

<p><b>DOCKET NO. 456</b> – 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 at Plymouth Tax Assessor Map 054/065/016A-1, 33 Keegan Road, Plymouth, Connecticut.</p>	<p>} } }</p>	<p>Connecticut  Siting  Council  July 9, 2015</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 February 13, 2015 for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a 140-foot monopole wireless telecommunications facility at 33 Keegan Road in Plymouth, Connecticut (refer to Figure 1). (Cellco 1, pp. 1-2)
2. Cellco is a Delaware Partnership with an administrative office located at 99 East River Drive, East Hartford, Connecticut. (Cellco 1, p. 2)
3. The party in this proceeding is the applicant - Cellco. (Transcript 1, April 21, 2015, 3:00 p.m. [Tr. 1], p. 4)
4. The purpose of the proposed facility is to replace an existing 180-foot Cellco telecommunications facility located at 42 South Street in Plymouth, approximately 0.35 miles west-northwest of the proposed site. The proposed site would continue to provide reliable wireless service to Route 6, Route 262, and surrounding areas once the 42 South Street facility is decommissioned. (Cellco 1, pp. 6-7)
5. The 42 South Street facility was approved by the Council in 1993 in Docket 156. Cellco obtained the Docket 156 Certificate in 2008. The existing lease terminates at the end of 2018. Cellco attempted to renegotiate new lease terms with the landlord and extend the lease but could not reach an agreement. Cellco would be required to remove the tower and all associated equipment from the 42 South Street site by the end of 2018. (Cellco 1, pp. 6-7; Tr. 1, pp. 31-32; 48-50)
6. Pursuant to C.G.S § 16-50(b), Cellco published public notice of its intent to submit this application on February 9 and February 10, 2015 in *The Bristol Press*. (Cellco 2)
7. Pursuant to C.G.S § 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. Proof of service notice to two abutters was not received. Cellco resent notice to these abutters by first class mail. (Cellco 1, p. 4; Attachment 4; Cellco 3, response 1)
8. On February 13, 2015, the Applicant provided notice to all federal, state and local officials and agencies listed in C.G.S. § 16-50(b). (Cellco 1, p. 3; Attachment 2)
9. Upon receipt of the application, the Council sent a letter to the Town of Plymouth on February 17, 2015 as notification that the application was received and is being processed in accordance with C.G.S. §16-50gg. (Record)
10. During a regular Council meeting on March 5, 2015, the application was deemed complete pursuant to Connecticut Regulations of State Agencies (R.C.S.A.) § 16-50/1a and the public hearing schedule was approved by the Council. (Record)

11. Pursuant to C.G.S. §16-50m, on March 11, 2015, the Council published legal notice of the date and time of the public hearing in *The Bristol Press*. (Record)
12. Pursuant to C.G.S. §16-50m, on March 6, 2015, the Council sent a letter to the Town of Plymouth to provide notification of the scheduled public hearing and to invite the Town to participate in the proceeding. (Record)
13. In compliance with the R.C.S.A. §16-50j-21, on April 3, 2015, Cellco installed a four-foot by six-foot sign where the parcel abuts Keegan Road. The sign presented information regarding the project and the Council's public hearing. (Cellco 4)
14. The Council and its staff conducted an inspection of the proposed site on April 21, 2015, beginning at 2:00 p.m. During the field inspection, Cellco flew a balloon at the proposed site to simulate the height of the proposed tower. (Hearing Procedure Memo dated March 25, 2015; Tr. 2, p. 17)
15. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on April 21, 2015, beginning with the evidentiary portion of the hearing at 3:00 p.m. and continuing with the public comment session at 7:00 p.m. at the Plymouth Town Hall, 80 Main Street, Plymouth, Connecticut. (Council's Hearing Notice dated March 6, 2015; Tr. 1 p. 1; Transcript 2 – April 21, 2015, 7:00 p.m. [Tr. 2], p. 1)

#### **State Agency Comment**

16. Pursuant to C.G.S. § 16-50j (g), on March 6, 2015 and April 22, 2015, 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; Council on Environmental Quality; Public Utilities Regulatory Authority; Office of Policy and Management; Department of Economic and Community Development; Department of Agriculture; Department of Transportation (DOT); Connecticut Airport Authority; State Historic Preservation Office (SHPO); and Department of Emergency Services and Public Protection (DESPP). (Record)
17. The DOT responded with a written no comment letter. (DOT correspondence dated February 25, 2015)
18. No other state agencies submitted comments to the Council regarding the proposal. (Record)

