

DOCKET NO. 463 – American Towers, LLC and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at East Lyme Tax Assessor Parcel ID 29.0 45, 351A Boston Post Road, East Lyme, Connecticut.	} } }	Connecticut Siting Council September 29, 2016
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Findings of Fact

Introduction

1. American Towers, LLC and New Cingular Wireless PCS, LLC, (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 October 6, 2015 for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a 194-foot monopole wireless telecommunications facility located at 351A Boston Post Road in East Lyme, Connecticut. (Applicant 1, p. 1)
2. American Towers, LLC (ATC) is a Massachusetts Corporation with an office in Woburn, Massachusetts. ATC owns and/or operates numerous tower facilities in Connecticut. ATC would construct, maintain and own the proposed facility and would be the Certificate Holder. (Applicant 1, p. 5)
3. New Cingular Wireless PCS, LLC (AT&T) is a Delaware limited liability company with an administrative office located in Rocky Hill, Connecticut. AT&T is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to Connecticut. (Applicant 1, p. 5)
4. The parties in this proceeding are the Applicant, the Town of East Lyme (Town) and BHSO Community Conservancy. Pursuant to Connecticut General Statutes §22a-19, the Council granted both the Town of East Lyme and BHSO Community Conservancy Connecticut Environmental Protection Act intervenor status. (BHSO Community Conservancy 1; Town 1; Transcript 1, December 15, 2015, 3:00 p.m. [Tr. 1], p. 5)
5. The purpose of the proposed facility is to replace an existing 150-foot telecommunications facility located at 2 Scott Road in East Lyme, approximately 0.3 miles northwest of the proposed site (refer to Figure 1). AT&T and T-Mobile Northeast LLC (T-Mobile) are located on the existing tower. T-Mobile did not intervene in the proceeding but intends to locate on the proposed facility. (Applicant 1, p. 11; Applicant 2, Tab E; Tr. 1, p. 67)
6. The Scott Road facility was approved by the Council in 1986 in Docket 67 by issuing a Certificate to AT&T's predecessor, Southern New England Telephone Company. AT&T's existing property lease with the landlord terminates in late 2016. AT&T attempted to renegotiate a long-term lease extension with the landlord but could not reach an agreement. (Applicant 1, pp. 2, 11, Tab 1)
7. The proposed facility would allow AT&T to continue to provide reliable wireless service to portions of Route 1, Lovers Lane, Dean Road and surrounding areas once the existing Scott Road facility is decommissioned. (Applicant 1, p. 11, Tab 1 coverage models)
8. Pursuant to C.G.S. § 16-50(b), public notice of the application filing to the Council was published in The Day on September 23, and September 30, 2015. (Applicant 5)

9. Pursuant to C.G.S. §16-50/(b), notice of the application was provided to all abutting property owners by certified mail. Notice was refused by one abutter at 339 Boston Post Road, East Lyme. (Applicant 1, Tab 13; Applicant 2, Response 20)
10. On October 5, 2015, the Applicant provided notice to all federal, state and local officials and agencies listed in C.G.S. §16-50/(b). (Applicant 1, Tab 14)

Procedural Matters

11. Upon receipt of the application, on October 7, 2015 the Council sent a letter to the Town of East Lyme as notification that the application was received and is being processed, in accordance with C.G.S. §16-50gg. (Record)
12. During a regular Council meeting on November 12, 2015, the application was deemed complete pursuant to Regulations of Connecticut State Agencies (R.C.S.A.) §16-50/-1a and the public hearing schedule was approved by the Council. (Record)
13. Pursuant to C.G.S. §16-50m, a legal notice was published in The Day on November 17, 2015 that indicated the date, location and time of the Council's public hearing. (Record)
14. Pursuant to C.G.S. §16-50m, on November 13, 2015, the Council sent correspondence to the Town of East Lyme to provide notification of the scheduled public hearing and to invite the municipality to participate. (Record)
15. 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 November 30, 2015. The sign presented information regarding the project and the Council's public hearing. (Applicant 3)
16. The Council and its staff conducted an inspection of the proposed site on December 15, 2015, beginning at 2:00 p.m. During the field inspection, the Applicant attempted to fly a four-foot diameter red balloon at the proposed site to simulate the height of the proposed tower. Weather conditions at this time included high winds which caused three balloons to become entangled in the surrounding tree canopy. The Applicant successfully flew a 5.5-foot diameter red and yellow balloon from 8:00 a.m. to approximately 1:00 pm. when winds were calmer. (Council's Hearing Notice dated November 24, 2015; Tr. 1, p. 17-18; Transcript 2, December 15, 2015 – 7:00 p.m. [Tr. 2], p. 1)
17. Pursuant to C.G.S. §16-50m, the Council, after giving due notice thereof, held a public hearing on December 15, 2015, beginning with the evidentiary portion of the hearing beginning at 3:00 p.m. and continuing with the public comment session at 7:00 p.m. at the East Lyme Town Hall, 108 Pennsylvania Avenue, East Lyme, Connecticut. (Council's Hearing Notice dated November 13, 2015; Tr. 1, p. 1; Tr. 2, p. 1)
18. The Council continued the public evidentiary hearing on January 26, 2016 at the Council's office at 10 Franklin Square, New Britain, Connecticut. (Council's Continued Hearing Memo dated December 16, 2015; Transcript 3, January 26, 2016, 11:00 a.m. [Tr. 3], p. 1)
19. On January 22, 2016, the Council requested consent from the Applicant to extend the deadline for a decision in the proceeding until May 3, 2016. (Council Extension Request Letter dated January 22, 2016)
20. On February 12, 2016, the Applicant granted consent to extend the deadline for a decision until April 15, 2016. (Applicant Consent to Extension Letter dated February 12, 2016)

21. On March 3, 2016, the Council reviewed the Draft Findings of Fact and after conducting a non-binding straw poll approving the facility, directed staff to draft a favorable Opinion and Decision and Order for Council review at a meeting scheduled for March 31, 2016. (Council Meeting Minutes of March 3, 2016)
22. On March 28, 2016, the Applicant requested the Council defer a final decision in this matter and granted the Council an extension of time until September 3, 2016 to render a decision to allow the Applicant enough time to thoroughly investigate a potential alternative site. (Applicant Request to Defer Decision and Grant Extension on Decision Deadline dated March 28, 2016)
23. On August 19, 2016, the Council requested consent from the Applicant to extend the deadline for a decision in the proceeding to the 360-day statutory deadline of September 30, 2016. (Council Extension Request Letter dated August 19, 2016)
24. On August 23, 2016, the Applicant granted consent to extend the deadline for a decision until the 360-day statutory deadline of September 30, 2016. (Applicant Consent to Extension Letter dated August 23, 2016)
25. On September 14, 2016 the Applicant submitted an amendment to the application for an alternative tower site located at 2 Arbor Crossing in East Lyme, Connecticut. (Applicant's Amendment to the Application received September 14, 2016)

State Agency Comment

26. Pursuant to C.G.S. § 16-50j (g), on November 13, 2015 and January 27, 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)
27. The Council received a response from the DOT's Bureau of Engineering and Construction on November 13, 2015 indicating that a Highway Encroachment Permit would be required if any work is conducted within the state right of way on Route 1. (DOT Comment received November 13, 2015)
28. The Council received a response from the DPH's Drinking Water Section on December 1, 2015, indicating that the proposed project does not appear to be located in a public water supply source water area. Therefore, the Drinking Water Section has no comments at this time. (DPH Comment dated December 1, 2015)
29. The following agencies did not respond with comment on the application: DEEP, CEQ, PURA, OPM, DECD, DOAg, CAA, DESPP, and SHPO. (Record)

