TECHNICAL REPORT
to the
TOWN OF GUILFORD

T-MOBILE NORTHEAST LLC
(T-MOBILE)

PROPOSED GUILFORD
MONOPOLE TOWER TELECOMMUNICATIONS FACILITY

MOOSE HILL ROAD
GUILFORD, CONNECTICUT

T-Mobile Northeast LLC
35 Griffin Road South
Bloomfield, Connecticut 06002

Table of Contents

Introduction

T-Mobile Northeast LLC, a subsidiary of T-Mobile USA, Inc. d.b.a. T-Mobile ("T-Mobile") hereby submits this Technical Report to the Town of Guilford ("Town") pursuant to General Statutes § 16-50*l*. T-Mobile proposes to install a wireless telecommunications facility (the "Facility") on an approximately 163 acre parcel located at Moose Hill Road and owned by Leete Associates, Inc. (the "Property" or the "Site"). The Facility would consist of a 140 foot monopole structure, with an antenna array mounted on the tower at a centerline of approximately 137'9" above grade level ("AGL"), and related equipment located nearby on a concrete equipment pad. The Facility, if approved, would provide wireless communications service in this area Guilford.

The purpose of this Technical Report is to provide the Town with information concerning the Facility. Section One addresses the need for the proposed Facility. Section Two details the site selection process, including an analysis of other sites considered and rejected by T-Mobile. Section Three describes the design for the Facility and the environmental effects, if any, associated with the proposed Facility.

Correspondence and/or communications regarding this Technical Report should be addressed to the attorneys for T-Mobile:

Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604
(203) 368-0211

Attention: Julie D. Kohler, Esq.
Jesse A. Langer, Esq.

SECTION 1

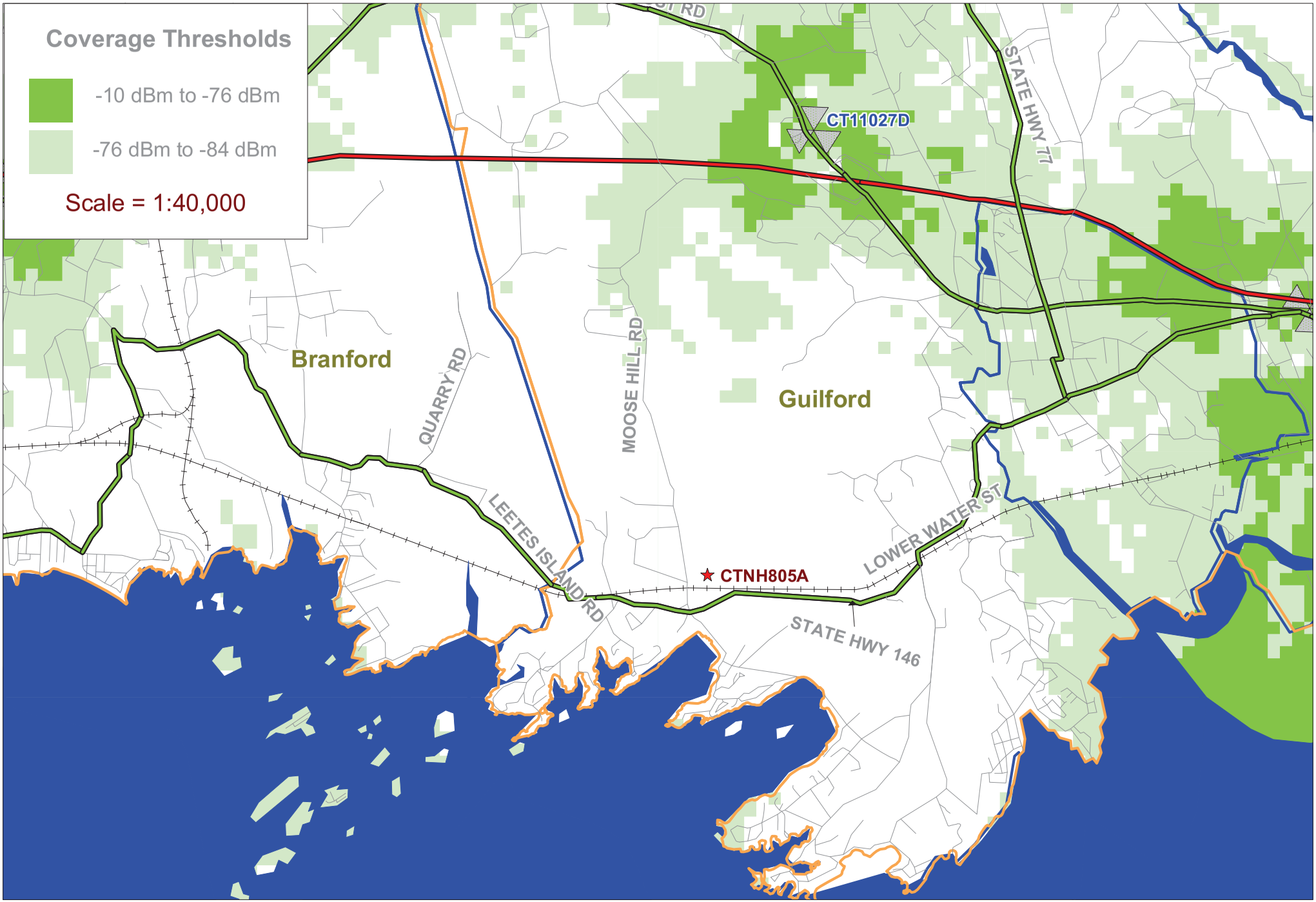
Site Justification

The proposed Facility is necessary to enhance wireless service availability to existing and future T-Mobile wireless device users. Enhanced coverage provided by the Facility would allow T-Mobile subscribers to use voice and data services reliably as well as to connect to Emergency 911 services. The intended coverage area of the Facility includes sections around Route 146, Moose Hill Road, Old Quarry Road and Corn Crib Hill Road, south of Interstate 95, as well as the Amtrak rail line that passes though the area. Additionally, the Facility would provide capacity relief for the current sites that presently cover this area from outlying areas. Finally, the Facility would enhance the coverage for emergency services in the area.

Included herein are propagation plots prepared by T-Mobile that depict (1) coverage from existing and approved surrounding sites; (2) predicted coverage from the proposed Site with an antenna array mounted on the monopole at 137'9" AGL; and (3) coverage from the proposed Site with the existing and approved sites.

Together, these propagation plots demonstrate the need for a site in the area of the proposed Facility and the effectiveness of the proposed Facility in meeting the need for wireless service in this area of Guilford.

