terminal Instrument Procedures Tools (TERPS).
 1. Construction or alteration requiring notice to the FAA. Except for construction less than 25 feet AGL or as provided in FAR Part 77.15, any construction or alteration that meets or exceeds the height criteria established in FAR Part 77.13 as amended from time to time, shall complete the FAA notification



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

process as provided in FAR Part 77.17 as amended from time to time, using the FAA Notice of Proposed Construction or Alteration form 7460-1 as amended from time to time.

2. Height limitation. The military airport hazard district ordinance does not preclude approval of obstructions to air navigation with heights in excess of those height limitations prescribed in FAR Part 77 and/or TERPS, if either of the following is met:
 - a. A determination of "No Hazard to Air Navigation" is issued from a FAA airspace study resulting from the notice requirement of FAR part 77.17 and the airport manager supports the determination; or
 - b. A variance application may be considered by the board of zoning appeals, when such action is considered advisable to effectuate the purposes of this section and reasonable in the circumstances when considering the results of the determination of an FAA airspace study and the input from the airport manager.
- A land Use compatibility matrix pertaining to allowed land uses within the specific APZ zones and noise contours is located within Section 134-275.1.
- Permits. Any building permit or business license application submitted for properties within the military airport hazard district shall be reviewed by the community development agency to determine whether it meets the standards set forth in this Code. Those applications which do not meet these criteria shall be required to seek approval from the board of commissioners.

Cobb County Comprehensive Transportation Plan (CTP)

The Cobb County Comprehensive Transportation Plan (CTP) Update 2040 provides data and findings as a foundation for identifying specific strategies to maintain and improve Cobb County's transportation system in both the near and long term.

Within the CTP, Dobbins ARB is referenced several times as being one of Cobb Counties top employment destinations. The I-75 corridor connects

several regional centers including Cumberland, Franklin and Delk Roads, Dobbins/Lockheed Martin, and Town Center, therefore infrastructure improvements to I-75 are directly relevant to Dobbins ARB missions. The following are additional transportation infrastructure improvements indirectly related to land use compatibility at Dobbins ARB:

- In November of 2013, the residents of Marietta approved a \$68 million redevelopment bond issue for the Franklin Road corridor between Cobb Parkway and I-75. The money will be used to purchase aging apartment complexes along the corridor to be demolished and redeveloped. Redevelopment could include large-scale office and industrial/ flex space and could have significant impact on the area in terms of economic development, land use, and transportation.
- "Connect Cobb" is a transportation project that has the potential to expand mobility in the Northwest Transit Corridor, a 25-mile stretch along I-75 and Cobb Parkway, connecting northern Cobb County and midtown Atlanta, with high capacity transit service. The Connect Cobb corridor is one of the most congested corridors in the Atlanta metropolitan region. Population and employment is expected to grow through the year 2040 and focus along the corridor.

Cobb County Building Regulations

The Cobb County code makes no specific reference to attenuating sound or noise near Dobbins ARB, despite the residential land uses within the installation noise contours.

Special and Specific Area Plans

Cumberland Community Improvement District

The Cumberland Community Improvement District (CCID) is the mechanism through which local commercial property owners finance and develop roads, trails, beautification, and other infrastructure enhancements. The CCID encompasses five and a half square miles around the I-75/I-285 interchange in Cobb County generating revenues through self-imposed commercial

property taxes by commercial property owners to improve their property values through infrastructure investments.

To date, \$100 million in local assessments have been raised through the CCID. With partners such as the GDOT and Cobb DOT, the CCID implements and/or partners on studies to assess the current transportation and land use environment to determine options for future improvements. Though Dobbins ARB is a substantial economic generator, it has not been involved in any of these proceedings due to the proximity outside of the CCID.

The sheer success of the CCID as well as the future growth expectation in suburban Atlanta and Cobb County will intensify development within the CCID and draw in more commercial, office and residential space, along with other amenities including the new Atlanta Braves complex. These capital improvement projects and programs have the potential to affect Dobbins ARB and its missions. A CCID master plan has been underway and will be completed within the next couple of years.

Other Cobb County Tools

Real Estate Disclosure

In Georgia, there is no “legally” required form that a seller must use to disclose any defects, although a standard Georgia Association of Realtors (GAR) form, that is quite thorough, exists and is used by most real estate agents when selling property. The disclosure statement however, does not reference proximity to and noise from military installations.

City of Marietta

The following is a review of the existing planning tools (policies, programs, and plans) utilized by the City of Marietta.

City of Marietta Comprehensive Plan

The City of Marietta Comprehensive Plan is a policy document that assists in guiding the long range vision of the city. The Plan establishes goals and guiding principles upon which city officials’ base decisions regarding development. The 2006 Comprehensive Plan update contains elements

outlining recommendations for land use, transportation, economic development, and community facilities, among others. The guidelines and policies outlined in the Plan are important because of their potential impacts on operations at Dobbins ARB, located adjacent to the City of Marietta.

Future land use maps show several existing and new land uses adjacent to the Dobbins ARB boundaries, some of which include Parks and Recreation (two adjacent parks), Community Service and Institution (Kennesaw State University – Marietta Campus) as well as industrial warehousing. These uses, especially community services, can be affected and can adversely affect the mission at Dobbins ARB.

The City of Marietta hopes to grow the professional and technical services that surround Dobbins Air Force Base.

The following deficiencies concerning military compatibility are based on a review of the Comprehensive Plan:

- Within the Appendix is a myriad of maps for the City. While Dobbins ARB is shown on each, there is no mention of the AICUZ Overlay District.
- The goals and policies of some elements, such as land use and transportation, do not take the military installation presence or mission into consideration.

City of Marietta Zoning Ordinance

The City of Marietta Code of Ordinances contains the zoning ordinance originally adopted in 1998. The ordinance categorizes the land and provides development regulation for twenty-eight districts. The City of Marietta does not include a stand-alone district for airport or military zoning but has adopted an AICUZ Overlay District established directly for Dobbins ARB detailed in the Supplementary Regulations. The Code contains maximum heights for structures, telecommunication facility regulations, maximum densities and intensities for residential and non-residential development, and outdoor lighting regulations.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

While most single family residential uses have a height maximum of 35 feet other residential districts have maximum heights of 15 feet, 45 feet or 15 stories. Height maximums for commercial and industrial uses have height maximums of 35 feet, 40 feet, 50 feet, 75 feet, and 85 feet. The Regional Retail Commercial (RRC) district has no height maximums. There are various uses that allow for height maximums that may interfere with the air missions at Dobbins ARB due to the fact that tracts of the city are located within Dobbins ARB safety zones. These include high-rises which have a maximum of 15 stories, and some commercial developments that do not apply to height maximums such as the RRC district.

Telecommunication towers may be permitted in certain zoning districts and depending on the number of users on a tower, maximum telecommunications tower heights range anywhere from 100 to 200 feet.

Basic lighting requirements are included in the zoning code for almost every district provided. A common regulation states that “lighting shall be established in such a way that no direct light shall cast over any property line nor adversely affect neighboring properties.” The AICUZ Overlay District includes a restriction on development in any portion of the Overlay District if it will produce light emissions which would either directly or indirectly (reflective) interfere with pilot vision.

Airport Land Use Compatibility

The AICUZ Overlay District is established as a supplementary regulation to contribute to the safe operation of Dobbins ARB, to facilitate orderly development around the airfield, to protect property values, and to control and minimize noise and potential accident impacts on the surrounding areas of the City of Marietta. The AICUZ Overlay District promotes development patterns which are appropriate for the airfield vicinity and protects the public's safety and welfare by limiting land uses near the airport which require or generate large concentrations of individuals.

Detailed within this supplementary regulation are the Accident Potential and Noise Zones identified as part of the AICUZ study, where Noise zones are depicted as contours with day-night sound levels (DNL) in excess of

65 decibels. Land use guidelines are based on the compatibility of various land uses with the listed noise exposure ranges. Also detailed within the AICUZ Overlay District are permitted uses, recommended noise reduction measures and height restrictions.

The district regulations note that any object or structure which would penetrate any of the FAA Part 77 imaginary surfaces is considered by the FAA to be an obstruction to air navigation and refers to Appendix D of the Dobbins ARB AICUZ Study which provides detailed criteria for determining whether an object or structure constitutes an obstruction.

City of Marietta Building Regulations

The City of Marietta Building Code makes no specific reference to attenuating sound or noise near Dobbins ARB, despite the residential land uses within the installation noise contours.

Other City of Marietta Tools

Urban Redevelopment Plan

The City of Marietta Urban Redevelopment Plan dated June 2009 serves to strengthen the current and future redevelopment efforts in the targeted areas. The plan outlines steps to encourage economic stability and growth in these areas.

Many urban redevelopment opportunity and target areas located within the City of Marietta are either adjacent to or in proximity of the Dobbins ARB and within range of the flight missions that take place there, particularly the Franklin Gateway Opportunity Zone which runs along the I-75 corridor.

Real Estate Disclosure

In Georgia, there is no “legally” required form that seller must use to disclose any defects, although a standard Georgia Association of Realtors (GAR) form, that is quite thorough, does exist and is used by most real estate agents when selling property. The disclosure statement however, does not reference proximity to and noise from military installations.

City of Smyrna

The following is a review of the existing planning tools (policies, programs and plans) utilized by the City of Smyrna.

City of Smyrna Comprehensive Plan

The Smyrna 2030 Comprehensive Plan is an update to the current Smyrna Comprehensive Plan and builds upon and enhances the vision created in the 1991 document to assist the community in preparing for the social, economic, and cultural changes and providing a community vision for the future.

The following concerning military compatibility was identified based on a review of the Comprehensive Plan:

- Stakeholders included in the participation process are detailed within the Comprehensive Plan's Community Participation Plan. One of the stakeholders listed is a Lockheed/ Dobbins ARB Representative.

The following deficiencies concerning military compatibility are based on a review of the Comprehensive Plan:

- Within the Plan are maps for the City on which Dobbins ARB is shown, though there is no mention of the AICUZ study, safety zones or noise zones within the Plan.
- The goals and policies of some elements, such as land use and transportation, do not take the military installation presence or mission into consideration.

City of Smyrna Zoning Ordinance

The City of Smyrna Code of Ordinances, Appendix A contains the zoning ordinance which categorizes the land and provides development regulations for twenty-two districts. The City of Smyrna does not include a stand-alone district provision for airport or military zoning, despite its adjacency to Dobbins ARB. The Ordinance contains maximum heights for structures, telecommunication facility regulations, maximum densities and intensities

for residential and non-residential development, and outdoor lighting regulations.

While most single family residential uses have a height maximum of 35 feet there are various non-residential districts that allow for higher maximums up to 55 feet or five stories. Several commercial districts allow for additional heights provided height bonuses are approved by the City Council.

Section 1206 of the Code states that height limitations do not apply to transmission towers which are governed by the special use permit procedures.

City of Smyrna Building Regulations

The Smyrna code makes no specific reference to attenuating sound or noise proximate to Dobbins ARB, despite many existing residential land uses within the Dobbins ARB noise contours.

Special and Specific Area Plans

Smyrna Town Center Livable Centers Initiative Study

In 2003, Smyrna prepared a Study of "Downtown Smyrna" in support of the Atlanta Regional Commission's LCI program to fund investment studies and transportation projects located in activity and town centers in the region. The Smyrna LCI Study Area is a one-mile by four-mile area within the northern half of Smyrna.

The Existing Conditions section notes that Dobbins Air Force Base (Naval Air Station) is immediately north of the northern boundary of the study area and that while overflights from Dobbins ARB have diminished, they constrain higher end and higher-density residential development that would significantly limit the market base for retail along Windy Hill, in Belmont Hills, and down Atlanta Road south to Spring Road.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Other City of Smyrna Tools

Real Estate Disclosure

In Georgia, there is no “legally” required form that seller must use to disclose any defects, although a standard Georgia Association of Realtors (GAR) form, that is quite thorough, does exist and is used by most real estate agents when selling property. The disclosure statement however, does not reference proximity to and noise from military installations.

4.5 Other Tools and References

Atlanta Regional Commission and Strategic Plan

The Atlanta Regional Commission (ARC) is an intergovernmental coordination and regional planning agency for the 10-county area in Georgia including Cobb County. Since the 1950's, ARC and its predecessor agencies have helped to guide the region's leadership, consideration and resources on key issues of regional importance.

The ARC Strategic Plan, which was adopted by the ARC Board in 2011, serves as a consistent framework to guide both current and future board members in focusing resources and efforts efficiently on the region's critical needs. It was created to ensure focus and concerted effort towards accomplishing regional objectives to achieve regional impact as well as local relevance.

Source: <http://www.atlantaregional.com/>; ARC Strategic Plan, 2011

Atlanta Regional Military Affairs Council

The Atlanta Regional Military Affairs Council (ARMAC) provides a continuing effort to foster partnerships, education and a strong working relationship between the business and military communities in the metro Atlanta area. The Council consists of approximately 20 Cobb business leaders, Lockheed Martin staff and former military officers. About a dozen core members of the group meet monthly at Dobbins ARB to prepare for the possibility of a Base Realignment and Closure (BRAC) Commission formed by Congress. The Council has a three-fold mission: to justify and clearly explain the mission of Dobbins ARB including tenant missions, to study what missions could be

done more efficiently in the future, and engaging the local community to support the continued mission.

Source: <http://www.cobbchamber.org/Member-Services/ARMAC.aspx>

Office of Economic Adjustment and NACo

In the interest of land use compatibility between the military and the local community, the DOD Office of Economic Adjustment (OEA) and other public interest groups, such as the National Association of Counties (NACo), have prepared educational documents and videos that educate and inform the public about encroachment issues and methods that can be used to address existing or future compatibility concerns. The following five resources have been published to inform the public on land use compatibility.

Guides

The Practical Guide to Compatible Civilian Development near Military Installations (July 2007), OEA

This guide offers general information on community development and civilian encroachment issues. The guide can be found at:
<http://www.oea.gov/>.

Joint Land Use Study Program Guidance Manual (November 2006)

This manual provides guidance on the JLUS program, process, and efforts to support compatible development. This manual can be obtained on the OEA website at the following address: <http://www.oea.gov/>.

Encouraging Compatible Land Use between Local Governments and Military Installations: A Best Practices Guide (April 2007), NACo

This guidebook presents case studies of best practices between the military and communities through communication, regulatory approaches, and Joint Land Use Studies. The guide can be accessed on the NACo website at the following address: <http://www.naco.org/>.

