

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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October 21, 2011

TO: Parties and Intervenors

FROM: Linda Roberts, Executive Director *LRoberts*

RE: **DOCKET NO. 416** - 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 located off Day Hill Road, Bloomfield, Connecticut.

As stated at the hearing in New Britain on August 30, 2011, after the Council issues its draft findings of fact, parties and intervenors may identify errors or inconsistencies between the Council's draft findings of fact and the record; however, no new information, evidence, argument, or reply briefs will be considered by the Council.

Parties and Intervenors may file written comments with the Connecticut Siting Council on the Draft Findings of Fact issued on this docket by October 28, 2011.

LR/CDM/laf

Enclosure

DOCKET NO. 416 - Cellco Partnership d/b/a Verizon Wireless } Connecticut
application for a Certificate of Environmental Compatibility and }
Public Need for the construction, maintenance and operation of a } Siting
telecommunications facility located off of Day Hill Road, }
Bloomfield, Connecticut. } Council

October 3, 2011

DRAFT

Findings of Fact

Introduction

1. Cellco Partnership d/b/a Verizon Wireless (Cellco), in accordance with provisions of Connecticut General Statutes (CGS) § 16-50g through 16-50aa, applied to the Connecticut Siting Council (Council) on February 14, 2011 for the construction, maintenance, and operation of a telecommunications facility, which would include a 110-foot tall monopole tower, south of Day Hill Road in the Town of Bloomfield, Connecticut. (Cellco 1, pp. i, 1)
2. Cellco is a Delaware Partnership with an administrative office located at 99 East River Drive, East Hartford, Connecticut. Cellco is licensed by the Federal Communications Commission (FCC) to operate a wireless telecommunications system in Connecticut. The operation of wireless telecommunications systems and related activities is Cellco's sole business in Connecticut. (Cellco 1, pp. 4-5)
3. The party in this proceeding is the applicant. (Transcript, June 7, 2011, 3:00 p.m. [Tr. 1], p. 3)
4. The purpose of the proposed facility is to provide coverage, particularly for PCS frequencies, and capacity relief primarily along portions of Routes 187 and 189 as well as local roads and residential, agricultural, industrial, and commercial areas in portions of northern Bloomfield, northwest Windsor, and southern East Granby. (Cellco 1, pp. i, 1-2; Transcript, August 30, 2011, 1:00 p.m. [Tr. 3], p. 41)
5. Pursuant to CGS § 16-50(b), Cellco published public notice of its intent to submit this application on February 9 and 10, 2011 in The Hartford Courant. (Cellco 1, p. 5; Cellco 2 - Affidavit of Publication dated February 14, 2011)
6. Pursuant to CGS § 16-50(b), Cellco sent notices of its intent to file an application with the Council to each person appearing of record as owner of property abutting the property on which the site is located. (Cellco 1, p. 6; Attachment 4)
7. Cellco received return receipts from all but two abutting property owners. Notice letters to Donald and Lisa Dickson and James E. and Renee M. Trzcinski were returned marked "unclaimed." Notices to these two parties were resent via regular mail on March 14, 2011. (Cellco 4, Response 6)
8. Pursuant to CGS § 16-50(b), Cellco provided copies of its application to all federal, state and local officials and agencies listed therein. (Cellco 1, p. 5; Attachment 2)

9. Pursuant to CGS § 16-50m, the Council, after giving due notice thereof, held a public hearing on June 7, 2011, beginning at 3:00 p.m. and continuing at 7:00 p.m. in the Bloomfield Council Chambers in the Bloomfield Town Hall, 800 Bloomfield Avenue in Bloomfield, Connecticut. (Tr. 1, p. 2 ff.)
10. Cellco posted a sign giving public notice of its pending application on the host property on June 1, 2011. The sign was four feet by six feet in size and included the date of the scheduled public hearing and contact information for the Council. (Cellco 5, Sign Posting Affidavit, dated June 1, 2011)
11. The Council and its staff conducted an inspection of the proposed site on June 7, 2011, beginning at 2:00 p.m. The applicant flew a balloon at the site from 8:00 a.m. until approximately 6:00 p.m. at a height of 110 feet to simulate the proposed monopole tower. Weather conditions were favorable for the balloon flight with light winds and good visibility. (Tr. 1, p. 24)
12. On July 14, 2011, Cellco requested that the Council re-open its evidentiary hearing for this proceeding in order to allow the introduction of new evidence regarding a possible alternative location for the proposed facility. The alternative site was being offered in response to a request from the Council at the June 7, 2011 public hearing. (Cellco 6 – Motion to Reopen the Evidentiary Hearing, July 14, 2011)
13. The Council approved Cellco's request to re-open the evidentiary hearing on July 28, 2011. It held the re-opened hearing on August 30, 2011 beginning at 1:00 p.m. in Hearing Room One of the Council's offices at Ten Franklin Square in New Britain. (Tr. 3, p. 2 ff.)

State Agency Comment

14. Pursuant to CGS § 16-50i, on March 24, 2011 and June 8, 2011, the Council solicited comments on Cellco's application from the following state agencies: Department of Agriculture, Department of Environmental Protection (DEP), Department of Public Health, Council on Environmental Quality, Department of Public Utility Control, Office of Policy and Management, Department of Economic and Community Development, the Department of Transportation (ConnDOT), and the Department of Emergency Management and Homeland Security. (CSC Hearing Package dated March 24, 2011; CSC Letter to State Department Heads dated June 8, 2011)
15. Pursuant to CGS § 16-50j (h), the Council requested additional comments on August 31, 2011 from the same state agencies following the re-opened hearing. (CSC Letter to State Department Heads dated August 31, 2011)
16. On May 10, 2011, ConnDOT submitted comments describing its procedure for leasing DOT property for telecommunications sites. (ConnDOT Comments, dated May 10, 2011)
17. Except for ConnDOT, no state agencies responded to the Council's solicitations for comments on this application. (Record)

Municipal Consultation

18. On November 19, 2010, Cellco representatives met with Bloomfield Town Planner Thomas Hooper, who served as designee for Bloomfield's Town Manager, to discuss Cellco's need for wireless service in the north Bloomfield area and its plans for a wireless telecommunications facility off of Day Hill Road. During this meeting Cellco provided copies of a Technical Report, which included a description of its proposed facility, to Mr. Hooper. (Cellco 1, p. 19)
19. On November 19, 2010, Cellco representatives also met with Paul Goldberg, Fire Administrator with the Windsor Volunteer Fire Department, who was serving as designee for Windsor Town Manager Peter Souza. This meeting occurred because Cellco's proposed facility is located within 2,500 feet of the Windsor town boundary. (Cellco 1, p. 19)
20. Neither the Town of Bloomfield nor the Town of Windsor has expressed an interest in placing antennas on the proposed tower. (Tr. 1, p. 53)
21. Should either town seek to place antennas on the proposed tower in the future, it could do so without incurring a rental charge. (Tr. 1, p. 53)

