



ultium  cells



DOE/EA-2189

## ENVIRONMENTAL ASSESSMENT

Spring Hill, TN Battery Cell Manufacturing Plant  
Lordstown, OH Battery Cell Manufacturing Plant

Department of Energy, Loan Programs Office –  
Advanced Technology Vehicles Manufacturing

AUGUST 2022

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## ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
ACHP	Advisory Council on Historic Preservation
APE	area of potential effects
ARAP	Aquatic Resource Alteration Permit
ATVM Program	Advanced Technology Vehicle Manufacturing Loan Program
BMPs	best management practices
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2e</sub>	carbon dioxide equivalent
County	Maury County, Tennessee
CPWS	Columbia Power & Water Systems
DOE	U.S. Department of Energy
EA	Environmental Assessment
ECOS	Environmental Conservation Online System
EJ	environmental justice
EO	Executive Order
EPA	Environmental Protection Agency
EV	electric vehicle

<b>Acronym/Abbreviation</b>	<b>Definition</b>
GHG	greenhouse gas
GM	General Motors Holdings LLC
HAP	hazardous air pollutant
HUC	Hydrologic Unit Code
IPaC	Information for Planning and Consultation
LG	LG Energy Solution Michigan, Inc.
LOS	level of service
LPO	Loan Programs Office
MLMA	Maury Labor Market Area
MOA	Memorandum of Agreement
MTAEC	Middle Tennessee Ag Research and Education Center
NAAQS	National Ambient Air Quality Standards
NATA	National-Scale Air Toxics Assessment
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMP	n-methyl pyrrolidone
NO <sub>x</sub>	nitrogen oxides
NRHP	National Register of Historic Places
NSR	New Source Review
Plan	Drought Management Plan
PM	particulate matter
PM <sub>10</sub>	particulate matter of a diameter of less than 10 micrometers
PM <sub>2.5</sub>	particulate matter of a diameter of less than 2.5 micrometers
PPE	personal protective equipment
Proposed Action	Providing financial assistance for the tooling of an existing facility
SR	State Route
Study	workforce alignment study in 2020
TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
THC	Tennessee Historical Commission
tpy	tons per year
TVA	Tennessee Valley Authority

<b>Acronym/Abbreviation</b>	<b>Definition</b>
Ultium	Ultium Cells LLC
US 31	U.S. Highway 31
USFWS	U.S. Fish and Wildlife Service

## 1.0 PURPOSE AND NEED

### 1.1 Purpose and Need for Agency Action

The purpose and need for agency action is to comply with the U.S. Department of Energy (DOE) mandate under Section 136 of the Energy Independence and Security Act of 2007 to select projects for financial assistance that are consistent with the goals of the Act.

Ultium Cells LLC (Ultium), a joint venture between General Motors Holdings, LLC, (together with its affiliates, each referred to herein as GM) and LG Energy Solution Michigan, Inc. (LG), proposes a phased development of multiple battery-manufacturing facilities that includes tooling an existing manufacturing facility in Lordstown, Ohio, constructing and tooling a manufacturing facility near Spring Hill, Tennessee, and constructing and tooling a manufacturing facility near Lansing, Michigan. The facilities will be used to mass-produce automotive battery cells to supply the growing demand from GM's next generation of battery-electric vehicles.

Ultium has applied for a loan pursuant to DOE's Advanced Technology Vehicle Manufacturing Loan Program (ATVM Program). The ATVM Program was created by the Energy Independence and Security Act of 2007 to provide incentives for projects that retrofit, expand, or create manufacturing facilities in the United States for advanced technology vehicles or qualifying components, including engineering costs. The primary goal of the ATVM Program is to improve fuel economy for light-duty vehicles and thereby reduce ozone precursors, greenhouse gas (GHG) emissions, and particulate matter (PM) emissions associated with vehicle emissions.

Ultium is proposing to tool a recently constructed manufacturing facility in Lordstown, Ohio, construct a new 2.8-million-square-foot manufacturing facility and a 120,000-square-foot recycling facility near Spring Hill, Tennessee, and construct a manufacturing facility of to-be-determined-size near Lansing, Michigan. The three manufacturing facilities will be using the most advanced manufacturing processes to produce battery cells efficiently with little waste. The battery cells manufactured in both Spring Hill and Lordstown primarily will be used in GM's line of all-electric vehicles (EV) assembled at the existing Spring Hill, Tennessee, Ingersoll, Ontario, and Hamtramck and Orion, Michigan vehicle assembly plants. These zero-emission EVs will displace vehicles with internal combustion engines and their associated emissions, such as ozone precursors, PM, and GHGs that contribute to global warming, as is consistent with the primary goal of the ATVM Program. Financially supporting Ultium's Project would help bring battery cells and batteries to market and into greater use, while contributing to the expansion of zero-emission propulsion, thereby reducing overall national emissions of air pollutants and human-caused GHGs.

### 1.2 Background

The ATVM Program is administered by DOE's Loan Programs Office (LPO). LPO originates, underwrites, and services loans to eligible automotive manufacturers and component manufacturers to finance reequipping, expanding, or establishing manufacturing facilities in the United States to produce Advanced Technology Vehicles and qualifying components, and the costs of associated engineering integration performed in the United States.

To fund the expansion, Ultium has applied to the DOE ATVM Program for financial assistance. On review of Ultium's initial application by the DOE LPO, the application was determined as substantially complete per the rules governing the ATVM Program in 10 Code of Federal Regulations (CFR) Part 611. Ultium was subsequently invited to enter into the LPO's due diligence process.

### 1.3 Scope of Environmental Assessment

In accordance with the National Environmental Policy Act (NEPA), LPO is preparing this Environmental Assessment (EA) to address the procurement and installation of battery-manufacturing equipment (tooling) in an existing facility in Lordstown, Ohio, the construction and tooling of the Spring Hill, Tennessee, facility, and the construction of a recycling building at the Spring Hill facility. The information regarding the construction and tooling of the Lansing, Michigan, facility is not yet ripe to support a

decision by LPO about whether to provide financial assistance for that phase of the project; therefore, it is not included in the scope of this EA. When the information is ripe to allow LPO to evaluate a financial support decision for the Lansing, Michigan facility, LPO will complete a supplemental EA that considers the environmental impacts of its action and inform such a decision.

This EA allows LPO to consider the environmental impacts of its action (financial assistance/ATVM loan) to support the tooling of an existing facility in Lordstown, Ohio, and the construction and tooling of the Spring Hill, Tennessee facility. Therefore, the scope of the Proposed Action (providing a loan to Ultium) encompasses the tooling of the existing facility in Lordstown, Ohio, the construction and tooling of a new facility near Spring Hill, Tennessee, and the construction of a recycling building at the Spring Hill facility to be tooled and operated by others.

LPO reviewed the scope of the Proposed Action specific to the Project in Lordstown, Ohio, to identify any significant issues that warrant detailed review in this EA. In its review, LPO considered the scope of the Proposed Action (providing financial assistance for the tooling of an existing facility), the location of the existing facility adjacent to GM's former Lordstown Manufacturing Facility (closed and sold in 2019), and the fact that no new land-disturbing construction activities are associated with LPO's financial assistance. In addition, LPO reviewed the construction and operating permits associated with the Lordstown facility (see Appendix A) and considered the former operations and workforce at the adjacent manufacturing facility (approximately 8,000 employees). Based on this review, LPO found no significant issues associated with financially supporting the tooling of the Lordstown facility that require further study in this EA.

The scope of the Proposed Action also involves the construction and tooling of a manufacturing facility near Spring Hill, Tennessee, and the construction of a recycling building at the Spring Hill facility to be tooled and operated by others. For this facility, several factors influenced the scope of issues analyzed in this EA. The location of the new manufacturing and recycling facilities are on land that was previously disturbed from agricultural activities and/or during construction of an existing vehicle-assembly plant located immediately to the north of the project site, and several permits have been issued or are in the process of being issued by regulatory authorities (see Appendix A). Any permits necessary for facility operations will be obtained from the appropriate federal, state, or local regulating authority prior to facility operation. In addition, Ultium will apply for an individual federal Environmental Protection Act (EPA) ID number for the disposal of waste from the facility.

Based on LPO's review of the scope of the Proposed Action, the existing site conditions, and permit status, the scope of the issues analyzed in this EA includes:

- Aesthetics and Visual Resources
- Air Quality
- Biological Resources
- Cultural Resources, including Native American interests
- Noise
- Public and Occupational Health and Safety
- Socioeconomics and Environmental Justice
- Traffic and Transportation
- Waste Management
- Water Resources, including wetlands, groundwater, and surface water

These resource areas were identified as potentially being affected by the Proposed Action near Spring Hill, Tennessee, and each was assessed to determine the nature, extent, and significance of those impacts (see Section 3.0, *Environmental Consequences*). The assessment combined desktop research and analysis of existing available information with select field studies, including site assessments related to cultural resources.



Resources not included in this EA include soils and geology, land use, and recreation. Because the new facility is outside centers of urban development and adjacent to an existing manufacturing facility within a previously disturbed property zoned as Heavy Industrial, impacts on these resources are not anticipated and, therefore, not included in the scope of this EA.

## 2.0 DESCRIPTION OF THE PROPOSED ACTION

Under the Proposed Action, the Project involves tooling of a manufacturing facility in Lordstown, Ohio, the construction and tooling of a manufacturing facility near Spring Hill, Tennessee, and the construction of a recycling building at the Spring Hill facility. The facilities will be used to build lithium-ion battery cells designed for use in EVs and other applications. The recycling building, tooled and operated by others, will intake used or inoperable battery cells for recovery of component raw materials for reuse. The battery manufacturing facilities support GM's overall development and manufacturing of EVs. As discussed in Section 1.3, *Scope of Environmental Assessment*, the tooling involves acquiring and installing the battery cell-manufacturing equipment in the facilities. Such activities are not anticipated to result in a significant impact on the human environment in Lordstown, Ohio; therefore, the following description of the Proposed Action and the impact analyses focus on the activities at the Spring Hill, Tennessee, project site. Due to the timing of the of Ultium's application to the ATVM Program, several construction activities were initiated prior to LPO's consideration of whether to issue an ATVM loan to Ultium and are taken into account.

The project activities in Tennessee involve constructing a new plant and recycling building, and associated infrastructure to the south of the existing assembly plant. The new plant will consist of a 2.8-million-square-foot building that houses three large process operations (Electrode, Assembly, and Formation), with several attendant structures and features to provide various support functions. Attendant structures include parking areas, shipping and receiving areas, utilities, access roads, stormwater management facilities, a substation, a guard house, hazardous materials storage, recycling areas, landscaped areas, and water supply tanks (see **Figure 1**, Site Location Map and **Figure 2**, Site Layout). Two locations are being evaluated for the final location of the recycling facility. Both locations are within the extents of the project limits that have been evaluated for this EA; therefore, no additional evaluations will be required once a final location is selected.

The overall area of the project site may disturb up to 274 acres, which includes the following.:

- A 188-acre area for new construction (the 2.8-million-square-foot manufacturing facility, the recycling building, and their associated attendant structures)
- A 13-acre utility corridor
- An existing 27-acre spoil pile (stockpiled crushed stone from previous development adjacent to the project site)
- Up to 46 acres of additional project area for stockpiling, laydown, operations, or long-term storage

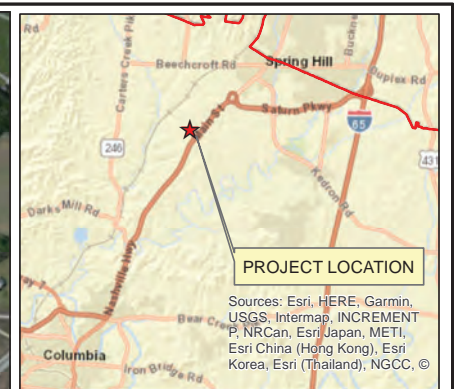
Within the 188-acre project site, up to 98 acres will be permanently affected. Permanent features include approximately 46 acres from the proposed building footprint, 9 acres from additional structures and the recycling building, 23 acres from roads, sidewalks, and parking, 13 acres from stormwater retention basins, and 7 acres from a gravel pad. Eighty-three acres will be temporarily affected due to 6 acres of general construction activities and 77 acres for the creation of lawn and landscaped areas and utility easements. Up to an additional 46 acres are included in this evaluation because they have potential temporary or permanent uses to meet project construction needs, such as additional soil stockpiling, laydown, and/or construction operations center, or long-term operational needs, such as sea container storage. Of the 46 acres, 18 acres are previously disturbed and used for temporary construction storage or house utilities for the existing GM assembly plant, 10 acres are paved and used for a trailer city operations center and a water utility meter area, 8 acres are mowed and managed grass, 10 acres are agricultural fields, and less than 1 acre is forested.

Access to the project site is through Saturn Parkway/Donald F. Ephlin Parkway, 2 miles of which is being reconstructed/realigned as part of a separate project being undertaken by the Tennessee Department of Transportation (TDOT). The majority of the project site is previously disturbed by existing roadways, previous construction activities, and ongoing agricultural activities. The following subsections describe the construction and operation of the Project.

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C:\Users\vtremonte\OneDrive - ARCADIS\Desktop\GM #2 Spring Hill\GIS\MXD\Figure 1 - EA Site Location\_20220421.mxd 4/21/2022 3:51:46 PM



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



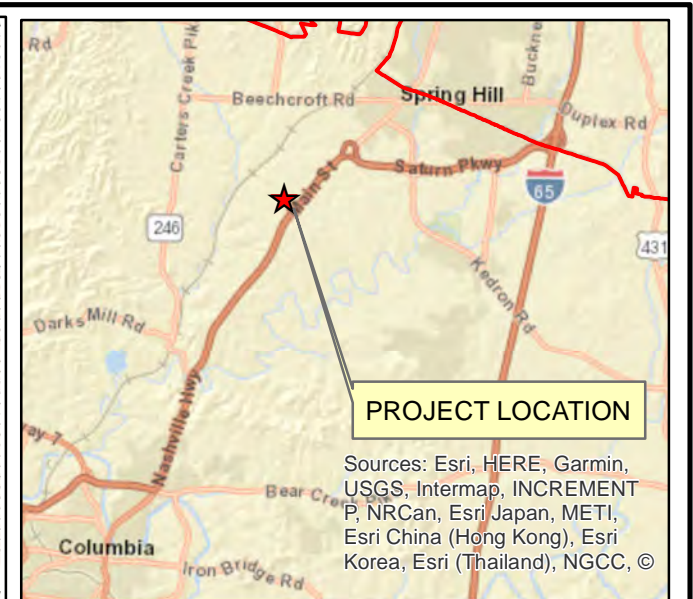
### Legend

- Primary Project Area
- Project Location (274 Acres)



GRAPHIC SCALE

ULTIUM CELLS LLC SPRING HILL	
ENVIRONMENTAL ASSESSMENT	
SITE LOCATION	
	FIGURE 1



**Legend**

- General Building Project Site Layout
- Recycling Facility Location Options:
  - Location Option A
  - Location Option B

ULTIUM CELLS LLC  
 SPRING HILL  
 ENVIRONMENTAL ASSESSMENT

**SITE LAYOUT**

## 2.1 Project Construction

The Project construction encompasses an approximately 274-acre limits-of-disturbance area, which includes the 188-acre project site, a 13-acre utility corridor, a 27-acre existing rock stockpile, and 46 acres of potential project expansion area. The project site includes the main building and attendant structures, a recycling building, paving for sidewalks and parking, stormwater detention facilities, temporary construction zones, a gravel pad area for electric equipment, and lawn and landscaped areas. The 13-acre utility corridor for water, sewer, natural gas, data fiber, and electrical power is approximately 6,000 feet long and varies in width from 50 feet, where there is a single utility, to 230 feet, where there are multiple utilities. Due to the existing assembly plant to the north, public infrastructure to support the Project already exists and needs only to be brought to the project site, as part of separate projects being undertaken by the Tennessee Valley Authority (TVA) and local utility authorities. The entirety of the utility corridor is on GM-owned property. The stockpile consists of crushed rock that was residual from the construction of the existing GM manufacturing plant north of the project site.

### 2.1.1 Construction of Project Structures and Equipment Installation

The main manufacturing building will encompass 2.8 million square feet (approximately 2,155 feet long by 925 feet wide) with a concrete floor, an internal steel frame structure to reduce interior posts, and an insulated metal exterior. The height of the primary structure will be approximately 75 feet. The building will contain three primary process areas for the cell manufacturing process: Electrode, Formation, and Assembly, with delivery and shipment truck docks on the north and south sides. In addition to the primary building, site structures and attendant features will include workforce parking, permanent stormwater management, waste storage, electric transfer station, process support equipment, and a truck scale. The recycling building will be approximately 120,000 square feet (approximately 400 feet wide by 300 feet long) with a peak roof height of approximately 43 feet and will house operations areas and offices. The building will be a lightweight industrial one-story warehouse type facility with an exterior of insulated metal wall panels. It will have a slab on grade foundation with approximately 40 feet clear interior height. Office space will be approximately 5,000 square feet.

The construction on the Project site will sequence through successive phases starting with the establishment of sedimentation and erosion control measures, rough grading and clearing, building pad preparation and construction, building shell construction, final grading, site stabilization and landscaping, and conclude with equipment installation, testing and validation. General site clearing and grading will occur within the 274-acre limits of disturbance with minor tree clearing along the utility corridor. The building pad preparation will use stockpiled rock from previous GM plant construction projects for base material in slab/foundation construction. Following the slab/foundation construction, the skeletal steel structure will be assembled followed by the building shell. The final phase of building construction includes the installation of the equipment to support the battery cell manufacturing process, including boilers, ovens, stocker and roll presses and associated piping systems and controls, notching equipment, lamination, testing equipment, stacking and packaging equipment and associated conveyors and controls. The recycling building will be constructed concurrently with the primary building.

After the building shell is constructed, the project site will be landscaped with consideration for aesthetic views from surrounding land uses and facilities. Landscaping will include strategically placed mounds and berms that are planted with native trees along U.S. Highway 31 (US 31) to the southeast of the project site and along the adjacent parcel to the northeast of the project site to provide screening and enhance aesthetics, and managed turf grass would surround the facility.

Construction in the 13-acre utility area will occur concurrently with the construction on the project site and include a 20-inch ductile iron or high-density polyethylene water line and a 12-inch polyvinyl chloride sanitary sewer. The natural gas, electricity, and data-fiber utility lines will be installed by the local utility companies within the 13-acre utility corridor. The water and sanitary sewer utilities would be built using open-trench methods for most of the length within the utility corridor. Tie-in locations for the water line are approximately 3,300 feet west of the building, at a meter pit near the intersection of Daniel Court and Freehand Lane. Sanitary sewer tie-in is at the furthest extent of the utility corridor, near Cleburne Road, west of the project site. Nonintrusive techniques, such as horizontal direct drilling, will be used at the

water and sewer utility line stream crossing. Bore holes will maintain no less than a 50-foot lateral buffer from the top of bank of the stream.

### **2.1.2 Project Schedule**

General construction began in July 2021 and is expected to be completed in summer 2023. Equipment installation is planned to begin in summer 2022 and will be phased in over time. Startup for trial operations, debugging, and validation will occur sequentially as equipment is installed beginning in the second half of 2022 with the facility becoming partially operational in 2023. Full operation production is expected in 2025.

Preparation of the utility corridor will begin spring 2022, and construction of the water and sanitary sewer utilities is planned for spring and summer 2022. The construction of the natural gas, electricity, and data fiber utility lines is anticipated to begin in late 2021 and conclude by late 2023.

The installation of the manufacturing equipment in the building will be completed in phases to support a ramp up of production and availability of skilled trade resources, with initial equipment arriving on site in mid to late 2022 and continuing through 2023. Following the installation of the manufacturing equipment, trials and debugging will be performed in phases beginning in the first quarter of 2023 and continuing through late 2024.

## **2.2 Operations**

The operation of the recycling building will be by other entities and is not part of the Proposed Action. The operation of the battery manufacturing facility includes raw material receiving, the battery manufacturing processes (mixing, electrode manufacturing, assembly, and formation), a final product storage and shipping area, and ancillary equipment and processes (e.g., heaters, generators, waste recovery systems). The building is organized into five sequential process areas for mixing, electrode, assembly, formation, and storage. Raw materials are received and prepared in the mixing area. Electrode production includes slurry mixing, coating, and drying. In assembly production, the cells are built, terminals are added, cells are filled with electrolyte, and the cells are sealed. Formation includes initial charging/discharging of the cells. Cells are then stored and aged in preparation for shipping.

### **2.2.1 Manufacturing Process Summary**

Multiple parallel lines of manufacturing are used to create the battery cells. In the mixing process area, the facility conducts metering and mixing of cathode activation and anode activation (electrolyte process) products, carbon, graphite, and other powder products are mixed into a slurry using n-methyl pyrrolidone (NMP) as the solvent ingredient for the cathode, and deionized water as a solvent for the anode. In the electrode process area, the coating and drying process is performed, which includes applying the slurry from the mixing process onto aluminum and/or copper foil and drying the foil strip through a dryer using a heat exchanger. During this process, NMP is captured through a solvent-recovery system. In the assembly process area, the cathode and anode are then laminated, stacked on an aluminum sheet, and folded. An electrolyte liquid is injected into the folded product under vacuum pressure, and aluminum and/or copper tabs are laser-welded to the cell. In the formation process area and following application of the tabs, the cells are placed in storage for aging to stabilize the electrolyte into the cell, and formation is achieved by charging and discharging equipment. Prior to final packaging and placement in the storage process area, degassing is conducted by piercing the cell, extracting residual gas under vacuum pressure, and resealing.

## 2.2.2 Staffing and Operational Timeframe

The projected production for battery cells is expected to be approximately 3 shifts per day, 6 days per week, and 24 hours per day, and will reach full capacity in 2025. The estimated total number of employees is 1,300, with approximately 400 per shift. Anticipated staffing phasing is provided in Table 1.

**Table 1: Anticipated Site Staffing**

Year	2022	2023				2024				2025			
Quarter	Q1	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Percentage of Employees	2%	7%	17%	24%	35%	48%	61%	74%	86%	98%	99%	99%	100%

## 2.2.3 Shipping and Receiving

Raw materials for the Project will be trucked to the site and received in the mixing process area. The incoming raw materials will require approximately 55 incoming daily truck trips, moving and storing products onsite will require 17 daily truck trips, and outgoing product shipping will require approximately 48 daily truck trips. Approximately 103 total truck trips per day are required to provide raw materials to and ship final products from the facility.

## 2.2.4 Waste Management

During operations, the facility will generate both solid and liquid hazardous and nonhazardous waste associated with the manufacturing processes employed, as well as general solid nonhazardous waste associated with routine building operations and maintenance. All the wastes generated at the facility will be collected, categorized, and disposed and/or recycled in accordance with all applicable federal, state, and local environmental regulations. Further discussion is in Section 3.11, *Cumulative Impacts*.

### 3.0 ENVIRONMENTAL CONSEQUENCES

In each of the following sections, a specific resource area is addressed with both qualitative and, where applicable, quantitative information to concisely describe the nature and characteristics of the resource that may be affected by the proposed Project, as well as the potential direct and indirect impacts on that resource from the Project given proposed Project controls. A conclusion regarding the significance of impacts is provided for each resource area. For the recycling building, the Proposed Action only includes construction of the building; tooling and operations will be by others. As such, evaluation of operational effects to resources are not included for the recycling building.

Section 3.11 provides a review of the present and reasonably foreseeable federal and nonfederal actions that may contribute to a cumulative impact when added to the impacts of the Proposed Action. The impacts of past actions were reviewed and are included as part of the affected environment to establish the current condition of the resource (the baseline condition) that may be affected by the Proposed Action.

#### 3.1 Aesthetics and Visual Resources

The project site is south and adjacent to Spring Hill and approximately 20 miles north of Columbia, in Maury County, Tennessee. The project site is zoned Heavy Industrial by Maury County<sup>1</sup>. The immediate surrounding area is characterized by industrial, Agricultural, and Public land uses. Views to the north include the existing GM assembly plant, with access roads surrounding a corporate and manufacturing campus. Views to the northeast include Haynes Havens farm, with existing mature trees providing some screening. Views to the east and southeast are across US 31, with agricultural land on the other side of the highway. Land on the southern side of US 31 is zoned Agriculture–Forestry and Light Industrial by Maury County. Views to the south include a daycare center and a local high school. Views to the southwest and west are of undeveloped land. There are no residential properties within 0.25 mile of the project site. The large scale of the Project may allow it to be visible from further away. However, as part of the Project, sculpted berms and screening landscaping will be installed along the northeastern, eastern, southern, and southeastern borders of the project site to minimize potential adverse aesthetic and visual impacts from the new facility and the recycling building.

Construction of the Project would result in permanent visual changes to the project site, specifically, the existence of the proposed new buildings on what is currently agricultural land. However, the siting of the industrial facility is consistent with the Heavy Industrial zoning of the area. Additionally, the new facility and recycling building would have an appearance consistent with the existing assembly plant, which is currently the dominant visual element in the immediate landscape. Operations at the new facility would result in minor increases in nighttime light in the vicinity. However, beyond the neighboring assembly plant, no land uses in the immediate vicinity are occupied at night; thus, the area would not be adversely affected by minor increases in nighttime light.

Because the area is zoned as Heavy Industrial, existing manufacturing facilities are located adjacent to the new facility, and the incorporation of sculpted berms and landscaping to screen the new facility from the surrounding landscape, impacts on aesthetics and visual resources as a result of the Proposed Action would not be significant.

#### 3.2 Air Quality

The operation of the recycling building will be by other entities and is not part of the Proposed Action. As such, air quality considerations for the recycling building are not included in this analysis.

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<sup>1</sup> Maury County Regional Planning Commission. 2021. Maury County Zoning Map. Available: [www.maurycounty-tn.gov/DocumentCenter/View/3340/Maury-County-Zoning-Map-Public-May-11-2021?bidId=](http://www.maurycounty-tn.gov/DocumentCenter/View/3340/Maury-County-Zoning-Map-Public-May-11-2021?bidId=). Accessed: August 23, 2021.



### 3.2.1 Setting

Pursuant to the Clean Air Act (CAA), EPA established National Ambient Air Quality Standards (NAAQS) to control a limited number of widely occurring Criteria Pollutants, including carbon monoxide (CO), nitrogen dioxide, ozone, PM of a diameter of less than 2.5 micrometers (PM<sub>2.5</sub>), PM of a diameter of less than 10 micrometers (PM<sub>10</sub>), and sulfur dioxide. Primary air quality standards were developed for these pollutants to protect public health—including sensitive populations such as children, elderly, and asthmatics—and secondary standards were developed to protect the nation's welfare, including protection against decreased visibility and damage to animals, crops, and vegetation. EPA has concluded that the current NAAQS protect the public health, including the at-risk populations of older adults, children, and people with asthma, with an adequate margin of safety. The airshed that contains the project site in Maury County is in attainment for NAAQS, meaning none of the ambient concentrations of criteria pollutants exceed the air quality standards.

To protect air quality, several permitting programs under the CAA regulate point-source air emissions. Under the New Source Review (NSR) permitting program, a major stationary source is one of 28 listed facility types that has the potential to emit 100 tons per year (tpy) or more of a regulated NSR pollutant or is an unlisted facility that has the potential to emit 250 tpy or more of a regulated NSR pollutant. A Prevention of Significant Deterioration (PSD) permit is required for new major sources or a major source making a major modification in areas that are in attainment for all the NAAQS. The proposed battery-manufacturing facility is not considered a new major stationary source because it is not one of the 28 listed facility types, nor does it have the potential to emit 250 tpy of a regulated NSR pollutant. The facility applied to receive a minor NSR permit to construct the emission sources located at the facility. The Tennessee Department of Environment and Conservation (TDEC) administers this permitting program and issues the permit to construct and operate the facility.

Ultium prepared a NSR construction permit application and submitted it to TDEC in June 2021; updates were sent on August 10 and 11, September 17, and October 17 and 25, 2021, and February 1 and 18, and March 4 and 28, 2022. TDEC issued Ultium a permit to Construct/Modify Air Contaminant Sources on April 14, 2022. The air pollutant loads reflected in Table 2 represent potential to emit air pollutants from all emission sources at the facility. This potential to emit reflects both permitted and non-permitted emission sources (including insignificant and exempt sources). All permit limits for permitted units have been accounted for in this potential to emit total. Since the potential to emit from the facility exceeds 100 tpy, the facility will be subject to the CAA Title V Operating Permit Program. A Title V Operating Permit will be received after completion of construction.

**Table 2: Potential to Emit**

Air Pollutant	Tons Per year
Nitrogen Oxides (NO <sub>x</sub> )	107.76
Carbon Monoxide (CO)	149.83
Volatile Organic Compounds (VOC)	61.62
PM <sub>10</sub>	48.74
PM <sub>2.5</sub>	45.48
Sulfur Oxides (SO <sub>x</sub> )	4.83
Lead	0.00210
Ammonia (NH <sub>3</sub> )	5.36
Total Hazardous Air Pollutants (HAPs)	6.69
Copper	10.21
Carbon Dioxide Equivalent (CO <sub>2</sub> e)	207,479

*PM<sub>2.5</sub> = particulate matter of a diameter of less than 2.5 micrometers; PM<sub>10</sub> = particulate matter of a diameter of less than 10 micrometers*

*The totals in the table above represent the total potential to emit from the site (permitted and permit exempt units), actual emissions are expected to be under these totals. All regulated sources of emissions (e.g., facility boilers) are subject to specific permitted emission levels.*

### 3.2.2 Emissions Analysis

Air emissions would result from the construction and operation of the Project. During construction, air emissions would be generated from mobile sources (e.g., trucks, automobiles) and dust, and from the onsite rock-crushing operation. The emissions from the worker vehicles, construction equipment, and trucks would be temporary and transient in nature and various best management practices (BMPs); for example, watering soils and truck covers and washing would be implemented to further reduce potential impacts. The operation of the rock-crushing and sizing operation has been permitted, and emission limits include less than 45 pounds/hour of PM generated and visible emissions not to exceed 20 percent opacity in greater than one 6-minute period per hour and no more than four 6-minute periods in 24 hours, with wet suppression as the primary emission control mechanism.

Because the emissions during construction would not overlap with the emissions during operation and due to the controls that would be implemented during project construction, impacts on air quality as a result of the construction of the Project would not be significant.

The operation of the battery-manufacturing facility would result in several sources of air pollutant emissions that would result in the total emissions presented in Table 2. In accordance with the Minor NSR air permit to construct, various emission control technologies would be implemented specific to the emission source (e.g., dust collectors and activated carbon treatment). Most of the NO<sub>x</sub>, CO, and carbon dioxide equivalent (CO<sub>2</sub>e) emissions are associated with the combustion of natural gas used in the air-handling units and boilers; the majority of the PM emissions (PM<sub>2.5</sub> and PM<sub>10</sub>) and copper emissions are associated with the electrode mixing and the cutting and notching process steps, and the majority of volatile organic compound emissions are associated with the solvent-recovery plant and general solvent cleaning used in the overall manufacturing process. The other emissions (SO<sub>x</sub>, lead, ammonia, and hazardous air pollutants [HAPs]) are associated with multiple manufacturing-process steps.

Due to the location of the project site and existing air quality conditions, the amount of anticipated air emissions, the controls that would be implemented during operation and meeting applicable emission standards, impacts on air quality as a result of the Project would not be significant.

### 3.3 Biological Resources

#### 3.3.1 Wildlife and Vegetation

The land within the project site is predominately agricultural, with some roadways, parking areas, and a former construction staging area (rock pile). The majority of the project area has been previously disturbed by agriculture and industrial activities and represents limited biological habitat. The boundary of the agricultural fields has a mix of grasses and herbaceous vegetation, and the median of the Donald F. Ephlin Parkway is predominantly covered by maintained lawn grasses, with a few small patches of scrub-shrub and young trees. Segments of the utility corridors cross small areas of early successional forested patches and one riparian corridor. Active row-crop fields exist throughout a majority of the site, and connection with intact natural habitats is minimal.

Due to the current Industrial land use adjacent to the project site, its lack of natural habitat and connection to intact natural habitats, and resultant low potential for wildlife use, impacts on general biological resources (wildlife and vegetation) as a result of the Project would not be significant.

#### 3.3.2 Threatened and Endangered Species

An investigation was conducted to determine the potential effects of the Project on federally listed threatened or endangered species by reviewing the U.S. Fish and Wildlife Service's (USFWS) Environmental Conservation Online System (ECOS)–Information for Planning and Consultation (IPaC) database. According to the IPaC database, seven threatened, endangered, or candidate species may be found within the area of the project site: gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), monarch butterfly (*Danaus plexippus*), leafy prairie-clover (*Dalea foliosa*), Price's potato-bean (*Apios priceana*), and Short's bladderpod (*Physaria globosa*). No critical habitat for any identified listed species is within the project area. In September 2021, Ultium consulted with the USFWS's Cookeville Tennessee Ecological Services Division field office to determine potential impacts on threatened and endangered species. In November 2021, USFWS responded that, based on lack of proximity of the project site to known records of threatened and endangered species and lack of their habitats at the project site, USFWS is not aware of any federally listed species that would reasonably be expected to occupy the anticipated area of impact. Based on its review of the ECOS-IPaC information and the consultations with and findings by USFWS, LPO has determined that the Project would have no effect on threatened or endangered species or designated critical habitat.

However, USFWS expressed concern that the operation of the Project could lead to significant volumes of locally sourced water, which could affect the water quality and quantity in the nearby Duck River, especially during drier seasons of the year. The Duck River hosts federally listed mussels, including rabbitsfoot (*Quadrula cylindrica*), slabside pearlymussel (*Pleuronaia dolabelloides*), and sheepsnose (*Plethobasus caphysus*).

As indicated in Section 2.0, *Description of the Proposed Action*, all water for the Project would come from the local municipal source, Columbia Power & Water Systems (CPWS), which uses the Duck River as a source of raw water. Based on the concerns raised by the USFWS, LPO reviewed CPWS water withdrawals from the Duck River and identified that CPWS is authorized to withdraw water at a maximum rate of 31 cubic feet per second (cfs) (20.04 million gallons per day), from the Duck River near River Mile (RM) 134 under its TDEC Aquatic Resource Alteration Permit (ARAP). In accordance with the ARAP, CPWS is required to maintain a minimum flow rate of 100 cfs (65 million gallons per day [MGD]) at RM 132.8, downstream of CPWS's water intake location, and monitor and record the river flow daily at the U.S. Geological Survey gage 03599500.<sup>2</sup> In addition, the ARAP requires compliance with the Duck River Regional Drought Management Plan (Duck River Drought Plan), dated April 20, 2013, to include any

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<sup>2</sup> Tennessee Department of Environment and Conservation, 2019. Aquatic Resource Alteration Permit issued to Columbia Power & Water Systems. CPWS; NRS18.285. Issued June 24, 2019.

subsequent revisions.<sup>3</sup> In 2016 CPWS issued its own Drought Management Plan (CPWS Drought Plan) that responded to TDEC mandates regarding drought management plans and overlaps with the Duck River Drought Plan.<sup>4</sup> Both the Duck River Drought Plan and the CPWS Drought Plan provide trigger thresholds for required water conservation. The drought trigger thresholds are based on the Normandy Reservoir water level and flows in the Duck River. The CPWS Drought Plan provides the following trigger thresholds and measures to be implemented at each drought stage:

- Stage 1, Drought Monitoring: Normandy Lake level at 872 feet above mean sea level (msl). CPWS and Duck River Agency officials monitor drought conditions, initiate drought forecasts, and prepare for stage escalations.
- Stage 2, Drought Alert: Normandy Lake level at 868 feet above msl. CPWS notifies customers of drought conditions and provides informational and educational resources to support voluntary conservation measures.
- Stage 3, Drought Warning: Normandy Lake level at 864 feet above msl. All customers are required to reduce average summertime usage by ten percent; watering of lawns and outdoor vegetation are restricted to nighttime watering on alternating days; watering of golf course fairways and athletic fields is prohibited; and all non-mandated hydrant and line flushing is suspended.
- Stage 4, Drought Emergency: Normandy Lake level at 856 feet above msl and/or a flow rate of less than 100 cfs (65 MGD) at the U.S. Geological Survey gage 03599500 in the Duck River. All customers are required to reduce average summertime use by twenty percent; residential and most commercial users are restricted to essential and domestic uses; all outdoor uses of water, except for fire-fighting, sanitation, health, and medical purposes are prohibited; and water served for drinking purposes at restaurants, or other public or non-public eating establishments is restricted to be served only as requested by the customer.

The Project's anticipated total water usage is 1.4 MGD (2.17 cfs) with an operational peak flow rate of 1,284 gallons per minute (2.86 cfs). The design and operation of the Project includes the use of a water recirculating system at the most water intensive process (cooling tower make-up water) to improve water efficiency and reduce the overall water demand. CPWS indicated that it has the capacity to provide up to 5,000 gallons per minute (11.14 cfs or 7.2 MGD), which far exceeds the peak flow rate required for Project operations. The addition of the Project through a water tariff with CPWS would not modify how CPWS operates under its ARAP, nor change the drought stage trigger thresholds and measures to be implemented at each drought stage.

Ultium recognizes that drought conditions may occur in the future and one or more of the drought trigger stages under the CPWS Drought Plan could be triggered. Ultium would comply with all conditions imposed by CPWS through its tariff for the new manufacturing facility. In addition, Ultium is assessing several water reuse and recycle options for possible future implementation at the new manufacturing facility. Should future conditions reduce the water supplied from CPWS, Ultium could implement one or more of the following water cycling and/or water capture options in order to continue operations at full capacity; however, the current design and operation of the facility does not include the following measures:

- Condensate collection from air handling units and dehumidifier units to supplement make-up water demand for the cooling towers. Condensate production varies on a seasonal basis, and instead of entering the sewer, condensate flow would be diverted and reused.
- Stormwater capture from rooftop runoff to supplement make-up water demand for the cooling towers. Stormwater from the roof of the main building would be diverted into underground tanks to be reused to supplement the water demand for the cooling towers.

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<sup>3</sup> See: <https://duckriveragency.org/DMP%20Report.pdf> The purpose of the Tennessee Duck River Development Agency's Regional Drought Management Plan is to ensure that stakeholders utilizing water supply sources in the Duck River region plan appropriately to mitigate drought impacts and will respond in an organized, responsive and appropriate manner in the event of a drought-related water shortage. Accessed July 2022.

<sup>4</sup> See: [https://cpws.com/wp-content/uploads/2017/01/2016\\_DroughtManagementPlan\\_2.pdf](https://cpws.com/wp-content/uploads/2017/01/2016_DroughtManagementPlan_2.pdf) Columbia Power & Water. 2016. Drought Management Plan. July. Available: C. Accessed: November 2021.

- Plume capture of evaporation from cooling towers using electrical charged collector mechanisms to attract and collect water droplets to supplement make-up water demand for the cooling towers. Plume capture would be available on a seasonal basis dependent on ambient temperature conditions creating a plume.
- Treatment and reuse of blowdown from the cooling towers and concentrate from reverse osmosis (RO) units. Blowdown and RO concentrate would be diverted from sewer flows and treated at a minimum to match potable water quality or produce a higher quality reuse stream. Treated sources would be intended to supplement either make-up water demand for the cooling towers or potable water demand for the RO units.

Given the current agricultural and industrial land use of the Project site, the lack of critical habitat and resultant low potential for wildlife use, the conditions of the ARAP and the associated Drought Management Plans that require water conservation during drought conditions, as well as the current and future permitted water withdrawals from the Duck River and CPWS' excess water supply capacity, along with the options available to Ultium to respond to any future reductions in water supply, and the results of informal consultation with USFWS, adverse impacts on biological resources, including threatened and endangered species, as a result of the Project are not anticipated, and impacts would not be significant (a no effect determination).

### 3.4 Cultural Resources

A *historic property*, as defined by the National Historic Preservation Act (NHPA) (54 United States Code § 300101 *et seq.*), is any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to consider the impact of their actions on historic properties. Regulations implementing the NHPA (36 CFR Part 800) provide clear steps for agencies to follow regarding consultation with state, local, or tribal government officials in the identification of historic properties potentially affected by their undertaking, assessment of impacts on historic properties, and resolution of adverse effects through avoidance, minimization, or mitigation.

Section 106 consultation was initiated with the Tennessee Historical Commission (THC) and indicated that the Project could have the potential to affect historic properties eligible for listing on the NRHP within the proposed area of potential effects (APE). The architectural APE for this Project was defined as the approximately 158-acre building area where new aboveground structures would be located, as well as a 0.5-mile buffer surrounding that area (Appendix A). The architectural APE did not include a buffer around the utility corridor or the stockpile areas because the undertaking includes only underground utilities, and the stockpile is a human-made feature that is being reduced in size and would not introduce any new visual impacts. The archaeological APE was defined as all the new land requirements proposed for ground disturbance, totaling 274 acres.

Invitations to comment on the Project and engage in government-to-government consultation with DOE regarding the NEPA and Section 106 processes were sent to the Alabama-Coushatta Tribe of Texas, Cherokee Nation, Chickasaw Nation, Coushatta Tribe of Louisiana, Eastern Band of Cherokee Indians, and Muscogee (Creek) Nation (Appendix B). The Eastern Band of Cherokee Indians notified DOE that they were interested in the project site and requested that a Phase I archaeological survey be conducted, following both the Secretary of the Interior's standards and those of the Tennessee Division of Archaeology. The Cherokee Nation notified DOE that they were interested in acting as a consulting party for the Project. The Cherokee Nation noted that, after reviewing the Project location and description, they did not find any instances where the Project intersected or adjoined known cultural, historic, or prehistoric resources. In the event of any unanticipated discoveries, the Cherokee Nation requested that work be halted immediately, and they be contacted. The Eastern Band of Cherokee Indians asked for clarification regarding the archaeological survey methodology, and DOE provided a written response.

