STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
APPLICATION OF NEW CINGULAR WIRELESS PCS, LLC (AT&T) FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF A WIRELESS TELECOMMUNICATIONS FACILITY AT 24 DINGLEBROOK LANE, NEWTOWN, CONNECTICUT	:	DOCKET NO. 376
	:	MAY 5, 2009

RESPONSES OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS
TO CONNECTICUT SITING COUNCIL PRE-HEARING INTERROGATORIES, SET ONE

On April 21, 2009, the Connecticut Siting Council ("Council") issued Pre-Hearing Interrogatories to the Intervenor, Cellco Partnership d/b/a Verizon Wireless ("Cellco"), relating to the above-captioned docket. Below are Cellco's responses.

Question No. 1

Which wireless services does Cellco Partnership d/b/a Verizon Wireless (Cellco) seek to provide via a co-location at the proposed tower, e.g. cellular, PCS, LTE?

Response

Cellco will seek to deploy wireless services at this facility, in all of its licensed frequencies, including cellular (850 MHz), personal communications service ("PCS") (1900 MHz) and 700 MHz.

Question No. 2

What is Cellco's existing signal strength in the area that would be covered by this facility?

Response

Cellco existing signal strength in this area ranges from -95 dBm to -120 dBm at Cellular frequencies; and from -100 dBm to -120 dBm at PCS frequencies. Cellco is not currently providing 700 MHz frequency service anywhere in Connecticut.

Question No. 3

What is the minimum signal level Cellco would consider acceptable for service in the vicinity of the proposed site?

Response

Cellco's minimum acceptable coverage thresholds are -75 dBm for reliable in-building service and -85 dBm for reliable in-vehicle service.

Question No. 4

What is the minimum signal level that Cellco requires in order to provide adequate in-vehicle coverage? What is the minimum signal level that Cellco requires in order to provide adequate in-building coverage?

Response

Cellco's minimum reliable coverage thresholds are -75 dBm for reliable in-building service and -85 dBm for reliable in-vehicle service.

Question No. 5

Provide the distance and direction from the proposed site to the existing sites that the proposed tower would interact with. Also include the addresses, tower heights, antenna heights and tower types (e.g. monopole).

Response

The proposed Newtown facility would interact with three (3) of Cellco's adjacent cells sites.

1. Cellco's existing Newtown cell site consists of antennas at the 185-foot level on the 185-foot monopole tower located off Route 34 in Newtown. This cell site is approximately five (5) miles to the south of the proposed Newtown North facility.

2. Cellco's existing Hawleyville cell site consists of antennas at the 140-foot level on the 154-foot monopole tower located at 6 Fairfield Drive in Brookfield, CT. This cell site is approximately 3.56 miles to the southwest of the proposed Newtown facility.

3. Cellco's existing Brookfield cell site consists of antennas at the 70-foot level on the 80-foot lattice tower located at 37 Carmen Hill Road, Brookfield, CT. This cell site is approximately 5.12 miles to the northwest of the proposed Newtown facility.

Question No. 6

Provide the proposed antenna height, number of antennas, and type of antenna mounting, e.g. low-profile platform.

Response

Cellco will install a total of fifteen (15) antennas (six (6) cellular; six (6) PCS; and three (3) 700 MHz antennas) on the tower. Cellco antennas will be attached to a low profile platform at a centerline height of 140 feet, ten feet below the AT&T antennas.

Question No. 7

Provide the following information for Cellco antennas: number of channels per sector for each antenna system that would be installed on the proposed tower; ERP per channel for each antenna system; and frequency at which each antenna system would operate.

Response

PCS Antennas

Alpha Sector – 140 ft.	**Beta Sector – 140 ft.**	**Gamma Sector – 140 ft.**
Antenna Type: LPA – 185063/8CF	Antenna Type: LPA – 185063/8CF	Antenna Type: LPA – 185063/8CF
Frequency: Tx: 1970-1990 MHz; Rx: 1890-1910 MHz	Frequency: Tx: 1970-1990 MHz; Rx: 1890-1910 MHz	Frequency: Tx: 1970-1990 MHz; Rx: 1890-1910 MHz
No. Channels: 15	No. Channels: 15	No. Channels: 15
ERP/Channel: 359 W Max	ERP/Channel: 359 W Max	ERP/Channel: 359 W Max

Cellular Antennas

Alpha Sector – 140 ft.	**Beta Sector – 140 ft.**	**Gamma Sector – 140 ft.**
Antenna Type: DB846F652AXY	Antenna Type: DB846F652AXY	Antenna Type: DB846F652AXY
Frequency: Tx: 869-880,890-891.5 MHz; Rx: 824-835, 845-846.5 MHz	Frequency: Tx: 869-880,890-891.5 MHz; Rx: 824-835, 845-846.5 MHz	Frequency: Tx: 869-880,890-891.5 MHz; Rx: 824-835, 845-846.5 MHz
No. Channels: 9	No. Channels: 9	No. Channels: 9
ERP/Channel: 387 W Max	ERP/Channel: 387 W Max	ERP/Channel: 387 W Max

700 MHz Antennas

Alpha Sector – 140 ft.	**Beta Sector – 140 ft.**	**Gamma Sector – 140 ft.**
Antenna Type: BXA–70063/6CF (1)	Antenna Type: BXA–70063/6CF (1)	Antenna Type: BXA–70063/6CF (1)
Frequency: 746 – 757 MHz	Frequency: 746 – 757 MHz	Frequency: 746 – 757 MHz
No. Channels: 1	No. Channels: 1	No. Channels: 1
ERP/Channel: 794 W Max	ERP/Channel: 794 W Max	ERP/Channel: 794 W Max

Question No. 8

Would flush-mounted antennas or antennas attached to the tower via T-arms provide the required coverage? Would either configuration result in reduced coverage and/or necessitate greater antenna height? Explain.

