

JESSE A. LANGER

PLEASE REPLY TO: Bridgeport
E-Mail Address: jlanger@cohenandwolf.com

December 14, 2011

VIA FEDERAL EXPRESS and ELECTRONIC MAIL

Ms. Linda L. Roberts
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

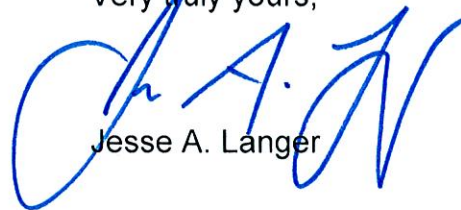
**Re: Docket No. 421 – Application by T-Mobile Northeast LLC
for a Certificate of Environmental Compatibility and Public
Need for a Telecommunications Facility at 158 Edison Road
in the town of Trumbull, Connecticut**

Dear Ms. Roberts:

In connection with the above-referenced docket, I have enclosed an original and fifteen (15) copies of Applicant T-Mobile Northeast LLC's responses to the Connecticut Siting Council's "homework" requests.

Please do not hesitate to contact me with any questions.

Very truly yours,



Jesse A. Langer

JAL:lcc
Enclosures

cc: Service List

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

RE: APPLICATION BY T-MOBILE
NORTHEAST LLC FOR A
CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED
FOR A TELECOMMUNICATIONS FACILITY
AT 158 EDISON ROAD IN THE
TOWN OF TRUMBULL, CONNECTICUT

DOCKET NO. 421

Date: December 14, 2011

**RESPONSES TO THE CONNECTICUT SITING COUNCIL'S "HOMEWORK"
REQUESTS BY THE APPLICANT T-MOBILE NORTHEAST LLC**

The Applicant, T-Mobile Northeast LLC ("T-Mobile"), submits the following responses to the "homework" requests made by the Connecticut Siting Council ("Council") in connection with the above-captioned Application.

1. Clarification of the facility located at 2225 Reservoir Ave shown on the diagram in Application Tab I.
- A1 The site located at 2225 Reservoir Avenue is a CL&P structure (pole number 848), which hosts a Metro PCS facility. T-Mobile maintains a similar facility on another CL&P structure (pole number 845) to the east on Rock Hill Road, identified as existing T-Mobile site CT11080B. T-Mobile maintains another site on a CL&P structure further east at 48 Quail Trail (pole number 838), which is identified as existing T-Mobile site CT11860A. There is also a facility maintained by Cingular Wireless PCS, LLC on yet another CL&P pole (pole number 844) located on Quarry Road. Accordingly, Tab I shows several facilities clustered in this area of Trumbull.**
2. Provide a copy of the coverage modeling for the Police Department, CSP Hotline, EMS, Public Works and Fire Department systems. Please include a narrative describing the models and principal coverage objectives.
- A2 The Town of Trumbull ("Town") has several objectives with respect to its current public safety wireless land mobile radio system ("Public Safety System"). First, the Town needs to replace the existing 100 foot lattice tower ("Existing Tower"), presently located at 158 Edison Road ("Property"). The Existing Tower is approximately 30 years old and has reached the end of its designed service life span. Second, the Town needs to improve the overall coverage of the Public Safety System, particularly**

the gaps in the north, northeast and northwest of the Town as well as beyond the Town's borders. Third, the improved infrastructure is necessary so the Town can address technological changes in the future, such as the deployment of next generation radio frequency systems. Specifically, the Town would like to employ simulcast technology and Point to Point back haul capabilities.

The Town's consultant, Northeastern Communications, Inc. ("Northeastern"), has determined that replacing the Existing Tower with the 150 foot monopole, proposed by T-Mobile ("Facility"), coupled with the subsequent deployment of simulcast technology, would greatly improve the Public Safety System. The following propagation plots, which are appended hereto as Attachment A, show the improvement in coverage: (1) "Composite Inbound;" (2) "Monitor Hill;" (3) Trumbull PD – Antenna 1109 at 100 feet above grade level ("AGL"); (4) Trumbull PD – Antenna 1109 at 150 feet AGL; (5) Trumbull EMS – Antenna DB222 at 80 feet AGL; and (6) Trumbull EMS – Antenna DB222 at 150 feet AGL.

The "Composite Inbound" plot depicts the Town's Police Department "receive" coverage as it exists with the current Public Safety System. The "Monitor Hill" plot depicts the Town's police department "transmit" coverage as it exists with the Town's current Public Safety System.

The "Monitor Hill" plot, combined with the third plot, depicts the Police Department's transmit capabilities at 100 feet AGL, on the Existing Tower, once the Town employs a simulcast system. Similarly, the "Monitor Hill" plot, combined with the fourth plot, depicts the Police Department's transmit capabilities at 150 feet AGL, on the Facility, once the Town employs simulcast technology. There is a noticeable improvement to the Police Department's transmit capabilities, particularly to the north, northeast and northwest of the Property. Please see feasibility studies regarding anticipated back haul capabilities appended hereto as Attachment B.

The fifth and sixth plots demonstrate the additional coverage the Town's EMS would gain should the Council approve the Facility.

