

Daniel F. Caruso  
Chairman

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

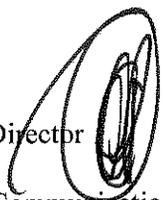
Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

Internet: [ct.gov/csc](http://ct.gov/csc)

January 25, 2008

TO: Parties and Intervenors

FROM: S. Derek Phelps, Executive Director 

RE: **DOCKET NO. 345** - MCF Communications bg, Inc. and Celco Partnership  
d/b/a Verizon Wireless application for a Certificate of Environmental  
Compatibility and Public Need for the construction, maintenance and operation  
of a telecommunications facility located off Exeter Drive in Sterling,  
Connecticut.

---

As stated at the hearing in Sterling on December 6, 2007, 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 February 7, 2008.

SDP/cm

Enclosure



**DOCKET NO. 345** - MCF Communications bg, Inc. and }  
Cellco Partnership d/b/a Verizon Wireless application for a }  
Certificate of Environmental Compatibility and Public Need for }  
the construction, maintenance and operation of a }  
telecommunications facility located off Exeter Drive in }  
Sterling, Connecticut.

Connecticut  
Siting  
Council  
January 18, 2008

**DRAFT Findings of Fact**  
**Introduction**

1. MCF Communications bg, Inc. (MCF) and Cellco Partnership d/b/a Verizon Wireless (Cellco) (collectively, the Applicant), in accordance with provisions of Connecticut General Statutes (CGS) § 16-50g through 16-50aa, applied to the Connecticut Siting Council (Council) on August 24, 2007 for the construction, operation, and maintenance of a wireless telecommunications facility at Exeter Drive, in Sterling, Connecticut. (Applicant 1, p. 1)
2. MCF is a stock corporation based in the Commonwealth of Massachusetts with offices located in North Andover, Massachusetts. MCF develops, owns, manages and markets communications facilities throughout New England. Cellco is a Delaware Partnership with an office located in East Hartford, Connecticut. (Applicant 1, p. 4)
3. Cellco is licensed by the Federal Communications Commission to operate a wireless telecommunications system in the State of Connecticut. Operation of wireless telecommunications systems and related activities are Cellco's sole business in Connecticut. (Applicant 1, p. 4)
4. The party in this proceeding is the Applicant. (Transcript 1- 3:00 p.m. [Tr. 1], p.1)
5. The purpose of the proposed facility is to provide service to coverage gaps identified by Cellco along Route 14 and Route 14A, as well as local roads in the central portion of the Town of Sterling (Town). (Applicant 1, pp. 1-2)
6. Pursuant to General Statutes § 16-50m, the Council, after giving due notice thereof, held a public hearing on December 6, 2007, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Robert P. Jordan Community Center, 50 Main Street, Sterling, Connecticut. (Council's Hearing Notice dated October 23, 2007; Tr. 1, p. 2; Transcript 2 – 7:00 p.m. [Tr. 2], p. 2)
7. The Council and its staff conducted an inspection of the proposed site on December 6, 2007, beginning at 2:00 p.m. During the field inspection, the applicant flew a red balloon at the proposed site to simulate the height of the proposed tower. Weather conditions during the field review were sunny and clear, but blustery. During the field review, the balloon reached a height of 140 feet above ground level (agl), but did not maintain that height for the entire flight due to the wind. The balloon was aloft from 8:00 a.m. to 5:00 p.m. for the convenience of the public. (Council's Hearing Notice dated October 23, 2007; Tr. 1, p. 21)
8. On November 15, 2007, the Applicant placed a four-foot by six-foot sign on the subject parcel adjacent to the proposed access to the site. The sign contained information regarding the tower proposal, the public hearing, and contact information for the Council. (Tr. 1, p. 22)
9. Pursuant to CGS § 16-50l (b), public notice of the application was published in the Norwich Bulletin on August 21 and 22, 2007. (Applicant 1, p. 5; Applicant 2)

10. Pursuant to General Statute § 16-50l(b), notice of the application was provided to all abutting property owners by certified mail. Notice was unclaimed by one abutter, Sterling Hills Estates Homeowners. A second notice was sent to Sterling Hills Estates at a different address. The receipt for this second mailing was returned indicating that this abutter did receive notice. (Applicant 3, response 2)
11. Pursuant to CGS § 16-50l (b), the Applicant provided notice to all federal, state and local officials and agencies listed therein. (Applicant 1, Attachment 2)
12. On October 12, 2001, MCF filed an application with the Council for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a 130-foot tower to accommodate Sprint PCS. This tower was to be located on Town property approximately 940 feet to the southeast of the proposed tower location. The proceeding was designated as Docket No. 216. (Applicant 1, p. 10)
13. This tower was approved by the Council on April 3, 2002. Cellco did not participate in that proceeding. The tower was never constructed, and the Certificate expired. (Applicant 1, p. 10; Tr. 1, p. 23)
14. Following the expiration of the Docket No. 216 Certificate, the Town asked MCF to modify its land lease for the proposed tower site and move the leased area to the proposed site. (Applicant 1, p. 10; Tr. 1, p. 13)

#### State Agency Comment

15. Pursuant to General Statutes § 16-50j (h), on October 23, 2007 and December 11, 2007, the following State agencies were solicited by the Council 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), and the Department of Transportation (DOT). (Record)
16. The Council received responses from the DOT's Bureau of Engineering and Highway Operations dated November 27, 2007, and the DPH Drinking Water Section dated November 7, 2007. Neither agency had any comments. (DOT Comments dated November 27, 2007; DPH Comments dated November 7, 2007)

#### Municipal Consultation

17. MCF notified the Town of this proposal on July 13, 2007 by sending a technical report to First Selectman Russell Gray. (Applicant 1, p. 19)
18. By letter dated July 16, 2007, First Selectman Gray waived the 60-day review period and expressed his support for the proposed facility. (Applicant 1, Attachment 10)
19. First Selectman Gray made a limited appearance statement at the December 6, 2007 proceeding by noting his concerns about the lack of wireless telecommunications service in two Town villages: Sterling Village and Oneco. He further stated that approximately one-half of the town is currently without service. (Tr. 1, pp. 7-8)

20. Second Selectman Neil Cook made a limited appearance statement at the December 6, 2007 proceeding by noting his concerns about the inability to reach emergency services due to the lack of wireless telecommunications service in the area. Mr. Cook would also be amenable to a taller tower if necessary, up to 160 feet tall. (Tr. 1, pp. 8-9, 41)
21. Dick Spurling, Superintendent of Schools in Sterling, made a limited appearance statement at the December 6, 2007 proceeding by noting his concerns about the ability to communicate with the school buses in the event of an emergency. (Tr. 1, pp. 9-10)
22. David Shippee, Second Assistant Chief (fireman and EMT), made a limited appearance statement at the December 6, 2007 proceeding by noting his concerns about how residents involved in accidents have had difficulty making calls to emergency services due to the lack of service. (Tr. 1, pp. 10-11)
23. Sharon Chviek, Economic Development Coordinator for Sterling, made a limited appearance statement at the December 6, 2007 proceeding and endorsed the comments of her colleagues. Ms. Chviek also submitted a petition containing signatures from residents, business owners, emergency services workers, etc. in support of the proposed tower. Ms. Chviek considers cell phones to be a potentially life saving device. Ms. Chviek also noted that in her 12 years in the Town of Sterling, she has never heard anyone oppose a cell tower in the Town. (Tr. 1, pp. 11-12)
24. MCF would provide space, at no fee, for the Town's emergency communication services. The Town would be interested in locating emergency services (particularly fire) antennas at the site, although specific needs were not discussed. (Applicant 1, p. 11; Tr. 1, pp. 35, 39, 45)

#### Public Need for Service

25. 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. 7)
26. 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 Federal Communications Commission (FCC) to provide personal wireless communication service to Windham County, Connecticut. (Council Administrative Notice Item No. 7; Applicant 1, p. 7)
27. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 7)
28. The Telecommunications Act of 1996, a Federal law passed by the United States Congress, 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 No. 7)

29. In 1999, Congress passed the Wireless Communications and Public Safety Act (the 911 Act) to facilitate and encourage the prompt deployment of a nationwide, seamless communication infrastructure for emergency services. The Applicant's facility would be in compliance with the requirements of the 911 Act. (Tr. 1, p. 53).

