DOCKET NO. 244 - Omnipoint Facilities Network 2, L.L.C., a subsidiary of T-Mobile, USA, Inc. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a wireless telecommunications facility at the New Canaan Country Club, 95 Country Club Road, New Canaan, Connecticut.	}	Connecticut Siting Council February 18, 2004

Findings of Fact

Introduction

1. Omnipoint Facilities Network 2, LLC a subsidiary of T-Mobile, USA, Inc. (T-Mobile), in accordance with provisions of General Statutes §§ 16-50g through 16-50aa applied to the Connecticut Siting Council (Council) on March 3, 2003 for the construction, operation, and maintenance of a wireless telecommunications facility at 95 Country Club Road, New Canaan, Connecticut. The proposed facility is intended to fill a gap in coverage along Route 123 in New Canaan. (T-Mobile 1, p. 1; T-Mobile 3, Q. 29)

2. T-Mobile is licensed by the Federal Communications Commission (FCC) to provide wireless personal communication service (PCS) in Connecticut. T-Mobile formed Omnipoint Facilities Network 2, LLC to operate its telecommunications infrastructure in the New York Basic Trading Area, which includes Fairfield County, Connecticut. (T-Mobile 1, pp. 3-4)

3. The parties in this proceeding are the applicant, the Country Club of New Canaan, Inc., the Citizens for Responsible Cellular Planning (CRCP), John Corcoran and Wanda Corcoran and James E. Lineberger and Harrietjo Lineberger, Lewis D. Bakes, the Town of New Canaan, and Thomas A. Champion. The intervenor is AT&T Wireless PCS, LLC d/b/a AT&T Wireless. The Country Club of New Canaan, Inc. withdrew from party status in the proceedings on October 7, 2003. (Transcript 1, May 22, 2003, 2:00 p.m. (Tr. 1), p. 9; Transcript 2, May 22, 2003, 7:00 p.m. (Tr. 2), p. 8; record)

4. Pursuant to General Statutes § 16-50m, the Council, after giving due notice thereof, held a public hearing on May 22, 2003, beginning at 2:00 p.m. and continuing at 7:00 p.m. in the auditorium of the New Canaan Town Hall, 77 Main Street, New Canaan, Connecticut. The public hearing was continued on July 31, 2003 and on November 10, 2003, at the offices of the Connecticut Siting Council, Ten Franklin Square, New Britain, Connecticut. The May 22, 2003 and July 31, 2003 hearing sessions were held in conjunction with Docket number 243, which is proposed at 270 Valley Road in New Canaan. The November 10, 2003 hearing session was bifurcated from Docket number 243. (Tr. 1, p. 5; Tr. 2, p. 5; Transcript 3, July 31, 2003, 11:00 a.m. (Tr. 3), p. 5; Transcript 4, November 10, 2003, 11:00 a.m. (Tr. 3), p. 3; record)

5. The Council and its staff made inspections of the proposed site on May 22, 2003, beginning at 1:00 p.m. During the field inspection, the applicant flew a balloon approximately 40 feet to the west of the proposed site to a height of 125 feet to compensate for the 15-foot decrease in elevation between the proposed site and the location at which the balloon was flown. (Tr. 4, p. 135)

6. T-Mobile began applying for local approvals from the Town of New Canaan for the proposed site beginning in 2000, but encountered opposition and changing municipal requirements. Connecticut law shifted jurisdiction over PCS facilities from towns to the Council in 2001. (T-Mobile 1, p. 15)

7. The Town of New Canaan has indicated its preference of multiple shorter towers to fewer taller towers. (T-Mobile 1, p. 15)

8. On May 13, 2002, T-Mobile notified the Town of New Canaan of its intent concerning the proposed telecommunications facility through a technical report sent to Richard T. Bond, First Selectman of the Town of New Canaan. (T-Mobile 1, p. 3, 15)

9. The Town of New Canaan held a public meeting regarding the proposed project on June 26, 2002. The Town requested more information regarding T-Mobile's wireless technology and coverage needs, and any information about alternatives that have not yet been considered. On August 13, 2002, the Town held a follow-up public information meeting to discuss alternative locations and alternative technologies. The Town specifically asked T-Mobile to investigate alternative locations including other Country Club sites and Town property located on Michigan Road. (T-Mobile 1, p. 23, 24)