Municipal Consultation

30. AT&T began preliminary discussions with the Town regarding a replacement facility in the Fall of 2013. (Applicant 1, Tab 2; Tr. 1, p. 14)

31. On April 9, 2015 AT&T, in anticipation of the decommissioning of the 2 Scott Road tower, filed Petition 1152 with the Council for a temporary tower on Ancient Highway in East Lyme. The purpose of the temporary facility was to provide limited wireless service to Route 1 and surrounding areas until a permanent replacement tower site was found. (Council Administrative Notice 29 – Petition 1152 Record)
32. The Town submitted a letter to the Council on May 8, 2015 objecting to the replacement tower site and the petition. (Council Administrative Notice 29 – Petition 1152 Record)
33. AT&T withdrew Petition 1152 without prejudice on June 8, 2015. (Council Administrative Notice 29 – Petition 1152 Record)
34. For the proposed site, the Applicant commenced the 90-day pre-application municipal consultation process by filing a technical report with the Town of East Lyme on June 5, 2015. A meeting with town officials to discuss the project was held on June 25, 2015. (Applicant 1, p. 24)
35. The Applicant participated in a Town-held public presentation regarding the proposed project on July 29, 2015. (Applicant 1, p. 24)

Public Need for Service

36. 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)
37. 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. AT&T is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to Connecticut, including the Town of East Lyme. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996; Applicant 1, Tab 1, RF Report p. 1))
38. 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)
39. 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)
40. 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)

41. 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)
42. 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)
43. 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)
44. 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)
45. 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. 12 – Presidential Executive Order 13616, Accelerating Broadband Infrastructure Development)
46. 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. 21 – FCC Wireless Infrastructure Report and Order)

47. 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)

AT&T Existing and Proposed Wireless Services

48. AT&T proposes to deploy 700 MHz, 850 MHz and 1900 MHz wireless services at the proposed site. Both the 700 MHz and 1900 MHz frequencies would provide long-term evolution (4G) voice and data service with an in-building service design threshold of -83 dBm and -86 dBm, respectively. The 850 MHz frequency would provide service to older technology (2G, 2.5G, 3G) at an in-building service design threshold of -74 dBm and an in-vehicle threshold of -82 dBm. AT&T intends to phase out 2G service on January 1, 2017. (AT&T 2, R. 1, R. 3; Tr. 3, p. 63)
49. The proposed facility is designed to replace as much wireless service as possible that is currently provided by the existing 2 Scott Road facility. The 2 Scott Road facility is located at an approximate elevation of 337 feet above mean sea level (amsl) near the summit of Pond Hill, one of the tallest hills in the Route 1 area of East Lyme. (Applicant 1, Tab 1; Council Administrative Notice 25, Docket 67 Record)
50. Wireless service characteristics for 850 MHz service provided by the existing 2 Scott Road facility are provided in the table below. 850 MHz was selected as the frequency to demonstrate wireless service capability as it has the greatest impact on wireless customers (refer to Figure 5).

Existing 850 MHz Service from 2 Scott Road (antenna height 152 agl - 489 feet amsl)			
Length of service on Main Roads	Length of service on Secondary Roads	Service Area	Population
4.1 miles (-82 dBm)	16.1 miles (-82 dBm)	3.0 square miles (-74 dBm) 6.2 square miles (-82 dBm)	1,370 (-74 dBm) 2,389 (-82 dBm)

(Applicant 1, Tab 1, RF Report; Applicant 2, R. 5)

51. The proposed facility would provide reliable wireless service for AT&T to portions of Route 1, Lovers Lane, Dean Road, Scott Road, North Bride Brook Road, and surrounding areas including residential and commercial developments (refer to Figure 6). (Applicant 1, Tab 1 RF Report)

52. The table below presents AT&T’s projected 850 MHz service from the proposed facility along major roads and in the surrounding area.

Projected 850 MHz Service (antenna height 190 feet agl – 389 amsl)			
Length of service on Main Roads	Length of service on Secondary Roads	Service Area	Population
3.7 miles (-82 dBm)	13.2 miles (-82 dBm)	2.2 square miles (-74 dBm) 4.1 square miles (-82 dBm)	1,365 (-74 dBm) 2,076 (-82 dBm)

(Applicant 1, Tab 1, RF Report; Applicant 2, R. 5)

53. The proposed facility would not be able to replace all of the reliable wireless service currently provided by the 2 Scott Road facility as AT&T’s proposed antennas are approximately 100 feet lower in ground elevation than its current installation on the 2 Scott Road tower. Most of the “lost” service would be along Scott Road and Route 1 west of North Bride Brook Road. AT&T has no current plan to replace this “lost” service. (Applicant 1 , Tab 1 RF Report; Tr. 1, pp. 31-32)

54. AT&T’s proposed facility would interact with the following AT&T facilities as part of its seamless wireless network:

Site Location	Distance and Direction from Proposed Tower	Antenna Centerline above ground level	Structure Type
269 Flanders Road, East Lyme	0.8 miles east	107 feet	power line facility
93 Roxbury Road, East Lyme	1.6 miles south	79 feet	water tank facility
15 Liberty Way, East Lyme	2.8 miles south	62 feet	building mount
38 Hatchetts Hill Road, Old Lyme	3.6 miles southwest	165 feet	monopole
62-1 Boggy Hole Road, Old Lyme	4.8 miles west-southwest	145 feet	monopole

(Applicant 2, R. 4)

55. If AT&T’s proposed antenna height was reduced below 190 feet above ground level (agl), reliable service would be negatively affected along Route 1. Additionally, some wireless connectivity loss to adjacent AT&T facilities would occur. Specific coverage loss includes four separate 0.1 mile areas on Route 1, a 0.2 mile section on Goldfinch Terrace, 0.1 mile on Upper Pattagansett Road, and 0.1 mile on Nelson Road. (AT&T 10, R. 4; Tr. 1, p. 66)

Site Selection

56. The search for a tower site in this area dates to the Fall of 2013 when ATC and AT&T were separately examining properties that could host a telecommunications tower. (Applicant 1, Tab 2; Tr. 1, pp. 14, 37)
57. The search included investigating whether existing towers or other sufficiently tall structures were available within the Applicant’s search area that could provide adequate wireless service for AT&T. No such structures were identified. (Applicant 1, Tab 2)
58. Given the topography of the area, characterized by hilly terrain to the northwest and southeast of Route 1, both AT&T and ATC focused their search for suitable properties in the area around Pond Hill, site of the 2 Scott Road facility and The Orchards residential development, and along high elevation terrain on Wilson Hill in the Ancient Highway area (refer to Figure 7 for topographic map information). (Applicant 1, Tab 2, Tab 8 topographic map)

59. In addition to the proposed site, the Applicant investigated numerous other parcels including sites suggested by the Town, BHSO Community Conservancy, and the Council. None of the investigated or suggested parcels were suitable for telecommunications use, as indicated in the table below:

Location	Parcel Size (acres)	Reason for rejection
351B Boston Post Road	7.27	Property owner not interested
405 Boston Post Road	39.7	Property owner not interested
Hathaway Road (M35.0/L23)	152	Property owner not interested
Scott Road (M34.0/L9)	44	Rejected by AT&T radio frequency engineers
24 Sunrise Trail (Rear)	4.1	Property owner not interested
171 Boston Post Road (light duty tower at Public Safety Complex)	61	Rejected by AT&T radio frequency engineers
Stone Ranch (existing tower)	1026	Rejected by AT&T radio frequency engineers and not available per property owner (CT Military Dept.)
6 Stone Ranch (near former airfield)	1026	Rejected by AT&T radio frequency engineers
415 Boston Post Road	34.4	Rejected by AT&T radio frequency engineers
12 Scott Road	3.2	Rejected by AT&T radio frequency engineers
Scott Road (M29.0/L11)	34	Rejected by AT&T radio frequency engineers
405 Boston Post Road (M29.0/L31)	39.7	Rejected by AT&T radio frequency engineers
291 N. Bride Brook (M24.0/L95)	53.5	Rejected by AT&T radio frequency engineers
430 Boston Post Road	18.9	Rejected by AT&T radio frequency engineers
440 Boston Post Road (water tank)	0.3	Rejected by AT&T radio frequency engineers
Marion Drive (M25.0/L32)	35.4	Town owned open space not available and rejected by AT&T radio frequency engineers
Ancient Highway, Drabik lot M30.0/L1	8.6	Site acceptable to AT&T but site given adverse effect determination by Mohegan Tribe. Location of Petition 1152
Ancient Highway Drabik lots M30.0/L2 & M25.0/L31	4.2 & 21	Site acceptable to AT&T but site given adverse effect determination by Mohegan Tribe
286 Flanders Road	79	Gateway development area acceptable to AT&T but area given adverse effect determination by Mohegan Tribe
18 Drabik Road	6.5	Rejected by AT&T radio frequency engineers
Drabik Road (Cedar Ridge G.C.)	77.2	Rejected by AT&T radio frequency engineers
16 Mostowy Road	301.5	Rejected by AT&T radio frequency engineers
83-89 Upper Pattagansett Road	53.8	Rejected by AT&T radio frequency engineers
29 Goldfinch Terrace	200.5	Rejected by AT&T radio frequency engineers
300 Flanders Road	2.4	Rejected by AT&T radio frequency engineers
11 Industrial Park Road	4.8	Rejected by AT&T radio frequency engineers

49 Industrial Park Road	8.4	Rejected by AT&T radio frequency engineers
63 Scott Road	Not available	Rejected by AT&T radio frequency engineers
397 Boston Post Road	Not available	Rejected by AT&T radio frequency engineers
21 Legendary Road	Not available	Rejected by AT&T radio frequency engineers
12 Seebeck Road	Not available	In area determined by MTHPO as culturally significant
Flanders Lane (M31/L1)	Not available	Rejected by AT&T radio frequency engineers and in area determined by Mohegan Tribe as culturally significant
Ancient Highway (M25/L30)	Not available	Rejected by AT&T radio frequency engineers and in area determined by Mohegan Tribe as culturally significant
84 Lovers Lane (M25.1/L85)	Not available	Rejected by AT&T radio frequency engineers
94 Lovers Lane (M25.1/L88)	Not available	Rejected by AT&T radio frequency engineers

(Applicant 1, Tab 2; Applicant 2, R. 18, R. 19; Applicant 9, R. 3)

60. Both the Drabik parcel (M30.0/L1) and the 286 Flanders Road Gateway parcel were acceptable to AT&T. During the municipal consultation process, the Applicant submitted a technical report to the Town that proposed a tower on both of these parcels as well as a tower on the proposed site. During the Applicant's FCC-mandated National Environmental Policy Act (NEPA) review process, the Mohegan Tribal Historic Preservation Office (MTHPO) performed a site visit of the Ancient Highway area where these two sites were located. The MTHPO indicated that due to potential tribal features on an abutting parcel and the potential historic use of the Ancient Highway by the tribe, development of a tower in the Ancient Highway area would have an adverse effect on tribal cultural resources and the historic landscape of the Ancient Highway area. Given this adverse effect determination, the Applicant would not be able to obtain NEPA approval for telecommunications use of these two parcels as well as other potential tower locations in the general area of Ancient Highway. Given this determination, these two locations were not submitted as candidates in the Application to the Council. (AT&T 1, Tab 2; Applicant 2, R. 19; Tr. 3. pp. 38-49, 80-92)
61. A parcel owned by the Town located east of Marion Drive (M25.0/L32) is considered Town Open Space and is not available to the Applicant. (Town 2, R. 3; Tr. 3, p. 17)
62. The Applicant examined locations at the Stone Ranch parcel, specifically the existing telecommunications tower located at the highest point on the property and a location adjacent to the former airfield at a lower elevation. Both locations are not suitable for AT&T as they would not provide adequate coverage. Even if the existing tower was at a height of 400 feet agl, coverage would still be deficient. Although Stone Ranch is a large parcel, other locations on this property would not be suitable because the property is located too far west of the target service area on Route 1. Furthermore, the CT Military Department, operators of Stone Ranch, would not permit use of the existing tower or the other areas of the Stone Ranch parcel for commercial telecommunications use. (Applicant 1, Tab 2; Applicant 2, R. 18; Applicant 9, R. 1, R. 2, R. 3)
63. Locating antennas on the 45-foot tall Town-owned water tank at 440 Boston Post Road would not provide adequate coverage to the target service area. Installing a tower on the parcel would not be feasible given the parcel's small size (0.32 acre) and location adjacent to a residence. Additionally, AT&T determined the site would not provide adequate coverage even if antennas were installed at 199 feet agl in this location. (Applicant 1, Tab 2; Applicant 2, R. 18; Applicant 10, R. 4)

64. The property owner of 335 Boston Post Road, an abutting property east of the proposed site, offered their property for telecommunications use. The Applicant would not pursue a location on this property given its narrow width, steep grade, and lack of existing access to the rear of the parcel. (Tr. 1, pp. 86-87)
65. Utilizing microcells, distributed antenna systems, or repeaters are not feasible to replace the wireless services currently provided by the existing 2 Scott Road tower. These technologies are better suited for specific localized areas where coverage and capacity are needed, such as commercial buildings, stadiums and tunnels. (Applicant 1, p. 13)

