

<p>DOCKET NO. 484 - 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 at one of three locations at 72 Ragged Hill Road, Pomfret, Connecticut.</p>	<p>} } }</p>	<p>Connecticut Siting Council November 8, 2018</p>
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Findings of Fact

Introduction

1. Cellco Partnership d/b/a Verizon Wireless (Cellco), in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g, et seq, applied to the Connecticut Siting Council (Council) on July 9, 2018 for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a telecommunications facility at one of three locations at 72 Ragged Hill Road, Pomfret, Connecticut (refer to Figures 1 & 2). (Cellco 1, pp. 1-2)
2. Cellco is a Delaware Partnership with an administrative office located in Wallingford, Connecticut. Cellco is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to Windham County, Connecticut, the county in which Pomfret is located. (Cellco 1, pp. 2, 27, Tab 5)
3. The party in this proceeding is Cellco. (Transcript 1, September 18, 2018, 3:00 p.m. [Tr. 1], p. 5)
4. The purpose of the proposed facility is to provide reliable wireless service to existing service deficient areas in the northwest Pomfret, northeast Eastford and southwest Woodstock region. (Cellco 1, p. i; Cellco 3, response 17)
5. Pursuant to C.G.S. § 16-50l (b), the applicant provided public notice of the filing of the application that was published in *The Norwich Bulletin* on July 5, and July 6, 2018. (Cellco 2)
6. Pursuant to C.G.S. § 16-50l (b), notice of the application was provided to all abutting property owners by certified mail. Notice was unclaimed by two abutters for property at 66 Swedetown Road in Pomfret and on Quarry Road in Woodstock. Cellco resent notice to these abutters by first class mail. (Cellco 1, Tab 4; Cellco 3, response 1)
7. On July 9, 2018, Cellco provided notice to all federal, state and local officials and agencies listed in C.G.S. § 16-50l (b), including the Towns of Woodstock and Eastford, located within 2,500 feet of the site property. (Cellco 1, Tab 2; Cellco 3, response 3)

Procedural Matters

8. On July 11, 2018, the Council sent letters to the Towns of Pomfret, Eastford and Woodstock as notification that the application was received and is being processed, in accordance with C.G.S. § 16-50gg. (Record)
9. During a regular Council meeting on August 2, 2018, the application was deemed complete pursuant to Regulations of Connecticut State Agencies (R.C.S.A.) § 16-50l-1a and the public hearing schedule was approved by the Council. (Record)
10. Pursuant to C.G.S. § 16-50m, the Council published legal notice of the date and time of the public hearing in *The Norwich Bulletin* on August 6, 2018. (Record)

11. Pursuant to C.G.S. § 16-50m, on August 3, 2018, the Council sent letters to the Towns of Pomfret, Eastford and Woodstock to provide notification of the scheduled public hearing and to invite the municipalities to participate. (Record)
12. On August 15, 2018, the Council held a pre-hearing teleconference on hearing procedural matters for interested persons to discuss the requirements for pre-filed testimony, exhibit lists, administrative notice lists, expected witness lists, filing of pre-hearing interrogatories and the logistics of the public inspection of the proposed sites. (Council Pre-hearing Conference Memorandum, dated August 15, 2018)
13. In compliance with R.C.S.A. § 16-50j-21, on September 4, 2018, the Applicant installed three four-foot by six-foot signs at three locations on the subject property, visible from a public road, that presented information regarding the proposed project and the Council's public hearing. (Cellco 4)
14. The Council and its staff conducted an inspection of the proposed sites on September 18, 2018, beginning at 1:30 p.m. During the field inspection, the applicant flew a 4.5-foot diameter balloon at each of the proposed sites to simulate the height of the proposed towers (Site A - blue balloon, Site B - purple balloon, Site C - red balloon). Weather conditions during the balloon fly included rain with heavy overcast and light to moderate winds. The balloons were aloft from approximately 8:00 a.m. to 6:00 p.m. for the convenience of the public. (Council's Hearing Notice dated August 3, 2018; Council Hearing Procedures Memorandum dated August 15, 2018; Tr. 1, pp. 11-12)
15. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on September 18, 2018, beginning with the evidentiary session at 3:00 p.m. and continuing with the public comment session at 6:30 p.m. at the Abington Congregational Church, Fellowship Hall, 542 Hampton Road, Pomfret, Connecticut. (Council's Hearing Notice dated August 3, 2018; Tr. 1, p. 1; Transcript 2 – 6:30 p.m. [Tr. 2], p. 1)

State Agency Comment

16. Pursuant to C.G.S. § 16-50j (g), on August 3, 2018, the following State agencies were solicited by the Council to submit written comments regarding the proposed facility: Department of Energy and Environmental Protection (DEEP); Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA); Office of Policy and Management (OPM); Department of Economic and Community Development (DECD); Department of Agriculture (DOAg); Department of Transportation (DOT); Connecticut Airport Authority (CAA); Department of Emergency Services and Public Protection (DESPP); and State Historic Preservation Office (SHPO). (Record)
17. The Council received a response from the DOT's Bureau of Engineering and Construction on August 7, 2018 indicating that DOT had no comments. (DOT Comments received August 7, 2018)
18. The Council received a response from the CAA on August 21, 2018 requesting that the Applicant coordinate the project with two nearby private airports. (CAA Comments received August 21, 2018)
19. The following agencies did not respond with comment on the application: DEEP, CEQ, PURA, OPM, DECD, DOAg, DPH, DESPP, and SHPO. (Record)

Municipal Consultation

20. On May 18, 2017, Cellco commenced the 90-day pre-application municipal consultation process by submitting a technical report for the proposed telecommunications facility to local officials in the Towns of Pomfret, Eastford and Woodstock. The Pomfret First Selectman, Craig Baldwin requested that Cellco host a Public Information Meeting (PIM) regarding the project. (Cellco 1, pp. 23-24)
21. The PIM was held on August 23, 2017 at the Pomfret Senior Center, and was attended by approximately thirty-five residents. Cellco sent all abutters a notification of the PIM and published a notice in a local newspaper. At the time of the PIM, only one site on the property was proposed, referred to as Site 1A. Based on public comment received at the PIM, Cellco and the landowner discussed alternative locations on the parcel and developed two additional sites that were subsequently included in the Application, referred to as Site B and Site C. (Cellco 1, pp. 22-24, Tab 17)
22. By letter to the Council dated September 25, 2018, the Pomfret First Selectman Maureen Nicholson expressed opposition to the proposed tower, stating that it would not fit in with the rural character of the Town and that wireless service in Town is adequate. (Town of Pomfret comment letter, dated September 25, 2018)
23. Cellco did not receive any comments from officials in the Towns of Eastford or Woodstock. (Tr. 1, p. 24)
24. The proposed facility would be designed to accommodate Town or local emergency response antennas. However, to date, no emergency responders have expressed an interest in co-locating emergency services antennas at the proposed facility. (Cellco 1, p. 14; Tr. 1, pp. 20-21)

Public Need for Service

25. 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. 4 – Telecommunications Act of 1996)
26. 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 Federal Communications Commission (FCC) to provide personal wireless communication service to Connecticut. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996; Cellco 1, p. 6, Tab 5)
27. Section 253 of the Telecommunications Act of 1996 prohibits any state or local statute or regulation, or other state or local legal requirement from prohibiting or having the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)
28. Section 704 of the Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services and from prohibiting or having the effect of prohibiting the provision of personal wireless services. This section also requires state or local governments to act on applications within a reasonable period of time and to make any denial of an application in writing supported by substantial evidence in a written record. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)

29. Section 704 of the Telecommunications Act of 1996 also prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects of radio frequency emissions, which include effects on human health and wildlife, to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)
30. In February 2009, as part of the American Recovery and Reinvestment Act, Congress directed the FCC to develop a National Broadband Plan to ensure every American has “access to broadband capability.” Congress also required that this plan include a detailed strategy for achieving affordability and maximizing use of broadband to advance “consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, employee training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.” (Council Administrative Notice Item No. 20 – The National Broadband Plan)
31. Section 706 of the Telecommunications Act of 1996 requires each state commission with regulatory jurisdiction over telecommunications services to encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans, including elementary and secondary schools, by utilizing regulating methods that promote competition in the local telecommunications market and remove barriers to infrastructure investment. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)
32. In December 2009, President Barack Obama recognized cell phone towers as critical infrastructure vital to the United States. The Department of Homeland Security, in collaboration with other federal stakeholders, state, local, and tribal governments, and private sector partners, has developed the National Infrastructure Protection Plan (NIPP) to establish a framework for securing our resources and maintaining their resilience from all hazards during an event or emergency. (Council Administrative Notice Item No. 11 – Presidential Proclamation 8460, Critical Infrastructure Protection)
33. In February 2012, Congress adopted the Middle Class Tax Relief and Job Creation Act to advance wireless broadband service for both public safety and commercial users. The Act established the First Responder Network Authority to oversee the construction and operation of a nationwide public safety wireless broadband network. Section 6409 of the Act contributes to the twin goals of commercial and public safety wireless broadband deployment through several measures that promote rapid deployment of the network facilities needed for the provision of broadband wireless services. (Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012)
34. In June 2012, President Barack Obama issued an Executive Order to accelerate broadband infrastructure deployment declaring that broadband access is a crucial resource essential to the nation's global competitiveness, driving job creation, promoting innovation, expanding markets for American businesses and affording public safety agencies the opportunity for greater levels of effectiveness and interoperability. (Council Administrative Notice Item No. 22 – FCC Wireless Infrastructure Report and Order; Council Administrative Notice Item No. 12 – Presidential Executive Order 13616, Accelerating Broadband Infrastructure Development)

35. Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, also referred to as the Spectrum Act, a state or local government may not deny and shall approve any request for collocation, removal or replacement of equipment on an existing wireless tower provided that this does not constitute a substantial change in the physical dimensions of the tower. The Federal Communications Commission defines a substantial change in the physical dimensions of a tower as follows:
- a) An increase in the existing height of the tower by more than 10 percent or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater. Changes in height should be measured from the dimensions of the tower, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act.
 - b) Adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater.
 - c) Installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four, or more than one new equipment shelter.
 - d) A change that entails any excavation or deployment outside the current site.
 - e) A change that would defeat the concealment elements of the tower.
 - f) A change that does not comply with conditions associated with the siting approval of the construction or modification of the tower, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would exceed the thresholds identified in (a) – (d).
- (Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012; Council Administrative Notice Item No. 22 – FCC Wireless Infrastructure Report and Order)
36. According to state policy, if the Council finds that a request for shared use of a facility by a municipality or other person, firm, corporation or public agency is technically, legally, environmentally and economically feasible, and the Council finds that the request for shared use of a facility meets public safety concerns, the Council shall issue an order approving such shared use to avoid the unnecessary proliferation of towers in the state. (C.G.S. §16-50aa)
37. On August 3, 2018, the Council sent correspondence to other telecommunications carriers requesting that carriers notify the Council by September 11, 2018 if they are interested in locating on the proposed facility in the foreseeable future. No carriers responded to the Council's solicitation. (Record)

Existing and Proposed Wireless Services

38. Cellco's proposed tower facility, referred to by Cellco as the Pomfret Center site, would provide wireless services generally to the northwest Pomfret, northeast Eastford and southwest Woodstock areas (target service area). Cellco's wireless service objectives could be met by construction of a 150-foot tower at Sites A or B, or, due to a higher ground elevation, a 130-foot tower at Site C. (Cellco 1, pp. 6-7, Tab 1; Cellco 3, Attachment 1)
39. Cellco would initially deploy Long Term Evolution (LTE) voice and data service equipment utilizing the 700 MHz and 2100 MHz frequency bands on the proposed tower. Cellco designs its LTE network using a -95 dB Reverse Link Operational Path Loss standard for reliable in-vehicle service and -85 Reverse Link Operational Path Loss standard for reliable in-building service. (Cellco 3, response 11; Tr. 1, p. 24)

40. Propagation modeling indicates Cellco's existing 700 MHz service in the target service area is deficient, including large land areas and roadways. Deficient service on major roads includes 1.5 miles of Route 44, 1.8 miles of Route 244, and 2.1 miles of Route 198. Additionally, there is minimal 2100 MHz service in most of the surrounding area. (Cellco 1, p. 7; Cellco 3, response 14)
41. Although the site is designed to improve Cellco's coverage footprint, the proposed facility would also provide capacity relief to adjacent facilities. However, none of these adjacent facilities are currently at risk of exhausting capacity. (Cellco 3, response 13)
42. The table below indicates the projected 700 MHz coverage from each of the proposed sites:

	700 MHz Projected Service		
	Site A (150 feet)	Site B (150 feet)	Site C (130 feet)
Land Area (sq. mi.)	20	16	21
Route 44 (mi.)	1.7	1.0	2.4
Route 244 (mi)	3.6	3.0	3.0
Route 198 (mi)	3.4	2.4	2.2

Refer to Figures 3 to 6 for 700 MHz coverage models. (Cellco 1, pp. 8-9; Cellco 3, response 17)

43. All three facilities would improve coverage to Route 198, a north-south roadway west of the sites that that follows the narrow Still River valley. The topography of the area would cause some areas along the roadway to receive less than standard service. Cellco would optimize the site and adjacent sites to maximize service to these areas. (Tr. 1, pp. 28-30)
44. Of the three sites, Site C would provide the most in-vehicle service to the surrounding area due to its higher ground elevation. For example, Site C would project more to the southeast, offering more service to Route 97, Mashamoquet Brook State Park, and the Airline State Park Greenway Trail than Sites A or B. (Cellco 3, Attachment 1, Cellco 1 1d, p. 4-18; Tr. 1, pp. 31-32, 53-54)
45. Service from Site A and Site B are essentially the same with the exception of the Route 97 area where Site A offers more service. (Cellco 3, Attachment 1; Tr. 1, pp. 31-33, 53-54)
46. Although 2100 MHz service from the sites appears limited, it would facilitate the deployment of carrier aggregation technology which expands customer bandwidth, thus enhancing Cellco's voice and data services. The customer can simultaneously receive signals from multiple frequencies, in this case, the 700 MHz and 2100 MHz frequencies, thus expanding the amount of transmitted data. Refer to Figures 7 and 8 for 2100 MHz coverage models. (Tr. 1, pp. 25-27)
47. The coverage models indicate that wireless service from the proposed site would overlap with wireless service from adjacent sites. Some of the projected service from the proposed site would be handled by these adjacent sites. Once the proposed site is activated, the site and adjacent existing sites would be optimized to maintain operational network performance. (Cellco 3, response 17)

48. Cellco’s proposed facility would interact with adjacent existing tower facilities identified in the following table:

Cellco Site Designation	Site Address	Distance/direction from Proposed Sites	Antenna Height (agl)
Pomfret East	398 Pomfret Street, Pomfret	4.3 miles east	157 feet
Brooklyn West	118 Grant Hill Road, Brooklyn	7.9 miles south	117 feet
Ashford Relo	353 Pumpkin Hill Road, Ashford	5.9 miles southwest	240 & 248 feet
Ashford North	174 Ashford Center Road, Ashford	6.1 miles southwest	120 feet
Eastford-	35 Old Route 44, Eastford	2.8 miles southwest	190 feet
Westford	264 Janoski Road, Ashford	8.7 miles northwest	180 feet
Union West	1050 Buckley Highway, Union	8.7 miles northwest	150 feet
Woodstock NW	40 Sherman Road, Ashford	5.8 miles northwest	137 feet
Coatney Hill	at 215 Coatney Hill Road, Woodstock	4.0 miles north	167 feet
Woodstock Relo	87 West Quassett Road, Woodstock	2.9 miles northwest	149 feet

These existing Cellco facilities surrounding the proposed site cannot provide adequate service to the target service area. (Cellco 1, pp. 10-11, 13; Cellco 3, response 19)

Site Selection

49. Cellco established a search ring for its Pomfret Center facility in January 2009. Cellco identified the subject property as suitable for tower development and began the application process. Cellco then put the proposed site on hold in May 2010. Cellco reactivated the proposed site in December 2016. (Cellco 1, Tab 8)
50. There are no other existing towers or other sufficiently tall structures available within Cellco’s search area. (Cellco 1, p. 13, Tab 8)
51. After determining there were no suitable structures within the search area, Cellco searched for properties suitable for tower development. The large size of the 72 Ragged Hill Road site property - 627 acres - allowed Cellco to investigate numerous locations for a tower site. Of the locations investigated, three were ultimately selected as suitable sites and were submitted in the application to the Council. (Cellco 1, pp. 13-14; Cellco Tab 8)
52. Cellco investigated 14 different sites, including 8 sites on the subject parcel. Of these, three sites on the subject parcel were selected for potential tower development. The 11 rejected sites and the reasons for their rejection are as follows:
- a) 63 Firetower Road, Pomfret – existing lattice tower would require replacement. Also site would not be able to connect to Cellco’s Woodstock North facility.
 - b) 187 Firetower Road, Pomfret – site would not be able to connect to Cellco’s Woodstock NW facility.
 - c) Swedetown Road, Pomfret – This parcel is located northwest of the site property. Site was rejected Cellco RF engineers because it is located too far to the north of Route 244.

- d) Angle Road, Pomfret – This parcel is located east of the site property and contains wetland areas that limit site development. Site was rejected by Cellco RF engineers because it would not be able to connect to Cellco’s Eastford facility.
- e) 665 Brayman Hollow Road, Pomfret – Available site on property is adjacent to developed residential areas and thus would have greater visual impact than the proposed sites.
- f) 326 Taft Pond Road, Pomfret – site would not be able to connect to Cellco’s Woodstock North facility.
- g) 72 Ragged Hill Road, Pomfret (5 sites) – five other sites on the parcel were examined and rejected due to wetland crossings and/or deficient coverage.
(Cellco 1, Tab 8)

53. While it is technically possible to utilize small cells or a distributed antenna system to provide the required wireless service to be provided by the proposed tower, it would be difficult to penetrate some of the dense residential areas to the west and northwest as it would require the installation of nodes and antennas on private residential lots and/or apartment complexes. Thus, the proposed macro-cell tower site would be the most efficient and cost effective means of enhancing wireless service in the area. (Cellco 1, pp. 12-13; Cellco 3, response 16)

Site Property Description

- 54. The site property consists of a 627-acre parcel owned by Raynham, Inc. that is currently used for residential and agricultural purposes. Most of the property is forested and logging roads extend through the property. (Cellco 1, p. i, Tab 1)
- 55. The property has road frontage along Swedetown Road and Ragged Hill Road to the west, Brayman Hollow Road to the south, and a section of Quarry Road to the north. (Cellco 1, Tab 1, Tab 8)
- 56. The property and surrounding area is zoned Rural Residential. (Cellco 1, Bulk File b –Town Zoning Map)
- 57. The Property is surrounded by residential and agricultural uses and other undeveloped wooded land. (Cellco 1, Tab 1, Tab 9)
- 58. All three proposed sites (A, B & C) are located in the western portion of the parcel, near the intersection with Ragged Hill Road and Swedetown Road (refer to Figure 9). (Cellco 1, Tab 1)
- 59. All three proposed sites would be accessed from an existing logging road that extends east into the parcel from Swedetown Road. The logging road access on Swedetown Road is approximately 600 feet north of the Ragged Hill Road intersection. (Cellco 1, Tab 1)
- 60. The existing logging road would be improved as necessary, by adding gravel and base material to create a stable surface. (Cellco 1, p. 7, Tab 1; Tr. 1, p. 13)
- 61. Utilities to all three sites would be installed underground from a new utility pole to be installed at the logging road entrance on Swedetown Road. The exact placement of the wood pole would be coordinated with the local utility company. (Cellco 1, Tab 1)

