

DOCKET NO. 437 – 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 111 } Second Hill Road, Bridgewater, Connecticut }	Connecticut Siting Council August 22, 2013
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DRAFT Findings of Fact

Introduction

1. New Cingular Wireless PCS, LLC (AT&T), in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g, et seq., applied to the Connecticut Siting Council (Council) on March 5, 2013 for the construction, maintenance, and operation of a 160-foot wireless telecommunications facility at 111 Second Hill Road in Bridgewater, Connecticut (refer to Figure 1). (AT&T 1, pp. 1-2)
2. AT&T is a Delaware limited liability company with an office at 500 Enterprise Drive, Rocky Hill, Connecticut. The company's member corporation is licensed by the Federal Communications Commission (FCC) to construct and operate a personal wireless services system. The company does not conduct any other business in the State of Connecticut other than the provision of wireless services under FCC rules and regulations. (AT&T 1, p. 3)
3. The party in this proceeding is AT&T. (Transcript 1, June 25, 2013- 3:00 p.m. [Tr. 1], p. 3)
4. The purpose of the proposed facility is to provide reliable wireless telecommunications services along Route 67, Route 133 and adjacent areas in the northern part of Bridgewater. (AT&T 1, p. 1, Tab 1)
5. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on June 25, 2013, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Burnham School, 80 Main Street South, Bridgewater, Connecticut. (Council's Hearing Notice dated April 5, 2013)
6. The Council and its staff conducted an inspection of the proposed site on June 25, 2013, beginning at 2:00 p.m. During the field inspection, AT&T flew a 4-foot diameter red balloon to simulate the height of the proposed tower. The string was set to a height of 160 feet. The weather was breezy so a few balloons were lost and replaced, and the string was angled at times. (Transcript 2, June 25, 2013- 7:00 p.m. [Tr. 2], pp. 19-21)
7. Pursuant to C.G.S. § 16-50l (b), public notice of the application was published in the Housatonic Times on February 22 and March 1, 2013. (AT&T's Letter of March 20, 2013)
8. Pursuant to C.G.S. § 16-50l(b), notice of the application was provided to all abutting property owners by certified mail. Confirmation of receipt for all but six addresses was received either by certified mail receipts or by confirmation through the United States Postal Service tracking system. (AT&T 2, response 1)
9. Pursuant to C.G.S. § 16-50l (b), AT&T provided notice to all federal, state and local officials and agencies listed therein. (AT&T 1, p. 4)

State Agency Comment

10. Pursuant to C.G.S. § 16-50j (h), on April 5, 2013 and June 26, 2013, 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); and Department of Emergency Management and Public Protection (DESPP). (Record)
11. No agencies responded to the Council's solicitation. (Record)

Municipal Consultation

12. AT&T notified the Town of Bridgewater of the proposal in February 2011. (AT&T 1, p. 19)
13. During the consultation period, AT&T was considering another site in Bridgewater to serve the southern end of town. This site, the subject of Docket 412 (Wewaka Brook Road), had a different search ring. The Town became a party in that proceeding and requested that both sites be considered at the same time. (Council Administrative Notice Item 22; AT&T 1, pp. 2, 19)
14. The technical report for the Second Hill Road Site was submitted into the record for Docket 412 on March 31, 2011. (Council Administrative Notice 22)
15. Due to funding priorities, AT&T did not submit the subject application until 2013, after Docket 412 was approved by the Council. (AT&T 1, pp. 2, 19)
16. The Town did not request a meeting regarding this proposal. (Tr. 1, p. 44)
17. The First Selectman of the Town of Bridgewater, William Stuart, made a limited appearance statement into the record at the June 25, 2013 hearing stating that Second Hill Road is a Town-designated scenic road and the tower, if approved, should feature a stealth application so that it blends in with the surroundings. (Tr. 2, pp. 8-10, 15-16)

Public Need for Service

18. 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)
19. 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 throughout the State. (Council Administrative Notice Item No. 4; AT&T 1, p. 9)
20. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 4)

21. The Telecommunications Act of 1996 prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects, which include human health 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 No. 4)
22. 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. Approximately 70 percent of 9-1-1 calls are made with a wireless device. (Council Administrative Notice Item No. 6; AT&T 1, p. 8)
23. Following the enactment of the 911 Act, the FCC mandated wireless carriers to provide enhanced 911 services (E911) to allow public safety dispatchers to determine a wireless caller's geographical location within several hundred feet. The proposed facility would become a component of AT&T's E911 network in this part of the state. (Council Administrative Notice Item No. 6; AT&T 1, p. 9)
24. 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)
25. Pursuant to the tower sharing policy of the State of Connecticut under C.G.S. §16-50aa, 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. (Conn. Gen. Stat. §16-50aa)

Existing and Proposed Wireless Coverage – AT&T

26. AT&T's proposed facility would provide 850 MHz (cellular), 1900 MHz (PCS), and 700 MHz (LTE) service. (AT&T 1, Tab 4)
27. AT&T designs its system for -82 dBm in-vehicle coverage and -74 dBm in-building coverage. (AT&T 2, Tab 1)
28. AT&T's existing signal strength in the proposed service area ranges from less than -100 dBm to -82 dBm. (AT&T 2, response 5)
29. AT&T has identified an in-building coverage gap of 22 square miles and an in-vehicle coverage gap of 14.8 miles in north Bridgewater and surrounding areas, including the Route 67, Route 133, Christian Road, and Clapboard Road areas. The coverage gap data includes coverage from the approved Docket 412 site as well as a Council-approved site in Roxbury that was the subject of Docket 428 (refer to figure 3). (AT&T 1, Tab 1; AT&T 2, response 6)