10. Notice of the application was provided to all abutting landowners by certified mail, return receipt requested. Three of the notifications were returned as unreceived. A notice to Kenneth H. Hannan, Jr. was unclaimed after two attempts. A notice to Elizabeth O. Ker was returned with a note that the property owner had moved to London, England and a notice was sent via regular international airmail. A notice to the Noyes Family Partnership was returned because an error had been made with the address, which was corrected and re-sent, and the return receipt was returned. Public notice of the application was published in The Stamford Advocate on March 3 and March 4, 2003. (T-Mobile 1, p. 5, affidavit of publication received March 20, 2003)

11. Pursuant to General Statutes § 16-50j (h), the following state agencies were solicited to submit written comments regarding the proposed facility on March 27, 2003; 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), and the Department of Transportation (DOT). (record)

12. Comments were received from the DOT on April 7, 2003, October 7, 2003, and October 16, 2003. Comments were received from the DEP on May 8, 2003. (record)

13. The following agencies did not offer comments on the application: DPH, CEQ, DPUC, OPM, and the DECD. (record)

Telecommunications Act

14. 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. (Council Admin. Notice, no. 7, Telecom. Act 1996)

15. 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 Admin. Notice, no. 7, Telecom Act 1996)

16. The Telecommunications Act of 1996 prohibits local and state bodies from discriminating among providers of functionally equivalent services. (Council Admin. Notice, no. 7, Telecom. Act 1996)

17. The Telecommunications Act of 1996, a Federal law passed by the United States Congress, prohibits any state or local agency 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 Federal Communication Commission's (FCC) 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 Admin. Notice, no. 7, Telecom. Act 1996)

Site Search

18. T-Mobile investigated two potential properties, including the proposed site, for the construction of a tower within the search ring. Alternative locations considered included interior points within the Country Club property and Town-owned property located on Michigan Road. The owner of the Country Club is not interested in locating a tower facility at an alternative location within the property. (T-Mobile 1, p. 7, 24; T-Mobile 2, Q. 6)

19. A tower placed at the Michigan Road parcel would not provide adequate coverage to the target area, and would have to be located near the road close to abutting property lines and visible to surrounding residences due to interior locations of the property being dominated by wetlands. Radio frequency coverage was evaluated from the Michigan Road parcel at 110 feet above ground level (AGL) and 150 feet AGL and neither of the heights would provide the overlap coverage required because it was over a mile north of the proposed site. T-Mobile also considered co-locating on existing utility poles within the public right-of-way, but determined that height and terrain limitations would not fill the coverage gap. (T-Mobile 1, p. 8, 24; T-Mobile 2, Q. 6; Tr. 4, p. 81)

20. An alternative facility location within the Country Club property was identified by T-Mobile and would be farther away from Route 123 and nearby residences but would have a lower ground elevation and would therefore require a higher tower. T-Mobile could not reach an agreement with the Country Club regarding an alternate interior location for a facility. (Tr. 4, p. 88, 94, 98)

21. There are no existing towers located within the 0.3-mile search ring that would provide co-location opportunities suitable for T-Mobile. (T-Mobile 1, p. 7)

Site Description

22. T-Mobile would construct a 110-foot steel silhouette pole, using stealth technology to accommodate three sets of antennas contained within the pole. The proposed silhouette pole would be painted brown to blend in with the surrounding trees between the Country Club fairway and Smith Ridge Road. T-Mobile would install two sets of antennas with centerlines at the 106-foot level and the 99-foot level, within the pole. Space would be available at the 89-foot level for a future carrier. Two small measurement function receiver antennas would be installed within the pole and one global positioning system (GPS) antenna would be installed on one of the equipment cabinets for enhanced 911 position location. (T-Mobile 1, p. 9-11; Tr. 4, p. 31)

23. The proposed steel silhouette tower design is for 82 feet of steel and 28 feet of radio frequency transparent material, which would conceal the antennas. If future expansion of the proposed tower is necessary, T-Mobile could change the 28 feet of transparent material to 28 feet of steel on which platforms could be installed, but this expansion would have to be incorporated into the design prior to construction, if so ordered by the Council. (Tr. 4, p. 45)