Videos

The Base Next Door: Community Planning and the Joint Land Use Study Program, OEA

This informative video discusses the issue of encroachment near military installations as urban development occurs within the vicinity. This video can be accessed on the official OEA YouTube channel at:

<http://www.youtube.com/watch?v=6UiyWDgLeJM>

Managing Growth, Communities Respond, OEA

This video highlights the lessons learned from three communities (Kitsap Naval Base in Bangor, Washington; Fort Drum in Jefferson County, New York; and Fort Leonard Wood in Pulaski County, Missouri) that have successful programs for managing growth near their respective military installations. This video can be accessed on the official OEA YouTube channel at: <http://www.youtube.com/watch?v=rea6d3bDp3c>



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Please see the next page.



Compatibility Assessment

5

5.1 Identification of Compatibility Issues

Compatibility, in relation to military readiness, can be defined as the balance or compromise between community needs and interests and military needs and interests. The goal of compatibility planning is to promote an environment where both community and military entities communicate, coordinate, and implement mutually supportive actions that allow both to achieve their respective objectives.

A number of factors assist in determining whether community and military plans, programs, and activities are compatible or in conflict with joint land uses such as community activities and military installations. For this JLUS, 25 compatibility factors were reviewed to identify, determine, and establish a set of key study area issues. These compatibility factors are listed below.

COMPATIBILITY FACTORS	
AQ	Air Quality
AT	Anti-Terrorism / Force Protection
BIO	Biological Resources
CA	Climate Adaptation
COM	Coordination / Communication
CR	Cultural Resources
DSS	Dust / Smoke / Steam
ED	Energy Development
FSC	Frequency Spectrum Capacity
FSI	Frequency Spectrum Impedance / Interference
HA	Housing Availability
IE	Infrastructure Extensions
LAS	Land / Air / Sea Spaces
LU	Land Use
LEG	Legislative Initiatives
LG	Light and Glare
MAR	Marine Environments
NOI	Noise
PT	Public Trespassing
RC	Roadway Capacity
SA	Safety Zones
SNR	Scarce Natural Resources
VO	Vertical Obstructions
V	Vibration
WQQ	Water Quality / Quantity

Of the 25 compatibility factors considered, nine were determined to be inapplicable to this JLUS:

- Dust, Smoke and Steam
- Energy Development
- Frequency Spectrum Capacity
- Housing Availability
- Infrastructure Extensions
- Legislative Initiatives
- Marine Environments
- Public Trespassing
- Scarce Natural Resources
- Vibration

5.2 Issues

At the initial committee workshops and subsequent public forums, groups were asked to identify the location and type of compatibility issues they thought existed today, or could occur in the future, using the 25 factors as a guide. A number of individual issues were identified for each factor. Additional technical issues were analyzed and added based on available information and similarity with other community JLUS experiences around the country.

5.3 Setting Priorities

The public and committees provided input on establishing priorities for the compatibility factors and issues. Priorities were used to determine the type and timing of associated actions for each issue. Three criteria were utilized to prioritize the compatibility factors:



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

- **Is it a Current Impact?** Each issue was considered based on its current impact to the compatibility of either Dobbins ARB or the surrounding areas. Issues posing the most extensive operational constraints or community concerns constitute the highest priority.
- **Location.** This criterion assesses the proximity of each issue in relation to activities occurring on Dobbins ARB and surrounding areas. Issues occurring near the installation are often more critical than those occurring remotely.
- **Potential Impact.** Although an issue may not have a current impact on the installation or the community, it may possess the ability to become an issue in the future. Should conditions change, adjacent or proximate development increase, or other issues become apparent, new conflicts with existing or future missions and operational activities at Dobbins ARB could arise. Issues were considered based on their future potential using the same criteria that were established for current impact.

With a comprehensive list of issues to address in the JLUS, the public and AC identified the relative priority of each compatibility factor. The PC finalized the prioritization of issues based on public and AC input, categorizing the factors into four categories:

- **High-Priority.** Due to the nature of these issues, an immediate response is warranted. Issues identified as High Priority are to be initiated within 1-2 years following completion of the JLUS.
- **Medium-Priority.** To be initiated within 3-4 years following completion of the JLUS.
- **Low Priority.** To be initiated in 5 or more years following completion of the JLUS.

- **Awareness Factors.** Awareness factors are those issues that pose a minimal impact to Dobbins ARB and/or the surrounding jurisdictions and are documented in this JLUS for the purpose of maintaining operational awareness. These items do not require action at the current time, but should be monitored in the long term.

5.4 Dobbins ARB Compatibility Issues by Factor

Air quality is defined by numerous components that are regulated at the federal and state level. For compatibility, the primary concerns are pollutants that limit visibility (such as particulates, ozone, etc.) and potential non-attainment of air quality standards that may limit future changes in operations at the installation or in the area. The following Air Quality Protection issues were identified:

- **Regional Air Quality.** Reductions in non-attainment for regional air quality could result in increased environmental compliance efforts and costly emissions offsets which would impact Dobbins ARB and possibly limit operations associated with air emissions.

Anti-Terrorism / Force Protection is the protection and security of the nation's defense assets. Issues are created when national defenses can be breached or compromised, such as development close to the fence line where the public can view operational activities. It is important for the DOD and Dobbins ARB to address these issues to ensure military readiness. The following Anti-Terrorism / Force Protection issues were identified:

- **Proximity and Unobstructed Viewshed.** Concerns over external sightlines into Dobbins ARB from Highway 41 (Cobb Parkway). Multiple businesses that line Cobb Parkway have an unobstructed view of Dobbins ARB operations.

- **Proximity of A.L. Burruss Nature Park.** Concerns over external sightlines into Dobbins ARB from public parks. A.L. Burruss Nature Park is a 45-acre park adjacent to the portion of Dobbins ARB north of South Cobb Drive. The west side of the park runs along the Dobbins ARB fence line providing unobstructed sight lines into Dobbins ARB property.
- **Perimeter Fencing.** Multiple times per year cars collide with the perimeter fence along S Cobb Drive creating a breach that must be guarded until fixed. The winding road has hills and curves which can create hazardous driving conditions.

Climate Change is the gradual shift of global weather patterns and temperature resulting from natural factors and human activities (e.g. burning of fossil fuels) that produce long-term impacts on atmospheric conditions. The effects of climate change vary and may include fluctuations in sea levels, alterations of ecosystems, variations in weather patterns, and natural resource availability issues. The results of climate change, i.e. ozone depletion and inefficiencies in land use, can present operational and planning challenges for the military and communities as resources are depleted and environments altered. The following Climate Change issues were identified:

- **Urbanization of Watersheds.** Concern that urbanization of watersheds coupled with greater frequencies and intensities in storms could result increased stormwater runoff volumes resulting in localized flooding. Heavy rainfall events, when coupled with increases in impervious surfaces, produce large quantities of runoff that can potentially overwhelm stormwater distribution systems causing flash floods.

Coordination / Communication refers to the programs and plans that promote interagency coordination. Interagency communication serves the general welfare by promoting a more comprehensive planning process inclusive of all affected stakeholders. Interagency coordination also seeks to develop and include mutually beneficial policies for both communities and

the military in local planning documents such as general plans. The following Coordination / Communication issues were identified:

- **Public Outreach Opportunities.** A strong relationship between Dobbins ARB and the public fosters community support for operations, future projects, and mission changes at Dobbins ARB. Budget limitations can impact public outreach and media coverage opportunities, affecting the ability of the Base to optimize relationships with the public.
- **Development Review Coordination.** There is limited or no formalized reciprocal consultation between Dobbins ARB and surrounding jurisdictions for review of development plans. While Dobbins ARB and jurisdictions may engage in informal verbal and electronic communications, there is no formal agreement delineating points-of-contact, types of projects, review timeframes, or the roles and responsibilities for each affected party. This can potentially lead to confusion and duplication of resources or inability to reach the intended audience in a timely manner.
- **State and Local Coordination.** Dobbins ARB maintains a stronger relationship with Congress than with state and local government officials. Although Dobbins ARB quarterly meets with congressional stakeholders to preserve partnerships and promote cooperation, this interaction is limited between local and state elected officials.
- **Information Coordination.** Internal organizational coordination from leadership to staff within jurisdictions is critical to effective analysis and decision-making on compatibility issues. Improve the top-down information flow on compatibility issues to ensure staff can make timely and optimized analysis and recommendations to management and elected officials.
- **Operational Footprint Awareness.** Property buyers may be unaware of the Dobbins ARB mission impact when purchasing land or homes. Compatibility with safety zones and other operational impacts associated with the mission footprint may not always be communicated to private property buyers.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

- **School District Coordination.** Improving coordination between Dobbins ARB and School Districts has the potential to reduce incompatible school siting. Any coordination between School Boards and Dobbins ARB regarding the placement of new school facilities is conducted informally.

Cultural Resources are defined by buildings, features, objects, locations, and historic structures that provide evidence of past accomplishments and events of individuals. Cultural resources may prevent development, apply development constraints, or require special access by Native American tribes, other groups, or governmental regulatory authorities. The following Cultural Resources issue was identified:

- **Access to Jonesville Cemetery.** Difficult physical access and security concerns associated with historic Jonesville Cemetery located inside Dobbins ARB.

Frequency Spectrum Interference / Impedance is the interruption of electronic signals due to the existence of a structure or object between the source of the signal and its destination (receptor). Such obstructions can include wind turbines, cell towers, and tall buildings depending on the ground-level elevation at the site and the numbers of structures within a confined area. The following Frequency Spectrum Interference / Impedance issues were identified:

- **Radio Frequency Interference.** Flights on approach at the east end of Runway 29 experience communications outages with Command Post from sources in the APZs.
- **Internet Connectivity Projects.** Potential for frequency conflict with wireless providers and possible increased use of small cell towers.

Land, Air and Sea Space Competition is the management or use of land and air space to accomplish testing, training, and operational missions. These resources must be available and of a sufficient size, cohesiveness, and quality to accommodate effective training and testing. Military and civilian air operations can compete for limited air space, especially when the

airfields are in close proximity to each other. Use of this shared resource can impact future growth in operations for all users. The following Competition for Land and Air Spaces issues were identified:

- **Unauthorized Unmanned Aerial Vehicles.** Potential for unauthorized Unmanned Aerial Vehicles (UAVs) to irregularly impact Dobbins flight patterns. UAVs could be commercial, personal, or used sporadically to monitor storms or assist in rescue operations. There is a general concern that UAVs in the airspace over Cobb County and Dobbins ARB could interfere with or complicate civilian and military airspace use.
- **Airspace Competition.** Regional airspace congestion from commercial and general aviation has the potential to impact future missions at Dobbins ARB. With the presence of Dobbins ARB and many public and private airports in the Atlanta region, there is constant competition for airspace requiring deconflicting of shared use. With the growth in population, the associated increased demand for commercial and private air travel, this competition is likely to intensify.

Land Use planning and regulation relates to the government's role in protecting the public's health, safety, and welfare. Local jurisdictions' general plans and zoning ordinances can be the most effective tools for avoiding or resolving land use compatibility issues. These tools including the Dobbins ARB overlay districts for Cobb County and the City of Marietta balance land use compatibility with safety and noise zones and imaginary surfaces to promote development patterns appropriate for the airfield vicinity while protecting public property rights. Land use separation also applies to properties where the use of one property may adversely impact the use of another. For instance, industrial uses are often separated from residential uses to avoid impacts related to noise, odors, lighting, and so forth. The following Land Use issues were identified:

- **Public Transportation and High Density Development.** Concern for compatibility with potential high-density development resulting from regional public transportation infrastructure improvements proximate to Dobbins ARB. Transit corridors are catalysts for surrounding development and rely on increased densities and intensities to support them.
- **Redevelopment Areas.** Redevelopment is an important contributor to economic vitality. A number of redevelopment initiatives are underway within the JLUS Study Area. Within these redevelopment areas, compatibility of land uses with Dobbins ARB operations is critical.
- **Densities in the Accident Potential Zones.** Residential densities in Accident Potential Zones exceed recommended thresholds creating a safety concern.
- **Dobbins ARB Overlay Districts.** Concern that Dobbins ARB Overlay Districts do not comprehensively reflect the recommendations of the 2011 AICUZ Study. Cobb County and the City of Marietta have adopted Zoning Overlay Districts to prevent incompatible land use associated with Dobbins ARB operations; however, the Overlay regulations are less stringent than the AICUZ recommendations.
- **SunTrust Park Development and Spin-off Impacts.** Development associated with the SunTrust Park should be coordinated to minimize impacts on Dobbins ARB operations.
- **SunTrust Park Operational and Game Day Impacts.** The SunTrust Park operations should be coordinated to minimize operational and game day impacts on Dobbins ARB aviation missions.

Light and Glare can be generated by both military and civilian uses. Light and glare can be generated from certain construction materials during the daytime when sunlight reflects off the structure. This can create visual impairments for pilots flying at low altitudes. Certain types of alternative energy development can create glare for pilots in training, posing a safety hazard to the pilot and the aircraft. The following Light and Glare issues were identified:

- **Light Pollution.** Ambient light from sources surrounding Dobbins ARB affects the performance of nighttime aviation training using night vision equipment
- **Light and Glare within the Approach and Departure Surfaces.** Areas with a high density of cars such as large parking lots can create areas of reflective surfaces with the potential to impede daytime pilot visibility. Lighting intensities and configurations can create ambient nighttime lighting conditions that affect pilot visibility, orientation, and training with night vision equipment. This of particular concern within the approach and departure areas extending from the ends of runways.
- **Upward-directed Spotlights.** Upward-directional spotlights used for temporary events and business advertising can interfere with pilot visibility and create a distraction at night. Because these lights are mobile, many high intensity lights can be redeployed frequently in differing locations.
- **Regional Roadway Improvements.** Night lighting associated with major highway and road improvement projects create ambient light which can affect pilot visibility and effectiveness of night vision equipment.

Noise is the result of both military training exercises and construction and development activities. This factor can be incompatible with sensitive land uses. Noise that is loud and extending into night hours can disrupt the lives of the public. The following Noise issues were identified:

- **Noise Complaints from Residential Communities.** Residential communities experience noise generated from Dobbins ARB aircraft operations. Aircraft noise is one of the most common disrupting factors associated with airfield operations. Generally, aircraft approaching and departing an airfield create the greatest noise impact on the surrounding community.