30. Existing AT&T sites, including the Council approved Docket 412 and Docket 428 sites, cannot reliably provide coverage to the proposed service area. (AT&T 1, Tab 1)
31. The proposed site, with AT&T antennas installed at a height of 157 feet above ground level (agl), would provide 10.7 square miles of in-building and 8.3 square miles of in-vehicle coverage to the north part of Bridgewater, including the Route 67 area, Christian Road, Clapboard Road and the town center area along Route 133 that contains the town hall and The Burnham School (refer to Figure 4). (AT&T 1, Tab 1; Council Administrative Notice 53)
32. Coverage from the proposed site and surrounding AT&T sites would not be able to serve the southwest area of Bridgewater or areas in western Roxbury. AT&T has no current plan to serve these areas. (Tr. 1, p. 50)
33. Reducing the tower height by 10 feet would reduce reliable coverage along Route 67 near the Roxbury town line and along Route 133 south of Route 67. The terrain of the surrounding area is hilly, presenting coverage issues if the tower was lower. (AT&T 1, Tab 3; Tr. 1, pp. 45, 48)

Site Selection

34. AT&T began its search for a site to serve its coverage needs in early 2009. The ring was centered near the intersection of Route 67 and Route 133 in Bridgewater (refer to Figure 1). (AT&T 1, p. 1)
35. AT&T identified an existing structure operated by the DOT at 96-110 Second Hill Road that consists of a 110-foot steel pole. AT&T examined the structure and determined it would need replacement to accommodate its antennas. AT&T did not pursue this location after determining the tower is in an open field area with no screening to adjacent properties or along Second Hill Road. (AT&T 1, Tab 2; Council Administrative Notice 22)
36. In addition to the CT DOT tower, AT&T investigated 29 locations in the north Bridgewater area prior to selecting the proposed site. The rejected locations were not selected due to lack of landowner interest or the inability to meet coverage objectives. (AT&T 1, Tab 2)
37. Although the proposed site is at the north edge of the search ring, the site meets coverage objectives given the high topography of the area, allowing coverage to extend onto adjacent hillsides as well as within the intervening valleys. (AT&T 1, Tab 1; AT&T 2, response 1; Tr. 1, p. 49)
38. Providing coverage via a distributed antenna system, repeater, or microcell is not practical given the limited service area for each of these systems. These systems are employed for limited, targeted areas such as within buildings, highway underpasses or in urban environments. (AT&T 1, p. 11)

Facility Description

39. The proposed facility would be located on a 4.5-acre residentially developed parcel owned by Robert Reibe at 111 Second Hill Road (refer to Figure 2). The property is located on the east side of Second Hill Road. (AT&T 1, p. 12, Tab 2)
40. The site property is along the crest of Second Hill, a landform that extends in a north-south direction and features steep slopes to the south, east, and west. (AT&T 1, Tab 5)
41. The property is zoned R-3, residential. (AT&T 1, p. 13)

42. The proposed tower site is located in the wooded, northeast corner of the parcel, adjacent to a Connecticut Light and Power Company easement that traverses the north portion of the property in an east-west direction (refer to Figure 5). (AT&T 1, Tab 3)
43. There are six residences within 1,000 feet of the tower site. (AT&T 1, Tab 3)
44. The nearest residence to the tower site is approximately 475 feet to the west (Schumas Property). (AT&T 1, Tab 3)
45. The nearest property lines to the proposed tower site are approximately 110 feet to east (Hargrove Property) and approximately 110 feet to north (Foyer Property). (AT&T 1, Tab 3)
46. There are no schools within 250 feet of the proposed facility. (AT&T 1, Tab 3)
47. Access to the tower site would be from a new 350-foot long access drive extending from Second Hill Road, along the edge of the CL&P right-of-way to the tower site. (AT&T 1, p. 13, Tab 3; Tr. 1, p. 10)
48. The access drive would be finished with gravel and extend through a lightly wooded area of the property. (AT&T 1, Tab 3)
49. AT&T would construct a 160-foot monopole at the site. The proposed tower would be capable of supporting four levels of platform-mounted antennas. (AT&T 1, Tab 3)
50. AT&T would install 12 panel antennas on a platform at a centerline height of 157 feet agl. (AT&T 1, Tab 3)
51. No other carriers have indicated interest in the proposed site. (Tr. 1, p. 40; Record)
52. The tower would be located within a 45-foot by 90-foot equipment compound. (AT&T 1, Tab 3)
53. The compound would be enclosed by an eight-foot tall chain link fence. (AT&T 1, Tab 3)
54. Utility service to the compound would be installed underground along the access road from an existing utility pole on Second Hill Road. (AT&T 1, tab 3)
55. An emergency diesel generator would be located on a concrete pad within the compound. The generator would be capable of supplying a 48-hour run time before refueling. (AT&T 1, Tab 3; AT&T 2, response 9)
56. The estimated construction cost of the facility is:
- | | |
|-------------------------------|------------------|
| Radio equipment and antennas | \$250,000. |
| Site development/installation | 138,000. |
| Tower and foundation | 90,000. |
| <u>Utilities</u> | <u>30,000.</u> |
| <u>Total estimated cost</u> | <u>\$508,000</u> |
- (AT&T 1, p. 19)

