STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 25-2931-PET

Petition of Bell Atlantic Mobile Systems, LLC and	]
Vertex Towers, LLC requesting a certificate of	]
public good, pursuant to 30 V.S.A. § 248a, for the	]
installation of wireless telecommunications equipment	]
at 1030 Route 100 in Rochester, Vermont	]

ADDENDA TO 12/30/2025 RECOMMENDATION OF THE ROCHESTER PLANNING COMMISSION

On 12/30/2025, the Rochester Planning Commission submitted, via the public comments portal, their first recommendation letter regarding the above-captioned matter. That letter detailed the proposed project's contravention of the Rochester Town Plan.

In their 12/30/2025 recommendation, the Rochester Planning Commission referenced documents which were contained in an Addenda. Those documents were not submitted as .pdf files but, rather, linked via a Google Drive folder.

It has come to the Town and Planning Commission's attention that the Addenda documents may not be accessible. The Planning Commission hereby files this .pdf volume of the Addenda documents for the convenience of the Commission, all parties and the public.

ADDENDA DOCUMENTS

Dated at Middlebury Vermont this 3rd day of March, 2026

/s/Cindy Ellen Hill, Esq.

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CERTIFICATE OF SERVICE

I, Cindy Ellen Hill, Esq., do hereby certify that on this 3rd day of March 2026, I filed the foregoing **ADDENDA TO 12/30/2025 RECOMMENDATION OF THE ROCHESTER PLANNING COMMISSION** in ePUC, thus effecting service on all parties.

/s/Cindy Ellen Hill, Esq.

Rochester

Town Plan

Rochester Planning Commission
February 2020

The Rochester Town Plan was prepared by the Rochester Planning and Zoning Board with assistance from the Two Rivers-Ottauquechee Regional Commission with partial funding through a Municipal Planning Grant from the Vermont Department of Housing and Community Development.

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Maps that accompany this Plan:

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The lands in the National Forest are subject to jurisdictional control of the U.S. Forest Service and managed under the Land and Resource Management Plan.

Planned Unit Development (PUD)
Making Planned Unit Development (PUD) a part of this Plan is intended to offer land developers an alternative to conventional land subdivision where every house is placed on a lot which must meet minimum area, frontage, and setback requirements.

PUD is a development style which allows flexibility in site plan design in which a modification of the zoning regulations is permitted by the Planning Commission. Residences may need to be clustered together within a PUD and valuable open space preserved, but in no case can the overall density of the project exceed the number of units that would be permissible if conventionally subdivided.

The advantages of PUD are that it provides for a more economic arrangement of streets and utilities, helps preserve the natural and scenic qualities of open land, and provides for the development of those lands which are most able to support building. A PUD may also offer a variety of housing types and varying densities

A. Overall Land Use Goals, Policies, and Recommendations

Policies
1. Encourage the preservation of historic buildings and sites wherever possible.
2. Encourage developers to utilize cluster planning principles to minimize any adverse impacts on agricultural and forest lands.
3. Discourage development of lands about 2,500 feet in elevation.
4. Maintain regulations which allow a developer increased density for siting structures along the edge of tillable and high forested areas.

Recommendations
1. Continue to work cooperatively with the United States Forest Service on planning and decision making on land use within the Green Mountain National Forest.
2. Ensure that Rochester zoning regulations is consistent with state law regarding the regulation of agricultural structures.

B. Section 248a –Telecommunications Facilities
Telecommunications facilities are subject to review and approval by the Vermont Public Utilities Commission (PUC) under 30 VSA §248a. Under these laws, prior to the construction of a generation or telecommunications facility (that is part of a network), the Board must issue a Certificate of Public Good. A Section 248a review addresses environmental, economic, and social impacts associated with a project, like Act 250. In making its determination, the Board must give due consideration or substantial deference to the recommendations of municipal and regional planning commissions and their respective plans similar to the Act 250 process. Accordingly, it is appropriate that this Plan address these land uses and provide guidance to town officials, regulators, and utilities.
For all telecommunications facilities, the following policies shall apply:

1. **Preferred Locations**: New telecommunications facilities shall be sited and designed in locations that reinforce the town's traditional patterns of growth, of Rochester's compact village center surrounded by a rural countryside, including farm and forest land.

2. **Prohibited Locations**: Because of their distinctive natural, historic or scenic value, telecommunication facility development shall be excluded from the following areas:
   - Floodways shown on FEMA Flood Insurance Rate Maps (except as required for hydro facilities)
   - Fluvial erosion hazard areas shown on Fluvial Erosion Hazard Area maps (except as required for hydro facilities)
   - Wetlands as indicated on Vermont State Wetlands Inventory maps or identified through site analysis.
   - Rare, threatened or endangered species habitat or communities.

3. **Significant Areas**: All new telecommunications facilities shall be sited and designed to avoid or, if no other reasonable alternative exists, to otherwise minimize or mitigate adverse impacts to the following:

   - Historic districts, landmarks, sites and structures listed, or eligible for listing, on state or national registers.
   - Public parks and recreation areas, including state and municipal parks, forests and trail networks.
   - State or federally designated scenic byways, and municipally designated scenic roads and viewsheds.
   - Special flood hazard areas identified by National Flood Insurance Program maps (except as required for hydro facilities)
   - Public and private drinking water supplies, including mapped source protection areas.

4. **Zoning Compliance**: New telecommunications facilities shall be sited in accordance with municipal zoning regulations.

5. **Natural Resource Protection**: New telecommunications facilities must be sited to avoid the fragmentation of, and undue adverse impacts to the town's working landscape, including large tracts of undeveloped forestland, open farm land, and primary agricultural soils mapped by the US Natural Resource Conservation Service.

6. **Protection of Wildlife**: Designers must gather information about natural and wildlife habitats that exist in the project area and take measures to avoid any undue adverse impact on these resources. Consideration shall be given to the effects of the project on: rare, threatened, and endangered species; the impacts of human activities at or near habitat areas; and any loss of vegetative cover or food sources for critical habitats for rare, threatened or endangered species.

7. **Site Selection**: Site review should not be limited to the telecommunications facilities; other elements required of the facility need to be considered as well. These include access roads, site clearing, onsite power lines, substations, lighting, and off-site power lines. Development of these elements shall be done in such a way as to minimize any negative impacts. Unnecessary site clearing, and highly visible roadways can have greater visual impacts than the telecommunication facility itself. In planning for facilities, designers should take steps to mitigate their impact on natural, scenic and historic resources and improve the harmony with their surroundings.

When surveyed in 2012, residents were very supportive of increasing cell coverage throughout the community depending on the location of the proposed telecommunications towers. Residents indicated that Deer Mountain, Alexander Hill and Mount Reeder would be the most acceptable locations for a telecommunications tower, while Mount Cushman, Rochester Mountain and Austin Hill would be the least. Developers should locate telecommunications towers accordingly.

2. Maintain the one acre minimum lot size and establish a maximum building footprint not to exceed 3,000 square feet.

Agricultural – Residential Area
This zone covers the river valley in two separate areas. Agriculture and residential development are to be the major types of development in this area. The contrast between these open, undeveloped areas and the more built-up hamlet area is what helps maintain the character and identity of a small New England village.

Parts of this area are located within the Flood Hazard Overlay Area and development within the Overlay is subject to Rochester's Floodplain Bylaw. Non-residential uses that are appropriate in this area include non-retail studios or workshops and outdoor recreational facilities. A minimum lot size of two acres is required.

Policies
1. Encourage clustered housing and shared driveways are for new residential development.
2. Encourage home occupations (home businesses and work at home businesses).

Aquifer Recharge Area
To protect the quality of the public water supply serving Rochester Village, the 13 acres surrounding the Town well south of the village have been designated as the Aquifer Recharge Area. These are the lands whose surface and ground water serve to recharge the well that provides the village with its municipal water supply.

Policy
1. Agricultural and outdoor recreational uses shall be the only allowable use provided they do not require the construction of sub-surface sewage systems.

Residential – Conservation Area
Any land not covered by one of the other four land use areas listed above falls within this category. From a physical standpoint these lands exhibit the least potential for supporting high density development since most of the land is characterized by steep slopes, shallow and fragile soils, high elevations and remote locations. An estimated 13,104 +/- acres within this zone are publicly owned or part of the Green Mountain National Forest. Uses compatible with the purposes of this land use area include: agriculture, forestry, recreation and properly sited residential development.

Policies
1. Consider soil suitability in determining lot sizes and home placement.
2. Encourage house sites that take into consideration elements such as grade, screening, access and energy conservation.
3. Discourage development of lands above 2,500 in elevation.
4. Maintain a minimum three acre lot size.

Flood Hazard Overlay Area
This area contains those lands which are considered subject to flood hazard as described and designated by the Federal Emergency Management Agency on Rochester's Flood Hazard Boundary Map. This map was issued in 2006 and serves as the official map. For Rochester to continue participation in the National Flood Insurance Program, it has adopted and will continue to enforce a permanent flood plain zoning bylaw regulating development activities within the flood hazard areas. For more detail about Floodplain, see the Flood Resilience chapter of this Plan. The boundaries on the Flood Hazard Boundary Map represent the 100-year base flood or the flood level having a one percent chance of being equaled or exceeded in any given year. For more detail about floodplains, refer to the Flood Resilience chapter of this Plan.

Rochester's Flood Hazard Regulations have been designed to meet the minimum standards (for more information, see Chapter XIV, Natural Resources) set by the Federal Emergency Management Agency (FEMA) and the National Flood Insurance Program (NFIP). New development within the floodway is prohibited. Within the 100-year flood plain, uses allowed require a conditional use permit; uses include single and multi-family residences, utilities, public buildings, quarries and home industries to name a few.

When surveyed in 2012 nearly 60% of responders felt that the Planning Commission should revise the Rochester Zoning Bylaw to prohibit all new development in the Special Flood Hazard Area. The severe damages and complete loss of homes caused by Tropical Storm Irene in 2011 highlighted the need for Rochester to reevaluate the requirements of the Flood Hazard Area, both in terms of uses allowed and in terms of the area designated as Flood Hazard Area. Much of the flood damage from Irene occurred in locations outside the mapped flood hazard area. Because FEMA mapped floodplains are not as accurate as the community would like, alternative ways of interpreting the flood hazard area, including improved maps or expanded stream buffers need to be considered in the future.

The Planning Commission has analyzed existing map data and has determined that the area designated as 100-year floodplain touches a limited number of parcels in Rochester. Appropriate uses for this area would be agriculture, forestry and recreation.

Policies

1. Avoid and minimize the loss of life and property, the disruption of commerce, the depletion of the tax base, and the extraordinary public expenditures and demands on public services that result from flooding related inundation and erosion.
2. Ensure that the selection, design, creation, and use of development in hazard areas is safe and accomplished in a manner that is consistent with public wellbeing, does not impair stream equilibrium, flood plain function, or the stream corridor.
3. Manage all flood hazard areas designated pursuant to 10 V.S.A. Chapter 32 § 753, the municipal hazard mitigation plan; and make the Town of Rochester, its citizens, and businesses eligible for federal flood insurance, federal disaster recovery funds, and hazard mitigation funds as may be available.
4. Prohibit all new development in the 100-year floodplain.
5. Allow the development of small out-buildings or similar structures provided they are properly flood-proofed and meet the thresholds required by the National Flood Insurance Program for flood hazard regulation.
6. Allow renovations to existing structures unless the proposed renovations expanded the footprint of the existing building by more than 10% or exceed substantial improvement thresholds required by the National Flood Insurance Program for flood hazard regulation.

XII. Flood Resilience

A. Background

Following the impact of Tropical Storm Irene in 2011, the Vermont Legislature added a requirement that all communities address flood resilience as part of their municipal plans. Interpreted broadly, "resilience" means that an entity—a person, neighborhood, town, state, region or society— when faced with a situation or event, could effectively return to its previous state or adapt to change(s) resulting from the situation or event without undue strain. As such, "resilience" is an overall preparedness for a future event. For the purposes of this chapter, flood resilience will mean the ability of Rochester to effectively understand, plan for, resist, manage and, in a timely manner, recover from flooding.

Types of Flooding
There are two types of flooding that impact communities in the state of Vermont inundation and flash flooding. Inundation flooding occurs when rainfall over an extended period and over an extended area of the river's basin leads to flooding along major rivers, inundating previously dry areas. This type of flooding occurs slowly, but flood waters can cover a large area. Inundation flooding is slow and allows for emergency management planning if necessary. However, unlike during a flash flood, it may take days or weeks for inundation flood waters to subside from low areas, which may severely damage property.

Flash flooding occurs when heavy precipitation falls on the land over a short period of time. Precipitation falls so quickly that the soil is unable to absorb it, leading to surface runoff. The quick-moving runoff collects in the lowest channel in an area—including upland streams, small tributaries, and ditches. The water level rises quickly and moves further downstream. Flash flooding typically does not cover a large area, but the water moves at a very high velocity, and the flooding manifests quickly, making flash floods particularly dangerous. Due to the velocity of the water, a flash flood can move large boulders, trees, cars, or even houses.

The collecting of water in channels in steep areas also causes fluvial channel erosion, which can severely damage roads and public and private property. Fast moving water in the stream channel may undermine roads and structures and change the river channel itself, predisposing other roads and structures to future flooding damage. Flash floods can also mobilize large amounts of debris, plugging culverts and leading to even greater damage. In Vermont, most flood-related damage is caused by flash flooding and fluvial erosion (erosion of stream banks). Due to its narrow river valley and steep side slopes, Rochester is vulnerable to flash flooding and fluvial erosion.

Causes of Flooding
Severe storms with particularly heavy precipitation can create flash flood conditions. However, over an extended period of time, severe storms may also cause inundation flooding due to the cumulative effects of continuous rain, saturated soils, and high-water table/high aquifer levels.

Floodplains and river corridors fill an important role, as flood waters and erosive energy must go somewhere. Development in the floodplain can lead to property damage and risks to health and safety. Development in one area of the floodplain or river corridor can also cause increased risks to other areas by diverting flood flows or flood energy. Debris carried by the floodwater from one place to another also poses a danger. Flooding is worsened by land uses that create impervious surfaces that lead to faster runoff, and by past stream modifications that have straightened or dredged channels, creating channel instability.

Historic Flood Events
One of the worst flood disasters to hit the Town of Rochester, as well as the surrounding region and the State of Vermont, occurred on November 3, 1927. This event was caused by up to 10 inches of heavy rain from the remnants of a tropical storm that fell on frozen ground. A more recent flood event that devastated the region and

the state was the result of Tropical Storm Irene, which occurred on August 28, 2011. Record flooding was reported across the state and was responsible for several deaths, as well as hundreds of millions of dollars of home, road, and infrastructure damage. Other major floods in the area were those of 1938 and 197: both were hurricane events that dropped over 10 inches of rain.

Tropical Storm Irene caused widespread damage to property and infrastructure in the Town of Rochester due to an estimated 9 inches of rain that fell during the storm, some of the highest precipitation totals in Windsor County. It is thought that the flooding that occurred because of Tropical Storm Irene was close to or equal to a 500-year flood, or a flood that has a 0.2% chance of occurring every year. Much of Rochester's road infrastructure was damaged by the storm, including Little Hollow Road, North Hollow Road, Brook Street, Fiske Road, Marsh Brook Road, Bethel Mountain Road, and Bingo Road. For neighboring Orange County, damages totaled $32.5 million. The storm damage for Rochester totaled $3 million according to FEMA's public assistance database, which captures at least 75% of the total damage. In the Two Rivers-Ottauquechee Region, FEMA provided over $61 million in assistance.

B. Flood Hazard and River Corridor Areas in Town

Flood Hazard and River Corridor Areas

There are two sets of official maps that govern development in floodplains in Vermont. They are the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRMs) and VT Agency of Natural Resources (ANR) River Corridor area maps. FEMA has calculated the floodplain on the FIRMS to show the 100-year flood boundary, or a flood that has a 1% chance of any given year of occurring. This area of inundation is called the Special Flood Hazard Area (SFHA). FIRMs may also show expected base flood elevations (BFEs) and floodways (smaller areas that carry more current). FIRMS are only prepared for larger streams and rivers. Rochester has FEMA FIRM maps that are used in the administration of their Flood Hazard Bylaw administration. FEMA FIRM Maps were last updated for the Town of Rochester on September 28, 2007. No Flood Insurance Studies (FIS) were completed for Rochester on September 28, 2007. FEMA FIRM Maps are available for the Main Branch of the White River, the West Branch of the White River, Brandon Brook, Corporation Brook, and Bingo Brook. Rochester contains 890 acres of floodplain, 424 of which are in the floodway. During Tropical Storm Irene, several homes were damaged or lost that were not in FEMA mapped floodplains. These were due to fluvial erosion and not inundation flooding. In total, almost fifty homes were damaged or lost in this event.

Recent studies have shown that a significant portion of flood damage in Vermont occurs outside of the FEMA mapped areas along smaller upland streams, as well as along road drainage systems that fail to convey the amount of water they are receiving. Since FEMA maps are only concerned with inundation, and these other areas are at risk from flash flooding and erosion, these areas are often not recognized as being flood-prone. It should be noted that small, mountain streams may not be mapped by FEMA in NFIP FIRMs (Flood Insurance Rate Maps), flooding along these streams is possible, and such flooding should be expected and planned for. Property owners in such areas outside of SFHAs are not required to have flood insurance. Flash flooding in these reaches can be extremely erosive, causing damage to road infrastructure, threatening topographic features including stream beds and the sides of hills and mountains, and creating landslide risk. The presence of undersized or blocked culverts can lead to further erosion and streambank/mountainside undercutting. Change in these areas may be gradual or sudden.

Furthermore, precipitation trend analyses suggest that intense, local storms are occurring more frequently. Vermont ANR's River Corridor maps show the areas that may be prone to flash flooding or erosion, which may be inside FEMA-mapped areas, or extend outside of these areas. In these areas, the lateral movement of the river and the associated erosion is a greater threat than inundation by floodwaters. The ANR mapped River Corridors accurately represent the area where rivers and streams will move over time to meander, and they depict areas that are at risk to erosion due to the river or streams' lateral movement. Elevation or flood proofing alone may not be protective in these areas as erosion can undermine structures. Rivers, streams, and brooks that have mapped River

Corridors include Marsh Brook as well as the Main Stem of the White River, the West Branch of the White River, Chittenden Brook, Brandon Brook, Corporation Brook, and Bingo Brook, all of which have mapped special flood hazard areas.

In the Town and Village of Rochester, 26 total structures are located in the special flood hazard area, meaning they have a 1% chance of flooding every year. Additionally, there are 46 structures that are located within the mapped River Corridor. To help reduce the risk to health, structures, and road infrastructure, it is important to restore and improve the flood storage capacity of existing floodplains and to increase the overall area for retention of floodwaters in Rochester.

Flood Hazard Regulations
The Town of Rochester has a Flood Hazard Bylaw that was adopted on September 28, 2009. The Flood Hazard Bylaw applies to all lands in the Town of Rochester, and specifically aims to regulate development of lands in the Special Flood Hazard Area, or the areas near rivers, streams, and brooks, that have a 1% chance of flooding annually. The River Corridor Area is not subject to specific regulatory conditions in the Town and of Rochester Flood Hazard Area Bylaw.

National Flood Insurance Program (NFIP)
Under the provisions of the National Flood Insurance Act (1968), the Federal Emergency Management Agency (FEMA) has conducted a series of evaluations and hydrologic engineering studies to determine the limits of flood hazard areas along streams, rivers, lakes, and ponds expected to be inundated during the 100-year base flood. The calculations do not consider the impact of ice dams or debris, and may, therefore, underestimate the areas which are subject to flooding damage.

FEMA has prepared a Flood Hazard Boundary Map for the Town of Rochester, which includes flood hazard areas for the Main Stem of the White River, the West Branch of the White River, Brandon Brook, Corporation Brook, and Bingo Brook. This map is on file at the Town Office and at the Two Rivers-Ottauquechee Regional Commission. It can also be found online through FEMA's website and the Vermont Agency of Natural Resources.

FEMA also administers the National Flood Insurance Program, which provides flood hazard insurance at subsidized rates for property owners in affected areas. To qualify for federal insurance, towns must adopt and retain a bylaw to control land development within these areas. Minimum standards must be included and approved by FEMA. Coverage is only available to landowners if a town elects to participate in the program. The Town of Rochester incorporates Flood Hazard regulations as part of its Flood Hazard Bylaw, and has participated in the National Flood Insurance Program since August 5, 1991.

C. Promoting Flood Resilience

Flood Hazard Regulation

The following changes to the Flood Hazard Bylaw (within Rochester's zoning) would help protect the citizens of Rochester from further damages from a severe flooding event:

1. Discourage all new development in the Special Flood Hazard Area, which is also called the 100-year floodplain, or the area that has a 1% chance of flooding every year.
2. Require the elevation of existing structures in the Special Flood Hazard Area to 2 feet above base flood elevation.
3. Exclude small out-buildings or similar structures from the prohibition on new development provided they are properly flood-proofed and meet the thresholds required by the National Flood Insurance Program for flood hazard regulation. The prohibition also would not apply to renovations to existing structures unless

the proposed renovations expand the footprint of the existing building or exceed the substantial improvement thresholds required by the National Flood Insurance Program for flood hazard regulation.
4. Encourage the most appropriate uses within the Flood Hazard Area along rivers and streams including those that are recreational and agricultural (using Required Agricultural Practices). Minimizing development within these areas will help protect both public and private investments as well as the natural and scenic quality of Rochester's waterways.

Revisions to Rochester's flood hazard bylaw will require input from the community regarding the level of regulation it believes is necessary to protect citizens and their buildings from severe flood hazard events. Provided that all parts of the flood hazard bylaw continue to meet the minimum requirements of the NFIP, communities have a broad range of flexibility in regulating the flood hazard area.

Non-regulatory approaches

Easements
Rochester could pursue riparian easements to protect floodplain from development and preserve flood storage.

Culvert Maintenance
Rochester maintains an up-to-date list of culverts and culvert condition, and completed a comprehensive culvert inventory in summer 2016. The Town continues to update this list as they make improvements. As part of this process, priority projects were identified, and cost estimates were generated to prioritize culvert upgrades for damaged and undersized structures.

Vermont Agency of Transportation Codes and Standards, which the Town of Rochester adopted on March 11, 2013, require a minimum size of 18 inches for new culverts. The process of upgrading culverts is ongoing.

D. Goals, Policies, and Recommendations

Goals

1. Maintain and improve the quality of Rochester's surface and ground waters.
2. Enhance and maintain use of flood hazard areas as open space, greenways, non-commercial recreation and/or agricultural land.
3. Ensure no net loss of flood storage capacity to minimize potential negative impacts. These impacts include the loss of life and property, disruption of commerce, and demand for extraordinary public services and expenditures that result from flood damage.
4. Increase flood storage capacity in Rochester.
5. Prepare Rochester to be resilient in the event of a severe storm by actively reviewing the Local Emergency Management Plan.
6. Protect municipal infrastructure and buildings from the potential of flood damage.

Policies

1. Use sound planning practices to address flood risks so that Rochester's citizens, property, economy, and the quality of the town's rivers as natural and recreational resources are protected.
2. Prohibit all new fill and construction of buildings in mapped floodways (*Mapped areas, unless corrected by FEMA)*.

3. Limit permitted land uses within Rochester's River Corridor Areas to non-structural outdoor recreational and agricultural uses due to the dangerous erosive risk in these areas.
4. Prohibit commercial, industrial, and residential uses within ANR's mapped river corridor areas outside of designated village areas.
5. Consider moving or abandoning roads that often experience serious flood damage.
6. Design culverts and bridges, at minimum, to meet VTrans Hydraulics Manual, ANR Stream Alteration Standards, VTrans Codes and Standards. Maintain culverts to ensure they are effective during severe weather events.
7. Avoid building Rochester's emergency services, power substations, and municipal buildings in the Special Flood Hazard or River Corridor Areas.
8. Encourages property owners to maintain vegetated buffer strips in riparian zones bordering streams and rivers. Rock rip-rap and retaining walls should only be used to the minimum extent necessary and when bioengineering techniques may not be adequate to prevent significant loss of land or property.
9. Maintain Rochester's upland forests and watersheds predominately in forest use to ensure high quality valley streams and to ensure that flood flows are reduced.
10. Ensure all wetlands which provide flood storage functions remain undeveloped. In the long term, restoration and enhancement of additional wetlands should be pursued to improve Rochester's flood resilience. Some but not all wetlands can be seen on the ANR atlas.
11. Ensure after flood events, recovery and reconstruction within the river area are managed according to the Vermont River Program's best practices to avoid negative impacts downstream.

Recommendations

1. Revise Rochester's Flood regulations to reflect the policies in this chapter.
2. Work with VTrans and the Regional Planning Commission on advocating for and improving the flood capabilities of state or town-owned transportation infrastructure.
3. Continue working to update hazard mitigation plans and emergency preparedness and recovery procedures.
4. The Selectboard should continue to send a representative to regularly attend and participate in the region's Local Emergency Planning Committee (LEPC #12).
5. The town should continue to maintain and update town bridge and culvert inventories. This information should be used to develop a schedule to replace undersized culverts.

XIII. Natural, Scenic and Cultural Resources

A. Background

The rural landscape is of the utmost importance to the Rochester community, both for its utility and its scenic value. Rochester residents value open, working lands that are hospitable to both recreation and outdoor work. It is essential to the community that this landscape be protected as it is the fundamental reason why residents choose to live in Rochester. Residents want to maintain the quality of their landscape for the future and protect the natural world they value, while allowing the land to be worked safely and harmoniously.

Goals

1. Protect the natural, scenic and historic character of Rochester.
2. Maintain the quality of the landscape for the future and protect the natural world, while allowing the land to be worked safely, harmoniously and sustainably.

Policy

1. Ensure the natural, scenic and historic character of Rochester's working landscape is protected, through careful land use planning.

B. Air Quality

Air quality is an important feature in our overall quality of life. Clean air contributes to our health and to clear skies and extended views. Rochester is heavily forested with limited development, but air quality can be affected from vehicle emissions, heating sources, backyard burning, commercial activities, and dust from construction projects.

Goals

1. Maintain healthy air quality.
2. Support state and federal programs directed at the reduction of air pollution and encourage enforcement of air-quality standards to prevent deterioration of the region's air quality.

C. Water Resources

Water resources include aquifers (the supply of fresh water beneath the ground) and surface waters (streams, ponds and lakes). Sustainable yields of quality water are necessary for the lives and livelihood of citizens of Rochester. Groundwater is difficult to map and currently Rochester has no mapped groundwater information.

The Vermont Agency of Natural Resources, in cooperation with federal and other state agencies, has evaluated aquifer recharge areas serving systems involving 10 or more connections or 25 or more people. These recharge areas are acknowledged and are recognized as important for protection. Land developments that are potential threats to water quality and significant aquifers are discouraged from locating in these areas. Rochester has a well system that provides water to the village. The primary well is located south of the village in the aquifer recharge district. The 15-acre area surrounding it has been designated a "well-head protection area".

The White River, West Branch, Bingo Brook, Brandon Brook and numerous other tributaries continue to provide excellent fishing opportunities for Brook and Rainbow trout. The Forest Service has purchased land and/or easements for public access to many areas of the White River.
Rochester is fortunate to have a non-profit organization that focuses on the protection of the White River watershed. The White River Partnership started in 1995 with a group of local citizens interested in preserving the

quality of life in the White River Watershed. A grass-roots organization, the White River Partnership (WRP) is a grassroots, non-profit organization that brings together people and local communities to improve the long-term health of the White River and its watershed. . The Partnership is committed to developing a diverse membership to assure a balanced approach to addressing the challenges facing the watershed, incorporating the best of traditional thinking and practice with current research and technology.

The health of Rochester's surface waters is essential to maintaining quality groundwater, as well as an important element for outdoor recreation and natural beauty. There are many state and federal programs that help fund stream-management projects, such as the Conservation Reserve Enhancement Program (CREP). CREP provides funds to farmers for preserving lands once used for agriculture, with the goal of introducing and encouraging vegetated stream buffers to prevent erosion and provide habitat. Stream instability can lead to excessive flooding and other types of damage due to increased flow velocity.

Riparian buffers are strips of bankside vegetation along waterways that provide a transition zone between water and land use. Construction or development along shorelines, or removal or disruption of vegetation within these areas can create increased water pollution, higher water temperatures, destabilization of banks, higher soil erosion rates and loss of fish or wildlife habitats. Damages from extreme weather events have indicated a need for stream buffers, particularly in areas outside of the Flood Hazard Area.

Goals

1. Maintain or enhance the quality and quantity of drinking-water resources.
2. Allow use of groundwater resources by new development in such a manner to protect the public right to adequate quality and quantity of the resource.
3. Consider surface water and groundwater impacts and effects related to proposed or existing uses of land.
4. Maintain or improve surface water quality and quantity.

Policies

1. Ensure land use activities which potentially threaten groundwater quality are carefully reviewed and monitored to prevent undue loss of groundwater quality.
2. Encourage preservation of the natural state of streams and water resources by,

    - Protection of adjacent wetlands and natural areas;
    - Protection of natural scenic qualities; and
    - Maintenance of existing stream bank stability, buffer vegetation, and wildlife habitat.

3. Ensure no structures are allowed within 50 feet of the top of the bank of designated permanent streams, except those that by their nature must be located near streams.
4. Ensure no ground disturbance or removal of vegetation is allowed within 35 feet of the top of the stream bank, excepting that incidental to bridge or culvert construction, or permitted bank stabilization.
5. Ensure development in Rochester is permitted only if it does not cause any significant environmental degradation or pollution of ground or surface waters or cause unreasonable reductions in supply.
6. Ensure no development of any kind is allowed adjacent to any brook, stream or tributary or in a well head recharge area that is potentially detrimental to water quality. .
7. Monitor all large water withdrawals in the regional area that have a potential to affect the water sources of Rochester residents.
8. Enact standards that maintain or improve water quality according to the policies and actions developed in the White River Basin Plan (Basin 9).

Recommendation

1. The Planning Commission should amend the Rochester Zoning Regulations to include stream buffer requirements that require setbacks and limitations on development immediately adjacent to streams.

D. Wetlands

Wetlands are ecologically fragile areas and how these lands are managed has a direct bearing on the quality and quantity of water resources. In addition to being Vermont's most productive ecosystem, wetlands serve a wide variety of functions beneficial to the health, safety and welfare of the public, including the following:

- Retaining storm water run-off, reducing flood peaks and thereby reducing flooding;
- Improving surface water quality through storage of organic materials, chemical decomposition and filtration of sediments and other matter from surface water;
- Providing spawning, feeding and general habitat for fish;
- Providing habitat for a wide diversity of wildlife and rare, threatened or endangered plants; and
- Contributing to the open space character and the overall beauty of the rural landscape.

Rochester's most significant wetlands have been mapped and are included as part of the National Wetlands Inventory (NWI) prepared by the U.S. Fish and Wildlife Service. These wetlands have been delineated on USGS topographic maps, and by reference are made a part of this Plan (see Map 5, Natural Resources). There are approximately 463 acres of mapped wetlands in Rochester.

Goal

1. Identify and encourage land use development practices that avoid or mitigate adverse impacts on significant wetlands.

Policies

1. Abide and adhere to state wetlands regulations.
2. Ensure structural development or intensive land uses are not be located in significant wetlands.
3. Ensure development adjacent to wetlands is planned so as not to result in disturbance to wetland areas or their function. Mitigating measures to protect the function of a wetland are an acceptable measure.

Recommendation

1. The Planning Commission should consider creating buffer rules for wetlands.

E. Flora, Fauna and Natural Communities

In Rochester, there is a broad range of communities that exist in the older forests, early successional forests, open fields and valley floors. The breadth and diversity of wildlife and plant communities indicate a healthy, thriving ecosystem. Good management practices, such as requiring developers to locate their projects in less sensitive

areas, maintaining buffer areas and protect against silt runoff from excavating, are a few of the ways that these communities can be protected.

Rochester's fields, forests, wetlands and streams provide habitat to a diversity of flora and fauna. Although nearly all undeveloped land in the town provides habitat for these plants and animals, there are some areas which provide critical habitat that should remain intact. These areas include wetlands, vernal pools, and deer-wintering areas.

Wintering areas are an important habitat requirement for deer during the critical winter months when snow depth and climate are limiting factors to survival. Typically, these areas consist of mature softwood stands, at low elevations or along stream beds, which provide cover and limit snow depths. Southerly facing slopes are also beneficial due to good sun exposure and may be utilized even in areas of limited softwood cover. More specific factors, such as percent of canopy closure, species of softwoods, and stand age, also figure into the quality of the wintering area. Rochester has more than 3569 acres (10% of Rochester's total acreage) of deer wintering yards.

Most important when considering development and its impact on wildlife is the concept of habitat fragmentation. Forests provide habitat to a diverse population of wildlife, which are negatively impacted when forested land is fragmented through development. Forest fragmentation affects water quality and quantity, fish and wildlife populations, and the biological health and diversity of the forest itself. When many small habitat losses occur over time, the combined effect may be as dramatic as one large loss. Forest fragmentation can disrupt animal travel corridors, increase flooding, promote the invasion of exotic vegetation, expose forest interiors, and create conflicts between people and wildlife. Habitat loss reduces the number of many wildlife species and eliminates others.

To help mitigate the effects of human population growth and land consumption, many scientists and conservationists urge governments to establish protected corridors, which connect patches of important wildlife habitat. These corridors, if planned correctly, allow wildlife to move between habitats and allow individual animals to move between groups, helping to restore or maintain genetic diversity that is essential both to the long-term viability of populations and to the restoration of functional ecosystems. Because of its generally low density and the percentage of preserved forestland (Green Mountain National Forest) in town, Rochester maintains a substantial amount of good quality wildlife habitat.

Goals

1. Sustain the natural diversity of flora and fauna found in Rochester.
2. Maintain or improve the natural diversity, populations, and migratory routes of native fish and wildlife.

Policies

1. Ensure native wildlife populations and natural diversity are sustained and enhanced.
2. Encourage long-term protection of critical habitats through conservation easements, land purchases, leases and other incentives.
3. Protect deer wintering areas from development and other uses that adversely impact these areas.
4. Development is designed to preserve continuous areas of wildlife habitat whenever possible. Fragmentation of habitat is discouraged. Efforts should be made to maintain connecting links between such areas.
5. Give preference to development that utilizes existing roads.

Recommendation

1. The Planning Commission should consider amending the Rochester Zoning and Subdivision regulations to protect wildlife corridors.

F. Invasive Species

Invasive non-native species are a growing problem throughout Vermont. Invasive plants are defined as those exotic species that typically spread from disturbed areas into natural communities, but many of these species are also impacting yards, agricultural fields, and working forests. In Rochester the spread of invasives is negatively impacting the rural character of the town, reducing native plant populations and consequently affecting wildlife populations, creating economic impacts by dominating other plants in agricultural fields and inhibiting reproduction of trees in sugarbush areas and other forests, destroying the scenic quality of roadsides, reducing property values, and potentially posing health risks. At the present time, the greatest threats are posed by wild chervil (fields, roadsides and recently logged areas), Japanese knotweed (streams, rivers, roadsides, yards), and Japanese barberry (forests), but there are increasing threats throughout the region from garlic mustard, giant hogweed, and other invasives.

Some of these invasives, especially wild chervil and knotweed, have proliferated to such an extent that eradication from many sites is impossible, but there are still portions of the town that have not been infested. Diligence is necessary from town residents and employees to prevent the further spread of these species, and the introduction of new species that could pose more serious threats. For example, giant hogweed has been identified from several towns in Central Vermont. This Federally listed noxious weed produces a sap which, in combination with moisture and sunlight, can cause severe skin and eye irritation, painful blistering, permanent scarring and blindness.

One of the more common ways in which invasive species spread to new locations is when seeds or root segments are transported on vehicles, especially construction and logging machinery, mowers, etc. Best management practices have been identified for reducing the accidental spread of invasives, including avoiding using fill from invaded sites, washing of equipment before leaving infected sites, stabilization of disturbed sites, timing of mowing, etc.

Goal

1. Reduce the impact of invasive species on agriculture and native ecosystems.

Policy

1. Control new occurrences of invasive species to prevent further infestations.

Recommendations

1. Town employees and contractors should become familiar with the best management practices to prevent the accidental spread of invasives.
2. The town should work with the Upper White River Cooperative Weed Management Area to conduct workshops for town employees and residents on identification of invasives (to promote early detection) and control methods.
3. The town should consider developing criteria for new development projects that reduces the potential for new invasive plant infestations. (e.g., source of imported materials such as fill, hay bales, ornamental plantings, etc.)
4. The Town should time roadside mowing to minimize the spread of invasive species.
5. The Town should conduct an inventory of invasive species that can be used as baseline data to assess the future spread.

G. Mineral and Gravel Resources

The use and management of Rochester's earth and mineral resources are matters of public good. Maintenance of sustainable quantities of gravel, sand, crushed rock, and other materials are essential for land development, as well as state and local highways. Despite this, public and private interests are oftentimes in conflict over use of the resource. It is in the interest of the Rochester business owners and residents to enable utilization of these resources when such uses do not significantly inhibit or conflict with other existing or planned land uses, or conflict with other stated goals in this Plan.

Goal

1. Support extraction and processing of mineral resources only where such activities are appropriately managed, and the public interest is clearly benefited. Any support shall be balanced against the need to maintain the rural character valued by the citizens of Rochester.

Policies

1. Consider pollution, noise and vehicle traffic as part of the decision-making process when reviewing proposed gravel extraction projects.
2. Plan, construct and manager mineral extraction and processing facilities,

    - So as not to adversely impact existing or planned uses within the vicinity of the project site;
    - To not significantly interfere with the function and safety of existing road systems serving the project site;
    - To minimize any adverse effects on water quality, fish and wildlife habitats, viewsheds and adjacent land uses.
    - To reclaim and re-vegetate sites following extraction.
    - To minimize noise impacts on adjacent uses including residential areas;
    - To maintain the rural character of the Town.

H. Significant Natural and Historic Areas

While Rochester residents would agree that the entirety of the community is significant for its beauty and its rural landscape, there are several areas that represent the most significant places in Town. These lands are what most residents agree make Rochester the place it is today. These areas include:

- **The Park**: Perhaps no other location in Rochester symbolizes the Town more than the Park. With its stately maple trees, bandstand, the Civil War monument and surrounded by beautiful old homes, the Park is the focal point of many community events.

- **Bethel Mt. Road**: There are scenic views from many locations along the road. It offers foreground views of the woodlands and pastures, and distant views of the valleys and mountains stretching from Killington Peak in the south to Mt. Ellen to the north.

- **Route 100/White River Corridor**: As Vermont Route 100 winds its way north through the valley, it parallels the White River, offering views of the village, farms and other open areas and the Green Mountain foothills. Route 100 has been designated as one of Vermont's scenic byways.

- **West Hill**: Located in the western part of Town, the West Hill offers the explorer a combination of woodland, cellar holes, old buildings, a cemetery, mountain streams and views of the main ridge of the Green Mountains.

- **The Hollows**: Little, North, Middle and South Hollow all offer spectacular scenery. Farms, forests, country lanes, mountains and streams, all the things that evoke the image of Vermont are in the Hollows.

- **Bingo**: Whether via auto, bicycle or cross-country skis, a trip along Bingo Brook offers beautiful views of the mountain streams in all seasons.

- **Pierce Hall**: Pierce Hall is a 100-year-old multi-purpose community center that has recently been renovated. It has a long history of public use.

- **Rochester Public Library**: The Rochester Public Library building was built in the late 1800's originally as a church. It was given to the library trustees in the early 1900's and has been actively used as a library since then. The building retains the original stained-glass windows from when it was a church.

In addition to the specific resources listed above, the Town of Rochester has numerous historic resources, both publicly and privately owned. A survey, conducted in 1973 by Vermont's Division for Historic Preservation, identified approximately 38 structures with historical significance. Twenty-five of these are located around the village Park. In addition, there are many other structures or sites of local significance.

Goal

1. Protect Rochester's scenic and historical characteristics.

Policy

1. Consider the value of these areas during project review.

I. Conservation Commission

Vermont statute enables communities to create a Conservation Commission (CC), a volunteer board that focuses specifically on the natural, scenic and cultural resources within a community. A CC may conduct inventories of natural resources, recommend the purchase of or the receipt of gifts of land to the Selectboard, assist the planning commission with natural resource planning and maintain a conservation fund.

The CC, at the discretion of the town, can manage a fund which is to be used to assist with the purchase or conservation of property with the intention of protecting natural resources and implementing the town plan. Any use of such a fund requires support from the Selectboard.

Vermont state statute Title 24, Chapter 118 Conservation Commissions, provides guidance on the powers and duties of a Conservation Commission (https://legislature.vermont.gov/statutes/section/24/118/04505).

Rochester does not have a Conservation Commission currently.

Appendix B: Tropical Storm Irene History

On August 28, 2011, the State of Vermont found itself in the path of Tropical Storm Irene. The storm caused power outages statewide for approximately 50,000 households and widespread flooding that resulted in six deaths. Record amounts of rain fell in a short amount of time resulting in catastrophic flooding across the state. Rainfall totals were between 4 and 7 inches with some locally higher amounts up to 10 inches concentrated during a 6-8-hour period. The Otter Creek reached an historic crest (nearly 4 feet over the previous record in 1938) and the Mad, Winooski and White Rivers were very close to records established in 1927. Those main stem rivers were fed by many smaller tributaries that caused damaging flash flooding throughout the central and southern parts of the state.

More than 1500 Vermont families were displaced, and the transportation and public infrastructure was decimated. Of Vermont's 251 towns and cities, 223 towns were impacted by Irene, causing household damage, infrastructure damage or both. Forty-five (45) municipalities were considered severely impacted. Hundreds of state and local roads were closed for an extended period completely isolating numerous towns and limiting access to many others. This resulted in state and National Guard missions to deliver emergency supplies by ground and air. The flooding also caused the first-ever evacuation of the State Emergency Operations Center due to access challenges and the impact to the buildings and support mechanism in the state office complex in Waterbury.

By mid-afternoon on Sunday, Nason Brook, Rogers Brook, Breakneck Brook, Brook St. Brook and Cold Brook, had turned into raging rivers carrying the runoff from their steep banks. With culverts blocked at the point where those brooks cross under Route 100, both Nason Brook and the Brook St. Brook breached their banks and flowed swiftly across Route 100, making passage nearly impossible. Brook St. Brook undermined the foundation of a century-old home, causing it to collapse, nearly trapping one resident as he tried to evacuate. At Nason Brook the current across route 100 was so strong that some residents had to be rescued by bucket loader. In the wide area that frequently floods along the banks of the White River, the water reached a height of ten feet (the rim of a basketball net) before it began to abate.

2 - View of Route 100, Brook St. Brook (Source: Mansfield Heliflight)

Monday, August 29th

Some of the most severe damage took place in and around Rochester and its neighboring communities, including Hancock, Granville, Bethel, Pittsfield and Stockbridge. Few communities were impacted on the scale that Rochester was. By the morning of August 29th, the town of Rochester found itself completely and utterly cut off from the rest of the world. The White River had washed away the electric substation that fed power to the community. Telephone and cellular communications were completely down. Highways leading out of Rochester (Route 100, Route 73 and Camp Brook Rd.) were all so severely damaged that no one could get in or out by vehicle.

In addition to the damage to municipal infrastructure, homes had been devastated. The White River overflowed its banks, destroying and inundating valuable farmland. Many of the small tributaries that feed run-off from the hills into the river valley became far more violent and dangerous than they had ever been. The dangers of fluvial erosion became apparent as these small streams attempted to find equilibrium under the sudden and massive

3 – Damaged Woodlawn Cemetery, Nason Brook (Source: Associated Press)

amount of rain; they broke through their usual quiet meanders, taking away soil, trees, and rocks and in some cases damaging or destroying homes. Particularly alarming was the damage caused by Nason Brook. The Woodlawn Cemetery, which is built on sandy soils, found itself quickly eroding away as an over-full Nason Brook rushed toward the White River. The damage disinterred 50 coffins and caused a potential community health hazard, not to mention the significant emotional damage caused by the loss of remains.

4 - Residents line up to get food from Mac's Market (Source: Associated Press)

While many communities devastated by Irene struggled with where to begin with the recovery process, Rochester rallied together. Members of the Selectboard, emergency services and road crews met at the Town Office (command center for the incident) to determine a course of action. With cell phone coverage out, officials drove to the top of Bethel Mountain where coverage was still available and contacted state emergency officials to let them know that the citizens of Rochester were alive, but trapped and in need of assistance. The Selectboard and volunteers organized a town meeting, which was attended by nearly 300 residents after volunteers went door-to-door to notify them. These meetings continued at 1PM daily and provided residents with a much needed and valuable source of up-to-date information.

Recognizing the crisis that was affecting their community, the Town's grocery store opened and rather than allow their perishable food to go to waste, they gave it away. Four restaurants provided meals to residents, and volunteers at the Federated Church collected enough food to offer lunch on Tuesday. The Rochester Emergency Shelter, located in the Rochester School, was activated the first night of the flood to house travelers who found themselves trapped in town. This facility continued as the primary location for meals and donated supplies throughout the disaster period. Volunteers kept the shelter operating and turned out three meals a day for an extended period, post event.

Local heavy equipment operators with excavators, bulldozers and dump trucks went to work to assist Town and State highway crews. Members of the Rochester Fire Department embraced their role as emergency responders and assisted wherever needed, doing wellness checks on individuals, conducting electric surveys with CVPS, directing traffic, staffing helicopter landing zones, assisting medical transport, and using fire hoses to remove culvert debris.

Tuesday, August 30th

On Tuesday, those in need of serious medical assistance, including four dialysis patients, were removed from town by helicopter or were driven out in four-wheel drive vehicles after road crews cleared a logging road from Barnard to Stockbridge making it passable for emergency vehicles. National Guard helicopters were able to make several drops of essential emergency materials including bottled water (the municipal water supply was working via generator, but water had to be boiled), meals-ready-to eat and blankets.

5 - National Guard members hand MREs and water to Rochester residents (Source: Associated Press)

Concerns grew about the potential lack of food in the community, as well as the lack of fuel to run generators and emergency equipment. Prescription drugs and other medical needs also became a concern after Irene. To address this concern volunteers (including members of the Bethel Fire Dept.) created an emergency system for identifying critical needs and developing protocols to order and coordinate delivery of medicines and other medical, mental health and critical care. The administrative staff at Gifford Medical Center in Randolph was essential to this effort.

Residents located on the western side of the White River were completely shut off from the rest of the community due to the failure of the bridge that connects Route 73 with Route 100. Making matters worse, bridges farther west had also failed, creating an "island". Stranded residents took responsibility for addressing their own needs during the extended period of isolation.

Wednesday, August 31st

By Wednesday, trucks owned by Central Vermont Public Service (now Green Mountain Power) began to appear around the community. Power would return days later, well short of the potential two to three weeks that was originally estimated. Residents continued to meet daily.

The Process of Recovery

In the following days and weeks, Rochester and its community members would work together to help each other recover from Irene's devastation. Groups organized to help clean up the damage to homes and buildings. Residents built a footbridge across the White River to allow those who lived on the Route 73 side of Rochester who were stranded to be able to access Route 100. Some families kept a car on each side of the river to get back and forth to work for the seven weeks until a temporary bridge was constructed.

Local groups organized cleanup events and made great efforts to keep community morale up. Local clean-up crews were joined by volunteers from across the State. Electric companies from Canada and points south assisted CVPS in the placement of a portable substation to take the place of the destroyed sub-station and transmission lines. Neighbors in Addison County volunteered their trucks and drivers; Brandon Fire & Rescue acted as the fire crew for "the Island of West Rochester" before the Route 73 Bridge was restored. The most common comment made by Rochester residents as they worked to recover from Irene was that "This community has been fantastic".

6 - Temporary footbridge over White River (Source: VTrans)

While Rochester's community has shown its mettle, and bonds have formed between citizens that might never have grown, there is still much work to be done.

FEMA

Rochester, like much of Vermont, has had a mixed experience with the Federal Emergency Management Agency. FEMA is responsible for providing aid to communities and their residents under federally declared disasters. The

Selectboard has worked with FEMA to take advantage of funding for the repair of municipal infrastructure such as roads and bridges. But where the municipality wished to make improvements that enhance flood resiliency, FEMA's strict regulations make this challenging. Rochester benefited from additional funding from other agencies that allowed some structures to be upgraded.

It is estimated that 30 of Rochester's roads were damaged to some extent, many with portions completely washed away. The total amount of funds spent repairing town property (including roads, bridges, culverts, ball fields, parks, cemetery, and sewer system and tennis courts) was close to $3,000,000. When final reimbursements from FEMA and the State of Vermont are collected, Rochester's share will be just under $50,000.

For businesses and private citizens, working with FEMA is a more challenging and slower process. Businesses are not eligible for FEMA relief funding and instead can take advantage of low-interest loans through the Small Business Association. The burden of adding more debt to a business that may already be carrying debt can make reopening after a disaster difficult. Homeowners are eligible for what is called Individual Assistance through FEMA, but the maximum amount of assistance per home is $30,200. If a resident's home is destroyed, the cost to replace it is likely to be substantially more than $30,200.

Under certain circumstances, some properties may be eligible for a FEMA buyout through the State of Vermont. The purpose of this program is to completely remove structures that have been and are likely to be severely damaged by flooding again. These homes, if purchased through this program, are demolished and the land becomes town property and is unable to be developed again. The buyout amount is generally 75% of the value of the building, but the building must have substantial damage, which is defined as more than 50% of the value of the home. There are two homes in Rochester that were bought out through this program.

> *"For all of its destruction, Tropical Storm Irene also demonstrated why we love this community, and why we have chosen to live, work and raise our families here. Everyone should be as proud as we are of Rochester's response to one of the most significant events in the history of the Town."* - Rochester Selectboard, 2011 Town Report

Lessons Learned

The municipal response to Irene made it clear that the systems put in place by Town Government to handle such a severe hazard event were generally successful. The Selectboard was effective in keeping the lines of communication with members of the community open through regular scheduled meetings. The distribution of information is probably the most important element of disaster response. Volunteers maintained the Rochester web site and utilized social media to communicate essential information to the public.

Additionally, municipal staff and volunteers including the road crew, public works crew and the volunteer fire department were invaluable to the Town's response. Collectively they worked well with the community to bring essential services back online and to ensure that the health and safety of all were maintained.

The devastation caused by Irene within the Flood Hazard Area (FHA) and outside the FHA in fluvial erosion hazard areas has made it clear that development in these areas carries high risk. When surveyed by the Planning Commission in 2012, 70% of the responses indicated that current regulations should be more stringent to enhance flood safety. Nearly 60% of the respondents felt that development within the floodplain should be prohibited altogether.