#### **Municipal Consultation**

19. Pursuant to C.G.S. § 16-50j(g), on May 15, 2014 Cellco commenced the 90-day pre-application municipal consultation process by meeting with Margus Laan, Plymouth Director of Planning and Economic Development, and Charles Wiegert, Interim Director of Public Works, as designees for Mayor David Merchant. (Cellco 1, p. 20)
20. At the request of the Town, Cellco appeared before the Plymouth Planning and Zoning Commission (Commission) on July 17, 2014. At the meeting, the Commission requested that Cellco relocate the tower from its original location to increase the distance from an abutting property to the northwest. Cellco incorporated this change into the application. (Cellco 1, p. 21, Attachment 1)
21. The Plymouth Land Use Department submitted comments to the Council on May 21, 2015 expressing concern regarding the effect of site blasting on neighboring wells, and requesting that the proposed access drive have some type of barrier to prevent unwanted intrusion into the parcel. The Department of Public Works commented that the location of proposed catch basins and a retaining wall near the

road were an issue. The Town requested more detail regarding existing catch basins, drainage flow, and the slope of the driveway, when available. (Town comments of May 21, 2015)

### **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. 4)
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. Cellco is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to Connecticut wireless markets, including the proposed service area. (Council Administrative Notice Item No. 4; Cellco 1, p. 2)
24. 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)
25. 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)
26. 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)
27. 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. 19)
28. 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)
29. 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 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)
30. 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)
31. 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. 12)
32. 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% 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; Council Administrative Notice Item No. 12)
33. 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 if the Council also 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)

### **Public Safety**

34. 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)
35. Following the enactment of the 911 Act, the FCC mandated wireless carriers to provide enhanced 911 services (E911) that allow public safety dispatchers to determine a wireless caller's geographical location within several hundred feet. (Cellco 1, p. 5)
36. The proposed facility would be in compliance with the requirements of the 911 Act and would provide Enhanced 911 services. (Cellco 1, p. 5)
37. Cellco would be able to support text-to-911 services nationwide in areas where municipal Public Safety Answering Points support text-to-911 technology (PSAP). 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 No. 21; Cellco response 2)
38. 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 (EAS) that is implemented by the FCC and FEMA at the federal level through broadcasters and other media service providers, including wireless carriers. (Council Administrative Notice No. 5)
39. The tower would be constructed in accordance with the Electronic Industries Association Standard "Structural Standards for Steel Antenna Towers and Antenna Support Structures" and the 2009 State Building Code. (Cellco 1, Tab 1)
40. The proposed equipment compound would be surrounded by an eight-foot high chain-link fence with three strands of barbed wire. (Cellco 1, Attachment 1)
41. The equipment shelter would have intrusion alarms and would be monitored on a 24-hour basis. (Cellco 1, p. 8)
42. Any site blasting for construction would include pre-blast surveys of adjacent areas and coordination with the local fire marshal. (Tr. 1, pp. 20-21)

### **Existing And Proposed Wireless Services**

43. The proposed facility is designed to replace the existing 42 South Street facility located on Pine Hill, one of the taller hills in this area. The proposed site would provide reliable wireless service to a large portion of eastern Plymouth, including the Route 6 and Route 262 areas. (Cellco 1, Attachment 6; Tr. 1, p. 47)
44. Cellco determined that an antenna height of 140 feet at the proposed site would offer comparable coverage to that of its existing installation at 180 feet on the 42 South Street facility. (Cellco 1, Attachment 6; Tr. 1, pp. 51-52)

45. Since the proposed site is shorter in ground elevation and tower height than the existing 42 South Street facility, the proposed site allows Cellco to control some of the coverage overlap that exists with adjacent Cellco facilities, particularly in the Thomaston area to the west. (Cellco 1, Attachment 6; Tr. 1, pp. 51-52)
46. Using a tower height of 140 feet, Cellco proposes to install 850 MHz and 1900 MHz equipment to provide CDMA voice and data services and 700 MHz and 2100 MHz equipment to provide digital voice and data services (long-term evolution - LTE). (Cellco 1, p. 10; Attachment 6; Cellco 3, response 4; Tr. 1, pp.- 72)
47. Cellco’s design threshold for its CDMA network is -85 dBm. The LTE service design threshold is 120 dB Reverse Link Operational Path Loss (RLOPL) for a minimum reliable service footprint. (Cellco 3, response 3; Tr. 1, pp. 72-74)
48. The table below presents Cellco’s anticipated service from the proposed facility along major roads and in the surrounding area.

Frequency	Projected Service (antenna centerline 140 feet agl)		
	Length of service on Route 6	Length of service on Route 262	Service Area
700 MHz	1.4 miles	2.0 miles	19.9 square miles
850 MHz	1.4 miles	1.6 miles	12.9 square miles
1900 MHz	1.3 miles	1.9 miles	6.7 square miles
2100 MHz	1.2 miles	1.4 miles	5.6 square miles

Proposed 700 MHz service is shown in Figure 2. (Cellco 1, p. 7)

49. Cellco’s proposed facility would interact with the following Cellco facilities as part of its seamless wireless network:

Adjacent Cellco Facilities	Distance and Direction from Proposed Site
Thomaston South – 170 Mt. Tobe Road, Plymouth	2.3 miles south
Thomaston Center – 580 Chapel Street, Thomaston	1.5 miles west
Plymouth – 171 Town Hill Road, Plymouth	1.4 miles northwest
Plymouth NW – 297 North Street, Plymouth	2.2 miles north

