

DOCKET NO. 155 - An application of Metro Mobile CTS of Fairfield County, Inc. for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a cellular telephone telecommunications tower, antennas, associated equipment, and building on a 17-acre parcel of land used and owned by the Town of Darien as the Town waste transfer station off Ledge Road, with an alternative site on a 1-acre parcel owned by the Noroton Heights Fire Department, Inc., located immediately adjacent to the Noroton Heights Fire Department Building at 209 Noroton Avenue in the Town of Darien, Connecticut.

Connecticut

Siting

Council

December 30, 1992

Findings of Fact

Introduction

1. Metro Mobile CTS of Fairfield County, Inc. (Metro Mobile), in accordance with provisions of sections 16-50g through 16-50z of the Connecticut General Statutes (CGS), applied to the Connecticut Siting Council (Council) on June 17, 1992, for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a cellular telecommunications tower, associated equipment, and equipment building in the Town of Darien, Connecticut, to provide increased domestic public cellular telephone service to the Bridgeport, Connecticut, New England County Metropolitan Area (NECMA) which Fairfield County is part of. (Metro Mobile I, p. 1)
2. Public notice of the application, as required by CGS section 16-501(b), was published in the Stamford Advocate and the Norwalk Hour on June 15, and 16, 1992. (Metro Mobile V)
3. Pursuant to CGS section 16-50m, the Council, after giving due notice thereof, held a public hearing for this application on September 22, 1992, beginning at 7:00 p.m. in the Darien Town Hall, 2 Renshaw Road, Darien, Connecticut. (Council Hearing Notice and Transcript)
4. The Council and its staff inspected the proposed and alternate sites in the Town of Darien, Connecticut, on September 22, 1992. (Council Hearing Notice)

Cellular Telecommunications

5. In 1981, the Federal Communications Commission (FCC) recognized the public need for technical improvement, wide-area coverage, high quality service, and establishing a competitive market for mobile telephone service (Metro Mobile I, p. 6; Council Docket No. 126, Finding of Fact No. 8)
6. The FCC has exercised its primary jurisdiction in determining need for the provision of cellular service, and the applicant is not required to further demonstrate a public need for the service. The FCC has also exercised its jurisdiction in setting technical standards and establishing a competitive market. (Metro Mobile I, p. 7; Transcript, p. 132)
7. The FCC has determined that for the public interest two licenses would be issued to encourage competition in providing cellular service in each market area. In the Bridgeport NECMA, one license has been awarded to Springwich Cellular Limited Partnership, a wireline company, and the other to Metro Mobile, a non-wireline company. (Metro Mobile I, p. 7; Council Docket No. 126, Finding of Fact No. 10)
8. The FCC's rules permit a licensee to modify its system, including the addition of new cell sites without prior approval by the FCC, as long as the licensee's service area is not enlarged. The proposed Darien site would not enlarge Metro Mobile's authorized Bridgeport NECMA. (Metro Mobile I, p. 8; Transcript p. 132)
9. Cellular service consists of small overlapping broadcast regions. These regions or cells are limited by the location of a potential facility site within a cellular grid, and by constraints imposed by laws of radio propagation. The system design provides for frequency reuse, handoff capability, and orderly system expansion. (Metro Mobile I, Tab 5, pp. 6-9; Council Docket No. 126, Finding of Fact No. 12)
10. The proposed Darien site would provide coverage to existing holes identified as 1.5 miles along Interstate 95 and 2.25 miles along U.S. Route 1. The proposed site would also off-load traffic from existing Stamford and Norwalk cell sites and improve service to secondary arteries in the Towns of Darien, Stamford, and Norwalk. (Metro Mobile I, p. 8, Tab 5, pp. 15-16 and attachment 6; Metro Mobile VII, Q. 4)
11. Metro Mobile responds to customer complaints on a case-by-case basis. The correlation between poor signal strength and customer complaints could not be proven. (Transcript, pp. 87-90)

