

DOCKET NO. 405 - 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 at 422 Rockville Road or 81 } Council
James Road, Voluntown, Connecticut. }

January 20, 2011

Findings of Fact

Introduction

1. Cellco Partnership d/b/a Verizon Wireless (Cellco), in accordance with the provisions of Connecticut General Statutes (CGS) §§ 16-50g through 16-50aa, applied to the Connecticut Siting Council (Council) on September 2, 2010 for the construction, maintenance, and operation of a 160-foot wireless telecommunications facility located at either 422 Rockville Road or 81 James Road, in Voluntown, Connecticut (refer to Figure 1). (Cellco 1, p. i)
2. Cellco is a Delaware Partnership with an office in East Hartford, Connecticut. Cellco is licensed by the Federal Communications Commission (FCC) to construct and operate a personal wireless service system in Connecticut. (Cellco 1, p. 5)
3. The purpose of the proposed facility is to provide wireless service for Cellco to the east-central area of Voluntown, including portions of Route 138, Route 165, Route 49, and recreational areas within Pachaug State Forest. (Cellco 1, pp. 1-2, Tab 7)
4. Pursuant to CGS § 16-50m, the Council held a public hearing on November 30, 2010, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Voluntown Fire Department building, 205 Preston City Road, Voluntown, Connecticut. (Transcript 1 – 11/30/10, 3:00 p.m. [Tr. 1], p. 2; Transcript 2 – 11/30/10, 7:00 p.m. [Tr. 2], p. 2)
5. The Council and its staff conducted an inspection of the two sites on November 30, 2010, beginning at 1:45 p.m. The applicant flew a balloon at each site from 11:00 a.m. to 4:30 p.m. to simulate the height of the proposed facilities. A red balloon was flown at 422 Rockville Road (Site 1) and a black balloon was flown at 81 James Road (Site 2). Weather conditions were variable with some moderate wind gusts and good visibility. (Tr. 1, pp. 96-97)
6. Notice of the application was sent to all abutting property owners by certified mail. All return receipts were received. (Cellco 1, p. 6, Tab 5; Cellco 4, Q. 1)
7. Public notice of the application was published in the Norwich Bulletin on August 30 and 31, 2010. (Cellco 5)
8. Cellco installed a four-foot by six-foot sign at the entrance to each property on November 11, 2010. Each sign presented information regarding the project and the Council's public hearing. (Cellco 3)
9. Pursuant to CGS § 16-50l(b), Cellco provided notice of the application to all federal, state and local officials and agencies listed therein. (Cellco 1, p. 6)

State Agency Comment

10. Pursuant to General Statutes § 16-50j(h), on October 14, 2010 and December 1, 2010, the following State agencies were solicited to submit written comments regarding the proposed facility: 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, Department of Public Safety (DPS) Department of Transportation (DOT), Department of Agriculture, and Department of Emergency Management and Homeland Security. (Record)
11. On October 22, 2010, the Council received a written response from the DOT Bureau of Engineering and Highway Operations stating that a permit would be required if construction occurred within the Route 138 right-of-way. On November 1, 2010, the Council received written comment from the DPS Bureau of Infrastructure and Communications stating no objection to either proposed facility. (Record)
12. With the exception of the DOT and DPS, no other state agencies submitted comments in response to the Council's solicitation. (Record)

Municipal Consultation

13. On June 14, 2010, Cellco submitted a technical report to the Town of Voluntown and met with the First Selectman Ronald Millovitsch, Selectman Willis Maynard, and the Chairman of the Planning and Zoning Commission, Robert Hanson. (Cellco 1, p. 21)
14. On July 21, 2010, Cellco hosted a publically noticed project information meeting at the town hall. Three property owners who about the Site 1 location attended the meeting. (Cellco 1, pp. 21-22; Tr. 1, pp. 38-39)

Public Need for Service

15. 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 8)
16. 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. Cellco is licensed by the FCC to provide wireless service to New London County. (Council Administrative Notice Item 8; Cellco 1, p. 8)
17. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item 8)
18. The Telecommunications Act of 1996 prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental 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 8)

19. In an effort to ensure the benefits of wireless technologies to all Americans, Congress enacted the Wireless Communications and Public Safety Act of 1999. The purpose of this legislation was to promote public safety through the deployment of a seamless, nationwide emergency communications infrastructure that includes wireless communications services. (Council Administrative Notice Item 9)
20. Cellco would provide space on the tower for town emergency service antennas. The Quinebaug Valley Emergency Service and the Voluntown Fire Department expressed interest in the site, although their exact equipment needs are presently unknown. (Cellco 1, p. 4; Tr. 2, pp. 29-30)

Cellco - Existing and Proposed Wireless Coverage

21. Cellco proposes to operate cellular (800 MHz), personal communication service (PCS - 1900 MHz), and long-term evolution (LTE - 700 MHz) equipment at the proposed site. (Cellco 1, p. 2)
22. To maintain reliable service, Cellco designs and operates at a signal level threshold of -85 dBm for in-vehicle service and -75 dBm for in-building service. (Cellco 4, Q. 4)
23. The existing cellular signal level in the proposed service area ranges from -86 dBm to -108 dBm. (Cellco 4, Q. 5)
24. Cellco currently experiences degraded coverage along Route 138 and 165 east of Voluntown village to the Rhode Island border and on portions of Route 49 in the area of the village (refer to Figures 2 & 4). Degraded to nonexistent coverage also exists in the surrounding Pachaug State Forest, an active recreation area containing many trails and a state operated campground at Green Fall Pond. (Cellco 1, Tab 7; Cellco 4, Q. 8)
25. The nearest facilities to the proposed service area are located at 497 Ekonk Road in Voluntown, approximately 3.5 miles northwest of the sites, and at 1439 Voluntown Road in Griswold, approximately 4 miles west of the sites. Coverage from these existing sites does not extend to the proposed service area. (Cellco 1, Tab 7, Tab 9)
26. Installing antennas at the proposed height of 160 feet above ground level (agl) at the proposed sites would provide the following reliable service (-85 dBm or greater) to the proposed service area:

Coverage Type	Linear miles on Rt. 138 (site 1/site 2)	Linear miles on Rt. 165 (site 1/site 2)	Linear miles on Rt. 49 (site 1/site 2)	Square miles (site 1/site 2)
<i>Cellular</i>	4.0 / 4.1	2.1 / 2.0	1.8 / 1.6	10.2 / 9.7
<i>PCS</i>	2.1 / 3.1	1.8 / 1.8	0.5 / 0.5	6.9 / 6.6
<i>LTE</i>	3.3 / 3.8	2.2 / 2.1	1.5 / 0.0	10.0 / 9.4

Refer to Figures 3 & 5 for proposed cellular and PCS coverage from Site 1 and 2. (Cellco 1, pp. 2-3, Tab 7)

27. Site 1 provides more service to the Green Fall Pond area and surrounding state forest and an improved interface with neighboring sites and existing search rings when compared to Site 2. (Cellco 1, Tab 7; Tr. 1, pp. 19-20, 41, 48-50)

Site Selection

28. Cellco established a search area for the proposed service area in May 2009. The ring generally focused on the area between Route 165 and Route 138 east of Voluntown village. (Cellco 1, Tab 9)

29. The search included identification of potential structures that could be used for telecommunications purposes and the examination of area properties, including municipal parcels, to identify potential telecommunications sites. (Cellco 1, Tab 9)
30. Cellco did not identify any structures in the search area that would be suitable for a telecommunications facility. (Cellco 1, Tab 9)
31. After determining there were no viable structures within the search area, Cellco searched for properties suitable for tower development. Cellco investigated 11 different properties in Voluntown and selected two for tower development. The nine rejected locations and reasons for their rejection are as follows:
 - a) Price Property, 500 Beach Pond Road – extensive wetlands;
 - b) Voluntown Peace Trust Property, 539 Beach Pond Road – landowner did not respond to inquiries;
 - c) Cipriano Property, 616 Beach Pond Road – landowner did not respond to inquiries;
 - d) Allen Property, 69 Laurel Drive – extensive wetlands;
 - e) Pico Property, 107 James Road – landowner not interested in lease;
 - f) Gileau Property, 173 James Road – extensive wetlands;
 - g) Livingston Property, 185 Rockville Road – wetland and clearing impacts;
 - h) Potopowitz Property, 191 James Road – landowner did not respond to inquiries;
 - i) Living World Fellowship, 528 Beach Pond Road – extensive wetlands.(Cellco 1, Tab 9)

Facility Description

32. Cellco proposes to construct a 160-foot monopole at the either site, capable of supporting four levels of platform-mounted antennas as well as emergency response antennas. It would be constructed in accordance with Electronic Industries Association standard ANSI/TIA-222-F. (Cellco 1, Tab 1, Tab 2)
33. Cellco proposes to install 15 panel antennas on a platform at a centerline height of 160 feet agl. The top of the antennas would extend to 163 feet agl. (Cellco 1, Tab 1, tab 2)
34. Cellco proposes to construct a 50-foot by 50-foot fenced compound within a 100-foot by 100-foot lease area at the base of the tower. A 12-foot by 24-foot equipment shelter would be installed within the compound, enclosed by an eight-foot high chain link fence. (Cellco 1, Tab 1, Tab 2)
35. Underground utilities would service both sites. (Cellco 1, Tab 1, Tab 2; Tr. 1, p. 65)
36. An emergency diesel power generator would be located within the shelter. (Cellco 1, Tab 1, Tab 2)

Site 1 Description – 422 Rockville Road

37. Site 1 is located on an 11.2-acre parcel owned by Cheryl Marcinko at 422 Rockville Road. (Cellco 1, Tab 1)
38. The parcel is located on the south side of Rockville Road (Route 138) and is developed with a single-family residence. (Cellco Tab 1)

39. The tower site is located approximately 430 feet southwest of the residence, in a wooded area south of an existing open area on the property (refer to Figure 6). (Cellco 1, Tab 1; Tr. 1, pp. 17-18)
40. The tower site would be accessed by using 720 feet of existing driveway and dirt road that extends to an open area in the southwest portion of the property. A new 170-foot gravel drive would be constructed from the open area through woodlands to the compound site. (Cellco 1, Tab 1)
41. The proposed tower would be located at an elevation of 486 feet above mean sea level (amsl). (Cellco 1, Tab 1)
42. The property is in the Rural Zoning district. The Pachaug State Forest abuts the property to the south and east. Residential properties abut the site to the west and north. (Cello 1, Tab 1)
43. The nearest property line to the proposed tower is approximately 78 feet to the south (state forest). The Williams property is approximately 145 feet to the west. (Cellco 1, Tab 1)
44. The nearest residence to the proposed tower site is approximately 625 feet to the northwest (Williams residence). (Cellco 1, Tab 1)
45. There are five residences within 1,000 feet of the tower site. (Cellco 1, p. 15)
46. The estimated construction cost of the facility is:

Tower, coax, and antennas	\$150,000.
Radio equipment	450,000.
Power systems	20,000.
Equipment building	50,000.
<u>Miscellaneous (site work)</u>	<u>92,000.</u>
<u>Total estimated cost</u>	<u>\$762,000.</u>

(Cellco 1, pp. 23-24)

