

# Joint Land Use Study Report



Montgomery—Maxwell AFB



JOINT LAND USE STUDY

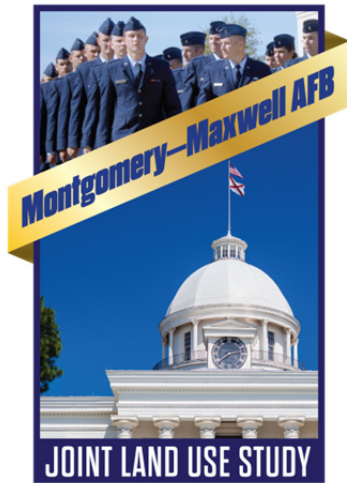


**Montgomery—Maxwell AFB**



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*This study was prepared under contract with the City of Montgomery, with financial support from the Office of Economic Adjustment, Department of Defense. 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.*



# Montgomery-Maxwell Air Force Base

## Joint Land Use Study Report

*Prepared Under Contract with:*



**City of Montgomery**  
25 Washington Avenue  
Montgomery, AL 36106

*Prepared by:*



**June 2017**

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# Acknowledgements

## Policy Committee

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

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

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# Montgomery–Maxwell AFB

Joint Land Use Study



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# Acronyms

## A

AETC	Air Education Training Command
AFB	Air Force Base
AGL	above ground level
AICUZ	Air Installation Compatible Use Zone
ALDEM	Alabama Department of Environmental Management
ALDOT	Alabama Department of Transportation
AMSL	above mean sea level
APZ	Accident Potential Zone
APZ-LZ	Accident Potential Zone-Landing Zone
AQ	Air Quality
AT	Anti-Terrorism / Force Protection
AS/DO	Assistant Squadron Duty Officer
AW	Airlift Wing

## B

BASH	Bird Air Strike Hazard
BIO	Biological Resources
BUG	Backlight, Uplight, and Glare

## C

CA	Climate Adaptation
CARPDC	Central Alabama Regional Planning and Development Commission
CEDS	Comprehensive Economic Development Strategy
COM	Communication / Coordination
CP	Comprehensive Plan
CR	Cultural Resources
CZ	Clear Zone

## D

dB	decibel
DISA	Defense Information Systems Agency
DNL	Day Night Average A-weighted Sound Level
DOC	Alabama Department of Corrections
DOD	Department of Defense
DSS	Dust, Smoke, Steam



### E

e.g.	for example
EA	Environmental Assessment
ED	Energy Development

### F

FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FSC	Frequency Spectrum Capacity
FSI	Frequency Spectrum Interference / Impedance
FY	fiscal year

### G

GIS	Geographic Information Systems
-----	--------------------------------

### H

HA	Housing Availability
HOA	Homeowners Association

### I

I	Interstate
i.e.	for example
ICEMAP	Installation Complex Encroachment Management Action Plan
IDP	Installation Development Plan
IE	Infrastructure Extensions
IGA	Intergovernmental Agreements

### J

JLUS	Joint Land Use Study
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### L

LAS	Competition for Land, Air, and Sea Space
LEG	Legislative Initiatives
LG	Light and Glare
LU	Land Use
LZ	Landing Zone

## M

M-3	Industrial Zoning District [City of Montgomery]
MAR	Marine Environments
MCA	Military Compatibility Area
MCOD	Military Compatibility Overlay District
MGM	Montgomery Regional Airport
MOA	Military Operating Area
MOU	Memorandum of Understanding
MSL	mean sea level
MTR	Military Training Route
MWW	Montgomery Water Works

## N

NGO	Non-governmental Organization
NM	nautical mile
NOI	Noise

## O

OEA	Office of Economic Adjustment
OSS / CC	Operations Support Squadron / Command Commander

## P

P.L.	Public Law
P4	Public-Public, Public-Private Partnerships
PC	Policy Committee
PT	Public Trespassing

## R

REPI	Readiness Environmental Protection and Integration
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## S

§	Section
SA	Safety Zones
SCADC	South Central Alabama Development Commission
SF	square feet
SIP	State Improvement Plan
SNCO	Air Force Senior Non-Commissioned Officer Academy
SR	Slow Route Military Training Route
STC	sound transmission class
STEM	Science, Technology, Engineering, and Math Program



### T

TBD	to be determined
TAC	Technical Advisory Committee

### U

US	United States
USAF	United States Air Force
USAHAS	United States Avian Hazard Advisory System

### V

V	Vibration
VFR	Visual Flight Rules
VO	Vertical Obstructions

### W

WASH	Wildlife Aircraft Strike Hazard
WQQ	Water Quality / Quantity





# Introduction

1

*The Maxwell Air Force Base (AFB) Joint Land Use Study (JLUS) is a collaborative planning effort led by the City of Montgomery in partnership with Montgomery County and the City of Prattville. The JLUS was undertaken in an effort to guide planning and development in the areas surrounding Maxwell AFB and Gunter Annex to help mitigate any future issues and enhance coordination among all entities involved in the process.*

*The Maxwell AFB JLUS encourages a proactive approach to promote increased communication about the important decisions surrounding land use regulation, conservation, and natural resource management issues that affect both the local communities and the military. The aim of the process is to establish and encourage a working relationship between military installations and the neighboring communities that surround them so that encroachment issues related to current and future missions and local growth can be reduced or prevented. Encroachment issues refer to the conflicting uses of land, air, water, and other resources that can individually, or cumulatively, impact the military's ability to carry out its training missions.*

*The compatibility factors considered in this document are described in the Compatibility Assessment (Chapter 5 of the JLUS or Chapter 5 of the Background Report). A review of these factors led to the development of a set of issues, which resulted in the strategies to address compatibility concerns. The recommended strategies are based on a toolbox of methods used to address the application of policy, planning and zoning, coordination and*

*communication, and outreach methods. One of the key recommendations is the formation of a JLUS Coordination Committee responsible for overseeing the implementation progress in the months and years after the JLUS is completed. The recommended strategies are outlined in more detail in Chapter 6, Recommended Plan.*

## **What Is a Joint Land Use Study?**

A Joint Land Use Study (JLUS) is a planning process accomplished through the collaborative efforts of stakeholders in a defined study area to identify compatible land uses and growth management guidelines within jurisdictions, and adjacent to, active military installation. These stakeholders include local community, state, and federal officials, residents, business owners, federal resource agencies and landholders, nongovernmental organizations, and the military. The process is intended to establish and encourage a working relationship among military installations and proximate communities to prevent and / or reduce encroachment issues associated with future mission expansion and local growth. Although primarily funded by the Department of Defense (DOD), Office of Economic Adjustment (OEA), a JLUS is produced by and for local communities. The project sponsor and grant administrator for the Maxwell AFB JLUS is the City of Montgomery.

## **JLUS Goal and Objectives**

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



This goal is achieved through application of three primary JLUS objectives.

- **Understanding.** Convene community and military representatives to identify, confirm, and understand compatibility issues and concerns in an open forum, considering both the community and military perspectives and needs. This includes increasing public awareness, education, and opportunities for input organized in a cohesive outreach program.
- **Collaboration.** Encourage cooperative land use and resource planning among Maxwell AFB, Gunter Annex, and surrounding communities so that future community growth and development are compatible with the Maxwell AFB and Gunter Annex missions and operations, while seeking ways to reduce operational impacts on land within the study area.
- **Actions.** Provide a set of mutually supported tools, activities, and procedures from which local jurisdictions, agencies, and Maxwell AFB can select, prepare, and approve / adopt in order to implement recommendations developed during the JLUS process. The actions include both operational measures to mitigate installation impacts on surrounding communities and local government and agency approaches to reduce community impacts on military operations. These tools help decision makers resolve compatibility issues and prioritize projects within their annual budgeting cycles.

## Why Prepare a Joint Land Use Study?

Collaboration and joint planning among military installations, local jurisdictions, and agencies protects the long-term viability of existing and future military missions. Working together also enhances local economies and industries before compatibility becomes an issue. 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 sustainability of local communities while protecting current and future missions at Maxwell AFB and Gunter Annex.

### ***Economic Importance***

Maxwell AFB and Gunter Annex are both located in south central Alabama. Gunter Annex is roughly five miles east of Maxwell AFB. The two bases, together, cover over 2,600 acres in the City of Montgomery, Alabama. Maxwell AFB and Gunter Annex play an important role in the regional economy, employing over 12,000 people, which makes it the largest employer in the Montgomery Metropolitan Area. It is estimated that Montgomery also has a total military population of over 25,000 including active duty, retirees, dependents, and Guard and Reservist components. Maxwell AFB provides approximately \$1.2 billion annually through indirect jobs created by the base; an additional annual value of nearly \$270 million is also generated within the community.

### ***A Part of the Local Community***

In addition to the economic benefits Maxwell AFB provides to the region, the installation is involved with a variety of community outreach and educational programs. Military personnel stationed at Maxwell AFB have become an integrated part of the surrounding communities' way of life. The Secretary of the Air Force for Installations, Environment, and Logistics named Maxwell as an Air Force Prototype for the Public-Public Private-Public Partnerships (P4) initiative, which identifies ways for installations, local governments, and community leaders to utilize their combined resources and capabilities to share the cost for services and / or enhancements that benefit the entire community. Maxwell AFB and the City have partnered on many projects since the commencement of the P4 initiative, including:

- **STARBASE STEM Program.** This provides fifth graders from the local community the unique opportunity to engage in hands-on activities focused on science and technology.

- **Gunter Annex Joint Fitness Center.** Currently under consideration, a proposal for construction of a fitness center through a partnership between the base and either the City of Montgomery or the YMCA of Greater Montgomery.
- **Freedom Park.** Freedom Park was developed by the River Region Partners at Maxwell AFB to provide a place for fitness activities and recreation to personnel with base access.

## Military Strategic Importance

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Maxwell AFB is not only important to the local community, through its economic impact and community engagement, but Maxwell AFB and Gunter Annex are also strategic assets in the nation's defense. Maxwell AFB is home to Air University, the intellectual and leadership center of the Air Force. Air University is a significant capability in the Air Education Training Command (AETC); it includes Air War College and Officer Training School and Air Command and Staff College. The University provides the full spectrum of military education from pre-commissioning to the highest levels of professional military education, including degree granting and continuing education for officers, and enlisted and civilian personnel worldwide.

In addition to Maxwell AFB's role in professional military education, the base is home to the 908th Airlift Wing (AW) Reserve Unit. The 42nd Air Base Wing is also headquartered at Maxwell AFB and operates the Gunter Annex. Gunter Annex is home to the Business and Enterprise Systems Directorate, a leader in Information Technology.

Maxwell AFB also serves as a hurricane evacuation center for southern US Air Force aircraft for bases under threat, and is a critical FEMA partner in hurricane relief efforts.

## Public Outreach

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The JLUS process was designed to create a locally relevant document that builds consensus and garners stakeholder support. To achieve the JLUS goals and objectives, the Maxwell AFB JLUS process included a public outreach program providing a variety of participation opportunities for interested parties.

### *Stakeholders*

An early step in any planning process is stakeholder identification. Informing and involving them early is instrumental to identifying, understanding, and resolving their most important issues through the development of integrated strategies and measures. Stakeholders include individuals, groups, organizations, and governmental entities interested in, affected by, or affecting the outcome of the JLUS document. Stakeholders identified for the Maxwell AFB JLUS include:

- Local jurisdictions (City of Montgomery, City of Prattville, and Montgomery County)
- DOD officials (including OEA Representatives) and military installation personnel
- Local, county, regional, and state planning, regulatory, and land management agencies
- Landholding and regulatory federal agencies
- The public (including residents, businesses, and landowners)
- Environmental advocacy organizations
- Native American Tribes
- Nongovernmental organizations (NGOs)
- Other special interest groups (including local educational institutions and school districts)



### **Policy Committee and Technical Advisory Committee**

The development of the Maxwell AFB JLUS was guided by two committees, comprising community leaders, Maxwell AFB personnel, federal and state agencies, resource agencies, local governments, and other stakeholders. The two committees were the Policy Committee (PC) and the Technical Advisory Committee (TAC).

**JLUS Policy Committee (PC).** The PC consisted of elected officials from participating jurisdictions, Maxwell AFB and Gunter Annex leadership, and representatives from other interested and affected agencies. The PC was responsible for the direction of the JLUS, preparation and approval of the study design, approval of policy recommendations, and approval of draft and final JLUS documents.

**Technical Advisory Committee (TAC).** The TAC was responsible for identifying and studying technical issues, providing feedback on report development, and assisting in the development and evaluation of implementation strategies and tools. Membership included area planners, military base planners, business and development community representatives, and other subject matter experts as needed to assist in the development and evaluation of implementation strategies and tools. Items discussed by the TAC were brought before the PC for consideration and action.

### **Public Workshops**

A series of public workshops were held throughout the development of the JLUS. These workshops provided an opportunity for the exchange of information with the greater community, assisted in identifying issues to be addressed, and provided an opportunity for input on proposed strategies. Each workshop included a traditional presentation and a facilitated exercise providing a “hands on,” interactive opportunity for the public to participate in the JLUS development.

### **Public Outreach Materials**

#### **JLUS Fact Sheet / Compatibility Factors Brochure.**

At the beginning of the JLUS process, a Fact Sheet (JLUS Update #1) was developed describing the JLUS program, objectives, methods for public input, and proposed the Maxwell AFB JLUS Study Area. This Fact Sheet was made available at the meetings for review by interested members of the public and on the project website.

**Strategy Tools Brochure.** JLUS strategies incorporate a variety of actions that local governments, military installations, agencies, and other stakeholders can take to promote compatible land use planning. This brochure provided an overview of strategy types that can be applied to address study area compatibility issues.





**Website.** A project website was developed to provide stakeholders, the public, and media representatives with access to project information. The website was maintained for the entire duration of the project to make information easily accessible. Information contained on the website included program points of contact, schedules, relevant documents and maps, public meeting information, and downloadable comment forms. The project website is located at <http://www.montgomerymaxwellafbjlus.com/>.

### JLUS Study Area

The Montgomery-Maxwell AFB JLUS Study Area, as depicted on Figure 1, is designed to address all lands near Maxwell AFB and Gunter Annex, where community uses and activities may impact current or future military operations or where such uses and activities may be impacted by operations. Maxwell AFB and Gunter Annex are both located in southern Alabama and are situated within the Montgomery city limits in Montgomery County. Maxwell AFB is located in the northwestern portion of the city, while Gunter Annex is located in the northeastern portion of the city.



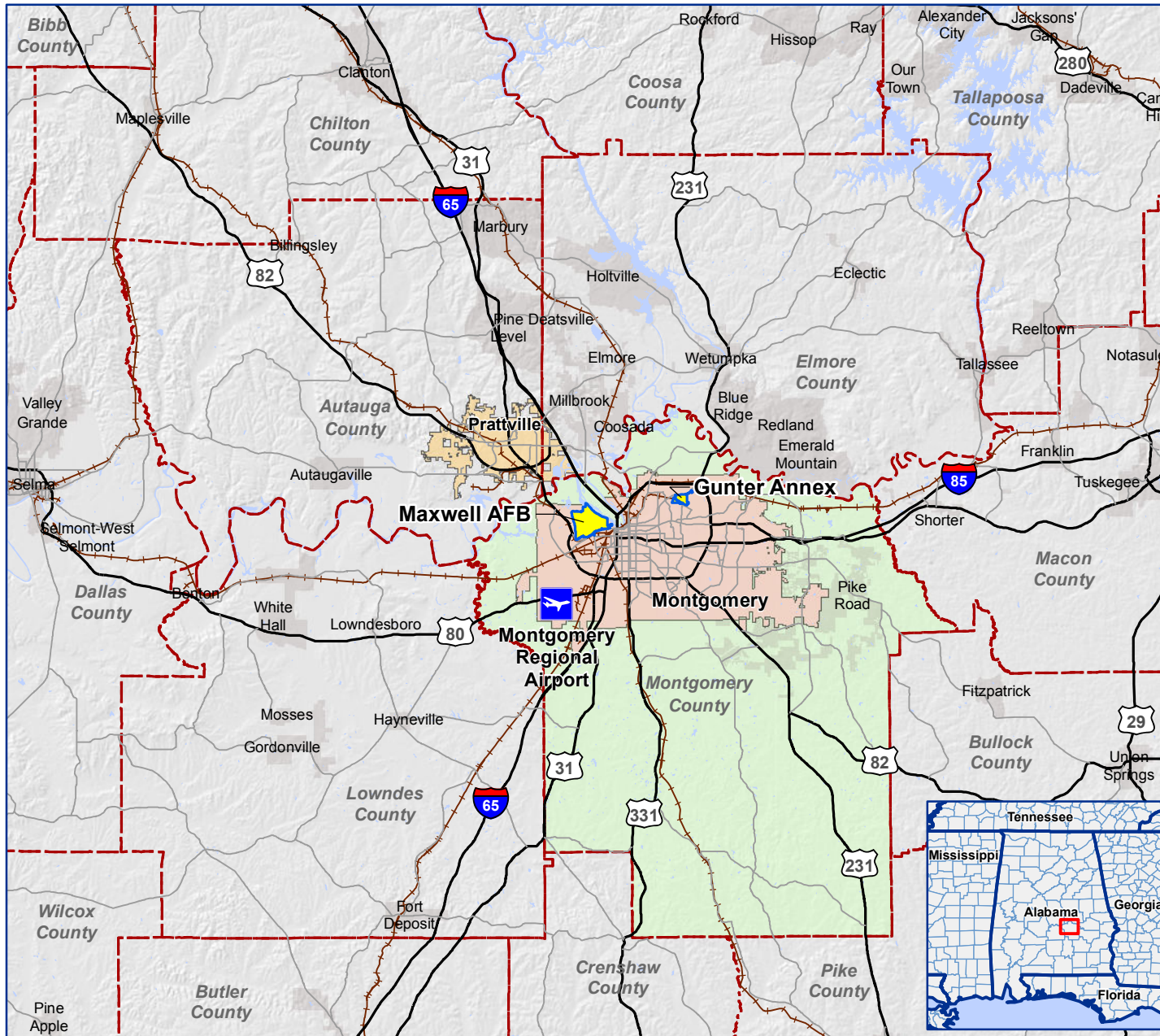
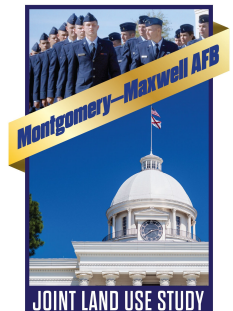


Figure 1

### JLUS Study Area

#### Legend

- Installation
- City of Montgomery
- City of Prattville
- Montgomery County
- Other City / Town
- Other County
- Water Body
- Interstate / Highway
- Major Road
- Railroad
- ✈ Airport



Source: U.S. Census Bureau TIGER, 2015.





# Community Profile

2

The study area for the Maxwell JLUS covers large expanses of south-central Alabama and is focused on Maxwell AFB and Gunter Annex. The study area includes three communities in south-central Alabama. These communities are: Montgomery County, the City of Montgomery, and the City of Prattville. An overview of the JLUS study area communities is provided to gain a better understanding of the activities outside the fence line and how those activities may impact mission operations.

## Study Area Growth Trends

It is important to examine past, current, and future growth trends to understand the types and amount of growth and development occurring in the Study Area. Identifying growth patterns for the area surrounding Maxwell AFB-Gunter Annex is one element in determining potential future compatibility issues or areas of concern associated with where new growth may extend that could impact or be impacted by military operations. This section provides a brief summary of the recent and projected future population changes within the JLUS Study Area, as well as economic trends and an overview of community development that could be indicators of future growth.

## Population Trends

The population data is based on information obtained from the US Census Bureau and shows the growth or decline within the JLUS Study Area. Table 1 provides a comparison of the changes in population in the region between 2000 and 2010, noting the percentage change over the decade.

**Table 1. Study Area Population, 2000-2010**

Jurisdiction	2000	2010	Number Change	Percent Change
State of Alabama	4,447,100	4,779,736	332,636	7%
❖Autauga County	43,671	54,571	10,900	25%
❖Elmore County	65,874	79,303	13,429	20%
Montgomery County	223,510	229,363	5,853	3%
City of Montgomery	201,911	205,764	3,853	2%
City of Prattville	24,303	33,960	9,049	40%

❖Autauga and Elmore Counties are not participating JLUS communities. They are included here due to their proximity to Maxwell AFB and Gunter Annex to show regional growth.

Source: 2000 and 2010 US Census Bureau data

Population levels overall have increased throughout the JLUS Study Area between 2000 and 2010. The City of Prattville experienced the highest population growth rate in the JLUS Study Area with a rate of 40 percent. The City of Montgomery and Montgomery County had relatively the same growth rate between 2000 and 2010 with a growth rate of 2 percent for the City and 3 percent Countywide. While Montgomery County experienced very little population growth over the 10-year period, both Autauga and Elmore counties experienced population growth rates of 20 percent and



25 percent, respectively. It should be noted that Autauga and Elmore counties are not participating JLUS communities, but the population numbers are included here due to their proximity to Maxwell AFB and Gunter Annex demonstrating regional growth.

### Population Projections

The University of Alabama Center for Business and Economic Research projected state and county population through 2030. According to their projections listed in Table 2, Montgomery County is expected to continue to increase in population, but at a rate less than the State of Alabama as a whole. Both Autauga and Elmore Counties are also expected to continue increasing at rates around 20 percent through 2030.

**Table 2. JLUS Study Area Population Projections from 2010 to 2030**

Jurisdiction	2010	2020	2030	Percent Change 2010 to 2030
Alabama	4,779,736	5,096,521	5,373,294	12%
❖Autauga County	54,571	60,715	68,883	21%
❖Elmore County	79,303	88,942	98,374	19%
Montgomery County	229,363	237,348	245,423	7%

❖Autauga and Elmore Counties are not participating JLUS communities

Source: University of Alabama Center for Business & Economic Research

### Economic Development

Agriculture is Alabama’s top industry, generating \$70.4 billion annually and 580,295 jobs. Forestry is another leading industry that supports 122,020 direct and indirect jobs.

The primary economic activity throughout the JLUS Study Area is centered on the agriculture industry dating back to the early colonial period. Efforts to diversify Montgomery’s economy with new sectors have brought substantial growth to the region in manufacturing, heavy commercial development, and tourism. These economic sectors now represent the largest industries in the city, in addition to hospitality and food services. Much effort has been placed on promoting regional tourism through the expansion of recreational facilities, and the development of new cultural and recreational districts.

### Montgomery County

Historically, agriculture played a significant role in Montgomery County’s economy; however, the County’s economy experienced diversification in the 20th century that brought rise of governmental influence within the county, with nearly 25 percent of the county’s workforce being employed by local, state, and federal agencies.

The top employer for Montgomery County is Maxwell AFB-Gunter Annex, employing over 12,000 people, followed by Hyundai, who recently constructed an automotive plant, south of the City of Montgomery, which provides for more than 3,000 high-paying jobs. The influence of the new Hyundai plant was significant in attracting 72 new manufacturing support businesses.





### ***City of Montgomery***

Much like the County, the City has reaped the benefits of a strong agriculture industry in the past. However, at the turn of the 20th Century, the City began experiencing growth in manufacturing, healthcare, business, and government. These industries still thrive today.

Montgomery's largest employers are Maxwell AFB and Gunter Annex, Hyundai Motor Manufacturing Alabama, the State of Alabama, Montgomery Public Schools, Baptist Health, Alfa Insurance, and the City of Montgomery.

### ***City of Prattville***

The City of Prattville was established as a manufacturing town in the early 1800s, and is currently, the county seat of Autauga County. Manufacturing within the city is strong, employing roughly 10 percent of the workforce.

Though the city has a strong manufacturing component, the economic industries that compose the top employment in the city are:

- Educational services, and health care and social assistance (18.2 percent);
- Public administration (14.4 percent);
- Retail trade (12.5 percent); and
- Arts, entertainment, recreation, accommodation, and food services (10.6 percent).

## **Current Development Overview**

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Land uses throughout the JLUS Study Area range from open space and agriculture in unincorporated Montgomery County, to the residential and urban population center in the City of Montgomery. This section discusses the setting in the immediate vicinities of Maxwell AFB and Gunter Annex.