Environmental Concerns

57. Development of the proposed site would have no adverse effect on historic, architectural or archeological resources listed in or eligible for the National Register of Historic Places. Representatives from the State Historic Preservation Office visited the farm at 95 Second Hill Road, abutting the site to the south, to view a balloon fly conducted by AT&T. The farm is under consideration for the National Register of Historic Places. (AT&T 1, Tab 6; Tr. 1, p. 24)
58. The proposed site is in proximity to known locations of the wood turtle, a State species of special concern and the American Kestrel, a State threatened species. (AT&T 2, response 4)
59. The wood turtle requires riparian areas and use adjacent fields, powerline cuts, and woodland as summer habitat. AT&T would develop a turtle protection program prior to construction that would be submitted to DEEP and the Council for comment. Similar protection plans have been developed for other projects within the State. (AT&T 2, response 4)
60. The American Kestrel would most likely be found utilizing the open field habitat to the north and south of the project site. The kestrel nests in tree cavities at the edges of open field areas. AT&T would conduct a survey for the kestrel in the area of construction and submit the results to DEEP for comment. AT&T would implement any DEEP recommendations. (AT&T 2, response 4; Tr. 1, p. 13)
61. The proposed access road and compound would be located in a wooded strip of land between field areas to the north and south. Approximately 70 trees and shrubs would be cleared to develop the site. The woodland area does offer edge habitat for certain bird species. (AT&T 1, Tab 3; Tr. 1, pp. 13-14)
62. The landowner is not willing to re-locate the proposed access drive immediately adjacent to the wooded strip because such re-location would be over the landowners maintained lawn area. (Tr. 1, p. 11)
63. Runoff from the site would be controlled using two separate grass drainage swales on the south side of the access drive. The upper swale would discharge north of an existing garage on the property. The lower swale, below the existing garage would discharge onto Second Hill Road. A new catch basin would be installed in the road adjacent to the swale outlet. The catch basin would be connected to an existing underground drainage system. (AT&T late file of July 11, 2013; Tr. 1, pp. 24-25)
64. A wetland area is located immediately north of the access road entrance. This wetland extends north along Second Hill Road. It is dominated by shrub species, many of which are invasive. Construction would not directly impact the wetland area. (AT&T 1, Tab 3, Tab 4)
65. Erosion and sedimentation controls consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and other best management practices would be established and maintained during construction. (AT&T 1, Tab 4)
66. Aircraft hazard obstruction marking or lighting of the tower would not be required. (AT&T 1, p. 16)
67. The nearest Important Bird Area, a National Audubon Society designation that recognizes unique habitats that stand out from the surrounding landscape and typically support vulnerable or special concern species, is approximately 4.5 miles southwest of the proposed site in Roxbury. (Council Administrative Notice 52; AT&T 2, Tab 5)

68. The design of the proposed tower would comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact 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 13; AT&T 2, response 12)
69. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of the proposed AT&T antennas is calculated to be 6.9% of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed 160-foot 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 base. (AT&T 1, Tab 3)

Visibility

70. The proposed tower would be visible year-round above the tree canopy from approximately 112 acres within a two-mile radius of the proposed site (refer to Figure 6). Most of this visibility is from fields on abutting property north and south of the site. The tree canopy in the study area is estimated to be 65 feet in height. (AT&T 1, Tab 5)
71. Second Hill Road is a Town-designated scenic road. The tower would have a mix of seasonal and year-round visibility for approximately a half-mile along the crest of Second Hill. Open views would mainly occur across open fields. (Tr. 1, pp. 21-23)
72. Other roads within 0.75 miles that would have year-round views of the tower include sections of Curtis Road, approximately 0.6 miles south of the site at its closets point, and a short section of Hatch Road, approximately 0.5 miles southwest of the site. (AT&T 1, Tab 5)
73. Approximately 19 residences within two-miles of the site would have year-round views of the tower above the tree canopy. Ten of these residences are within 0.75 miles of the site. An additional 12 residences within 0.75 miles would have seasonal views of the tower. (AT&T 1, Tab 5)
74. The abutting residential property to the west 120 Second Hill Road would be able to view the upper portions of the tower. (Tr. 1, p. 15)
75. The abutting residential property to the southwest, 100 Second Hill Road, would have seasonal views of the tower. (Tr. 1, p. 20)
76. The abutting farm property to the south, 95 Second Hill Road, would have unobstructed views of most of the tower from the rear yard of the farm residence as there is little intervening vegetation. AT&T proposes to plant several spruce trees along the south edge of the compound to provide screening from this area. (AT&T 1, Tab 3)
77. Several species of mature trees along the north side of the site property provide screening to 120 Second Hill Road and Second Hill Road itself. Several of these trees, mostly the white spruce and catalpa varieties are in poor health. AT&T, with consent from the landowner, would plant spruce trees to enhance screening. (Tr. 1, pp. 10, 15-17; AT&T Late file of July 23, 2013)

