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CAPE COD
COMMISSION

**CAPE COD COMMISSION STAFF REPORT
DEVELOPMENT OF REGIONAL IMPACT REVIEW**

Date: November 8, 2024
Project: Long Pond Monopole (File No. 24012)
Project Applicant: TowerNorth Development, LLC
c/o Atty. Ed Pare, Brown Rudnick
One Financial Center, Boston, MA 02111
Property Owner: WVB, LLC
Property/ Site: 1185 Long Pond Road, Brewster (Assessors ID Map 85 Lot 110)
Title Reference: Book 25949 Page 149
Subcommittee: Elizabeth Taylor (Chair), Jacqueline Etsten, David Mead-Fox, Harold Mitchell,
Thomas Wilson, and Kevin Grunwald (Alternate)

Project Description and Context

The Applicant proposes development on a leased portion of a +/- 2.3-acre property ("Property"; "Project Site"). The Property currently contains a commercial building operating as a liquor store with associated site improvements. The Applicant proposes the construction of a 125-foot multi-user monopole-style wireless communications tower with associated equipment ("Project"). The Applicant has legal standing to pursue the Project through a Memorandum of Lease and a Letter of Authorization, both from the Property Owner. As proposed, the development and construction of the wireless communications tower would consist of:

- clearing +/- 19,250 square feet of vegetated area;
- constructing a 50'x60' compound surrounded by a 6'-tall stockade fence with sound-attenuating material;
- installing the monopole tower, carrier antennas, concrete equipment pads, and all associated ground equipment (including equipment cabinets, propane generators, and propane tanks) within the fenced area; and

- installing an approximately 12'x300' gravel driveway connecting the fenced area to the existing site parking areas.

The Project Site is located at the intersection of Millstone Road and Long Pond Road in an area developed with a mix of commercial and residential properties. The Property also abuts a small-scale commercial office building to the north, a residential property to the east, and an undeveloped parcel to the south.

The Project Site is within a Wellhead Protection Area, but no other RPP-mapped sensitive resource areas are present. Staff suggests the Project Site is best characterized by the Suburban Development Area Placetype based on the surrounding mix of residential and commercial development. Suburban Development Areas are characterized by moderately dense residential neighborhoods as well as automobile-oriented commercial development that may have a patchwork of fragmented open space. The Project Site is within a Wellhead Protection Area, but no other RPP-mapped sensitive resource areas are present.

Ongoing operations and activity at the Property would be minimal, thus the Project does not involve regionally significant or sustained effects on the transportation network.

DRI Jurisdiction

The Project requires mandatory DRI review pursuant to Section 3 of the Commission's *Chapter A: Enabling Regulations Governing Review of Developments of Regional Impact ("Enabling Regulations")* (revised May 2020) as the "[c]onstruction of any Wireless Communication Tower exceeding 35 feet in overall height...".

The Commission received a mandatory Development of Regional Impact referral for the Project from the Town of Brewster ("Town") on August 12, 2024.

The Applicant submitted a DRI application to the Commission on August 9, 2024. Additional materials were submitted on October 15, 2024. The hearing period was opened procedurally on October 11, 2024.

DRI Review Standards

Section 7(c)(viii) of the Commission's *Enabling Regulations* contains the standards to be met for DRI approval, which include, as applicable, consistency with the Cape Cod Regional Policy Plan (RPP), municipal development bylaws, District of Critical Planning Concern (DCPC) implementing regulations and Commission-certified Local Comprehensive Plans. The Commission must also find that the probable benefit from the Project is greater than its probable detriment.

DRI review of the Project is subject to the 2018 RPP, amended in March 2021, which is the version of the RPP in effect at the time of the Commission's first substantive public hearing on the Project. The Commission determines the Project's consistency with the Act and 2018 RPP by determining whether the Project is consistent with the Goals and Objectives in Section 6 of the 2018 RPP, as particular goals and objectives are deemed applicable and material to the Project.

Cape Cod Regional Policy Plan

Applicable and Material RPP Goals and Objectives

Commission staff reviewed the details of the DRI Application Materials and suggest that the following RPP Goals are applicable, material, and regionally significant and are thus subject to RPP consistency review: Community Design, Cultural Heritage, Water Resources, Open Space, and Capital Facilities and Infrastructure. Ongoing operations and activity at the Property would be minimal, thus the Project does not involve regionally significant or sustained effects on the transportation network.