Response

To be clear, when we discuss the use of "flush-mounts" or "T-arms" we are simply describing a means of physically attaching the antennas to a tower at a particular height. Similar to the low-profile antenna platform described in this application, the use of T-arms would allow for the installation of Cellco's standard full-array of fifteen (15) antennas, all at the same height on the tower. Cellco would prefer the use of a low profile platform simply because such an installation allows for easier maintenance of the antennas. The use of T-arms, however, would also be acceptable.

A flush-mounted antenna refers to an antenna that is attached directly to the monopole tower. Due to the relatively small diameter of the monopole, Cellco could only install three flush-mounted antennas at any particular height; one antenna per sector, in order to provide the 360 degrees of coverage around the tower site. The use of flush-mounted antennas (one antenna per sector) results in a coverage loss of 3 to 4 dB from a particular facility and the shrinking of that facility's overall coverage footprint. As the coverage footprint shrinks, coverage gaps will open in the area around the proposed tower site particularly along the edges of the coverage footprint where that coverage connects to the adjacent cell sites. Cellco's ability to provide reliable service to a particular target area becomes much more of a challenge. In some instances, Cellco can compensate for this coverage loss by increasing the centerline height of its antennas. In addition, each of Cellco's three operating frequencies would require its own array of three

flush-mounted antennas. If it were required to use flush-mounted antennas, Cellco would need to occupy three antenna levels on the tower, one each for its 1900 MHz, 850 MHz and 700 MHz systems, severely limiting tower sharing opportunities in the future.

Question No. 9

Provide existing coverage plots for Cellco's cellular and PCS services, as applicable.

Response

Plots showing coverage from Cellco's existing Brookfield, Hawleyville and Newtown cell sites in the area are included in Attachment 1. Attachment 2 contains plots showing Cellco's existing cellular and PCS coverage together with coverage from the proposed Dinglebrook Lane tower with Cellco antennas at the 140-foot level.

Question No. 10

Provide proposed coverage plots for Cellco's cellular and PCS services, as applicable, using the same scale assuming the antennas are located at the proposed centerline height, 10 feet lower, and 20 feet lower.

Response

Attachment 3 contains coverage plots with Cellco antennas located at the 130' level on the proposed AT&T tower. Attachment 4 contains coverage plots with Cellco antennas mounted at the 120' level on the proposed AT&T tower.

Question No. 11

Provide the approximate dimensions of Cellco's proposed equipment shelter.

Response

Cellco will install its standard 12' x 30' shelter at this site.

Question No. 12

Would Cellco have backup power at its tower site? How would backup power be provided, e.g. battery, diesel generator, etc.? If a generator is proposed, would it be located inside the equipment shelter? Explain.

Response

Yes. Cellco's back up power system relies first on a battery back-up system, then on its back-up generator. The battery system and back-up generator are located inside Cellco's shelter. The generator will be maintained in a separate 10' x 12' generator room. The batteries are located in the main equipment area of the shelter.

Question No. 13

Has Cellco considered using a fuel cell as a backup power source for the proposed facility? Explain

Response

Not at this time. As has been reported in other dockets, Cellco has an Internal Maintenance Engineering Organization whose responsibility it is to explore alternative power sources for existing cell sites. This organization is currently exploring the use of fuel cells, biofuels for the fueling of generators, solar power and wind power as alternative energy sources at cell site locations. Currently, the use of fuel cells to provide back-up to a cell site is not economically viable.

