

**Environmental Assessment
Solar Farm Project
Walking Horse Site
1251 Roberson Spring Road
Loudon, Loudon County, Tennessee
February 2024**



Prepared for:



United States Department of Agriculture
Rural Development

On behalf of:

Alternus Energy Americas Inc.

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- APPENDIX B – Alternative Site Plan
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1.0 PURPOSE AND NEED

1.1 Project Description

Alternus Energy Americas Inc. (Alternus) is applying for financial assistance from the United States Department of Agriculture (USDA)-Rural Utilities Service (RUS) for the development of a solar farm located in Loudon, Loudon County, Tennessee. Serving as the lead federal agency, the USDA RD is responsible for evaluating the proposed development plan to ensure compliance with the National Environmental Policy Act (NEPA). As such, USDA RD must decide whether or not to provide financing assistance for this proposed project. NEPA requires that the potential environmental consequences of the proposed action and its alternatives be examined. This Environmental Assessment (EA) presents such an examination. The USDA RD's decision to approve financial assistance will be the analysis outlined in this EA in addition to subsequent detailed engineering and financial reviews.

Terracon has prepared this Environmental Assessment (EA) to analyze potential impacts to the natural and human environments associated with the proposed project in accordance with NEPA (42 United States Code [U.S.C.] 4321 et seq.) and its implementing regulations (40 Code of Federal Regulations [CFR] 1500–1508) promulgated by the Council on Environmental Quality (CEQ), Rural Development's (RD) NEPA Regulations (7 CFR Part 1970—Environmental Policies and Procedures), and RD Instructions 1970-Subpart C.

The site consists of a portion of a parcel identified by the Loudon County Tax Assessor as parcel 040 164.00 for a total site area of approximately 42.7 acres. The approximate center for the proposed solar farm is located at approximate latitude 35°43'31.073" N and longitude 84°21'39.64" W using WGS84 datum. The location of the site is illustrated on a topographic map in Exhibit 1 and an aerial photograph in Exhibit 2. Exhibits are included in Appendix A.

Based on a review of historical aerial photographs on Google Earth Pro, the site has historically consisted of agricultural farmland to the east, and forested land to the west since the early 1970s. There is a power line easement bisecting the property in the western portion of the site dating back to 1997. Based on a review of the Loudon, TN 7.5-minute topographic quadrangle map dated 1984, the site ranges in elevation from approximately 800 feet to 900 feet above mean sea level with topography sloping in all directions.

The surrounding region is generally characterized by undeveloped or agricultural and wooded areas to the west, residential to the north, industrial to the northeast, commercial to the south and west, and the City of Loudon located further to the northeast of the site. A United States Geologic Survey (USGS) Topographic Map and an aerial photograph of the project area are provided as Exhibits 1 and 2.

The proposed project will include the development of a solar farm. The plans for the proposed facility include the installation of photovoltaic arrays, inverters, battery storage, an access road,

and fencing around the site. The facility will provide a renewable energy source for Loudon County and the surrounding counties.

Project facilities and associated infrastructure will be designed, constructed, and operated in accordance with applicable laws, ordinances, regulations, and standards. The project is anticipated to take approximately nine months (January 2024 – September 2024) to complete, upon the commencement of construction. Construction lay down areas will be located within the boundaries of the proposed development footprint. Exhibit 3 depicts the proposed development footprint within the approximately 42.7-acre site. Proposed project development plans are illustrated on Exhibit 3.

Terracon Consultants, Inc. (Terracon), retained by Alternus Energy Americas Inc., has prepared this EA in accordance with USDA RD Instruction 1970-C. As part of this process, the USDA RD will complete an independent analysis of this document to concur with the scope and content. Once this analysis is complete, the USDA RD may adopt this EA in accordance with 7 CFR 1970.102.

1.2 RUS Purpose and Need

USDA RD is a mission area that includes three federal agencies – Rural Business-Cooperative Service, Rural Housing Service, and Rural Utilities Service. The agencies have more than 50 programs that provide financial assistance and a variety of technical and educational assistance to eligible rural and tribal populations, eligible communities, individuals, cooperatives, and other entities with the goal of improving the quality of life, sustainability, infrastructure, economic opportunity, development, and security in rural America. Financial assistance can include direct loans, guaranteed loans, and grants to accomplish program objectives.

The Applicant (Alternus) is seeking funding from USDA Rural Utilities Service (RUS) to support the development of a renewable solar farm located in Loudon, Loudon County, Tennessee. The RUS Electric Program, as authorized under the Rural Electrification Act of 1936, finances construction of electric distribution, transmission, and generation facilities; system improvements and replacement required to furnish and improve electric service in rural areas; demand side management, energy efficiency and conservation programs; and on-grid and off-grid renewable energy systems.

1.3 Alternus Purpose and Need

The purpose and need of this project are based on the need for a renewable energy source to be located within the rural area of Loudon County, Tennessee. In order to provide a renewable energy source to the surrounding communities, Alternus has proposed the development of this facility to complement other energy sources provided in this community. The purpose of this project is to provide a solar farm as a source of renewable energy in Loudon County and

surrounding areas. The proposed project will also provide other benefits to the local community including the reduction of greenhouse gas emissions and air pollution and the creation of revenue and jobs for the local community.

2.0 ALTERNATIVES TO THE PROPOSED ACTION

2.1 Development of Alternatives

This section discusses the alternatives selection process and defines the alternatives that were considered. The implementing procedures for NEPA establish several policies for federal agencies to follow in order to avoid or minimize the adverse effects of their actions. Among these policies is the use of the NEPA process to identify and assess reasonable alternatives to the proposed project that would avoid or minimize adverse impacts (40 CFR 1500.2(e)). Alternatives considered included: no action (status quo) and proposed action (Preferred Alternative).

2.2 Alternatives Retained for Detailed Analysis

2.2.1 Alternative 1: No Action

Under the “No Action” alternative, the site would not be developed as a solar farm and Loudon County and the surrounding areas would not have the needed renewable energy source in a rural underserved area. The project area would continue to be utilized as agricultural property and pasture for grazing cattle.

2.2.2 Alternative 2: Original Site Plan

Under Alternative 2, the site plan includes the proposed solar facility with a site layout that would require tree removal and would include potential impacts to the wet weather conveyance located on the west side of the site. If this alternative is selected, the purpose and need of the proposed facility would be achieved, but there would be minor impacts on the environment. See Appendix B for the Alternative Site Plan.

2.2.3 Alternative 3: Revised Site Plan

Under Alternative 3, the original site plan was revised to include the proposed solar facility with limited tree removal. The site plan was also revised to avoid the wet weather conveyance located on the west side of the site. If this alternative is selected, the purpose and need of the proposed facility would be achieved, and there would be de minimis impacts to the environment.

Alternative 3 was selected for the development of the site as a solar facility with the least impact on the site and surrounding areas.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

A screening process was used to determine which environmental resources are likely to be impacted by the proposed action. Because the project is specifically designed to produce certain environmental benefits and to avoid or mitigate others, some environmental resources required less discussion. In some cases, environmental resources were dismissed from analysis if they were not applicable to the proposed project. The remaining resources were analyzed further to assess the likely impacts of the proposed action and to determine what actions should be taken to mitigate adverse impacts.

The level of NEPA analysis depends on the magnitude of the proposed action and the significance and potential effect of the project's environmental impacts on the quality of the human environment. The term 'significance' as used in NEPA requires considerations of both context and intensity. Context means that the significance of an action must be analyzed in several contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Intensity refers to the severity of the impact, the cumulative effects, and the degree of controversy surrounding the proposed action. Significance varies with the setting of the proposed action. Both short-term and long-term effects are relevant. Impacts that are routinely handled through the issuance of permits, consultations, modifications to design, or other agreements are generally not considered to be significant unless there are exceptional circumstances and/or potential for generating substantial controversy. It should be noted that in accordance with the Paperwork Reduction Act (44 U.S.C. 3501), minimal discussion is provided within the table and following sections regarding areas of the affected environment where little to no consequence is anticipated regarding the proposed action.

3.1 Land Use

3.1.1 Affected Environment

General Land Use and Zoning

The site is located on an approximately 42.7-acre area on a portion of one parcel identified by Loudon County Tax Assessor as parcel 040 164.00 in Loudon, Loudon County, Tennessee. According to Terracon's review of historic aerial photographs provided by Google Earth, the site has historically been undeveloped or agricultural farmland since at least 1969. Surrounding properties include commercial, residential and agricultural. Based on a review of the TP Loudon, TN 7.5-minute topographic quadrangle map dated 1984, the site ranges in elevation from approximately 800 feet to 900 feet above mean sea level with topography sloping in all directions from the central portion of the site.

The proposed use of the site is compatible with the surrounding commercial properties. See the table below for parcel ownership and zoning.

Table 1: Parcel Ownership

Parcel No.	Owner	Zoning
040 164.00	Griffiss Land Company LLC	Residential

Important farmland, prime forest land, and prime rangeland

The Farmland Protection Policy Act (FPPA) and USDA Departmental Regulation No. 9500-3, Land Use Policy, provide protection for important farmland, prime forestland, and prime rangeland. The USDA regulation 7 CFR Part 658 implements the FPPA. The FPPA, 7 U.S.C. 4201, was enacted in 1981 in order to minimize the loss of prime farmland and unique farm, forest, and range lands as a result of Federal actions by converting these lands to nonagricultural uses. See Appendix F for the completed AD 1006 form.

Formally Classified Lands

Formally Classified Lands are properties administered either by federal, state or local agencies or have been given special protection through formal legislative designation. Formerly Classified Lands may include the following:

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. National Parks 2. National Reserves 3. Battlefields and Military Parks 4. National Lakeshores 5. National Parkways 6. National Conservation Areas 7. Forest Reserves 8. Wilderness Study Areas 9. Wild and Scenic Rivers 10. National Grasslands 11. Coordination Areas 12. Coastal Zones 13. Coastal Barriers Resource System | <ol style="list-style-type: none"> 14. National Monuments 15. Recreation Areas 16. National Seashores 17. National Natural Landmarks 18. Cooperative Management and Protection Areas 19. Outstanding Natural Areas 20. Wilderness 21. National Scenic and Historic Trails 22. National Forest 23. National Wildlife Refuges 24. Waterfowl Production Areas 25. Areas of State and Local Interest |
|---|--|

Based on a review of the applicable maps and resource management agencies for each of the above-listed land areas, none were identified on the site or surrounding properties.

3.1.2 Environmental Consequences

The project proposes the development of the site as a solar farm. The site is zoned as R-2 high density residential, and the proposed project is compatible with the surrounding land uses. According to the NRCS soil survey, the majority of the site is not designated as having prime

farmland soils. As discussed in Section 3.1.1 approximately 22% of the site is designated as having prime farmland soils, primarily on the eastern portion of the site. Approximately 10.4 acres of the proposed site are identified as having Decatur silty clay loam, approximately 4.4 acres are identified as Emory silt loam, and approximately 2.2 acres are identified as Etowah-Dewey complex soils, which are identified as prime farmland. See attached Exhibit 4 – Web Soil Survey.

The project has not been identified as Federally Classified Land. As such, no environmental consequences pertaining to potential effects on Federally Classified Land will occur associated with the development of the site.

The site is located within the city limits of the City of Loudon, Tennessee, is zoned as R-2 high density residential, and is located directly north and south of parcels developed as commercial and industry facilities. This site is part of the Knoxville, Tennessee urbanized area on the 2020 Census Bureau Map. On the AD 1006 form for the Farmland Conversion Impact Rating, the site scored a total site assessment value of 130, which is lower than the NRCS's threshold value of 160. For sites that score equal to or greater than 160, alternative sites of less agricultural value would be recommend. Based on the status of the site of having an impact rating of less than 160, site alternatives will not considered, and no further action is required under the FPPA.

Under the “No Action” alternative, no changes to land use would occur. The project area land would remain undeveloped, and the solar farm would not be constructed.

3.1.3 Mitigation/Management Measures

Based on the status of the site of having an impact rating of less than 160, site alternatives will not considered, no further action is required under the FPPA, and mitigation/management measures will not be required.

3.2 Floodplains

3.2.1 Affected Environment

E.O. 11988, "Floodplain Management", requires Federal agencies to avoid actions, to the extent practicable that will result in the location of facilities in floodplains and/or affect floodplain values. Facilities located in a floodplain may be damaged or destroyed by a flood or may change the flood handling capability of the floodplain, or the pattern, or magnitude of the flood flow. The relevant floodplain for most applicant projects is an area, which has a 1-percent chance of a flood occurrence in a given year. The flood of this interval is referred to as the 100-year flood or the base flood. The floodplain management guidelines require Federal agencies to apply the 0.2 percent or 500-year flood occurrence standard to the location of "critical facilities." Critical facilities include healthcare facilities, emergency service facilities, and areas used for the storage of hazardous materials.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel Number 47105C0176D, the site is located outside of the FEMA designated 100-year and 500-year floodplain zones. It is not anticipated that the site will be impacted by flood related issues. The FEMA map for the site is included in Appendix A as Exhibit 5.

3.2.2 Environmental Consequences

The proposed site development would be located within Zone X with minimal flood hazard. 100-year and 500-year floodplain zones would not be impacted by the project, and no direct or indirect effects to 100-year floodplains would be encountered. The proposed development at the site does not contain floodplains or coastal areas. No impacts to floodplains associated with the proposed project are anticipated. Under the “No Action” alternative, no impacts to floodplains or coastal areas are anticipated.

3.2.3 Mitigation / Management Measures

No impacts are anticipated that would require mitigation or management measures.

3.3 Wetlands

3.3.1 Affected Environment

The *US Army Corps of Engineers (USACE) Wetland Delineation Manual* defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. An area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area either lacks vegetation or the vegetation is dominated by hydrophytes.

The definition of a Waters of the US is (1) waters used in interstate or foreign commerce, including all waters subject to the ebb and flow of tides; (2) all interstate waters including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sandflats, *wetlands*, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, etc., which the use, degradation, or destruction of could affect interstate/foreign commerce; (4) all impoundments of waters otherwise defined as Waters of the US, (5) tributaries of waters identified in 1 through 4 above; (6) the territorial seas; and (7) wetlands adjacent to waters identified in 1 through 6 above. Within non-tidal waters that meet the definition given above, and in the absence of adjacent wetlands, the indicator used by the USACE to determine the lateral extent of its jurisdiction is the ordinary high water mark (OHWM), which

is defined as the line on the shore established by fluctuations of water and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, and/or the presence of litter and debris. Typically, the USACE and the U.S. Environmental Protection Agency (EPA) will assert jurisdiction over the following waters:

- Traditional navigable waters (TNWs),
- Wetlands adjacent to TNWs,
- Non-navigable tributaries of TNWs that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months), and Wetlands directly abutting such tributaries.

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus (a significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters) with a TNW.

- Non-navigable tributaries that are not relatively permanent,
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent, and
- Wetlands adjacent to but not directly abutting a relatively permanent non-navigable tributary.

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow), and
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

Any person, firm, or agency planning to alter or work in waters of the U.S., including the discharge of dredged or fill material, must first obtain authorization from the USACE under Section 404 of the Clean Water Act (CWA; 33 United States Code [USC] 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act of 1899 prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from the USACE (33 USC 403).

A jurisdictional waters determination was completed by another consultant at the site (BBJ Group LLC, December 2022). The report indicated the presence of one wet weather conveyance within the project boundary identified as WWC-1. Based on the selection of Alternative 3 with the revised site plan, this feature would be located outside of the planned installation areas of solar farm components. A request for jurisdiction determination has been submitted to the USACE and TDEC. The Jurisdictional Waters Determination Report is included as Appendix C.

Wetlands

It should be noted that on November 28, 1990, the Food, Agriculture, Conservation and Trade Act of 1990 amended the CONACT by the addition of Section 363, as follows: the Secretary shall not approve any Rural Development loan under this title to drain, dredge, fill or level or otherwise manipulate a wetland (as defined in section 1201(a)(16) of the Food Security Act of 1985 (16 U.S.C. 3801 (a)(16)), or to engage in any activity that results in impairing or reducing the flow, circulation, or reach of water, except in the case of activity related to the maintenance of previously converted wetlands, or in the case of such activity that is already commenced prior to the date of enactment of this section. No wetlands were identified within the site area.

3.3.2 Environmental Consequences

It is not anticipated that the proposed site development will impact wetlands.

Under the “No Action” alternative, no impacts to wetlands and water quality would occur.

3.3.3 Mitigation / Management Measures

Impacts to the channel (identified as WWC-1) will be avoided with the use of orange safety fencing or brightly colored flags to keep construction activity out of the area. In addition, a 30-foot buffer will be established from the centerline of the channel along each side prior to any clearing, excavating, or grading. After work has been completed, disturbed areas throughout the proposed project area will be re-established with vegetation as described in the Storm Water Pollution Prevention Plan (SWPPP). See the site-specific SWPPP included in Appendix D.

3.4 Water Resources

3.4.1 Affected Environment

3.4.1.1 Groundwater

According to the USGS, the principal aquifer for the site area is the Valley and Ridge Aquifers, which follow the Appalachian Mountains. The proposed project will not use groundwater as part of the proposed action.

The EPA identifies aquifers that provide for more than 50% of the drinking water supply as designated Sole Source Aquifers. The EPA website was reviewed for the presence of sole source aquifers at the site. No sole source aquifers were identified at the site. A map is included as Appendix E.

3.4.1.2 Surface Water

The nearest surface water is Williams Branch located approximately 0.8 miles to the east of the site. The site drains to the east eventually entering Williams Branch then flowing north to the Tennessee River. The proposed project will not adversely impact surface waters.

The Loudon Utilities Board provides water to the site, and water is sourced from the Tennessee River. The proposed project will have limited needs for water use and will not adversely impact surface waters.

3.4.2 Environmental Consequences

Based on the proposed development being greater than one acre, a National Pollutant Discharge Elimination System (NPDES) permit will be required. A Notice of Intent (NOI) will be submitted to the TDEC prior to construction. Construction work will be performed in accordance with a SWPPP that will be approved by TDEC prior to implementation. Alternus is currently working with an engineering firm to develop an SWPPP. Based on the distance from a surface water, there will be no adverse impacts to surface water. The project will not use groundwater; and therefore, there will be no impacts to groundwater.

Under the “No Action” alternative, no impacts to groundwater or surface water would occur.

3.4.3 Mitigation/Management Measures

Coverage under the general stormwater construction permit / NPDES permit will be required prior to construction. Construction work will be performed in accordance with a SWPPP that has been approved by TDEC prior to implementation. Erosion and sedimentation control measures will be installed upgradient of the streams prior to the commencement of construction activities at this location. After work has been completed, disturbed areas throughout the proposed project area will be re-established with vegetation as described in the SWPPP. Alternus is currently working with an engineering firm to develop a SWPPP.

Water, eroded materials, and other potential pollutants shall be prevented from entering the streams or watercourses as described in the SWPPP. Construction activities shall be performed by methods that prevent entrance or accidental spillage of solid matter, contaminant debris, and other objectionable pollutants and wastes into flowing streams or dry water courses, lakes, and underground water sources. Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses shall not be performed without prior approval of appropriate state agencies.

3.5 Cultural Resources

3.5.1 Affected Environment

The National Historic Preservation Act of 1966, as amended (16 U.S.C. § 470 et seq.) and the Advisory Council on Historic Preservation's implementing regulations, 36 CFR Part 800, require Federal agencies to take into account the effect their actions may have on historic properties prior to carrying out such actions. Terracon contracted Subterranean Consultants (STC) to complete a Cultural Resources Assessment (CRA) of the proposed site. The Assessment was completed to identify historic properties within the area of potential effect (APE) that may be listed or eligible for the National Register of Historic Places (NRHP).

To comply with section 106 of the NHPA, STC followed 36 CFR Part 800 of the Code of Federal Regulations (CFR) during this identification effort, and if significant archaeological resources are identified, STC would assess resource significance based on NRHP criteria (36CFR Part 60.4 [a-d]). The Phase I archaeological survey and historic structures survey included a literature review and intensive field survey. During the literature review, which took place in 2023, state and county maps and documents were examined to determine if previously recorded cultural resources are in the project area.

Based on the results of the desktop review, no property or sites are currently listed or eligible to be listed on the National Register of Historic Places. The TDEC Division of Archaeology indicated no archaeological resources are located within the subject property. There are no archaeological materials or architectural structures previously recorded within the direct effects area of potential effect identified during the survey. Therefore, no eligible archaeological resources will be impacted by the proposed project. STC recommended that the current proposed project receive archaeological resource clearance and no further cultural resource work. TDEC's response letter is included in Appendix F.

As part of the Section 106 Review, tribal consultation will be completed with the following tribes with interests in Loudon County, Tennessee:

- Alabama-Coushatta Tribe of Texas
- Cherokee Nation
- Coushatta Tribe of Louisiana
- Eastern Band of Cherokee Indians
- Muscogee (Creek) Nation

Responses from the above listed tribes and tribal directory assessment information are included in Appendix G.

3.5.2 Environmental Consequences

No previously recorded historic structures greater than 50 years old were identified during research or field surveys conducted within or near the project APE. No archaeological materials or architectural structures were identified during the survey or were previously recorded within the area of direct effect or area of potential effect. Therefore, as reported in the CRA, no eligible or listed resources will be impacted by the proposed project, and no additional archaeological investigations are warranted for the project tract.

The CRA was forwarded to the SHPO for concurrence. As previously stated, the SHPO concurred with the findings of the CRA and proposed project development, stating that the project activities will not affect cultural resources listed on or eligible for the NRHP.

Under the “No Action” alternative, no impacts on cultural resources are anticipated.

3.5.3 Mitigation / Management Measures

There are no anticipated negative impacts on cultural resources (archaeological, paleontological, or historic) and no mitigation is anticipated. However, there is the potential to encounter currently undiscovered cultural resources during the site development process. If archaeological materials are encountered during construction, the procedures codified at 36 CFR 800.13(b) will apply and the applicant should contact the SHPO immediately. Archeological material consists of any items, fifty years or older, which were made or used by man. These items include but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal, and glass objects. If human remains are encountered, ground disturbing activities should immediately cease, and the SHPO should be contacted. This stipulation shall be placed on the construction plans to ensure contractors are aware of it.

3.6 Biological Resources

3.6.1 Threatened and Endangered Species

3.6.1.1 Affected Environment

The United States Fish and Wildlife Service (USFWS) Information Planning and Conservation (IPaC) system was utilized to identify potential federally protected species that may occur in the site area. Additionally, records/information requests were submitted to the USFWS, TDEC Natural Heritage Inventory and Tennessee Wildlife Resources Agency (TWRA). See the Habitat Assessment report included in Appendix F for more details.

There were six species identified in the IPAC report that could potentially be affected by the construction of the project. These species included the gray bat, northern long-eared bat,

tricolored bat, orangefoot pimpleback, pink mucket, and Anthony’s riversnail. No critical habitat was identified at the site for these species, and there are no suitable rivers, streams or aquatic features in the proposed development area.

The BBJ Group issued a letter to the TDEC Natural Heritage Program (TN NHP) requesting a rare species database review. TN NHP responded on October 9, 2022 indicating there were no rare species that would be impacted by the proposed solar farm. Terracon issued letters to the USFWS and TWRA requesting a statement on whether the agencies would consider if the proposed development of the site would impact any federal or state-listed endangered or threatened species. The TWRA responded on February 3, 2023 and stated that the proposed project is not anticipated to have an adverse effect on state-listed species. The USFWS responded on March 17, 2023 and stated that they do not anticipate that the proposed project will have an adverse effect on federally listed species. The USFWS included a condition that tree removal should be conducted between October 15 and March 31 to minimize impacts to roosting bats and nesting birds.

On October 5, 2023, Terracon personnel issued letters to the USFWS, TN NHP, and TWRA requesting a statement on whether the agencies would consider if the proposed development of the site would impact federal or state listed endangered or threatened species.

On October 11, 2023, the TWRA responded that stream and wetland mitigation requirements of the TDEC and USACE should be followed as well as recommendations from USFWS. The TWRA stated that erosion and sedimentation control measures should be implemented to prevent potential impacts on fish and wildlife associated with this project. TWRA further stated: “With these understandings, the TWRA has no additional species requirements or objections to the project, as the implementation of best management practices will be sufficient to reduce potential impacts to fish and wildlife associated with this project.”

On October 5, 2023, the TN NHP responded that there are no recorded occurrences of state-listed species within one mile of the site; however, there are known occurrences of four state listed species within four miles. The TN NHP further stated: “The Division of Natural Areas – Natural Heritage Program has reviewed the location of the proposed project workspace with respect to rare plant species. Based on the habitat within the project, we do not anticipate any impacts to occurrences of rare, threatened or endangered plant species from this project.” The TN NHP recommended consultation with the TWRA regarding state-listed rare animals, and with the USFWS regarding federally listed species.

The USFWS responded on March 17, 2023 and stated that they do not anticipate that the proposed project will have an adverse effect on federally listed species. The USFWS included a condition that tree removal should be conducted between October 15 and March 31 to minimize impacts to roosting bats and nesting birds. As part of the USDA review of this project, a request was made to contact the USFWS to confirm that there were no changes to their previous

comments. The IPAC letter was issued on August 21, 2023 and listed six federally protected species. A response was received from the USFWS on November 1, 2023 that was consistent with the requirements of their March 17, 2023 correspondence.

Gray bat (Myotis grisescens)

The gray bat is listed as federally endangered and is a medium-sized bat with short ears and grayish to brown fur. Its habitat is caves year-round but it frequents forested areas. Roost sites are nearly exclusively restricted to caves throughout the year, though only a few percent of available caves are suitable. Winter roosts are in deep vertical caves with domed halls. Large summer colonies utilize caves that trap warm air and provide restricted rooms or domed ceilings; maternity caves often have a stream flowing through them and are separate from the caves used in summer by males.

Potential suitable summer roosting habitat for the gray bat is present at the site; and therefore, tree clearing activities at the site should occur between October 15th and March 31st. If tree clearing will be necessary outside the protective window, the USFWS recommends that acoustic and/or mist-netting surveys be conducted to determine the presence or absence of the above-listed bat species. If tree clearing is completed outside of the designated summer roosting and maternity season, the proposed project may affect, not likely to adversely affect the gray bat.

Indiana bat (*Myotis sodalis*)

The Indiana bat, listed as federally endangered, is a small sized bat, weighing less than one ounce with a wingspan of 9 to 11 inches. The Indiana bat is distinguished by its foot structure and color variations in fur. Their fur is dark brown and black. Indiana bats cluster together for warmth during the winter in caves or abandoned mines. The hibernation location must be cool and humid with stable temperatures, ranging from 32°F to 50°F. After hibernation, the Indiana bat migrates to wooded areas where they roost under loose tree bark on dead or dying trees. Breeding occurs in the fall before they enter the caves for hibernation and become pregnant in the spring when they emerge from the caves. After migration, females will roost in large groups called maternity colonies.

Potential suitable summer roosting habitat for the Indiana bat is present at the site, and therefore tree clearing activities at the site should occur between October 15th and March 31st. If tree clearing will be necessary outside the protective window, the USFWS recommends that acoustic and/or mist-netting surveys be conducted to determine the presence or absence of the above-listed bat species. If tree clearing is completed outside of the designated summer roosting and maternity season, the proposed project may affect, not likely to adversely affect the Indiana bat.

Northern long-eared bat (*Myotis septentrionalis*)

The northern long-eared bat, identified as federally endangered, is small to medium sized (generally around three inches in length), but has a much larger wingspan than other bats in the Eastern United States. This species is a light brownish color with wooly fur and is most often

distinguished from other *Myotis* by its long ears. This species requires caves with stable temperatures for hibernation. Summer roosting and foraging habitat consist of established mixed hardwood-pine forests containing trees with exfoliating bark and snags (dead trees) with loose, peeling chunks of bark and/or crevices and holes utilized for roosting. The northern long-eared bat also more commonly utilizes ridgelines and hilly areas as well as riparian areas. If tree clearing is completed outside of the designated summer roosting and maternity season, the proposed project may affect, not likely to adversely affect the northern long-eared bat.

Tricolored bat (*Perimyotis subflavus*)

The tricolored bat is listed as proposed endangered by the federal government. Tricolored bats are associated with forested landscapes, where they forage near trees (including forest perimeters) and along waterways. Maternity and other summer roosts probably are mainly in dead or live tree foliage (including attached lichen clumps such as *Usnea* and "Spanish moss"); caves, mines, and rock crevices may be used as night roosts between foraging forays. Maternity colonies also may utilize human-made structures or tree cavities; sometimes these are in open sites that would not be tolerated by most other bats. Hibernation sites often are in caves, mines, cave like tunnels, or box culverts under highways, especially those near forests. If tree clearing is completed outside of the designated summer roosting and maternity season, the proposed project may affect, not likely to adversely affect the tricolored bat.

Potential suitable summer roosting habitat for the Indiana bat, northern long-eared bat, and tricolored bat is present at the site; and therefore, tree clearing activities should occur between October 15th and March 31st. If tree clearing will be necessary outside the protective window, the USFWS recommends that acoustic and/or mist-netting surveys be conducted to determine the presence or absence of the above-listed bat species.

Orangefoot pimpleback (*Plethobasus cooperianus*)

The orangefoot pimpleback is listed as federally endangered. The orangefoot pimpleback inhabits medium to large rivers in the sand, gravel, and cobble substrates in riffles and shoals in deep water and steady currents as well as some shallower shoals and riffles. No medium to large rivers are located at the site. Based on the lack of preferred habitat at the site, the proposed project will have no effect on the orangefoot pimpleback.

Pink mucket (*Lampsilis abrupta*)

The pink mucket is listed as federally endangered. The pink mucket is characterized as a large river species associated with fast-flowing waters, although in recent years it has been able to survive and reproduce in impoundments with river-lake conditions but never in standing pools of water. It is found in waters with strong currents, rocky or boulder substrates, with depths up to about one meter, but is also found in deeper waters with slower currents and sand and gravel substrates. No large rivers or ponds are located at the site. Based on the lack of preferred habitat at the site, the proposed project will have no effect on the pink mucket.

Anthony's Riversnail (*Athearnia anthonyi*)

Anthony's riversnail is listed as endangered by the federal government. Preferred habitat appears to be larger rivers, but lower stretches of larger creeks are also inhabited. Historically, the snail has been found on cobble/boulder substrates in the vicinity of riffles. No large creeks or rivers are located at the site. Based on the lack of preferred habitat at the site, the proposed project will have no effect on the pink mucket.

3.6.2 Environmental Consequences

The guidance provided by the USFWS on August 21, 2023, states that if tree trimming is required it shall take place only between October 15th and March 31st in order to limit the potential effects of the proposed project on protected bats. Approximately 7.1 acres of trees will be removed on the western and central portions of the site.

Under the "No Action" alternative, no impacts due to species and vegetation are anticipated.

3.6.3 Mitigation / Management Measures

Gray bat, Indiana bat (*Myotis sodalis*), Northern long-eared bat (*Myotis septentrionalis*), and Tricolored bat (*Perimyotis subflavus*)

Potential suitable summer roosting habitat for the gray bat, Indiana bat, northern long-eared bat, and tricolored bat are present at the site; and therefore, tree clearing activities at the site should occur between October 15th and March 31st. If tree clearing will be necessary outside the protective window, the USFWS recommends that acoustic and/or mist-netting surveys be conducted to determine the presence or absence of the above-listed bat species.

Based on the listed species located in the vicinity of the project area, no individuals of the listed species were observed. USFWS recommends the development of an erosion control plan tailored to the site that follows best management practices (BMPs) to minimize erosion and prevent debris deposition and sedimentation in the project area. If at any time during construction activities, evidence of any state or federally protected species is observed, construction activities should stop and the USFWS and TDEC should be contacted in order to re-evaluate the project.

Approximately 7.1 acres of trees will be removed on the western and central portions of the site. It is anticipated that tree clearing will be completed outside of the designated summer roosting and maternity season; and therefore, the proposed project may affect, not likely to adversely affect the gray bat, Indiana bat, northern long-eared bat, and tricolored bat.

3.6.4 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 was enacted to protect migratory bird populations. As directed under Executive Order 13186, in furtherance of the Migratory Bird Treaty Act (16

U.S.C. 703-711), actions must be taken to avoid or minimize impacts to migratory bird resources and to prevent or abate the detrimental alteration of the environment for the benefit of migratory birds, as practicable. The Migratory Bird Treaty Act protects over 1,500 migratory bird species (see 50 C.F.R. 10.13, List of Migratory Birds) in the U.S. and its territories.

3.6.4.1 Affected Environment

The site consists primarily of agricultural land with wooded areas in the central and western portions of the site. The proposed site development is not located directly on the coast or near any large bodies of water and consists primarily of agricultural and wooded land. As part of the proposed project, approximately 7.1 acres of trees will be removed on the western and central portions of the site. See the IPAC Appendix F for a list of migratory bird species.

3.6.4.2 Environmental Consequences

The proposed site development is not located directly on the coast or near any large bodies of water and consists primarily of pastureland and wooded land. No effect on coastal habitat for shore birds or other migratory birds is expected. Furthermore, the proposed site development will not likely impact any areas that could potentially be used as a flight corridor. The proposed project may affect, not likely to adversely affect migratory birds.

Under the “No Action” alternative, no impacts due to migratory birds are anticipated.

3.6.4.3 Mitigation / Management Measures

Approximately 7.1 acres of trees will be removed on the western and central portions of the site. It is anticipated that tree clearing will be completed outside of the designated nesting season; therefore, the proposed project may affect, not likely to adversely affect migratory birds.

3.6.5 Bald and Golden Eagle Protection Act

According to the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), development within 660 feet of a nest is subject to development restrictions and potential mitigation.

3.6.5.1 Affected Environment

The site consists primarily of agricultural land with wooded areas in the central and western portions of the site. No nests or roosts have been observed on the proposed site or have been identified within 660 feet of the proposed site; therefore, the proposed project may affect is not likely to adversely affect bald and golden eagles.

3.6.5.2 Environmental Consequences

The proposed site development is not located directly on the coast or near any large bodies of water and consists primarily of pastureland and wooded land. The proposed project may affect, not likely to adversely affect bald and golden eagles.

Under the “No Action” alternative, no impacts due to bald and golden eagles are anticipated.

3.6.5.3 Mitigation / Management Measures

Approximately 7.1 acres of trees will be removed on the western and central portions of the site. It is anticipated that tree clearing will be completed outside of the designated nesting season; therefore, the proposed project may affect, not likely to adversely affect bald and golden eagles.

3.6.6 Invasive Species

In accordance with Executive Order 13112, a survey for populations of invasive species is necessary to prevent the introduction, limit the spread, and minimize the potential impacts to economic, ecological, and human health impacts of invasive species. If there is potential to spread or introduce invasive species as part of the proposed project, the EA must address this issue.

3.6.6.1 Affected Environment

The site consists primarily of agricultural land with wooded areas in the central and western portions of the site. Invasive plant species are typically concentrated in areas disturbed by humans especially in areas with disturbed soil. No invasive fauna were observed. Chinese privet (*Ligustrum sinense*) and Japanese honeysuckle (*Lonicera japonica*) were observed at the site.

3.6.6.2 Environmental Consequences

The applicant will take measures to identify areas of the site where invasive plant species are concentrated and will take measures to prevent the spread of these species. To limit the introduction and spread of invasive plant species, disturbed areas will be restabilized with native vegetation that will propagate and establish, as necessary, for the appropriate season.

Under the “No Action” alternative, no impacts due to invasive species are anticipated.

3.6.6.3 Mitigation / Management Measures

During the construction process, the applicant will take measures to prevent or minimize the spread of these species as appropriate for the time of the year. These measures will include

removal and disposal of vegetative parts in the soil that may reproduce by root raking, burning on site any such parts and aboveground parts that bear fruit, controlling or eradicating infestations prior to construction, and cleaning of vehicles and other equipment prior to leaving the infested site.

3.7 Air Quality

3.7.1 Affected Environment

Under the Clean Air Act (CAA), the USEPA has established National Ambient Air Quality Standards (NAAQS) (40 CFR part 50) for air pollutants. The principal pollutants defining the air quality, called “criteria pollutants,” include carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ozone, suspended particulate matter less than or equal to 10 microns in diameter (PM₁₀), fine particulate matter less than or equal to 2.5 microns in diameter (PM_{2.5}), and lead (Pb). CO, SO₂, Pb, and some particulates are emitted directly into the atmosphere from emissions sources. Ozone, NO₂, and some particulates are formed through atmospheric chemical reactions that are influenced by weather, ultraviolet light, and other atmospheric processes. NAAQS are classified as primary or secondary. Primary standards protect against adverse health effects; secondary standards protect against welfare effects, such as damage to farm crops and vegetation and damage to buildings. Some pollutants have long-term and short-term standards. Short-term standards are designed to protect against acute, or short-term, health effects, while long-term standards were established to protect against chronic health effects.

Areas that are and have historically been in compliance with the NAAQS are designated as attainment areas. Areas that violate a federal air quality standard are designated as nonattainment areas. Areas that have transitioned from nonattainment to attainment are designated as maintenance areas and are required to adhere to maintenance plans to ensure continued attainment. The CAA requires states to develop a general plan to attain and maintain the NAAQS in all areas of the country and a specific plan to attain the standards for each area designated nonattainment for a NAAQS. These plans, known as State Implementation Plans (SIPs), are developed by state and local air quality management agencies and submitted to USEPA for approval. Based on the USEPA Green Book website, Loudon County is not listed in an nonattainment area. The Nonattainment Areas Map updated December 31, 2022, is included in Appendix A. For Loudon County, PM 2.5 and 8-hour ozone pollutants have been in maintenance status since 2017. Construction-related emissions will be limited to the construction phase of the project and will be temporary and minor. The proposed project is not anticipated to produce emissions other than emissions from a limited number of vehicles that will visit the site to perform periodic maintenance. It is anticipated that emissions from these vehicles will be minor, and these emissions will not exceed de minimis levels for PM 2.5 and 8-hour ozone pollutants.

Construction activities will result in temporary and minor direct emissions (on-site) and indirect emissions (vehicles traveling to the site) of greenhouse gases (CO₂, N₂O, and CH₄). Direct

emissions of greenhouse gases are anticipated from maintenance vehicles that will periodically visit the site. It is anticipated that the emissions from maintenance vehicles will be de minimis.

3.7.2 Environmental Consequences

The project consists of the development of a renewable solar farm facility. No equipment has yet been presented as part of the proposed development that would require air permits, and it appears that no long-term air quality effects would be associated with the routine operations of the facility. Should final development plans include the use of diesel-fueled emergency generators or other qualifying equipment, the facility would need to apply for an air permit with TDEC. Construction activities associated with the proposed project would generate particulate matter from soil disturbances and diesel-powered equipment. It is expected that minor amounts of carbon monoxide and precursor pollutants for ozone would be emitted by tailpipe emissions from construction equipment and vehicles. Any air pollutants would be widely dispersed across the project area and short-term in nature. Air pollutants would be minimized by dust suppression (watering) and vehicle maintenance.

Under the “No Action” alternative, no new emissions or changes in emissions from existing levels that would affect air quality are anticipated.

3.7.3 Mitigation / Management Measures

Dust mitigation measures will be required during the construction of the proposed facility. Measures may include watering of disturbed areas and sweeping or other methods to control tire track-out at intersections with construction and paved areas. Minor emissions from construction can be further reduced or mitigated through the use of BMPs. BMPs for dust control include spraying water on exposed surfaces to minimize dust, limiting the area of uncovered soil to the minimum needed for each activity, siting staging areas to minimize fugitive dust, using a soil stabilizer (chemical dust suppressor), mulching, using a temporary gravel cover, limiting the number and speed of vehicles on the site, and covering trucks transporting soil, sand, or other loose material off-site. BMPs for construction vehicle and equipment emissions include limiting vehicle idling time, using low or ultra-low sulfur fuel (including biodiesel), conducting proper vehicle maintenance, and using electric-powered tools (instead of gas-powered tools). It is anticipated that construction contractors will properly maintain their fleet of vehicles/equipment so that air emissions are kept to a minimum during construction activities.

Based on the above information, it is not anticipated that the project would have a negative impact on the attainment of NAAQS. The project is not listed as located in a non-attainment area for criteria air pollutants. Implementation of the proposed project is not anticipated to be a detriment to the attainment of national ambient air quality standards.

3.8 Aesthetics

3.8.1 Affected Environment

The visual quality of an area may be affected by the introduction of the array layout. Visually sensitive areas include regions of high scenic beauty, scenic overlooks, scenic highways, wilderness areas, integral vistas, parks, national forests, and along wild and scenic, recreational, and/or national inventory rivers. The project area consists of approximately 42.7 acres of farmland. The surrounding region is characterized by commercial and industrial facilities, agricultural land and residential properties.

3.8.2 Environmental Consequences

The proposed array will be visible looking to the west from Maremont Parkway, looking to the north from Roberson Spring Road, and looking to the south from an industrial facility. It is not anticipated that the array will be visible from the residential properties to the north. During construction, the short-term visual change will be minor from the viewpoints from the north, south, and east. After construction, the visual change will be limited as the height of the solar arrays will be approximately 11 feet, and the arrays will not block the view across the site. Since the arrays will not be visible from the residential properties to the north, it is not anticipated that the nearby residents will experience a long-term adverse impact due to the proposed project.

Under the “No Action” alternative, no impacts due to aesthetics are anticipated.

3.8.3 Mitigation / Management Measures

The project has been designed so that the final site installation will have a minimal visual impact on surrounding residential properties. The facility is not located in the vicinity of any areas that would commonly be recognized as visually sensitive. As such, no mitigation/management measures are anticipated for the development of the facility.

3.9 Transportation

3.9.1 Affected Environment

The proposed project within the city limits of Loudon, but the property remains in agricultural use and is located to the south of the developed area of Loudon, Loudon County, Tennessee near Highway 72S. Access to the proposed facility would be off Highway 72S. In general, traffic volumes would not be significantly affected by the development. Relatively low and short-term impacts on traffic in the area are expected during the construction activities.

3.9.2 Environmental Consequences

Any significant impact on traffic would be short-term during site development. Construction vehicles and equipment would be stored on the site and appropriate signage would be posted if roadways are affected. Therefore, the impact on traffic due to construction activities associated with the proposed action is considered to be minor. It is anticipated that the traffic increase associated with the development will not be a significant change from the current traffic levels.

Under the “No Action” alternative, no changes to transportation are anticipated.

3.9.3 Mitigation / Management Measures

No Mitigation or Management Measures are anticipated to be required to reduce impacts to less than significant levels during construction activities.

3.10 Noise

3.10.1 Affected Environment

The closest noise receptors to the site consist of single-family residences on surrounding properties. The closest residential land uses are adjacent to the property to the north. Construction-related activities have the potential to elevate local sound levels temporarily, though the location of most of the construction activity will occur more than 150 feet away from the closest residential properties, and construction-related noise would be attenuated over a distance within acceptable levels. The U.S. Department of Housing and Urban Development recommends that residential noise levels should not exceed 65 decibels (dB). Typical noise levels on a construction site may range between 80 and 110 dB according to the American National Institutes Standard, but the noise levels will attenuate over the distance to off-site properties at a safe level. It is anticipated that the installed solar array equipment will operate at a noise level of less than 65 dB.

3.10.2 Environmental Consequences

It is not anticipated that the proposed site development would produce noise levels above residential acceptable levels (65 dB) after construction activities have been completed. Construction-related activities have the potential to elevate local sound levels temporarily, though the location of most of the construction activity will occur more than 150 feet away from the closest residential properties in the area, and construction-related noise will be attenuated over a distance to levels below residential noise levels (65 dB) based on the sound attenuation calculation.. Construction-related noise is not considered to cause significant impacts on the residential properties.

Under the “No Action” alternative, no impacts due to noise are anticipated.

3.10.3 Mitigation / Management Measures

No mitigation/management measures are necessary regarding noise issues associated with the site.

3.11 Human Health and Safety

3.11.1 Affected Environment

Electromagnetic Fields and Interference

Public, media, regulatory, and scientific concern that exposure to power-frequency electric and magnetic fields (EMF) may cause a variety of health effects has been increasing. Consequently, attempts to locate transmission lines and substations near residential areas, schools, health facilities, and other public facilities have created controversy in some areas of the United States. Health and safety considerations should be made prior to the development of new transmission lines. The site placement was considered as part of the planning process, and the site is not located near sensitive receptors including schools. The closest residential receptor is over 150 feet to the north of the site.

Environmental Risk Management

The proposed chemical use at the proposed facility was evaluated according to the TDEC regulations, rules, and guidance to determine if the materials are hazardous. It has been determined that the materials proposed for use at the site will not produce significant quantities of hazardous waste, and the facility will not be categorized as a Very Small Quantity Generator (VSQG), a Small Quantity Generator (SQG), or a Large Quantity Generator (LQG) of hazardous waste. See Appendix H for the Phase I Environmental Site Assessment.

3.11.2 Environmental Consequences

The EMF created by the solar facility will be relatively minor (0-3 gigahertz) according to the Tell et al. 2015 study (See Appendix I) and well below the limits established by FCC (≥ 0.3 MHz). It is not anticipated the EMF created by the facility will adversely impact the closest residential receptor.

Based on the nature of the proposed development, the facility will not generate hazardous waste. Based on prior site visits and a desktop review of historical aerial photographs, it appears that the site has been primarily utilized as agricultural land. A Phase I Environmental Site Assessment was completed by BBC Group with a report dated September 30, 2022. It was reported in the Phase I ESA report that there were no Recognized Environmental Conditions (RECs) associated with the site including no underground or above-ground storage tanks nor known operations at

the site that resulted in spills of hazardous or toxic substances or hazardous air or water emissions. The site is not listed on or near a state or USEPS Superfund site or priority cleanup site. There are no structures at the site; and therefore, no presence of lead-based paint, asbestos, or mold on manmade structures.

Under the “No Action” alternative, no impacts regarding environmental risks at the site are anticipated.

3.11.3 Mitigation / Management Measures

Based on a limited review, mitigation/management measures are not anticipated for the site.

3.12 Social Impact Assessment/Environmental Justice

3.12.1 Affected Environment

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that federal agencies, whenever practical and appropriate, maintain information on populations by race, national origin, or income and shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects. According to the U.S. Census Bureau QuickFacts in 2021, the population of Loudon County, Tennessee is 56,690 with a median household income of \$66,151 and 9.6% of the population living in poverty.¹ Based on the EJScreen map, the site is not mapped as a Justice40 community, but it is identified as an EPA Inflation Reduction Act (IRA) Disadvantaged Community. See attached the RD Form 2006-38 and EJSCREEN report in Appendix J. The surrounding community will be invited to comment on the proposed project during the public notice period. The site is located within the city limits of Loudon, but the property remains in agricultural use and is located to the south of the developed area of Loudon, Loudon County, Tennessee. The site is bordered by residential to the northwest, commercial and industrial to the north and east, and agricultural and industrial to the south, and undeveloped wooded property to the west.

3.12.2 Environmental Consequences

It is anticipated that socioeconomic impacts from the construction and operation of the proposed facility will be beneficial. Temporary jobs will be created for construction workers during construction activities, and permanent and temporary jobs will be created once the facility is in operation. The potential increase in employees for construction and operation would have a

¹ QuickFacts Census Data Estimates as of July 1, 2021. www.census.gov/quickfacts/bradleycountytennessee. Accessed 2/11/2023

positive impact on the economic activity in the area. Alternus anticipates the site development will create one permanent full-time job and four permanent part-time jobs.

For the surrounding community, there may be a temporary change in traffic patterns and intensity due to the construction of the facility, but it is not anticipated that there will be significant long-term or permanent changes in traffic patterns, traffic intensity, or an increased risk for accidents as a result of the proposed project. The proposed project is not anticipated to adversely impact the disadvantaged population identified in the EPA IRA Disadvantaged Community map located near the site. Loudon County's population grew an average of 2.2% from 2000 to 2022 and is anticipated to continue to follow this trend. It is not anticipated that the proposed project will significantly impact population changes in Loudon County. As a result of an increased availability of electricity provided by this proposed facility, there may be an increase in the number of businesses in this region of Tennessee, but it is not anticipated that there will be a significant increase in industrial and commercial growth in the area immediately surrounding the facility.

Under the "No Action" alternative, no socioeconomic impacts are anticipated.

3.12.3 Mitigation / Management Measures

Although there are no Mitigation or Management Measures are anticipated to be required to reduce impacts to less than significant levels, the disadvantaged community located near the site will be invited to participate in the public notice through the local newspaper advertisement.

4.0 CUMULATIVE EFFECTS

The proposed Alternus renewable solar facility will result in positive socioeconomic impacts on the immediate project area and surrounding community. It is anticipated that the facility will employ approximately one full-time employee and four part-time employees. Located within an area that needs additional electrical resources, the facility will service Loudon County and surrounding areas. It is anticipated that the development project will result in positive health and economic effects including reduction of greenhouse gas emissions and air pollution from other sources, fewer potential safety hazards from producing other sources of energy, and creation of revenue and jobs for the local community.

The Loudon County Planning and Zoning and Economic Development websites were reviewed to search for proposed projects within the immediate vicinity of the site. Meeting agendas from the Regional Planning Commission, Historic Zoning Commission, and Board of Zoning Appeals were also reviewed. No projects were found within the immediate vicinity of the site.

5.0 AGENCY AND PUBLIC CONSULTATION

5.1 Agency Correspondence

The following regulatory agencies were consulted regarding the proposed project. A copy of relevant documentation and agency correspondence is included in Appendix F. Responses received from applicable agencies are included in the Appendix accordingly.

- United States Fish and Wildlife Service, Georgia Field Office (USFWS)
- United States Army Corps of Engineers – Savannah District (USACE)
- Tennessee Department of Conservation (TDEC)
- TDEC – Natural Heritage Program (TDEC-NHP)
- Tennessee Wildlife Resources Agency (TWRA)
- Tennessee Historical Commission – State Historic Preservation Office (SHPO)

5.2 Public Notice

This EA will be made available to the public for a 14-day public review and comment period. The availability of this document for review and comment will occur when this document is published in the News-Herald, Lenoir City, Tennessee. A copy of the EA will also be available at the Loudon Public Library at 210 River Road, Loudon, TN 37774, and will be posted on the RUS project website: <https://www.rd.usda.gov/resources/environmentalstudies/assessments>. Once the RUS has reviewed and evaluated public comments on the project, the agency will issue its environmental decision related to the project. If the RUS issues a FONSI for the EA, a notice will be published in the News-Herald informing the public of the RUS's finding and the availability of the final EA and FONSI. The notice will be prepared in accordance with RUS guidance. The RUS is using its NEPA procedures to meet its responsibilities to solicit and consider the views of the public during review under Section 106 of the NHPA and its implementing regulation. Accordingly, public comments submitted during NEPA scoping will inform RUS decision-making in Section 106 review.

6.0 MITIGATION, MONITORING COMMITMENTS, AND PERMITS

Mitigation measures will be implemented prior to and during the design and construction of this project to reduce potential negative environmental impacts below the level of significance. Additionally, several common design and/or construction management measures will be implemented in accordance with good practices. Mitigation and management measures are summarized below:

- USDA funding can be utilized only for funding portions of the project located wholly in upland areas with no potential to impact wetlands.

- Under the NPDES storm water program, a permit is required for land clearing activities that exceed one acre.
- A SWPPP will be developed for the construction of the facility and the construction activity will conform to the plan. Erosion and sedimentation control measures will be installed upgradient of channels prior to the commencement of construction activities at this location. After work has been completed, disturbed areas throughout the proposed project area will be re-established with vegetation as described in the SWPPP. Water, eroded materials and other potential pollutants shall be prevented from entering streams or watercourses as described in the SWPPP. Construction activities shall be performed by methods that prevent entrance or accidental spillage of solid matter, contaminants, debris, and other objectionable pollutants and wastes into flowing streams or dry water courses, lakes and underground water sources. Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses shall not be performed without prior approval of appropriate state agencies.
- If archeological materials are encountered during construction, the applicant should contact the SHPO immediately. Archeological material consists of any items, 50 years or older, which were made or used by man. These items include but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal, and glass objects. If human remains are encountered, construction activities should cease, and the applicant should contact SHPO. This stipulation shall be placed on the construction plans to ensure contractors are aware of it.
- USFWS recommends the BMPs be implemented to minimize erosion and prevent debris deposition and sedimentation in the project area in accordance with the site-approved SWPPP.
- Threatened/Endangered Species - Potential suitable summer roosting habitat for the gray bat, Indiana bat, northern long-eared bat, and tricolored bat are present at the site, and therefore tree clearing activities at the site should occur between October 15th and March 31st. If tree clearing will be necessary outside the protective window, the USFWS recommends that acoustic and/or mist-netting surveys be conducted to determine the presence or absence of the above-listed bat species.
- Dust mitigation measures will be required during the construction of the proposed facility. Measures may include watering of disturbed areas and sweeping or other methods to control tire track-out at intersections with construction and paved areas. Minor emissions from construction can be further reduced or mitigated through the use of BMPs. BMPs for dust control include spraying water on exposed surfaces to minimize dust, limiting the area of uncovered soil to the minimum needed for each activity, siting staging areas to minimize fugitive dust, using a soil stabilizer (chemical dust suppressor), mulching, using a temporary gravel cover, limiting the number and speed of vehicles on the site, and covering trucks transporting soil, sand, or other loose material off-site.
- BMPs for construction vehicle and equipment emissions include limiting vehicle idling time, using low or ultra-low sulfur fuel (including biodiesel), conducting proper vehicle maintenance, and using electric-powered tools (instead of gas-powered tools). It is

anticipated that construction contractors will properly maintain their fleet of vehicles/equipment so that air emissions are kept to a minimum over time.

- The guidance provided by the USFWS, states that if tree trimming is required it shall take place only between October 15th and March 31st in order to limit the potential effects of the proposed project on protected bats and/or migratory bird species.

7.0 CONCLUSIONS

Alternative 1 is the No Action Alternative, which would have no significant impact on environmental resources. The solar farm would not be constructed and no social, economic, or health-related benefits would occur from this project for Loudon County.

Alternative 2 consists of the development of an approximately 62-acre tract of land with the solar farm project with potential impacts on water resources.

Alternative 3 consists of the development of an approximately 62-acre tract of land with a solar farm project area of approximately 42.7 acres that avoids potential impacts on water resources and limits tree clearing.

Alternative 3 was selected as it prevents significant short-term and long-term adverse environmental impacts. The selected site has numerous desirable aspects that aided in its selection, such as:

- Centrally located off of Highway 72 which provides easy access to the facility;
- No known contamination issues;
- Approximately 42.7 acres of property with access to utilities;
- Attainable compliance with applicable laws and development permits; and
- Reasonable land and development costs.

The majority of potential impacts associated with Alternative 3 are considered to be negligible or temporary, occurring mostly during construction. The remaining impacts would be mitigated to less than significant levels through the implementation of permitting and management measures (discussed in Section 6.0 of this report). Assuming the appropriate measures are followed in Section 6.0, no significant impacts are anticipated.

The analysis performed in this EA concludes that the proposed action would not have a significant adverse impact, either individually or cumulatively, on the environment; provided that the mitigation measures, BMPs, and regulatory compliance permits and requirements described in this EA are implemented.

8.0 LIST OF PREPARERS

Table 2 below lists the preparers of this EA.

