

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

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July 15, 2011

TO: Parties and Intervenors

FROM: Linda Roberts, Executive Director

RE: **DOCKET NO. 408** - 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 95 Balance Rock Road, Hartland, Connecticut.

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As stated at the hearing in New Britain on May 16, 2011, after the Council issues its draft findings of fact, parties and intervenors may identify errors or inconsistencies between the Council's draft findings of fact and the record; however, no new information, evidence, argument, or reply briefs will be considered by the Council.

Parties and Intervenors may file written comments with the Connecticut Siting Council on the Draft Findings of Fact issued on this docket by July 22, 2011.

LR/RDM/laf

Enclosure

**LIST OF PARTIES AND INTERVENORS**  
**SERVICE LIST**

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
<b>Applicant</b>	<input checked="" type="checkbox"/> U.S. Mail	New Cingular Wireless PCS, LLC (AT&T)	<p>Lucia Chiochio, Esq. Christopher B. Fisher, Esq. Cuddy &amp; Feder LLP 445 Hamilton Avenue, 14<sup>th</sup> floor White Plains, NY 10601 (914) 761-1300 (914) 761-5372 <a href="mailto:lchiochio@cuddyfeder.com">lchiochio@cuddyfeder.com</a> <a href="mailto:cfisher@cuddyfeder.com">cfisher@cuddyfeder.com</a></p> <p>Michele Briggs AT&amp;T 500 Enterprise Drive Rocky Hill, CT 06067 <a href="mailto:Michele.g.briggs@cingular.com">Michele.g.briggs@cingular.com</a></p>
<b>Party (granted on 11/18/10)</b>	<input checked="" type="checkbox"/> E-Mail	Thomas H. Sirman	<p>David F. Sherwood, Esq. Moriarty, Paetzold &amp; Sherwood 2230 Main Street, P.O. Box 1420 Glastonbury, CT 06033-6620 (860) 657-1010 (860) 657-1011 fax <a href="mailto:dfsherwood@gmail.com">dfsherwood@gmail.com</a></p>
<b>Party (granted on 01/06/11)</b>	<input checked="" type="checkbox"/> U.S. Mail	Town of Hartland	<p>Margaret F. Rattigan Murphy, Laudati, Kiel, Buttler &amp; Rattigan, LLC 10 Talcott Notch, Suite 210 Farmington, CT 06032 (860) 674-8292 (860) 674-0850 fax</p>
<b>Party (granted on 01/13/11)</b>		<p>Heike M. Krauland 64 Balance Rock Road East Hartland, CT 06027 (860) 413-9483 <a href="mailto:heiketavin@yahoo.com">heiketavin@yahoo.com</a></p>	

<p><b>DOCKET NO. 408</b> - 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 95 Balance Rock Road, }          Hartland, Connecticut. }</p>	<p>Connecticut  Siting  Council  July 7, 2011</p>
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**DRAFT Findings of Fact**

**Introduction**

1. New Cingular Wireless PCS, LLC (AT&T), in accordance with the provisions of Connecticut General Statutes (CGS) §§ 16-50g through 16-50aa, applied to the Connecticut Siting Council (Council) on October 13, 2010 for the construction, maintenance, and operation of a 190-foot wireless telecommunications facility located at 95 Balance Rock Road in Hartland, Connecticut. (AT&T 1, pp. 3-4)
2. The parties in the proceeding are the applicant, Thomas H. Sirman, Heike M. Krauland, and the town of Hartland. (Record)
3. AT&T is a Delaware Partnership with an office in Rocky Hill, Connecticut. AT&T is licensed by the Federal Communications Commission (FCC) to construct and operate a personal wireless service system in Connecticut. (Cellco 1, p. 4)
4. Pursuant to CGS § 16-50m, the Council held a public hearing on January 13, 2011, at the Hartland Fire Department building, 34 South Road, East Hartland, Connecticut. The hearing was continued on March 1, 2011, and May 16, 2011 at the Council's office at 10 Franklin Square, New Britain, Connecticut. (Transcript 1 – 01/13/11, 3:10 p.m. [Tr. 1], p. 2; Transcript 2 – 01/13/11, 7:00 p.m. [Tr. 2], p. 3; Transcript 3 – 03/01/11, 11:25 a.m. [Tr. 3], p. 3; Transcript 4 – 05/16/11, 1:05 p.m. [Tr. 4], p. 3)
5. The application contained information regarding one site, referred to as Site A. After the application was filed and prior to the January 13, 2011 hearing, AT&T presented a second site on the property for Council consideration referred to as Site B. After the March 1, 2011 hearing, AT&T presented a third potential site on the property for Council consideration, referred to as Site C (refer to Figure 1). (AT&T 1, Tab 3; AT&T 3, R. 8; AT&T 22, R. 9)
6. The Council and its staff conducted an inspection of the Site A and Site B on January 13, 2011 beginning at 2:00 p.m. The applicant attempted to fly balloons at both sites to simulate the heights of the proposed towers, but weather conditions were not favorable and the balloons were only flown between 8:00 a.m. and 10:00 a.m. (AT&T 17, R. 9; Tr. 2, pp. 4-5)
7. Notice of the application was sent to all abutting property owners by certified mail. All return receipts were received. (AT&T 1, Tab 11)
8. Public notice of the filing of the application with the Council was published in the Hartford Courant on October 7 and 11, 2010. (AT&T 2)
9. AT&T installed a sign along the entrance to the site property on December 29, 2010. The sign presented information regarding the project and public hearing. (AT&T 17, R. 10; Tr. 2, p. 5)

10. Pursuant to CGS § 16-501(b), Cellco provided notice of the application to all federal, state and local officials and agencies listed therein. (AT&T 1, Tab 10)

#### **State Agency Comment**

11. Pursuant to General Statutes § 16-50j(h), on November 22, 2010 and May 16, 2011, the following State agencies were solicited to submit written comments regarding the proposed facility: Department of Environmental Protection (DEP), Department of Public Health (DPH), Council on Environmental Quality (CEQ), Department of Public Utility Control (DPUC), Office of Policy and Management (OPM), Department of Economic and Community Development (DECD), Department of Transportation (DOT), Department of Agriculture (DOAg), and Department of Emergency Management and Homeland Security (DEMHS). (Record)
12. On February 22, 2011, the Council received written comment from CEQ that stated further wildlife studies at the site should be conducted, the site would affect scenic resources in the area, and that approval should not be given to impact wetland areas that may have been previously filled without proper permits. (Record)
13. No other state agencies commented on the proposal. (Record)

#### **Municipal Consultation**

14. On June 29, 2010, AT&T submitted a technical report to the Town of Hartland First Selectman Wade Cole. (AT&T 1, Tab 9)
15. On August 16, 2010, AT&T attended a public information session hosted by the Town of Hartland Planning and Zoning Commission. As a result of this meeting, AT&T revised the site plans prior to submission of the application to the Council to address some of the concerns expressed by the public and the Planning and Zoning Commission. (AT&T 1, Tab 9)
16. The Town of Hartland became a party to the proceeding on January 6, 2011. (Record)

#### **Public Need for Service**

17. In 1996, the United States Congress recognized a nationwide need for high quality wireless telecommunications services, including cellular telephone service. Through the Federal Telecommunications Act of 1996, Congress seeks to promote competition, encourage technical innovations, and foster lower prices for telecommunications services. (Council Administrative Notice Item 8)
18. In issuing cellular licenses, the Federal government has preempted the determination of public need for cellular service by the states, and has established design standards to ensure technical integrity and nationwide compatibility among all systems. Cellco is licensed by the FCC to provide wireless service to Windham County. (Council Administrative Notice Item 8)
19. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item 8)

20. The Telecommunications Act of 1996 prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. This Act also blocks the Council from prohibiting or acting with the effect of prohibiting the provision of personal wireless service. (Council Administrative Notice Item 8)
21. In an effort to ensure the benefits of wireless technologies to all Americans, Congress enacted the Wireless Communications and Public Safety Act of 1999. The purpose of this legislation was to promote public safety through the deployment of a seamless, nationwide emergency communications infrastructure that includes wireless communications services. Congress further enacted the Enhanced 911 Act to facilitate emergency response capabilities. (Council Administrative Notice Items 9 & 10)
22. AT&T would provide space on the tower for Town emergency service antennas, if the need arises. (AT&T 1, p. 10)