Site 2 Description – 81 James Road

47. Site 2 is located on a 9.5-acre parcel owned by Ronald and Joanne Millovitsch at 81 James Road. (Cellco 1, Tab 2)
48. The parcel is located on the east side of James Road and is developed with a single-family residence. The remaining portion of the property consists of agricultural fields and woodland. (Cellco 1, Tab 2)
49. The tower site is located approximately 730 feet east of the residence, in a wooded area adjacent to an agricultural field (refer to Figure 7). (Cellco 1, Tab 2, Tab 11)
50. Access to the tower compound would utilize 155 feet of an existing driveway that extends from James Road and a new 680-foot gravel drive that extends eastward along the south property line. (Cellco 1, Tab 2)
51. The proposed tower would be located at an elevation of 441 feet amsl. (Cellco 1, Tab 2)
52. The property is in the Rural Zoning district. State forest abuts the property to the east and west. Developed residential parcels abut the site to the north and south. (Cello 1, Tab 2)

53. The nearest property lines to the proposed tower are the James and Brandi Millovitsch property, approximately 52 feet to the south, and the Bridget Lee property, approximately 200 feet to the north at 67 James Road. (Cellco 1, Tab 2)
54. The nearest residence to the proposed tower site is approximately 600 feet to the southwest at 103 James Road (Farrey residence). (Cellco 1, Tab 2)
55. There are nine residences within 1,000 feet of the tower site. (Cellco 1, p. 15, Tab 2)
56. The estimated construction cost of the facility is:

Tower, coax, and antennas	\$145,000.
Radio equipment	450,000.
Power systems	19,000.
Equipment building	50,000.
<u>Miscellaneous (site work)</u>	<u>115,000.</u>
<u>Total estimated cost</u>	<u>\$779,000.</u>

(Cellco 1, p. 24)

Environmental Concerns

57. Development of either site would have no adverse effect on historic, architectural or archeological resources listed in or eligible for the National Register of Historic Places. (Cellco 1, p. 21, Tab 12)
58. Site 1 is approximately 0.1 mile south of an Atlantic White Cedar swamp in the Pachaug State Forest, an area that contains several plant species listed in the State endangered, threatened or special concern databases. The DEP recommends the establishment of proper erosion and siltation control methods to ensure the swamp is not negatively affected during construction. (Cellco 1, p. 17, Tab 12)
59. Site 2 is within the range of the eastern hognose snake (*Heterodon platirhinos*). Although the tower site and access drive do not contain suitable soil types for this species, Cellco would undertake a construction awareness program to prevent any impacts to this species. (Cellco 1, p. 17, Tab 12; Tr. 1, pp. 72-73)
60. Site 1 is located in a wooded area and would require the removal of 14 trees with a diameter six inches or greater. A band of trees would remain between the existing cleared area and the compound. The compound location could be shifted approximately 100 feet to the north to the edge of the existing cleared area, resulting in less woodland disturbance. (Cellco 1, Tab 1; Tr. 2, pp. 30-31)
61. Development of Site 2 would require the removal of 16 trees with a diameter six inches or greater. A few trees and shrubs would be maintained between the existing field area and the compound. (Cellco 1, Tab 2; Tr. 1, pp. 92-94)
62. Site 1 is located between two wetland areas on the property. One wetland is oriented in a north-south direction along the property boundary and is 88 feet west of the compound at its closest point, at the base of a granite outcrop. A second, smaller forested wetland is located, approximately 125 feet east of the compound area. This wetland offers a limited amphibian breeding area. Amphibian migration between the two wetlands would be minimal given the granite outcrops in the area. (Cellco 1, Tab 1, Tab 13; Tr. 1, pp. 69-70)

63. At Site 2, an extensive forested wetland is located in the eastern portion of the property. The tower compound is located approximately 12 feet from the nearest portion of the wetland. Interior areas of this wetland are suitable for amphibian breeding. Moving the site to the west, away from the wetland, would bring the compound and tower into the existing field area, increasing visibility when viewed across the field. (Cellco 1, p. 20, Tab 2, Tab 13; Tr. 1, pp. 70-74)
64. Erosion and sedimentation controls and other best management practices would be established and maintained for the duration of construction. Areas disturbed by construction would be seeded with a conservation/wildlife mix. (Cellco 1, p. 19, Tab 13)
65. The Town of Voluntown is located within the Quinebaug and Shetucket Rivers Valley National Heritage corridor, a 35-town area located in northeast Connecticut and south-central Massachusetts. Congress established the corridor in 1994 to recognize the region as a unique national resource. The designation is intended to encourage preservation and promotion of the region's cultural, historical and natural heritage. The proposed sites would not affect any identified cultural, historical or natural resources identified within the area. (Council Administrative Notice Item 17; Cellco 1, p. 19)
66. Aircraft hazard obstruction marking or lighting of either tower would not be required. (Cellco 1, p. 22)
67. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of the proposed Cellco antennas is calculated to be 15.5% of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed 160-foot 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 base. (Cellco 4, Q. 7)

Visibility

68. The projected visibility of each of the two proposed towers within a two-mile radius of each site is as follows:

Receptor	Site 1	Site 2
Year-round visibility (acres)	2 (on host property)	3.5 (on host property and abutter to south)
Seasonal visibility (acres)	38 (within 0.25 mi)	26 (within 0.25 mi.)
Residential properties with year-round views (non-lessor)	0	1 (abutter)
Residential properties with seasonal views (non-lessor)	7 (within 0.25 mi.)	5 (within 0.25 mi)

(Refer to Figures 8 & 9). (Cellco 1, Tab 10, Tab 11)

