DOCKET NO. 36

AN APPLICATION SUBMITTED BY CONTINENTAL CABLEVISION OF CONNECTICUT INC., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE ERECTION OF COMMUNITY ANTENNA TELEVISION TOWERS IN THE TOWNS OF EAST GRANBY, HARTLAND AND UNION.	:	CONNECTICUT SITING COUNCIL
	:	February 24, 1984

ORIGINAL

F I N D I N G S O F F A C T

1. Continental Cablevision of Connecticut, Inc. (Continental) in accordance with provisions of Section 16-50k et seq. of the General Statutes of Connecticut (CGS) revised to 1983 and Sections 16-50j-70 et seq. of the Regulations of Connecticut State Agencies (RSA), applied to the Connecticut Siting Council (Council) on November 2, 1983, for a Certificate of Environmental Compatibility and Public Need (Certificate) for the erection of community antenna television towers and associated equipment in the towns of East Granby, Hartland, and Union. (Record)
2. The fee as prescribed by Section 16-50v-1 of the RSA accompanied the application. (Record)
3. The application was accompanied by proof of service as required by Section 16-501 of the CGS. (Record)
4. An affidavit of newspaper notice as required by Section 16-501 of the CGS was also filed. (Continental 3)
5. Pursuant to Section 16-50m of the CGS, the Council, after giving due notice thereof, held public hearings at the East Granby Town Hall, in East Granby, Connecticut, on December 15, 1983, at 7:00 P.M. and at the Union Elementary School, in Union Connecticut, on December 21, 1983, at 7:00 P.M. (Record)
6. The parties to the proceeding are the applicant, Continental Cablevision of Connecticut, Inc., and those persons and

organizations whose names are listed in the Decision and Order which accompanies these findings. (Record)

7. The following state agencies filed written comments with the Council pursuant to Section 16-50j(g) of the CGS: the Department of Economic Development and the Department of Environmental Protection. (Record)
8. The Department of Economic Development examined the docket and concluded that the proposal is compatible with the environment while providing service to many homes in the northern section of the state. (Record)
9. The Department of Environmental Protection (DEP) did not oppose any of the proposed sites. (DEP Comments, 12/5/83)
10. On December 15 and 21, 1983, members of the Council made field inspections of the proposed sites and surrounding areas. (Record)
11. On December 23, 1982, Continental received a certificate of public convenience and necessity from the Department of Public Utility Control (DPUC) to serve CATV Area No. 11, which consists of the towns of East Granby, East Windsor, Enfield, Granby, Hartland, Somers, Stafford, Suffield, Union, and Windsor Locks. (Continental 1, p. 1; DPUC Docket 81-08-11, decision)
12. The proposed East Granby, Hartland, and Union facilities are CATV hub sites which, in conjunction with the certified Stafford head-end facility , would provide service to a major part of Area 11, regardless of the status of future tower applications. (Tr. 12/15/83, p. 28)

13. Continental will offer universal service to all franchise area residents. Continental estimates there are 34,000 homes in the franchise area. (Continental 2, Q. 1)
14. An estimated 60% to 65% of the total homes in CATV Area 11 would receive service. This number of subscribers would keep the franchise economically viable. (Continental 2, Q. 1)
15. Customers adding pay T.V. channels to their expanded basic monthly service could average a monthly charge ranging from $25.00 to $30.00. (Continental 2, Q. 1)
16. Continental will provide as part of their system two institutional channels which will provide telecommunications capability between city halls, police stations, fire departments, and other public buildings as they become wired throughout the franchise. (Continental 2, Q. 1)
17. The transmission of television signals by AML microwave requires a path unobstructed by trees or terrain. (Continental 2, Q. 1)
18. In order to maintain minimal signal quality, only two point-to-point relays of a microwave signal are possible. (Continental 2, Q. 1)
19. The entire franchise area would be hard-wired with overhead lines where utility poles now exist and underground where other utilities are currently underground. (Continental 2, Q. 1)
20. The industry standard for the maximum number of cascading amplifiers is between twenty-five and thirty, beyond which signal quality degrades below acceptable levels. (Continental 2, Q. 1)