Table 2 – Preparers of the Environmental Review

Name	Affiliation	Title	Responsibilities
Amanda M. Herrit	Terracon Consultants, Inc.	Senior Environmental Scientist	Report Preparation
Dallas Whitmill, P.E.	Terracon Consultants, Inc.	Principal Engineer	Oversight and Sr. Technical Report Review

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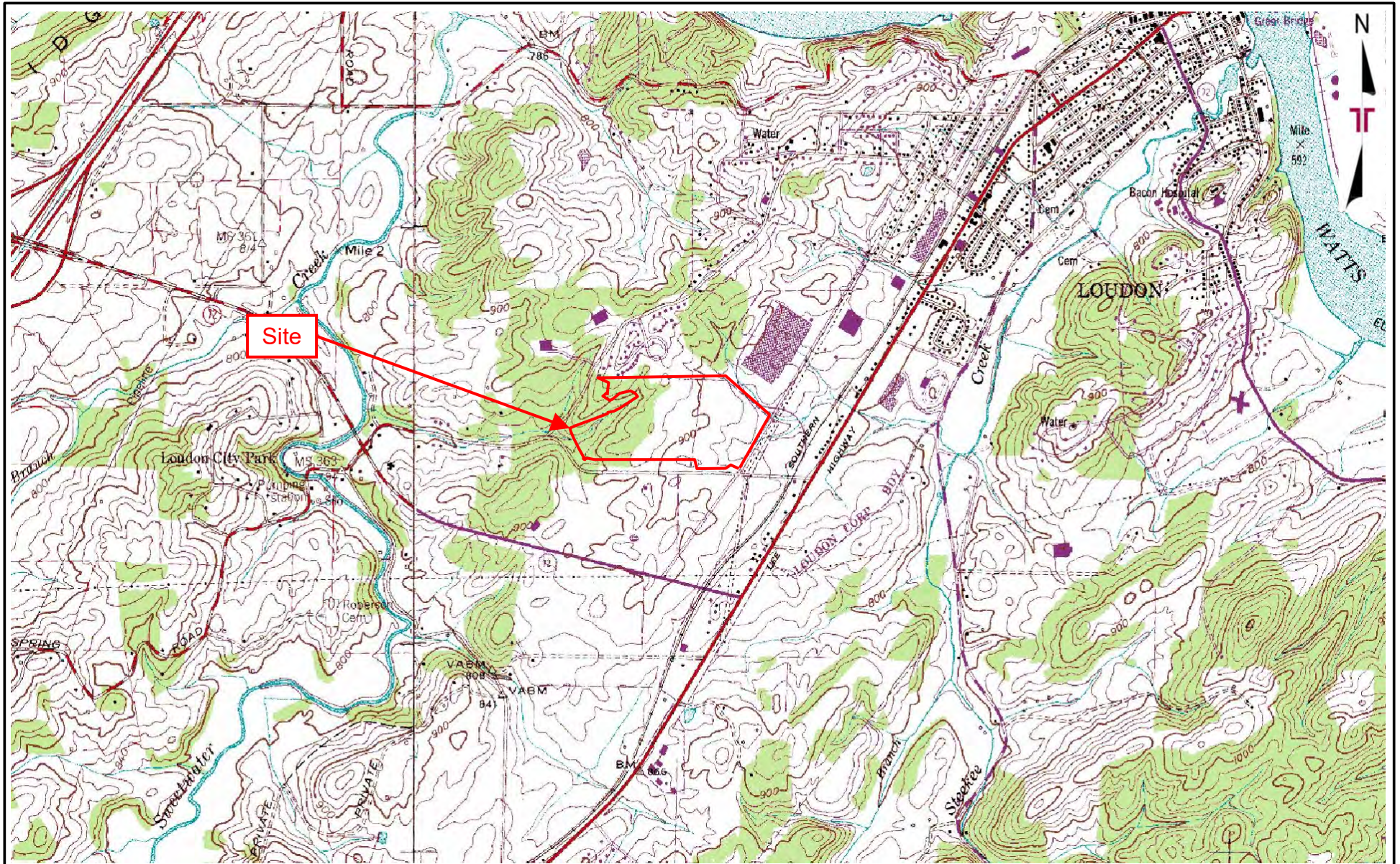
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Appendix A – Exhibits



TOPOGRAPHIC MAP IMAGE COURTESY OF THE
U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: PHILADELPHIA, TN
(1/1/1984)

DIAGRAM IS FOR GENERAL LOCATION
ONLY, AND IS NOT INTENDED FOR
CONSTRUCTION PURPOSES

Project Manager:
AMH
Drawn by:
RAM
Checked by:
AMH
Approved by:
DEW

Project No.
E2227159
Scale:
1"=2,000'
File Name:
N:\Projects\2022
Date:
January 2023



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Topographic Map

Alternus Energy America's Inc. - Solar Farm Project
Walking Horse
Roberson Spring Road and Maremont Parkway
Loudon, Loudon County, TN

Exhibit

1



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: AMH
 Drawn by: RAM
 Checked by: AMH
 Approved by: DEW

Project No. E2227159
 Scale: As Shown
 File Name: N:\Projects\2022
 Date: January 2023



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Site Diagram

Alternus Energy America's Inc. - Solar Farm Project
 Walking Horse
 Roberson Spring Road and Maremont Parkway
 Loudon, Loudon County, TN

Exhibit

2

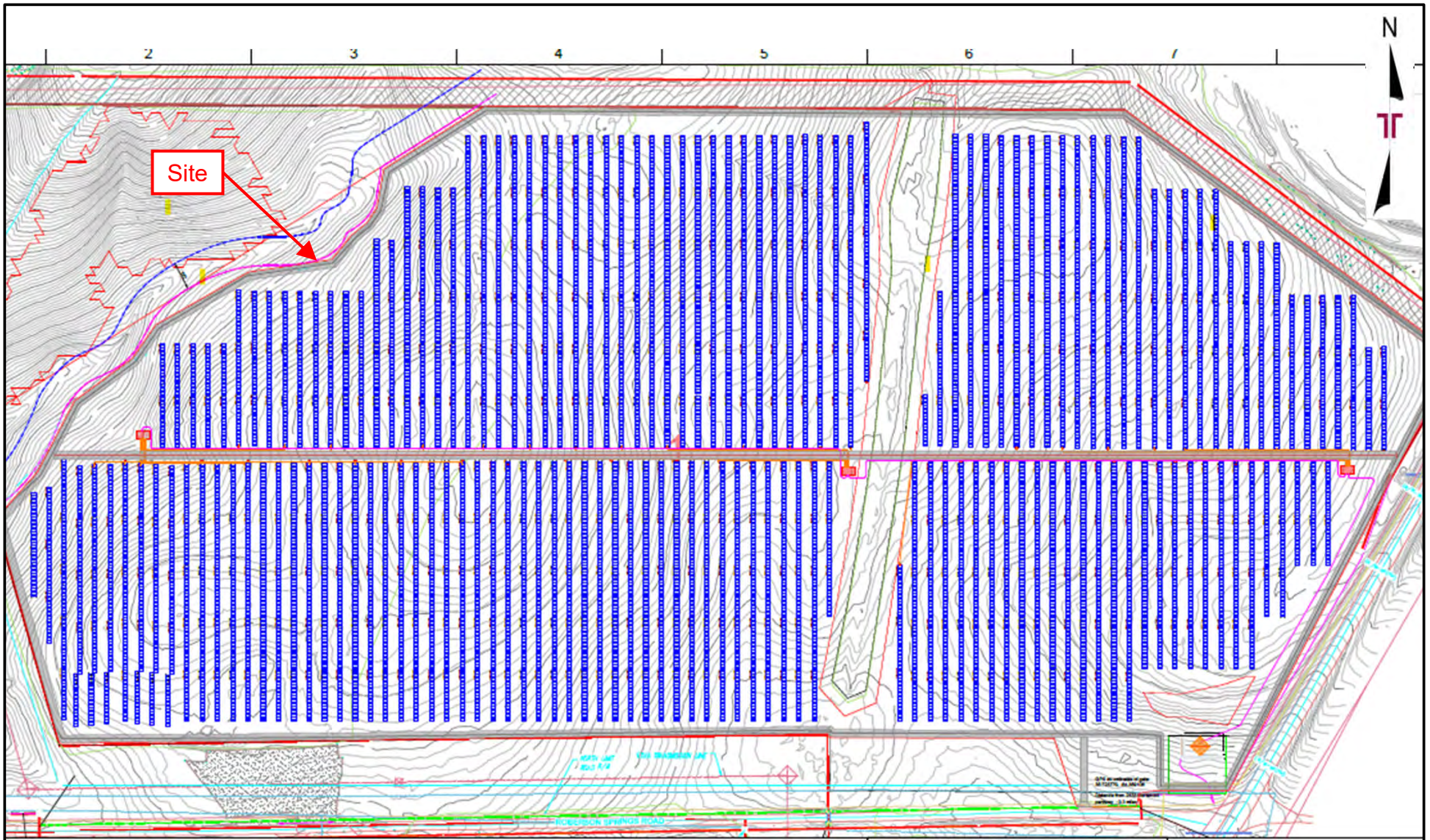


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	AMH	Project No.	E2227159
Drawn by:	RAM	Scale:	As Shown
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Approved by:	DEW	Date:	January 2023

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Proposed Site Development Plan
 Alternus Energy America's Inc. - Solar Farm Project
Walking Horse
 Roberson Spring Road and Maremont Parkway
 Loudon, Loudon County, TN

Exhibit
3



MAP LEGEND

- Area of Interest (AOI)**
 - Area of Interest (AOI)
- Soils**
 - Soil Map Unit Polygons
 - Soil Map Unit Lines
 - Soil Map Unit Points
- Special Point Features**
 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Perennial Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Water Features**
 - Streams and Canals
- Transportation**
 - Rails
 - Interstate Highways
 - US Routes
 - Major Road
 - Local Roads
- Background**
 - Aerial Photography
- Other**
 - Spill Area
 - Stony Spot
 - Very Stony Spot
 - Wet Spot
 - Other
 - Special Line Features

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DcB2	Decatur silty clay loam, eroded gently sloping phase	10.3	16.5%
DcC2	Decatur silty clay loam, 5 to 12 percent slopes, eroded	15.1	24.2%
DcD3	Decatur silty clay loam, 12 to 20 percent slopes, severely eroded	1.1	1.7%
DeC2	Dewey silty clay loam, 6 to 15 percent slopes, eroded	7.0	11.2%
DeD2	Dewey silty clay loam, 15 to 25 percent slopes, eroded	1.9	3.0%
Em	Emory silt loam, 0 to 4 percent slopes, occasionally flooded	3.5	5.6%
FcC	Fullerton gravelly silt loam, 5 to 12 percent slopes	0.0	0.1%
FsC	Fullerton silt loam, sloping phase (Dewey)	9.4	15.0%
FsD	Fullerton silt loam, moderately steep phase (Dewey)	8.5	13.6%
uEdB	Etowah-Dewey complex, 2 to 6 percent slopes	2.1	3.4%
uEdC	Etowah-Dewey complex, 6 to 12 percent slopes	1.8	2.9%
WIC	Waynesboro loam, 6 to 15 percent slopes	1.6	2.6%
Totals for Area of Interest		62.5	100.0%

Soil Map may not be valid at this scale.

Map Scale: 1:4,670 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

USDA Natural Resources Conservation Service

Web Soil Survey National Cooperative Soil Survey

SOILS MAP COURTESY OF USDA WEB SOIL SURVEY 2-7-23

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Project Manager:	AMH	Project No.	E2227159
Drawn by:	RAM	Scale:	As Shown
Checked by:	AMH	File Name:	N:\Projects\2022
Approved by:	DEW	Date:	February 2023

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Web Soil Survey Map

Alternus Energy America's Inc. - Solar Farm Project

Walking Horse

Roberson Spring Road and Maremont Parkway
Loudon, Loudon County, TN

Exhibit

4

National Flood Hazard Layer FIRMette



84°22'2"W 35°43'46"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000
 Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes, Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/7/2023 at 1:05 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	AMH	Project No.	E2227159
Drawn by:	RAM	Scale:	As Shown
Checked by:	AMH	File Name:	N:\Projects\2022
Approved by:	DEW	Date:	February 2023



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National Flood Hazard Map

Alternus Energy America's Inc. - Solar Farm Project
 Walking Horse
 Roberson Spring Road and Maremont Parkway
 Loudon, Loudon County, TN

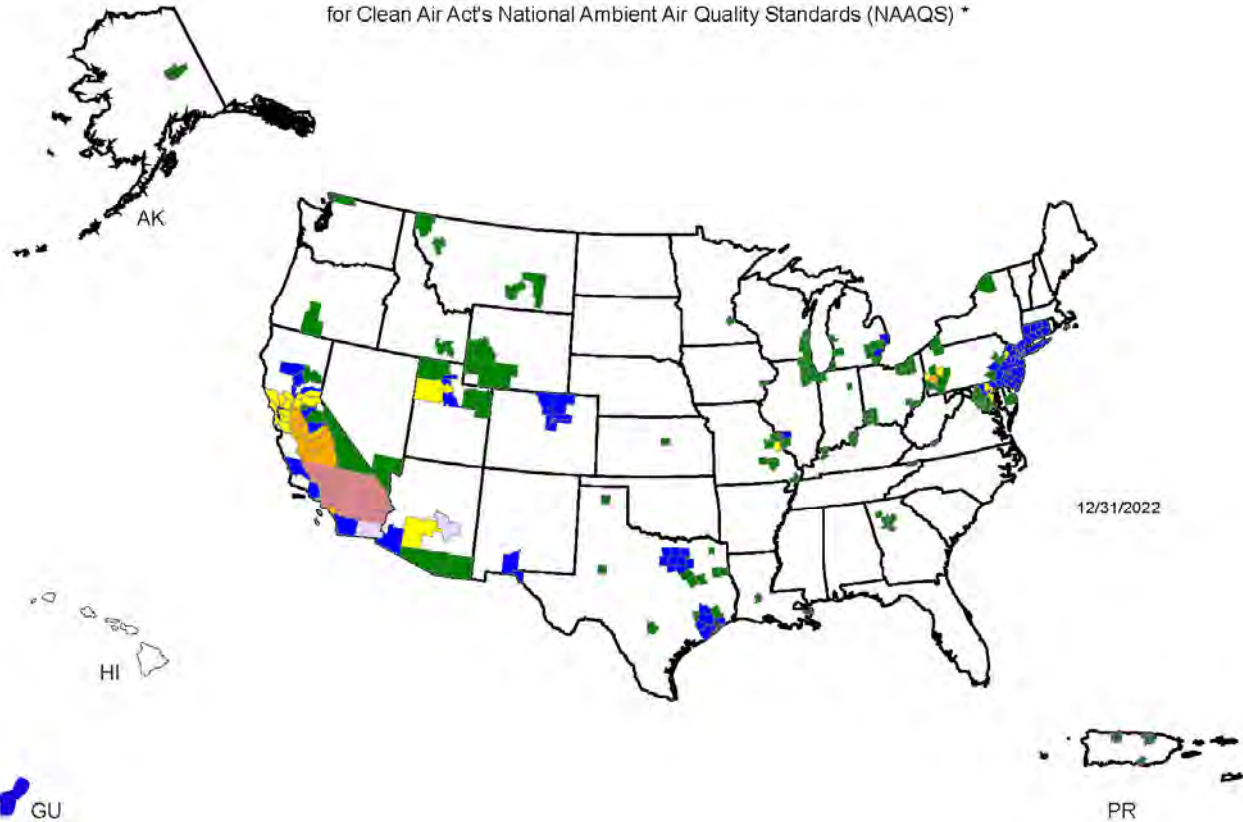
Exhibit

5



Counties Designated "Nonattainment"

for Clean Air Act's National Ambient Air Quality Standards (NAAQS) *



Legend **

- County Designated Nonattainment for 6 NAAQS Pollutants
- County Designated Nonattainment for 5 NAAQS Pollutants
- County Designated Nonattainment for 4 NAAQS Pollutants
- County Designated Nonattainment for 3 NAAQS Pollutants
- County Designated Nonattainment for 2 NAAQS Pollutants
- County Designated Nonattainment for 1 NAAQS Pollutant

* The National Ambient Air Quality Standards (NAAQS) are health standards for Carbon Monoxide, Lead (1978 and 2008), Nitrogen Dioxide, 8-hour Ozone (2008), Particulate Matter (PM-10 and PM-2.5 (1997, 2006 and 2012), and Sulfur Dioxide.(1971 and 2010)

** Included in the counts are counties designated for NAAQS and revised NAAQS pollutants. Revoked 1-hour (1979) and 8-hour Ozone (1997) are excluded. Partial counties, those with part of the county designated nonattainment and part attainment, are shown as full counties on the map.

TOPOGRAPHIC MAP IMAGE
COURTESY OF THE U.S.
GEOLOGICAL SURVEY
QUADRANGLES INCLUDE:
WHITE PINE, TN (1/1/1961)

DIAGRAM IS FOR GENERAL LOCATION
ONLY, AND IS NOT INTENDED FOR
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Drawn by: RAM	Scale: As Shown
Checked by: AMH	File Name: N:\Projects\2022
Approved by: DEW	Date: January 2023



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Nonattainment Areas Map

Alternus Energy America's Inc. - Solar Farm Project
Walking Horse
Roberson Spring Road and Maremont Parkway
Loudon, Loudon County, TN

Exhibit

6

Appendix B – Alternative Site Plan



Notes			
PV Plant: Walking Horse, LLC_Zeppelin Location: Tennessee, United States UTM convergence: 1.5415 ° Altitude: 902.6 ft Suitable area: 52.99 acre Perimeter fence: 1.19 mi			
Rated Power: 7.5 MW Peak Power: 10.2 MW Ratio DC/AC: 1.35 Structure: Monoline+ 1V B PV Module: HT-SAAE HT72-18X-545 Bifacial Inverter: Chint Power Systems CPS SCA125KTL-DO/US-600 Power Station: 1056.0 kVA, 0.6/12.5kV Pitch distance: 24.61 ft Modules per string: 27			
Number of PV modules: 18630 Number of string boxes: 57 Number of inverters: 57 Number of power stations: 8			

Legend	
	Available area
	Substation
	Power station
	Colors indicate solar field connection to each power station
	Mounting structure
	Roads
	Medium voltage trenches
	Low voltage trenches
	Fences
	Medium voltage lines
	String cables
	Cables from inverter to PS
	String inverters

REV	DESCRIPTION	BY	DATE
00	FIRST VERSION	RP	2022-02-16

FOR INFORMATION ONLY

www.ratedpower.com

CLIENT:

PROJECT:
Walking Horse, LLC_Zeppelin

DRAWING:
PV Plant Layout

SCALE: 1 : 4000	SHEET: 1 / 1
REVISION: 00	DATE: 2022-02-16
DIN A3	

Appendix C – Jurisdictional Waters Determination



January 25, 2023

Joe Tierney
Chief Operations Officer
Sunrise Energy Ventures, LLC
315 Manitoba Avenue, Suite 200
Wayzata, Minnesota 55391

**Re: Jurisdictional Waters Determination Summary and Report
Walking Horse Solar, LLC Facility
Roberson Spring Road
Loudon, Tennessee
BBJ Group Project No. R2213668**

Dear Mr. Tierney:

BBJ Group, LLC (BBJ Group) is pleased to present Emmons & Olivier Resources, Inc. (EOR), on behalf of Sunrise Energy Ventures, LLC (Sunrise), with a summary and complete report of the *Jurisdictional Waters Determination* prepared for the proposed Walking Horse Solar, LLC Facility located north of Roberson Spring Road in Loudon, Loudon County, Tennessee (Subject Property). This work was performed in accordance with the EOR and BBJ Group Scope of Work (SOW), dated August 2, 2022.

Per the SOW, an onsite jurisdictional waters determination for streams and wetlands was performed at the approximately 80-acre Subject Property by a licensed Tennessee Qualified Hydrologic Professional (QHP) with BBJ Group's subcontractor, Griggs & Maloney (G&M), on November 14, 2022. Initial desktop review of Natural Resources Conservation Service (NRCS) soil maps depicted approximately four acres of hydric soils (Emory silt loam) at the Subject Property. However, the results of the onsite evaluation did not identify wetland areas within the project area. A single channelized feature was observed at the western extent of the project area. The Jurisdictional Waters Determination (JWD) Report prepared by G&M, dated December 1, 2022, identified the channelized feature as a wet weather conveyance (WWC-1) which enters onto the Subject Property at coordinates 35.727075°, -84.363434°, and is routed southwest toward a roadside ditch along Carding Machine Road (at 35.724979°, -84.367123°) where it is conveyed into an existing culvert and offsite. G&M anticipated that the United States Army Corps of Engineers (USACE) would regard the wet weather conveyance as an ephemeral stream due to differences in terminology between the State and the USACE. BBJ Group understands that the currently proposed design of the solar facility will avoid development, dredging, filling, etc. within the WWC-1. The complete report is provided herein as Appendix A.

G&M submitted the JWD Report on January 11, 2023 to the Tennessee Department of Environment & Conservation (TDEC) Division of Water Resources (DWR) requesting concurrence with the QHP's findings. Subsequently, on January 19, 2023, Mr. Joshua Frazier of the TDEC DWR completed an on-

site field assessment at the Subject Property. TDEC then provided written concurrence with the identification of the wet weather conveyance (WWC-1) on January 20, 2023. A copy of the concurrence letter and the associated Hydrologic Determination Field Data Sheet prepared by Mr. Frazier regarding WWC-1 is provided in Appendix B.

Given the absence of a traditional “top of bank” on either side of the wet weather conveyance, BBJ Group understands and agrees with Sunrise’s decision to establish a minimum 30-foot buffer from the centerline of the channel along each side of the identified WWC-1 prior to any clearing, excavation, or grading onsite, per the TDEC DWR Tennessee Erosion & Sediment Control Handbook (TNESCH)¹ and Tennessee’s General NPDES Permit for Discharges of Stormwater Associated with Construction Activities (referred to as the CGP), Permit No. TNR100000. The TNESCH recommends the use of orange safety fencing (or brightly colored flags) along that buffer as a visual marker to keep construction activity out of WWC-1 and to maintain the existing vegetation.

Based on Sunrise’s currently proposed design, revised January 11, 2023, the development and construction activities at the Subject Property will be designed to avoid all jurisdictional aquatic resources under USACE authority (i.e., the ephemeral stream noted as WWC-1). In addition, in consideration of applicable TDEC regulations, (a) the onsite activities will avoid development, construction, and staging within the WWC, and (b) 30-foot buffers will be maintained on each side of the WWC from the centerline of the channel for the duration of the development activities. As such, no further permitting or consultation with TDEC or USACE is required as they relate to the wet weather conveyance. If the design is altered such that any of the above noted stipulations are no longer valid, additional correspondence, consultation, and/or review by one or both entities may be required.

We appreciate the opportunity to provide Sunrise with our environmental consulting services. We will follow-up to answer any questions you may have and look forward to meeting your environmental needs.

Sincerely,

BBJ Group, LLC



Amber Winter
Staff Scientist



Mark Quarles
Nashville Branch Manager

Appendix A *Jurisdictional Waters Determination Report*
Appendix B *Concurrence Documentation*

¹ https://tnepsc.org/TDEC_EandS_Handbook_2012_Edition4/TDEC%20EandS%20Handbook%204th%20Edition.pdf

APPENDIX A

JURISDICTIONAL WATERS DETERMINATION REPORT

JURISDICTIONAL WATERS DETERMINATION REPORT

Walking Horse Project Area
Loudon, Loudon County, Tennessee

December 1, 2022

Prepared for:



BBJ Group, LLC.
Mr. Mark Quarles, P.G.
Senior Consultant, Branch Manager
1616 Westgate Circle
Brentwood, TN 37027

Prepared by:



745 S. Church St., STE 205
P.O. Box 2968
Murfreesboro, Tennessee 37130
(615) 895-8221

G&M Project No.: 1384-07

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List of Acronyms

CoCoRaHS	Community, Collaborative, Rain, Hail, and Snow Network
DWR	Division of Water Resources
ESRL PSD	Earth System Research Laboratory Physical Science Division
G&M	Griggs & Maloney, Inc.
HD	Hydrologic Determination
HUC	Hydrologic Unit Code
HWY	Highway
JWD	Jurisdictional Waters Determination
NOAA	National Oceanic and Atmospheric Administration
NRCS	National Resource Conservation Service
NWI	National Wetlands Inventory
STR	Stream
TDEC	Tennessee Department of Environment and Conservation
TWRA	Tennessee Wildlife Resource Authority
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WWC	Wet Weather Conveyance

1.1. Executive Summary

Griggs & Maloney, Inc. (G&M) conducted a jurisdictional waters determination (JWD) on an approximately 81-acre project area, centered at approximate GPS coordinates N35.725351°, W84.362527°, that occurs within a property (Parcel ID: 053 040 16400 000 2023) located on Roberson Spring Road in Loudon, Loudon County, Tennessee.

G&M performed a map review of the project area utilizing data derived from the USDA's Web Soil Survey, USFWS's National Wetlands Inventory (NWI), and USGS 3D Elevation Program's LiDAR data. Soils data from U.S.D.A NRCS Web Soil Survey maps indicates that the soil series that occur within the project area are Bolton, Decatur, Dewey, Emory, Fullerton, Etowah-Dewey, and Waynesboro. The NRSC maps also indicate that Emory silt loam has a hydric rating of 1. Data sourced from the NWI mapper indicates that a riverine aquatic feature occurs within the project area. LiDAR data derived from USGS 3D Elevation Program indicates that the project area features rolling terrain with small drainage basins, and relatively flat areas with a low gradient where agricultural fields are present.

G&M personnel conducted the field examination of the project area on November 14, 2022. Based on the results of field examination, no wetland areas were observed within the project area. A single channelized feature was observed at the western extent of the project area.

Additional photos of the identified aquatic resource and of the project area are included under Appendix C. Copies of the Hydrologic Determination field sheets and copies of the Wetland Determination Data Forms for sample plots conducted within the project area are included under Appendix D. A copy of the Weather Conditions Calculation Sheet is included under Appendix E. Reference maps utilized during desktop review of the project area are included under Appendix F.

Figure 1 shows the project area boundary on a USGS 7.5 Minute Topographic map, while Figure 2 shows the project area boundary with identified aquatic features indicated and sample plot and photo locations plotted on the most recent aerial image. Both Figure 1 and Figure 2 are included under Appendix A. An Aquatic Features Table which indicates the location of the identified aquatic resources via GPS coordinates is included under Appendix B.

It is recommended that the project area referenced in this JWD report be reviewed by the appropriate regulatory agencies and a concurrence letter be acquired from the agencies before any disturbance or development within the project area occurs. It is anticipated that WWC 1 will likely be regulated by the US Army Corps of Engineers as an Ephemeral Stream, possibly Intermittent based on observed characteristics.

Upon approval, G&M can facilitate the submittal of this report to the appropriate regulatory authorities to obtain the respective agencies concurrence letter.

1.2. Project Area Description

The project area is located in Ecoregion 67f Southern Limestone/Dolomite Valleys and Rolling Hills and two different HUC 12s, the eastern side of the project area is located within the Tennessee River – Town Creek HUC 12 060102010301 while the western side is located within Sweetwater Creek HUC 12 060102010302. The project area is comprised of a mixture of agricultural fields and forested area. Based on review of aerial imagery, the open field areas are currently utilized for agricultural purposes (crop production) and are maintained on an annual basis. The project area is bounded by residential and

commercial development to the north, Maremont Parkway to the east, Roberson Spring Road to the south and Carding Machine Road to the west. At the time of field evaluation, the open field areas were planted with soy beans. Forested areas that occur within the project area commonly featured wild black cherry (*Prunus serotina*), American beech (*Fagus grandifolia*), shagbark hickory (*Carya ovata*), eastern red cedar (*Juniperus virginiana*), and hackberry (*Celtis occidentalis*) with minimal understory and heavy leaf litter observed throughout.

Figure 1: Site Location Map and Figure 2: Site Detail Map are included under Appendix A, which respectively show the project area overlain on a topographic map and an aerial image. Additional photographs of the project area are included under Appendix C.

1.3. Methodology

The project area was evaluated for drainage channels that meet the definition of either a wet weather conveyance or a stream according to the Tennessee Department of Environment and Conservation (TDEC) Hydrologic Determination (HD) protocols.

To be classified as a wet weather conveyance according to TDEC criteria, the channel must be evaluated by a Qualified Hydrologic Professional (QHP) and a Hydrologic Determination (HD) Field Data Sheet must be completed and achieve an overall score of less than 19, under normal weather conditions, based on the field evaluation of three characteristics and associated aspects of the channel: *Geomorphology*, *Hydrology*, and *Biology*. Channels achieving a score greater than 19, under normal weather conditions, is to be considered a stream. TDEC defines a wet weather conveyance as:

“Wet Weather Conveyances” are man-made or natural watercourses, including natural watercourses that have been modified by channelization: that flow only in direct response to precipitation runoff in their immediate locality; whose channels are at all times above the ground water table; that are not suitable for drinking water supplies; and in which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months. [Rule 1200-4-3-.04(25)]

A variance in terminology occurs with the U.S. Army Corps of Engineers (USACE) as channels are classified as either an Ephemeral Stream, Intermittent Stream, or Perennial Stream, according to regulation 33 CFR 328.3 and Regulatory Guidance Letter 05-05. USACE’s definition for each of the three stream classifications:

1. *Ephemeral stream*: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.
2. *Intermittent stream*: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

3. *Perennial stream*: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

The project area was also evaluated for wetland areas according to the technical criteria established by the USACE Wetland Delineation Manual Techniques (1987) along with the Interim Regional Supplement to the USACE Wetland Delineation Manual: Eastern Mountains and Piedmont Region (July 2010) for potential wetland areas. To be classified as a wetland according to USACE criteria, an area must exhibit all of the following environmental characteristics:

1. *Vegetation*. The prevalent (dominant) vegetation consists of plants that are typically adapted to life in water or anaerobic (saturated) soil conditions. These hydrophytic species (plants growing in wetlands and water), due to morphological, physiological, and/or reproductive adaptation(s), can grow, compete, reproduce, and/or persist in moist soil conditions.
2. *Soil*. Soils are present and classified as hydric, or they possess characteristics that are associated with reducing soil conditions that are formed by extended periods of inundation.
3. *Hydrology*. The area is inundated either permanently or periodically at mean water depths of less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.

1.4. Map Review

Prior to performing field work, G&M performed a map review of the project area utilizing data derived from the USDA's Web Soil Survey, USFWS's National Wetlands Inventory (NWI), and USGS 3D Elevation Program's LiDAR data.

Soils data from Web Soil Survey indicates that the property is underlain with Bolton, Decatur, Dewey, Emory, Fullerton, Etowah-Dewey, and Waynesboro soil series. Emory is the only one of these soil types that has any potential to be considered hydric soils based on their classification. Wetland data sourced from the NWI mapper indicates that no mapped wetland features occur within or in proximity to the project area. LiDAR data derived from USGS 3D Elevation Program indicates that the project area features rolling terrain with small drainage areas and associated low points that receive runoff from upgradient areas. Copies of the map resources utilized during desktop review are included under Appendix F.

Antecedent rainfall data was collected calculated and weather conditions for the project area were considered normal. Local precipitation data was derived from a Community, Collaborative, Rain, Hail, and Snow Network (CoCoRaHS) weather station designated "TN-LN-11". Precipitation mean and standard deviation were derived from NOAA ESRL PSD data from the KNOXVILLE AP station. A copy of the weather conditions calculation sheet is included under Appendix E.

1.5. Jurisdictional Waters Determination

G&M personnel conducted field evaluation of the project area on November 14, 2022 under sunny and clear conditions. Prior to field evaluation, approximately 1.18" of rainfall had occurred within 7 days, with

0.94" occurring within 72 hours. A single channelized feature, Wet Weather Conveyance 1 (WWC 1) was observed at the western extent of the project area. No other aquatic features were observed within the project area. A total of three upland plots were conducted to document observed conditions within several topographic low points within the project area. Details concerning WWC 1 and the project area are presented in the following sections.

1.5.1. Wet Weather Conveyance 1 (WWC 1)

Wet Weather Conveyance 1 (WWC 1) enters into the project area at approximately N35.727075, W84.363434, and traverses in a southwesterly direction until reaching a roadside ditch along Carding Machine Road at N35.724979°, W84.367123° where it is conveyed into an existing culvert and offsite. The channel flows through a valley with a mostly defined bed and bank throughout but there are some segments where the channel loses definition. Substrate of the channel consisted of coarse materials such as gravel and small cobbles scattered throughout. At the time of the determination there was no hydrology present despite 1.18" of rainfall in the previous seven days with 0.94" occurring within 48 hours of the determination. Photo 1 shown to the right is looking upstream at WWC 1 from N35.725944°, W84.364892°. Based on lack of Primary Indicators and the Secondary Indicator Score of 15, the channel has been determined to be a Wet Weather Conveyance. Additional photographs of WWC 1 are included under Appendix C. A copy of the HD Field Data Sheet for WWC 1 is included under Appendix D.



Photo 1 – Looking upstream at WWC 1 from N35.725944°, W84.364892°.

1.5.2. Upland Sample Plots

Three Wetland Determination Data Forms were completed for three topographic low areas that receive runoff from upgradient and are mapped as potential hydric soil. Upland 1 (UPL 1) is located along the northern boundary of the project area at N35.726718°, W84.360034° in a slight depression. The area receives hydrology from upgradient areas to the west and is located in a different HUC 12. All of the upland plots are located within the Tennessee River – Town Creek HUC 12 060102010301 while WWC 1 is located in the Sweetwater Creek HUC 12 060102010302. The plot was conducted at the edge of the field at the lowest local topographic point observed. The soil was determined to possess upland characteristics and does not meet any hydric



Photo 2 –is looking southwest at UPL 1 from N35.727044°, W84.359856°.

soil indicators. Photo 2 is looking southwest at UPL 1 from N35.727044°, W84.359856°. A copy of the Wetland Determination Data Form is included under Appendix D.

Upland 2 (UPL 2) is located in a depressional area along the eastern boundary and Maremont Parkway at N35.724696°, W84.357786°. This area receives the majority of the surface runoff for the eastern side of the project area as it conveyed offsite via a culvert under Maremont Parkway. The sample plot was conducted at the lowest local topographic point observed in order to document soils, hydrology, and vegetation for the area. The soil was determined to possess upland characteristics and does not meet any hydric soil indicators. Photo 3 is looking southwest at UPL 2 from N35.727044°, W84.359856°. A copy of the Wetland Determination Data Form is included under Appendix D.



Photo 3 – Looking southwest at UPL 2 from N35.727044°, W84.359856°.

Upland 3 (UPL 3) is located along the southern boundary of the property along Roberson Springs Road at N35.723662°, W84.360836°. The slight depressional area receives runoff from surrounding upgradient areas to the north. The plot was conducted at the lowest local topographic point near Roberson Springs Road near an existing culvert that conveys surface water offsite. The soil was determined to possess upland characteristics and does not meet any hydric soil indicators. Photo 4 is looking south at UPL 3 from N35.727044°, W84.359856°. A copy of the Wetland Determination Data Form is included under Appendix D.



Photo 4 – Looking south at UPL 3 from N35.727044°, W84.359856°.

1.6. Summary

Griggs & Maloney, Inc. (G&M) conducted a jurisdictional waters determination (JWD) on an approximately 81-acre project area, centered at approximate GPS coordinates N35.725351°, W84.362527°, that occurs within a property (Parcel ID: 053 040 16400 000 2023) located on Roberson Spring Road in Loudon, Loudon County, Tennessee.

G&M performed a map review of the project area utilizing data derived from the USDA's Web Soil Survey, USFWS's National Wetlands Inventory (NWI), and USGS 3D Elevation Program's LiDAR data. Soils data from U.S.D.A NRCS Web Soil Survey maps indicates that the soil series that occur within the project area

are Bolton, Decatur, Dewey, Emory, Fullerton, Etowah-Dewey, and Waynesboro. The NRSC maps also indicate that Emory silt loam has a hydric rating of 1. Data sourced from the NWI mapper indicates that a riverine aquatic feature occurs within the project area. LiDAR data derived from USGS 3D Elevation Program indicates that the project area features rolling terrain with small drainage basins, and relatively flat areas with a low gradient where agricultural fields are present.

G&M personnel conducted the field examination of the project area on November 14, 2022. Based on the results of field examination, no wetland areas were observed within the project area. A single channelized feature was observed at the western extent of the project area.

Additional photos of the identified aquatic resource and of the project area are included under Appendix C. Copies of the Hydrologic Determination field sheets and copies of the Wetland Determination Data Forms for sample plots conducted within the project area are included under Appendix D. A copy of the Weather Conditions Calculation Sheet is included under Appendix E. Reference maps utilized during desktop review of the project area are included under Appendix F.

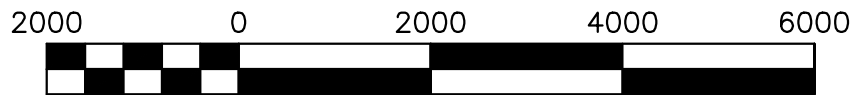
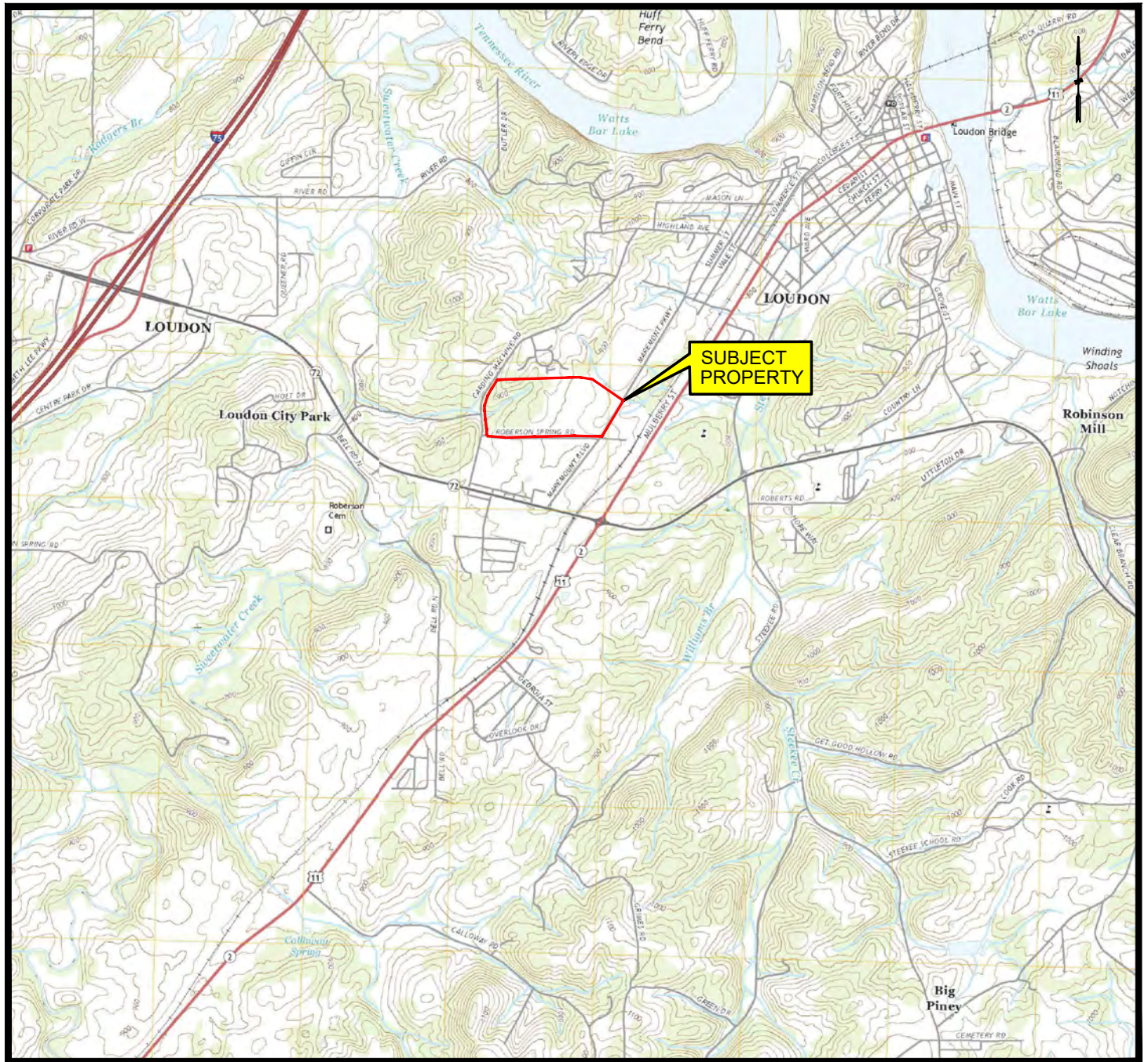
Figure 1 shows the project area boundary on a USGS 7.5 Minute Topographic map, while Figure 2 shows the project area boundary with identified aquatic features indicated and sample plot and photo locations plotted on the most recent aerial image. Both Figure 1 and Figure 2 are included under Appendix A. An Aquatic Features Table which indicates the location of the identified aquatic resources via GPS coordinates is included under Appendix B.

It is recommended that the project area referenced in this JWD report be reviewed by the appropriate regulatory agencies and a concurrence letter be acquired from the agencies before any disturbance or development within the project area occurs. It is anticipated that WWC 1 will likely be regulated by the US Army Corps of Engineers as an Ephemeral Stream, possibly Intermittent based on observed characteristics.

Upon approval, G&M can facilitate the submittal of this report to the appropriate regulatory authorities to obtain the respective agencies concurrence letter.

1.7. Appendix A: Figure 1: Project Area Location Map & Figure 2: Aquatic Features Map

Figure 1: Project Area Location Map



SCALE: 1"=2000'

Taken from: U.S.G.S.
 7.5 Minute Series (Topographic)
 Loudon 2019
 Philadelphia 2019

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 © 2022 Griggs & Maloney, Inc.

Figure 1
Site Location Map
 Jurisdictional Waters Determination
 Walking Horse Site
 BBJ Group
 Loudon, Loudon County, Tennessee
 Project No. 1384-07 November 2022

Figure 2: Aquatic Features Map



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Legend:

 Photo Location

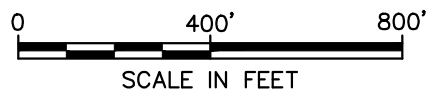


Figure 2

Site Detail Map

Jurisdictional Waters Determination
 Walking Horse Site
 BBJ Group
 Loudon, Loudon County, Tennessee
 Project No. 1384-07 November 2022

1.8. Appendix B: Aquatic Features Table

FEATURE	CLASSIFICATION	LATITUDE	LONGITUDE	DIMENSIONS
WWC 1	Ephemeral Stream	Begin: 35.727075°	-84.363434°	1,630 l.f.
		End: 35.724979°	-84.367123°	

1.9. Appendix C: Additional Photographs of WWC 1 and Project Area



Photo 5: Looking west/downstream at WWC 1 from N35.725067°, W84.366394°.



Photo 6: Looking north from N35.724894°, W84.367150° showing the location that WWC 1 flows into the drainage ditch along Carding Machine Road.



Photo 7: Looking west from N35.725014°, W84.364394° showing typical wooded area of the project area.



Photo 8: Looking east from N35.726361°, W84.361769° showing typical soybean field..



Photo 9: Typical upland soil observed. This test pit is from UPL 2.



Photo 10: Looking north from N35.723569°, W84.359589° showing typical soil bean field and rolling topography. UPL 2 is located in the low area along Maremont Parkway shown to the right of the photo.

1.10.

Appendix D: HD Field Sheet and Wetland Determination Data Forms



Hydrologic Determination Field Data Sheet

Tennessee Division of Water Resources, Version 1.5 (Fillable Form)

Named Waterbody: Unnamed Trib. to Sweetwater Creek		Date/Time: 11-14-22 @ 09:30
Assessors/Affiliation: A. Sanders QHP-IT / G&M		Project ID : 1384-07
Site Name/Description: Loudon Site		
Site Location: Loudon, Loudon County, TN		
HUC (12 digit): 060102010301 - Sweetwater Creek	Latitude: Begin: 35.727075° / End: 35.724979°	
Previous Rainfall (7-days) : 1.18"	Longitude: Begin: -84.363434° / End: -84.367123°	
Precipitation this Season vs. Normal : average CoCoRaHS / NOAA ESRL PSD Source of recent & seasonal precip. data :		
Watershed Size : 0.06 sq. mi	County: Loudon County	
Soil Type(s) / Geology : Fullerton silt loam, moderately steep phase (Dewey) (FsD)	Source: USDA NRCS Web Soil Survey / USGS StreamStats	
Surrounding Land Use : Agricultural / Transportation / Residential		
Degree of historical alteration to natural channel morphology & hydrology (select one & describe fully in Notes) : Slight		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	<input checked="" type="checkbox"/>	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	<input checked="" type="checkbox"/>	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	<input type="checkbox"/>	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	<input checked="" type="checkbox"/>	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	<input checked="" type="checkbox"/>	Stream
6. Presence of fish (except <i>Gambusia</i>)	<input checked="" type="checkbox"/>	Stream
7. Presence of naturally occurring ground water table connection	<input checked="" type="checkbox"/>	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	<input checked="" type="checkbox"/>	Stream
9. Evidence watercourse has been used as a supply of drinking water	<input checked="" type="checkbox"/>	Stream

NOTE: If any Primary Indicators 1-9 = "Yes", then no further investigation is necessary. However, assessors may choose to score secondary indicators as supporting evidence.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-DWR Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WET WEATHER CONVEYANCE

Secondary Indicator Score (if applicable) = 15.00

Justification / Notes :

The channel occurs within a valley and features a moderate gradient (~4%) along its approximately 1,630 l.f. reach. The channel features a defined bed and bank throughout most of the reach, however, the channel loses definition at some areas along the channel reach. Substrate within the channel consisted of coarse material (gravel/small cobble) and sediment. At the time of the determination, no surface water was present within the channel despite 1.18" on rainfall occurring with 7 days, with 0.94" occurring within 48 hrs of the determination. The channel bed and banks were covered with leaf litter throughout much of the reach. No benthic or aquatic organisms were observed. Some erosional features were present (grade controls). The channel is determined to be a WWC based on features and characteristics that are typical of moderate to high gradient channels, where the geomorphology score comprises 76% of the secondary indicator score.

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 11.50)					
	Absent	Weak	Moderate	Strong	
1. Continuous bed and bank	0	1	2	3	2
2. Sinuous channel	0	1	2	3	1
3. In-channel structure: riffle-pool sequences	0	1	2	3	1.5
4. Sorting of soil textures or other substrate	0	1	2	3	1.5
5. Active/relic floodplain	0	0.5	1	1.5	0.5
6. Depositional bars or benches	0	1	2	3	0.5
7. Braided channel	0	1	2	3	0
8. Recent alluvial deposits	0	0.5	1	1.5	1
9. Natural levees	0	1	2	3	0
10. Headcuts	0	1	2	3	1
11. Grade controls	0	0.5	1	1.5	1
12. Natural valley or drainageway	0	0.5	1	1.5	1.5
13. At least second order channel on existing USGS or NRCS map	0	1	2	3	0

B. Hydrology (Subtotal = 0.50)					
	Absent	Weak	Moderate	Strong	
14. Subsurface flow/discharge into channel	0	1	2	3	0
15. Water in channel and >48 hours since sig. rain	0	1	2	3	0
16. Leaf litter in channel (January – September)	1.5	1	0.5	0	0
17. Sediment on plants or on debris	0	0.5	1	1.5	0
18. Organic debris lines or piles (wrack lines)	0	0.5	1	1.5	0.5
19. Hydric soils in channel bed or sides of channel	No = 0		Yes = 1.5		0

N/A

C. Biology (Subtotal = 3.00)					
	Absent	Weak	Moderate	Strong	
20. Fibrous roots in channel bed ¹	3	2	1	0	1.5
21. Rooted plants in the thalweg ¹	3	2	1	0	1.5
22. Crayfish in stream (exclude in floodplain)	0	1	2	3	0
23. Bivalves/mussels	0	1	2	3	0
24. Amphibians	0	0.5	1	1.5	0
25. Macroinvertebrates (record type & abundance)	0	1	2	3	0
26. Filamentous algae; periphyton	0	1	2	3	0
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5	0
28. Wetland plants in channel bed ²	0	0.5	1	1.5	0

¹ Focus is on the presence of terrestrial plants.

² Focus is on the presence of aquatic or wetland plants.

Total Points = 15.00

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :

defined bed and bank along most of channel reach - some areas with less definition (power line easement)
channel dry at time of determination
no benthic/aquatic organisms
channel bed and bank covered with leaf litter (>90%)
coarse material in channel bottom (gravel/small cobble) along with sediment
some grade controls (tree roots) along reach - debris piles
1.18" of rainfall in 7 days - 0.94" in 48 hrs
0.06 sq mi drainage basin - basin likely modified from residential development to north of channel
1.112 sinuosity - power line easement traverses through segment of channel at lower extent of reach

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Walking Horse City/County: Loudon / Loudon County Sampling Date: 11/14/22
 Applicant/Owner: BBJ Group, LLC. State: TN Sampling Point: UPL 1
 Investigator(s): C. Maloney / A. Sanders Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Open Field Local relief (concave, convex, none): None Slope (%): <5%
 Subregion (LRR or MLRA): N/128 Lat: 35.726718 Long: -84.360034 Datum: _____
 Soil Map Unit Name: Emory silt loam (Em) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No (If no, explain in Remarks.)
 Are Vegetation , Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Sample plot conducted in open field area that has been utilized for agricultural purposes (soybean production).	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1) ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4) ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL 1

<p>Tree Stratum (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;"></th> <th style="width:35%; text-align: center;">Absolute % Cover</th> <th style="width:15%; text-align: center;">Dominant Species?</th> <th style="width:15%; text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table> <p>Sapling Stratum (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table> <p>Shrub Stratum (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table> <p>Herb Stratum (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;"></th> <th style="width:35%; text-align: center;">Absolute % Cover</th> <th style="width:15%; text-align: center;">Dominant Species?</th> <th style="width:15%; text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Vicia sativa</u></td><td style="text-align: center;">5</td><td style="text-align: center;">N</td><td style="text-align: center;">FACU</td></tr> <tr><td>2. <u>Trifolium subterraneum</u></td><td style="text-align: center;">5</td><td style="text-align: center;">N</td><td style="text-align: center;">FACU</td></tr> <tr><td>3. <u>Geranium carolinium</u></td><td style="text-align: center;">2</td><td style="text-align: center;">N</td><td style="text-align: center;">NI</td></tr> <tr><td>4. <u>Lamium purpureum</u></td><td style="text-align: center;">2</td><td style="text-align: center;">N</td><td style="text-align: center;">NI</td></tr> <tr><td>5. <u>Alium vinieale</u></td><td style="text-align: center;">2</td><td style="text-align: center;">N</td><td style="text-align: center;">FACU</td></tr> <tr><td>6. <u>Glycine max</u></td><td style="text-align: center;">84</td><td style="text-align: center;">Y</td><td style="text-align: center;">NI</td></tr> <tr><td>7.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>8.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>9.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>10.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>11.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: <u>50</u> 20% of total cover: <u>20</u></td></tr> </tbody> </table> <p>Woody Vine Stratum (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table>		Absolute % Cover	Dominant Species?	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(7.6 cm) or larger in diameter at breast height (DBH).</p> <p>Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.</p> <p>Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.</p> <p>Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.</p> <p>Woody vine – All woody vines, regardless of height.</p> <p>Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/></p>
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<p>Remarks: (Include photo numbers here or on a separate sheet.)</p> <p>Open field area planted with soy beans.</p>																																																																																																																																																																																									

SOIL

Sampling Point: UPL 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	7.5YR 3/3	100					SCL	
6-8"	7.5YR 3/4	100					SC	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)	<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)		
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)		
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Walking Horse City/County: Loudon / Loudon County Sampling Date: 11/14/22
 Applicant/Owner: BBJ Group, LLC. State: TN Sampling Point: UPL 2
 Investigator(s): C. Maloney / A. Sanders Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Open Field Local relief (concave, convex, none): None Slope (%): <5%
 Subregion (LRR or MLRA): N/128 Lat: 35.724696 Long: -84.357786 Datum: _____
 Soil Map Unit Name: Emory silt loam (Em) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No (If no, explain in Remarks.)
 Are Vegetation , Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Sample plot conducted in open field area that has been utilized for agricultural purposes (soybean production).	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1) ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4) ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL 2

<p>Tree Stratum (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;"></th> <th style="width:35%; text-align: center;">Absolute % Cover</th> <th style="width:20%; text-align: center;">Dominant Species?</th> <th style="width:20%; text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table> <p>Sapling Stratum (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table> <p>Shrub Stratum (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table> <p>Herb Stratum (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td><u>Cirsium vulgare</u></td><td style="text-align: center;">5</td><td style="text-align: center;">N</td><td style="text-align: center;">FACU</td></tr> <tr><td>2.</td><td><u>Vicia sativa</u></td><td style="text-align: center;">5</td><td style="text-align: center;">N</td><td style="text-align: center;">FACU</td></tr> <tr><td>3.</td><td><u>Geranium carolinium</u></td><td style="text-align: center;">10</td><td style="text-align: center;">N</td><td style="text-align: center;">NI</td></tr> <tr><td>4.</td><td><u>Schedonorus arundinaceus</u></td><td style="text-align: center;">60</td><td style="text-align: center;">Y</td><td style="text-align: center;">FACU</td></tr> <tr><td>5.</td><td><u>Glycine max</u></td><td style="text-align: center;">20</td><td style="text-align: center;">N</td><td style="text-align: center;">NI</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>7.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>8.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>9.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>10.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>11.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: <u>50</u> 20% of total cover: <u>20</u></td></tr> </tbody> </table> <p>Woody Vine Stratum (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table>		Absolute % Cover	Dominant Species?	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(7.6 cm) or larger in diameter at breast height (DBH).</p> <p>Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.</p> <p>Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.</p> <p>Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.</p> <p>Woody vine – All woody vines, regardless of height.</p> <hr/> <p>Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/></p>
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<p>Remarks: (Include photo numbers here or on a separate sheet.)</p> <p>Low area within soybean field that receives drainage from surrounding upgradient areas.</p>																																																																																																																																																																																																

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Walking Horse City/County: Loudon / Loudon County Sampling Date: 11/14/22
 Applicant/Owner: BBJ Group, LLC. State: TN Sampling Point: UPL 3
 Investigator(s): C. Maloney / A. Sanders Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Open Field Local relief (concave, convex, none): None Slope (%): <5%
 Subregion (LRR or MLRA): N/128 Lat: 35.723662 Long: -84.360836 Datum: _____
 Soil Map Unit Name: Emory silt loam (Em) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No (If no, explain in Remarks.)
 Are Vegetation , Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Sample plot conducted in open field area that has been utilized for agricultural purposes (soybean production).	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1) ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4) ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL 3

<p><u>Tree Stratum</u> (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;"></th> <th style="width:35%; text-align: center;">Absolute % Cover</th> <th style="width:20%; text-align: center;">Dominant Species?</th> <th style="width:20%; text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table> <p><u>Sapling Stratum</u> (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table> <p><u>Shrub Stratum</u> (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table> <p><u>Herb Stratum</u> (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td><u>Trifolium subterraneum</u></td><td style="text-align: center;">10</td><td style="text-align: center;">N</td><td style="text-align: center;">FACU</td></tr> <tr><td>2.</td><td><u>Vicia sativa</u></td><td style="text-align: center;">20</td><td style="text-align: center;">N</td><td style="text-align: center;">FACU</td></tr> <tr><td>3.</td><td><u>Geranium carolinium</u></td><td style="text-align: center;">10</td><td style="text-align: center;">N</td><td style="text-align: center;">NI</td></tr> <tr><td>4.</td><td><u>Schedonorus arundinaceus</u></td><td style="text-align: center;">30</td><td style="text-align: center;">Y</td><td style="text-align: center;">FACU</td></tr> <tr><td>5.</td><td><u>Glycine max</u></td><td style="text-align: center;">30</td><td style="text-align: center;">N</td><td style="text-align: center;">NI</td></tr> <tr><td>6.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>7.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>8.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>9.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>10.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>11.</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: <u>50</u> 20% of total cover: <u>20</u></td></tr> </tbody> </table> <p><u>Woody Vine Stratum</u> (Plot size: _____)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5.</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> <tr><td colspan="4" style="text-align: center;">50% of total cover: _____ 20% of total cover: _____</td></tr> </tbody> </table>		Absolute % Cover	Dominant Species?	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(7.6 cm) or larger in diameter at breast height (DBH).</p> <p>Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.</p> <p>Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.</p> <p>Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.</p> <p>Woody vine – All woody vines, regardless of height.</p> <p>Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/></p>
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<p>Remarks: (Include photo numbers here or on a separate sheet.)</p> <p>Low area within soybean field that receives drainage from surrounding upgradient areas.</p>																																																																																																																																																																																																

1.11.

Appendix E: Weather Conditions Calculation Sheet

Normal Weather Conditions Calculations Table

Long-term rainfall records										
	Month	Standard Deviation	Minus One Std. Dev. (DRY)	Normal (Mean inches)	Plus One Std. Dev. (WET)	Actual Rainfall	Condition (elevated, low, average)	Condition value	Month weight value	Product of previous two columns
1 st prior month*	October	1.41	0.99	2.40	3.81	1.62	Average	2	3	6
2 nd prior month*	September	1.75	1.05	2.80	4.55	2.51	Average	2	2	4
3 rd prior month*	August	1.51	1.39	2.90	4.41	3.2	Average	2	1	2
									Sum =	12

Note:

If sum is:	
6-9	then prior period has been abnormally dry
10-14	then prior period has been normal (average)
15-18	Then prior period has been abnormally wet

Condition value:	
Low =	1
Average =	2
Elevated =	3

Notes: Field visit - 11/14/22

1.18 of rainfall recorded in previous 7 days - 0.94" within 72hrs

CoCoRaHS - TN-LN-11

NOAA ESRL PSD - Knoxville AP

Conclusion: Normal weather conditions present.






1.12. Appendix F: Reference Maps

USFWS NWI Map



November 29, 2022

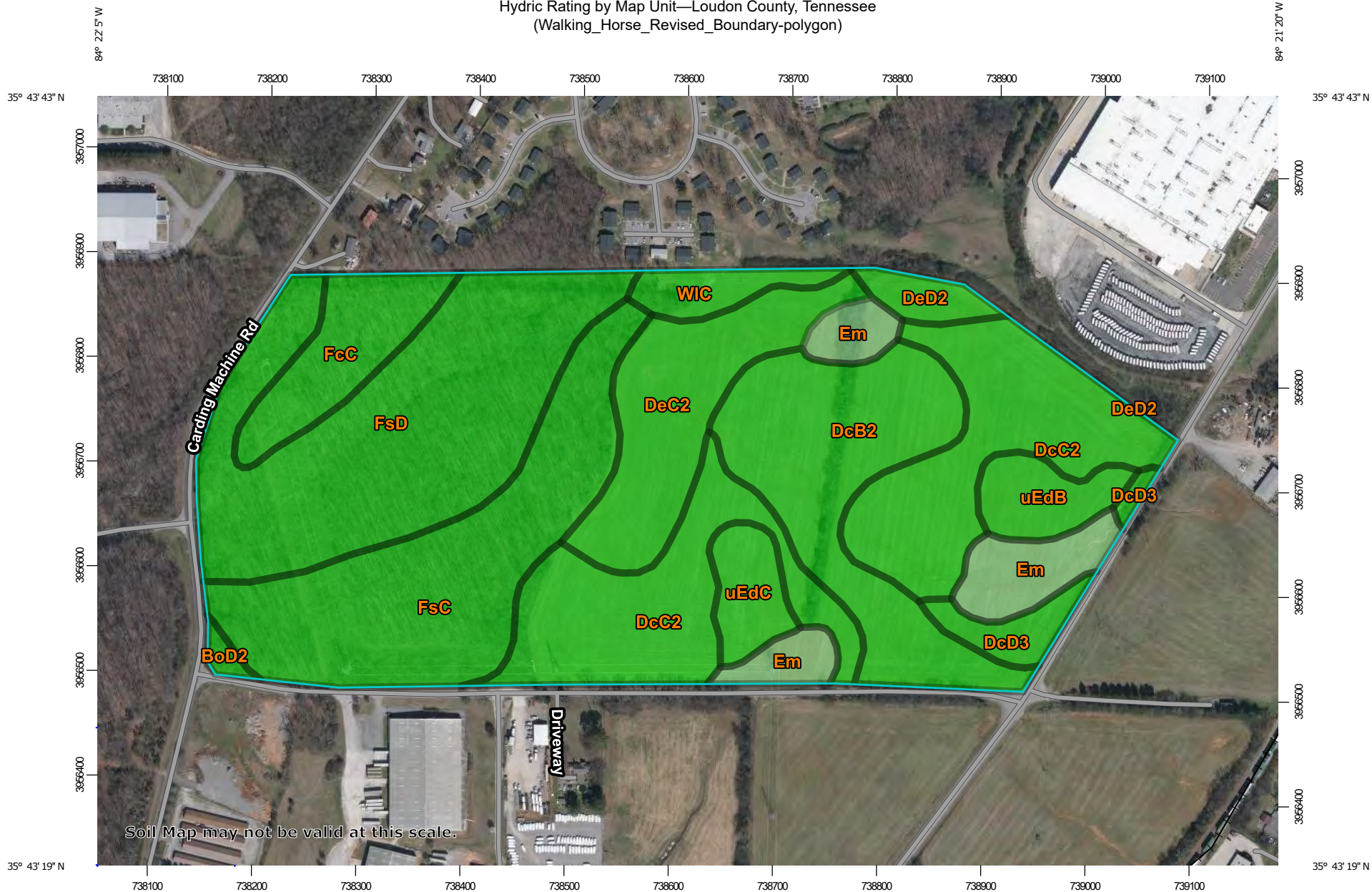
Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
| | |  | Freshwater Pond |  | Riverine |

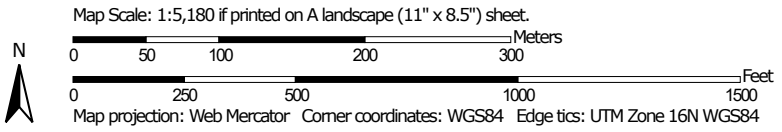
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

USDA NRCS Soil Maps

Hydric Rating by Map Unit—Loudon County, Tennessee
(Walking_Horse_Revised_Boundary-polygon)




Soil Map may not be valid at this scale.









