

BEFORE THE  
STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

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Proceeding on Motion of the Commission to Examine  
Repowering Alternatives to Utility Transmission  
Reinforcements

Case 12-E-0577

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**SUBMISSION OF NEW YORK STATE ELECTRIC & GAS CORPORATION**

Dated: February 19, 2013

BEFORE THE  
STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

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Proceeding on Motion of the Commission to Examine  
Repowering Alternatives to Utility Transmission  
Reinforcements

Case 12-E-0577

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**SUBMISSION OF NEW YORK STATE ELECTRIC & GAS CORPORATION**

On January 18, 2013, the New York State Public Service Commission (“Commission”) issued an Order Instituting Proceeding and Requiring Evaluation of Generation Repowering in the above-referenced proceeding.<sup>1</sup> In the Order, the Commission required New York State Electric & Gas Corporation (“NYSEG”) “to examine the relative costs and benefits of repowering” the Cayuga plant at its existing site and “to compare those costs and benefits to the costs and benefits of alternative transmission upgrades over the long term.”<sup>2</sup> Ordering Clause #3 specifically directs NYSEG, within thirty (30) days after issuance of the Order, to “file information with the Commission showing the anticipated costs of the transmission upgrades” that it proposes to implement.<sup>3</sup> NYSEG hereby makes that filing.

NYSEG has identified two transmission solutions to address the Cayuga retirement. The combined estimated cost of the two transmission solutions is approximately **[Start Confidential\*\* REDACTED \*\*End Confidential]**. The first project is the Upgrade of Line #972, which is approximately 4.2 miles at an estimated cost of approximately **[Start Confidential\*\* REDACTED \*\*End Confidential]**. The second project is the Second Elbridge to State Street 115 kV Line at an estimated cost of approximately **[Start Confidential\*\* REDACTED \*\*End Confidential]** (also referred to as NYSEG’s Auburn Transmission Project). The Auburn

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<sup>1</sup> Case 12-E-0577 – Proceeding on Motion of the Commission to Examine Repowering Alternatives to Utility Transmission Reinforcements, Order Instituting Proceeding and Requiring Evaluation of Generation Repowering (Jan. 18, 2013) (the “Order”).

<sup>2</sup> Order at 3.

<sup>3</sup> Order at 4.

Transmission Project is needed for customer reliability regardless of whether the Cayuga plant is repowered.<sup>4</sup> In addition, the New York Independent System Operator has identified several other projects that would be alternatives to the Cayuga Repowering. However, those projects are also Appendix L projects identified for reliability purposes and are needed without consideration of Cayuga. The following summarizes the project scope, cost and configuration of the Upgrade of Line #972 and the Second Elbridge to State Street 115 kV Line.

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<sup>4</sup> This project has been reconfigured from the original Appendix L project from 345kV to 115 kV as a more cost effective alternative for the Auburn Transmission Project.

**Case 12-E-0577**

**NYSEG**

**Project Scope & Cost Estimate for the  
Upgrade of the 115 kV Transmission Line  
Elbridge to State Street (Upgrade of Line #972)**

## Project Scope

NYSEG

Project: State Street 115 kV Transmission Line Upgrade (“Upgrade of Line #972”)

1. Project Description: The Upgrade of Line #972 consists of the conductor upgrade of a section of Line #972 spanning approximately 4.2 miles in length. The Upgrade of Line #972 begins at the intersection point with Line #971 and ends at the State Street Substation. In order to upgrade the existing conductor 336 ACSR to 1192 ACSR, it is necessary to dismantle and rebuild this segment of Line #972. The new structures will consist of wooden H-Frame poles, which are suitable for the new characteristics of the line.

The Proposed Project will be carried out within the existing corridor of Line #972. Therefore, NYSEG does not anticipate extending the right-of-way corridor.

