

Staff Report of Investigation

Wood County 138 kV Reinforcement Project
America Transmission Systems, Inc.

Case No. 18-1335-EL-BTX

October 9, 2019



Mike DeWine, Governor | Sam Randazzo, Chairman

**In the Matter of the Application of American
Transmission Systems, Inc. for a Certificate of
Environmental Compatibility and Public Need for the
Construction of the Wood County 138-kV
Reinforcement Project**)
)
) **Case No. 18-1335-EL-BTX**
)
)

Staff Report of Investigation

Submitted to the
OHIO POWER SITING BOARD

BEFORE THE POWER SITING BOARD OF THE STATE OF OHIO

In the Matter of the Application of American)
Transmission Systems, Inc. for a Certificate of)
Environmental Compatibility and Public Need for the) **Case No. 18-1335-EL-BTX**
Construction of the Wood County 138-kV)
Reinforcement Project)

Chairman, Public Utilities Commission	Director, Department of Natural Resources
Director, Department of Agriculture	Public Member
Director, Development Services Agency	Ohio House of Representatives
Director, Environmental Protection Agency	Ohio Senate
Director, Department of Health	

To the Honorable Power Siting Board:

In accordance with the Ohio Revised Code (R.C.) 4906.07(C) and rules of the Ohio Power Siting Board (Board), the staff of the Public Utilities Commission of Ohio (Staff) has completed its investigation in the above matter and submits its findings and recommendations in this Staff Report for consideration by the Board.

The findings and recommendations contained in this report are the result of Staff coordination with the following agencies that are members of the Board: Ohio Environmental Protection Agency, the Ohio Department of Health, the Ohio Development Services Agency, the Ohio Department of Natural Resources, and the Ohio Department of Agriculture. In addition, Staff coordinated with the Ohio Department of Transportation, the Ohio Historic Preservation Office, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the Federal Aviation Administration.

In accordance with R.C. 4906.07(C) and 4906.12, copies of this Staff Report have been filed with the Docketing Division of the Public Utilities Commission of Ohio and served upon the Applicant or its authorized representative, the parties of record, and pursuant to Ohio Administrative Code 4906-3-06, the main public libraries of the political subdivisions in the project area.

The Staff Report presents the results of Staff's investigation conducted in accordance with R.C. Chapter 4906 and the rules of the Board, and does not purport to reflect the views of the Board nor should any party to the instant proceeding consider the Board in any manner constrained by the findings and recommendations set forth herein.

Respectfully submitted,



Tamara S. Turkenton
Director, Rates and Analysis
Public Utilities Commission of Ohio

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I. POWERS AND DUTIES

OHIO POWER SITING BOARD

The authority of the Ohio Power Siting Board (Board) is prescribed by Ohio Revised Code (R.C.) Chapter 4906. R.C. 4906.03 authorizes the Board to issue certificates of environmental compatibility and public need for the construction, operation, and maintenance of major utility facilities defined in R.C. 4906.01. Included within this definition of major utility facilities are: electric generating plants and associated facilities designed for, or capable of, operation at 50 megawatts (MW) or more; electric transmission lines and associated facilities of a design capacity of 100 kilovolts (kV) or more; and gas pipelines greater than 500 feet in length and more than nine inches in outside diameter, and associated facilities, designed for transporting gas at a maximum allowable operating pressure in excess of 125 pounds per square inch. In addition, pursuant to R.C. 4906.20, the Board authority applies to economically significant wind farms, defined in R.C. 4906.13(A) as wind turbines and associated facilities with a single interconnection to the electrical grid and designed for, or capable of, operation at an aggregate capacity of 5 MW or greater but less than 50 MW.

Membership of the Board is specified in R.C. 4906.02(A). The voting members include: the Chairman of the Public Utilities Commission of Ohio (PUCO or Commission) who serves as Chairman of the Board; the directors of the Ohio Environmental Protection Agency (Ohio EPA), the Ohio Department of Health, the Ohio Development Services Agency (ODSA), the Ohio Department of Agriculture, and the Ohio Department of Natural Resources (ODNR); and a member of the public, specified as an engineer, appointed by the Governor from a list of three nominees provided by the Ohio Consumers' Counsel. Ex-officio Board members include two members (with alternates) from each house of the Ohio General Assembly.

NATURE OF INVESTIGATION

The Board has promulgated rules and regulations, found in Ohio Administrative Code (Ohio Adm.Code) 4906:1-01 et seq., which establish application procedures for major utility facilities and economically significant wind farms.

Application Procedures

Any person that wishes to construct a major utility facility or economically significant wind farm in this state must first submit to the Board an application for a certificate of environmental compatibility and public need.¹ The application must include a description of the facility and its location, a summary of environmental studies, a statement explaining the need for the facility and how it fits into the Applicant's energy forecasts (for transmission projects), and any other information the Applicant or Board may consider relevant.²

Within 60 days of receiving an application, the Chairman must determine whether the application is sufficiently complete to begin an investigation.³ If an application is considered complete, the Board or an administrative law judge will cause a public hearing to be held 60 to 90 days after the

1. R.C. 4906.04 and 4906.20.

2. R.C. 4906.06(A) and 4906.20(B)(1).

3. Ohio Adm.Code 4906-3-06(A).

official filing date of the completed application.⁴ At the public hearing, any person may provide written or oral testimony and may be examined by the parties.⁵

Staff Investigation and Report

The Chairman will also cause each application to be investigated and a report published by the Board's Staff not less than 15 days prior to the public hearing.⁶ The report sets forth the nature of the investigation and contains the findings and conditions recommended by Staff.⁷ The Board's Staff, which consists of career professionals drawn from the staff of the PUCO and other member agencies of the Board, coordinates its investigation among the agencies represented on the Board and with other interested agencies such as the Ohio Department of Transportation (ODOT), the Ohio History Connection, and the U.S. Fish and Wildlife Service (USFWS).

The technical investigations and evaluations are conducted pursuant to Ohio Adm.Code 4906-1-01 et seq. The recommended findings resulting from Staff's investigation are described in the Staff Report pursuant to R.C. 4906.07(C). The report does not represent the views or opinions of the Board and is only one piece of evidence that the Board may consider when making its decision. Once published, the report becomes a part of the record, is served upon all parties to the proceeding and is made available to any person upon request.⁸ A record of the public hearings and all evidence, including the Staff Report, may be examined by the public at anytime.⁹

Board Decision

The Board may approve, modify and approve, or deny an application for a certificate of environmental compatibility and public need.¹⁰ If the Board approves, or modifies and approves an application, it will issue a certificate subject to conditions. The certificate is also conditioned upon the facility being in compliance with applicable standards and rules adopted under the Ohio Revised Code.¹¹

Upon rendering its decision, the Board must issue an opinion stating its reasons for approving, modifying and approving, or denying an application for a certificate of environmental compatibility and public need.¹² A copy of the Board's decision and its opinion is memorialized upon the record and must be served upon all parties to the proceeding.¹³ Any party to the proceeding that believes its issues were not adequately addressed by the Board may submit within 30 days an application for rehearing.¹⁴ An entry on rehearing will be issued by the Board within 30 days and may be appealed within 60 days to the Supreme Court of Ohio.¹⁵

4. R.C. 4906.07(A) and Ohio Adm.Code 4906-3-08.

5. R.C. 4906.08(C).

6. R.C. 4906.07.

7. Ohio Adm.Code 4906-3-06(C).

8. R.C. 4906.07(C) and 4906.10.

9. R.C. 4906.09 and 4906.12.

10. R.C. 4906.10(A).

11. R.C. 4906.10.

12. R.C. 4906.11.

13. R.C. 4906.10(C).

14. R.C. 4903.10 and 4906.12.

15. R.C. 4903.11, 4903.12, and 4906.12.

CRITERIA

Staff developed the recommendations and conditions in this *Staff Report of Investigation* pursuant to the criteria set forth in R.C. 4906.10(A), which reads, in part:

The board shall not grant a certificate for the construction, operation, and maintenance of a major utility facility, either as proposed or as modified by the board, unless it finds and determines all of the following:

- (1) The basis of the need for the facility if the facility is an electric transmission line or gas pipeline;
- (2) The nature of the probable environmental impact;
- (3) That the facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations;
- (4) In the case of an electric transmission line or generating facility, that the facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems and that the facility will serve the interests of electric system economy and reliability;
- (5) That the facility will comply with Chapters 3704, 3734, and 6111 of the Revised Code and all rules and standards adopted under those chapters and under sections 1501.33, 1501.34, and 4561.32 of the Revised Code. In determining whether the facility will comply with all rules and standards adopted under section 4561.32 of the Revised Code, the board shall consult with the office of aviation of the division of multi-modal planning and programs of the department of transportation under section 4561.341 of the Revised Code;
- (6) That the facility will serve the public interest, convenience, and necessity;
- (7) In addition to the provisions contained in divisions (A)(1) to (6) of this section and rules adopted under those divisions, what its impact will be on the viability as agricultural land of any land in an existing agricultural district established under Chapter 929 of the Revised Code that is located within the site and alternative site of the proposed major utility facility. Rules adopted to evaluate impact under division (A)(7) of this section shall not require the compilation, creation, submission, or production of any information, document, or other data pertaining to land not located within the site and alternative site; and
- (8) That the facility incorporates maximum feasible water conservation practices as determined by the board, considering available technology and the nature and economics of the various alternatives.

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II. APPLICATION

APPLICANT

American Transmission Systems, Inc. (ATSI or Applicant), is a subsidiary of FirstEnergy Transmission, LLC, which in turn is a subsidiary of FirstEnergy Corporation. ATSI is a transmission-only utility that operates in Ohio and western Pennsylvania. FirstEnergy is an investor-owned electric utility holding company that serves approximately six million customers within a service territory that encompasses approximately 65,000 square miles. ATSI currently owns and maintains over 8,100 circuit-miles of transmission lines and facilities as well as substations. The Applicant's transmission assets are mostly comprised of those formerly owned by electric utilities in western Pennsylvania and Ohio.

HISTORY OF THE APPLICATION

Prior to formally submitting its application, the Applicant consulted with the Staff regarding application procedures.

On September 26, 2018, the Applicant held a public informational meeting in Bowling Green, Ohio regarding the proposed electric transmission line.

On December 19, 2018, the Applicant filed the Wood County 138-kV Reinforcement Project application.

On January 22, 2019, the Applicant filed a supplement to its application.

On February 19, 2019, the Director of Rates and Analysis, Public Utilities Commission of Ohio (PUCO), issued a letter of compliance regarding the application.

On May 9, 2019 the Applicant filed another supplement to its application.

On May 22, 2019, American Municipal Power, Inc. filed a motion to intervene, which has since been granted by the administrative law judge.