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

- **Range Activities Generate Noise.** Dobbins ARB range activities create noise which impacts the surrounding residential community. The Dobbins ARB mission includes combat range training and training for, and disposal of, unexploded ordnance in the southeast portion of Dobbins ARB.
- **University Campus Expansion.** Concern over Dobbins ARB flight operations noise impact on potential expansion of the Kennesaw State University Marietta Campus and Life University.
- **Dobbins ARB Contact Information.** Neither the Georgia National Guard nor the Dobbins ARB websites are designed for easy public access to information on noise from operations or for filing noise complaints.
- **Helicopter Noise.** Communities in the north/south flight corridor experience nighttime helicopter noise which may be perceived as a disturbance. Helicopter approach flight paths run from north to south toward the east end of Dobbins ARB. Helicopter departure flight paths run from south to north near the west end of Dobbins ARB.
- **New Residents.** New property owners may be unaware and unaccustomed to noise from aircraft overflight resulting in potential for increased noise complaints. Noise and vibration impacts affect properties in the vicinity of Dobbins ARB and may not be directly communicated to buyers prior to purchase.

Roadway Capacity relates to the ability of existing freeways, highways, arterials, and other local roads to provide adequate mobility and access between military installations and their surrounding communities. The following Roadway Capacity issues were identified:

- **High Traffic Volumes.** Access to Dobbins ARB during rush hour and weekend training periods causes traffic stacking on public roads. The Main Gate, located on the northeast side of the Base off of Cobb Parkway, is the most widely used access point but has limited room for vehicle stacking. This lack of space can cause back-ups onto Cobb Parkway, affecting through traffic and creating safety hazards.

Safety zones are areas in which development should be more restrictive, in terms of use and concentrations of people, due to the higher risks to public safety. Issues to consider include aircraft accident potential zones, weapons firing range safety zones, and explosive safety zones. The following Safety issues were identified:

- **Incompatible Uses in the Clear Zones.** Incompatible uses in the Clear Zones (CZ) extending from each end of Runway 11/29 outside Dobbins ARB create a safety concern.
- **Incompatible Uses in the Accident Potential Zones.** Incompatible uses which encourage the concentration of people in the Accident Potential Zones (APZs) extending beyond the CZs into Cobb County and the City of Marietta create a safety concern.
- **Coordinated Funding.** There is no funding or coordinated funding strategy among stakeholders to acquire vacant parcels within the Clear Zones.
- **Habitat for Wildlife Surrounding Base.** Vegetation and water sources within the immediate vicinity of Dobbins ARB can encourage nesting habitats for birds which pose a safety hazard for flight operations.
- **Bird Hazards.** Birds and bird attractants within a five statute mile radius of Dobbins ARB create an opportunity for bird aircraft strike hazards. This area includes water bodies, golf courses / putting ranges, and three landfill transfer stations.

Vertical Obstructions are structures that impede navigable airspace for both military and civilian aircraft operations. Structures that pose a threat to the airspace for military and civilian aviation include tall wind turbines and wireless communication towers. It is important to ensure the communities adjacent to Dobbins ARB plan accordingly to safeguard against unintended safety concerns relative to structures that obstruct navigable airspace. The following Vertical Obstructions issues were identified:

- **Road Construction and Expansion Projects.** Future road construction and expansion projects proximate to Dobbins ARB could create potential vertical obstructions for aircraft operations. Potential obstructions include temporary construction equipment and permanent infrastructure such as light poles. This is of primary concern for the Interstate 75 to US Highway 41 corridor projects.
- **Tree Evaluation.** Trees create potential vertical obstructions for aircraft within the Clear Zones and Approach and Departure Surfaces associated with Runway 11/29 immediate outside Dobbins ARB.
- **Tree Density and Preservation Requirements.** Tree density and preservation requirements in local zoning ordinances do not consider Clear Zone and Approach and Departure Clearance Surface height requirements.
- **Tree Clearing on Private Property.** The vertical obstruction hazard that tree heights present in critical flight areas outside Dobbins ARB – Clear Zones, Approach/ Departure Surface, and Inner Horizontal Surface, necessitates clearing on private property. A coordinated effort between Dobbins ARB and local jurisdictions is required to ensure positive public relations are maintained.
- **Obstructions in Imaginary Surfaces.** Permanent structures, such as light poles and utility lines, pose a potential safety concern for flight operations within Department of Defense established imaginary surfaces associated with Dobbins ARB Runway 11/29.
- **Future Regional Water Quantity.** Demand for future water supply sources is directly tied to regional growth. With a limited supply of water and increased demand from population growth, short-term usage restrictions affecting the regional communities and Dobbins ARB may be required during periods of shortfalls in supply. In the long-term, the Metropolitan North Georgia Water District has concluded that the region will need other water supply sources. The uncertainty of the future water supply could impose restrictions on future water use.
- **Future Regional Water Quality.** Regional population growth, associated increased wastewater, and stormwater discharges, coupled with polluted wastewater, stormwater, and aging water infrastructure at Dobbins ARB creates concern for future water quality within the region.

Water Quality and Quantity is the factor that assesses the quantity and quality of water resources in the Dobbins ARB JLUS Study Area. This factor evaluates the amount of water that is utilized by the installation relative to the available supply of water and then compares that with the demand and supply that is utilized by the surrounding communities to provide for the necessary public services. In addition to evaluating the water supply, this factor also reviews the overall quality of public water use in the JLUS Study Area. Water quality can be affected by military operations, public recreation use and stormwater drainage. The following Water Quality and Quantity issue has been identified:



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Please see the next page.



Implementation Plan

6

6.1 Implementation Plan

This section identifies and organizes the recommended actions (strategies) developed through a collaborative effort between representatives of local jurisdictions, Dobbins ARB, state and federal agencies, local organizations, the general public and other stakeholders that own or manage land or resources in the region. Because the Dobbins ARB JLUS is the result of a collaborative planning process, the recommendations in this section represent a true consensus plan; a realistic and coordinated approach to compatibility planning developed with the support of stakeholders involved throughout the process.

JLUS strategies incorporate a variety of actions that can be implemented to promote compatible land use and resource planning. Upon implementation, existing and potential compatibility issues arising from the civilian / military interface can be removed or significantly mitigated. As such, the recommended strategies function as the heart of the JLUS document and are the culmination of the planning process.

It is important to note that the JLUS is not an adopted plan, but rather a recommended set of strategies which should be implemented by the JLUS participants to address current and potential future compatibility issues.

The key to the implementation of the strategies is the establishment of the JLUS Implementation Coordinating Committee to oversee the JLUS execution. Through this committee, local jurisdictions, Dobbins ARB, and other interested parties can continue their initial work together to establish procedures, recommend or refine specific actions for member agencies, and make adjustments to strategies over time to ensure the JLUS continues to resolve key compatibility issues through realistic strategies and implementation.

6.2 Implementation Plan Guidelines

The key to a successful plan is balancing the different needs of all involved stakeholders. Several guidelines formed the basis upon which the strategies were developed:

- In concert with Georgia state laws, the Implementation Plan was developed with the understanding that the recommended strategies must not result in a taking of property value. In some cases, the recommended strategies can only be implemented with new enabling legislation.
- In order to minimize regulation, where appropriate, strategies were recommended only for specific geographic areas to resolve the compatibility issue.
- Similar to other planning processes that include numerous stakeholders, the challenge is to create a solution or strategy that meets the needs of all parties. In lieu of eliminating strategies that do not have 100 percent buy-in from all stakeholders, it was determined that the solution / strategy may result in the creation of multiple strategies that address the same issue but tailored to individual circumstances.



6.3 Dobbins ARB Military Compatibility Influence Area (MCIA)

In compatibility planning, the term “Military Compatibility Influence Area” (MCIA) is used to formally designate a geographic area where military operations may impact local communities, and conversely, where local activities may affect the military’s ability to conduct its mission. The MCIA is a geographic area where specific types of recommended JLUS strategies apply.

An MCIA is designated to accomplish the following:

- Promote an orderly transition between community and military land uses so that land uses remain compatible.
- Protect public health, safety, and welfare.
- Maintain operational capabilities of military installations and areas.
- Promote an awareness of the size and scope of military areas.
- Establish compatibility requirements within the designated area, such as requirements for sound attenuation and aviation easements.

An MCIA delineates a geographic area where strategies are recommended to support compatibility planning and JLUS goal and objectives. To better reflect the area of interest and focus implementation, the MCIA is divided into Subareas.

The MCIA Subareas are a zoning technique that ensures the JLUS strategies are applied to the appropriate areas, and that locations deemed not subject to a specific compatibility issue are not adversely impacted by regulations or policies inappropriate for their location or circumstance. The MCIA encompasses all the Subareas and its geographic boundary is defined by the largest Subarea boundary. The MCIA should be used by local jurisdictions to address ways to prevent or mitigate compatibility issues. Each jurisdiction’s MCIA boundary is determined by the largest geographic boundary of all the Subareas within their jurisdiction.

For the purpose of this JLUS Implementation Plan, there is one MCIA as depicted in Figure 5.

The Dobbins ARB MCIA comprises five MCIA Subareas which are depicted in Figures 5 and 6:

- Safety Compatibility Subarea
- Noise Compatibility Subarea
- Light Compatibility Subarea
- Vertical Obstruction Compatibility Subarea
- BASH Compatibility Subarea

These MCIA Subareas are discussed in the following sections.

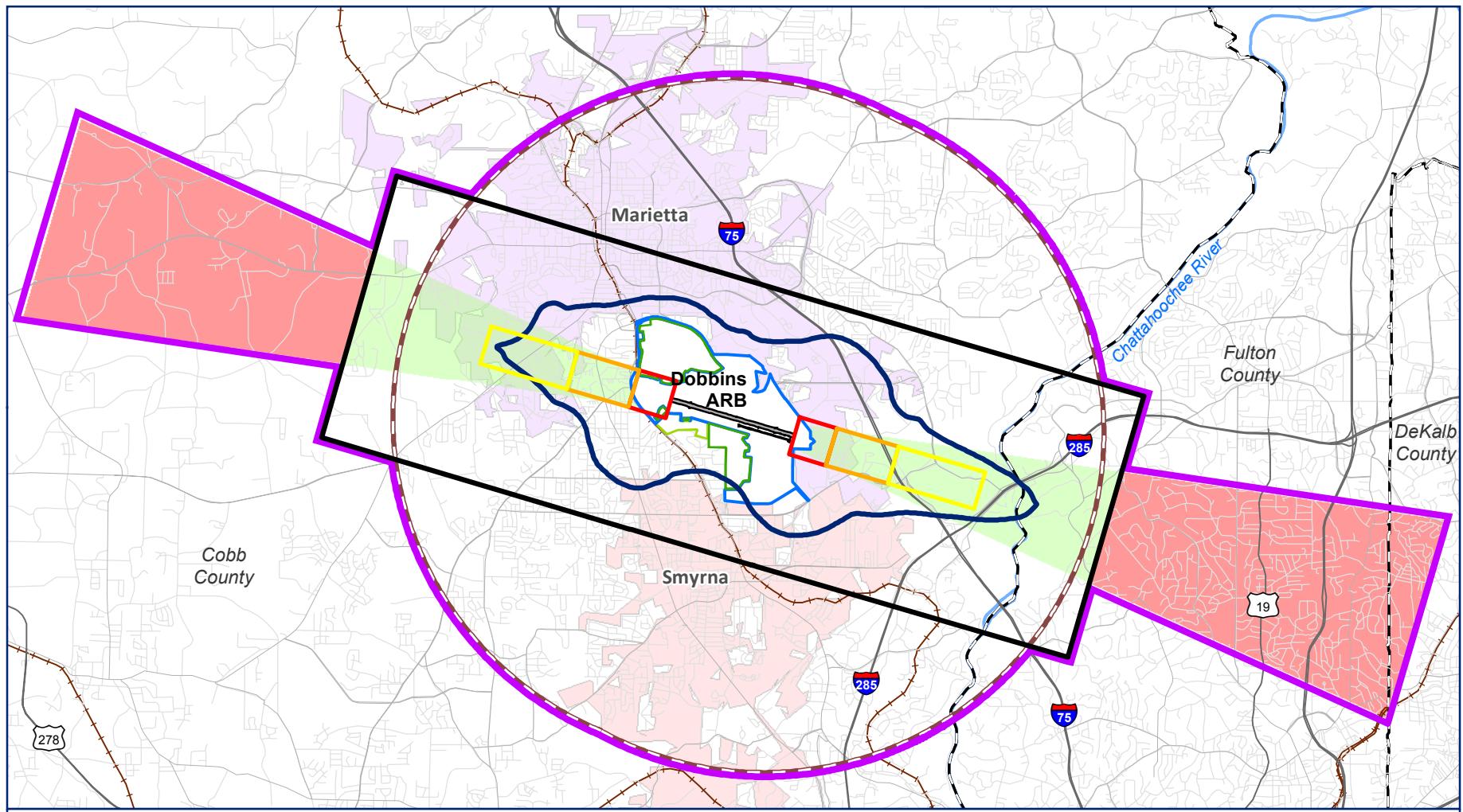
Dobbins ARB Military Compatibility Areas

Safety Compatibility Subarea

The Safety Compatibility Subarea addresses areas that could be affected by low-speed and low-altitude aircraft associated with military aviation operations. As described in Chapter 3 of the Background Report, the safety zones include the Clear Zone and Accident Potential Zones I and II. These areas are characterized by a high risk for aircraft collisions due to location and types of aviation operations that occur. The size and location of these areas are illustrated in Figures 5 and 6.

Noise Compatibility Subarea

The Noise Compatibility Subarea includes all land located off installation within the 65 dBA DNL noise contour for Dobbins ARB. This noise contour represents areas where residential development and other noise sensitive land uses may be subject to sound attenuation measures to reduce noise impacts. The Noise Compatibility Subarea is depicted in Figures 5 and 6.