#### Site Selection

30. Celco established its search ring in June of 2002, but did not participate in Docket No. 216. (Tr. 1, p. 23)
31. Celco established a circular search ring with approximately three-quarters of a mile in diameter. The search ring was centered at 41 degrees 42 minutes 45.7 seconds north latitude and 71 degrees 49 minutes 7.25 seconds west longitude, which is approximately 0.18 miles to the east of the proposed tower location. (Tr. 1, pp. 26-27)
32. Prior to selecting the proposed site, the Applicant did not consider any other raw land sites other than the original site in Docket No. 216. Since all of the area around the search ring is owned by the industrial park controlled by the Town and the Industrial Commission, and the top of the hill provides the best RF propagation, no other raw land sites were considered. (Tr. 1, pp. 13, 27)
33. There are no existing towers within a two-mile radius of the proposed site. (Applicant 1, Attachment 6)
34. The nearest existing structure is the 160-foot smokestack of the Exeter Power Plant located approximately 500 feet to the south of the proposed site. However, the owner was not interested in leasing space to Celco. (Applicant 1, Attachment 1; Tr. 1, pp. 28, 41)
35. There are no equally effective technological alternatives to the proposed facility. Microcells and repeaters would not solve the coverage problem due to the size of the coverage gap and the lack of existing service to repeat. (Applicant 1, p. 10; Tr. 1, p. 27).

#### Site Description

36. The proposed site is located on a 10.83-acre parcel at the end of Exeter Drive in Sterling. The parcel is owned by the Town. The parcel is located across the street from the Exeter Power Plant. The site location is depicted on Figure 1. (Applicant 1, Attachment 1)
37. The Town's Ordinances and Regulations permit telecommunication towers, subject to issuance of a Telecommunications Permit and a Building Permit. Town regulations allow the placement of new telecommunications facilities in industrial areas. (Applicant 1a, pp. 116, 123)
38. The proposed tower site is located in the eastern portion of the property, at an elevation of 541 feet above mean sea level (amsl). (Applicant 1, Attachment 1; Tr. 1, pp. 53-54)
39. The proposed facility would consist of a 140-foot a/gl monopole within a 200-foot by 200-foot leased area. The tower would be designed to support a total of four levels of antennas with a 10-foot center-to-center vertical separation. The tower would be constructed in accordance with the American National Standards Institute TIA/EIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Support Structures". (Applicant 1, Attachment 1)

40. Sprint expressed an interest to MCF in co-locating at the proposed tower, but did not participate in this proceeding. (Tr. 1, pp. 28-29)
41. Cingular has a lease with MCF to co-locate at this site, but did not participate in this proceeding. (Tr. 1, p. 28)
42. The proposed tower would be expandable to up to 180 feet agl. (Tr. 1, p. 32)
43. Cellco would install 12 panel antennas (six cellular and six PCS) on a low profile platform at a centerline height of 137 feet agl. The top of the antennas would reach a height of 140 feet agl. (Applicant 1, Attachment 1, p. 6; Applicant 4, response 2)
44. Cellco could also use T-arms if requested by the Council. (Applicant 4, response 2)
45. If Cellco were to use flush mounted antennas, it would require an increase in antenna centerline height of 10 feet to make up for the loss of approximately 2 dB in coverage it would experience with flush mounted antennas. (Applicant 4, response 2)
46. A 70-foot by 70-foot equipment compound enclosed by an eight-foot high chain-link fence would be established at the base of the tower. The size of the lease area would be able to accommodate the equipment of four wireless carriers. Verizon would install a 12-foot by 30-foot equipment shelter within the compound. (Applicant 1, p. 3; Applicant 1, Attachment 1)
47. Cellco would install a back-up diesel generator inside its equipment shelter. (Applicant 1, p. 3; Applicant 3, response 12)
48. No landscaping is proposed by the Applicant. (Applicant 1, Attachment 1)
49. For the proposed installation of the access road and compound gravel, approximately 90 cubic yards of cutting of the existing topsoil and loose stone would be required. No fill would be required. (Applicant 3, response 9)
50. Access to the proposed site would extend approximately 70 feet from Exeter Drive over a new 12-foot wide gravel driveway to the site compound. (Applicant 1, Attachment 1)
51. Utilities would be installed above ground beginning at an existing utility pole on Exeter Drive and would continue west along Exeter Drive for approximately 400 feet. The utilities would then turn to the north and continue approximately 60 feet to the proposed compound. Five new 40-foot wood utility poles would be installed approximately 100 feet apart to support the utilities. (Applicant 1, Attachment 1; Tr. 1, p. 35)
52. Until a final geotechnical survey is completed, MCF would not know whether blasting would be required. However, MCF does not anticipate the need for blasting. (Applicant 3, response 10)
53. The tower setback radius would extend onto an adjacent Town parcel, east of the site, by 40 feet. The tower setback radius would also extend onto Exeter Drive, south of the site, by 40 feet. (Applicant 1, Attachment 1)
54. Cellco would be willing to install a yield point on the tower, as necessary, to prevent the tower from encroaching upon an adjacent Town parcel or Exeter Drive in the event of a tower failure. (Applicant 4, p. 1)

55. The nearest property boundary from the proposed tower is approximately 100 feet to the east (Town property). This property is being reserved for future industrial use. (Applicant 1, Attachment 1; Tr. 1, p. 13)
56. There are no residences within 1,000 feet of the proposed tower site. The nearest residence is approximately 1,200 feet west of the tower site. The residence is located at 160 Main Street. (Applicant 1, p. 14 and Attachment 1; Tr. 1, pp. 45-46)
57. Land use in the surrounding area is industrial to the south and west, and the land to the north is vacant. To the west is residential. (Applicant 1, p. 17; Tr. 1, pp. 45-46)
58. The estimated construction cost of the proposed facility is:

Radio Equipment	\$ 450,000	
Tower, Coax and Antennas	\$ 150,000	
Power Systems	\$ 20,000	
Equipment Building	\$ 50,000	
<u>Misc. (Site Preparation and Installation)</u>	<u>\$ 119,000</u>	
Total	\$ 789,000	(Applicant 1, p. 21)

#### Environmental Considerations

59. The proposed facility would have no effect upon historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places or upon properties of traditional cultural importance to Connecticut's Native American community. (Applicant 1, Attachment 9)
60. There are no known existing populations of federal or state endangered or threatened species, or any state special concern species at the proposed site, based on a review of the Connecticut Department of Environmental Protection Natural Diversity Database. (Applicant 1, p. 20, Attachment 9)
61. Vegetation at the site consists of predominantly red oak. No trees six-inches diameter at breast height or greater would be removed to develop the site. (Tr. 1, pp. 53-54; Applicant 1, Attachment 1)
62. The closest wetland area is approximately 83 feet to the north of the proposed compound. (Tr. 1, p. 55)
63. Wetland vegetation consists of red oak, red maple, quaking aspen, gray birch, eastern cottonwood, sassafras, sugar maple, white oak, white pine, highbush blueberry, northern spicebush, green bulrush, and narrow-leaf cattail. (Applicant 1, Attachment 10, p. 2)
64. The area between the compound and the wetlands is a significantly disturbed area and consists of gravel fill material. (Applicant 1, Attachment 10, p. 2)
65. Utilizing appropriate soil erosion and sedimentation controls would reduce, if not eliminate any risk of impact to the wetlands during construction. (Applicant 1, Attachment 10, p. 4; Tr. 1, p. 55)

66. The Applicant would install erosion and sedimentation controls at the site during the construction period in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*. (Applicant 1, p. 18)
67. The proposed site is not located within a flood zone. (Applicant 3, response 11)
68. The closest airport to the site is Reconn Airport in the Town of Coventry, approximately 2.3 nautical miles southeast of the site. Obstruction marking and lighting of the tower would not be required. (Applicant 3, response 3; Applicant 1, pp. 19-20)
69. The floor of the equipment shelter is recessed, creating a bowl-like effect. The floor area is capable of containing 120 percent of all backup generator fluids (fuel and oil) in the event of a leakage or spillage. (Applicant 1, p. 16)
70. The maximum power density from the radio frequency emissions of Celco's proposed antennas for cellular frequencies would be 0.0279 mW/cm<sup>2</sup> or 4.81% of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed tower. For PCS frequencies, the maximum power density would be 0.0345 mW/cm<sup>2</sup> or 3.45% of the standard for Maximum Permissible Exposure. The total maximum power density at the tower base resulting from Celco's antennas would be 8.27% of the standard for Maximum Permissible Exposure. 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. (Applicant 1, Attachment 1; Tr. 1, pp. 58-59)

