APPLICATION FOR CONDITIONAL USE PERMIT

AND SITE PLAN APPROVAL

American Towers LLC
10 Presidential Way
Woburn, MA 01801

T-Mobile Northeast LLC
4 Sylvan Way
Parsippany, NJ 07054

c/o Daniel D. Klasnick, Esquire
Duval & Klasnick LLC
P.O. Box 254
Boxford, MA 01921

Property Location:

143 Dracut Road
Hudson, NH 03051

Map 259, Lot 011

Prepared by:

Daniel D. Klasnick, Esquire
Duval & Klasnick LLC

Telephone: 781-873-0021
Email: dklasnick@dkt-legal.com

Dated: February 12, 2021

DUVAL & KLASNICK LLC
COUNSELORS AT LAW

Daniel D. Klasnick
Licensed in Massachusetts, New Hampshire and New York
Desk: (781) 873-0021 - Mobile: (774) 249-2814
dklasnick@dkt-legal.com

February 12, 2021

Town of Hudson
Planning Board
12 School Street
Hudson, New Hampshire 03051

Re: Application for Conditional Use Permit and Site Plan Approval
143 Dracut Road, Hudson, NH

Dear Board Members:

Enclosed please the Application to the Planning Board for a Conditional Use Permit and Site Plan Approval to allow a proposed wireless telecommunications facility that is submitted on behalf of American Towers LLC and T-Mobile Northeast LLC.

In accordance with the Application requirements, please find enclosed the following:

- One (1) original and one (1) copy of the Application for Conditional Use Permit;
- One (1) original and one (1) copy of the Application for Site Plan Review;
- One (1) original and one (1) copy of the Project Narrative in Support of Applications;
- Abutter Notification List and two (2) sets of mailing labels;
- Check for the application fees of $480.00 plus the $73.55 cost for abutter notification in the amount of $553.55 payable to the Town of Hudson;
- Check for $1,250.00 for Consultant Review Fee (The amounts to be held in escrow with any excess returned about completion of the permitting process);
- A copy of the Assessors Card;
- Property Owner authorizing letter for application submission;
- Two (2) full size plan set and each ;
- Photo Simulations; and
- Supporting Documentation.

A copy of all of the above application materials, including plans, are being submitted in electronic form as a PDF on disk. A full paper copy of the application with a full size set of plans was submitted to the Town consultant: Steve Reichert, PE, Senior Project Manager, Fuss & O'Neill, Inc., The Gateway Bldg., 50 Commonwealth Street, Unit 25, Manchester, NH 03101 .

The Applicants would be happy to provide any additional information that you may require and would appreciate reasonable notice of any additional information you require in time to provide such information for the public hearing.

Should you require any additional information, please don't hesitate to contact me. Thank you very much for your cooperation.

Very truly yours,
DUVAL & KLASNICK LLC

By: Daniel D. Klasnick
Attorney at Law

CONDITIONAL USE PERMIT APPLICATION

Date of Application: **February 12, 2021** Tax Map #: **259** Lot #: **011**

Site Address: **143 Dracut Road**

Name of Project: **Hudson 3 NH**

Zoning District: **General 1 (G-1) and Residential 2 (R-2)** General CU#: _____
(For Town Use Only)

Z.B.A. Action: **Application filed for Special Exception**

PROPERTY OWNER:	DEVELOPER:
Name: **Tom and Rosa Chan Joshua and KristineWillett**	**American Towers LLC**
Address: **143 Dracut Road**	**c/o Duval & Klasnick LLC**
Address: **Hudson, NH 03051**	**P.O. Box 254, Boxford, MA 01921**
Telephone #	**(781) 873-0021**
Email:	**dklasnick@dkt-legal.com**
PROJECT ENGINEER:	**SURVEYOR:**
Name: **ATC Tower Services**	**Frank H. Wenz IV, Tectonic Engineering & Surveying**
Address: **3500 Regency Parkway, Suite 100**	**70 Pleasant Hill Road**
Address: **Cary, NC 27518**	**Mountainville, NY 10953**
Telephone # **(781) 873-0021**	**(781) 873-0021**
Email: **dklasnick@dkt-legal.com**	**dklasnick@dkt-legal.com**

PURPOSE OF PLAN:

Proposed 155-foot camouflaged "monopine" tower with T-Mobile antennas , associated 48' x 48' fenced ground area for carrier equipment with access from Dracut Road over existing paved driveway to proposed crushed stone driveway to the locked entrance gate and underground utilities . (Please see attached Project Brief and Exhibits)

(For Town Use Only)

Routing Date: _____ Deadline Date: _____ Meeting Date: _____

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____
(Initials)

Department:

Zoning: ___ Engineering: ___ Assessor: ___ Police: ___Fire: ___ DPW: ___ Consultant: ___

CONDITIONAL USE PERMIT APPLICATION AUTHORIZATION

I hereby apply for *Conditional Use Permit* Review and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the *Conditional Use Permit* specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s) by the filing of this application as indicated above, hereby given permission for any member of the Hudson Planning Board, the Town Planner, the Town Engineer, and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim to or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: **Please see attached Letter of Authorization** Date: _____

Print Name of Owner: **Tom W. and Rosa C. Chan/Joshua M. and Kristine C. Willett**

- If other than an individual, indicate name of organization and its principal owner, partners, or corporate officers.

Signature of Developer: **/s/ Daniel D. Klasnick** Date: **February 12, 2021**

Print Name of Developer: **Daniel D. Klasnick, Esquire attorney for the Applicants**

- The developer/individual in charge must have control over all project work and be available to the Code Enforcement Officer/Building Inspector during the construction phase of the project. The individual in charge of the project must notify the Code Enforcement Officer/Building Inspector within two (2) working days of any change.

SCHEDULE OF FEES

A. REVIEW FEES:

1. Conditional Use Permit
   $100 Flat Fee $ 100.00

CONSULTANT REVIEW FEE: (If Applicable - Separate Check)

Total _____ acres @ $600.00 per acre, or $1,250.00, whichever is greater. $_____

This is an estimate for cost of consultant review. The fee is expected to cover the amount. A complex project may require additional funds. A simple project may result in a refund.

LEGAL FEE:

The applicant shall be charged attorney costs billed to the Town for the Town's attorney review of any application plan set documents.

B. POSTAGE:

_____ Direct Abutters @$4.10 (or Current Certified Mail Rate) $_____

_____ Indirect Abutters (property owners within 200 feet) @$0.55 (or Current First Class Rate) $_____

TOTAL $ **100.00**

(For Town Use)

AMOUNT RECEIVED: $_____ DATE RECEIVED: _____

RECEIPT NO.: _____ RECEIVED BY: _____

NOTE: fees below apply only upon plan approval, not collected at time of application.

F. RECORDING FEES:

The applicant shall pay the costs of recording the final site plan layout prior to final site plan approval, in accordance with fees established by the County. Recording fees must be paid prior to recording.

Recording of Plan @ $24.00/sheet + $2.00/surcharge plan
Land & Community Heritage Investment Program (LCHIP) fee @ $25.00
Easements/Agreements @$10.00/first sheet, $4.00/each sheet thereafter +
$2.00/surcharge/doc. + First Class return postage rate

G. COST ALLOCATION PROCEDURE AMOUNT CONTRIBUTION AND OTHER IMPACT FEE PAYMENTS:

To be determined by the Planning Board at time of plan approval and shall be paid by the applicant at the time of submittal of the Certificate of Occupancy Permit requests.

*****The applicant shall be responsible for all fees incurred by the town for processing and review of the applicant's application, plan and related materials.*****

SITE PLAN APPLICATION

Date of Application: **February 12, 2021** Tax Map #: **259** Lot #: **011**

Site Address: **143 Dracut Road**

Name of Project: **Hudson 3 NH**

Zoning District: **General 1 (G-1) and Residential 2 (R-2)** General SP#: _____
(For Town Use Only)

Z.B.A. Action: **Application Filed for Special Exception**

PROPERTY OWNER:	DEVELOPER:
Name: **Tom and Rosa Chan Joshua and Kristine Willett**	**American Towers LLC**
Address: **143 Dracut Road**	**c/o Duval & Klasnick LLC**
Address: **Hudson, NH 03051**	**P.O. Box 254, Boxford, MA 01921**
Telephone # _____	**(781) 873-0021**
Email: _____	**dklasnick@dkt-legal.com**
PROJECT ENGINEER:	**SURVEYOR:**
Name: **ATC Tower Services**	**Frank H. Wenz IV, Tectonic Engineering & Surveying**
Address: **3500 Regency Parkway, Suite 100**	**70 Pleasant Hill Road**
Address: **Cary, NC 27518**	**Mountainville, NY 10953**
Telephone # **(781) 873-0021**	**(781) 873-0021**
Email: **dklasnick@dkt-legal.com**	**dklasnick@dkt-legal.com**

PURPOSE OF PLAN:

Proposed 155-foot camouflaged "monopine" tower with T-Mobile antennas, associated 48' x 48' fenced ground area for carrier equipment with access from Dracut Road over exiting paved driveway to proposed crushed stone driveway to the locked entrance gate and underground utilities. (Please see attached Project Brief and Exhibits)

(For Town Use Only)

Routing Date: _____ Deadline Date: _____ Meeting Date: _____

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____
(Initials)

Department:

Zoning: ___ Engineering: ___ Assessor: ___ Police: ___Fire: ___ DPW: ___ Consultant: ___

SITE DATA SHEET

PLAN NAME: **Hudson 3 NH**

PLAN TYPE: SITE PLAN

LEGAL DESCRIPTION: MAP **259** LOT **011**

DATE: **February 12, 2021**

Location by Street: **143 Dracut Road**

Zoning: **General 1 (G-1) and Residential 2 (R-2)**

Proposed Land Use: **Wireless Telecommunications Facility**

Existing Use: **Residential, Office**

Surrounding Land Use(s): **Primarily residential**

Number of Lots Occupied: **One**

Existing Area Covered by Building: **3,507 square feet**

Existing Buildings to be removed: **None**

Proposed Area Covered by Building: **None**

Open Space Proposed: **Not Applicable**

Open Space Required: **Not Applicable**

Total Area: S.F.: **2,500** Acres: _____

Area in Wetland: **None** Area Steep Slopes: **Nonw**

Required Lot Size: **2 acres**

Existing Frontage: **No Change**

Required Frontage: **150 feet (R-1)/200 Feet (G-1)**

Building Setbacks:	Required*	Proposed
Front:	**50'**	**233'-6"**
Side:	**15'**	**16'-0"**
Rear:	**15'**	**748'-2"**

SITE DATA SHEET
(Continued)

Flood Zone Reference: **Zone X**

Width of Driveways: **30 feet**

Number of Curb Cuts: **None**

Proposed Parking Spaces: **One**

Required Parking Spaces: **Not Applicable**

Basis of Required Parking (Use): **Not Applicable**

Dates/Case #/Description/Stipulations of ZBA, Conservation Commission, NH Wetlands Board Actions:
(Attach stipulations on separate sheet)

Filed Application for Special Exception

January 4, 2021

Waiver Requests

Town Code Reference:	*Regulation Description:*
Please see attached Waiver Requests	

(For Town Use Only)

Data Sheets Checked By: _____ Date: _____

SITE PLAN APPLICATION AUTHORIZATION

I hereby apply for *Site Plan* Review and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the *Site Plan* specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s) by the filing of this application as indicated above, hereby given permission for any member of the Hudson Planning Board, the Town Planner, the Town Engineer, and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim to or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: **Please see Letter of Authorization** Date:_____

Print Name of Owner:**Tom W. and Rosa C. Chan/Joshua M. & Kristine C. Willett**

- If other than an individual, indicate name of organization and its principal owner, partners, or corporate officers.

Signature of Developer: **/s/ Daniel D. Klasnick** Date:**February 12, 2021**

Print Name of Developer:**Daniel D. Klasnick, Esquire attorney for the applicants**

- The developer/individual in charge must have control over all project work and be available to the Code Enforcement Officer/Building Inspector during the construction phase of the project. The individual in charge of the project must notify the Code Enforcement Officer/Building Inspector within two (2) working days of any change.

WAIVER REQUEST FORM

Name of Subdivision/Site Plan: **Hudson 3 NH**

Street Address: **143 Dracut Road**

I **Daniel D. Klasnick Esquire** hereby request that the Planning Board waive the requirements of item **Please see attachment** of the Hudson Land Use Regulations in reference to a plan presented by **American Towers LLC and T-Mobile Northeast LLC**

American Tower Services (name of surveyor and engineer) dated **11/17/20** for property tax map(s) **259** and lot(s) **011** in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e., without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Land Use Regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

Please see attachment

Reason(s) for granting this waiver, relative to not being contrary to the spirit and intent of the Land Use Regulations: (if additional space is needed please attach the appropriate documentation hereto):

Please see attachment

Signed:

/s/ Daniel D. Klasnick, Esquire

Applicant or Authorized Agent

APPLICATION FOR COMMERCIAL WIRELESS TELECOMMUNICATIONS FACILITY

REQUEST FOR WAIVERS STATEMENT

APPLICANT: American Towers LLC

CO-APPLICANT: T-Mobile Northeast LLC

SITE ADDRESS: 143 Dracut Road

PARCEL NO: 259-011

ZONING DISTRICT: General 1 (G-1) and Residential 2 (R-2)

I. OVERVIEW

The applicants, American Towers LLC and T-Mobile Northeast, LLC, requests that the Planning Board of the Town of Hudson approve the application for a Conditional Use Permit and Site Plan Review for the proposed commercial wireless telecommunications facility.

The Applicant requests waivers pursuant Zoning Ordinance, Land Use Regulations, Site Plan Review Regulations and RSA 674:44 III(e) because of the proposed commercial wireless telecommunications facility and the existing site conditions at the property satisfies the standards for the Planning Board to review and approve the application for a wireless installation pursuant to the Ordinance and Regulations of the Town of Hudson.

The zoning drawing which are titled, "SITE NAME: HUDSON 3 NH, SITE NUMBER: 202096, SITE ADDRESS: 143 DRACUT ROAD, HUDSON, NH 33011" prepared by ATC Tower Services, Project Brief and Exhibits provides sufficient project details to allow the Planning Board to review and approve the applications for conditional use permit and site plan review.

II. WAIVERS REQUESTED AND BRIEF EXPLANATION

As pertains to the application for the Commercial Wireless Telecommunication Facility, the regulations and RSA 674:44 III(e) states that the Planning Board may as appropriate, waive any of the submission requirements based upon a written request of the applicant submitted at the time of application. A waiver of any submission requirement may be granted only if the Planning Board determines that due to special circumstances of the application, the information is unnecessary, would not violate the purpose of the requirement, granting the waiver would be beneficial and the requirement poses an unnecessary hardship to the Applicants.

In accordance with the Town of Hudson regulations, the Applicants have included a Subdivision/Site Plan Waiver Request Form that due to special circumstances of the application, the information is unnecessary, would not violate the purpose of the requirement, granting the waiver would be beneficial and the requirement poses an unnecessary hardship to the Applicants for the following provisions:

Site Plan Review Codes and Administrative Requirements and Definitions

- HR 275-9.A Stormwater Management Plan. Applicant requests a waiver of the requirement to complete a Stormwater Management Plan. The plans contain considerable detail regarding grading, erosion control and stormwater infrastructure to allow for review and comments, based upon the relatively limited ground disturbance and impervious surface associated with the Project.
- HR 275-9.B. Traffic Study. Applicants request a waiver of the requirement to complete a traffic study. The Facility will be unmanned and will generate no increase in traffic resulting from the approximate 1 or 2 month construction period. Once constructed, the Facility will generate on average 1 to 2 maintenance visits per month.
- HR 275-9.C. Noise Study. The Facility will generate negligible levels of noise that are consistent with typical residential use. No generator is proposed for the Facility.
- HR 275-9.D. Fiscal Impact Study. The Applicants request a waiver of the requirement to complete a fiscal impact study. The Project will not significantly affect the public infrastructure or municipal services, since no potable water supply or wastewater disposal are proposed as part of the Project. Moreover, the Facility will be unmanned. Maintenance will generate an average of one to two trips per month.
- HR 275-9.G. Copy of all applicable Town, state, county or federal approvals or permits. Applicants request that the Planning Board waive the requirement to provide copies of applicable permits. With respect to the Facility, Applicants have filed for a special exception with the Zoning Board of Adjustment and concurrent site plan/conditional use approval. The Project is undergoing review in accordance with the requirements of Section 106 of the Federal National Environmental Policy Act ("NEPA").
- HR 275-9.I. Environmental Impact Study. Applicants request a waiver of the requirement to complete a separate environmental impact study because the project will have minimal impact and, in any event, the requirements are consistent with the NEPA requirements for new communication towers.

- HR 276-11.1.B.(12). Location of Building Setback Lines. Applicants request a waiver of the requirement to show building setback lines because the Facility does not involve the construction of buildings, parking or display areas within the minimum 100' building setbacks for the G-1 Zoning District.
- HR 276-11.1.B.(17). Permanent Monuments. Applicants request a waiver of this requirement because a survey of American Tower's leased area and access utility easements with bearings was included as part of the site plans. The Site Plan does include a legal description of the parent parcel and shows the parent parcel boundaries. Given that the Facility will only occupy a small portion (50' x 50' lease area) of the Property, a survey of the parent parcel is unduly burdensome.
- HR 276-11.1.B.(20). Location of all Existing Buildings (including size and height). Applicant requests a waiver of the requirement to include the size and height of all existing buildings. The plans show the relative location and square footage of the existing buildings on the Property. The inclusion of further detail would not tend to assist the Board in its review of the proposed installation of the Facility.
- HR 276-11.1.B(25). Access Road within side yard setbacks. Applicants request a waiver. To access the Facility, the Applicants will be utilizing the existing driveway without alteration and then installing a driveway extension to the fenced area.
- HR 290-7. Stormwater Management Plan. Applicant requests a waiver of the requirement to complete a Stormwater Management Plan. The plans contain considerable detail regarding grading, erosion control and stormwater infrastructure to allow for review and comments, based upon the relatively limited ground disturbance and impervious surface associated with the Project.

Pursuant to the regulations and RSA 674:44 III(e), the Planning Board may waive any of the foregoing provisions when in the opinion of the Planning Board due to special circumstances of the application, the information is not required to determine compliance with the standards of the Ordinance and would result in unnecessary hardship to the applicant.

American Tower is committed to working with local communities in siting and construction of its antenna facilities. Because of American Tower's desire to be a good neighbor and establish long-term relationships, American Tower makes every effort to identify potential community concerns and incorporate all appropriate mitigation measures in the site selection process.

The location of the camouflaged monopole pine tree tower installation is an integral part of T-Mobile's network of telecommunications facilities necessary to provide adequate coverage to those persons living in Hudson, as well as those persons commuting

through the Hudson area on the various roadways. If T-Mobile is permitted to install the equipment detailed herein, this will aid in reaching T-Mobile's goal to provide enhanced service and communications in the Town of Hudson, the State of New Hampshire and the United States as a whole.

Based on the analysis of the application, project brief, exhibits and materials, Applicants' requested waivers should also be allowed based upon the considerations of the Telecommunications Act of 1996, ("TCA") codified at 47 USC§332(c)(7), which requires that zoning decisions do not prohibit the provision of wireless services.

American Tower has prepared plans, photo simulations and supporting materials which accurately depict the property and location of the camouflaged commercial wireless telecommunication tower on property. Due to the size and scope of the proposed camouflaged commercial wireless telecommunications tower, American Tower believes that the Plans, Project Brief, and other documents submitted meet the requirements to the extent applicable to this proposal. To the extent the Board believes that the provided Plans, photo simulations and supporting materials do not comply with the requirements, the additional detail will not tend to provide substantive assistance to the Board and therefore the Applicant requests a waiver from any such requirements.

III. SUMMARY

The Applicants' plans and supporting documentation, as submitted, are sufficient for review by the Planning Board to determine whether to grant the conditional use permit and site plan approval with all waivers requested.

SCHEDULE OF FEES

A. REVIEW FEES:

1. **Site Plan Use**	**Project Size/Fee**	
Multi-Family	$105.00/unit for 3-50 units $78.50/unit for each additional unit over 50	$_____
Commercial/Semi Public/Civic or Recreational	$157.00/1,000 sq. ft. for first 100,000 sq.ft. (bldg. area): $78.50/1,000 sq.ft. thereafter.	$_____
Industrial	$150.00/1,000 sq.ft for first 100,000 sq.ft. (bldg. area); $78.50/1,000 sq.ft thereafter.	$_____
No Buildings	$30.00 per 1,000 sq.ft. of proposed developed area	$**90.00**

CONSULTANT REVIEW FEE: (Separate Check)

Total _____ acres @ $600.00 per acre, or $1,250.00, whichever is greater. $**1,250.00**

This is an estimate for cost of consultant review. The fee is expected to cover the amount. A complex project may require additional funds. A simple project may result in a refund.

LEGAL FEE:

The applicant shall be charged attorney costs billed to the Town for the Town's attorney review of any application plan set documents.

(continued on next page)

SCHEDULE OF FEES
(Continued)

B. POSTAGE:

17	Direct Abutters @$4.10 (or Current Certified Mail Rate)	$ 69.70
7	Indirect Abutters (property owners within 200 feet) @$0.55 (or Current First Class Rate)	$ 3.85

C. ON SITE SIGNAGE: $ 15.00

D. ADVERTISING: (PUBLIC NOTICE) per notification, per hearing $ 80.00

E. TAX MAP UPDATING FEE: (FLAT FEE) $ 275.00

TOTAL $ **1,703.55**

(For Town Use)

AMOUNT RECEIVED: $_____ DATE RECEIVED: _____

RECEIPT NO.: _____ RECEIVED BY: _____

NOTE: fees below apply only upon plan approval, not collected at time of application.

F. RECORDING FEES:

The applicant shall pay the costs of recording the final site plan layout prior to final site plan approval, in accordance with fees established by the County. Recording fees must be paid prior to recording.

Recording of Plan @ $24.00/sheet + $2.00/surcharge plan
Land & Community Heritage Investment Program (LCHIP) fee @ $25.00
Easements/Agreements @$10.00/first sheet, $4.00/each sheet thereafter + $2.00/surcharge/doc. + First Class return postage rate

G. COST ALLOCATION PROCEDURE AMOUNT CONTRIBUTION AND OTHER IMPACT FEE PAYMENTS:

To be determined by the Planning Board at time of plan approval and shall be paid by the applicant at the time of submittal of the Certificate of Occupancy Permit requests.

*****The applicant shall be responsible for all fees incurred by the town for processing and review of the applicant's application, plan and related materials.*****

AMERICAN TOWER
CORPORATION

December 16, 2020

Town of Hudson
12 School Street
Hudson, NH 03051

American Tower Corporation: Wireless Communications Facility Project in Hudson, NH - **Statement of Authorization for Legal Representative to File Applications**

To Whom It May Concern:

This letter is written in connection with a proposal by American Tower Corporation ("ATC") to install a new wireless telecommunications facility consisting of a 155' monopine tower and compound at 143 Dracut Road, Hudson, NH, 03051.

By this letter, and in accordance with the Town of Hudson Zoning Ordinance, you are hereby notified that ATC's duly authorized legal representative is Daniel D. Klasnick. ATC authorizes Daniel D. Klasnick to apply for any necessary zoning petitions, permits or any other approvals, including but not limited to the filing of a building permit application, which is necessary for the installation of the wireless telecommunications facility at the above referenced property.

Sincerely,

American Tower Corporation

Gregory Csapo
Project Manager, Site Development
American Tower Corporation
3500 Regency Parkway, Suite 100
Cary, NC 27518
919-749-6927 Cell
gregory.csapo@americantower.com

T-Mobile Northeast LLC, a subsidiary of T-Mobile USA, Inc.

15 Commerce Way, Suite B
Norton, MA 02766
Attn.: Pamela Palmer

December 16, 2020

Town of Hudson
12 School Street
Hudson, NH 03051

Re: Wireless Communications Facility Project in Hudson, NH - 143 Dracut Road, Hudson, NH

Dear Sir or Madam:

This letter is submitted in support of the application for a new camouflaged ("monopine") personal wireless service facility ("Tower") at 143 Dracut Road, Hudson, NH, 03051.

T-Mobile Northeast LLC ("T-Mobile") is under agreement with American Tower Corporation ("ATC"), to collocate on the proposed Tower upon approval. T-Mobile has signed a confidential Site Lease Agreement with ATC and joins in the permitting applications for the installation of the Tower. The preparation of the permitting applications and representation before the town boards, committees and commissions will be by Daniel D. Klasnick, Esq. of Duval & Klasnick LLC.

The proposed Tower will be a necessary part of T- Mobile's network. T-Mobile has provided ATC with its coverage plots in support of the proposed Tower.

Sincerely,

Pamela Palmer
Project Manager, T-Mobile
Engineering Department

259	011	000	1 of 2	RESIDENTIAL	Total Card / Total Parcel
MAP	LOT	SUB	CARD	*Hudson*	APPRAISED: 517,600/ 772,900
					USE VALUE: 517,600/ 772,900
					ASSESSED: 517,600/ 772,900

PROPERTY LOCATION

No	Alt No	Direction/Street/City
143		DRACUT RD, HUDSON

OWNERSHIP

Unit #:

Owner 1:	CHAN, ROSA C.
Owner 2:	CHAN, TOM W.
Owner 3:	
Street 1:	143 DRACUT RD
Street 2:	
Twn/City:	HUDSON
St/Prov:	NH Cntry: Own Occ:
Postal:	03051 Type:

PREVIOUS OWNER

Owner 1:	CHAN, ROSA C. -
Owner 2:	CHAN, TOM W. -
Street 1:	143 DRACUT RD
Twn/City:	HUDSON
St/Prov:	NH Cntry:
Postal:	03051

NARRATIVE DESCRIPTION

This parcel contains 11.816 ACRES of land mainly classified as RES-COMM with a RANCH Building built about 2004, having primarily VINYL Exterior and 2739 Square Feet, with 1 Unit, 2 Baths, 2 3/4 Baths, 1 HalfBath, 9 Rooms, and 4 Bdrms.

OTHER ASSESSMENTS

Code	Descrip/No	Amount	Com. Int

IN PROCESS APPRAISAL SUMMARY

Use Code	Land Size	Building Value	Yard Items	Land Value	Total Value
101	11.316	392,400	20,500	57,200	470,100
338	0.500			47,500	47,500
Total Card	11.816	392,400	20,500	104,700	517,600
Total Parcel	11.816	499,900	168,300	104,700	772,900

Source: Market Adj Cost | Total Value per SQ unit /Card: 188.97 | /Parcel: 220.39

Legal Description

Entered Lot Size: Total Land: 11.816

Land Unit Type: AC

User Acct: 2569

GIS Ref:

GIS Ref:

Insp Date: 05/05/10

PREVIOUS ASSESSMENT

Parcel ID: 259-011-000

Tax Yr	Use	Cat	Bldg Value	Yrd Items	Land Size	Land Value	Total Value	Asses'd Value	Notes	Date
2020	013	FV	499,900	168300	11.816	104,700	772,900	772,900	Year End Roll	8/27/2020
2020	013	JB	499,900	168300	11.816	104,700	772,900	772,900	Year End Roll	5/6/2020
2019	013	FV	499,900	168300	11.816	104,700	772,900	772,900	Year End Roll	9/16/2019
2019	013	JB	499,900	168300	11.816	104,700	772,900	772,900	Year End Roll	5/8/2019
2018	013	FV	499,900	162700	11.816	104,700	767,300	767,300	Year End Roll	8/27/2018
2018	013	JB	499,900	162700	11.816	104,700	767,300	767,300	Year End Roll	5/9/2018
2017	013	FV	499,900	162700	11.816	104,700	767,300	767,300	Year End Roll	10/26/2017
2017	013	PV	499,900	162700	11.816	104,700	767,300	767,300	Year End Roll	8/28/2017

!178!

PRINT

Date	Time
12/17/20	11:37:33

LAST REV

Date	Time
08/19/20	12:59:09
amym	
178	

USER DEFINED

Prior Id # 1:	0003
Prior Id # 2:	0006
Prior Id # 3:	0000
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
ASR Map:	
Fact Dist:	
Reval Dist:	
Year:	
LandReason:	
BldReason:	
CivilDistrict:	
Ratio:	

SALES INFORMATION

TAX DISTRICT: PAT ACCT.

Grantor	Legal Ref	Type	Date	Sale Code	Sale Price	V	Tst	Verif	Notes
CHAN, ROSA C. ,	9065-0322	6	4/6/2018	EASEMENT		No	No		
143 DRACUT ROAD	8643-2424	1	2/27/2014		675,000	No	No		
MANIFEST CAPITA	8459-1539	5	8/16/2012	FORECLOSURE	400,000	No	No		
KAZANJIAN, MICH	8396-2795	1	2/14/2012	BUSINESS		No	No		
DUBE, RAYMOND J	7313-0217	1	9/3/2004		450,000	No	No		
DUBE, RAYMOND J	6427-2519		5/22/2001	FAMILY TRANS		No	No		
DUBE, MICHAEL	5770-0510		11/22/1996	UNCLASSIFIED		No	No		
	4244-0071		6/24/1987			No	No		

BUILDING PERMITS

Date	Number	Descrip	Amount	C/O	Last Visit	Fed Code	F. Descrip	Comment
8/5/2020	2020-00683-	ELECTRIC		C				
8/4/2020	2020-00683	SOLAR	99,000	O				
3/25/2015	2015-00218	ELECTRIC	200	C				2 METER SETS
5/11/2010	2005-00044	CERT OCC		C				CO ISSUED
8/24/2007	2007-375	IN-GRND	7,500	C				20X40 POOL
8/21/2007	2007-103	GARAGE	5,000	C				

ACTIVITY INFORMATION

Date	Result	By	Name
1/4/2019	Permit Visit	12	TECH ASMNT
3/16/2018	Field Review	12	TECH ASMNT
6/21/2017	Field Review	9	PVA
6/4/2014	Sale Data VI	12	TECH ASMNT
5/22/2014	Sale Data V	12	TECH ASMNT
6/27/2011	Measured	14	APPR TECH 4
5/5/2010	Bldg Inacc	12	TECH ASMNT
10/10/2008	Left Notice	8	ASMNT TECH I
2/15/2008	Permit Visit	10	APPRAISER II

Sign: RESPECTFUL OF VISIT NOT DATA ___/___/___

PROPERTY FACTORS

Item	Code	Description	%	Item	Code	Description
Z	G1	GENERAL	90	water	9	PRIV WATER
o	R2	RESD TWO	10	Sewer	0	SEPTIC
n				Electri		
Census:				Exmpt		
Flood Haz:	C					
D				Topo	4	ROLLING
s				Street		
t				Gas:		

LAND SECTION (First 7 lines only)

Use Code	Description	LUC Fact	No of Units	Depth / PriceUnits	Unit Type	Land Type	LT Factor	Base Value	Unit Price	Adj	Neigh	Neigh Influ	Neigh Mod	Infl 1	%	Infl 2	%	Infl 3	%	Appraised Value	Alt Class	%	Spec Land	J Code	Fact	Use Value	Notes
101	ONE FAMILY		1		SITE	ACRE		0	95,000.	1.00	RD									95,000	338	50				95,000	
101	ONE FAMILY		10.816		EXCESS	ACRES		0	4,000.	0.22	RD			WET/LOW	-50	RESTRIC	-50			9,734						9,700	LOC/SHAPE

Total AC/HA:	11.81600	Total SF/SM:	514705	Parcel LUC:	013	RES-COMM	Prime NB Desc	C-GENERAL	Total:	104,734	Spl Credit		Total:	104,700

EXTERIOR INFORMATION

Type:	19 - RANCH		
Sty Ht:	1 - ONE STY		
(Liv) Units:	1	Total:	1
Foundation:	1 - CONCRETE		
Frame:	1 - WOOD		
Prime Wall:	04 - VINYL		
Sec Wall:			%
Roof Struct:	2 - HIP		
Roof Cover:	1 - ASPH SHING		
Color:	WHITE		
View / Desir:			

GENERAL INFORMATION

Grade:	B+ - GOOD/VG		
Year Blt:	2004	Eff Yr Blt:	
Alt LUC:		Alt %:	
Jurisdict:		Fact:	
Const Mod:			
Lump Sum Adj:			

INTERIOR INFORMATION

Avg Ht/FL:	STD		
Prim Int Wal	1 - DRYWALL		
Sec Int Wall:			%
Partition:	T - TYPICAL		
Prim Floors:	03 - HARDWOOD		
Sec Floors:	04 - CARPET	10	%
Bsmnt Flr:	12 - CONCRETE		
Subfloor:			
Bsmnt Gar:			
Electric:	3 - TYPICAL		
Insulation:	2 - TYPICAL		
Int vs Ext:	S		
Heat Fuel:	1 - OIL		
Heat Type:	1 - FORCED AIR		
# Heat Sys:	2		
% Heated:	100	% AC:	100
Solar HW:	NO	Central Vac:	NO
% Com Wal		% Sprinkled	100

BATH FEATURES

Full Bath:	1	Rating:	VERY GOOD
A Bath:	1	Rating:	GOOD
3/4 Bath:	1	Rating:	GOOD
A 3QBth:	1	Rating:	VERY GOOD
1/2 Bath:	1	Rating:	GOOD
A HBth:		Rating:	
OthrFix:	4	Rating:	AVERAGE

OTHER FEATURES

Kits:	1	Rating:	VERY GOOD
A Kits:		Rating:	
Frpl:	3	Rating:	AVERAGE
WSFlue:		Rating:	

CONDO INFORMATION

Location:	
Total Units:	
Floor:	
% Own:	
Name:	

DEPRECIATION

Phys Cond:	GD - Good	13.	%
Functional:	O - OVERBUIL	20.	%
Economic:			%
Special:			%
Override:			%
	Total:	31.04	%

CALC SUMMARY

Basic $ / SQ:	105.00
Size Adj.:	0.82858706
Const Adj.:	0.99863768
Adj $ / SQ:	86.883
Other Features:	46904
Grade Factor:	1.38
NBHD Inf:	1.00000000
NBHD Mod:	
LUC Factor:	1.00
Adj Total:	569041
Depreciation:	176630
Depreciated Total:	392410

COMMENTS

HEATED POOL; FLA HAS ELECTRIC HEAT; OTHRFIX = FLA SINK, POOLSIDE SHOWER & TOILET, OUTSIDE SINK. FLA IS APT- LIKE WITH NO KITCHEN./plan #39628 , site plan for new cell tower, created new lot 11-1, plan expired in 2020 per ZA.

