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**FILE**

<b>V &amp; M STAR</b>
<b>LETTER OF NOTIFICATION</b>
<b>SUBSTATION #1 138 kV TRANSMISSION LINE FOR V &amp; M STAR TOMAHAWK EXPANSION PROJECT</b>
<b>OPSB CASE NO.: 09-1828-EL-BLN</b>

**December 1, 2009**

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2009 DEC -1 PM 5:15

PUCO

<b>V &amp; M Star 2669 M. Luther King Jr. Blvd. Youngstown, Ohio 44510</b>
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(C29609:)

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**LETTER OF NOTIFICATION  
SUBSTATION #1 138 kV TRANSMISSION LINE  
FOR V & M STAR TOMAHAWK EXPANSION PROJECT**

The following information is being provided in accordance with the procedures delineated in Ohio Administrative Code Section 4906-11-01: Letter of Notification Requirements of the Rules and Regulations of the Ohio Power Siting Board.

**4906-11-01 (B): General Information**

**4906-11-01 (B)(1)(a): Name and Reference Number**

Name of Project: Substation #1 138 kV Transmission Line for V&M Star  
("V&M") Tomahawk Expansion Project ("Project").

**4906-11-01 (B)(1)(b): Brief Description of Project**

In this Project, V&M is proposing to install an approximately 1,600 foot long transmission line from the new primary metering station to the existing V&M Substation #1.

The transmission line will extend from the new primary metering station to the existing V&M Substation #1, approximately 1600 feet to the south. As part of the project, eight (8) new poles will be installed for the transmission line. V&M will own the new transmission line, structures and associated hardware that is being designed and constructed by FirstEnergy Service Company and Ohio Edison.

The Project area is located northwest of the intersection of US 422 and SR 711, in the City of Youngstown, Mahoning County. The general location of the Project is shown in Exhibit 1, which is a partial copy of the United States Geologic Survey, Mahoning County Ohio Quad Map, ID number 41080-A6. Exhibit 2 shows the general layout of the proposed Project.

**4906-11-01 (B)(1)(c): Why the Project Meets the Requirements for a Letter of Notification**

The Project meets the requirements for a Letter of Notification because the Project is within the types of project defined by Item (1)(e) of the Application Requirement Matrix for Electric Power Transmission Lines in Appendix A of 4906-1-01 of the Ohio Administrative Code. These items state:

*(1) Rerouting or extension or new construction of single or multiple circuit electric power transmission line(s) as follows:*

*(e) Line(s) one hundred twenty-five kV and above, but less than three hundred kV, and greater than 0.2 miles in length.*

The proposed Project includes installing one approximately 1,600 foot (0.3 mile) long single-circuit 138 kV transmission line, including the installation of eight (8) new poles.

**4906-11-01 (B)(2): Need for the Project**

The proposed Project is needed to provide power from the new primary metering station to the existing V&M Substation #1, as well as allowing it to increase its production capacity of seamless pipe and other tubular goods. Total estimated load consumption is expected to increase to 55 mVA.

**4906-11-01 (B)(3): Location Relative to Existing or Proposed Lines**

The location of the Project relative to existing or proposed transmission lines owned by V&M is shown in Exhibit 1. Reference to long-term forecast report mapping is not applicable as no such recent long-term forecast report is required or exists.

**4906-11-01 (B)(4): Alternatives Considered**

There were no other alternatives considered.

**4906-11-01 (B)(5): Construction Schedule**

Construction on the Project is expected to begin on approximately August 1, 2010 and is expected to be completed and placed in-service by November 30, 2010.

#### **4906-11-01 (B)(6): Area Map**

Exhibit No. 1 is a map depicting the general location of the project site. To locate and view the project site from the Columbus, Ohio area, travel north on Interstate 71 for approximately 100 miles. Take exit 209 to merge onto I-76 E/US-224 E towards Akron, approximately 18.4 miles. Take the exit onto I-76 E towards Akron for approximately 1.7 miles. Take the exit onto I-76 E/I-77 S towards Akron and continue for approximately 40.1 miles. Continue on I-80 E for approximately 4.5 miles. Then continue on I-680 S for about 2.8 miles and take exit 3A to merge onto OH-711 E towards Martin Luther King Blvd for approximately 1.3 miles. Take the US-422 exit towards Youngstown/Girard for 0.3 miles and turn right at Martin Luther King Jr. Blvd./US-422 and arrive at 2669 Martin Luther King Jr. Blvd.

#### **4906-11-01 (B)(7): Property Owner List**

Property along the Project route is currently owned by the State of Ohio and is in the process of being transferred to the City of Youngstown. Any remaining easements not already obtained for the transmission line right-of-way will be obtained prior to beginning construction on the Project.

#### **4906-11-01 (C): Technical Features of the Project**

##### **4906-11-01 (C)(1): Operating Characteristics**

The new transmission line will be designed and constructed for 138 kV operation.

The transmission line has the following characteristics:

Voltage:	138 kV
Conductor:	795 kcmil 26/7 ACSR
Ground Wire:	3#6 Alumoweld
Insulators:	Polymer Horizontal Post
Structure types:	Exhibit No. 3 – Tangent Structure Exhibit No. 4 – Tangent Dead End Structure with Slack Span Structure Exhibit No. 5 – Corner Dead End Structure Exhibit No. 6 – Steel Pole Corner Dead End Structure Exhibit No. 7 – Laminate Light Angle Structure Exhibit No. 8 – Tangent Dead End Structure

**4906-11-01 (C)(2)(a): Calculated Electric and Magnetic Fields**

The following table itemizes the line loading of the transmission line tap being installed in the proposed Project. The normal line loading of 331 amps and emergency line loading of 331 amps is based on the maximum load to be served to the customer owned substation. The winter rating is based on the continuous maximum conductor ratings ("MCR") of the circuits for an ambient temperature of zero degrees centigrade (32 deg. F), wind speed of 1.3 miles per hour, and a circuit design operating temperature of 100 degrees centigrade (212 deg. F).