#### Visibility

71. The proposed tower would be visible year-round from approximately 67.2 acres within a two-mile radius of the site (refer to Figure 12). The tower would be seasonally visible from approximately 6.3 acres within a two-mile radius of the site. (Applicant 1, Attachment 8)
72. Visibility of the proposed tower from roads within a two-mile radius of the site is presented in the table below:

Road	Length of Road Visibility (Seasonal)	Length of Road Visibility (Year-round)	Nearest Distance with Visibility to Tower
Exeter Drive	0.3 miles	-	0.02 miles north
Church Street	-	0.4 miles	0.6 miles northeast
Sterling Road	-	0.2 miles	0.5 miles northeast

(Applicant 1, Attachment 8)

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

Location as Marked on Viewshed Map		Visible	Approx. Portion of Tower Visible	Approx. Distance to Tower
Exeter Drive	(1)	Yes	140 feet - unobstructed	0.07 miles northwest
Intersection of Main Street and Industrial Park Road	(2)	No	-	0.5 miles northeast
River Road	(3)	No	-	1.0 miles southwest
Sterling Park	(4)	No	-	1.4 miles northwest
Sterling Memorial School	(5)	No	-	1.6 miles northwest
Riverbend Campground	(6)	No	-	1.7 miles northwest
Newport Road	(7)	No	-	1.7 miles northwest
Sterling Hill Historic District & Scenic Portion of Route 14A	(8)	No	-	1.9 miles northeast
Glen Falls Historic Bridge	(9)	No	-	2.0 miles east
Route 14	(10)	Yes	40 feet - unobstructed	1.1 miles northeast
Route 14	(11)	Yes	30 feet - unobstructed	0.7 miles northeast
Church Street	(12)	Yes	30 feet - unobstructed	1.0 miles northeast
Sterling Ridge Lane	(13)	No	-	0.3 miles east
Hungry Hill Road	(14)	No	-	0.4 miles northwest

(Applicant 1, Attachment 8)

74. The proposed site would be visible from approximately 10 residences year-round on Church Street. The tower would also be seasonally visible from two homes in the abutting Sterling Hills subdivision property. (Tr. 1 p. 19)
75. The proposed tower would not be visible from Riverbed Campground located approximately 1.8 miles southwest of the site. (Applicant 1, Attachment 8)
76. The proposed tower would not be visible from Sterling Park Campground approximately 1.3 miles east of the site. (Applicant 1, Attachment 8)
77. The nearest scenic road to the site is Route 14A, from Route 49 east to Porter Pond Road, approximately 1.8 miles southwest of the site. The tower would not be visible from this scenic road. (Applicant 1, Attachment 8)
78. The nearest historic district is the Sterling Hills Historic District, approximately 1.9 miles southwest of the proposed tower. The proposed tower would not be visible from the historic district. (Applicant 1, Attachment 8)
79. The proposed tower would not be visible from the Moosup Valley State Park Trail, approximately 0.4 miles southwest of the proposed site. (Applicant 1, Attachment 8)

**Existing and Proposed Wireless Coverage**

80. Cellco transmits in the 869-880 MHz frequency bands for cellular service and in the 1970-1975 MHz frequency bands for PCS service. Cellco operates with a signal level service design of -85 dBm for this area, sufficient for in-vehicle coverage. The signal level threshold for in-building coverage is -75 dBm. (Applicant 3, response 4; Tr. 2, pp. 8)

81. Adjacent Cellco facilities that would interact with the proposed facility are as follows:

Location	Antenna Height agl and Structure Type	Approximate Distance and Direction from Site
Spaulding Hill Road, Plainfield	110 feet - water tank	3.92 miles southwest
548 Green Hollow Road, Plainfield	125 feet - building	3.64 miles northwest
47 Unity Drive, Plainfield	127 feet - building	3.74 miles west

(Applicant 3, response 6)

82. The length of existing coverage gaps (signal strength < -85 dBm) on select roads within a two-mile radius of each proposed site is presented in the table below.

Existing Road Gaps*		
Road	Cellular Frequencies	PCS Frequencies
Route 14	3.49	5.63
Route 14A	3.23	3.51
Total	6.72	9.14

\*approximate miles; signal strength < -85 dBm  
 (Applicant 3, response 4)

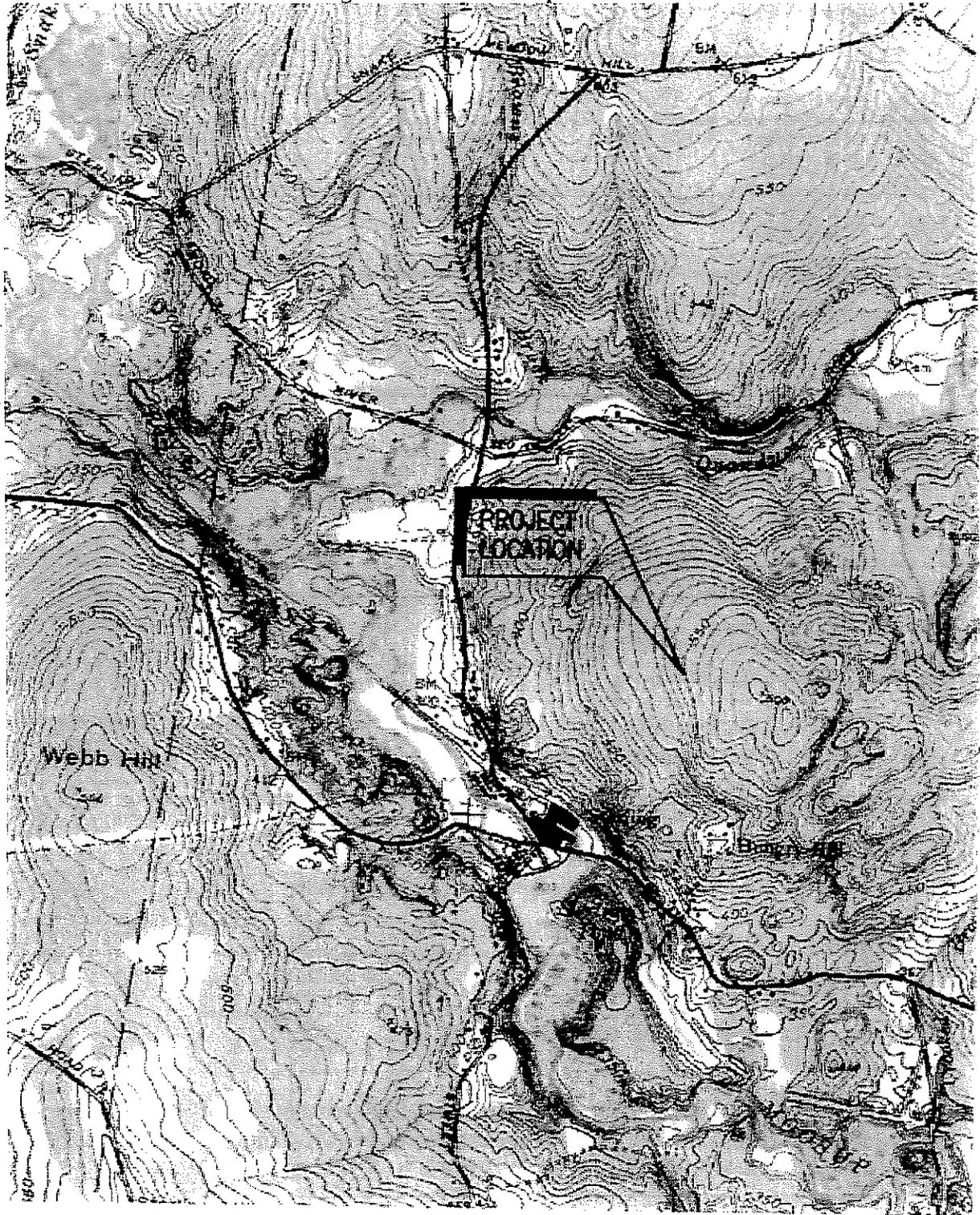
83. The minimum antenna height Cellco is requesting is 137 feet agl. Installing antennas at a centerline height of 137 feet agl would provide coverage to the following roads (refer to Figures 5 and 7):

