DOCKET NO. 129 - AN APPLICATION OF METRO MOBILE CTS OF HARTFORD, INC., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF A CELLULAR TELEPHONE TOWER AND ASSOCIATED EQUIPMENT IN THE TOWN OF MANCHESTER, CONNECTICUT.	:	Connecticut Siting Council March 12, 1990

FINDINGS OF FACT

1. Metro Mobile CTS of Hartford, Inc., in accordance with provisions of sections 16-50g to 16-50z of the Connecticut General Statutes (CGS), applied to the Connecticut Siting Council (Council) on September 29, 1989, for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a telecommunications tower, associated equipment, and building to provide Domestic Public Cellular Radio Telecommunications Service (cellular service) in the Town of Manchester, part of the Hartford, Connecticut, New England County Metropolitan Area ("Hartford NECMA"). (Record)

2. The application was accompanied by proof of service as required by section 16-50l of the CGS. (Record)

3. Affidavit of newspaper notice as required by section 16-50l of the CGS was supplied by the applicant. Newspaper notice of this application was published twice by the applicant in The Hartford Courant. (Metro Mobile 1, pp.4-5, Exhibit 5)

4. The Council and its staff inspected the proposed and alternate sites in the Town of Manchester, Connecticut, on December 28, 1989. (Record)

5. Pursuant to section 16-50m of the CGS, the Council, after giving due notice thereof, held a public hearing on this application on December 28, 1989, at 3:30 P.M., and 7:00 P.M., at the Lincoln Center Hearing Room, 494 Main Street, Manchester, Connecticut. (Record)

6. The parties to the proceeding are the applicant and those persons and organizations whose names are listed in the Decision and Order which accompanies these Findings. (Record)

7. The Department of Environmental Protection (DEP) filed written comments with the Council pursuant to section 16-50j of the CGS. (Record)

8. In 1981, the Federal Communications Commission (FCC) recognized a national need for technical improvement, wide-area coverage, high quality service, and competitive pricing in mobile telephone service. (Metro Mobile 1, p.5; Docket 107, Finding of Fact 10)

9. The FCC has pre-empted State regulation in determining that a public need currently exists for cellular service, setting technical standards for that service, and establishing a competitive market. (Metro Mobile 1, p.6; Docket 107, Finding of Fact 12)

10. The FCC has determined that the public interest requires two licenses for cellular service be made available in each market area or NECMA to provide competition. One license is awarded to a wireline company, the other to a non-wireline company. (Metro Mobile 1, pp.6, 10; Docket 107, Finding of Fact 11)

11. Conventional mobile telephone service has been limited by insufficient frequency availability, inefficient frequency use, and poor quality of service. These limitations have resulted in congestion, blocking of transmission, interference, lack of coverage, and high costs. (Metro Mobile 1, p.5; Docket 107 Finding of Fact 9)

12. Cellular service consists of small, overlapping broadcast regions. These regions or cells are limited in coverage by the FCC's technical standards governing transmitting power. The system design provides frequency reuse and hand-off and would be capable of an orderly and compatible expansion. (Metro Mobile 1, pp.13-14, Exhibit 11, p.6)

13. Cell site locations are limited by a basic need for a 10 percent to 20 percent overlap of coverage between cell sites. Location of cell sites is essential to provide for uninterrupted hand-off of calls in progress. (Metro Mobile 1, Exhibit 11, pp.6-7)

14. Presently, the proposed cellular system represents state-of-the-art technology and Metro Mobile is aware of no viable alternatives. A mobile satellite service has been under consideration by the FCC and may become available in the distant future. (Metro Mobile 1, p.18)

15. Metro Mobile expects digital cellular technology to be commercially available in the late 1990's. The technology would increase the capability of handling calls over present cellular technology without having to add additional sites. (Tr. 12/28/89, pp.33-34)

16. In selecting a site for the cell, Metro Mobile found no available structures of adequate height or structural strength in or near a 0.6 mile theoretical search area within Manchester. (Metro Mobile 1, Exhibit 11, pp.8-9 and Attachment "A"; Metro Mobile 7)

