Tennessee Department of Transportation
Aeronautics Division

Finding of No Significant Impact (FONSI)

Middle Tennessee State University (MTSU) Development
Shelbyville Municipal Airport (KSYI)
Shelbyville, TN

I. Introduction / Background

In accordance with the National Environmental Policy Act (NEPA), this Finding of No Significant Impact (FONSI) announces final agency determinations and approvals for those Federal Actions by the Federal Aviation Administration (FAA) through the FAA Tennessee State Block Grant Program (SBGP) administered by the Tennessee Department of Transportation (TDOT) Aeronautics Division that are necessary to support the proposed developments at the Shelbyville Municipal Airport in Shelbyville, TN.

II. Proposed Federal Action

The airport will have the following project occur on airport property:
Middle Tennessee State University Development

The proposed project includes the relocation of Middle Tennessee University's aerospace department, flight training program, and aircraft maintenance program from KMBT to KSYI.

The preferred alternative proposes consists of the construction and installation of approximately 66,000 sf of enclosed hangar/lab space, 280,400 sf of new apron space, 120,000 sf of administration/classroom/office/lab building space, 50,000 sf flight operations building, a 50,000 sf three-level student housing building, landside auto parking areas of approximately 175,470 sf including an additional 201,300 sf five-story parking garage, approximately 1,500 linear feet of airport perimeter fence and access gates, Relocation and installation of major associated utilities, equipment, generators, a new access drive from State Highway 231 and access roads, a stormwater detention basin and purchase of three 3,00-gallon Avgas fuel trucks within a lease of 20.8 acres of converted aeronautical/non-aeronautical use land from the City of Shelbyville at Shelbyville Municipal Airport near the south end of airport grounds near runway 26.

III. Purpose and Need

The intent of this project is to address Middle Tennessee State University's (MTSU) growth and existing facility deficiencies by relocating their flight training program, aerospace department, and aircraft maintenance program from KMBT to KSYI.

The need for this project is due to the future expansion requirements of MTSU's aerospace program to accommodate fleet and enrollment expansions, which was initiated in April 2023. As part of the proposed action, Infrastructure at SYI needed to accommodate these programs includes an estimated 66,000 square feet (sf) of enclosed hangars, 120,000-sf of classroom/office space, a 50,000-sf flight operations building, a 50,000-sf student housing building, security fences, parking, utilities, generators, garages, stormwater detention ponds, and fuel trucks.

IV. Alternatives

Federal guidelines concerning the environmental review process require that all reasonable and practicable alternatives that might accomplish the objectives of a proposed project be identified and evaluated. Such an examination ensures that alternatives are not prematurely dismissed and may lead to consideration of alternatives that fulfill the project's purpose and need as well as enhance environmental quality or have a less detrimental effect. The alternatives evaluated for this Environmental Assessment are listed below.

1. Alternative A consists of the construction and installation of approximately 66,000 sf of enclosed hangar/lab space, 280,400 sf of new apron space, 120,000 sf of administration/classroom/office/lab building space, 50,000 sf flight operations building, a 50,000 sf three-level student housing building, landside auto parking areas of approximately 175,470 sf including an additional 201,300 sf five-story parking garage, approximately 1,500 linear feet of airport perimeter fence and access gates, Relocation and installation of major associated utilities, equipment, generators, a new access drive from State Highway 231 and access roads, a stormwater detention basin and purchase of three 3,00-gallon Avgas fuel trucks within a lease of 20.8 acres of converted aeronautical/non-aeronautical use land from the City of Shelbyville at Shelbyville Municipal Airport on the south end of airport grounds near runway 36.

2. Alternative B is located at the existing MTSU campus and contained within Murfreesboro Municipal Airport grounds, requiring the upgrading and expansion of existing facilities. This alternative would include land acquisitions, significant tree clearings, threatened/endangered species habitat impacts, loss of tenants, business impacts as a result of land

acquisitions, and displacements of students during facility upgrades/expansion.

3. Alternative C, located northeast of Runway 18 at Shelbyville Municipal Airport consists of all the developments listed in alternative A in addition to a land acquisition of approximately 50 acres, tree clearing of approximately 1.3 acres, threatened/endangered species habitat impacts associated with tree clearing, and the realignment of Airport Road and Benford Road.

4. No Action Alternative

The No Action Alternative was eliminated because it did not meet the purpose and need of the project. Alternative A, the preferred alternative, was selected as it met the purpose and need of the project, and it would address the immediate, short, and long-term issues and needs of the airport.

V. Environmental Impacts

The Environmental Assessment analyzed all environmental categories based on FAA Order 1050.1F and 5050.4B. Those resource categories that the Sponsor's preferred alternative has the potential to impact are discussed below.

There will be no impact to the following categories:

- Air Quality
- Biological Resources
- DOT Section 4(f)
- Farmland
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Socioeconomics, Environmental Justice, Children's Environmental Health and Safety Risks
- Visual Effects

There will be minimal impacts to the following category:

- Noise and Compatible Land Use
    - Noise Analyses indicate that an additional 29 acres of land would be exposed to the airport's 65dBA DNL. This potentially impacts one residence located on the east side of the airport property boundary along airport road within the 60dB contour and could experience an increase of 3 dB in the future. No noise abatement or mitigation measures are warranted as a result of this study.

VI. Permits and Mitigation

The Airport Sponsor shall be responsible for obtaining all necessary construction permits or Certifications below prior to initiating construction activities near or on the environmental resource requiring the permit. Project related permits, certifications, and other mitigation measures required for the proposed action are discussed below. It should be noted that best management practices (BMPs) are considered standard operating procedure and are not considered mitigation; therefore, they are not discussed in this section.

The permit(s) required for this project include the following:

- NPDES construction stormwater discharge permit
- Individual Section 404 permit
- Individual Section 401 Water Quality Certification
- Individual Aquatic Resources Alteration Permit

No mitigation is required for this project as there will be no significant adverse impacts to any environmental resources or to the quality of the human environment.

VII. Public Involvement

The following agencies were consulted with in the preparation of this Environmental Assessment:

- Tennessee Division of Environment and Conservation
    - Division of Air Pollution Control
    - Division of Archaeology
    - Division of Remediation
    - Division of Solid Waste Management
    - Division of Archaeology

    - Division of Water Resources
- Tennessee Historical Commission – State Historic Preservation Office
- Tennessee Wildlife Resources Agency
- United States Army Corp of Engineers
- United States Department of Agriculture - Natural Resources Conservation Service
- United States Fish and Wildlife Service

A public notice was published in the Shelbyville Times-Gazette for 30 days beginning on October 2nd, 2025. The draft Environmental Assessment was made available for public review online at SYI-MTSUDevelopment.AirportPlans.com and physically at the Shelbyville Municipal Airport located at 2828 Highway 231 North, Shelbyville, TN 37610. During the 30-day public review period, no public comments were received nor were requests made to hold a public hearing regarding this project.

VIII. Decision

This decision does not approve Federal or State funding for the proposed airport development and does not constitute a Federal or State funding commitment. After careful and thorough consideration of the facts contained herein, the undersigned finds that approval of the proposed Federal Action is consistent with existing national environmental policies and objectives as set forth in Section 101(a) of the National Environmental Policy Act of 1969 (NEPA) and that it will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2) (C) of NEPA.

Approved: Xavier Gliesman Date: 11/12/2025

Xavier Gliesman, Senior Technical Specialist, TDOT Aeronautics Division

Environmental Assessment

Shelbyville Municipal Airport
Middle Tennessee State University (MTSU)
Development

City of Shelbyville
Middle Tennessee State University
Shelbyville, TN

Prepared by:

GARVER

4300 J.B. Hunt Drive, Suite 240
Rogers, AR 72758

November 2025

Preparer's Certification

I hereby certify that this Environmental Assessment for the Shelbyville Municipal Airport (SYI) was prepared by Garver under my direct supervision for the City of Shelbyville and Middle Tennessee State University (MTSU).

Prepared by: Garver, LLC

Prepared for: City of Shelbyville

Signed by:
9F2D952F573A414...

Prepared for: Middle Tennessee State University

This Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the responsible TAD official.

-Xavier Gliesman
Responsible TAD Official

REVIEWED
By Xavier Gliesman at 2:57 pm, Nov 13, 2025
Date

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1.0 Introduction and Background

This Environmental Assessment (EA) has been prepared per the National Environmental Policy Act (NEPA) of 1969 and Federal Aviation Administration (FAA) Order 1050.1G, involving the relocation of the Middle Tennessee State University (MTSU) aviation facility (Aerospace Department) from the Murfreesboro Municipal Airport (MBT) to the Shelbyville Municipal Airport (SYI or Airport), which is considered the Proposed Action. EA preparer information is located in **Appendix A**.

MTSU's Aerospace Department was first established in 1942 at MBT. The program now has 20 staff, over 100 flight instructors, and serves over 1,200 students. In peak months during the semester, the current fleet logs over 5,000 flight hours (MTSU, 2023). Students receive training in all aspects of the flight environment that include flight training, systems operations, navigation, communications, airport operations, and other areas. Training occurs in state-of-the-art computerized aircraft flight decks with scenario-based curriculums. MTSU's curriculum is approved by FAA under 14 CFR Part 141 – *Pilot Schools*.

SYI is a public use airport located at 2828 US-231 northeast of the City of Shelbyville, Tennessee. **Figure 1** shows the Airport's location in the region and proximity to MBT. The Airport is owned by the City of Shelbyville, operated by the Shelbyville Municipal Airport Authority, and is approximately 600 acres in size, which is almost three times the size of MBT. The airport has one primary use runway (Runway 18-36) and a full parallel taxiway.

The long-range vision of MTSU is to establish a full Aerospace Campus by beginning with this current project of relocation to SYI as the first phase. MTSU's vision is for students to spend the majority of their time at this campus (TM Partners, 2023). In December 2023, MTSU completed a Program Verification Submittal (PVS) that evaluated initial program relocation requirements for the move from MBT to SYI, which included codes/regulations, site conditions, other developments, site design, utilities, market trends, and schedules. Additionally, MTSU completed an economic impact assessment of its program's effect on Rutherford County, Nashville's Metropolitan Statistical Area (MSA), and Tennessee economies (MTSU, 2022).

Prior to the implementation of the Proposed Action, a separate Fixed Base Operator (FBO) building and apron construction project at SYI will be completed as a connected action and enabling project that will provide aircraft tie-down areas and taxiway access between the new MTSU campus and the existing full parallel taxiway.

The Proposed Action would be funded by MTSU, SYI, and the City of Shelbyville through a combination of local, state and federal grant sources. As both MTSU and SYI are part of the state block grant program (SBGP), per the SBGP Memorandum of Agreement (MOA), the lead agency for the proposed project is the Tennessee Department of Transportation (TDOT) Aeronautics Division in coordination with the FAA.

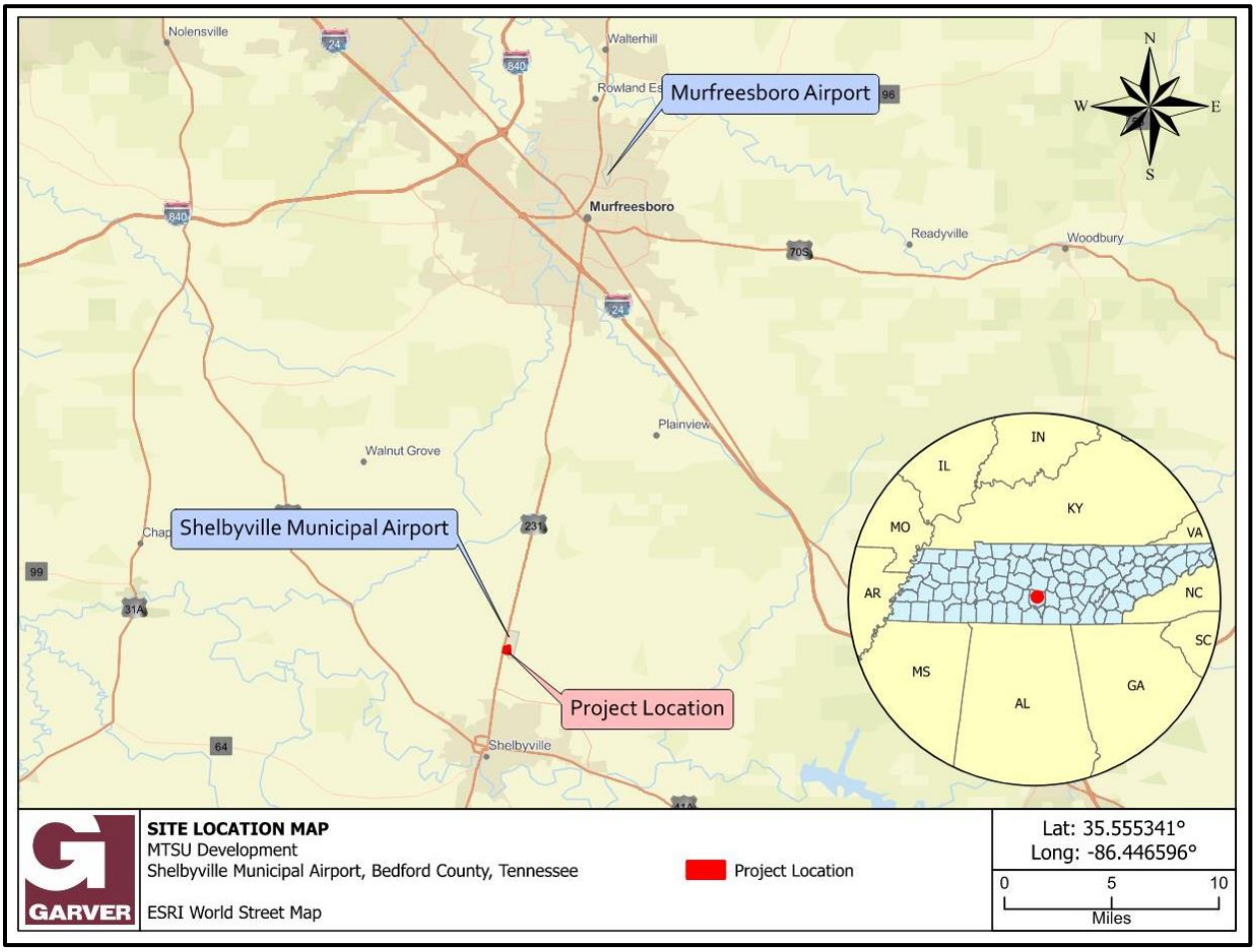
2.0 Purpose and Need

2.1 Purpose

The purpose of the Proposed Action is to address MTSU program's growth and existing facility deficiencies by relocating their flight training program, Aerospace Department, and aircraft maintenance program from MBT to SYI (TM Partners, 2023). The Proposed Action would be designed to provide the required square

footage of educational, aircraft maintenance, administrative, classroom, hangar, landside parking, and laboratory space. The design improvements would be compatible with the existing airport's layout.

Figure 1: Site Location Map



All design and development associated with the Proposed Action, including connected actions identified in **Section 3**, would meet current FAA Airport Design Standards per Advisory Circular (AC) 150/5300-13B, AC 150/5325-4B, other appropriate FAA ACs, 14 CFR Part 77 airspace regulations, Part 141, Part 147 – *Aviation Maintenance Technical Programs*, City of Shelbyville, and State of Tennessee applicable design codes.

2.2 Need

MTSU needs to meet the future expansion requirements of its facilities to accommodate fleet and enrollment expansion, which was initiated by an April 2023 request for 10 additional aircraft. Expansion at MBT was considered but would impact other customers utilizing that airport. As a result of detrimental impacts to existing MBT customers, MTSU needs to relocate the Aerospace Department, flight training, and aircraft maintenance programs to another airport. MTSU identified SYI as the airport best suited for this relocation. SYI does not currently have available enclosed hangars, administration/classroom/office/lab

space, landside parking, and additional apron space to accommodate these programs, which support 70 to 100 aircraft. As part of the Proposed Action, infrastructure at SYI needed to accommodate these programs includes an estimated 66,000 square feet (sf) of enclosed hangars, 120,000 sf of classroom/office space, 50,000 sf flight operations building, security fences, utility relocations, diesel generator, 280,400 sf of airside apron space, approximately 175,470 sf of landside parking with an additional five-story parking garage, and a 50,000 sf three-level student housing building. Stormwater runoff detention is needed to appropriately treat surface runoff from the Proposed Action; therefore, a detention basin will be installed. Three 3,000-gallon Avgas fuel trucks will also be needed as part of the proposed action. The Airport Operations Area (AOA) security fence is needed to provide security for the additional infrastructure. Approximately 20.8 acres of land needs to be leased from the City of Shelbyville to MTSU for purposes of accommodating the Proposed Action infrastructure.