78. Visibility of the proposed tower from specific locations within a two-mile radius of the site is as follows:

Specific Location	Photo location on Map*	Approx. Portion of Tower Visible	Approx. Distance (miles)/Direction from Tower
Adjacent to # Sarah Sanford Road	1	Barely discernible through trees	1.93/south
Main Street north of Sarah Sanford Rd.	2	Barely discernible through trees	1.9/south
Curtis Road, north of #94	3	100 feet above trees	1.1/southwest
Curtis Road south of Stackhouse Lane	4	80 feet above trees	1.0/southwest
Curtis Road, north of #204	5	90 feet above trees	0.63/southwest
Hatch Road by #35-39 ^	6	60 feet above trees	0.55/southwest
Cedar Hill Road	7	60 feet through trees	0.44/west
Second Hill Road, adjacent to #96 ^	8	80 feet above trees	0.13/south
Second Hill Road across field	9	80 feet above trees	0.11/north
Second Hill Road across field	10	90 feet above trees	0.27/north
Standish Drive, Adjacent to #3	11	60 feet above trees	0.95/north
Jefferson Drive, adjacent to #12 ^	12	90 feet above trees	0.92/north
Revere Road, adjacent to #20	13	60 feet through trees	0.75/northeast
Bluestone Road	14	60 feet above trees	1.4/northeast
Beaver Pond Lane	15	100 feet above trees	1.5/northeast

* Map is attached as Figure 6.

^ Photosimulation of tower from this location attached.

79. Lover's Leap State Park is located approximately 1.8 miles southwest of the site. The proposed tower would not be visible from this location. (AT&T 1, Tab 5)

80. A preserve owned by the Sunny Valley Foundation is located approximately 1.7 miles southwest of the site. Within the preserve, hiking trail maintained by the Connecticut Forest and Parks Association) accesses a vista with views oriented to the west, away from the tower. (Council Administrative Notice 50)

81. Development rights to the abutting agricultural land north and south of the site property have been obtained by the State. Although the land is protected from development, these properties are not accessible to the public. (AT&T late file of July 11, 2013)

82. Installing a tower with a flush-mount design to reduce visibility of the antenna platforms would require the tower to be 30 feet taller to accommodate AT&T's coverage needs and accommodate all of their antennas since only three antennas could be mounted at each tower level. A tower with a flush-mount design would also impede co-location opportunities for other carriers. (AT&T 2, response 8)

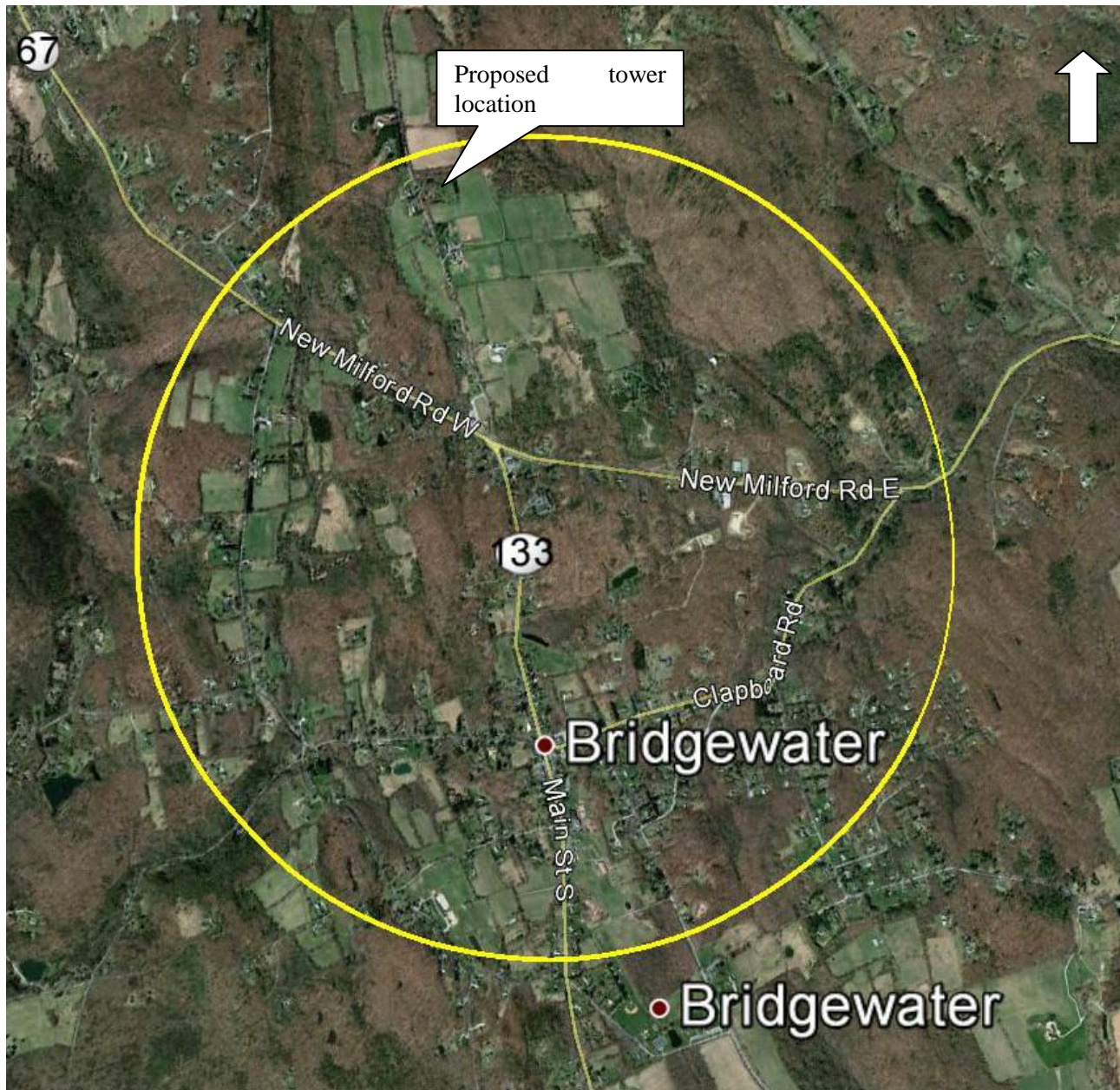


Figure 1: Site Location at 111 Second Hill Road, Bridgewater. Yellow circle is approximate search ring area. (AT&T 2, Tab 1)