RESIDENTIAL GRID

1st Res Grid	Desc: Line 1	# Units	1

Level	FY	LR	DR	D	K	FR	RR	BR	FB	HB	L	O
Other												
Upper												
Lvl 2												
Lvl 1												
Lower												

Totals	RMs: 9	BRs: 4	Baths: 1	HB 1

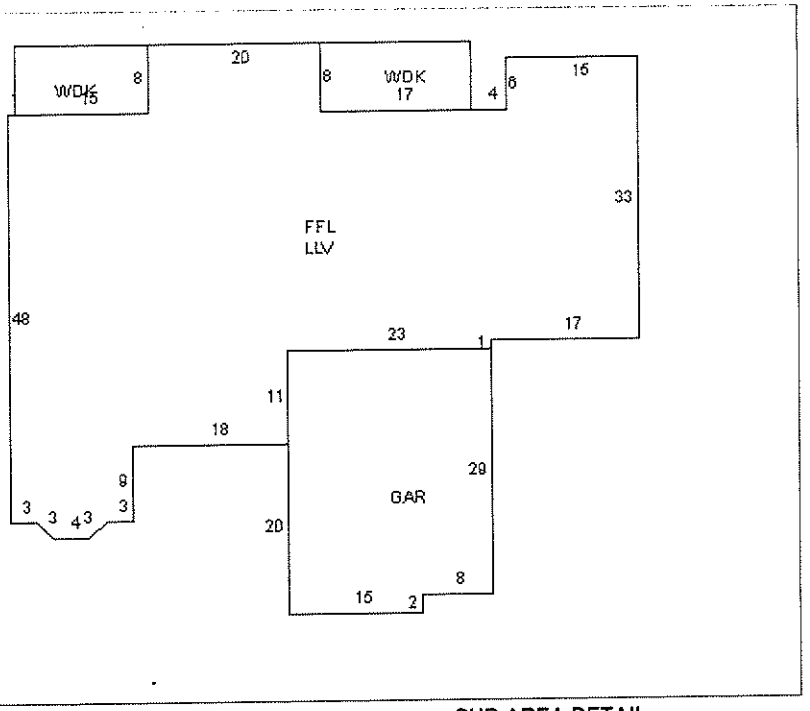
REMODELING

Exterior:	
Interior:	
Additions:	
Kitchen:	
Baths:	
Plumbing:	
Electric:	
Heating:	
General:	

RES BREAKDOWN

No Unit	RMS	BRS	FL
1	9	4	1
Totals			
1	9	4	

SKETCH



SUB AREA

Code	Description	Area - SQ	Rate - AV	Undepr Value
FFL	FIRST FLOOR	2,739	86.880	237,973
LLV	LOWER LEVEL	2,739	36.860	100,960
GAR	GARAGE	697	32.530	22,672
WDK	WOOD DECK	256	15.000	3,839

SUB AREA DETAIL

Sub Area	% Usbl	Descrip	% Type	Qu	# Ten
LLV	100 FLA		85 EX		

COMPARABLE SALES

Rate	Parcel ID	Typ	Date	Sale Price

WtAv$/SQ:		AvRate:		Ind.Val	

Juris. Factor:		Before Depr:	119.90
Special Features:	0	Val/Su Net:	61.02
Final Total:	392400	Val/Su SzAd	143.26

Net Sketched Area:	6,431	Total:	365,444
Size Ad	2739	Gross Area	6431	FinArea	2739
---	---	---	---	---	---

IMAGE

AssessPro Patriot Properties, Inc

MOBILE HOME

Make:		Model:		Serial #		Year:		Color:	

PARCEL ID 259-011-000

SPEC FEATURES/YARD ITEMS

Code	Description	A	Y/S	Qty	Size/Dim	Qual	Con	Year	Unit Price	D/S	Dep	LUC	Fact	NB Fa	Appr Value	JCod	JFact	Juris. Value
11	POOL-VINYL	D	Y	1	20X40	GD	AV	2007	50.12	T	80	101			8,000			8,000
19	PATIO	D	Y	1	20x40	AV	AV	2010	6.16	T	10.5	101			4,400			4,400
2	SHED-WOOD	D	Y	1	12X12	GD	GD	2010	29.08	T	40	101			2,500			2,500
14G	GAZEBO	D	Y	1	10x10	EX	EX	2017	56.20	T	0.5	101			5,600			5,600

More:	N	Total Yard Items:	20,500	Total Special Featues:		Total:	20,500

259	011	000	2 of 2	COMMERCIAL	Hudson
MAP	LOT	SUB	CARD		

	Total Card /	Total Parcel
APPRAISED:	255,300/	772,900
USE VALUE:	255,300/	772,900
ASSESSED:	255,300/	772,900

PROPERTY LOCATION

No	Alt No	Direction/Street/City
143		DRACUT RD, HUDSON

OWNERSHIP

Unit #:

Owner 1:	CHAN, ROSA C.
Owner 2:	CHAN, TOM W.
Owner 3:	
Street 1:	143 DRACUT RD
Street 2:	
Twn/City:	HUDSON
St/Prov:	NH
Cntry:	
Own Occ:	
Postal:	03051
Type:	

PREVIOUS OWNER

Owner 1:	
Owner 2:	
Street 1:	
Twn/City:	
St/Prov:	
Cntry:	
Postal:	

NARRATIVE DESCRIPTION

This parcel contains 11.816 ACRES of land mainly classified as RES-COMM with a OFFICE Building built about 2004, having primarily VINYL Exterior and 768 Square Feet, with 0 Unit, 0 Bath, 0 3/4 Bath, 2 HalfBaths, 0 Rooms, and 0 Bdrm.

OTHER ASSESSMENTS

Code	Descrip/No	Amount	Com. Int

IN PROCESS APPRAISAL SUMMARY

Use Code	Land Size	Building Value	Yard Items	Land Value	Total Value
340	0.000	107,500	147,800		255,300
Total Card	0.000	107,500	147,800		255,300
Total Parcel	11.816	499,900	168,300	104,700	772,900

Source: Market Adj Cost | Total Value per SQ unit /Card: 332.42 | /Parcel: 220.39

Legal Description

Entered Lot Size	
Total Land:	11.816
Land Unit Type:	AC

User Acct	2569
GIS Ref	
GIS Ref	
Insp Date	06/27/11

Patriot Properties Inc.

PREVIOUS ASSESSMENT

Parcel ID: 259-011-000

Tax Yr	Use	Cat	Bldg Value	Yrd Items	Land Size	Land Value	Total Value	Asses'd Value	Notes	Date

!178!

PRINT

Date	Time
12/17/20	11:37:37

LAST REV

Date	Time
06/26/17	06:54:00
jmichaud	
178	

USER DEFINED

Prior Id # 1:	0003
Prior Id # 2:	0006
Prior Id # 3:	0000
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
ASR Map:	
Fact Dist:	
Reval Dist:	
Year:	
LandReason:	
BldReason:	
CivilDistrict:	
Ratio:	

SALES INFORMATION

TAX DISTRICT

PAT ACCT.

Grantor	Legal Ref	Type	Date	Sale Code	Sale Price	V	Tst	Verif	Notes

BUILDING PERMITS

Date	Number	Descrip	Amount	C/O	Last Visit	Fed Code	F. Descrip	Comment

ACTIVITY INFORMATION

Date	Result	By	Name
6/21/2017	Field Review	9	PVA
6/4/2014	Sale Data VI	12	TECH ASMNT
6/27/2011	Meas. Denied	14	APPR TECH 4
2/15/2008	Permit Visit	10	APPRAISER II
6/8/2007	Measured	6	RB
9/20/1990	Inspected	2	AVITAR

Sign: [illegible] __/__/__

PROPERTY FACTORS

Item	Code	Description	%	Item	Code	Description
Z	G1	GENERAL	90	water		
o	R2	RESD TWO	10	Sewer		
n				Electri		
Census:				Exmpt		
Flood Haz:						
D				Topo		
s				Street		
t				Gas:		

LAND SECTION (First 7 lines only)

Use Code	Description	LUC Fact	No of Units	Depth / PriceUnits	Unit Type	Land Type	LT Factor	Base Value	Unit Price	Adj	Neigh	Neigh Influ	Neigh Mod	Infl 1	%	Infl 2	%	Infl 3	%	Appraised Value	Alt Class	%	Spec Land	J Code	Fact	Use Value	Notes
340	OFFICE		0		SITE	ACRE	SITE	0	0.	0.00	MG																

Total AC/HA:	0.00000	Total SF/SM:	0	Parcel LUC:	013	RES-COMM	Prime NB Desc	C-GENERAL

Total: | Spl Credit | Total:

EXTERIOR INFORMATION

Type:	71 - OFFICE		
Sty Ht:	1 - ONE STY		
(Liv) Units:	0	Total:	1
Foundation:	6 - SLAB		
Frame:	1 - WOOD		
Prime Wall:	04 - VINYL		
Sec Wall:			%
Roof Struct:	1 - GABLE		
Roof Cover:	1 - ASPH SHING		
Color:	GRAY		
View / Desir:			

GENERAL INFORMATION

Grade:	C- - AVG/FAIR		
Year Blt:	2004	Eff Yr Blt:	
Alt LUC:		Alt %:	
Jurisdict:		Fact:	
Const Mod:			
Lump Sum Adj:			

INTERIOR INFORMATION

Avg Ht/FL:	STD		
Prim Int Wal	1 - DRYWALL		
Sec Int Wall:			%
Partition:	T - TYPICAL		
Prim Floors:	05 - LINO/VINYL		
Sec Floors:			%
Bsmnt Flr:			
Subfloor:			
Bsmnt Gar:			
Electric:	3 - TYPICAL		
Insulation:	2 - TYPICAL		
Int vs Ext:	S		
Heat Fuel:	1 - OIL		
Heat Type:	1 - FORCED AIR		
# Heat Sys:	1		
% Heated:	100	% AC:	
Solar HW:	NO	Central Vac:	NO
% Com Wal		% Sprinkled	

BATH FEATURES

Full Bath		Rating:	
A Bath:		Rating:	
3/4 Bath:		Rating:	
A 3QBth		Rating:	
1/2 Bath:	2	Rating:	AVERAGE
A HBth:		Rating:	
OthrFix:	2	Rating:	AVERAGE

OTHER FEATURES

Kits:		Rating:	
A Kits:		Rating:	
Frpl:		Rating:	
WSFlue:		Rating:	

CONDO INFORMATION

Location:	
Total Units:	
Floor:	
% Own:	
Name:	

DEPRECIATION

Phys Cond:	AV - Average	13.	%
Functional:	D - DESIGN	5.0	%
Economic:	L - LOCATION	10.	%
Special:			%
Override:			%
	Total:	25.62	%

CALC SUMMARY

Basic $ / SQ:	126.00
Size Adj.:	1.50000000
Const Adj.:	0.98000002
Adj $ / SQ:	185.220
Other Features:	8000
Grade Factor:	0.93
NBHD Inf:	1.00000000
NBHD Mod:	
LUC Factor:	1.00
Adj Total:	144558
Depreciation:	37036
Depreciated Total:	107522

COMMENTS

OFC HAS HALF BATH & SINK; BOTH GARS HAVE STEEL FRAMES, 39X48 HAS HALF BATH & SINK. SHD IS METAL TRUCK UNIT..

RESIDENTIAL GRID

1st Res Grid	Desc:		# Units

Level	FY	LR	DR	D	K	FR	RR	BR	FB	HB	L	O
Other												
Upper												
Lvl 2												
Lvl 1												
Lower												

Totals	RMs:	BRs:	Baths:	HB	2

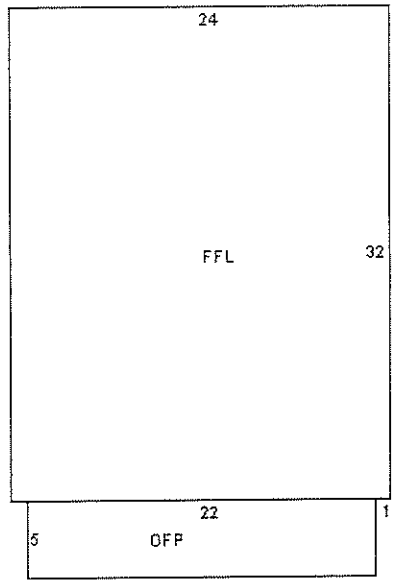
REMODELING

Exterior:	
Interior:	
Additions:	
Kitchen:	
Baths:	
Plumbing:	
Electric:	
Heating:	
General:	

RES BREAKDOWN

No Unit	RMS	BRS	FL
Totals			

SKETCH



SUB AREA

Code	Description	Area - SQ	Rate - AV	Undepr Value
FFL	FIRST FLOOR	768	185.220	142,249
OFP	OPEN PCH	110	47.180	5,189

SUB AREA DETAIL

Sub Area	% Usbl	Descrip	% Type	Qu	# Ten

COMPARABLE SALES

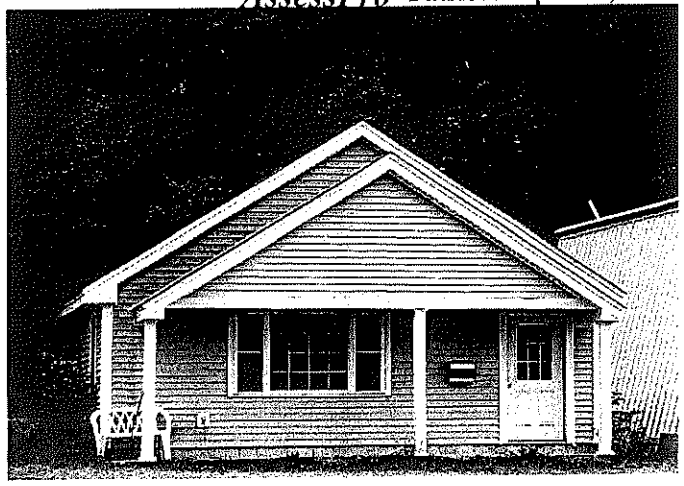
Rate	Parcel ID	Typ	Date	Sale Price

WtAv$/SQ:		AvRate:		Ind.Val	
Juris. Factor:		Before Depr:	172.25		
Special Features:	0	Val/Su Net:	122.44		
Final Total:	107500	Val/Su SzAd	139.97		

Net Sketched Area:	878			Total:	147,438
Size Ad	768	Gross Area	878	FinArea	768

IMAGE

AssessPro Patriot Properties, Inc



MOBILE HOME

Make:		Model:		Serial #:		Year:		Color:	

PARCEL ID 259-011-000

SPEC FEATURES/YARD ITEMS

Code	Description	A	Y/S	Qty	Size/Dim	Qual	Con	Year	Unit Price	D/S	Dep	LUC	Fact	NB Fa	Appr Value	JCod	JFact	Juris. Value
45	GAR-HIGH	D	Y	1	40X41	GD	AV	2004	46.73	T	13	340			66,700			66,700
45	GAR-HIGH	D	Y	1	39X48	GD	AV	2007	45.38	T	10	340			76,500			76,500
1	SHED-METAL	D	Y	1	8X40	GD	AV	2008	16.45	T	13.5	340			4,600			4,600

More:	N	Total Yard Items:	147,800	Total Special Featues:		Total:	147,800

ALL DIRECT ABUTTERS

List name(s) and mailing addresses of the owner(s) of record of the property and all direct abutters as of the time of the last assessment of taxation made by the Town of Hudson, including persons whose property is either contiguous or separated from the subject tract of land by a street or stream. If at the time of your hearing any applicable property owner is found not to have been notified because your lists are incorrect or incomplete, the Zoning Board will defer your hearing to a later date, following notification of such abutters. (Use additional copies of this page if necessary)

MAP	LOT	NAME OF PROPERTY OWNER	MAILING ADDRESS
259	010	Paul and Suzan Grodin	145 Dracut Road Hudson, NH 03051
259	008	Abreau Construction Corp. Tr. Abreau Construction Realty Tr.	3 Demauro Dr. Tyngsboro, MA 01879
259	004	Nancy E. Hauman	130 Norris Road Tyngsboro, MA 01879
259	003	Sarah and Brian Walsh	128 Norris Road Tyngsboro, MA 01879
259	002	Brian and Danielle Robichaud	126 Norris Road Tyngsboro, MA 01879
259	001	James and Lorraine Neofotistos	124 Norris Road Tyngsboro, MA 01879
258	016	Loenilde and Mario Jose Sousa	122 Norris Road Tyngsboro, MA 01879
258	017	Town of Hudson	12 School Street Hudson, NH 03051
253	006	Town of Hudson	12 School Street Hudson, NH 03051
254	008	Alan and Tracey Marcotte, Trustees Salt Trust	650 Pelham Road Dracut, MA 01826
254	007	Alan and Tracey Marcotte, Trustees Salt Trust	650 Pelham Road Dracut, MA 01826
254	006	Alan and Tracey Marcotte, Trustees Salt Trust	650 Pelham Road Dracut, MA 01826
254	004	Jeffrey and Cheryl Zduniak	135 Dracut Road Hudson, NH 03051
254	003	Robert F. Bowen III, Trustee Bowen Revocable Trust	137 Dracut Road Hudson, NH 03051

MAP	LOT	NAME OF PROPERTY OWNER	MAILING ADDRESS
254	001	Victor Lavoie	141 Dracut Road Hudson, NH 03051
254	040	John and Mary Grace Schofield	2 Sherburne Road Hudson, NH 03051
254	048	Jeremy Auger and Leann Hubert	144 Dracut Road Hudson, NH 03051
259	011	(Owner) Tom and Rosa Chan Joshua and Kristine Willett	143 Dracut Road Hudson, NH 03051
259	011	(Applicant) American Towers LLC c/o Property Tax Dept.	PO Box 723597 Atlanta, GA 31139
259	011	(Applicant) T-Mobile Northeast LLC	4 Sylvan Way Parsippany, NJ 07054
259	011	(Applicant Representative) Daniel D. Klasnick, Esquire Duval & Klasnick LLC	P.O. Box 254 Boxford, MA 01921

ALL INDIRECT ABUTTERS WITHIN 200 FEET

List name(s) and mailing addresses of all indirect abutters (those whose property is not contiguous but is within 200 feet from the property in question) as of the time of the last assessment of taxation made by the Town of Hudson. If at the time of your hearing any applicable property owner is found not to have been notified because your lists are incorrect or incomplete, the Zoning Board will defer your hearing to a later date, following notification of such abutters. (Use additional copies of this page if necessary)

MAP	LOT	NAME OF PROPERTY OWNER	MAILING ADDRESS
259	009	Orlando Vasquez	149 Dracut Road Hudson, NH 03051
259	012	Janet Urban	148 Dracut Road Hudson, NH 03051
258	015	Peter D. Marlowe	440 Middlesex Road Tyngsboro, MA 01879
253	005	Benjamin and Elisangela Richards	8 Schaeffer Cir. Hudson, NH 03051
254	005	Guy and Ann Marie Peloquin, Trustees	133 Dracut Road Hudson, NH 03051
254	002	Brian Wickens	139 Dracut Road Hudson, NH 03051
254	039	Michael Abdinoor	138 Dracut Road Hudson, NH 03051

TOWN OF HUDSON

NARRATIVE IN SUPPORT OF APPLICATION CONDITIONAL USE PERMIT AND SITE PLAN APPROVAL

APPLICANT: American Towers LLC

CO-APPLICANT: T-Mobile Northeast LLC

SITE ADDRESS: 143 Dracut Road

PARCEL NO: 259-011

ZONING DISTRICT: General 1 (G-1) and Residential 2 (R-2)

This narrative in Support of the Application for a Conditional Use Permit and Site Plan Approval and to the extent necessary, all rights reserved, all other required relief pursuant to the Town of Hudson Zoning Ordinance and the federal Telecommunications Act of 1996 for a Wireless Telecommunications Facility ("Facility") is respectfully submitted by American Towers LLC ("American Tower") and T-Mobile Northeast, LLC ("T-Mobile")(collectively the "Applicants") to the Town of Hudson, Planning Board (the "Board").

SPECIAL EXCEPTION STANDARDS

The Applicants have separately filed an application for special exception with the Town of Hudson Zoning Board of Adjustment under §334-10.D Mixed or dual use on a single lot, which includes a residential use, shall only be allowed by Special Exception in accordance with the general requirements for special exception in Article VI, §334-23, the mixed or dual uses shall be compatible. Pursuant to §334-31.D.24, a wireless communications facility is an allowed use by Special Exception, per Article XVIII, §334-91 through 334-107 Commercial Wireless Telecommunications, Radio Service and Receive-Only Facilities.

APPLICANT'S INTEREST IN THE PROPERTY

The property owners leased a portion of subject property located at 143 Dracut Road, being shown on the Tax Map of the Town of Hudson as Parcel 259-011 for the installation of the proposed telecommunications tower facility. The property owner has given the Applicants full

authority to file all applications for the necessary approvals for the installation of a wireless communications facility at this site.

See Exhibit 1, Letter of Authorization.

PROJECT DESCRIPTION

American Tower and T-Mobile propose the following regarding the proposal to locate a camouflaged telecommunications tower with T-Mobile's tower equipment and ground equipment on the property containing at 143 Dracut Road, Hudson, New Hampshire.

See Exhibit 2, Stamped Plans.
See Exhibit 3, Photo Simulations.

a. The Proposed Free Standing Tower

American Tower proposes to construct a self-supporting one hundred fifty-five (155) foot camouflaged "monopine" tower ("Tower"). The Tower will be designed to meet the design standards consistent with ANSI/TIA-222-G code and the 2015 International Building Code. The Tower will be designed with a lower capacity section (aka breakpoint) to limit the fall radius to approximately 36-feet from the center point location of the Tower.

See Exhibit 4, Confirmation of Tower Structural Capacity Letter.

b. The Proposed Ground Space of the Facility

Within the 2,304 square foot (48' x 48') fenced area is the proposed ground space for the Facility that will be surrounded by a six (6) foot high chain link fence with barbed wire that will have a twelve (12) foot wide locked entrance gate.

The proposed ground space for the Facility will accommodate the area necessary to house the camouflaged telecommunications tower, equipment cabinets of T-Mobile and the equipment for three (3) future collocators at the property.

The fenced ground space will be screened by existing vegetation at the property line and from Dracut Road. This will provide an effective screen of the fenced ground space area.

c. The Proposed Access to the Facility

Over existing paved driveway from Dracut Road to a proposed crushed stone driveway to the locked swing gate measuring 12' wide, as shown and described in the Plans. There will be a 12' x 20' gravel turn-around parking area immediately adjacent to the fenced equipment space. There is proposed planting of 4 evergreen trees located at the beginning of the crushed stoned driveway to provide further screening.

After construction of the Facility is complete, the only traffic to the Facility will be for routine monthly service by T-Mobile and other carriers of the Facility to ensure that the telecommunications equipment remains in good working order.

T-Mobile and the future wireless service providers will not have any permanent employees or customers at the Facility.

d. The Proposed Electric and Telephone Utilities

Electric and telephone lines will run underground from the Facility and will be connected to existing electric and telephone service in accordance with utility guidelines.

e. The Proposed T-Mobile Panel Antennas and Remote Radio Heads

T-Mobile proposes to install nine (9) antennas at a centerline mount height of one hundred twenty (150) feet with one (1) 25.7" microwave dish. T-Mobile's panel antennas will be installed on the tower to provide 360° of coverage. The antennas will be mounted in three separate arrays of three antennas per array.

Coaxial cabling will connect the antennas located on the Tower to the switching and power equipment located inside the equipment cabinet located at the base of the proposed monopole.

f. T-Mobile Wireless Proposed Equipment Cabinet

T-Mobile will install equipment cabinets inside of the fenced area on a concrete pad.

g. Proposed Maintenance Schedule of the Facility

The site is unmanned and when operational, will not generate substantial amounts of traffic. Trips to and from the Facility will be limited to once or twice a month, on average, by maintenance personnel.

The Tower proposed for construction is a camouflaged "monopine" monopole.

The Equipment is maintenance free. However, in the event that maintenance of the Equipment becomes necessary, T-Mobile shall perform necessary maintenance to its Equipment.

American Tower agrees to maintain the ground space within the two thousand three hundred four (2,304) square foot area surrounded by a six (6) foot high chain link fence. American Tower agrees to maintain the chain link fence for the duration of the use of the Site for the Facility.

SATISFACTION OF CONDITIONAL USE STANDARDS

Based on the description set forth herein, and as will be further demonstrated at the Public Hearing on this matter, the proposed Facility meets the location, height and site requirements set forth in of the Town of Hudson, Zoning Ordinance

Under §334-96.1 Table of Conditionally Permitting Facilities and §334-96.2 Conditional Use Permit Required, the proposed Facility is allowed upon grant of a conditional use permit and upon site plan review by the Hudson Planning Board.

See Exhibit 5, Zoning Determination #20-11 and #20-39.

§ 334-92. Purpose: commercial wireless telecommunication facilities.

In recognition of the federal Telecommunications Act of 1996, this article is designed and intended to balance the interests of the residents of Hudson, telecommunication providers and telecommunication customers in the siting of wireless telecommunication facilities within the Town of Hudson; so as to ensure coordinated development of telecommunication infrastructure while preserving the legitimate need to protect the health, safety and welfare of the Town, its residents and visitors. This article establishes general guidelines for the siting of commercial wireless telecommunication facilities, towers and antennas to enhance and fulfill the following goals:

A. Preserve the authority of Hudson to regulate and to provide for reasonable opportunity for the siting of commercial wireless telecommunication facilities by enhancing the ability of providers of telecommunication services to provide such services to the community quickly, effectively and efficiently;

American Tower and T-Mobile are committed to working with local communities in siting and construction of their wireless communication facilities. Because of Applicants' desire to be a good neighbor and establish long-term relationships, they make every effort to identify potential community concerns and incorporate all appropriate mitigation measures in the site selection process. By focusing on the installation of a camouflaged facility on a property that this Board previously granted approval for the installation of a telecommunications tower to accommodate network requirements to address coverage and capacity demands, the Applicants are minimizing the visual and environmental impacts of the facility's presence, operation and maintenance. The proposed installation will be camouflaged, substantially screened from view and located in a manner to minimize the visual impact.

B. Reduce adverse impacts such facilities may create, including, but not limited to, impacts on aesthetics, environmentally sensitive areas, historically significant locations, flight corridors, health and safety by injurious accidents to person and property, and prosperity through protection of property values;

American Tower is proposing to install a camouflaged monopine style telecommunications

tower designed with features to limit its visual impact to the maximum extent possible.

See Exhibit 2, Stamped Plans.
See Exhibit 3, Photo Simulations.

C. Provide for co-location and minimal impact siting options through assessment of technology, current location options, future available locations and innovative siting techniques;

The proposed Facility will not only provide a location at a sufficient height to allow the installation of T-Mobile's equipment to address a significant gap in its wireless coverage it will provide for a collocation opportunity for three addition wireless service providers reducing the need for further telecommunications towers in this area of the Town of Hudson.

D. Permit the construction of new towers only where all other reasonable opportunities have been exhausted; and to encourage the users of towers and antennas to configure them in a way that minimizes the adverse visual impact of the towers and antennas;

There are no existing towers, buildings, and other support structures in the search area to accommodate the proposed T-Mobile equipment. The combination of distance from coverage objectives and topography prevents any existing towers from filling the significant coverage gap in T-Mobile's network in Hudson. The area searched for possible collocations is in and around Dracut Road, Pine Road, Sanders Road and the Tyngsboro/Pelham town boundaries. The search ring is characterized as suburban residential with medium size lots and considerable forested wetland and protected conservation lands.

The wireless communications system being developed by T-Mobile has been designed utilizing sophisticated computer-engineering models which simultaneously evaluate topography, population patterns, and land use concerns to identify specific geographic regions to be serviced by the communications facility in the network. As a result, a limited search area is identified by the Radio Frequency Engineer as the necessary location for a transmission facility to ensure the most complete coverage to area residents, businesses and public safety officials. Once the search area has been selected, then T-Mobile's site selection consultant first seeks to identify existing structures. In this case, after a thorough review of the search area, T-Mobile has determined that the proposed Tower is the only feasible alternative for attachment purposes and therefore T-Mobile proposes to install a six (6) panel antenna array with ground equipment at the location of the Facility.

A gap in coverage is evidenced by the inability to adequately transmit or to receive a wireless signal, or by the interruption or disconnection of a wireless signal. T-Mobile currently has a significant gap in wireless capacity and coverage in the Town of Hudson. The gap that exists in the Town prevents T-Mobile from providing uninterrupted wireless service to current and future public and private users of its wireless communications system.

The location of its wireless communications equipment at this location is an integral part of T-Mobile's network of telecommunications facilities necessary to provide adequate coverage to those persons living in the Town of Hudson, as well as those persons commuting through the Hudson area. Following a thorough analysis, T-Mobile submits that it can fulfill its significant wireless service gaps by locating its equipment on the proposed Tower.

E. Require cooperation and co-location, to the highest extent possible, between competitors in order to reduce cumulative negative visual and property value impacts upon the Town;

The proposed telecommunications tower is designed to accommodate the equipment of T-Mobile and multiple future wireless service providers.

See Exhibit 6, Statement of Shared Use Evaluation and Tower Availability.

F. Provide maintenance and safety inspections for any and all facilities;

The Equipment is maintenance free. However, in the event that maintenance of the Equipment becomes necessary, T-Mobile shall perform necessary maintenance to its Equipment.

American Towers agrees to maintain the ground space within the two thousand three hundred four (2,304) square foot area surrounded by a six (6) foot high chain link fence. American Tower agrees to maintain the chain link fence, landscaping and access driveway extension for the duration of the use of the Site for the Facility.

G. Provide for the removal of abandoned facilities that are no longer inspected for safety concerns and Building Code compliance; provide a mechanism for the Town to remove these abandoned facilities to protect the citizens from imminent harm and danger;

The Applicants agree to remove any abandoned facilities that are no longer inspected for safety concerns and Building Code compliance. The Applicants have provided an estimate to certify the cost to remove the proposed monopine and improvements and agrees upon request to provide the Town with a removal bond.

See Exhibit 7, Tower Facility Removal Estimate.

H. Provide for the removal or upgrade of facilities which are technologically outdated; and

The Applicants agree to remove any abandoned equipment that is no longer in operation or technologically outdated.

I. Provide for the protection of the environment and open space; and preserve community character, scenic vistas and historic heritage.

By focusing on the installation of a camouflaged facility on a property that this Board previously approved for the installation of a telecommunications tower to accommodate network requirements to address coverage and capacity demands, the Applicants are minimizing the visual and environmental impacts of the Facility's presence, operation and maintenance. The proposed installation will be camouflaged, substantially screened from view and located in a manner to minimize the visual impact.

§ 334-95. Siting standards.

General provisions: The uses listed within this section are deemed to be permitted uses in the designated district in accordance with all other applicable ordinances and regulations of the Town, including site plan review and approval by the Hudson Planning Board.

A. Commercial wireless telecommunication facilities may be considered either principal or secondary uses. A different existing use or an existing structure on the same lot shall not preclude the installation of a commercial wireless telecommunication facility on such a lot.

The proposed camouflaged Facility will be constructed in compliance with this requirement.

B. For purposes of determining whether the installation of a commercial wireless telecommunication facility complies with district development standards, the dimensions of the entire lot shall control, even though the facility may be located on leased parcels within such lots.

The proposed camouflaged Facility will be constructed in compliance with all dimension standard to be located within a leased area on 11.81-acre lot.

C. A commercial wireless telecommunication facility which is constructed in accordance with the provisions of this article on a nonconforming lot, or in conjunction with a nonconforming use, shall not be deemed to constitute the expansion of a nonconforming use or structure.

As confirmed by Bruce Buttrick, Zoning Administrator/Code Enforcement Officer, the subject lot is a legal non-conforming lot with regards to the area and frontage requirements and is bisected with two zoning districts: R-2 and G-1. The proposed camouflaged Facility is located on a portion of the Property located within the G-1 District. The proposed use is permitted subject to a conditional use permit and concurrent site plan approval.

The Applicants have separately filed an application for special exception with the Town of Hudson Zoning Board of Adjustment under §334-10.D Mixed or dual use on a single lot,

which includes a residential use, shall only be allowed by Special Exception in accordance with the general requirements for special exception in Article VI, §334-23, the mixed or dual uses shall be compatible. Pursuant to §334-31.D.24, a wireless communications facility is an allowed use by Special Exception, per Article XVIII, §334-91 through 334-107 Commercial Wireless Telecommunications, Radio Service and Receive-Only Facilities.

D. Towers shall not exceed 180 feet in height above the ground. In all cases, a tower's maximum height shall be the minimum height above the ground necessary to perform or achieve the desired communication(s) or telecommunication service(s). Co-location is considered to be within the definition of a desired communication or telecommunication service.

The proposed Facility will comply with this requirement. The proposed Monopine will be only 150 feet height with the highest appurtenance a camouflaged branch feature at a maximum height of 155 feet above ground level. The proposed T-Mobile antennas will be mounted at a height of 150' as the necessary height to address the network requirements to address the service gaps in the Town of Hudson, New Hampshire.