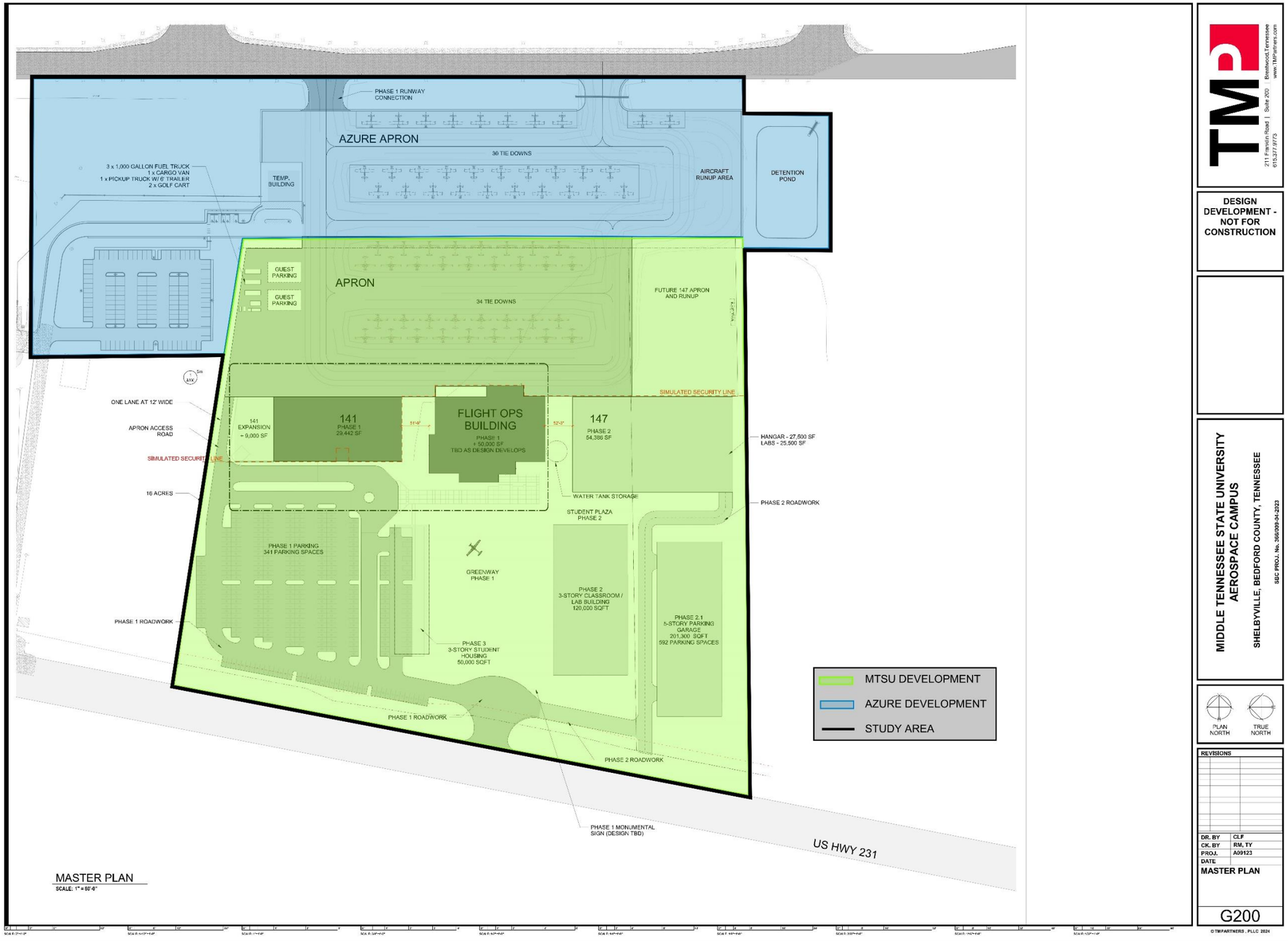
Additionally, 5.0 acres of airport-owned land to be leased by Azure is needed to accommodate a new FBO building, temporary classrooms, landside parking, and approximately 203,845 sf of apron. The Azure development is considered an enabling project to the Proposed Action and is needed to provide aircraft access to the existing full parallel taxiway (Taxiway A) and apron space for aircraft tie-downs.

3.0 Proposed Action

The major elements of the Proposed Action are shown in the MTSU conceptual site layout provided in **Figure 2** and identified as Alternative A. The Proposed Action elements are contained within the Study Area. The Proposed Action satisfies the objectives of the purpose and need by achieving the total required square footage of hangars, aprons, classroom/office space, building facilities, and landside parking. The following actions are included as the Proposed Action and needed to accommodate the relocation of the MTSU Aerospace Campus to SYI in compliance with the airport development standards set forth by FAA for the safe and efficient operation of aircraft at the airport:

- Construction of approximately 66,000 sf of enclosed hangar/lab space
- Construction of approximately 280,400 sf of new apron space
- Installation of approximately 1,500 linear feet of airport perimeter fence and access gates
- Construction of approximately 120,000 sf of administration/classroom/office/lab building space
- Construction of approximately 50,000 sf flight operations building
- Relocation and installation of major associated utilities, equipment, and generator
- Construction of landside auto parking areas of approximately 175,470 sf including an additional 201,300 sf five-story parking garage
- Construction of a 50,000 sf three-level student housing building
- Installation of a new access drive from State Highway 231 and access roads
- Construction of a stormwater detention basin
- MTSU lease of 20.8 acres of land from the City of Shelbyville
- Conversion of land to aeronautical use
- Purchase of three 3,000-gallon Avgas fuel trucks

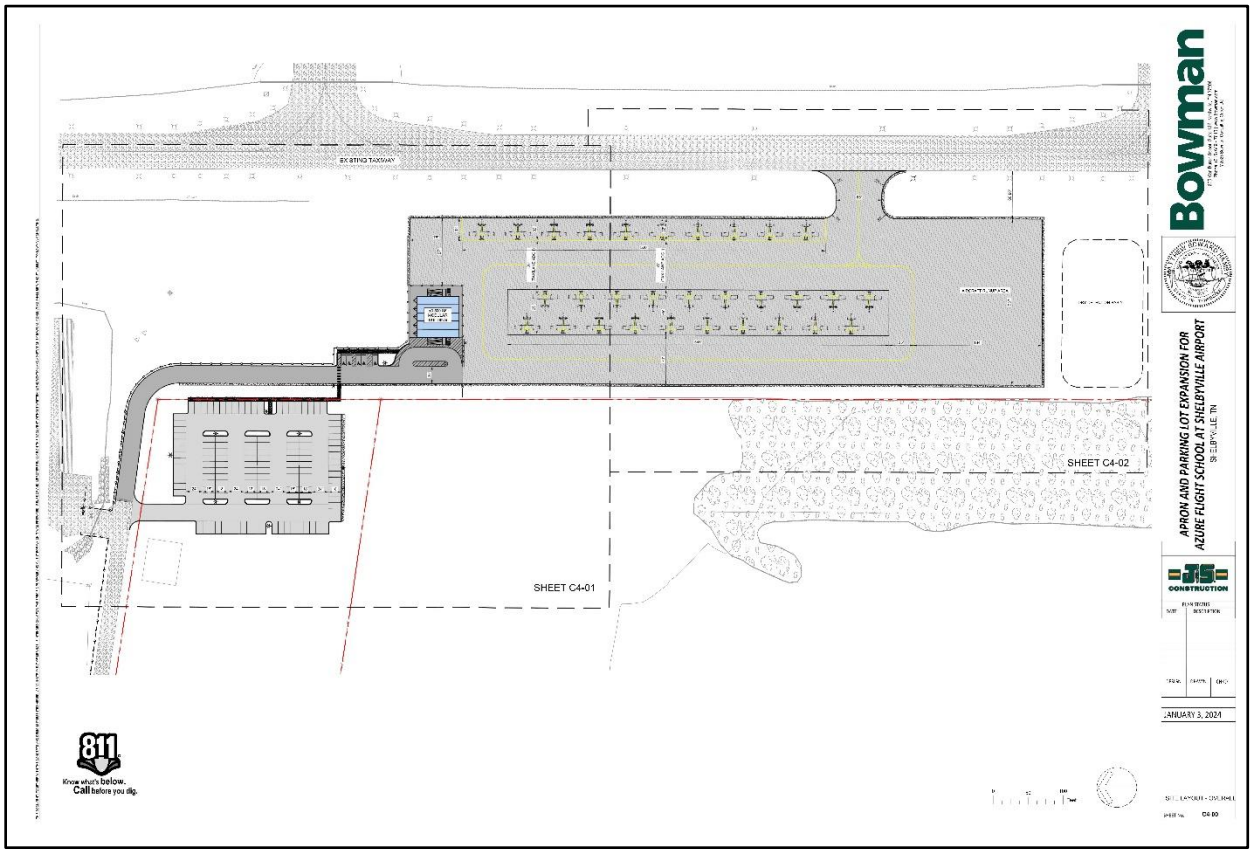
Figure 2: MTSU Conceptual Site Layout



The enabling project (Azure Development) will include the following actions and is shown in detail in **Figure 3**.

- Construction of a taxiway connector
- Construction of 203,845 sf of apron
- Fixed Based Operator (FBO) permanent building and a 3,500-sf temporary classroom building
- Construction of landside auto parking areas of approximately 43,500 sf
- Construction of a paved 25-ft wide access drive to the FBO
- Construction of a stormwater detention basin
- Azure lease of 5.0 acres of land from SYI

Figure 3: Azure Development Layout



4.0 Alternatives

Three build location alternatives were considered in meeting the purpose and need for the Proposed Action. Two of these three location alternatives were dismissed and not carried forward for further review in this document due to greater environmental impacts or failure to meet MTSU development objectives. Conceptual design layouts consisting of different facility configurations were also considered during project scoping (Garver, 2023) for Alternative A – Proposed Action. It should be noted that three nearby airports were considered for the Proposed Action. The No Action Alternative will not meet the purpose and need for the project; however, it was retained to satisfy the requirements of the National Environmental Policy Act (NEPA) and maintain a baseline to allow for a comparison of impacts.

As a result of needing to provide initial apron tie downs, the Azure development is proposed as an enabling project as detailed in **Section 4.4** and shown in **Figure 3**.

4.1 Alternatives Considered and Selection Criteria

This section briefly summarizes and compares potential impacts associated with three build location alternatives. Only the Proposed Action is carried forward in detailed evaluation in this EA. Alternatives B and C were eliminated from further study as incurring greater environmental impacts or not meeting MTSU development objectives as summarized in **Table 1**.

Relocation of the MTSU program to other airports (Warren County Memorial Airport (RNC), Smyrna Airport (MQY), and Lebanon Municipal Airport (M54) was not carried forward due to not meeting MTSU development objectives of available space identified in approved ALPs, ease of transportation to and from the MTSU main campus, and receptivity of the airports and city leadership.

Eight resource categories, as outlined in **Table 1**, were identified during the alternative screening process and were used to evaluate three build location alternatives. The three alternatives were evaluated in meeting the purpose and need for the Proposed Action and take into account estimated study areas and conceptual layouts (Proposed Action only).

Table 1: Alternatives Screening Matrix

Resource Impacts†	**Alternatives**		
	Alternative A (Proposed Action)	**Alternative B** (Improve and Expand Existing Campus)	**Alternative C** (North Location at SYI)
Business Relocations	No*	Yes	No
Aircraft safety issues (Runway crossings, back taxiing, etc…)	No	Yes	Yes
MTSU Development Objectives of Available Space in approved ALP	Yes	No	Yes
Structure Relocations/Impacts	Yes (6)**	Yes (5)***	No
Tree Removal (acres)	2	30+	1.3
Property Acquisition or Lease (acres)	20.8	7.3	50
Wetlands in Study Area (acres)	1.21	3	2.86
Recreational Facility Impacts	No	Yes	No

†Based on estimated likelihood of impacts from conceptual layouts or anticipated study areas. *Land acquisition from a business but does not include any relocations. **Abandoned. ***Actively used as existing MTSU campus buildings.

4.1.1 Alternative A – Proposed Action

Build Alternative A is contained within the study area as shown in **Figure 2**. This alternative provides adequate land for several different layouts of facilities needed to meet the purpose and need for relocation and expansion of the MTSU program. Additional future program expansion beyond the current Proposed Action's layout (i.e., greater than 10 years) could be accommodated at SYI based on available space identified in the approved ALP. Alternative A components are identified in **Section 4.2**.

4.1.2 Alternative B

Build Alternative B is located at the existing MTSU campus and contained within an approximate study area as shown in **Figure 4**. This location alternative would require upgrading and expanding existing facilities and would not satisfy the purpose and need by providing land for expanding the MTSU program without greater environmental impacts. Specifically, this alternative would include:

- Possible land acquisition
- Significant tree clearing (up to 30 acres east of the runway)
- Threatened and endangered species habitat impacts associated with tree clearing
- Loss of tenants (the ALP identifies possible expansion areas for hangar development)
- Business impacts as a result of land acquisition or lease
- Upgrading facilities would temporarily displace students currently utilizing five buildings (maintenance hangar, classrooms/workshops, turbine shop, flight dispatch/operations, and simulator bay/classroom/offices)

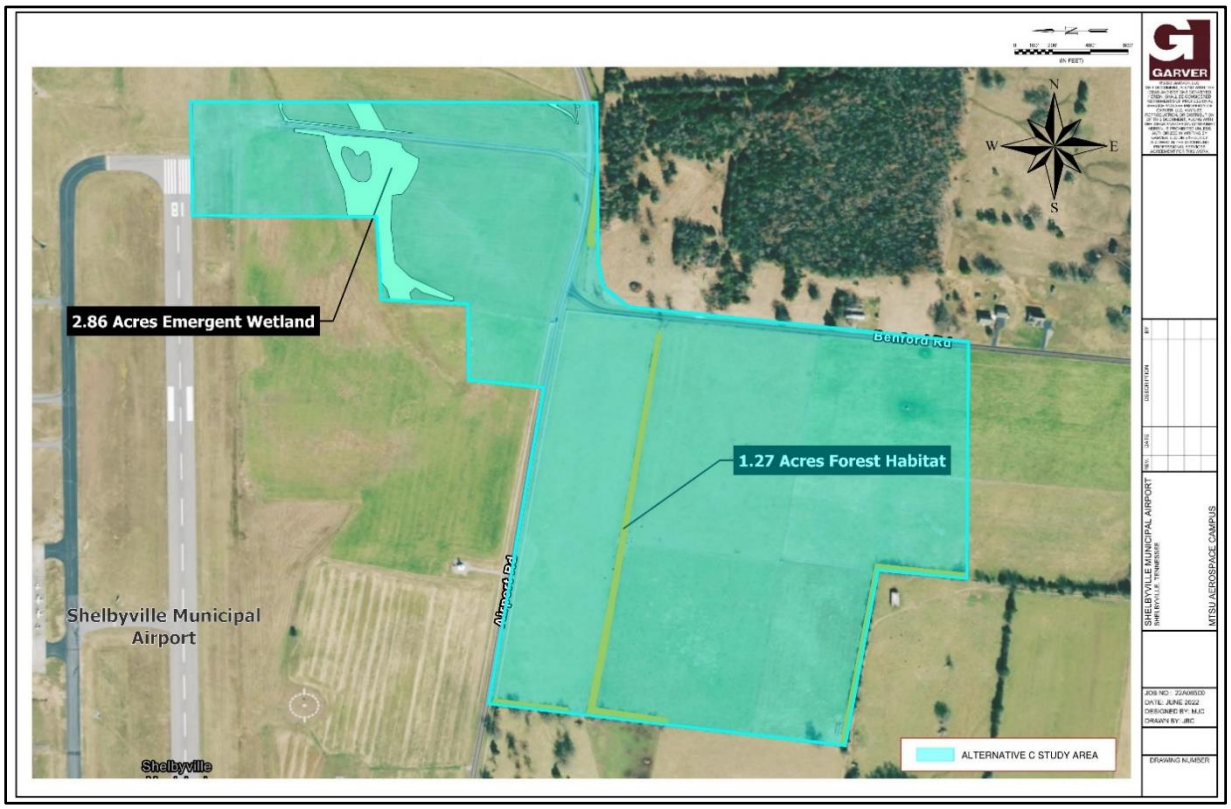
Figure 4: Alternative B Study Area

4.1.3 Alternative C

Build Alternative C is located northeast of Runway 18 at SYI and is bisected by Airport Road. This alternative's approximate study area is shown in **Figure 5**. This build alternative would satisfy the purpose and need by providing land for expanding the MTSU program; however, greater environmental impacts would be included with the selection of this alternative. Specifically, this alternative would include:

- Land acquisition of approximately 50 acres
- Tree clearing (approximately 1.3 acres)
- Threatened and endangered species habitat impacts associated with tree clearing
- Airport Road and Benford Road realignment

Figure 5: Alternative C Study Area and Concept Layout



4.2 Proposed Action Elements

The Proposed Action includes the following elements:

4.2.1 Construction of Enclosed Hangars

Approximately 66,000 sf of enclosed hangar and lab space will be constructed to serve the FAA Part 141 Professional Pilot aircraft and Flight School Maintenance fleet and will be designed according to FAA standards AC 150/5300-13B.