17. Before selecting the proposed and alternate sites Metro Mobile considered and rejected four sites within the search area. One site in an industrial zone to the west of the alternate cell site location was rejected because of inadequate space for a cell site. A second area in a B1 and B2 business zone located along Hartford Road to the west of Prospect Street was rejected by Metro Mobile because land uses were mostly small businesses on shallow lots adjacent to high density residential development. A third area in a B2 business zone located along Center Street east and west of Pine Street was rejected because of adjacent high-density residential development. A fourth site in a B3 business zone located near the intersection of High Street and Pine Street was rejected because it was a small site surrounded by high-density multi-family dwellings. (Metro Mobile 1, Exhibit 11, pp.8-9 and Attachment "A"; Metro Mobile 3, Q.5, Attachment 2)

18. At the hearing, attention was brought to a site at the Town-owned Lincoln Center as a possible location for Metro Mobile's tower and equipment building. The site is one-tenth of a mile outside the search area at a ground elevation of 260 feet AMSL, and is in a residential zone. The site had no acceptable space to construct a tower or building. (Metro Mobile 7; Tr. 12/28/89)

19. The applicant had no communication with the Town of Manchester to share antennas or tower space on Metro Mobile's proposed tower at the time of the hearing. The Town had not shown interest in sharing tower space from the time of the hearing to the close of the record on February 15, 1990. (Tr. 12/28/89, pp.40, 111, 112; Record)

20. The proposed monopole could be designed to handle the Town of Manchester's police and fire antennas if the Town were interested. (Tr. 12/28/89, pp.105, 109)

21. The Town of Manchester's Planning and Zoning Commission, a party to the proceeding, stated that Metro Mobile's tower at the proposed site would be very obtrusive and potentially incompatible with surrounding zoning districts and land uses, while the tower at the alternate site would be very obtrusive and totally incompatible with the surrounding Historic and residential neighborhood. The Town was also disappointed that Metro Mobile focused on two locations in the center of the urbanized portion of Manchester. (Town of Manchester 1; Tr. 12/28/89, p.91)

22. Both the proposed and alternate sites would primarily provide additional cellular traffic handling capacity, as opposed to providing coverage to an area otherwise unserved. (Metro Mobile 1, p.10)

23. The proposed tower would primarily provide "off-loading" of calls from existing sites in Hartford, Vernon, and Glastonbury. (Metro Mobile 1, pp.10, 15-16, Exhibit 8, Exhibit 11, p.10; Metro Mobile 3, Q.12; Tr. 12/28/89, p.31)

24. The existing Hartford, Glastonbury, and Vernon sites have been in service for a little over two years. (Tr. 12/28/89, p.25)

25. The interrelationship of the traffic load between all of the sites in the area, not just one site, is causing the need for the proposed Manchester site. (Tr. 12/28/89, p.28)

26. The proposed site would also increase the quality of coverage in the Manchester area. (Tr. 12/28/89, pp.22, 23)

27. At the time of installation of the proposed Manchester facility, all existing sites in the area, including the Manchester site, would be fully sectorized. Such sectorization provides for increased call handling capacity within a cell by dividing the geographic service area into six directional sectors which allows for additional frequency reuse. Even with sectorization, the projected cellular traffic demands and frequency reuse requirements necessitate location of a site within the Manchester area. Operation of the proposed facility would off load the existing sites and improve coverage to the Manchester area. (Metro Mobile 3, Q.7, Q.11, Q.12, Q.13; Tr. 12/28/89, p.26)

28. The proposed site would increase the total cellular capacity in the Manchester area by up to 3,600 calls per hour. (Metro Mobile 4, Q.26)

29. With the addition of the proposed Manchester site, potential frequency interference problems from the Vernon, Glastonbury, and Hartford sites would be limited by a reassignment of frequencies recognizing their coverage areas and overlap. (Metro Mobile 3, Q.8)