(Cellco 1, pp. 8-9)

50. Other carriers that would locate at the proposed facility include MetroPCS at 130 feet, and New Cingular Wireless PCS LLC (AT&T), which has lease rights at 120 feet on the proposed tower. MetroPCS is a current tenant at the existing 42 South Street facility. (Cellco 3, response 11)
51. AT&T was interested in locating at the 42 South Street facility but the existing tower is not structurally adequate to support additional carriers and there is not enough ground lease space to accommodate AT&T’s equipment. AT&T would not seek to locate at the South Street site once Cellco and/or MetroPCS leave the site. (Cellco 3, response 11; Tr. 1, pp. 35-36)

**Site Selection**

52. Cellco issued a search area for a facility to replace the existing 42 South Street facility in January 2013. (Cellco 1, Attachment 8)

53. There are no existing towers or other sufficiently tall structures within the search area suitable to use as a telecommunications facility. (Cellco 1, Attachment 8)
54. In addition to the proposed site, Cellco examined three other properties in the search area for telecommunications use but determined they were not suitable, as follows:
- a) 80 Keegan Road - property is mostly pasture, lacking suitable screening vegetation;
  - b) Keegan Road Parcel 00012070 - 5.1-acre parcel has challenging topography; and
  - c) Mattatuck State Park/Forest - large State-owned forest parcels are not available for telecommunications use.
- (Council Administrative Notice Item No. 36; Cellco 1 – Attachment 8)

### **Facility Description**

55. The proposed site is located on an approximate 12.4-acre wooded parcel owned by Steven Westall. The property owner's residence is located 215 feet to the south on an abutting parcel at 41 Keegan Road. (Cellco 1, p. 18; Attachment 1 maps)
56. The property is zoned residential, R-40. (Cellco 1, Tab 1)
57. The property is located on the east side of Keegan Road. It rises at a 45-degree grade adjacent to Keegan Road before reaching more moderate grades towards the tower site. East of the tower site, the property slopes sharply downhill to the east towards Todd Hollow Brook, losing 130-150 feet of elevation. (Cellco 1, p. 18, Attachment 1, p. 2; Cellco 3, response 8; Cellco filing of May 8, 2015)
58. The proposed tower site is located on the western portion of the parcel, approximately 400 feet from Keegan Road. (Cellco 1, Attachment 1)
59. The tower site is at an elevation of 826 feet above mean sea level (amsl). (Cellco 1, Tab 1)
60. Cellco would construct a 50-foot by 50-foot equipment compound within a 100-foot by 100-foot lease area. The compound would be enclosed by an eight-foot high chain link fence. The compound would be cut into existing ledge on the north and east sides. (Cellco 1, Attachment 1)
61. Cellco would construct a 140-foot monopole within the compound, capable of supporting four levels of platform-mounted antennas. (Cellco 1, Attachment 1)
62. Cellco would install 12 antennas and associated remote radio heads on an antenna platform at the 140-foot level of the tower. The antennas would extend to a height of 143 feet above ground level (agl). (Cellco 1, Attachment 1)
63. MetroPCS would install six antennas at the 130-foot level of the tower and install equipment cabinets on a concrete pad within the compound. (Cellco 3, response 11)
64. AT&T would install up to 12 antennas at the 120-foot level of the tower and install an equipment shelter within the compound. (Cellco 3, response 11)
65. Cellco originally proposed a 525-foot access drive that went directly east from Keegan Road, perpendicular to the 45-degree slope. During the proceeding, in an attempt to reduce the amount of ledge blasting, grading and construction of extensive retaining walls to build the access drive, Cellco developed an alternative access drive plan that would enter the parcel at a 35-degree angle from Keegan Road, rising along the side of the embankment (refer to Figure 3). (Tr. 2, pp. 19-20; Cellco filing of May 8, 2015)

