ORIGINAL

DOCKET NO. 157 - An application of the Department of Public Safety, Division of State Police for a Certificate of Environmental Compatibility and Public Need for the construction, operation, and maintenance of telecommunications facilities located west of Ekonk Hill Road, Sterling; northeast of Mt. Hill Road, Thompson; south of Westcott Road behind Troop D Barracks, Killingly; and east of Valentine Road/Wolf Den Road, Brooklyn, Connecticut.

: Connecticut
: Siting
: Council
: March 16, 1993

OPINION

The State of Connecticut Department of Public Safety, Division of State Police (CSP), applied to the Connecticut Siting Council (Council) on September 24, 1992, for a Certificate of Environmental Compatibility and Public Need (Certificate) to construct, operate, and maintain telecommunications towers, associated equipment, and equipment buildings in the Towns of Killingly, Thompson, Sterling, and Brooklyn, Connecticut.

The CSP plan to replace their existing outdated, overburdened, two-way radio system with a modern arrangement using point-to-point microwave and an 800 megaHertz (mHz) two-way mobile telecommunications system. This system would be capable of supporting mobile data terminals, voice encryption, higher transmission speed for computer operation, operation of 1,000-plus units, and future expansion of the system which could not be addressed or upgraded in the current low-band, two-way radio system. Presently, leased telephone landlines provide point-to-point communications to existing CSP troops, district commands, headquarters, and other fixed locations.

The proposed system would allow the CSP to operate an independent, efficient, and more reliable communications network than the existing landline system which is susceptible to a greater number of potential outage risks. In addition, the Federal Communications Commission (FCC) has recognized a need for effective public safety communications and has established a national plan for frequency allocation in the 800 mHz spectrum. Presently, the CSP and other public safety agencies in the New England and Tri-State Committees for Spectrum Utilization are applying for FCC licenses.

The proposed Troop D tower site in Killingly would be behind the Troop D barracks straddling an existing, level parking lot and grassy area adjacent to the Troop D garage which is served by an existing driveway. The CSP would construct a 140-foot, self-supporting lattice tower, equipment building, and fence in

place of an existing 60-foot, rooftop mounted, guyed tower. The proposed tower would support various types of antennas extending to an overall height of 158 feet above ground level (AGL). The fall zone of this tower would extend up to a maximum of approximately 25 feet onto five adjacent properties, but the only buildings within the fall zone would be the existing CSP barracks and garage, and the proposed equipment building.

Although the Troop D parcel is zoned residential, commercial development does exist in the immediate area and the construction of the proposed tower would be consistent with surrounding land uses. Moreover, visibility would be reduced because of screening provided by the existing barracks.

The proposed 180-foot Brooklyn tower would replace and be constructed adjacent to an existing 180-foot tower which has been in operation for 50 years. A variety of antennas would be mounted to the proposed tower which would add 14 feet to the structure for an overall height of 194 feet AGL. The fall zone of the proposed tower would encompass five properties including a 270-foot section of a town road, but the only building within the fall zone would belong to the CSP.

Because the proposed Brooklyn replacement tower would be of the same height as the existing tower, this proposal would not substantially change the aesthetics of the surrounding area. While a potential alternative 150-foot tower exists, approximately a quarter-mile north of the proposed CSP facility, this tower could not support the addition of CSP antennas and its shared users. Consequently, we believe that this alternative was justifiably rejected.

Although the proposed 180-foot height of the proposed Brooklyn tower is needed to maintain the existing low-band radio system coverage, the proposed 800 mHz two-way mobile radio system could operate at a lower tower height. Furthermore, the CSP do not plan to dismantle the existing tower until the proposed tower is constructed and new equipment is operating. Consequently, it is conceivable that the existing 180-foot tower could temporarily remain intact for low-band operations with the proposed tower tailored in height to meet the specific requirements of the proposed 800 mHz system. After full implementation of the 800 mHz system, the low-band radio tower would be removed. Knowing that the minimum tower height for a microwave link is 120 feet, a substantial reduction of the final tower height is possible. While this tower height modeling and tower construction scheduling will be complex, and possibly not feasible, the reduction of a tower's height would minimize long-term visual effects and is clearly worth pursuing. Therefore, we will order that the tower be approved, but at a height to be reevaluated and modeled to the lowest height possible not to exceed 194 feet AGL, with antennas and all appurtenances, as determined in the context of a Development and Management (D&M) plan.