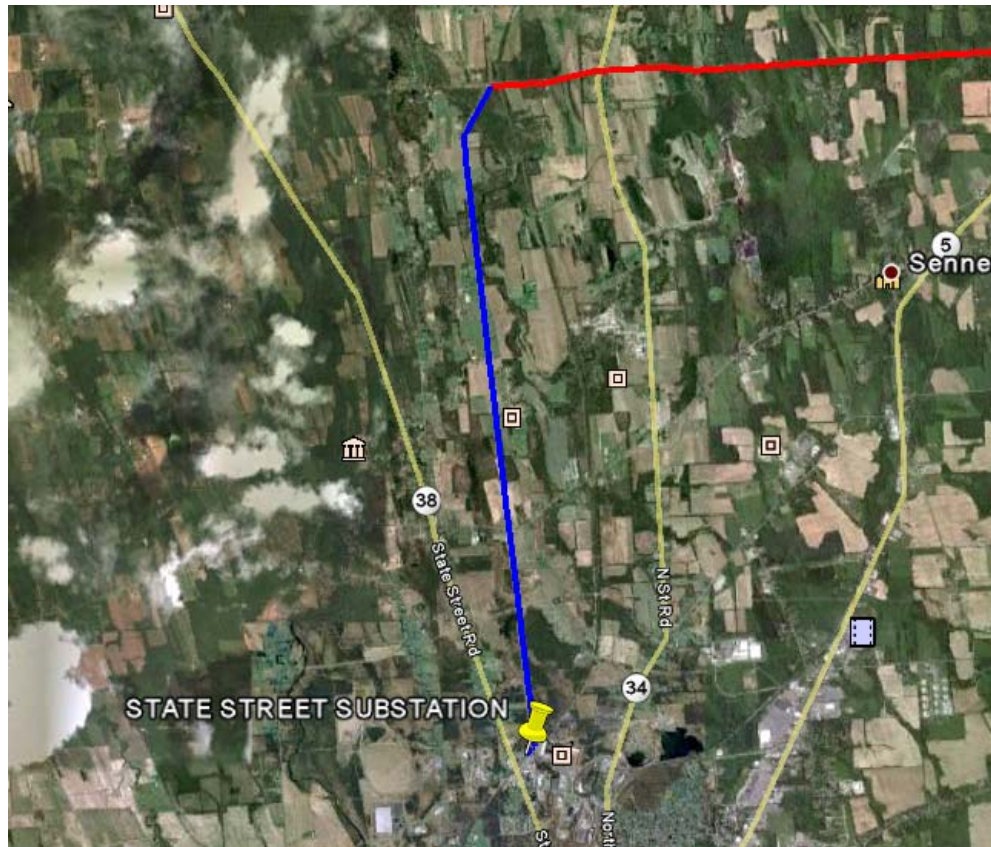
2. Estimated Cost: The preliminary estimated cost of the Upgrade of Line #972 is approximately **[Start Confidential\*\* REDACTED \*\*End Confidential]** as detailed below.

	<i>Total</i>
I-USA Internal Labor	<b>[Start Confidential** REDACTED **End Confidential]</b>
Contract Engineering	<b>[Start Confidential** REDACTED **End Confidential]</b>
Construction	<b>[Start Confidential** REDACTED **End Confidential]</b>
Material	<b>[Start Confidential** REDACTED **End Confidential]</b>
Total:	<b>[Start Confidential** REDACTED **End Confidential]</b>