12. Assuming even geographical distribution of cellular traffic at full channelization, the existing Stamford and Norwalk sites, and the proposed Darien site could each handle approximately 35 erlangs of traffic. Presently, the Stamford site is handling approximately 26 erlangs of traffic while the Norwalk site is handling approximately 27 erlangs of traffic, both at peak load with the existing geography and frequency allocation. (Metro Mobile VII, Q. 15; Metro Mobile VIII, Qs. 2 and 3)
13. The proposed 56 channels within the allocated frequency level 870-890 MHz is based on Metro Mobile's current 7-cell reuse pattern, 3-sector design which results in approximately 18 to 20 channels per sector. (Metro Mobile VII, Q. 8)
14. Metro Mobile was unable to identify any acceptable existing facilities or other structures of adequate height, sufficient structural strength, and adequate space to develop a new facility without building a new tower. (Metro Mobile I, Tab 5, p. 11)
15. Modifications to existing Metro Mobile sites in Norwalk and Stamford would require antenna heights of 325 and 335 feet above ground level (agl), respectively, to provide the desired coverage to Darien. Technical operations at these heights could not be successfully integrated or maintained. (Metro Mobile VII, Q. 14)
16. There were 26 sites considered of which 24 were rejected by Metro Mobile for the proposed Darien cell site. Reasons for rejection are:
 - a) landowners unwilling to lease or sell property for use as a tower site;
 - b) a satisfactory business agreement could not be negotiated with the property owner;
 - c) potential sites were eliminated because of the distance from the center of the search area;
 - d) existing tower sites were eliminated because of the inability to operate with adjacent cell sites;
 - e) existing building structures were not capable of supporting a rooftop tower and significant structural modifications would have to be made; and
 - f) a Connecticut Department of Transportation policy requires a 30-day termination clause that Metro Mobile finds unacceptable to construct on that property. (Metro Mobile I, tab 3; Metro Mobile VII, Q. 2)
17. There is an abandoned incinerator stack on town property off of Ledge Road which stands approximately 50 feet in height and 90 feet west of the proposed prime site. This structure was investigated and rejected because of a lack of structural integrity, inadequate height, and contemplation of removal by the Town at a future time. (Metro Mobile VII, Q. 1)

18. Metro Mobile's cellular system represents state-of-the-art technology and no viable alternatives to this system are available. Even though a mobile phone satellite service has been under consideration by the FCC, no commercial in-service date has been projected. (Metro Mobile I, p. 18)
19. Digital technology may be capable of increasing capacity over the current analog technology, but it would not fully replace the need for the proposed tower or any existing towers. (Transcript, pp. 80-82, and 109)

Proposed Prime Site

20. The proposed prime site lies in the southeast corner of a 16.7 acre parcel owned by the Town of Darien off Ledge Road. The proposed 30-foot by 60-foot leased area is approximately 1,000 feet west of Boston Post Road and 60 feet north of Ledge Road, Darien, Connecticut. (Metro Mobile I, tab 1, pp. 1 and 4)
21. The topographic elevation at the proposed prime site is 76 feet above mean sea level (AMSL). (Metro Mobile I, tab 1, p. 5)
22. A new 100-foot self-supporting monopole tower is proposed to be constructed at the prime site. Two 15-foot omnidirectional signal antennas would be mounted with their base 98 feet agl. Six four-foot directional transmit/receive antennas would be side mounted with their center of transmission at 100 feet agl. (Metro Mobile I, p. 9; Metro Mobile VII, Qs. 6 and 7)
23. An existing, winding, access drive, approximately 800 feet long, would serve the proposed prime site from Ledge Road. This road would be maintained by the Town of Darien. (Metro Mobile I, p. 9, tab 1 p.4; Transcript, p. 39)
24. The proposed prime site is located in a Service Business (SB) zone district. The property containing the proposed site supports Town services such as a solid waste transfer station, a composting operation, public works garage, and the site of the Town's former landfill. Other land uses surrounding the proposed prime site include an automobile dealership, a construction equipment storage facility, and residential properties to the east; a natural area and fire training site both owned by the Town of Darien to the west; a railway and a high voltage transmission line right-of-way to the north; and Interstate 95 to the south of the site across Ledge Road. (Metro Mobile I, pp. 23 and 25, tab 1 p.4, 6, and 29)

