

DRAFT

**Petition No. 1616
Cellco Partnership d/b/a Verizon Wireless
194 Mount Parnassus Road
East Haddam, Connecticut**

**Staff Report
June 14, 2024**

Notice

On February 22, 2024, Cellco Partnership d/b/a Verizon Wireless (Cellco) submitted a petition to the Connecticut Siting Council (Council) for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k for the proposed extension and modifications to an existing Connecticut Department of Emergency Services and Public Protection (DESPP)-owned telecommunications facility and installation of associated telecommunications equipment located at 194 Mount Parnassus Road (Route 434), East Haddam, Connecticut (Petition or Project).

Specifically, Cellco proposes to extend the height of the existing DESPP tower by 40 feet to support Cellco's equipment and the potential collocation of additional tenants. The existing 121-foot lattice tower is not tall enough to support the collocation of Cellco and future tenants.

Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40, on or about February 22, 2024, Cellco provided notice to the Connecticut Department of Transportation (DOT), the owner of the host parcel; DESPP, the owner and manager of the existing facility; abutting property owners; and Town of East Haddam (Town) officials.

On February 26, 2024, the Council sent correspondence to the Town stating that the Council has received the Petition and invited the municipality to contact the Council with any questions or comments by March 23, 2024. No comments were received.

On February 26, 2024, Cellco received comments from the abutting property owner to the southeast of the existing facility site at 200 Mount Parnassus Road (Slabinski) related to the proximity of the proposed facility extension and Cellco's emergency backup generator to the property line.

On March 18, 2024, the Council received comments from Slabinski related to the distance of the tower to the property line, Federal Aviation Administration (FAA) warning lighting, generator noise, radio frequency emissions, and light pollution.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act, an administrative agency is required to take an action on a petition for a declaratory ruling within 60 days of receipt. During a regular meeting held on April 11, 2024, pursuant to CGS §4-176(e), the Council voted to set the date by which to render a decision on the Petition as no later than July 21, 2024, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

The Council issued interrogatories to Cellco on May 17, 2024. Cellco submitted responses to the Council's interrogatories on June 6, 2024.

Jurisdiction

Pursuant to CGS §§16-50i(a)(6) and 16-50x, the Council has exclusive jurisdiction over telecommunications towers, including associated equipment, ***owned or operated by the state***, a public service company or a certified telecommunications provider or used in a cellular system. (Emphasis added).

Under RCSA §16-50j-2a (30), "Tower" means a structure, whether free standing or attached to a building or another structure, that has a height greater than its diameter and that is high relative to its surroundings, or that is used to support antennas for sending or receiving radio frequency signals, or for sending or receiving signals to or from satellites, or any of these, which is or is to be:

- a) ***Used principally to support one or more antennas*** for receiving or sending radio frequency signals, or for sending or receiving signals to or from satellites, or any of these, and
- b) ***Owned or operated by the state***, a public service company as defined in Section 16-1 of the Connecticut General Statutes, or a certified telecommunications provider, or used in a cellular system, as defined in Section 16-50i(a) of the Connecticut General Statutes. (Emphasis added).

The existing tower is owned and operated by the state. The proposed tower extension will be used principally to support antennas and in a cellular system. Thus, the Council has jurisdiction over the existing facility and the proposed extended facility. Pursuant to the tower sharing policy of the state under CGS §16-50aa, the Council must examine whether the proposed extended facility may be shared with any public or private entity that provides service to the public, provided such shared use is technically, legally, environmentally and economically feasible and meets public safety concerns, to promote the immediate and shared use of telecommunications facilities and avoid the unnecessary proliferation of such facilities in the state. The proposed extended facility is designed to accommodate Cellco's antennas at the 146-foot level with space for two additional wireless carriers at the 135-foot and 155-foot levels.

Existing Facility Site

The existing facility site is located on an approximately 0.20-acre (8,695 square feet) host parcel on the south side of Mount Parnassus Road that is owned by the State of Connecticut. It is accessed by an access drive off Mount Parnassus Road that extends approximately 70 feet to a locked access gate. Utilities parallel the access road. Existing stone walls run along the perimeter of the north and east sides of the facility site. The edge of the stone walls is approximately 8 inches from the existing fence line.

The surrounding area is wooded with sparse residential development.