E. An RF Engineering/Facilities Master Plan shall be submitted for review to include present and future network infrastructure in both Hudson and abutting communities. The lay person shall be able to easily understand the Master Plan and supporting documentation. It shall explain sufficiently why the tower must be in this location. With the exceptions of alternative facilities/ technologies, which do not have visible outdoor equipment, and telecommunication facilities placed on existing utility poles, site plan approval is required for all commercial wireless telecommunication facilities, including any such facilities situated on residential sites.

The wireless communications system being developed by T-Mobile has been designed utilizing sophisticated computer-engineering models which simultaneously evaluate topography, population patterns, and land use concerns to identify specific geographic regions to be serviced by the communications facility in the network.

The location of its equipment on the proposed tower is an integral part of T-Mobile network of telecommunications facilities necessary to provide adequate coverage to those persons living in the Town of Hudson, as well as those persons commuting through the Hudson area on the various roadways. Following a thorough analysis, T-Mobile submits that it can fulfill its significant wireless service gaps by locating its equipment on the proposed tower at the 150' height.

See Exhibit 8, T-Mobile RF Report.
See Exhibit 9, T-Mobile FCC Licenses.

F. The FCC regulates radio frequency (RF) emissions, and local jurisdictions are preempted from prohibiting the construction of commercial wireless telecommunication facilities on the basis of exposure to RF emissions. Owners/operators of commercial wireless telecommunications

facilities shall construct such facilities in accordance with FCC regulations pertaining to RF emissions.

The proposed camouflaged Facility's installation will not impact the health and safety of adjoining properties, the general neighborhood or the surrounding neighborhoods as outlined by the certifications and attestation of compliance with all Federal and State rules and regulations. The proposed equipment meets the requirements of all applicable federal and state regulations regarding radio frequency emissions.[1] As part of this application package, American Tower and T-Mobile have included herewith a RF compliance report prepared by Donald L. Haes, Jr., Ph.D., CHP.

See Exhibit 10, Radio Frequency Compliance Report.

§ 334-96.1. Districts where conditionally permitted.

The maximum tower height of a commercial wireless telecommunication facility shall be 180 feet above the ground. In all cases, a tower's maximum height shall be the minimum height above the ground necessary to perform or achieve the desired commercial wireless telecommunications service(s).

As noted in the Zoning Determination #20-011 and provisions of the Article XVIII, proposed siting of the tower is allowed in the G-1 district as a secondary use per §334-95A. The proposed camouflaged monopine tower at a maximum height of 155' will comply with the height requirements.

§ 334-96.2. Conditional use permit required.

Pursuant to NH RSA 674:21(II), the Hudson Planning Board is hereby authorized to issue a conditional use permit for commercial wireless telecommunication facilities according to the Table of Conditionally Permitted Facilities as set forth in § 334-96.1. Application for a conditional use permit shall be made concurrently with application for subdivision and/or site plan approval.

By this application the Applicants are complying with the requirement to obtain a Conditional Use Permit and concurrent site approval.

§ 334-97. Bonding security and insurance.

If required as a condition of approval, American Tower is prepared to provide a surety bond in a reasonable amount. With this application, an estimate of the reasonable cost and restoration costs. A Certificate of Insurance is provided with the application demonstrating that American Tower has a policy for general liabilities on the Facility and at the Property.

[1] The Telecommunications Act prohibits local authorities from considering the effects of RF emissions for wireless facilities that comply with RF emission guidelines established by the FCC47 USC § 332(c)(7)(B)(iv).

See Exhibit 7, Tower Facility Removal Estimate.
See Exhibit 11, Certificate of Insurance.

§ 334-98. Removal of abandoned antennas and towers.

The Applicants agree to promptly remove any abandoned antennas, equipment or the Tower.

§ 334-100. Applicable federal regulation references.

The Applicants agree to comply with all applicable federal regulations in the installation, maintenance and operation of the Facility.

§ 334-101. Antenna and mast height.

The proposed camouflaged monopine tower at a maximum height of 155' will comply with the applicable height requirements.

§ 334-102. Fall zone calculation.

The proposed camouflaged monopine is further designed to accommodate a theoretical fall radius of approximately 36 feet from the center point location of the tower. As such, the proposed monopine complies with the fall zone requirements of this section. By Zoning Determination #20-039, it is confirmed that the camouflaged monopine satisfies of the ordinance fall zone standards.

See Exhibit 4, Engineer Stamped Structural Letter.

§ 334-103. Number of masts for antennas.

The project meets the require that one tower shall be situated on property that is at least 2 acres in size, as the subject parcel is 11.8 acres in size.

§ 334-104. Co-location.

The Tower has been designed to be structurally capable of accommodating multiple communications providers and American Tower will lease space on the tower and within the compound at industry-standard commercially reasonable rates.

See Exhibit 6, Statement of Shared Use Evaluation and Tower Availability.

§ 334-105. Yard and green space setback requirements.

The Facility complies with §334-105 because no antenna, mast or supporting appurtenant devices are located within the yard setback or within any green space.

§ 334-106. Hazardous RF emission certifications and environmental evaluations.

The proposed camouflaged Facility's installation will not impact the health and safety of adjoining properties, the general neighborhood or the surrounding neighborhoods as outlined by the certifications and attestation of compliance with all Federal and State rules and regulations. The proposed equipment meets the requirements of all applicable federal and state regulations regarding radio frequency emissions.[2] As part of this application package, American Tower and T-Mobile have included herewith a RF compliance report prepared by Donald L. Haes, Jr., Ph.D., CHP.

See Exhibit 10, Radio Frequency Compliance Report.

§ 334-107. Receive-only facilities.

The provisions of §334-107 are inapplicable to proposed multi-user camouflaged Facility.

SATISFACTION OF SITE PLAN REVIEW STANDARDS

Pursuant to §275-4 of the Hudson Land Use Regulations, American Tower is required to obtain site plan approval from the Hudson Planning Board prior to commencing construction of the Facility. Site Plan approval is intended to assure that minimum development standards shall be attained, so as to provide for and protect the public health, safety and general wellbeing.

§ 275-6. General requirements.

In the review of any nonresidential SITE PLAN conducted under this regulation, the PLANNING BOARD shall require that adequate provisions be made by the OWNER or his/her/its authorized agent for the following:

A. The safe and attractive DEVELOPMENT of the site and to guard against such conditions as would involve danger or injury to health or safety, and no significant diminution in value of surrounding properties would be suffered.

The proposed camouflaged Facility's installation will not impact the health and safety of adjoining properties, the general neighborhood or the surrounding neighborhoods. The 11.8-acre Property is suitable for the Facility because the natural growth and dense vegetation of the Property and adjoining properties will screen the Facility from nearby

[2] The Telecommunications Act prohibits local authorities from considering the effects of RF emissions for wireless facilities that comply with RF emission guidelines established by the FCC47 USC § 332(c)(7)(B)(iv).

residential properties. The location of the Facility also satisfies the setback and fall zone requirements set forth in the Telecommunications Ordinance.

The direct and indirect financial benefits to the Town of Hudson of reliable wireless service are indicative of the very nature of the use by the public and private sector. A wireless communications facility will promote the general welfare and thereby encourage business investment by providing a desirable and convenient service to current businesses. The Applicants' proposal will also further benefit the public interest because wireless communications capabilities remain highly attractive to prospective residents and businesses.

The enclosed a property value market study that provides an assessment of the potential impact that wireless telecommunications towers have on adjacent residential property values. The report that includes supporting data prepared by Real Estate Consultants of New England, Inc. provides that "[i]t is my opinion that the proposed tower will have no measurable impact on surrounding property values due to the proximity or visibility."

See Exhibit 12, Market Study Investigation.

B. Traffic circulation and access, including adequacy of entrances and exits, traffic flow, sight distances, curb cuts, turning lanes and traffic signalization.

The Facility will utilize the existing access located off of Dracut Road. The proposed installation will be unmanned once operational. American Tower and T-Mobile will not have any permanent employees or customers at the personal wireless service facility. The site will be visited approximately once per month in a single service vehicle by technicians for routine maintenance purposes, which will not significantly affect traffic on adjacent ways. The improved gravel access driveway with parking/turnaround area will be utilized by American Tower's and T-Mobile' service technicians and any future wireless service providers.

C. Pedestrian and bicycle safety and access.

There will be no impact on pedestrian or bicycle safety and access. The Facility is on private property and will be unmanned.

D. Off-street parking and loading.

There is a designated parking area for the infrequent visits by service personnel and technicians visiting the Facility.

E. Emergency vehicle access, including fire lanes.

The access driveway and turnaround area will be available to accommodate any emergency vehicles.

F. Stormwater drainage and groundwater recharge.

The installation of the Facility on the 11.8-acre Property will involve minimal grading and alteration. American Tower has provided detailed plans that include stormwater and

erosion control measures.

G. Water supply, wastewater disposal and solid waste disposal.

The proposed installation of the Facility will not require a water supply or wastewater disposal systems. If any solid waste is generated on site, it will be removed and properly disposed of by American Tower.

H. Elimination of undesirable and preventable elements of pollution, such as noise, smoke, soot, particulates or any other discharge, into the environment which might prove harmful to persons, structures or adjacent properties.

The proposed Facility will not generate undesirable and preventable elements of pollution, such as noise, smoke, soot, particulates or any other discharge, into the environment which might prove harmful to persons, structures or adjacent properties. There is no generator proposed for the Facility.

I. Adequate provision for fire safety, prevention and control.

The Facility is unmanned and unlike other uses will require no police, fire or other public services.

J. Harmonious and aesthetically pleasing DEVELOPMENT of the municipality and its environs.

By focusing on the installation of a camouflaged facility on a property that this Board previously approved for the installation of a telecommunications tower to accommodate network requirements to address coverage and capacity demands, the Applicants are minimizing the visual and environmental impacts of the facility's presence, operation and maintenance. The proposed installation will be camouflaged, substantially screened from view and located in a manner to minimize the visual impact.

K. Suitably located travel ways of sufficient width to accommodate existing and prospective traffic and to afford adequate light, air and ACCESS for fire-fighting apparatus and equipment to buildings, and be coordinated so as to compose a convenient system.

The Facility will utilize the existing access located off of Dracut Road. The proposed installation will be unmanned once operational. American Tower and T-Mobile will not have any permanent employees or customers at the personal wireless service facility. The site will be visited approximately once per month in a single service vehicle by technicians for routine maintenance purposes, which will not significantly affect traffic on adjacent ways. The improved gravel access driveway with parking/turnaround area will be utilized by American Tower's, T-Mobile' service technicians, any future wireless service providers and emergency responders.

L. Landscaping in keeping with the general character of the surrounding area, showing trees, shrubbery and grass areas and other reasonable landscape details.

American Tower proposes to preserve as much of the existing vegetation as possible

during construction and installation of the Facility to maintain the natural screening of the camouflaged facility. With the use of a camouflaged design, the Facility will substantially blend with the existing vegetation. That fenced area will be substantially setback from Dracut Road, screened by existing vegetation and structures on the property. To provide further screening, American Tower is proposed to install four evergreen trees at the beginning of the proposed gravel driveway.

M. Signage and exterior lighting.

The FAA Report confirms that Notice of the proposed Facility is not necessary and consequently it is not necessary to install tower lighting. The only signage will be as necessary to provide safety information and site identification for service technicians. No signs will be visible from Dracut Road or other public rights of way.

See Exhibit 13 FAA/TOW AIR Report

N. Conformance with all existing codes.

The Facility will be installed and operated in compliance with all applicable codes, regulations, ordinance and laws.

O. (Reserved)

P. Compliance with the provisions of the Zoning Ordinance.[1]

The Facility will be installed in full compliance with the Zoning Ordinance.

Q. The minimization of encroachment on neighboring land uses.

The Facility meets the required setbacks and fall zone distance. The adjoining property is undeveloped and does not otherwise encroach on neighboring land uses.

R. Green areas, open space, conservation easements, pedestrian easements, slope easements and such other easements as may be applicable.

The Facility does not adversely impact any green areas, conservation easements, pedestrian easements, slope easements or any other easements.

S. The use of a shared DRIVEWAY for ACCESS to two or more proposed SITE PLANS shall be allowed.

The Facility will utilize the existing driveway from Dracut Road with a driveway extension to the fenced area.

T. Installation of improvements. The PLANNING BOARD shall weigh the burden that proposed DEVELOPMENT places on public facilities, infrastructure, sewers and amenities and shall require the installation of public improvements, both on-site and off-site, to compensate for this burden.

The Facility will have minimal effect on public facilities or infrastructure. The Facility will not result in any nuisance or hazard to pedestrian or vehicular traffic. Maintenance personnel are expected to visit the Facility no more than one-or-two trips per month.

The Facility also includes the installation of a parking and turnaround area on the Property for maintenance personnel. The Facility require no water or sewer service. All proposed electrical and cabling for the Facility will be run underground from existing service per local utility standards.

U. The PLANNING BOARD shall require the APPLICANT to execute a DEVELOPMENT agreement. This agreement shall detail the terms, conditions and responsibilities of the APPLICANT and the Town in conjunction with an approved plan.

If required as a condition of approval, American Tower will enter into a mutually agreeable Development Agreement.

V. Installation or placement of outside appurtenances: e.g., utility boxes, storage containers trash receptacles and/or air-conditioning equipment.

The installation of all utilities and connections shall be as depicted on the project plans for the Facility.

W. Exterior storage or display areas.

There will be no exterior storage or display areas included as part of the installation of the Facility.

COMPLIANCE WITH TELECOMMUNICATIONS ACT OF 1996

Because American Tower and T-Mobile are applying for zoning approval for the installation of equipment that provides wireless services, the application is subject to §704 of the federal Telecommunications Act of 1996 ("TCA"), codified at 47 U.S.C. §332(c)(7)(B). By way of background, the TCA is a federal law enacted in 1996 whose purpose is "[t]o promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies."[3] To further this purpose, the TCA established national standards that apply to zoning applications for wireless facilities. These standards preempt inconsistent state and local laws, so they must be considered by zoning boards in making decisions on applications for wireless facilities.

Without the relief requested, T-Mobile would be unable to provide adequate coverage by filling existing significant gap in coverage, thereby creating a hardship recognized by federal and state courts interpreting the TCA. The Site is located within the limited geographic area whereby T-Mobile's radio frequency engineers determined that a wireless facility is required. Federal courts interpreting the TCA have held that where an applicant for the installation of wireless communications facilities to provide communications services seeks zoning relief as required by the municipal zoning ordinance, federal law imposes substantial restrictions affecting the standard for granting the requested relief. The TCA provides that: no laws or actions by any local government or planning or zoning board may prohibit, or have the effect of prohibiting, the placement, construction, or modification of communications towers, antennas, or other wireless

[3] *Telecommunications Act of 1996*, Pub. L. No. 104-104, 110 Stat. 56 (1996).

facilities in any particular geographic area, see 47 U.S.C. §332(c)(7)(B)(i); local government or planning or zoning boards may not unreasonably discriminate among providers of functionally equivalent services, see 47 U.S.C. §332(c)(7)(B)(i); health concerns may not be considered so long as the emissions comply with the applicable standards of the FCC, see 47 U.S.C. §332(c)(7)(B)(iv); and, decisions must be rendered within a reasonable period of time, see 47 U.S.C. §332(c)(7)(B)(ii) and the FCC's Declaratory Ruling commonly referred to as the "shot clock".

Through the evidence submitted, American Tower and T-Mobile have demonstrated that significant gaps exist in its network in this area of Hudson and the proposed tower is the only feasible means reasonably available to T-Mobile to fill its significant gaps in coverage.

CONCLUSION

The availability of wireless communications service enhances community safety and is increasingly relied upon by civil defense and other safety officers as well as the general public in times of crisis, natural disaster, bad storms or similar circumstances. Wireless communications service also provides a convenience to residents and is an attractive feature and service to businesses. The proposed installation, by providing these services, will promote the health, safety, convenience and general welfare of the inhabitants of the Town of Hudson.

The proposed installation meets all of the standards for a conditional use permit pursuant to the Town's Zoning Ordinance and Site Plan Review pursuant to the Town's Site Plan Review Regulations. The subject parcel is located within the General 1 (G-1) and Residential 2 (R-2) zoning districts and the installation proposed is a camouflaged monopine structure. The installation will have minimal impact on the community and will comply with all applicable laws and regulations.

The Applicant therefore requests that the Board grant its application for a conditional use permit with site plan review approval and all necessary waiver relief from the Town's Zoning Ordinance and Site Plan Regulations.

TOWN OF HUDSON

APPLICATION FOR
CONDITIONAL USE PERMIT AND
SITE PLAN APPROVAL
TABLE OF CONTENTS –EXHIBITS

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EXHIBIT 1

AUTHORIZATION OF

PROPERTY OWNER

December 14, 2020

Town of Hudson
Town Hall
12 School Street
Hudson, New Hampshire 03051

Re: Letter of Authorization
Zoning, Conservation and/or Building Permit

Applicant: **American Towers LLC and T-Mobile Northeast LLC**
By Daniel D. Klasnick,Esquire

Site Address: **143 Dracut Road, Hudson, New Hampshire**
(Assessors Parcel I.D.: 259-011-000)

To Whom It May Concern:

We are the owners of the property at 143 Dracut Road, Hudson, New Hampshire. We hereby give full and complete authorization to American Tower LLC and T-Mobile Northeast LLC and their representatives and successors in interest to apply for any necessary zoning petitions, conservation permitting, permits or any other approvals, including but not limited to the filing of a building permit application, which is necessary for the installation of their wireless telecommunications facility at the above referenced property.

A copy of this letter shall be regarded as having the same effect as the original.

Thank you for your attention to this matter.

Sincerely,

Tom W. Chan

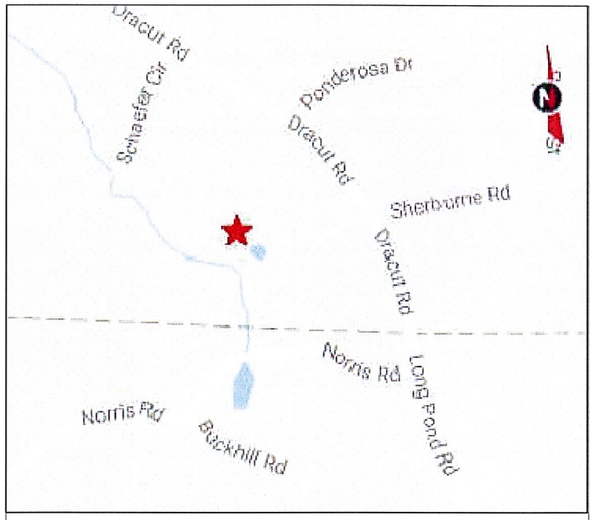
Joshua M. Willett

Rosa C. Chan

Kristine C. Willett

EXHIBIT 2

STAMPED PLANS



VICINITY MAP

0 1000' 2000'

SCALE: 1"=1000' (11X17)
1"=500' (22X34)

AMERICAN TOWER®

SITE NAME: HUDSON 3 NH
SITE NUMBER: 202096
SITE ADDRESS: 143 DRACUT ROAD
HUDSON, NH 33011

LOCATION MAP

RAWLAND
707B V2 TOWER
CONSTRUCTION DRAWINGS

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: TBD

TELEPHONE COMPANY: TBD

811 Know what's **below.** **Call** before you dig.

PROJECT SUMMARY

SITE ADDRESS:

143 DRACUT ROAD
HUDSON, NH 33011
COUNTY: HILLSBOROUGH

GEOGRAPHIC COORDINATES:

LATITUDE: N42° 41' 59.86"

LONGITUDE: W71° 23' 26.47"

GROUND ELEVATION: 294.39' AMSL

ZONING INFORMATION:

JURISDICTION: TOWN OF HUDSON

PARCEL NUMBER: 259-011

ZONING:
PARCEL SPANS TWO DISTRICTS:
G-1 (GENERAL 1) - TOWER LOCATION
R-2 (RESIDENTIAL 2)

PROPERTY OWNER:

ROSA C. CHAN AND TOM W. CHAN AND
JOSHUA M. WILLET AND KRISTINE C. WILLET
143 DRACUT RD
HUDSON, NH 03051

TOWER OWNER:

AMERICAN TOWERS LLC
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:

ATC TOWER SERVICES
3500 REGENCY PARKWAY SUITE 100
CARY, NC 27518

PROJECT DESCRIPTION

THIS PROJECT INVOLVES ERECTING A NEW 155' MONOPINE WITH ASSOCIATIVE FACILITIES IN A 50' X 50' COMPOUND.

THIS PLAN WILL BE VALID FOR ONE YEAR AFTER APPROVAL.

PROJECT NOTES

1. THE FACILITY WILL BE UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. PROPOSED FACILITY WILL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.

PROJECT LOCATION DIRECTIONS

FROM BOSTON, MA:

TAKE I-93 N TO NH-3A S IN HUDSON. TAKE THE NH-3A S EXIT FROM CIRCUMFERENTIAL HWY. DRIVE TO DRACUT RD.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	2	11/17/20	NW
G-002	GENERAL NOTES	0	11/09/20	NW
V-201	COMPOUND DETAIL & DESCRIPTIONS			
V-202	EXISTING CONDITIONS			
C-101	OVERALL SITE PLAN	0	11/09/20	NW
C-102	GRADING PLAN & PROFILE	0	11/09/20	NW
C-103	EROSION & SEDIMENT CONTROL PLAN	0	11/09/20	NW
C-104	PLANTING PLAN	0	11/09/20	NW
C-401	COMPOUND PLAN	0	11/09/20	NW
C-402	TOWER ELEVATION	0	11/09/20	NW
C-501	CONSTRUCTION DETAILS	2	11/17/20	NW
C-502	CONSTRUCTION DETAILS	0	11/09/20	NW
C-503	SIGNAGE	0	11/09/20	NW
E-401	GROUNDING LAYOUT	0	11/09/20	NW
E-501	ELECTRICAL DETAILS	0	11/09/20	NW
E-601	ELECTRICAL ONE LINE DIAGRAM	0	11/09/20	NW
R-601	SPECIAL INSPECTIONS WORKSHEET	2	11/17/20	NW

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING _____
PLANNING BOARD:
CHAIRMAN _____ SIGNATURE DATE: _____
SECRETARY _____ SIGNATURE DATE: _____
SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECIEVES FINAL APPROVAL.

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

PROPERTY OWNER:
TOM W. & ROSA C. CHAN
143 DRAUT ROAD
HUDSON, NH 03051

LANDLORD SIGNATURE:_____

AMERICAN TOWER®
dba SPECIALTY TOWER SERVICES
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 1571

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20
1	UPDT SURVEY SEAL	NW	11/16/20
2	ADDED SPECIAL INSPECTION	NW	11/17/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

Authorized by "Patrick P. Barry"
17 Nov 2020 01:15:53

cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	2

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS FOR WIRELESS TOWER SITES.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE ATC CM PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE ATC CM PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE ATC CM, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE ATC CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR WILL NOTIFY THE ATC CONSTRUCTION MANAGER IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. ALL ROOF WORK SHALL BE DONE BY A QUALIFIED AND EXPERIENCED ROOFING CONTRACTOR IN COORDINATION WITH ANY CONTRACTOR WARRANTING THE ROOF TO ENSURE THAT THE WARRANTY IS MAINTAINED.
17. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
18. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
19. CONTRACTOR SHALL FURNISH ATC WITH THREE AS-BUILT SETS OF DRAWINGS UPON COMPLETION OF WORK.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH ATC CM TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR WILL COORDINATE WITH ATC CONSTRUCTION MANAGER TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY ATC. ALL REQUIRED PERMITS NOT OBTAINED BY ATC MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ATC FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO ATC SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
25. CONTRACTOR SHALL NOTIFY ATC CM A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.

EROSION AND SEDIMENTATION CONTROL PLAN NOTES:

THIS PLAN HAS BEEN DEVELOPED TO PROVIDE A STRATEGY FOR CONTROLLING SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROPOSED FACILITY. THE EQUIPMENT ANTICIPATED TO BE USED FOR THE CONSTRUCTION INCLUDES THE FOLLOWING: BACKHOES, BULLDOZERS, LOADERS, TRUCKS, CRANES, COMPACTORS, AND GRADERS. THE FOLLOWING MEASURES WILL BE UNDERTAKEN TO PROVIDE MAXIMUM PROTECTION TO THE SOIL, WATER, AND ABUTTING LANDS:

1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM AMERICAN TOWER PRIOR TO IMPLEMENTATION.
2. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.).
3. A COPY OF THE SEDIMENT AND EROSION CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE DURING CONSTRUCTION UNTIL THE SITE IS STABILIZED. (AS APPLICABLE)
4. PRIOR TO GRUBBING OR ANY EARTHMOVING OPERATION, SILTATION FENCE WILL BE INSTALLED ACROSS THE SLOPE ON THE CONTOUR AT THE DOWNHILL LIMIT OF THE WORK AS PROTECTION AGAINST CONSTRUCTION RELATED EROSION. (CONSULT ATC CM AS REQUIRED)
5. STONE CHECK DAMS WILL BE INSTALLED IN THE DRAINAGE DITCHES TO PREVENT EROSION PRIOR TO THE STABILIZATION OF THE CHANNELS. EROSION CONTROL BLANKETS WILL ALSO BE INSTALLED IN ALL DITCHES TO BE REVEGETATED.
6. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY UNDISTURBED LAND AREA WILL BE COMPLETED WITHIN FIFTEEN CALENDAR DAYS AFTER FINAL GRADING HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE OR PRACTICAL TO PERMANENTLY STABILIZE DISTURBED LAND, TEMPORARY EROSION CONTROL MEASURES WILL BE IMPLEMENTED WITHIN THIRTY CALENDAR DAYS OF EXPOSURE OF SOIL. ALL DISTURBED AREAS WILL BE MULCHED FOR EROSION CONTROL UPON COMPLETION OF ROUGH GRADING. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED.
7. ANY EXPOSED SLOPES GREATER THAN 2:1 AND NEWLY CONSTRUCTED DRAINAGE DITCHES WILL BE STABILIZED WITH EROSION CONTROL BLANKET TO PREVENT EROSION DURING CONSTRUCTION AND TO FACILITATE REVEGETATION AFTER LOAMING AND SEEDING.
8. TO PROVIDE PROTECTION AGAINST EROSION, RIPRAP WILL BE PLACED AT ALL CULVERT INLETS AND OUTLETS AS SHOWN ON THE ATTACHED DRAWINGS.
9. IN AREAS OF CONSTRUCTION DEWATERING, ISOLATED SETTLEMENT TRAPS WILL BE CONSTRUCTED ADJACENT TO THE ACTIVITY. WATER WILL BE PUMPED FROM THE EXCAVATIONS TO THESE DEPRESSION AREAS FOR SEDIMENT REMOVAL. ADDITIONAL SEDIMENTATION PROTECTION WILL BE PROVIDED BY THE INSTALLATION OF HAYBALE BARRIERS BETWEEN THE BASINS AND THE RECEIVING DRAINAGE COARSE.
10. NATIVE TOPSOIL SHALL BE SAVED, STOCKPILED, MULCHED, AND REUSED AS MUCH AS POSSIBLE ON THE SITE. SILTATION FENCE SHALL BE INSTALLED AT THE BASE OF STOCKPILES AT THE DOWNHILL LIMIT TO PROTECT AGAINST EROSION. STOCKPILES WILL BE STABILIZED BY SEEDING AND MULCHING UPON FORMATION OF THE PILES. UPHILL OF THE STOCKPILES, STABILIZED DITCHES AND/OR BERMS WILL BE CONSTRUCTED TO DIVERT STORMWATER RUNOFF AWAY FROM THE PILES.
11. FINAL SEEDING WILL BE APPLIED IN ACCORDANCE WITH THE AMERICAN TOWER CORPORATION CONSTRUCTION SPECIFICATION.
12. SHOULD CONSTRUCTION OCCUR AFTER NOVEMBER 15, ADDITIONAL EROSION CONTROL METHODS WILL BE IMPLEMENTED. ALL DISTURBED AREAS WILL BE MINIMIZED AS MUCH AS POSSIBLE. PRIOR TO FREEZING, ADDITIONAL EROSION CONTROL DEVICES WILL BE INSTALLED AS APPROPRIATE INSPECTION OF THESE EROSION CONTROL ITEMS WILL BE CONSTANT, WITH PARTICULAR ATTENTION PAID TO WEATHER PREDICTIONS TO ENSURE THAT THESE MEASURES ARE PROPERLY IN PLACE TO HANDLE LARGE AMOUNTS OF RUNOFF FROM HEAVY RAINS OR THAWS.
13. FOR AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY TO BE CONSIDERED PERMANENTLY STABILIZED, THE DISTURBED AREAS SHALL BE COVERED BY A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
14. THE CONTRACTOR WILL REGULARLY INSPECT THE PROJECT'S EROSION AND SEDIMENTATION CONTROLS DURING THE ENTIRE ACTIVE CONSTRUCTION STAGES. THE INSPECTIONS WILL BE PERFORMED WEEKLY AND AFTER ALL RUNOFF EVENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE INSTALLATION, OPERATION, MAINTENANCE, AND REMOVAL OF ALL EROSION AND SEDIMENTATION CONTROLS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY. SEDIMENT THAT HAS BEEN TRAPPED BY THE SILT BARRIER WILL BE REMOVED AS REQUIRED, AND IN ALL CASES, BEFORE THE ACCUMULATION HAS REACHED HALF THE HEIGHT OF THE FENCE. THE SILT BARRIER WILL BE RE-ANCHORED, REPAIRED, OR REPLACED AS NECESSARY. ALL OTHER CONTROLS WILL BE INSPECTED ON THE SAME SCHEDULE. IF EROSION AND SEDIMENT CONTROL BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S, OR MODIFICATION OF THOSE INSTALLED WILL BE REQUIRED.
15. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
16. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
17. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
18. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE AMERICAN TOWER CORPORATION CONSTRUCTION SPECIFICATION AND/OR THE CONTRACTOR SHALL NOTIFY THE ATC CONSTRUCTION MANAGER.
19. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

CONSTRUCTION SEQUENCE:

1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM AMERICAN TOWER PRIOR TO IMPLEMENTATION.
2. BEGIN ROAD REPAIR AND BULK GRADING.
   - 2.1. STRIP TOPSOIL AND STORE AT DESIGNATED LOCATIONS AS SHOWN ON THE PLANS OR LOCATION AS AGREED UPON WITH THE ATC CONSTRUCTION MANAGER.
   - 2.2. NATIVE TOPSOIL SHALL BE SAVED, STOCKPILED, MULCHED, AND REUSED AS MUCH AS POSSIBLE ON THE SITE. SILT FENCE SHALL BE INSTALLED AT THE BASE OF STOCKPILES AT THE DOWNHILL LIMIT TO PROTECT AGAINST EROSION.
   - 2.3. ROUGH GRADE WATERBAR LOCATIONS. OVER-EXCAVATE TO ALLOW FOR PROPER STONE DEPTHS. WATER BARS SHOULD NOT BE 'SPEED BUMPS' AND SHALL BE INSTALLED PER THE DIMENSIONS INDICATED ON PLANS AND DETAIL.
3. CONSTRUCT DITCH WORKING DOWNSTREAM TO UPSTREAM.
   - 3.1. IMMEDIATELY STABILIZE DITCH, FILL AND CUT SLOPES WITH EROSION CONTROL MATTING. SEE PLANS AND DETAILS FOR LOCATIONS.
4. INSTALL CULVERT.
   - 4.1. INSTALL RIP-RAP OUTLET PROTECTION.
5. CONSTRUCT ACCESS ROAD
   - 5.1. INSTALL GEOTEXTILE ON BASE COURSE
   - 5.2. INSTALL SURFACE COARSE TO MATCH DEPTH AND CROSS SLOPES AS INDICATED ON THE DETAIL
   - 5.3. COMPACTION SHALL BE WITH SHEEPSFOOT ROLLER OR RUBBER TIRED ROLLERS WEIGHING AT LEAST EIGHT TONS FOR BASE COURSE AND SMOOTH DRUM VIBRATOR ROLLERS FOR SURFACE COURSE/FINISH GRADE PER ATC SPECIFICATIONS.
6. INSTALL TOWER PER MANUFACTURERS SPECIFICATIONS.
7. INSTALL COMPOUND SURFACE COURSE PER DETAIL.
8. INSTALL FENCE PER DETAIL.
9. INSTALL UTILITIES COORDINATING WITH LOCAL UTILITY COMPANY.
10. PERMANENTLY SEED AND STABILIZE ALL DISTURBED AREAS.
    - 10.1. FINAL SEEDING WILL BE APPLIED IN ACCORDANCE WITH THE AMERICAN TOWER CORPORATION CONSTRUCTION SPECIFICATION.