Public Need for Service

22. In 1996, the United States Congress recognized a nationwide need for high quality wireless telecommunications services, including cellular telephone service. Through the Federal Telecommunications Act of 1996, Congress seeks to promote competition, encourage technical innovations, and foster lower prices for telecommunications services. (Council Administrative Notice Item No. 8 - Telecommunications Act of 1996)
23. In issuing cellular licenses, the Federal government has preempted the determination of public need for cellular service by the states, and has established design standards to ensure technical integrity and nationwide compatibility among all systems. (Council Administrative Notice Item No. 8 - Telecommunications Act of 1996; Cellco 1, p. 7)
24. The Telecommunications Act of 1996 prohibits local and state bodies from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 8 - Telecommunications Act of 1996)
25. The Telecommunications Act of 1996 prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects, which include human health effects, of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. This Act also blocks the Council from prohibiting or acting with the effect of prohibiting the provision of personal wireless service. (Council Administrative Notice Item No. 8 - Telecommunications Act of 1996)

26. In recognition of the public safety benefits enhanced wireless telecommunications networks can provide, Congress enacted the Wireless Communications and Public Safety Act of 1999 (the 911 Act). The purpose of this legislation was to promote public safety by making 9-1-1 the universal emergency assistance number and through the deployment of a seamless, nationwide emergency communications infrastructure that includes wireless communications services. (Cellco 1, pp. 7-8)
27. In 2004, Congress enacted the Enhanced 911 (E911) Act for the specific purpose of enhancing and promoting homeland security, public safety, and citizen activated emergency response capabilities. (Cellco 1, p. 8)
28. Cellco's antennas would comply with E911 requirements. (Cellco 4, Response 1)

Existing and Proposed Wireless Coverage

29. In the Hartford market area, Cellco holds licenses issued by the FCC for the "A" Block for cellular frequencies, the "F" Block for Personal Communications Services (PCS) frequencies, and the "C" Block for the 700 MHz frequency range (Long Term Evolution – LTE). (Cellco 1, Attachment 5)
30. Cellco's network design thresholds for reliable service are -85 dBm for in-vehicle service and -75 dBm for in-building coverage on all of its operating frequencies. (Cellco 4, Response 7)
31. Cellco's existing signal strength in the vicinity of the proposed facility ranges from -86 dBm to -96 dBm at cellular (850 Mhz) and PCS (1900 MHz) frequencies. (Cellco 4, Response 8)
32. In the sectors of the adjacent cell sites that are directed toward the proposed facility, Cellco experiences dropped calls at an average rate of 2.7% and ineffective attempts at an average rate of 2.5%. Cellco's network design objective for dropped calls and ineffective attempts is less than one percent (1%). The results of Cellco's monthly drive tests, customer complaints, propagation modeling data, and system performance data indicate Cellco's service is substandard within the area that would be served by the proposed facility. (Cellco 4, Response 9)
33. During the last three years, Cellco has experienced a 30 to 40 percent increase in demand for data traffic and an approximately 15 percent increase in voice traffic. (Tr. 1, p. 39)
34. Cellco experiences existing coverage gaps along Routes 189 and 187 as indicated in the following table:

| Frequency | Length of Coverage Gap | |
|-----------|------------------------|-----------|
| | Route 189 | Route 187 |
| 850 MHz | 0.9 mile | 0.3 mile |
| 1900 MHz | 1.7 miles | 2.0 miles |

(Cellco 4, Response 10)

35. The table below indicates the distances Cellco would cover at its different licensed frequencies along the major routes in the vicinity of its proposed facility.

| Frequency | Distance Covered | |
|-----------|------------------|-----------|
| | Route 187 | Route 189 |
| 850 MHz | 2.2 miles | 1.7 miles |
| 1900 MHz | 1.8 miles | 1.7 miles |
| 700 MHz | 2.3 miles | 1.9 miles |

(Cellco 1, p. 3)

36. The table below indicates the total area Cellco would cover at its different licensed frequencies from the proposed facility.

| Frequency | Total Area Covered |
|-----------|--------------------|
| 850 MHz | 4.07 sq. mi. |
| 1900 MHz | 3.88 sq. mi. |
| 700 MHz | 5.91 sq. mi. |

(Cellco 1, p. 3)

37. Cellco's proposed facility would hand off signals with the adjacent facilities identified in the following table.

| Hand Off Facility Location | Distance and Direction from Proposed Site |
|-------------------------------|---|
| Grist Mill Road, Simsbury | 3.8 miles, W |
| 8 Hoskins Road, Bloomfield | 1.7 miles, NW |
| 750 Rainbow Road, Windsor | 3.4 miles, NE |
| 482 Pigeon Hill Road, Windsor | 3.3 miles, E |
| 785 Park Avenue, Bloomfield | 3.3 miles, S |

(Cellco 4, Response 4)

38. The lowest feasible height at which Cellco's antennas could achieve its coverage objectives in the vicinity of the proposed facility is 110 feet above ground level (AGL). (Cellco 4, Response 5)
39. With antennas at 100 feet AGL, Cellco's coverage footprint would shrink from 4.07 square miles to 3.35 square miles at 850 MHz frequencies from 3.88 to 3.52 square miles at 1900 MHz frequencies, and from 5.91 to 5.25 square miles at 700 MHz frequencies. (Cellco 4, Response 5)
40. With Cellco's antennas at 100 feet AGL, coverage gaps along Routes 187 and 189 would open up. (Tr. 1, p. 18)

Site Selection

41. Cellco initiated its site search process for facility in north Bloomfield in April 2006. (Cellco 1, p. 11)

42. Cellco's search ring had a radius of approximately 0.55 mile. (Cellco 4, Response 12)
43. Cellco maintains five telecommunications facilities within approximately four miles of the proposed north Bloomfield site. None of these facilities can provide the service Cellco is seeking to provide in this area of Bloomfield. Cellco's existing sites are listed in the following table.

| Cellco Site Name | Facility Height and Type | Location | Cellco Ant. Ht. | Distance and Direction to Facility |
|------------------|-------------------------------|-------------------------------|-----------------|------------------------------------|
| Simsbury | 150', monopole | Grist Mill Road, Simsbury | 140' | 3.8 miles, W |
| Windsor 2 | 100', monopole | 750 Rainbow Road, Windsor | 83' | 3.4 miles, NE |
| Windsor | 160', self-supporting lattice | 482 Pigeon Hill Road, Windsor | 158' | 3.3 miles, E |
| Tariffville | 180', self-supporting lattice | 8 Hoskins Road, Bloomfield | 148' | 1.7 miles, NW |
| Bloomfield 3 | 140', monopole | 785 Park Avenue | 109' | 3.3 miles, S |

(Cellco 1, p. 2; Attachment 8)

44. In addition to the towers on which Cellco has antennas, there are six other telecommunications facilities within four miles of the proposed site. None of these six facilities would enable Cellco to achieve its coverage objectives in this area. The six facilities are identified in the following table:

| Type of Tower | Tower Location | Distance and Direction from Proposed Facility |
|-----------------------------|---------------------------------|---|
| 140' monopole | 871 Hopmeadow Road, Simsbury | 3.1 miles, NW |
| 87' transmission line tower | 142 Duncaster Road, Bloomfield | 1.2 miles, SW |
| 120' flagpole | 30 Brae Burnie Lane, Bloomfield | 3.1 miles, SW |
| 120' monopole | 28 Brewer Street, Bloomfield | 2.8 miles, SE |
| 95' monopole | 100 Filley Street, Bloomfield | 2.2 miles, SE |
| 170' monopole | 99 Day Hill Road, Windsor | 3.6 miles, E |