The most essential lesson learned was how strong Rochester's community is. The impact of Irene was felt to the core of this community, and as a result, it will influence the future and the vision of the community in many ways, which is why Irene will be a recurring theme throughout this plan. The resourcefulness and resilience of Rochester's people were extraordinary in the face of incredible dislocation. It is felt by many that the bonds created by Irene will last forever and will continue to make Rochester a better place.

Town of Rochester, Vermont

2025

Local Hazard Mitigation Plan

Prepared by the Two Rivers-Ottauquechee Regional Commission and the Town of Rochester

Adopted by Town

X, X, 2025

Approved by FEMA

X, X, 2025

CERTIFICATE OF ADOPTION

«DATE»

TOWN OF Rochester, Vermont Selectboard

A RESOLUTION ADOPTING THE Rochester, Vermont 2025 Local Hazard Mitigation Plan

WHEREAS, the Town of Rochester has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of the hazards profiled in the Rochester, Vermont 2025 Local Hazard Mitigation Plan, which result in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Rochester has developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for its Rochester Vermont 2025 Local Hazard Mitigation Plan (Plan) under the requirements of 44 CFR 201.6; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies, and Plan maintenance procedures for the Town of Rochester; and

WHEREAS, the Plan recommends several hazard mitigation actions (projects) that will provide mitigation for specific natural hazards that impact the Town of Rochester with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Rochester eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by Town of Rochester Selectboard:

1. The Rochester, Vermont 2025 Local Hazard Mitigation Plan is hereby adopted as an official plan of the Town of Rochester;

2. The respective officials identified in the mitigation action plan of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;

3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as part of this resolution for a period of five (5) years from the date of this resolution; and
4. An annual report on the process of the implementation elements of the Plan will be presented to the Selectboard by the Emergency Management Director.
IN WITHNESS WHEREOF, the undersigned have affixed their signature and the corporate seal of the Town of Rochester this day of XX XX, XXXX.

By _____ (name and title)

Attest By _____ (name and title)

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B. Hazard Profiles for "Top Hazards"

This section of the Plan satisfies the requirements of 44 CFR 201.6(c)(2)(i), 201.6(c)(2)(ii), and 201.6(c)(2)(iii) for **Flash Flood/Flood/Fluvial Erosion**.

1. Flash Flood/Flood/Fluvial Erosion

Flooding is one of the worst threats to Rochester's residents and infrastructure. Past instances of flooding in Rochester have included rain and/or snowmelt events that cause flooding in the major rivers' floodplains and intense rainstorms over a small area that cause localized flash-flooding. Both kinds of events can be worsened by the build-up of ice or debris, which can contribute to the failure of important infrastructure (such as culverts and bridges).

The worst flood disaster to hit the Town of Rochester, as well as the overarching region and the State of Vermont, occurred on November 3, 1927. This event was caused by nearly 10 inches of heavy rain from the remnants of a tropical storm that fell on frozen ground. Eighty-four Vermonters, including the Lieutenant Governor, were killed. The flooding in the White River valley was particularly violent, with an estimated 120,000 to 140,000 cubic feet/second (cfs) flowing out of the White River at West Hartford, Vermont. Like many towns in the region, the Town of Rochester received heavy precipitation.

A more recent flooding event that devastated the region and the state was the result of Tropical Storm Irene, which occurred on August 28, 2011. Record flooding was reported across the state and was responsible for several deaths, as well as hundreds of millions of dollars of home, road and infrastructure damage. Due to the strong winds, 50,000 Vermont residents were initially without power, and many did not have electricity restored to their homes and businesses for over a week. Despite the damage wrought, the flooding caused by Tropical Storm Irene is considered to be the second greatest natural disaster in 20th and 21st century Vermont, second only to the Flood of 1927.

The Town of Rochester suffered major damage to property and infrastructure during Tropical Storm Irene, although no lives were lost. It is estimated that Tropical Storm Irene dropped 6-7 inches of rain over the Town of Rochester in a very short span of time, some of the highest precipitation totals in Windsor County (which averaged 3-5 inches over its land area). It is thought that the flooding that occurred as a result of the storm was close to being or was a full-fledged 500-year flood.

Many of Rochester's roads and culverts were damaged by the storm, including parts of the following: Little Hollow Road, North Hollow Road, Brook Street, Fiske Road, Marsh Brook Road, Bethel Mountain Road, and Bingo Road. The county-wide damage totaled $32.5 million, and Town-wide damage was over $3 million. Following the flood damage, the State of Vermont and FEMA have been coordinating on the home buy-out process across the state. There were four home buy-outs in Rochester from Tropical Storm Irene: two on North Main Street, one on Robinson Avenue and one on Quarry Hill Road.

Unfortunately, flooding is very common across the region, with many events impacting the Town of Rochester specifically. Flooding is one of the worst threats to Rochester's residents and infrastructure. The following list indicates the history of occurrence with regard to this hazard in Windsor County (given the small population of Rochester, town-specific data is limited. Federal disaster numbers are listed where appropriate. There have been 55 recorded flooding and flash flooding events in Windsor county

since 1950. The events are either federally declared disasters or specifically mention Rochester or North/West/Northwest Windsor County.

The most recent flooding event in Rochester was the April 15, 2019 event. This spring rain storm combined with snow melt hit central Vermont very hard and resulted in federal disaster declarations in several counties. Both sides of Camp Brook and Bethel Mountain Road were damaged. The lower section of Bethel Mountain Road was heavily damaged resulting in closure from April to October and over 3 million in repairs to the culverts and ditches. New larger culvert and uphill ditches were added and the lower bank was stabilized in places.

History of Occurrences:

Date	Event	Location	Extent
Period of 07/11/2024-07/12/2024 (DR-4810)	Flash Flood, Flood	Statewide	The remnants of TS Beryl brought heavy precipitation to much of Vermont, leading to heavy showers and storms across the region. Both FEMA Individual Assistance and Public Assistance were available in Addison County following the event. Damage totals for Rochester are not known. According to NOAA, over 3.3" of rain fell in nearby Lincoln, VT.
08/03/2023	Flash Flood	Windsor County	A cluster of showers and thunderstorms brought heavy rain, leading to flash flooding in some areas. 3"-6" of rainfall was reported. Specific damage and rainfall data for Rochester are not known. Property damage is estimated at $1.3 million in Addison and Windsor Counties.
Period of 07/09/2023-07/11/2023 (DR-4720)	Flood, Flash Flood	Statewide	The July 10-11 heavy rain event brought flooding to much of Vermont. In nearby Lincoln, total precipitation was recorded at 4.5". Individual Assistance was available in Addison County following the event. Damage totals for Rochester are not known, however according to NOAA, between July 7 and July 21, State estimated damage was between $400 and $500 million, with damage to businesses and homes across the state.
Period of 4/15/2019 (DR-4445 VT)	Severe Flash Flooding	Rochester, Windsor County; Vermont	Widespread 0.5 to 1.5 inches of rain and significant melting snow at mid and upper elevations caused flash flooding across portions of southern and central Vermont VEM Sit Rep reported major impacts in Rochester, Bethel, Royalton with several town roads closed due to water over roads and isolated washouts. Bethel Mountain Rd was flooded out.
06/2013—07/2013 (DR-4140)*	Flooding, Flash Flood	Rochester, Vermont	Showers and thunderstorms developed on a daily basis in the summertime heat, and rainfall rates as high as two to three inches in an hour were observed, and flash flooding

Date	Event	Location	Extent
			resulted in several areas where storms remained stationary or repeatedly moved across the same area. Flash flooding from thunderstorms closed a portion of Route 100 near Rochester
Period from 08/27/2011—09/02/2011 (DR-4022 VT)	Severe Flash Flooding	Rochester, County/region-wide	Tropical Storm Irene. 4-7'' of rain in Rochester. Severe damage to state and town road infrastructure including VT Route 100. Several communities between Rutland and Windsor and within Windsor county were isolated due to loss of infrastructure. Dozens of homes and businesses experienced severe flooding as well as major losses to farms and livestock.
5/26/2011-5/27/2011 (DR-4001)	Flooding	County-wide	3-5+'' of rain county-wide
10/01/2010	Flooding	Rochester	Heavy rain spread into Vermont late on September 30th and continued October 1st, and eventually produced four to five inches of rain. Flooding along the upper reaches of the White River closed Route 100 just north of Rochester near Quarry Hill Road
08/06/2008 (07/21/2008—08/12/2008 (DR 1790 VT))	Flash Flooding	County-wide	3-5" of rain across southern Green Mountains. Damage to road infrastructure. Flood waters traveled down the White River, through Rochester to Stockbridge. In Stockbridge, portions of Route 100 were flooded and the road was closed to traffic. A one-mile section of Bingo Road in Rochester was washed out and several other roads flooded. Two bridges were damaged which stranded a private residence and some campers.
05/14/2006	Flooding	County-wide	Widespread rainfall totals in Windsor county were 3 to 6 inches with 3 inches in Bethel, 3.68 inches in Woodstock, 4.62 inches in Springfield and 6 inches in Cavendish.
1/18/2006	Flooding	County-wide	Widespread rainfall of 1.5 to 2.5 inches on the night of the 17th through early afternoon of the 18th increased run-off into area watersheds. In addition to field flooding and ponding of water on area roadways, there was some flooding along Route 12 in Hartland.
10/09/2005	Flooding	County-wide	Heavy rain from late on October 7th through early October 9th resulted in minor flooding in Windsor county.
03/28/2005	Flooding		Ice jam on the north branch of the Black River in Reading (Windsor county) resulting in minor flooding and chunks of ice on Route 106
10/29/2003	Flooding	County-wide	Streams and rivers rose rapidly with a few resulting in some flooding. In particular, the upper reaches of the White River resulted in low land and field flooding in Rochester and Royalton.
04/13/2002	Flooding	County-wide	The heaviest rainfall was in the south half of Vermont. In Windsor county, flooding was reported from the White River and its branches in the towns of Sharon, Bethel and Rochester with some road washouts. In Royalton, 2 people were rescued after their vehicle was moved by flood waters.

Date	Event	Location	Extent
12/17/2000 (DR-1358)	Flash Flood	County-wide	Small streams overflowed their banks with some road flooding and low land flooding.
7/31/2000	Flooding	Statewide, County-wide	Portions of Route 133 were washed out in Middletown Springs where over 5 inches of rain fell. In Windsor county, flooding was reported around the Ludlow area.
Period from 07/14/2000—07/18/2000 (DR-1336 VT)	Flooding	County-wide	An upper level low over the eastern Great Lakes and western New York and its related surface low pressure system resulted in showers and thunderstorms across Vermont during the afternoon and night of Sunday July 16th. Slow moving thunderstorms resulted in especially heavy rainfall, especially across the mountainous portions of the county.
04/04/2000	Flash Flood	County-wide	Steady rain combined with melting mountain snows. Water was on VT Route 100 in Rochester in late morning/early afternoon. A mudslide was reported near VT Route 73 near Rochester.
03/28/2000	Flash Flood	County-wide	Steady rain and melting snow resulted in rising water levels on county rivers and streams, especially in the south portion of the county. The north branch of the Williams River in and around the Chester, Vermont area was over its banks during the late morning and early afternoon of March 28th.
Period from 06/17/1998—07/13/1998 (DR-1228 VT)	Flooding	County-wide	3-6” of rain. Extensive flooding occurred along the White River and its branches. In the Vermont towns of Rochester and Bethel, extensive flooding resulted in massive road damage and washouts. National Guard members were sent in to aid with relief.
10/21/1996*	Flooding	Rochester, County-wide	Rainfall storm totals were generally between 2” to 4.5,” with the heaviest rain along and east of the Green Mountains. The White River flooded portions of Route 100 to a depth of several inches in the Rochester, VT area (eastern Windsor County) between 9:15 AM EST and 3 PM EST.
5/11/1996	Flooding	County-wide	Rain spread across the region Saturday and Sunday with between 1 1/2 and 3 1/2 inches of rainfall. The rain mixed with wet snow above the 2000 foot level Sunday with 1 to 3 inches of snow accumulating in the mountains. Some field flooding was reported along the Otter Creek from Rutland to Middlebury and along portions of the Black River in Windsor County.
06/28/1973—06/30/1973 (DR-397)	Flooding	Rochester, County-wide	Rainfall as much as 6 inches in 24 hours in some locations. 8.53” reported in Rochester. State declared disaster area. 3 deaths occurred and resulted in $64 million in damage. Power outage time data for this event are not known. Extensive flooding occurred along the White River and its branches. In the Vermont towns of Rochester and Bethel, extensive flooding resulted in massive road damage and washouts.

Date	Event	Location	Extent
11/3/1927—11/7/1927 "The Great Flood of 1927"	Severe flooding, landslides	County-wide	Considered to one of VT's most devastating events, the flood took out 1285 bridges, miles of roads and railways, and countless homes and buildings. 84 people were killed, including Lt. Gov. S. Hollister Jackson. Rainfall totaled 4-9" statewide, following a month with 150% the normal amount of rain. Power outage time data for this event are not known. Approximately 7" in Rochester.

The Town of Rochester Floodplain Overlay District prohibits new structures in the floodplain and places restrictions on other types of activities within the floodplain. It also specifies land, area and structural requirements in the Floodplain Overlay Districts. The town bylaw has a 50-foot setback prohibition of structures being located from the top of any river or perennial stream bank within the Overlay District. These buffers seek to protect the fragile riparian habitat, improve or maintain water quality and prevent soil erosion.

There are 32 residences and 13 commercial structures within the 500-year floodplain, which equals nearly 10 million dollars if all properties were damaged/destroyed in a severe flooding event in 2025 (when adjusted for inflation). There are also a few critical facilities for the town located in the floodplain, such as the Rochester Town Garage and Rochester Water System infrastructure. The 500-year floodplain was chosen as a basis for this analysis to demonstrate the large number of Rochester properties that are or may be vulnerable to flooding. In addition, the flooding that occurred as a result of Tropical Storm Irene is considered to be slightly less than or equal to a 500-year flood. Therefore, in order to be more forward-looking, the damage to structures in the 500-year floodplain area is documented in this plan.

Due to the development restrictions that mountainous terrain places on an area, "at-risk populations," such as children or the elderly, and critical infrastructure that serves them may be located in flood hazard areas. Across Vermont, most child and elder care facilities are not registered with the State. Most child day care is private and in-home in Rochester and there are currently no licensed facilities in the Town. The Park House is a private elder care facility in Rochester, but it is not located in the floodplain. Finally, low-income housing is registered with the State, and there are no mobile home parks in Rochester.

Recent studies have shown that the majority of flooding in Vermont is occurring along upland streams, as well as along road drainage systems that fail to convey the amount of water they are receiving. These areas are often not recognized as being flood prone and property owners in these areas are not typically required to have flood insurance (DHCA, 1998). It should be noted that although small, mountainous streams may not be mapped by FEMA in NFIP FIRMs (Flood Insurance Rate Map), flooding along these streams is possible, and should be expected and planned for. Flash flooding in these reaches can be very erosive, causing damage to road infrastructure and to topographic features, including stream beds and the sides of hills and mountains. In the Town of Rochester, there are 15 commercial or public structures, including a pump station, and 6 residential structures located in the fluvial erosion hazard area. The presence of undersized or blocked culverts can lead to further erosion and stream bank/mountain side

undercutting. Furthermore, precipitation trend analysis suggests that intense, local storms are occurring more frequently. Extent data for fluvial erosion is unknown.

A number of culverts have been replaced or upgraded since Rochester's 2009 Annex was adopted. In an attempt to improve the flow of floodwater through the Town, Rochester upgraded culverts on the following roads: Marsh Brook Road, Cemetery Road, Little Hollow Road, South Hollow Lane, North Hollow Lane, Moose Run Road, Oak Lodge Road, Flanders Hill Road, and at Brook Street Brook and Cushman Road. A 70-foot bridge on Route 73 was also replaced with a 90-foot bridge to permit larger qualities of water to flow through. Since the 2014 plan update, West Hill Road, Townline Road, and Woodlawn Road have also been upgraded. There are two Town roads which flood regularly by inundation flooding: Beans Bridge Road and Bingo Road. All other Town roads are subject to erosional flooding when heavy rain events drop large amounts of rain in a short period of time. Rochester updates its culvert inventory in-house each year.

Since the 2014 Rochester Local Hazard Mitigation Plan there has been minimal development in the Town. No residential development projects are planned in Rochester in areas that would be vulnerable to flooding. Renovations of the Rochester High School will begin in 2025, and this property is located in the flood zone. There are no repetitive loss properties in Rochester on FEMA's NFIP list.

Hazard	Location	Vulnerability	Extent	Observed Impact	Likelihood/ Probability
Flooding	Regular inundation flooding: Beans Bridge Road and Bingo Road. Beans Bridge Road is repaired 3-4 times per year. All other roads in the Town are subject to erosional flooding.	Culverts, bridges, road infrastructure. 32 residential and 13 commercial and industrial buildings in a 500 year floodplain. Elderly people tend to be at higher risk when floods occur.	Most recently, Tropical Storm Irene- 5-7" across the county (9" in Rochester, according to local reports).	From TS Irene: $3,010,499.39 for Rochester from FEMA's Public Assistance database.	Highly likely

C. Vulnerability Summary

As a result of the above profiled hazards, the Town believes the following vulnerabilities to be of highest concern due to their potentially severe consequences and likelihood of occurrence:

- **Flash Flood/Flood/Fluvial Erosion:** One of the worst threats, flooding impacts roads and the village center, especially facilities for children, elders, and community emergency shelters. Under-sized bridges and culverts factor into the threat, with Rochester being home to many known, problematic choke points (as identified by the LHMP Committee). Out-dated flood hazard mapping for Windsor County also compounds existing threats. Furthermore, flood hazard mapping (Special Flood Hazard Areas) does not adequately encompass all areas that could be flooded, thus potentially making some residents too complacent in regard to the threat. In addition, numerous homes and public facilities are located in the 500-year floodplain and could be impaired by a major flood event. Specific vulnerable roads include Bethel Mountain Road, Rt. 100, Beans Bridge Road, and River Brook Drive.
- **Severe Weather: Hail, High Winds, Hurricanes, Tropical Storms:** Damage to public and private property and municipal infrastructure can be extensive during severe weather events. Prolonged power outages and downed cellular communications can greatly hamper public and business services for indeterminate periods of time. Specific vulnerable roads include Bethel Mountain Road, Great Hawk Community, and Middle Hollow Road.
- **Extreme Cold/Ice Storm/Heavy Snow:** Lack of access to power and telecommunication services throughout the Town could severely impede response efforts and could be especially harmful to vulnerable populations (e.g., the elderly and disabled). One specific vulnerable area to this hazard is the Park House.
- **Extreme Heat:** This threat could be especially harmful to vulnerable populations especially if power is lost for air conditioning (e.g., the elderly and disabled). One specific vulnerable area to this hazard is the Park House.
- **Hazard Materials Spill:** Lack of access to power and telecommunication services throughout the Town could severely impede response efforts and could be especially harmful to vulnerable populations (e.g., the elderly and disabled). Specific vulnerable areas include Bethel Mountain Road and Rt. 100.
- **Water Contamination:** Lack of access to power and telecommunication services throughout the Town could severely impede response efforts and could be especially harmful to vulnerable populations (e.g., the elderly and disabled). Specific vulnerable roads include Rt. 100 and could likely occur as a spill down by the Pump House.

VI. Mitigation

A. Goals

1. To reduce injury, death and/or losses from the natural hazard of flash floods/floods/fluvial erosion
2. To reduce injury, death and/or losses from the natural hazard of severe weather/high winds/hurricanes/tropical storms.
3. To reduce injury, death and/or losses from the natural hazard of extreme temperatures, both hot and cold, along with ice storms and heavy snow
4. To reduce injury, death and/or losses from the natural hazard of secondary hazards: hazardous materials spill and water supply contamination.

B. Excerpted Town Plan Goals & Objectives Supporting Local Hazard Mitigation

- To protect existing and future housing from flood damage (pg 13, 56, 57)
- It is the policy of the Town to retain Class 4 roads, trails, and other public rights-of-way as public resources (pg 31).
- It is the policy of the Town to require development on private roads to adhere to Town access standards and to provide safe year-round access to town services particularly town future and rescue (pg 31).
- It is the policy of the Town to maintain a reliable and up to date inventory of existing culverts and structures, coupled with a short and long range plan for replacement and upsizing (pg 31).
- The Selectboards should develop a town highway capital plan and schedule that will guide maintenance and road infrastructure investments in the future (pg 31).
- It is the policy of the town that the Selectboard maintain an up to date emergency operations plan (pg 39).
- It is the policy of the town to work with the TRORC to properly plan for hazard events (pg 39).
- The Selectboard should update the Local Emergency Management Plan on a yearly basis (pg 39).
- The Selectboard should adopt a Hazard Mitigation Plan with assistance from TRORC (pg 39).
- Maintain and improve the quality of Rochester's surface and ground waters (pg 56).
- Enhance and maintain use of flood hazard areas as open space, greenways, non-commercial recreation, and or agricultural land (pg 56).
- Ensure no net loss of flood storage capacity to minimize potential negative impacts. These impacts include the loss of life and property, disruption of commerce, and demand for extraordinary public services and expenditures that result from flood damage (pg 56).
- Allow Rochester to be resilient in the event of a severe flood and/or storm (pg 56).
- Protect municipal infrastructure and buildings from the potential of flood damage (pg 56).
- Use sound planning practices to address flood risks so that Rochester's citizens, property, economy, and the quality of the town's rivers as natural and recreational resources are protected (pg 56).

NOMINATION PACKAGE AND
CORRIDOR MANAGEMENT PLAN

Scenic Route 100 Byway – **Expansion of the Vermont Byway Designation**

FINAL – FEBRUARY 28, 2013
Amended on January 21, 2015

Submitted to:

Vermont Agency of Transportation
John LaBarge
Vermont Byways Program Manager
1 National Life Building, Drawer 33
Montpelier, VT 05633-5001

State of Vermont
Vermont Byway Council
c/o John LaBarge

Submitted as a collaborative effort by:

Okemo Valley Regional Chamber of Commerce,
Southern Windsor County Regional Planning Commission,
Town of Killington Office of Economic Development and Tourism,
Two Rivers-Ottauquechee Regional Commission,
Windham Regional Commission,
Green Mountain Valley Business Community,
Mount Snow Valley Chamber of Commerce,
and other members of the Vermont Scenic Route 100 Byway Communities of Granville, Hancock, Rochester, Stockbridge, Pittsfield, Killington, Bridgewater, Plymouth, Ludlow, Cavendish, Andover, Weston, Londonderry, Jamaica, Wardsboro, Stratton, Dover, Wilmington, Whitingham and Stamford.

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G. Matrix of Significant Corridor Resources

The intrinsic resources categories are: **A**rchaeological, **C**ultural, **H**istoric, **N**atural, **R**ecreational and **S**cenic. The matrices list each town's resources and identify what intrinsic resource category they fall under. As discussed in Part D: Regional Intrinsic Resources, many of the common intrinsic resources that span across communities along Route 100 have been identified and will be excluded from individual matrices.

Town of Granville							
Resources	**A**	**C**	**H**	**N**	**R**	**S**	***Notes***
Green Mountain National Forest				√	√	√	46% of town land
Granville Gulf Reservation State Park				√	√	√	
Moss Glen Falls				√		√	
Church & Town Hall			√				
Town Clerk's Office			√				(historic 1-room schoolhouse)
Granville Upper + Lower Village Center Designations		√	√				

Town of Hancock							
Resources	**A**	**C**	**H**	**N**	**R**	**S**	***Notes***
Taylor Meadow				√	√	√	
Middlebury College Snow Bowl				√	√	√	
Camp Killooleet				√	√	√	
U.S. National Forest				√	√	√	
VT Scenic Route 125				√		√	State Designated Scenic Highway

Town of Rochester							
Resources	**A**	**C**	**H**	**N**	**R**	**S**	***Notes***
Green Mountain National Forest			√	√	√	√	
Rochester Public Library		√	√		√		
Rochester Historical Society		√	√				Museum within library.
Pierce Hall		√	√				Architectural gem.
Ball Field					√		
The Town Green			√	√	√	√	
Mount Cushman				√	√	√	
National Forest Campground at Chittenden Brook				√	√	√	
White River				√	√	√	
Mill Village	√		√				
The Hollows		√	√	√	√	√	Scenic Vermont.
Bethel Mountain Road		√		√		√	

Vermont Verde Antique Quarry		√					Since the early 1900s.
Rochester Village Center Designation		√	√				

Town of Stockbridge							
Resources	**A**	**C**	**H**	**N**	**R**	**S**	***Notes***
Stockbridge Common Historic District			√			√	
Orestes Brownson Monument		√	√				
Lamb Monument			√				
Central VT ATV Club					√		
White River Valley Camping Area					√	√	
Taggart Brook				√	√	√	
Tweed River				√	√	√	
Bartlet Brook				√	√	√	
Basin Brook				√	√	√	
Guernsey Brook				√	√	√	
Boutwell Brook				√	√	√	
Broughton Brook				√	√	√	
Brown Brook				√	√	√	
Dalton Brook				√	√	√	
Betsy Bartlet Grave			√				
No Town			√	√	√	√	
Greely Talc Mine	√			√	√		
Geocaching					√		
Ted Green Ford			√				Oldest Ford dealership in New England.
Stone Revival		√					
Les Newell Wildlife Management Area				√	√	√	
Stockbridge/Gaysville Historical Society		√	√				
Belcher Library		√	√				
Peavine Park					√		
Veterans Honor Roll		√	√				Located on Stockbridge Common.

Town of Pittsfield							
Resources	**A**	**C**	**H**	**N**	**R**	**S**	***Notes***
Green Mountain National Forest				√	√	√	59% of land in Pittsfield
Village Park/Town Common				√	√		
Softball field by Stanley Tools					√		
West Branch of Tweed River				√	√		
Veteran's Monument		√	√				

RCC Atlantic, Inc. d/b/a Unicel / The Federated Church of Rochester

WIRELESS COMMUNICATIONS FACILITY

TOWN OF ROCHESTER, VT

CONDITIONAL USE PERMIT APPLICATION

Prepared by Downs Rachlin Martin PLLC

Submitted March 25, 2008

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2438993.1

LYSSA PAPAZIAN

HISTORIC PRESERVATION CONSULTANT

13 DUSTY RIDGE ROAD ~ PUTNEY, VT 05346

PHONE/FAX: (802) 387-2878

papazian@myvermont.com

Ms. Jane Lendway, State Historic Preservation Officer
Vermont Division for Historic Preservation
National Life Building – Drawer 20
Montpelier, VT 05620-0501

March 13, 2008

Re: Proposed concealed communications antennas
Federated Church of Rochester
15 North Main Street, a.k.a. Route 100
Rochester, VT
Section 106 Review: Historic Preservation Report

Dear Ms. Lendway:

Introduction:

As the historic preservation consultant hired by the Rural Cellular Corp. (RCC) d.b.a RCC Atlantic, Inc., I have conducted a Section 106 Review for the above referenced undertaking. Under the terms of the National Environmental Protection Act (NEPA), RCC must comply with standards set forth in 36 C.F.R. 800, regulations established by the Advisory Council on Historic Preservation to implement Section 106 of the National Historic Preservation Act in order to obtain a license from the Federal Communications Commission (FCC).

The review has been conducted in order to identify the project's potential impacts to historic buildings and structures, historic districts, historic landscapes and settings and to known or potential archaeological resources. This report has been prepared to provide additional information about the historic status of the Federated Church of Rochester at 15 North Main Street on the village green in Rochester, Vermont and to determine the effect, if any, of the project on historic resources within the project's "Area of Potential Effect" (APE).

In the attached report : *"FCC FORM 621 ATTACHMENTS & SECTION 106 HISTORIC PRESERVATION REPORT for: Federated Church of Rochester: Cell Antenna Installation, 15 North Main Street, a.k.a. Route 100, Rochester, Vermont, 05767"* dated March 2008, I have reached the following conclusions:

Determination of Effect

Based on a site visit, a review of project plans and the files at VDHP, it is my determination that the proposed antenna installation will have **No Adverse Effect** on historic resources on or eligible for listing on the State or National Register of Historic Places.

Specifically, the proposed installation meets the Secretary of the Interior's Standards for Rehabilitation and therefore will have **No Direct Adverse Effect** on the Federated Church of Rochester.

In addition, the proposed installation will not be detectable to the public on the exterior and therefore will have **No Effect** on other surrounding historic properties in the APE for visual effects.

If the Vermont Division for Historic Preservation concurs with the determination of **No Adverse Effect**, please sign on the line provided below.

Sincerely,

Lyssa Papazian

If the Vermont Division for Historic Preservation concurs with the determination of No Effect, please sign on the line provided below.

State Historic Preservation Officer Date

Attachments: -FCC FORM 621

-*"FCC FORM 621 ATTACHMENTS & SECTION 106 HISTORIC PRESERVATION REPORT for: Federated Church of Rochester: Cell Antenna Installation, 15 North Main Street, a.k.a. Route 100, Rochester, Vermont, 05767"* dated March 2008

c: Timothy Richmond, Pyramid Network Services

LYSSA PAPAZIAN
HISTORIC PRESERVATION CONSULTANT
13 DUSTY RIDGE ROAD ~ PUTNEY, VT 05346
PHONE/FAX: (802) 387-2878
papazian@myvermont.com

Attachments:

-FCC Form 621

-"FCC FORM 621 ATTACHMENTS & SECTION 106 HISTORIC PRESERVATION REPORT for: Federated Church of Rochester: Cell Antenna Installation, 15 North Main Street, a.k.a. Route 100, Rochester, Vermont, 05767"

March 2008

Approved by OMB 3060-1039
Estimated Time Per Response:
.5 to 10 hours

FCC FORM 621

Collocation ("CO") Submission Packet

Introduction

The **CO Submission Packet** is to be completed by or on behalf of Applicants who wish to collocate an antenna or antennas on an existing communications tower or non-tower structure by or for the use of licensees of the Federal Communications Commission ("FCC").[1] **The Packet (including Form CO and attachments) is to be submitted to the State Historic Preservation Office ("SHPO") or to the Tribal Historic Preservation Office ("THPO"), as appropriate, before any construction orother installation activities on the site begin. Failure to provide the SubmissionPacket and complete the review process under Section 106 of the NationalHistoric Preservation Act ("NHPA")[2] prior to beginning construction or otherinstallation activities may violate Section 110(k) of the NHPA and the Commission's rules.**

The instructions below should be read in conjunction with, and not as a substitute for, the "Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission," dated September 2004, ("Nationwide Agreement"), the "Nationwide Programmatic Agreement for the Collocation of Wireless Antennas" ("Collocation Agreement"),[3] and the relevant rules of the FCC (47 C.F.R. §§ 1.1301-1.1319) and the Advisory Council on Historic Preservation ("ACHP") (36 C.F.R. Part 800).[4]

Exclusions and Scope of Use

The CO Submission Packet should be submitted only for those collocations that are subject to Section 106 review. The CO Submission Packet should not be

[1] A "communications tower" is a structure built for the sole or primary purpose of supporting FCC-licensed antennas and their associated facilities; other structures upon which antennas may be collocated are referred to as "non-tower structures."

[2] 16 U.S.C. § 470f.

[3] Nationwide Programmatic Agreement for the Collocation of Wireless Antennas, 16 FCC Rcd 5574, 5575-5581 (WTB: March 16, 2001)("Collocation Agreement"); see also Fact Sheet Regarding the Implementation of the Nationwide Programmatic Agreement with Respect to Collocating Wireless and Broadcast Facilities on Existing Towers and Structures, Notice, 67 Fed. Reg. 5282 (Feb. 5, 2002).

[4] Section II.A.9. of the Nationwide Agreement defines a "historic property" as: "Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or NHO that meet the National Register criteria."

submitted for collocations that have been excluded from Section 106 Review bythe Collocation Agreement or the Nationwide Agreement.

Where a collocation is to be completed but no submission will be made to a SHPO or THPO due to the applicability of one or more exclusions, the Applicant should retain in its files documentation of the basis for each exclusion should a question arise as to the Applicant's compliance with Section 106.

The CO Submission Packet is to be used only for the collocation of an antenna or antennas on an existing communications tower or a non-tower structure. New tower constructions that are subject to Section 106 review should be submitted using the New Tower ("NT") Submission Packet (FCC Form 620).

General Instructions: Form CO

Fill out the answers to Questions 1-5 and provide the requested attachments. Attachments should be numbered and provided in the order described below.

For ease of processing, provide the Applicant's Name, Applicant's Project Name, and Applicant's Project Number in the lower right hand corner of each page of Form CO and attachments.[5]

1. Applicant Information

Full Legal Name of Applicant: RCC dba Unicel Rural Cellular

Name and Title of Contact Person: Timothy S. Richmond , Pyramid Network Services
Address of Contact Person (including Zip Code):

302 Mountain View Dr., Suite 200, Colchester, VT 05446

Phone: (802) 654-5028 Fax: (802) 654-5119

E-mail address: trichmond@pyramidnetworkservices.com

2. Applicant's Consultant Information

Full Legal Name of Applicant's Section 106 Consulting Firm:

Lyssa Papazian, Historic Preservation Consultant

[6] Some attachments may contain photos or maps on which this information can not be provided.

Name of Principal Investigator: Lyssa Papazian

Title of Principal Investigator: Sole Proprietor, Historic Preservation Consulting

Investigator's Address: 13 Dusty Ridge Road

City: Putney State Vermont Zip Code 05346

Phone: (802) 387-2878 Fax: (802) 387-2878 (must call first)

E-mail Address: papazian@myvermont.com

Does the Principal Investigator satisfy the Secretary of the Interior's Professional Qualifications Standards? [6] YES / NO.

Areas in which the Principal Investigator meets the Secretary of the Interior's Professional Qualification Standards: history, architectural history

Other "Secretary of the Interior qualified" staff who worked on the Submissions Packet (provide name(s) as well as well as the area(s) in which they are qualified):

3. Collocation and Site Information

a. Street Address of Site: 15 North Main Street

City or Township: Rochester

County / Parish: Windsor State: Vermont Zip Code: 05767

b. Nearest Cross Roads: Park Street / Kirby Drive

The Professional Qualification Standards are available on the cultural resources webpage of the National Park Service, Department of the Interior: <http://www.cr.nps.gov/local-law/arch_stnds_9.htm>. The Nationwide Agreement requires use of Secretary-qualified professionals for identification and evaluation of historic properties within the APE for direct effects, and for assessment of effects. The Nationwide Agreement encourages, but does not require, use of Secretary-qualified professionals to identify historic properties within the APE for indirect effects. See Nationwide Agreement, §§ VI.D.1.d, VI.D.1.e, VI.D.2.b, VI.E.5.

Applicant's Name: RCC d/b/a Unicel
Project Name: Rochester
Project Number: VT 4112

c. NAD 83 Latitude/Longitude coordinates (to tenth of a second):

N 43° 52' 29.0"; W 72° 48' 31.6"

d. Tower or non-tower structure height above ground level, including proposed collocation:[7] 52 feet; 15.85 meters

e. Description of antennas to be collocated (e.g., type, number, shape, dimensions, color): Three antennas are proposed within the belfry behind RF transparent louvers, Model No: AP10-850/065D/XP

f. Approximate height of collocation above ground level: 46.5 feet; 14.17 meters; if antennas to be located on different levels, describe their placement.

g. Structure. This Form CO pertains to collocation of antenna(s) on: [ ] a communications tower or [X] a non-tower structure (check one). If a non-tower structure, briefly describe the structure:
Stealth installation in existing church steeple

h. If the antennas will be collocated on a communications tower, check the appropriate box:
☐ guyed lattice tower ☐ self-supporting lattice ☐ monopole

☐ other (briefly describe tower)

i. Structure Completion. Indicate the date that the existing communications tower or non-tower structure was built (date on which construction activities ended):
1949 with a small renovation to the front porch in 2001

j. Section 106 Review. Has the communications tower or non-tower structure been the subject of SHPO/THPO review pursuant to Section 106 of the National Historic Preservation Act? If so, identify the company that made the submission, the date it was submitted, and the SHPO/THPO reference number.

_____

k. Based on the Applicant's research (see Attachments 8 and 9), is the existing communications tower or non-tower structure listed or eligible for listing in the National Register?

☒ Yes ☐ No

[7] Include top-mounted attachments such as lightning rods.

Applicant's Name: RCC d/b/a Unicel
Project Name: Rochester
Project Number: VT 4112

4. Current Status of Collocation: [8]

a. [x] Construction and/or installation not yet commenced;
b. [ ] Construction and/or installation commenced on [date] _____; or,
c. [ ] Construction and/or installation commenced on [date] _____ and completed on [date] _____.

5. Applicant's Determination of Effect:

a. Direct Effects (check one):

i. [ ] No Historic Properties in Area of Potential Effects ("APE") for direct effects;

ii. [ ] "No effect" on Historic Properties in APE for direct effects;
iii. [X] "No adverse effect" on Historic Properties in APE for direct effects;
iv. [ ] "Adverse effect" on one or more Historic Properties in APE for direct effects.

b. Visual Effects (check one):

i. [ ] No Historic Properties in Area of Potential Effects ("APE") for visual effects;

ii. [X] "No effect" on Historic Properties in APE for visual effects;
iii. [ ] "No adverse effect" on Historic Properties in APE for visual effects;
iv. [ ] "Adverse effect" on one or more Historic Properties in APE for visual effects.

Failure to provide the Submission Packet and complete the review process under Section 106 of the NHPA prior to beginning construction or other installation activities may violate Section 110(k) of the NHPA and the Commission's rules. See Section X of the Nationwide Agreement.

Applicant's Name: RCC d/b/a Unicel
Project Name: Rochester
Project Number: VT 4112

FCC Form 621
January 2005

Certification and Signature

I certify that all representations on this Form CO (FCC Form 621) and the accompanying attachments are true, correct, and complete.

Signature/Date: March 6, 2008

Printed Name/Title: Lyssa Papazian, Historic Preservation Consultant

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1) AND/ OR FORFEITURE (U.S. Code, Title 47, Section 503).

Applicant's Name: RCC d/b/a Unicel
Project Name: Rochester
Project Number: VT 4112

LYSSA PAPAZIAN

HISTORIC PRESERVATION CONSULTANT

13 DUSTY RIDGE ROAD ~ PUTNEY, VT 05346

PHONE/FAX: (802) 387-2878

papazian@myvermont.com

FCC FORM 621 ATTACHMENTS &

SECTION 106 HISTORIC PRESERVATION REPORT for:

Federated Church of Rochester: Cell Antenna Installation
15 North Main Street, a.k.a. Route 100
Rochester, Vermont, 05767

March 2008

Contents

ATTACHEMNT 1: RESUMES/VITAE

Lyssa Papazian, Historic Preservation Consultant,
13 Dusty Ridge Road, Putney, Vermont, 05346
(802) 387-2878, papazian@myvermont.com

Lyssa Papazian has been working professionally in the field of historic preservation for the past sixteen years, first as a Senior Architectural Historian in the New Jersey State Historic Preservation Office and for the past ten years as a consultant in Vermont. She holds a master of science in Historic Preservation (MS, Univ. of Pennsylvania, 1992) and a bachelor's degree in Art and American studies from Brown University (AB, 1982). She meets the Secretary of the Interior's Professional Qualifications Standards for history and architectural history.

Her areas of expertise include industrial and agricultural history, documentation and research of historic properties, the Section 106 regulatory process, the rehabilitation of historic housing and the use of the historic tax credit, and National Register of Historic Places nominations. In addition to her regulatory role for the New Jersey SHPO, she has completed over 20 Section 106 and Act 250 review reports for project in Vermont as a consultant. Several of these have involved antenna installations. Ms. Papazian has also produced many historical publications including National Register nominations, exhibits, reports, and articles.

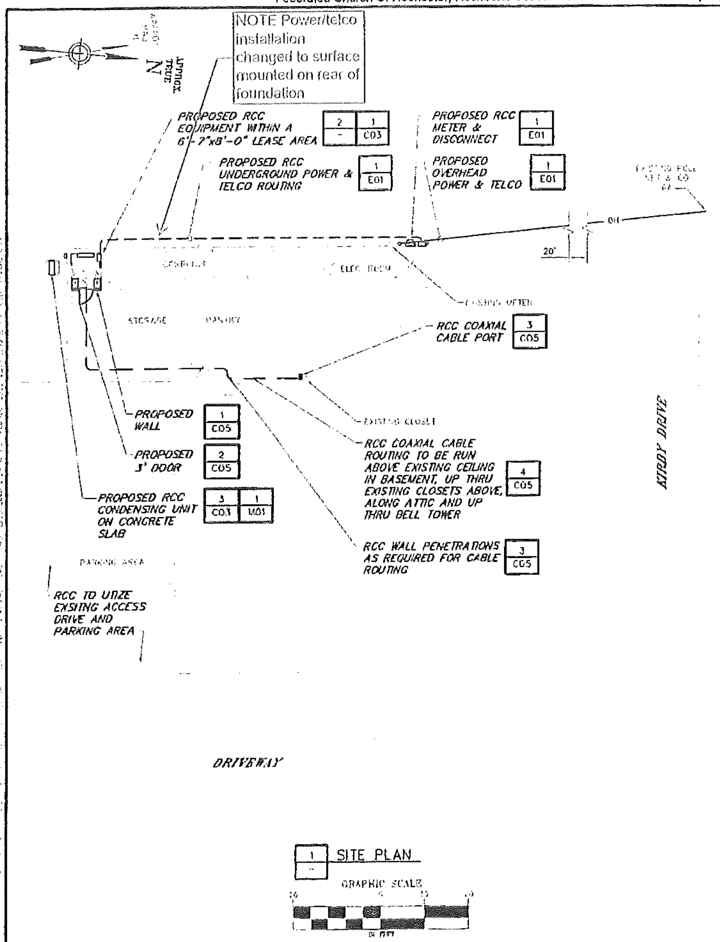
ATTACHMENT 2: ADDITIONAL SITE INFORMATION

Process

A field visit was conducted on February 5, 2008 to the proposed site: the Federated Church of Rochester and surrounding areas of Rochester village. The field visit also included some research on the history of Rochester and the church. The files of the Vermont Division for Historic Preservation and the Vermont Historical Society including the Vermont Historic Sites and Structures Survey and the list of National Register of Historic Places nominations were consulted to determine if sites listed in the State Register or National Register were located near the APE.

Project Description

RCC proposes to install three antennas in the belfry section of the Federated Church steeple. The antennas will be mounted on braces attached minimally to the existing steeple wood framing and concealed behind painted, transmissible Plexiglas louvers that will replace the existing painted wooden louvers in three (north, south, and east) of the belfry openings. One antenna will be concealed behind each of these louvered openings. A small, non-public section of the basement will be partitioned off as a small room to house the mechanical equipment. The coaxial cables between the equipment room and the antennas will be run vertically in a corner of the church steeple. Then the cables will run horizontally across the attic above the main sanctuary to an existing electrical chase near the rear of the church. The coaxial cable will then run vertically down through this chase, concealed within a small closet on the first floor in the rear meeting room behind the sanctuary. The coaxial cables will run through the floor of the closet into the basement where it will be run horizontally above the suspended ceiling in two finished sections of the rear ell basement to the equipment room near the southwest corner of the ell. A new electrical conduit will be surface mounted to the rear concrete foundation wall of the church in order to bring the power from the overhead lines and electrical boxes near the northwestern rear corner to the equipment room in the southwest corner. A small air conditioning condenser unit will be installed on a small, 3' by 3' by 6" concrete pad just outside the side door of the ell near the rear, southwest corner of the building. Except for this small exterior unit, the entire antenna, cable, and equipment installation will be in non-public or concealed areas. The belfry area, which cannot be seen from the exterior through the present louvers, will have the three antennas installed on braces as mentioned above. The screens in the openings will be replaced with transmissive screen materials and the wooden louvers will be replaced with louvers made out of transmissive material. These new louvers will match the existing in dimensions. The new louvers will then be painted carefully match the existing slightly distressed appearance of the louvers. These will be the only elements visible to the surrounding area. None of the antenna, cable or equipment cabinet installations will be visible on the exterior and only the a/c unit will be on the exterior in a very inconspicuous spot, not visible to the neighboring properties or street.



ECOE FOR GENERAL NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS TO ENSURE THAT WORK PROGRESSION IS NOT INTERRUPTED.

2. THE LOCATION OF ALL EXISTING FEATURES SHOWN ON THIS SET OF PLANS HAS BEEN DETERMINED FROM FIELD MEASUREMENTS AND PLANS PROVIDED TO CLOUGH HARBOUR & ASSOCIATES LLP. NO GUARANTEE IS MADE NOR SHOULD BE ASSUMED AS TO THE COMPLETENESS OR ACCURACY OF THE CURRENT HORIZONTAL OR VERTICAL LOCATIONS. ALL PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS OF THE INFORMATION SHOWN PRIOR TO CONSTRUCTION ACTIVITIES.

3. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED AND EACH OF THE DRAWINGS HAS BEEN REVISED TO INDICATE "ISSUED FOR CONSTRUCTION."

4. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A NEAT AND ORDERLY SITE, YARD AND GROUNDS. REMOVE AND LEGALLY DISPOSE OFF SITE ALL RUBBISH, WASTE MATERIALS, LITTER, AND ALL FOREIGN SUBSTANCES. REMOVE PETRO-CHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS TO A SMOOTH EVEN-TEXTURED SURFACE.

5. THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE.

6. THE CONTRACTOR SHALL RESTORE ALL PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD OF CONDITION AS BEFORE DISTURBED AS DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE.

7. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.

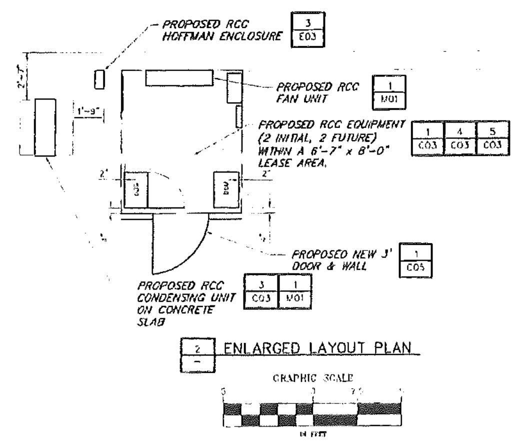
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES, ETC.

9. ALL UTILITY WORK INVOLVING CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY OWNER. NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY OWNER BEFORE EACH AND EVERY CONNECTION TO EXISTING SYSTEMS IS MADE.

10. CONTRACTOR IS TO SUPPLY COMBINATION LOCKS, PER RCC SPECIFICATIONS, IF APPLICABLE.

BASEMAP NOTES:

1. BASEMAP INFORMATION OBTAINED FROM A FEBRUARY 05, 2008 SITE VISIT PERFORMED BY CLOUGH HARBOUR & ASSOCIATES LLP, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.