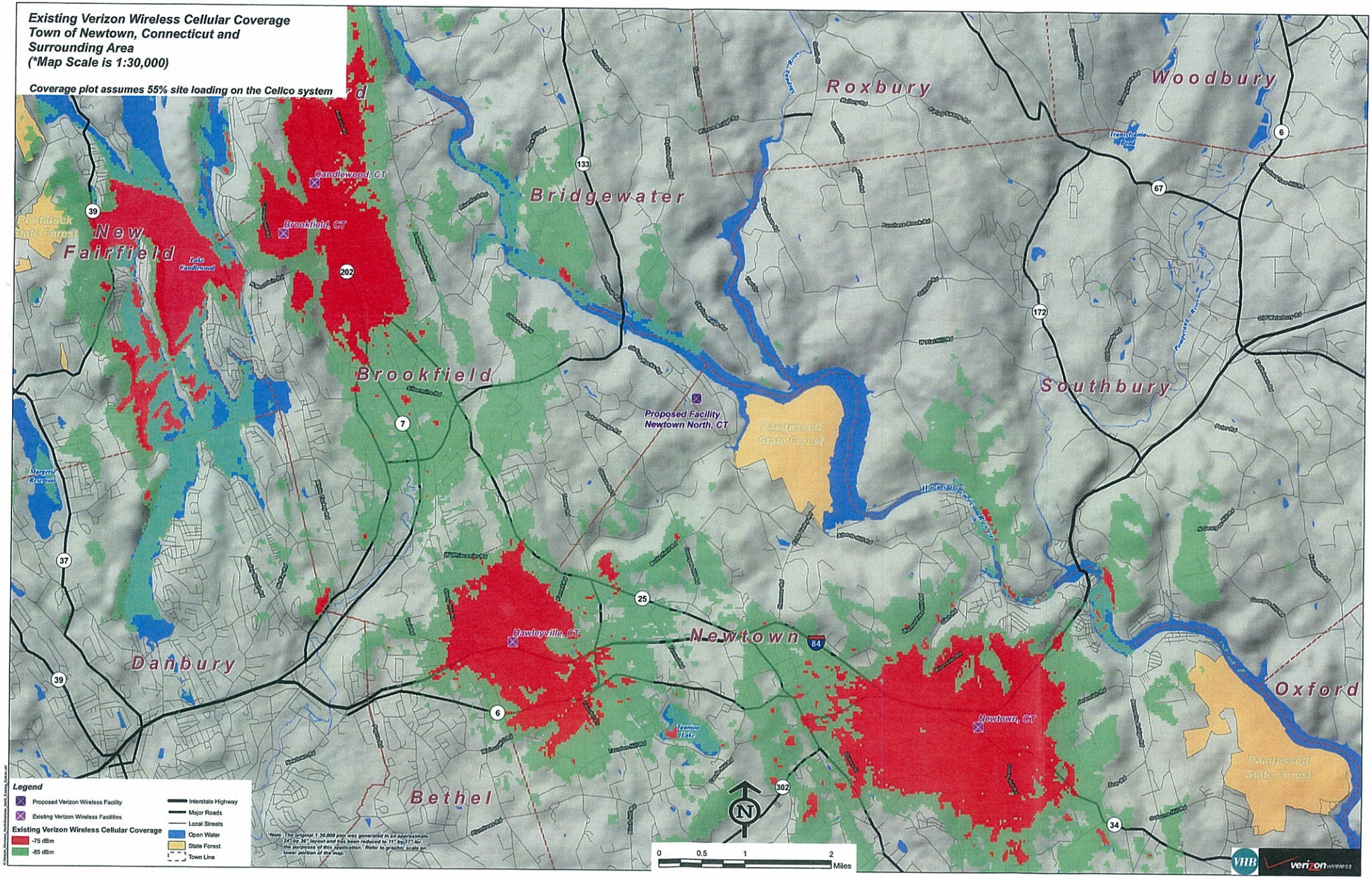
CERTIFICATE OF SERVICE

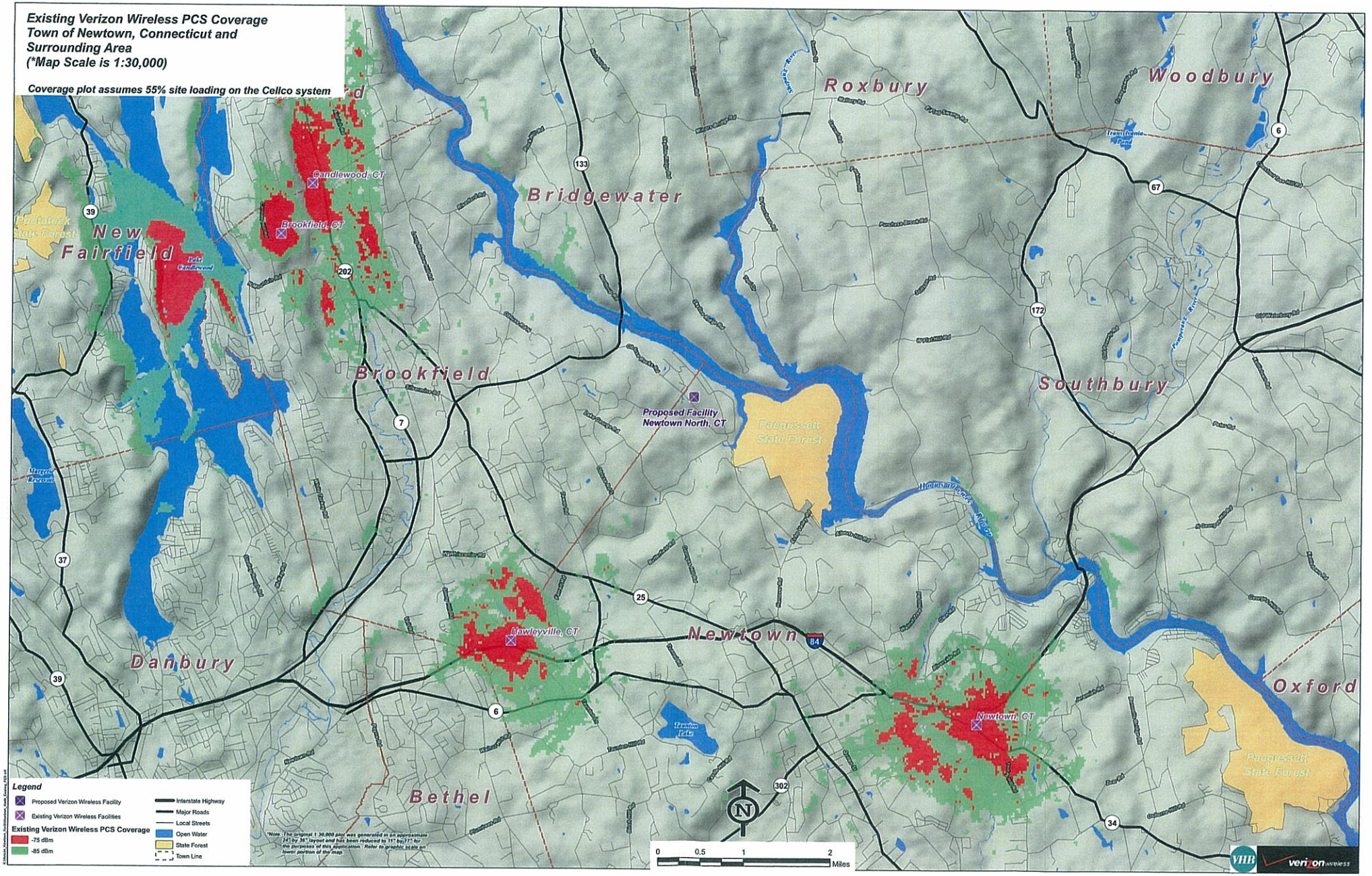
I hereby certify that on the 5th day of May, 2009, a copy of the foregoing was sent, postage prepaid, to:

Christopher B. Fisher Esq.
Cuddy & Feder LLP
445 Hamilton Avenue, 14th Floor
White Plains, NY 10601