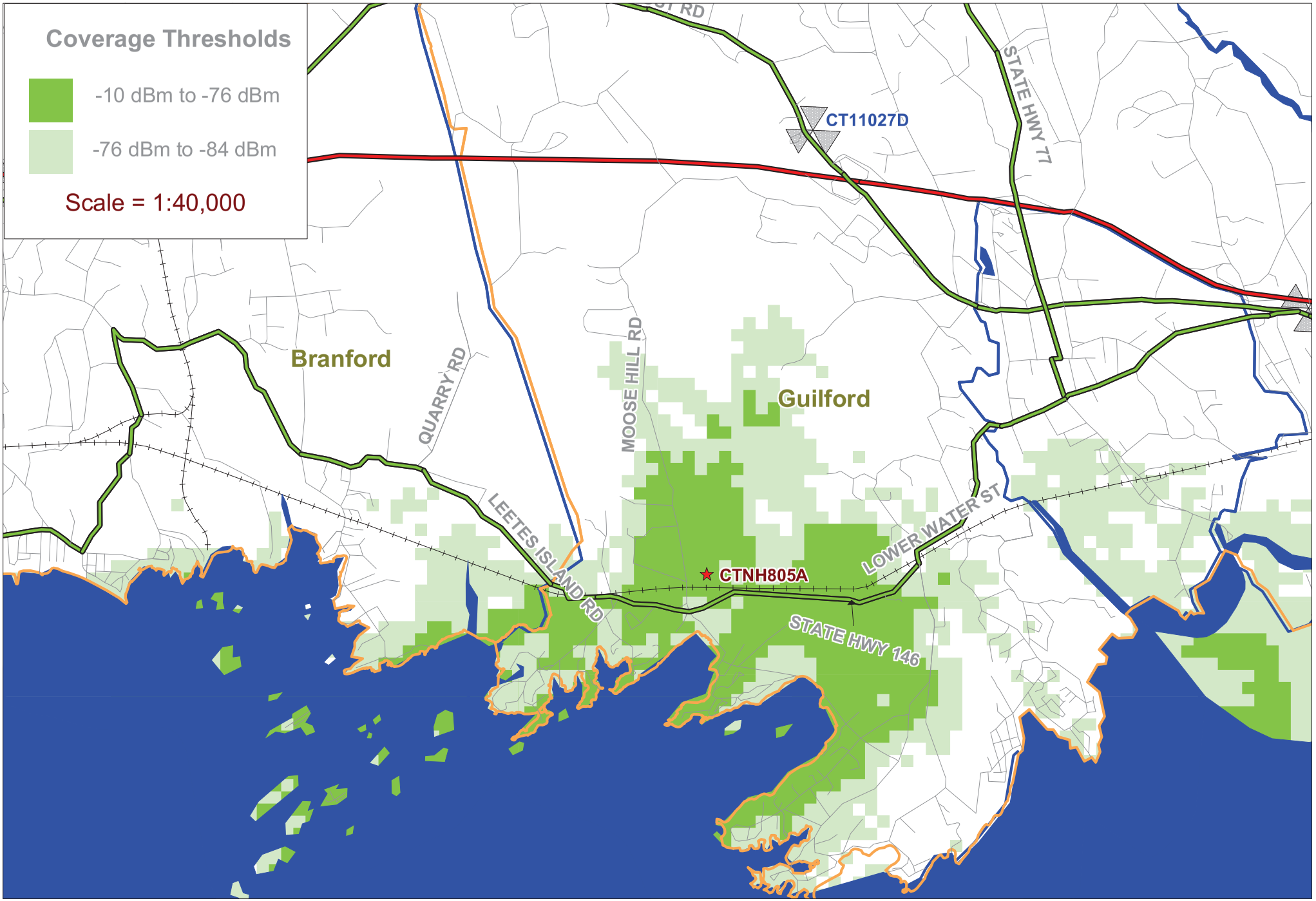
ATTACHMENT A



N

-T-Mobile-- Existing T-Mobile On Air Coverage

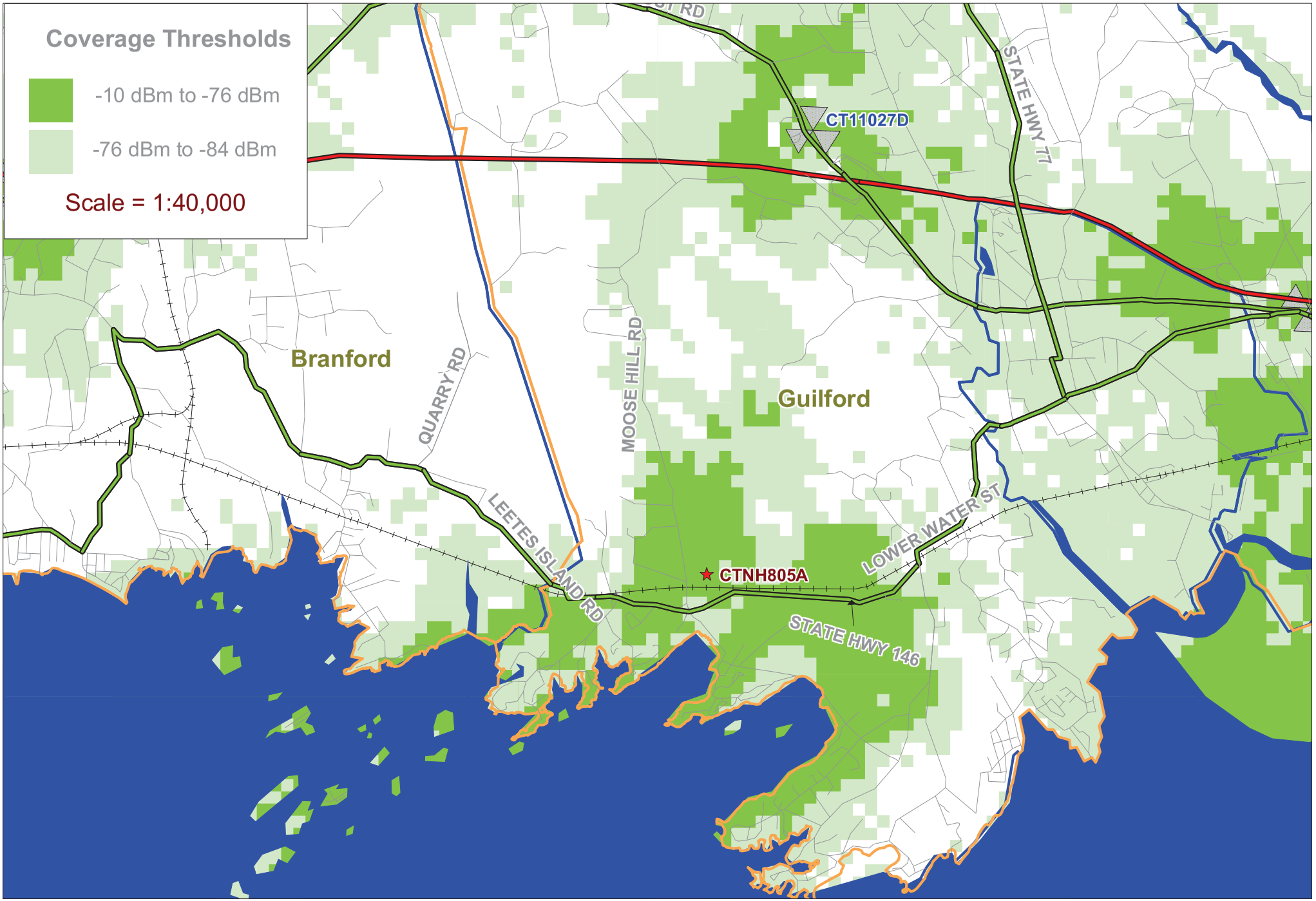
Coverage Thresholds
Dark Green - In Building Coverage
Light Green - In Vehicle Coverage



N

-T-Mobile-- T-Mobile Proposed CTNH805A @ 137'

Coverage Thresholds
Dark Green - In Building Coverage
Light Green - In Vehicle Coverage



N

-T-Mobile--

Existing T-Mobile On Air Coverage
With CTNH805A @ 137'

Coverage Thresholds
Dark Green - In Building Coverage
Light Green - In Vehicle Coverage

SECTION 2

Site Search Process and Selection

General Statutes § 16-*50l* (e) requires T-Mobile to provide the Town with a technical report considering, *inter alia*, "the site selection process." When filing its application for a certificate of environmental compatibility and public need with the Connecticut Siting Council, T-Mobile must include a statement that describes "the narrowing process by which other possible sites were considered and eliminated." Regs., Conn. State Agencies § 16-50j-74(j). In accordance with these requirements, this Technical Report details the description of the general site search process, the identification of the target search area and the alternative locations considered for development of the proposed Facility.

As a wireless carrier licensed by the Federal Communications Commission ("FCC"), T-Mobile investigates prospective sites in an area based upon the needs of its wireless infrastructure. T-Mobile chooses a target area central to the area in which it has identified coverage and/or capacity needs after extensive research of that particular area. The area targeted is the geographical location where the installation of a site would, based on general radio frequency engineering and system design standards, likely address the identified problem. T-Mobile's goal is to locate sites that will remedy coverage or capacity issues, and cause the least environmental impact. In this case, T-Mobile has searched for a site in this area, and has identified the Property as the best possible location for a wireless facility.

T-Mobile is sensitive to State and local desires to minimize the construction of new towers, and it does not pursue development of a new facility where an acceptable existing structure can be found. In general, T-Mobile's site acquisition personnel study the area in and near the search area to determine whether any suitable structure exists. If T-Mobile cannot find a structure with appropriate height and structural capabilities, it turns to industrial and commercial areas or individual parcels that have appropriate environmental and land use characteristics. The list of potential locations is limited by the willingness of property owners to make their properties available for a telecommunications facility. Radio frequency engineers study potentially suitable and available locations to determine whether those locations will meet the technical requirements for a telecommunications facility. The list of possible alternative sites may be further narrowed by T-Mobile's analysis of potential environmental effects and benefits. The weight given to relevant factors varies for each search, depending on the nature of the area and the availability of potential sites.

