DOCKET NO. 467 - Homeland Towers, LLC and 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 Brookfield Tax Assessor Map E10, Lot 014, 100 Pocono Road, Brookfield, Connecticut.	Connecticut Siting Council October 13, 2016

Findings of Fact

Introduction

1. Homeland Towers, LLC and Cellco Partnership d/b/a Verizon Wireless, collectively the Applicant, in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g, et seq, applied to the Connecticut Siting Council (Council) on June 6, 2016 for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a 150-foot monopole wireless telecommunications facility at 100 Pocono Road in Brookfield, Connecticut (refer to Figure 1). (Applicant 1, p. ES-i)

2. Homeland Towers, LLC (HT) is a New York limited liability company with offices at 22 Shelter Rock Lane, Danbury, Connecticut. HT has developed numerous tower facilities in Connecticut and New York. HT would construct, maintain, and own the proposed facility and would be the Certificate Holder. (Applicant 1, p. 3)

3. Cellco Partnership d/b/a Verizon Wireless (Cellco) is a Delaware Partnership with an administrative office located at 99 East River Drive, East Hartford, Connecticut. Cellco is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to Fairfield County, Connecticut. (Applicant 1, pp. 3, 7)

4. The only party in this proceeding is the Applicant. (Transcript 1, August 2, 2016, 3:00 p.m. [Tr. 1], p. 4)

5. The purpose of the proposed facility is to increase network capacity and to provide reliable wireless service to existing service gaps primarily in the northeastern portion of Danbury and central Brookfield. (Applicant 1, p. 8, Tab 6)

6. Pursuant to C.G.S. § 16-50*l*(b), public notice of the filing of the application to the Council was published in The News-Times on June 2 and June 3, 2016. (Applicant 4)

7. Pursuant to C.G.S. § 16-50*l*(b), notice of the application filing was provided to all abutting property owners by certified mail. Notice was unclaimed by three abutters. The Applicant resent notice to these abutters by first class mail. Subsequent to the first class mailing, one of the three abutters contacted the Applicant and stated notice was received. (Applicant 1, Tab 4; Applicant 3, R. 1)

8. On July 7, 2015, the Applicant provided notice to all federal, state and local officials and agencies listed in C.G.S. § 16-50*l*(b). (Applicant 1, Tab 2)

Council Procedures

9. Upon receipt of the application, the Council sent a letter to the Town of Brookfield on June 7, 2016, 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 June 23, 2016, the application was deemed complete pursuant to Connecticut Regulations of State Agencies (R.C.S.A.) § 16-50*l*-1a and the public hearing schedule was approved by the Council. (Record)

11. Pursuant to C.G.S. § 16-50m, on June 30, 2016 the Council published legal notice of the date and time of the public hearing in the Yankee Pennysaver. (Record)

12. Pursuant to C.G.S. § 16-50m, on June 24, 2016, the Council sent a letter to the Town of Brookfield to provide notification of the scheduled public hearing and invite the municipality to participate. (Record)

13. On July 6, 2016, the Council held a pre-hearing teleconference on hearing procedural matters for interested parties 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 site scheduled for August 2, 2016. (Council Pre-hearing Conference Memorandum, dated June 29, 2016)

14. In compliance with R.C.S.A. § 16-50j-21, the Applicant installed a four-foot by six-foot sign at the entrance to the subject property on July 13, 2016. The sign presented information regarding the project and the Council's public hearing. (Applicant 2)

15. The Council and its staff conducted an inspection of the proposed site on August 2, 2016, beginning at 2:00 p.m. During the field inspection, the applicant flew a four-foot diameter red balloon at the proposed site to simulate the proposed 150-foot tall tower. Weather was favorable for the field review. The balloon was aloft from approximately 8:00 a.m. to 6:00 p.m. for the convenience of the public. (Council's Hearing Notice dated June 24, 2016; Tr. 1, pp. 25-26)

16. Although the Town may install 25-foot whip antennas on top of the proposed tower, a balloon was not flown at the top height of the proposed whip antennas (175 feet above ground level) as such height would not be representative of the overall visibility of the facility from the surrounding area due to the narrow profile (two-inch diameter) of the whip antennas. (Tr. 1, pp. 25-26)

17. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on August 2, 2016, 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 Brookfield Town Hall, Room 133, 100 Pocono Road, Brookfield Connecticut. (Council's Hearing Notice dated June 24, 2016; Tr. 1, p. 1; Transcript 2, August 2, 2016, 7:00 p.m. [Tr. 2], p. 1)

State Agency Comment

18. Pursuant to C.G.S. § 16-50j (g), on June 24, 2016 and August 3, 2016, 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)

19. The Council received a response from the DOT's Bureau of Engineering and Construction on August 1, 2016 indicating that DOT had no comments. (DOT Comments received August 1, 2016)

20. The following agencies did not respond with comment on the application: DEEP, CEQ, PURA, OPM, DECD, DOAg, CAA, DESPP, DPH and SHPO. (Record)

Municipal Consultation

21. HT approached the Town in November 2011 regarding its intent to construct a telecommunications facility in the Pocono Road area. At this time, the Town requested that the Town-owned parcel at 100 Pocono Road parcel be considered for a tower facility that could accommodate both telecommunications carriers and Town communications equipment. (Applicant 1, Tab 8)

22. HT entered into a lease agreement with the Town in March 2014 for a tower facility at 100 Pocono Road. (Applicant 1, Tab 8)

23. As required by C.G.S. § 16-50*l* (e), the Applicant met with the Brookfield First Selectman Stephen C. Dunn on December 16, 2015 to commence the 90-day pre-application municipal consultation process. Copies of the technical report for the project were distributed to various town agencies at this time. (Applicant 1, pp. 21-22)

24. The Applicant hosted a Public Information Meeting at the Brookfield Town Hall on January 27, 2016. Notice of the public meeting was sent to property abutters as well as notice publication in the Yankee Pennysaver and The News-Times. (Applicant 1, p. 22)

25. The First Selectman Dunn made a limited appearance statement into the record at the August 2, 2016 public hearing expressing support for the proposed facility. (Tr. 2, pp. 70-71)

26. Major James Purcell of the Brookfield Police Department and Chief Wayne Gravius of the Brookfield Fire Department made limited appearance statements at the August 2, 2016 public hearing stating the proposed facility would facilitate the Town's transition from analog to digital communications. The site would provide improved Town communications for police, fire, ambulance, schools and public works services. (Tr. 1, pp. 6-7)

Public Need for Service

27. 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)