**AT&T - Existing and Proposed Wireless Coverage**

23. AT&T proposes to operate cellular (800 MHz), and personal communication service (PCS - 1900 MHz), equipment at the proposed site. The cellular system is used to design coverage needs for the site (refer to Figures 3, 4, 5 & 6). (AT&T 3, R. 3)
24. AT&T designs and operates its network at the following signal-level thresholds: -82 dBm for in-vehicle service and -74 dBm for in-building service. Although a call may be made at a signal level below these thresholds, service is still considered unreliable. (AT&T 3, R. 1; AT&T 17, R. 3)
25. AT&T seeks to provide coverage to Route 20 and surrounding areas in the north-central section of Hartland. Existing AT&T facilities at 22 Welsh Road, 350 Hartland Boulevard, Center Hill Road in Hartland, and on Sodom Road and North Lane in Granville Massachusetts do not provide adequate coverage to the area (refer to Figure 2). (AT&T 1, Tab 1, AT&T 3, R. 3; AT&T 17, R. 2; Tr. 1, p. 64)
26. The existing cellular signal level in the proposed service area ranges from -70 dBm to -105 dBm. (AT&T 3, R. 2)
27. Installing antennas at any of the three sites would provide the following reliable coverage to the proposed service area:

Coverage Type	Approx. Linear Miles on Rt. 20	Approx. Square Miles
Cellular (-82 dBm)	2.8	17
Cellular (-74 dBm)	not quantified	10
PCS (-82 dBm)	2.6	10
PCS (-74 dBm)	not quantified	6

\* Assuming antennas at Site A are at 190 feet above ground level (agl), antennas at Site B are at 160 feet agl, and antennas at Site C are at 190 feet agl. (AT&T 3, R. 4; AT&T 17, R. 5; AT&T 22, R. 9)

28. Although coverage objectives could be met at a height of 160 feet at Site B, AT&T request approval to install antennas at 190 feet to increase coverage to the area, specifically where Route 20 traverses a deep valley north of the Barkhamsted Reservoir, also known as the "hollow", approximately 1.6 miles northwest of the site (refer to Figure 2). (AT&T 17, R. 4, R. 5; Tr. 2, p. 23)

29. Signal levels in the -94 dBm to -95 dBm range put instability in the network as it tries to maintain a call. A signal level that approaches 100-dBm would have difficulty maintaining a call. (Tr. 1, pp. 84-86; Tr. 3, pp. 52-56, 76-77)
30. Lowering the heights of the proposed facilities beyond what is required to meet coverage objectives would reduce coverage in the Route 20 hollow. The table below presents an analysis of the changes in signal level at different antennas heights within the Route 20 hollow:

Route 20 north of Barkhamsted Reservoir		
Antenna height	Length of Coverage Gap	Weakest Signal
190 feet	900 feet	-99.6 dBm
170 feet	970 feet	-102.9 dBm
150 feet	1250 feet	-104.4 dBm

- This analysis is based on propagation models for Site A. Coverage from Site B at 160 feet agl and Site C at 190 feet agl would be similar. (AT&T 17, R. 3 AT&T 22, R. 9; Tr. 3, pp. 104-105)
31. Due to the great elevation range between the proposed site and the bottom of the Route 20 hollow, coverage would still be marginal within the Route 20 hollow. AT&T is seeking to increase the signal level within this gap to the greatest extent possible. (Tr. 1, pp. 64-65, 82-83, 85-86)
32. Site B with antennas at 190 feet agl would increase the signal level within the Route 20 hollow to -97 dBm at its weakest point. (Tr. 3, p. 97)
33. Lowering the Site B antenna height to 140 feet would decrease the signal level within the Route 20 hollow to -103 dBm and increase the length of the gap from 900 feet to 1,500 feet. Although propagation modeling of 150 feet at Site B was not performed, the signal level would be between -103 dBm and -99.6 dBm within the Route 20 hollow. (Tr. 3, pp. 130-132)
34. A second gap on Route 20 approximately two miles west of the site where Falls Brook crosses the road would remain even with the proposed installation, due to local topography. Signal levels would be approximately -90 dBm for a length of 1,340 feet. Lowering the height of the antennas would not have an effect on this gap. (AT&T 17, R. 3; Tr. 3, pp. 10, 129)
35. The proposed site would not be able to provide coverage to Route 179 south of East Hartland village. This area has more traffic and development than the area to be served by the proposed tower. AT&T would issue a separate search ring to provide coverage to this area. (AT&T 1, Tab 1; AT&T 18, R. 3; Tr. 3, pp. 135-138)

#### Site Selection

36. AT&T established a search area for the proposed service area in December of 2008. The ring initially focused on an area along Route 20 west of the Barkhamsted Reservoir, but the unavailability of land in that area necessitated a examination of other properties in the surrounding area that would meet coverage objectives. (AT&T 1, Tab 2; AT&T 3, R. 6; Tr. 1, pp. 64-65)
37. During the initial search, AT&T investigated 11 other properties, 8 of which were in DEP-owned state forest or owned by the Metropolitan District Commission (MDC) as Class I & II watershed land. DEP state forest property and Class I & II watersheds land are not available for development due to State statute. Two privately owned parcels, one on Milo Coe Road, and one on Brook Drive, were examined

but both did not meet coverage objectives. A third privately-owned parcel at 384 Center Street was not available (AT&T 1, Tab 2; AT&T 3, R. 11; AT&T 4, R. 2; AT&T 8)

38. During the proceeding, AT&T was requested to examine the feasibility of installing a facility at a DOT salt garage located on Route 20 approximately 0.4 miles northeast of the site. AT&T would not be able to meet coverage objectives in the Route 20 hollow area due to a prominent ridge directly to the northeast that would block coverage. Additionally, new coverage gaps would occur on Route 20 on the west side of the reservoir. (AT&T 3, R. 9; AT&T 17, R. 1; AT&T 22, R. 4; Tr. 3, pp. 49-50; Tr. 4, pp. 20-21, 61-62)
39. During the proceeding, AT&T was requested to examine the feasibility of a facility at the Camp Alice Merritt property, and at 339 South Road, 55 Pell Road, and 150 East Pell Road. All four of these properties would not meet coverage objectives. (AT&T 4, R. 3; AT&T 10; AT&T 18, R. 1, R. 2, AT&T 22, R. 8)
40. A property at 38 Pell Road was also examined but rejected due to its relatively small size (3.8-acres), and its use as a mostly cleared, residential lot. (AT&T 4, R. 3)
41. The site search included identification of potential structures that could be used for telecommunications purposes and the examination of area properties, including municipal parcels, to identify potential telecommunications sites. (AT&T 1, Tab 2)
42. AT&T did not identify any structures in the search area that would be suitable for a telecommunications facility. (AT&T 1, Tab 2; )
43. An existing SBA site in Tolland Massachusetts, approximately 4.5 to 5.0 miles northwest of the site is too far from the proposed service area to provide adequate coverage. (AT&T 22, R. 10; Tr. 4, p. 18)

#### Property Description

44. The site property consists of a 12-acre parcel owned by the Ring Mountain Hunt Club. (AT&T 1, Tab 3)
45. The property is located near the end of Balance Rock Road and west of Route 20, at the north end of the East Hartland section of town. The property is approximately 1.8 miles south of the Massachusetts border. (AT&T 1, Tab 1)
46. The property is zoned residential, R-1. (AT&T 1, Tab 3)
47. The property is used as a gun club and improved with a shooting range, clubhouse and parking area, all of which are located in the southwest portion of the property. The remaining portion of the property is wooded. (AT&T 1, Tab 1)
48. The Tunxis State Forest abuts the property to the north, east and west. Two residential properties abut the site to the south (Sirman at 88 Balance Rock Road and Krauland at 72 Balance Rock Road). (AT&T 1, Tab 3)
49. Land use within a quarter-mile of the site includes low-density residential and state forest. (AT&T 1, p. 17, Tab 3)

### Proposed Facilities

50. AT&T proposes to construct a 190-foot monopole at one of the three sites, capable of supporting four levels of platform-mounted antennas (although a height of 160 feet would meet coverage objectives at Site B). It would be constructed in accordance with the Electronic Industries Association standard ANSI/TIA-222-F. (AT&T 1, Tab 3; AT&T Tab D; AT&T 22, Tab 4)
51. AT&T proposes to install up to 12 panel antennas on a platform at a centerline height of 187 feet agl. (AT&T 1, Tab 3)
52. AT&T proposes to construct a compound within a 100-foot by 100-foot lease area at the site. Site A would feature a 60-foot by 85-foot compound. Sites B and C would feature a 75-foot by 75-foot compound. (AT&T 1, Tab 3; AT&T Tab D; AT&T 22, Tab 4)
53. A 12-foot by 20-foot equipment shelter would be installed within the compound, enclosed by an eight-foot high chain link fence. An emergency diesel generator would be located within the shelter. (AT&T 1, Tab 3)
54. The estimated construction cost of the facility\*, not including antennas or radio equipment, is:

Tower, and foundation	\$90,000.
Site development	9,100.
Utilities	11,600.
<u>Installation</u>	<u>93,000.</u>
<u>Total estimated cost</u>	<u>\$203,700.</u>

\* based on the development of Site A.  
(AT&T 1, p. 19)

### Site Description

#### *Site A*

55. Proposed Site A is located in the southwest corner of the property, adjacent to the existing clubhouse (refer to Figure 7). (AT&T 1, Tab 3)
56. The proposed Site tower would be located at an elevation of 1100 feet above mean sea level (amsl). (AT&T 1, Tab 3)
57. The proposed Site A tower would be approximately 190 feet north of the property line with Balance Rock Road and 165 feet east of the boundary with the Tunxis State Forest. The tower radius would extend onto the state forest property by 25 feet. (AT&T 1, Tab 3)
58. The nearest residence to the proposed tower is approximately 457 feet to the southeast at 72 Balance Rock Road (Krauland). (AT&T 1, Tab 3)
59. There are two residences within 1,000 feet of the tower site. (AT&T 1, Tab 3)
60. Access to the site would be by using an existing driveway for 100 feet and a new driveway of 72 feet. (AT&T 1, Tab 3)



61. Utilities would be installed by connecting an overhead line from a utility pole on Balance Rock Road to a new pole on the property. From the new pole, utilities would extend underground 100 feet to the compound. The utility route would follow an existing route that services the clubhouse. (AT&T 1, Tab 3; Tr. 1, p. 60)

*Site B*

62. Proposed Site B is located in the forested northeast portion of the property, approximately 500 feet northeast of proposed Site A (refer to Figure 8). (AT&T 4, R. 14)

63. The proposed Site B tower would be located at an elevation of 1,135 feet amsl. (AT&T 7)

64. The proposed Site B tower is approximately 475 feet north of Balance Rock Road and 165 feet south and 170 feet west of the Tunxis State Forest. The tower radius would extend onto the state forest property by 25 feet. If a 160-foot tower were constructed, the tower radius would be contained within the site parcel. (AT&T 4, Tab D)

65. The nearest residence to the proposed Site B tower is approximately 700 feet to the south at 72 Balance Rock Road (Krauland). (AT&T 4, Tab D)

66. There are three residences within 1,000 feet of the Proposed Site B tower. (AT&T 4, Tab D)

67. Access to proposed Site B would be from a new, 12-foot wide gravel road extending 475 feet north from Balance Rock Road. The road curves slightly near the compound area. AT&T could design the access road with a more pronounced curve near the middle of the road to provide more screening of the tower from the road entrance on Balance Rock Road. (AT&T 4, Tab D; AT&T 22, R. 13)

68. Utilities would be installed underground along the access road. (AT&T 4, Tab D)

69. The culvert would be installed in the access road to cross over a drainage ditch along Balance Rock Road. Two additional culverts would be required along the access road to cross over an intermittent watercourse. (AT&T 4, Tab D, Tab E; Tr. 1, pp. 56-57)

*Site C*

70. Proposed Site C is located in the northeast corner of the parcel, 150 feet northeast of proposed Site B (refer to Figure 9). (AT&T 22, Tab 3, Tab 6)

71. The proposed Site C tower would be located at an elevation of 1,148 feet amsl. (AT&T 22, Tab 3)

72. The proposed Site C tower is approximately 590 feet north of Balance Rock Road and 100 feet south and 100 feet west of the Tunxis State Forest. The tower radius would extend onto the state forest property by 90 feet. (AT&T 22, Tab 3)

73. The nearest residence to the proposed Site C tower is approximately 740 feet to the south at 72 Balance Rock Road (Krauland). The number of residences within 1,000 feet was not quantified. (AT&T 22, Tab 6)

74. Access to proposed Site B would be from a new, 12-foot wide gravel road extending 770 feet northeast from the existing clubhouse on the property. The road would traverse the shooting range, then through the forested area of the property to the compound. (AT&T 22, Tab 3)

75. Utilities would be installed underground along the access road. (AT&T 224, Tab 3)

### Environmental Considerations

76. Development of a tower facility would have no effect on historic or archeological resources listed in or eligible for the National Register of Historic Places. A historic cabin constructed by the Civilian Conservation Corps in 1937 is located at the west end of Balance Rock Road, within Tunxis State Forest. The tower would not be visible from the cabin. A local historic residence is located near the intersection of Balance Rock Road and Route 20. The tower would no be visible from the residence. (AT&T 1, Tab 6, Tab 7; Tr. 3, pp. 43-44, 226; Tr. 4, p. 25)
77. Although the subject property is not within any designated area indicating the presence of Federally threatened or endangered species or State endangered, threatened or special concern species, the property is near areas were records indicate the presence of the Saw-whet owl, a State species of special concern. (Council Administrative Notice Item 30; AT&T 1, Tab 7)
78. The owl regularly winters in the State and is considered an uncommon to rare breeder in Connecticut. A call back survey identified a Saw-whet owl southwest of the property on January 5, 2011. The owl prefers dense mixed forest for roosting and foraging and favors dense stands of mature evergreens as a daytime roost site. The site property and surrounding state forest areas contains suitable mixed forest habitat. (AT&T 1, tab 7; AT&T 9)
79. Proposed Site A does not have any tree cavities that are suitable for nesting owls. The proposed Site B area and remaining wooded areas of the property contain stands of evergreens where some trees contain cavities that could be used for nesting. An examination of the trees in the Site B and Site C development areas did not find any evidence of owl nests. (AT&T 9; AT&T 22, Tab 9)
80. Although no owls were identified on the site property during owl surveys, it would be beneficial to restrict work from occurring between March 1 and July 1 to minimize any potential for disturbance to nesting owls. (AT&T 22, Tab 6)
81. Approximately 30 trees with a diameter of six-inches or greater would be removed to develop Site A. Approximately 180 trees would be removed to develop Site B. A tree count for Site C is not in the record although it may be similar to that of Site B because the compound is also in a heavily wooded area and the proposed access road would pass through 380 feet of woodland. (AT&T 1, Tab 4; AT&T 4, Tab D; AT&T 22, Tab 3)
82. The proposed site is not located near any areas identified by the Connecticut Audubon Society as an Important Bird Area (IBA). The IBA designation refers to specific areas and properties owned by the State, local jurisdictions and conservation groups. (Council Administrative Notice No. 39)
83. The site is located at the edge of a major forest area designated as key bird habitat by the Connecticut Audubon Society. This key bird habitat designation consists of a large area covering portions of several towns. (Sirman 9; Tr. 4, pp. 72-73)
84. The site property and surrounding area is located along a north-south ridge that runs along the east side of the Barkhamsted Reservoir and is in an area that contains large unfragmented forest tracts that are suitable to support fragmentation-sensitive Neo-tropical songbirds. (Sirman 9; Tr. 4, pp. 92-94)