A 120-foot monopole public safety communications tower was constructed at the site prior to the 1960s. It hosted DESPP and DOT antennas. In 2010, DESPP and DOT entered into a Memorandum of Agreement (MOA) under which DESPP manages the existing telecommunications facility site located on the host parcel that DOT owns.¹

¹ The MOA was amended in 2013.

Existing Facility

In 2015, DESPP submitted Petition No. 1130 to the Council to replace the existing 120-foot monopole at the site with a 120-foot, three-legged self-supporting lattice tower to accommodate the antennas and associated equipment for DESPP, DOT and the Town, as well as to replace an 80 square foot building with an 882 square foot building to host associated equipment. A shared 70-kilowatt (kW) propane-fueled emergency backup generator and 1,800-gallon underground propane tank were also proposed. The Council issued a Declaratory Ruling to DESPP in Petition No. 1130 for the tower replacement on February 19, 2015. Construction of the replacement facility was completed on May 4, 2017.

The existing 120-foot self-supporting lattice tower and associated equipment building are enclosed by an eight-foot-tall chain link fence with 1¼ inch mesh topped with barbed wire within a compound area of approximately 6,500 square feet. The existing facility's foundation and structure were designed to be 180 feet above ground level (agl) without a yield point.

A lattice tower provides stability needed by DESPP to maintain microwave links between its adjacent sites.² The existing tower currently supports DESPP equipment at the 120-foot level, DOT equipment at the 55-foot level, Town equipment at the 55-foot level, and Valley Shore Emergency Communications (VS) and Quinebaug Valley Emergency Communications (QV) equipment at the 20-, 80-, 85- and 100-foot levels. A 4-foot lightning rod is located at the top of the existing facility.

The State Historic Preservation Office (SHPO) determined that no historic properties would be affected by the replacement facility in Petition No. 1130.

The existing facility is not marked or lit. The FAA Determination of No Hazard to Air Navigation for Petition No. 1130 noted the facility "is not a hazard for air navigation up to 126 feet above ground level" and would not require marking or lighting for aviation safety.

Proposed Facility Extension and Associated Equipment

Cellco discovered a need for service in the surrounding area in 2022 and established a search ring in February of 2023. It evaluated three other existing structures, including a tower site located at 101 Parker Road, which was rejected by radio frequency (RF) engineers as too far east to meet Cellco's coverage objectives; a silo structure at 91 Maple Avenue, which was rejected based on its short height; and a tower site at the East Haddam Fire Department at 440 Town Street, which was rejected based on its short height (45 feet).

Under a lease agreement with the State, Cellco would extend the existing 120-foot self-supporting lattice tower by 40 feet and install 12 antennas and 8 RRHs at a centerline height of 146 feet agl on the extended tower. Cellco would relocate the existing 4-foot lightning rod to the top of the extended facility. Cellco would also lease ground space and expand the existing facility fence area in the northwest corner in an irregular shaped approximately 8 feet by 12.5 feet (134 square feet) area to accommodate its utility connections and facilitate utility connections for future tenants at the site. The proposed location for the

² Cellco's equipment installation on the extended facility would also benefit from the tower design stability standards.

meter bank at the access gate is aligned with the utility route to the equipment compound. Cellco could install one meter near its proposed equipment inside the compound.

The proposed tower extension would comply with the DOT/DESPP MOA for the facility site and updated MOA standards. DESPP would assume ownership and management of the proposed tower extension after construction.

Cellco’s proposed antennas would provide services in the 700 MHz frequency and would be capable of providing 5G services. Current service in the surrounding area is provided by four existing telecommunications facilities located in Salem, Chester, East Haddam and Moodus, which are approximately 5.4 miles, 5.5 miles, 3.3 miles, and 3.2 miles, respectively, from the existing facility site. None of these facilities provide coverage to Mount Parnassus Road and local roads in the surrounding area, and the Salem facility is approaching exhaustion of capacity. Cellco’s antenna installation on the proposed extended facility would provide reliable wireless service along Mount Parnassus Road and local roads in the surrounding area where there are coverage gaps, and provide some capacity relief for the Salem site.