### ***Maxwell AFB***

The following information discusses the general types of land uses surrounding Maxwell AFB and briefly describes any discussions regarding development or proposed development in this area.

#### **North**

The Alabama River and its floodplain are located in both Montgomery and Elmore Counties, to the north of the base, which limits development in this area. This area is composed mainly of waterways, including the Alabama River and numerous small ponds. The remaining land in this area comprises agricultural and forested areas. Northwest of Maxwell AFB approximately 20 miles is the City of Prattville. Interstate 65 is a main thoroughfare that runs north of Maxwell AFB.

#### **South**

The majority of the land south of Maxwell AFB is low density development consisting mainly of large industrial and commercial developments, including trucking and automotive related industries and wholesale and supply stores. Technical schools and public institutions, as well as low density residential, characterized by suburban residential developments are also found in this area. There are on-going discussions and marketing efforts to develop the land to the east and west of the Montgomery Regional Airport.

#### **East**

Cottage Hill, Western Hills, Centennial Hill, Washington Park, and the Garden District are some of the City of Montgomery's neighborhoods located east of Maxwell AFB. These areas include a mix of single-family residential, multi-family residential, and components of historic buildings and homes. In addition, this area is characterized by some neighborhood commercial and institutional facilities, including government buildings, churches, and schools. Though the majority of the land to the east of Maxwell AFB is residential, there are some recreational and entertainment



facilities along the Alabama River, and there are also on-going discussions within the City for additional recreational development in this area.

### **West**

West of Maxwell AFB, commercial and industrial development has been established along the Birmingham Highway, with some scattered residential developments; however, the area still remains mostly rural and undeveloped.

### ***Gunter Annex***

The following information discusses the general types of land uses surrounding Gunter Annex and briefly describes any discussions regarding development or proposed development in this area.

### **North**

The area north of Gunter Annex is largely forested with some agriculture and recreation areas, including the Montgomery Motorsports Park. Northwest of Gunter Annex are some industrial areas, including a truck rental facility and a distribution center.

### **South**

The area south of Gunter Annex consists of low density suburban development—a mix of mostly residential with some neighborhood commercial uses.

### **East**

Areas east of Gunter Annex can be characterized as commercial and industrial, with recreational facilities including a golf course and baseball fields beyond the industrial areas. Lagoon Park Trails, a regional park in the city, also is located in this area; it provides numerous amenities including six hiking trails and other opportunities to enjoy nature.

### **West**

The area west of Gunter Annex comprises large public facilities, such as the Montgomery State Farmer's Market and Garrett Coliseum, with the Mann Wildlife Museum and Montgomery Zoo to the northwest. The remaining area consists mostly of single-family residential and forested open space.



## Military Profile

3

*Maxwell AFB-Gunter Annex is located in Montgomery County in south-central Alabama. Maxwell AFB and Gunter Annex are two geographically separate facilities. Maxwell AFB is located in the northwest portion of the City of Montgomery and is bordered to the north-northeast by the Alabama River. Gunter Annex is approximately five miles east-northeast of Maxwell AFB in the city.*

*Identifying and describing the various activities performed on the operating facilities and in the surrounding airspace provides valuable insight into the importance of Maxwell AFB-Gunter Annex as a national strategic asset and as a part of the fabric of the surrounding communities. The purpose of providing this information is to enable stakeholders to make informed decisions about future development and economic growth within communities and institutions near Maxwell AFB-Gunter Annex that could potentially impact the viability and future role of the base.*

### Installation Setting

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#### **Maxwell AFB**

Maxwell AFB encompasses 2,239 acres of land and is located in a relatively urban area in south-central Alabama. The majority of the urbanized land uses surrounding Maxwell AFB are located south and east of the base; however, recent years there have been efforts for increased recreational

and open spaces with recreational attributes discussed for areas north-northeast of the base between the Alabama River and Gunter Annex.

Montgomery County and surrounding counties are predominantly characterized by agricultural land uses and neighborhood communities.

#### **Gunter Annex**

Gunter Annex is a 378-acre sub-installation of Maxwell AFB located approximately five miles east-northeast of Maxwell AFB. The land uses surrounding Gunter Annex include numerous neighborhood communities, recreational and open space, and the Alabama River to the north as well.

### Current Mission Operations

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Air University is the primary mission of Maxwell AFB–Gunter Annex. Air University supports education for planners and leaders in air and space power for the Air Force, other branches of the U.S. armed forces, federal government civilians and many international organizations.

The 42d Air Base Wing is the host unit for Maxwell AFB. Their primary mission is to provide support to Air University and ensure that airmen are ready to deploy in support of U.S. military operations worldwide. In addition to the host unit, Maxwell AFB has five other major tenant units that accomplish different and varied missions:

- Air Force Reserve: 908th Airlift Wing
- Air Force Life Cycle Management Center
- Defense Information Systems Agency
- U.S. Judge Advocate General's Corps
- Air Force Space Command



### Maxwell AFB Mission Footprint

Mission activities conducted on and around Maxwell AFB and Gunter Annex can generate potential impacts on surrounding communities' areas if incompatible land uses develop. Examples of potential mission impacts on surrounding communities include noise and vibration from overhead flights and the risk of an aircraft accident. Conversely, the military mission is susceptible to hazards and other incompatibilities created by certain types of civilian development or activities, such as obstructions to airspace and frequency interference or location of noise sensitive uses in high noise zones. Understanding the overlapping spatial patterns of these compatibility zones, or "mission footprint" is essential for promoting compatible and informed land use decision making.

There are several elements that make up the mission footprint that extends outside the Maxwell AFB and Gunter Annex boundaries. These essential elements play a key role in the installation's viability for sustaining current and future mission operations. These elements are listed below and described in more detail on the following pages.

#### **Maxwell AFB Footprint Elements**

- Accident Potential Zones
- Aircraft Noise Contours
- Military Notification Area
- Imaginary Surfaces
- Airfield Approach and Departure Flight Tracks
- Airspace
- Part 77 Vertical Obstruction Compliance
- Bird / Wildlife Aircraft Strike Hazard (BASH) Relevancy Area

#### **Gunter Annex Footprint Elements**

- Military Notification Area – Anti-Terrorism / Force Protection Area

### Accident Potential Zones

Accident Potential Zones (APZs) per Air Force regulations are developed to assist military and community planners in planning land uses that are compatible with airfield operations, thereby protecting health and safety. For a complete technical explanation of the APZs, see Chapter 3, Military Profile of the Background Report. The APZs are illustrated on Figure 2.

#### **Runway 15/33**

There are typically three safety zones that extend from the ends of runways: Clear Zone (CZ), APZ I, and APZ II. The CZ is the area that begins at each end of the runway. At Maxwell AFB, the Runway 15/33 CZ measures 3,000 feet wide by 3,000 feet long. It is recommended that no development occur in the CZs unless it is a use that is needed for the safe operation of aircraft.

The APZ I is an area beginning at the end of each CZ at a width of 3,000 feet and a length of 5,000 feet. This area has a lower potential for accidents and therefore has less development restrictions recommended. The APZ II is an area that begins at the end of each APZ I and measures 3,000 feet wide by 7,000 feet long. The accident potential in this area is further reduced, and with this, some additional development types are allowed.

#### **Landing Zone 007/187**

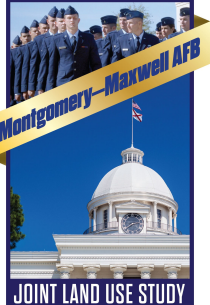
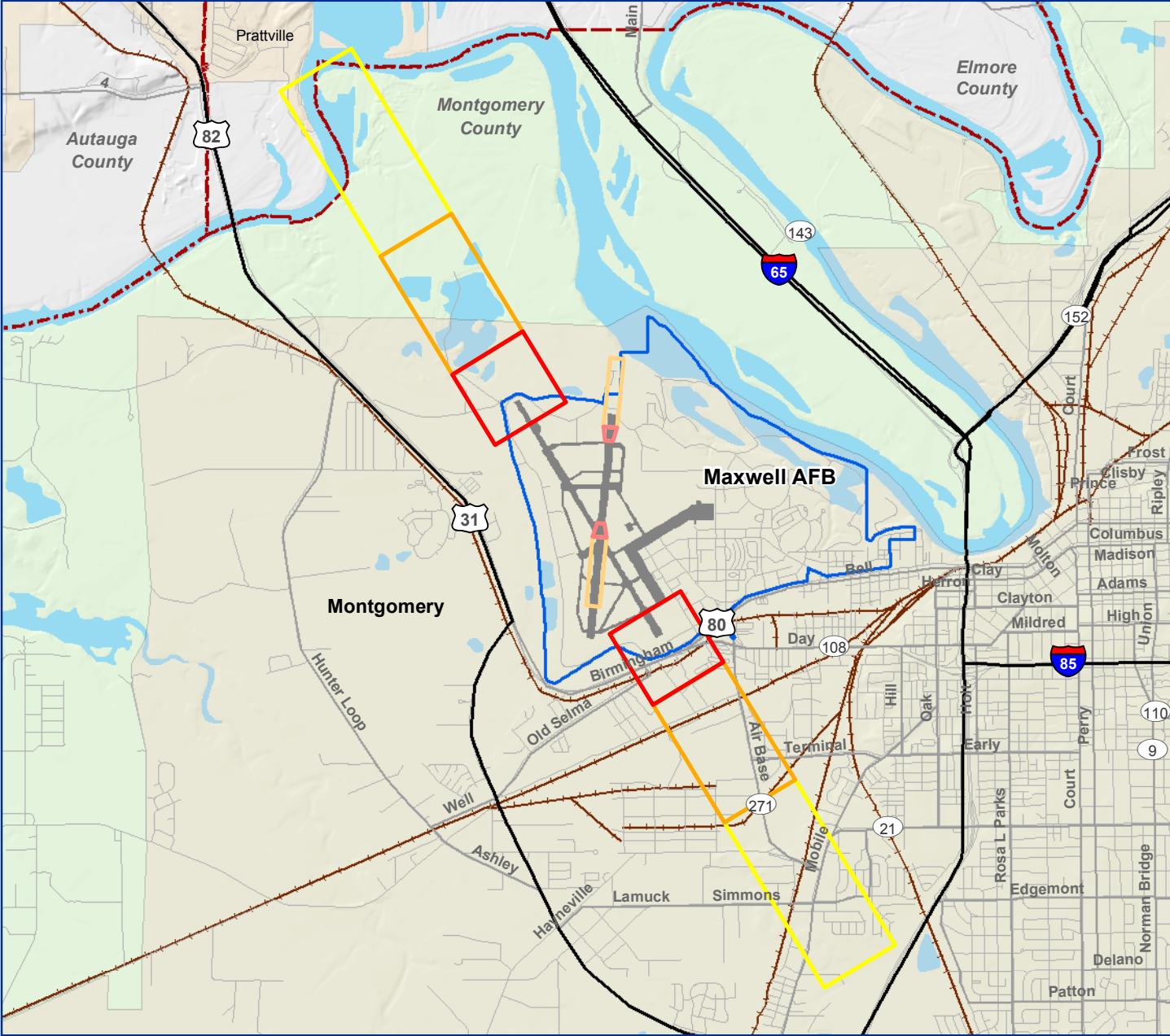
As illustrated on Figure 2, the landing zone has two safety zones: the CZ and APZ-Landing Zone (APZ-LZ). The landing zone (LZ) CZ begins at each end of the LZ and measures an inner width of 135 feet on each side of the LZ's centerline, and tapers out to a width of 250 feet on each side. The LZ CZ extends out 500 feet along the extended LZ centerline.

The APZ- LZ for the LZ begins at the end of the CZ and extends out for 250 feet on each side of the centerline for 2,500 feet along the extended LZ centerline. This area has a lower potential for accidents and therefore has less restrictions recommended for development.

Figure 2

### Airfield Safety Zones

- Legend**
- Airfield Safety Zones**
    - Clear Zone
    - Accident Potential Zone I
    - Accident Potential Zone II
    - Landing Zone (LZ) Clear Zone
    - Landing Zone (LZ) Accident Potential Zone
  - Installation
  - City of Montgomery
  - City of Prattville
  - Montgomery County
  - Other City / Town
  - Other County
  - Water Body
  - Interstate / Highway
  - Major Road
  - Local Road
  - Railroad
  - Runway



Source: Maxwell Air Force Base, 2015.



### ***Aircraft Noise Contours***

Aircraft noise is produced from flight operations (overflight, take-offs, landings, touch-and-go operations) and engine maintenance run-ups. The Air Force considers how its operations impact the local community by calculating an average-weighted noise level measured as a day-night average A-weighted sound level (DNL). The Maxwell AFB AICUZ uses the DOD NOISEMAP program to develop noise contours indicating noise exposure levels from aircraft operations; this is an average of all types of aircraft at Maxwell AFB.

Noise levels are depicted visually as noise contours that connect the points of equal value. These noise contours are drawn in five decibel (dB DNL) increments from 65 dB DNL up to 80 dB DNL and are overlaid on a map of the Maxwell AFB vicinity. The 80 dB DNL is the “loudest” contour line computed and the 65 dB DNL is the “quietest”. The DNL measure has been determined to be a reliable measure of community sensitivity to aircraft noise and has become a standard metric used to map aircraft noise impacts. These noise contours are typically generated during the AICUZ Report process. Maxwell AFB’s AICUZ was updated in 2009 to reflect a change in aircraft equipment and mission operations. The 2009 noise contours are illustrated on Figure 3.

### ***Military Notification Area***

The Military Notification Area is an area that has been established and defined by the State of Alabama Military Land Use Planning Act. The City of Montgomery and Montgomery County are required to notify Maxwell AFB-Gunter Annex of proposed adoptions and amendments of zoning ordinances, comprehensive master plans, or land development regulations that could impact any area or airspace within two miles of the boundaries of Maxwell AFB proper prior to a decision or approval. However, through a memorandum of agreement, the surrounding jurisdictions have implemented a five mile notification area for Maxwell AFB.

This area has a dual purpose in that it is used for military notification, but for the purposes of this JLUS this is also the anti-terrorism / force protection area. Recommendations for this area include enhanced communication and coordination measures.

### ***Imaginary Surfaces***

Federal Aviation Regulation, Part 77, adopted by the Department of Defense, specifies a series of imaginary height surfaces surrounding military and civilian airports. The imaginary surfaces of an active runway are used to define the required airspace that must remain free of vertical obstructions in the vicinity of aviation operations to ensure safe flight operations. Structures on the ground should not exceed these heights to protect the navigable airspace associated with the airfield, the safety of pilots and people, and the land uses on the ground. This is especially important in the clear zone and the approach-departure surfaces.

Figure 4 illustrates the imaginary surfaces at Maxwell AFB. For a complete technical explanation of the imaginary surfaces see Chapter 3, Military Profile of the Background Report.

### ***Airfield Approach and Departure Flight Tracks***

According to the Maxwell AFB Air Installation Compatible Use Zone (AICUZ) report, flight tracks are developed to indicate the primary flight corridors that military aviation operations will use. These flight tracks provide guidance to planners about the typical area of operations that occur at the airfield. These are created using information gathered from air traffic controllers, pilots, and other sources. When flight tracks are developed they attempt to avoid urban development as much as possible to reduce impacts and risk to the general public and commercial or general aviation activities, but safety of operations is paramount in the design of these tracks. Figure 5 illustrates the primary flight tracks used by Maxwell AFB aircraft for both Runways 15/33 and 007/187. Other flight tracks may also be used depending on variables such as weather or mission.

Figure 3

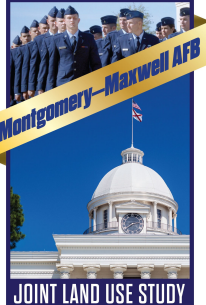
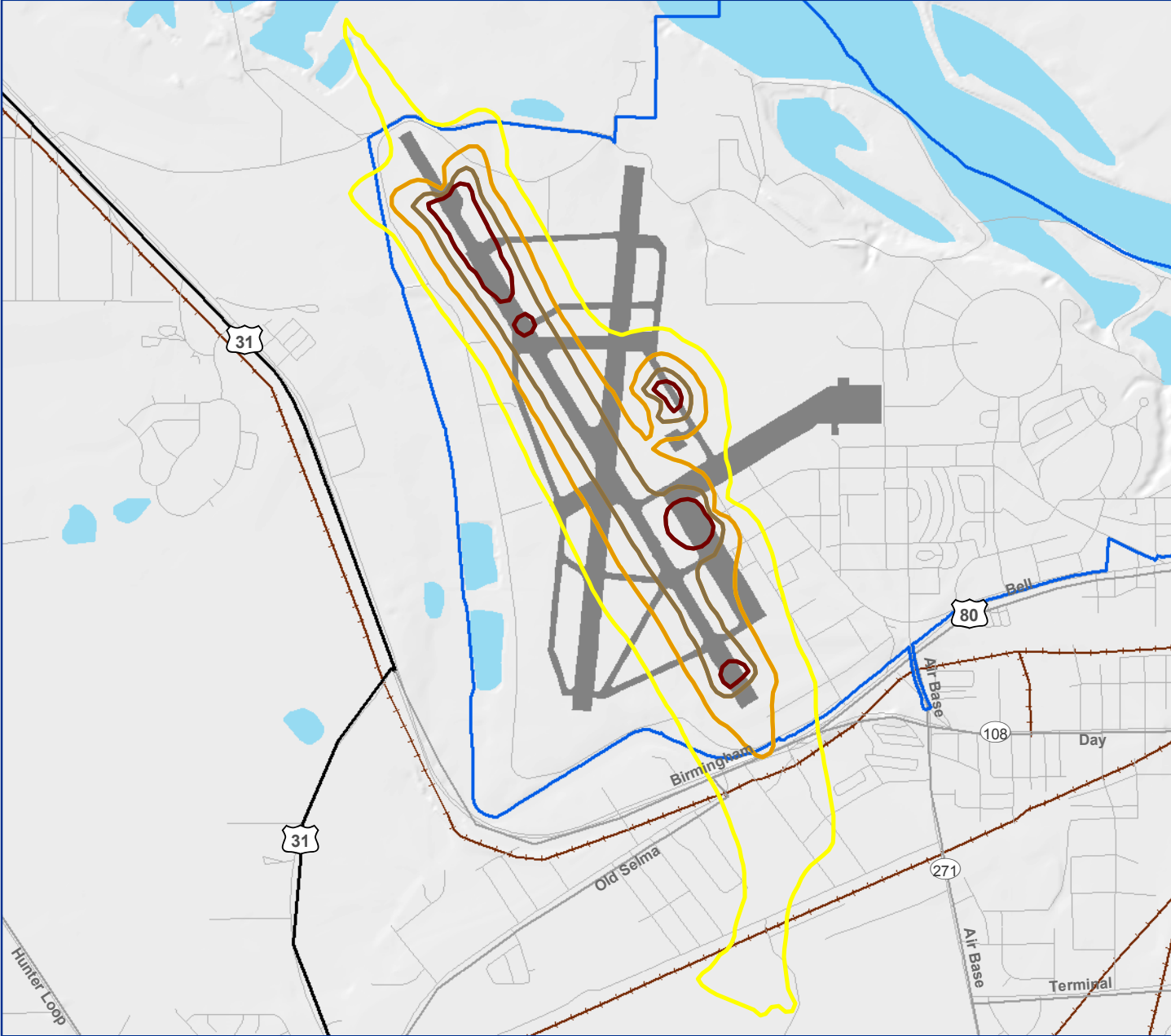
Noise Contours

Legend

DNL Noise Contour (dB)

- 65 DNL
- 70 DNL
- 75 DNL
- 80 DNL

- Installation
- Water Body
- Interstate / Highway
- Major Road
- Local Road
- Railroad
- Runway



Source: Maxwell Air Force Base, 2007.

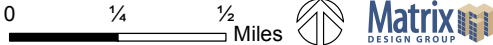




Figure 4

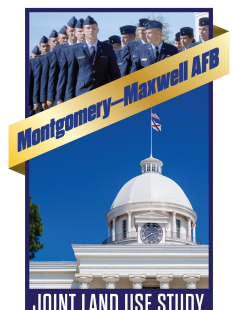
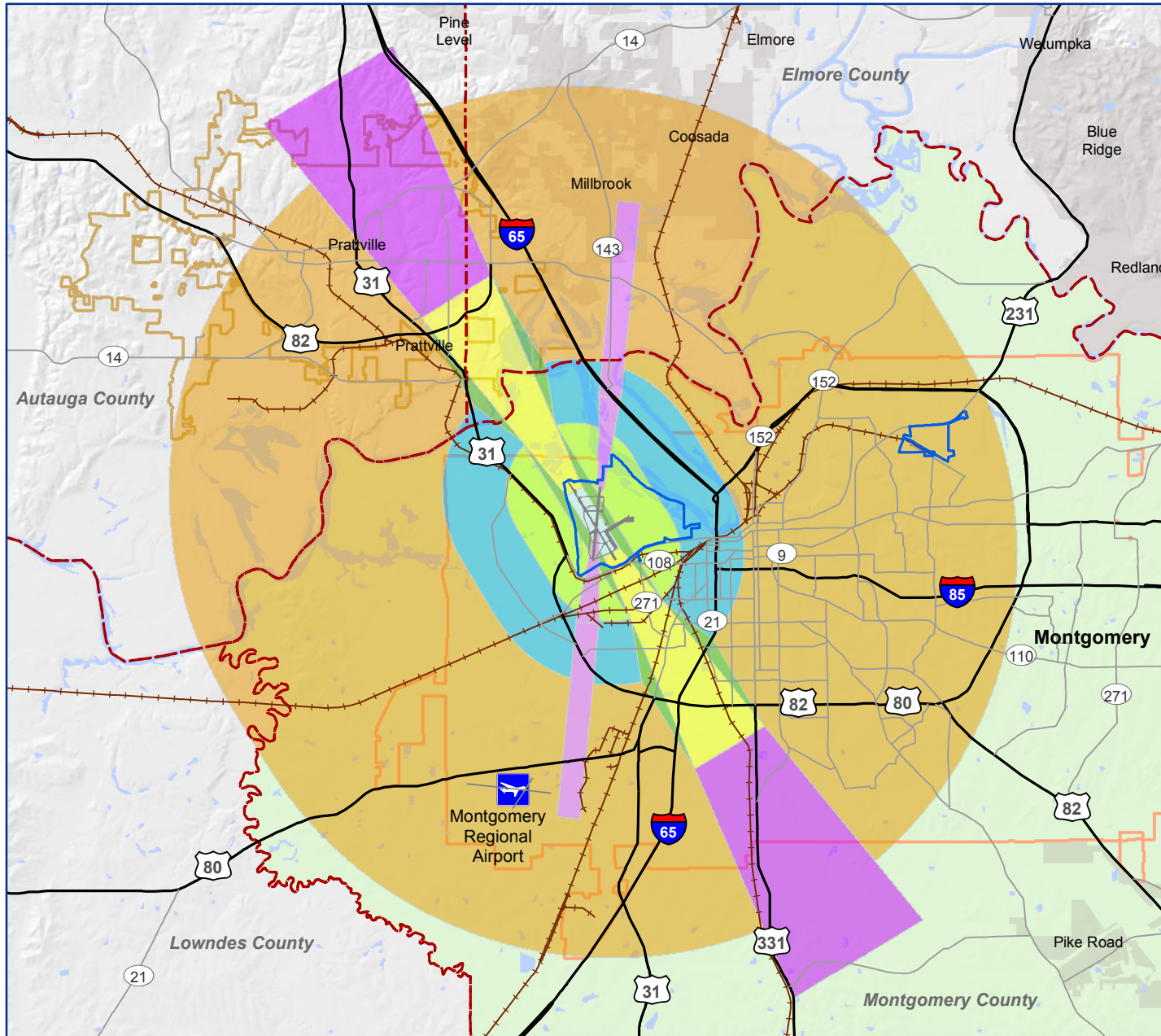
### Imaginary Surfaces

#### Legend

##### Airfield Imaginary Surface

- Primary Surface
- Approach/Departure Clearance Surface (50:1)
- Approach/Departure Clearance Surface (Horizontal) (Up to 500 feet)
- Approach/Departure (LZ) (35:1)
- Inner Horizontal Surface (150 feet)
- Conical surface (20:1)
- Outer Horizontal Surface (Up to 500 feet)
- Transitional Surface (7:1)

- Installation
- City of Montgomery
- City of Prattville
- Montgomery County
- Other City / Town
- Other County
- Water Body
- Interstate / Highway
- Major Road
- Railroad
- ✈ Montgomery Regional Airport
- Runway



Source: Maxwell Air Force Base, 2007.