Facility Description – Proposed Site A

62. Proposed Site A is located in a wooded area approximately 260 feet east of Swedetown Road, which is also the distance to the nearest property line. (Cellco 1 p. 7, Tab 1; Cellco 2, response 31)
63. The nearest off-site residence is 420 feet southwest of the proposed site. (Cellco 1, Tab 1)
64. Two residences are within 1,000 feet of the proposed site. (Cellco 1, Tab 1)
65. The proposed tower consists of a 150-foot monopole, approximately 50 inches wide at the base tapering to 24 inches wide at the top. It would be capable of supporting multiple wireless carriers and a 20-foot extension. (Cellco 1, p. 20, Tab 1)
66. The tower site is located at an elevation of approximately 820 feet above mean sea level (amsl). (Cellco 1, Tab 1)
67. Cellco would install six panel antennas and six remote radio heads on an antenna platform at a centerline height of 150 feet above ground level (agl). (Cellco 1, p. 7, Tab 1)
68. A 50-foot by 50-foot fenced equipment compound within a 100-foot by 100-foot lease area would be established at the base of the tower, enclosed by an eight-foot tall chain link fence. (Cellco 1, Tab 1)
69. Cellco would install equipment cabinets and an emergency generator on a 16-foot by 10-foot concrete pad, covered by a metal canopy. (Cellco 1, p. 7, Tab 1)
70. Vehicle access to the compound would follow the existing logging road for 140 feet, then follow a new 12-foot wide, 120-foot long gravel drive extending southeasterly to the compound. (Cellco 1, p. 7, Tab 1)

Facility Description – Proposed Site B

71. Proposed Site B is located in a wooded area approximately 570 feet due east of Swedetown Road. The nearest property line is 530 feet to the west. (Cellco 1, p. 8, Tab 1, Tab 9)
72. The nearest off-site residence is 850 feet southwest of the proposed site. (Cellco 1, Tab 1)
73. One residence is within 1,000 feet of the proposed site. (Cellco 1, Tab 1)
74. The proposed tower consists of a 150-foot monopole, approximately 50 inches wide at the base tapering to 24 inches wide at the top. It would be capable of supporting multiple wireless carriers and a 20-foot extension. (Cellco 1, pp. 7, 20, Tab 1)
75. The tower site is located at an elevation of approximately 816 feet amsl. (Cellco 1, Tab 1)
76. Cellco would install six panel antennas and six remote radio heads on an antenna platform at a centerline height of 150 feet agl. (Cellco 1, p. 7, Tab 1)
77. A 50-foot by 50-foot fenced equipment compound within a 125-foot by 80-foot lease area would be established at the base of the tower, enclosed by an eight-foot tall chain link fence. (Cellco 1, Tab 1)
78. Cellco would install equipment cabinets and an emergency generator on a 16-foot by 10-foot concrete pad, covered by a metal canopy. (Cellco 1, p. 7, Tab 1)

79. Vehicle access to the compound would follow the existing logging road for approximately 625 feet to a new 12-foot wide, 50-foot long gravel drive extending east to the compound. (Cellco 1, p. 8, Tab 1)

Facility Description – Proposed Site C

80. Proposed Site C is located in a wooded area approximately 1,300 feet due east of Ragged Hill Road. The nearest property line is approximately 1,000 feet to the southwest. (Cellco 1, p. 9, Tab 1, Tab 9)
81. The nearest off-site residence is 1,500 feet southwest of the proposed site. (Cellco 1, Tab 1)
82. No residences are within 1,000 feet of the proposed site. (Cellco 1, Tab 1)
83. The proposed tower consists of a 130-foot monopole, approximately 50 inches wide at the base tapering to 24 inches wide at the top. It would be capable of supporting multiple wireless carriers and a 20-foot extension. (Cellco 1, pp. 7, 20, Tab 1)
84. The tower site is located at an elevation of approximately 833 feet amsl. (Cellco 1, Tab 1)
85. Cellco would install six panel antennas and six remote radio heads on an antenna platform at a centerline height of 130 feet agl. (Cellco 1, p. 7, Tab 1)
86. A 50-foot by 50-foot fenced equipment compound within a 100-foot by 100-foot lease area would be established at the base of the tower, enclosed by an eight-foot tall chain link fence. (Cellco 1, Tab 1)
87. Cellco would install equipment cabinets and an emergency generator on a 16-foot by 10-foot concrete pad, covered by a metal canopy. (Cellco 1, p. 7, Tab 1)
88. Vehicle access to the compound would follow the existing logging road for approximately 2,000 feet to a new 12-foot wide, 20-foot long gravel drive extending east to the compound. (Cellco 1, p. 8, Tab 1)
89. Cellco examined the possibility of using an alternative access route to Site C that would take a more direct, eastward approach from Ragged Hill Road than the current proposed access, but ultimately rejected this potential access route due to an extensive wetland crossing that would be required. Additionally, the landowner did not want this area of the property encumbered by a long-term lease that could be detrimental to any potential future subdivision plans. (Tr. 1, pp. 58-60)

Project Cost

90. Cellco would recover the costs of the construction and operation of the site through the customer price of its services on a national level. (Cellco 3, response 2)

91. The estimated cost of each proposed facility is:

	Site A	Site B	Site C
Radio equipment	150,000	150,000	150,000
Tower	60,000	60,000	60,000
Generator	60,000	60,000	60,000
Site Prep & Construction	250,000	300,000	480,000
TOTAL	\$520,000	\$570,000	\$750,000

(Cellco 1, p. 26)

92. The significant additional cost to develop a facility at Site C is largely due to the long access drive that must be developed, including a crossing through a wetland that would require mitigation measures as well as a specialized design. The extension of the utility run by almost 2,000 feet also adds significant cost to the project. (Tr. 1, pp. 70-71)

Public Safety

93. The Wireless Communications and Public Safety Act of 1999 (911 Act) was enacted by Congress to promote and enhance public safety by making 9-1-1 the universal emergency assistance number, by furthering deployment of wireless 9-1-1 capabilities, and by encouraging construction and operation of seamless ubiquitous and reliable networks for wireless services. (Council Administrative Notice Item No. 6 - Wireless Communications and Public Safety Act of 1999)
94. The proposed facilities would be in compliance with the requirements of the 911 Act and would provide Enhanced 911 services. (Cellco 1, p. 5)
95. Wireless carriers have voluntarily begun supporting text-to-911 services nationwide in areas where municipal Public Safety Answering Points (PSAP) support text-to-911 technology. Text-to-911 will extend emergency services to those who are deaf, hard of hearing, have a speech disability, or are in situations where a voice call to 911 may be dangerous or impossible. However, even after a carrier upgrades its network, a user's ability to text to 911 is limited by the ability of the local 911 call center to accept a text message. The FCC does not have the authority to regulate 911 call centers; therefore, it cannot require them to accept text messages. (Council Administrative Notice Item No. 21 – FCC Text-to-911: Quick Facts & FAQs)
96. Cellco's facilities would be capable of supporting text-to-911 service as soon as the PSAP is capable of receiving text-to-911. However, no PSAPs in the vicinity of the proposed tower sites are able to accept text-to-911 service at this time. (Cellco 3, response 23)
97. Pursuant to the Warning, Alert and Response Network Act of 2006, "Wireless Emergency Alerts" (WEA) is a public safety system that allows customers who own certain wireless phone models and other enabled mobile devices to receive geographically-targeted, text-like messages alerting them of imminent threats to safety in their area. WEA complements the existing Emergency Alert System that is implemented by the FCC and FEMA at the federal level through broadcasters and other media service providers, including wireless carriers. Cellco's facilities would comply with the intent of the WARN Act. (Council Administrative Notice No. 5 – FCC WARN Act; Cellco 3, response 24)
98. Pursuant to C.G.S. §16-50p(a)(3)(G), the towers would be constructed in accordance with the current governing standard in the State of Connecticut. (Cellco 3, response 4)
99. The tower radius for each site would remain within the boundaries of the subject property. (Cellco 1, Tab 1)
100. None of the proposed towers would constitute an obstruction or hazard to air navigation and would not require any obstruction marking or lighting. The CAA requested that Cellco coordinate the project with two nearby private airports. Cellco has contacted the owners of each airport to notify them about the proposed project. Project plans were also sent to each airport owner. (Cellco 1, pp. 24-25; Tr. 1, pp. 21-24)

101. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of Cellco's proposed antennas at any of the three sites is less than 30 percent of the standard for the General Public/Uncontrolled Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed tower (21.8 percent for Sites A and B, 29.0 percent for Site C). 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 in a sector 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, Tab 15; Council Administrative Notice Item No. 2 – FCC OET Bulletin No. 65)

Emergency Backup Power

102. In response to two significant storm events in 2011, Governor Malloy formed a Two Storm Panel (Panel) that was charged with an objective review and evaluation of Connecticut's approach to the prevention, planning and mitigation of impacts associated with emergencies and natural disasters that can reasonably be anticipated to impact the state. (Final Report of the Two Storm Panel, Council Administrative Notice Item No. 46)
103. In response to the findings and recommendations of the Panel, and in accordance with C.G.S. §16-50//, the Council, in consultation and coordination with the Department of Energy and Environmental Protection, the Department of Emergency Services and Public Protection and the Public Utilities Regulatory Authority (PURA), studied the feasibility of requiring backup power for telecommunications towers and antennas as the reliability of such telecommunications service is considered to be in the public interest and necessary for the public health and safety. The study was completed on January 24, 2013. (Council Administrative Notice Item No. 26 – Council Docket No. 432)
104. The Council reached the following conclusions in the study:
- a) "Sharing a backup source is feasible for Commercial Mobile Radio Service providers, within certain limits. Going forward, the Council will explore this option in applications for new tower facilities;" and
 - b) "The Council will continue to urge reassessment and implementation of new technologies to improve network operations overall, including improvements in backup power."
- (Council Administrative Notice Item No. 26 – Council Docket No. 432)
105. Cellco proposes to install a 30-kilowatt diesel-fueled generator for its own use. It could run for approximately 130 hours under normal cell tower loading conditions. A battery unit would also be installed that can provide up to 8 hours of emergency power in the event the diesel-fueled generator does not start or runs out of fuel. (Cellco 5)
106. If another carrier seeks to locate on the tower in the future, Cellco would be amenable for that carrier to upgrade the existing single entity emergency generator to a shared generator. (Cellco 3, response 27)
107. The emergency power generator would have a double-walled fuel tank with remote alarm to protect against fuel leakage. Also, the generator has a secondary containment basin to collect any oil or coolant leaks. (Cellco 3, response 28)
108. The generator would be remotely tested and monitored on a bi-weekly basis to ensure proper operation. (Cellco 3, response 26)