69. Site 1 would be seasonally visible from the surrounding abutting properties and from Route 138 north of the site, with most of the upper portion of the tower visible through the trees. (Cellco 1, Tab 10; Tr. 1, pp. 36-38)

70. The upper 130 feet of the Site 2 tower would be visible year-round from the abutting property at 87 James Road and from James Road in front of the host property. Seasonal views of a majority of the tower would be possible from the abutting properties at 67, 89, and 103 James Road. (Cellco 1, Tab 11; Tr. 1, pp. 24-28)
71. The Pachaug Trail, a blue-blazed trail maintained by the Connecticut Forest and Parks Association (CFPA) is located approximately 0.1 mile south of Site 1. The upper half of the tower would be seasonally visible from approximately 200 feet of the trail. (Cellco 1, Tab 10; Tr. 1, pp. 30-31)
72. There are no CFPA or DEP maintained hiking trails in the Site 2 area. (Cellco 1, Tab 11)

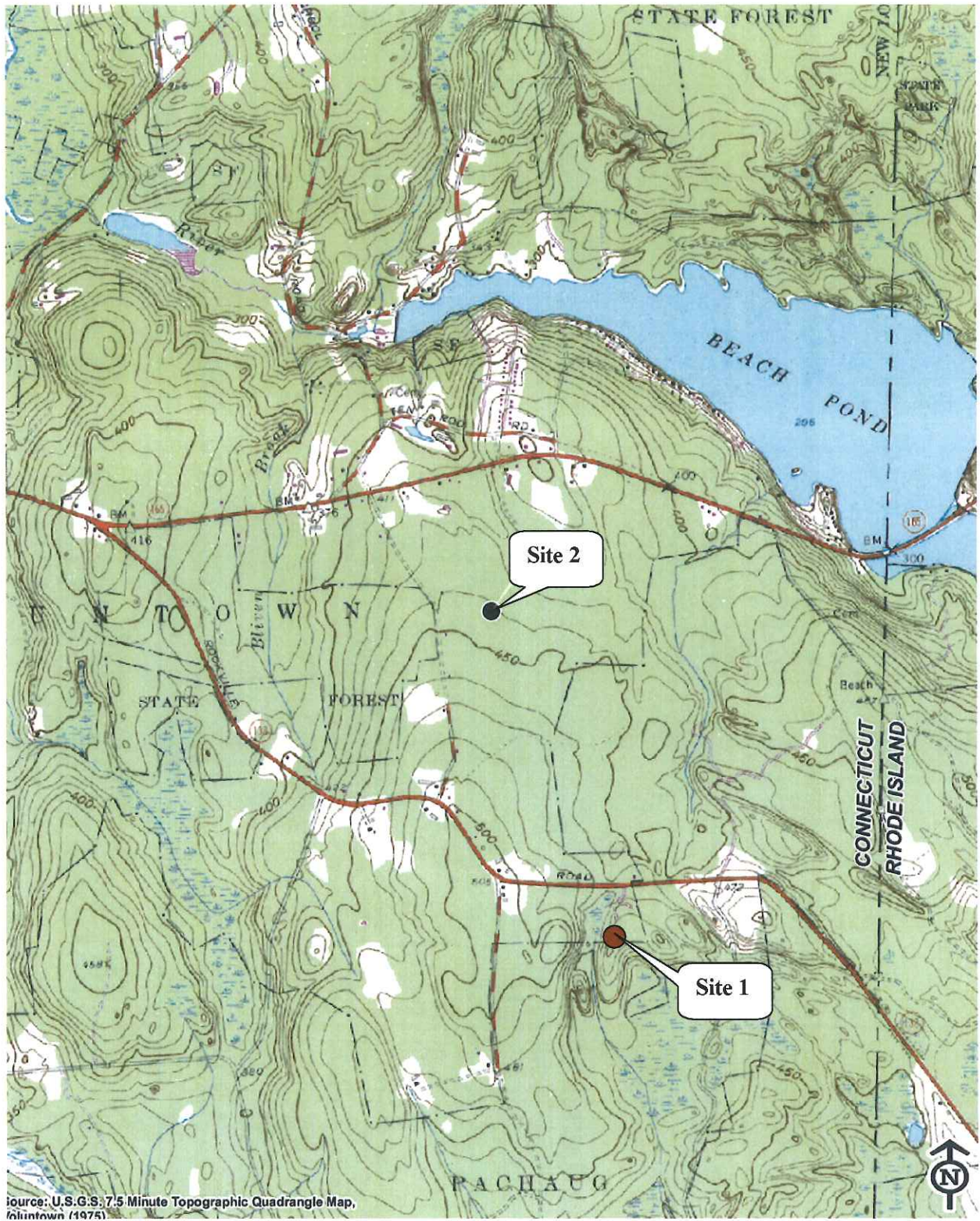


Figure 1: Location of Site 1 - 422 Rockville Road, and Site 2- 81 James Road. (Cellco 1, Tab 1)