Proposed Facility Description

66. The proposed site is located on an approximately 7.2-acre flag shaped parcel at 351A Boston Post Road in East Lyme. The parcel is located on the southeast side of Pond Hill. (Applicant 1, p. 15, Tab 4, Tab 8)
67. The parcel is located northwest of Route 1 and contains a single family residence (refer to Figure 2). The parcel is accessed from a paved driveway extending uphill from Route 1. The driveway is shared with an abutter to the north at 351B Boston Post Road. There are no restrictions in the property deed that would limit the Applicant's access to the proposed site. (Applicant 1, Tab 4; Applicant 10, R. 9; Tr. 1, p. 18)
68. The subject property is zoned Residential (RU-40). (Applicant 1, Tab 4)
69. Land use immediately surrounding the subject parcel is residential. Seven developed residential properties are to the south, downhill, between the property line and Route 1. A developed residential property is located to the north at 351B Boston Post Road. Residential development is also located to the west in The Orchards residential development and to the east/northeast. (Applicant 1, Tab 4, Tab 8)
70. The tower site is located in a wooded, eastern portion of the property, at an elevation of approximately 200 feet above mean sea level. (Applicant 2, Tab D)
71. The property owner's residence is approximately 320 feet west of the proposed tower site. (Applicant 1, Tab 4, Sheet C-1.0)
72. The proposed tower site is 100 feet from the north property line (351B Boston Post Road) and 152 feet from the east property line (335 Boston Post Road). (Applicant 2, R. 11)
73. The nearest abutting residence to the proposed tower site is approximately 397 feet to the south at 341 Boston Post Road. (Applicant 1, Tab 4, Sheet C-1.0; Applicant 2, Tab E)
74. There are approximately 39 residential dwellings within 1,000 feet of the proposed tower site. (Applicant 2, R. 10)
75. The proposed tower would consist of a 194-foot monopole, designed to accommodate up to four wireless antenna platforms. It would have an approximate diameter of 60 inches at the base and 42 inches at the top. (Applicant 1, Tab 3, Tab 4)

76. The monopole would have a gray, galvanized steel finish. The Applicant would be willing to paint the antennas and antenna mounts a gray color to match the monopole finish. (Applicant 1, p. 21; Applicant 10, R. 2)
77. AT&T would install up to 12 panel antennas and 27 remote radio units on an antenna platform at a centerline height of 190 feet agl. The total height of the facility with antennas would be 194 feet agl. (AT&T 1, Tab 4)
78. T-Mobile intends to locate at the 180-foot level of the proposed facility. A lease most likely would be signed with ATC if the facility is approved for construction. (Applicant 1, Tab 7; Tr. 1, p. 67)
79. A 60-foot by 100-foot tower equipment compound would be established within a 70-foot by 120-foot lease area. (Applicant 1, Tab 4)
80. AT&T proposes to install an 11.5-foot by 16-foot equipment shelter within the compound. (Applicant 1, p. 15)
81. Two HVAC units would be attached to AT&T's proposed equipment shelter to provide air conditioning and heating to the equipment shelter. Typically, only one of the HVAC units operates at a time. (AT&T 2, Tab A)
82. The proposed equipment compound would be surrounded by an eight-foot high, anti-climb chain-link fence. The compound and AT&T's equipment shelter would be locked for security purposes. (Applicant 2, R. 13)
83. Underground utilities would be installed to the compound from existing service along the paved residential driveway. (Applicant 1, p. 15)
84. No other wireless carriers have expressed an interest in co-locating on the proposed tower at this time. (Record)
85. Existing ground elevation in the proposed compound area varies by 12 feet. Construction would require cut and fill (balanced) to create a compound surface. Retaining walls on the uphill and downhill slopes would be constructed to stabilize adjacent slopes. (Applicant 2, Tab D; Tr. 1, p. 23)
86. Access to the proposed compound would utilize the existing paved residential driveway on the west edge of the property for approximately 360 feet. Access would proceed east onto an existing dirt pathway that extends into the eastern portion of the property. The dirt path would be resurfaced, graded, widened to a travel width of 12 feet, and extended to a total length of approximately 700 feet. (Applicant 1, Tab 3; Applicant 2, Tab D; Tr. 1, p. 18)
87. The grade of the existing paved driveway is approximately 15 percent. The grade of the proposed access drive that follows the dirt path is three to five percent but reaches eight percent near the compound. (Tr. 1, pp. 20-22)
88. Site preparation would commence following Council approval of a Development and Management Plan (D&M Plan) for the site and is expected to be completed within six weeks. Installation of the equipment shelter and tower are expected to take another four weeks. After the equipment installation, cell site integration and system testing is expected to require an two additional weeks. (Applicant 1, p. 25)

89. The estimated cost of the proposed facility is:

Tower and Foundation	\$150,000
Site Development	105,000
Utility Installation	85,000
AT&T Antennas and Equipment	<u>\$250,000</u>
Total Estimated Costs	\$590,000

(Applicant 1, p. 25)

Public Safety

90. 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)
91. The proposed facility would be in compliance with the requirements of the 911 Act and would provide Enhanced 911 services. (Applicant 1, p. 12)
92. Wireless carriers have voluntarily begun supporting text-to-911 services nationwide in areas where municipal Public Safety Answering Points 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)
93. 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 Item No. 5 – FCC WARN Act)
94. The tower would be constructed in accordance with the American National Standards Institute "Structural Standards for Steel Antenna Towers and Antenna Support Structures" Revisions F and G. (Applicant 1, Tab 3)
95. The proposed tower would not constitute an obstruction or hazard to air navigation and would not require any obstruction marking or lighting. (Applicant 1, Tab 3)
96. AT&T's equipment shelter would be remotely monitored 24/7 and equipped with silent intrusion and system alarms. (Applicant 2, R. 13)
97. The tower set back radius extends beyond the north property boundary by 94 feet and to the east by 42 feet. (Applicant 2, p. 11)

98. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of AT&T's proposed and T-Mobile's potential antennas is 3.41% 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 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. (Applicant 1, Tab 6; Council Administrative Notice Item No. 2 – FCC OET Bulletin No. 65)

Emergency Backup Power

99. 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. 49 - Final Report of the Two Storm Panel)
100. 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. 27 – Council Docket No. 432)
101. 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. 27 – Council Docket No. 432)
102. ATC would install a shared diesel powered emergency generator within the compound that could supply up to four telecommunications carriers for 48 hours before it would require re-fueling. (Applicant 2, R. 16; Tr. 1, pp. 28-31)
103. A 300 gallon diesel fuel tank would be located within the emergency generator unit. The tank would be double walled for leak prevention. (Tr. 1, pp. 92-93)
104. 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

105. No historic or cultural resources would be affected by the proposed facility. (Applicant 1, p. 18, Tab 12)

106. The site property does not contain any wetlands or watercourses. The nearest wetland to the proposed compound site is located 900 feet to the south, on private property south of Route 1. Development of the compound and access road would have no effect on this wetland. (Applicant 1, p. 19, Tab 6)
107. Post-construction stormwater controls would be designed to maintain existing natural drainage patterns and are designed for a 100-year storm event. (Tr. 1, pp. 24-27)
108. Stormwater control features for the site include rip rap lined swales in the compound and access drive area, level spreaders along the access drive and two to three underground detention chambers installed along the access drive to collect runoff from the swales. (Applicant 2, Tab D; Tr. 1, pp. 24-27)
109. The underground detention chambers would measure two feet in diameter by eight feet long, surrounded by two feet of gravel to allow for chamber discharge percolation into the soil. (Tr. 1, pp. 73-75)
110. The underground system is being used at this site given the relatively close distance of the development area to the south property line. (Tr. 1, pp. 27-28, 74-75)
111. Although a geotechnical study was not undertaken, given the presence of ledge outcroppings on the property, some blasting and or chipping may be required to install the access drive, tower foundation and site detention system. If significant ledge is encountered, the stormwater control system may have to be redesigned to account for existing soil conditions. (Tr. 1, pp. 29, 73-75)
112. Construction erosion and sedimentation controls would consist of straw bales, silt fencing and natural fiber erosion control blankets, where necessary. If approved, the final details of the construction erosion and sedimentation control plan would be provided in the D&M Plan. (Applicant 2, Tab D)
113. The site is located in the Federal Emergency Management Agency Zone X, an area outside of the 500-year flood zone. (Applicant 1, Tab 4)
114. Approximately 45 trees with a diameter of 12 inches or greater at breast height (dbh) would be removed to develop the access drive and compound. Most of the trees in the site development area range in height from 45 to 80 feet. (Tr. 1, pp. 14, 53-54)
115. Approximately 0.4-acre of forest would be cleared to develop the site. The site is in an area classified as edge forest and would not result in the fragmentation of a core forest block. (Applicant 2, R. 14)
116. Several forest openings occur on either side of the proposed access drive. The Applicant would examine relocating part of the access drive into these openings in order to reduce the amount of necessary tree clearing. (Tr. 1, pp. 20-21)
117. Several trees would be trimmed along the existing paved driveway to accommodate construction vehicles. (Tr. 1, p. 20)
118. A review of the project's potential impact on plant and animal species determined that the northern long-eared bat, a federally-listed Threatened Species and State-listed Endangered Species, the red bat, a State Species of Special Concern, and the small whorled pogonia, a federally-listed Threatened Species, were recorded as occurring in the general area of the site property. (DEEP 2015 revision to State Listed Species; Applicant 1, p. 18)