CONCRETE AND REINFORCING STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
2. MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE AND SUBMITTED TO ENGINEER PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A MAXIMUM 4" SLUMP AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.
4. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:	ASTM C-150, TYPE 1 OR 2
REINFORCEMENT:	ASTM A-185, PLAIN STEEL WELDED WIRE FABRIC
REINFORCEMENT BARS:	ASTM A615, GRADE 60, DEFORMED
NORMAL WEIGHT AGGREGATE:	ASTM C-33
WATER:	DRINKABLE
ADMIXTURES:	NON-CHLORIDE CONTAINING

5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):
   - A. CONCRETE CAST AGAINST EARTH: 3"
   - B. ALL OTHER CONCRETE: 2"
6. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ATC CM APPROVAL WHEN DRILLING HOLES IN CONCRETE.
8. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI 301.
9. DO NOT WELD OR TACK WELD REINFORCING STEEL.
10. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
11. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
12. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
13. DO NOT ALLOW REINFORCEMENT, CONCRETE OR SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 3 DAYS AFTER PLACEMENT.
14. FOR COLD-WEATHER AND HOT-WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
15. CONCRETE SHALL BE RUBBED TO A ROUGH GROUT FINISH. PADS SHALL BE SEALED BY STEEL TROWEL.
16. UNLESS OTHERWISE NOTED:
    - A. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
    - B. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
17. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
18. REINFORCING BAR DEVELOPMENT LENGTHS, AS COMPUTED IN ACCORDANCE WITH ACI 318, FORM THE BASIS FOR BAR EMBEDMENT LENGTHS AND BAR SPLICED LENGTHS SHOWN IN THE DRAWINGS. APPLY APPROPRIATE MODIFICATION FACTORS FOR TOP STEEL, BAR SPACING, COVER AND THE LIKE.
19. DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
20. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
21. LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS
22. SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 8".
23. BAR SUPPORTS SHALL BE ALL-GALVINIZED METAL WITH PLASTIC TIPS.
24. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE 16 GAUGE CONFORMING TO ASTM A82
25. SLAB ON GROUND
    - A. COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.
    - B. PROVIDE VAPOR BARRIER BENEATH SLAB ON GROUND.

GENERAL FOUNDATION NOTES:

(APPLICABLE FOR EQUIPMENT SHELTER ONLY)

1. THOROUGHLY COMPACT BOTTOM OF EXCAVATIONS PRIOR TO PLACING RIGID INSULATION BARRIER. BACKFILL AND COMPACTION PROCEDURES SHALL BE DONE PER INDUSTRY STANDARDS.
2. ALL REINFORCING STEEL SHALL BE ASTM A615 - GRADE 60. SECURE REINFORCING IN PLACE TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.
3. VERIFY DETAILS AND DIMENSIONS WITH SHELTER DRAWINGS. NOTIFY ATC CM OF ANY DISCREPANCIES.
4. INSULATION BARRIER PROVIDED IS FOR FROST PROTECTION IN LIEU OF STANDARD FOUNDATIONS WITH BEARING AT CODE REQUIRED FROST DEPTH.
5. SHELTER MUST BE ANCHORED TO ITS FOUNDATION. ANCHOR IN ACCORDANCE WITH SHELTER MANUFACTURER SPECIFICATIONS.

AMERICAN TOWER®
dba SPECIALTY TOWER SERVICES
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 1571

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

Authorized by "Patrick P. Barry"
17 Nov 2020 01:15:54

cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

PROJECT SUMMARY

FIELD SURVEY DATE: 08/03/2020
SITE ADDRESS: 143 DRACUT ROAD HUDSON, NEW HAMPSHIRE 03051

PARCEL INFORMATION
OWNER: ROSA C. CHAN AND TOM W. CHAN AND JOSHUA M. WILLETT AND KRISTINE C. WILLETT
OWNER ADDRESS: 143 DRACUT ROAD, HUDSON, NH 03051
APN: 259-011-000

TOTAL AREAS:
PARENT PARCEL: 11.816± ACRES
ATC LEASE AREA: 2,500 SQ. FT., 0.06± ACRES
ATC ACCESS & UTILITY EASEMENT: 16,418 SQ. FT., 0.38± ACRES

GEOGRAPHIC COORDINATES OF TOWER:
LATITUDE: 42°42'00.15" N — LONGITUDE: 71°23'27.40" W
VERTICAL DATUM: NAVD 1988 — HORIZONTAL DATUM: NAD83
GROUND ELEVATION: 289'

THIS IS TO CERTIFY THAT THE ABOVE INFORMATION IS PROVIDED TO THE FOLLOWING ACCURACY:
± TWENTY (20) FEET IN THE HORIZONTAL
± THREE (3) FEET IN THE VERTICAL

*BEARINGS ARE THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM AND ARE BASED ON GPS OBSERVATIONS.

FLOODPLAIN:
PER THE FEMA FLOODPLAIN MAPS, THE SITE IS LOCATED IN AN AREA DESIGNATED AS ZONE X.
COMMUNITY PANEL NO. : 330092
EFFECTIVE DATE: SEPTEMBER 25, 2009

BOUNDARY NOTE
THIS SURVEY IS THE RESULT OF AN ACTUAL FIELD SURVEY BASED UPON SUFFICIENT RESEARCH AND FIELD EVIDENCE TO VERIFY THE PARENT PARCEL OF THE SUBJECT PROPERTY. HOWEVER, THIS SURVEYOR HAS RELIED UPON THE DEEDS OF RECORD, AS PROVIDED. THIS SURVEYOR MAKES NO GUARANTEE , EITHER EXPRESSED OR IMPLIED AS TO THE QUALITY OF THE DEED REPORT AND REFERENCE DOCUMENTS PROVIDED AND THE DOCUMENTS PROVED AFFECTING THE LEASE AND IMMEDIATE AREA HAVE BEEN PLOTTED. THE BOUNDARY SHOWN HEREON IS PLOTTED FROM THE RECORD INFORMATION PROVIDED AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

ENCROACHMENT NOTE
PROPOSED SITE: AT THE TIME OF THE SURVEY, NO VISIBLE ENCROACHMENTS WERE EVIDENT ONTO OR BEYOND THE LEASE AREA, PARENT PARCEL, OR THE ACCESS AND UTILITY EASEMENT(S).

SURVEYOR'S NOTES

1. THERE IS ACCESS TO THE SUBJECT PROPERTY VIA DRACUT ROAD, A PUBLIC RIGHT OF WAY.
2. THE LOCATIONS OF ALL UTILITIES SHOWN ON THE SURVEY ARE FROM VISIBLE SURFACE EVIDENCE ONLY.
3. AT THE TIME OF THIS SURVEY THERE WAS NO OBSERVABLE SURFACE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS.
4. AT THE TIME OF THIS SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF THE SUBJECT PROPERTY BEING USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.
5. AT THE TIME OF THIS SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF ANY RECENT CHANGES IN STREET RIGHT-OF-WAY LINES EITHER COMPLETED OR PROPOSED, AND AVAILABLE FROM THE CONTROLLING JURISDICTION.
6. AT THE TIME OF THIS SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF ANY RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.
7. ANGLES OR BEARINGS SHOWN HEREON ARE FORMATTED IN DEGREES, MINUTES, AND SECONDS. DISTANCES OR ELEVATIONS SHOWN HEREON ARE IN U.S. SURVEY FEET, UNLESS NOTED OTHERWISE.
8. UNDERGROUND IMPROVEMENTS IF ANY AND NOT VISIBLE AT THE TIME OF THE SURVEY, HAVE NOT BEEN LOCATED IN THE FIELD OR SHOWN HEREON.
9. NOT ALL IMPROVEMENTS ON THE PARENT PARCEL BEING SURVEYED ARE SHOWN HEREON.
10. WETLAND FLAGS SHOWN AS DELINEATED BY ILEX WETLAND CONSULTANTS ON 05/10/16, AND FIELD SURVEYED ON 05/26/17.

REFERENCES

A. DEED: BOOK 8643, PAGE 2424

B. MAP ENTITLED: "SITE PLAN" PREPARED BY MAYNARD & PAQUETTE ENGINEERING ASSOCIATES, LLC ON 01/20/04.

C. TITLE COMMITMENT PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY AS COMMITMENT NUMBER 29893496, EFFECTIVE DATE 09/05/19.

LEGAL DESCRIPTION

PARENT PARCEL - AS PROVIDED:
AN INTEREST IN LAND, SAID INTEREST BEING OVER A PORTING OF THE FOLLOWING DESCRIBED PARENT PARCEL:

A CERTAIN TRACT OF LAND WITH THE BUILDINGS THEREON, ON THE WEST SIDE OF THE ROAD FROM NASHUA TO LOWELL WHICH IS PART OF THE FORD FARM SITUATED IN HUDSON, HILLSBOROUGH COUNTY, AND STATE OF NEW HAMPSHIRE, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON A STONE WALL AT THE SOUTHEASTERLY MOST CORNER OF THE PREMISES A DISTANCE OF 327.74 FEET WEST OF THE WEST SIDE OF DRACUT ROAD; THENCE NORTH 76-25-56 WEST A DISTANCE OF 86.24 FEET TO A HUB SET IN THE GROUND; THENCE NORTH 76-17-18 WEST A DISTANCE OF 252.32 FEET TO A POINT; THENCE NORTH 76-57-58 WEST A DISTANCE OF 147.87 FEET TO A STONE BOUND; THENCE NORTH 78-10-29 WEST A DISTANCE OF 115.43 FEET TO A HUB SET IN THE GROUND; THENCE 76-48-41 WEST A DISTANCE OF 426.15 FEET TO A HUB SET IN THE GROUND; THENCE TURNING AND RUNNING NORTH 08-13-30 EAST A DISTANCE OF 160.05 FEET TO A DRILL HOLE; THENCE NORTH 07-23-28 EAST A DISTANCE OF 99.73 FEET TO A DRILL HOLE; THENCE NORTH 07-34-33 EAST A DISTANCE OF 289.93 FEET TO A DRILL HOLE; THENCE TURNING AND RUNNING SOUTH 81-15-45 EAST A DISTANCE OF 118.84 FEET TO A DRILL HOLE; THENCE SOUTH 87-09-15 EAST A DISTANCE OF 137.96 FEET TO A POINT; THENCE NORTH 89-21-19 EAST A DISTANCE OF 127.02 FEET TO A POINT; THENCE SOUTH 78-30-00 EAST A DISTANCE OF 94.27 FEET TO A POINT; THENCE SOUTH 72-17-17 EAST A DISTANCE OF 118.73 FEET TO AN IRON PIPE SET IN THE GROUND; THENCE TURNING AND RUNNING SOUTH 09-21-56 WEST A DISTANCE OF 386.78 FEET TO A STONE BOUND; THENCE TURNING AND RUNNING NORTH 83-41-23 EAST A DISTANCE OF 304.05 FEET TO A STONE BOUND; THENCE NORTH 78-50-30 EAST A DISTANCE OF 301.68 FEET TO A STONE POST AT THE NORTHEASTERLY MOST CORNER OF THE PREMISES ON THE WEST SIDE OF DRACUT ROAD; THEN SOUTH 17-35-40 EAST A DISTANCE OF 220.65 FEET TO A POINT; THENCE A DISTANCE OF 36.56 FEET ALONG A CURVE HAVING A RADIUS OF 25 FEET TO A POINT; THENCE SOUTHWESTERLY A DISTANCE OF 193.153 FEET ALONG A LOT DESIGNATED AS LOT 2292-01 IN A PLAN HEREINAFTER MENTIONED TO A POINT; THENCE TURNING AND RUNNING SOUTHERLY A DISTANCE OF 184.76 FEET ALONG SAID LOT 2292-01 IN A PLAN HEREINAFTER MENTIONED TO THE POINT OF BEGINNING. THESE BOUNDARIES ENCLOSE AN AREA OF 11.816 ACRES.

LESS AND EXCEPT THAT PORTION OF PROPERTY CONVEYED TO THE STATE OF NEW HAMPSHIRE BY NOTIECE OF CONDEMNATION DATED APRIL 30, 1981 AND RECORDED MAY 4, 1981 IN DEED BOOK 2838, PAGE 607

AND BEING THE SAME PROPERTY CONVEYED TO ROSA C. CHAN AND TOW W. CHAN AND JOSHUA M. WILLET AND KRISTINE C. WILLET FROM 143 DRACUT ROAD, LLC , A NEW HAMPSHIRE LIMITED LIABILITY COMPANY BY WARRANTY DEED DATED FEBRUARY 27, 2014 AND RECORDED MARCH 3, 2014 IN DEED BOOK 8643, PAGE 2424.

TAX PARCEL NO. 259-011-000

ATC LEASE AREA - AS SURVEYED (PROPOSED):
ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE, LYING AND BEING IN THE TOWN OF HUDSON, COUNTY OF HILLSBOROUGH, STATE OF NEW HAMPSHIRE, SAID BEING A PORTION OF PARCEL ID 259-011-000 AS DESIGNATED ON THE HILLSBOROUGH COUNTY TAX MAPS. BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWESTERLY CORNER OF THE HEREIN DESCRIBED ATC LEASE AREA SAID POINT BEING NORTH 73°20'51" EAST FOR A DISTANCE OF 142.18 FEET TO A POINT WHOSE STATE PLANE COORDINATE IS 72997.60 NORTH AND 1058342.53 EAST; RUNNING THENCE

NORTH 00°00'00" WEST FOR A DISTANCE OF 50.00 FEET TO A POINT; THENCE
NORTH 90°00'00" EAST FOR A DISTANCE OF 50.00 FEET TO A POINT; THENCE
SOUTH 00°00'00" EAST FOR A DISTANCE OF 50.00 FEET TO A POINT; THENCE
SOUTH 90°00'00" WEST FOR A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING.

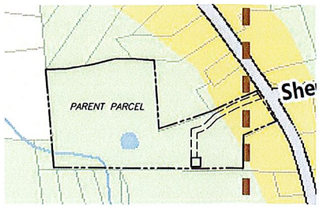
CONTAINING 2,500 SQUARE FEET

ATC ACCESS & UTILITY EASEMENT - AS SURVEYED (PROPOSED):
ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE, LYING AND BEING IN THE TOWN OF HUDSON, COUNTY OF HILLSBOROUGH, STATE OF NEW HAMPSHIRE, SAID BEING A PORTION OF PARCEL ID 259-011-000 AS DESIGNATED ON THE HILLSBOROUGH COUNTY TAX MAPS. BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHOSE STATE PLANE COORDINATE IS 73367.69 NORTH AND 1058781.80 EAST SAID POINT BEING ON THE WESTERLY SIDELINE OF DRACUT ROAD. SAID POINT BEING NORTH 69°58'47" EAST FOR A DISTANCE OF 280.70 FEET FROM A STONE BOUND ALONG THE NORTHERN PROPERTY BOUNDARY HEREIN; RUNNING THENCE

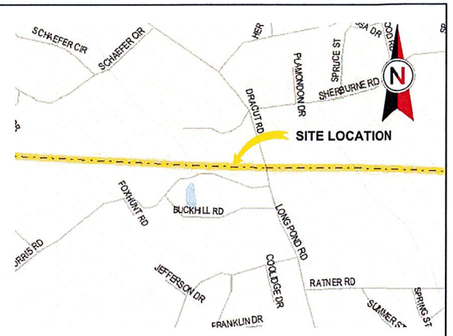
ALONG THE SOUTHWESTERLY SIDELINE OF DRACUT ROAD, SOUTH 33°36'06" EAST FOR A DISTANCE OF 30.73 FEET TO A POINT; THENCE
LEAVING SAID SIDELINE, SOUTH 68°55'29" WEST FOR A DISTANCE OF 91.88 FEET TO A POINT; THENCE
SOUTH 68°40'56" WEST FOR A DISTANCE OF 60.76 FEET TO A POINT; THENCE
SOUTH 62°27'01" WEST FOR A DISTANCE OF 86.80 FEET TO A POINT; THENCE
SOUTH 61°15'39" WEST FOR A DISTANCE OF 21.56 FEET TO A POINT; THENCE
ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 70.00 FEET WITH AN ARC LENGTH OF 19.51 FEET AND WHOSE LONG CHORD BEARS S 53°16'30" W FOR A DISTANCE OF 19.45 FEET TO A POINT; THENCE
SOUTH 45°17'20" WEST FOR A DISTANCE OF 35.42 FEET TO A POINT; THENCE
ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 160.00 FEET WITH AN ARC LENGTH OF 82.19 FEET AND WHOSE LONG CHORD BEARS S 60°00'18" W FOR A DISTANCE OF 81.29 FEET TO A POINT; THENCE
SOUTH 74°43'15" WEST FOR A DISTANCE OF 17.74 FEET TO A POINT; THENCE
SOUTH 24°26'15" WEST FOR A DISTANCE OF 115.36 FEET TO A POINT ALONG THE NORTHERLY SIDELINE OF THE ABOVE DESCRIBED LEASE AREA; THENCE
ALONG SAID SIDELINE, NORTH 90°00'00" WEST FOR A DISTANCE OF 32.95 FEET TO A POINT; THENCE
LEAVING SAID SIDELINE, NORTH 24°26'15" EAST FOR A DISTANCE OF 143.07 FEET TO A POINT; THENCE
NORTH 74°43'15" EAST FOR A DISTANCE OF 31.82 FEET TO A POINT; THENCE
ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 130.00 FEET WITH AN ARC LENGTH OF 66.78 FEET AND WHOSE LONG CHORD BEARS N 60°00'18" E FOR A DISTANCE OF 66.05 FEET TO A POINT; THENCE
NORTH 45°17'20" EAST FOR A DISTANCE OF 35.42 FEET TO A POINT; THENCE
ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 100.00 FEET WITH AN ARC LENGTH OF 27.88 FEET AND WHOSE LONG CHORD BEARS N 53°16'30" E FOR A DISTANCE OF 27.79 FEET TO A POINT; THENCE
NORTH 61°15'39" EAST FOR A DISTANCE OF 21.87 FEET TO A POINT; THENCE
NORTH 62°27'01" EAST FOR A DISTANCE OF 68.21 FEET TO A POINT; THENCE
NORTH 68°40'56" EAST FOR A DISTANCE OF 62.46 FEET TO A POINT; THENCE
NORTH 68°55'29" EAST FOR A DISTANCE OF 85.80 FEET TO THE POINT OF BEGINNING.

CONTAINING 16,418 SQUARE FEET



2 PARENT PARCEL
0 800' 1600'
SCALE: 1"=800' (11X17)
1"=400' (22X34)

SURVEY LEGEND
- EXISTING PROPERTY
- EXISTING ADJ. PROPERTY
- EXISTING LEASE
- EXISTING EASEMENT
- 290 EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- EXISTING TREELINE
- EXISTING CHAINLINK FENCE
- EXISTING STONE WALL
- UNDERGROUND ELECTRIC
- UNDERGROUND CABLE
- EXISTING BUILDING
- EXISTING CONCRETE
- EXISTING ROAD (PAVED)
- EXISTING ROAD (DIRT)
- EXISTING WETLAND
- EXISTING UTILITY POLE
- EXISTING WELL
- TPB EXISTING TELEPHONE PULLBOX
- UPB EXISTING UTILITY PULLBOX
- SURVEY BENCHMARK
- PROPERTY CORNER
- SBB EXISTING STONE BOUND
- EXISTING DRILL HOLE
- A1 WETLAND FLAG
- 16 TITLE REFERENCE #



1 VICINITY MAP
0 2000' 4000'
SCALE: 1"=2000' (11X17)
1"=1000' (22X34)

NOTES CORRESPONDING TO TITLE COMMITMENT

THE TITLE COMMITMENT PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY AS COMMITMENT NUMBER 29893496, COMMITMENT DATE July 15, 2020 CONTAINS THE FOLLOWING SURVEY RELATED ITEMS.

8. MATTERS AS SHOWN AND NOTED ON PLAN RECORDED IN INSTRUMENT NO. 10671. NO MATTERS SHOWN OR NOTED ON PLAN.
9. EASEMENT IN FAVOR OF NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY, A NEW YORK CORPORATION AND PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, A CORPORATION, THEIR SUCCESSORS AND ASSIGNS SET FORTH IN INSTRUMENT RECORDED ON MARCH 3, 1980 IN DEED BOOK 2754, PAGE 660. NOT SHOWN HEREON. NOT PLOTTABLE, NO METES AND BOUNDS PROVIDED. CAN AFFECT PARCEL.
10. NOTICE OF CONDEMNATION IN FAVOR OF THE STATE OF NEW HAMPSHIRE SET FORTH IN INSTRUMENT RECORDED ON MAY 4, 1981 IN DEED BOOK 2838, PAGE 607. NOT PLOTTABLE. PLAN REFERENCED NOT PROVIDED.
11. MATTERS AS SHOWN AND NOTED ON PLAN RECORDED IN INSTRUMENT NO. 234147. NO MATTERS SHOWN OR NOTED ON PLAN.
12. SITE PLAN DEVELOPMENT AGREEMENT DATED AUGUST 21, 2004 , BY AND BETWEEN MICHAEL KAZNJIAN AND TOWN OF HUDSON RECORDED ON SEPTEMBER 2, 2004 IN DEED BOOK 7312, PAGE 253. NOT SHOWN HEREON. NO SURVEY MATTERS PLOTTABLE.
13. MATTERS AS SHOWN AND NOTED ON PLAN RECORDED IN INSTRUMENT NO. 33406. NO MATTERS SHOWN OR NOTED ON PLAN.
14. INTENTIONALLY REMOVED.
15. MORTGAGE FROM TOM W. CHAN, ROSA C. CHAN AND JOHN M. WILLITT AND KRISTINE C. WILLETT, GRANTOR(S), IN FAVOR OF MERRIMACK COUNTY SAVINGS BAND, DATED FEBRUARY 27, 2014, AND RECORDED MARCH 3, 2014 IN DEED BOOK 8643, PAGE 2427, IN THE ORIGINAL AMOUNT OF $480,000.00. SHOWN HEREON.
16. TERMS AND CONDITIONS OF MEMORANDUM OF LEASE AGREEMENT DATED MARCH 15, 2018, BY AND BETWEEN TOM W. CHAN AND ROSA C. CHAN AND JOSHUA M. WILLETT AND KRISTINE C. WILLETT AND AMERICAN TOWERS LLC, A DELAWARE LIMITED LIABILITY COMPANY, D/B/A AMERICAN NEW HAMPSHIRE TOWERS RECORDED ON MARCH 19, 2018 IN DEED BOOK 9056, PAGE 2930. SHOWN HEREON.

AMENDMENT TO MEMORANDUM OF LEASE AGREEMENT RECORDED ON MARCH 22, 2019 IN DEED BOOK 9154, PAGE 1028. NOT PLOTTABLE.

17. SUBORDINATION AND NON-DISTURBANCE AGREEMENT DATED MARCH 1, 2018, BY AND BETWEEN MERRIMACK COUNTY SAVINGS BANK AND AMERICAN TOWERS LLC, A DELAWARE LIMITED LIABILITY COMPANY, D/B/A AMERICAN NEW HAMPSHIRE TOWERS RECORDED ON MARCH 19, 2018 IN DEED BOOK 9057, PAGE 0137. SHOWN HEREON.
18. EASEMENT DEED IN FAVOR OF PUBLIC SERVICE OF NEW HAMPSHIRE (PSNH), D/B/A EVERSOURCE ENERGY, A CORPORATION AND ITS SUCCESSORS SET FORTH IN INSTRUMENT RECORDED ON APRIL 19, 2018 IN DEED BOOK 9065, PAGE 322. LOCATION OF UNDERGROUND UTILITIES PARTIAL MARKED OUT AT TIME OF SURVEY. SHOWN HEREON.

SITE PLAN AGREEMENT, BOOK 9053, PAGE 781 (NOT REFERENCED IN TITLE). NOT SHOWN HEREON. REFERENCES PROPOSED STRUCTURES.

PLANNING BOARD

APPROVED BY THE HUDSON PLANNING BOARD
DATE OF MEETING:_____
PLANNING BOARD:
CHAIRMAN:_____ SIGNATURE DATE:_____
SECRETARY:_____ SIGNATURE DATE:_____
SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVED FINAL APPROVAL

LANDLORD APPROVAL

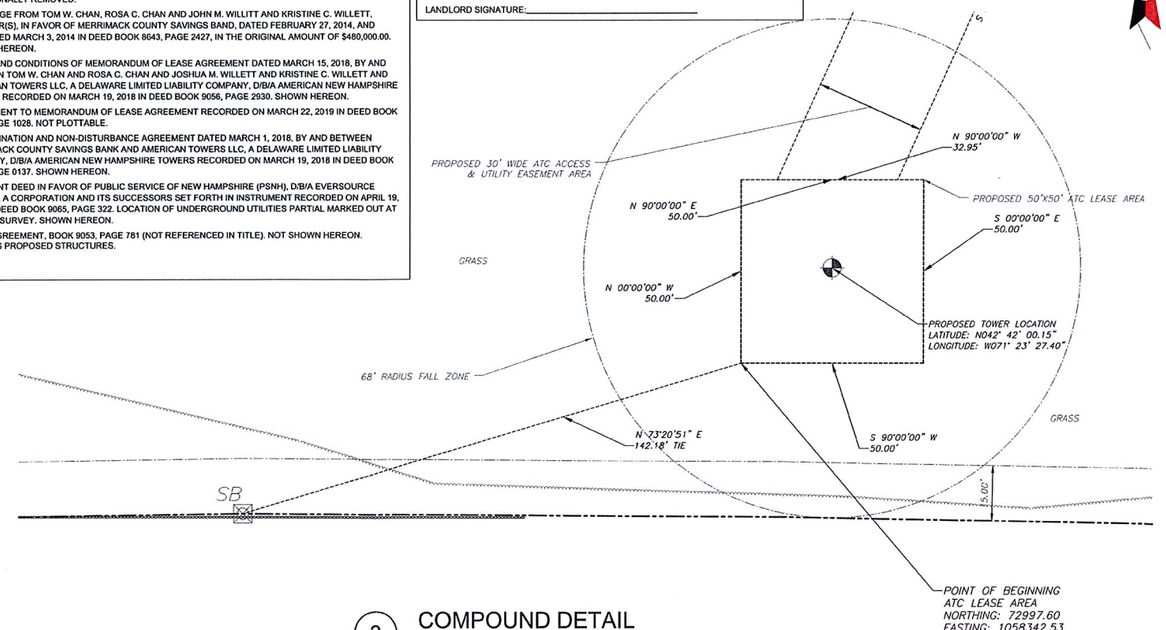
PURSUANT TO THE SITE REVIEW REGULATIONS OF HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

PROPERTY OWNER:
TOM W. & ROSA C. CHAN; JOSHUA M. & KRISTINE C. WILLETT
143 DRACUT ROAD
HUDSON, NH 03051

LANDLORD SIGNATURE:_____

ZONING SETBACK REQUIREMENTS

ZONE DISTRICT:	R-2	G-1
MINIMUM LOT AREA (SQ. FT.)		
WITH TOWN WATER & SEWER	43,560	87,120
WITHOUT TOWN WATER & SEWER	60,000	87,120
MINIMUM LOT FRONTAGE (LINEAR FT.)		
LOCAL ROADWAYS WITH TOWN WATER AND SEWER	120	200
ARTERIAL AND COLLECTOR	150	200
BUILDING SETBACK REQUIREMENTS (FT.)		
ARTERIAL AND COLLECTOR ROADWAYS	50/15/15	50/15/15
LOCAL ROADWAYS	30/15/15	30/15/15



3 COMPOUND DETAIL
0 20' 40'
SCALE: 1"=20' (11X17)
1"=10' (22X34)

AMERICAN TOWER®
ATC TOWER SERVICES, INC
3533 REGENCY PARKWAY
SUITE 133
CARY, NC 27551
PHONE: (919) 468-0145
COA: D-0204

REV.	DESCRIPTION	BY	DATE
11	PER COMMENTS	SW	11/25/19
12	PER COMMENTS	FW	02/11/20
13	PER COMMENTS	SW	08/05/20

ATC SITE NUMBER:
202096
ATC SITE NAME:
HUDSON
NH
SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NEW HAMPSHIRE 03051

SURVEY CERTIFICATE:
TO AMERICAN TOWER CORPORATION:
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(B) (TO THE EXTENT, GRAPHICALLY DEPICT ON SURVEY DRAWING THE ZONING SETBACK LINES), 7(A), 7(B)(1), 7(C), 8, 9, 11, AND 13 TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 08/03/2020

DATE OF PLAT OR MAP: 08/05/2020

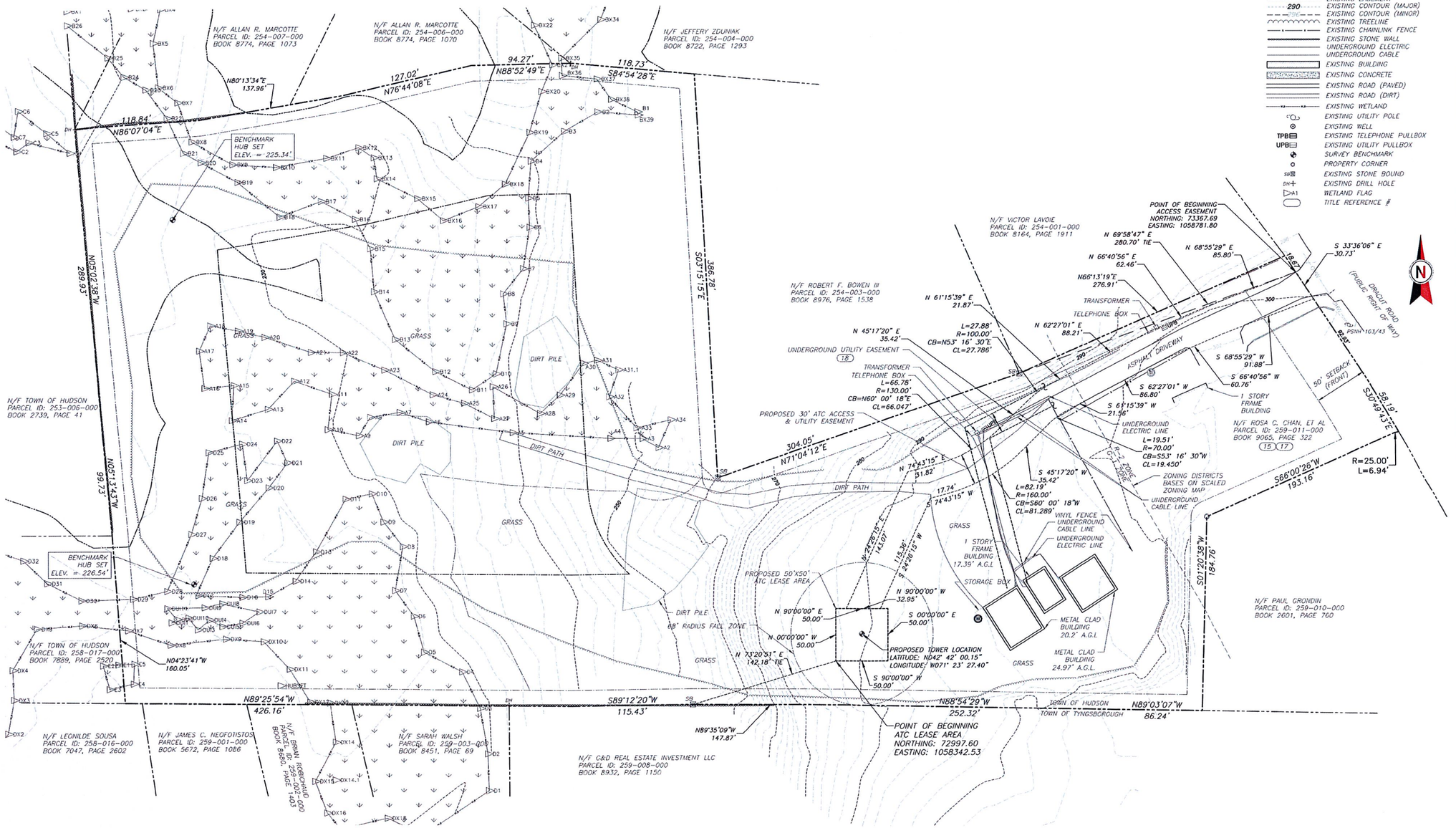
(SIGNED) NAME: FRANK H. WENZ IV, L.L.S. 970

SURVEY LOGO:
Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering & Surveying Consultants P.C.
70 Pleasant Hill Road — Phone: (845) 534-5959
P.O. Box 37 — (800) 829-6531
Mountainville, NY 10953
www.tectonicengineering.com

DRAWN BY:	SA
APPROVED BY:	FHW
DATE DRAWN:	12/16/16
ATC JOB NO:	202096

COMPOUND DETAIL & DESCRIPTIONS

SHEET NUMBER:	REVISION:
V-201	13



PLANNING BOARD

APPROVED BY THE HUDSON PLANNING BOARD
DATE OF MEETING: _____
PLANNING BOARD:
CHAIRMAN: _____ SIGNATURE DATE:
SECRETARY: _____ SIGNATURE DATE:
SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVED FINAL APPROVAL

LANDLORD APPROVAL

PURSUANT TO THE SITE REVIEW REGULATIONS OF HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

PROPERTY OWNER:
TOM W. & ROSA C. CHAN; JOSHUA M. & KRISTINE C. WILLETT
143 DRACUT ROAD
HUDSON, NH 03051

LANDLORD SIGNATURE: _____

4 EXISTING CONDITIONS PLAN

0 100' 200'

SCALE: 1"=100' (11X17)
1"=50' (22X34)

AMERICAN TOWER®
ATC TOWER SERVICES, INC
3533 REGENCY PARKWAY
SUITE 133
CARY, NC 27551
PHONE: (919) 468-0145
COA: D-0204

REV.	DESCRIPTION	BY	DATE
11	PER COMMENTS	SW	11/25/19
12	PER COMMENTS	FW	02/11/20
13	PER COMMENTS	SW	08/05/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON
NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NEW HAMPSHIRE 03051

SURVEY CERTIFICATE:
TO AMERICAN TOWER CORPORATION:
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(B) (TO THE EXTENT, GRAPHICALLY DEPICT ON SURVEY DRAWING THE ZONING SETBACK LINES), 7(A), 7(B)(1), 7(C), 8, 9, 11, AND 13 TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 08/03/2020.