30. The Vernon and Glastonbury sites are currently omnidirectional sites which normally could accommodate approximately 45 channels and handle approximately 1,200 calls during the peak hour, however, because of a potential frequency separation problem due to the addition of new sites and the sectorization of surrounding sites, the Vernon and Glastonbury sites could only accommodate approximately 30 channels or 800 calls during the peak hour. Hartford is a sectorized site that can accommodate 12 to 15 channels in each of its six sectors which can handle approximately 3,600 calls or 600 calls per sector during the peak hour. (Metro Mobile 3, Q.10; Tr. 12/28/89, pp.20, 27-29)

31. The Vernon site currently handles approximately 250 calls during the peak hours and approximately 175 calls per hour averaged over a 12-hour business day from 7:00 a.m. to 7:00 p.m. The peak hour occurs during the afternoon on weekdays. (Metro Mobile 3, Q.14; Tr. 12/28/89, pp.26-27)

32. The Glastonbury site currently handles approximately 300 calls during the peak hours and approximately 250 calls per hour averaged over a 12-hour business day from 7:00 a.m. to 7:00 p.m. The peak hour occurs during the afternoon on weekdays. (Metro Mobile 3, Q.14; Tr. 12/28/89, pp.26-27)

33. The Hartford site currently handles approximately 2,225 calls from all six sectors during the peak hours and approximately 1,610 calls per hour averaged over a 12-hour business day from 7:00 a.m. to 7:00 p.m. The peak hour occurs during the afternoon on weekdays. (Metro Mobile 3, Q.14)

34. Sector three of the existing Hartford cell site is currently exceeding its 600 call per hour maximum call handling capacity during its peak hour. This sector covers parts of Hartford, East Hartford, and Glastonbury. The proposed Manchester site would provide relief to this sector. Sector five, the next busiest sector of the Hartford cell site, covers West Hartford and is also approaching its 600 call per hour capacity. A sector is the area within a 60 degree arc with sector one being between a vector starting at zero degrees and ending at 60 degrees, sector two between 60 degrees and 120 degrees, sector three between 120 degrees and 180 degrees, sector four between 180 degrees and 240 degrees, sector five between 240 degrees and 300 degrees, and sector six between 300 degrees and 360 degrees. (Metro Mobile 3, Q.15; Metro Mobile 4, Q.24; Tr. 12/28/89, p.21)

35. Without the proposed Manchester site, additional Hartford site sectors and the existing Vernon and Glastonbury cell sites would begin to exceed their maximum call handling capacity during 1990. No call projection data was provided, but Metro Mobile contends that the Vernon and Glastonbury sites could handle approximately twice the current demand. (Metro Mobile 3, Q.15; Metro Mobile 4, Q.24, Q.25, Q.27; Tr. 12/28/89, pp.30-31, 32; Record)

36. The proposed cellular site would be a triangular 7,600 square foot parcel of land located in the rear of a larger, 1.35 acre lot at 266 Center Street, Manchester, Connecticut. The remainder of the lot is used for storage and manufacturing. The proposed tower would be located approximately 12 feet west of an abutting property owned by Kenneth C. Burkamp, which has a metal storage shed on-site, and approximately 25 feet south of a manufacturing building owned by S. Mark Stephens, lessor of the site. The proposed tower would be located approximately 260 feet south of Center Street and approximately 140 feet east of the nearest residential building. (Metro Mobile 1, Exhibit 1, p.1; Metro Mobile 3, Q.6, Attachment 3; Tr. 12/28/89, pp.15-16, 17, 18)

37. Access to the proposed site would be over an existing driveway on land of an adjacent property owner (Kenneth C. Burkamp) and land of the lessor (S. Mark Stephens). Vehicular access over the adjacent property is permitted by a non-exclusive right of passage granted to the lessor. (Metro Mobile 1, p.9, Exhibit 1, p.1; Metro Mobile 3, Q.3)

38. Metro Mobile proposes to construct a 115-foot self-supporting monopole tower to which two platforms would be attached. Two 15-foot omnidirectional call-processing, whip transmit antennas would be mounted at 113 feet on the corners of the platform with six 11 1/2-foot transmit/receive antennas side mounted with center of radiation at 106 feet. The total height of the tower with antennas would be 128 feet above ground level. (Metro Mobile 1, Exhibit 1, p.8; Tr. 12/28/89, pp.18, 19, 77, 78)