24. Locating additional carriers on the facility, other than T-Mobile and AT&T Wireless, would require an increase in height of the 110-foot silhouette pole. A 160-foot silhouette pole would accommodate five carriers, assuming two sets of antennas for each carrier, while a 130-foot traditional style monopole would also accommodate five carriers. (Tr. 4, p. 47, 48)

25. The proposed site would be located on a 23-foot by 19-foot leased area located on an approximately 153-acre site owned by the Country Club of New Canaan (Country Club). The proposed compound is located adjacent to an existing SNET facility compound, which is used by the local utility, and would join that compound to create one 47-foot by 19-foot compound. The leased area was designed to encompass the tower and T-Mobile's equipment. Equipment would be arranged to fit two to three carriers within the leased area. A 6-foot chain link fence and 6-foot high arborvitae or similar shrubs would surround the compound. (T-Mobile 1, p. 9-10; T-Mobile 2, Q. 19; Tr. 4, p. 31, 55, 131)

26. The proposed equipment compound would contain an 8-foot by 12-foot concrete pad to accommodate two equipment cabinets for T-Mobile. AT&T Wireless would install two equipment cabinets on a concrete pad. (T-Mobile 1, p. 10; Tr. 4, p. 31)

27. AT&T Wireless has a commitment to locate equipment at the proposed site at the 89-foot level of the tower and would use one antenna mount on the proposed structure. (AT&T Wireless 1, Q. 6; Tr. 4, p. 51; Tr. 2, p. 112)

28. T-Mobile has offered the Town of New Canaan space on the proposed tower for municipal communications equipment at no cost. (T-Mobile 2, Q. 15; Tr. 4, p. 138)

29. Access to the proposed site would be directly from Smith Ridge Road (Route 123) using an existing parking area along the road that is used to service the existing SNET telephone equipment. Utilities would originate from existing utilities currently used for SNET. (T-Mobile 1, p. 10; Tab 3; T-Mobile 2, Q. 3; 21)

30. The proposed site is located adjacent to a residential area. The area surrounding the Country Club property consists of residential homes. The Country Club property is zoned as 4-acre residential. In the 2003 Plan of Conservation and Development, the proposed site is within a location that is designated a scenic vista. There are 8 residences within a 1,000-foot radius of the proposed site. The nearest residence is located 200 feet to the east of the proposed site. (T-Mobile 1, p. 18; Town of New Canaan, Administrative Notice 1; Tr. 4, p. 237)

31. The tower setback radius at the proposed site would extend across Smith Ridge Road and onto an adjacent property to the east. The proposed tower location is 36 feet from the edge of Smith Ridge Road. The structure could be designed with a midpoint break at the 55-foot level so that it would not extend onto the adjacent property across Smith Ridge Road but would still fall onto Smith Ridge Road. There are no existing or planned structures within the tower setback radius. (T-Mobile 1, Tab 3; T-Mobile 2, Q. 8; Tr. 4, p. 75)

32. The approximate costs of construction to T-Mobile for the proposed site are estimated as follows:

110' Silhouette pole and antenna	$ 30,000
Utility Systems	16,500
Caisson (foundation)	27,500
Miscellaneous labor costs	5,600
Total Costs	$ 79,600

(T-Mobile 1, p. 26)

Environmental Considerations

33. The proposed facilities would have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. (T-Mobile 1, Tab 6)

34. The proposed project would not affect threatened or endangered species or critical habitats. (T-Mobile 1, Tab 6)

35. The removal of two or three trees would be required for the construction of the proposed site. The tower site would be located within a band of trees consisting of a mixture of black locust, red oak, tulip poplar and hickory. The average tree height is approximately 80 feet AGL with the black locust reaching 90 feet AGL. A moderate amount of fill would be necessary to level the site and would be supported by a ten-foot retaining wall. (T-Mobile 2, Q. 9, T-Mobile 3, Q. 27; DEP comments dated May 8, 2003)

36. The nearest wetland is approximately 250 feet to the west of the proposed site. The Country Club property is located within Zone C on the Flood Insurance Rate Maps, which is an area of minimal flooding. (T-Mobile 1, p. 22; T-Mobile 2, Q. 17)

37. The applicant performed an air-space analysis for the proposed facility, which determined that the site would not constitute an obstruction or hazard to air navigation. The proposed tower would not require hazard lighting or paint striping. (T-Mobile 1, p. 26)