The OPSB has scheduled a local public hearing for October 24, 2019, at 6:00 p.m., at the Ohio Department of Transportation – District 2, 317 East Poe Road, Bowling Green, Ohio 43402. The adjudicatory hearing will commence on November 7, 2019, at 10:00 a.m., in Hearing Room 11-D at the offices of the Public Utilities Commission of Ohio, 180 East Broad Street, Columbus, Ohio 43215-3793.

This summary of the history of the application does not include every filing in case number 18-1335-EL-BTX. The docketing record for this case, which lists all documents filed to date, can be found online at <http://dis.puc.state.oh.us>.

PROJECT DESCRIPTION

ATSI proposes to construct, own, operate, and maintain the Brim-Lemoyne 138 kV and Brim-Midway 138 kV transmission lines in Wood County, Ohio.¹⁶ The \$8.4 million project is

16. "Application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility and Public Need" (Application), American Transmission Systems, Incorporated, December 19, 2018.

intended to improve the quality and reliability of electric service and to expand the electric transmission system to meet anticipated near-term growth in the Wood County area. The Applicant plans to place the transmission line in service by June 2020.

The proposed project involves the installation of a new 138 kV overhead electric transmission line between the existing Lemoyne-Midway 138 kV transmission line and the Brim substation. A 60-foot right-of-way is proposed by the Applicant for the new transmission line. The transmission line would be a double-circuit line that would be supported by wood poles with a few steel pole structures used where needed for support. ATSI stated that it utilized public input and field survey data to identify route alternatives and to identify a Preferred and an Alternate route.

Preferred Transmission Line Route

The Preferred Route begins at the Brim Substation, located at the northwest corner of the intersection of Bishop and Brim roads. The Preferred Route travels generally northwest until it reaches the Lemoyne-Midway 138 kV transmission line. The Preferred Route is approximately 6 miles long.

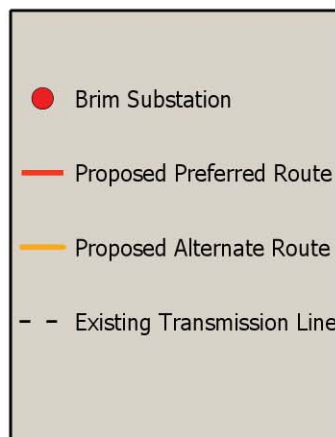
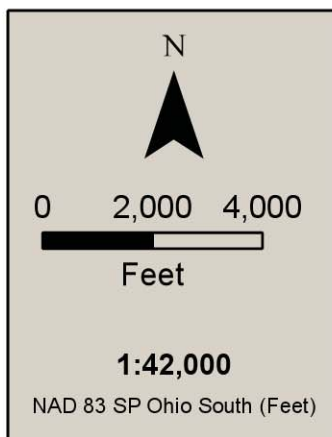
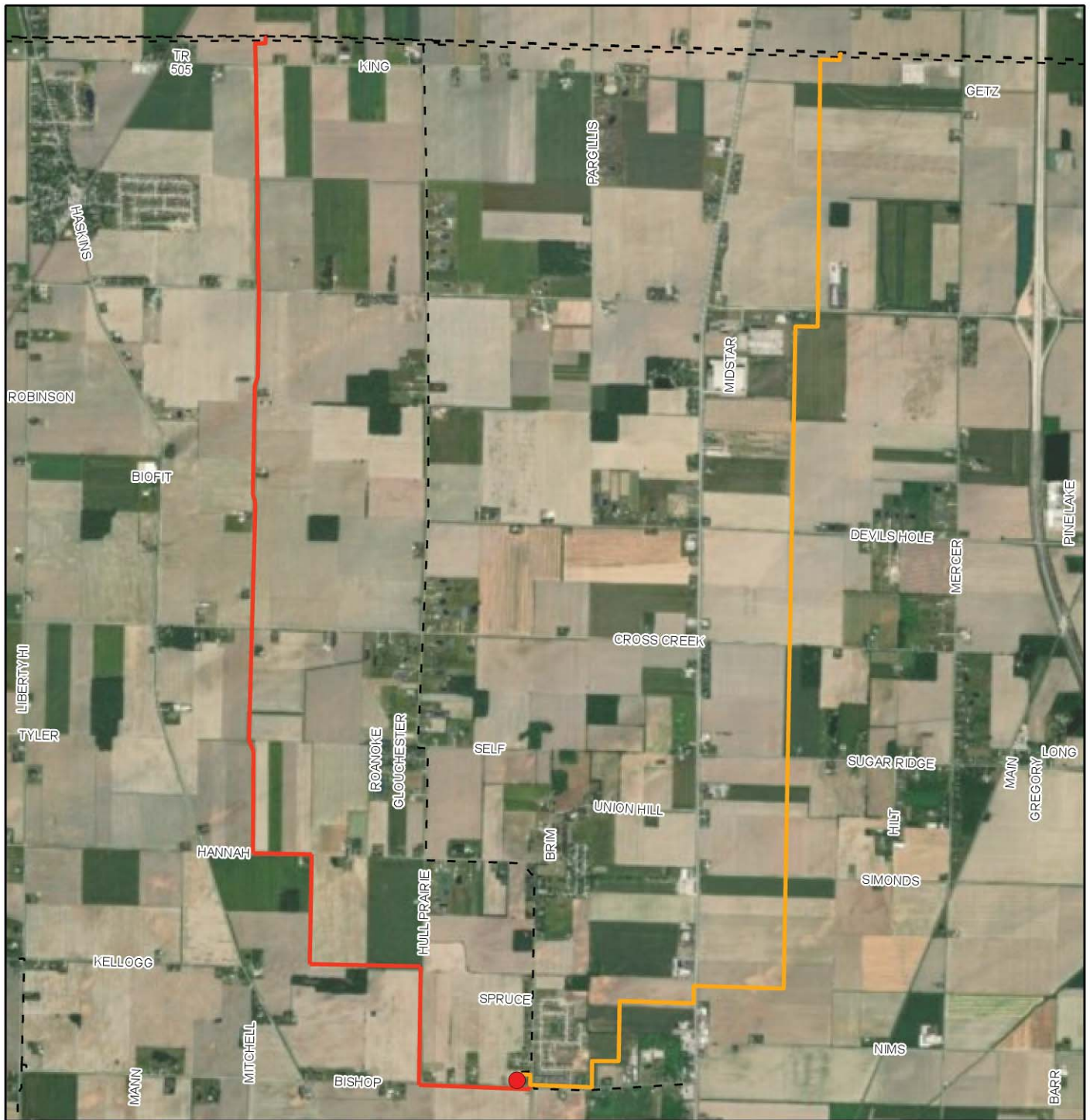
Alternate Transmission Line Route

The Alternate Route also begins at the Brim Substation. The Alternate Route travels east for about 1 mile past Dixie Highway, then travels north until it reaches the existing Lemoyne-Midway 138 kV transmission line. The Alternate Route is approximately 6 miles long.

The Preferred and Alternate routes are shown on the maps in this report.

Project Schedule

The Applicant plans to complete final transmission line engineering design work in October 2019; this would be selecting final location of poles on plans issued for construction. Construction is anticipated to begin February 2020 and be completed around June 2020.