39. The horizontal off-set of the antennas placed on the corners of the platform would be a maximum of 6 1/2 feet from the tower structure. (Tr. 12/28/89, p.78)

40. Ground elevation at the proposed site is 196 feet AMSL. Residential properties in the immediate area on Pine Street, Park Street, and New Street from where the tower would be visible are at an elevation ranging from 198 feet to 220 feet. (Tr. 12/28/89, pp.15-16, 17; Town of Manchester 1, pp.2-3)

41. Metro Mobile would raze an abandoned wood-frame building and construct a 20-foot by 40-foot single-story, prefabricated concrete building on the proposed site. The building would house receiving, transmitting, switching, processing, performance monitoring, and climate control equipment. The abandoned building could not be utilized for equipment because it is in poor condition, and the owner wanted it razed as part of the lease arrangement. (Metro Mobile 1, p.9; Metro Mobile 3, Q.2)

42. The alternate site would be on a 50-foot by 85-foot parcel of land located in the northern portion of a larger 1.1 acre lot at 218 Hartford Road, Manchester, Connecticut. The remainder of the lot is used for manufacturing. The proposed tower would be approximately 141 feet west of Prospect Street, approximately 44 feet west of an on-site two story brick manufacturing building, 46 feet south of Hartford Road, 120 feet east of abutting property also owned by S. Mark Stephens, and 120 feet north of land owned by Millbridge Hollow Condominiums. (Metro Mobile 1, Exhibit 2, p.1; Metro Mobile 3, Q.6, Attachment 3; Tr. 12/28/89, p.18; Town of Manchester 1, pp.3-4)

43. The southern boundary of the alternate site lot is 60 feet from the northern edge of Hop Brook. (Town of Manchester 1, p.4)

44. Access to the alternate site would be over an existing driveway and parking lot on land of the lessor (S. Mark Stephens). (Metro Mobile 1, Exhibit 1, p.9, Exhibit 2, pp.1, 7; Metro Mobile 3, Q.6, Attachment 3)

45. The alternate site tower would consist of a 140-foot self-supporting tower to which two platforms would be attached. Two 15-foot omnidirectional call-processing, whip transmit antennas would be mounted at 138-feet on the corners of the platform with six 11 1/2-foot transmit/receive antennas side mounted with center of radiation at 131 feet. The total height of the alternate site tower with antennas would be 153 feet above ground level. (Metro Mobile 1, p.8; Exhibit 2, p.8; Tr. 12/28/89, p. 78)

46. Ground elevation at the alternate site would be at 170 feet AMSL. (Tr. 12/28/89, p.18)

47. A 20-foot by 40-foot single story building would be constructed on the alternate site. The building would house the same equipment as the proposed site. (Metro Mobile 1, p.9)

48. Minimal site leveling or backfilling would be required at the proposed site. Removal of an on-site dirt pile would be required at the alternate site. (Metro Mobile 1, Exhibit 1, p.7, Exhibit 2, p.7; Tr. 12/28/89, p.18)

49. Utility lines for the proposed site would be routed from Center Street to the proposed cell site over land of the lessor. Utility lines for the alternate site would be routed from existing utility poles along Hartford Road to the alternate site. (Metro Mobile 1, p.9, Exhibit 1, p.1, Exhibit 2, p.1, Exhibit 9, pp. 1, 11; Tr. 12/28/89, p.88)

50. The metal storage shed east of the site on adjacent property owned by Kenneth C. Burkamp, a one-story brick manufacturing building on the lessor's property, and property west of the site owned by Kenneth C. Burkamp would be within the fall zone of the proposed site tower. Hartford Road, land owned by the Millbridge Hollow Condominiums, and a two-story brick manufacturing building on property of the lessor would be within the fall zone of the alternate site tower. The fall zones would not be totally within the lessor's properties. (Town of Manchester 1, p.2; Metro Mobile 3, Q.6, Attachment 3)