The Town's Fire Department operates on 33.56 MHz, 33.86 MHz and 33.74 MHz. It is difficult to depict coverage from these frequencies and such efforts generally yield inaccurate mapping. Accordingly, Northeastern does not recommend propagation predictions for these frequencies. Nevertheless, the Fire Department would like to switch to VHF frequencies in the same range as the Town's EMS and, therefore, the fifth and sixth plots are representative of the coverage for the Fire Department's next generation system. VHF frequencies provide better in-building coverage

than the lower 33 MHz frequencies currently used by the Fire Department, which is why the Fire Department would like to switch frequencies.

3. Provide a diagram depicting the emergency services backhaul dish locations. Please describe each location and provide the dish heights.

A3 The Town does not have any existing backhaul dish locations utilized by the Town's Police Department, EMS or Fire Department.

4. At the Council hearing on December 6, 2011, there was testimony that the backhaul dishes on the proposed tower need to be at a height of 140 feet. The proposed tower profile in the Application indicates the backhaul dishes would be mounted at 147 feet. Can the tower be reduced so that the backhaul dishes are mounted at the 140 foot level, with the top of the tower being at 143 feet?

A4 Northeastern recommends that the backhaul equipment be placed at 147 feet AGL, as depicted in the Application. Additionally, there would need to be sufficient space between T-Mobile's antennas and the Town's equipment to avoid any interference.

5. Please explain why the EiRP values in Application Tab O are different than the values provided in the Application Tab Q, Graiff RF report, Table 2.

A5 The difference in the EiRP values used in the Graiff RF Report and the Application stem from the following variables used in the calculations: the number of channels; the height of the antennas assumed in the calculations and the values associated with the cabling. Overall, the difference amounts to approximately 7 watts – a fraction of a dB – which is a negligible.

6. Please describe the balloon fly that occurred on December 6, 2011?

A6 On December 6, 2011, Vanasse Hangen Brustlin, INC ("VHB") tethered two weather balloons at heights of 153 feet AGL and 174 feet AGL, respectively, from 8:00 a.m. to 4:00 p.m. VHB had to move the location of the balloon float approximately 43 linear feet to the south of the proposed Facility's location to avoid any potential contact with the existing communications tower. The balloon float location was approximately 3 feet lower in elevation than the proposed Facility location. An approximately 5-foot diameter yellow and blue weather balloon was tethered at 153 feet AGL to represent the top of the proposed monopole structure, and an approximate 4-foot diameter red balloon was tethered at 174 feet AGL to represent the top of the Town's emergency communications antenna array. The weather conditions were mixed, with a low cloud ceiling that reduced visibility to about 0.25 miles. While parts of the day were relatively calm, variable wind speeds averaged in the 6 to 12 mile per hour range, which occasionally

pushed the balloons off to the side at angles below the desired heights. VHB estimates that the balloons were blown down sporadically to heights approximately 20 to 25 feet less than the height proposed in the Application during the strongest wind gusts, with the most severe angles.

Respectfully submitted,

T-MOBILE NORTHEAST LLC


By: 

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jlanger@cohenandwolf.com

CERTIFICATE OF SERVICE

I hereby certify that on this day a copy of the foregoing was delivered by Electronic Mail and First Class U.S. Mail, postage prepaid, to all parties and interveners of record, as follows:

Keith R. Ainsworth, Esq.
Evans Feldman & Ainsworth, L.L.C.
261 Bradley Street
P.O. Box 1694
New Haven, CT 06507-1694
(**Via Email:** krainsworth@snet.net)