28. 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 personal wireless communication service to Fairfield County, Connecticut. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996; Applicant 1, pp. 3, 7)

29. 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)

30. 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)

31. 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)

32. 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 – The National Broadband Plan)

33. 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)

34. 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 – Presidential Proclamation 8460, Critical Infrastructure Protection)

35. 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)

36. 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 Admin Notice Item No. 21 – FCC Wireless Infrastructure Report and Order; Council Admin Notice Item No. 12 – Presidential Executive Order 13616, Accelerating Broadband Infrastructure Development)

37. 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 – Middle Class Tax Relief and Job Creation Act of 2012; Council Administrative Notice Item No. 21 – FCC Wireless Infrastructure Report and Order)

38. 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)

Existing and Proposed Wireless Service - Cellco

39. Cellco's proposed installation at the 146-foot level of the tower would provide coverage to existing service gaps and would provide capacity relief to adjacent Cellco sites. (Applicant 1, Tab 1, Tab 8)

40. Cellco would initially deploy Long Term Evolution (LTE) voice and data service equipment in the 700 MHz and 2100 MHz frequency bands. If necessary, Cellco would deploy 1900 MHz LTE service to meet future network capacity demands. Cellco designs its LTE network using a 120 dB Reverse Link Operational Path Loss standard. (Applicant 3, R. 2, R. 3)

41. Cellco would not deploy its older CDMA voice services in the 850 MHz frequency band. This band would be reserved for future development as an LTE enabled frequency. (Applicant 3, R. 5; Tr. 1, pp. 32-33)

42. The table below indicates Cellco's approximate existing coverage gaps along major roads.

Road	700 MHz Service Gaps	1900 MHz Service Gaps	2100 MHz Service Gaps
Route 7	2.5 miles	3.6 miles	3.8 miles
Route 202	1.2 miles	3.2 miles	2.9 miles
Route 25	0.8 mile	2.0 miles	2.3 miles
Route 133	1.0 miles	3.2 miles	3.0 miles

Refer to Figures 2 and 4. (Applicant 3, R. 5)

43. In addition to providing service to identified service gaps, Cellco's proposed installation would provide capacity relief to its adjacent Brookfield and Bethel North facilities. Both facilities are at their service capacity limits. (Applicant 1, p. 8)

44. Cellco's proposed installation would interact with the following adjacent Cellco facilities:

Cellco Site Name and Site Location	Distance and Direction from Proposed Tower	Antenna Height	Structure Type
"Brookfield" - 37 Carmen Hill Road, Brookfield	2.5 miles northwest	79 feet	80-foot lattice
"Brookfield West" - 52 Stadley Rough Road, Danbury	2.6 miles southwest	97 feet	140-foot monopole
"Bethel North" - 8 Sky Edge Lane, Bethel	3.3 miles south	167 feet	Electric transmission tower
"Newtown North" - 24 Dinglebrook Lane, Newtown	3.2 miles east	140 feet	150-foot monopole
"Hawleyville" -6 Fairfield Drive, Newtown	2.8 miles south	140 feet	163-foot monopole

(Applicant 1, pp. 9-10; Record)

45. Cellco's installation at a tower height of 146 feet is projected to provide the following service to the surrounding target area:

	700 MHz Service	1900 MHz Service	2100 MHz Service
Land area	14.5 square miles	5.5 square miles	5.3 square miles
Route 7	5.5 miles	3.2 miles	3.6 miles
Route 202	5.2 miles	2.2 miles	2.6 miles
Route 25	2.9 miles	1.6 miles	1.7 miles
Route 133	1.7 miles	1.1 miles	1.2 miles

Refer to Figures 3 and 5. (Applicant 1, p. 8)

46. Once Cellco's installation is operational, the wireless system is field examined by radio frequency engineers to identify further necessary adjustments or the need for additional Cellco facilities such as a small cell to provide service to isolated service deficient areas. (Tr. 1, pp. 33-34)

Site Selection

47. HT began searching for a tower site in November 2011 and contacted the Town regarding potential locations in the Route 7/Pocono Road area. The Town directed HT to the municipal complex at 100 Pocono Road. (Applicant 3, R. 7)

48. Cellco issued a search ring for the target service area in February 2014. (Applicant 1, R. 7)

49. Other locations investigated for a telecommunications facility but ultimately rejected include:
    a) Eversource transmission tower at 100 Pocono Road, Brookfield – rejected due to presence of 345 kilovolt transmission lines on the tower which makes necessary electric outages difficult.
    b) Flagpole telecommunications facility, 2 Huckleberry Road, Brookfield – does not meet Cellco's coverage objectives.
    c) Rooftop at 60 Old Milford Road, Brookfield – does not meet Cellco's coverage objectives.

    (Applicant 1, Tab 8)

50. Although it is technically possible to provide wireless service to the target service area using numerous small cells, the actual number of small cells necessary would be significant due to the large size of the service area to be covered. Some areas within the target service area have dense residential development, creating installation issues. The use of a macro-cell at the proposed site is the most efficient and cost effective method for providing a large coverage footprint. (Applicant 3, R. 6)

Facility Description

51. The proposed site is located in the southerly portion of a 43.2-acre parcel owned by the Town. (Applicant 1, Tab 1)

52. The subject property is zoned Residential - R-40. (Applicant 1, Tab 1)

53. The parcel includes a municipal complex consisting of four buildings that support town offices, a senior center, the police department, and fire department. The property also includes a municipal public works storage and processing yard and recreational fields. (Applicant 1, p. ES-i, Tab 1-Sheet A-1)

54. The tower site is located in a generally level area of the public works yard. The yard is located west of the fire department and south of the recreational fields. (Applicant 1, Tab 1)

55. The tower site is at a ground elevation of 337 feet above mean sea level. (Applicant 1, Tab 1)

56. The proposed facility would consist of a 150-foot monopole approximately 50 inches wide at the base tapering to 24 inches wide at the top. The tower would be designed to support a 20-foot extension. (Applicant 1, p. 13, Tab 1)

57. The tower would be designed to support five levels of wireless carrier antennas as well as municipal emergency services antennas. Refer to Figure 6. (Applicant 1, p. 13, Tab 1)

58. Cellco would install up to 12 panel antennas and 9 remote radio heads on an antenna platform at a centerline height of 146 feet above ground level. (Applicant 1, p. 2, Tab 1)

59. The Town would locate three 25-foot long whip antennas and two dish antennas on a mounting bar at the 150-foot level of the tower, a whip antenna on a standoff arm at the 75-foot level of the tower and a dish antenna at a the 60-foot level of the tower. (Applicant 1, Tab 1)