109. According to R.C.S.A. §22a-69-1.8, noise created as a result of, or relating to, an emergency, such as an emergency backup generator, is exempt from the State Noise Control Regulations. Even though the emergency generator is exempt from noise control regulations, the generator would meet noise control regulatory criteria during operation. (R.C.S.A. §22a-69-1.8; Cellco 3, response 31)
110. Pursuant to R.C.S.A. §22a-174-3b, the generator would be managed to comply with DEEP's "permit by rule" criteria. Therefore, the generator would be exempt from general air permit requirements. (R.C.S.A. §22a-174-3b; Cellco 1, p. 25)

Environmental Considerations

111. No historic properties on or eligible for listing on the State or National Register of Historic Places are within a half-mile of the proposed sites. If a tower on the site parcel is approved, Cellco would send information regarding the project to the SHPO. (Cellco 1, p. 18)
112. The site parcel is within the Last Green Valley National Heritage Corridor, a 35-town area located in northeast Connecticut and south-central Massachusetts, established by Congress 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 be visible or have any direct effect on any identified heritage area resource. (Council Administrative Notice Item No. 64; Tr. 1, pp. 40-41)
113. Development of any of the three proposed sites would require the removal of three to six trees with a diameter of six inches or greater at breast height. Some overhanging tree branches may need to be trimmed to upgrade the existing logging road to the sites. (Cellco 1, Tab 1; Tr. 1, p. 14)
114. Connecticut is within the range of the northern long-eared bat (NLEB), a federally-listed threatened species and state-listed endangered species. There are no known NLEB hibernacula or known maternity roost trees near the project area and thus the proposed facility is not likely to adversely impact the NLEB. The United States Fish and Wildlife Service (USFWS) did not respond to the Cellco NLEB submittal, and in accordance with USFWS rules, the project site is thus deemed in compliance and no further action is necessary. (Cellco 1, p. 17, Tab 10)
115. According to DEEP's Natural Diversity Database, development of the proposed sites would not negatively impact any state-listed species. (Cellco 1, Tab 10)
116. The site parcel is located approximately 4.3 miles from the Pomfret Important Bird Area (IBA), a Connecticut Audubon Society designated area with known bird concentrations. Development of the proposed sites would have no effect on the IBA. (Cellco 1, Tab 10)
117. The design of the proposed facility would comply with USFWS guidelines for minimizing the potential impact of telecommunications towers to bird species. The guidelines recommend that towers be less than 199 feet tall, avoid the use of aviation lighting, and avoid guy-wires as tower supports, among others. (Cellco 1, Tab 10)
118. The Inland Wetlands and Watercourses Act (IWWA), C.G.S. §22a-36, *et seq.*, contains a specific legislative finding that the inland wetlands and watercourses of the state are an indispensable and irreplaceable but fragile natural resource with which the citizens of the state have been endowed, and the preservation and protection of the wetlands and watercourses from random, unnecessary, undesirable and unregulated uses, disturbance or destruction is in the public interest and is essential to the health, welfare and safety of the citizens of the state. (C.G.S. §22a-36, *et seq.*)

119. The IWWA grants regulatory agencies with the authority to regulate upland review areas in its discretion if it finds such regulations necessary to protect wetlands or watercourses from activity that will likely affect those areas. (C.G.S. §22a-42a)
120. The IWWA forbids regulatory agencies from issuing a permit for a regulated activity unless it finds on the basis of the record that a feasible and prudent alternative does not exist. (C.G.S. §22a-41)
121. There would be no direct wetland impacts through the development of the tower compound at all three sites. The Site A compound would be located ± 160 feet from the nearest wetland, the Site B compound would be located ± 140 feet from the nearest wetland, and the Site C compound would be located ± 90 feet from the nearest wetland (refer to Figure 10). (Cellco 1, Tab 11)
122. Development of the access roads to Sites A and Site B would have no direct wetland impacts. The access road to Site C passes through a wetland for 60 linear feet and extends along a wetland edge for an additional 135 feet. (Cellco 1, Tab 10, Tab 11; Tr. 1, p. 16)
123. Upgrading the logging road through the wetland area for access to Site C would include the installation of a French Mattress at the west end of the crossing. It consists of a sub-base of coarse stone and gravel material wrapped in a geotextile fabric to allow for hydraulic connection between the wetland areas on either side of the existing logging road. A culvert at the east end of the crossing would be maintained. (Cellco 1, Tab 10)
124. Improving the logging road for access to Site C would result in 1,500 square feet of permanent wetland impacts. Three vernal pools are located adjacent to the existing logging road and a fourth pool is located 175 feet south of the logging road. No disruption to the hydrology of the vernal pools is anticipated from the proposed improvements to the logging road. (Cellco 1, Tab 1, Tab 11; Tr. 1, pp. 15-18)
125. Spotted salamander and wood frog were confirmed in the three vernal pools adjacent to the existing logging road. Improvements to the logging road to Site C would occur within the VPE of three vernal pools. (Cellco 1, Tab 1, Tab 11)
126. Development of the compound at any of the three sites would not be within the vernal pool envelope (VPE) of any of the pools. (Cellco 1, Tab 11)
127. The total area of Critical Terrestrial Habitat (CTH) associated with the four identified vernal pools is ± 58 acres, which consists largely of undeveloped land. The combined vernal pool CTH is less than 1 percent developed under existing conditions. Development of the sites would increase the developed portion of the combined CTH area by 0.24 percent for Site A, 0.45 percent for Site B, and 1.07 percent for Site C. (Cellco 1, Tab 1, Tab 11)
128. Cellco would implement vernal pool Best Management Practices (BMPs) to reduce impacts to the vernal pool and vernal pool obligate species. The BMPs consist of several components including: installation of appropriate erosion controls; periodic inspection and maintenance of isolation structures; herpetofauna sweeps; contractor education and reporting. (Cellco 1, Tab 1, Tab 11)
129. The project would be constructed in compliance with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control*. (Cellco 1, Tab 10)

130. None of the three proposed sites are in areas mapped by the U.S. Department of Agriculture Natural Resource Conservation District as containing prime farmland soils. (Cellco 1, pp. 18-19)
131. Portions of the Site property are enrolled in the Public Act 490 Program as Tillable D farmland, forest land and swamp land. The exact boundaries of each tax designation are not known. The Public Act 490 designation does not restrict the development of a telecommunications facility on the property. (Cellco 3, response 8)
132. The site is located in the Federal Emergency Management Agency Zone X, an area of minimal risk for flooding. (Cellco 1, p. 21)
133. The proposed site is not within a DEEP designated Aquifer Protection Area or a public supply watershed. (Cellco 3, response 30)
134. Operation of the proposed facility would not cause any significant noise, air, or water impacts or present a hazard to human health. (Cellco 1, p. 19)
135. Stormwater along the west end of the access drive to all three proposed sites would be controlled by a subsurface stone drain located along the edge of the access drive. The drain would connect to a series of concrete galleries that would have a gravel base to allow for controlled infiltration. (Cellco 1, Tab 1)
136. Noise from normal operation of the facility would comply with state noise control regulations at the property boundaries. (Cellco 1, Tab 1)
137. Construction noise is exempt from the State of Connecticut Noise Control Regulations §22a-69-1.8(g), which includes, but is not limited to, “physical activity at a site necessary or incidental to the erection, placement, demolition, assembling, altering, blasting, cleaning, repairing, installing, or equipping of buildings or other structures, public or private highways, roads, premises, parks, utility lines, or other property.” (R.C.S.A. §22a-69-1.8(g))
138. Cellco does not anticipate the need for blasting to develop the proposed sites. (Tr. 1, pp. 19-20)
139. Site preparation and engineering would commence following Council approval of a Development and Management Plan (D&M Plan) and are expected to be completed within four weeks. Installation of the equipment is expected to take another four weeks. After the equipment installation, cell site integration and system testing is expected to require about two additional weeks. (Cellco 1, pp. 26-27)

Visibility

140. The proposed sites are located within a relatively undeveloped area with rolling terrain. Based on a visibility field reconnaissance study, the top portions of all three towers would be visible from a section of Hopkins Road, approximately 1.4 to 1.6 miles northwest of the sites. Visibility modeling also shows potential year-round visibility of all three towers from a small portion of one residential property on the south side of the Ragged Hill Road-Swedetown Road intersection (approx. 1,050 feet from Site A). (Cellco 1, Tab 9; Cellco 3, Attachment 3)
141. Generally, due to the forested nature of the site and surrounding area, seasonal views of Sites A and B would be limited to areas within 0.25 mile of the site. Both sites would also be seasonally visible from a section of Quarry Road, approximately 0.8 mile north of the sites. Site C is not expected to be seasonally visible from off-site locations (refer to Figures 11 A, B, C). (Cellco 1, Tab 9; Cellco 3, Attachment 3)