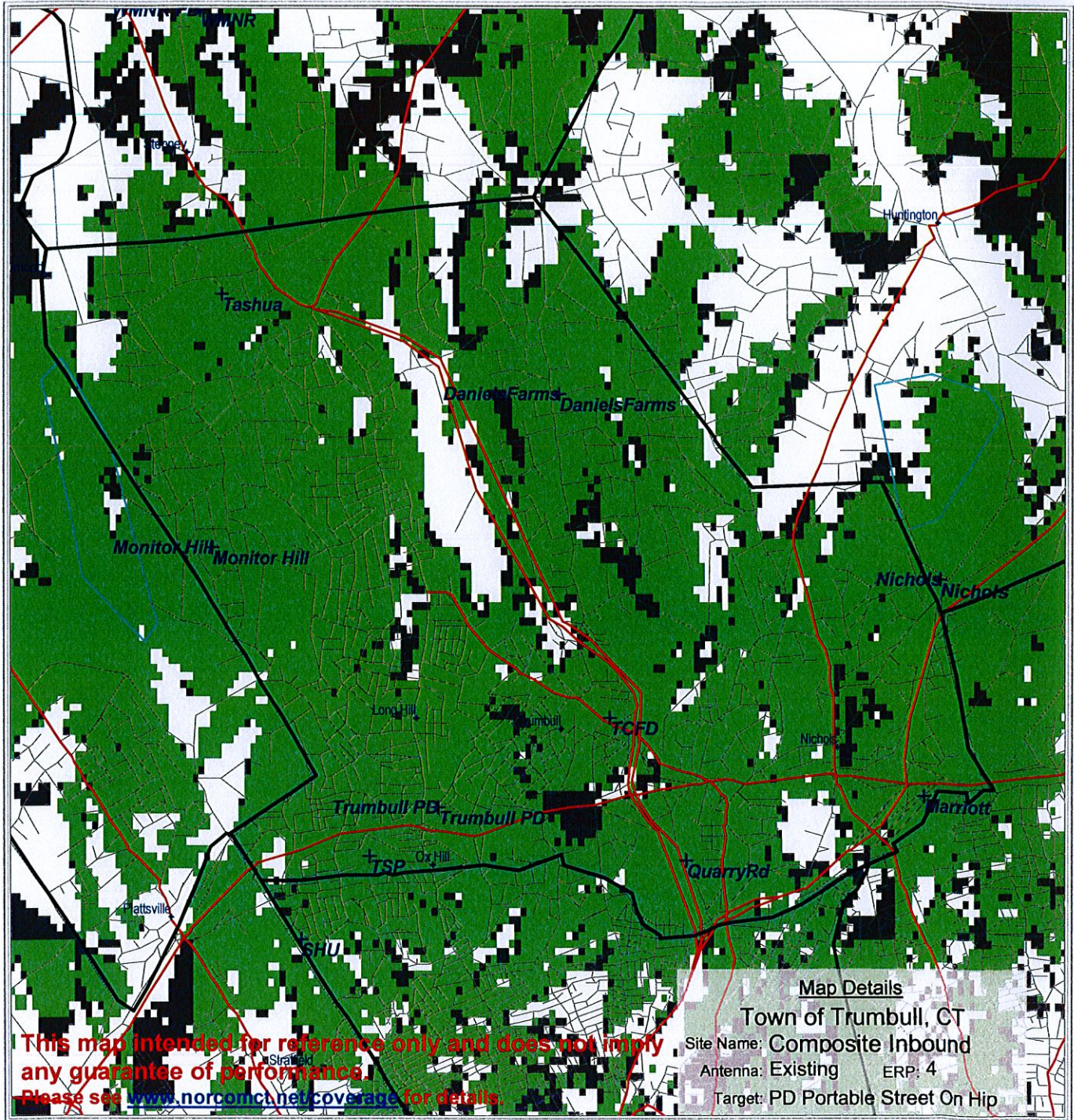
Jesse A. Langer

ATTACHMENT A

NORTHEASTERN Communications, Inc.