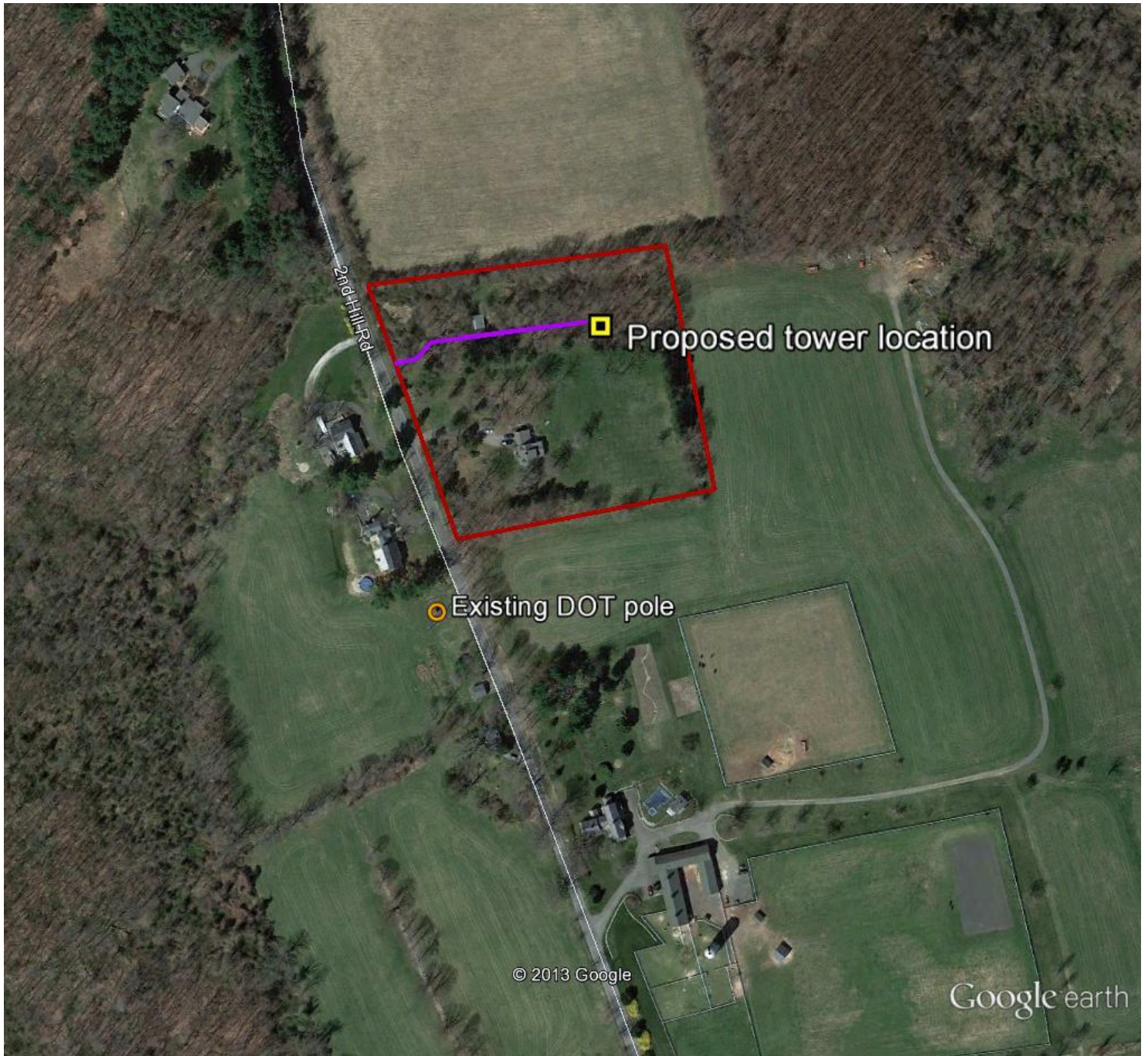


Figure 2: Proposed tower location at 111 Second Hill Road. Property boundaries shown in red. Approximate location of tower access drive show in purple. (AT&T 1, Tab 3, AT&T 2, Tab 1)