Legend

Military Company
Influence Area

BASH Military Compatibility Subarea

5-mile BASH Relevancy Area

Noise Military Compatibility Subarea

65 dBA DNL

 Light Military Compatibility Subarea

- Approach/Departure Clearance Surface
- Subzone (glide angle) = 50 ft to 1ft up to 500 ft

- Approach/Departure Clearance
- Surface Subzone (horizontal) = 500 ft

 County Bound

a City of Mariett

Highway

 Major Road

er — Railroads

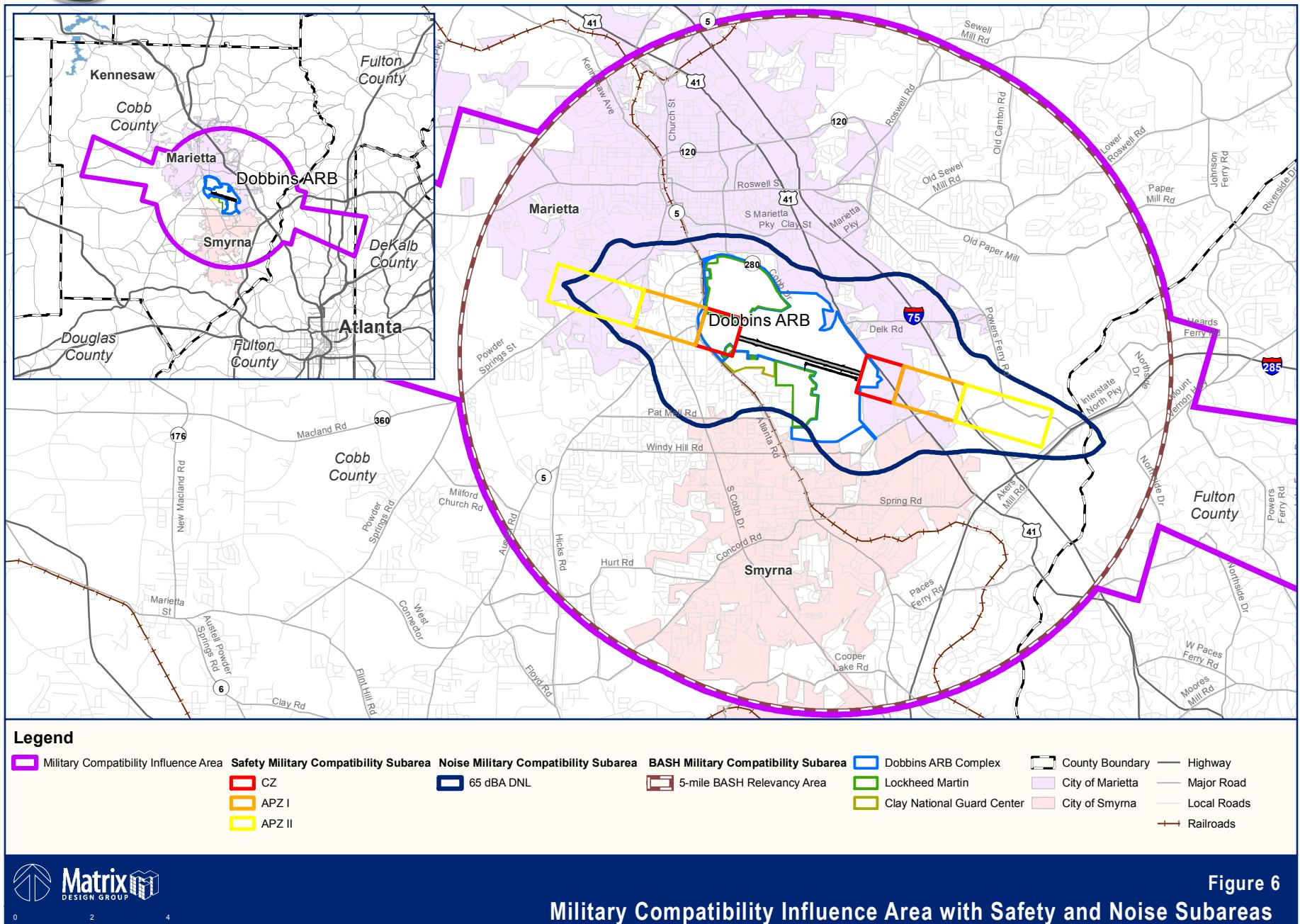
 Major River



Figure 5
Military Compatibility Influence Area



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY



Sources: ESRI, 2014; Dobbins AFB, 2011

Light Compatibility Subarea

The Light Compatibility Subarea consists of a rectangular buffer inclusive of the Approach / Departure Surface slope up to 500-foot and a 1-mile area extending perpendicular from each end of the Approach / Departure Surface connected from end to end. New development within this Subarea may be subject to lighting regulations that include fully-shielded and / or full cutoff light fixtures. The Light Compatibility Subarea is depicted on Figure 5.

Vertical Obstruction Compatibility Subarea

The Vertical Obstruction Compatibility Subarea serves to protect important flight areas for aircraft that operate out of Dobbins ARB. Within this Subzone, strategies address coordinated efforts to ensure the heights of structures do not create vertical obstructions. The Vertical Obstruction Compatibility Subarea is depicted on Figure 5.

The Vertical Obstruction Compatibility Subarea includes the 500-foot clearance zone characterized by the vertical limits of the most expansive imaginary surface—the Approach / Departure Clearance Surface. In this surface, for every 50 horizontal feet extending from the end of runway, development can extend one vertical foot. Land uses should be coordinated with Dobbins ARB to ensure safety of the public and pilots is of highest priority.

Bird / Wildlife Air Strike Hazard Compatibility Area

The Bird / Wildlife Strike Hazard (BASH) Compatibility Subarea extends out from the Dobbins ARB runway a distance of five statute miles. This Subarea is meant to include areas near the airfield with the highest safety concerns if concentrations of birds or bird-attractant uses were located there. Bird strikes with aircraft can have serious safety concerns, including the potential for loss of life or aircraft. Even minor bird strikes can cause costly repairs to aircraft and interfere with flight missions.

The five-mile distance associated with the BASH MCA is an FAA recommended standard for managing bird attractants around runways. Developments like landfills, landfill transfer stations, developments with major water features are just some examples of uses that may attract birds

in and around Dobbins ARB. The Dobbins ARB BASH Compatibility Subarea is depicted on Figure 5.

6.4 How to Read the Implementation Plan

The strategies developed were designed to address the issues identified during preparation of the JLUS. The purpose of each strategy is to:

1. Avoid future actions, operations, or approvals that would cause a compatibility issue,
2. Eliminate an existing compatibility issue,
3. Reduce the adversity of an existing issue, or
4. Provide for on-going communications and collaboration.

To make the strategies easier to use, they are presented in a table format that provides the strategy and information on when and how that strategy will be implemented. Table 2 highlights the format and content of the strategy table, and the following paragraphs provide an overview of how to read the information presented within each strategy. The strategies are provided in Table 3.

It is important to note that the outlined strategies may or may not be applicable to all agencies, depending upon further implementation details yet to be determined.

Issue / Strategy ID. The Issue / Strategy ID is an alpha-numeric number that provides a unique reference for each specific issue and strategy.

Strategy. In bold type is a title that describes the strategy. This is followed by the complete strategy statement that describes the action needed.

Timeframe. This column indicates the projected timeframe of each strategy. The timeframes are described below:



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

- 2015 Strategy to be initiated within 1-2 years following JLUS completion.
- 2018 Strategy to be initiated within 3-4 years following JLUS completion.
- 2020 Strategy to be initiated in 5 or more years following JLUS completion.
- Awareness Although no issues were identified for these factors, the potential for compatibility issues to arise in the future should be monitored.

Geographic Area. This column indicates the applicable geographic area applicable to the strategy, if it relates to an area outside Dobbins ARB. Geographic Areas may consist of the following:

- General. Does not have an applicable geography
- County. Specific county only (county is identified)
- Study Area. Applies throughout the Study Area
- Dobbins ARB. Applicable to the Dobbins ARB Installation
- MCIA. Military Compatibility Influence Area (a composite of all Compatibility Subareas)
- Compatibility Subarea. Compatibility Subarea (Safety, Noise, Light Vertical Obstruction, BASH)

Responsible Party. At the right end of the strategy table are a series of columns, one for each jurisdiction, military entity, agency, and organization with responsibility for implementing the JLUS strategies. If an entity has responsibility relative to implementing a strategy, a mark is shown under their name. This mark is one of two symbols that represent their role. A solid square (■) designates that the entity identified is responsible for implementing the strategy. A hollow square (□) designates that the entity plays a key supporting role, but is not directly responsible for implementation. The responsible parties are identified by their assigned acronym in the heading at the top of each page.

Table 2. Strategy Key

Issue or Strategy ID	Geographic Area	Strategy	Timeline	Communication / Coordination							
				Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia
COM-1		Public Outreach Opportunities. A strong relationship between Dobbins ARB and the public fosters community support for operations, future projects, and mission changes at Dobbins ARB. Budget limitations can impact public outreach and media coverage opportunities, affecting the ability of the Base to optimize relationships with the public.		■	■	■	■	■	■	■	■
COM-1A	Study Area	Develop an Outreach Campaign Plan. Develop an Outreach Campaign Plan to identify public outreach goals and action items, metrics and milestones for activities, and responsible parties for conducting outreach activities. Goals should support a range of activities including public appearances, speaking engagements, educational seminars, open houses, media engagements, exhibits, press and news release and publication development/distribution that reinforces the community understanding of Dobbins ARB, enhances its strategic value within the community, and strengthens the community support base. The Public Outreach Campaign Plan should address current issues, concerns, and potential changes at Dobbins ARB including those associated with the Georgia National Guard and Lockheed Martin. Consideration should be given to a broad mix of outreach channels including in person, print, video, and digital tools such as websites, social media, and podcasts and support from area jurisdictions and organizations.		■	■	■	■	■	■	■	■

Issue / Strategy Number:
Alpha-numeric identifier used for reference.

Geographic Area:
Where each strategy applies. For example, if only MCA is indicated, then that strategy only applies to areas within the MCA.

Strategy:
Description of the strategy.

Timeline:
The expected initiation date for strategy implementation.

Responsible Party:
The primary and partner responsible agencies. For example, the ■ denotes the primary agency who will take the lead in implementation. The □ denotes partner agency who will assist the primary agency in implementation.

Table 3. Dobbins ARB Strategies

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
AIR QUALITY												
AQ-1		Regional Air Quality Reductions in non-attainment for regional air quality could result in increased environmental compliance efforts and costly emissions offsets which would impact Dobbins ARB and possibly limit operations associated with air emissions.										
AQ-1A	Study Area	Monitor Regional Air Quality Impacts Continue to monitor air quality impacts in the Atlanta Air Quality Control Region for changes in ozone emissions and consider the adoption of policies to prevent the significant deterioration of air quality and to maintain ambient air quality standards at or below current levels. Work with the Georgia Department of Natural Resources to implement recommended control measures per the State Redesignation Request and Maintenance Plan to control Nitrogen Oxides and volatile organic compounds that create ozone. Consider particular measures at Dobbins ARB to mitigate ozone emissions including the replacement of all chlorofluorocarbon air conditioning systems and implementation of an emission monitoring system to alert when unacceptable emissions levels are reached. Develop and adopt an action plan in conjunction with the GA National Guard and Lockheed Martin for addressing periods when ozone emissions reach unacceptable levels. <i>State of Georgia:</i> Georgia Department of Natural Resources <i>Other Partner:</i> Atlanta Regional Commission	Awareness				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
ANTI-TERRORISM / FORCE PROTECTION												
AT-1		Proximity and Unobstructed Viewshed Concerns over external sightlines into Dobbins ARB from Highway 41 (Cobb Parkway). Multiple businesses that line Cobb Parkway have an unobstructed view of Dobbins ARB operations.										
AT-1A	Dobbins ARB	Screen Dobbins ARB Fence Line along Cobb Parkway Consider supplementing the existing chain link fence with additional screening such artificial hedge slats or boxwood panels that will obstruct views with an outwardly natural appearance to screen views into Dobbins ARB along the stretch of Cobb Parkway paralleling Atlantic Avenue SE where there is no land for natural vegetation on their side of the Dobbins property	2020				■					
AT-2		Proximity of A.L. Burruss Nature Park Concerns over external sightlines into Dobbins ARB from public parks. A.L. Burruss Nature Park is a 45-acre park adjacent to the portion of Dobbins ARB north of South Cobb Drive. The west side of the park runs along the Dobbins ARB fence line providing unobstructed sight lines into Dobbins ARB property.										
AT-2A	Dobbins ARB	Screen Dobbins ARB Fence Line along Park Boundary Consider screening views into Dobbins ARB from the park boundary by installing artificial hedge slats within the existing fence to obstruct views into Dobbins ARB along the property line with A. L. Burruss Park.	2020				■					

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
AT-2B	City of Marietta	<p>Coordinate with City of Marietta Police Department</p> <p>Adopt an MOU between the City of Marietta Police Department and Dobbins ARB to establish coordinated routine patrols through A.L. Burruss Park. Include specified intervals that the Marietta Police Department places the mobile security tower in the parking lot to deter potential suspicious activity that might affect Dobbins ARB security.</p> <p><i>Other Partner:</i> City of Marietta Police Department</p>	2020		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>
AT-3		<p>Perimeter Fencing</p> <p>Multiple times per year cars collide with the perimeter fence along South Cobb Drive creating a breach that must be guarded until fixed. The winding road has hills and curves which can create hazardous driving conditions.</p>										
AT-3A	Dobbins ARB	<p>Control Views Along South Cobb Drive</p> <p>Install vegetation along the Dobbins ARB Consolidated Club parking lot perimeter adjacent to the curve on South Cobb Drive to further screen paved areas inside the installation from view of southbound South Cobb Drive traffic. Similar to vegetation planted along the Dobbins ARB jogging trail adjacent to South Cobb Drive, vegetation should be sufficiently spaced and of sufficient height to screen views of parking lot that might convey to southbound drivers that Atlantic Ave SE or the parking lot is an extension of South Cobb Drive.</p>	2016				<input checked="" type="checkbox"/>					
AT-3B	Cobb County	<p>Roadway Improvements Along South Cobb Drive</p> <p>Coordinate with Cobb DOT and the Georgia Department of Transportation (GDOT) to assess, design, fund, and install a transportation improvement to keep vehicles from crashing into the Dobbins ARB perimeter fence. Coordinate with Georgia Department of Transportation to program the improvement project in the state</p>	2015	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input type="checkbox"/>	



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
AT-3B (cont'd)		transportation capital improvements program. <i>State of Georgia:</i> GDOT <i>Other Partner:</i> Atlanta Regional Commission										
BIOLOGICAL RESOURCES												
No Issues identified to date.												
CLIMATE ADAPTATION												
CA-1		Urbanization of Watersheds Concern that urbanization of watersheds coupled with greater frequencies and intensities in storms could result increased stormwater runoff volumes resulting in localized flooding. Heavy rainfall events, when coupled with increases in impervious surfaces, produce large quantities of runoff that can potentially overwhelm stormwater distribution systems causing flash floods.										
CA-1A	Dobbins ARB	Improve Dobbins ARB Stormwater Management Identify stormwater improvement projects that will enhance conveyance, retention, and detention of stormwater at Dobbins ARB. Continue to pursue sustainment, restoration, and modernization funding for stormwater projects identified in the Capital Improvements Program. Consider stormwater runoff performance standards for military construction (MILCON) projects including potential reuse for landscaping irrigation and bioswales to manage runoff from new impervious surfaces. Coordinate with Cobb County for the areas associated on the fringes where there are shared storm water resources.	2020	<input type="checkbox"/>			<input checked="" type="checkbox"/>					

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
CA-1B	Cobb County	Improve County Stormwater Management Continue improvements to regional stormwater infrastructure to facilitate better conveyance systems and access to drainage basins. Implement recommended programs for mapping, floodplain acquisition, Flood Storage Volume Purchase Program for existing privately-owned lakes and dams to create additional runoff capacity, and enhance stream buffers. Continue to program and seek funding for these initiatives through grants and the County Capital Improvement Plan. Coordinate with Dobbins ARB for the areas associated on the fringes where there are shared storm water resources.	2020	■			□					
CA-1C	Cities of Marietta and Smyrna	Improve City Stormwater Management Continue actions to improve stormwater management including deterring development in floodplains and promoting compact development coupled with open space that encourages stormwater infiltration on site and reducing peak demand on regional stormwater infrastructure. Coordinate with Dobbins ARB for the areas associated on the fringes where there are shared storm water resources.	2020	■	■		□					
COMMUNICATION / COORDINATION												
COM-1		Public Outreach Opportunities A strong relationship between Dobbins ARB and the public fosters community support for operations, future projects, and mission changes at Dobbins ARB. Budget limitations can impact public outreach and media coverage opportunities, affecting the ability of the Base to optimize relationships with the public.										



