PROPOSED ACTION

The applicant plans to bring electric zero-emission vehicles at scale to American customers with the largest, most advanced, most efficient auto production complex in its 118-year history. As proposed, the Blue Oval SK (BOSK) Battery Park 631-acre campus will highlight two (2) lithium-ion battery manufacturing facilities that are over 4,000,000 square feet each (herein referred to as battery plants GE2 and TE1-2). The campus will also feature several auxiliary buildings to support both administrative and process related functions creating an efficient and sustainable "cradle to cradle" process for battery production. In total, over two dozen support facilities totaling more than 600,000 square feet will be constructed to support administration, employee services, security, process, utilities, and storage as illustrated on the Engineer's drawings included as **Attachment B.2**.

Construction of the industrial campus will result in unavoidable impacts to jurisdictional water resources and threatened and endangered bat species forested habitat.

PURPOSE AND NEED

The demand for electric and hybrid vehicles has increased dramatically in recent years, and Ford's goal is to produce more battery electric vehicles. batteries are essential for production of these vehicles. The purpose of the Proposed Action is to construct a battery manufacturing facility in the Southeast, Southwest, or Midwest U.S. to meet the demand for electric vehicle batteries. The proposed battery park will have good access to an interstate highway and railway and will be large enough to accommodate two (2) battery plants and associated infrastructure to support the proposed project in the timeframe required.

Increased production of batteries for powering electric vehicles is crucial for supporting the escalating market demand for electric vehicles. A manufacturing facility centrally located to other Ford plants and the supplier base is needed to ensure that supplies meet the automobile industry's increased demand for batteries to power electric vehicles and subsequently, the increased consumer demand for electric vehicles. The proposed battery manufacturing complex will supply Ford's vehicle assembly plants with American-made batteries essential for next-generation electric Ford and Lincoln vehicles. This battery park will support existing Ford facilities, including the Louisville Assembly Plant and the Blue Oval City assembly complex, which is currently under development in Stanton, Tennessee and anticipated to begin production of electric vehicles in 2025. Ford expects 40 to 50 percent of its vehicle volume to be fully electric by 2030.

SITE REQUIREMENTS

The following requirements are essential for the site selected for the Proposed Action.

<u>Size</u>: A large site of approximately 1,400 to 1,600 acres is required for the battery park. Sufficient area on a single site is necessary to accommodate the two (2) battery plants, recycling facility, suppliers, support facilities, and infrastructure.

<u>Logistics:</u> Proximity to a sufficient transportation network is crucial, *i.e.* access to a major highway, preferably an interstate highway. The Proposed Action requires good highway access to accommodate transportation needs for trucking as well as for employees commuting to and from work. Proximity to a mainline railway is also desirable as a potential transportation alternative.

Access to a riverport is not essential but would be beneficial as a future transportation option of shipping via waterways. Redundancy in transportation options is vital for ensuring timely delivery of batteries because future transportation needs may change.

Utilities: Battery plants require large amounts of electricity and water. Each battery plant requires 160 MW of electricity and approximately 3.0 MGD of water. An acceptable parcel for the Proposed Action must have sufficient water and electrical service available at the site and ready to connect with utility infrastructure constructed on site to support the plants and other facilities. The site must also have access to a large-diameter sewer line to accommodate wastewater treatment needs.

Topography: The site selected for the Proposed Action must not involve extensive earthwork or cut and fill areas, which would increase site preparation costs and the time required for construction of the facilities.

Project Timeframe: The schedule for beginning operation of the battery plants is driven by the current and projected increase in production of electric vehicles. Consequently, constructability within the timeframe required is an important practicability factor for the Proposed Action. The Glendale battery park is projected to be operational by 2025 to support the production of electric vehicles at Ford assembly plants. Groundbreaking needs to begin in mid-March 2022 to construct the required facilities and have the battery plants operational and prepared to ship products by the 2025 deadline. To support the required project schedule, an acceptable site must be considered "shovel-ready," with the required zoning, access, and utilities. A site that requires relatively minimal earthwork is also essential for meeting the required timeframe.