(Cellco 4, Response 2)

45. In its site search process, Cellco did not find any existing, non-tower structures of a height that would enable Cellco to provide its desired coverage. (Cellco 1, p. 11)

46. Cellco identified and investigated 11 properties during its site search process. These properties and the determinations of their suitability are listed below.
- a. River Bend Associates, Inc. – Day Hill Road, Bloomfield – This is the 11.8 acre property on which Cellco’s proposed facility would be located.
 - b. Center Fire Department No. 3 – 361 Tunxis Avenue, Bloomfield – This parcel is located at the southeast corner of Tunxis Avenue and Adams Road. It is the location of the Center Fire Department firehouse. There is another structure used for fire training purposes in the rear of the property. Most of the parcel is paved and used on a regular basis by the fire department. This site was rejected because of the fire department’s use of all paved areas on the parcel and limitations posed by a large wetland area in the rear, unpaved portion of the property.
 - c. Griffin Center Development – 1975, 1985, and 1995 Blue Hills Avenue, Windsor – These three parcels are currently used for agricultural purposes. The property owner was unwilling to lease space for a telecommunications tower because he plans to develop the properties for industrial and mixed use purposes.
 - d. Griffin Road North – Windsor – There are four parcels in this area, all located within the Griffin Center Business Park. The property owner was unwilling to lease land for a telecommunications tower due to future development plans.
 - e. 1936 Blue Hills Avenue, Windsor – This is a five-acre parcel used for agricultural purposes. The property owner was unwilling to lease space for a telecommunications tower due to plans for future development.
 - f. 310 and 340 West Newberry Road, Bloomfield – Cellco investigated two parcels at these addresses. The owner of these two properties was unwilling to lease space for a telecommunications tower due to plans for future development.

(Cellco 1, Attachment 8)

47. Cellco could not identify any equally effective technological alternatives to the proposed facility that would provide service of comparable quality. (Cellco 1, p. 10)
48. A Distributed Antenna System (DAS) would not be viable for Cellco’s desired coverage as it is more suited for specific, more localized need areas. (Tr. 1, p. 11)

Facility Description

Application Site

49. Cellco's proposed site would be located on a 10.8 acre parcel south of Day Hill Road and west of the ConnDOT rail line. The property (Property) is owned by River Bend Associates, Inc. and was formerly used for agricultural purposes. The proposed site is approximately 600 feet east of Tunxis Avenue (Route 189) and 1,600 feet southwest of Blue Hills Avenue Extension (Route 187). (See Figures 1 and 2) (Cellco 1, pp. iii, 2; Attachment 1)
50. The Property is located in an R-40 zoning district, a designation primarily intended to allow for single family residences on a minimum lot size of 40,000 square feet. Telecommunications towers are permitted in R-40 districts subject to the issuance of a Special Permit by the planning and zoning commission. (Cellco 1, p. 17; Bulk Filing – Bloomfield Zoning Regulations)
51. Cellco's proposed facility would be located in the southerly portion of the Property. Cellco would lease a 100-foot by 100-foot parcel, within which it would develop a 47-foot by 76-foot graveled compound that would include a 110-foot high monopole tower. The compound would be enclosed by an eight-foot high chain link fence topped with three strands of barbed wire. Cellco's equipment would be housed within a 12-foot by 24-foot single-story shelter. (See Figure 3) (Cellco 1, Attachment 1)
52. Emergency backup power would be provided by a propane-fueled generator that would be located within Cellco's equipment shelter. A 1,000 gallon propane tank would be installed adjacent to the equipment shelter. (Cellco 1, p. 12; Attachment 1)
53. Cellco would use propane to fuel its backup generator because of the presence of wetlands near the proposed facility. (Tr. 1, p. 16)
54. The propane tank would have a separate gate for service access. (Tr. 1, p. 16)
55. The propane-fueled generator would be able to operate for approximately 70 hours before it would need to be refueled. (Tr. 1, p. 17)
56. The proposed tower would be located at 41° 52' 32.77" N latitude and 72° 44' 31.08" W longitude. Its elevation at ground level would be approximately 180 feet above mean sea level. (Cellco 1, Attachment 1, p. 4)
57. Cellco's proposed tower would be designed in accordance with the specifications of the Electronic Industries Association Standard EIA/TIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Support Structures." The diameter of the tower would be approximately 55 inches at its base and 30 inches at its top. (Cellco 1, Attachment 1, p. 6)
58. The proposed tower would be designed to accommodate a minimum of four wireless carriers, plus antennas for the Town of Bloomfield, should it have a need to locate on the tower. (Cellco 1, p. 12)

59. The proposed tower would be designed to be capable of being extended up to 20 feet, to an overall height of 130 feet AGL. (Cellco 1, p. 12)
60. Cellco would install a total of 15 antennas—six cellular (850 MHz) antennas, six PCS (1900 MHz) antennas, and three LTE (700 MHz) antennas—at a centerline height of 110 feet AGL. The antennas would extend to an overall height of 113 feet AGL. (Cellco 1, pp. 2-3)
61. Cellco would install its antennas on a low profile platform. (Cellco 4, Response 15)
62. Cellco would require three different heights to deploy its proposed antennas on a flagpole- or flush-mounted tower, and the height of the proposed tower would have to be raised 10 or 20 feet. (Tr. 1, pp. 14-15)
63. The proposed facility would require approximately 365 cubic yards of cut and 32 cubic yards of fill. (Cellco 4, Response 11)
64. Vehicular access to the proposed site would extend over a new gravel driveway for a distance of approximately 1,250 feet from Day Hill Road, run closely parallel to the ConnDOT rail line, and then turn westward toward the site. (Cellco 1, Attachment 1; Drawing C-10)
65. Utility service would extend from existing service along Day Hill Road and follow the path of the access drive underground to the proposed facility. (Cellco 1, Attachment 1, p. 1; Tr. 1, pp. 10-11)
66. Cellco does not anticipate that blasting would be required to develop the proposed facility. Any final determination of the need for blasting, however, would be made after a more thorough geotechnical survey of the project site. (Cellco 4, Response 13)
67. The setback radius of the proposed tower would lie completely within the Property. The nearest property line to the location of the proposed tower is 215 feet to the south. (Cellco 4, Response 16)
68. There are 29 residences located within 1,000 feet of the proposed facility. (Cellco 1, p. 14)
69. The closest residence is located at 372 Tunxis Avenue, approximately 470 feet to the west of the proposed site. It is owned by Susan and Jacqueline Oclair. (Cellco 1, pp. 14-15; Attachment 4)
70. Land use within ¼ mile of the proposed site is a mix of commercial, residential, and industrial uses in the Towns of Bloomfield and Windsor. (Cellco 1, Attachment 1, p. 4)