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	<input type="checkbox"/> Cobb County	<input type="checkbox"/> City of Marietta	<input type="checkbox"/> City of Smyrna	<input checked="" type="checkbox"/> Dobbins ARB	<input checked="" type="checkbox"/> GA National Guard	<input checked="" type="checkbox"/> Lockheed Martin	<input type="checkbox"/> Cobb Chamber	State of Georgia	<input type="checkbox"/> Other
COM-1A	General	<p>Develop an Outreach Campaign Plan</p> <p>Develop an Outreach Campaign Plan to identify public outreach goals and action items, metrics and milestones for activities, and responsible parties for conducting outreach activities. Goals should support a range of activities including public appearances, speaking engagements, educational seminars, open houses, media engagements, exhibits, press and news release and publication development/distribution that reinforces the community understanding of Dobbins ARB, enhances its strategic value within the community, and strengthens the community support base. The Public Outreach Campaign Plan should address current issues, concerns, and potential changes at Dobbins ARB including those associated with the Georgia National Guard and Lockheed Martin. Consideration should be given to a broad mix of outreach channels including in person, print, video, and digital tools such as websites, social media, and podcasts and support from area jurisdictions and organizations.</p> <p><i>Other Partner: Fulton County</i></p>	2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
COM-1B	MCIA	<p>Establish a Dobbins ARB Public Outreach Program</p> <p>Dobbins ARB should create an outreach plan to share information with the community. The public outreach program should describe outreach activities to include tours of the installation, development of informational brochures to be mailed to neighbors and posted on the Dobbins ARB website, a single location identifying public relations points of contact for Dobbins ARB, the GA National Guard, and Lockheed Martin, and making contact information widely available. It should also include a military and community communication protocol directory that identifies the different level of communication channels between the appointed and elected officials, to staff, to the general public and Dobbins ARB.</p> <p>As part of the outreach program, Dobbins ARB should host regularly</p>	2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-1B (cont'd)		scheduled open houses for the public to provide an overview of activities, construction, or other items of public interest. This forum should also allow residents the opportunity to comment on concerns. The open houses could be conducted on an annual basis. Any open house or activities that invite civilians onto Dobbins ARB should be deconflicted with installation activities such as changes in base command or senior leadership, and other open house activities.										
COM-1C	Safety, Noise & Vertical Obs Subareas	<p>Conduct a Good Neighbor Program</p> <p>Dobbins ARB should conduct, on a bi-annual basis, a Good Neighbor Program where they send out letters to property owners within the region inviting them to a Dobbins ARB Open Forum. The purpose of the meeting will be to allow for an open exchange of information to maintain transparent communication and provide a platform for Dobbins ARB to inform neighbors and interested citizens of any upcoming mission changes or operations and maintenance events that may have an impact on the neighbors and whereby the adjacent property owners can provide input and pose questions to Dobbins ARB representatives.</p> <p>The open houses would be held at or near Dobbins ARB on a semi-annual basis and require participation from the Georgia National Guard and Lockheed Martin with the support of each local jurisdiction.</p> <p><i>Other Partner: Fulton County</i></p>	2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-1D	General	Develop an Online Website for Clay National Guard Center Create a dedicated webpage for the Clay National Guard Center to enhance public awareness of National Guard activities associated with the Center. The website should convey operational anomalies outside of normal procedures that may impact the public and clearly identify a point of contact by phone or email for noise issues and complaints. The website should convey activities unique to the Clay National Guard Center that educate the public, generate community support, and reaffirm its relationship with the regional community. Consider incorporating social media specific to the Clay National Guard Center to reinforce outreach objectives and coordinating with Dobbins ARB, the 94th Airlift Wing, Cobb County and the cities of Marietta and Smyrna to include a link on their websites.	2015				<input type="checkbox"/>	<input checked="" type="checkbox"/>				
COM-1E	General	Enhance Online Presence of 94th Airlift Wing Public Affairs Provide a highly visible link on the Dobbins ARB website to the 94th Airlift Wing Public Affairs including what the Public Affairs is, to enhance public awareness of activities. Update the Public Affairs webpage to convey operational anomalies outside of normal procedures that may impact the public and clearly identify the point of contact for noise issues and complaints. Consider incorporating social media specific to Public Affairs to reinforce outreach objectives and coordinating with the Clay National Guard Center, Cobb County, and the cities of Marietta and Smyrna to include a link on their websites. Add a drop down menu titled Noise Complaints on the front page of the Dobbins ARB website.	2015				<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	<input type="checkbox"/> Cobb County	<input type="checkbox"/> City of Marietta	<input type="checkbox"/> City of Smyrna	<input checked="" type="checkbox"/> Dobbins ARB	<input checked="" type="checkbox"/> GA National Guard	Lockheed Martin	<input type="checkbox"/> Cobb Chamber	State of Georgia	<input type="checkbox"/> Other
COM-1F	Study Area	<p>Notify Public Through News Outlets When Exercises will be Performed Outside of Usual Time Periods</p> <p>Provide surrounding residents notification of pending operational changes through the release of information to area newspapers, television stations, and radio stations in the Atlanta area. This serves not only to notify area residents of activities but provides ongoing exposure for Dobbins ARB within the surrounding community. Notification techniques should include but not be limited to:</p> <ul style="list-style-type: none"> • Dobbins ARB Facebook / Twitter • Public Service Announcements • Dobbins ARB Falcon Flyer and local newspapers • Jurisdiction Public Relations or Communications Offices • Dobbins ARB Public Affairs webpage and Clay National Guard Center webpage • Group Email Blast to jurisdiction elected and appointed officials and public safety offices • Create specific links to cities and county websites <p><i>Other Partners:</i> External media outlets including but not limited to the Marietta Daily Journal, TV23, news radio stations with broad circulation, Cobb Chamber Community Calendar</p>	2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-2		Development Review Coordination There is limited or no formalized reciprocal consultation between Dobbins ARB and surrounding jurisdictions for review of development plans. While Dobbins ARB and jurisdictions may engage in informal verbal and electronic communications, there is no formal agreement delineating points-of-contact, types of projects, review timeframes, or the roles and responsibilities for each affected party. This can potentially lead to confusion and duplication of resources or inability to reach the intended audience in a timely manner.										
COM-2A	MCIA	Formalize Development Review Coordination Consider formalizing coordination processes to ensure long-term consistency in information sharing and communication between local jurisdictions and agencies with Dobbins ARB that will also supplement existing coordination requirements in overlay district regulations. Establish a Memorandum of Agreement (MOA) to formalize processes for Dobbins ARB review and comment on development proposals, rezoning applications, other land use or regulation changes or master plans that may pose operational impacts on Dobbins ARB. The MOA should outline an effective process that promotes productive communication and coordination that can be maintained and replicated in the future. The MOA should provide a proactive approach for identifying potential conflicts with the military as early in the development review process as possible. Include in the MOA, triggers for Dobbins ARB to convey and coordinate development reviews, when necessary, with the Georgia National Guard. The MOA with Dobbins ARB should include:	2015	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>				

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-2A (cont'd)		<ul style="list-style-type: none"> Definition of project types that require review Definition of project types that warrant military participation at development review meetings Identification of points of contact for all coordination Notification procedures for requesting and receiving comments Timeframes for responses consistent with state law and similar jurisdiction procedures. Provide notice to Dobbins ARB on all public hearings regarding projects identified for coordination. <p>Procedures should be reviewed annually and updated as appropriate by the JLUS Coordination Committee.</p> <p><i>State of Georgia: GDOT</i></p> <p><i>Other Partners:</i> Atlanta Regional Commission, School Districts, Fulton County</p>										
COM-2B	MCIA	<p>Consider Web-Based Tool for Coordinated Development Reviews</p> <p>Consider implementing a web-based tracking tool for coordinating development reviews with Dobbins ARB using automation through e-mail notifications. The tool could provide a clearinghouse to discuss various project types and a forum for discussion on broader long-term project review, such as comprehensive plan updates, zoning ordinance language, and capital improvement plans for public facilities. Ensure that project uploads include contact information, project location information, a project description, and a deadline for comments.</p>	2018	■	■	■	■	■				
COM-2C	Dobbins ARB	<p>Create a Community Planning Liaison Officer Position at Dobbins ARB</p> <p>Consider establishing a permanent Community Planning Liaison Officer at Dobbins ARB to act as the Base Commander's direct representative with local communities, public elected officials,</p>	2015				■					



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-2C (cont'd)		other government agencies and major landowners surrounding the Base. The position would serve in an oversight capacity to monitor encroachment issues that could potentially affect the Dobbins ARB mission and tenant commands. The officer could work with local, state and federal officials to coordinate planning of mutual interest issues with area jurisdictions and serve as a liaison with the Cobb Chamber, school boards, and other community organizations.										
COM-3		State and Local Coordination Dobbins ARB maintains a stronger relationship with Congress than with state and local government officials. Although Dobbins ARB quarterly meets with congressional stakeholders to preserve partnerships and promote cooperation, this interaction is limited between local and state elected officials.										
COM-3A	General	Establish a JLUS Implementation Coordination Committee Formalize through a resolution that the JLUS Policy and Advisory Committees will transition to a JLUS Implementation Coordinating Committee and Sub Committee respectfully, responsible for monitoring the implementation of the recommended JLUS strategies, maintaining efficient and effective coordination among the JLUS partners, and acting as a forum for continued communication and sharing of information and current events associated with military compatibility. <i>Other Partners:</i> Atlanta Regional Commission, Fulton County	2015	<input checked="" type="checkbox"/>								
COM-3B	Study Area	Establish a Regional Partnership to Promote the Military Value of Dobbins ARB and the Regional Community Create a non-profit 501(c)(6) organization to enhance the military value of Dobbins ARB and the surrounding community, working with the local, regional, state and national governments, Cobb Chamber, development authorities, economic development agencies, the Cumberland Community Improvement District,	2015	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-3B (cont'd)		<p>Atlanta Regional Commission, and other interested parties to ensure the long-term viability and sustainability of Dobbins ARB and economic development throughout the region.</p> <p>The organization should act as a community liaison to safeguard Dobbins ARB's ability to operate a variety of missions without operational restrictions, support current and new missions, ensure ongoing community support and infrastructure favorable to military missions, facilitate community and installation partnerships, enhance quality of life for assigned personnel and reservists, and work with community partners to foster regional development supported by a qualified workforce.</p> <p><i>Other Partners:</i> Cumberland Community Improvement District, Atlanta Regional Commission, Georgia Military Affairs Coordinating Committee, Atlanta Regional Military Affairs Council, development authorities, economic development agencies, Fulton County</p>										
COM-3C	General	<p>Engage and Coordinate with State Representatives and Local Leadership</p> <p>Engage local leadership including Planning Commissioners, City Councils, County Commissioners, Board of Zoning Appeals members, and state representatives of the General Assembly to maximize support and provide a unified voice targeted to state supported funding of encroachment reduction initiatives.</p> <p>Note: this effort may be conducted by the non-profit 501(c)(6) organization recommended in Strategy COM-3A.</p> <p><i>State of Georgia:</i> state representatives</p> <p><i>Other Partners:</i> Atlanta Regional Military Affairs Council, and local leadership</p>	2015	<input type="checkbox"/>								



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-3D	General	<p>Enhance Partnership Opportunities for Local Jurisdiction Staff and Leadership, State Representatives, Congressional Staffers to Support Dobbins ARB</p> <p>To maximize support for Dobbins ARB from all levels of government, solicit participation from planning staff and leadership from Cobb County and the cities of Marietta and Smyrna, state officials, and congressional staffers at local functions that support Dobbins ARB such as Atlanta Regional Military Affairs Council events.</p> <p>Create new opportunities for support, and partnerships that foster synergies, continued community support, and advocacy for current and new missions. Consider partnership opportunities to advance and implement proposed JLUS strategies in conjunction with the proposed partnership organization in Strategy COM-3B.</p> <p><i>State of Georgia:</i> state representatives</p> <p><i>Other Partners:</i> Georgia Military Affairs Coordinating Committee, Atlanta Regional Military Affairs Council, local jurisdiction staff and leaders, congressional staffers, Fulton County</p>	2015	<input checked="" type="checkbox"/>								

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-3E	General	<p>Provide Mutual Briefings</p> <p>To perpetually enhance support and cooperation, and reinforce the partnership between Dobbins ARB and local jurisdictions, Dobbins ARB should annually present a “state of the installation” briefing including strategic goals, operational changes, and proposed construction projects that may impact the greater community to the Cobb County Board of Commissioners and city councils of Marietta and Smyrna. Cobb County and the cities of Marietta and Smyrna should provide annual briefings to Dobbins ARB of changes within the communities that may impact the installation including comprehensive plans, master plans, transportation plans, zoning, development projects, and capital improvement plans.</p> <p><i>Other Partner:</i> Fulton County</p>	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input type="checkbox"/>
COM-3F	Study Area	<p>Enhance Relationship with Educational Institutions</p> <p>Continue to pursue and leverage opportunities with area educational institutions. Identify and target curriculum-focused teaching, training, and research opportunities that further the missions and goals of Dobbins ARB and provide an investment in a technically-proficient and highly-skilled community workforce.</p> <p><i>Other Partners:</i> Georgia Tech Research Institute, Georgia Institute of Technology, Kennesaw State University, Embry-Riddle University, Chattahoochee Technical College, Georgia Highlands College, University of Georgia</p>	2015				<input checked="" type="checkbox"/>					<input type="checkbox"/>



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-3G	Dobbins ARB	Explore Public-Public and Public-Private Partnership (P4) Opportunities to Cut and Share Costs 10 US Code Section 2336 codifies Section 331 of the National Defense Authorization Act for Fiscal Year 2013 as it pertains to intergovernmental support agreements with state and local governments. Identify partnering opportunities between jurisdictions and Dobbins ARB to achieve cost savings through intergovernmental support agreements for shared services. Consider potential public-private partnerships for new lodging inside the Main Gate, additional housing, or gate security screening personnel.	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
COM-4		Information Coordination Internal organizational coordination from leadership to staff within jurisdictions is critical to effective analysis and decision-making on compatibility issues. Improve the top-down information flow on compatibility issues to ensure staff can make timely and optimized analysis and recommendations to management and elected officials.										
COM-4A	General	Coordinate Information Sharing Amend administrative policies to reinforce and encourage communication and coordination between all staffing levels within an organization - managers, directors, and staff. Include enabling language that supports and facilitates an open dialog to improve the flow of information that will assist staff analysis of compatibility issues and provide decision-makers with an optimized evaluation to implement strategies.	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
		For other strategies that address this issue refer to Strategies COM-3B and COM-3C.										