51. The zoning of the proposed cellular site is I, Industrial. This zone is approximately three acres in size and is surrounded to the north by a Business zone, to the east and west by Residential zones, and to the south by the Cheney Brothers National Historic Landmark District. The proposed tower would be a use requiring a special exception under Manchester zoning regulations. The zoning of the alternate cellular site is H, Historical, and is within the Cheney Brothers National Historic Landmark District. The alternate tower would be a use requiring a special exception under Manchester zoning regulations. (Town of Manchester 1, p.2; Metro Mobile 1, Exhibit 11, Attachment "A"; Metro Mobile 3, Q.5, Attachment 2)

52. The Cheney Brothers National Historic Landmark District was established in 1978 through a designation by the United States Department of the Interior, and is listed in the National Register of Historic Places. (Town of Manchester 1, pp.3-4; Tr. 12/28/89, p.59)

53. Metro Mobile does not have any existing towers within a national landmark district. (Tr. 12/28/89, p.59)

54. Within the Cheney Brothers District north of the alternate site are rehabilitated mill buildings used for multi-family dwellings and some neighborhood commercial purposes. Within the Cheney Brothers District east of the alternate site are buildings used for commercial purposes. To the west of the alternate site lot is property in an industrial zone used for commercial purposes. (Town of Manchester 1, pp.3-4)

55. The proposed site would be less than 200 feet north of the Cheney Brothers Historic District. (Town of Manchester 1, p.5; Metro Mobile 3, Q.5, Attachment 2)

56. There are approximately 159 residences within a 1,000-foot radius of the proposed tower. The nearest residence is 140 feet southwest of the proposed property. There are approximately 24 residences, six condominium buildings, and two apartment buildings within a 1,000-foot radius of the alternate cell site. The nearest residence is 180 feet from the alternate tower. (Metro Mobile 1, Exhibit 1, p.7, Exhibit 2, p.7, Exhibit 9, p.12; Tr. 12/28/89, pp.17-18, 103)

57. The electromagnetic radio frequency power density at the proposed and alternate sites, assuming all channels operating simultaneously at maximum allowable power and broadcasting from the lowest set of antennas would be 0.1124 milliwatts per square centimeter (mW/cm^2) at the proposed site and 0.0737 mW/cm^2 at the alternate site, and would be well below the American National Standards Institute standard of 2.92mW/cm^2, as adopted by the State in CGS 22a-162. (Metro Mobile 1, p.12, Exhibit 9, pp.2, 12; DEP comments of 12/14/89; Tr. 12/28/89, p.19)

58. Both the proposed and alternate towers would be designed to withstand pressure equivalent to a 90 mph wind with a 1/2-inch solid ice accumulation in accordance with Electronic Industries Association standard RS-222-D. The overturn moment for the foundation would be 1.5. The antenna mounting arrangement, the support brackets, and the antenna structure would be designed to withstand 125 mph winds. (Metro Mobile 1, Exhibit 1, p.9, Exhibit 2, p.9; Tr. 12/28/89, pp.82-83, 87)

59. According to the Connecticut Historical Commission, "the prime site,..., does not appear to meet the eligibility criteria for the National Register of Historic Places, while the alternate site,...does appear to be of local historic and architectural significance. Therefore, we recommend that the proposed telecommunications tower and associated equipment shelter be constructed at the 266 Center Street [prime] site." (Metro Mobile 3, Q.1, Attachment 1)

60. There are no known extant populations of Connecticut "Species of Special Concern" or Federal Endangered and Threatened Species that occur at the site in question. (Metro Mobile 3, Q.1, Attachment 1; DEP Comments of 12/14/89)

61. The total estimated cost of construction for the proposed site is as follows:

Radio equipment	$676,500
Tower and antennas	38,800
Power system	18,000
Building	76,600
Miscellaneous (Site preparation and installation	140,200
TOTAL	$950,100.

(Metro Mobile 1, pp.16-17, Exhibit 1, p.9)

62. The total estimated cost of construction for the alternate site is as follows:

Radio equipment	$676,500
Tower and antennas	41,760
Power system	18,000
Building	76,600
Miscellaneous (Site preparation and installation	135,200
TOTAL	$948,060.

(Metro Mobile 1, p.17, Exhibit 2, p.9)

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