RURAL CELLULAR CORPORATION
d/b/a UNICEL
302 Mountain View Drive
Colchester, VT 05446-1910

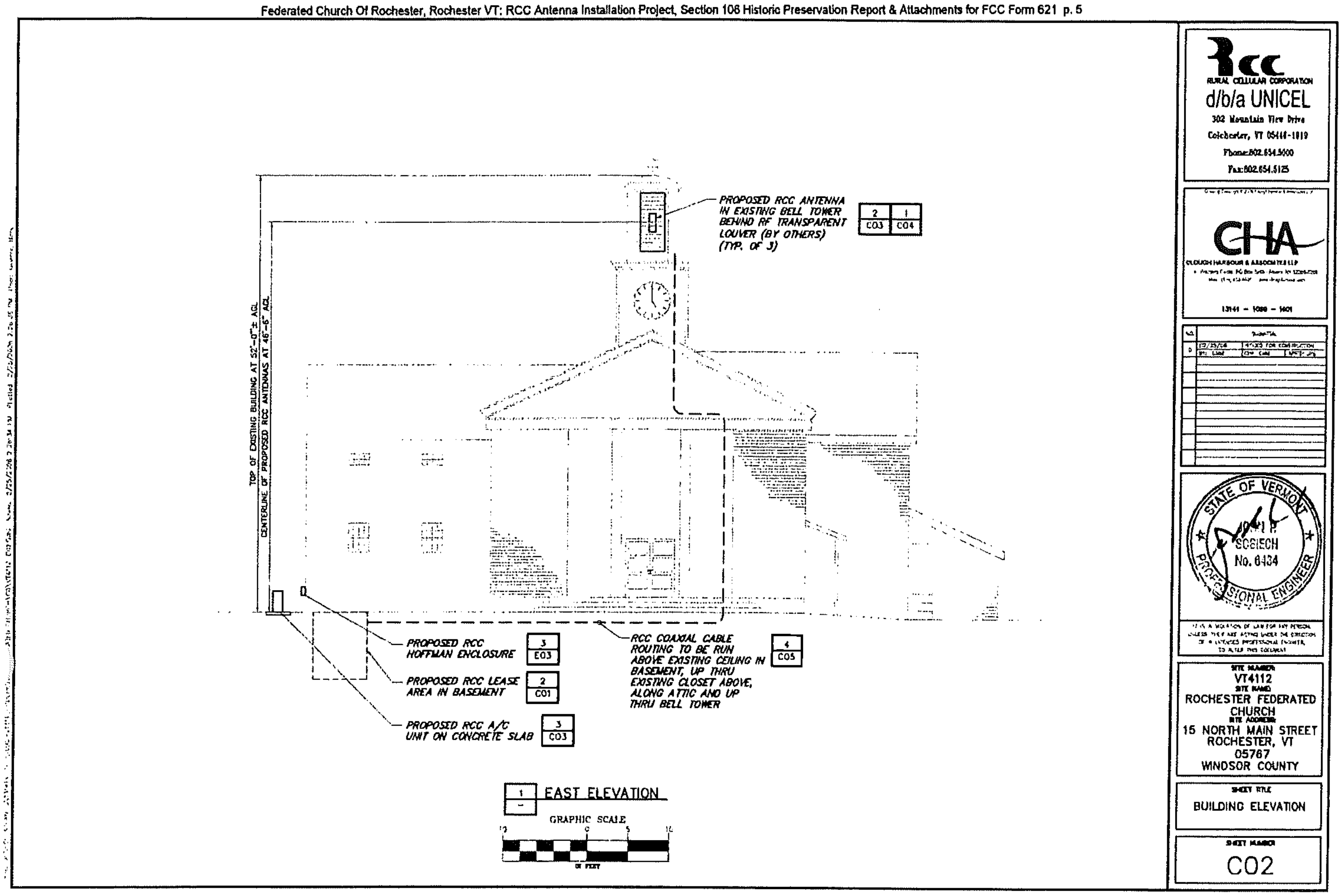
CHA

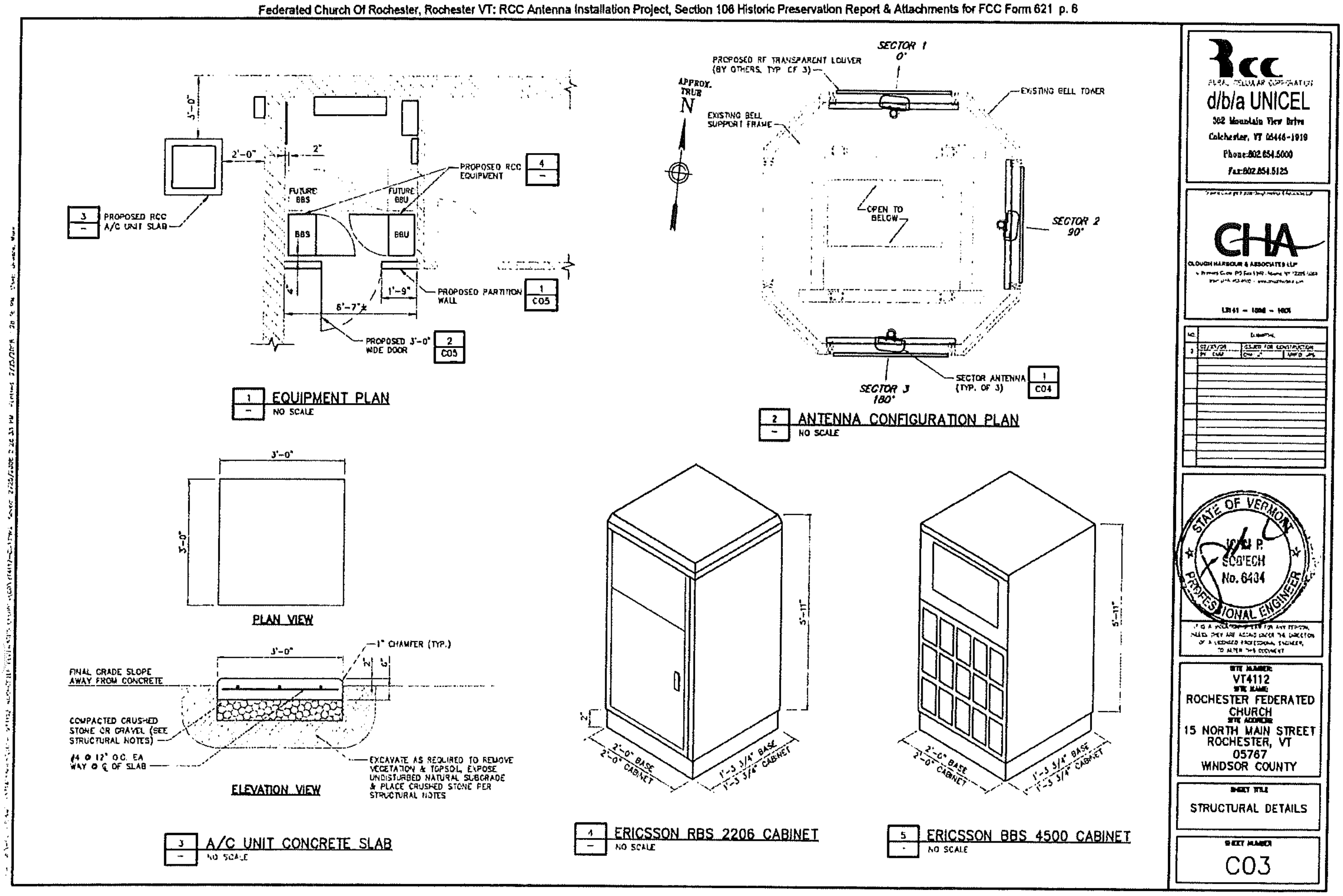
13144 – 1006 – 1601

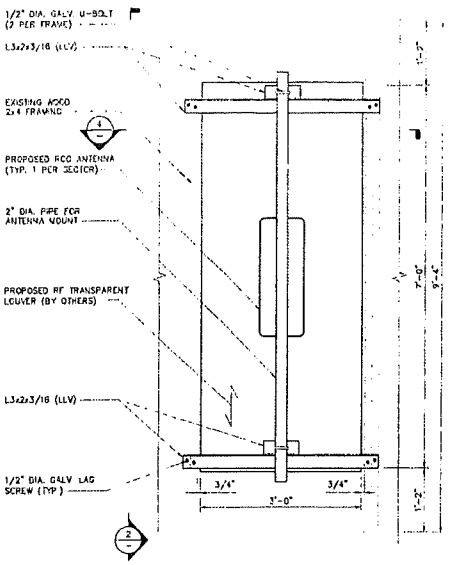
SITE NUMBER: VT4112
SITE NAME: ROCHESTER FEDERATED CHURCH
SITE ADDRESS: 15 NORTH MAIN STREET ROCHESTER, VT 05767 WINDSOR COUNTY

SHEET TITLE: SITE PLAN

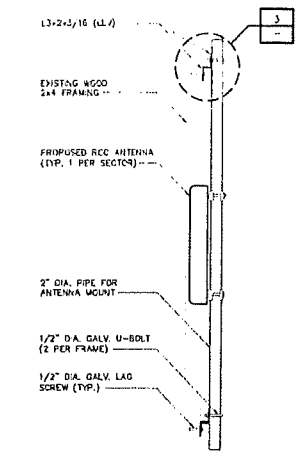
SHEET NUMBER: C01


PROPOSED RCC ANTENNA IN EXISTING BELL TOWER BEHIND RF TRANSPARENT LOUVER (BY OTHERS) (TYP. OF 3)
2 C03
1 C04
TOP OF EXISTING BUILDING AT 52'-0"± AGL
CENTERLINE OF PROPOSED RCC ANTENNAS AT 46'-6" AGL
PROPOSED RCC HOFFMAN ENCLOSURE
3 E03
PROPOSED RCC LEASE AREA IN BASEMENT
2 C01
PROPOSED RCC A/C UNIT ON CONCRETE SLAB
3 C03
RCC COAXIAL CABLE ROUTING TO BE RUN ABOVE EXISTING CEILING IN BASEMENT, UP THRU EXISTING CLOSET ABOVE, ALONG ATTIC AND UP THRU BELL TOWER
4 C05
1 EAST ELEVATION
GRAPHIC SCALE
RCC RURAL CELLULAR CORPORATION
d/b/a UNICEL
302 Mountain View Drive
Colchester, VT 05446-1819
Phone:802.654.5000
Fax:802.654.5125
CHA
CLOUGH HARBOUR & ASSOCIATES LLP
STATE OF VERMONT
No. 6434
PROFESSIONAL ENGINEER
SITE NUMBER
VT4112
SITE NAME
ROCHESTER FEDERATED CHURCH
SITE ADDRESS
15 NORTH MAIN STREET
ROCHESTER, VT
05767
WINDSOR COUNTY
SHEET TITLE
BUILDING ELEVATION
SHEET NUMBER
C02

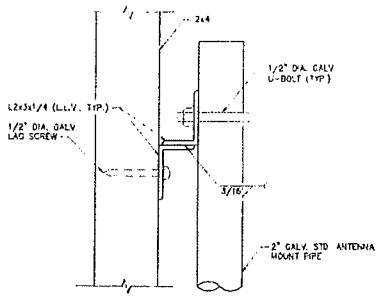

PROPOSED RCC EQUIPMENT
FUTURE BBS
FUTURE BBU
BBS
BBU
PROPOSED RCC A/C UNIT SLAB
PROPOSED PARTITION WALL
PROPOSED 3'-0" WIDE DOOR
1 EQUIPMENT PLAN
NO SCALE
SECTOR 1 0°
PROPOSED RF TRANSPARENT LOUVER (BY OTHERS, TYP. OF 3)
APPROX. TRUE N
EXISTING BELL TOWER
EXISTING BELL SUPPORT FRAME
OPEN TO BELOW
SECTOR 2 90°
SECTOR 3 180°
SECTOR ANTENNA (TYP. OF 3)
2 ANTENNA CONFIGURATION PLAN
NO SCALE
PLAN VIEW
FINAL GRADE SLOPE AWAY FROM CONCRETE
1" CHAMFER (TYP.)
COMPACTED CRUSHED STONE OR GRAVEL (SEE STRUCTURAL NOTES)
EXCAVATE AS REQUIRED TO REMOVE VEGETATION & TOPSOIL, EXPOSE UNDISTURBED NATURAL SUBGRADE & PLACE CRUSHED STONE PER STRUCTURAL NOTES
ELEVATION VIEW
3 A/C UNIT CONCRETE SLAB
NO SCALE
4 ERICSSON RBS 2206 CABINET
NO SCALE
5 ERICSSON BBS 4500 CABINET
NO SCALE
d/b/a UNICEL
302 Mountain View Drive
Colchester, VT 05446-1919
CHA
STATE OF VERMONT
PROFESSIONAL ENGINEER
No. 6434
VT4112
ROCHESTER FEDERATED CHURCH
15 NORTH MAIN STREET
ROCHESTER, VT
05767
WINDSOR COUNTY
STRUCTURAL DETAILS
C03



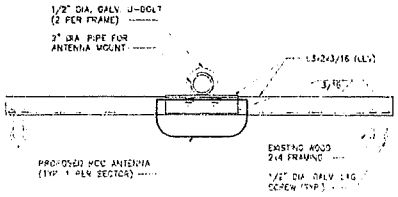
1 — ANTENNA FRAMING ELEVATION
NO SCALE



2 — ANTENNA FRAMING SECTION 1
NO SCALE



3 — ANTENNA MOUNT ATTACHMENT DETAIL
NO SCALE



4 — ANTENNA FRAMING SECTION 2
NO SCALE

RCC
d/b/a UNICEL
302 Mountain View Drive
Colchester, VT 05446-1919
Phone:802.654.5900
Fax:802.654.5125

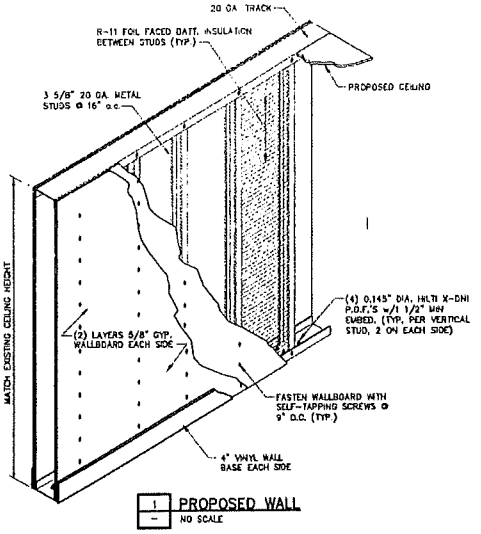
CHA
CLOUGH HARBOUR & ASSOCIATES LLP
13141 - 1098 - 1806

STATE OF VERMONT
JOSEPH SOBIECH
No. 6484
PROFESSIONAL ENGINEER

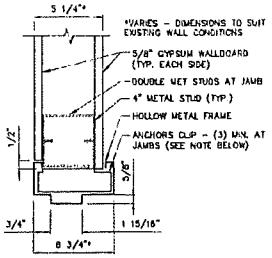
SITE NUMBER: VT4112
SITE NAME: ROCHESTER FEDERATED CHURCH
SITE ADDRESS: 15 NORTH MAIN STREET ROCHESTER, VT 05767 WINDSOR COUNTY

SHEET TITLE: STRUCTURAL DETAILS

SHEET NUMBER: C04



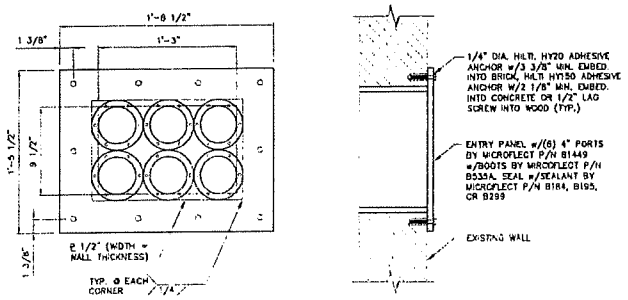
1 — PROPOSED WALL
NO SCALE



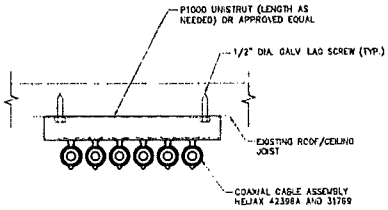
NOTE:
PROVIDE ANCHOR CLIPS AT HEAD FOR DOOR OPENINGS LARGER THAN 48" AS FOLLOWS:

3' TO 6'	1 AT MID POINT
6' TO 7'	2 AT 1/3 POINTS
7' AND LARGER	3 AT 1/4 POINTS

2 — DOOR JAMB (HEAD SIMILAR)
NO SCALE



3 — PORT PANEL DETAIL
NO SCALE



4 — CEILING MOUNTED COAXIAL CABLES
NO SCALE

RCC
d/b/a UNICEL
302 Mountain View Drive
Colchester, VT 05446-1919
Phone:802.654.5000
Fax:802.654.5125

CHA
GOUGH HARBOUR & ASSOCIATES LLP

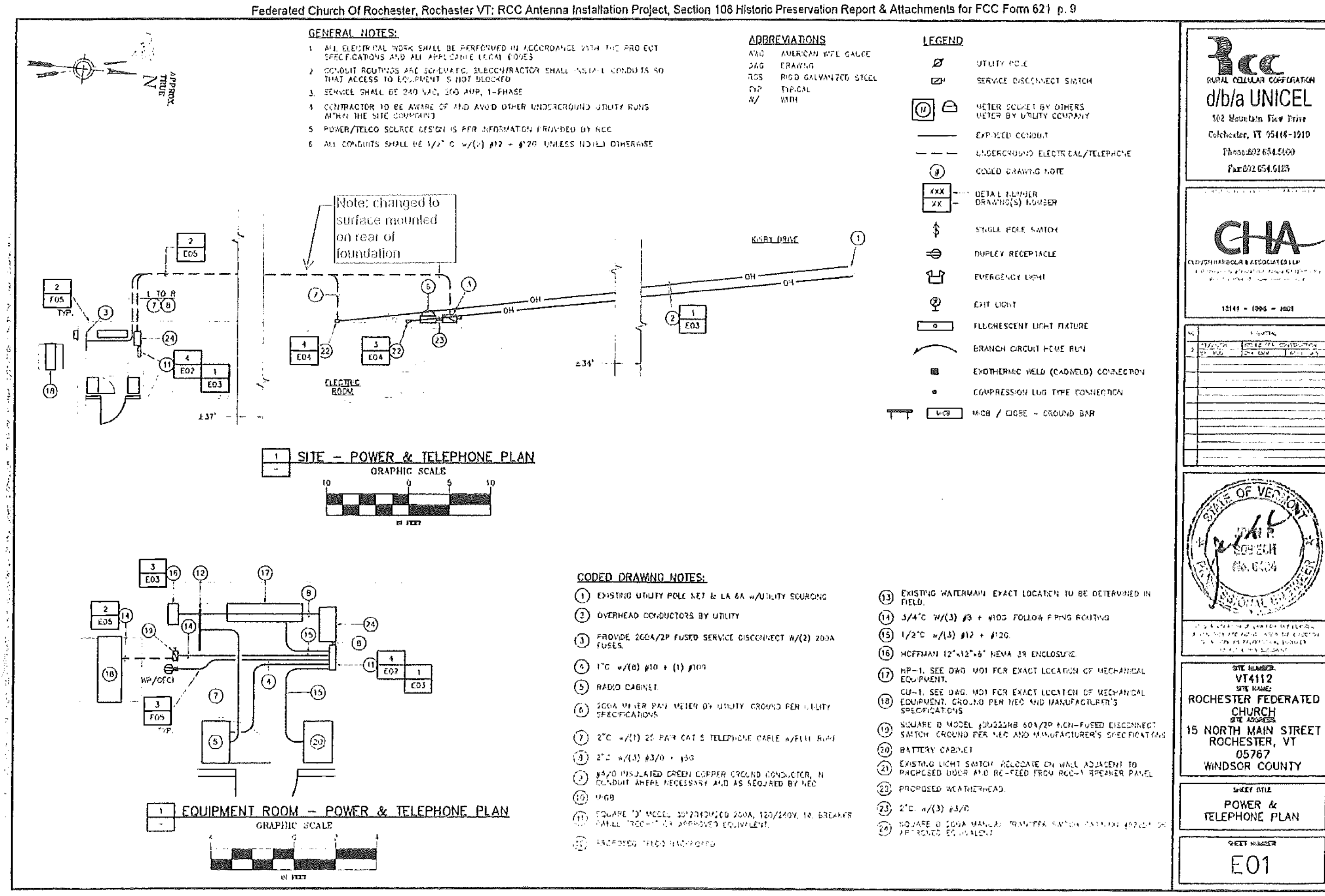
NO.	SUBMITTAL	
0	12/15/08	ISSUED FOR CONSTRUCTION
BY	CHK. BY	APP'D. BY

STATE OF VERMONT
JOHN R. SOZIECH
No. 6434
PROFESSIONAL ENGINEER

SITE NUMBER:
VT4112
SITE NAME:
ROCHESTER FEDERATED CHURCH
SITE ADDRESS:
15 NORTH MAIN STREET
ROCHESTER, VT
05767
WINDSOR COUNTY

SHEET TITLE
STRUCTURAL DETAILS

SHEET NUMBER
C05


GENERAL NOTES:
ABBREVIATIONS
AWG AMERICAN WIRE GAUGE
DWG DRAWING
RGS RIGID GALVANIZED STEEL
TYP TYPICAL
W/ WITH
LEGEND
UTILITY POLE
SERVICE DISCONNECT SWITCH
METER SOCKET BY OTHERS METER BY UTILITY COMPANY
EXPOSED CONDUIT
UNDERGROUND ELECTRICAL/TELEPHONE
CODED DRAWING NOTE
DETAIL NUMBER DRAWING(S) NUMBER
SINGLE POLE SWITCH
DUPLEX RECEPTACLE
EMERGENCY LIGHT
EXIT LIGHT
FLUORESCENT LIGHT FIXTURE
BRANCH CIRCUIT HOME RUN
EXOTHERMIC WELD (CADWELD) CONNECTION
COMPRESSION LUG TYPE CONNECTION
Note: changed to surface mounted on rear of foundation
KIRBY DRIVE
ELECTRIC ROOM
SITE – POWER & TELEPHONE PLAN
GRAPHIC SCALE
CODED DRAWING NOTES:
EQUIPMENT ROOM – POWER & TELEPHONE PLAN
GRAPHIC SCALE
RURAL CELLULAR CORPORATION
d/b/a UNICEL
CHA
VT4112
ROCHESTER FEDERATED CHURCH
15 NORTH MAIN STREET
ROCHESTER, VT
05767
WINDSOR COUNTY
POWER & TELEPHONE PLAN
E01

ATTACHMENT 3: TRIBAL AND NHO INVOLVEMENT

CLOUGH HARBOUR & ASSOCIATES LLP

February 19, 2008

Mr. Doug Harris
Narragansett Tribe
NITHPO
P.O. Box 350
Wyoming, RI 02898

RE: Rochester Federated Church Communications Facility
CHA Project No.: 13141.1096.1106
TCNS No.: 35824

Dear Mr. Harris:

On behalf of Rural Cellular Corporation d/b/a UNICEL, Clough Harbour & Associates LLP submitted a notification to the TCNS, which was forwarded to you on February 12, 2008 (TCNS ID#: 35824).

The proposed project entails the co-location of antennas in the existing bell tower of the Rochester Federated Church located at 15 North Main Street, Rochester, VT. The proposed equipment will be located in the basement. Other than a small A/C unit and the underground power and telco, no other disturbance outside of the existing building is proposed. The ground disturbance discussed above, is proposed directly adjacent to the existing building in areas that most likely would have been disturbed during the construction of the building.

We would like to request that you comment on any potential impacts to historic properties that your tribe may attach religious and cultural significance. A check for $500 has been enclosed to cover your review. Additionally, a location map, project plan, site photographs and directions to the site have been provided.

Should you have any questions please do not hesitate to contact me at (518) 453-8211 or nfrazer@cha-llp.com.

Very truly yours,

CLOUGH HARBOUR & ASSOCIATES LLP

Nicole E. Frazer
Environmental Scientist

Engineering | Architecture | Surveying | Landscape Architecture | Geospatial Information Technology
111 Winners Circle, P.O. Box 5269, Albany, NY 12205-0269
T 518.453.4500 • F 518.458.1735 • www.cloughharbour.com

azer, Nicole

m: towernotifyinfo@fcc.gov
t: Tuesday, February 12, 2008 3:51 PM
Frazer, Nicole
bject: Proposed Tower Structure Info - Email ID #1764476

ar Nicole E Frazer Mrs,

ank you for submitting a notification regarding your proposed structure via the Tower
nstruction Notification Application. Note that the FCC has assigned a unique
ification ID number for this proposed structure.
u will need to reference this Notification ID number when you update your project's
atus with us.
low are the details you provided for the tower you have proposed to construct:

Notification Received: 02/12/2008

Notification ID: 35824
Tower Owner Individual or Entity Name: Clough Harbour and Associates for RCC d/b/a
ICEL
Consultant Name: Nicole E Frazer Mrs
Street Address: Clough Harbour & Associates LLP
3 Winners Circle
City: Albany
State: NEW YORK
Zip Code: 12205
Phone: 518-453-8211
Email: nfrazer@cha-llp.com

Structure Type: B - Building
Latitude: 43 deg 52 min 28.9 sec N
Longitude: 72 deg 48 min 31.8 sec W
Location Description: 15 North Main Street
City: Rochester
State: VERMONT
County: WINDSOR
Ground Elevation: 298.7 meters
Support Structure: 15.8 meters above ground level
Overall Structure: 15.8 meters above ground level
Overall Height AMSL: 314.5 meters above mean sea level

, Nicole — **Frazer**

towernotifyinfo@fcc.gov
Friday, February 15, 2008 3:01 AM
Frazer, Nicole
kim.pristello@fcc.gov; diane.dupert@fcc.gov
NOTICE OF ORGANIZATION(S) WHICH WERE SENT PROPOSED TOWER CONSTRUCTION NOTIFICATION INFORMATION - Email ID #1767223

From:
Sent:
To:
Cc:
Subject

ir or Madam:

Dear S

you for using the Federal Communications Commission's (FCC) Tower Construction cation System (TCNS). The purpose of this electronic mail message is to inform you he following authorized persons were sent the information you provided through TCNS, relates to your proposed antenna structure. The information was forwarded by the FCC horized TCNS users by electronic mail and/or regular mail (letter).

Thank Notifi that t which to aut

s who have received the information that you provided include leaders or their ees of federally-recognized American Indian Tribes, including Alaska Native Villages ctively "Tribes"), Native Hawaiian Organizations (NHOs), and State Historic vation Officers (SHPOs). For your convenience in identifying the referenced Tribes making further contacts, the City and State of the Seat of Government for each and NHO, as well as the designated contact person, is included in the listing below. e that Tribes may have Section 106 cultural interests in ancestral homelands or locations that are far removed from their current Seat of Government. Pursuant to mmission's rules as set forth in the Nationwide Programmatic Agreement for Review of s on Historic Properties for Certain Undertakings Approved by the Federal ications Commission (NPA), all Tribes and NHOs listed below must be afforded a able opportunity to respond to this notification, consistent with the procedures set below, unless the proposed construction falls within an exclusion designated by the or NHO. (NPA, Section IV.F.4).

Person design (colle Preser and in Tribe We not other the Co Effect Commun reason forth Tribe

formation you provided was forwarded to the following Tribes and NHOs who have set geographic preferences on TCNS. If the information you provided relates to a ed antenna structure in the State of Alaska, the following list also includes Tribes d in the State of Alaska that have not specified their geographic preferences. For Tribes and NHOs, if the Tribe or NHO does not respond within a reasonable time, you make a reasonable effort at follow-up contact, unless the Tribe or NHO has agreed ferent procedures (NPA, Section IV.F.5). In the event such a Tribe or NHO does not d to a follow-up inquiry, or if a substantive or procedural disagreement arises n you and a Tribe or NHO, you must seek guidance from the Commission (NPA, Section These procedures are further set forth in the FCC's Declaratory Ruling released on r 6, 2005 (FCC 05-176).

The in their propos locate these should to dif respon betwee IV.G). Octobe

Tower Coordinator Sequahna Mars - Narragansett Indian Tribe - Wyoming, RI - onic mail and regular mail

1. Cel electr

formation you provided was also forwarded to the additional Tribes and NHOs listed These Tribes and NHOs have NOT set their geographic preferences on TCNS, and ore they are currently receiving tower notifications for the entire United States. ese Tribes and NHOs, you are required to use reasonable and good faith efforts to ine if the Tribe or NHO may attach religious and cultural significance to historic ies that may be affected by its proposed undertaking. Such efforts may include, but limited to, seeking information from the relevant SHPO or THPO, Indian Tribes, gencies, the U.S. Bureau of Indian Affairs, or, where applicable, any federal with land holdings within the state (NPA, Section IV.B). If after such reasonable d faith efforts, you determine that a Tribe or NHO may attach religious and l significance to historic properties in the area and the Tribe or NHO does not d to TCNS notification within a reasonable time, you should make a reasonable effort

The in below. theref For th determ proper are no state agency and go cultur respon

low up, and must seek guidance from the Commission in the event of continued non-se or in the event of a procedural or substantive disagreement. If you determine he Tribe or NHO is unlikely to attach religious and cultural significance to ic properties within the area, you do not need to take further action unless the or NHO indicates an interest in the proposed construction or other evidence of tial interest comes to your attention.	to fol respon that t histor Tribe potent
	None
formation you provided was also forwarded to the following SHPOs in the State in you propose to construct and neighboring States. The information was provided to SHPOs as a courtesy for their information and planning. You need make no effort at ime to follow up with any SHPO that does not respond to this notification. Prior to iction, you must provide the SHPO of the State in which you propose to construct (or ibal Historic Preservation Officer, if the project will be located on certain Tribal with a Submission Packet pursuant to Section VII.A of the NPA.	The in which these this t constr the Tr lands)
) Cara Metz - Massachusetts Historical Commission - Boston, MA - electronic mail	2. SHP
ity SHPO Brona Simon - Massachusetts Historical Commission - Boston, MA - electronic	3. Dep mail
ector/SHPO James McConaha - NH Division of Historical Resources - Concord, NH - onic mail	4. Dir electr
servation Planner Emily Paulus - NH Division of Historical Resources - Concord, NH - onic mail	5. Pre electr
ector Ruth L Pierpont - Bureau of Field Services, NY State Parks &* Hist. Pres. - ord, NY - electronic mail	6. Dir Waterf
ector Eric Gilbertson - Vermont Division for Historic Preservation - Montpelier, VT tronic mail	7. Dir - elec
sions* above set forth language provided by the Tribe, NHO, or SHPO. These ions may indicate types of tower notifications that the Tribe, NHO, or SHPO does not o review. TCNS automatically forwards all notifications to all Tribes, NHOs, and that have an expressed interest in the geographic area of a proposal, as well as and NHOs that have not limited their geographic areas of interest. However, if a al falls within a designated exclusion, you need not expect any response and need rsue any additional process with that Tribe, NHO, or SHPO. Exclusions may also set policies or procedures of a particular Tribe, NHO, or SHPO (for example, types of ation that a Tribe routinely requests, or a policy that no response within 30 days tes no interest in participating in pre-construction review).	*Exclu exclus wish t SHPOs Tribes propos not pu forth inform indica
are proposing to construct a facility in the State of Alaska, you should contact sion staff for guidance regarding your obligations in the event that Tribes do not d to this notification within a reasonable time.	If you Commis respon
be advised that the FCC cannot guarantee that the contact(s) listed above opened viewed an electronic or regular mail notification. The following information ng to the proposed tower was forwarded to the person(s) listed above:	Please and re relati
fication Received: 02/12/2008 fication ID: 35824 r Owner Individual or Entity Name: Clough Harbour and Associates for RCC d/b/a	Noti Noti Towe UNICEL

```
nt Name: Nicole E Frazer Mrs                                                  Consulta
ddress: Clough Harbour & Associates LLP                                       Street A
        3 Winners Circle
bany                                                                          City: Al
EW YORK                                                                       State: N
: 12205                                                                       Zip Code
18-453-8211                                                                   Phone: 5
frazer@cha-llp.com                                                            Email: n

e Type: B      - Building                                                     Structur
: 43 deg 52 min 28.9 sec N                                                    Latitude
e: 72 deg 48 min 31.8 sec W                                                   Longitud
 Description: 15 North Main Street                                            Location
chester                                                                       City: Ro
ERMONT                                                                        State: V
WINDSOR                                                                       County:
levation: 298.7 meters                                                        Ground E
Structure: 15.8 meters above ground level                                     Support
Structure: 15.8 meters above ground level                                     Overall
Height AMSL: 314.5 meters above mean sea level                                Overall

e any questions or comments regarding this notice, please contact the FCC using  If you hav
onic mail form located on the FCC's website at:                               the electr

eless.fcc.gov/outreach/notification/contact-fcc.html.                         http://wir

so call the FCC Support Center at (877) 480-3201 (TTY 717-338-2824). Hours are  You may al
. to 7:00 p.m. Eastern Time, Monday through Friday (except Federal holidays).  from 8 a.m
 quality service and ensure security, all telephone calls are recorded.       To provide

                                                                              Thank you,
mmunications Commission                                                       Federal Co
```

ATTACHMENT 4: LOCAL GOVERNMENT

The local zoning permit application was filed on March 5, 2008.

ATTACHMENT 5: PUBLIC INVOLVEMENT

The following public notice ad was run in the local paper, the Rutland Herald on 3/7/08:

> "RCC d/b/a UNICEL proposes the co-location of antennas and associated equipment on an existing building located at 15 North Main Street, Rochester, VT. Clough Harbour & Associates LLP (CHA) on behalf of RCC d/b/a UNICEL invites comments from any interested party regarding the potential effects of the project on historic properties. Comments may be sent to CHA, Attn: Nicole Frazer, III Winners Circle, Albany, NY 12205, (518) 453-8211 or nfrazer@cha-llp.com. Comments must be received by April 7, 2008."

ATTACHMENT 6: ADDITIONAL CONSULTING PARTIES

The documentation has been prepared by a Vermont historic preservation professional. No additional consulting parties have participated to date.

ATTACHMENT 7: AREA OF POTENTIAL EFFECT

A. Area of Potential Effect for Direct Effects

Due to the limited nature of the proposal, the Area of Potential Effect (APE) for direct effects is determined to be the Federated Church of Rochester itself.

B. Area of Potential Effect for Visual Effects

The APE for visual effects is defined as "the geographic area in which the Undertaking has the potential to introduce visual elements that diminish or alter the setting, including the landscape, where the setting is a character-defining feature of a Historic Property that makes it eligible for listing on the National Register."[1]

Due to the limited nature of the proposal as a "stealth" style antenna installation involving only the in-kind replacement of louvers on the exterior and a small a/c condenser unit near the rear of the church, the APE for visual effects is determined to be the immediate area around the church from which the stealth louver installation can be well seen – across Route 100/Main Street, the Rochester Green, and approximately 50 yards to the north and south along Main Street and to the east on Park Street. (See Sketch Map in Attachment 12, p.42)

[1] Paragraph VI.C.3, *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communication Commission,* [September 2004, FCC 04-222]

ATTACHMENT 8: HISTORIC PROPERTIES IDENTIFIED IN THE APE FOR VISUAL EFFECTS

Rochester Village Green Historic District
[see Attachment 11 for photographs]

The Federated Church of Rochester is sited at the northeastern corner of the large village green that defines the downtown area of Rochester. The formal green is lined with nineteenth and early twentieth century homes and institutions and there is an 1868 Civil War Monument in the center.

The green and immediately surrounding properties are within the Rochester Village Green Historic District (Historic Sites & Structures Survey [HSSS] #1415-1) that was listed on the State Register of Historic Places in 1977 and is eligible for listing on the National Register.

The district includes properties fronting along the green on Main Street/Route 100, Park Street, East Park Street, South Park Street, and in addition three properties adjacent to the green on Bethel Mountain Road. Aside from the modern intrusions of the late 20th century post office on Park Street and a small commercial telephone company building on South Park Street, the district is still wonderfully intact and retains enough integrity to be listed on the National Register of Historic Places. The HSSS form's "Statement of Significance" reads:

> *"The Rochester Village Green Historic District is the historic center of the village of Rochester and represents an architecturally unified and cohesive grouping of essentially wood frame domestic and quasi-public buildings surround a square, tree-covered common. The environment of the Historic District is significant not only for its unified architectural character but also for its uncluttered spaciousness. The Historic District is extended on the east along Bethel Mountain Road to include the 1816 brick schoolhouse.*
>
> ...
>
> *Some of the architectural qualities and elements which constitute the unified and cohesive architectural character of the Historic District are: the essentially uniform scale of the predominantly 2 ½-story, wood frame buildings which surround the park, the predominance of wood-frame construction, the predominant use of white paint instead of a variety of disunifying colors, and the porches which are the principle and dominating architectural element on the front elevation of most of the houses around the park and which are universally constructed out of turned component parts."*

The eligible district includes properties on Main Street (Route 100), Park Street, Bethel Mountain Road, Huntington Lane (formerly East Park Street), and Park Row (formerly South Park Street). Although this district focuses on the Rochester Village Green, it could also be extended north and south along Route 100 to include more intact 19th century architecture comprising the rest of the downtown of the village. To the north on Main Street are two

previously surveyed properties (HSSS #s 1415-13 & 1415-14) which also are individually listed on the state register.

The individual properties nearest the church and within the APE for visual effects are:

2*. HSSS 1415-1, Property #2, Cooper-Webber House, 6 South Main Street, Rochester, Vermont, 05767
Described in the survey as "1833, A 2 ½ story, wood frame, Federal style house with a center chimney first floor plan but with, originally, symmetrically paired interior chimney stacks. American eagles with 25 stars above their heads are stenciled on the hall walls. The house was erected by Josiah Phelps."

3. HSSS 1415-1, Property #3, Old Universalist Church/ Town Library, 22 South Main Street, Rochester, Vermont, 05767
Described in the survey as "1852, Originally the Universalist Church, the building was purchased by the town in 1937 to be used for a town library. Originally there was a bell tower attached to the northeast corner of the front (east) elevation." An old photograph, Fig. 1., shows that the building was originally a Greek Revival single story church with a tower. Presently it has no tower and the tall one story Greek Revival building was raised up a floor on a shingled wood frame base with a wide center double leaf door under a simple transom. The Greek Revival style pilasters and flush boarded pediment of the original are still extant on the second story and gable.

4. HSSS 1415-1, Property #4, Pierce Hall, 38 South Main Street, Rochester, Vermont, 05767
Described in the survey as "1916, Pierce hall was erected by Julia Pierce to be used for public meetings and as a community center. Even though the building is architecturally out of character with the other buildings surrounding the park, Pierce Hall is a prominent landmark on the park and an important historic resource." The simple, brick, two-story, Colonial Revival style building has a hipped roof and front entry porch extended further to the front by a porte cochere. The one-over-one light sash windows are paired in symmetrical fenestration. The cornice is embellished with dentils on the main block, porch and porte cochere. The basement and porch supports are rusticated stone or concrete. A stone plaque is centered over the door inscribed with "Pierce Memorial" and under it another advertising its second use as a Masonic Hall. According to the Pierce community Center web site, the building was original designed by local architect Charles Kinsman.[2] Early photographs show that it originally had a short central tower – now gone.

5. HSSS 1415-1, Property #5, House, 42 South Main Street, Rochester, Vermont, 05767
Described in the survey as "A 1 ½ story, wood frame, vernacular, Greek Revival style house with a front gable elevation. A one story porch on the front gable elevation constructed out of turned components and brackets." This c. 1850 house no longer has a front porch but instead a simple stoop in front of the side entry door in a paneled recess and also has peaked window and door lintels.

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[2] http://www.piercehall.org/index2.html

6. HSSS 1415-1, Property #8, Park House (formerly Rochester Inn), 16 Park Row & Main Street, Rochester, Vermont, 05767
Described in the survey as "1914, An excellent example of vernacular Shingle style architecture. Erected by Julia Pierce, the Rochester Inn was, originally, a private dwelling." The large 3-story wood frame house has a mansard roof embellished by an intersecting three story projecting bay window pavilion on the north façade. The building has a deep, one story porch that wraps around both street facades and is supported on Ionic style wood columns. According to the local village center designation map, the building is now a multi-unit dwelling. The website for Park House identifies that it is now "shared living for seniors."[3] The building is still architecturally intact.

7. HSSS 1415-1, Property #24, Rochester Village Green & Civil War Monument, Main Street/Park Street/South Park Street/East Park Street, Rochester, Vermont, 05767
The land for a town common was donated to the Rochester proprietors as a four acre parcel in 1786 by Ebenezer Burnham. A meeting house was erected there in 1792. The common has remained an open and public green ever since. A Civil War Monument was erected in the center of the green between 1867 and 1868 and is described in the survey as "... the first Civil War monument erected in the United States of America." The open park with tall shade trees and a gazebo is still intact.

8. HSSS 1415-1, Property #23, Mobil Mini-Mart/Skip Mart (formerly Texaco Garage), 12 North Main Street, Rochester, Vermont, 05767
Described in the survey as a "1920-30" garage. This wood frame service station, now converted to a mini-mart appears to have been re-sided and altered. The main block has large windows on the side façade that may have once been service bays. There is a large projecting gable forming a porte cochere over the main entrance. It still appears to have the massing of early 20th century service station.

9. HSSS 1415-1, Property #22, U.S. Post Office, 46 Park Street, Rochester, Vermont, 05767
Described in the survey as a modern intrusion. This c. 1960-70 modern one story wood frame building has a gable front façade clad in brick on the first floor with a recessed entrance porch on one side. It is not historic.

10. HSSS 1415-1, Property #21, House, Park Street, Rochester, Vermont, 05767
Described in the survey as "A 2 ½ story, wood frame, vernacular Shingle style house with a gambrel roof. A one story porch on the front (south) elevation." This house appears still intact and is set back from Park Street.

11. HSSS 1415-1, Property #20, House, 1 Park Street, Rochester Vermont, 05767
Described in the survey as "c. 1880; A 2 ½ story, wood frame, Italianate Revival style house with a front gable elevation. Bracketed cornice; double, round headed windows and a hood supported by brackets on the front gable elevation; and a one story porch on the wing constructed

[3] http://parkhousevt.org/

out of turned components and brackets." The building is still architecturally intact and now houses Inner Traditions Publishing Co. offices.

12. HSSS 1415-1, Property # 19, Federated Church Parsonage, Huntington Place (Corner Bethel Mtn. Rd), Rochester Vermont, 05767
Described in the survey as "c. 1825; A 2 ½ story, wood frame, I-house. A one story porch on the ell constructed out of turned components and brackets. Barn."

13. HSSS 1415-1, Property #16, House, Bethel Mountain Road, Rochester Vermont, 05767
Described in the survey as "c. 1850; A 1 ½ story, wood frame house with a front gable elevation."

14. Seasoned Books & Kristina's Kitchen 30 North Main Street/Route 100, Rochester, Vermont, 05767
This c. 1840-1860, 1 ½ story, wood frame vernacular Greek Revival style house has a later 19th century gable screen and front entry porch embellished with turned components, a valence screen and elaborate brackets. The simple open eaves have long thin cornice returns on the front gable elevation. The windows have peaked lintels and the side door entry is in a paneled recess. The house is very similar in massing and style to the neighboring property, 42 North Main Street. Both appear on the 1869 Beers Atlas.

15. BCK Real Estate/ Susan Disbrow Attorney Offices, 42 North Main Street/Route 100, Rochester, Vermont, 05767
This c. 1840-1860, 1 ½ story, wood frame, vernacular Greek Revival style house has a later 19th century gable screen and c. 1910 Colonial revival style front porch. The simple open eaves have long thin cornice returns on the front gable elevation. The windows have plain lintels and the side door entry is in a paneled recess. The house, now clad in vinyl clapboards, is very similar in massing and style to the neighboring property, 30 North Main Street. Both appear on the 1869 Beers Atlas.

16. HSSS # 1415-14, Campbell & Greeley Hardware Company (Rochester Hardware), North Main Street, Rochester, Vermont, 05767
Described in the survey as "An excellent example of a late nineteenth century commercial building." This c. 1890 Italianate style building has an entablature which paired, scroll sawn cornice brackets that returns around the building. There is a second story balcony porch across half of the front (east) elevation with turned components. The original recessed storefront has been enclosed within a first floor projecting porch. The front façade has elaborate, molded and bracketed projecting window lintels.

17. HSSS # 1415-13, Trask Block (formerly Hunt's Variety Store), 61 North Main Street/Route 100, Rochester, Vermont, 05767
Described in the survey as "An excellent example of a late nineteenth century commercial building. The original store fronts are extant." This c. 1880 Italianate style building has a dentilated and paneled entablature which returns around the building as well as a bracketed

cornice with drop pendants. The storefronts have a modillion cornice supported by end brackets and mullions in the form of pilasters. The front façade has elaborate, bracketed projecting window lintels. The building now houses the Rochester Café and Judy Jensen Clay Studio.

18. The Porch/Occasions Catering/Nordic Adventures, 13 School Street at North Main St., Rochester, Vermont, 05767
This 2 ½ story, wood frame, c. 1880 Italianate Style house has Victorian embellishments including a wrap-around porch using turnings, spindles and brackets. The open eaves have scroll sawn brackets and the windows have peaked molded lintels. There is a gable dormer and a one story bay window on the side (south) elevation and the side entry front door on the gable front façade has sidelights.

*** Sketch map in Attachment 12 (p. 42) indicates location of these properties by numbers 2-18.**

ATTACHMENT 9: HISTORIC PROPERTIES IDENTIFIED IN THE APE FOR DIRECT EFFECTS

1*. HSSS 1415-1, Property #1, The Federated Church of Rochester, 15 North Main Street, Rochester, Vermont, 05767
[see Attachment 11 for additional photographs]

The Federated Church of Rochester, the site of the proposed antennas, was built in 1949 replacing the 1813 Congregational Church which had previously burned on the same spot. The present church was designed by the Burlington and Rutland firm, Freeman, French & Freeman and has many authentic features and design elements of Federal style churches in Vermont.

The church has been identified as a building in the Rochester Village Green Historic District. This district was identified in the 1973 Historic Sites & Structures Survey and was listed on the State Register of Historic Places in 1977. Despite the fact that it was not even 30 years old at the time of the survey, it was included as an outstanding building. It is now over 50 years old and would clearly contribute to the district as a local landmark and excellent example of Colonial Revival architecture. The church sits prominently on a rise overlooking the northeast corner of the main village green at the intersection of Main Street/Route 100 and Park Street.

The high 2-story Greek Revival/Colonial Revival Style gable front church has a monumental recessed entry porch with square columns topped by the main pedimented roof gable. Centered on the asphalt-shingled roof is a two-stage steeple with a square base containing a clock on the front façade and similar circle moldings on the other three faces and topped by a deep molded cornice. Above this is the louvered smaller, octagonal belfry section topped by a shallow rounded metal roof. The main sanctuary is a two story high space with five large multi-pane windows on either side. The church is clad in vinyl clapboards over the original wooden siding. There is a large, 2-story rear ell projecting to the south with another entrance off the south gable façade. A broadly curving drive frames the short hill in front of the church. The recessed entry porch was adapted in 2001 to accommodate a ramp through the north projecting section of the main block. This may also have been when the vinyl siding was applied.

The design of the church is based loosely on that of its 1813 predecessor. Originally the sanctuary was a high space with galleries on three sides and a large Palladian window behind the raised pulpit. The building gained a tall domed steeple in 1825 when it was given a bell and was remodeled further in 1849 to become a two story space with removal of the galleries and insertion of a second floor. The sanctuary was above and the first floor was leased for a town meeting room.

The book, *Rochester Remembers 1781-1981,* edited by Earl N. & Mary O. Davis [1981: Randolph, VT] has several historic views that illustrate the evolution of the Federated Church of Rochester.

As can just be seen in an early 1868 photograph of the village (at right) the church after 1849 had a monumental Greek Revival style entry portico, low first floor with windows and a high second floor with tall windows and the elaborate and substantial centered steeple. The 1825 steeple was of an elegant three-stage design with a square base, open, arched belfry, octagonal top section with louvered arched openings and a high, narrow domed roof and finial.

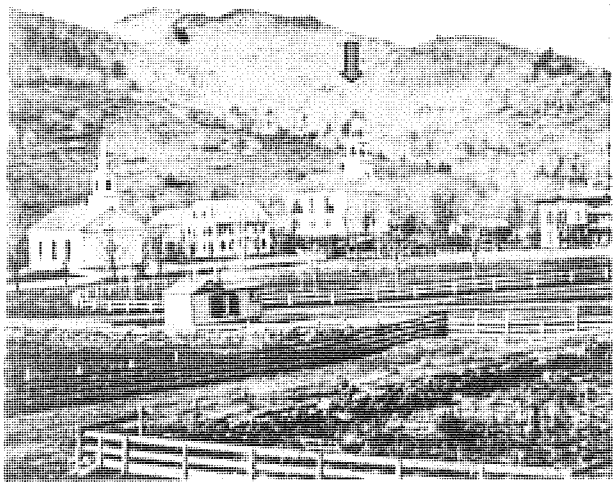
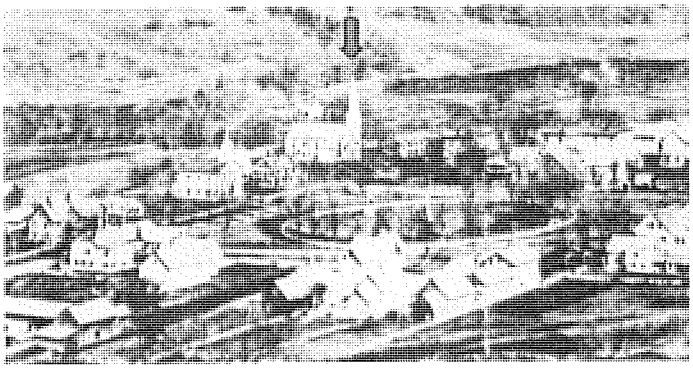


Fig. 1. 1868 photograph from Rochester Remembers



In 1895, the old belfry was taken down and a taller, more elaborate steeple built on the north front corner of the church. As seen in the c. 1895 photograph at left, the newer 108' steeple was pointed and asymmetrical to the church.

Fig. 2. c. 1895 photograph from Rochester Remembers

This church burned in 1943 and was replaced by the present building in 1949. The design of the replacement was clearly meant to hearken back to an earlier version of the church. The Freeman, French, Freeman design, seen in the photograph at right when it was new, uses a monumental pediment and front portico, a single level high sanctuary rather than two floors, and has a simplified version of the centered 1825 steeple.

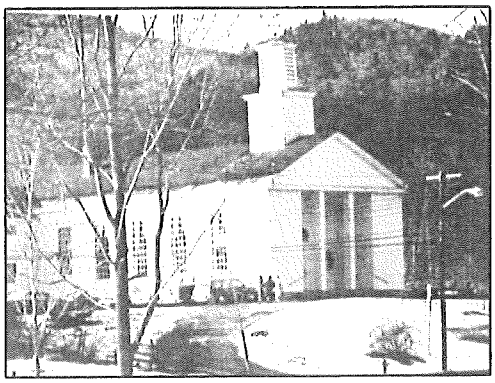
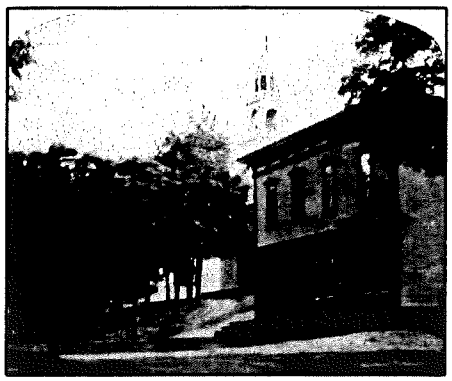


Fig. 3 c. 1950 photograph from Rochester Remembers



Figs. 4 & 5. Then & now: At left a c.1880-1890 historic view, courtesy Vermont Historical Society, at right the same view in 2008 of the Freeman, French, Freeman design

On the interior, the church has an entry vestibule with a canted ceiling from the balcony above it from which doors open into the sanctuary directly. There is a staircase with a graceful curving Federal style railing on the south from the vestibule to access the balcony. The walls of the vestibule are plain with simple moldings and paneled doors.
The Colonial Revival style main sanctuary echoes the interior of many simple Federal style churches with a solid flush board wainscoting, molded window and door surrounds, paneled pews and half walls surrounding the pulpit/altar dais that is also accented by simple pilasters. The pews were in fact brought from an old church in Massachusetts. The large open room is well lit by the large multi-light windows on either side.

The balcony area is directly above the vestibule and has plain walls and a tiered floor with pews and a solid broad balustrade. In the northeast corner of the balcony there is door to a storage closet with also contains the ladder to the attic and steeple. Both the attic and steeple are unfinished spaces with simple ladders and just enough flooring to access them. The belfry level is accessed through a hatch and is exterior space with a large cast bronze bell, labeled "Clinton H. Meneely Bell Company, Troy, N.Y., U.S.A. A.D. 1887." There are light screens on the interior of the louvered openings and a set of four speakers mounted to the ceiling of the belfry.

In 1973, the church was identified as contributing property #1 to the Rochester Village Green Historic District (Historic Sites & Structures Survey [HSSS] #1415-1) that was listed on the State Register of Historic Places in 1977. It also appears to be eligible for listing on the National Register of Historic Places as a contributing building and local landmark in the still-eligible historic district and could also qualify for listing individually under the "Religious Buildings, Sites and Structures in Vermont" multiple property documentation form.

*** Sketch map in Attachment 12 (p.42) indicates location of this property by number [1].**

ATTACHMENT 10: EFFECTS ON IDENTIFIED PROPERTIES

a. Assessment of Effects

Direct Effects

Based on a site visit, a review of project plans (in Attachment 2) and the files at VDHP, it is my determination that the proposed antenna installation will have **No Direct Adverse Effect** on historic resources on or eligible for listing on the State or National Register of Historic Places.

Effects to the Federated Church of Rochester

While the Federated Church of Rochester (#1) is an historic resource, the proposed installation will be almost entirely interior and will avoid all public areas. There are only two exterior elements. The main exterior elements – the new louvers – will match the existing in appearance including the painted finish (slightly distressed if appropriate). The other is a small a/c condenser unit installation in a very inconspicuous spot at the rear of the site, not visible to the neighboring properties or street.