Additionally, invitations to be Section 106 consulting parties were sent to the Maury County Historical Society, Maury County Chapter of the Association for Preservation of Tennessee Antiquities, Middle Tennessee AgResearch and Education Center at Spring Hill, City of Spring Hill, Maury County, and City

of Columbia. The City of Spring Hill responded that they accepted the invitation. No other substantive responses were received from these parties.

A Phase 1 archaeological survey and, due to the additional land requirements for the Project, three supplemental Phase 1 archaeological surveys were completed. No archaeological sites were identified during any of the Phase I surveys, and all concluded that no archaeological sites would be affected by construction, operation, or maintenance of the Project. THC concurred that the project would not affect any NRHP-eligible archaeological resources (see Appendix B).

An architectural survey concluded that architectural resources exist within 0.5 mile of the project site on the Haynes Haven Stock Farm property and Middle Tennessee Ag Research and Education Center (MTAEC) property. Based on the history and architectural resources, DOE and THC concurred that the Haynes Haven Stock Farm is eligible for inclusion on the NRHP under Criterion A, for agriculture (for its association with breeding notable Tennessee Walking Horses) and its use as a breeding and show farm; and under Criterion C for architecture, as a good local example of late classical revival architecture for the farmhouse and for good examples of a large Craftsman-inspired horse barn and circa-1890s lattice barn. DOE and THC concurred that MTAEC is eligible for inclusion on the NRHP under Criterion A, for its association with the state's efforts to foster innovation in agriculture. Therefore, DOE and THC determined that the Project would adversely affect both the Haynes Haven Stock Farm and MTAEC because the new facility would disrupt the rural setting integral to both properties' significance as historic agricultural resources.

To resolve the adverse effects of the Project, DOE prepared a Memorandum of Agreement (MOA) and submitted it to the potentially interested Tribes and potentially interested consulting parties for their review and comment (see Appendix B). In addition, DOE invited the Advisory Council on Historic Preservation (ACHP) to participate in the consultation to resolve the adverse effects, and ACHP responded that its participation is not needed (Appendix B). The MOA included the following stipulations to minimize and mitigate effects, as follows.

- Construct berms and plant trees and/or shrubs along the boundary of the project site to minimize and mitigate the adverse visual effects to the Haynes Haven Stock Farm and MTAEC.
- Develop and submit a NHRP nomination for the Haynes Haven Stock Farm.
- Develop a historical context report on the MTAEC property.

Prior to executing the MOA, THC notified LPO that the Tennessee Valley Authority (TVA) was reviewing an undertaking (development of transmission line to the Project) and recommended that LPO and TVA jointly review their undertakings. TVA and LPO reviewed their respective undertakings and agreed that LPO is the lead Federal agency for the construction and tooling of the battery manufacturing facility, and TVA is the lead Federal agency for the construction of a transmission line to the manufacturing facility. In addition, LPO invited TVA to become party to the MOA as an invited signatory; however, TVA's signature is not required for the execution of the MOA. The MOA was signed by the executing signatories (DOE Loan Programs Office, THC, and Ultium) on August 4, 2022 (Appendix C).

Should unexpected archeological resources be discovered during construction, activities would be halted in the immediate area of the discovery until the resources have been evaluated for NRHP eligibility criteria (36 CFR 60.4) in consultation with THC and Tribal consulting parties in accordance with 36 CFR 800.13. Appropriate mitigation would be determined during THC and Tribal consultation.

Due to the absence of archaeological resources, the pending execution of the MOA to address the adverse impacts on historic architectural properties, and the controls that are in place in the event of an unanticipated discovery of such materials, impacts on cultural resources as a result of the Project would not be significant.

### 3.5 Noise

*Noise* is any unwanted sound that penetrates the environment or interferes with normal communication or activities. The project area is zoned Heavy Industrial by Maury County.<sup>5</sup> Surrounding the project site are large areas zoned Light Industrial, General Commercial, Regional Commercial, and Agriculture–Forestry, as well as several smaller pockets of Single-Family zoning.<sup>6,7</sup> Overall, the surrounding area remains mostly undeveloped. The project site directly abuts US 31 and is adjacent to an existing assembly plant. Existing sources of noise at the project site include vehicular traffic comprising commuter vehicles, large delivery trucks for the existing assembly plant, and farm and maintenance equipment for the neighboring farm fields and maintained areas.

The Project would generate temporary noise during construction from heavy machinery, such as bulldozers, graders, excavators, dump trucks, and cement trucks, as well as smaller tools, such as jack hammers and nail guns. Noise and sound levels would be typical of new construction activities and be intermittent and temporary. Construction activities would be limited to daytime between the hours of 6:00 a.m. to 6:00 p.m., Monday through Saturday.

There are no existing residences within 0.25 mile of the project site; the nearest residential homes are just under 0.5 mile from the primary building site. Within 0.25 mile, there is a public high school, a daycare facility, a farm experimentation station (MTAEC), and the Haynes Havens Stock Farm. These facilities could experience minor, short-term, adverse impacts from noise generated during construction of the proposed facility.

The industrial process/manufacturing operations at the facility operations would not add to the local ambient noise levels because the manufacturing processes would be conducted within an enclosed building and consistent with the current Industrial-zoned land use. The facility is located adjacent to an existing manufacturing facility, so the vehicular traffic from commuting workers and trucks, both receiving and shipping materials, would not represent a new source of noise in the area.

Due to controls that would be implemented during construction (time limits) and the nature of the area surrounding the Project (i.e., adjacent to existing manufacturing facility), impacts from noise as a result of the proposed Project would not be significant.

### 3.6 Public and Occupational Health and Safety

The tooling and operation of the recycling building will be performed by other entities; thus, they are not part of the Proposed Action. As such, public and occupational health and safety considerations for the recycling building are not included in this analysis.

The construction contractor developed and is implementing a site-specific occupational health and safety plan for construction activities. Employee health and safety plans and emergency plans would be developed and implemented for operation of the Project. These plans would include regular required safety training for all employees, employee wellness programs, and monitoring programs to track work-related injuries and near-miss trends. Given these controls, it is anticipated that potential worker accidents would remain within or below the national averages for construction activities.

Various hazardous chemicals are used throughout the battery cell–manufacturing process. Currently, no regulated substances per Section 112(r) of the CAA (Risk Management Plan) would be used. However, the Project would be using carbon nanotubes, and, as such, Ultium has registered carbon nanotubes on the chemical inventory, as required by the Toxic Substance Control Act of 1976, and submitted an application in September 2021 to EPA. As of May 2022, EPA is reviewing the application. Ultium would comply with Toxic Substance Control Act regulations, as required by EPA. Ultium would employ a

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<sup>5</sup> Maury County Regional Planning Commission. 2013. Maury County Zoning Map. April. Available: [maurycounty-tn.gov/DocumentCenter/View/221/Zoning-Map-PDF](http://maurycounty-tn.gov/DocumentCenter/View/221/Zoning-Map-PDF) Accessed August 23, 2021.

<sup>6</sup> City of Columbia, Tennessee. No date. GIS Mapping Public Maps Zoning Map. Available: [www.columbiatn.com/549/GIS-Mapping](http://www.columbiatn.com/549/GIS-Mapping) Accessed: August 23, 2021.

<sup>7</sup> City of Spring Hill, Tennessee. 2021. Municipal Zoning Map of Spring Hill. [www.springhilltn.org/DocumentCenter/View/4449/Adopted-UDC-Zoning-Map-amended-on-11-15-2021?bidId=](http://www.springhilltn.org/DocumentCenter/View/4449/Adopted-UDC-Zoning-Map-amended-on-11-15-2021?bidId=) Accessed: August 24, 2021.

chemical-control process that evaluates all new chemicals for environmental and safety regulatory implications prior to that chemical being brought on site. In addition, Ultium would use a software program to track chemical purchases monthly that would be able to run reports to notify the site if any chemicals used trigger CAA Section 112(r) requirements.

Ultium would implement its safety management system, Workplace Safety System. This system includes precautionary, preventative, and emergency response information regarding the potential release of these hazardous substances. Ultium has prescriptive internal Performance Standards for respiratory protection, chemical-exposure assessment and management, and personal protective equipment (PPE). Ultium would develop and provide training for all workers who handle hazardous chemicals. Workers would be required to wear the necessary PPE, have access to necessary response supplies in the event of accidental release, and know how to respond in an emergency. Safe work practices are important for all individuals working with hazardous substances, so that they understand the potential risks, necessary safety precautions, and proper response in the event of an accidental contact/release. Ultium would develop and maintain emergency response plans to address injuries, fires, spills, hazardous material leaks, and operational safety. The plans would be used by personnel to minimize human health and safety concerns and environmental impacts. The details of the emergency response plans would be developed in conjunction with the public emergency response services and neighboring community.

Ultium also is involved with the Local Emergency Planning Committee. Per the Emergency Planning and Community Right-to-Know Act<sup>8</sup> rule, Ultium would produce and submit necessary chemical threshold reports, site plans, and site emergency response plans and would participate in meetings. Ultium would also develop the necessary emergency response procedures applicable to transportation of dangerous goods and materials.

Safety Data Sheets for all chemicals would be followed and available on site. Electrolyte storage tanks made of materials resistant to the substances stored in them and placed in a hardened area which would protect the soil and water environment. Transfer of electrolytes would take place under nitrogen pressure, eliminating the possibility of substance emission, and leakage sensors would be located on the valves. The tank-unloading stand would be surrounded by a trough, equipped with sumps, and the floor would be covered with chemical-resistant resin. Used or expired mixtures of chemicals and laboratory reagents would be selectively stored in closed, labelled containers, resistant to substances contained in waste, in a separate location on the premises. The storage location would be protected against weather conditions and unauthorized access.

The plant would be equipped with a fire sprinkler system, and any transfer of materials would take place over hardened areas equipped with separators. The transport of waste generated by the plant to proper disposal facilities would be adapted to the type and amount of waste and would be carried out through authorized qualified transport companies.

BMPs and requirements of applicable federal, state, and local regulations and standards for construction and operation of the facility would be implemented to ensure the safety of workers and the public. These standards would include compliance with federal Occupational Safety and Health Administration regulations, state rules under the Tennessee Occupational Safety and Health Administration regulations, and the Tennessee Occupational Safety and Health Act.

The City of Columbia's Fire Station No. 5 is less than 1 mile from the project site and would provide emergency medical services, fire and rescue, and responses to hazardous-materials emergencies. Columbia Fire and Rescue, the local fire department, would be informed of potential hazards associated with the facility, facility construction, and layout information for the project site to ensure first responders and the public are protected from exposure to potentially hazardous situations (e.g., toxic smoke or vapors) in the event of a fire or industrial accident.

The safe production of lithium-ion batteries would not result in any hazardous materials exiting the manufacturing plant and/or entering directly or indirectly into Waters of the United States, either on site or downstream off site. The Project would not affect the quantitative and chemical status of groundwater.

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<sup>8</sup> [www.epa.gov/epcra/what-epcra](http://www.epa.gov/epcra/what-epcra).



Wastewater and waste management at the project site would be conducted in a manner that does not pose a threat to the water and soil environment.

As a result of the measures to address health and safety—including BMPs, compliance with federal, state, and local regulations and standards, plans for preventing chemical spills and potential mishandling of hazardous materials, response plans, and the facility's experience with handling and use of the same hazardous materials—impacts related to health and safety from use of hazardous materials during construction and operation are not anticipated.

### 3.7 Socioeconomics and Environmental Justice

The operation of the recycling building will be performed by others and is not part of the Proposed Action. As such, socioeconomics and environmental justice (EJ) considerations for the recycling building are not included in this analysis.

#### 3.7.1 Socioeconomics

The project site is in unincorporated Maury County, Tennessee (County). Nearby towns include the City of Columbia (10 miles, population 33,380) and the City of Spring Hill (immediately adjacent to site, population 39,711). The Project is adjacent to and shares access with GM's Spring Hill car manufacturing plant in Spring Hill.

The County completed a workforce alignment study in 2020 (Study).<sup>9</sup> As part of this Study, the County identified its "labor market area" to illustrate where the employees working within the County live and commute from. As the largest employer in the County, the GM Spring Hill plant provided labor information to the County, from which, in part, the labor market area was developed.<sup>10</sup> This labor market area was used as a reasonable estimate for the broadly affected socioeconomic area of the proposed Project. The Maury Labor Market Area (MLMA) includes the following nine counties in Tennessee: Davidson, Hickman, Williamson, Rutherford, Lewis, Maury, Marshall, Lawrence, and Giles.

Maury County's population in 2020 was 98,330, a 12-percent increase over the previous 5 years. The 2020 population in the MLMA was 1,529,340, an 8-percent increase over the previous 5 years. Projected population increases for the County and the MLMA in the next 5 years are 8 percent and 5 percent, respectively. The County has a larger percentage of population over 25 years old with a high school diploma (36 percent), when compared to the State of Tennessee (32 percent), the United States (27 percent), and the MLMA (26 percent), and the MLMA has a higher percentage of residents with an Associate's degree or higher (44 percent) when compared to the same geographies. The Study reported unemployment rates in the County and MLMA as 6.5 percent and 6.28 percent, respectively in October 2020 (compared to the Tennessee unemployment rate at around 5 percent in April 2021).<sup>11</sup> Labor force participation rates were 62.6 percent and 68.1 percent for the County and the MLMA, respectively, which is higher than the U.S. rate of 61.7 percent. With a growing and educated workforce both within the County and the MLMA, as well as a labor force participation rate higher than the U.S. average, it is anticipated the local work force would be able to absorb the jobs, and little, if any, migration would occur from outside the MLMA as a result of the Project. It is expected that the current labor market would be able to absorb the new jobs associated with the Project.

The proposed facility is expected to generate approximately 1,300 new jobs. The Study reported the mean commute time for Maury County is 29.2 minutes. It is not expected that these new employees would be disproportionately located in any government facility or service area within the County or the MLMA because the existing infrastructure and services (e.g., roads, schools, fire departments, police force) would be able to accommodate any population migration to the MLMA.

<sup>9</sup> Maury County, Tennessee. 2021. *Workforce Alignment Study*. Maury County Chamber & Economic Alliance, Boyette Strategic Advisors.

<sup>10</sup> Nashville Area Chamber of Commerce. 2021. Maury County. Available: [www.nashvillechamber.com/economic-development/our-region/maury](http://www.nashvillechamber.com/economic-development/our-region/maury). Accessed: June 10, 2021.

<sup>11</sup> U.S. Bureau of Labor Statistics. 2021. Databases, Tables & Calculators by Subject: Tennessee. Available: [data.bls.gov/timeseries/LASST470000000000003](https://data.bls.gov/timeseries/LASST470000000000003). Accessed: June 10, 2021.

Based on the jobs that would be created during construction and operation of the Project, the availability of a labor force, and the housing and public services already available in the MLMA, no significant adverse socioeconomic impacts are expected.

### 3.7.2 Environmental Justice

LPO’s review of EJ issues focuses on Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, the National-Scale Air Toxics Assessment (NATA) cancer risk and respiratory hazard index, as defined in EPA’s Environmental Justice screening tool, and on any site-specific review of population centers (e.g., schools, day-care centers) near the project site.

EO 12898 directs federal agencies to address environmental and human health conditions in minority and low-income communities. The evaluation of EJ is dependent on determining if high and adverse impacts from the proposed project would disproportionately affect minority or low-income populations in the affected community. Table 3, provides a comparison of population and ethnicity for Maury County, where the Project is located, with the surrounding cities of Columbia and Spring Hill, and the State of Tennessee. In accordance with EPA’s Environmental Justice Guidelines minority populations should be identified when either: 1) the minority population of the affected area exceeds 50 percent; or 2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

**Table 3: Population, Ethnicity, and Poverty**

Population, Ethnicity, and Poverty	Columbia	Spring Hill	Maury County	Tennessee
Total Population	33,380	39,711	100,974	6,910,840
<b>Ethnicity</b>				
White	76.3%	90.8%	84.1%	78.4%
Black or African American	13.4%	4.5%	12.0%	17.1%
Hispanic or Latino	18.5%	6.0%	6.2%	5.7%
Asian	5.9%	1.9%	1.0%	2.0%
American Indian and Alaska Native	1.3%	0.2%	0.5%	0.5%
Native Hawaiian and other Pacific Islander	0.2%	0.0%	0.1%	0.1%
Poverty	11.4%	2.8%	9.9%	13.6%

Notes: All population and ethnicity data were gathered from the U.S. Census Bureau web page. Accessed February 3, 2022.

The ethnic and racial composition of the affected area is less than 50 percent of the total population and, for Maury County, is not meaningfully different when compared to surrounding communities and the state. The incidence of poverty based on the percentage of persons below the poverty level for the state and surrounding communities is not meaningfully different than that of Maury County. There are no anticipated impacts that could give rise to disproportionate effects on minority or low-income populations in the affected area.

The NATA Respiratory Hazard and Cancer Risk Indexes are tools for determining how local residents compare to population of the state and the entire United States. According to the EPA’s EJ Screen for Block Group 471190102012 (<https://ejscreen.epa.gov/mapper/>), both the NATA Respiratory Index, and the NATA Cancer Risk (lifetime risk per million) is in the 80<sup>th</sup>–90<sup>th</sup> percentile for the United States and the 80<sup>th</sup> (Cancer) and 76<sup>th</sup> (Respiratory) percentiles for Tennessee. Although these NATA indicators are in a higher percentile in comparison to the rest of the United States and Tennessee, TDEC has reviewed the project emissions. As discussed in Section 3.2, *Air Quality*, permitted emission levels of criteria pollutants and HAPs are considered to be protective of human health and the environment; Ultium’s emissions limits

are under all of the State of Tennessee and Federal permit limits for criteria pollutants and HAPs. The permit conditions and controls, as described in Section 3.2, would be implemented during project operation to minimize emissions and potential air quality impacts.

The site-specific region of influence for this analysis identified several population centers. Specifically, a few schools and daycare centers are close to the site:

- Christ Children's Academy (275 feet away, 500 Saturn Parkway, Spring Hill, TN 37174)
- Spring Hill High School (900 feet away, 1 Raider Lane, Columbia, TN 38401)
- A Child's Dream Pre-K (approximately 3,000 feet away, 2820 Spring Meade Boulevard, Columbia, TN 38401)
- Spring Hill Middle School (more than 5,000 feet away, 3501 Cleburne Road, Spring Hill, TN 37174)

Standard safety measures (e.g., fences, security, controlled building access) in place at the site would prevent unauthorized access (including from children) to the general property and the facility.

Based on the jobs created during construction and the 1,300 direct-operation jobs at the proposed plant, the Project would benefit the regional economy. With the minority populations and poverty rates in the County not being meaningfully different than those of the surrounding communities and the state, and given that permitted air emissions are protective of human health and the environment, impacts on EJ communities from construction and operations would not be significant.

### 3.8 Traffic and Transportation

Anticipated operational activities at the project site would include a total of 1,300 employees, with approximately 400 personnel split over three shifts, commuting to the site each day, as well as an average of 240 truck trips per day. Access to the proposed project site is granted via US 31, State Route (SR) 396 (Saturn Parkway), and Donald F. Elphin Parkway (an internal private roadway at the site). The project site is adjacent to and would share roadway access with the existing GM assembly plant to the north. Local infrastructure is already in place to service the existing plant, including two exits off US 31. The Project would primarily affect Saturn Parkway, a public, four-lane, paved freeway connecting Interstate 65 to the existing car manufacturing plant, and US 31, a three-to four-lane arterial roadway, and their relevant intersections. According to the *Spring Hill Comprehensive Plan*, in 2011, traffic counts at Saturn Parkway and Kedron Road operated at a level of service (LOS)<sup>12</sup> A. In 2011, traffic counts at US 31, just north of the Saturn Parkway interchange, operated at an LOS of C.<sup>13</sup> The City of Spring Hill, assuming a maximum 2-percent growth rate, projected a LOS in 2030 for traffic counts at those locations to be A and D, respectively.<sup>14</sup>

TDOT has initiated a project to reconstruct and reroute Donald F. Elphin Parkway in the vicinity of the project site to both support the Project and provide a public road with additional access to the interior of the southern portion of the property. In 2021, TDOT performed a Traffic Impact Analysis to ensure that appropriate design features (e.g., turning lanes, traffic signals) are included in the road design. Project design features would ensure traffic safety, maintain access to the daycare center at the southern end of the parkway, provide access to employee and truck entrances to the project site, and improve traffic flow from the existing manufacturing facility to US 31. The new roadway is anticipated to be constructed by August 2022. No new exits are proposed as part of, or in support of, the Project.

TDOT's Traffic Impact Analysis for the Project is based on 2019 and 2021 traffic counts on the roadway network adjacent to the proposed facility. The analysis did not identify any operational deficiencies associated with the Project. The existing traffic counts were projected to future counts (2042), using growth rates provided from the Nashville Metropolitan Planning Organization computer assessment

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<sup>12</sup> Road performance is measured using level of service (LOS) ratings. LOS ratings range from A to F, with A as the best travel conditions and F the worst. Most planners aim for LOS C, which is defined as roads that are below, but close to, capacity, where traffic generally flows at the posted speed.

<sup>13</sup> City of Spring Hill. 2011. *Spring Hill Comprehensive Plan*. Available: [www.springhilltn.org/DocumentCenter/View/148/04c-Transportation-SH-Comp-Plan-06-2011?bidId=](http://www.springhilltn.org/DocumentCenter/View/148/04c-Transportation-SH-Comp-Plan-06-2011?bidId=). Accessed: February 2022.

<sup>14</sup> Ibid.

model, and the traffic trips anticipated to be generated for the proposed 1,300 employees. The Traffic Impact Analysis was conducted to evaluate the loading of anticipated traffic, including truck deliveries, to and from the project site, and the anticipated impact to existing traffic volumes and patterns, during both the construction and operation periods. Based on the *Highway Capacity Manual's* estimated capacity for a four-lane highway<sup>15</sup> and traffic count projections provided by TDOT,<sup>16</sup> it was concluded that the existing roadway facilities have sufficient capacity to service the projected traffic volumes in these areas for the estimated regional population growth and the construction and operation of the Project.

In addition, a Traffic Impact Study commissioned by GM for the Project analyzed intersection capacity for two access points: one for employees and one for trucks.<sup>17</sup> If the intersections are unsignalized (i.e., two-way stop controlled) upon completion of development, the study determined an LOS of “F” for eastbound/westbound traffic and an LOS of “A” for northbound/ southbound traffic during the morning and evening peak hours. If a traffic signal is installed at the intersections, the study found that the truck access intersection would operate at an acceptable LOS (“C” for eastbound/westbound traffic, and “A” or “B” for northbound/southbound traffic), but the employee access intersection would not (“C” or “F” for eastbound/westbound and “D,” “E,” or “F” for northbound/southbound). To ease anticipated delays, geometric improvements recommended by the study were incorporated into TDOT’s project design. Such improvements include installing a northbound right-turn lane and widening the approach to include a dedicated left-turn lane.

Ultium would implement Maintenance of Traffic plans to ensure safety during various phases of Project construction. As the site plan is further developed, Ultium and TDOT would work collaboratively to ensure traffic pattern changes are aligned with project activities and that appropriate signage and controls are in place to uphold traffic safety, including a controlled turning lane at the intersection to mitigate traffic to and from the project site. Pavement markings needed at internal intersections would be updated to avoid anticipated vehicle conflicts due to sight restrictions and turning envelopes of both passenger vehicles and large trucks. The GM traffic impact study assumed that the Project’s employees would be split into two shifts; however, they would be split into three. Additionally, Ultium would stagger shifts with the existing car manufacturing plant during operations to mitigate traffic increases during shift changes.

Based on the conclusions of the 2021 traffic impact studies, as well as the measures incorporated as part of the Project (i.e., accounting for increases in traffic from construction and operation by installing appropriate signage and controls, managing traffic flows at intersections with pavement markings, implementing traffic safety plans, and staggering shifts with the existing car manufacturing plant), the impacts from the Project on transportation are not anticipated to be significant.

### 3.9 Waste Management

The operation of the recycling building will be performed by other entities and is not part of the Proposed Action. As such, waste management considerations for the recycling building are not included in this analysis.

All solid waste generated during the construction phase of the Project would be managed and transported in accordance with all federal, state, and local regulations. As explained in Section 2.0, *Description of the Proposed Action*, solid and liquid hazardous and nonhazardous waste generated during the operations phase would be collected, categorized, and disposed and/or recycled in accordance with all applicable federal, state, and local environmental regulations. Due to the multiple generating sources associated with the manufacturing processes, Table 4 provides an overview of the potentially hazardous waste that would be generated at the facility, the annual quantities, its characterization and storage requirements, and disposal practices. In addition, Ultium would employ a strategic program that seeks to continually improve resource efficiency through enhanced source reduction, recycling, and recovery, while maintaining compliance with regulations.

<sup>15</sup> Transportation Research Board. 2016. *Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis*.

<sup>16</sup> Tennessee Department of Transportation (TDOT). 2021. *Transportation Impact Analysis for the S.I.A Road Service Project Night Sky*. Strategic Transportation Investments Division. June 2.

<sup>17</sup> General Motors, LLC. 2021. *Traffic Impact Analysis: Project Night Sky, Spring Hill, Tennessee*. Prepared by Gresham Smith. November.

**Table 4: Operational Waste Management**

Waste Stream	Waste Characterization	Estimated Annual Waste Volume (pounds)	Collection	Transportation	Anticipated Disposal Method <sup>a</sup>
Electrolyte	Hazardous	16,000	Aboveground storage tank	Via tanker truck	Incineration
Bag Filter Media	Non-hazardous	189,450	Drums and characterized for disposal	Drums by truck	Recovery
Waste NMP	Non-hazardous	161,500	Aboveground storage tank	Via tanker truck	Recycling
Scrap Copper	Non-hazardous	873,000	Roll-off boxes	Via truck	Recycling
Scrap Aluminum	Non-hazardous	700,250	Roll-off boxes	Via truck	Recycling
Scrap Battery Cells	Non-hazardous	6,775,000	Drums	Via truck	Recycling
Cell Material	Hazardous	5,500,000	Gaylord boxes	Via truck	Recycling
Oils and Greases	Non-hazardous	12,000	Drums	Via truck	Recycling
Lab Chemicals	Hazardous	12,500	Drums and characterized for disposal	Drums by truck	Incinerated

**Notes:**

<sup>a</sup> Information based on a sister plant and actual volumes will be evaluated once in production.

With planned waste management practices, including recycling, and authorized solid and liquid waste disposal controls, impacts from waste management activities are not anticipated to be significant.

## 3.10 Water Resources

### 3.10.1 Wetlands and Streams

A surface water delineation to identify federally regulated wetlands and streams was completed for the project area following procedures outlined in the U.S. Army Corps of Engineers' *1987 Wetland Delineation Manual* and its Northcentral and Northeast regional supplements.<sup>18</sup> Additionally, a TDEC hydrologic determination report was completed to identify state regulated wetlands, streams, and non-regulated wet weather conveyances.<sup>19</sup>

The Project would affect 0.08 acres of isolated, low-quality wetlands. Water and sewer utilities would pass under a stream by employing non-invasive horizontal directional drilling under the stream; therefore, the stream would not be affected by the Project (see **Figure 3**). The 0.08 acres of wetlands are within the 13-acre area proposed for stormwater detention basins, and their presence would not alter the overall function provided by the isolated and non-jurisdictional wetland (e.g., sedimentation, filtration) with its conversion to a stormwater basin. However, the water quality from the Project would be improved by removing suspended particulate from the stormwater runoff.

To minimize potential impacts on offsite wetlands and streams from project construction, Ultium prepared a Soil Erosion and Sediment Control Plan that TDEC approved for the project site. Controls that would be implemented to minimize impacts include installing sedimentation ponds to intercept construction-site runoff and a silt fence around the perimeter of any area that would be disturbed by the Project.

<sup>18</sup> Steckel, J. Tremante, V. 2021. *Surface Water Delineation Report*. Prepared by Arcadis for General Motors.

<sup>19</sup> Moore, S. 2021. *Hydrologic Determination, Spring Hill Battery Cell Manufacturing Plant Project, Spring Hill, Maury County, Tennessee*. Prepared by Arcadis for General Motors.

Because the Project does not affect any federally regulated wetlands or streams, and the affected isolated wetland would still perform the same wetland functions (e.g., sedimentation control, filtration), the impacts from the Project on wetlands streams would not be significant.

### ***3.10.2 Surface Water, Floodplains, and Groundwater***

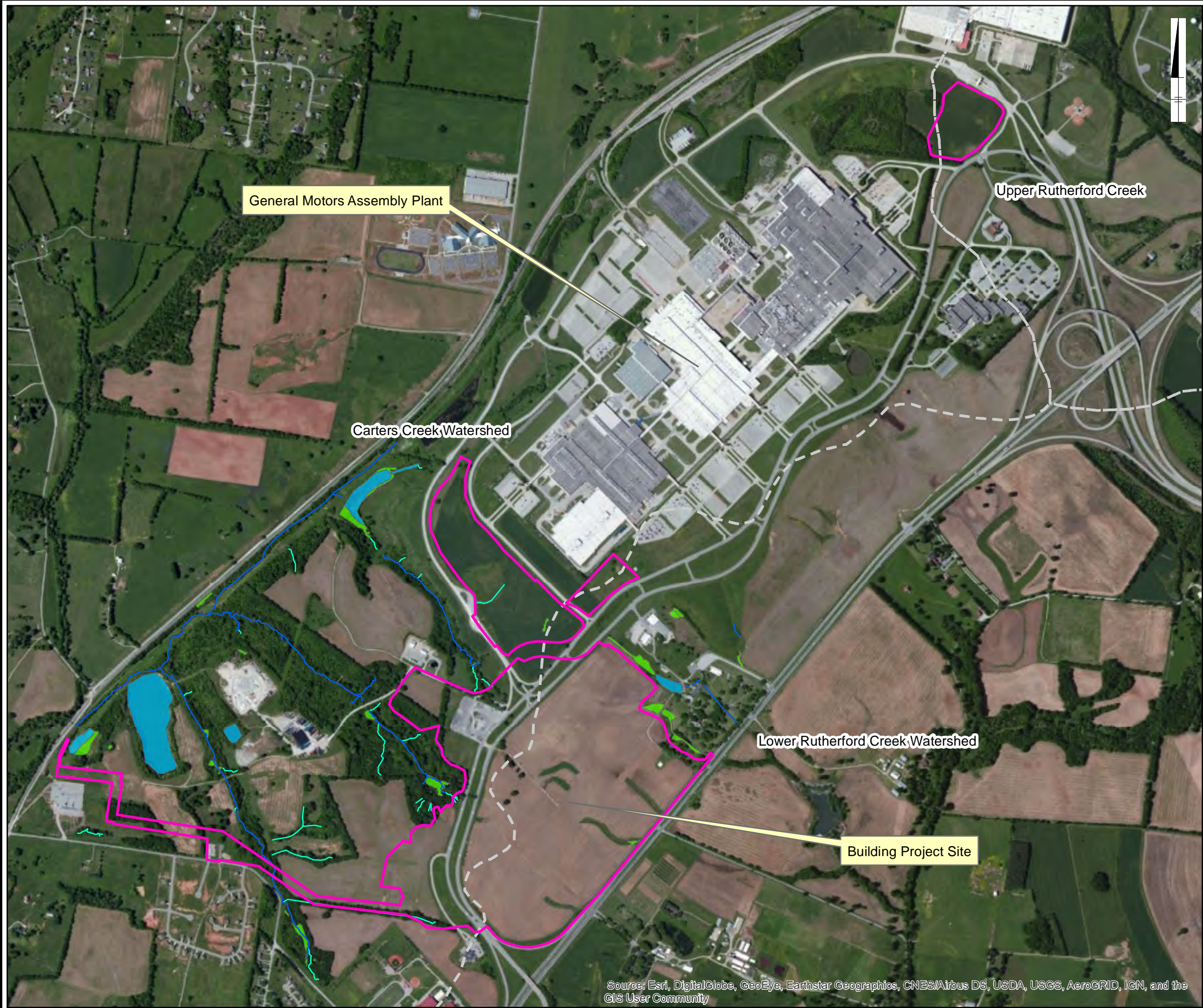
The project site is located primarily between two surface watersheds: the western section of the Project, west of the Donald F. Ephlin Parkway, is within the Carters Creek River Basin – Hydrologic Unit Code (HUC) 060400030202, which flows into the Lower Tennessee River watershed; and the eastern half of the Project, east of the Donald F. Ephlin Parkway, is within the Lower Rutherford Creek Basin – HUC 060400030203, which also flows into the Lower Tennessee River. One additional potential project area is northeast of the existing GM Assembly, with a small portion within the Carters Creek Basin, but is mostly within the Upper Rutherford Creek Basin – HUC 060400030201, also draining to the Lower Tennessee River (**Figure 3**). The development of the Project on approximately 274 acres would alter the amount of impervious surface from approximately 17 acres (8 percent) of the total project site up to approximately 78 acres (28 percent). This increase in impervious area would result in changes to stormwater runoff or infiltration due to decreased pervious surface on the project site. In addition, a Stormwater Management Plan was prepared, including a Mass Grading Plan and Stormwater Pollution Prevention Plan to address runoff during construction and operation. A Notice of Coverage under the General National Pollutant Discharge Elimination System Permit for Storm Water Discharges was approved by TDEC and permitted under TNR100000. This permit requires compliance with and oversight by the state's stormwater management policies.

The Maury County Flood Insurance Rate Map 47119C0180E (effective April 16, 2007), published by the Federal Emergency Management Agency, shows the entire project site as being within Zone X, indicating that there is minimal risk of flooding.

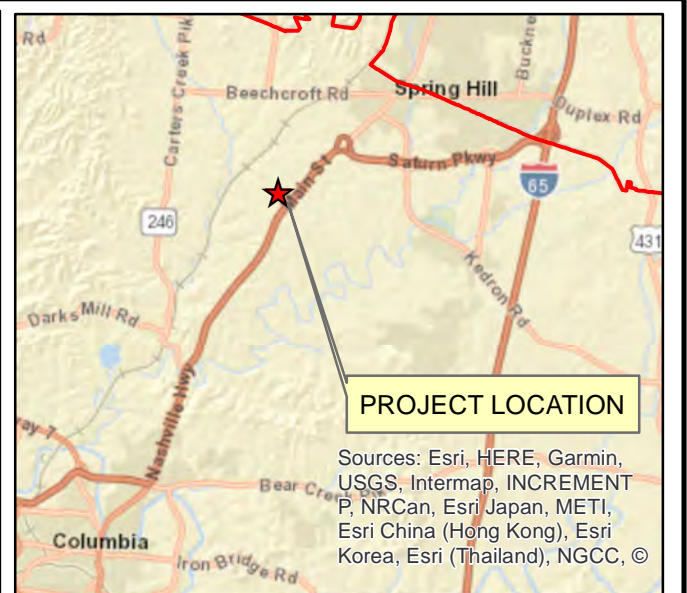
During operations, the Project would obtain its water from CPWS, which operates under the Board of Public Utilities of the City of Columbia, Tennessee. The municipal water distribution system utilizes the Duck River, near the Old Columbia Dam reservoir, as its source and has adequate capacity to serve the Project's anticipated potable water needs. The Project would not use groundwater or include any discharges that could adversely affect groundwater.

Based on the current plans for municipal water use, the absence of identified floodplains, and anticipated stormwater control and treatment during construction and operation, the impacts from the Project on surface water, floodplains, and groundwater would not be significant.

City/Group: Created By: Last Saved By: VTTremante  
Project (Project #): C:\Users\vtremante\OneDrive - ARCADIS\Desktop\GM #2 Spring Hill\GIS\MXD\Figure 3 - Water Resources Vacinity Map.mxd 4/21/2022 4:04:32 PM









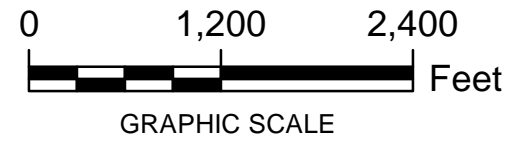
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community




Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, ©

### Legend

-  Proposed Project Location (274 Acres)
-  HUC-12 Watershed Boundary
-  Streams
-  Wet Weather Conveyances
-  Open Water
-  Wetlands



ULTIUM CELLS LLC SPRING HILL ENVIRONMENTAL ASSESSMENT	
<b>WATER RESOURCES SITE MAP</b>	
	<b>FIGURE 3</b>

### 3.11 Cumulative Impacts

*Cumulative impacts* are potential effects on the environment from the incremental impact of the Project when added to other past, present, and reasonably foreseeable future actions undertaken by other agencies (federal or nonfederal) or persons (40 CFR Part 1508.1 (g)). Projects were identified through a review of active project lists and planning documents from the Greater Nashville Regional Council, Maury County, the Maury County Chamber and Economic Alliance, and TDOT, with additional information provided by Ultium. The review identified the following current and reasonably foreseeable future projects.

- **US 31 Greenway:**<sup>20</sup> A Maury County-proposed 9.4-mile greenway along US 31 from the riverwalk in Columbia to the Rippavilla plantation. Approximately 0.5 mile of the proposed greenway would be sited adjacent to the project site.
- **Battery Assembly Building Reconstruction:** Reconstruction of an existing building located within the complex of the existing assembly plant.
- **Donald F. Ephlin Parkway Reconstruction:** Reconstruction and realignment by TDOT of 2 miles of the previously privately owned roadway. The roadway would remain a four-lane divided roadway and include new employee and truck access points.
- **TVA Transmission Line Installation:** A 1.1-mile transmission line to be installed by TVA to provide power to the project site. The transmission line would be located within the 13-acre utility corridor on the southwestern side of the project site.
- **Tooling and Operation of the Recycling Building:** Tooling and operation of the recycling facility constructed as part of the proposed Project.
- **Faurecia Manufacturing Facility Expansion:** Expansion of an existing manufacturing facility of primarily automotive door panels by nearly 100,000 square feet, leading to the potential creation of more than 170 jobs. At its closest point, the facility would be nearly 0.7 miles northeast of the project site.

LPO reviewed the identified projects in the region to determine the resources that may be subject to a cumulative impact. The reviewed focused on the resources affected by the Project and identified resources that may be affected by both the Project and other projects in the region. Based on this review, the following resources were evaluated for cumulative impacts.

- Aesthetics and Visual Resources
- Air Quality and Climate Change
- Cultural Resources
- Socioeconomics and Environmental Justice
- Traffic and Transportation

The Project, when considered together with the identified projects in the region, does not have the potential to result in significant cumulative impacts on other resources due to the geographic location and separation of the projects, the disturbed nature of the project sites, and/or the lack of construction or operational overlap that would result in an incremental impact on a particular resource.

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<sup>20</sup> Maury County Parks & Recreation Department. 2019. *Greenway Concept Plan*. Available: [www.maurycounty-tn.gov/DocumentCenter/View/2627/Maury-County-Parks-and-Recreation-Master-Plan?bidId=](http://www.maurycounty-tn.gov/DocumentCenter/View/2627/Maury-County-Parks-and-Recreation-Master-Plan?bidId=). Accessed May 2022.



### 3.11.1 Aesthetics and Visual Resources

The Project area is zoned as Heavy Industrial, and several projects involve expansion or reconstruction of existing facilities. The TVA Transmission Line Project would involve installation of overhead powerlines within the utility corridor, which may be visible to users of the future US 31 Greenway Project. However, according to Maury County's *Greenway Concept Plan*,<sup>21</sup> the benefits of the US 31 Greenway are to provide multimodal transportation connectivity and economic development. The plan states that the Greenway is not meant to provide recreation and social interaction or access to natural resources. Thus, the view from the Greenway was not a consideration in the development of the project, and adverse effects are not expected.

Because the additional development within the industrial complex containing the Project is consistent with the existing setting (zoned as Heavy Industrial), along with the incorporation of sculpted berms and landscaping to screen the Project from the surrounding landscape, cumulative impacts on aesthetics and visual resources would not be significant.

### 3.11.2 Air Quality and Climate Change

The reconstruction of the battery assembly building and Donald. F. Ephlin Parkway, as well as the installation of the TVA transmission line, would overlap with the construction phase of the Project. In addition, the Faurecia facility expansion could overlap with the Project's construction. However, air emissions resulting from construction would be temporary and minimized through the use of BMPs. Furthermore, the parkway reconstruction and utility installation are being undertaken in support of the Project and thus would serve to support the Project's reduction of approximately 2,407,328 tons of carbon dioxide (CO<sub>2</sub>) per year. Cumulatively, these activities may have temporary impacts during the construction phase, but they would have a long-term benefit to reduction in GHG emissions.

The potential emissions associated with the operation of the Battery Assembly Building, the Faurecia Manufacturing Facility, and the recycling building have the potential to result in cumulative impacts on the regional air quality. As discussed in Section 3.2, *Air Quality*, Murray County is in attainment of for NAAQS; in accordance with the CAA, the state has developed a State Implementation Plan to maintain compliance with NAAQS. Any new emissions in the airshed, to include those of the identified projects in the region, that are subject to CAA permitting would have to comply with CAA regulations and would be reviewed to ensure the air quality in the region maintains compliance with NAAQS. Therefore, the cumulative impacts on air quality associated with the operation of the Project and the other projects in the region would not be significant.

