TowerCo and AT&T Proposed Wireless Tower Facility Rose Hill Road

Public Information Meeting March 30, 2015

Tonight's Community Meeting

TowerCo and AT&T Presentation - Review of the project, application process and information presented in the Technical Report on file with Branford

Public Q&A after the Presentation





TowerCo and AT&T Project Professionals

Kelly Wade-Bettuchi, AT&T External & Government Affairs
Christopher Fisher, Cuddy & Feder, Counsel
Dan Goulet, C Squared, AT&T's Consulting Engineer
David Weisman, Vertical Development LLC, Real Estate Specialist
David Archambault, Smartlink, Real Estate Specialist
Doug Roberts, Hudson Design Group, Site Civil Engineer
Russ Dasta, Virtual Site Simulations, Visual Consultant

Wireless Infrastructure - Federal, State and Municipal Roles

Wireless Infrastructure

Wireless carriers conduct site searches in areas where there is a need for new infrastructure to reliably serve the public and typically enter into lease agreements with property owners.

State Siting Policies & Municipal Wireless Facility Preferences

TowerCo and AT&T take into consideration Connecticut policies regarding tower siting as set forth in Section 16-50aa of the General Statutes and also review municipal preferences articulated in local zoning regulations or municipal plans of conservation and development as part of infrastructure planning.

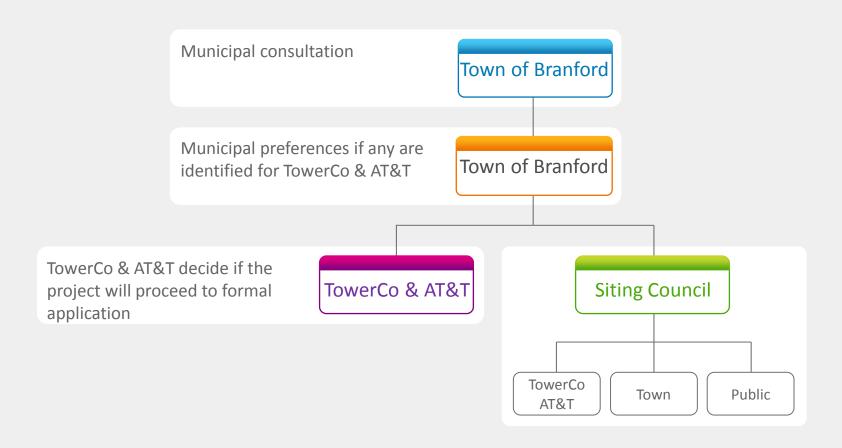
State & Local Zoning Jurisdiction

In the State of Connecticut, municipalities regulate rooftop antenna attachments and the Siting Council regulates towers. The Legislature has determined that the Siting Council, which regulates energy and communications infrastructure throughout the state, should have jurisdiction over communications towers.

Federal Policies & Laws

All State Siting Council and local zoning proceedings are subject to various federal policies and laws regarding wireless infrastructure that are intended to ensure services can be reliably provided to the public by wireless carriers that are licensed by the Federal Communications Commission.

State Tower Siting - Application Process Overview



State of Connecticut – Municipal Consultation Process

Prepare and share a Technical Report with municipal officials

TowerCo & AT&T submitted to Branford and adjacent East Haven on 1/16/15.

2

Meet with municipal officials and obtain any local comments or preferences

90 day time frame for comments and feedback to TowerCo & AT&T

3

Host a public information session if requested

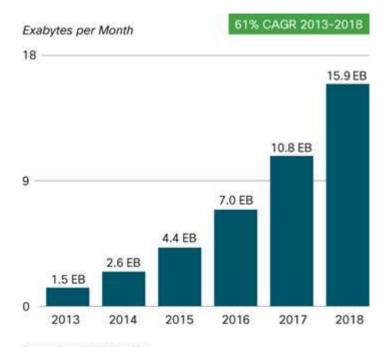
Public information meetings are optional and Branford officials requested TowerCo & AT&T conduct this March 30 public information meeting.

Wireless Demand

Our Network in a Day

In 1914, our network allowed millions of Americans to connect via voice with one another. One hundred years later, our network represents billions of devices connecting hundreds of millions of people – allowing communication that extends far beyond hearing another person's voice.