66. The revised access drive would extend 470 feet to the compound area. The drive would have a grade of 20 percent as it angles upward along Keegan Road before turning eastward into the interior of the parcel, rising to the compound at a grade of 10 -13 percent. (Cellco filing of May 8, 2015)
67. A 90-foot long retaining wall would be constructed along the east side of the access drive as it climbs the steep slope from Keegan Road. Rip-rap would be installed to stabilize the 2:1 side slope of the access drive. (Cellco filing of May 8, 2015)
68. Construction of the site with the revised access road would require 1,315 cubic yards of cut and 480 cubic yards of fill. Ledge outcrops on the parcel indicate shallow blasting and/or rock chipping would be necessary. (Tr. 1, pp. 17-19; Cellco filing of May 8, 2015)
69. The landlord is not amenable to using the existing paved driveway at 41 Keegan Road to access the tower site. (Tr. 1, pp. 40-44; Tr. 2, pp. 18-20)
70. The landowner would be amenable to an access road that would extend along a field area at 55 Keegan Road, a parcel owned by the landlord that extends behind 41 Keegan Road and abuts 33 Keegan Road (refer to Figure 1). This potential access would cross a wetland. To reduce environmental impact, Cellco decided not to pursue this alternative. (Tr. 1, pp. 41-44; Tr. 2, pp. 18-19)
71. Utility connections servicing the compound would be installed underground along the access drive, originating from a utility pole on Keegan Road. (Cellco 1, Attachment 1)
72. Land use within a quarter-mile of the tower site is rural residential. (Cellco 1, Attachment 1)
73. There are 11 residential dwellings within 1,000 feet of the site. The lessor's residence, 41 Keegan Road, is located 215 feet southwest of the tower site. The nearest abutting residence not owned by the landlord is at 23 Keegan Road, 400 feet northwest of the tower site. (Cellco 1, Attachment 1; Cellco 3, response 10)
74. The nearest property from the proposed tower is owned by the lessor at 41 Keegan Road, approximately 36 feet to the south. The nearest property from the tower site that is not owned by the lessor is approximately 168 feet to the northwest at 23 Keegan Road. (Cellco 1, p. 21)
75. Construction of the proposed facility would take approximately 10-12 weeks. (Cellco 1, p. 23)
76. The estimated construction cost of the proposed facility is as follows:

Tower	\$ 88,000.
Power systems	40,000.
Equipment Shelter	90,000
Radio equipment	300,000.
Blasting/retaining walls	160,000.
<u>Site prep/construction</u>	<u>360,000.</u>
Total Cost	\$1,038,000.

The above costs include the original road configuration. The cost estimate for the alternative access drive has not been developed. (Cellco 1, p. 22; Tr. 1, p. 11)



### **Emergency Backup Power**

77. 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. (Council Administrative Notice Item No. 42)
78. In accordance with CGS §16-50ll, the Council, in consultation and coordination with DEEP, DESPP and the Public Utilities Regulatory Authority, 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)
79. The Council reached the following conclusions in the study:
- a) "Sharing a backup source is feasible for CMRS [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)
80. Cellco and AT&T each propose to install separate generators for their own use. MetroPCS does not intend to have emergency backup power. (Cellco 1, Attachment 1; Cellco 3, response 11)
81. Although Cellco prefers that each tenant on the tower use its own source of backup power, Cellco would install a single generator capable of supplying emergency power to multiple carriers if ordered to do so. (Cellco 1, response 13; Tr. 1, pp. 74-75)
82. 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. (R.C.S.A. §22a-69-1.8)

### **Environmental Considerations**

83. The SHPO reviewed the project and determined the tower would have no adverse effect on resources listed in or eligible for the National Register of Historic Places (NRHP). Although the site would not be visible from any historic district or building, SHPO requested that the tower be painted to match adjacent materials. (Cellco 1, Attachment 14; Tr. 1, pp. 28-30)
84. The Plymouth Center Historic District, listed in the (NRHP), is located approximately 0.75 miles north of the tower site. The proposed tower would not be visible from the district. The existing South Street facility is visible from portions of the district. (Council Administrative Notice Item 15; Tr. 1, pp. 29-31, 37-38)
85. No wetlands are located on the site property. The nearest wetland, consisting of an unnamed perennial stream, is located 130 feet west of the property. (Cellco 1, Attachment 13)
86. The site is not within a designated Federal Emergency Management Agency flood zone. (Cellco 1, p. 20)
87. The preliminary stormwater control design for the revised access drive includes two cross swales/level spreaders along the upper portion of the access drive to divert flows off the driveway. A drainage swale would be constructed along the lower portion of the north side of the driveway. The swale would be