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-5		<p>Operational Footprint Awareness</p> <p>Property buyers may be unaware of the Dobbins ARB mission impact when purchasing land or homes. Compatibility with safety zones and other operational impacts associated with the mission footprint may not always be communicated to private property buyers.</p>										
COM-5A	Noise and Safety Subarea	<p>Create an Educational Campaign for New Residents to Acknowledge the Noise and Risk Involved Living in Proximity to Dobbins ARB</p> <p>To ensure that residents are aware of the risk and noise involved living in a safety zone, jurisdictions should provide information through various mediums to new resident to inform them that they are residing in a host community for Dobbins ARB and may be subject to impacts from military operations.</p> <p><i>Other Partners:</i> realtors, realtor associations, apartment associations</p>	2015	■	■	■					■	
		For other strategies that address this issue refer to Strategies COM-1A, COM-1C, NOI-1B, NOI-6A, SA-5A, and VO-2B.										
COM-6		<p>School District Coordination</p> <p>Improving coordination between Dobbins ARB and School Districts has the potential to reduce incompatible school siting. Any coordination between School Boards and Dobbins ARB regarding the placement of new school facilities is conducted informally.</p>										



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
COM-6A	Safety & Noise Subareas	Develop a Memorandum of Understanding with School Districts Dobbins ARB should develop a Memorandum of Understanding with the surrounding school districts to coordinate on all future school master plans to prevent schools from being planned in noise sensitive and safety areas of the Safety and Noise Subareas. <i>Other Partners:</i> Cobb County Board of Education, Marietta City Schools Board of Education, Smyrna School District Board	2015				■					■
CULTURAL RESOURCES												
CR-1		Access to Jonesville Cemetery Difficult physical access and security concerns associated with historic Jonesville Cemetery located inside Dobbins ARB.										
CR-1A	Dobbins ARB	Establish a Memorandum of Agreement with Mount Sinai Baptist Church members to access the cemetery Establish procedures for visitor processing including visiting hours and a Dobbins ARB point of contact. Distribute this information to parishioners and include on the Dobbins ARB website. <i>Other Partners:</i> Mount Sinai Baptist Church, other interested parties	2020				■					■
DUST / SMOKE / STEAM												
No Issues identified to date.												
ENERGY DEVELOPMENT												
No Issues identified to date.												

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
FREQUENCY SPECTRUM CAPACITY												
No Issues identified to date.												
FREQUENCY SPECTRUM IMPEDANCE / INTERFERENCE												
FSI-1		<p>Radio Frequency Interference</p> <p>Flights on approach at the east end of Runway 29 experience communications outages with Command Post from sources in the APZs.</p>										
FSI-1A	Safety Subarea	<p>Coordinate with FAA Eastern Spectrum Engineering Services-Frequency Management Office.</p> <p>Dobbins ARB should consider reaching out to and coordinating with the FAA Eastern Frequency Management Office in Atlanta, Georgia to enable identification of frequency interference sources and deconflict such interferences.</p> <p><i>Other Partners:</i> FAA Eastern Spectrum Engineering Services-Frequency Management Office</p>	2018				<input checked="" type="checkbox"/>					<input type="checkbox"/>
FSI-1B	Safety Subarea	<p>Update Plans and Amend Codes to Include Frequency Spectrum Interference Areas</p> <p>Local jurisdictions should update their Comprehensive Plans and amend Code of Ordinances to incorporate the maps for where frequency spectrum interference may occur. Coordination with Georgia Department of Transportation (Georgia Department of Transportation) and other agencies for projects should occur, as needed.</p> <p><i>State of Georgia:</i> GDOT</p>	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
FSI-1C	Vertical Obs Subarea	Amend Special Use Permit Regulations Cobb County and the cities of Marietta and Smyrna should consider amending their telecommunications regulations to include a maximum height for certain structures, e.g. towers and antennae, in the Approach and Departure Clearance Surfaces and other areas that may be impacted by military aviation and communications operations. <i>Other Partner: Fulton County</i>	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>
		For another strategy that addresses this issue refer to Strategy COM-2A										
FSI-2		Internet Connectivity Projects Potential for frequency conflict with wireless providers and possible increased use of small cell towers.										
FSI-2A	Vertical Obs Subarea	Develop an Educational and Outreach Program as Part of the Development Review Process to Ensure Developers are Aware of Dobbins ARB Frequency Requirements The jurisdictions should work with Dobbins ARB to ensure that the appropriate information is available to developers in the early phases of planning and development to promote military compatible development as it relates to the impact and limitations of frequency. <i>Other Partner: Fulton County</i>	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>
FSI-2B	Vertical Obs Subarea	Develop an Educational Outreach Program with Broadband Providers to Ensure They are Aware of Dobbins ARB Frequency Requirements Dobbins ARB should work with broadband providers to ensure that providers are aware of the installation frequency requirements when planning wireless broadband transmission facilities to deconflict and prevent future interference with required installation	2018				<input checked="" type="checkbox"/>					<input type="checkbox"/>

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
FSI-2B (cont'd)		frequencies. <i>Other Partners:</i> broadband providers										
HOUSING AVAILABILITY												
No Issues identified to date.												
INFRASTRUCTURE EXTENSIONS												
No Issues identified to date.												
LAND / AIR/ SEA SPACES												
LAS-1		Unauthorized Unmanned Aerial Vehicles Potential for unauthorized Unmanned Aerial Vehicles (UAVs) to irregularly impact Dobbins flight patterns. UAVs could be commercial, personal, or used sporadically to monitor storms or assist in rescue operations. There is a general concern that UAVs in the airspace over Cobb County and Dobbins ARB could interfere with or complicate civilian and military airspace use.										
LAS-1A	Study Area	UAV Operating Areas / Corridors Working with Dobbins ARB, local jurisdictions, and resource management agencies to provide coordination and input procedures on the identification and development of UAV operating areas / corridors. <i>Other Partners:</i> FAA, Fulton County	Awareness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input checked="" type="checkbox"/>



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LAS-1B	Study Area	<p>Enhance Coordination Efforts</p> <p>The Department of Defense through Dobbins ARB, the FAA, and the State of Georgia should develop a formalized communication / coordination protocol delineating points of contact, the responsibilities for each agency, establish regular meetings, and identify areas for coordination relative to UAV use in the area.</p> <p><i>State of Georgia: GDOT Aviation Division</i></p> <p><i>Other Partner: FAA</i></p>	Awareness				<input checked="" type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>
LAS-2		<p>Airspace Competition</p> <p>Regional airspace congestion from commercial and general aviation has the potential to impact future missions at Dobbins ARB. With the presence of Dobbins ARB and many public and private airports in the Atlanta region, there is constant competition for airspace requiring deconflicting shared use. With the growth in population, the associated increased demand for commercial and private air travel, this competition is likely to intensify.</p>										
LAS-2A	Study Area	<p>Facilitate a Civilian / Military Aviation Coordination Annual Meeting</p> <p>Dobbins ARB, the jurisdictions, and other resource agencies should consider facilitating a Civilian / Military Aviation Coordination meeting to promote collaboration among all impacted stakeholders and to address the individual issues that may arise for civilian and aviation operations.</p> <p><i>State of Georgia: GDOT Aviation Division</i></p> <p><i>Other Partners: FAA, Fulton County</i></p>	2020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LAS-2B	Study Area	<p>Develop Memorandum of Agreement for Coordination</p> <p>Based on the discussions and decisions derived from the Civilian / Military Aviation Coordination Committee, the aviation partners should formalize areas for coordination to include but not limited to:</p> <ul style="list-style-type: none"> ▪ Establish procedures for integrated military and civilian aviation operations ▪ Flexible use airspace (maximum utilization of airspace) ▪ Sharing of common navigation facilities and aviation services ▪ Joint consultation for avionics development to facilitate sustainable compatibility ▪ Expanded collaborative decision making from airport to FAA to also include airlines and military ▪ Enhanced information exchange, data sharing, and automated prediction tools <p><i>Other Partners:</i> FAA, Airlines, Local Airports—Hartsfield-Jackson IAP, Cobb County-McCollum Field, DeKalb-Peachtree Airport, Fulton County-Brown Field, Small/Stockmar Airport, and airports to the south of IAP.</p>	2020	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>					
LAS-2C	Study Area	<p>Monitor Airspace Utilization</p> <p>Dobbins ARB and the surrounding civilian airports should track and catalog the air activities that occur within each classified airspace in the JLUS study area. This will assist in assessment of utilization and determine need for adjustments between military and civilian aviation operations.</p> <p><i>Other Partners:</i> Hartsfield-Jackson IAP, Cobb County-McCollum Field, DeKalb-Peachtree Airport, Fulton County-Brown Field, Small/Stockmar Airport, and airports to the south of IAP.</p>	2020				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LAS-2D	Study Area	Airspace Utilization Study Dobbins ARB should work with the FAA to conduct a comprehensive airspace utilization study to identify areas of greatest conflict and areas where minor improvements can be made to alleviate airspace congestion during peak times, etc. Public-public partnerships (P3) and the FAA could potentially be used to fund such a study. <i>Other Partners:</i> FAA, Hartsfield-Jackson IAP, Cobb County-McCollum Field, DeKalb-Peachtree Airport, Fulton County-Brown Field, Small/Stockmar Airport, and airports to the south of IAP.	2020	<input type="checkbox"/>			<input type="checkbox"/>					<input checked="" type="checkbox"/>
LAND USE												
LU-1		Public Transportation and High Density Development Concern for compatibility with potential high-density development resulting from regional public transportation infrastructure improvements proximate to Dobbins ARB. Transit corridors are catalysts for surrounding development and rely on increased densities and intensities to support them.										
LU-1A	Safety Subarea	Update Plans to Recognize Transit Impacts on Dobbins ARB Operations Update the Cobb County Comprehensive Transportation Plan, Comprehensive Plans for the cities of Marietta and Smyrna with policy statements that recognize the potential benefits and impacts of transit on Dobbins ARB operations. Include policies that discourage transit stations or hubs and higher density / intensity development than currently prescribed by plans within the Clear Zone and Accident Potential Zones east of Dobbins ARB. Ensure that policies do not preclude a transit station at the Dobbins ARB Main Gate to serve people working at Dobbins ARB.	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LU-1B	Safety Subarea	<p>Coordinate Transit Improvements with Dobbins ARB</p> <p>Include Dobbins ARB in the review of planning future transit facilities east of Dobbins ARB that would propose transit stations or hubs within the Clear Zone and Accident Potential Zones.</p>	2018	<input checked="" type="checkbox"/>			<input type="checkbox"/>					
LU-2		<p>Redevelopment Areas</p> <p>Redevelopment is an important contributor to economic vitality. A number of redevelopment initiatives are underway within the JLUS study area. Within these redevelopment areas, compatibility of land uses with Dobbins ARB operations is critical.</p>										
LU-2A	Noise & Safety Subareas	<p>Powers Ferry Master Plan</p> <p>Consider modifying the Powers Ferry Master Plan to cap the density and intensity within the 65 dBA DNL noise contour and safety subareas at the development potential currently prescribed by zoning.</p>	2015	<input checked="" type="checkbox"/>								
		For other strategies that address this issue refer to Strategies COM-2A, FSI-1B, FSI-1D, LG-1A, LG-2A, NOI-1A, NOI-6A, VO-1A, VO-5A, and VO-5B.										



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LU-3		Densities in the Accident Potential Zones Residential densities in Accident Potential Zones exceed recommended thresholds creating a safety concern.										
LU-3A	Safety Subarea	Accident Potential Zone Land Use Evaluation Study The JLUS Implementation Coordination Committee should work with Cobb County and the City of Marietta to prepare a comprehensive land use evaluation of the land within the Clear Zone and Accident Potential Zones of the Dobbins ARB airfield to identify property owners, vacant land, entitled land, and other recorded instruments on the land within these zones. This information will be used to determine land with willing sellers that can be acquired to secure land within the CZs and APZs. The evaluation study should focus on identifying opportunities and mechanisms for density reductions including potential for land acquisition, transfers of development rights, and easements.	2015	■	■							
		For other strategies that address this issue refer to Strategies SA-1A, SA-1B, and SA-1D.										
LU-4		Dobbins ARB Overlay Districts Concern that Dobbins ARB Overlay Districts do not comprehensively reflect the recommendations of the 2011 AICUZ Study. Cobb County and the City of Marietta have adopted Zoning Overlay Districts to prevent incompatible land use associated with Dobbins ARB operations; however, the Overlay regulations are less stringent than the AICUZ recommendations.										