Source: Cisco VNI Mobile, 2014

Wireless Services

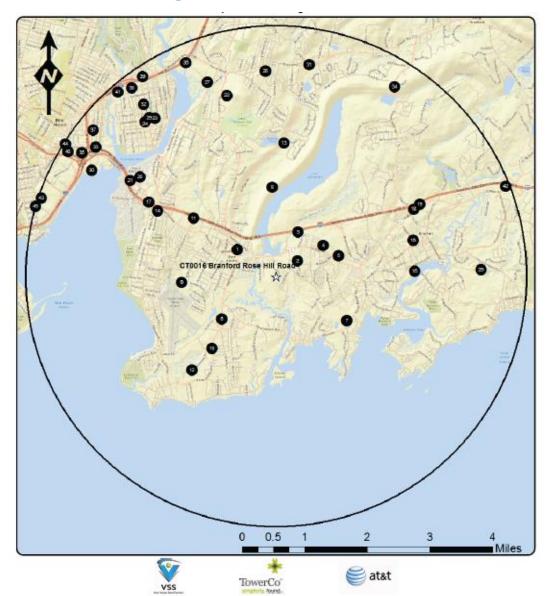
Voice, Text, E911

Data – 4G LTE Services – High Speed Mobile Broadband

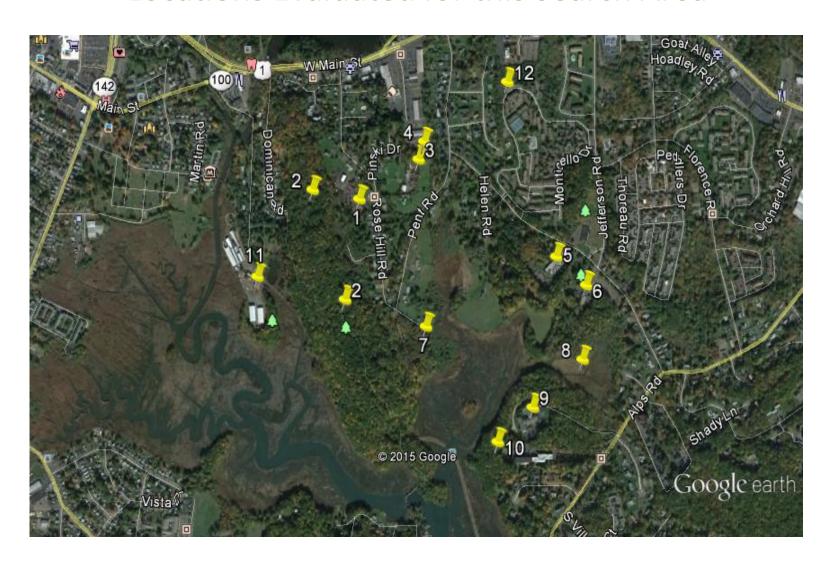
M2M – Healthcare, Energy Transportation and Other Economic Sectors