4.2.2 Construction of Administration/Classroom/Office/Lab Building

The Proposed Action will create 120,000 sf of administration/classroom/office/lab space, which may host multiple faculty offices and student classrooms. The specific layout of the classrooms and offices will be designed at a later date. Facility requirements for classrooms and offices will be based on current and projected staffing and student enrollment. This building would accommodate the FAA Part 147 Aviation Maintenance Technical (AMT) program.

4.2.3 Removal and Installation of Airport Security Fence

Removal of approximately 1,600 linear feet and installation of approximately 1,500 linear feet of AOA security fence and partial security fence removal is required for the expansion and to accommodate the conversion of additional land to aeronautical use. Refer to **Figure 2** showing the relocated AOA fence. The relocated AOA security fence will meet standard design and signage criteria identified in FAA Advisory Circular 150/5370-10F – *Standards for Specifying Construction of Airports*.

4.2.4 Relocation and Installation of Utilities, Equipment, and Generator

Relocation and/or installation of water, sewer, communication, underground electrical, lighting, fire protection systems, and gas utilities is required to provide services to the classroom/office buildings. Based on future water demand studies, a water storage tank may be installed as part of the Proposed Action. All utilities to be relocated occur within the direct study area. Additionally, it is anticipated that water, gas, electric, and communication utilities are available along Highway 231. An indoor lighting and heating, ventilation, and cooling (HVAC) system will be installed to accommodate the MTSU development. An approximately 2,660-Kilovolt-amps (KVA) generator is required to support the new services and will be located within the Proposed Action's direct study area. Sanitary sewer service is anticipated to be provided by a new proposed gravity main that will be in place prior to the Proposed Action implementation.

4.2.5 Construction of MTSU Apron and Land Use Reclassification

The proposed MTSU configuration requires a new apron to be located adjacent to and connecting with the Azure apron, which will be connected to the full parallel taxiway. The MTSU apron will accommodate FAA separation distance requirements provided in AC 150/5300-13B for the safe and efficient maneuvering of aircraft and ground support equipment. This new apron will include approximately 280,400 sf of pavement and will provide space for the volume of aircraft traffic expected at the MTSU campus. The expanded apron will be striped and designed to accommodate Aircraft Design Group (ADG) I aircraft (Diamond DA-40 (anticipated 90% of the incoming MTSU aircraft fleet) and Piper Seminole PA-44 light twins (10% of the incoming aircraft fleet mix)) aircraft. Refer to **Figure 2** for the conceptual Proposed Action layout.

Expansion of the north apron also requires the reclassification of 5 acres of airport land from non-aeronautical use to aeronautical use.

4.2.6 Construction of an Access Drive and Associated Landside Parking

A new access road will be constructed that will connect landside parking and buildings to Highway 231. The proposed access drive and parking area consists of approximately 175,470 sf of new paved areas. Landside parking will also include approximately 201,300 sf, five-story parking garage.

4.2.7 Construction of a Stormwater Detention Pond

An appropriately sized stormwater detention pond is required to capture stormwater from the new development and will be constructed on the south side of the campus. Due to the increase in impervious pavement and buildings (20.8 acres), stormwater detention is required. The detention area will be constructed according to design standards and comply with AC 150/5200-32C *Hazardous Wildlife Attractants on or Near Airports*. A new outfall structure will also be installed in the detention basin.

Alternatively, underground detention for this area may also be a consideration and will be evaluated during the design phase of the project.

4.2.8 Land Lease

MTSU is leasing 16 acres of land from the City of Shelbyville and will obtain another 4.8 acres for the duration of the lease agreement. The leased area is shown in **Figure 3**. Upon termination of the current MTSU lease at MBT, those facilities will become property of MBT.

4.2.9 Construction of a Student Housing Building

A 50,000-sf three-story student housing building will be constructed as part of the Proposed Action. This building will be located near the landside open parking area as shown in **Figure 3**.

4.2.10 Purchase of Mobile Refueling Trucks

As part of the Proposed Action, three 3,000-gallon Avgas mobile refueling trucks will be purchased. These mobile refuelers will be parked near the airport's existing fuel farm.

4.3 Azure Development – Enabling Project

As previously mentioned, the Azure development is an enabling project for the MTSU Proposed Action and is shown in **Figure 3**. Construction of this development will occur prior to implementation of the Proposed Action, allowing for gradual transition space for the MTSU fleet. Key components of the Azure development are discussed below.

4.3.1 Fixed Base Operator (FBO) and Apron

A new FBO will be constructed within the Azure development area that would include office space and landside parking. A new apron will be constructed adjacent to and connecting with the existing full parallel taxiway that will accommodate FAA separation distance requirements provided in AC 150/5300-13B. This new apron will include approximately 203,845 sf of pavement and will provide for the volume of aircraft traffic expected at the MTSU campus. The apron will be striped to accommodate aircraft tie downs and be designed for ADG I aircraft.

4.3.2 Construction of Temporary Administration, Classroom, and Office Space

This enabling project will create 3,500 sf of temporary administration/classroom/office space, which may host faculty offices and student classrooms. The specific layout of the classrooms and offices will be designed at a later date. A total of five temporary buildings may be constructed.

4.3.3 Relocation and Installation of Utilities and Equipment

Relocation and/or installation of water, sewer, communication, underground electrical, lighting, fire protection systems, and gas utilities is required and will provide service to the temporary classroom/office and permanent FBO buildings. All utilities to be relocated occur within the direct study area. Major utilities are anticipated to be accessed along Highway 231.

4.3.4 Construction of an Access Drive and Associated Landside Parking

An existing access road from Highway 231 will be extended along the northern boundary to the Azure development landside parking and FBO building. The proposed access drive and parking area consists of approximately 43,500 sf of new paved areas.

4.3.5 Land Lease

Azure will lease approximately 5.0 acres of airport-owned land located on the east side of the study area. This area will be developed prior to the MTSU development. The leased area is shown in **Figure 3**.

4.3.6 Construction of a Stormwater Detention Pond

An appropriately sized stormwater detention pond is required to capture stormwater from the new development and will be constructed on the south side of the campus. Due to the increase in impervious surfaces (5.7 acres), stormwater detention is required. The detention area will be constructed according to design standards and comply with AC 150/5200-32C. A new outfall structure will also be installed in the detention basin.

4.4 Proposed Action Construction Phasing

The Proposed Action's anticipated construction timeline is outlined below:

- General Contractor Selection: February 2024
- Begin Construction: 3rd Quarter 2025
- Complete Construction: 1st Quarter 2027

4.5 No Action Alternative

The No Action Alternative would not include construction of any proposed improvements at SYI. This alternative would retain existing MTSU programs at MBT and would not result in changes to the existing facilities, thus it does not provide adequate expansion infrastructure to meet the purpose or need for the project. This alternative would not meet the current aircraft demand or student enrollment and would have a negative economic effect on the airport due to limiting other aviation expansion at MBT.

Additionally, the purpose of the training program is to respond to the growing lack of pilots and mechanics in the aviation industry. The No Action alternative would limit future opportunities for meeting the pilot and aviation mechanic demands.

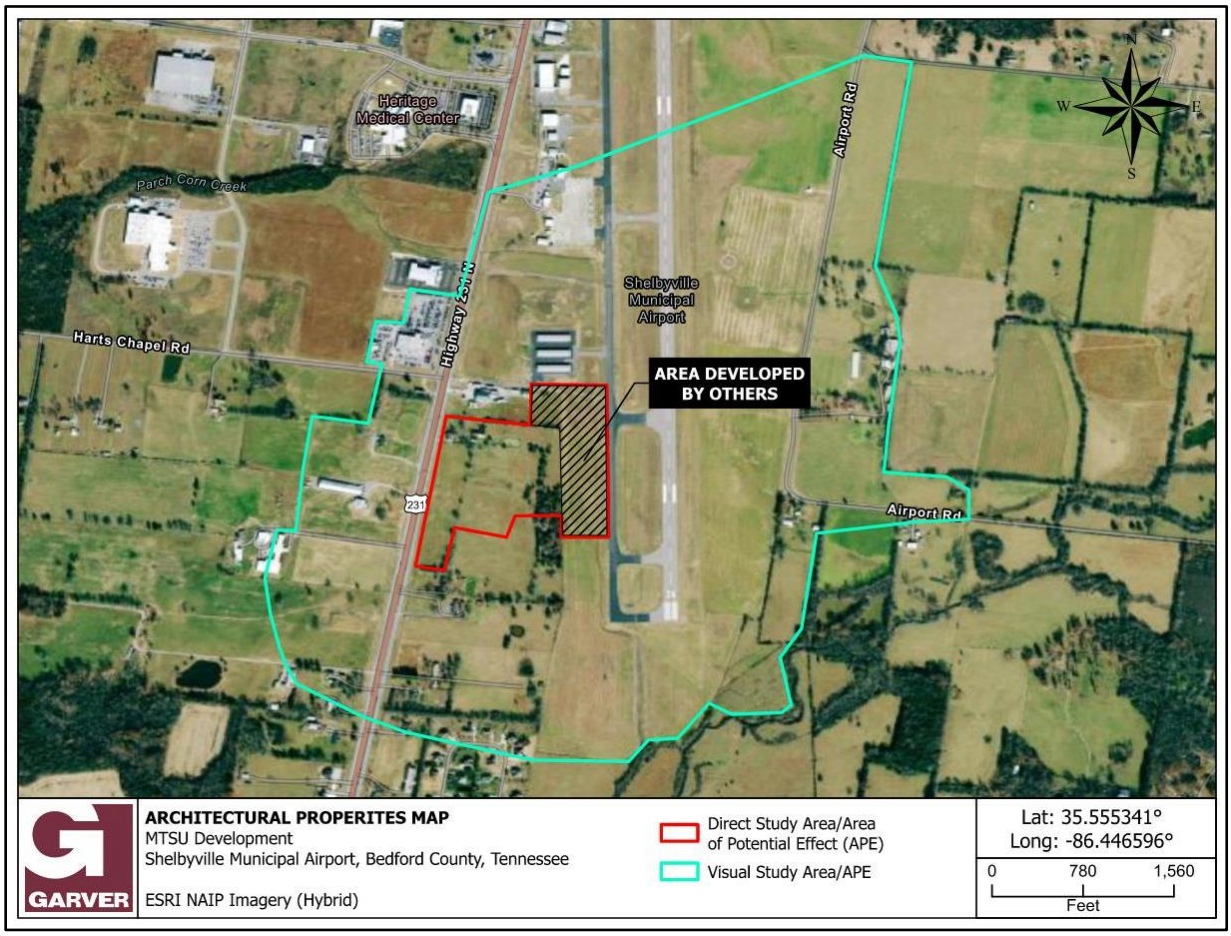
5.0 Affected Environment, Environmental Consequences, and Mitigation

5.1 Introduction and Study Areas

This section describes the existing environment within the study area, which is also referred to as the direct study area for resources that could be affected by the Proposed Action. The direct study area contains approximately 31 acres and was determined based on the potential for ground disturbance that may be required to construct the Proposed Action. The direct study area currently contains undeveloped pasture and wooded areas and remnant buildings from an abandoned farm.

A larger, indirect study area of approximately 442 acres is proposed to encompass potential changes in visual effects and includes a variable boundary around the direct study area that is correlated to elevation, terrain, and vegetation surrounding the airport as shown in **Figure 6**, which depicts the two study areas. The area surrounding the airport is rural in nature and contains natural drainage features and wooded and open areas with few residences, a cemetery, and commercial businesses in the immediate vicinity. An audible-focused indirect study area was also evaluated to determine the noise environment around the airport. Further discussion can be found in **Section 5.12**.

Figure 6: Study Areas Exhibit



Site visits were performed on November 29-30, 2023 and July 24-25, 2024, to document the existing conditions and environmental resources located within the direct study area that could be affected by the Proposed Action. A cursory review was also conducted within the surrounding airport property. Site photographs representing current conditions within the direct study area are provided in **Section 5.2**. The descriptions, photographs, and figures in this section depict current conditions within the direct study area and the areas that will be affected as the project moves forward through design and into construction.

5.2 Impact Assessment

Assessing impacts also includes documenting agency comments and concerns regarding agency-managed resources that may be affected by the project. In March and October 2024, letters were sent to applicable local, state, and federal agencies to assess the level of environmental consequences based on the purpose and need of the project.

This section describes the existing natural and social environmental resources that could be affected by or could affect the Proposed Action or the No Action Alternatives. Only those specific resources relevant to potential impacts are described in detail. Resources potentially impacted by the Proposed Action and the No Action Alternatives are evaluated in this section in accordance with FAA Order 1050.1G. Resources not impacted by the Proposed Action include Coastal Resources, Floodplains, and Wild and Scenic Rivers. Photographs of the study area are provided below.

◄ Photograph 1
View to the south of the study area.

► Photograph 2
View to the east of a remnant barn and grain silo (background). The residence associated with the unoccupied farm has been or will be removed by others prior to this project.

◄ Photograph 3
View to the northeast from the eastern part of the study area.

5.3 Past, Present, and Future Projects

Past, present, and reasonably foreseeable future projects that may have a causal relationship to the Proposed Action at the airport were identified and evaluated to determine the cumulative impacts on the environment as a result of the following projects. Projects that have occurred within the last five years at the airport include:

- Runway Rehabilitation and RSA Improvements – 2020
- Security Gate Improvements – 2021
- Low Pressure Sewer System – 2023

Present projects at the airport for which effects on resources were evaluated include:

- Azure Development – 2024
- ALP Update
- Taxiway and Hangar Development
- ALP Forecast Revisions and Contract Tower Application
- TCAT Shelbyville Campus (not on airport, but in the vicinity)
- Duksan Electra America, Inc. Manufacturing Facility (not on airport, but in the vicinity)

In addition to the proposed MTSU relocation to SYI under review in this EA, reasonably foreseeable actions within the next five-year term may include the below-listed actions depicted in the ALD and/or identified in the Airport Capital Improvement Program (ACIP) through 2029. The ALD reflects future improvements at SYI beyond those in the reasonably foreseeable future.

- Midfield Utility Layout – 2024 (awaiting contract execution)
- Shadeport Hangar Development – 2024 (awaiting contract execution)
- Runway 18 Run-Up Pad – 2024 (awaiting contract execution)
- Midfield Hangar Construction – 2025
- Terminal Renovation and Parking Lot Expansion – 2026
- Perimeter Fencing – 2026

- Midfield Taxiway Extension – 2028
- Terminal Apron Expansion – 2029
- Construct Federal Contract Air Traffic Control Tower - 2029
- Land Acquisition – 2029
- Construct Supplemental Fuel Farm - 2029

Overall impacts of the recent past and reasonably foreseeable future actions, combined with the Proposed Action include ground disturbance, increases in additional paved surfaces on airport-owned property, and the visual character surrounding the airport. These potential impacts or effects on certain resources are included in the following categories.

5.4 Air Quality

5.4.1 Affected Environment

The U.S. Environmental Protection Agency (EPA) developed the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA) for the six most common air pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), sulfur dioxide (SO_2), and lead (Pb). These pollutants are regulated by the EPA through human health-based (primary standards) and environmental-based (secondary standards) criteria. The NAAQS are applicable to all areas of the United States. Areas of the United States with poor air quality that have ambient concentrations of these criteria pollutants above the NAAQS are designated as “nonattainment areas”. A nonattainment area is required to have an applicable State Implementation Plan (SIP) that sets mitigation measures and timelines to bring ambient concentrations of the criteria pollutants below the NAAQS. When ambient concentrations in a nonattainment area meet the NAAQS, the EPA designates the area as a “maintenance area” and the applicable SIP ensures that the ambient concentrations of criteria pollutants do not increase above the NAAQS again. With regard to aviation-related Federal actions planned to occur in a nonattainment or maintenance area, the proposed impacts to air quality must conform to the conditions of the applicable SIP. The EPA does not currently list Bedford County as an area of nonattainment or maintenance for NAAQS.

The closest EPA air quality monitoring stations are located at Columbia, Chattanooga, and Nashville in Tennessee, and Huntsville, Alabama. The Nashville/Davidson County ambient outdoor air quality monitoring locations were evaluated as they represent a city and county with significantly greater populations and aviation operations. The most recent results from 2023 for Nashville/Davidson County and the EPA NAAQS are provided in **Table 2**, which show the primary and secondary levels per averaging time for each pollutant. The EPA *de minimis* thresholds for each criteria pollutant is 100 tons/year.

Table 2: EPA and DEQ Outdoor Air Quality Statistics Results*

CO 8hr (ppm)**	CO 1hr (ppm)**	O_3 1hr (ppm)	O_3 8hr (ppm)	Nox (ppb)	SO_2 1hr (ppb)	SO_2 24hr (ppb)	PM_{10} ($\mu g/m^3$)	24hr $PM_{2.5}$ ($\mu g/m^3$)	Annual $PM_{2.5}$ ($\mu g/m^3$)
1.4	1.8	0.086	0.08	9	3	2.2	--	23.25	10.05*
NAAQS Air Quality Standards* **									
9	35	0.12	0.07	100	75	140	150	35	12.0

*EPA annual statistics are not considered finalized until May 1, 2024. *Most recent monitoring information provided by EPA (EPA Outdoor Air Quality Statistics Report for Davidson County, Tennessee. **First highest max. ***https://www.epa.gov/criteria-air-pollutants/naaqs-table.