- lined with rip-rap and would lead to a new catch basin that would be installed by Cellco. The new catch basin would connect to an existing Town stormwater sewer system on the east side of Keegan Road. The outflow area of the existing sewer system, located on the west side of Keegan Road, would be reconstructed to account for a three percent increase in stormwater flow from the site. (Cellco filing of May 8, 2015)
88. The proposed site is in proximity to known records of the eastern box turtle, wood turtle, and whip-poor-will, all State species of special concern. Cellco would implement a Turtle Protection Program that includes DEEP-recommended construction practices to reduce impact to turtle populations during construction. To protect potential whip-poor-will nests in the site area, Cellco would avoid construction during the nesting period of May 1 to July 31. DEEP concurred with these protective measures. (Cellco 5; Cellco 6)
89. The proposed facility is not located near an Important Bird Area (IBA), as designated by the National Audubon Society. The nearest IBA to the proposed tower site is the White Memorial Foundation property in Litchfield, approximately 6.6 miles northwest of the site. Due to this long distance, the IBA would not adversely impacted. (Cellco 1, Attachment 12)
90. The proposed site is near a potential migratory flyway that follows the Todd Hollow Brook riparian corridor located 0.25 miles east of the site. The proposed facility would comply with the United States Fish and Wildlife Service guidelines for minimizing the potential for telecommunications towers to impact bird species, including a tower height less than 199 feet, no lights on the tower, and no guy wires. Recent studies have shown that towers less than 300 feet high rarely result in migratory bird collisions. (Council Administrative Notice No. 14; Cellco 1, Attachment 12)
91. The proposed site is approximately 2.4 miles northeast of a State-designated critical habitat. The habitat area consists of an acidic rocky summit and associated scrub oak woodland. (Cellco 1, Attachment 12)
92. Approximately 28 trees with a minimum diameter of six inches at breast height would be removed to develop the site, including the revised access drive. If development were to include the access drive as originally designed, 55 trees would need to be removed. (Cellco filing of May 8, 2015)
93. Throughout the construction period of the proposed facility, 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 DEEP. (Cellco 1, Attachment 13, p. 5)
94. The proposed 140-foot tower would not constitute an obstruction or hazard to air navigation and would not require any obstruction marking or lighting. (Cellco 1, p. 21)
95. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of proposed antennas operated by Cellco, AT&T and MetroPCS is 55.2 percent of the standard for the General Public/Uncontrolled 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 telecommunication carrier 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 telecommunication carriers 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. (Council Administrative Notice Item No. 2; Cellco 1, response 12)

**Visibility**

96. The proposed 140-foot tower would be visible year-round from approximately 65 acres within two miles of the site, mostly from areas along Todd Hollow Road east of the site and South Street west of the site. (Cellco 1, Attachment 9)
97. When the leaves are off the trees, generally November through April, the tower could be visible through trees from an additional 284 acres within two miles of the site. (Cellco 1, Attachment 9)
98. Approximately 11 residences within a half-mile of the site could have year-round views of the proposed facility. An additional six residences within a half-mile could have seasonal views of the facility. (Cellco 3, response 14c)
99. Potential visibility of the proposed 140-foot tower from specific locations within a two-mile radius of the site is presented in the table below:

<b>Specific Location</b>	<b>Photo location on Map*</b>	<b>Approx. Portion of Facility Visible</b>	<b>Approx. Distance &amp; Direction to Tower</b>
Park Street	1	Not visible	0.9 miles southeast
South Street	2	Seasonal - 20 feet	0.4 mile southeast
South Street	3	Year-round – 40 feet	0.3 mile southeast
South Street (near #155)	4	Year-round – 40 feet	0.1 mile southeast
South Street	5	Year-round – 65 feet	0.1 mile northeast
South Street	6	Year-round – 80 feet	0.2 mile northeast
South Street (near #211)	7	Year-round – 70 feet	0.3 mile northeast
Lakeside Drive	8	Not visible	0.7 mile northeast
West Lake Road (across lake)	9	Year-round – 15 feet	0.8 mile northeast
Hosier Road	10	Year-round – 10 feet	0.8 mile northeast
Patricia Lane	11	Not visible	1.2 mile northeast
Cedar Mountain Road	12	Not visible	1.3 mile northeast
Prospect Street	13	Not visible	0.8 mile southeast
Maple Avenue	14	Not visible	0.6 mile southeast
Todd Hollow Road	15	Year-round – 35 feet	0.6 mile southwest
Todd Hollow Road	16	Year-round – 65 feet	0.3 mile southwest
Todd Hollow Road	17	Seasonal – 55 feet	0.3 mile southwest
Todd Hollow Road	18	Year-round – 50 feet	0.2 mile southwest
Todd Hollow Road	19	Year-round – 70 feet	0.3 mile northwest
Todd Hollow Road	20	Year-round – 70 feet	0.3 mile northeast
Todd Hollow Road	21	Year-round – 70 feet	0.4 mile northwest
Todd Hollow Road (near #278)	22	Year-round – 70 feet	0.6 mile northwest
Scott Road	23	Seasonal – 55 feet	0.7 mile northwest
Keegan Road	24	Not visible	0.7 mile northwest
Keegan Road	25	Seasonal – 50 feet	0.5 mile northwest
Keegan Road (near # 87)	26	Year-round – 40 feet	0.2 mile north
Keegan Road (near # 55)	27	Year-round – 50 feet	0.1 mile north
Knight Lane	28	Year-round – 40 feet	0.6 mile west
Scott Road	29	Not visible	0.8 mile southwest
Cross Road	30	Not visible	0.9 mile west

\*Map with photo-locations attached as Figure 4. (Applicant 1, Attachment 9; Cellco 3 response 14)

