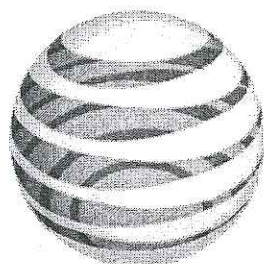


Radio Frequency Analysis Report

Proposed Site 1129

880 Andrew Mountain Road

Naugatuck, CT



at&t

October 4, 2010



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Table of Contents

1. Overview.....2

2. Coverage Objective.....2

3. Conclusion.....5

4. Statement of Certification5

5. Attachments6

List of Tables

Table 1: Area Coverage Statistics3

Table 2: Population Captured Statistics.....3

Table 3: Miles of Road Covered by the Proposed Site4

List of Attachments

- Attachment 1: “Existing Coverage” for the Current AT&T network
- Attachment 2: “Existing & Proposed Coverage” for the AT&T network with Proposed site SR1129

1. Overview

C Squared Systems was retained by New Cingular Wireless PCS, LLC ("AT&T") to investigate the extent of coverage that could be potentially obtained by utilizing/upgrading an existing tower located at 880 Andrew Mountain Road in Naugatuck, CT. AT&T is licensed by the FCC to provide wireless communications services throughout the State of Connecticut including the town of Naugatuck where this proposed facility would be located.

In building out and expanding their network, AT&T prioritizes utilizing existing towers first as a means to improve coverage for its customers. While there is an existing structure (tower) at this location, because it is unable to structurally support AT&T and/or potentially other collocated carriers in the future, they are proposing to replace the tower so that it can sufficiently accommodate these requirements.

In addition to providing a digital voice network, AT&T is currently deploying advanced broadband data services by overlaying a 3rd Generation (3G) network utilizing UMTS technology. This 3G network is used by mobile devices for fast web browsing, media streaming, and other applications that require broadband connections. Depending on the RF environment and available network capacity, UMTS can support much higher data rates and therefore a richer set of applications. The mobile devices that benefit from a 3G network are not limited to handheld phones, but also include devices such as PDAs and laptop air-cards.

This report addresses AT&T's need for an upgraded tower with the top of their antennas at 120 feet above ground level. C Squared Systems has reviewed and conducted this coverage analysis that shows AT&T has a gap in reliable service that exists in the town of Naugatuck, and the surrounding communities. The proposed site on Andrew Mountain Road is needed to help fill in existing coverage gap and provide connectivity to the rest of the AT&T network. Included as attachments in this report are coverage maps detailing the existing network, as well as the expected coverage, from the wireless facilities in this area.

2. Coverage Objective

There is a serious service deficiency in the AT&T wireless communications network in the subject area. A deficiency in coverage is evidenced by the inability to adequately and reliably transmit/receive quality calls and/or utilize data services as detailed above. Seamless reliable coverage provides users with the ability to successfully originate, receive, and maintain quality calls and/or utilize data applications throughout a service area. Overlapping coverage is required for users to be able to move throughout the service area and reliably "hand-off" between cells to maintain uninterrupted calls.

Due to terrain characteristics and the distance between the targeted coverage area and the existing sites, AT&T options are quite limited. AT&T's network requires deployment of antennas throughout the area to be covered, which are connected to receivers and transmitters that operate in a limited geographic area known as a "cell." AT&T's wireless network, including their wireless handsets and devices, operate by transmitting and receiving low power radio frequency signals to and from these cell sites. The signals are transferred to and from ground telephone lines and

routed to their destinations by sophisticated electronic equipment. The size of the area served by each cell site is dependent on several factors, including the number of antennas used, the height at which the antennas are deployed, the topography of the land, vegetative cover and natural or man-made obstructions in the area. As customers move throughout the service area, the transmission from the portable devices is automatically transferred to the closest AT&T facility without interruption in service, provided that there is overlapping coverage from the cells.