119. The Applicant surveyed the site property for the northern long-eared bat and the small whorled pogonia and did not find either species. Furthermore, the property did not contain suitable habitat for these species. Although the site does not contain prime habitat for the northern long-eared bat, the Applicant expects the USFWS to issue a restriction on tree clearing that could extend from April 15 to August 31 and would coordinate construction activity accordingly. (Applicant 2, R. 14)
120. DEEP recommended a tree clearing restriction from May 1 to August 15 to avoid potential impacts to the red bat, a tree roosting species that favors large diameter trees. (Applicant 1, p. 17, Tab 9).
121. The proposed facility is not located near a National Audubon Society designated Important Bird Area (IBA). The nearest IBA to the proposed tower site is at the Connecticut College Arboretum, approximately 6.3 mile to the northeast. (Council Administrative Notice Item No. 67; Applicant 1, Tab 9)
122. The proposed facility is 3.3 miles east of the nearest waterfowl focus area, a designation that recognizes the most important habitats for waterfowl along the Atlantic Flyway, a regional primary migratory bird flyway. (Applicant 1, Tab 10)
123. The proposed facility would comply with the USFWS guidelines for minimizing the potential impact of telecommunications towers on bird species. (Applicant 1, Tab 10)
124. Noise from HVAC units at the proposed facility would not exceed State Noise Control Regulations at the property boundaries. (Applicant 2, Tab A)

Visibility

125. The proposed tower would be visible year-round from approximately 115 acres within a two-mile radius of the site (refer to Figure 7), with about a third of the visibility occurring over the open waters of Pattagansett Lake northeast of the site. The tower would be seasonally visible from approximately 844 acres within a two-mile radius of the site. (Applicant 8)
126. Generally, year-round views of portions of the facility would occur from locations in the immediate area surrounding the site, as well as from areas east of the site out to a distance of 0.75 miles. Year-round views from more distant areas to the west and south are effectively blocked by hilly terrain or dense tree cover. (Applicant 1, Tab 8; Applicant 8)
127. Approximately 24 residentially developed properties would have year-round views of the proposed tower. For residences with visibility within 0.25 miles of the site, the majority would have views of the upper 10 feet of the tower. (Applicant 10, R. 1)
128. Several homes, including but not limited to 351B Boston Post Road and 21 Plum Hill Road, given their location on the hillside above the tower site, would have year-round views of a substantial portion of the tower. (Applicant 8 Viewshed map; BHSO 2, photos; Tr. 3 p. 69)
129. Residences with substantial seasonal visibility of the tower would be mostly from the surrounding immediate area, including but not limited to, the residences at 24 Sunrise Trail, 342 Boston Post Road, and 345 Boston Post Road. (Applicant 8 map; BHSO 2, photos)
130. Generally, the proposed site is more visible to developed areas east of Plum Hill than the existing 2 Scott Road tower. The 2 Scott Road tower would mainly be visible from areas to the west, although most of this area is undeveloped. (Applicant 8)

131. 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 from Tower
East Lyme High School	1	Not visible	1.4 mi east
Chesterfield Road	2	Year-round - 30 feet barely discernible	1.6 mi northeast
Chesterfield Road	3	Year-round - 15 feet barely discernible	1.6 mi northeast
Flanders Road	-	Year-round - 30 feet	2.4 mi southeast
Maplewood Drive	5	Year-round - 35 feet	0.3 mi southeast
MacKinnon Pl. at Morris Ln.	6	Year-round - 80 feet	0.3 mi east
Parker Drive	7	Year-round - 80 feet	0.6 mi east
Boston Post Road	8	Year-round - 50 feet	0.4 mi east
Upper Pattagansett Road	9	Year-round - 15 feet	1.0 mi northeast
Island Campground	10	Year-round - 40 feet	0.7 mi east
Partridge Lane	11	Not visible	0.50 mi north
The Orchards - Arbor Crossing at Peach Lane	12	Not visible	0.47 mi northwest
The Orchards - Arbor Crossing	13	Not visible	0.37 mi northwest
The Orchards - Arbor Crossing (near #105)	14	Seasonal - 20 feet through trees	0.31 mi northwest
The Orchards - Arbor Crossing (near #111)	15	Seasonal - 40 feet through trees	0.24 mi northwest
The Orchards - Plum Hill Road (near #35)	16	Seasonal - 80 feet through trees	0.21 mi northwest
The Orchards - Plum Hill Road (near #31)	17	Seasonal - 100 feet through trees	0.17 mi west
The Orchards - Plum Hill Road (near #19)	18	Seasonal - 40 feet through trees	0.19 mi west
The Orchards - Hickory Court (near #5)	19	Not visible	0.27 mi west
The Orchards - Hickory Court	20	Year-round - 15 feet	0.26 mi southwest
The Orchards - Hickory Ct. at Plum Hill Rd.	21	Seasonal - 50 feet through trees	0.26 mi southwest
The Orchards - Plum Hill Road (near #11)	22	Year-round - 20 feet	0.25 mi southwest
Plum Hill Road	23	Seasonal - 40 feet through trees	0.28 mi southwest
Joshua Valley Road	24	Not visible	0.74 mi southwest
Esther Pond Lane	25	Not visible	1.19 mi southwest
North Bride Brook Road	26	Seasonal - barely discernible	0.91 mi southwest
Woodrow Road	27	Seasonal - 30 feet through trees	0.90 mi south
Woodrow Road	28	Seasonal - barely discernible	0.83 mi south
Lovers Lane	29	Seasonal - 50 feet through trees	0.48 mi south
Jean Drive	30	Seasonal - 30 feet through trees	0.45 mi south
Lovers Lane	31	Year-round -15 feet/ Seasonal 60 feet	0.34 mi south
Maplewood Drive	32	Year-round - 80 feet	0.32 mi southeast
MacKinnon Pl. at Morris Ln	33	Year-round - 80 feet	0.36 mi east
Boston Post Road	34	Year-round - 60 feet	0.34 mi east
Boston Post Road	35	Year-round - 60 feet	0.53 mi east
Legendary Road	36	Not visible	0.56 mi north