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LU-4A	MCIA	<p>Military Compatibility Influence Area (MCIA)</p> <p>Update comprehensive plans and amend the zoning ordinances to include the Military Compatibility Influence Area (MCIA) where not already established. The MCIA will assist in achieving military compatibility. Description of the MCIA and its Subareas can be found in the JLUS Implementation section narrative. The MCIA consists of five subareas:</p> <ul style="list-style-type: none"> • Safety Compatibility Subarea – This Subarea comprises the Clear Zones and Accident Potential Zones I and II • Noise Compatibility Subarea – This Subarea comprises the area within the footprint of the 65 dB noise contour per 1998 identified in the 2011 AICUZ Study • Light Compatibility Subarea – This Subarea forms a rectangle around the Dobbins ARB airfield extending outward from the runway ends to the 500-foot slope of the Approach/Departure Clearance Surface and extending 1-mile perpendicular to each end of the Approach/Departure Surface forming a box around the airfield • Vertical Obstruction Compatibility Subarea – This Subarea comprises the Approach / Departure imaginary surface. • BASH Compatibility Subarea –This Subarea comprises a five nautical mile radius around the airfield runway <p>The Comprehensive Plans and zoning ordinances should reflect the following:</p> <ul style="list-style-type: none"> • Include the MCIA boundaries on the Future Land Use Maps and official zoning maps where not already established • Collaborate on a case-by-case basis with Dobbins ARB to ensure development does not create a vertical obstruction. • Jurisdictions should work with Dobbins ARB concerning land uses that may attract birds i.e. detention ponds, landfills, golf courses, certain agriculture uses, etc. 	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input type="checkbox"/>



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LU-4A (cont'd)		<i>Other Partner: Fulton County</i>										
LU-4B	MCIA and all Subareas	Update Zoning Map Layer with Changes to Dobbins ARB Overlay Districts Cobb County and the City of Marietta should consider revising the overlay districts for Dobbins ARB to provide greater public transparency. Cobb County and the City of Marietta should update the digital zoning map layer with changes to the overlay district and the City of Smyrna should update their digital zoning map layer with the Noise Subarea per recommended areas identified in Strategy LU-4A as applicable. <i>Other Partner: Fulton County</i>	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input type="checkbox"/>
LU-4C	Noise Subarea	Incorporate Noise Contour Maps into Local Planning Documents Incorporate noise contour maps in City of Smyrna planning documents and on zoning map. Incorporate policies and guidelines that address noise impacts from aircraft operations and DOD compatibility guidelines as an appendix in these documents easily accessible by the public. <i>Other Partner: Fulton County</i>	2015			<input checked="" type="checkbox"/>						<input type="checkbox"/>
LU-5		SunTrust Park Development and Spin-off Impacts Development associated with the SunTrust Park should be coordinated to minimize impacts on Dobbins ARB operations.										
		For strategies that address this issue refer to Strategies COM-2A, FSI-1D, FSI-2A, LU-2B, LG-1A, LG-2A, NOI-1A, NOI-6A, VO-5A, and VO-5B.										

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LU-6		<p>SunTrust Park Operational and Game Day Impacts</p> <p>SunTrust Park operations should be coordinated to minimize operational and game day impacts on Dobbins ARB aviation missions.</p>										
LU-6A	Vertical Obs Subarea	<p>Coordinate with SunTrust Park Operating Authority to Mitigate Potential Operational and Game Day Impacts</p> <p>Establish a Memorandum of Understanding between Dobbins ARB and the SunTrust Park Operating Authority to mitigate potential operational and game impacts. The Memorandum should be established in advance of the facility opening and include standard operating procedures including notification of when fireworks will be discharged and broadcast frequencies to deconflict potential frequency interference. Modify the Memorandum once UAV regulations have been adopted by the FAA that govern their commercial use and identify procedures if they will be part of the broadcast enterprise.</p> <p><i>Other Partner: SunTrust Park</i></p>	2015				■					■
LEGISLATIVE INITIATIVES												
No Issues identified to date.												
LIGHT AND GLARE												
LG-1		<p>Light Pollution</p> <p>Ambient light from sources surrounding Dobbins ARB affects the performance of nighttime aviation training using night vision equipment</p>										



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LG-1A	Light Subarea	Dark Sky Ordinances The jurisdictions surrounding Dobbins ARB should consider adopting dark sky ordinances that regulate new lighting fixtures including amount of lumens, placement and height of fixtures, and fully-shielded downward directional fixtures. This will help mitigate any further ambient light leakage or sky glow that degrades the night time training environment around Dobbins ARB. <i>Other Partner:</i> Fulton County	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input type="checkbox"/>
LG-2		Light and Glare within the Approach and Departure Surfaces Areas with a high density of cars or large parking lots can create large areas of reflective surfaces with the potential to impede both daytime and nighttime pilot visibility. This of particular concern within the approach and departure areas extending from the ends of runways.										
LG-2A	Light Subarea	Amend Code of Ordinances to Incorporate Restrictions for LED Billboards Cobb County and the cities of Marietta and Smyrna should consider amending their ordinances to place restrictions on the use of LED billboards to reduce both ambient light and prevent distractions to pilots. Consider regulating the number of billboards and/or distance between them, lighting intensity, and rate and associated changes in light levels with screen changes. <i>Other Partner:</i> Fulton County	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input type="checkbox"/>

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LG-2B	Light Subarea	<p>Develop Lighting Retrofit Program for Large Parking Lot Structures and Other Public Facilities</p> <p>Cobb County should consider collaborating with utility providers and private developers to retrofit large parking lot structures with military compatible lighting fixtures that are fully-shielded and downward directional. The public-private partnership (P3) initiative should be considered to fund this program.</p> <p><i>Other Partners:</i> Utility providers, Private developers</p>	2018	<input checked="" type="checkbox"/>								
LG-2C	Light Subarea	<p>Update Plans and Amend Codes to Incorporate the Light Subarea in Planning Documents</p> <p>Cobb County and the cities of Marietta and Smyrna should update their plans and amend their codes to incorporate the JLUS Light Subarea in their planning documents to provide enhanced information to all stakeholders, e.g. developers and local decision makers.</p> <p><i>Other Partner:</i> Fulton County</p>	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input type="checkbox"/>
LG-2D	Light & Safety Subareas	<p>Update Comprehensive Plans and Amend Codes to Discourage Structures with a Significant Amount of Lighting Fixtures from Areas Surrounding the Approach-Departure Clearance Surface</p> <p>Cobb County and the City of Marietta should consider updating plans and amending codes to establish provisions that discourage large commercial, retail strips, car dealerships uses inside the Approach-Departure Clearance Zone and within the flight paths of the Dobbins ARB airfield.</p> <p><i>Other Partner:</i> Fulton County</p>	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>					<input type="checkbox"/>



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
LG-3		Upward-directed Spotlights Upward-directional spotlights used for temporary events and business advertising can interfere with pilot visibility and create a distraction at night. Because these lights are mobile, many high intensity lights can be redeployed frequently in differing locations.										
LG-3A	Light Subarea	Amend Zoning Ordinances Prohibiting Spotlights in Safety and Approach-Departure Clearance Zones Cobb County and the City of Marietta should amend their zoning ordinances to prohibit the use of temporary spotlights in both the Safety and Approach-Departure Clearance Surface to ensure these types of lights do not impair the vision of pilots performing aviation training activities. <i>Other Partner:</i> Fulton County	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<input type="checkbox"/>
LG-4		Regional Roadway Improvements Night lighting associated with major highway and road improvement projects create ambient light which can affect pilot visibility and effectiveness of night vision equipment.										
LG-4A	Light Subarea	Replace Lighting along Roadways Coordinate with Georgia Department of Transportation and power companies responsible for permanent roadway lighting to install downward facing fully-shielded fixtures with LED bulbs for new roadway lighting, develop a program for retrofitting fixtures with dark sky compliant fixtures, and replace current bulbs with LED bulbs when they have reached the end of their lifecycle. <i>State of Georgia:</i> GDOT <i>Other Partners:</i> Cobb EMS, Georgia Power, Marietta Power	2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
MARINE ENVIRONMENTS												
No Issues identified to date.												
NOISE												
NOI-1		Noise Complaints from Residential Communities Residential communities experience noise generated from Dobbins ARB aircraft operations. Aircraft noise is one of the most common disrupting factors associated with airfield operations. Generally, aircraft approaching and departing an airfield create the greatest noise impact on the surrounding community.										
NOI-1A	Noise Subarea	Amend Zoning Codes to Include Sound Attenuation in Construction of New Buildings in Noise Zones Consider amending zoning codes to require new residential uses and other noise sensitive land uses to be constructed with an interior noise level of 45 dBA.	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
NOI-1B	Noise Subarea	Educational Materials on Sound Attenuation Methods Use DOD or FAA sound attenuation educational materials as a supplemental educational document, describing building techniques which can be used to achieve the required 45 dBA interior noise maximum threshold. Local jurisdictions should make use of already available technical support materials from the Federal Aviation Administration and Department of Defense. <i>Other Partner: Fulton County</i>	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input type="checkbox"/>



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
NOI-1C	Noise Subarea	Require Avigation Easements Require avigation easements for properties within the Noise Subarea that notify property owners of the nearby noise, vibration, odor and other impact associated with aviation operations. These easements allow for these impacts with no liability on the jurisdictions where the noise and impacts occur or on the organization generating the noise and impacts. <i>Other Partner: Fulton County</i>	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input type="checkbox"/>
NOI-1D	Noise Subarea	Require the Dedication of Avigation / Noise Easements or a Note on the Plat for Special Use or Conditional Use Approvals Require avigation / noise easements for new development projects. Avigation easements notify property owners of the nearby noise, vibration, odor and other impact associated with aviation operations. These easements allow for these impacts with no liability on the jurisdictions where the noise and impacts occur or on the organization generating the noise and impacts.	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
NOI-2		Range Activities Generate Noise Dobbins ARB range activities create noise which impacts the surrounding residential community. The Dobbins ARB mission includes combat range training and training for, and disposal of, unexploded ordnance in the southeast portion of Dobbins ARB.										
		For strategies that address this issue refer to Strategies COM-1B, COM-1C, COM-1E, COM-1F, COM-5A, NOI-1B, NOI-1C, and NOI-1D.										
NOI-3		University Campus Expansion Concern over Dobbins ARB flight operations noise impact on potential expansion of the Kennesaw State University Marietta Campus and Life University.										

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
NOI-3A	Noise Subarea	<p>Coordinate University Campus Facility Siting</p> <p>Dobbins ARB should coordinate with Kennesaw State University Governance and Life University to ensure that university strategic plans acknowledges the 65 dBA DNL noise contours that traverse the campuses associated with Dobbins ARB flight operations.</p> <p>Ensure that any future projects, for both residential and learning facilities programmed for the campuses are outside the 65 dBA DNL noise contours or incorporate noise level reduction measures in the construction.</p> <p>Other Partners: Kennesaw State University Governance, Life University Board of Trustees / Executive Office</p>	2020				■					■
NOI-4		<p>Dobbins ARB Contact Information</p> <p>Neither the Georgia National Guard nor the Dobbins ARB websites are designed for easy public access to information on noise from operations or for filing noise complaints.</p>										
		For strategies that address this issue refer to Strategies COM-1B, COM-1D, and COM-1E.										
NOI-5		<p>Helicopter Noise</p> <p>Communities in the north/south flight corridor experience nighttime helicopter noise which may be perceived as a disturbance. Helicopter approach flight paths run from north to south toward the east end of Dobbins ARB. Helicopter departure flight paths run from south to north near the west end of Dobbins ARB.</p>										
		For strategies that address this issue refer to Strategies COM-1B, COM-1C, COM-1D, COM-1E, COM-1F, NOI-1A, NOI-1B, NOI-1C, NOI-1D, and SA-2A.										



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
NOI-6		<p>New Residents</p> <p>New property owners may be unaware and unaccustomed to noise from aircraft overflight resulting in potential for increased noise complaints. Noise and vibration impacts affect properties in the vicinity of Dobbins ARB and may not be directly communicated to buyers prior to purchase.</p>										
NOI-6A	Noise Subarea	<p>Adopt Real Estate Disclosure Amendment that Notifies Potential Buyers of Property within Noise Zones that Property is Located in a Host Community of Dobbins ARB and Subject to Operational Impacts including Noise from Overflight and Range Activities</p> <p>Develop a Military Compatibility Real Estate Disclosure to providing appropriate information about missions and operations at Dobbins ARB. The disclosure should be provided at the earliest possible point in the interaction between realtor / real estate agent and / or owner and buyer or renter and required during title transfers. The disclosure should specify that a property is located near an active military installation and may be subject to aircraft overflight and range activities generating noise, vibration and other related impacts associated with military training and readiness.</p> <ul style="list-style-type: none">• Work with Cobb Association of Realtors and local real estate representatives to develop and implement adequate language for inclusion in disclosure notices• Include language in the real estate disclosure that property located in Clear Zones (CZs) and Accident Potential Zones (APZ) are not eligible for government-backed loans• Introduce legislation requiring military compatibility real estate disclosures for jurisdictions.• Work with the Georgia Real Estate Commission & Appraisers Board, and local real estate representatives to ensure compliance with notification requirements <p><i>State of Georgia: Georgia Real Estate Commission & Appraisers</i></p>	2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
NOI-6A (cont'd)		Board <i>Other Partners:</i> Cobb Association of Realtors, local real estate representatives										
		For other strategies that address this issue refer to Strategies COM-1B, COM-1C, COM-1D, COM-1E, COM-1F, COM-5A, NOI-1A, NOI-1B, NOI-1C, and NOI-1D.										
PUBLIC TRESPASSING												
No Issues identified to date.												
ROADWAY CAPACITY												
RC-1		High Traffic Volumes Access to Dobbins ARB during rush hour and weekend training periods causes traffic stacking on public roads. The Main Gate, located on the northeast side of the Base off of Cobb Parkway, is the most widely used access point but has limited room for vehicle stacking. This lack of space can cause back-ups onto Cobb Parkway, affecting through traffic and creating safety hazards.										
RC-1A	Study Area	Plan and Budget for Roadway Improvements Cobb County DOT should plan and budget for access management improvements on Cobb Parkway to mitigate congestion and provide for mobility. Cobb County should also work with Georgia Department of Transportation as appropriate to fund access improvements. <i>State of Georgia:</i> GDOT	2018	■							□	