38. The electromagnetic radiofrequency power density, calculated using the FCC Office of Engineering and Technology Bulletin 65, August 1997, using conservative worst-case approximation of radiofrequency power density levels at the base of the tower, with all T-Mobile and AT&T Wireless antennas transmitting simultaneously on all channels at full power, would be 24.4 percent of the American National Standards Institute (ANSI) and National Council on Radiation Protection and Measurements standards at the proposed site. (T-Mobile 1, p. 13, Tab 1; AT&T Wireless 1, Q. 5)

Visibility

39. A field investigation was used to perform a viewshed analysis of a 2-mile radius around the proposed facility. The surrounding tree height ranges from 70-95 feet AGL and consists primarily of hardwoods and pines. The proposed facility would be visible from sections of Smith Ridge Road (Rt. 123) to the northwest and southeast of the proposed site, a section of Country Club Road near the intersection with Smith Ridge Road, and a section of Oenoke Ridge Road. The proposed tower would be visible from approximately 15 to 20 homes on Smith Ridge Road, and approximately 10 to 15 homes on Oenoke Ridge Road. A map depicting the visibility of the proposed 110-foot tower is included as Figure 1. (T-Mobile 1, Tab 7; Tr. 4, p. 136, 137)

40. A silhouette structure that is appropriately colored would not present the typically conspicuous tower appearance. The proposed compound would be placed adjacent to a utility infrastructure facility to avoid the need for extensive tree removal and to minimize impact to the surrounding residential area. (T-Mobile 1, p. 11; DEP comments dated May 8, 2003)

41. A tower located at an interior site within the Country Club property would be aesthetically preferable to the proposed site. (Tr. 4, p. 69, 70)

42. The visibility of the proposed tower from various locations in the area would be as follows:

Visibility of Proposed 110-foot Tower

Location	Visibility	Approx. Distance (ft.) and direction from proposed site
Country Club Road	Yes	845 S
Smith Ridge Road	Yes	475 NW
Smith Ridge Road	Yes	265 SE
Oenoke Ridge Road	Yes	5,600 NW
Smith Ridge Road	No	800 SE
Canoe Hill Road	No	3,300 SE
Intersection of West Road and Oenoke Ridge Road	No	5,280 SW
Smith Ridge Road	No	4,200 NW

(T-Mobile 1, Tab 7)

Existing and Proposed Wireless Coverage
T-Mobile Coverage

43. T-Mobile operates a personal communications service network using a 1900 MHz frequency signal allocated by the FCC. Drive test data for the proposed tower was performed by T-Mobile using a minimum signal level of -87 dBm, for in-vehicle coverage. The proposed facility would provide coverage to the area, based on drive-test data. T-Mobile designs the system for in-vehicle coverage, but also intends to provide coverage for in-building uses. (T-Mobile 1, p. 3; T-Mobile 4; Tr. 1, p. 93)

44. The proposed facility would interact with an existing facility with T-Mobile antennas at 39 Locust Avenue, and a proposed T-Mobile site at 270 Valley Road. (T-Mobile 2, Q. 2)

45. Use of alternative technologies like microcells, or the use of smart antennas or multiplexing, which would allow multiple carriers to share the same antenna, would not be adequate to provide coverage to this area. (T-Mobile 1, p. 24, 25)

46. Existing facilities leave gaps in wireless coverage in the northern New Canaan area. Gaps are defined as areas receiving less than –87 dBm coverage. The primary purpose of this application is to provide coverage to these gaps along Route 123. (T-Mobile 1, p. 6; T-Mobile 3, Q. 25, 29)

47. Existing wireless coverage, and proposed coverage at 99 feet AGL, at 1900 MHz, within a three mile radius of the proposed site is as follows:

Existing and Proposed T-Mobile Coverage at 99 feet AGL
(see Figure 2 and Figure 3)

Route	Existing Gaps (miles) at < -87 dBm	Gaps (miles) from the proposed site at <-87 dBm	Total Road Miles within a Three Mile Radius
123	4.9	2.7	5.9
124	6.0	2.7	6.0
Total	10.9 miles	5.4 miles	11.9 miles

(T-Mobile 3, Q. 25)

48. The proposed silhouette structure would provide coverage similar to a traditional monopole structure. A traditional monopole can accommodate multiple carriers with a ten-foot separation between each carrier. A silhouette structure may require two elevations on a structure for one carrier. A traditional monopole could accommodate more carriers than a silhouette structure of the same height. (T-Mobile 2, Q. 14)