AT&T
500 Enterprise Drive
Rocky Hill, CT 06067
Attn: Michele Briggs

Kenneth C. Baldwin


Existing Verizon Wireless Cellular Coverage
Town of Newtown, Connecticut and
Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
Roxbury
Woodbury
Bridgewater
New Fairfield
Candlewood, CT
Brookfield, CT
Brookfield
Proposed Facility
Newtown North, CT
Paugussett State Forest
Southbury
Danbury
Hawleyville, CT
Newtown
Newtown, CT
Oxford
Bethel
Taunton Lake
Lake Candlewood
Pootatuck State Forest
Housatonic River
Pomperaug River
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Existing Verizon Wireless Cellular Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Open Water
State Forest
Town Line
0 0.5 1 2
Miles
VHB
verizon wireless


Existing Verizon Wireless PCS Coverage
Town of Newtown, Connecticut and
Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
Roxbury
Woodbury
Bridgewater
New Fairfield
Candlewood, CT
Brookfield, CT
Brookfield
Proposed Facility
Newtown North, CT
Paugussett State Forest
Southbury
Hawleyville, CT
Newtown
Newtown, CT
Danbury
Bethel
Oxford
Paugussett State Forest
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Existing Verizon Wireless PCS Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Open Water
State Forest
Town Line
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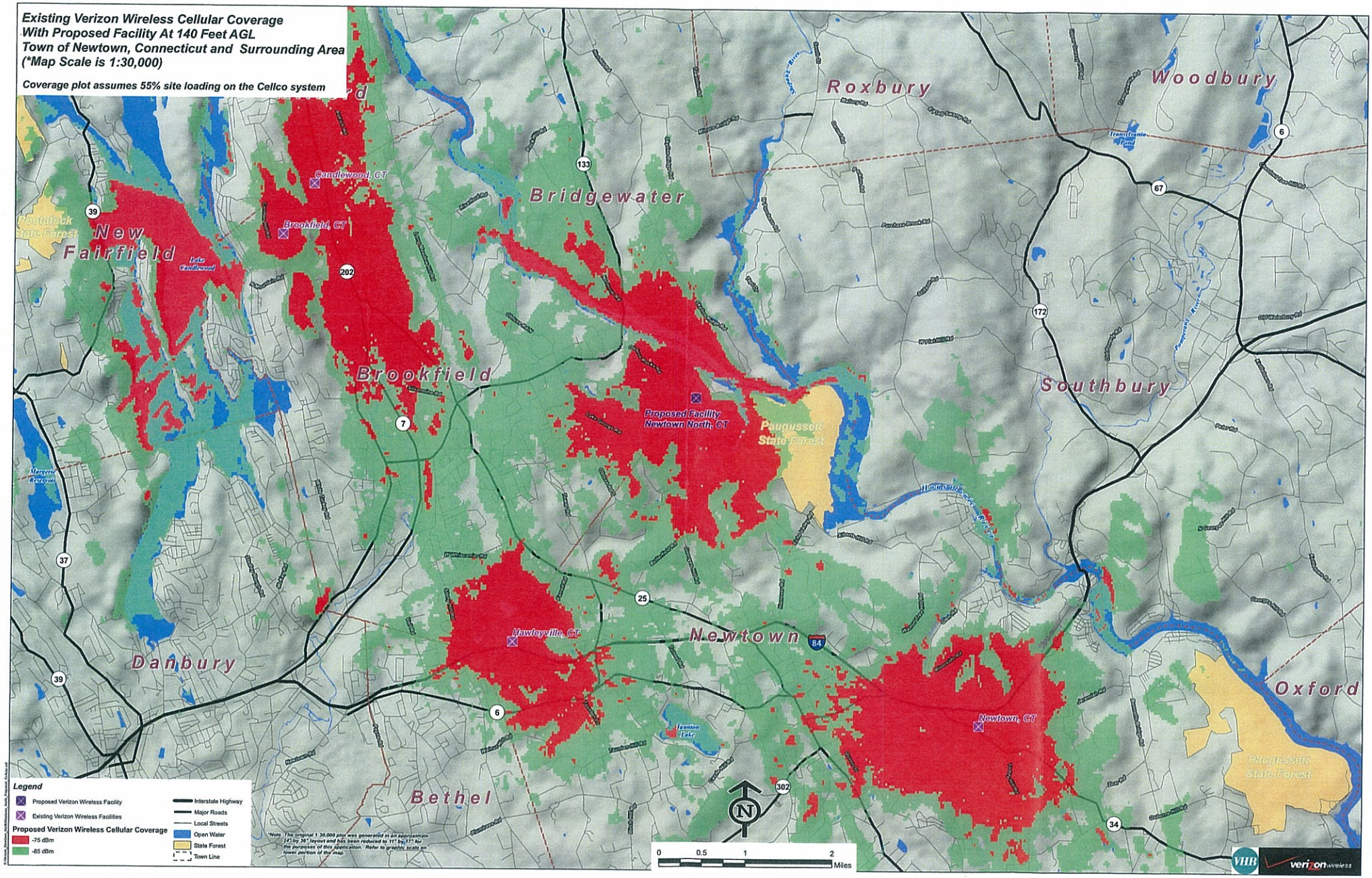
verizon wireless