Line Name	Normal Loading Amps	Emergency Loading Amps	Winter Rating Amps
Substation #1 138 kV Transmission Line for V&M Star Tomahawk Expansion	331	331	1320

The following electric and magnetic field ("EMF") calculations were performed using the EPRI EXPOCALC program software. This program software assumes the input transmission line configuration is located on flat terrain. Also, a balanced, three-phase circuit loading is assumed for the transmission circuits. The model utilizes the normal, emergency, and winter rating of the transmission line from the primary metering station to the V&M Substation #1.

EMF CALCULATIONS		Electric Field kV/meter	Magnetic Field mGauss
Normal Loading	Under Lowest Conductors	2.10	57.44
	At Right-of-Way Edges	0.02/0.42	28.76/37.38
Emergency Loading	Under Lowest Conductors	2.10	57.44
	At Right-of-Way Edges	0.02/0.42	28.76/37.38
Winter Rating	Under Lowest Conductors	2.10	203.34
	At Right-of-Way Edges	0.02/0.42	74.68/126.33

## **4906-11-01 (C)(2)(b): EMF Discussion**

### **Background Information**

EMFs are naturally occurring in the environment and can be found in the Earth's interior and in the human body. EMFs are generated essentially anywhere there is a flow of electricity, including electrical appliances and power equipment. Electric fields are associated with the voltage of the source; magnetic fields are associated with the flow of current in a wire. The strength of these fields decreases rapidly with distance from the source. EMFs associated with electricity use are not disruptive to cells like x-rays or ultraviolet rays from the sun. These fields are thought to be too weak to break molecules or chemical bonds in cells. Extensive research has been conducted over the past three decades to determine whether EMFs are associated with adverse health effects. A number of independent scientific panels have reviewed the research and have stated that there is no basis to conclude that EMFs cause adverse health effects, nor has it been shown that levels in everyday life are harmful.

### **Recent Developments**

As a part of the National Energy Policy Act of 1992, the Electric and Magnetic Fields Research and Public Information Dissemination ("EMF RAPID") program was initiated within the five-year effort under the National EMF Research Program. The culmination of this five-year effort resulted in a final RAPID Working Group report, which was released for public review in August 1998. The Director of the National Institutes of Environmental Health Sciences ("NIEHS") then prepared a final report to Congress after receiving public comments.

The NIEHS' Director's final report, released to Congress on May 4, 1999, concluded that extremely low frequency electric and magnetic fields ("ELF-EMF") exposure cannot be recognized at this time as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard. The Director further stated that the conclusion of this report is insufficient to warrant aggressive regulatory concern.

### **Sources for Additional Information**

The following websites sponsored by federal agencies or other organizations provide additional information on EMF:

- Centers for Disease Control/National Institute for Occupational Safety and Health: <http://www.cdc.gov/niosh/topics/emf/>
- NIEHS EMF Rapid Program: <http://www.niehs.nih.gov/health/topics/agents/emf/>

### **4906-11-01 (C)(3): Estimated Costs**

The estimated capital costs for the proposed Project are:

Account	Cost
Land Rights	\$ 0
Poles and Fixtures	\$398,000
Overhead Conductors & Devices	\$154,000
Removal	\$ 0
Total	\$552,000

### **4906-11-01 (D): Socioeconomic Data**

#### **4906-11-01 (D)(1): Land Use**

The Project area is located in an industrial area. Neighboring land use in the area of the proposed Project is industrial. Based on the U.S. Bureau of Census estimates, the 2000 population of the City of Youngstown was 73,818 and the population of Mahoning County was 257,555.

#### **4906-11-01 (D)(2): Agricultural Land**

The placement of the new structures and guying will not impact agricultural land use. There will be no structures in agricultural land.

#### **4906-11-01 (D)(3): Archaeological or Cultural Resources**

A National Environmental Policy Act ("NEPA") Report ("NEPA Report") on the Tomahawk Expansion site concluded there are no historic properties affected by this Project.

**4906-11-01 (D)(4) a: Documentation of Letter of Notification Transmittal**

This Letter of Notification is being provided concurrently to the following officials:

**Mahoning County**

The Honorable David Ludt  
Mahoning County Commissioner  
21 West Boardman Street  
Second Floor  
Youngstown, OH 44503

The Honorable John McNally  
Mahoning County Commissioner  
21 West Boardman Street  
Second Floor  
Youngstown, OH 44503

The Honorable Anthony Traficanti  
Mahoning County Commissioner  
21 West Boardman Street  
Second Floor  
Youngstown, OH 44503

Richard A. Marsico, P.E., P.S.  
Mahoning County Engineer  
940 Bears Den Road  
Youngstown, OH 44512

Michael O'Shaughnessy, Director  
Mahoning Planning Commission  
50 Westchester Drive, Suite 203  
Youngstown, OH 44515

**City of Youngstown**

The Honorable Jay Williams  
Mayor, City of Youngstown  
Sixth Floor, City Hall  
26 South Phelps Street  
Youngstown, OH 44503

Chuck Shasho, City Engineer  
City of Youngstown  
Fifth Floor, City Hall  
26 South Phelps Street  
Youngstown, OH 44503

The Honorable Chuck Sammarone  
President of Council  
City of Youngstown  
Sixth Floor, City Hall  
26 South Phelps Street  
Youngstown, OH 44503

Valencia Y. Marrow, Clerk of Council  
City of Youngstown  
Sixth Floor, City Hall  
26 South Phelps Street  
Youngstown, OH 44503