Coverage maps indicate Cellco’s equipment upgrade would improve its existing 700 MHz coverage area as follows:

Street Name	700 MHz	
	RSRP/ -85 dBm	RSRP/ -95 dBm
Mt. Parnassus Road	2.86 miles	2.97 miles
Shenanigans Road	0.79 miles	0.79 miles
Ballahack Road	0.36 miles	0.36 miles
Ballahack Road #1	0.64 miles	0.64 miles
Ballahack Road # 2	0.75 miles	0.79 miles
Bogue Lane	0.6 miles	0.6 miles
Parker Road	0.95 miles	0.95 miles
Overall Coverage Footprint	27.2 sq miles	83.6 sq miles

The proposed facility would have minimal to no interaction or overlapping coverage with the Council Docket No. 520 telecommunications facility at 124 Ague Spring Road due to the distance between the two proposed site locations.

Cellco would utilize the existing access drive to the site. Telephone and electric service would be routed through underground conduits to a meter box in an extended fenced area in the northwest corner of the facility site and continue underground to connect to an existing utility pole located along Mount Parnassus Road at the northwest corner of the access drive. The extended fenced area would be 134 square feet and surrounded by a new fence to match the existing fence type and design.

Cellco’s lease area within the existing equipment compound is 12-foot by 20-foot. It would install two equipment cabinets on an 11-foot by 20-foot concrete pad sheltered underneath a weather canopy and a 50-kW diesel-fueled emergency backup generator with an associated 210-gallon double-walled fuel tank and tertiary containment.

Cellco's generator would be exercised weekly during daylight hours and would be capable of providing 45 hours, or up to two days, of backup time before refueling. Although its preference is to maintain its own equipment, it is possible Cellco could tap into the existing propane generator and tank that is located at the site with permission from DESPP.

Cellco would also install a battery backup capable of supplying power for up to eight hours if the generator malfunctions. A GPS antenna, telco/electric lines and conduits, utility meter, and ice bridge would also be installed.

Commercial Mobile Radio Service (CMRS) providers are licensed by and are under the jurisdiction and authority of the Federal Communications Commission (FCC). At present, no standards for backup power for CMRS providers have been promulgated by the FCC.

No other wireless carriers have expressed an interest in locating equipment at the proposed extended facility.

The total estimated cost of the proposed facility extension and associated equipment installation is \$250,000. Costs to construct a new telecommunications facility are approximately \$400,000 to \$600,000.

Maintenance of the proposed extended facility would be conducted by DESPP consistent with the DOT/DESPP MOA.

Neither the Project, nor any portion thereof, is proposed to be undertaken by state departments, institutions, or agencies, or funded in whole or in part, by the state through any contract or grant. Cellco is a private entity.

Public Health and Safety

The Project would be constructed in accordance with the current Connecticut State Building Code, Telecommunications Industry Association (TIA) 222-H Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a maximum wind speed of 135 miles per hour, the National Electrical Code, the Connecticut State Fire Safety Code, and the Occupational Safety and Health Administration standards.

A Professional Engineer duly licensed in the State of Connecticut has certified that the existing lattice tower is structurally adequate to support the proposed loading.

The centerline of the existing facility is located approximately 64 feet from the northern boundary of Mount Parnassus Road, approximately 22 feet from the nearest property line to the south and approximately 200 feet from the nearest residence at 200 Mount Parnassus Road. The tower setback radius currently extends beyond the host parcel. The extended facility cannot be designed with a yield point so that the tower setback radius remains within the boundaries of the host parcel. The existing facility's foundation and structure were specifically designed for a maximum height of 180 feet with no yield point.

Construction of the extended facility would not impact or interfere with any existing nearby public utilities. Any proposed utilities at the site are required to maintain a minimum 3-foot separation between conduit and the existing underground propane tank. A minimum 4-foot clearance is also required between the fence and the service meter in the expanded fence area. Prior to the commencement of construction, all existing utilities and infrastructure locations will be identified using Call Before You Dig to ensure that proper construction measures can be incorporated to avoid impacts and interference.

Access to the facility site is restricted to licensed tenants and controlled by DESPP. Licensed tenant personnel are required to report their arrival on site, identity, purpose, expected and actual departure times to the DESPP Network Control Center. Cellco would maintain remote-monitored silent intrusion alarms for its equipment and install motion-activated lighting for maintenance purposes during nighttime hours.

Bollards would be installed near the expanded fence area next to the access gate to protect the equipment from vehicle impact.