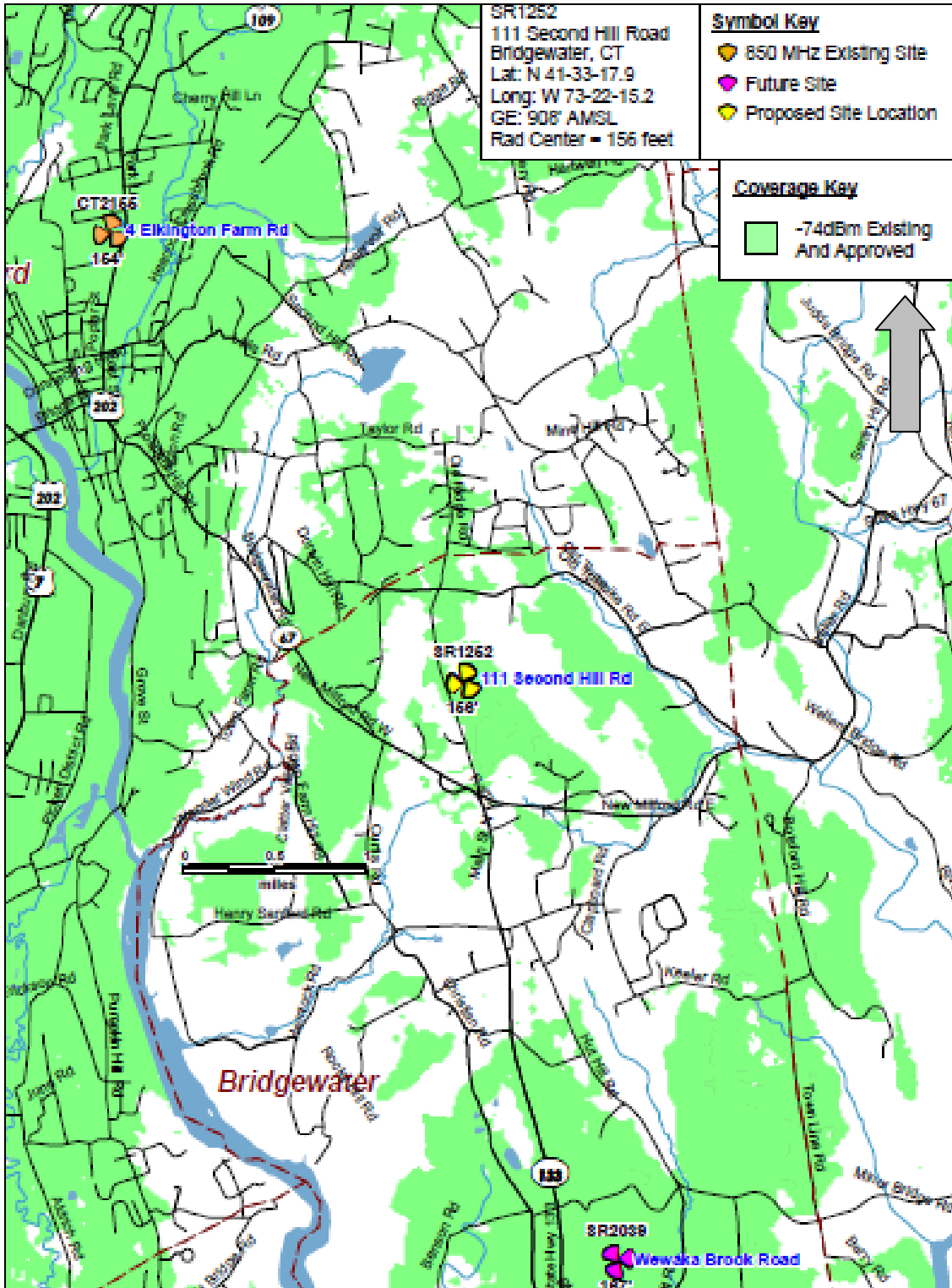


Figure 3: Existing AT&T coverage including the approved AT&T site at Wewaka Brook Road. (AT&T 2, Tab 4)