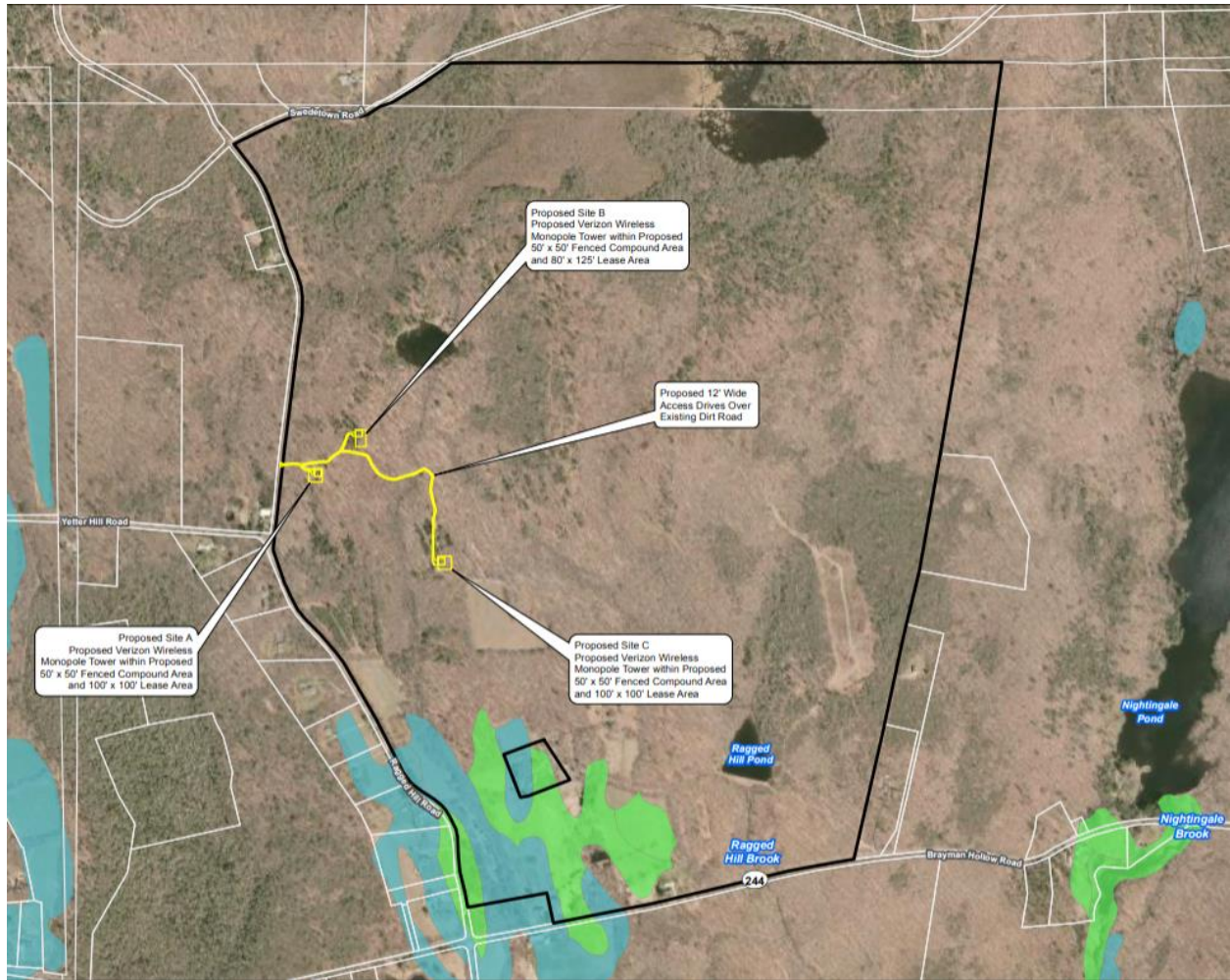
142. Portions of the Site A tower and compound would be visible through the trees from Swedetown Road west of the site and possibly from a residence near the corner of Swedetown Road and Ragged Hill Road (approx. 420 feet southwest). (Cellco 1, Tab 9; Cellco 3, Attachment 3; Tr. 1, pp. 36-38)
143. Site B would be less visible from Swedetown Road than Site A with visibility limited to portions of the tower. The tower would not be visible from the residence at the corner of Swedetown Road and Ragged Hill Road (approx. 850 feet southwest). (Cellco 1, Tab 9; Cellco 3, Attachment 3; Tr. 1, pp. 36-38)
144. Site A could be painted a brown or similar color to blend in during leaf-off conditions with the surrounding wooded landscape. (Tr. 1, pp. 39-40)
145. There are no “blue-blazed” hiking trails maintained by the Connecticut Forest and Park Association within one-mile of the site. (Council Administrative Notice Item No. 69; Applicant 1, Tab 9)
146. Pursuant to C.G.S. § 16-50p(a)(3)(F), no public schools or commercial child day care facilities are located within two miles of the site. (Cellco 1, Tab 9)
147. Connecticut State Route 244, a state designated scenic road, is located approximately 0.54 miles south of the Site C, the nearest site to this resource. None of the three sites would be visible from the designated scenic portion of Route 244. (Cellco 1, Tab 9, Bulk File 1d, p. 3-6)
148. Landscaping is not proposed at any of the three sites. (Cellco 1, Tab 1)

Figure 1 – Site Location



(Celco 1, p. ii)

Figure 2 - Site Property, Tower Locations and Surrounding Terrain



Legend






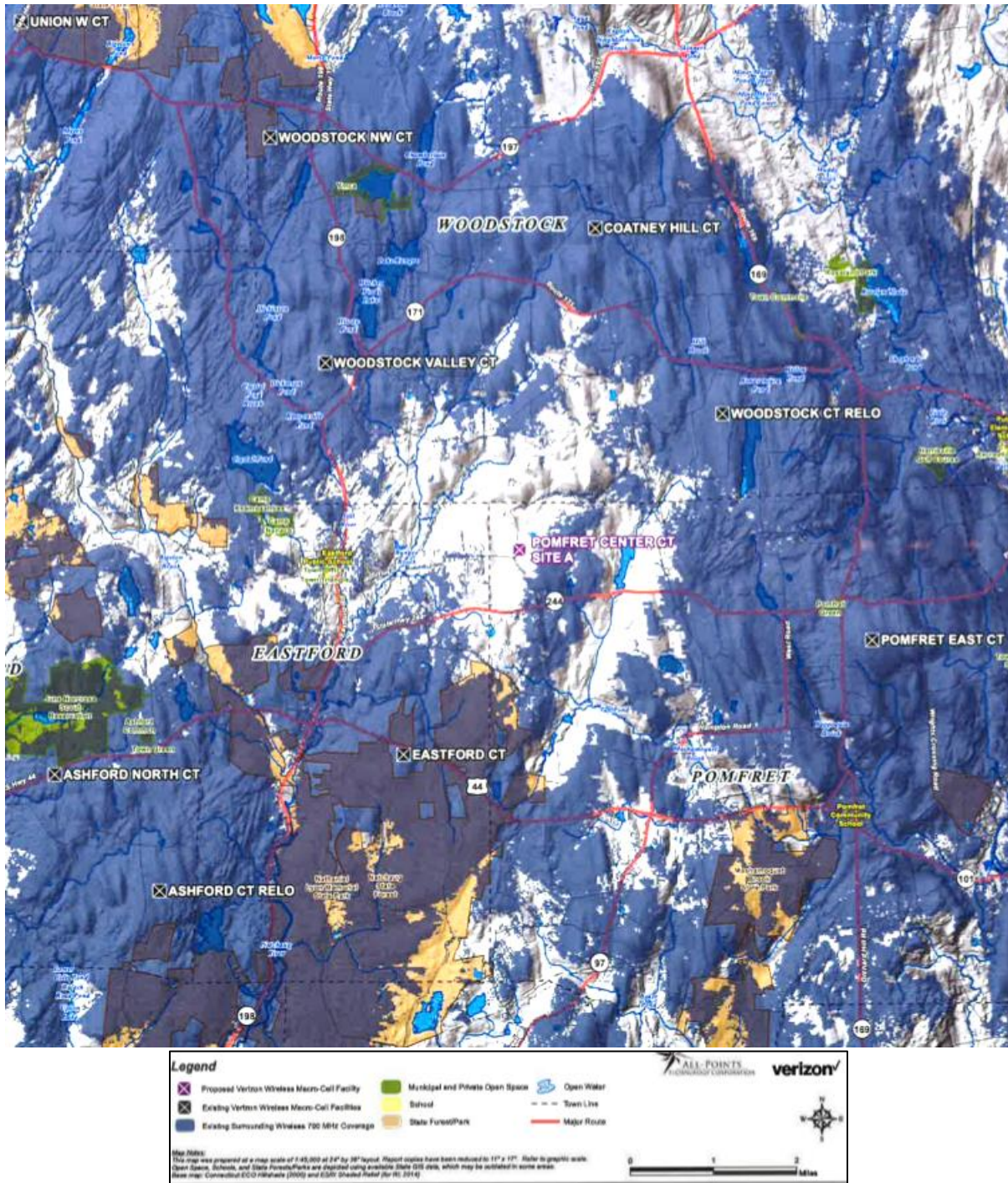
-  Proposed Verizon Wireless Facility Layout (Sites A, B, and C)
-  Approximate Subject Property
-  Approximate Parcel Boundary (CTDEEP)
-  Prime Farmland Soils
-  Statewide Important Farmland Soils