DATE OF PLAT OR MAP: 08/05/2020

(SIGNED) NAME: FRANK H. WENZ IV

FRANK H. WENZ IV, L.L.S. 970

SURVEY LOGO:

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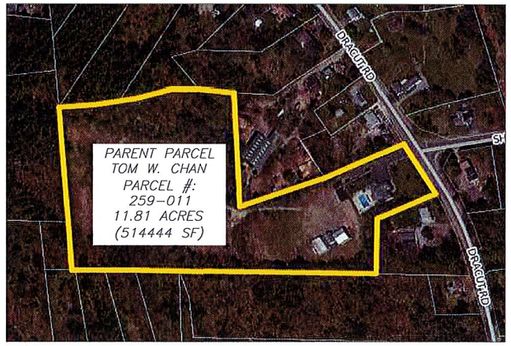
70 Pleasant Hill Road
P.O. Box 37
Mountainville, NY 10953
Phone: (845) 534-5959
(800) 829-6531
www.tectonicengineering.com

DRAWN BY:	SA
APPROVED BY:	FHW
DATE DRAWN:	12/16/16
ATC JOB NO:	202096

EXISTING CONDITIONS

SHEET NUMBER:	REVISION:
V-202	13

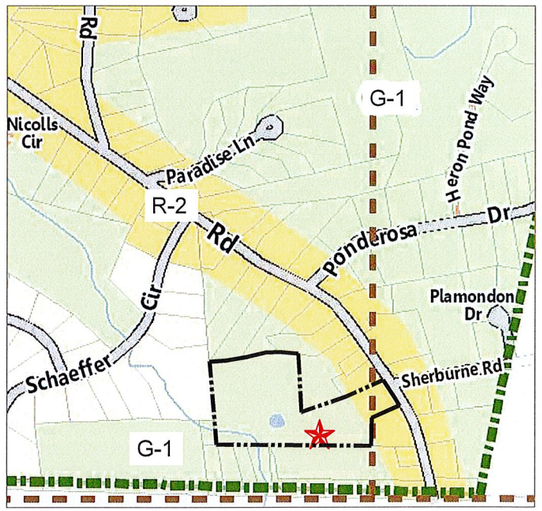
ZONING INFORMATION				
PARCEL SPANS TWO DISTRICTS: G-1 (GENERAL 1) - TOWER LOCATION R-2 (RESIDENTIAL 2)				
	REQUIRED:	TOWER:	TMOBILE:	FENCE:
MIN AREA:	2 ACRES	11.81 ACRES	N/A	N/A
MAX HEIGHT:	N/A	155' A.G.L.	N/A	N/A
MIN FRONTAGE:	N/A	N/A	N/A	N/A
MIN DEPTH:	NONE	N/A	N/A	N/A
MIN FRONT YARD SETBACK:	50'	756'-11"	235'-9"	233'-6"
MIN SIDE YARD SETBACK:	15'	40'-6"	19'-11"	16'-0"
MIN REAR YARD SETBACK:	15'	772'-9"	783'-1"	748'-2"



1 GIS PARCEL IMAGE

0 200' 400'

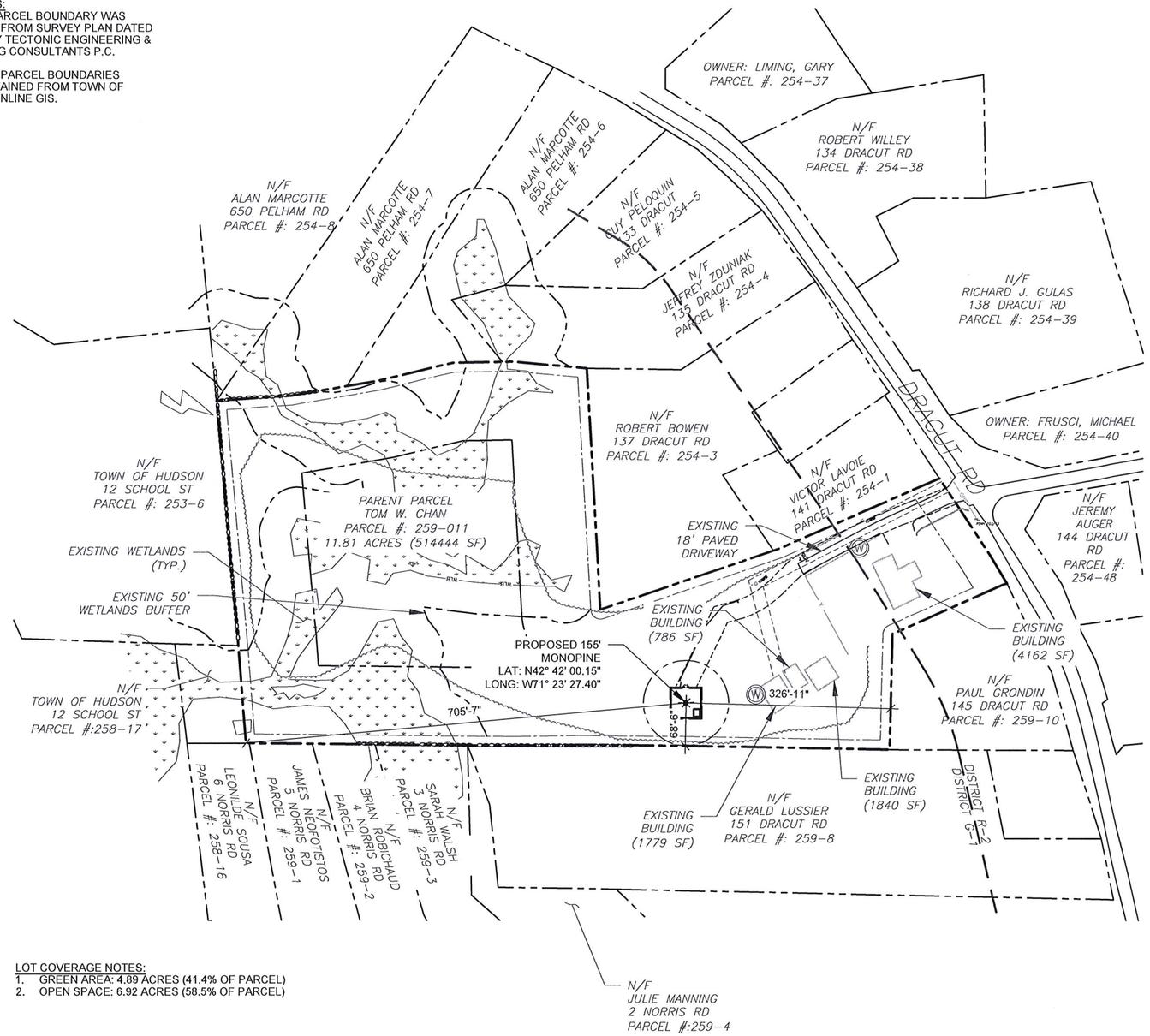
SCALE: 1"=200' (11X17)
1"=100' (22X34)



2 ZONING BOUNDARY

SCALE: NOT TO SCALE

PARCEL NOTES:
1. PARENT PARCEL BOUNDARY WAS OBTAINED FROM SURVEY PLAN DATED 08/05/20 BY TECTONIC ENGINEERING & SURVEYING CONSULTANTS P.C.
2. ABUTTING PARCEL BOUNDARIES WERE OBTAINED FROM TOWN OF HUDSON ONLINE GIS.



LOT COVERAGE NOTES:
1. GREEN AREA: 4.89 ACRES (41.4% OF PARCEL)
2. OPEN SPACE: 6.92 ACRES (58.5% OF PARCEL)

3 OVERALL SITE PLAN

0 200' 400'

SCALE: 1"=200' (11X17)
1"=100' (22X34)

LEGEND

- EXISTING PROPERTY
- EXISTING ADJ. PROPERTY
- EXISTING EASEMENT
- XXX EXISTING CONTOUR (MAJOR)
- XXX EXISTING CONTOUR (MINOR)
- EXISTING TREELINE
- EXISTING CHAINLINK FENCE
- EXISTING BUILDING
- EXISTING LEASE AREA
- EXISTING ROAD (PAVED)

APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING _____ PLANNING BOARD: CHAIRMAN _____ SIGNATURE DATE: _____ SECRETARY _____ SIGNATURE DATE: _____ SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECIEVES FINAL APPROVAL.	PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL. PROPERTY OWNER: TOM W. & ROSA C. CHAN 143 DRAUT ROAD HUDSON, NH 03051 LANDLORD SIGNATURE:_____

AMERICAN TOWER®
dba SPECIALTY TOWER SERVICES
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 1571

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

Authorized by "Patrick P. Barry"
17 Nov 2020 01:15:54

cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

OVERALL SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

PROPERTY OWNER:
TOM W. & ROSA C. CHAN
143 DRAUT ROAD
HUDSON, NH 03051

LANDLORD SIGNATURE:_____

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING _____
PLANNING BOARD:
CHAIRMAN _____ SIGNATURE DATE: _____
SECRETARY _____ SIGNATURE DATE: _____
SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECIEVES FINAL APPROVAL.

SOIL CLASSIFICATIONS:

CaD-CANTON FINE SANDY LOAM (15-25% SLOPES)

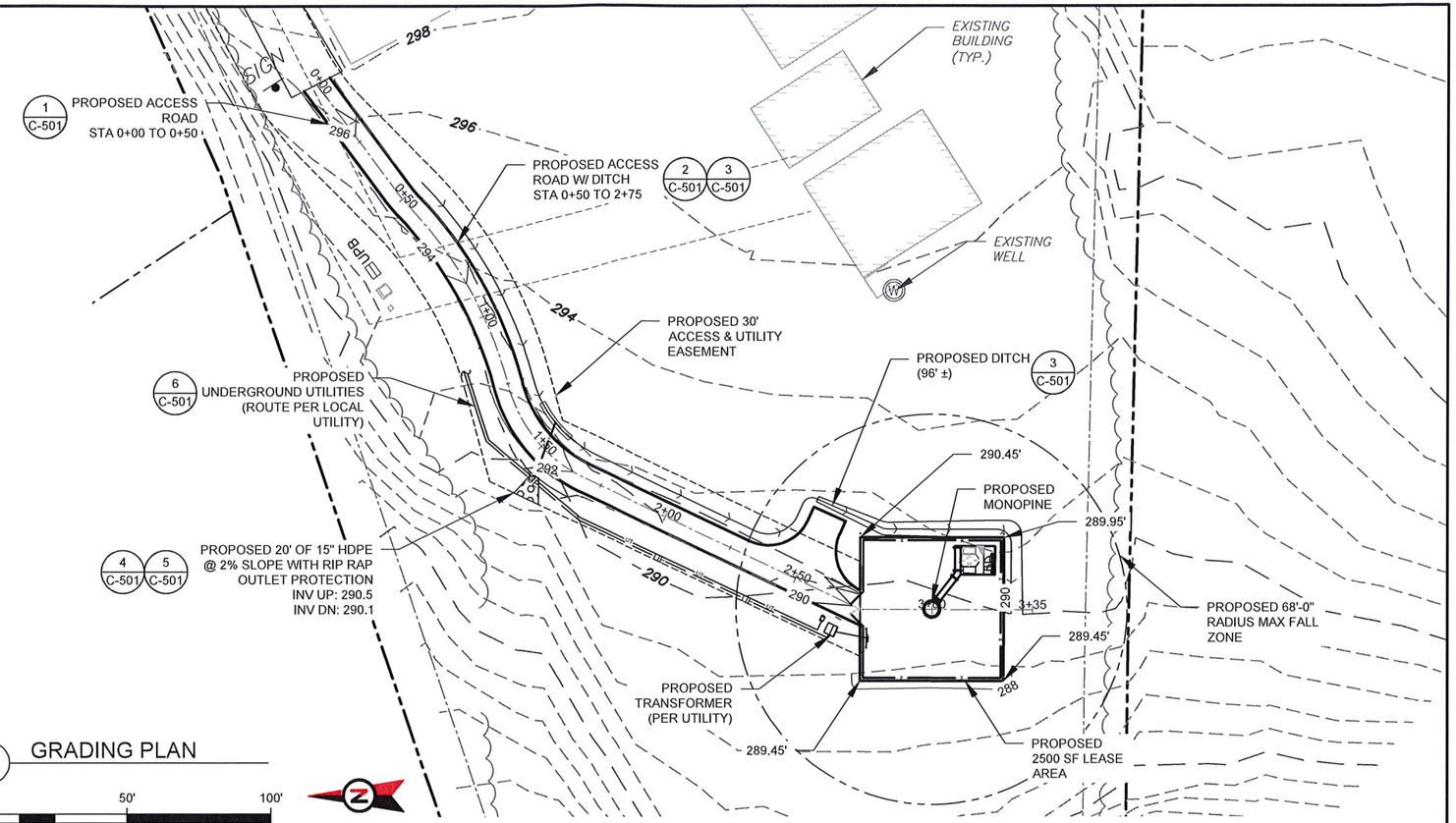
CaB-CANTON FINE SANDY LOAM (0-8% SLOPES)

CmD-CANTON FINE SANDY LOAM, VERY STONY (15-25% SLOPES)

CUT/FILL VOLUMES	CUT (yd^3)	FILL (yd^3)	NET (yd^3)	
ACCESS ROAD	7.64	41.02	33.38	FILL
COMPOUND	29.16	19.96	-9.2	FILL
		TOTAL	24.18	FILL

STONE REQUIRED FOR ROAD	AVE STONE DEPTH (in)	WIDTH (feet)	LENGTH (feet)	STONE IMPORT (yd^3)	STONE IMPORT (TONS)
COMPOUND	6	50	50	46.3	63.0
ROAD COARSE	6	12	282	62.7	85.3
			TOTAL	109.0	148.3

* CUT / FILL CALCULATIONS ARE APPROXIMATE. THE AMOUNT OF TOPSOIL THAT WILL NEED TO BE REMOVED AND THE COMPACTION AND SHRINKAGE FACTORS WILL VARY BASED ON SITE CONDITIONS.
* AMOUNT OF STONE TO IMPORT IS APPROXIMATE. THE CONTRACTOR SHALL FOLLOW THE DETAILS ON THE PLANS TO THE APPROPRIATE STONE DEPTHS

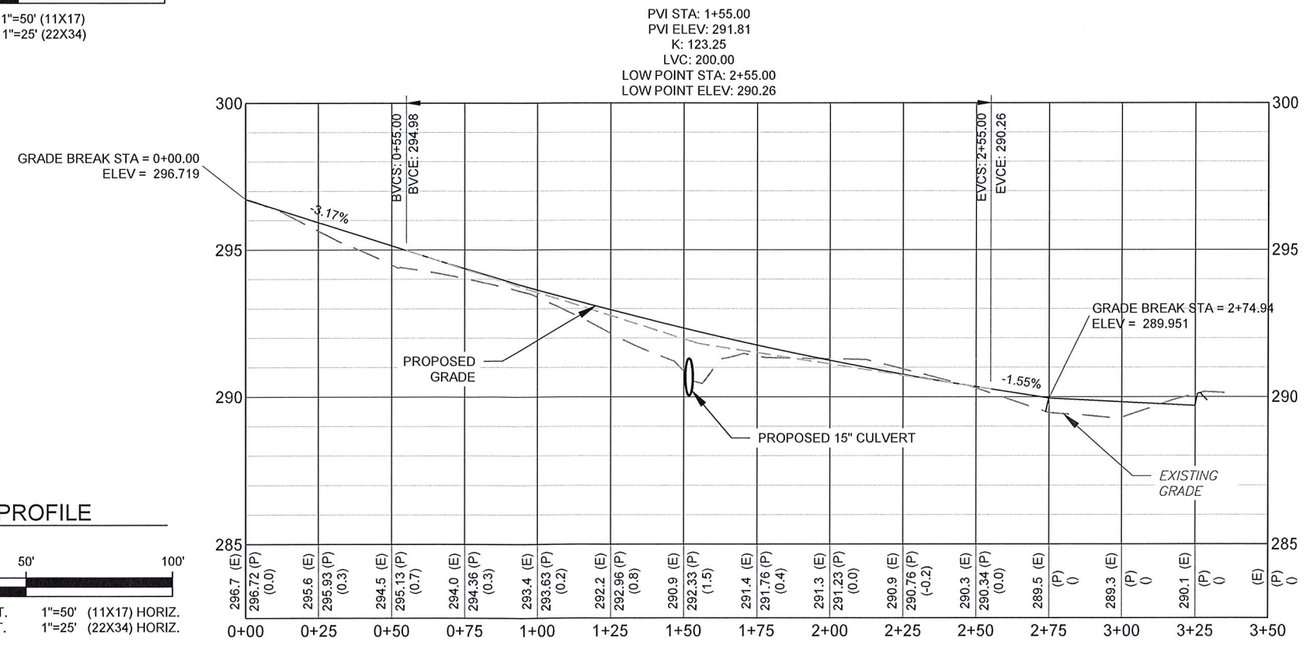


1 GRADING PLAN

0 50' 100'

LEGEND

- EXISTING PROPERTY
- EXISTING ADJ. PROPERTY
- EXISTING EASEMENT
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- EXISTING TREELINE
- EXISTING CHAINLINK FENCE
- EXISTING BUILDING
- EXISTING LEASE AREA
- EXISTING ROAD (PAVED)
- PROPOSED DITCH
- PROPOSED CULVERT
- PROPOSED WATERBAR
- PROPOSED OUTLET PROTECTION
- PROPOSED ACCESS ROAD
- PROPOSED CONTOUR (MINOR)
- PROPOSED CONTOUR (MAJOR)
- PROPOSED FENCE
- PROPOSED LOD
- PROPOSED SILT FENCE
- PROPOSED UNDERGROUND POWER
- PROPOSED UNDERGROUND TELCO



2 ROAD PROFILE

0 50' 100'

SCALE: 1"=5' (11X17) VERT. 1"=50' (11X17) HORIZ.
1"=2.5' (22X34) VERT. 1"=25' (22X34) HORIZ.

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

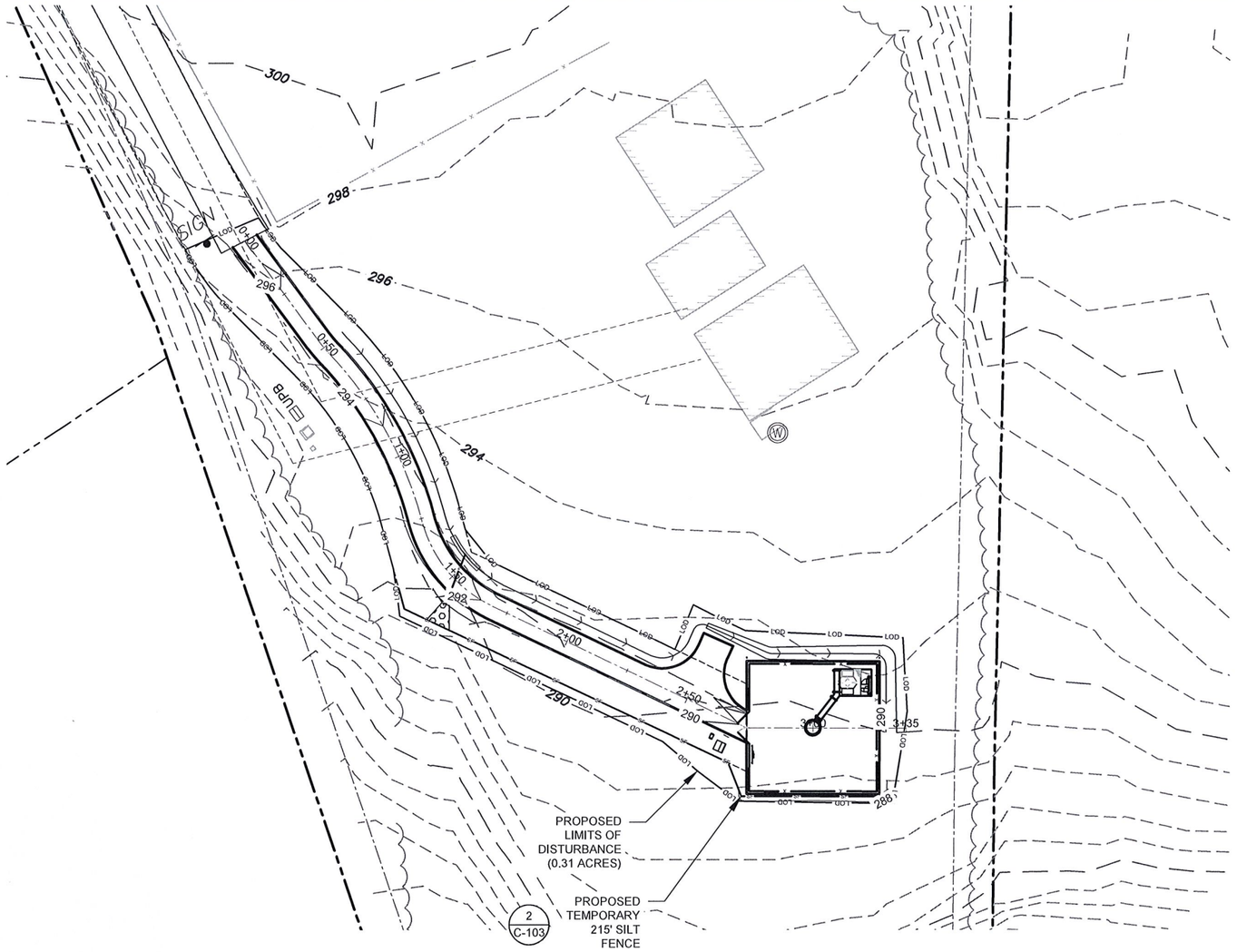
Authorized by "Patrick P. Barry"
17 Nov 2020 01:15:54

cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

GRADING PLAN & PROFILE

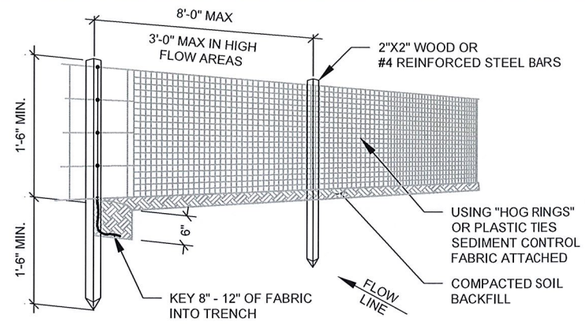
SHEET NUMBER:	REVISION:
C-102	0



1 EROSION & SEDIMENT CONTROL PLAN

0 50' 100'

SCALE: 1"=50' (11X17)
1"=25' (22X34)



NOTES:

1. FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL STAKES.
2. SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.
3. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.
4. ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED.
5. FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

AMERICAN TOWER MASTER SPECIFICATION:
1. DIVISION 31 EARTHWORK SECTION 0312500 FOR EROSION AND SEDIMENT CONTROLS

2 SILT FENCE DETAIL

SCALE: NOT TO SCALE

LEGEND

- EXISTING PROPERTY
- EXISTING ADJ. PROPERTY
- EXISTING EASEMENT
- XXX EXISTING CONTOUR (MAJOR)
- XXX EXISTING CONTOUR (MINOR)
- EXISTING TREELINE
- EXISTING CHAINLINK FENCE
- EXISTING BUILDING
- EXISTING LEASE AREA
- EXISTING ROAD (PAVED)
- PROPOSED DITCH
- SD PROPOSED CULVERT
- PROPOSED WATERBAR
- PROPOSED OUTLET PROTECTION
- PROPOSED ACCESS ROAD
- XXX PROPOSED CONTOUR (MINOR)
- XXX PROPOSED CONTOUR (MAJOR)
- PROPOSED FENCE
- LOD PROPOSED LOD
- SF PROPOSED SILT FENCE
- UE PROPOSED UNDERGROUND POWER
- UT PROPOSED UNDERGROUND TELCO

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

PROPERTY OWNER:
TOM W. & ROSA C. CHAN
143 DRAUT ROAD
HUDSON, NH 03051

LANDLORD SIGNATURE:_____

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING _____
PLANNING BOARD:
CHAIRMAN _____ SIGNATURE DATE: _____
SECRETARY _____ SIGNATURE DATE: _____
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ATC SITE NUMBER:
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HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

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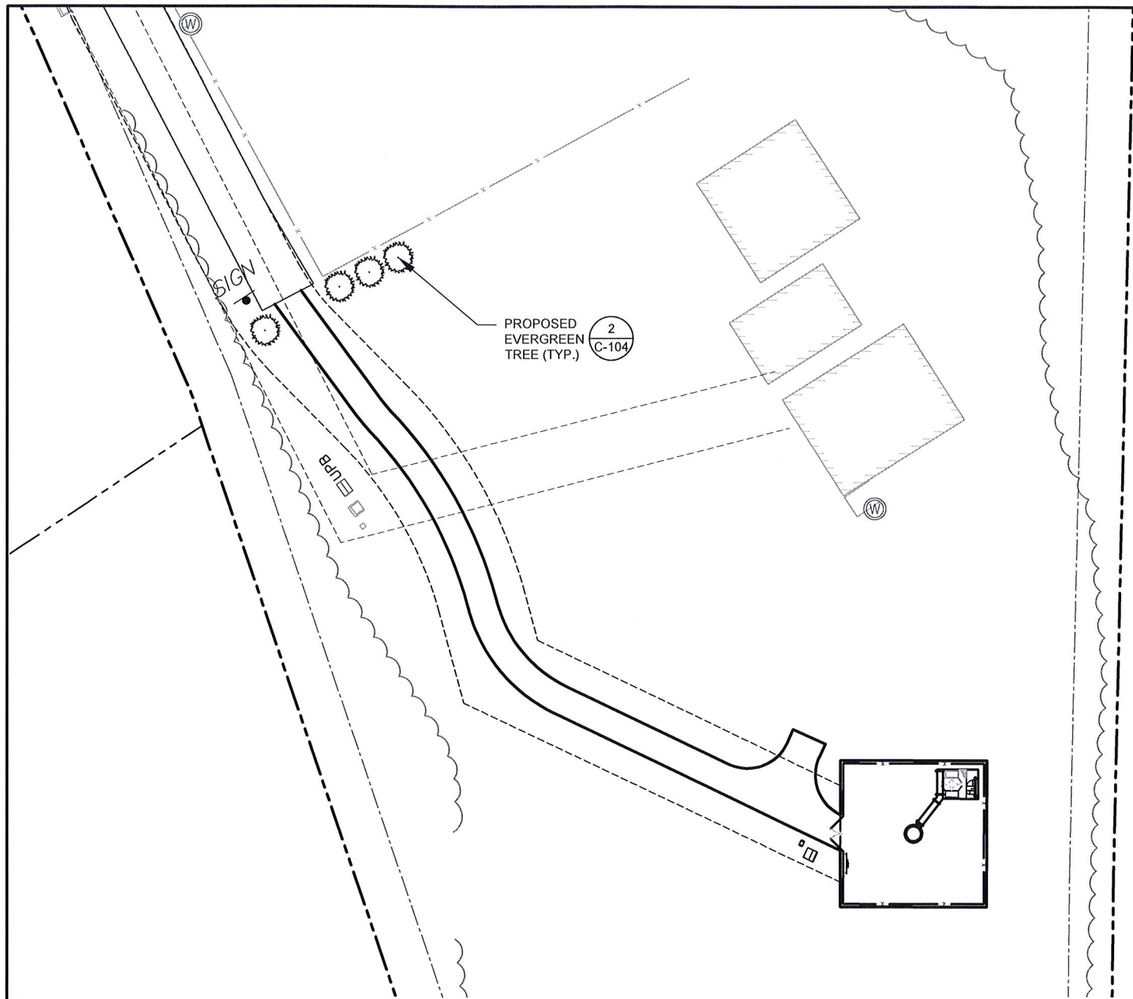
17 Nov 2020 01:15:55

cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

EROSION & SEDIMENT CONTROL PLAN

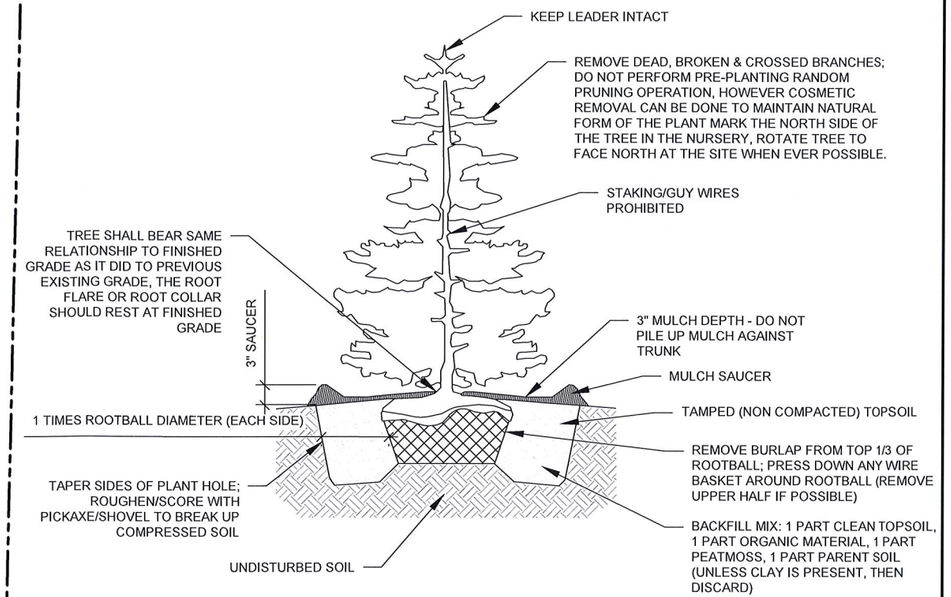
SHEET NUMBER:	REVISION:
C-103	0



1 PLANTING PLAN

0 50' 100'

SCALE: 1"=50' (11X17)
1"=25' (22X34)



2 TYPICAL EVERGREEN TREE PLANTING DETAIL

SCALE: NOT TO SCALE

NOTES:
1. CONTRACTOR TO VERIFY THAT ADEQUATE DRAINAGE EXISTS PRIOR TO PLANTING.
2. DO NOT WRAP TRUNK OF TREE.
3. STAKING OF TREES IN NOT RECOMMENDED, EXCEPT ON WINDY SITE OR FOR LARGE EVERGREEN TREES. IF STAKING IS DONE, FLEXIBLE STRAPS - NOT HOSE AND WIRE - SHOULD BE USED AND MUST BE REMOVED AT APPROPRIATE TIME. ATC IS RESPONSIBLE FOR THE REPLACEMENT OF DESTROYED OR DAMAGED TREES.
4. ALL TREES SHALL CONFORM TO THE STANDARDS SET FORTH IN THE MOST RECENT AMERICAN STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (A.A.N.).
5. TREE WITH ROOT FLARE COVERED BY MORE THAT 1.5" OF SOIL WILL BE REJECTED PRIOR TO INSTALLATION.