100. The proposed tower would not be visible from the Mattatuck Trail, a “blue blazed” hiking trail maintained by the Connecticut Forest and Parks Association approximately 0.9 mile south of the site. (Cellco 1, Attachment 9; Council Administrative Notice Item No. 57)
101. There are no scenic roads within two miles of the site. (Cellco 1, Attachment 9)
102. Pursuant to C.G.S § 16-50p(a)(3)(G), no schools or commercial day care centers are within 250 feet of the site property. The nearest school (Plymouth Center School) and commercial day care (TPDCC Plymouth Center B/A School Program) are approximately 1.2 miles northwest of the site at 107 North Street, Plymouth. (Cellco 1, Attachment 9)
103. Cellco would be willing to construct a monopine at the site. A monopine would soften year-round views of the facility from nearby locations and from views of the facility through the trees. (Tr. 1, pp. 26-27)

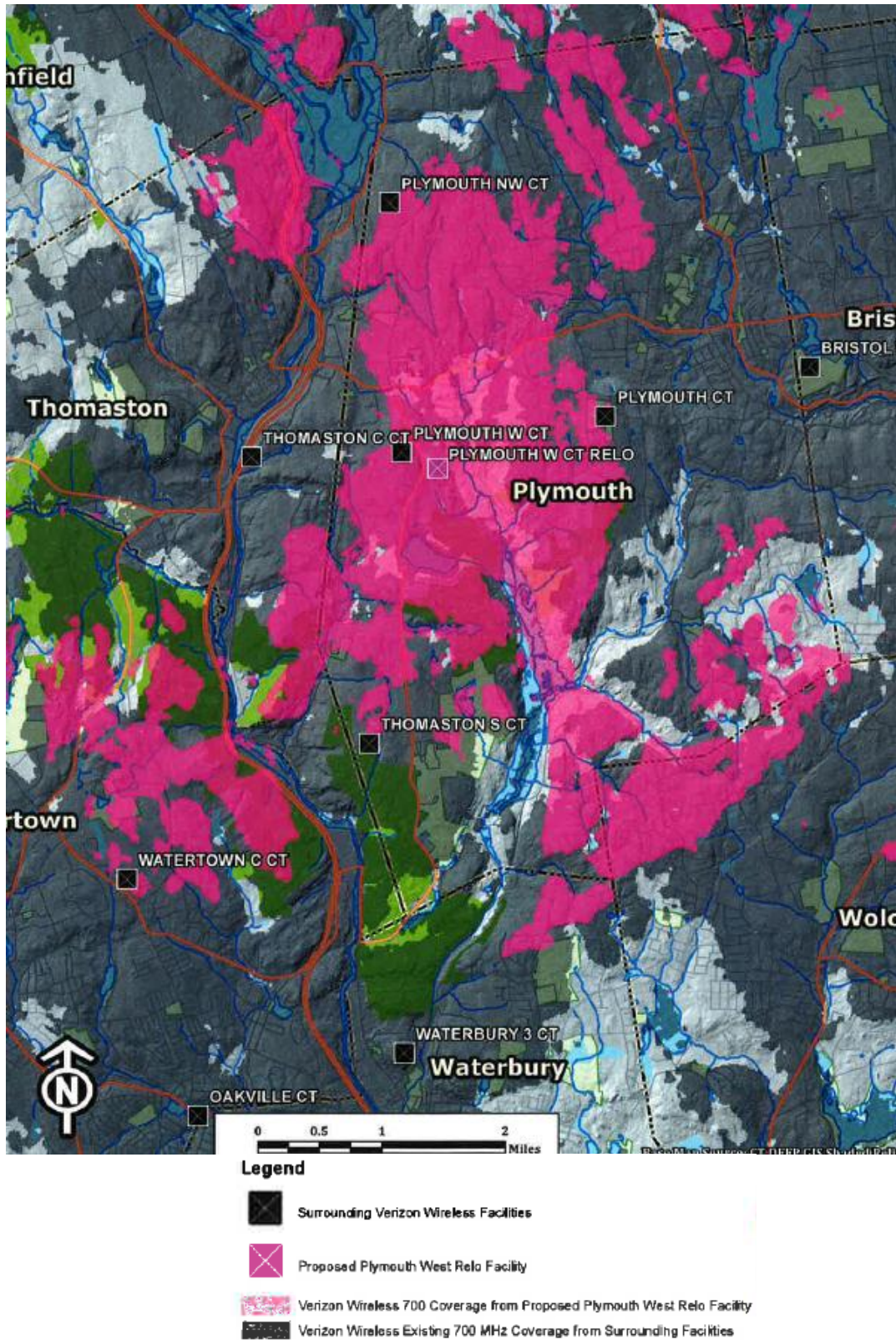
**Figure 1 – Aerial Photograph of Proposed Site Location**



(Original access drive layout shown. The alternate access drive is shown on Figure 3) (Cellco 1, p. iii)