Naomi Road	37	Seasonal - 35 feet through trees	0.25 mi south
Host Property Driveway	38	Year-round – 50 feet	0.12 mi southwest
Boston Post Rd. #342 (front)	-	Seasonal - 60 feet through trees	730 feet southwest
Boston Post Rd. #345 (rear)	-	Seasonal - 50 feet through trees	570 feet west
Boston Post Road #341 (front)	-	Year-round - 50 feet/ Seasonal 30 feet	595 feet south
Sunrise Trail #24 (rear)	-	Seasonal - 40 feet through trees	630 feet east
Boston Post Road #351B (front)	-	Year-round – majority of tower	500 feet north
The Orchards - Plum Hill Road, near #21 (street)	-	Year-round - 30 feet	970 feet west

* Projected visibility map attached as Figure 7. (Applicant 1, Tab 2, Tab 4, Tab 8, Applicant 2, Tab E; Applicant 8, BHSO Community Conservancy 2 photos; Tr. 3, pp. 69, 93-94)

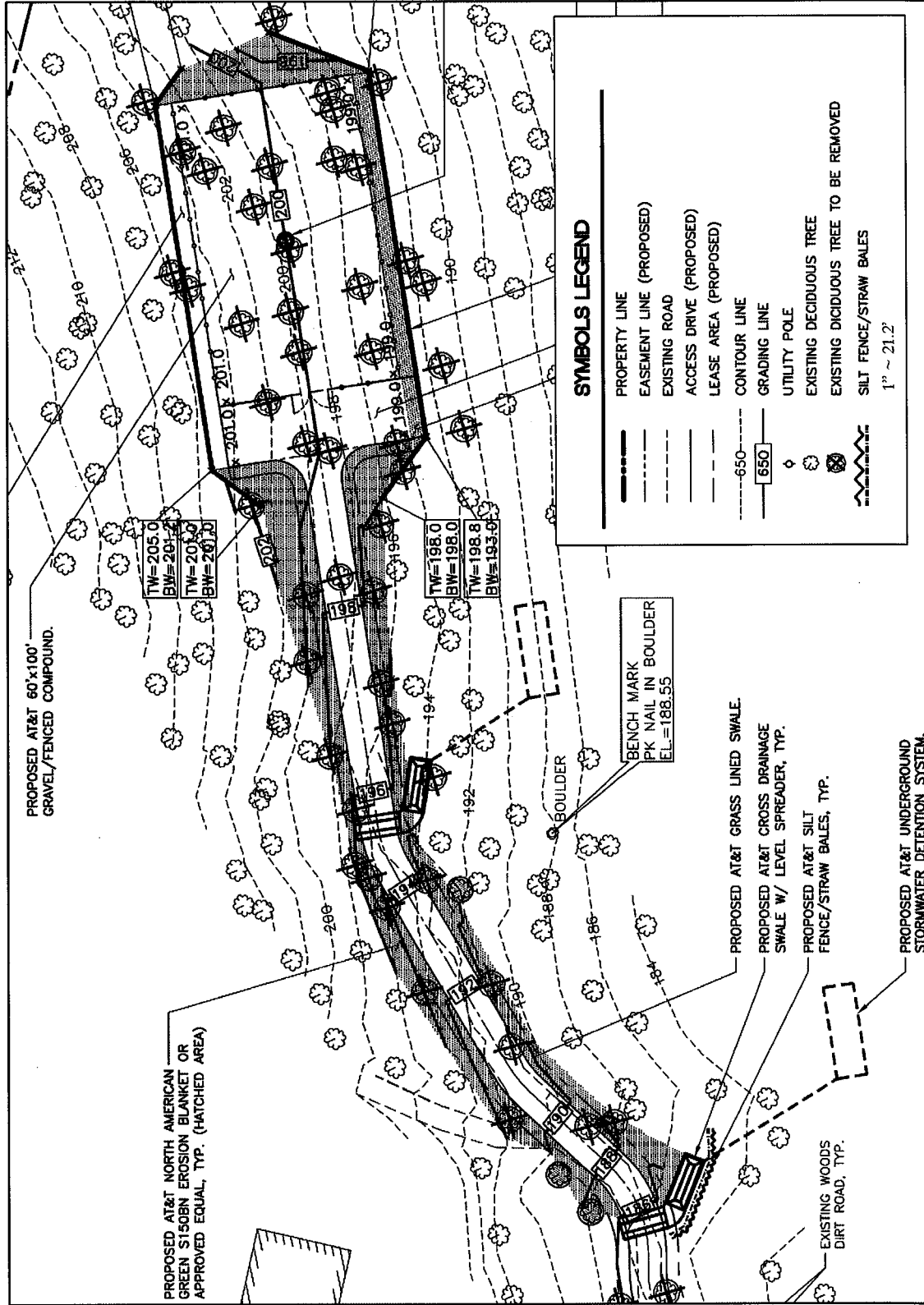
132. There are no hiking trails designated by the Connecticut Forest and Parks Association or DEEP within two miles of the site. (Applicant 1, Tab 8; Council Administrative Notice Item No. 65)
133. There are no state or locally-designated scenic roads located within two-miles of the site. (Applicant 1, Bulk File, Town of East Lyme Plan of Conservation and Development)
134. Pursuant to C.G.S § 16-50p(a)(3)(G), no schools or commercial child day care centers are located within 250 feet of the tower site. The nearest school is the Flanders School approximately 1.6 miles east-northeast of the tower site. The nearest commercial child day care facility is over two miles to the east-southeast of the tower site. (Applicant 1, Tab 8 p. 6)

Figure 1 – Aerial Photograph Showing Existing Tower at 2 Scott Road and Proposed Project Location at 351A Boston Post Road.