### 3.11.3 Greenhouse Gas Emissions and Climate Change

The current science and study of the earth's climate now shows with 95-percent certainty that human activity is the dominant cause of observed global warming since the mid-twentieth century<sup>22</sup>. Since the beginning of the industrial era, circa 1750, human activities have increased the concentration of GHGs (primarily CO<sub>2</sub>, NO<sub>x</sub>, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere. The rising global temperatures have been accompanied by changes in weather and climate (e.g., changes in rainfall that result in more floods, droughts, or intense rain; rising sea levels, Arctic sea

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<sup>21</sup> Maury County Parks & Recreation Department. 2019. *Greenway Concept Plan*. Available: [www.maurycounty-tn.gov/DocumentCenter/View/2627/Maury-County-Parks-and-Recreation-Master-Plan?bidId=](http://www.maurycounty-tn.gov/DocumentCenter/View/2627/Maury-County-Parks-and-Recreation-Master-Plan?bidId=). Accessed May 2022.

<sup>22</sup> Intergovernmental Panel on Climate Change (IPCC). 2013. *Climate Change 2013: The Physical Science Basis*. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T. F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P. M. Midgley (eds.)]. Cambridge, UK, and New York, NY, USA: Cambridge University Press. 1,535 pp.

ice decline, more frequent and severe heat waves).<sup>23</sup> It is now well established that rising atmospheric GHG emission concentrations are significantly affecting the Earth's climate<sup>24</sup>.

GHG emissions associated with the construction of the Project would be minimal compared to the savings resulting from use of the battery cells in EV automotive battery applications. Project operations would generate average annual GHG emissions of 320,870 tpy from electric power delivered from the regional grid and 90,987 tpy from the combustion of natural gas. As discussed in Section 2.0, *Description of the Proposed Action*, the new manufacturing facility would be used to build battery cells designed for use in EV batteries.

The magnitude of potential annual reductions in gallons of petroleum would depend on the number of EVs using the manufactured battery cells. At full capacity, the Project would produce enough batteries to supply more than 595,000 vehicles annually, assuming a 125-kilowatt-hour battery pack is used for each vehicle. Therefore, the petroleum displaced (i.e., saved) is calculated to be 246.4 million gallons per year (based on annual mileage of 12,000 miles and current 2021 average fuel economy of 29 miles per gallon for light-duty vehicles).

The annual avoided CO<sub>2</sub> is calculated from the Project's annual fuel consumption savings (246.4 million gallons) multiplied by the U.S. Energy Information Administration's Fuel Emission factor of 19.54 pounds CO<sub>2</sub>/gallon for gasoline. Therefore, the use of battery cells produced by the Project and used in EVs would support a reduction of approximately 2,407,328 tons of CO<sub>2</sub> per year. In general, the potential benefits associated with reducing CO<sub>2</sub> emissions would support a reduction in GHG concentrations and reduce the associated climate change impacts (e.g., increases in atmospheric temperature, changes in precipitation, increases in the frequency and intensity of extreme weather events, rising sea levels).

### 3.11.4 Cultural Resources

As described in Section 3.4, *Cultural Resources*, the Project would incorporate measures, as stipulated in the pending MOA, to minimize potential impacts on the Haynes Haven Stock Farm and MTAEC. The TVA Transmission Line Project would involve installation of overhead powerlines within the utility corridor in the southwestern portion of the site. The Proposed Action's manufacturing facility would block the view of the powerlines from both historic properties. Furthermore, other identified projects would expand or reconstruct existing facilities or infrastructure or would be constructed within the existing highway right of way. Thus, significant adverse cumulative impacts on cultural resources are not anticipated.

### 3.11.5 Socioeconomics and Environmental Justice

The construction and operation of the Project, along with the construction and operation of the identified projects in the region, would result in an increase in temporary construction workers and long-term employment. The increase in short-term and long-term jobs in the region would result in a beneficial socioeconomic impact. Because the Project and the other projects in the region subject to regional planning and coordination via the Greater Nashville Regional Council, Maury County, the Maury County Chamber and Economic Alliance, and TDOT, significant cumulative impacts on the existing infrastructure and services (e.g., roads, schools, fire departments, police force) resulting from any population migration to the MLMA are not anticipated.

The proportion of the population in Maury County that is minority or low-income is not significantly greater than the neighboring communities or state overall; therefore, no cumulative impacts would disproportionately affect the EJ communities in the project area.

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<sup>23</sup> Intergovernmental Panel on Climate Change (IPCC). 2013. *Climate Change 2013: The Physical Science Basis*. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T. F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P. M. Midgley (eds.)]. Cambridge, UK, and New York, NY, USA: Cambridge University Press. 1,535 pp.

<sup>24</sup> U.S. Council on Environmental Quality (CEQ). 2016. *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*. August 1. 33 pp.


### ***3.11.6 Traffic and Transportation***

As discussed in Section 3.8, Traffic and Transportation, the reconstruction and realignment of the Donald F. Ephlin Parkway is being undertaken by TDOT to support the Project and improve access to and from the existing industrial complex to include the project site. Ultium and TDOT would continue to coordinate throughout the development and implementation of both projects to ensure that potential traffic-delay impacts are minimized. In addition, improvements to Donald F. Ephlin Parkway would facilitate access to and from the recycling facility and the battery-assembly building. The Project, in conjunction with the identified projects in the region, would lead to an incremental increase in overall traffic; however, no significant adverse cumulative effects on the region's overall transportation network are anticipated.

## 4.0 FINDING

Based on this EA, DOE has determined that providing a federal loan to Ultium to tool a recently constructed manufacturing facility in Lordstown, Ohio, and construct and tool a manufacturing facility (inclusive of constructing a recycling building) near Spring Hill, Tennessee, will not have a significant effect on the human environment. The preparation of an environmental impact statement is therefore not required, and the DOE is issuing this Finding of No Significant Impact.

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Todd Stribley, NEPA Document Manager  
Director, Environmental Compliance  
U.S. Department of Energy, Loan Programs Office

This Finding of No Significant Impact should not be construed as a final decision about the issuance of a loan guarantee.

## 5.0 LIST OF AGENCIES CONTACTED

- Advisory Council on Historic Preservation
- Ohio Environmental Protection Agency
- Tennessee Department of Environment and Conservation
- Tennessee Historical Commission
- United States Fish and Wildlife Service
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS)

## **6.0 LIST OF PREPARERS**

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### **6.2 General Motors LLC on behalf of Ultium Cells, LLC**

- James Hartnett, Environmental Manager, 37 years' experience

### **6.3 Arcadis U.S. Inc. (contractor to Ultium Cells, LLC)**

- Vinnie Tremante, M.S. Environmental Science, 24 years' experience
- Sara Moore, M.S. Environmental Science, M of Public Affairs, 19 years' experience
- Tegan Baiocchi, M.S. Historic Preservation, 12 years' experience
- Crista Haag, M.A. Anthropology/Archaeology, 20 years' experience
- Laura Constantine, M.S. Marine Environmental Science, 36 years' experience

**APPENDIX A      PERMITS AND APPROVALS**

**Table A-1: Tooling and Operational Permits for the Proposed Project's Ohio Site**

Agency	Type of Approval	Identification Number	Date Applied	Date Approved
City of Warren	Industrial Wastewater Discharge Permit	2022-007	5/25/2021	2/8/2022
Ohio Environmental Protection Agency	Air Permit to Install	P0128323	4/15/2020	7/15/2020
Ohio Environmental Protection Agency	NPDES Industrial Stormwater General Permit	OEPA Facility Permit#: 3GR02267*AG EPA#: OHGR03049	11/1/2021	11/15/2021
Ohio Environmental Protection Agency	PTI Off-Spec NMP Storage Tank	DSWPTI1414092	03/23/2021	8/23/2021
Ohio Environmental Protection Agency	PTI Dechlorination System	DSWPTI1386139	11/04/2020	11/16/2020
Ohio Environmental Protection Agency	NPDES Non-Contact Cooling Water General Permit	3GN00069*AG	10/14/2021	1/6/2021
Ohio Environmental Protection Agency	Permit to Install Sanitary Sewer Phase 1	DSWPTI1351331	4/29/2020	5/5/2020
Ohio Environmental Protection Agency	Permit to Install Sanitary Sewer Phase 2	DSWPTI1362661	7/7/2020	9/15/2020
Ohio Environmental Protection Agency	Permit to Install Sanitary Sewer Phase 3	DSWPTI1423438	6/2/2021	7/2/2021
Ohio Environmental Protection Agency	RCRA Site ID	OHR000217331	6/28/2021	7/1/2021

**Table A-2: Permits for the Proposed Project's Tennessee Site**

Agency	Type of Approval	Identification Number	Date Applied	Date Approved
City of Columbia Wastewater Department	Sanitary Sewer Permit to Install	–	5/04/2022	–
Columbia Power & Water	Application for New Service	–	TBD	–
Maury County Codes Department	Building Permit	No. 2021-2020	–	10/27/2021
Tennessee Department of Environment & Conservation	Air Permit to Install	979184	6/29/2021	4/14/2022
Tennessee Department of Environment & Conservation	General Permit for Minor Alterations to Wetlands	ARAP – NR2018.3330	4/29/2021	5/6/2021
Tennessee Department of Environment & Conservation	NPDES Permit General Construction Activity	TNR182632	4/15/2021	5/10/2021
Tennessee Department of Environment & Conservation	RCRA Site ID	TNR000047779	–	1/27/2022



**APPENDIX B**

**CONSULTATION WITH AGENCIES, INDIAN TRIBES, AND  
INTERESTED PARTIES**

## Appendix B – Agency Coordination

Organization	Contact Date(s)	Summary of Contact
Tennessee Department of Environmental Quality	10/8/2021	Notice of Intent to Prepare an Environmental Assessment
U.S. Army Corps of Engineers	10/8/2021	Notice of Intent to Prepare an Environmental Assessment
Ohio Department of Environmental Protection	10/8/2021	Notice of Intent to Prepare an Environmental Assessment
U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS)	10/26/2021 11/05/2021	NRCS Farmland Conversion Impact Rating NRCS Response
Advisory Council on Historic Preservation	11/26/2021 12/10/2021	Section 106, Resolution of Adverse Effects Response from ACHP
Tennessee Historical Commission	11/02/2021 11/10/2021  11/17/2021 11/19/2021 02/04/2022 02/04/2022 02/17/2022 02/17/2022 02/18/2022 04/22/2022 04/22/2022 04/27/2022 05/12/2022 06/15/2022 07/08/2022 08/04/2022	Section 106 Initiation Letter THC response (awaiting LPO adverse effect determination) Adverse Effect Determination THC concurrence Expansion of APE THC concurrence with APE Expansion Addendum Report II and Draft Draft MOA THC Response Expanded APE and additional information THC Response Revised Draft Memorandum of Agreement THC response to Revised Draft MOA THC Notification to LPO regarding TVA THC Concurrence regarding lead agencies LPO Submittal of MOA and execution
Tennessee Valley Authority	07/07/2022 07/27/2022 08/15/2022	LPO to TVA TVA to LPO LPO submittal of executed MOA
U.S. Fish and Wildlife Service	06/28/2022 07/05/2022 07/25/2022 08/03/2022	Correspondence from and to USFWS LPO to USFWS LPO to USFWS USFWS to LPO



## Department of Energy

Washington, DC 20585

October 8, 2021

Bryan Davidson, Policy Analyst  
Office of Policy and Sustainable Practices, TDEC  
William R Snodgrass Tennessee Tower  
312 Rosa L Parks Ave, 2nd Floor  
Nashville, TN 37243

**SUBJECT:** Intent to Prepare an Environmental Assessment (EA) for a Proposed Federal Loan to Ultium Cells, LLC., for Lithium-Ion Battery Cell Manufacturing Facilities in Lordstown, Ohio and Spring Hill, Tennessee

Dear Bryan Davidson,

Under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, the U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a manufacturing facility in Lordstown, Ohio, and the construction and tooling of a manufacturing facility in Spring Hill, Tennessee. The facilities will be used to build lithium-ion battery cells designed for use in electric vehicles and other applications. The decision to prepare an EA was made in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

The purpose and need for DOE's action is to comply with our mandate under Section 136 of the Energy Independence and Security Act to select projects for financial assistance that are consistent with the goals of the Act. Pursuant to the Act, the ATVM program was established to provide loans to automobile and automobile parts manufacturers for the cost of re-equipping, expanding, or establishing manufacturing facilities in the United States to produce advanced technology vehicles or qualified components. DOE has determined that the tooling and construction of the lithium-ion battery cells manufacturing facilities as proposed by Ultium is consistent with the goals of the Act, and is using the NEPA process to assist in determining whether to issue a loan to Ultium to support the proposed project.

The proposed project would involve tooling a recently constructed manufacturing facility in Lordstown, Ohio and constructing a new facility in Spring Hill, Tennessee to produce lithium-ion battery cells. Tooling would involve acquiring and installing the battery cell manufacturing equipment in the approximate 2.0-million-square-foot Ohio facility, located on a nearly 180-acre site (see Attachment 1). The Tennessee facility would include an approximately 2.0-million-square-foot facility and several auxiliary structures and features on a 190-acre site (see Attachments 2 and 3). The auxiliary structures would include parking, loading areas, utility and access roads, stormwater management facilities, switch yard and electricity substation, warehouse, guard house, contractor trailer area, trailer staging areas and sea container storage, hazardous material storage, water tank area, and recycling area. In addition, construction would involve re-routing an access road. A two-mile public roadway is also being constructed by the Tennessee Department of Transportation as a separate project. Based on preliminary estimates, approximately 1,100 new jobs would be created at each plant.

The DOE NEPA regulations provide for the notification of host states of NEPA determinations and for the opportunity for host states to review EAs prior to DOE approval. This process is intended to improve coordination and to facilitate early and open communication. DOE will provide the draft EA to you for your review and comment.

If you or your staff would like to receive further information concerning this project or DOE's NEPA process for ATVM loans, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Sincerely,

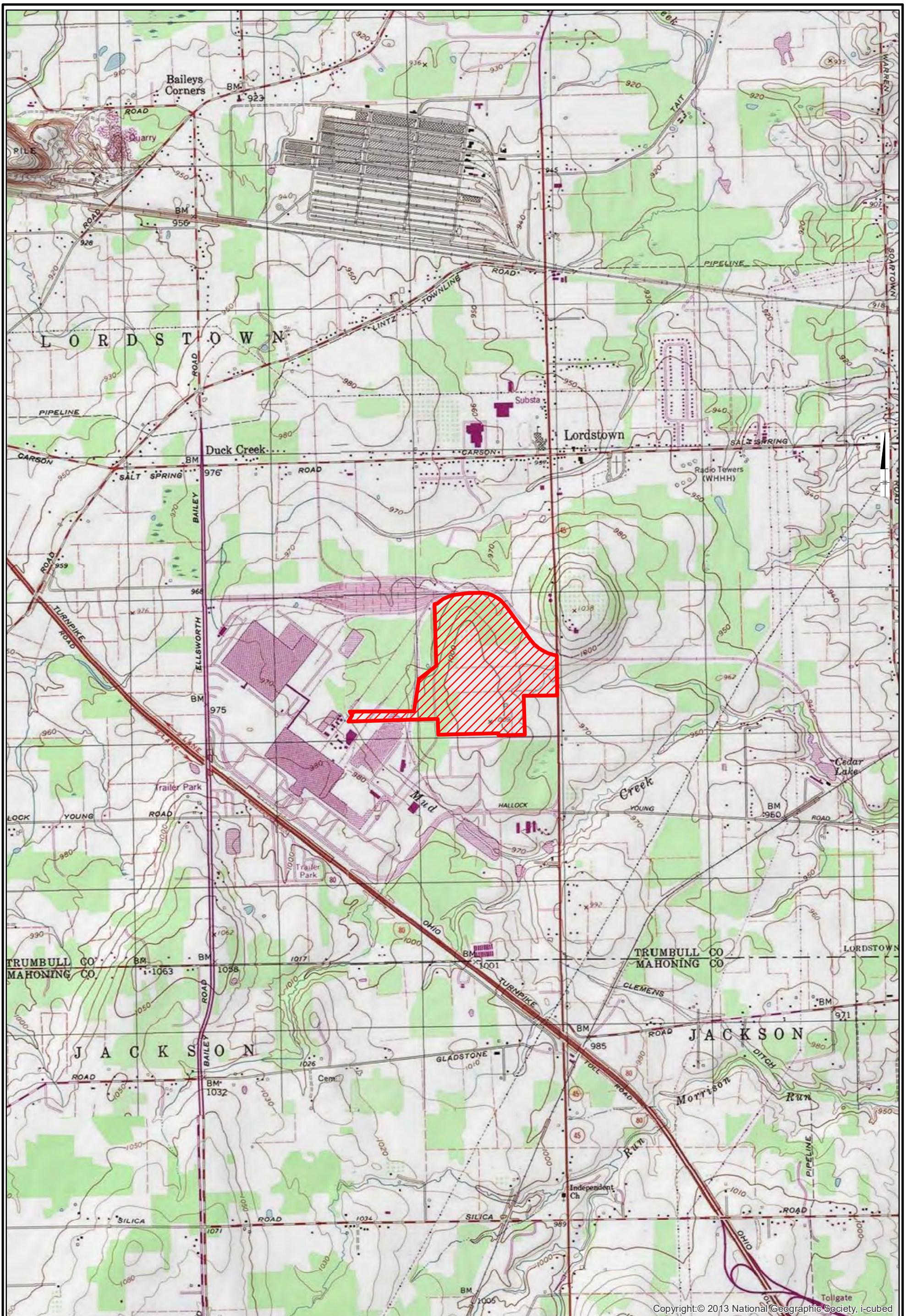


Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

- Attachment 1: Lordstown, OH Site Location Map
- Attachment 2: Spring Hill, TN Site Location Map
- Attachment 3: Spring Hill, TN Overall Grading and Drainage Plan

cc: Matthew Taylor, TDEC  
Eddie Gordon, TDEC  
Chad Augustin, TDEC  
Crystal Stacey, TDEC  
Samantha Iskrzycki, USACE

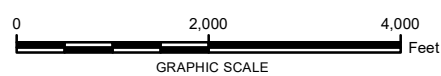


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**Legend**

 Battery Cell Plant Site/Permit Limits (177 Acres)

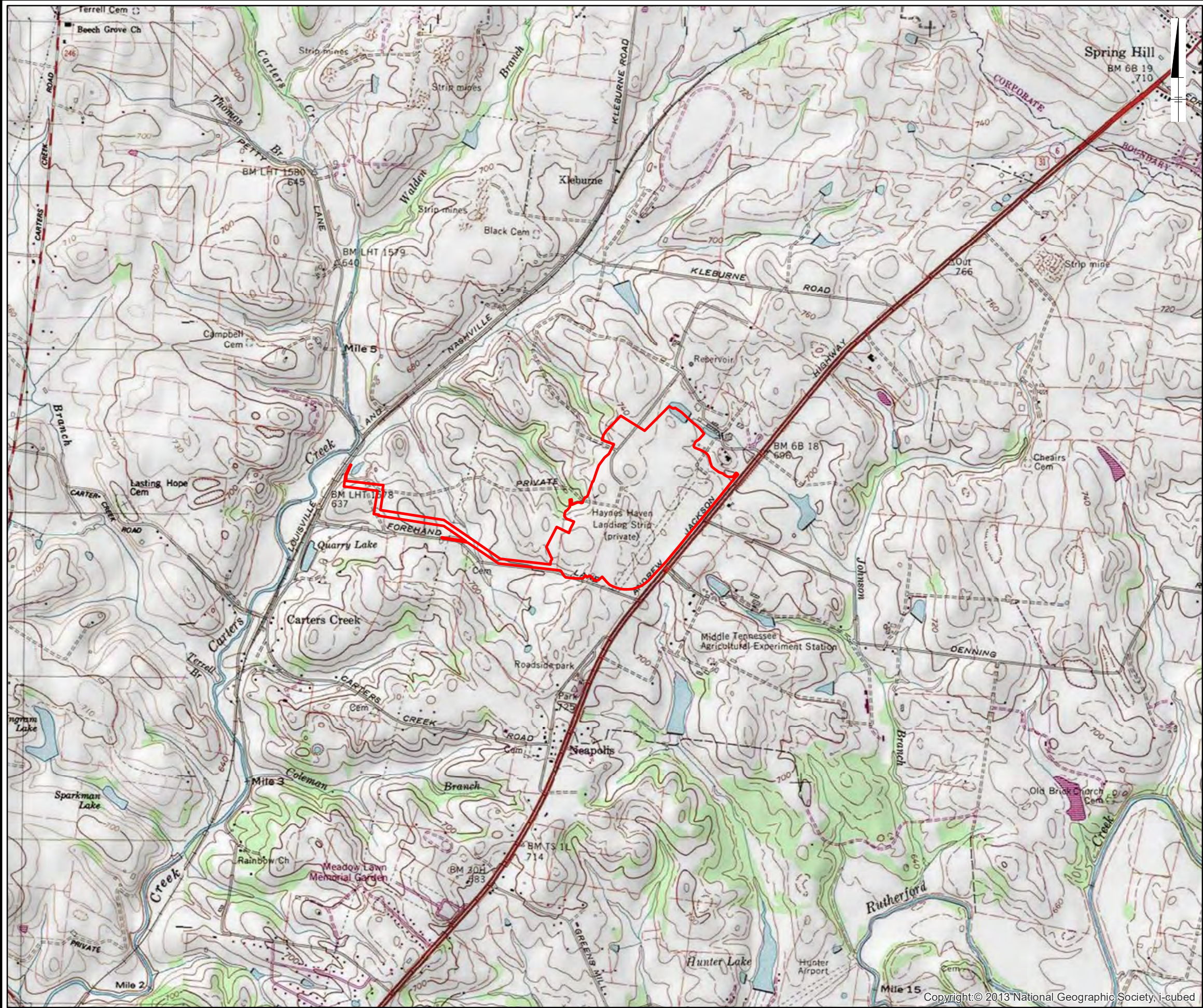
**NOTES:**  
 1. USGS TOPOGRAPHIC MAP OBTAINED FROM ESRI IMAGE SERVICE



GENERAL MOTORS, LLC  
 LORDSTOWN, OHIO  
**LORDSTOWN BATTERY CELL PLANT PROJECT**  
**SITE LOCATION MAP WITH PERMIT PROJECT LIMITS**

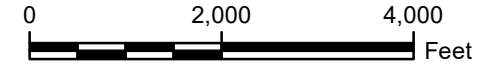
 **ARCADIS** Engineering & Consulting for municipal and built assets | **FIGURE 1**

City: Div/Group: Created By: Last Saved By: VTrémante  
 Project (Project #): C:\Users\vtremante\OneDrive - ARCADIS\Desktop\Spring Hill\GISMXD\Figure 1 - Site Location Map\Spring Hill\GISMXD\Figure 1 - Site Location Map\_L0D\_2021-09-09.mxd 9/29/2021 4:44:10 PM



**Legend**

Project Limits of Disturbance 2021-09-09

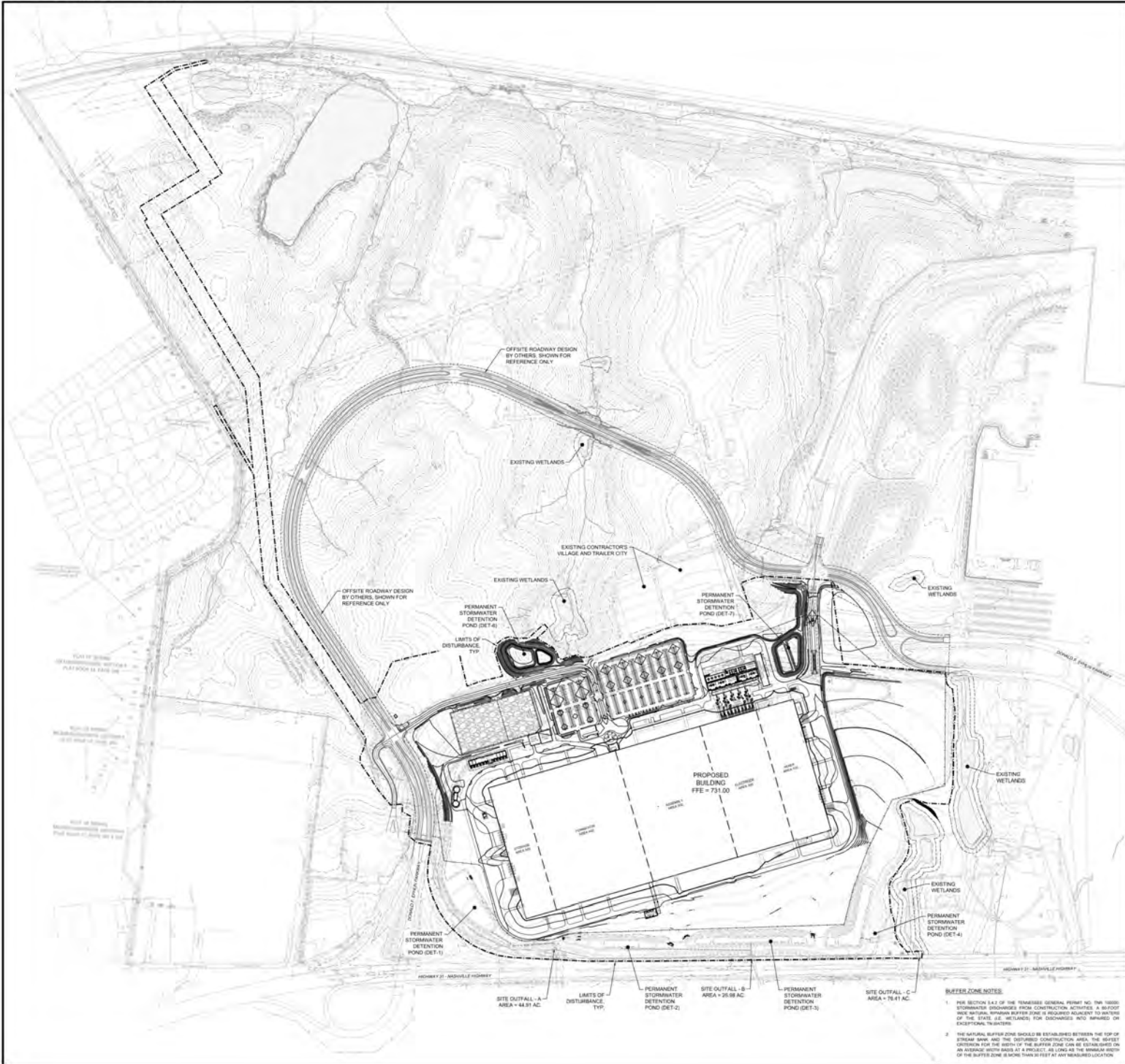


GRAPHIC SCALE

NOTES:  
 1. CARTERS CREEK AND SPRING HILL  
 USGS 7.5 MINUTE QUADRANGLE MAPS

ULTIUM CELLS LLC  
 SPRING HILL  
**PROJECT NIGHT SKY**

**SITE LOCATION MAP**



**LEGEND**

- PROPERTY LINE
- BUILDING LINE
- - - - - EXISTING MAJOR CONTOUR
- - - - - EXISTING MINOR CONTOUR
- 730 — PROPOSED MAJOR CONTOUR
- 720 — PROPOSED MINOR CONTOUR
- ===== STORM PIPE
- ===== STORM STRUCTURES
- ST (AT) (CD) STRUCTURE LABEL
- 730.00 SPOT ELEVATION
- 730.0000 FLUSH ELEVATION
- 730.0000 HIGH POINT ELEVATION
- 889.00 MATCH EXISTING FINISH GRADE ELEVATION

NO	DATE	DESCRIPTION
REVISIONS		

**NOT FOR CONSTRUCTION**

ULTIUM CELLS LLC DISCLAIMER & TYPICAL NOTES

SUPPLIER PROJECT NO: 45024 YD  
 SUPPLIER SHEET NO: NDH  
 SUPPLIER CHECKED BY: SAB, TWS  
 SUPPLIER NO: **Site Plan**

CONTRACT NO: 2100263-0000

**Gresham Smith**  
 GreshamSmith.com

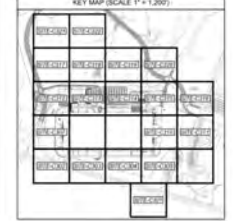
**ultium cells**

**Sustainable Workplaces**  
 "Creating places you want to be"

Spring Hill ASSY, STPG, PT  
 Site ID: 1536

Structure ID: 1000  
 Level: N/A

**ULTIUM CELLS LLC - SPRING HILL BATTERY CELL MANUFACTURING**



**OVERALL GRADING & DRAINAGE PLAN**

ULTIUM CELLS LLC PROJ NO 2100263  
 SHEET NO: SITE-C000

DESIGNED BY: J. HARRIS  
 CHECKED BY: A. DE AVILA  
 SCALE: AS NOTED  
 DATE:

**811**  
 Call before you dig

**GRAPHIC SCALE**

0 100 200 300 400

**811**  
 Call before you dig

**REFERENCES NOTES**

- PER SECTION 14.2 OF THE TENNESSEE GENERAL PERMIT NO. 100000, STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES A 50-FOOT HIGH NATURAL BUFFER ZONE IS REQUIRED ADJACENT TO WATERS OF THE STATE (I.E. WETLANDS) FOR DISCHARGES INTO IMPAIRED OR EXCEPTIONAL TURBIDITY.
- THE NATURAL BUFFER ZONE SHOULD BE ESTABLISHED BETWEEN THE TOP OF STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE GREATEST DISTANCE FROM THE BATTERY OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 50 FEET AT ANY TRANSVERSE LOCATION.

NO	DATE	DESCRIPTION
REVISIONS		

ULTIUM CELLS LLC PROJ NO 2100263  
 SHEET NO: SITE-C000

DESIGNED BY: J. HARRIS  
 CHECKED BY: A. DE AVILA  
 SCALE: AS NOTED  
 DATE:

**811**  
 Call before you dig

**GRAPHIC SCALE**

0 100 200 300 400

**811**  
 Call before you dig



## Department of Energy

Washington, DC 20585

October 8, 2021

Thomas Schneider  
Federal Facilities Program Administrator  
Ohio Environmental Protection Agency  
401 East Fifth Street  
Dayton, OH 45402-2911

**SUBJECT:** Intent to Prepare an Environmental Assessment (EA) for a Proposed Federal Loan to Ultium Cells, LLC., for Lithium-Ion Battery Cell Manufacturing Facilities in Lordstown, Ohio and Spring Hill, Tennessee

Dear Thomas Schneider,

Under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, the U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a manufacturing facility in Lordstown, Ohio, and the construction and tooling of a manufacturing facility in Spring Hill, Tennessee. The facilities will be used to build lithium-ion battery cells designed for use in electric vehicles and other applications. The decision to prepare an EA was made in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

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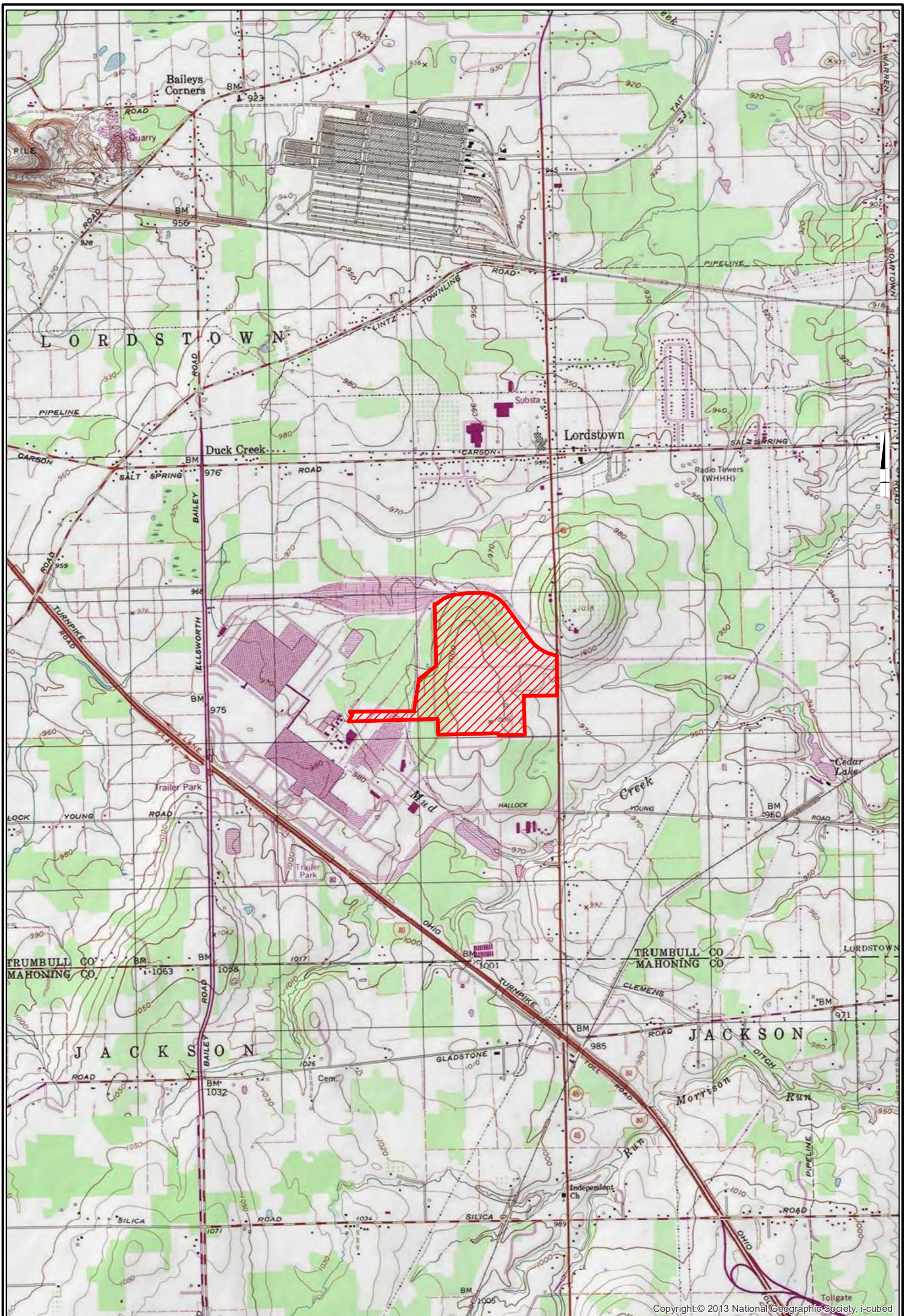
Sincerely,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

- Attachment 1: Lordstown, OH Site Location Map
- Attachment 2: Spring Hill, TN Site Location Map
- Attachment 3: Spring Hill, TN Overall Grading and Drainage Plan

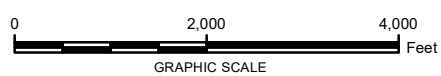


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**Legend**

 Battery Cell Plant Site/Permit Limits (177 Acres)

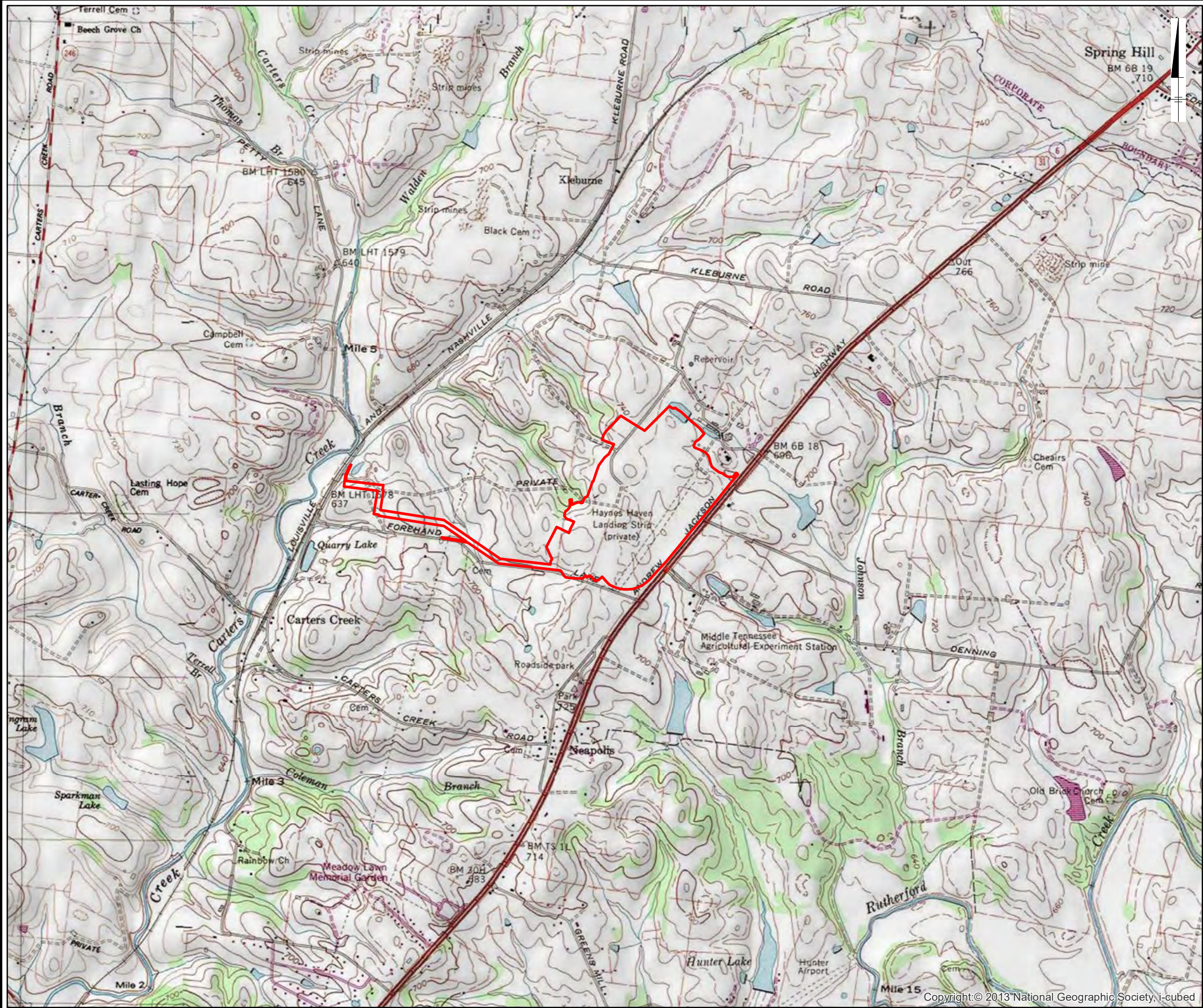
**NOTES:**  
 1. USGS TOPOGRAPHIC MAP OBTAINED FROM ESRI IMAGE SERVICE



GENERAL MOTORS, LLC LORDSTOWN, OHIO	
<b>LORDSTOWN BATTERY CELL PLANT PROJECT</b>	
<b>SITE LOCATION MAP WITH PERMIT PROJECT LIMITS</b>	
 <b>ARCADIS</b>	<b>FIGURE 1</b>

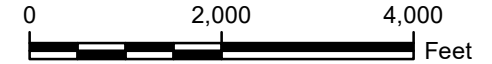
City/Columbus, Inc./GeoEye, Inc. Created By: Last Saved By: V.Tremaine  
 C:\Users\vtremaine\OneDrive - ARCADIS\Desktop\GIS\Lordstown\GIS\MXD\Figure 1 Site Location Map-Permit Limits 03132020.mxd 10/5/2021 4:58:13 PM

City: Div/Group: Created By: Last Saved By: VTrémante  
Project (Project #):  
C:\Users\vtremante\OneDrive - ARCADIS\Desktop\Spring Hill\GISMXD\Figure 1 - Site Location Map\Spring Hill\GISMXD\Figure 1 - Site Location Map.mxd 9/29/2021 4:44:10 PM



**Legend**

 Project Limits of Disturbance 2021-09-09

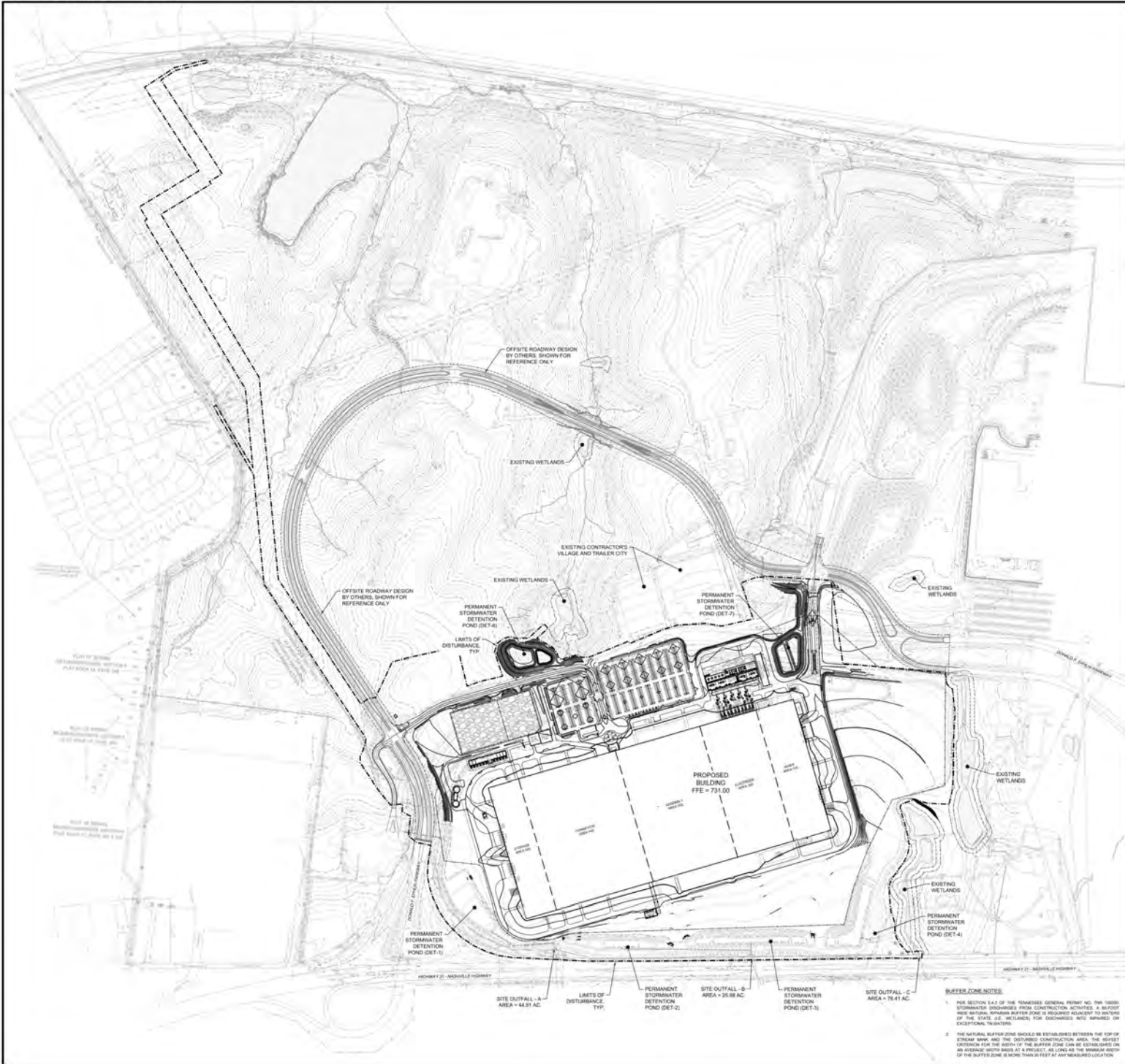


GRAPHIC SCALE

NOTES:  
1. CARTERS CREEK AND SPRING HILL  
USGS 7.5 MINUTE QUADRANGLE MAPS

ULTIUM CELLS LLC  
SPRING HILL  
PROJECT NIGHT SKY

**SITE LOCATION MAP**



**LEGEND**

- PROPERTY LINE
- BUILDING LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 730 --- PROPOSED MAJOR CONTOUR
- 720 --- PROPOSED MINOR CONTOUR
- STORM PIPE
- STORM STRUCTURES
- STRUCTURE LABEL
- SPOT ELEVATION
- FLUSH ELEVATION
- HIGH POINT ELEVATION
- MATCH EXISTING FINISH GRADE ELEVATION

NO.	DATE	DESCRIPTION
REVISIONS		

**NOT FOR CONSTRUCTION**

ULTIUM CELLS LLC DISCLAIMER & TYPICAL NOTES

SUPPLIER PROJECT NO:	CERTIFIED BY:
45024.10	
SUPPLIER DESIGNED BY:	
NDH	
SUPPLIER CHECKED BY:	
SAB, TWIS	
SUPPLIER IN CHARGE:	
Hal Pising	

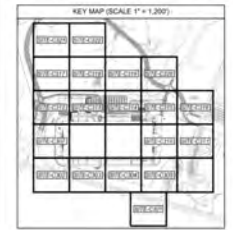


**ultium cells**  
**Sustainable Workplaces**  
"Creating places you want to be"

Spring Hill ASSY, STPG, PT  
Site ID: 1536  
Structure ID: 1000  
Level: N/A  
**ULTIUM CELLS LLC - SPRING HILL BATTERY CELL MANUFACTURING**

**OVERALL GRADING & DRAINAGE PLAN**

- PROJECT DATA**
- TITLE: TRACKING AND TRACKS
  - TOTAL SITE AREA = 188.92 AC
  - DATE OF DISTURBANCE = 08/28/20
  - FEMA FLOOD ZONE = A (PANEL A7) (REVISED, DATED APRIL 16, 2007)
  - EXISTING WETLANDS INFORMATION REFER TO DDC OR TERMINATION 60 (HMS) AND USACE FILE NO. 18-0-0-00000
  - DISCHARGE NORTH TO GARDNER CREEK, 3-YEAR DESIGN STORM
  - DISCHARGE SOUTH TO RUTHERFORD CREEK, 3-YEAR DESIGN STORM



- REFERENCES/NOTES**
- PER SECTION 14.1 OF THE TENNESSEE GENERAL PERMIT NO. 100000, STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES A 50 FOOT HIGH NATURAL BUFFER ZONE IS REQUIRED ADJACENT TO WATERS OF THE STATE (I.E. WETLANDS) FOR DISCHARGES INTO IMPAIRED OR EXCEPTIONAL TURBIDITY.
  - THE NATURAL BUFFER ZONE SHOULD BE ESTABLISHED BETWEEN THE TOP OF STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE GREATEST DISTANCE FROM THE BENTH OF THE BUFFER ZONE CAN BE DETERMINED ON AN AVERAGE WIDTH BASIS AT A POINT AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 50 FEET AT ANY TRANSVERSE LOCATION.