71. The estimated cost of the proposed facility, including antennas, is:

| | |
|---------------------------------|----------------|
| Cell site radio equipment | \$450,000 |
| Tower, coax, and antennas costs | 150,000 |
| Power systems costs | 20,000 |
| Equipment building costs | 50,000 |
| <u>Miscellaneous costs</u> | <u>170,000</u> |
| Total costs | \$840,000 |

(Cellco 1, p. 22)

Alternative Site

72. Cellco's alternative site would be located approximately 350 feet north of the site proposed in Cellco's original application and immediately west of a large barn in the northern portion of the Property. (See Figure 2) (Cellco 6.c. - Visual Assessment - Alternate Site Location)
73. At this location, Cellco would erect a 110-foot tall monopole tower inside a 50-foot by 58-foot compound, enclosed by an eight-foot tall chain link fence, within a 100-foot by 100-foot lease area. (Cellco 6.a. - Alternate Site Location Project Plans, Sheet C-1.0)
74. Vehicular access to the alternative site would be from Day Hill Road via a 12-foot wide gravel access drive for a distance of approximately 580 feet. (Cellco 6.a. - Alternate Site Location Project Plans, Sheet C-1.0)
75. Utilities would be brought to the alternative site underground from Day Hill Road along a different route than the access drive in order to give the property owner greater flexibility for future development possibilities. (See Figure 4) (Cellco 6.a. - Alternate Site Location Project Plans, Sheet C-1.0; Tr. 3, pp. 36-37)
76. The nearest residence to the alternative site is located approximately 530 feet to the west at 374 Tunxis Avenue. It is owned by Leo Ryans. (Cellco 6.a. - Alternate Site Location Project Plans, Sheet C-0.0)

Environmental Considerations

Application Site

77. The proposed facility would have no effect on archaeological resources listed or eligible for listing in the National Register of Historic Places. (Cellco 1, Attachment 10, SHPO Comment dated November 22, 2010)
78. There are no extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur on the Property. (Cellco 1, Attachment 10, Letter from CTDEP Bureau of Natural Resources, dated August 18, 2010)

79. Cellco's emergency backup generator would require a permit from DEP's Bureau of Air Management. Cellco would obtain this permit prior to installing the generator. (Cellco 1, pp. 20-21)
80. Cellco's proposed facility is not located within an Important Bird Area (IBA) as designated by Audubon Connecticut. The closest IBA is Northwest Park in Windsor, which is located approximately 2.3 miles to the northeast along the Farmington River. (Cellco 4, Tab 2 – Dean Gustafson, Migratory Bird Impact Evaluation, p. 2)
81. Cellco's proposed facility would comply with the recommendations of the United States Fish and Wildlife Service's *Interim Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers*. (Cellco 4, Tab 2 – Dean Gustafson, Migratory Bird Impact Evaluation, pp. 3-5)
82. Two trees with a diameter at breast height of six inches or more would be removed to develop the proposed site. (Cellco 1, Attachment 10, p. 5)
83. There is a wetland resource area that consists of a seasonally saturated forested wetland with an associated intermittent watercourse flowing through its interior and a man-made pond located to the west of the proposed facility. The nearest proposed disturbance associated with the proposed facility is approximately 100 feet from the nearest point of the wetland area. (Cellco 1, Attachment 12)
84. Cellco would establish and maintain appropriate soil erosion and sedimentation control measures, in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* established by the Connecticut Council for Soil and Water Conservation, in cooperation with the Connecticut Department of Environmental Protection, throughout the construction period of the proposed facility. (Cellco 1, p. 18; Attachment 12)
85. With appropriate erosion and sedimentation controls in place, Cellco's proposed facility would not have any direct impacts to the wetland area. (Cellco 1, p. 18; Attachment 12)
86. Cellco's proposed facility site is located outside of the 500-year flood plain. (Cellco 1, Attachment 13)
87. The proposed tower would not constitute an obstruction or hazard to air navigation and would not require any obstruction marking or lighting. (Cellco 1, p. 20; Attachment 14)
88. At either location, the cumulative worst-case maximum power density from the radio frequency emissions from the operation of Cellco's proposed antennas would be 29.3% of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed tower. This calculation was based on methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997) that assumes all antennas would be pointed at the base of the tower and all channels would be operating simultaneously, which creates the highest possible power density levels. Under normal operation, the antennas would be oriented outward, directing radio frequency emissions away from the tower, thus resulting in significantly lower power density levels in areas around the tower. (Cellco 1, p. 16; Attachment 11)

Alternative Site

89. The alternative site would be approximately 65 feet from the closest point of the wetlands to the west of the site. (Cellco 6.b. - Wetland Impact Assessment - Alternate Site Location)
90. The trench for the underground utilities would be approximately 15 feet from the wetland area at its nearest point. (Cellco 6.b. - Wetland Impact Assessment - Alternate Site Location; Tr. 3, p. 28)
91. Cellco could take protective measures to minimize any potential impact on the wetlands. These measures include: the installation and maintenance of proper erosion control measures in accordance with the *2002 Connecticut Guidelines For Soil Erosion and Sediment Control Guidelines* during construction activities, maintaining a minimum buffer of 25 feet between the compound and the wetlands, stabilizing any disturbed soil by seeding it with a New England Conservation/Wildlife mix, and planting a buffer of native shrubs along the west and south sides of the proposed compound. (Cellco 6.b. - Wetland Impact Assessment - Alternate Site Location)
92. One catalpa tree with a diameter at breast height of 12 inches would be required to be removed for the alternative site's compound. Four trees—three catalpas and one red maple—would be required to be removed for the utility trench to this site. (Cellco 6.b. - Wetland Impact Assessment - Alternate Site Location)

Visibility

Application Site

93. Cellco's proposed tower would be visible above the tree canopy on a year-round basis from approximately 101 acres in the surrounding vicinity. The majority of the areas with year-round visibility are open commercial and agricultural properties. There are smaller areas that would have year-round visibility to the northwest, southwest and southeast of the proposed facility. (See Figure 9) (Cellco 1, Attachment 9, p. 5)
94. A monopine tower would possibly soften the views of the tower from surrounding areas, particularly those located to the west of the proposed facility. From a vantage point to the east of the proposed facility looking westward, a monopine would appear more prominent. (Tr. 1, pp. 11-13)
95. The proposed tower would be seasonally visible from approximately 33 acres located within the general vicinity of the proposed facility. (Cellco 1, Attachment 9, p. 5)
96. The proposed tower would not be visible from the Metacomet Trail, which is located approximately 1.6 miles to the west. (Cellco 1, Attachment 9, p. 5: Viewshed Analysis Map)

97. Approximately 12 residential properties could have at least partial year-round views of the proposed tower. In addition, there are approximately 17 residential properties that could have seasonal views of the proposed tower. The locations of the properties that are likely to have year-round and seasonal views of the proposed tower are identified in the following table.

| Property Location | Number of residential properties with potential year-round views | Number of residential properties with potential seasonal views |
|---------------------------|---|---|
| Route 189 (Tunxis Avenue) | 2 | 5 |
| McCormick Place | 3 | 2 |
| Bear Ridge Drive | - | 2 |
| Adams Road | 1 | 3 |
| Boysen Drive | 2 | 4 |
| Lynn Circle | - | 1 |
| Terry Plains Road | 2 | - |
| Duncaster Road | 2 | - |
| Total | 12 | 17 |