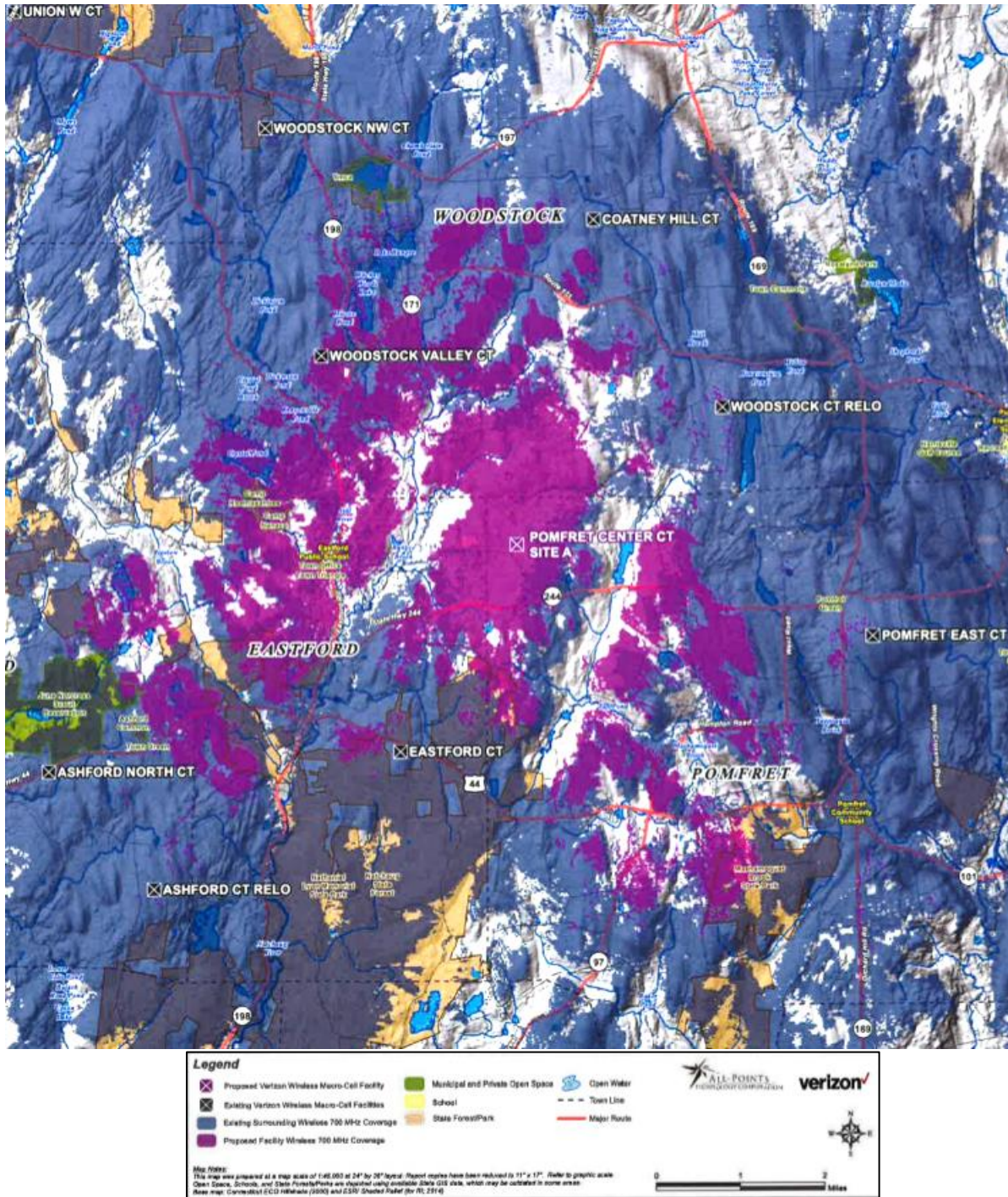


Figure 3 - Existing LTE 700 MHz Service



(Cellco 3, Attachment 1)

Figure 4 - Proposed LTE 700 MHz Service- Site A



(Cellco 3, Attachment 1)