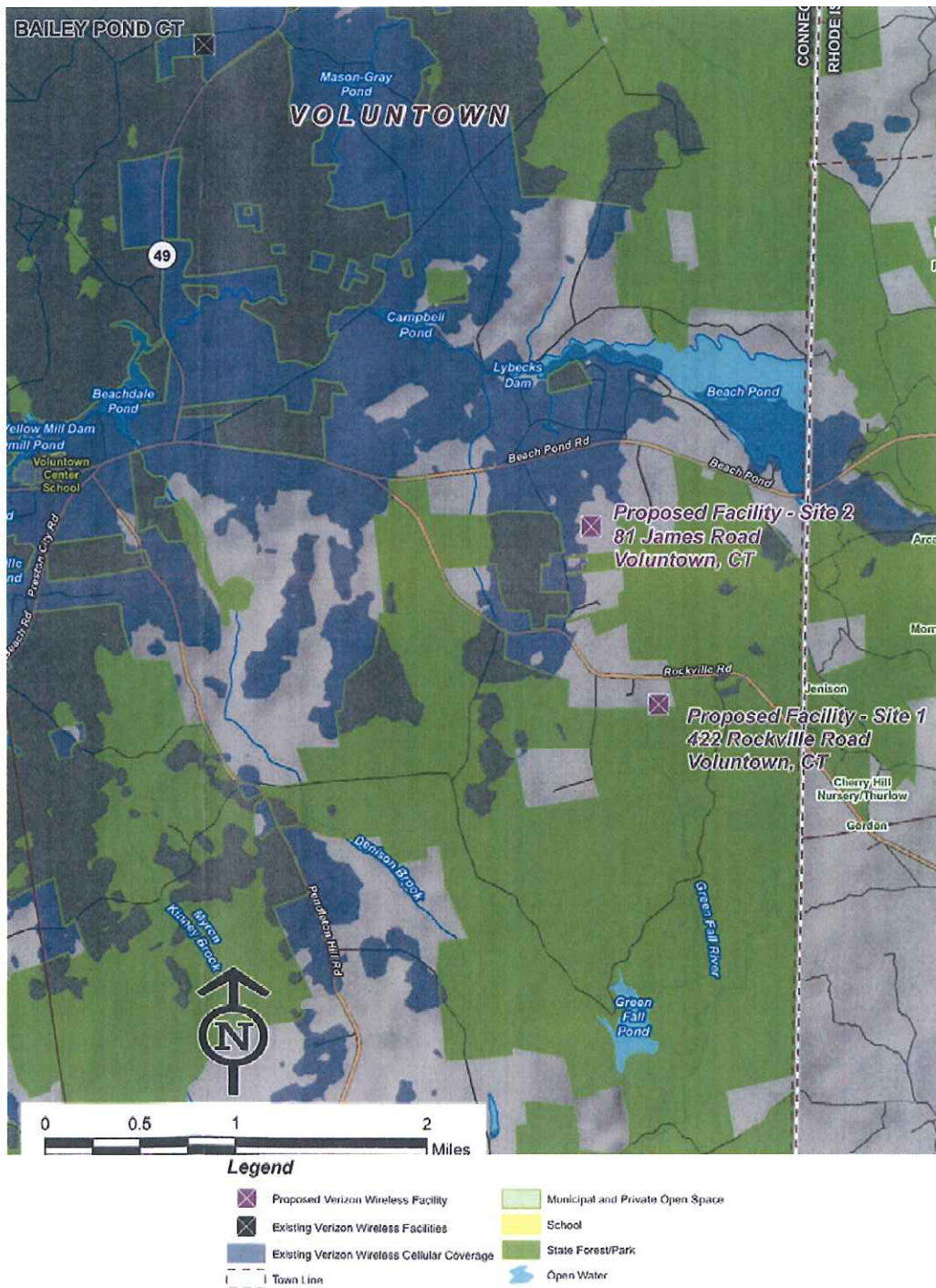
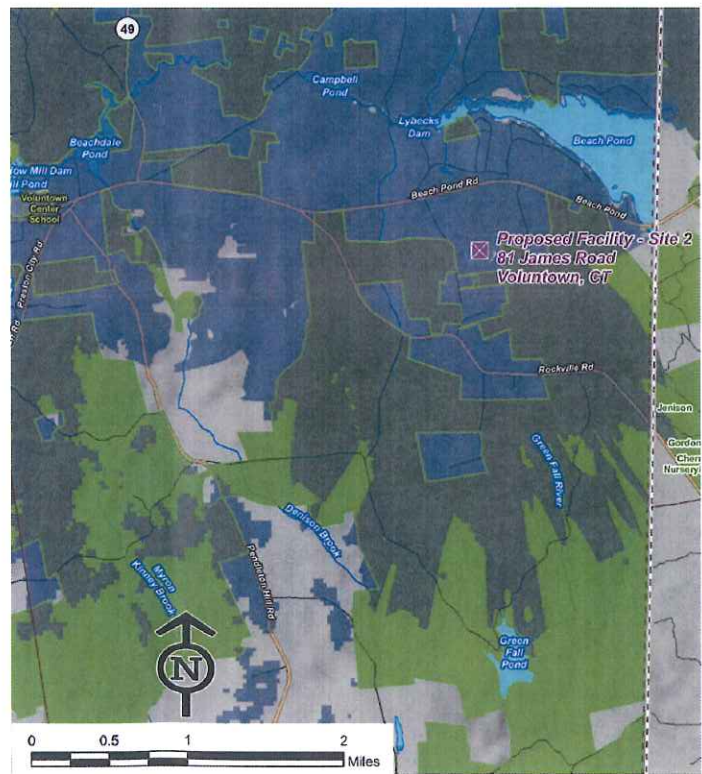
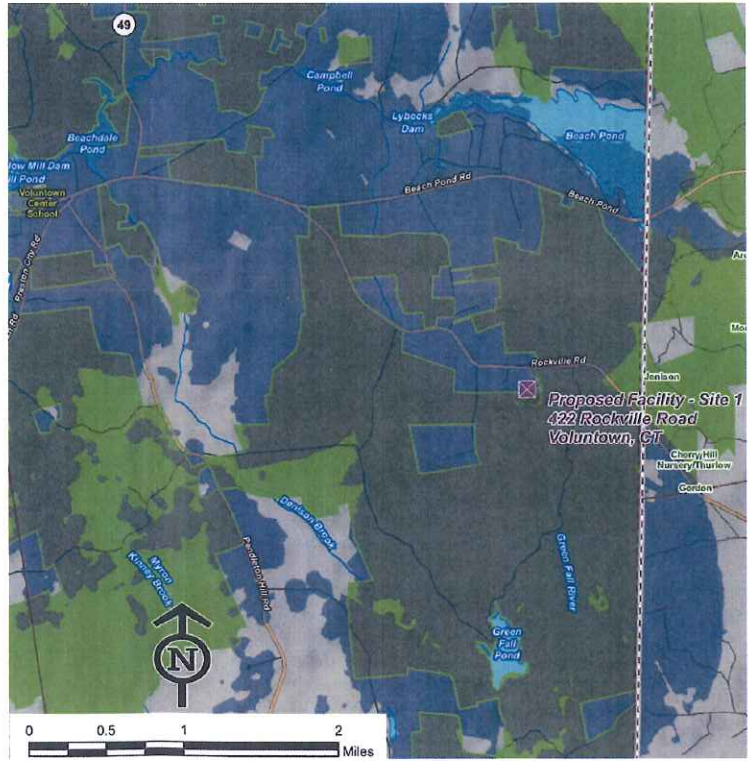