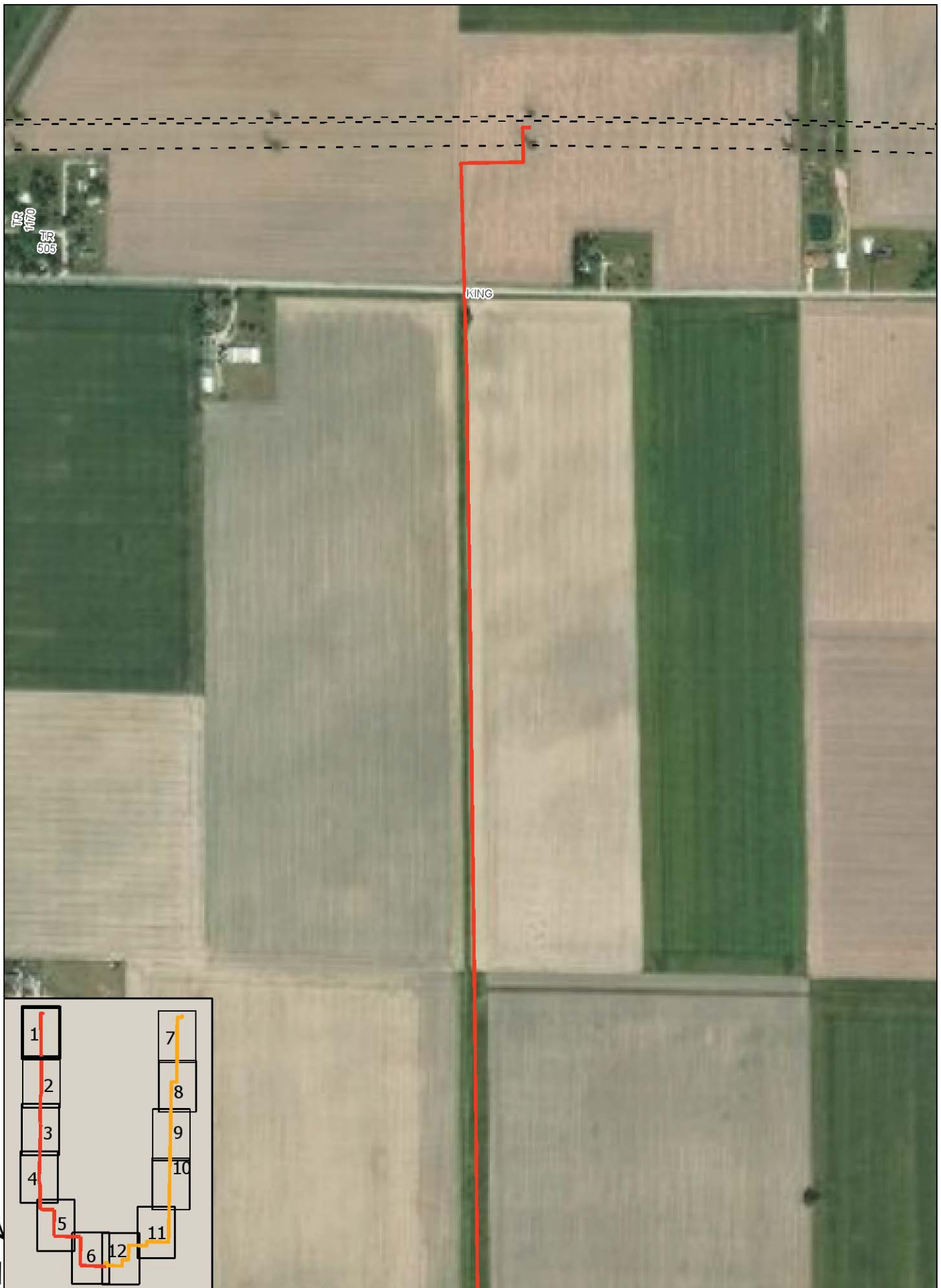


Overview Map

18-1335-EL-BTX

Wood County 138-kV Reinforcement Project

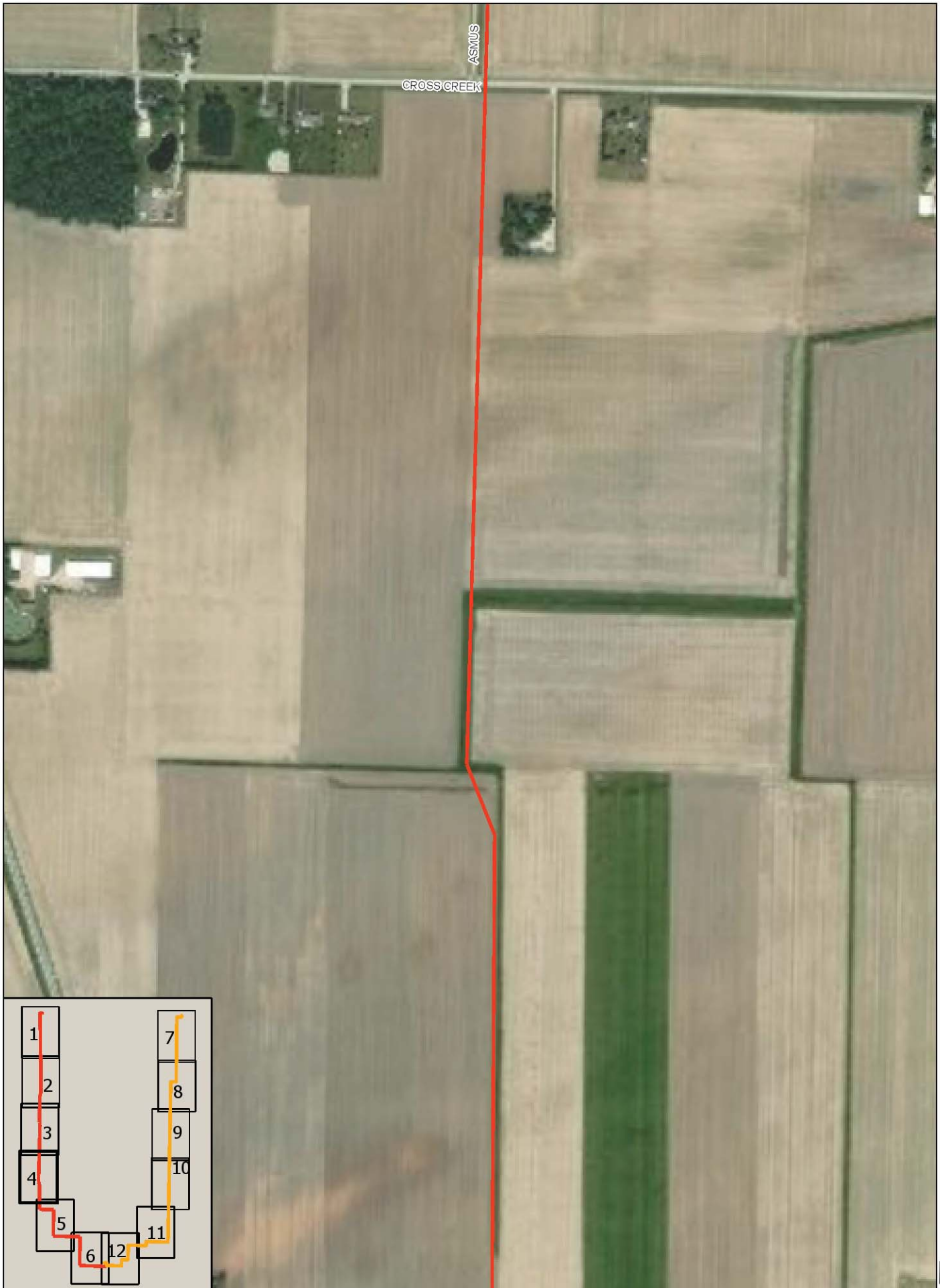
Maps are presented solely for the purpose of providing a visual representation of the project in the staff report, and are not intended to modify the project as presented by the Applicant in its certified application and supplemental materials.