811  
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NORTH

GRAPHIC SCALE

ULTIUM CELLS LLC PROJ NO	2100263
ULTIUM CELLS LLC PROJ NO	2100263
ULTIUM CELLS LLC PROJ NO	2100263
ULTIUM CELLS LLC PROJ NO	2100263
ULTIUM CELLS LLC PROJ NO	2100263

DATE: AS NOTED

**SITE-C300**



## Department of Energy

Washington, DC 20585

October 26, 2021

Mackenzie Painter, Soil Conservationist – Maury County  
Columbia Field Office  
National Resources Conservation Service  
811 Hatcher Lane  
Columbia, TN 38401

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; NRCS Farmland Conversion Impact Rating

Dear Mackenzie Painter,

Under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, the U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee (DOE's proposed action and undertaking).

The proposed project would involve constructing and tooling a new facility at 100 Saturn Parkway in Spring Hill, Tennessee to produce lithium-ion battery cells designed for use in electric vehicles and other applications. The facility would include an approximately 2.0-million-square-foot facility and several auxiliary structures and features on a 190-acre site (see Attachments 1 and 2). The auxiliary structures would include parking, loading areas, utility and access roads, stormwater management facilities, switch yard and electricity substation, warehouse, guard house, contractor trailer area, trailer staging areas and sea container storage, hazardous material storage, water tank area, and recycling area. In addition, construction would involve re-routing an access road. A two-mile public roadway is also being constructed by the Tennessee Department of Transportation as a separate project.

The proposed project site consists of agricultural land and existing roadways and is located immediately south of an existing manufacturing facility. An existing shed and associated gravel drive are located near the northeast corner of the site and below-grade utilities servicing the adjacent manufacturing facility and associated structures traverse the west end of the site. Neighboring properties are predominantly industrial or

agricultural farms. The site is zoned as industrial. Attachments 3 and 4 show respectively the farmed and converted area and the nonurban use of the proposed project site.

DOE is aware that the Natural Resources Conservation Service (NRCS) has general responsibility for implementing the Farmland Protection Policy Act (FPPA) and to review projects that may affect prime, unique, or statewide important farmland. Since DOE is proposing to issue a loan for the construction of the Ultium Project, we are assuming responsibility for complying with the FPPA. As part of that process, DOE has completed Parts I, III, and VI of the enclosed form (Attachment 5); we ask that NRCS completes Parts II, IV, and V of the form. Pursuant to §658.4(g) of the FPPA, after DOE makes a final decision on the project, DOE will return a copy of the Form AD-1006 to the NRCS, indicating the final decision of the agency to the NRCS field office.

If you or your staff would like to receive further information concerning this project or DOE's ATVM Loan Program, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Sincerely,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

- Attachment 1: Spring Hill, TN Site Location Map
- Attachment 2: Spring Hill, TN Overall Grading and Drainage Plan
- Attachment 3: Prime Farmland: Farmed and Converted Area
- Attachment 4: Prime Farmland: Nonurban Use
- Attachment 5: AD-1006



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

November 5, 2021

Dear Mr. Stribley,

The Natural Resources Conservation Service (NRCS) in Tennessee has received your [Farmland Protection Policy Act](#) (FPPA) request ([AD-1006, Farmland Conversion Impact Rating](#)) regarding the Lithium-Ion Battery Cell Manufacturing Facility located in Spring Hill, Tennessee. The intent of the FPPA is to minimize the impact Federal programs have on the unnecessary and irreversible conversion of important farmland to nonagricultural uses.

Through the review process, it has been determined this project does not meet the guidance set forth by the act and is therefore **EXEMPT** from Farmland Protection Policy Act (FPPA) review due to the following:

- No federal funding – This project is not planned and/or constructed with the assistance of federal funding and therefore is not subject to FPPA.
- Not prime farmland – This project does not have an unnecessary or irreversible impact on land designated as prime farmland and therefore is not subject to FPPA. Official land classification information can be found at <http://websoilsurvey.nrcs.usda.gov>.
- Urban development - This project area is already in or committed to urban land use or has existing footprints including right-of-ways and therefore is not subject to FPPA.
- Subsurface corridor project (minimal disturbance) – Properly planned/permitted buried utility projects will result in minimal disturbance of agricultural lands and are therefore not subject to FPPA.
- Agricultural structures - The construction of on-farm structures that are associated with farm operations are not subject to FPPA.
- Zoning - This project area has been designated by a state or local government entity for commercial and/or industrial landuse and therefore is not subject to FPPA.
- Water storage - This project area involves land used for water storage and therefore is not subject to FPPA.
- Minimal acreage threshold - This project falls below the threshold of 10 acres per linear mile which require review and therefore is not subject to FPPA.

Questions regarding your inquiry and this response can be directed to the Tennessee State Soil Scientist at (615) 277-2550 or emailed to the FPPA intake box at [tnhawc@usda.gov](mailto:tnhawc@usda.gov).

Sincerely,



## Department of Energy

Washington, DC 20585

November 24, 2021

Mr. Christopher Wilson, Federal Property Management Section  
Advisory Council on Historic Preservation  
401 F Street NW, Suite 308  
Washington, DC 20001-2637

**Subject: U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Section 106 Resolution of Adverse Effects**

Dear Mr. Wilson:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, the U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee (DOE's proposed action and undertaking).

The proposed Project has been the subject of previous Section 106 consultations pursuant to the National Historic Preservation Act. The purpose of this letter is to present the DOE undertaking and the associated area of potential effect (APE), summarize the findings of the previous Section 106 consultations, present the status of the cultural resource reviews and analyses, and to notify and inquire if the Advisory Council on Historic Preservation would like to participate in the development of a Memorandum of Agreement to complete the Section 106 review process for this undertaking.

### **DOE Undertaking and APE**

The DOE undertaking (providing a loan to Ultium for the proposed project in Tennessee) would involve constructing a new lithium-ion battery cell manufacturing facility in Spring Hill, Tennessee (see Attachment 1). The facility would include an approximately 2.8-million-square-foot building and several auxiliary structures and features, a utility corridor, soil storage areas, and an existing spoil pile, all within an area totaling approximately 218 acres (see Attachment 2). The auxiliary structures and features include parking and loading areas, utility and access roads, stormwater management facilities, switch yard and electricity substation, warehouse, guard house, contractor trailer area,



trailer staging areas and sea container storage, hazardous material storage, water tank area, and a recycling area. The utility corridor would be used to route overhead power lines and underground utilities (potable water and sanitary sewer) to the project site; however, the overhead powerlines are a separate project and are not associated with the DOE undertaking. A two-mile public roadway is also being constructed by the Tennessee Department of Transportation as a separate project. The existing spoil pile contains stockpiled crushed stone from previous development adjacent to the project site.

The architectural APE includes the 158-acre building area where new above-ground structures would be located, as well as 0.5-mile buffer surrounding that area (Attachment 3). The architectural APE does not include a buffer around the utility corridor or the stockpile areas, as the undertaking includes only underground utilities, and the stockpile is a man-made feature that is being reduced in size and would not introduce any new visual impacts.

### **Previous and Ongoing Section 106 consultations and findings**

In accordance with Section 106 DOE has invited six Native American Indian Tribes and six local governmental and non-governmental organizations to participate in the Section 106 process (see Attachment 4). To identify historic properties and assess adverse effects, DOE reviewed the following documents:

- Architectural Survey Report: Project Night Sky, City of Spring Hill, Maury County, Tennessee, dated June 21, 2021
- Phase I Archaeological Report for Project Night Sky, Maury County, Tennessee, dated June 2021
- Addendum I: Phase I Archaeological Report for Project Night Sky, Maury County, Tennessee, dated November 2021
- The Tennessee State Historic Preservation Office response to the Archaeological Report dated June 14, 2021
- The Tennessee State Historic Preservation Office response to the Architectural Survey Report dated July 8, 2021

Based on DOE's review of the archaeological and architectural surveys and reports, as well as in consultation with the SHPO, DOE concurs with the following:

- The Haynes Haven Stock Farm is eligible for listing in the National Register under Criterion A, for agriculture, for its association with breeding notable Tennessee Walking Horses, and for its use as a breeding and show farm.
- The Haynes Haven Stock Farm is eligible under Criterion C, for architecture, as a good local example of late classical revival architecture for the farmhouse and for good examples of a large Craftsman inspired horse barn and ca. 1890s lattice barn.
- The Middle Tennessee Agricultural Experiment Station (MTAES) is eligible under Criterion A for its association with the state's efforts to foster innovation in agriculture.

In consultation with the SHPO, DOE determined that the undertaking will have an **adverse effect** on both the Haynes Haven Stock Farm and the MTAES, as both are located within the 0.5-mile buffer surrounding the 158-acre building area. The construction of the proposed project would disrupt the existing rural setting that is integral to the significance of both properties as agricultural historic resources. All the correspondence from the SHPO and DOE to the SHPO are included in Attachment 5.

### **Requests and Next Steps**

DOE intends to initiate the development of a memorandum of agreement (MOA) pursuant to 36 CFR Part 800.14(b), to address the potential adverse effects of the undertaking. DOE will circulate a draft MOA to the SHPO, Ultium, and the consulting parties that have expressed interest in the Section 106 process for review and comment. Because DOE intends to prepare a MOA to resolve the potential adverse effects, please notify me if the Council would like to participate in its development.

If you have any questions or comments, please do not hesitate to contact me at (303) 275-4549, or by email at [todd.stibley@hq.doe.gov](mailto:todd.stibley@hq.doe.gov).

Sincerely,



Todd Stibley  
NEPA Document Manager  
Loan Programs Office

### **Attachments:**

- Attachment 1: Spring Hill, TN Site Location Map
- Attachment 2: Spring Hill, TN Overall Site Development Map
- Attachment 3: Spring Hill, TN Architectural APE
- Attachment 4: Potentially Interested Parties
- Attachment 5: Correspondence



December 10, 2021

Mr. Todd Stribley  
NEPA Document Manager  
Loan Programs Office  
Department of Energy  
Washington, DC 20585

Ref: *Proposed Construction of a New Lithium-Ion Battery Cell Manufacturing Facility  
Spring Hill, Tennessee  
ACHP Project Number: 17741*

Dear Mr. Stribley:

On November 24, 2021, the Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the potential adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, Criteria for Council Involvement in Reviewing Individual Section 106 Cases, of our regulations, "Protection of Historic Properties" (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act, does not apply to this undertaking. Accordingly, we do not believe our participation in the consultation to resolve adverse effects is needed.

However, if we receive a request for participation from the State Historic Preservation Officer, Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Should the undertaking's circumstances change, consulting parties cannot come to consensus, or you need further advisory assistance to conclude the consultation process, please contact us.

Pursuant to Section 800.6(b)(1)(iv), you will need to file the final Section 106 agreement document (Agreement), developed in consultation with the Tennessee State Historic Preservation Office and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the Agreement and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require our further assistance, please contact Mr. Anthony Guy Lopez at (202) 517-0220 or by email at [alopez@achp.gov](mailto:alopez@achp.gov) and reference the ACHP Project Number above.

Sincerely,

LaShavio Johnson  
Historic Preservation Technician  
Office of Federal Agency Programs



## Department of Energy

Washington, DC 20585

November 2, 2021

Casey Lee, Historic Preservation Specialist/Coordinator  
Tennessee State Historic Preservation Office  
Section 106 Review and Compliance Program  
2941 Lebanon Pike  
Nashville, TN 37243-0442

**SUBJECT:** U.S. Department of Energy, Loan Programs Office, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Section 106 Initiation

Dear Ms. Lee,

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee (DOE's proposed action and undertaking). The purpose of this letter is to initiate consultation with the Tennessee State Historic Preservation Office under Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, present the DOE undertaking, present the archaeological and architectural areas of potential effect (APEs) and seek your concurrence, submit an additional survey report titled *Addendum I: Phase I Archaeological Report for Project Night Sky, Maury County, Tennessee*, dated November 2021 for your review, and present the current activities that DOE is executing pursuant to its Section 106 responsibilities.

### **DOE Undertaking and APE**

The DOE undertaking (providing a loan to Ultium for the proposed project in Tennessee) would involve constructing a new lithium-ion battery cell manufacturing facility in Spring Hill, Tennessee (see Attachment 1). The facility would include an approximately 2.8-million-square-foot building, several auxiliary structures and features, a utility corridor, soil storage areas, and an existing spoil pile all within an area totaling approximately 218 acres (see Attachment 2). The auxiliary structures and features include parking and loading areas, utility and access roads, stormwater management facilities,

switch yard and electricity substation, warehouse, guard house, contractor trailer area, trailer staging areas and sea container storage, hazardous material storage, water tank area, and a recycling area. The utility corridor would be used to route overhead power lines and underground utilities (potable water and sanitary sewer) to the project site; however, the overhead powerlines are a separate project and are not associated with the DOE undertaking. A two-mile public roadway is also being constructed by the Tennessee Department of Transportation as a separate project. The existing spoil pile contains stockpiled crushed stone from previous development adjacent to the project site.

The archaeological APE includes the area subject to ground disturbing activities, constituting the entire 218-acre Project footprint (Attachment 3), which is made up of a 158-acre building area, the 33-acre utility corridor, access roads, and soil staging areas, and the existing 27-acre spoil pile area. The architectural APE includes the 158-acre building area where new above-ground structures would be located, as well as 0.5-mile buffer surrounding that area (Attachment 4). The architectural APE does not include a buffer around the utility corridor or the stockpile areas, as the undertaking includes only underground utilities, and the stockpile is a man-made feature that is being reduced in size and would not introduce any new visual impacts.

### **Section 106 Next Steps**

In accordance with Section 106 to identify historic properties and assess adverse effects, DOE is reviewing the *Architectural Survey Report: Project Night Sky, City of Spring Hill, Maury County, Tennessee*, and the *Phase I Archaeological Report for Project Night Sky, Maury County, Tennessee*, your office's July 8, 2021 and June 14, 2021 responses to the respective studies, and the *Addendum I: Phase I Archaeological Report for Project Night Sky, Maury County, Tennessee*, dated November 2021 (submitted for your review, see Attachment 5). Based on our initial analysis, DOE anticipates preparing an adverse effect determination for architectural resources and a no adverse effect determination for archaeological resources.

DOE is identifying other potential consulting parties to include Ultium, Native American Indian tribes that have an interest in the project area, local governments and historical societies, and the Advisory Council on Historic Preservation. DOE will contact the potential consulting parties and request if they would like to participate in the Section 106 process and will submit the previous archaeological and architectural survey reports, and DOE's identification of historic properties and assessment of adverse effects to all interested parties.

We look forward to consulting with your office throughout the Section 106 process. If you have any questions or would like to discuss this project further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Sincerely,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

- Attachment 1: Spring Hill, TN Site Location Map
- Attachment 2: Spring Hill, TN Overall Site Development Plan
- Attachment 3: Spring Hill, TN Archaeological APE
- Attachment 4: Spring Hill, TN Architectural APE
- Attachment 5: Addendum I: Phase I Archaeological Report for Project Night Sky, Maury County, Tennessee, dated November 2021

cc: Jennifer M. Barnett, Tennessee Division of Archaeology



**TENNESSEE HISTORICAL COMMISSION**  
STATE HISTORIC PRESERVATION OFFICE  
2941 LEBANON PIKE  
NASHVILLE, TENNESSEE 37243-0442  
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[www.tnhistoricalcommission.org](http://www.tnhistoricalcommission.org)

November 10, 2021

Mr. Todd E. Stribley  
Department of Energy  
Department of Energy  
1000 Independence Avenue SW  
Washington, DC 20585

RE: DOE / Department of Energy, General Motors (Ultium) Battery Cell Manufacturing Facility, Project Night Sky, 158 Acres, Spring Hill, Maury County, TN

Dear Mr. Stribley:

In response to your request, we have reviewed the archaeological survey report and accompanying documentation submitted by you regarding the above-referenced undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Considering the information provided, we concur that no archaeological resources eligible for listing in the National Register of Historic Places will be affected by this undertaking. We further concur that the appropriate next step is to submit the effects determination for architectural resources. Once this is submitted, our office will comment on effects to architectural resources.

If project plans are changed or archaeological remains are discovered during project construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. Questions or comments may be directed to Casey Lee (615 253-3163).

Your cooperation is appreciated.

Sincerely,

for: E. Patrick McIntyre, Jr.  
State Historic Preservation Officer

Casey Lee  
Historic Preservation Specialist/Coordinator  
Section 106 Review and Compliance Program  
Tennessee State Historic Preservation Office



## Department of Energy

Washington, DC 20585

November 17, 2021

Casey Lee, Historic Preservation Specialist/Coordinator  
Tennessee State Historic Preservation Office  
Section 106 Review and Compliance Program  
2941 Lebanon Pike  
Nashville, TN 37243-0442

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Adverse Effect Determination

Dear Ms. Lee,

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee (DOE's proposed action and undertaking).

The purpose of this letter is to continue consultation with the Tennessee State Historic Preservation Office under Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, and present DOE's finding of adverse effects. DOE previously contacted your office on November 2, 2021, and a response from your office was received by DOE on November 10, 2021 (Attachments 1 and 2). The response concurred that no archaeological resources eligible for listing in the National Register of Historic Places will be affected by the undertaking.

The architectural area of potential effect (APE) includes the 158-acre building area where new above-ground structures would be located, as well as 0.5-mile buffer surrounding that area (Attachment 3). The architectural APE does not include a buffer around the utility corridor or the stockpile areas, as the utility corridor includes only underground utilities, and the stockpile is a man-made feature less than 50 years old that is being reduced in size and would not introduce any new visual impacts.



DOE reviewed the *Architectural Survey Report: Project Night Sky, City of Spring Hill, Maury County, Tennessee*, as well as your office's July 8, 2021 response to the study (Attachment 4) and concurs with the following:

- The Haynes Haven Stock Farm is eligible for listing in the National Register under Criterion A, for agriculture, for its association with breeding notable Tennessee Walking Horses, and for its use as a breeding and show farm.
- The Haynes Haven Stock Farm is eligible under Criterion C, for architecture, as a good local example of late classical revival architecture for the farmhouse and for good examples of a large Craftsman inspired horse barn and ca. 1890s lattice barn.
- The Middle Tennessee Agricultural Experiment Station (MTAES) is eligible under Criterion A for its association with the state's efforts to foster innovation in agriculture.

DOE has determined the undertaking will have an **adverse effect** on both the Haynes Haven Stock Farm and the MTAES, as both are located within the 0.5-mile buffer surrounding the 158-acre building area. The construction of the proposed project would disrupt the existing rural setting that is integral to the significance of both properties as agricultural historic resources. In the case of Haynes Haven, the proposed facility will be constructed immediately southwest of the recommended NRHP boundary within a historically cleared agricultural field and will be visible from most areas of the property. While a larger existing manufacturing facility is located within the property's viewshed to the north, the existing facility sits at a distance to the Haynes Haven property and its presence is largely hidden due to the topography of the landscape. Further, the existing facility and the Haynes Haven property are separated by cleared and cultivated fields, maintaining the rural setting of the property. In contrast, the proposed new facility will be constructed in closer proximity to Haynes Haven, and thus have a more conspicuous presence with less space for a buffer, though minimization efforts such as landscaping and vegetative screening are being considered.

Similarly, the new facility will be constructed to the northwest of the MTAES, which sits on the southeast side of Highway 31, and will introduce a new industrial visual component to an otherwise rural and agricultural setting. As with Haynes Haven, there are existing modern developments within the viewshed of the MTAES, including the existing manufacturing facility, Spring Hill High School, and the Highway 31/Donald F. Ephlin Parkway interchange. These developments are all sited at a distance from the MTAES property and are either separated by large agricultural fields, or only introduce a small visual element that does not alter the rural and agricultural feel of the overall setting. The new facility, however, will be constructed immediately across Highway 31 from the MTAES in proximity to the MTAES main entrance and primary buildings. It will thus have a more conspicuous presence, though minimization efforts, including landscaping and vegetative screening, are being considered.

We request your concurrence with the assessment of adverse effect by December 17, 2021. Upon your concurrence with the assessment of adverse effects, DOE will consult with you and other interested parties in the resolution of the adverse effects through the development of a Memorandum of Agreement. If you have any questions or would like to discuss this project further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Sincerely,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

- Attachment 1: November 2, 2021 Correspondence
- Attachment 2: November 10, 2021 Correspondence
- Attachment 3: Spring Hill, TN Architectural APE
- Attachment 4: July 8, 2021 Correspondence

cc: Jennifer M. Barnett, Tennessee Division of Archaeology



**TENNESSEE HISTORICAL COMMISSION**  
STATE HISTORIC PRESERVATION OFFICE  
2941 LEBANON PIKE  
NASHVILLE, TENNESSEE 37243-0442  
OFFICE: (615) 532-1550  
[www.tnhistoricalcommission.org](http://www.tnhistoricalcommission.org)

November 19, 2021

Mr. Todd E. Stribley  
Department of Energy  
Department of Energy  
1000 Independence Avenue SW  
Washington, DC 20585

RE: DOE / Department of Energy, General Motors (Ultium) Battery Cell Manufacturing Facility,  
Project Night Sky, 158 Acres, Spring Hill, Maury County, TN

Dear Mr. Stribley:

In response to your request, we have reviewed the documents submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Considering available information, we concur that the Haynes Haven Stock Farm and the Middle Tennessee Agricultural Experiment Station (MTAES) are eligible for listing in the National Register of Historic Places. We further concur that the project as currently proposed will adversely affect both historic resources as the new facility would disrupt the more rural setting integral to both properties' significance as agricultural historic resources under Criterion A. You should continue to consult with our office to resolve the adverse effect. Please direct questions and comments to Casey Lee (615 253-3163). We appreciate your cooperation.

Sincerely,

for: E. Patrick McIntyre, Jr.  
State Historic Preservation Officer

Casey Lee  
Historic Preservation Specialist/Coordinator  
Section 106 Review and Compliance Program  
Tennessee State Historic Preservation Office



## Department of Energy

Washington, DC 20585

February 4, 2022

Casey Lee, Historic Preservation Specialist/Coordinator  
Tennessee State Historic Preservation Office  
Section 106 Review and Compliance Program  
2941 Lebanon Pike  
Nashville, TN 37243-0442

**SUBJECT:** U.S. Department of Energy, Loan Programs Office, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Expansion to Area of Potential Effects

Dear Ms. Lee,

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee (DOE's proposed action and undertaking).

The purpose of this letter is to continue consultation with the Tennessee State Historic Preservation Office (THC) under Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800. Due to recent project changes DOE is presenting an updated archaeological Area of Potential Effects (APE) for the Spring Hill project and is requesting THC concurrence with the revised APE and that no additional cultural resource surveys are needed. Finally, DOE is requesting THC concurrence that the previously submitted finding of Adverse Effect for the Haynes Haven Stock Farm and Middle Tennessee Agricultural Experiment Station (MTAES) is still applicable.

A review of an updated limits disturbance (LOD) from January 2022 indicates that there are three areas that were not subject to the initial cultural resource review. Attachment 1 illustrates the three additional areas of the LOD located outside of the previous archaeological APE, and Attachment 2 provides the revised archaeological APE. Area 1 is a proposed utility corridor that would be used to route overhead power lines to the project site that will be installed, owned, and managed by the Tennessee Valley Authority (TVA). Area 2 includes a utility corridor for a proposed underground natural gas line that will be installed, owned, and managed by Atmos Energy. As previously provided in the correspondence dated November 2, 2021, the utility corridors (Areas 1 and 2) are

separate projects and are not part of the DOE undertaking. Area 3, a 2.4-acre workspace that encompasses portions of Donald F. Ephlin Parkway, is subject to the DOE undertaking.

The Phase I Archaeological survey and addendum completed in 2021 for the Project did document areas adjacent to Area 3 as previously disturbed from the construction of the Donald F. Ephlin Parkway. To the southeast of Area 3, a pedestrian archaeological survey yielded negative survey results. Photographs taken from the survey (Attachment 3) illustrate the disturbance from the Donald F. Ephlin Parkway in Area 3. In addition, soils within Area 3 are recorded as Maury silt loam, eroded gently sloping phase.

Given the previous disturbance, eroded soils, and no known historic properties, there is considered to be a low probability of identifying cultural resources within Area 3. Therefore, DOE recommends that no further investigation of cultural resources is necessary within the expanded APE and that the Adverse Effect finding for this project that was submitted to THC in November 2021 is still applicable.

We request your concurrence with this APE expansion, the recommendation for no further cultural resource investigations, and the applicability of the previously submitted finding document within thirty (30) days of receipt of this letter. If you have any questions or would like to discuss this project further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

Attachment 1: General Motors Spring Hill Limits of Disturbance Comparison Map

Attachment 2: Revised Archaeological APE

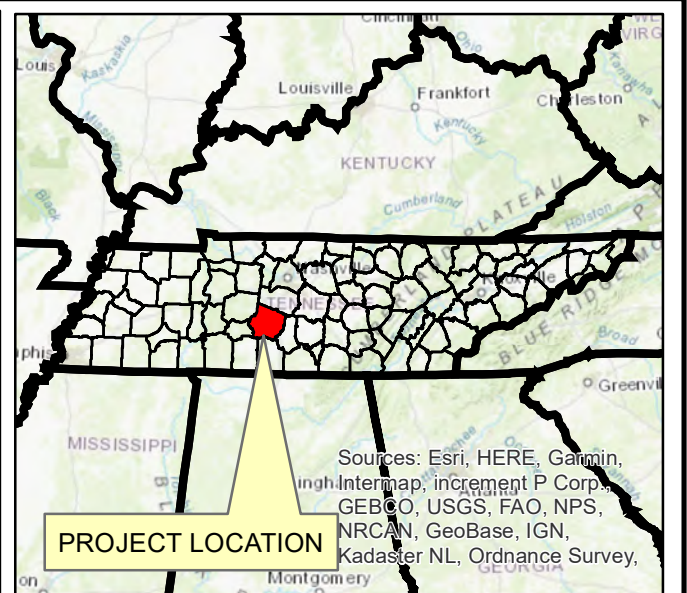
Attachment 2: Photographs of Area 3

**Attachment 1**  
**General Motors Spring Hill Limits of Disturbance Comparison Map**

City: Div/Group: Created By: Last Saved By: VTTremante  
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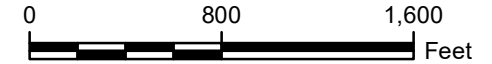
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, etc.

### Legend

- LOD 2022-01-21 (226 ac)
- LOD 2021-10-22 (218 ac)
- Streams
- WWC
- Wetland Boundaries



GRAPHIC SCALE

### NOTES:

- 1 - Expanded Overhead Electric Utility Easement (4.1 ac)
- 2 - Natural Gas Line Easement (1.3 ac)
- 3 - Additional Work Space (2.4 ac)

GENERAL MOTORS  
SPRING HILL  
**LIMITS OF DISTURBANCE**

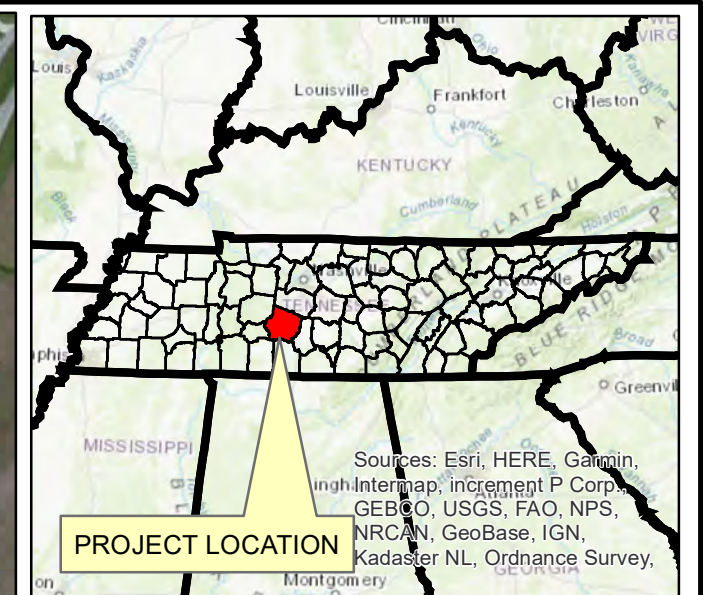
**LOD COMPARISON**

**Attachment 2**  
**Revised Archaeological APE**





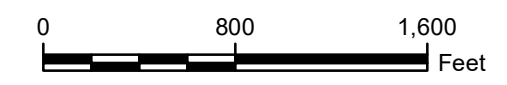
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Sources: Esri, HERE, Garmin, Intel, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, etc.

### Legend

 Area of Potential Effect



GRAPHIC SCALE

ULTIUM CELLS LLC  
SPRING HILL BATTERY CELL MANUFACTURING PLANT  
CULTURAL RESOURCES

ARCHAEOLOGICAL AREA  
OF POTENTIAL EFFECT

**Attachment 3**  
**Photographs of Area 3**



**Photograph 1. Overview of Area 3 (southeast edge), facing northeast.**



**Photograph 2. Overview of Area 3 (road right of way), facing northeast.**



**TENNESSEE HISTORICAL COMMISSION**

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February 4, 2022

Mr. Todd E. Stribley  
Department of Energy  
Washington, DC 20585

RE: DOE / Department of Energy, General Motors (Ultium) Battery Cell Manufacturing Facility, Project Night Sky, 158 Acres (35.723754, -86.969122), Spring Hill, Maury County, TN

Dear Mr. Stribley:

In response to your request, we have reviewed the documents you submitted regarding the proposed modifications to your previously reviewed proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

In order to complete our review of the revised undertaking, we will need to receive from you a detailed archaeological survey report of the "Area 3" expansion to the undertaking's area of potential effect for this undertaking. A list of individuals and organizations which have indicated a desire to work in Tennessee is available at [https://www.tn.gov/content/dam/tn/environment/archaeology/documents/arch\\_CONSLIST.pdf](https://www.tn.gov/content/dam/tn/environment/archaeology/documents/arch_CONSLIST.pdf). This list is solely for the convenience of persons or firms seeking archaeological services. It does not indicate nor imply any sanction, certification, or approval by the State of Tennessee.

Upon receipt of the survey report, we will continue our review of this undertaking as expeditiously as possible. Until such time as this office has rendered a final comment on this project, your Section 106 obligation under federal law has not been met. Please inform this office if this project is canceled or not funded, licensed, or permitted by the federal agency. Questions and comments may be directed to Jennifer M. Barnett ((615) 687-4780, [Jennifer.Barnett@tn.gov](mailto:Jennifer.Barnett@tn.gov)).

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.  
Executive Director and  
State Historic Preservation Officer

EPM/jmb



## Department of Energy

Washington, DC 20585

February 17, 2022

Casey Lee, Historic Preservation Specialist/Coordinator  
Tennessee State Historic Preservation Office  
Section 106 Review and Compliance Program  
2941 Lebanon Pike  
Nashville, TN 37243-0442

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Archaeological Report Addendum II

Dear Ms. Lee:

Please find attached for your review and comment Addendum II for the Phase I Archaeological Report for the Lithium-Ion Battery Cell Manufacturing Facility construction project in Spring Hill, Tennessee. The report includes the results of a survey of 2.4 acres recently added to the overall project area of potential effects (APE). No archaeological sites or surveys were identified in the APE.

We request your review and comments on this draft within thirty (30) days of receipt of this letter. However, if you have any immediate questions or concerns, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,

A handwritten signature in cursive script that reads "Todd Stribley".

Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

Attachment 1: Addendum II: Phase I Archaeological Report for Project Night Sky, Maury County, Tennessee



## Department of Energy

Washington, DC 20585

February 17, 2022

Casey Lee, Historic Preservation Specialist/Coordinator  
Tennessee State Historic Preservation Office  
Section 106 Review and Compliance Program  
2941 Lebanon Pike  
Nashville, TN 37243-0442

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Draft Memorandum of Agreement

Dear Ms. Lee:

Please find attached for your review and comment a draft Memorandum of Agreement (MOA) for the Lithium-Ion Battery Cell Manufacturing Facility construction project in Spring Hill, Tennessee. The purpose of the MOA is to resolve the adverse effects to the Haynes Haven Stock Farm and Middle Tennessee Agricultural Experiment Station (MTAES) that will result from the proposed project. All interested and consulting parties and Tribes are being provided with a copy of the MOA for review and comment.

We request your review and comments on this draft within thirty (30) days of receipt of this letter, and I will be contacting you during this review period to schedule a virtual meeting to discuss the MOA. However, if you have any immediate questions or concerns, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,

*Todd Stribley*

Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

Attachment 1: Draft Memorandum of Agreement



**TENNESSEE HISTORICAL COMMISSION**  
STATE HISTORIC PRESERVATION OFFICE  
2941 LEBANON PIKE  
NASHVILLE, TENNESSEE 37243-0442  
OFFICE: (615) 532-1550  
[www.tnhistoricalcommission.org](http://www.tnhistoricalcommission.org)

February 18, 2022

Mr. Todd E. Stribley  
Department of Energy  
Washington, DC 20585

RE: DOE / Department of Energy, General Motors (Ultium) Battery Cell Manufacturing Facility,  
Project Night Sky, Addendum II (35.723754, -86.969122), Spring Hill, Maury County, TN

Dear Mr. Stribley:

In response to your request, we have reviewed the archaeological report of investigations Addendum II and accompanying documentation submitted by you regarding the above-referenced undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Considering the information provided, we find that no archaeological resources eligible for listing in the National Register of Historic Places will be affected by this undertaking. If project plans are changed or archaeological remains are discovered during project construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. Complete and/or updated Tennessee Site Records should be submitted to the Tennessee Division of Archaeology for all sites recorded and/or revisited during the current investigation. Questions or comments may be directed to Jennifer M. Barnett ((615) 687-4780, [Jennifer.Barnett@tn.gov](mailto:Jennifer.Barnett@tn.gov)).

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.  
Executive Director and  
State Historic Preservation Officer

EPM/jmb



## Department of Energy

Washington, DC 20585

April 22, 2022

Casey Lee, Historic Preservation Specialist/Coordinator  
Tennessee State Historic Preservation Office  
Section 106 Review and Compliance Program  
2941 Lebanon Pike  
Nashville, TN 37243-0442

**SUBJECT:** U.S. Department of Energy, Loan Programs Office, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Second Expansion to Area of Potential Effects & Archaeological Report Addendum III

Dear Ms. Lee:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee (DOE's proposed action and undertaking).

The purpose of this letter is to continue consultation with the Tennessee State Historic Preservation Office (THC) under Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800. Due to additional project changes, DOE is presenting updated archaeological and architectural Areas of Potential Effects (APE) for the Spring Hill project. With this letter, DOE is requesting the following:

- THC concurrence with the revised APE;
- THC review of the third addendum report containing Phase I archaeological survey results within the revised APE;
- THC concurrence that no additional cultural resource surveys are needed; and,
- THC concurrence that the previously submitted finding of Adverse Effect for the Haynes Haven Stock Farm and Middle Tennessee Agricultural Experiment Station (MTAES) is still applicable.

Recent project changes include the addition of laydown areas, contractor's yard, parking, and equipment and soil storage, and the construction of a recycling facility building (not to include tooling), all of which comprise an addition 53.4 acres of new, proposed land disturbance. The recycling building location is currently being evaluated and has two site



options, both of which are included in the expanded limits of disturbance (LOD) and APE (Attachment 1). The recycling building will be tooled and operated by others and will process used or inoperable battery cells for recovery of raw materials for reuse.

Due to these project changes, a new APE for archaeological and architectural cultural resources is being proposed. Attachment 2 illustrates the additional areas of the LOD located outside of the previous archaeological APE, constituting the extent of the revised archaeological APE. Attachment 3 depicts the slight expansion of the 0.5 mile-buffer that makes up the architectural APE to account for potential effects from the recycling building. No permanent above ground structures are located in the other areas (laydown areas, contractor's yard, parking, and equipment and soil storage) associated with the archaeological APE, and were not considered in defining the architectural APE.

An additional Phase I Archaeological survey was conducted in seven areas that make up the total 53.4 acres of proposed LOD and APE expansion. A Phase I archaeological survey report detailing this investigation and its findings is attached for your review and comment (Attachment 4). The location of the additional facility is on land that was previously disturbed from agricultural activities or during construction of an existing vehicle assembly plant located immediately to the north of the Project site. Background research on these new land areas, a pedestrian reconnaissance survey, and shovel testing yielded negative survey results and no sites were identified. DOE is requesting your review and comment on this report.

Within the expanded architectural APE, there are no additional standing or historic structures. Therefore, DOE recommends that no further investigation of architectural resources is necessary within this portion of the APE.