MAP LEGEND

Area of Interest (AOI)







 Area of Interest (AOI)

Soils







Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available






Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Loudon County, Tennessee
Survey Area Data: Version 19, Sep 15, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 7, 2020—Mar 26, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BoD2	Bolton silt loam, eroded moderately steep phase	0	0.3	0.4%
DcB2	Decatur silty clay loam, eroded gently sloping phase	0	10.5	12.9%
DcC2	Decatur silty clay loam, 5 to 12 percent slopes, eroded	0	17.0	20.8%
DcD3	Decatur silty clay loam, 12 to 20 percent slopes, severely eroded	0	1.7	2.0%
DeC2	Dewey silty clay loam, 6 to 15 percent slopes, eroded	0	7.0	8.6%
DeD2	Dewey silty clay loam, 15 to 25 percent slopes, eroded	0	1.1	1.4%
Em	Emory silt loam, 0 to 4 percent slopes, occasionally flooded	1	4.4	5.5%
FcC	Fullerton gravelly silt loam, 5 to 12 percent slopes	0	3.9	4.8%
FsC	Fullerton silt loam, sloping phase (Dewey)	0	13.0	16.0%
FsD	Fullerton silt loam, moderately steep phase (Dewey)	0	16.8	20.6%
uEdB	Etowah-Dewey complex, 2 to 6 percent slopes	0	2.2	2.7%
uEdC	Etowah-Dewey complex, 6 to 12 percent slopes	0	2.0	2.4%
WIC	Waynesboro loam, 6 to 15 percent slopes	0	1.6	1.9%
Totals for Area of Interest			81.5	100.0%

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

USGS 3DEP Hillshade Map



APPENDIX B
CONCURRENCE DOCUMENTATION



**STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
KNOXVILLE ENVIRONMENTAL FIELD OFFICE**

1371 Middlebrook Pike
KNOXVILLE, TENNESSEE
37912

PHONE (865) 594-6035

STATEWIDE 1-888-891-8332

FAX (865) 594-6105

January 20, 2023

Mr. Conor Maloney,
Griggs & Maloney, Inc
e-copy: CMaloney@griggsandmaloney.com
745 S. Church Street, Suite 205
Murfreesboro, TN 30130

Re: Hydrologic Determination of Water Resources (DWR ID No. 31943)
Walking Horse Project
Sweetwater Creek watershed, Loudon County, TN

Mr. Maloney:

The Tennessee Department of Environment and Conservation, Division of Water Resources (TDEC-DWR) has reviewed the following report "*Jurisdictional Waters Determination Report*" for the proposed Walking Horse Project Area in Loudon County. This report was prepared by Griggs & Maloney, Inc., and submitted on your behalf to our office on January 12, 2023, in support of jurisdictional hydrologic determinations of a water feature associated with the above referenced site. This water feature is found on property located at 35.725351 / - 84.362527 (Lat/Long), at Roberson Spring Road in Loudon, Loudon County, Tennessee. Please note that all geographic coordinates provided in this letter have a limited precision and should be considered approximate. As part of our review, Division staff Josh Frazier on January 19, 2023.

Based on the information and documentation submitted in the report, our observations on-site, and the Division's rules and guidance regarding hydrologic determinations, the Division accepts the jurisdictional determination of the assessed water features as documented in the submitted report and portrayed on *Figure 1.8. – Appendix B: Aquatic Features Table*. These findings as presented in the report and accompanying information are summarized and displayed in the table below.

**Hydrologic Determination of Assessed Water Features
Proposed Walking Horse Solar Farm Project, Loudon County**

Feature	Determination	Begin	End
WWC - 1	Wet Weather Conveyance	35.727075, -84.36434 (origin/property boundary)	35.724979, -84.36712 (property boundary)

It is important to note that the Division’s evaluation and concurrence is restricted to only the water features identified within the submitted report and as depicted on the attached map. Only the water features listed above were assessed as part of this hydrologic determination, therefore this correspondence is not intended to represent a comprehensive water resource inventory of the entire site. It is the property owner’s responsibility to consider and report any additional water features within the property boundaries that may be affected by any construction activities associated with future development.

Any alterations to jurisdictional streams, wetlands, or open water features may only be performed under the coverage of, and conformance to, a valid *Aquatic Resource Alteration Permit (ARAP)* issued by the Division. ARAP applications and provisions are available on-line at <https://www.tn.gov/environment/permit-permits/water-permits/aquatic-resource-alteration-permit--arap.html>.

Alterations to Wet Weather Conveyances typically may be performed without application or notification to the Division, provided they conform to the provisions found under *Tennessee Code Annotated § 69-3-108 (q)*.

Please note that coverage under the *General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)* will be needed if the proposed land disturbance activity for this project is one acre or more in size. Information and applications regarding the Division’s construction storm water program can be found [online](#). A completed Notice of Intent form, an application fee, and a storm water pollution prevention plan should be submitted to the above address for review and coverage under this permit prior to any land disturbance.

Discharges and alterations to sinkholes may require the submittal of an application and written authorization under the provisions of TDEC Rules. Information and applications regarding the Underground Injection Control program may be seen online at <https://www.tn.gov/environment/permit-permits/water-permits/underground-injection-control-permit.html>. Physical alterations or re-routing of surface hydrology to a sinkhole may require coverage under the *Class V Injection Control Permit*.

Hydrologic determinations are advised and governed by Tennessee Department of Environment and Conservation (TDEC) rules and regulations, and therefore only apply to the State’s permitting process. Because these and other various water features on-site may potentially also be considered jurisdictional Waters of the United States, any alterations to them should only be performed after consultation with the U.S. Army Corps of Engineers.

We appreciate the opportunity to assess the jurisdictional status of these water features prior to site plan finalization and initiation of construction activities. Because natural variation and human activities can alter hydrologic conditions, the Division reserves the right to reassess the status of the water features in the future.

Thank you for your interest in water quality in Tennessee. Please contact Josh Frazier at 865-364-9500 or by email at Joshua.Frazier@tn.gov if you have any questions.

Respectfully,

A handwritten signature in cursive script that reads "Michael Atchley".

Mr. Michael Atchley,
Manager, Knoxville Environmental Field Office
TDEC Division of Water Resources

Enclosures: *Attachment 1 – Hydrologic Field Data Sheet*

Cc: File copy
Mr. Mark Quarles, P.G., Senior Consultant, Branch Manager, BBJ Group, mquarles@bbjgroup.com
USACE Nashville: NashvilleRegulatory@usace.army.mil



Hydrologic Determination Field Data Sheet

Tennessee Division of Water Resources, Version 1.5 (Fillable Form)

Named Waterbody: Unnamed Trib. to Sweetwater Creek		Date/Time: 1/19/23 - 1005
Assessors/Affiliation: Josh Frazier, TDEC/DWR		Project ID : Griggs & Maloney 1384-07
Site Name/Description: Walking Horse Project		
Site Location: Loudon		
HUC (12 digit): 060102010301 - Sweetwater Creek	Latitude: 35.727075 (start) 35.724979 (end)	
Previous Rainfall (7-days) : Approx 1.5" - AHPS Analysis	Longitude: -84.363434 (start) -84.367123 (end)	
Precipitation this Season vs. Normal : average <input type="button" value="v"/> Source of recent & seasonal precip. data :		
Watershed Size : Approx 0.10 squar mile	County: Loudon County	
Soil Type(s) / Geology : Fullerton silt loam, moderately steep phase (Dewey) (FsD)	Source: NRCS Web Soil Survey	
Surrounding Land Use : Agricultural/Transportation/Residentjial		
Degree of historical alteration to natural channel morphology & hydrology (select one & describe fully in Notes) : Slight <input type="button" value="v"/>		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	<input checked="" type="checkbox"/>	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	<input checked="" type="checkbox"/>	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	N/A <input checked="" type="checkbox"/>	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	<input checked="" type="checkbox"/>	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	<input checked="" type="checkbox"/>	Stream
6. Presence of fish (except <i>Gambusia</i>)	<input checked="" type="checkbox"/>	Stream
7. Presence of naturally occurring ground water table connection	<input checked="" type="checkbox"/>	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	<input checked="" type="checkbox"/>	Stream
9. Evidence watercourse has been used as a supply of drinking water	<input checked="" type="checkbox"/>	Stream

NOTE: If any Primary Indicators 1-9 = "Yes", then no further investigation is necessary. However, assessors may choose to score secondary indicators as supporting evidence.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

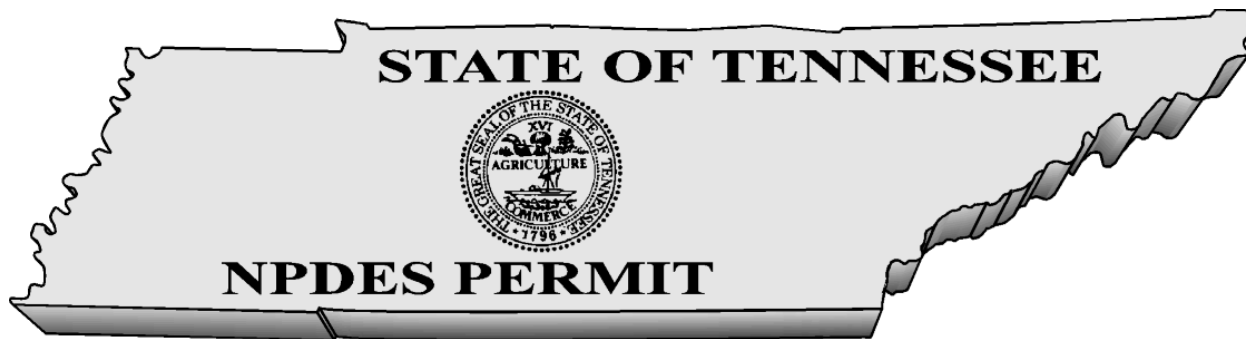
Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-DWR Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WET WEATHER CONVEYANCE <input type="button" value="v"/> Secondary Indicator Score (if applicable) = 14.75

Justification / Notes :

- Rained the morning off assessment. BBJ Group pushed concurrence investigation.
- weak sinuosity throughout feature.
- feature displayed prominent bed and bank throughout majority of reach.
- weak/moderate substrate sorting, mostly gravel/small cobble

Appendix D – SWPPP



Tracking Number TNR137393

NOTICE OF COVERAGE UNDER THE GENERAL NPDES PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (CGP)

Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.):

Name of the Construction Project: **Walking Horse Solar Farm (49.81 acres)**
Master Tracking Number at the Site: **TNR137393**
Permittee Name: **Inman Solar, Incorporated**
Project Name: **Walking Horse Solar Farm**
Contractor(s): **no contractor**
is authorized to discharge: storm water associated with construction activity
from site located at: **1260 Roberson Spring Rd, Loudon County**
to receiving waters named: **Wet weather conveyance to Sweetwater Creek**
in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

Likely presence of threatened or endangered species in one mile radius: **NO**
Likely presence of threatened or endangered species downstream: **NO**

Additional pollution prevention requirements apply for discharges into waters which TDEC identifies as:
- Unavailable Condition - Siltation
- Exceptional Tennessee Waters: NO

Your coverage under the CGP shall become effective on **December 14, 2023**, and shall be terminated upon receipt of [Notice of Termination](#).

A copy of the CGP can be obtained from <https://www.tn.gov/content/tn/environment/permit-permits/water-permits1/npdes-permits1/npdes-stormwater-permitting-program/npdes-stormwater-construction-permit.html>



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, TN 37921
Phone 865-594-6035 Statewide 1-888-891-8332 Fax 865-594-6105

December 14, 2023

Mr. Nick Stein, CM
Inman Solar Incorporated
e-copy: nick@inmansolar.com
320 N. Highland Ave NE
Atlanta, GA 30315

Subject: **NPDES Construction General Permit Tracking No. TNR137393**
Master Tracking Number: TNR137393
Walking Horse Solar Farm
Inman Solar, Incorporated
Loudon, Loudon County, Tennessee

Dear Mr. Stein:

You recently submitted a Notice of Intent (NOI) form as part of an application package to obtain coverage under a General NPDES Permit for Storm Water Discharges Associated with Construction Activity. The Division of Water Resources (the division) acknowledges receipt of the most recent version of the application for the above referenced project on November 29, 2023. After review, the application was deemed to be complete on December 14, 2023. Enclosed is the Notice of Coverage (NOC) form which shows the site name and location, receiving stream, effective date of coverage, etc.

Contractor Information

You have not identified a contractor on the NOI. You must identify a primary contractor, or contractor otherwise responsible for sediment and erosion controls on the construction site, if appropriate, and submit a revised NOI to this office prior to beginning earth clearing operations onsite. When submitting the NOI, please include the above referenced permit tracking number.

Storm Water Pollution Prevention Plan (SWPPP)

You have submitted a Storm Water Pollution Prevention Plan (SWPPP) as required by Section 1.4.2 of the CGP. Please note that the division has not performed an engineering review of the SWPPP and does not certify whether the SWPPP adequately provides for the pollution prevention requirements at the site as described in the general permit. The division acknowledges that you have submitted a SWPPP that appears to include the required components of a SWPPP. It is the responsibility of all site operators to design, implement, and maintain measures that are sufficient to prevent pollution at the referenced site, and to remain in compliance with the terms and conditions of the general permit.

Receiving Stream not Supporting Designated Uses

The receiving stream for the construction site for which the NOI was submitted appears on the state's list for partially supporting or for not supporting a stream's designated use due to siltation. Since the discharge

from the proposed construction site may contain significant amounts of silt, the division considers the potential for degradation to the receiving stream from the discharge to be significant. Therefore, the additional pollution prevention requirements described in Subpart 6.4 of the General Permit are applicable to your construction site; requirements of Section 6.4.2. apply only if the stream is located on or adjacent to the disturbed area.

Site Assessment

Per Subsection 5.5.3.8 of the permit, a quality assurance of erosion prevention and sediment controls (EPSCs) shall be done by performing site assessments by a qualified individual. Site assessment shall be conducted at each outfall draining 10 or more acres (Subsection 5.5.3.5) or 5 or more acres if draining to waters with unavailable parameters or Exceptional Tennessee Waters (Section 6.4.1). Site assessments must cover the entire disturbed area and occur within 30 days of construction commencing at each portion of the site that drains the qualifying acreage. At a minimum, site assessments should be performed to verify the installation, functionality and performance of the EPSC measures described in the SWPPP. If structural BMPs (or equivalent EPSC measures) are not constructed or construction is in progress at the time of the site assessment, a follow-up monthly assessment(s) is required until the BMPs are constructed per the SWPPP.

Annual Maintenance Fee and Termination of Permit Coverage

Effective July 1, 2014, permit fees for the General Permit have been revised. In addition to new application fee amounts, annual maintenance fees are now required for projects that exceed one year of coverage. Permittees wishing to terminate coverage must submit a completed notice of termination (NOT) form, which is available on the division's construction stormwater webpage at <https://www.tn.gov/content/tn/environment/permit-permits/water-permits1/npdes-permits1/npdes-stormwater-permitting-program/npdes-stormwater-construction-permit.html>.

The division will review the NOT for completeness and accuracy and, when necessary, investigate the site for which the NOT was submitted. The division will notify the applicant that either the NOT form was received and accepted, or that the permit coverage is not eligible for termination and has not been terminated. If applicable, the notification will include a summary of existing deficiencies.

We appreciate your attention to the general construction storm water permit and its requirements. A copy of the CGP can be obtained from <https://www.tn.gov/content/tn/environment/permit-permits/water-permits1/npdes-permits1/npdes-stormwater-permitting-program/npdes-stormwater-construction-permit.html>. We believe this does make a difference to the quality of state waters. If you have any questions, please contact Mr. Joshua Frazier at (865) 364-9500 or by e-mail at Joshua.Frazier@tn.gov.

Sincerely,



Michael Atchley
Environmental Program Manager

cc: DWR, Knoxville EFO Permit File
Mr. Chad Hofstadter, Civil Engineer, Hofstadter and Associates, chad@hofstadter.com

SWPPP INDEX OF SHEETS

DESCRIPTION	SHT.
1. SWPPP REQUIREMENTS (5.0.)	1
2. SITE DESCRIPTION (5.5.1.)	1
3. ORDER OF CONSTRUCTION ACTIVITIES (5.5.1.a)	1
4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION	1
5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (5.5.3.)	2
6. MAINTENANCE AND INSPECTION	3
7. SITE ASSESSMENTS (5.5.3.8.)	3
8. STORMWATER MANAGEMENT (5.5.3.11.h)	4
9. NON-STORMWATER DISCHARGES (5.5.3.12.)	4
10. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (5.5.3.7.c, 6.1)	4
11. RECORD-KEEPING	5
12. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (8.7.5.)	6
13. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (8.7.6.)	6

NOTE: CITATIONS IN PARENTHESIS INDICATE SECTIONS OF THE CURRENT CGP.

1. **SWPPP REQUIREMENTS** (5.0.)
 - 1.1. HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING LICENSING AND/OR CERTIFICATIONS (5.2)?
 - YES (CHECK ALL THAT APPLY BELOW) OR NO
 - CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
 - A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
 - HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE
 - 1.2. DO THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (E.G. SEDIMENT BASINS) (5.2)? YES NO
 - IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT? YES NO
 - 1.3. DO THE PROJECT STORMWATER OUTFALLS DISCHARGE INTO THE FOLLOWING (6.4.1.)? YES (CHECK ALL THAT APPLY BELOW) NO
 - WATERS WITH UNAVAILABLE PARAMETERS (303d FOR SILTATION)
 - EXCEPTIONAL TENNESSEE WATERS (ETW)
2. **SITE DESCRIPTION** (5.5.1.)
 - 2.1. PROJECT LIMITS (5.5.1.f): REFER TO TITLE SHEET
 - 2.2. TOTAL PROJECT AREA (5.5.1.b): 81.16 ACRES
 - 2.3. TOTAL AREA TO BE DISTURBED (5.5.1.b): 49.81 ACRES
 - 2.4. PROJECT DESCRIPTION (5.5.1.a):
 - TITLE:
 - COUNTY:
 - 2.5. SITE MAP(S) (3.2.2.): REFER TO TITLE SHEET
 - 2.6. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (5.5.1.c): REFER TO EXISTING CONTOURS SHEET(S) EC3.1, SITE LOCATION MAP, AND THE OUTFALL TABLE IN SECTION 4.2.
 - 2.7. IF THE PROJECT WILL EXCEED 50 ACRES OF DISTURBANCE AT ANY POINT DURING THE LIFESPAN OF THE PROJECT THE FOLLOWING CONDITIONS MUST BE MET (5.5.3.3)
 - 2.7.1. TDEC SHALL BE NOTIFIED. (5.5.3.3.a)
 - 2.7.2. A GEOSPATIAL FILE IDENTIFYING THE PROJECT AREAS BOUNDARIES SHALL BE SUBMITTED TO TDEC. (5.5.3.3.e)
 - 2.7.3. A MONITORING PLAN SHALL BE PREPARED FOR OUTFALLS DRAINING 10 OR MORE ACRES, OR 5 ACRES IF DRAINING TO WATERS WITH UNAVAILABLE PARAMETERS (303d SILTATION) OR AN ETW. (5.5.3.3.f)
 - 2.7.4. SITE ASSESSMENTS SHALL BE CONDUCTED ON A QUARTERLY BASIS (5.5.3.3.b AND 5.5.3.8).
 - 2.7.5. INSPECTIONS SHALL BE CONDUCTED TWICE PER WEEK AND FOLLOWING ANY RAINFALL EVENT OF MORE THAN 0.5 INCHES IN 24 HOURS (5.5.3.3.c AND 5.5.3.9).

2.8. MAJOR SOIL DISTURBING ACTIVITIES (5.5.1.a) (CHECK ALL THAT APPLY):

- CLEARING AND GRUBBING
- EXCAVATION
- CUTTING AND FILLING
- FINAL GRADING AND SHAPING
- UTILITIES
- OTHER (DESCRIBE): _____

2.9. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? YES NO
IF YES, LIST THE CORRESPONDING PLAN SHEET: _____

2.10. SOIL PROPERTIES (5.5.1.d, 5.5.3.3.d, 5.5.3.6.b).
SOIL PROPERTIES FOR THE PRIMARY SOILS ARE LISTED IN THE TABLE BELOW.

SOIL PROPERTIES			
PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
FsC	B	10.2	.37
DcB2	B	8.5	.32
DcC2	B	15.5	.32
DeC2	B	9.6	.28
Em	B	6.3	.37

2.11. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (5.5.3.6.a).

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	SEE	HYDRO		
PERVIOUS				
WEIGHTED CURVE NUMBER OR C-FACTOR =				

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	SEE	HYDRO		
PERVIOUS				
WEIGHTED CURVE NUMBER OR C-FACTOR =				

3. **ORDER OF CONSTRUCTION ACTIVITIES** (5.5.1.a)

CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO: MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION. NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE ORDER OF CONSTRUCTION ACTIVITIES AND THE BASIC EPSC DEVICES DEPICTED ON THE EPSC PLAN CONTAINED WITHIN THE APPROVED SWPPP.

- 3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS _____)
- 3.2. INSTALL STABILIZED CONSTRUCTION EXITS.
- 3.3. INSTALL PERIMETER PROTECTION WHERE RUNOFF SHEET FLOWS FROM THE SITE.

- 3.4. INSTALL INITIAL EPSC MEASURES BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CULVERT OR BRIDGE CONSTRUCTION, CUTTING, FILLING, OR ANY OTHER EARTHWORK OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.
- 3.5. PERFORM CLEARING AND GRUBBING (NOT MORE THAN TWO WEEKS PRIOR TO GRADING OR EARTH-MOVING. REFER TO THE STABILIZATION PRACTICES BELOW.).
- 3.6. REMOVE AND STORE TOPSOIL.
- 3.7. STABILIZE DISTURBED AREAS WITHIN 2 WEEKS OF COMPLETING ANY STAGE AND/OR PHASE OF ACTIVITY (STEEP SLOPES SHALL BE STABILIZED WITHIN 1 WEEK AFTER CONSTRUCTION ACTIVITY HAS TEMPORARY OR PERMANENTLY CEASED).
- 3.8. INSTALL UTILITIES, STORM SEWERS, CULVERTS AND BRIDGE STRUCTURES.
- 3.9. INSTALL INLET AND CULVERT PROTECTION ONCE STRUCTURES ARE IN PLACE AND CAPABLE OF INTERCEPTING FLOW.
- 3.10. PERFORM FINAL GRADING AND INSTALL BASE STONE.
- 3.11. COMPLETE FINAL PAVING AND SEALING OF CONCRETE.
- 3.12. INSTALL TRAFFIC CONTROL AND PROTECTION DEVICES.
- 3.13. COMPLETE FINAL STABILIZATION (TOPSOIL, SEEDING, MULCH, EROSION CONTROL BLANKET, SOD, ETC.)
- 3.14. REMOVE TEMPORARY EROSION CONTROLS AND ACCUMULATED SEDIMENT FROM AREAS THAT HAVE ESTABLISHED AT LEAST 70 PERCENT UNIFORM PERMANENT VEGETATIVE COVER.
- 3.15. RE-STABILIZE AREAS DISTURBED BY REMOVAL ACTIVITIES.

4. **STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION**

- 4.1. STREAM INFORMATION (5.5.1.h, 5.5.1.i)
 - 4.1.1. WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS WITHIN THE PROJECT LIMITS? YES NO
 - IF YES, THE IMPACT(S) HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE WATER QUALITY PERMITS.
 - 4.1.2. HAVE ANY OF THE RECEIVING STATE WATERS LESS THAN OR EQUAL TO 1 FLOW MILE DOWN GRADIENT OF THE PROJECT LIMITS BEEN CLASSIFIED BY TDEC AS FOLLOWS (CHECK ALL THAT APPLY):
 - 303d WITH UNAVAILABLE PARAMETERS FOR SILTATION
 - EXCEPTIONAL TENNESSEE WATERS (ETW)
 - 4.1.3. RECEIVING WATERS OF THE STATE (5.5.1.h, 5.5.1.j, 5.5.1.k).

RECEIVING WATERS OF THE STATE INFORMATION					
STATE WATER LABEL	NAME OF RECEIVING STATE WATER	303d WITH UNAVAILABLE PARAMETERS FOR SILTATION (YES OR NO)	ETW (YES OR NO)	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)
	SWEETWATER	NO	NO	NO	YES
	STEEKEE CRE	NO	NO	NO	YES



WALKING HORSE
LOUDON COUNTY,
TENNESSEE

STORM WATER POLLUTION
PREVENTION PLAN

SHEET NO.: 1

4.1.4. RECEIVING WATERS OF THE US (NON STATE WATERS) (4.1.2). LIST ANY FEATURE THAT IS IDENTIFIED AS A WET WEATHER CONVEYANCE (TDEC) AND IDENTIFIED AS WATERS OF THE US BY THE ARMY CORPS OF ENGINEERS.

WET WEATHER CONVEYANCES THAT ARE WATERS OF THE US			
WOTUS LABEL	NAME OF RECEIVING STATE WATER	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN 15-FT OF THE PROJECT LIMITS (YES OR NO)

4.1.5. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES REQUIRED FOR WATERS OF THE STATE? (5.5.1.1, 6.4.2.)

YES NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____.
IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER.

60-FEET FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS (ETW) (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET).

A 60 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM WITH THIS DESIGNATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 60 FOOT CRITERION FOR THE WIDTH 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 30 FEET AT ANY MEASURED LOCATION. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET).

A 30 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 30 FOOT CRITERION FOR THE WIDTH 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 15 FEET AT ANY MEASURED LOCATION. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

15-FEET FOR ANY WET WEATHER CONVEYANCES IDENTIFIED AS WATERS OF THE US BY THE US ARMY CORPS OF ENGINEERS.

4.1.6. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR STATE WATERS DUE TO A TDEC ARAP? (1.5.2.)

YES NO

4.1.7. ARE THERE WATER QUALITY RIPARIAN BUFFER ZONE EXEMPTIONS? (4.1.2.1.) YES NO

IF YES, EXISTING CONDITIONS DESCRIPTION: _____

4.1.8. EVERY ATTEMPT SHOULD BE MADE FOR CONSTRUCTION ACTIVITIES TO NOT TAKE PLACE WITHIN THE WATER QUALITY RIPARIAN BUFFER ZONE AND FOR EXISTING FORESTED AREAS TO BE PRESERVED. (4.1.2., 6.4.2.)

4.1.9. BECAUSE OF HEAVY SEDIMENT LOAD ASSOCIATED WITH CONSTRUCTION SITE RUNOFF, WATER QUALITY RIPARIAN BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND

SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE WATER QUALITY RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA.

4.1.10. WHERE IT IS NOT PRACTICABLE TO MAINTAIN A FULL WATER QUALITY RIPARIAN BUFFER, BEST MANAGEMENT PRACTICES (BMPs) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MUST BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CGP. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

4.2. OUTFALL INFORMATION

4.2.1. OUTFALL TABLE (5.5.1.c). SEE SWPPP SHEET S-_____ FOR OUTFALL INFORMATION.

4.2.2. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (5.5.1.f)? YES NO

4.2.3. HAVE ALL OUTFALLS BEEN LABELED ON A USGS TOPOGRAPHIC MAP INCLUDED IN THE "DOCUMENTATION AND PERMITS" BINDER (3.2.2.)? YES NO

4.2.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED AROUND OR THROUGH THE PROJECT TO ELIMINATE CONTACT WITH DISTURBED AREAS OF THE PROJECT AND SEPARATE IT FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA OF TO THE OUTFALLS IN THIS AREA?

YES NO N/A

4.2.5. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN(S) OR SEDIMENT TRAP(S)? (5.5.3.5.)

YES NO N/A

4.2.6. A SEDIMENT BASIN, OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS. A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. (5.5.3.5)

OR

OF FIVE ACRES OR MORE FOR AN OUTFALL(S) THAT DISCHARGES TO A STATE STREAM WITH UNAVAILABLE PARAMETERS DUE TO SILTATION OR EXCEPTIONAL TENNESSEE WATERS (ETW). A TEMPORARY (OR PERMANENT) SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/ 24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. (6.4.1.e).

4.2.7. A SEDIMENT TRAP, OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

OF 3.5 - 4.9 ACRES FOR AN OUTFALL(S) THAT DISCHARGES TO A STATE STREAM WITH UNAVAILABLE PARAMETERS (303d SILTATION) OR EXCEPTIONAL TENNESSEE WATERS (ETW). A SEDIMENT TRAP THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. (6.4.1.f).

IN BOTH INSTANCES, THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

4.2.8. SEDIMENT STRUCTURES TREATING DRAINAGE AREAS IN EXCESS OF 25 ACRES REQUIRE A SITE-SPECIFIC DESIGN THAT ACCURATELY DEFINES THE SITE HYDROLOGY, SITE-SPECIFIC SEDIMENT LOADING, HYDRAULICS OF THE SITE, AND ADHERES TO ALL TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK DESIGN RECOMMENDATIONS FOR SEDIMENT BASINS. (5.5.3.5.)

4.3. WETLAND INFORMATION

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WETLANDS? YES NO

IF YES, THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND IN THE WATER QUALITY PERMITS.

WETLAND INFORMATION		
WETLAND LABEL	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)

4.4. TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (1.3.j)

4.4.1. IS THIS PROJECT LOCATED IN A HUC-8 WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION AND HABITAT ALTERATION?

YES NO

4.4.2. IF YES, IS THIS PROJECT LOCATED WITHIN A HUC-12 SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)?

YES NO

4.4.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION?

YES NO

IF YES, SWPPP INCORPORATES MEASURES OR CONTROLS CONSISTENT WITH THE ASSUMPTIONS AND REQUIREMENTS OF THE TMDL.

5. **EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (5.5.3.)**

5.1. EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION (4.1.1).

5.2. EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS, AND STREAM BANKS. (4.1.1)

5.3. HAVE THE CONTROL MEASURES BEEN DESIGNED PER THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (5.5.3.5.)?

YES NO

5.4. THE CONTROL MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE -YEAR, 24 HOUR STORM EVENT (5.5.3.5., 6.4.1.b).

5.5. ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED ON THE EPSC PLANS (5.5.1.f)? YES NO

5.6. AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

5.7. CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION, INCLUDING STREAM AND WETLAND BUFFERS (UNLESS PERMITTED), SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

5.8. HAS A THREE STAGED EPSC PLAN BEEN PREPARED FOR THE PROJECT (5.5.2.)?

YES A THREE STAGED EPSC PLAN HAS BEEN PREPARED.

NO A SINGLE STAGED EPSC PLAN HAS BEEN PREPARED SINCE THE PROJECT DISTURBANCE IS LESS THAN 5 ACRES AND THE PROJECT CONSISTS OF A SINGLE-LOT HOME, COMMERCIAL LOT OR LINEAR INFRASTRUCTURE PROJECT.



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- 5.9. STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR GREATER REGARDLESS OF HEIGHT. HAVE STEEP SLOPES BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE (5.5.3.4.) (10. "STEEP SLOPE")? YES NO N/A
- 5.10. THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE AQUATIC RESOURCE ALTERATION (ARAP) PERMIT OR SECTION 401 CERTIFICATION (5.5.1.h). ALL PERMITS WILL BE MAINTAINED ON SITE WITHIN THE "DOCUMENTATION AND PERMITS" BINDER.
- 5.11. TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REINSTALLED AT THE END OF THE WORKDAY OR BEFORE A PRECIPITATION EVENT.
- 5.12. EPSC MEASURES LOCATED IN WOTUS (EPHEMERAL STREAMS) MUST BE CONSIDERED TEMPORARY AND SHALL BE REMOVED AT THE END OF CONSTRUCTION.
- 5.13. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED TO A LEVEL SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT. SEDIMENT THAT MIGRATES INTO WATERS OF THE STATE/US SHALL NOT BE REMOVED WITHOUT GUIDANCE AND APPROVAL FROM TDEC.
- 5.14. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION EXIT (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
- 5.15. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY APPROPRIATE CONTROLS THAT PROVIDE THE LEVEL OF TREATMENT (FILTRATION) NECESSARY TO COMPLY WITH PERMIT REQUIREMENTS. (4.1.3.).
- 5.16. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT.
- 5.17. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE, WELL- VEGETATED AND/OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. (5.5.3.5.).
- 5.18. THE DEWATERING OF WORK AREAS, TRENCHES, FOUNDATIONS, EXCAVATIONS, ETC. THAT HAVE COLLECTED STORMWATER, WATER FROM VEHICLE WASH AREAS, OR GROUNDWATER SHALL BE EITHER HELD IN SETTLING BASINS OR TREATED BY FILTRATION AND/OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.
- 5.19. WATER DISCHARGED FROM DEWATERING ACTIVITIES SHALL NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITHIN THE RECEIVING NATURAL RESOURCE. WATER MUST BE HELD WITHIN SETTLING BASINS UNTIL IT IS AT LEAST AS CLEAR AS THE RECEIVING WATERS.
- 5.20. DEWATERING STRUCTURES, SEDIMENT FILTER BAGS, SEDIMENT BASINS AND TRAPS SHALL NOT BE LOCATED CLOSER THAN 30 FEET (60 FEET DESIRABLE VEGETATIVE BUFFER) FOR WATERS WITH UNAVAILABLE PARAMETERS DUE TO SILTATION AND EXCEPTIONAL TENNESSEE WATERS (ETW) AND 15 FEET (30 FEET DESIRABLE VEGETATIVE BUFFER) FOR ALL OTHER FEATURES FROM THE TOP BANK OF A STREAM, WOTUS (EPHEMERAL), WETLAND OR OTHER NATURAL RESOURCE AND SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED.
- 5.21. STABILIZATION PRACTICES: PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 2 WEEKS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL BE

SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED (5.5.3.5.f).

- 5.22. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 2 WEEKS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE (5.5.3.4.).
- 5.23. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE
- 5.24. DELAYING THE PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.
- 5.25. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 1 WEEK AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED. (5.5.3.4.).

6. MAINTENANCE AND INSPECTION

- 6.1. INSPECTION PRACTICES (5.5.3.9.)
- 6.1.1. PROJECT EPSC INSPECTORS RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE, AND/OR REPAIR OF EPSC MEASURES SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS (5.5.3.10.):
- 6.1.1.1. SUCCESSFULLY COMPLETED THE TDEC "LEVEL I - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL" COURSE AND ANY RECERTIFICATION COURSES AS REQUIRED
- 6.1.1.2. BE A CURRENT TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT.
- 6.1.1.3. BE A CURRENT CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC).
- 6.1.1.4. SUCCESSFULLY COMPLETED TDEC "LEVEL II - DESIGN PRINCIPLES FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY RECERTIFICATION COURSE AS REQUIRED.
- 6.1.2. EPSC CONTROLS SHALL BE INSPECTED TO VERIFY MEASURES HAVE BEEN INSTALLED AND MAINTAINED IN ACCORDANCE WITH CONSTRUCTION DRAWINGS, SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES. EPSC INSPECTIONS SHALL BE DOCUMENTED ON THE TDEC CONSTRUCTION STORMWATER INSPECTION CERTIFICATION (TWICE-WEEKLY INSPECTIONS) FORM.
- 6.1.3. OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING EROSION AND CONTROLLING SEDIMENT INCLUDING SIGNIFICANT IMPACTS TO SURROUNDING STATE WATERS, WOTUS (EPHEMERAL), WETLANDS, OTHER NATURAL RESOURCES AND ADJACENT PROPERTY OWNERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWN GRADIENT LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
- 6.1.4. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS APART (5.5.3.11.a).
- 6.1.5. ON PROJECTS WHERE THE PERMITTEE CHOOSES TO DISTURB MORE THAN 50 ACRES AT ONE TIME, INSPECTIONS WILL BE CONDUCTED TWICE PER WEEK AND FOLLOWING ANY RAINFALL EVENT OF MORE THAN 0.5 INCHES IN 24 HOURS. (5.5.3.3.c)
- 6.1.6. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH WHERE SITES OR PORTIONS OF SITES HAVE BEEN TEMPORARILY STABILIZED UNTIL CONSTRUCTION ACTIVITIES RESUME WITH WRITTEN NOTIFICATION TDEC ENVIRONMENTAL FIELD OFFICE AND SUBSEQUENT TDEC APPROVAL. WRITTEN NOTIFICATION MUST INCLUDE THE INTENT TO CHANGE FREQUENCY AND JUSTIFICATION (5.5.3.11.a).
- 6.1.7. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL WILL BE INSPECTED (5.5.3.11.b).

- 6.1.8. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, USACE SECTION 404, AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE (10 "INSPECTOR").
- 6.1.9. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 1 WEEK OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 2 WEEKS OF THE INSPECTION (5.5.3.11.e AND 5.5.3.11.f).
- 6.1.10. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER.
- 6.1.11. THESE INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS OF THE SITE THAT HAVE MET FINAL STABILIZATION REQUIREMENTS AND HAVE BEEN NOTED IN THE SWPPP.
- 6.1.12. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES (5.5.3.11.h).

6.2. MAINTENANCE PRACTICES (5.1 AND 8.13.)

- 6.2.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER AND IN ACCORDANCE WITH CONSTRUCTION DRAWINGS AND GOOD ENGINEERING PRACTICES. (5.1. AND 5.5.3.1.b)
- 6.2.2. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- 6.2.3. UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT OR WITHIN 7 DAYS (WHICHEVER IS SOONER) AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. (5.5.3.11.e).
- 6.2.4. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES (SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, OTHER CONTROLS, ETC.) WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). (5.5.3.1.d).
- 6.2.5. DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE EPSC MEASURES AT THE CONTRACTOR'S OWN EXPENSE.
- 6.2.6. CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ONE-HALF (½) THE HEIGHT OF THE DAM.
- 6.2.7. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS, DOES NOT MIGRATE INTO FEATURES REMOVED FROM, AND DOES NOT MIGRATE ONTO ADJACENT PROPERTIES AND/OR INTO WATERS OF THE STATE/U.S.
- 6.2.8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED (5.5.3.7.a).
- 6.2.9. ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, EROSION WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.

7. SITE ASSESSMENTS (5.5.3.8.)

ARE SITE ASSESSMENTS REQUIRED? YES NO



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8. STORMWATER MANAGEMENT (5.5.3.11.h)

- 8.1. STORMWATER MANAGEMENT WILL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS WILL BE DEPICTED ON THE PLANS AND NOTED AS PERMANENT.
- 8.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (5.5.3.6.c): _____
- 8.3. OTHER ITEMS NEEDING CONTROL (5.5.3.7.)
CONSTRUCTION MATERIALS: THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).
- LUMBER, GUARDRAIL, TRAFFIC CONTROL DEVICES
 - CONCRETE WASHOUT
 - PIPE CULVERTS (I.E. CONCRETE, CORRUGATED METAL, HDPE, ETC.)
 - MINERAL AGGREGATES, ASPHALT
 - EARTH
 - LIQUID TRAFFIC STRIPING MATERIALS, PAINT
 - ROCK
 - CURING COMPOUND
 - EXPLOSIVES
 - OTHER _____

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

8.4. WASTE MATERIALS (5.5.3.7.c)

WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S) CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

8.5. HAZARDOUS WASTE (5.5.3.7.c) (8.8)

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

8.6. SANITARY WASTE (5.5.3.7.b)

PORTABLE SANITARY FACILITIES WILL BE PROVIDED ON ALL CONSTRUCTION SITES. SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY LOCAL REGULATIONS. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

8.7. OTHER MATERIALS

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

- FERTILIZERS AND LIME
- PESTICIDES AND/OR HERBICIDES
- DIESEL AND GASOLINE
- MACHINERY LUBRICANTS (OIL AND GREASE)

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

9. NON-STORMWATER DISCHARGES (5.5.3.12.)

- 9.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE CONSTRUCTION OF THIS PROJECT (CHECK ALL THAT APPLY):
- DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER.
 - WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES THE SITE.

- WATER USED TO CONTROL DUST. (3.5.3.1.n)
- POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE.
- UNCONTAMINATED GROUNDWATER OR SPRING WATER.
- FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS.
- OTHER: _____

- 9.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE.
- 9.3. THE DESIGN OF ALL IMPACTED EPSC MEASURES RECEIVING FLOW FROM ALLOWABLE NON-STORMWATER DISCHARGES MUST BE DESIGNED TO HANDLE THE VOLUME OF THE NON-STORMWATER COMPONENT.
- 9.4. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.
- 9.5. ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (5.5.1.g)?
- YES NO
- IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER: _____

10. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (5.5.3.7.c, 6.1)

10.1. SPILL PREVENTION (5.5.3.7.c)

10.1.1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN WHEN REQUIRED BY FEDERAL CODE.

10.2. MATERIAL MANAGEMENT

10.2.1. HOUSEKEEPING

ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ON-SITE BY THE CONTRACTOR. EXCEPT FOR BULK MATERIALS THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED. (9-410.06) THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL. DUST GENERATED WILL BE CONTROLLED IN AN ENVIRONMENTALLY SAFE MANNER. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.

10.2.2. HAZARDOUS MATERIALS

PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RE-SEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM. POTENTIAL pH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.

10.3. PRODUCT SPECIFIC PRACTICES

- 10.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.
- 10.3.2. FERTILIZERS: FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY THE SOIL ANALYSIS. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.
- 10.3.3. PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF PER THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.
- 10.3.4. CONCRETE TRUCKS: CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED.

10.4. SPILL MANAGEMENT

IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IF NECESSARY:

- 10.4.1. ALL ONSITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANGE OF LEAKAGE AND SPILLS.
- 10.4.2. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
- 10.4.3. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.
- 10.4.4. ALL SPILLS SHALL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- 10.4.5. THE CONTRACTOR'S RESPONSIBLE PARTY WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.
- 10.4.6. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE PRIMARY PERMITTEE AFTER THE SITUATION HAS BEEN STABILIZED.
- 10.4.7. IF AN OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.
- 10.4.8. IF A SPILL OCCURS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN



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SHEET NO.: 4

IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

10.5. SPILL NOTIFICATION (6.1)

WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO, OR MORE THAN A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD:

- 10.5.1. THE PRIMARY PERMITTEE OFFICE WILL NOTIFY THE LOCAL TDEC ENVIRONMENTAL FIELD OFFICE AND ANY OTHER APPLICABLE REGULATORY AGENCIES WITHIN 24 HOURS OF THE SPILL.
- 10.5.2. IN ADDITION TO ANY FOLLOW UP NOTIFICATIONS REQUIRED BY FEDERAL LAW, A WRITTEN DESCRIPTION OF THE RELEASE, DATE OF RELEASE AND CIRCUMSTANCES LEADING TO THE RELEASE, WHAT ACTIONS WERE TAKEN TO MITIGATE EFFECTS OF THE RELEASE, AND STEPS TAKEN TO MINIMIZE THE CHANCE OF FUTURE OCCURRENCES WILL BE SUBMITTED TO THE APPROPRIATE TDEC ENVIRONMENTAL FIELD OFFICE WITHIN 2 WEEKS OF KNOWLEDGE OF THE RELEASE.
- 10.5.3. THE SWPPP MUST BE MODIFIED WITHIN 2 WEEKS OF KNOWLEDGE OF THE RELEASE PROVIDING A DESCRIPTION OF THE RELEASE, CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF RELEASE. THE SWPPP WILL BE REVIEWED AND MODIFIED AS NECESSARY TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES.

11. RECORD-KEEPING

11.1. REQUIRED RECORDS

THE PRIMARY PERMITTEE OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (7.2.1.):

- 11.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.
- 11.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.
- 11.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
- 11.1.4. RECORDS EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES.
- 11.1.5. RECORDS OF QUALITY ASSURANCE SITE ASSESSMENTS, IF APPLICABLE.
- 11.1.6. COPY OF SITE EPSC INSPECTOR'S CERTIFICATION AND/OR LICENSING
- 11.1.7. A COPY OF ANY REGULATORY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS.

11.2. RAINFALL MONITORING PLAN (7.2.1.):

11.2.1. EQUIPMENT

AT A MINIMUM, THE CONTRACTOR WILL INSTALL A FENCE POST TYPE RAIN GAUGE TO MEASURE RAINFALL. THE STANDARD FENCE POST RAIN GAUGE WILL BE A WEDGE-SHAPED GAUGE THAT MEASURES UP TO 6 INCHES OF RAINFALL. AN ENGLISH SCALE WILL BE PROVIDED ON ONE FACE, WITH A METRIC SCALE ON THE OTHER FACE. GRADUATION WILL BE PERMANENTLY MOLDED IN DURABLE WEATHER-RESISTANT PLASTIC. THE MINIMUM GRADUATION WILL BE 0.01 INCH (OR 0.1MM). AN ALUMINUM BRACKET WITH SCREWS MAY BE USED TO MOUNT THE GAUGE ON A WOODEN SUPPORT. IF A RAIN GAUGE CANNOT BE MAINTAINED ON-SITE A REFERENCE SITE MAY BE USED FOR A RECORD OF DAILY RAINFALL.

11.2.2. LOCATION

THE RAIN GAUGE WILL BE LOCATED AT OR ALONG THE PROJECT SITE, AS DEFINED IN THE NOI OF THE NPDES PERMIT, IN AN OPEN AREA SUCH THAT THE MEASUREMENT WILL NOT BE INFLUENCED BY OUTSIDE FACTORS (I.E. OVERHANGS, GUTTER, TREES, ETC.). AT LEAST ONE RAIN GAUGE PER LINEAR MILE IS REQUIRED ALONG (AS MEASURED ALONG THE CENTERLINE OF THE PRIMARY ALIGNMENT) THE PROJECT WHERE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING IS ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED.

11.2.3. METHODS

RAINFALL MONITORING WILL BE INITIATED PRIOR TO CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING, OR FILLING, EXCEPT AS SUCH MINIMAL CLEARING MAY BE NECESSARY TO INSTALL A RAIN GAUGE IN AN OPEN AREA. THE RAIN GAUGE WILL BE CHECKED FOR OPERATIONAL SOUNDNESS DAILY (DURING NORMAL BUSINESS HOURS) IN WET TIMES AND WEEKLY IN DRY TIMES. GAUGES WILL BE REPAIRED OR REPLACED ON THE SAME DAY IF FOUND TO BE NON-OPERATIONAL OR MISSING.

11.2.4. EACH RAIN GAUGE WILL BE READ (FOR DETAILED RECORDS OF RAINFALL) AND EMPTIED AFTER EVERY RAINFALL EVENT OCCURRING ON THE PROJECT SITE AT APPROXIMATELY THE SAME TIME OF THE DAY (DURING NORMAL BUSINESS HOURS). DURING PERIODS OF DRY CONDITIONS, IT WILL NOT BE NECESSARY TO READ THE RAIN GAUGE EVERY DAY. IN LIEU OF THIS REQUIREMENT ON WEEKENDS AND ON STATE HOLIDAYS, THE RAIN GAUGES CAN BE EMPTIED THE NEXT BUSINESS DAY AND A REFERENCE SITE USED FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION FOR THOSE DAYS. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.

11.2.5. DETAILED RECORDS WILL BE RECORDED OF RAINFALL EVENTS INCLUDE DATES, AMOUNTS OF RAINFALL, AND THE APPROXIMATE DURATION (OR THE STARTING AND ENDING TIMES). THE RAINFALL RECORDS SHALL BE RECORDED ON THE RAINFALL RECORD SHEET AND SHALL BE MAINTAINED IN THE "DOCUMENTATION AND PERMITS" BINDER.

11.2.6. IF THE RAINFALL EVENT IS STILL IN PROGRESS AT THE DAILY RECORDING TIME, THE GAUGE WILL BE EMPTIED AND THE RECORD WILL INDICATE THAT THE STORM EVENT WAS STILL IN PROGRESS.

11.2.7. RAIN GAUGE INFORMATION (DETAILED RECORDS), INCLUDING THE LOCATION OF THE NEAREST OUTFALL, WILL BE RECORDED ON THE EPSC INSPECTION REPORT FORMS AT THE TIME OF MEASUREMENT.

11.3. KEEPING PLANS CURRENT (5.4.)

11.3.1. THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL REGULATORY OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.

11.3.2. THE STAGES DEPICTED WITHIN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL STAGES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION, THUS MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS STAGES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE STAGES OF CONSTRUCTION THAT WILL OCCUR, THUS THESE DOCUMENTS MUST BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

11.3.3. THE PRIMARY PERMITTEE'S EPSC INSPECTOR OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:

11.3.3.1. WHENEVER THERE IS A CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP;

11.3.3.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY; WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THAT THE SWPPP IS INEFFECTIVE IN

ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;

11.3.3.3. WHEN ANY NEW OPERATOR AND/OR SUB-OPERATOR IS ASSIGNED OR RELIEVED OF THEIR RESPONSIBILITY TO IMPLEMENT A PORTION OF THE SWPPP;

11.3.3.4. TO PREVENT A NEGATIVE IMPACT TO LEGALLY PROTECTED STATE OR FEDERALLY LISTED OR PROPOSED THREATENED OR ENDANGERED AQUATIC FAUNA;

11.3.3.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS.

11.3.3.6. ALL SWPPP REVISION(S) SHALL BE RECORDED WITHIN 1 WEEK BY THE PROJECT EPSC INSPECTOR.

11.3.3.7. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION), CONSTRUCTION SHALL NOTIFY THE PERMITS SECTION FOR PROPER COORDINATION.

11.4. MAKING PLANS ACCESSIBLE

11.4.1. THE PRIMARY PERMITTEE WILL RETAIN A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER AT THE CONSTRUCTION SITE (OR OTHER LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES TO THE DATE OF FINAL STABILIZATION. THE PRIMARY PERMITTEE WILL HAVE A COPY OF THE SWPPP AVAILABLE AT THE LOCATION WHERE WORK IS OCCURRING ON-SITE FOR THE USE OF OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE (7.2.).

11.4.2. PRIOR TO THE INITIATION OF LAND DISTURBING ACTIVITIES AND UNTIL THE SITE HAS MET THE FINAL STABILIZATION CRITERIA, THE PRIMARY PERMITTEE OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (5.3.4.) (7.2.1.):

11.4.2.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE PROJECT;

11.4.2.2. THE INDIVIDUAL NAME, COMPANY NAME, E-MAIL ADDRESS (IF APPLICABLE) AND TELEPHONE NUMBER OF THE LOCAL PROJECT SITE OWNER AND OPERATOR CONTACT;

11.4.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND

11.4.2.4. THE LOCATION OF THE SWPPP.

11.4.3. ALL INFORMATION DESCRIBED IN SECTION 13.4.2 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING. THE NOTICE MUST BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION WHERE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY.



WALKING HORSE
LOUDON COUNTY,
TENNESSEE

STORM WATER POLLUTION
PREVENTION PLAN

SHEET NO.: 5

11.5. NOTICE OF TERMINATION (9.0.)

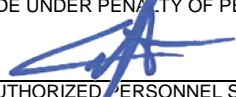
- 11.5.1. WHEN ALL STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED BY FINAL STABILIZATION, THE PRIMARY PERMITTEE WILL SUBMIT A NOTICE OF TERMINATION (NOT) THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT TO THE TDEC CENTRAL OFFICE IN NASHVILLE, TN.
- 11.5.2. FOR THE PURPOSES OF THE CERTIFICATION REQUIRED BY THE NOT, THE ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY MEANS THE
 - 11.5.2.1. ALL EARTH-DISTURBING ACTIVITIES ON THE SITE ARE COMPLETED AND ALL DISTURBED SOILS AT THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL HAVE BEEN FINALLY STABILIZED; AND
 - 11.5.2.2. ALL CONSTRUCTION MATERIALS, WASTE AND WASTE HANDLING DEVICES, AND ALL EQUIPMENT, AND VEHICLES THAT WERE USED DURING CONSTRUCTION HAVE BEEN REMOVED AND PROPERLY DISPOSED; AND
 - 11.5.2.3. ALL STORMWATER CONTROLS THAT WERE INSTALLED AND MAINTAINED DURING CONSTRUCTION, EXCEPT THOSE THAT ARE INTENDED FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE, HAVE BEEN REMOVED; AND
 - 11.5.2.4. ALL POTENTIAL POLLUTANTS AND POLLUTANT GENERATING ACTIVITIES ASSOCIATED WITH CONSTRUCTION HAVE BEEN REMOVED; AND
 - 11.5.2.5. THE PERMITTEE HAS IDENTIFIED WHO IS RESPONSIBLE FOR ONGOING MAINTENANCE OF ANY STORMWATER CONTROLS LEFT ON THE SITE FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE; AND
 - 11.5.2.6. TEMPORARY EPSC MEASURES HAVE BEEN OR WILL BE REMOVED AT AN APPROPRIATE TIME TO ENSURE FINAL STABILIZATION IS MAINTAINED; AND
 - 11.5.2.7. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDENTIFIED SITE THAT ARE AUTHORIZED BY A NPDES GENERAL PERMIT HAVE OTHERWISE BEEN ELIMINATED FROM THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL.

11.6. RETENTION OF RECORDS (7.1.)

THE PRIMARY PERMITTEE WILL RETAIN COPIES OF THE SWPPP, ALL REPORTS REQUIRED BY THE PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

12. **SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (8.7.5.)**

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED BY ME, OR UNDER MY DIRECTION OR SUPERVISION. THE SUBMITTED INFORMATION IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.



AUTHORIZED PERSONNEL SIGNATURE (5.3.3.)
Carl Hofstadter Jr

PRINTED NAME
Civil Engineer

TITLE
11/29/2023

DATE

13. **SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (8.7.6.)**

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ONSITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

AUTHORIZED CONTRACTOR PERSONNEL SIGNATURE (5.3.3.)

PRINTED NAME

TITLE

DATE

Appendix E – EPA Sole Source Aquifer Map



Appendix F – Biological Resources



STATE OF TENNESSEE

DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Natural Areas
Natural Heritage Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 2nd Floor
Nashville, Tennessee 37243
Phone 615/532-0431 Fax 615/532-0046

October 9, 2022

Amber Winter
BBJ Group, LLC
140 South Dearborn Street, Suite 1520
Chicago, Illinois 60603

Subject: Walking Horse Solar Development
Parcel No. 053 040 164.00: (35.72515°, -84.36190°)
Loudon County, TN
Rare Species Database Review

Dear Ms. Winter:

Thank you for your correspondence of 1 September 2022 requesting a rare species database review for the proposed solar development in Loudon County, Tennessee. The project area is bounded to the west by Carding Machine Road, to the south by Roberson Springs Road, and to the east by Maremont Pkwy.

Per your submittal:

BJ Group's client has requested preliminary assessment of the Project Area as they intend to develop an approximately 80-acre site as a solar farm. The Project Area currently appears as agricultural property, landscaped areas, and wooded areas.

We have reviewed the state's natural heritage database with regard to the project boundaries, and we find that no rare species have been observed previously within one mile of the project area.

Within four miles of the project area the following rare species have been reported:

Type	Scientific Name	Common Name	Global Rank	St. Rank	Fed. Prot.	St. Prot.	Habitat
Vascular Plant	<i>Aureolaria patula</i>	Spreading False-foxglove	G3	S3	--	S	Oak Woods and Edges
Vascular Plant	<i>Berberis canadensis</i>	American Barberry	G3G4	S2	--	S	Rocky Woods and River Bars

Type	Scientific Name	Common Name	Global Rank	St. Rank	Fed. Prot.	St. Prot.	Habitat
Invertebrate Animal	<i>Athearnia anthonyi</i>	Anthony's Riversnail	G1	S1	LE,XN	E	Larger rivers and downstream stretches of lg creeks, on cobble/boulder substrates adj. riffles; portions of upper TN River basin.
Invertebrate Animal	<i>Lampsilis abrupta</i>	Pink Mucket	G1G2	S2	LE	E	Generally a large river species, preferring sand-gravel or rocky substrates with mod-strong currents; Tennessee & Cumberland river systems.
Invertebrate Animal	<i>Plethobasus cooperianus</i>	Orangefoot Pimpleback	G1	S1	LE, XN	E	Large rivers in sand-gravel-cobble substrates in riffles and shoals in deep flowing water; Cumberland & Tennessee river systems.
Vertebrate Animal	<i>Percina tanasi</i>	Snail Darter	G2G3	S2S3	LT	T	Sand and gravel shoals of moderately flowing, vegetated, large creeks; upper Tennessee River watershed.
Animal Assemblage	Rookery	Heron Rookery	G5	SNR	--	Rare, Not State Listed	

The Division of Natural Areas - Natural Heritage Program has reviewed the location of the proposed project workspace with respect to rare plant species. Based on the habitat within the project, we do not anticipate any impacts to occurrences of rare, threatened, or endangered plant species from this project.

We ask that you coordinate this project with the Tennessee Wildlife Resources Agency (Region 4, Rob Lindbom, dennis.lindbom@tn.gov) to ensure that legal requirements for protection of state listed rare animals are addressed. Additionally, we ask that you contact the U.S. Fish and Wildlife Service Field Office, Cookeville, Tennessee (931-525-4970) for comments regarding federally listed species. Please ensure that best management practices to address erosion and sediment are implemented and maintained during construction activities. Note that the [General Aquatic Resource Alteration Permit](#) states that “use of monofilament-type erosion control netting or blanket is prohibited in the stream channel, stream banks, or any disturbed riparian areas within 30 feet of top of bank.” Where necessary and feasible, we encourage use of biodegradable netting under the CGP (Construction General Stormwater Permit) as well.

Thank you for considering Tennessee’s rare species throughout the planning of this project. Should you have any questions, please do not hesitate to contact me at 615-532-4799 or dillon.blankenship@tn.gov.

Sincerely,

Dillon

Dillon Blankenship | Environmental Review Coordinator
Tennessee Natural Heritage Program

Herrit, Amanda M

From: TN Help <tnhelp@service-now.com>
Sent: Monday, April 10, 2023 4:22 PM
To: Billy McCarley
Cc: Herrit, Amanda M
Subject: Walking Horse Solar Development - Project # SHPO0002840



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

2023-04-10 12:19:49 CDT

Mr. Billy McCarley
Subterranean Consultants
bmccarley@subterraneanco.com

RE: Rural Development (RD), Walking Horse Solar Development, Project#: SHPO0002840, Loudon, Loudon County, TN

Dear Mr. McCarley:

In response to your request, we have reviewed the cultural resources 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 find that no historic properties 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. Please provide your Project # when submitting any additional information regarding this undertaking. Questions or comments may be directed to Kelley Reid, who drafted this response, at Kelley.Reid@tn.gov, +16157701099.

Sincerely,

E. Patrick McIntyre, Jr.

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

Ref:MSG7925254_dJ7Xu5RenUPRcg50qbC7



TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
5107 EDMONDSON PIKE
NASHVILLE, TENNESSEE 37211

February 3, 2023

Robin Murrell
Engineering Assistant I Environmental
51 Lost Mound Drive, Suite 135 I
Chattanooga, TN 37406

RE: Walking Horse Site project. The project is located within Lenoir City, Loudon County, Tennessee. (Latitude 35.72531389°N and longitude -84.36036667°W).

Dear Ms. Murrell,

The Tennessee Wildlife Resource Agency has reviewed the above referenced project. It is our understanding the applicant proposes a solar farm to be built in the existing agricultural fields.

It is also our understanding that stream and wetland mitigation requirements, as set forth by the Tennessee Department of Environment & Conservation and the U.S. Army Corp of Engineers, will be followed as well as any recommendations from the US Fish and Wildlife Service regarding federally listed species.