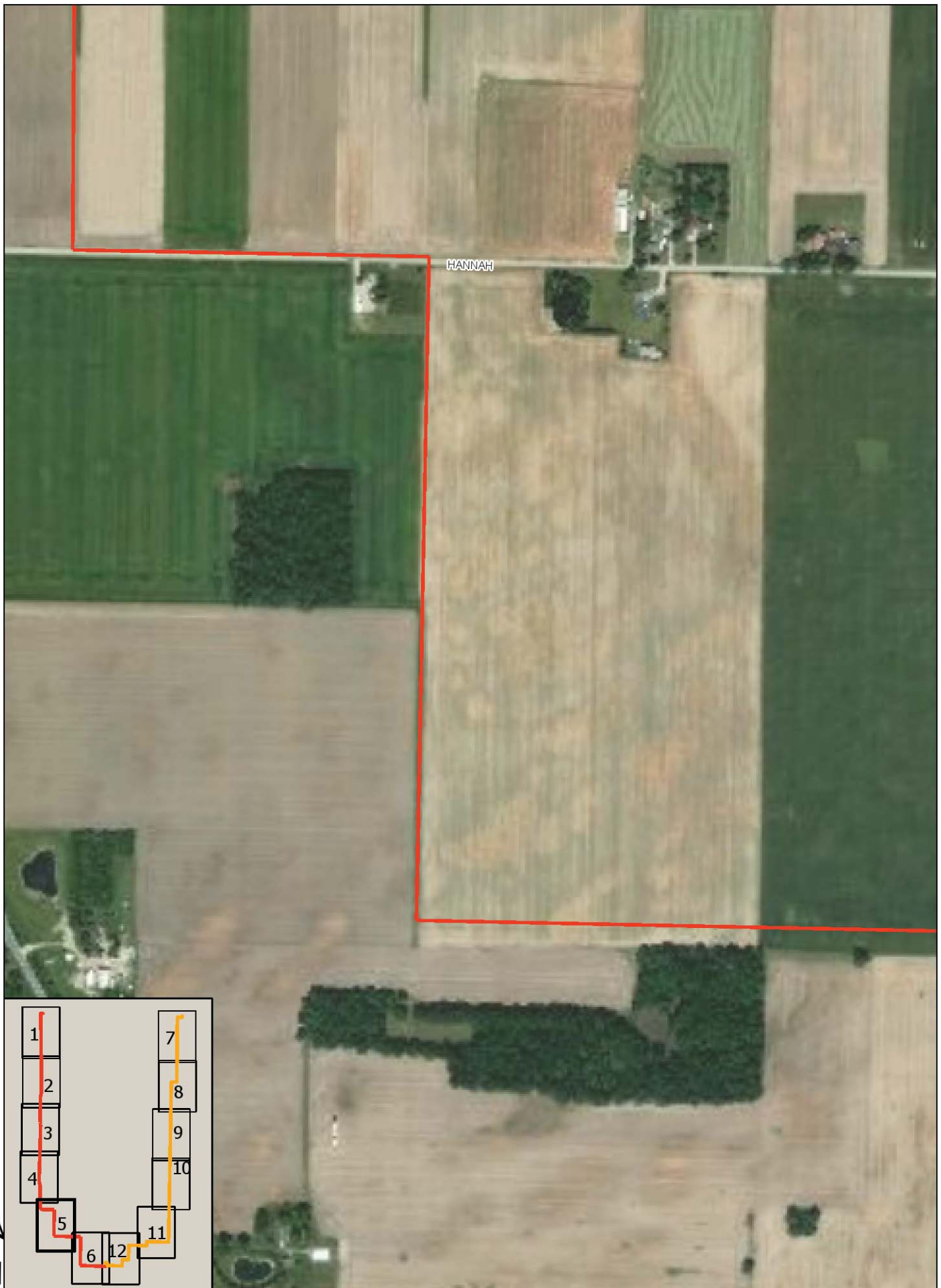


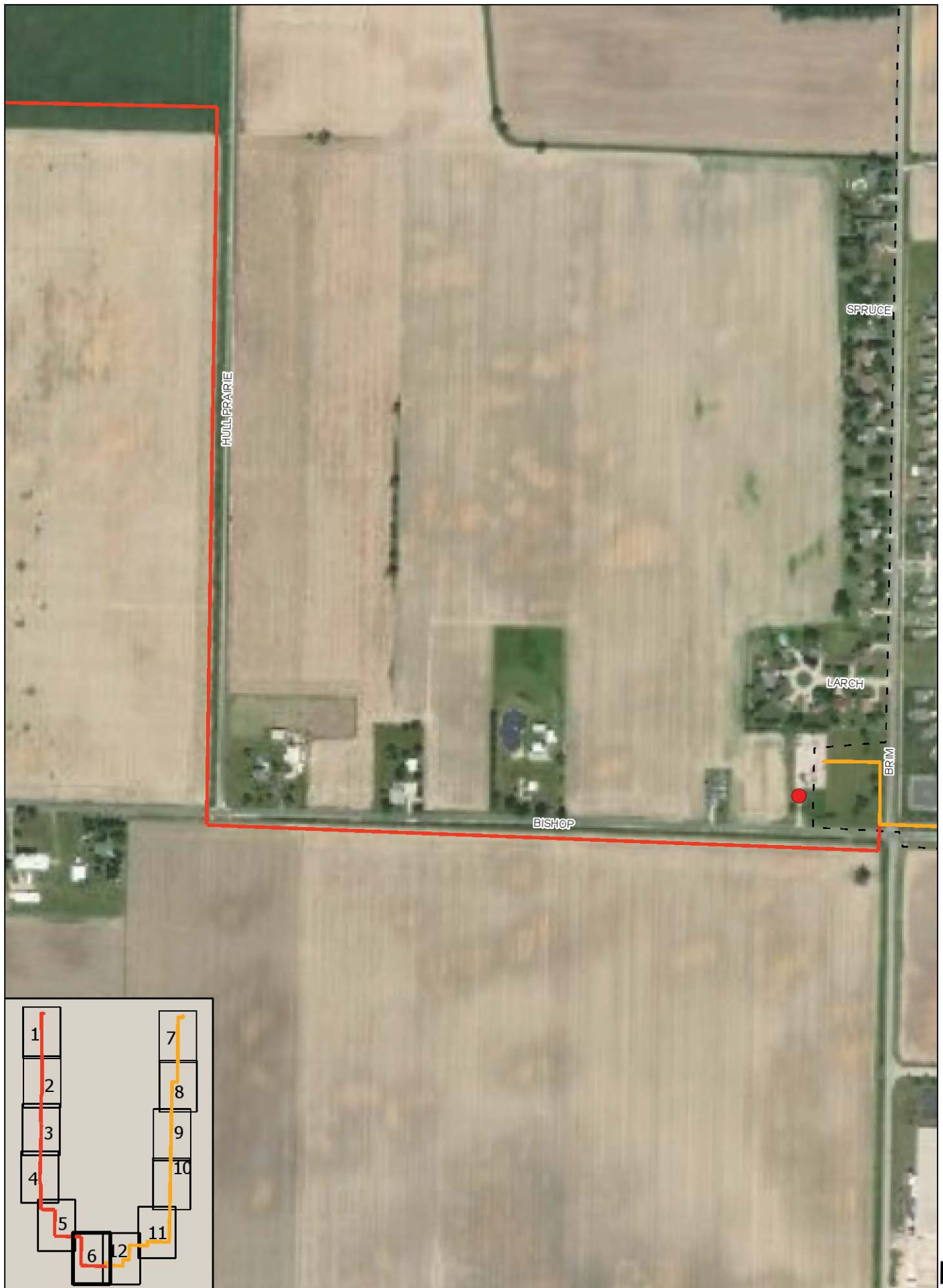
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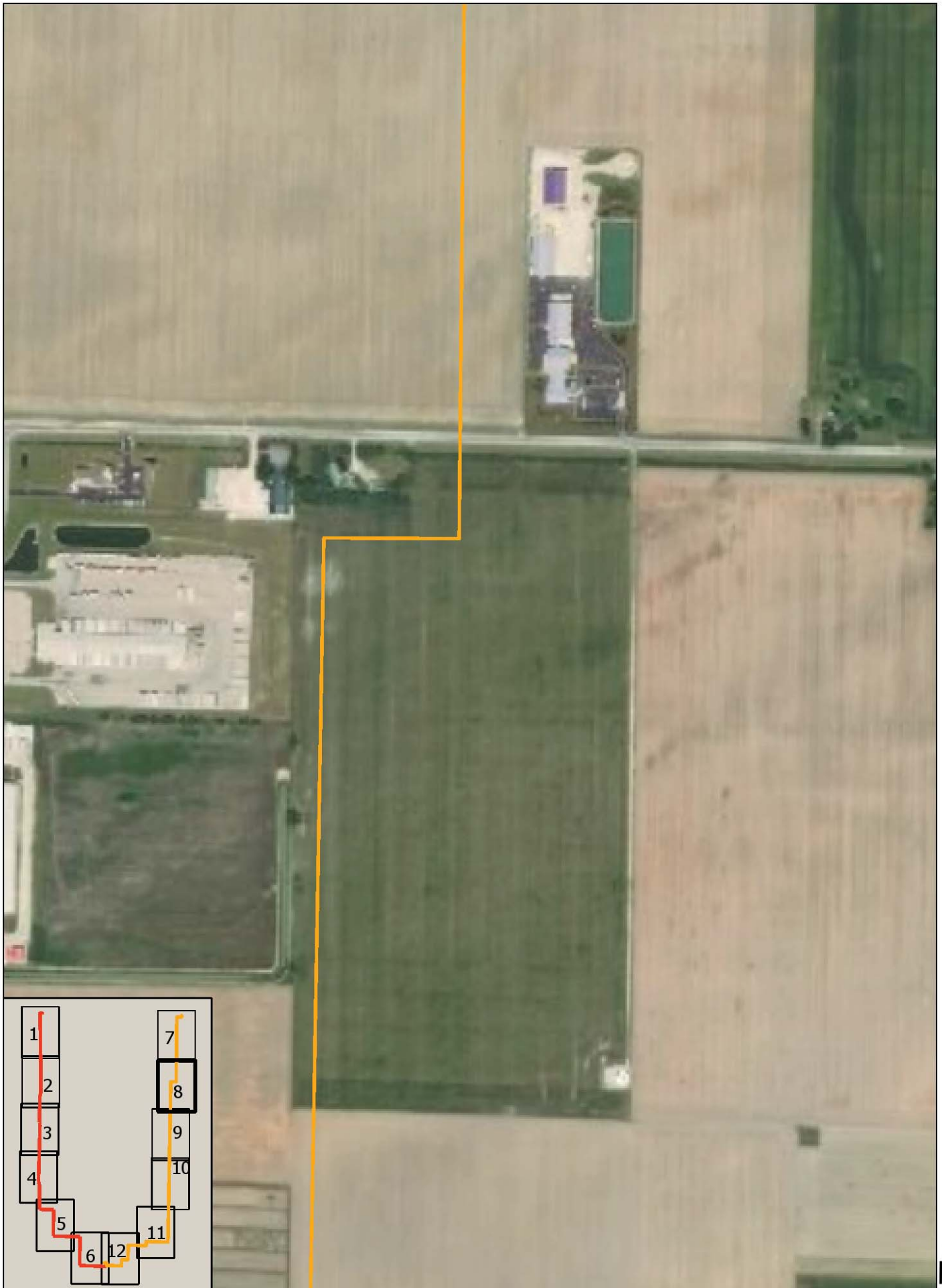
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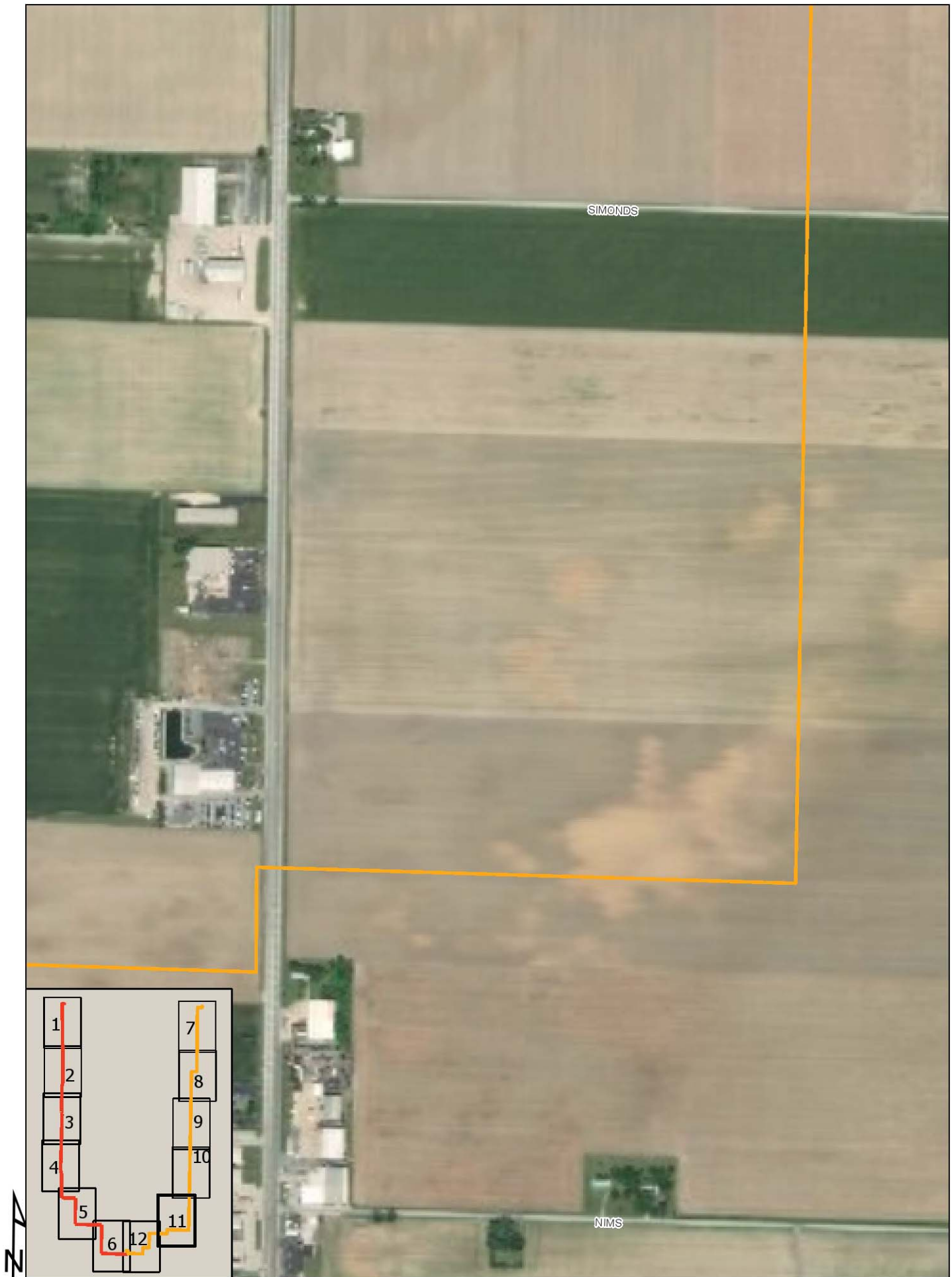