Considering the entire proposed APE with the new expansion, the undertaking will still result in adverse effects to the Haynes Haven Stock Farm and MTAES property. The nature of these effects is visual due to the introduction of intrusive, modern structures near the property, primarily by the proposed manufacturing facility. The recycling building is a similarly modern structure but will be shorter in height (40 feet compared to 75 feet) than the manufacturing facility. The construction of the recycling building will contribute to the adverse visual effects on the Haynes Haven Stock Farm and MTAES property. However, as the recycling building will be a small part of the modern site, the nature and scale of the adverse effects to these properties has not changed. Therefore, DOE is requesting concurrence from THC that the previously submitted finding is still applicable.

We request your review of and concurrence with the proposed APE expansion, the third addendum Phase I archaeological survey report, the recommendation that no additional architectural surveys are needed, and the applicability of the previously submitted Adverse Effect finding document within thirty (30) days of receipt of this letter.

Once we receive your concurrence, an updated Memorandum of Agreement with the updated project description and previously proposed THC updates, will be distributed to THC and consulting parties for review. If you have any questions or would like to discuss this project further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

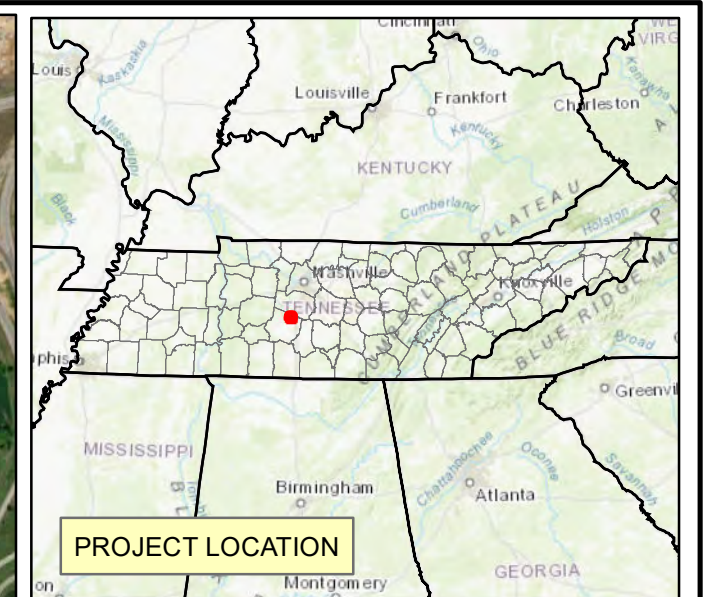
Attachment 1: Recycling Building Locations Map

Attachment 2: Revised Archaeological APE

Attachment 3: Revised Architectural APE

Attachment 4: Addendum III: Phase I Archaeological Report for Project Night Sky,  
Maury County, Tennessee

**Attachment 1**  
**Recycling Building Locations Map**

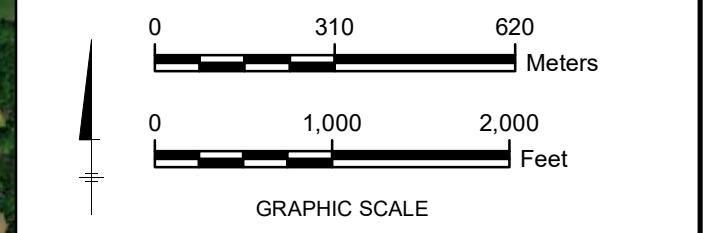


**Legend**

- Addendum III Survey, April 2022 (APE) [53 acres]
- Project
- Previous APE

**Proposed Recycling Facility**

- Option A
- Option B



Base Map Source:  
Esri World Imagery Clarity Layer and World Topographic Layer. Obtained from Esri Imagery Service.

GENERAL MOTORS, LLC  
PROJECT NIGHT SKY  
SPRING HILL, MAURY COUNTY, TENNESSEE

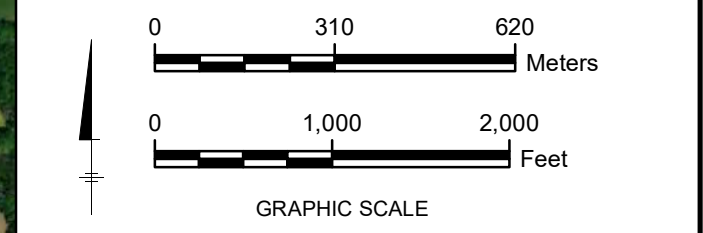
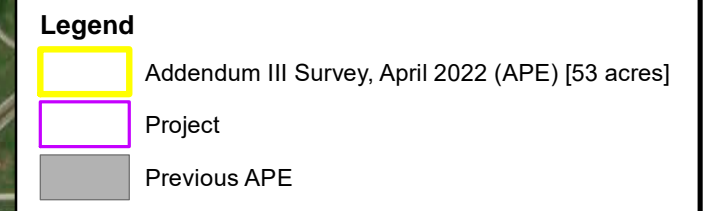
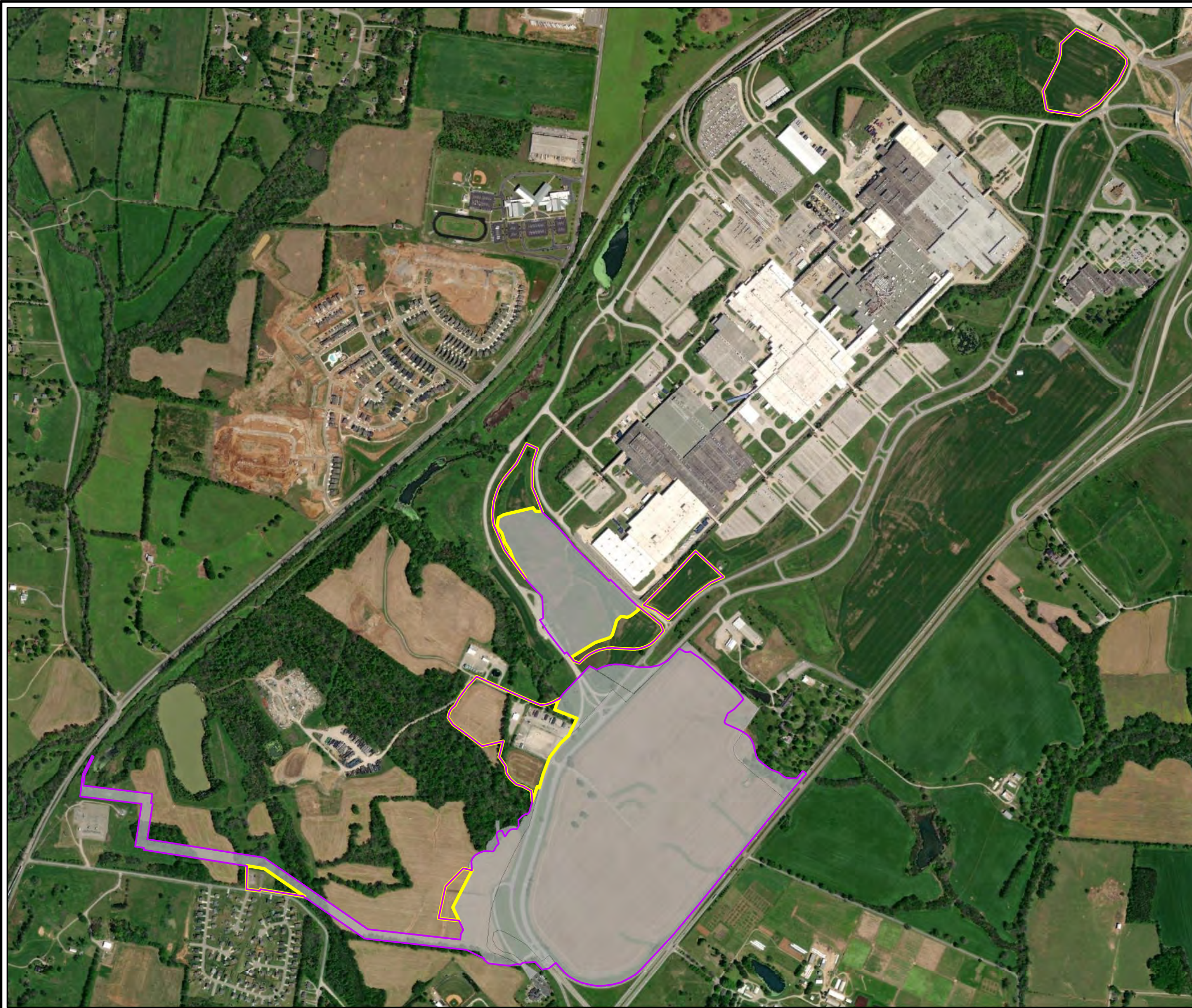
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**POTENTIAL RECYCLE  
BUILDING LOCATIONS**

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**ARCADIS** | **FIGURE 1**

**Attachment 2**  
**Revised Archaeological APE**

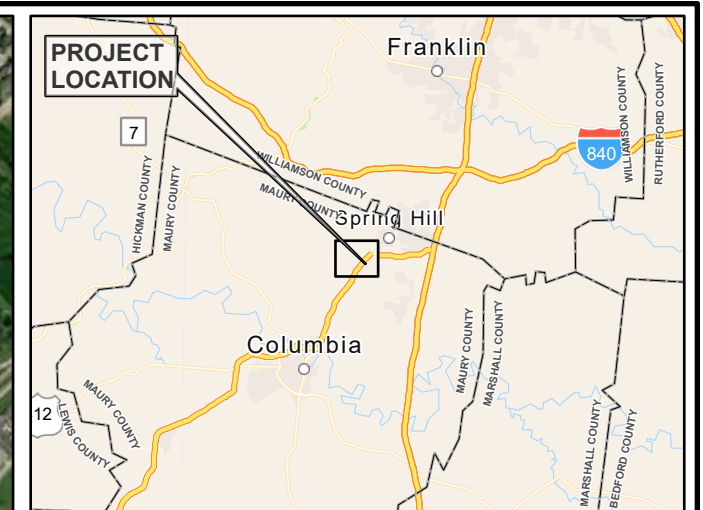
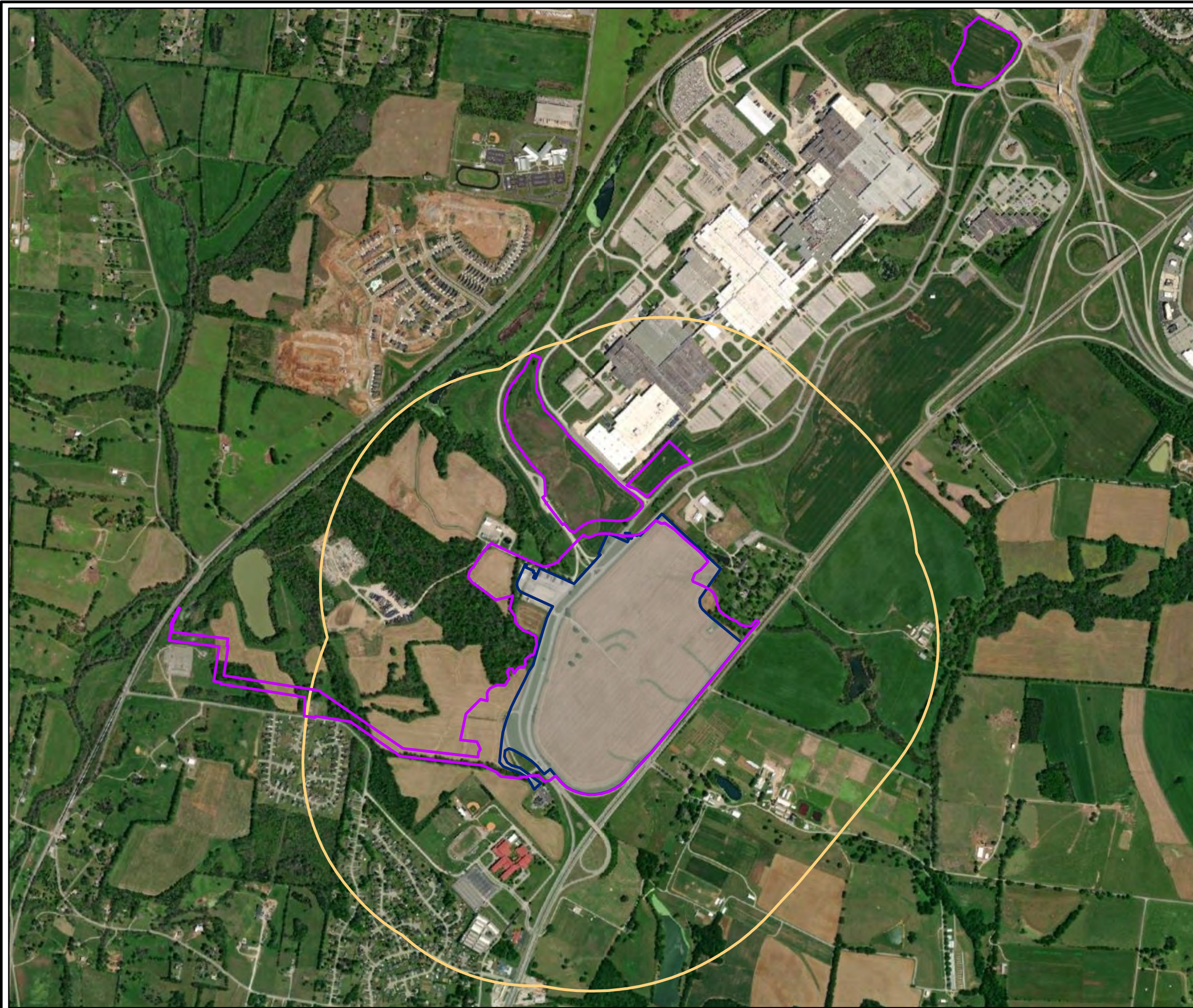


Base Map Source:  
Esri World Imagery Clarity Layer and World Topographic Layer. Obtained from Esri Imagery Service.

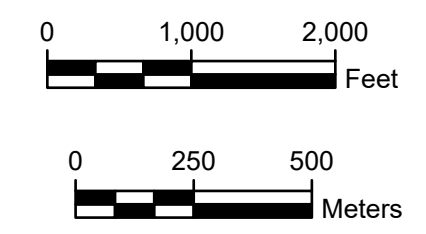
ULTIUM CELLS, LLC  
PROJECT NIGHT SKY  
SPRING HILL, MAURY COUNTY, TENNESSEE

**AREA OF POTENTIAL EFFECT**

**Attachment 3**  
**Revised Architectural APE**



- LEGEND:**
- PROJECT
  - APE - 0.5 MILE BUFFER
  - CURRENT BUILDING LOD



NOTE:  
1. 2020 AERIAL IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.

GENERAL MOTORS SPRING HILL CULTURAL RESOURCES DESKTOP REVIEW MAURY COUNTY, TENNESSEE	
<b>ARCHITECTURAL APE</b>	
	<b>FIGURE 3</b>





**TENNESSEE HISTORICAL COMMISSION**  
STATE HISTORIC PRESERVATION OFFICE  
2941 LEBANON PIKE  
NASHVILLE, TENNESSEE 37243-0442  
OFFICE: (615) 532-1550  
[www.tnhistoricalcommission.org](http://www.tnhistoricalcommission.org)

April 22, 2022

Mr. Todd E. Stribley  
Department of Energy  
Washington, DC 20585

RE: DOE / Department of Energy, General Motors (Ultium) Battery Cell Manufacturing Facility, Project Night Sky, Revised (35.723754, -86.969122), Spring Hill, Maury County, TN

Dear Mr. Stribley:

In response to your request, we have reviewed the additional documentation and third archaeological report addendum submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Considering available information, we concur with your agency's revised definition of the area of potential effect for this undertaking. In accordance with our previous correspondence, we further concur that the undertaking as currently proposed will adversely affect the National Register eligible Haynes Haven Stock Farm and Middle Tennessee (MTAES). You should continue to consult with our office to resolve the adverse effect. Please direct questions and comments to Jennifer M. Barnett (615 687-4780, [Jennifer.Barnett@tn.gov](mailto:Jennifer.Barnett@tn.gov)). We appreciate your cooperation.

Sincerely,

E. Patrick McIntyre, Jr.  
Executive Director and  
State Historic Preservation Officer

EPM/jmb



## Department of Energy

Washington, DC 20585

April 27, 2022

Casey Lee, Historic Preservation Specialist/Coordinator  
Tennessee State Historic Preservation Office  
Section 106 Review and Compliance Program  
2941 Lebanon Pike  
Nashville, TN 37243-0442

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Revised Draft Memorandum of Agreement

Dear Ms. Lee:

Please find enclosed for your review and comment a revised draft Memorandum of Agreement (MOA) for the Lithium-Ion Battery Cell Manufacturing Facility construction project in Spring Hill, Tennessee. The purpose of the MOA is to resolve the adverse effects to the Haynes Haven Stock Farm and Middle Tennessee Agricultural Experiment Station (MTAES) that will result from the proposed project. All interested and consulting parties and Tribes are being provided with a copy of the revised MOA for review and comment.

The revised draft MOA replaces the draft MOA submitted to you on February 18, 2022, and incorporates the project changes described in our letter to you dated April 22, 2022, as well as comments provided by your office. Through consultation with your office, DOE determined that the adverse effect finding on the Haynes Haven Stock Farm and the Middle Tennessee AgResearch and Experiment Center are still applicable.

We request your review and comments on this draft within thirty (30) days of receipt of this letter, and I will be contacting you during this review period to schedule a virtual meeting to discuss the MOA. However, if you have any immediate questions or concerns, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachment:

Attachment 1: Revised Draft Memorandum of Agreement

**From:** Section 106 <[Section.106@tn.gov](mailto:Section.106@tn.gov)>

**Sent:** Thursday, May 12, 2022 11:11 AM

**To:** DOE LPO Environmental <[DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com)>

**Subject:** RE: U.S. Department of Energy, Loan Programs Office: Revised Draft Memorandum of Agreement

Hi Todd,

We have no additional comments for the MOA. Please let us know if any other consulting parties have asked to participate and if they have submitted any comments on the agreement.

Best,  
Casey



**Casey Lee** | Historic Preservation Specialist, Section 106  
Tennessee Historical Commission  
State Historic Preservation Office  
2941 Lebanon Pike, Nashville, TN 37214  
p. 615-253-3163  
[Casey.Lee@tn.gov](mailto:Casey.Lee@tn.gov)  
[tnhistoricalcommission.org](http://tnhistoricalcommission.org)

**From:** [Section 106](#)  
**To:** [Stribley, Todd](#)  
**Subject:** [EXTERNAL] RE: Ultium Final MOA for Signature  
**Date:** Wednesday, June 15, 2022 9:20:41 AM  
**Attachments:** [image001.png](#)

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Hi Todd,

We recently received an undertaking from the TVA regarding the construction of a new transmission line and substation for the Project Night Sky Project. Based on guidance we have received from the ACHP in the past, the undertakings are linked, and therefore if the federal agencies do not agree to designate one as lead for each undertaking, then they need to separately consider the cumulative effects of the connected undertakings.

Please let me know if you would like a phone call to talk about this more!

Best,  
Casey



**Casey Lee** | Historic Preservation Specialist, Section 106  
Tennessee Historical Commission  
State Historic Preservation Office  
2941 Lebanon Pike, Nashville, TN 37214  
p. 615-253-3163  
[Casey.Lee@tn.gov](mailto:Casey.Lee@tn.gov)  
[tnhistoricalcommission.org](http://tnhistoricalcommission.org)

---

**From:** Ryan, Angela <angela.ryan@hq.doe.gov>  
**Sent:** Friday, June 10, 2022 1:09 PM  
**To:** Casey Lee <Casey.Lee@tn.gov>  
**Cc:** McCoy, Maureen <Maureen.McCoy@icf.com>; Stribley, Todd <todd.stribley@hq.doe.gov>  
**Subject:** [EXTERNAL] RE: Ultium Final MOA for Signature

Hello, Casey.

Thank you for your quick response and please see the attached signed forms for the Applicant and the Department of Energy. We will send you the other two signatures as soon as they are received. Is there anything else I can provide at this time?

Very Respectfully,

Angela Ryan  
Environmental Protection Specialist  
Loans Program Office  
Department of Energy  
240.220.4586  
[Angela.Ryan@hq.doe.gov](mailto:Angela.Ryan@hq.doe.gov)

---

**From:** Casey Lee <[Casey.Lee@tn.gov](mailto:Casey.Lee@tn.gov)>  
**Sent:** Friday, June 10, 2022 2:04 PM  
**To:** Ryan, Angela <[angela.ryan@hq.doe.gov](mailto:angela.ryan@hq.doe.gov)>  
**Cc:** McCoy, Maureen <[Maureen.McCoy@icf.com](mailto:Maureen.McCoy@icf.com)>; Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>  
**Subject:** [EXTERNAL] RE: Ultium Final MOA for Signature

Hi Angela,

Typically, our office requests that the federal agency and other consulting parties sign the agreement first (unless ACHP is participating and then they sign last). Please let me know if there is an issue with this request.

Best,  
Casey



**Casey Lee** | Historic Preservation Specialist, Section 106  
Tennessee Historical Commission  
State Historic Preservation Office  
2941 Lebanon Pike, Nashville, TN 37214  
p. 615-253-3163  
[Casey.Lee@tn.gov](mailto:Casey.Lee@tn.gov)  
[tnhistoricalcommission.org](http://tnhistoricalcommission.org)

---

**From:** Ryan, Angela <[angela.ryan@hq.doe.gov](mailto:angela.ryan@hq.doe.gov)>  
**Sent:** Thursday, June 9, 2022 4:05 PM  
**To:** Casey Lee <[Casey.Lee@tn.gov](mailto:Casey.Lee@tn.gov)>  
**Cc:** McCoy, Maureen <[Maureen.McCoy@icf.com](mailto:Maureen.McCoy@icf.com)>; Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>  
**Subject:** [EXTERNAL] Ultium Final MOA for Signature

**\*\*\* This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security. \*\*\***

Good afternoon, Casey.

I am working with Todd Stribley on finalizing the Ultium Night Sky MOA process. Please see the attached letter, MOA and specific signature page for E. Patrick McIntyre, Jr. Once all parties have signed, the final executed MOA will be sent out to all parties.

A hard copy of these documents can be sent upon request. Thank you for your collaboration on this project, and please do not hesitate to contact me if you need anything further.

Very Respectfully,

Angela Ryan  
Environmental Protection Specialist  
Loans Program Office  
Department of Energy  
240.220.4586  
[Angela.Ryan@hq.doe.gov](mailto:Angela.Ryan@hq.doe.gov)

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**From:** [TN Help](#)  
**To:** [Stribley, Todd](#)  
**Cc:** [mharle@tva.gov](mailto:mharle@tva.gov); [LPO Environmental](#)  
**Subject:** [EXTERNAL] General Motors (Ultium) Battery Cell Manufacturing Facility, Project Night Sky - Project # SHPO0001127  
**Date:** Wednesday, July 27, 2022 7:50:32 AM  
**Attachments:** [State Seal for TDEC.png](#)  
[patricksignature.png](#)

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**TENNESSEE HISTORICAL COMMISSION**  
**STATE HISTORIC PRESERVATION OFFICE**  
2941 LEBANON PIKE  
NASHVILLE, TENNESSEE 37243-0442  
OFFICE: (615) 532-1550  
[www.tnhistoricalcommission.org](http://www.tnhistoricalcommission.org)

2022-07-08 08:31:54 CDT

Mr. Todd Stribley  
Department of Energy  
[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)

RE: Department of Energy (DOE), General Motors (Ultium) Battery Cell Manufacturing Facility, Project Night Sky, Project#: SHPO0001127, Spring Hill, Maury County, TN

Dear Mr. Stribley:

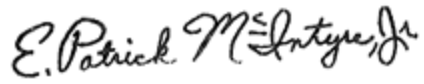
In response to your request, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

We appreciate the DOE's notification of lead federal agency status for the General Motors (Ultium) Battery Cell Manufacturing Facility. Further, we acknowledge that the DOE is in agreement with the Tennessee Valley Authority (TVA) regarding the TVA's status as lead federal agency for the construction of the Ultium Night Sky 161-Kv Transmission Line.

Please provide your Project # when submitting any additional information regarding this undertaking. You may direct questions or comments to Casey Lee, who drafted this response, at [Casey.Lee@tn.gov](mailto:Casey.Lee@tn.gov), +16152533163.



Sincerely,



E. Patrick McIntyre, Jr.  
Executive Director and  
State Historic Preservation Officer

Ref:MSG6728072\_RzRFxPDLLjadkmwvuRkh

\*\*\*\*\*

This message does not originate from a known Department of Energy email system.  
Use caution if this message contains attachments, links or requests for information.

\*\*\*\*\*



## Department of Energy

Washington, DC 20585

August 4, 2022

Casey Lee, Historic Preservation Specialist/Coordinator  
Tennessee State Historic Preservation Office  
Section 106 Review and Compliance Program  
2941 Lebanon Pike  
Nashville, TN 37243-0442

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Final Memorandum of Agreement

Dear Ms. Lee:

Please find enclosed the final Memorandum of Agreement (MOA) for the Lithium-Ion Battery Cell Manufacturing Facility construction project in Spring Hill, Tennessee. This revised final MOA replaces the MOA submitted to your office on June 9, 2022, and pursuant to the letter submitted by the Tennessee Valley Authority (TVA) on July 26, 2022, TVA has been included as an invited signatory to the MOA.

The attached MOA includes executing digital signatures by Ultium Cells, LLC, and the Department of Energy, Loan Programs Office. Upon review and signature by the Tennessee Historical Commission, the final executed MOA will be distributed to the invited signatories and concurring parties. In addition, the final executed MOA will be provided to all of the consulting parties and Tribes, and filed with the Advisory Council on Historic Preservation.

If you have any questions, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [LPO\\_Environmental@hq.doe.gov](mailto:LPO_Environmental@hq.doe.gov).

Respectfully,

A handwritten signature in cursive script that reads "Todd Stribley".

Todd Stribley  
Director, Environmental Compliance  
DOE Loan Programs Office

Attachment:  
Attachment 1: Final Memorandum of Agreement



## Department of Energy

Washington, DC 20585

July 7, 2022

Michaelyn Harle, Ph.D, Archaeologist  
Tennessee Valley Authority  
400 W. Summit Hill Drive, WT 11A-K  
Knoxville, TN 37902

**SUBJECT:** Federal Undertakings by the U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; and the Tennessee Valley Authority for a Transmission Line to the Facility

Dear Dr. Harle:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, the U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee (DOE's proposed action and undertaking). Because of the potential Federal support (financial assistance), LPO has initiated consultations with the Tennessee State Historic Preservation Office (SHPO), interested parties, and Tribes pursuant to Section 106 of the National Historic Preservation Act.

The purpose of this letter is to address additional coordination between Federal agencies by requesting the Tennessee Valley Authority (TVA) to concur with: (1) LPO is the lead Federal agency for the Section 106 process of the construction and tooling of the battery manufacturing facility in Spring Hill, Tennessee; and (2) TVA is the lead Federal agency for the Section 106 process of the transmission line to the manufacturing facility, as well as to inform you that TVA will be invited to sign the Memorandum of Agreement (MOA) as an invited signatory<sup>1</sup>. In addition, if TVA intends to sign the MOA as an invited signatory, please provide the name and title for the TVA representative that can sign the MOA (a copy of the MOA is attached to this letter).

---

<sup>1</sup> In accordance with 36 CFR 800.6 (c) 2 iv, the refusal of any party invited to become a signatory to a MOA does not invalidate the MOA.

Please provide your concurrence regarding the lead Federal status to me at LPO\_environmental@hq.doe.gov, and I will provide you a updated MOA with TVA as invited signatory page for your consideration. If you have any immediate questions or concerns, please contact me in the DOE Loan Programs Office at (303) 275-4549.

Respectfully,



Todd Stribley  
Director, Environmental Compliance  
Loan Programs Office

cc: Casey Lee, Tennessee State Historic Preservation Office, Historic Preservation Specialist/Coordinator

Attachment:  
Attachment 1: Memorandum of Agreement

July 26, 2022

Todd Stribley  
Director, Environmental Compliance  
Loan Programs Office

Dear Mr. Stribley:

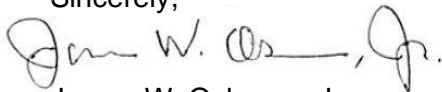
RE: FEDERAL UNDERTAKINGS BY THE U.S. DEPARTMENT OF ENERGY (DOE), LITHIUM-ION BATTERY CELL MANUFACTURING FACILITY IN SPRING HILL, TENNESSEE; AND THE TENNESSEE VALLEY AUTHORITY (TVA) FOR A TRANSMISSION LINE (TL) TO THE FACILITY (TVA TRACKING – CRMS 24671291490, Project#: SHPO0001148)

By this letter we are responding to the U.S. DOE June 7, 2022, letter. TVA agrees that: (1) DOE's Loan Programs Office (LPO) is the lead Federal agency for Section 106 for the construction and tooling of the battery manufacturing facility in Spring Hill, Tennessee; and (2) TVA is the lead Federal agency for the Section 106 process for construction of a TL to the manufacturing facility. We also understand that LPO is inviting TVA to be a signatory to their Memorandum of Agreement (MOA) to address adverse effect from the construction of the battery manufacturing facility and that pursuant to 36 CFR 800.6 (c)(2) the MOA will be executed regardless of whether TVA signs the document. TVA has provided your office the name for the signature line and will review the MOA upon receipt.

TVA also understands that Tennessee Historical Commission (THC) concurred with TVA's findings that the proposed TL construction would have no adverse effects to historic properties. TVA will update and send the final report to THC as indication of conclusion of the undertaking.

If you have any questions, please contact Michaelyn Harle by email, [mharle@tva.gov](mailto:mharle@tva.gov).

Sincerely,



James W. Osborne, Jr.  
Manager  
Cultural Compliance

MSH:ERB  
Enclosures

cc (Enclosures):

Ms. Casey Lee  
Tennessee Historical Commission  
2941 Lebanon Road  
Nashville, Tennessee 37243-0442



## Department of Energy

Washington, DC 20585

August 15, 2022

James W. Osborne, Jr.  
Manager, Cultural Compliance  
Tennessee Valley Authority  
400 West Summit Hill Drive  
Knoxville, TN 37902

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Executed Memorandum of Agreement

Dear Mr. Osborne:

Please find enclosed the final Memorandum of Agreement (MOA) for the Lithium-Ion Battery Cell Manufacturing Facility construction project in Spring Hill, Tennessee. (Attachment 1). All consulting parties and Tribes are being provided with a copy of this executed MOA.

As an invited signatory, should you elect to sign the MOA, please email me your digitally signed page of the MOA, and I will distribute the additional signature page to the executing signatories (Ultium, LLC. and the Tennessee Historical Commission).

If you have any questions, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [LPO\\_Environmental@hq.doe.gov](mailto:LPO_Environmental@hq.doe.gov).

Respectfully,

*Todd Stribley*

Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

Attachment 1: Executed Memorandum of Agreement

**From:** Alexander, Steven <[steven\\_alexander@fws.gov](mailto:steven_alexander@fws.gov)>  
**Sent:** Tuesday, June 28, 2022 7:40 AM  
**To:** LPO\_Environmental <[lpo\\_environmental@hq.doe.gov](mailto:lpo_environmental@hq.doe.gov)>  
**Cc:** Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>; Sykes, Robbie <[robbie\\_sykes@fws.gov](mailto:robbie_sykes@fws.gov)>; 'Robert D. Baker' <[Robert.D.Baker@tn.gov](mailto:Robert.D.Baker@tn.gov)>; 'Amacker, Todd Michael' <[tmamacker@tn.gov](mailto:tmamacker@tn.gov)>; 'bryan.davidson@tn.gov' <[bryan.davidson@tn.gov](mailto:bryan.davidson@tn.gov)>; 'Crista.Haag@arcadis.com' <[Crista.Haag@arcadis.com](mailto:Crista.Haag@arcadis.com)>  
**Subject:** [EXTERNAL] Ultium Cells, LLC

Mr. Todd Stribley  
U.S. Department of Energy  
Washington, DC 20585

Mr. Stribley –

The U.S. Fish and Wildlife Service (Service) has reviewed the draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the Ultium Cells, LLC project in Maury County, Tennessee. The only record of initial consultation with the Service is a June 1, 2022, auto-generated IPaC report of threatened and endangered species occurrence data for the site proposed for development. The Duck River was not included in the spatial query for this project and all federally-listed aquatic species were excluded from the report. The draft EA also references flow constraints in the Duck River at Columbia, Tennessee, and a drought management plan from the Duck River Agency (see italicized excerpt from the draft EA below):

*CPWS adopted a Drought Management Plan (Drought Plan) as part of its TDEC Aquatic Resource Alteration Permit (ARAP) to withdraw water from the Duck River. The Drought Plan provides trigger thresholds for required water conservation, based on the Normandy Reservoir water level and flows in the Duck River. The 2016 revisions of the Drought Plan align with the recommendations by the Duck River Development Agency and the 100-cubic-feet-per-second flow requirements imposed by the CPWS's ARAP "...water withdrawals by CPWS shall not result in a reduction of flow in the Duck River to less than 100 cubic feet per second (65 MGD) downstream of the CPWS water intake." The Project's anticipated water usage is 1.4 million gallons per day with an operational peak flow rate of 1,284 gallons per minute. CPWS indicated that it has the capacity to provide up to 5,000 gallons per minute, which far exceeds the peak flow rate required for operations. The Drought Plan also states that a majority of the water released from Normandy Reservoir is not used by public water systems. Consequently, conservation by public water systems affects only a relatively small portion of the overall flow in the Duck River and does not have a large influence on the total river flow. With public water demand a small portion of available water at Normandy Reservoir and restrictions from TDEC to maintain flows in the Duck River, CPWS available flow rate will maintain the required flows in the Duck River. Given the current Agricultural and Industrial land use of the project site, its lack of critical habitat and resultant low potential for wildlife use, the administrative controls in place by CPWS to require water conservation during drought conditions, and the results of informal consultation with USFWS, adverse impacts on biological resources, including threatened and endangered species, as a result of the Project are not anticipated, and impacts would not be significant.*

The Service has not received a section 7 consultation request from the U.S. Department of Energy (DOE) or the Ultium Cells LLC consultants for this proposed project. The referenced drought management plan has not been approved by the Tennessee Department of Environment and Conservation or the

Tennessee Valley Authority. The Service is currently engaged in formal section 7 consultation with the U.S. Environmental Protection Agency on proposed improvements to the Columbia Power and Water System infrastructure. We would appreciate additional information regarding the current status of proposed DOE funding and your intent to enter into section 7 consultation with the Service for this proposed project.

Sincerely,

Steven R. Alexander

U.S. Fish and Wildlife Service  
South Atlantic-Gulf Interior Region  
Tennessee Ecological Services Field Office  
446 Neal Street  
Cookeville, TN 38501

---

**From:** LPO\_Environmental <[lpo\\_environmental@hq.doe.gov](mailto:lpo_environmental@hq.doe.gov)>  
**Sent:** Tuesday, June 28, 2022 9:57 AM  
**To:** Alexander, Steven <[steven\\_alexander@fws.gov](mailto:steven_alexander@fws.gov)>; Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>  
**Cc:** Sykes, Robbie <[robbie\\_sykes@fws.gov](mailto:robbie_sykes@fws.gov)>  
**Subject:** [EXTERNAL] RE: Ultium Cells, LLC

Steven –

Thanks for sending on the comments and concerns from the U.S. Fish and Wildlife Service, we are looking into them now.

Please let me know if you are available for quick call this afternoon (anytime after 2:30 central time) works with my schedule.

I would like to make sure that we (the Department of Energy) are collecting the correct information to respond to the comments and concerns.

Let me know if you are available this afternoon, and I can send out a MS Teams meeting invite accordingly.

Thanks

**Todd Stribley**  
**Loan Programs Office**  
Office: 303.275.4549  
Cell: 301.525.5944

---

**From:** LPO\_Environmental <[lpo\\_environmental@hq.doe.gov](mailto:lpo_environmental@hq.doe.gov)>  
**Sent:** Monday, July 25, 2022 6:27 PM  
**To:** Alexander, Steven <[steven\\_alexander@fws.gov](mailto:steven_alexander@fws.gov)>; Sikula, Nicole R <[nicole\\_sikula@fws.gov](mailto:nicole_sikula@fws.gov)>; Sykes, Robbie <[robbie\\_sykes@fws.gov](mailto:robbie_sykes@fws.gov)>; Elbert, Daniel C <[daniel\\_elbert@fws.gov](mailto:daniel_elbert@fws.gov)>; Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>



**Cc:** Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>; LPO\_Environmental <[lpo\\_environmental@hq.doe.gov](mailto:lpo_environmental@hq.doe.gov)>; Ryan, Angela <[angela.ryan@hq.doe.gov](mailto:angela.ryan@hq.doe.gov)>  
**Subject:** RE: [EXTERNAL] RE: Ultium Cells, LLC

Steven, Nichole, Robbie, Daniel, and David

Following up from our phone conversation on July 5, regarding the GM – Ultium Project in Spring Hill, Tennessee.

We have updated the information presented in the environmental assessment and have concluded that there is still no effect on threatened and endangered species at the Project site or in the Duck River.

We were able to confirm that the water supply for the Ultium Project is from Columbia Power and Water Systems, and does not require any new withdrawals or amendments to its existing TDEC Aquatic Resource Alteration Permit, and that Ultium would be subject to the drought plan conditions imposed by Columbia Power and Water Systems. We also provided a brief description of the Drought Plan Trigger levels and the conservation measures that would be implemented at each stage.

Per our discussion, we have included information water conservation measures included as part of the Project (a water re-circulation system that Ultium will include in its cooling tower make-up water system to reduce overall water consumption), as well as other water recycling or collection activities that Ultium may develop in the future in response to reductions in water supply.

Please let me know if there is any additional information that we can include on the ongoing consultations with EPA/TDEC, as well as if you have any questions other information to include in the revised text.

Thanks

**Todd Stribley**  
**Loan Programs Office**  
Office: 303.275.4549  
Cell: 301.525.5944

---

**From:** Sikula, Nicole R <[nicole\\_sikula@fws.gov](mailto:nicole_sikula@fws.gov)>  
**Sent:** Wednesday, August 3, 2022 2:59 PM  
**To:** LPO\_Environmental <[lpo\\_environmental@hq.doe.gov](mailto:lpo_environmental@hq.doe.gov)>; Alexander, Steven <[steven\\_alexander@fws.gov](mailto:steven_alexander@fws.gov)>; Sykes, Robbie <[robbie\\_sykes@fws.gov](mailto:robbie_sykes@fws.gov)>; Elbert, Daniel C <[daniel\\_elbert@fws.gov](mailto:daniel_elbert@fws.gov)>; Pelren, David <[david\\_pelren@fws.gov](mailto:david_pelren@fws.gov)>  
**Cc:** Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>; Ryan, Angela <[angela.ryan@hq.doe.gov](mailto:angela.ryan@hq.doe.gov)>  
**Subject:** Re: [EXTERNAL] RE: Ultium Cells, LLC

Todd,

I have conferred with Steve Alexander and we agree that your revision to the Threatened and Endangered Species section of the EA adequately addresses our concerns and presents the options available to Ultium should water demand conflict with the water availability that provides habitat for threatened and endangered aquatic species in the Duck River.

We thank you for your due diligence in presenting this information in a clear and thoughtful analysis.

Best Regards,  
Nicole Sikula  
Deputy Field Supervisor  
*Tennessee Ecological Services Field Office*  
*South Atlantic-Gulf Interior Region*  
U.S. Fish and Wildlife Service

## Appendix B – Tribal Coordination

Organization	Contact Date(s)	Summary of Contact
Alabama-Coushatta Tribe of Texas	10/08/2021 02/17/2022 02/25/2022 04/25/2022 04/27/2022 05/11/2022  08/15/2022	Notification and Initiation letter (all tribes) Draft MOA (all tribes) Contacted via phone regarding receipt of draft MOA LPO submission of additional information (all tribes) Revised Draft Memorandum of Agreement (all tribes) Contact via phone, Tribe requested MOA to new Chairman LPO submitted MOA to Chairman Ricky Sylestine on the same day LPO submittal of executed MOA
Cherokee Nation	10/08/2021 11/08/2021 02/17/2022 02/25/2022 02/28/2022 04/25/2022 04/27/2022 05/11/2022  05/24/2022  05/25/2022 08/15/2022	Notification and Initiation letter (all tribes) Request to be a Consulting Party Draft MOA (all tribes) Contacted via phone regarding receipt of draft MOA Email correspondence between LPO and Cherokee Nation LPO submission of additional information (all tribes) Revised Draft Memorandum of Agreement (all tribes) Contacted via phone regarding receipt of revised draft MOA Contacted via phone regarding receipt of revised draft MOA; LPO submitted additional information on the same day Chickasaw Nation Response LPO submittal of executed MOA
Chickasaw Nation	10/08/2021 02/17/2022 02/25/2022  03/09/2022 04/25/2022 04/27/2022 05/11/2022  08/15/2022	Notification and Initiation letter (all tribes) Draft MOA (all tribes) Contacted via phone regarding receipt of draft MOA; LPO resent draft MOA same day Chickasaw Nation response to LPO LPO submission of additional information (all tribes) Revised Draft Memorandum of Agreement (all tribes) Contacted via phone regarding receipt of revised draft MOA LPO submittal of executed MOA
Coushatta Tribe of Louisiana	10/08/2021 02/17/2022 02/25/2022  04/25/2022 04/27/2022	Notification and Initiation letter (all tribes) Draft MOA (all tribes) Contacted via phone regarding receipt of draft MOA; LPO updated contact information, and submitting additional information the same day LPO submission of additional information (all tribes) Revised Draft Memorandum of Agreement (all tribes)

Organization	Contact Date(s)	Summary of Contact
	05/11/2022 08/15/2022	Contacted via phone regarding receipt of revised draft MOA LPO submittal of executed MOA
Eastern Band of Cherokee Indians	10/08/2021 10/11/2021 02/16/2022 02/17/2022 02/25/2022 04/25/2022 04/27/2022 04/27/2022 04/29/2022 05/3/2022 05/9/2022 05/12/2022 05/25/2022 08/15/2022	Notification and Initiation letter (all tribes) Email exchange between ECBI and LPO LPO to ECBI providing archaeological reports Draft MOA (all tribes) Contacted via phone regarding receipt of draft MOA LPO submission of additional information (all tribes) Revised Draft Memorandum of Agreement (all tribes) Response from EBCI requesting additional information LPO responded to ECBI with additional information LPO attempted to contact EBCI LPO attempted to contact EBCI LPO attempted to contact EBCI LPO attempted to contact EBCI LPO submittal of executed MOA
Muscogee (Creek) Nation	10/08/2021 02/17/2022 02/25/2022 04/25/2022 04/27/2022 05/11/2022 08/15/2022	Notification and Initiation letter (all tribes) Draft MOA (all tribes) Contacted via phone regarding receipt of draft MOA LPO submission of additional information (all tribes) Revised Draft Memorandum of Agreement (all tribes) Contacted via phone regarding receipt of revised draft MOA LPO submittal of executed MOA

Notes: For correspondence sent to all Tribes, a single letter is included.