Length of coverage provided*		
Road	Cellular Frequencies	PCS Frequencies
Route 14	4.1	2.3
Route 14a	3.5	1.1
Total	7.6	3.4

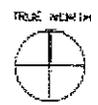
\*approximate miles; signal strength >= -85 dBm  
 (Applicant 1, p. 11)

84. Installing antennas at a centerline height of 127 feet agl would not meet Cellco's coverage objectives and would result in coverage gaps in cellular frequencies of 0.2 miles and 0.3 miles along Route 14 and Route 14A, respectively. (Applicant 1, p. 11)
85. Although coverage at PCS frequencies would be complete, coverage would diminish as the height of the antennas are lowered. (Applicant 1, p. 11)
86. Installing antennas at a centerline height of 117 feet agl would not meet Cellco's coverage objectives and would result in coverage gaps in cellular frequencies of 0.4 miles and 0.6 miles along Route 14 and Route 14A, respectively. (Applicant 1, p. 11)

Figure 1: Location Map



USGS TOPO MAP: DNECO 41071-F7  
SCALE 1" = 3000'  
0 1000 2000  
SCALE IN FEET

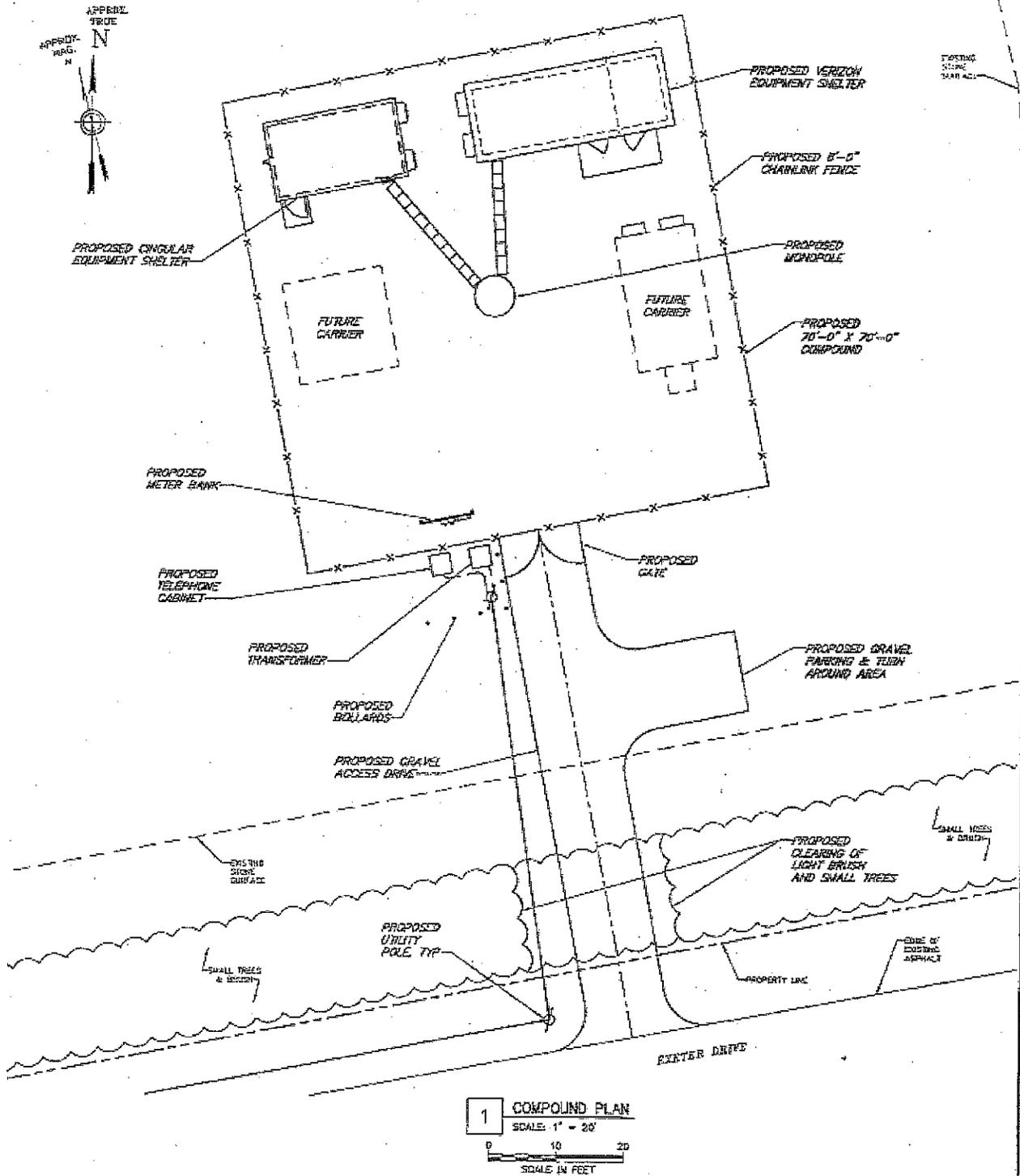


**Figure 2: Aerial Photograph**



(Applicant 1, Attachment 1)

Figure 3: Site Plan



(Applicant 1, Attachment 1)

Figure 4: Cellco's Existing Cellular Coverage

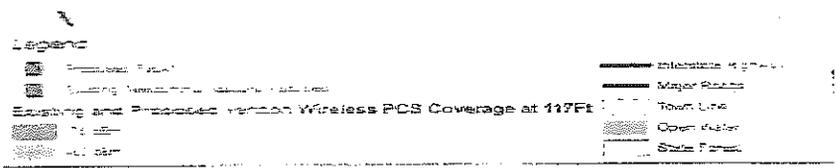
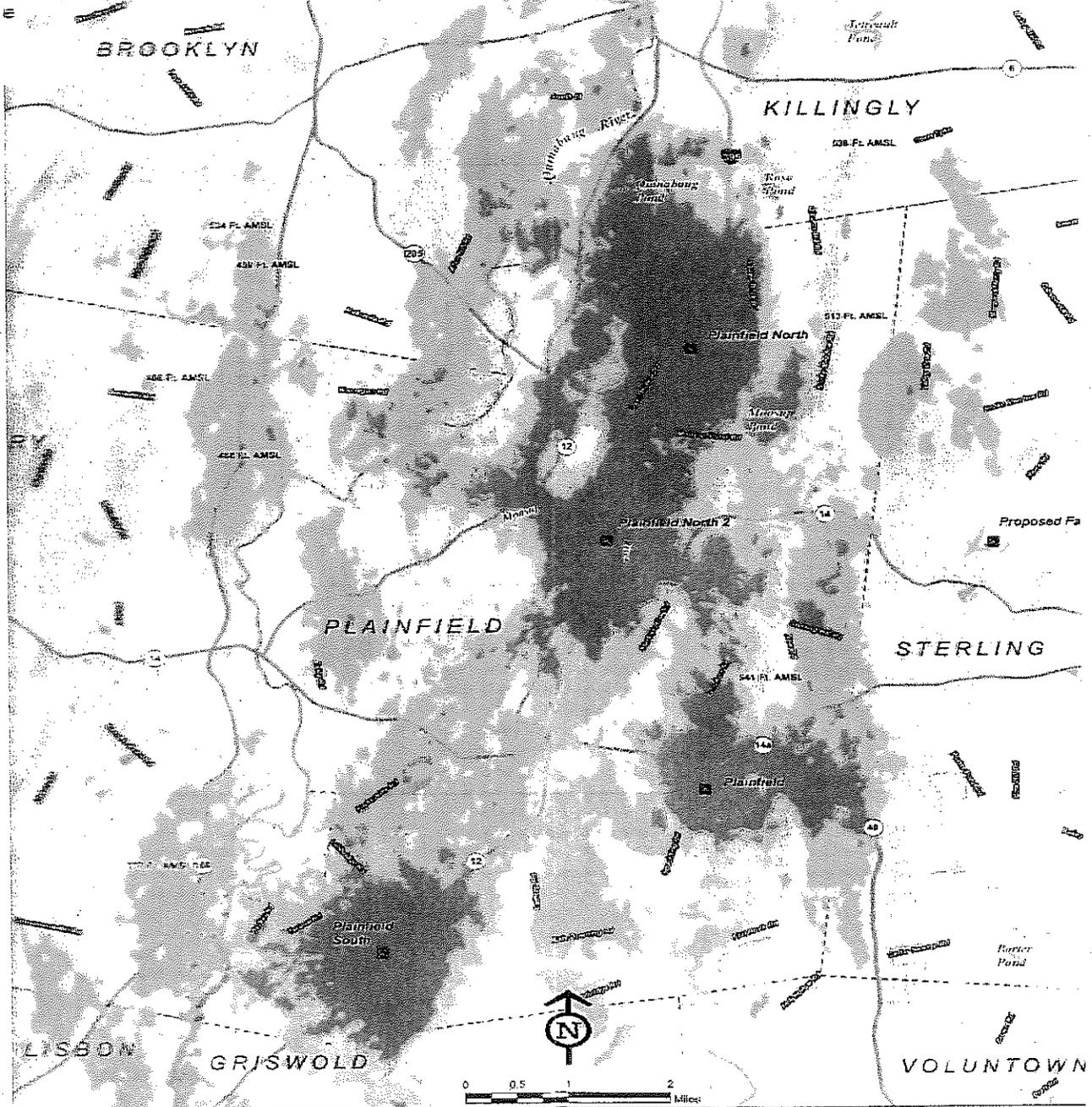