7 Great Hill Road
Naugatuck, CT 06770

(203) 575-9008 • Fax (203) 753-1739
<http://www.norcomct.com>



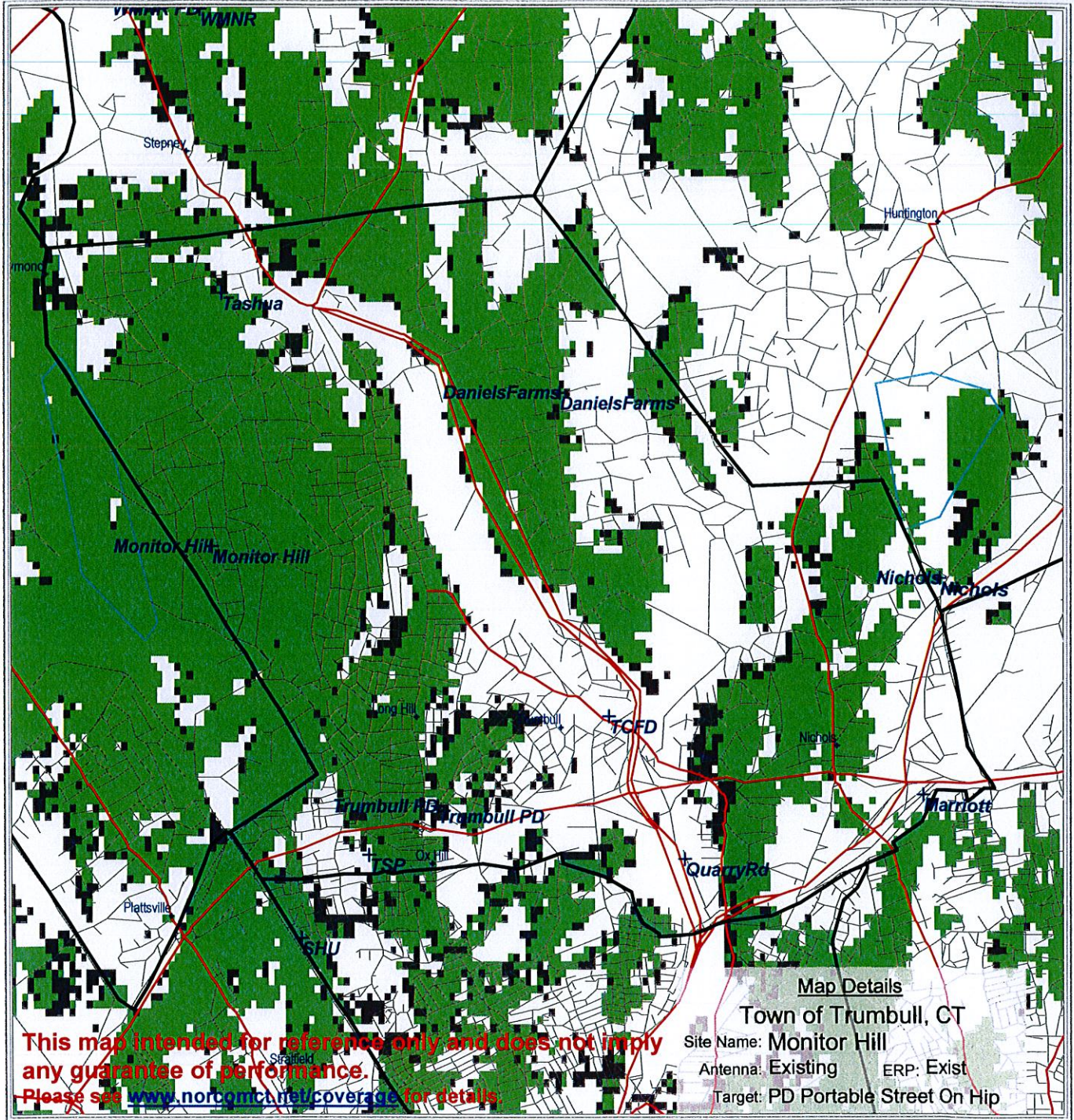
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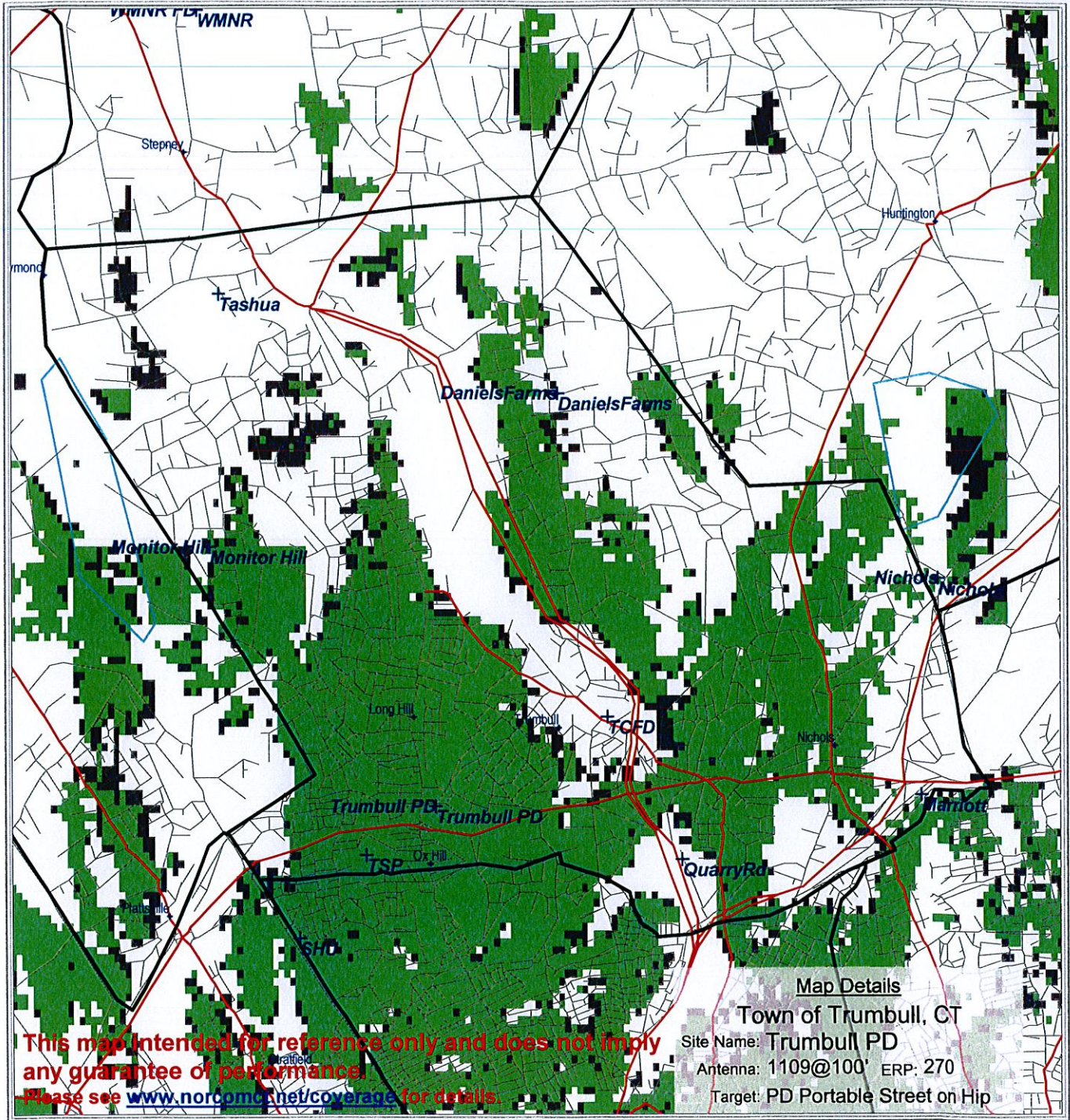