85. Migratory birds use ridgelines as well as valleys during migration. Although the site is on a ridgeline, the site is not considered to be in a major flyway where birds are concentrated. A diffuse flyway is located in the eastern states where migrating birds do pass throughout the area, including the site. (Tr. 3, pp. 57-59; Tr. 4, pp. 98-102; 147-149)
86. Bird mortality caused by tower strikes occur generally with telecommunications towers over 1,000 feet in height, are illuminated at night, have guy wires, are located near wetlands, are in major songbird migration pathways, and have frequent periods of poor weather during bird migration periods. (Sirman Administrative Notice 2)
87. The proposed tower would comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing potential impact 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. (Council Administrative Notice No. 39; AT&T 3, R. 15)
88. A few studies were conducted for telecommunication towers below 200 feet. One of these studies examined a 100-foot tower and found no mortality and another examined a 197-foot tower and attributed four bird deaths to tower collision. (AT&T 12; Tr. 4, pp. 41-42)
89. Development of Site A does not directly affect any wetlands or watercourses. The nearest wetland to Site A is a forested swamp 40 feet from the north, south and east sides of the site. The swamp is dominated by eastern hemlock and drains to a drainage ditch along Balance Rock Road. The wetlands in this area are already located near existing development (e.g., the clubhouse, parking lot) and are already degraded. (AT&T 4, Tab E; AT&T 15, R. 9)
90. Development of the Site B access road would affect an intermittent watercourse. The watercourse, generally 3 feet wide and 6-inches deep, flows from wetlands within Tunxis State Forest to the wetland near Site A. The watercourse is seasonal and does not support fish. (AT&T 4, Tab 4; AT&T 22, R. 8)
91. The Site B access road crossing would utilize a natural stream crossing design that recreates the streambed within a culvert. Approximately 45 feet of the watercourse would be permanently affected by the road crossing. Another 10 feet would be affected by temporary construction impacts. (AT&T 15; Tr. 1, pp. 57-58)
92. Stormwater discharge into the watercourse and downgradient wetlands could be a concern and can be managed by adhering to the DEP's Stormwater Management Plan and 2004 DOT drainage manual. (AT&T 15, R. 8, R. 9)
93. No vernal pools were identified at the property but wetland areas in and around the site could support amphibians. To prevent impacts on migrating amphibians, work should not occur between March 1 and May 15. (AT&T 15, R. 10)
94. Development of Site C would impact wetlands where the proposed access road passes through the shooting range. A disturbed wetland traverses the shooting range where ongoing maintenance clearing occurs. Construction of the road would impact approximately 1,900 square feet of this wetland. No wetlands are located within the Site C compound area. (Tr. 3, pp. 120-121; Tr. 4, pp. 21-22, 56, 116)
95. The Site B access road could be relocated to follow the configuration of Site C. This would prevent impacts to the intermittent watercourse and buffering forest along the original Site B access road configuration, a more productive habitat than the already disturbed wetlands within the shooting range. (Tr. 3, pp. 123-125; Tr. 4, pp. 21-22, 56)

96. The subject property is within the watershed of the Barkhamsted Reservoir, a public water supply reservoir operated by the Metropolitan District Commission (MDC). The MDC commented on the proposal with their primary concern being the implementation and maintenance of proper erosion and sedimentation controls and the prevention of spills during construction. The MDC would also monitor construction activities during routine watershed inspections. (MDC letter of January 4, 2011)
97. Erosion and sedimentation controls and other best management practices would be established and maintained for the duration of site construction and would be consistent with MDC recommendations. A spill prevention program would also be established to protect watershed resources. (AT&T 15)
98. Aircraft hazard obstruction marking or lighting would not be required. (AT&T 1, p. 14)
99. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of AT&T's antennas has been calculated to total 3.6 percent of the standard for 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 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. (AT&T 3, Tab I)

**Visibility**

100. The projected visibility of the tower from each of the proposed sites within a two-mile radius of the subject property is as follows:

	<b>Site A (190 feet agl)</b>	<b>Site B (160 feet agl)</b>	<b>Site C (190 feet agl)</b>
Area of year-round visibility (not including water areas)	~ 2 acres	~ 1 acre	~ 2 acres
Area of seasonal visibility	~ 21 acres	~ 5 acres	~ 5 acres
48 Balance Rock Road	Upper 40 feet visible leaf-off from driveway area	Non-visible	Non-visible
64 Balance Rock Road	Upper 50 feet visible leaf-off from front deck and interior areas	Non-visible	Non-visible
72 Balance Rock Road	Upper 70 feet visible year-round from rear yard  Upper 15 feet visible leaf-off from interior areas and front deck	Upper 20 feet visible leaf-off from front deck and rear yard	Upper 20 feet visible leaf-off from front deck and year yard
88 Balance Rock Road	Upper 40 feet visible year-round from rear yard	Upper 15 feet visible leaf-off from front yard	Upper 75 feet visible leaf-off from front yard

(Refer to Figures 10, 11 & 12). (AT&T 1, Tab 5; AT&T 7; AT&T 22, Tab 6; Krauland 3; Tr. 4, p. 96)

101. The projected visibility of the proposed towers from select roads and scenic resources is as follows:

Resource	Approximate Distance/Direction from Sites	Visibility of towers
Balance Rock Road	Adjacent to site	Seasonal visibility from select areas
Route 20 north and east of site	0.3 to 1.6 miles north and east	No
Route 20 west of site	1.4 to 1.9 miles west	Seasonal visibility from 0.8 mile segment for Site A. 0.1 mile for Sites B & C
CCC Ski Cabin	0.5 mile west	No
Tunxis hiking trail	0.1-0.2 mile west	Seasonal visibility in spot areas near state forest boundary
Falls Brook hiking trail	1.7 miles west	No
Route 20 overlook	1.4 miles northwest	Yes (above 65-foot treeline)
Pine Mountain Overlook (Tunxis Trail)	2.8 miles south	Yes
Indian Council Caves (Tunxis Trail)	4.3 miles south	No
Beach Rock	6.7 miles southwest	No
Saville Dam	7 miles southwest	No

(AT&T 1, Tab 5; AT&T 7; AT&T 22, R. 2, R. 7, Tab 6; Sirman 12, R. 7; Tr. 4, pp. 11-12, 87-88)

102. AT&T would consider installing a monopine at the site to mitigate some of the near range views. The monopine would appear out of scale with the surrounding vegetation when viewed from the Route 20 overlook. (Tr. 4; pp. 30, 68, 142)
103. A fire tower style tower would not be beneficial in this area because it would be a bulkier structure, increasing some of the near range visibility. (Tr. 4, pp. 43-44)
104. There are no state or local designated scenic roads in the Town of Hartland. (AT&T 22, Tab 6; Tr. 4, p. 126)