### **Trumbull County**

The Honorable Paul E. Heltzel  
Trumbull County Commissioner  
160 High Street  
Warren, OH 44481

The Honorable Daniel E. Polivka  
Trumbull County Commissioner  
160 High Street  
Warren, OH 44481

The Honorable Frank S. Fuda  
Trumbull County Commissioner  
160 High Street  
Warren, OH 44481

David DeChristofaro, P.E., P.S.  
Trumbull County Engineer  
650 North River Road, N.W.  
Warren, OH 44483

Bill Miller, Director, Trumbull County  
Planning Commission  
347 North Park Avenue  
Warren, OH 44481

### **City of Girard**

The Honorable James L. Melfi  
Mayor, City of Girard  
City Hall  
101 West Main Street  
Girard, OH 44420

The Honorable Reynold Paolone  
President of Council, City of Girard  
City Hall  
101 West Main Street  
Girard, OH 44420

George Finelli, Chair  
Planning Commission, City of Girard  
City Hall  
101 West Main Street  
Girard, OH 44420

David Hall, City Engineer  
City of Girard  
101 West Main Street  
Girard, OH 44420

### **Liberty Township (Trumbull County)**

The Honorable W. Gary Litch  
Liberty Township Trustee  
1315 Churchill-Hubbard Road  
Liberty Township, OH 44505-1378

The Honorable Jack Simon  
Liberty Township Trustee  
1315 Churchill-Hubbard Road  
Liberty Township, OH 44505-1378

The Honorable Jodi Stoyak  
Liberty Township Trustee  
1315 Churchill-Hubbard Road  
Liberty Township, OH 44505-1378

Mr. Patrick Ungaro  
Liberty Township Administrator  
1315 Churchill-Hubbard Road  
Liberty Township, OH 44505-1378

Copies of the transmittal letters to these officials have been included with the transmittal letter submitting this Letter of Notification to the Ohio Power Siting Board.

**4906-11-01 (D)(5): Current or Pending Litigation**

There is no known current or pending litigation involving this Project.

**4906-11-01 (D)(6): Local, State, and Federal Requirements**

There are no known local, state, or federal requirements that must be met prior to commencement of construction on the proposed transmission line Project.

**4906-11-01 (E): Environmental Data**

**4906-11-01 (E)(1): Endangered, Threatened, and Rare Species Investigation**

The Project will not adversely affect federal or state designated species. Pursuant to a July 6, 2009 letter from the Ohio Department of Natural Resources, there are no records of rare or endangered species within a one mile radius of the Project. The July 6, 2009 letter from the Ohio Department of Natural Resources is attached as Exhibit 9.

**4906-11-01 (E)(2): Areas of Ecological Concern**

A NEPA Report produced for the V&M Project on this site discusses areas of ecological concern for this Project. The NEPA Report references correspondence with the United States Fish and Wildlife Service regarding the presences of potential habitat of the Indiana Bat in the Project area. The NEPA Report indicates that approximately 9 trees that would provide Indiana Bat habitat will be removed by the V&M Star Tomahawk Expansion Project. If any of these potential Indiana Bat habitat trees are located along the route of the transmission line, in order to avoid impact to the Indiana Bat during the construction of the transmission line, they will be removed in the October through March period.

**4906-11-01 (E)(3): Additional Information**

Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the National Electrical Safety Code as adopted by the Public Utilities Commission of Ohio and will meet all applicable safety standards established by the Occupational Safety and Health Administration.

# EXHIBIT 1



Orig Date: 1984  
Quad Series: 7.5'  
Paper Source: Topographic 1:24,000  
Quad Order ID: 41080-A6  
Coverage: Mahoning County, OH  
Vendor: USGS

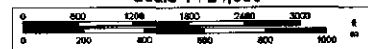
Data use subject to license.

