DOCKET NO. 482 - Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility on town-owned property behind Lyman Memorial High School located at 917 Exeter Road, Lebanon, Connecticut.	}	Connecticut
	}	Siting
	}	Council
		June 21, 2018

Opinion

On March 12, 2018, Cellco Partnership d/b/a Verizon Wireless (Cellco) applied to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of wireless telecommunications facility located at the Lyman Memorial High School at 917 Exeter Road in Lebanon, Connecticut. The purpose of the proposed facility is to provide reliable wireless service to existing gaps in Lebanon and to improve Town of Lebanon (Town) public works and emergency communication services.

The United States Congress recognized a nationwide need for high quality wireless services through the adoption of the Federal Telecommunications Act of 1996 and directed the Federal Communications Commission (FCC) to establish a market structure for system development and develop technical standards for network operations. The FCC preempts state or local regulation on matters that are exclusively within the jurisdiction and authority of the FCC, including, but not limited to, network operations and radio frequency emissions. Preservation of state or local authority extends only to placement, construction and modifications of telecommunications facilities based on matters not directly regulated by the FCC, such as environmental impacts. The Council's statutory charge is to balance the need for development of proposed wireless telecommunications facilities with the need to protect the environment.

Cellco is currently located on five existing telecommunications facilities within a five-mile radius of the proposed site and these existing facilities cannot provide adequate service to large areas of Lebanon. Cellco customers experience unreliable 700 MHz LTE service along 3.8 miles of Route 207, 3.4 miles of Route 87, and 0.75 miles of Route 16. Additionally, there is no 2100 MHz LTE service available in the central portion of Lebanon.

Coverage models indicate the site would be able to provide a 700 MHz LTE coverage footprint of 48 square miles and a 2100 MHz LTE coverage footprint of 9 square miles. Once the site is operational, adjustments would be made so that the actual wireless service footprint would be the slightly reduced from what is projected on the coverage models. The adjustments, known as site optimization, are necessary to prevent interference with adjacent sites and maximize performance in high traffic areas.

Although the Town did not participate as a party to the proceeding, several Town officials made statements into the record at the public hearing held on May 1, 2018, indicating that the proposed tower would vastly improve Town public works and emergency communications throughout Town. The high school is also the Town's designated emergency response center, and as such, is a priority facility for Eversource to restore power in the event of Town-wide power outages, thus enabling the site to provide Town and Cellco communications without the need of relying on emergency backup power for an extended period of time.

Cellco established a search area for a new site in March 2015 and immediately identified an existing municipal 80-foot lattice tower behind the high school that currently supports Town and emergency communication antennas. Due to the low height and limited structural capability of the existing lattice tower, the Town and Cellco determined a replacement tower was needed. Several potential tower locations on the 38-acre school property were examined, including a site adjacent to the existing lattice tower, and a few other sites in a wooded area south of the developed school area. The Town ultimately selected a site in the wooded area as the Town wanted a location that was least disruptive to school operations.

The proposed site is located in the southerly portion of the 38.17-acre school parcel, zoned Rural Agricultural Residential. Cellco proposes to construct a 150-foot monopole and an associated equipment compound in the wooded area, south of a field used by the agricultural science department. A new 12-foot wide, 325-foot long gravel access drive would be constructed from an existing paved driveway at the rear of the school. The new access drive would traverse the edge of a field with poorly drained soils to the 50-foot by 50-foot tower equipment compound. The compound, enclosed by an eight-foot high chain link fence, would contain Cellco's ground equipment, emergency power generation system and a Town communication equipment shelter.

The 150-foot tower would be designed to support four levels of wireless carrier antennas as well as municipal and emergency service antennas. Cellco would install nine panel antennas and nine remote radio heads on a square platform at a centerline height of 140 feet above ground level. Town public works and emergency service whip antennas (up to 21 feet in height) would be installed at the 150-foot level of the tower.

An underground telecommunication line to service the facility would extend 1,720 feet from a utility pole on Exeter Road to the compound, through a lawn area along the east side of the school property. Site power would extend underground to the compound for a distance of 495 feet from existing service at the rear of the school.