**Figure 1:** Location of proposed Site A, Site B, and Site C at 95 Balance Rock Road.  
(AT&T 1, AT&T 4, AT&T 22)



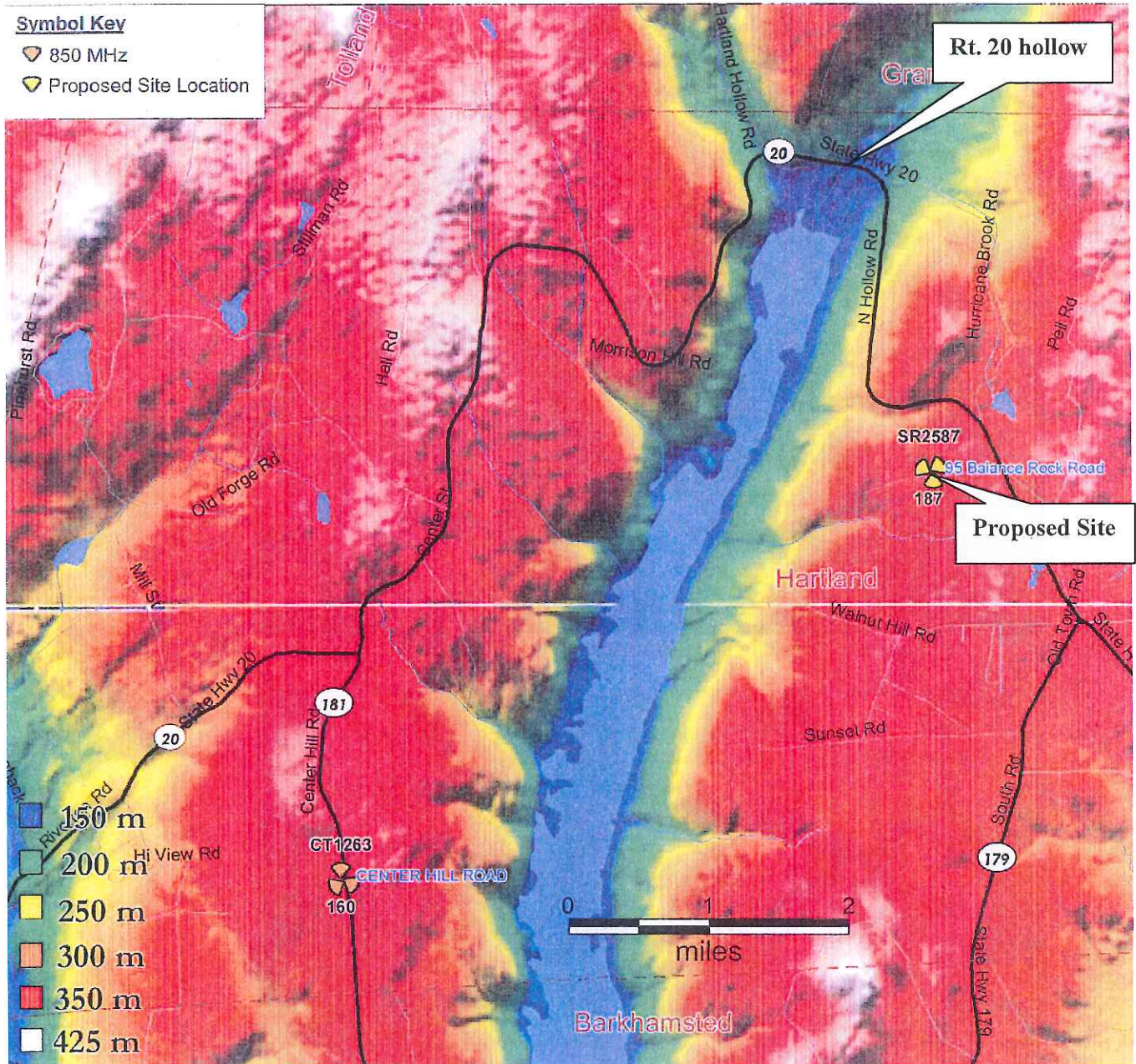


Figure 2: Terrain profile of surrounding area showing high elevation at proposed site and low elevation along Route 20 at north end of reservoir (“hollow”)



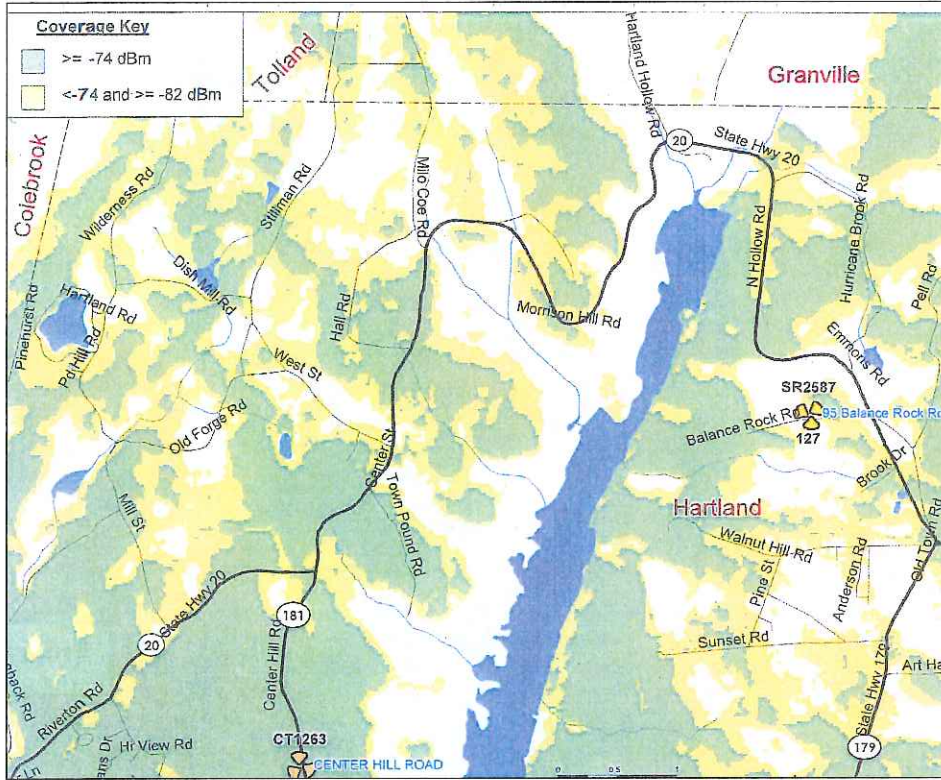


Figure 3: Existing cellular coverage. (AT&T 1)

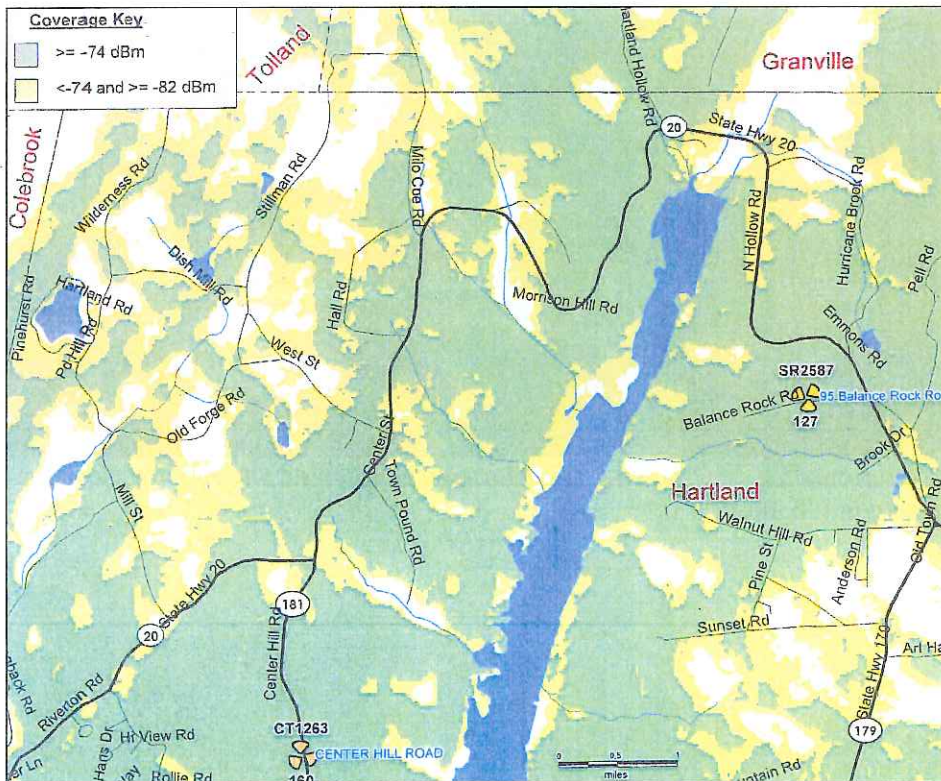


Figure 4: Proposed cellular coverage. (AT&T 1)



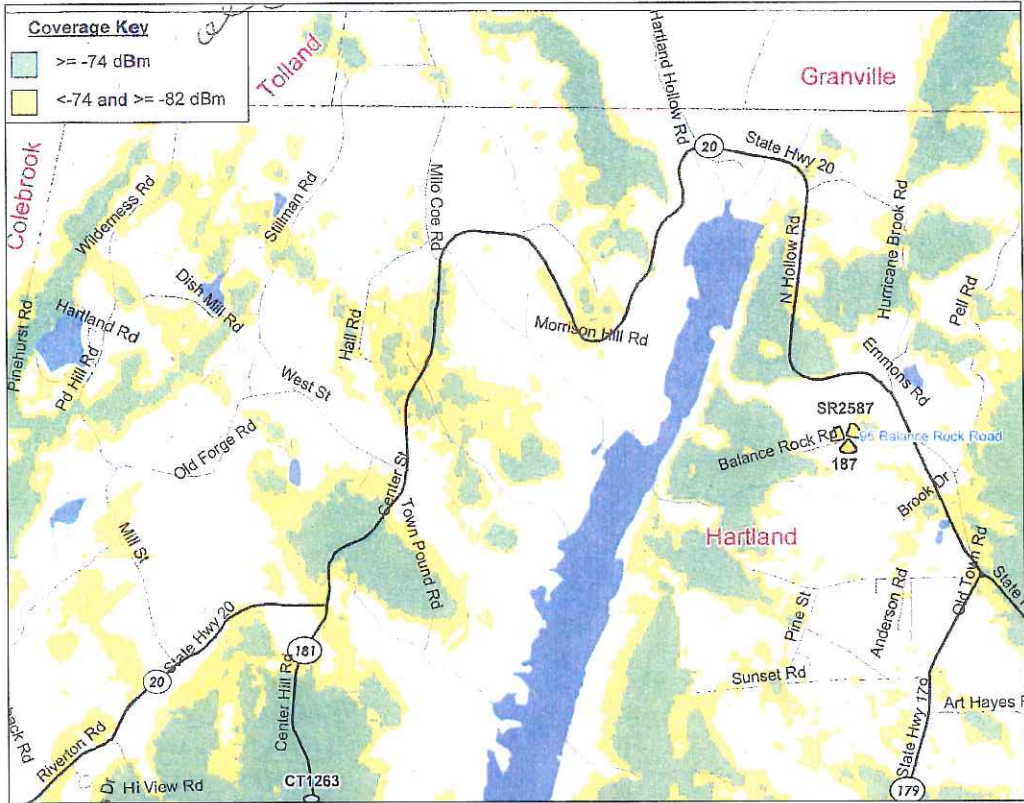


Figure 5: Existing PCS coverage. (AT&T 3)