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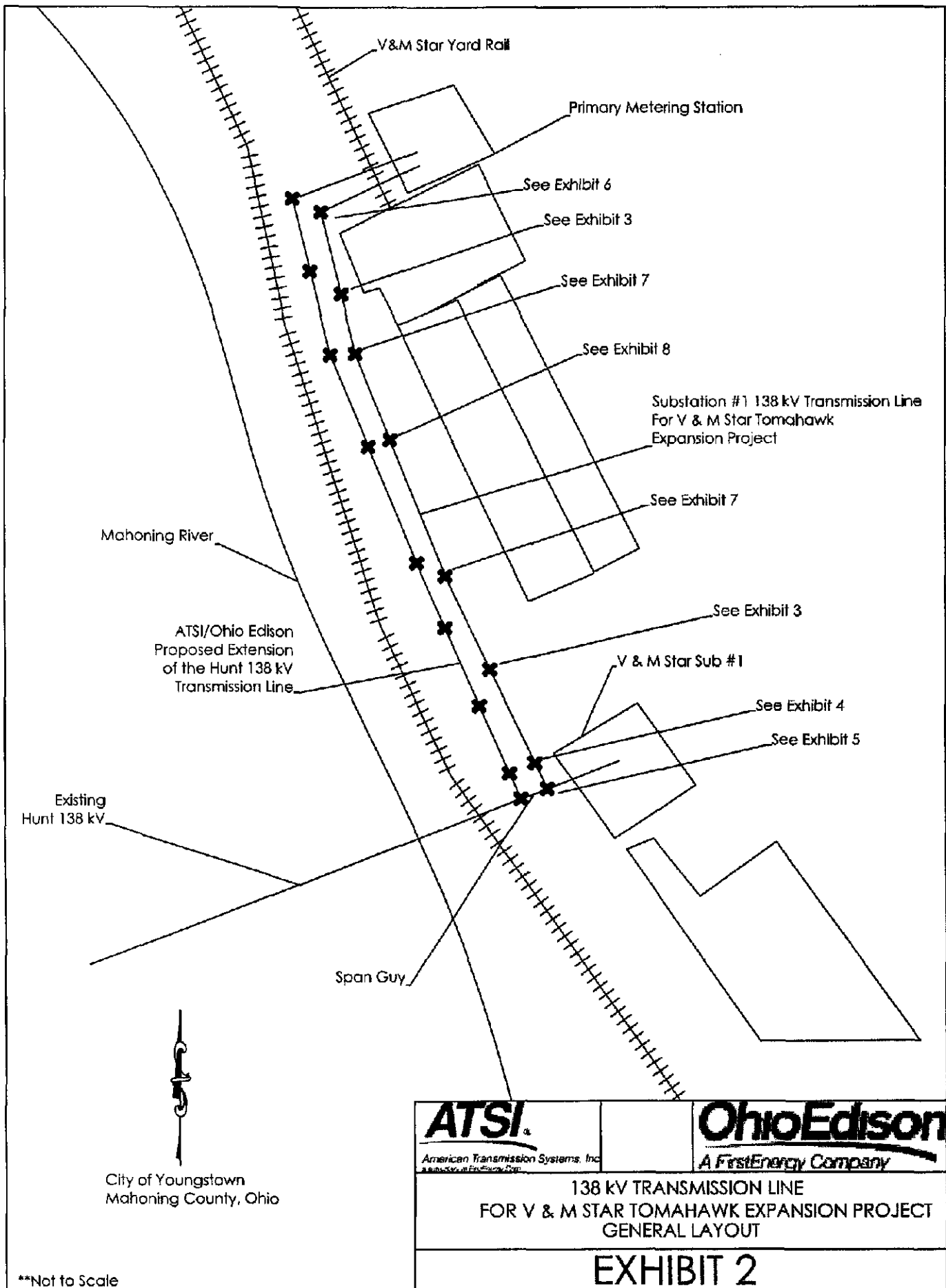
[www.delorme.com](http://www.delorme.com)

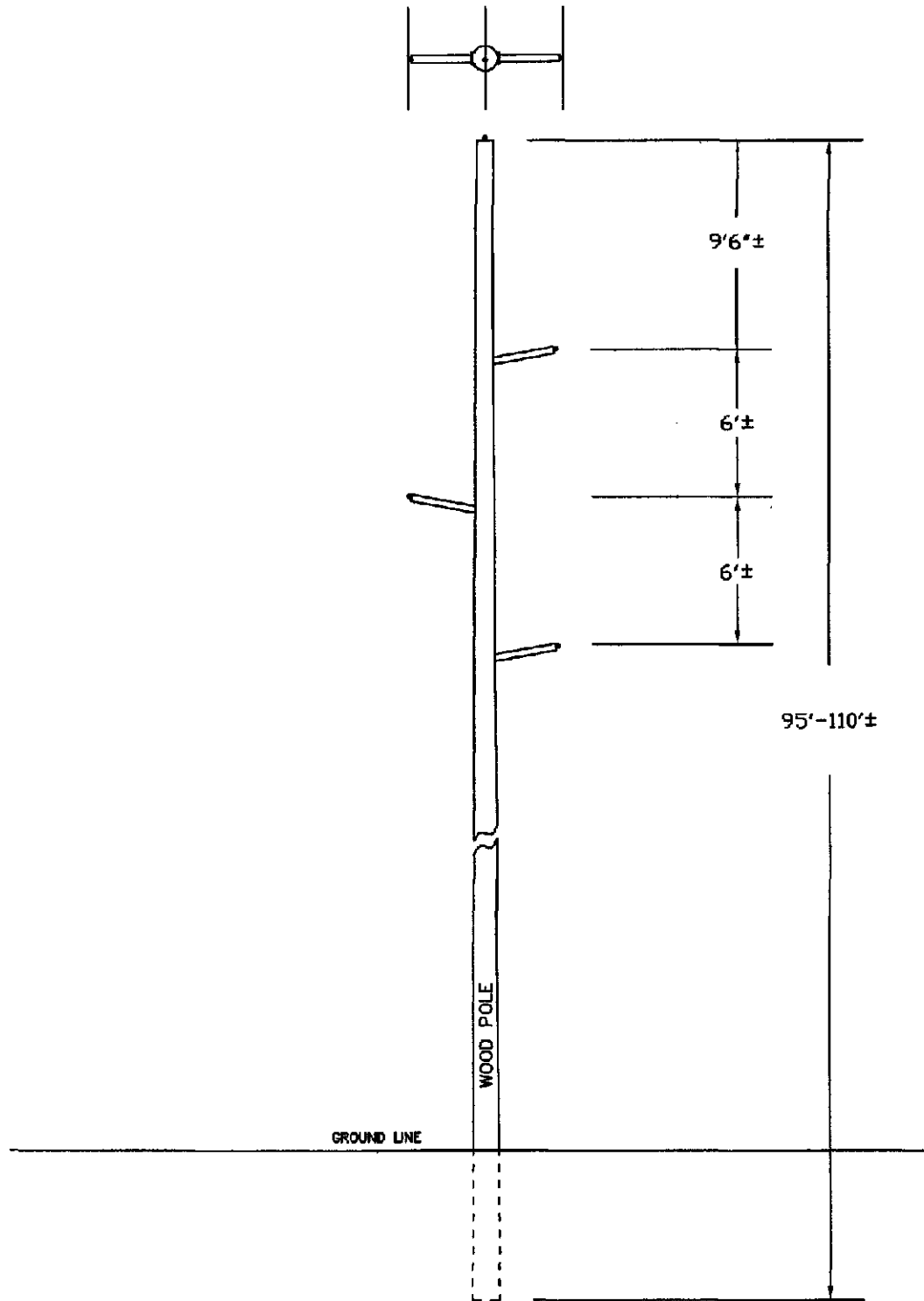
MIN (S.E.W)