Commission staff make the following recommendations relative to the Project's consistency with these RPP Goals and relevant Objectives and Technical Bulletin guidance:

Community Design

The Community Design Goal of the RPP is to protect and enhance the unique character of the region's built and natural environment based on the local context. The following Community Design Objectives are applicable and material to the Project:

- Minimize the amount of newly disturbed land and impervious surfaces (CD2); and
- avoid adverse visual impacts from infrastructure on scenic resources (CD3).

The Applicant has compacted their development with a small equipment pad and a single lane access drive. The Project proposes +/- 19,250 sf of clearing on the Site for the underground utilities, access drive and compound. Thus, Staff suggests the Project is minimizing newly disturbed land and impervious surfaces, consistent with Objective CD2.¹

The Project's visibility will not impact any scenic or culturally significant resources at the proposed location, and thus Staff suggests the Project as proposed is consistent with Objective CD3. While no scenic or culturally significant resources will be impacts, Staff notes that the final set of photo simulations only includes the photo of the balloon for View #5. While the overall impact can be inferred from the photo of the balloon, a full photo simulation should be provided.

¹ Prior to DRI Review, the Applicant proposed an alternative design, which located the monopole further to the west on the site, toward the intersection of Long Pond Road and Millstone Road. This alternative would have left the monopole more visible from the intersection of Long Pond Road and Millstone Road, but it also would have limited newly disturbed land and been less visible to adjacent residential areas. While the clearing required for the access road will be greater than if the Applicant had pursued the alternative, staff suggest that the designs are unlikely to result in different or greater impacts from a regional perspective.

The Project will be set back substantially from the road and is surrounded by a vegetated buffer that should effectively screen the Project. Staff recommends retaining the native vegetation in the buffer areas to the maximum extent possible. While the screening provided by the vegetative buffer makes landscaping unnecessary for consistency with Community Design objectives, staff suggests that the Applicant take cues from the existing native vegetation on the site to inform the choice of plantings in any other landscaping on site. Staff notes that the Proposed Landscaping Plan (Sheet L-1), the "Landscaping Schedule" lists the non-native Mountbatten Chinese Juniper; however, the plan shows Emerald Sentinel Eastern Red Cedar to be planted. The Applicant should confirm which species is proposed to be planted. Staff suggests the Mountbatten Chinese Juniper be replaced with native eastern red cedar or northern white cedar or other native evergreen or shrub species already found on the site.

Cultural Heritage

The Cultural Heritage Goal of the RPP is to protect and preserve the significant cultural, historic, and archaeological values and resources of Cape. The following Cultural Heritage Objective is applicable and material to the Project:

- Protect and preserve archaeological resources and assets from alteration or relocation (CH2).

Staff notes that the currently proposed monopole location appears to have been undisturbed since at least 1938. The Applicant submitted a Project Notification Form to the Massachusetts Historical Commission ("MHC"). The MHC reviewed the current location of the Project and determined on May 29, 2024 that the Project was unlikely to have adverse impacts on historic or archaeological resources. Thus, Staff suggests the Project is consistent with Objectives CH2.

Water Resources

The Water Resources Goal of the RPP is to maintain a sustainable supply of high-quality untreated drinking water and protect, preserve, or restore the ecological integrity of Cape Cod's fresh and marine surface water resources. The following Water Resources Objectives are applicable and material to the Project:

- protect and preserve groundwater quality (WR1); and
- manage and treat stormwater to protect and preserve water quality (WR4).

The Project does not include any wastewater infrastructure and is not expected to generate any wastewater while in operation. The Applicant has provided a nitrogen loading calculation for the entire property, which includes the existing liquor store and parking lot. The nitrogen loading is 2.3 mg/L, mostly due to existing development on the Project Site, which is consistent with Objective WR1.

Since the Property is located within a Wellhead Protection Area, there are limitations on the storage or use of hazardous materials/hazardous waste. The Applicant has indicated the only confirmed lessee, Verizon Wireless, proposes to use a propane fueled backup generator, which is consistent with WR1 and follows guidance in the Water Resources Technical Bulletin. To ensure the protection of Long Pond, the Applicant has agreed to a condition requiring any backup power generators only use natural gas or propane for fuel. Subject to this condition, Staff suggests the Project is consistent with Objective WR1.