LEGEND

- EXISTING PROPERTY
- EXISTING ADJ. PROPERTY
- EXISTING EASEMENT
- EXISTING CONTOUR (MAJOR) (XXX)
- EXISTING CONTOUR (MINOR) (XXX)
- EXISTING TREELINE
- EXISTING CHAINLINK FENCE
- EXISTING BUILDING
- EXISTING LEASE AREA
- EXISTING ROAD (PAVED)
- PROPOSED DITCH
- PROPOSED CULVERT (SD)
- PROPOSED WATERBAR
- PROPOSED OUTLET PROTECTION
- PROPOSED ACCESS ROAD
- PROPOSED CONTOUR (MINOR) (XXX)
- PROPOSED CONTOUR (MAJOR) (XXX)
- PROPOSED FENCE
- PROPOSED LOD (LOD)
- PROPOSED SILT FENCE (SF)
- PROPOSED UNDERGROUND POWER (UE)
- PROPOSED UNDERGROUND TELCO (UT)

PROPOSED PLANTING TABLE

SPECIES:	QTY:	MIN. CALIPER SIZE	MAX HEIGHT	SPACING	MAX WIDTH
ARBORVITAE (GREEN GIANT)	4	3" CALIPER	50-60'	12' O/C	10-12'

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

PROPERTY OWNER:
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LANDLORD SIGNATURE:_____

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ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

STATE OF NEW HAMPSHIRE – PATRICK P. BARRY No. 13612 – PROFESSIONAL ENGINEER

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17 Nov 2020 01:15:56

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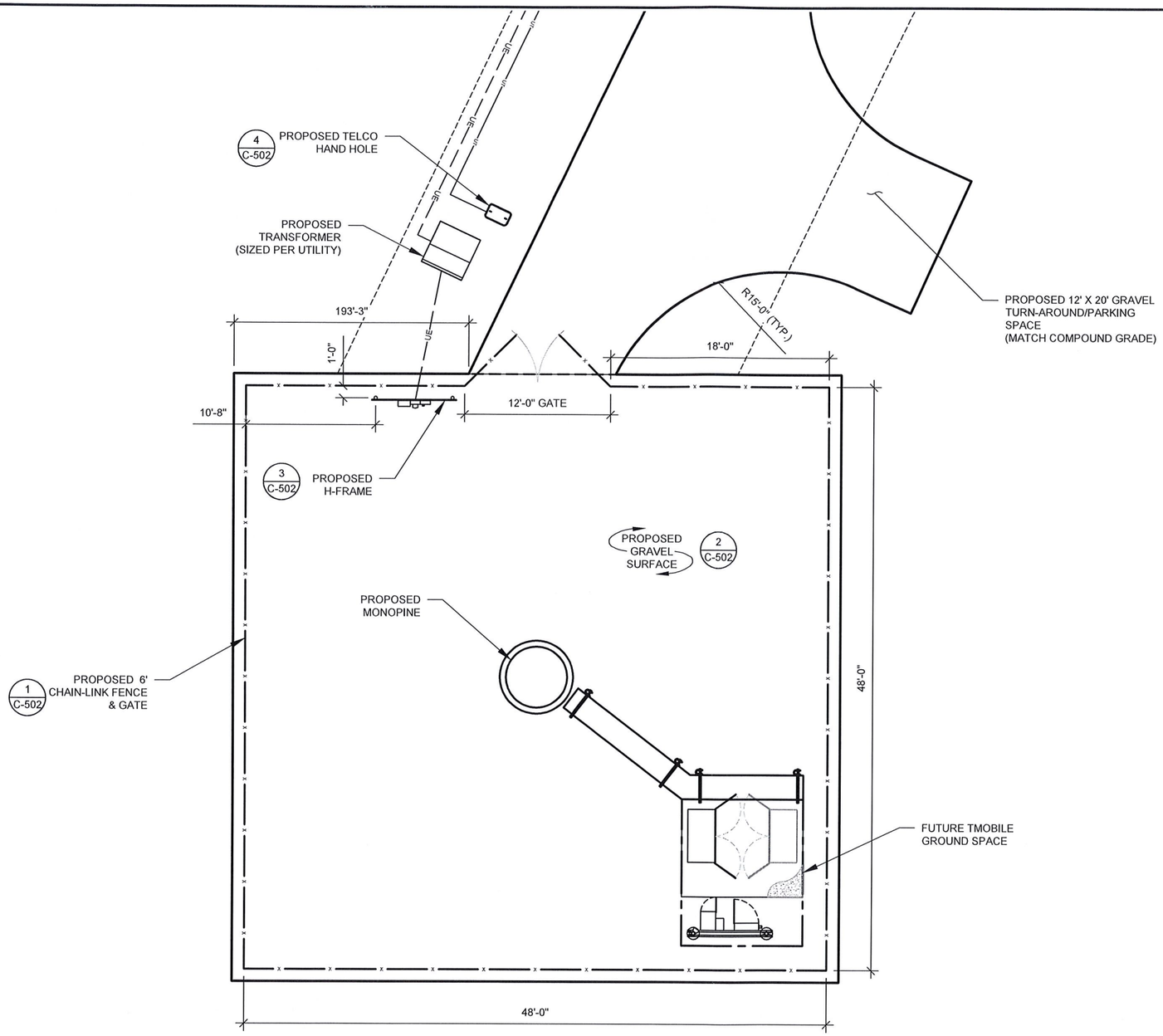
DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

PLANTING PLAN

SHEET NUMBER:	REVISION:
C-104	0



APPROVED BY THE HUDSON, NH PLANNING BOARD	PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.
DATE OF MEETING _____ PLANNING BOARD: CHAIRMAN _____ SIGNATURE DATE: _____ SECRETARY _____ SIGNATURE DATE: _____ SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECIEVES FINAL APPROVAL.	PROPERTY OWNER: TOM W. & ROSA C. CHAN 143 DRAUT ROAD HUDSON, NH 03051 LANDLORD SIGNATURE:_____

1 COMPOUND PLAN

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

N

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0	FOR CONSTRUCTION	NW	11/09/20

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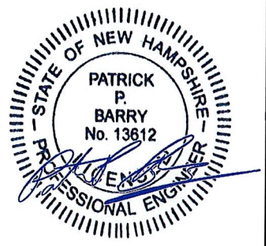
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:



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17 Nov 2020 01:15:56

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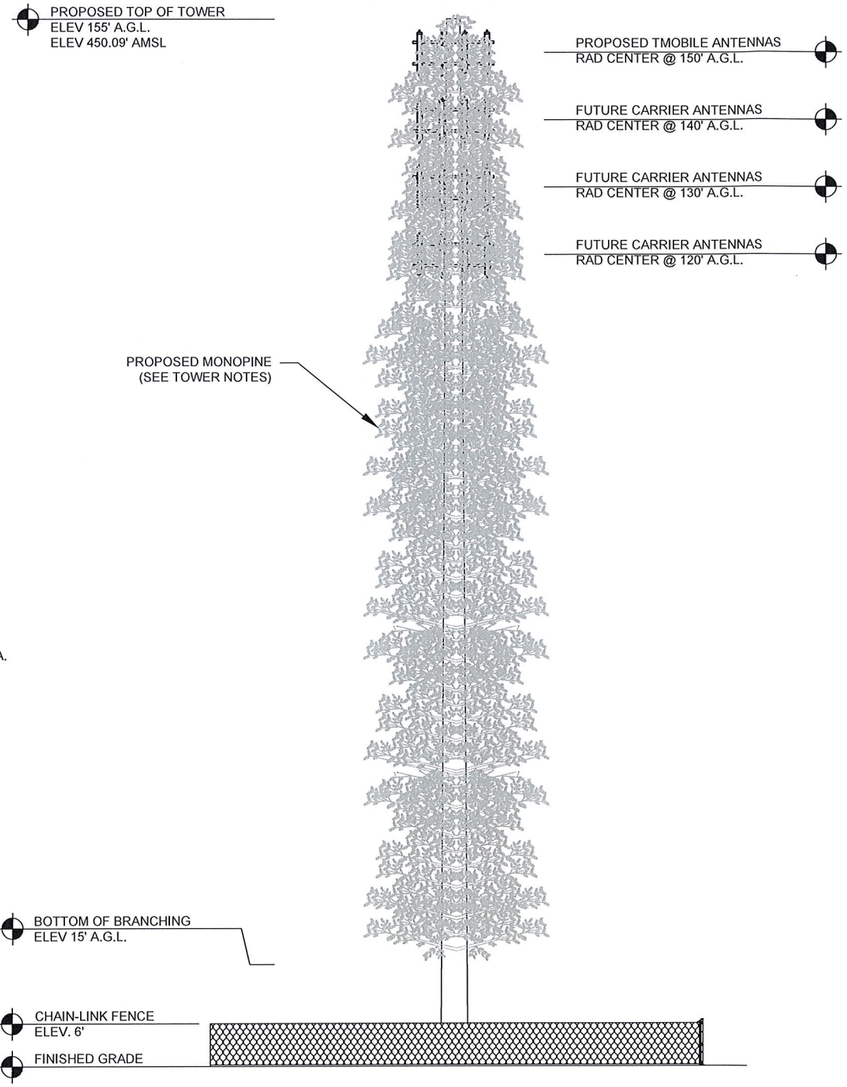
DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

COMPOUND PLAN

SHEET NUMBER:	REVISION:
C-401	0



1 TOWER ELEVATION
SCALE: NOT TO SCALE

TOWER NOTES:

1. INSTALL (3) 1-5/8" HYBRID CABLES INSIDE MONOPINE.
2. NO LIGHTING IS REQUIRED BY FAA.
3. BRANCHING SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND DOES NOT REPRESENT THE FINAL DESIGN.

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

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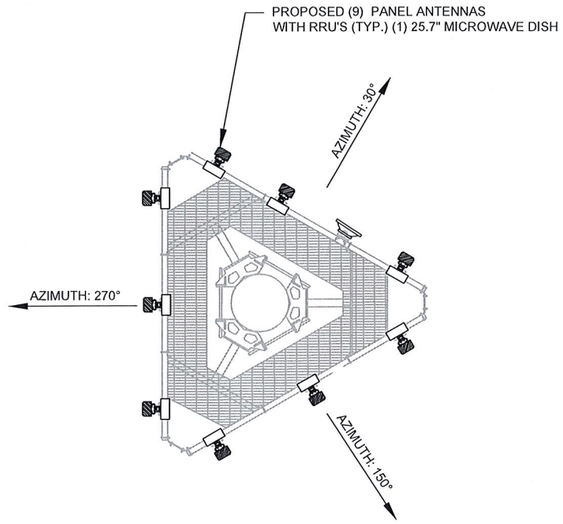
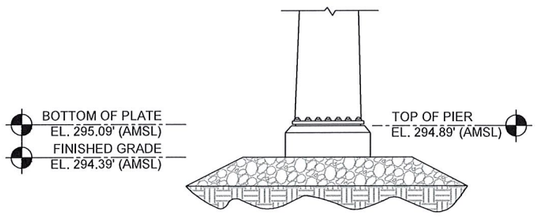


2 PROPOSED ANTENNA MOUNTING DETAIL (PLAN VIEW)
SCALE: NOT TO SCALE



3 TOWER BASE ELEVATION
SCALE: NOT TO SCALE

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PHONE: (919) 468-0112
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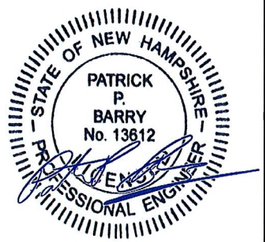
ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:



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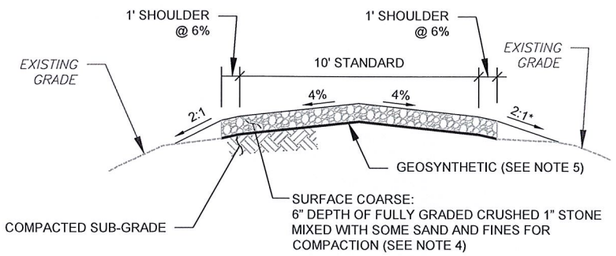
17 Nov 2020 01:15:57

cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-402	0

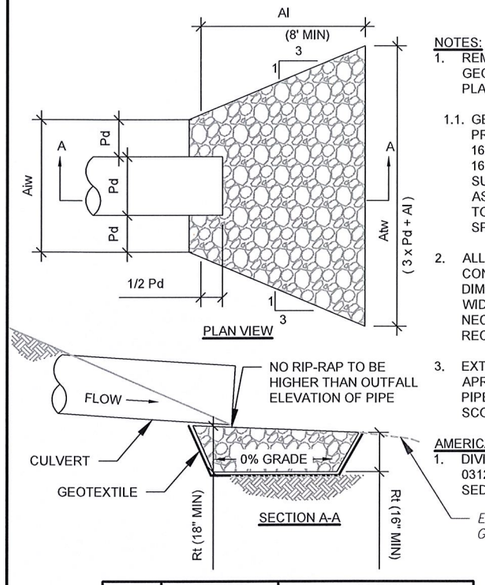


NOTES:
1. SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. NO DELETERIOUS MATERIALS OR ORGANICS TO BE USED. REMOVE ALL TOP SOIL AND ORGANICS BEFORE COMMENCING ACCESS ROAD OR A MIN. DEPTH OF 6".
2. TYPICAL ACCESS ROAD COMPACTION SHALL BE WITH SHEEPSFOOT ROLLER OR RUBBER TIRED ROLLERS WEIGHING AT LEAST EIGHT TONS FOR BASE COURSE AND SMOOTH DRUM VIBRATOR ROLLERS FOR SURFACE COURSE/FINISH GRADE.
3. THE PREFERRED CUT AND FILL SLOPE IS 2:1, HOWEVER THE ENGINEER OF RECORD MAY REVISE THE CUT SLOPE TO 1:1 OR 1.5:1 IF CUT SLOPE IS ROCK OR WELL CEMENTED SOIL AND THE FILL SLOPE TO 3:1 OR GREATER IF THE FILL SLOPE IS POOR SOILS AND PRONE TO LANDSLIDES OR SEVERE EROSION
4. REFER TO SIEVE ANALYSIS IN ATC SPECIFICATIONS SECTION 312000 PART 2.1 SOIL MATERIALS FOR APPROVED GRADATION. COMMON REFERENCED NAMES ARE CRUSHER RUN, ABC, 2A, 2RC.
5. GEOSYNTHETIC: APPROVED PRODUCTS ARE US FABRICS: US 315 AND TENCATE: 160N. CONTRACTOR MAY SUBMIT DESIGN ALTERNATIVE AS OUTLINED IN THE AMERICAN TOWER MASTER SPECS.
6. GOOD SOIL CONDITIONS ARE FOR ROADS OVER SANDS, SILTY SANDS, GRAVEL, AND GLACIAL TILL OR DIRECTLY ON ROCK. VERY STIFF TO HARD SOIL FEEL CONDITIONS. CBR BETWEEN 4.0 TO 6.0.

AMERICAN TOWER MASTER SPECIFICATION:
1. DIVISION 31 EARTHWORK SECTION 0312000 FOR ACCESS ROADS AND EARTH WORK
2. DIVISION 31 EARTHWORK SECTION 0312500 FOR EROSION AND SEDIMENT CONTROLS

1 STA 0+00 - 0+50 CROWNED ROAD

SCALE: NOT TO SCALE



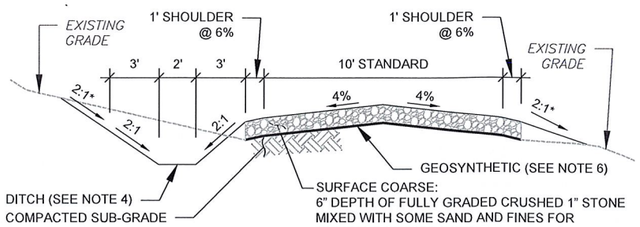
NOTES:
1. REMOVE TOPSOIL AND PLACE GEOTEXTILE FABRIC PRIOR TO PLACING STONE.
   1.1. GEOTEXTILE: APPROVED PRODUCTS ARE US FABRICS: US 160NW AND TENCATE: MIRAFI 160N. CONTRACTOR MAY SUBMIT DESIGN ALTERNATIVE AS OUTLINED IN THE AMERICAN TOWER MASTER SPECIFICATIONS.
2. ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
3. EXTEND RIPRAP ON BACK SIDE OF APRON TO AT LEAST 1/2 DEPTH OF PIPE ON BOTH SIDES TO PREVENT SCOUR AROUND THE PIPE.

AMERICAN TOWER MASTER SPECS:
1. DIVISION 31 EARTHWORK SECTION 0312500 FOR EROSION AND SEDIMENT CONTROLS

PIPE DIA Pd (IN)	RIPRAP		APRON		
	SIZE R-_	THICK. Rt (IN)	LENGTH Al (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
15	3	18	8	4.0	12.0

4 RIP RAP OUTLET PROTECTION

SCALE: NOT TO SCALE



NOTES:
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2. TYPICAL ACCESS ROAD COMPACTION SHALL BE WITH SHEEPSFOOT ROLLER OR RUBBER TIRED ROLLERS WEIGHING AT LEAST EIGHT TONS FOR BASE COURSE AND SMOOTH DRUM VIBRATOR ROLLERS FOR SURFACE COURSE/FINISH GRADE.
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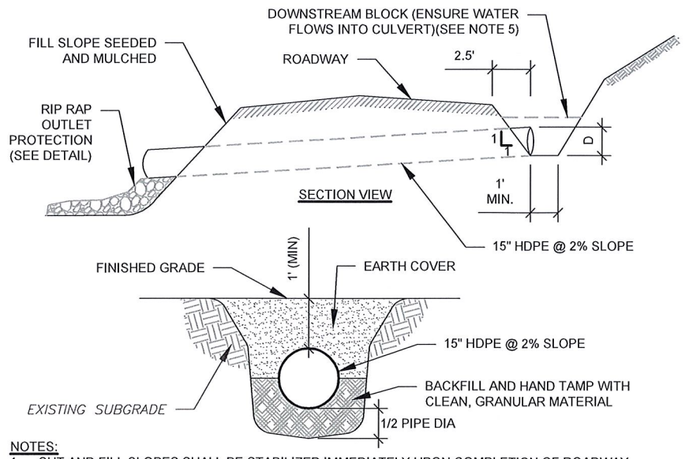
4. DITCH
   4.1. DITCHES LEADING TO CULVERTS SHALL BE LINED WITH EROSION CONTROL BLANKET. SEE DITCH DETAIL.
   4.2. THE DITCH SHALL BE INITIALLY OVER-EXCAVATED TO ALLOW FOR THE PLACEMENT OF TOPSOIL.
   4.3. DITCH SHALL BE CONSTRUCTED FREE OF SEDIMENT, TREE ROOTS, STUMPS OR OTHER PROJECTIONS THAT WILL IMPEDE NORMAL CHANNEL FLOW AND/OR PREVENT GOOD LINING TO SOIL CONTACT.
5. REFER TO SIEVE ANALYSIS IN ATC SPECIFICATIONS SECTION 312000 PART 2.1 SOIL MATERIALS FOR APPROVED GRADATION. COMMON REFERENCED NAMES ARE CRUSHER RUN, ABC, 2A, 2RC.
6. GEOSYNTHETIC: APPROVED PRODUCTS ARE US FABRICS: US 2600 AND TENCATE: HP270. CONTRACTOR MAY SUBMIT DESIGN ALTERNATIVE AS OUTLINED IN THE AMERICAN TOWER MASTER SPECS.
7. MARGINAL SOIL CONDITIONS ARE FOR ROADS OVER SANDS, SILTY SANDS, GRAVEL, AND GLACIAL TILL OR DIRECTLY ON ROCK. VERY STIFF TO HARD SOIL FEEL CONDITIONS. CBR BETWEEN 1.0 TO 4.0

AMERICAN TOWER MASTER SPECIFICATION:
1. DIVISION 31 EARTHWORK SECTION 0312000 FOR ACCESS ROADS AND EARTH WORK
2. DIVISION 31 EARTHWORK SECTION 0312500 FOR EROSION AND SEDIMENT CONTROLS

2 STA 0+50 - STA 2+75 CROWNED ROAD WITH DITCH

SCALE: NOT TO SCALE

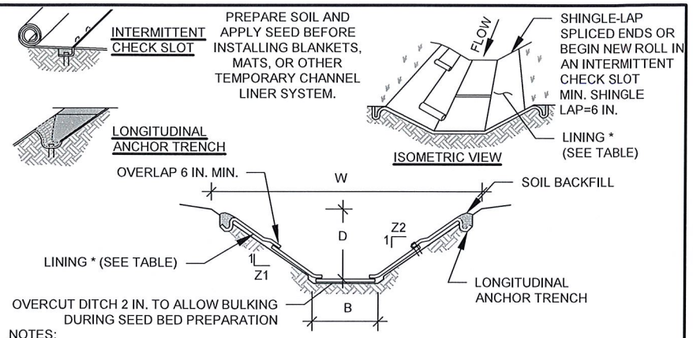


NOTES:
1. CUT AND FILL SLOPES SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF ROADWAY GRADING. THESE AREAS SHALL BE BLANKETED WHEREVER THEY ARE LOCATED WITHIN 50 FEET OF A SURFACE WATER OR WHERE A SUITABLE VEGETATIVE AREA DOES NOT EXIST.
2. A TOP DRESSING COMPOSED OF HARD, DURABLE STONE SHALL BE PROVIDED FOR SOILS HAVING LOW STRENGTH.
3. ROADSIDE DITCHES SHALL BE PROVIDED WITH ADEQUATE PROTECTIVE LINING OR RIP-RAP WHEREVER RUNOFF CANNOT SHEET FLOW AWAY FROM THE ROADWAY.
4. ADEQUATELY SIZED CULVERTS OR OTHER SUITABLE CROSS DRAINS SHALL BE PROVIDED AT ALL SEEPS, SPRINGS, AND DRAINAGE COURSES. DITCH RELIEF CULVERTS OR TURNOUTS SHALL BE PROVIDED AT THE INTERVALS INDICATED ON PLANS BY ENGINEERS DESIGN. RIPRAP OUTLET PROTECTION TO BE SIZED ACCORDINGLY BY THE ENGINEER OF RECORD.
5. TO PREVENT BYPASS FLOW A DOWNSTREAM EARTHEN OR STONE BLOCK SHALL BE INSTALLED AT CULVERT.

AMERICAN TOWER MASTER SPECIFICATION:
1. DIVISION 31 EARTHWORK SECTION 0312500 FOR EROSION AND SEDIMENT CONTROLS

5 CULVERT PLACEMENT PROFILE

SCALE: NOT TO SCALE



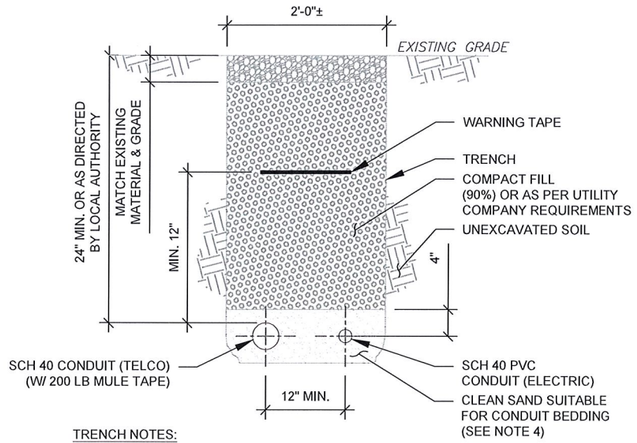
NOTES:
1. * SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION
2. ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.
3. CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION.
4. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 48 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
5. NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

AMERICAN TOWER MASTER SPECIFICATION:
1. DIVISION 31 EARTHWORK SECTION 0312500 FOR EROSION AND SEDIMENT CONTROLS

STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
0+50 - 2+75 COMPOUND (96'±)	2	1.5	8	2	2	NORTH AMERICAN GREEN S75

3 ECB DITCH DETAIL

SCALE: NOT TO SCALE



TRENCH NOTES:
1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
2. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
3. CONCRETE ENCASE CONDUIT IN MINIMUM 2" THICK ENVELOPE WHEN INSTALLING UNDER SITE ACCESS ROAD AND EXTEND 6" BEYOND ROAD.
4. CONFIRM SPACING AND DEPTH WITH NEC OR LOCAL CODE REQUIREMENTS

6 TELCO AND POWER JOINT TRENCH CONDUIT

SCALE: N.T.S.

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PHONE: (919) 468-0112
COA: 1571

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20
2	ADDED SPECIAL INSPECTION	NW	11/17/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

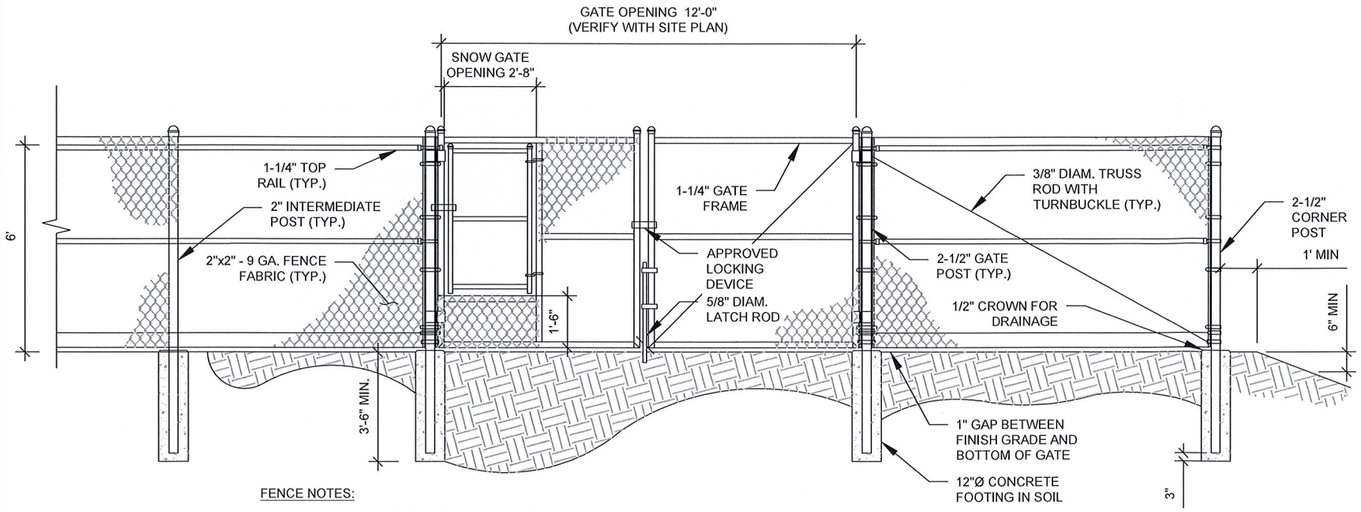
Authorized by "Patrick P. Barry"
17 Nov 2020 01:15:58

cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	2



FENCE NOTES:

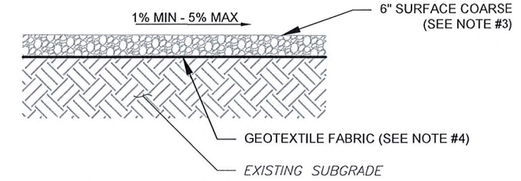
1. ATTACH EACH GATE WITH 1-1/2 PAIR OF NON-LIFT-OFF TYPE, MALLEABLE IRON OR FORGING, PIN-TYPE HINGES. ASSEMBLIES SHALL ALLOW FOR 180° OF GATE TRAVEL. TACK WELD GATE HINGE TO POST FOR SECURITY.
2. POSTS NOT TO EXCEED A MAXIMUM SEPARATION OF 10 FEET.

AMERICAN TOWER MASTER SPECIFICATION:

1. DIVISION 32 EXTERIOR IMPROVEMENTS SECTION 0323113 FOR CHAIN LINK FENCE AND GATES

1 GATE AND FENCE DETAIL (WITH SNOW GATE)

SCALE: NOT TO SCALE

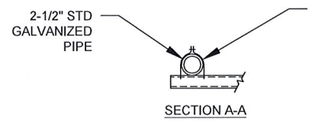


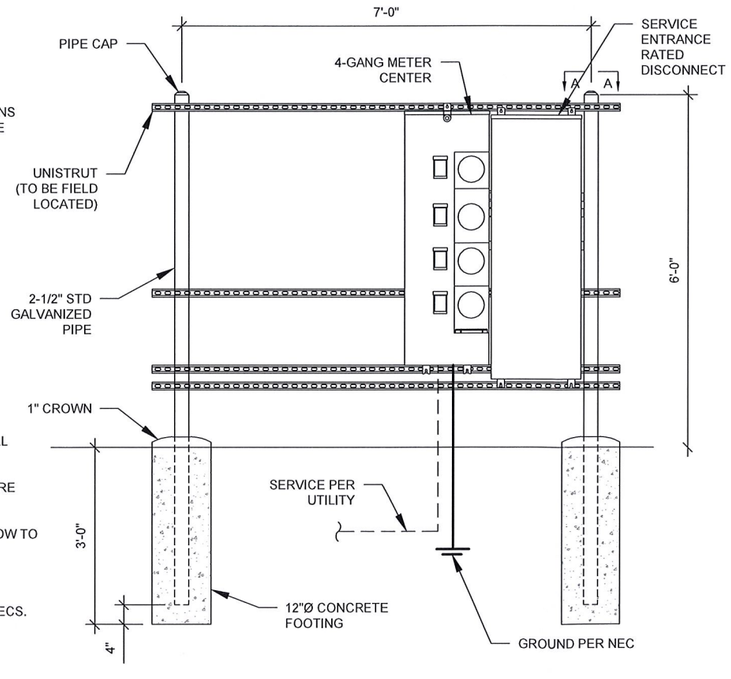
NOTES:

1. CONTRACTOR TO CONTACT ALL UTILITIES FOR LOCATION OF UNDERGROUND SERVICES. SERVICE LOCATIONS TO BE CONFIRMED PRIOR TO CONSTRUCTION.
2. REMOVE ALL UNSUITABLE OR DELETERIOUS MATERIAL AS REQUIRED. COMPACT UNDERLYING SOIL TO 90% OF MAXIMUM DENSITY. REPLACE REMOVED SOIL WITH 8" LIFTS OF GRANULAR "B" MATERIAL TO A DEPTH OF 4" BELOW PROPOSED GRADE. COMPACT TO MINIMUM 95% OF MAXIMUM DRY DENSITY ALL COMPACTION SHALL BE IN ACCORDANCE WITH THE 2006 IBC. REVIEW WITH PROJECT MANAGER AND GEOTECT PRIOR TO CONSTRUCTION.
3. SURFACE COARSE OF GRANULAR "A" MATERIAL SHALL CONSIST OF EVENLY GRADED MIXTURE OF CRUSHED STONE OR GRAVEL, WITH 100% PASSING THROUGH 3/4" SIEVE AND NOT MORE THAN 5% PASSING THROUGH #4 SIEVE.
4. PROVIDE GEOTEXTILE FABRIC UNDER WASHED CHIPPED STONE COMPOUND UNLESS NOTED OTHERWISE. WOVEN GEOTEXTILE: APPROVED PRODUCTS ARE US FABRICS: US 200 AND TENCATE: 160N. CONTRACTOR MAY SUBMIT DESIGN ALTERNATIVE AS OUTLINED IN THE AMERICAN TOWER MASTER SPECIFICATIONS.

2 COMPOUND CROSS SECTION

SCALE: NOT TO SCALE



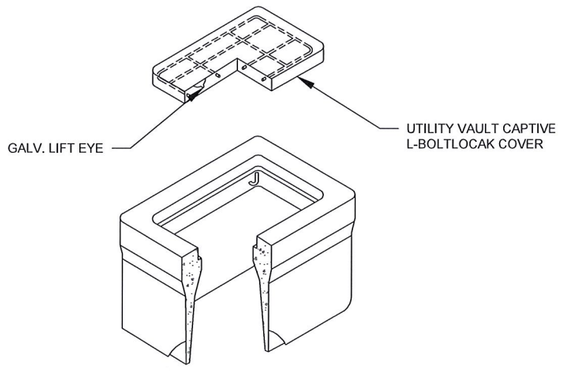


H-FRAME NOTES:

1. IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST WILL ALWAYS BE REQUIRED.
2. PROPOSED UNISTRUTS TO BE FIELD CUT AND SHOULD NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
3. SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT, ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
4. UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
5. ALL PROPOSED HARDWARE TO BE MOUNTED PER MANUFACTURERS SPECS.
6. METER CENTER TO FOLLOW HEIGHT REQUIREMENTS PER UTILITY.

3 UTILITY H-FRAME

SCALE: N.T.S.



NOTES:

1. INSTALL ON 3/4" AGGREGATE WHICH SHALL EXTEND A MINIMUM OF 6" BEYOND ALL SIDES OF THE BOX AND BE A MINIMUM OF 4" DEEP, BELOW THE BOX.
2. SIZED APPROPRIATELY FOR THE APPLICATION PER NEC.
3. CAP TO HAVE POWER/ELEC OR TELCO SHOWN.

4 TYPICAL PULL BOX

SCALE: NOT TO SCALE

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COA: 1571

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

Authorized by "Patrick P. Barry"
17 Nov 2020 01:15:58

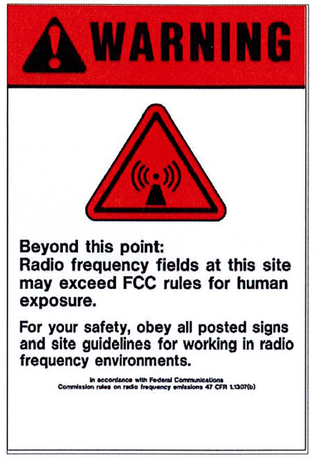
cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

CONSTRUCTION DETAILS

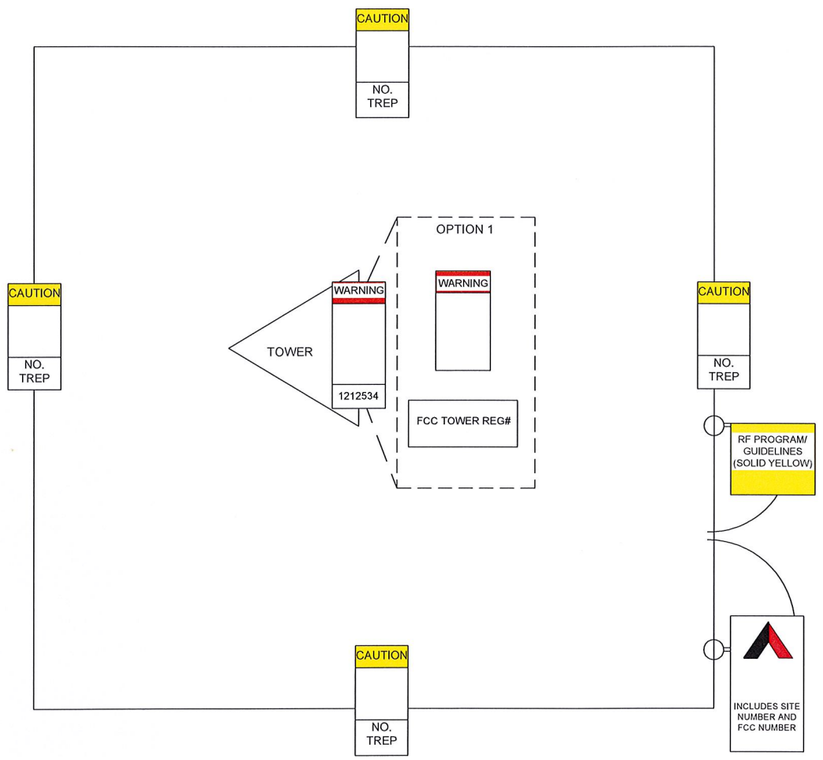
SHEET NUMBER:	REVISION:
C-502	0

ATC CAUTION AND NO TRESPASSING SIGN



ATC RF WARNING AND FCC NUMBER SIGN

A "NO TRESPASSING" SIGN MUST BE POSTED A MINIMUM OF EVERY 50'.



APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING _____ PLANNING BOARD: CHAIRMAN _____ SIGNATURE DATE: _____ SECRETARY _____ SIGNATURE DATE: _____ SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECIEVES FINAL APPROVAL.	PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL. PROPERTY OWNER: TOM W. & ROSA C. CHAN 143 DRAUT ROAD HUDSON, NH 03051 LANDLORD SIGNATURE:_____

FCC TOWER REGISTRATION #

Posting of sign required by law

ATC STAND-ALONE FCC TOWER REGISTRATION SIGN

THERE MUST BE AN ATC SIGN WITH SITE INFORMATION AND FCC REGISTRATION NUMBER AT BOTH THE ACCESS ROAD GATE (GATE OFF OF MAIN ROAD, IF APPLICABLE) AND COMPOUND FENCE (IF NO COMPOUND FENCE, THEN IN A CONSPICUOUS PLACE UPON DRIVE UP). IN ADDITION, PLEASE LOOK AT DIAGRAM FOR ALL ADDITIONAL SIGNS REQUIRED.