Existing Verizon Wireless Cellular Coverage
With Proposed Facility At 140 Feet AGL
Town of Newtown, Connecticut and Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
Roxbury
Woodbury
Bridgewater
New Fairfield
Brookfield
Southbury
Danbury
Newtown
Oxford
Bethel
Candlewood, CT
Brookfield, CT
Proposed Facility
Newtown North, CT
Hawleyville, CT
Newtown, CT
Paugussett State Forest
Lake Candlewood
Pootatuck State Forest
Margerie Reservoir
Lake Zoar
Housatonic River
Pequonnock River
Taunton Lake
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Proposed Verizon Wireless Cellular Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Open Water
State Forest
Town Line
*Note: The original 1:30,000 plot was generated in an approximate 11"by 36" layout and has been reduced to 11" by17" for the purposes of this application. Refer to graphic scale on lower portion of the map.
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Miles
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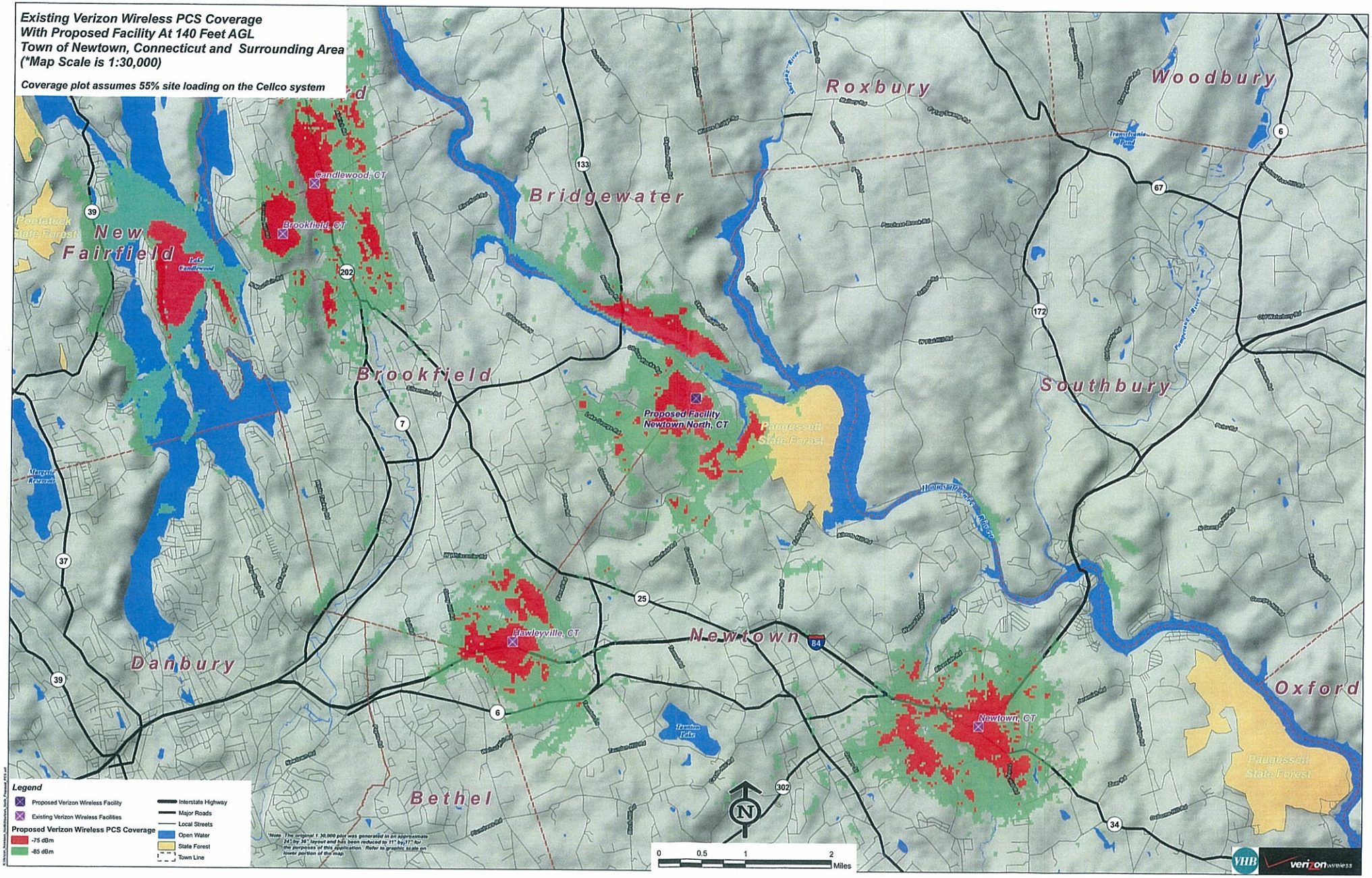
verizon wireless