Public Safety Applications

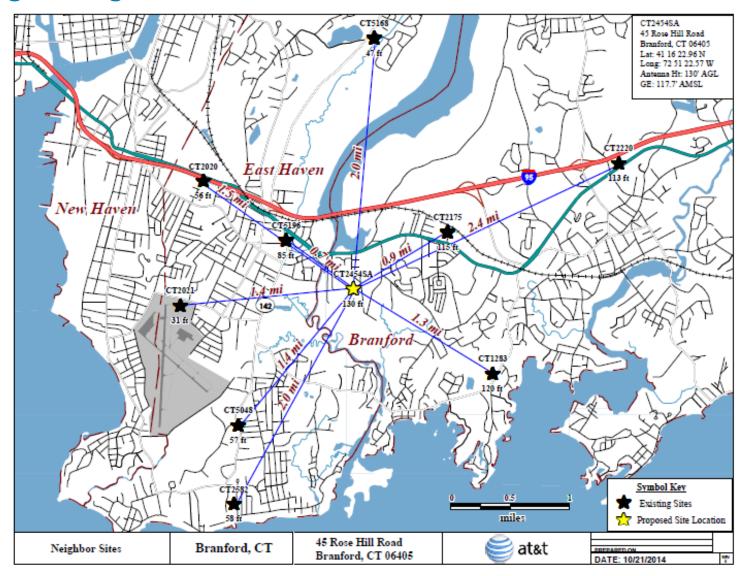
Existing Wireless Site Locations



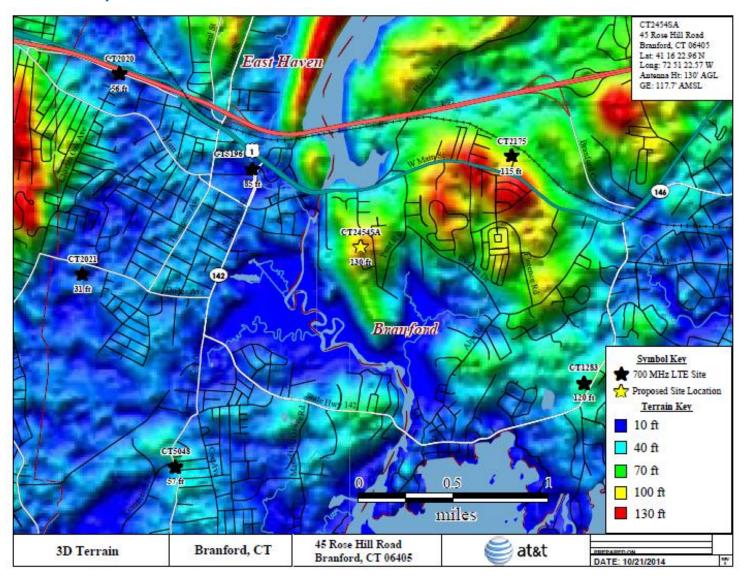
Locations Evaluated for this Search Area