ALTERNATIVES CONSIDERED

In addition to the No Action Alternative, the Applicant evaluated over 25 alternative sites for the Proposed Action in the southeastern and midwestern United States. Finding a site large enough for the proposed facilities was challenging, and many sites were eliminated from consideration because they had construction challenges or lacked the required access or utilities. After eliminating potential sites that were obviously not suitable for various reasons, five (5) sites, including the selected Glendale location, were seriously considered and assessed in greater detail. When the preliminary site review indicated that an alternative site was not practicable, environmental assessments related to streams, wetlands, threatened and endangered species, and historic resources were not conducted. The required project timeframe prohibited further investigations of sites determined to be unsuitable.

No Action Alternative

The No Action Alternative would not result in any impact on the aquatic environment or any other environmental factor. However, this alternative would not meet the project purpose of constructing manufacturing facilities to produce batteries for electric vehicles. The Ford Motor Company would not be able to obtain sufficient supplies of batteries required for electric vehicles, and vehicle production would not meet the consumer demand. Therefore, the No Action Alternative does not meet the purpose and need for the Proposed Action and is not a practicable alternative.

Alternative 1 - Selected Alternative; Proposed Action

Alternative 1 is the 1,550-acre Megasite in Glendale, Kentucky selected by the Applicant for the Proposed Action. This site is a practicable alternative that meets all requirements for construction and operation of the battery manufacturing facilities. This property provides sufficient acreage required for the battery plants, associated facilities, and infrastructure (access roads, parking lots, loading/unloading areas, etc.). The site is adjacent to I-65 at the KY 222 interchange (Exit 86), which provides excellent access for trucking as well as for employees commuting to and from work.

The Kentucky Transportation Cabinet (KYTC) is currently in the process of upgrading the Exit 86 interchange to provide additional capacity for traffic entering and exiting the site. The interchange project is already permitted by the USACE, which supports the project schedule. KYTC is also proceeding with a project to widen KY 1136 (Gilead Church Road), which is along the southern boundary of the site.

A CSX mainline railway adjacent to the western boundary of the site provides direct rail access and the capability to transport via rail as an optional transportation means. It is currently anticipated that most deliveries and shipments will initially be handled by trucking, although specific shipping details will be determined later. Specific plans are still being developed for shipping batteries to Ford plants wherever needed, which will include the Louisville Assembly Plant and the Blue Oval City assembly complex in Tennessee. Transloading and intermodal shipping are not being considered at this time. The Port of Louisville on the Ohio River is approximately 47 miles north of the site. There are no current plans for shipping via waterways, but it is beneficial to have this future transportation option.

Topography of the property is gently rolling, with an elevation change of only 50 to 75 feet over the site; therefore, site preparation will require minimal cut and fill. Construction of the battery park within the required timeframe is supported by this shovel-ready site. This site meets the Kentucky Cabinet for Economic Development shovel-ready criteria, which include appropriate industrial zoning, accessibility, sufficient utility service (electricity, treated water, natural gas, sanitary sewer), and previous documentation of environmental features. The Elizabehtown / Hardin County Industrial Development Foundation had previously identified streams, wetlands, threatened and endangered species habitat, and historic resources present on the site, and preliminary coordination with the Kentucky Heritage Council State Historic Preservation Office (SHPO), US Fish and Wildlife Service, and the USACE had been conducted.

All of the required utilities are available at this site: 69 kilovolts (kV) of electricity (Kentucky Utilities), 16-inch water line at the site with a 24-inch line north of the site (Hardin County Water District No. 2), 18-inch force main sewer line along the south and western boundaries of the site and three 8-inch gravity lines on the site (Hardin County Water District No. 2 – Sewer Collection). Kentucky Utilities is currently working with Ford to design the required electrical infrastructure on the site.

The Proposed Action will impact 28,275.43 linear feet of stream, 16.03 acres of wetland, and 65.6 acres of suitable bat habitat. No historic resources will be impacted. Details concerning streams, wetlands, protected species habitat, and historic resources on the alternative sites eliminated from consideration are not available for comparison with Alternative 1, the Proposed Action. The project timeframe prohibited further environmental investigations for alternative sites after they were determined to be unsuitable.

Alternatives Considered but Rejected

The following four (4) sites were considered but rejected for the Proposed Action prior to the selection of Alternative 1. The location of each rejected site must be non-specific due to non-disclosure and confidentiality agreements the Ford Motor Company has with the states in which the sites are located. None of these sites were determined to be practicable alternatives, each having been found unacceptable for various reasons when evaluated based on practicability factors. Each alternative site eliminated from consideration had obstacles such as poor access, topographic challenges, or environmental issues, which placed a strong selection preference for Alternative 1, the selected site and Proposed Action.

