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April 28, 2023

VIA E-FILING

Ms. Tanowa Troupe
Docketing Division, Ohio Power Siting Board
The Public Utilities Commission of Ohio
180 East Broad Street
Columbus, OH 43215

Re: *American Transmission Systems, Incorporated's Application for a
Certificate of Environmental Compatibility and Public Need
Dowling-Fulton 345 kV Transmission Line Tap to Melbourne
Substation Project
OPSB Case No. 22-0248-EL-BTX*

Dear Ms. Troupe:

Please find attached American Transmission Systems, Incorporated's ("ATSI's") response to Staff's completeness review request dated April 11, 2023.

Should the Ohio Power Siting Board desire further information or discussion of this submittal, please contact me at 614-227-1989.

Respectfully submitted,



Devan K. Flahive (0097457)
Attorney for American Transmission Systems, Incorporated

cc: Anne M. Rericha, Esq. (arericha@firstenergycorp.com)

Attachments

**BEFORE
THE OHIO POWER SITING BOARD**

*In the Matter of American Transmission Systems,)
Incorporated's Application for a Certificate of) Case No. 22-0248-EL-BTX
Environmental Compatibility and Public Need to)
Construct the Dowling-Fulton 345 kV)
Transmission Line Tap to Melbourne Substation
Project*

ATSI'S RESPONSE TO COMPLETENESS REVIEW REQUEST FROM OPSB STAFF

Request Dated April 11, 2023:

1) To date, the Applicant has not provided Staff with any onsite data that evaluates the geology and soils for foundation construction. Please provide Staff with a work plan to conduct interim level geotechnical studies to further characterize the site geology and soils that will allow the Applicant to make an informed suitability assessment. Also, provide an estimated timetable for completion of this interim study and submission of the results to Staff. Note, Staff needs the study results in sufficient time to complete its analysis prior to issuance of the staff report. Staff understands that final design level geotechnical studies may be conducted post-certificate should the Board issue a certificate.

RESPONSE: A scope of work ("work plan") for geotechnical investigation associated with the above-referenced Project is attached. Generally, core boring is not completed until foundation design is needed on the project, which is later in the detailed engineering phase. This allows for design to progress in sequence with other activities such as landowner negotiations, access development and permitting.

Due to the number of infrastructure improvements in the Project area, GPD Group ("GPD"), ATSI's consultant for geotechnical support for the Project, gathered available core boring data and provided ATSI with an interim geotechnical report,¹ which has been provided to Staff for confirmatory technical evaluation during Staff's investigation.

Note that, in summary, GPD concludes that the historical core boring data does not identify any site geology and soils that would warrant subsurface investigation (i.e. core boring) at this phase of the project. Please note that core boring for this Project is anticipated to be conducted in the time frame outlined in Section 4.0 of the report and in accordance with the work plan, though ATSI expressly reserves all rights to modify this interim plan if final design engineering so requires.

¹ This breadth and depth of data may not be available for all projects/project areas.

Scope of Work - Subsurface Investigation and Geotechnical Report ATSI- Dowling-Fulton 345 kV Tap to Melbourne Substation

1.0 Introduction

American Transmission Systems, Incorporated ("ATSI"), a FirstEnergy company, is proposing to construct a new 345 kilovolt (kV) four-breaker ring bus substation (Melbourne Substation) on an approximately 9-acre site and one new 345 kV transmission line to connect the Melbourne Substation with ATSI's existing 345 kV electric transmission system. The line will extend approximately 9 miles from ATSI's existing Dowling-Fulton 345 kV Transmission Line to the Melbourne Substation in Fulton County, Ohio. Also, as a part of this Project, ATSI plans to construct two, approximately 0.5-mile long, 345 kV transmission lines (Tie Lines) to connect the existing, customer-owned Sydney Substation to the proposed Melbourne Substation.