60. HT would establish a 55-foot by 70-foot equipment compound within a 75-foot by 75-foot lease area at the site. Refer to Figure 7. (Applicant 1, p. 2, Tab 1)

61. The compound would be enclosed by an eight-foot tall chain link fence with two-inch mesh. HT would be willing to install an anti-climb feature on the fence. (Applicant 1, p. 9, Tab 1; Tr. 1, p. 58)

62. Cellco would install three equipment cabinets on a 445 square foot elevated steel platform with a canopy roof. (Applicant 1, p. 2)

63. The Town would install a 10-foot by 12-foot equipment shelter within the compound to serve its communication equipment. (Applicant 1, Tab 1)

64. An easement to access the site would utilize an existing driveway that extends 420 feet along the north side of the fire station to the public works yard. A 12-foot wide gravel access road would be established for 310 feet through the yard to the compound gate. (Applicant 1, Tab 1)

65. Utilities would be installed underground to the compound along the south side of the fire station from a utility pole on Pocono Road. (Applicant 1, Tab 1)

66. The nearest abutting property from the proposed tower is a developed commercial property approximately 128 feet to the south at 82 Pocono Road. (Applicant 1, Tab 1; Tr. 1, p. 11)

67. There are four residential structures within 1,000 feet of the proposed tower site. The nearest residence is located at 88 Pocono Road, approximately 315 feet southeast of the tower site. (Applicant 1, p. 15, Tab 1)

68. Construction of the site would take approximately six to ten weeks, depending on scheduling and site conditions. Once radio equipment and antennas are installed, cell site integration and system testing would require another two weeks before the site is fully operational within Cellco's wireless network. (Applicant 1, p. 24)

69. The estimated cost of the proposed facility is:

Tower and foundation	$160,000
Site development	105,000
Utility installation	45,000
Facility installation	45,000
Subtotal: HT Cost	**$355,000**
Cellco antennas and coax	$95,000
Cellco radio equipment	$300,000
Cellco power systems and other equipment	$85,000
Subtotal: Cellco's Cost	**$480,000**
Total Estimated Facility Cost	**$835,000**

(Applicant 1, pp. 23-24)

Public Safety

70. 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)

71. The proposed facility would be in compliance with the requirements of the 911 Act and would provide Enhanced 911 services. (Applicant 1, p. 6)

72. 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)

73. Cellco's facility 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 site are able to accept text-to-911 service at this time. (Cellco 3, R. 8)

74. 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. (Council Administrative Notice No. 5 – FCC WARN Act)

75. The tower would be constructed in accordance with the governing standard in the State of Connecticut for tower design in accordance with the currently adopted International Building Code. Final tower and foundation design details would be provided in the Development and Management (D&M) Plan for the facility. (Applicant 1, Tab 1)

76. The proposed tower would not constitute an obstruction or hazard to air navigation and would not require any obstruction marking or lighting. (Applicant 1, p. 22)

77. The tower set back radius extends beyond the property boundary 22 feet to the south, onto a parking area for a commercial property at 82 Pocono Road. (Applicant 1, Tab 1)

78. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of the proposed municipal and Cellco antennas is 39.5 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 antennas are operating at full power, all antenna channels would be operating simultaneously, and all radio transmitters are operating at full power which creates the highest possible power density levels. Under normal operation, this equipment would be not at maximum operating capacity and the radio frequency power associated with the antennas would be oriented towards the horizon, thus resulting in significantly lower power density levels in areas around the tower. (Applicant 3, Attachment 2; Council Administrative Notice Item No. 2 – FCC OET Bulletin No. 65)

Emergency Backup Power

79. 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. 47 - Final Report of the Two Storm Panel)

80. In response to the findings and recommendations of the Panel, and in accordance with C.G.S. §16-50*ll*, the Council, in consultation and coordination with DEEP, DESPP, and 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)

81. The Council reached the following conclusions in the study:
    a) "Sharing a backup source is feasible for CMRS 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)

82. Cellco would install a 10-kilowatt propane-fueled generator at the site for its own use. Cellco would also install an approximately 500-gallon propane fuel tank on a concrete pad adjacent to its equipment platform. The fuel tank would feature bollard protection to prevent vehicle impact within the equipment compound. (Applicant 1, Tab 1; Tr. 1, pp. 14-15)

83. Cellco's emergency power generator would provide approximately 60 hours of run time without refueling, assuming normal cell site customer usage. (Applicant 3, R. 11)

84. Cellco would also have a battery backup to provide short-term power to the Cellco's equipment in the event the emergency generator does not start during an electric outage. (Tr. 1, pp. 23-24)

85. The Town does not have an emergency power source for its equipment and intends to discuss a potential shared generator with HT prior to the submission of the D&M Plan for the project. (Tr. 1, pp. 14-21; Tr. 2, pp. 70-71)

86. HT designed the compound to account for individual generators for any other carriers that locate on the facility in the future. If necessary, the compound fence line could be expanded to the lease area limits to create more space for additional ground equipment. (Tr. 1, pp. 21-22)

87. 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

88. No historic properties would be affected by the proposed facility. (Applicant 1, p. 17)

89. The proposed tower site and underground utility connection route are in open areas and no tree clearing would be required. (Applicant 1, Tab 1; Tr. 1, pp. 24-25)

90. The nearest wetland to the tower compound is approximately 390 feet to the northwest, adjacent to the Route 7 expressway. The nearest wetland to the access drive is located 80 feet south of the entrance on Pocono Road. This wetland is in a maintained lawn area and functions as a drainage basin for the Fire Department building. (Applicant 1, Tab 12)

91. The proposed project would comply with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control*. (Applicant 1, p. 21)

92. The site is located in the Federal Emergency Management Agency Zone X, an area outside of the 500-year flood zone. (Applicant 1, p. 21)

93. The site is not within an Aquifer Protection Area. (Applicant 3, R. 12)

94. Two State-listed Species of Special Concern, the eastern box turtle and the wood turtle, are listed on the DEEP maintained Natural Diversity Database as occurring in the general area of the site. Habitat for both species is located northwest and west of the proposed site, beyond the athletic fields and Route 7 expressway, features that act as barriers for turtle migration into the site area. Although the Applicant proposes to implement a turtle protection program for both species, such a program would not be necessary given the lack of nearby suitable habitat. (Applicant 1, pp. 16-17; Tr. 1, pp. 49-52)