There are no existing towers, transmission line structures or other suitable structures in the area of Guilford, which is the subject of this site search. The nearest towers and suitable structures are already in use by T-Mobile. Moreover, any other existing towers are too far from the target area to provide coverage specifically to the

target area. Finally, there are no other suitable areas of commercial or industrial use in or near the target area.

T-Mobile considered several other locations that might have addressed the coverage gap in this area of Guilford. The reasons T-Mobile did not select any of these locations are outlined below:

1. Leetes Island Rd (Map 19 / Lot 013). This parcel is 8.08 acres and designated as open space. There are no existing structures on the parcel suitable for co-location. T-Mobile sent two letters to the property owner regarding the parcel and the property owner has not responded to date.

2. New Quarry Road (Map 66/ Lot 09B). This is a 4.99 acre parcel owned by Yale University. There are no existing structures on the parcel suitable for co-location. The parcel is located approximately 0.5 miles to the west of the coverage objective. Additionally, a telecommunications facility on this site would overlap with an anticipated Verizon site located to the west and would, as a result, require a taller facility located to the east to address coverage in that area.

3. Amtrak Right of Way. There are no suitable structures on the parcel. The Right of Way is located approximately 0.5 miles to the west of the coverage objective. Additionally, a telecommunications facility on this site would overlap with an anticipated Verizon site located to the west and would, as a result, require a taller facility located to the east to address coverage in that area.

4. Leetes Island Road (Map 19/ Lot 015). This is a large 159 acre parcel with no existing structures suitable for co-location. Leete Associates, Inc. owns this parcel and is not interested in leasing any space on this parcel for a telecommunications facility.

5. Dunk Rock Road (Map 69/ Lot 013). This is a large 253 acre parcel, which is owned by the State of Connecticut. There are no existing structures on the parcel suitable for co-location. The parcel is located approximately one mile to the northwest of the coverage objective. T-Mobile's RF engineers reviewed the parcel and determined that it is too far from the coverage objective to afford adequate coverage.

6. Moose Hill Road (Map 69/ Lot 001). This is a 21.41 acre parcel with no existing structures suitable for co-location. Leete Associates, Inc. owns this parcel and is not interested in leasing any space on this parcel for a telecommunications facility. T-Mobile's RF engineers reviewed the parcel and determined that it is too far from the coverage objective to afford adequate coverage.

7. Moose Hill Road (Map 69/ Lot 001A). This is a 31 acre parcel with no existing structures suitable for co-location. The parcel is located approximately 0.7 miles to the north of the coverage objective. T-Mobile's RF engineers reviewed the parcel and determined that it is too far from the coverage objective to afford adequate coverage.

8. Moose Hill Road (Map 69/ Lot 005). This is a 15.62 acre parcel owned by the Guilford Land Trust. There are no existing structures on the parcel suitable for co-location. The parcel is located approximately 1.1 miles to the north of the coverage objective. T-Mobile's RF engineers reviewed the parcel and determined that it is too far from the coverage objective to afford adequate coverage.

9. Moose Hill Road (Map 69/ Lot 007). This is a 6.8 acre parcel owned by the Guilford Land Trust. There are no existing structures on the parcel suitable for co-location. The parcel is located approximately 0.85 miles to the north of the coverage objective. T-Mobile's RF engineers reviewed the parcel and determined that it is too far from the coverage objective to afford adequate coverage.

10. Moose Hill Road (Map 69/ Lot 007-A). This is a 23.33 acre parcel owned by the Guilford Land Trust. There are no existing structures on the parcel suitable for co-location. The parcel is located approximately 0.75 miles to the northwest of the coverage objective. T-Mobile's RF engineers reviewed the parcel and determined that it is too far from the coverage objective to afford adequate coverage.

11. 225 Moose Hill Road (Map 66/ 57). This parcel is 8.5 acres and does not host any existing structures suitable for co-location. The parcel is located approximately 0.35 miles to the north of the coverage objective. T-Mobile's RF engineers reviewed the parcel and determined that it is too far from the coverage objective to afford adequate coverage.

12. 204 Dromara Road (Map 66/ Lot 017). This is a 9.1 acre parcel. It does not host any existing structures suitable for co-location. The parcel is located approximately 0.5 miles northwest of the coverage objective. T-Mobile's RF engineers reviewed the parcel and determined that it is too far from the coverage objective to afford adequate coverage.

13. New Quarry Road (Map 66/ Lot 012). This is a 46.22 acre parcel. It does not host any existing structures suitable for co-location. The parcel is located approximately 0.6 miles northwest of the coverage objective. T-Mobile's RF engineers reviewed the parcel and determined that it is too far from the coverage objective to afford adequate coverage.

14. Leetes Island Road (Map 18/ Lot 018-A). This is an 8.6 acre parcel owned by the Guilford Land Trust. There are no existing structures on the parcel suitable for co-location. The parcel is located approximately 0.5 miles to the west of coverage objective. T-Mobile's RF engineers reviewed the parcel and determined that it is too far from the coverage objective to afford adequate coverage.

Consequently, T-Mobile has determined that the Property is superior to the other properties in the area. The proposed Site is fairly secluded and shielded by existing mature vegetation. The majority of the year round views of the Facility would consist of open-water views on the Long Island Sound.

SECTION 3

PROPOSED SITE

Moose Hill Road
Guilford, Connecticut

Land of
Leete Associates, Inc.

Map 66/Lot 64
163 Acres

GENERAL FACILITY DESCRIPTION

The proposed Site would consist of a 2,500 square foot compound, which would sit within a 3,000 square foot area leased to T-Mobile. The Facility would be located in the southwestern portion of an approximately 163 acre parcel located on Moose Hill Road in Guilford, Connecticut. The Property is currently vacant and undeveloped. The Facility would include a 140 foot monopole structure with T-Mobile's antenna array mounted on the tower with T-Arms.

Related equipment cabinets would be placed nearby within the leased area. The equipment would be surrounded by an eight foot chain link fence. Access to the proposed tower would be across an existing gravel drive. T-Mobile would also add a gravel drive to connect the existing gravel drive with the proposed Facility. Utility connections would extend from Moose Hill Road.

ATTACHMENT B

MAP ID: 66-63
83 MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
BRADFORD W. LEETE SR.
& LYDIA RAFFA-LEETE
83 MOOSE HILL ROAD
GUILFORD, CT 06437

MAP ID: 66-62
MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
LEETE ASSOCIATES, INC.
P.O. BOX 45
GUILFORD, CT 06437

MAP ID: 66-61
133 MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
ROBERT L. & ELIZ G. JACKSON
133 MOOSE HILL ROAD
GUILFORD, CT 06437

DROMARA ROAD

DROMARA ROAD

DOLAN DRIVE

MOOSE HILL ROAD

MAP ID: 66-1
30 DROMARA ROAD
LAND NOW OR FORMERLY OF
ELIZABETH DUBOIS FAMILY TRUST
30 DROMARA ROAD
GUILFORD, CT 06437

MAP ID: 66-59
MOOSE HILL ROAD
LAND NOW OR FORMERLY
OF
LEETE ASSOCIATES, INC.
P.O. BOX 45
GUILFORD, CT 06437

MAP ID: 66-56
283 MOOSE HILL ROAD
LAND NOW OR
FORMERLY OF
MADLYN N. FLAVELL
283 MOOSE HILL ROAD
GUILFORD, CT 06437

MAP ID: 66-57
225 MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
STUART C. & DEBORAH E. PRESS
225 MOOSE HILL ROAD
GUILFORD, CT 06437

MAP ID: 69-9
397 MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
EFFIE A. GOOD
397 MOOSE HILL ROAD
GUILFORD, CT 06437

MAP ID: 69-7A
MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
GUILFORD LAND CONSERVATION
TRUST INC.
P.O. BOX 200
GUILFORD, CT 06437