(Cellco 1, Attachment 9, pp. 5-6)

98. The visibility of Cellco's proposed tower from different vantage points in the surrounding vicinity is summarized in the following table. The vantage points listed are identified by their corresponding number in the Visual Resource Evaluation Report contained in Attachment 9 of Cellco's application (Figure 9).

| Location | Visibility | Approx. Portion of (110') Tower Visible | Approx. Distance and Direction to Tower |
|---|-------------------|--|--|
| 1 – Day Hill Road | Year-round | 50' | 5100 feet, west |
| 2 – Day Hill Road | Year-round | 50' | 4000 feet, west |
| 3 – Blue Hills Avenue Extension | Year-round | 20' | 2400 feet, southwest |
| 4 – Waterside Crossing Approaching Blue Hills Ave Extension | Year-round | 50' | 2100 feet, southwest |
| 5 – Route 189 (Tunxis Avenue) | Year-round | 30' | 1800 feet, southeast |
| 6 – 387 Tunxis Avenue | Year-round | 30' | 950 feet, southeast |
| 7 – 372 Tunxis Avenue | Year-round | 100' | 580 feet, east |
| 8 – 368 Tunxis Avenue | Year-round | 60' | 740 feet, northeast |
| 9 – 6 McCormick Place | Year-round | 20' | 1,100 feet, northeast |
| 10 – 10 McCormick Place | Year-round | 40' | 950 feet, east |
| 11 – 1 Boysen Drive | Year-round | 30' | 1,700 feet, northeast |

(table continued on next page)

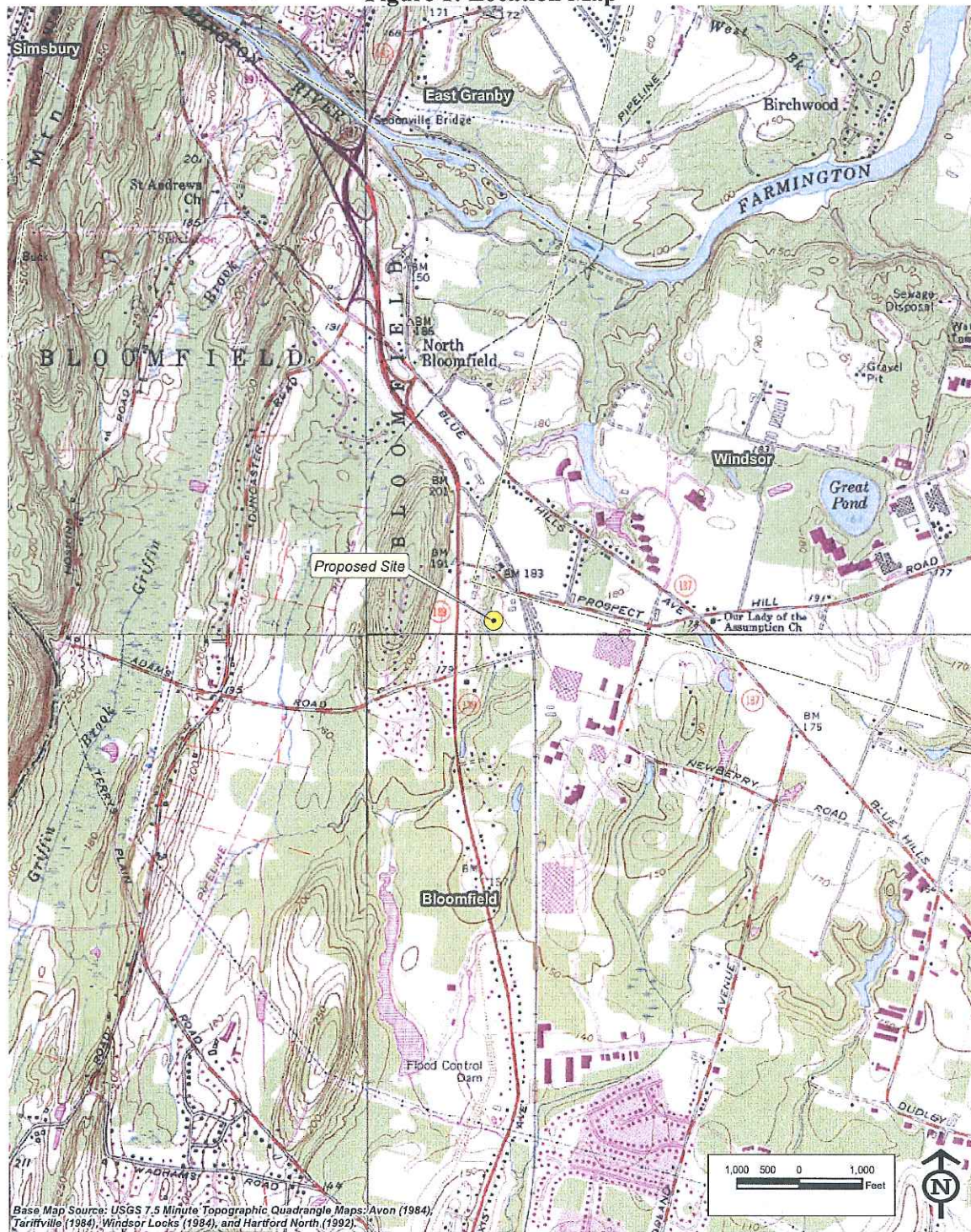
| <u>Location</u> | <u>Visibility</u> | <u>Approx. Portion of (110') Tower Visible</u> | <u>Approx. Distance and Direction to Tower</u> |
|--|-------------------|--|--|
| 12 – Lynn Circle west of Boysen Drive | Seasonal | 20' | 2,000 feet, northeast |
| 13 – 11 Boysen Drive | Seasonal | 10' | 2,100 feet, northeast |
| 14 – 16 Bear Ridge Drive | Seasonal | 40' | 1,500 feet, east |
| 15 – Harvest Lane at Habitat Lane | None | n/a | 2,400 feet, east |
| 16 – Terry Plains Road | Year-round | 20' | 7,500 feet, northeast |
| 17 – Terry Plains Road | None | n/a | 8,400 feet, northeast |
| 18 – Griffin Road South | Seasonal | 20' | 2,600 feet, northwest |
| 19 – 30 Griffin Road South | Year-round | 40' | 2,400 feet, northwest |
| 20 – Day Hill Road | Year-round | 100' | 1,800 feet, west |
| 21 – Day Hill Road, near host property | Year-round | 80' | 650 feet, southwest |
| 22 – 98 Adams Road | Year-round | 50' | 580 feet, northwest |
| 23 – 23 Edwards Way | None | n/a | 1,600 feet, northwest |
| 24 – Bloomfield Reservoir | None | n/a | 6,230 feet, northeast |

(Cellco 1, Attachment 9 – Photographic Simulations)

Alternative Site

99. The alternative site would substantially minimize potential visibility from locations along Adams Road to the south. (Cellco 6.c. - Visual Assessment - Alternate Site Location, p. 1)
100. The alternative site would also reduce visibility along Tunxis Avenue, to the west. (Cellco 6.c. - Visual Assessment - Alternate Site Location, p. 2)