95. The bog turtle and the northern long-eared bat, both federally-listed Threatened Species and State-listed Endangered Species, have been documented to occur in the vicinity of the proposed site. The U.S. Fish and Wildlife Service submitted correspondence to the Applicant stating that suitable habitat for these species is no longer present in the area. (Applicant 1, Tab 10; Tr. 1, pp. 47-50)

96. The proposed facility is not located within five miles of an Important Bird Area as designated by the National Audubon Society. (Council Administrative Notice No. 65)

97. The design of the proposed facility would comply with United States Fish and Wildlife Service 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. (Council Administrative Notice No. 14)

98. Development of the site would not require blasting. (Applicant 1, R. 13)

99. Operation of the proposed facility would not cause any significant noise, air, or water impacts. (Applicant 1, p. 18)

Visibility

100. The proposed tower would be visible year-round from approximately 348 acres within a two-mile radius of the site (refer to Figure 8). The tower would be seasonally visible from an additional 752 acres within a two-mile radius of the site. (Applicant 1, Tab 9 – Visibility Analysis Viewshed Map)

101. Generally, year-round views of the facility would occur within a half-mile of the site. Most of the land-use with year-round views consists of commercial development along Route 202, Silvermine Road and Pocono Road. Other areas with year-round views include the Route 7 expressway, open field areas on Pocono Road and Junction Road and recreation fields and parking areas of the municipal complex. (Applicant 1, Tab 9, p. 6, Visibility Analysis Viewshed Map)

102. Several residential properties on the east side of Pocono Road across from the site property would have views of most of the facility where intervening vegetation is not present. The residence at 88 Pocono Road would have year-round views of the upper 30 to 50 feet of the tower. Some intervening coniferous trees would block views of the lower portions of the tower. (Tr. 1, pp. 27-32)

103. The tower would be visible year round and during leaf-off conditions from the Still River Greenway, a 2.5 mile recreational trail that extends to the west and north of the site. (Applicant 1, Tab 9; Applicant 1d, p. 45)

104. There are no state or locally-designated scenic roads located within the two-mile study area. (Applicant 1d; Council Administrative Notice Item No. 64)

105. Pursuant to C.G.S § 16-50p(a)(3)(G), the nearest school is the Brookfield High School located approximately 1.16 miles northeast of the proposed facility. The nearest commercial child day care facility is located approximately 0.57 miles south of the proposed facility. The proposed tower would not be visible from either of these facilities. (Applicant 1, Tab 9)

106. Projected visibility of the proposed tower from specific locations within a two-mile radius of the site is presented in the table below:

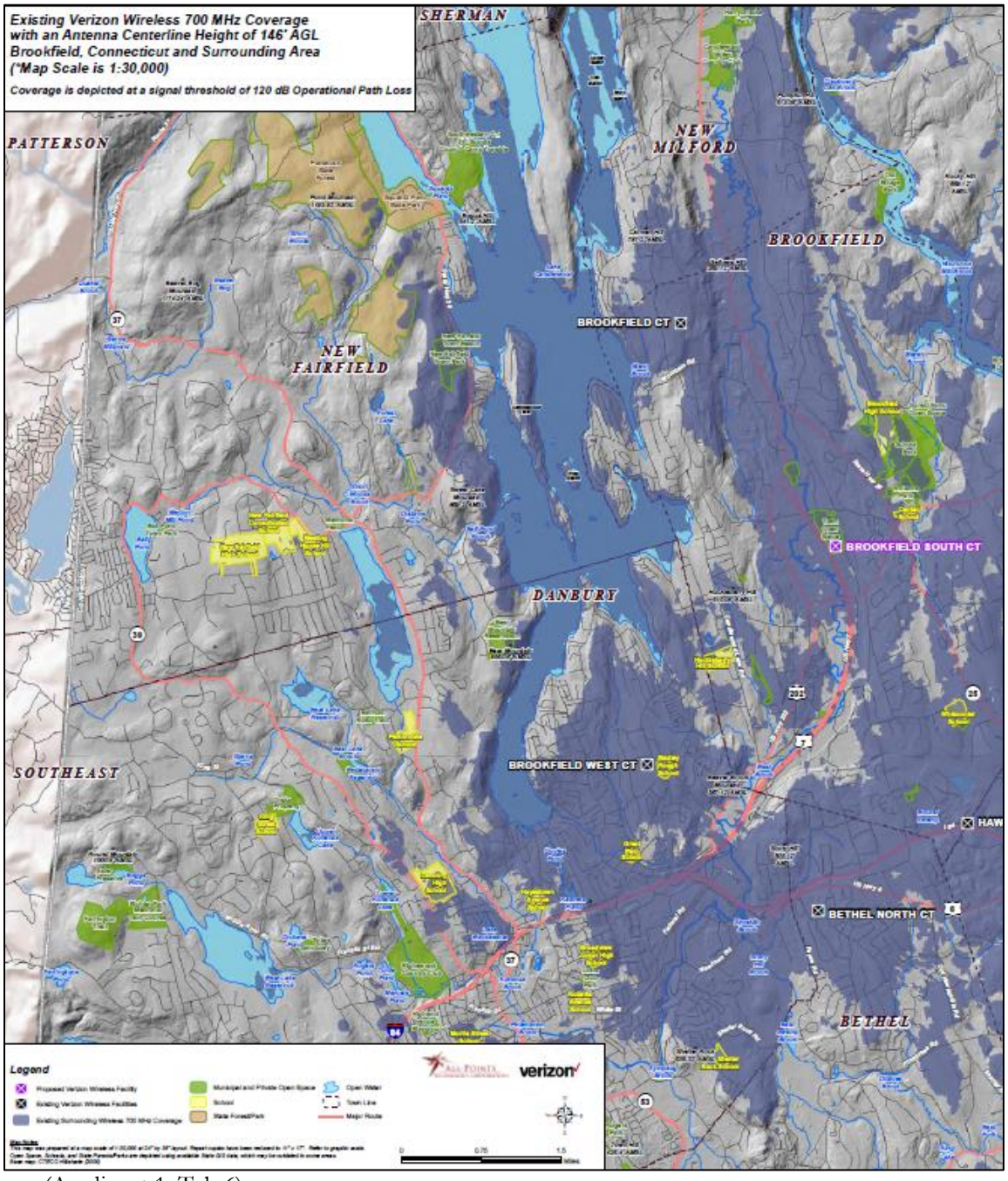
Specific Location	**Photo location on Map***	**Approx. Portion of Facility Visible**	**Approx. Distance & Direction to Tower**
Elbow Hill Road	1	Year-round – 45 feet	0.7 mile southeast
Silvermine Road	2	Year-round – 20 feet	0.6 mile southeast
Silvermine Road, Rt. 7 overpass	3	Year-round – 35 feet	0.5 mile southeast
Dean Road	4	Year-round – 35 feet	0.4 mile southeast
100 Pocono Road- Police Dept.	5	Year-round – 125 feet	0.3 mile south
100 Pocono Road- lower lot	6	Year-round – 125 feet	0.2 mile south
100 Pocono Road- driveway	7	Year-round – 115 feet	0.2 mile south
Pocono Road, near Senior Ctr.	8	Year-round – 125 feet	0.2 mile south
Pocono Road, near post office	9 (not shown)	Year-round – 75 feet	0.2 mile south
Pocono Road, near #101	10	Not visible	0.1 mile southwest
Pocono Road, near access drive	11	Year-round – 125 feet	0.1 mile southwest
Pocono Road, Fire Dept.	12	Year-round – 75 feet	0.1 mile west
Junction Road, Rt. 7 overpass	13	Year-round – 15 feet	0.5 mile north
Junction Road, near #119	14	Year-round – 75 feet	0.5 mile northeast
Junction Road, near #113	15	Year-round – 65 feet	0.6 mile northeast
Federal Road, at Junction Road	16	Year-round – 20 feet	0.6 mile northeast
Federal Road, near Junction Road	17	Not visible	0.6 mile northeast
Federal Road, north of Junction Road	18	Year-round – 10 feet	0.5 mile northeast
Central Cemetery	19	Year-round – 60 feet	0.6 mile east
Old Oak Drive	20	Year-round – 10 feet	0.6 mile southeast
Federal Road, near #612	21	Not visible	0.7 mile southeast
Federal Road, Rt. 7 ramp	22	Year-round – 75 feet	0.8 mile southeast
Federal Road, Rt. 7 Overpass	23	Year-round – 15 feet	0.8 mile southeast