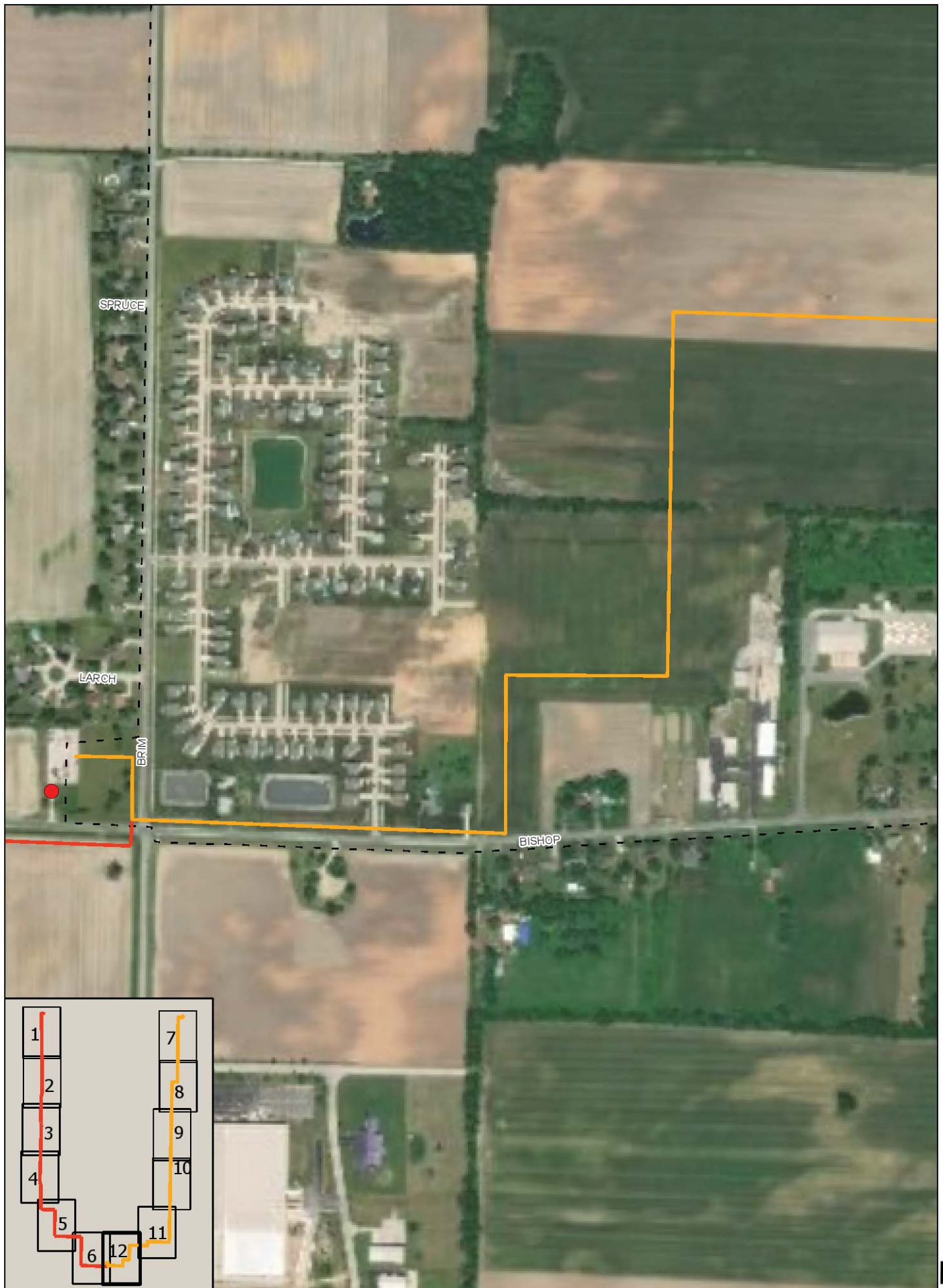
1 inch = 500 feet





1 inch = 500 feet





1 inch = 500 feet

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III. CONSIDERATIONS AND RECOMMENDED FINDINGS

In the matter of the application of American Transmission Systems, Inc., Staff submits the following considerations and recommended findings pursuant to R.C. 4906.07(C) and 4906.10(A).

Considerations for R.C. 4906.10(A)(1)

BASIS OF NEED

Purpose of Proposed Facility

The proposed facility is part of the Applicant's improvement plan to modernize and improve the resiliency, overall efficiency and operational flexibility of the Applicant's transmission and sub-transmission system in Wood County. The equipment for this project would reinforce the under 100 kV transmission system in the Bowling Green area and would allow ATSI to improve electric transmission service. This involves the construction of a new Lemoyne-Midway 138 kV transmission line to Brim substation. The project is a new tap location on the existing Lemoyne-Midway 138 kV line to the new Brim 4-breaker 138 kV Ring Bus at the existing Brim substation.

Based on Staff's review of information provided by the Applicant, the facility would provide safe and reliable electric service by reducing the amount of local load loss under contingency conditions, resolving thermal loading issues and providing operating flexibility to avoid the potential for local voltage collapse. Additional discussion about how the proposed facility resolves these issues is presented in the Electric Grid section of this report.

Long Term Forecast

ATSI identified the need for the proposed transmission line project in the 2019 ATSI Long-Term Forecast Report to the Public Utilities Commission of Ohio.^{17, 18}

System Economy and Reliability

The proposed facility is not expected to adversely impact the existing transmission grid. The Applicant identified reliability problems associated with the existing configuration. Constructing a new 138 kV transmission line should address these problems and thus improve system reliability. These problems are discussed in more detail in the Electric Grid section of this report.

Conclusion

Staff concludes that the Applicant has demonstrated the basis of need due to the reliability issues caused by low voltage on the existing regional transmission grid. The proposed facility should allow the transmission system to provide safe, reliable electric service.

Recommended Findings

Staff recommends that the Board find that the basis of need for the project has been demonstrated and therefore complies with the requirements specified in R.C. 4906.10(A)(1), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

17. "American Transmission Systems, Incorporated LTFR," Public Utilities Commission of Ohio case number 19-806-EL-FOR, <http://dis.puc.state.oh.us>.

18. R.C. 4935.04(C) and Ohio Adm.Code. 4901:5-5.

Considerations for R.C. 4906.10(A)(2)

NATURE OF PROBABLE ENVIRONMENTAL IMPACT

Pursuant to R.C. 4906.10(A)(2), the Board must determine the nature of the probable environmental impact of the proposed facility.

Socioeconomic Impacts

Regional Development Plan

The Wood County Planning Commission has indicated that the proposed transmission line is compatible with their regional land use plan, as it is expected to foster further economic development (Application p. 07-12).

Land Use

Land use in proximity to the proposed facility is predominately agricultural. The Preferred Route would traverse agricultural land for 96.5 percent of its length and the Alternate Route would traverse agricultural land for 88.3 percent of its length. No structures are expected to be removed or relocated for this facility's construction or operation. Significant impacts to commercial or industrial land uses are not likely, as these land uses are only minimally present. No state forests, parks, golf courses, hiking trails or other recreational land uses are within 1,000 feet of either route. Both routes avoid sensitive land uses such as churches, schools, medical facilities and cemeteries, as these uses are well in excess of 1,000 feet away.

The Applicant has identified 83 residences located within 1,000 feet of the Preferred Route right-of-way and 104 residences located within 1,000 feet of the Alternate Route right-of-way. The Applicant has identified 17 residences located within 200 feet of the Preferred Route right-of-way, with distances ranging from 55 to 190 feet. The Applicant has identified 19 residences located within 200 feet of the Alternate Route right-of-way. However, impacts to residential properties would be greater along the Alternate Route, as three houses appear to be located within 35 feet of the right-of-way as it parallels Bishop Road.

Cultural, Archaeological, and Architectural Resources

The Applicant conducted a Phase I cultural resource survey to ascertain potential impacts to historical properties and archaeological sites. The survey included a review of the National Register of Historic Places (NRHP) and analysis of sites that may be eligible for inclusion in the NRHP. The Applicant's survey focused on a 1-mile radius around the project area. The Applicant's survey included archaeological resources and known sites, landmarks, historical structures, bridges, cemeteries, and historic districts.

In its application, the Applicant committed to ongoing consultation with the Ohio Historic Preservation Office (OHPO) in preparation of a survey plan for the project area. The Applicant stated that an evaluation of the its study results would be coordinated with the OHPO to determine specific measures to appropriately avoid or minimize any potentially adverse impacts to cultural resources. If potentially adverse impacts to cultural resources can not be avoided or minimized, then the Applicant has committed to achieving a memorandum of understanding with the OHPO to address and mitigate those impacts.

Aesthetics

Aesthetic impacts and considerations are always measured against the surrounding land use features and potential viewers' subjective opinions. In this case, the proposed project's location of the transmission line among existing agricultural fields and farm features, such as storage silos, moderates potential viewshed impacts. The Applicant has selected a monopole design, which provides for a simpler appearance. The rural nature of the project vicinity limits and diminishes the potential number of viewers. Transportation corridors typically are smaller and much more lightly traveled, which again reduces viewing impacts. The presence of existing woodlots is able to offer additional natural screening of portions of the facility.

Noise

Most noise impacts associated with this project would occur during the proposed construction period. The Applicant would mitigate noise impacts by using standard construction techniques and limiting construction activities to daylight hours, to the extent feasible. Occasional, short term, noise impacts would also occur, associated with maintenance and repair activities, throughout the life of the facility. Although the Applicant states that construction activity will generally be limited to daylight hours, Staff recommends a condition that limits general construction activities to daylight hours unless the noise impact from the construction activities do not rise above ambient levels at sensitive receptors. If extraordinary circumstances, that include noise impacts above ambient levels at sensitive receptors, require nighttime construction activities, the Applicant shall notify Staff and affected property owners or tenants before the construction occurs.

Economics

The Applicant states that it would construct, own, and operate the project regardless of whether the preferred or alternate route is chosen. The Applicant plans to acquire rights-of-way and easements for the project through negotiations with property owners. The Applicant may also purchase land and/or come to other types of agreements with property owners. In the event that negotiations are unsuccessful, the Applicant would pursue appropriation of the necessary rights-of-way.

The Applicant states that their total estimated capital and intangible costs are expected to be nearly \$8.5 million for either the alternate or the preferred routes. Capital and intangible costs are broken down by the Applicant as follows:

- \$4.4 million for land and land rights, engineering, construction, etc.
- \$1.3 million for poles and fixtures.
- \$2.7 million for right-of-way clearing, roads, trails or other access.

Staff notes that its review of the Applicant's cost estimates should not be construed as a recommendation for approval of cost recovery in any ratemaking proceeding.

Taxes

ATSI derived estimates of local property tax revenues for their proposed utility facilities. Both the proposed routes are located within Wood County and would be expected to generate approximately \$570,000 in first year property taxes to local townships and school districts located within Wood County.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Socioeconomic Conditions** heading of the Recommended Conditions of Certificate section.

Ecological Impacts

Geology

The geology of Wood County within the project area lies entirely within the glaciated Maumee Lake Plains Region of the Central Lowland Physiographic Province. This area was formed by the glacial lakes that preceded the present day Lake Erie and is a flat plain traversed by sand ridges. Throughout most of Wood County, the sand ridges and lake deposits underlie glacial till that was deposited by melting glaciers as it receded northward during the late Wisconsin time period. The glacial till of various thicknesses ranging from close to the surface to about 80 feet in other areas is a heterogeneous mixture of all sizes of soil consisting of clay, silt, sand, and gravel. It may also contain streaks, seams, and layers, or lenses of sand and gravel, which may be water-bearing.

The bedrock within the project area consists of shales, dolomite and limestone of the Silurian and Devonian Systems. There are no known Karst features mapped within the project area, although the Applicant has noted that the bedrock geologies of carbonate rock, can be affected by dissolution in the presence of an elevated and slightly acidic groundwater table. The Applicant stated that it would perform site specific geotechnical work to obtain additional information for engineering design and construction purposes. The geology at the project area does not present any known geological hazards or features that would adversely impact or prevent the construction of the proposed 138 kV transmission line.

Slopes and Foundation Soil Suitability

The soils along both routes, according to the Soils Survey of Wood County, Ohio, generally consist of silt loams and silty clay loams. The dominant soil units are the Hotyville clay loam, Mermill-Aurand complex, Randolph loam, Rimer and Tedrow till substratum, loamy fine sands, and Aurand loam. The Hotyville, the most prevalent soil unit, formed in till, and is very deep, nearly level, and somewhat poorly drained to very poorly drained. The permeability is moderately slow in the upper part of the subsoil and slow in the lower part of the subsoil and in the substratum. The parent material is till with the landform described as Lake Plains. The position on the landform is along flat area, depressions, and drainage ways. The slopes are nearly flat, ranging from 0 to 2 percent.