25. The northwestern portion of the Ledge Road parcel was once used as the Town's landfill, but has since closed and is now used as a transfer station. The proposed prime site is located on the southeast portion of the same parcel in an area which has not been used for disposal of solid waste. (Metro Mobile I, pp. 20-21; Transcript, pp. 38 and 39)
26. The proposed prime site tower fall zone encompasses a portion of Ledge Road and the cell site's equipment building. No other structures are within this fall zone. (Metro Mobile I, tab 1, p. 4 and 14)
27. Eighty-three residences, of which 69 are condominiums, would be within 1,000 feet of the proposed prime site. The nearest residence is 540 feet north from the proposed prime tower. (Metro Mobile I, tab 1, p. 15; Metro Mobile VII, Q. 3)
28. Electric and telephone utility lines would run 60 feet north overhead from Ledge Road and 55 feet east underground for a total distance of 115 feet to the proposed prime site. (Metro Mobile I, p. 9; tab 1, p. 1, and 4)
29. The proposed prime site is level and clear and would not interfere with any future Town activities. Trees east of the site, reaching heights of approximately 70 feet, would remain. (Metro Mobile I, tab 1, p. 5, Transcript, p. 94)
30. Metro Mobile would plant evergreen trees north of the proposed prime site for screening purposes. Metro Mobile has also agreed to plant vegetative screening on the property of the Middlesex Common Condominiums which have a sight line due south of the proposed prime site. (Metro Mobile VIII, p. 9, Q. 1; Transcript, p. 39 and 45)
31. At the proposed prime site, an 8-foot high chain-link, security fence with a 10-foot vehicle gate would be erected around the entire site. (Metro Mobile I, p. 9; Metro Mobile VII, Q. 9)
32. The proposed prime site would have no impact with respect to historic, architectural, or archaeological resources. (Metro Mobile I, p. 13, 20; and attachment 4)
33. Pursuant to CGS section 8-24, the Darien Planning and Zoning Commission (PZC) issued a favorable report to lease property at the proposed prime site, whereby the Board of Selectman unaminously approved this proposal and prime site. The Representative Town Meeting approved the PZC report and authorized the First Selectman to enter into a lease agreement with Metro Mobile for the leasing of Town property at the proposed prime site. (Metro Mobile I, pp. 19-22; Metro Mobile VI, attachment 7; Metro VI; Metro Mobile VII, Q. 9; Transcript, p. 11)

34. Total estimated cost of construction to be incurred by Metro Mobile for the proposed prime site would be:
- | | |
|-------------------------------|------------------|
| Radio equipment | \$478,500 |
| Tower and antennas | \$ 33,700 |
| Power systems | \$ 18,000 |
| Building costs | \$ 68,300 |
| Site preparation/installation | <u>\$150,000</u> |
| Total | \$748,500 |
- (Metro Mobile I, tab 1, p. 8)

Proposed Alternate Site

35. The proposed alternate site consists of a 660-square foot leased area located approximately 65 feet west of Noroton Avenue and immediately adjacent to the north side of a fire station building within a 1.007 acre parcel owned by the Noroton Heights Fire Department, Inc., at 209 Noroton Avenue, Noroton Heights, Connecticut. (Metro Mobile I, tab 2, pp. 1 and 6)
36. The topographic elevation at the proposed alternate site is 121 feet AMSL. (Metro Mobile I, tab 2, p. 6)
37. A new 100-foot self-supporting monopole tower is proposed to be constructed at the alternate site. Two 15-foot omnidirectional signal antennas would be mounted with their base 98 feet agl. Six four-foot directional transmit/receive antennas would be side mounted with their center of transmission at 100 feet agl. (Metro Mobile I, p. 9; Metro Mobile VII, Qs. 6 and 7)
38. Access to the proposed alternate site would be over an existing driveway from Noroton Avenue. This drive is maintained by the Town and the Noroton Heights Fire Department. (Metro Mobile I, p. 9)
39. The proposed alternate site is zoned Residential 1/3 acre (R-1/3). Adjacent land uses to this site include Town recreation fields to the west and residential properties to the north across a Town-owned access road serving the fields. A Veterans of Foreign Wars (VFW) Post #6933 building and a vacant parcel owned by the Darien Lions Club are to the south. Residential properties and parade grounds of the Fitch's Old Soldiers home are east across Noroton Avenue. (Metro Mobile I, pp. 23 and 25; Fletcher II, pp. 1 and 2)
40. The VFW building adjacent to the proposed alternate site was formerly constructed as the chapel for the Fitch's Old Soldiers Home. A lot demarcated as the Fitch's Old Soldiers Home, located across Noroton Avenue from the proposed alternate site, was founded 1864 and is noted as the first home in the United States for disabled veterans. A number of homes from this era are still

maintained in the Noroton Heights neighborhood. These properties may possess architectural and historical significance. (Metro Mobile I, p. 23; Fletcher II, p. 2 and 3; Fletcher III, p. 2; and Connecticut Historical Commission letter dated October 5, 1992; Transcript, pp. 148-150)