*Viewshed map provided as Figure 8
(Applicant 1, Tab 1, Tab 9)

Figure 1 – Site Location

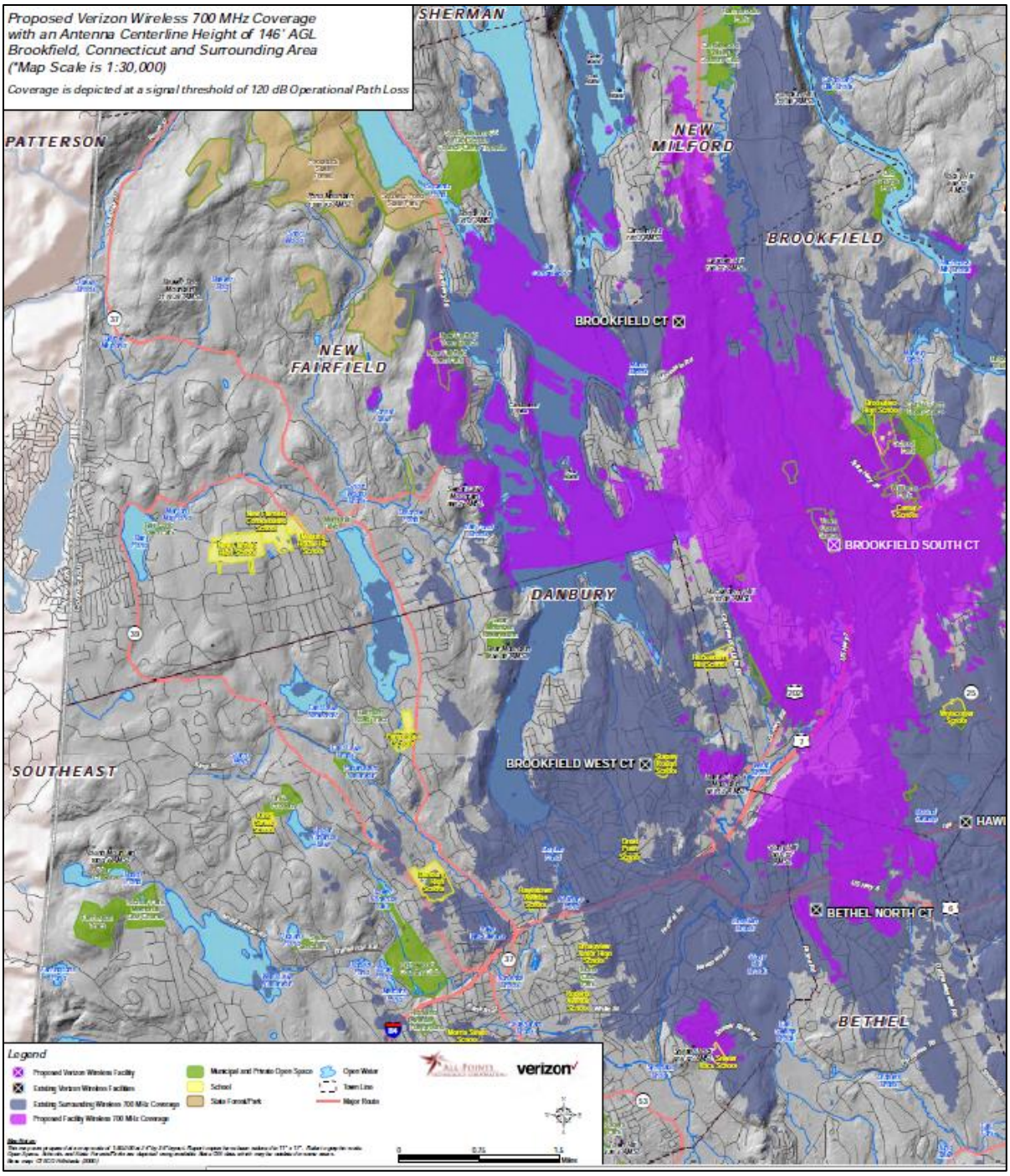
(Applicant 1, p. ES iv)