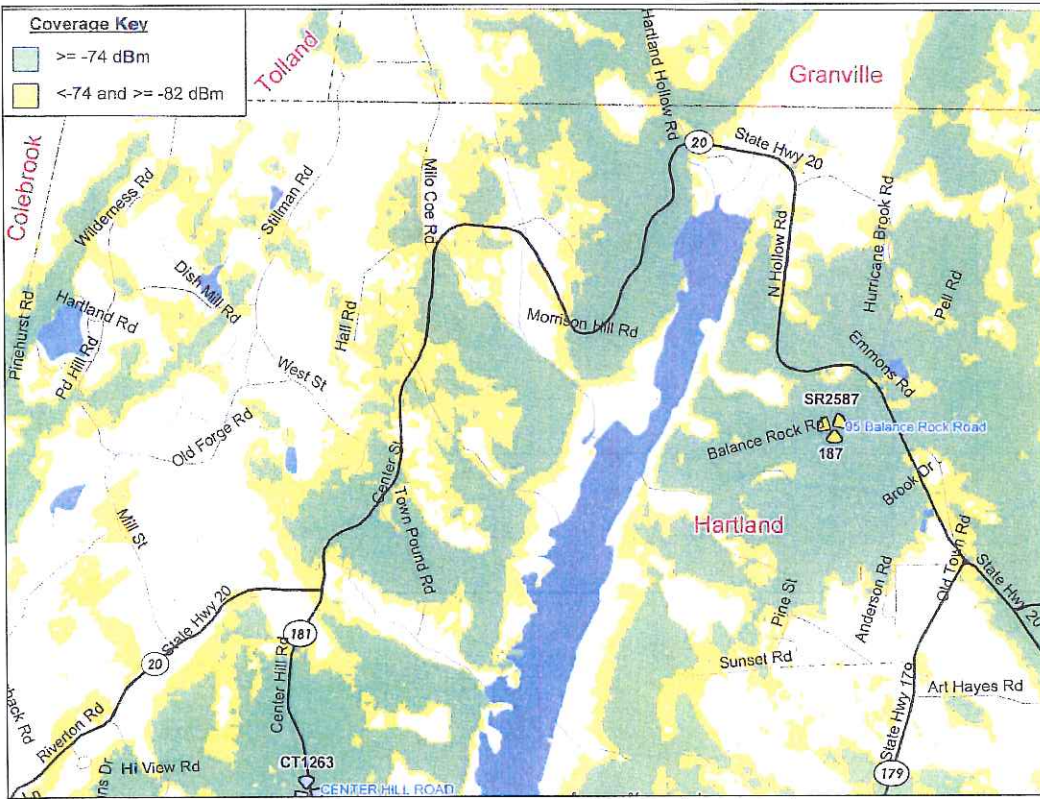


Figure 6: Existing PCS coverage. (AT&T 3)



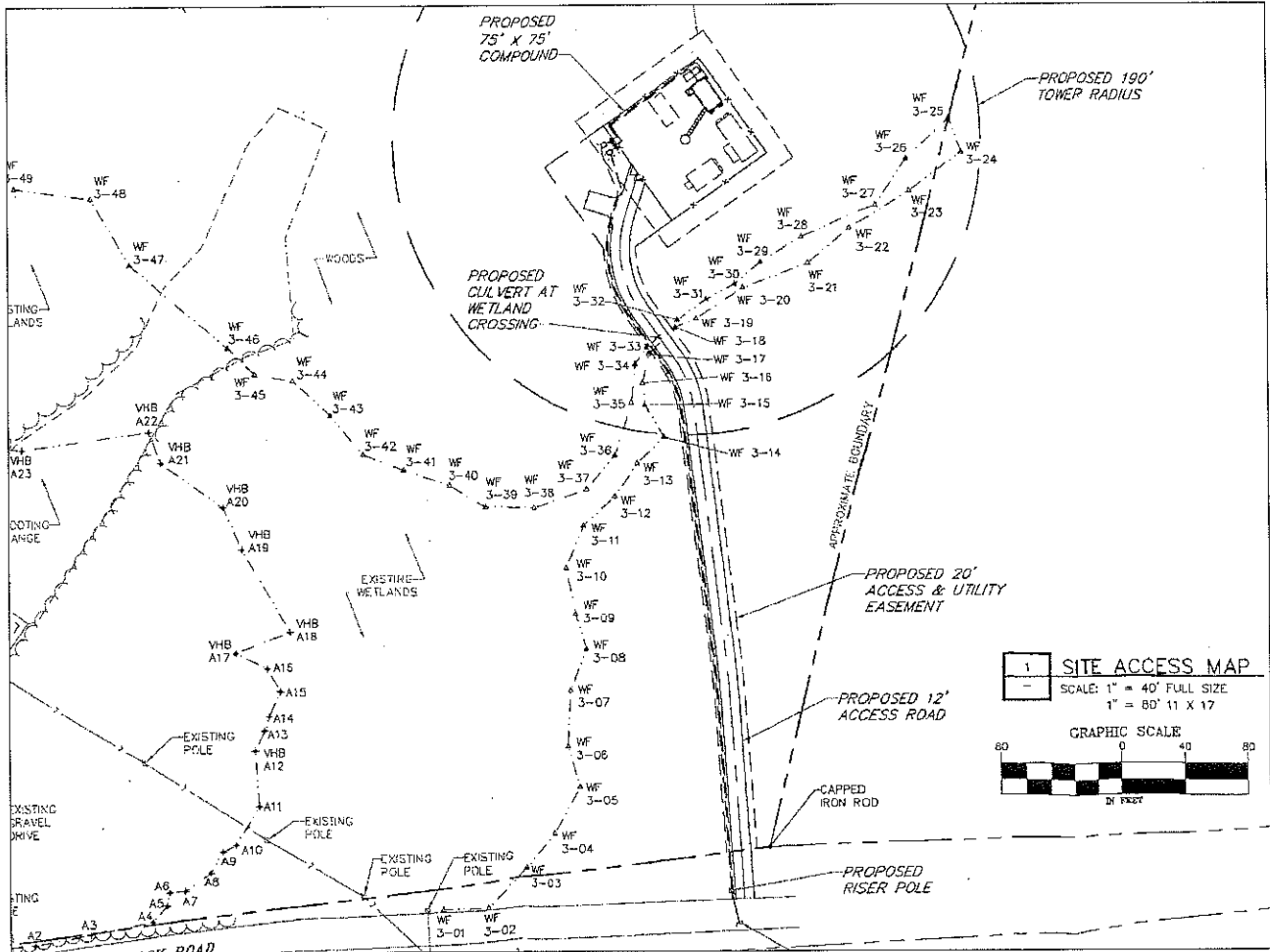


Figure 8: Site B development plan. (AT&T 3)