Existing Verizon Wireless PCS Coverage
With Proposed Facility At 140 Feet AGL
Town of Newtown, Connecticut and Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
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Bridgewater
New Fairfield
Candlewood, CT
Brookfield, CT
Brookfield
Southbury
Proposed Facility
Newtown North, CT
Paugussett State Forest
Hawleyville, CT
Newtown
Danbury
Newtown, CT
Oxford
Bethel
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Proposed Verizon Wireless PCS Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Open Water
State Forest
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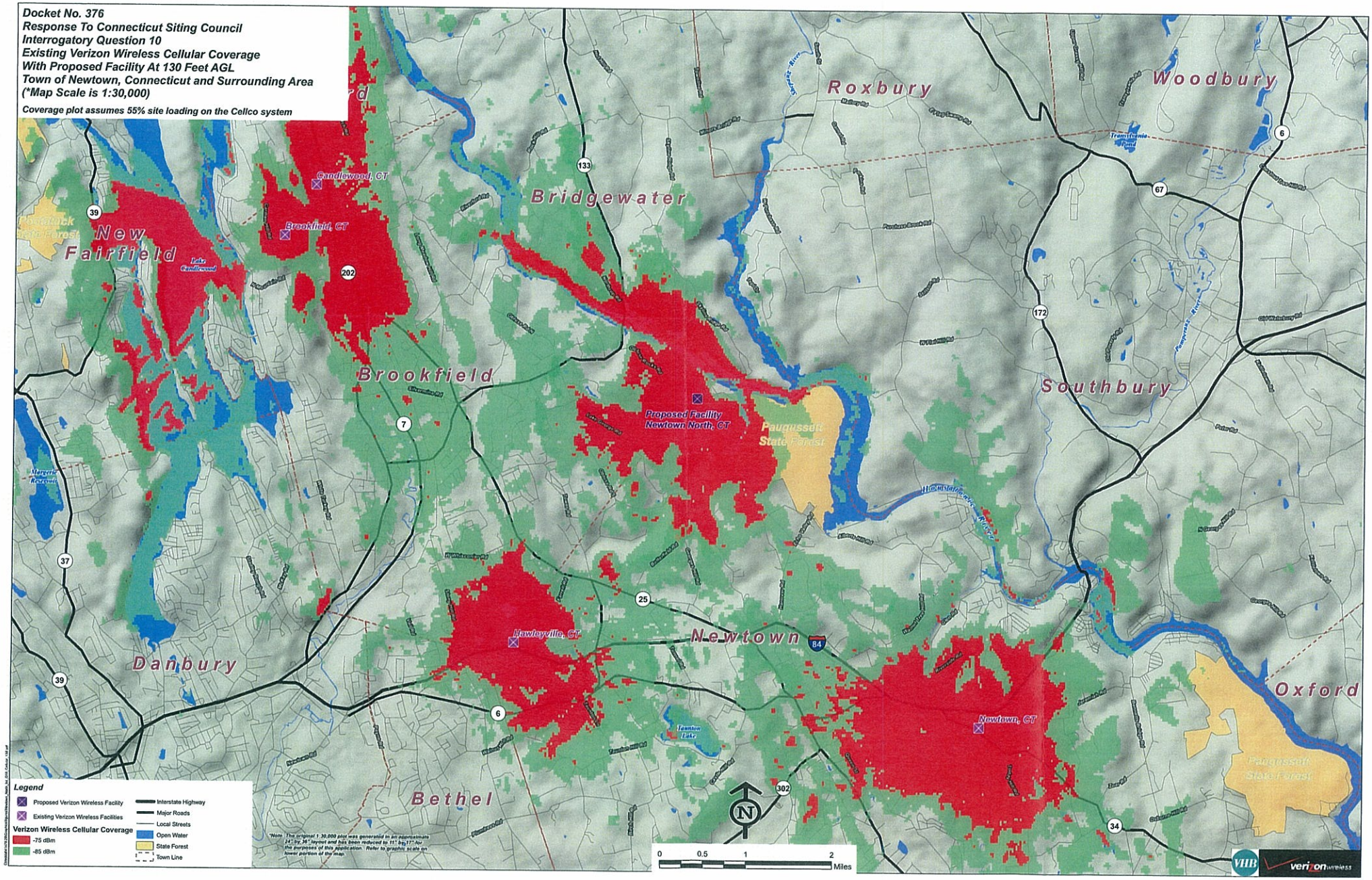
Docket No. 376
Response To Connecticut Siting Council
Interrogatory Question 10
Existing Verizon Wireless Cellular Coverage
With Proposed Facility At 130 Feet AGL
Town of Newtown, Connecticut and Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
Roxbury
Woodbury
Bridgewater
New Fairfield
Brookfield
Southbury
Danbury
Newtown
Oxford
Bethel
Candlewood, CT
Brookfield, CT
Proposed Facility
Newtown North, CT
Hawleyville, CT
Newtown, CT
Paugussett State Forest
Lake Candlewood
Taunton Lake
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Verizon Wireless Cellular Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Open Water
State Forest
Town Line
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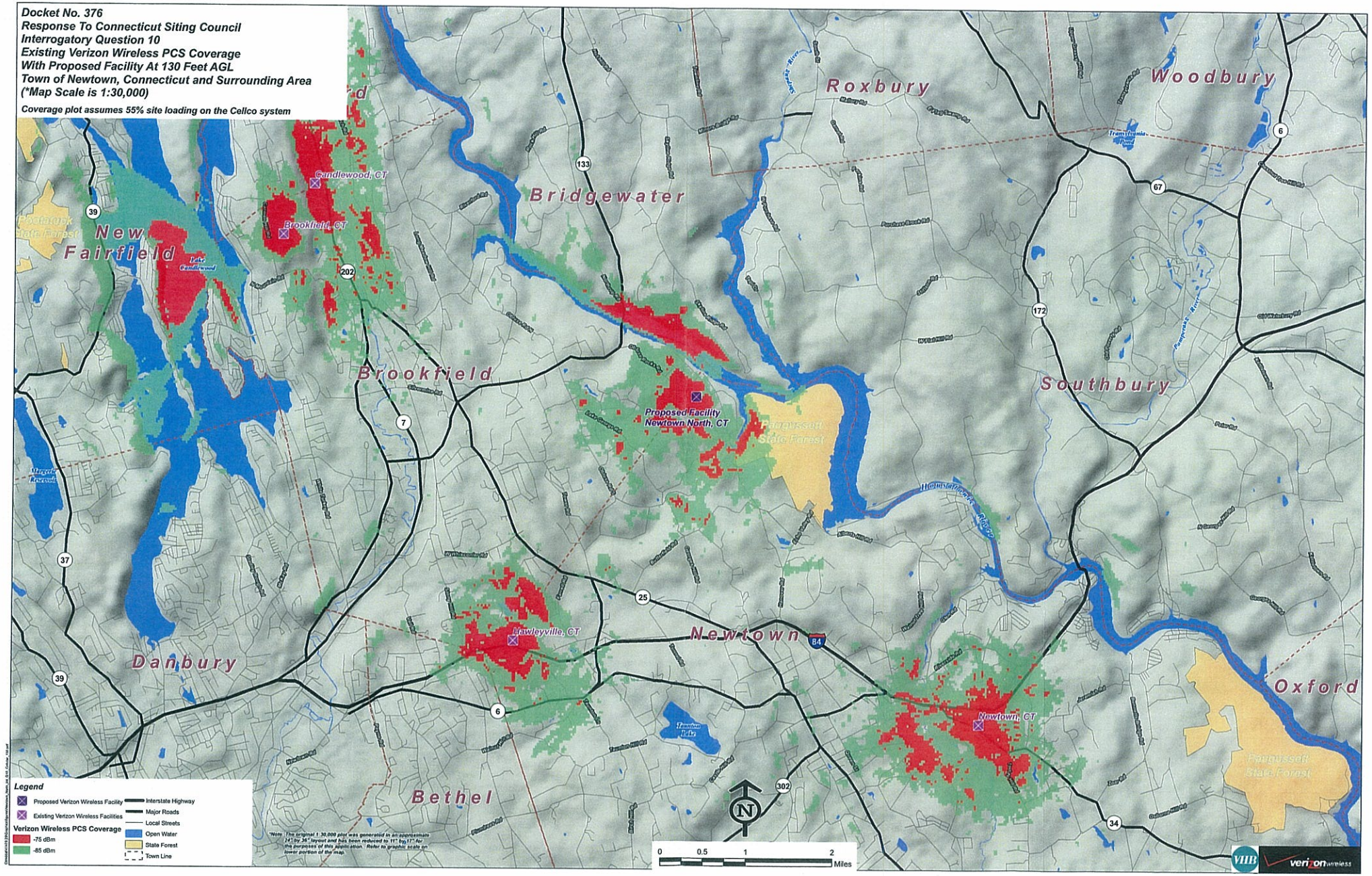
verizonwireless