OPTION 1 MAY BE USED TO POST TOWER REGISTRATION NUMBERS AT THE BASE OF THE TOWER IF A WARNING SIGN DOES NOT HAVE SPACE FOR THE TOWER REGISTRATION NUMBER.

IMPORTANT: FOR ANY ATC SIGN THAT DOES NOT MEET THE ATC SPECIFICATION FOR SIGNAGE (I.E., SHARPIE/PAINT PEN, WORN LABELS, ETC.), BRING IT INTO COMPLIANCE (RE-WRITE IF WORN) AND FLAG FOR REPLACEMENT ASAP WITH THE APPROPRIATE PERMANENT SIGN (YOU CAN ORDER THESE THROUGH THE WAREHOUSE).

ONLY LABELS PRINTED BY A ZEBRA LABEL PRINTER WILL BE ACCEPTED.

NOTICE

GUIDELINES FOR WORKING IN RADIOFREQUENCY ENVIRONMENTS

- All personnel should have electromagnetic energy (EME) awareness training.
- All personnel entering this site must be authorized.
- Obey all posted signs.
- Assume all antennas are active.
- Before working on antennas, notify owners and disable appropriate transmitters.
- Maintain minimum 3 feet clearance from all antennas.
- Do not stop in front of antennas.
- Use personal RF monitors while working near antennas.
- Never operate transmitters without shields during normal operation.
- Do not operate base station antennas in equipment room.

ATC RF PROGRAM NOTICE SIGN

ATC SITE SIGN

REPLACEMENT OF SIGNAGE:

AS SIGNAGE BECOMES STOLEN, DAMAGED, BRITTLE OR FADED, IT SHOULD BE REPLACED WITH SIGNAGE PER THIS SPECIFICATION. ANY ACQUIRED SITE SHOULD HAVE NEW SIGNS POSTED WITHIN 60 DAYS UNLESS OTHERWISE SPECIFIED. ANY SITE SOLD SHOULD HAVE THE ATC SIGNS REMOVED WITHIN 30 DAYS UNLESS OTHERWISE SPECIFIED. ALL FCC OR REGULATORY SIGNAGE MUST BE INSTALLED OR REPLACED AS REQUIRED TO MEET OUR STANDARD. SIGNS SHOULD BE REPLACED ON NORMAL, QUARTERLY MAINTENANCE VISITS BY CONTRACTORS OR SITE MANAGERS, UNLESS OTHERWISE REQUIRED ON A CASE-BY-CASE BASIS.

NOTE:

EXTERIOR SIGNS ARE NOT PROPOSED EXCEPT AS REQUIRED BY THE FCC. ALL EXISTING SIGNAGE AND ANY FUTURE SIGNAGE WILL BE COMPLIANT WITH STATUTE 164-43.4 NO HIGH-VOLTAGE SIGNAGE IS NECESSARY. NO HIGH-VOLTAGE EQUIPMENT PRESENT.

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CARY, NC 27518
PHONE: (919) 468-0112
COA: 1571

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

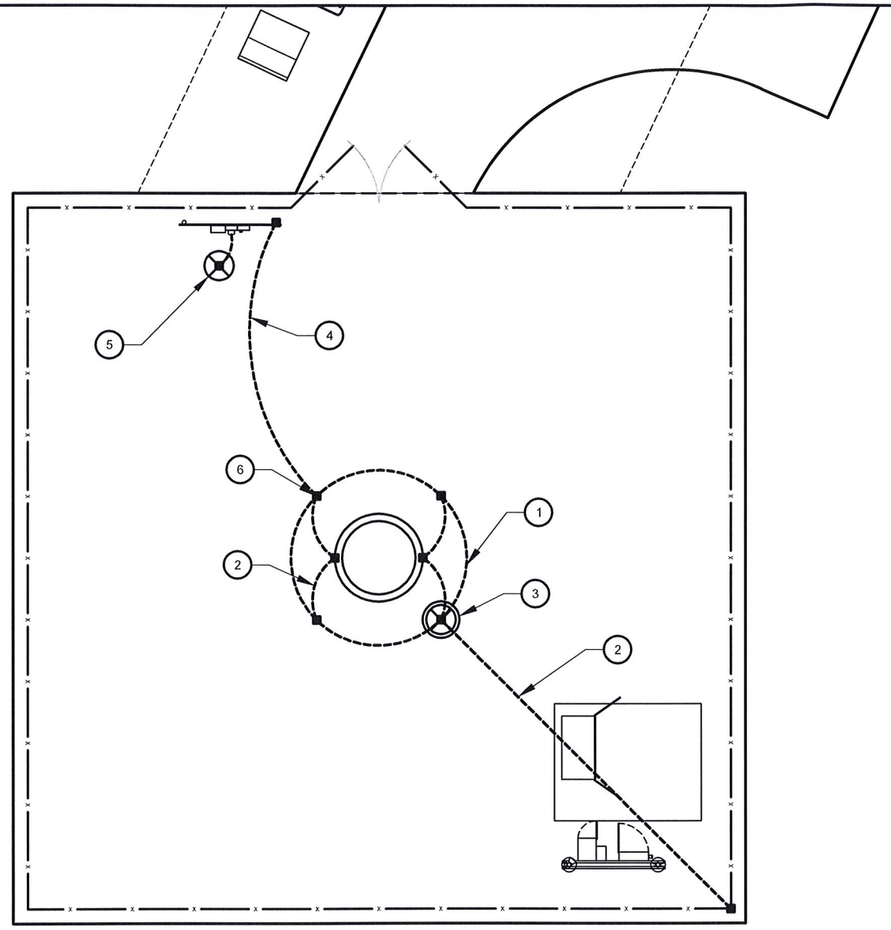
Authorized by "Patrick P. Barry"
17 Nov 2020 01:15:59

cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

SIGNAGE

SHEET NUMBER:	REVISION:
C-503	0



1 GROUNDING PLAN

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

GROUNDING PLAN NOTES:

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
2. ALL GROUND CONNECTIONS SHALL BE EXOTHERMIC WELDED. ALL WIRES SHALL BE COPPER.
3. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE. GROUNDING AND OTHER OPERATIONAL TESTING WILL BE WITNESSED BY OWNER REPRESENTATIVE.
4. REFER TO ATC CONSTRUCTION SPEC AND COMPLY WITH ALL REQUIREMENTS OF GROUNDING STANDARDS.
5. ELECTRICAL CONTRACTOR TO PROVIDE DETAILED DESIGN OF GROUNDING SYSTEM, AND RECEIVE APPROVAL OF DESIGN BY OWNER REPRESENTATIVE, PRIOR TO INSTALLATION OF GROUNDING SYSTEM. PHOTO DOCUMENT ALL CONNECTIONS AND GROUND RING
6. NOTIFY CONSTRUCTION MANAGER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
7. TO AVOID TOWER FOUNDATION, GROUND RODS MAY BE INSTALLED AT AN ANGLE OR TOWER GROUND RING MAY BE EXTENDED AS NEEDED.

KEYED NOTES:

1. #2 AWG SBTC TOWER GROUND RING. (MIN 2 FT FROM FOUNDATION)
2. #2 AWG SBTC TOWER RING RADIALS. GROUNDING RADIAL (TYP.) SEE TRENCH DETAIL 4 ON SHEET E-501. MAINTAIN DEPTH AND MINIMUM 15 FT. SEPARATION FROM OTHER RADIALS AT ENDS AND MINIMUM 5 FT. SEPARATION AT GROUNDING SYSTEMS AND BUILDING FOUNDATIONS.
3. 3/4Ø" X 10 FT GROUND ROD WITH TEST WELL (MIN. ONE PER SITE ON TOWER GROUND RING). SEE DETAIL 5 ON SHEET E-501.
4. BOND TO ELECTRICAL SERVICE AT MAIN BONDING JUMPER WITH #2 AWG SBTC. PARALLEL CONNECTION AWAY FROM TOWER. SEE DETAIL 1 ON SHEET E-501.
5. SERVICE GROUND ROD SIZE MINIMUM PER NEC OR AS OTHERWISE INDICATED. PLACE MINIMUM OF 10' FROM ALL OTHER GROUND RODS.
6. TOWER TO GROUND RING BONDS. SEE DETAIL 3 ON SHEET E-501.
7. ADDITIONAL RADIAL EXTENSION IN ROAD CENTER (80' MAX. OR TO RIGHT OF WAY, WHICHEVER IS SHORTER) SEE DETAIL 4 ON SHEET E-501.

INSTALLATION NOTES:

1. INSTALL STANDARD LEVEL I DESIGN (BASE BID) WHICH INCLUDES:
   1.1. TOWER RING, 1 GROUND ROD PER LEG, SERVICE GROUND ROD AT H-FRAME, 4 RADIALS TO CORNERS. ADDITIONAL WORK NECESSARY BELOW SHALL BE CONSIDERED AN ALLOWANCE.
2. MEASURE GROUNDING SYSTEM RESISTANCE WITH A 3-PROBE TEST PRIOR TO BACKFILL/DEMOBILIZATION AND PRIOR TO CONNECTION OF UTILITY POWER NEUTRAL TO THE SYSTEM.
3. IF GROUNDING SYSTEM RESISTANCE (STEP 2) IS GREATER THAN 10 OHMS INSTALL LEVEL III ADDITIONAL RADIAL IN ROAD AND COORDINATE WITH ATC ENGINEER OF RECORD.

GROUNDING PLAN LEGEND:

- GROUND WIRE (LEVEL I)
- GROUND WIRE (LEVEL II)
- GROUND WIRE (LEVEL III)
- EXOTHERMIC WELD
- MECHANICAL WELD
- COPPER GROUND ROD
- TEST WELL

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING _____
PLANNING BOARD:
CHAIRMAN _____ SIGNATURE DATE: _____
SECRETARY _____ SIGNATURE DATE: _____
SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECIEVES FINAL APPROVAL.

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

PROPERTY OWNER:
TOM W. & ROSA C. CHAN
143 DRAUT ROAD
HUDSON, NH 03051

LANDLORD SIGNATURE:_____

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PHONE: (919) 468-0112
COA: 1571

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

STATE OF NEW HAMPSHIRE
PATRICK P. BARRY
No. 13612
PROFESSIONAL ENGINEER

Authorized by "Patrick P. Barry"
17 Nov 2020 01:16:00

cosign

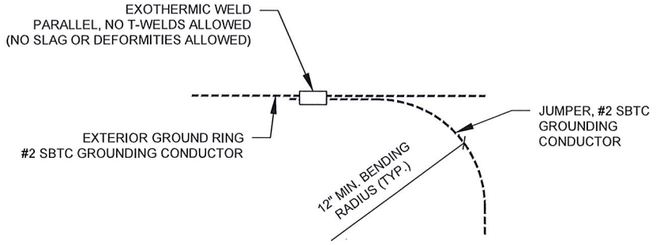
DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

GROUNDING LAYOUT

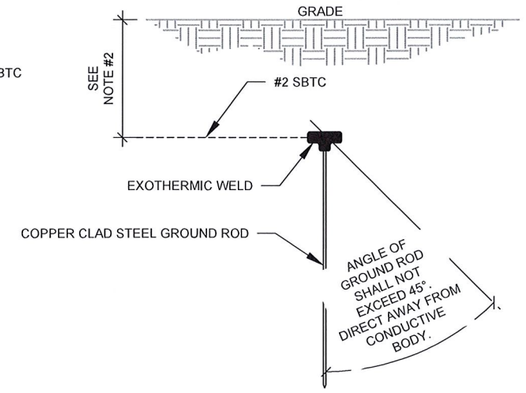
SHEET NUMBER:	REVISION:
E-401	0

NOTES:

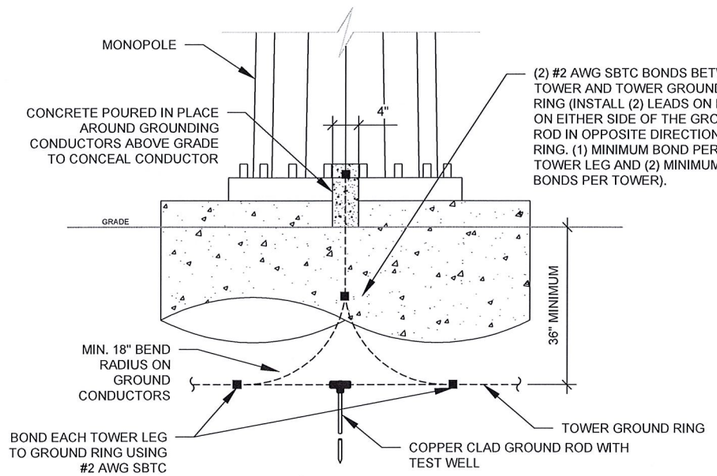
1. LOCATE BEFORE DIGGING.
2. ALL RING AND RADIAL DEPTHS AT 30" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.
3. WELD GROUND TO FENCE AS LOW AS POSSIBLE TO DETER COPPER THEFT



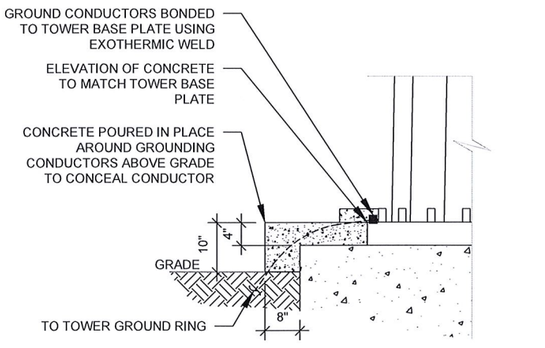
1 TIE CONNECTION DETAIL
SCALE: N.T.S.



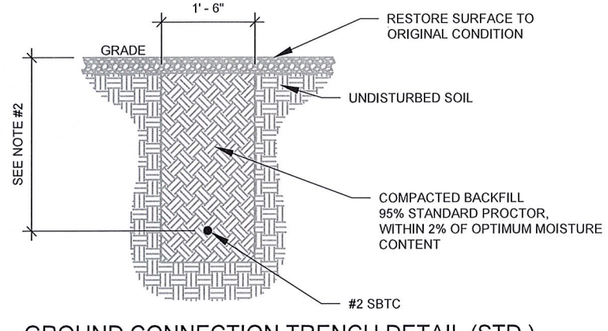
2 GROUND ROD DETAIL
SCALE: N.T.S.



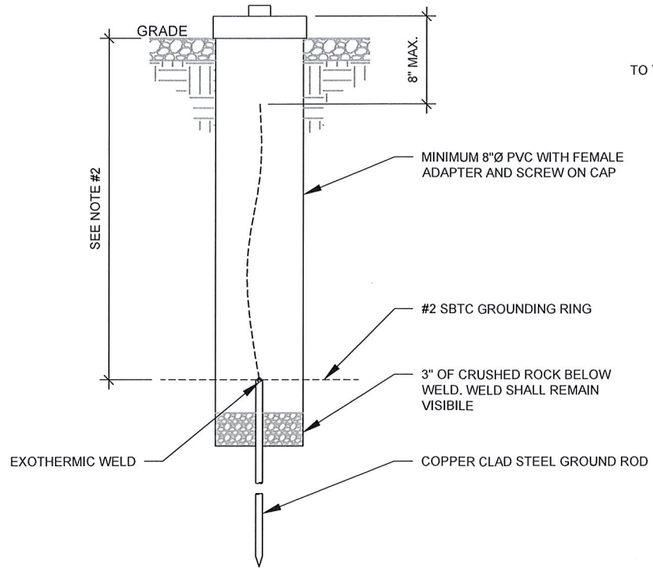
3 TOWER GROUNDING (FRONT)
SCALE: N.T.S.



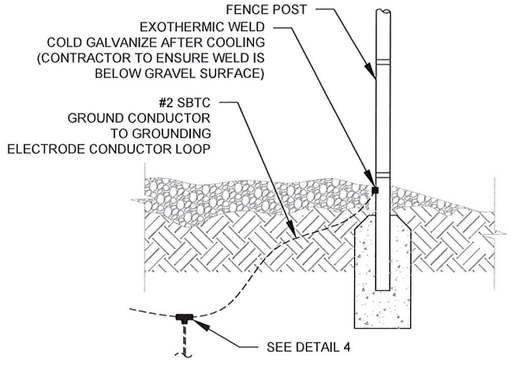
6 TOWER GROUNDING (SIDE)
SCALE: N.T.S.



4 GROUND CONNECTION TRENCH DETAIL (STD.)
SCALE: N.T.S.



5 TEST WELL DETAIL
SCALE: N.T.S.



7 FENCE GROUNDING DETAIL
SCALE: N.T.S.

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SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 1571

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

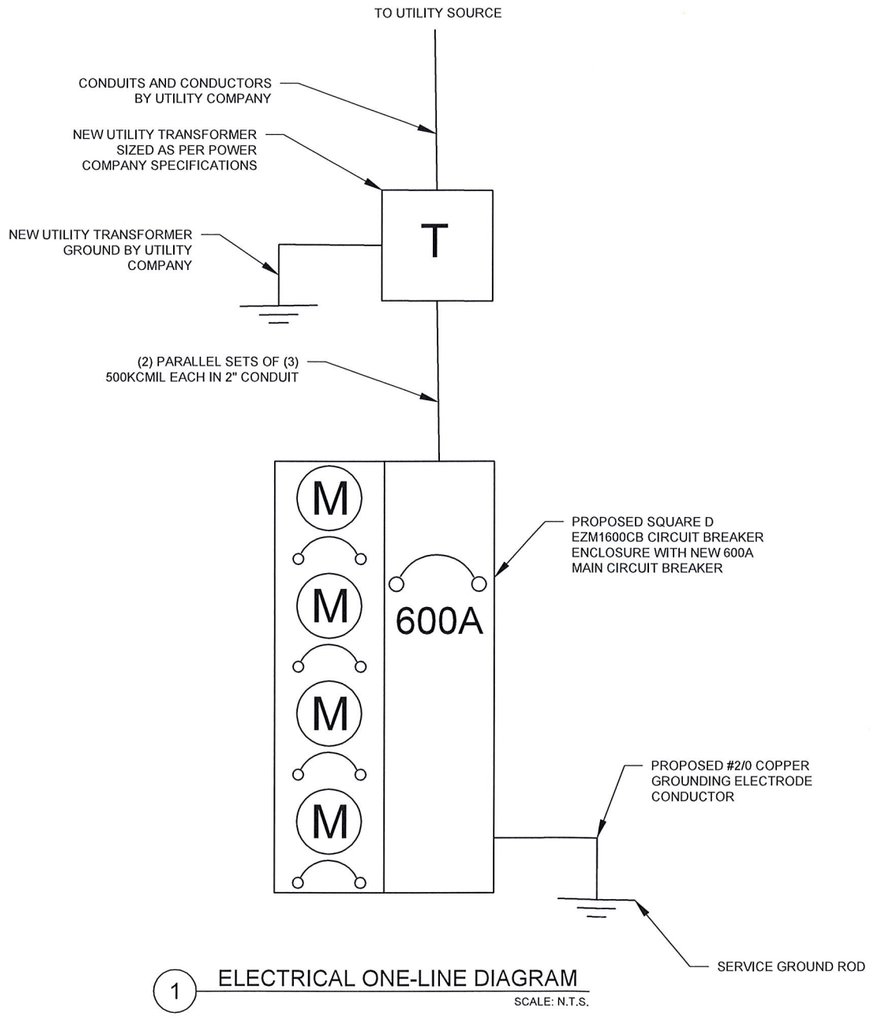
Authorized by "Patrick P. Barry"
17 Nov 2020 01:16:01

cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

ELECTRICAL DETAILS

SHEET NUMBER:	REVISION:
E-501	0



1 ELECTRICAL ONE-LINE DIAGRAM

SCALE: N.T.S.

APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING _____ PLANNING BOARD: CHAIRMAN _____ SIGNATURE DATE: _____ SECRETARY _____ SIGNATURE DATE: _____ SITE PLANS ARE VALID FOR ONE YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECIEVES FINAL APPROVAL.	PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL. PROPERTY OWNER: TOM W. & ROSA C. CHAN 143 DRAUT ROAD HUDSON, NH 03051 LANDLORD SIGNATURE:_____

AMERICAN TOWER®
dba SPECIALTY TOWER SERVICES
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 1571

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

Authorized by "Patrick P. Barry"
17 Nov 2020 01:16:01

cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

ELECTRICAL ONE LINE DIAGRAM

SHEET NUMBER:	REVISION:
E-601	0

CAP EX INSPECTION NOTES

THE SPECIAL INSPECTION (SI) PROCEDURE IS INTENDED TO CONFIRM THAT CONSTRUCTION AND INSTALLATION MEETS ENGINEERING DESIGN, ATC PROCEDURES AND ATC STANDARD SPECIFICATIONS FOR WIRELESS TOWER SITES.

TO ENSURE THAT THE REQUIREMENTS OF THE SI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR AND THE INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED FROM AMERICAN TOWER CORPORATION (ATC). IT IS EXPECTED THAT EACH PARTY WILL PROACTIVELY REACH OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR AMERICAN TOWER POINT OF CONTACT.

SPECIAL INSPECTOR

THE SPECIAL INSPECTOR IS REQUIRED TO CONTACT THE GENERAL CONTRACTOR AS SOON AS RECEIVING A PO FROM ATC. UPON RECEIVING A PO FROM ATC THE SPECIAL INSPECTOR AT A MINIMUM MUST:

- REVIEW THE REQUIREMENTS OF THE SI CHECKLIST.
- WORK WITH THE GENERAL CONTRACTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
- ANY CONCERNS WITH THE SCOPE OF WORK OR PROJECT COMMITMENT MUST BE RELAYED TO THE ATC POINT OF CONTACT IMMEDIATELY.

THE SPECIAL INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR INSPECTION AND TEST REPORTS, REVIEWING THESE DOCUMENTS FOR ADHERENCE TO CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE SI REPORT TO AMERICAN TOWER CORPORATION.

GENERAL CONTRACTOR

THE GENERAL CONTRACTOR IS REQUIRED TO CONTACT THE SI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE SI CHECKLIST.
- WORK WITH THE SI TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS.

THE GENERAL CONTRACTOR SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE SI CHECKLIST.

CAP EX SPECIAL INSPECTION CHECKLIST

INSPECTION ITEM	DESCRIPTION	INSPECTION TESTING REQUIRED	RESPONSIBILITY	SI REVIEW REQUIRED			INSPECTION FREQUENCY	
				PRE CX	DURING CX	POST CX	PERIODIC	CONTINUOUS
SPECIAL INSPECTION FIELD WORK & REPORT	DOCUMENTATION AND SITE VISIT CONDUCTED BY AN ATC APPROVED SPECIAL INSPECTOR AS REQUIRED BY ATC AND OTHER AUTHORITIES HAVING JURISDICTION. INSPECTION PARAMETERS TO FOLLOW ATC'S CONSTRUCTION SPECIFICATIONS FOR WIRELESS TOWER SITES.	Y	SI			✔		
ENGINEERING ASSEMBLY DRAWINGS	GC SHALL SUBMIT DRAWINGS TO SI FOR INCLUSION IN SI REPORT	Y	GC	✔				
FABRICATED MATERIAL VERIFICATION & INSPECTION	MTR AND OR MILL CERTIFICATIONS FOR SUPPLIED MATERIALS GC SHALL SUPPLY SI WITH REPORTS TO BE INCLUDED IN SI REPORT WHEN REQUIRED BY ATC	Y	SI	✔				
ROAD INSPECTION	STONE SHOULD HAVE A MINIMUM DEPTH OF 6". ENTRANCE SHALL HAVE A MINIMUM WIDTH OF 20' FOR A MINIMUM LENGTH OF 30' AND A 30' RADIUS, IF POSSIBLE. TRAVEL LANE SHALL HAVE A MIN. WIDTH OF 12' IN THE TANGENTS AND 15' AT THE CURVES. ROAD HAS NO SIGNS OF RILLS AND EROSION. ROAD IS PROPERLY CROWNED OR SUPER-ELEVATED. ALL DIMENSIONS AND DEPTHS SHALL BE PER THE PLANS OR ABOVE UNLESS UNLESS OTHERWISE SPECIFIED.	Y	GC / SI			✔	✔	
DITCH INSPECTION	A DITCH SHOULD BE INSTALLED PER THE APPROVED PLANS. INSPECT EROSION PROBLEMS, DAMAGE TO VEGETATION, SEDIMENT AND DEBRIS ACCUMULATION (ADDRESS WHEN >3 INCHES AT ANY SPOT OR COVERING VEGETATION). INSPECT FOR POOLS OF STANDING WATER. IF REQUIRED, DEWATER AND DISCHARGE TO AN APPROVED LOCATION AND RESTORE GRADE TO PROVIDE POSITIVE DRAINAGE. VEGETATION ALONG THE SURFACE OF THE DITCH SHOULD BE KEPT IN GOOD CONDITION, AND ANY BARE SPOTS IMMEDIATELY RE-VEGETATED. IF THE DITCH IS RIP-RAP VERIFY IF ADDITIONAL RIP-RAP NEEDS TO BE INSTALLED. THE CHANNEL SHOULD BE CLEANED WHENEVER THE TOTAL DEPTH IS REDUCED BY 25% AT ANY LOCATION OR A MINIMUM 9" DEPTH IS NOT ACHIEVED.	Y	SI			✔	✔	
CHECK DAM INSPECTION	INSPECT AND CORRECT CHECK DAMS WHEN SIGNS OF ALTERED WATER FLOW (CHANNELIZATION, OBSTRUCTIONS, EROSION ETC.) ARE IDENTIFIED.CHECK DAMS SHOULD BE HALF OF THE DITCH HEIGHT. A CHECK DAM SHALL BE INSTALLED AT THE CULVERT TO PREVENT BYPASS FLOW.	Y	SI		✔	✔	✔	
WATER BAR INSPECTION	IS THE WATER BAR FUNCTIONING PROPERLY AND PREVENT WATER FROM TRAVELING DOWN THE ROADWAY IN STEEP SLOPES OR AT CURVES. SHOULD BE CONSTRUCTED AND MAINTAINED AT A CROSS SLOPE OF 2% AND DISCHARGE TO A DITCH OR WELL VEGETATED AREA.	Y	SI		✔	✔	✔	
TURN-OUT INSPECTION	IS THE TURNOUT LOCATED TO TAKE ADVANTAGE OF NATURAL DRAINAGE COURSES OR BUFFER AREAS WHERE POSSIBLE? INSPECT AND VERIFY IF THE TURNOUTS ARE FUNCTIONING PROPERLY AND IF EARTHEN BERMS OR RIP-RAP IS NECESSARY TO MAINTAIN THE DRAINAGE PATTERN.	Y	SI		✔	✔	✔	
CULVERT INSPECTION	INSTALLED THE CORRECT SIZE AND MATERIAL TYPE AND AT THE PROPER LOCATIONS WITH A MINIMUM OF 1' COVER. CULVERTS SHOULD BE KEPT CLEAN AND ENSURE WATER FLOW. UNLESS AT A LOW POINT ALL A DOWNSTREAM EARTHEN OR STONE BERM SHALL BE INSTALLED AT THE CULVERT TO PREVENT BYPASS FLOW.	Y	SI		✔	✔	✔	
OUTLET PROTECTION INSPECTION	SHALL BE INSTALLED ON LEVEL GRADE TO PREVENT SCOUR AND EROSION AT PIPE OR CHANNEL OUTFALL.DISPLACED RIP-RAP SHALL BE REPLACED. DEPTH SHALL BE 1.5 TIMES THE STONE SIZE OR MIN OF 9". A MINIMUM LENGTH OF 8' IS REQUIRED. MIN STONE SIZE: AASHTO R-3 RIP RAP (3"-6" CLEAN STONE).	Y	SI		✔	✔	✔	
BASIN INSPECTION	UP GRADIENT CULVERTS, CATCH BASINS AND INLETS OF BASIN SHOULD BE INSPECTED AND CLEANED. VEGETATION ALONG THE SURFACE OF THE BASIN SHOULD BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS REVEGETATED AS SOON AS POSSIBLE. INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SLOPE STABILITY IN THE BERMS AND PONDING OF WATER GREATER THAN 72 HOURS SINCE THE LAST RUNOFF EVENT.	Y	SI		✔	✔	✔	
SILT FENCE INSPECTION	ALL SILT FENCE AND STAKES SHOULD BE REMOVED BY THE CONTRACTOR AFTER THE SITES HAS ACHIEVED STABILIZATION. NO LONG TERM MAINTENANCE IS REQUIRED.	Y	SI			✔	✔	
SEEDING INSPECTION	SITES SHOULD OBTAIN AND MAINTAIN AT LEAST 70% STABILIZATION. STONE IS CONSIDERED STABILIZED.	Y	SI			✔	✔	
COMPACTION VERIFICATION	CONTRACTOR SHALL PROVIDE AN INDEPENDENT THIRD PARTY CERTIFIED INSPECTION WHICH PROVIDES TEST RESULTS FOR COMPACTION TEST OF SOILS IN PLACE TO ASTM STANDARDS.	Y	GC / TA			✔		
COMPOUND INSPECTION	THE COMPOUND SHALL HAVE A MAXIMUM GRADE OF 5% AND A MINIMUM OF 1% IN ANY DIRECTION. A 1' MINIMUM GRAVEL APRON AROUND THE COMPOUND WITH A DITCH INSTALLED PER THE PLANS SURROUNDING THE UP GRADIENT PERIMETER OF THE COMPOUND. THE DITCH SHALL FREELY GRAVITY DRAIN TO AN APPROPRIATE LOCATION WITH NO IMPACT TO DOWN GRADIENT FEATURES SUCH AS THE ACCESS ROAD OR OTHER STRUCTURES.	Y	GC / TA			✔	✔	
SLOPE STABILITY INSPECTION	EROSION CONTROL BLANKETS SHALL BE USED ON ALL SLOPES GREATER THAN 2H:1V OR STEEPER OR AS DIRECTED BY LOCAL REGULATING AGENCIES, AND WHERE POTENTIAL EXISTS FOR SEDIMENT POLLUTION TO RECEIVING SURFACE WATERS. SINCE ROCK SLOPES POSE LITTLE, IF ANY, POTENTIAL FOR EROSION, CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILL SLOPES DO NOT NEED TO BE BLANKETED.	Y	SI			✔	✔	
POWER AND GROUNDING	POWER PANELS, DISCONNECTS, ATS, TROUGH, H-FRAME, CONDUIT AND GROUNDING SYSTEMS ARE IN CONFORMANCE WITH THE DESIGN DRAWINGS	Y	SI			✔	✔	
GC AS-BUILT DRAWINGS WITH CONSTRUCTION RED-LINES	GC SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS TO SI FOR APPROVAL/REVIEW AND INCLUSION IN SI REPORT	Y	GC			✔		
SI AS-BUILT DRAWINGS WITH INSPECTION RED-LINES (AS REQUIRED)	SI SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS WITHIN SI REPORT	Y	SI			✔		
PHOTOGRAPHS	PHOTOGRAPHIC EVIDENCE OF SPECIAL INSPECTION, ON SITE REMEDIATION, AND ITEMS FAILING INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE SI REPORT. COMPLETE PHOTO LOG IS TO BE SUBMITTED WITHIN SI REPORT.	Y	GC / SI			✔		

NOTE:
1. SPECIAL INSPECTIONS ARE INTENDED TO BE A COLLABORATIVE EFFORT BETWEEN GC AND SI. WHENEVER POSSIBLE GC IS TO PROVIDE SI WITH PHOTOGRAPHIC OR OTHER ACCEPTABLE EVIDENCE OF PROPER INSTALLATION IF PERIODIC INSPECTION FREQUENCY IS ACCEPTABLE. THE GC AND SI SHALL WORK TO COMPILE EVIDENCE OF PROPER CONSTRUCTION AND LIMIT THE NUMBER OF SI SITE VISITS REQUIRED.
2. GC TO REFERENCE TOWER AND FOUNDATION DRAWINGS FOR SPECIAL INSPECTION REQUIREMENTS.