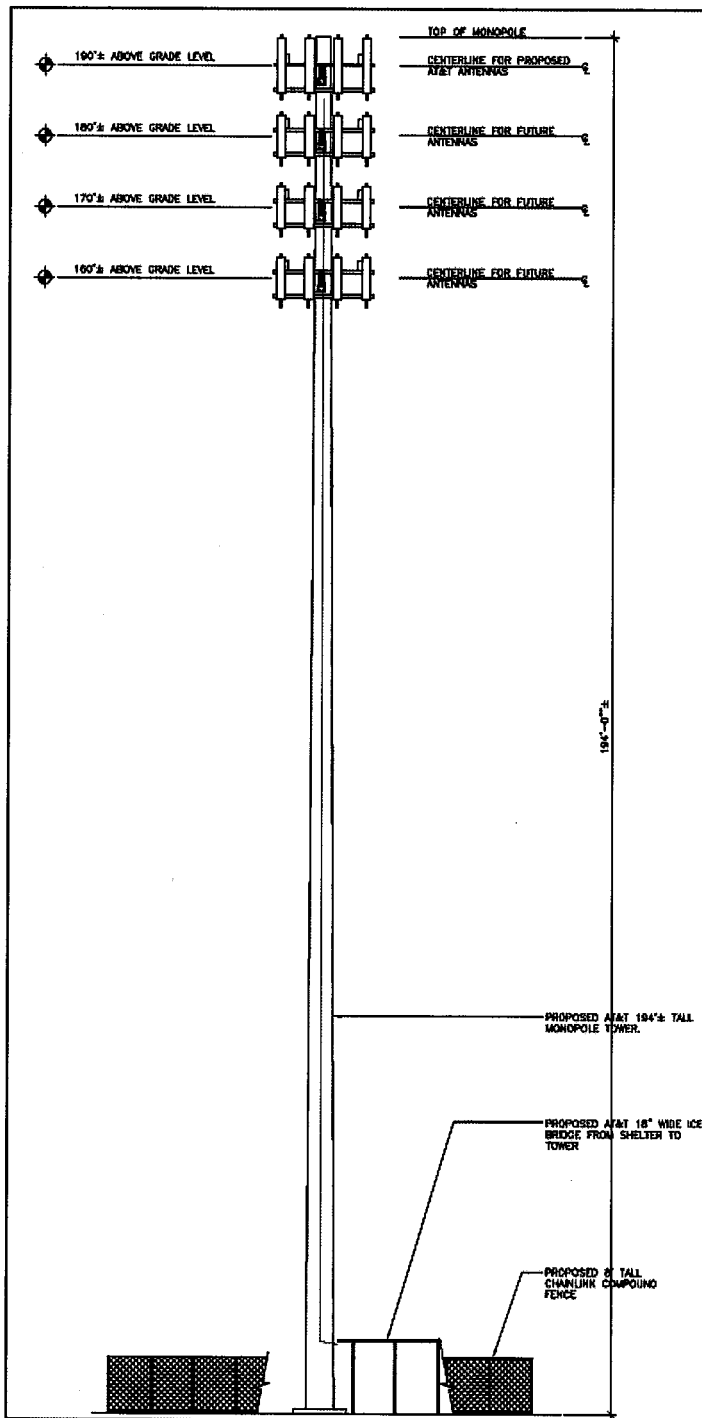
(Applicant 2, Tab E)

Figure 3: Proposed Compound Area Plan Detail



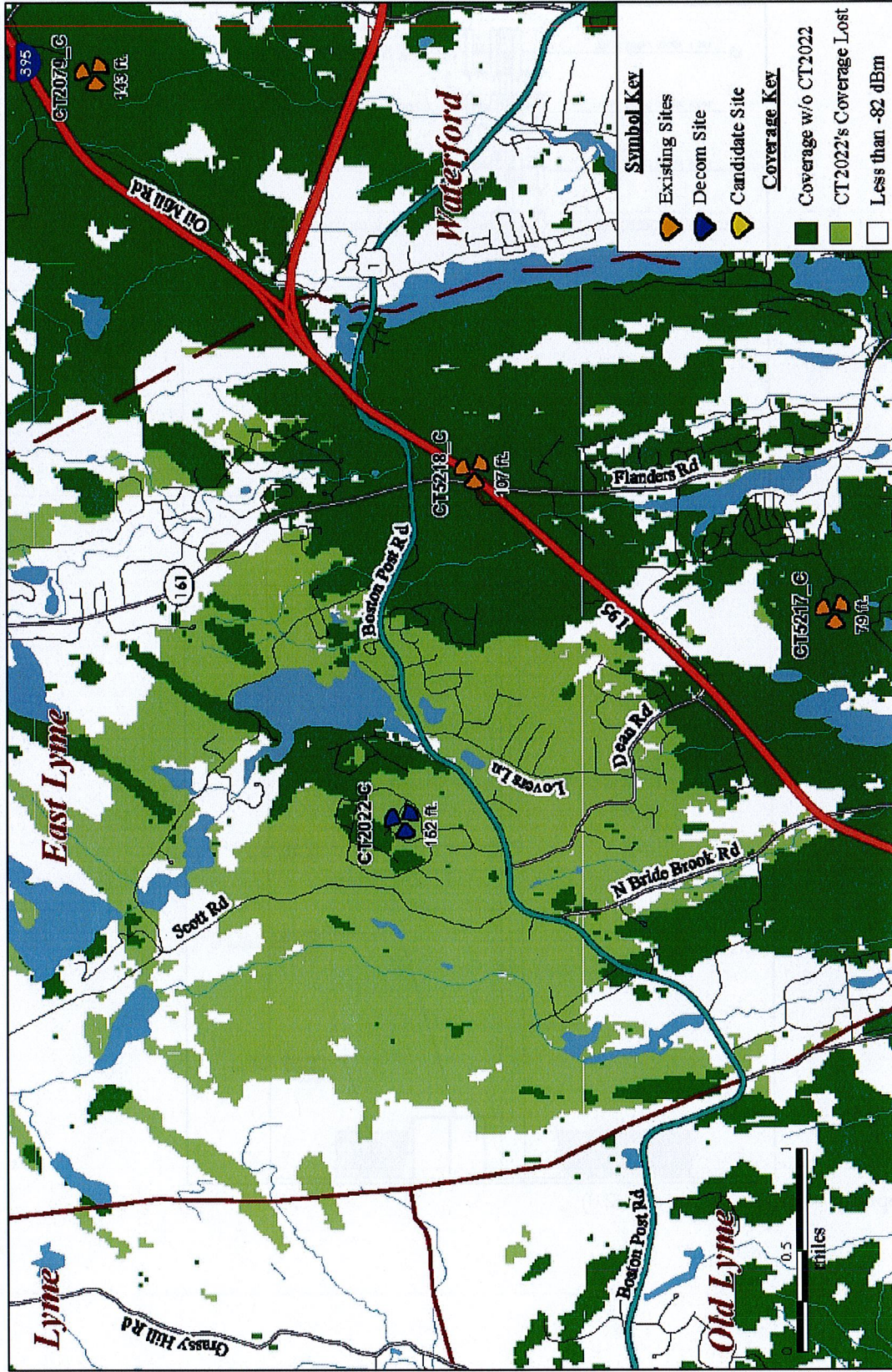
(Applicant 2, Tab D)