3. Anticipated In Service Date:

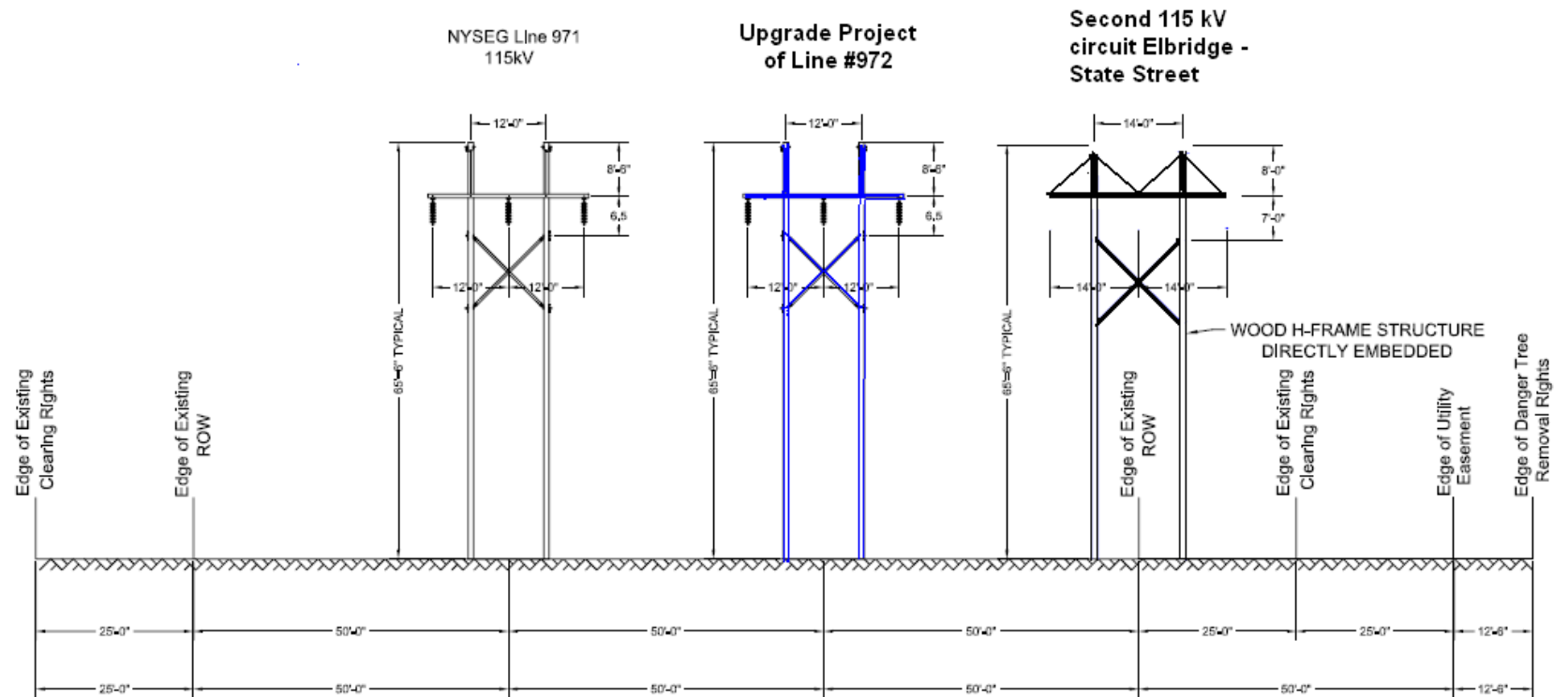
To be determined based on eventual Article VII application.

4. Maps: See the attached area map:



The section of Line #972 (approximately 4.2 miles in length) that will be upgraded is shown in blue in the drawing above.

5. Cross Section Profile:



In the drawing shown above, Line #972 (which is the subject of this Proposed Project) is shown in blue.

**Case 12-E-0577**

**NYSEG**

**Project Scope & Cost Estimate for**

**Second Elbridge to State Street 115 kV**

**Transmission Line (“Auburn Transmission Project”)**



## Project Scope

NYSEG

Project: Second Elbridge to State Street 115 kV Transmission Line (“Auburn Transmission Project”)

### 1. Project Description:

The Auburn Transmission Project consists of the construction of a new 115kV transmission line between the National Grid Elbridge Substation and NYSEG State Street Substation. The total distance of the Auburn Transmission Project is approximately 14.5 miles. The Auburn Transmission Project will be constructed in two segments. The first segment will be located in the NYSEG right-of-way (“ROW”) which runs northward from the State Street Substation for approximately 4.2 miles to a point at which the NYSEG ROW intersects with the National Grid ROW (the “ROW Intersection”). In this segment, the new transmission line will be installed on wooden H-Frame structures constructed parallel to NYSEG existing Lines #971 and #972.

The second segment of the Auburn Transmission Project will be located in the National Grid ROW, which runs westward from Elbridge Substation to the ROW Intersection, a distance of approximately 10.3 miles. In this segment, the Auburn Transmission Project will be installed on double circuit capacity, phase-over-phase galvanized steel monopole structures.

The entire Auburn Transmission Project will be built with a 1192.5 kcmil ACSR 45/7 “Bunting” conductor. Shield wires will be Optical Ground Wire (OPGW) and Alumoweld 7x7 static wire.

The Auburn Transmission Project requires modifications to both the NYSEG State Street Substation and the National Grid Elbridge Substation. At the State Street Substation, an existing bay will be relocated so that a new bay can be installed to connect the Auburn Transmission Project. The resulting configuration at State Street Substation will be a single bus bar with a tie breaker, separated into two bus bays.

National Grid will provide the scope of work for the Elbridge Substation.