Figure 5 - Proposed LTE 700 MHz Service- Site B

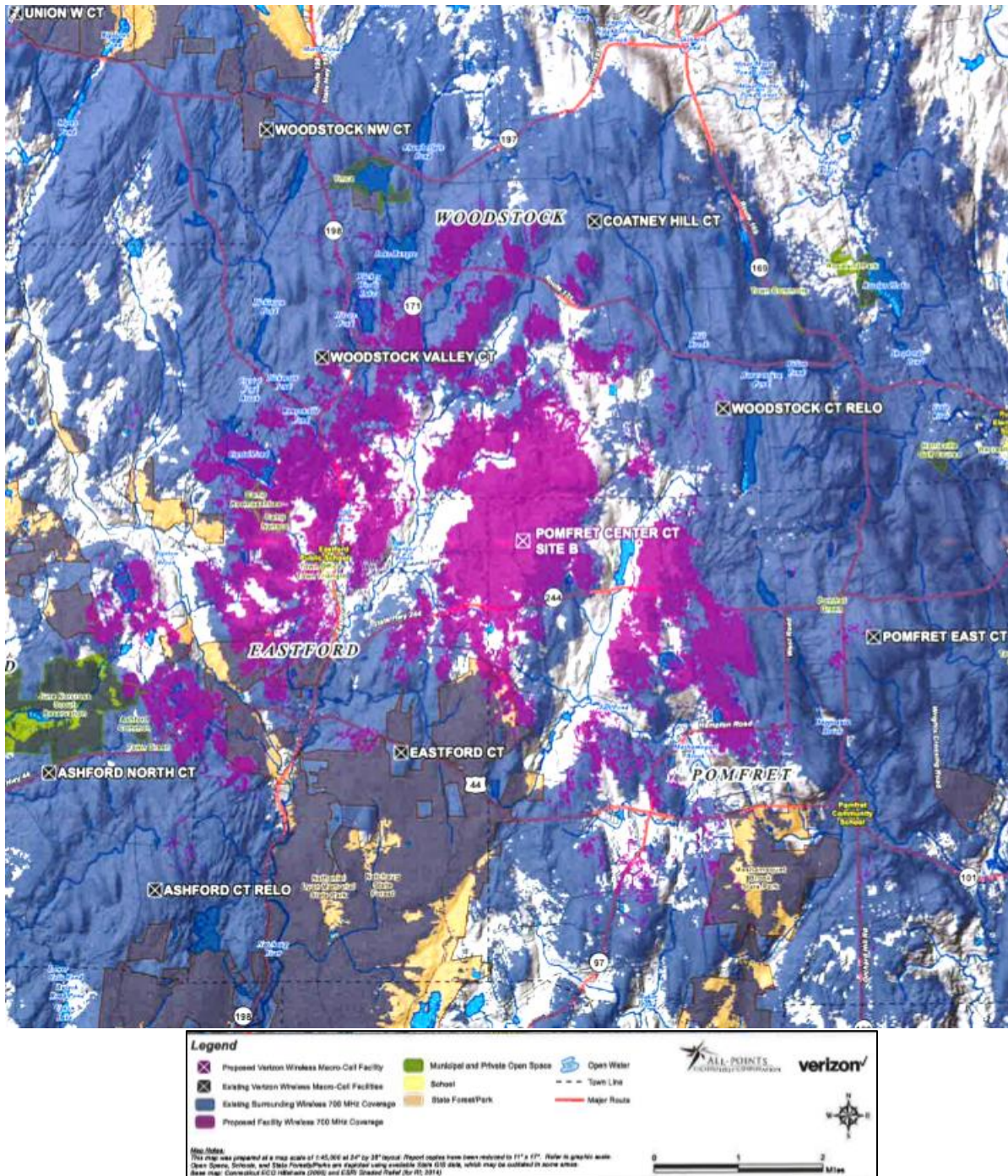


Figure 6 - Proposed LTE 700 MHz Service - Site C

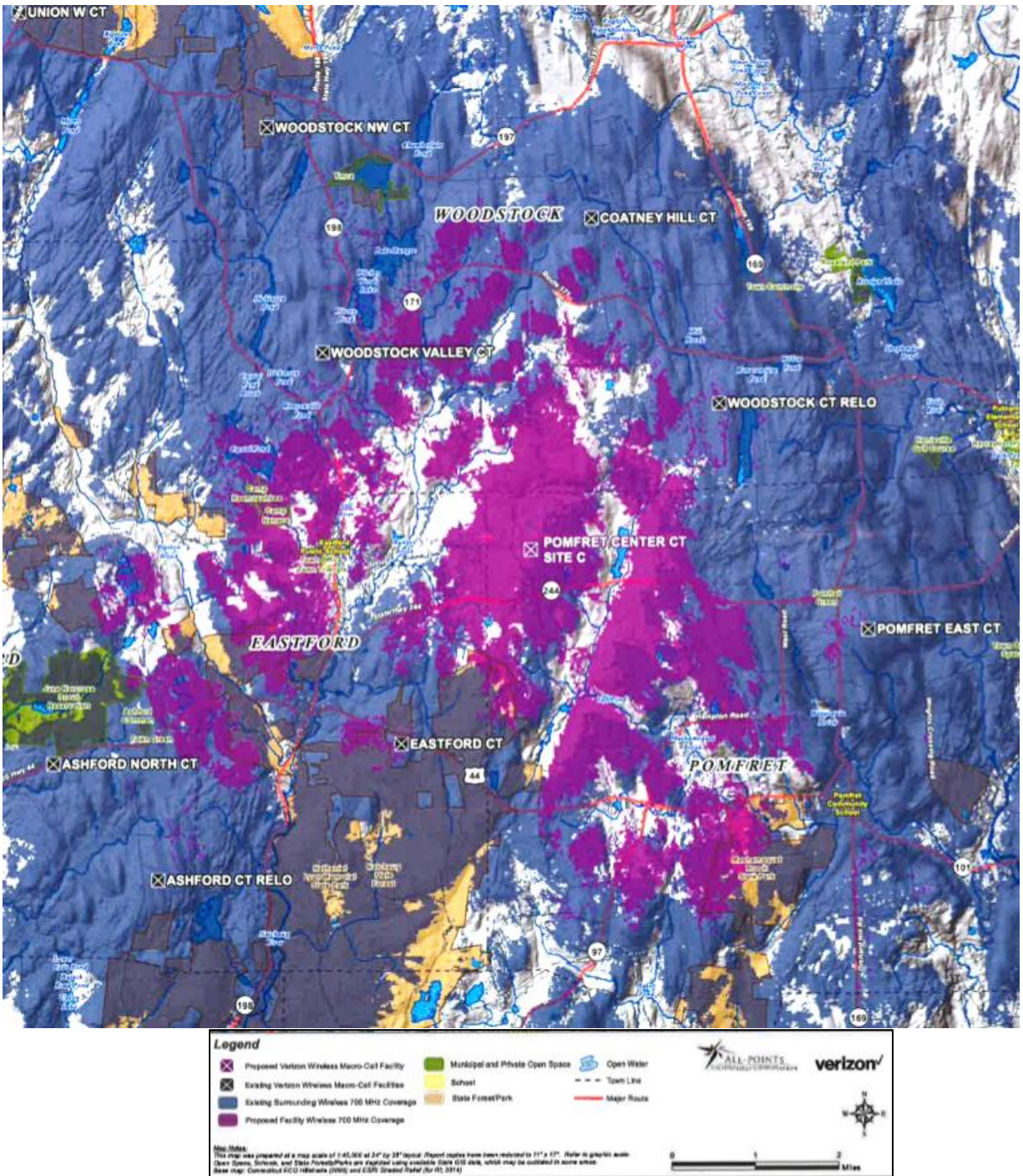


Figure 7 – Existing LTE 2100 MHz Service

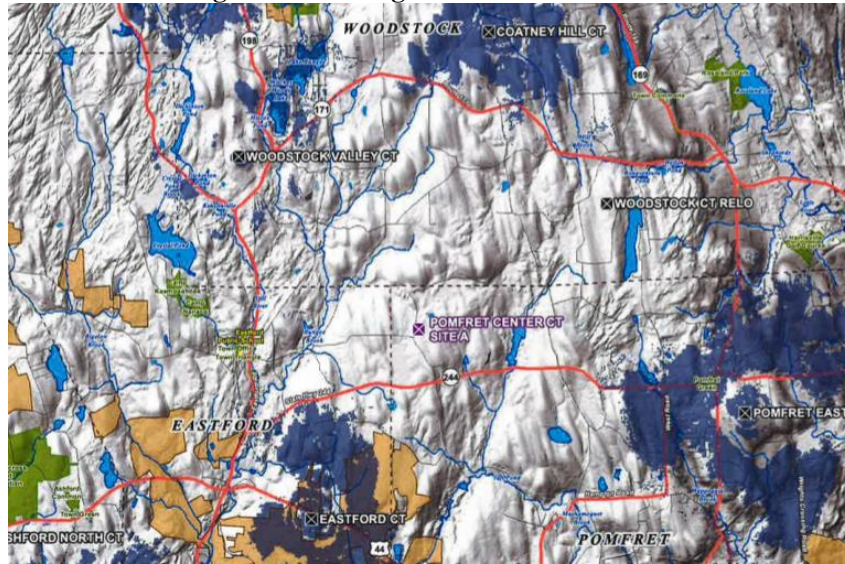
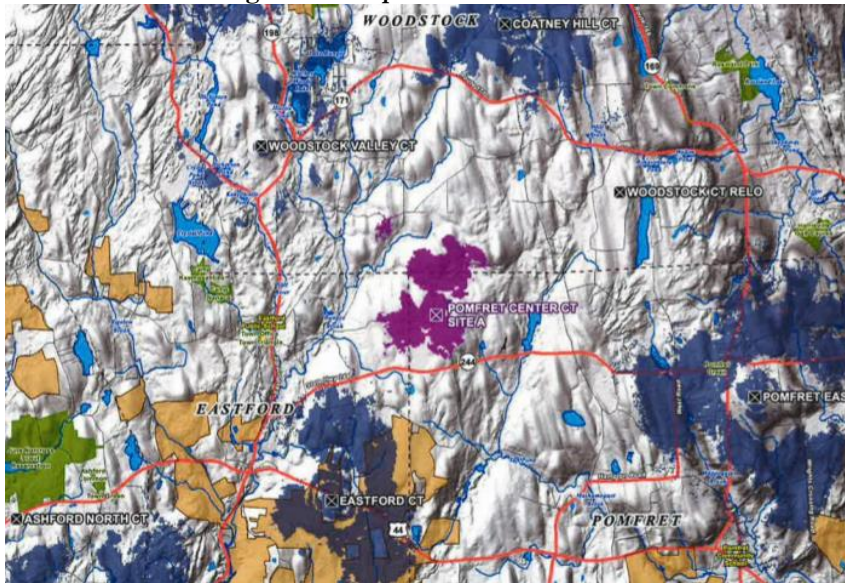
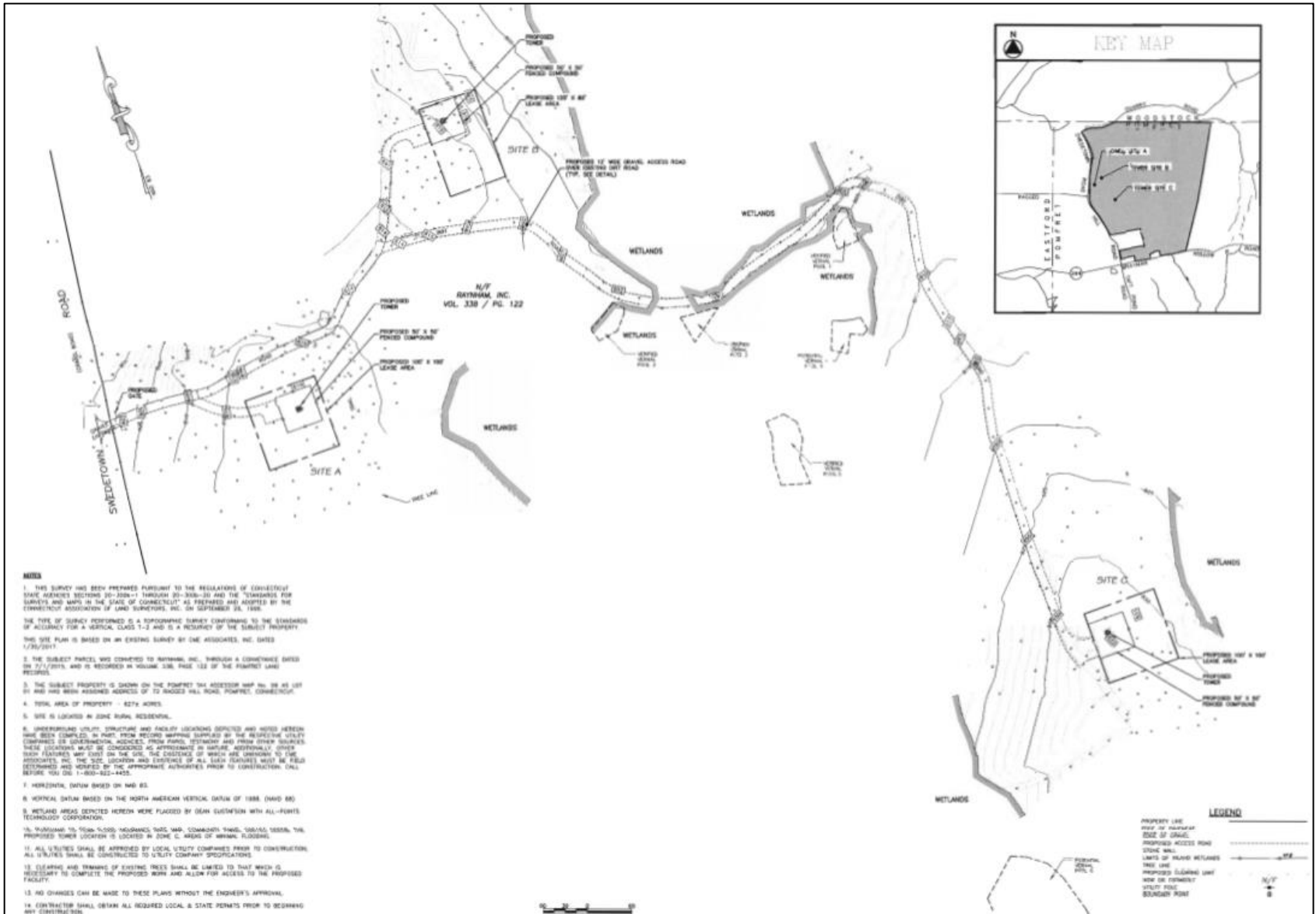


Figure 8 – Proposed LTE 2100 MHz Service *



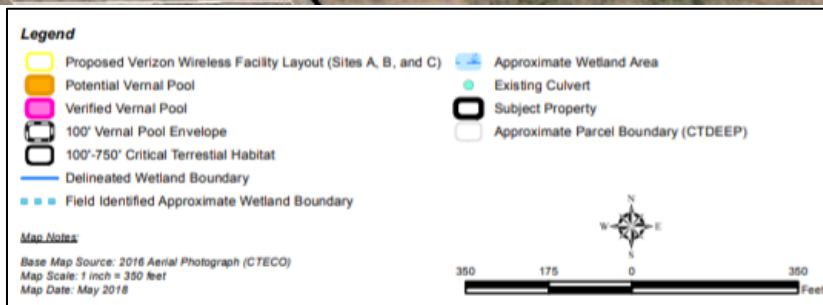
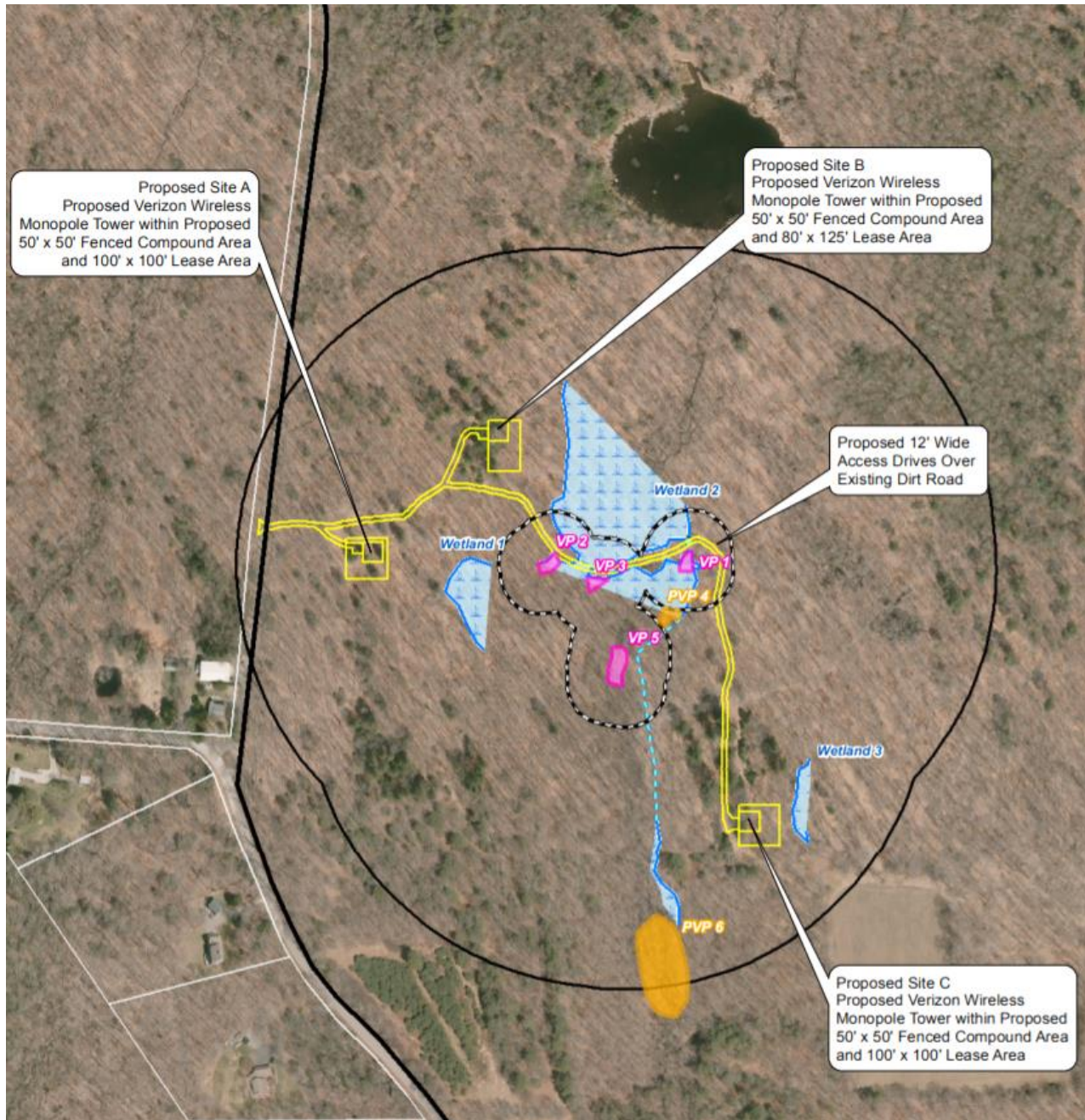
*The proposed 2100 MHz service from all three sites is similar