With these understandings, the TWRA has no additional specie requirements or objections to the project, as the implementation of best management practices will be sufficient to reduce potential impacts to fish and wildlife associated with this project.

Thank you for the opportunity to review and comment on this proposed project. If you have further questions regarding this matter; please contact me at (615) 913-1560.

Sincerely,

Dennis R Lindbom

Dennis Lindbom
Aquatic Habitat Protection Biologist

The State of Tennessee

AN EQUAL OPPORTUNITY, EQUAL ACCESS, AFFIRMATIVE ACTION EMPLOYER

Herrit, Amanda M

From: Pelren, David <david_pelren@fws.gov>
Sent: Friday, March 17, 2023 8:39 AM
To: Herrit, Amanda M
Cc: Tennessee ES, FWS; Sikula, Nicole R
Subject: FWS #2023-0040349 Walking Horse solar project site Lenoir City

Follow Up Flag: Follow up
Flag Status: Flagged

Ms. Amanda Herrit
Senior Environmental Scientist
Terracon

Ms. Herrit –

Thank you for coordinating with us about a proposed solar power generation project located at Lenoir City, Loudon County, Tennessee (FWS #2023-0040349, Terracon #E2227159). This action would involve a 52-acre tract (approximately 18 acres of which is forested), and we understand that the facility would be constructed exclusively within existing agricultural fields. Information about federally listed species that are located in the general vicinity of the project area was generated during a search of the Fish and Wildlife Service's Information for Planning and Consultation system. Those species are: the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), orangefoot pimpleback (*Plethobasus cooperianus*), pink mucket (*Lampsilis abrupta*), and Anthony's riversnail (*Athearnia anthonyi*). You have requested comments relative to the potential for environmental impacts, including those to threatened and endangered species.

Based on the project site location and habitat, we are not aware of any federally listed species that are expected to occupy this project's anticipated area of impact. The project proponent should re-coordinate with us if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

Note that the tricolored bat was proposed for federal listing in accordance with sections 3(6) and 4(a)(1) of the Endangered Species Act (ESA) of 1973, as amended, on September 14, 2022. No designated critical habitat has been proposed at this time. While a proposed species is not afforded protection under the ESA, there is a prohibition against jeopardy of its continued existence. The listing decision for this species should be announced within 12 months of the date the proposed rule was published. If the tricolored bat is listed, the prohibition against taking a listed species under section 9 of the ESA becomes effective 30 days later, regardless of a proposed action's stage of completion. At this time, the project proponent should determine if the action is likely to jeopardize the continued existence of this species and confer with our office only if jeopardy may occur. If the proposed action will not be complete should the tricolored bat be listed and it may result in effects to the species after the effective date of the final listing rule, the project proponent would need to coordinate with our office at that time in regard to potential impacts. In any case, although not required in accordance with the Endangered Species Act, we recommend that any tree removal be conducted during the period of October 15 through March 31 to the greatest extent feasible in order to minimize impacts to bats in general and birds that may use the site for nesting.

Feel free to contact me with any questions.

David Pelren
Fish and Wildlife Biologist
Ecological Services
U.S. Fish and Wildlife Service
446 Neal St.
Cookeville, TN 38501
office phone: 931-525-4974
mobile phone: 931-261-5844

NOTE: This email correspondence and any attachments to and from this sender are subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.



**STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
KNOXVILLE ENVIRONMENTAL FIELD OFFICE**

1371 Middlebrook Pike
KNOXVILLE, TENNESSEE
37912

PHONE (865) 594-6035

STATEWIDE 1-888-891-8332

FAX (865) 594-6105

January 20, 2023

Mr. Conor Maloney,
Griggs & Maloney, Inc
e-copy: CMaloney@griggsandmaloney.com
745 S. Church Street, Suite 205
Murfreesboro, TN 30130

Re: Hydrologic Determination of Water Resources (DWR ID No. 31943)
Walking Horse Project
Sweetwater Creek watershed, Loudon County, TN

Mr. Maloney:

The Tennessee Department of Environment and Conservation, Division of Water Resources (TDEC-DWR) has reviewed the following report "*Jurisdictional Waters Determination Report*" for the proposed Walking Horse Project Area in Loudon County. This report was prepared by Griggs & Maloney, Inc., and submitted on your behalf to our office on January 12, 2023, in support of jurisdictional hydrologic determinations of a water feature associated with the above referenced site. This water feature is found on property located at 35.725351 / - 84.362527 (Lat/Long), at Roberson Spring Road in Loudon, Loudon County, Tennessee. Please note that all geographic coordinates provided in this letter have a limited precision and should be considered approximate. As part of our review, Division staff Josh Frazier on January 19, 2023.

Based on the information and documentation submitted in the report, our observations on-site, and the Division's rules and guidance regarding hydrologic determinations, the Division accepts the jurisdictional determination of the assessed water features as documented in the submitted report and portrayed on *Figure 1.8. – Appendix B: Aquatic Features Table*. These findings as presented in the report and accompanying information are summarized and displayed in the table below.

**Hydrologic Determination of Assessed Water Features
Proposed Walking Horse Solar Farm Project, Loudon County**

Feature	Determination	Begin	End
WWC - 1	Wet Weather Conveyance	35.727075, -84.36434 (origin/property boundary)	35.724979, -84.36712 (property boundary)

It is important to note that the Division's evaluation and concurrence is restricted to only the water features identified within the submitted report and as depicted on the attached map. Only the water features listed above were assessed as part of this hydrologic determination, therefore this correspondence is not intended to represent a comprehensive water resource inventory of the entire site. It is the property owner's responsibility to consider and report any additional water features within the property boundaries that may be affected by any construction activities associated with future development.

Any alterations to jurisdictional streams, wetlands, or open water features may only be performed under the coverage of, and conformance to, a valid *Aquatic Resource Alteration Permit (ARAP)* issued by the Division. ARAP applications and provisions are available on-line at <https://www.tn.gov/environment/permit-permits/water-permits/aquatic-resource-alteration-permit--arap.html>.

Alterations to Wet Weather Conveyances typically may be performed without application or notification to the Division, provided they conform to the provisions found under *Tennessee Code Annotated § 69-3-108 (q)*.

Please note that coverage under the *General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)* will be needed if the proposed land disturbance activity for this project is one acre or more in size. Information and applications regarding the Division's construction storm water program can be found [online](#). A completed Notice of Intent form, an application fee, and a storm water pollution prevention plan should be submitted to the above address for review and coverage under this permit prior to any land disturbance.

Discharges and alterations to sinkholes may require the submittal of an application and written authorization under the provisions of TDEC Rules. Information and applications regarding the Underground Injection Control program may be seen online at <https://www.tn.gov/environment/permit-permits/water-permits/underground-injection-control-permit.html>. Physical alterations or re-routing of surface hydrology to a sinkhole may require coverage under the *Class V Injection Control Permit*.

Hydrologic determinations are advised and governed by Tennessee Department of Environment and Conservation (TDEC) rules and regulations, and therefore only apply to the State's permitting process. Because these and other various water features on-site may potentially also be considered jurisdictional Waters of the United States, any alterations to them should only be performed after consultation with the U.S. Army Corps of Engineers.

We appreciate the opportunity to assess the jurisdictional status of these water features prior to site plan finalization and initiation of construction activities. Because natural variation and human activities can alter hydrologic conditions, the Division reserves the right to reassess the status of the water features in the future.

Thank you for your interest in water quality in Tennessee. Please contact Josh Frazier at 865-364-9500 or by email at Joshua.Frazier@tn.gov if you have any questions.

Respectfully,

A handwritten signature in cursive script, appearing to read "Michael Atchley".

Mr. Michael Atchley,
Manager, Knoxville Environmental Field Office
TDEC Division of Water Resources

Enclosures: *Attachment 1 – Hydrologic Field Data Sheet*

Cc: File copy
Mr. Mark Quarles, P.G., Senior Consultant, Branch Manager, BBJ Group, mquarles@bbjgroup.com
USACE Nashville: NashvilleRegulatory@usace.army.mil



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
REGULATORY DIVISION
3701 BELL ROAD
NASHVILLE, TENNESSEE 37214

May 1, 2023

SUBJECT: File No. LRN-2023-00207, Walking Horse Development, Sweetwater Creek Watershed, Loudon, Tennessee (35.72535, -84.36253)

Mr. Conor Maloney,
Griggs & Maloney, Inc (CMaloney@griggsandmaloney.com)
745 S. Church Street, Suite 205
Murfreesboro, TN 30130

Dear Mr. Maloney:

This letter is in regard to your report entitled "JURISDICTIONAL WATERS DETERMINATION REPORT, Walking Horse Project Area, Loudon, Loudon County, Tennessee" dated December 1, 2022., which documented potential waters of the United States on a review area of approximately 81-acres. Your email dated April 18, 2023, associated with the proposed Walking Horse Development in Loudon County, Tennessee, indicated your preference for potential waters of the U.S. on the review area to be reviewed as a preliminary jurisdictional determination (PJD). This project has been assigned File No. LRN-2023-00207, please refer to this number in any future correspondence.

The U.S. Army Corps of Engineers (USACE) has regulatory responsibilities pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). Under Section 10, the USACE regulates any work in, or affecting, navigable waters of the U.S. It appears the review area does not include navigable waters of the U.S. and would not be subject to the provisions of Section 10. Under Section 404, the USACE regulates the discharge of dredged and/or fill material into waters of the U.S., including wetlands.

Based on a field review of the review area on March 10, 2023, one reach of ephemeral stream totaling 1,630 linear feet was documented within the review area. This office has determined these features **may** be jurisdictional waters of the U.S. in accordance with 33 C.F.R. 331.2 and a PJD has been prepared. The PJD is non-binding, cannot be appealed and only provides a written indication that waters of the U.S, including wetlands, may be present on-site. For purposes of computation of impacts, compensatory mitigation requirements and other resource protection measures, a permit decision made on the basis of a PJD will treat all waters that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. If you wish, you may request an approved JD (which may be appealed), by contacting this office. Also, you may provide new information for further

consideration by the USACE to re-evaluate the PJD. This determination is only valid for the review area shown on the attached map entitled LRN-2023-00207, Figure 1, attached to this letter.

Enclosed with this letter is a copy of the PJD. If you agree with the findings of this PJD and understand your options regarding the same, please sign and date the form and return it to this office within 30 days of receipt of this letter. You should submit the signed copy to the following address:


U.S. Army Corps of Engineers
Nashville District
Eastern Regulatory Field Office
501 Adesa Blvd., Suite 250
Lenoir City, TN 37771
Attn: Ken M. Jones (ken.m.jones@usace.army.mil)

Please contact this office if you would like to schedule a pre-application meeting to further discuss alternatives for site development to assist you in avoiding and minimizing impacts to waters of the United States. If your development plan requires the discharge of material into waters of the U.S., a Department of the Army Permit would be required.

The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

We appreciate your awareness of the USACE regulatory program. If you have any questions, you may contact me or Ken M. Jones at (865) 333.1488 or by e-mail at ken.m.jones@usace.army.mil.

Sincerely,



Casey H. Ehorn
Deputy Chief, East Branch
Regulatory Division

Electronic Copies Furnished:

Tennessee Division of Water Resources (Joshua.Frazier@tn.gov)
Mr. Mark Quarles, P.G., BBJ Group, (mquarles@bbjgroup.com)



51 Lost Mound Drive, Suite 135
Chattanooga, Tennessee 37406
P 423-499-6111
F 423-499-8099
Terracon.com

November 3, 2023

Alternus Energy Americas Inc.
360 Kingsley Park Drive, Suite 250
Fort Mill, SC 29715

Attn: Mr. Joseph Duey, Chief Executive Officer
P: (248) 872-3068
E: rg@alternusenergy.com


Re: Threatened and Endangered Species Habitat Assessment
Solar Farm Project: Walking Horse Site
1251 Roberson Spring Road, Loudon, Loudon County, Tennessee 37774
Terracon Project No. E2227159


Dear Mr. Duey:

Terracon is pleased to submit this Threatened and Endangered (T&E) Species Habitat Assessment report addressing federal Endangered Species Act (ESA) compliance requirements as they may affect work activities on the above referenced project site. Based on Terracon's review of the agency responses, potential suitable summer roosting habitat for the listed bat species is present at the site; and therefore, tree clearing activities at the site should occur between October 15th and March 31st. The USFWS also recommended clearing between October 15th and March 31st to minimize impacts on nesting birds. The USFWS and TWRA recommend the development of a site-specific erosion control plan tailored that follows best management practices (BMPs) to minimize erosion and prevent debris deposition and sedimentation in the project area. If at any time during construction activities, evidence of any state or federally protected species is observed, construction activities should stop and the USFWS, TWRA and TDEC should be contacted to re-evaluate the project.

If there are questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.


Amanda M. Herrit, M.S., TNQHP
Senior Environmental Scientist


Dallas Whitmill, P.E.
Principal Engineer, Env. Department Manager

Threatened and Endangered Species Habitat Assessment Report

Walking Horse

1251 Roberson Spring Road

Loudon, Loudon County, Tennessee

November 3, 2023

Terracon Project No. E2227159



Prepared for:

Alternus Energy Americas Inc.
Fort Mill, South Carolina

Prepared by:

Terracon Consultants, Inc.
Chattanooga, Tennessee

Explore with us

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APPENDICES

APPENDIX A – EXHIBITS

- Exhibit 1: Topographic Map
- Exhibit 2: Aerial Exhibit
- Exhibit 3: Preliminary Site Plan

APPENDIX B – SITE PHOTOGRAPHS

**APPENDIX C – IPAC REPORT
TDEC T&E SPECIES LIST FOR LOUDON COUNTY**

APPENDIX D – AGENCY RESPONSES

THREATENED & ENDANGERED SPECIES HABITAT ASSESSMENT

Walking Horse

1251 Roberson Spring Road

Loudon, Loudon County, Tennessee

Terracon Project No. E2227159

November 3, 2023

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) was retained by Alternus Energy Americas, Inc. (client) to perform a Threatened and Endangered (T&E) Species Habitat Assessment, in accordance with our proposal dated (October 3, 2023). The project site is approximately 51-acres and is located east of 1251 Roberson Spring Road, Loudon, Loudon County, Tennessee, hereafter referred to as the site. The site predominantly consists of agricultural fields with wooded areas in the western portion. The center of the site is located at approximately latitude 35°43'31" N and longitude 84°21'39" W using WGS84 datum. The location of the site is illustrated on a topographic map included as Exhibit 1; and an aerial photograph with approximate habitat locations is illustrated on Exhibit 2. Exhibits are included in Appendix A.

2.0 SCOPE OF SERVICES

The purpose of performing the T&E species habitat assessment was to characterize the existing site conditions, observe the site for listed T&E species and their habitats, and provide an opinion regarding whether the work activities onsite would negatively affect listed T&E species.

3.0 SITE DESCRIPTION AND PRELIMINARY DATA GATHERING

According to Terracon's review of historic aerial photographs and topographic maps provided by EDR, the site has historically consisted of agricultural fields with wooded areas in the western portion of the site. Based on a review of the Philadelphia, Tennessee 7.5' quadrangle map and Loudon, Tennessee 7.5' quadrangle map, the site elevation appears to be approximately 800-900 feet above mean sea level with topography generally sloping towards the southwest. The site is located within the Watts Bar Lake Watershed, Hydrological Unit Code (HUC 06010201). During the site reconnaissance, Terracon personnel observed the site to predominantly consist of agricultural fields with some wooded areas on the western portion of the site.

A jurisdictional waters determination was completed by another consultant at the site (BBJ Group LLC, December 2022). The report indicated the presence of one wet weather conveyance within the project boundary identified as WWC-1. Based on site plans, this feature would be located outside of the planned installation areas of solar farm components.

Before conducting the field assessment, Terracon personnel completed a data search of federally endangered/threatened species listed in the area. Terracon accessed the United States Fish and

T&E Species Habitat Assessment

Walking Horse ■ Loudon, Loudon County, Tennessee
November 3, 2023 ■ Terracon Project No. E2227159



Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) decision support system and the Rare Species by County list provided by the Tennessee Department of Environment and Conservation (TDEC). Additionally, Terracon sought consultation with the Tennessee Natural Heritage Program (TN NHP) and the Tennessee Wildlife Resources Agency (TWRA) to include state listed species in this Habitat Assessment. The IPaC list, Rare Species by County list, and correspondence from the TN NHP and TWRA identified six threatened or endangered species with the potential to be present within Loudon County.

4.0 HABITAT ASSESSMENT

Terracon conducted a site visit January 24, 2023. The purpose of the site visit was to evaluate the existing site conditions, perform stream and wetland assessments, observe the site for listed T&E species and/or their habitats, and provide an opinion regarding whether development on-site would have an impact on listed T&E species. The USFWS web site (<http://ecos.fws.gov/ipac>) was used to identify the project boundaries and the federally listed threatened or endangered species for this project area. Each of the species is discussed further below.

Invertebrate Animals

Mollusca

Orangefoot pimpleback (*Plethobasus cooperianus*)

The orangefoot pimpleback is listed as federally endangered. The orangefoot pimpleback inhabits medium to large rivers in the sand, gravel, and cobble substrates in riffles and shoals in deep water and steady currents as well as some shallower shoals and riffles. No medium to large rivers are located at the site. Based on the lack of preferred habitat at the site, it is not anticipated that the proposed project will have an adverse effect on the orangefoot pimpleback.

Pink mucket (*Lampsilis abrupta*)

The pink mucket is listed as federally endangered. The pink mucket is characterized as a large river species associated with fast-flowing waters, although in recent years it has been able to survive and reproduce in impoundments with river-lake conditions but never in standing pools of water. It is found in waters with strong currents, rocky or boulder substrates, with depths up to about one meter, but is also found in deeper waters with slower currents and sand and gravel substrates. No large rivers or ponds are located at the site. Based on the lack of preferred habitat at the site, it is not anticipated that the proposed project will have an adverse effect on the pink mucket.

Anthony's Riversnail (*Athearnia anthonyi*)

Anthony's riversnail is listed as endangered by the federal government. Preferred habitat appears to be larger rivers, but lower stretches of larger creeks are also inhabited. Historically, the snail has been found on cobble/boulder substrates in the vicinity of riffles. No large creeks or rivers are

located at the site. Based on the lack of preferred habitat at the site, it is not anticipated that the proposed project will have an adverse effect on the pink mucket.

Vertebrate Animals

Mammals

Indiana bat (*Myotis sodalis*)

The Indiana bat, listed as federally endangered, is a small sized bat, weighing less than one ounce with a wingspan of 9 to 11 inches. The Indiana bat is distinguished by its foot structure and color variations in fur. Their fur is dark brown and black. Indiana bats cluster together for warmth during the winter in caves or abandoned mines. The hibernation location must be cool and humid with stable temperatures, ranging from 32°F to 50°F. After hibernation, the Indiana bat migrates to wooded areas where they roost under loose tree bark on dead or dying trees. Breeding occurs in the fall before they enter the caves for hibernation and become pregnant in the spring when they emerge from the caves. After migration, females will roost in large groups called maternity colonies.

Northern long-eared bat (*Myotis septentrionalis*)

The northern long-eared bat, identified as federally endangered, is small to medium sized (generally around three inches in length), but has a much larger wingspan than other bats in the Eastern United States. This species is a light brownish color with woolly fur and is most often distinguished from other *Myotis* by its long ears. This species requires caves with stable temperatures for hibernation. Summer roosting and foraging habitat consist of established mixed hardwood-pine forests containing trees with exfoliating bark and snags (dead trees) with loose, peeling chunks of bark and/or crevices and holes utilized for roosting. The northern long-eared bat also more commonly utilizes ridgelines and hilly areas as well as riparian areas.

Tricolored bat (*Perimyotis subflavus*)

The tricolored bat is listed as proposed endangered by the federal government. Tricolored bats are associated with forested landscapes, where they forage near trees (including forest perimeters) and along waterways. Maternity and other summer roosts probably are mainly in dead or live tree foliage (including attached lichen clumps such as *Usnea* and "Spanish moss"); caves, mines, and rock crevices may be used as night roosts between foraging forays. Maternity colonies also may utilize human-made structures or tree cavities; sometimes these are in open sites that would not be tolerated by most other bats. Hibernation sites often are in caves, mines, cave like tunnels, or box culverts under highways, especially those near forests.

Potential suitable summer roosting habitat for the Indiana bat, northern long-eared bat, and tricolored bat is present at the site: and therefore, tree clearing activities should occur between October 15th and March 31st. If tree clearing will be necessary outside the protective window, the USFWS recommends that acoustic and/or mist-netting surveys be conducted to determine the presence or absence of the above-listed bat species.

No individuals of the listed species were observed. USFWS recommends the development of an erosion control plan tailored to the site that follows best management practices (BMPs) to minimize erosion and prevent debris deposition and sedimentation in the project area. If at any time during construction activities, evidence of any state or federally protected species is observed, construction activities should stop and the USFWS and TDEC should be contacted to re-evaluate potential impacts to the federal and state listed species.

5.0 AGENCY CORRESPONDENCE

On October 5, 2023, Terracon personnel issued letters to the USFWS, TN NHP, and TWRA requesting a statement on whether the agencies would consider if the proposed development of the site would impact federal or state listed endangered or threatened species.

On October 11, 2023, the TWRA responded that stream and wetland mitigation requirements of the TDEC and USACE should be followed and recommendations from USFWS. The TWRA stated that erosion and sedimentation control measures should be implemented to prevent potential impacts to fish and wildlife associated with this project. They also state “with these understandings, the TWRA has not additional specie requirements or objections to the project, as implementation of best management practices will be sufficient to reduce the potential impacts to fish and wildlife associate with this project.”

On October 5, 2023, the TN NHP responded that there are no recorded occurrences of state-listed species within one mile of the site; however, there are known occurrences of four state listed species within four miles. The TN NHP recommended consultation with the TWRA regarding state-listed rare animals, and with the USFWS regarding federally listed species. The TN NHP further states “we do not anticipate any impacts to occurrences of rare, threatened, or endangered plant species from this project.

The USFWS responded on March 17, 2023 and stated that they do not anticipate that the proposed project will have an adverse effect on federally listed species. The USFWS included a condition that tree removal should be conducted between October 15 and March 31 to minimize impacts to bats and birds. As part of the USDA review of this project, a request was made to contact the USFWS to confirm that there were no changes to their previous comments. The IPAC letter was issued on August 21, 2023 and listed six federally protected species. A response was received from the USFWS on November 1, 2023 that there were no additional comments in regards to this project.

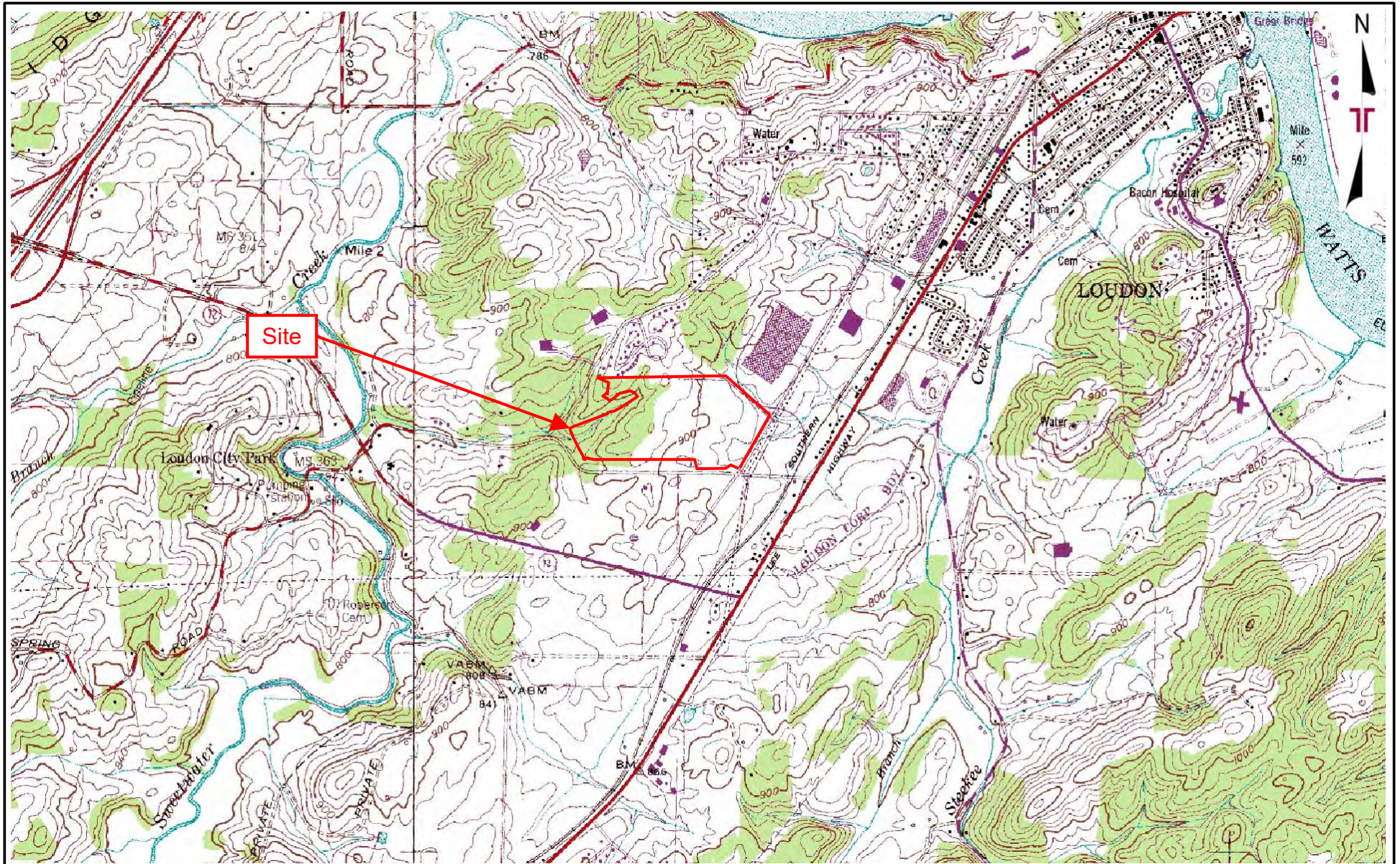
Agency responses for the project are included in Appendix D.

6.0 FINDINGS

Based on Terracon's review of the agency responses, potential suitable summer roosting habitat for the listed bat species is present at the site; and therefore, tree clearing activities at the site should occur between October 15th and March 31st. If tree clearing will be necessary outside the protective window, the USFWS recommends that acoustic and/or mist-netting surveys be conducted to determine the presence or absence of the above-listed bat species. If tree clearing is completed outside of the designated summer roosting and maternity season, it is not anticipated that the proposed project will have an adverse effect on the listed bat species. The USFWS also recommended clearing between October 15th and March 31st to minimize impacts on nesting birds.

The USFWS and TWRA recommend the development of a site-specific erosion control plan tailored that follows best management practices (BMPs) to minimize erosion and prevent debris deposition and sedimentation in the project area. If at any time during construction activities, evidence of any state or federally protected species is observed, construction activities should stop and the USFWS and TDEC should be contacted to re-evaluate the project.

Appendix A – Exhibits



TOPOGRAPHIC MAP IMAGE COURTESY OF THE
U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: PHILADELPHIA, TN
(1/1/1984)

DIAGRAM IS FOR GENERAL LOCATION
ONLY, AND IS NOT INTENDED FOR
CONSTRUCTION PURPOSES

Project Manager:
AMH
Drawn by:
RAM
Checked by:
AMH
Approved by:
DEW

Project No.
E2227159
Scale:
1"=2,000'
File Name:
N:\Projects\2022
Date:
January 2023



51 Lost Mound Drive, Suite 135 Chattanooga, TN 37406
PH. (423) 499-6111 FAX (423) 499-8099

Topographic Map

Alternus Energy America's Inc. - Solar Farm Project
Walking Horse
Roberson Spring Road and Maremont Parkway
Lenoir City, Loudon County, TN

Exhibit

1



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: AMH
 Drawn by: RAM
 Checked by: AMH
 Approved by: DEW

Project No. E2227159
 Scale: As Shown
 File Name: N:\Projects\2022
 Date: January 2023



51 Lost Mound Drive, Suite 135 Chattanooga, TN 37406
 PH. (423) 499-6111 FAX (423) 499-8099

Site Diagram

Alternus Energy America's Inc. - Solar Farm Project
 Walking Horse
 Roberson Spring Road and Maremont Parkway
 Lenoir City, Loudon County, TN

Exhibit

2

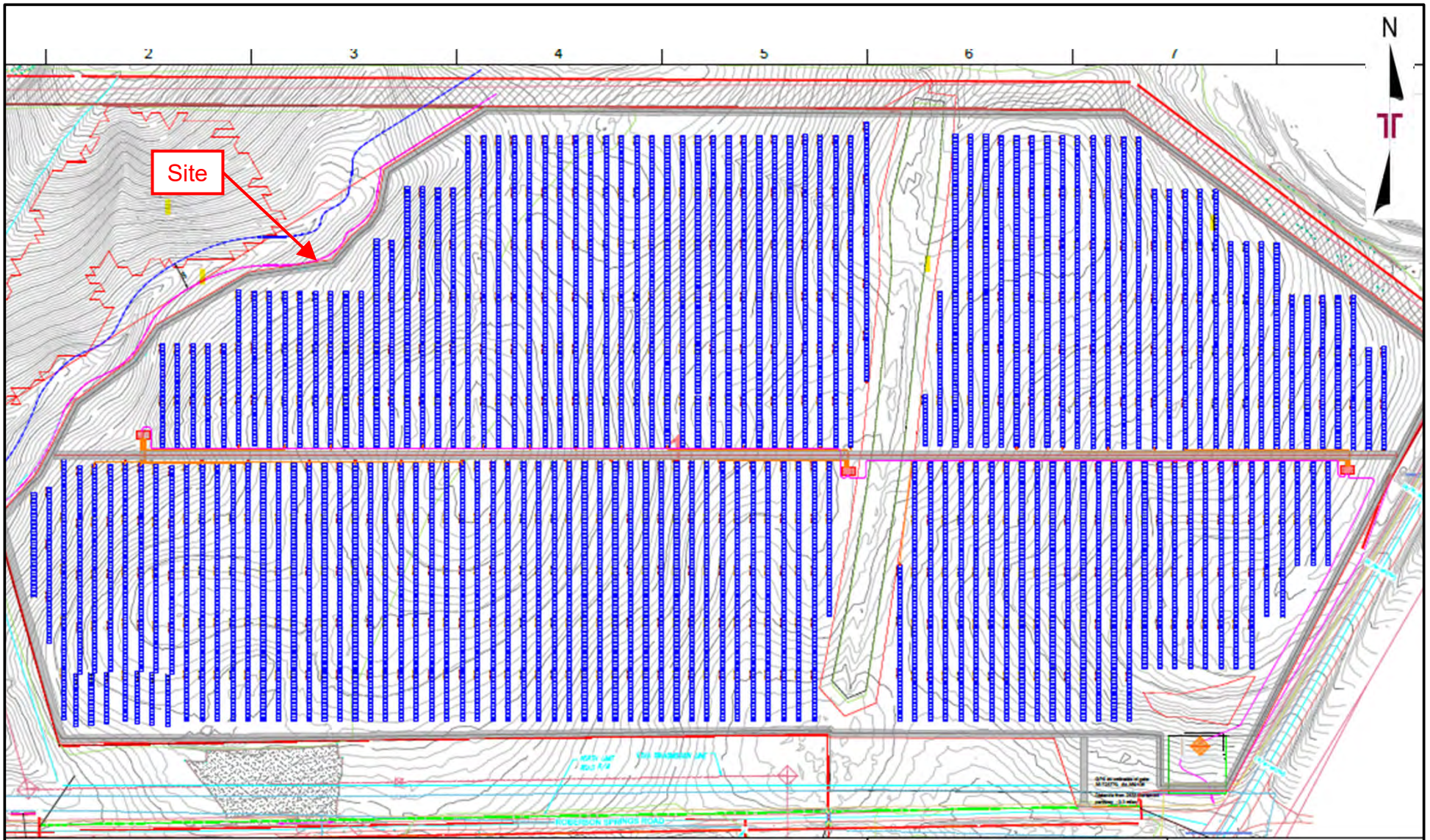


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	AMH	Project No.	E2227159
Drawn by:	RAM	Scale:	As Shown
Checked by:	AMH	File Name:	N:\Projects\2022
Approved by:	DEW	Date:	January 2023



51 Lost Mound Drive, Suite 135 Chattanooga, TN 37406
 PH. (423) 499-6111 FAX (423) 499-8099

Proposed Site Development Plan

Altenu Energy America's Inc. - Solar Farm Project
Walking Horse
 Roberson Spring Road and Maremont Parkway
 Lenoir City, Loudon County, TN

Exhibit

3

Appendix B – Site Photographs

Walking Horse Site

■ 1251 Roberson Spring Road Loudon, Loudon County, TN

Date Pictures Taken: January 24, 2023 ■ Terracon Project No. E2227159



Photo 1: View of the site looking to the north.



Photo 2: View of the site looking to the northwest.

Walking Horse Site

■ 1251 Roberson Spring Road Loudon, Loudon County, TN

Date Pictures Taken: January 24, 2023 ■ Terracon Project No. E2227159



Photo 3: View of the site looking to the southeast.



Photo 4: View of the site looking to the north.

Walking Horse Site

■ 1251 Roberson Spring Road Loudon, Loudon County, TN

Date Pictures Taken: January 24, 2023 ■ Terracon Project No. E2227159

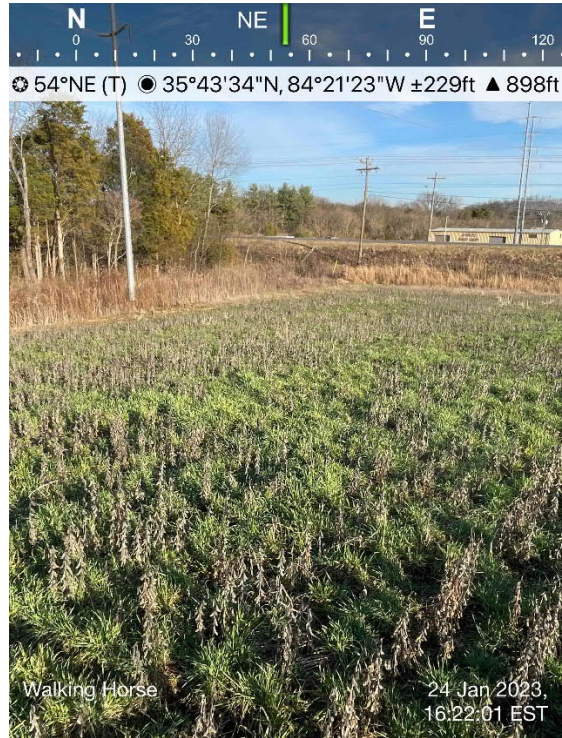


Photo 5: View of the site looking to the northeast.



Photo 6: View of the site looking to the southeast.

Appendix C – IPAC Report
TDEC T&E Species List for Loudon County



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Tennessee Ecological Services Field Office
446 Neal Street
Cookeville, TN 38501-4027
Phone: (931) 528-6481 Fax: (931) 528-7075

In Reply Refer To:
Project Code: 2023-0119445
Project Name: Walking Horse

August 21, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Tennessee Ecological Services Field Office
446 Neal Street
Cookeville, TN 38501-4027
(931) 528-6481

PROJECT SUMMARY

Project Code: 2023-0119445
Project Name: Walking Horse
Project Type: Power Gen - Solar
Project Description: Proposed solar farm
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@35.7253717,-84.3614536060339,14z>



Counties: Loudon County, Tennessee

ENDANGERED SPECIES ACT SPECIES

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Whooping Crane <i>Grus americana</i> Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non- Essential

CLAMS

NAME	STATUS
Orangefoot Pimpleback (pearlymussel) <i>Plethobasus cooperianus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1132	Endangered
Pink Mucket (pearlymussel) <i>Lampsilis abrupta</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7829	Endangered

SNAILS

NAME	STATUS
Anthony's Riversnail <i>Athearnia anthonyi</i> Population: U.S.A. (TN - specified portions of the French Broad and Holston Rivers; see 17.85(b)(1)) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4827	Experimental Population, Non-Essential
Anthony's Riversnail <i>Athearnia anthonyi</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4827	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.

2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p>	Breeds Sep 1 to Aug 31
<p>Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 15 to Aug 25
<p>Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 20 to Aug 20
<p>Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 1 to Jul 31
<p>Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 1 to Jul 31
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 10 to Sep 10

NAME	BREEDING SEASON
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>

- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- [R5UBH](#)
-

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Amanda Herrit
Address: 51 Lost Mound Dr, Suite 135
City: Chattanooga
State: TN
Zip: 37406
Email: amanda.herrit@terracon.com
Phone: 4233151449

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Agriculture

TDEC Threatened/Endangered Species List for Loudon County, TN

County	Type	Category	Scientific Name	Common Name	Fed. Status	State Status	Habitat	Wet Habitat Flag
Loudon	Vertebrate Animal	Amphibian	Cryptobranchus alleganiensis	Hellbender	--	E	Rocky, clear creeks and rivers with large shelter rocks.	Aquatic
Loudon	Vertebrate Animal	Fish	Cycleptus elongatus	Blue Sucker	--	T	Swift waters over firm substrates in big rivers.	Aquatic
Loudon	Vertebrate Animal	Fish	Percina burtoni	Blotchside Logperch	--	T	Habitat includes gravel runs and riffles of clear, small to medium rivers or large creeks.	
Loudon	Vascular Plant	Flowering Plant	Potamogeton amplifolius	Large-leaf Pondweed	--	T	Lakes And Streams	Aquatic
Loudon	Vascular Plant	Flowering Plant	Carex comosa	Bristly Sedge	--	T	Swamps	Possible
Loudon	Vertebrate Animal	Mammal	Myotis grisescens	Gray Myotis	LE	E	Cave obligate year-round; frequents forested areas; migratory.	Upland
Loudon	Invertebrate Animal	Mollusc	Plethobasus cooperianus	Orangefoot Pimpleback	LE, XN	E	Large rivers in sand-gravel-cobble substrates in riffles and shoals in deep flowing water; Cumberland & Tennessee river systems.	Aquatic
Loudon	Invertebrate Animal	Mollusc	Cyprogenia stegaria	Fanshell	LE, XN	E	Medium to large streams and rivers with coarse sand and gravel substrates; Cumberland and Tennessee river systems.	Aquatic
Loudon	Invertebrate Animal	Mollusc	Plethobasus cyphus	Sheepnose	LE	E	Large to medium-sized rivers, in riffles and coarse sand/gravel subst; TN & Cumb river systems incl KY Reservoir; W Uplands & Rim.	Aquatic
Loudon	Invertebrate Animal	Mollusc	Athearnia anthonyi	Anthony's Riversnail	LE, XN	E	Larger rivers and downstream stretches of lg creeks, on cobble/boulder substrates adj. riffles; portions of upper TN River basin.	Aquatic
Loudon	Invertebrate Animal	Mollusc	Lampsilis abrupta	Pink Mucket	LE	E	Generally a large river species, preferring sand-gravel or rocky substrates with mod-strong currents; Tennessee & Cumberland river systems.	Aquatic
Loudon	Invertebrate Animal	Mollusc	Obovaria retusa	Ring Pink	LE, XN	E	Large rivers in gravel and sand bars; Tennessee & Cumberland river watersheds; many historic locations currently inundated.	Aquatic
Loudon	Vertebrate Animal	Reptile	Pituophis melanoleucus melanoleucus	Northern Pinesnake	--	T	Well-drained sandy soils in pine/pine-oak woods; dry mountain ridges; E portions of west TN, E to lower elev of the Appalachians.	Upland

Appendix F – Agency Responses



STATE OF TENNESSEE

DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Natural Areas
Natural Heritage Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 2nd Floor
Nashville, Tennessee 37243
Phone 615/532-0431 Fax 615/532-0046

October 9, 2022

Amber Winter
BBJ Group, LLC
140 South Dearborn Street, Suite 1520
Chicago, Illinois 60603

Subject: Walking Horse Solar Development
Parcel No. 053 040 164.00: (35.72515°, -84.36190°)
Loudon County, TN
Rare Species Database Review

Dear Ms. Winter:

Thank you for your correspondence of 1 September 2022 requesting a rare species database review for the proposed solar development in Loudon County, Tennessee. The project area is bounded to the west by Carding Machine Road, to the south by Roberson Springs Road, and to the east by Maremont Pkwy.

Per your submittal:

BJ Group's client has requested preliminary assessment of the Project Area as they intend to develop an approximately 80-acre site as a solar farm. The Project Area currently appears as agricultural property, landscaped areas, and wooded areas.

We have reviewed the state's natural heritage database with regard to the project boundaries, and we find that no rare species have been observed previously within one mile of the project area.

Within four miles of the project area the following rare species have been reported:

Type	Scientific Name	Common Name	Global Rank	St. Rank	Fed. Prot.	St. Prot.	Habitat
Vascular Plant	<i>Aureolaria patula</i>	Spreading False-foxtail	G3	S3	--	S	Oak Woods and Edges
Vascular Plant	<i>Berberis canadensis</i>	American Barberry	G3G4	S2	--	S	Rocky Woods and River Bars

Type	Scientific Name	Common Name	Global Rank	St. Rank	Fed. Prot.	St. Prot.	Habitat
Invertebrate Animal	<i>Athearnia anthonyi</i>	Anthony's Riversnail	G1	S1	LE,XN	E	Larger rivers and downstream stretches of lg creeks, on cobble/boulder substrates adj. riffles; portions of upper TN River basin.
Invertebrate Animal	<i>Lampsilis abrupta</i>	Pink Mucket	G1G2	S2	LE	E	Generally a large river species, preferring sand-gravel or rocky substrates with mod-strong currents; Tennessee & Cumberland river systems.
Invertebrate Animal	<i>Plethobasus cooperianus</i>	Orangefoot Pimpleback	G1	S1	LE, XN	E	Large rivers in sand-gravel-cobble substrates in riffles and shoals in deep flowing water; Cumberland & Tennessee river systems.
Vertebrate Animal	<i>Percina tanasi</i>	Snail Darter	G2G3	S2S3	LT	T	Sand and gravel shoals of moderately flowing, vegetated, large creeks; upper Tennessee River watershed.
Animal Assemblage	Rookery	Heron Rookery	G5	SNR	--	Rare, Not State Listed	

The Division of Natural Areas - Natural Heritage Program has reviewed the location of the proposed project workspace with respect to rare plant species. Based on the habitat within the project, we do not anticipate any impacts to occurrences of rare, threatened, or endangered plant species from this project.

We ask that you coordinate this project with the Tennessee Wildlife Resources Agency (Region 4, Rob Lindbom, dennis.lindbom@tn.gov) to ensure that legal requirements for protection of state listed rare animals are addressed. Additionally, we ask that you contact the U.S. Fish and Wildlife Service Field Office, Cookeville, Tennessee (931-525-4970) for comments regarding federally listed species. Please ensure that best management practices to address erosion and sediment are implemented and maintained during construction activities. Note that the [General Aquatic Resource Alteration Permit](#) states that “use of monofilament-type erosion control netting or blanket is prohibited in the stream channel, stream banks, or any disturbed riparian areas within 30 feet of top of bank.” Where necessary and feasible, we encourage use of biodegradable netting under the CGP (Construction General Stormwater Permit) as well.

Thank you for considering Tennessee’s rare species throughout the planning of this project. Should you have any questions, please do not hesitate to contact me at 615-532-4799 or dillon.blankenship@tn.gov.

Sincerely,

Dillon

Dillon Blankenship | Environmental Review Coordinator
Tennessee Natural Heritage Program



TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
5107 EDMONDSON PIKE
NASHVILLE, TENNESSEE 37211

February 3, 2023

Robin Murrell
Engineering Assistant I Environmental
51 Lost Mound Drive, Suite 135 I
Chattanooga, TN 37406

RE: Walking Horse Site project. The project is located within Lenoir City, Loudon County, Tennessee. (Latitude 35.72531389°N and longitude -84.36036667°W).

Dear Ms. Murrell,

The Tennessee Wildlife Resource Agency has reviewed the above referenced project. It is our understanding the applicant proposes a solar farm to be built in the existing agricultural fields.

It is also our understanding that stream and wetland mitigation requirements, as set forth by the Tennessee Department of Environment & Conservation and the U.S. Army Corp of Engineers, will be followed as well as any recommendations from the US Fish and Wildlife Service regarding federally listed species.

With these understandings, the TWRA has no additional specie requirements or objections to the project, as the implementation of best management practices will be sufficient to reduce potential impacts to fish and wildlife associated with this project.

Thank you for the opportunity to review and comment on this proposed project. If you have further questions regarding this matter; please contact me at (615) 913-1560.

Sincerely,

Dennis R Lindbom

Dennis Lindbom
Aquatic Habitat Protection Biologist

The State of Tennessee

AN EQUAL OPPORTUNITY, EQUAL ACCESS, AFFIRMATIVE ACTION EMPLOYER

Herrit, Amanda M

From: Pelren, David <david_pelren@fws.gov>
Sent: Friday, March 17, 2023 8:39 AM
To: Herrit, Amanda M
Cc: Tennessee ES, FWS; Sikula, Nicole R
Subject: FWS #2023-0040349 Walking Horse solar project site Lenoir City

Follow Up Flag: Follow up
Flag Status: Flagged

Ms. Amanda Herrit
Senior Environmental Scientist
Terracon

Ms. Herrit –

Thank you for coordinating with us about a proposed solar power generation project located at Lenoir City, Loudon County, Tennessee (FWS #2023-0040349, Terracon #E2227159). This action would involve a 52-acre tract (approximately 18 acres of which is forested), and we understand that the facility would be constructed exclusively within existing agricultural fields. Information about federally listed species that are located in the general vicinity of the project area was generated during a search of the Fish and Wildlife Service's Information for Planning and Consultation system. Those species are: the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), orangefoot pimpleback (*Plethobasus cooperianus*), pink mucket (*Lampsilis abrupta*), and Anthony's riversnail (*Athearnia anthonyi*). You have requested comments relative to the potential for environmental impacts, including those to threatened and endangered species.

Based on the project site location and habitat, we are not aware of any federally listed species that are expected to occupy this project's anticipated area of impact. The project proponent should re-coordinate with us if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

Note that the tricolored bat was proposed for federal listing in accordance with sections 3(6) and 4(a)(1) of the Endangered Species Act (ESA) of 1973, as amended, on September 14, 2022. No designated critical habitat has been proposed at this time. While a proposed species is not afforded protection under the ESA, there is a prohibition against jeopardy of its continued existence. The listing decision for this species should be announced within 12 months of the date the proposed rule was published. If the tricolored bat is listed, the prohibition against taking a listed species under section 9 of the ESA becomes effective 30 days later, regardless of a proposed action's stage of completion. At this time, the project proponent should determine if the action is likely to jeopardize the continued existence of this species and confer with our office only if jeopardy may occur. If the proposed action will not be complete should the tricolored bat be listed and it may result in effects to the species after the effective date of the final listing rule, the project proponent would need to coordinate with our office at that time in regard to potential impacts. In any case, although not required in accordance with the Endangered Species Act, we recommend that any tree removal be conducted during the period of October 15 through March 31 to the greatest extent feasible in order to minimize impacts to bats in general and birds that may use the site for nesting.

Feel free to contact me with any questions.

David Pelren
Fish and Wildlife Biologist
Ecological Services
U.S. Fish and Wildlife Service
446 Neal St.
Cookeville, TN 38501
office phone: 931-525-4974
mobile phone: 931-261-5844

NOTE: This email correspondence and any attachments to and from this sender are subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

Environmental Review Report

Project Information

Report Generation Date: 10/5/2023 2:15 pm
Project Name: Alternus Energy - Walking Horse
User-defined Project ID: E2227159
ERT Project ID: TNNHP_ERT_267
Project Size: 59.29 acres
County(s): Loudon
State: TN
TN Physiographic Province: Ridge And Valley
Watershed(s) HUC 8:

- 06010201
- 06010201

Watershed(s) HUC 12:

- 060102010301 (Sweetwater Creek)
- 060102010302 (Tennessee River-Town Creek)

Latitude, Longitude (Decimal Degrees): 35.725476 / -84.361471

Contact Information

Organization: Terracon
Name: Morgan Leek
Phone: 423-602-2115
Email: morgan.leek@terracon.com
Address: 51 Lost Mound Drive, Chattanooga, TN 37406

Project Description

The proposed construction of a solar farm at the site located northwest of the intersection of Roberson Springs Road and Maremont Parkway in Loudon, Loudon County, Tennessee. The project site consists of an approximately 53.24-acre tract of land (Parent Parcel ID No.: 040 164.00). The location of the project site is shown on the attached Topographic Map, Exhibit 1 (USGS Philadelphia, Tennessee 7.5' quadrangle map and Loudon, Tennessee 7.5' quadrangle map) and the center of the project site is located at approximately latitude 35.725298 °N and longitude 84.361012 °W using WGS84 datum.

This report is based on documented occurrences in the vicinity of your project area. As all areas of the state have not been surveyed for rare species, this report only serves as guidance as to what rare species could occur onsite.

The Tennessee Department of Environment and Conservation - Division of Natural Areas (TDEC-DNA) currently tracks over 1,100 rare and endangered plant and animal species as well as hundreds of conservation sites across the state. The Division and other scientists collect this information through ongoing research and field investigations and from scientific literature, museum collections, and other sources. We continually analyze and update the database. The data are not only important in identifying areas of ecological significance for conservation and restoration activities, but are also useful in the environmental review process.

Additional Information about the TDEC Division of Natural Areas can be found here:

<https://www.tn.gov/environment/program-areas/na-natural-areas.html>

The following report and agency comments are based on a query of the TDEC-DNA rare species database and associated geographic information with regard to the project information you submitted through the Environmental Review Tool.

Please note that although TDEC-DNA manages data for state and federally listed plant and animal species in Tennessee, **the Tennessee Wildlife Resources Agency (TWRA) has legal authority over wildlife** and **the U.S. Fish and Wildlife Service (USFWS) has legal jurisdiction over all federally listed species**. Furthermore, both agencies may possess additional data of which we are unaware or have additional concerns not addressed herein. TDEC Division of Water Resources (TDEC-DWR) is the state authority for all Waters of the State. As such, we ask that you coordinate your project with these entities (where appropriate) and any other relevant federal, state, or local authorities beyond your coordination with TDEC-DNA. We encourage you to share this report from the TDEC-DNA rare species database when coordinating with other agencies.

Thank you for considering Tennessee's rare species throughout the planning of this project. Should you have any questions, please do not hesitate to contact our office at 615-532-4799 or environmental.review@tn.gov.

Managed Areas within 1 Mile of the Project Area

Area Name	Manager
-----------	---------

Rare Species Occurrences within 1 Mile of the Project Area

Type	Scientific Name	Common Name	Global Rank	State Rank	Fed. Protection	State Protection	Habitat
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Rare Species Occurrences within 4 Miles of the Project Area

Type	Scientific Name	Common Name	Global Rank	State Rank	Fed. Protection	State Protection	Habitat
Vascular Plant	<i>Aureolaria patula</i>	Spreading False-foxglove	G3	S3	--	S	Oak Woods And Edges
Vascular Plant	<i>Berberis canadensis</i>	American Barberry	G3G4	S2	--	S	Rocky Woods And River Bars
Invertebrate Animal	<i>Atheurnia anthonyi</i>	Anthony's Riversnail	G1	S1	LE,XN	E	Larger rivers and downstream stretches of lg creeks, on cobble/boulder substrates adj. riffles; portions of upper TN River basin.
Invertebrate Animal	<i>Lampsilis abrupta</i>	Pink Mucket	G1G2	S2	LE	E	Generally a large river species, preferring sand-gravel or rocky substrates with mod-strong currents; Tennessee & Cumberland river systems.



Invertebrate Animal	Plethobasus cooperianus	Orangefoot Pimpleback	G1	S1	LE, XN	E	Large rivers in sand-gravel-cobble substrates in riffles and shoals in deep flowing water; Cumberland & Tennessee river systems.
Vertebrate Animal	Percina tanasi	Snail Darter	G2G3	S2S3	LT	T	Sand and gravel shoals of moderately flowing, vegetated, large creeks; upper Tennessee River watershed.
Animal Assemblage	Rookery	Heron Rookery	G5	SNR	--	Rare, Not State Listed	

You can consult the TN Rare Plant List and the TN Rare Animal List at the Natural Heritage Inventory Program web page: <https://www.tn.gov/environment/program-areas/na-natural-areas/na-natural-heritage-inventory-program.html>

Additional information regarding rare species can be found in NatureServe Explorer: <https://explorer.natureserve.org>

Additional information regarding federally listed species can be found at USFWS ECOS: <https://ecos.fws.gov/ecp>

Full details regarding global/state ranks and fed/state protection can be found here: https://www.tn.gov/content/dam/tn/environment/natural-areas/documents/na_status-ranks.pdf



User-Submitted Responses

Project Type:	Solar Development
Will this project require damage to or destruction of native vegetation outside of a maintained right-of-way, manicured/mowed lawn, or garden?:	Yes
Will this project impact wetlands or jurisdictional streams as defined by TDEC Division of Water Resources?:	No
Is any portion of the project area on land owned by the State of Tennessee or the U.S. Federal Government?:	No
Will this review be used for certification in the Tennessee Department of Economic and Community Development's Select TN Certified Sites Program?:	No
Is this project publicly-funded or supported by a publicly-funded grant?:	Yes
Is this environmental review being requested to fulfill requirements of a TDEC permit application?:	Yes

COMMENTS REGARDING USER-SUBMITTED RESPONSES

TDEC-DNA does not have any comments regarding the User-Submitted Responses for this project. See comments regarding Managed Areas and Rare Plant Species in the sections below.

COMMENTS REGARDING NEARBY MANAGED AREAS

Our query does not show that any managed conservation areas are in the proposed project area. That said, it is your responsibility to ensure any such areas that may be impacted by your project are correctly identified and that appropriate coordination is conducted. The TN property viewer can be accessed here: <https://tnmap.tn.gov/assessment/>

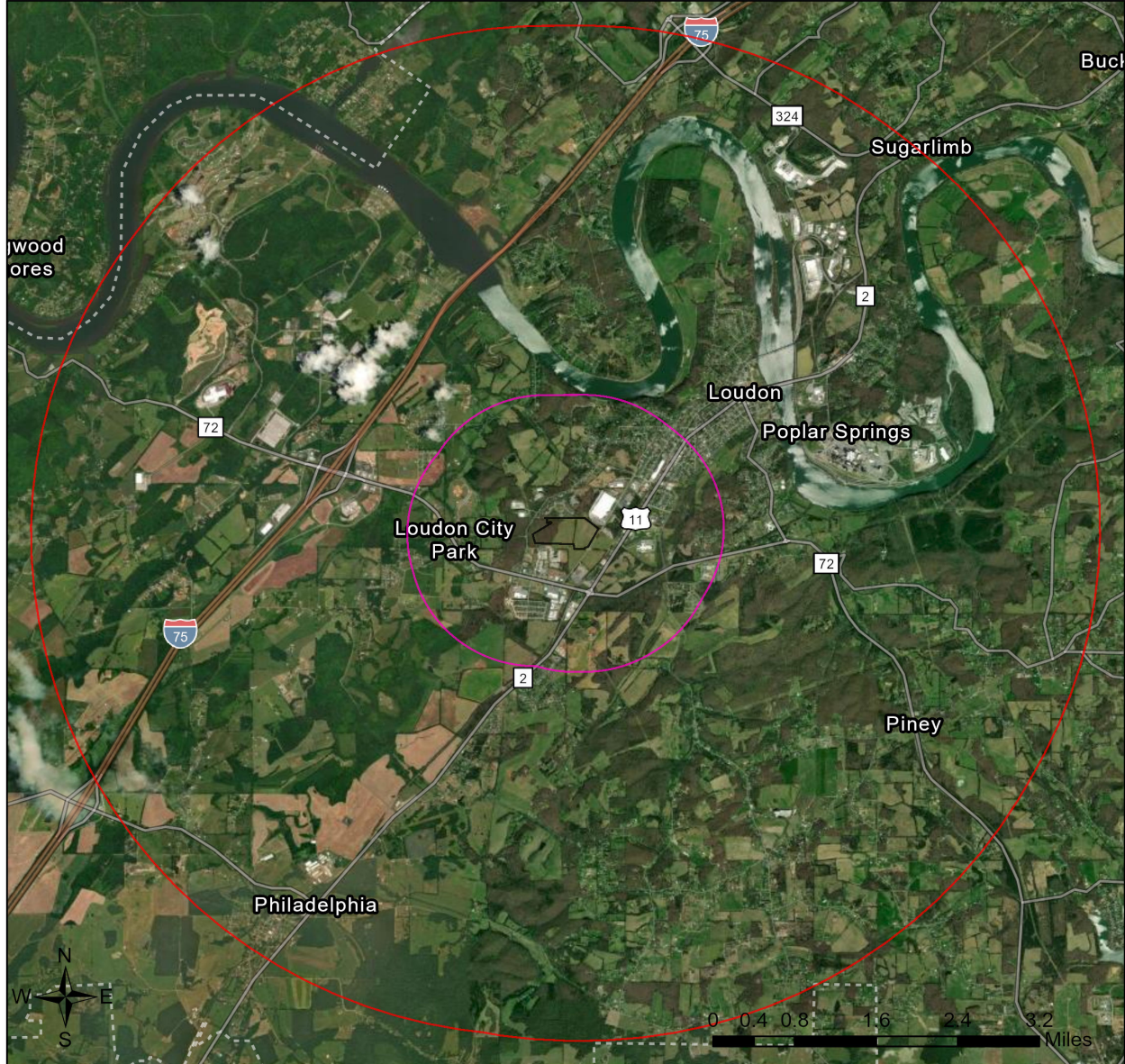
COMMENTS REGARDING POTENTIAL IMPACTS TO RARE PLANT SPECIES

Where suitable habitat is present any of the rare plant species known from within four miles of the



project area may occur at the site. If suitable habitat is present, an appropriately timed survey by a qualified biologist would be necessary to identify and avoid impacting rare plant species at the site. Appendix A and Appendix B are provided at the end of this report to assist with addressing this comment.

Alternus Energy - Walking Horse
 Aerial Image Basemap With Locator Map



- Project Boundary
- Buffered Project Boundary 4 Mile
- Buffered Project Boundary 1 Mile



Project Size (acres): 59.29
 Lat/Long (DD): 35.7255 / -84.3615
 Lat/Long (DMS): 35° 43' 31.7152" N / 84° 21' 41.2965" W
 County(s): LOUDON
 Watershed (HUC12): 060102010301; 060102010302
 USGS Quad(s): LOUDON

Earthstar Geographics
 Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA
 Esri, HERE, Garmin, FAO, NOAA, USGS, EPA

Alternus Energy - Walking Horse
 Web Map As Submitted By User



- Water Lines
- Scenic Rivers
- Managed Areas
- Buffered Project Boundary 100 Meters
- Project Boundary



Contacts

USFWS

If your project review list includes federally listed plant or animal species, and you would like a review from the U.S. Fish and Wildlife Service, please follow the instructions for submitting a review request provided at <https://www.fws.gov/media/tn-es-project-review-requests-guidance>.