The proposed installation meets the Secretary of the Interior's Standards for Rehabilitation and therefore will have **No Direct Adverse Effect** on the historic church.

Visual Effects

Based on a site visit, a review of project plans and the files at VDHP, it is my determination that the proposed antenna installation will have **No Visual Effect** on historic resources on or eligible for listing on the State or National Register of Historic Places.

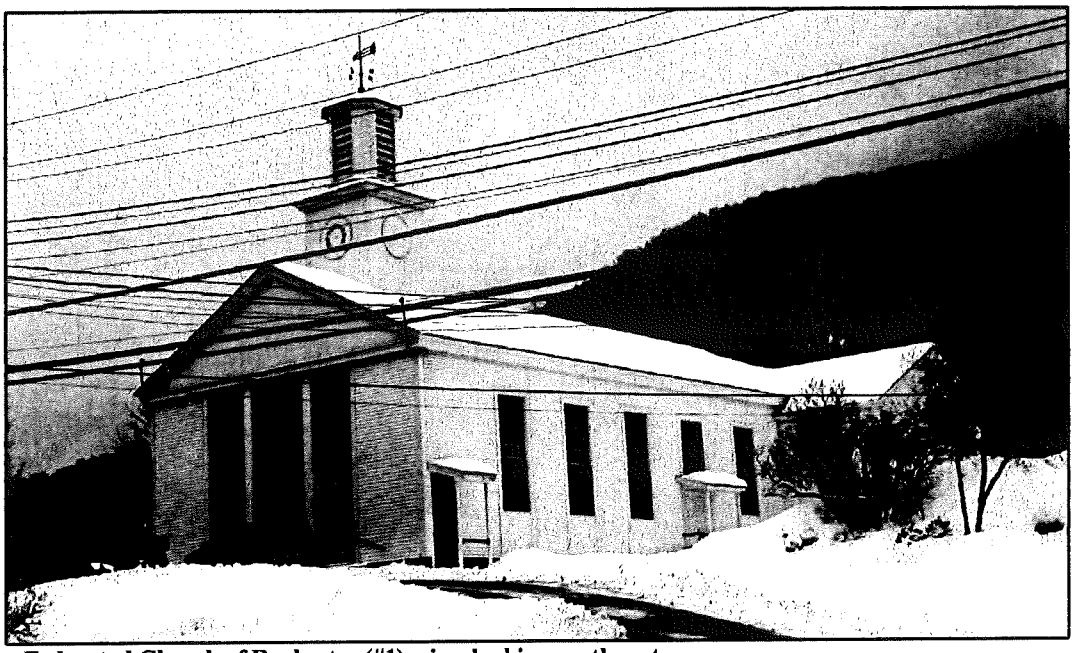
Effects to the Resources in the Visual APE

The concealed nature of the installation, the very small exterior a/c condenser unit placed inconspicuously at the rear of the site, and the matching new louvers means that the installation will not be detectable from the public exterior so there would be **No Visual Effect** on the surrounding eligible Rochester Village Green Historic District (#s 2-13) and its potential extension to the north on Main Street (#s 14-18) including the Campbell & Greeley Hardware Building (#16) and the Trask Block (#17).

b. Correspondence with the SHPO

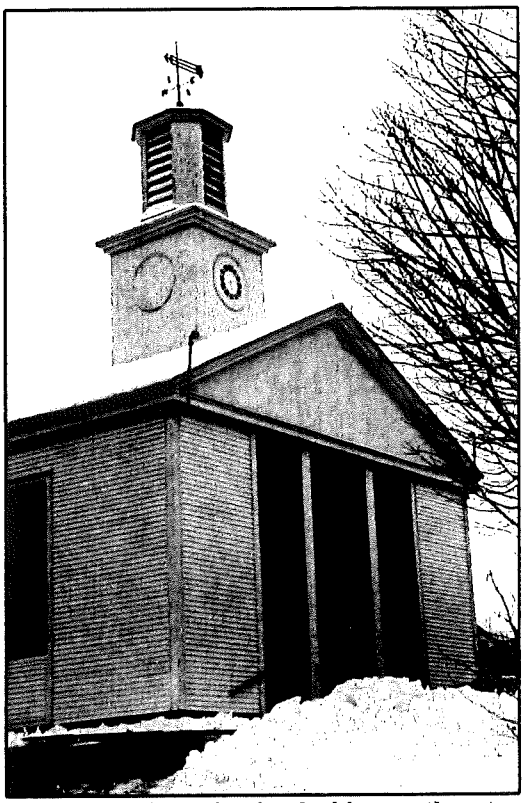
There has been no correspondence with the SHPO to date

ATTACHMENT 11: PHOTOGRAPHS

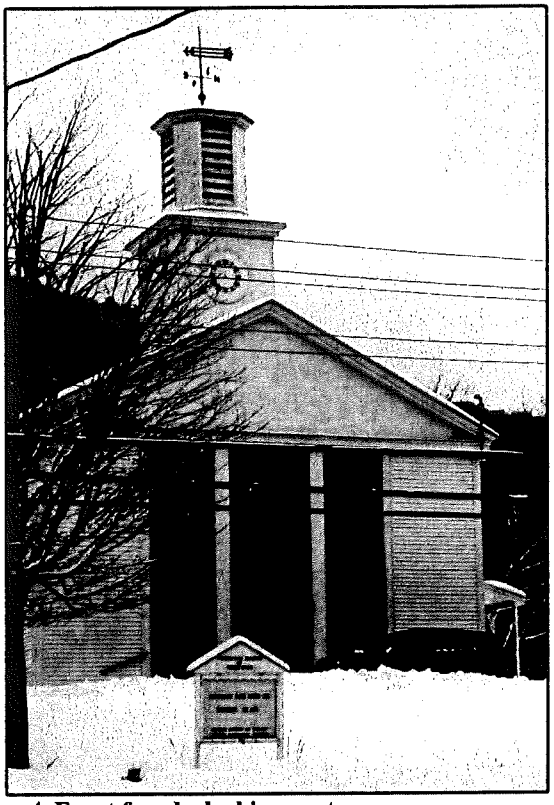


1. Federated Church of Rochester (#1), view looking southwest

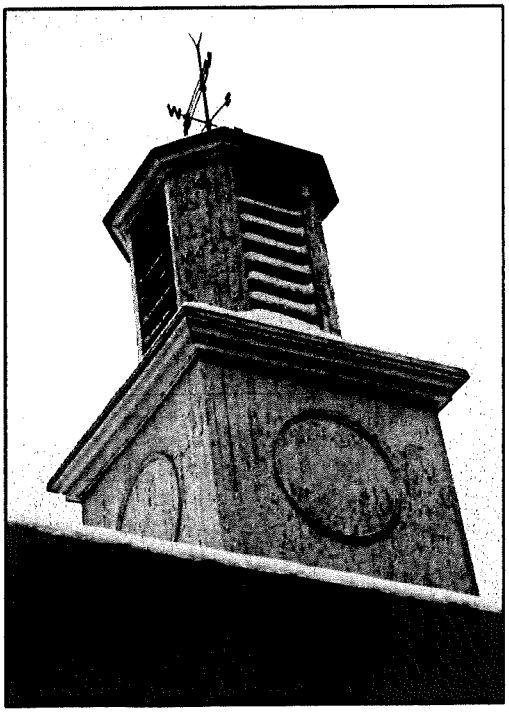
2. Federated Church of Rochester, view looking northwest



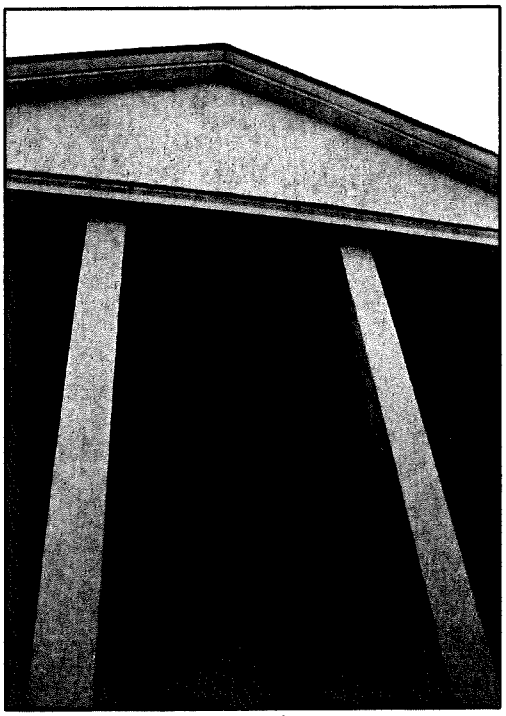
3. Front (east) facade, view looking northwest



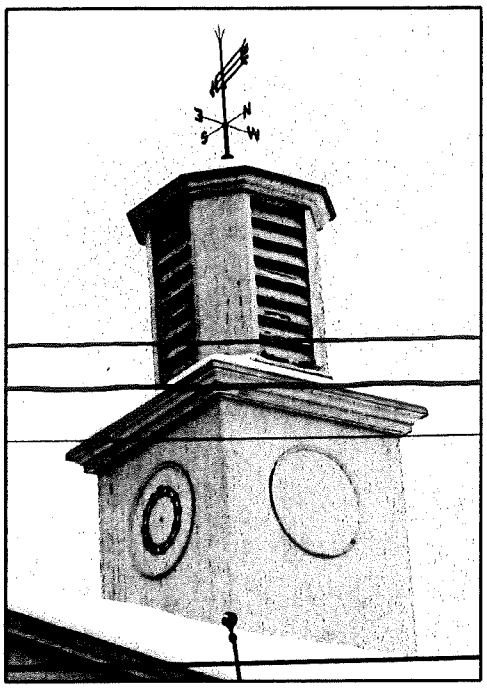
4. Front façade, looking west



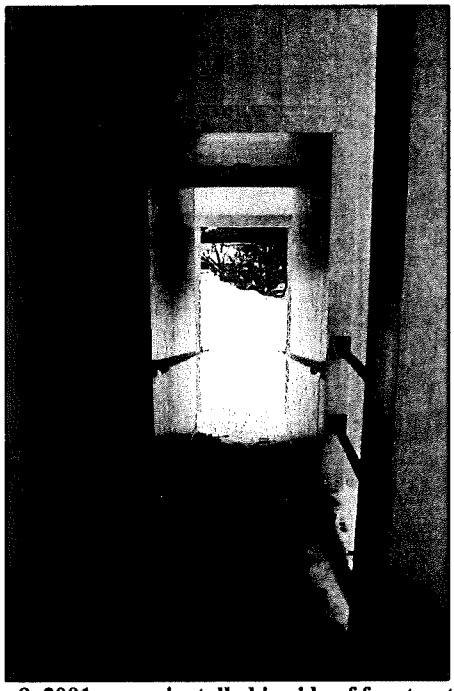
5. Steeple detail, looking northeast



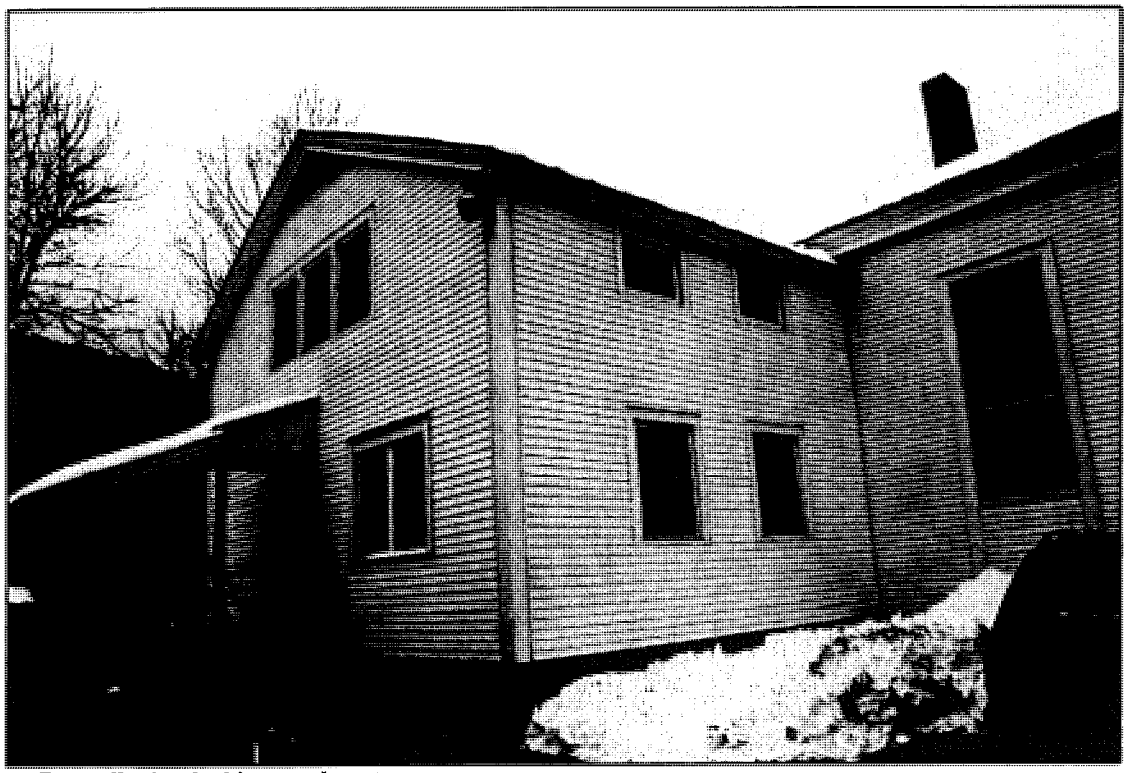
6. Front entry detail, looking west



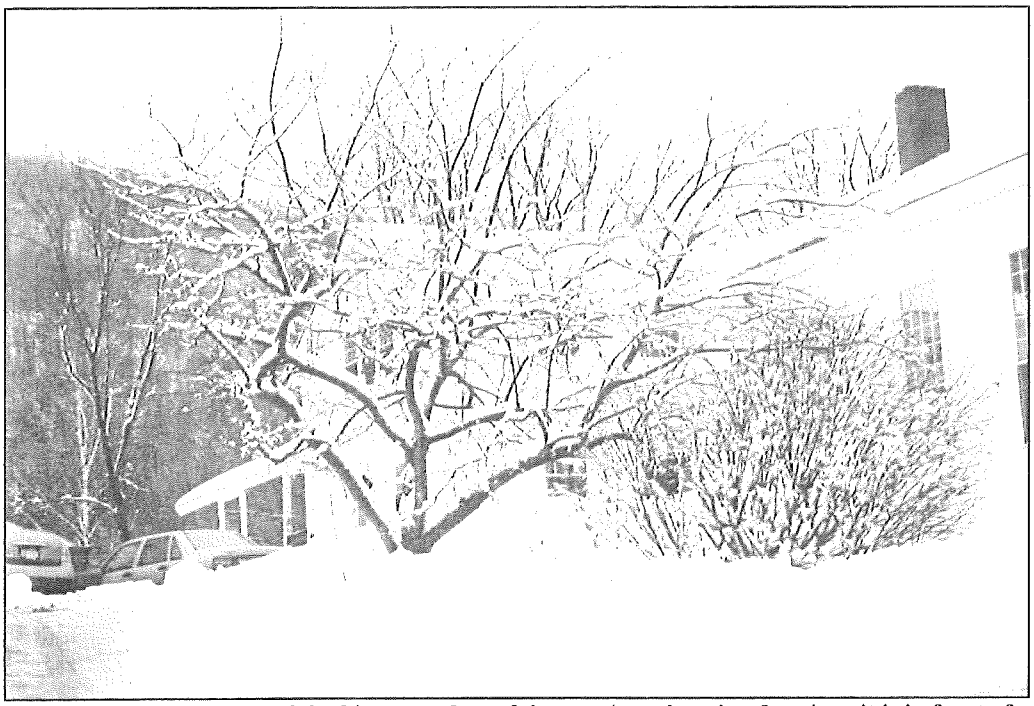
7. Steeple detail, looking southwest



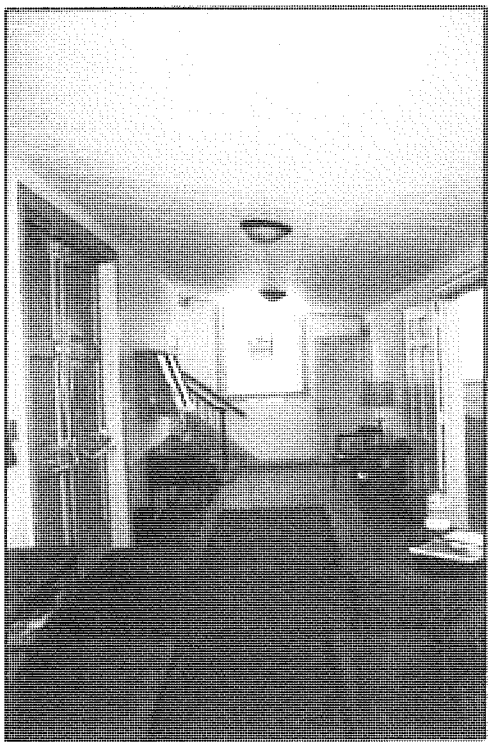
8. 2001 ramp installed in side of front entry, looking north



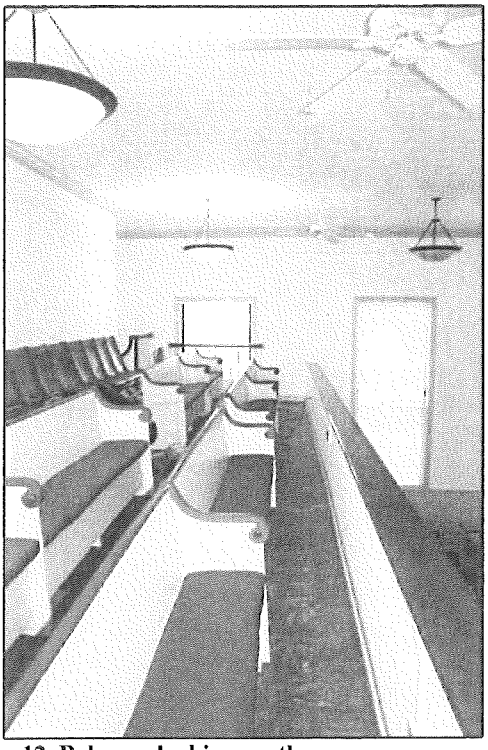
9. Rear ell, view looking northwest



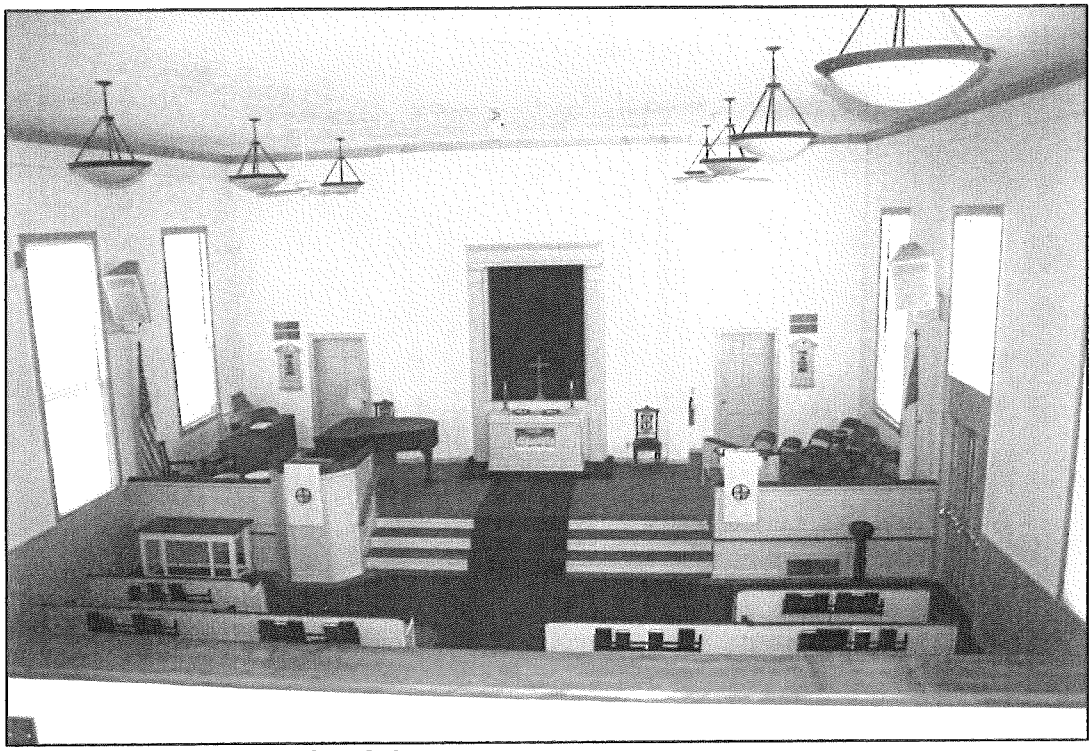
10. South façade of rear ell, looking west from driveway (note location for a/c unit is in front of parked cars)



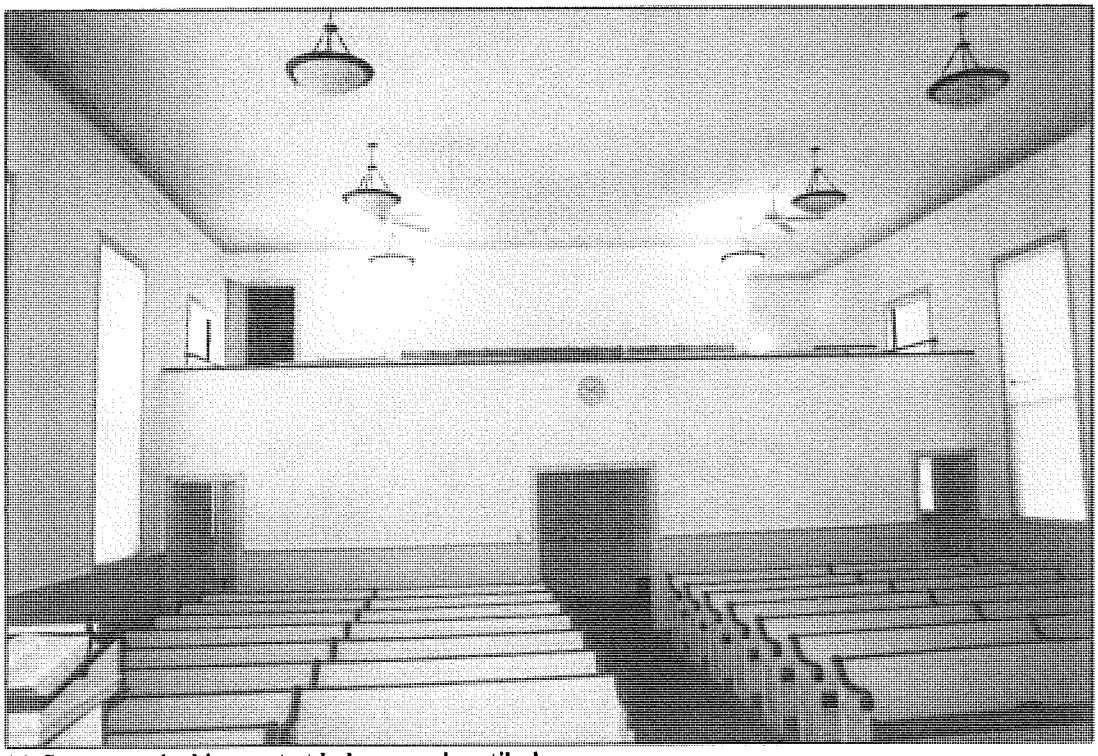
11. Church vestibule, looking south



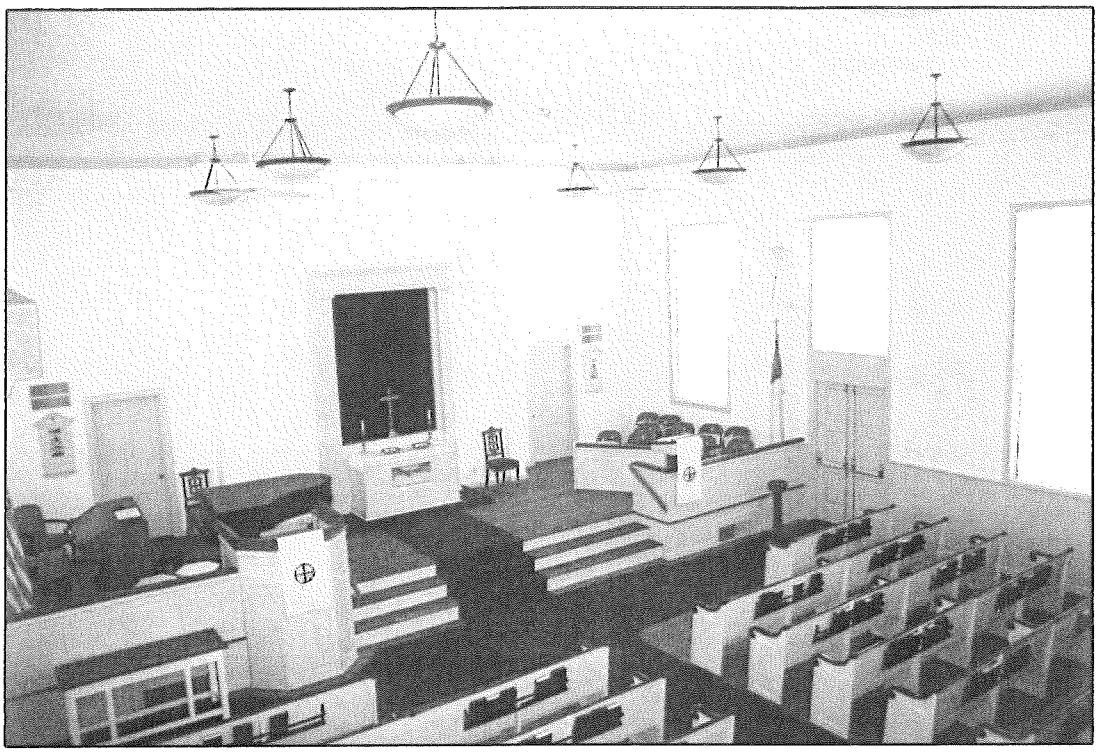
12. Balcony, looking south



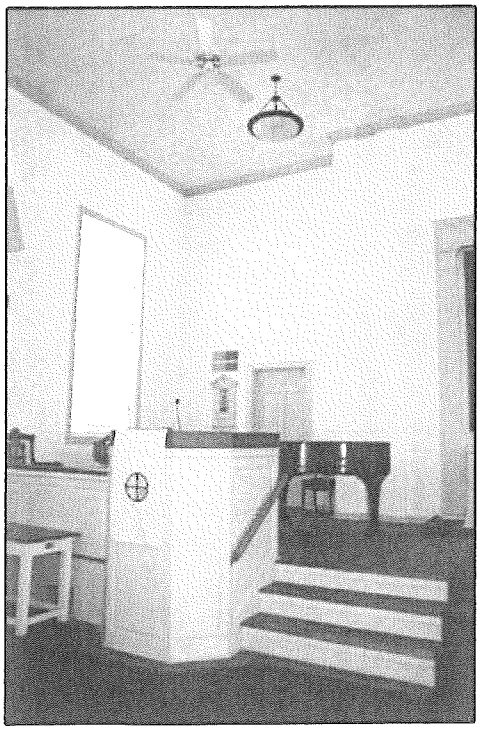
13. Sanctuary, looking west from balcony



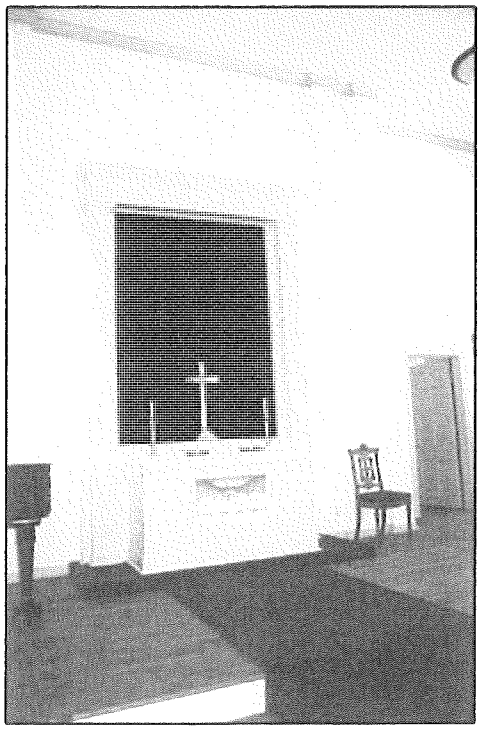
14. Sanctuary, looking east at balcony and vestibule



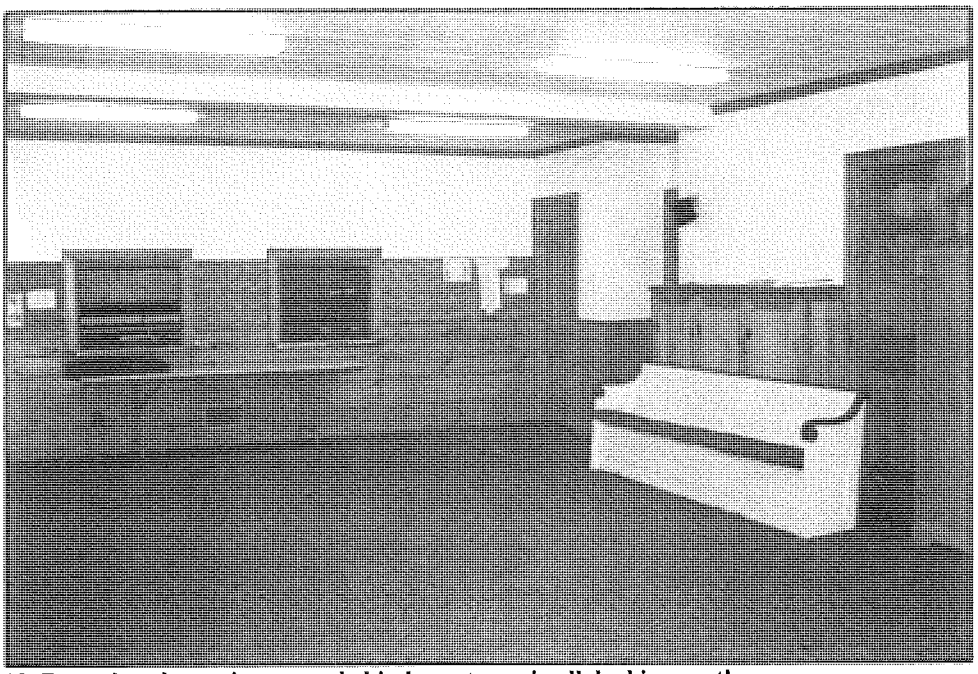
15. Sanctuary, looking northwest



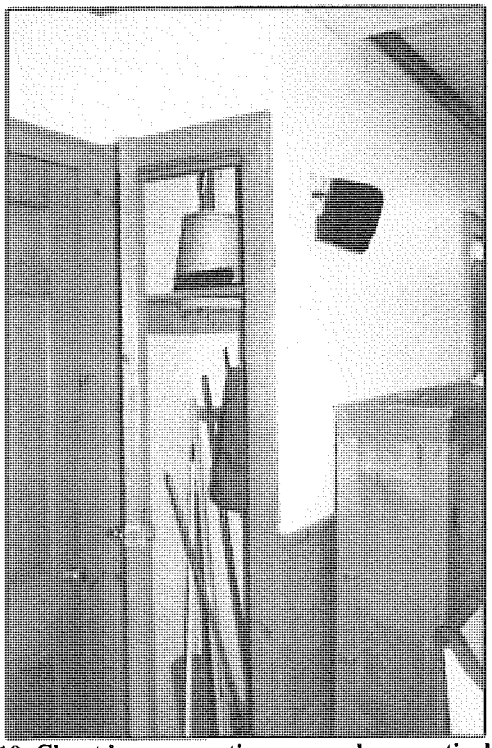
16. Sanctuary detail of pulpit and dais, looking west



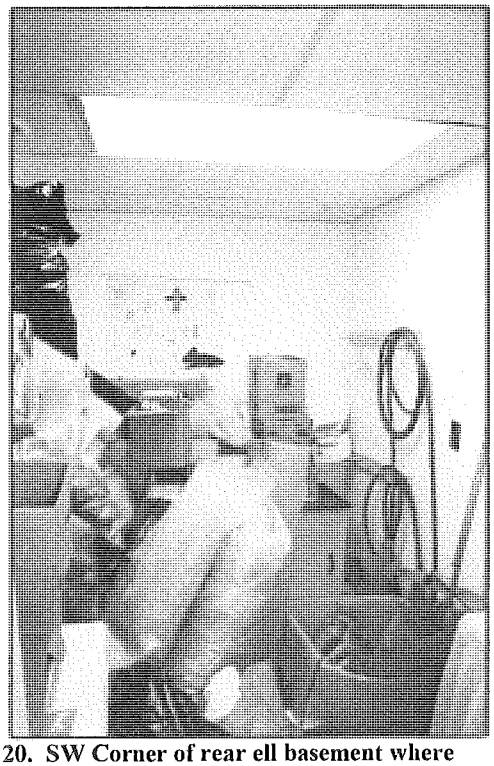
17. Sanctuary detail of dais, looking northwest



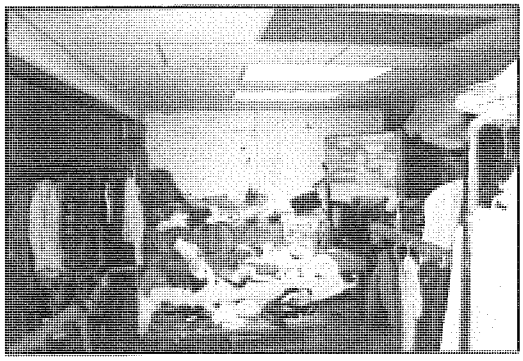
18. Rear church meeting room, behind sanctuary in ell, looking north

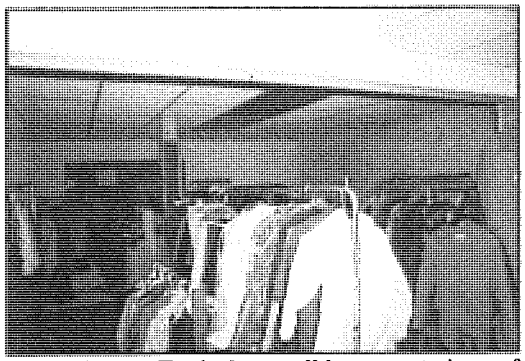


19. Closet in rear meeting room where vertical coaxial cables will be run.



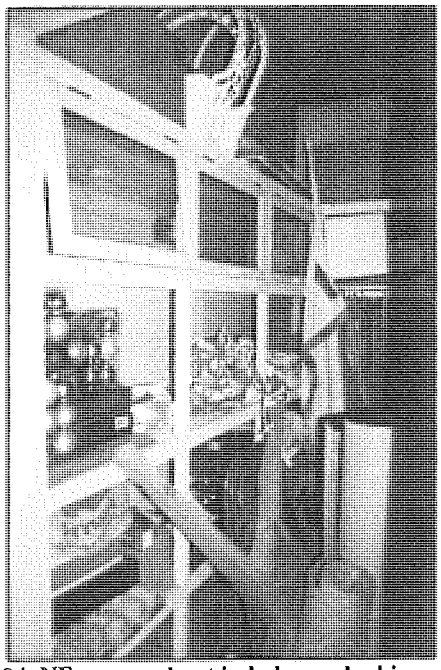
20. SW Corner of rear ell basement where equipment room will be created, looking west



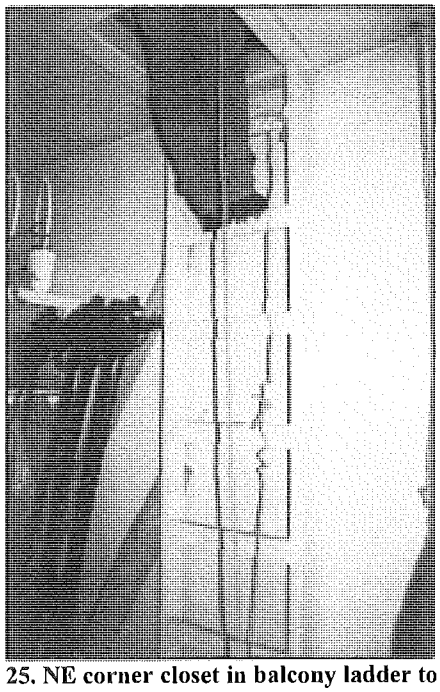


21-22. Above, Typical rear ell basement views of south room
23. Above, right, Typical rear ell basement view of north room.

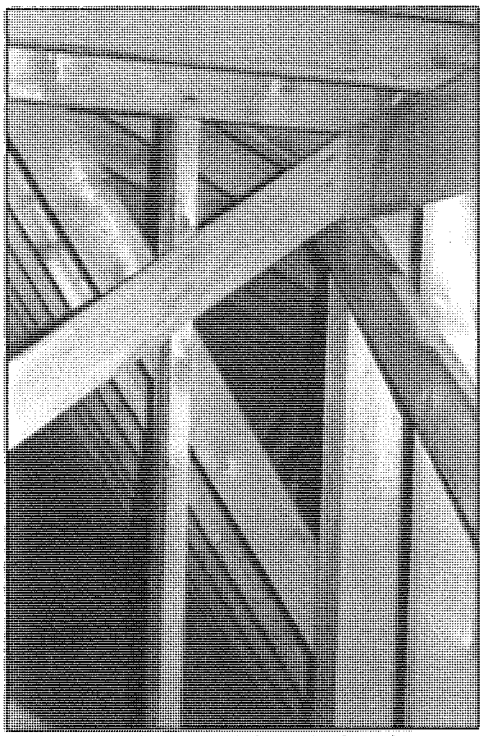
Note: Coaxial cables to enter basement near north room and cross above dropped ceiling to south room corner where equipment room will be created.



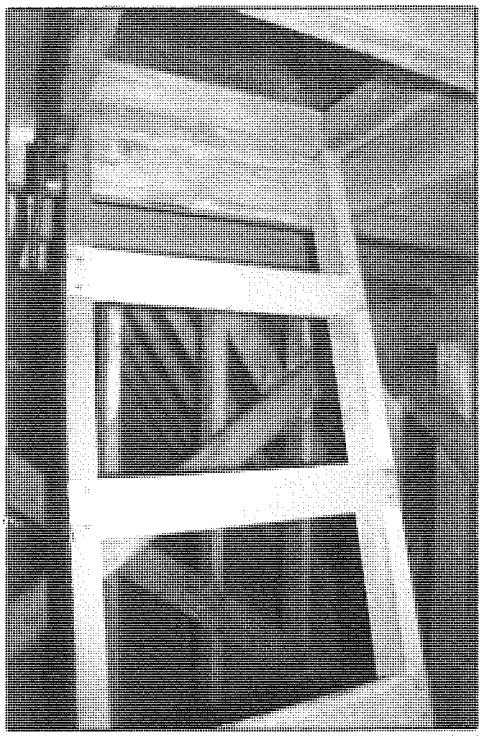
24. NE corner closet in balcony, looking east



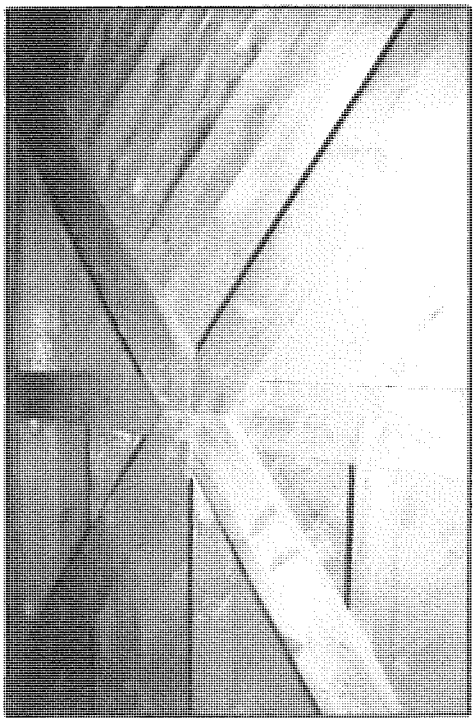
25. NE corner closet in balcony ladder to steeple



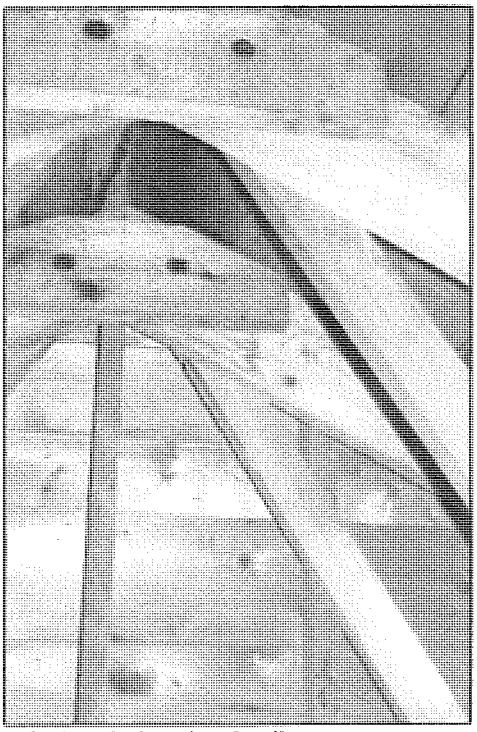
26. Typical view of attic/steeple framing



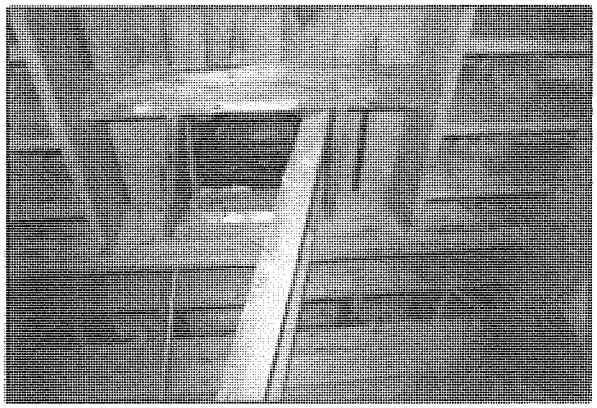
27. Ladder from attic level to first steeple level



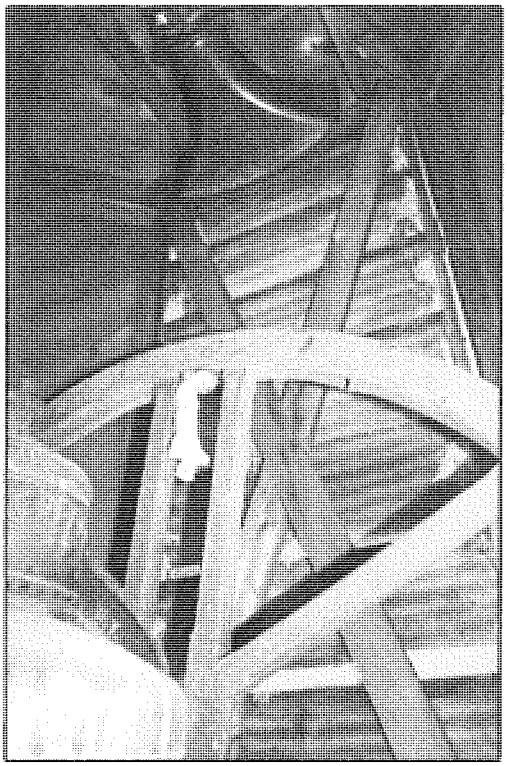
28. Front wall, first level of steeple



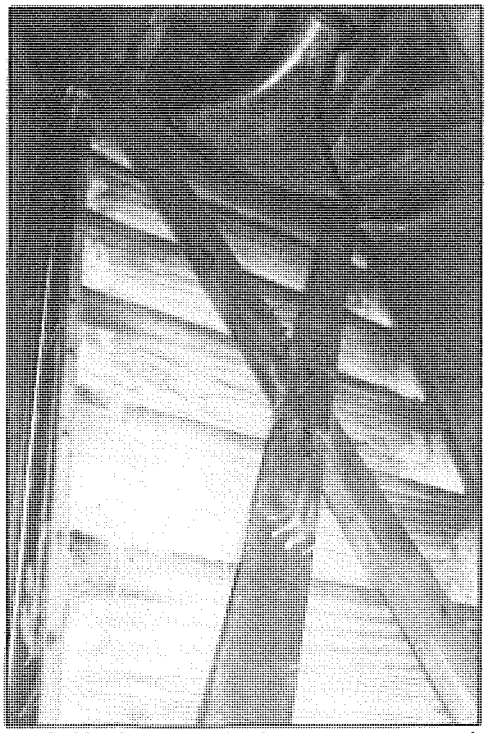
29. Steeple framing detail



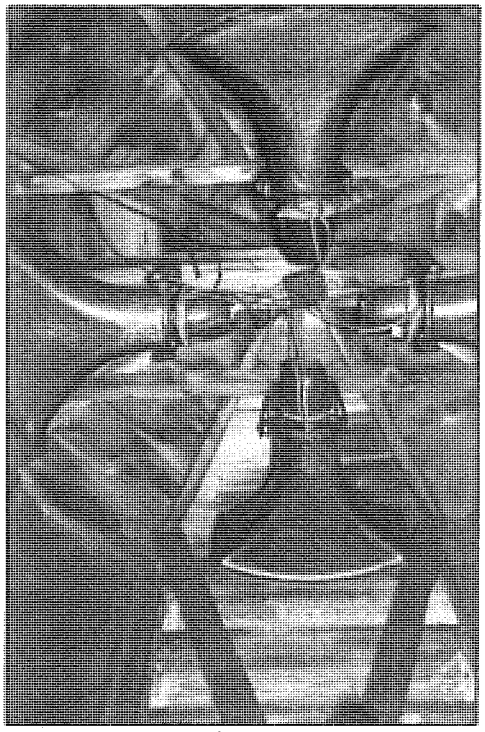
30. Above, Ladder from first steeple level to belfry hatch



31. Belfry level, detail of louvers and screening

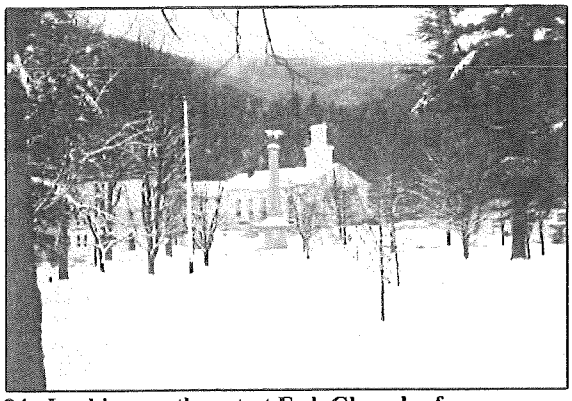


32. Belfry level, detail of louvers and screening

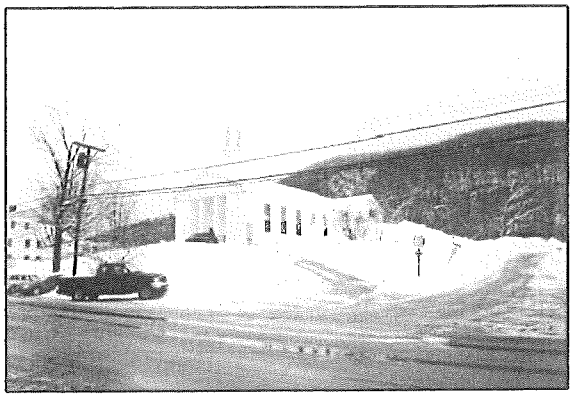


33. Top of belfry with speakers

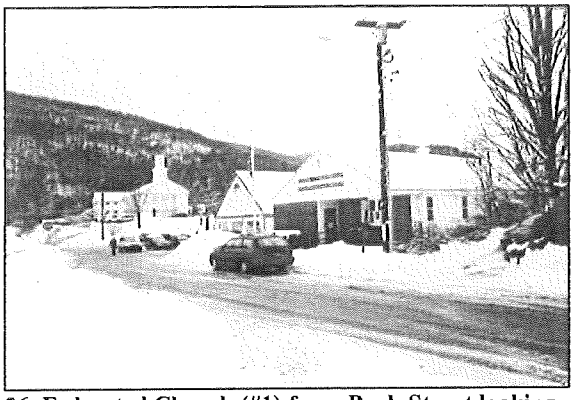
Rochester Village Green Historic District & APE for Visual Effects (See also Sketch Map on page 42)



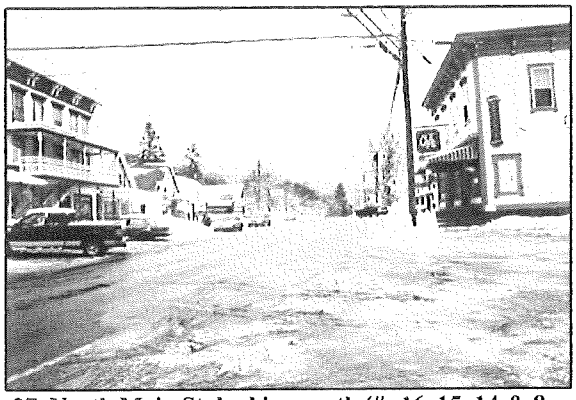
34. Looking northwest at Fed. Church of Rochester (#1) across green (#7) with monument.



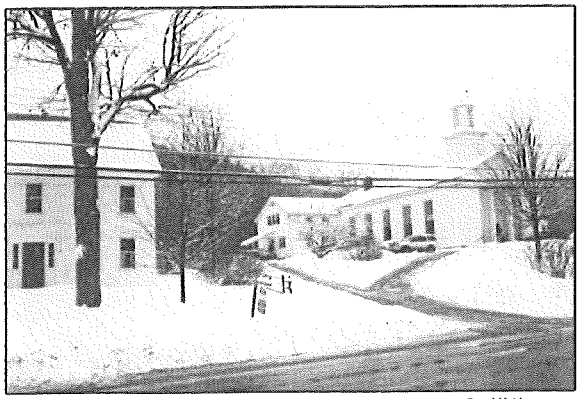
35. Looking southwest at Fed. Church of Rochester (#1) from across Main St. at #8.