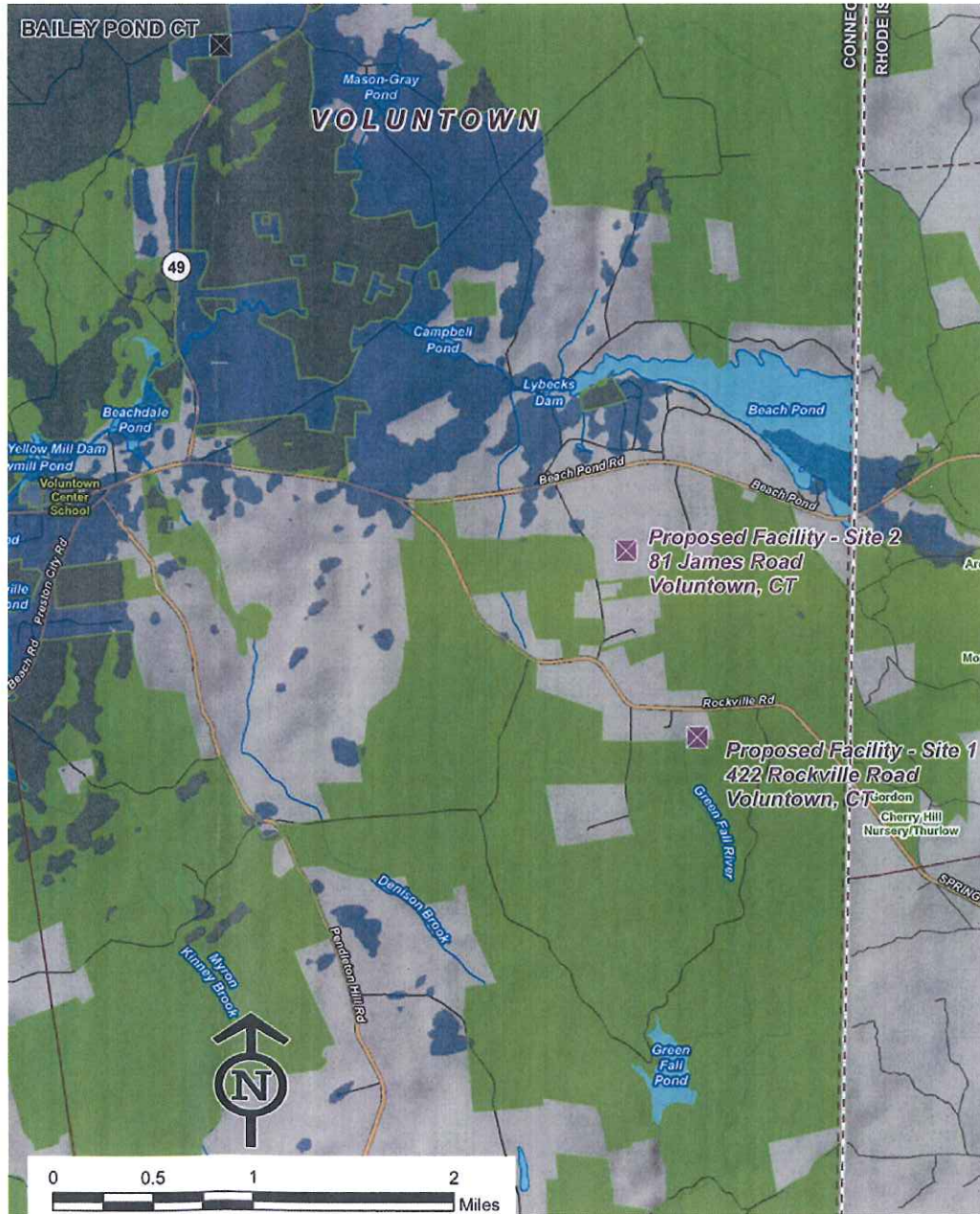
Figure 2: Existing cellular coverage in proposed service area. (Cellco 1, Tab 7)



Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Proposed Verizon Wireless Cellular Coverage
- Town Line
- Municipal and Private Open Space
- School
- State Forest/Park
- Open Water