Docket No. 376
Response To Connecticut Siting Council
Interrogatory Question 10
Existing Verizon Wireless PCS Coverage
With Proposed Facility At 130 Feet AGL
Town of Newtown, Connecticut and Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
Roxbury
Woodbury
Bridgewater
New Fairfield
Brookfield
Southbury
Danbury
Newtown
Oxford
Bethel
Candlewood, CT
Brookfield, CT
Proposed Facility
Newtown North, CT
Hawleyville, CT
Newtown, CT
Lake Candlewood
Pootatuck State Forest
Paugussett State Forest
Transylvania Pond
Taunton Lake
Housatonic River
Pequabuck River
133
67
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202
172
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25
84
302
34
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Verizon Wireless PCS Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Open Water
State Forest
Town Line
*Note: The original 1:30,000 plot was generated in an approximate 24"by 36" layout and has been reduced to 11" by17" for the purposes of this application. Refer to graphic scale on lower portion of the map.
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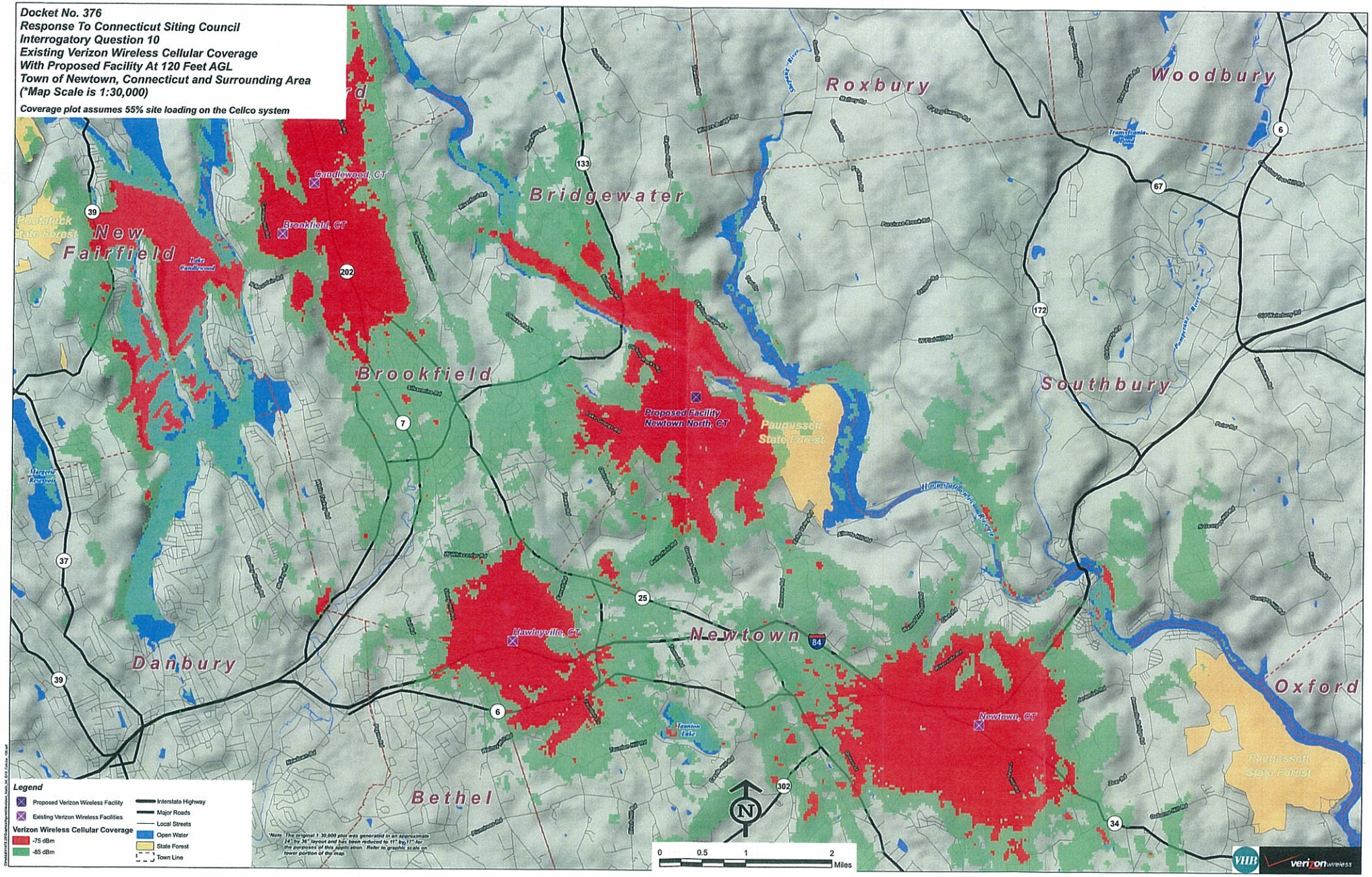
Docket No. 376
Response To Connecticut Siting Council
Interrogatory Question 10
Existing Verizon Wireless Cellular Coverage
With Proposed Facility At 120 Feet AGL
Town of Newtown, Connecticut and Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
Roxbury
Woodbury
Bridgewater
New Fairfield