21. There is a potential for a cable system to interfere with aircraft navigation; however, the FCC has reviewed Continental's system and disallowed the use of two channels to prevent any interference with aircraft. (Continental 2, Q. 1)
22. The National Weather Service Radar on Soapstone Mountain would neither affect nor be affected by the proposed microwave transmissions. (Continental 2, Q. 1)
23. The total cost of constructing the entire Continental system is expected to be approximately $23 million over a period of seven years. (Continental 2, Q. 1)
24. A statewide cable television interconnection network could be accommodated by the proposed facilities without modification. (Tr. 12/15/83, p. 27)
25. There are no wetlands or water courses on or within 100 feet of any of the proposed tower sites. (Continental 2, Q. 16)
26. Continental does not foresee the need for blasting at any of the proposed sites. (Continental 2, Q. 11)
27. The proposed sites would be fenced to prevent public access. (Tr. 12/15/83, p. 30)
28. The proposed tower designs are based on the Electronic Industries Association (EIA) RS-222-C Standard, Zone B. Zone B refers to 100 mph steady wind with ½ inch of radial ice. (Continental 1, pp. 3, 10, 16; EIA Standard RS-222-C)
29. The towers designed for Continental's requirements would have a 54% overbuild safety factor. (Continental 2, Q. 9; Tr. 12/15/83, pp. 10-11)

30. Although the Hartland and Union towers have been designed to support additional antennas, Continental has no plans to add equipment beyond that proposed in the application. (Continental 2, Q. 21; Tr. 12/15/83, pp. 31-32; Tr. 12/21/83, pp. 60-63)

31. Continental has no objection to sharing the proposed towers with other technically compatible entities. (Tr. 12/15/83, p. 28)

32. There are no known hazards to human health associated with the facilities as proposed. The calculated power densities for the proposed sites are several orders of magnitude lower than any existing U.S. standard. (Continental 1, pp. 9, 15, 21; Continental 2, Q. 18)

33. Continental will apply for microwave licenses from the Federal Communications Commission for all three proposed facilities. (Continental 1, pp. 7, 14, 20; Continental 2, Q. 1)

34. The dish heights at the proposed sites are required by the microwave equipment supplier (Hughes Microwave) in order for the installations to be guaranteed. (Tr. 12/15/83, p. 25)

35. The standard colors for microwave dish antennas are white, light blue, or international orange while custom colors are available for an additional charge of $150.00 per unit. (Continental 2, Q. 6)

36. The proposed towers may need to be lighted pursuant to pending Federal Aviation Administration rulings. (Continental 1, pp. 7, 14, 20)

37. Continental's proposed distribution system is already utilizing the largest cable available (1" diameter) for signal transmission; therefore, a supertrunk system would not increase the maximum run

length from each hub site. The greater the diameter of the cable, the less signal loss in the cable at any given frequency. (Tr. 12/15/83, pp. 19-21; Tr. 12/21/83, p. 63)

38. Continental plans to keep the number of amplifiers in cascade to a maximum of 25, allowing about eleven miles of 1" cable in order to maintain a desirable signal quality at the end of the line. The industry standard for the maximum number of amplifiers is between 25 and 30. (Continental 2, Q. 1; Tr. 12/15/83, pp. 24, 25)

39. Land use rights for 50'x50' plots have been negotiated with all of the property owners of the three proposed sites. (Continental 1, p. 6, 19; Exhibit D,J,P; Continental 2, Q. 17)

40. The proposed facilities would not have a significant effect on surrounding area property values. (Continental 2, Q. 7; Exhibit W)

41. The construction of each facility would take approximately 30 days. (Continental 2, Q. 19)

42. The proposed East Granby facility would consist of one 20' self-supporting tower, one 10' dish antenna mounted on the top of the tower, and one prefabricated single-story 8'x10' building. (Continental 1, pp. 3, 5; Tr. 12/15/83, p. 10)