Figure 1: Location Map



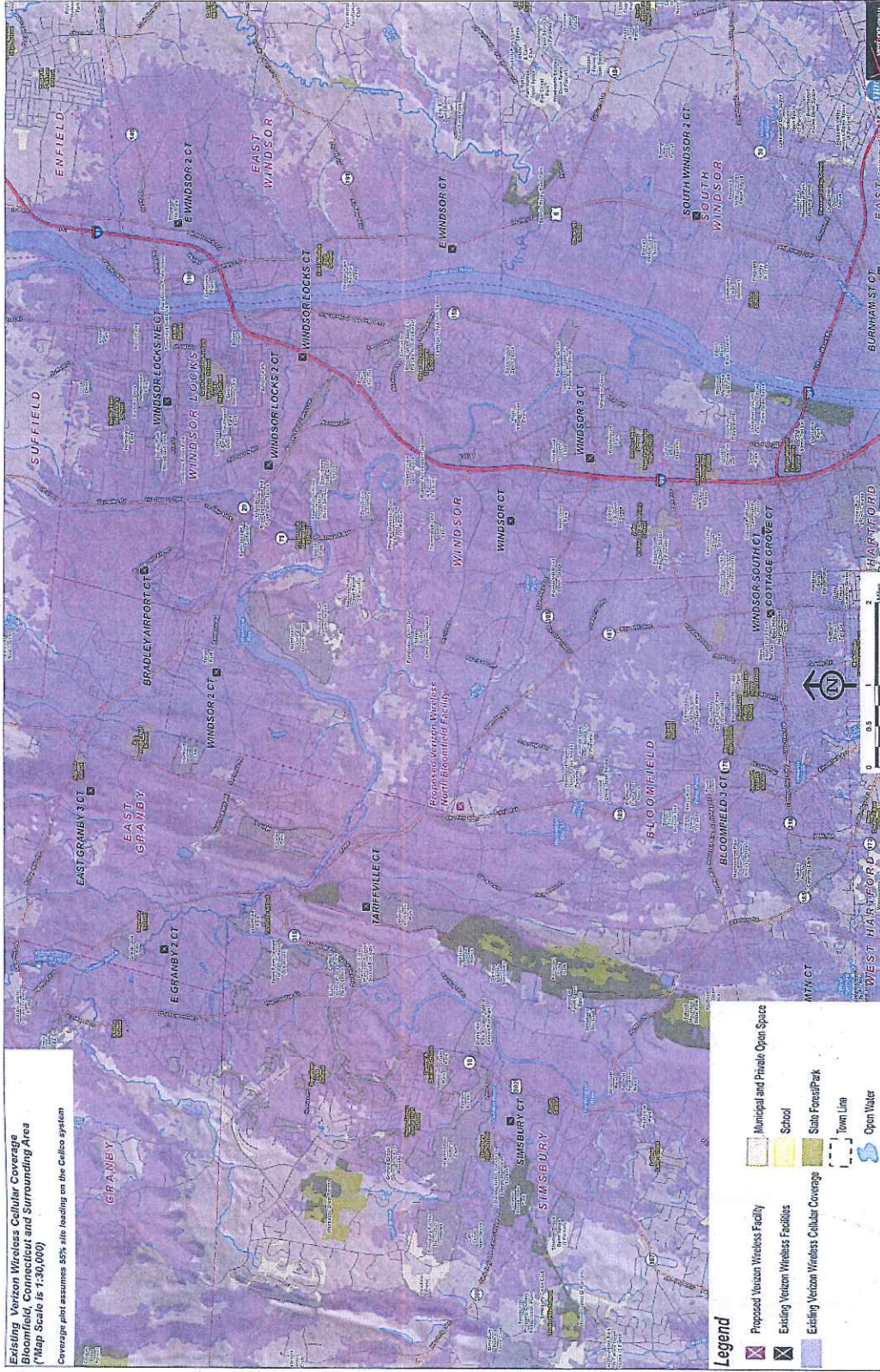
(Cellco 1, p. ii)

Figure 2: Aerial Photograph of Proposed Application Site and Alternative Site



(Cellco 6.c. - Visual Assessment - Alternate Site Location)

Figure 5: Celco's Existing Coverage at Cellular Frequencies



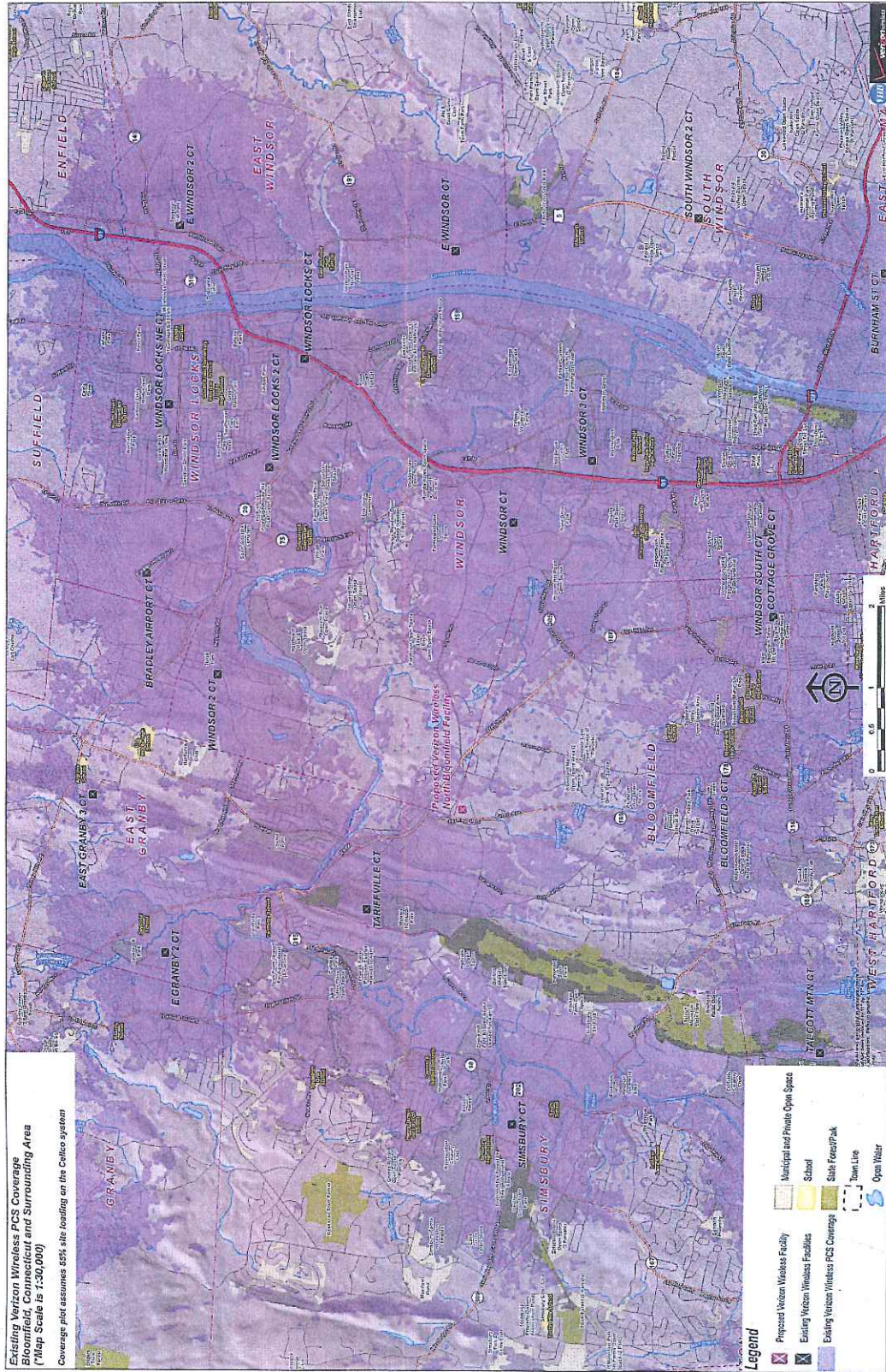
(Cellco 1, Attachment 6)