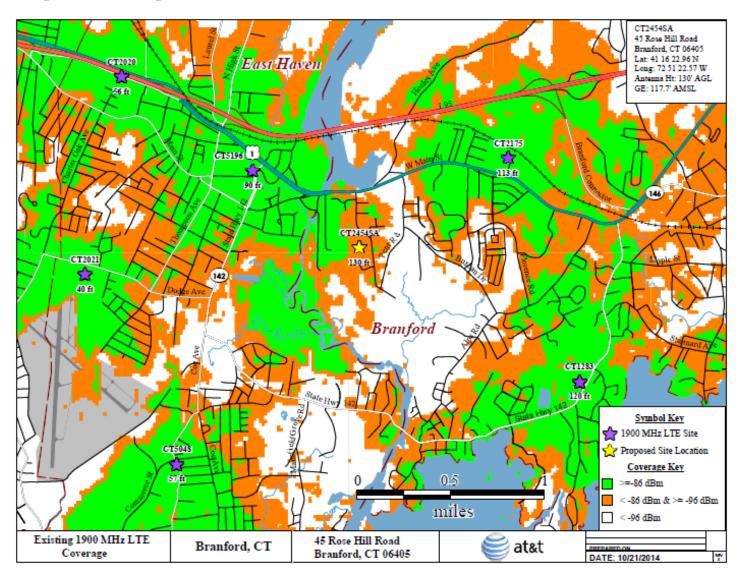
Neighboring Sites



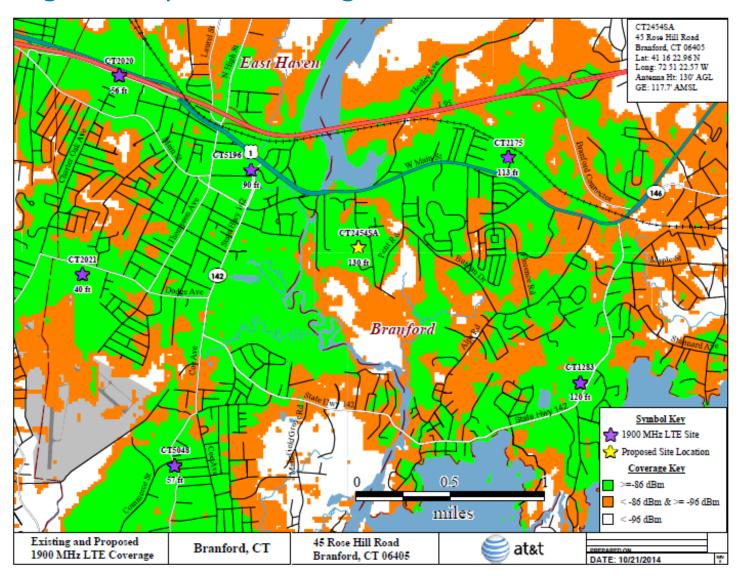
Terrain Map



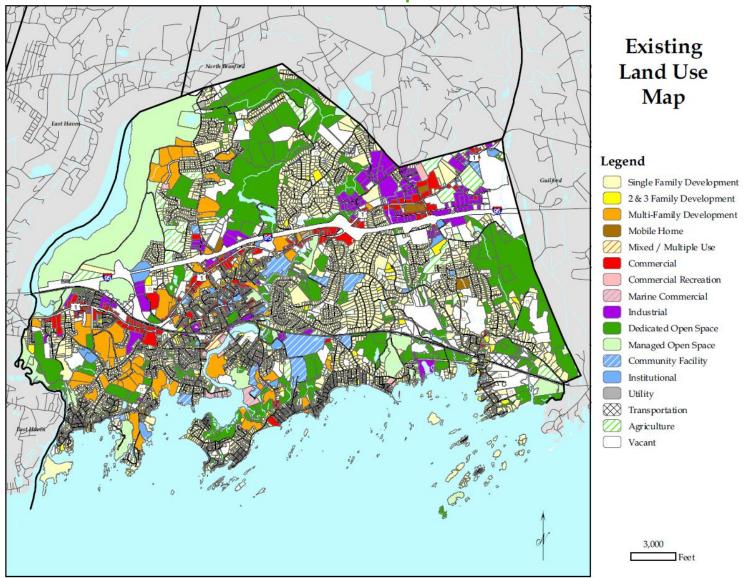
Existing Coverage



Existing and Proposed Coverage



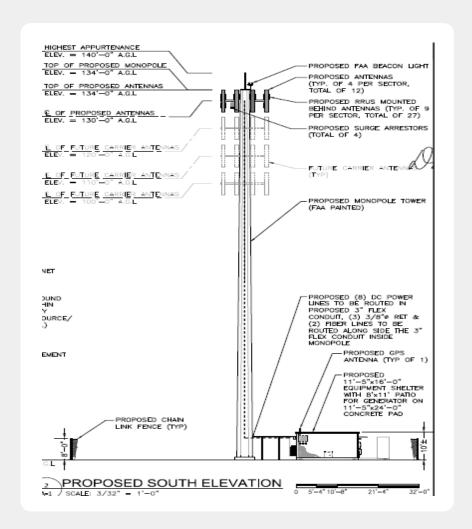
Town of Branford Land Use Map

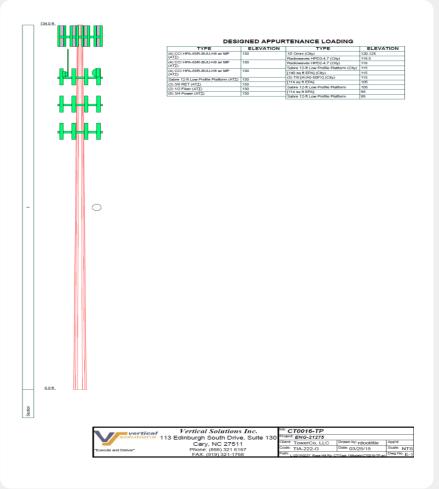


Aerial – Project Site



Tower Elevation





Existing Site Photographs









Existing Site Photographs









Wireless Infrastructure - Safety

Wireless Infrastructure - There are no known adverse health effects from cell sites and no health risks to the general public have been shown.

FCC - You can find the full FCC guidelines for Cellular and PCS Sites at: http://www.fcc.gov/cgb/consumerfacts/rfexposure.html

American Cancer Society- affirms the FCC's conclusion stating "at ground level near typical cellular base stations, the amount of RF energy is thousands of times less than the limits for safe exposure set by the FCC and other regulator authorities". You can find the full ACS report at:

http://www.cancer.org/Cancer/CancerCauses/OtherCarcinogens/AtHome/cellular-phone-towers

World Health Organization — confirms that RF emissions diminish rapidly with distance. The WHO states that studies have not shown a correlation between exposure to RF emissions from base stations and an increased risk of cancer or any adverse long or short-term health effects. You can find the full WHO report at: http://www.who.int/mediacentre/factsheets/fs304/en/index.html

Wireless Safety Analysis – Rose Hill Road

Due to the directional nature of the proposed AT&T antennas, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to the Attachment for the vertical patterns of the proposed AT&T antennas. The calculated results below include a nominal 10 dB off-beam pattern loss to account for the lower relative gain directly below the antennas.