The nearest airport to the facility site is the Goodspeed Airport located approximately 3.2 miles to the southwest. FAA notification of the existing structure and of the proposed extended structure is recommended to determine if obstruction marking and lighting is required. Cellco has not completed its FAA notification application and has not consulted with the Connecticut Airport Authority regarding the proposed extended facility. When Cellco completes and submits its FAA notification application, the FAA will determine if the extended facility would be a hazard to air navigation and require obstruction marking or lighting.

The proposed extended facility and associated equipment would comply with state noise control standards. Emergency backup power generators are exempt from DEEP Noise Control Regulations §22a-69-1.8. Cellco's 50-kW emergency backup generator has a noise profile of 79 decibels (dB) at a distance of 23 feet while operating at full load. This noise profile could be reduced to 64 dB with the inclusion of a noise-attenuation cover. The proposed generator would be exercised on a weekday during the late morning hours for approximately 20 minutes every two weeks. Cellco is willing to complete a post-construction noise study to determine if the cumulative operation of the noise-generating equipment at the extended facility site complies with state noise control standards at the property lines.

Cellco's antennas would support text-to-911 service and would comply with E911 requirements and the intent of the Warning, Alert and Response Network Act of 2006.

The calculated cumulative worst-case power density from the operation of Cellco's antennas would be 8.66% of the applicable maximum permissible exposure (MPE) limit established by the Federal Communications Commission (FCC) at ground level using a far field approximation.

The residence at 200 Mount Parnassus Road is at a ground elevation approximately 16 feet higher than the facility site. Assuming antenna heights on the extended facility of 16 feet lower than proposed, the result would be an overall increase in the percent MPE of less than 1%.

Environmental Effects and Mitigation Measures

Construction would occur within the existing developed area. No tree removal is required.

The site is not located within a Department of Energy and Environmental Protection (DEEP) Natural Diversity Database area. The nearest NDDDB area is located 0.5 miles to the north and west of the existing facility site.

The nearest Important Bird Area is the Lyme Forest Block located approximately 0.25-mile east of the site. The proposed extended facility would comply with the United States Fish and Wildlife Service recommended best practices for Communication Tower Design, Siting, Construction, Operation, Maintenance and Decommissioning as it does not contain guy wires and is expected to remain unlit.

The existing and proposed extended facility have propensity for avian nesting and perching. Bashan Lake is located approximately 1-mile north of the site. If osprey establish a nest on the extended facility, any construction and/or maintenance activities at the facility site are required to comply with the Migratory Bird Treaty Act. Avian perching on towers is common and typically does not impact the equipment or the birds.

The existing facility is visible within 0.25-mile or less of the site. A visibility study determined that, compared to the existing facility, the proposed 160-foot extended facility would not create new areas of visibility; however, it would be more prominent above the tree line in some locations where it is currently visible through intervening vegetation.

The nearest state-designated scenic road is State Route 149 North, located approximately 2.8 miles to the west of the site. The existing facility is not visible from this scenic road and the extended facility is not anticipated to be visible from this road due to distance, intervening topography and vegetation.

The site is not located within a Federal Emergency Management Agency 100-year or 500-year flood zone.

The total limit of disturbance (LOD) for the fence expansion area is approximately 225 square feet. The LOD for this expansion area will likely reach the edge of the stonewall outside the existing fence line. Cellco would repair and/or reconstruct the stonewall as necessary.

The LOD for the proposed extended facility construction is approximately 300 feet south of a wetland located across Mount Parnassus Road. Erosion and sedimentation controls including silt fence with hay bales or filter socks would be installed and best management practices would be employed.

The site is not located within a DEEP-designated Aquifer Protection Area.

No properties listed on the National Register of Historic Places are located within 0.5 miles of the existing site.

Extended Facility Construction

The Project would take approximately twelve months to complete. Typical construction hours/days of the week would be 7:00 AM to 5:00 PM, Monday-Saturday.

Cellco anticipates the use of a crane to install the lattice tower extension and would notify FAA.

A temporary facility is not expected to be required to maintain service during construction. Temporary service outages may be required during installation of Cellco's proposed lattice extension and equipment on the existing facility. Any service outages would be coordinated with DESPP.

Conclusion

If approved, staff recommends the following conditions:

- 1) Approval of any project changes be delegated to Council staff;
- 2) RF access restriction and caution signage shall be installed at the site in compliance with FCC guidance;
- 3) Deployment of any 5G services must comply with FCC and FAA guidance relative to air navigation, as applicable;
- 4) Install erosion and sediment control measures consistent with the applicable *Connecticut Guidelines for Soil Erosion and Sediment Controls*; and
- 5) Submit a copy of the FAA Determination prior to the commencement of construction.