The remaining soil units identified along both routes, some of which are mentioned above have somewhat similar characteristics. The positioning on the landform varies along slight rises, flat areas, back slopes, and knolls. The slopes along both routes mostly range from 0 to 2 percent. The Applicant sited both routes along flat lying areas and not in any areas exceeding 12 percent. Although depth to water saturation zones, frost action, and low strength could be limiting factors to site development, none of the mapped soil units listed above present factors that would hinder or prevent the construction of the transmission line along either route.

The Applicant would perform additional subsurface drilling and soil testing at representative locations along the selected route. The borings would extend to the proposed depth within the soil subsurface or to competent bedrock, whichever is encountered first. Various tests would be performed both in the field and inside a laboratory. The Applicant stated that, prior to construction, their geotechnical representative would provide the Applicant and Staff a final report that

documents the findings of the geotechnical investigation and laboratory testing, along with recommendations on foundation design and construction methods. Pending the final report, the soils appear to be suitable for design and construction of the proposed 138 kV transmission line project.

Surface Waters

The Preferred Route right-of-way would cross three perennial streams and nine upland drainage ditches. The Alternate Route would cross one perennial stream and six upland drainage ditches. All streams and ditches have maintained herbaceous vegetative banks with no forested riparian areas. During construction, temporary stream crossings by vehicles may be required. The Applicant has proposed temporary stream ford, temporary culvert stream crossings, and temporary access bridge crossing methods. Stream fords involve direct crossings of streams by construction vehicles without protection of the stream bed and banks, which can lead to increased erosion and sedimentation. Staff recommends that no stream fords be permissible and that timber matting, or other methods, which avoid or minimized streambed disturbance be employed.

No wetlands, lakes, reservoirs, or floodplains would be crossed or impacted by the proposed facility.

The Applicant stated that it would obtain coverage under the Ohio EPA General National Pollutant Discharge Elimination System (NPDES) Permit. Sedimentation that may occur as a result of construction activities would be minimized through best management practices (BMP), such as silt fences. BMPs would be outlined in the Applicant's Stormwater Pollution Prevention Plan (SWPPP) required as part of the NPDES Permit.

Threatened and Endangered Species

The Applicant requested information from the Ohio Department of Natural Resources (ODNR) and the United States Fish and Wildlife Service (USFWS) regarding state and federal listed threatened and endangered plant and animal species. Additional information was provided through field assessments and review of published ecological information. The following table identifies state and federal listed species on which the ODNR and the USFWS provided comments due to their potential to be found in the project area based on their review of available information.

BIRDS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
northern harrier	<i>Circus cyaneus</i>	N/A	Endangered	Known range. Due to the location, the type of habitat present at the project site, no impacts to this species are anticipated.
lark sparrow	<i>Chondestes grammacus</i>	N/A	Endangered	Known range. Due to the location, the type of habitat present at the project site, no impacts to this species are anticipated.

BIRDS				
upland sandpiper	<i>Bartramia longicauda</i>	N/A	Endangered	Known range. Due to the location, the type of habitat present at the project site, no impacts to this species are anticipated.
REPTILES & AMPHIBIANS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
spotted turtle	<i>Clemmys guttata</i>	N/A	Threatened	Known range. Due to the location, the type of habitat present at the project site, no impacts to this species are anticipated.
MAMMALS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Indiana bat	<i>Myotis sodalis</i>	Endangered	Endangered	Known range, habitat includes woodlands.
northern long-eared bat	<i>Myotis septentrionalis</i>	Threatened	Threatened	Known range, habitat includes woodlands.
FRESH WATER MUSSELS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Pondhorn	<i>Uniomereus tetralasmus</i>	N/A	Threatened	Known range. No suitable habitat was within the project area.
FISH				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
western banded killifish	<i>Fundulus diaphanatus menona</i>	N/A	Threatened	Known Range. No suitable habitat was within the project area.

A small amount of tree clearing would be necessary within the proposed project area. The project is within the range of state and federal endangered Indiana bat (*Myotis sodalis*) and the state and federal threatened northern long-eared bat (*Myotis septentrionalis*). As tree roosting species in the summer months, the habitat of these species may be impacted by the project. In order to avoid impacts to the Indiana bat and northern long-eared bat, Staff recommends the Applicant adhere to seasonal tree cutting dates of October 1 through March 31 for all trees three inches or greater in diameter, unless coordination efforts with the ODNR and the USFWS allows a different course of action. The project is not expected to impact any bat hibernacula.

In the event that the Applicant encounters listed plant or animal species during construction, Staff recommends that the Applicant immediately halt construction that could adversely impact the identified the encountered species and contact Staff, the ODNR, and the USFWS, as applicable. Staff further recommends the Applicant, prior to construction, provide a final access plan to Staff that would include avoidance of impacts to listed species as presented in the application. Staff also recommends that if the Applicant encounters any listed plant or animal species prior to

construction, the Applicant include the location and how impacts would be avoided in a final access plan.

Vegetation

The Preferred and Alternate routes cross through two major vegetative communities. The following table reflects the major vegetative communities present in the construction corridor and associated acres of impact for each route.

VEGETATION		
Community Type	Preferred Route Impacts (Acres)	Alternate Route Impacts (Acres)
Agricultural	42	38.6
Maintained Lawn	1.4	4

The Applicant proposes to clear 30 feet on either side of the transmission line. Temporary disturbance to the right-of-way includes vegetative clearing and the installation of poles and stringing locations. No forested areas would be cleared, and tree clearing would be limited to a select few trees along either route. Due to the prevalence of agricultural vegetation in the project area, Staff anticipates herbicide use to be very limited. During operation, the right-of-way would be returned to agricultural land use.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Ecological Conditions** heading of the Recommended Conditions of Certificate section.

Public Services, Facilities, and Safety

Roads and Bridges

The Preferred and Alternate routes cross several county and township roads in Wood County. The Preferred Route crosses one state route. The Alternate Route crosses two state routes. Neither the Preferred nor the Alternate route cross any U.S. highways or interstate routes.

The Applicant did not identify any active railroads crossed or followed by either route. Neither the Preferred nor the Alternate route cross any bridges in the project area.

Access to construction areas would be through existing farm roads and public roads. The Applicant stated that an increase in truck traffic would be anticipated during construction for the purpose of project area equipment access and equipment and material deliveries.

Safety

The Applicant stated that it would comply with all applicable safety standards set by the Occupational Safety and Health Administration (OSHA), safety standards of the PUCO, and the North American Electric Reliability Corporation (NERC) Reliability Standards. The Applicant's design would meet the requirements of the National Electric Safety Code.

Communications

Because the Applicant has incorporated minimization of radio interference into the design of the transmission line, the Applicant does not expect AM or FM radio or microwave path interference

to occur from the operation of the proposed transmission line along either the Preferred or Alternate route.

Any likely source of television interference would be a localized, and due to defective hardware that could be easily detected and replaced. The Applicant indicates that it will maintain the transmission line in good condition, which should avoid impacts to television reception. Television interference would be resolved through the complaint resolution process either by equipment repair, employment of a high-gain directional antenna, or other mitigation options.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Public Services, Facilities, and Safety Conditions** heading of the Recommended Conditions of Certificate section.

Recommended Findings

Staff recommends that the Board find that the Applicant has determined the nature of the probable environmental impact for the proposed facility, and therefore complies with the requirements specified in R.C. 4906.10(A)(2), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(3)

MINIMUM ADVERSE ENVIRONMENTAL IMPACT

Pursuant to R.C. 4906.10(A)(3), the proposed facility must represent the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, along with other pertinent considerations.

Route Selection

The Applicant completed a route selection process that resulted in the identification of the Preferred and Alternate transmission line routes. Land use constraints were identified and categorized by evaluating various land uses, including ecological, cultural and technical factors. A ranking system was used to weigh the data to produce potential candidate routes. The Applicant also relied on public involvement to determine feasible adjustments to the final two routes.

Minimizing Impacts

While both the Preferred and Alternate routes are viable, Staff concludes that potential impacts are greater along the Alternate Route. The ecological and economic costs are similar for both routes. In general, land use impacts associated with agricultural, institutional and commercial uses are also similar. Staff's concern with the Alternate Route is in regard to potential impacts to residential properties. The Alternate Route has more residences located within 1,000 feet and also within 200 feet as well. Additionally, three houses are projected to fall within 35 feet of the edge of the Alternate Route's right-of-way.

Recommended Findings

Staff recommends that the Board find that the Preferred Route represents the minimum adverse environmental impact, and therefore complies with the requirements specified in R.C. 4906.10(A)(3), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(4)

ELECTRIC GRID

Pursuant to R.C. 4906.10(A)(4), the Board must determine that the proposed electric facilities are consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facilities will serve the interests of electric system economy and reliability. The purpose of this section is to evaluate the impact of integrating the proposed facility into the existing regional transmission grid.

The Applicant proposes to construct an approximately 6-mile 138 kV transmission line which would provide a second 138 kV source into the existing Brim Substation. The proposed line would begin at the existing Lemoyne-Midway 138 kV transmission line and terminate at the existing Brim Substation.

The Applicant states the proposed facility should address potential thermal overloads, improve reliability under certain planning criteria, and strengthen the transmission system by adding additional capacity in the Wood County area.

American Transmission Systems, Inc. Planning Criteria

ATSI uses internal transmission planning reliability criteria to plan their system. These criteria are required by the Federal Regulatory Energy Commission (FERC) and are filed as part of the annual FERC Form No. 715 filing. The criteria must comply with NERC Reliability Standards and PJM Interconnection, LLC (PJM) planning and operating manuals for the Bulk Electric System (BES). ATSI defines the BES as transmission lines rated below 100 kV, and transformers with secondary voltages below 100 kV. The proposed project is designed to meet ATSI's transmission planning criteria. The figure below highlights a portion of ATSI's planning criteria.^{19, 20}

ATSI TRANSMISSION PLANNING CRITERIA		
System Condition	Voltage Limits	Thermal Performance
Normal	345kV & 138 kV: .95 - 1.05 per unit (< 70 kV: .92 - 1.05 per unit, < 26 kV .92 - 1.075 per unit)	No facility may exceed its seasonal normal rating
Contingency	345 kV: .92 - 1.05 per unit 138 kV: .92 - 1.05 per unit (non-bulk electric system .90 - 1.05 per unit) All Remaining Voltage Levels: .90 - 1.05 (.90 - 1.075 for 25/23 kV) per unit	N-1: Not to exceed seasonal short-term emergency rating or additionally, non-bulk electric system, not to exceed long-term emergency rating for transformers N-2: Not to exceed seasonal short-term emergency rating

NERC Planning Criteria

NERC is responsible for the development and enforcement of the federal government's approved reliability standards, which are applicable to all owners, operators, and users of the bulk power system. As an owner, operator, and/or user of the bulk power system, the Applicant is subject to

19. "Transmission Planning Criteria," FirstEnergy, accessed September 14, 2019, <https://www.pjm.com/planning/planning-criteria/to-planning-criteria.aspx>.