2. Estimated Cost: The preliminary estimated cost of the Auburn Transmission Project is approximately **[Start Confidential\*\* REDACTED \*\*End Confidential]** as detailed below:

	<i>Total</i>
I-USA Internal Labor	<b>[Start Confidential** REDACTED **End Confidential]</b>
Contract Engineering	<b>[Start Confidential** REDACTED **End Confidential]</b>
Construction	<b>[Start Confidential** REDACTED **End Confidential]</b>
Material	<b>[Start Confidential** REDACTED **End Confidential]</b>
	<b>[Start Confidential** REDACTED **End Confidential]</b>

This work is dependent upon an Article VII filing, which is currently under development.

3. Anticipated In Service Date:

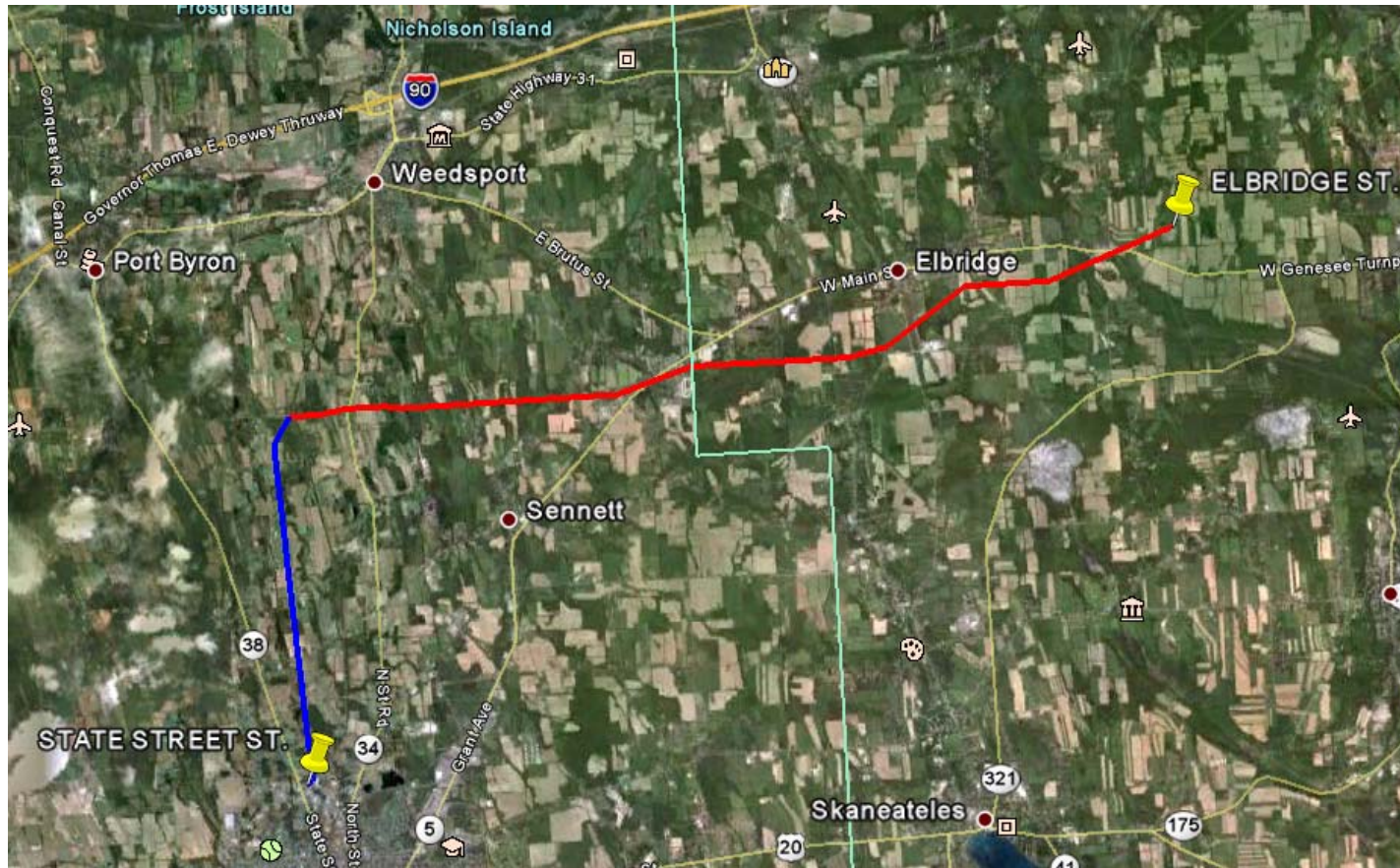
NYSEG expects to file an Article VII application in mid-March 2013.