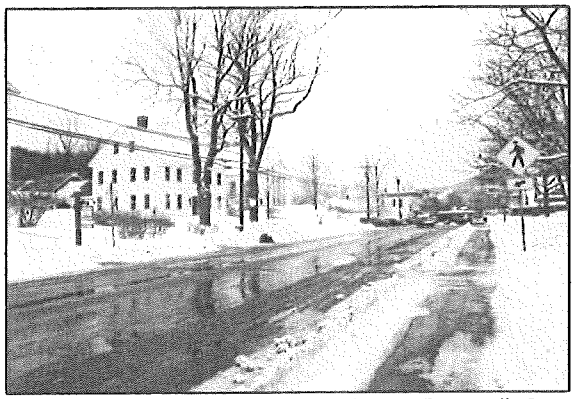
36. Federated Church (#1) from Park Street looking west (#s 8 & 9 on right).



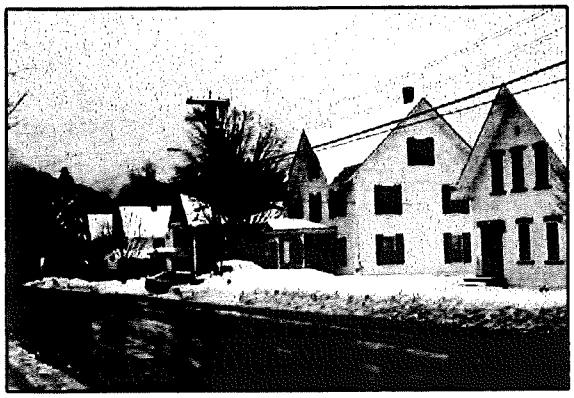
37. North Main St. looking south (#s 16, 15, 14 & 8 on left, # 17 on right).



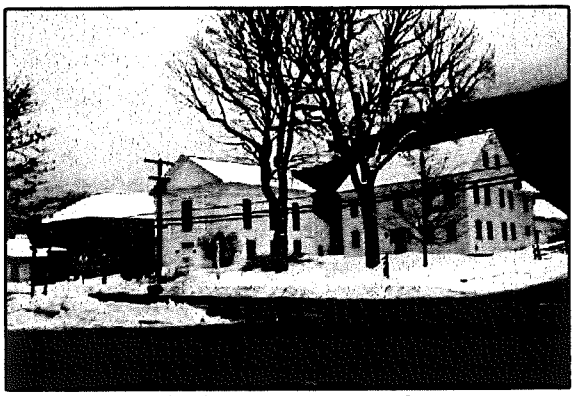
38. Looking northwest at Federated Church (#1) With #2 on left.



39. South Main St., looking northwest (l. to r. #s 2, 1, & 17; park #7 on right).



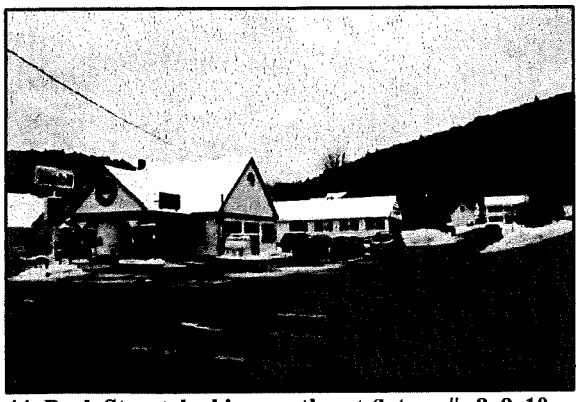
40. South Main St. along west side of green, looking south (#5 on right).



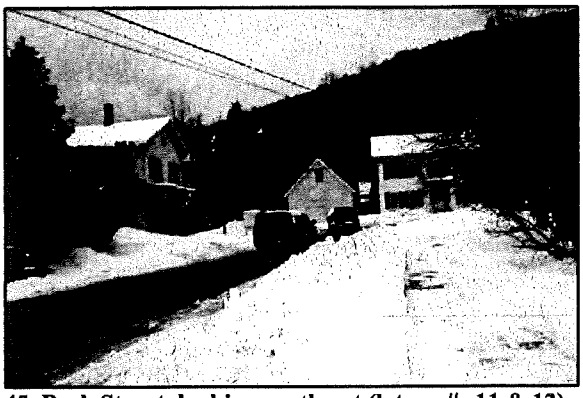
41. South Main St. across from northwest corner of green, looking southwest (l. to r. #s 4, 3, & 2).

42. Park House (#6) looking southeast.

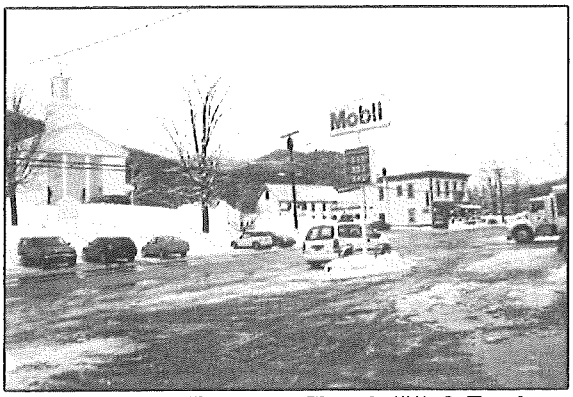
43. Green/Park (#7) with monument & gazebo, looking east.



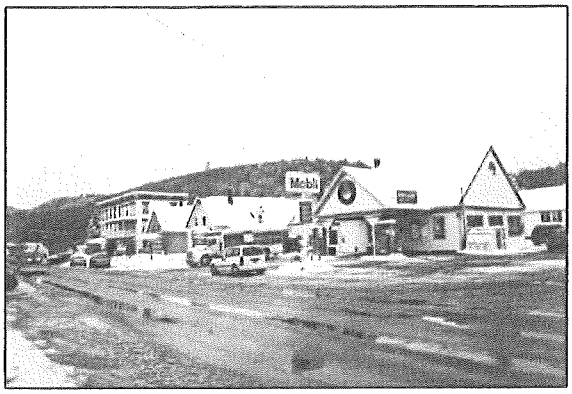
44. Park Street, looking southeast (l. to r. #s 8, 9, 10 & 11).



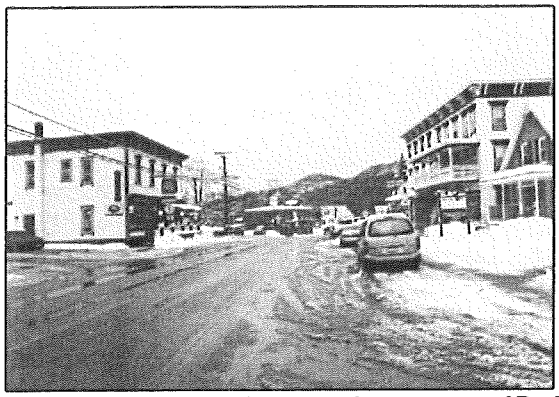
45. Park Street, looking southeast (l. to r. #s 11 & 12).



46. Main St. with Federated Church (#1) & Trask Block (#17 looking northwest.

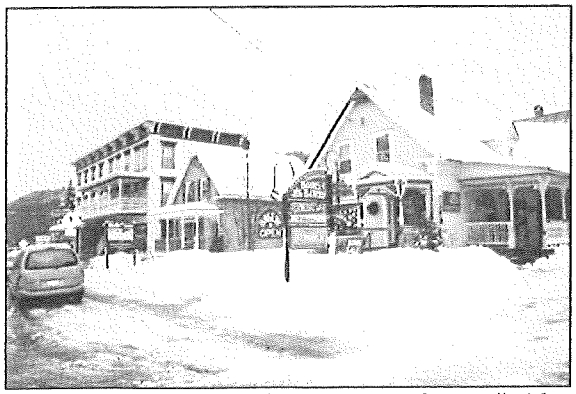


47. North Main St. looking northeast from church to eligible extension of district (l. to r. #s 16, 15, 14, & 8).

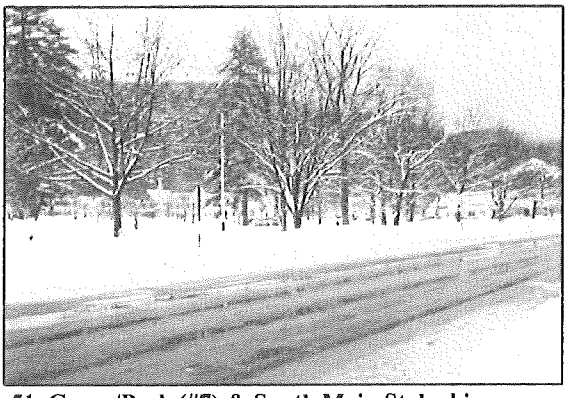


48. North Main St. looking north from corner of Park St. beyond SR district to eligible extension. (# 17 on left & #s 16 & 15 on right)

49. North Main St. & School St., looking north with #18 on right.

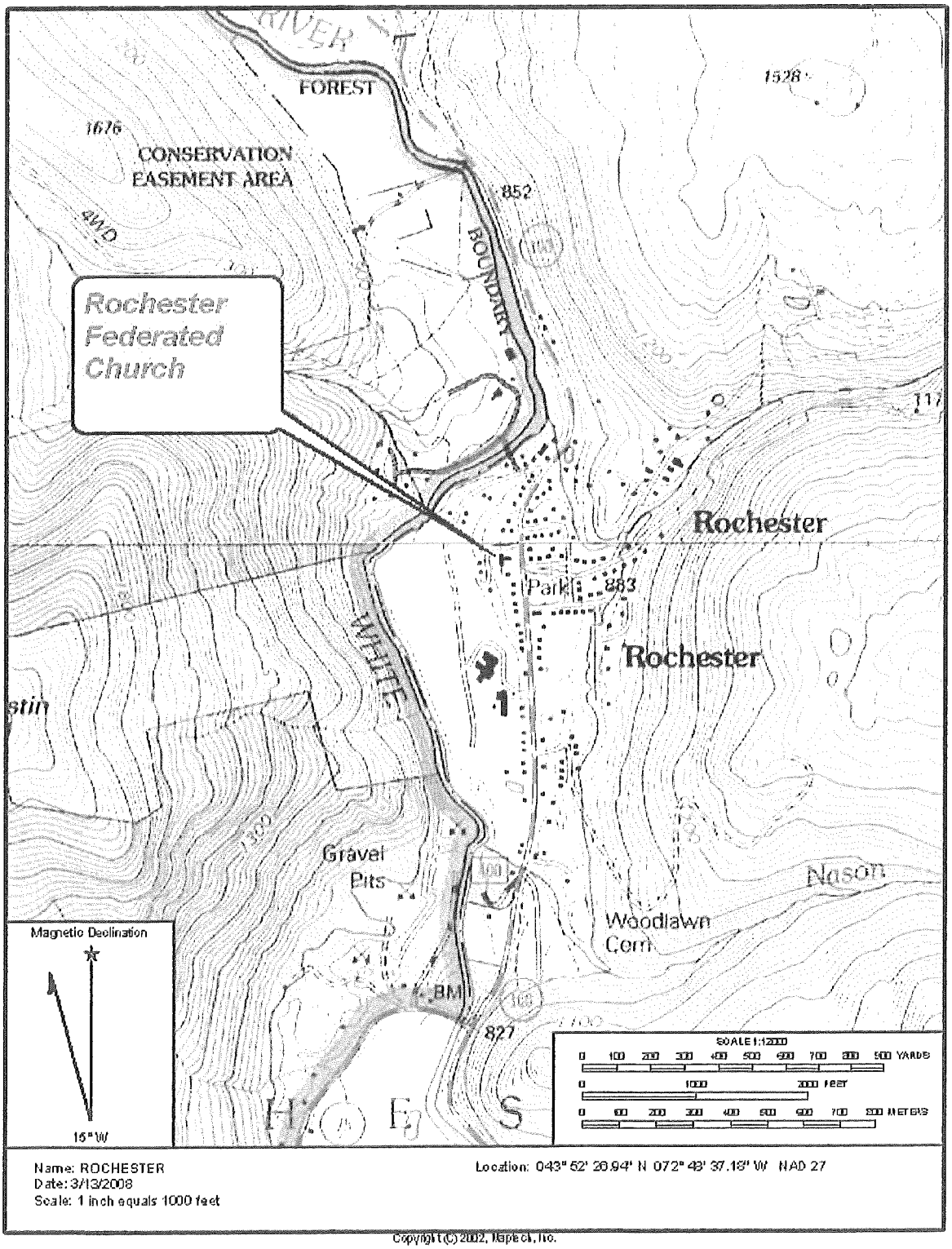


50. North Main St., looking northeast (l. to r. #s 16, 15, & 14).



51. Green/Park (#7) & South Main St. looking southwest from church.

ATTACHMENT 12: MAPS



Sketch map showing location of historic resources in Visual and **Direct** APEs.

1. **HSSS 1415-1, Property #1, The Federated Church of Rochester, 15 North Main Street**
2. HSSS 1415-1, Property #2, Cooper-Webber House, 6 South Main Street
3. HSSS 1415-1, Property #3, Old Universalist Church/ Town Library, 22 South Main Street
4. HSSS 1415-1, Property #4, Pierce Hall, 38 South Main Street
5. 1415-1, Property #5, House, 42 South Main Street,
6. 1415-1, Property #8, Park House (formerly Rochester Inn), 16 Park Row & Main Street
7. HSSS 1415-1, Property #24, Rochester Village Green & Civil War Monument, Main Street/Park Street/ Park Row/Huntington Lane
8. HSSS 1415-1, Property #23, Mobil Mini-Mart/Skip Mart (formerly Texaco Garage), 12 North Main Street
9. 1415-1, Property #22, U.S. Post Office, 46 Park Street
10. HSSS 1415-1, Property #21, House, Park Street
11. HSSS 1415-1, Property #21, House, 1 Park Street
12. HSSS 1415-1, Property # 19, Federated Church Parsonage, Huntington Place (Corner Bethel Mtn. Rd)
13. HSSS 1415-1, Property #16, House, Bethel Mountain Road
14. Seasoned Books & Kristina's Kitchen 30 North Main Street
15. BCK Real Estate/ Susan Disbrow Attorney Offices, 42 North Main Street
16. HSSS # 1415-14, Campbell & Greeley Hardware Company (Rochester Hardware), North Main Street
17. HSSS # 1415-13, Trask Block (formerly Hunt's Variety Store), 61 North Main Street
18. The Porch/Occasions Catering/Nordic Adventures, 13 School Street

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Town of Rochester. *Town of Rochester, Vermont: Its History, 1780-1975.*Rochester, VT: Town of Rochester, 1975.

Websites:
Park House website: http://parkhousevt.org/
Pierce Hall website: http://www.piercehall.org/

Exh. DPS-LT-2

AESTHETIC ASSESSMENT & ORDERLY DEVELOPMENT REVIEW

View from Post Office Hill Road looking northwest toward the Project site (image from 2021).

PUC Case #:	**23-4087-PET**
Project Location:	North Hollow Road, Granville, Vermont
Project Size:	180' AGL Telecommunication Tower
Prepared For:	State of Vermont Department of Public Service
Prepared By:	Lucy Thayer, PLA
TCE Project #:	21-086

May 13, 2024

tce
a Bowman company

478 Blair Park Road, Williston VT 05795 | 802.879.6331 | www.tcevt.com

Contents

Appendices

Introduction and Scope of Work

TCE was first retained by the Vermont Department of Public Service ("DPS") in 2021, to conduct a visual impact analysis to determine potential visual impact of the proposed telecommunications facility off of North Hollow Road in Granville, VT ("Project") for Vermont Public Utility Commission ("PUC") Case No. 21-1144-PET (the "First Petition") filed in March 2021 at the "Original Location". The First Petition was voluntarily withdrawn and a subsequent petition, PUC Case No. 22-2775-PET (the "Second Petition"), was filed in July 2022 proposing an "Alternative Location". TCE did not review the Second Petition. The petition currently under review is **PUC Case No. 23-4087-PET** (the "Current Petition"). The Original Location proposed in the First Petition and the proposed location for this Current Petition are the same. Photos from TCE's May 2021 site visit are included in this report as the tower location for the First Petition and the Current Petition are the same.

This analysis is conducted in response to the requirements set forth for aesthetic review under Title 30 Section 248 of the Vermont Statutes, governing the review of telecommunication facilities and projects. The PUC adopted the Quechee Analysis, a two-step analysis as set forth originally for the review of aesthetics under Criterion 8 for Act 250 to determine that a proposed project will not have an undue adverse effect on a proposed project site's aesthetics. This analysis references prefiled testimony, exhibits, and supporting documents as presented in filings to the PUC on behalf of New Cingular Wireless PCS, LLC d/b/a AT&T (the "Applicant") for **PUC Case No 23-4087-PET**, as noted above. Documents and exhibits referenced in this report were accessed through the public ePUC online database.

This visual impact analysis presents findings and conclusions of investigation as to whether alterations to the areas visual character are adverse, and if so, whether the changes are unduly adverse as defined by the Quechee Analysis.

The methodologies for the aesthetic assessment of this Project include visual and spatial analyses of aerial photographs, satellite imagery and GIS data, field reconnaissance and site visits, and document research and review. Our primary analysis assesses the Project's visibility and potential for visual and aesthetic impacts to public vantage points such as state or local roads. Locations that include neighboring properties and residential areas in close proximity to the proposed Project were also considered, although review of aesthetics under Section 248a, using the Quechee Analysis, does not specifically guarantee that views from individual private homes and properties will never change. We have used multiple field studies to verify our analyses of the proposed conditions following completion of the proposed Project.

Report Organization and Contents

This report is organized around and relies on an extensive narrative of the Quechee Analysis as it applies to the proposed Project. This report is accompanied by exhibits and plans as supporting documents which are referenced throughout the document or included as appendices.

- Granville Town Plan, adopted November 13, 2019 (the "**Town Plan**")
- Two Rivers-Ottauquechee Regional Plan, adopted July 15, 2020 (the "**Regional Plan**")

Project Background

Project Description[1,2,3]

The Project is located in the Town of Granville, in Addison County, Vermont, and will consist of the construction of a 180-foot above ground level ("AGL") monopole structure proposed to house telecommunication appurtenances off of North Hollow Road. Figure 1 below is an excerpt from Exh. ATT-JD-02 at page 1 that provides an overview of the Project site characteristics.

Proposed Tower Location	Off of North Hollow Road, Granville, VT
Tax Map	11L0000037.100
Acreage	70.36 acres
Tower Latitude	44° 00' 26.13"
Tower Longitude	72° 50' 07.11"
Ground Elevation	1,793'± AMSL
Closest State/Fed Hwy	VT Route 100
Tower Owner	AT&T or its assignee
Tower Height / Type	180' AGL self-support galvanized steel monopole, painted brown along with antennas and tower-mounted equipment
Current Use of Project Parcel	Woodland under approved Forest Management Plan
Gladchun Parcel Tax Map	11L0000069.600
Length of Access on Gladchun Parcel	759'
Length of Access on Project Parcel	797' + 1,358'

Figure 1. Table from the Current Petition ATT-JD-02 at pg 1.

The location and design of the Project tower that is proposed with the Current Petition is the same location as was evaluated by TCE in 2021 in the Original Location proposed in 21-1144-PET. The below is an excerpt from Exh. ATT-JD-02 section *II. Project Description and 248a Categorization* beginning at page 2 that describes the proposed facility and components (the "Facility" or "Project").

> 1. A steel monopole telecommunications tower measuring 180' aboveground level ("AGL" (the "Tower"), surrounded by existing trees extending to approximately 69.2' AGL in the immediate vicinity, with the tower to be painted dark brown along with the antennas and tower-mounted equipment, and with capacity and space for additional carriers;
>
> 2. Six (6) panel antennas—three (3) measuring approximately 96" x 21" and three (3) measuring approximately 96" x 20.7"—all mounted on the Tower at a centerline height of 176' AGL (i.e., so as not to exceed the height of the Tower);

[1] Exh. ATT-JD-02
[2] Exh. ATT-LH-02
[3] Exh. ATT-LH-02a

3. Twelve (12) remote radio head units ("RRUs") (each measuring roughly 13" x 18") and one (1) surge arrestor (measuring 31.4" x 10.24") to be installed behind the panel antennas;

4. A lightning rod measuring 4' to be mounted at the top of the Tower, extending to a total height of 184' AGL;

5. A walk-in operating equipment cabinet measuring 78" x 78", mounted on an 8' x 10' concrete pad (the "WIC"), and topped with a GPS antenna;

6. A 20-kilowatt propane emergency backup generator with 500 gallon fuel tank to be located on concrete pads next to the WIC (the "Generator");

7. A 50' x 50' fenced compound using an 8' tall chain link fence topped with 1' of barbed wire, and including a 12'-wide double swing access gate, all to enclose the Tower, WIC, and Generator, while providing space for future collocator installations (the "Compound");

8. Minor upgrades for the existing access roads to the Compound as follows:

a. Use of an existing access road extending from North Hollow Road approximately 759' over Parcel ID 11L0000069.600 (the "Gladchun Parcel"), and 797' over the Project Parcel, with limited stabilization improvements to the road bed (including permanent water bars), and selective tree clearing and trimming for construction vehicle access and utility installation where necessary, but with no expansion or widening of the access route (the "Existing Access");

b. From Station 15+56 as shown on Page C-6 of the Site Plan, utilization of an existing historic access road on the Project Parcel for roughly 1,358 feet to the Tower Compound, conducting tree clearing and trimming where required to ensure a maximum road width of 12', and otherwise making limited stabilization improvements to the road bed (including permanent water bars) (the "Eastern Access");

9. Electrical and fiber optic conduits and cabling installation to service the Compound, as follows:

a. Use directional boring to install two separate conduits under the Existing Access (one for electric, one for telephone / fiber optic), employing open trench construction only if and where ledge is encountered or anticipated in order to encase conduits in concrete; and

b. Install an electrical transformer and associated telephone / fiber optic pull box on Parcel ID 11L0000069.901 (the "Gove Parcel"), then extend utilities back on to the Eramo Property to follow the Eastern Access; and

10. Install ancillary improvements consisting of an ice bridge, a utility backboard, and other equipment and appurtenances located within and immediately outside of the Compound, all to be used in connection with operation of the Facility.

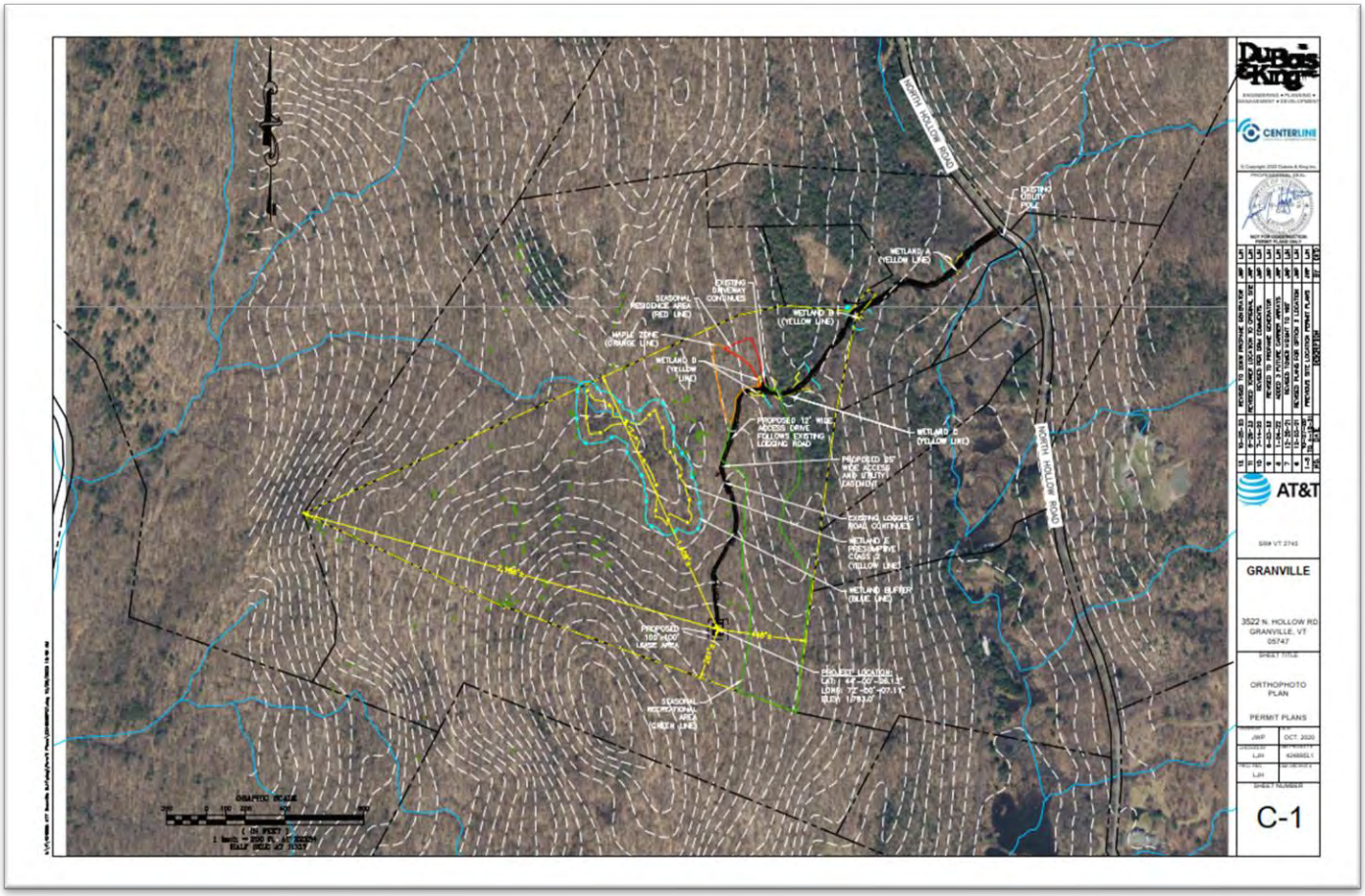


Figure 2. Sheet C-1 excerpted from Exh. ATT-LH-02.

Additional project information includes[4]:

- Access will be from North Hollow Drive via an existing woods trail that will be widened and stabilized;
- Total acreage of tree clearing is estimated to be 21,252 square feet (0.49 acres);
- Total area of permanent earth disturbance will be 65,623 square feet (1.51 acres);
- Approximately 196 square feet (0.004 acres) of wetland buffer impacts are proposed
- No streams will be altered or forded
- No lighting or marking of the Tower is proposed
- Average tree height is 69.2 feet, based on 16 samples in/around the proposed tower location

[4] Exh. ATT-LH-02 at C-2

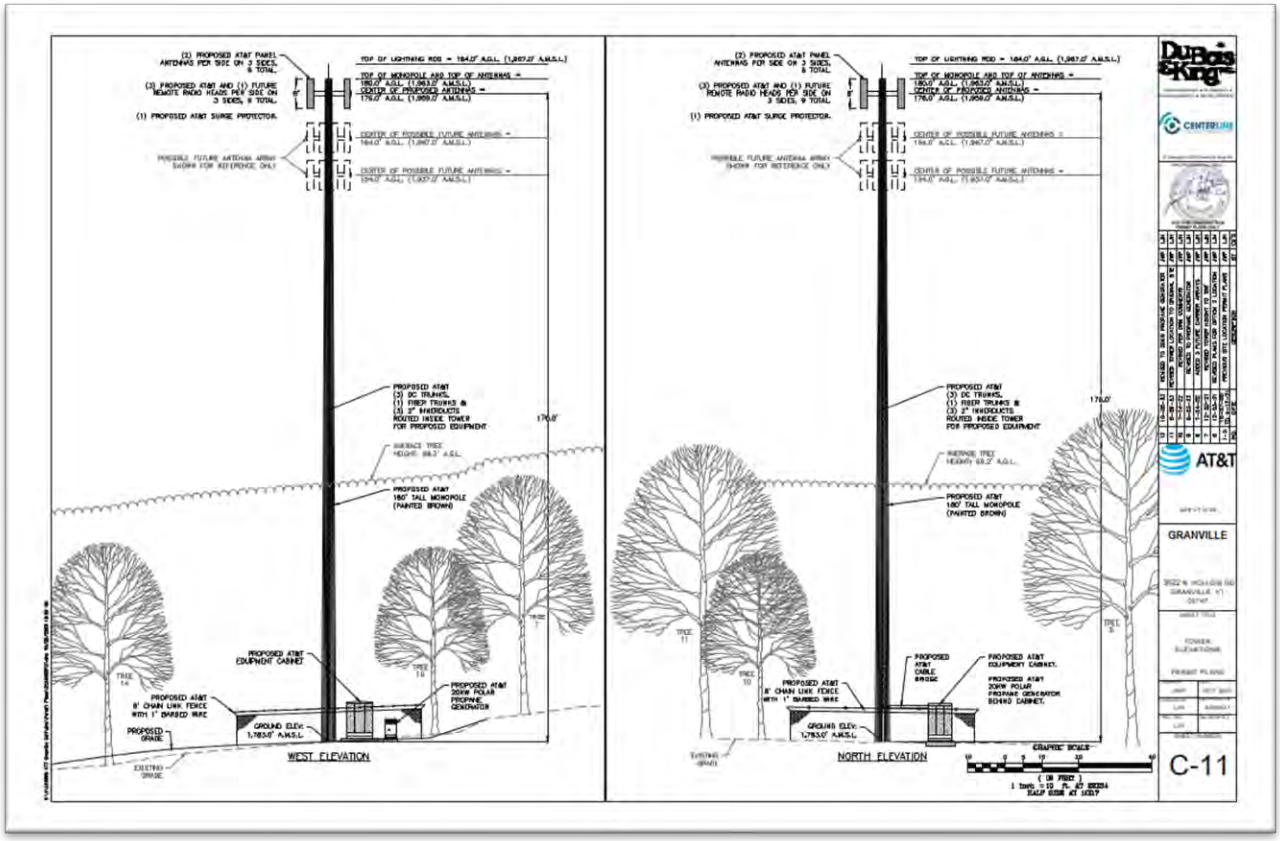


Figure 3. Sheet C-11 excerpted from Exh. ATT-LH-02.

Aesthetic Assessment

The Quechee Analysis is a two-step process that begins with assessing the nature of the project, its context, and whether or not it will lead to an adverse aesthetic impact, and if it is adverse, if the project is unduly adverse.

The first step asks questions of the project to test for adverse impacts. The five questions include the following themes:

1. The nature of the project's surroundings.

2. The project's design and compatibility with its surroundings.

3. The colors and materials selected for the project and suitability for the context.

4. The project’s visibility.

5. The project's impact on open space in the area.

If the conclusion from the first step of the analysis is that the aesthetic impact of the project is considered to be in harmony or compatible with its surroundings, then the aesthetic impact of the project is considered not adverse. If this is not the case, then the project is considered to have an adverse impact and the second step of the Quechee Analysis is required to determine if the adverse impacts are undue. An aesthetic impact is unduly adverse if any of the following is true:

1. The project violates a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area;

2. The project offends the sensibilities of the average person because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area; or

3. The applicant has failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings.

The Quechee Analysis

Step One of the Quechee Analysis

1. Project Surroundings

1. A. What is the nature of the project's surroundings?

The nature and character of the Project's surroundings is rural and is a largely comprised of large swaths of forested areas, including the Green Mountain National Forest and the Granville Gulf Reservation. The Granville Town Plan describes the area below.

> Granville is a rural community of 33,600 acres (51.5 sq. mi.) with the Northfield Mountains rising to the east and the main crest of the Green Mountains rising to the west. Granville is bounded on the north by the town of Warren and a part of Roxbury; on the east by Braintree; on the south by Hancock; on the west by Ripton and a small part of Lincoln. [5]

A significant portion of the town is Green Mountain National Forest, which comprises approximate 46% of the land area.[6] Development in Granville is primarily limited to the VT 100 corridor, a designated scenic

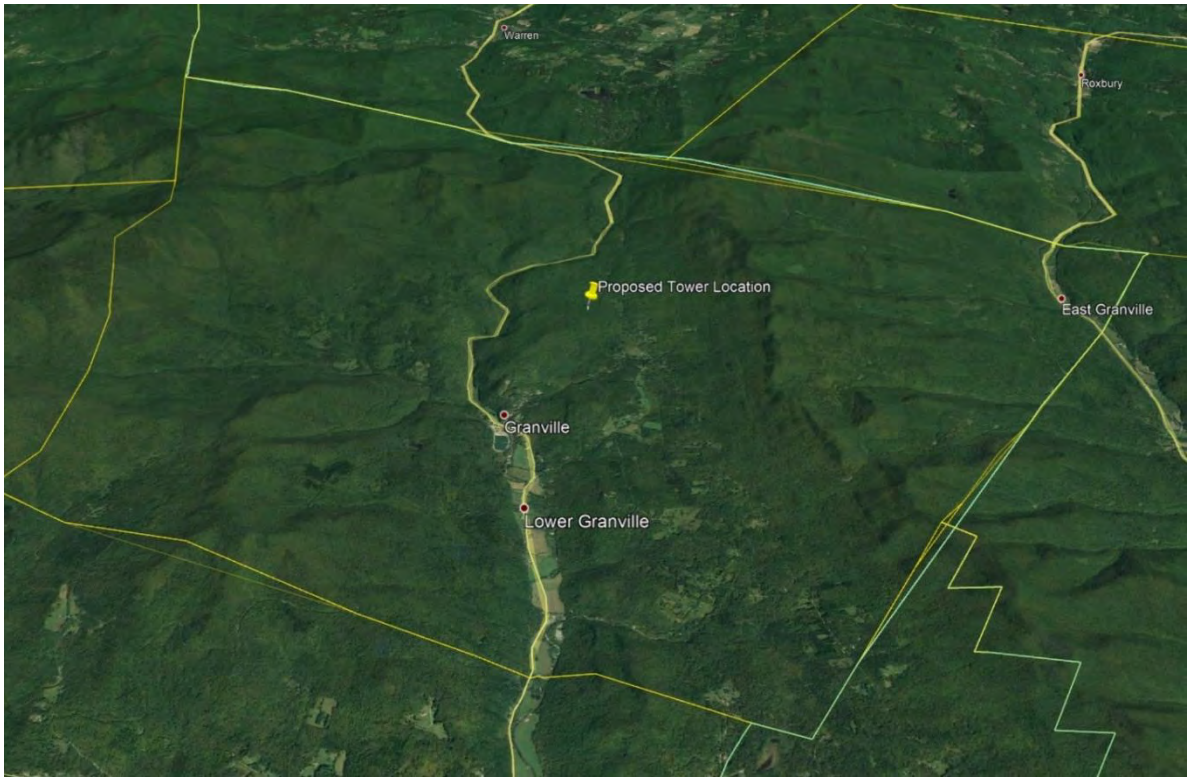


Figure 4. Google Earth oblique view of the Town and surrounding area.

[5] Granville Town Plan at 6
[6] *Id.*

byway, that runs north-south and bisects the town, and along the roads east of VT 100, like North Hollow Road, Post Office Hill Road, Mason Hill Road, Buffalo Farm Road, and other rural roads.

1. B. Is the project to be located in an urban, suburban, village, rural or recreational resort area?

The area where the Project is proposed is a rural and is comprised of rural residential and municipal development in the general surrounding area.

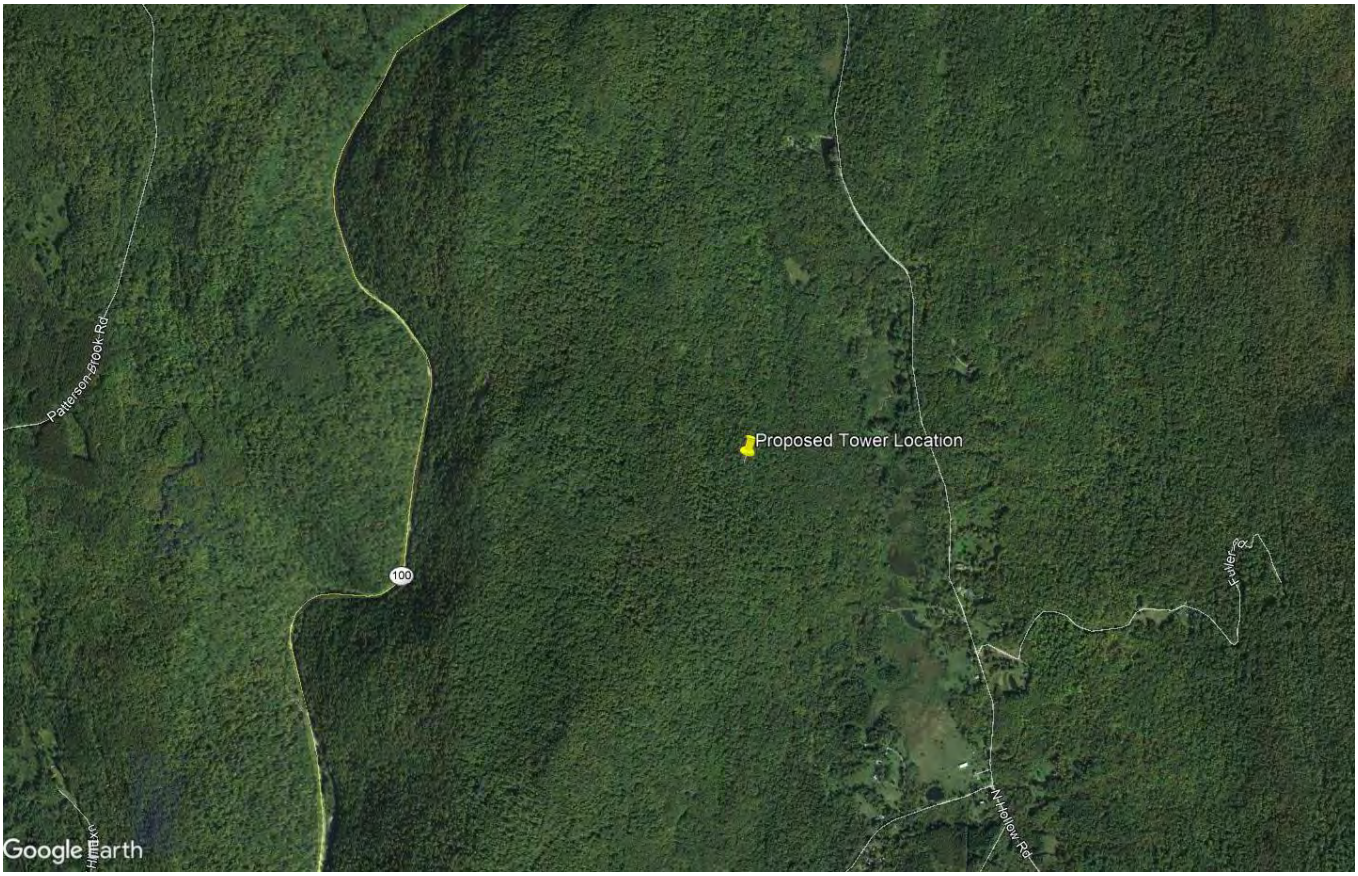


Figure 5. Google Earth Map showing site and surrounding area

1. C. What land uses presently exist?

The Project parcel is wooded. The site falls in the land use area designated as "Rural" per the *Future Land Use Map* included in the Town Plan (Map 2 of 7). There are only two other land uses provided in Town Plan *Future Land Use Map*, these designations are "Villages" and "Public Lands".

1. D. What is the topography like?

The Tower is proposed on the east side of an unnamed ridgeline situated between VT 100 and North Hollow road. The high point near the Tower is at an approximate elevation of 1900-1920 feet[7]. The topography of the site is generally sloping from west to east.

[7]Exh. ATT-LH-02, Sheet C-1

The topography of the greater Granville area is characterized by the Green Mountains to the west and the Northfield Range to the east. Route 100 in the vicinity of the Project area is located in an area known as the Granville Gulf[8] where the roadway travels between steep terrain.

1. E. What structures exist in the area?

Structures in the general surrounding area include residential and municipal structures (town offices, garage, post office), with few commercial businesses. VT 100 bisects the town north to south. One existing telecommunication tower located approximately 2.6 miles south of the proposed Tower, visible from VT 100 as seen in the below photo.

Figure 6. Photo facing east showing the existing telecommunications tower from Route 100 at the Granville Commons. (53 mm focal length photo, taken 05/21/2021)

1. F. What vegetation is prevalent?

The Site is wooded with a mix of mature evergreen and deciduous trees. Exh. ATT-LH-02 identifies 15 maples and one beech in the immediate vicinity of the Tower and Facility on sheet C-10.

The surrounding area is predominantly forest and woodland, with limited development consisting of some open wetlands, fields, as well clearings for residential, municipal, and commercial uses. Some surrounding lands are enrolled in Vermont's "current use" or forest management plans, including the Green Mountain

[8] Granville Town Plan at pg. 25.

National Forest, which has a plan that "…has prescribed activities and policies for the subsequent 15 years and includes significant logging of the forest."[9]

1. G. Does the area have particular scenic values?

The general area can be considered to have scenic value. Route 100 is a designated Scenic Byway that travels through the Green and Northfield Mountains in the Town of Granville. The Town Plan states at page 25 that the nearby "Granville Gulf Reservation is best known for its aesthetic contribution to the scenic drive along that section of Route 100 and for the spectacular Moss Glan Falls with its 80-foot drop to the floor of the gulf where Deer Hollow Brook joins Alder Meadow Brook."[10] The Town Plan also states that "[e]ast of the Green Mountain National Forest and Route 100, the Braintree Ridge provides scenic beauty all along Granville's North Hollow Road."[11]

From inside the Green Mountain National Forest, there are highly scenic views of Vermont's mountains and landscape to both the east and the west.

Figure 7. Photo facing northeasterly toward the Project site from a clearing off of Forest Road 207 in the Green Mountain National Forest in an area used for camping. The Northfield Range is visible in the background. (28mm equivalent focal length photo, photo taken 05/21/2021)

[9] *Id* at pg 6.
[10] *Id* at pg 25.
[11] *Id*.

2. Project Design

2. A. Is the project's design compatible with its surroundings?

Given the type of structure proposed, a 180 feet AGL steel monopole tower, it is doubtful the Project can be considered compatible with its forest surroundings. The average surrounding tree canopy was measured at 69.2 feet[12] which means that there will be approximately 110 feet of the Tower that will be taller than the surrounding tree canopy. However, the Tower is sited down slope from the peak of the hill and is not taller than the trees on the peak of the slope.

With regard to the location of the Tower to the surrounding areas, the topography of the Granville Gulf – having relatively steep slopes on either side of scenic VT 100 – are such that that the Tower is not visible from the VT 100 scenic byway.

2. B. Is the architectural style of the buildings compatible with other buildings in the area?

The Project's ground level Compound elements will not be visible from public offsite locations. As noted above, the Tower itself is not compatible with its surroundings.

2. C. Is the scale of the project appropriate to its surroundings?

As a telecommunication tower, the Tower structure and appurtenances need to be taller than the tree canopy to allow for the operational and functional use and will be by design and necessity of function, at a greater/taller vertical scale than its surroundings.

2. D. Is the mass of structures proposed for the site consistent with land use and density patterns in the vicinity?

The mass of the Tower and appurtenances will be consistent with other telecommunication devices in the nearby area, while also being a new element in the landscape where it is proposed.

3. Project Materials

3. Are the colors and materials selected for the project suitable for the context within which the project will be located?

The Tower is proposed as a steel monopole to be painted dark brown[13] which is consistent with other telecommunication towers. The Petitioner noted that several alternative designs were evaluated.[14] The design alternatives included a self-supporting lattice tower "where light comes through the crossbeams on the tower, but with added girth in the lower portions of the tower structure as compared with a monopole of uniform width", and a "monopine", a "monopole that uses steel and fiberglass camouflaging to attempt to hide antennas and tower-mounted equipment, and purports to resemble a coniferous tree."[15] The alternative designs were presented to the Town, adjoining landowners, and the regional

[12] Exh. ATT-LH-02, Sheet C-10.
[13] Exh. ATT-JD-02 at pg 2.
[14] Prefiled Testimony of David Archambault and Jeffery DelliColli at pg 9.
[15] *Id* at pgs 9-10.

planning commission, however the Petitioner testifies that no party expressed a preference for the alternative designs.[16] Ultimately, the original design proposing a monopole that is painted brown was determined to be the most preferable tower design option. I concur with this assessment, both the lattice and monopine designs are larger and have more components that will create more visual contrast. The monopole design will have the smallest and more "slender" profile of the options. By painting the Tower brown, it will prevent glare on sunny days while allowing for the monopole to be visually absorbed by hillside behind at vantage points with that condition, including the Green Mountain National Forest.

4. Project Visibility

From where can the project be seen? Will the project be in the viewer's foreground, middleground or background? Is the viewer likely to be stationary so that the view is of long duration, or will the viewer be moving quickly by the site so that the length of view is short?

To evaluate the visual impacts of the Project, we reference Commission Rule 5.112. In determining whether there has been an undue adverse impact, the rule states that "a project will be found to offend the sensibilities of the average person if the project would be so out of character with its surroundings or so significantly diminish the scenic qualities of the area as to be offensive or shocking to the average person. The Commission will consider the perspective of an average person viewing the project from both adjoining residences and from public vantage points."[17]

The Current Petition (23-4087-PET) proposes the same design, size, and location for the Tower that was proposed in the 2021 petition (21-1144-PET), identified as the Tower's Original Location: lat. N 44°-00'-26.13" long. W 72°-50'-07.11". Site photos from May 21, 2021 and April 18, 2024 are included in this report because the locations reviewed during both May 2021 and April 2024 site visits were the same.

Site reconnaissance was conducted on three occasions by TCE as noted below:

- Original Petition 21-1144-PET
  - May 21th, 2021 – site reconnaissance to review the Original Location; there was no balloon flight during this visit;
  - July 27th, 2021 – site reconnaissance to review an alternative location; a balloon flight of the alternative location was conducted. The alternative location was approximately 0.42 miles northwest of the Original Location and therefore, no photos are included from this site visit.
- Current Petition
  - April 18th, 2024 during the PUC scheduled Site Visit for the Current Petition; a balloon flight was conducted for this site visit.

Areas visited included along public roads in the surrounding area (2021 and 2024) and to specific public and private property addresses with the PUC scheduled Site Visit (2024). Balloon flights orchestrated by

[16] *Id.* at pg. 10.
[17] Commission Rule 5.100 regulates the construction and operation of net-metering projects, however the cited language may be equally applied within the context of a Section 248a petition.

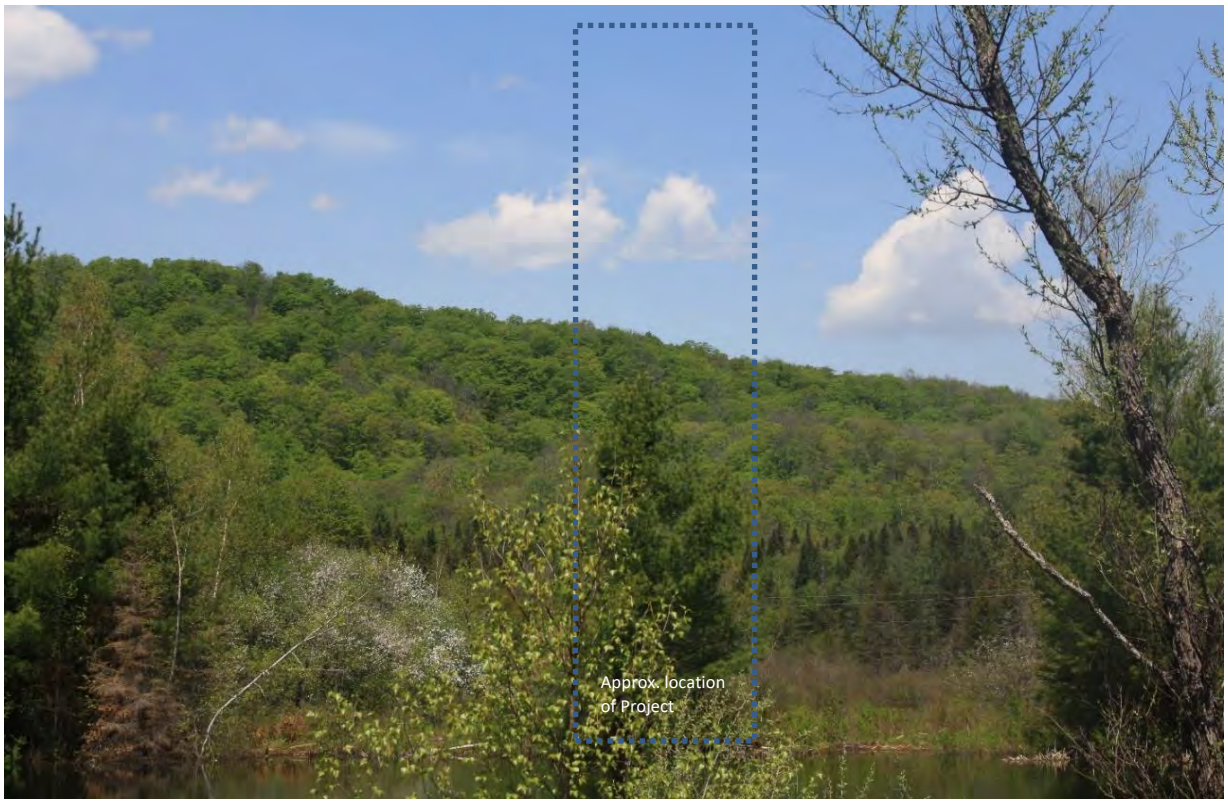


Figure 8. View facing northwesterly looking toward the Project from Post Office Hill Road. This view is in approximately the same location as ATT-JD-13 Photo 9. Focal length is 50 mm which is considered to represent a person's field of view. Image from 05/21/2021.

the Petitioner occurred on two of the TCE site visits, first on July 27th, 2021 and again at the PUC Site Visit on April 18th, 2024.

Site reconnaissance and a review of the simulations provided by the Petitioner yielded the conclusion that the Tower will be visible from portions of Post Office Hill Road, North Hollow Road, and several residences in the surrounding area. See *Appendix A – Context Map & Photo Inventory* for photos of the site and surrounding area.