Figure 5: Cellco's Proposed Cellular Coverage With Antennas at 137 feet



Figure 6: Celco's Existing PCS Coverage

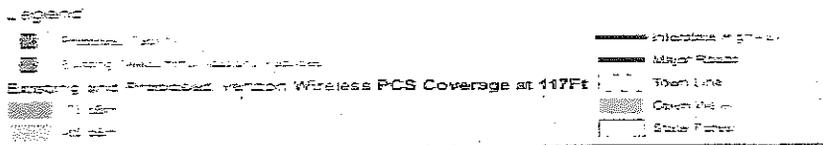
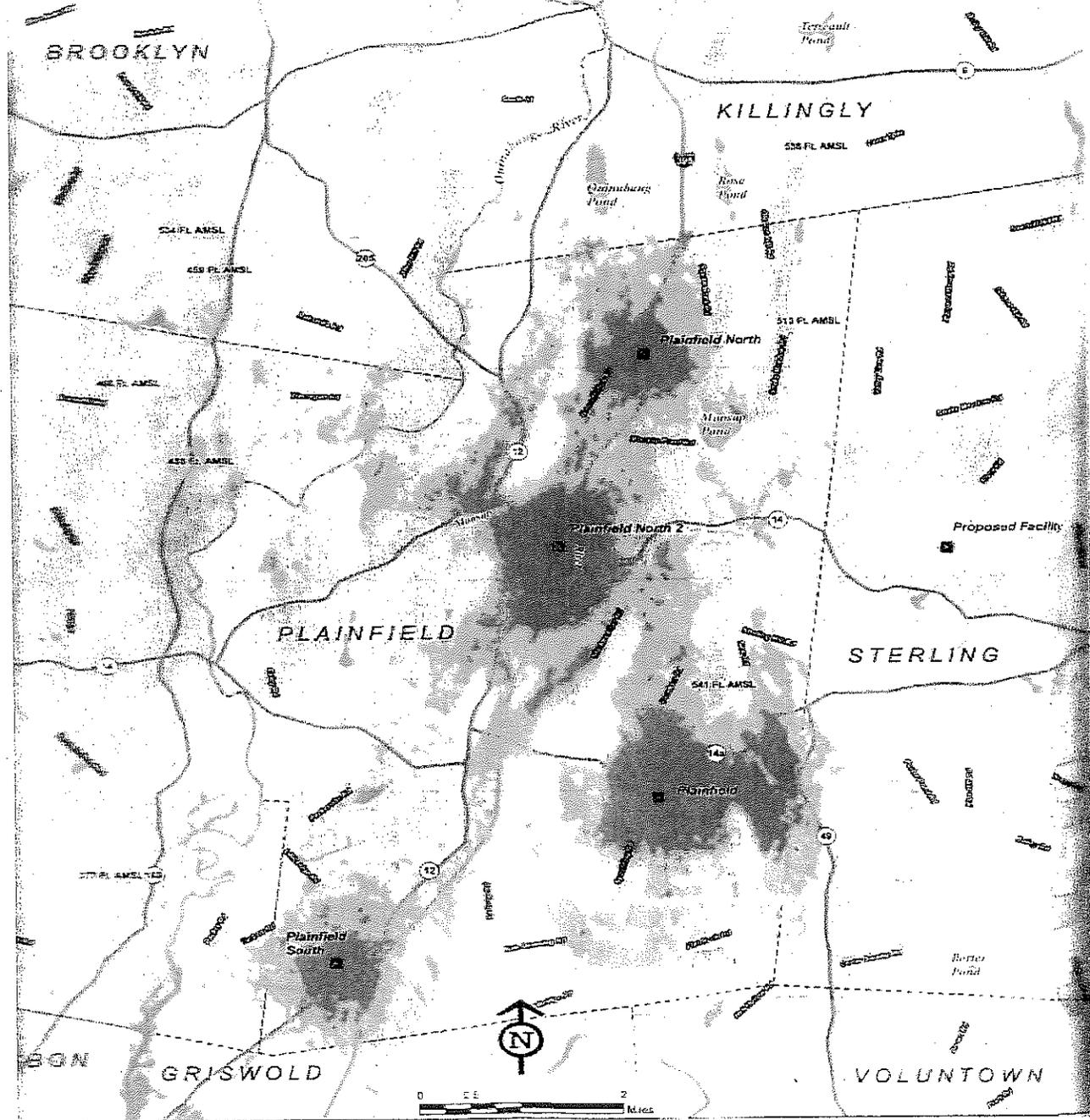