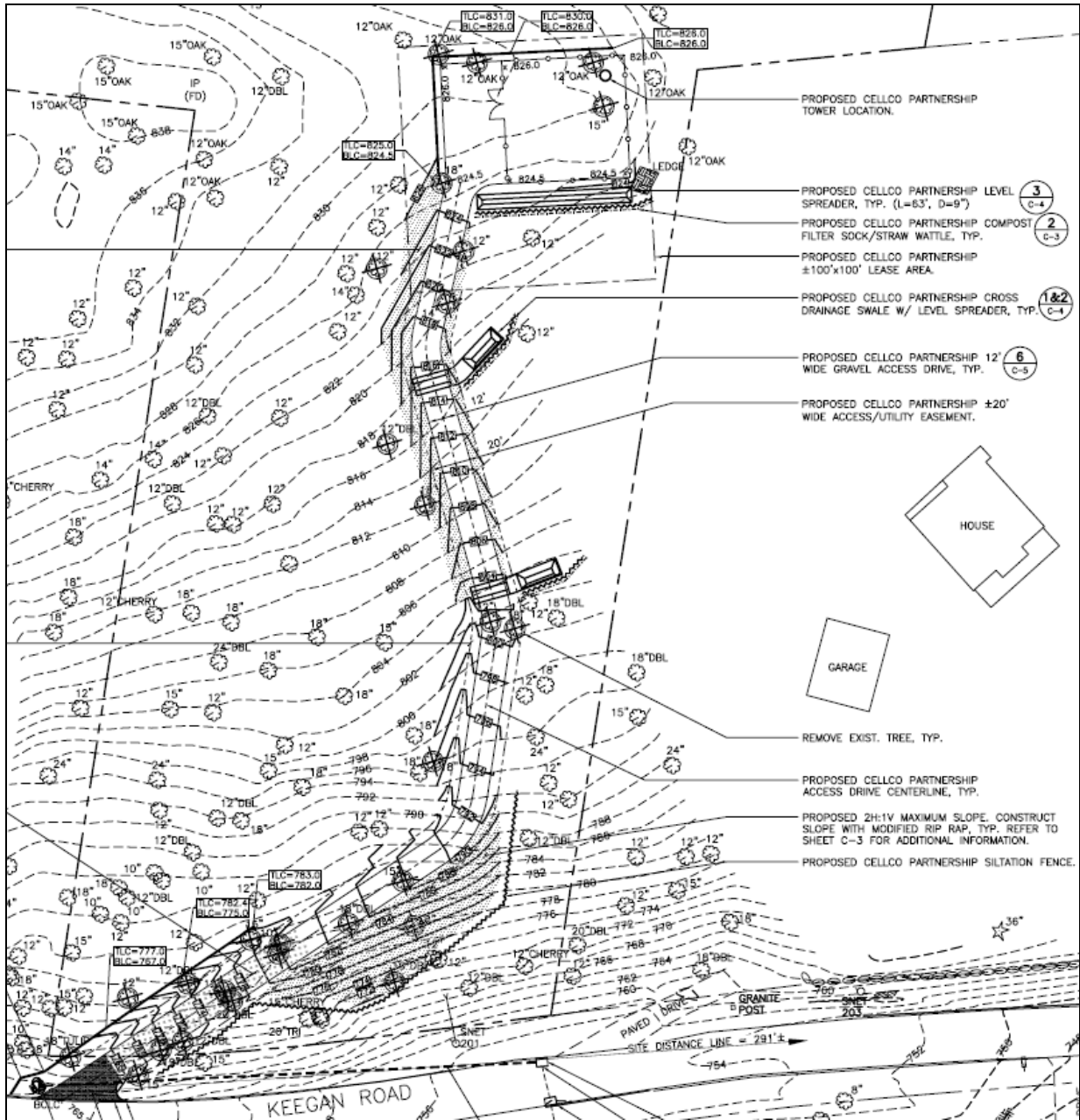


**Figure 2 – Cellco Proposed and Existing 700 MHz service**



(Cellco 1, Tab 6)