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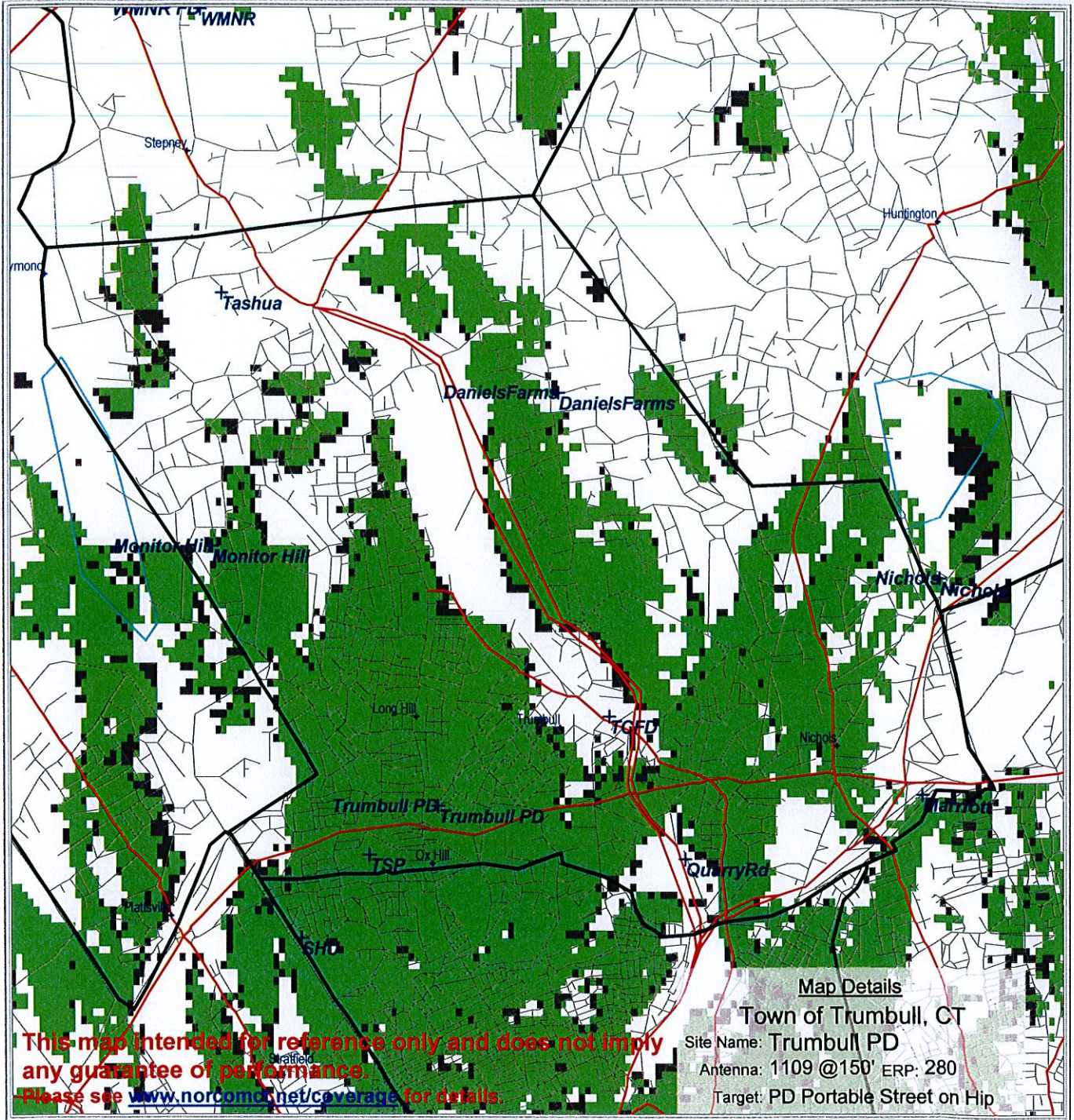
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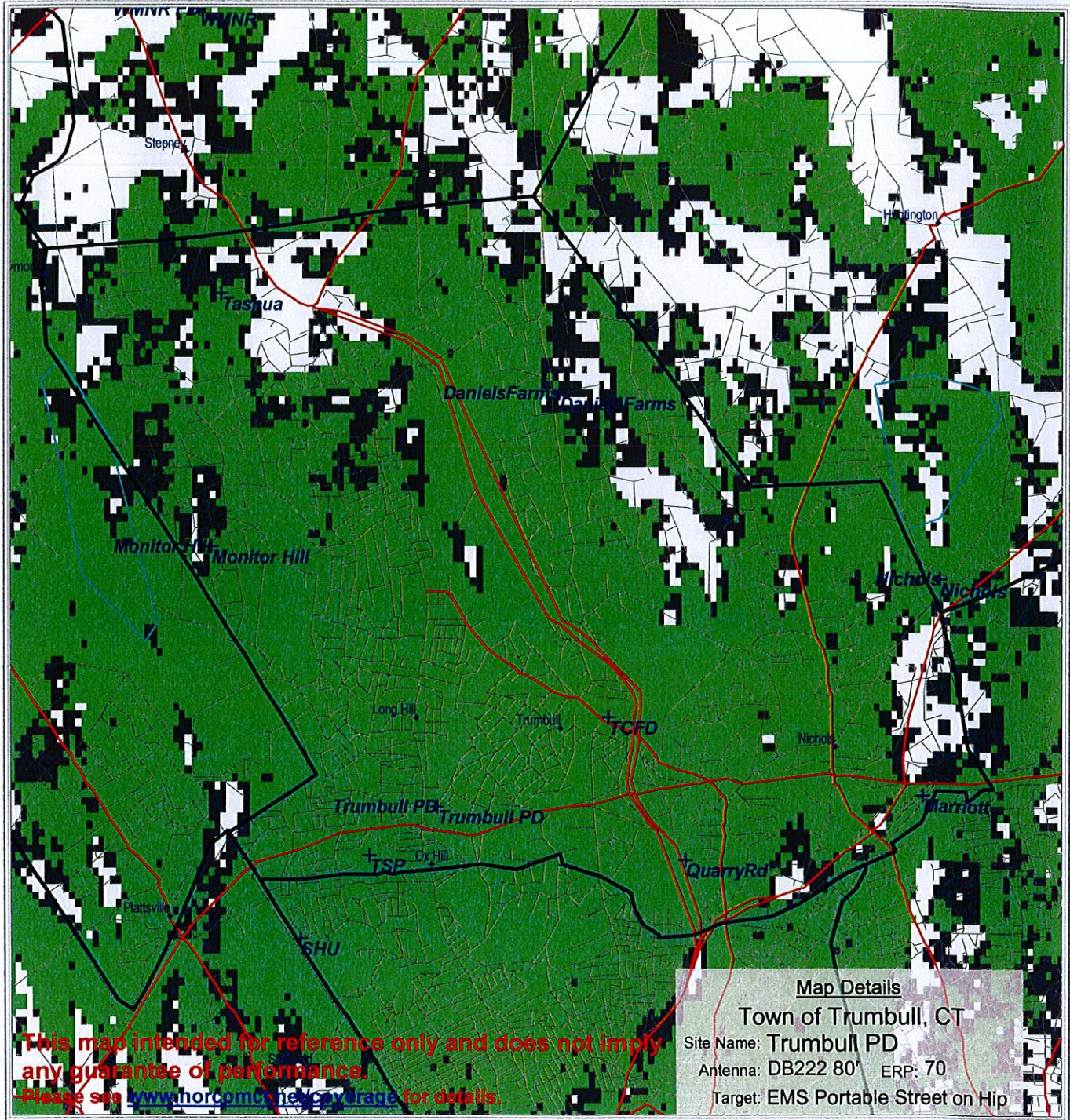
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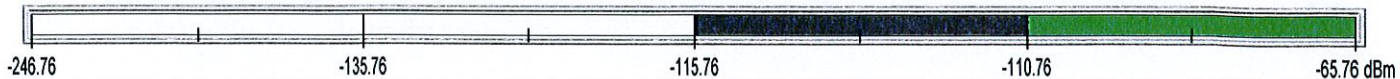