Meteorological conditions and trends in Bedford County indicate that annual rainfall has increased over 13 inches between 1900 and 2023 with an average of 53.9 inches. Average temperatures in the same span of years indicate an increase of 2.3° Fahrenheit (F) with an average temperature of 58.6°F (USA FACTS, 2024). Topographically, the study area is relatively flat and slightly sloping to the southeast. The land around the airport has rolling hills and pastures. These factors would not significantly influence the dispersal of emissions in the study area.

5.4.2 Environmental Consequences

No Action Alternative

The No Action Alternative would not directly or indirectly impact air quality as there would be no change in the amount of aircraft activity, runway use patterns, taxi times, or vehicles accessing the airport. Since the No Action Alternative does not involve construction activities, no additional impacts to air quality would be expected to occur.

Proposed Action

- Direct Impacts

  Appendix A of FAA Order 1050.1G provides the FAA's significance threshold for air quality. A significant impact would occur if the Proposed Action would cause pollutant concentrations to exceed one or more of the NAAQS or if it were to increase the frequency or severity of any such existing violations. The Proposed Action affects future aircraft activity by increasing the existing operations at the airport by approximately 50 percent over the course of 10 years. The Proposed Action affects landside traffic operations by shifting the travel routes of an estimated 1,000 landside automobiles from accessing MBT to SYI as a result of students and faculty accessing the new facility. Additionally, the Proposed Action will not change runway use patterns and only slightly increase aircraft taxi times and operational effects from ground access vehicles. However, no aircraft or surface transportation emissions are expected to rise to the level of significance as the Proposed Action is predominantly a relocation from one airport to another. Temporary increases in emissions resulting from construction activities may occur for a limited period of time at the project site and in the immediately adjacent areas. The most common air pollutants generated from construction activities are CO, volatile organic compounds (VOCs), NO_2, and particulate matter with a diameter of less than 10 microns (PM_{10}).

Based on the construction emissions inventory completed for the Proposed Action, none of the criteria air pollutants will exceed de minimis thresholds. Refer to **Table 3** below.

Table 3: Construction Emissions Inventory Results

EPA Criteria Air Pollutants						
	VOC (tons)	**CO (tons)**	**PM10 (tons)**	**PM2.5 (tons)**	**SO2 (tons)**	**NOx (tons)**
Non-Road Year 1 (2025)	0.08	0.60	0.15	0.14	0.002	0.99
Non-Road Year 2 (2026)	0.52	3.87	0.97	0.94	0.012	6.45
Non-Road Year 3 (2027)	0.14	1.04	0.26	0.25	0.003	1.74
Total Non-Road Emissions:	**0.74**	**5.51**	**1.38**	**1.34**	**0.017**	**9.17**
Total On Road Year 1 (2025)	0.02	0.08	0.01	0.01	0.001	0.255
Total On Road Year 1 (2026)	0.10	0.51	0.07	0.06	0.008	1.66
Total On Road Year 1 (2027)	0.03	0.14	0.02	0.02	0.002	0.45
Total On Road Emissions:	**0.14**	**0.72**	**0.09**	**0.09**	**0.01**	**2.36**

Total Construction Emissions (tons/year)						
Total Project (2025)	**0.09**	**0.67**	**0.16**	**0.15**	**0.00**	**1.25**
Total Project (2026)	**0.62**	**4.38**	**1.04**	**1.00**	**0.02**	**8.11**
Total Project (2027)	**0.17**	**1.18**	**0.28**	**0.27**	**0.01**	**2.18**
De minimis Thresholds (tons/year)*	**100**	**100**	**100**	**100**	**100**	**100**

* EPA De Minimis Tables: *https://www.epa.gov/general-conformity/de-minimis-tables*

- Indirect Impacts

  Indirect effects on air quality on and around the airport are anticipated to be minor based on projected growth in the region, additional aviation operations, additional landside vehicular traffic, and construction activities. Based on review of air quality data provided in **Table 2** and construction emissions results in **Table 3**, indirect air quality effects are not anticipated to rise to the level of significance.

- Mitigation and Best Management Practices (BMPs)

  Air quality effects resulting from the implementation of the Proposed Action or No Action Alternative are anticipated to be below threshold levels of significance. No mitigation measures are proposed because air quality thresholds are not anticipated to be exceeded due to construction. Dust suppression will be utilized during construction activities to reduce potential wind erosion and air quality effects within the immediate area of the Proposed Action.

  Dust suppression and BMPs are required for disturbances over one acre and would be implemented for recent past, current, and reasonably foreseeable future actions in the area around the airport.

5.5 Biological Resources

5.5.1 Affected Environment

The study area for biological resources is the direct study area as shown in **Figure 7** and contains fallow and maintained pasture areas with a dominance of upland herbaceous grasses and forbs as documented in the habitat assessment prepared for the Proposed Action, which is located in **Appendix B**.

There is one unoccupied residential farmhouse and five outbuildings located in the northwestern portion of the study area. The outbuildings/barns could provide suitable summer roosting habitat for bats. Approximately 0.99 acre of emergent wetlands and 0.01 acre of scrub-shrub wetlands are located throughout the study area.

Fish

There is one pond (0.21 acre) located in the study area and appears to be relatively permanent and could contain common fish species such as bluegill (*Lepomis* species), mosquitofish (*Gambusia affinis*), and minnows (*Notropis* species). This pond is the only hydrologic feature capable of providing habitat for fish species within the study area.

Wildlife

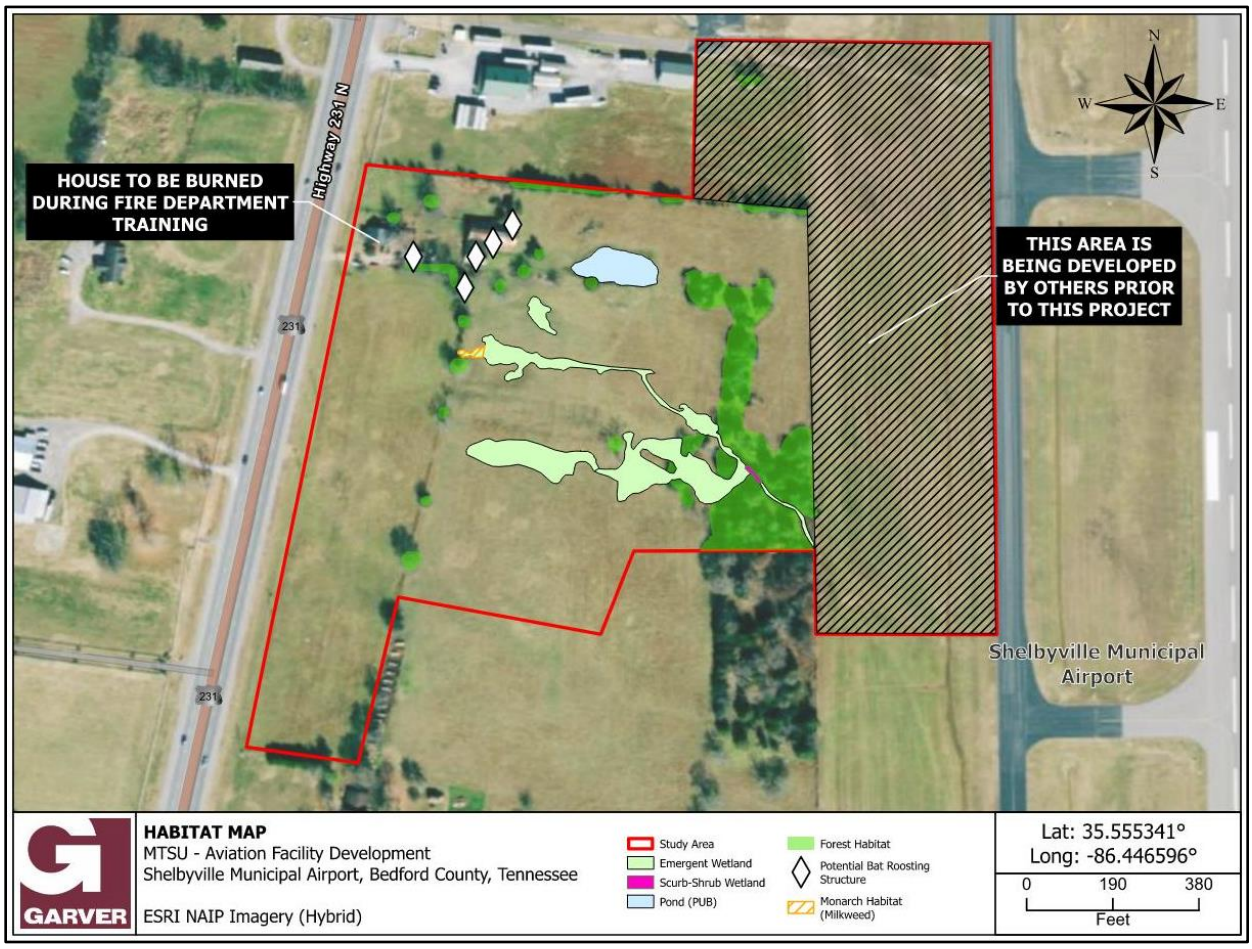
The presence of wildlife within the study area is likely diminished by the limited monocultural nature of the maintained grasslands presenting a lack of suitable habitat for many terrestrial species. The majority of available habitat consists of approximately 1.9 acres of mixed hardwoods surrounded by some maintained grassland intersected by roads and a utility right-of-way. Wildlife which could be expected in the area include white-tailed deer, small mammals, birds, reptiles, amphibians, and terrestrial and aquatic invertebrates.

The indirect study area for assessing the affected environment for wildlife species considers auditory and lighting effects that reach farther out from the airport. Available wildlife habitat around the airport is also fragmented due to agricultural, residential, commercial, and industrial developments.

Plants

The study area contains predominantly herbaceous grasslands (28.5 acres) with approximately 1.9 acres of forested areas within the study area that includes eastern red cedar (*Juniperus virginiana*), post oak (*Quercus stellata*), chestnut oak (*Quercus montana*), and shag-bark hickory (*Carya ovata*). An estimated 28.5 acres of pasture/grasslands are present within the study area and includes dominant herbaceous vegetation consisting of broomsedge (*Andropogon virginicus*), Bermuda grass (*Cynodon dactylon*), false tall rye grass (*Schedonorus arundinaceus*), lesser poverty grass and (*Juncus tenuis*). The Tennessee Wildlife Resources Agency (TWRA) was contacted regarding the occurrence of rare plants, outstanding natural communities, and other elements of special concern. TWRA's response is provided in **Appendix C** and did not identify any plant species of concern.

Figure 7: Habitat Exhibit



Federal and State Listed Species

The United States Department of the Interior, Fish and Wildlife Service (USFWS), Cookeville Ecological Services Field Office was consulted early during the development of this document. Agency responses are located in **Appendix C**. The USFWS Information for Planning and Consultation (IPaC) on-line tool was used to identify potential habitat for 14 federally listed endangered, threatened, proposed endangered, and candidate species that may occur in or pass through the study area within Bedford County and are listed in **Table 4**. No critical habitats were identified within or near the study area.

Based on the site visit and a habitat evaluation, the study area contains forested roosting habitat for the northern long-eared and tricolored bats; however, the northern long-eared bat is unlikely to occur in the area and any tree removal will not jeopardize the continued existence of the tricolored bat.

Table 4: Federally Listed Species

Species/ Status	Habitat Requirements	Suitable Habitat within Direct Study Area (SA)	Preliminary Effect Determination
Gray Bat (*Myotis grisescens*) Endangered	The gray bat occurs in limestone karst areas and primarily uses caves throughout the year, although they move from one cave to another seasonally. Smaller colonies also occasionally roost under bridge structures.	No caves, bridges, or suitable roosting structures are located within or adjacent to study area.	No effect
Northern Long-eared Bat (*Myotis septentrionalis*) Endangered	In winter, northern long-eared bats use caves, mine portals, abandoned tunnels, protected sites along cliff lines and similar situations that afford protection from cold. During the summer they roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees.	No caves, mines, tunnels, or cliffs are within or adjacent to study area. The study area does contain a farm building and trees that are potentially suitable for summer roosting; however, per USFWS, the project is located in an area the northern long-eared bat is unlikely to occur.	No effect
Tricolored Bat (*Perimyotis subflavus*) Proposed Endangered	In winter, Tricolored Bats hibernate in caves, mine portals, and man-made structures such as box culverts. During the summer they prefer to roost in the clumps of dead leaves of oak trees within complex oak forests greater than 50 years old. Less commonly, they will roost in clumps of dead pine needles attached to living trees. They commonly forage along riparian corridors.	No caves were observed within or near the project site. Woodland mostly consists of eastern red cedar in the study area but does include some mature hardwoods. Riparian corridors do not exist in or adjacent to the study area. The project will require the demolition of five buildings.	Not likely to jeopardize the continued existence
Whooping Crane (*Grus americana*) Experimental	Nesting occurs in dense emergent vegetation in ponds, lakes, and wetlands. Migration habitat includes marshes, shallow lakes, lagoons, salt flats, stubble and grain fields, and barrier islands.	Dense emergent vegetation within or around the pond was absent. Emergent wetlands in the study area are regularly maintained or do not exhibit significantly dense vegetation. No other whooping crane habitat is present.	No Effect
Cumberland Moccasinshell (*Medoinidus conradicus)* Proposed Endangered	Found in riffles, runs, and shoals of high gradient streams to medium sized rivers with coarse sand, gravel, and/or cobble.	No streams or rivers present.	Not likely to jeopardize the continued existence
Cumberland Monkeyface (pearlymussel) (*Theliderma intermedia*) Endangered	Found in riffles and shoals of headwater streams and large rivers with high gradients with sand and gravel substrates.	No streams or rivers present.	No Effect
Fluted Kidneyshell (*Ptychobranchus subtentus)* Endangered	Found in riffles, runs, and shoals of high gradient streams to medium sized rivers with sand, gravel, and/or cobble.	No streams or rivers present.	No Effect

Species/ Status	Habitat Requirements	Suitable Habitat within Direct Study Area (SA)	Preliminary Effect Determination
Rabbitsfoot (*Theliderma cylindrica)* Threatened	Found in small streams to medium sized rivers with swift current gravel or cobble substrates.	No streams or rivers present.	No Effect
Round Hickorynut (*Obovaria subrotunda)* Threatened	Found in small streams to large rivers and lake with sand, gravel, and cobble substrates and moderate flow.	No streams or rivers present.	No Effect
Salamander Mussel (*Simpsonaias ambigua)* Proposed Endangered	Found in small streams to large rivers and lake with mud, silt, sand, gravel, cobble, and boulder substrates and swift current.	No streams or rivers present.	Will not jeopardize continued existence
Slabside Pearlymussel (*Pleuronaia dolabelloides)* Endangered	Found in large creeks to medium rivers with sand, gravel, and cobble substrate with moderate current.	No streams or rivers present.	No Effect
Tennessee Clubshell (*Pleurobema oviforme)* Proposed Endangered	Found in headwater streams to small rivers with sand, gravel, and cobble substrate with moderate current.	No streams or rivers present.	Will not jeopardize continued existence
Tennessee Pigtoe (*Pleuronaia barnesiana)* Proposed Endangered	Found in moderate to high gradient streams to medium rivers with sand, gravel, and/ or cobble.	No streams or rivers present.	Will not jeopardize continued existence
Monarch Butterfly (*Danaus plexippus*) Candidate	Monarch butterflies require the presence of milkweed (*Asclepias spp.*), flowering nectar plants (defined as forbs that can provide nectar for monarchs at some point in the growing season), and additional native habitat such as meadows, prairies, and grasslands.	Though much of the study area is herbaceous vegetation which may provide flowering plants, it lacks plant diversity throughout and is regularly maintained. An approximate 0.02-ac area contains milkweed.	Will not jeopardize the continued existence
Leafy Prairie-clover (*Dalea foliosa*) Endangered	Occurs on thin-soiled limestone glades and limestone barrens. In Tennessee, the plants occur on wet calcareous barrens and moist prairies or cedar glades, usually near a stream or where some seepage from limestone provides seasonal moisture. The plants require full sun and low competition for optimum growth and reproduction; periodic fire is needed to maintain these conditions.	Glades or limestone barrens were not observed in the study area. Herbaceous areas lacked diversity and leafy prairie-clover would likely struggle to compete with tall fescue and broomsedge. Vegetation is seasonally mowed.	May affect, not likely to adversely affect

The Tennessee Wildlife Resources Agency (TWRA) was contacted on March 21, 2024. A response from TWRA received on May 2, 2024, indicated three state listed species as identified in **Table 5** have been documented within two miles of the stud area; however, no suitable habitat exists for these species on-site. TDEC rare species by watershed were also reviewed and included in **Table 5**. The study area is located entirely within the Fall Creek 12-digit Hydrologic Unit Code (HUC) watershed. Eight species were identified by TDEC that include the Streamside Salamander, Limestone Blue Star, Tennessee Milkvetch, Tennessee Clubtail, Coppercheek Darter, Redband Darter, Striated Darter, and Duck River Bladderpod. The No Action Alternative would not directly or indirectly significantly impact fish, wildlife, or plant species within the study area. Coordination with TWRA is provided in **Appendix C**.