Location	Carrier	Vertical Distance to Antenna (Ft.)	Operating Frequency (MHz)	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Power Density (mw/cm²)	Limit	%МРЕ
	AT&T UMTS	130	880	1	1028	0.0024	0.5867	0.41%
	AT&T UMTS	130	1900	1	1265	0.0030	1.0000	0.30%
C1	AT&T LTE	130	710	2	1254	0.0059	0.4733	1.24%
Ground Level	AT&T LTE	130	880	1	1542	0.0036	0.5867	0.61%
Level	AT&T LTE	130	1900	2	1897	0.0089	1.0000	0.89%
	AT&T LTE	130	2300	1	2179	0.0051	1.0000	0.51%
							Total	3.96%

Summary: Under worst-case assumptions, RF Power Density levels for the proposed AT&T antenna arrays will not exceed 3.96% of the FCC MPE limit for General Public/Uncontrolled Environments.

Property Values

Home buyers want access to wireless phone and broadband technology. Over one-third of Americans do not have landlines and rely solely on wireless.1 The new generation of home buyers relies an even greater percentage on wireless.

According to the National Association of Realtors, affordable high-speed broadband is quickly becoming as important as electric and water service, and the absence of broadband makes a community a less attractive location for new investment and development.2

The National Association of Realtors not only supports broadband infrastructure, but also refers to a study showing that communities that have access to it have 6 percent higher property values.3

1 CDC Wireless Substitution: Early release of estimates from the National Health Interview Survey, July-December 2011, National Center for Health Statistics, p.1, June 2012. 2 National Association of Realtors, Broadband Access-Issue Summary, (2011) 3 Gillett, Sharon, "Measuring the Economic Impact of Broadband Deployment Final Report," National Technical Assistance, Training, Research and Evaluation Project #99-07-13829, p.4, (Feb. 28, 2006)

DFFP



December 1, 2014

Jason Stayer EBI Consulting 11908 Argonne Forest Trl - Unit A Austin, TX 78759 jstayer@ebiconsulting.com

Project: New Telecommunications Tower and Facility at Waste Tech, LLC Located 45 Rose Hill Road in NDDB Determination No.: 201410911

Dear Jason Staver.

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding the area delineated on the map provided for the proposed New Telecommunications Tower and Facility at Waste Tech, LLC Located 45 Rose Hill Rd Branford, Connecticut, I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for one year. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by December 1, 2015.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the vears by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely

Cown m. makay

Dawn M. McKay Environmental Analyst 3

> 79 Elm Street, Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action / Equal Opportunity Employer

SHPO



Department of Economic and Community Development



January 13, 2015

Ms. Amber Courselle **EBI** Consulting 21 B Street Burlington, MA 01803

Subject: Proposed Telecommunications Tower

45 Rose Hill Road Branford, CT TowerCo

Dear Ms. Courselle:

The State Historic Preservation Office is in receipt of the proposal for the abovereferenced project, submitted for review and comment pursuant to the National Historic Preservation Act and in accordance with Federal Communications Commission regulations.

The SHPO concurs with EBI's determination that the proposed undertaking, which includes a new 134' monopole tower within a 3600 sq. ft. lease area at 45 Rose Hill Road, will have no adverse effect to sites listed on or eligible for listing on the National Register of Historic Places, with the following conditions:

- The monopole tower and associated equipment will be designed, painted to match adjacent materials, and installed to be as non-visible as possible,
- if not in use for six consecutive months, the antennae and equipment shall be removed by the telecommunications facility owner. This removal shall occur within 90 days of the end of such six-month period.

The State Historic Preservation Office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act and Section 106 of the National Historic Preservation Act. For further information please contact Todd Levine, Environmental Reviewer, at (860) 256-2759 or todd.levine@ct.gov.