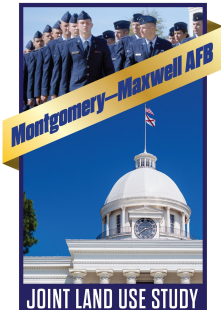
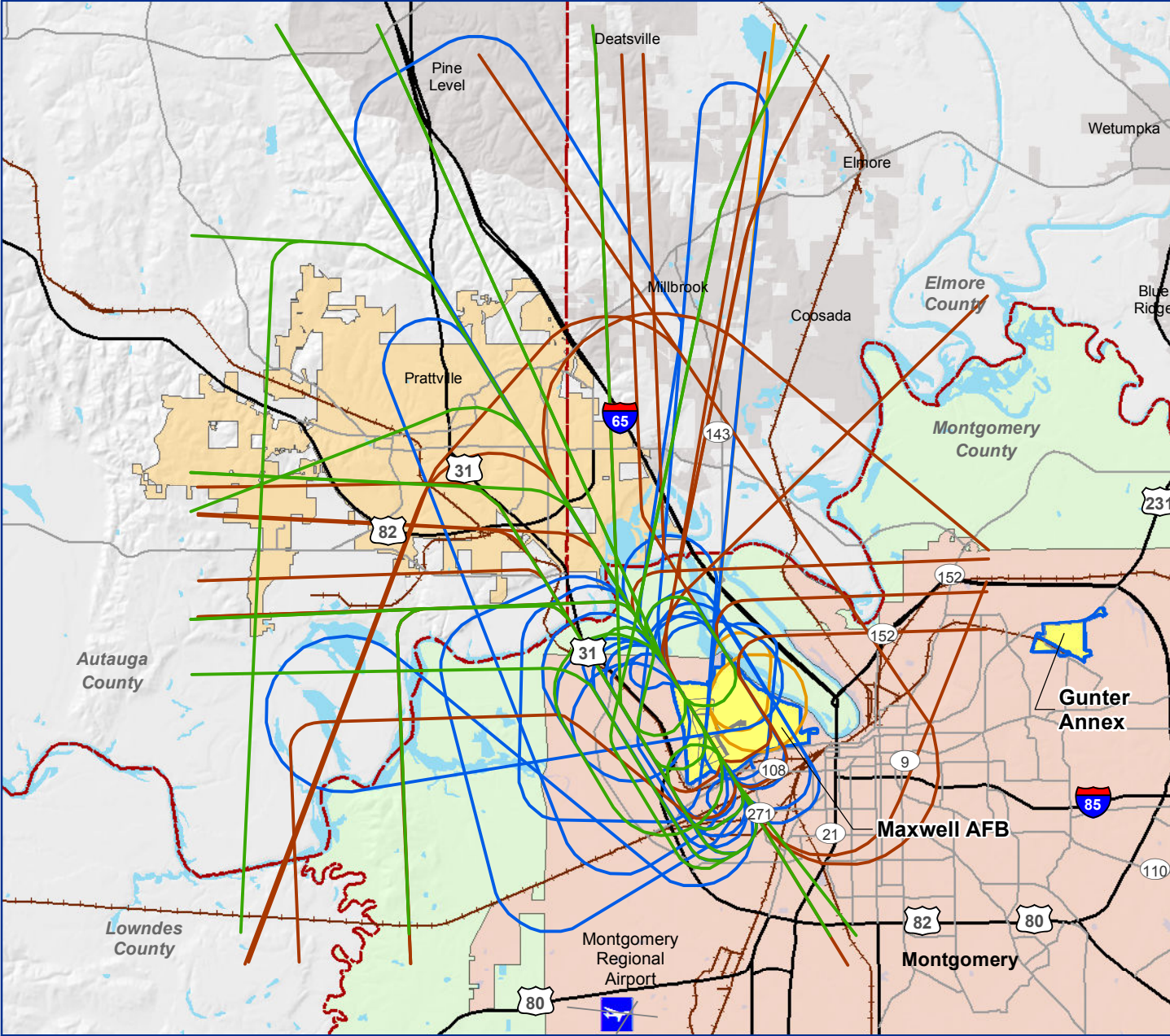


Figure 5

Flight Tracks

Legend

- Arriving
- Departing
- Closed Pattern
- Landing Zone
- Installation
- City of Montgomery
- City of Prattville
- Montgomery County
- Other City / Town
- Other County
- Water Body
- Interstate / Highway
- Major Road
- Railroad
- ✈ Airport
- Runway



Source: Maxwell Air Force Base AICUZ, 2009.

0 1 2 Miles Matrix DESIGN GROUP



### ***Airspace Control***

To help controllers and pilots deal with varying traffic conditions in the sky, United States airspace has been divided into six different classes (A, B, C, D, E, and G). These different classes have different requirements for entry into the airspace, pilot qualifications, radio and transponder equipment, and Visual Flight Rules (VFR) weather minimums.

Within the JLUS Study Area, Maxwell AFB and Montgomery Regional Airport (MGM) are surrounded by Class D airspace. This airspace classification requires an operational control tower, and that two-way communication is established prior to entry. Aircraft separation is maintained through a combination of the Montgomery Terminal Radar Approach Control, which is an FAA facility, and a control tower, located at Maxwell AFB. Figure 6 shows the airspace for Maxwell AFB.

### ***Part 77 Vertical Obstruction Compliance***

FAA Regulation Title 14 Part 77, commonly known as Part 77, provides the basis for evaluation of vertical obstruction compatibility. This regulation provides information to evaluate the potential for a vertical obstruction based on the elevation of the airfield, the height and resulting elevation of the new structure or facility, and the location of the structure or facility relative to the airfield in question. This regulation determines compatibility based on the height of proposed structures or natural features relative to their distance from the ends of a runway.

As of January 29, 2013, the main focus of Part 77.17 is to establish standards to determine obstructions within navigable airspace, typically within a certain distance from an airport or airfield. A key reference used for compatibility planning is the following:

*A height that is 200 feet AGL or above the established airport elevation, whichever is higher, and within three nautical miles of the established reference point of an airport, excluding heliports, with its*

*longest runway more than 3,200 feet in actual length is considered a vertical obstruction. This height increases in the proportion of 100 feet for each additional nautical mile of distance from the airport up to a maximum of 499 feet.*

Figure 7 provides an illustration of this measure of vertical obstruction. Note that this is in addition to, not a replacement of, imaginary surfaces.

### ***Slow Routes***

Slow Routes (SRs) are low-level routes that are utilized at elevations at or below 1,500 feet AGL, at airspeeds of 250 knots or less. There are four SRs for Maxwell AFB in the JLUS Study Area; however, the SRs have minimal impact to land uses within the study area. SRs are characterized by a centerline and a SR corridor which can be anywhere from 2 NM to 10 NM wide, which is 1 to 5 NM on either side of the SR centerline. The SRs provide pilots that train within them the optimal space to perform the necessary mission operations in designated airspace with a separation between military and civilian activities.

### ***Bird / Wildlife Aircraft Strike Hazard Relevancy Area***

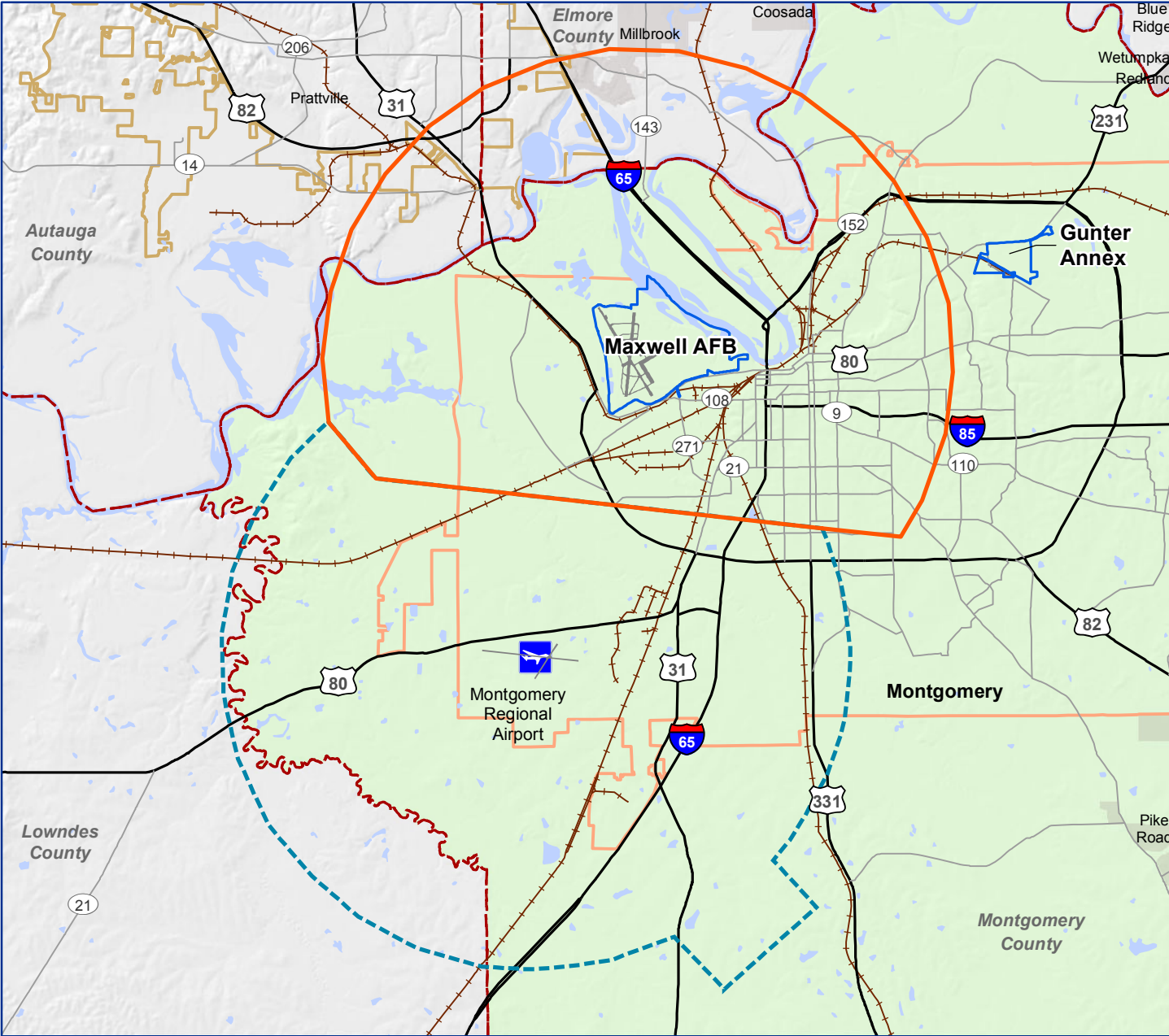
Birds and wildlife can represent a significant hazard to military training and flight operations. Certain types of land uses attract birds and wildlife such as standing water and grasslands. While there have been an insignificant number of fatalities associated with bird / wildlife air strike hazards (BASH/ WASH) in the past 30 years, the concern associated with BASH is the significant amount of damage a BASH incident can cost the federal government. Since fiscal 1985, the Air Force has spent more than \$820 million repairing aircraft damaged by collisions with birds.

According to the United States Avian Hazard Advisory System, there have been 175 bird strikes reported for Maxwell AFB since 2004. More recently, there were seven strikes in 2015, six strikes in 2014, and six strikes in 2013, respectively.

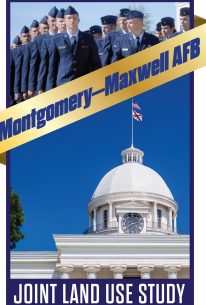
Figure 6

Airspace Control

- Legend**
- Class D Airspace Control**
    - Maxwell Air Force Base
    - Montgomery Regional Airport
  - Installation
  - City of Montgomery
  - City of Prattville
  - Montgomery County
  - Other City / Town
  - Other County
  - Water Body
  - Interstate / Highway
  - Major Road
  - Railroad
  - Montgomery Regional Airport
  - Runway



Source: Maxwell Air Force Base AICUZ, 2009.



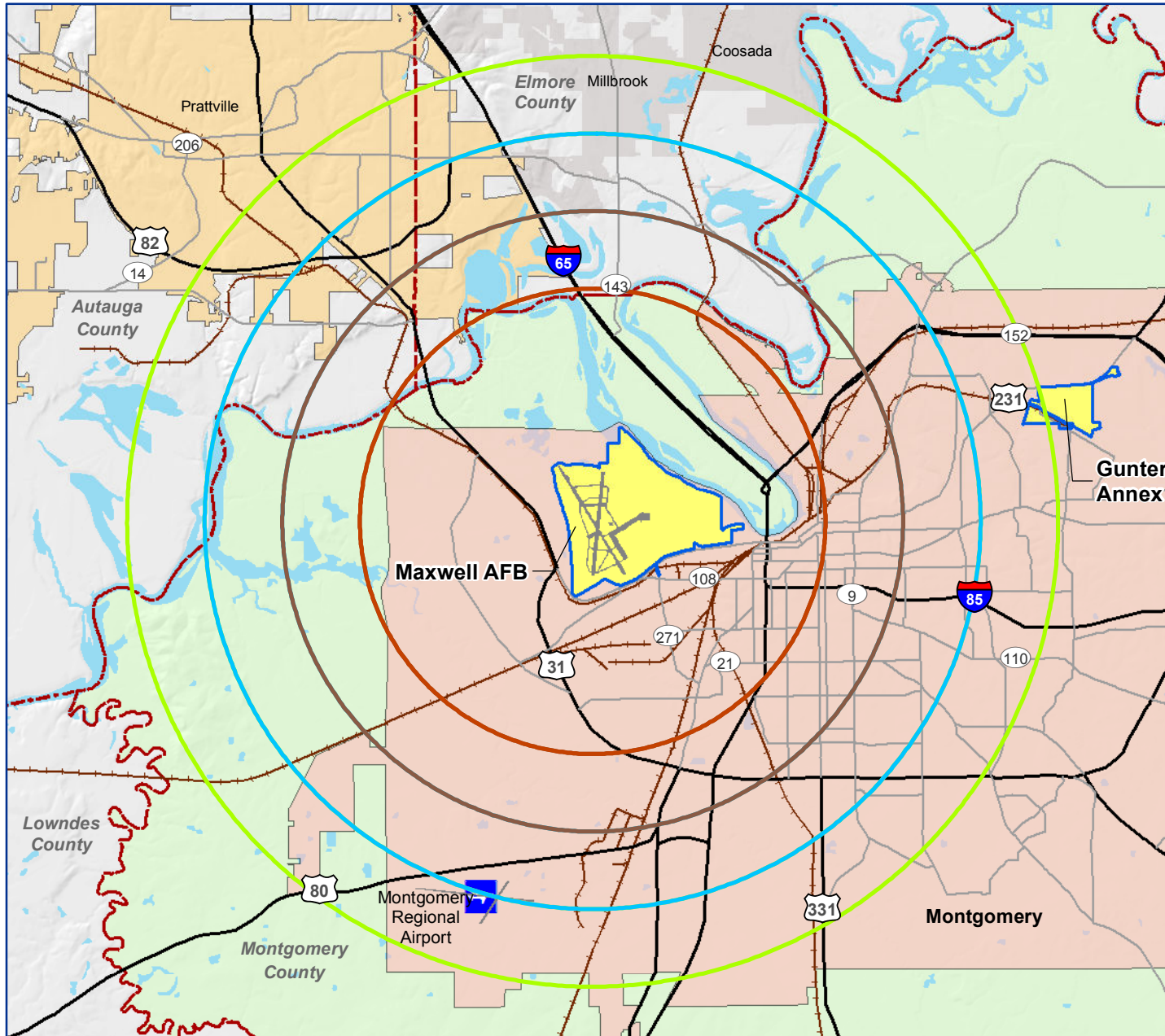
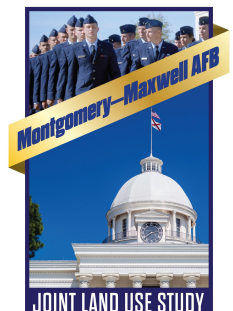


Figure 7

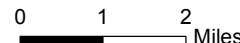
### FAA Part 77

#### Legend

- Up to 200' @ 3NM
- Up to 300' @ 4NM
- Up to 400' @ 5NM
- Up to 500' @ 6NM
- Installation
- City of Montgomery
- City of Prattville
- Montgomery County
- Other City / Town
- Other County
- Water Body
- Interstate / Highway
- Major Road
- Railroad
- ✈ Airport
- Runway



Source: Matrix Design Group, 2016.



Certain types of land uses attract birds and wildlife, such as open water areas, standing water, and other natural areas. The location of Maxwell AFB is not within a major flyway for migratory birds, but is in a suburban area that has numerous bodies of water both on- and off-base including the Alabama River, timbered areas, and farmland, all which increase the risk for BASH incidents. Figure 8 shows the FAA five-statute mile radius around the Maxwell AFB air operations area that has been studied as having a high risk profile associated with aircraft collisions with birds and wildlife due to aircraft flying at lower altitudes and slower speeds.

### **Gunter Annex Mission Footprint**

The following areas describe the Gunter Annex mission footprint relative to frequency interference, anti-terrorism / force protection, and military notification. There is one footprint to consider around Gunter Annex that has a multi-purpose.

- Military Notification Area

#### ***Military Notification Area***

The Military Notification Area is an area that has been established and defined by the State of Alabama Military Land Use Planning Act. The City of Montgomery and Montgomery County are required to notify Maxwell AFB-Gunter Annex of proposed adoptions and amendments of zoning ordinances, comprehensive master plans, or land development regulations that could impact any area or airspace within two miles of the boundaries of Gunter Annex prior to a decision or approval as illustrated on Figure 9.

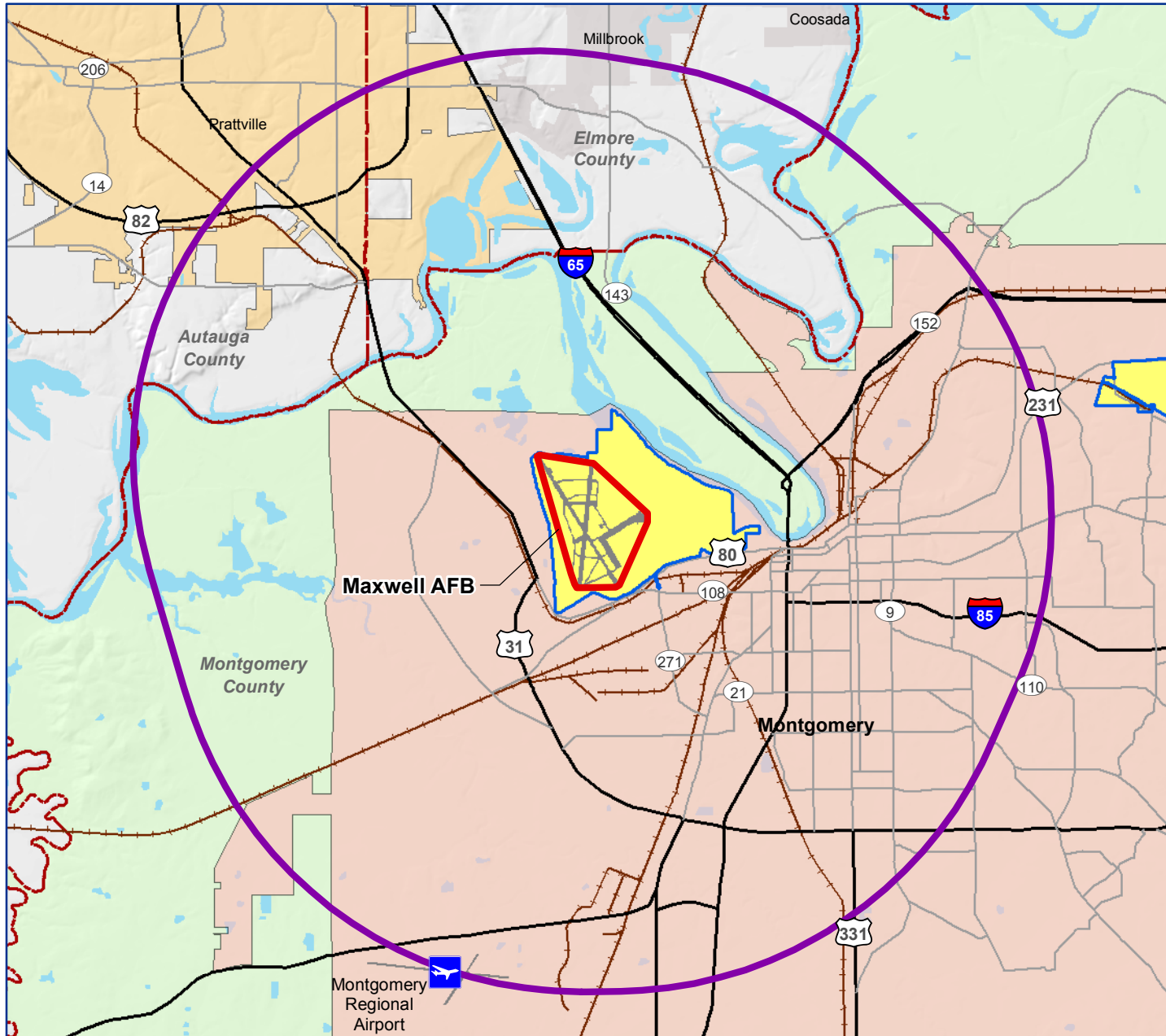
This area has a dual purpose in that it is used for military notification, but for the purposes of this JLUS this is also the anti-terrorism / force protection and frequency interference area. Recommendations include enhanced communication and coordination and vigilance upon the community and

military to facilitate compatible development and the security of Gunter Annex.

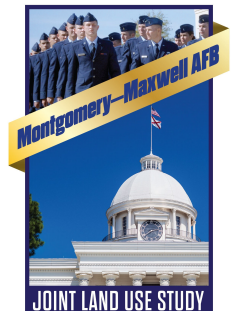


Figure 8

### Bird / Wildlife Air Strike Relevancy Area



- Legend**
- 5-mile BASH Relevancy Area
  - Airport Operations Area
  - Installation
  - City of Montgomery
  - City of Prattville
  - Montgomery County
  - Other City / Town
  - Other County
  - Water Body
  - Interstate / Highway
  - Major Road
  - Railroad
  - A Airport
  - Runway



Source: Matrix Design Group, 2016.