4. Maps: Proposed one-line diagram for State Street Substation:

**[Start Confidential\*\***

**REDACTED**

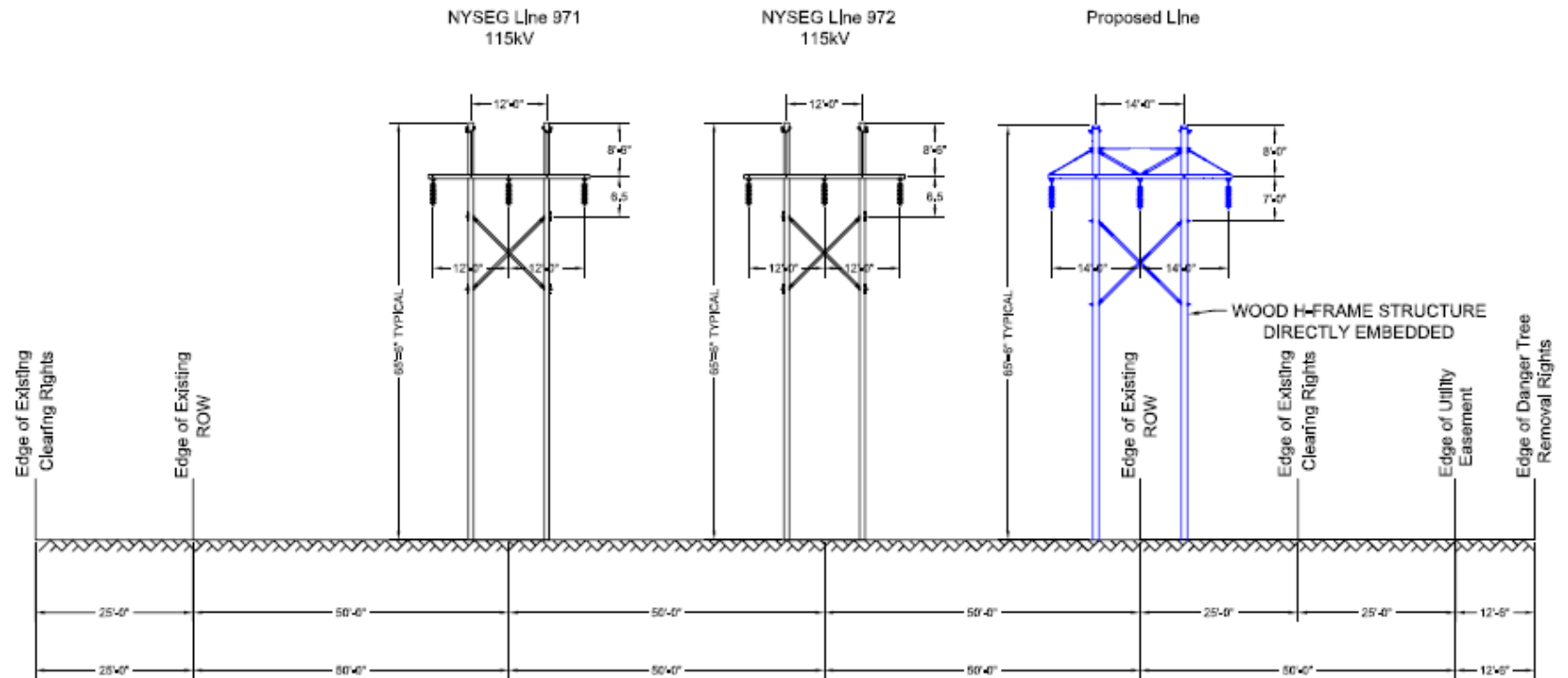
**\*\*End Confidential]**

5. Area Map:

**Segment 1 (shown in blue in the map above):** Between the State Street Substation and the ROW Intersection. The new circuit will be installed on wooden H-Frame structures.