Figure 2 - Existing LTE 700 MHz Service



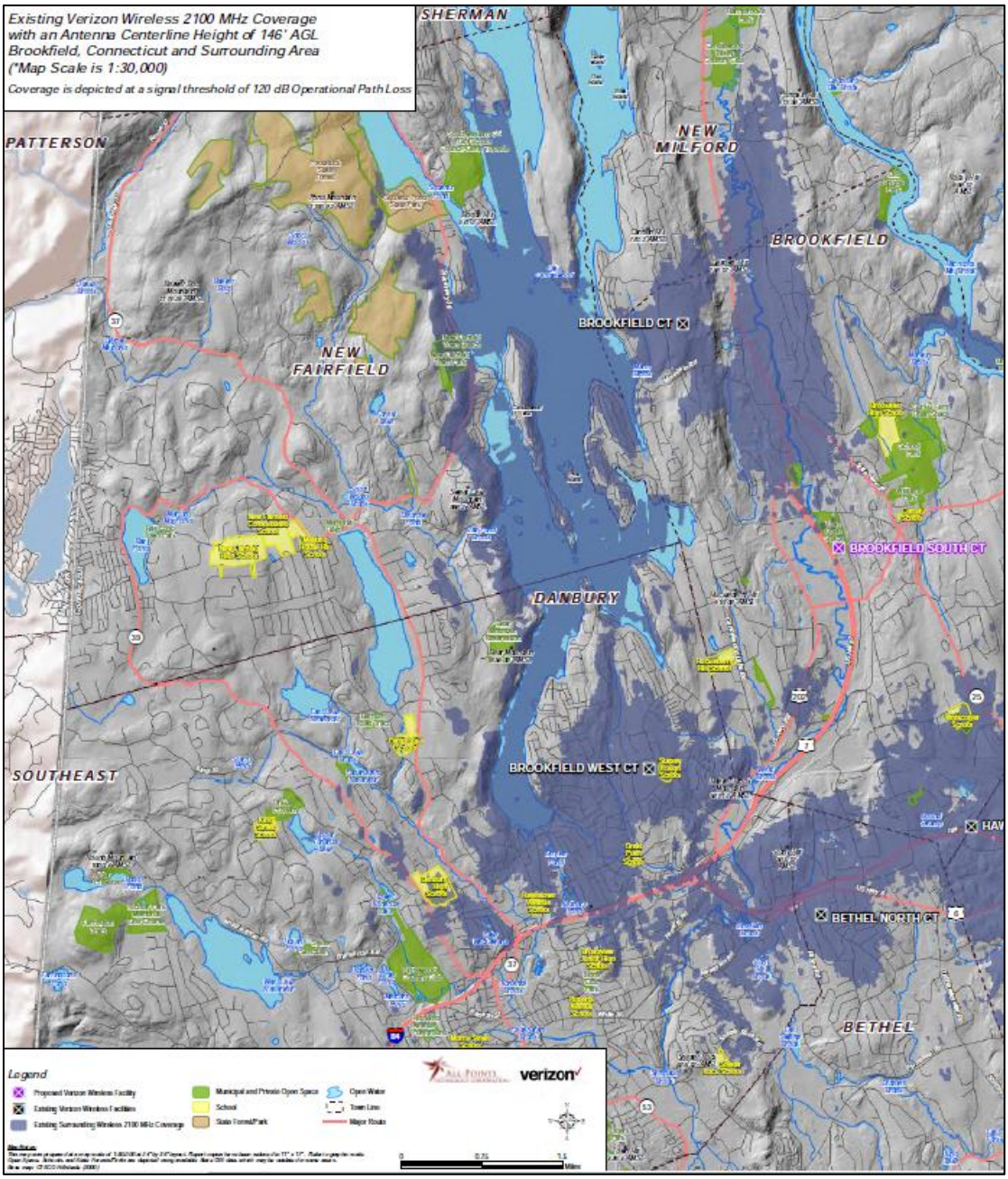
(Applicant 1, Tab 6)

Figure 3 - Proposed LTE 700 MHz Service



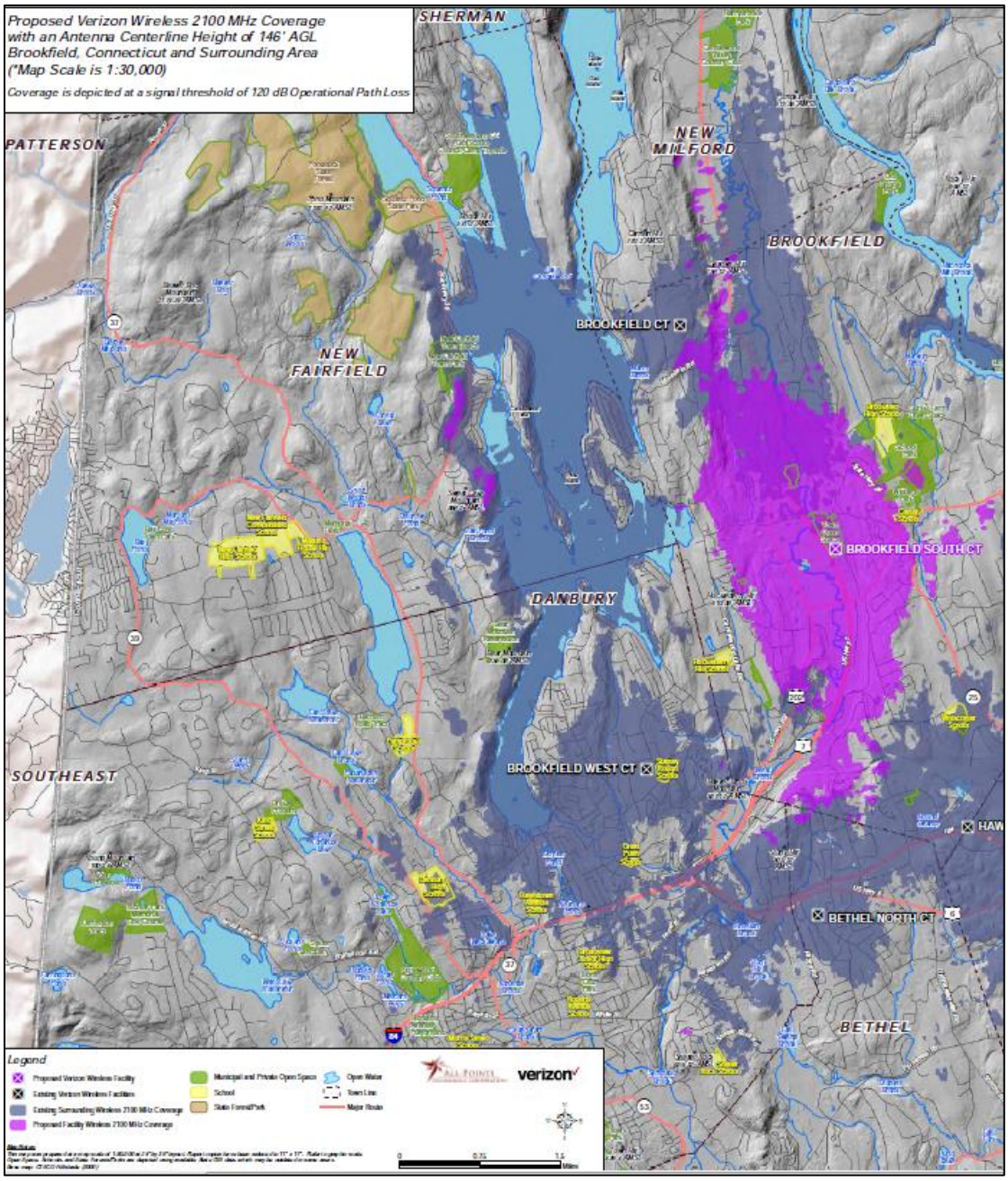
(Applicant 1, Tab 6)