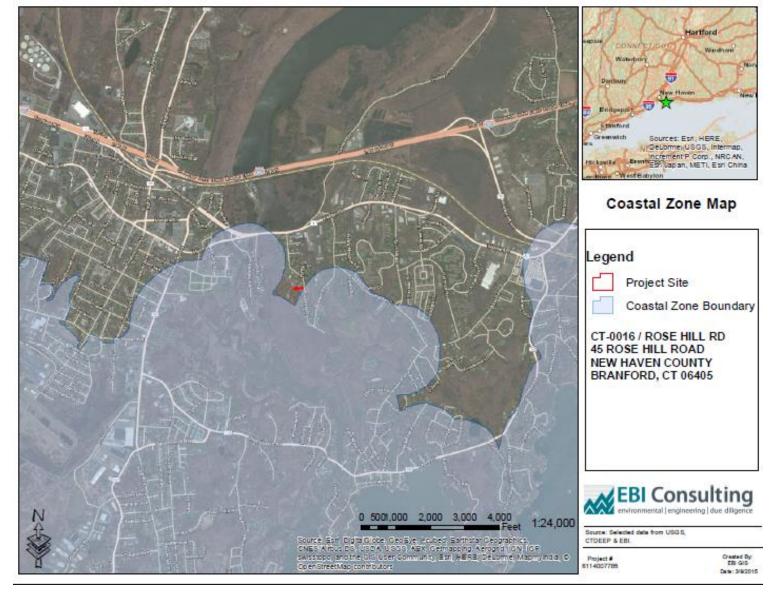
Mary B. Dunne

Deputy State Historic Preservation Officer

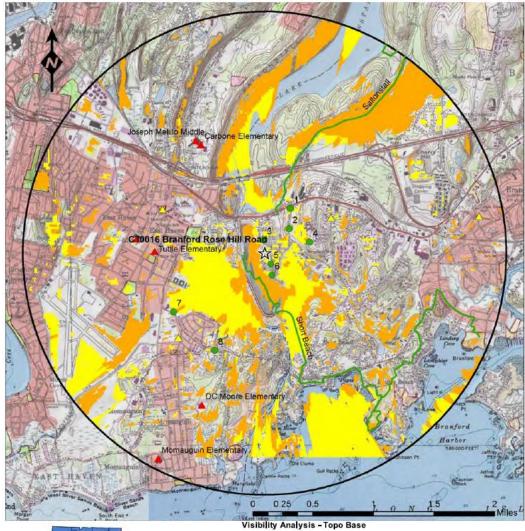
State Historic Preservation Office

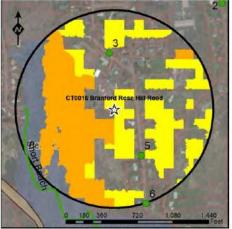
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Coastal Zone Map



Viewshed Map





Visibility Analysis - Aerial View - 1000 ft radius

Legend:

- CT0016 Tower Location
- Picture Location
 - 2 Mile Radius Study Area
 - Predicted Year Round Visibility (leaf on) +/-858 Acres Predicted Seasonal Visibility (leaf off) +/-984 Acres
 - Protected Properties (State, CTDEP, May 2007)
- Protected Properties (Municiapl, CTDEP, May 2007)
- Protected Properties (Municiapl, CTDEP, May 2007) Federal Open Space (CTDEP, May 2007)
- Blue Blazed Trails (CFPA 2014)
 CT Statewide Trail System
- Schools (CTDEP 2008)
 - Licensed Daycare Facilities (CT,Gov DB 2014)

Notes:

- Map compiled by VSS November 2014
 Viewshed analysis completed using ESRI ArcGIS Spatial Analyst
- . Proposed monopole tower height of 134.0' ALG
- Tree Canopy estimated at an average height of 50'
- . Viewing height assumed to be 5' AGL
- . Study area defined as 2 mile radius centered at proposed tower
- · Data sources noted on Documentation page of Viewshed report
- . Visibility analysis maps and representations contained herein depict where proposed facility may potentially be visible based on best data available and site conditions at the time data was collected. This study does not claim to depict all locations where facility may be visible.



Proposed AT&T Wireless Communications Facility CT0016 Branford Rose Hill Road 45 Rose Hill Road Branford, CT 06405







Photolog Map

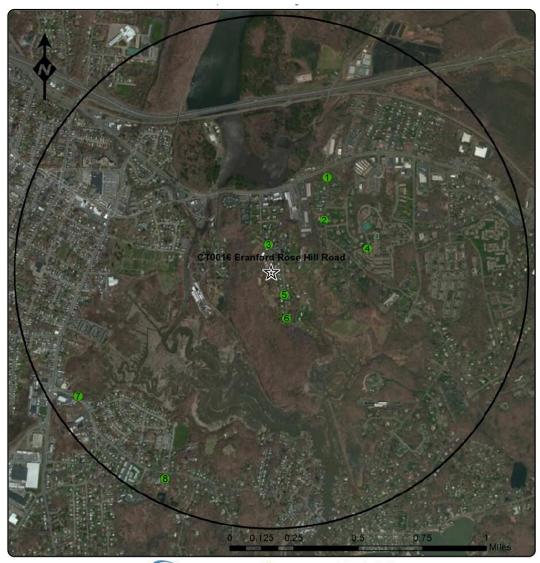










Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
1	Pent Road 2	41.27842 -72.85204	+/- 0.44 Miles	North West	207.65	Year Round