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
RC-1B	Dobbins ARB	Program and Budget for Installation Gate Projects that Improve Off-Base Roadway Capacity Dobbins ARB should program and budget for installation gate projects that will improve off-base roadway capacity, enhance Base access for commercial deliveries and improve vehicular mobility outside the Base. These improvements include the Main Gate at Cobb Parkway reconfiguration. Coordinate with the Cobb DOT and other stakeholders including Georgia Department of Transportation for state roadways. <i>State of Georgia: GDOT</i>	2018				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
SAFETY ZONES												
SA-1		Incompatible Uses in the Clear Zones Incompatible uses in the Clear Zones (CZ) extending from each end of Runway 11/29 outside Dobbins ARB create a safety concern.										
SA-1A	Safety Subarea	Funding Partnerships to Acquire Property within Clear Zones Cobb County, the City of Marietta, Dobbins ARB, and the Georgia National Guard should consider partnering on funding the acquisition of property within Clear Zones. Cobb County and the City of Marietta should consider various funding sources including public-private partnerships. Dobbins ARB and the Georgia National Guard should consider DOD funding sources including military construction (MILCON) funds and Operations and Maintenance funds for land acquisition. This strategy should be done in conjunction with Strategy SA-2B. <i>State of Georgia: Georgia Department of Natural Resources</i> <i>Other Partners: Georgia Conservancy, Georgia Land Trust</i>	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
SA-1B	Safety Subarea	<p>Pursue State Grant Matching Program for Acquisition of Property within Clear Zones</p> <p>Consider leveraging collaborative funds to request dedicated grant funding from the State General Assembly. Request that the State establish a grant mechanism that provides a match to local jurisdictions for land acquisition within the Clear Zones. This strategy should be done in partnership with the organization recommended in COM-3B and in conjunction with Strategy SA-2C.</p> <p><i>State of Georgia:</i> Georgia General Assembly, Georgia Department of Natural Resources</p> <p><i>Other Partners:</i> Georgia Conservancy, Georgia Land Trust</p>	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SA-1C	Safety Subarea	<p>Voluntary Conservation Easements for Property in Clear Zones</p> <p>Develop a conservation easement program to reduce development potential within the Clear Zones. This strategy should be done in conjunction with Strategy SA-2E.</p> <p><i>Other Partners:</i> Georgia Conservancy, Georgia Land Trust</p>	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>
SA-1D	Safety Subarea	<p>Create a Transfer of Development Rights Program for the Clear Zones</p> <p>Cobb County and the City of Marietta should assess and consider developing a Transfer of Development Rights Program redirect development to receiver sites outside of Clear Zones. In addition to development rights, consider the transfer of incompatible uses to reduce the risk profile within these areas. This strategy should be done in conjunction with Strategy SA-2D.</p>	2016	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
SA-2		<p>Incompatible Uses in the Accident Potential Zones</p> <p>Incompatible uses which encourage the concentration of people in the Accident Potential Zones (APZs) extending beyond the CZs into Cobb County and the City of Marietta create a safety concern.</p>										



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
SA-2A	Safety Subarea	<p>Obtain Written Agreement from New Residents Acknowledging that They Live Within a Dobbins ARB Accident Potential Zone As Condition of Utility Hookup</p> <p>Develop a disclosure form that new residents sign acknowledging that they reside on property located in a host community of Dobbins ARB and within an Accident Potential Zone. The disclosure form should educate new residents about missions and operations at Dobbins ARB. Consider partnering with the local utility companies to include the disclosure as a condition of utility hookup.</p> <p>Other Partners: Georgia Power, Cobb Electric Membership Corporation, Marietta Power</p>	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>
SA-2B	Safety Subarea	<p>Funding Partnerships to Acquire Property within Accident Potential Zones</p> <p>Cobb County, the City of Marietta, Dobbins ARB, and the Georgia National Guard should consider partnering on funding the acquisition of property within Accident Potential Zones. Cobb County and the City of Marietta should consider various funding sources including public-private partnerships. Dobbins ARB and the Georgia National Guard should consider DOD funding sources including military construction (MILCON) funds and Operations and Maintenance funds for land acquisition. This strategy should be done in conjunction with Strategy SA-1A.</p> <p><i>State of Georgia:</i> Georgia Department of Natural Resources <i>Other Partners:</i> Georgia Conservancy, Georgia Land Trust</p>	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SA-2C	Safety Subarea	<p>Pursue State Grant Matching Program for Acquisition of Property within Accident Potential Zones</p> <p>Consider leveraging collaborative funds to request dedicated grant funding from the State General Assembly. Request that the State establish a grant mechanism that provides a match to local</p>	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
SA-2C (cont'd)		<p>jurisdictions to acquire land within Accident Potential Zones to protect the Dobbins ARB mission. This strategy should be done in partnership with the organization recommended in COM-3B and in conjunction with Strategy SA-1B.</p> <p><i>State of Georgia:</i> Georgia General Assembly, Georgia Department of Natural Resources</p> <p><i>Other Partners:</i> Georgia Conservancy, Georgia Land Trust</p>										
SA-2D	Safety Subarea	<p>Create a Transfer of Development Rights Program for the Accident Potential Zones</p> <p>Cobb County and the City of Marietta should assess and consider developing a Transfer of Development Rights Program to protect the Dobbins ARB mission and redirect incompatible and potentially incompatible development to a receiver sites outside of Accident Potential Zones. In addition to development rights, consider the transfer of incompatible uses to reduce the risk profile within these areas. This strategy should be done in conjunction with Strategy SA-1D.</p>	2016	■	■							
SA-2E	Safety Subarea	<p>Voluntary Conservation Easements for Property in Accident Potential Zones</p> <p>Develop a conservation easement program to reduce development potential within the Accident Potential Zones. This strategy should be done in conjunction with Strategy SA-1C.</p> <p><i>Other Partners:</i> Georgia Conservancy, Georgia Land Trust</p>	2015	■	■		■					■
		For another strategy that addresses this issue refer to Strategy LU-3A.										
SA-3		<p>Coordinated Funding</p> <p>There is no funding or coordinated funding strategy among stakeholders to acquire vacant parcels within the Clear Zones.</p>										



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
		For strategies that address this issue refer to Strategies COM-3B, COM-3C, SA-1A, SA-1B, SA-2B, and SA-2C.										
SA-4		Habitat for Wildlife Surrounding Base Vegetation and water sources within the immediate vicinity of Dobbins ARB can encourage nesting habitats for birds which pose a safety hazard for flight operations.										
SA-4A	Safety Subarea	Request a Landscaping Maintenance Easement from CSX Transportation for Abandoned Railway Right-of-Way Dobbins ARB should request an easement from CSX Transportation, the land leaseholder, for the purpose landscaping maintenance within the railway right-of-way immediately west of Dobbins ARB. If an easement cannot be obtained from CSX, pursue an easement from the State of Georgia (property owner) once the CSX Transportation lease expires in 2019. <i>State of Georgia: State of Georgia Other Partner: CSX</i>	2018				■				□	□
SA-4B	BASH Subarea	Amend Zoning Ordinances to Include Bird / Wildlife Air Strike Hazard Regulations Amend zoning ordinances to regulate land uses and guide building standards that will not attract birds and other wildlife in the BASH Compatibility Subarea, specifically within the Approach / Departure Clearance Surface. Such controls should include prohibiting certain trees and foliage that attract birds in this area. <i>Other Partner: Fulton County</i>	2018	■	■	■						□

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
SA-5		<p>Bird Hazards</p> <p>Birds and bird attractants within a five statute mile radius of Dobbins ARB create an opportunity for bird aircraft strike hazards. This area includes water bodies, golf courses / putting ranges, and three landfill transfer stations.</p>										
SA-5A	BASH Subarea	<p>Educate the Public About Bird Attractants</p> <p>Provide public awareness and educational programs to improve the public understanding of the hazards of bird attractants and habitats on the aviation activities at Dobbins ARB. Include this information on jurisdiction and Dobbins ARB websites, and include as part of the Public Outreach Program in COM-1B.</p> <p><i>Other Partner: Fulton County</i></p>	2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input type="checkbox"/>
		For other strategies that address this issue refer to Strategies COM-1D, COM-1E, and SA-4B.										
SCARCE NATURAL RESOURCES												
No Issues identified to date.												



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
VERTICAL OBSTRUCTIONS												
VO-1		Road Construction and Expansion Projects Future road construction and expansion projects proximate to Dobbins ARB could create potential vertical obstructions for aircraft operations. Potential obstructions include temporary construction equipment and permanent infrastructure such as lighting fixtures. This is of primary concern for the Interstate 75 to US Highway 41 corridor projects.										
VO-1A	Vertical Obs Subarea	Utility Infrastructure Coordination Electric utility companies and the Georgia Department of Transportation should coordinate with Dobbins ARB on the height of temporary construction equipment and siting of above-ground permanent utility / light poles and infrastructure to ensure utilities associated with road construction expansions projects do not create a vertical obstruction to Dobbins ARB aviation operations. <i>State of Georgia: GDOT</i> <i>Other Partner: Georgia Power</i>	2018				<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VO-2		Tree Evaluation Trees create potential vertical obstructions for aircraft within the Clear Zones and Approach and Departure Surfaces associated with Runway 11/29 immediate outside Dobbins ARB.										
VO-2A	Safety Subarea	Modify Tree Ordinances Consider modifying elements of tree ordinances to accommodate properties within Clear Zones. Restrict tree replacement to species that will not grow to heights that create vertical obstructions.	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
VO-2A (cont'd)		Consider not counting trees removed for safety purposes against density or quantity requirements. Where not already implemented, establish a Tree Replacement Fund to allow properties to make payments in lieu of meeting tree density / quantity requirements.										
VO-2B	Safety Subarea	<p>Tree Maintenance Communication</p> <p>Establish a Tree Maintenance Communication / Education Program targeted to property owners within the Clear Zones. Consider a joint effort between Dobbins ARB, Cobb County, and the City of Marietta to send a cohesive message to property owners affected by the tree trimming / cutting requirements for aviation safety. The partnership could conduct outreach through direct mailings, open house meetings, and coordinated / targeted community and business visits in advance of cutting within a particular area. The information campaign could include an overview of why the cutting is necessary, the frequency for cutting or schedule so that property owners are aware of when the upcoming activity will be taking place, and how cutting affects their property relative to City and County regulations. Consider conducting the outreach as an ongoing activity on an as-needed basis.</p>	2015	■	■		■					
VO-3		<p>Tree Density and Preservation Requirements</p> <p>Tree density and preservation requirements in local zoning ordinances do not consider Clear Zone and Approach and Departure Clearance Surface height requirements.</p>										
		This issue can be addressed by Strategy VO-2A.										



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
VO-4		Tree Clearing on Private Property The vertical obstruction hazard that tree heights present in critical flight areas outside Dobbins ARB – Clear Zones, Approach/Departure Surface, and Inner Horizontal Surface, necessitates clearing on private property. A coordinated effort between Dobbins ARB and local jurisdictions is required to ensure positive public relations are maintained.										
		This issue can be addressed by Strategy VO-2B.										
VO-5		Obstructions in Imaginary Surfaces Permanent structures, such as light poles and utility lines, pose a potential safety concern for flight operations within Department of Defense established imaginary surfaces associated with Dobbins ARB Runway 11/29.										
VO-5A	Vertical Obs Subarea	Develop a 3-Dimensional Imaginary Surfaces Model Cobb County should work with the cities of Marietta and Smyrna with the assistance of Dobbins ARB to develop a digital and printed 3D model of existing height regulations compared to allowable heights for the glide slope of the Approach / Departure Surface. This tool will assist the jurisdictions in considering amendments to their zoning regulations to further enhance military compatibility and for determining whether heights of proposed structures obstruct the navigable airspace during the review of development applications. <i>Other Partner:</i> Federal Aviation Administration, Fulton County	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
VO-5B	Vertical Obs Subarea	<p>Dobbins ARB Review of Proposed Structures</p> <p>Include Dobbins ARB representatives in the review of any proposed development that meets or exceeds the established heights based on the 3-Dimensional Imaginary Surfaces Model developed in Strategy VO-5B. Adhere to the procedures and protocols established in Strategy COM-2A.</p> <p><i>Other Partner:</i> Fulton County</p>	2015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input type="checkbox"/>
VIBRATION												
No Issues identified to date.												
WATER QUALITY / QUANTITY												
WQQ-1		<p>Future Regional Water Quantity</p> <p>Demand for future water supply sources is directly tied to regional growth. With a limited supply of water and increased demand from population growth, short-term usage restrictions affecting the regional communities and Dobbins ARB may be required during periods of shortfalls in supply. In the long-term, the Metropolitan North Georgia Water District has concluded that the region will need other water supply sources. The uncertainty of the future water supply could impose restrictions on future water use.</p>										
WQQ-1A	Study Area	<p>Monitor Regional Water Supply and Demand</p> <p>Since there are no regulatory protections to protect or sustain Dobbins ARB in short-term drought conditions and Dobbins ARB is dependent on Lockheed Martin for potable water, Dobbins ARB should continue to monitor regional water in the short- and long-term to implement water conservation measures as necessary.</p>	Awareness				<input checked="" type="checkbox"/>					



DOBBINS AIR RESERVE BASE JOINT LAND USE STUDY

Issue / Strategy ID	Geographic Area	Strategy	Timeframe	Cobb County	City of Marietta	City of Smyrna	Dobbins ARB	GA National Guard	Lockheed Martin	Cobb Chamber	State of Georgia	Other
WQQ-1B	Dobbins ARB	Evaluate Potential for Water Conservation Conduct a comprehensive water usage audit and feasibility study to assess opportunities for indoor and outdoor water conservation techniques, including demand management strategies, water-saving devices, programs, and policies that support compact and green development.	Awareness				■					
WQQ-2		Future Regional Water Quality Regional population growth, associated increased wastewater, and stormwater discharges, coupled with polluted wastewater, stormwater, and aging water infrastructure at Dobbins ARB creates concern for future water quality within the region.										
WQQ-2A	Dobbins ARB	Monitor Stormwater Water Quality Dobbins ARB should continue to monitor quality of stormwater runoff and pursue stormwater management projects to improve detention, reduce flooding, and treat stormwater onsite. Consider updating the Storm Water Pollution Prevention Plan based on completed stormwater improvements at the Base. Continue to identify projects and request funding to improve stormwater detention.	Awareness				■					