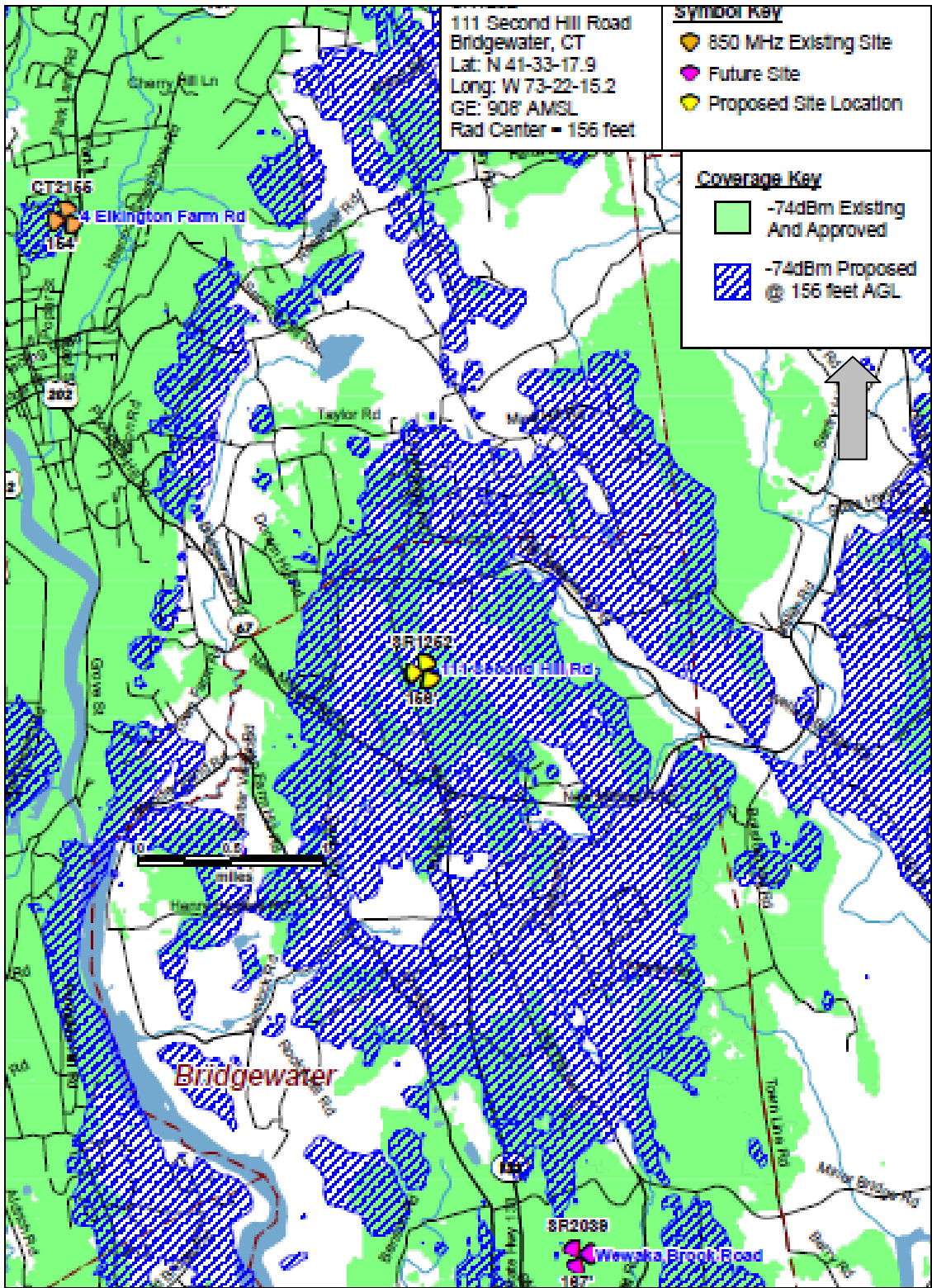


Figure 4: Proposed coverage from Second Hill Road site. (AT&T2, Tab 4)