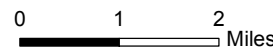
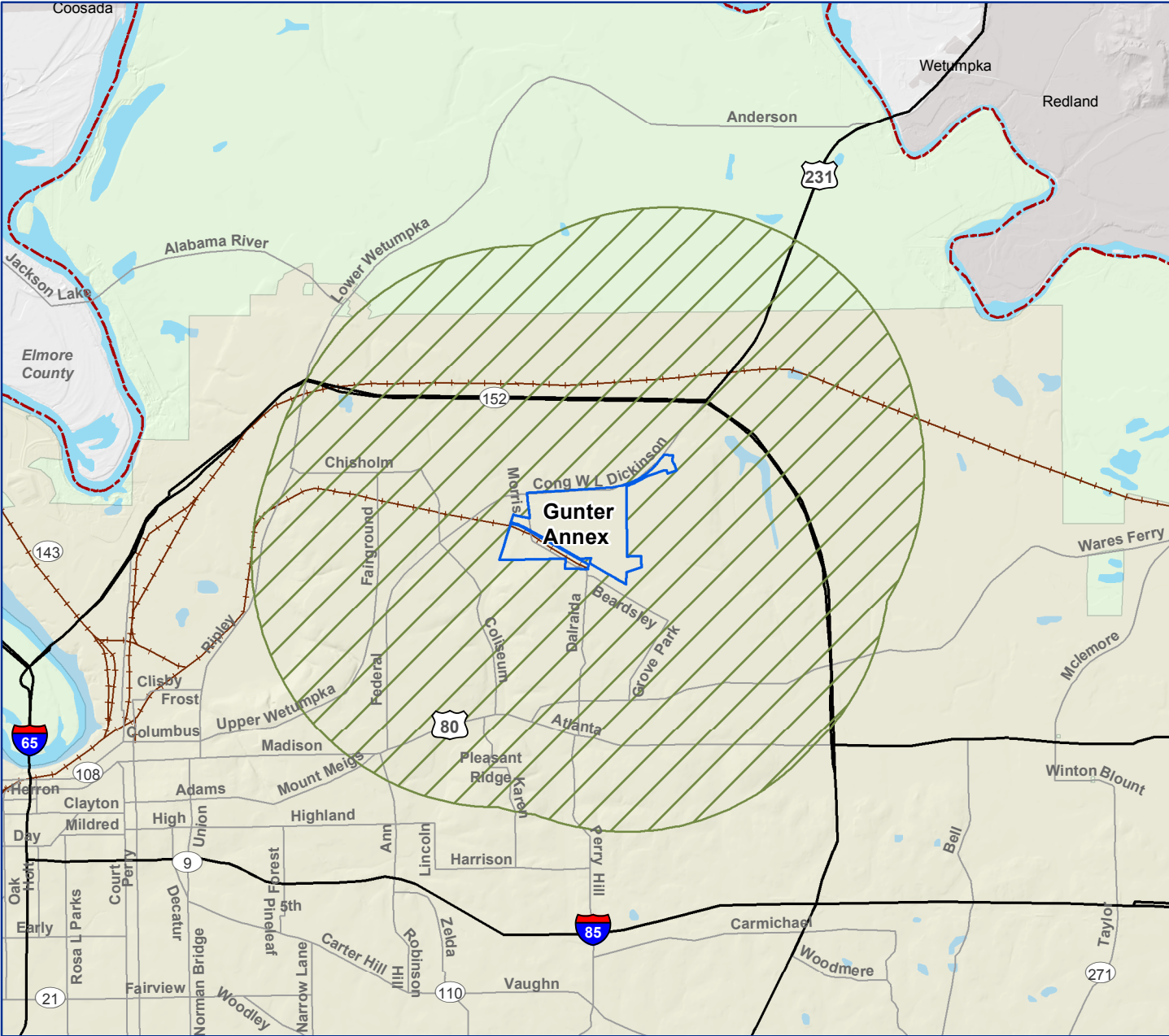
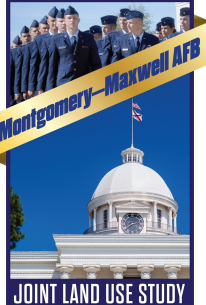


Figure 9  
Military  
Notification Area  
Gunter Annex



- Legend**
- Notification Area (2-Miles)
  - Installation
  - City of Montgomery
  - City of Prattville
  - Montgomery County
  - Other City / Town
  - Other County
  - Water Body
  - Interstate / Highway
  - Major Road
  - Railroad
  - Runway



Source: Maxwell Air Force Base, 2015.

0 1/2 1 Miles Matrix DESIGN GROUP



Please see the next page.





## Existing Compatibility Tools

4

*This section provides an overview of governmental plans and programs (tools) that are currently used or may be applied to either directly or indirectly to address compatibility planning and issues identified within the Montgomery-Maxwell Air Force Base (AFB) Joint Land Use Study (JLUS) Study Area.*

*There are three types of planning tools that are evaluated; 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. Examples of conditional tools include comprehensive plans, memorandums of understanding, intergovernmental agreements, and other policy documents that can be modified.*

*An overview of relevant federal, state, and local plans and programs and regional planning entities is included.*

### **Federal Plans and Programs**

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#### ***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 Encroachment Management Framework, which has four elements (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 an Installation Complex Encroachment Management Action Plan (ICEMAP). Acting involves the implementation of programs. Lastly, monitoring involves maintaining awareness of mission needs and encroachment issues.

#### ***Department of Defense Energy Siting Clearinghouse***

Section 358 of the 2011 National Defense Authorization Act sanctioned the study of the effects of new construction and obstructions on military installations and operations. The Energy Siting Clearinghouse serves to coordinate the Department of Defense (DOD) review of existing applications for energy projects. Several key elements of Section 358 include designation of a senior official and lead organization to conduct the review of energy project applications, a specific timeframe for completion of a hazard assessment associated with an application (30 days), specific criteria for DOD objections to projects and a requirement to provide an annual status



report to Congress. This legislation facilitates procedural certainty and a predictable process that promotes compatibility between energy independence and military capability.

### ***Federal Aviation Act***

The Federal Aviation Act was enacted in 1958 to provide methods for overseeing and regulating civilian and military use of airspace over the U.S. The Act requires the Secretary of Transportation to make long-range plans that formulate policy for the orderly development and use of navigable air space. The intent is to serve the needs of both civilian aeronautics and national defense, but does not specifically address the needs of military agencies. Military planning strives to work alongside local, state, and federal aviation law and policies but sometimes must supersede these and other levels of government due to national security interests. The Federal Aviation Administration (FAA) was created as a result of the Act for a variety of purposes, including the management of airspace over the U.S.

The 500-foot rule, promulgated by the FAA, states that every citizen of the United States has “a public right of freedom of transit in air commerce through the navigable air space of the United States.” The rule was formally announced in the 1963 Court of Claims ruling in *Aaron v. United States* and states that flights 500 feet or more above ground level (AGL) do not represent a compensable taking because flights 500 feet AGL enjoy a right of free passage without liability to the owners below.

Another 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 relative 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 FAA Internet site at <http://www.faa.gov/>.

The FAA has identified certain imaginary surfaces around runways to determine how structures and facilities are evaluated and identify if they pose a vertical obstruction relative to the airspace around a runway. 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.

### ***Noise Control Act of 1972***

The Noise Control Act of 1972 identified that noise not adequately controlled has the potential of endangering the health and welfare of people. It states that all Americans are entitled to an environment free from noise that can jeopardize their general health and quality of life. Along with state, local, and territorial governments, actions from the federal government were needed to ensure that the objectives of the Act were met.

Concurrently, military installations were experiencing the impacts from encroaching urban development located adjacent to the installation and the resulting complaints regarding noise from military flight operations. The DOD responded by establishing the Air Installation Compatible Use Zone (AICUZ) program which was subsequently adopted by the Air Force as AFI 32-7063.

The Noise Control Act and the AICUZ program are important because encroaching development and increased population near military installations often creates compatibility concerns. As communities grow, it is important that the military installation, developers, and the communities work together to mitigate the issue of noise and develop ways to coexist successfully.



### ***Partners in Flight Program***

The DOD has implemented a program entitled Partners in Flight that sustains and enhances the military testing and training mission through habitat-based management strategies. The program assists natural resource managers in monitoring, inventorying, researching, and management of birds and their habitats. As part of the Partners in Flight program, a strategic plan is created that can be incorporated into a Bird/Wildlife Aircraft Strike Hazard (BASH/WASH) plan. This program reaches beyond the boundaries of the installation to facilitate community partnerships and determine the current status of bird populations to prevent the further endangerment of birds.

### ***US Avian Hazard Advisory System***

The US Avian Hazard Advisory System (USAHAS) is a geographic information system-based bird avoidance model developed by the US Air Force used for “analysis and correlation of bird habitat, migration, and breeding characteristics, combined with key environmental and manmade geospatial data.” The model provides up-to-date information – “near real-time” – about bird activity and movements to assist pilots and flight planners in the scheduling and use of flight routes. The model can also be used as a forecasting tool to estimate bird strike risk. Information from the North American Breeding Bird Survey, Audubon Christmas Bird Count, bird refuge databases, and the US Air Force Bird-Aircraft Strike database as well as public domain information regarding bird attractant locations is used to formulate the bird activity and movement data. The model is available for use by agencies and the general public, accessible from the USAHAS website at <http://www.usahas.com/>.

### ***Maxwell AFB Plans and Programs***

Maxwell AFB plans and programs provide guidance for land uses and development activities on the installation. These tools govern 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 missions.

These tools provide guidance and establish measures for standard operating procedures during certain events such as flight training. There are various installation tools that are instrumental in assisting and guiding land use decisions as they interface with the military mission.

### ***Air Installation Compatible Use Zone***

The United States DOD initiated the AICUZ program to assist government entities and communities in anticipating, identifying, and promoting compatible land use and development near military installations with aircraft activity. The AICUZ program involves coordinating the efforts of installation commanders and local community leaders and other government agencies to encourage compatible development of land in proximity to military airfields. It also serves to protect the health, safety, and welfare of civilians and military personnel by encouraging land development compatible with aircraft operations, while protecting the public investment in the installation. This program recommends compatibility measures and land uses that are compatible with specific elements of military airfields including elevated sound levels, accident potential zones, and obstruction clearance criteria.

The AICUZ program has two objectives. First to assist local, regional, state and federal officials in protecting and promoting the public health, safety, and welfare by promoting compatible development within the AICUZ area of influence. And second, to protect Air Force operational capability from the effects of land use which are incompatible with aircraft operations.



This is done through the establishment of noise contours and runway safety zones based on the mission at Maxwell AFB. Maxwell AFB has a current AICUZ Report last updated in 2009.

### ***Bird / Wildlife Aircraft Strike Hazard Plan (BASH/WASH)***

The purpose of a Bird / Wildlife Aircraft Strike Hazard (BASH/WASH) plan is to minimize wildlife and bird strike damage to military aircraft. A BASH / WASH plan is designed to alert aircrew and operations personnel and provide increased levels of flight safety, especially during the critical phases of flight, take-off, and landing operations. This plan establishes procedures for reducing bird strikes through bird management and alerting pilots of bird activity. Maxwell AFB has a current BASH / WASH Plan that was updated in 2013.

### ***Memorandum of Understanding Between the Cities of Millbrook, Montgomery, and Prattville, the Counties of Autauga, Elmore and Montgomery and Maxwell Air Force Base for Zoning and Land Use Change Notifications***

Pursuant to the Military Land Use Planning Act, the memorandum of understanding (MOU) establishes provisions for notification and coordination of proposed zoning changes, comprehensive master plans, or land development regulations that could impact military operations. The MOU requires notification from the participating jurisdictions of zoning and land use changes to the military within five nautical miles of Maxwell AFB's runway centerline and two miles from the Gunter Annex installation boundary. The MOU also requires local governments to give a 30-day notice to the military of proposed land use and zoning changes prior to any public hearings or final decisions.

## **State of Alabama Plans and Programs**

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### ***Military Land Use Planning Act***

The Military Land Use Planning Act of 2014 is codified in Chapter 106 in Title 2 of the Code of Alabama. The law requires local governments whose jurisdictional boundaries are within two miles of a military installation to notify affected installations of proposed land use changes and to allow installations 30 calendar days to comment on proposed land use changes before any final action is taken at the public hearing scheduled.

The Act was amended to add Section 11-52-8 of the Alabama Code, which requires municipalities to acknowledge and show military installations in any master plans and relevant maps that are adopted by municipal planning commissions.

### ***Alabama Code § 11-52-30, Territorial Jurisdictions***

Alabama State Code Section (§) 11-52-30 requires that all municipalities in the state that have municipal planning commissions shall include all land within its corporate limits and all land within five miles of the corporate limits and not located in any other municipality. When two or more municipalities overlap each other, then each municipality shall terminate the boundary line equidistant from each municipality's corporate limits. This is important to the JLUS to understand the limits of authority for the cities of Montgomery and Prattville.

## **Regional Organizations and Programs**

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### ***Central Alabama Regional Planning and Development Commission***

The Central Alabama Regional Planning and Development Commission (CARPDC) is the regional organization for the Counties of Autauga, Elmore, Montgomery and Tallassee, the Cities of Millbrook, Montgomery, Prattville,



and Wetumpka, and the Towns of Coosada, Elmore, and Pike Road. The CARPDC studies regional issues of mutual interest with the objective of guiding the development of policy and making recommendations to carry out programs and projects to benefit the member governments. The CARPDC provides technical and planning assistance to the Cities and Counties and coordinates regional planning initiatives with all relevant levels of government.

### ***2014 Draft CARPDC Comprehensive Economic Development Strategy***

The 2014 Draft Update to the Comprehensive Economic Development Strategy (CEDS) is the first step in developing a regional approach to economic development for the CARPDC region. The CEDS includes the Counties of Bullock, Butler, Crenshaw, Lowndes, Macon, Montgomery, Pike, and Tallasse, but excludes Autauga and Elmore Counties. The CEDS identifies the region's strengths, weaknesses, opportunities, and threats to ensure the recommendations are appropriate for the region. In addition, the CEDS has identified partners in the area; however, does not reference the military or Maxwell AFB-Gunter Annex as an economic development partner.

## **County and Municipal Plans and Programs**

The planning tools used by the study area jurisdictions were analyzed and categorized as permanent, semi-permanent, or conditional. In Alabama, authority to regulate land use is delegated by the state to counties and municipalities. The nature of a jurisdiction's authority to regulate local land use depends on that jurisdiction's local government.

### ***Montgomery County***

Montgomery County is not authorized by law to develop a comprehensive plan or zoning regulations.

### ***City of Montgomery***

The following is a review of the existing planning tools utilized by the City of Montgomery along with a brief analysis identifying their ability to address land use and military compatibility, and where potential improvements can be made.

#### **Comprehensive City Plan of Montgomery**

While the Comprehensive City Plan serves as the guiding document for the city, it is over 50 years old and does not reflect military compatibility guidance in land use planning goals, objectives, and policies. However, the City is expected to update its Comprehensive Plan in a couple of years.

The plan provided an initial foundation for the various land uses that are located in the city including residential, commercial, public facilities, industrial uses and undeveloped / agricultural uses. At the time the plan was prepared, there was a breakdown of how much of the land was developed and undeveloped separated into two categories including within the City of Montgomery and the Central City.

A review of the Comprehensive City Plan has identified the following concerns related to military compatibility:

- The city's plan does not incorporate the latest military compatibility guidelines for land use planning.

#### **Zoning Ordinance of the City of Montgomery**

The ordinance designates the area within two miles of Maxwell AFB to be an airport hazard area. Within this area, general district regulations apply with the addition of some modifications to height regulations. Generally, the airport hazard area recognizes that natural-made structures (trees) are a hazard to safe navigable airspace, and as such trees are incorporated into the height restrictions for these areas. No tree or structure is permitted to exceed 35 feet in the Agricultural 1 and 2 Districts. Additionally, structures



in the Industrial District (M-3), including trees, are not permitted to exceed a height of 45 feet. Finally, no exceptions to height restrictions in Article I (8) of the zoning ordinance are allowed in this airport hazard area without the approval of the Board of Adjustment.

A review of the zoning ordinance has identified the following concerns related to military compatibility:

- While the heights for the airport hazard area are typically compatible, the zoning ordinance does not incorporate the Imaginary Surfaces and the FAA Part 77 guidance.
- Densities for residential uses and intensities for non-residential uses are not delineated for the airport hazard area.
- The zoning ordinance does not incorporate the most recent AICUZ guidance from Maxwell AFB.
- The airport hazard area does not contain guidance for lighting standards.
- The airport hazard area does not contain regulations for mitigating noise.

### **City of Prattville**

The following is a review of the existing planning tools utilized by the City of Prattville along with a brief analysis identifying their ability to address land use and military compatibility, and where potential improvements can be made.

#### **City of Prattville Comprehensive Plan**

The Comprehensive Plan adopted in 2009 is divided into two sections: a City-wide Plan and a Planning District Plan. The City-wide Plan includes sections on future land use, economic development, housing, transportation and circulation, and community facilities. The planning districts are specific

to areas or corridors that are expected to experience high levels of change over the next decade, have a large concentration of commercial uses, are underserved by the community, contain a large amount of vacant or underdeveloped land, or have a high concentration of aging retail. The Planning District portion of the plan identifies 11 focused planning districts, including the Historic District, Intron Neighborhood District, Rural Neighborhood District, North Neighborhood District, and Conservation and Green Space.

A review of the Comprehensive Plan identified the following concern related to military compatibility:

- The Comprehensive Plan does not include goals, objectives, or policies for coordinating with Maxwell AFB.

#### **City of Prattville Zoning Ordinance**

The City of Prattville's Zoning Ordinance was adopted in February of 1950, and was last amended in 1991. Height regulations in Prattville are defined by the zoning districts, but do not apply to:

*“Church steeples, hospitals, sanitariums, barns, silos, farm structures, chimneys, flagpoles, public utility poles, radio and television towers and aerials, cooling towers, water tanks, and industrial structures when required by manufacturing process but not to exceed twenty-five percent of the area of the lot.”*

A review of the Zoning Ordinance identified the following concerns related to military compatibility:

- The Ordinance only requires building permits for antennas and structures greater than 45 feet in height, which could represent incompatible development in certain locations, especially nearest the airfield and if located within an approach and departure zone.



- Lighting regulations included in the ordinance relate to outdoor signage, and require lighting within or directed toward outdoor signs to be mounted in a way that affords screening of the light, or in some way prevents illumination of surrounding property and public right-of-way. However, lighting does not have to be fully cut off or fully shielded, which could result in light trespass and horizon brightening that would affect night time training capabilities in this area.
- The Zoning Ordinance does not include requirements for including Maxwell AFB in zoning or review processes.



Please see the next page.





# Compatibility Issues

5

## 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 can be evaluated to determine whether community and military plans, programs, and activities are compatible or in conflict. For this Joint Land Use Study (JLUS), 25 compatibility factors were used to identify, determine, and establish a set of key JLUS compatibility issues for evaluation.

## Methodology and Evaluation

The methodology for the Maxwell Air Force Base (AFB) JLUS consisted of a comprehensive and inclusive discovery process to identify key stakeholder issues associated with the compatibility factors. At the initial Policy Committee (PC) and Technical Advisory Committee (TAC) meetings and public workshops, stakeholders were asked to identify the location and type of issue in conjunction with compatibility factors they thought existed today or could occur in the future. As a part of the evaluation phase, the PC, TAC, and the public examined and prioritized the compatibility issues identified. Other factors and associated issues were analyzed based on available information and similarity with other community JLUS experiences around the country.

Of the 25 compatibility factors considered, no issues were identified for the following factors:

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

- Air Quality
- Biological Resources
- Cultural Resources
- Dust, Smoke, and Steam
- Frequency Spectrum Capacity
- Local Housing Availability
- Infrastructure Extensions
- Legislative Initiatives
- Marine Environments
- Roadway Capacity
- Scarce Natural Resources
- Vibration
- Water Quality / Quantity



### Anti-Terrorism / Force Protection (AT)

Anti-Terrorism / Force Protection (AT) relates to the safety of personnel, facilities, and information on an installation from outside threats. Security concerns and trespassing can present immediate compatibility concerns to installations. Due to current world conditions and recent events, military installations are required to meet more restrictive standards to address AT issues. These standards include increased security checks at installation gates and physical changes (such as new gate / entry designs). Additional emphasis on credential and vehicle checks can create capacity and queuing issues with entrance gates that are inadequate to support the high volume of vehicles requiring access to the installation on a daily basis. The reduced processing throughput time at the gates can create circulation issues and general safety concerns external to the installation and within local communities. The following Anti-Terrorism / Force Protection issues were identified:

- **No Controlled Perimeter between Maxwell AFB and the Alabama River.** There is no controlled perimeter between Maxwell AFB and the Alabama River, which can increase security breaches of the installation perimeter.
- **Abandoned Department of Corrections Facility Outside Gunter Annex.** The abandoned Department of Corrections facility adjacent to Gunter Annex poses risk to installation security. The property contains abandoned structures and debris in an unsecured environment which increases concern for potential security breaches.
- **Compliance with Residential Setbacks Adjacent to Gunter Annex’s Southern Fence Line.** The Gunter Annex southern boundary borders the Dalraida neighborhood where residential properties abut the installation property. Backyard accessory structures such as storage sheds that do not comply with the city’s residential setbacks regulations represent an increased security concern for the base.

- **Utility Vaults for Water Lines are Not Secured Outside Maxwell AFB Fence Line.** Utility vaults that support Maxwell AFB’s water lines are situated partially on installation and City of Montgomery property. Only the portion of the vaults located on Maxwell AFB are protected.

### Climate Adaptation (CA)

Climate adaptation is the gradual shift of global weather patterns and temperatures resulting from natural factors and human activities (e.g., burning of fossil fuels) that produce long-term impacts on atmospheric



*Flooding at Maxwell AFB.*

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 can present operational and planning challenges for the military and communities as resources are depleted and environments are altered. The following Climate Adaptation issues were identified:

- **Flooding on Maxwell AFB Impacts Operations.** Flooding from various sources including private dams, ditches, and the Alabama River impacts Maxwell AFB by causing flooding in military operational areas.



## Coordination / Communication (COM)

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This discussion 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 comprehensive plans. The following Coordination / Communication issues were identified:

- **No Formalized Planning Coordination Between the Local Jurisdictions and Maxwell AFB.** There is no formalized planning coordination between the local jurisdictions and Maxwell AFB for ensuring compatible development within Maxwell AFB and Gunter Annex operational areas.
- **Enhanced Planning Notification for Maxwell AFB.** The existing process for planning notification between the City of Montgomery and Maxwell AFB needs to be expanded to allow for earlier involvement by affected stakeholders and notification of land use planning actions, e.g. zoning changes, variances, etc., in the planning and development process.
- **Formalized Maxwell AFB Points of Contact.** The public and elected officials are not aware of the designated points of contact for Maxwell AFB and Gunter Annex for reporting concerns or obtaining information related to training activities.
- **Formalized Procedures for Information Sharing and Economic Development Organizations.** There are no formal procedures established for information sharing between Maxwell AFB and local economic development organizations to facilitate appropriate discussions about synergistic economic development opportunities. Economic development organizations do not understand the impact

some development can have on the operational mission of Maxwell AFB and Gunter Annex.

- **Lack of Enhanced, Early Coordination with School Districts.** There is currently no communication or coordination with the school district regarding planning and siting of new schools in the JLUS Study Area. This could potentially lead to incompatible land uses in military operational areas.

## Energy Development (ED)

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Development of energy sources, including alternative energy sources (such as solar, wind, geothermal or biofuels) could pose compatibility issues related to glare (solar energy), or vertical obstruction (wind generation), or water quality / quantity.

The following Energy Development issue was identified:

- **Alternative Energy Development Coordination.** There are no formal procedures for coordinated alternative energy proposals with the DOD and Maxwell AFB.

## Frequency Spectrum Interference / Impedance (FSI)

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The frequency spectrum is the entire range of electromagnetic frequencies used for communications and other transmissions, which includes communication channels used for radio, cellular phones, and television. In the performance of typical operations, the military relies on a range of frequencies for communications and support systems. Similarly, public and private users rely on a range of frequencies in the use of cellular telephones and other wireless devices used on a daily basis.



The following Frequency Spectrum Interference / Impedance issue was identified:

- **Frequency Interference Concern.** Concern about potential future development near the Gunter Annex area could potentially disrupt transmission signals.

### Land, Air, and Sea Spaces (LAS)

The military manages or uses 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 and sea operations can compete for limited air and sea space, especially when the usage areas are in close proximity to each other. Use of this shared resource can impact future growth in operations for all users.

The land, air, and sea spaces used by the military can be owned by the DOD, designated for DOD use by a federal or state agency, provided through easements or other agreements with public or private entities, or maintained as a historic usage right. Public and private requests to share or assume some of these resources may have a negative impact on military training and test objectives. The following Land, Air, Sea Spaces issue was identified:

- **Competition for Airspace.** There is an overlap in operational areas between Montgomery Regional Airport and Maxwell AFB. Though air traffic procedures are in place to separate current levels of air traffic, the competition for local airspace between future military and civilian aviation operations needs to be studied in more depth.

### Land Use (LU)

The basis of land use planning and regulation relates to the government's role in protecting the public's health, safety, and welfare. Local jurisdictions' comprehensive plans and zoning ordinances can be the most effective tools for avoiding or resolving land use compatibility issues. These tools ensure the separation of land uses that differ significantly in character. 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:

- **Proposed Future Development Compatibility.** There is a concern about the compatibility of proposed future development in the vicinity of Maxwell AFB. Certain types of development can create compatibility issues if not coordinated with the military; i.e., development



*View of downtown Montgomery facing west with Maxwell AFB in the background.*

- that attracts large congregations of people, outdoor lighting for such development, and water features could attract birds and wildlife to the area of air operations potentially creating an incompatible environment.
- **Undeveloped Land Concern.** There is a general concern about the undeveloped land in the vicinity of Maxwell AFB. If developed without military review and input, the land could potentially create incompatible land uses with the military mission.