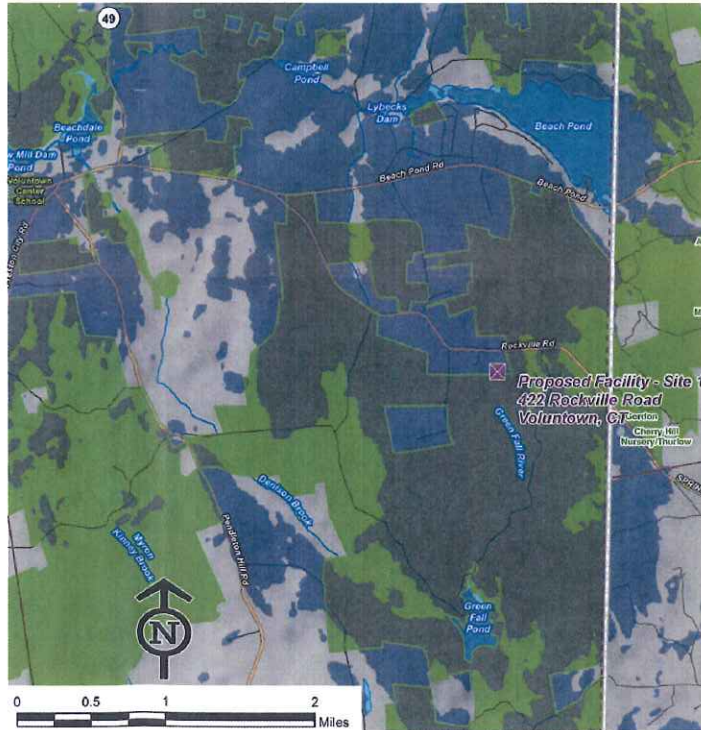
Figure 3: Proposed cellular coverage - Site 1 and Site 2. (Cellco 1, Tab 7)



Legend

- ✕ Proposed Verizon Wireless Facility
- ✕ Existing Verizon Wireless Facilities
- Existing Verizon Wireless PCS Coverage
- Town Line
- Municipal and Private Open Space
- School
- State Forest/Park
- ~ Open Water

Figure 4: Existing PCS coverage in proposed service area. (Cellco 1, Tab 7)



Legend






- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Proposed Verizon Wireless PCS Coverage
- Town Line
- Municipal and Private Open Space
- School
- State Forest/Park
- Open Water

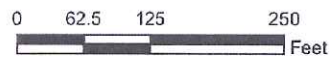
Figure 5: Proposed PCS coverage - Site 1 and Site 2. (Cellco 1, Tab 7)



Base Map Source: 2006 color aerial photograph with 1-foot resolution.

Legend

-  Tower Site
-  Wetland Flag
-  Wetland Boundary
-  Existing Gravel Access Road
-  Wetland Area



Vanasse Hangen Brustlin, Inc.





**Preliminary Wetland Map
Proposed Verizon Wireless Facility
422 Rockville Road
Voluntown, Connecticut**



Figure 6: Location of Site 1 at 422 Rockville Road. Please note a cleared area now exists along the dirt road (yellow line) extending from the residence to a potential alternate location shown in red. (Cellco 1, Tab 12)



Legend

-  Tower Site
-  Wetland Flag
-  Wetland Boundary
-  Wetland Area

Vanasse Hangen Brustlin, Inc.
Preliminary Wetland Map
Proposed Verizon Wireless Facility
81 James Road
Voluntown, Connecticut



Figure 7: Location of Site 2 at 81 James Road. (Cellco 1, Tab 12)