MAP ID: 19-5
43 MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
WAYNE M. & KAREN E.
LOVINGTON
43 MOOSE HILL ROAD
GUILFORD, CT 06437

MAP ID: 66-58
205 MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
ALDO S. & ELIZABETH B. PARISOT
205 MOOSE HILL ROAD
GUILFORD, CT 06437

MAP ID: 66-55
313 MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
JANET C. SENFT
313 MOOSE HILL ROAD
GUILFORD, CT 06437

MAP ID: 66-54
341 MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
MARLENE P. ABT
341 MOOSE HILL ROAD
GUILFORD, CT 06437

MAP ID: 66-53
365 MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
ERIN ZEIDENBERG
365 MOOSE HILL ROAD
GUILFORD, CT 06437

FROM
COMPOUND
TO ℄ 320±

℄ OF TOWER
TO ℄ 346±

MAP ID: 66-60
149 MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
ANN E. ZELLER
149 MOOSE HILL ROAD
GUILFORD, CT 06437

℄ OF TOWER
TO ℄ 351±

FROM
COMPOUND
TO ℄ 323±

MAP ID: 19-10
LEETES ISLAND ROAD
LAND NOW OR FORMERLY OF
LEETE ASSOCIATES, INC.
P.O. BOX 45
GUILFORD, CT 06437

SUBJECT SITE
MAP ID: 66-64
MOOSE HILL ROAD
LAND NOW OR FORMERLY OF
LEETE ASSOCIATES, INC.
P.O. BOX 45
GUILFORD, CT 06437
163.0 ACRES

FROM COMPOUND TO ℄ 1121±

℄ OF TOWER TO ℄ 1150±

FROM COMPOUND TO ℄ 2236±

℄ OF TOWER TO ℄ 2271±

MAP ID: 19-11
575 LEETES ISLAND ROAD
LAND NOW OR FORMERLY OF
ALAN HAESCHE & SANDRA RUX
575 LEETES ISLAND ROAD
GUILFORD, CT 06437

MAP ID: 19-12
558 LEETES ISLAND ROAD
LAND NOW OR FORMERLY OF
MARC J. KNAPP
25281 BUNTING CIRCLE
LAND O LAKES, FL 34639

PROPOSED T-MOBILE 50' x 50' CHAIN
LINK FENCED COMPOUND W/
EQUIPMENT, UTILITIES, & 140± AGL
MONOPOLE

NO MAP OR LOT REFERENCE (RAILROAD)
ADJACENT TO SUBJECT PARCEL
LAND NOW OR FORMERLY OF
NATIONAL RAILROAD PASSENGER CORP.
60 MASSACHUSETTS, NE
WASHINGTON, DC 20002
ADDITIONAL MAILING:
400 NORTH CAPITAL STREET, NW
WASHINGTON, DC 20001

PROPERTY LINE (TYP)

MAP ID: 69-13
DUNK ROCK ROAD
LAND NOW OR FORMERLY OF
STATE OF CONNECTICUT
110 BARTHOLOMEW AVENUE
HARTFORD, CT 06106

ABUTTERS MAP

SCALE: 1" = 200'

TRUE N

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

T-MOBILE SITE NUMBER:
CTNH805A

APT FILING NUMBER:
CT-255T-400

T-Mobile

35 GRIFFIN ROAD
BLOOMFIELD, CT 06002
OFFICE: (860)-692-7100

ALL-POINTS TECHNOLOGY CORPORATION, P.C.
3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419
PHONE: (860)-663-1697
FAX: (860)-663-0935

PERMITTING DOCUMENTS
GUILFORD
MOOSE HILL ROAD
GUILFORD, CT 06437

DESIGN TYPE:
RAW LAND

REVISIONS:
REV.0: 12/16/09: FOR REVIEW: SMC
REV.1: 12/18/09: FOR TECH REPORT: SMC
REV.2:
REV.3:
REV.4:

ABUTTERS MAP

APT FILING NUMBER: CT-255T-400
APT DRAWING NUMBER: CTNH805A
DRAWN BY: RCB
CHECKED BY: SMC
SCALE: AS NOTED
DATE: 12/16/09

SHEET NUMBER:
A-1

STATE OF CONNECTICUT
SCOTT M. CHASE
No.19728
LICENSED
PROFESSIONAL ENGINEER

NOTES

1. THIS MAP AND SURVEY HAVE BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT," AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

   THE TYPE OF SURVEY PERFORMED AND THE MAPPED FEATURES DEPICTED HEREON ARE IN ACCORDANCE WITH THE REQUIREMENTS OF A TOPOGRAPHIC SURVEY. BOUNDARY LINES DEPICTED HEREON ARE COMPILED FROM OTHER MAPS, DEEDS, AND A LIMITED FIELD SURVEY; THESE LINES DO NOT REPRESENT A PROPERTY BOUNDARY OPINION AND ARE SUBJECT TO CHANGE BASED ON A COMPLETE FIELD SURVEY.

2. VERTICAL ACCURACY CLASS: T-2. ELEVATIONS REFER TO NORTH AMERICAN VERTICAL DATUM 1988. TOPOGRAPHIC INFORMATION IS DEPICTED ONLY FOR A PORTION OF THE PROPERTY. FIELD SURVEYED DECEMBER 1, 2009.

3. NORTH REFERS TO TOWN OF GUILFORD ASSESSOR'S MAPS.

4. REFERENCE MAPS:

   (A) "RIGHT OF WAY AND TRACK MAP, THE NEW YORK NEW HAVEN AND HARTFORD R.R. CO., FROM NEW HAVEN TO NEW LONDON, STATION 739+05 TO 791+85, TOWN OF GUILFORD, STATE OF CONN.," SHEET 13 OF 55, SCALE 1"=100', DATED JUNE 30, 1915
   (B) "MAP SHOWING PROPERTY OF PETER WOERNER," PREPARED BY ERIC ANDERSON, SCALE 1"=40', DATED APRIL 10, 1978
   (C) "MAP OF PROPERTY OWNED BY N.J.F. THE NEW YORK, NEW HAVEN & HARTFORD RAILROAD COMPANY TO BE CONVEYED TO JONATHAN T. & LINDA FRAWLEY HOWEY," PREPARED BY ROBERT C. HART, SCALE 1"=30', DATED 4-12-2001 AND REVISED 6-25-01

5. ACCORDING TO FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE NUMBER HPC-CTNH805, THERE ARE NO COVENANTS, RESTRICTIONS, EASEMENTS OR RIGHTS-OF-WAY AFFECTING THE PORTIONS OF THE PROPERTY DEPICTED HEREON.