20. "Form No. 715 - Annual Transmission Planning and Evaluation Report," Federal Regulatory Energy Commission, accessed September 14, 2019, <https://www.ferc.gov/docs-filing/forms/form-715/overview.asp>.

compliance with various NERC reliability standards, including but not limited to those related to transmission planning for contingency events.

PJM Interconnection

The proposed project was submitted to PJM as a supplemental project and reviewed at the PJM Subregional RTEP Committee - Western meeting on August 31, 2018. PJM assigned the project upgrade ID S1703. The construction status of the transmission project can be tracked on PJM's website.^{21, 22}

Load Flow Studies and Contingency Analyses

American Transmission Systems, Inc. evaluated the Wood County area transmission system using PJM's 2022 summer peak load conditions with and without the proposed project in-service. The load flow study was completed using multiple contingency (N-2) events. The results exhibited several facilities over their summer emergency rating and with critically low voltage. These conditions can cause equipment failure and reliability problems, including a complete collapse of the local grid. Staff reviewed transcription diagrams provided by the applicant to verify the load flow results. The following table displays a subset of the most severe load flow study results with and without the proposed transmission line.

LOAD FLOW STUDY RESULTS			
2022 Power Flows			
Contingency	Overload Facility	% Overload Before	% Overload After
(1) Brim Transformer #1 (2) Pemberville-Bowling Green No.4 69 kV T-Line	Midway-Bowling Green No2 69 kV T-Line	163.4%	4.8%
(1) Brim Transformer #1 (2) Midway-Bowling Green No.2 69 kV T-Line	Pemberville 69/34.5 kV Transformer #1	103.7%	15.1%
2022 System Voltages			
Contingency	Overload Facility	Voltage Before	Voltage After
(1) Brim Transformer #1 (2) Pemberville-Bowling Green No.4 69 kV T-Line	Bowling Green 3 to Bowling Green 7 - 69 kV	53.8	69.7
	Malinta - 34.5 kV	27.9	33.1
	Tontogany - 69 kV	56.6	66.2
(1) Brim Transformer #1 (2) Midway-Bowling Green No.4 69 kV T-Line	Bowling Green 3 to Bowling Green 7 - 69 kV	63.5	69.7
	Weston - 69 kV		

Conclusion

The Applicant provided information demonstrating the proposed project would improve reliability by adding a second 138 kV transmission source to the Wood County area. In addition to improving

21. PJM Interconnection, "8.31.2018 - Subregional RTEP Committee – Western," accessed September 14, 2019, <http://pjm.com/committees-and-groups/committees/srrtep-w.aspx>.

22. PJM Interconnection, "Transmission Construction Status," accessed September 14, 2019, <https://pjm.com/planning/services-requests/interconnection-queues.aspx>.

reliability, the additional power available to the area would allow for future economic development and growth. The proposed facility is consistent with plans for expansion of the local and regional power grid.

Recommended Findings

Staff recommends that the Board find that the proposed facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facility would serve the interests of electric system economy and reliability. Therefore, Staff recommends that the Board find that the facility complies with the requirements specified in R.C. 4906.10(A)(4), provided that any certificate issued by the Board for the proposed facilities include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(5)

AIR, WATER, SOLID WASTE, AND AVIATION

Pursuant to R.C. 4906.10(A)(5), the facility must comply with Ohio law regarding air and water pollution control, withdrawal of waters of the state, solid and hazardous wastes, and air navigation.

Air

Air quality permits are not required for construction of the proposed facility. However, fugitive dust rules adopted under R.C. Chapter 3704 may be applicable to the construction of the proposed facility. The Applicant would control fugitive dust through dust suppression techniques such as irrigation, mulching, or application of tackifier resins. These methods of dust control are sufficient to comply with fugitive dust rules.

Water

Neither construction nor operation of the proposed facility would require the use of significant amounts of water. Therefore, the requirements under R.C. 1501.33 and 1501.34 are not applicable to this project. The Applicant would seek coverage, if needed, under the U.S. Army Corps of Engineers Nationwide Permit 12 for Utility Line Activities for surface water impacts associated with the proposed transmission line.

The Applicant intends to submit a Notice of Intent for coverage under the Ohio EPA's NPDES general permit for stormwater discharges associated with construction activities. The Applicant would submit a SWPPP to the Ohio EPA as part of the NPDES permit. This SWPPP would include a detailed construction access plan and indicate BMP for construction activities that minimize erosion-related impacts to streams and wetlands. The Applicant has committed to identify wetlands, streams, and other environmentally sensitive areas before commencement of clearing or construction. The Applicant has also stated that no construction or access would be permitted in these areas unless clearly specified in the construction plans and specifications, thus minimizing any disturbance to surface water bodies. With these provisions, construction of this facility would comply with the requirements set forth under R.C. Chapter 6111.

Solid Waste

Debris generated during construction would consist of items such as conductor scrap, construction material packaging, including cartons, boxes, insulator crates, conductor reels, wrapping; and used stormwater erosion control materials. Materials with salvage value would include clearance poles and conductor reels. All construction-related debris would be disposed of in accordance with state and federal requirements.

Any contaminated soils discovered or generated during construction would be handled in accordance with applicable regulations. The Applicant intends to have a Spill Prevention Plan in place and would follow the Spill Prevention Plan for any spill cleanup. The Applicant's solid waste disposal plans comply with solid waste disposal requirements set forth in R.C. Chapter 3734.

Aviation

The anticipated height of the electric transmission support structures is expected to be from 55 feet to 150 feet tall. The Applicant also indicated that it would utilize cranes during the construction of the proposed facility.

The Federal Aviation Administration (FAA) and Ohio Department of Transportation (ODOT) Office of Aviation administer regulatory programs to provide airport airspace analysis. These programs are also administered to evaluate and authorize certain obstructions near airports. The Applicant submitted a request for review by the FAA for the electric transmission support structures. The FAA performed an aeronautical study for these structures and issued determination of no hazard letters for each structure. A caveat in the FAA's determination of no hazard letter, is that if the crane height exceeds the overall heights in the aeronautical study a separate temporary construction authorization may need to be obtained from the FAA. Staff recommends that the Applicant notify the closest airport prior to construction and provide detail of the height, operating conditions, and duration of the crane work. The Wood County Airport is the closest airport. It is located approximately 8,000 to 10,000 feet south and east of the proposed transmission line preferred and alternate routes.

Staff found that there were other public-use airports in the area of the proposed facility. These are Bordner (3D8), Toledo Express (TOL), Toledo Executive (TDZ), Deshler Municipal (6D7), Toledo Suburban (DUH), Fostoria Metropolitan (FZI), and Henry County (7W5) which are between 5 and 18 miles from the proposed electric transmission lines. The closest heliport is University of Toledo Medical Center (74OH) approximately 9 miles away. Staff found that neither these public use airports or heliport pose any air navigation concerns with the proposed transmission line.

Staff contacted the ODOT Office of Aviation during the review of this application, in accordance with R.C. 4906.10(A)(5) and 4561.341, to consult and determine potential impacts of the proposed transmission line on local airports. The ODOT Office of Aviation has indicated that none of the structures filed with the FAA for the preferred or alternate route would penetrate the 14 CFR Part 77 protected navigable airspace of the Wood County airport or any other public use airport in Ohio. Also, the ODOT Office of Aviation has no objection to the project.

The Applicant has committed to obtaining and complying with federal or state laws and regulations prior to the commencement of construction activities that require such permits or authorizations. The Applicant would also provide copies of permits and authorizations, including all supporting documentation, to Staff within seven days of issuance or receipt by the Applicant. Furthermore, the Applicant stated that it would provide a schedule of construction activities and acquisition of corresponding permits for each activity at the preconstruction conference.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Air, Water, Solid Waste, and Aviation Conditions** heading of the Recommended Conditions of Certificate section.

Recommended Findings

Staff recommends that the Board find that the proposed facility complies with the requirements specified in R.C. 4906.10(A)(5), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(6)

PUBLIC INTEREST, CONVENIENCE, AND NECESSITY

Pursuant to R.C. 4906.10(A)(6), the Board must determine that the facility will serve the public interest, convenience, and necessity.

Public Interaction

The Applicant hosted a public informational open house for this project. Attendees were provided the opportunity to speak with representatives of the Applicant about the proposed project and to provide feedback.

The Applicant indicated that it served copies of the complete application on officials representing Wood County; Center, Middleton, and Plain townships; and the City of Bowling Green. The Applicant indicated that it also sent copies of the complete application to the Wood County District Library. Additionally, copies of the complete application are available for public inspection at the offices of the PUCO and online at <http://opsb.ohio.gov>. The Applicant provides project updates online at https://www.firstenergycorp.com/about/transmission_projects/ohio/wood-county-reinforcement.html. Members of the public may also contact the Applicant by phone or email.

The Applicant has committed to provide notice to any affected property owners and tenants about construction activities at least seven days prior to the start of construction. Staff recommends that the Applicant provide Staff with a copy of its public information program that informs affected property owners and tenants of the nature of the project. Staff also recommends that the Applicant provide Staff with a copy of a complaint resolution process, to address potential public complaints resulting from facility construction and operation.

The OPSB has scheduled a local public hearing for October 24, 2019, at 6:00 p.m., at the Ohio Department of Transportation – District 2, 317 East Poe Road, Bowling Green, Ohio 43402. The adjudicatory hearing will commence on November 7, 2019, at 10:00 a.m., in Hearing Room 11-D at the offices of the Public Utilities Commission of Ohio, 180 East Broad Street, Columbus, Ohio 43215-3793.

The OPSB has received public comments related to this case. OPSB board members and the public may view these comments online in the public comments section of the record for case number 18-1335-EL-BTX at <http://dis.puc.state.oh.us>.

Electromagnetic Fields

Electric transmission lines, when energized, generate electromagnetic fields (EMF). Laboratory studies have failed to establish a strong correlation between exposure to EMF and effects on human health. There have been concerns, however, that EMF may have impacts on human health.

Because these concerns exist, the Applicant has computed the EMF associated with the new circuits.²³ The fields were computed based on the maximum loadings of the lines, which would lead to the highest EMF values that might exist along the proposed transmission line. Daily current load levels normally operate below the maximum load conditions, thereby further reducing nominal EMF values.

23. Application, tables 7-2 through 7-5.

The electric field is a function of the voltage, the line configuration, and the distance from the transmission lines. Electric fields are produced by voltage or electric charge. For example, a plugged-in lamp cord produces an electric field, even if the lamp is turned off. The electric field for this transmission line would be 0.398 kV/meter or less. Electric fields are easily shielded by physical structures such as the walls of a house, foliage, etc.

Magnetic fields are a function of the electric current, the configuration of the conductors, and the distance from the transmission lines. The magnetic fields for this project are estimated at the right-of-way edge to be less than 37.25 milligauss. The Applicant states that the transmission facilities will be installed according to the requirements of the National Electric Safety Code.

