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

Municipal consultation

Municipal preferences if any are identified for TowerCo & AT&T

TowerCo & AT&T decide if the project will proceed to formal application

Siting Council

TowerCo AT&T  Town  Public
State of Connecticut – Municipal Consultation Process

1. 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.

- 529,000 Wi-Fi hotspots
- 1.46 Million SQ MI with 4G coverage
- 8.2 Million Wi-Fi connections

56.2 petabytes of data

- 383 Million phone calls placed
- 1.9 Billion text messages sent
- 285 Million web transactions
- 430 Million MB used on social media websites
- 80 Million minutes of streaming audio
- 310 Million minutes of streaming video

Exabytes per Month

61% CAGR 2013-2018

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
Existing Site Photographs
Existing Site Photographs
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.

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

Summary: Under worst-case assumptions, RF Power Density levels for the proposed AT&T antenna arrays will not exceed 3.96%¹ of the FCC MPE limit for General Public/Uncontrolled Environments.
Home buyers want access to wireless phone and broadband technology. Over one-third of Americans do not have landlines and rely solely on wireless. 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.

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.

DEEP

SHPO

January 15, 2015

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

Subject: Proposed Telecommunications Tower
45 Rose Hill Road
Branford, CT
TowerCo

Dear Ms. Courville:

The State Historic Preservation Office is in receipt of the proposal for the above-referenced 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 5000 sq. ft. lease area at 45 Rose Hill Road, will have no adverse effect to sites listed or eligible for listing on the National Register of Historic Places, with the following conditions:

1. The monopole tower and associated equipment will be designed, painted to match adjacent materials, and installed to be as non-visible as possible.
2. If not in use for six consecutive months, the antenna 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.

Sincerely,

Mary B. Jung
Deputy State Historic Preservation Officer

State Historic Preservation Office
One Constitution Plaza | Hartford, CT 06103 | P: (860) 256-2815 | Connecticuthistory.org
An Effort of the Connecticut Historical Commission in partnership with the Department of Energy and Environmental Protection.
Coastal Zone Map
Viewshed Map

Legend:
- CT0016 Tower Location
- Picture Location
- 2 Mile Radius Study Area
- Predicted Year Round Visibility (leaf on) +/-855 Acres
- Predicted Seasonal Visibility (leaf off) +/-844 Acres
- Protected Properties (State, CTDEN, May 2007)
- Protected Properties (Municipal, CTDEN, May 2007)
- Federally Open Space (CTDEN, May 2007)
- Blue Blazed Trails (CFFA 2014)
- CT Statewide Trail System
- Schools (CTDEN 2008)
- Licensed Daycare Facilities (CT, Gov DB 2014)

Notes:
- Map compiled by VSS, November 2014
- Viewshed analyses completed using ESRI ArcGIS Spatial Analyst
- Proposed monopole tower height of 134' AGL
- Tree canopy estimated at an average height of 50'
- Viewing height assumed to be 6' 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.
Photolog Map
## Pent Road 2

**Existing**

<table>
<thead>
<tr>
<th>Photo #</th>
<th>Location</th>
<th>Gps Coordinates</th>
<th>Distance to site</th>
<th>Orientation</th>
<th>Bearing to site</th>
<th>Visibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pent Road 2</td>
<td>41.27842, -72.85204</td>
<td>+/- 0.44 Miles</td>
<td>North West</td>
<td>207.65</td>
<td>Year Round</td>
</tr>
</tbody>
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**Site:** CT0016 Branford Rose Hill Road

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## Pent Road 2

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<tr>
<td>2</td>
<td>Pent Road 1</td>
<td>41.27601, -72.85225</td>
<td>+/- 0.30 Miles</td>
<td>North West</td>
<td>227.34</td>
<td>Seasonal</td>
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<tr>
<td>3</td>
<td>Rose Hill Rd</td>
<td>41.27463, -72.85639</td>
<td>+/- 0.11 Miles</td>
<td>North</td>
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Monticello Drive

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<tr>
<td>4</td>
<td>Monticello Dr</td>
<td>41.27440, -72.84903</td>
<td>+/- 0.40 Miles</td>
<td>West</td>
<td>251.04</td>
<td>Seasonal</td>
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### Rose Hill Road South

#### Existing

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<tbody>
<tr>
<td>5</td>
<td>Rose Hill Rd South</td>
<td>41.27178, -72.85522</td>
<td>+/- 0.11 Miles</td>
<td>South West</td>
<td>324.26</td>
<td>Year Round</td>
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</tbody>
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<tr>
<td>6</td>
<td>Rose Hill Rd south</td>
<td>41.27046, -72.85503</td>
<td>+/- 0.19 Miles</td>
<td>South</td>
<td>338.33</td>
<td>Seasonal</td>
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Short Beach Road

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<tbody>
<tr>
<td>7</td>
<td>Short Beach Rd</td>
<td>41.26502, -72.87066</td>
<td>+/- 0.88 Miles</td>
<td>South East</td>
<td>58.55</td>
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# Short Beach Road

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<tbody>
<tr>
<td>8</td>
<td>Short Beach Road</td>
<td>41.26139, -72.86411</td>
<td>+/- 0.90 Miles</td>
<td>South East</td>
<td>26.97</td>
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*Simulation*

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Q&A
Thank you.