In order to develop a site-specific foundation design for each new transmission line steel pole structure, we will require a subsurface investigation that involves advancing one (1) boring at each specified location, conducting laboratory tests on various collected samples, and providing recommendations relative to foundation design and other pertinent geotechnical aspects of this project.

The purposes of this report will be to investigate subsurface conditions within the proposed transmission line alignment and to provide geotechnical engineering recommendations for earthwork and foundation design. Specifically, the scope of work will include the following:

- Conducting a field exploration program consisting of site reconnaissance and drilling a sample boring at selected location near the proposed structures to explore subsurface conditions and collect soil samples.
- Conducting geotechnical engineering laboratory test on sampled soils to assist with soil classifications and estimation of engineering properties.
- Developing geotechnical engineering recommendations for the design and construction of foundations, and earthwork for site grading.

2.0 Subsurface Exploration Program

The subsurface exploration will consist of drilling and sampling one boring at each site to a depth that will later be determined based on calculated structure loading. Boring shall not be terminated in unacceptably soft clay or loose sand deposits. The boring locations will be located using a georeferenced file.

The borings will be drilled with a rotary drill rig using hollow-stem augers with standard penetration, Shelby tube sampling, and rock coring will be performed in accordance with current ASTM standards. Representative soil samples will be obtained by split barrel sampling procedure in general accordance with the appropriate ASTM standards. In the split barrel sampling procedure, the number of blows required to advance a standard 2 inch O.D. ("Outer Diameter") split barrel sampler the last 12 inches of the typical total 18 inch penetration by means of a 140 pound hammer with a free fall of 30 inches, is the standard penetration resistance value (N-Value). This value will be used to estimate the in situ relative density of cohesion-less soils and the consistency of cohesive soils. The sampling depths and penetration distance, plus the standard penetration resistance values, will be shown on the boring logs. The samples will be sealed and returned to the laboratory for testing and classification.



A Field log will be prepared by a qualified Geologist. This log will include visual classifications of the materials encountered during drilling as well as the Geologist's interpretation of the subsurface conditions between samples. The final boring log will represent an interpretation of the field log and include modifications based on observations made by a Geotechnical Engineer and the results of laboratory testing.

Qualified personnel, to drill the boring, and an experienced geotechnical engineer or geologist, to coordinate the investigation and log the borings, shall be provided.

2.1 Laboratory Testing

The samples will be classified in the laboratory based on visual observation, texture and plasticity. The descriptions of the soils indicated on the boring logs will be in accordance with the Unified Soil Classification System. The laboratory testing program will consist of performing the following tests:

- Natural water content tests (ASTM D-2216)
- Atterberg Limit test (ASTM D-4318)
- Unconfined Compressive Strength (ASTM D-2166)
- Unit Weight (ASTM D-7263)
- Chemical Suite (Various)

Information from these tests will be used in conjunction with field penetration test data to evaluate soil strength in-situ, volume change potential, and soil classification. Results of these tests will be provided on the boring logs.

2.2 Geotechnical Engineering Report

A report prepared under the direction of a Registered Professional Engineer in the pertinent state detailing soil exploration methods used, description of the geology and subsurface conditions encountered, any testing completed for development of soil parameters, and any other special considerations for design of transmission line structure foundations. Report shall be signed and sealed in accordance with applicable state regulations and shall minimally include:

- Subsurface conditions
- Ground water conditions
- Geotechnical considerations such as Geologic and Seismic Hazards
- Engineering Recommendations for Foundations Systems
- Additional Design and Construction Considerations
- Geotechnical recommendations for required earthwork for the proposed project.
- Boring logs and final boring location plan

If there are any questions, please do not hesitate to call any time.



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**This foregoing document was electronically filed with the Public Utilities
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in

Case No(s). 22-0248-EL-BTX

Summary: Response to Staff's Completeness Review Request electronically filed
by Ms. Devan K. Flahive on behalf of American Transmission Systems
Incorporated.