TWRA

Environmental reviews are coordinated by TWRA via regional habitat protection biologists. You can request an environmental review from TWRA by using the [TWRA Environmental Review Request Form \(arcgis.com\)](#). If you have additional questions or need to follow up on a request, the appropriate TWRA contact for this project is listed below. When project areas include two TWRA regions, both staff members are listed.

Rob Lindbom

TWRA Region for this Project:	Region 4
TWRA Region Contact for this Project:	Rob Lindbom
Address:	3030 Wildlife Way, Morristown, TN 37814
Email Address:	Dennis.Lindbom@tn.gov

TDEC Environmental Field Office

The nearest Environmental Field Office (EFO) should be your starting point for any environmental question. Each EFO is staffed with technical staff who are available to assist with permitting needs, outreach functions, and general guidance. If water resources - including streams, wetlands, or riparian areas - are to be impacted by the project, you can also coordinate with TDEC Division of Water Resources via the appropriate Environmental Field Office or Permitting Unit.

KNOXVILLE

TDEC Environmental Field Office for this Project:	KNOXVILLE
Address:	3711 Middlebrook Pike, Knoxville, TN 37921
Phone number:	(888) 891-8332

Appendix A: TDEC-DNA ERT Self-Certification (Rare Plant Species)

For individuals or agencies that wish to document their use of the ERT, this self-certification can help with using the ERT Report to evaluate potential impacts to rare plant species. If the ERT Report section Comments Regarding Potential Impacts to Rare Plant Species indicates that “One or more rare plant species or rare ecological communities have been documented within the immediate vicinity of the project boundary...” we suggest contacting TDEC Division of Natural Areas for further consultation via the method described in the ERT Report prior to using this self-certification.

STEP 1

In consultation with TDEC-Division of Natural Areas via the ERT Report, I have reviewed the rare species documented within 1- and 4- miles of the project area and compared their habitat requirements to the habitat present at the project site.

Based on my survey of the project area or a survey by a qualified biologist (SELECT ONE):

Habitat for rare plant species known from within 4-miles of the project area IS present in the project area. (Go to STEP 2)

OR

Habitat for rare plant species known from within 4-miles of the project area IS NOT present in the project area. (Skip to STEP 4)

STEP 2

Where suitable habitat is present for rare plant species known from within 4 miles of the project area, appropriately timed surveys were conducted for the rare plant species known from those habitat types as informed by the ERT Report, the TN Rare Plant list, and/or other botanical resources – (see APPENDIX B for Example Rare Plant Survey Documentation). Following our appropriately timed surveys and documentation of those surveys, we determined (SELECT ONE):

Rare plant species **ARE** present in the project area. (GO TO STEP 3)

OR

Rare plant species **ARE NOT** present in the project area. (SKIP TO STEP 4)



STEP 3

Following observation of rare plant species at the site, we began further consultation with TDEC Division of Natural Areas. [Send survey results and pictures of rare plant species to TDEC-DNA at environmental.review@tn.gov, making sure to include the ERT Project ID in the subject line]. I have attached correspondence with TDEC-DNA regarding additional consultation to this form. (GO TO STEP 4)

STEP 4

Following consultation with TDEC-Division of Natural Areas through the ERT and due diligence in the form of a habitat assessment and/or appropriately timed surveys for rare plant species, I have determined that this project is unlikely to impact rare plant species **OR** after identifying rare plant species at the site, I have notified TDEC-DNA that state or federally listed threatened or endangered species are present.

NAME: _____
COMPANY/ORGANIZATION: _____
SIGNATURE: _____
DATE: _____

Appendix B: Example Rare Plant Survey Documentation

All surveys...

Date of survey

Names of surveyors

Total effort (hours)

Map of total project area (with annotations identifying survey areas within project area)

Representative photos of areas surveyed (with latitude/longitude and direction for each)

When rare plant species are identified (repeat for each species)...

Photos of any rare species identified, along with the following information for each photo (or photo series):

Latitude and longitude of observation(s) (decimal degrees)

Multiple points or the centroid of a large population can be used if individuals are widely dispersed

Notes regarding extent of population

e.g. phenology, number of individuals, quality of habitat, extent of area where species is present

Survey Certification

One or more **appropriately timed** surveys were conducted in a study area where suitable habitat was present for rare plant species known from within four miles. Select the result of your survey(s) below.

____ **Result 1:** The survey results suggest that rare plant species ARE NOT present at the site.

Sign below and use this documentation to support your TDEC-DNA ERT Self-Certification for rare plant species.

NAME: _____

COMPANY/ORGANIZATION: _____

SIGNATURE: _____

DATE: _____

OR

____ **Result 2:** The surveys identified rare plant species at the site (continued on next page).



TDEC-DNA welcomes the opportunity to review the results of rare species surveys where rare species have been previously documented and/or new occurrences of rare species are identified. When a survey identifies rare plant species at a site, you may submit your survey documentation to TDEC Division of Natural Areas via email at environmental.review@tn.gov making sure to include your ERT Project ID in the subject line.



TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
5107 EDMONDSON PIKE
NASHVILLE, TENNESSEE 37211

October 11, 2023

Alternus Energy - Walking Horse
Solar Development Loudon County

The Tennessee Wildlife Resource Agency has reviewed the above referenced project. It is our understanding the applicant is proposing construction of a solar farm at the site located northwest of the intersection of Roberson Springs Road and Maremont Parkway in Loudon, Loudon County, Tennessee. The project site consists of an approximately 53.24-acre tract of land (Parent Parcel ID No.: 040 164.00). The location of the project is located at approximately latitude 35.725298 °N and longitude 84.361012 °W.

It is also our understanding that stream and wetland mitigation requirements, as set forth by the Tennessee Department of Environment & Conservation and the U.S. Army Corp of Engineers, will be followed as well as any recommendations from the US Fish and Wildlife Service regarding federally listed species.

With these understandings, the TWRA has no additional specie requirements or objections to the project, as the implementation of best management practices will be sufficient to reduce potential impacts to fish and wildlife associated with this project.

Thank you for the opportunity to review and comment on this proposed project. If you have further questions regarding this matter; please contact me at (615) 913-1560.

Sincerely,

Dennis Lindbom

Dennis Lindbom
Aquatic Habitat Protection Biologist

Cc: Jason Miller: Assistant Chief, Biodiversity Division, Aquatics Program

The State of Tennessee

AN EQUAL OPPORTUNITY, EQUAL ACCESS, AFFIRMATIVE ACTION EMPLOYER

Herrit, Amanda M

From: Sykes, Robbie <robbie_sykes@fws.gov>
Sent: Wednesday, November 1, 2023 6:14 PM
To: Herrit, Amanda M; Tennessee ES, FWS
Cc: Leek, Morgan
Subject: FWS #2023-0119445. Terracon # E2227159 - Proposed Walking Horse Solar Farm in Loudon Co, TN

Ms. Herrit,

Thank you for coordinating with us about a proposed solar power generation project located northwest of the intersection of Robertson Springs Road and Maremont Parkway in Loudon County, Tennessee (FWS #2023-00119445, Terracon #E2227159). This action would involve a 53.24-acre tract. Information about federally listed species that are located in the general vicinity of the project area was generated during a search of the Fish and Wildlife Service's Information for Planning and Consultation system. Those species are: the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), orangefoot pimpleback (*Plethobasus cooperianus*), pink mucket (*Lampsilis abrupta*), Whooping crane (*Grus americana*), and Anthony's riversnail (*Athearnia anthonyi*). You have requested comments relative to the potential for environmental impacts, including those to threatened and endangered species.

Based on the project site location and habitat, we are not aware of any federally listed species that are expected to occupy this project's anticipated area of impact. The project proponent should re-coordinate with us if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

Note that the tricolored bat was proposed for federal listing in accordance with sections 3(6) and 4(a)(1) of the Endangered Species Act (ESA) of 1973, as amended, on September 14, 2022. No designated critical habitat has been proposed at this time. While a proposed species is not afforded protection under the ESA, there is a prohibition against jeopardy of its continued existence. The listing decision for this species should be announced within 12 months of the date the proposed rule was published. If the tricolored bat is listed, the prohibition against taking a listed species under section 9 of the ESA becomes effective 30 days later, regardless of a proposed action's stage of completion. At this time, the project proponent should determine if the action is likely to jeopardize the continued existence of this species and confer with our office only if jeopardy may occur. If the proposed action will not be complete should the tricolored bat be listed and it may result in effects to the species after the effective date of the final listing rule, the project proponent would need to coordinate with our office at that time in regard to potential impacts. In any case, although not required in accordance with the Endangered Species Act, we recommend that any tree removal be conducted during the period of October 15 through March 31 to the greatest extent feasible in order to minimize impacts to bats in general and birds that may use the site for nesting.

Feel free to contact me with any questions.

Sincerely,

Robbie Sykes
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
446 Neal Street



United States Department of Agriculture

January 26, 2024

Amanda Herrit
Terracon
51 Lost Mound Drive, Suite 135
Chattanooga, TN 37406

Project, Walking Horse Solar Project, Loudon County, TN

Amanda,

The submitted Walking Horse Solar Project does contain prime farmland and for this reason a Farmland Protection Policy Act evaluation was completed. The attached CPA-1006 form has been processed through Part V per Code of Federal Regulations 7 CFR 657. In accordance with policy, please return a copy of the form to tnhawc@usda.gov upon completion of Parts VI and VII.

For your reference, NRCS policy and procedures on prime and unique farmlands are published in the Code of Federal Regulations 7 CFR 657.

The website is: <https://www.ecfr.gov/current/title-7/subtitle-B/chapter-VI/subchapter-F/part-657?toc=1>

Please let me know if you have any questions.

Sincerely,

**AARON
FRIEND** Digitally signed by
AARON FRIEND
Date: 2024.01.26
15:27:43 -06'00'

Aaron Friend
State Soil Scientist - TN
USDA-NRCS

Natural Resources Conservation Service
801 Broadway, 675 U.S. Courthouse
Nashville, Tennessee 37203
Voice (615) 277-2531 Fax (855) 591-1284
USDA is an equal opportunity provider, employer, and lender.

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request			
Name of Project		Federal Agency Involved			
Proposed Land Use		County and State			
PART II (To be completed by NRCS)		Date Request Received By NRCS		Person Completing Form:	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>		YES <input type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %			
Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site					
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide Important or Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)					
PART VI (To be completed by Federal Agency) Site Assessment Criteria <i>(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i>		Maximum Points	Site A	Site B	Site C
1. Area In Non-urban Use		(15)			
2. Perimeter In Non-urban Use		(10)			
3. Percent Of Site Being Farmed		(20)			
4. Protection Provided By State and Local Government		(20)			
5. Distance From Urban Built-up Area		(15)			
6. Distance To Urban Support Services		(15)			
7. Size Of Present Farm Unit Compared To Average		(10)			
8. Creation Of Non-farmable Farmland		(10)			
9. Availability Of Farm Support Services		(5)			
10. On-Farm Investments		(20)			
11. Effects Of Conversion On Farm Support Services		(10)			
12. Compatibility With Existing Agricultural Use		(10)			
TOTAL SITE ASSESSMENT POINTS		160			
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100			
Total Site Assessment (From Part VI above or local site assessment)		160			
TOTAL POINTS (Total of above 2 lines)		260			
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>			
Reason For Selection:					
Name of Federal agency representative completing this form:					Date:

(See Instructions on reverse side)

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, <http://fppa.nrcs.usda.gov/lesa/>.
- Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s) of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.
- Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

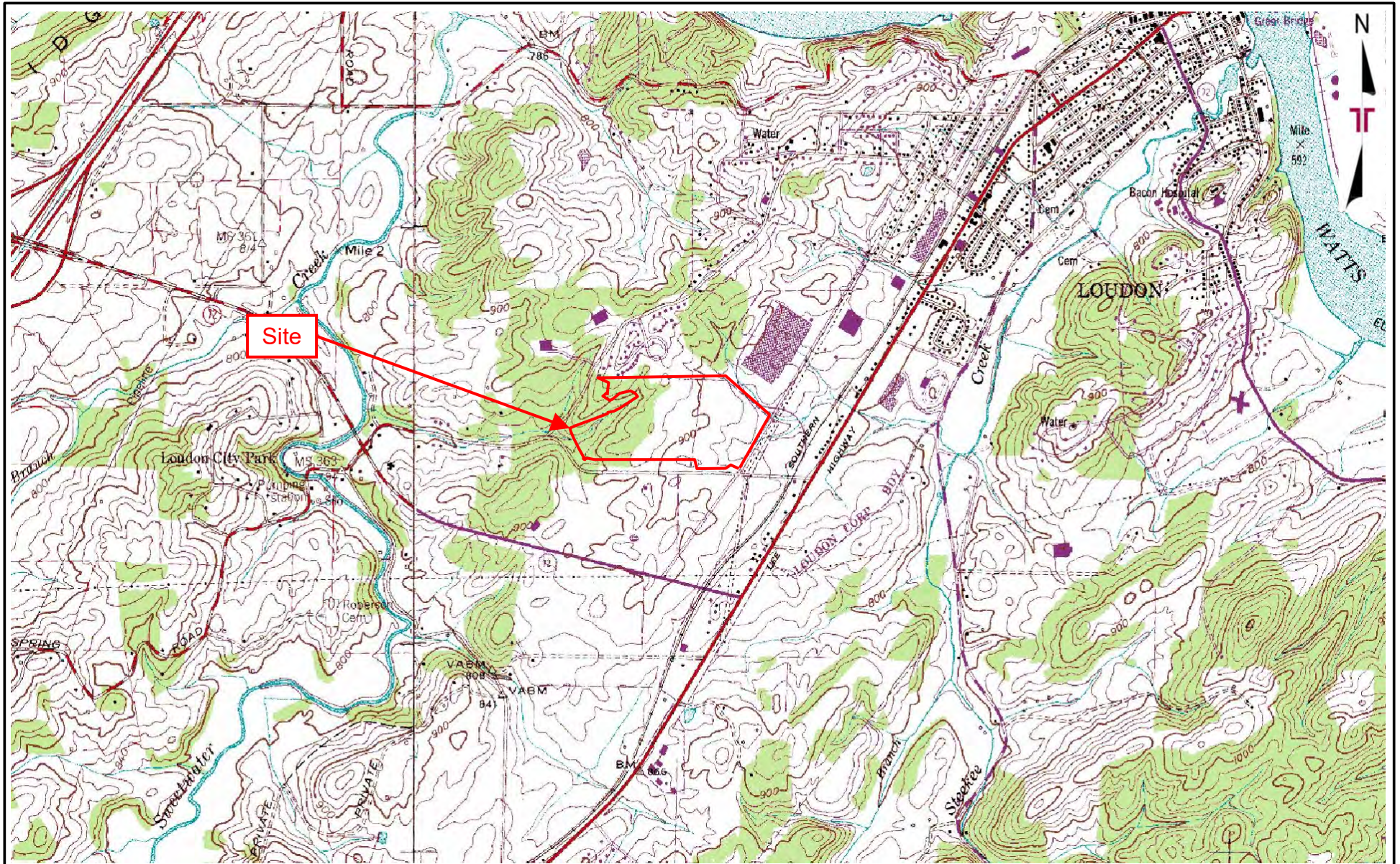
Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.

Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.



TOPOGRAPHIC MAP IMAGE COURTESY OF THE
U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: PHILADELPHIA, TN
(1/1/1984)

DIAGRAM IS FOR GENERAL LOCATION
ONLY, AND IS NOT INTENDED FOR
CONSTRUCTION PURPOSES

Project Manager:
AMH
Drawn by:
RAM
Checked by:
AMH
Approved by:
DEW

Project No.
E2227159
Scale:
1"=2,000'
File Name:
N:\Projects\2022
Date:
January 2023



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PH. (423) 499-6111 FAX (423) 499-8099

Topographic Map

Alternus Energy America's Inc. - Solar Farm Project
Walking Horse
Roberson Spring Road and Maremont Parkway
Loudon, Loudon County, TN

Exhibit

1



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: AMH
 Drawn by: RAM
 Checked by: AMH
 Approved by: DEW

Project No. E2227159
 Scale: As Shown
 File Name: N:\Projects\2022
 Date: January 2023



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Site Diagram

Alternus Energy America's Inc. - Solar Farm Project
 Walking Horse
 Roberson Spring Road and Maremont Parkway
 Loudon, Loudon County, TN

Exhibit

2

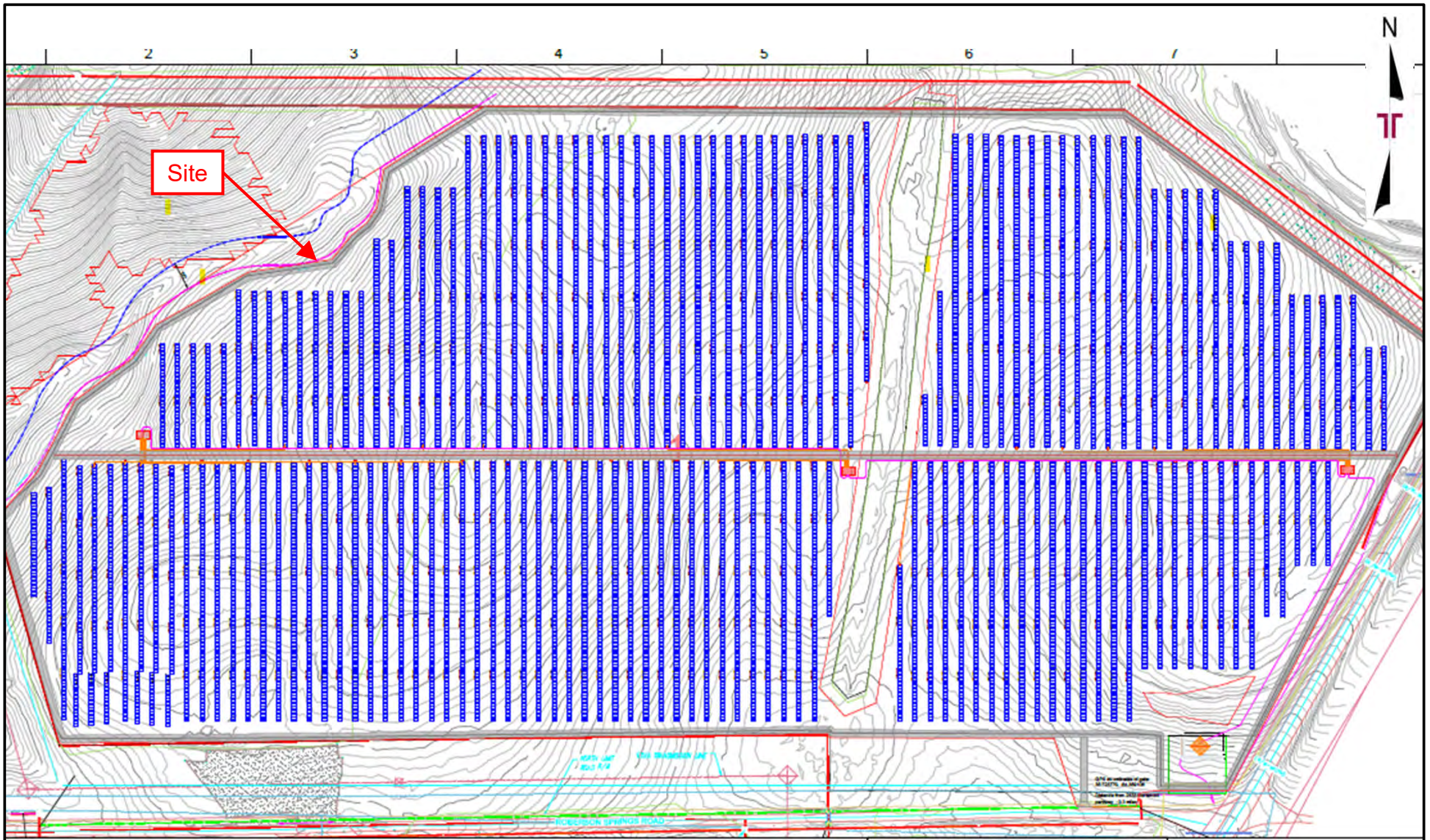


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	AMH	Project No.	E2227159
Drawn by:	RAM	Scale:	As Shown
Checked by:	AMH	File Name:	N:\Projects\2022
Approved by:	DEW	Date:	January 2023



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Proposed Site Development Plan
Alternus Energy America's Inc. - Solar Farm Project
Walking Horse
Roberson Spring Road and Maremont Parkway
Loudon, Loudon County, TN

Exhibit
3



MAP LEGEND

- Area of Interest (AOI)**
 - Area of Interest (AOI)
- Soils**
 - Soil Map Unit Polygons
 - Soil Map Unit Lines
 - Soil Map Unit Points
- Special Point Features**
 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Perennial Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Water Features**
 - Streams and Canals
- Transportation**
 - Rails
 - Interstate Highways
 - US Routes
 - Major Road
 - Local Roads
- Background**
 - Aerial Photography
- Other**
 - Spill Area
 - Stony Spot
 - Very Stony Spot
 - Wet Spot
 - Other
 - Special Line Features

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DcB2	Decatur silty clay loam, eroded gently sloping phase	10.3	16.5%
DcC2	Decatur silty clay loam, 5 to 12 percent slopes, eroded	15.1	24.2%
DcD3	Decatur silty clay loam, 12 to 20 percent slopes, severely eroded	1.1	1.7%
DeC2	Dewey silty clay loam, 6 to 15 percent slopes, eroded	7.0	11.2%
DeD2	Dewey silty clay loam, 15 to 25 percent slopes, eroded	1.9	3.0%
Em	Emory silt loam, 0 to 4 percent slopes, occasionally flooded	3.5	5.6%
FcC	Fullerton gravelly silt loam, 5 to 12 percent slopes	0.0	0.1%
FsC	Fullerton silt loam, sloping phase (Dewey)	9.4	15.0%
FsD	Fullerton silt loam, moderately steep phase (Dewey)	8.5	13.6%
uEdB	Etowah-Dewey complex, 2 to 6 percent slopes	2.1	3.4%
uEdC	Etowah-Dewey complex, 6 to 12 percent slopes	1.8	2.9%
WfC	Waynesboro loam, 6 to 15 percent slopes	1.6	2.6%
Totals for Area of Interest		62.5	100.0%

Map Scale: 1:4,670 if printed on A landscape (11" x 8.5") sheet.
 0 50 100 200 300 Meters
 0 200 400 800 1200 Feet
 Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

USDA Natural Resources Conservation Service

Web Soil Survey National Cooperative Soil Survey

SOILS MAP COURTESY OF USDA
 WEB SOIL SURVEY 2-7-23
 DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	AMH	Project No.	E2227159
Drawn by:	RAM	Scale:	As Shown
Checked by:	AMH	File Name:	N:\Projects\2022
Approved by:	DEW	Date:	February 2023

Terracon
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Web Soil Survey Map
 Alternus Energy America's Inc. - Solar Farm Project
Walking Horse
 Roberson Spring Road and Maremont Parkway
 Loudon, Loudon County, TN

Exhibit
4

National Flood Hazard Layer FIRMette



84°22'2"W 35°43'46"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000 84°21'24" W 35°43'17" N
 Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes, Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/7/2023 at 1:05 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	AMH	Project No.	E2227159
Drawn by:	RAM	Scale:	As Shown
Checked by:	AMH	File Name:	N:\Projects\2022
Approved by:	DEW	Date:	February 2023



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National Flood Hazard Map

Alternus Energy America's Inc. - Solar Farm Project
 Walking Horse
 Roberson Spring Road and Maremont Parkway
 Loudon, Loudon County, TN

Exhibit

5

Herrit, Amanda M

From: Friend, Aaron - FPAC-NRCS, TN <aaron.friend@usda.gov>
Sent: Friday, January 26, 2024 4:39 PM
To: Herrit, Amanda M
Cc: Rohit Garg; Eoin Coleman; Barbara Fleischood
Subject: RE: [External Email]E2227159: Walking Horse Solar Farm - AD 1006 Form Review
Attachments: E2227159.WalkingHorse.AD1006.PrimeFarmLandReview.pdf; SO FPPA TN Response Letter - Walking Horse Solar.pdf

Good Afternoon,

Thank you for providing the requested information. The attached CPA-1006 form has been processed through Part V per Code of Federal Regulations 7 CFR 657.

Let us know if you have any questions.

Best,

Aaron Friend

State Soil Scientist - Tennessee



801 Broadway, Nashville, TN 37203
Phone: 615-277-2550 | Mobile: (615) 202-6092
Email: aaron.friend@usda.gov | Website: www.tn.nrcs.usda.gov

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“Helping People Help the Land”

From: Herrit, Amanda M <Amanda.Herrit@terracon.com>
Sent: Wednesday, January 24, 2024 10:23 AM
To: Friend, Aaron - FPAC-NRCS, TN <aaron.friend@usda.gov>
Cc: Rohit Garg <rg@alternusenergy.com>; Eoin Coleman <edc@alternusenergy.com>; Barbara Fleischood <bf@alternusenergy.com>
Subject: RE: [External Email]E2227159: Walking Horse Solar Farm - AD 1006 Form Review

You don't often get email from amanda.herrit@terracon.com. [Learn why this is important](#)

Good morning Aaron,

We appreciate your assistance with this project. Do you have the information needed to complete the review?

Have a great day.

Thanks,
Amanda

Amanda M. Herrit, M.S., CPESC, TNOHP
Senior Environmental Scientist | Environmental Services



51 Lost Mound Drive, Suite 135 | Chattanooga, TN 37406
P (423) 499-6111 | D (423) 602-2109 | F (423) 499-8099 | M (423) 315-1449
Amanda.Herrit@terracon.com | Terracon.com



From: Herrit, Amanda M
Sent: Tuesday, January 23, 2024 11:21 AM
To: Friend, Aaron - FPAC-NRCS, TN <aaron.friend@usda.gov>
Cc: Rohit Garg <rg@alternusenergy.com>; Eoin Coleman <edc@alternusenergy.com>; Barbara Fleischood <bf@alternusenergy.com>
Subject: RE: [External Email]E2227159: Walking Horse Solar Farm - AD 1006 Form Review

Aaron,

See attached the KMZ file and CAD file. Thanks!

From: Friend, Aaron - FPAC-NRCS, TN <aaron.friend@usda.gov>
Sent: Tuesday, January 23, 2024 10:46 AM
To: Herrit, Amanda M <Amanda.Herrit@terracon.com>
Cc: Rohit Garg <rg@alternusenergy.com>; Eoin Coleman <edc@alternusenergy.com>; Barbara Fleischood <bf@alternusenergy.com>
Subject: RE: [External Email]E2227159: Walking Horse Solar Farm - AD 1006 Form Review

Amanda,

Looks as if the project is coming into focus. Do you have a way to produce a GIS data layer of the project boundary? It make the process go much smoother on this end.

Thanks,

Aaron Friend
State Soil Scientist - Tennessee



801 Broadway, Nashville, TN 37203

Phone: 615-277-2550 | Mobile: (615) 202-6092
Email: aaron.friend@usda.gov | Website: www.tn.nrcs.usda.gov

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From: Herrit, Amanda M <Amanda.Herrit@terracon.com>
Sent: Tuesday, January 23, 2024 9:06 AM
To: Friend, Aaron - FPAC-NRCS, TN <aaron.friend@usda.gov>
Cc: Rohit Garg <rg@alternusenergy.com>; Eoin Coleman <edc@alternusenergy.com>; Barbara Fleischood <bf@alternusenergy.com>
Subject: RE: [External Email]E2227159: Walking Horse Solar Farm - AD 1006 Form Review

Aaron,

See attached the site plan. The client informed me that the leased site is 62 acres. The project area (solar panels within the fenced boundary) has been reduced from 53 acres to 42.7 acres.

Thanks,
Amanda

Amanda M. Herrit, M.S., CPESC, TNQHP
Senior Environmental Scientist | Environmental Services



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Amanda.Herrit@terracon.com | Terracon.com



From: Friend, Aaron - FPAC-NRCS, TN <aaron.friend@usda.gov>
Sent: Monday, January 22, 2024 12:32 PM
To: Herrit, Amanda M <Amanda.Herrit@terracon.com>
Cc: Rohit Garg <rg@alternusenergy.com>; Eoin Coleman <edc@alternusenergy.com>; Barbara Fleischood <bf@alternusenergy.com>
Subject: RE: [External Email]E2227159: Walking Horse Solar Farm - AD 1006 Form Review

Amanda,

Working on your FPPA request but there appears to be 2 different project boundaries. Can you please confirm which is correct (62.5 or 53 acres). If possible, please provide a shapefile of the project boundary for our records. Looking forward to completing this request for you.

Best,

Aaron Friend

State Soil Scientist - Tennessee



801 Broadway, Nashville, TN 37203

Phone: 615-277-2550 | Mobile: (615) 202-6092

Email: aaron.friend@usda.gov | Website: www.tn.nrcs.usda.gov

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From: Herrit, Amanda M <Amanda.Herrit@terracon.com>

Sent: Tuesday, January 16, 2024 10:07 AM

To: Friend, Aaron - FPAC-NRCS, TN <aaron.friend@usda.gov>

Cc: Rohit Garg <rg@alternusenergy.com>; Eoin Coleman <edc@alternusenergy.com>; Barbara Fleischood <bf@alternusenergy.com>

Subject: [External Email]E2227159: Walking Horse Solar Farm - AD 1006 Form Review

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[External Email]

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Please send any concerns or suspicious messages to: Spam.Abuse@usda.gov

Mr. Friend,

See attached the Walking Horse Solar AD 1006 form completed for your review.

Thanks,

Amanda

Amanda M. Herrit, M.S., CPESC, TNQHP
Senior Environmental Scientist | Environmental Services



51 Lost Mound Drive, Suite 135 | Chattanooga, TN 37406

P (423) 499-6111 | D (423) 602-2109 | F (423) 499-8099 | M (423) 315-1449

Amanda.Herrit@terracon.com | Terracon.com



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Appendix G – Tribal Consultation



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Chuck Hoskin Jr.

Principal Chief
ᎠᎳᎯ ᎠᎳᎯ ᎠᎳᎯ
ᎠᎳᎯ ᎠᎳᎯ

Bryan Warner

Deputy Principal Chief
ᎠᎳᎯ ᎠᎳᎯ ᎠᎳᎯ
ᎠᎳᎯ ᎠᎳᎯ ᎠᎳᎯ

October 31, 2023

Kate Moore
United States Department of Agriculture
Rural Development, Rural Utilities Service
1400 Independence Ave SW, Room 2230 Stop 1570
Washington, DC 20250

Re: Walking Horse
1251 Roberson Spring Road, Loudon, Loudon County, TN 37774

Ms. Kate Moore:

The Cherokee Nation (Nation) is in receipt of your correspondence about **Walking Horse**, and appreciates the opportunity to provide comment upon this project. This communication is intended for government-to-government consultation with a sovereign federally recognized Tribal Nation. Information received in consultation will be deemed confidential unless explicit consent is provided by the Nation.

The Nation maintains databases and records of cultural, historic, and pre-historic resources in this area. Our Historic Preservation Office (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 United States Department of Agriculture (USDA) halt all project activities immediately and re-contact our Office for further consultation if items of cultural significance are discovered during the course of this project. Additionally, the Nation requests that the USDA conduct appropriate inquiries with other pertinent 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

Appendix H – Phase I Environmental Site Assessment

Phase I Environmental Site Assessment

Walking Horse Site

1251 Roberson Spring Rd

Loudon, Loudon County, TN

December 4, 2023 | Terracon Project No. E2227159

Prepared for:

Alternus Energy Americas Inc
360 Kingsley Park Drive, Suite 250
Fort Mill, SC



Prepared by:

Terracon Consultants, Inc.
Arden, North Carolina



Nationwide
Terracon.com

- Facilities
- Environmental
- Geotechnical
- Materials



7 Glenn Bridge Rd, Ste G
Arden, NC 28704-3333
P 828-476-4545
Terracon.com

December 4, 2023

Alternus Energy Americas Inc
Kingsley Park Drive, Suite 250
Fort Mill, SC 03827

Attn: Joe Duey
P: (248) 872-3068
E: rg@alternusenergy.com

Re: Phase I Environmental Site Assessment
Walking Horse Site
1251 Roberson Spring Rd
Loudon, Loudon County, Tennessee
Terracon Project No. E2227159

Dear Mr. Duey:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Phase I Environmental Site Assessment (ESA) report for the above-referenced subject property (hereinafter known as the 'site'). This assessment was performed in accordance with Terracon Proposal No. PE2227159 dated October 10, 2022.

We appreciate the opportunity to be of service to you on this project. In addition to Phase I services, our professionals provide other environmental, geotechnical, construction materials, and facilities services on a wide variety of projects locally, regionally, and nationally. For more detailed information on all of Terracon's services please visit our website at www.terracon.com. If there are any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,

Terracon Consultants, Inc.

A handwritten signature in black ink, appearing to read "T. Gray".

Thomas G. Gray
Field Scientist

A handwritten signature in black ink, appearing to read "C. Tice Welborn".

For:
C. Tice Welborn, PG
Environmental Department Manager

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APPENDICES

APPENDIX A Exhibit 1: Topographic Map, Exhibit 2: Site Diagram

APPENDIX B Site Photographs

APPENDIX C Historical Documentation and User Questionnaire

APPENDIX D Environmental Database Information

APPENDIX E Credentials

APPENDIX F Description of Terms and Acronyms

EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) was performed in accordance with Terracon Proposal No. PE2227159 dated October 10, 2022, and the Supplemental Agreement for Services dated November 17, 2023. This Phase I ESA was conducted consistent with the procedures included in ASTM E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA was to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of this report. The ESA was conducted under the supervision or responsible charge of Tice Welborn, Environmental Professional. Matthew Sadler performed the site reconnaissance on November 13, 2023.

Findings and Opinions

A summary of findings is provided below. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

Site Description and Use

The site consists of agricultural and wooded land located at 1251 Roberson Springs Road, Loudon, Loudon County, Tennessee. The site is an approximately 52-acre portion of an approximately 140-acre parent parcel that has not been improved. The site is currently unoccupied and has no ongoing site operations.

Historical Information

Between 1895 and 1952, the site consisted of undeveloped farmland. Between 1969 and 2018, the site consisted of a mix of wooded land and agricultural land. North of the site consisted of undeveloped agricultural land between 1895 and 1940. By 1952, residential development occurred north of the site. By 1969, industrial development occurred north of the site. Between 1969 and 2018, north of the site was further developed with residential and light industrial facilities. Between 1895 and 2018, east of the site has consisted of agricultural and wooded land with scattered residential properties. Between 1895 and 1981, south of the site consisted of undeveloped agricultural land with scattered residences. By 1987 residential and commercial development occurred south of the site. By 1992, industrial development occurred south of the site. Between 1997 and 2018, south of the site consisted of a mix of residential, commercial, industrial, and undeveloped land. Between 1895 and 1952, west of the site consisted of agricultural land with scattered residential houses. By 1959 residential and commercial properties. Between 1969 and 2018, west of the site consisted of agricultural, residential, and commercial land.

Records Review

Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed. The site was not identified in the regulatory databases. Seven (7) environmentally regulated facilities are located within the surrounding area. However, based upon regulatory status, apparent topographic gradient, and/or distance from the site, and inquiry results from the local agencies, the facilities do not constitute recognized environmental conditions (RECs) in connection with the site at this time.

Site Reconnaissance

During Terracon's site reconnaissance, one pole-mounted transformer was observed on the eastern border of the site. No evidence of release was observed in proximity to the transformer. One wet weather conveyance was observed on western extent of the site. No evidence of release was observed in proximity to the conveyance. No RECs were observed during site reconnaissance.

Adjoining Properties

The site is bordered to the north by residential properties, undeveloped land, and Protomet Corporation. The site is bordered to the east by agricultural land, residential properties, and a car repair shop. The site is bordered to the south by agricultural land, residential land, and a trucking facility. The site is bordered to the west by wooded land. No RECs were observed with adjoining properties.

Significant Data Gap(s)

No Significant Data Gaps were determined during the completion of this Phase I Environmental Site Assessment.

Conclusions

We have performed a Phase I ESA consistent with the procedures included in ASTM Practice E 1527-21 Guidelines at the Walking Horse site located at 1251 Robertson Spring Road, Loudon, Loudon County, Tennessee, the site. RECs or CRECs were not identified in relation to the site.

Recommendations

Based on the scope of services, limitations, and conclusions of this assessment, Terracon did not identify RECs and further investigation is not warranted at this time.

1.0 INTRODUCTION

1.1 Site Description

Site Name	Walking Horse Site
Site Location/Address	1251 Roberson Spring Rd, Loudon, Loudon County, Tennessee
Land Area	Approximately 52-acres of an approximately 140-acre parent tract
Site Improvements	The site consists of a mix of wooded and agricultural land with no improvements
Anticipated Future Site Use	Redevelopment as a solar farm
Reason for the ESA	Leasing the site

The location of the site is depicted on Exhibit 1 of Appendix A, which was reproduced from a portion of the USGS 7.5-minute series topographic map. The site and adjoining properties are depicted on the Site Diagram, which is included as Exhibit 2 of Appendix A. Acronyms and terms used in this report are described in Appendix F.

1.2 Scope of Services

This Phase I ESA was performed in accordance with Terracon Proposal No. PE2227159 dated October 10, 2022, and the Supplemental Agreement for Services dated November 17, 2023. This Phase I ESA was conducted consistent with the procedures included in ASTM E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA was to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of this report. Recognized environmental conditions are defined by ASTM E1527-21 as “(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.” A de minimis condition is not a recognized environmental condition.

This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews (including local government inquiries, as applicable), and a visual noninvasive reconnaissance of the site and adjoining properties. Limitations, ASTM deviations, and significant data gaps (if identified) are noted in the applicable sections of the report.

1.3 Standard of Care

This ESA was performed in accordance with generally accepted practices of this profession, undertaken in similar studies at the same time and in the same geographical area. We have endeavored to meet this standard of care, but may be limited by conditions encountered during performance, a client-driven scope of work, or inability to review information not received by the report date. Where appropriate, these limitations are discussed in the text of the report, and an evaluation of their significance with respect to our findings has been conducted.

Phase I ESAs, such as the one performed at this site, are of limited scope, are noninvasive, and cannot eliminate the potential that hazardous, toxic, or petroleum substances are present or have been released at the site beyond what is identified by the limited scope of this ESA. In conducting the limited scope of services described herein, certain sources of information and public records were not reviewed. It should be recognized that environmental concerns may be documented in public records that were not reviewed. No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs. No warranties, express or implied, are intended or made. The limitations herein must be considered when the user of this report formulates opinions as to risks associated with the site or otherwise uses the report for any other purpose. These risks may be further evaluated – but not eliminated – through additional research or assessment. We will, upon request, advise you of additional research or assessment options that may be available and associated costs.

1.4 Additional Scope Limitations, ASTM Deviations, and Data Gaps

Based upon the agreed-on scope of services, this ESA did not include subsurface or other invasive assessments, vapor intrusion assessments or indoor air quality assessments (i.e., evaluation of the presence of vapors within a building structure), business environmental risk evaluations, or other services not particularly identified and discussed herein. Credentials of the company (Statement of Qualifications) have not been included in this report but are available upon request. Pertinent documents are referred to in the text of this report, and a separate reference section has not been included. Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested is not, or was not, received by the issuance date of the report. Information obtained for this ESA was received from several sources that we believe to be reliable; nonetheless, the authenticity or reliability of these sources cannot and is not warranted hereunder.

An evaluation of the significance of limitations and missing information with respect to our findings has been conducted, and where appropriate, significant data gaps are identified and discussed in the text of the report. However, it should be recognized that an evaluation of significant data gaps is based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date may result in an alteration of our conclusions, recommendations, or opinions. We have no obligation to provide information obtained or discovered by us after the issuance date of the report, or to perform any additional services, regardless of whether the information would affect any conclusions, recommendations, or opinions in the report. This disclaimer specifically applies to any information that has not been provided by the client.

This report represents our service to you as of the report date and constitutes our final document; its text may not be altered after final issuance. Findings in this report are based upon the site's current utilization, information derived from the most recent reconnaissance and from other activities described herein; such information is subject to change. Certain indicators of the presence of hazardous substances, petroleum products or PFAS compounds may have been latent, inaccessible, unobservable, or not present during the most recent reconnaissance and may subsequently become observable (such as after site renovation or development). Further, these services are not to be construed as legal interpretation or advice.

1.5 Reliance

This ESA report is prepared for the exclusive use and reliance of Alternus Energy Americas Inc. Use or reliance by any other party is prohibited without the written authorization of Alternus Energy Americas Inc and Terracon Consultants, Inc. (Terracon).

Reliance on the ESA by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the proposal, ESA report, and Terracon's Agreement. The limitation of liability defined in the Agreement is the aggregate limit of Terracon's liability to the client and all relying parties.

Continued viability of this report is subject to ASTM E1527-21 Section 4.6. If the ESA will be used by a different user (third party) than the user for whom the ESA was originally prepared, the third party must also satisfy the user's responsibilities in Section 6 of ASTM E1527-21.

1.6 Client Provided Information

Prior to the site visit, Eoin Coleman, the client's representative, was asked to provide the following user questionnaire information as described in ASTM E1527-21 Section 6.

Client Questionnaire Responses

Client Questionnaire Item	Client Did Not Respond	Client's Response	
		Yes	No
Specialized Knowledge or Experience that is material to a REC in connection with the site.			X
Actual Knowledge of Environmental Liens or Activity Use Limitations (AULs) that may encumber the site.			X
Actual Knowledge of a Lower Purchase Price because contamination is known or believed to be present at the site.			X
Commonly Known or Reasonably Ascertainable Information that is material to a REC in connection with the site.			X
Obvious Indicators of Releases at the site.			X

Terracon's evaluation of the information provided in the User Questionnaire did not identify any RECs. A copy of the questionnaire is included in Appendix C.

2.0 PHYSICAL SETTING

Physical Setting Information		Source
Topography		
Site Elevation	Approximately Site Elevation feet above sea level	USGS Topographic Map, PHILADELPHIA, TN (1/1/1974) and LOUDON, TN (1/1/1984). (Appendix A)
Topographic Gradient	Due to site size, the topographic gradient varies across the site.	
Closest Surface Water	Unnamed stream channel on the western extent of the site.	
Soil Characteristics		
Soil Type	Varies across the site	Loudon County, TN USDA-NRCS Web Soil Survey issued November 14, 2023
Description	Decatur silty clay loam: Eroded gently sloping phase	
	Decatur silty clay loam: 5 to 12 percent slopes, eroded	
	Decatur silty clay loam: 12 to 20 percent slopes, severely eroded	
	Dewey silty clay loam: 6 to 15 percent slopes, eroded	
	Emory silt loam: 0 to 4 percent	

Physical Setting Information		Source
	<p>slopes, occasionally flooded</p> <p>Fullerton silt loam: sloping phase (Dewey)</p> <p>Etowah-Dewey complex: 6 to 12 percent slopes</p> <p>Waynesboro loam: 6 to 15 percent slopes</p>	
Geology/Hydrogeology		
Formation	<p>Unnamed (upper part of Knox Group), including Newala Formation, Mascot Dolomite, Kingsport Formation, Longview Dolomite, and Chepultepec Dolomite</p>	
Description	<p>(Onc) Unnamed (upper part of the Knox Group), including the (On) Newala Formation; (Oma) Mascot Dolomite - Light-gray, fine-grained, well-bedded cherty dolomite; mottled (red and green) dolomite characteristic; interbeds of bluish-gray limestone in upper part; chert-matrix quartz sandstone at base. Erosional unconformity at top. Thickness 350 to 800 feet; (Ok) Kingsport Formation - Gray, fine-grained, sparingly cherty dolomite with basal dense, gray limestone sequence. Thickness about 250 feet. and (Olc) Unnamed (middle part of the Knox Group), including (Olv) Longview Dolomite - Siliceous, gray, fine-grained, medium-bedded dolomite; interbeds of gray limestone in upper part. Thickness about 300 feet; (Oc) Chepultepec Dolomite - Light-gray, fine-grained, well-bedded dolomite, moderately cherty; fine-grained limestone locally in upper part; quartz sandstone beds at base. Average thickness about 800 feet.</p>	<p>Greene, D.C., and Wolfe, W.J., 2000, Superfund GIS - 1:250,000 Geology of Tennessee, USGS, (geo250k).</p> <p>Hardeman, W.D., Miller, R.A., and Swingle, G.D., 1966, Geologic Map of Tennessee: Division of Geology, Tennessee Department of Environment and Conservation, 4 sheets, scale 1:250,000</p>
Estimated Depth to First	Not known – due to size of site may	Estimated Depth Source

Physical Setting Information		Source
Occurrence of Groundwater	be inferred to vary	
*Hydrogeologic Gradient	Not known - may be inferred to be parallel to topographic gradient (primarily to the Topo Gradient).	

* The groundwater flow direction and the depth to shallow, unconfined groundwater, if present, would likely vary depending upon seasonal variations in rainfall and other hydrogeological features. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

3.0 HISTORICAL USE INFORMATION

Terracon reviewed the following historical sources to develop a history of the previous uses of the site and surrounding area, in order to help identify RECs associated with past uses. Copies of selected historical documents are included in Appendix C.

3.1 Historical Topographic Maps, Aerial Photographs, and Sanborn Maps

Readily available historical USGS topographic maps, selected historical aerial photographs (at approximately 10-to-15-year intervals) and historical fire insurance maps produced by the Sanborn Map Company were reviewed to evaluate land development and obtain information concerning the history of development on and near the site. Reviewed historical topographic maps, aerial photographs, and Sanborn maps are summarized below.

Historical fire insurance maps produced by the Sanborn Map Company were requested from EDR to evaluate past uses and relevant characteristics of the site and surrounding properties. Based upon inquiries to the above-listed Sanborn provider, Sanborn maps were not available for the site.

- Topographic map: Loudon, Tennessee, published in 1895, 1936, 1940, 1952, 1984, 2013, 2016, and 2019 (1:24,000)
- Topographic map: Philadelphia, Tennessee, published in 1935, 1940, 1952, 2013, 2016, and 2019 (1:24,000)
- Aerial photograph: USGS, 1969, 1975, 1981, 1992, and 1997, 1"=500'
- Aerial photograph: USDA, 1987, 2007, 2010, 2014, and 2018, 1"=500'
- Sanborn Fire Insurance Map(s): Sanborn maps not available.

Historical Maps and Aerial Photographs

Direction	Description
Site	Between 1895 and 1952, the site consisted of undeveloped farmland. Between 1969 and 2018, the site consisted of a mix of wooded land and agricultural land.
North	North of the site consisted of undeveloped agricultural land between 1895 and 1940. By 1952, residential development occurred north of the site. By 1969, industrial development occurred north of the site. Between 1969 and 2018, north of the site was further developed with residential and light industrial facilities.
East	Between 1895 and 2018, east of the site has consisted of agricultural and wooded land with scattered residential properties.
South	Between 1895 and 1981, south of the site consisted of undeveloped agricultural land with scattered residences. By 1987 residential and commercial development occurred south of the site. By 1992, industrial development occurred south of the site. Between 1997 and 2018, south of the site consisted of
West	Between 1895 and 1952, west of the site consisted of agricultural land with scattered residential houses. By 1959 residential and commercial properties. Between 1969 and 2018, west of the site consisted of agricultural, residential, and commercial land.

3.2 Historical City Directories

The City Directory Comp city directories used in this study were made available through City Directory Source (selected years reviewed: Years Reviewed) and were reviewed at approximate five-year intervals, if readily available. The current street address for the site was identified as 1251 Roberson Spring Rd.

Historical City Directories

Direction	Description
Site	The site is not listed in the city directories.
North	2400 Maremont Pkwy: Maremont Corp (1994-2014); No listing (2017); Protomet (2020) 2455 Maremont Pkwy: James Body Shop and Wrecker Service (1994-2020); Tri County Contractors (2000-2020)
East	No listings available.
South	1257 Roberson Spring Rd: Webb Warehousing Incorporated (2000); Advanced Emission Inc. (2005); McBride Company (2005-2020); Pallet Source (2005); Mission Transport (2010); CDX LLC (2010-2020)
West	No listings available.

3.3 Site Ownership

Based on a review of information obtained from the City or County assessor’s records, the current site owner is Griffiss Land Company LLC. Previous Owners were unable to be identified from property search records.

3.4 Title Search

At the direction of the client, a title search was not included as part of the scope of services. Unless notified otherwise, we assume that the client is evaluating this information outside the scope of this report.

3.5 Environmental Liens and Activity and Use Limitations

The ERIS regulatory database report included a review of both Federal and State Engineering Control (EC) and Institutional Control (IC) databases. Based on a review of the database report, the site was not listed on the EC or IC databases. Please note that in addition to these federal and state listings, AULs can be recorded at the county and municipal level that may not be listed in the regulatory database report. Environmental lien and activity and use limitation records recorded against the site were not provided by the client. At the direction of the client, performance of a review of these records was not included as part of the scope of services and unless notified otherwise, we assume that the client is evaluating this information outside the scope of this report.

3.6 Interviews Regarding Current and Historical Site Uses

The following individuals were interviewed regarding the current and historical use of the site.

Interviews

Interviewer	Name / Phone #	Title	Date/Time
Tommy Gray	Tim Harper / 865-385-8018	Property Observer	November 27, 2023 / 16:00

Terracon interviewed Mr. Tim Harper, Property Observer, after the site reconnaissance. Mr. Harper indicated that they have been familiar with the site for approximately 50 years. Mr. Harper noted that he was aware of the past uses of the site as farmland. Mr. Harper explained he was unaware of any underground storage tanks on the site. Mr. Harper was unaware of any environmental concerns associated with the site and was further unaware of any past, present, or potential future environmental litigation associated with the site.

3.7 Prior Report Review

Terracon requested the client provide any previous environmental reports they are aware of for the site. Previous reports were not provided by the client to Terracon for review.

4.0 RECORDS REVIEW

Regulatory database information was provided by EDR, a contract information services company in a report dated Database Report Date. The purpose of the records review was to identify RECs in connection with the site. Information in this section is subject to the accuracy of the data provided by the information services company and the date at which the information is updated. The scope herein did not include confirmation of facilities listed as "unmappable" by regulatory databases.

In some of the following subsections, the words up-gradient, cross-gradient, and down-gradient refer to the topographic gradient in relation to the site. As stated previously, the groundwater flow direction and the depth to shallow groundwater, if present, would likely vary depending upon seasonal variations in rainfall and the depth to the soil/bedrock interface. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

4.1 Federal and State/Tribal Databases

Listed below are the facility listings identified on federal and state/tribal databases within the ASTM-required search distances from the approximate site boundaries. Database definition, descriptions, and the database search report are included in Appendix D.

Federal Databases

Database	Description	Distance (miles)	Listings
CERCLIS	Comprehensive Environmental Response, Compensation, & Liability Information System	0.5	
CERCLIS / NFRAP	Comprehensive Environmental Response, Compensation, & Liability Information System/No Further Remedial Action Planned	0.5	0
ERNS	Emergency Response Notification System	Site	0
IC / EC	Institutional Control/Engineering Control	Site	0
NPL	National Priorities List	1	0

Database	Description	Distance (miles)	Listings
NPL (Delisted)	National Priorities Delisted List	0.5	0
RCRA CORRACTS/ TSD	RCRA Corrective Action Activity	1	0
RCRA Generators	Resource Conservation and Recovery Act	Site and adjoining properties	0
RCRA Non-CORRACTS/ TSD	RCRA Non-Corrective Action Activity	0.5	0

State/Tribal Databases

Database	Description	Distance (miles)	Listings
Brownfields	Brownfields Sites	0.5	0
IC/EC	Institutional and/or Engineering Controls Listing	Site	0
LUST	Leaking Underground Storage Tank Sites	0.5	1
SCL	State equivalent CERCLIS Site	0.5	0
SHWS	State Hazardous Waste Site	1	0
SWF/LF	Solid Waste Facilities/Landfills	0.5	0
UST	Underground Storage Tanks	Site and adjoining properties	0
VCP	Voluntary Cleanup Program Sites	0.5	1

In addition to the above ASTM-required listings, Terracon reviewed other federal, state, local, and proprietary databases provided by the database firm. A list of the additional reviewed databases is included in the regulatory database report in Appendix D.

The following table summarizes the site-specific information provided by the database and/or gathered by this office for identified facilities within 500 feet of the site. Facilities are listed in order of proximity to the site. Additional discussion for selected facilities follows the summary table.

Listed Facilities

Facility Name and Location	Estimated Distance / Direction/Gradient	Database Listings	Findings Summary
Protomet Corporation	Approximately 250 feet north / down-gradient	PFAS ECHO	No based on gradient and available records discussed below.

Protomet Corporation

This facility is located at 2400 Maremont Avenue approximately 250 feet down-gradient of the site and is listed in PFAS ECHO database. This facility is registered with the EPA's Toxic Release Inventory (TRI) System and maintains a facility registration ID of 110070559818. The facility is listed as releasing, either by onsite removal or offsite transfer, chemicals under the NAICS code 332813, chemicals involved with Electroplating, Plating, Polishing, Anodizing, and Coloring. The specific chemicals listed in the facilities TRI are Nitrate Compounds and Nitric Acid. According to available records, no violations are listed in reference to the facility. Based on the lack of listed violations and the gradient in reference to the site, this facility does not constitute a REC to the site.

The remaining facilities listed in the database report do not appear to represent RECs to the site at this time based upon regulatory status, apparent topographic gradient, and/or distance from the site.

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site. The report listed two facilities in the unmapped section. Determining the location of unmapped facilities is beyond the scope of this assessment; however, none of these facilities were identified as the site or adjacent properties. These facilities are listed in the database report in Appendix D.

4.2 Local Agency Inquiries

Agency Contacted/ Contact Method	Response
Tennessee Department of Environment and Conservation / https://tdec.tn.gov/FileNetSearch	According to the Tennessee Department of Environment and Conservation FileNet database, no septic tank records pertaining to the site were available.
Loudon Fire Department / (865) 458-2033	According to Bill Jeames of the Loudon Fire Department, he was unaware of any environmental concerns associated with the site.

5.0 SITE RECONNAISSANCE

5.1 General Site Information

Information contained in this section is based on a visual reconnaissance conducted while walking through the site and the accessible interior areas of structures, if any, located on the site. The site and adjoining properties are depicted on the Site Diagram, which is included in Exhibit 2 of Appendix A. Photo documentation of the site at the time of the visual reconnaissance is provided in Appendix B. Credentials of the individuals planning and conducting the site visit are included in Appendix E.

General Site Information

Site Reconnaissance	
Field Personnel	Matthew Sadler
Reconnaissance Date	November 6, 2023
Weather Conditions	Clear / Sunny
Site Contact/Title	Tim Harper / Property Observer
Site Utilities	
Drinking Water	N/A
Wastewater	N/A
Electric	Loudon Utilities
Natural Gas	N/A

5.2 Overview of Current Site Occupants

The site is currently unoccupied wooded and agricultural land.

5.3 Overview of Current Site Operations

No current site operations are underway as the site consists of wooded and agricultural land.

5.4 Site Observations

The following table summarizes site observations and interviews. Affirmative responses (designated by an "X") are discussed in more detail following the table.

Site Characteristics

Category	Item or Feature	Observed or Identified
Site Operations, Processes, and Equipment	Emergency generators	
	Elevators	
	Air compressors	
	Hydraulic lifts	
	Dry cleaning	
	Photo processing	
	Ventilation hoods and/or incinerators	
	Waste treatment systems and/or water treatment systems	
	Heating and/or cooling systems	
	Paint booths	
	Sub-grade mechanic pits	
	Wash-down areas or carwashes	
	Pesticide/herbicide production or storage	
	Printing operations	
	Metal finishing (electroplating, chrome plating, galvanizing, etc.)	
	Salvage operations	
Oil, gas, or mineral production		
Other processes or equipment		
Aboveground Chemical or Waste Storage	Aboveground storage tanks	
	Drums, barrels, and/or containers ≥ 5 gallons	
	MSDS or SDS	
Underground Chemical or Waste Storage, Drainage or Collection Systems	Underground storage tanks or ancillary UST equipment	
	Sumps, cisterns, French drains, catch basins, and/or dry wells	
	Grease traps	
	Septic tanks and/or leach fields	
	Oil/water separators, clarifiers, sand traps, triple traps, interceptors	
	Pipeline markers	
Interior floor drains		

Category	Item or Feature	Observed or Identified
Electrical Transformers/PCBs	Transformers and/or capacitors	X
	Other equipment	
Releases or Potential Releases	Stressed vegetation	
	Stained soil	
	Stained pavement or similar surface	
	Leachate and/or waste seeps	
	Trash, debris, and/or other waste materials	
	Dumping or disposal areas	
	Construction/demolition debris and/or dumped fill dirt	
	Surface water discoloration, odor, sheen, and/or free-floating product	
	Strong, pungent, or noxious odors	
	Exterior pipe discharges and/or other effluent discharges	
Other Notable Site Features	Surface water bodies	X
	Quarries or pits	
	Wastewater lagoons	
	Wells	

Electrical Transformers/PCBs

During Terracon’s site visit, one pole-mounted transformers, owned and serviced by utility Loudon Utilities, was observed on the eastern portion of the site; however, no information with regard to PCB content of the transformer fluids was observed. Some transformers contain mineral oil which may contain PCBs.

Loudon Utilities maintains responsibility for the transformers, and if the transformers were “PCB contaminated,” Loudon Utilities is not required to replace the transformer fluids until a release is identified. However, evidence of current or prior releases was not observed in the vicinity of the electrical equipment during the site reconnaissance.

The observed pole-mounted transformer does represent a REC to the site.

Surface water bodies

One wet weather conveyance was observed on western extent of the site. No evidence of release was observed in proximity to the conveyance.

6.0 ADJOINING PROPERTY RECONNAISSANCE

Visual observations of adjoining properties (from site boundaries) are summarized below.

Adjoining Properties

Direction	Description
North	The site is bordered to the north by residential properties and Protomet Corporation.
East	The site is bordered to the east by agricultural land, residential properties, and a car repair shop.
South	The site is bordered to the south by agricultural land, residential land, and a trucking facility.
West	The site is bordered to the west by wooded land.

RECs were not observed with the adjoining properties.


7.0 ADDITIONAL SERVICES

Per the agreed scope of services specified in the proposal, additional services (asbestos sampling, lead-based paint sampling, wetlands evaluation, lead in drinking water testing, radon testing, vapor encroachment screening, etc.) were not conducted.

As a part of the ongoing work at the site, Terracon has completed an Environmental Assessment Report, a Threatened/Endangered Species Assessment, and others completed a Cultural Resource Assessment, and a Waters of the United States Assessment. These reports have been or will be submitted to the client under separate covers.