Alternative 2: This alternative is a 1,550-acre site in the South. Alternative 2 has good access, with an adjacent interstate highway and rail line. Water, electricity, and natural gas are available at the site. However, the property includes a river, small lake, streams, and wetlands, and approximately half of the site is in floodplain. The site has extreme topographical challenges for site preparation. In addition, the property is located in a hurricane zone, which creates the potential for facility damage and loss of workforce during hurricane season and also requires more expensive construction. After consideration of these issues, investigations to assess streams and wetlands, habitat, and historic resources were not conducted. This site was considered unsuitable because much of the property is in floodplain, extensive cut and fill required could delay the project schedule, construction costs are higher in a hurricane zone, and potential damage and loss of workforce could occur due to hurricanes. Therefore, Alternative 2 is not a practicable alternative.

Alternative 3: This alternative is a 1,643-acre site located in the Southeast. The site does not have good access, with the nearest interstate approximately 20 miles away and no direct route between the site and the interstate. The property has adequate water and electricity available. However, a water main and a natural gas pipeline through the site would require relocation prior to site preparation and construction. This would significantly increase the site preparation cost and could not be accomplished within the timeline required. In addition, there are wetlands and small lakes with dams on the property and more than 220 feet of elevation change across the site. Extensive cut and fill would be necessary, which would significantly increase the site preparation cost and could not be completed within the required timeframe. After consideration of these issues, investigations to assess streams and wetlands, habitat, and historic resources were not conducted. For the reasons outlined above, Alternative 3 is not a practicable alternative.

Alternative 4: This alternative is a 1,400-acre site in the Midwest. The property has good access, and adequate water and electricity are available. However, this property is a brownfield site that would require environmental due diligence to evaluate the potential for contamination, and any necessary remediation would need to be conducted prior to construction. This would cause a significant increase in site preparation costs and could not be completed in the required project timeframe. After consideration of these issues, investigations to assess streams and wetlands, habitat, and historic resources were not conducted. Because the required due diligence would be costly and time-consuming, Alternative 4 is not a practicable alternative.

Alternative 5: This alternative is a 1,376-acre heavily wooded site in the South, located partially in floodplain. The site has access to an interstate highway, but there is no rail line nearby. The property is adjacent to residential neighborhoods in a suburban area. There is no wastewater system near the site, and the availability of sufficient water and electrical service is unknown. The topography is challenging, with more than 160 feet of elevation change across the site. This would require extensive

cut and fill, significantly increasing costs and site preparation time. In addition, the site is an irregular shape, not rectangular, which presents challenges for designing the site layout. The presence of floodplain and wetlands scattered across the site and reduce the useable area to less than 500 acres, which is not large enough to accommodate the battery park. After consideration of these issues, investigations to assess streams and wetlands, habitat, and historic resources were not conducted. Because there is no wastewater system, site preparation would be costly and time-consuming, and useable land is limited, Alternative 5 is not a practicable alternative.

The following Alternatives Comparison Matrix (pages 6-7) summarizes the practicability categories and factors used for evaluating each alternative site and identifying practicable alternatives that meet the purpose and need for the Proposed Action.

ALTERNATIVES COMPARISON MATRIX FOR PRACTICABILITY

Practicability Category	Practicability Factor	Alternative 1 Selected	Alternative 2 Rejected	Alternative 3 Rejected	Alternative 4 Rejected	Alternative 5 Rejected
Availability	Existing Zoning Appropriate or Potential for Zoning Change?	Yes	Yes	Yes	Yes	Yes
	Available for Acquisition?	Yes	Yes	Yes	Yes	Yes
Logistics	Sufficient Parcel Size?	Yes 1,550 acres	Yes	Yes	Yes	No Useable size is < 500 acres
	Availability of Utilities?	Yes Water, Electric, Gas	Yes Water, Electric, Gas	Yes Water, Electric, Gas	Yes Water, Electric, Gas	No No wastewater system near site; information not available for water or electricity.
	Access Availability?	Yes Adjacent to I-65 and a CSX mainline railway; Louisville Riverport is approx. one hour away via I-65.	Yes Adjacent to interstate highway and rail line	No Poor access with the nearest interstate > 20 miles away with no direct route.	Yes Adjacent to state highway and rail line near site	No Access points to interstate highway but no rail line at site.
Site Conditions	Topography and Other Site Conditions Feasible for Construction?	Yes Gently rolling topography; minimal cut and fill required.	No Extreme topographical challenges; river and small lake on site; 50% of site in floodplain;	No Extreme topographical challenges (<220 feet elevation change across site); small	No Brownfield site; would require environmental due diligence	No Extreme topographical challenges (<160 feet elevation change across