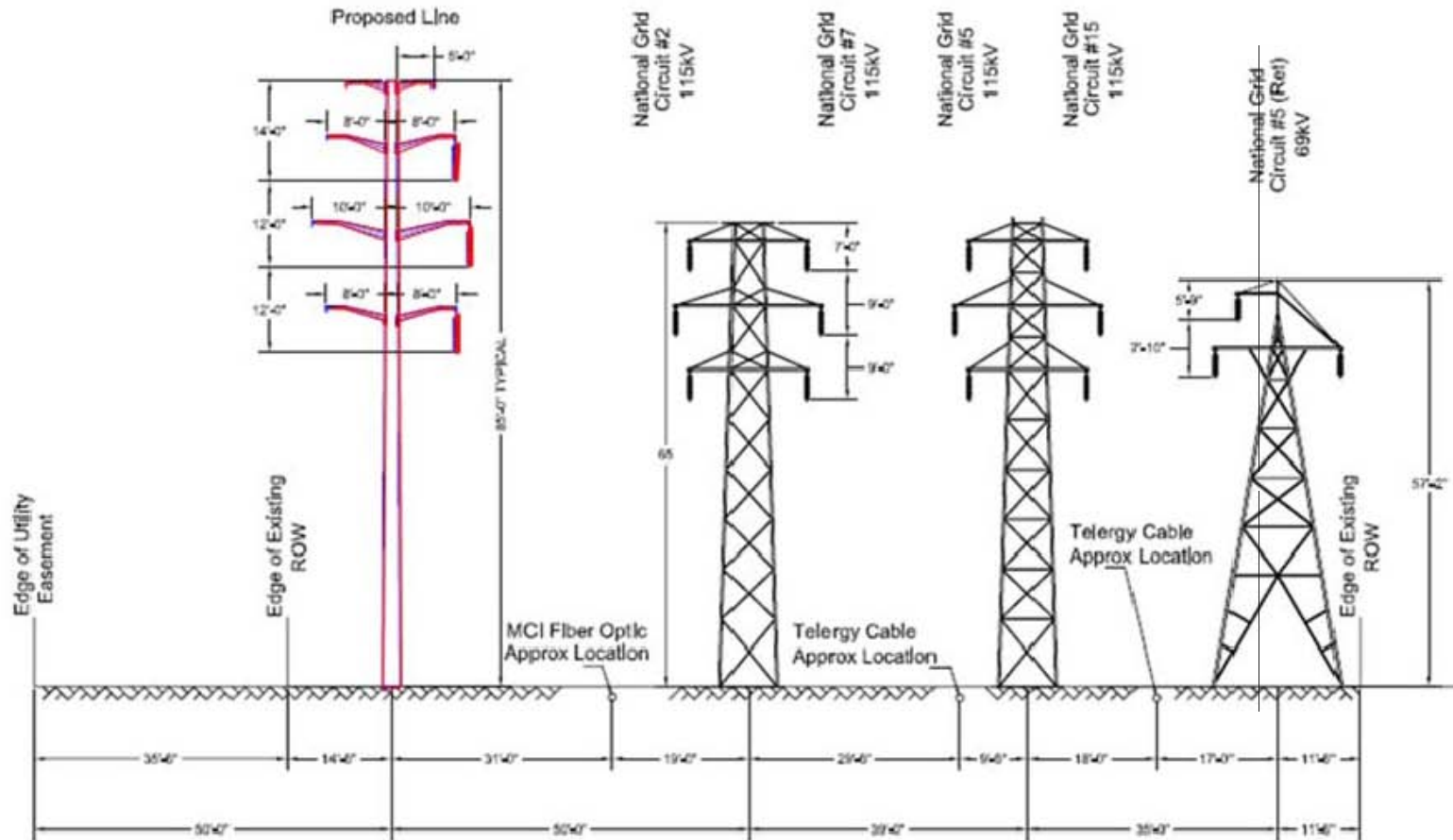
**Segment 2 (shown in red in the map above):** Between the Elbridge Substation and the ROW Intersection. The new circuit will be installed on double circuit capacity, phase-over-phase galvanized steel monopole structures.

6. Cross Section Profile 1 (depicting proposed typical ROW Cross Section between the State Street Substation and the ROW Intersection):



The structures in black are the existing lines, and the one shown in blue is the new 115 kV line between the Elbridge and State Street Substations.

Cross Section Profile 2 (depicting proposed typical ROW Cross Section between the Elbridge Substation and the ROW Intersection):



The structures in black are the existing lines, and the one shown in red is the new 115 kV line between the Elbridge and State Street Substations.