Cellco's emergency power system consists of a battery cabinet and a 35-kW propane fueled generator. The battery alone could supply four hours of emergency power depending on site loading. The generator would recharge the battery unit and can run for 5.5 days before refueling would be necessary. Cellco's emergency power system would be shared with the Town, enabling the Town to maintain emergency communications during commercial power outage events.

Development of the site would disturb a 0.18 acre forested area that is classified as edge forest. A total of 12 trees with a minimum diameter of six inches at breast height would be removed to construct the site. Site construction would have a negligible effect on an adjacent 62 acre core forest located east of the site. Construction of the access road would disturb approximately 1,800 square feet of mapped prime farmland soils. The site is outside of mapped 100-year and 500-year flood zones. The proposed site is not within a Department of Energy and Environmental Protection (DEEP) designated Aquifer Protection Area or a public supply watershed.

The eastern box turtle, a State Species of Special Concern, is known to occur in the vicinity of the site. Cellco would include standard construction-related DEEP box turtle protection measures in the Development and Management (D&M) Plan for the project.

Two wetlands are in close proximity to the proposed access road and compound, one of which contains a vernal pool. The Council inquired as to the feasibility of relocating the tower site to the north, out of the edge forest and away from the two wetlands but the Town sought to keep it away from active school areas as much as possible, including adjacent facilities used by the school agricultural science program. Cellco located the proposed access drive to keep it as far as possible

from the wetland containing the vernal pool. This wetland would be 107 feet northeast of the compound and 70 feet east of the proposed access drive. The second wetland, disturbed by filling, would be 109 feet north of the compound and 26 feet from the proposed access drive. Additionally, Cellco would implement vernal pool Best Management Practices to reduce potential impacts to the vernal pool and vernal pool obligate species. The proposed project would be constructed in compliance with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control.*

The proposed facility is not located near an Important Bird Area, as designated by the national Audubon Society. However, the design of the proposed facility would comply with United States Fish and Wildlife Service guidelines for minimizing the potential impact of telecommunications towers to bird species.

The tower will be visible year-round from approximately 288 acres within a two-mile radius of the site, mostly from open field areas within 1.0 mile of the site. Seasonal views would generally be limited to locations within 1.0 mile of the proposed facility where vegetation on hills or along roads would obstruct year-round views from adjacent open areas. The site is within the Last Green Valley National Heritage Corridor and would be visible from portions of the Lebanon Town Green, an identified heritage corridor resource, approximately 1.5 miles northeast of the site.

A camouflaged tower design such as a stealth silo or fire tower would not be practical at the site due to the antenna height required for both Cellco and the Town's needs. Once a silo or fire tower exceeds a height of 80 to 90 feet, it would appear out of context with the surroundings.

According to a methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997), the radio frequency power density levels of the Town's and Cellco's antennas would be 1.04 percent of the FCC's General Public/Uncontrolled Maximum Permissible Exposure, as measured at the base of the tower. This is conservatively based on all antennas of a given sector pointing down to the ground and emitting maximum power. This percentage is well below federal standards established for the frequencies used by wireless companies. If federal standards change, the Council will require that the tower be brought into compliance with such standards. The Council will require that the power densities be recalculated in the event other carriers add antennas to the tower. The Telecommunications Act of 1996 prohibits any state or local agency from regulating telecommunications towers on the basis of the environmental effects of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. Regarding potential harm to wildlife from radio emission; this, like the matter of potential hazard to human health, is a matter of federal jurisdiction. The Council's role is to ensure that the tower meets federal permissible exposure limits.

Based on the record in this proceeding, the Council finds that the effects associated with the construction, operation, and maintenance of the telecommunications facility at the proposed site, including effects on the natural environment, ecological balance, public health and safety, scenic, historic, and recreational values, agriculture, forests and parks, air and water purity, and fish, aquaculture and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with policies of the State concerning such effects, and are not sufficient reason to deny this application. Therefore, the Council will issue a Certificate to Cellco Partnership d/b/a Verizon Wireless for the construction, maintenance, and operation of a 150-foot monopole telecommunications facility at the proposed site located at 917 Exeter Road in Lebanon, Connecticut.