Table 5: TDEC State Listed Species

Species	Habitat Requirements	Suitable Habitat within Direct Study Area (SA)	Preliminary Effect Determination
Streamside Salamander* (*Ambystoma barbouri*) State Endangered	Seasonally flowing karst streams; middle Tennessee.	No habitat is located within or adjacent to study area.	No impact
Limestone Blue Star (*Amsonia tabernaemontana*) Special Concern	Glades, barrens, and rocky river bars.	No habitat is located within or adjacent to study area.	No impact
Tennessee Milkvetch (*Astragalus tennesseensis*) Special Concern	Glades.	No habitat is located within or adjacent to study area.	No impact
Tennessee Clubtail (*Gomphus sandrius*) Rare, Not State Listed	Slow streams with bare bedrock banks in the Central basin of upper Duck River and middle Cumberland River watersheds.	No habitat is located within or adjacent to study area.	No impact
Coppercheek Darter (*Etheostoma aquali*) State Threatened	Prefers deep riffles, runs and flowing pools in the Duck and Buffalo River watersheds.	No habitat is located within or adjacent to study area.	No impact
Redband Darter* (*Etheostoma luteovinctum*) In Need of Management	Limestone streams in the Nashville basin and portions of Highland Rim.	No habitat is located within or adjacent to study area.	No impact
Striated Darter* (*Etheostoma striatulum*) State Threatened	Bedrock pools of headwaters and creeks with large slabrock cover in the upper Duck River watershed.	No habitat is located within or adjacent to study area.	No impact
Duck River Bladderpod (*Paysonia desnipila*) Special Concern	Cultivated fields, open limestone glades, and disturbed lowlands along stream and rivers.	No cultivated fields, limestone glades, or disturbed lowlands along streams or rivers.	No impact

*TWRA identified species located within two miles of the study area.

5.5.2 Environmental Consequences

No Action Alternative

Since the No Action Alternative does not involve construction activities, there would be no direct or indirect impacts to fish, wildlife, or plant species within the study area.

Proposed Action

- Direct Impacts

  The Proposed Action would directly affect approximately 30 acres of a maintained grassland areas, 1.9 acres of trees, 0.99 acre of emergent wetlands, 0.01 acre of scrub-shrub wetlands, 0.21 acre of pond, and 0.27 acre of built environment. The pond may contain fish or aquatic species and there is limited potential for wildlife species.

  There is no surface habitat for any of the federal and state listed species; therefore, no effect and no impact determinations were made for most of these species. The Proposed Action would have a May Affect, Not Likely to Adversely Affect determination for the leafy prairie-clover. The Proposed Action will not jeopardize the continued existence of the federally listed proposed endangered and candidate species. Informal Section 7 consultation was completed for these species on May 21, 2024 (USFWS reference activity no. 2024-0044690). USFWS concurred with the determinations listed above and recommended that the buildings on the site are proposed for demolition between April 1 and October 15 be inspected and if any evidence of bats is encountered, additional coordination with their office will be required. Refer to correspondence provided in **Appendix C**.

- Indirect Impacts

  No indirect impacts are anticipated concerning federally or state listed threatened and endangered species. As noted previously, the surrounding land contains developed areas and fragmented grassed airfield areas.

- Mitigation and BMPs

  In compliance with the USFWS response, inspection of the buildings shall be completed if proposed demolition is to occur between April 1 and October 15. Additional coordination with the USFWS is required if the project is not completed before the tricolored bat is federally listed. Tree clearing is recommended by the USFWS to occur between October 1 and March 31. The use of water quality control measures to prevent sedimentation and water quality effects downstream of the Proposed Action will be included. BMPs and provisions for water quality protection in accordance with the Airport's Industrial Stormwater Pollution Prevention Plan (SWPPP) per National Pollutant Discharge Elimination System (NPDES) regulations, and in compliance with the anticipated construction SWPPP will be implemented for the Proposed Action. The required construction SWPPP will be obtained prior to construction. TAD will ensure mitigation measures and BMPs are fulfilled.

  USFWS recommendations related to threatened and endangered species are commitments for federal and state projects and enforceable as part of Section 7 compliance. Therefore, the recent past, current, and reasonably foreseeable future actions in the area around the airport will have only minor impacts on the surrounding natural or man-made environment. This conclusion is based on the assumption that all projects will be implemented as planned and will comply with all applicable regulations and guidelines.

5.6 Department of Transportation, Section 4(f)

Section 4(f) of the Department of Transportation (USDOT) Act of 1966 protects important public resources including public parks, recreation areas, wildlife or waterfowl refuges of national, state, or local significance, and historic sites. There are no Section 4(f) properties within the direct study area; however, a historic resources survey completed for the Proposed Action indicated three buildings located on the adjacent airport are potentially eligible for listing in the National Register of Historic Places (NRHP) and as a result, would be considered Section 4(f) resources. Refer to **Figure 8** for a location of these resources.

5.6.1 Affected Environment

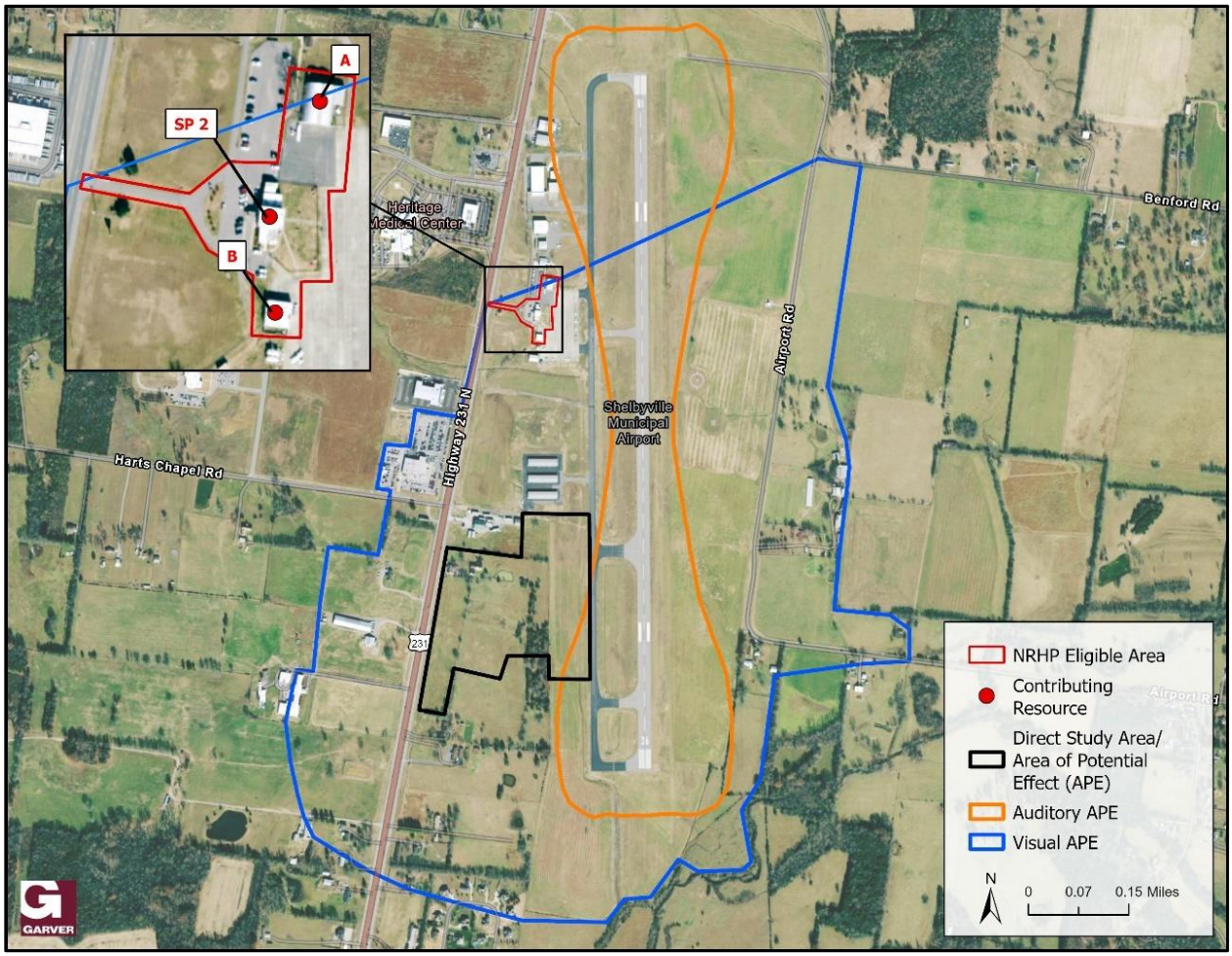
The study area for evaluating historic properties is the viewshed of the Proposed Action, which is also the same as the visual indirect study area (identified in Section 5.9 as the indirect area of potential effect (APE)). The indirect study area is also considered the difference in the 65 day-night average sound level (DNL) noise contour between the No Action and Proposed Action alternatives. Both indirect study areas contain the SYI airfield, surrounding residential properties, and undeveloped areas.

5.6.2 Environmental Consequences

No Action Alternative

Based on the results of the noise analysis performed for the No Action Alternative, the buildings potentially eligible for NRHP listing would not fall within the estimated 65 DNL sound level contour generated by aircraft at the airport in the future conditions.

Figure 8: Potentially NRHP Eligible Resources



Proposed Action

- Direct Impacts

  Based on the results of the noise analysis performed for the Proposed Action Alternative, the buildings potentially eligible for NRHP listing would not fall within the estimated 65 DNL sound level contour generated by aircraft at the airport in the future conditions.

  The Proposed Action's buildings do not provide size or contrast to diminish any aspects of the historic integrity of the airport buildings that are eligible for listing as documented in the Historic Resources Survey mentioned in **Section 5.9**. The Proposed Action meets the criteria for a finding of No Historic Properties Affected as per 36 CFR 800.4 (d)(1), and therefore does not impact Section 4(f) resources. Concurrence of No Historic Properties Affected was received from the Tennessee Historical Commission (THC) on September 24, 2024.

- Indirect Impacts

  As there are no significant direct environmental impacts expected concerning the buildings potentially eligible for NRHP listing, indirect impacts are not anticipated.

- Mitigation and BMPs

  No mitigation or BMPs are proposed as no direct or indirect Section 4(f) impacts are anticipated.

5.7 Farmlands

The Farmland Protection Policy Act (FPPA) regulates federal actions with the potential to convert farmlands to non-agricultural uses. The FPPA is intended to minimize the impact that federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that, to the extent possible, federal programs are administered to be compatible with state and local units of government and with private programs and policies to protect farmland. There are three classes of farmland categorized based on soil types and are defined below:

- Prime Farmland – Farmland as designated by the USDA as having the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops which is currently available for use.
- Unique Farmland – Farmland other than prime farmland that has the combined conditions to produce sustained high-quality yields of specialty crops such as citrus, nuts, fruits, and vegetables when properly managed.
- Farmland of Statewide Importance – Farmland other than Prime or Unique Farmland that has a good combination of physical and chemical characteristics for the production of crops important to the agricultural economy of the state.

The FPPA defers to local jurisdictions regarding the identification of areas to be identified as having the appropriate soil characteristics to be designated as prime, unique, or farmland of state or local importance.

5.7.1 Affected Environment

The study area contains approximately 11.8 acres of prime farmland as determined by mapping soil units according to the Natural Resources Conservation Service (NRCS) web soil survey (accessed January 2024). This area has been historically farmed for hay for at least one of the last five years.

No Action Alternative

The No Action Alternative will not include any changes to the airfield or project area and therefore would not impact farmlands.

Proposed Action

- Direct Impacts

  Part I and Part II of the NRCS Farmland Conversion Impact Rating Form (Form AD-1006) was completed and sent to the NRCS office in Shelbyville on April 29, 2024. The NRCS office has

reviewed the Proposed Action and determined that FPPA does not apply. **Appendix C** contains this determination from the USDA.

- Indirect Impacts

  No indirect farmland effects are anticipated.

5.8 Hazardous Materials, Solid Waste, and Pollution Prevention

Federal actions require consideration of hazardous material, solid waste, and pollution prevention impacts in NEPA documentation. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) defines a hazardous material as any substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. The term hazardous material includes both hazardous wastes and hazardous substances, as well as petroleum and natural gas substances and materials. The Resource Conservation and Recovery Act (RCRA) defines solid waste as any discarded material that meets specific regulatory requirements and can include items such as refuse, scrap metal, spent material, chemical-by-products, and sludge from industrial and municipal wastewater and water treatment plants. Pollution prevention describes methods used to avoid, prevent, or reduce pollutant discharges or emissions through strategies such as using fewer toxic inputs, redesigning products, altering manufacturing and maintenance processes, and conserving energy. The direct study area was assessed for the presence of hazardous material, hazardous waste, and hazardous substances. If the Proposed Action would include generation of hazardous waste or the use of fuel storage tanks, federal, state, and or local statutes and regulations may apply.

5.8.1 Affected Environment

There are several small farm-related buildings within the study area. One of these buildings contains small containers (1 quart to 5 gallons) of paint, and farm and automotive maintenance materials such as power steering fluid, oil, used oil, brake fluid, aerosol cans, and possibly kerosine and diesel fuel cans. No significant soil staining or stressed vegetation was observed around these containers, which were mostly located within one or two of the covered buildings.

The Tennessee Division of Environment and Conservation (TDEC) Division of Remediation (DoR) was contacted who reviewed their files and indicated they have no records of DoR sites within a one-mile radius of the study area. The TDEC Division of Solid Waste Management (DSWM) was contacted and provided recommendations on wastes generated by the Proposed Action's construction be confined to the project limits and handled in accordance with the Solid and Hazardous Waste Rules and Regulations of the state. DSWM also reviewed state and federal databases (WasteBin and ECHO/NEPAssist). DSWM identified one hazardous waste generating site within one mile of the study area. Refer to **Appendix C** for agency coordination.

The EPA NEPAssist tool was used to identify the location of any Superfund sites, hazardous waste generator facilities, or solid waste sites within or near the direct study area, which is used for determination of hazardous materials sites. One RCRA site was identified within a 1-mile radius of the study area. No sites related to hazardous wastes were identified within the study area. SYI has two above ground storage tanks located approximately 1,650 feet north of the study area.

Pollution Prevention

The airport accomplishes pollution prevention through the implementation of site-specific construction general permits and an industrial stormwater permit. A spill prevention control and countermeasure plan (SPCCP) would be required for fuel storage associated with the proposed action.

5.8.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, no impacts to hazardous materials, solid waste, or hazardous waste are expected to occur. The airport would continue to operate its facilities in compliance with the same regulations associated with transport, storage, and use of existing hazardous materials as it does today. No increase in stormwater runoff or pollution would be expected by the No Action Alternative. Any deicing operations would continue to occur as they have.

Proposed Action

- Direct Impacts

  The Proposed Action would have no direct impacts to significant amounts of known hazardous materials, solid waste, or hazardous waste sites. Minor amounts of petroleum and other products within the abandoned structures on the site would be disposed of in accordance with local, state, and federal regulations, which was also a recommendation of DSWM. Demolition of the on-site abandoned structures (approximately 5,640 ft^2) is required for development and the solid waste generated from the demolition and construction activities will be handled and disposed of in accordance with applicable laws and regulations.

  The Proposed Action would increase the amount of impervious area by adding approximately 1,147,015 sf of pavement associated with apron expansion and by adding new structures and landside parking areas. These improvements would increase the volume and rate of stormwater runoff that may contain sources of potential pollutants. Stormwater outfall modifications would occur as a result of the Proposed Action and will be added to the airport's NPDES permit and SWPPP.

  Short-term and temporary impacts may occur as a result of construction activities for the Proposed Action and include the temporary increase of petroleum fuels on-site that are utilized by construction equipment and the production of solid waste. Potential solid waste produced as a result of demolition of the existing on-site buildings includes concrete block, scrap steel, sheetrock, shingles, metal, and/or wood.

  During construction grading activities associated with the Proposed Action, the primary potential pollutant is sediment and silt entering stormwater and receiving waters at the airport. This could affect biotic communities on airport property or downstream of the airport; however, on-site stormwater will be directed to proposed detention and retention basins, which will have capacity to receive the additional runoff from the increased impervious areas. Additionally, the Proposed Action will include the introduction of three 3,000-gallon mobile refuelers to the airport.

- Indirect Impacts

  Potential indirect impacts on the water quality of downstream environments are discussed in subsequent sections of this document.