Scale 1 : 24,000


$$1'' = 2,000.0 \text{ ft}$$

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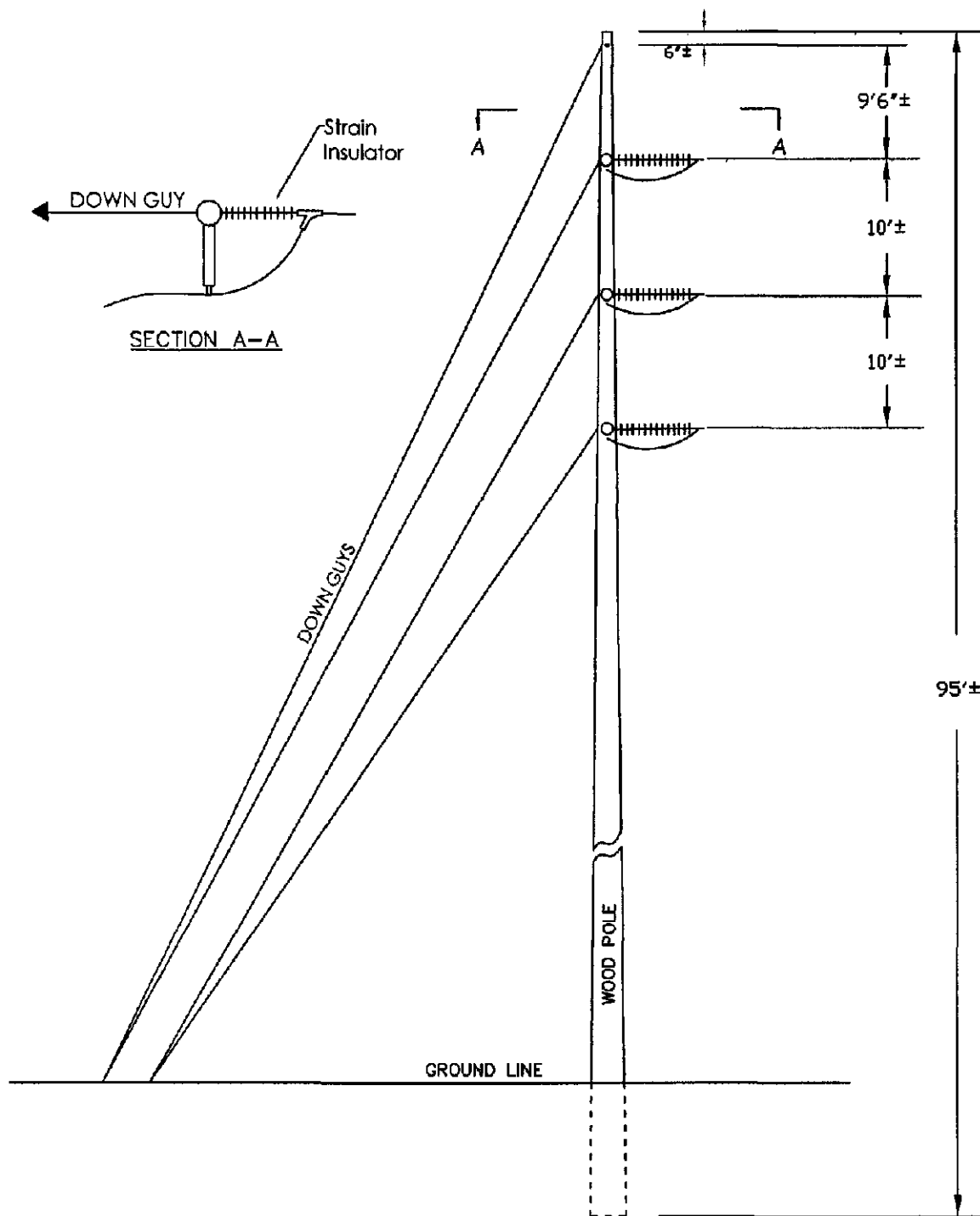