Petitioner Simulations

During our analysis, TCE conducted a review of the simulations and supporting documents provided by the Petitioner including Exhs. ATT-JPT-02, ATT-JPT-03, ATT-JPT-15, ATT-JPT-16, and Prefiled Testimony of David Archambault and Jeffery DelliColli. The methodology described in ATT-JPT-02 is appropriate for the creation technical simulations that reliably represent the Project. The simulations locations were representative of the areas TCE anticipated and/or observed visibility both in public and private view locations. Simulations from private properties are consistent with the anticipated visibility, which was confirmed during the PUC site visit in April 2024. The one portion of this type of simulation that is challenging to depict is where in the tree line the Tower's monopole enters the tree canopy (i.e. how much of the monopole is visible above the tree line). It is very likely that this is well represented in the simulations. It is also not clear if any attempt was made to show proposed trees to be removed. If there

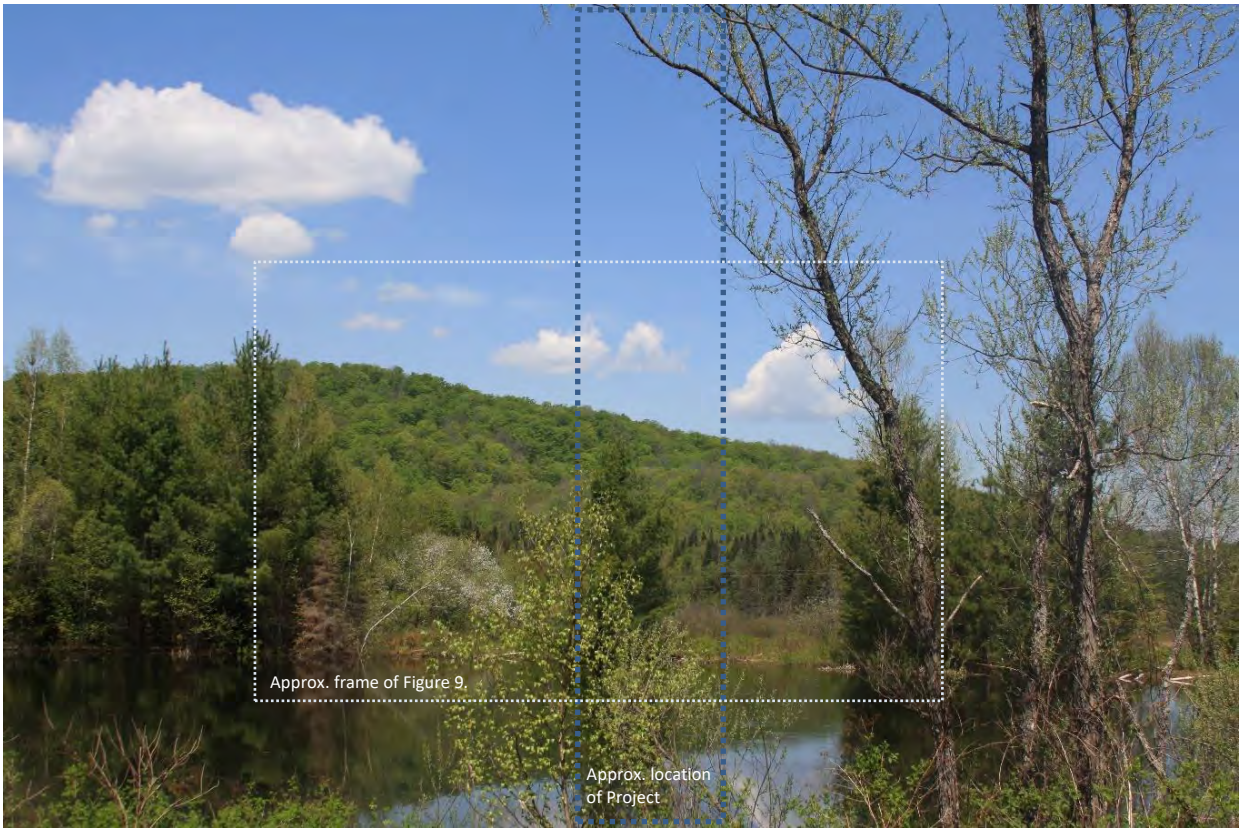


Figure 9. Same view from Post Office Hill Road facing northwesterly looking toward the Project as Figure 9. The focal length of this photo is 28 mm. Image from 05/21/ 2021.

are areas where the exact amount of exposed monopole or tree clearing is not exactly correct, this does not change the validity of the simulation or significantly alter the visual representation of the Tower and the simulations are still acceptable. In summary the Petitioner's simulations found to be accurate, reliable, and consistent with field observations and site visits and represent what the constructed Project may look like.

Public Viewpoints

Post Office Hill Road

From public locations and area roads, visibility of the Tower will be from specific locations on Post Office Hill Road for approximately 0.11 miles at the northeast end of the road where it intersects with North Hollow Road with views being broken up by roadside vegetation and structures. Where views are present along Post Office Hill Road, the Tower will be "skylined" (i.e. above the trees with sky as a background) and will be in the middle to background. View duration from this stretch of road will be short for those traveling due to the intervening vegetation and structures that will obstruct the views.

North Hollow Road

Visibility from North Hollow Road will be from a few specific views along about ±1.5 miles of road, starting north of the intersection with Post Office Hill Road. Views from North Hollow Road will vary from (a) clear views with no or few visual obstructions between the viewer and the Tower, to (b) partially filtered views

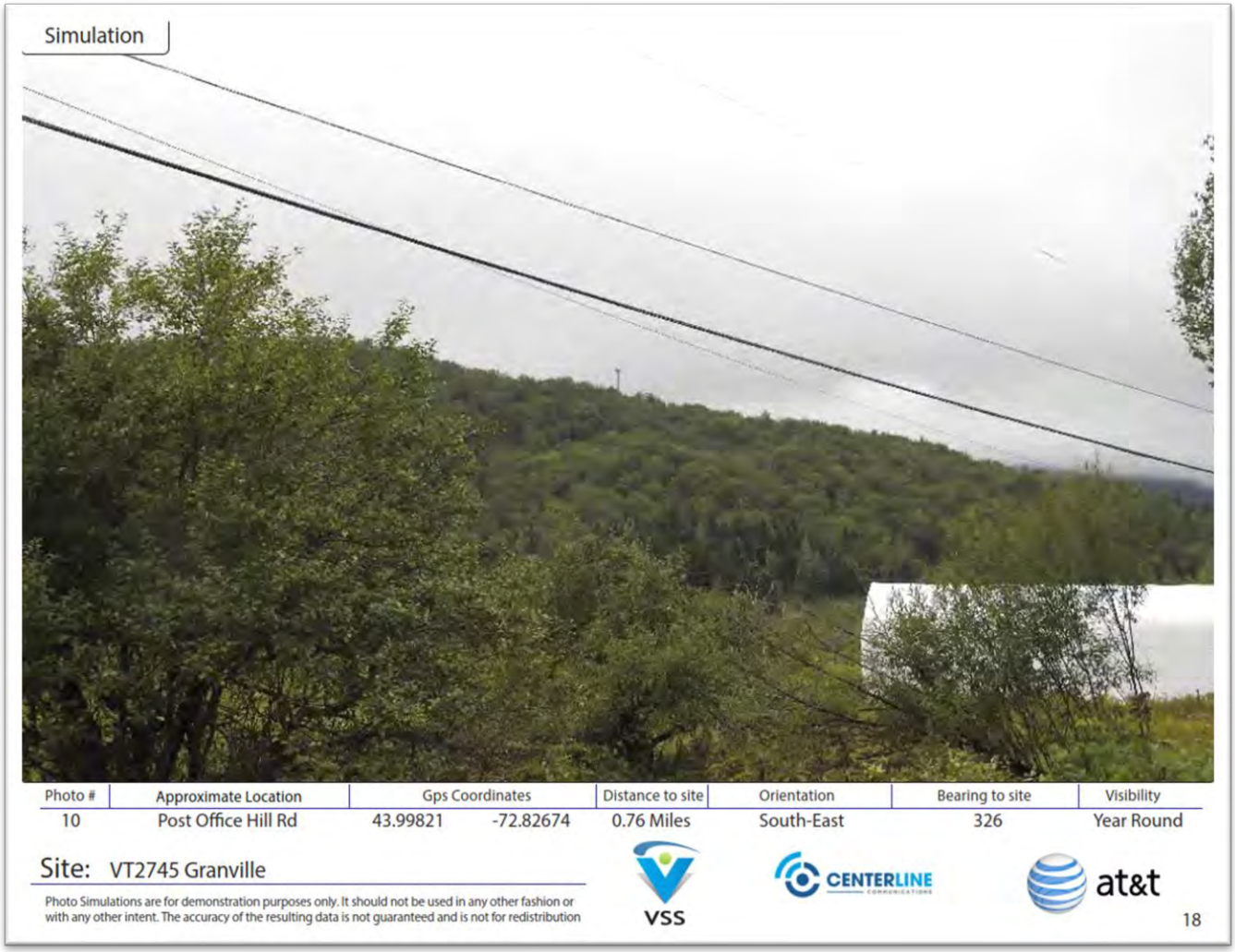


Figure 10. Simulation of the proposed Tower from ATT-JPT-15 showing Photo Location 10 at Post Office Hill Road near the intersection with North Hollow Road. This is a similar location to Figures 9 and 10 in this report. No focal length is provided for the existing photo or simulation.

that have seasonal visibility (i.e. leaf off conditions), to (c) no view of the Tower because it will be blocked by intervening vegetation, topography and viewer orientation. From North Hollow Road, the Project will skylined, appear in the middle to background, and have a short view duration where views are present.

Green Mountain National Forest

Site reconnaissance in the Green Mountain National Forest found that no visibility is expected due to the location of the Tower being on the opposite (east) side of the mountains which blocks views of the Tower from the National Forest.

VT Rt 100

There will be no visibility of the Project from VT Route 100.

Figure 11. Photo from a clearing in the Green Mountain National Forest along Patterson Brook Road looking at the Project site and the Northfield Range beyond. The tower will not be visible from this location. Image from 05/21/2021.

Views from public vantage points are considered **not adverse** because of the limited visibility – there are only a few localized areas where the Project will be visible from public roads and lands; the Project will not be visible from VT 100, the scenic byway or from the Green Mountain National Forest.

Non-public / Private Viewpoints

Views are expected from non-public, private locations from several nearby residents and parcels. Visibility from these parcels will vary depending on location, elevation, distance to the Project, orientation of residential structures and viewers, and intervening vegetation or structures between the view location and the Project.

During the April 2024 PUC site visit and balloon flight[18] several private residences were visited that included the following locations:

- 3944 North Hollow Road – Gladchun Residence
  - Visibility of Tower confirmed
- 3397 North Hollow Road – Wood Residence

[18] Due to windy weather conditions on the day of the scheduled PUC site visit (April 18, 2024) the balloon fluctuated in the sky and was not fully vertical (i.e. did not stay at the peak height), however it did provide a useful guide to the location and height of the proposed Tower.

  - Visibility of Tower confirmed
- 4170 North Hollow Road – Neale Residence
  - Visibility of Tower confirmed

After the official PUC site visit, I visited additional locations at the request of several intervenors (Jeffery Gladchun and Judy Wood), Brooke Dingledine (attorney for Mr. Gladchun), the Petitioner, and the Department of Public Service that included:

- 3511 North Hollow Road – Falcon Residence
  - Visibility of Tower confirmed from area near the pond below house site
- Residences on Fuller Road
  - Visibility of Tower confirmed from fire pit at seasonal residence and lower portion of Fuller Road only

Observations at the PUC site visit in April 2024 from the above residences and private view areas confirmed views of the Project were consistent with simulations provided by the Petitioner in Exhs. ATT-

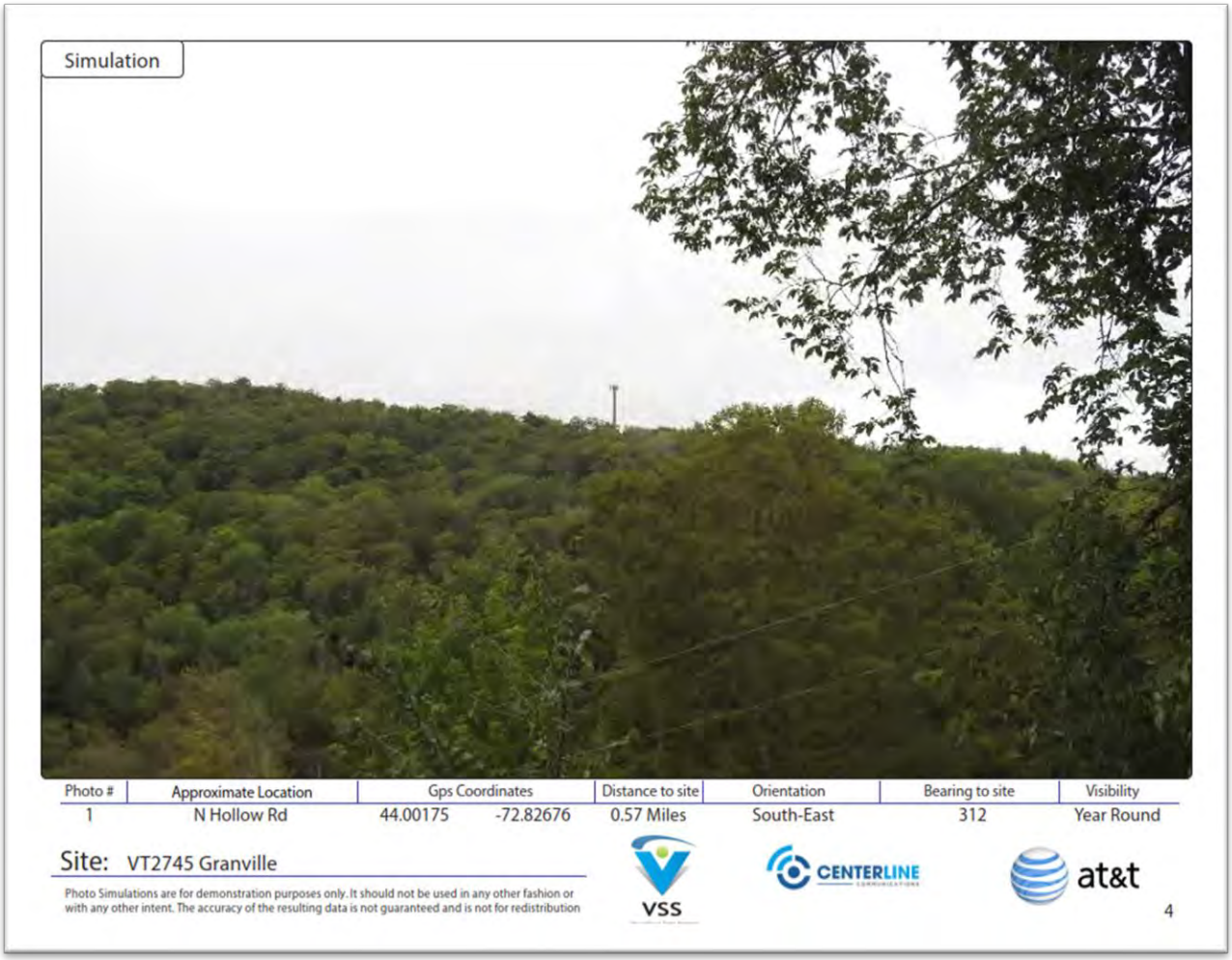


Figure 12. Simulation from Exh. ATT-JPT-16 Photo location # 1 at 3397 North Hollow Road (Wood Residence).

JPT-15 and ATT-JPT-16. Where views exist on private parcels, they will be stationary and long duration, depending on the viewer location, orientation, and any potential intervening obstructions like vegetation, other structures, etc.

The Project will appear to be in the middle to background of the views due to its distance from the viewer and intervening visual objects, like trees and vegetation. As observed during the PUC balloon flight in April 2024 and as shown in the simulations, the Tower will be skylined to varying extents from all private view locations where the Tower is visible.

Views on private parcels are all within 0.6 miles from the Project. The distance, orientation/bearing, and elevation of the viewer relative to the Tower visibility. For instance, view locations that are both closer in distance and lower in elevation the Tower will have more of the monopole visible above the tree line (i.e. 4170 North Hollow Road, see Exht. ATT-JPT-16). View locations that are higher in elevation looking more westerly at the Project will see less of the Project above the tree line (i.e. 3944 North Hollow Road, see Exh. ATT-JPT-16) because of the hill behind compared to view locations that are higher in elevation looking

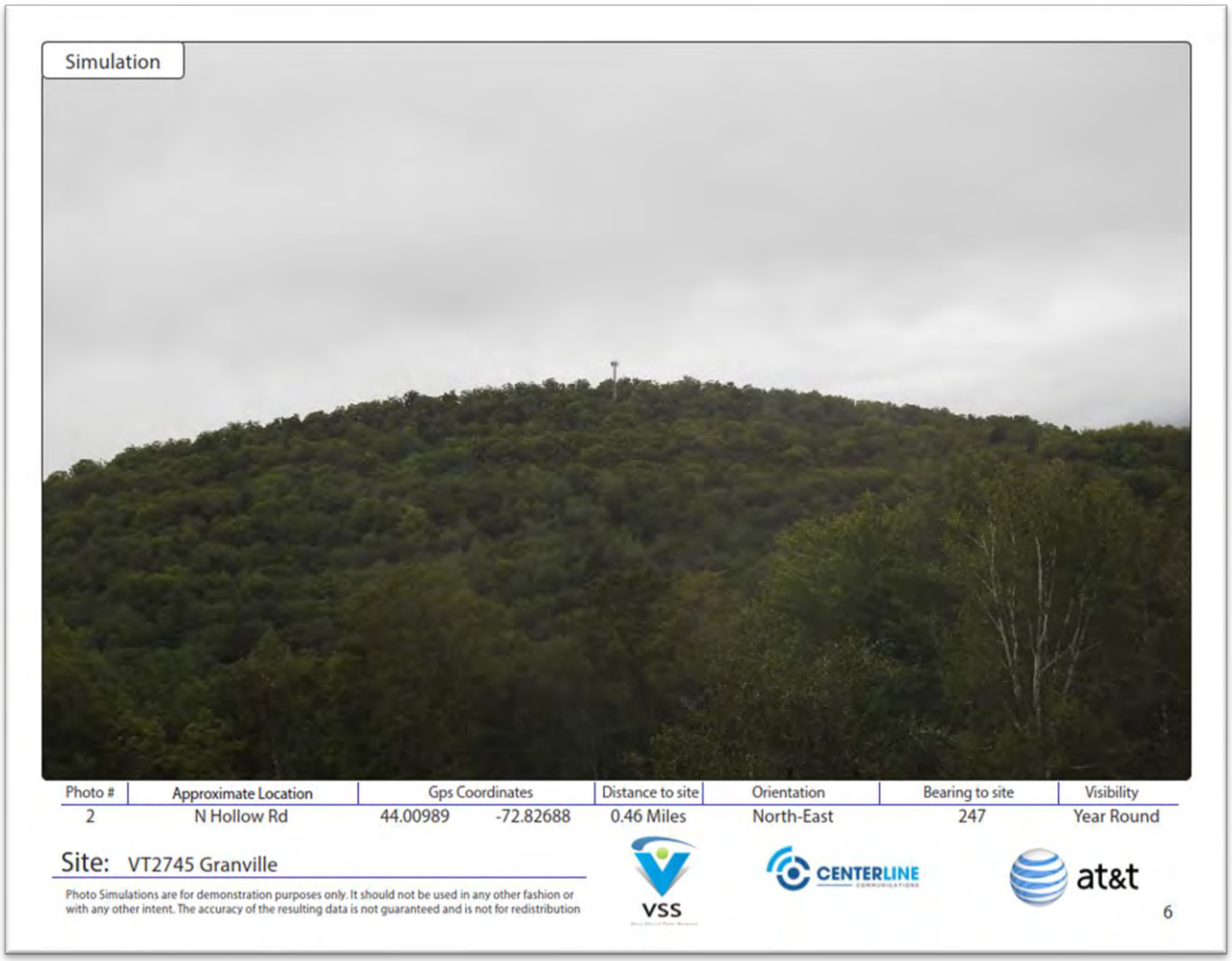


Figure 13. Simulation from Exh. ATT-JPT-16 at Photo location # 2 at 3944 North Hollow Road (Gladchun Residence).

northwesterly that will have more of the monopole above the tree line because the wooded hillside is not in the background.

Private landowners may consider the Project as objectionable because of the new visual element in their viewscape that is in contrast to the forested surroundings and taller than the tree line. For these reasons, views from private properties are considered **adverse**.

Data resulting from GIS analysis[19] (refer to *Appendix B – Viewshed Analysis Mapping*) provides information on potential visibility based on topography and vegetative cover data. The results of the "tree cover" analysis indicate that the Project is expected to have limited visibility consistent with observations made during site reconnaissance with views broken up by topography of the area, viewer direction, and intervening vegetation. In addition to GIS analysis, our examination of the visibility of the Project was confirmed by conducting site visits and photo reconnaissance of the area to verify the initial GIS analysis.

Open Space

5. A. What is the project's impact on open space in the area?

Impacts to visual open space will result from the Project where the Project has visibility, specifically from a small area of Post Office Hill and section of North Hollow Road, in that it will introduce a new visual element into the landscape.

5. B. Will it maintain existing open areas, or will it contribute to a loss of open space?

The Project will not cause the loss of any identified or preserved visual open space or physical open spaces. As noted in this report, there will be visibility of the Project from specific public and private view locations, however the Project's visibility from these locations will not contribute to a loss of open space.

Conclusion of Step One of the Quechee Analysis

After an analysis of visual impact of the Project, TCE concludes that the Project will have an **adverse** impact on the visual resources and aesthetic beauty of the area because of the new visual element in the landscape that is a larger/taller scale than the natural, forested surroundings of the area. Since the Project is determined to be adverse, Step Two of the Quechee Analysis is triggered.

Step Two of the Quechee Analysis

Since it was determined that the impact is adverse by the first step of the Quechee Analysis, the next investigation will determine whether the adverse aesthetic impact will be undue. An aesthetic impact is unduly adverse if any of the following is true:

[19] The viewshed analysis was conducted using ArcGIS 10.2 software and a LiDAR-derived 1.4-meter Digital Elevation Model. Using the Spatial Analysis Viewshed tool we were able to determine viewshed potential.

1. The project violates a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area;

2. The project offends the sensibilities of the average person because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area; or

3. The applicant has failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings.

Community Standard

1. Does the project violates a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area?

Town Plan

The Granville Town Plan (adopted 11.13.19, the "**Town Plan**") does not have a telecommunications policy or ordinance. The section *Cellular Communications* states the following:

> In 2010, a cell tower was installed on a private property on Butz Road, providing Granville its first cellular communications access. The most reliable server connected with this tower is AT&T. Though a cellular provider seeking to create a network of cell towers is exempt from local land use regulations under V.S.A Title 30, Chapter 5, §248a, due consideration of the municipal plan is prescribed as part of the permitting process of the Public Utility Commission (PUC) - formerly known as the Public Service Board. As this is not addressed directly in this Plan's Goals and Policies, note the Recommendation below regarding drafting and adopting a Telecommunications Ordinance.[20]

The *Policies* section includes the policy "3. The Town shall participate in any Public Utility Commission proceeding concerning construction of telecommunication facilities and will base its position on the town's future Telecommunications Ordinance per Recommendation 4." [21]

And recommendation 4 states "We recommend the town draft and adopt a telecommunications ordinance as soon as possible." [22]

No telecommunications ordinance or policy has been adopted by the Town to date. Since the Town does not have a telecommunications ordinance or zoning bylaws, the Town Plan was used to answer this part of the Quechee Analysis.

[20] Granville Town Plan at pg 17-18.
[21] *Id* at pg 19.
[22] *Id* at pg 19

The Town Plan has identified this area as having scenic value, section *IV. Transportation* that states "…VT Route 100, a nationally designated Scenic Byway, …"[23] and continues to note that "Routes [sic] 100 is considered a prime location for cycling due to the scenic nature of the valley."[24]

The Town Plan continues, providing the following in the *Transportation* policy "6. An integral scenic element of the rural countryside is the network of back roads comprising the town's highway system. These byways are both visually and economically important to the Town."[25] This policy relates to the Project area because it is located off of North Hollow Road which is part of the "network of backroads" that are "visually important".

The section *VII. Significant Cultural, Historic and Scenic Resources* offers the following with regard to scenic resources:

> Granville Gulf Reservation is best known for its aesthetic contribution to the scenic drive along that section of Route 100 and for the spectacular Moss Glen Falls with its 80-foot drop to the floor of the gulf where Deer Hollow Brook joins Alder Meadow Brook. [26]

There will be no visual impacts to the Granville Gulf Reservation as a result of the Project because topography of the VT 100 travel corridor area serves to effectively block the Project from this area.

The section *VII. Significant Cultural, Historic and Scenic Resources* states:

> East of the Green Mountain National Forest and Route 100, the Braintree Ridge provides scenic beauty all along Granville's North Hollow Road.[27]

The scenic beauty provided by the Braintree Ridge will be not impacted. The Braintree Ridge is not specifically identified on any town or regional maps that note other peaks and ridges (i.e. Adams, Lost, Childs Mountain, etc.). Instead it is presumed that this is part of the Northfield Range east of North Hollow Road near the Braintree border, Braintree Gap and Braintree Mountain Road, not the small unnamed hills where the Project is located (between VT 100 and North Hollow Road). The Project is consistent this standard.

The Town Plan also includes more general guidance on protecting natural and scenic areas, this is found in section *III. Physical Conditions and Natural Resources* that includes the goal "[p]rotect the Region's rural agricultural character, scenic landscape, and recreational resources."[28] The *VII.*

[23] Granville Town Plan at pg 11.
[24] *Id* at pg 12.
[25] *Id* at pg 13.
[26] *Id* at pg 25.
[27] *Id.*
[28] *Id* at pg 10.

Significant Cultural, Historic and Scenic Resources "Goals, Policies, Recommendations" [29] section provides the following:

> Goals
> 1. Preservation of Granville's historic structures and historical sites.
> 2. Preservation of Granville's scenic resources.
>
> Policies
>
> Policies relevant to the above goals are set forth in section III. Natural Resources and Physical Conditions, section V. Utilities, Facilities, and Services, as well as section X. Land Use.
>
> Recommendations
>
> 1. Promote the historical and cultural resources of the community and build support for local historic preservation efforts.
> 2. Maintain the flavor and character of the Village Centers by monitoring development and encouraging developers to incorporate design features comparable to New England historic style architecture.

While the Town Plan provides general goals ("preservation of Granville's scenic resources") and general locations ("integral scenic element of the rural countryside is the network of back roads comprising the town's highway system") there is a lack of specific written community measures to use as a guide to protect the scenic resources of the area.

A review of the Town Plan finds the Project **does not** violate standards intended to preserve the aesthetics or scenic beauty of the area as outlined in the Town Plan.

Regional Plan

The Two Rivers-Ottauquechee Regional Plan (adopted 11/13/2019, the "**Regional Plan**") was also reviewed. The Regional Plan identifies *Prominent Scenic Landscape* at pg 159 (emphasis added).

> **Prominent Scenic Landscapes**
>
> The following areas are likely to be affected by projects and should be reviewed. Such areas are generally accepted as areas of scenic significance:
>
> 1. Shorelands immediate to public lakes, rivers, or ponds;
> 2. *Areas immediately adjacent to scenic corridors;*
> *3. Prominent ridgelines, mountaintops, or excessively steep slopes that can be readily viewed from public corridors;*
> 4. Exceptional agricultural and historic areas;
> *5. Areas within or immediately adjacent to natural areas (i.e., wetlands) designated by the State; and*
> 6. Areas of high scenic quality that are publicly recognized as exceptionally unique or are noted examples of the dominant characteristics of an area in the Region. Examples of prominent scenic areas within the TRO Region include designated byways.
>
> • Connecticut River Byway (a National Scenic Byway): Route 5, Hartland to Newbury
> • Crossroads of Vermont Byway: Route 4, Bridgewater to Hartford

[29] Granville Town Plan at pg 25.

• *Scenic Route 100 Byway: Plymouth to Granville*

The policies section at 160 discusses design and development considerations, excerpted below.

Policies: Scenic Resources

1. Where development is proposed in areas of scenic value (including prominent ridgelines or mountaintops, highly scenic areas with distant views, scenic agricultural land, scenic areas highly visible from a public corridor, built environments with scenic value, and industrial or commercial development in areas of scenic value), because they possess scenic views, contain land with historic or scenic significance, or are highly visible within a scenic context, design plans must:
   a. Maintain the prominent natural feature of the developed area;
   b. Work toward enhancing or retaining views;
   c. Minimize adverse impact on views and areas of historic significance;
   d. Minimize contrasts with areas of historic significance; and
   e. Reflect traditional settlement patterns.
2. Project planners must minimize the adverse effects of strip development on existing visual resources by consideration of the following design principles:
   a. Integrate landscaping into parking areas;
   b. Encourage compact and densely developed projects that utilize land efficiently;
   c. Place street trees as buffers between traffic arteries and internal drives;
   d. Use unobtrusive signage;
   e. Vary the pattern, number, size, and location of structures within the site;
   f. Employ screening plans for visually objectionable features on the site; and
   g. Minimize access roads or curb cuts onto public highways and use of common access drives.
3. Given their unique visual experience, roads exhibiting exceptionally high scenic and cultural values, and determined to be of local or state significance, must be constructed or improved with due concern for the special scenic qualities inherent to the roadway and roadway fringe. Substantial modifications or off-alignment options that unnecessarily destroy the special characteristics of such roadways are not consistent with this Plan.
4. It is appropriate that municipalities, TRORC, and other entities employ a process for evaluating impacts and recommend design characteristics to be considered by those involved in the review and preparation of development proposals.

The Project is located in an area identified as having scenic significance, however it **does not** violate any of the policies for protection of scenic and natural resources because there will be no visual impact from the Project along VT 100 Scenic Byway, the project is located on unnamed ridges and prominent natural features will be maintained, no adverse impacts are expected in areas of historic significance, and the Project is not expected to adversely impact traditional settlement patterns.

Regional Plan's *Telecommunications* section (at 197-201) also discusses aesthetic considerations:

> Transmission towers are necessary telecommunications facilities, but as land uses, these towers have emerged as planning concerns, primarily for aesthetic reasons.

> To ensure adequate transmission of signals in mountainous areas such as ours, towers and related facilities need to be located on hilltops or high elevation points. One of the Region's principal scenic qualities is its ridgelines and mountainsides. These areas are significant contributors to the rural character of the Region. The ridges are predominately undeveloped and provide an unbroken skyline viewed from the valley floor. The use of the Region's ridges for telecommunication towers and related facilities needs to be undertaken in a manner that will not unduly detract from, nor adversely affect, these scenic values. Protection of these areas from insensitive developments is a matter of public good. Thus, due to transmission towers' higher visibility from multiple vantage points, conflict with scenic landscapes has become an issue.[30]

The Regional Plan section *Goals, Policies, and Recommendations: Telecommunications* identifies the following goal "4. The enhancement of telecommunications networks is supported, when such facilities do not have significant adverse environmental, health, or aesthetic impacts"[31] as well as policies.

The Regional Plan also identifies specific mitigation measures and considerations in the Policies section at 200, excerpted below.

> **Policies**
> 1. Public and private efforts to expand telecommunications access is supported, when done in a manner that does not have an undue adverse impact on the rural character of our communities.
> 2. Efforts to provide free public broadband access in places such as village centers and public buildings is supported.
> 3. Telecommunications facility development shall be excluded from the following areas:
> • Floodways shown on FEMA Flood Insurance Rate Maps.
> • Wetlands as indicated on Vermont State Wetlands Inventory maps or identified through site analysis.
> • Rare, threatened, or endangered species habitat or communities.
> 4. All new telecommunications facilities and related infrastructure must be sited and designed to avoid or, if no other reasonable alternative exists, to otherwise minimize and mitigate adverse impacts to the following:
> • Historic districts, landmarks, and sites.
> • State or federally designated scenic byways and municipally designated scenic roads and viewsheds.
> • Special flood hazard areas identified by National Flood Insurance Program maps.
> • Necessary wildlife habitat identified by the State or through analysis, including core habitat areas, migration, and travel corridors.
> 5. New telecommunications facilities and related infrastructure (this includes access roads, site clearing, on-site power lines, lighting, and off-site power lines) must be sited to avoid the fragmentation of large priority and high priority forest blocks.

[30] Two Rivers-Ottauquechee Regional Plan at pgs 199-200.
[31] *Id* at pg 200.

6. Telecommunications facilities development shall minimize site clearing and highly visible roadways.
7. The developer shall make reasonable efforts to minimize the aesthetic impact of the telecommunications facility or infrastructure on the surrounding landscape. This includes options such as the utilization of "stealth towers," camouflage through paint scheme, or designs that blend into the surroundings, such as asymmetrical mono-poles disguised as pine trees.
8. Telecommunications facilities shall be designed to be the minimum height necessary to achieve coverage.
9. All new facilities shall incorporate reasonable options for sharing space on proposed towers. Applicants for new towers must demonstrate that there is no reasonable opportunity for co-location on existing towers.
10. To support resiliency, applicants shall make space available on towers for municipal communication systems to enhance or expand road and emergency service communication networks.
11. To minimize conflict with scenic values, facility design and construction shall employ the following principles:
    • In rural locations, be located in forested areas or be sufficiently landscaped to screen the lower sections of towers and related ground fixtures from public vantage points, such as trails, roads, or water bodies;
    • In more developed areas, utilize materials, architectural styles, color schemes, lighting fixtures, size, and other design elements to promote aesthetic compatibility with surrounding uses and to avoid adverse visual impacts; and
    • Be located downgrade of the ridge so as not to exceed the elevation of the tree line as seen from public highways.
12. Consideration shall be given to the environmental limitations of any given site. Impacts on wildlife habitats, soil erosion, forestry and agricultural lands, and similar resources should be carefully addressed. Projects that materially impact these resources are discouraged.
13. The clearing of land associated with site development for tower and facility construction should not negatively impact the scenic views present.
14. Towers or facilities that are designed to resemble trees or natural features shall not be placed conspicuously higher than the tree line.
15. Permits must require removal of facilities that are no longer used.[32]

The Project does comply with the Regional Policies with regard to design and mitigation.

After a review of the Regional Plan, TCE finds that the Project **does not** violate any community standards intended to preserve the aesthetics or scenic beauty of the area as outlined in the Regional Plan.

Shocking & Offensive

2. Does the project offend the sensibilities of the average person because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area?

[32] Two Rivers-Ottauquechee Regional Plan at pg 200-201.

In determining this factor, the Commission may consider the perspective of an average person viewing the project from both adjoining residences and from public vantage points. The perspective of an average person from a public or private vantage point is considered from an objective, rather than a subjective and neighborly viewpoint. The following is TCE's opinion representing our understanding of the average viewer's perspective of the Project. From public vantage points, like vehicles traveling on the VT 100 Scenic Byway, the Green Mountain National Forest, and most nearby roads where no visibility is expected due to the topography of the area the Project will not offend the sensibilities of the average person from this travel corridor due to an overall lack of visibility. Views from identified areas on Post Office Hill Road and North Hollow Road will have visibility as described in this report and shown on the Petitioners simulations (Exh. ATT-JDP-15), the Project will not be shocking or offensive even though there are locations with views of the Tower. This is due to the short view window/duration of view, speed of travelers, and visual obstructions like intervening trees and structures that break up the views along much of the roads. Even in winter/leaf off conditions, the tree branches and structures (buildings, utility poles, etc.) will serve to break up views of the Project. Telecommunication towers can also be considered to be more common in the landscape and are less likely to be considered shocking and offensive, even in a forested area like the Project area.

From private properties, landowners may find the Project to be "shocking" or "offensive" largely because it is a new contrasting structure that will be (a) stationary and (b) a portion of the Tower extends above the tree line or skylined from specific vantage points on their property that has an otherwise forested view. Telecommunication towers have become increasingly common in the landscape, even in more rural areas with the desire for cellular service throughout the state. Additionally, no lighting or marking of the Tower is proposed[33] which reduces the Projects visual impacts. If the average viewer were to view the Project from adjoining private properties, they would likely find the Project to be adverse. However, based on our review of the Project, I conclude that the average viewer would not find the Project to be so out of character with its surroundings or that it significantly diminishes the scenic qualities of the area.

While the Project does have adverse visual impacts that cannot be mitigated (i.e. the Tower height), TCE finds that from both public and private vantage points the Project **does not** offend the sensibilities of the average person because it is out of character with the surroundings or that it will significantly diminish the qualities of the area, understanding that specific landowners and residents, particularly those with a view of the Tower, may find the Project objectionable.

Project Mitigation & Harmony with Surroundings

3. Has the applicant failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings?

For telecommunication towers there are fewer options to improve the harmony of the project with its surroundings since the towers typically need to be taller than the surroundings to function properly.

[33] Exh. ATT-JD-02 at pg 12

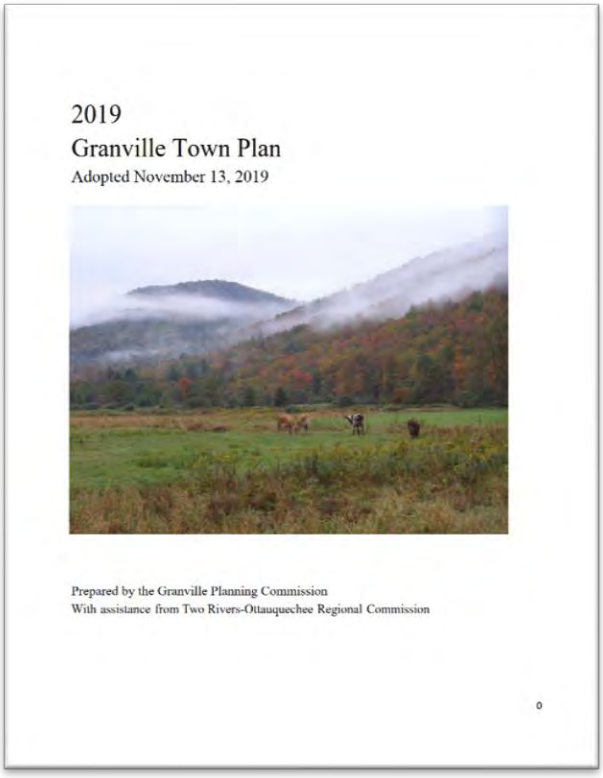
Mitigation measures can include (a) collocation of towers/appurtenances to limit new vertical structures in the landscape, (b) location/siting new towers to limit visual impact, (c) alterations to the tower height to reduce the height of the project components, and (d) changes to design styles (i.e. monopole, lattice, monopine) and/or colors of the project components, (e) limit site work that will impact project visibility, including clearing. For the Project, the Applicant has done the following:

a) The Petitioner has stated that collocation is not possible for this Project.[34]
b) Alternative locations were explored in the surrounding area, however no suitable alternative location was viable.[35] The Project is proposed in a location where there is no visibility from VT 100 Scenic Byway and there is limited visibility from general surrounding areas.
c) The Petitioner has testified that it is not possible to reduce the height of the Tower.[36]
d) Alternative tower designs were presented that included a lattice and monopine options, as well as alternative colors for the monopole design. The final tower design reflects the option – a steel monopole painted brown – that will have the smallest profile and uses a color that will limit glare and provide camouflage against wooded backgrounds.[37]
e) The Project proposes to minimize tree clearing to only what is necessary for access and construction of the Project.[38]

TCE concludes that the Applicant has taken generally available mitigating steps to improve the harmony of the project with its surroundings.

[34] Exh. ATT-JD-02 at pg 19, section VIII, and ATT-JD-11
[35] Prefiled Testimony of David Archambault and Jeffery DelliColli at pg 10 and 15 and Exhs. ATT-JPT-08, ATT-JPT-09, ATT-JPT-10, ATT-JPT-11, ATT-JPT-12, ATT-JPT-13.
[36] Prefiled Testimony of David Archambault and Jeffery DelliColli at pg 22.
[37] Prefiled Testimony of David Archambault and Jeffery DelliColli at pg 9.
[38] Exh. ATT-LJ-02.

Town and Regional Plans



This section evaluates the Project's consistency with the Town and Regional planning documents. Documents referenced for this report include the below list.

- Granville Town Plan, adopted November 13, 2019 (the "**Town Plan**")
- Two Rivers-Ottauquechee Regional Plan, adopted July 15, 2020, Effective August 19, 2020, (the "**Regional Plan**")

Also see **Step Two** of the Quechee Analysis in this report for additional discussion on community standards with regard to the Project.

Town Plan

The Town plan states that natural resources should be protected, noting that wetlands "contribute to the open space character and overall beauty of the natural landscape."[39] The Town Plan does not specifically identify wetlands or open spaces that should be preserved or are of a particular or unique scenic value.

The section of the Town Plan *X. Land Use* provides a description of the Rural land use designation.

> Rural Areas
>
> All areas of Granville that are not part of the Village Center Areas are considered Rural Areas. Granville's Rural Areas consist of a mixed pattern of land uses, including residential, small-scale businesses, outdoor recreational, agricultural, forestry, and natural resource uses.
>
> Non-residential uses, such as service businesses, professional offices and guest accommodations, are acceptable land uses for Rural Areas provided that such uses are planned as relatively small in size or scale; are auxiliary and not primary uses; do not unduly conflict with existing or planned residential, forestry or agricultural uses; and do not unduly affect rural character. Such non-residential development in Rural Areas may be permitted along Class 2 and Class 3 roads, but may be prohibited in areas that are not served by municipal roads, as outlined and authorized in the Vermont Agency of Transportation "standard A-76 for Rural Town Highways" and the pursuant Granville Town Highway Ordinance.[40]

[39] Granville Town Plan at pg 8.
[40] Id at pg 32.

Forest fragmentation is discussed in the Town Plan at 34, see below excerpt.

> The vast acreage of the Green Mountain National Forest, west of Rt. 100, is not subject to regulation by the Town of Granville. Though there are some small pockets of State public land east of Rt. 100 also not subject to Town regulation, almost all the land east of Rt. 100 is within our purview. Thus, it is this land we must protect from forest fragmentation.[41]

This section also notes the large forest blocks within the Town. The Project is located in a "Priority Interior Forest Block" and a "High Priority Connectivity Block", but it is not located in the "Highest Priority Interior Forest Blocks" or the "Highest Priority Connectivity Blocks". The Project is located in lower designations for forest connectivity and forest blocks and there are no specific policies included in the Town or Regional plans to prohibit telecommunication development on lands with these designations. The Town Plan goals and policies speak to the preventing forest fragmentation and preserving large forest blocks. The Project will not adversely impact forest blocks or increase forest fragmentation because the clearing will be limited to the creation of the road and Facility, no other development for the Project is proposed.

In the section XII. Implementation: Putting the Plan into Action, in the section *B. Non-Regulatory – Guidelines for Growth* there is a section *Siting New Development* at 40-41 that was reviewed for relevance and consistency, see excerpt below.

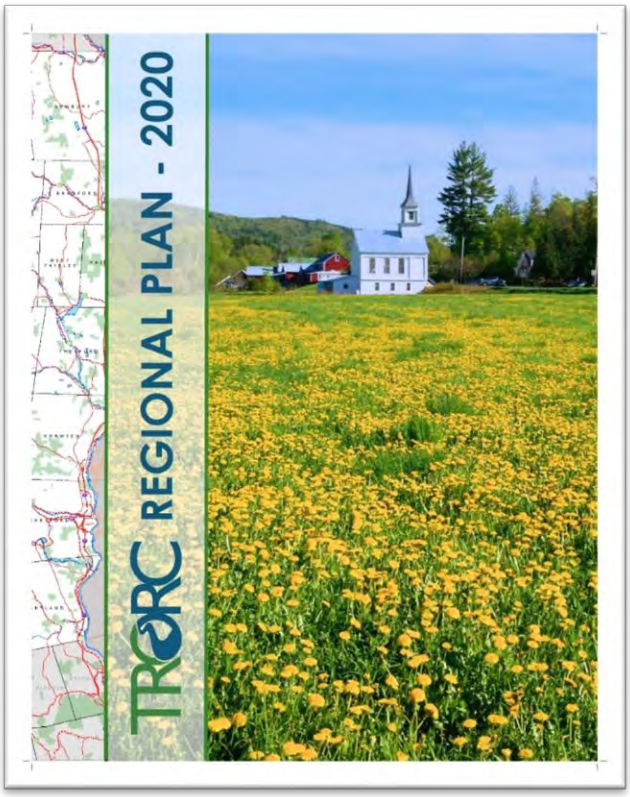
> New development should be sited to:
> 1. Be compatible with the historic settlement pattern;
> 2. Maintain functional integrity of deer wintering yards and wildlife corridors;
> 3. Be cost efficient for municipal services;
> 4. Conserve the agricultural potential of primary agricultural soils by
>
> a) Keeping primary agricultural soils available for agricultural production unless the only economically viable use of the land would be from incompatible uses.
>
> b) Utilize creative planning and design to minimize the reduction of agricultural potential.
>
> Designing New Development
> New development - particularly large residential development - should be designed to:
> 1. Avoid overloading public facilities and services;
> 2. Be compatible with desired habitat conditions and public outdoor recreation;
> 3. Take advantage of opportunities to enhance and/or restore habitats by establishing native vegetative diversity
> or provide other wildlife benefits;
> 4. Mitigate the effects of proposed actions on identified archeological sites;
> 5. Be compatible with the qualities that make historic areas, structures or site significant;
> 6. Protect the community trail system from activities which would unduly compromise desired trail experiences and uses;
> 7. Promote the design, siting and construction of buildings and structures that are energy efficient and minimize the need for costly energy sources;
> 8. Incorporate the following visual elements:

[41] Id at 34

a) Unobtrusive heights of buildings
b) Vegetative screening
c) Preservation of native vegetation
d) Unobtrusive location of utilities
e) Minimal alterations to topography

> Unlike regulatory tools, the above are not, in their general application, mandatory, and are not intended to be strictly adhered to in every case; these are general guidelines for growth. [42]

The Project is consistent with the above guidelines. The Recommendations in this section (*B. Non-Regulatory – Guidelines for Growth)* state "1. Adoption of a Telecommunications Ordinance that will protect Granville from undesirable cell tower and/or other telecommunications projects."[43] As noted previously, no telecommunications ordinance is adopted at the time of this report.



Regional Plan

Relevant portions of the Regional Plan regarding telecommunications and scenic resources have been included in above sections in this report under **Step Two** of the Quechee Analysis. As noted in those sections, the Project is consistent with the Regional Plan.

Our review of the Town and Regional documents found that the Project **is consistent with** the relevant provisions and objectives of each plan.

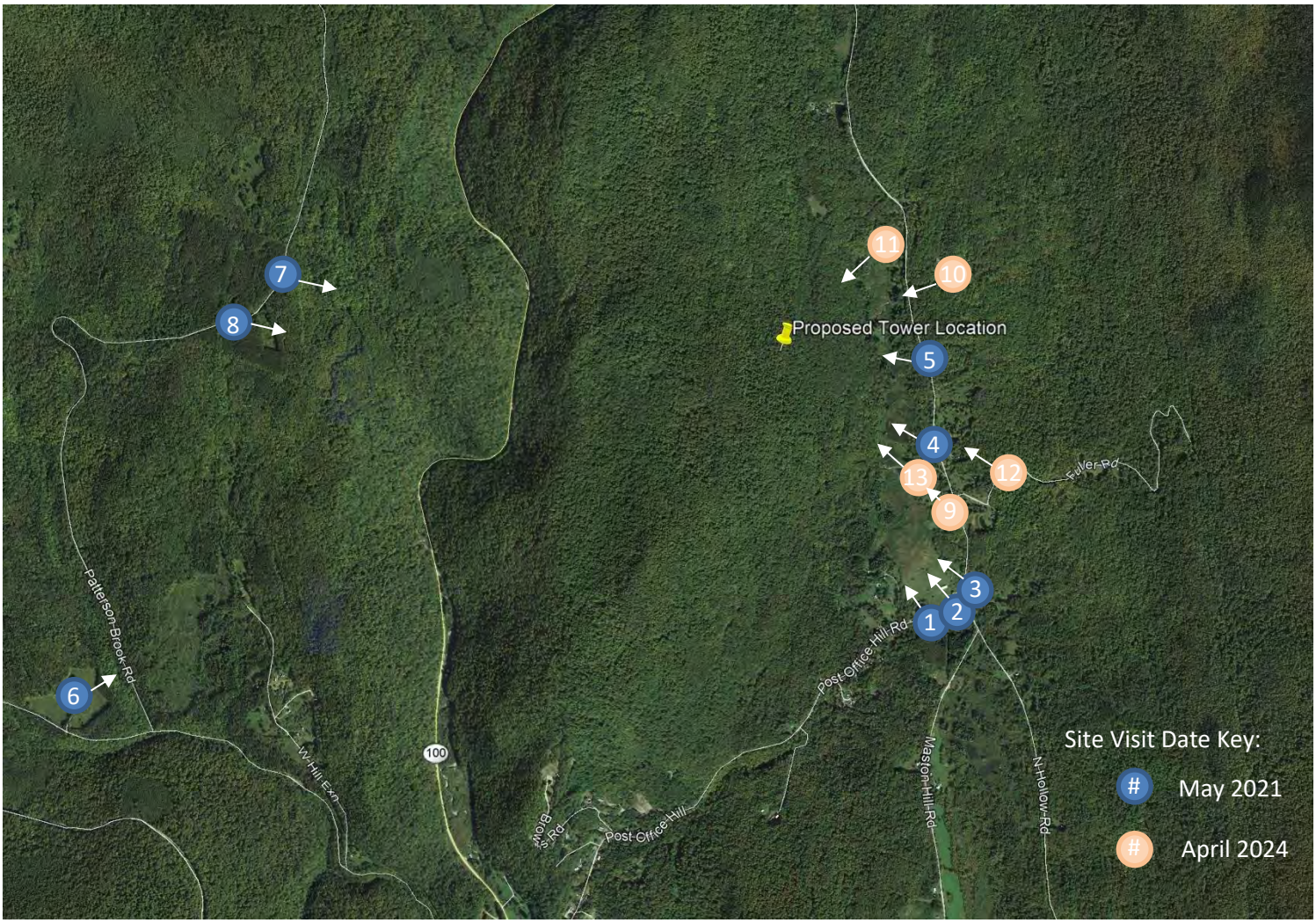
Final Conclusion

As previously presented, TCE concludes that the Project **does create an adverse impact** on the visual and scenic resources of the area, however the Project as a whole **does not create an undue adverse impact** on the visual and scenic resources of the Town or surrounding area. Additionally, the Project is consistent with both the Town and Regional planning documents.

[42] Granville Town Plan at 40-41
[43] Granville Town Plan at 41

Appendix

Appendix A – Context Map & Photo Inventory



*All photos are 50-55mm focal length unless otherwise noted.
**Areas noted as "Approx. location of Project" in the Photo Inventory are approximate to provide context for the photo as it relates to the Project and expected visibility.