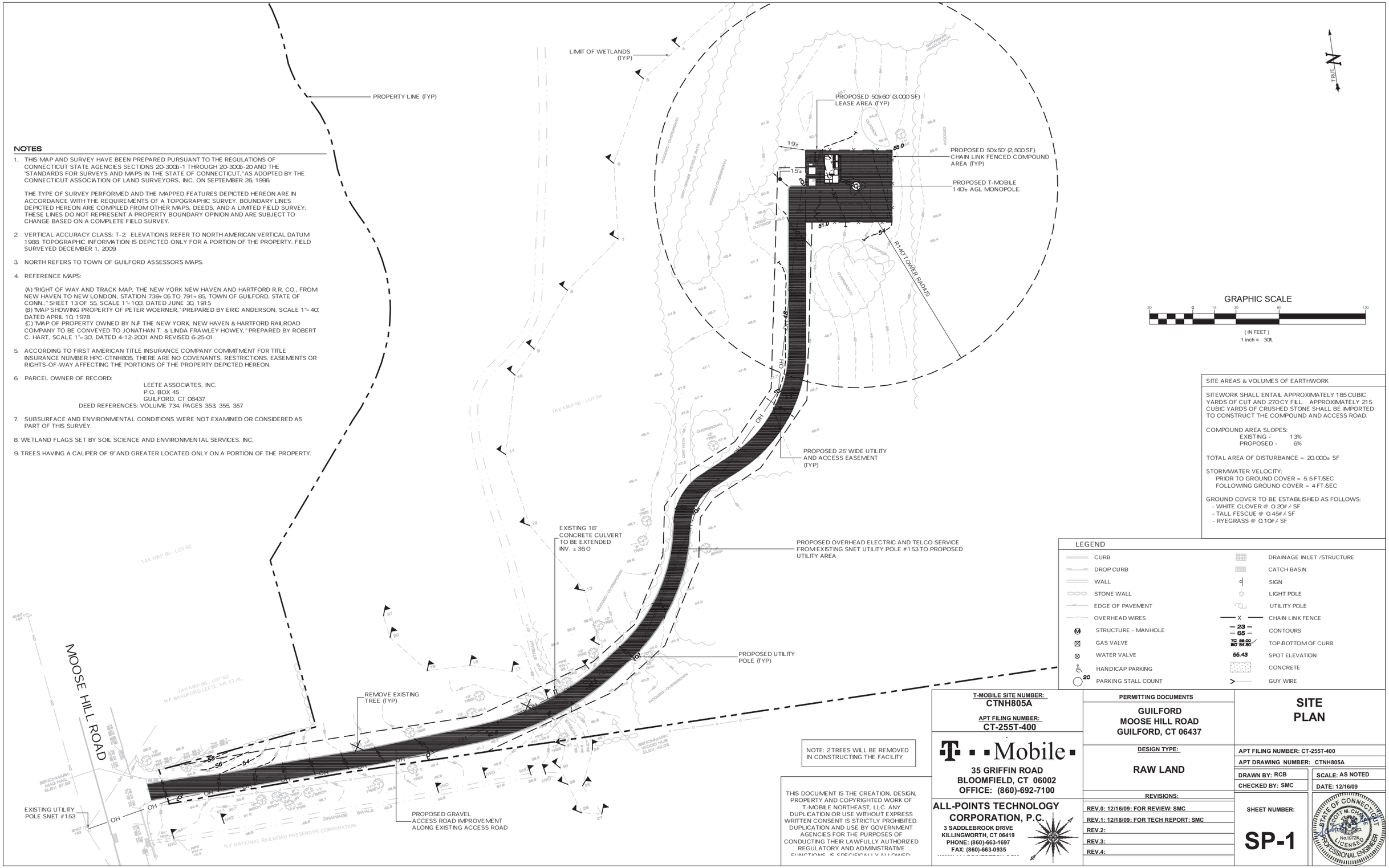
6. PARCEL OWNER OF RECORD:

   LEETE ASSOCIATES, INC.
   P.O. BOX 45
   GUILFORD, CT 06437
   DEED REFERENCES: VOLUME 734, PAGES 353, 355, 357

7. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS PART OF THIS SURVEY.

8. WETLAND FLAGS SET BY SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC.

9. TREES HAVING A CALIPER OF 9" AND GREATER LOCATED ONLY ON A PORTION OF THE PROPERTY.



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30ft.

SITE AREAS & VOLUMES OF EARTHWORK

SITEWORK SHALL ENTAIL APPROXIMATELY 185 CUBIC YARDS OF CUT AND 270 CY FILL. APPROXIMATELY 215 CUBIC YARDS OF CRUSHED STONE SHALL BE IMPORTED TO CONSTRUCT THE COMPOUND AND ACCESS ROAD.

COMPOUND AREA SLOPES:
EXISTING - 13%
PROPOSED - 6%

TOTAL AREA OF DISTURBANCE = 20,000± SF

STORMWATER VELOCITY:
PRIOR TO GROUND COVER = 5.5 FT./SEC
FOLLOWING GROUND COVER = 4 FT./SEC

GROUND COVER TO BE ESTABLISHED AS FOLLOWS:
- WHITE CLOVER @ 0.20#/ SF
- TALL FESCUE @ 0.45#/ SF
- RYEGRASS @ 0.10#/ SF

LEGEND

CURB	DRAINAGE INLET /STRUCTURE
DROP CURB	CATCH BASIN
WALL	SIGN
STONE WALL	LIGHT POLE
EDGE OF PAVEMENT	UTILITY POLE
OVERHEAD WIRES	CHAIN LINK FENCE
STRUCTURE - MANHOLE	CONTOURS
GAS VALVE	TOP/BOTTOM OF CURB
WATER VALVE	SPOT ELEVATION
HANDICAP PARKING	CONCRETE
PARKING STALL COUNT	GUY WIRE

NOTE: 2 TREES WILL BE REMOVED IN CONSTRUCTING THE FACILITY

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KILLINGWORTH, CT 06419
PHONE: (860)-663-1697
FAX: (860)-663-0935

PERMITTING DOCUMENTS

GUILFORD
MOOSE HILL ROAD
GUILFORD, CT 06437

DESIGN TYPE:

RAW LAND

REVISIONS:

REV.0: 12/16/09: FOR REVIEW: SMC
REV.1: 12/18/09: FOR TECH REPORT: SMC
REV.2:
REV.3:
REV.4:

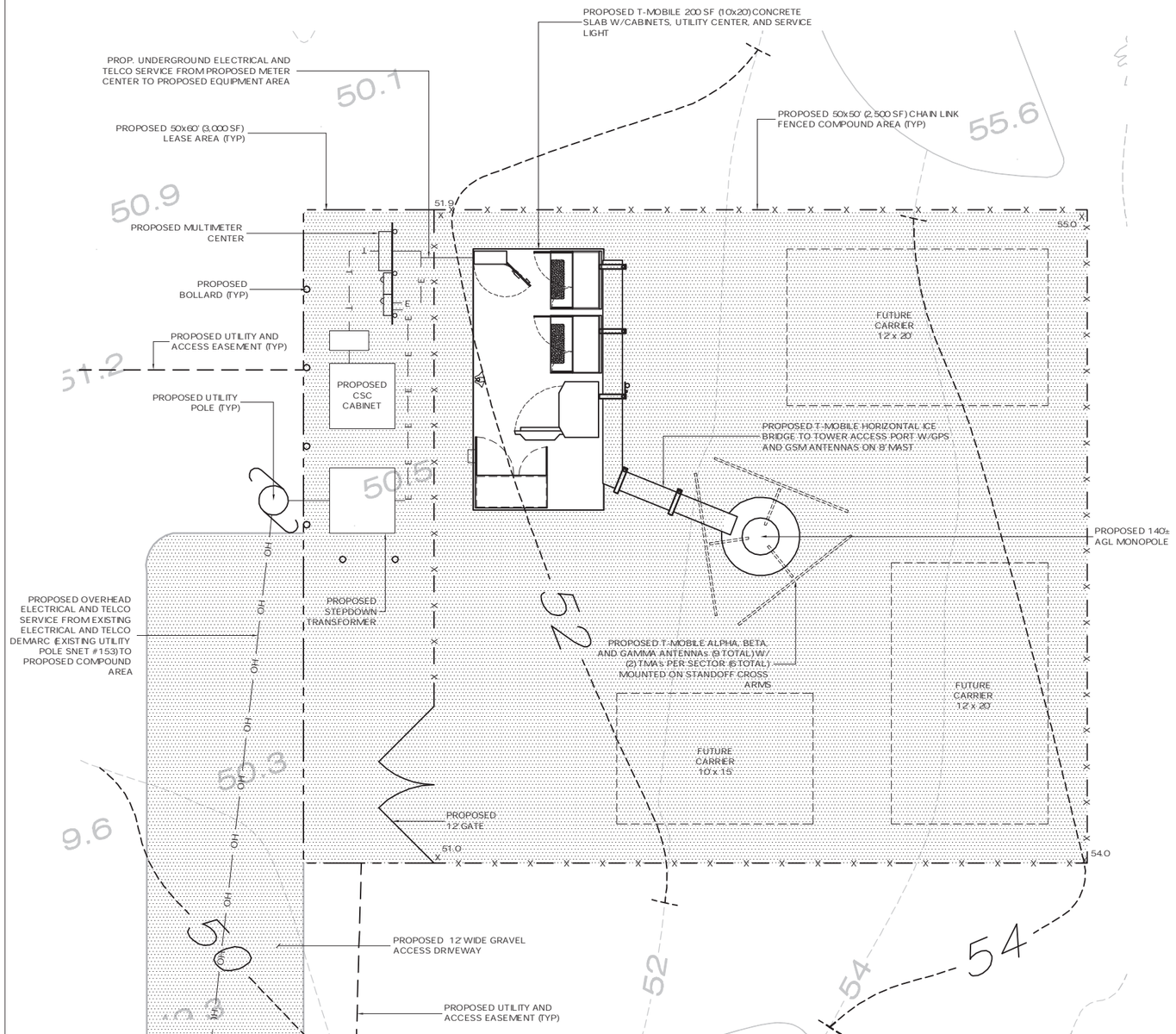
SITE PLAN

APT FILING NUMBER: CT-255T-400
APT DRAWING NUMBER: CTNH805A
DRAWN BY: RCB
CHECKED BY: SMC
SCALE: AS NOTED
DATE: 12/16/09

SHEET NUMBER:

SP-1

SCOTT M. CHAMPLIN No.19728 LICENSED PROFESSIONAL ENGINEER STATE OF CONNECTICUT



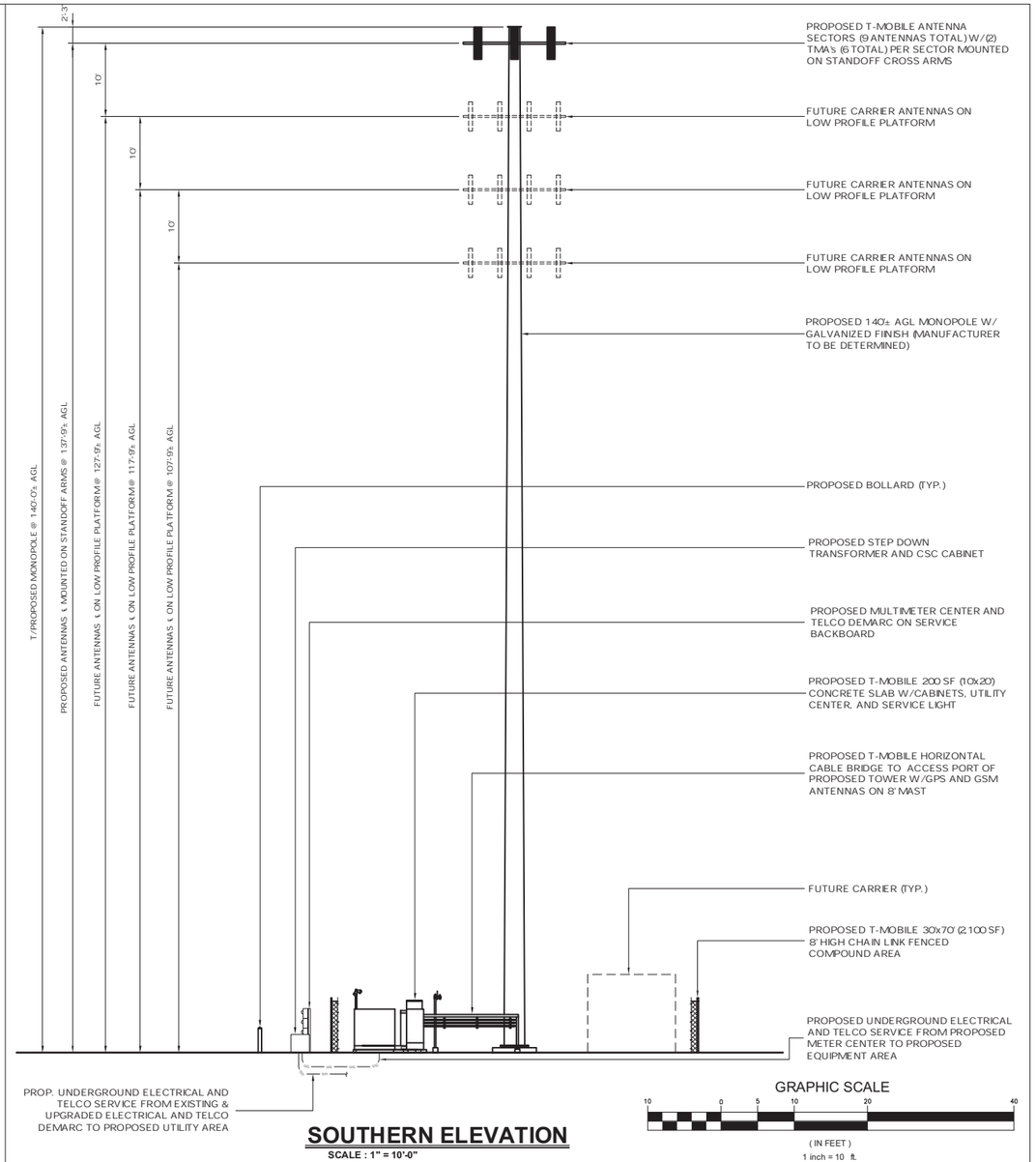
COMPOUND PLAN

SCALE : 1" = 5'-0"

GRAPHIC SCALE

5 0 2.5 5 10 20

(IN FEET)
1 inch = 5 ft.



SOUTHERN ELEVATION

SCALE : 1" = 10'-0"

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

ENGINEERING ANALYSIS AND CERTIFICATION

IN ACCORDANCE WITH THE 2005 CONNECTICUT STATE BUILDING CODE AND THE ELECTRONIC INDUSTRIES ASSOCIATION STANDARD EIA/TIA-222-F "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORT STRUCTURES" FOR NEW HAVEN COUNTY, THE TOWER WOULD BE DESIGNED TO WITHSTAND PRESSURES EQUIVALENT TO A MAXIMUM 115 MPH WIND. THE FOUNDATION DESIGN WOULD BE BASED ON SOIL CONDITIONS AT THE SITE.

T-MOBILE SITE NUMBER:
CTNH805A

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T-Mobile

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BLOOMFIELD, CT 06002
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3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419
PHONE: (860)-663-1697
FAX: (860)-663-0935

PERMITTING DOCUMENTS

GUILFORD
MOOSE HILL ROAD
GUILFORD, CT 06437

DESIGN TYPE:

RAW LAND

REVISIONS:

REV.0: 12/16/09: FOR REVIEW: SMC
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REV.2:
REV.3:
REV.4:

COMPOUND PLAN & TOWER ELEVATION

APT FILING NUMBER: CT-255T-400
APT DRAWING NUMBER: CTNH805A
DRAWN BY: RCB
CHECKED BY: SMC
SCALE: AS NOTED
DATE: 12/16/09

SHEET NUMBER:

SP-2

STATE OF CONNECTICUT · SCOTT M. CHASE · No.19728 · LICENSED PROFESSIONAL ENGINEER

SITE EVALUATION REPORT

I. LOCATION

A. COORDINATES: 41°16'02.88" N
71°42'57.81" W

B. GROUND ELEVATION: 52' ± AMSL

C. USGS MAP: USGS 7.5 quadrangle for Guilford, Connecticut (1984)

D. SITE ADDRESS: Moose Hill Road
Guilford, CT 06437

E. ZONING WITHIN ¼ MILE OF SITE: The areas to the north, south, east and west are zoned for residential use.

II. DESCRIPTION

A. SITE SIZE: 2,500 square feet

LESSOR PARCEL: 3,000 square feet

B. TOWER TYPE/HEIGHT: 140 foot monopole

C. SITE TOPOGRAPHY AND SURFACE: The Site is located on a vacant and undeveloped parcel. The Site is wooded with some meadows. The topography slopes from the east to the southwest.

D. SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER: The existing terrain consists of a clearing on a wooded parcel. The closest wetland system to the proposed Facility would be 130 feet to the west. The improved gravel access would cross over a culvert. A stream passes under the culvert.

E. LAND USE WITHIN ¼ MILE OF SITE: The areas to the north and east are vacant. The areas to the south are used for residential and railroad and include some vacant land. The areas to the west are used for residential purposes.

III. FACILITIES

A. POWER COMPANY: CL&P

B. POWER PROXIMITY TO SITE: 760'±

C. TELEPHONE COMPANY: AT&T

D. PHONE SERVICE PROXIMITY: 760'±

E. VEHICLE ACCESS TO SITE: Access to the proposed tower would be across a gravel drive and a proposed gravel drive, the latter of which would connect the existing gravel drive to the proposed Facility.