**Ohio Edison**  
A FirstEnergy Company

SUBSTATION #1 138 kV TRANSMISSION LINE  
FOR V & M STAR TOMAHAWK EXPANSION PROJECT  
SINGLE CIRCUIT TANGENT STRUCTURE

**EXHIBIT 3**

\*\* NOT TO SCALE

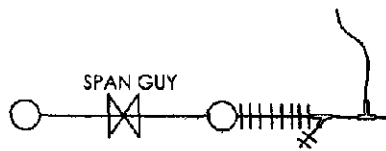


\*\* NOT TO SCALE

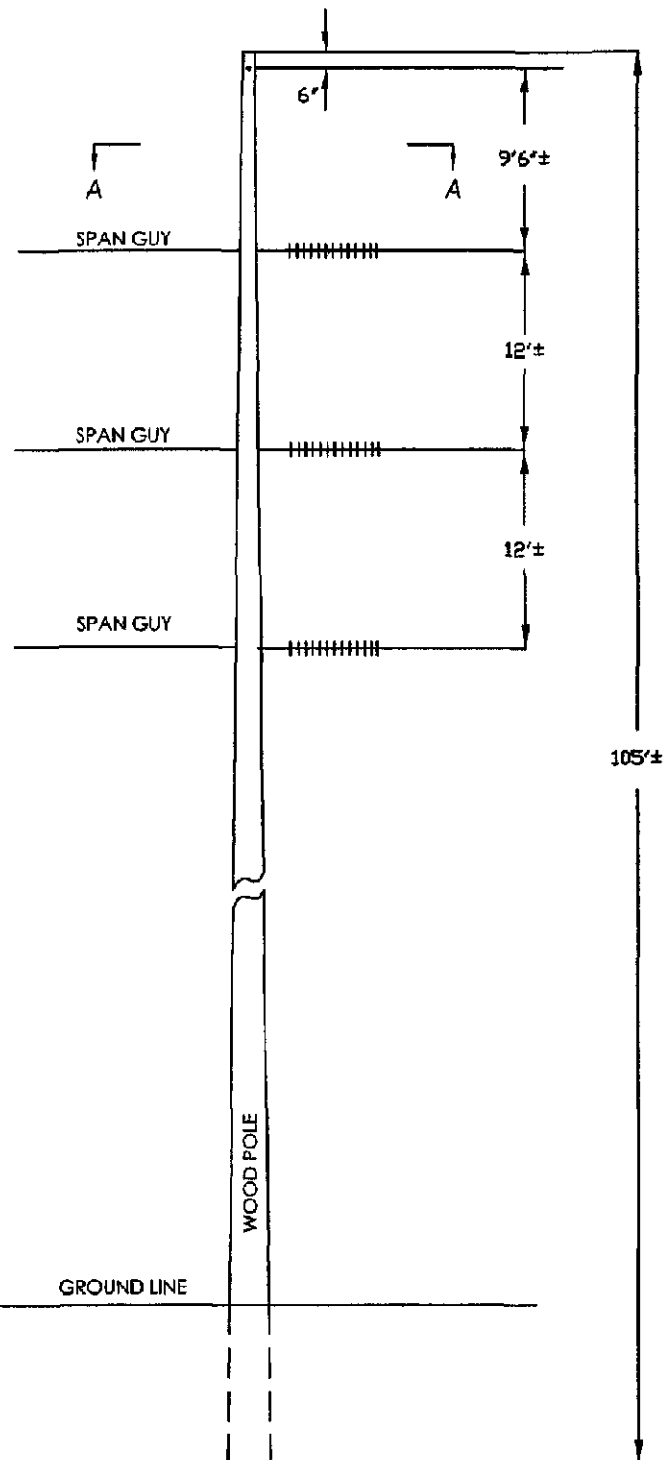
**Ohio Edison**  
A FirstEnergy Company

SUBSTATION #1 138 kV TRANSMISSION LINE  
FOR V & M STAR TOMAHAWK EXPANSION PROJECT  
TANGENT DEAD END WITH SLACK SPAN STRUCTURE

**EXHIBIT 4**



SECTION A-A

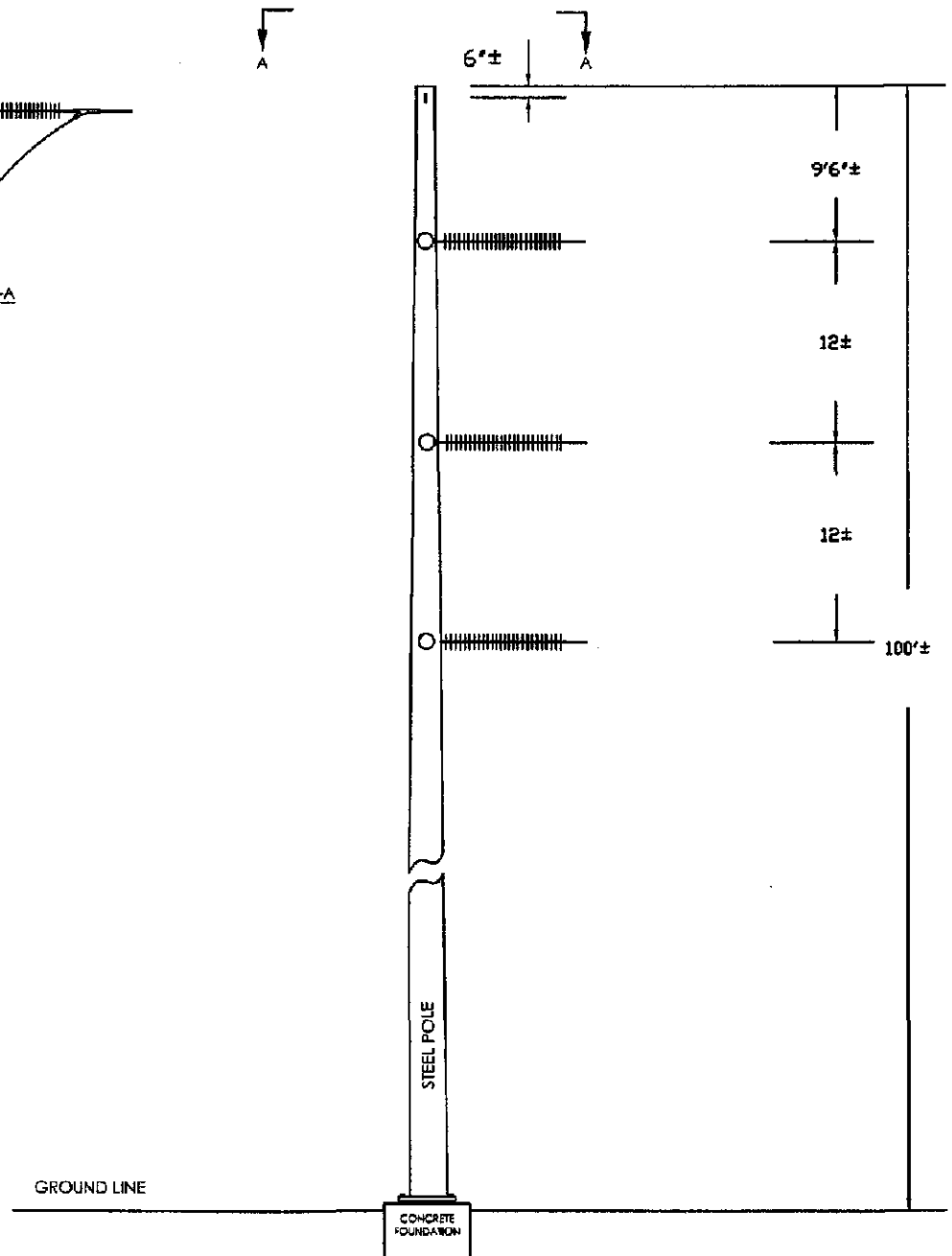
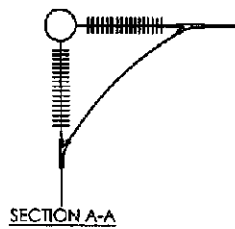