AT&T Wireless Coverage

49. The proposed tower would provide AT&T Wireless with coverage to Route 123 (Smith Ridge Road), and Route 124 (Oenoke Road). AT&T Wireless would use one antenna mount on the proposed silhouette structure at the 89-foot level. AT&T Wireless requires a minimum signal level threshold of -85 dBm to provide in-vehicle coverage and some in-building coverage. Existing coverage combined with proposed coverage from antennas at 89 feet above ground level, at 1900 MHz, would leave the following gaps within a three mile radius of the proposed site as follows: (AT&T Wireless 1, Q. 1, 4; Tr. 1, p. 112)

Existing and Proposed AT&T Wireless Coverage at 89 feet AGL
(see Figure 4)

Route	Gaps (miles) at <-87 dBm	Total Road Miles within a Three Mile Radius
123	1.9	5.9
124	1.7	6.0
Total	3.6 miles	11.9 miles

(AT&T Wireless 1; Q. 2, 3)

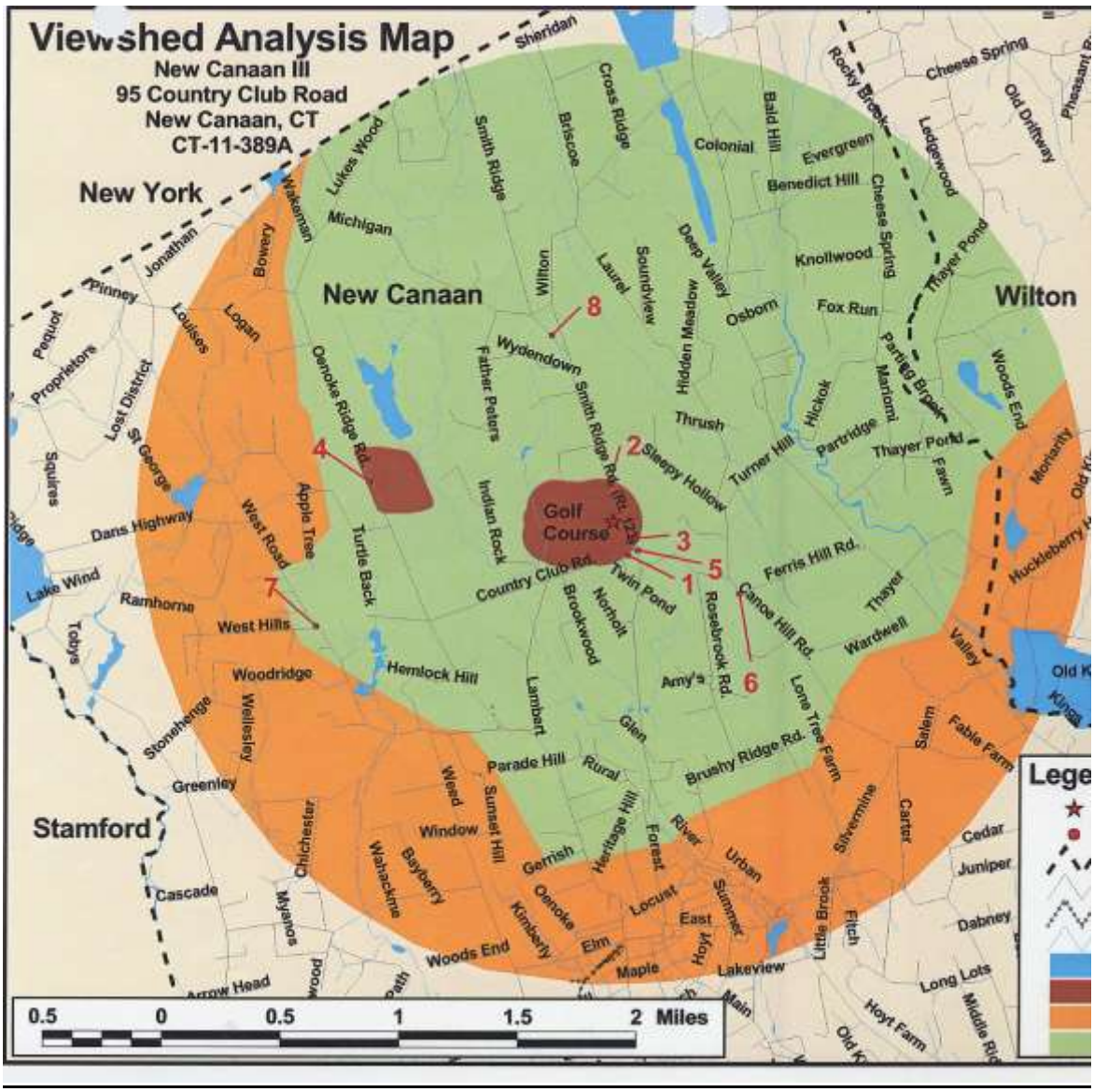

Figure 1. Visibility of the proposed structure within a two-mile radius. (T-Mobile 1, Tab 7)

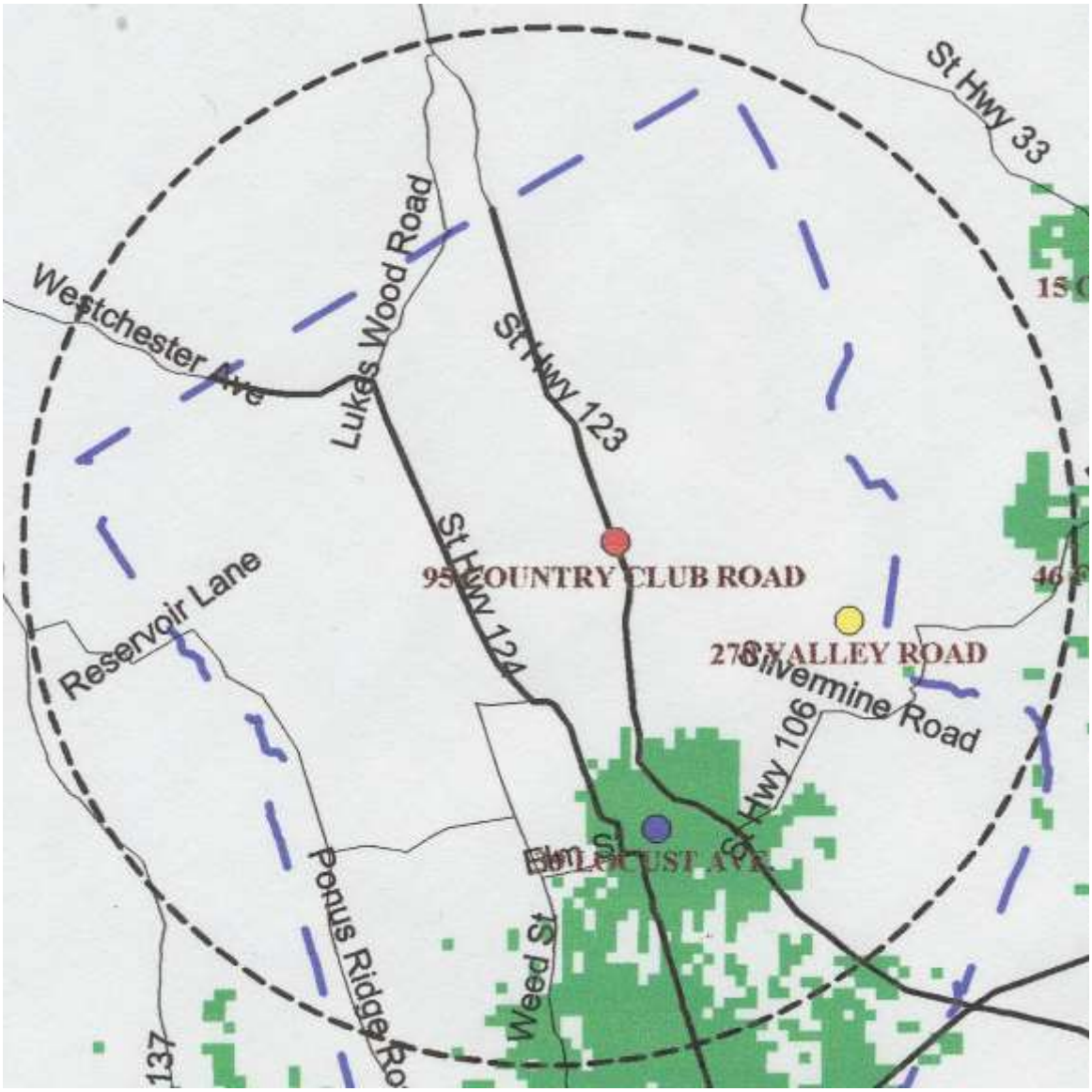

Figure 2. Existing T-Mobile coverage within a three mile radius of the proposed site at a scale of 1:100,000. (T-Mobile 3, Q. 25)