Site: CT0016 Branford Rose Hill Road









Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
1	Pent Road 2	41.27842 -72.85204	+/- 0.44 Miles	North West	207.65	Year Round

Site: CT0016 Branford Rose Hill Road









Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
2	Pent Road 1	41.27601 -72.85225	+/- 0.30 Miles	North West	227.34	Seasonal

Site: CT0016 Branford Rose Hill Road







Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
2	Pent Road 1	41.27601 -72.85225	+/- 0.30 Miles	North West	227.34	Seasonal

Site: CT0016 Branford Rose Hill Road







Rose Hill Road



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
3	Rose Hill Rd	41.27463 -72.85639	+/- 0.11 Miles	North	181.53	Year Round

Site: CT0016 Branford Rose Hill Road







Rose Hill Road



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
3	Rose Hill Rd	41.27463 -72.85639	+/- 0.11 Miles	North	181.53	Year Round

Site: CT0016 Branford Rose Hill Road







Monticello Drive



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
4	Monticello Dr	41.27440 -72.84903	+/- 0.40 Miles	West	251.04	Seasonal

Site: CT0016 Branford Rose Hill Road







Monticello Drive



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
4	Monticello Dr	41.27440 -72.84903	+/- 0.40 Miles	West	251.04	Seasonal

Site: CT0016 Branford Rose Hill Road









Photo #	Location	Gps Coordinates	Distance to site Orientation	Bearing to site	Visibility
5	Rose Hill Rd South	41.27178 -72.85522	+/- 0.11 Miles South West	324.26	Year Round

Site: CT0016 Branford Rose Hill Road









Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
5	Rose Hill Rd South	41.27178 -72.85522	+/- 0.11 Miles	South West	324.26	Year Round

Site: CT0016 Branford Rose Hill Road









Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
6	Rose Hill Rd south	41.27046 -72.85503	+/- 0.19 Miles	South	338.33	Seasonal

Site: CT0016 Branford Rose Hill Road









Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
6	Rose Hill Rd south	41.27046 -72.85503	+/- 0.19 Miles	South	338.33	Seasonal

Site: CT0016 Branford Rose Hill Road









Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
7	Short Beach Rd	41.26602 -72.87066	+/- 0.88 Miles	South East	58.55	Year Round

Site: CT0016 Branford Rose Hill Road









Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
7	Short Beach Rd	41.26602 -72.87066	+/- 0.88 Miles	South East	58.55	Year Round

Site: CT0016 Branford Rose Hill Road





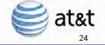




Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
8	Short Beach Road	41.26139 -72.86411	+/- 0.90 Miles	South East	26.97	Year Round

Site: CT0016 Branford Rose Hill Road







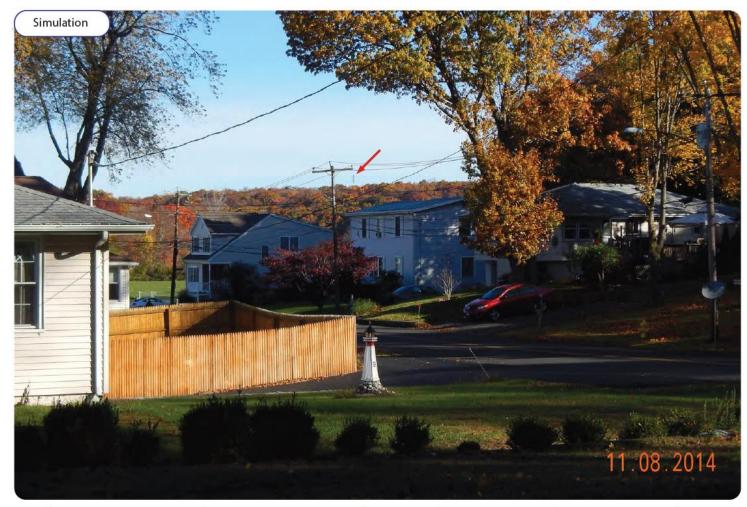
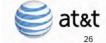


Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
8	Short Beach Road	41.26139 -72.86411	+/- 0.90 Miles	South East	26.97	Year Round

Site: CT0016 Branford Rose Hill Road







Q&A

Thank you.