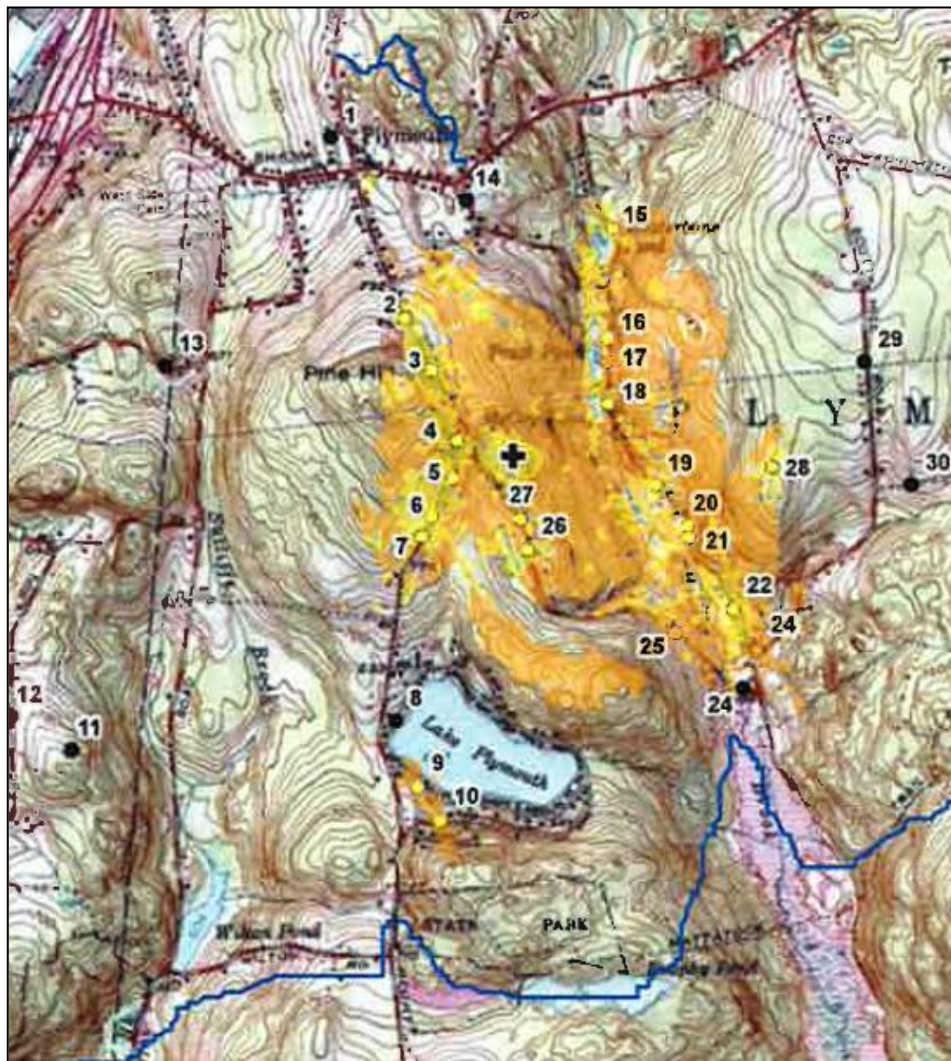
**Figure 3 – Proposed Site Plan with Revised Access Drive Layout**










Scale- 0.7" = 50' (Cellco filing of May 8, 2015)



**Figure 4 – Visibility Analysis with a Proposed Tower Height of 140 feet**



**Legend**

-  Proposed Tower Location
- Photo Locations**
-  Not Visible
-  Seasonal Views
-  Year-round Views
-  Trails
-  Predicted Seasonal Visibility (284 Acres)
-  Predicted Year-Round Visibility (65 Acres)

No scale

(Cellco 1, Attachment 9)



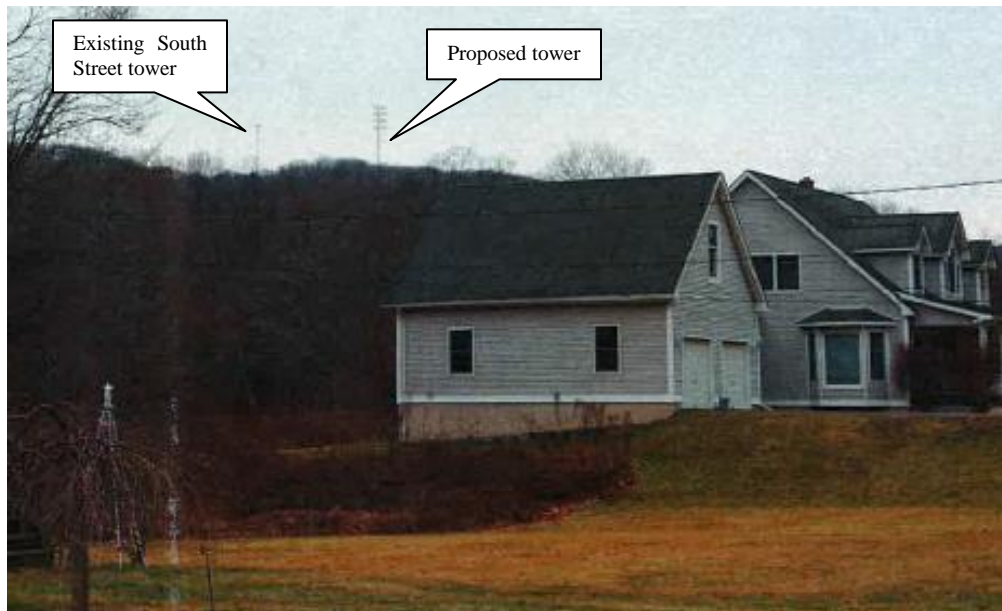
**Figure 5 – Photo-simulation of proposed tower from map location 3 – South St.**



**Figure 6 – Photo-simulation of proposed tower from map location 7 – South St.**



**Figure 7 – Photo-simulation of proposed tower from map location 22- Todd Hollow Rd.**



**Figure 8 - Photo-simulation of proposed tower from map location 26 - Keegan Rd.**