Figure 4 - Existing LTE 2100 MHz Service



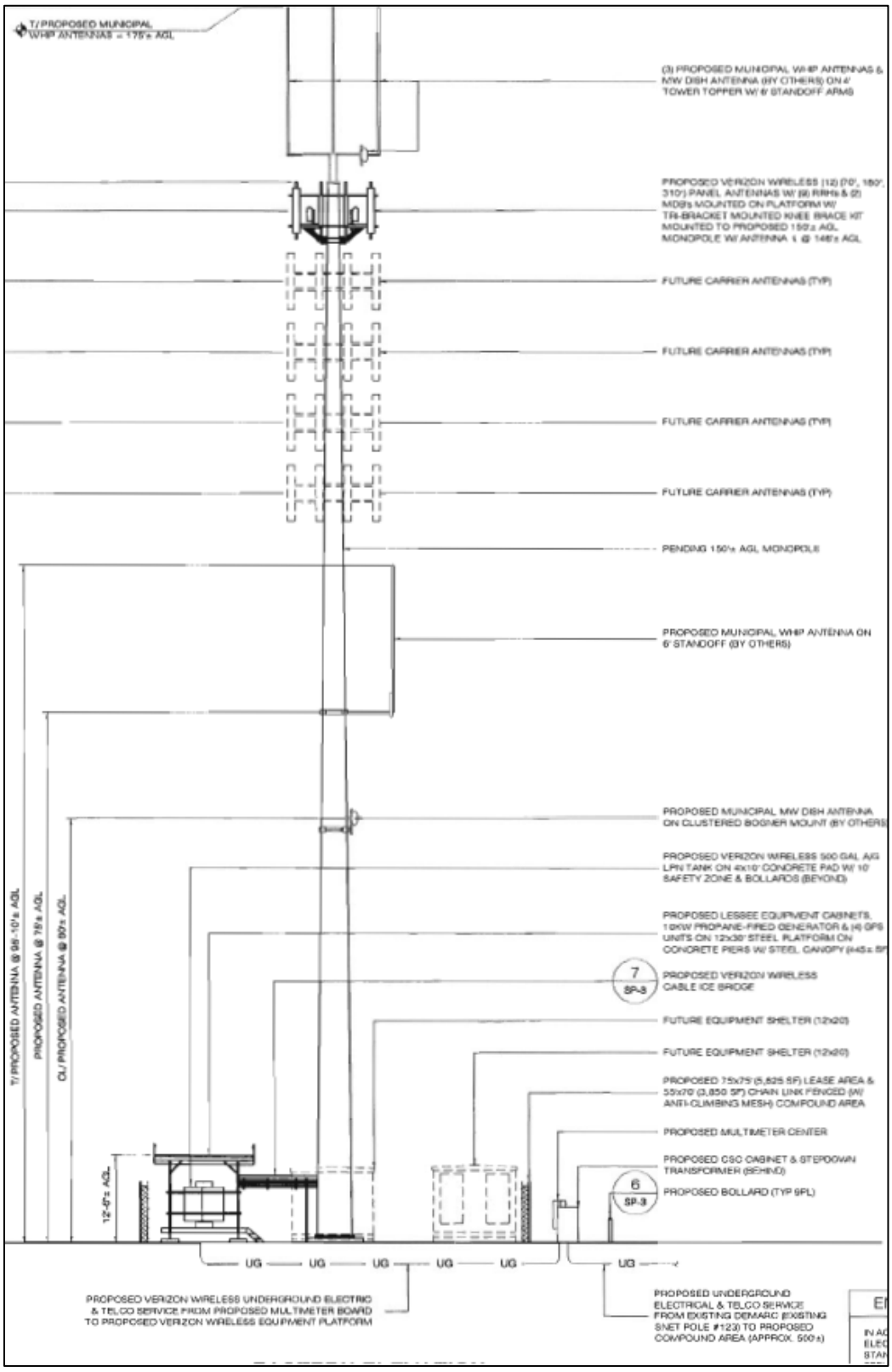
(Applicant 1, Tab 6)