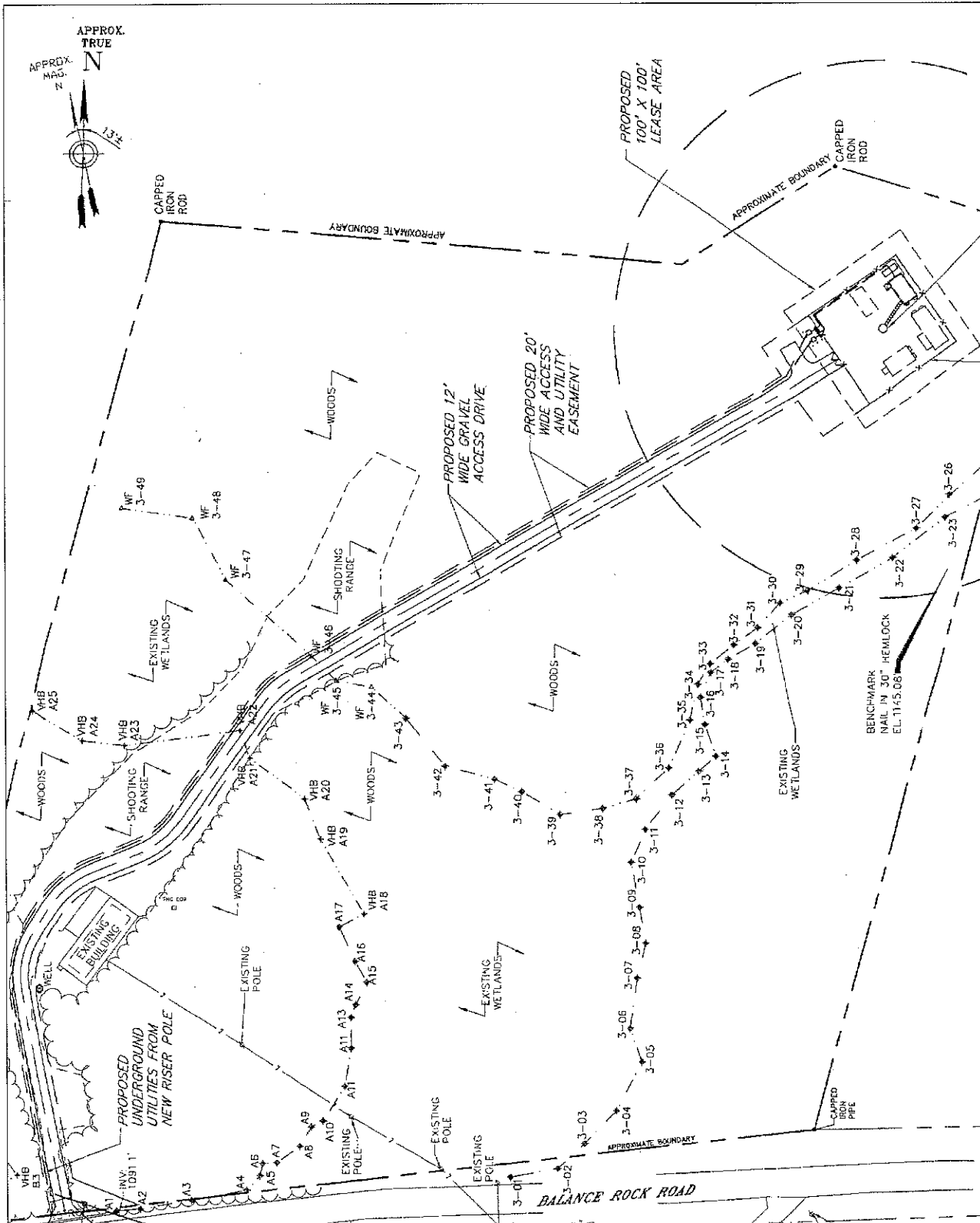


Figure 9: Site C development plan (AT&T 22)



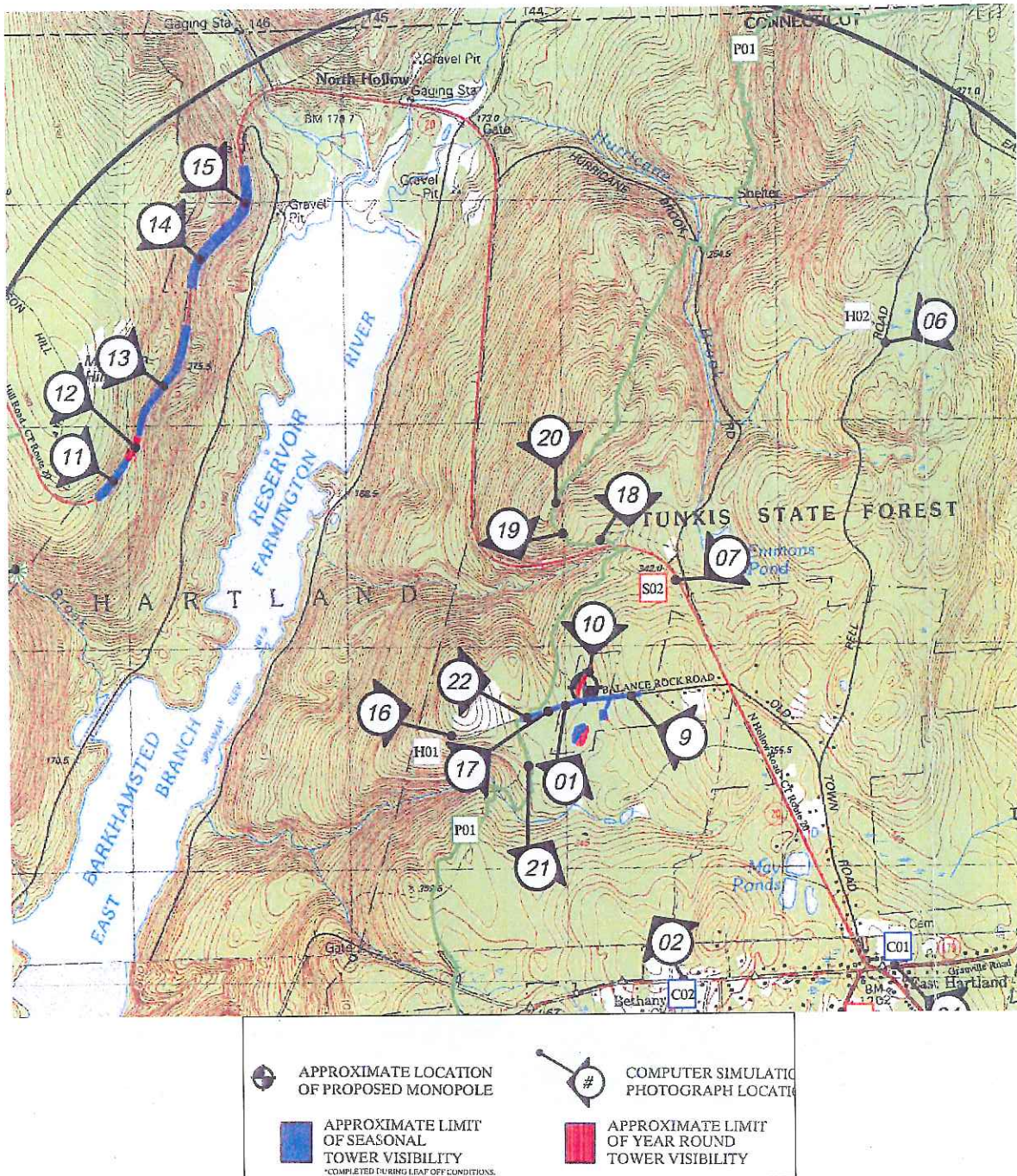


Figure 10: Visibility of Site A. (AT&T 1)