ALTERNATIVES COMPARISON MATRIX FOR PRACTICABILITY

Practicability Category	Practicability Factor	Alternative 1 Selected	Alternative 2 Rejected	Alternative 3 Rejected	Alternative 4 Rejected	Alternative 5 Rejected
			located in hurricane zone.	lakes with dams on site.		site); site has irregular shape; site abuts residential neighborhoods.
Cost	Reasonable?	Yes	No Significant cost for earthwork / site preparation; location in hurricane zone requires more costly construction.	No Significant cost for earthwork and relocating water main and natural gas pipeline across the site.	No Significant risk for added cost for due diligence required.	No Significant cost for earthwork / site preparation.
Supports Project Schedule	Constructability in timeframe required?	Yes This site is "shovel ready" with required utilities, access to interstate highway, and minimal earthwork required.	No Time required for earthwork would delay the project.	No Time required for earthwork and relocating water main and natural gas pipeline would delay the project.	No Time required for environmental due diligence would delay the project.	No Time required for earthwork would delay the project.

LEAST ENVIRONMENTALLY DAMAGING PRACTICABLE ALTERNATIVE

The Applicant's selected alternative for the Proposed Action is the only practicable alternative identified among all of the sites evaluated and is therefore the least environmentally damaging practicable alternative. Each of the alternative locations had constraints that made the sites unacceptable for development of the battery park. After sites were determined to be unacceptable for various other reasons, assessments of streams, wetlands, threatened and endangered species habitat, and historic resources were not conducted.

SELECTED SITE AVOIDANCE, MINIMIZATION, AND COMPENSATION

On-site alternatives were reviewed, and extensive efforts were focused on developing the site layout to minimize impacts to jurisdictional water resources and other environmental features. While minimizing impacts to the aquatic environment was a priority, the presence of archaeological sites recommended for Phase II testing presented an additional challenge. A number of different site configurations were considered, and modifications were made during the design process to minimize impacts to the greatest extent possible.

Locating the battery park on the east side of the 1,550-acre property will provide better access to the I-65 interchange and easy entry and exit for the site. Developing the eastern part of the site also avoids impacts to archaeological sites requiring further investigation and allows expansion opportunities on the remainder of the property.

Impacts to jurisdictional streams are summarized in **Table 3**, **Attachment G.1**, while streams that were avoided are summarized in **Table 4**, **Attachment G.2**. Impacts to jurisdictional wetlands are summarized in **Table 5**, **Attachment G.3**, while wetlands that were avoided are summarized in **Table 6**, **Attachment G.4**.

More than 11,000 linear feet of impacted stream channels will be relocated on site and will remain "daylighted" rather than being placed in culverts. Constructing a relocated stream will be less environmentally damaging than piping, minimizing the negative impact of the Proposed Action to some extent. Natural channel design techniques will create a meandering channel with a vegetated riparian corridor to replace some of the functions and values of the impacted streams. This channel relocation has not been designed for mitigation credit but will be beneficial for replacing impacted aquatic habitat and minimizing impacts to the downstream watershed. A monitoring plan (**Attachment B.8**) required by the Kentucky Division of Water outlines the post-construction monitoring methodology that will be implemented to ensure that the relocated stream channel successfully meets the intended purpose.

The applicant intends to make an appropriate lump sum payment to the Kentucky Department of Fish and Wildlife Resources Stream and Wetland Mitigation Fund to compensate for unavoidable impacts to jurisdictional waters of the U.S. as summarized in **Table 2**, **Attachment H**. In addition, mitigation for impacts to suitable forested bat habitat has been made in the form of contributions to the Imperiled Bat Conservation Fund as documented in Attachments E.4, E.5, E.7 and E.9.