8.0 DECLARATION

I, C. Tice Welborn, declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312; and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the site. I have developed and performed the All Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

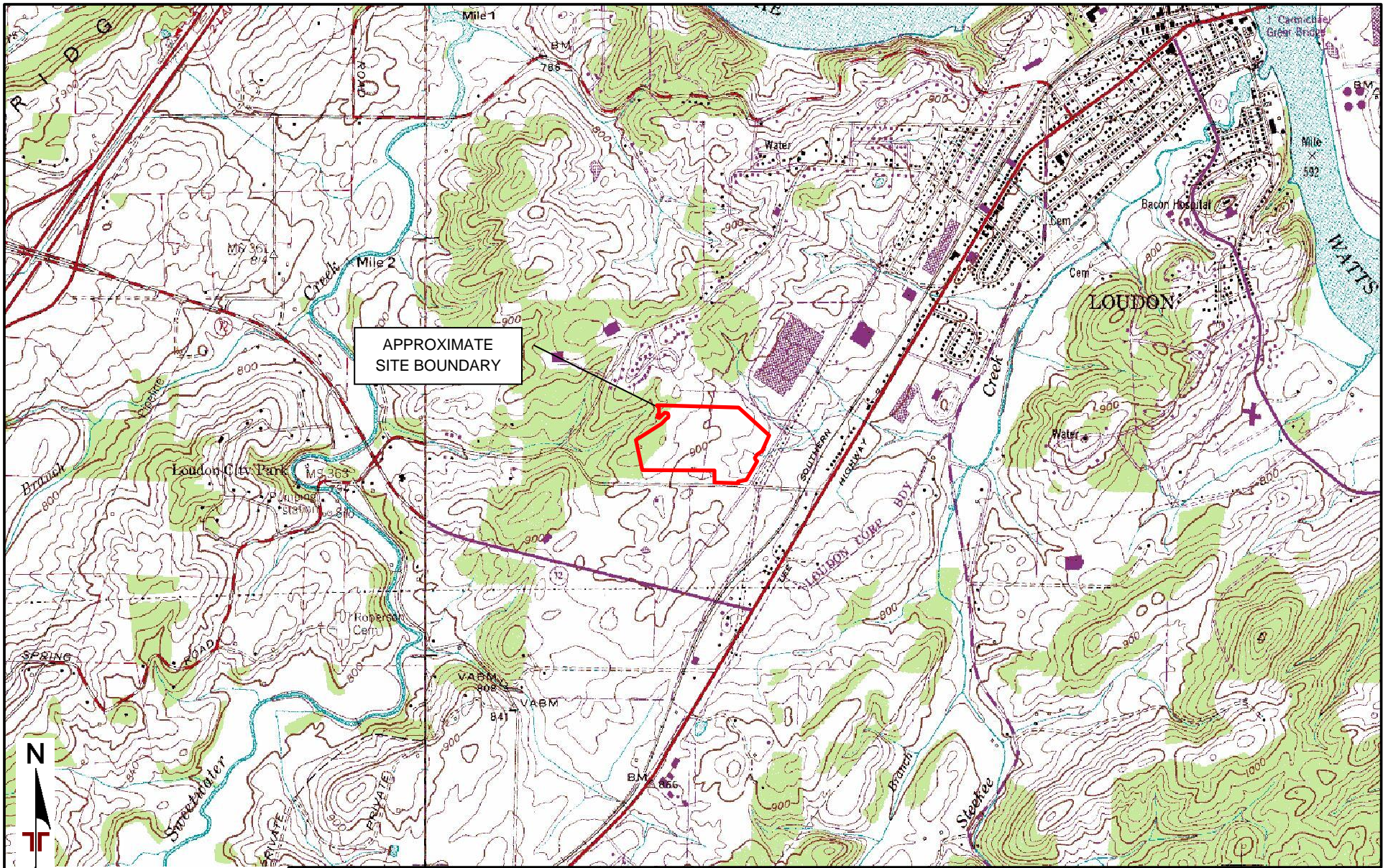
 For: _____

C. Tice Welborn, PG
Environmental Department Manager

APPENDIX A

EXHIBIT 1: TOPOGRAPHIC MAP

EXHIBIT 2: SITE DIAGRAM



TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
 QUADRANGLES INCLUDE: PHILADELPHIA, TN (1/1/1974) and LOUDON, TN (1/1/1984).

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	TG	Project No.	E2227159
Drawn by:	TG	Scale:	1"=2,000'
Checked by:	TS	File Name:	E2227159
Approved by:	TS	Date:	11/13/23

Terracon
 51 Lost Mound Dr, Ste 135
 Chattanooga, TN 37406-1030

TOPOGRAPHIC MAP
 Alternus Energy Environmental Consulting for USDA
 Walking Horse
 Roberson Spring Road and Maremont Parkway
 Loudon, TN

Exhibit
 1



AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	TG
Drawn by:	TG
Checked by:	TS
Approved by:	TS

Project No.	E2227159
Scale:	AS SHOWN
File Name:	E2227159
Date:	11/13/23

Terracon

51 Lost Mound Dr, Ste 135
Chattanooga, TN 37406-1030

SITE DIAGRAM

Alternus Energy Environmental Consulting for USDA
Walking Horse
Roberson Spring Road and Maremont Parkway
Loudon, TN

Exhibit	2
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APPENDIX B
SITE PHOTOGRAPHS



Photo 1 View along Robinson Spring Road facing west



Photo 2 View of the site facing north



Photo 3 View of the site facing east



Photo 4 View of agricultural land east of the site



Photo 5 View of the site facing west



Photo 6 View of agricultural land south of the site



Photo 7 View southwest along Maremont Parkway



Photo 8 View northeast along Maremont Parkway



Photo 9 View of the site and pole-mounted transformer facing northeast



Photo 10 View of pole-mounted transformer facing northeast



Photo 11 View of unnamed warehouse northeast



Photo 12 View of electrical components



Photo 13 View of the site facing north



Photo 14 View of treeline through the center of the site



Photo 15 View of the site facing north



Photo 16 View of transmission lines south of the site



Photo 17 View of wooded land west of the site



Photo 18 View of residential property south of the site



Photo 19 View of Purpose Transport office building south of the site



Photo 20 View of Purpose Transport parking south of the site



Photo 21 View of wooded land west of the site



Photo 22 View of ponce metals northwest of the site



Photo 23 View of Protomet Corporation parking northeast of the site



Photo 24 View of Protomet Corporation building northeast of the site

APPENDIX C
HISTORICAL DOCUMENTATION AND USER
QUESTIONNAIRE

ASTM E1527-21 User Questionnaire



Person Completing Questionnaire	Name: Eoin Coleman Company: Alternus Energy	Phone: Email: edc@alternusenergy.com
Site Name	GRIFFISS LAND COMPANY LLC, ET AL TAX MAP 040 PARCEL 164.00 DEED BOOK 367, PAGE 775 TRACT C JJ GRIFFISS, HEIRS PLAT CABINET I, PAGE 38	
Site Address	0 ROBERSON RD LOUDON, TN 37774	
Point of Contact for Access	Name: Tim Harper Company:	Phone: 865-385-8018 Email: littletimmy@charter.net
Access Restrictions or Special Site Requirements?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, please explain)	
Confidentiality Requirements?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, please explain)	
Current Site Owner	Name: Company: GRIFFISS LAND COMPANY LLC	Phone: Email:
Current Site Operator	Name: Alternus Energy	Phone: Email:
Reasons for ESA (e.g., financing, acquisition, lease, etc.)	Financing	
Anticipated Future Site Use	Solar Energy Production	
Relevant Documents?	Please provide Terracon copies of prior Phase I or II ESAs, Asbestos Surveys, Environmental Permits or Audit documents, Underground Storage Tank documents, Geotechnical Investigations, Site Surveys, Diagrams or Maps, or other relevant reports or documents. <i>Please refence docs from NEPA report completed by Terracon.</i>	

ASTM User Questionnaire

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must respond to the following questions. Failure to provide this information to the environmental professional may result in significant data gaps, which may limit our ability to identify recognized environmental conditions resulting in a determination that "all appropriate inquiry" is not complete. This form represents a type of interview and as such, the user has an obligation to answer all questions in good faith, to the extent of their actual knowledge.

- 1) Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the property under federal, tribal, state, or local law (40 CFR 312.25)?
 No Yes (If yes, explain below and send Terracon a copy of the title records or judicial records reviewed.)
- 2) Did a search of recorded land title records (or judicial records where appropriate) identify any activity and use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state, or local law (40 CFR 312.26)?
 No Yes (If yes, explain below and send Terracon a copy of the title records or judicial records reviewed.)
- 3) Do you have any specialized knowledge or experience related to the site or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the site or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business (40 CFR 312-28)?
 No Yes (If yes, explain below)
- 4) Do you have actual knowledge of a lower purchase price because contamination is known or believed to be present at the site (40 CFR 312.29)?
 No Yes Not applicable (If yes or Not applicable, explain below)
- 5) Are you aware of commonly known or reasonably ascertainable information about the site that would help the environmental professional to identify conditions indicative of releases or threatened releases (40 CFR 312.30)?
 No Yes (If yes, explain below)
- 6) Based on your knowledge and experience related to the site, are there any obvious indicators that point to the presence or likely presence of contamination at the site (40 CFR 312.31)?
 No Yes (If yes, explain below)

Comments or explanations:

Walking Horse

1251 Roberson Spring Road

Loudon, TN 37774

Inquiry Number: 7492738.4

November 09, 2023

EDR Historical Topo Map Report

with QuadMatch™



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

11/09/23

Site Name:

Walking Horse
1251 Roberson Spring Road
Loudon, TN 37774
EDR Inquiry # 7492738.4

Client Name:

Terracon
72 Pointe Circle
Greenville, SC 29615
Contact: Tommy Gray



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Terracon were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

Coordinates:

P.O.#	KF237118	Latitude:	35.725491 35° 43' 32" North
Project:	KF237118	Longitude:	-84.361086 -84° 21' 40" West
		UTM Zone:	Zone 16 North
		UTM X Meters:	738687.64
		UTM Y Meters:	3956712.96
		Elevation:	906.70' above sea level

Maps Provided:

2019
2016
2013
1984
1952
1940
1935, 1936
1895

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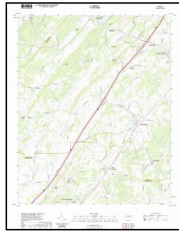
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2019 Source Sheets



Loudon
2019
7.5-minute, 24000

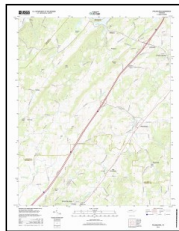


Philadelphia
2019
7.5-minute, 24000

2016 Source Sheets



Loudon
2016
7.5-minute, 24000

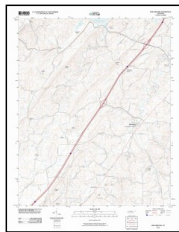


Philadelphia
2016
7.5-minute, 24000

2013 Source Sheets



Loudon
2013
7.5-minute, 24000



Philadelphia
2013
7.5-minute, 24000

1984 Source Sheets



Loudon
1984
7.5-minute, 24000
Aerial Photo Revised 1981

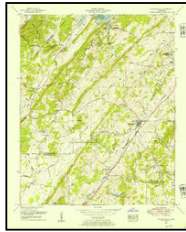
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1952 Source Sheets



Loudon
1952
7.5-minute, 24000
Aerial Photo Revised 1952



Philadelphia
1952
7.5-minute, 24000
Aerial Photo Revised 1952

1940 Source Sheets

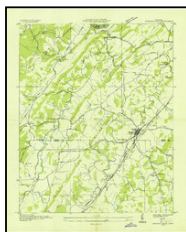


Philadelphia
1940
7.5-minute, 24000

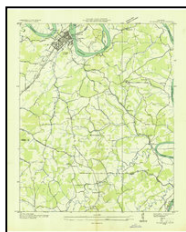


Loudon
1940
7.5-minute, 24000

1935, 1936 Source Sheets

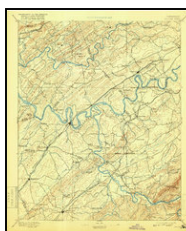


Philadelphia
1935
7.5-minute, 24000

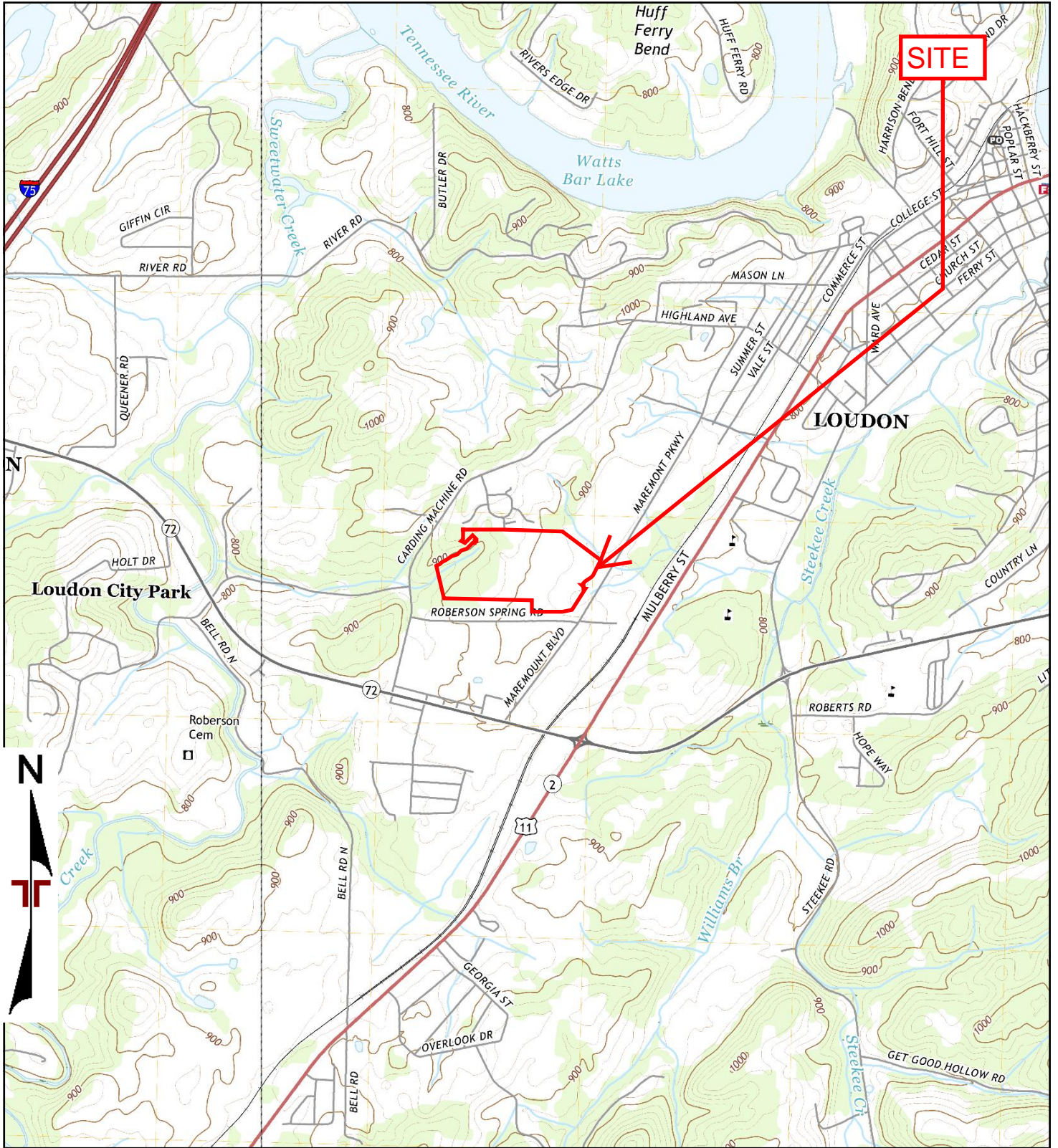


Loudon
1936
7.5-minute, 24000

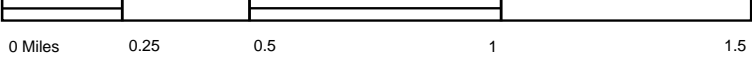
1895 Source Sheets



Loudon
1895
30-minute, 125000



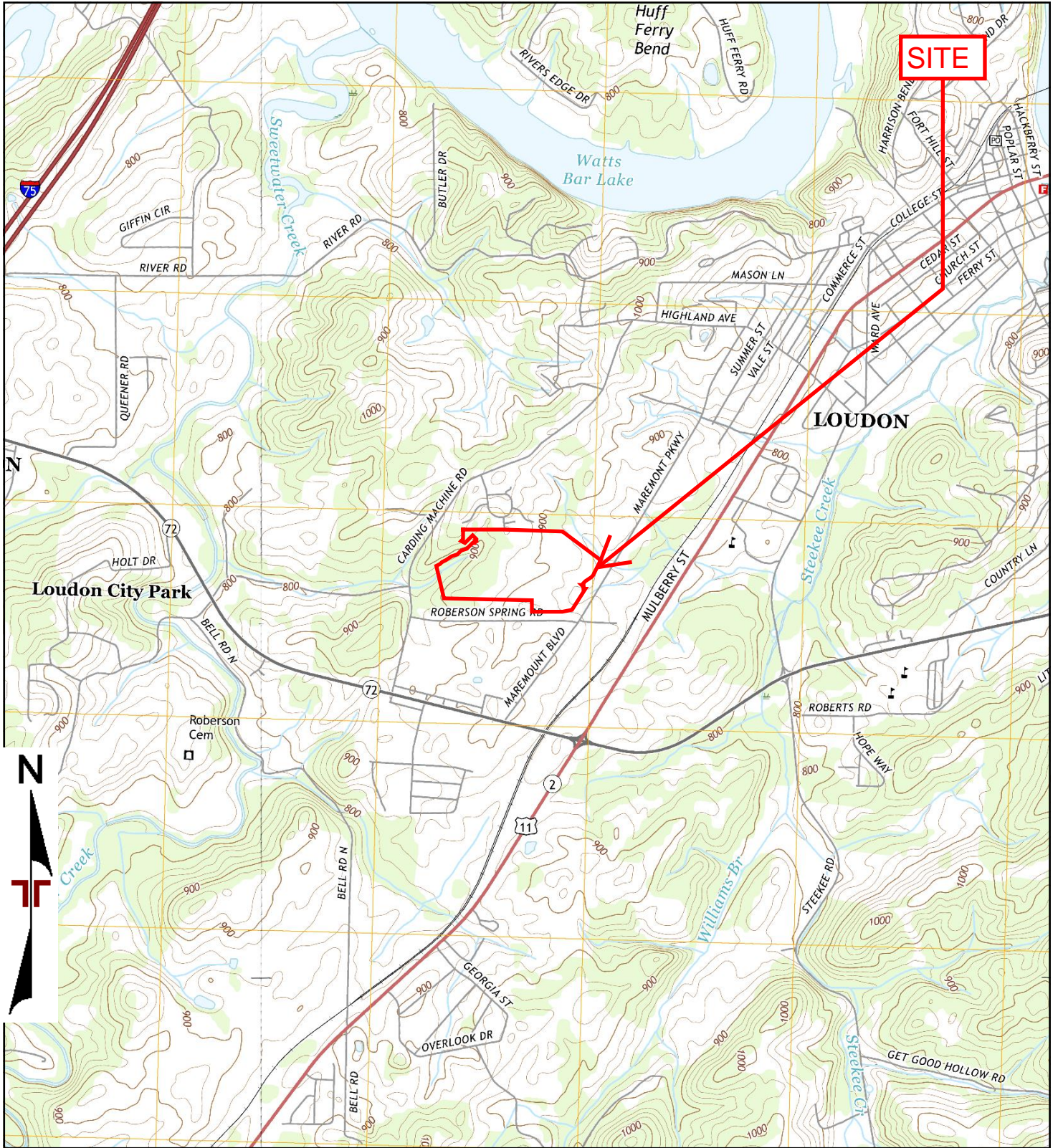
TP, Loudon, 2019, 7.5-minute
 SW, Philadelphia, 2019, 7.5-minute



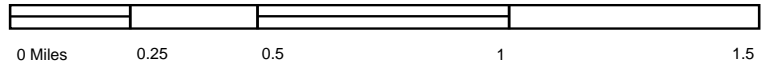
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 2019



2019 TOPOGRAPHIC MAP	



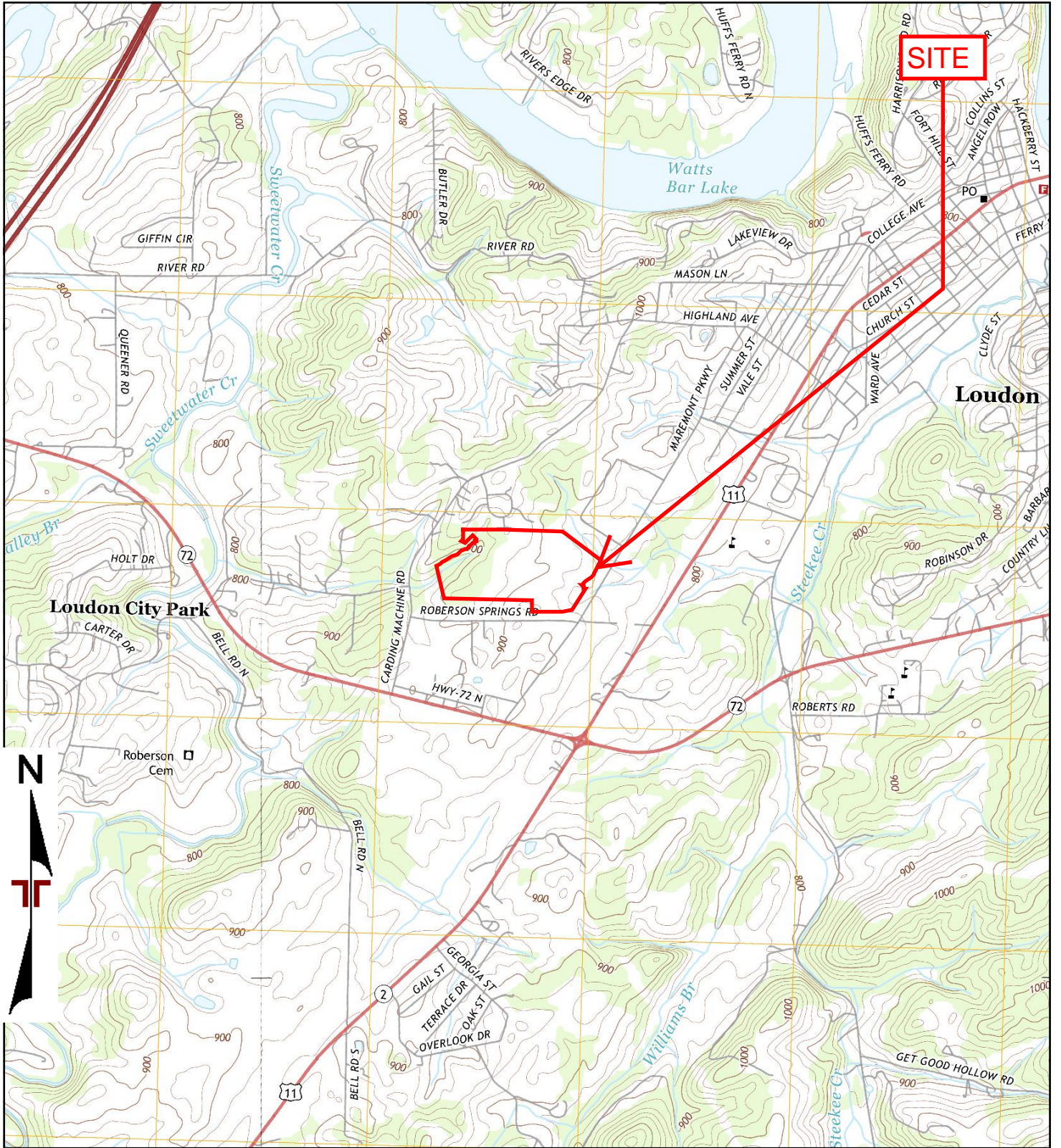
TP, Loudon, 2016, 7.5-minute
 SW, Philadelphia, 2016, 7.5-minute



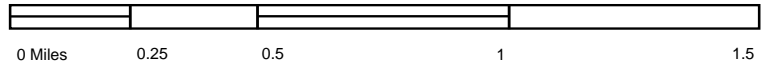
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 2016



2016 TOPOGRAPHIC MAP	



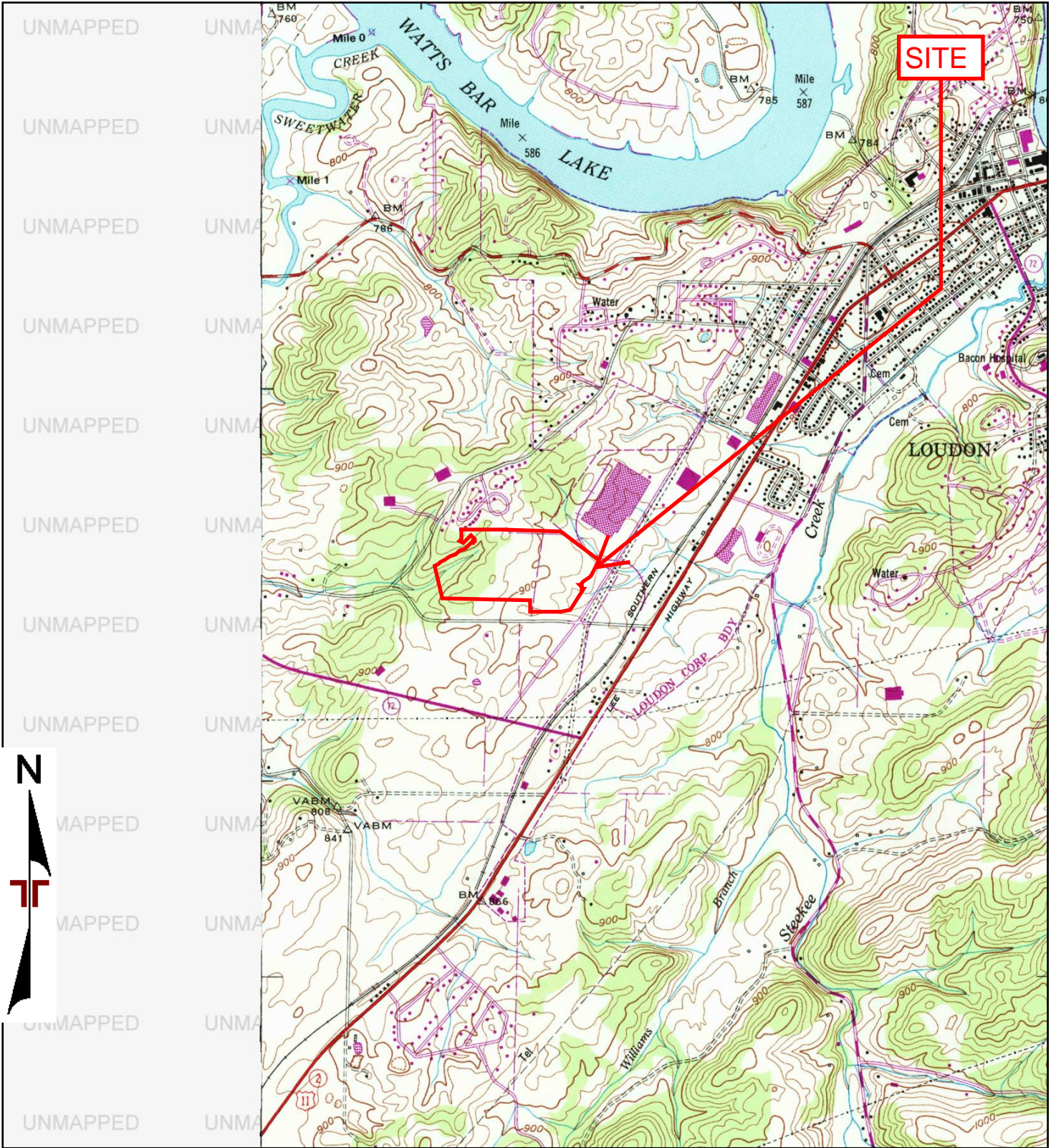
TP, Loudon, 2013, 7.5-minute
 SW, Philadelphia, 2013, 7.5-minute



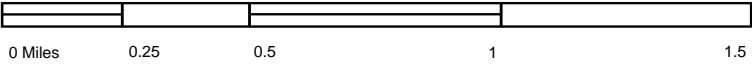
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 2013



2013 TOPOGRAPHIC MAP	



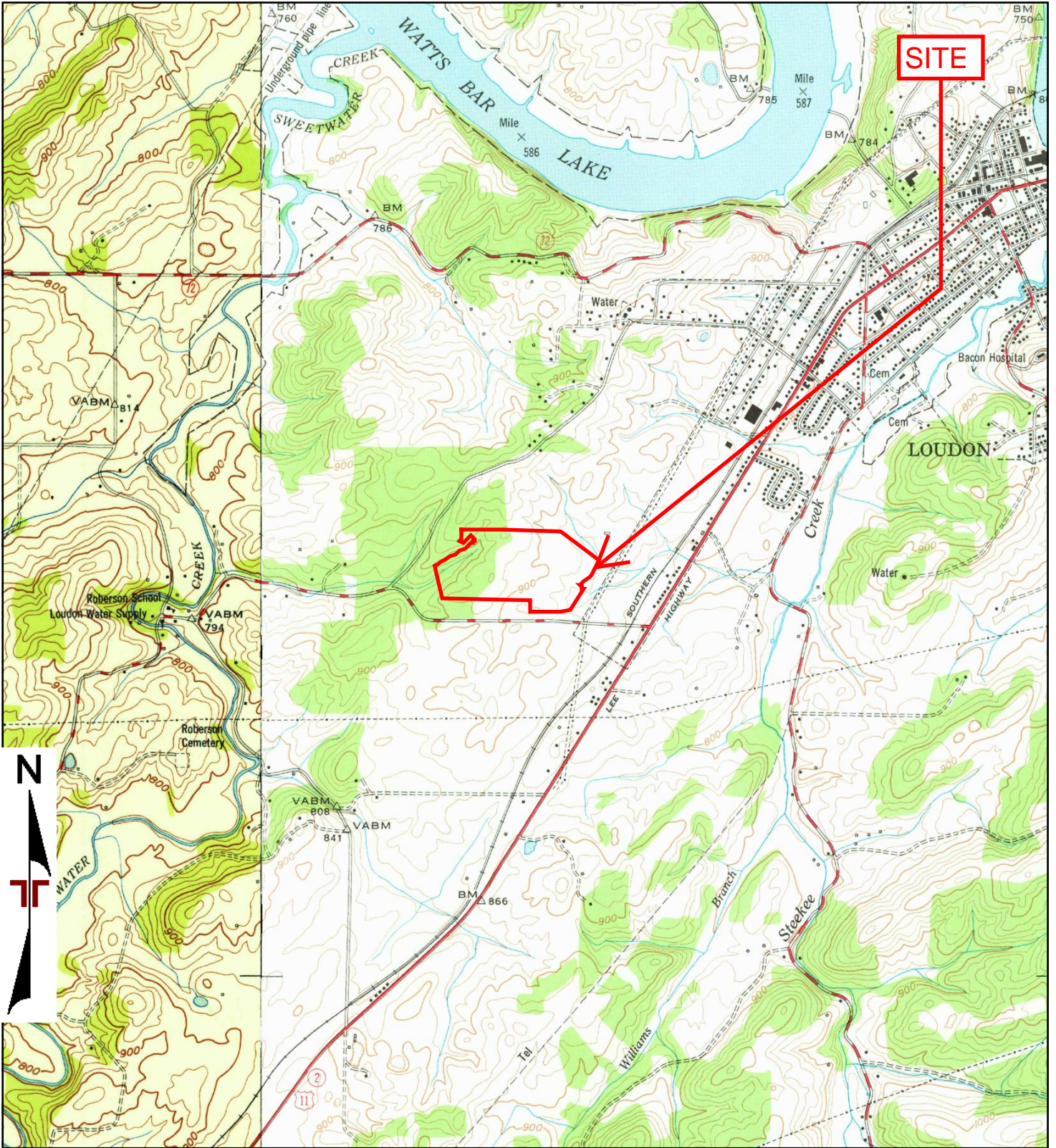
TP, Loudon, 1984, 7.5-minute



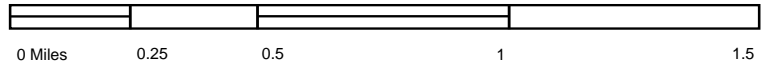
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 1984



1984 TOPOGRAPHIC MAP	



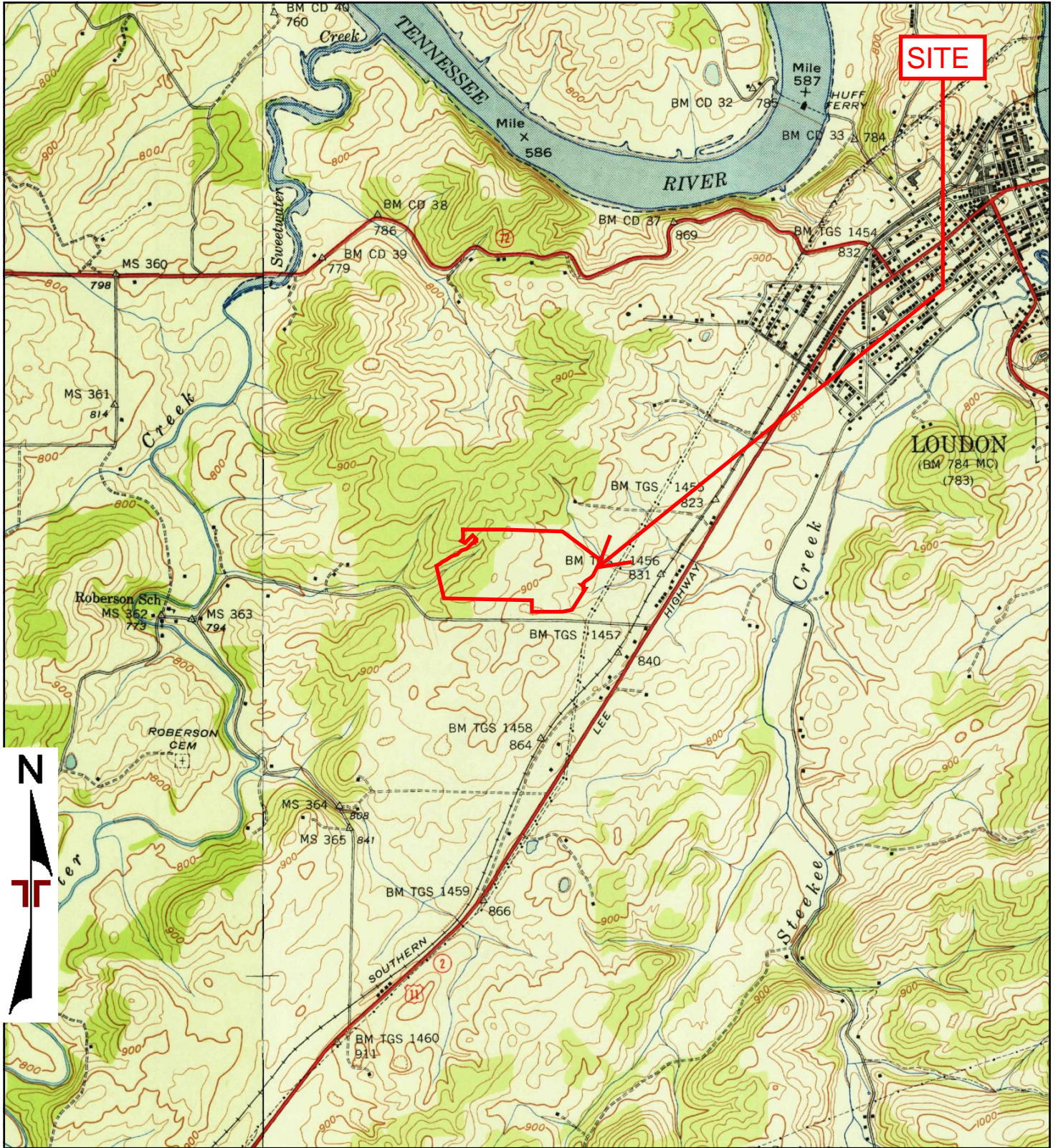
TP, Loudon, 1952, 7.5-minute
 SW, Philadelphia, 1952, 7.5-minute



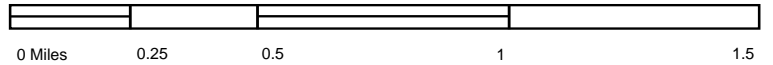
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 1952



1952 TOPOGRAPHIC MAP	



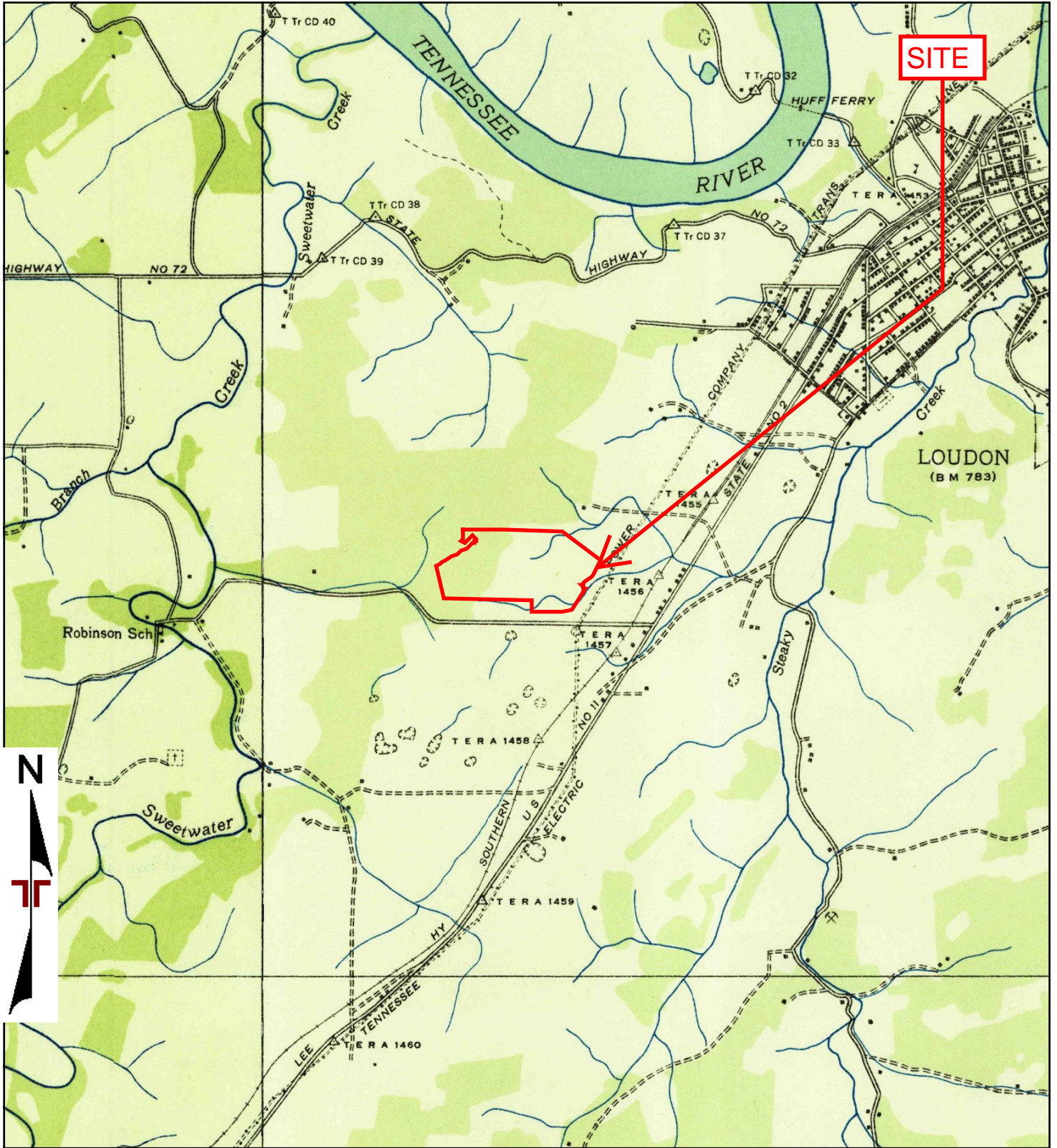
TP, Loudon, 1940, 7.5-minute
 SW, Philadelphia, 1940, 7.5-minute



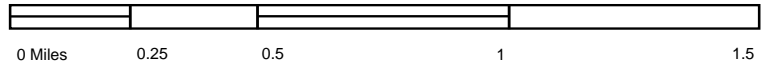
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 1940



1940 TOPOGRAPHIC MAP	



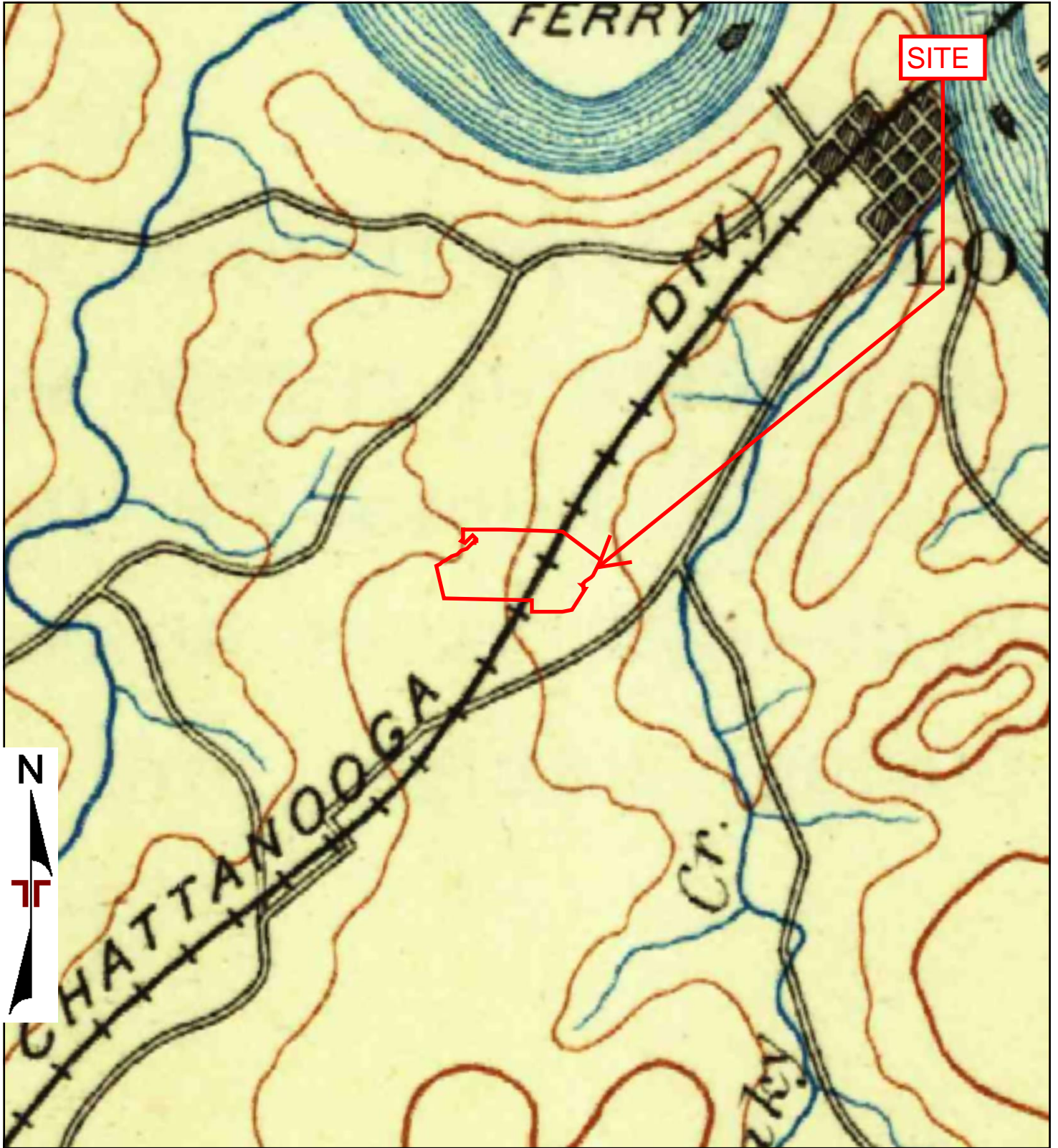
TP, Loudon, 1936, 7.5-minute
 SW, Philadelphia, 1935, 7.5-minute



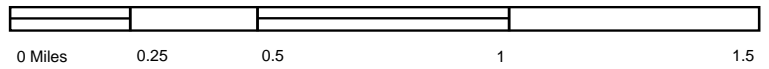
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 1935, 1936



1935, 1936 TOPOGRAPHIC MAP	



TP, Loudon, 1895, 30-minute



Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 1895



1895 TOPOGRAPHIC MAP	



Walking Horse

1251 Roberson Spring Road

Loudon, TN 37774

Inquiry Number: 7492738.8

November 10, 2023

The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Site Name:

Walking Horse
 1251 Roberson Spring Road
 Loudon, TN 37774
 EDR Inquiry # 7492738.8

Client Name:

Terracon
 72 Pointe Circle
 Greenville, SC 29615
 Contact: Tommy Gray



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Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2018	1"=500'	Flight Year: 2018	USDA/NAIP
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2007	1"=500'	Flight Year: 2007	USDA/NAIP
1997	1"=500'	Acquisition Date: February 23, 1997	USGS/DOQQ
1992	1"=500'	Flight Date: March 02, 1992	USGS
1987	1"=500'	Flight Date: June 06, 1987	USDA
1981	1"=500'	Flight Date: March 12, 1981	USGS
1975	1"=500'	Flight Date: April 21, 1975	USGS
1969	1"=500'	Flight Date: August 25, 1969	USGS

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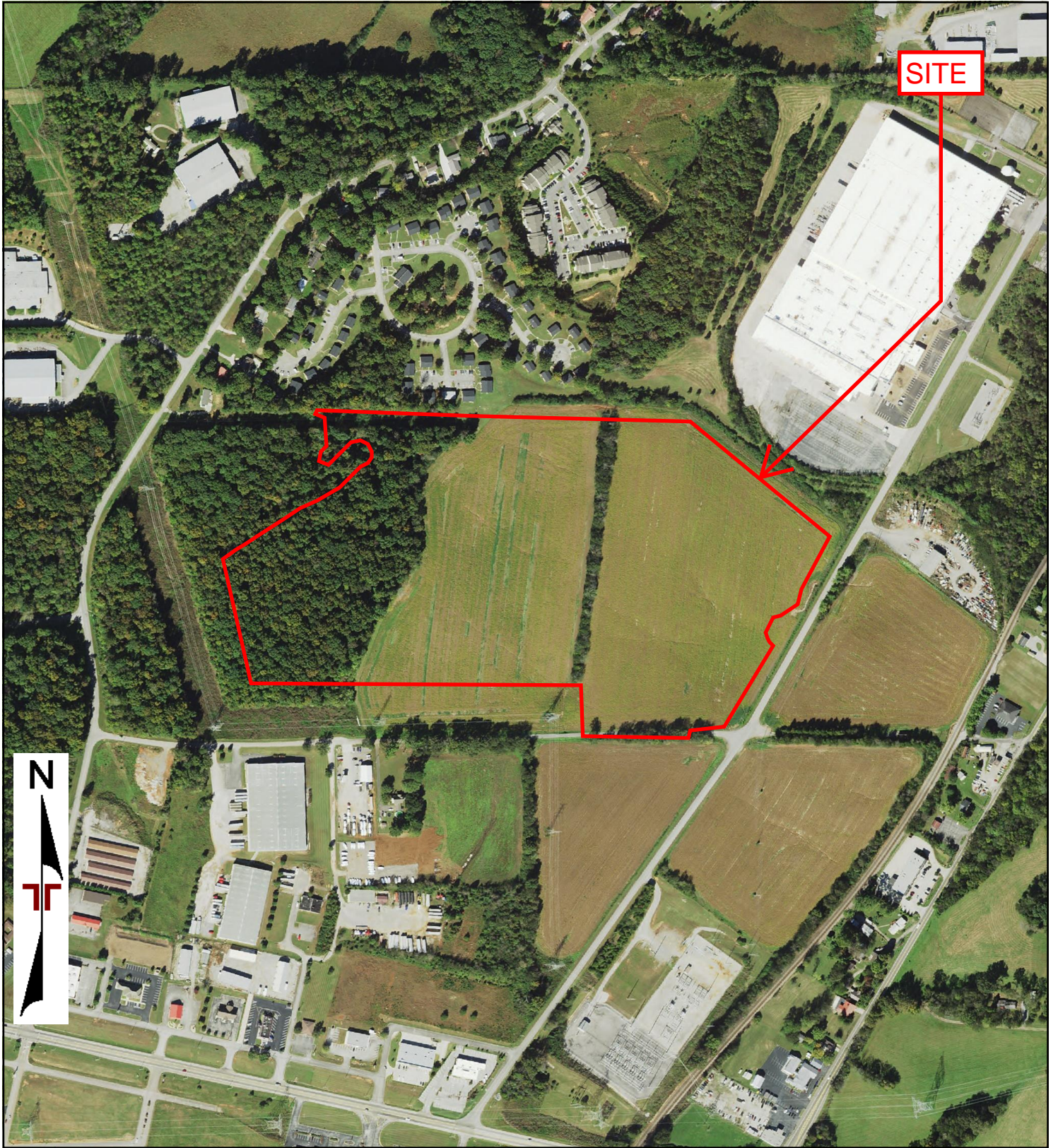
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0 Feet

500

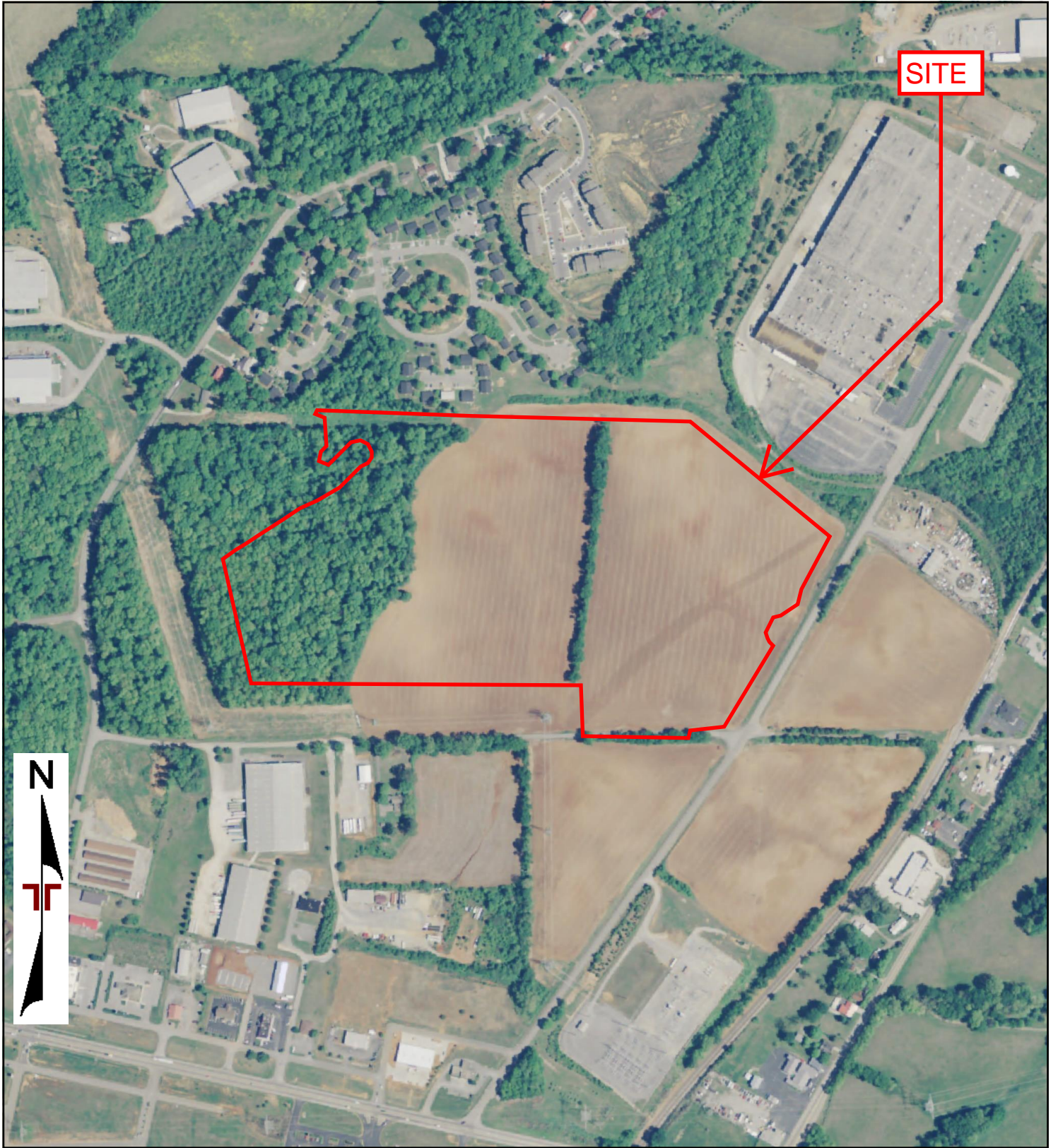
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2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 2018



2018 AERIAL PHOTOGRAPH	



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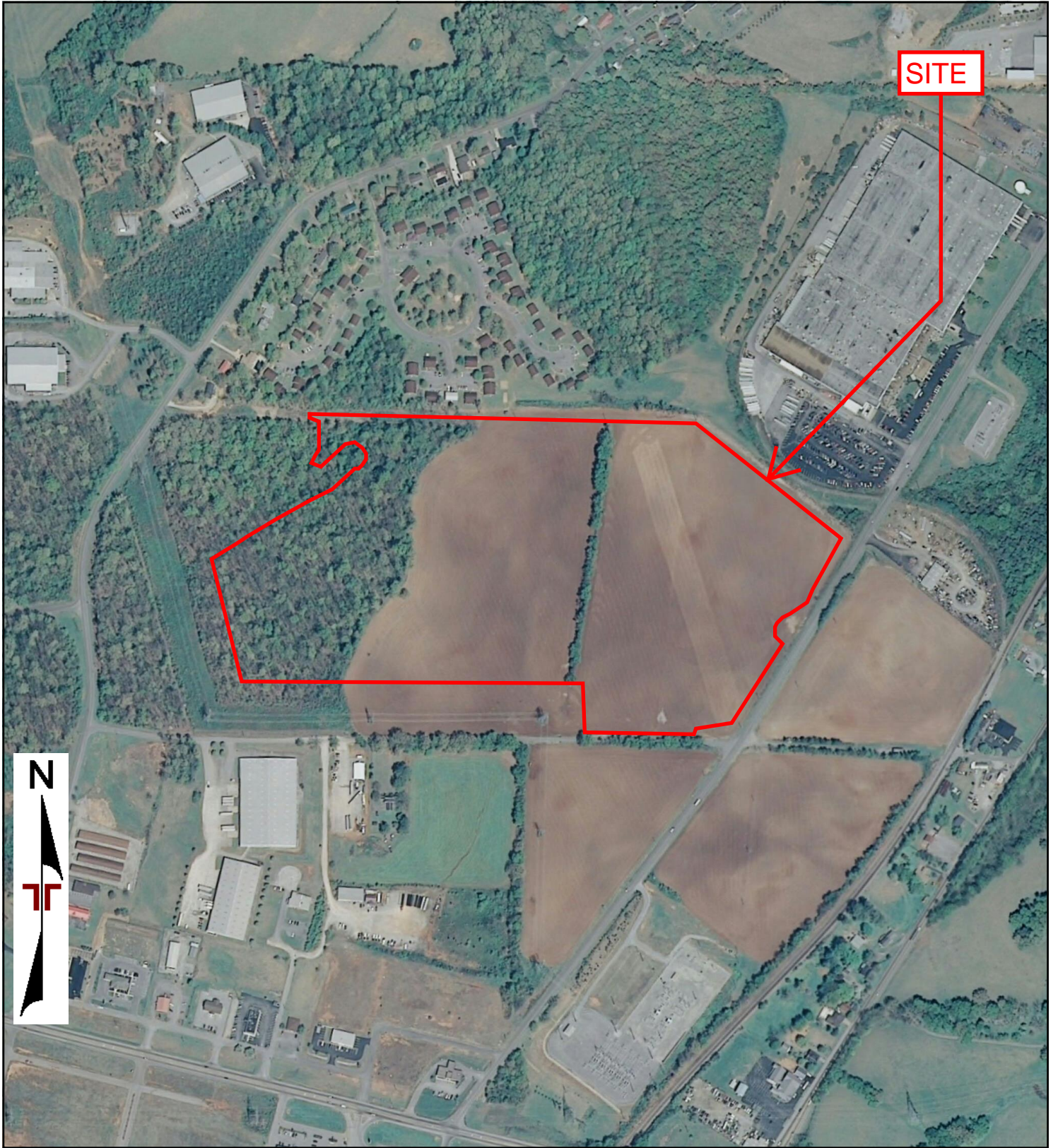
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Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 2014



2014 AERIAL PHOTOGRAPH	



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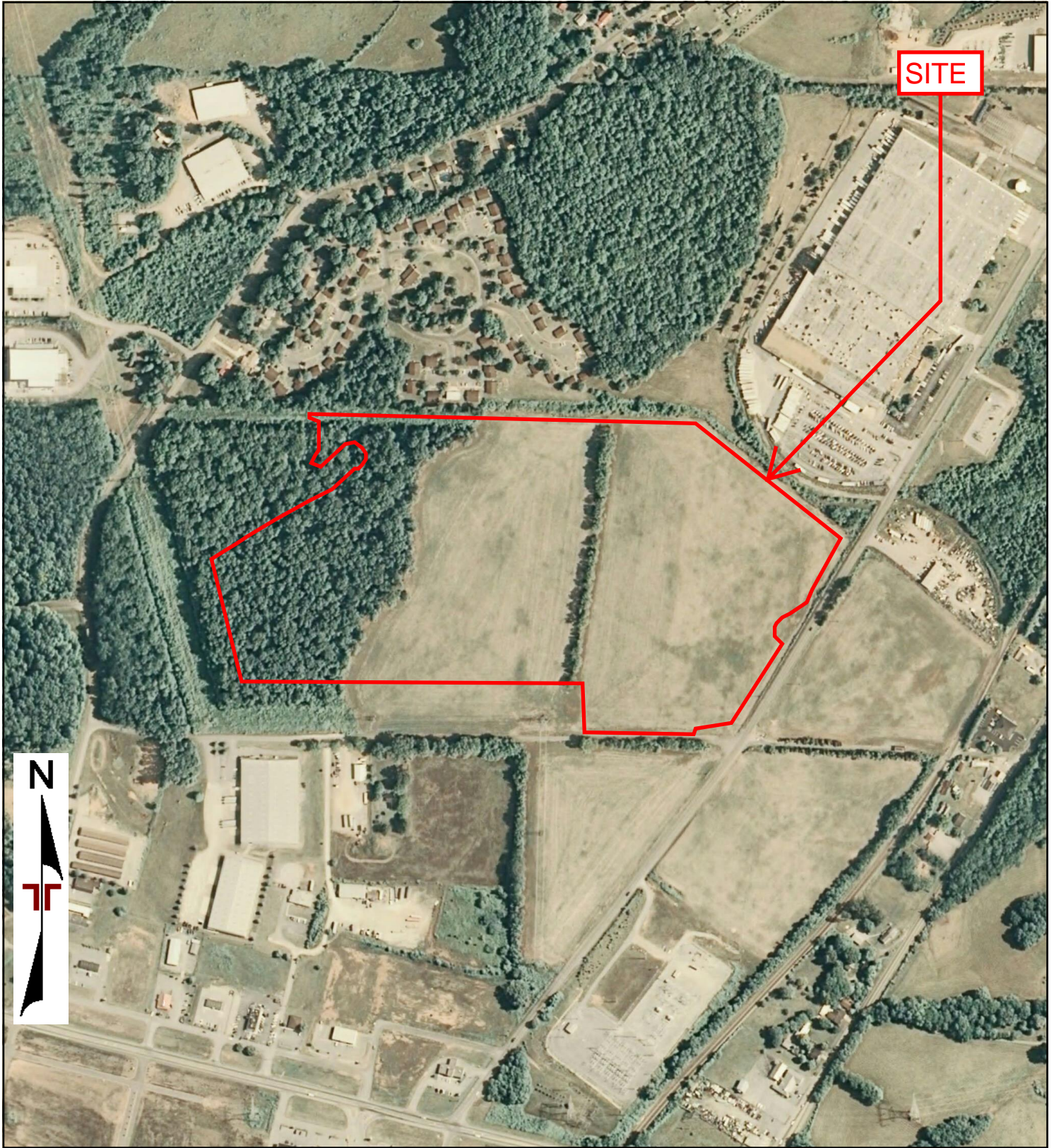
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Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 2010