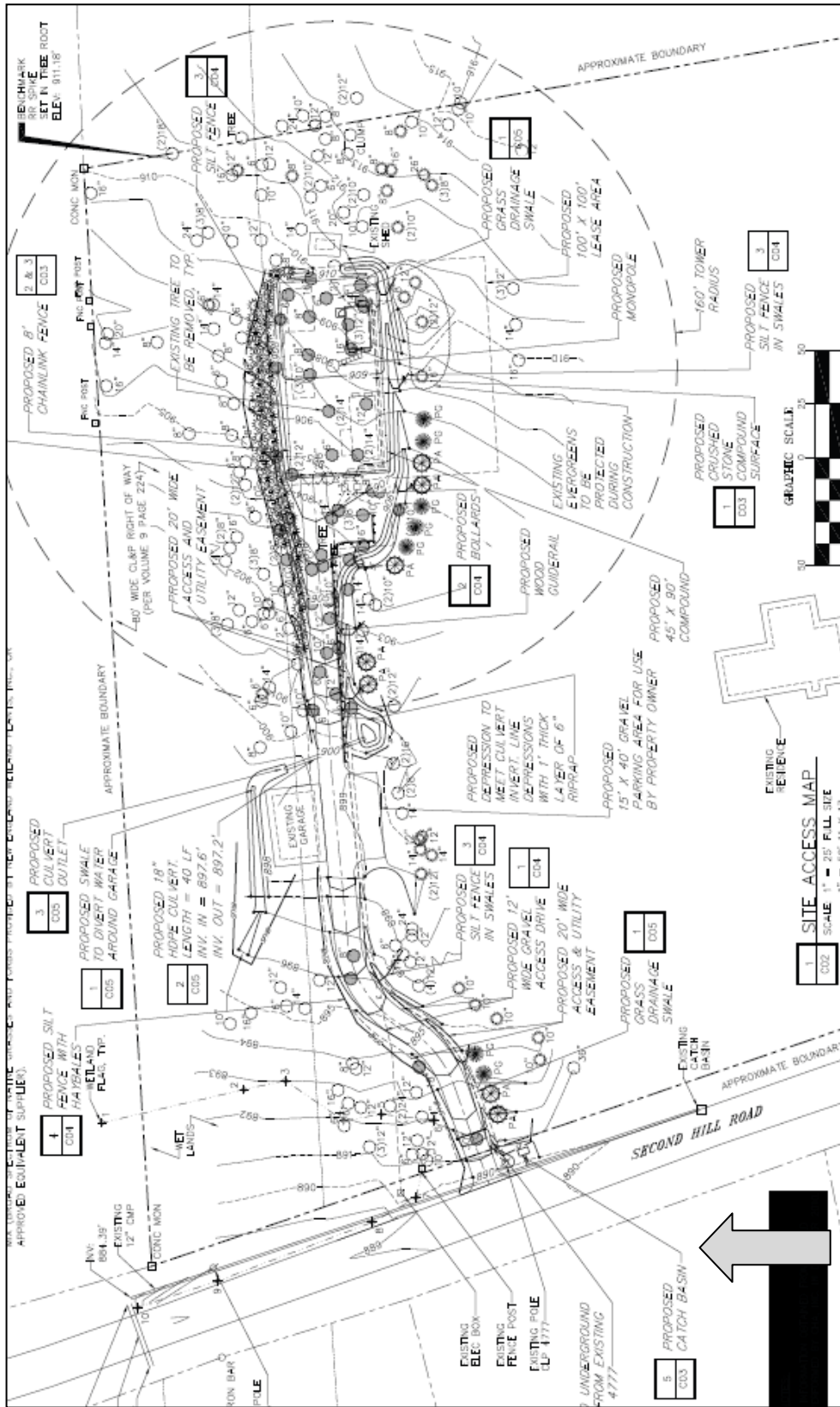
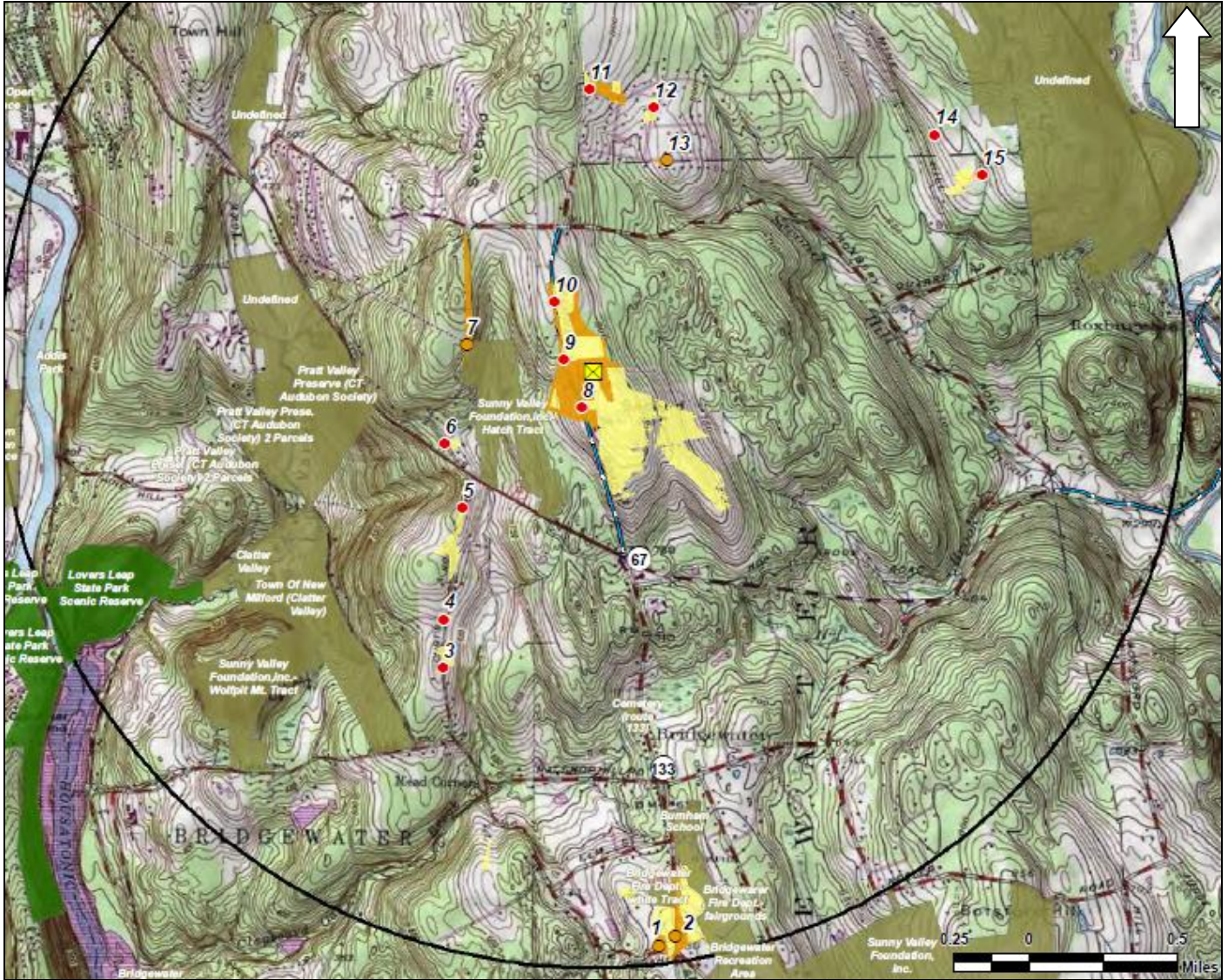


Figure 5: Proposed site plan. (AT&T Late file of July 23, 2013)



Legend




-  Proposed Facility
- Photos - March 30, 2011 and May 3, 2012**
-  Balloon Visible Through Trees
-  Balloon Visible Above Trees

Figure 6: Projected visibility of the 160-foot tower. (AT&T 1, Tab 5)



Photo simulation of proposed 160-foot tower. Visibility map location 8. Adjacent to #96 Second Hill Road (DOT tower location), 0.13 miles from site. (AT&T 1, Tab 5)



Photo simulation of proposed 160-foot tower. Visibility map location 6. Adjacent to #35-39 Hatch Road, 0.5 miles from site. (AT&T 1, Tab 5)



Photo simulation of proposed 160-foot tower. Visibility map location 12. Adjacent to #11 Jefferson Drive, 0.92 miles from site. (AT&T 1, Tab 5)