Figure 9 – Site Plan

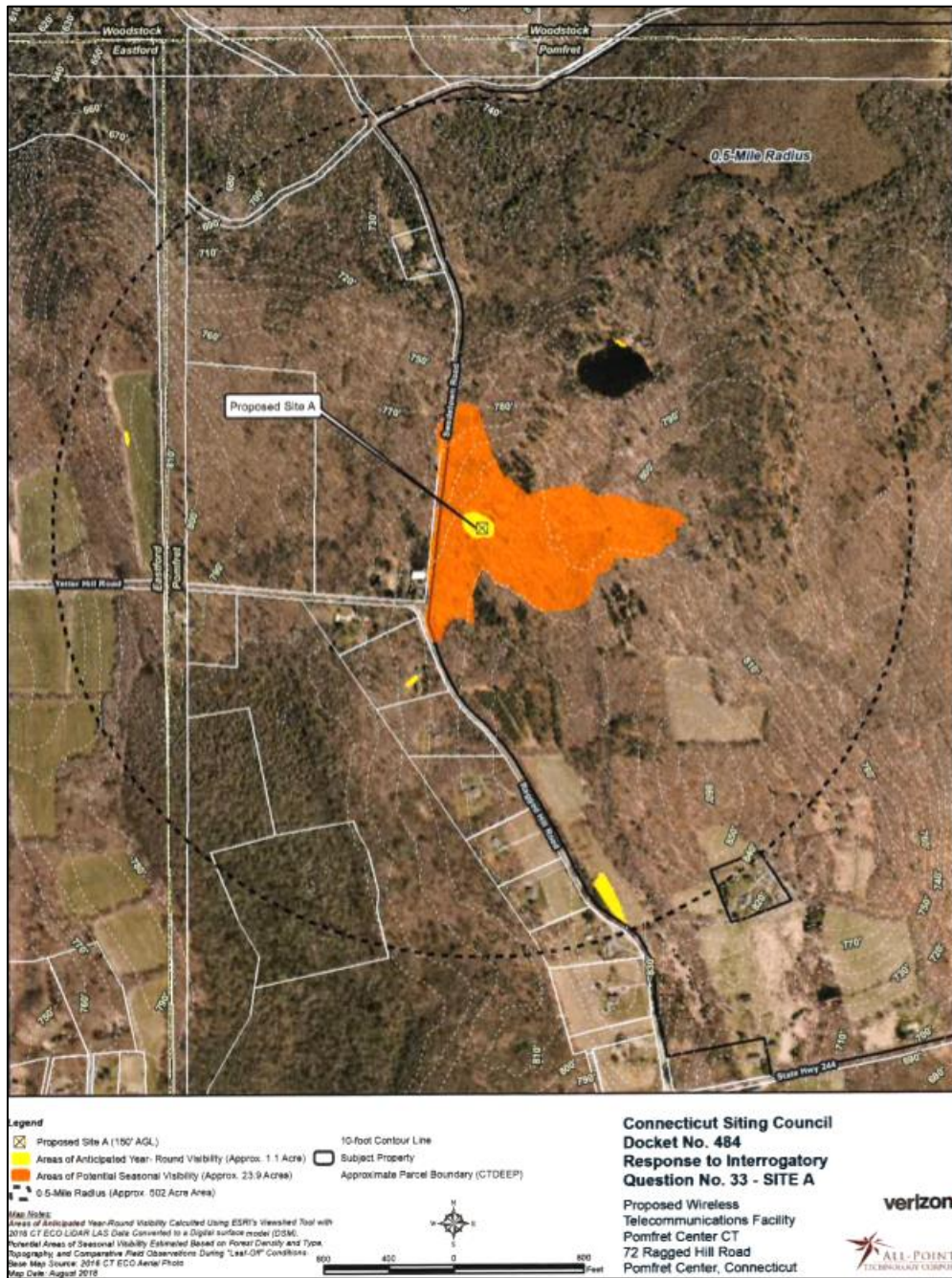


(Cellco 1, Tab 1)

Figure 10 – Site Locations and Wetland Resources

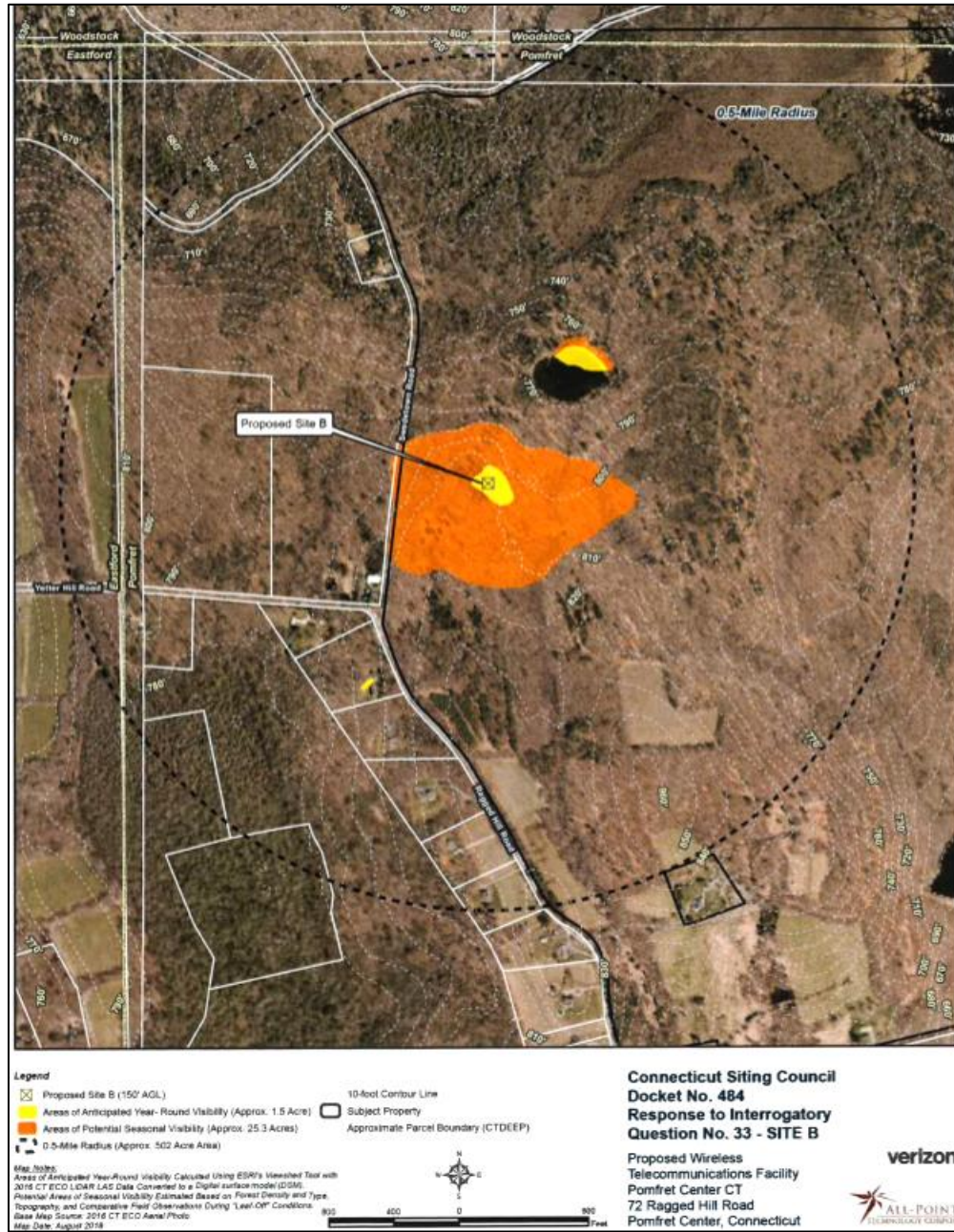


Figures 11 A, B, C – Visibility Analysis
Site A



(Cellco 3, Attachment 3)

Site B



Site C