Figure 4 – Tower Profile Drawing



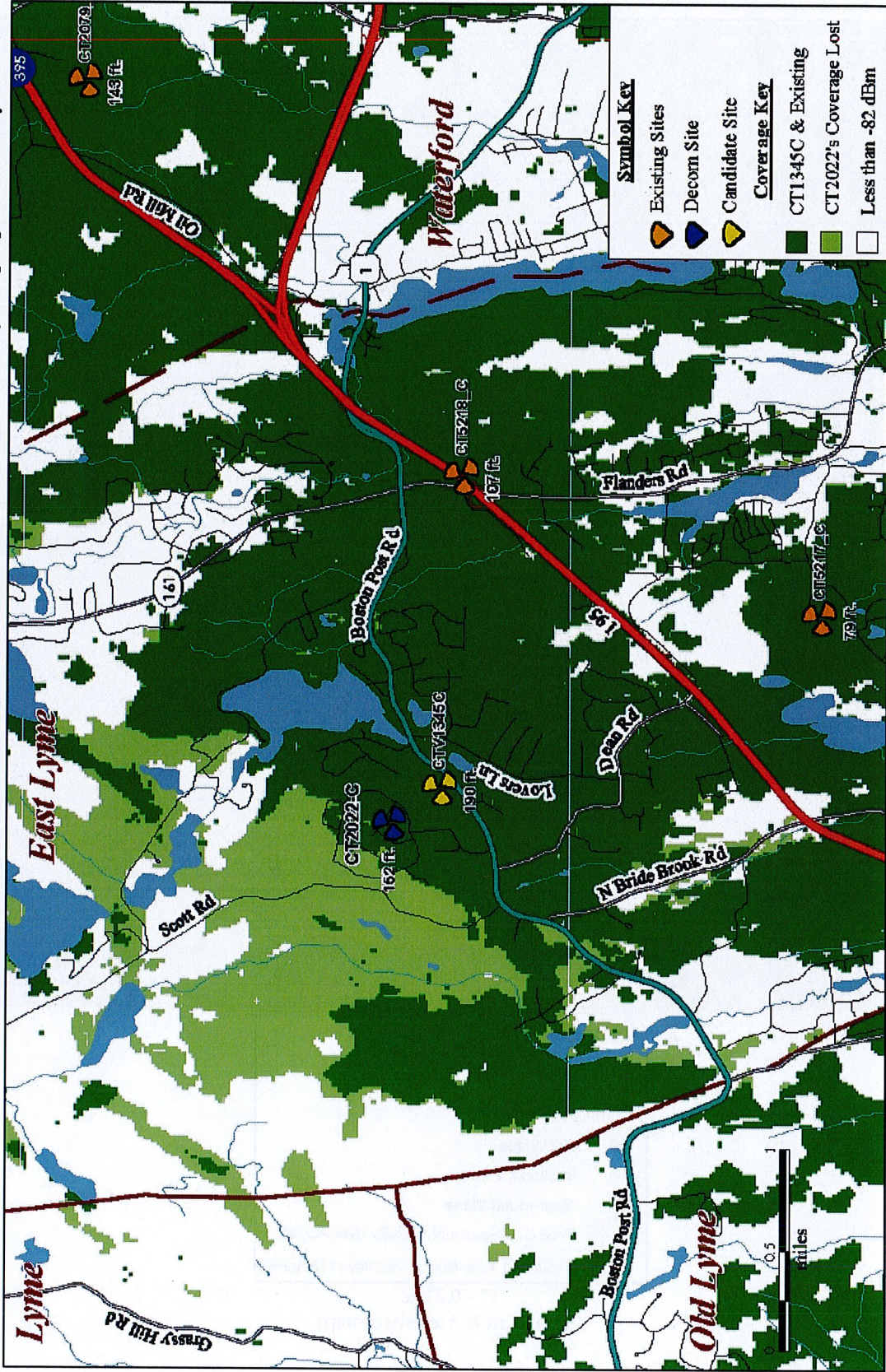
(Application 1, Tab 1 – Sheet C-2.0)

Figure 5: Existing AT&T Coverage in East Lyme Area (850 MHz). Light Green represents coverage "lost" once the existing 2 Scott Road facility is decommissioned. Dark green represents remaining coverage after the 2 Scott Road is decommissioned.



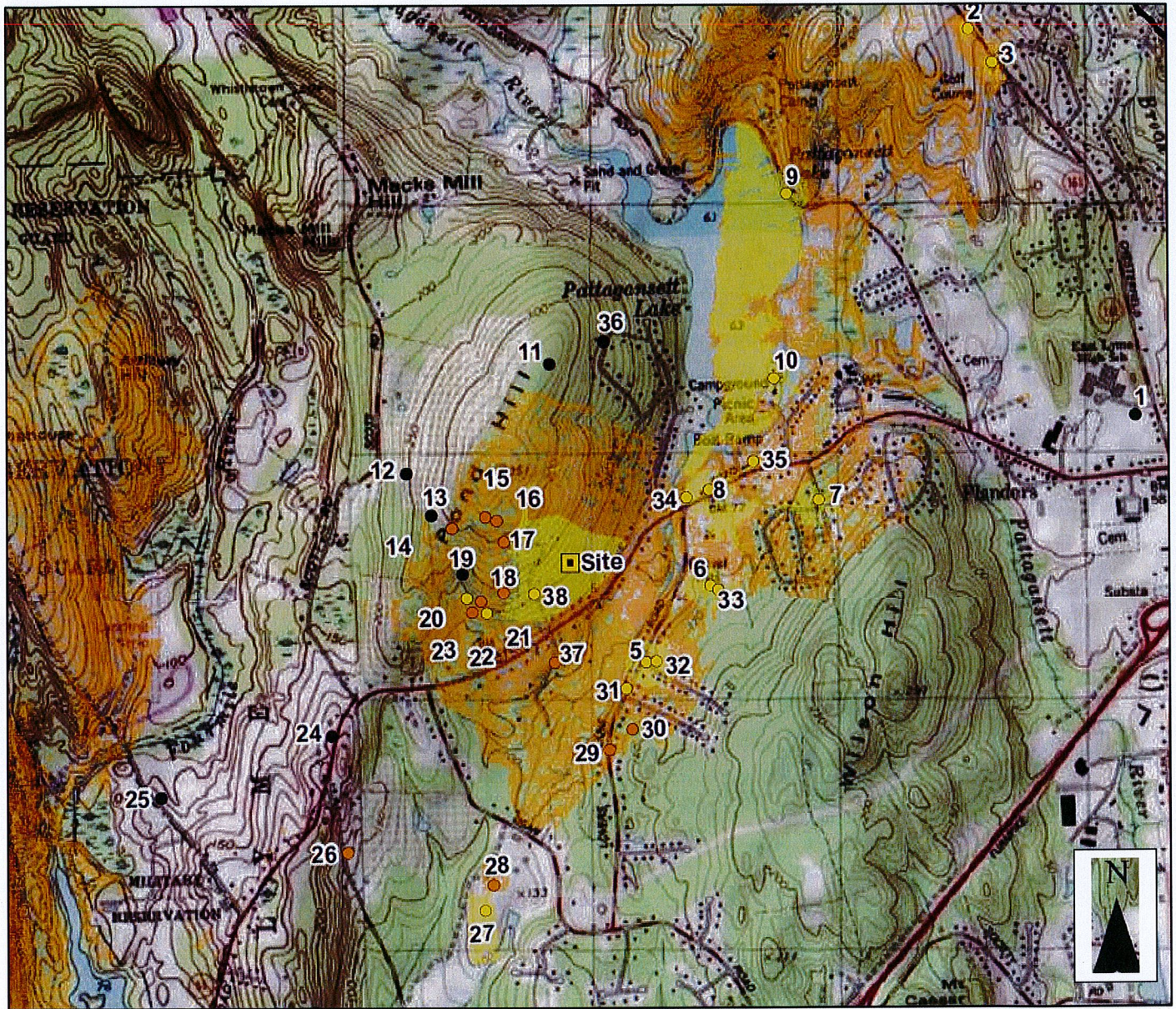
(Applicant 1, Tab 1)

Figure 6: Existing and Proposed AT&T Coverage in East Lyme Area (850 MHz). Dark green represents existing and proposed coverage after the 2 Scott Road is decommissioned. Light Green represents coverage not recovered by the proposed facility.









(Applicant 1, Tab 1)

Figure 7 – Projected Visibility of the Proposed Site



Legend

-  Proposed Tower
- Photo Locations**
-  Not Visible
-  Seasonal Views
-  Year-round Views
-  Predicted Seasonal Visibility (844 Acres)
-  Predicted Year-Round Visibility (115 Acres)

1" ~ 0.27 mi
(Applicant 8, viewshed map)