## Light and Glare (LG)

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This factor refers to man-made lighting (street lights, airfield lighting, building lights) and glare (direct or reflected light) that disrupts vision. Light sources from commercial, industrial, recreational, and residential uses at night can cause excessive glare and illumination, impacting the use of military night vision devices and air operations. Conversely, high intensity light sources generated from a military area (such as ramp lighting) may have a negative impact on the adjacent community. The following Light and Glare issue was identified:

- **Preserve Capability for Night Mission Training.** While there is no current impact to night mission training, there is concern with potential future development that could create light pollution and horizon brightening. This would impact the effectiveness of night vision devices, ultimately affecting the overall capability of Maxwell AFB executing night time training.

## Noise (NOI)

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Sound that reaches unwanted levels is referred to as noise. The central issue with noise is the impact, or perceived impact, on people, animals (wild and domestic), and general land use compatibility. Exposure to high noise levels can have a significant impact on human activity, health, and safety. The decibel (dB) scale is used to quantify sound intensity. To understand the relevance of decibels, a normal conversation often occurs at 60 dB, while an ambulance siren from 100 feet away is about 100 dB. Noise associated with military operations (arrival/departure of military aircraft, firing of weapons, etc.) may create noises in higher dB ranges. The following Noise issues were identified:

- **Lack of Noise Regulations North of Maxwell AFB.** Lack of noise regulations north of Maxwell AFB, including in the cities of Prattville and Millbrook, and the Town of Coosada, could potentially increase

noise sensitive land uses in high noise areas, e.g., areas under low level military training.

- **Potential Future Missions Could Increase Noise Impacts.** Potential future missions at Maxwell AFB could bring additional C-130s or fighter jets to the installation which could intensify noise impacts and expand the noise contours.

## Public Trespassing (PT)

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This factor addresses public trespassing, either purposeful or unintentional, onto a military installation. The potential for trespassing increases when public use areas are in close proximity to the installation.

Military areas that are located on, or adjacent to, public lands owned by other entities (i.e., federal, state, or local) that are designated for public access, recreation, or for livestock grazing often experience issues related to public trespassing into training ranges and other areas with safety hazards related to military operations. The following Public Trespassing issue was identified:

- **Public Trespass onto Installation from Powder Magazine Park.** Maxwell AFB tracks several public trespassing incidents annually of individuals who intentionally and unintentionally trespass onto the installation from Powder Magazine Park.

## Safety Zones (SA)

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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.

Military installations often engage in activities or contain facilities that, due to public safety concerns, require special consideration by local jurisdictions



when evaluating compatibility. It is important to regulate land use near military airfields in order to minimize damage from potential aircraft accidents and to reduce air navigation hazards. To help mitigate potential issues, the Department of Defense (DOD) has delineated Clear Zones (CZs) and Accident Potential Zones (APZs) in the vicinity of airfield runways. APZs are usually divided into APZ I and APZ II. Each zone was developed based on the statistical review of aircraft accidents. Studies show that most mishaps occur on or near the runway, predominately along its extended centerline. The following Safety issues were identified:

- **Incompatible Uses in Clear Zone.** Any development that occurs within the Clear Zone (CZ), including railroad, and utility and roadway infrastructure, is incompatible per Air Force AICUZ recommended guidelines.
- **Incompatible Uses in Accident Potential Zones.** There are land uses, including a Technical College and the Montgomery County Health Center, in the accident potential zones that are incompatible with the latest Air Force AICUZ recommended guidelines for land uses in the airfield safety zones.
- **Land Use Control of Southern Clear Zone.** The northern CZ is either owned by the Air Force or controlled by avigation easements that restrict height and use in accordance with the imaginary surfaces. However, a majority of the southern CZ is subject to local land use controls.
- **Bird Air Strike Hazard Awareness Concern.** General concern about Bird Air Strike Hazard (BASH) incidents. While Maxwell AFB updates its BASH Plan upon mission changes and monitors the conditions indicative of high risk potential of BASH incidents, it is important to maintain an awareness of the BASH environment in this area to decrease the risk to safety and property damage.

## Vertical Obstructions (VO)

Vertical obstructions are created by buildings, trees, structures, or other features that may encroach into the navigable airspace or line of sight radar signal transmission pathways used by the military. These obstructions can be a safety hazard to both the public and military personnel and potentially impact military readiness. The following Vertical Obstructions issues were identified:

- **Pumping Station Tower Extends into Navigable Airspace.** The tower at the city's sewer pumping station located north of Maxwell AFB's airfield extends into navigable airspace. This can create an airspace hazard relative to the recommended heights and dimensions of the imaginary surfaces.
- **Trees Inside Southern Clear Zone.** Trees inside the southern CZ pose an obstruction to navigable airspace for Maxwell AFB's Runway 15/33.
- **Temporary Crane Permits.** The lack of permits for temporary construction cranes in the City of Montgomery creates the potential for vertical obstructions of the imaginary surfaces.
- **Lack of Awareness of Imaginary Surfaces in Economic Development Community.** The lack of awareness about imaginary surfaces within the economic development community creates potential for incompatible development with aviation operations.
- **Height Regulations Do Not Consider Imaginary Surfaces.** Current Montgomery and Prattville height regulations do not consider the Federal Aviation Administration's height guidance relative to imaginary surfaces.
- **Formalized Cell Tower Regulations.** There are no formalized cell tower regulations for the jurisdictions in the JLUS Study Area. Lack of a formalized process for approval of energy development projects can potentially lead to oversight and compatibility issues.



# Recommended Plan

6

## Recommended Plan

This section identifies and organizes the recommended actions (strategies) developed through a collaborative effort between representatives of local jurisdictions, Maxwell Air Force Base (Maxwell AFB), state and federal agencies, local organizations, the general public and other stakeholders that own or manage land or resources in the region. Because the Montgomery-Maxwell AFB JLUS is the result of a collaborative planning process, the recommendations in this section represent a true consensus

*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.*

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.

The key to the implementation of the strategies is the establishment of a JLUS Coordination Committee to oversee the JLUS implementation. Through this Committee, local jurisdictions, Maxwell AFB, 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.

## Recommended 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 the Alabama state laws, the Recommended 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 strategy may result in the creation of multiple strategies that address the same issue but tailored to individual circumstances.



### **Military Compatibility Areas**

In compatibility planning, the term “Military Compatibility Area” (MCA) 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. An MCA is designated to accomplish the following:

- (1) Promote an orderly transition between community and military land uses so that land uses remain compatible.
- (2) Protect public health, safety, and welfare.
- (3) Maintain operational capabilities of military installations and areas.
- (4) Promote an awareness of the size and scope of military training areas to protect areas separate from the actual military installation (e.g., critical air space) used for training purposes.
- (5) Establish compatibility requirements within the designated area, such as requirements for sound attenuation and avigation easements.

An MCA delineates a geographic area where strategies are recommended to support compatibility planning and the JLUS goal and objectives. The MCAs are where the majority of the recommended strategies apply. To better reflect the area of interest and focus implementation, several MCAs are further divided into subareas. The five MCAs, one Vertical Obstruction Awareness Area (VOAA), and one Military Compatibility Overlay District (MCO) used in the Montgomery–Maxwell AFB JLUS Recommended Plan are identified below, and several Maxwell AFB subzones are shown and described on the following pages:

- Safety MCA
- BASH MCA
- Noise MCA
- Vertical Obstruction MCA
- Vertical Obstruction Awareness Area
- Gunter Annex MCA
- Maxwell AFB MCO

### ***MCA 1: Study Area (Figure 1)***

This MCA covers regional strategies that apply to the Study Area as a whole (see Figure 1).

### ***MCA 2: Safety Military Compatibility Area (Figure 10)***

The Safety MCA for Maxwell AFB is illustrated on Figure 10. This MCA has four subzones in which strategies address the establishment of awareness measures and restrictive covenants or conservation easements between the military and willing landowners. In addition, strategies applied to this area would facilitate the discouragement of land uses that attract birds and wildlife to the area and decrease the risk profile associated with this area. The following subzones are:

- Clear Zone Subzone,
- Accident Potential Zone I Subzone,
- Accident Potential Zone II Subzone, and
- Accident Potential Zone-Landing Zone Subzone.

### ***MCA 3: BASH Military Compatibility Area (Figure 11)***

The BASH MCA covers a five-mile radius around the air operations area as shown on Figure 11—the primary area which aviation operations occur. Land uses in this area should not encourage or promote increased bird and wildlife activity and / or habitation. Such recommendations would include amending the zoning ordinance to discourage land uses such as man-made water features and landfills.

### ***MCA 4: Noise Military Compatibility Area (Figure 12)***

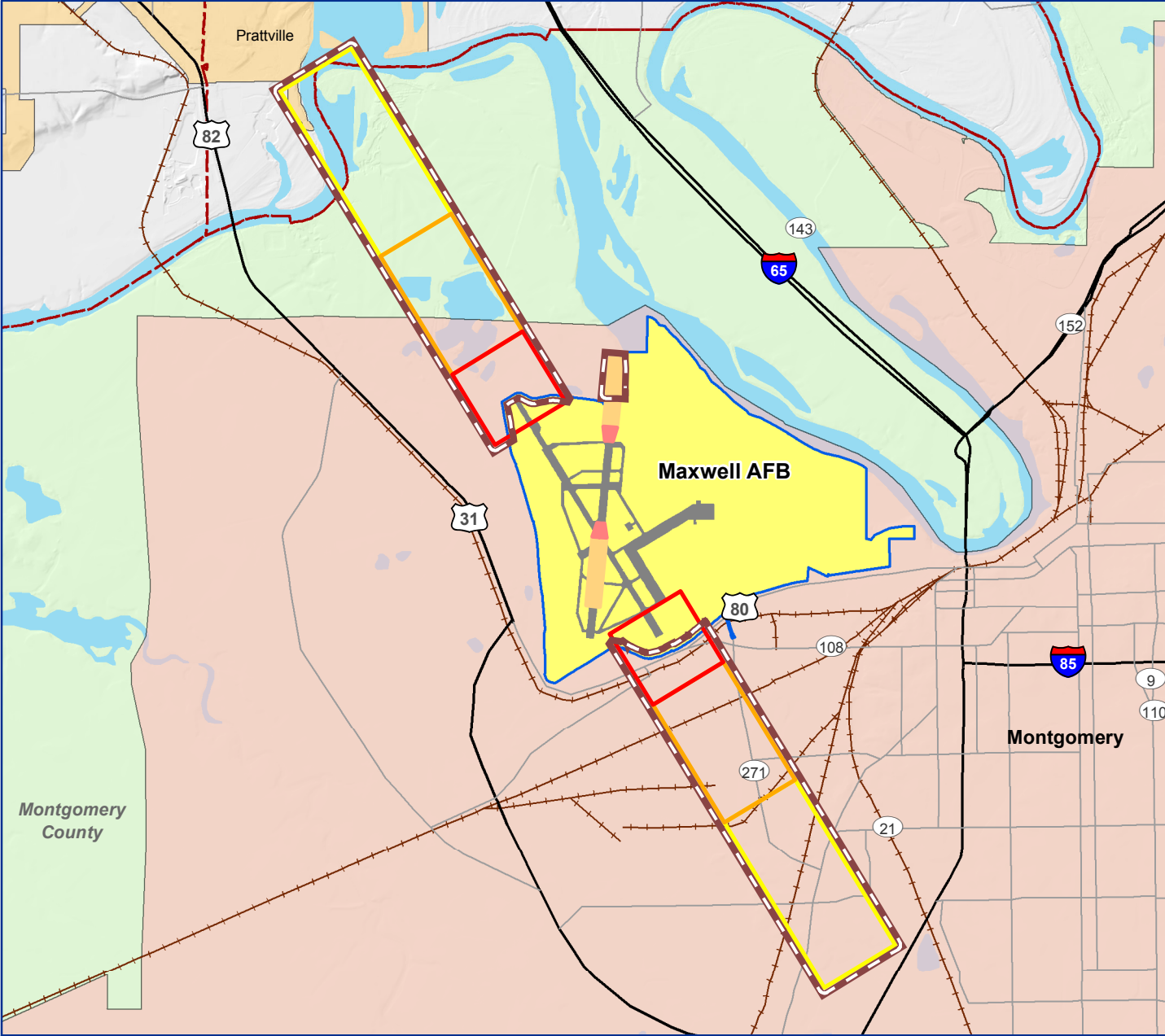
The Noise MCA includes all land located off installation within the 65 dB and the 70 dB noise contours. The 70 dB noise contour is a small portion of land comprising mostly utility infrastructure and is located immediately outside the base. The 65 dB noise contour impacts land uses both to the north and south of the airfield and generally strategies would address awareness and potentially sound attenuation measures. Figure 12 illustrates the Maxwell AFB Noise MCA.



Figure 10

### Safety Military Compatibility Area

- Legend**
- Safety MCA
  - Accident Potential Zones**
  - Clear Zone
  - Accident Potential Zone I
  - Accident Potential Zone II
  - Landing Zone (LZ) Clear Zone
  - Landing Zone (LZ) Accident Potential Zone
  - Installation
  - City of Montgomery
  - City of Prattville
  - Montgomery County
  - Other City / Town
  - Other County
  - Water Body
  - Interstate / Highway
  - Major Road
  - Railroad
  - Airport
  - Runway



Source: Matrix Design Group, 2016.

0 1/2 1 Miles

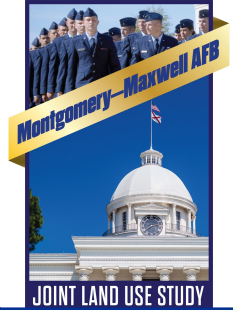
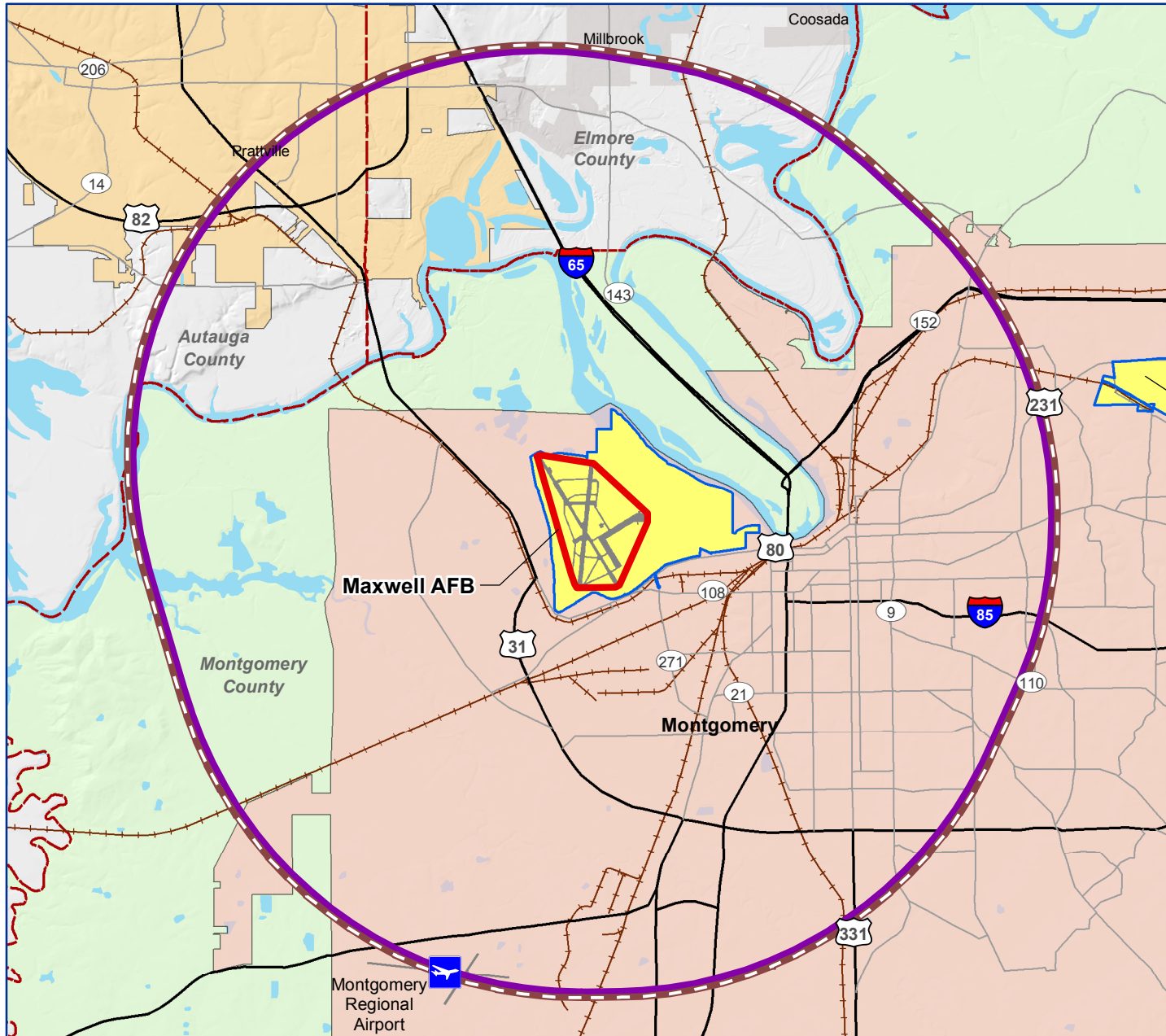


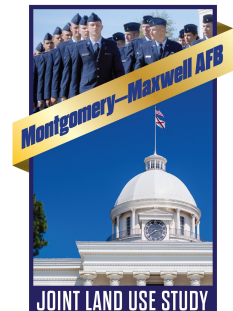


Figure 11

### BASH Military Compatibility Area



- Legend**
- BASH MCA
  - 5-mile BASH Relevancy Area
  - Airport Operations Area
  - Installation
  - City of Montgomery
  - City of Prattville
  - Montgomery County
  - Other City / Town
  - Other County
  - Water Body
  - Interstate / Highway
  - Major Road
  - Railroad
  - Airport
  - Runway













Source: Matrix Design Group, 2016.

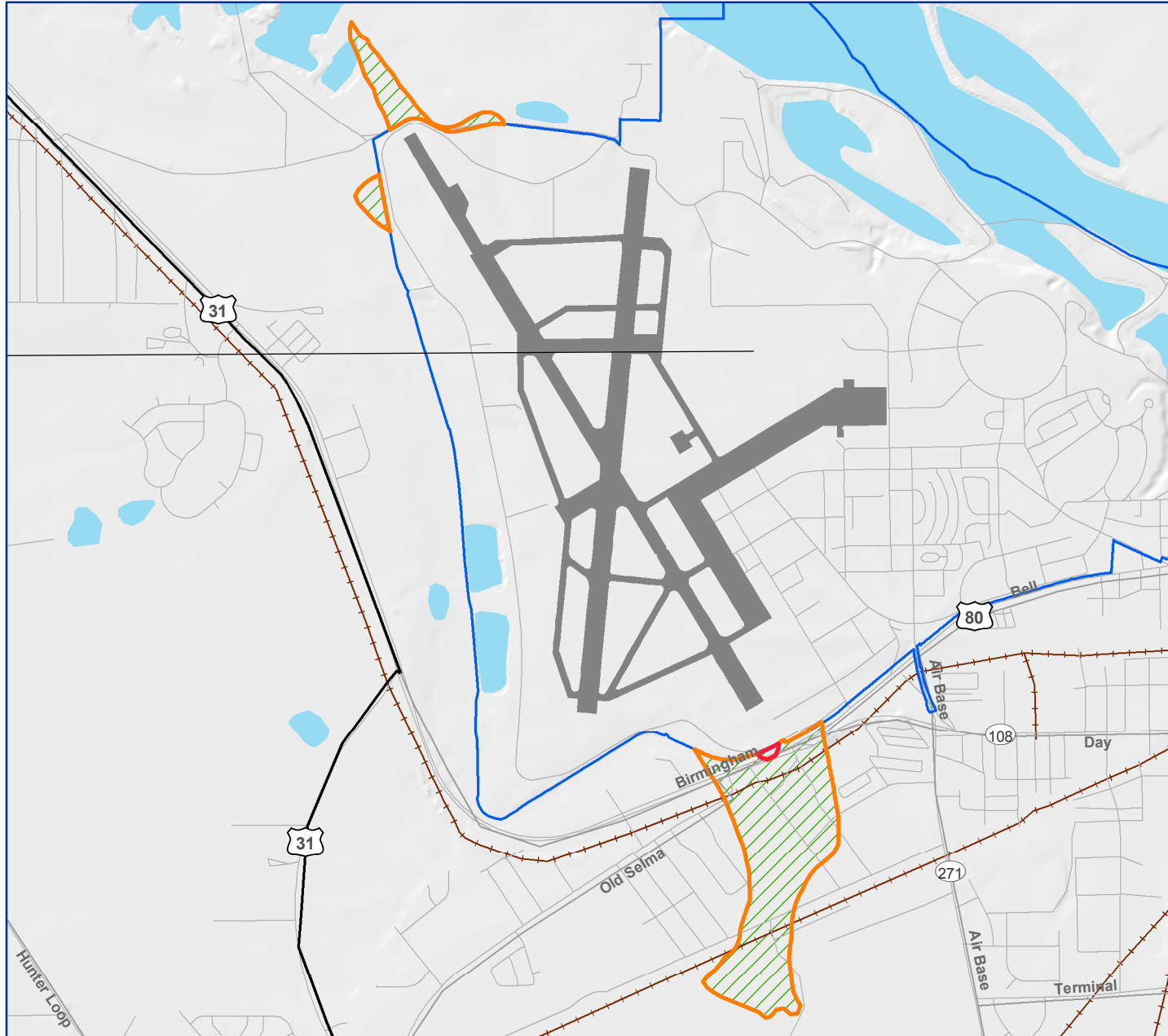


Figure 12

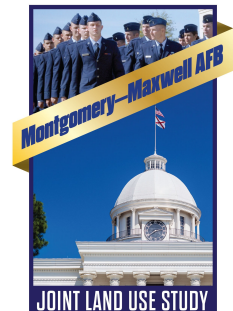
### Noise Military Compatibility Area

#### Legend

-  Noise MCA
- DNL Noise Contour (dB)**
-  65 dB DNL Subzone
-  70 dB DNL Subzone
-  Installation
-  Water Body
-  Interstate / Highway
-  Major Road
-  Local Road
-  Railroad
-  Runway



Source: Maxwell Air Force Base, 2007.





### ***MCA 5: Vertical Obstruction Military Compatibility Area (Figure 13)***

The Vertical Obstruction MCA serves to protect important flight areas for aircraft that operate out of Maxwell AFB. Within this MCA, strategies address height restrictions to avoid vertical obstructions. The Vertical Obstruction MCA at Maxwell AFB is depicted on Figure 13. There are 11 subzones with varying height guidance that comprise this MCA.

### ***Vertical Obstruction Awareness Area (Figure 14)***

The Vertical Obstruction Awareness Area (VOAA) is designed to provide awareness of the complexity of the airspace above both Maxwell AFB and Montgomery Regional Airport (MGM). The VOAA identifies the most constrained, moderately constrained, and minimally constrained areas relative to the assessment of vertical obstructions. This area is where the imaginary surfaces of MGM overlap with the imaginary surfaces of Maxwell AFB, and thus, there is a complex constraint in this area. Consideration for both slopes and height limitations should be incorporated into planning discussions and documents where appropriate. The criteria are categorized by the following:

- Most constrained encompasses the area where structures should not exceed 150 feet.
- Moderately constrained covers the area that should not exceed the range between 150 feet and 500 feet.
- Minimally constrained covers the area where structures should not exceed 500 feet.

These are illustrated on Figure 14. It should be noted that there are slopes that should also be complied with and factored into discussions and planning within these areas depending on location of proposed site. As the location is nearer to the runway, the slopes are more restrictive.