Figure 5 - Proposed LTE 2100 MHz Service



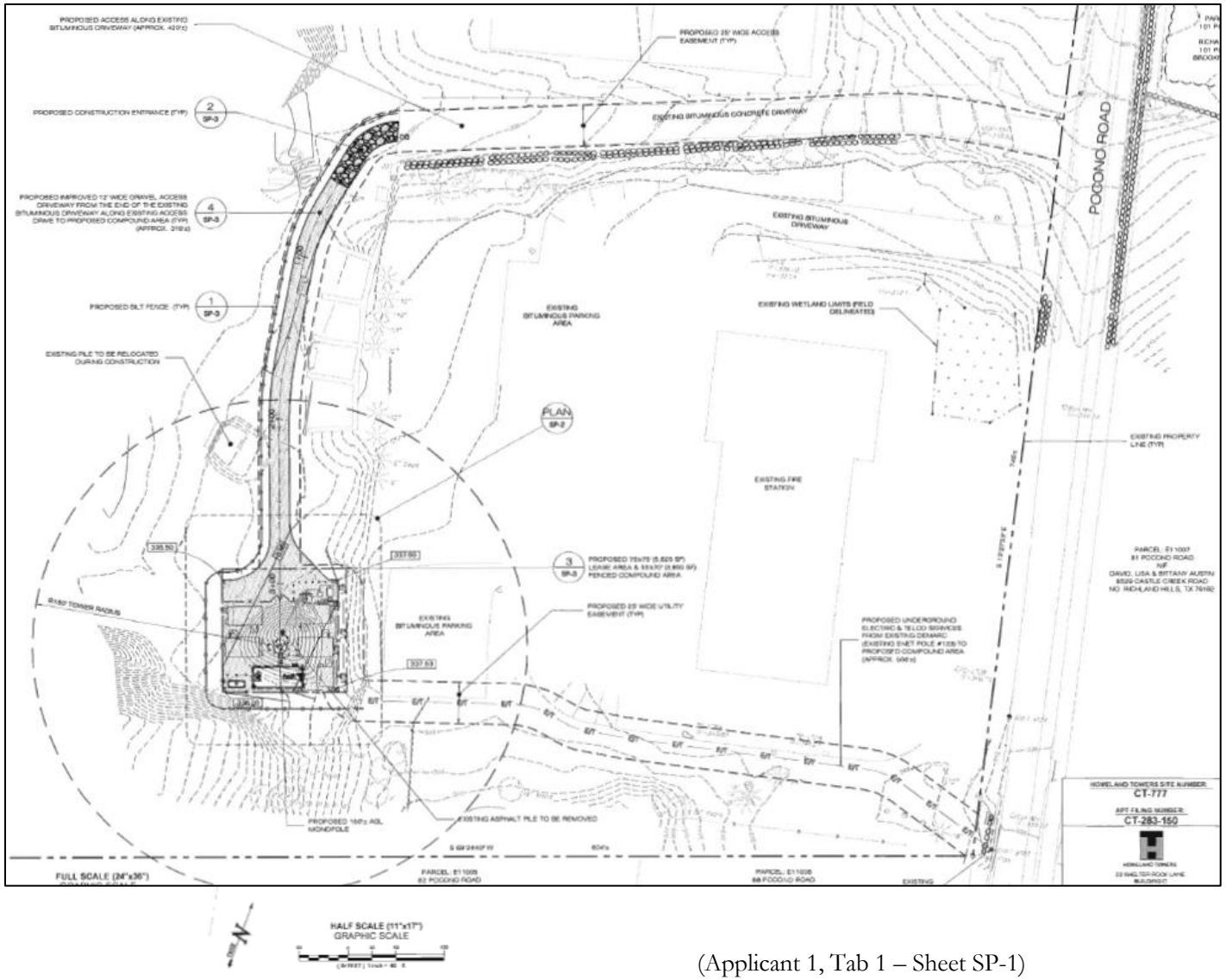
(Applicant 1, Tab 6)

Figure 6 - Tower Elevation



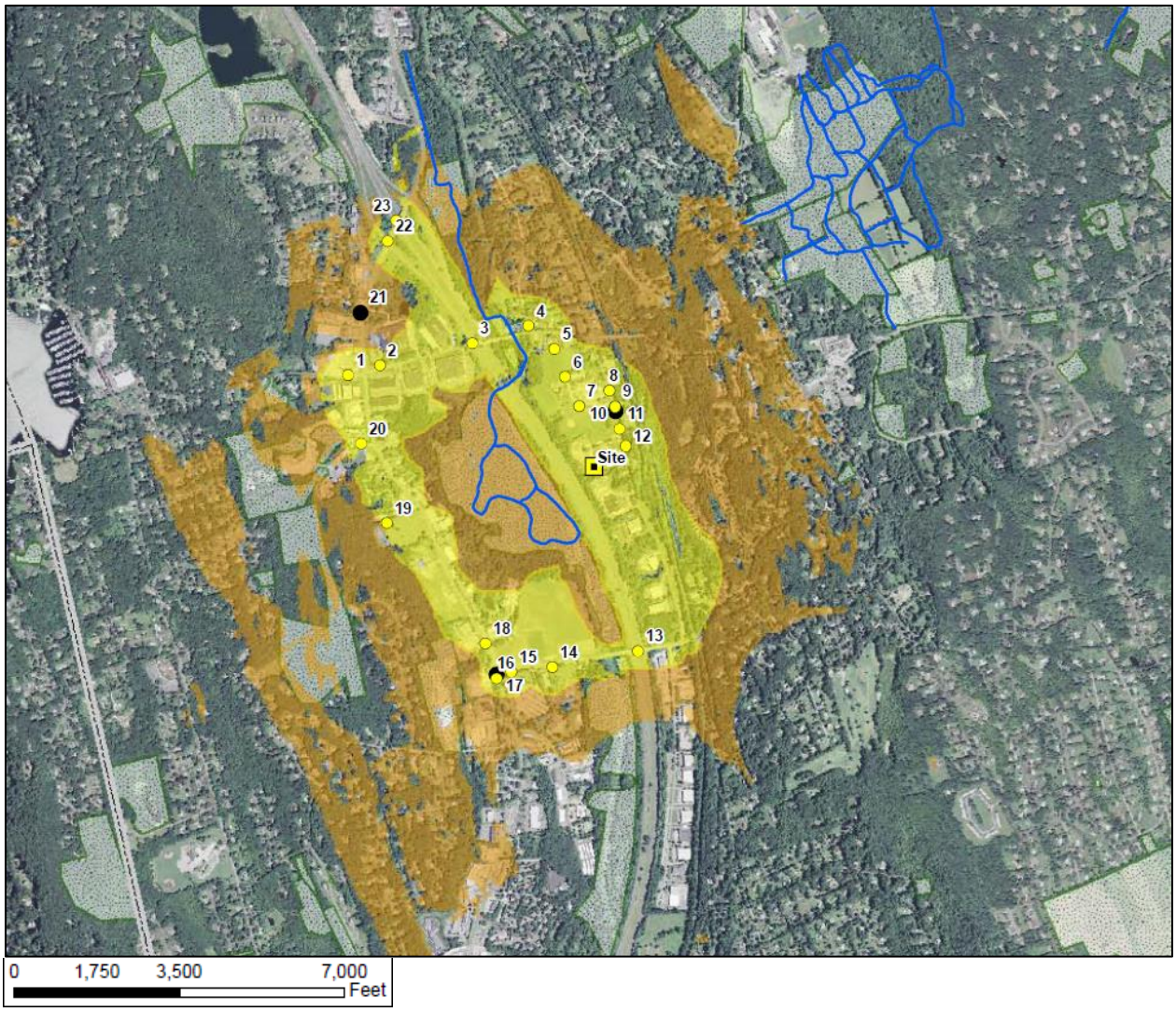
(Applicant 1, Tab 1 – Sheet SP-2)

Figure 7 – Site Plan



(Applicant 1, Tab 1 – Sheet SP-1)

Figure 8 – Visibility Analysis



(Applicant 1, Tab 9 – Viewshed Map)