43. The East Granby tower is needed to receive microwave TV signals from the Stafford head-end facility to be distributed to subscribers in East Granby and Suffield, and to transmit two institutional channels to the Stafford head-end site for distribution throughout the system. (Continental 1, p. 4)

44. The East Granby site is centrally located to serve the towns of East Granby and Suffield and is at an elevation which would allow the use of a short tower. (Continental 1, pp. 5, 6)

45. The proposed East Granby site is a hill-top cow pasture located approximately 400' off South Grand Street. The site and surrounding area are zoned for agricultural use. (Continental 1, p. 5)

46. The proposed East Granby facility is 700 feet from the nearest residence. (Continental 2, Q. 15)

47. Access to the East Granby site would require no improvement or road construction. (Continental 1, pp. 3, 5)

48. Electric service for the site would be brought in on wires on three 35' poles adjacent to the line of 40' trees to the south of the proposed facility. (Tr. 12/15/83, pp. 16-18)

49. Continental plans to plant shrubbery to shield the base of the East Granby tower from view and would be able to provide detailed plans in a Development and Management Plan if required. (Continental 1, p. 5; Continental 2, Q. 17; Tr. 12/15/83, pp. 13-16; Continental 6)

50. Continental identified fourteen existing towers within a ten mile radius of the proposed East Granby site; however, all were found unsuitable for the company's needs due to structure, location, height, or technology. (Continental 1, pp. 7, 8; Continental 2, Q. 20)

51. Alternate sites for the East Granby facility were considered, but none were found preferable to the proposed site. (Continental 1, pp. 8, 9)

52. The East Granby tower site is approximately seventeen miles from the Stafford head-end facility. (Continental 2, Q. 18)

53. The longest cable run planned from the East Granby facility would be 8.5 miles, which would require 19 amplifiers in cascade. (Continental 2, Q. 10)

54. Cable lines from the East Granby hub site could not serve the Windsor Locks area because utility pole line discontinuity would require technically infeasible cable runs. (Tr. 12/15/83, p. 22-25)

55. Projected total East Granby facility cost for engineering, construction, building, and equipment is $80,680. The total cost would include the following:

Engineering and site improvements	$ 6,000
Building and standby power	$10,400
Tower structure	$ 4,000
Electronic equipment and antenna	$60,280

(Continental 1, Exhibit A)

56. The estimated additional cost of placing underground the electric service into and TV coaxial cable from the East Granby facility to the nearest utility pole, approximately 400', would total $8,559.90, which would include the costs for trenching, cable, conduit, and miscellaneous equipment. (Continental 2, Q. 12)

57. The cost to install overhead utility services to the proposed East Granby facility from the nearest utility pole is estimated to total $1,505.00. (Continental Late 5)

58. The incremental cost for providing a tower at the East Granby site capable of withstanding Zone B wind loading with 1" radial ice loads would be $455.00. (Continental 2, Q. 9)

59. The cost of planting arborvitae (white cedar) trees around the East Granby facility for screening purposes is estimated to be

between $850 and $1,000. (Tr. 12/21/83, p. 56; Continental 6)

60. The proposed Hartland site located on Welsh Road is a portion of the four acre tract presently used as the town landfill, which is surrounded by state forest. The area is zoned for rural residential use. The proposed site is approximately 800' from the nearest paved road (Mountain Road) and 1400 feet from the nearest residence. (Continental 1, p. 12; Continental 2, Q. 15)

61. The existing dirt road (Welsh Road) provides access to the dump and surrounding state forest area and would provide construction and maintenance access to the Hartland site without improvement. (Continental 1, p. 12)

62. The Hartland facility, although well removed from Mountain Road, would be visible to the large number of visitors who travel Welsh Road to the Tunxis State Forest surrounding the site. (Tr. 12/15/83, pp. 12, 13; DEP Comments 12/5/83)

63. The proposed Hartland facility would consist of one 110' self-supporting tower with two 10' dish antennas mounted near the top and one single-story 8'x10' building. (Continental 1, p. 10; Tr. 12/15/83, p. 10)