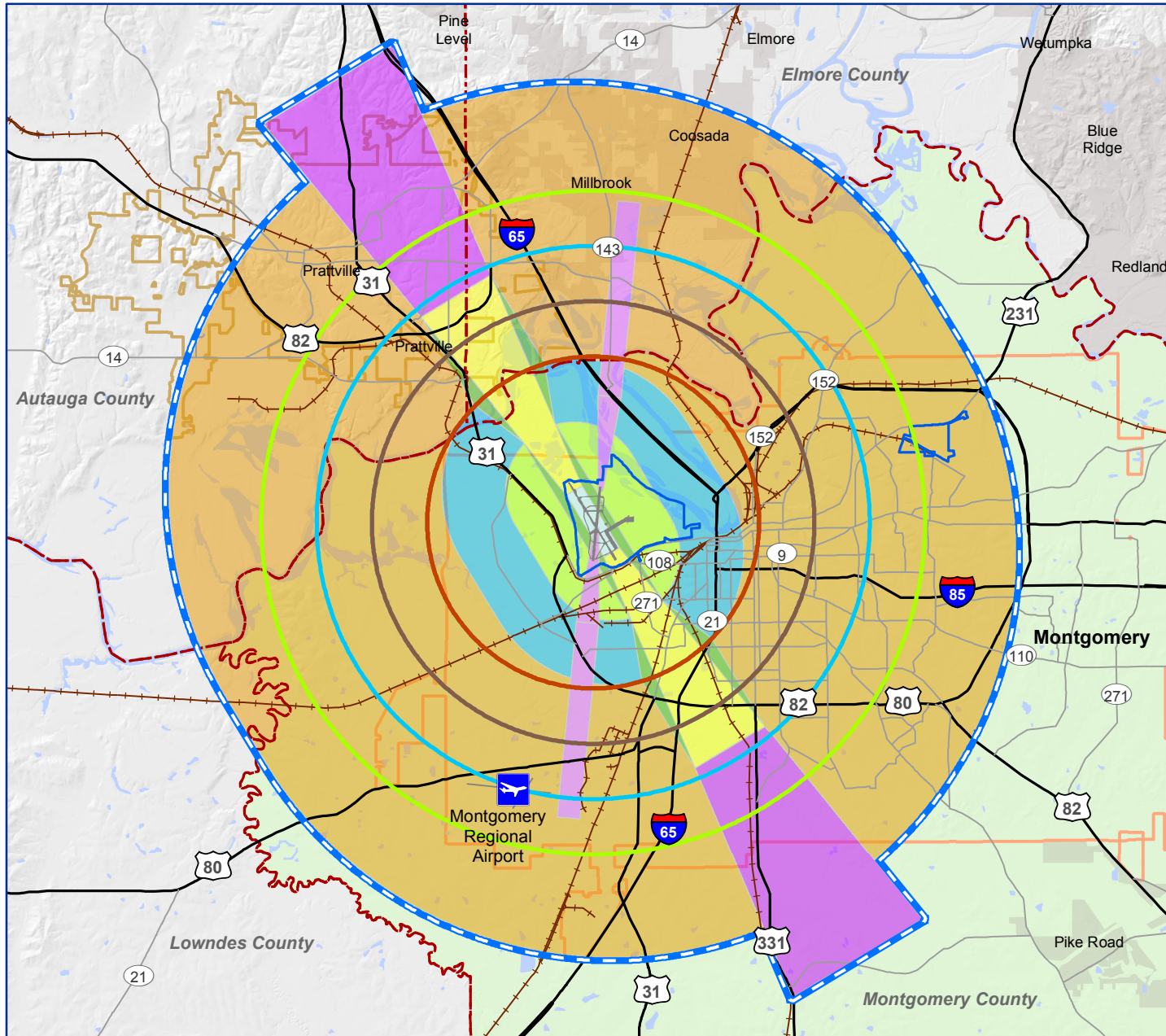
Recommendations for the VOAA include enhanced communication and coordination and potentially strict regulations for the “most constrained” area.

### ***MCA 6: Gunter Annex Military Compatibility Area (Figure 15)***

The Gunter Annex MCA is designed to capture the two-mile notification area established by state law pursuant to Alabama Code Sections 11-106.1 through 11-106.5 as illustrated on Figure 15. This area is designed to protect the area around Gunter Annex related to anti-terrorism / force protection concerns, frequency interference concerns, and notifications of proposed development within a two-mile radius of the installation. Recommendations that apply to this area include notification and enhanced communication and coordination.

### ***Maxwell AFB-Gunter Annex Military Compatibility Overlay District (Figure 16)***

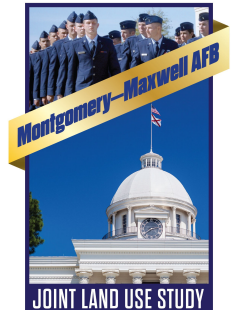
The Maxwell AFB-Gunter Annex Military Compatibility Overlay District (MCO) is the consolidated military compatibility area. This area, illustrated on Figure 16, covers the majority of northwestern Montgomery County and portions of the surrounding counties. Land uses in this area should be coordinated with Maxwell AFB on a case-by-case basis unless otherwise restricted due to a more stringent regulation.



**Figure 13**  
**Vertical Obstruction**  
**Military Compatibility**  
**Area**

**Legend**

- Vertical Obstruction MCA
- FAA Part 77**
- Up to 200' @ 3NM Subzone
- Up to 300' @ 4NM Subzone
- Up to 400' @ 5NM Subzone
- Up to 500' @ 6NM Subzone
- Airfield Imaginary Surface**
- Primary Surface
- Approach/Departure Clearance Surface Subzone (50:1)
- Approach/Departure Clearance Surface Subzone (Horizontal) (Up to 500 feet)
- Approach/Departure Subzone (LZ) (35:1)
- Inner Horizontal Surface Subzone (150 feet)
- Conical surface Subzone (20:1)
- Outer Horizontal Surface Subzone (Up to 500 feet)
- Transitional Surface Subzone (7:1)
- Installation
- City of Montgomery
- City of Prattville
- Montgomery County
- Other City / Town
- Other County
- Water Body
- Interstate / Highway
- Major Road
- Railroad
- Montgomery Regional Airport
- Runway

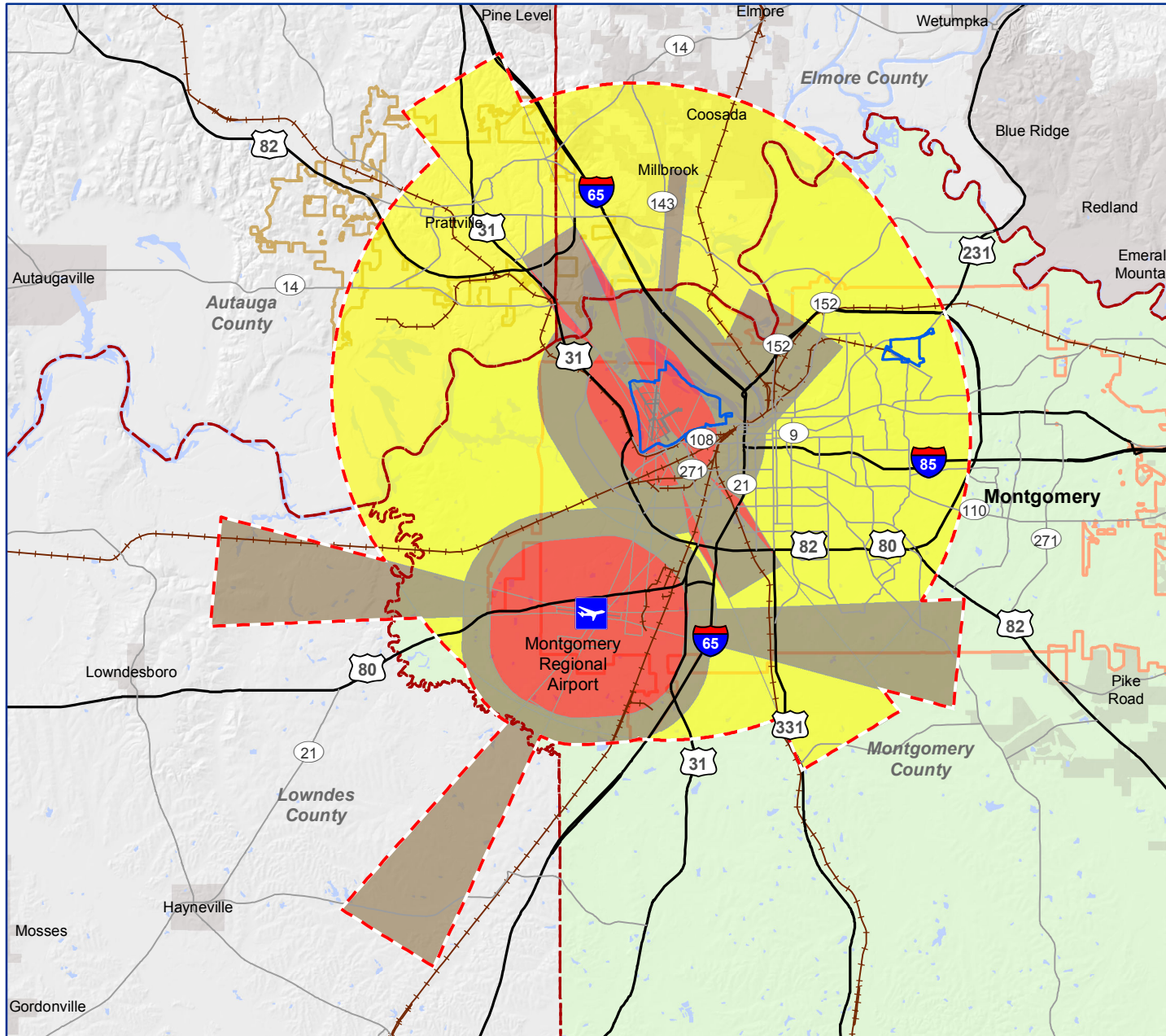


Sources: Maxwell Air Force Base, 2007; Matrix Design Group, 2016.



Figure 14

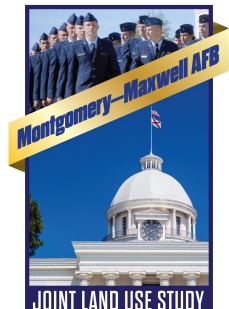
### Vertical Obstruction Awareness Area



**Legend**

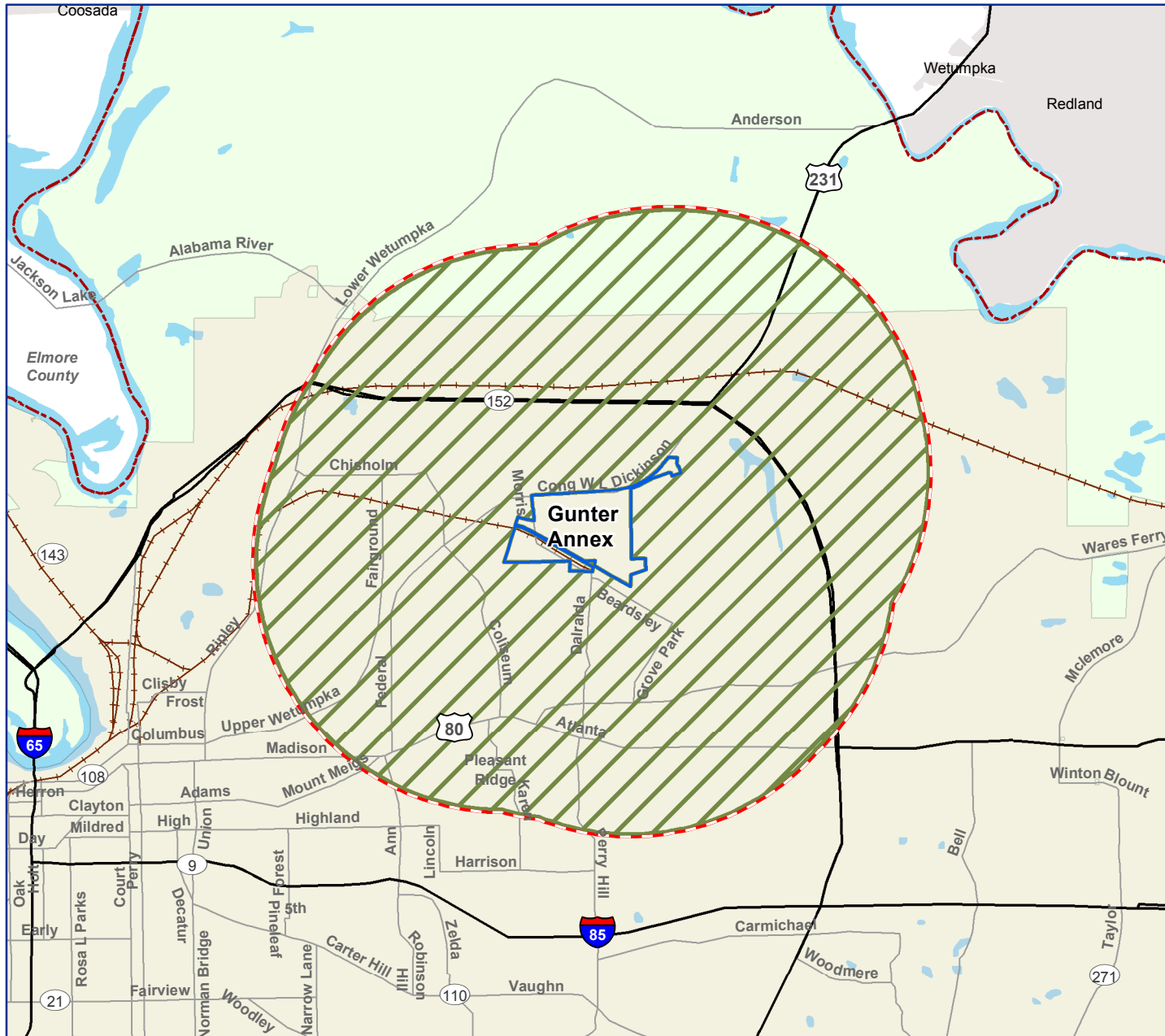
- Vertical Obstruction Awareness Area\*
- Constraint**
- Less than 150 feet
- 150 feet to 500 feet
- not to exceed 500 feet
- Installation
- City of Montgomery
- City of Prattville
- Montgomery County
- Other City / Town
- Other County
- Water Body
- Interstate / Highway
- Major Road
- Railroad
- ✈ Montgomery Regional Airport
- Runway

\*Development in these areas must also comply with FAA Part 77 Regulations.

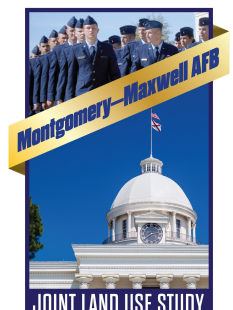


Sources: Maxwell Air Force Base, 2007; Matrix Design Group, 2016.

Figure 15  
Gunter Annex  
Military Compatibility  
Area



- Legend**
- Gunter Annex MCA
  - Notification Area (2-Miles)
  - Installation
  - City of Montgomery
  - City of Prattville
  - Montgomery County
  - Other City / Town
  - Other County
  - Water Body
  - Interstate / Highway
  - Major Road
  - Railroad
  - Runway



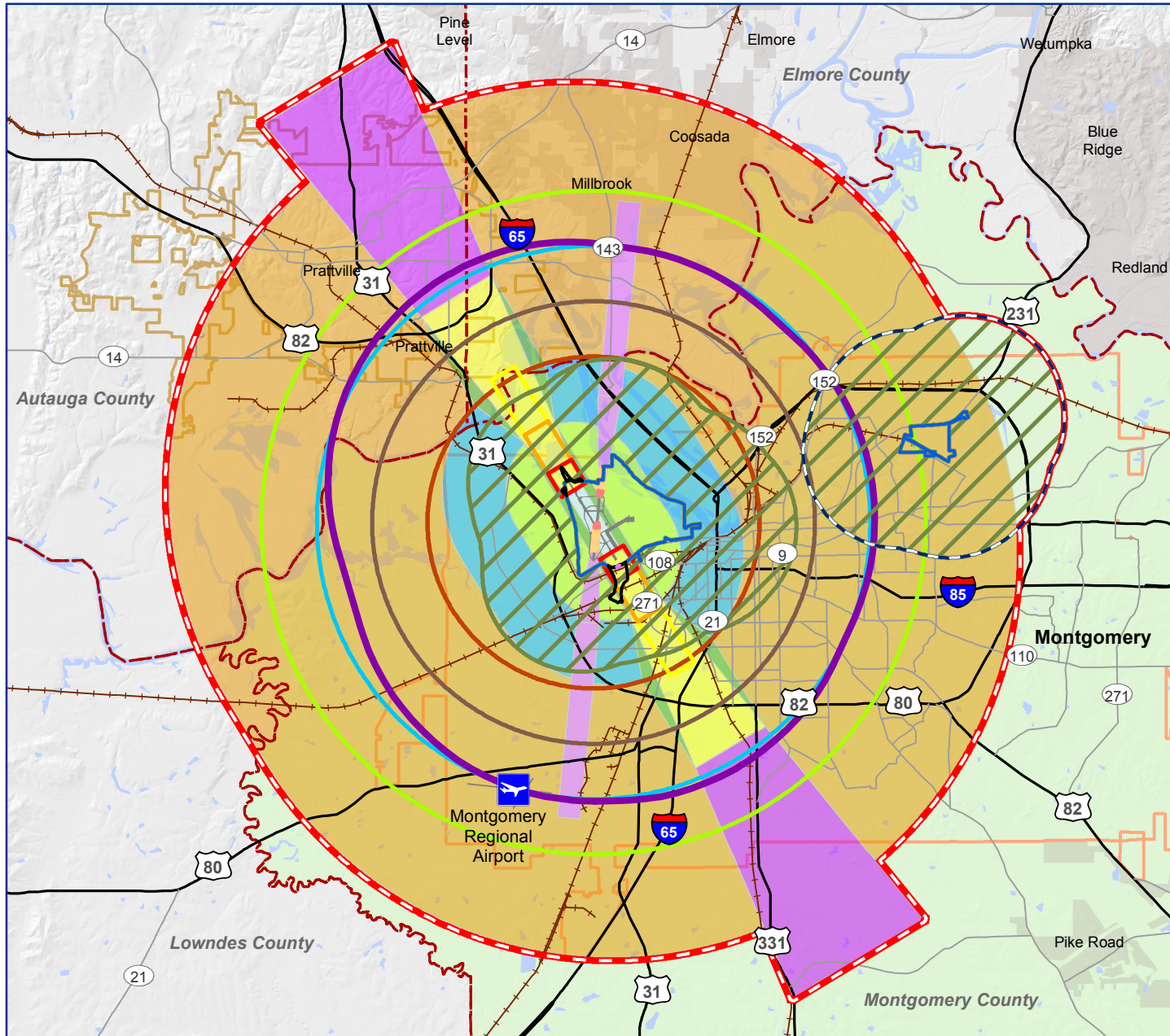
Source: Maxwell Air Force Base, 2015.

0 1/2 1 Miles Matrix DESIGN GROUP



Figure 16

### Military Compatibility Overlay District



**Legend**

- MCOD
- Maxwell AFB Notification Area Subzone
- Gunter Annex MCA
- 5-mile BASH Relevancy Area Subzone

**Accident Potential Zones**

- Clear Zone
- Accident Potential Zone I
- Accident Potential Zone II
- Landing Zone (LZ) Clear Zone
- Landing Zone (LZ) Accident Potential Zone

**DNL Noise Contour (dB)**

- 65 dB DNL Subzone
- 70 dB DNL Subzone

**FAA Part 77**

- Up to 200' @ 3NM Subzone
- Up to 300' @ 4NM Subzone
- Up to 400' @ 5NM Subzone
- Up to 500' @ 6NM Subzone

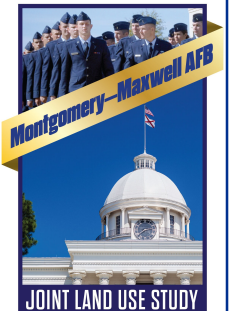
**Airfield Imaginary Surface**

- Primary Surface
- Approach/Departure Clearance Surface Subzone (50:1)
- Approach/Departure Clearance Surface Subzone (Horizontal) (Up to 500 feet)
- Approach/Departure Subzone (LZ) (35:1)
- Inner Horizontal Surface Subzone (150 feet)
- Conical surface Subzone (20:1)
- Outer Horizontal Surface Subzone (Up to 500 feet)
- Transitional Surface Subzone (7:1)

**Other Symbols**

- Installation
- City of Montgomery
- City of Prattville
- Montgomery County
- Other City / Town
- Other County
- Water Body
- Interstate / Highway
- Major Road
- Railroad
- Montgomery Regional Airport
- Runway

Sources: Maxwell Air Force Base, 2007 and 2015; Matrix Design Group, 2016.







### How to Read the Recommended Plan

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

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

To make the strategies easier to use, they are presented in a table format (Table 3) that provides the strategy and information on when and how that strategy will be implemented. Figure 17 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.

**Issue #.** The issue # is an alpha-numeric number that provides a unique reference for each specific issue and strategy. An issue’s reference number is composed of the Compatibility Factor ID (COM) and the Issue number (1, 2, or 3).



**Completed Stamp.** This stamp indicates this recommendation was identified during the JLUS process and completed before the end of the process concluded.



**In Progress Stamp.** This stamp indicates this recommendation has been initiated by the responsible parties indicated in the table.

**Military Compatibility Area (MCA).** This column indicates the applicable MCA that the strategy applies to outside Maxwell AFB and Gunter Annex. Additional details on MCAs are provided under the previous “Compatibility Areas” section.

**Strategy.** In bold type is a title that describes the strategy. This is followed by the complete strategy statement that describes the action needed. Each set of strategies is preceded by the issue which they are meant to address.

**Timeframe.** This column indicates the projected timeframe of each strategy. The year listed reflects the starting timeframe for initiating work on this strategy or if it is an on-going action.

2017	Strategy proposed for initiation in 2017-2018 (within a year of JLUS completion)
2019	Strategy proposed to be initiated in 2019-2020 (within 2-3years of JLUS completion)
2021	Strategy proposed to be initiated in 2021-2023 (within 4-6 years from JLUS completion)
On-going	An on-going strategy that should be consistently monitored



Figure 17. Montgomery-Maxwell AFB Strategy Key

Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	CARPOC / SCADC	Montgomery County School District	Other
<b>Energy Development (ED)</b>												
ED-1	<b>Alternative Energy Development Coordination</b> There are no formal local procedures for coordinating alternative energy development proposals with the DOD and Maxwell AFB..											
ED-1C	MCA-1	<p><b>Coordinate with the DOD Siting Clearinghouse</b></p> <p>Consider updating plans to include policies or a guiding framework including communication with the military to promote compatible planning for proposed energy development projects. Such communication should include submission of proposed projects to Maxwell AFB and the DOD Siting Clearinghouse to review each project for military compatibility. Include coordination with DOD Siting Clearinghouse as part of the MOU between Maxwell AFB and stakeholders, referenced in Recommendation COM-1B.</p> <p>This guiding framework should include at a minimum:</p> <ul style="list-style-type: none"> <li>■ Delineation of the area for which communication and coordination occurs for proposed energy development, and</li> <li>■ Triggers for communication and coordination such as capacity, height of towers, and construction technology for solar panels (e.g. photovoltaic or concentrated solar power), and</li> <li>■ Confirmation that development has been reviewed by Maxwell AFB and the DOD Siting Clearinghouse with local government permit applications.</li> </ul> <p><i>Note: The DOD Siting Clearinghouse requirements and standards published in Title 32, Code of Federal Regulations, Part 211 shall advise and guide the process to facilitate the early submission of energy project proposals to the Clearinghouse for military mission compatible review.</i></p> <p><i>Other Partners: Willing Landowners; Autauga and Elmore counties; City of Millbrook and Town of Coosada</i></p>	2020	■	■	■	□		■	■	■	□

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

**Military Compatibility Area:** Geographic area where each option applies.

**Strategy:** Description of the Strategy.  
**Note:** Provides further information about the partners and / or information that the partners may want to consider in implementation.