The Project will result in approximately 7,000 square feet of semi-permeable crushed stone surfaces in the equipment compound and access road as well as impervious concrete pads for the monopole and telecommunications equipment. The Project proposes several control measures to manage stormwater runoff, including a pea gravel infiltration trench to manage runoff from the equipment compound and a swale and infiltration basin to manage runoff generated from the access road.

There are some inconsistencies in the stormwater report and plans that should be clarified, including the dimensions of the infiltration trench (indicated as both 2' x 2' x 50' and 5' x 5' x 50') and the calculated storage associated with that BMP. The proposed wet swale is not explicitly identified on the plans, though it can be inferred from the grading. Details (e.g. sample cross section) should be provided for the wet swale and plunge pool that show that proposed side slopes and vegetation / planting schedules are consistent with design guidelines in Volume 2 Chapter 2 of the Massachusetts Stormwater Handbook or the Draft Stormwater Handbook update. Provided these minor clarifications can be made, Staff suggests the Project is consistent with Objective WR4.

Open Space

The Open Space Goal of the RPP is to conserve, preserve, or enhance a network of open space that contributes to the region's natural and community resources and systems. The following Open Space Objective is applicable and material to the Project:

- protect or provide open space appropriate to context (OS3).

According to the Application, the Area of Development Impact (ADI) is 19,250 square feet. Projects in Suburban Development Areas are required to provide high-quality open space in a ratio of 1:1 on-site, offsite, or by cash contribution. The Applicant may provide the required open space, through protection of 19,250 square feet or through cash contribution for the purpose of open space protection within the Town. Commission staff expect further information from the Applicant as to how the Applicant proposes to address Objective OS3. The current per acre value for open space mitigation in the Town of Brewster is \$94,905 per acre. The required open space cash contribution would be \$41,758 for the 0.44-acre ADI.

Capital Facilities & Infrastructure

The Capital Facilities & Infrastructure Goal of the RPP is to guide the development of capital facilities and infrastructure necessary to meet the region's needs while protecting regional resources. The following Capital Facilities & Infrastructure Objective is applicable and material to the Project:

- coordinate the siting of capital facilities and infrastructure to enhance the efficient provision of services and facilities that respond to the needs of the region (CAP2).

Wireless network connectivity is influenced by many factors, including proximity to a cell site, physical obstacles, signal interference, severe weather, topographical features, or large structures or other objects between a phone and the nearest cell site.

The Applicant suggests that the tower is necessary to address a potential gap in wireless coverage and identified the proposed site as the only feasible location to close the potential gap. Provided such gap has been verified, the Project would improve cellular coverage in Brewster for Verizon customers and includes space for up to three additional carriers.

Based on the information provided in the DRI Application, the proposed tower is infrastructure that would improve cellular service in the area of the proposed site in response to the needs of the region, and thus staff suggests the Project is consistent with Objective CAP2.

Other DRI Standards of Review

Consistency with Technical Bulletin 97-001: Guidelines for DRI Review of Wireless Communication Towers (Revised September 2010)

Commission staff direct applicants to Technical Bulletin 97-001 for guidance on location and design of wireless towers. The Commission has retained Isotrope Wireless, LLC ("Isotrope") as its wireless technical consultant to review the Project relative to, among other things, consistency with these guidelines.

Detailed analysis as to the Project's consistency with Technical Bulletin 97-001 can be found in Isotrope's report, which is attached to this staff report. The wireless technical consultant will present his report to the subcommittee at the November 12th hearing on the Project.

Consistency with applicable Municipal Development Ordinances/Bylaws (including DCPC implementing regulations)

The front portion of the Site is located in the Commercial zoning district and the rear portion is located in the Residential Medium Density zoning district. Additionally, the majority of the Site is located within the Old King's Highway Historic District. The Applicant located the Project toward the rear of the site to be outside of the Old King's Highway Historic District.

The Project will require a variance from the Brewster Zoning Board of Appeals and other local approvals as required.

Comments have been provided by Jonathon Idman, Brewster Town Planner. Staff note that these comments include discussion of an alternative design for the Project. Prior to DRI Review, the Applicant proposed an alternative design, which located the monopole further to the west on the Project Site, toward the intersection of Long Pond Road and Millstone Road. This alternative would have been more visible from the intersection of Long Pond Road and Millstone Road, but it also would have limited newly disturbed land within a Wellhead Protection Area, reduced the amount of semi-pervious area requiring stormwater treatment, and been less visible to adjacent residential areas. Staff suggest that, compared with one another, the designs are unlikely to result in different or greater impacts from a regional perspective.