## Department of Energy

Washington, DC 20585

October 8, 2021

David Sickey, Chairman  
Coushatta Tribe of Louisiana  
PO Box 818  
Elton, LA 70532

**SUBJECT:** Proposed Federal Loan to Ultium Cells, LLC., for Lithium-Ion Battery Cell Manufacturing Facilities in Lordstown, Ohio and Spring Hill, Tennessee

Dear Chairman Sickey:

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to assist in determining whether to issue a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a manufacturing facility in Lordstown, Ohio, and the construction and tooling of a manufacturing facility in Spring Hill, Tennessee. The facilities will be used to build lithium-ion battery cells designed for use in electric vehicles and other applications. As part of this environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the National Historic Preservation Act (NHPA).

The proposed project would involve tooling a recently constructed manufacturing facility in Lordstown, Ohio and constructing a new facility in Spring Hill, Tennessee to produce lithium-ion battery cells. Tooling would involve acquiring and installing the battery cell manufacturing equipment in the approximate 2.0-million-square-foot Ohio facility, located on a nearly 180-acre site (see Attachment 1). The Tennessee facility would include an approximately 2.0-million-square-foot facility and several auxiliary structures and features on a 190-acre site (see Attachments 2 and 3). The auxiliary structures would include parking, loading areas, utility and access roads, stormwater management facilities, switch yard and electricity substation, warehouse, guard house, contractor trailer area, trailer staging areas and sea container storage, hazardous material storage, water tank area, and recycling area. In addition, construction would involve re-routing an access road. A two-mile public roadway is also being constructed by the Tennessee Department of Transportation as a separate project. Based on preliminary estimates, approximately 1,100 new jobs would be created at each plant.

This letter is intended to notify you of the proposed Federal project (a potential loan to Ultium), identify if you have an interest in the proposed project site in Spring Hill, Tennessee, and provide you with the opportunity to comment and engage DOE in government-to-government consultation on the proposed project. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities. We want to give you the opportunity to raise any issues or concerns you may have regarding the sites.

I would greatly appreciate notification if you do or do not have an interest in the project sites, as well as any comments or concerns you may have by November 8, 2021. Should you have an interest in the project sites, I will provide you with additional information pursuant to NEPA and the NHPA as it becomes available. Please provide your notification of interest and any comments or concerns by email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov), or I can also be reached by telephone at 303-275-4549.

Respectfully,

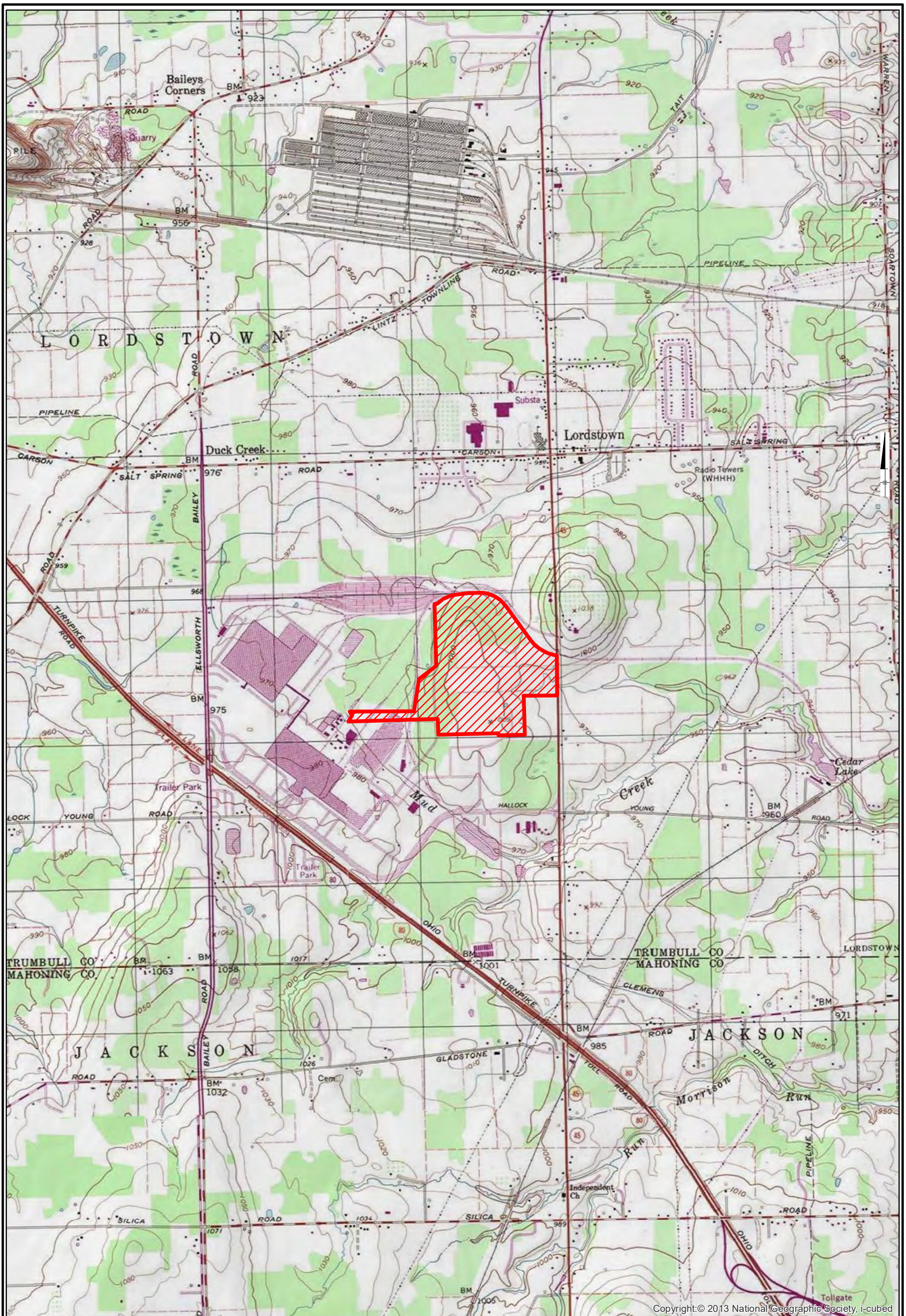


Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

- Attachment 1: Lordstown, OH Site Location Map
- Attachment 2: Spring Hill, TN Site Location Map
- Attachment 3: Spring Hill, TN Overall Grading and Drainage Plan

cc: Linda Langley, THPO

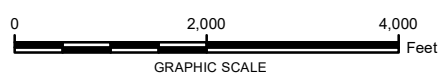


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**Legend**

 Battery Cell Plant Site/Permit Limits (177 Acres)

**NOTES:**  
 1. USGS TOPOGRAPHIC MAP OBTAINED FROM ESRI IMAGE SERVICE

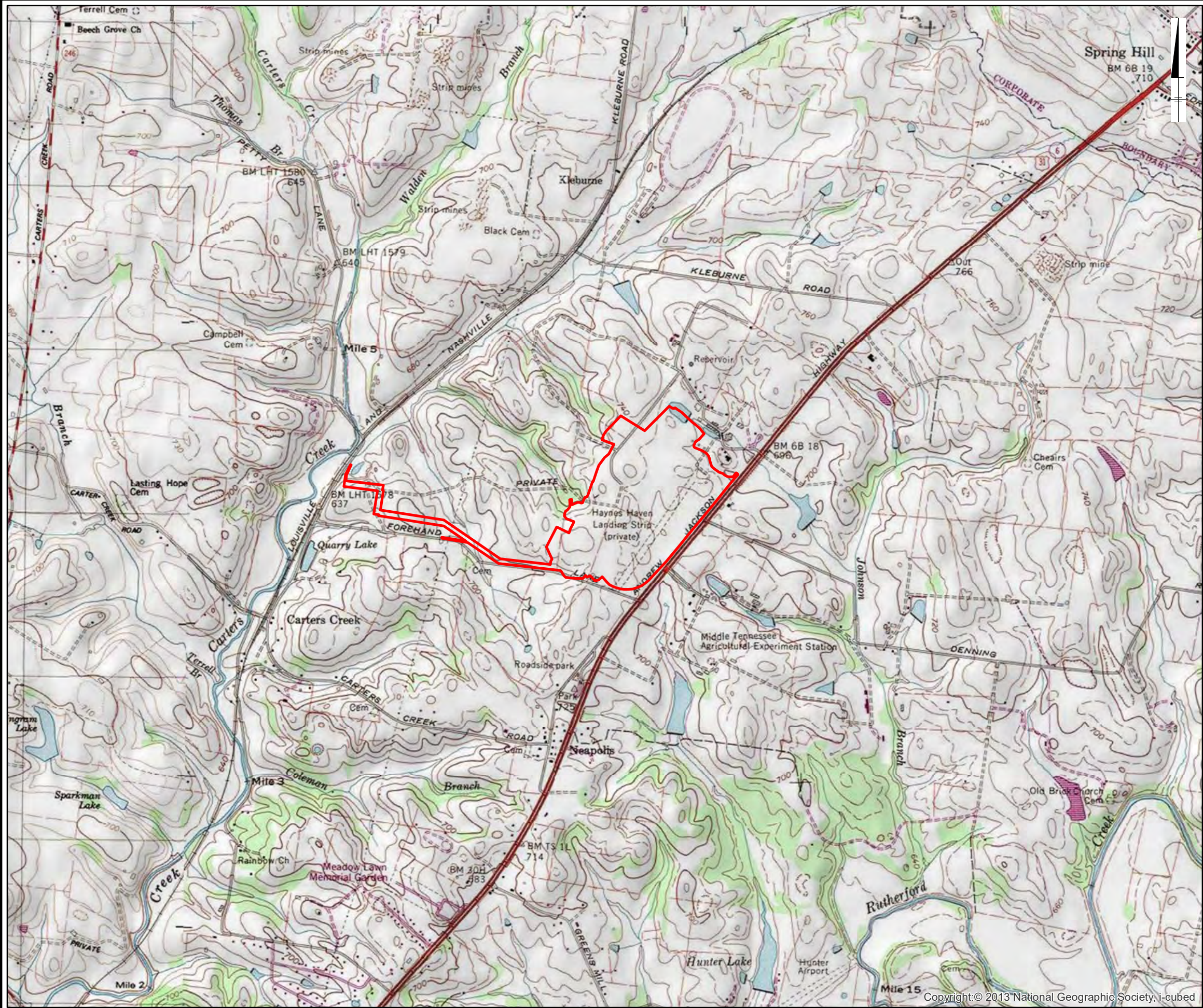


GENERAL MOTORS, LLC  
 LORDSTOWN, OHIO  
**LORDSTOWN BATTERY CELL PLANT PROJECT**  
**SITE LOCATION MAP WITH PERMIT PROJECT LIMITS**


 **ARCADIS** | Engineering & Consulting for municipal and built assets | **FIGURE 1**

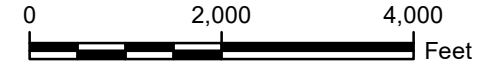
City/Columbus, Inc./GeoEye, Inc. Created By: Last Saved By: V.Tremaine  
 C:\Users\vtremaine\OneDrive - ARCADIS\Desktop\GIS\Lordstown\GIS\MXD\Figure 1 Site Location Map-Permit Limits 03132020.mxd 10/5/2021 4:58:13 PM

City: Div/Group: Created By: Last Saved By: VTrémante  
Project (Project #): C:\Users\vtremante\OneDrive - ARCADIS\Desktop\Spring Hill\GIS\MXD\Figure 1 - Site Location Map\Spring Hill\GIS\MXD\Figure 1 - Site Location Map.mxd 9/29/2021 4:44:10 PM



**Legend**

 Project Limits of Disturbance 2021-09-09



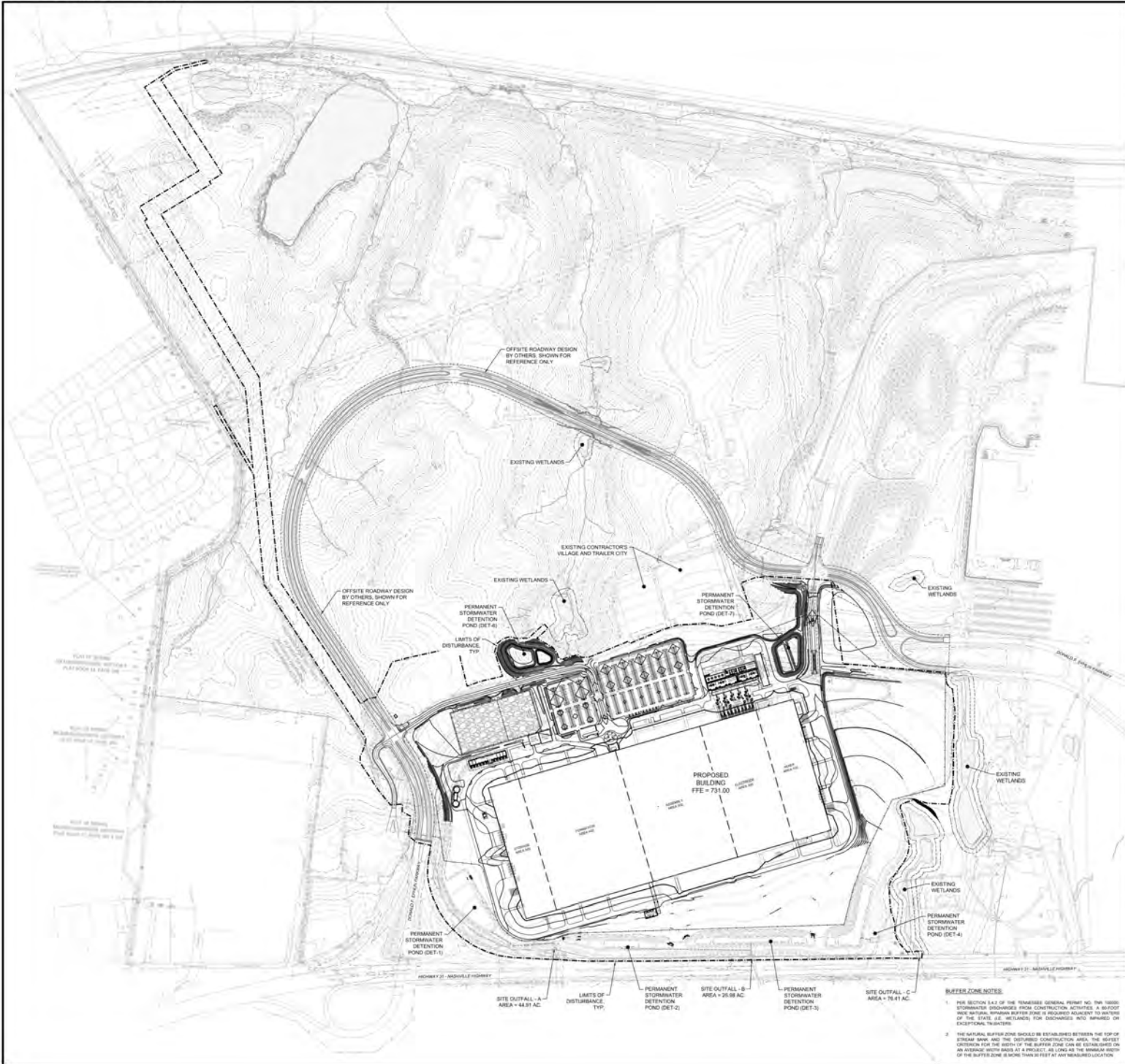
GRAPHIC SCALE

NOTES:  
1. CARTERS CREEK AND SPRING HILL  
USGS 7.5 MINUTE QUADRANGLE MAPS

ULTIUM CELLS LLC  
SPRING HILL  
PROJECT NIGHT SKY

**SITE LOCATION MAP**





**LEGEND**

- PROPERTY LINE
- BUILDING LINE
- - - - - EXISTING MAJOR CONTOUR
- - - - - EXISTING MINOR CONTOUR
- 730 --- PROPOSED MAJOR CONTOUR
- 720 --- PROPOSED MINOR CONTOUR
- STORM PIPE
- STORM STRUCTURES
- STRUCTURE LABEL
- SPOT ELEVATION
- FLUSH ELEVATION
- HIGH POINT ELEVATION
- MATCH EXISTING FINISH GRADE ELEVATION

REVISIONS		
NO.	DATE	DESCRIPTION

NOT FOR CONSTRUCTION

ULTIUM CELLS LLC DISCLAIMER & TYPICAL NOTES

SUPPLIER PROJECT NO: 45024 YD  
 SUPPLIER SHEET NO: NDH  
 SUPPLIER CHECKED BY: SAB, TWS  
 SUPPLIER FOR: Hill Planting

**Gresham Smith**  
 GreshamSmith.com

**Sustainable Workplaces**  
 "Creating places you want to be"

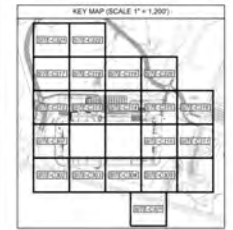
Spring Hill ASSY, STPG, PT  
 Site ID: 1536  
 Structure ID: 1000  
 Level: N/A  
**ULTIUM CELLS LLC - SPRING HILL BATTERY CELL MANUFACTURING**

**OVERALL GRADING & DRAINAGE PLAN**

DESIGNED BY: J. HARRIS CHECKED BY: A. DE AVILA SCALE: AS NOTED DATE:	PROJECT NO: 2100263 SHEET NO: SITE-C000
---	--

SITE-C300

- PROJECT DATA**
- TITLE TRACKING NO. 15M00000
  - TOTAL SITE AREA = 188.00 AC
  - LIMITS OF DISTURBANCE = 168.28 AC
  - FEMA FLOOD ZONE A (PANEL A) FLOODING, DATED APRIL 16, 2007
  - EXISTING WETLANDS INFORMATION REFER TO DDC OR TERMINATION 60-3886 AND USACE FILE NO. 18-0-0-00000
  - DISCHARGE NORTH TO GARDNER CREEK, 3-YEAR DESIGN STORM
  - DISCHARGE SOUTH TO NUTTERWOOD CREEK, 3-YEAR DESIGN STORM



- REFERENCES NOTES**
- FOR SECTION 14.1 OF THE TENNESSEE GENERAL PERMIT NO. 100000, STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES A 50-FOOT HIGH NATURAL BUFFER ZONE IS REQUIRED ADJACENT TO WATERS OF THE STATE (I.E. WETLANDS) FOR DISCHARGES INTO IMPAIRED OR EXCEPTIONAL TURBIDITY.
  - THE NATURAL BUFFER ZONE SHOULD BE ESTABLISHED BETWEEN THE TOP OF STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE GREATEST DISTANCE FROM THE BATTERY OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 50 FEET AT ANY INSTALLED LOCATION.

GRAPHIC SCALE

**From:** [Stribley, Todd](#)  
**To:** [Stephen Yerka](#)  
**Subject:** RE: Notification of a Federal Action in Spring Hill, Tennessee  
**Date:** Monday, October 11, 2021 11:58:00 AM  
**Attachments:** [image001.png](#)

---

Stephen –

Thank you for your timely reply, and your interest of the EBCI's interest in the Spring Hill development. I will send you copies of the archaeological surveys and project information pursuant to the NEPA and Section 106 process as it becomes available.

Please let me know if you have any questions about the proposed project or any process related questions (my contact information is below).

Thanks

**Todd Stribley**  
**Loan Programs Office**  
Office: 303.275.4549  
Cell: 301.525.5944

---

**From:** Stephen Yerka <[syerka@ebci-nsn.gov](mailto:syerka@ebci-nsn.gov)>  
**Sent:** Monday, October 11, 2021 8:40 AM  
**To:** Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>  
**Subject:** [EXTERNAL] FW: Notification of a Federal Action in Spring Hill, Tennessee

Good morning Mr. Stribley,  
Thank you for inviting the EBCI to be a consulting party on the project: Proposed Federal Loan to Ultium Cells, LLC., for Lithium-Ion Battery Cell Manufacturing Facilities in Lordstown, Ohio and Spring Hill, Tennessee. Please accept this email as official notice of the EBCI THPO's interest in the Spring Hill development. Our office requests a Phase 1 intensive archaeological survey of the proposed site following SOI standards and the standards set forth by the Tennessee Division of Archaeology. AS you may be aware, the Spring Hill location is in fairly close proximity to civil war

Also, please note that I will be the point-of-contact through the NHPA consultation representing the EBCI. Please send all communication about the project to me at [syerka@ebci-nsn.gov](mailto:syerka@ebci-nsn.gov). I can also be reached by phone at (828) 359-6852 (office) and (828) 736-7536 (mobile).

Thank you,  
Stephen

Stephen J. Yerka  
Historic Preservation Specialist, THPO  
Eastern Band of Cherokee Indians (<https://ebci.com/>)

[syerka@ebci-nsn.gov](mailto:syerka@ebci-nsn.gov)

(828) 359-6852



---

**From:** Richard Sneed <[richsnee@ebci-nsn.gov](mailto:richsnee@ebci-nsn.gov)>  
**Sent:** Monday, October 11, 2021 9:10 AM  
**To:** Stephen Yerka <[syerka@ebci-nsn.gov](mailto:syerka@ebci-nsn.gov)>  
**Subject:** FW: Notification of a Federal Action in Spring Hill, Tennessee

---

**From:** Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>  
**Sent:** Friday, October 8, 2021 4:09 PM  
**To:** Richard Sneed <[richsnee@ebci-nsn.gov](mailto:richsnee@ebci-nsn.gov)>  
**Cc:** Russell Townsend <[russtown@ebci-nsn.gov](mailto:russtown@ebci-nsn.gov)>  
**Subject:** Notification of a Federal Action in Spring Hill, Tennessee

Dear Principal Chief Sneed:

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to assist in determining whether to issue a Federal loan to Ultium Cells, LLC., to support the tooling of an existing manufacturing facility in Lordstown, Ohio, and the construction and tooling of a new manufacturing facility in Spring Hill, Tennessee. As part of this environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the National Historic Preservation Act (NHPA).

Attached to this email is the formal notification letter that contains additional information and figures.

Please let me know if you have any issues accessing the PDF version of the letter.

Respectfully,

**Todd Stribley**  
**Loan Programs Office**

Office: 303.275.4549

Cell: 301.525.5944

[Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov)

\*\*\*\*\*

This message does not originate from a known Department of Energy email system.  
Use caution if this message contains attachments, links or requests for information.



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**Chuck Hoskin Jr.**

*Principal Chief*  
G F F P P S . 1 S  
0-E O G . 9

**Bryan Warner**

*Deputy Principal Chief*  
S Z . 9 F V . 9  
W F . 1 D L . 1 0-E O G . 9

November 8, 2021

Todd Stribley  
Department of Energy  
1000 Independence Avenue SW  
Washington, D.C. 20585

Re: Proposed Federal Loan to Ultium Cells, LLC for Lithium-Ion Battery Cell Manufacturing Facilities

Mr. Todd Stribley:

The Cherokee Nation (Nation) is in receipt of your correspondence about **Ultium Cells, LLC**, and appreciates the opportunity to provide comment upon this project. Please allow this letter to serve as the Nation's interest in acting as a consulting party to this proposed project for Spring Hill, Maury County, Tennessee.

The Nation maintains databases and records of cultural, historic, and pre-historic resources in this area. Our Historic Preservation Office reviewed this project, cross referenced the project's legal description against our information, and found no instances where this project intersects or adjoins such resources. Thus, the Nation does not foresee this project imparting impacts to Cherokee cultural resources at this time.

However, the Nation requests that the Department of Energy (DOE) halt all project activities immediately and re-contact our Offices for further consultation if items of cultural significance are discovered during the course of this project.

Additionally, the Nation requests that the DOE conduct appropriate inquiries with other pertinent Tribal and Historic Preservation Offices regarding historic and prehistoric resources not included in the Nation's databases or records.

If you require additional information or have any questions, please contact me at your convenience. Thank you for your time and attention to this matter.

Wado,

Elizabeth Toombs, Tribal Historic Preservation Officer  
Cherokee Nation Tribal Historic Preservation Office  
elizabeth-toombs@cherokee.org  
918.453.5389



## Department of Energy

Washington, DC 20585

February 16, 2022

Stephen Yerka  
Historic Preservation Specialist, THPO  
Eastern Band of Cherokee Indians  
PO Box 455  
Cherokee, NC 28719

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Phase I Archaeological Report

Dear Mr. Yerka:

Please find attached for your review and comment the Phase I Archaeological Survey Report and Addendum Report for the Lithium-Ion Battery Cell Manufacturing Facility construction project in Spring Hill, Tennessee. As requested in your October 11, 2021 letter, the survey was completed according to the Secretary of the Interior and Tennessee Division of Archaeology standards. No archaeological sites were identified within the area of potential effects (APE) by the survey.

We request your review and comments on this report within thirty (30) days of receipt of this letter. However, if you have any immediate questions or concerns, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,

*Todd Stribley*

Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

Attachment 1: Phase I Archaeological Survey and Supplemental Report

cc: Richard Sneed, Principal Chief



## Department of Energy

Washington, DC 20585

February 17, 2022

Stephen Yerka  
Historic Preservation Specialist, THPO  
Eastern Band of Cherokee Indians  
PO Box 455  
Cherokee, NC 28719

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Draft Memorandum of Agreement

Dear Mr. Yerka:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee. As described in our letter to you on October 8, 2021, DOE initiated a review of this project pursuant to Section 106 of the National Historic Preservation Act. The purpose of this letter is to provide for your review a draft Memorandum of Agreement (MOA) to resolve the adverse effects of the proposed activities in Spring Hill, Tennessee.

Cultural resources investigations, including an architectural survey and Phase I archaeological survey, were completed on the Spring Hill site as a part of the Section 106 review process for this project. No archaeological sites were identified, and ten architectural resources were identified within the project's area of potential effects (APE). Through consultation with the Tennessee Historical Commission (THC), DOE determined that the project would result in adverse effects to two properties: Haynes Haven Stock Farm and Middle Tennessee Agricultural Experiment Station (MTAES). THC concurred with this finding on November 19, 2021. The attached MOA seeks to resolve these adverse effects. All interested parties and Tribes are being provided with a copy of the MOA for review and comment.

We request your review and comments on this draft MOA within thirty (30) days of receipt of this letter. I will be contacting you during the review period to confirm whether you would like to be a concurring party on the MOA. If you have any questions or would like to discuss this MOA further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

Attachment 1: Draft Memorandum of Agreement

cc: Richard Sneed, Principal Chief

**From:** [Stribley, Todd](#)  
**To:** [Elizabeth Toombs](#); [Tremante, Vinnie](#)  
**Cc:** [jim.f.hartnett@gm.com](mailto:jim.f.hartnett@gm.com); [Jablon, Rebecca](#); [McCoy, Maureen](#)  
**Subject:** RE: Ultium, Spring Hill, TN, Section 106  
**Date:** Monday, February 28, 2022 4:14:00 PM

---

Elizabeth –

Per our conversation, Mr. Vinnie Tremante will be able to set up and provide you access to an FTP site with the Phase 1 archaeological reports (a primary report and two addendums) for the project site.

Vinnie – Please provide Elizabeth access to your FTP site so she can access the Phase 1 archaeological reports and addendums.

Thanks

**Todd Stribley**  
**Loan Programs Office**  
Office: 303.275.4549  
Cell: 301.525.5944

---

**From:** Elizabeth Toombs <[elizabeth-toombs@cherokee.org](mailto:elizabeth-toombs@cherokee.org)>  
**Sent:** Monday, February 28, 2022 2:48 PM  
**To:** Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>  
**Subject:** [EXTERNAL] RE: Ultium, Spring Hill, TN, Section 106

Thank you for the information and invitation, Mr. Stribley. Is there a related report that this Office can review for Spring Hill, Tennessee? Thank you for your time and any additional details.

Wado,

Elizabeth Toombs, Tribal Historic Preservation Officer  
Cherokee Nation  
Tribal Historic Preservation Office  
PO Box 948  
Tahlequah, OK 74465-0948  
918.453.5389

---

**From:** Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>  
**Sent:** Thursday, February 17, 2022 4:01 PM  
**To:** Chuck Hoskin Jr <[chuck-hoskin@cherokee.org](mailto:chuck-hoskin@cherokee.org)>  
**Cc:** Elizabeth Toombs <[elizabeth-toombs@cherokee.org](mailto:elizabeth-toombs@cherokee.org)>  
**Subject:** <EXTERNAL> Ultium, Spring Hill, TN, Section 106



\*\*\*\*\*  
NOTICE: THIS EMAIL CONTAINS AN ATTACHMENT SENT FROM AN EXTERNAL SENDER.  
IF YOU DO NOT KNOW THE SENDER OR WERE NOT EXPECTING THIS EMAIL,  
DO NOT OPEN ANY EMAIL ATTACHMENTS AND DELETE THIS MESSAGE.  
Thank you: The Cherokee Nation - Information Technology Department  
\*\*\*\*\*

Dear Principal Chief Hoskin, Jr.:

As part of our ongoing Section 106 process, described in the attached letter, the Department of Energy, Loan Programs Office and the Ultium Cells, LLC., have prepared a draft Memorandum of Agreement (MOA) to resolve the adverse effects of the proposed activities in Spring Hill, Tennessee. As described in the attached cover letter, I am requesting your review and comments on this draft MOA within thirty (30) days of receipt of this letter, and I will be contacting you to confirm whether you would like to be a concurring party on the MOA.

If you have any immediate questions or comments, please contact me via email or phone per the contact information listed below.

Thank you for your participation.

**Todd Stribley**  
**Loan Programs Office**  
Office: 303.275.4549  
Cell: 301.525.5944  
[Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov)

\*\*\*\*\*  
This message does not originate from a known Department of Energy email system.  
Use caution if this message contains attachments, links or requests for information.  
\*\*\*\*\*

March 9, 2022

Mr. Todd Stribley  
NEPA Document Manager  
Department of Energy  
Loan Programs Office  
1000 Independence Avenue, SW  
Washington, DC 20585

Dear Mr. Stribley:

Thank you for the letter regarding the proposed draft Memorandum of Agreement (MOU) to address adverse effects to the Hayes Haven Stock Farm and Middle Tennessee Agricultural Experiment Station as part of the construction of battery manufacturing facility in Spring Hill, Maury County, Tennessee. The Chickasaw Nation has no comments on the MOU and will not be a signatory.

Your efforts to preserve and protect significant historic properties are appreciated. If you have any questions, please contact Ms. Karen Brunso, tribal historic preservation officer, at (580) 272-1106, or by email at [karen.brunso@chickasaw.net](mailto:karen.brunso@chickasaw.net).

Sincerely,

A handwritten signature in black ink, appearing to read "Lisa John", with a long horizontal flourish extending to the right.

Lisa John, Secretary  
Department of Culture and Humanities

cc: [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov)



## Department of Energy

Washington, DC 20585

April 25, 2022

Bill Anoatubby, Governor  
Chickasaw Nation  
PO Box 1548  
Ada, OK 74821

**SUBJECT:** U.S. Department of Energy, Loan Programs Office, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Archaeological Report Addendum III

Dear Governor Anoatubby:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee (DOE's proposed action and undertaking).

The purpose of this letter is to continue consultation with the Chickasaw Nation under Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800. Due to additional project changes, DOE is providing a third addendum report containing Phase I archaeological survey results within the revised archaeological area of potential effects (APE). This report has been provided to THC, along with information on the expanded APE, for review and comment. We are attaching this report for your review (see Attachment 4).

Recent project changes include the addition of laydown areas, contractor's yard, parking, and equipment and soil storage, and the construction of a recycling facility building (not to include tooling), comprising 53.4 acres of new, proposed land disturbance. The recycling building location is currently being evaluated and has two site options, both of which were included in the expanded limits of disturbance (LOD) (Attachment 1). The recycling building will be tooled and operated by others and will process used or inoperable battery cells for recovery of component raw materials for reuse. Due to these project changes, a new APE for archaeological and architectural cultural resources is being proposed. Attachment 2 illustrates the additional areas of the LOD located outside of the previous archaeological APE, constituting the extent of the revised archaeological APE. Attachment 3 depicts the slight expansion of the 0.5 mile-buffer that makes up the architectural APE (which only considers the permanent aboveground

structures associated with the undertaking) to account for potential effects from the construction of the recycling building.

An additional Phase I Archaeological survey was conducted in seven areas that make up the total 53.4 acres of proposed LOD expansion. A Phase I archaeological survey report detailing this investigation and its findings is attached for your review and comment (Attachment 4). The location of the additional facility is on land that was previously disturbed from agricultural activities or during construction of an existing vehicle assembly plant located immediately to the north of the Project site. Background research on these new land areas, a pedestrian reconnaissance survey, and shovel testing yielded negative survey results and no sites were identified.

I would greatly appreciate any comments you may have on this addendum within thirty (30) days of receipt of this letter. An updated draft Memorandum of Agreement will be distributed to you, THC, and all consulting parties and will reflect this updated project description. If you have any questions or would like to discuss this project further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

Attachment 1: Recycling Building Locations Map

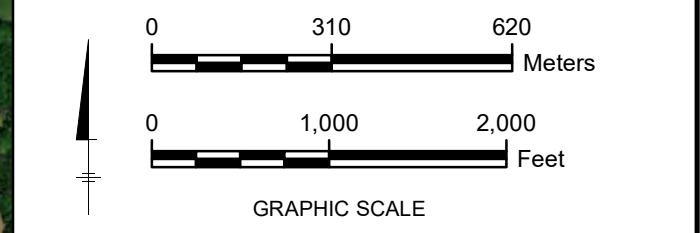
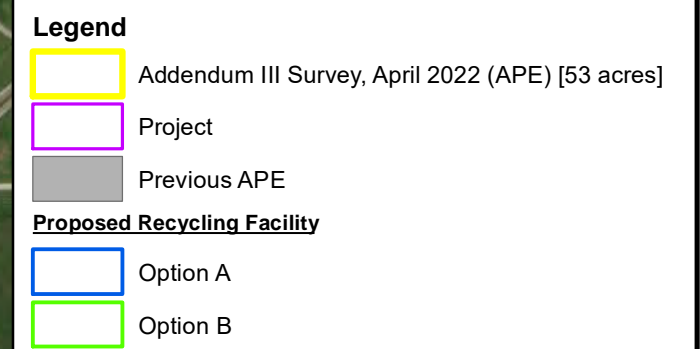
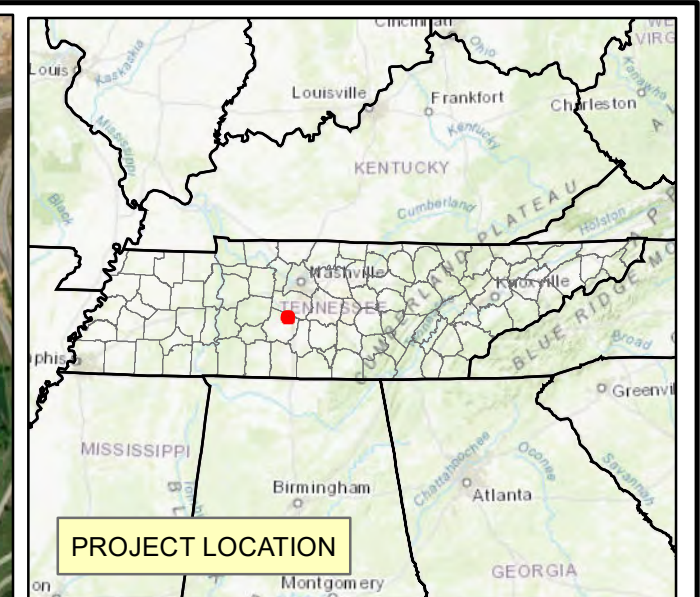
Attachment 2: Revised Archaeological APE

Attachment 3: Revised Architectural APE

Attachment 4: Addendum III: Phase I Archaeological Report for Project Night Sky, Maury County, Tennessee

cc: Kirk Perry, Historic Preservation Officer

**Attachment 1**  
**Recycling Building Locations Map**

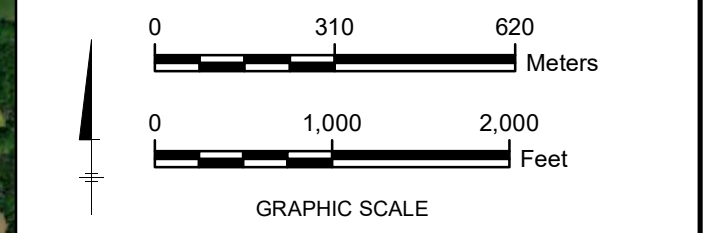
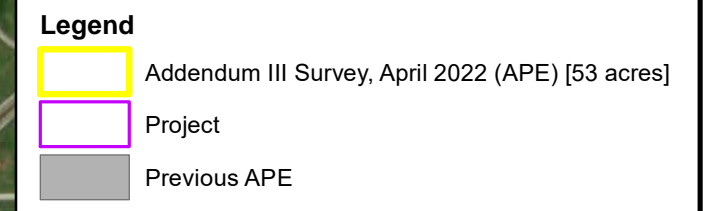
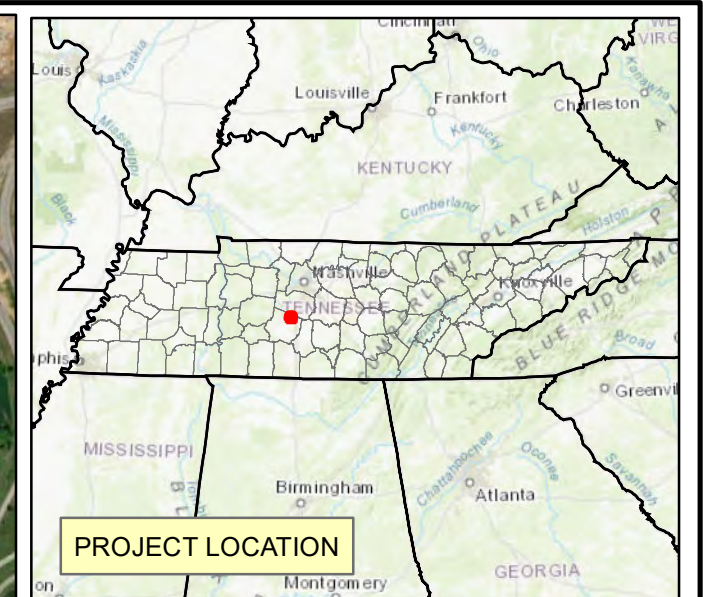


Base Map Source:  
Esri World Imagery Clarity Layer and World Topographic Layer. Obtained from Esri Imagery Service.

