

# **VISUAL RESOURCE EVALUATION**

## **PROPOSED 120' TALL TELECOMMUNICATIONS STRUCTURE**

**0903  
Altamont  
23 Agawam Lane  
Village of Altamont  
Albany County  
New York**

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## **VISUAL RESOURCE EVALUATION**

Tectonic Engineering & Surveying Consultants, P.C., was contracted by Enterprise Consulting Solutions, LLC to conduct a "Visual Resource Evaluation" to determine which areas within the Village of Altamont will contain views of the proposed 120 foot tall wireless telecommunications structure.

### **Setting:**

The proposed site is located off of Agawam Lane in the Village of Altamont, Albany County, New York. The surrounding land use is R-40, Single Family Residential 4,000 Square Foot. Within the study area the topography ranges in elevation from 300' +/- AMSL (Above Mean Sea Level) to 1,500' +/- AMSL. The predominant forest species are mixed deciduous and coniferous, with an estimated height of 30 to 70 feet. The field study for this visual resource evaluation was conducted in the winter season during 100% leaf off conditions. The leaf off condition represents a worst case scenario in that it is a scenario in which the visibility of the structure is maximized due to the lack of leaves on existing vegetation.

### **Methodology:**

On Tuesday, January 15<sup>th</sup>, 2019, Tectonic Engineering & Surveying Consultants, P.C., conducted a field investigation for the purpose of evaluating the viewshed associated with the proposed installation of the 120 foot tall monopole (structure) with a 4 foot lightning rod. Conditions were partly sunny, approximately 20°-31°, with wind speeds of approximately 6-7 mph. The study area consisted of a two (2) mile radius from the project site. Creating a viewshed greater than a two (2) mile radius is generally unwarranted. Due to the fact that objects tend to appear smaller the farther they are from the viewer, in this case, the structure would appear very small, if visible at all, from a distance of more than two (2) miles.

The methodology utilized during this field investigation is referred to as a "balloon test." The height of the proposed structure was simulated by floating a three-foot diameter, helium-filled weather balloon at 120' feet above ground level (AGL). The balloon is set at the top of the structure (120'), as opposed to the top of the lightning rod (124') because the lightning rod is very narrow and is notably less visible than the antenna array. The balloon provided reference points for height as well as location and also provides a known dimension that later aids in the production of photo simulations.

The participants then proceeded with a review of the proposed structure's visual impact by noting those areas on a USGS 7.5 Minute Series Topographic Quadrangles Map that fall within the study area and marking those points from which, in theory, one might see the structure upon its completion. The terrain represented in the topographic map, was then analyzed to determine those areas from which views would be "blocked by topography," and therefore from which one would not see the structure upon its completion.

Tectonic drove the study area to confirm the potential visibility of the structure based on the viewshed map. Areas delineated as "blocked by topography" were confirmed by viewing the site from public roadways within the two (2) mile radius and it was found that the topography only viewshed map first produced was correct and accurate, and that the balloon was in fact not visible from areas indicated to be blocked by topography. During the "in field" review, the participants conducted a second analysis to

determine those areas from which views of the structure may be “visible” or “concealed by vegetation.” The resulting data from this second analysis was reviewed and referenced on the “Viewshed Analysis Map” attached. Colors are used to differentiate between areas from which the structure will be visible (Green), concealed by vegetation (Yellow) and areas from which a view of the structure will be blocked by topography (Red). The viewshed analysis resulted in the discovery that the proposed structure would be visible from only very few locations within the two (2) mile radius. The structure will only be visible from areas along Main Street, Gun Club Road, Sunset Drive, Sanford Place, Whipple Way, Indian Maiden Pass Lainhart Road, Maple Street, Western Avenue, Bozenkill Road, Leesome Lane, the Altamont Fairgrounds & Highpoint. Overall, the viewshed map confirms that the proposed structure will not result in any significant visual impacts.

Photographs were taken from various vantage points the study area to document the actual view towards the proposed structure, as well as the general character of the viewshed. Each photograph attached includes a brief description of the location and orientation from which it was taken, as summarized below and also presented on the “Photo Log Map” attached.