Attached are two coverage maps that illustrate the existing coverage conditions as well as how the proposed site will improve coverage for this area. As you can see from the map labeled "Existing Coverage", Rubber Ave and the neighborhoods to the north of this are not sufficiently covered. The map labeled "Existing & Proposed Coverage" show how the proposed site will fit into and improve the existing network in this area. While it does not provide full seamless coverage to Rubber Ave and the neighborhoods of Naugatuck, it does provide much improved service from an existing tower location that can be modified to meet AT&T's needs.

Our testing as well as customer reports received from AT&T for this area of Naugatuck reveal that AT&T's network is not reliable and that there is a service deficiency. We completed a number of tests at varying heights to find the best solution for this area. The current gap in coverage where signal strength is < -82 dBm required for reliable in-vehicle coverage and < -74 dBm for in-building reliability are fairly significant in this area. These gaps in coverage and the benefits the proposed upgraded site that AT&T is planning for can be summarized by the following statistics:

Proposed Site - Area Covered (Square miles)	Current Uncovered Gap	Proposed Incremental Area Covered @ 120' AGL	% of Gap Area Covered @ 120' AGL	% of Coverage Lost for Important Areas @ 100' AGL
> -74 dBm (in-building)	33.1	4.1	12.3%	5.9%
> -82 dBm (in-vehicle)	16.9	6.2	36.8%	3.8%

Table 1: Area Coverage Statistics

Proposed Site - Population Captured (2000 Census)	Current Uncaptured Population	Proposed Incremental Population Captured @ 120' AGL	% of Population Captured @ 120' AGL	% of Population Lost for Important Areas @ 100' AGL
> -74 dBm (in-building)	28,364	4,056	14.3%	10.3%
> -82 dBm (in-vehicle)	10,319	4,537	44.0%	3.6%

Table 2: Population Captured Statistics

In addition to this area square miles and population benefits, the other goal of a proposed AT&T site in this area is to improve coverage to customers as they travel to and from Naugatuck as well as along the neighborhood roads. The following table 3 highlights many of the roads incrementally covered this area from the proposed site.

Incremental Proposed Street Coverage in miles (≥ -82 dBm)		
Street Name	Proposed @ 120' AGL	% Lost @ 100' AGL
South St	0.664	16.6%
Gunntown Rd	0.603	35.1%
Rubber Ave Ext	0.589	6.2%
Field St	0.584	0.0%
Chestnut Tree Hill Rd	0.368	53.9%
Rubber Ave	0.366	1.7%
High St	0.364	0.0%
Ansonia Derby Expy	0.234	0.0%
Spring St	0.218	8.3%
Prospect St	0.175	8.7%
Straits Tpke	0.143	0.0%
Neumann St	0.117	6.3%
N Main St	0.084	0.0%
Meriden Rd	0.067	0.0%
Blackberry Hill Rd	0.062	0.0%
Huntingdon Ave	0.051	66.6%
Willow St	0.047	33.2%
Main St	0.024	0.0%
State Hwy 8	0.015	100.0%
Oak St	0.001	0.0%

Table 3: Miles of Road Covered by the Proposed Site

3. Conclusion

While the existing tower is not ideally located to provide complete seamless coverage, it does provide significant coverage benefits to Naugatuck and the surrounding areas. No other existing structure was identified and available to provide the coverage requirements needed for this area. The location and the minimum height selected were chosen to achieve an optimal balance between meeting coverage objectives, clearing the tree line, minimizing the aesthetic impact to the community, and future collocation.

As depicted in the enclosed plots, the proposed AT&T site, at a height of 120 feet AGL will provide the much needed fill-in coverage for this area, providing an appropriate coverage footprint for the residents of Naugatuck along with effective connectivity to the rest of AT&T existing network.

Without this site in this area, at the height requested, significant gaps in service will exist within the Town of Naugatuck; therefore AT&T anticipates that Naugatuck will look favorably upon the proposed facility.

4. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate.