F. OBSTRUCTION: N/A

G. CLEARING AND FILL REQUIRED: The total area of disturbance would be 20,000 square feet. The Facility would require 270 cubic yards of fill material, 185 cubic yards of cut and 215 cubic yards of crushed stone. T-Mobile would have to remove two trees.

IV. LEGAL

A. PURCHASE [ ] LEASE [X]

B. OWNER: Leete Associates, Inc.

C. ADDRESS: P.O. Box 45, Guilford, Connecticut 06437

D. DEED ON FILE AT: Volume 734, Page 353

FACILITIES AND EQUIPMENT SPECIFICATION
(TOWER & EQUIPMENT)

I. TOWER SPECIFICATIONS

A. MANUFACTURER: TBD

B. TYPE: Monopole

C. HEIGHT: 140'

D. DIMENSIONS: The bottom of the monopole would have an approximate 36" to 42" maximum outer diameter and the top of the monopole would have an approximate 21" to 26" outer diameter.

II. TOWER LOADING

A. T-MOBILE

1. MODEL: 2 Nortel BTS S12000 Equipment Cabinets
1 ERICSON BTS 3106 Equipment Cabinet
1 Transtector 1101-781-200MG Power Telco Cabinet
1 Magnetek MPE5566 Battery Backup Enclosure

2. DIMENSIONS: BTS S12000: 4'-5" x 3'-11" x 5'-9"
BTS 3106: 4'-3" x 2'-4" x 5'-4"
Power Telco Cabinet: 2'-6" x 1'-2" x 5'-4"
Battery Backup Enclosure: 2'-6" x 5'-6" x 5'-6"

3. ANTENNAS: An array consisting of alpha, beta and gamma sectors (9 antennae total) with 2 TMA per sector (6 total) mounted on standoff cross arms.

4. TOWER POSITION: 137'9" AGL to the center of the antenna array

5. TRANSMISSION LINES: 18 lines

B. FUTURE CARRIERS – 3 additional carriers

III. ENGINEERING ANALYSIS AND CERTIFICATION:

In accordance with the 2005 Connecticut State Building Code and the Electronic Industries Association Standard EIA/TIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Support Structures" for New Haven County, the tower would be designed to withstand pressures equivalent to a maximum 115 MPH wind. The foundation design would be based on soil conditions at the Site.

ENVIRONMENTAL ASSESSMENT STATEMENT

I. PHYSICAL IMPACT

A. WATER FLOW AND QUALITY

The construction, operation and maintenance of the Facility would result in a very small disturbance to the nearest wetlands and watercourse. The proposed access to the Facility would cross over a culvert, which T-Mobile would improve slightly. A stream passes under the culvert. The improvement to the culvert would result in a minor disturbance to the stream. The closest wetland system is 130 feet to the west of the proposed Facility. The nearest coastal resource is 1000 feet to the south of the proposed Facility. The proposed Facility would not impact any coastal resource. *See* attached Wetlands Compliance Letter. T-Mobile would implement Best Management Practices during construction to control storm water and erosion.

B. AIR QUALITY

Under ordinary operating conditions, the equipment that would be used at this Facility would emit no air pollutants of any kind. For limited periods during power outages, a portable generator might be utilized.

C. LAND

Minimal clearing and grading would be required for development of the proposed Site. *See* the Site Evaluation Report, *supra*. The Facility would require the removal of two trees. The remainder of the Property would remain unchanged by the construction and operation of the Site.

D. NOISE

The Facility equipment after construction would not emit any noise other than the installed heating, air conditioning and ventilation systems. A portable generator might be employed during power outages. Some noise is anticipated during Facility construction, which is expected to take approximately eight weeks.

E. POWER DENSITY

The worst-case calculation of power density for operation of T-Mobile's antennas at the Facility would be approximately 5.2197% of the applicable FCC/ANSI standards. *See* attached Power Density Calculations.

F. VISIBILITY

The attached preliminary viewshed demonstrates that only 16 percent of the 8,042 acre study area (two mile radius) would have year-round views of portions of the Facility. Most of these views would be open water views on the Long Island Sound. Accordingly, the Facility would have a minimal visual impact. *See* attached Preliminary Viewshed.

II. SCENIC, NATURAL, HISTORIC & RECREATIONAL VALUES

T-Mobile has retained EBI Consulting ("EBI") to evaluate the Facility in accordance with the FCC's regulations implementing the National Environmental Policy Act of 1969 ("NEPA"). Once EBI completes the NEPA report, T-Mobile will file the report with the application for Certificate of Environmental Compatibility and Public Need. EBI, however, has issued a preliminary determination that the proposed Facility will not implicate any of the criteria outlined in § 1.1307(a) of the NEPA, particularly items (1) through (8), and that an Environmental Assessment is not required. Furthermore, based on EBI's preliminary review and archaeological assessment, even though tribal consultation is incomplete and SHPO concurrence has yet to be granted, it is unlikely that the proposed Facility would impact Native American religious sites and historic resources. *See attached Low Potential Impact Letter*

ATTACHMENT C

SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC.

Soil Science • Ecological Studies • Hazardous Waste Assessments • Project Planning • Soil & Water Testing

KENNETH C. STEVENS, Jr.
President

December 18, 2009

ATTN: Scott M. Chasse, P.E.
All Points Technology Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06419

Re: Wetlands Compliance Review
T-Mobile Site CTNH805A, Moose Hill Road, Guilford, CT
SS&ES Job No. 2009-201-CT-GUI-1

Dear Mr. Chasse:

Soil Science and Environmental Services, Inc. (SS&ES) conducted a site inspection at the subject property on November 17, 2009. Thomas W. Pietras, SS&ES Professional Wetland and Soil Scientist, conducted the investigation. The southwestern portion of the property was examined to determine if there are any wetlands, watercourses or coastal resources either on the study site or in close proximity. Additionally, SS&ES reviewed the Town of Guilford GIS files and the Town of Guilford Natural Inventory Report to gather additional information about the property.

The subject property, labeled as Parcel 066064 on the Town of Guilford GIS Map, is located north of Amtrak Railroad and east of Moose Hill Road (Figure 1). The property is mainly wooded and also contains small areas of old fields. The property is accessed from Moose Hill Road by a gravel driveway that is located between the railroad property and the residence at 83 Moose Hill Road. It is proposed to construct a wireless communications facility in the southwestern portion of the property. The facility will be located in the northern portion of a field. The proposed 50'x60' (300 sq ft) lease area will have a 50'x50' (2,500 sq ft) fenced compound area. Within the fencing there will be a 140 foot monopole, 200 sq ft concrete slab with cabinets, transformer and utilities. The lease area will be able to support three additional pad sites for future carriers. Utility poles are proposed to be installed along the driveway to provide electric and telephone service to the facility from Moose Hill Road.

It is proposed to make improvements to the gravel driveway. The driveway servicing the facility will have a 12 foot width. It will be necessary to conduct some minor grading along the portions of the existing driveway. Additional gravel is proposed to be added to the driveway and the culvert at the stream crossing will be extended. Sediment and erosion controls will be installed to prevent erosion and sedimentation from impacting the wetlands and stream. A more detailed construction plan for the driveway and culvert will be prepared in the future. This plan will also contain sediment and erosion controls.

The Coastal Resource Map in the Town of Guilford Natural Resources Inventory Report was reviewed. According to the map, the nearest Tidal Wetlands to the project area lie approximately 1000 feet to the south on the southern side of Route 146.

On 11/17/09 SS&ES identified Inland Wetlands and Watercourses in the southwestern portion of the property. The wetland boundaries were delineated with consecutively numbered, blue survey tapes. The wetlands consist of poorly drained and very poorly drained, glacial till soils. The wetlands contain a mix of wet meadow, sapling/shrub swamp and forested swamp. A stream flows in a southerly direction through the wetlands. The stream flows under the existing gravel driveway within an 18 inch rcp. The stream flows onto the Amtrak property and passes into a culvert that extends under the railroad tracks. Drainage from the stream empties into a large wetland that is located further to the east of the facility and eventually into Long Island Sound. Additionally, a ditched drainage swale is located to the south of the driveway on the Amtrak Property. The swale receives drainage from a culvert on the east side of Moose Hill Road. Drainage flows through the swale in an easterly direction and discharges into the stream.