Figure 7: Cellco's Proposed PCS Coverage with Antennas at 137 feet

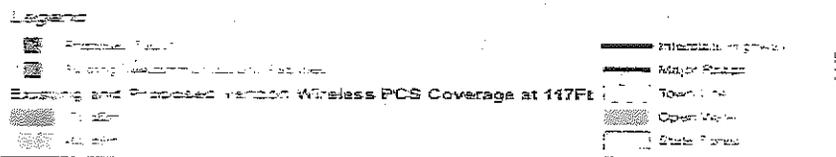
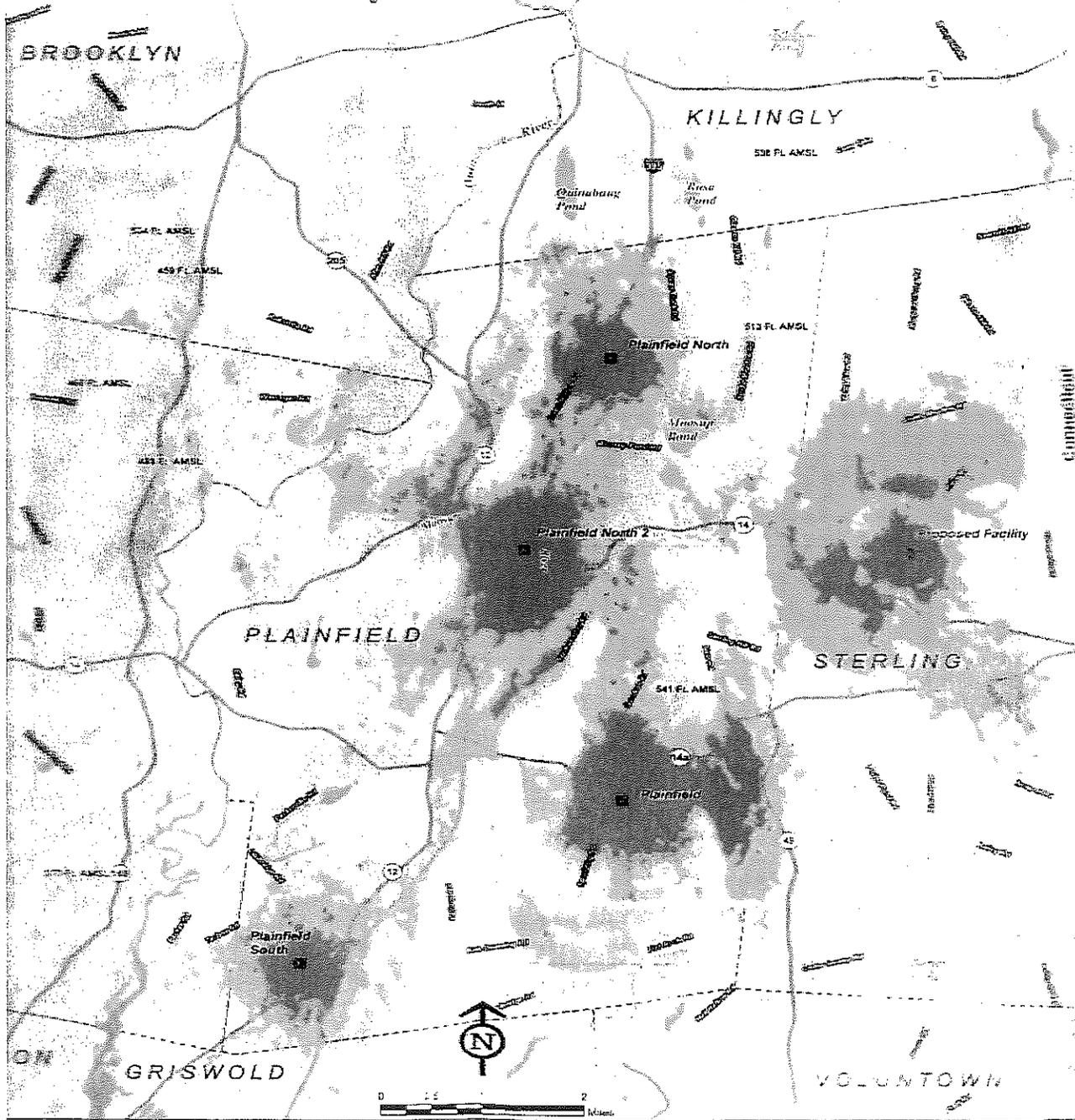
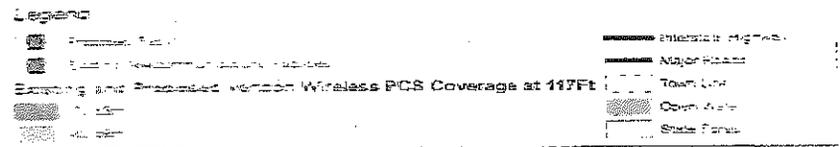
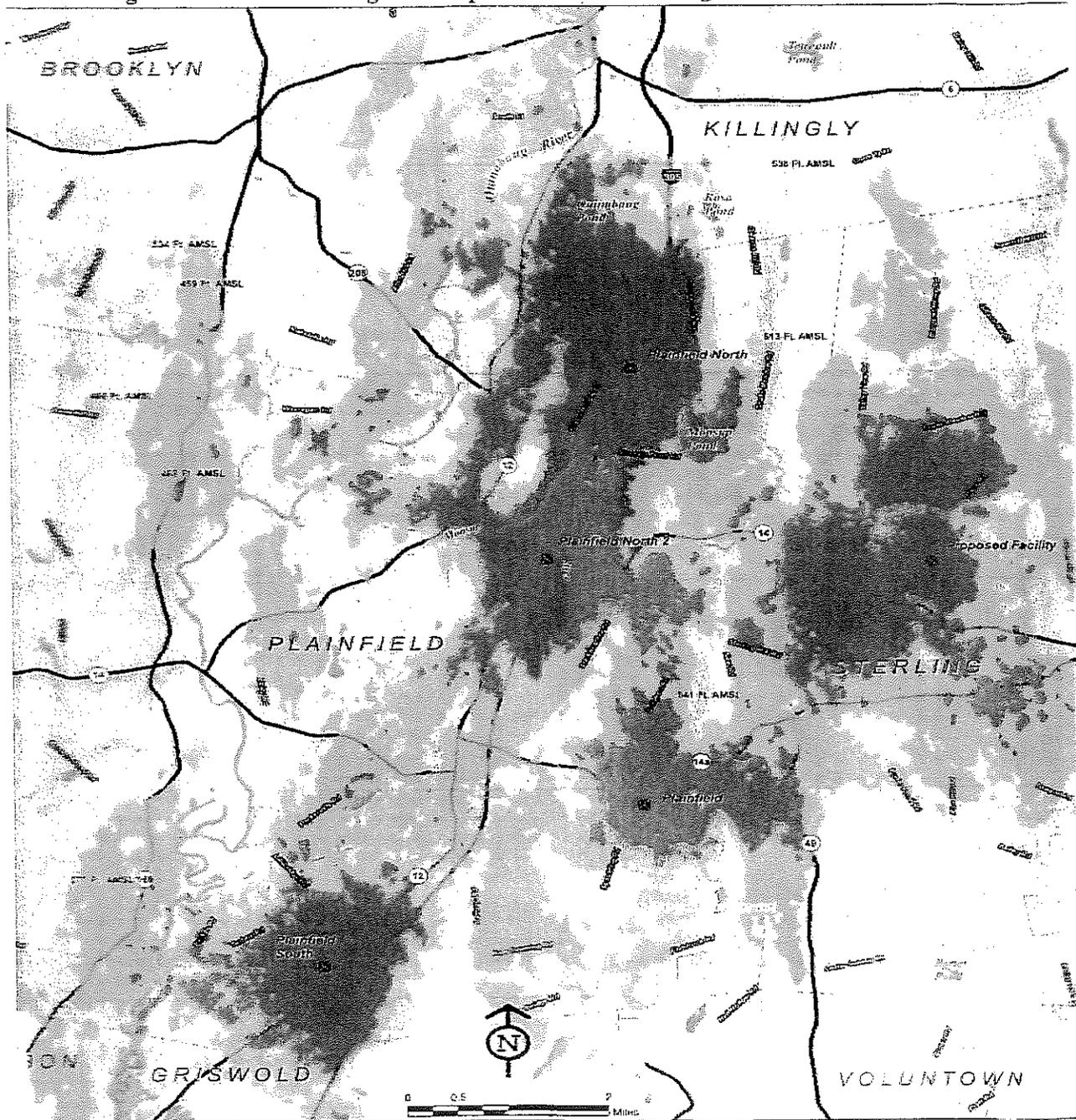
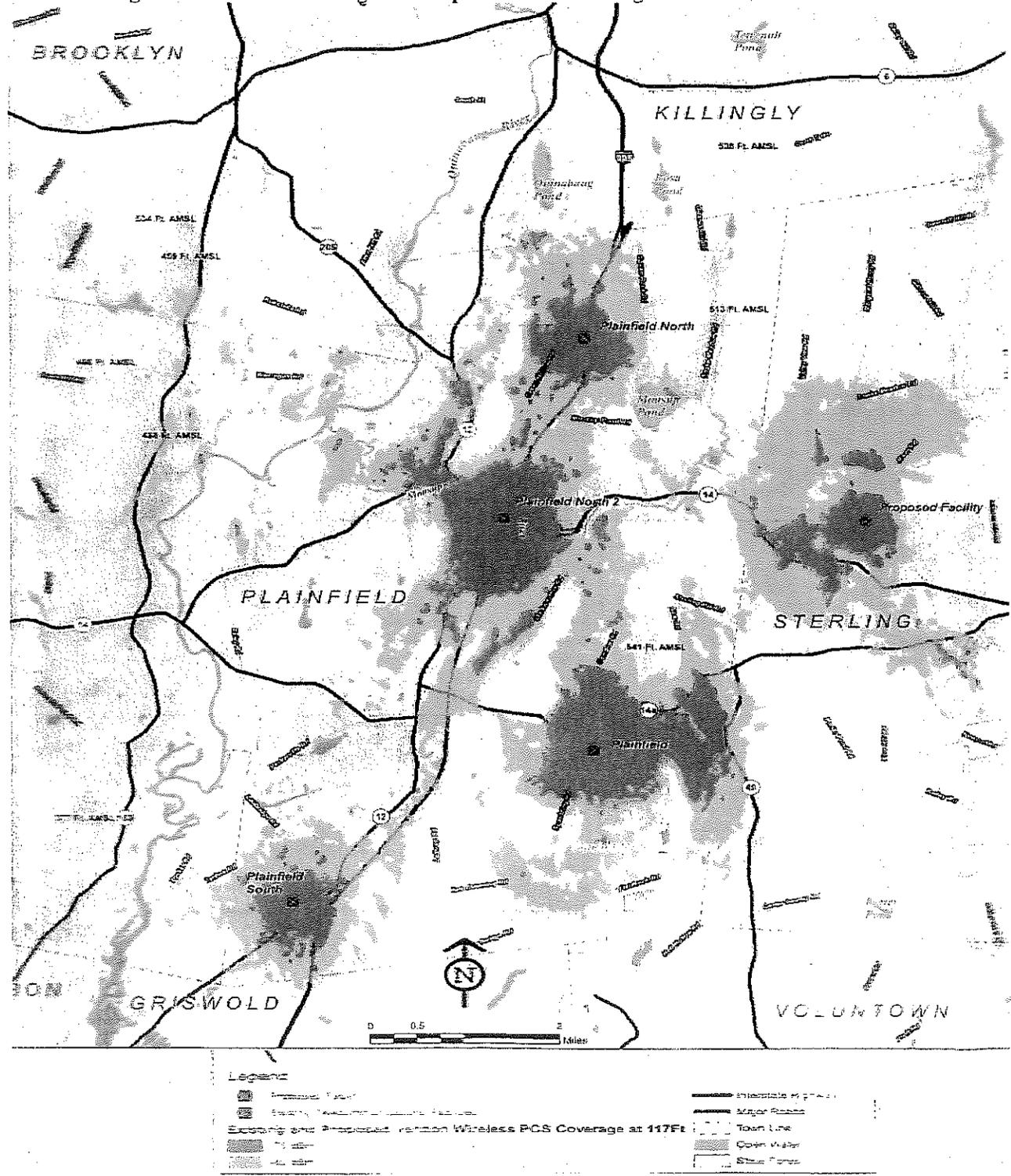