GENERAL MOTORS, LLC  
PROJECT NIGHT SKY  
SPRING HILL, MAURY COUNTY, TENNESSEE

**POTENTIAL RECYCLE  
BUILDING LOCATIONS**

**Attachment 2**  
**Revised Archaeological APE**



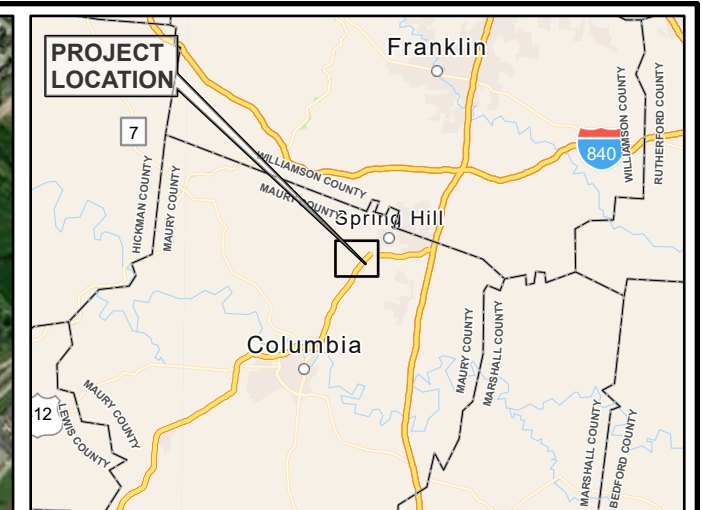
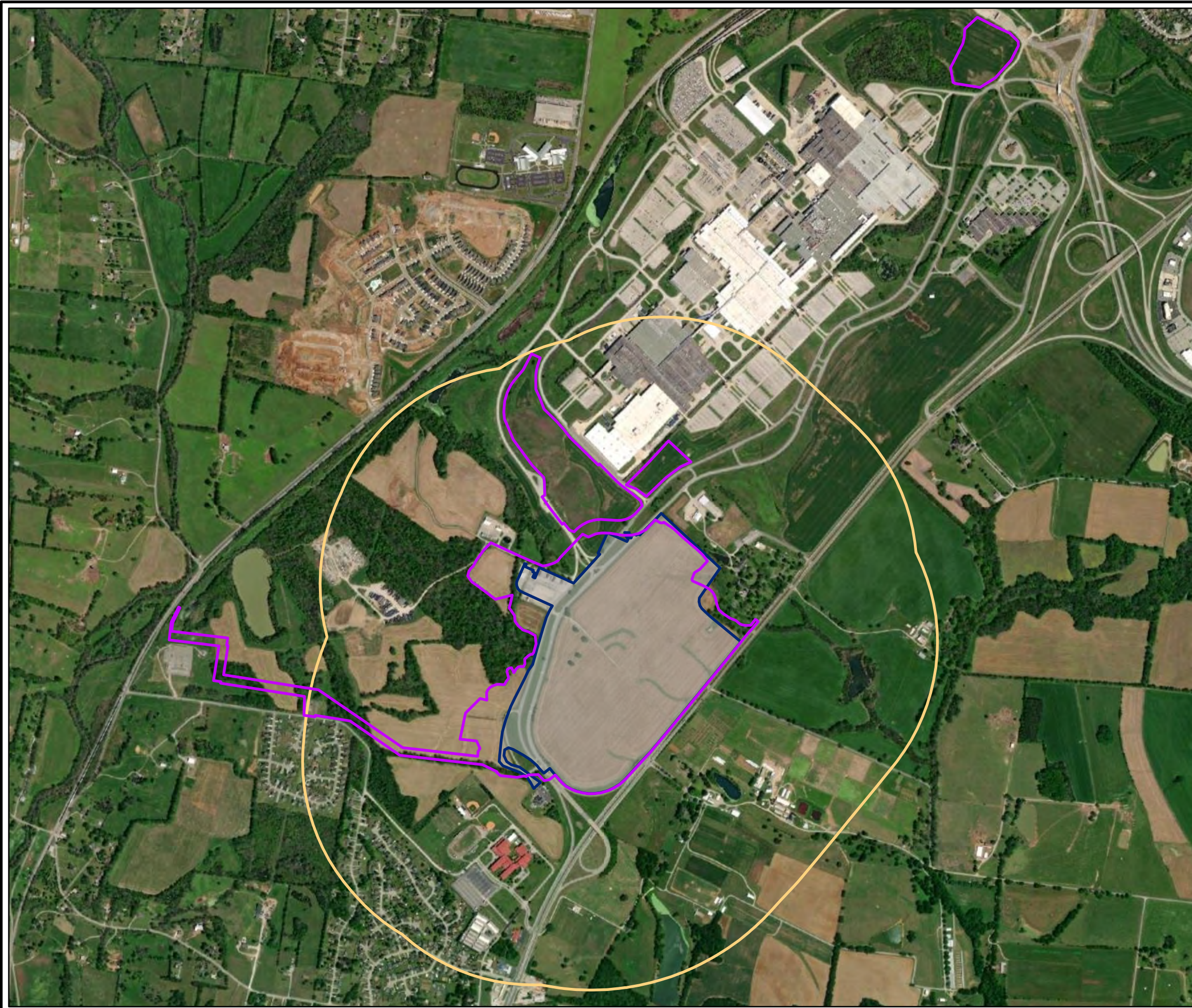
Base Map Source:  
Esri World Imagery Clarity Layer and World Topographic Layer. Obtained from Esri Imagery Service.

ULTIUM CELLS, LLC  
PROJECT NIGHT SKY  
SPRING HILL, MAURY COUNTY, TENNESSEE

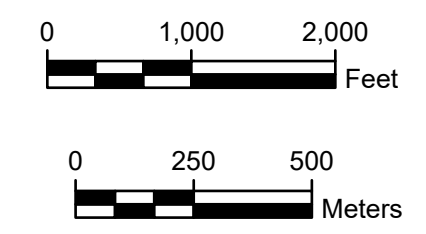
**AREA OF POTENTIAL EFFECT**



**Attachment 3**  
**Revised Architectural APE**



- LEGEND:**
- PROJECT
  - APE - 0.5 MILE BUFFER
  - CURRENT BUILDING LOD



NOTE:  
1. 2020 AERIAL IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.

GENERAL MOTORS SPRING HILL CULTURAL RESOURCES DESKTOP REVIEW MAURY COUNTY, TENNESSEE	
<b>ARCHITECTURAL APE</b>	
	<b>FIGURE 3</b>



## Department of Energy

Washington, DC 20585

April 27, 2022

Mr. Stephen Yerka  
Historic Preservation Specialist, THPO  
Eastern Band of Cherokee Indians  
PO Box 455  
Cherokee, NC 28719

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Revised Draft Memorandum of Agreement

Dear Mr. Yerka:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee. As described in our letter to you on October 8, 2021, DOE initiated a review of this project pursuant to Section 106 of the National Historic Preservation Act. The purpose of this letter is to provide for your review a revised draft Memorandum of Agreement (MOA) to resolve the adverse effects of the proposed activities in Spring Hill, Tennessee.

The revised draft MOA replaces the draft MOA submitted to you on February 17, 2022, and incorporates the project changes described in our letter to you dated April 25, 2022, as well as comments provided by the Tennessee State Historical Commission (THC), State Historic Preservation Office (SHPO). Through consultation with the THC, DOE determined that the adverse effect finding on the Haynes Haven Stock Farm and the Middle Tennessee AgResearch and Experiment Center are still applicable. The attached revised draft MOA seeks to resolve these adverse effects. All interested parties and Indian Tribes are being provided with a copy of the revised draft MOA for review and comment.

We request your review and comments on this revised draft MOA within thirty (30) days of receipt of this letter. I will be contacting you during the review period to confirm whether you would like to be a concurring party on the MOA. If you have any questions or would like to discuss this MOA further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachment:

Attachment 1: Revised Draft Memorandum of Agreement

cc: Richard Sneed, Principal Chief

**From:** [Stribley, Todd](#)  
**To:** [Stephen Yerka](#)  
**Cc:** [DOE LPO Environmental](#); [jim.f.hartnett@gm.com](mailto:jim.f.hartnett@gm.com); [Haag, Crista](#)  
**Bcc:** [Eskridge, Anna \(CONTR\)](#); [Jablon, Rebecca](#); [McCoy, Maureen](#)  
**Subject:** RE: DOE Loan Programs Office - Ultium Project  
**Date:** Friday, April 29, 2022 11:49:00 AM  
**Attachments:** [image001.png](#)  
[220429 Response to Eastern Band Cherokee.docx](#)

---

Stephen –

Attached is a response to your question regarding disturbed soils at the project site that was prepared by the archaeologist (Crista Haag) leading the surveys.

Also, if you would like to discuss the methodology/results further or have additional questions, please let me know if one of the following dates and times works with your schedule, and I will send out a virtual meeting invite based on your schedule.

- Wednesday, May 4, 1pm (east coast time);
- Thursday, May 5, 1pm (east coast time); or
- Friday, May 6, 1pm, 2pm, or 3pm east coast time

Also, if the above dates and times do not work with your schedule, please provide a few dates and time that do, and we will plan accordingly.

Respectfully,

**Todd Stribley**  
**Loan Programs Office**  
Office: 303.275.4549  
Cell: 301.525.5944

---

**From:** Stribley, Todd  
**Sent:** Wednesday, April 27, 2022 2:38 PM  
**To:** Stephen Yerka <[syerka@ebci-nsn.gov](mailto:syerka@ebci-nsn.gov)>  
**Cc:** DOE LPO Environmental <[DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com)>  
**Subject:** DOE Loan Programs Office - Ultium Project

Stephen –

Just a quick response to let you know that I am coordinating with the applicant (Ultium) to identify when the team that the completed the archaeological survey are available for a virtual meeting to address your questions.

I anticipate that I will be able to provide you with a few dates and times by the end of the week.

Thanks and look forward to speaking with you.

**Todd Stribley**

Director, Environmental Compliance

**Loan Programs Office**

Office: 303.275.4549

Cell: 301.525.5944

[Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov)

**From:** Stephen Yerka <[syerka@ebci-nsn.gov](mailto:syerka@ebci-nsn.gov)>

**Sent:** Wednesday, April 27, 2022 12:17 PM

**To:** DOE LPO Environmental <[DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com)>

**Subject:** RE: U.S. Department of Energy, Loan Programs Office: Archaeological Report Addendum III

Good afternoon Todd,

Thank you for sending this information. The EBCI THPO would like to request a (virtual) meeting or conference call to discuss this project please.

I have some questions about the methodology for the approach to survey in these additional areas. Specifically the designation of "disturbed" profiles and how that was determined, and how many of those "disturbed" soils may actually be that the shovel tests did not penetrate potential fill in the area.

Thank you,

Stephen

Stephen J. Yerka

Historic Preservation Specialist, THPO

Eastern Band of Cherokee Indians (<https://ebci.com/>)

[syerka@ebci-nsn.gov](mailto:syerka@ebci-nsn.gov)

(828) 359-6852





## Department of Energy

Washington, DC 20585

May 11, 2022

Ricky Sylestine, Chairman  
Alabama-Coushatta Tribe of Texas  
571 State Park Road 56  
Livingston, TX 77351

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Revised Draft Memorandum of Agreement

Dear Chairman Sylestine:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee. As described in our letter to you on October 8, 2021, DOE initiated a review of this project pursuant to Section 106 of the National Historic Preservation Act. The purpose of this letter is to provide for your review an updated draft Memorandum of Agreement (MOA) to resolve the adverse effects of the proposed activities in Spring Hill, Tennessee.

The revised draft MOA replaces the draft MOA submitted to the Nita Battise on February 17, 2022, and incorporates the project changes described in our letter to her dated April 25, 2022, as well as comments provided by the Tennessee State Historical Commission (THC), State Historic Preservation Office (SHPO). Through consultation with the THC, DOE determined that the adverse effect finding on the Haynes Haven Stock Farm and the Middle Tennessee AgResearch and Experiment Center is still applicable. The attached revised draft MOA seeks to resolve these adverse effects. All interested parties and Indian Tribes are being provided with a copy of the revised draft MOA for review and comment. During a follow-up phone conversation on May 11, 2022, Chairwoman Battise indicated that the MOA should be sent to you and provided your contact information.

We request your review and comments on this draft MOA by May 27, 2022. Please also indicate whether you would like to be a concurring party on the MOA. If you have any questions or would like to discuss this MOA further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:  
Revised Draft Memorandum of Agreement

cc: Nita Battise, Former Tribal Council Chairwoman



**From:** Elizabeth Toombs <elizabeth-toombs@cherokee.org>  
**Sent:** Wednesday, May 25, 2022 1:26 PM  
**To:** Stribley, Todd <todd.stribley@hq.doe.gov>; DOE LPO Environmental <DOE\_LPO@icf.com>  
**Cc:** McCoy, Maureen <Maureen.McCoy@icf.com>  
**Subject:** [EXTERNAL] RE: U.S. Department of Energy, Loan Programs Office: Archaeological Report Addendum III

Thank you all for the information and details. The Cherokee Nation would like to join the MOA as a concurring party given that the project is within our ancestral homelands. Our signatory authority is Chad Harsha, Secretary of Natural Resources. While we do not anticipate any adverse effects to historic properties of significance to the Cherokee Nation, this Office respectfully requests additional language to the proposed MOA that will ensure Section 106 compliance in the event of project changes in addition to clauses about the discovery of human remains. Additional guidance may be found on the ACHP website: <https://www.achp.gov/guidance-agreement-documents/Sample%20Stipulations>.

Please let me know if there are any questions or concerns, or if this Office may be of further help.

Wado,

Elizabeth Toombs, Tribal Historic Preservation Officer  
Cherokee Nation  
Tribal Historic Preservation Office  
PO Box 948  
Tahlequah, OK 74465-0948  
918.453.5389

**From:** Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>  
**Sent:** Tuesday, May 24, 2022 4:37 PM  
**To:** Elizabeth Toombs <[elizabeth-toombs@cherokee.org](mailto:elizabeth-toombs@cherokee.org)>; DOE LPO Environmental <[DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com)>  
**Cc:** McCoy, Maureen <[Maureen.McCoy@icf.com](mailto:Maureen.McCoy@icf.com)>  
**Subject:** <EXTERNAL> RE: U.S. Department of Energy, Loan Programs Office: Archaeological Report Addendum III

Email 4 of 4 with the initial archaeological report from June 2021.

Thanks

**Todd Stribley**  
**Loan Programs Office**  
Office: 303.275.4549  
Cell: 301.525.5944

**From:** Stribley, Todd  
**Sent:** Tuesday, May 24, 2022 3:36 PM  
**To:** Elizabeth Toombs <[elizabeth-toombs@cherokee.org](mailto:elizabeth-toombs@cherokee.org)>; DOE LPO Environmental <[DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com)>  
**Cc:** McCoy, Maureen <[Maureen.McCoy@icf.com](mailto:Maureen.McCoy@icf.com)>  
**Subject:** RE: U.S. Department of Energy, Loan Programs Office: Archaeological Report Addendum III

Email 3 of 4 with Addendum I from November 2021.

Thanks

**Todd Stribley**  
**Loan Programs Office**  
Office: 303.275.4549  
Cell: 301.525.5944

**From:** Stribley, Todd  
**Sent:** Tuesday, May 24, 2022 3:34 PM  
**To:** 'Elizabeth Toombs' <[elizabeth-toombs@cherokee.org](mailto:elizabeth-toombs@cherokee.org)>; 'DOE LPO Environmental' <[DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com)>  
**Cc:** 'McCoy, Maureen' <[Maureen.McCoy@icf.com](mailto:Maureen.McCoy@icf.com)>  
**Subject:** RE: U.S. Department of Energy, Loan Programs Office: Archaeological Report Addendum III

Email 2 of 4 with Addendum II from February 2022.

Thanks

**Todd Stribley**  
**Loan Programs Office**  
Office: 303.275.4549  
Cell: 301.525.5944

**From:** Stribley, Todd  
**Sent:** Tuesday, May 24, 2022 3:32 PM  
**To:** 'Elizabeth Toombs' <[elizabeth-toombs@cherokee.org](mailto:elizabeth-toombs@cherokee.org)>; DOE LPO Environmental <[DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com)>  
**Cc:** McCoy, Maureen <[Maureen.McCoy@icf.com](mailto:Maureen.McCoy@icf.com)>  
**Subject:** RE: U.S. Department of Energy, Loan Programs Office: Archaeological Report Addendum III

Elizabeth –

Jumping into the conversation to provide you the archaeological reports associated with the Ultium Project. Attached is addendum III, and will send you subsequent emails of the other Archaeological reports from June 2021, November 2021, and February 2022.

Thanks

**Todd Stribley**  
**Loan Programs Office**  
Office: 303.275.4549  
Cell: 301.525.5944

**From:** Elizabeth Toombs <[elizabeth-toombs@cherokee.org](mailto:elizabeth-toombs@cherokee.org)>  
**Sent:** Tuesday, May 24, 2022 3:20 PM  
**To:** DOE LPO Environmental <[DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com)>  
**Cc:** Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>  
**Subject:** [EXTERNAL] RE: U.S. Department of Energy, Loan Programs Office: Archaeological Report Addendum III

Thank you for the draft, Ms. McCoy. Confirming that I received both documents to the MOA.

Is there a way to access the related archeological report for this project as well? I think this information will help this Office continue with the review. Thank you for your understanding and any additional details.

Wado,

Elizabeth Toombs, Tribal Historic Preservation Officer  
Cherokee Nation  
Tribal Historic Preservation Office  
PO Box 948  
Tahlequah, OK 74465-0948  
918.453.5389

**From:** DOE LPO Environmental <[DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com)>  
**Sent:** Tuesday, May 24, 2022 3:56 PM  
**To:** Elizabeth Toombs <[elizabeth-toombs@cherokee.org](mailto:elizabeth-toombs@cherokee.org)>  
**Cc:** Stribley, Todd <[todd.stribley@hq.doe.gov](mailto:todd.stribley@hq.doe.gov)>  
**Subject:** <EXTERNAL> RE: U.S. Department of Energy, Loan Programs Office: Archaeological Report Addendum III

Elizabeth,

Part 2 of the Spring Hill MOA is attached for your review. Please let me know if you have any questions.

Thanks,  
Maureen McCoy



## Department of Energy

Washington, DC 20585

August 15, 2022

Elizabeth Toombs  
Tribal Historic Preservation Officer  
Cherokee Nation  
PO Box 948  
Tahlequah, OK 74465

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Executed Memorandum of Agreement

Dear Ms. Toombs:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee. As described in our letter to you on October 8, 2021, DOE initiated a review of this project pursuant to Section 106 of the National Historic Preservation Act. The final Memorandum of Agreement (MOA) to resolve the adverse effects of the proposed activities in Spring Hill, Tennessee was sent to you on June 9, 2022. The purpose of this letter is to inform you of an additional invited signatory to the MOA and to provide you with a copy of the executed MOA.

Prior to executing the MOA, the Tennessee Historical Commission notified LPO that the Tennessee Valley Authority (TVA) was reviewing an undertaking (development of transmission line to the Project) and recommended that LPO and TVA jointly review their undertakings. TVA and LPO reviewed their respective undertakings and agreed that LPO is the lead Federal agency for the construction and tooling of the battery manufacturing facility, and TVA is the lead Federal agency for the construction of a transmission line to the manufacturing facility. In addition, LPO invited TVA to become party to the MOA as an invited signatory; however, TVA's signature is not required for the execution of the MOA.

All consulting parties and Tribes are being provided with a copy of this executed MOA (Attachment 1).

If you have any questions, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [LPO\\_Environmental@hq.doe.gov](mailto:LPO_Environmental@hq.doe.gov).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

Attachment 1: Executed Memorandum of Agreement

cc: Chad Harsha, Secretary of Natural Resources

## Appendix B – Interested Party Coordination

Organization	Contact Date(s)	Summary of Additional Contact
Association for Preservation of Tennessee Antiquities	11/12/2021 02/17/2022 02/25/2022 04/25/2022 04/27/2022  05/11/2022 08/15/2022	Notification and Initiation letter (all interested parties) Draft MOA (all interested parties) Contacted via phone regarding receipt of draft MOA LPO submission of additional information (all interested parties) Revised Draft Memorandum of Agreement (all interested parties)  Contacted via phone regarding receipt of revised draft MOA LPO submittal of executed MOA
City of Columbia	11/12/2021 02/17/2022 02/25/2022 04/25/2022 04/27/2022  05/11/2022 08/15/2022	Notification and Initiation letter (all interested parties) Draft MOA (all interested parties) Contacted via phone regarding receipt of draft MOA LPO submission of additional information (all interested parties) Revised Draft Memorandum of Agreement (all interested parties)  Contacted via phone regarding receipt of revised draft MOA LPO submittal of executed MOA
City of Spring Hill	11/12/2021 02/17/2022 02/25/2022 04/25/2022 04/27/2022  05/11/2022  08/15/2022	Notification and Initiation letter (all interested parties) Draft MOA (all interested parties) Contacted via phone regarding receipt of draft MOA LPO submission of additional information (all interested parties) Revised Draft Memorandum of Agreement (all interested parties)  Contacted via phone regarding receipt of revised draft MOA; Mayor Hagaman requested to sign the MOA as a concurring party. LPO submittal of executed MOA
Maury County	11/12/2021 02/17/2022 02/25/2022  04/25/2022 04/27/2022  05/11/2022 08/15/2022	Notification and Initiation letter (all interested parties) Draft MOA (all interested parties) Contacted via phone regarding receipt of draft MOA; LPO provided Draft MOA same day LPO submission of additional information (all interested parties) Revised Draft Memorandum of Agreement (all interested parties)  Contacted via phone regarding receipt of revised draft MOA LPO submittal of executed MOA
Maury County Historical Society	11/12/2021 02/17/2022 04/25/2022 04/27/2022 08/15/2022	Notification and Initiation letter (all interested parties) Draft MOA (all interested parties) LPO submission of additional information (all interested parties) Revised Draft Memorandum of Agreement LPO submittal of executed MOA

<b>Organization</b>	<b>Contact Date(s)</b>	<b>Summary of Additional Contact</b>
Middle TN AgResearch and Education Center at Spring Hill	11/12/2021 02/17/2022 02/25/2022 04/25/2022 04/27/2022  05/11/2022 08/15/2022	Notification and Initiation letter (all interested parties) Draft MOA (all interested parties) Contacted via phone regarding receipt of draft MOA LPO submission of additional information (all interested parties) Revised Draft Memorandum of Agreement (all interested parties)  Contacted via phone regarding receipt of revised draft MOA LPO submittal of executed MOA

Notes: For correspondence sent to all Interested Parties, a single letter is included.



## Department of Energy

Washington, DC 20585

November 12, 2021

Maury County Historical Society  
ATTN: Corresponding Secretary  
P.O. Box 147  
Columbia, TN 38402-0147

**SUBJECT:** Proposed Federal Loan to Ultium Cells, LLC., for Lithium-Ion Battery Cell Manufacturing Facilities in Lordstown, Ohio and Spring Hill, Tennessee; Invitation to Participate in the Section 106 Process

Dear Corresponding Secretary:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee. As part of its consideration of providing a Federal loan, DOE has initiated a review pursuant to Section 106 of the National Historic Preservation Act. In accordance with our responsibilities pursuant to Section 106, we are notifying you of the Federal undertaking and seeking to identify if you would like to be consulting party in the Section 106 process.

The DOE undertaking encompasses providing a loan to Ultium to support the construction of a new lithium-ion battery cell manufacturing facility in Spring Hill, Tennessee (see Attachment 1). The facility would include an approximately 2.8-million-square-foot building, several auxiliary structures and features, a utility corridor, soil storage areas, and an existing spoil pile all within an area totaling approximately 218 acres (see Attachment 2). The auxiliary structures and features include parking and loading areas, utility and access roads, stormwater management facilities, switch yard and electricity substation, warehouse, guard house, contractor trailer area, trailer staging areas and sea container storage, hazardous material storage, water tank area, and a recycling area. The utility corridor would be used to route overhead power lines and underground utilities (potable water and sanitary sewer) to the project site; however, the overhead powerlines are a separate project and are not associated with the DOE undertaking. A two-mile public roadway is also being constructed by the Tennessee Department of



Transportation as a separate project. The existing spoil pile contains stockpiled crushed stone from previous development adjacent to the project site.

The archaeological area of potential effect (APE) includes the area subject to ground disturbing activities, constituting the entire 218-acre Project footprint (see Attachment 3), which is made up of a 158-acre building area, the 33-acre utility corridor, access roads, and soil staging areas, and the existing 27-acre spoil pile area. The architectural APE includes the 158-acre building area where new above-ground structures would be located, as well as 0.5-mile buffer surrounding that area (see Attachment 4). The architectural APE does not include a buffer around the utility corridor or the stockpile areas, as the undertaking includes only underground utilities, and the stockpile is a man-made feature that is being reduced in size and would not introduce any new visual impacts.

I would greatly appreciate notification if you do or do not wish to be a consulting party in the Section 106 process for project in Spring Hill, Tennessee, by December 13, 2021. Should you wish to be a consulting party, I will provide you with additional information pursuant to the NHPA Section 106 process as it becomes available. Please provide your notification of interest and any comments or concerns by email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov), or I can also be reached by telephone at 303-275-4549.

Respectfully,



Todd Stribley  
Environmental Protection Specialist  
Loan Programs Office

Attachments:

- Attachment 1: Spring Hill, TN Site Location Map
- Attachment 2: Spring Hill, TN Overall Site Development Plan
- Attachment 3: Spring Hill, TN Archaeological APE
- Attachment 4: Spring Hill, TN Architectural APE



## Department of Energy

Washington, DC 20585

February 17, 2022

Mr. Jim Hagaman  
Mayor, City of Spring Hill  
199 Town Center Parkway  
Spring Hill, TN 37174

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Draft Memorandum of Agreement

Dear Mr. Hagaman:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee. As described in our letter to you on November 12, 2021, DOE initiated a review of this project pursuant to Section 106 of the National Historic Preservation Act. The purpose of this letter is to provide for your review a draft Memorandum of Agreement (MOA) to resolve the adverse effects of the proposed activities in Spring Hill, Tennessee.

Cultural resources investigations, including an architectural survey and Phase I archaeological survey, were completed on the Spring Hill site as a part of the Section 106 review process for this project. No archaeological sites were identified, and ten architectural resources were identified within the project's area of potential effects (APE). Through consultation with Tennessee Historical Commission (THC), DOE determined that the project would result in adverse effects to two properties: Haynes Haven Stock Farm and Middle Tennessee Agricultural Experiment Station (MTAES). THC concurred with this finding on November 19, 2021. The attached MOA seeks to resolve these adverse effects. All interested parties and Tribes are being provided with a copy of the MOA for review and comment.

We request your review and comments on this draft MOA within thirty (30) days of receipt of this letter. I will be contacting you during the review period to confirm whether you would like to be a concurring party on the MOA. If you have any questions or would like to discuss this MOA further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

Attachment 1: Draft Memorandum of Agreement



## Department of Energy

Washington, DC 20585

April 25, 2022

**SUBJECT:** U.S. Department of Energy, Loan Programs Office, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Archaeological Report Addendum III

Dear Interested Party:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee (DOE's proposed action and undertaking).

The purpose of this letter is to continue consultation with your organization under Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800. Due to additional project changes, DOE is providing a third addendum report containing Phase I archaeological survey results within the revised archaeological area of potential effects (APE). This report has been provided to THC, along with information on the expanded APE, for review and comment. We are attaching this report for your review (see Attachment 4).

Recent project changes include the addition of laydown areas, contractor's yard, parking, and equipment and soil storage, and the construction of a recycling facility building (not to include tooling), comprising 53.4 acres of new, proposed land disturbance. The recycling building location is currently being evaluated and has two site options, both of which were included in the expanded limits of disturbance (LOD) (Attachment 1). The recycling building will be tooled and operated by others and will process used or inoperable battery cells for recovery of component raw materials for reuse. Due to these project changes, a new APE for archaeological and architectural cultural resources is being proposed. Attachment 2 illustrates the additional areas of the LOD located outside of the previous archaeological APE, constituting the extent of the revised archaeological APE. Attachment 3 depicts the slight expansion of the 0.5 mile-buffer that makes up the architectural APE (which only considers the permanent aboveground structures associated with the undertaking) to account for potential effects from the construction of the recycling building.

An additional Phase I Archaeological survey was conducted in seven areas that make up the total 53.4 acres of proposed LOD expansion. A Phase I archaeological survey report

detailing this investigation and its findings is attached for your review and comment (Attachment 4). The location of the additional facility is on land that was previously disturbed from agricultural activities or during construction of an existing vehicle assembly plant located immediately to the north of the Project site. Background research on these new land areas, a pedestrian reconnaissance survey, and shovel testing yielded negative survey results and no sites were identified.

I would greatly appreciate any comments you may have on this addendum within thirty (30) days of receipt of this letter. An updated draft Memorandum of Agreement will be distributed to you, THC, and all consulting parties and will reflect this updated project description. If you have any questions or would like to discuss this project further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

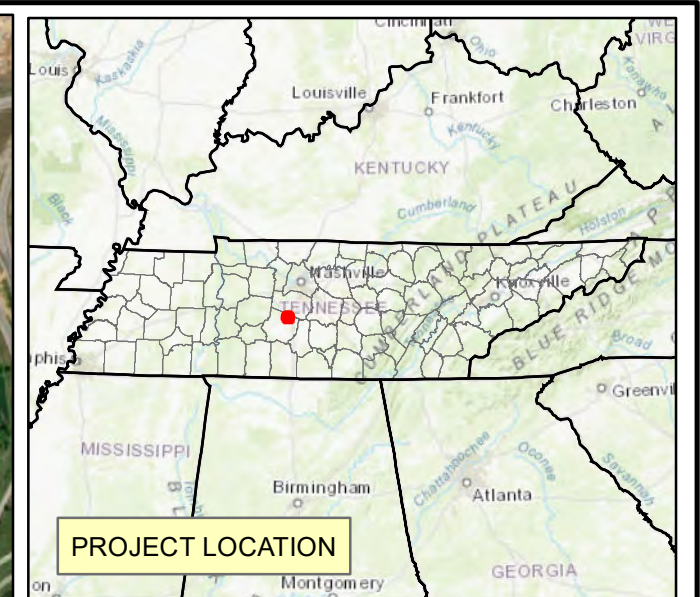
Attachment 1: Recycling Building Locations Map

Attachment 2: Revised Archaeological APE

Attachment 3: Revised Architectural APE

Attachment 4: Addendum III: Phase I Archaeological Report for Project Night Sky, Maury County, Tennessee

**Attachment 1**  
**Recycling Building Locations Map**

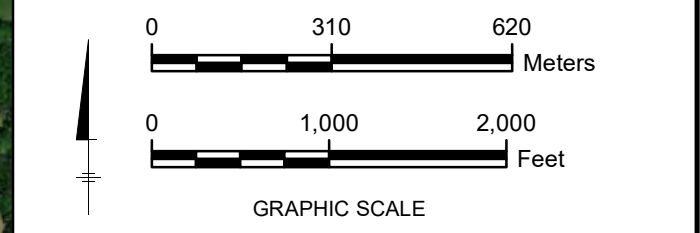


**Legend**

- Addendum III Survey, April 2022 (APE) [53 acres]
- Project
- Previous APE

**Proposed Recycling Facility**

- Option A
- Option B



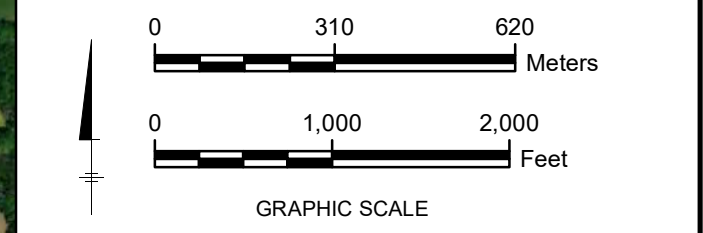
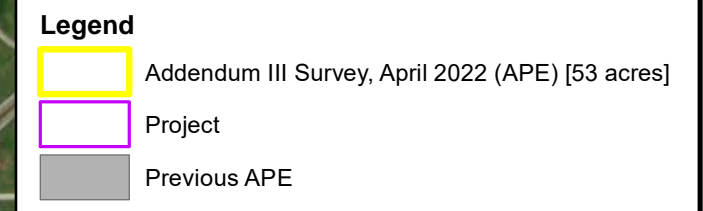
Base Map Source:  
Esri World Imagery Clarity Layer and World Topographic Layer. Obtained from Esri Imagery Service.

GENERAL MOTORS, LLC  
PROJECT NIGHT SKY  
SPRING HILL, MAURY COUNTY, TENNESSEE

**POTENTIAL RECYCLE  
BUILDING LOCATIONS**

**Attachment 2**  
**Revised Archaeological APE**



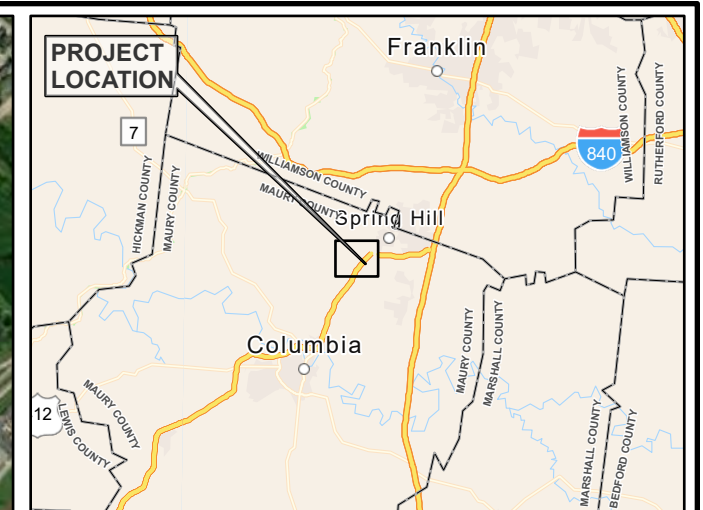
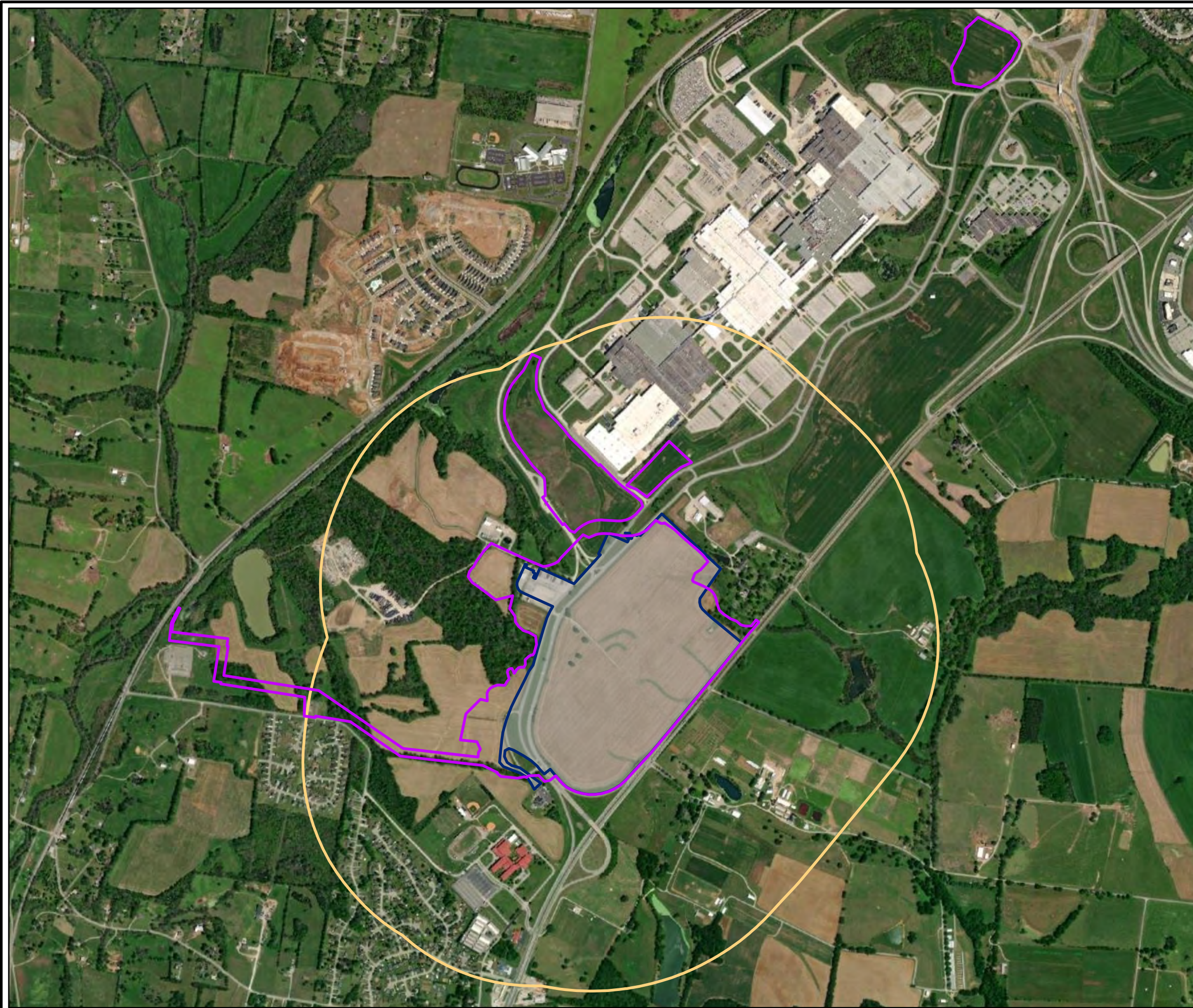


Base Map Source:  
Esri World Imagery Clarity Layer and World Topographic Layer. Obtained from Esri Imagery Service.

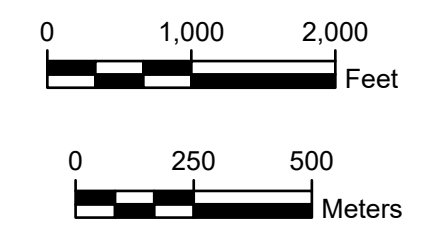
ULTIUM CELLS, LLC  
PROJECT NIGHT SKY  
SPRING HILL, MAURY COUNTY, TENNESSEE

**AREA OF POTENTIAL EFFECT**

**Attachment 3**  
**Revised Architectural APE**



- LEGEND:**
- PROJECT
  - APE - 0.5 MILE BUFFER
  - CURRENT BUILDING LOD



NOTE:  
1. 2020 AERIAL IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.

GENERAL MOTORS SPRING HILL CULTURAL RESOURCES DESKTOP REVIEW MAURY COUNTY, TENNESSEE	
<b>ARCHITECTURAL APE</b>	
	<b>FIGURE 3</b>



## Department of Energy

Washington, DC 20585

April 27, 2022

Mr. Adam Southern  
Maury County Chapter President  
Association for Preservation of Tennessee Antiquities  
808 Athenaeum Street  
Columbia, TN 38401

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Revised Draft Memorandum of Agreement

Dear Mr. Southern:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee. As described in our letter to you on October 8, 2021, DOE initiated a review of this project pursuant to Section 106 of the National Historic Preservation Act. The purpose of this letter is to provide for your review a revised draft Memorandum of Agreement (MOA) to resolve the adverse effects of the proposed activities in Spring Hill, Tennessee.

The revised draft MOA replaces the draft MOA submitted to you on February 17, 2022, and incorporates the project changes described in our letter to you dated April 25, 2022, as well as comments provided by the Tennessee State Historical Commission (THC), State Historic Preservation Office (SHPO). Through consultation with the THC, DOE determined that the adverse effect finding on the Haynes Haven Stock Farm and the Middle Tennessee AgResearch and Experiment Center are still applicable. The attached revised draft MOA seeks to resolve these adverse effects. All interested parties and Indian Tribes are being provided with a copy of the revised draft MOA for review and comment.

We request your review and comments on this revised draft MOA within thirty (30) days of receipt of this letter. I will be contacting you during the review period to confirm whether you would like to be a concurring party on the MOA. If you have any questions or would like to discuss this MOA further, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [DOE\\_LPO@icf.com](mailto:DOE_LPO@icf.com).

Respectfully,



Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachment:

Attachment 1: Revised Draft Memorandum of Agreement



## Department of Energy

Washington, DC 20585

August 15, 2022

Jim Hagaman, Mayor  
City of Spring Hill  
199 Town Center Parkway  
Spring Hill, TN 37174

**SUBJECT:** U.S. Department of Energy, Lithium-Ion Battery Cell Manufacturing Facility in Spring Hill, Tennessee; Executed Memorandum of Agreement

Dear Mayor Hagaman:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the tooling of a battery manufacturing facility in Lordstown, Ohio, and the construction and tooling of a battery manufacturing facility in Spring Hill, Tennessee. As described in our letter to you on October 8, 2021, DOE initiated a review of this project pursuant to Section 106 of the National Historic Preservation Act. The final Memorandum of Agreement (MOA) to resolve the adverse effects of the proposed activities in Spring Hill, Tennessee was sent to you on June 9, 2022. The purpose of this letter is to inform you of an additional invited signatory to the MOA and to provide you with a copy of the executed MOA.

Prior to executing the MOA, the Tennessee Historical Commission notified LPO that the Tennessee Valley Authority (TVA) was reviewing an undertaking (development of transmission line to the Project) and recommended that LPO and TVA jointly review their undertakings. TVA and LPO reviewed their respective undertakings and agreed that LPO is the lead Federal agency for the construction and tooling of the battery manufacturing facility, and TVA is the lead Federal agency for the construction of a transmission line to the manufacturing facility. In addition, LPO invited TVA to become party to the MOA as an invited signatory; however, TVA's signature is not required for the execution of the MOA.

All consulting parties and Tribes are being provided with a copy of this executed MOA (Attachment 1).

If you have any questions, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at [Todd.Stribley@hq.doe.gov](mailto:Todd.Stribley@hq.doe.gov).

Respectfully,

A handwritten signature in black ink that reads "Todd Stribley". The signature is written in a cursive, slightly slanted style.