2010 AERIAL PHOTOGRAPH	



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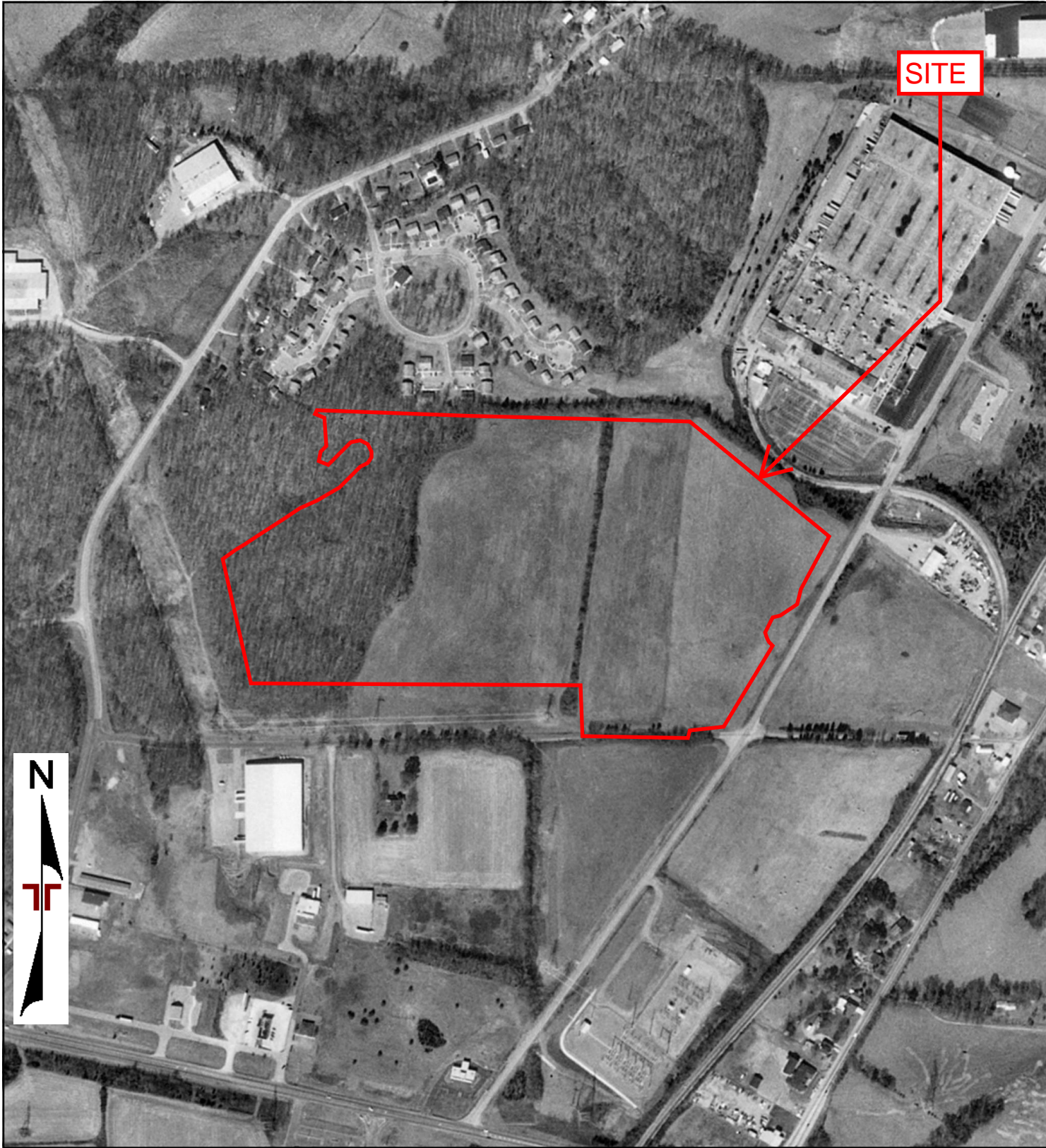
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Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 2007



2007 AERIAL PHOTOGRAPH



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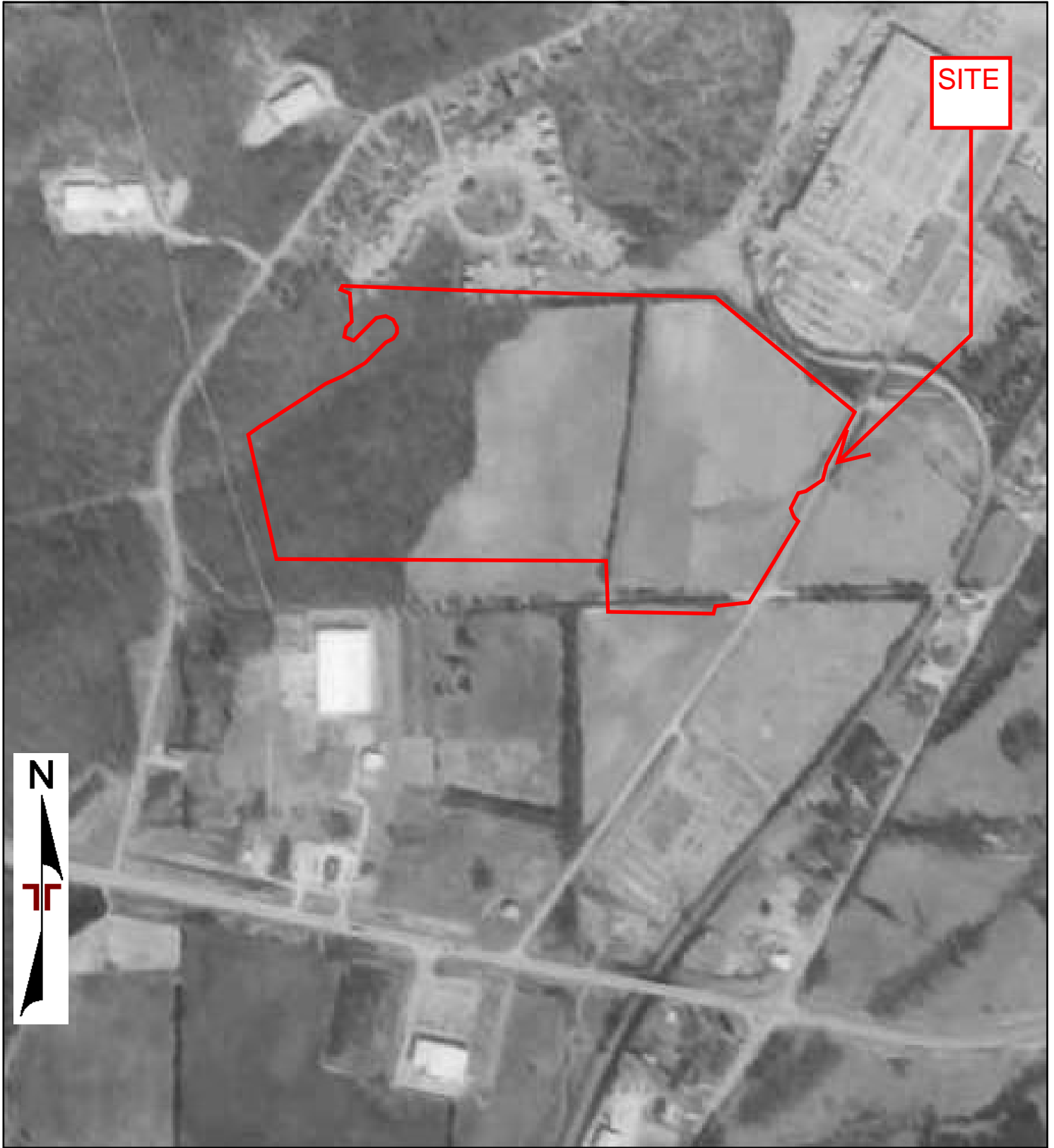
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Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1997



1997 AERIAL PHOTOGRAPH	



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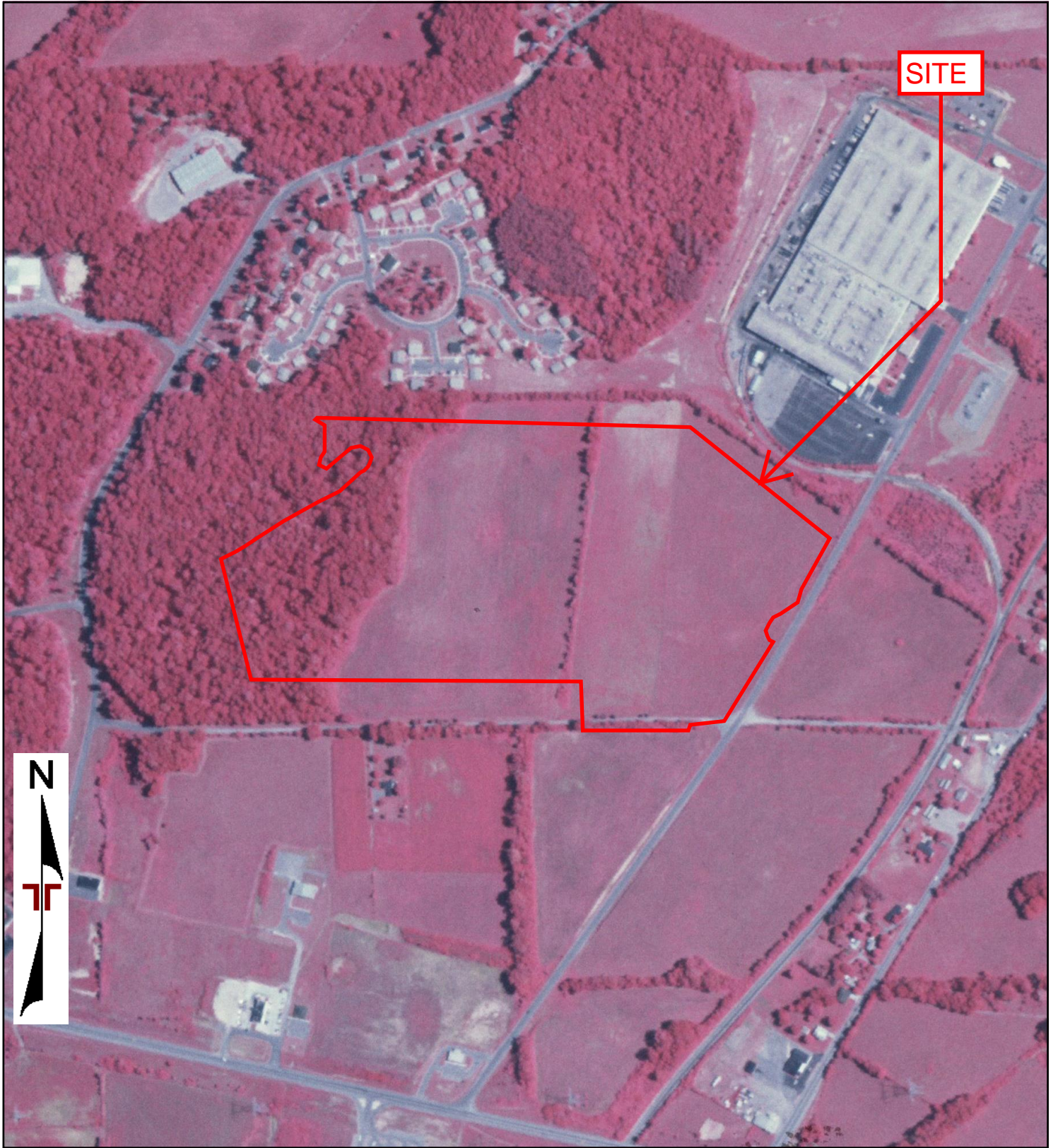
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2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1992



1992 AERIAL PHOTOGRAPH	

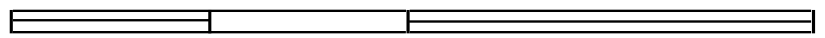
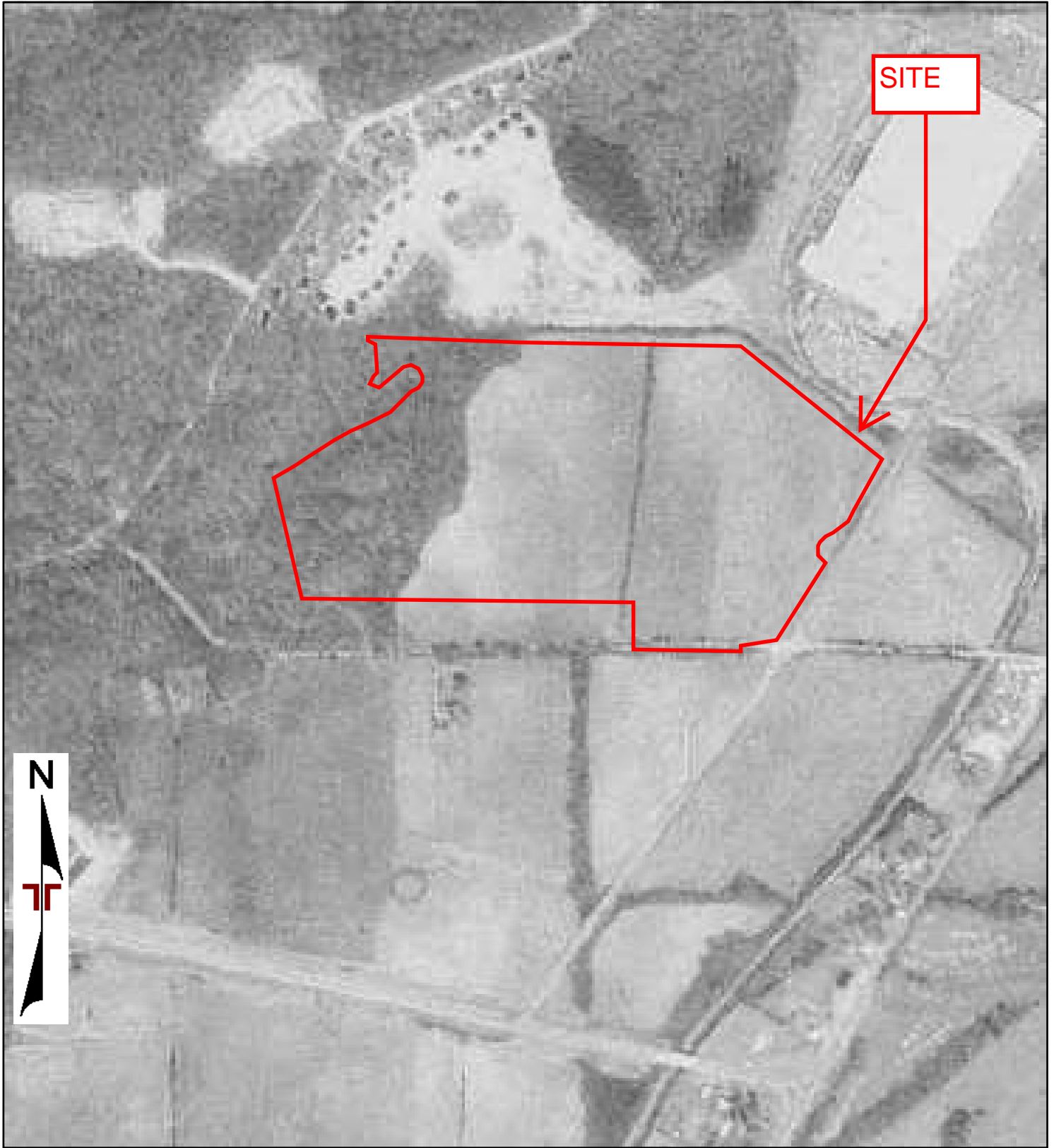


0 Feet 500 1000 2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1987



1987 AERIAL PHOTOGRAPH	



0 Feet

500

1000

2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1981



1981 AERIAL PHOTOGRAPH	



SITE

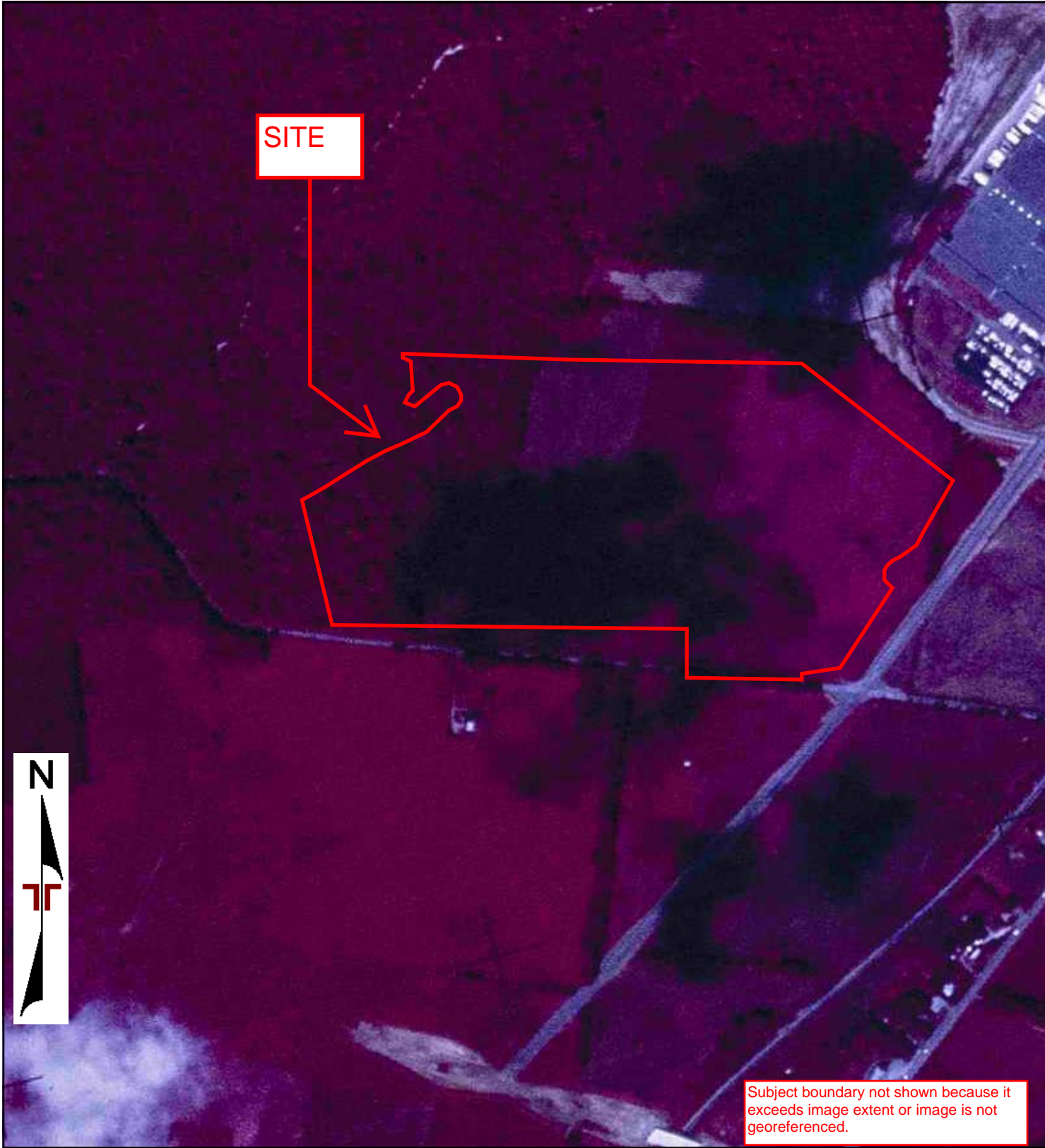


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Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1975



1975 AERIAL PHOTOGRAPH	




0 Feet 500 1000 2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1969



1969 AERIAL PHOTOGRAPH



Walking Horse

1251 Roberson Spring Road

Loudon, TN 37774

Inquiry Number: 7492738.3

November 09, 2023

Certified Sanborn® Map Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

11/09/23

Site Name:

Walking Horse
1251 Roberson Spring Road
Loudon, TN 37774
EDR Inquiry # 7492738.3

Client Name:

Terracon
72 Pointe Circle
Greenville, SC 29615
Contact: Tommy Gray



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Terracon were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 658C-4E83-82CA
PO # KF237118
Project KF237118

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.



Sanborn® Library search results

Certification #: 658C-4E83-82CA

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

The Sanborn Library LLC Since 1866™

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Loudon (053)	Jan 1 Owner	Current Owner	ROBERSON SPRINGS RD		
Tax Year 2024 Reappraisal 2021	GRIFFISS LAND COMPANY LLC	P O BOX 1638 MC 0312	Ctrl Map:	Group:	Parcel:
	%SUNTRUST BANK	CHATTANOOGA TN 37401	040		164.00
	P O BOX 1638 MC 0312			PI:	SI:
	CHATTANOOGA TN 37401				000

Value Information

Land Market Value:	\$2,667,900	Land Use Value:	\$213,800
Improvement Value:	\$0	Improvement Value:	\$0
Total Market Appraisal:	\$2,667,900	Total Use Appraisal:	\$213,800
		Assessment Percentage:	25%
		Assessment:	\$53,450

Subdivision Data

Subdivision:			
Plat Book:	Plat Page:	Block:	Lot:
I	36-39		

Additional Information

01 044 044 02100 000

General Information

Class: 11 - Agricultural	City: LOUDON
City #: 434	Special Service District 2: 000
Special Service District 1: 000	Neighborhood: F01
District: 01	Number of Mobile Homes: 0
Number of Buildings: 0	Utilities - Electricity: 01 - PUBLIC
Utilities - Water/Sewer: 00 - PUBLIC / NONE	Zoning: M-1, M-2, R-2
Utilities - Gas/Gas Type: 00 - NONE	

Outbuildings & Yard Items

Building #	Type	Description	Units
------------	------	-------------	-------

Sale Information

Long Sale Information list on subsequent pages

Land Information

Deed Acres: 139.68 **Calculated Acres:** 0 **Total Land Units:** 139.68

Land Code	Soil Class	Units
20 - ACREAGE		139.68

Sale Information

Sale Date	Price	Book	Page	Vacant/Improved	Type Instrument	Qualification
3/7/2014	\$0	367	775		ED - EXECUTOR/EXECUTRIX DEED	-
4/5/2012	\$0	353	594		-	-
4/4/2012	\$0	353	587		-	-
1/13/2011	\$0	345	512		-	-
6/8/2010	\$0	341	496		-	-
5/27/2009	\$0	334	229		-	-
2/17/2009	\$0	332	770		-	-
10/18/1934	\$0	0038	0270		-	-
5/15/1934	\$0	0038	0270		-	-
8/16/1913	\$0	0021	0230		-	-

APPENDIX D
ENVIRONMENTAL DATABASE INFORMATION

Walking Horse

1251 Roberson Spring Road
Loudon, TN 37774

Inquiry Number: 7492738.2s
November 09, 2023

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	28
Government Records Searched/Data Currency Tracking	GR-1
<u>GEOCHECK ADDENDUM</u>	
Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-7
Physical Setting Source Map Findings	A-8
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
 Please contact EDR at 1-800-352-0050
 with any questions or comments.

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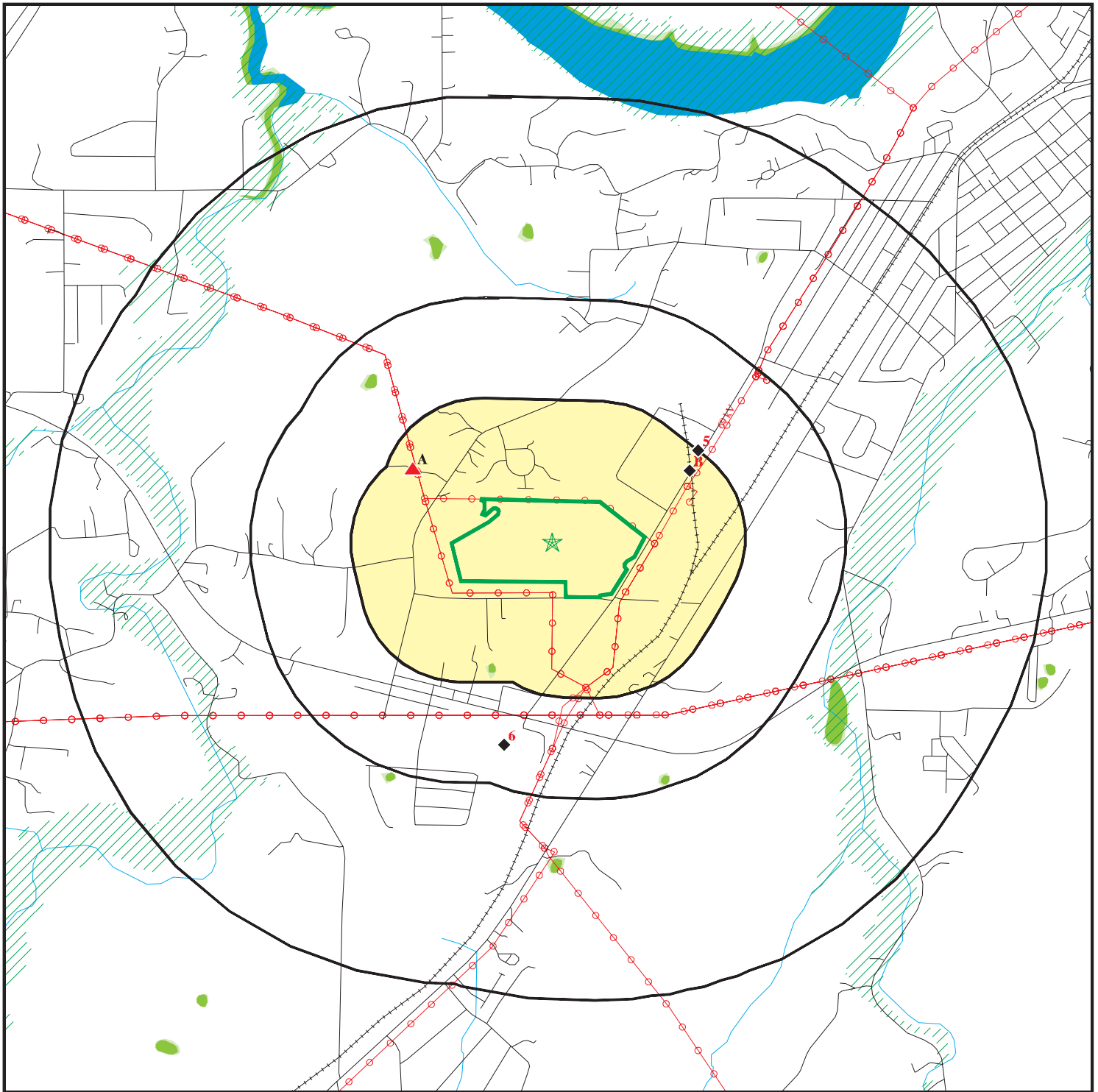
MAPPED SITES SUMMARY

Target Property Address:
 1251 ROBERSON SPRING ROAD
 LOUDON, TN 37774

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	VYTRON CORP	1000 VYTRON RD.	RCRA NonGen / NLR, FINDS, ECHO	Higher	871, 0.165, WNW
B2	PROTOMET CORPORATION		PFAS ECHO	Lower	954, 0.181, ENE
A3	VYTRON CORP		PFAS ECHO	Higher	987, 0.187, WNW
B4	MAREMONT EXHAUST PRO	2400 INDUSTRIAL PARK	RCRA NonGen / NLR, FINDS, ECHO	Lower	1048, 0.198, ENE
5	INTERNATIONAL MUFFLE	2400 MAREMONT PARKWA	SRP, VCP, NPDES	Lower	1323, 0.251, ENE
6	FOOD CITY GAS N GO #	1477 HIGHWAY 72 NORT	LUST, UST, HIST UST	Lower	2099, 0.398, SSW

OVERVIEW MAP - 7492738.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

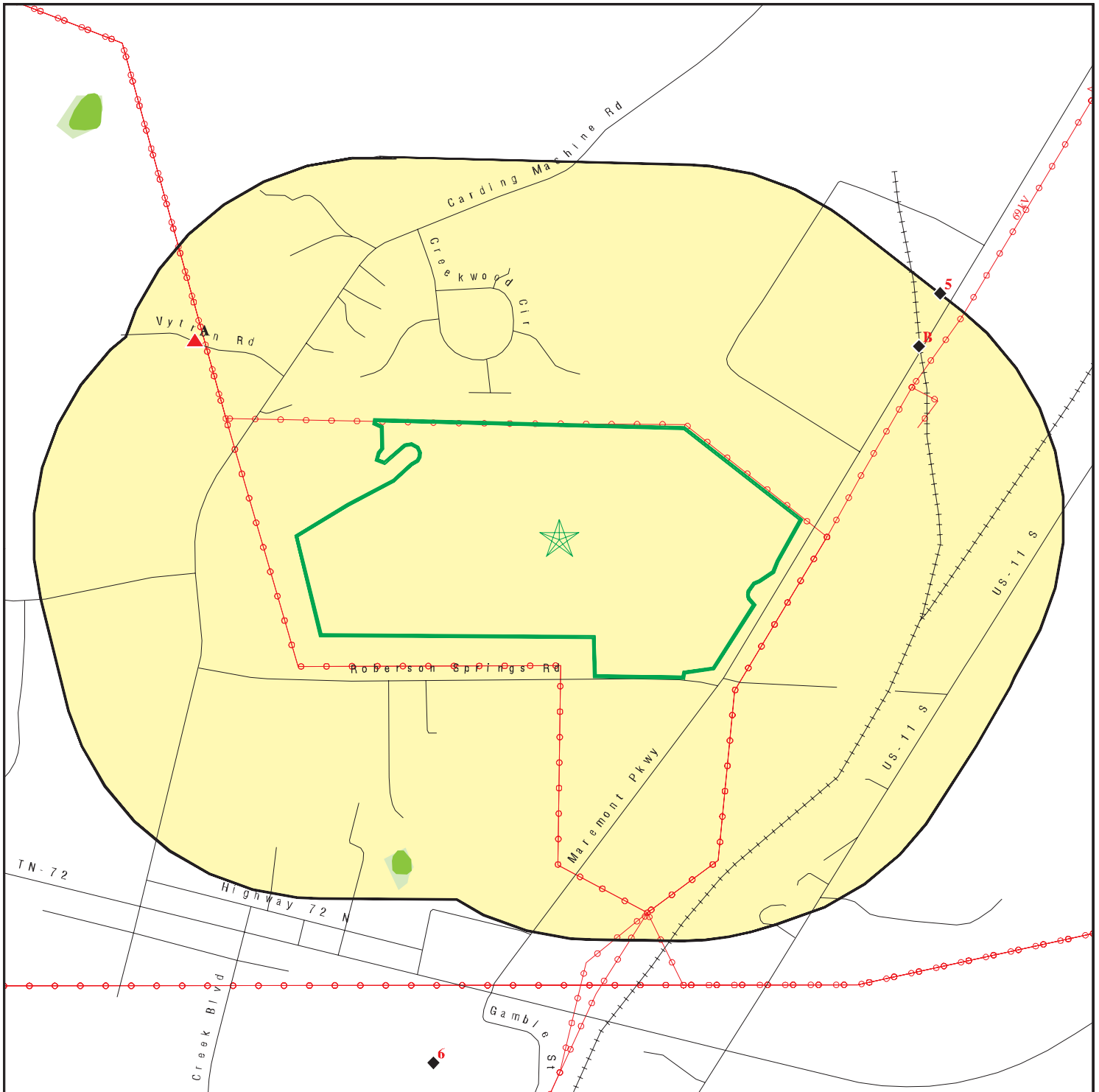
State Wetlands














This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Walking Horse
 ADDRESS: 1251 Roberson Spring Road
 Loudon TN 37774
 LAT/LONG: 35.725491 / 84.361086

CLIENT: Terracon
 CONTACT: Tommy Gray
 INQUIRY #: 7492738.2s
 DATE: November 09, 2023 8:49 am

DETAIL MAP - 7492738.2S



- | | |
|---|---|
|  Target Property |  Indian Reservations BIA |
|  Sites at elevations higher than or equal to the target property |  Power transmission lines |
|  Sites at elevations lower than the target property |  Special Flood Hazard Area (1%) |
|  Manufactured Gas Plants |  0.2% Annual Chance Flood Hazard |
|  Sensitive Receptors |  National Wetland Inventory |
|  National Priority List Sites |  State Wetlands |
|  Dept. Defense Sites | |

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Walking Horse
 ADDRESS: 1251 Roberson Spring Road
 Loudon TN 37774
 LAT/LONG: 35.725491 / 84.361086

CLIENT: Terracon
 CONTACT: Tommy Gray
 INQUIRY #: 7492738.2s
 DATE: November 09, 2023 8:50 am

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Lists of Federal NPL (Superfund) sites</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Lists of Federal Delisted NPL sites</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Lists of Federal sites subject to CERCLA removals and CERCLA orders</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Lists of Federal CERCLA sites with NFRAP</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Lists of Federal RCRA facilities undergoing Corrective Action</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Lists of Federal RCRA TSD facilities</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Lists of Federal RCRA generators</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>Lists of state- and tribal (Superfund) equivalent sites</i>								
SHWS	1.000		0	0	0	0	NR	0
<i>Lists of state and tribal landfills and solid waste disposal facilities</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
SWM COMPLAINTS	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal leaking storage tanks</i>								
LUST	0.500		0	0	1	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
LUST TRUST	0.500		0	0	0	NR	NR	0
HIST_LUST CO	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal registered storage tanks</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<i>State and tribal institutional control / engineering control registries</i>								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal voluntary cleanup sites</i>								
VCP	0.500		0	0	1	NR	NR	1
INDIAN VCP	0.500		0	0	0	NR	NR	0
SRP	0.500		0	0	1	NR	NR	1
<i>Lists of state and tribal brownfield sites</i>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
<i>Local Brownfield lists</i>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Landfill / Solid Waste Disposal Sites</i>								
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Hazardous waste / Contaminated Sites</i>								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
PRIORITYCLEANERS	0.500		0	0	0	NR	NR	0
DEL SHWS	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
<i>Local Lists of Registered Storage Tanks</i>								
HIST UST	0.250		0	0	NR	NR	NR	0
<i>Local Land Records</i>								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	2	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

A1
WNW
1/8-1/4
0.165 mi.
871 ft.

VYTRON CORP
1000 VYTRON RD.
LOUDON, TN 37774
Site 1 of 2 in cluster A

RCRA NonGen / NLR
FINDS
ECHO

1000367523
TND982147316

Relative:
Higher
Actual:
912 ft.

RCRA Listings:	
Date Form Received by Agency:	20180118
Handler Name:	Vytron Corporation
Handler Address:	VYTRON ROAD
Handler City,State,Zip:	LOUDON, TN 37774
EPA ID:	TND982147316
Contact Name:	MARK V WEAVER
Contact Address:	P.O. BOX 279
Contact City,State,Zip:	LOUDON, TN 37774-0279
Contact Telephone:	865-458-4624
Contact Fax:	865-458-2206
Contact Email:	AP@VYTRON.COM
Contact Title:	PRESIDENT
EPA Region:	04
Land Type:	Private
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Tn
State District:	103
Mailing Address:	P.O. BOX 279
Mailing City,State,Zip:	LOUDON, TN 37774-0279
Owner Name:	Cytron Corporation
Owner Type:	Private
Operator Name:	Vytron Corporation
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Hazardous Secondary Material Indicator:	NN
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VYTRON CORP (Continued)

1000367523

Handler Date of Last Change:	20181024
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	Ignitable Waste

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MARK WEAVER
Legal Status:	Private
Owner/Operator Address:	1000 VYTRON ROAD
Owner/Operator City,State,Zip:	LOUDON, TN 37774
Owner/Operator Telephone:	865-458-4624

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MARK WEAVER
Legal Status:	Private
Owner/Operator Address:	1000 VYTRON ROAD
Owner/Operator City,State,Zip:	LOUDON, TN 37774
Owner/Operator Telephone:	865-458-4624

Owner/Operator Indicator:	Operator
Owner/Operator Name:	CLIFF MAJORS
Legal Status:	Private
Owner/Operator Address:	1000 VYTRON ROAD
Owner/Operator City,State,Zip:	LOUDON, TN 37774
Owner/Operator Telephone:	865-458-4624

Owner/Operator Indicator:	Operator
Owner/Operator Name:	CLIFF MAJORS
Legal Status:	Private
Owner/Operator Address:	1000 VYTRON ROAD
Owner/Operator City,State,Zip:	LOUDON, TN 37774
Owner/Operator Telephone:	865-458-4624

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MARK WEAVER
Legal Status:	Private
Owner/Operator Address:	1000 VYTRON ROAD
Owner/Operator City,State,Zip:	LOUDON, TN 37774
Owner/Operator Telephone:	865-458-4624

Owner/Operator Indicator:	Operator
Owner/Operator Name:	CLIFF MAJORS
Legal Status:	Private
Owner/Operator Address:	1000 VYTRON ROAD
Owner/Operator City,State,Zip:	LOUDON, TN 37774
Owner/Operator Telephone:	865-458-4624

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VYTRON CORP (Continued)

1000367523

Owner/Operator Indicator: Owner
Owner/Operator Name: MARK WEAVER
Legal Status: Private
Date Became Current: 20130123
Owner/Operator Address: 1000 VYTRON ROAD
Owner/Operator City,State,Zip: LOUDON, TN 37774-5602
Owner/Operator Telephone: 865-458-4624

Owner/Operator Indicator: Operator
Owner/Operator Name: VYTRON CORPORATION
Legal Status: Private
Owner/Operator Address: 1000 VYTRON ROAD
Owner/Operator City,State,Zip: LOUDON, TN 37774
Owner/Operator Telephone: 865-458-4624
Owner/Operator Fax: 865-458-2206

Owner/Operator Indicator: Operator
Owner/Operator Name: VYTRON CORPORATION
Legal Status: Private
Date Became Current: 20130123
Owner/Operator Address: 1000 VYTRON ROAD
Owner/Operator City,State,Zip: LOUDON, TN 37774
Owner/Operator Telephone: 865-458-4624

Owner/Operator Indicator: Owner
Owner/Operator Name: CYTRON CORPORATION
Legal Status: Private
Date Became Current: 19780101
Owner/Operator Address: 1000 VYTRON ROAD
Owner/Operator City,State,Zip: LOUDON, TN 37774-5602
Owner/Operator Telephone: 865-458-4624
Owner/Operator Fax: 865-458-2206
Owner/Operator Email: AP@VYTRON.COM

Historic Generators:
Receive Date: 19990201
Handler Name: VYTRON CORPORATION
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: Tn
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

Receive Date: 20030307
Handler Name: VYTRON CORPORATION
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Tn
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VYTRON CORP (Continued)

1000367523

Receive Date: 20090113
Handler Name: VYTRON CORPORATION
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: Tn
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

Receive Date: 20120119
Handler Name: VYTRON CORPORATION
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: Tn
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

Receive Date: 20130123
Handler Name: VYTRON CORPORATION
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: Tn
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

Receive Date: 20180118
Handler Name: VYTRON CORPORATION
Federal Waste Generator Description: Not a generator, verified
State District Owner: Tn
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 326121
NAICS Description: UNLAMINATED PLASTICS PROFILE SHAPE MANUFACTURING

Has the Facility Received Notices of Violations:

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Universal Waste - Small Quantity Handlers
Date Violation was Determined: 20160204

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VYTRON CORP (Continued)

1000367523

Actual Return to Compliance Date: 20160204
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Enforcement Identifier: 001
Date of Enforcement Action: 20160204
Enforcement Responsible Agency: State
Corrective Action Component: No
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: TN503
Enforcement Responsible Sub-Organization: 03

Found Violation: No

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Universal Waste - Small Quantity Handlers
Date Violation was Determined: 20160204
Actual Return to Compliance Date: 20160204
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Enforcement Identifier: 001
Date of Enforcement Action: 20160204
Enforcement Responsible Agency: State
Corrective Action Component: No
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: TN503
Enforcement Responsible Sub-Organization: 03

Evaluation Action Summary:

Evaluation Date: 20160204
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: TN503
Evaluation Responsible Sub-Organization: 03
Actual Return to Compliance Date: 20160204

Evaluation Date: 20020808
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: TN507
Evaluation Responsible Sub-Organization: 03

Evaluation Date: 20160204
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier: TN503
Evaluation Responsible Sub-Organization: 03
Actual Return to Compliance Date: 20160204

FINDS:

Registry ID: 110000372739

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VYTRON CORP (Continued)

1000367523

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:

THE EMISSION INVENTORY SYSTEM (EIS) MAINTAINS AN INVENTORY OF LARGE STATIONARY SOURCES AND VOLUNTARILY-REPORTED SMALLER SOURCES OF AIR POINT POLLUTANT EMITTERS. IT CONTAINS INFORMATION ABOUT FACILITY SITES AND THEIR PHYSICAL LOCATION, EMISSIONS UNITS, EMISSIONS PROCESSES, RELEASE POINTS, CONTROL APPROACHES, AND REGULATIONS. FACILITY INVENTORY DATA ARE KEPT SEPARATE FROM THE EMISSIONS DATA AND HAVE STABLE IDENTIFIERS TO IMPROVE CONTINUITY FROM YEAR TO YEAR AND TO HELP IDENTIFY DUPLICATE OR MISSING FACILITIES

The Integrated Compliance Information System (ICIS) provides a database that, when complete, will contain integrated enforcement and compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained in ICIS by EPA in the Regional offices and it at Headquarters. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

The Toxic Release Inventory System (TRIS) is a publicly available EPA database reported annually by certain covered industry groups, as well as federal facilities. It contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment, and includes information about waste management and pollution prevention activities.

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000367523
Registry ID:	110000372739
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110000372739
Name:	VYTRON CORP
Address:	1000 VYTRON RD.
City,State,Zip:	LOUDON, TN 37774

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

PROTOMET CORPORATION (Continued)

1027409453

CWA NAICS: -
 CWA SICS: -
 RCRA IDS: -
 RCRA Permit Types: -
 RCRA NAICS: -
 SDWA IDS: -
 SDWA System Types: -
 SDWA Compliance Status: -
 SDWA SNC Flag: N
 TRI IDS: 3777WPRMT24MAR
 TRI Releases Transfers: 28588
 TRI On Site Releases: 557
 TRI Off Site Transfers: 28,031
 TRI Reporter: Y
 Facility IMP Water Flag: -
 EJSCREEN Flag US: N
 EJSCREEN Report: https://ejscreen.epa.gov/mapper/mobile/EJSCREEN_mobile.aspx?geometry=%7B%22x%22:-84.35511,%22y%22:35.72785,%22spatialReference%22:%7B%22wkid%22:4326%7D%7D&unit=9035&areatype=&areaid=&basemap=streets&distance=1

A3
WNW
1/8-1/4
0.187 mi.
987 ft.

VYTRON CORP

PFAS ECHO 1027437056

LOUDON, TN

N/A

Site 2 of 2 in cluster A

Relative:
Higher
Actual:
927 ft.

PFAS ECHO:
 Name: VYTRON CORP
 City,State,Zip: LOUDON, TN
 Latitude: 35.728204
 Longitude: -84.367241
 Count: 1
 County: LOUDON
 Status: Inactive
 Region: 04
 Industry: Plastics and Resins
 ECHO Facility Report: <https://echo.epa.gov/detailed-facility-report?fid=110000372739>
 Facility Percent Minority: 17.746
 Facility Derived Tribes: -
 Facility Population: 274.54
 EPA Programs: RCRA
 Federal Facility: No
 Federal Agency: -
 Facility FIPS Code: 47105
 Facility Indian Country Flag: N
 Facility Collection Method: ADDRESS MATCHING-HOUSE NUMBER
 Facility Derived HUC: 06010201
 Facility Derived WBD: 060102010301
 Facility Derived CD113: 02
 Facility Derived CB2010: 471050606003104
 Facility Major Flag: -
 Facility Active Flag: Y
 Facility Inspection Count: 1
 Facility Date Last Inspection: 8/20/2018
 Facility Days Last Inspection: 1,776
 Facility Informal Count: 0
 Facility Date Last Informal Action: 2/4/2016
 Facility Formal Action Count: 1

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

VYTRON CORP (Continued)

1027437056

Facility Date Last Formal Action:	11/5/2019
Facility Total Penalties:	79,065
Facility Penalty Count:	1
Facility Date Last Penalty:	11/5/2019
Facility Last Penalty AMT:	79,065
Facility QTRS With NC:	0
Facility Programs With SNC:	0
Facility Compliance Status:	No Violation Identified
Facility SNC Flag:	N
AIR Flag:	N
NPDES Flag:	N
SDWIS Flag:	N
RCRA Flag:	Y
TRI Flag:	N
GHG Flag:	N
AIR IDS:	-
CAA Permit Types:	-
CAA NAICS:	-
CAA SICS:	-
NPDES IDS:	-
CWA Permit Types:	-
CWA NAICS:	-
CWA SICS:	-
RCRA IDS:	TND982147316
RCRA Permit Types:	Other
RCRA NAICS:	326121
SDWA IDS:	-
SDWA System Types:	-
SDWA Compliance Status:	-
SDWA SNC Flag:	N
TRI IDS:	37774VYTRNPOBOX
TRI Releases Transfers:	-
TRI On Site Releases:	-
TRI Off Site Transfers:	-
TRI Reporter:	-
Facility IMP Water Flag:	-
EJSCREEN Flag US:	N
EJSCREEN Report:	https://ejscreen.epa.gov/mapper/mobile/EJSCREEN_mobile.aspx?geometry=%7B%22x%22:-84.367241,%22y%22:35.728204,%22spatialReference%22:%7B%22wkid%22:4326%7D%7D&unit=9035&areatype=&areaid=&basemap=streets&distance=1

B4
ENE
 1/8-1/4
 0.198 mi.
 1048 ft.

MAREMONT EXHAUST PRODUCTS INC
2400 INDUSTRIAL PARK BLVD
LOUDON, TN 37774

RCRA NonGen / NLR **1000206055**
FINDS **TND049467814**
ECHO

Site 2 of 2 in cluster B

Relative:
Lower
Actual:
841 ft.

RCRA Listings:	
Date Form Received by Agency:	19950213
Handler Name:	Maremont Exhaust Products Inc
Handler Address:	INDUSTRIAL PARK BLVD
Handler City,State,Zip:	LOUDON, TN 37774
EPA ID:	TND049467814
Contact Name:	LARRY RUEBUSH
Contact Address:	2400 INDUSTRIAL PARK BLVD
Contact City,State,Zip:	LOUDON, TN 37774
Contact Telephone:	615-458-4681

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

MAREMONT EXHAUST PRODUCTS INC (Continued)

1000206055

EPA Region:	04
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Tn
State District:	103
Mailing Address:	INDUSTRIAL PARK BLVD
Mailing City, State, Zip:	LOUDON, TN 37774
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Hazardous Secondary Material Indicator:	NN
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Handler Date of Last Change:	20000902
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Sub-Part P Indicator:	No

Historic Generators:

Receive Date:	19950213
Handler Name:	MAREMONT EXHAUST PRODUCTS INC
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Tn
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Receive Date:	19900301
Handler Name:	MAREMONT CORPORATION

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MAREMONT EXHAUST PRODUCTS INC (Continued)

1000206055

Federal Waste Generator Description: Large Quantity Generator
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

List of NAICS Codes and Descriptions:

NAICS Code: 336399
NAICS Description: ALL OTHER MOTOR VEHICLE PARTS MANUFACTURING

Has the Facility Received Notices of Violations:

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General Facility Standards
Date Violation was Determined: 19860429
Actual Return to Compliance Date: 19860812
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19860812
Enforcement Identifier: 007
Date of Enforcement Action: 19860502
Enforcement Responsible Agency: State
Corrective Action Component: No
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: TN081

Found Violation: No

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 19860429
Actual Return to Compliance Date: 19860812
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19860812
Enforcement Identifier: 007
Date of Enforcement Action: 19860502
Enforcement Responsible Agency: State
Corrective Action Component: No
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: TN081

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 19860429
Actual Return to Compliance Date: 19860812
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19860812
Enforcement Identifier: 007
Date of Enforcement Action: 19860502
Enforcement Responsible Agency: State

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MAREMONT EXHAUST PRODUCTS INC (Continued)

1000206055

Corrective Action Component: No
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: TN081

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19890808
Actual Return to Compliance Date: 19890922
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State

Found Violation: No

Found Violation: No

Found Violation: No

Found Violation: No

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 19860429
Actual Return to Compliance Date: 19860812
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19860812
Enforcement Identifier: 007
Date of Enforcement Action: 19860502
Enforcement Responsible Agency: State
Corrective Action Component: No
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: TN081

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19860429
Actual Return to Compliance Date: 19860812
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19860429
Actual Return to Compliance Date: 19860812
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19860812
Enforcement Identifier: 007
Date of Enforcement Action: 19860502
Enforcement Responsible Agency: State
Corrective Action Component: No
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: TN081

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MAREMONT EXHAUST PRODUCTS INC (Continued)

1000206055

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 19860429
Actual Return to Compliance Date: 19860812
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19860812
Enforcement Identifier: 007
Date of Enforcement Action: 19860502
Enforcement Responsible Agency: State
Corrective Action Component: No
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: TN081

Found Violation: No

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19860429
Actual Return to Compliance Date: 19860812
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19860812
Enforcement Identifier: 007
Date of Enforcement Action: 19860502
Enforcement Responsible Agency: State
Corrective Action Component: No
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: TN081

Found Violation: No

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19890808
Actual Return to Compliance Date: 19890922
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19890808
Actual Return to Compliance Date: 19890922
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State

Evaluation Action Summary:
Evaluation Date: 19860429
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: TN081

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MAREMONT EXHAUST PRODUCTS INC (Continued)

1000206055

Actual Return to Compliance Date:	19860812
Scheduled Compliance Date:	19860812
Evaluation Date:	19890922
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier:	TN036
Evaluation Date:	19860429
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN081
Actual Return to Compliance Date:	19860812
Scheduled Compliance Date:	19860812
Evaluation Date:	19860429
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN081
Actual Return to Compliance Date:	19860812
Scheduled Compliance Date:	19860812
Evaluation Date:	19890808
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN036
Actual Return to Compliance Date:	19890922
Evaluation Date:	19880511
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Evaluation Responsible Person Identifier:	TN349
Evaluation Date:	19860812
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier:	TN081
Evaluation Date:	19850319
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN092
Evaluation Date:	19870518
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN313
Evaluation Date:	19860429

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MAREMONT EXHAUST PRODUCTS INC (Continued)

1000206055

Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN081
Actual Return to Compliance Date:	19860812
Scheduled Compliance Date:	19860812
Evaluation Date:	19860429
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN081
Actual Return to Compliance Date:	19860812
Evaluation Date:	19860429
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN081
Actual Return to Compliance Date:	19860812
Scheduled Compliance Date:	19860812
Evaluation Date:	19860429
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN081
Actual Return to Compliance Date:	19860812
Scheduled Compliance Date:	19860812
Evaluation Date:	19890808
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Evaluation Responsible Person Identifier:	TN036
Evaluation Date:	19860429
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN081
Actual Return to Compliance Date:	19860812
Scheduled Compliance Date:	19860812
Evaluation Date:	19860911
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Evaluation Responsible Person Identifier:	TN081
Evaluation Date:	19890808
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	TN036
Actual Return to Compliance Date:	19890922

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MAREMONT EXHAUST PRODUCTS INC (Continued)

1000206055

Evaluation Date: 19860429
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: TN081
Actual Return to Compliance Date: 19890922

FINDS:

Registry ID: 110004967377

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1000206055
Registry ID: 110004967377
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110004967377>
Name: MAREMONT EXHAUST PRODUCTS INC
Address: 2400 INDUSTRIAL PARK BLVD
City,State,Zip: LOUDON, TN 37774

5
ENE
1/4-1/2
0.251 mi.
1323 ft.

INTERNATIONAL MUFFLER COMPANY DBA MAREMONT
2400 MAREMONT PARKWAY
LOUDON, TN 37774

SRP S107858742
VCP N/A
NPDES

Relative:
Lower
Actual:
864 ft.

SRP:
Name: MAREMONT EXHAUST PRODUCTS
Address: 2400 MAREMONT PKWY
City,State,Zip: LOUDON, TN
Site Control Number: SRS-2005-1232
EPAID: TNR000033845
State Remediation Program Site Number: SRS530969
Field Office: KNOX
Contaminants Of Concern: VOC
Active?: CLOSED
Number Of Days In System: 3433
Program: VOLUNTARY
Latitude: 35.7219
Longitude: -84.3603

VCP:

Name: MAREMONT EXHAUST PRODUCTS
Address: 2400 MAREMONT PKWY
City,State,Zip: LOUDON, TN
Facility ID: SRS530969

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

INTERNATIONAL MUFFLER COMPANY DBA MAREMONT (Continued)

S107858742

Facility Status: CLOSED
EFO: KNOXVILLE
EPA Facility ID: TNR000033845
EPA Registry ID: 110046405662
Latitude: 35.7219
Longitude: -84.3603
Acres: Not reported

NPDES:

Name: INTERNATIONAL MUFFLER COMPANY DBA MAREMONT
Address: 2400 MAREMONT PARKWAY
City,State,Zip: LOUDON, TN 37774
Permit Number: TNR050032
Permit Type: TMSP
Permitting Action: Inactive
Permittee Name: International Muffler Company DBA Maremont
EFO Name: Knoxville
Function1: Official Contact
Name: General Manager James Kozar
Company: International Muffler DBA Maremont
Address: 2400 Maremont Parkway
City/Zip: Loudon 37774
Phone: 458-4681
Issuance: 03/01/2002
Expiration: 12/31/2006
Effective: 03/10/2006
Rating: N/A
NPDES Permit: TNS075591
App for NCO: 09/20/2012
Activity Description: manufacture of automotive exhaust
SIC Code: 3714
Receiving Stream: Unnamed Tributary to Steekee Creek
Site ID: 7151
Hydrocode: 6010201
Watershed Name: Tennessee-Watts Bar Lake

6
SSW
1/4-1/2
0.398 mi.
2099 ft.

FOOD CITY GAS N GO #632
1477 HIGHWAY 72 NORTH
LOUDON, TN 37774

LUST U003988112
UST N/A
HIST UST

Relative:
Lower
Actual:
900 ft.