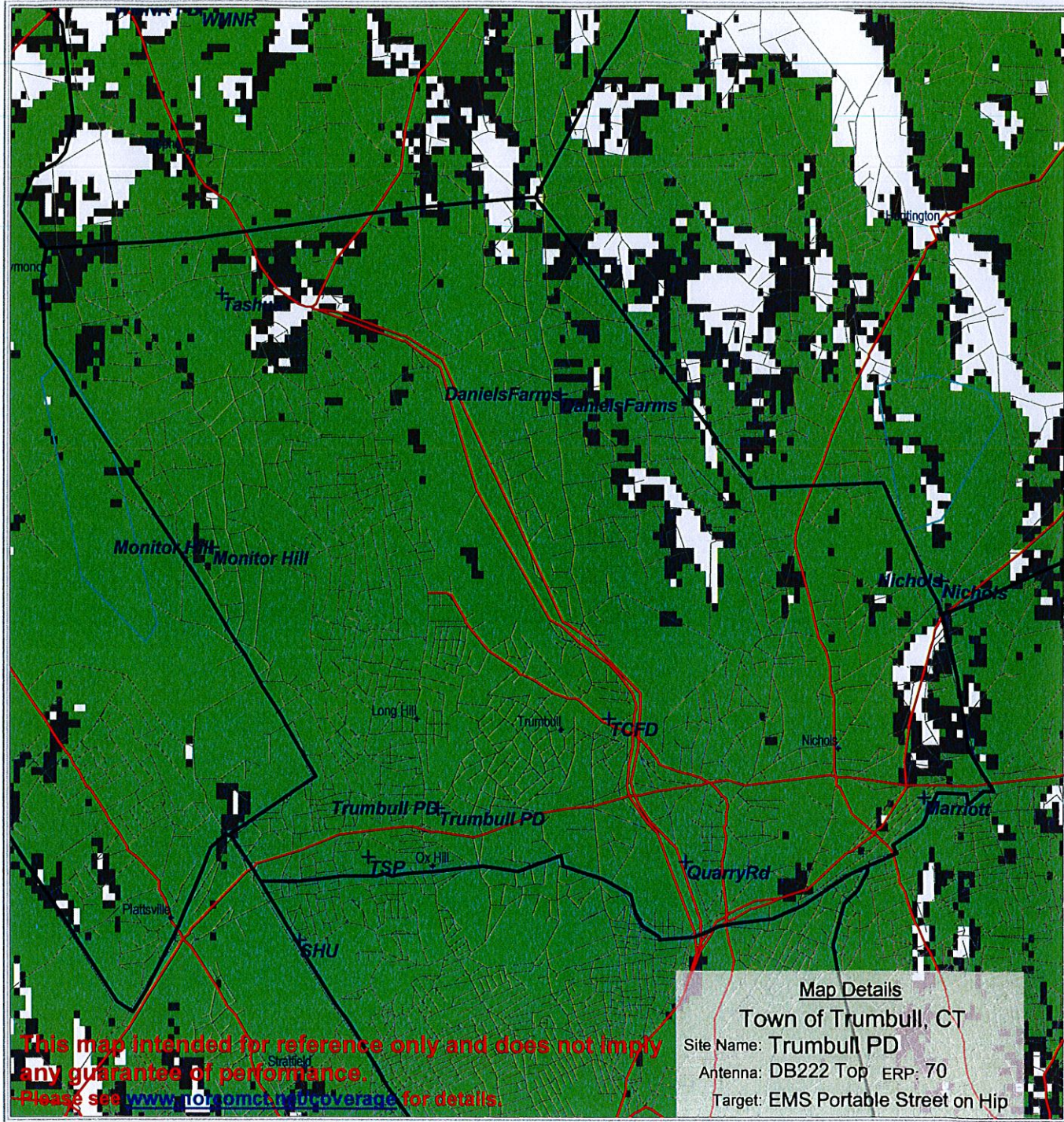
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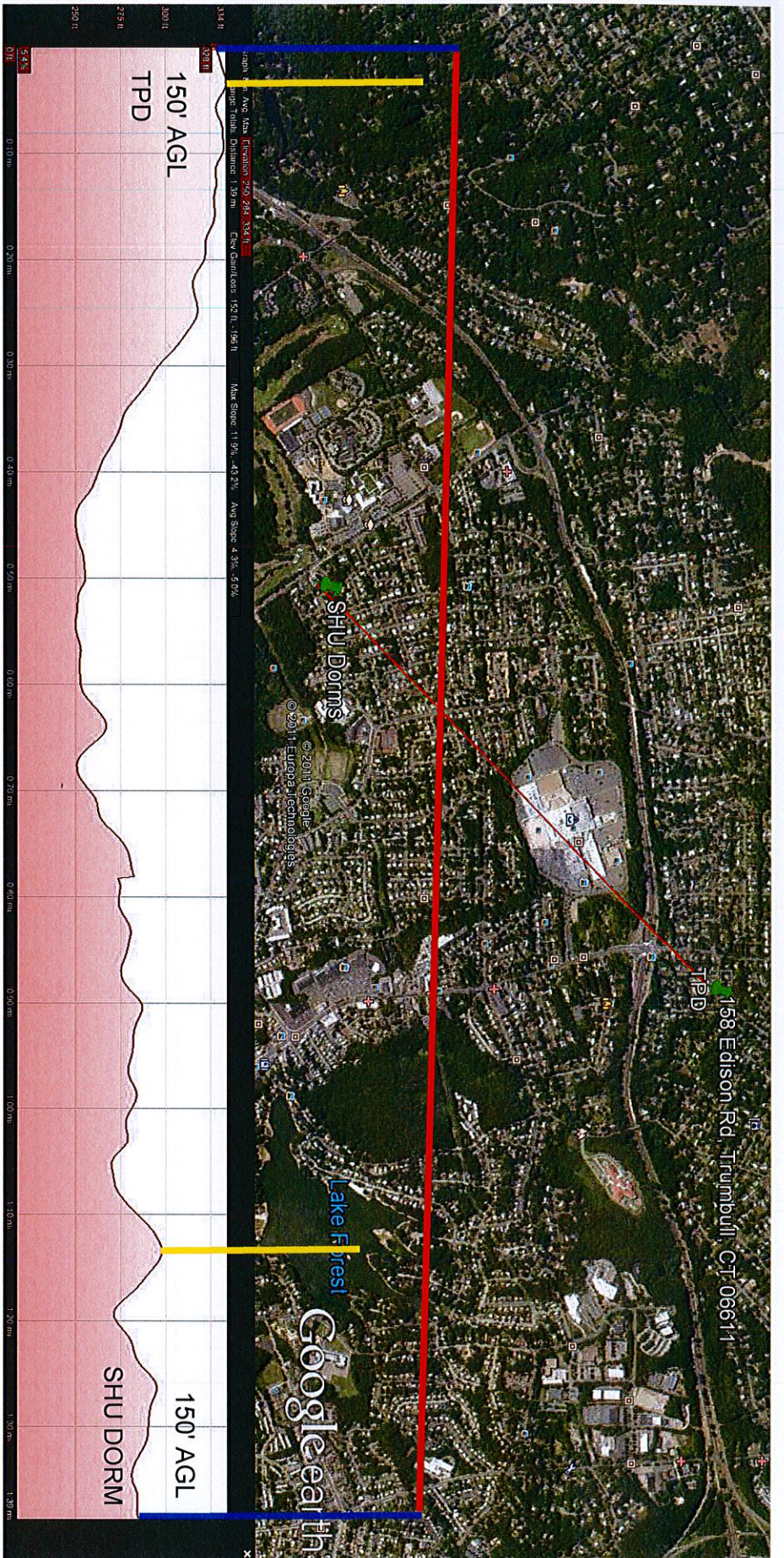
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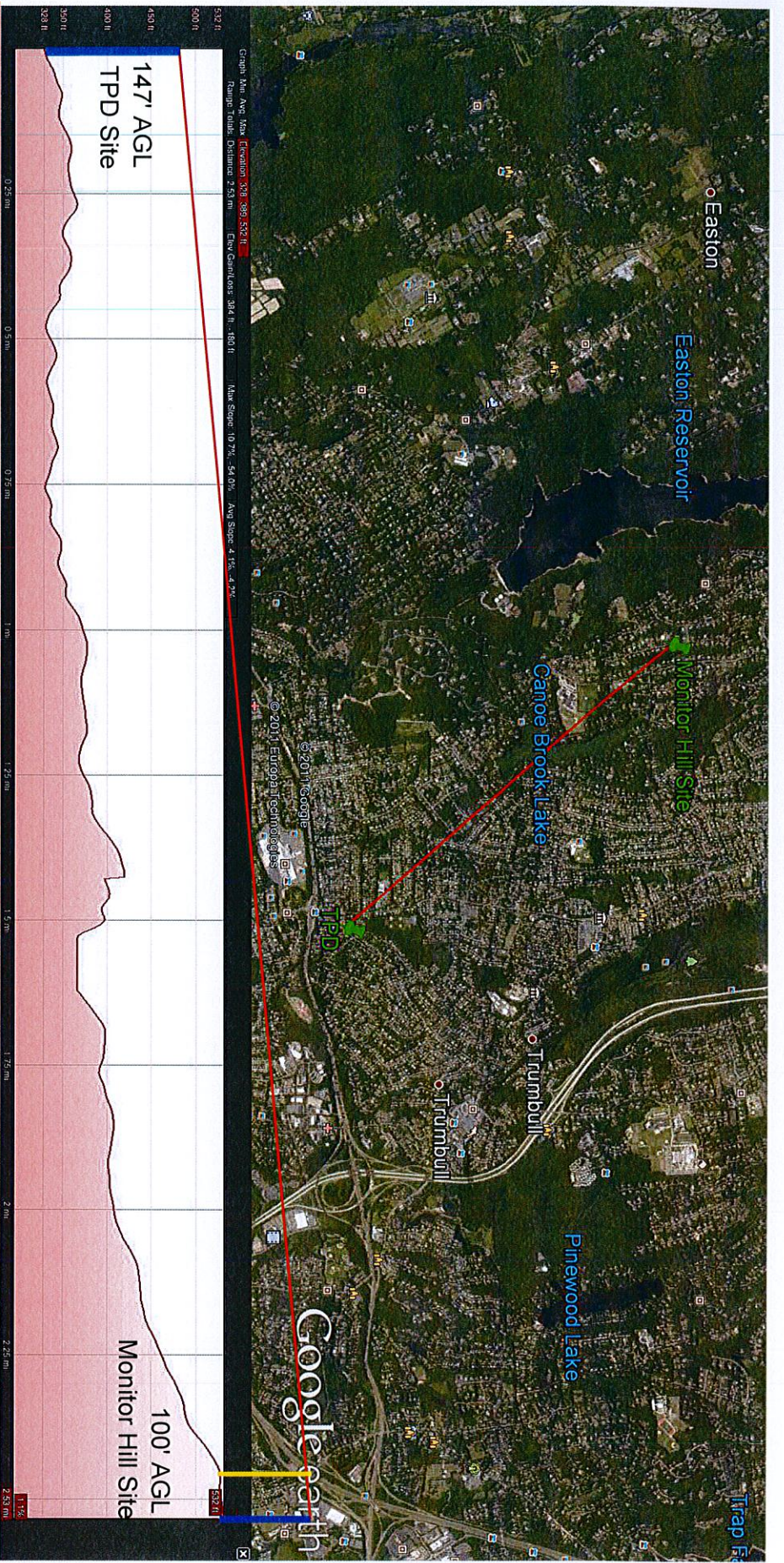
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ATTACHMENT B



Assumes 147' Dish Height at Trumbull PD site and 150' Dish Height on Existing Building
 Assumes 100' Average Tree Height for Fresnel Zone Calculation
FEASIBILITY STUDY ONLY, NOT FINAL ENGINEERING



Trumbull PD to Monitor Hill PTP Path

Assumes 147' Dish Height at Trumbull PD site and 100' Dish Height at Existing Monitor Hill Site
 Assumes 100' Average Tree Height for Fresnel Zone Calculation
FEASIBILITY STUDY ONLY, NOT FINAL ENGINEERING