May 21, 2021

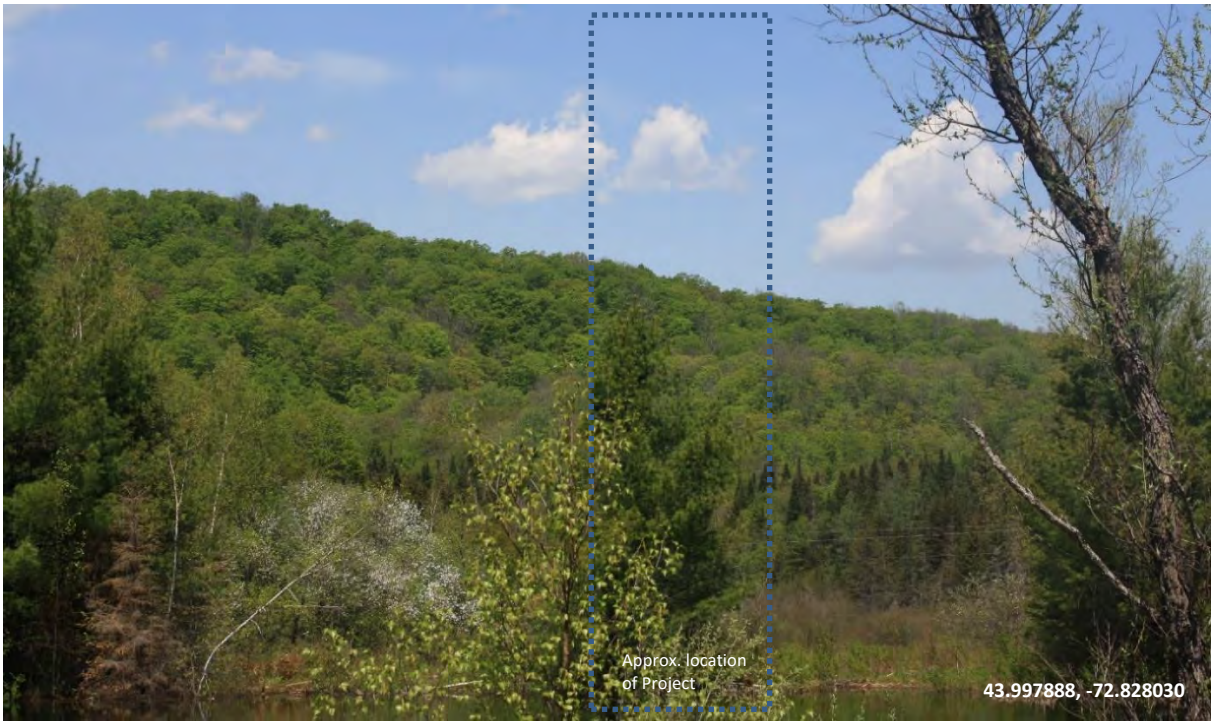


Photo 1. View facing northwesterly looking toward the Project from Post Office Hill Road. This view is in approximately the same location as ATT-JD-13 Photo 9. The Project will be visible from this location.

Photo 2. View facing northwesterly looking toward the Project from Post Office Hill Road. The Project will be visible behind the building from this location.

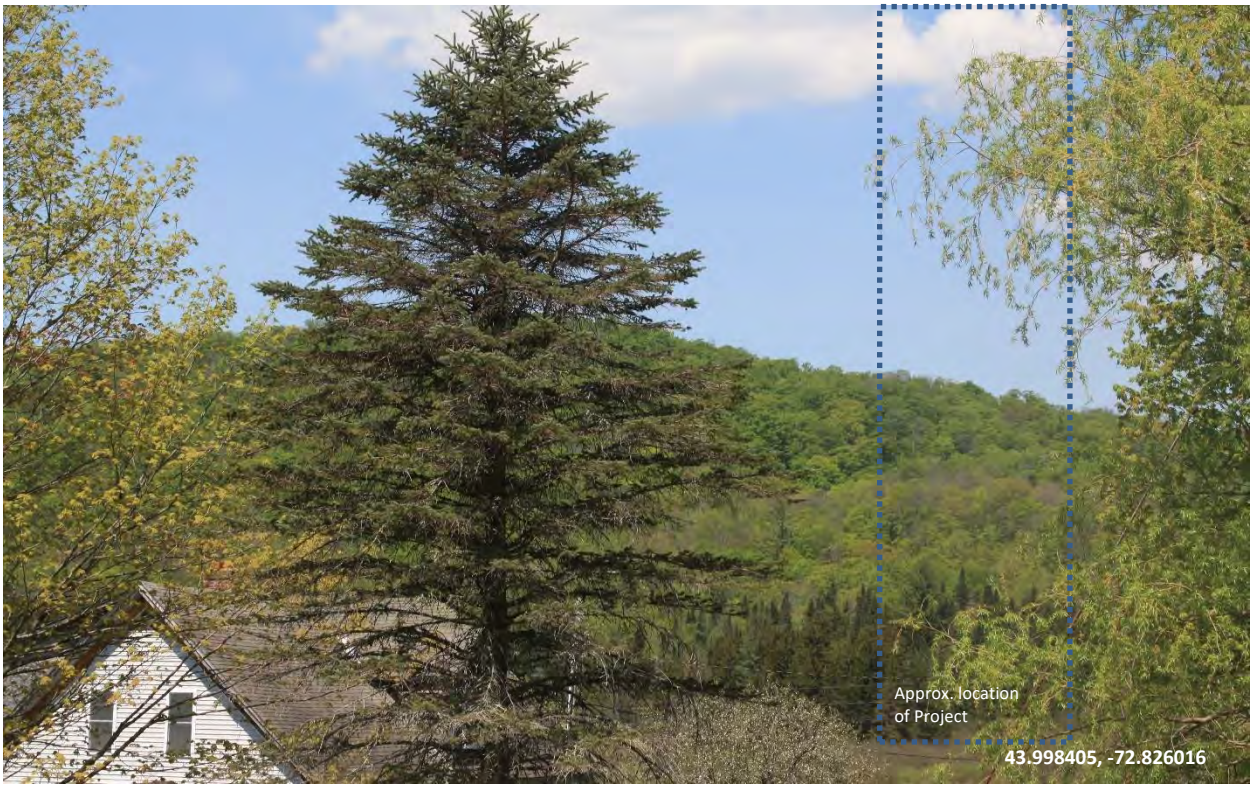


Photo 3. View facing northwesterly looking toward the Project from the intersection of Post Office Hill and North Hollow Road. This view is in approximately the same location as ATT-JD-13 Photo 12. The Project will be visible from this location.

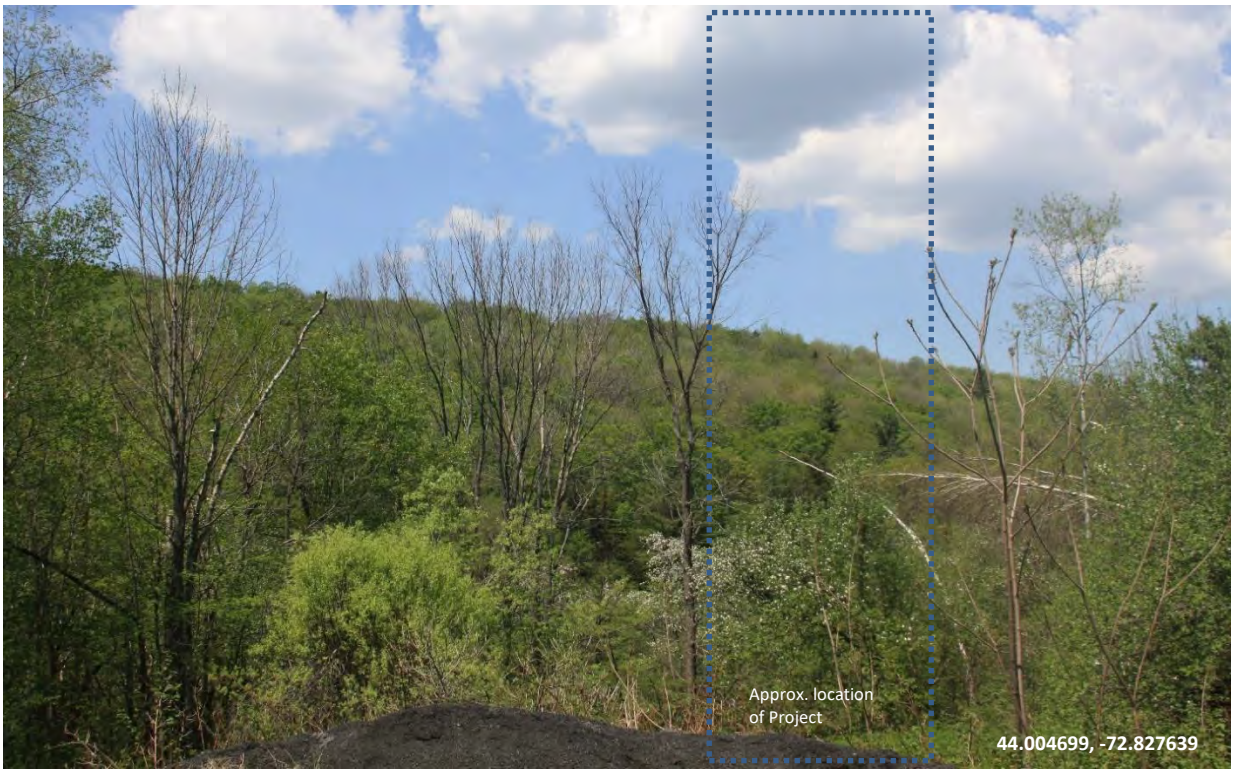


Photo 4. View facing westerly looking toward the Project from North Hollow Road. This view is similar to the location of Exh. ATT-JPT-13, Photo 3 at pg 8. The Project will have seasonal visible from this location.

Photo 5. View facing northwesterly looking toward the Project from North Hollow Road. This view is in approximately the same location as Exh. ATT-JPT-13, Photo 1 at pg 4. The Project will be have seasonal visibility from this location.

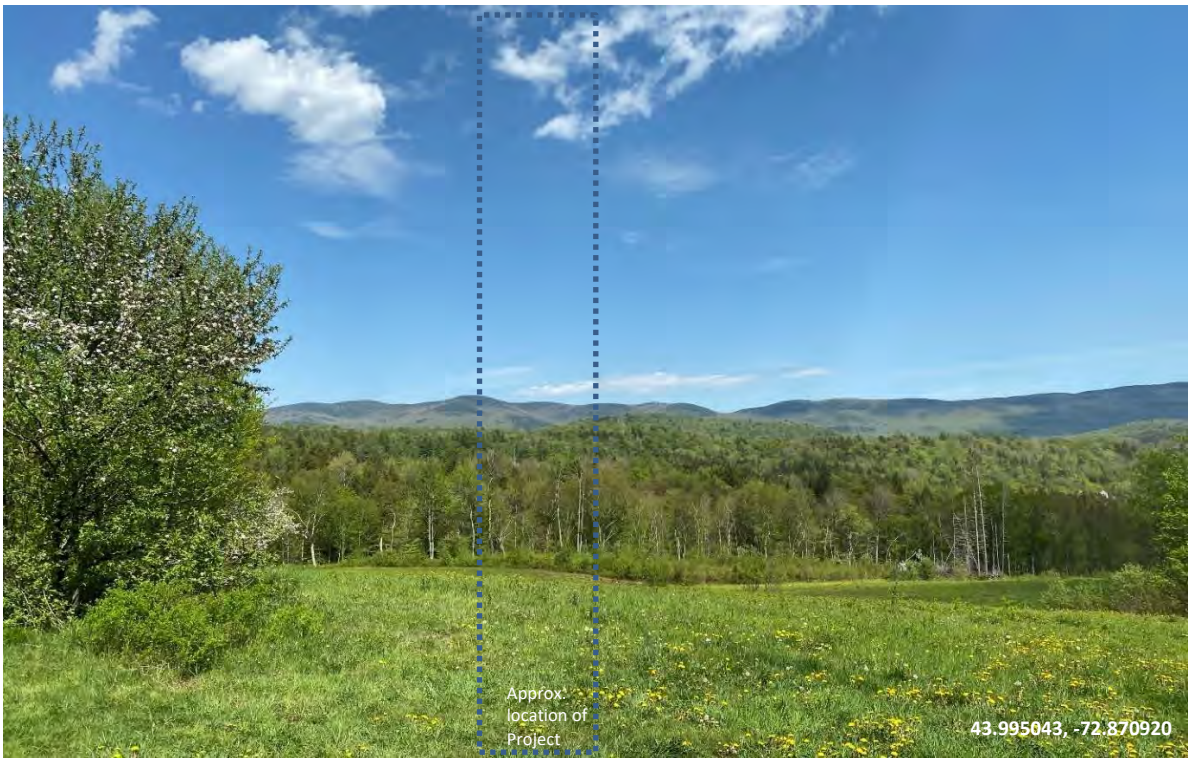


Photo 6. View facing easterly looking toward the Project from Forest Service Road 207. The Project will not be visible from the Green Mountain National Forest. This photo is 28mm equiv. focal length.

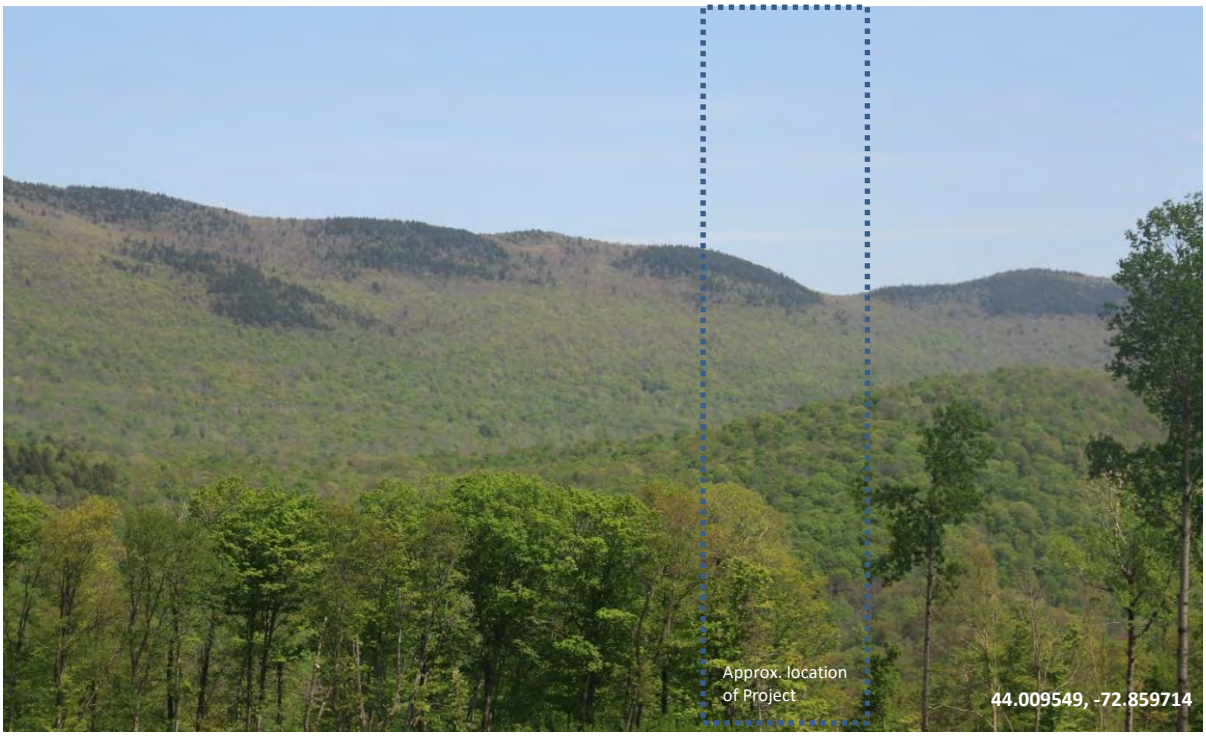


Photo 7. View facing easterly looking toward the Project from a clearing off of Patterson Brook Road, a forest service road in the Green Mountain National Forest. The Project will be not visible from the Green Mountain National Forest.

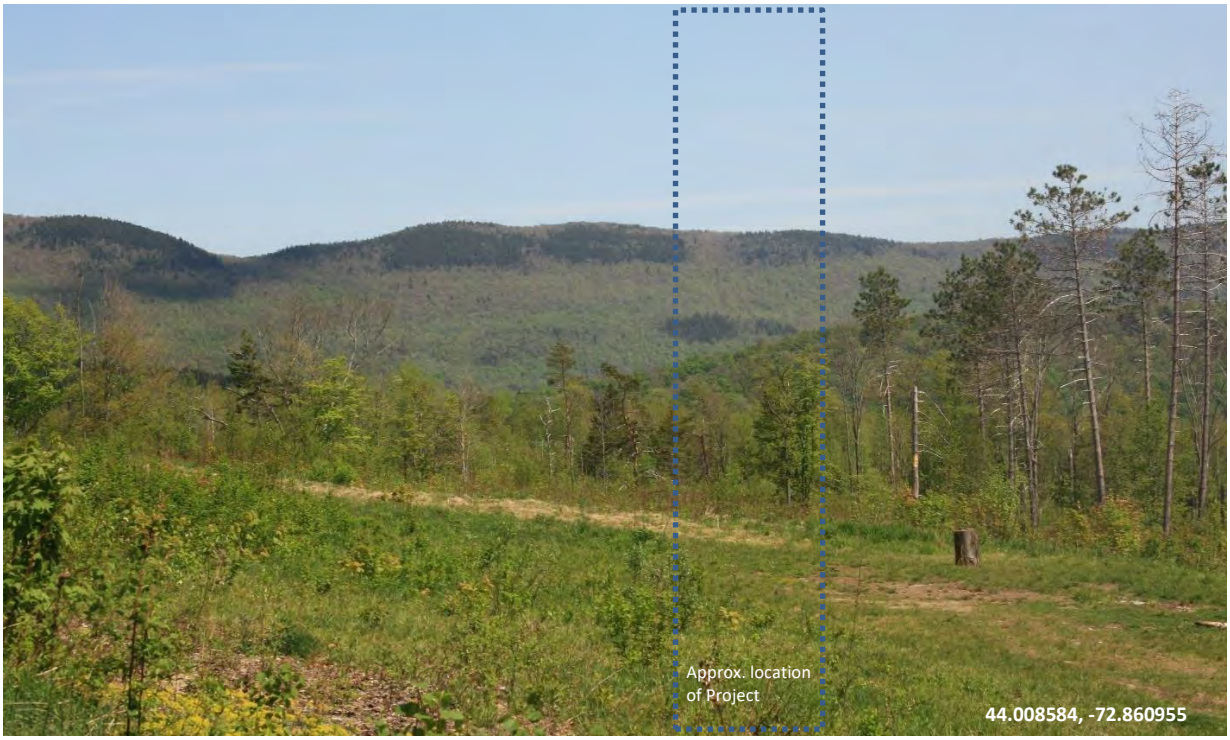


Photo 8. View facing easterly looking toward the Project from a clearing off of Patterson Brook Road, a forest service road. The Project will be visible from specific locations in the Green Mountain National Forest, including east facing cleared slopes. The Northfield Range is visible in the background.

PUC Site Visit – April 18, 2024 Balloon Flight[44]**

Photo 9. View facing northwesterly looking toward the Project from 3397 North Hollow Road (Wood residence), approximately 0.57 miles away from the Project.

Photo 10. View facing southwesterly looking toward the Project from 3944 North Hollow Road (Gladchun residence), approximately 0.45 miles away from the Project.

[44]** Due to weather conditions on the day of the scheduled PUC site visit 04/18/2024, the balloon location fluctuated from wind and was not fully vertical for most photos.

Photo 11. View facing southwesterly looking toward the Project from 4170 North Hollow Road (Neale residence), approximately 0.39 miles away from the Project.

Photo 12. View facing northwesterly looking toward the Project from 147 Fuller Road (seasonal residence), approximately 0.58 miles away from the Project.

Photo 13. View facing northwesterly looking toward the Project from 3511 North Hollow Road (Falcon residence), approximately 0.45 miles away from the Project.

Appendix B – Viewshed Analysis Map

This can be found under Exh. DPS-LT-3.

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 23-4087-PET

Application of New Cingular Wireless PCS, LLC d/b/a AT&T pursuant to 30 V.S.A. § 248a requesting a Certificate of Public Good for an installation of a wireless telecommunications facility in Granville, Vermont	

PREFILED TESTIMONY OF
MARTIN J. LAVIN
ON BEHALF OF APPLICANT

November 30, 2023

The purpose of the testimony from the witness is to provide the Commission with a description of the proposed telecommunications Facility, the specific coverage objectives that will be met, the service that will be provided within the coverage area, and how the proposed Facility will promote the general good of the State of Vermont, per Section 248a(a) of Title 30 V.S.A.

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EXHIBITS

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

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PREFILED TESTIMONY OF
MARTIN J. LAVIN
ON BEHALF OF APPLICANT

November 30, 2023

1. Introduction

Q1. Please state your name, occupation and business address.

A1. My name is Martin J. Lavin. I am employed by C Squared Systems, LLC and am a radiofrequency engineer providing consultation to AT&T through Centerline Communications LLC. My business address is 65 Dartmouth Drive, Auburn, NH 03032.

Q2. Please describe your education, job description, and professional experience.

A2. My resume is attached as Exhibit ATT-MJL-01. I am a consultant involved with C Squared's ongoing design and development work for AT&T's long term evolution ("LTE") in New England, including Vermont. In that capacity, I am responsible for generating propagation maps and examining candidates for optimal coverage and performance within a specified search area. I also create radiofrequency (RF) Reports for potential and existing sites, and closely interact with site acquisition agents, equipment vendors, legal counsel, and various other internal and external teams.

Q3. Have you ever testified before the Public Utility Commission?

A3. No; however, I reviewed Mr. Usmani's prefiled testimonies for the AT&T Section 248a FirstNet-related project in Granville as described in Case No. 21-1144-PET ("First Petition"), and Case No. 22-2775-PET ("Second Petition"), as well as certain discovery responses associated with the Second Petition. Mr. Usmani is no longer employed by C Squared, hence my involvement. C Squared also worked with Jeffrey DelliColli, including reviewing Mr. DelliColli's Prefiled Testimony and the project narrative submitted with the application as Exhibit ATT-JD-02 (the "Project Narrative").

Q4. What is the purpose of your testimony?

A4. The purpose of my testimony is to explain why the proposed Facility at the "Original Location" (as that and other capitalized terms are defined in the Project Narrative (Exhibit ATT-JD-02), and incorporated into my testimony by reference) will improve AT&T's wireless communications services along VT Route 100, North Hollow Road, and other areas of the northern section of Granville, and will expand AT&T's deployment of the 700 MHz Nationwide Public Safety Broadband Network in Vermont as part of FirstNet.

2. Wireless Service Objectives for the Project

Q5. Please identify the location of the Project that is the subject to this Section 248a filing.

A5. Applicant intends to construct a telecommunications facility on an approximately 70-acre parcel of land consisting of undeveloped wooded land with a main access road as well as skidder roads, all situated west of North Hollow Road, and east of VT Route 100. The

coordinates for the Tower that the Project Narrative sponsored by Mr. DelliColli (Exhibit ATT-JD-02) refers to as the "Original Location" are latitude 44˚ 00' 26.13" and longitude 72˚ 50' 07.11". The Site Plans sponsored by Mr. Louis Hodgetts (Exhibit ATT-LH-02) contain a visual depiction of the Original Location's features, while also showing the Original Location on Page C-11. Antenna configurations and proposed tower-mounted equipment specifications appear on Page C-15.

Q6. Please be more specific as to which wireless services are proposed to be provided if the Project is approved.

A6. Specifically, AT&T seeks to provide existing and to-be-developed wireless services using all of its active nationwide and regional FCC licenses applicable within Addison County to cover the maximum amount of area in each licensed territory, including but not limited to commercial wireless services made available in Granville through use of the following FCC Call Signs at the authorized frequencies: **KNLB200** (Wireless Communications Service, 2310MHz–2315MHz, 2355MHz–2360MHz); **KNLB204** (Wireless Communications Service, 2310 MHz–2315MHz, 2355 MHz–2360MHz); **KNLB210** (Wireless Communications Service, 2305MHz–2310MHz, 2350MHz–2355MHz); **KNLB297** (Wireless Communications Service, 2345MHz–2350MHz); **KNLB312** (Wireless Communications Service, 2305MHz–2310MHz, 2350MHz–2355MHz); **KNLG395** (CW-PCS Broadband, 1885MHz–1890MHz, 1965MHz–1970MHz); **WPQL634** (Wireless Communications Service, 2315MHz–2320MHz); **WPQL636** (Wireless Communications Service, 2315MHz–2320MHz); **WPZA235** (WZ

– 700 MHz Lower Band Blocks C, D, 716MHz–722MHz); **KNKN749** (Cellular, 824–835 MHz paired with 869–880 MHz, 845–846.5 MHz paired with 890–891.5 MHz); **KNLH720** (CW-PCS Broadband, 1890MHz–1895MHz, 1970MHz–1975MHz); **WQVN676** (AT - AWS-3 (1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz)); **WQVN677** (AT - AWS-3 (1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz)); **WRNJ764** (PM - 3.7 GHz Service, 3900MHz–3920MHz); **WRNJ765** (PM - 3.7 GHz Service, 3920MHz–3940MHz); **WRNJ766** (PM - 3.7 GHz Service, 3940MHz–3960MHz); **WRNJ767** (PM - 3.7 GHz Service, 3960MHz–3980MHz); **WRQM877** (PK - 3.45 GHz Service, 3470MHz–3480MHz); **WRQM878** (PK - 3.45 GHz Service, 3480MHz–3490MHz); **WRQM879** (PK - 3.45 GHz Service, 3490MHz–3500MHz); **WRQM880** (PK - 3.45 GHz Service, 3500MHz–3510MHz); and **WRTN956** (CW-PCS Broadband, 1895MHz–1910MHz, 1975MHz–1990MHz).

Q7. Can you please clarify which of these various licenses are associated with the nationwide public safety broadband network ("NPSBN") for the First Responder Network Authority (the "Authority)?

A7. Yes. AT&T seeks to provide existing and to-be-developed wireless services for first responders subscribing to the NPSBN using AT&T's nationwide Band 14 spectrum leased from the Authority under FCC Call Sign **WQQE234**. This service—often referred to as FirstNet—is in addition to the spectrum upon which AT&T's existing commercial network operates pursuant to the licenses listed in my previous answer, all in order to cover the maximum amount of area in each licensed territory.

Q8. Please explain your general understanding of the FirstNet project as it pertains to this particular area of Vermont.

A8. As explained in the Project Narrative, in 2017 the Authority selected AT&T to build, manage, and operate the NPSBN nationwide, subject to obtaining approval from designated authorities in each state and territory for an implementation plan to make the public safety network broadly available to local, state, and federal first responders. AT&T's plans included new wireless facilities in a variety of locations, all which were reviewed and ultimately approved in each state and territory. The Granville search ring was one of thirty six tower sites that AT&T funded in order to implement FirstNet in Vermont. This overall understanding is reflected in the Opt-In Letter from Governor Phil Scott to the FirstNet Authority dated November 29, 2017, which is provided as Exhibit ATT-MJL-02.

Q9. Did the State of Vermont have a role in selecting Granville as a specific location for FirstNet?

A9. That is my understanding: as described more fully in Section III of the Project Narrative (Exhibit ATT-JD-02), AT&T worked closely with the State of Vermont in selecting the search rings of focus for FirstNet implementation. This area of Granville—referenced as "Granville Gulf (Rte100)" in 2017 correspondence between the State and AT&T's representatives—was selected by the State as a priority area to address the needs of Vermont's first responders. As Mr. DelliColli points out in the Project Narrative (Exhibit ATT-JD-02), unreliable service along VT Route 100 through Granville had evidently

been identified by the State as far back as 2009 (see Exhibit ATT-JD-09). Thus, the approved state implementation plan is the principal reason why AT&T has sought to build a new facility in this area of Granville.

3. Coverage Objective.

Q10. Please describe the coverage objective for the Project in greater detail.

A10. The primary coverage objective is to improve AT&T voice-based coverage along a section of VT Route 100 through northern Granville known as the "Granville Gulf," in addition to nearby secondary roads, all so that AT&T can enhance its LTE network while also supporting the deployment of the NPSBN for FirstNet. The goal for this Facility includes providing outdoor voice coverage to sections of the Green Mountain National Forest to the west of VT Route 100 ("GMNF"), as well as areas of the Granville Gulf State Reservation Forest on the eastern side of the highway ("GGSRF"). A helpful overview of the general area is seen on the Granville Gulf Reservation map prepared by the Vermont Department of Forests, Parks & Recreation, included as Exhibit ATT-MJL-03, on which there are a few annotations for reference. The key area of AT&T's voice-based coverage focus runs from roughly the intersection of Plunkton Road and Route 100 near the Granville / Warren municipal boundary, south along Route 100 to the midpoint of a roughly 1.25 mile straightaway section of the highway that runs to the intersection with Post Office Hill Road. It is important in this area that AT&T also cover secondary roads such as North Hollow Road, Post Office Hill, Browns Road, West Hill Road, and recreational roads that extend west into the GMNF. AT&T also hopes to extend data-

based coverage to the very few residences and other buildings in the area, particularly along North Hollow Road, Post Office Hill Road, and Fuller Road, among others.

Q11. Did C Squared prepare a coverage analysis for the Project?

A11. Yes, in fact C Squared has produced several analyses between 2020 and 2022, some which are based on predictive radiofrequency propagation software, while others were based upon continuous wave ("CW") tests, also known as "drive tests", using a transmitter suspended by a balloon in order to then track the strength of particular signals along stretches of roadways.

Q12. Please describe these analyses.

A12. The first report being submitted as Exhibit ATT-MJL-04 is an initial report prepared by C Squared engineer Sohail M. Usmani for the Original Location dated December 10, 2020, and submitted as part of the First Petition ("Initial Report"). The introduction in the Initial Report describes in detail the considerations involved in deploying wireless service to prevent there being areas of inadequate radio frequency coverage with substandard service. Given the promise of prioritized, preemptive wireless services for first responders subscribing to FirstNet who use wireless tools to respond to public emergencies, ensuring sufficient coverage along well-travelled highways in this area, as well as on forested recreation parcels such as the Green Mountain National Forest, takes on an added level of importance.

Q13. Please describe factors involved in AT&T selecting a particular site to address the search ring, and C Squared's role in that process.

A13. On an AT&T Project, identification of critical search rings is determined by radiofrequency engineers based on review of statistical data on the performance of the existing network, customer feedback, data from a drive test where available, and the planned deployment of new technologies, like LTE service and the NPSBN. This information is used by the AT&T network operations team to identify a search ring for evaluation of possible locations suitable for a new site.

In this case, the area of intended coverage in the northern section of Granville, known as the search ring, was necessarily constrained by the fact that VT Route 100 is in effect a gulf or canyon with substantial, protected forestlands on each side of the roadway, as well illustrated on the "VT2745 - Area Terrain Map" included as the second map with Exhibit ATT-MJL-04. At the outset of implementing the FirstNet project in Vermont in 2018, AT&T's search ring focus envisioned that a single site on the ridgeline that separates Granville/Warren from Roxbury/Braintree might potentially enhance voice coverage for both VT Route 100 and VT Route 12A. However, given the topography and vegetation, as well as difficulties identifying suitable parcels, AT&T determined that covering the Granville Gulf section of VT Route 100 would require a stand-alone tower solution closer to the highway. This is one of the reasons why the alternatives shown as "VT2745_Alt_F" and "VT2745_Alt_A" on several of the maps included with the Initial Report (Exhibit ATT-MJL-04) ultimately were not pursued. It's my understanding from

Mr. DelliColli that these alternatives also had significant environmental and cost constraints.

Once a search ring is defined, a site acquisition representative investigates within the defined area for existing buildings, towers, or structures of sufficient height to meet the intended coverage objective as closely as possible. Assuming there are no existing structures within a search ring, the site acquisition agents evaluate possible locations for "raw land" builds, such as the proposed Project. If approved by AT&T, C Squared's role is to then evaluate and validate the proposed location and any other potential site candidates brought forward by the site acquisition agents to determine whether each candidate adequately meets the search ring objective. This includes considerations of continuous signal strengths along roadways and in buildings, as well as the site's ability to interconnect with other nearby facilities. C Squared clears any conclusions regarding its assessment with AT&T prior to producing a report.

Q14. Please summarize the Initial Report's conclusions relative to the proposed Project at the Original Location.

A14. Predictive propagation maps depicting the existing AT&T 4G LTE coverage in Granville and showing the effect of installing the proposed Project at the Original Location were included as part of the Initial Report. The analysis concludes on page 6 by summarizing the extent of adequate voice-based coverage for AT&T customers (using a level of -108 dBm) as follows:

- approximately 1.2 miles of new outdoor coverage along VT Route 100 through Granville Gulf
- approximately 2.3 miles along Patterson Brook Road
- approximately 2.0 miles along Paddledock Road (also known as North Hollow Road)
- approximately 1.1 miles of Texas Falls Road
- approximately 0.9 miles of Plunkton Road

In addition, the Facility was predicted to bring high quality coverage to roughly 134 residents in the general area, as well as to structures which are reported by the Vermont Data Warehouse to have roughly 23 employees. The Facility will also provide reliable outdoor coverage in portions of the GMNF and GGRSF where hiking / recreation trails are located.

Q15. Please explain the significance of using -108 dBm as a measurement standard in the Initial Report.

A15. Decibels in reference to 1 milliwatt or "dBm" is a unit of power and refers to the amount of power an antenna or tower-mounted amplifier can produce, as well as how much signal is present at a given location. C Squared was authorized by AT&T to use -108 dBm for the Initial Report, given the expectation that most AT&T users in this location would either be outdoors using a handset, or using a handset while driving a vehicle along VT Route 100 or secondary roads in the vicinity (i.e., adequate coverage). High quality coverage within buildings typically requires a higher measurement such as between -83 to -93 dBm. Given the terrain in this area, and the sparse number of

dwellings or buildings apart from along North Hollow and Post Office Hill Roads, the Initial Report primarily focused on the adequate coverage standard to validate the site.

4. Continuous Wave Test Results for Current Location

Q16. Please explain the concerns that arose with respect to the Initial Report.

A16. It's my understanding from Mr. DelliColli and from reviewing materials related to Mr. Usmani's participation that during the initial stages of preparing for the First Petition, the Granville Selectboard and members of the public expressed concern that the last map in the Initial Report was unclear as to whether the proposed Facility would provide reliable voice coverage along VT Route 100. This in turn led the Selectboard to request that the Department conduct its own evaluation, while also causing AT&T and C Squared to consider options to check the predictive analysis.

Q17. Please explain what was done by the applicant to evaluate the sufficiency of the Original Location to address the intended coverage area.

A17. To verify the modeling in the Initial Report, and specifically to measure expected coverage along VT Route 100 from the proposed location and more broadly evaluate the effectiveness of the project, C Squared conducted a radiofrequency drive test on January 13, 2021, using a balloon at the Original Location to suspend a single transmitting antenna at the proposed height of 176' AGL, and to document the resulting coverage along the Granville Gulf at various signal strengths. The results of the drive test are included in the drive test report provided as Exhibit ATT-MJL-05 (the "First Drive

Test Report"). The methodology for the drive test, as well as specifications of the transmitter, are included as part of the First Drive Test Report.

Q18. Please summarize the results of the drive test.

A18. The First Drive Test Report superimposes the signal strength measurements along the roadways through the search ring taken from the transmitter, with VT Route 100 being the main focus. The maps on pages 3 and 4 show only the results from the drive test with the transmitter at the Original Location (i.e., the purple star marked "VT2745"), and not adjacent voice-based coverage coming from AT&T's existing facility located off of Butz Hill Road (i.e., a site known as "Lower Granville," and shown on the map as "VT6390"). The maps on pages 5 and 6 show the same results, but overlaid upon the predictive outdoor/vehicle propagation included in the Initial Report measured at -108 dBm. On all of the maps, the signal strengths are coded with five separate colors: green (showing coverage lower than -83 dBm), light blue (-83 to -93 dBm), yellow (-93 to 103 dBm), red (-103 to -113 dBm), and black (lower than -113 dBm). Stated broadly, the First Drive Test Report shows signal strengths between -83 and -113 dBm along virtually all of VT Route 100 from the intersection with Plunkton Road, save for a roughly 0.5 mile section in the southernmost "straightaway" stretch of the highway, and in two other very short locations in between (i.e., two sections each less than 500 feet). As to surrounding public rights of way such as North Hollow Road (identified as "Paddledock Road"), Mattson Hill Road, and Post Office Hill Road, the drive test results reflect virtually uninterrupted coverage at the same signal strengths (i.e., between -83 and -113

dBm). When superimposed against the predicted coverage for areas beyond the roadways, the First Drive Test Report demonstrates that the Project will achieve the search ring's "adequate coverage" objective.

Q19. Following presentation of these results as part of the permitting process, how did other involved parties respond to the drive test?

A19. Release of the First Drive Test Report in connection with public meetings and filings on the Project in winter 2021 led to some additional confusion with those involved with the case. Because the drive test was focused on voice coverage from the proposed facility, the results as shown on the maps are admittedly difficult for a layperson to easily decipher, in that they do not show existing voice and data coverage from the Lower Granville VT6390 site, thus making it incorrectly appear that there will be a significant gap along the southern straightaway section of VT Route 100. (The best indication of where existing voice coverage already exists can be seen on the map entitled "VT2745 – 700 MHz LTE Coverage (-109 dBm)" included on the second to last page of Exhibit ATT-MJL-04.) When that existing coverage from VT6390 at -108 dBm is overlaid with a representation of predicted and drive-test-based voice coverage from the proposed site, the AT&T user is shown to have adequate coverage from approximately the intersection of Plunkett Road / VT Route 100 through the Granville Gulf past Post Office Hill Road, and into Granville proper. For first responders subscribing to FirstNet employing so-called high-powered user equipment ("HPUE") in their vehicles—i.e., equipment with heightened sensitivity to lower signal strengths based on an +8 dBm booster—the drive

test results show they will have reliable voice connectivity through the entirety of Granville Gulf.

Q20. Was the absence of existing coverage depictions the only issue with the drive test results?

A20. No, there were at least four other aspects of the First Drive Test Report that unfortunately spurred more confusion. First, unlike the Initial Report (which used -108 dBm to measure adequate coverage, based on use of AT&T's 700 MHz spectrum), the continuous wave results were shown as ranging between -103 to -113 dBm, all at 879 MHz. This made it difficult to compare the 2021 drive test results with the propagation maps in the Initial Report, including insofar as signal ranges in the 700 MHz band tend to reach beyond those in the 800 MHz band.

Second, there was concern as to whether the signals at -109 dBm to -113 dBm would be reliable for commercial customers, given prior reliance upon the -108 dBm standard. Third, the signal strengths between -103 to -113 dBm were shown in red, which some members of the public took to represent unreliable signal strength. In point of fact, this was simply a color selection, rather than a deliberate statement on the Project's reliability. And fourth, the fact that the drive test was taken during "leaf off" conditions led to speculation on the part of certain members of the public that the Project would not be reliable during "leaf on" conditions, when dense vegetation has the tendency to interfere with signal propagation.

Q21. How did the applicant ultimately address these concerns over the First Drive Test Report?

A21. Beginning in late May / early June of 2021, AT&T began to investigate the possibility of moving locations on the Eramo Property to reduce the visual impacts associated with the Tower, all in response to public comments and interventions in Case No. 21-1445-PET. Those investigations ultimately led to consideration of what Mr. DelliColli references in the Project Narrative as the "Alternative Location," being a 195' tower with coordinates of N 44 00 30.61, W 72 50 21.02, situated northwest of the Original Location. Beyond focusing on visual impacts, AT&T requested that C Squared perform a second drive test using the Alternative Location, with the goal of addressing the core concerns that had arisen with the First Drive Test Report.

C Squared performed a second continuous-wave-based drive test on September 14, 2021, and prepared a report which is submitted as Exhibit ATT-MJL-06 (the "Second Drive Test Report"). The test associated with the Second Drive Test Report occurred during "leaf on" conditions, in order to evaluate the extent to which vegetation would attenuate signal strengths along VT Route 100 and elsewhere.

In order to avoid confusion with an additional report, C Squared consulted with AT&T in advance of the test to settle upon two specific signal strength thresholds to represent the minimum service level required for adequate coverage (only for voice, not for data) through the Granville Gulf: one for commercial AT&T customers using -110 dBm, the other for FirstNet subscribers in vehicles equipped with HPUE using -118 dBm. These

two thresholds from the drive test are represented using a single color (green for -110 dBm, orange for -118 dBm). C Squared was also asked to show existing 700MHz coverage at the -110/-118 dBm signal strengths from the Lower Granville site (VT6390) on each of the maps (depicted in green), as well as software-based propagation prediction for the Project using the same thresholds at 700 MHz (depicted in blue). The maps were prepared to show both the upper and lower halves of the Granville Gulf search ring, as well as focusing in on each section of VT Route 100.

Q22. Please explain the results of the Second Drive Test Report.

A22. The Second Drive Test Report reveals that, if the Project is completed, FirstNet subscribers using voice communications will have adequate coverage through virtually the entire search ring from just south of the Plunkett Road intersection at the -118 dBm signal strength. The one roughly 0.15 mile area falling below the -118 dBm threshold along Post Office Hill Road per the second drive test (i.e., the row of black dots depicted on the map entitled "Lower Half") is an area where AT&T service already exists from the Lower Granville site.

With respect to AT&T customers, there will be roughly 7.5 miles of adequate coverage along roads in the area (including 1.6 miles along VT Route 100) that will avoid falling below the -110 dBm threshold, and thus avoid voice-based service interruptions in the area. Although pages 4D and 5D of the Second Drive Test Report show areas falling below the thresholds during the drive test, the maps make clear that there is already

existing, reliable voice coverage in those locations from the Lower Granville site, such that the user will not experience service difficulties in the normal course.

Q23. Please summarize any steps taken to account for the coverage differences, if any, shown in the First Drive Test Report for the Original Location with the methodology employed in the Second Drive Test Report based on the Alternative Location.

A23. Yes. Understanding the concerns that arose with the First Drive Test Report, taking into account the authorizations provided by AT&T for C Squared to use the -110dBm and -118dBm thresholds for measuring commercial and FirstNet service, respectively, and re-plotting the 2021 drive test data taken from the Original Location on C Squared's software using the -110 (yellow) and -118 (blue) thresholds, I was able to produce three new maps which are submitted here as Exhibit ATT-MJL-07 (the "Restated Report"). The three maps are as follows:

- Existing 850 MHz coverage through VT Route 100 and surrounding roads of the Granville Gulf search ring, with coverage coming almost exclusively from the VT6390 site in Lower Granville. The black and blue areas shown in several sections of the search ring demonstrate where there would be only intermittent service for FirstNet, and essentially non-functional voice service for commercial users.

- Documented Existing 850 MHz coverage through VT Route 100 and surrounding roads of the Granville Gulf search ring, based exclusively on the drive test data collected on January 12, 2021.

- Combined 850 MHz coverage through VT Route 100 and surrounding roads of the Granville Gulf search ring, based on the 2021 drive test data plus existing coverage from VT6390 and any other adjacent AT&T sites. The map shows reliable coverage at -110 dBm essentially all the way from the Plunkett Road intersection with VT Route 100 all the way through Granville into Hancock, and with excellent coverage along Post Office Hill, North Hollow, and several other main roads.

You will note that a star marked "VT5977" appears on each of the three maps. This AT&T site consists of a node antenna installed on a utility pole off of North Hollow Road, adjacent to the Eramo residence. As the node was not yet on-the-air when the Existing Coverage data was collected, propagated signals from this node are not included on the combined coverage map.

Q24. Would a higher tower at the Original Location at North Hollow Road strengthen the signals and improve service?

A24. Not significantly, and not without resulting in a tower over 200' that would require lighting and marking by the FAA. AT&T concluded that lighting and marking would not be desirable for this location given the Tower's visibility to some residents along North Hollow Road, as described more fully in the joint panel testimony of Mr. DelliColli and Archambault.

Q25. Please summarize your conclusions from the various assessments of the proposed Project.

A25. In short, based on my review of the Initial Report, the First Drive Test Report, the Second Drive Test Report, and the Restated Report, it is my view that the proposed Project at the Original Location will fulfill its intended function of providing reliable voice service along VT Route 100 through the Granville Gulf, and more generally for FirstNet and AT&T users in the vicinity of northern Granville. The Project should also provide overall high quality data service for dwellings and buildings off of North Hollow Road, and some redundant voice and data coverage for areas to the south of the site.

5. Collocation / Modification of Existing Facilities

Q26. Has the applicant analyzed whether there are existing support structures in the area that could allow for collocation of antennas in lieu of building a new tower?

A26. Yes. In short, there are no support structures in this area that could eliminate the need for a new tower site. The closest support structure is the existing AT&T facility in Lower Granville, shown in the Initial Report and the First Drive Test Report as VT6390. Beyond Lower Granville, there are no other towers or tall structures in this area. This is validated by the Department of Public Service's own drive test results included as Exhibit ATT-JD-11 with the Project Narrative, showing no national carrier with reliable coverage through the Granville Gulf search ring.

The relative location of AT&T's other existing facilities are shown on the map entitled "VT2745 – Neighbor Sites & Radial Distances" included with the Initial Report, Exhibit ATT-MJL-04. The map and accompanying chart on page 4 of the report show that none

of these facilities are close enough or have sufficient height to address the coverage gap along VT Route 100 in Granville through modifications. A new tower is needed to remedy the coverage gap in this area.

Q27. Can AT&T's existing facility in Lower Granville be modified in order to obviate the need for the proposed Project?

A27. No, it cannot. As part of the First Petition, C Squared was asked to consider whether the VT6390 site could be modified to allow AT&T to meet its wireless service objectives in the Granville Gulf without the need for a new tower site. The results are included with the Height Modification Analysis propagation maps included as Exhibit ATT-MJL-08, showing that even extending the existing 140' tower to 500 feet, there would be no appreciable difference in signals through the intended coverage area.

Q28. In your view, will the Tower at the Original Location prove adequate to allow for collocation by other carriers?

A28. While each carrier's network is different, and cognizant that there's no way to guarantee collocation by independent parties on any tower, I believe it is more than likely that the Tower will prove adequate for other providers. First and foremost, there are no other tall structures within or near the search ring, and siting a new tower in this area is very difficult, for all the reasons outlined by Mr. DelliColli and others. Second, bearing in mind that typically a carrier will install an array separated at least 10 feet vertically from each of the nearest arrays (measured from the centerline of panel antennas on each array), and based upon my review of the propagation and drive test data collected for the Project,

I believe other carriers providing commercial mobile radio services and using adjacent or similar frequencies to AT&T (e.g., 700 MHz-800MHz, 2100 MHz) would be likely to seek to collocate on the proposed Tower, particularly if they also install arrays on the Lower Granville site. This is true even though the arrays may be up to 20 feet lower than AT&T's array (e.g., 156' or 166' AGL as compared with AT&T's array at 176'). It also assumes the same caveats stated previously regarding adequate voice coverage as opposed to high quality data coverage along VT Route 100.

6. Department of Public Service Review and Alternatives Evaluated

Q29. Please describe Applicant's interaction with the Department of Public Service in connection with review of the Project, starting with the First Petition.

A29. In connection with the advance notice associated with the First Petition, due to concerns expressed by the Town of Granville Selectboard, the Department of Public Service retained the services of an independent radiofrequency engineer, David Maxson at Isotrope, LLC ("Isotrope"). Isotrope reviewed the Initial Report, the First Drive Test Report, and other information, posed questions concerning the "normalization" assumptions used in the analysis, and inquired on the potential viability of five alternate locations to the north of the proposed Project location.

Q30. Please describe Applicant's interaction with the Department of Public Service in connection with review of alternative off-site locations.

A30. With respect to the five alternatives proposed by Isotrope, C Squared analyzed each of the locations, and included the results as shown in Exhibit ATT-MJL-09, and identified

as "VT2745_Alt_1" through "VT2745_Alt_5" In short, C Squared determined that none of the alternatives resulted in a substantial gain in coverage along VT Route 100, and in some cases resulted in additional areas along the highway where service levels would be too weak to accommodate in-vehicle or outdoor coverage for AT&T customers.

Q31. Did the Department ever challenge the results of C Squared's analysis of the alternatives?

A31. Not to the knowledge of C Squared.

Q32. Please explain the Applicant's interactions with the Department of Public Service in connection with the Second Petition.

A32. During the advance notice period associated with the Second Petition, the Town of Granville Selectboard was asked to assess the accuracy of the drive test results set forth in the Second Drive Test Report, as well as materials submitted with the First Petition. In lieu of Isotrope, the Department began working with Brian Webster, a radiofrequency engineer with Wireless Mapping, Inc., to evaluate the radiofrequency information presented. Over the course of several months, C Squared's engineers worked with Mr. Webster to respond to questions and provide supporting materials. Mr. Webster then presented his own analysis at a June 20, 2022 public meeting held via Zoom with the Selectboard and the Department. While I did not personally attend, I reviewed the video of the hearing, the transcript, and Wireless Mapping's work product.

Q33. Did the Department's representative agree with C Squared's conclusions regarding the proposed Project?

A33. In general, yes. While Mr. Webster took issue with certain aspects of how C Squared's data was presented, his own independent review of the Project at both the Original and Alternative Locations validated that the proposed Facility would provide adequate voice-based coverage for the search ring. Incidentally, Wireless Mapping concluded that the AT&T project at the Original Location would perform slightly better than a facility at the Alternative Location. Although some of C Squared's data suggests otherwise, it is enough of a close call to say that there is no material difference between the two locations in terms of satisfying the search ring objective. In that sense, C Squared is in agreement with Mr. Webster's conclusions.

7. Small Cell Alternative

Q34. Has C Squared analyzed whether pole-mounted, solar-powered femtocells are a potential alternative solution to constructing a new communications tower?

A34. Yes. In response to public comments filed in connection with the Second Petition, AT&T asked C Squared to analyze whether "small cells" would be a suitable or viable alternative to the proposed Project on the Eramo Parcel. C Squared agreed that small cells at this location are neither suitable nor viable alternatives for the proposed Project, for several reasons.

Q35. How did you evaluate the feasibility of a small-cell solution in terms of coverage?