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Candlewood, CT
Brookfield, CT
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Newtown North, CT
Hawleyville, CT
Newtown, CT
Paugussett State Forest
Lake Candlewood
Pootatuck State Forest
Transylvania Pond
Taunton Lake
Housatonic River
Pequonnock River
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Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Verizon Wireless Cellular Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Open Water
State Forest
Town Line
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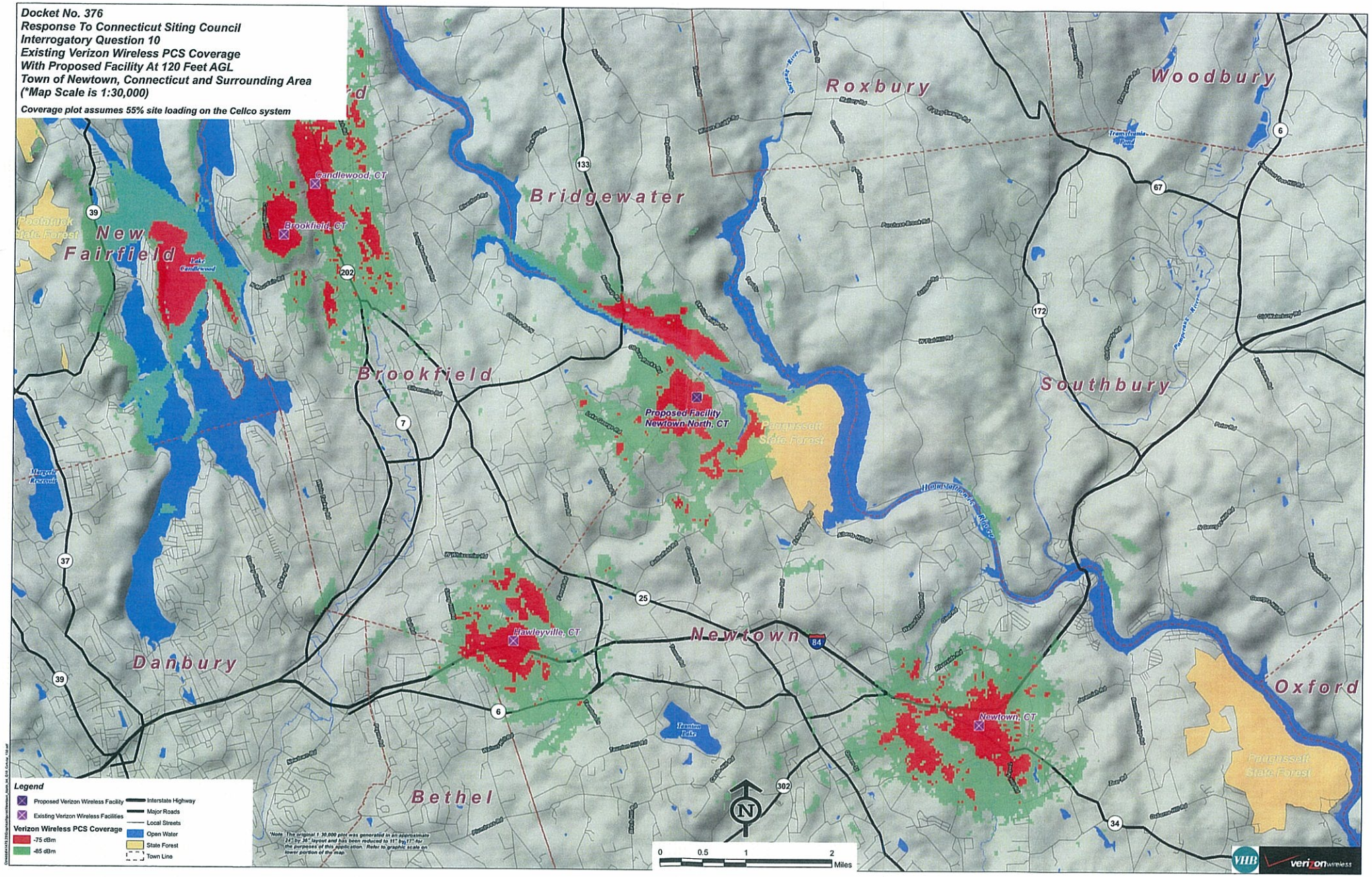
Docket No. 376
Response To Connecticut Siting Council
Interrogatory Question 10
Existing Verizon Wireless PCS Coverage
With Proposed Facility At 120 Feet AGL
Town of Newtown, Connecticut and Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
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Woodbury
Bridgewater
New Fairfield
Brookfield
Southbury
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Newtown
Oxford
Bethel
Candlewood, CT
Brookfield, CT
Proposed Facility
Newtown North, CT
Hawleyville, CT
Newtown, CT
Paugussett State Forest
Pootatuck State Forest
Lake Candlewood
Taunton Lake
Transylvania Pond
Housatonic River
Pomperaug River
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Verizon Wireless PCS Coverage
-75 dBm
-85 dBm
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Town Line
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verizonwireless