**Timeframe:** The expected initiation date for option 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.



**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.

- ALDEM Alabama Department of Environmental Management
- ALDOT Alabama Department of Transportation
- CARPDC Central Alabama Regional Planning and Development Commission
- SCADC South Central Alabama Development Commission


**Table 3. Issues / Strategies by Compatibility Factor (Alphabetized by Factor)**

Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
<b>Air Quality (AQ)</b>												
	No issues identified for Air Quality.											
<b>Anti-Terrorism / Force Protection (AT)</b>												
<b>AT-1</b>	<b>No Controlled Perimeter Between Maxwell AFB and the Alabama River</b> There is no controlled perimeter between Maxwell AFB and the Alabama River, which can increase security breaches of the installation perimeter.											
<b>AT-1A</b>	MCOD	<b>Install Buoys or Other Markers along Installation Perimeter in Alabama River</b> Maxwell AFB through the Civil Engineering	2020				■					□



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<p>Squadron (CES) and / or Security Forces Squadron (SFS) should work with the Air Force and Alabama Department of Environmental Management (ALDEM) to install buoys or other markers including fencing in the water along the installation perimeter to assist in awareness by users of the Alabama River.</p> <p><i>Other Partner: ALDEM</i></p>										
AT-1B	MCOD	<p><b>Develop Memorandum of Agreement for Maintenance of Buoys</b></p> <p>If Strategy AT-1A is implemented, then Maxwell AFB through CES and / or SFS should work with ALDEM to develop a set of procedures for maintaining the buoys to ensure their adequate operation. The MOA should include but not be limited to:</p> <ul style="list-style-type: none"> <li>■ Regular schedule for monitoring,</li> <li>■ Annual budgeting for maintenance of buoys and organizational roles, and</li> <li>■ Points of contact for each organization.</li> </ul> <p><i>Other Partner: ALDEM</i></p>	2021				■					□



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
AT-2	<b>Abandoned Department of Corrections Facility Outside Gunter Annex</b> The abandoned Department of Corrections facility adjacent to Gunter Annex poses risk to installation security. The property contains abandoned structures and debris in an unsecured environment which increases concern for potential security breaches.											
AT-2A	MCA-6	<b>Conduct Feasibility Study</b> The State of Alabama should budget for and conduct a study to determine the best option for the abandoned buildings adjacent to Gunter Annex. The study should assess feasibility of demolition and redevelopment. <i>Primary Partner: Alabama State Department of Corrections (DOC)</i>	2019									■
AT-2B 	MCA-6	<b>Update Communication Procedures</b> The Alabama State DOC should work with Maxwell AFB-Gunter Annex to update formal communications protocol or memorandum of understanding to facilitate and monitor issues or concerns that arise regarding suspicious activity or other concerns at the abandoned site. At a minimum, the protocol or MOU should include: <ul style="list-style-type: none"> <li>■ Date and time of activity, issue, or concern,</li> </ul>	2018				□					■



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<ul style="list-style-type: none"> <li>Points of contact for DOC,</li> <li>Brief description of activity, issue, or concern, and</li> <li>Action taken for addressing activity, issue, or concern.</li> </ul> <p><i>Primary Partner: Alabama DOC</i></p>										
<b>AT-3</b>	<p><b>Compliance with Residential Setbacks Adjacent to Gunter Annex’s Southern Fence Line</b></p> <p>The Gunter Annex southern boundary borders the Dalraida neighborhood where residential properties abut the installation property. Backyard accessory structures such as storage sheds that do not comply with the city’s residential setbacks regulations represent an increased security concern for the base.</p>											
<b>AT-3A</b>	MCA-6	<p><b>Compliance of Accessory Structures Setbacks</b></p> <p>The City of Montgomery should comply with the accessory structures setbacks to facilitate secure property including along the military installation located within the city limits. This will assist with maintaining a secure military installation perimeter while maintaining code compliance.</p>	On-going	■								
<b>AT-3B</b>	MCA-6	<p><b>Amend Zoning Ordinance: Article VI General Provisions, Section 4, Location of Accessory</b></p>	2018	■								



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<p><b>Structures on Residential Lots</b>                      The City of Montgomery should amend Article VI. General Provisions, Section 4, Location of Accessory Structures on Residential Lots in its zoning ordinance to incorporate compliance measures for accessory structures setbacks to ensure illegal non-conforming uses are addressed to maintain the security of all property and property owners in the city.</p>										
AT-4	<p><b>Utility Vaults for Water Lines are Not Secured Outside Maxwell AFB</b>                      Utility vaults that support Maxwell AFB’s water lines are situated on both installation and City of Montgomery property. Only the vaults located on Maxwell AFB are protected.</p>											
AT-4A	MCA-1	<p><b>Develop Memorandum of Understanding</b>                      Maxwell AFB and Montgomery Water Works (MWW) should develop a memorandum of understanding (MOU) to delineate responsibility for the monitoring of the utility vaults that support water lines for Maxwell AFB. The MOA should at minimum include the following:</p> <ul style="list-style-type: none"> <li>■ Days and times for MWW monitoring,</li> </ul>	2017				□					■



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<ul style="list-style-type: none"> <li>Reports to Maxwell AFB about any incident that occurred while monitored by the city, and</li> <li>Points of contact in case of emergency.</li> </ul> <p><i>Other Primary Partner: MWW</i> <i>Primary Maxwell AFB Partner: CES</i></p>										
<b>Biological Resources (BIO)</b>												
	No issues identified for Biological Resources.											
<b>Climate Adaptation (CA)</b>												
<b>CA-1</b>	<b>Flooding on Maxwell AFB Impacts Operations</b> Flooding from various sources including private dams, ditches, and Alabama River impacts Maxwell AFB by causing flooding in military operational areas.											
<b>CA-1A</b>	<b>MCA-1</b>	<p><b>Consider Adopting a Statewide Dam Safety Program</b></p> <p>The Alabama Legislature should consider adopting a statewide Dam Safety Program that would establish provisions for public and private dams. At</p>	2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>





Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<p>minimum, the provisions should include:</p> <ul style="list-style-type: none"> <li>■ General recommended guidance for the construction of dams—private and public;</li> <li>■ General recommended maintenance for a variety of sizes of dams;</li> <li>■ Periodic inspections for both public and private dams to ensure property owners are not engaging in behaviors that would increase flood potential;</li> <li>■ Procedures for removing items or addressing behaviors that increase flood potential;</li> <li>■ Explanation of the benefits of a Statewide Dam Safety Program; and,</li> <li>■ Contact information for questions about general information and enforcement.</li> </ul> <p><i>Other Partner: ALDEM</i></p>										



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
CA-1B	MCA-1	<p><b>Update Hazard Mitigation Plan for Military Compatibility</b></p> <p>Montgomery County should work together with Maxwell AFB the next time it updates its Hazard Mitigation Plan (HMP) to incorporate appropriate military compatibility guidance including integrating the military in the process.</p>	On-going and 2018		■		□					
<b>Communication / Coordination (COM)</b>												
COM-1	<p><b>No Formalized Planning Coordination Between the Local Jurisdictions and Maxwell AFB</b></p> <p>There is no formalized planning coordination between the local jurisdictions and Maxwell AFB for ensuring compatible development within Maxwell AFB and Gunter Annex operational areas.</p>											
COM-1A	MCA-1	<p><b>Establish a JLUS Coordination Committee</b></p> <p>Establish a JLUS Coordination Committee to maintain efficient and effective coordination among the JLUS partners and to oversee the implementation of JLUS recommendations and increase coordination on military compatibility issues.</p> <p>■ The JLUS Coordination Committee should</p>	2017	■	□	□	□		□	□	□	□



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<p>comprise the same jurisdictions, agencies, and Maxwell AFB as included in the development of the JLUS.</p> <ul style="list-style-type: none"> <li>■ Additional entities identified as “Other Partners” as part of the JLUS strategies should be included.</li> <li>■ The JLUS Coordination Committee should meet on a regular basis as agreed upon by the Committee members.</li> <li>■ The JLUS Coordination Committee can be either a standalone organization or an existing advisory committee can be repurposed as appropriate to the area and issues addressed.</li> </ul> <p><i>Other Partners: Any additional entities deemed appropriate (e.g. entities from the JLUS Technical or Policy Committees).</i></p>										
<p><b>COM-1B</b></p> <p><i>COMPLETED</i></p>	<p><b>MCA-1</b></p>	<p><b>Develop and Approve Memorandum of Agreement</b></p> <p>The cities of Montgomery and Prattville, Montgomery County, and Maxwell AFB should collaborate through the JLUS Coordination Committee to facilitate the development of a</p>	<p>2017</p>	<p>■</p>	<p>■</p>	<p>■</p>	<p>■</p>			<p>□</p>	<p>□</p>	



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<p>formal MOA that delineates the roles and responsibilities for each agency to collaborate on proposed development and land use planning matters. At minimum, the MOA should include:</p> <ul style="list-style-type: none"> <li>■ Point of contact and information for each agency including phone numbers and email addresses,</li> <li>■ Role in communicating with the base on compatibility concerns,</li> <li>■ Responsibility in coordinating on the resolution of compatibility concerns,</li> <li>■ Community and military response times,</li> <li>■ Triggers for coordination and communication, (e.g., infrastructure planning, water resources planning, economic development, new or changes to comprehensive plans, zoning) pursuant to AL Code § 11-106-1 through § 11-106-5, and subdivision plats, and</li> <li>■ Procedures for early development review.</li> </ul>										
COM-1C	MCA-1	<p><b>Update Memorandum of Agreement</b> The City of Montgomery should update the existing</p>	2017	■	■	■	■			□	□	



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		MOA to include triggers for communication, a procedure for early development review, military response times so it does not delay community-mandated timeframes, and points-of-contact information should include phone numbers and email addresses as delineated in Strategy COM-1B.										
COM-2	<b>Enhanced Planning Notification for Maxwell AFB</b> The existing process for planning notification between the City of Montgomery and Maxwell AFB needs to be expanded to allow for earlier involvement by affected stakeholders and notification of land use planning actions, e.g. zoning changes, variances, etc., in the planning and development process.											
COM-2A	MCA-1	<b>Planning Board Representative</b> The cities should provide for a Maxwell AFB representative, when appropriate and available, to local planning boards in each local jurisdiction (and other advisory boards, as appropriate) within the Study Area to attend meetings and be available to answer questions relative to applications or plans that may affect operations associated with Maxwell AFB-Gunter Annex. If there are jurisdictions that do not currently provide this, then implement this upon acceptance of the JLUS Report.	On-going	■		■	□			■	■	



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
COM-2B	MCA-1	<p><b>Create and Maintain a GIS Data Clearinghouse</b></p> <p>The counties and cities in the Study Area, and Maxwell AFB should work collaboratively to develop a GIS clearinghouse to share GIS data (e.g., military footprints, economic development sites, and other pertinent GIS data) to enable enhanced long-range compatibility planning. In addition, a protocol for accessing and updating the information should be developed to ensure accuracy and appropriate security measures are established.</p>	2018	■	□	□	□		□	□	□	□
		For other recommendations that address this issue, see Recommendations for Issue COM-1.										
COM-3	<p><b>Formalized Maxwell AFB Points of Contact</b></p> <p>The public and elected officials are not aware of the designated points of contact for Maxwell AFB and Gunter Annex for reporting concerns or obtaining information related to training activities.</p>											
		For recommendations that address this issue, see Recommendations for Issue COM-1.										



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
COM-4	<b>Formalized Procedures for Information Sharing and Economic Development Organizations</b> There are no formal procedures established for information sharing between Maxwell AFB and local and regional economic development organizations to facilitate appropriate discussions about synergistic economic development opportunities. Economic development organizations do not understand the impact some development can have on the operational mission of Maxwell AFB and Gunter Annex.											
COM-4A	MCA-1	<b>Update Comprehensive Economic Development Strategies</b> The Montgomery Chamber of Commerce, CARPDC, and SCADC should work with Maxwell AFB in future updates of their comprehensive economic development strategies (CEDS) to ensure that the military's goals and interests are captured in the CEDS for each organization and to ensure that neither the economic development groups nor the military's goals and interests conflict with the other.	2018	<input type="checkbox"/>			<input type="checkbox"/>			<input checked="" type="checkbox"/>		
		For other recommendations that address this issue, see Recommendations for Issue COM-1.										



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
COM-5	<b>Lack of Enhanced, Early Coordination with School Districts</b> There is currently no communication or coordination with the school district regarding planning and siting of new schools in the JLUS Study Area. This could potentially lead to incompatible land uses in military operational areas.											
COM-5A	MCA-1	<b>Update School District Strategic Plan, Section F – Facilities Expansion Program</b> The Montgomery County School District should update its strategic plan, particularly Section F – Facilities Expansion Program, to incorporate military compatibility goals and objectives in identifying appropriate locations for new schools to ensure that the schools provide an optimum learning environment free of loud noise and other impacts that could be generated from aviation operations in the area. <i>Other Partner: Montgomery County Board of Education</i>	2018				<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input type="checkbox"/>
		For other recommendations that address this issue, see Recommendations for Issue COM-1.										





Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
<b>Cultural Resources (CR)</b>												
No issues identified for Cultural Resources.												
<b>Dust, Smoke, Steam (DSS)</b>												
No issues identified for Dust, Smoke, and Steam.												
<b>Energy Development (ED)</b>												
<b>ED-1</b>	<b>Alternative Energy Development Coordination</b> There are no formal local procedures for coordinating alternative energy development proposals with the DOD and Maxwell AFB.											
<b>ED-1A</b>	<b>MCA-1</b>	<p><b>Consider Adopting Alternative Energy Development Permitting Requirements Legislation</b></p> <p>The Alabama Legislature should consider adopting alternative energy development and permitting laws to ensure the development is military compatible. Laws should consider at minimum:</p> <ul style="list-style-type: none"> <li>Impacts on military and civilian (MGM) aviation operations,</li> </ul>	2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				



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		<ul style="list-style-type: none"> <li>Remediation and decommissioning of developments as they reach the end of their lifecycle, and</li> <li>Should not preclude local permits or regulations.</li> </ul> <p>This will allow the development of compatible alternative energy and facilitate economic development in this industry.</p>										
ED-1B	MCA-1	<p><b>Consider Adopting Zoning Regulations for Alternative Energy Developments</b></p> <p>The jurisdictions in the JLUS Study Area should consider adopting regulations for alternative energy developments to ensure impacts to the military and MGM aviation operations are minimal. This will also facilitate long-term economic development in the energy industry for the area.</p> <p><i>Other Primary Partners: Autauga and Elmore counties, City of Millbrook and Town of Coosada</i></p>	2019	■	■	■	□			□	□	■



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
ED-1C	MCA-1	<p><b>Coordinate with the DOD Siting Clearinghouse</b></p> <p>Consider updating plans to include policies or a guiding framework including communication with the military to promote compatible planning for proposed energy development projects. Such communication should include submission of proposed projects to Maxwell AFB and the DOD Siting Clearinghouse to review each project for military compatibility. Include coordination with DOD Siting Clearinghouse as part of the MOU between Maxwell AFB and stakeholders, referenced in Recommendation COM-1B.</p> <p>This guiding framework should include at a minimum:</p> <ul style="list-style-type: none"> <li>■ Delineation of the area for which communication and coordination occurs for proposed energy development, and</li> <li>■ Triggers for communication and coordination such as capacity, height of towers, and construction technology for solar panels (e.g. photovoltaic or concentrated solar power), and</li> <li>■ Confirmation that development has been</li> </ul>	2018	■	■	■	□		■	■	■	□



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<p>reviewed by Maxwell AFB and the DOD Siting Clearinghouse with local government permit applications.</p> <p><i>Note: The DOD Siting Clearinghouse requirements and standards published in Title 32, Code of Federal Regulations, Part 211 shall advise and guide the process to facilitate the early submission of energy project proposals to the Clearinghouse for military mission compatible review.</i></p> <p><i>Other Partners: Willing Landowners; Autauga and Elmore counties; City of Millbrook and Town of Coosada</i></p>										
ED-1D	MCA-1	<p><b>“Red, Yellow, Green” Map</b></p> <p>Develop a "Red, Yellow, Green" Map in coordination with Maxwell AFB and its Civil Engineering Squadron identifying specific locations where structures that exceed a mutually agreed upon height would be incompatible with frequency interference and aircraft flight routes.</p> <p><i>Note: It is important to incorporate all pertinent data that would impact development including</i></p>	2017	■	□	□	□					



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<i>economic development regarding alternative energy development siting.</i>										
<b>Frequency Spectrum Capacity (FSC)</b>												
	No issues identified for Frequency Spectrum Capacity.											
<b>Frequency Spectrum Interference (FSI)</b>												
<b>FSI-1</b>	<b>Frequency Interference Concern</b> Concern about potential future development near the Gunter Annex area could potentially disrupt transmission signals.											
<b>FSI-1A</b>	<b>MCA-6</b>	<b>Develop a Frequency Ordinance for Jurisdictions in the Gunter MCA</b> The City of Montgomery should work with Maxwell AFB-Gunter Annex to develop an ordinance that would limit land uses that transmit a certain frequency and / or exceed a determined electromagnetic threshold in the Gunter MCA. The frequency and electromagnetic threshold would be determined by Maxwell AFB-Gunter Annex. The ordinance would also mitigate distances between	<b>2019</b>	■			□					



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		frequency dependent uses and Gunter Annex.										
FSI-1B	MCA-6	<p><b>Update Business License Application</b></p> <p>The City of Montgomery and Montgomery County should update their business license applications to include an item for identification of frequency and electromagnetic threshold. This should be shared with Maxwell AFB-Gunter Annex to provide feedback on impacts to frequency and electromagnetic threshold information for properties located in the Gunter MCA.</p>	2019	■	■		□					
FSI-1C	MCA-6	<p><b>Develop Memorandum of Agreement</b></p> <p>The City of Montgomery and Montgomery County should develop a MOA to share proposals and business license information as it relates to land uses that generate electromagnetic frequencies for properties in the Gunter MCA to facilitate coordination with the military.</p>	2018	■	■		□					
FSI-1D	MCA-6	<p><b>Develop Frequency Spectrum Management Plan</b></p> <p>Maxwell AFB should develop a Frequency Spectrum</p>	2018	□	□		■					



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		<p>Management Plan to enable enhanced coordination internally and with the jurisdictions. At minimum, the plan should identify the following:</p> <ul style="list-style-type: none"> <li>■ The mission critical frequencies;</li> <li>■ Points of contact internal to the Base and the primary points of contact with the City and County of Montgomery;</li> <li>■ Measures to update the plan when frequencies change for the military; and</li> <li>■ Communication procedures for relaying the changes in frequencies to the jurisdictions.</li> </ul>										
<b>Local Housing Availability (HA)</b>												
	No issues identified for Local Housing Availability.											
<b>Infrastructure Extensions (IE)</b>												
	No issues identified for Infrastructure Extensions.											



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
<b>Competition for Land, Air, and Sea Space (LAS)</b>												
LAS-1	<b>Competition for Airspace</b> There is an overlap in operational areas between Montgomery Regional Airport and Maxwell AFB. Though air traffic procedures are in place to separate current levels of air traffic, the competition for local airspace between future military and civilian aviation operations needs to be studied in more depth.											
LAS-1A	MCOD	<b>Conduct Feasibility Study</b> The City of Montgomery should work with Maxwell AFB to conduct a feasibility study on providing increased capabilities for the military to conduct additional operations. Likewise, the commercial operations of Montgomery Regional Airport should be evaluated to determine if increased commercial operations could be supported. <i>Other Partner: Alabama Air National Guard, Maxwell Operations Support Squadron</i>	2018	■			□					□
LAS-1B	MCOD	<b>Unauthorized Drone No-Fly Zone</b> The Cities of Montgomery and Prattville should amend their zoning ordinances to incorporate a one-mile no-fly zone around Maxwell AFB, Gunter	2018	■		■	□					





Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		Annex, and MGM that provides permissive uses to prevent unauthorized drones from operating over the airfields and facilitate security and airspace control.										
<b>Land Use (LU)</b>												
<b>LU-1</b>	<p><b>Proposed Future Development Compatibility</b></p> <p>There is a concern about the compatibility of proposed future development in the vicinity of Maxwell AFB. Certain types of development can create compatibility issues if not coordinated with the military, i.e. development that attracts large congregations of people, outdoor lighting for such development, and water features could attract birds and wildlife to the area of air operations potentially creating an incompatible environment.</p>											
<b>LU-1A</b>	<b>MCA-1</b>	<p><b>Military Compatibility Areas (MCAs)</b></p> <p>The JLUS Stakeholders should incorporate the MCAs and MCOD shown on Figures 8 through 15 into their planning documents. The MCAs and MCOD should be used by JLUS stakeholders to identify where, geographically, each JLUS strategy should be applied. This will facilitate education and awareness of military compatibility areas in the JLUS Study Area.</p> <ul style="list-style-type: none"> <li>■ <b>MCA 1 (Study Area).</b> This MCA covers regional</li> </ul>	2017	■	■	■			■	■	■	



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<p>strategies that apply to the Study Area as a whole (see Figure 1).</p> <ul style="list-style-type: none"> <li>■ <b>MCA 2 (Safety).</b> This MCA has four subzones in which strategies address the establishment of restrictive or conservation easements between the military and willing landowners and awareness measures and land use changes would avoid attracting birds and wildlife to the area.</li> <li>■ <b>MCA 3 (BASH).</b> This MCA is an area defined by a five-mile statute radius around the air operations area of an airfield that should be considered in land use planning relative to bird air strike hazard incidents. Land uses that attract birds (e.g. landfills and man-made water features) should be discouraged from this area.</li> <li>■ <b>MCA 4 (Noise).</b> An area that is defined by the 65 dB and 70 dB DNL noise contour associated with air operations at Maxwell AFB.</li> <li>■ <b>MCA 5 (Vertical Obstruction).</b> This MCA and its subzones document the areas subject to vertical height restrictions due to aircraft</li> </ul>										



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		<p>activity. This includes areas surrounding Maxwell AFB within the imaginary surfaces and Part 77 vertical obstruction compliance.</p> <ul style="list-style-type: none"> <li>■ <b>Vertical Obstruction Awareness Area (VOAA).</b> This area is designed to capture the overlap of Maxwell AFB’s and MGM’s imaginary surfaces and provide information where the most constrained areas are relative to the overlap of the two airports imaginary surfaces. This is to facilitate awareness of the complexity of the imaginary surfaces in this area. Proposed development should be evaluated on a case-by-case basis to foster military and public air transport compatibility.</li> <li>■ <b>MCA 6 (Gunter Annex).</b> The Gunter Annex MCA is designed to capture the two-mile notification area established by state law pursuant to Alabama Code Sections 11-106.1 through 11-106.5.</li> <li>■ <b>MCOD.</b> The area is the consolidated footprint of all the MCAs and associated subzones within the Maxwell AFB mission footprint.</li> </ul>										



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LU-1B	MCA-1	<p><b>Maintenance and Update of MCAs and VOAA</b></p> <p>Maxwell AFB and its Civil Engineering Squadron shall provide updated information to the JLUS Coordination Committee when changes in operations or circumstances result in the need to update or modify one of the MCA or VOAA boundaries. The JLUS Coordination Committee will be responsible for making a recommendation to members for incorporation into appropriate plans, regulations, and policies.</p>	2017 – On-going	■	■	■	■		■	■	■	
LU-1C	MCA-1	<p><b>Amend Zoning Ordinances</b></p> <p>The jurisdictions in the JLUS Study Area should amend their zoning ordinances to reflect military compatibility including incorporating the MCAs presented in this JLUS and the AICUZ recommended land use guidelines. This will promote and encourage land use planning in consideration of military compatibility, and result in more sustainable economic development and improved long-range planning.</p>	2017	■		■	□					



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		For other recommendations that address this issue, see Recommendations for Issues COM-1 and COM-2.										
LU-2	<p><b>Undeveloped Land Concern</b></p> <p>There is a general concern about the undeveloped land in the vicinity of Maxwell AFB. If developed without military review, decision makers could potentially create incompatible land uses with the military mission.</p>											
LU-2A	MCOD	<p><b>Update Plans and Amend Zoning Ordinances.</b></p> <p>The jurisdictions, economic development organizations, and school districts in the JLUS Study Area should update their plans and amend zoning ordinances to incorporate military compatibility goals, policies, and regulations. This will facilitate military compatible development in the area.</p> <p>◆ Recommendation applies to cities of Prattville, and Millbrook, and Town of Coosada if future mission footprints change resulting in greater impact to the jurisdictions.</p>	2018	■	■	■	□		■	■	■	◆



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
<b>Legislative Initiatives (LEG)</b>												
No issues identified for Legislative Initiatives.												
<b>Light and Glare (LG)</b>												
<b>LG-1</b>	<b>Preserve Capability for Night Mission Training</b> While there is no current impact to night mission training, there is concern with potential future development that could create light pollution and horizon brightening. This would impact the effectiveness of night vision devices, ultimately affecting the overall capability of Maxwell AFB executing nighttime training.											
<b>LG-1A</b>	<b>MCA-1</b>	<b>Dark Skies Ordinances</b> Develop dark sky ordinances to protect night skies from significant increases in ambient light and glare. This includes designs that ensure lighting is limited to illuminating the specific site (no spillover lighting) and is designed to utilize downward facing lighting and lighting that is shielded.	2017	■	■	■						
<b>LG-1B</b>	<b>MCA-1</b>	<b>Consider Developing a Lighting Ordinance</b> The jurisdictions should consider developing a lighting ordinance to control light pollution in the	2017	■	■	■						



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		<p>jurisdictions, which can have an adverse impact on nighttime military training. The ordinance at a minimum should include regulations for Backlight, Uplight, and Glare (BUG)-rated fixtures for commercial development and fully cutoff fixtures for residential uses. The ordinance should also include controls for timers for lights, establish lumens per fixture and how many foot-candles a fixture can emit over property lines, etc.</p>										
<b>Marine Environments (MAR)</b>												
	No issues identified for Marine Environments.											