LUST:
Name: FOOD CITY GAS N GO # 632
Address: 1477 HIGHWAY 72 NORTH
City,State,Zip: LOUDON, TN 37774
Region: STATE
Facility Id: 2530158
Current Status: 1a Completed Tank Closure
Case Manager: Wayne Clifford
Section: FO
Site Number: 1

UST:

Name: FOOD CITY GAS N GO #632
Address: 1477 HIGHWAY 72 NORTH
City,State,Zip: LOUDON 37774

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FOOD CITY GAS N GO #632 (Continued)

U003988112

Facility ID: 2530158
Facility Description: Gas Station or Truck Stop
Owner ID: 309708
Owner Name: K-VA-T FOOD STORES, INC.
Owner Address: PO BOX 1158
Owner Address 2: 1 FOOD CITY CIRCLE
Owner City,St,Zip: ABINGDON, VA 24212-1158

Tank Number: 1
Tank ID: 56942
Tank Other Material: Composite - Steel w/FRP
Compartment ID: 58124
Compartment Letter: A
Compartment Status: Permanently Out of Use
Compartment Capacity: 20000
Substance Description: Gasoline
Date Installed: MAY-01-2004
Date Closed: AUG-23-2012
Tank Emergency: Automatic
Overfill Type: Comercial
Pipe Material Desc: Flexible Plastic (APT - OPW Pieces - Environ - etc)
Pipe Other Material: Pressurized

Name: FOOD CITY GAS N GO #632
Address: 1477 HIGHWAY 72 NORTH
City,State,Zip: LOUDON 37774

Tank Number: 2
Tank ID: 56943
Tank Other Material: Composite - Steel w/FRP
Compartment ID: 58125
Compartment Letter: A
Compartment Status: Permanently Out of Use
Compartment Capacity: 20000
Substance Description: Gasoline
Date Installed: MAY-01-2004
Date Closed: AUG-23-2012
Tank Emergency: Automatic
Overfill Type: Comercial
Pipe Material Desc: Flexible Plastic (APT - OPW Pieces - Environ - etc)
Pipe Other Material: Pressurized

HIST UST:
Name: FOOD CITY GAS N GO #632
Address: 1477 HIGHWAY 72 NORTH
City,State,Zip: LOUDON, TN 37774
Facility ID: 2-730200
Facility Description: Gas Station
Owner ID: 156765
Owner Name: K-VA-T FOOD STORES, INC.
Owner Address: P.O. Box 1158
Owner City,St,Zip: Abingdon, VA 24210
Owner Telephone: (276) 623-5100
Owner Description: Commercial

Tank ID: 2
Tank Status: Currently In Use

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FOOD CITY GAS N GO #632 (Continued)

U003988112

Tank Capacity: 20000
Tank Contents: Gasoline
Tank Material: Composite (Steel w/ FRP)
Tank 2ndary Trait: None
Tank Manual Gauge: False
Tank Tightness: False
Tank Inventory Control: False
Tank ATG: True
Tank Vapor Monitor: False
Tank Groundwater Monitor: False
Tank Double Walled: False
Tank 2nd Contained: False
Tank SIR: False
Overfill Installed: True
Spill Installed: True
Cathodic Protection: True
Date Installed: 05/04/2004
Tank Leak Detection Listed: False
Pipe Material: Flexible Plastic
Pipe Other Material: Double-Walled
Pipe Type: Pressurized
Pipe Auto Line Leak Detect.: True
Pipe Leak Detection Listed: False
Pipe Vapor Monitor: False
Pipe Groundwater Monitor: False
Pipe 2nd Contained: False
Pipe SIR: False
Pipe Leak Detection Listed: False

Tank ID: 1
Tank Status: Currently In Use
Tank Capacity: 20000
Tank Contents: Gasoline
Tank Material: Composite (Steel w/ FRP)
Tank 2ndary Trait: None
Tank Manual Gauge: False
Tank Tightness: False
Tank Inventory Control: False
Tank ATG: True
Tank Vapor Monitor: False
Tank Groundwater Monitor: False
Tank Double Walled: False
Tank 2nd Contained: False
Tank SIR: False
Overfill Installed: True
Spill Installed: True
Cathodic Protection: True
Date Installed: 05/04/2004
Tank Leak Detection Listed: False
Pipe Material: Flexible Plastic
Pipe Other Material: Double-Walled
Pipe Type: Pressurized
Pipe Auto Line Leak Detect.: True
Pipe Leak Detection Listed: False
Pipe Vapor Monitor: False
Pipe Groundwater Monitor: False

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FOOD CITY GAS N GO #632 (Continued)

U003988112

Pipe 2nd Contained: False
Pipe SIR: False
Pipe Leak Detection Listed: False

Count: 2 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
LOUDON	1003868552	RESERVOIR HILL MUNICIPAL LDFL	H'LAND AV & CARDING MACHINE RD	37774	SEMS-ARCHIVE
LOUDON	U004165616	COLLIN'S QUICK STOP	939 MULBERRY	37774	LUST, UST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
TN	AIRS	Listing of Permitted Sources	Department of Environment & Conservation	07/24/2023	07/26/2023	10/16/2023
TN	AST	Aboveground Storage Tanks	Department of Environment and Conservation	10/01/1999	10/12/1999	11/05/1999
TN	BROWNFIELDS	Superfund VOAP Listing	Department of Environment & Conservation	06/12/2023	06/13/2023	09/07/2023
TN	CDL	Registry of Contaminated Properties	Department of Environment & Conservation	07/06/2023	07/26/2023	10/16/2023
TN	DEL SHWS	Deleted State Hazardous Waste Sites	Department of Environment & Conservation	06/26/2023	06/26/2023	09/13/2023
TN	DRYCLEANERS	Registered Facilities List	Dept. of Environment & Conservation	06/01/2023	07/11/2023	09/26/2023
TN	ENG CONTROLS	Engineering Control Sites	Department of Environment & Conservation	08/07/2023	08/09/2023	10/27/2023
TN	HIST UST	Underground Storage Tank Database	Department of Environment & Conservation	07/31/2023	08/09/2023	10/27/2023
TN	HIST_LUST CO	Leaking Underground Storage Tanks Sites	Department of Environmental Conservation, Col	10/18/1994	10/24/1994	12/30/1994
TN	INST CONTROL	Institutional Control Sites	Department of Environment & Conservation	08/07/2023	08/09/2023	10/27/2023
TN	LEAD CERT	Lead Safe Housing Registry	Department of Environment & Conservation	02/25/2019	02/26/2019	06/13/2019
TN	LIENS	Liens Information	Department of Environment & Conservation	06/22/2023	06/22/2023	09/14/2023
TN	LUST	Fund Eligible Leaking Underground Storage Tank Sites	Department of Environment and Conservation	07/31/2023	08/09/2023	10/27/2023
TN	LUST TRUST	LUST TRUST Fund Database	Department of Environment & Conservation	07/31/2023	08/09/2023	10/27/2023
TN	NPDES	Permitted Facility Listing	Department of Environment & Conservation	08/14/2023	08/15/2023	11/01/2023
TN	PFAS	PFAS Contamination Site Location Listing	Department of Environment & Conservation	09/01/2022	12/19/2022	03/14/2023
TN	PRIORITY CLEANERS	DCERP Remediation Sites Listing	Department of Environment & Conservation	07/10/2023	07/11/2023	09/26/2023
TN	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Environment and Conservation	07/01/2013	07/15/2014	01/15/2014
TN	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	Department of Environment and Conservation		07/01/2013	01/03/2014
TN	SHWS	Promulgated Sites	Department of Environment & Conservation	06/26/2023	06/26/2023	09/13/2023
TN	SPILLS	State Spills	Department of Environment & Conservation	01/05/2015	01/06/2015	02/10/2015
TN	SPILS	Statewide Petroleum Incident Logging Section	Department of Environment & Conservation	08/16/2023	08/16/2023	11/01/2023
TN	SRP	State Remediation Program List	Department of Environemtn & Conservation	06/12/2023	06/13/2023	09/07/2023
TN	SWF/LF	Solid Waste Disposal Facilities	Department of Environment and Conservation	06/05/2023	06/06/2023	08/28/2023
TN	SWM COMPLAINTS	Solid Waste Management Complaints	Department of Environment & Conservation	08/21/2023	08/22/2023	11/08/2023
TN	SWRCY	Recycling Facilities Listing	Department of Environment & Conservation	06/05/2023	06/06/2023	08/28/2023
TN	UST	Facility and Tank Report	Department of Environment and Conservation	07/31/2023	08/09/2023	10/27/2023
TN	VAPOR	VOC Sites Listing	Department of Environment & Conservation	05/05/2023	06/28/2023	08/04/2023
TN	VCP	Voluntary Cleanup, Oversight and Assistance Program Sites	Department of Environmental & Conservation	06/26/2023	06/26/2023	09/13/2023
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	06/13/2023	06/14/2023	08/14/2023
US	AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing	Environmental Protection Agency	07/05/2023	07/06/2023	09/25/2023
US	BIOSOLIDS	ICIS-NPDES Biosolids Facility Data	Environmental Protection Agency	07/16/2023	07/18/2023	08/28/2023
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2021	03/09/2023	03/20/2023
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2021	04/14/2023	07/10/2023
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	06/30/2023	07/19/2023	10/10/2023
US	CORRACTS	Corrective Action Report	EPA	07/24/2023	07/31/2023	08/14/2023
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
US	DOD	Department of Defense Sites	USGS	06/07/2021	07/13/2021	03/09/2022
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	Delisted NPL	National Priority List Deletions	EPA	09/19/2023	10/03/2023	10/19/2023
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	06/24/2023	06/29/2023	09/25/2023
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	06/12/2023	06/20/2023	08/14/2023
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	06/23/2023	06/23/2023	09/20/2023
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	03/08/2023	03/09/2023	05/30/2023
US	FINDS	Facility Index System/Facility Registry System	EPA	05/04/2023	05/25/2023	07/24/2023
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	08/07/2023	08/15/2023	10/10/2023
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	08/14/2023	08/15/2023	10/19/2023
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	03/03/2023	03/03/2023	06/09/2023
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	06/19/2023	06/23/2023	09/20/2023
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/20/2023	05/09/2023	07/14/2023
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	04/20/2023	05/09/2023	07/14/2023
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	04/20/2023	05/09/2023	07/14/2023
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	04/14/2023	05/09/2023	07/14/2023
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	04/26/2023	05/09/2023	07/14/2023
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	04/25/2023	05/09/2023	07/14/2023
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	04/19/2023	05/09/2023	07/14/2023
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	04/19/2023	05/09/2023	07/14/2023
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	04/20/2023	05/09/2023	07/14/2023
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	04/20/2023	05/09/2023	07/14/2023
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	04/20/2023	05/09/2023	07/14/2023
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/14/2023	05/09/2023	07/14/2023
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	04/26/2023	05/09/2023	07/14/2023
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	04/25/2023	05/09/2023	07/14/2023
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	04/20/2023	05/09/2023	07/14/2023
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	04/19/2023	05/09/2023	07/14/2023
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisiting	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	09/19/2023	10/03/2023	10/19/2023
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	09/19/2023	10/03/2023	10/19/2023
US	LUCIS	Land Use Control Information System	Department of the Navy	08/03/2023	08/07/2023	10/10/2023
US	MINES MRDS	Mineral Resources Data System	USGS	08/23/2022	11/22/2022	02/28/2023
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	07/05/2023	07/05/2023	09/25/2023
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	07/20/2023	09/01/2023	09/20/2023
US	NPL	National Priority List	EPA	09/19/2023	10/03/2023	10/19/2023
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	03/20/2023	04/04/2023	06/09/2023

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	07/14/2011	08/05/2011	09/29/2011
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015
US	PFAS ATSDR	PFAS Contamination Site Location Listing	Department of Health & Human Services	06/24/2020	03/17/2021	11/08/2022
US	PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	07/05/2023	07/05/2023	09/25/2023
US	PFAS ECHO FIRE TRAINING	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	07/05/2023	07/05/2023	09/25/2023
US	PFAS FEDERAL SITES	Federal Sites PFAS Information	Environmental Protection Agency	07/05/2023	07/05/2023	10/02/2023
US	PFAS NPDES	Clean Water Act Discharge Monitoring Information	Environmental Protection Agency	07/05/2023	07/05/2023	10/02/2023
US	PFAS NPL	Superfund Sites with PFAS Detections Information	Environmental Protection Agency	07/05/2023	07/05/2023	10/02/2023
US	PFAS PART 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing	Environmental Protection Agency	07/05/2023	07/05/2023	09/25/2023
US	PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing	Environmental Protection Agency	07/05/2023	07/05/2023	10/02/2023
US	PFAS TRIS	List of PFAS Added to the TRI	Environmental Protection Agency	07/05/2023	07/05/2023	10/02/2023
US	PFAS TSCA	PFAS Manufacture and Imports Information	Environmental Protection Agency	07/05/2023	07/05/2023	10/02/2023
US	PFAS WQP	Ambient Environmental Sampling for PFAS	Environmental Protection Agency	09/23/2023	10/03/2023	10/10/2023
US	PRP	Potentially Responsible Parties	EPA	09/19/2023	10/03/2023	10/19/2023
US	Proposed NPL	Proposed National Priority List Sites	EPA	09/19/2023	10/03/2023	10/19/2023
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	07/24/2023	07/31/2023	08/14/2023
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	07/24/2023	07/31/2023	08/14/2023
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	07/24/2023	07/31/2023	08/14/2023
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	07/24/2023	07/31/2023	08/14/2023
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	07/24/2023	07/31/2023	08/14/2023
US	RMP	Risk Management Plans	Environmental Protection Agency	05/09/2023	06/29/2023	09/25/2023
US	ROD	Records Of Decision	EPA	09/19/2023	10/03/2023	10/19/2023
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	07/30/2021	02/03/2023	02/10/2023
US	SEMS	Superfund Enterprise Management System	EPA	09/19/2023	10/03/2023	10/19/2023
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	09/19/2023	10/03/2023	10/19/2023
US	SSTS	Section 7 Tracking Systems	EPA	07/17/2023	07/18/2023	10/10/2023
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2021	08/18/2023	11/07/2023
US	TSCA	Toxic Substances Control Act	EPA	12/31/2020	06/14/2022	03/24/2023
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	04/06/2023	04/13/2023	04/19/2023
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	08/21/2023	08/21/2023	11/07/2023
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	08/21/2023	08/21/2023	11/07/2023
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	06/19/2023	06/20/2023	08/14/2023
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	08/21/2023	08/21/2023	11/07/2023
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	08/21/2023	08/21/2023	11/07/2023
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	08/01/2023	08/22/2023	11/07/2023
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	01/07/2022	02/24/2023	05/17/2023
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	11/09/2021	10/20/2022	01/10/2023

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	08/07/2023	08/08/2023	10/24/2023
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	01/01/2019	10/29/2021	01/19/2022
PA	PA MANIFEST	Manifest Information	Department of Environmental Protection	06/30/2018	07/19/2019	09/10/2019
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2020	11/30/2021	02/18/2022
VT	VT MANIFEST	Hazardous Waste Manifest Data	Department of Environmental Conservation	10/28/2019	10/29/2019	01/09/2020
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	05/31/2018	06/19/2019	09/03/2019
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
TN	Daycare Centers	Sensitive Receptor: Child Care Listing	Department Of Human Services			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
TN	State Wetlands	Wetland Inventory	Department of Environment & Conservation			
US	Topographic Map	Current USGS 7.5 Minute Topographic Map	U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line Data		Endeavor Business Media			

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WALKING HORSE
1251 ROBERSON SPRING ROAD
LOUDON, TN 37774

TARGET PROPERTY COORDINATES

Latitude (North):	35.725491 - 35° 43' 31.77"
Longitude (West):	84.361086 - 84° 21' 39.91"
Universal Transverse Mercator:	Zone 16
UTM X (Meters):	738693.2
UTM Y (Meters):	3956513.2
Elevation:	907 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	13171644 LOUDON, TN
Version Date:	2019
Southwest Map:	13171658 PHILADELPHIA, TN
Version Date:	2019

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

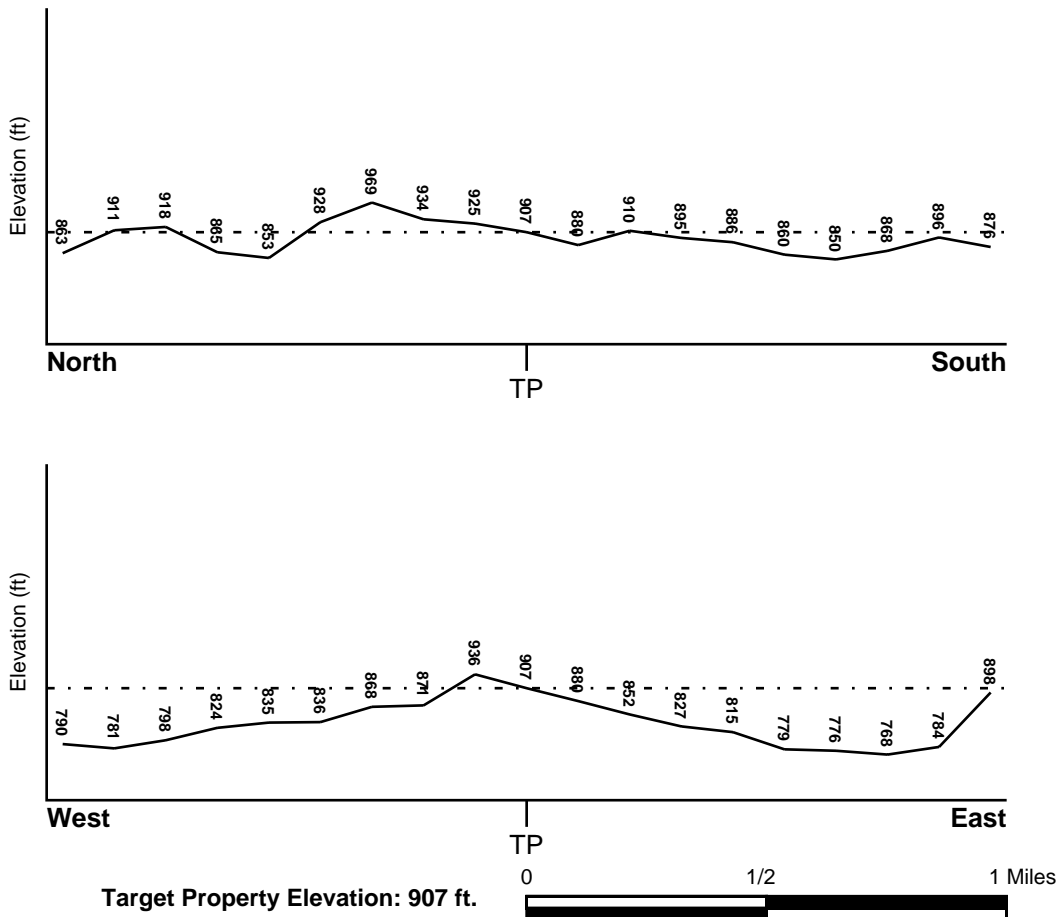
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
47105C0176D	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
47105C0177D	FEMA FIRM Flood data
47105C0157D	FEMA FIRM Flood data
47105C0159D	FEMA FIRM Flood data
47105C0178D	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u> LOUDON	<u>NWI Electronic Data Coverage</u> YES - refer to the Overview Map and Detail Map
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HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era: Paleozoic
System: Ordovician
Series: Ordovician
Code: O (*decoded above as Era, System & Series*)

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: DECATUR

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
2	7 inches	20 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
3	20 inches	72 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: cherty - silt loam
silty clay loam
loam

Surficial Soil Types: cherty - silt loam
silty clay loam
loam

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: silty clay loam
cherty - clay
silt loam
unweathered bedrock
clay loam
cherty - silt loam

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

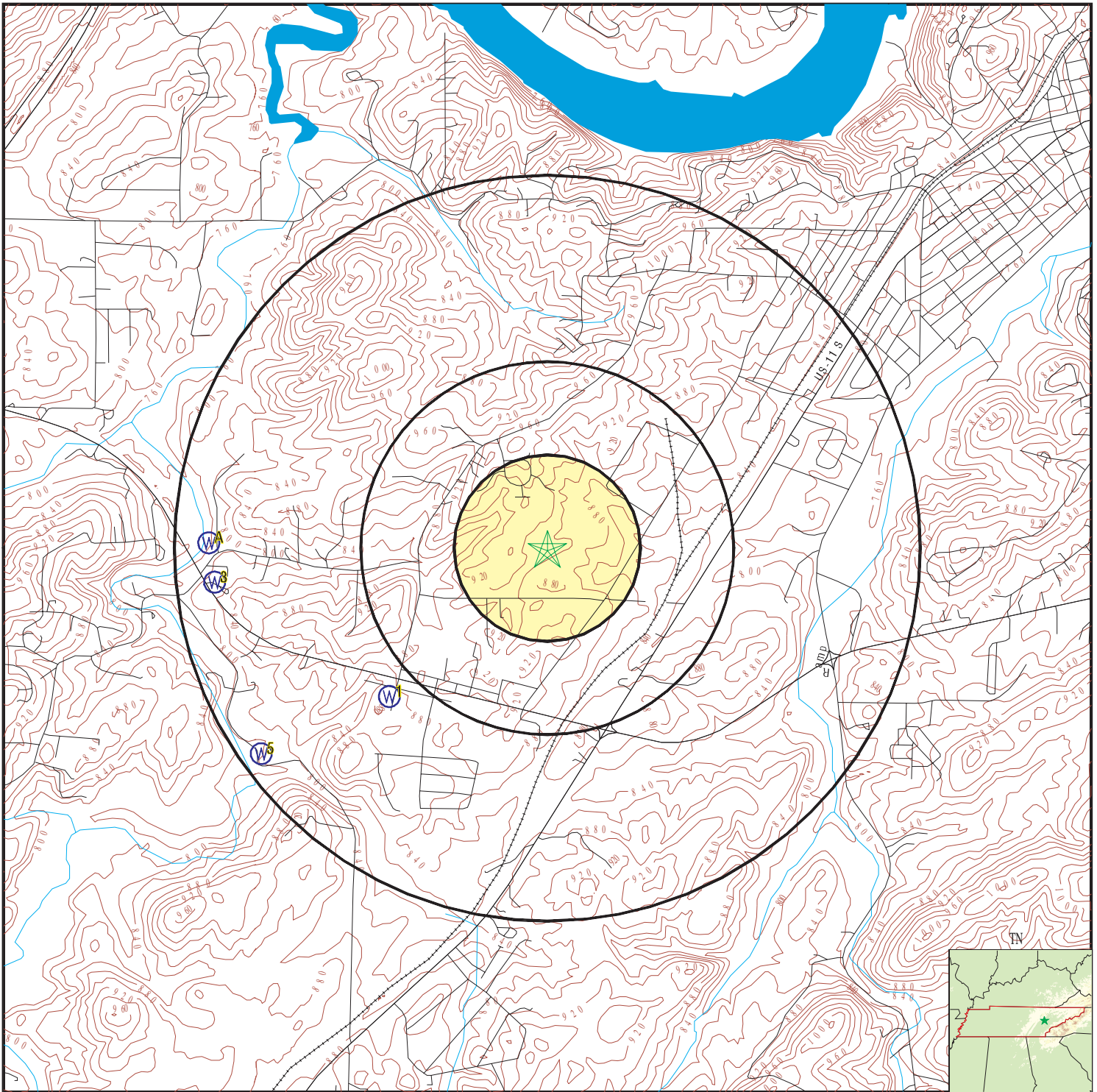
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	TN800000081160	1/2 - 1 Mile SW
A2	TN800000082553	1/2 - 1 Mile West
3	TN800000082547	1/2 - 1 Mile West
A4	TN800000082544	1/2 - 1 Mile West
5	TN800000081161	1/2 - 1 Mile SW

PHYSICAL SETTING SOURCE MAP - 7492738.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Oil, gas or related wells



SITE NAME: Walking Horse
 ADDRESS: 1251 Roberson Spring Road
 Loudon TN 37774
 LAT/LONG: 35.725491 / 84.361086

CLIENT: Terracon
 CONTACT: Tommy Gray
 INQUIRY #: 7492738.2s
 DATE: November 09, 2023 8:50 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

1
SW
1/2 - 1 Mile
Lower

TN WELLS TN800000081160

Well Number:	20084015	Well Use:	Commercial
Completion Date:	15-NOV-08	Total Depth (ft):	300
Completion Est Yield (gpm):	0	Casing Type:	Not Reported
Casing Feet Below Ground:	0	License Code:	609
Driller Tag #:	GEO1029	Driller Report ID:	0
Inspection Date:	Not Reported	Inspection Tag #:	0
Completion Static Levels:	0	Finish Type:	Not Reported
Finish From (ft):	0	Finish to (ft):	0
Form Log:	Yes		

A2
West
1/2 - 1 Mile
Lower

TN WELLS TN800000082553

Well Number:	20005512	Well Use:	Test
Completion Date:	19-SEP-00	Total Depth (ft):	322
Completion Est Yield (gpm):	400	Casing Type:	Steel
Casing Feet Below Ground:	40	License Code:	571
Driller Tag #:	D0048933	Driller Report ID:	111
Inspection Date:	28-SEP-00	Inspection Tag #:	27534
Completion Static Levels:	15	Finish Type:	Open Hole
Finish From (ft):	40	Finish to (ft):	322
Form Log:	Yes		

3
West
1/2 - 1 Mile
Lower

TN WELLS TN800000082547

Well Number:	20002843	Well Use:	Test
Completion Date:	13-JUN-00	Total Depth (ft):	143
Completion Est Yield (gpm):	800	Casing Type:	Steel
Casing Feet Below Ground:	78	License Code:	571
Driller Tag #:	D0043397	Driller Report ID:	37
Inspection Date:	13-JUL-00	Inspection Tag #:	27877
Completion Static Levels:	6	Finish Type:	Open Hole
Finish From (ft):	78	Finish to (ft):	143
Form Log:	Yes		

A4
West
1/2 - 1 Mile
Lower

TN WELLS TN800000082544

Well Number:	20002836	Well Use:	Test
Completion Date:	16-MAY-00	Total Depth (ft):	322
Completion Est Yield (gpm):	200	Casing Type:	Steel
Casing Feet Below Ground:	41	License Code:	571

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Driller Tag #:	D0043389	Driller Report ID:	114
Inspection Date:	13-JUL-00	Inspection Tag #:	27842
Completion Static Levels:	15	Finish Type:	Open Hole
Finish From (ft):	41	Finish to (ft):	322
Form Log:	Yes		

5
SW
1/2 - 1 Mile
Lower

TN WELLS TN800000081161

Well Number:	20151631	Well Use:	Residential
Completion Date:	22-AUG-15	Total Depth (ft):	260
Completion Est Yield (gpm):	50	Casing Type:	Steel
Casing Feet Below Ground:	83	License Code:	959
Driller Tag #:	D0105235	Driller Report ID:	260
Inspection Date:	21-AUG-15	Inspection Tag #:	59810
Completion Static Levels:	20	Finish Type:	Open Hole
Finish From (ft):	0	Finish to (ft):	260
Form Log:	Yes		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: TN Radon

Radon Test Results

County	Total Sites	Avg	Max	<4 pCi/L	4-10 pCi/L	10-20 pCi/L	20-50 pCi/L	50-100 pCi/L	>100 pCi/L
LOUDON	21	8.6	31.8	9	5	5	2	0	0

Federal EPA Radon Zone for LOUDON County: 1

- Note: Zone 1 indoor average level > 4 pCi/L.
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 37774

Number of sites tested: 3

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	2.500 pCi/L	67%	33%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	6.500 pCi/L	0%	100%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Environment & Conservation

Telephone: 651-532-0052

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

County Water Wells in Tennessee

Source: Department of Environment and Conservation

Telephone: 615-532-0160

Water well locations for the entire state.

Oil and Gas Well Database

Department of Environment & Conservation

Telephone: 615-687-7109

A listing of locations of oil and gas well permits issued across the state.

OTHER STATE DATABASE INFORMATION

RADON

State Database: TN Radon

Source: Department of Environment & Conservation

Telephone: 615-299-9725

Radon Test Results

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX E
CREDENTIALS

C. Tice Welborn, P.G.

Department Manager – Environmental Services

PROFESSIONAL EXPERIENCE

Mr. Welborn is a Department Manager in Terracon's Greenville, SC office and currently manages Environmental Services. He has over 15 years of experience in site assessment, cleanup and remediation planning, regulatory compliance, geographic information systems (GIS), wetlands delineation, watershed management, wildlife and natural resources assessment, erosion prevention and sediment control, community involvement, and redevelopment planning. He is a licensed Professional Geologist in South Carolina and North Carolina and an Authorized Project Reviewer (APR) and Subject Matter Expert (SME) in Terracon's Quality and Project Delivery Program.

Mr. Welborn is a qualified EP as defined by the US EPA AAI Rule (40 CFR. 312.20). Mr. Welborn is well versed in environmental assessments and due diligence in compliance with ASTM standards. Mr. Welborn has specialized in the assessment and remediation of complex industrial and commercial properties through both federal and state programs and is very knowledgeable in state and federal rules, regulations, and policies. For much of his career, he has focused primarily on federal and state brownfields site assessment and redevelopment projects. His experience includes project management (including federal and state reporting) and oversight, site assessment, development of state and federal assessment and cleanup plans, and participation in community meetings and public hearings.

PROJECT EXPERIENCE

Unity Park – Greenville, SC

Mr. Welborn currently serves as project manager providing environmental and engineering consulting services for the City of Greenville's 66-acre Unity Park Project. These services include asbestos and lead-containing paint related services, numerous Phase I ESA and Limited Site Investigation (Phase II ESA) services, Underground Storage Tank (UST) assessment and removal, soil removal oversight, and cleanup planning and remediation. As a result of Terracon's early involvement and superb performance performing initial environmental services, Terracon was selected by the City of Greenville for their on-call engineering services contract. Mr. Welborn serves as the client manager for this contract which includes environmental, geotechnical, and materials testing services various City projects, including the \$73 million Unity Park Project.

Greenville Brownfields Program – Greenville, SC

In 2015, Terracon was selected to provide on-call environmental assessment services for the City of Greenville's Brownfields Program and in 2018, Terracon was selected to provide programmatic support and environmental management services for the Brownfields Program (3-year contract). Tice currently oversees a project team of four subconsultants and who have completed over 10 site assessments at various project sites in the City of



EDUCATION

Bachelor of Science, Geology,
2007, Clemson University

REGISTRATIONS/ CERTIFICATIONS

Professional Geologist:
South Carolina, #2591
North Carolina, #2412

PROFESSIONAL TRAINING

40-Hour HAZWOPER
8-Hour HAZWOPER Refresher
EPA Watershed Management

WORK HISTORY

Terracon Consultants, Inc.,
Department Manager, 2013-
Present

CTC /Cardno, Project
Geologist/Environmental
Scientist, 2009-2013

K-Plus, Environmental Scientist,
2008-2009

Professional Service Industries,
Project Manager, 2007-2008

AWARDS/RECOGNITION

GSA Business Forty Under 40,
2020

PRESENTATIONS/ PUBLISHED ARTICLES

"Small Town. Big Money.
Leveraging Success." presented
at the National Brownfields
Conference, December 2019

"Brownfield Funding Drives
Community Development
Project Down the Tracks"
Delivering Success, June 2018

C. Tice Welborn, P.G. (continued)

Greenville. In addition to project management and SCDHEC/EPA programmatic reporting, Tice has completed community outreach activities, work plan development, and serves as regulatory liaison between the City and SCDHEC and the US Environmental Protection Agency. Mr. Welborn is serving as Project Manager for this project which includes completion of US EPA federal reporting requirements.

PRESENTATIONS/ PUBLISHED ARTICLES (continued)

"Small Town Case Study:
Pickens Doodle Park"
presented at the Southeast
Brownfields Workshop,
November 2017

Former Hoechst Celanese / Fiber Industries Plant – Greenville, SC

The Former Hoechst Celanese / Fiber Industries property located off of Woodruff Road in Greenville, SC is the site of a former textile chemical operation that has been undergoing assessment and remedial activities since the 1980s. This over 200-acre property is located in one of the most rapidly growing and desirable parts of town; however, the environmental stigma from the former operations has resulted in reluctance to develop the property. Mr. Welborn has managed numerous Phase I ESAs, Phase II ESAs, and remediation activities on various developments across this property. Many of the site assessment and remediation efforts were completed through the SCDHEC Voluntary Cleanup Program. Site contaminants range from volatile organic compounds, polycyclic aromatic hydrocarbons, Dowtherm© constituents, metals, and asbestos. Site remediation activities have included the development of Corrective Measures Plans, Media Management Plans, Soil Excavation Plans and excavation oversight, and Vapor Intrusion Mitigation System design and system inspections.

Central Brownfields Program – Central, SC

Mr. Welborn provided grant writing services to the Town of Central in their successful applications to acquire \$400,000 in U.S. EPA Brownfields Community Wide Assessment funding and \$180,000 in US EPA Brownfields Cleanup Funding to support the Town's redevelopment initiatives by providing much needed environmental assessment and remediation services. Terracon has completed Phase I ESA services, asbestos and lead-paint surveys, hazardous material surveys, cleanup planning, regulatory review, and public engagement services that are spurring redevelopment and private investment on three of downtown Central's most blighted properties. Terracon has completed assessment of five of the town's highest priority sites along their Main Street corridor. With Terracon's assistance, asbestos abatement was completed at one of the sites. With Terracon's assistance, the Town acquired Brownfields Cleanup Grant funding to remediate contaminants identified on three of these sites and Terracon is working with the Town and a private developer on a fourth site, an 88-acre former textile mill, to complete further assessment and redevelopment. Mr. Welborn serves as Project Manager for this project which includes completion of US EPA federal reporting requirements.

Main and Stone Mixed Use Development – Greenville, SC

The Beach Company contracted Terracon to perform a Phase I ESA for this site. In response to the ESA findings, Terracon provided a Site Workplan for additional assessment. The additional assessment identified both impacted soil and a vapor intrusion risk. Terracon developed a Soil Management Plan (SMP) and designed a Vapor Mitigation System (VMS) to address those concerns. During installation of the VMS, Terracon provided Quality Assurance/Quality Control. After installation of the VMS, Terracon provided testing of both indoor air and sub slab vapor conditions to confirm the effectiveness of the VMS. Terracon also provided geotechnical, materials testing, and special inspection services for this project. Mr. Welborn served as project manager for this project which has received a Certificate of Completion from the South Carolina Department of Health and Environmental Control.

Tommy G. Gray
Field Scientist

PROFESSIONAL EXPERIENCE

Tommy is a Field Scientist in Terracon's Tallahassee, FL Office nearing two years of experience as an environmental consultant. Mr. Gray brings experience in Wetland Delineations, Phase I Site Assessments and Report Writing, Listed Species Surveys, Stormwater Pollution Prevention, Surface Water Monitoring, and Soil and Groundwater Assessments.

PROJECT EXPERIENCE

MARS Background Monitoring – Tallahassee, Florida

Field Scientist engaged with the City of Tallahassee for surface water monitoring utilizing ISCO Automatic Samplers. Mr. Gray was involved with the initialization of the samplers, collection of samples, communications with the City, and report preparations outlining the methodologies, observations, and results of the monitoring.

City Center Phase I ESA & LSI – Tallahassee, Florida

Field Scientist participating in and conducting a site assessment and investigation for potential petroleum contamination at the City Center office building in Tallahassee. Mr. Gray assisted in the original site assessment as well as the preparation and collection of soil samples from on-site drilling activities.

SOMO Adams Street – Tallahassee, Florida

Field Scientist participating in and conducting a site assessment and investigation for potential petroleum contamination at a former gas station in Tallahassee. Mr. Gray assisted in the original site assessment as well as the preparation and collection of soil and groundwater samples from on-site drilling activities.

Samsung Solar Project – Decatur County, Georgia

Field Scientist assisting in Phase I Environmental Site Assessment (ESAs) performed on over 1600 acres of agricultural land in south Decatur County, Georgia. Mr. Gray was involved with the site assessment, desktop review, and report preparations to determine if any Recognized Environmental Conditions (RECs) were associated with the site.

GPA Bainbridge Terminal – Bainbridge, Georgia

Field Scientist assisting in surface water monitoring for a Georgia Port Authority Industrial NPDES Permit in Bainbridge, Georgia. Mr. Gray was involved with the quarterly monitoring of this facility which included taking baseline water quality readings, collecting samples, and noting field observations.



EDUCATION

Bachelor of Science, Environmental Sciences & Sustainability, The George Washington University, Washington, D.C.

REGISTRATIONS/ CERTIFICATIONS

Certified Stormwater Pollution Prevention Inspector in the State of Florida

Jay Lee Cleaners– Chipley, Florida

Field Scientist participating in and conducting an investigation for potential dry cleaning solvent contamination in downtown Chipley, Florida. Mr. Gray assisted in the well sampling and report preparation activities for the dry cleaning site.

Rose Printing DPT Investigation – Tallahassee, Florida

Field Scientist assisting in an investigation for potential dry cleaning solvent contamination at the former Rose Printing facility in downtown Tallahassee. The project consisted of an FDEP chlorinated solvent site investigation at multiple depths. Mr. Gray assisted with preparation of the HASP/QAPP and the temporary well installation and sampling.

Solomon C&D Landfill – Tallahassee, Florida

Field Scientist performing routine, semiannual groundwater monitoring of the Solomon C&D landfill in Tallahassee for contaminant exceedances above state statutes. Mr. Gray assisted in the semiannual groundwater well sampling and report preparation activities.

APPENDIX F
DESCRIPTION OF TERMS AND ACRONYMS

Description of Selected General Terms and Acronyms

Term/Acronym	Description
ACM	<p>Asbestos Containing Material. Asbestos is a naturally occurring mineral, three varieties of which (chrysotile, amosite, crocidolite) have been commonly used as fireproofing or binding agents in construction materials. Exposure to asbestos, as well as ACM, has been documented to cause lung diseases including asbestosis (scarring of the lung), lung cancer and mesothelioma (a cancer of the lung lining).</p> <p>Regulatory agencies have generally defined ACM as a material containing greater than one (1) percent asbestos, however some states (e.g., California) define ACM as materials having 0.1% asbestos. In order to define a homogenous material as non-ACM, a minimum number of samples must be collected from the material dependent upon its type and quantity. Homogenous materials defined as non-ACM must either have 1) no asbestos identified in all of its samples or 2) an identified asbestos concentration below the appropriate regulatory threshold. Asbestos concentrations are generally determined using polarized light microscopy or transmission electron microscopy. Point counting is an analytical method to statistically quantify the percentage of asbestos in a sample. The asbestos component of ACM may either be friable or non-friable. Friable materials, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure and have a higher potential for a fiber release than non-friable ACM. Non-friable ACM are materials that are firmly bound in a matrix by plastic, cement, etc. and, if handled carefully, will not become friable.</p> <p>Federal and state regulations require that either all suspect building materials be presumed ACM or that an asbestos survey be performed prior to renovation, dismantling, demolition, or other activities that may disturb potential ACM. Notifications are required prior to demolition and/or renovation activities that may impact the condition of ACM in a building. ACM removal may be required if the ACM is likely to be disturbed or damaged during the demolition or renovation. Abatement of friable or potentially friable ACM must be performed by a licensed abatement contractor in accordance with state rules and NESHAP. Additionally, OSHA regulations for work classification, worker training and worker protection will apply.</p>
AHERA	Asbestos Hazard Emergency Response Act
AST	Aboveground Storage Tanks. ASTs are generally described as storage tanks less than 10% of which are below ground (i.e., buried). Tanks located in a basement, but not buried, are also considered ASTs. Whether, and the extent to which, an AST is regulated, is determined on a case-by-case basis and depends upon tank size, its contents and the jurisdiction of its location.
BGS	Below Ground Surface

Description of Selected General Terms and Acronyms

Term/Acronym	Description
Brownfields	State and/or tribal listing of Brownfield properties addressed by Cooperative Agreement Recipients or Targeted Brownfields Assessments.
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes. BTEX are VOC components found in gasoline and commonly used as analytical indicators of a petroleum hydrocarbon release.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (a.k.a. Superfund). CERCLA is the federal act that regulates abandoned or uncontrolled hazardous waste sites. Under this Act, joint and several liability may be imposed on potentially responsible parties for cleanup-related costs.
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System. An EPA compilation of sites having suspected or actual releases of hazardous substances to the environment. CERCLIS also contains information on site inspections, preliminary assessments and remediation of hazardous waste sites. These sites are typically reported to EPA by states and municipalities or by third parties pursuant to CERCLA Section 103.
CESQG	Conditionally Exempt Small Quantity Generators
CFR	Code of Federal Regulations
CREC	Controlled Recognized Environmental Condition is defined in ASTM E1527-21 as “a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority) , with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). A condition considered by the environmental professional to be a controlled recognized environmental condition shall be listed in the findings section of the Phase I Environmental Site Assessment report, and as a recognized environmental condition in the conclusions section of the Phase I Environmental Site Assessment report.”
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System. An EPA-maintained federal database which stores information on notifications of oil discharges and hazardous substance releases in quantities greater than the applicable reportable quantity under CERCLA. ERNS is a cooperative data-sharing effort between EPA, DOT, and the National Response Center.
ESA	Environmental Site Assessment

Description of Selected General Terms and Acronyms

Term/Acronym	Description
FRP	Fiberglass Reinforced Plastic
Hazardous Substance	As defined under CERCLA, this is (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title; (C) any hazardous waste having characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (with some exclusions); (D) any toxic pollutant listed under section 1317(a) of Title 33; (E) any hazardous air pollutant listed under section 112 of the Clean Air Act; and (F) any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action under section 2606 of Title 15. This term does not include petroleum, including crude oil or any fraction thereof which is not otherwise listed as a hazardous substance under subparagraphs (A) through (F) above, and the term include natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).
Hazardous Waste	This is defined as having characteristics identified or listed under section 3001 of the Solid Waste Disposal Act (with some exceptions). RCRA, as amended by the Solid Waste Disposal Act of 1980, defines this term as a "solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."
HREC	Historical Recognized Environmental Condition is defined in ASTM E1527-21 as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time of the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in the regulatory criteria). If the EP considers the past release to be a recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition."

Description of Selected General Terms and Acronyms

Term/Acronym	Description
IC/EC	A listing of sites with institutional and/or engineering controls in place. IC include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. EC include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.
ILP	Innocent Landowner/Operator Program
LQG	Large Quantity Generators
LUST	Leaking Underground Storage Tank. This is a federal term set forth under RCRA for leaking USTs. Some states also utilize this term.
MCL	Maximum Contaminant Level. This Safe Drinking Water concept (and also used by many states as a ground water cleanup criteria) refers to the limit on drinking water contamination that determines whether a supplier can deliver water from a specific source without treatment.
MSDS	Material Safety Data Sheets. Written/printed forms prepared by chemical manufacturers, importers and employers which identify the physical and chemical traits of hazardous chemicals under OSHA's Hazard Communication Standard.
NESHAP	National Emissions Standard for Hazardous Air Pollutants (Federal Clean Air Act). This part of the Clean Air Act regulates emissions of hazardous air pollutants.
NFRAP	Facilities where there is "No Further Remedial Action Planned," as more particularly described under the Records Review section of this report.
NOV	Notice of Violation. A notice of violation or similar citation issued to an entity, company or individual by a state or federal regulatory body indicating a violation of applicable rule or regulations has been identified.
NPDES	National Pollutant Discharge Elimination System (Clean Water Act). The federal permit system for discharges of polluted water.
NPL	The NPL is the EPA's database of uncontrolled or abandoned hazardous waste facilities that have been listed for priority remedial actions under the Superfund Program.
OSHA	Occupational Safety and Health Administration or Occupational Safety and Health Act

Description of Selected General Terms and Acronyms

Term/Acronym	Description
PACM	Presumed Asbestos-Containing Material. A material that is suspected of containing or presumed to contain asbestos but which has not been analyzed to confirm the presence or absence of asbestos.
PCB	Polychlorinated Biphenyl. A halogenated organic compound commonly in the form of a viscous liquid or resin, a flowing yellow oil, or a waxy solid. This compound was historically used as dielectric fluid in electrical equipment (such as electrical transformers and capacitors, electrical ballasts, hydraulic and heat transfer fluids), and for numerous heat and fire sensitive applications. PCB was preferred due to its durability, stability (even at high temperatures), good chemical resistance, low volatility, flammability, and conductivity. PCBs, however, do not break down in the environment and are classified by the EPA as a suspected carcinogen. 1978 regulations, under the Toxic Substances Control Act, prohibit manufacturing of PCB-containing equipment; however, some of this equipment may still be in use today.
pCi/L	picoCuries per Liter of Air. Unit of measurement for Radon and similar radioactive materials.
PLM	Polarized Light Microscopy (see ACM section of the report, if included in the scope of services)
PST	Petroleum Storage Tank. An AST or UST that contains a petroleum product.
Radon	A radioactive gas resulting from radioactive decay of naturally-occurring radioactive materials in rocks and soils containing uranium, granite, shale, phosphate, and pitchblende. Radon concentrations are measured in picoCuries per Liter of Air. Exposure to elevated levels of radon creates a risk of lung cancer; this risk generally increases as the level of radon and the duration of exposure increases. Outdoors, radon is diluted to such low concentrations that it usually does not present a health concern. However, radon can accumulate in building basements or similar enclosed spaces to levels that can pose a risk to human health. Indoor radon concentrations depend primarily upon the building's construction, design and the concentration of radon in the underlying soil and ground water. The EPA recommended annual average indoor "action level" concentration for residential structures is 4.0 pCi/l.
RCRA	Resource Conservation and Recovery Act. Federal act regulating solid and hazardous wastes from point of generation to time of disposal ("cradle to grave"). 42 U.S.C. 6901 et seq.
RCRA Generators	The RCRA Generators database, maintained by the EPA, lists facilities that generate hazardous waste as part of their normal business practices. Generators are listed as either large (LQG), small (SQG), or conditionally exempt (CESQG). LQG produce at least 1000 kg/month of non-acutely hazardous waste or 1 kg/month of acutely hazardous waste. SQG produce 100-1000 kg/month of non-acutely hazardous waste. CESQG are those that generate less than 100 kg/month of non-acutely hazardous waste.

Description of Selected General Terms and Acronyms

Term/Acronym	Description
RCRA CORRACTS/ TSDs	The USEPA maintains a database of RCRA facilities associated with treatment, storage, and disposal (TSD) of hazardous materials which are undergoing "corrective action". A "corrective action" order is issued when there is a release of hazardous waste or constituents into the environment from a RCRA facility.
RCRA Non-CORRACTS/ TSDs	The RCRA Non-CORRACTS/TSD Database is a compilation by the USEPA of facilities which report storage, transportation, treatment, or disposal of hazardous waste. Unlike the RCRA CORRACTS/TSD database, the RCRA Non-CORRACTS/TSD database does not include RCRA facilities where corrective action is required.
RCRA Violators List	RAATS. RCRA Administrative Actions Taken. RAATS information is now contained in the RCRIS database and includes records of administrative enforcement actions against facilities for noncompliance.
RCRIS	Resource Conservation and Recovery Information System, as defined in the Records Review section of this report.
REC	Recognized Environmental Conditions are defined by ASTM E1527-21 as 1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment. A de minimis condition is not a recognized environmental condition.
SCL	State "CERCLIS" List (see SPL /State Priority List, below).
SPCC	Spill Prevention, Control and Countermeasures. SPCC plans are required under federal law (Clean Water Act and Oil Pollution Act) for any facility storing petroleum in tanks and/or containers of 55-gallons or more that when taken in aggregate exceed 1,320 gallons. SPCC plans are also required for facilities with underground petroleum storage tanks with capacities of over 42,000 gallons. Many states have similar spill prevention programs, which may have additional requirements.
SPL	State Priority List. State list of confirmed sites having contamination in which the state is actively involved in clean up activities or is actively pursuing potentially responsible parties for clean up. Sometimes referred to as a State "CERCLIS" List.
SQG	Small Quantity Generator
SWF/LF	State and/or Tribal database of Solid Waste/Landfill facilities. The database information may include the facility name, class, operation type, area, estimated operational life, and owner.
TPH	Total Petroleum Hydrocarbons

Description of Selected General Terms and Acronyms

Term/Acronym	Description
TRI	Toxic Release Inventory. Routine EPA report on releases of toxic chemicals to the environment based upon information submitted by entities subject to reporting under the Emergency Planning and Community Right to Know Act.
TSCA	Toxic Substances Control Act. A federal law regulating manufacture, import, processing and distribution of chemical substances not specifically regulated by other federal laws (such as asbestos, PCBs, lead-based paint and radon). 15 U.S.C 2601 et seq.
USACE	United States Army Corps of Engineers
USC	United States Code
USGS	United States Geological Survey
USNRCS	United States Department of Agriculture-Natural Resource Conservation Service
UST	Underground Storage Tank. Most federal and state regulations, as well as ASTM E1527-21, define this as any tank, incl., underground piping connected to the tank, that is or has been used to contain hazardous substances or petroleum products and the volume of which is 10% or more beneath the surface of the ground (i.e., buried).
VCP	State and/or Tribal facilities included as Voluntary Cleanup Program sites.
VOC	Volatile Organic Compound

Description of Selected General Terms and Acronyms

Term/Acronym	Description
Wetlands	<p>Areas that are typically saturated with surface or ground water that creates an environment supportive of wetland vegetation (i.e., swamps, marshes, bogs). The <u>Corps of Engineers Wetlands Delineation Manual</u> (Technical Report Y-87-1) defines wetlands as areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. For an area to be considered a jurisdictional wetland, it must meet the following criteria: more than 50 percent of the dominant plant species must be categorized as Obligate, Facultative Wetland, or Facultative on lists of plant species that occur in wetlands; the soil must be hydric; and, wetland hydrology must be present.</p> <p>The federal Clean Water Act which regulates “waters of the US,” also regulates wetlands, a program jointly administered by the USACE and the EPA. Waters of the U.S. are defined as: (1) waters used in interstate or foreign commerce, including all waters subject to the ebb and flow of tides; (2) all interstate waters including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, etc., which the use, degradation, or destruction could affect interstate/ foreign commerce; (4) all impoundments of waters otherwise defined as waters of the U. S., (5) tributaries of waters identified in 1 through 4 above; (6) the territorial seas; and (7) wetlands adjacent to waters identified in 1 through 6 above. Only the USACE has the authority to make a final wetlands jurisdictional determination.</p>

Appendix I – EMF Study



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Erratum

Electromagnetic Fields Associated with Commercial Solar Photovoltaic Electric Power Generating Facilities

R. A. Tell , H. C. Hooper, G. G. Sias, G. Mezei, P. Hung & R. Kavet

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Abstract

The southwest region of the United States is expected to experience an expansion of commercial solar photovoltaic generation facilities over the next 25 years. A solar facility converts direct current generated by the solar panels to three-phase 60-Hz power that is fed to the grid. This conversion involves sequential processing of the direct current through an inverter that produces low-voltage three-phase power, which is stepped up to distribution voltage (~12 kV) through a transformer. This study characterized

magnetic and electric fields between the frequencies of 0 Hz and 3 GHz at two facilities operated by the Southern California Edison Company in Porterville, CA and San Bernardino, CA. Static magnetic fields were very small compared to exposure limits established by IEEE and ICNIRP. The highest 60-Hz magnetic fields were measured adjacent to transformers and inverters, and radiofrequency fields from 5–100 kHz were associated with the inverters. The fields measured complied in every case with IEEE controlled and ICNIRP occupational exposure limits. In all cases, electric fields were negligible compared to IEEE and ICNIRP limits across the spectrum measured and when compared to the FCC limits (≥ 0.3 MHz).

Q Keywords: electric fields exposure standards and guidelines magnetic fields solar photovoltaic power

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Appendix J – EJSCREEN Report



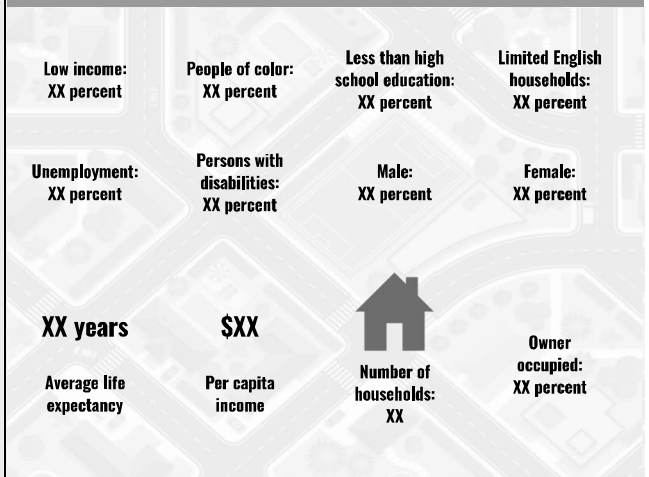
EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

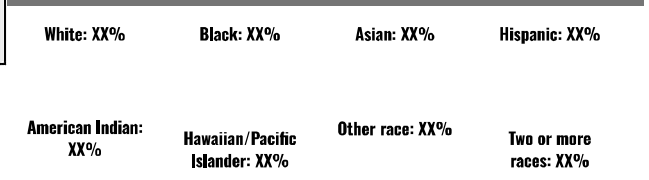
area is too small or sparsely populated, or these data are not available in the national dataset. Cannot generate an EJScreen chart or report.

Area reserved for map

COMMUNITY INFORMATION



BREAKDOWN BY RACE



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	XX%
Spanish	XX%
French, Haitian, or Cajun	XX%
German or other West Germanic	XX%
Russian, Polish, or Other Slavic	XX%
Other Indo-European	XX%
Korean	XX%
Chinese (including Mandarin, Cantonese)	XX%
Vietnamese	XX%
Tagalog (including Filipino)	XX%
Other Asian and Pacific Island	XX%
Arabic	XX%
Other and Unspecified	XX%
Total Non-English	XX%

BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

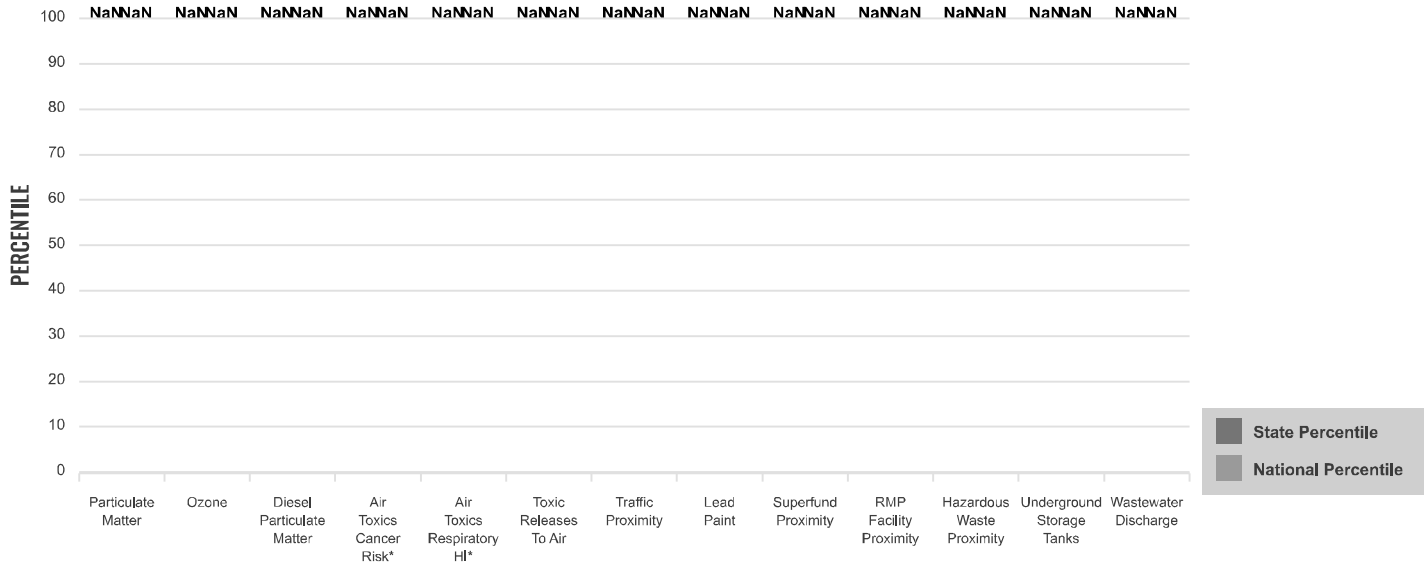
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

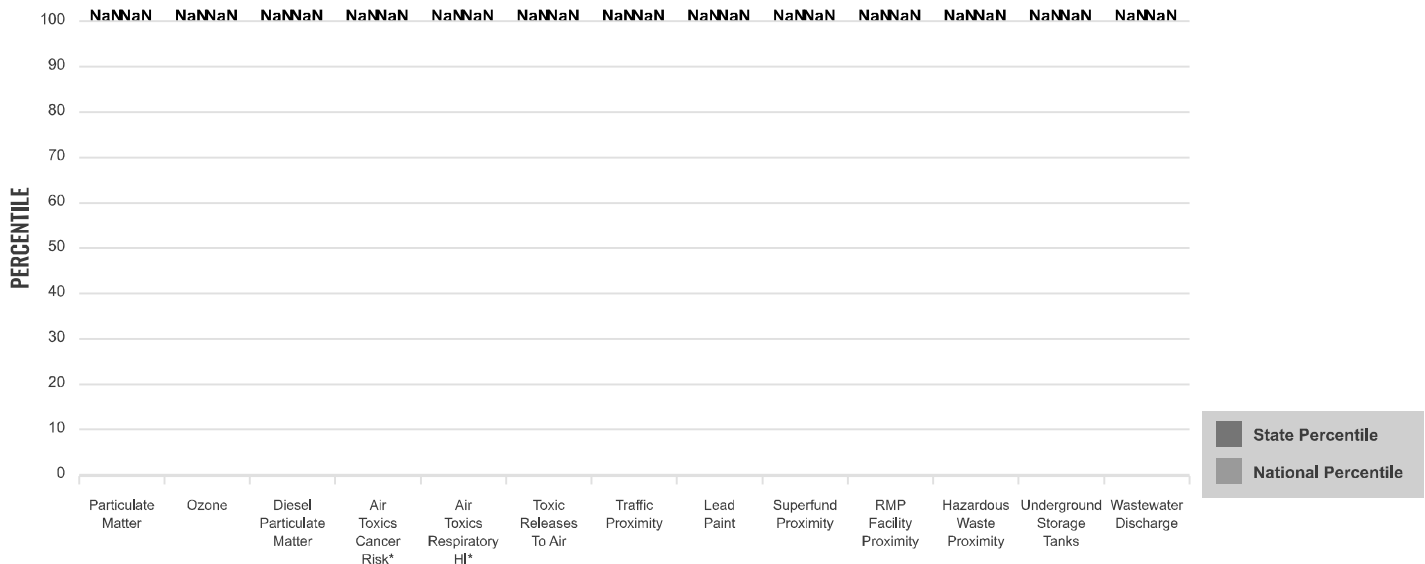
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for XX

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m ³)	XX	XX	XX	XX	XX
Ozone (ppb)	XX	XX	XX	XX	XX
Diesel Particulate Matter (µg/m ³)	XX	XX	XX	XX	XX
Air Toxics Cancer Risk* (lifetime risk per million)	XX	XX	XX	XX	XX
Air Toxics Respiratory HI*	XX	XX	XX	XX	XX
Toxic Releases to Air	NaN	NaN	NaN	NaN	NaN
Traffic Proximity (daily traffic count/distance to road)	NaN	NaN	NaN	NaN	NaN
Lead Paint (% Pre-1960 Housing)	XX	XX	XX	XX	XX
Superfund Proximity (site count/km distance)	XX	XX	XX	XX	XX
RMP Facility Proximity (facility count/km distance)	XX	XX	XX	XX	XX
Hazardous Waste Proximity (facility count/km distance)	XX	XX	XX	XX	XX
Underground Storage Tanks (count/km ²)	XX	XX	XX	XX	XX
Wastewater Discharge (toxicity-weighted concentration/m distance)	XX	XX	XX	XX	XX
SOCIOECONOMIC INDICATORS					
Demographic Index	XX%	XX%	XX	XX%	XX
Supplemental Demographic Index	XX%	XX%	XX	XX%	XX
People of Color	XX%	XX%	XX	XX%	XX
Low Income	XX%	XX%	XX	XX%	XX
Unemployment Rate	XX%	XX%	XX	XX%	XX
Limited English Speaking Households	XX%	XX%	XX	XX%	XX
Less Than High School Education	XX%	XX%	XX	XX%	XX
Under Age 5	XX%	XX%	XX	XX%	XX
Over Age 64	XX%	XX%	XX	XX%	XX
Low Life Expectancy	XX%	XX%	XX	XX%	XX

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	XX
Hazardous Waste, Treatment, Storage, and Disposal Facilities	XX
Water Dischargers	XX
Air Pollution	XX
Brownfields	XX
Toxic Release Inventory	XX

Other community features within defined area:

Schools	XX
Hospitals	XX
Places of Worship	XX

Other environmental data:

Air Non-attainment	XX
Impaired Waters	XX

Selected location contains American Indian Reservation Lands*	XX
Selected location contains a "Justice40 (CEJST)" disadvantaged community	XX
Selected location contains an EPA IRA disadvantaged community	XX

Report for XX

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	XX	XX	XX	XX	XX
Heart Disease	XX	XX	XX	XX	XX
Asthma	XX	XX	XX	XX	XX
Cancer	XX	XX	XX	XX	XX
Persons with Disabilities	XX	XX	XX	XX	XX

CLIMATE INDICATORS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	XX	XX	XX	XX	XX
Wildfire Risk	XX	XX	XX	XX	XX

CRITICAL SERVICE GAPS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	XX	XX	XX	XX	XX
Lack of Health Insurance	XX	XX	XX	XX	XX
Housing Burden	XX	N/A	N/A	N/A	N/A
Transportation Access	XX	N/A	N/A	N/A	N/A
Food Desert	XX	N/A	N/A	N/A	N/A

Footnotes

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