64. The Hartland tower and microwave dishes are needed to relay TV signals from the Stafford head-end to Hartland and Granby subscribers and to transmit two institutional channels to the Stafford head-end facility for distribution throughout the franchise area. (Continental 1, p. 10)

65. The Hartland tower site is approximately 26 miles from the Stafford head-end. (Continental 2, Q. 18)

66. The Hartland tower would use two separate microwave dishes for transmitting and receiving signals. A single transmitting and receiving dish would be unsatisfactory due to signal losses created by the distance between Hartland and Stafford. (Tr. 12/15/83, p. 33)

67. The longest cable run planned from the Hartland facility would be 9.5 miles, which would require 22 amplifiers in cascade to provide the desired signal quality. (Continental 2, Q. 10)

68. An alternate location for the proposed Hartland facility on Mountain Road in that town was investigated and rejected as unsuitable due to higher rental costs and a neighbor's opposition. (Continental 1, p. 15)

69. The projected cost of engineering, construction, building, tower, and electronic equipment at the Hartland site totals $117,215.00, including:

Engineering and site improvements	$ 8,800
Building and standby power	$10,400
110' tower	$36,000
Electronic equipment	$62,015

(Continental 1, Exhibit G)

70. The incremental cost for a tower at the Hartland site capable of withstanding zone B wind loading with 1" radial ice would be $3,641.00. (Continental 2, Q. 9)

71. Continental's payments for use of the Hartland site would reduce the town's cost of operating the landfill. (Continental 1, p. 13)

72. The proposed Union facility would consist of one 110' self-supporting tower, one 10' dish antenna mounted on the top of the tower, and one single-story 8'x10' building. (Continental 1, p. 16; Tr. 12/15/83, p. 10)

73. The Union facility is needed to receive microwave signals from the Stafford head-end for distribution throughout the town of Union and to transmit two institutional channels back to Stafford for distribution throughout the area 11 franchise. (Continental 1, p. 16)

74. The proposed Union site is a forested hill top approximately 300' off Stickney Road surrounded by state forest and within an area zoned R2 residential. (Continental 1, p. 18-19)

75. The proposed Union site is 2,200 feet from the nearest residence. (Continental 2, Q. 15)

76. An existing wood (logging) road which would provide access to the proposed Union site would require grading and some tree trimming but no tree removal. (Continental 1, p. 18; Tr. 12/21/83, pp. 59, 60)

77. Visibility of the proposed Union facility would be minimal due to the density of forest cover not only surrounding the site area but throughout the town of Union. (Continental 2, Q. 5; DEP Comments 12/5/83)

78. The distance from the Stafford head-end to the Union hub site would be approximately ten miles. Sending signals from the Stafford head-end to and throughout Union by cable would require 44 amplifiers in cascade. Therefore, the signal quality would be unacceptable, according to industry standards. (Tr. 12/15/83, pp. 20, 21; Continental 2, Q. 23)

79. Continental identified six towers within a ten mile radius of the proposed Union site; however, all would be unsuitable for the company's needs due to structure, location, visibility, height, or

technology. (Continental 1, p. 20; Continental 2, Q. 20)

80. Alternate sites were considered for the Union facility but none are preferable to the proposed site. (Continental 1, p. 20; Continental 2, Q. 13; Tr. 12/21/83, pp. 57-59)

81. Projected costs for engineering, construction, building, and equipment at the Union site are estimated at $117,215, including

Engineering and site improvements	$ 8,800
Building and standby power	$10,400
Tower structure - 110' self-support	$36,000
Electronic equipment and antenna	$62,015

(Continental 1, Exhibit M)

82. Estimated additional costs to underground electric service and television coaxial cable from the nearest utility pole to the Union facility, approximately 400', would total $7,739.00 including the costs for clearing, trenching, cable, conduit, and miscellaneous equipment. (Continental 2, Q. 12; Continental 4)

83. The cost to install overhead utility services from the nearest utility pole to the Union facility is estimated to total $1,505.00. (Continental 5)

84. The incremental cost for providing a tower capable of withstanding Zone B wind loading with 1" radial ice at the Union site would be $2,995.00. (Continental 2, Q. 9)