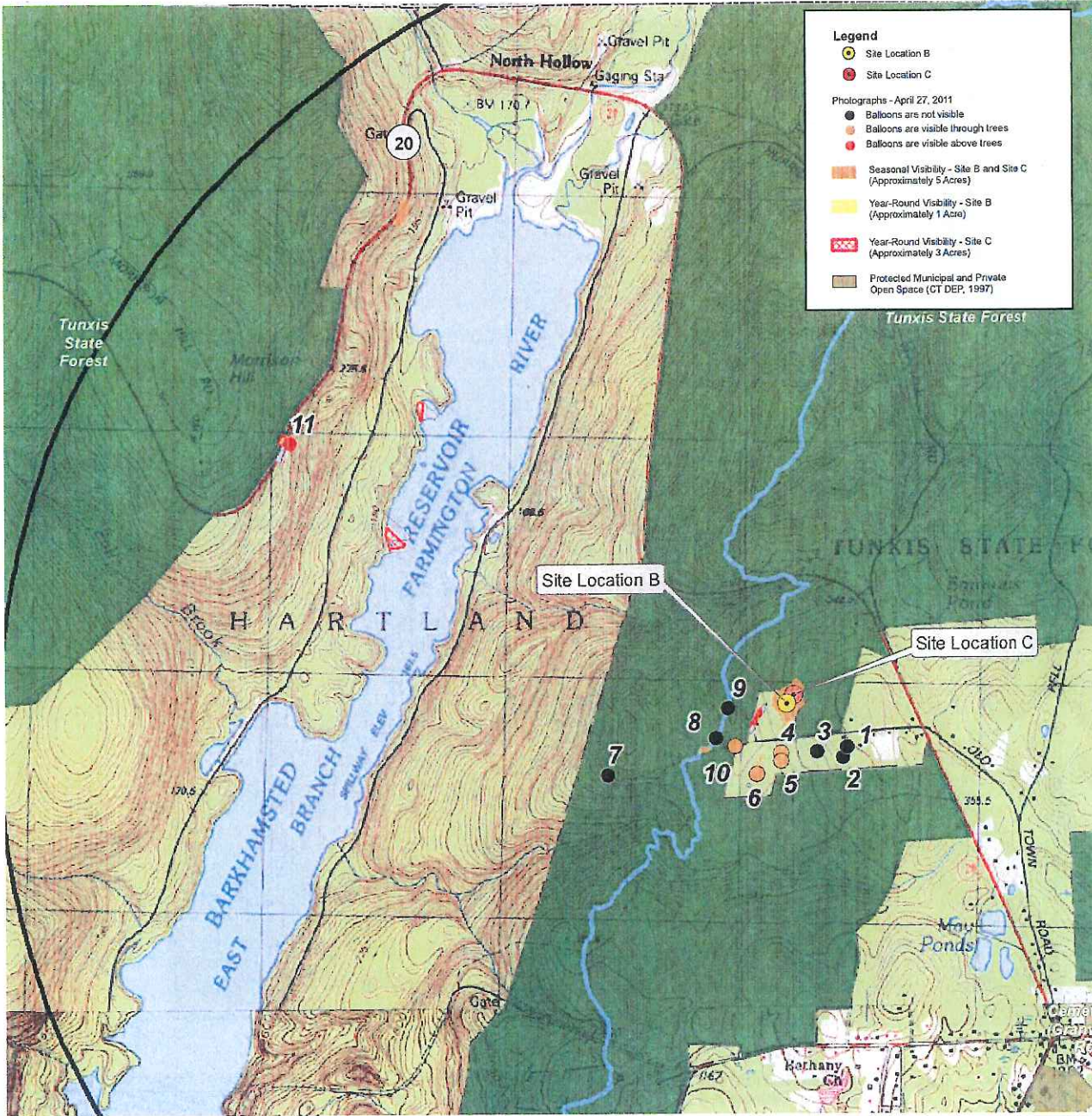


Figure 11: Visibility of Sites B & C. (AT&T 22)



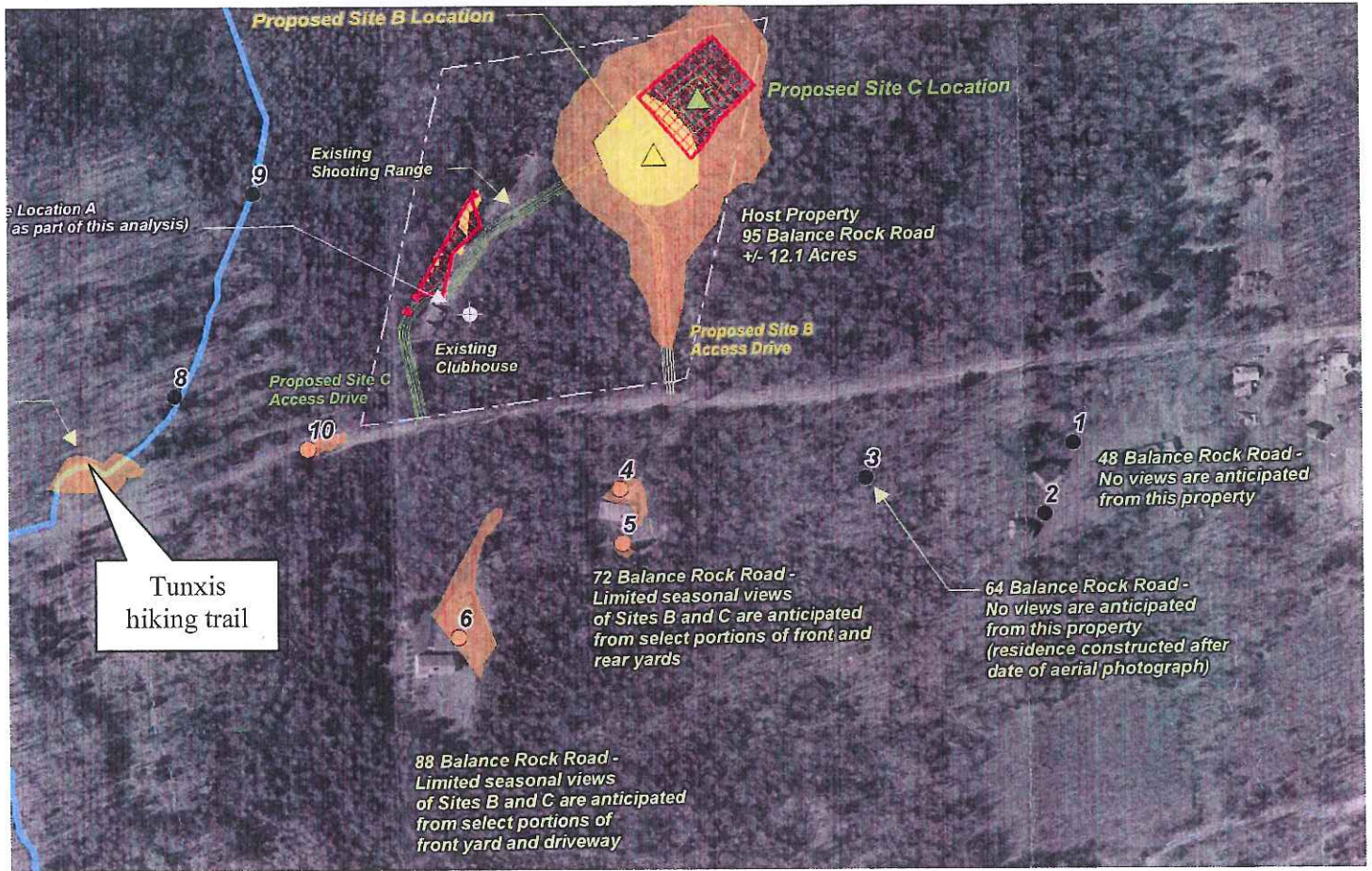
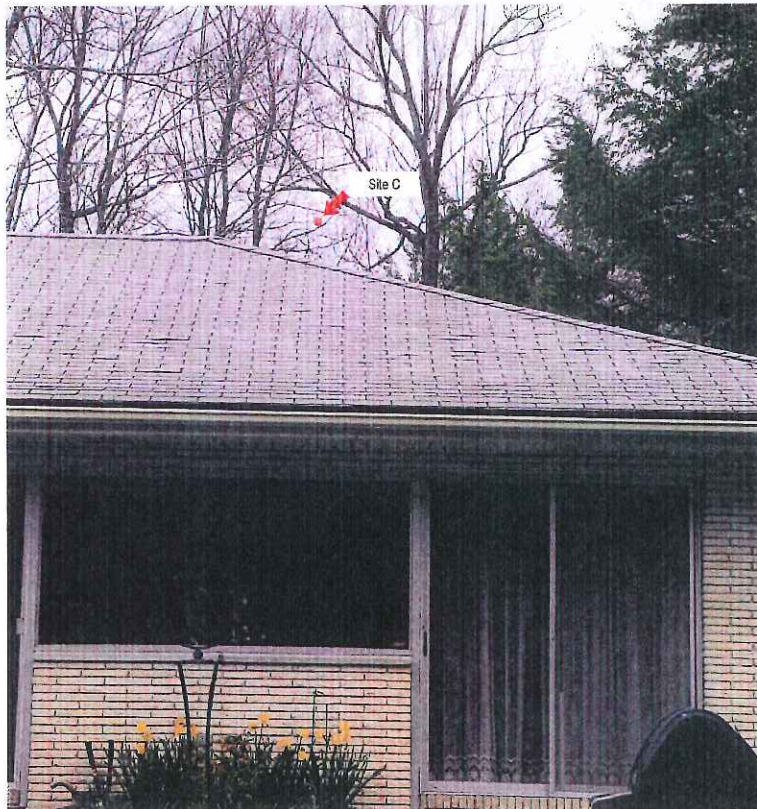


Figure 12: Visibility of Sites B & C from Balance Rock Road area. (AT&T 22)





**Figure 13:** Visibility of Site B & C from rear yard of 72 balance Rock Road. (AT&T 4)





Figure 14: Visibility of Sites B & C from front yard of 88 Balance Rock Road. (AT&T 22)





**Figure 15:** Visibility of Site C from Route 20. All three of the proposed towers would extend above the treeline. (AT&T 22