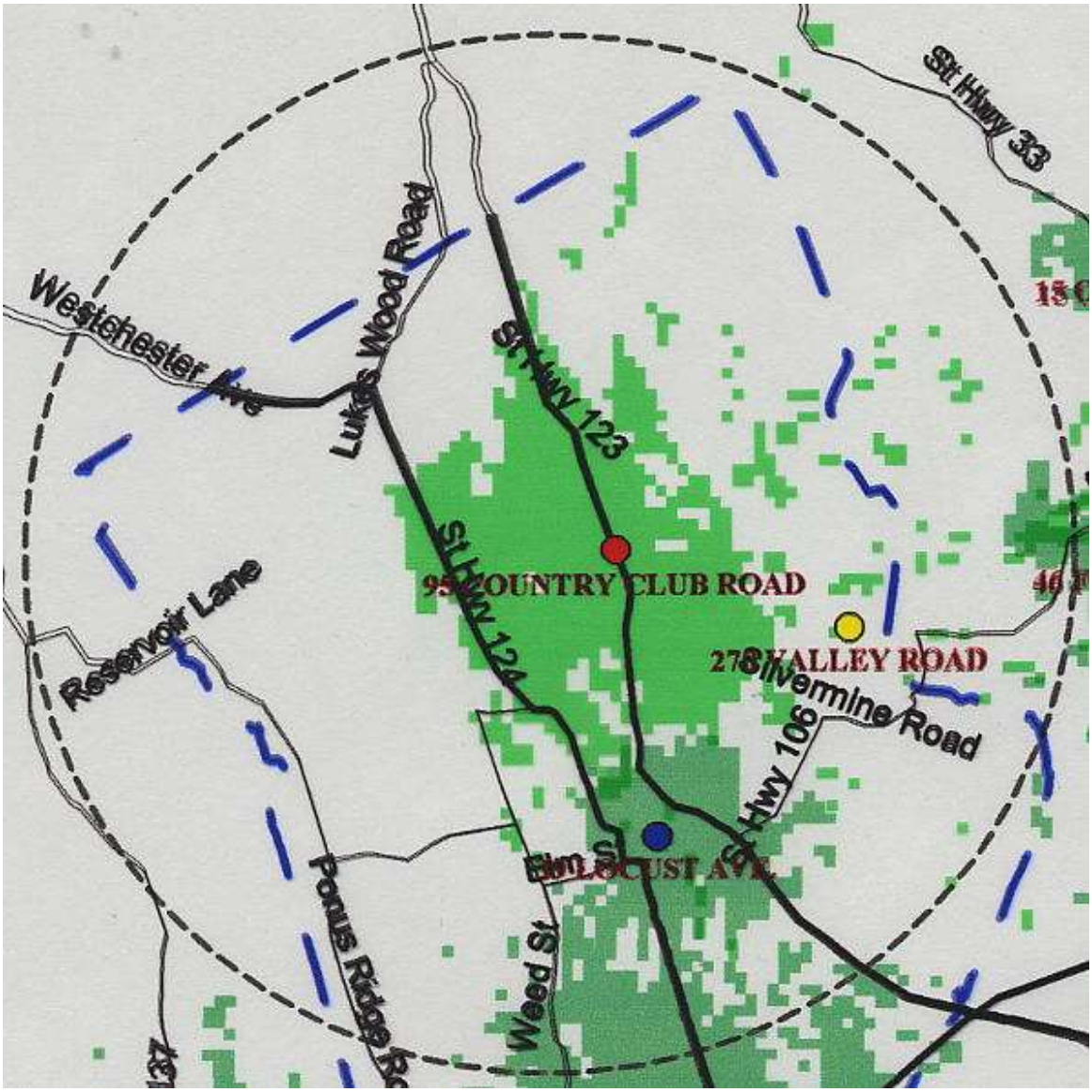

Figure 3. Existing T-Mobile coverage with coverage from the proposed site at 99 feet AGL at a scale of 1:100,000. (T-Mobile 3, Q. 25)