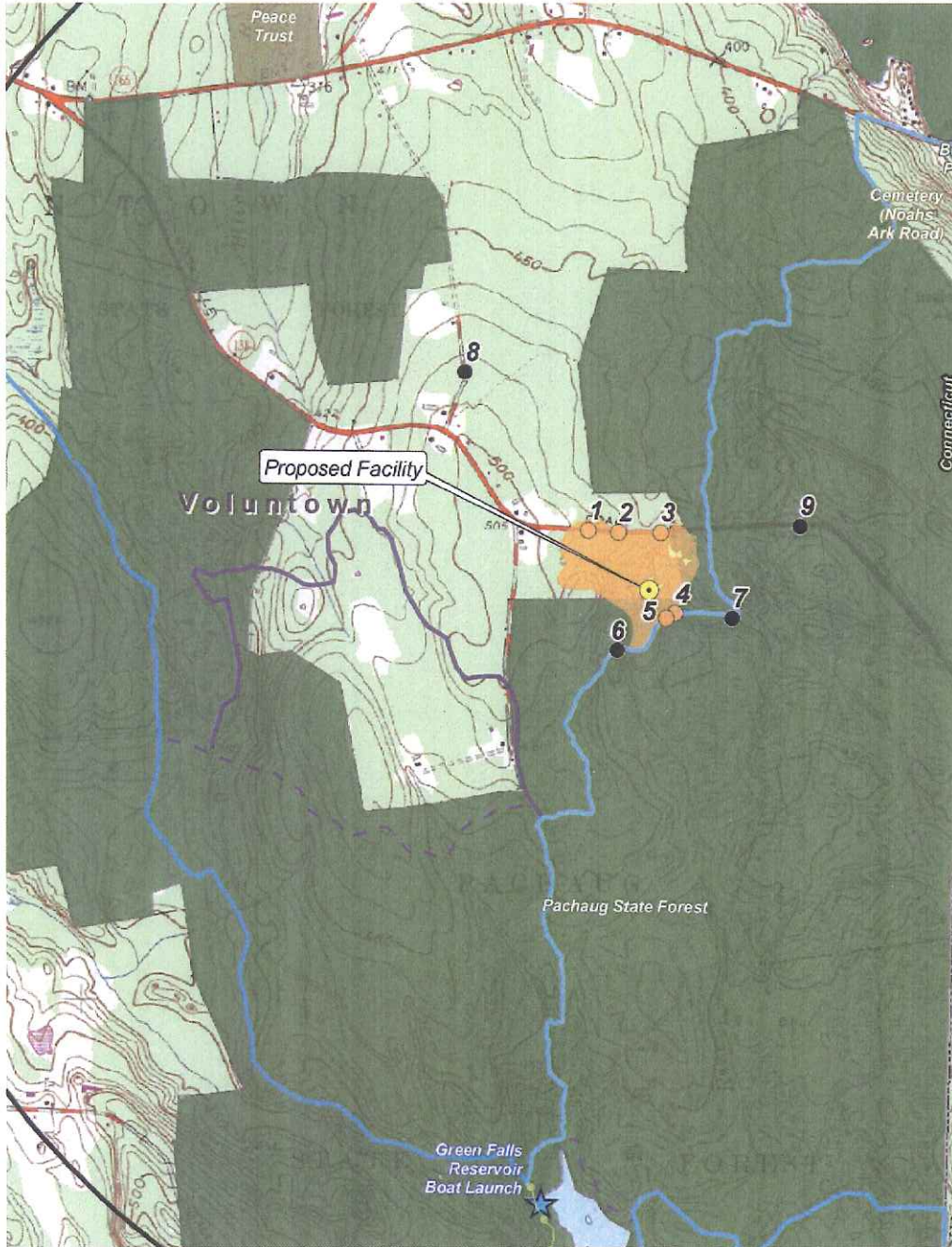
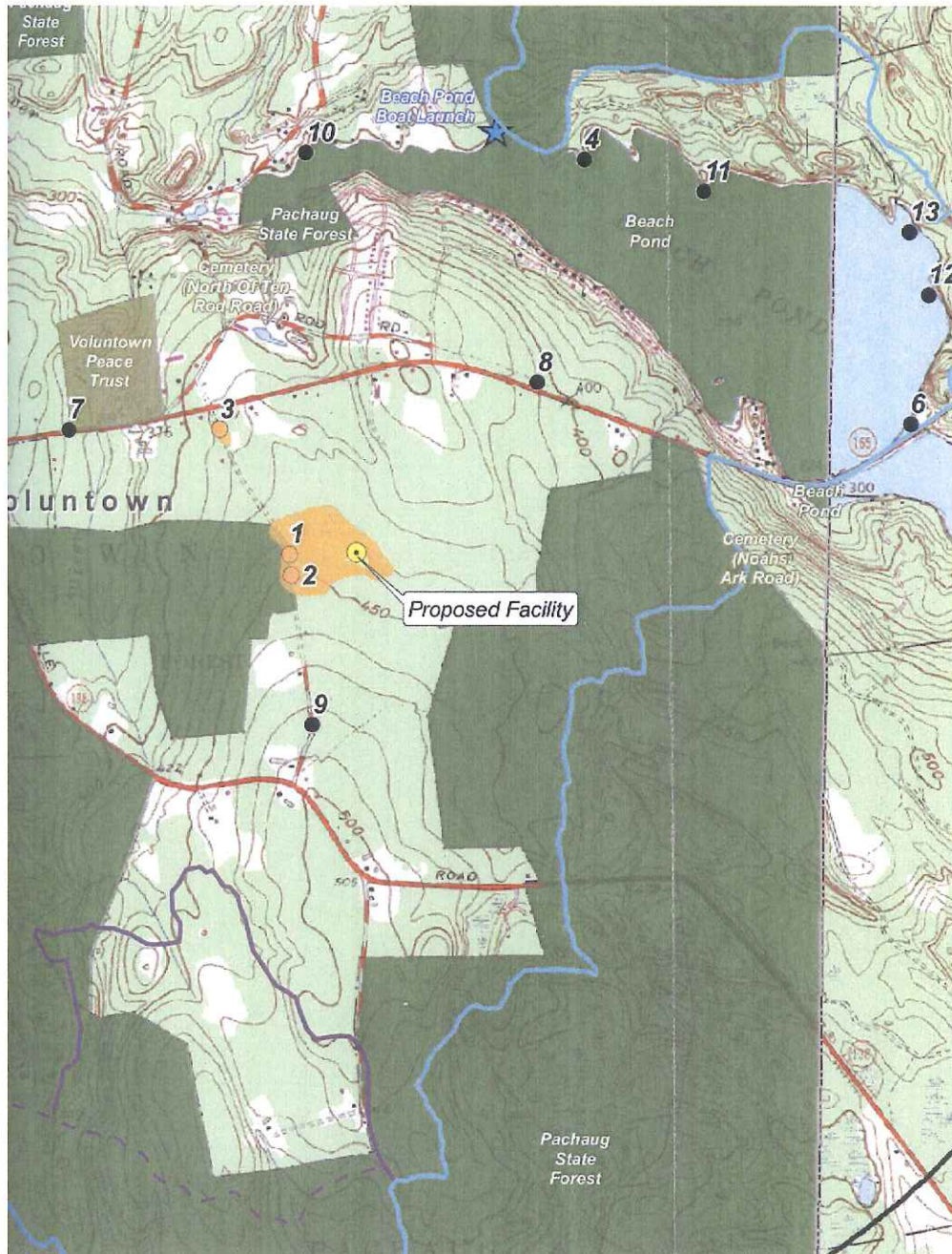


Figure 8: Projected visibility of Site 1. (Cellco 1, Tab 10)



Legend

- | | |
|---|---|
| <ul style="list-style-type: none"> ● Proposed Site Location ● Photographs - April 6, 2010 and August 17, 2010 ● Balloon is not visible ● Balloon visible through trees ■ Seasonal Visibility (Approximately 26 acres) ■ Year-Round Visibility (Approximately 3.5 acres) | <ul style="list-style-type: none"> ■ CT DEP Protected Properties (2007) ■ 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 |
|---|---|

Figure 9: Projected visibility of Site 2. (Cellco 1, Tab 11)