Recommended Findings

Staff recommends that the Board find that the proposed facility would serve the public interest, convenience, and necessity, and therefore complies with the requirements specified in R.C. 4906.10(A)(6), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(7)

AGRICULTURAL DISTRICTS

Pursuant to R.C. 4906.10(A)(7), the Board must determine the facility's impact on the agricultural viability of any existing agricultural district land within the Preferred and Alternate routes of the proposed utility facility. The agricultural district program was established under R.C. Chapter 929. Agricultural district land is exempt from sewer, water, and electrical service tax assessments.

Agricultural land can be classified as an agricultural district through an application and approval process that is administered through local county auditors' offices. Eligible land must be devoted exclusively to agricultural production or be qualified for compensation under a land conservation program for the preceding three calendar years. Furthermore, eligible land must be at least 10 acres or produce a minimum average gross annual income of \$2,500.

Respectively, the Preferred and Alternate routes would include approximately 42.0 and 39.6 acres of agricultural land. The majority of impacts to agricultural land would be temporary. Currently, this agricultural land is primarily used for the production of row crops. Both the Preferred and Alternate routes are almost entirely located within Agricultural District lands. According to the Applicant's research of county records, there are 54 Agricultural District properties located within 1,000 feet of the Preferred and Alternate routes.

The Applicant would take measures to minimize impacts to field operations, irrigation, agricultural and field drainage systems associated with agricultural lands that would occur as a result of construction, operation, and maintenance of the proposed project. The Applicant stated it would coordinate with landowners to mitigate any impact to irrigation systems. Field drainage systems damaged by construction activities would be repaired by the Applicant. The Applicant stated that landowners would be compensated for any lost or damaged crops. Structures would be located, where feasible, at the edge of fields, and excavated top soil would be segregated and stockpiled. Top soil would also be restored to original conditions. According to the Applicant, no agricultural structures are anticipated to be impacted by this project.

Given the measures to be undertaken by the Applicant to minimize impacts to agricultural lands, the proposed facility would not impact the agricultural viability of any existing agricultural district land within either the Preferred or Alternate route.

Recommended Findings

Staff recommends that the Board find that the impact of the proposed facility on the viability of existing agricultural land in an agricultural district has been determined, and therefore complies with the requirements specified in R.C. 4906.10(A)(7), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(8)

WATER CONSERVATION PRACTICE

Pursuant to R.C. 4906.10(A)(8), the proposed facility must incorporate maximum feasible water conservation practices, considering available technology and the nature and economics of the various alternatives.

The facility may require the use of minimal amounts of water for dust control and for concrete foundations during construction. However, the transmission line would not require the use of any water during operation. Therefore, the facility would comply with water conservation practice as specified under R.C. 4906.10(A)(8).

Recommended Findings

Staff recommends that the Board find that the proposed facility would incorporate maximum feasible water conservation practices, and therefore complies with the requirements specified in R.C. 4906.10(A)(8).

IV. RECOMMENDED CONDITIONS OF CERTIFICATE

Following a review of the application filed by American Transmission Systems, Inc. and the record compiled to date in this proceeding, Staff recommends that a number of conditions become part of any certificate issued for the proposed facility. These recommended conditions may be modified as a result of public or other input received subsequent to the issuance of this report. At this time, Staff recommends the following conditions:

GENERAL CONDITIONS

Staff recommends the following conditions to ensure conformance with the proposed plans and procedures as outlined in the case record to date, and to ensure compliance with all conditions listed in this Staff Report:

- (1) The facility shall be installed on the Applicant's Preferred Route, utilizing the equipment, construction practices, and mitigation measures as presented in the application filed on December 19, 2018, as supplemented on January 2, 2019 and May 9, 2019, and further clarified by recommendations in this *Staff Report of Investigation*.
- (2) The Applicant shall conduct a preconstruction conference prior to the start of any construction activities. Staff, the Applicant, and representatives of the prime contractor and/or subcontractors for the project shall attend the preconstruction conference. The conference shall include a presentation of the measures to be taken by the Applicant and contractors to ensure compliance with all conditions of the certificate, and discussion of the procedures for on-site investigations by Staff during construction. Prior to the conference, the Applicant shall provide a proposed conference agenda for Staff review to ensure compliance with this condition. The Applicant may conduct separate preconstruction conferences for each stage of construction.
- (3) At least 30 days before the preconstruction conference, the Applicant shall submit to Staff one set of detailed engineering drawings of the final project design, including the facility, temporary and permanent access roads, construction staging areas, and any other associated facilities and access points, so that Staff can determine that the final project design is in compliance with the terms of the Certificate. The final project design shall be provided in hard copy and as geographically referenced electronic data. The final design shall include all conditions of the Certificate and references at the locations where the Applicant and/or its contractors must adhere to a specific condition in order to comply with the Certificate.
- (4) Within 60 days after the commencement of commercial operation, the Applicant shall submit to Staff a copy of the as-built specifications for the entire facility. The Applicant shall provide as-built drawings in both hard copy and as geographically referenced electronic data.
- (5) The certificate shall become invalid if the Applicant has not commenced a continuous course of construction of the proposed facility within five years of the date of journalization of the certificate.

- (6) As the information becomes known, the Applicant shall provide to Staff the date on which construction will begin, the date on which construction was completed, and the date on which the facility begins commercial operation.
- (7) Prior to the commencement of construction activities in areas that require permits or authorizations by federal or state laws and regulations, the Applicant shall obtain and comply with such permits or authorizations, including any permits necessary for aviation clearance. The Applicant shall provide copies of permits and authorizations, including all supporting documentation, to Staff within seven days of issuance or receipt by the Applicant. The Applicant shall provide a schedule of construction activities and acquisition of corresponding permits for each activity at the preconstruction conference.

SOCIOECONOMIC CONDITIONS

Staff recommends the following conditions to address the impacts discussed in the **Socioeconomic Impacts** section of the Nature of Probable Environmental Impact:

- (8) At least 30 days before the preconstruction conference, the Applicant shall provide Staff with a copy of its public information program, for confirmation that it complies with this condition, that informs affected property owners and tenants of the nature of the project, and that provides specific contact information of Applicant personnel who are familiar with the project, the proposed timeframe for project construction, and a schedule for restoration activities.
- (9) At least 30 days before the preconstruction conference, the Applicant shall provide Staff with a copy of a complaint resolution process, for confirmation that it complies with this condition, to address potential public complaints resulting from facility construction and operation. The resolution process must describe how the public can contact the facility and how the facility would respond to anyone issuing a complaint.

ECOLOGICAL CONDITIONS

Staff recommends the following conditions to address the impacts discussed in the **Ecological Impacts** section of the Nature of Probable Environmental Impact:

- (10) The Applicant shall complete a geotechnical exploration and evaluation at representative pole locations to confirm that there are no issues to preclude development of the 138 kV transmission line for the selected route. The geotechnical exploration and evaluation shall include borings to provide subsurface soil properties, static water level, rock quality description, percent recovery, and depth and description of the bedrock contact and recommendations needed for the final design and construction of pole foundations. The Applicant must fill all boreholes, and borehole abandonment must comply with state and local regulations. The Applicant shall provide copies of all geotechnical boring logs to Staff and to the ODNR Division of Geological Survey prior to construction.
- (11) The Applicant shall adhere to seasonal cutting dates of October 1 through March 31 for removal of any trees greater than or equal to three inches in diameter, unless coordination with the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) allows a different course of action.

- (12) The Applicant shall contact Staff, the ODNR, and the USFWS within 24 hours if state or federal listed species are encountered during construction activities. Construction activities that could adversely impact the identified plants or animals shall be immediately halted until an appropriate course of action has been agreed upon by the Applicant, Staff and the appropriate agencies.
- (13) The Applicant shall provide a construction access plan for review prior to the preconstruction conference. The plan shall consider the location of streams, wetlands, wooded areas, and sensitive plant or animal species, and explain how impacts to all sensitive resources will be avoided or minimized during construction, operation, and maintenance. The plan shall include the measures to be used for restoring the area around all temporary access points, and a description of any long-term stabilization required along permanent access routes.
- (14) The Applicant shall not cross streams by fording for construction access and shall instead employ timber matting or other methods that avoid or minimize streambed disturbance.

PUBLIC SERVICES, FACILITIES, AND SAFETY CONDITIONS

Staff recommends the following conditions to address the requirements discussed in the **Public Services, Facilities, and Safety** section of the Nature of Probable Environmental Impact:

- (15) The Applicant shall coordinate with the appropriate authority regarding any temporary road closures, lane closures, road access restrictions, and traffic control necessary for construction and operation of the proposed facility.
- (16) General construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m., or until dusk when sunset occurs after 7:00 p.m. Impact pile driving, hoe ram, and blasting operations, if required, shall be limited to the hours between 10:00 a.m. to 5:00 p.m., Monday through Friday. Construction activities that do not involve noise increases above ambient levels at sensitive receptors are permitted outside of daylight hours when necessary. The Applicant shall notify Staff and affected property owners or tenants of upcoming construction activities including potential for nighttime construction activities.

AIR, WATER, SOLID WASTE, AND AVIATION CONDITIONS

Staff recommends the following conditions to address the requirements discussed in the **Air, Water, Solid Waste, and Aviation** section of the Nature of Probable Environmental Impact:

- (17) The Applicant shall meet all recommended and prescribed Federal Aviation Administration (FAA) and Ohio Department of Transportation (ODOT) Office of Aviation requirements to construct an object that may affect navigable airspace. This includes submitting coordinates and heights for all structures that penetrate the notification slope of any public use airport or that exceed 199 feet above ground level for ODOT Office of Aviation and FAA review prior to construction, and the non-penetration of any FAA Part 77 surfaces.
- (18) At least 30 days prior to the preconstruction conference, the Applicant shall file in this docket a copy of the FAA Determination of No Hazard letters and the FAA temporary

construction permit for the electric transmission towers as shown in the application and any construction cranes.

- (19) Within 30 days of construction completion, the Applicant shall file the as-built electrical transmission tower coordinates and heights with the FAA, the Wood County Airport, and OPSB.
- (20) The Applicant shall coordinate with the Wood County Airport authority regarding the use of construction cranes to ensure that any necessary notification can be issued by the airport.
- (21) The Applicant shall remove all construction staging area and access road materials after completion of construction activities, as weather permits, unless otherwise directed by the landowner. Impacted areas shall be restored to preconstruction conditions in compliance with the Ohio Environmental Protection Agency (Ohio EPA) General National Pollutant Discharge Elimination System permit(s) obtained for the project and the approved Stormwater Pollution Prevention Plan created for this project. All construction debris and all contaminated soil shall promptly be removed and properly disposed of in accordance with Ohio EPA regulations.



**Power Siting
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180 E. Broad St.
Columbus, Ohio 43215-3793

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