Figure 1 – Aerial View of Existing Facility Site with Proposed Modifications



Figure 2 - Proposed Overall Site Plan

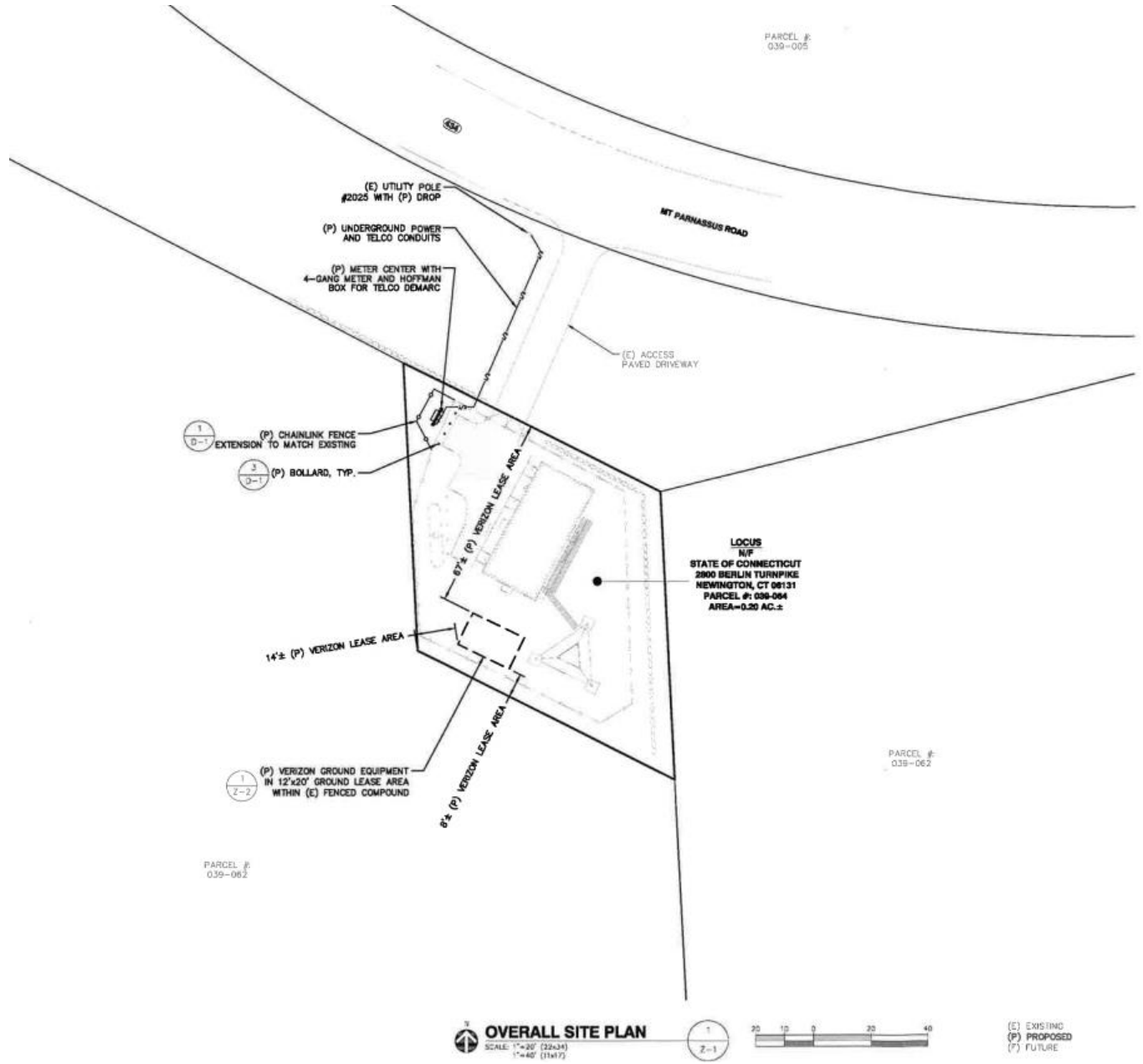


Figure 4 - Proposed Extended Facility Elevation Drawing