Figure 8: Cellco's Existing and Proposed Cellular Coverage with Antennas at 127 feet



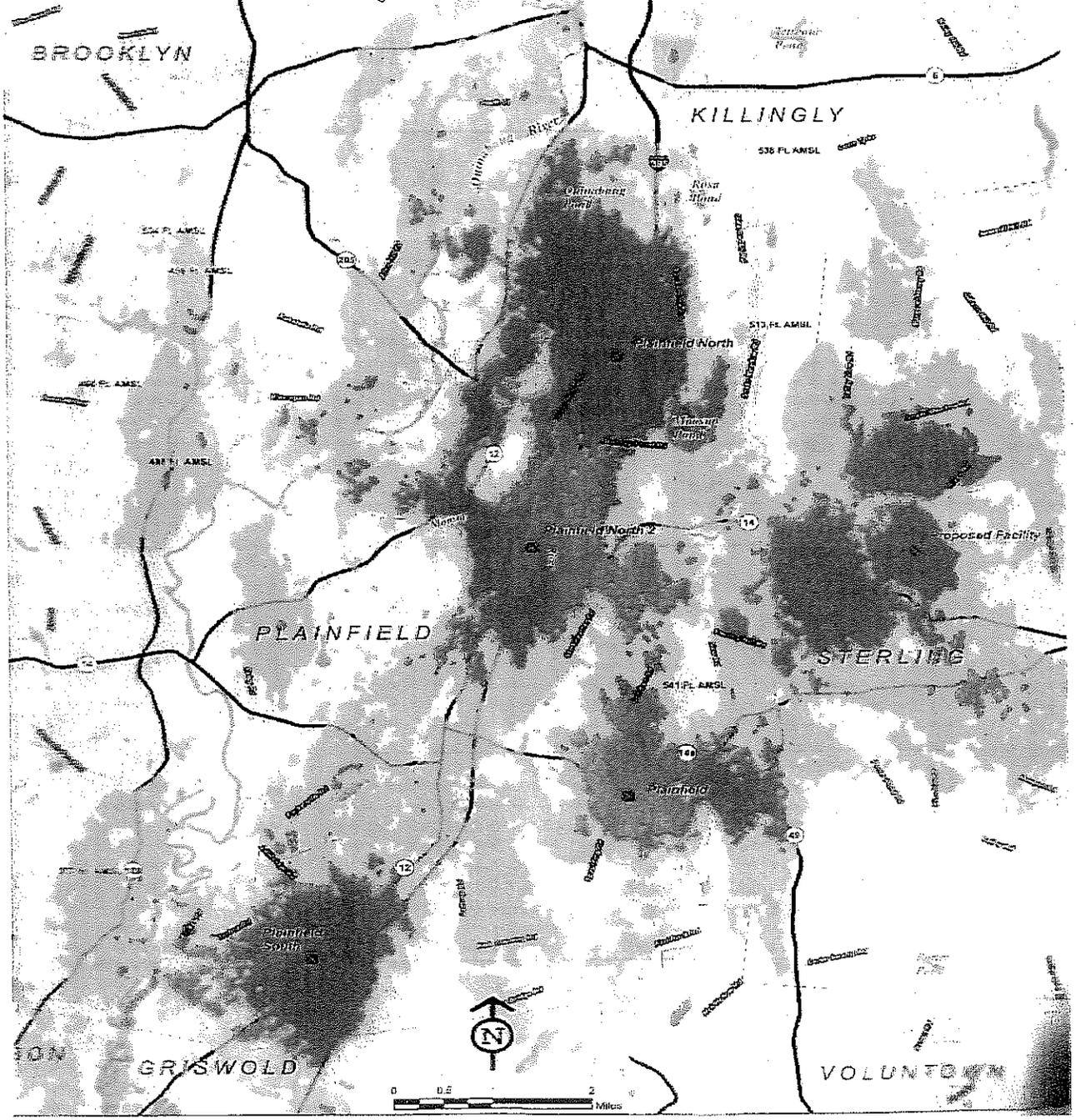
(Verizon 3, response 1)

Figure 9: Cellco's Existing and Proposed PCS Coverage with Antennas at 127 feet



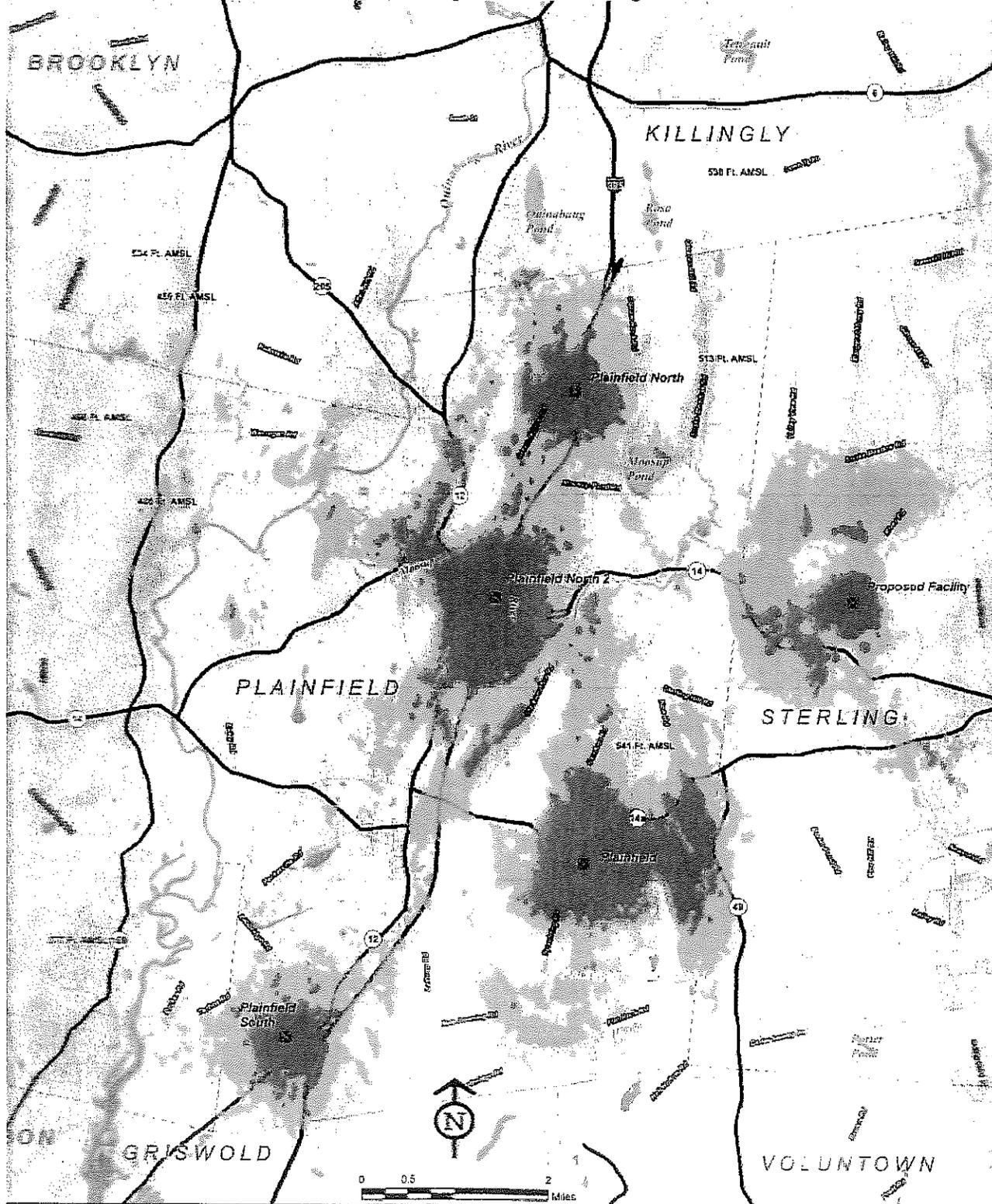
(Verizon 3, response 1)