Figure 6: Cellco's Cellular Coverage with Proposed Facility



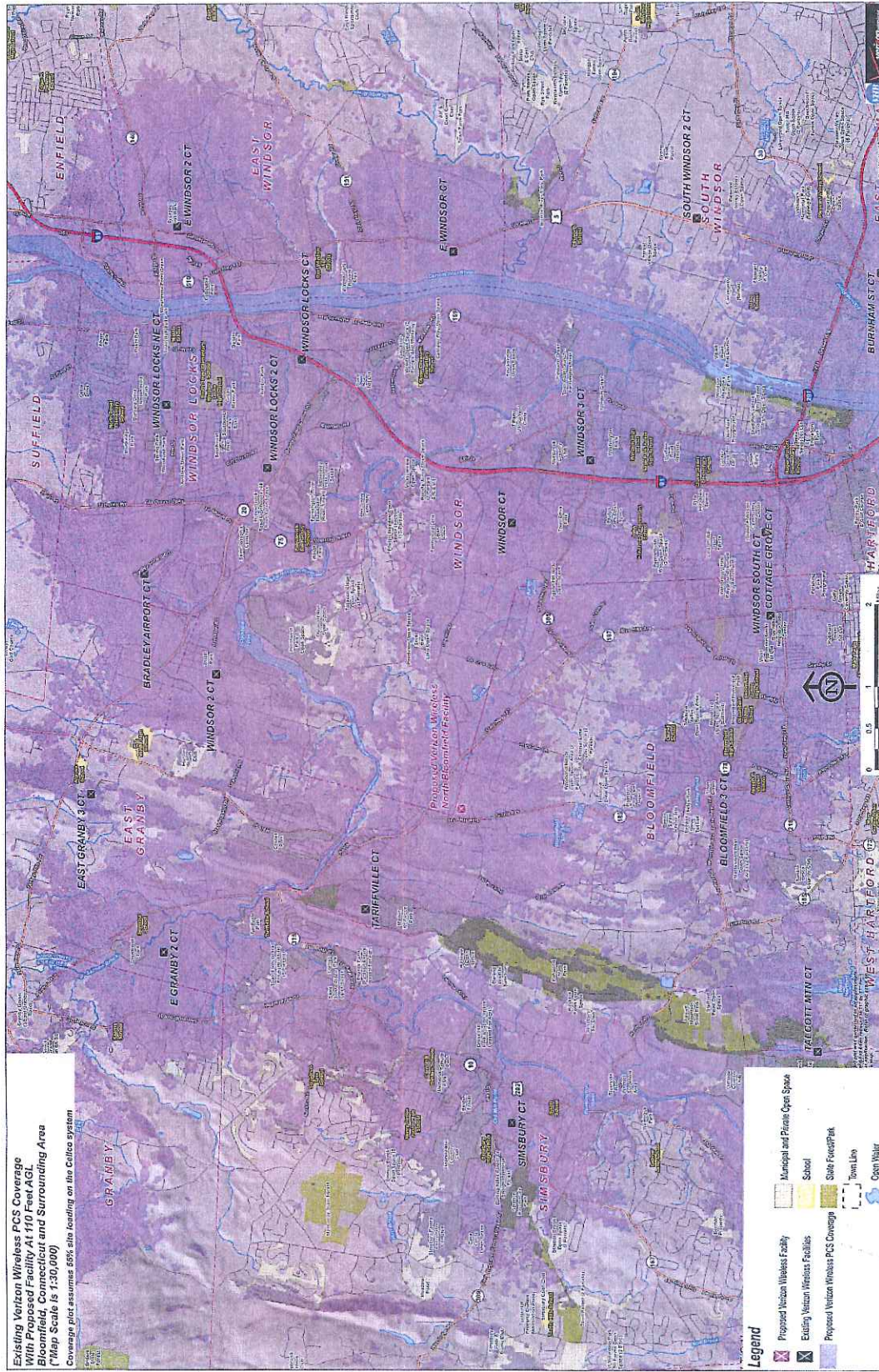
(Cellco 1, Attachment 6)

Figure 7: Cellco's Existing Coverage at PCS Frequencies



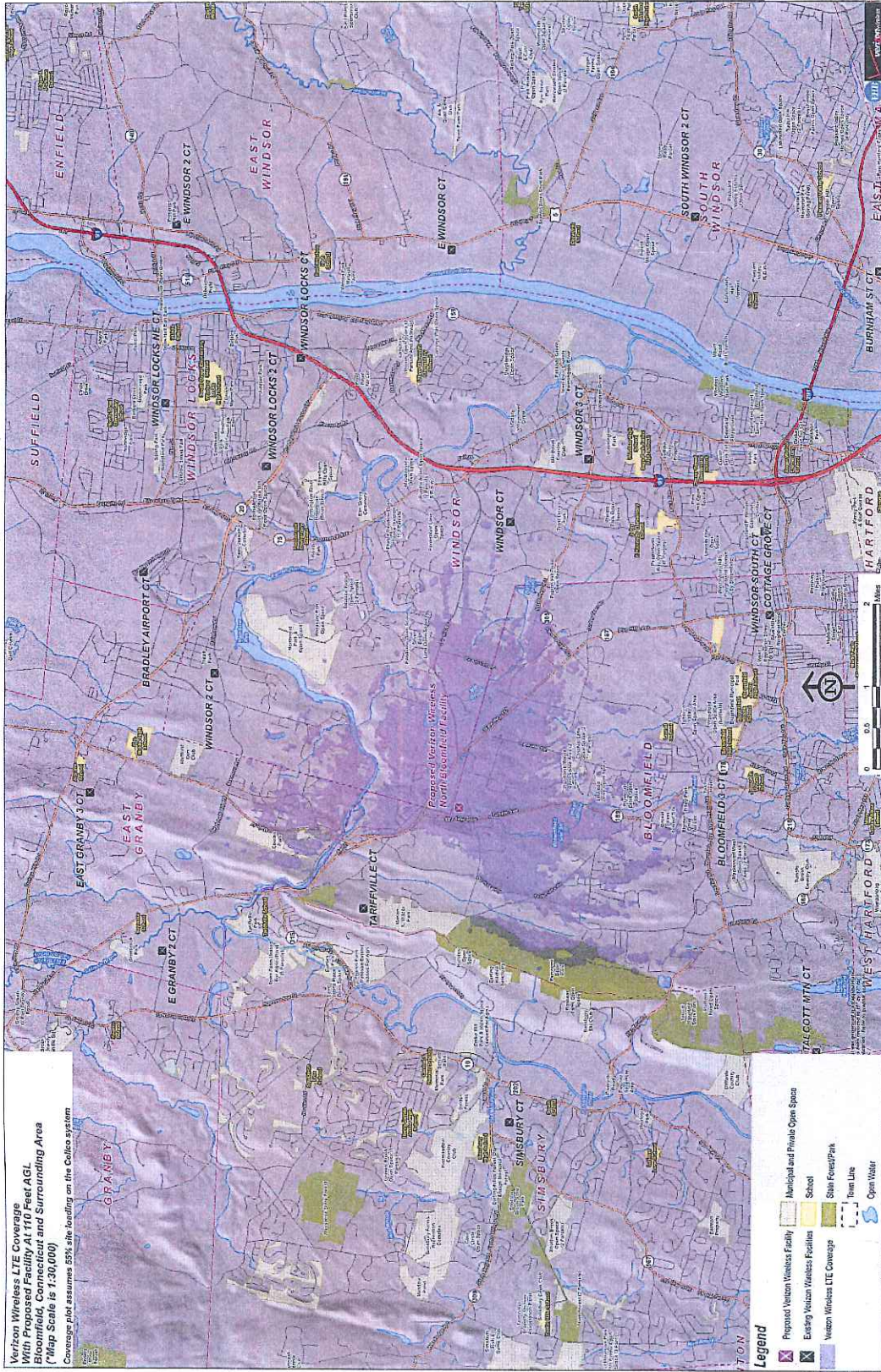
(Cellco 1, Attachment 6)