The Commission must review the Project as currently proposed in accordance with the DRI review standards. However, considering the comments from the Town, Staff suggests that the Commission could consider making the finding that the alternative design would not result in different or greater impacts from a regional perspective. Such a finding would provide greater flexibility for the Applicant and Town going forward to proceed with either design.

No DCPC implementing regulations apply to the Project.

EXHIBIT A

ISOTROPE WIRELESS – REVIEW OF APPLICANT’S DEVELOPMENT OF REGIONAL IMPACT
APPLICATION



Thinking outside the sphere

Review of Application for DRI: New Tower at 1185 Long Pond Road, Brewster, MA

June 26, 2024

Tower North Development, LLC (Applicant) proposes a 125-ft monopole tower at 1185 Long Pond Road for Development of Regional Impact (DRI) approval by the Cape Cod Commission (Commission). It would be a new structure.

Summary:

The application materials are complete and describe a proposed facility that has a design familiar to the Commission. From a wireless communications perspective, the proposed design raises no red flags on topics such as radio energy safety, facility size and capacity.

The application includes information provided by C-Squared Systems on behalf of Verizon Wireless depicting predicted existing and proposed coverage at 700 MHz and 2100 MHz, as well as measured coverage data (drive data) in the area of the proposed monopole, in order to demonstrate the need for the site (for Verizon Wireless).

Application Requirements:

The DRI Review requirements state, by section (summarized):

- **Demonstration of a coverage and/or capacity problem requiring a solution**

As mentioned in the summary, above, the application includes information as Attachment 6 from C-Squared Systems on behalf of Verizon Wireless to demonstrate the need for the proposed facility. There are several prediction plots (Attachment A and B) and 2 plots of drive data, (Attachments F and G) collected October 5, 2023. It is noted that the coverage prediction map for the existing sites (Attachment A) is a reasonably good match for the measured/drive data, with no areas of major mismatch, and therefore it can be concluded that the prediction is therefore reasonably accurate for this location.

It is noted that on Attachment A and B, several Small Cells locations are identified, but coverage is not shown from these locations. For this application, the coverage from these Small Cells is not expected to contribute to the area of need, as the Small Cells are located more distant from the area of need than existing Verizon Macro Cells, but Small Cell coverage should be represented in the plots



provided, as it exists and should be depicted as accurately as possible, even if it does not affect or change the area of need.

Turning to a broader analysis, the Subcommittee can interpret the plots in this way:

- White areas on Attachment A indicate areas where Verizon is predicted to have sub-standard coverage on both bands (700 and 2100) that are being presented here,
- Green areas are areas where Verizon is predicted to have acceptable coverage at 700 MHz but not at 2100 MHz.
- Yellow areas are where Verizon is predicted to have acceptable coverage at both 700 MHz and 2100 MHz.

Our review of the plots presented is that they can be considered valid by the subcommittee when considering the gap as represented in the plots. It should also be noted that the area shown as coverage need here is due to a demand evolution. The plots and drive data show that Route 6 is already covered quite well indeed by Verizon in this area. The area of need here is primarily residential but also the State Park, and the Ocean Edge Resort and Golf course which are “newer” demand areas as residents come to rely on their mobile phones for both convenience and safety indoors, and in areas that are not proximate to major roadways and commercial districts.

- **Demonstration that all existing structures have been identified and fairly rejected**

We note the existence of wireless antennas on the town of Brewster’s water tanks at 1 Yankee Drive, and we also note that in Mr. Brian Glivic’s Alternative Site Analysis as “Director of Strategic Site Development for Tower North, he states: “This parcel is available for a wireless installation but does not meet the coverage objectives of Verizon Wireless as it is too close to an existing Verizon Wireless facility located at 1657 Main Street”. Notwithstanding Mr. Glivic’s opinion as a Site Development person, the reasoning for the Applicant or Verizon dismissing this potential site location on the Water Tanks seems to be a technical one, and therefore, a technical analysis should be included to demonstrate that the existing Water Tanks cannot partially or fully cover the area of need/gap that Verizon hopes to fill. We would request a plot similar to Attachment B showing coverage for the Water Tank with antennas mounted near the top, (instead of the subject new site) to demonstrate conclusively that mounting a site on the Water Tank cannot address the referenced area of need, either in whole or in part.