A35. C Squared conducted a desktop assessment, designing a layout of poles having the least amount of associated impacts to ensure reliable coverage along VT Route 100. This layout included 7 50' poles installed at 7 points along the highway. The locations of each pole are shown on Exhibit ATT-MJL-10 as CRAN01 through CRAN07. The propagation maps were run at 700 MHz, superimposed with existing coverage at -110 dBm, and showing voice coverage from each node at -110 dBm (consistent with the assumptions in the Second Drive Test Report). Through technology developed through Visual Site Simulations, the approximate visual impact of each small-cell node along the highway is depicted in Exhibits ATT-JPT-10 and ATT-JPT-11 accompanying the Prefiled Testimony of Messrs. DelliColli and Archambault (Joint Panel), for reference.

In terms of feasibility, based on C Squared's calculations, a small cell array would provide a total of 1.79 square miles of adequate coverage along the roadway; by contrast, the Original Site provides roughly 7.5 miles of total roadway in and near Granville Gulf. This loss in coverage impacts first responders responsible for forest management in the GMNF and the GGSRF, undermining a key component of the Project's objective. It also reduces the benefits that residents and users of secondary roads in the area would experience with a new tower-based facility.

Q36. Please explain why small cells would be unsuitable as a substitute for a tower.

A36. First, it is my understanding that there are currently no utility poles along VT Route 100, meaning that as a preliminary matter, consideration would need to be given to allowing

those new installations. From the Project Narrative associated with Mr. DelliColli's testimony (Exhibit ATT-JD-02), and specifically the discussion regarding the scenic qualities of this stretch of Route 100 as set forth in the municipal plan, I assume that a small cell solution would be aesthetically unsuitable for this location, by introducing new, tall structures that do not exist today along a scenic highway.

On the practical side, this stretch of VT Route 100 lacks the power lines and fiberoptic cables necessary to operate small cells. Installing the needed electrical and fiber would involve trenching and blasting that would disturb the natural environment, and would in my experience prove to be very expensive for AT&T.

C Squared also considered whether small cells at the location could be powered by other means. Unfortunately, the nature of the Granville Gulf and the dense vegetation on both sides of the highway will limit the sunlight available to power solar-powered cells. Further, emergency backup power must be available for FirstNet sites. Emergency generators are not installed along roadways, and if generators cannot be installed at the base of each pole, restrictions on land use for both the Green Mountain National Forest and Granville Gulf Reservation State Forest would pose a difficulty in accommodating emergency backup power. With respect to telecommunications links, microwave use between small cells in lieu of fiber is likely precluded by bends in the highway and the dense surrounding tree canopy.

Beyond these practical factors for enabling use of small cells, based on my discussion with Mr. DelliColli (who reviewed the environmental characteristics of the hypothetical

small cell array), certain poles would invariably need to be situated close to the Mad River (i.e., a known Class II wetland) and Alder Meadow Brook (*see* Exhibit ATT-JPT-10). It's my understanding that the Vermont Agency of Natural Resources seeks to keep new structures outside of wetland buffers and riparian corridors whenever possible. When these factors are considered together, it seems clear that a small cell facility could not replace the proposed Project.

8. General Good Criteria

Q37. Are you familiar with Vermont's telecommunications policy and planning statute, 30 V.S.A. §202c?

A37. Yes, I am familiar with the statute and its stated objectives for improved telecommunications within Vermont.

Q38. Please state your opinion on whether the proposed Project—situated at the Original Location—is consistent with the general good criteria as outlined in the statute.

A38. Yes. I have evaluated the relevant criteria in section (b) of the statute, and respond to each one as follows:

- *"(3) Support the availability of modern mobile wireless telecommunications services along the State's travel corridors and in the State's communities…"*: As pointed out, there is some coverage today along the sections of VT Route 100 through the southerly straightaway of the Granville Gulf; however, service along the highway is inadequate overall, and cannot be made adequate without the proposed Facility.

There are no existing structures that can be modified, nor is a small-cell system viable for this particular area.

- *"(4) Provide for high-quality, reliable telecommunications services for Vermont businesses and residents …"*: The Facility will improve reliability of access to wireless voice and data services for AT&T customers and FirstNet users along VT Route 100 and in the general vicinity of northern Granville.

- *"(5) Provide the benefits of future advances in telecommunications technologies to Vermont residents and businesses …"*: Absent the proposed Project, there is no reliable, effective and affordable means of bringing AT&T commercial wireless service and FirstNet capabilities into this area.

- *"(7) Support the application of telecommunications technology to maintain and improve governmental and public services, public safety, and the economic development of the State …"*: Given that this particular search ring was selected as a priority area by the State of Vermont as part of FirstNet implementation, and knowing that the Facility will provide adequate coverage in the area for voice applications, particularly FirstNet users, for the reasons stated in my testimony, I submit that the Project is consistent with this criterion. I also note that it will enable 911 calls to reach a dispatcher even for those users of networks other than AT&T and FirstNet.

- *"(8) Support deployment of broadband infrastructure that: (A) uses the best commercially available technology; (B) does not negatively affect the ability of*

Vermont to take advantage of future improvements in broadband technology or result in widespread installation of technology that becomes outmoded within a short period after installation …": The technology AT&T proposes to install is state of the art at present for providing mobile voice coverage in this remote area of the State; however, the Tower is built to structurally support ongoing upgrades of equipment that typically take place every three to four years in the wireless industry, as well as being adequate for additional collocations.

- *"(9) In the deployment of broadband infrastructure, encourage the use of existing facilities, such as existing utility poles and corridors and other structures, in preference to the construction of new facilities or the replacement of existing structures with taller structures …"*: For the reasons stated, the coverage and capacity needs for AT&T FirstNet cannot be met using existing structures (e.g., extending the height of the tower in Lower Granville), nor can it be satisfied with existing utility poles, since none are available along scenic VT Route 100.

9. Conclusion

Q39. Does this conclude your testimony?

A39. Yes, it does.

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STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 23-4087-PET

Application of New Cingular Wireless PCS, LLC d/b/a AT&T requesting a certificate of public good, pursuant to 30 V.S.A. § 248a, for the installation of wireless telecommunications equipment off of North Hollow Road in Granville, Vermont	

PREFILED TESTIMONY OF
DAVID ARCHAMBAULT AND JEFFREY DELLICOLLI
(JOINT PANEL)
ON BEHALF OF APPLICANT

November 30, 2023

The purpose of the testimony from Mr. DelliColli and Mr. Archambault is to provide the PUC with a description of the visual impact analysis reports prepared by Virtual Site Simulations, LLC, as well as a *Quechee Lakes* analysis, in order to demonstrate the Project's compliance with Section 248a(b)(1) of Title 30, V.S.A.

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EXHIBITS

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 23-4087-PET

Application of New Cingular Wireless PCS, LLC d/b/a AT&T requesting a certificate of public good, pursuant to 30 V.S.A. § 248a, for the installation of wireless telecommunications equipment off of North Hollow Road in Granville, Vermont	

PREFILED TESTIMONY OF
DAVID ARCHAMBAULT AND JEFFREY DELLICOLLI
(JOINT PANEL)
ON BEHALF OF APPLICANT

November 30, 2023

1. Introduction

Q1. Please state your name, occupation and business address.

A1. Mr. DelliColli: My name is Jeffrey DelliColli. As stated in my separate prefiled testimony, I am employed by Centerline Communications ("Centerline"), the company contracted by New Cingular Wireless PCS, LLC d/b/a AT&T ("AT&T") to assist with the provision of commercial mobile radio services within Vermont and New England. My position is Program Manager for Northern New England at Centerline, where I am responsible for coordinating facilities siting and overseeing construction personnel to complete the installation and development of the AT&T FirstNet implementation project. My business address is 750 West Center Street, Suite 301, West Bridgewater, MA 02379.

Mr. Archambault: My name is David Archambault. I am the Vice-President of Virtual Site Simulations, LLC ("VSS"). VSS is located at 24 Salt Pond Road, Suite C3, South Kingston, Rhode Island, 02789.

Q2. Please describe your education, job description and professional experience.

A2. Mr. DelliColli: For the AT&T projects being supervised by Centerline, I am responsible for managing the local and state municipal and environmental permitting processes, design and architectural/engineering services, and construction. My resume is included as Exhibit ATT-JD-01, accompanying my separate prefiled testimony. During the last six years, I have devoted a substantial amount of time in my professional career to siting acquisition for AT&T projects in Vermont and New England.

Mr. Archambault: My resume is included as Exhibit ATT-JPT-01. As I explain in my resume, I have been involved in developing visual documentation as part of site acquisition projects for hundreds of wireless facilities throughout New England, including for carriers and tower developers. I am skilled with the software and techniques to develop three-dimensional modelling, GIS mapping, and testing protocols to develop photo simulations and viewshed maps for new and expanded wireless facilities. I have also trained others on using VSS's viewshed map software known as IVSview® (and described further below) to accurately predict visibility from specific locations, taking into account topography, vegetation, structures, and other landscape features.

Mr. DelliColli: Just to confirm, I was among Mr. Archambault's software trainees, learning the key features and parameters as part of my work on AT&T FirstNet projects since 2018. I now regularly use VSS's IVSview® tool to assess visual impacts and to look for ways to reduce the visibility of tower projects.

Q3. Have you previously submitted prefiled testimony to the Commission?

A3. Mr. DelliColli: Yes, I've submitted testimony for numerous AT&T projects, including on this particular Project both for Case No. 21-1144-PET (the "First Petition"), as well as Case No. 22-2775-PET (the "Second Petition").

Mr. Archambault: I have not; however, I have presented VSS's work product before multiple municipal zoning authorities throughout New England in connection with tower projects.

Q4. What is the purpose of your testimony?

A4. Joint Panel: Our testimony is intended to address the visual aesthetics of the Project through presentation of various predictive viewshed maps, as well as photographic documentation and simulations (prepared by VSS), and a *Quechee Lakes* analysis prepared by Mr. DelliColli.

Q5. Mr. DelliColli, can you please elaborate on your credentials to provide a *Quechee Lakes* analysis?

A5. Mr. DelliColli: Yes, I want to be clear on this point. I am not an attorney, have no legal training, and do not profess to have qualifications to render any determinative legal opinion on the aesthetics criteria in Section 248a(c)(1). It's my understanding that the only legal decision of any import on aesthetics is the one made by the Commission, after considering all the evidence and recommendations of the hearing officer. My purpose is to address compliance with written community standards, and recount the public reactions to various iterations of the Project from the Project Narrative, Exhibit ATT-JD-

02, but reframed through the *Quechee Lakes* test. My analysis here also focuses on whether there are generally available mitigation measures that a reasonable person would take to reduce the aesthetic effects of the Project, and how those have been employed here. We believe it appropriate to address this facet of the *Quechee Lakes* test separately, in light of the illustrative materials concerning the Project prepared by Mr. Archambault and VSS's technicians over several years, and based on my extensive experience siting towers in Vermont and New England. Martin Lavin, Louis Hodgetts, and Melinda Squillace, separately address the public benefit aspects of the Project in their prefiled testimonies.

2. Documentation of Project's Visual Effects

Q6. Please briefly describe the Project.

A6. Joint Panel: The Project consists of a 180' proposed self-support galvanized steel monopole communications tower, with antennas, remote radioheads, and other appurtenances, all to be painted dark brown, and all contained within a 50' x 50' fenced compound to be constructed on property of Michael and Diane Eramo off of North Hollow Road in Granville. The coordinates for the Project are latitude 44˚ 00' 26.13" and longitude 72˚ 50' 07.11", which we refer to as the "Original Location."

Mr. DelliColli: Site Plans submitted with the Prefiled Testimony of Louis Hodgetts (Exhibit ATT-LH-02) contain a general depiction of the Project's location and features, and a description of the specific features are set forth in the Project Narrative associated with my separate prefiled testimony (Exhibit ATT-JD-02).

Q7. Please describe your familiarity with the Project location.

A7. Mr. DelliColli: As the responsible site acquisition representative for the Project, I have visited the Property numerous times since 2019, including for site visits with the Agency of Natural Resources ("ANR") described in the Prefiled Testimony of Melinda Squillace. I've also worked closely with the landowners of the "Project Parcel", Michael and Diane Eramo.

Mr. Archambault: Representatives of VSS visited the Project on November 28, 2020, January 12, 2021, July 27, 2021, and September 14, 2021 to conduct balloon tests. I personally visited the Project site on three separate occasions: once on January 12, 2021 for the balloon associated with the radiofrequency drive test described by Mr. Lavin; again on September 11, 2023 for a noticed balloon test in connection with the current application; and again on September 27, 2023 to conduct a balloon test for one of the adjoining owners whose property had been missed at the earlier test. At each visit, VSS technicians remained at the site for anywhere between 3 and 8 hours to complete the visual documentation associated with the Project.

Q8. Please explain VSS's approach and methodology for documenting aesthetic impacts.

A8. Mr. Archambault: I am enclosing as Exhibit ATT-JPT-02 an explanation of VSS's process for assessing the potential visual impact of a new tower facility. This is the same process VSS has used routinely for all the balloon tests and simulations produced for tower projects in Vermont and elsewhere. The end result of this methodology, used consistently, is to provide the viewer with an accurate assessment of what a tower project

will look like from a given location based on what the human eye will see, without any zoom lenses or other visual enhancements. Adherence to this process also allows us to determine with virtual certainty how much of a tower project will be visible above trees and other clutter from a given vantage point, as well as confidently predicting points from which a tower will not be visible in the normal course.

3. Aesthetics of Preliminary and Original Locations

Q9. Please describe VSS's efforts to document the visual impacts of the Project, beginning in 2020.

A9. Mr. Archambault: VSS conducted four separate balloon tests associated with the Project in 2020 through 2021. The first test was conducted on November 28, 2020, using what we'll refer to as the "Preliminary Location," with coordinates of 44° 00' 24.36", and -72° 50' 08.83". This was a location proposed by AT&T prior to shifting the Project 200 feet to the northeast.

Following completion of the publicly-noticed balloon test, VSS prepared a set of photo simulations for the Project, based upon a request from Centerline. The visual effects of the 180' tower at this Preliminary Location are provided as Exhibit ATT-JPT-03. Stated briefly, the Simulations showed three locations within a 1 mile radius along North Hollow Road and Post Office Hill Road where the tower would be visible year round, two locations where the tower would be visible on a seasonal basis, and fifteen locations in the area with no visibility (including five locations along VT Route 100 through Granville Gulf).

Q10. Please explain why the proposed location of the Tower shifted.

A10. Mr. DelliColli. The principal reason for the shift from the Preliminary Location to what we refer to as the Original Location (in other words, the location we're now proposing) was a request from ANR to move the Tower away from a neighboring property boundary, and to reduce the amount of road clearing required. The overall shift is best demonstrated in Exhibit ATT-JPT-04, a sketch prepared by DuBois & King at Centerline's request, with the red lines representing the Preliminary Location, and the black lines showing the Original Location where AT&T now proposes to site the Tower.

Q11. Please explain whether this shift affected the Project aesthetics.

A11. Mr. DelliColli. Not meaningfully. Although no viewshed was distributed at the time, I used VSS's IVSview® to prepare a viewshed map using the Preliminary Location coordinates, showing 23.7 acres of visibility for the Tower at 180' (*see* Exhibit ATT-JPT-05). As discussed below, this represents only a slight increase in comparison to the impacts predicted for the Original Location.

Q12. Given that the 2020 photo simulations were developed based upon a balloon test at the Preliminary Location as opposed to the Original Location, can the simulations still be considered an accurate representation of the proposed Project's visibility?

A12. Joint Panel: Yes, as the difference in terms of visibility from the shift is sufficiently limited that there is no appreciable difference in locations. This is borne out when the 2020 simulations are compared against those that VSS prepared in 2023 following a balloon test taken from the Original Location, and discussed in greater detail below.

Q13. Please continue to recount VSS's efforts to document the visual impacts of the Project for the Original Location.

A13. Mr. DelliColli: As a result of AT&T's decision to shift from the Preliminary Location to the Original Location in December 2020, Centerline requested that VSS prepare a viewshed analysis and conduct a balloon test to confirm the absence of visual impacts along VT Route 100. As I explained in the Project Narrative (Exhibit ATT-JD-02), visibility of the Project on VT Route 100, a designated scenic highway and a visual resource specifically referenced in the Town of Granville's Town Plan, was a source of concern for satisfying the Section 248a criteria. Centerline wanted to be certain that the Tower was not visible anywhere in the VT Route 100 viewshed if at all possible.

Mr. Archambault: A viewshed map prepared using VSS's IVSview® and dated December 17, 2020 is provided as Exhibit ATT-JPT-06. The viewshed map showed that the tower at 180' from the Original Location would have had roughly 22.1 acres of visibility within a 1-mile radius, with varying visibility along North Hollow Road and Post Office Hill Road, but with no visibility along VT Route 100. Through a second balloon test held on January 12, 2021, VSS was able to document the viewshed map's prediction, i.e., no visibility of the tower on VT Route 100, as shown on the 15 photographs included as part of Exhibit ATT-JPT-07. VSS also confirmed, as demonstrated by photos 12 and 14 in the exhibit, the absence of visibility along West Hill Extension, a key road that leads into the Green Mountain National Forest.

Q14. Based on the initial assessment, did the applicant propose any steps to mitigate the visual impact of the Project from the Original Location?

A14. Mr. DelliColli: Yes. Despite the Project's limited visual impacts, AT&T received adverse reactions from some members of the public, as evidenced from comments at public hearings in 2020 and 2021, as well as comments filed with the Commission during the advance notice period (*see* PUC Case No. 20-3420-AN, Public Comments), and during the 30-day post-filing comment period (*see* PUC Case No. 21-1144-PET, Public Comments). Broadly stated, there were three groups of considerations for reducing the Projects' aesthetics since 2018, when Centerline began work on AT&T's Project, and late October 2021, when AT&T withdrew its First Petition. Those groups are (1) alternative tower designs; (2) alternative "off parcel" tower locations; and (3) alternative "on parcel" locations.

4. Mitigation: Alternative Tower Designs

Q15. Please describe applicant's consideration of alternative tower designs for the Project.

A15. Mr. DelliColli. Following the public hearings in 2021 in particular, Centerline asked VSS to develop simulations of alternative tower designs to reduce impacts.

Mr. Archambault: Submitted as Exhibit ATT-JPT-03 are simulations that VSS prepared based on the 2020 photographic simulations, using the locations where the Tower would be most visible from public roads, but juxtaposing the galvanized steel monopole against two other typical tower designs—a self-support lattice tower (where light comes through the crossbeams on the tower, but with added girth in lower portions of the tower structure

as compared with a monopole of uniform width); and a "monopine," which is a monopole that uses steel and fiberglass camouflaging to attempt to hide antennas and tower-mounted equipment, and purports to resemble a coniferous tree.

Q16. Explain why the applicant did not adopt the two other alternative designs.

A16. Mr. DelliColli: For two reasons: first, presentation of VSS's comparative exhibit during public hearings and included with the First Petition did not result in any party—the Town, the adjoining owners, the regional planning commission—expressing a preference for either the lattice tower or the monopine over the proposed monopole design. Second, both the lattice tower and the monopole are larger overall, and cannot be effectively camouflaged by a hillside backdrop or other setting due to the difficult topography of the area. (Mr. Lavin addresses the effect of topography and vegetation on signal strength in greater detail in his prefiled testimony.) When set against the sky (and protruding above the hillside), it is preferable from an aesthetics perspective, based on my experience, to use the more slender profile of a monopole design.

5. Mitigation: Off-Parcel Alternatives Evaluated

Q17. Please summarize applicant's efforts to identify locations apart from the Project Parcel for the proposed Project.

A17. Mr. DelliColli: AT&T has explored multiple off-parcel alternative locations for a tower site. The chart being submitted as Exhibit ATT-JPT-09 lists 23 separate properties within or near the general vicinity of the search ring area that were investigated, in addition to

the Project Parcel (i.e., Candidate R on the chart). GoogleEarth™ maps with each of the candidates plotted follows immediately after the chart.

Each row of the chart is color coded as either grey or green. The grey sites were rejected by AT&T's radiofrequency engineers as insufficient to address the wireless service objective in the search ring, usually after Centerline made contact with a landowner, tower developer, or public entity to determine whether there was any interest in leasing land to construct a new tower compound and associated access road. Notable among these "RF-rejected" sites were:

- A location in the Green Mountain National Forest (Candidate C);
- Multiple locations on the large Montgomery Timber parcels in Roxbury, Granville, and Braintree (Candidates E and H through M);
- Sites in or near the Alpine Village residential neighborhood in Warren (Candidates D, G, O, Q, and Y); and
- Other locations off of North Hollow Road (Candidates S, T, U, and W).

The green sites were accepted by AT&T's radiofrequency engineers, but proved infeasible as alternatives due to other reasons, such as substantial obstacles in terms of the amount of environmental impacts necessary to construct new roads and utilities to build a site (as well as the associated costs); or, in a few instances, an unwillingness of landowners to engage in negotiations with AT&T. Notable among this group were:

- SBA and Vertex "optioned" sites on higher elevations of Montgomery Timber parcels near Rice Mountain (Candidates A and N);
- Rice Mountain summit in Roxbury (Candidate B); and
- Webster Timber property in Roxbury (Candidate F).

Q18. Does the chart include locations proposed by the Department of Public Service?

A18. Mr. DelliColli: No—those five proposed locations that were raised by David Maxson of Isotrope as part of the public meetings associated with the Original Location in the First Petition—and referenced with the Prefiled Testimony of Martin Lavin as Exhibit ATT-MJL-09—were primarily reviewed and rejected by C-Squared and AT&T's radiofrequency engineers. But reviewing that same list, I was aware that many of the selected locations would have been infeasible due to either conservation restrictions (especially those landlocked by the Granville Gulf Reservation State Forest), or similar environmental concerns associated with access road construction as had disqualified other "green" sites on Centerline's list.

I'd also add that reviewing the five proposed Maxson locations with hindsight, each of them appears very close to either North Hollow Road, or to VT Route 100. No visual analysis has been conducted on any of them to my knowledge, but being familiar with the area, none of these appear to have obvious aesthetic advantages or differences in comparison to the Original Location, even assuming there were no environmental barriers or radiofrequency challenges.

Q19. Did the applicant ever consider the possibility of using multiple small cell nodes in lieu of a tower-based project?

A19. Mr. DelliColli: Yes: this "off-parcel" possibility was first raised by Mr. Maxson in connection with the 2020 public hearing for the Original Location, and by one of the intervenors in connection with the Second Petition for the Alternative Location, though to my knowledge neither one ever completed or submitted any type of actual analysis.

In September 2022, responding to public comments, AT&T analyzed whether the coverage objectives for the Project could be met with a small cell solution, which would entail the installation of several antenna nodes. Working with C Squared, and as described more fully in the Prefiled Testimony of Martin Lavin, it was determined that replicating the coverage achieved by the Project only along VT Route 100 would require a minimum of seven new 50' poles. The features near each of these locations along Vermont Route 100 are shown on the photographs taken from the Street View feature in GoogleEarth™, submitted as Exhibit ATT-JPT-10. With the assistance of technology developed through VSS to identify the approximate visual impact of each small cell node (and some assistance from Mr. Archambault), while also evaluating the area for wetland impacts, I prepared the Viewshed Map and Wetlands Location provided as Exhibit ATT-JPT-11.

Q20. What did the applicant conclude regarding the viability of the hypothetical small cell system?

A20. Mr. DelliColli: As set forth more fully in Mr. Lavin's prefiled testimony, AT&T concluded that this potential alternative solution would not be viable from a development perspective because (1) it would result in a coverage loss of approximately 6.27 square miles, (2) this stretch of Vermont Route 100 lacks any overhead or underground power lines to supply power to the small cell nodes or fiber optic cable to connect each node, and (3) the topography and vegetation of the surrounding area would prevent solar-powered cells from being able to generate and store sufficient power. Beyond these factors, I would add that the small node arrays on new poles along a scenic highway would have a significantly greater visual impact on exclusively public property than is true of the proposed Project. In addition, several of the nodes would be located within feet of the Mad River, a known Class II wetland, and Alder Meadow Brook. Based on my interactions with ANR representatives over the course of this Project and the AT&T FirstNet project more generally, ANR would be unlikely to accept such placement if the same public service goals can be met by alternative means.

Q21. Are there additional site acquisition efforts for alternative locations off of the Eramo parcel for which you wish to make the Commission aware?

A21. Mr. DelliColli: Yes: earlier in 2023, AT&T asked Centerline to find a location for a single utility pole site designed to provide provisional FirstNet coverage (and without any commercial coverage) in a portion of the search ring area—particularly along West Hill Road—while the instant application was being reviewed. Centerline worked with

AT&T's engineers and public utilities such as Green Mountain Power Corporation ("GMP") and Consolidated Communications to look for a suitable pole site along public rights of way. In a few instances, I attempted to work with private owners along West Hill, West Hill Extension, and Browns Road, as well as on land managed by the U.S. Forest Service, to secure access or utility rights. Although Centerline was ultimately successful in securing rights for a provisional antenna facility on a GMP pole within the public right of way along the east side of North Hollow Road (adjacent to the Eramo property), the experience fortified my belief that there are no other suitable properties in the Granville Gulf area for a new tower, nor can antennas on utility poles be used to cover the area in the same way as the proposed Project on the Eramo Parcel.

6. Mitigation: On-Parcel Alternatives Evaluated

Q22. Please describe the applicant's efforts to explore changing the location of the Tower on the subject parcel to address visual aesthetics.

A22. Mr. DelliColli: In the summer of 2021, in light of multiple interventions by adjoining property owners, AT&T stayed the CPG proceeding for the First Petition to commence looking at several other potential options for wireless facilities on the western half of the Eramo property, away from North Hollow Road and Post Office Hill Road, all at locations shown on Exhibit ATT-JPT-12 (i.e. Map of On-Parcel Alternatives, prepared by DuBois & King at Centerline's request). Each option was submitted to AT&T's radiofrequency engineers for analysis.

Q23. Please describe the results of the analysis.

A23. Mr. DelliColli: All but one was determined to result in substantial degradation of coverage for AT&T's coverage objective for the Project. However, one location—referenced on Exhibit ATT-JPT-12 as Option 2 (and later identified in certain AT&T materials as "Candidate EE") proved viable from both a construction and a radiofrequency perspective, provided the tower height was increased to 195' to accommodate for a loss in ground elevation. This is the location referenced in the Project Narrative (Exhibit ATT-JD-02) as the "Alternative Location."

Q24. Please describe what was done to evaluate this potentially viable location.

A24. Mr. DelliColli: On December 28, 2021, I prepared a viewshed map for the Alternative Location using the IVSview® software, which is being submitted as Exhibit ATT-JPT-13. The viewshed map predicted a total visibility of 1.4 acres, limited to essentially two properties east of North Hollow Road, and with no visibility on the southern end of North Hollow Road or along Post Office Hill Road.

Mr. Archambault: VSS conducted a balloon test at the new location on July 27, 2021, and confirmed no visibility from any public roads in the area. VSS subsequently ran a balloon test on September 14, 2021, which was used primarily for the second radiofrequency drive test referenced in the Prefiled Testimony of Martin Lavin, but also to confirm for the public the absence of visibility off of the Property, as reflected on the viewshed map.

Q25. Please describe whether AT&T chose to pursue this new location.

A25. Jeff DelliColli: Following the September balloon test, AT&T had sought to amend the First Petition to use the Alternative Location, but was aware based on interactions with ANR and environmental consultants that documenting wildlife habitat at the Alternative Location could take a substantial amount of time. At a hearing held before the Commission on October 6, 2021, the transcript of which is provided as Exhibit ATT-JPT-14, the Hearing Officer communicated that an amendment request would not be granted. Rather, AT&T had to choose to either withdraw its petition to relocate the Project to the Alternative Location (and re-commence the Section 248a process), or continue to proceed with the Original Location in Case 21-1144-PET.

Q26. Please describe the result.

A26. Mr. DelliColli: As I referenced in the Project Narrative, AT&T withdrew its petition on October 29, 2021, and filed a new advance notice for the Alternative Location on January 18, 2022. Following very extensive documentation of the habitat impacts by DuBois & King (as described in the Prefiled Testimony of Louis Hodgetts) through the winter and spring of 2022, and following a public hearing hosted by the Department of Public Service, AT&T submitted its Second Petition for the Alternative Location on July 18, 2022. ANR intervened, opposing the Project. As outlined in the Prefiled Testimony of Melinda Squillace, this led to a series of discussions and site visits with ANR starting in fall 2022 that continued for nearly a year. Ultimately, the environmental concerns presented by the new location were considered to be insurmountable from ANR's perspective, and gave rise to other habitat impact concerns relative to the Original

Location. Those have since been resolved through the Memorandum of Understanding reached with ANR (Exhibit ATT-MS-05), the foundation which rests upon a decision for AT&T to seek approval from the Commission for the Project at the Original Location.

7. Recent Documentation of Original Location from Public / Private Properties

Q27. Has further effort been made to assess the visual impacts of the Project from the Original Location?

A27. Mr. Archambault: Yes: at the request of Centerline, VSS conducted a balloon test from the Original Location on September 11, 2023. Consistent with the viewshed map included as Exhibit ATT-JPT-06, and as shown on the new photo simulations provided as Exhibit ATT-JPT-15, the Project will have limited visibility from public property along North Hollow Road, Post Office Hill Road, and Fuller Hill Road, and no visibility along Vermont Route 100. The degree of visibility as shown in these simulations are consistent with the 2020 simulations from the Preliminary Location, even though the 2020 simulations were photographed during "leaf off" conditions in late November.

Q28. Were there any additional areas of focus for the September 2023 balloon test that had not been included from 2020 and 2021?

A28. Mr. Archambault: Yes. It was communicated to me that the Selectboard had asked for a determination of the degree of visibility along Fuller Hill Road, particularly for houses further east, away from North Hollow Road, up the hill. Photo Location 6 in Exhibit ATT-JPT-15 is taken from the bottom of Fuller Hill Road. I confirmed that apart from

this one location—and consistent with the viewshed map provided as Exhibit ATT-JPT-06—the Project should not be visible from anywhere else along that road.

Q29. Please describe any efforts to document impacts vis-à-vis private property owners.

A29. Jeffrey DelliColli: As part of the advance notice associated with this application (Case No. 23-2716-AN), Centerline offered to make available to adjoining property owners VSS's services to photo-document the impact of the proposed Project at the September 11, 2023 balloon test. This would allow VSS to employ the same process and methodology described in Exhibit ATT-JPT-02, thus ensuring accuracy of the photographs, when viewing the balloon from neighboring properties. Each adjoining owner was given the opportunity to request and sign a temporary license agreement pursuant to which VSS would select two outdoor locations on the property, take photographs, and provide them to Centerline. From there, Centerline worked to distribute the photographs or simulations to the participating owners along with a photographic map. Ultimately, six licenses were signed and returned to Centerline prior to the test.

Mr. Archambault: Following the September 11th test (with one retake on September 27th), VSS prepared photo documentation and simulations for six private properties, all located within a one-half mile radius of the Project. These are provided as Exhibit ATT-JPT-16, and include the addresses and owners on the following page:

3944 North Hollow Road (Jeff Gladchun)	pp. 1–6
4107 North Hollow Road (Siobahn Neale)	pp. 7–12
3586 North Hollow Road (Michael and Diane Eramo – Residence)	pp. 13–18
3511 North Hollow Road (Mary Falcon)	pp. 19–24
3397 North Hollow Road (Judy Wood)	pp. 25–30
4145 North Hollow Road (Kimberly Warner)	pp. 31–34

Q30. What conclusions can be drawn from these materials?

A30. Mr. DelliColli: The exhibit compiling the photographic simulations and locational keys from these private properties, Exhibit ATT-JD-16, suggests that the Project's level of visibility from these locations will not be substantially different from the public areas shown in Exhibit ATT-JD-15. In no instance does the Tower appear to be substantially closer or taller than is the case for the Eramos' property on the east side of North Hollow Road where they maintain their residence (i.e., 3586 North Hollow Road). If anything, the tower appears shorter from properties situated closer to the Project (e.g., Neale Property at location 1 (0.36 miles away), Falcon Property at location 2 (0.47 miles away)) than when the viewer is farther from the Project (e.g., Wood Property at location 2 (0.59 miles away)). So while still showing visibility from neighboring properties, the simulations show no disparity in aesthetic effect upon one landowner over another.

Mr. Archambault: For one of the participating landowners, Ms. Kim Warner, I confirmed the Project will not be visible from her property near her house, or from any open areas immediately surrounding the house.

8. Additional Aesthetic Mitigation for Project at Original Location

Q31. Please explain what additional work, if any, has been undertaken to reduce the aesthetic effects of the proposed Project from the Original Location.

A31. Mr. DelliColli: Realistically, slight adjustments to the location of the Project on the Eramo Property are unlikely to change the visibility from any of the public roads or private property locations included in Exhibits ATT-JPT-15 and ATT-JPT-16 in any significant way (given non-availability of the Alternative Location based on ANR's concerns).

The main item Centerline recommended to AT&T, and which AT&T has accepted as part of the overall design of the Project, is to paint the tower, the antennas, and all tower-mounted equipment a dark brown color, as shown in the simulations VSS prepared. This is a reasonable mitigation measure in my view because it ends up muting the overall visibility of the tower to the extent it already extends out of a surrounding forest. On days with bright sunlight and clear skies, a painted tower is less likely to have glare from the grey tower / white antennas associated with monopoles. On darker, cloudier days, the painted monopoles tend to fade more into the background. This is best seen in Photos 3, 6, and 10 from the simulations Mr. Archambault prepared in 2023 (Exhibit ATT-JPT-15) compared against Photos 1, 9, and 12 from the 2020 simulations (Exhibit ATT-JPT-03).

The costs of "colorizing" the Tower, antennas, and tower-mounted equipment are not exorbitant, and will not affect the overall functionality of the Facility. AT&T and/or a future tower owner, as a condition of future collocation subleases, can ensure that other providers will follow the "paint to match" requirements for antennas and tower-mounted equipment. Moreover, this design has been used effectively for other Vermont tower projects, notably the FirstNet project in Grand Isle (Case No. 20-0685-PET, Exh. 5D).

Q32. Has consideration been given to reducing the height of the Tower to mitigate its aesthetic impacts?

A32. Mr. DelliColli: No, for several reasons. First, as set forth more fully in the Prefiled Testimony of Martin Lavin, the Granville Gulf search ring consists of extremely steep, densely-vegetated, challenging terrain on either side of VT Route 100, making it very difficult to provide service in the area. While Mr. Lavin testifies that additional height would not make a material difference for coverage, lowering the height would potentially reduce the signal strengths and compromise connectivity within the search ring.

Also, as I noted in the Project Narrative, and as shown in Exhibit ATT-JD-11, the Department of Public Service has documented that no other carrier has any reliable coverage in this area, and there are no tall structures upon which to collocate. Siting another tower in this area is next to impossible, for the reasons I've documented in the preceding discussion of off-site alternatives. So reducing the height of the Tower would prevent the likelihood of collocation to bring service into the area.

Finally, given that the Tower is between 0.36 miles (1901 feet), 0.62 miles (3274 feet), and 0.76 miles (4013 feet) away from the most visible points along North Hollow Road, Fuller Hill Road, and Post Office Hill Road, respectively (*see* Photo Locations 1, 3, 6, and 10 in Exhibit ATT-JPT-15), I do not believe that reducing the height by any amount would change the fact that the Tower needs to be visible above the trees. For those reasons, reducing the height is not a viable mitigation measure for the Project.

Q33. Will the Tower require any lighting or marking per FAA regulations?

A33. Mr. DelliColli: No. As stated in Section V.N of the Project Narrative (Exhibit ATT-JD-02), the Tower will not require lighting or marking. AT&T determined that the Tower would not exceed 180' so as to avoid being required to illuminate or otherwise mark the Tower, thereby minimizing visual impacts while still achieving coverage in the Granville Gulf.

9. Quechee Lakes Analysis

Q34. Please confirm your familiarity with the *Quechee Lakes* test for assessing whether the Project will have an undue adverse effect on aesthetics as set forth in Section 248a(c)(1).

A34. Mr. DelliColli: Yes. As set forth by the Vermont Supreme Court most recently in *In re Apple Hill Solar LLC*, 2019 VT 64, ¶33: "The PUC uses a modified version of the *Quechee* test to determine whether a project would have an undue adverse effect on aesthetics under § 248(b)(5). *See In re Quechee Lakes Corp*., Nos. 3W0411-EB, 3W0439-EB, slip op. at 19-20 (Vt. Envtl. Bd. Nov. 4, 1985); *In re Rutland Renewable Energy, LLC*, 2016 VT 50, ¶ 14, 202 Vt. 59, 147 A.3d 621 (noting PUC "has adopted a

modified version of the *Quechee* test for determining aesthetic impact"). The test first asks whether the project will have an adverse effect on the aesthetics of the area. *Rutland Renewable Energy*, 2016 VT 50, ¶ 14, 202 Vt. 59, 147 A.3d 621. If it will, the test then asks if the effect is undue. *Id*. An adverse effect is not undue if the project will "not violate a clear, written community standard intended to preserve the aesthetics or scenic, natural beauty of the area" and will "not offend the sensibilities of the average person," and the applicant will "take generally available mitigating steps that a reasonable person would take to improve the harmony of the proposed project with its surroundings." *Id*. (quotation omitted). In considering mitigation, economic viability is a reasonable concern, so that for instance, an applicant does not have to completely harmonize a project with its surroundings, or abandon it altogether due to aesthetic impacts. *Petition of Next Generation Solar Farm LLC*, Docket No. 8523, 2017 WL 1344510, Order of 4/6/2017 at 7. The availability of alternative sites is typically considered in the context of the mitigation prong. *Id*.

With respect to Section 248a specifically, an assessment of whether a particular project will have an undue adverse effect "is significantly informed by the overall societal benefits of the project." *Petition of SBA Towers III, Inc., and New Cingular Wireless PCS, LLC*, Docket 7721, Order of 4/20/11 at 8 n.4 ("Consider, for example, the benefits of an increase in wireless telecommunications services or other societal benefits.").

Q35. Please describe whether the Project as set forth in the instant application will have an adverse effect on aesthetics as set forth in the *Quechee Lakes* test.

A35. Mr. DelliColli: Based on the materials prepared by VSS, it's clear that the Project will introduce a new visual element into the forested landscape that does not presently exist, and that it will be visible from certain locations shown on Exhibit ATT-JPT-12 and Exhibit ATT-JPT-13, where no similar type of structure is currently visible. Consequently, consistent with the Commission's guidance, it is necessary to proceed to the second "prong" of the *Quechee Lakes* test.

Q36. Please describe whether the Project will violate any written community standards in municipal or regional planning documents.

A36. Mr. DelliColli: Town plans are usually sources of clear, written community standards. *See In re Rinkers, Inc.*, 2011 VT 78, ¶ 10, 190 Vt. 567, 27 A.3d 334 (mem.). As discussed more fully in Sections VI and VII of the Project Narrative (Exhibit ATT-JD-02), the Granville Town Plan really only has one written community standard of import, which is to preserve the scenic qualities of VT Route 100 through the Granville Gulf. The Project achieves compliance by virtue of being non-visible from any point along the highway, as demonstrated by the viewshed analyses and photographic documentation provided by VSS. *See* Exhibits ATT-JPT-03, ATT-JPT-05 through ATT-JPT-06, and ATT-JPT-13.

Beyond that one provision, the Town Plan recommends drafting a standalone ordinance concerning the construction of wireless telecommunications facilities, but the Town of

Granville has yet to adopt a stand-alone ordinance. This is found in the Town Plan at page 19 (excerpts included as Exhibit ATT-JD-15). In fact, the Town Planning Commission failed in 2021 to reach agreement to adopt an ordinance that would have impacted the Project. *See* Exhibit ATT-JD-02, Section VI. The Town voted against the adoption of the same telecommunications ordinance by voice vote during the 2022 Town Meeting. Accordingly, the Town of Granville does not have a clear, written community standard that would prohibit the Project at this location.

Q37. Please describe whether the Project's visual effect will be shocking and offensive.

A37. Mr. DelliColli: Based on my experience working on the Project, and considering the result of VSS's extensive documentation presented with this application—and in particular Exhibit ATT-JPT-16 showing the limited impacts from private properties—the Project does not appear shocking and offensive to the average person. The simulations from the nearby private properties show the Tower being distant and relatively muted using the slender profile. Also, a majority of Town personnel voted in the affirmative during the 2021 Town Meeting—a vote taken shortly after the balloon tests of December 2020 (Preliminary Location) and January 2021 (Original Location) were publicly noticed and conducted—that the Project Parcel off of North Hollow Road was a suitable location for a communications tower. And finally, as documented in the Project Narrative, and as shown in the Selectboard Recommendations (Exhibit ATT-JD-19 and ATT-JD-22), the Town Selectboard has twice recommended approval of the Project. In this sense, I do not believe the Project shocks the conscience or unduly interferes with uses and enjoyment of private or public property in the Town of Granville.

Mr. Archambault: As stated earlier, I've been involved in documenting the visual impacts of hundreds of sites throughout New England, including multiple sites in Vermont. I have limited familiarity with the *Quechee Lakes* test. But I would add to Mr. DelliColli's statement that as a result of the balloon tests conducted on September 11th and 27th of this year, I interacted directly with several of the adjoining property owners. Each owner was pleasant and cordial. In a few cases, some expressed relief that the balloon was either not visible or barely visible from their properties. Two of the property owners reacted negatively to the test, but not in a way I would consider to represent outrage due to tower proximity.

Q38. Please summarize whether Petitioner has taken reasonable mitigation measures to reduce the impact of the Project.

A38. Mr. DelliColli: AT&T has made extraordinary efforts to mitigate the visual effects of the Project. As I previously noted, since 2018 when AT&T began work on the FirstNet implementation plan, multiple other properties in the area and other locations on the Eramos' property were evaluated and considered as potential tower sites to address the coverage issues in Granville. All ultimately proved infeasible, except for a single location on the Eramo parcel. AT&T also considered whether a small cell project could meet the coverage objectives while having a reduced visual impact, and determined that it could not. Using existing utility poles nearby for provisional FirstNet-only coverage proved inadequate as compared with a full communications tower, and reinforced my opinion that there are no off-parcel alternatives. AT&T also analyzed and presented alternative tower designs for consideration, none which proved superior in aesthetic terms

to the proposed monopole. However, as described above, painting the monopole, antennas, and tower-mounted equipment a dark brown color will effectively mute the Project's visual impacts, without compromising functionality. And the conservation of lands on both the Eramo and Gove parcels as described in the Project Narrative, Exhibit ATT-JD-02, and per the Memorandum of Understanding with ANR, Exhibit ATT-MS-05, will also have positive aesthetic benefits for the entire area of North Hollow Road.

The only identified mitigation measure that could have meaningfully reduced AT&T's visual impact was to move to the Alternative Location on the Eramos' property. AT&T pursued this measure through the Second Petition, and attempted to address the habitat-based concerns raised by ANR in Case No. 22-2775-PET with a substantive habitat conservation plan, developed following over a year of research. Yet as a result of discussions with ANR, it became clear that there is a tension between the mitigation test in *Quechee Lakes* and what is required to mitigate impacts on necessary wildlife habitat, as described in the Prefiled Testimony of Melinda Squillace. The Commission has previously validated a hearing officer's finding that an aesthetic mitigation measure that will negatively impact a resource referenced in Section 248's environmental criteria is not a reasonable one. *See Application of Ryegate GLC Solar LLC*, CPG#16-0037-NMP, 2018 WL 4184385, Order of 8/21/2018, at 15 (rejecting relocation of net-metering solar project as a reasonable measure where it would impact wetlands). Based on this, and cognizant of ANR's environmental concerns over bear habitat, AT&T has chosen to relocate the Project back to the Original Location. Apart from the Alternative Location, there is no reasonably acceptable alternative location on the Project Parcel that could

mitigate its aesthetic effects, while still providing reliable wireless service for users on VT Route 100 in the Granville Gulf.

In short, AT&T has taken all reasonably available mitigation measures to minimize the Project's aesthetic effects.

Q39. Will the Project provide overall societal benefits?

A39. Mr. DelliColli: Yes, including the wireless service benefits and conservation-related benefits described in Section IV of the Project Narrative, Exhibit ATT-JD-02, and elaborated upon in the Prefiled Testimonies of Martin Lavin and Melinda Squillace.

10. Conclusion

Q40. Does this conclude your testimony?

A40. Joint Panel: Yes it does.

22428805.2

25-2931-PET
Rochester Planning Commission Recommendation
Addendum 8 23-4087-PET REMOVAL BOND

TOWER / STRUCTURE / EQUIPMENT REMOVAL BOND

Location of tower/structure/equipment:
North Hollow Road
Granville, VT 05747

Site ID: VT2745

FA #: 10141438

Bond Number: SU1172418

KNOW ALL MEN BY THESE PRESENTS:

THAT NEW CINGULAR WIRELESS PCS, LLC as Principal, and ARCH INSURANCE COMPANY , a corporation duly organized under the laws of the State of Missouri as Surety, are held and firmly bound unto the TOWN OF GRANVILLE, as Obligee, in the penal sum of Thirty Nine Thousand and No/100 Dollars ---------- ($39,000.00 ----------) for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a written agreement with the property owner for the placement of a tower, structure or equipment furnishing telephone, television or other electronic media service, which agreement sets forth the terms and conditions which govern the use of such towers, structures or equipment and which agreement is hereby specifically referred to and made part hereof, and

WHEREAS, the TOWN OF GRANVILLE ordinance and/or the property owner, requires the submission of a bond guaranteeing the maintenance, replacement, removal or relocation of said tower.

NOW THEREFORE, the condition of this obligation is such, that if the above bounden Principal shall perform in accordance with the aforesaid ordinance and/or agreement, and indemnify the Obligee against all loss caused by Principal's breach of any ordinance or agreement relating to the maintenance, replacement, removal or relocation of a tower, structure or equipment then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED HOWEVER, that this bond is executed subject to the following express provisions and conditions:

1. No claim, action, suit or proceeding shall be instituted against this bond unless same be brought or instituted and process served within one year after termination or cancellation of this bond.

2. No right of action shall accrue on this bond for the use of any person, corporation or entity other than the Obligee named herein or the heirs, executors, administrators or successors of the Obligee.

3. The aggregate liability of the surety is limited to the penal sum stated herein regardless of the number of years this bond remains in force or the amount or number of claims brought against this bond.

4. If any conflict or inconsistency exists between the Surety's obligations as described in this bond and as may be described in any underlying agreement, permit, document or contract to which this bond is related, then the terms of this bond shall prevail in all aspects.

5. It is expressly understood and agreed that this bond does not cover or guarantee rent or lease payments of any kind.

SIGNED this 14th day of April, 2021.

Principal: NEW CINGULAR WIRELESS PCS, LLC
by AT&T MOBILITY CORPORATION, its MANAGER

By: Sherri Bazan Digitally signed by Sherri Bazan Date: 2021.04.14 13:53:52 -05'00'
Sherri Bazan, Assistant Treasurer

CORPORATE SEAL CORPORATE SEAL

Surety: ARCH INSURANCE COMPANY

By: Elizabeth P Cervini Digitally signed by Elizabeth P Cervini Date: 2021.04.14 15:10:02 -04'00'
Elizabeth P. Cervini, Attorney-in-Fact

Arch Insurance Company CORPORATE SEAL 1971 Missouri

Producer Name
(Required in Arizona Only)

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for Note, Loan, Letter of Credit, Currency Rate, Interest Rate or Residential Value Guarantees.

POWER OF ATTORNEY

Know All Persons By These Presents:

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

David A. Johnson, David C. Rosenberg, Denise M. Bruno, Elizabeth P. Cervini, Harry C. Rosenberg, Jonathan F. Black, Joyce M. Houghton, Julia R. Burnet, Matthew J. Rosenberg and Stephanie S. Helmig of Wayne, PA (EACH)

its true and lawful Attorney(s)in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed:

Any and all bonds, undertakings, recognizances and other surety obligations, in the penal sum not exceeding
Ninety Million Dollars (90,000,000.00).

This authority does not permit the same obligation to be split into two or more bonds In order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on September 15, 2011, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect:

"VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process."

This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on September 15, 2011:

VOTED, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on September 15, 2011, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company.

In Testimony Whereof, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 13th day of February, 2019

Attested and Certified

Arch Insurance Company

Patrick K. Nails, Secretary

David M. Finkelstein, Executive Vice President

STATE OF PENNSYLVANIA SS

COUNTY OF PHILADELPHIA SS

I, Michele Tripodi, a Notary Public, do hereby certify that Patrick K. Nails and David M. Finkelstein personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
MICHELE TRIPODI, Notary Public
City of Philadelphia, Phila. County
My Commission Expires July 31, 2021

Michele Tripodi, Notary Public
My commission expires 07/31/2021

CERTIFICATION

I, Patrick K. Nails , Secretary of the Arch Insurance Company, do hereby certify that the attached Power of Attorney dated February 13, 2019 on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said David M. Finkelstein, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the Arch Insurance Company on this 14th day of April, 2021.

Patrick K. Nails, Secretary

This Power of Attorney limits the acts of those named therein to the bonds and undertakings specifically named therein and they have no authority to bind the Company except in the manner and to the extent herein stated.

PLEASE SEND ALL CLAIM INQUIRIES R.ELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

Arch Insurance – Surety Division
3 Parkway, Suite 1500
Philadelphia, PA 19102

ARCH INSURANCE COMPANY
STATEMENT OF FINANCIAL CONDITION
DECEMBER 31, 2020

Assets

Cash in Banks	$293,990,621
Bonds owned	$ 3,620,730,816
Stocks	$ 653,208,881
Premiums in course of collection	$ 525,571,487
Accrued interest and other assets	$ 593,248,584
Total Assets	$ 5,686,750,389

Liabilities

Reserve for losses and adjustment expenses	$2,577,386,588
Reserve for unearned premiums	$ 946,480,428
Ceded reinsurance premiums payable	$ 377,159,781
Amounts withheld or retained by company for account of others	$ 170,189,032
Reserve for taxes, expenses and other liabilities	$ 483,069,562
Total Liabilities	4,554,285,393
Surplus as regards policyholders	1,132,464,997
Total Surplus and Liabilities	$5,686,750,389

By: ______________________ Attest: ______________________

Executive Vice President, Chief Financial Officer and Treasurer

Executive Vice President, General Counsel and Secretary

State of) New Jersey
SS
County of) Bergen

Thomas James Ahern, Executive Vice President, Chief Financial Officer and Treasurer and Regan Shulman, Executive Vice President, General Counsel and Secretary being duly sworn, of ARCH INSURANCE COMPANY, Missouri; and that the foregoing is a true and correct statement of financial condition of said company, as of December 31, 2020.

Subscribed and sworn to before me, this 2 day of March, 2021

Notary Public ______________________

Performed remotely using communication technology

BARBARA A. LEE
Notary Public, State of New Jersey
Commission # 50107750
Commission Expires ... 2024