- Mitigation and BMPs

  Prior to initiating construction activities associated with the Proposed Action, the airport will obtain permit coverage for construction activities. General construction BMPs including silt fences, check dams, herbaceous buffers, and other controls as appropriate will be incorporated into construction plans to help prevent erosion and protect water quality in compliance with local erosion and sediment control regulations. Construction BMPs for the Proposed Action will include designating specific areas for construction equipment staging, maintenance, and fueling. These areas will be designed to provide appropriate secondary containment (temporary dikes or impervious containers) and other control measures to avoid and/or minimize potential, inadvertent, releases of fuels, oils, and other contaminants to stormwater, soil, and groundwater within the project area.

  All demolition activities would need to comply with EPA guidelines and Chapter 1200-03-11 of the Tennessee Air Pollution Control Regulations (TAPCR). Pre demolition surveys will be completed in accordance with TAPCR. This includes all materials that would be classified as solid and/or hazardous wastes and would be disposed of at an appropriate regional landfill that has capacity to receive solid waste produced by the Proposed Action. Any temporary fuel tanks or the temporary storage of other regulated materials will comply with federal, state, and local regulations.

  If any hazardous materials are encountered on the site during demolition or excavation, they will be appropriately identified and properly disposed of in accordance with applicable regulations. TAD will ensure mitigation measures and BMPs are fulfilled.

  Mobile refuelers will be positioned near the airport's existing fuel farm when not in use. These mobile refuelers will be required to have emergency spill kits on them and comply with any provisions provided in the airport's spill control and countermeasure plan (SPCCP).

5.9 Historical, Architectural, Archeological, and Cultural Resources

The National Historic Preservation Act of 1966 requires that an initial review be made to determine if any properties are on, or eligible for inclusion in, the National Register of Historic Places (NRHP). Initial consultation pursuant to Section 106 with the State Historic Preservation Office (SHPO) and Tribes in accordance with 40 CFR 1507.2, Section 106 of the National Historic Preservation Act, and FAA Order 1050.1F was completed. SHPO was consulted on April 24, 2024, who requested a cultural resources and architectural survey be completed for the Proposed Action. Additionally, TDEC's Division of Archaeology (DoA) was consulted on March 21, 2024. DoA reviewed their files and indicated that no significant archaeological resources will be disturbed and did not request additional surveys. Tribes were consulted on behalf of TAD on October 11, 2024. Agency coordination letters and consultation letters referencing Government to Government Tribal consultation and responses are included in **Appendix C**. Although there is no significance threshold for this category, the FAA has identified a factor that includes if the Proposed Action would result in a finding of Adverse Effect through the Section 106 process.

5.9.1 Affected Environment

The direct APE is the same as the direct study area and includes areas where ground disturbance is proposed. There are six existing, abandoned buildings located within the direct APE consisting of a residence, detached garage, sheds, a barn, and silo, all of which may have been constructed in 1950, according to Tennessee property assessment data (parcel ID 059014.00).

A review of the Tennessee Historical Commission (THC) viewer was accessed to identify the location of any historic properties, as defined by 36 CFR 800.16(l)(1), within a one-mile radius, which encompasses the indirect APE. No properties were identified by the THC viewer. An archaeological survey and historic resources survey were completed within the direct and indirect APEs by Cultural Resource Analysts, Inc. in August 2024. No archaeological sites deemed eligible for listing in the NRHP and no listed sites in the NRHP were identified. However, the *Historic Architectural Resources Survey for the Proposed Development Near the Shelbyville Municipal Airport* (CRA, 2024), provided in **Appendix D**, indicated that the main terminal building and two hangars on the airport that are located within the indirect visual APE would be eligible for listing in the NRHP. These buildings are shown in the CRA report and are included in an area encompassing all three buildings. The delineated area is also considered eligible for listing in the NRHP. Refer to **Figure 8** showing the direct and indirect APEs, and potentially eligible structures.

The following Native American Tribes were consulted during the preparation of this EA: Cherokee Nation, Eastern Band of Cherokee Indians, United Keetoowah Band of Cherokee Indians, Shawnee Tribe, Eastern Shawnee Tribe of Oklahoma, Absentee Shawnee Tribe of Oklahoma, and Chickasaw Nation. Consultation letters can be found in Appendix C.

5.9.2 Environmental Consequences

Potential construction, operational, visual, and auditory impacts were factors considered in determining impacts to historic, architectural, archaeological, and cultural resources. The Proposed Action's APEs were reviewed by the SHPO regarding historic properties and archaeological sites and presented in the archaeological and historic resources surveys prepared for the Proposed Action.

No Action Alternative

The No Action Alternative would not impact any historic, architectural, archaeological, or cultural resources.

Proposed Action

- Direct Impacts

  The Proposed Action will have no direct impacts to historic, architectural, archaeological, or cultural resources sites listed on or eligible for listing on the NRHP as identified in the Historic Architectural Resource Survey and Phase I Archaeological Survey prepared for the Proposed Action. Consultation with the SHPO concurred that there are no historic properties affected due to direct impacts. Correspondence received from SHPO, dated September 24, 2024 and October 7, 2024, indicated concurrence with the finding of no historic properties affected pursuant to 36 CFR 800.4 (d)(1) and is provided in **Appendix C**.

No comments from Tribal Historic Preservation Officers (THPO) and Tribal contacts were received with the proposed project. Consultation letters and responses are in **Appendix C**.

- Indirect Impacts

  Visual and auditory indirect effects on historic properties were evaluated. The Proposed Action will have no indirect adverse impacts on historic, architectural, archaeological or cultural resource sites, or eligible NRHP sites. The Proposed Action does not provide size or contrast to diminish any aspects of the historic integrity of the NRHP eligible buildings on the airport. The Proposed Action meets the criteria for a finding of No Historic Properties Affected as per 36 CFR 800.4 (d)(1).

- Mitigation and BMPs

  If construction work uncovers buried archeological materials, work will be halted in the area of discovery and the THPOs, SHPO, and the TAD Project Manager will be immediately notified. TAD will ensure mitigation measures and BMPs are fulfilled.

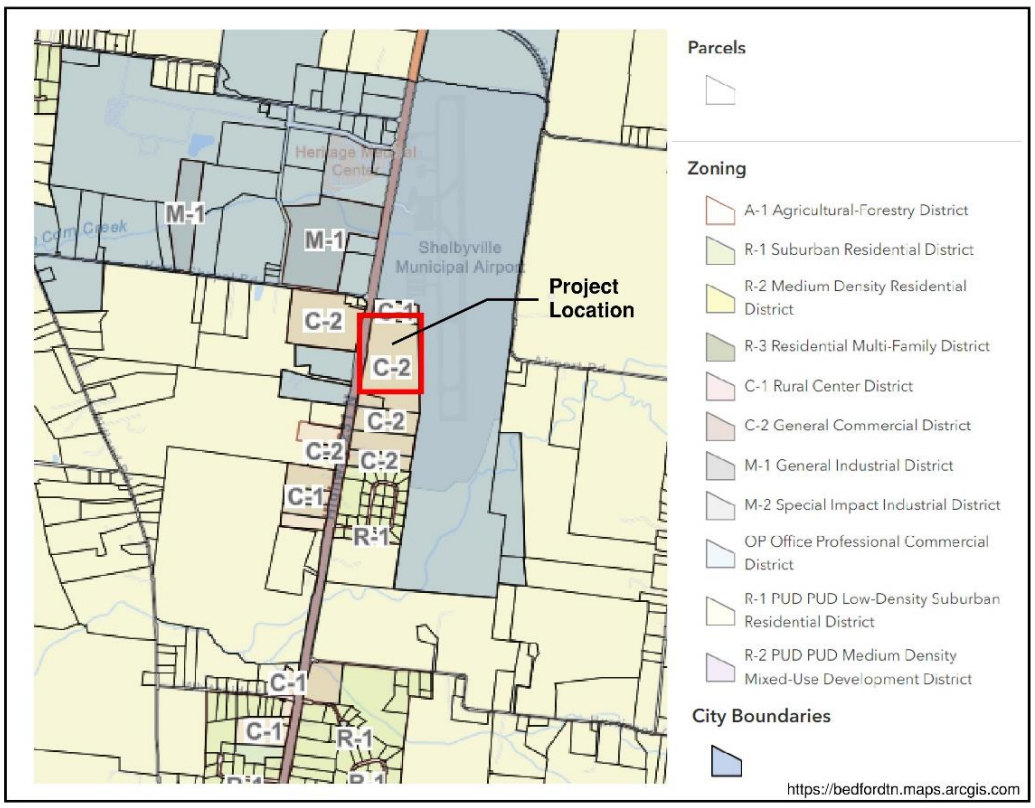
5.10 Land Use

5.10.1 Affected Environment

The direct study area is approximately 31 acres in size, 5 acres of which is located on airport-owned property that currently functions for aeronautical use. As part of the Proposed Action a portion of the remaining land to be leased to MTSU will be converted to aeronautical use. The exact amount will be determined in the design phase. No changes in zoning or land use are planned within the direct study area as it is located within a C-2 (General Commercial District) zone according to Bedford County zoning information (refer to **Figure 9**). Figures provided as part of the noise exposure maps provided in **Appendix E** reflect the current land use zoning around the airport within the 65 DNL noise contour. The entirety of the Proposed Action area will be leased by MTSU and the off-airport study area is located within the airport overlay zoning area. In compliance with 49 U.S.C. 47107(a)(10) and with *Article VI - Airport Overlay District* ordinance, zoning regulations for the industrial, commercial, and residential zoned areas around the airport have been developed and include provisions regulating potential development.

The indirect study area includes both the visual and auditory study areas around the direct study area shown in **Figures 6** and **8**. The indirect study area outside of the developed airfield contains hayfields, undeveloped wooded areas, commercial, residential, and agricultural land uses off the airport. The area surrounding the airport is rural in nature and contains natural drainage features and wooded and open areas with few residences in the immediate vicinity.

Figure 9: Zoning Exhibit



Tennessee has several statutes in place that were developed to promote safe development in the areas surrounding its airport facilities. Title 42, Chapter 4, Section 42-4-107(9) provides authority to study and recommend zoning changes in the area around the airport with respect to noise, building or structure heights, and other aviation obstructions.

5.10.2 Environmental Consequences

No Action Alternative

- Direct Impacts

  The No Action Alternative would retain the existing conditions and therefore prevent MTSU developments at this location at SYI. There would be no changes to existing or planned land uses at or surrounding SYI. No direct land use changes are anticipated at SYI.

- Indirect Impacts

  The No Action Alternative will have no indirect impacts associated with land use at SYI.

Proposed Action

- Direct Impacts

  All elements of the Proposed Action are located on property owned by the City of Shelbyville and will be leased to MTSU. The Proposed Action will not affect land use around the airport. No conflicts in land use planning are anticipated according to the Airport Layout Drawing (ALD) and current zoning in the area. No direct land use changes are anticipated.

- Indirect Impacts

  The Proposed Action will have no indirect impacts associated with land use.

5.11 Natural Resources and Energy

A review of natural resources and energy supply was completed to compare the existing and proposed usage of these resources for the Proposed Action. These resources include water, asphalt, aggregate, wood, electricity, natural gas, and fuel. In accordance with FAA Order 1053.1 and 1050.1G, the airport has reviewed these resources including principles of sustainability. The energy modeling may occur as part of design to determine life cycle costs (*Program Verification Submittal*, 2023). FAA policy encourages the use and development of sustainable technologies and practices and therefore should be considered whenever possible. The airport receives its electric supply from Duck River Electric Cooperative and water and natural gas supply from the Bedford County Utility District. Sanitary sewer service for the Proposed Action would be served by Shelbyville Power, Water and Sewerage. Initial coordination with local officials and these energy providers was completed during the development of the PVS.

5.11.1 Affected Environment

Natural resources such as water, asphalt, and aggregate that would be utilized are located onsite and/or would be provided for the project from existing services located along Highway 231 and offsite quarries/entities with available clean materials. The direct study area contains the existing abandoned residence and farm buildings that are supplied with electricity extending from the adjacent Highway 231.

5.11.2 Environmental Consequences

FAA Order 1050.1G Appendix A shows that FAA has not established a significance threshold for this impact category. However, a factor to consider is if the action would have the potential to cause demand to exceed available or future supplies of these resources.

No Action Alternative

- Direct Impacts

  The No Action Alternative would not change the future supply of natural resources or energy demands at the airport.

- Indirect Impacts

  The No Action Alternative would not have any indirect impacts associated with natural resources.

Proposed Action

- Direct Impacts

  No adverse effects or exceedances of local or regional natural resources and energy supplies are anticipated based on coordination with local utility providers.

  Based on available facility load data provided by I.C. Thomasson Associates, Inc., the anticipated electrical load demand for Proposed Action is 2,660 KVA. The Proposed Action's energy demand is not significant and is mainly for indoor lighting, training labs, and HVAC systems. Any additional energy uses are anticipated to be met by local energy suppliers. Based on coordination with local utility providers, electrical service for the Proposed Action would come from a new service connection at a point along Highway 231.

  Petroleum fuel (for construction equipment and mobile refuelers) and consumable materials are not considered to be scarce and increased usage of these resources during construction would be met by current and/or future suppliers. The Proposed Action will increase airside capacity and change aircraft and landside vehicle traffic patterns after construction, which could alter fuel usage. The nearby runway will remain open throughout construction and aircraft will continue to use existing facilities with no effect on aircraft traffic patterns. No substantial operational energy demands are anticipated.

  No adverse effects or exceedances of local or regional natural resources and energy supplies are anticipated.

- Indirect Impact

  Indirect effects associated with the Proposed Action are also anticipated to be met by local energy and utility providers as the population of the region increases.

5.12 Noise and Noise-Compatible Land Use

The FAA also provides federal compatible land use guidelines for several land uses as a function of DNL (day-night average sound level) values. The DNL represents a 24-hour A-weighted noise dose and includes an adjustment for nighttime noise (from 10pm to 7am) of an additional 10 decibels (dBA). FAA Order 5050.4B defines a noise sensitive area as "*an area where noise interferes with the area's typical activities or its uses*". Noise sensitive areas typically include residential homes, educational institutions, health care facilities, religious structures and sites, parks, recreational areas, areas with wilderness characteristics, wildlife refuges, and cultural and historical sites. FAA orders 1050.1G and 5050.4B define a significant noise impact as one which would occur if the proposed action would cause noise-sensitive areas to experience an increase in noise of 1.5 dB or more at or above the 65 dBA DNL noise contour when compared to a No Action Alternative for the same time frame.

Based on the noise study completed for the Proposed Action, the forecast year of 2033 was used to analyze impacts in the future condition and assumed that the ultimate condition of 70-100 based planes would be realized. The noise analysis incorporated general aviation and MTSU training operations in the fleet mix used to complete the modeling. Noise contours were generated using the FAA-approved Aviation Environmental Design Tool (AEDT) for determining potential noise-related impacts to the surrounding land uses. These contours were developed based on the yearly DNL sound levels for which FAA measures noise impacts. The FAA considers a ≤65 dBA DNL noise level as acceptable for residential developments per Federal Register (FR) Part 150 – *Airport Noise Compatibility Planning*.

Noise exposure maps (NEMs) developed showing the differentials between the No Action Alternative and the Proposed Action depicted three levels of contours ranging from 65 dBA DNL to 55 dBA DNL to document potential off-airport noise impacts to surrounding properties and are located in **Appendix E**.

5.12.1 Affected Environment

There are several agricultural, residential, commercial, and undeveloped land uses around the airport that fall within the 55 dBA DNL; however, the 65 dBA DNL is predominantly located on airport property. One residential property is located adjacent to the 65 dBA DNL contour. Additional sensitive receptors are located within the immediate area in the indirect (auditory) study area, all of which are located within the Airport Overlay District according to the Bedford County Zoning website (Zoning Finder (arcgis.com).

5.12.2 Environmental Consequences

No Action Alternative

The No Action Alternative was determined to represent projected operation increases through modeling year 2033 without the addition of the Proposed Action. Future noise conditions around the airport will change slightly in the No Action condition as a direct result of population increases and future airport use demands; however, operations would be constrained to the existing airfield configuration.

Proposed Action

- Direct Impacts

  Results of the noise analysis can be found in **Appendix E**, which indicate that an additional 29 acres would be exposed to the 65 dBA DNL. Approximately 3.6 acres of the expanded 65 dBA DNL area is located outside current airport property within agricultural areas; however, one noise-sensitive receptor is located approximately 120 feet from this contour but within the 60 dB contour and could experience an increase of 3 dB. This one residence is located on the east side of the airport property boundary along Airport Road as shown in **Figure 10** and would be considered impacted due to exceeding FAA's significance threshold for noise. All other areas experiencing a dB loss or gain within the 65 dBA DNL occur on airport property. Approximately 20 acres adjacent to the airport's property boundary may experience noise increases meeting reportable impact criteria as outlined in FAA Order 1050.1G. Nearby receptors may be temporarily impacted by construction noise. These impacts will be limited and will likely occur during typical workday hours. This construction noise will cease upon completion of the project. Noise impacts due to construction

are not anticipated to be above threshold levels deemed incompatible with the existing land use of the airport.