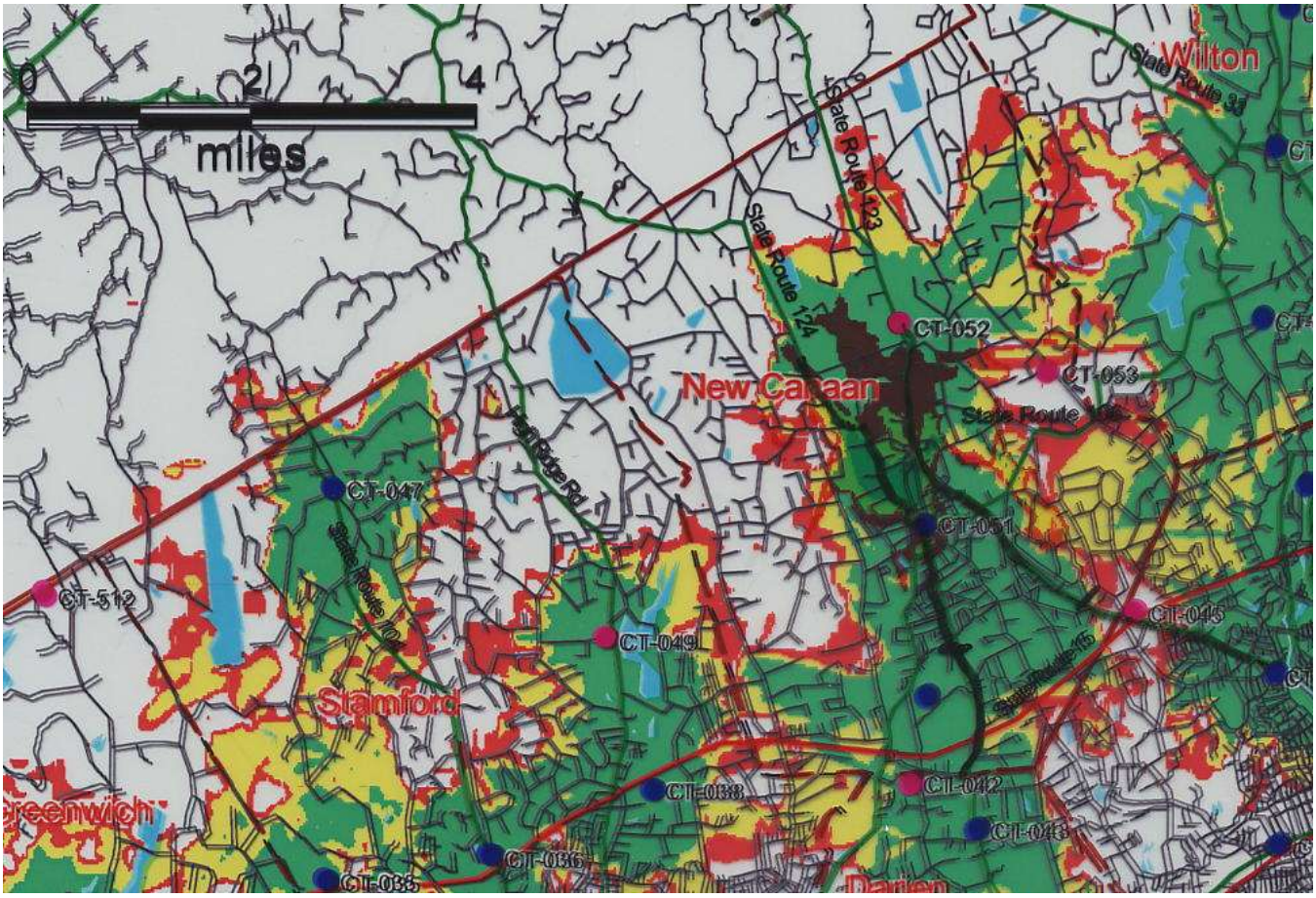

Figure 4. Existing AT&T Wireless coverage with coverage from the proposed site at a height of 89 feet AGL. (AT&T Wireless 1, Q. 2, 3)