1. *View from 1263 Berne Altamont Road, looking northeast towards the proposed structure from approximately 4,000’ away.*
2. *View from 221 Main Street, looking northwest towards the proposed structure from approximately 400’ away.*
3. *View from the intersection of Main Street & Altamont Boulevard, looking 1,750’ towards the proposed structure from approximately 1,750’ away.*
4. *View from the intersection of Main Street & Park Street, looking west towards the proposed structure from approximately 2,050’ away.*
5. *View from the Altamont Free Library at 179 Main Street, looking northwest towards the proposed structure from approximately 1,900’ away.*
6. *View from the intersection of Main Street & Grand Street, looking west towards the proposed structure from approximately 2,900’ away.*
7. *View from the intersection of Main Street & Gun Club Road, looking west towards the proposed structure from approximately 5,100’ away.*
8. *View from the Main Street entrance to the Altamont Fairgrounds, looking west towards the proposed structure from approximately 4,650’ away.*
9. *View from the Altamont Fairgrounds parking area near Brandle Road, looking northwest towards the proposed structure from approximately 5,050’ away.*
10. *View from Grove Way at the Altamont Fairgrounds, looking northwest towards the proposed structure from approximately 4,400’ away.*
11. *View from the Altamont Village Offices at 116 Main Street, looking west towards the proposed structure from approximately 3,850’ away.*

12. *View from the intersection of Western Avenue & Maple Street, looking southwest towards the proposed structure from approximately 1,700' away.*
13. *View from the intersection of Western Avenue & Bozenkill Road, looking southwest towards the proposed structure from approximately 4,300' away.*
14. *View from 14 Sanford Place, looking southwest towards the proposed structure from approximately 3,700' away.*
15. *View from the intersection of Bozenkill Road & Maple Avenue, looking south towards the proposed structure from approximately 3,200' away.*
16. *View from 23 Indian Maiden Pass, looking south towards the proposed structure from approximately 2,650' away.*
17. *View from the intersection of Crispin Lane & Lainhart Road, looking southwest towards the proposed structure from approximately 6,450' away.*
18. *View from 11 Sunset Drive, looking south towards the proposed structure from approximately 1,550' away.*
19. *View from 128 Maple Avenue, looking west towards the proposed structure from approximately 1,700' away.*
20. *View from 15 Agawam Road, looking north towards the proposed structure from approximately 700' away.*
21. *View from 1200 Leesome Road, looking north towards the proposed structure from approximately 5,900' away.*
22. *View from the intersection of Route 28 & Leesome Lane, looking northeast towards the proposed structure from approximately 2,150' away.*
23. *View from the intersection of Route 146 & G.I. Road, looking west towards the proposed structure from approximately 7,100' away.*
24. *View from the Bozenkill Park at 6374 Gun Club Road, looking southwest towards the proposed structure from approximately 4,450' away.*
25. *View from the Orchard Creek Golf Club at 6700 Dunnsville Road, looking southwest towards the proposed structure from approximately 10,150' away.*
26. *View from Highpoint on Long Path off Old Stage Road, looking north towards the proposed structure from approximately 6,250' away.*

**Process:**

Photographs of the weather balloon from the view points noted were taken with a Canon EOS Digital Rebel XT 8 mega pixel camera using a 55mm focal length lens to mimic the view as observed from the



human eye. A three (3) foot diameter red helium filled balloon was floated to a height of 120'. The 3' diameter was checked with the algebraic formula of circumference =  $\pi \times \text{diameter}$  where ( $\pi = 3.14$ )  $\times$  (diameter = 3') = 9.42' around.

In order to analyze the potential visual impacts of the proposed structure, Tectonic took photographs of the balloon from locations within the search area for the purpose of preparing simulations of the proposed structure. Photographs for which there is a corresponding simulated view (#5, 6, 10, 13, 14, 16, 17 & 19) of the proposed structure were produced by first photographing an existing similar type structure, then photographing the view towards the proposed site where the marker balloon was set to a height of 120' AGL. The digital images of the balloons and similar structure were then merged and scaled through the use of the image editing software, "Adobe Photoshop CS5." With this process, the structure is scaled to the correct height and width by scaling the similar type structure using measurements from the marker balloon. The similar type structure used has an antenna array that spans twelve feet (6'). By measuring the balloon width of 3 feet (3'), one can determine the proper width of the antenna array by multiplying the balloon width by two (2).

### **Conclusion:**

The Viewshed Analysis Map presents a conservative delineation of the viewshed within the study area, along the public roadways, and inside public parks. Therefore, any area from which any part of the structure may be visible is presented as a "visible area." In actuality, the views from many of these areas will be partially obscured by the mature vegetation and/or only the top of the structure may be visible. The installation of this telecommunications structure will not have a significant impact on the viewshed and surrounding area.

Sincerely,

TECTONIC ENGINEERING & SURVEYING CONSULTANTS, P.C.

By: 

Phil Cocca  
Visual Technician

By: 

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Vice President































































































































































































































