The proposed Ekonk Hill tower would replace an existing 90-foot, four-sided, lattice tower with a 140-foot, three-legged lattice tower, equipment building, and fence in the Town of Sterling. The proposed tower would support numerous antennas varying in size and type which would add 14 feet to the structure for an overall height of 154 feet AGL. The fall zone of the proposed tower would encompass three properties but the only building within the fall zone would belong to the CSP.

The existing 90-foot tower is State-owned and operated by the Department of Environmental Protection. The CSP plan to use the proposed Ekonk Hill tower as a base station site for two troops thereby limiting the construction of another tower elsewhere. Although the proposed tower would be 50 feet taller than the existing tower, further increasing its visibility to an area that is primarily open agricultural fields, the proposed tower would not be inappropriately sited since it is replacing an existing facility. Also, another tower is approximately 875 feet southeast from the proposed site further indicating that the area is not void of similar development.

The proposed Thompson site is in a hilltop forest, owned by the State. On this site, the CSP propose to construct a 180-foot, three-legged lattice tower, equipment building, and fence. The proposed tower would support several antennas which would add an additional 14 feet to the structure for an overall height of 194 feet AGL. The fall zone of this tower would encompass two properties with the proposed CSP equipment shelter being the only building within the fall zone.

While this general area of this site is zoned rural/residential, we observed during our field review a scattering of abandoned equipment, vehicles, and slash piles that could be associated with previous lumbering and milling activities. These remnants are eyesores that demonstrate the disturbed condition of the site. Although some clearing of mature and young white pine would be needed, those white pine remaining would act as a visual buffer to adjacent residences. Consequently, we find the existing nature and available vegetative screening to be acceptable for the proposed tower.

The proposed 180-foot tower height is needed for a microwave link to a planned Union facility; however, other microwave links to Ekonk Hill and Troop D could be provided by a 140-foot tower. Also, this 140-foot tower with antennas reaching a height of 154 feet could sufficiently provide the proposed 800 mHz radio coverage. Because the microwave link, between the proposed Thompson facility and a planned Union facility, has yet to be analyzed, the Council shall approve this tower at a height of 154-feet AGL, with antennas and all appurtenances, but that this height may be extended to a maximum height of 194 feet AGL, with antennas and all appurtenances, if the Council approves a Union facility or an alternative to the Union facility that requires a microwave link to a 180-foot tower at the Thompson facility.

The Council generally favors monopole type towers which have a thinner appearance and are visually less obtrusive. However, the proposed lattice towers in this application are appropriate to support multiple users, the proposed microwave dish antennas, and any future expansion by the CSP. In addition, the lattice construction would better accommodate the sharing of the towers by federal, state, local, and private entities. Furthermore, we do not find any abutting or adjacent land uses to be inconsistent with the development or visual effects associated with these towers or the access roads.

There are no known existing populations of Connecticut Species of Special Concern or State and federal endangered or threatened species occurring at the proposed Thompson, Sterling, Killingly, and Brooklyn sites. The construction of the proposed facilities would have no effect on State's historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. Moreover, there has not been any evidence that the development of these facilities and their access roads will have any substantial effect on the natural environment of the sites, including effects on the quality of the air, water, or ecology.

Although electromagnetic radio frequency power density is a concern of the Council, the power density levels would be well below the American National Standards Institute exposure limits for the proposed frequencies.

Based on its record in this proceeding, the Council finds that the effects associated with the construction, operation, and maintenance of telecommunications facilities and associated equipment buildings at the proposed Sterling, Brooklyn, Thompson, and Killingly sites, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with State policy, and are not sufficient reasons to deny the application. Therefore we will issue a Certificate for the proposed facilities.

The Council will require the CSP to submit a Development and Management (D&M) plan for approval prior to the commencement of any construction at the proposed Sterling, Thompson, Brooklyn, and Killingly sites. This D&M plan shall include detailed plans for the placement of the towers and equipment buildings relative to existing facilities; tower heights; access roads; utility line installation; erosion and sedimentation controls; fencing; and site landscaping.