41. The fall zone of the proposed alternate tower would encompass Metro Mobile's equipment building, the Noroton Heights Fire Department Building, and portions of Noroton Avenue and a Town road north of the site. (Metro Mobile I, tab 2, p. 5a)
42. There are 129 residences within 1,000 feet of the proposed alternate facility. The nearest residence is 200 feet east from the proposed alternate tower. (Metro Mobile I, tab 2, p. 16; Metro Mobile VII, Q. 3)
43. Electric and phone utility connections would be via overhead lines from an existing utility pole approximately 60 feet from the proposed alternate site. (Metro Mobile I, p. 9; tab 2, p.1)
44. The proposed alternate site is located in a parking area and no clearing or grading would be necessary. (Metro Mobile I, tab 2, pp. 6 and 16)
45. At the proposed alternate site, an 8-foot high chain-link, security fence with a personnel gate would be erected around the base of the tower. (Metro Mobile I, p. 9; Metro Mobile VII, Q. 9)
46. Total estimated cost of construction to be incurred by Metro Mobile for the proposed alternate site would be:

Radio equipment	\$478,500
Tower and antennas	33,700
Power Systems	18,000
Building cost	68,300
Site preparation/installation	<u>125,000</u>
Total	\$723,500

(Metro Mobile, tab 2, p. 9)

Proposed Prime and Alternate
Site Details

47. With 56 channels operating simultaneously at maximum power (100 watts), the worst case electromagnetic radio frequency power density level at either the proposed prime or alternate site would be 0.2096 mW/cm² at the base of the tower. The American National Standards Institute (ANSI) Safety Standard for the proposed frequency level 870-890 MHz is 2.92 mW/cm², and the State of Connecticut has adopted this standard pursuant to CGS sections 22a-162 and 22a-162a. (Metro Mobile I, p. 12, and tab 1, p. 15, and tab 2, p. 16)

48. The proposed prime or alternate tower would be designed to withstand pressure equivalent to a 90 mph wind with 0.5 inch of radial ice accumulation. (Metro Mobile I, tab 1, p. 8 and tab 2, p. 9; EIA standard 222-E)
49. No obstruction lighting or marking would be necessary for the proposed prime or alternate tower. (Metro Mobile I, tab 1, p. 11 and tab 2, p. 12 - FAA Notice of Proposed Construction or Alteration)
50. There are no known extant populations of federally endangered and threatened species or Connecticut "species of special concern" occurring at the proposed prime or alternate site. (Metro Mobile I, p. 13, 20, and Attachment 4)
51. Neither the proposed prime or alternate site would impact areas identified as regulated wetlands. (Metro Mobile I, p. 26)
52. Either the proposed or alternate site would have a new 14-foot by 40-foot, single story equipment shelter constructed. The proposed prime site would have a brick exterior while the proposed alternate would be painted to match the existing exterior of the Noroton Heights Fire Department building. (Metro Mobile I, p. 9; Metro Mobile VII, Q. 5)
53. Either the proposed prime or alternate cell site would be equipped with intrusion and system alarms. Neither site would be manned; however, Metro Mobile personnel would be available on a 24-hour basis. (Metro Mobile I, p. 9)
54. After construction, noise from the proposed prime or alternate site would be attributed to a temperature control unit and an emergency power generator used during times of power failure. (Metro Mobile I, tab 1, p. 15 and tab 2, p. 16; Metro Mobile VIII, p. 4, Q. 1 (a, b, and c))
55. Metro Mobile would allow the Town of Darien to mount antennas to either the proposed prime or alternate tower. The Town has not performed any engineering analysis for these mountings. Antennas on the Fire Department building would be moved to the proposed alternate tower, if approved. (Metro Mobile VII, Q. 5; Metro Mobile VIII, p. 5, Q. 2)
56. Joint procedures for resolving complaints of radio and/or television interference have been drafted. The Town of Darien and Metro Mobile would collaborate in resolving such issues. The FCC requires its licensees to investigate and resolve each complaint. (Metro Mobile VII, Q. 6; Metro Mobile VIII, p. 8, Q. 2)