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
<b>Noise (NOI)</b>												
<b>NOI-1</b>	<p><b>Lack of Noise Regulations North of Maxwell AFB</b>                      Lack of noise regulations north of Maxwell AFB, including in the cities of Prattville and Millbrook, and the Town of Coosada, could potentially increase noise sensitive land uses in high noise areas, e.g. areas under low level military training.</p>											
<b>NOI-1A</b>	<b>MCA-4</b>	<p><b>Develop Sound Attenuation Building Standards for New Construction</b>                      Amend the Building Code to require sound attenuation measures for all new construction of noise sensitive land uses (e.g. residential uses, hospitals, elderly care facilities, schools, churches) located within the 65 dB noise contour of the Noise MCA. These structures should be designed and constructed so as to limit their interior noise level to no greater than 45 dB Ldn certified by an accredited acoustical engineer.                      The minimum sound transmission class (STC) rating of structure components shall be provided in compliance with the table shown below. As an alternative to compliance with this table, structures shall be permitted to be designed and constructed</p>	<b>2018</b>	■		■						◆





Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other											
		<p>so as to limit their interior noise level to no greater than 45 Ldn. Exterior structures, terrain and permanent plantings shall be permitted to be included as part of the alternative design. The alternative design shall be certified by an acoustical engineer.</p> <table border="1" data-bbox="420 950 913 1201"> <thead> <tr> <th>dB LDN</th> <th>STC of Exterior Walls and Roof / Ceiling</th> <th>STC of Doors / Windows</th> </tr> </thead> <tbody> <tr> <td><u>65-69</u></td> <td><u>39</u></td> <td><u>25</u></td> </tr> <tr> <td><u>70-74</u></td> <td><u>44</u></td> <td><u>33</u></td> </tr> <tr> <td><u>&gt; 75</u></td> <td><u>49</u></td> <td><u>38</u></td> </tr> </tbody> </table> <p>◆ Recommendation applies to cities of Prattville, and Millbrook, and Town of Coosada if future noise levels are demonstrated to exceed 65 dB in the future.</p> <p><i>Other Primary Partners: City of Millbrook, Town of Coosada</i></p>	dB LDN	STC of Exterior Walls and Roof / Ceiling	STC of Doors / Windows	<u>65-69</u>	<u>39</u>	<u>25</u>	<u>70-74</u>	<u>44</u>	<u>33</u>	<u>&gt; 75</u>	<u>49</u>	<u>38</u>									
dB LDN	STC of Exterior Walls and Roof / Ceiling	STC of Doors / Windows																					
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Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
NOI-1B	MCA-4	<p><b>Require Sound Attenuation Buildings Standards for Substantial Improvement</b></p> <p>Significant (defined as an activity that modifies, alters, or expands an existing use by 50 percent of site footprint) extension, enlargement, relocation, reconstruction, or substantial alteration of an existing residential use within the Noise MCA area shall include the implementation of sound attenuation materials designed to reduce interior noise to 45 dB Ldn. This shall also apply to changes in a structure that increases the number of habitable units within the structure (as defined by the 2010 U.S. Census).</p> <p>◆ Recommendation applies to cities of Prattville, and Millbrook, and Town of Coosada if future noise levels are demonstrated to exceed 65 dB in the future.</p> <p><i>Other Primary Partners: City of Millbrook, Town of Coosada</i></p>	2018	■		◆						◆
NOI-1C	MCA-3	<p><b>Develop Sound Attenuation Retrofit Program</b></p> <p>Develop a voluntary sound attenuation retrofit</p>	2019	■		■						■



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		<p>program for residential uses. Develop a program that provides guidance on sound attenuation standards for retrofitting existing residential and commercial facilities. The program could include grant opportunities available to assist property owners in retrofitting structures in noise sensitive areas. Other funding sources for retrofitting homes should be identified and provided within the program materials.</p> <p><i>Other Primary Partners: City of Millbrook, Town of Coosada</i></p>										
NOI-1D	MCA-1	<p><b>Map Noise Complaints</b></p> <p>Noise complaints received by local jurisdictions / resource agencies in the JLUS Study Area should be provided to Maxwell AFB. Maxwell AFB shall map complaints including the identified source (since this may not be Maxwell AFB) and provide it to the JLUS Coordination Committee members annually.</p> <p><i>Other Primary Partners: City of Millbrook, Town of Coosada</i></p>	2017	■	■	■	■					■




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NOI-1E	MCA-1	<p><b>Follow Up on Noise Complaints</b></p> <p>The JLUS Coordination Committee shall follow up on complaints to determine if further action or coordination is needed.</p> <p>In addition to this, Maxwell AFB should provide a phone number to all jurisdictions that can be provided when a complaint is received so that the complainant may contact the Air Force directly.</p> <p><i>Other Primary Partners: City of Millbrook, Town of Coosada</i></p>	2017 – On-going	■	■	■	■					■
NOI-2	<p><b>Potential Future Missions Could Increase Noise Impacts</b></p> <p>Potential future missions at Maxwell AFB could bring additional C-130s or fighter jets to the installation which could intensify noise impacts and expand the noise contours.</p>											
NOI-2A	MCA-1	<p><b>Amend Zoning Ordinances</b></p> <p>Local jurisdictions should amend their Ordinances to include the recommended guidelines from the Air Installation Compatible Use Zone (AICUZ) Report for noise sensitive land uses associated with air operations at Maxwell AFB.</p> <p>◆ Recommendation applies to cities of Prattville,</p>	2017	■		◆						◆



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		<p>and Millbrook, and Town of Coosada if future noise levels are demonstrated to exceed 65 dB in the future.</p> <p><i>Other Primary Partners: Autauga and Elmore Counties, City of Millbrook and Town of Coosada should incorporate if jurisdictions experience impacts in the future due to mission changes.</i></p>										
NOI-2B	MCA-1	<p><b>Develop Noise Informational Brochure for Maxwell AFB Operations</b></p> <p>Maxwell AFB 908th Airlift Wing and the 42nd Air Base Wing should develop an informational / educational brochure about the noise generated from the operations that occur at Maxwell AFB to include any low-level altitude operating areas. Points-of-contact should also be included in this brochure. Local jurisdictions should help in the distribution of these brochures by making these available to those that request information and on local jurisdictional websites.</p> <p><i>Other Partners: City of Millbrook, Town of Coosada</i></p>	2017	☐	☐	☐	■			☐	☐	☐



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
<b>Public Trespassing (PT)</b>												
PT-1	<b>Public Trespass onto Maxwell AFB from Powder Magazine Park</b> Maxwell AFB records several public trespassing incidents annually of individuals who intentionally and unintentionally trespass onto the installation from Powder Magazine Park.											
PT-1A 	MCA-2	<b>Perimeter Security – People</b> <ul style="list-style-type: none"> <li>Air Force should continue to budget for and maintain fencing around all areas including the Alabama River area near the city’s boat ramp and Powder Magazine Park to discourage trespassing.</li> <li>Maintain monitoring of perimeter fencing to provide timely replacement or repair of damaged sections.</li> <li>Ensure placement, maintenance, and visibility of perimeter signage is adequately placed and spaced along the perimeter fence.</li> <li>In the instance of trespassing, work with Montgomery County Sheriff’s Office and other law enforcement to promptly apprehend the trespasser.</li> </ul>	On-going				■					□




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		<i>Other Partner: Montgomery County Sheriff's Office, other law enforcement agencies</i>										
PT-1B	Maxwell AFB Military Notification Area Subzone of MCOB & MCA-6	<p><b>Self-Policing Educational Brochure</b></p> <p>Maxwell AFB should work with the City of Montgomery to develop an educational brochure about the installation's boundaries and the Alabama River to inform the general public of the boundaries in and around the Alabama River and Powder Magazine Park and to avoid them. This brochure should be made available on JLUS Partners and boating and other recreational activity websites to ensure maximum awareness.</p>	2017	<input type="checkbox"/>			<input checked="" type="checkbox"/>					
PT-1C	MCA-2	<p><b>Develop MOU for Coordination of Homeless Encampments</b></p> <p>The City of Montgomery should work with the Salvation Army and Maxwell AFB, as appropriate, to develop coordination protocol for managing the homeless encampments near Powder Magazine Park to facilitate the care of homeless individuals and ensure public trespassing does not occur on the base by the homeless.</p>	2017 – On-going	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>					<input type="checkbox"/>



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		<i>Other Partner: Salvation Army, Montgomery County Sheriff's Office</i>										
<b>Roadway Capacity (RC)</b>												
	No issues identified for Roadway Capacity.											
<b>Safety Zones (SA)</b>												
<b>SA-1</b>	<b>Incompatible Uses in Clear Zones</b> Any development that occurs within the Clear Zone (CZ), including railroad, and utility and roadway infrastructure is incompatible with Air Force AICUZ recommended land use guidelines.											
<b>SA-1A</b>	<b>MCA-1</b>	<b>Amend Zoning Ordinances</b> The City of Montgomery and other cities in the JLUS Study Area should amend their zoning ordinances to reflect the AICUZ guidance for recommended land uses in the CZs and APZs. This will provide guidance to inform potential future development in the CZs.  <i>Other Primary Partners: City of Millbrook, Town of Coosada</i>	<b>2017 – On-going</b>	■		■						■





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<b>SA-1B</b> 	MCA-2	<p><b>Continue to Replace Utility Poles with Frangible Poles</b></p> <p>The City of Montgomery, Montgomery County, and the Montgomery Metropolitan Planning Organization should continue to work with Maxwell AFB and its Civil Engineering Squadron to replace infrangible utility poles with frangible poles in the CZs. This will decrease the risk profile associated with aircraft accidents for this area.</p> <p><i>Other Primary Partner: Montgomery Metropolitan Planning Organization</i></p>	2017	■	■		□		■			■
SA-1C	MCA-2	<p><b>Develop Coordination Procedures with Montgomery-Flomaton Railroad</b></p> <p>The City of Montgomery should work with Maxwell AFB (42nd SFS) and the Montgomery-Flomaton Railroad to designate points of contact for all agencies and develop coordination procedures to ensure issues that may arise between the utility infrastructure in the CZ and the base are addressed in a collaborative manner.</p> <p><i>Other Partner: Montgomery-Flomaton Railroad</i></p>	2017 – On-going	■			□					□



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
SA-1D	MCOD	<p><b>Update Comprehensive Plan</b></p> <p>The Cities of Montgomery and Prattville and Autauga County should consider updating its Comprehensive Plan to reflect the AICUZ guidance for recommended land uses in the CZs and APZs. This will provide guidance to inform potential future economic development in CZs.</p> <p><i>Other Primary Partner: Autauga County</i></p>	2019	■		■						■
SA-2	<p><b>Incompatible Uses in Accident Potential Zones</b></p> <p>There are land uses, including a Technical College and the Montgomery County Health Center, in the accident potential zones that are incompatible with the latest Air Force AICUZ recommended guidelines for land uses in the airfield safety zones.</p>											
		For recommendations that address this issue, see Recommendations SA-1A and SA-1D.										
SA-3	<p><b>Land Use Control of Southern Clear Zone</b></p> <p>The northern CZ is either owned by the Air Force or controlled by aviation easements that restrict height and use in accordance with the imaginary surfaces. However, a majority of the southern CZ is subject to local land use controls.</p>											
SA-3A	MCA-2	<p><b>Secure Runway 15/33 Clear Zone through the Use of Readiness and Environmental Protection</b></p>	2019	■			■					■



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		<p><b>Integration (REPI) Funding</b>                      Maxwell AFB through the 42nd Civil Engineering Squadron and the Operation Support Squadron should pursue REPI funds to establish an agreement with willing landowners to place the property located within the Runway 15/33 CZ into easements. This will facilitate the protection of this area for aviation operations and protect the general public from safety hazards associated with aviation operations.  <i>Other Primary Partners: Willing landowners</i></p>										
SA-3B	MCA-1	<p><b>Amend Official Zoning Map</b>                      The City of Montgomery should amend its official zoning map to incorporate the easements for Maxwell AFB. This will assist in the compatible future zoning and development of this area and decrease the risk profile for this area.                      Maxwell AFB Point-of-Contact (as needed): 42nd Civil Engineering Squadron</p>	2017	■			□					
		For other recommendations that address this issue,										



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		see Recommendation SA-1A.										
<b>SA-4</b>	<b>Bird / Wildlife Air Strike Hazard Awareness Concern</b>											
	General concern about Bird / Wildlife Air Strike Hazard (BASH/WASH) incidents. While Maxwell AFB updates its BASH Plan upon mission changes and monitors the conditions indicative of high risk potential of BASH/WASH incidents, it is important to maintain an awareness of the BASH/WASH environment in this area to decrease the risk to safety and property damage.											
<b>SA-4A</b>	<b>MCA-3</b>	<p><b>Develop Maintenance Procedures for West End Ditch</b></p> <p>The City of Montgomery and Montgomery County should work with Maxwell AFB through the 42nd Civil Engineering Squadron to develop maintenance procedures of the West End Ditch to ensure water flow is adequate and the buildup of debris and wood does not increase bird attractants to the area around the airfield. At minimum, the procedures should include:</p> <ul style="list-style-type: none"> <li>■ Designated points of contact,</li> <li>■ Resource allocation to manage maintenance of ditch, and</li> <li>■ Identify times of year when maintenance is especially needed due to beaver activity or</li> </ul>	2017 – On-going	■	■		□					



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		<p>other wildlife needs.</p> <p>This will facilitate ongoing monitoring and maintenance of the West End Ditch to decrease the attractants for birds and wildlife to the area.</p>										
SA-4B	MCA-3	<p><b>Amend Zoning Ordinances</b></p> <p>The Cities of Montgomery and Prattville should amend their zoning ordinances to incorporate Air Force AICUZ recommended guidance to ensure future land uses and zoning will be compatible with airfield operations and do not create increased risks for BASH/WASH incidents.</p>	2017	■		■						
SA-4C	MCA-3	<p><b>Update BASH Plan</b></p> <p>Maxwell AFB through the 42nd Operations Support Squadron should update its BASH Plan to incorporate points of contact for the community relative to BASH-related incidents since the Plan has a public component which engages the public to monitor and report BASH conditions to Maxwell AFB. This will facilitate continuity of information flow between the public and the Base in the event of military position vacancy caused by routine</p>	2017				■					□



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		military rotation. <i>Other Partner: Willing landowners</i>										
<b>Scarce Natural Resources (SNR)</b>												
	No issues identified for Scarce Natural Resources.											
<b>Vertical Obstructions (VO)</b>												
<b>VO-1</b>	<b>Pumping Station Tower Extends into Navigable Airspace</b> The tower at the city’s sewer pumping station located north of Maxwell AFB’s airfield extends into navigable airspace. This can create an airspace hazard relative to the recommended heights and dimensions of the imaginary surfaces.											
<b>VO-1A</b>	<b>MCA-5</b>	<b>Lower Tower on Pumping Station</b> The City of Montgomery should work with Montgomery Water Works (MWW) to determine if the height of the antenna tower on the tank can be lowered or decreased. If the height of tower can be decreased without or with a minimal impact to MWW, the city should work with MWW to identify funding options to implement the decreased height of the antenna tower on the pumping station.	2017	■			□					■



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		<i>Other Primary Partner: MWW</i>										
VO-1B	MCA-5	<p><b>Ensure Federal Aviation Regulation (FAR) Part 77 Compliance</b></p> <p>For all new, redeveloped, or rehabilitated buildings or structures including transmission, communications, or energy generation structures (including electrical transmission towers/lines, cellular and radio transmission towers, wind generation towers, and other similar structures), ensure compliance with FAR Part 77 height limit requirements to minimize vertical obstructions. In addition, ensure the developments and structures are compatible with, and do not pose a safety hazard to, air operations in the region.</p> <p><i>Other Primary Partners: City of Millbrook, Town of Coosada</i></p>	2018	■		■				□	□	■
VO-1C	MCA-5 and VOAA	<p><b>Require Imaginary Surface Heights and Slopes Compliance</b></p> <p>For all new, redeveloped, or rehabilitated buildings or structures including transmission,</p>	2018	■		■				□	□	■



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		communications, or energy generation structures (including electrical transmission towers/lines, cellular and radio transmission towers, wind generation towers, and other similar structures), ensure compliance with FAA imaginary surface height and slope limit requirements to minimize vertical obstructions. In addition, ensure the developments and structures are compatible with, and do not pose a safety hazard to, air operations in the region.  <i>Other Primary Partners: City of Millbrook, Town of Coosada</i>										
<b>VO-2</b>	<b>Trees Inside Southern Clear Zone</b> Trees inside the southern CZ pose an obstruction to navigable airspace for Maxwell AFB’s Main Runway (R15/33).											
<b>VO-2A</b>	<b>MCA-5</b>	<b>Update Landscaping / Tree Ordinance</b> The City of Montgomery should work with Maxwell AFB to update the city’s landscaping ordinance to ensure residential areas in the southern CZ maintain tree canopies at the 50 feet horizontal to one vertical foot slope. At minimum, the update should	<b>2019</b>	■			□					





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		include: <ul style="list-style-type: none"> <li>■ Designated points of contact,</li> <li>■ Identification of resource allocation and potential resource sharing (P4 initiatives), and</li> <li>■ Schedule of maintenance including time of year most overgrowth is a concern, etc.</li> </ul> This should assist in maintaining a CZ that is free from obstructions. Maxwell AFB should be consulted with to ensure appropriate height of trees for the safe navigation of aircraft.										
VO-3	<b>Temporary Crane Permits</b> The lack of permits for temporary construction cranes in the City of Montgomery creates the potential for vertical obstructions of the imaginary surfaces.											
VO-3A	MCA-5	<b>Develop Crane / Temporary Construction Permit Forms</b> Jurisdictions surrounding Maxwell AFB should develop and regulate temporary construction cranes through permits. The permit should reflect current information about the project including but not limited to:	2017	■		■	□					



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		<ul style="list-style-type: none"> <li>■ Duration of need for temporary crane,</li> <li>■ Points of contact for crane operators and general contractor, and</li> <li>■ Expected schedule of use of temporary crane.</li> </ul> <p>This will provide information to Maxwell AFB to facilitate safe aviation operations and awareness of temporary structures that could be in navigable airspace and to avoid such objects. Permit applications should be made available through the jurisdiction’s website.</p>										
VO-4	<p><b>Lack of Awareness of Imaginary Surfaces in Economic Development Community</b>                      The lack of awareness about imaginary surfaces within the economic development community creates potential for incompatible development with aviation operations.</p>											
VO-4A	MCA-5	<p><b>Update Montgomery Chamber of Commerce Strategy and Mapping</b>                      The Montgomery Chamber of Commerce should work with Maxwell AFB and Gunter Annex to update their economic development strategy that will result in compatible opportunities for the economy of the city and region and preserve</p>	2017				□			■		



Issue or Strategy #	Military Compatibility Area (MCA)	Strategy	Timeframe for Initiation	City of Montgomery	Montgomery County	City of Prattville	Maxwell AFB-Gunter Annex	Alabama Legislature	ALDOT	Montgomery Chamber of Commerce / CARPDC / SCADC	Montgomery County School District	Other
		military mission readiness for the Base.										
VO-4B	VOAA	<p><b>Consider Amending Zoning Ordinances to Incorporate Vertical Obstruction Awareness Area (VOAA)</b></p> <p>The Cities of Montgomery and Prattville should consider amending their zoning ordinances to incorporate the VOAA and establish height restrictions in compliance with FAA and DOD guidance for imaginary surfaces. The height restrictions should correlate with the guidance on the map, they are:</p> <ul style="list-style-type: none"> <li>■ Land uses located in the most constrained area should not exceed a 7 to 1 slope or 150 feet, depending on the location of the land use within the imaginary surfaces of this area,</li> <li>■ Land uses located in the moderately constrained area should not exceed 20 to 1, 30 to 1, or 50 to 1 slope, depending on the location of the land use within the imaginary surfaces of this area, and</li> <li>■ Land uses located in the minimally constrained</li> </ul>	2019 / On-going	■		■	□					



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		<p>area should not exceed 500 feet.</p> <p><i>Note: Elevation at the site should be factored into evaluation, and proposals for development should be shared with Maxwell AFB to facilitate military review and consideration.</i></p>										
VO-4C	VOAA	<p><b>Consider Including the Vertical Obstruction Awareness Area Information in Available Mapping, Communication, and Economic Development Planning Efforts</b></p> <p>Consider including the VOAA and its constrained area information in available mapping, communication, and economic development efforts. The VOAA could assist in achieving military compatibility in the future if implemented. The jurisdictions should not only consider including this information in their mapping and communication efforts, but should also use this as a tool to engage with Maxwell AFB and Gunter Annex to facilitate compatible planning and economic development.</p>	2018 / On-going	■	■	■	□			■		■



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		<i>Other Partners: Montgomery Water Works, Autauga and Elmore Counties, City of Millbrook, and Town of Coosada</i>										
VO-4D	MCOD	<b>Update Economic Development Strategy</b> The Montgomery Chamber of Commerce should update its economic development strategy to incorporate the MCOD and VOAA maps to facilitate understanding of existing land use constraints and promote future compatible economic development.	2018 / On-going							■		
VO-4E	MCA-5	<b>Update CEDS</b> The CARPDC and SCADC should update their CEDS to incorporate the MCOD and VOAA information to ensure that economic development is compatible with flight operations marketed for areas near Maxwell AFB and Montgomery Regional Airport.	2017				□			■		



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VO-5	<b>Height Regulations Do Not Consider Imaginary Surfaces</b> Current Montgomery and Prattville height regulations do not consider the Federal Aviation Administration’s height guidance relative to imaginary surfaces.											
VO-5A	MCA-5	<b>Develop a 3-Dimensional Imaginary Surfaces Model</b> The City of Montgomery should work with the jurisdictions and agencies to develop a 3D model of existing height regulations compared to allowable heights based on the FAA and DOD Imaginary Surfaces Guidance. This tool will assist the jurisdictions in amending their zoning ordinances further to enhance military compatibility as well as be used to evaluate development applications and economic development opportunities to determine if the heights of proposed structures do not obstruct the navigable airspace. <i>Other Primary Partners: City of Millbrook, Town of Coosada</i>	2018	■		■	□		■	■	■	■
		For other recommendations that address this issue, see Recommendations for Issues COM-2B and										



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		COM-4A.										
<b>Vibration (V)</b>												
	No issues identified for Vibration.											
<b>Water Quality / Quantity (WQQ)</b>												
	No issues identified for Water Quality / Quantity.											



Please see the next page.





**Montgomery—Maxwell AFB**



**JOINT LAND USE STUDY**



**Montgomery—Maxwell AFB**



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