The only proposed work that will impact wetlands or watercourses is to extend the existing culvert under the driveway. The present culvert is too short in length and it is necessary to extend it by about 6 feet. This would result in approximately 50 sq ft of disturbance to the wetlands and watercourse.

In conclusion, the construction of a wireless communications facility on the subject property will result in a very small disturbance to wetlands and watercourses in one area, approximately 50 sq ft of impact to wetlands and watercourses. The impact will be made in order to improve the existing culvert of a stream crossing on the driveway. The present culvert is too short and needs to be extended by 6 feet. The driveway provides the only direct access from this parcel to Moose Hill Road. With proper construction, the proposed culvert improvement will not result in any significant impacts to wetlands or watercourses. In addition, construction of the wireless communications facility will result in only a minimal increase in impervious coverage.

Respectfully submitted,

SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC.

Thomas W. Pietras

Thomas W. Pietras
Professional Wetland and Soil Scientist

Connecticut Market

Worst Case Power Density

Site:	**CTNH805A**
Site Address:	**Moose Hill Road**
Town:	**Guilford**
Tower Height:	**140 ft.**
Facility Style:	**Monopole**

GSM Data		UMTS Data	
Base Station TX output	20 W	**Base Station TX output**	40 W
Number of channels	6	**Number of channels**	2
Antenna Model	APX16DWV-16DWV	**Antenna Model**	APX16DWV-16DWV
Cable Size	1 5/8 in.	**Cable Size**	1 5/8 in.
Cable Length	160 ft.	**Cable Length**	160 ft.
Antenna Height	137.0 ft.	**Antenna Height**	137.0 ft.
Ground Reflection	1.6	**Ground Reflection**	1.6
Frequency	1945.0 MHz	**Frequency**	2.1 GHz
Jumper & Connector loss	4.50 dB	**Jumper & Connector loss**	1.50 dB
Antenna Gain	18.0 dBi	**Antenna Gain**	18.0 dBi
Cable Loss per foot	0.0116 dB	**Cable Loss per foot**	0.0116 dB
Total Cable Loss	1.8560 dB	**Total Cable Loss**	1.8560 dB
Total Attenuation	6.3560 dB	**Total Attenuation**	3.3560 dB
Total EIRP per Channel	54.65 dBm	**Total EIRP per Channel**	60.66 dBm
(In Watts)	292.03 W	**(In Watts)**	1165.36 W
Total EIRP per Sector	62.44 dBm	**Total EIRP per Sector**	63.67 dBm
(In Watts)	1752.19 W	**(In Watts)**	2330.72 W
nsg	11.6440	**nsg**	14.6440
Power Density (S) =	**0.022401 mW/cm^2**	**Power Density (S) =**	**0.029797 mW/cm^2**
T-Mobile Worst Case % MPE =		**5.2197%**	

Equation Used :

$$S = \frac{(1000)(grf)^2 (Power) * 10^{(nsg/10)}}{4\pi (R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

Historic Sites:

- H01 Jared Eliot House
- H02 Guilford Historic Town Center
- H03 Pelatiah Leete House
- H04 Whitfield Historic District
- H05 Route 146 Historic District
- H06 Isaac C. Lewis Cottage
- H07 Norcross Brothers Granite Quarry
- H08 John Rogers House
- H09 Stick Style House at Stony Creek
- H10 Stony Creek-Thimble Islands Historic District

Parks:

- P01 Westwoods Trails
- P02 Stony Creek Quarry Preserve Trails
- P03 Shell Beach
- P04 Chittenden Park
- P05 Chaffinch Island State Park
- P06 Peddlers Park

Schools:

- S01 A.W. Cox Elementary School
- S02 Community Nursery School Inc.
- S03 KinderCare
- S04 YMCA

Church/Cemetery:

- C01 West Side Cemetery
- C02 Church of Christ
- C03 Church of Later-Day Saints

Scenic Roads:

- R01 State Route 146

NOTES:
1. Only year round visible areas are shown on the map utilizing a computer generated topography & vegetation analysis.
2. Vegetation limits were determined from CT DOT 2004 aerial photos and are assumed to be 65' high.
3. Topography was determined from USGS topography mapping.
4. Field verification of visual limits has not been determined at this time. Verification will occur at a later date when weather permits completion of an accurate balloon test.

Legend

- APPROXIMATE LOCATION OF PROPOSED 140' MONOPOLE
- APPROXIMATE LIMIT OF YEAR ROUND TOWER VISIBILITY
- APPROXIMATE LIMIT OF HISTORIC DISTRICT
- APPROXIMATE LIMIT OF TRAIL SYSTEM
- C# CHURCH/CEMETERY
- P# PARK
- H# HISTORICAL SITE
- S# SCHOOL
- TRAIL OR SCENIC ROAD

Visibility by Acreage

ITEM	APPROXIMATE ACRES	% OF TOTAL AREA
2 MILE RADIUS AREA	8,053	100%
NOT VISIBLE DUE TO TOPOGRAPHY	3,076.2	38.2%
NOT VISIBLE DUE TO VEGETATION	3,672.2	45.6%
VISIBLE YEAR ROUND	1,304.6	16.2%

2 MILE VIEWSHED ANALYSIS MAP

MOOSE HILL ROAD, GUILFORD, CT
VISUAL IMPACT ASSESSMENT

PREPARED FOR:

T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD
BLOOMFIELD, CT 06002
OFFICE: (860)-692-7100

PREPARED BY:

CHA
2139 Silas Deane Highway, Suite 212 · Rocky Hill, CT 06067-2336
Main: (860) 257-4557 · www.chacompanies.com

CHA Project No.
14957-2001-1601

DECEMBER 2009

0 625' 1250' 2500' 5000'

NORTH

FIGURE VS-01

EBI CONSULTING
www.ebiconsulting.com

December 22, 2009

Ms. Jamie Ford
Project Coordinator
HPC Development, LLC
53 Lake Ave Ext.
Danbury, CT 06811

Subject: National Environmental Policy Act (NEPA) - Letter of Low Potential Impact
CTNH805A / Amtrak Guilford
Moose Hill Road, Guilford, CT
EBI Project # 61096865

Dear Ms. Ford:

Attached please find our *National Environmental Policy Act (NEPA)* Letter of Low Potential Impact for the proposed telecommunications installation at the address noted above (the Subject Property). The purpose of this *letter is* to evaluate the above-referenced property for potential environmental and historical concerns specified by the Federal Communications Commission (FCC) in 47 CFR 1.1307.

As of the date of this *Report* T-Mobile Northeast, LLC, *T-Mobile* proposes to construct a 140-foot monopole-style telecommunications tower within a proposed 50-foot by 50-foot fenced compound within the proposed 50-foot by 60-foot lease area. T-Mobile will mount a total of nine antennas at a centerline height of 137-feet 9-inches above ground level to the proposed tower. Proposed support equipment will be placed on a 10-foot by 20-foot concrete slab at the base of the proposed tower within a fenced compound. The right-of-way will follow a portion of an existing gravel driveway and require the improvement of a new gravel driveway from the existing driveway to the proposed tower compound.

Although the proposed project is located near the Route 146 Historic District, the facility is not likely to have an adverse impact on this historic resource. The proposed facility is sited in a remote location near the Amtrak right-of-way with approximately 52' of the proposed monopole rising above the top of the tree canopy. EBI would, however, recommend that photo simulations be prepared to quantify the visual impact to the aforementioned historic district and other nearby historic resources.

Ultimately, based upon the results of our preliminary NEPA screening, it appears that the proposed facility would not impact any of the criteria outlined in 1.1307(a), items (1) through (8). An Environmental Assessment is not required. Prior to issuing our final determination, we must complete the Section 106 and Native American consultation required under Section 1.1307(a) (4) and (5) of the FCC Rules. However, our preliminary review and archaeological assessment indicates that it is unlikely that the proposed undertaking would impact listed historic resources and Native American religious sites.

Thank you for the opportunity to prepare this *Report,* and assist you with this project. Please call us if you have any questions or if we may be of further assistance.

Respectfully Submitted,

Michael Chun
Program Director
Direct# (646) 789-9206