The airport overlay zone identifies where noise mitigation protocols are incorporated by the airport through State of Tennessee Ordinance Title 42, Chapter 4, Section 42-4-107(9). Additionally, the 65 dBA DNL sound level contour would expand by approximately 200 feet over agricultural portions of the same property as the receptor identified in **Figure 10**. All areas located within the expanded 65 dBA DNL are located within airport property.

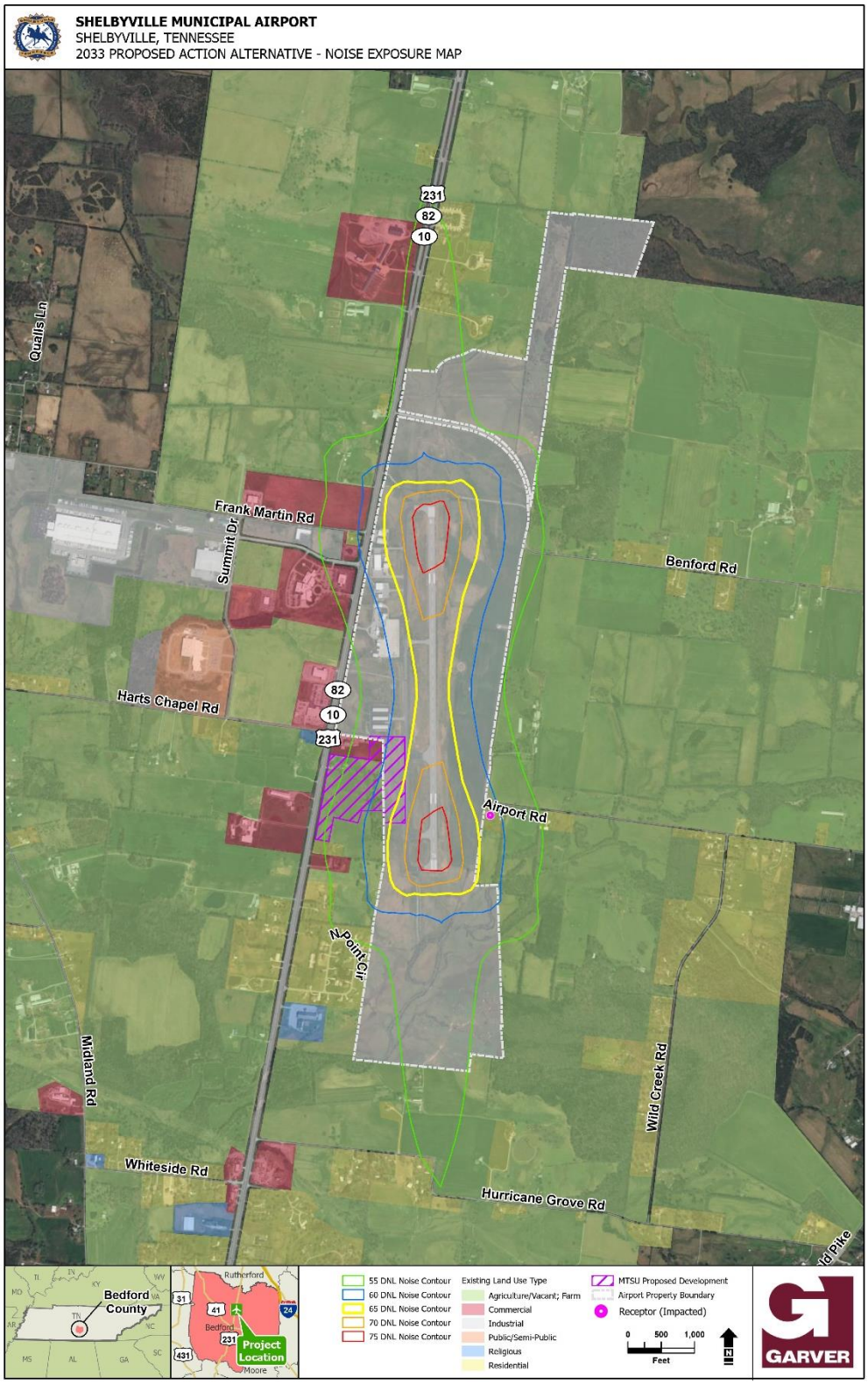
- Indirect Impact

  The cumulative effects of aviation-related noise generated by the Proposed Action and adjacent Highway 231 and Airport Road are not anticipated to cause an incompatible land use as the areas falling within the Proposed Action's 65 dBA DNL sound level contour are contained within the airport overlay zone mentioned above.

- Mitigation and BMPs

  No noise abatement or mitigation measures are warranted as a result of implementing the Proposed Action. Construction noise BMPs may include reduction in engine braking, ensuring functioning mufflers, and limiting night work. TAD will ensure mitigation measures and BMPs are fulfilled.

Figure 10: Noise Exposure Map of Proposed Action



5.13 Socioeconomics and Children's Health and Safety Risks

FAA Order 1050.1G, describes the socioeconomic impacts associated with relocation or other community disruption, transportation, planned development, employment, and children's health and safety.

EO 13045, dated April 21, 1997, pertains to "Protection of Children for Environmental Health and Safety Risks". This mandate requires federal agencies to identify and assess environmental health and safety risks that may affect children. EO 13045 states that to the extent permitted by law and appropriate, each federal agency shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children and ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

5.13.1 Affected Environment

The study area used for the analysis of socioeconomics, and children's health and safety is the approximately 430-acre area shown in **Figure 11**. This area is referred to as the socioeconomic study area.

The percent of low-income individuals in the socioeconomic study area is comparable to the percentages within the Census Blockgroup and Census Tract associated with the study area but is greater than the percentages for the county and state (see **Table 6**). The median household income for the Census Blockgroup associated with the Proposed Action is lower than that for the Census Tract, county, and state. However, it is above the 2021 Department of Health and Human Services poverty guidelines for a family of four, which is $26,500.

ACS data estimate approximately 10 children (25 percent of the total population) are present in the socioeconomic study area. Of those 10, approximately 6 are school aged (i.e., 5 or greater). There are no schools, daycares, parks, or children's health clinics within the socioeconomic study area.

Figure 11: Socioeconomic Study Area

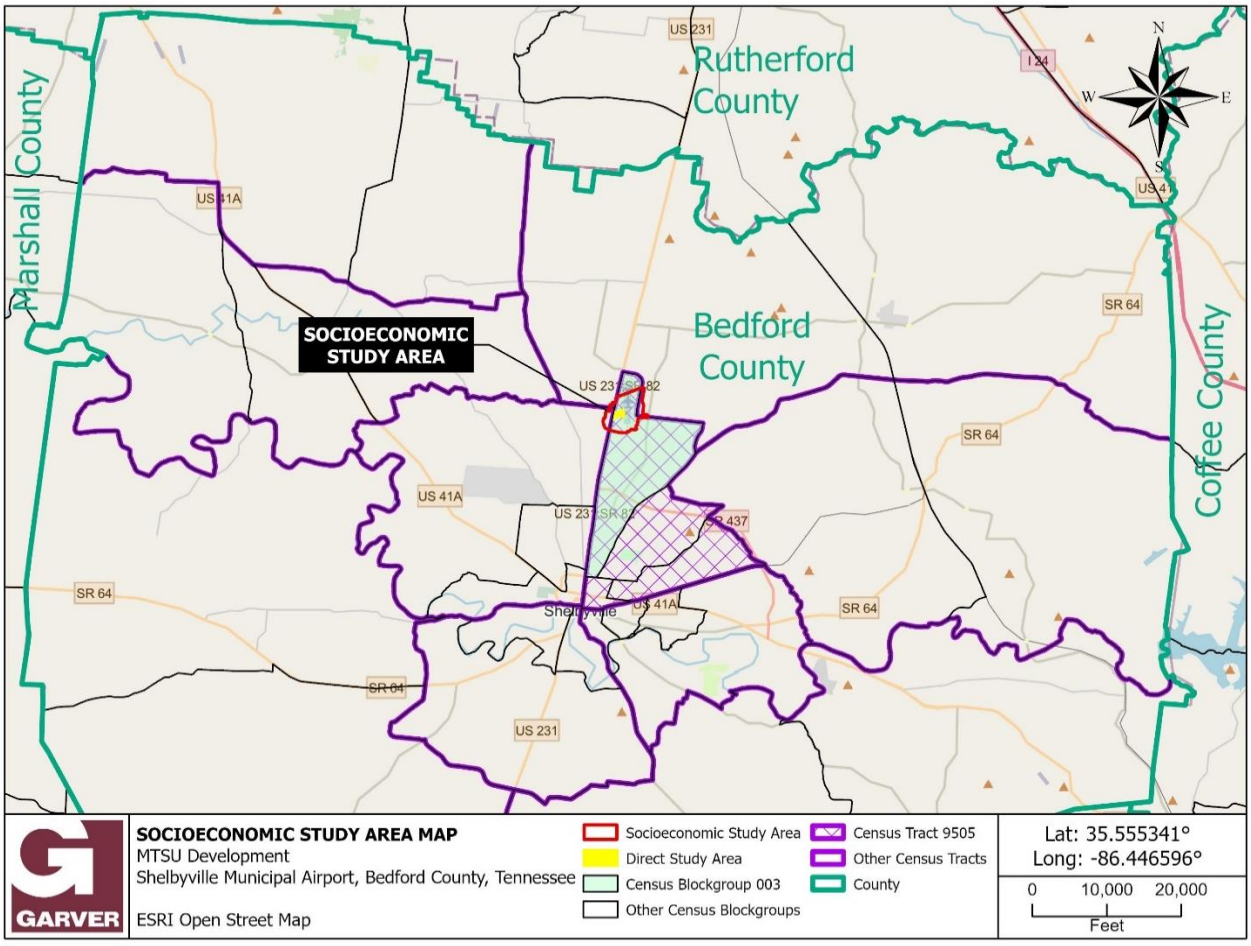


Table 6: EJScreen 2021 Low Income and Minority Population Estimates

Geography	Total Population	Low Income (%)	Median Household Income	Minority* (%)
Socioeconomic Study Area	40	21 (52%)	Unable to Estimate	11 (28%)
Census Blockgroup 003	1,052	547 (52%)	$41,689	295 (28%)
Census Tract 9505	7,095	3,264 (46%)	$42,332	3,406 (48%)
Bedford County	49,754	18,907 (38%)	$55,354	11,941 (24%)
Tennessee	6,859,497	2,263,634 (33%)	$58,516	1,852,064 (27%)

5.13.2 Environmental Consequences

No Action Alternative

- Direct Impacts

  The No Action Alternative would not relocate the MTSU Aerospace Department, flight training program, or aircraft maintenance program from MBT to SYI. Therefore, the No Action Alternative would have no direct effects on socioeconomics, or children's health or safety.

- Indirect Impacts

  The No Action Alternative would also not have indirect effects on socioeconomics, or children's health or safety.

Proposed Action

- Direct Impacts

  The Proposed Action would have no direct effects on children's health or safety. No direct effects related to residential/business acquisitions or relocations and no disruptions in established communities or planned developments are anticipated as a result of the Proposed Action.

  Beneficial socioeconomic impacts are anticipated from the Proposed Action due to the relocation of the MTSU Aerospace Department, flight training program, and aircraft maintenance program from MBT to SYI in Shelbyville. According to MTSU, the Aerospace Department, which encompasses the two above-mentioned programs as well as others, consists of 20 full-time faculty members, over 100 flight instructors, and over 1,000 students. The Proposed Action would move this program approximately 22 miles south from Murfreesboro to Shelbyville, 10 additional aircraft would be housed at SYI, and SYI would be expanded to accommodate the program's needs. As universities are economic engines for their communities and local spending associated with university activities is a boom to local businesses (MTSU, 2022), the Proposed Action is anticipated to have a beneficial, albeit relatively minor, impact on the local economy of Shelbyville due to increased local spending from students.

- Indirect Impact

  The Proposed Action would have no indirect effects on children's health or safety. Indirect socioeconomics effects resulting from the Proposed Action could include induced growth near SYI if the local economy is strengthened and there is a need for additional retail or commercial services.

5.14 Visual Effects

Visual effects associated with the Proposed Action take into account light emissions and visual resources and character. From the desk reference, the factors to consider are the extent the action would have the potential to:

- Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources;
- Contrast with the visual resources and/or visual character in the study area; and
- Block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

5.14.1 Light Emissions

5.14.1.1 Affected Environment

The location of the Proposed Action places improvements adjacent to Highway 231 and in view of several receptors (residences) around the airport. **Figure 6** shows the anticipated viewshed of the Proposed Action. The properties within the indirect or visual study area include commercial properties, farmland or undeveloped land, and scattered residences. The airport is illuminated by lights from various sources on the airside and landside in compliance with FAA standards for security, apron flood lighting, obstruction clearance, and navigation lighting. According to FAA Order 1050.1G, Order 1050.1F Environmental Desk Reference, and Order 5050.4B, light emissions generated by the Proposed Action were evaluated. There are currently no special purpose laws or requirements for visual effects. Regarding wildlife, green, white, and red colored lights have been studied regarding bat species and how they respond. Some studies suggest that *Myotis* species, which occur in the area, are more sensitive to light emissions by making them more vulnerable to predators (Lara, et al. 2023).

5.14.1.2 Environmental Consequences

No Action Alternative

- Direct and Indirect Impacts

  The No Action Alternative would not change the existing visual character or have any additional light emission impacts.

Proposed Action

- Direct Impacts

  The Proposed Action would produce additional light emissions other than those experienced from the existing airport facilities as visible within the direct study area. The visual landscape of the airport will change for several sensitive receptors within the immediate vicinity of the Proposed Action. However, adhering to lighting standards would help mitigate potential light pollution. The project will be compatible with the existing visual character around the airport and the overall setting of the airfield would not change drastically. Temporary and additional safety lighting during construction is anticipated and will comply with design plans as developed.

- Indirect Impacts

  By implementation of lighting standards, the proposed light emissions would not create an annoyance or interfere with normal residential activities at sensitive receptors and are not anticipated to contribute substantially to the indirect nature of light emissions experienced

surrounding the airport. The visual landscape of the airport as viewed from sensitive receptors would change slightly. Several sensitive receptors around the Proposed Action may experience additional lighting effects within the viewshed of the Proposed Action but are dependent on the fragmented forested areas and terrain located between the receptors and the Proposed Action. The highly variable forested areas and fencerows surrounding the airport would affect actual indirect light emission effects. These receptors likely already experience some lighting effects from the existing airport facilities. An increase in light emissions on wildlife species is anticipated to be minimal due to the already illuminated nature of the airport. Forested areas within the indirect study area could experience additional lighting impacts; however, canopy and understory cover would limit light penetration.

- Mitigation and BMPs

  Existing and future lighting fixtures at the airport will comply with FAA standards in AC 150/5345-53 so as to not create adverse lighting conditions to aircraft and off-airport sensitive receptors. Proposed lighting and fixtures will be designed to current FAA and airport standards. As the Proposed Action is compatible with the visual character and resources within the study area, no additional mitigation is proposed. TAD will ensure mitigation measures and BMPs are fulfilled.

  Lighting associated with recent past, current, and reasonably foreseeable future projects at the airport will comply with FAA standards; however, off-airport projects do not have to comply with FAA standards. Therefore, the recent past, current, and reasonably foreseeable future actions in the area around the airport could have minor lighting and/or visual impacts on the surrounding natural or man-made environment.

5.14.2 Visual Resources and Character

5.14.2.1 Affected Environment

As mentioned previously, the visual character of the area surrounding the airport includes commercial properties, farmland or undeveloped land, and scattered residences. According to FAA Order 1050.1G, Order 1050.1F Environmental Desk Reference, and Order 5050.4B, the visual character of the Proposed Action was evaluated. There are currently no special purpose laws or requirements for visual resources and character.

5.14.2.2 Environmental Consequences

No Action Alternative

- Direct and Indirect Impacts

  The No Action Alternative would not change the existing visual character or have any additional light emission impacts at SYI.

Proposed Action

- Direct Impacts

  The Proposed Action would not change the visual character of the direct study area and is compatible with the existing visual character of SYI and MBT.

- Indirect Impacts

  The visual landscape as viewed looking toward the airport may change as viewed from several (eight in particular) sensitive receptor locations; however, these receptors can already see airport buildings. The facilities would not obstruct views of receptors around the airport and are not anticipated to provide stark contrast of the visual character surrounding the airport.

5.15 Water Resources

5.15.1 Affected Environment

Water resources are surface waters and groundwater that are important in providing drinking water and in supporting recreation, transportation and commerce, industry, agriculture, and aquatic ecosystems. The direct study area was assessed for the presence of any wetlands, surface water resources, floodplains, and groundwater resources as these components function in concert as a single integrated system. Federal statutes or executive orders provide the framework to regulate potential impacts to surface water, groundwater, and wetlands. The following provides a list of statutes, regulations, and executive orders established to protect these resources:

- EO 11990 – Protection of Wetlands.
- EO 11988 – Floodplain management.
- Rivers and Harbors Act of 1899.
- The Clean Water Act.
- TDEC – Waters of the state regarding Aquatic Resource Alteration Permit (ARAP) and CWA Section 401 Water Quality Certification
- TDEC Division of Water Resources – NPDES Permitting
- Section 404 regulates discharges of dredged or fill materials from construction activities into waters of the United States, including wetlands. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States.
- Fish and Wildlife Coordination Act.