Figure 10: Celco's Existing and Proposed Cellular Coverage with Antennas at 117 feet



(Verizon 3, response 1)

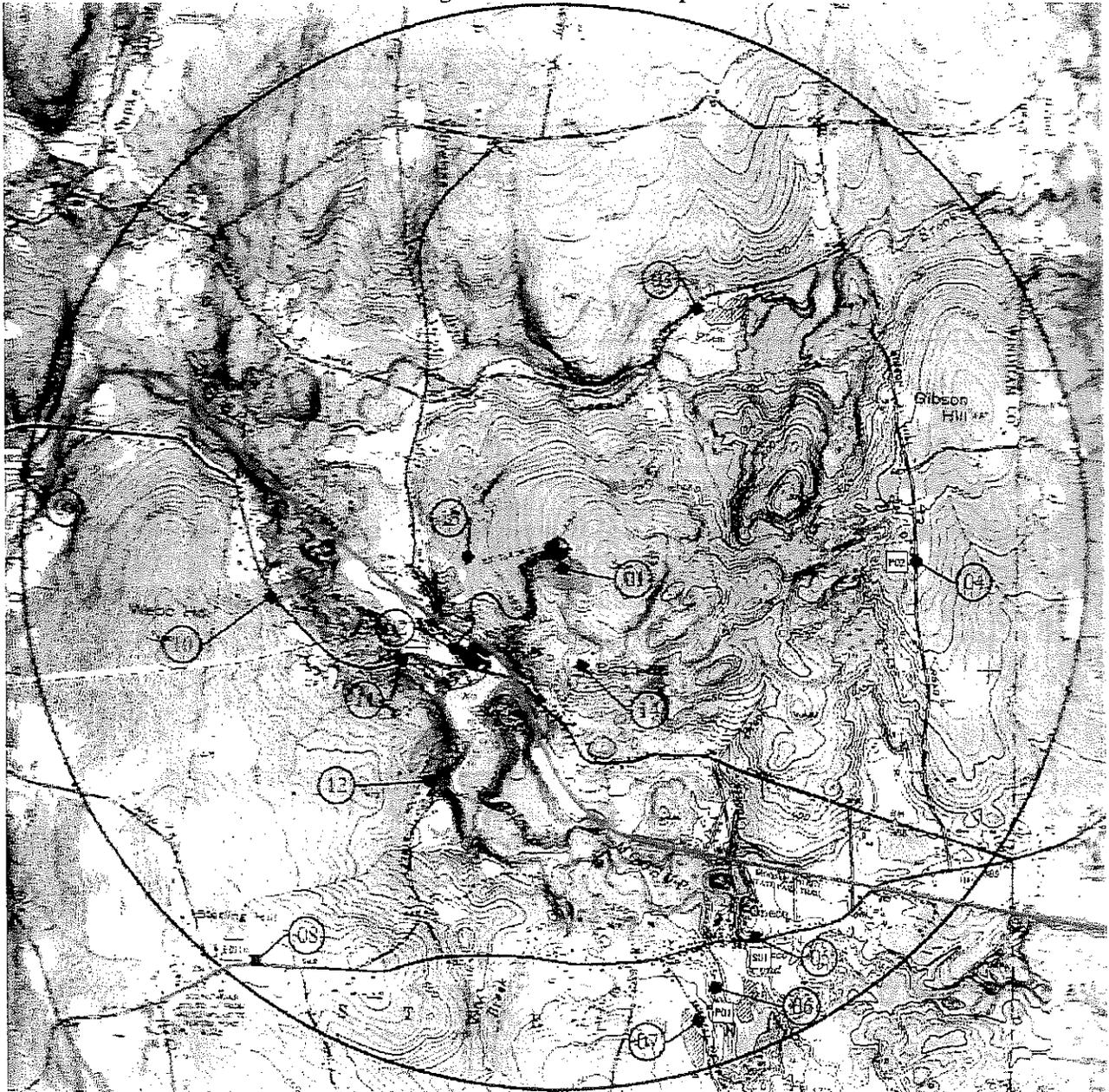
Figure 11: Celco's Existing and Proposed PCS Coverage with Antennas at 117 feet



(Verizon 3, response 1)

(Verizon Wireless 1, response 11)

Figure 12: Viewshed Map



(Applicant 1, Attachment 1)

Figure 13: Viewshed Map Legend

- NOTES:**
1. Only visible areas are shown on the map utilizing the process described in note 2. The remainder of the map has been estimated to be non-visible utilizing the process described in note 3.
  2. Seasonal and year-round areas of visibility were estimated from a field visual analysis within public R.O.W. and public properties. Areas shown on private property were interpolated from the field visual analysis.
  3. Non-visible areas were estimated from a computer generated topography & vegetation analysis and field verification of vegetation & building screening within public R.O.W. and public properties. Vegetation limits were determined from 2004 aerial photos and is assumed to be 65' high. Verification of vegetation height, coverage, and type within private areas not visible from public R.O.W. or public properties was not field verified.
  4. Historical areas were determined from national and state historical registers.
  5. Parks, schools, cemeteries, and churches were determined from street maps and field observations.
  6. Scenic roads, if any, were determined from the CTDDT list of designated scenic roads and field observations.

*Legend*

APPROXIMATE LOCATION OF PROPOSED MONOPOLE  
 COMPUTER SIMULATION PHOTOGRAPH LOCATION  
 APPROXIMATE LIMIT OF SEASONAL TOWER VISIBILITY  
 APPROXIMATE LIMIT OF YEAR ROUND TOWER VISIBILITY  
 CHURCH/CEMETERY  
 PARK  
 HISTORICAL SITE  
 SCHOOL  
 TRAIL OR SCENIC ROAD

*Visibility by Acreage*

ITEM	APPROXIMATE ACRES	% OF TOTAL AREA
2 MILE RADIUS AREA	5,053	100%
NOT VISIBLE DUE TO TOPOGRAPHY	1,845	23%
NOT VISIBLE DUE TO VEGETATION	6,134.5	76.1%
VISIBLE YEAR ROUND	67.2	0.8%
POTENTIAL SEASONAL VISIBILITY	6.3	0.1%

*Distances from Photo Locations to Tower*

PHOTO	DIST. (FT.)	PHOTO	DIST. (FT.)
01	350	10	5,800
02	2,850	11	3,800
03	5,450	12	5,200
04	7,150	13	1,800
05	5,550	14	2,350
06	9,100		
07	9,200		
08	10,050		
09	10,500		

**2 MILE VIEWSHED ANALYSIS MAP**  
 STERLING  
 VISUAL IMPACT ASSESSMENT

PREPARED FOR:

**MCF Communications, Inc.**

100 TURNPIKE STREET, SUITE 105  
 NORTH ANDOVER, MA 01842  
 OFFICE: (978) 887-2535  
 FAX: (978) 258-8850

PREPARED BY:

**CHA**

CONSULTING HISTORIC ARCHITECTS & LANDSCAPE ARCHITECTS  
 100 TURNPIKE STREET, SUITE 105, NORTH ANDOVER, MA 01842  
 OFFICE: (978) 887-2535  
 FAX: (978) 258-8850