**Ohio Edison**  
A FirstEnergy Company

SUBSTATION #1 138 kV TRANSMISSION LINE  
FOR V & M STAR TOMAHAWK EXPANSION PROJECT  
CORNER DEAD END WITH SLACK SPAN

**EXHIBIT 5**





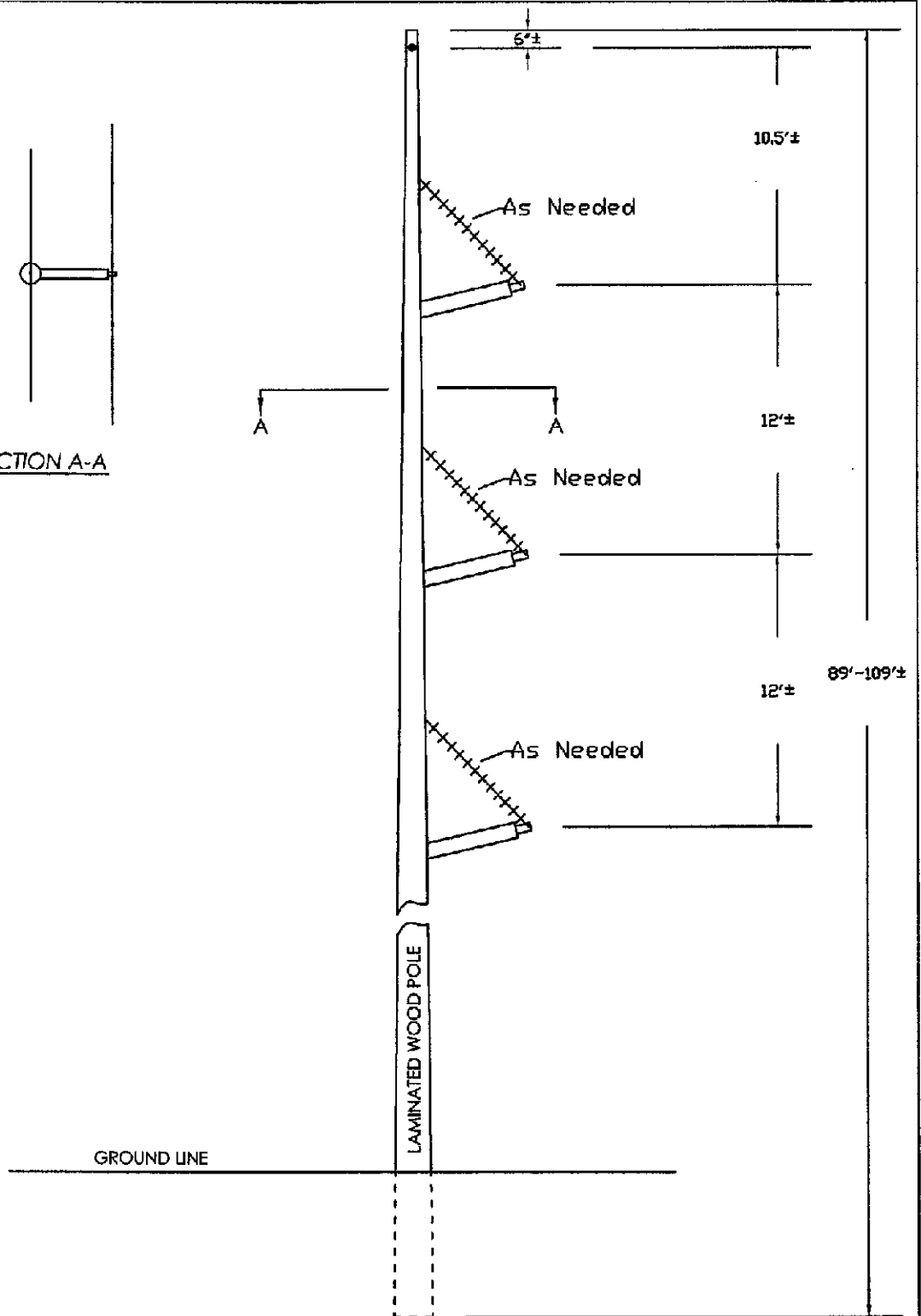
\*\* NOT TO SCALE

**Ohio Edison**  
A FirstEnergy Company

SUBSTATION #1 138 kV TRANSMISSION LINE  
FOR V & M STAR TOMAHAWK EXPANSION PROJECT  
STEEL POLE CORNER DEAD END

**EXHIBIT 6**

SECTION A-A



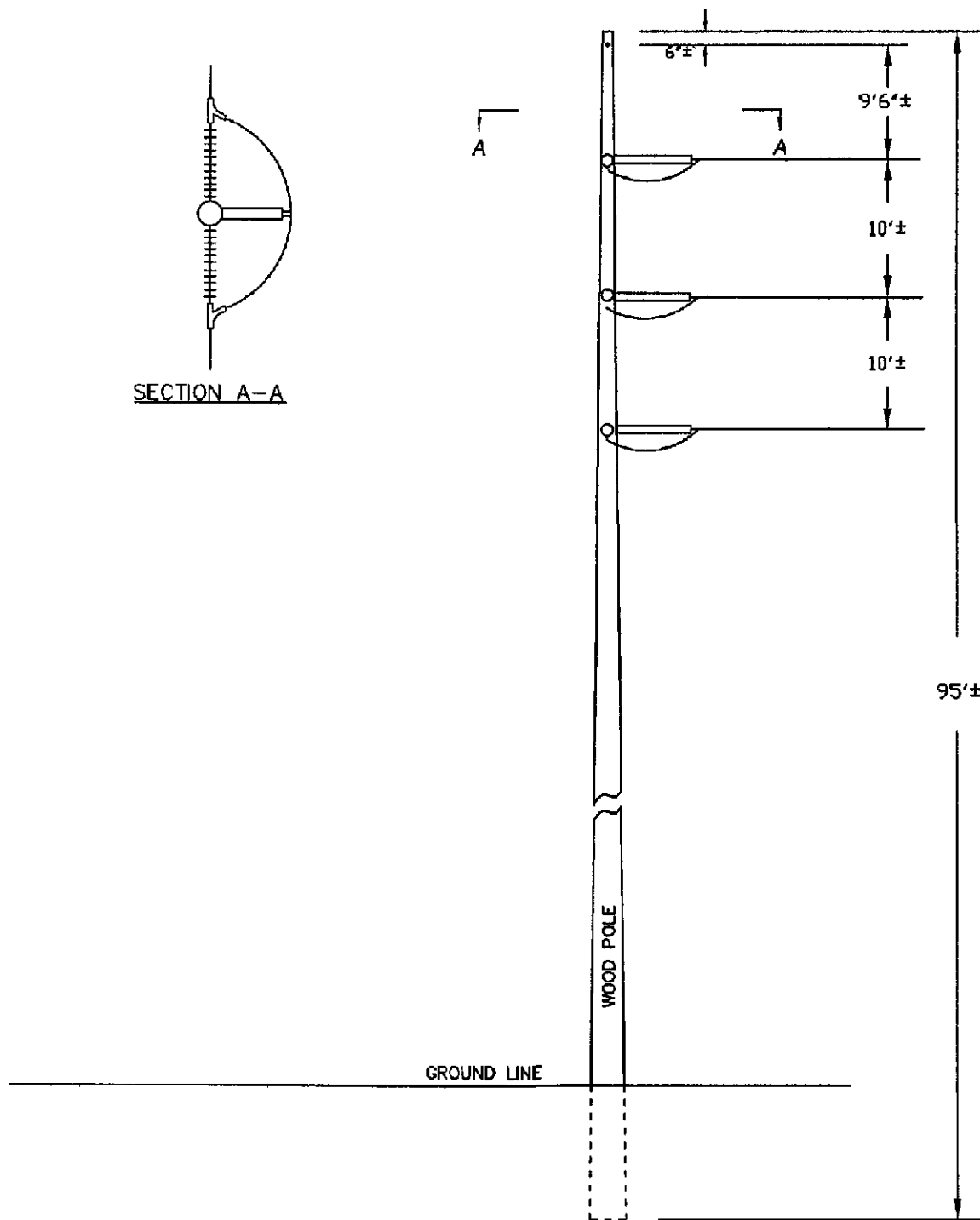
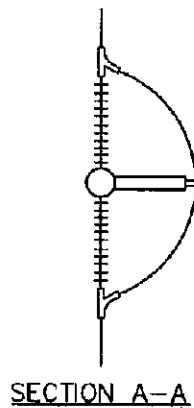
**Ohio Edison**

*A FirstEnergy Company*

SUBSTATION #1 138 KV TRANSMISSION LINE  
FOR V & M STAR TOMAHAWK EXPANSION PROJECT  
LIGHT ANGLE LAMINATE STRUCTURE

\*\* NOT TO SCALE

**EXHIBIT 7**



**Ohio Edison**  
A FirstEnergy Company

SUBSTATION #1 138 kV TRANSMISSION LINE  
FOR V & M STAR TOMAHAWK EXPANSION PROJECT  
TANGENT DEAD END STRUCTURE

\*\* NOT TO SCALE

**EXHIBIT 8**



## Ohio Department of Natural Resources

TED STRICKLAND, GOVERNOR

SEAN D. LOGAN, DIRECTOR

## Division of Natural Areas and Preserves

Steven D. Maurer, Chief

2045 Morse Rd., Bldg. F-1

Columbus, OH 43229-6693

Phone: (614) 265-6453; Fax: (614) 267-3096

July 6, 2009

William Malson  
 MS Consultants, Inc.  
 4450 Belden Village St. NW, Suite 801  
 Canton, OH 44718

Dear Mr. Malson:

After reviewing our Natural Heritage maps and files, I find the Division of Natural Areas and Preserves has no records of rare or endangered species in the Brier Hill Industrial Park project area, including a one mile radius, between I-80 and just south of State Route 711 in Girard, Trumbull County and Youngstown, Mahoning County, and on the Girard and Youngstown Quads (PID 86378).

There are no state nature preserves or scenic rivers at the project site. We are also unaware of any unique ecological sites, geologic features, animal assemblages, state parks, state forests or state wildlife areas within a one mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although we inventory all types of plant communities, we only maintain records on the highest quality areas.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke, Ecological Analyst  
 Natural Heritage Program