These statutes prevent/minimize the loss of wetlands, control discharges and pollution sources, establish water quality standards, protect drinking water systems, and protect aquifers and other sensitive ecological areas.

Surface Water

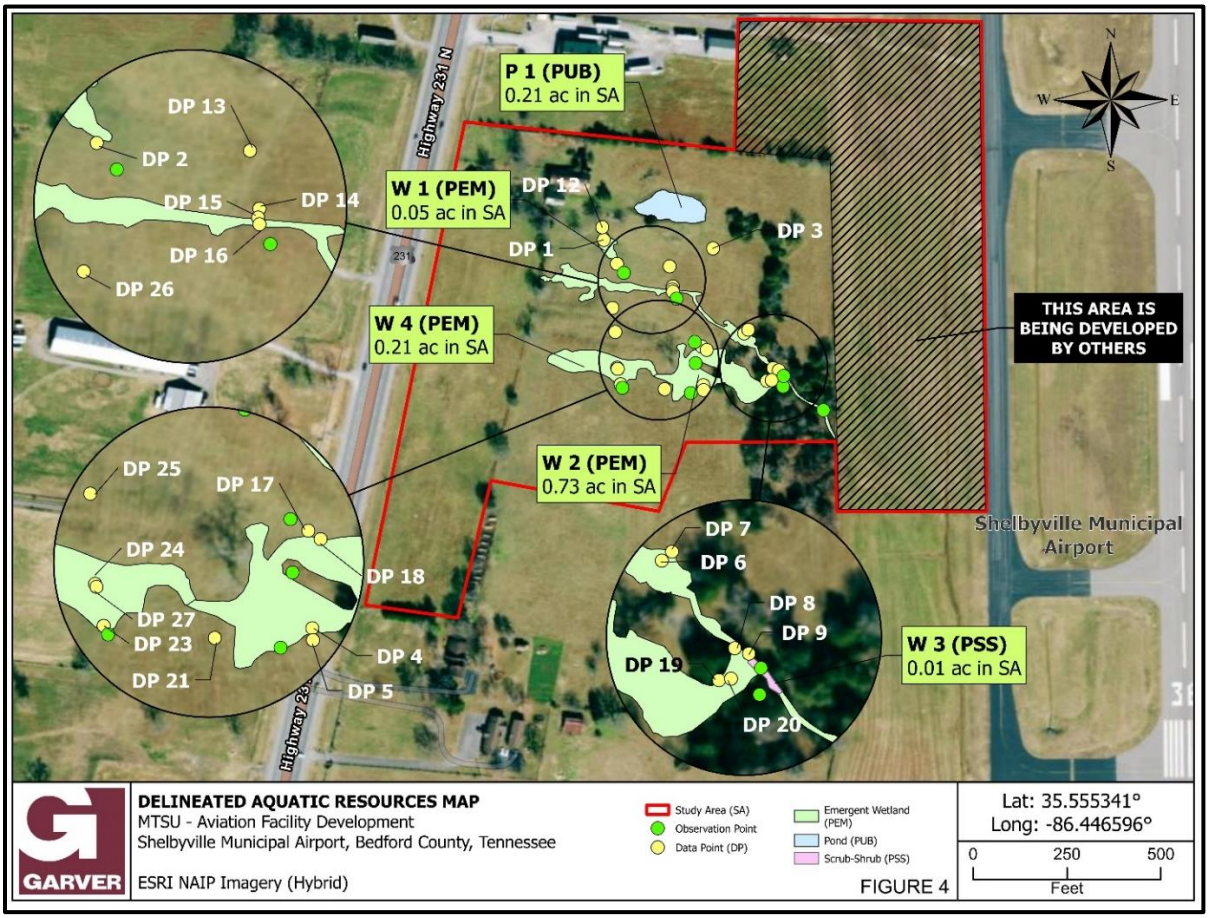
One pond comprising 0.21 acre of open water habitat is located within the study area (Pond 1 as shown in **Figure 12**). This isolated pond has a berm on the east side but has no clear discharge point from which it

drains. A limited watershed suggests it is hydrologically maintained by water table and some surface water runoff. No aquatic species were observed. No streams are located within the study area.

Wetlands

A wetland delineation was completed for the study area and is located in **Appendix F**. Three palustrine emergent/herbaceous and one scrub-shrub wetlands were identified in the study area (**Figure 12**). The emergent wetlands delineated in the study area total 0.99 acre, are routinely maintained by mowing, and are considered low quality. Dominant herbaceous species identified included hairy buttercup (*Ranunculus sardous*), yellow bristle grass (*Setaria pumila*), Frank's sedge (*Carex frankii*), and green ash (*Fraxinus pennsylvanica*) in herbaceous form (<3.28 ft. tall). These wetlands could be considered jurisdictional according to the Preliminary Jurisdictional Determination (PJD) issued by the USACE for the study area. One small scrub-shrub wetland (Wetland 3) was also delineated within the study area and consists of shrub species. This wetland could also be considered jurisdictional. The Preliminary Wetland Delineation provided in **Appendix F** was updated in September 2024 and resubmitted to the USACE for concurrence. The USACE's original response provided a PJD on May 28, 2024, confirming the wetlands in the project area may be jurisdictional. This correspondence can be found in **Appendix C**.

Figure 12: Wetland Delineation Figure



Floodplains

No FEMA-mapped floodplains or floodways are present within the study area.

Groundwater

The entire area is located within the Nashville Basin, a karst region an area underlain by Ordovician Carbonate (limestone). Glades and karst features including springs, sinkholes, sinking streams, and caves are frequent in the Nashville Basin. Ground water could be present. An inactive private well is located near the abandoned residence in the project area. No public water supplies or sole source aquifers were identified in the study area.

5.15.2 Environmental Consequences

No Action Alternative

- Direct and Indirect Impacts

  The No Action Alternative would not require construction and therefore no impacts to water resources would occur.

Proposed Action

- Direct Impacts

  The Proposed Action requires approximately 31 acres of ground disturbance. The Proposed Action is anticipated to fill approximately 0.21 acre of a pond and 1.0 acre of emergent and scrub-shrub wetlands within the direct study area as identified in **Table 7**. Potential impacts to water quality resulting from stormwater runoff during construction were also assessed. Temporary, short-term impacts to surface waters within the disturbed areas may occur from stormwater runoff during construction. These impacts may occur if any of the wetlands are not directly filled and may occur as a result of increased sedimentation and siltation resulting from land disturbance, may temporarily decrease water quality. However, these impacts are not anticipated to be significant as BMP measures and provisions and specifications of FAA Advisory Circular 150/5370-10F *Standards for Specifying Construction of Airports* will be implemented to avoid and/or minimize adverse construction activities. The appropriate Section 401 water quality certification shall be obtained in conjunction with the required Section 404 permit. No other construction-related impacts to groundwater are anticipated as a result of the Commission's Proposed Action.

- Indirect Impacts

  Water quality impacts of offsite waters could occur; however, the implementation of local, state, and federal regulatory programs to protect water quality will help prevent and/or reduce potential impacts.

Table 7: Wetlands and Water Resources Impacts

Feature No.	Cowardin Classification	Acreage Impacted
W 1	PEM1E	0.05
W 2	PEM1E	0.73
W 3	PSS1E	0.01
W 4	PEM1E	0.21
P 1	PUB	0.21
	TOTALS:	**1.21 acres**

- Mitigation and BMPs

  The Proposed Action will be subject to regulatory programs such as Section 404, Section 402, and Section 401 of the CWA which regulates dredge and fill in Waters of the U.S. (WOTUS) and protects surface waters by requiring improvements to meet water quality standards, respectively. Operational BMP measures and provisions and specifications of FAA AC 150/5370-10F *Standards for Specifying Construction of Airports* will be implemented to avoid and/or minimize adverse construction activities. A USACE issued Section 404 permit will be acquired, and the purchase of wetland mitigation credits from a USACE approved mitigation bank will take place to offset loss of WOTUS. Additionally, as required by the CWA Section 402 NPDES permitting process, a construction SWPPP for the Proposed Action will be developed and implemented. General construction BMPs (including silt fences, check dams, and other controls as appropriate) will be incorporated into construction plans to help prevent erosion, protect water quality, and ultimately to minimize potential impacts to surface water resulting from stormwater runoff. In addition, BMPs will require measures to prevent or minimize the potential release of contaminants into surface waters, provide swift response to accidental spills, and define acceptable on-site storage of fuel and lubricants. These BMPs are also consistent with the Species Protective Measures required by the USFWS and include the use of drip pans or other containment systems. TAD will ensure mitigation measures and BMPs are fulfilled.

  All projects requiring more than one acre of ground disturbance will adhere to BMPs prescribed by the project SWPPP. BMPs prescribed to retain sediment may include silt fence, rolled fiber barriers, and inlet filter protection, all of which are monitored and enforced as part of the required NPDES permit. This conclusion is based on the assumption that all projects will be implemented as planned and will comply with all applicable regulations and guidelines. Therefore, the recent past, current, and reasonably foreseeable future actions in the area around the airport will have only minor impacts on the surrounding natural or man-made environment.

5.16 Wild and Scenic Rivers

There are no wild and scenic rivers present in or near the direct study area; therefore, no impacts to these resources will occur as a result of the No Action Alternative or the Proposed Action.

6.0 Scoping

This section explains the steps taken to correspond with agencies, Tribes, and the public during the completion of this EA. A list of agencies and Tribes that were contacted is included in Section 6.1 and the public notification process is provided in Section 5.3. In October 2023, scoping letters were sent to applicable local, state, and federal agencies. Scoping letters were sent to Tribes in October 2024. These scoping letters were sent to help assess the level of environmental consequences based on the purpose and need of the project.

6.1 Agency Coordination

The intent of the agency and tribal coordination is to solicit input early in the process regarding potential environmental, cultural, and archeological resources which could be impacted by the Proposed Action. The below-listed agencies and Native American Tribes were consulted during the preparation of this EA. All agency coordination is provided in **Appendix C**.

Agencies Consulted and Dates of Consultation:

- USACE – Initial response received April 17, 2024. PJD received September 30, 2024.
- USFWS – IPaC coordination was completed on February 21, 2024. Section 7 concurrence was received on May 21, 2024.
- THC – Initial response received April 24, 2024. Request for survey received April 24, 2024. Concurrence of No Historic Properties Affected received on September 24, 2024 for historic resources and on October 7, 2024 for archaeological resources.
- TDEC, Division of Archaeology – Response received April 3, 2024.
- TDEC, Division of Water Resources – Initial response received March 26, 2024. HD received September 23, 2024.
- TDEC, Division of Air Pollution Control – Response received April 15, 2024
- TDEC, Division of Remediation – Response received April 5, 2024.
- TDEC, Division of Solid Waste Management - Response received April 26, 2024
- TWRA – Response received May 2, 2024.
- NRCS – Response received May 7, 2024

Tribes Consulted (Initial Tribal Consultation occurred October 11, 2024):

- Cherokee Nation
- Eastern Band of Cherokee Indians
- United Keetoowah Band of Cherokee Indians
- Shawnee Tribe
- Eastern Shawnee Tribe of Oklahoma
- Absentee Shawnee Tribe of Oklahoma
- Chickasaw Nation.

6.2 Public Coordination

The Proposed Action was announced online at *https://mtsunews.com* (MTSU's online magazine) on July 31, 2023. The website included reference to the relocation of the MTSU Aerospace campus to SYI. An initial study of an aerospace campus at SYI was included on MTSU's website on April 5, 2023. Additionally, the Governor of Tennessee and MTSU faculty officially announced the Proposed Action on September 21, 2023.

The Environmental Assessment was completed and prepared for public review and comment prior to advertising a notice of opportunity to request a Public Hearing. On October 2, 2025, the Airport opened the public comment period by placing advertisements on their website (*SYI-MTSUDevelopment.AirportPlans.com*) and in the Shelbyville Times-Gazette, a newspaper of general circulation throughout Shelbyville and Bedford County, Tennessee. A copy of the advertisement and affidavit of publication are included in **Appendix G**. Hardcopies of the EA were made available for the public to review until November 1, 2025, at the Airport Terminal Building. Opportunities were provided to the public to respond to the EA via letter, email, website comment response, or by telephone. No comments were received.

7.0 Mitigation

- The airport will comply with all applicable federal, state, and local development regulations, Executive Orders and permitting requirements.
- The airport will complete and maintain a construction Stormwater Pollution Prevention Plan throughout the duration of disturbance activities. BMPs such as silt fence, rolled fiber barriers, ditch checks, and other standard practices will be implemented according to the construction SWPPP and NPDES permit.
- Wetland mitigation is required for unavoidable impacts to 1.21 acres of pond, and emergent and scrub-shrub wetlands. Wetland and open water mitigation credits (if required) will be coordinated and approved by USACE and TDEC. Mitigation credits will be purchased by MTSU to compensate for these impacts through the Section 404 and Aquatic Resources Alteration Permit processes.
- Buildings to be removed shall be inspected for asbestos containing materials and lead-based paint per TDEC requirements.
- Petroleum and other products within the abandoned structures on the site will be disposed of in accordance with local, state, and federal regulations.
- Pre demolition surveys will be completed in accordance with TAPCR.
- Inspection of the buildings shall be completed for bat use if proposed demolition is to occur between April 1 and October 15.
- Tree clearing is recommended by the USFWS to occur between October 1 and March 31

8.0 Required Permits

- NPDES construction stormwater discharge permit.
- Individual Section 404 permit.
- Individual Section 401 Water Quality Certification.
- Individual Aquatic Resources Alteration Permit.

9.0 References

Bureau of Indian Affairs: Tribal Leadership Directory. 2024. Available online at https://biamaps.geoplatform.gov/Tribal-Leaders-Directory/

Council on Environmental Quality. 2023. NEPA Guidance, *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*. Council on Environmental Quality. Web. https://ceq.doe.gov/guidance/ceq_guidance_nepa-ghg.html and https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate

Executive Order (EO) 11990, Protection of Wetlands. May 24, 1977. 42 FR 26961, 3 CFR, 1977 Comp., p. 121.

Environmental Protection Agency. 2023. Web. https://epa.maps.arcgis.com/apps/webappviewer/index.html

Environmental Protection Agency. 2023. Outdoor Air Quality Data. Web. https://www.epa.gov/outdoor-air-quality-data/air-quality-statistics-report

FAA. 2006. FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions For Airport Actions. US Department of Transportation, Federal Aviation Administration.

FAA. 2022. FAA Advisory Circular 150/5300-13B, *Airport Design*. US Department of Transportation, Federal Aviation Administration.

FAA. 2015. FAA Aviation Emissions and Air Quality Handbook. Version 3, Update 1. US Department of Transportation, Federal Aviation Administration Office of Environment and Energy.

FAA. 2025. FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures. Purpose, Policy, and Applicability. US Department of Transportation, Federal Aviation Administration.

FAA. 2020. FAA Advisory Circular 150/5200-33C, *Hazardous Wildlife Attractants on or Near Airports*. US Department of Transportation, Federal Aviation Administration.

FAA. 2020. FAA 1050.1F Desk Reference. US Department of Transportation, Federal Aviation Administration Office of Environment and Energy.

IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II, and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva Switzerland, 151 pp. Web. https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf

Lara C. Marggraf, Oliver Lindecke, Christian C. Voigt, Gunārs Pētersons, Silke L. Voigt-Heucke, Nathusius' bats, Pipistrellus nathusii, bypass mating opportunities of their own species, but respond to foraging heterospecifics on migratory transit flights, Frontiers in Ecology and Evolution, 10.3389/fevo.2022.908560, 10, (2023).

MTSU. 2022. Economic Impact of Middle Tennessee State University on the State of Tennessee. Business and Economic Research Center at MTSU. 28 pages.

MTSU News. July 2023. *Fuel for Flight: Study shows airport relocation will bring jobs and revenue to the region*. Available online at https://mtsunews.com/fuel-for-flight/

MTSU.edu. Accessed online May-June 2024. Available online at https://www.mtsu.edu/aerospace/shelbyville.php

USAFacts.org. 2023. Climate in Bedford County Tennessee. Web. https://usafacts.org/issues/climate/state/tennessee/county/bedford-county/.

U.S. Census Bureau. 2021. Available online at https://data.census.gov/cedsci/.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2021. Web Soil Survey. Web. https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

USGS. ESRI. 7.5 minute, 1:24,000 scale Deason, Tennessee. Topographic Quadrangle Map.

WH.GOV. 2023. Biden-Harris Administration Releases New Guidance to Disclose Climate Impacts in Environmental Reviews. Web. https://www.whitehouse.gov/ceq/news-updates/2023/01/06/biden-harris-administration-releases-new-guidance-to-disclose-climate-impacts-in-environmental-reviews/