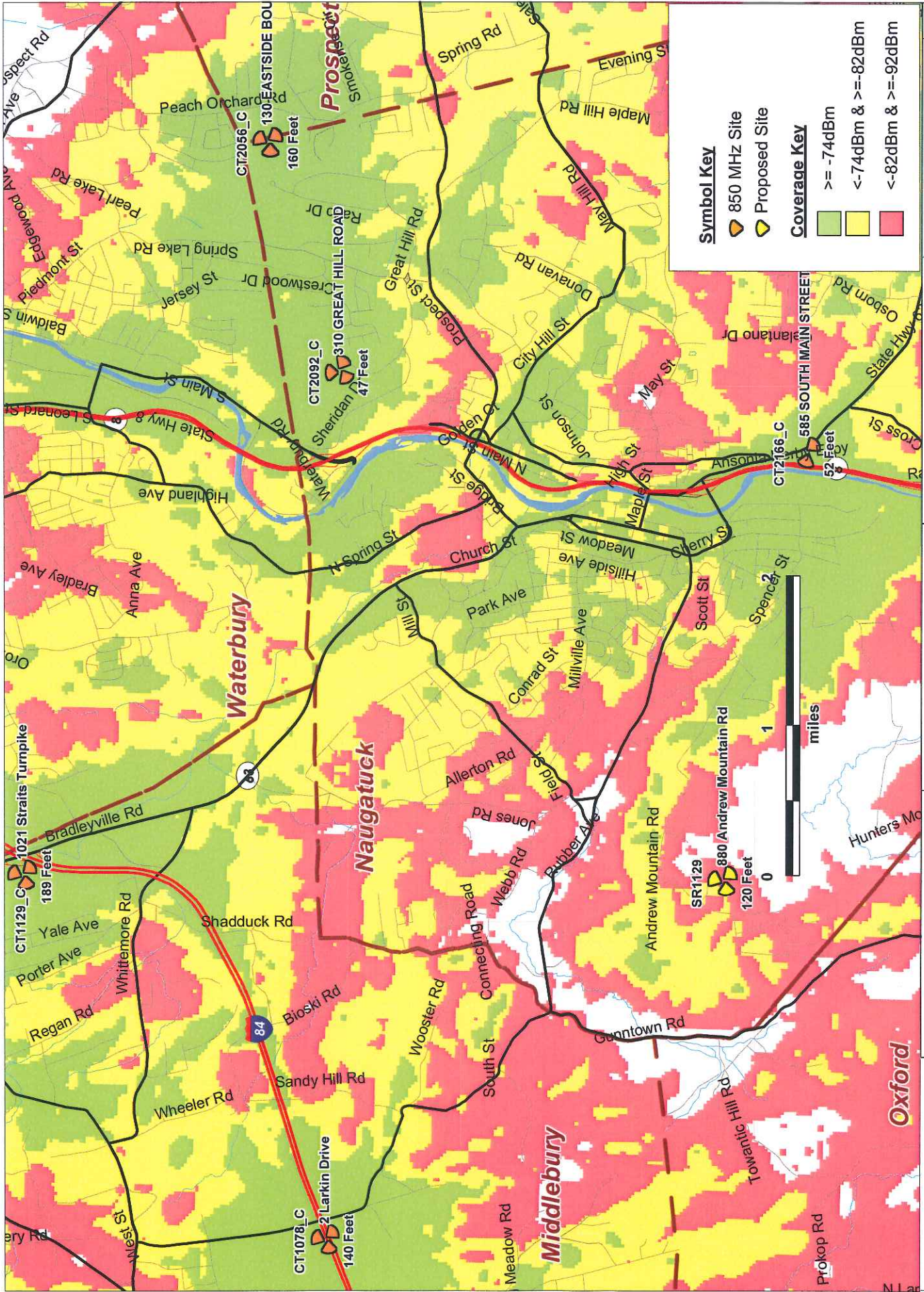
anthony wells

Tony Wells
C Squared Systems, LLC

September 21, 2010

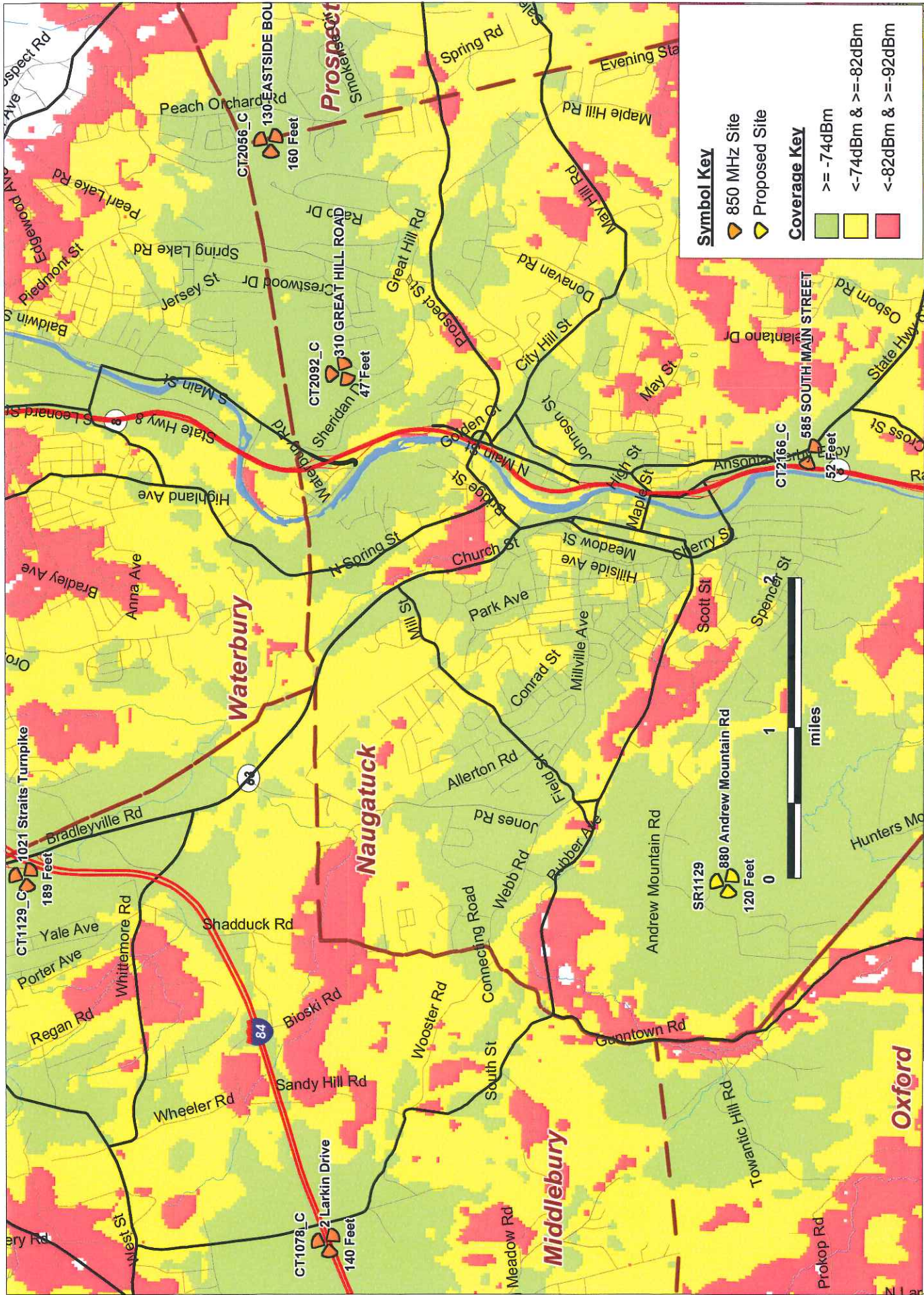
Date

5. Attachments



Existing Coverage	Naugatuck, CT	880 Andrew Mountain Rd Naugatuck, CT 06770	PREPARED ON	REV
			DATE: 09/17/2010	0





Symbol Key

- 850 MHz Site
- Proposed Site

Coverage Key

- >=-74dBm
- <-74dBm & >=-82dBm
- <-82dBm & >=-92dBm

PREPARED ON
 DATE: 09/17/2010



880 Andrew Mountain Rd
 Naugatuck, CT 06770

Naugatuck, CT

Existing & Proposed
 Coverage