Todd Stribley  
NEPA Document Manager  
Loan Programs Office

Attachments:

Attachment 1: Executed Memorandum of Agreement

**APPENDIX C**

**MEMORANDUM OF AGREEMENT AMONG ULTIUM,  
LLC., U.S. DEPARTMENT OF ENERGY - LOAN  
PROGRAMS OFFICE, AND THE TENNESSEE  
HISTORICAL COMMISSION**



**MEMORANDUM OF AGREEMENT  
AMONG THE U.S. DEPARTMENT OF ENERGY, ULTIUM CELLS, LLC., AND THE  
TENNESSEE HISTORICAL COMMISSION  
REGARDING  
THE ULTIUM CELLS SPRING HILL PROJECT,  
SPRING HILL, MAURY COUNTY, TENNESSEE**

**WHEREAS**, DOE, as the lead federal agency, is required to comply with the National Historic Preservation Act (NHPA) and its implementing regulations at 36 Code of Federal Regulations (CFR) Part 800; and

**WHEREAS**, Ultium Cells, LLC (Ultium), has applied to DOE for federal financial assistance in the form of a loan under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, for providing loan funding for the construction and tooling of a battery manufacturing facility and the construction of a recycling facility building near Spring Hill, Maury County, Tennessee (the Undertaking); and

**WHEREAS**, the Undertaking (providing a loan to Ultium for the proposed project) would include the construction of a new lithium-ion battery cell manufacturing facility and recycling facility building near Spring Hill, Tennessee. The battery manufacturing facility would include an approximately 2.8-million-square-foot building and several auxiliary structures and features, a utility corridor, soil storage areas, and an existing spoil pile. The recycling facility building would include a 120,000 square-foot building and associated parking areas. The development of the battery cell manufacturing facility and the recycling facility buildings and auxiliary structures and features encompasses an area totaling nearly 274 acres as depicted on the map, titled "Project Limits of Disturbance", included in Attachment 1 to this Memorandum of Agreement (MOA); and

**WHEREAS**, the Area of Potential Effects (APE) for the Undertaking includes all areas to be developed, including all temporary and permanent easement areas, staging areas, and construction areas, as well as a half-mile buffer around all new above-ground structures to account for any indirect (viewshed) impacts as depicted on the map, titled "Architectural APE", included in Attachment 1 to this MOA; and

**WHEREAS**, DOE, in consultation with the Tennessee Historical Commission (THC) and in accordance with 36 CFR § 800.4(b) and § 800.4(c), has inventoried historic properties within the Undertaking's APE; and

**WHEREAS**, DOE and THC concur that the Haynes Haven Stock Farm is eligible for inclusion on the National Register of Historic Places (NRHP) under Criterion A for agriculture, for its association with breeding notable Tennessee Walking Horses, and for its use as a breeding and show farm; and under Criterion C for architecture, as a good local example of late classical revival architecture for the farmhouse and for good examples of a large Craftsman inspired horse barn and ca. 1890s lattice barn; and

**WHEREAS**, DOE and THC concur that the Middle Tennessee AgResearch and Education Center is eligible for the NRHP under Criterion A for its association with the state's efforts to foster innovation in agriculture; and

**WHEREAS**, in accordance with 36 CFR § 800.5(a) for determining adverse effect, DOE and THC concur that the Undertaking will have an adverse effect on the Haynes Haven Stock Farm and the Middle Tennessee AgResearch and Education Center; and

**WHEREAS**, in accordance with 36 CFR § 800.2, DOE notified the Alabama-Coushatta Tribe of Texas, Cherokee Nation, Chickasaw Nation, Coushatta Tribe of Louisiana, Eastern Band of Cherokee Indians, and Muscogee (Creek) Nation, collectively "Tribes" of the undertaking and invited them to participate in the Section 106 process; and

**WHEREAS**, DOE invited the Tribes to comment and participate in consultation pursuant to 36 CFR 800.6(c)(3) as a Concurring Party; and

**WHEREAS**, in accordance with 36 CFR § 800.2, DOE notified the City of Columbia, City of Spring Hill, Maury County, Maury County Historical Society, Association for Preservation of Tennessee Antiquities, and the Middle Tennessee AgResearch and Education Center at Spring Hill, of the Undertaking and inviting them to participate in the Section 106 process; and

**WHEREAS**, Ultium has participated in the development of this MOA, and DOE has invited Ultium to sign this MOA as an Invited Signatory, pursuant to 36 CFR § 800.6(c)(1); and

**WHEREAS**, DOE has invited the Tennessee Valley Authority to sign this MOA as an Invited Signatory, pursuant to 36 CFR § 800.6(c)(1); and

**WHEREAS**, in accordance with 36 CFR 800.6(a)(1), DOE has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination, and the ACHP has elected not to participate pursuant to 36 CFR Part 800.6(a)(1)(iii); and

**NOW, THEREFORE**, DOE, THC, and Ultium agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the adverse effects of the Undertaking on historic properties, and further agree that these stipulations shall govern the Undertaking and all of its parts until this MOA expires or is terminated and shall satisfy the DOE's Section 106 responsibilities for all aspects of the Undertaking:

## STIPULATIONS

### I. DEFINITIONS

The definitions set forth in 36 CFR § 800.16 are incorporated herein by reference and apply throughout this MOA.

### II. TREATMENT OF ADVERSE EFFECTS

#### A. Vegetative Screening

Ultium will construct berms and plant trees/shrubs generally consistent with the plans included in Attachment 2 of this MOA to minimize and mitigate for the Undertaking's adverse visual effects to the Haynes Haven Stock Farm and the Middle Tennessee AgResearch and Education Center.

#### B. Haynes Haven NRHP Nomination

Ultium will prepare a NRHP nomination for the previously determined eligible Haynes Haven Stock Farm. The property was determined to be eligible for listing under Criterion A for its agricultural associations with horse breeding, specifically Tennessee Walking Horses, and under Criterion C for architecture as an example of Late Classical Revival style architecture. The nomination will focus on these areas of eligibility and will be prepared by a 36 CFR Part 61-qualified architectural historian according to Stipulation III.A. This nomination will be developed in consultation with THC staff and shall meet the THC's and the National Park Service's (NPS's) NRHP submission guidelines.

In the event of owner objection, the nomination will proceed through the nomination process (outlined below) as a formal Determination of Eligibility.

Based on consultations with and instructions from THC National Register staff, Ultium will complete the nomination form, as well as conduct site visits and additional background research, according to the THC's and NPS's submission guidelines. Within six months of the execution of this agreement, Ultium will submit a draft nomination packet for the Haynes Haven Stock Farm to DOE and THC for review. All comments shall be received within 45 days. Ultium will address all comments within 14 days of receipt and incorporate them into a revised nomination packet for DOE and THC review, and Ultium will consult with DOE and THC to resolve any outstanding issues, as needed. Consultation methods and frequency for the development and completion of the nomination packet will be decided upon execution of this agreement.

Ultium will complete and submit the final NRHP nomination to DOE and THC within one (1) year of the execution of this agreement. Following acceptance of the final NRHP nomination by DOE and THC, the nomination will be reviewed by the Tennessee State Review Board at their next meeting. Following the Tennessee State Review Board's approval, the THC National Register staff will

submit the nomination to the NPS in Washington, D.C. for final review, approval, and listing in the NRHP.

**C. Middle Tennessee AgResearch and Education Center Historical Context Report**

Ultium will prepare a historical context report (i.e., historical narrative) on the Middle Tennessee AgResearch and Education Center. The report will be researched and prepared by a 36 CFR Part 61- qualified historian according to Stipulation III.A.

Upon execution of this agreement, Ultium and THC shall meet to confirm the general scope of work for the Historical Context Report and discuss sources of information that could be accessed to prepare the historical context report. In general, the historical context report will include:

- a. An historical narrative of the property, including past ownership, Middle Tennessee AgResearch and Education Center purchase and construction, and subsequent additions and other changes to the property over time;
- b. A discussion of mid-to-late-twentieth-century activities and agricultural practices of the Middle Tennessee AgResearch and Education Center, including the development of new methodology and technologies; and
- c. A discussion of the historical role of the Middle Tennessee AgResearch and Education Center to central Tennessee, and as part of the larger University of Tennessee Agricultural Experiment Station Program.

Logistically, the preparation of the Middle Tennessee AgResearch and Education Center Historical Context Report will involve desktop and on-site archival research to appropriate local repositories, as well as a site visit to the Middle Tennessee AgResearch and Education Center property by a 36 CFR Part 61- qualified historian to document current conditions and collect photo documentation. Research involving other University of Tennessee Agricultural Experiment Stations will be limited to online desktop research only.

Ultium will submit a draft Historical Context Report to DOE and THC for review within nine (9) months of the execution of this agreement. DOE and THC will provide comments to Ultium within 30 days of receipt of the draft report. Ultium will incorporate and/or address these comments in a final version of the historical context report within 14 days of receipt. Ultium will consult with DOE and THC to resolve any outstanding issues as needed. Consultation methods and frequency for the development and completion of the Historical Context Report will be decided upon execution of this agreement.

Ultium will complete and submit a final version of the Middle Tennessee AgResearch and Education Center Historical Context Report to THC and DOE within one (1) year of the execution of this agreement.

### **III. POST-REVIEW DISCOVERIES**

#### **A. Discovery of Human Remains**

1. Ultium shall ensure and direct all contractors that when human remains, suspected human remains, or indications of a burial are discovered construction and installation activities at the Spring Hill site, that the local law enforcement, the county medical examiner, Ultium, and DOE shall be immediately notified, and implement reasonable efforts to protect the human remains from any harm. The human remains shall not be touched, moved, or further disturbed. All activities shall cease within a minimum of 50 feet from the area of the find (i.e., a 50-foot radius “no work” buffer shall be established).
2. DOE shall immediately notify the Tennessee State Historic Preservation Office and appropriate Consulting Parties and Indian Tribes.
3. Upon notification, Ultium shall ensure that the area of the find is secured and protected from further disturbance. Ultium shall ensure that the following procedures will be followed for discoveries on private land:
  - a. The procedures established by Tennessee Cemetery and Burial Site Laws (T.C.A. 11-6-107d) as amended.
  - b. Ultium/DOE shall notify the State Archaeologist of the discovery.
  - c. Ultium and DOE shall continue consultation with the Tennessee State Historic Preservation Office, Consulting Parties, and Indian Tribes as appropriate.
  - d. Ultium shall ensure that no remains will be removed from the area of the find until jurisdiction is established.
4. All Signatory Parties agree that the most appropriate treatment, if feasible, is to protect the human remains and permanently preserve burial sites in situ.

#### **B. Unanticipated Discoveries and Effects**

1. Ultium shall ensure and direct all contractors that when a previously unidentified cultural resources (e.g., an archaeological site) is discovered during the construction and installation activities associated with the Spring Hill site, that Ultium and DOE shall be immediately notified, and implement reasonable efforts to protect the resource from any harm. All activities shall cease within a minimum of 50 feet from the area of the find (i.e., a 50-foot radius “no work” buffer shall be established).
2. Upon notification, Ultium shall implement any additional reasonable measures necessary to avoid or minimize effects to the resource. Any previously unidentified cultural resource will be treated as though it is eligible for the NRHP until such other determination may be made.

3. DOE shall notify the Tennessee State Historic Preservation Office, Consulting Parties, and Indian Tribes of the discovery within 48 hours, and request consultation to resolve potential adverse effects.
  - a. DOE will consult with the Tennessee State Historic Preservation Office, Consulting Parties, and/or Indian Tribes, as appropriate, to determine if the resource is eligible for listing on the NRHP. If the resource is not eligible, the suspension of work will end and construction in the area may commence.
  - b. If the resource is found to be eligible for listing on the NRHP, the suspension of work will continue. The DOE, in consultation with Ultium, the Tennessee State Historic Preservation Office, Consulting Parties, and Indian Tribes will determine actions to avoid, minimize, or mitigate adverse effects to the historic property and will ensure that the appropriate actions are carried out.
4. If DOE, Ultium, the Tennessee State Historic Preservation Office, Consulting Parties, or Indian Tribes cannot agree on an appropriate course of action to address an unanticipated discovery or effects situation, then the DOE shall initiate the dispute resolution process set forth in Stipulation V.

#### **IV. PROFESSIONAL QUALIFICATIONS AND STANDARDS**

##### **A. Professional Qualifications.**

All historic preservation activities implemented pursuant to this MOA shall be conducted by, or under the direct supervision of, a person or persons meeting, at a minimum, the Secretary of Interior's *Professional Qualifications Standards* for Archeology, History, or Architectural History (48 FR 44738-39).

##### **B. Historic Preservation Standards.**

All historic preservation activities carried out pursuant to this MOA shall meet the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-44740) as well as standards and guidelines for historic preservation activities established by THC and the National Park Service.

##### **C. Documentation Standards.**

DOE shall ensure that all written documentation prescribed by Stipulations II and III of this MOA shall conform to the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44740), as well as to applicable standards and guidelines established by THC.

## **V. ADMINISTRATIVE STIPULATIONS**

### **A. RESOLVING OBJECTIONS.**

1. Should any party to this MOA object to the manner in which the terms of this MOA are implemented or to any documentation prepared in accordance with and subject to the terms of this MOA, the objecting party shall immediately notify the other parties, in writing, of the nature of its objection. Responsive comments shall be provided by the non-objecting parties in writing within fifteen (15) calendar days following receipt of the expression of objection. As soon as practicable after notice of an objection, the parties hereto shall begin cooperative discussions for the purpose of resolving the dispute.
2. The parties agree to work cooperatively and diligently toward a mutually acceptable resolution of the objection during a consultation period not to exceed thirty (30) calendar days, beginning on the date responsive comments are received by the objecting party from the non-objecting parties. If the parties resolve the objection, the terms of the resolution shall be incorporated into a written amendment to this MOA in accordance with Stipulation V.B, below. Thereafter, DOE may proceed in accordance with the terms of the resolution.
3. During the implementation of the terms of this MOA, should an objection pertaining to such implementation be raised by a member of the public, DOE shall immediately notify the other parties to this MOA in writing of the objection and take the objection into consideration. DOE shall consult with the objecting individual or organization and, as appropriate, with the other parties to this MOA, in an effort to reach a mutually acceptable resolution. The period of consultation shall not exceed fifteen (15) calendar days. DOE shall reach a decision regarding resolution of the objection and shall notify the objecting individual or organization as well as the parties to this MOA of its decision in writing. In reaching its decision, DOE shall take into account any comments from the other Signatories and Invited Signatories to this MOA and any additional comments from the objecting individual or organization. DOE's decision regarding the resolution will be final.

### **B. AMENDMENTS**

1. Any party to this MOA may propose that this MOA be amended, whereupon all parties to the MOA will consult for no more than thirty (30) days to consider such amendment. DOE may extend this consultation period, if necessary. The amendment process shall comply with 36 CFR § 800.6(c)(7). This MOA may be amended only upon the written agreement of the Signatories and Invited Signatories. If the MOA is not amended, it may be terminated by a Signatory or Invited Signatory in accordance with Section C of this Stipulation.

2. Stipulation II may be amended through consultation as prescribed in Section B.1 of this Stipulation without amending the MOA proper.

### **C. TERMINATION**

1. Only a Signatory or Invited Signatory may terminate this MOA. If this MOA is not amended as provided for in Section B of this Stipulation, or if DOE or THC proposes termination of this MOA for other reasons, the Signatory proposing termination shall, in writing, notify the other parties to this MOA, explain the reasons for proposing termination, and shall consult with the other parties to this MOA for no more than thirty (30) calendar days to seek alternatives to termination. Should such consultation result in an agreement, the parties shall proceed in accordance with the terms of that agreement and shall prepare any amendment to this MOA, if needed, in accordance with the terms of Stipulation V.B, above. Consultation shall not be required if DOE proposes termination because the Undertaking no longer meets the definition set forth at 36 CFR § 800.16(y).
2. If, after thirty (30) calendar days, consultation has not led to a resolution of the objection, the signatory party proposing termination may terminate this MOA by promptly notifying the other parties to this MOA in writing. Termination shall render this MOA without further force or effect.
3. If this MOA is terminated hereunder, and if DOE determines that the undertaking will nonetheless proceed, then DOE shall advise ACHP and request its comments in accordance with the requirements of 36 CFR § 800.6(c)(8) and 36 CFR §§ 800.7(a) and (c).

### **D. DURATION OF THE MOA**

1. Unless terminated pursuant to Section C of this Stipulation, this MOA will remain in effect following execution by the Signatory Parties until DOE, in consultation with the other parties hereto, determines that all the terms of this MOA have been satisfactorily fulfilled. Upon a determination by DOE that all of the requirements of this MOA have been satisfactorily fulfilled, DOE shall notify the other parties to this MOA in writing that this MOA has been fully satisfied and is therefore concluded.
2. If the requirements of this MOA appear unlikely to be fully performed within five (5) years following its date of execution, DOE shall consult with the other parties hereto to reconsider its terms at least sixty (60) calendar days prior to the date on which five (5) years will have elapsed. Reconsideration may include an agreement by the parties to extend this MOA on its original terms for a mutually agreed-upon additional period, or an agreement to amend this MOA in accordance with Stipulation V.B above, or termination. In the event



of termination, DOE will comply with Stipulation V.C.3 of this MOA, if it determines that the Undertaking will proceed notwithstanding termination of this MOA.

3. If DOE has not issued a loan for the Project within five (5) years following execution of this MOA, this MOA shall automatically terminate and have no further force or effect. In such event, DOE shall notify the other MOA parties in writing and, if Ultium chooses to continue with the Undertaking, DOE shall reinstate review of the Undertaking in accordance with 36 CFR Part 800.

#### **E. EFFECTIVE DATE.**

This MOA will take effect immediately upon its execution by the Signatories and Invited Signatory.

**EXECUTION** of this MOA by DOE, THC and Ultium, pursuant to 36 CFR § 800.6, including its transmittal by DOE to ACHP in accordance with 36 CFR § 800.6 (b)(1)(iv), and subsequent implementation of its terms, shall evidence that DOE has afforded ACHP an opportunity to comment on the Undertaking and its effects on Historic Properties, and that DOE has taken into account the effects of this Undertaking on Historic Properties in fulfillment of its duties under Section 106 of the NHPA.

**MEMORANDUM OF AGREEMENT  
BETWEEN THE U.S. DEPARTMENT OF ENERGY, ULTIUM CELLS, LLC., AND THE  
TENNESSEE HISTORICAL COMMISSION  
REGARDING  
THE ULTIUM SPRING HILL PROJECT,  
MAURY COUNTY, TENNESSEE**

**SIGNATORY:**

**DEPARTMENT OF ENERGY, LOAN PROGRAMS OFFICE**

**TODD STRIBLEY** Digitally signed by TODD  
STRIBLEY  
Date: 2022.08.03 15:28:37 -06'00'

Date: \_\_\_\_\_

Name: Todd Stribley

Title: Director of Environmental Compliance, DOE Loan Programs Office

**MEMORANDUM OF AGREEMENT  
BETWEEN THE U.S. DEPARTMENT OF ENERGY, ULTIUM CELLS, LLC., AND THE  
TENNESSEE HISTORICAL COMMISSION  
REGARDING  
THE ULTIUM SPRING HILL PROJECT,  
MAURY COUNTY, TENNESSEE**

**SIGNATORY:**

**TENNESSEE HISTORICAL COMMISSION**



Date: August 4, 2022

Name: E. Patrick McIntyre, Jr.

Title: Executive Director and State Historic Preservation Officer

**MEMORANDUM OF AGREEMENT  
BETWEEN THE U.S. DEPARTMENT OF ENERGY, ULTIUM CELLS, LLC., AND THE  
TENNESSEE HISTORICAL COMMISSION  
REGARDING  
THE ULTIUM SPRING HILL PROJECT,  
MAURY COUNTY, TENNESSEE**

**INVITED SIGNATORY:**

**ULTIUM CELLS LLC**

**Thomas A.  
Gallagher**

Digitally signed by Thomas A. Gallagher  
DN: cn=Thomas A. Gallagher, c=US,  
o=Ultium Cells LLC,  
email=thomas.a.galalgher@gm.com  
Date: 2022.07.30 19:40:11 -04'00'

Date: \_\_\_\_\_

Name: Thomas Gallagher

Title: Vice President Operations

**MEMORANDUM OF AGREEMENT  
BETWEEN THE U.S. DEPARTMENT OF ENERGY, ULTIUM CELLS, LLC., AND THE  
TENNESSEE HISTORICAL COMMISSION  
REGARDING  
THE ULTIUM SPRING HILL PROJECT,  
MAURY COUNTY, TENNESSEE**

**INVITED SIGNATORY:**

**TENNESSEE VALLEY AUTHORITY**

\_\_\_\_\_ Date: \_\_\_\_\_  
Name: James Osborne  
Title: Manager, Cultural Compliance

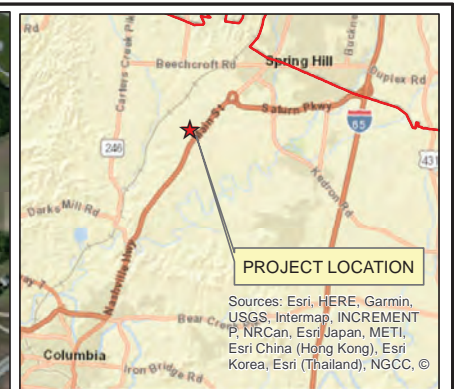
**MEMORANDUM OF AGREEMENT  
BETWEEN THE U.S. DEPARTMENT OF ENERGY, ULTIUM CELLS, LLC., AND THE  
TENNESSEE HISTORICAL COMMISSION  
REGARDING  
THE ULTIUM SPRING HILL PROJECT,  
MAURY COUNTY, TENNESSEE**

**CONCURRING PARTY:**

**City of Spring Hill**

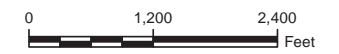
\_\_\_\_\_ Date: \_\_\_\_\_  
Name: Jim Hagaman  
Title: Mayor

**ATTACHMENT 1**  
**Affected Properties Location Maps**



### Legend

 Limits of Disturbance (274 Acres)

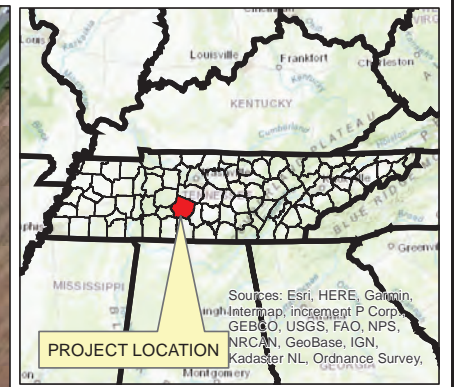


GRAPHIC SCALE

ULTIUM CELLS LLC SPRING HILL BATTERY CELL MANUFACTURING PLANT CULTURAL RESOURCES	
PROJECT LIMITS OF DISTURBANCE	
	FIGURE 1.0



City: D:\cgroups Created By: Last Saved By: V\Tremonte  
C:\Users\Tremonte\OneDrive - ARCADIS\Desktop\GM #2 Spring Hill\GIS\MXD\Figure 1 - Haynes Haven Location\_2022-04-26.mxd 4/26/2022 12:50:37 PM



### Legend

- Hanes Haven Property Boundary
- Project Area (274 Acres)



GRAPHIC SCALE

ULTIUM CELLS LLC  
SPRING HILL BATTERY CELL MANUFACTURING PLANT  
CULTURAL RESOURCES

HAYNES HAVEN LOCATION

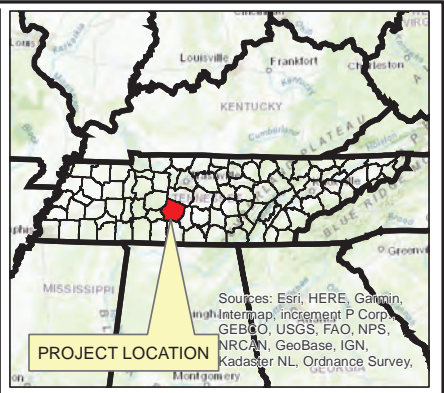
**FIGURE 1.1**

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community




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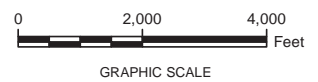



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Legend**

-  Above Ground Building Area (165 Acres)
-  Architectural APE (0.5 Mile Buffer)
-  Middle TN Ag Exp.Sta. (~1,263 Acres)



ULTIUM CELLS LLC SPRING HILL BATTERY CELL MANUFACTURING PLANT <b>CULTURAL RESOURCES</b>	
<b>ARCHITECTURAL APE</b>	
	<b>FIGURE 1.2</b>

**ATTACHMENT 2**  
**Landscape and Berm Screening Plans**

## ATTACHMENT 2 – LANDCAPE SCREENING PLANS

The design approach for landscape screening of the historic site is centered on re-establishing the natural pattern and species from within the landscape. Plant species have been selected that are native or naturalized that will ensure higher success rates, reduce long term maintenance, and help to provide replacement habitat for wildlife species. See Table 1 below for a representative list of species from which screening plantings will be selected. The proposed plantings have been positioned to replace lost vegetation while softening the views from within the historic property over time. With the berm and screening plantings located away from the primary building and closer to the affected properties their screening effectiveness is maximized.

The layout provides a mixture of canopy, evergreen and ornamental tree species placed in small groupings with the intent of mimicking natural patterns found in the regional ecology. While evergreen trees provide more immediate and fully opaque screening, canopy trees will provide the greater long-term impact as they mature and help to address the significant elevation changes on the property. With a focus on long term visual impacts, the decision was made to plant smaller trees to minimize the shock to the plant's systems, reduce plant loss during transplant, and encourage accelerated growth at the time of installation. All landscape plantings will be warranted by the contractor for one-year following completion and acceptance by Ultium. Any plants that do not survive the first year will be replaced. Planting is anticipated to be completed in June 2023.

Attachment 2.1 Landscape Master Plan

Attachment 2.2 Landscape sheet L200 - overall landscape layout plan that shows the proximity of the project and the landscaping to the affected sites.

Attachment 2.3 Landscape sheets L201-L207 and L210-L211, enlarged landscape layout plans

**Table 1 – Representative Landscape Plant Schedule**

### PLANT SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	HEIGHT
ACE SAC	Acer saccharum 'Legacy'	Legacy Sugar Maple	B & B	2"Cal	
AME ARB	Amelanchier arborea	Downy Serviceberry	B & B		8'
CER CAN	Cercis canadensis	Eastern Redbud	B & B	1.5"Cal	
CRA PHA	Crataegus phaenopyrum	Washington Hawthorn	B & B		10'
GIN BIL	Ginkgo biloba 'Autumn Gold' TM	Autumn Gold Maidenhair Tree	B & B	2"Cal	
GIN PSG	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Maidenhair Tree	B & B	3"Cal	
GYM DIO	Gymnocladus dioica 'Espresso'	Kentucky Coffeetree	B & B	2"Cal	
JUN VIR	Juniperus virginiana	Eastern Redcedar	B & B		6'
LIQ STY	Liquidambar styraciflua	Sweet Gum	B & B	2"Cal	
MAL PRA	Malus x 'Prairifire'	Prairifire Crabapple	B & B	1.5"Cal	
PIN STR	Pinus strobus	White Pine	B & B		6'
PIN VIR	Pinus virginiana	Virginia Pine	B & B		6'
QUE RUB	Quercus rubra	Red Oak	B & B	2"Cal	
ULM PAR	Ulmus parvifolia	Lacebark Elm	B & B	2"Cal	
SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	HT.
ARO MEL	Aronia melanocarpa	Black Chokeberry	5 gal	24" ht.	
FOR INT	Forsythia x intermedia	Border Forsythia	5 gal	24" ht.	
HAM VIR	Hamamelis virginiana	Common Witch Hazel	5 gal	24" ht.	
ILE COR	Ilex cornuta 'Dwarf Burford'	Dwarf Burford Holly	5 gal	24" ht.	
ITE VIR	Itea virginica 'Henry's Garnet'	Henry's Garnet Sweetspire	5 gal	24" ht.	
JUN CHI	Juniperus chinensis 'Sea Green'	Sea Green Juniper	5 gal	24" ht.	
PAR TRI	Parthenocissus tricuspidata	Boston Ivy	1 gal	cont.	
PHY OPU	Physocarpus opulifolius 'Monlo' TM	Diabolo Ninebark	5 gal	24" ht.	
PRU LAU	Prunus laurocerasus 'Schipkaensis'	Schipka English Laurel	5 gal	24" ht.	
RHU TYP	Rhus typhina	Staghorn Sumac	5 gal	24" ht.	
VIB DEN	Viburnum dentatum	Arrowwood	5 gal	24" ht.	
VIB PRU	Viburnum prunifolium	Blackhaw Viburnum	5 gal	24" ht.	
VIB PRA	Viburnum x pragensis	Prague Viburnum	5 gal	24" ht.	
ORNAMENTAL GRASSES	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	HT.
PAN CLO	Panicum virgatum 'Cloud Nine'	Cloud Nine Switch Grass	cont.	1 gal	
PAN SHE	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	cont.	1 gal	
SCH SCO	Schizachyrium scoparium 'Standing Ovation'	Standing Ovation Little Bluestem	cont.	1 gal	
SPO HET	Sporobolus heterolepis	Prairie Dropseed	cont.	1 gal	



# Landscape Master Plan

ATTACHMENT 2.1



ULTIUM CELLS LLC  
AT  
SPRING HILL

301 Donald F. Ephlin Pkwy

GM #2100263

**PLANT SCHEDULE**

TREES	BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	HEIGHT	QTY	REMARKS
ACE SAC	Acer saccharum 'Legacy'	Legacy Sugar Maple	8 B.B.	2" Cal		45	Ø clear trunk
AME ASB	Amenlarthar arborea	Downy Serviceberry	8 B.B.			16	multi trunk
CER CAN	Cercis canadensis	Eastern Redbud	8 B.B.	1.5" Cal	8'		single trunk
CRA PRA	Crataegus phaeocorynium	Washington Hawthorn	8 B.B.		10'	28	multi trunk
GIN BL	Ginkgo biloba 'Autumn Gold' TM	Autumn Gold Maidenhair Tree	8 B.B.	2" Cal		28	Ø clear trunk
GIN PSD	Ginkgo biloba Princeton Sentry	Princeton Sentry Maidenhair Tree	8 B.B.	3" Cal		9	Ø clear trunk
GYN LDO	Gymnocladia dioica 'Espresso'	Kentucky Coffee-tree	8 B.B.	2" Cal		4	Ø clear trunk
JUN VIR	Juniperus virginiana	Eastern Redcedar	8 B.B.		6'	43	full to base, nursery grown
LID STR	Liquidambar styraciflua	Sweet Gum	8 B.B.	2" Cal		8	Ø clear trunk
MAL PRA	Malus x 'Framfire'	Prairie Crabapple	8 B.B.	1.5" Cal		8	Ø clear trunk
PIN STR	Pinus strobus	White Pine	8 B.B.		6'	16	full to base
PIN VIR	Pinus virginiana	Virginia Pine	8 B.B.		6'	24	full to base
QUE RUB	Quercus rubra	Red Oak	8 B.B.	2" Cal		19	Ø clear trunk
ULM PAR	Ulmus parvifolia	Lanceleaf Elm	8 B.B.	2" Cal		16	Ø clear trunk

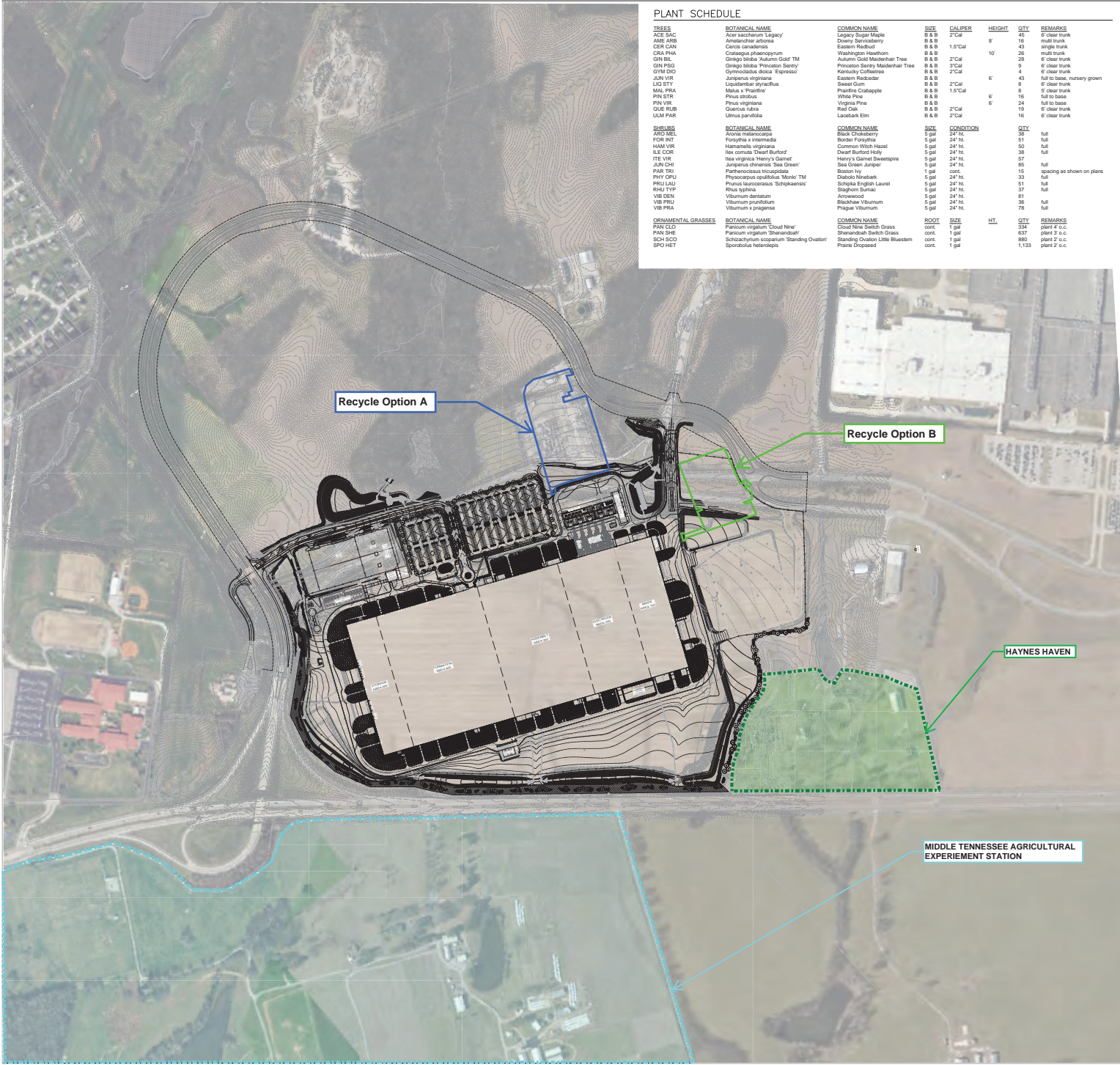
SHUBS	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	QTY	REMARKS
ABO MEL	Abutilon medicaginis	Black Chokeberry	5 gal	24" Ht.	38	full
FOR INT	Forsythia x intermedia	Bolder Forsythia	5 gal	24" Ht.	51	full
HAM VIR	Hamelia virginiana	Common Witch Hazel	5 gal	24" Ht.	50	full
ILE COR	Ilex cornuta 'Dwarf Burford'	Dwarf Burford Holly	5 gal	24" Ht.	38	full
ITE VIR	Itea virginica 'Henry's Garnet Sweetpire'	Henry's Garnet Sweetpire	5 gal	24" Ht.	57	full
JUN CHI	Juniperus chinensis 'Sea Green'	Sea Green Juniper	5 gal	24" Ht.	85	full
PAR TRI	Parthenocissus tricuspidata	Boston Ivy	1 gal	cont.	15	spacing as shown on plans
PNY CPU	Physocarpus opulifolius 'Mouly' TM	Dakota Ninebark	5 gal	24" Ht.	51	full
PRU LAU	Prunus laurocerasus 'Schlipkaensis'	Schlipka English Laurel	5 gal	24" Ht.	37	full
RHU TYP	Rhus typhina	Staghorn Sumac	5 gal	24" Ht.	81	full
VIB DEN	Viburnum dentatum	Arrowwood	5 gal	24" Ht.	36	full
VIB PRU	Viburnum prunifolium	Blackhaw Viburnum	5 gal	24" Ht.	78	full
VIB PRA	Viburnum x pragenase	Prairie Viburnum	5 gal	24" Ht.	78	full

ORNAMENTAL GRASSES	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	HT.	QTY	REMARKS
PAN CLO	Panicum virgatum 'Cloud Nine'	Cloud Nine Switch Grass	cont.	1 gal	53"	plant 4 c.c.	
PAN SHE	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	cont.	1 gal	63"	plant 3 c.c.	
SCH SCD	Schizachyrium scoparium 'Standing Ovation'	Standing Ovation Little Bluestem	cont.	1 gal	800	plant 2 c.c.	
SPO HET	Sporobolus heterophyllus	Prairie Dropseed	cont.	1 gal	1,133	plant 2 c.c.	

**LEGEND:**

- PRAIRIE MIX SEED (SEE SPEC.)
  - KY-31 FESCUE SEED (SEE SPEC.)
  - LANDSCAPE GRAVEL \*\*\*\*\*
  - IRRIGATION COVERAGE \*\*\*\*\*
  - IRRIGATION SLEEVE
- \*\*\*\*\* COVERAGE AREA FOR FULLY AUTOMATIC IRRIGATION SYSTEM. CONTRACTOR SHALL PROVIDE AS A DESIGN / BUILD ITEM FOR OWNER AND LANDSCAPE ARCHITECT REVIEW AND APPROVAL.
- \*\*\*\*\* AREA TO BE MULCHED WITH 3" LAYER OF #57 STONE PLACED OVER PERMEABLE NON-WOVEN WEED BARRIER FABRIC.
- \*\*\*\*\* AREA TO BE SEEDDED WITH KY-31 FESCUE AT THE RATE OF 5 LBS. PER 1000 S.F. OR EQUAL, AS APPROVED BY ENGINEER. MULCH SEEDDED AREA WITH STRAW AT THE RATE OF 1.5 BAGS PER 1000 S.F.
- \*\*\*\*\* AREA TO BE SEEDDED WITH TALL PRAIRIE MIX FOR DRY SOILS AT THE RATE OF 1 LB. PER 1000 S.F. ERADICATE ALL EXISTING VEGETATION AND TILL SOIL TO A DEPTH OF 4" PRIOR TO SEEDING. STABILIZE SEEDDED AREA WITH NORTH AMERICAN GREENS 15% EROSION CONTROL FABRIC FROM PRAIRIE NURSERY 800-476-8463. INSTALLATION SHALL BE PERFORMED BY A CONTRACTOR WITH A MINIMUM OF 3 YEARS EXPERIENCE IN ENVIRONMENTAL RESTORATION.



TREES	COMMON NAME
ACE SAC	Legacy Sugar Maple
AME ASB	Downy Serviceberry
CER CAN	Eastern Redbud
CRA PRA	Washington Hawthorn
GIN BL	Autumn Gold Maidenhair Tree
GIN PSD	Princeton Sentry Maidenhair Tree
GYN LDO	Kentucky Coffee-tree
JUN VIR	Eastern Redcedar
LID STR	Sweet Gum
MAL PRA	Prairie Crabapple
PIN STR	White Pine
PIN VIR	Virginia Pine
QUE RUB	Red Oak
ULM PAR	Lanceleaf Elm

SHUBS	COMMON NAME
ABO MEL	Black Chokeberry
FOR INT	Bolder Forsythia
HAM VIR	Common Witch Hazel
ILE COR	Dwarf Burford Holly
ITE VIR	Henry's Garnet Sweetpire
JUN CHI	Sea Green Juniper
PAR TRI	Boston Ivy
PNY CPU	Dakota Ninebark
PRU LAU	Schlipka English Laurel
RHU TYP	Staghorn Sumac
VIB DEN	Arrowwood
VIB PRU	Blackhaw Viburnum
VIB PRA	Prairie Viburnum

ORNAMENTAL GRASSES	COMMON NAME
PAN CLO	Cloud Nine Switch Grass
PAN SHE	Shenandoah Switch Grass
SCH SCD	Standing Ovation Little Bluestem
SPO HET	Prairie Dropseed

**PROJECT DATA**

- TOTAL TRACKING NO. = 7/8/2023
- TOTAL SITE AREA = 174,40 AC
- LIMITS OF DISTURBANCE = 220 AC
- FEMA FLOOD ZONE - X (PANEL 47118C) 180I-180I, DATED APRIL 16, 2007
- EXISTING WETLAND REGULATION REFERS TO TREE DETERMINATION ID 8802 AND USACE FILE NO. LRW-0-020400
- DISCHARGE NORTH TO CARTERS CREEK, 2-YEAR DESIGN STORM
- DISCHARGE SOUTH TO RUTHERFORD CREEK, 5-YEAR DESIGN STORM

ISSUED FOR PERMITTING

ULTIUM CELLS LLC DISCLAIMER & TYPICAL NOTES

SUPPLIER PROJECT NO. 45204-10 CERTIFIED BY

SUPPLIER DRAWN BY KMP

SUPPLIER CHECKED BY JBO, KRS

SUPPLIER BY HMI (P) (S)

CONSULTANT A/E FIRM INFO LOGO

GreshamSmith.com

**ultium cells**

**Sustainable Workplaces**

Spring Hill ASSY., STPG, PT

Site ID: 1536

Structure ID: 1000  
Level: N/A

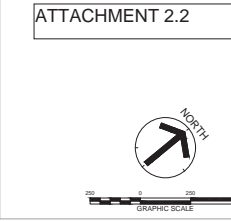
**ULTIUM CELLS LLC - SPRING HILL BATTERY CELL MANUFACTURING**

**OVERALL LANDSCAPE LAYOUT PLAN**

ULTIUM CELLS LLC/JE J. HARRIS  
ULTIUM CELLS LLC/JE A. DE AVILA  
SCALE: AS NOTED  
DATE: 1/18/2022

ULTIUM CELLS LLC/JE NO. 2100263  
SHEET NUMBER  
**SITE-L200**

FILE PLOT DATE STAMP: 1/19/2022 1:34:41 PM



ATTACHMENT 2.2