Figure 8: Celco PCS Coverage with Proposed Facility



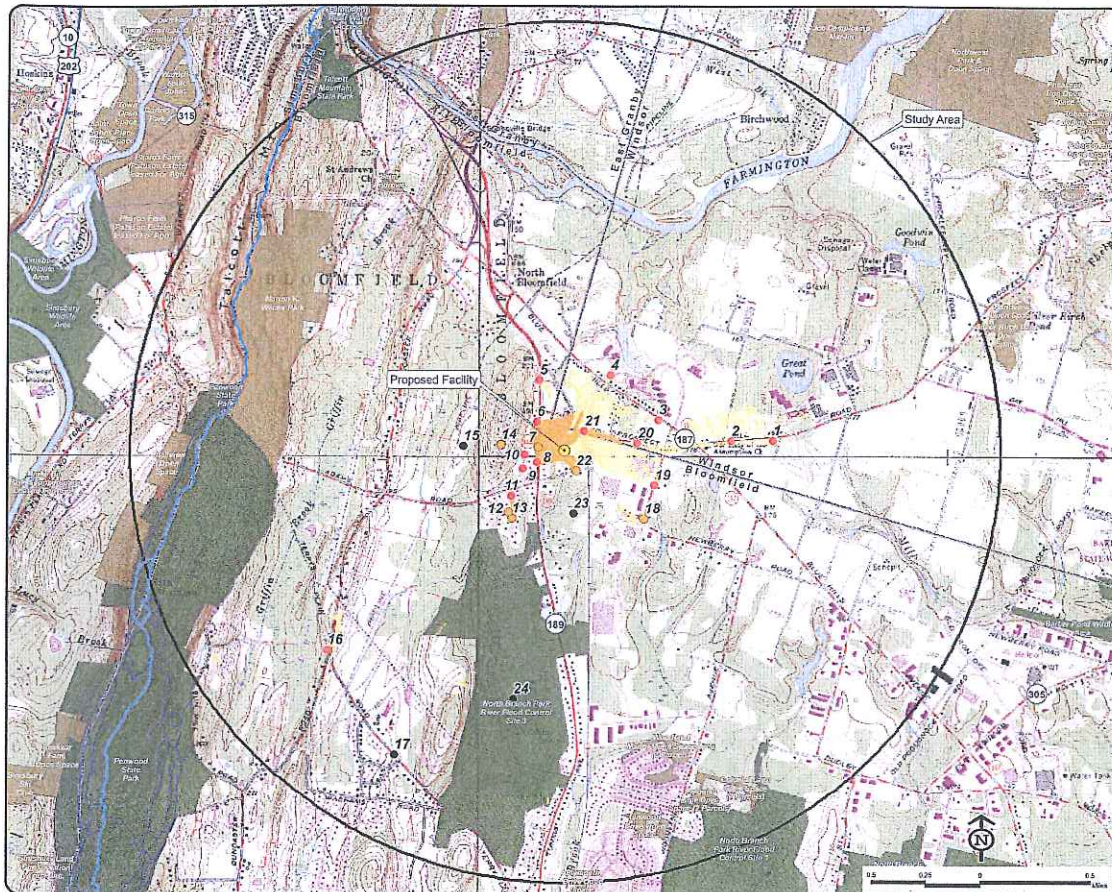
(Celco 1, Attachment 6)

Figure 9: Cellco LTE Coverage from Proposed Facility



(Cellco 1, Attachment 6)

Figure 10: Visibility Analysis (Application Site)



| Legend | |
|--------|--|
| | Proposed Tower Location |
| | <ul style="list-style-type: none"> ● Balloon is not visible ○ Balloon visible through trees ○ Balloon visible above trees |
| | Seasonal Visibility (Approximately 33 acres) |
| | Year-Round Visibility (Approximately 101 acres) |
| | Protected Municipal and Private Open Space (CT DEP, 1997) |
| | <ul style="list-style-type: none"> Preservation Conservation Existing Preserved Open Space Recreation General Recreation School Uncategorized |
| | CT DEP Property (CT DEP, May 2010) |
| | State Forest |
| | State Park |
| | DEP Owned Waterbody |
| | State Park Scenic Reserve |
| | Historic Preserve |
| | Natural Area Preserve |
| | Fish Hatchery |
| | Flood Control |
| | Other |
| | State Park Trail |
| | Water Access |
| | Wildlife Area |
| | Wildlife Sanctuary |
| | Federal Open Space (CT DEP, 2004) |
| | Boat Launches (CT DEP, Dec 2009) |
| | Metacomet Trail (CT Blue Blaze) |
| | Penwood State Park Trails |
| | Scenic Road (State and Local) |
| | Town Line |

(Cellco 1, Attachment 9)

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

| Status Granted | Document Service | Status Holder (name, address & phone number) | Representative (name, address & phone number) |
|-----------------------|---|---|---|
| Applicant | <input checked="" type="checkbox"/> E-mail <input checked="" type="checkbox"/> U.S. Mail | Cellco Partnership d/b/a Verizon Wireless | Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 (860) 275-8345 (860) 275-8299 - fax kbaldwin@rc.com Sandy Carter Regulatory Manager Verizon Wireless 99 East River Drive East Hartford, CT 06108 |
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