- **Demonstration that proposed location and height will solve (the) problem**

And

- **Demonstration that proposed height is minimum necessary to achieve coverage of target area.**

A review of Attachment B indicates that the proposed facility does not comprehensively fill all areas of need on the plot but it does fill a significant portion of the white areas shown, as well as improve some areas from green to yellow. Therefore, while not a comprehensive solution, this site appears to be a partial solution.

As far as height, C-Squared Systems has filed a supplement on August 22, to address this requirement. Attachments H and K to this supplement are of most interest. Attachment H shows coverage at 80', 100, and 120' at 700 MHz and Attachment K shows the same heights at 2100 MHz. Upon reviewing these plots, we find several conclusions:

1. The heights chosen do not comply with the DRI standard:
"Provide propagation plots at incrementally lower elevations until reaching an elevation that clearly is not sufficient. Use increments of ten percent of proposed antenna elevation above ground [12'], or ten feet, whichever is greater"
2. Incorrect increments aside, it does appear that minimal differences are predicted at the various heights, particularly at 2100 MHz. At 700 MHz, there are areas to the N and NW of the site that are predicted to lose coverage at 80' and 100', as compared with the proposed 120' for Verizon, but some of these same areas may be covered by a site on the Yankee Drive Water Tank. We would like to see further responses to 2 items before concluding this portion of the analysis:
 - a. A plot showing coverage from the Yankee Drive Water Tank along with the existing sites, and also a plot showing the Yankee Drive Water Tank along with this proposed tower (at various heights) and the existing sites
 - b. A specific response to the second section of the DRI review standard section:
 - b) Measure and provide data on height of surrounding tree, vegetation, and/or building cover. Supply photographs to corroborate. In complex environments, a plan view is recommended.*
 - c) Provide a propagation plot with top of antenna placed ten feet above average surrounding cover line.*

We also find the "delta" plots included in the supplement misleading because while the report references the standard of "acceptable coverage" for Verizon as -95 dBm, the "delta" plots show the change effects between levels of -75 to -115 dBm. Therefore, areas not meeting the standard are considered for the "delta" plot, which will show a reduction in coverage in areas where the coverage is below the standard, therefore overstating the area of study/analysis.



- **Demonstration of visual impact of proposed new structure.**

Included and noted. There have been 2 balloon flights and 2 sets of photosimulations, one from February 2024 (snow, no seasonal foliage) and one from October 2024 (seasonal foliage still in place) The location does appear to be well chosen for minimum visual impact of the compound, nearby the site, with significant tree screening around the site location. However, the height of the proposed tower does result in some visibility of the tower over the trees, such as shown on Freemans Way and Old Freemans Way.

- **Demonstration of Camouflaged Siting and Design Features**

Included. The ground equipment does appear to be screened from public view to the extent possible (by site selection) by the surrounding vegetation and the setback from the roads.

- **Demonstration of Co-Location Capability**

Included. The site appears to be designed for a total of 4 carriers to collocate in the future. (Verizon + 3 additional carriers)

- **Radiofrequency Radiation (RFR) Filing Requirements**

The radio frequency energy safety analysis confirms the facility would be compliant with the FCC requirements, which is the extent to which the placement of the facility on this basis can be controlled. The analysis only includes Verizon and therefore, any future carrier tenants will need to provide (to the town of Brewster, in their permit application) their own safety analysis, including any existing carriers (Verizon initially) and their proposed operation in aggregate. The carriers' final designs of their facilities, in combination with the other carriers on site, are required to be always compliant under the terms of their FCC licenses.

- **Hazardous Materials Filing Requirements**

Included in Attorney Pare's narrative, Page 11:

The Facility will not use, generate, or discharge hazardous materials or waste. Any backup power batteries used by the wireless carriers will comply with all applicable requirements. In consultation with the Town of Brewster, we understand a Water Quality Certificate will be required pursuant to the Bylaw.

- **Noise Filing Requirements**

Included, starting on page 132, the Applicant has included a noise study based on ambient noise as well as noise increases for the wireless equipment as well as the potential generators to be placed by Verizon and future tenants on the tower. The applicant has also proposed some sound-deadening material on the fence section nearest the residences to the NE of the proposed compound.



Isotrope, LLC

Conclusion:

The applicant has addressed most sections of the DRI review requirements, as listed above.

This concludes our initial review of the application.

Michael Lawton