TABLE KEY:
SI - ATC APPROVED SPECIAL INSPECTOR
GC - GENERAL CONTRACTOR
CX - CONSTRUCTION
CM - CONSTRUCTION MANAGER
TA - 3RD PARTY TESTING AGENCY
ATC - AMERICAN TOWER CORPORATION

COMMENTS:

AMERICAN TOWER®
dba SPECIALTY TOWER SERVICES
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: 1571

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	11/09/20
2	ADDED SPECIAL INSPECTION	NW	11/17/20

ATC SITE NUMBER:
202096

ATC SITE NAME:
HUDSON 3 NH

SITE ADDRESS:
143 DRACUT ROAD
HUDSON, NH 33011

SEAL:

STATE OF NEW HAMPSHIRE
PATRICK P. BARRY
No. 13612
PROFESSIONAL ENGINEER

Authorized by "Patrick P. Barry"
17 Nov 2020 01:16:02
cosign

DATE DRAWN:	11/09/20
ATC JOB NO:	13014796
ATC LEGACY #:	----

SPECIAL INSPECTIONS WORKSHEET

SHEET NUMBER:	REVISION:
R-601	2

EXHIBIT 3

PHOTO SIMULATIONS

Photographic Simulation Package

Proposed Wireless Telecommunications Facility:

202096 Hudson 3 NH
143 Dracut Road
Hudson, NH 33011

- Balloon Test Conducted 11/6/2020

Package prepared by:

Virtual Site Simulations, LLC
24 Salt Pond Road
Suite C3
South Kingstown, Rhode Island 02879

www.VirtualSiteSimulations.com
www.ThinkVSSFirst.com

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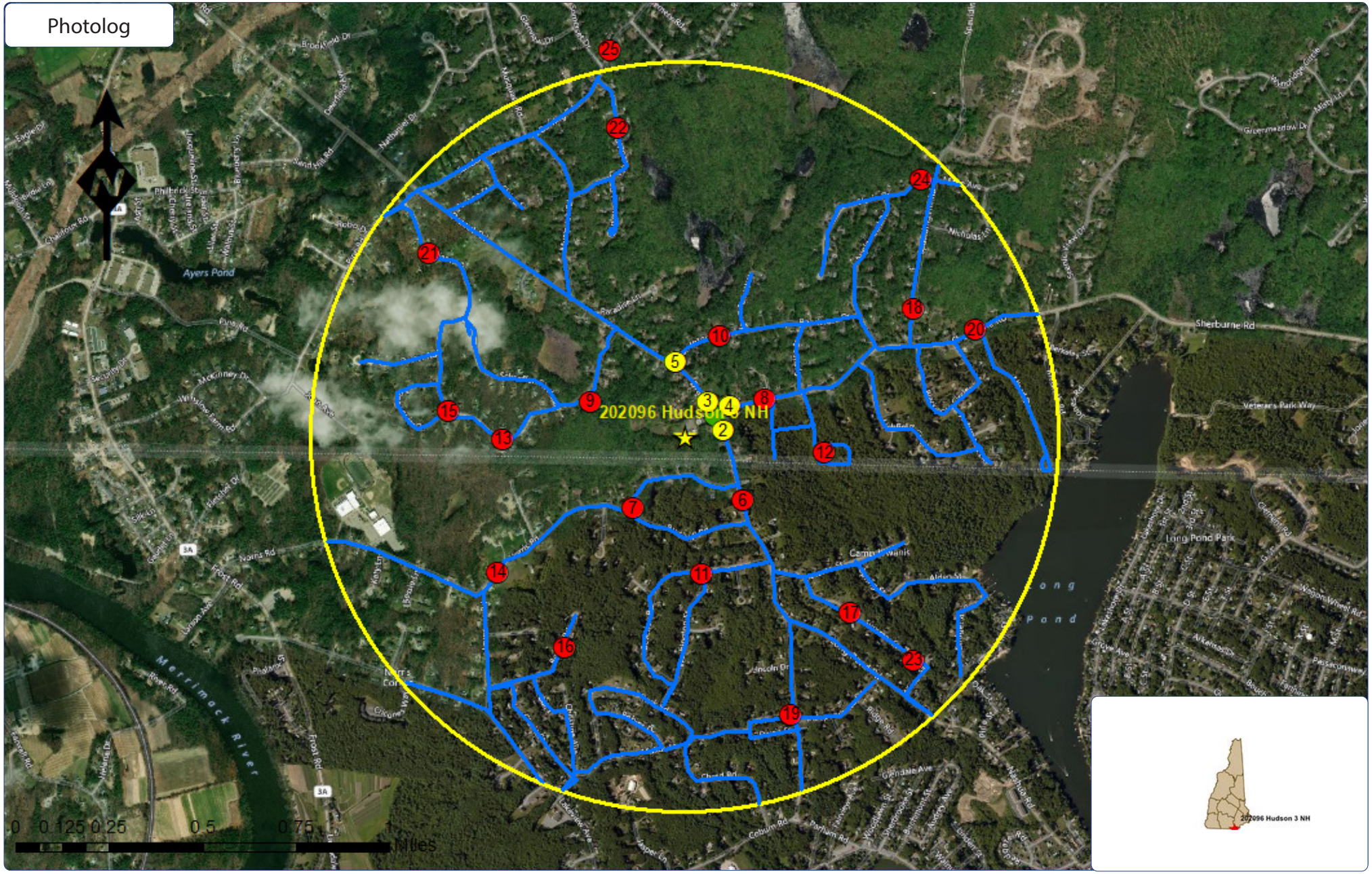
AMERICAN TOWER®

Photolog



Wireless Telecommunications Facility:

202096 Hudson 3 NH

143 Dracut Road

Hudson, NH 33011

Legend:

- Facility Location
- 1 Mile Radius
- Reconnaissance Track Log
- Photo location -Balloon visible - Year Round Visibility
- Photo location -Balloon visible - Obscured Visibility
- Photo location -Balloon NOT visible

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution

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Existing

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
1	Dracut Rd	42.70073	-71.38898	0.1 Miles	North-East	239	Year Round

Site: 202096 Hudson 3 NH

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Simulation

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
1	Dracut Rd	42.70073	-71.38898	0.1 Miles	North-East	239	Year Round

Site: 202096 Hudson 3 NH

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Existing

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
2	Dracut Rd	42.70018	-71.3886	0.11 Miles	East	262	Obscured

Site: 202096 Hudson 3 NH

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Simulation

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
2	Dracut Rd	42.70018	-71.3886	0.11 Miles	East	262	Obscured

Site: 202096 Hudson 3 NH

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Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
3	Dracut Rd	42.70131	-71.38941	0.11 Miles	North-East	215	Obscured

Site: 202096 Hudson 3 NH

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Simulation

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
3	Dracut Rd	42.70131	-71.38941	0.11 Miles	North-East	215	Obscured

Site: 202096 Hudson 3 NH

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Existing

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
4	Sherburne Rd	42.70113	-71.38827	0.15 Miles	North-East	237	Obscured

Site: 202096 Hudson 3 NH

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Simulation

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
4	Sherburne Rd	42.70113	-71.38827	0.15 Miles	North-East	237	Obscured

Site: 202096 Hudson 3 NH

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Existing

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
5	Ponderosa Dr	42.70287	-71.39109	0.2 Miles	North	174	Obscured

Site: 202096 Hudson 3 NH

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Simulation

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
5	Ponderosa Dr	42.70287	-71.39109	0.2 Miles	North	174	Obscured

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
6	Long Pond Rd	42.69747	-71.38768	0.23 Miles	South-East	318	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

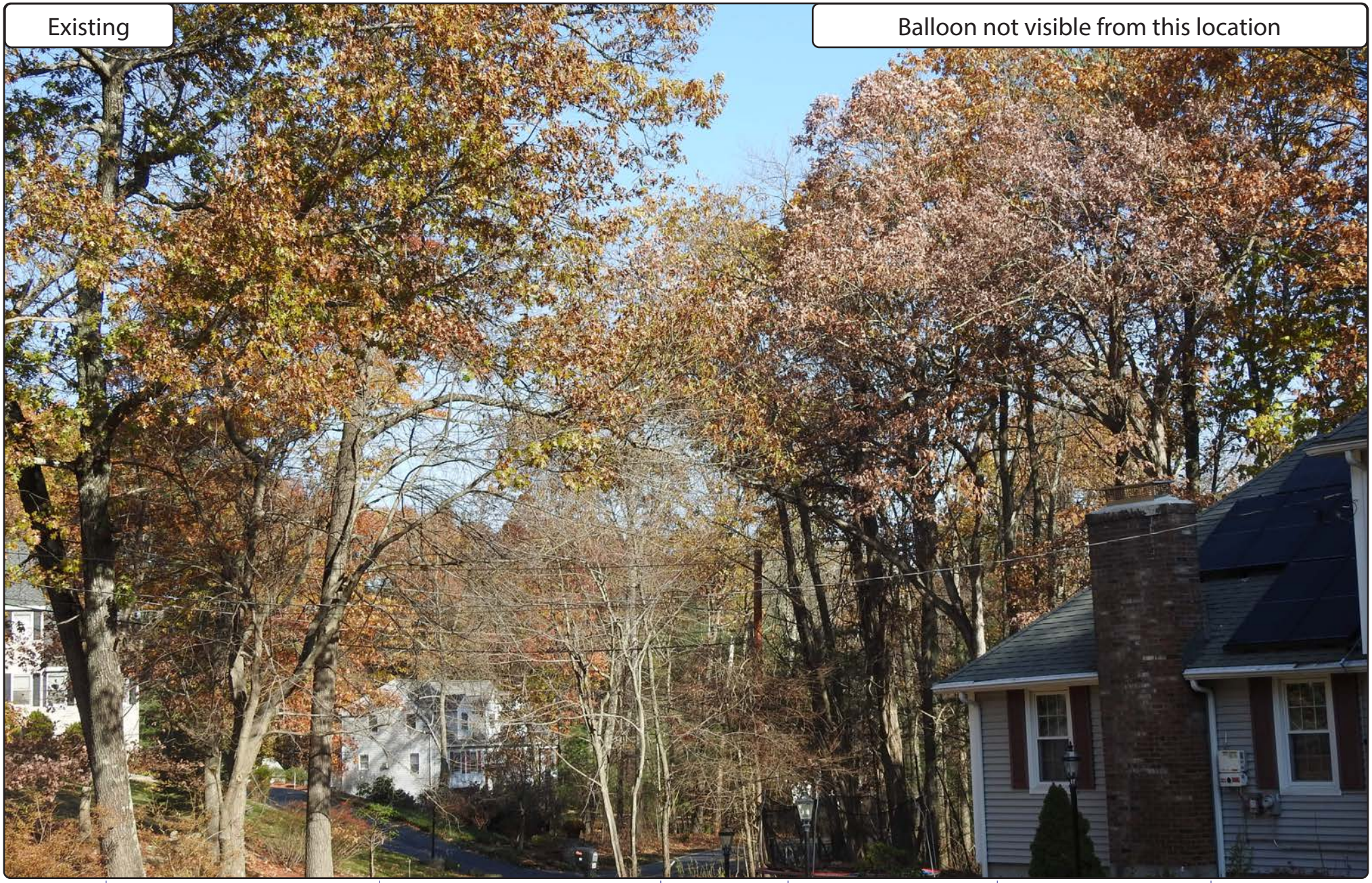

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
7	Norris Rd	42.69723	-71.39339	0.23 Miles	South-West	36	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
8	Sherburne Rd	42.70137	-71.38643	0.24 Miles	North-East	246	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
9	Schaefer Cir	42.70139	-71.39559	0.27 Miles	West	112	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

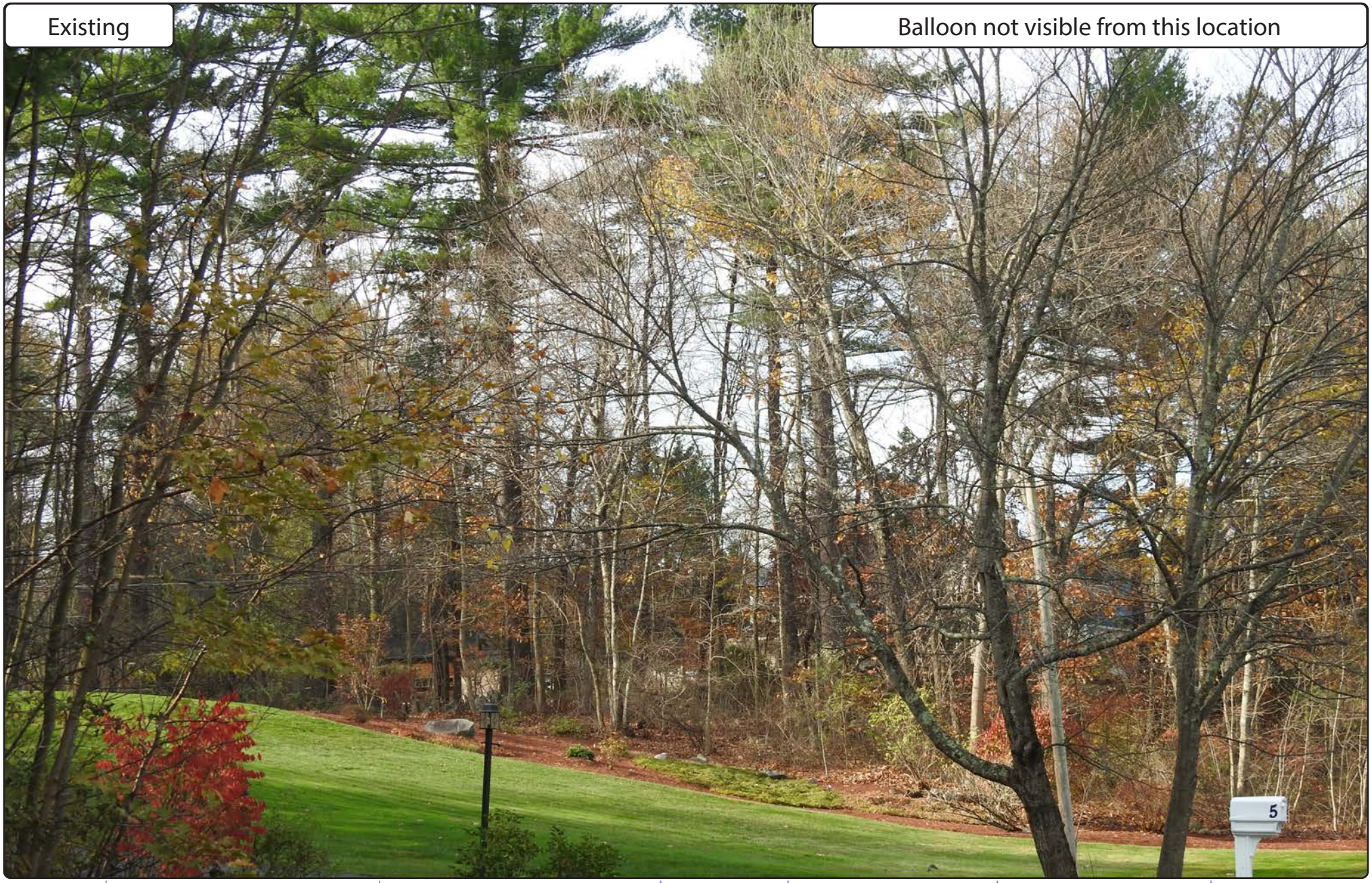

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
10	Ponderosa Dr	42.70383	-71.38873	0.29 Miles	North	200	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

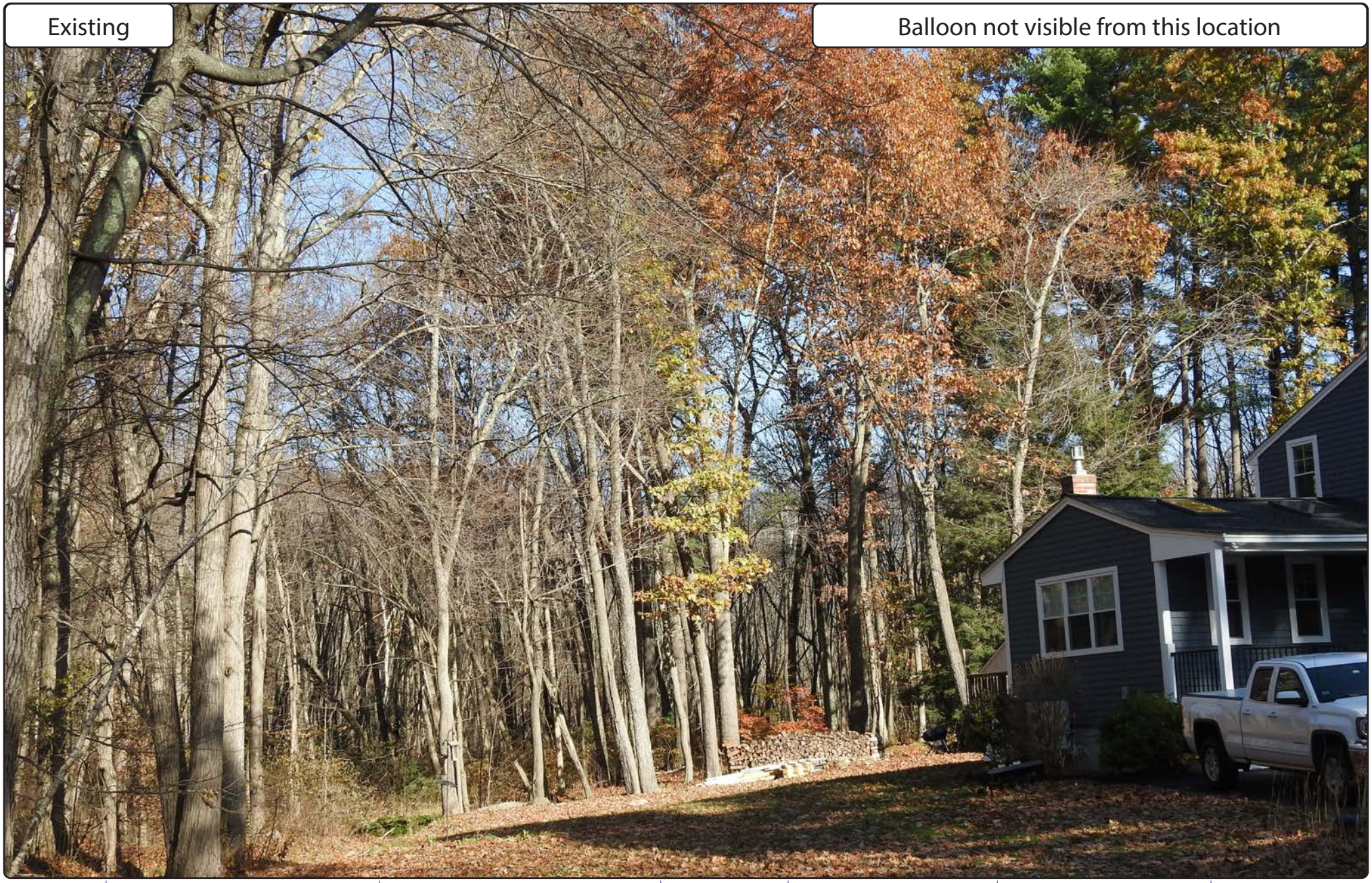

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
11	Beverlee Rd	42.69464	-71.38991	0.37 Miles	South	354	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
12	Sagewood Dr	42.69927	-71.38334	0.38 Miles	East	277	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
13	Schaefer Cir	42.69999	-71.40021	0.48 Miles	West	90	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
14	Norris Rd	42.69484	-71.40056	0.61 Miles	South-West	55	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

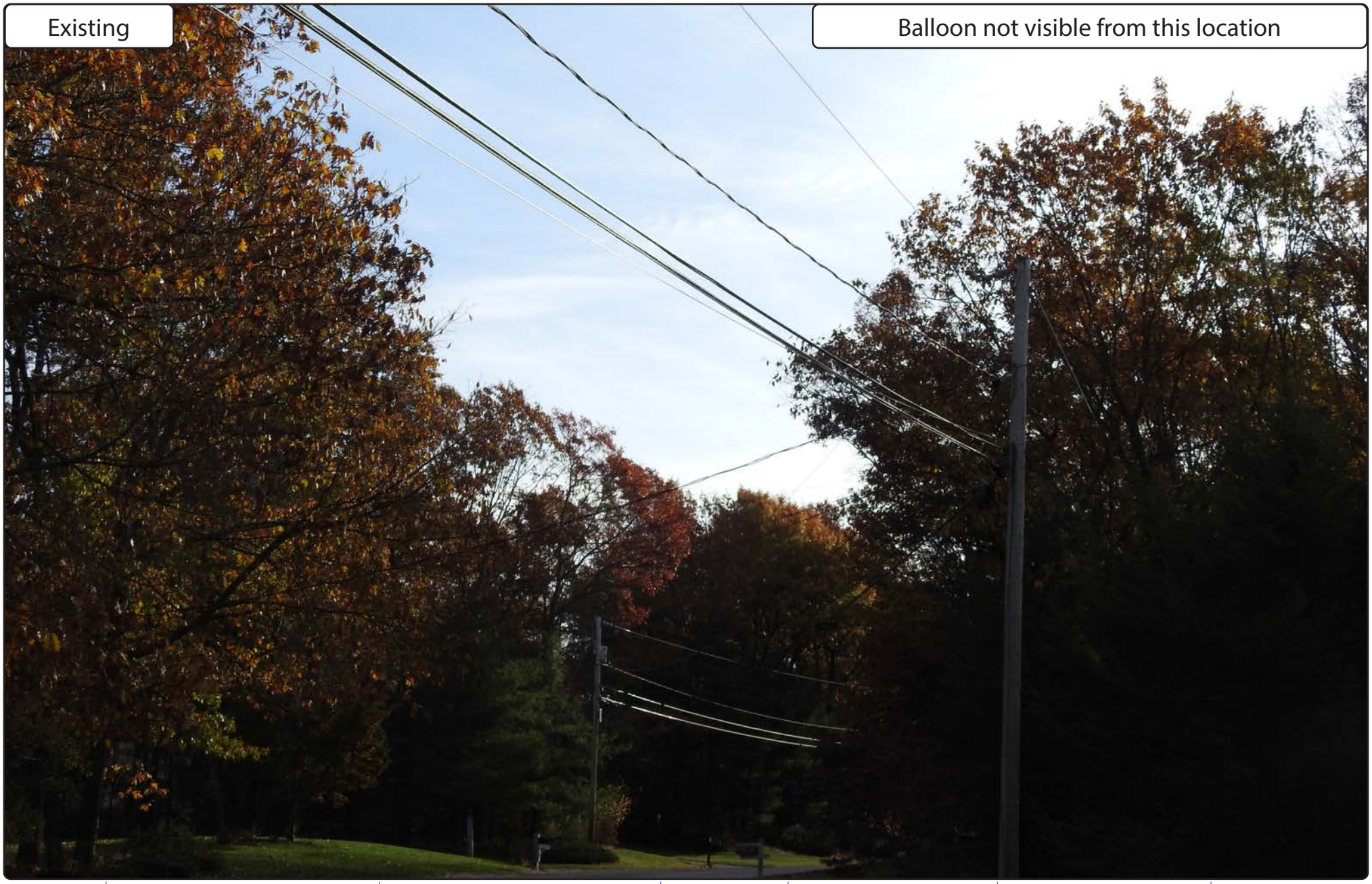

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
15	Anna Louise Dr	42.70109	-71.40307	0.63 Miles	West	97	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
16	Robert Rd	42.69191	-71.39712	0.64 Miles	South-West	30	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
17	Spring St	42.69306	-71.38211	0.65 Miles	South-East	318	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
18	Spaulding Hill Rd	42.70478	-71.37852	0.7 Miles	North-East	242	Not Visible

Site: 202096 Hudson 3 NH

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Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
19	Parham Rd	42.68917	-71.38534	0.79 Miles	South	340	Not Visible

Site: 202096 Hudson 3 NH

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AMERICAN TOWER®

Existing

Balloon not visible from this location

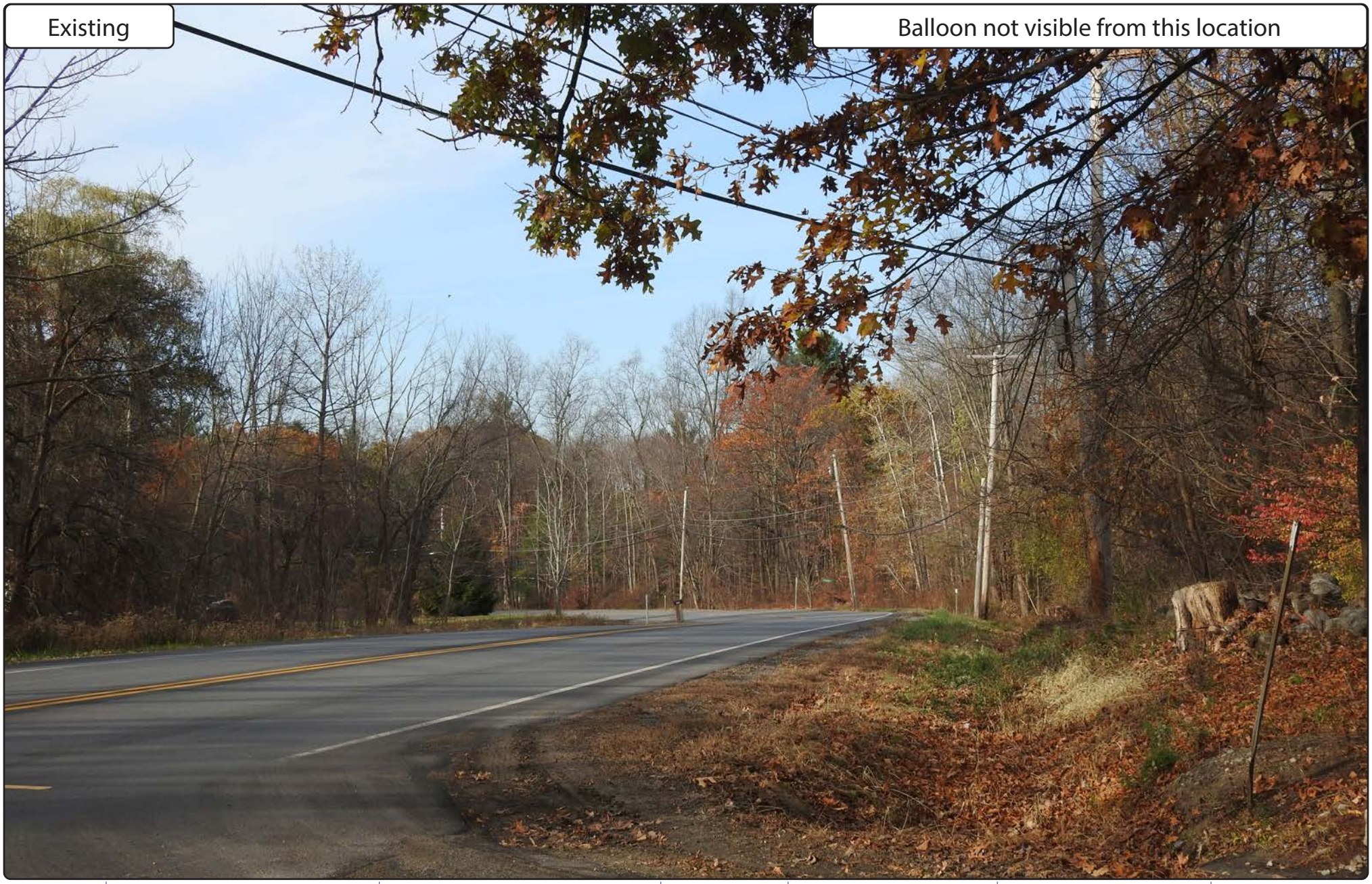


Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
20	Sherburne Rd	42.70393	-71.37529	0.83 Miles	East	251	Not Visible

Site: 202096 Hudson 3 NH

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution

VSS
Your Visual Data Partner

AMERICAN TOWER®

Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
21	Williams Dr	42.7072	-71.40393	0.84 Miles	North-West	127	Not Visible

Site: 202096 Hudson 3 NH

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution

VSS
Your Visual Data Partner

AMERICAN TOWER®

Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
22	Crestwood Dr	42.71194	-71.39395	0.84 Miles	North	169	Not Visible

Site: 202096 Hudson 3 NH

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution

VSS
Your Visual Data Partner

AMERICAN TOWER®

Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
23	Summer St	42.69119	-71.37885	0.85 Miles	South-East	315	Not Visible

Site: 202096 Hudson 3 NH

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution

VSS
Your Visual Data Partner

AMERICAN TOWER®

Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
24	Slavin Dr	42.70976	-71.37801	0.93 Miles	North-East	224	Not Visible

Site: 202096 Hudson 3 NH

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution

VSS
Your Visual Data Partner

AMERICAN TOWER®

Existing

Balloon not visible from this location

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
25	Gowing Rd	42.71497	-71.39429	1.05 Miles	North	170	Not Visible

Site: 202096 Hudson 3 NH

VSS
Your Visual Data Partner

AMERICAN TOWER®

EXHIBIT 4

ENGINEER STAMPED

STRUCTURAL LETTER

Michael F. Plahovinsak, P.E.
18301 State Route 161, Plain City, Ohio 43064
(614) 398-6250 - mike@mfpeng.com

January 21, 2021

American Tower

Re: Proposed 155-ft Pine Tree Monopole
Located in Hillsborough Co., NH: 202096 Hudson 3 NH
MFP Project #: 23518-104 r3 / TAPP Project Number: TP-19494

I understand that there may be some concern on the part of local building officials regarding the potential for failure of the proposed communication monopole. Communication structures are designed in accordance with the Telecommunications Industry Association ANSI/TIA-222-G , "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures". This Structure is to be fabricated by TransAmerican Power Products

I have designed this monopole to withstand a 3-sec. gusted wind speed of 97 mph as recommended by ANSI/TIA-222-G for Hillsborough Co., NH. The design also conforms to the requirements of the 2006-2015 International Building Code for an equivalent ultimate wind speed of 125 mph (Vult).

This monopole has been designed to accommodate a theoretical fall radius. The upper 81' of the pole has been designed to meet the wind loads of the design, however, the lower portion of the pole has been designed with a minimum 5% extra capacity. Assuming the pole has been designed according to my design, and well maintained, in the event of a failure due to extreme wind and comparable appurtenance antenna load (winds in excess of the design wind load), it would yield/buckle at the 74' elevation. The yielded section is designed to swing down and rest on the ground, resulting in an approximate 36-ft fall radius

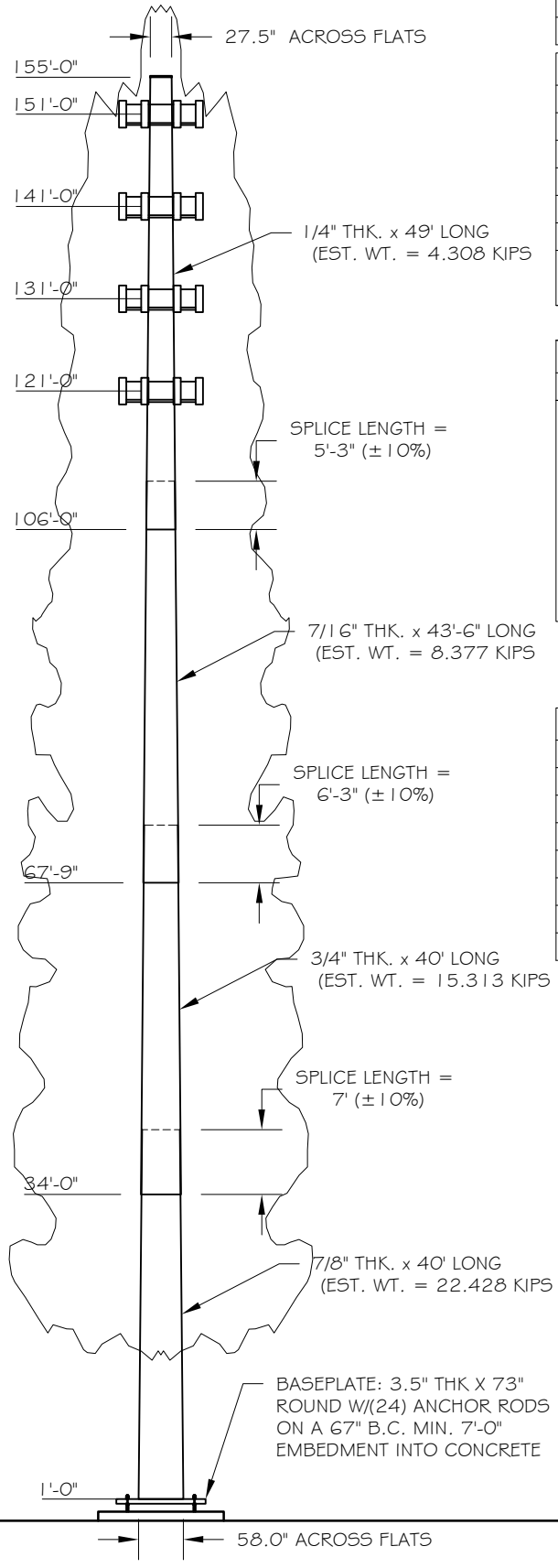
The structure has been designed with all of the applicable factors as required by the code. A properly designed, constructed and maintained pole has never collapsed; monopoles are safe structures with a long history of reliable operation.

I hope this review of the monopole design has given you a greater degree of comfort regarding the design capacity inherent in pole structures. If you have any additional questions please call me at 614-398-6250 or email mike@mfpeng.com.

Sincerely,

Michael F. Plahovinsak, P.E.

TAPP
2427 Kelly Lane
Houston, Texas 77066
281-444-8277
QUALITY STEEL POLES. DELIVERED.



Page 1 of 2	Job Number: 23518-104 r3
Eng: MFP	Customer Ref: TP-19494
	Date: 12/29/2020
Structure:	155-FT PINE TREE MONOPOLE
Site:	202096 HUDSON 3 NH
Location:	HILLSBOROUGH CO., NH / 42°42'1", -71°23'32"
Owner:	AMERICAN TOWER
Revision No.:	Revision Date:

DESIGN

Building Code:	2006-2015 INTERNATIONAL BUILDING CODE
Design Standard:	ANSI/TIA-222-G
Wind Speed Load Cases:	ASCE-7-05 CONVERTED TO ASCE-7-10
Load Case #1:	97 MPH Design Wind Speed - V_{ASD} (V_{ULT} = 125 MPH)
Load Case #2:	40 MPH Wind with 1" Ice Accumulation
Load Case #3	60 MPH Service Wind Speed

Structure Class Risk Category	Exposure Cat.	Topography Cat.	Crest Height
II	C	1	

STRUCTURE MEETS THE MINIMUM REQUIREMENTS OF TIA-222-H

EQUIPMENT LIST

Elev.	Description
151	(12) PANEL ANTENNAS + MOUNTING (125 FT2 / 2,000 LBS)
151	GENERIC ANTENNA MOUNT
141	(12) PANEL ANTENNAS + MOUNTING (175 FT2 / 2,250 LBS)
141	GENERIC ANTENNA MOUNT
131	(12) PANEL ANTENNAS + MOUNTING (175 FT2 / 2,250 LBS)
131	GENERIC ANTENNA MOUNT
121	(12) PANEL ANTENNAS + MOUNTING (125 FT2 / 2,000 LBS)
121	GENERIC ANTENNA MOUNT

ANTENNA FEED LINES ROUTED ON THE INSIDE OF THE POLE
POLE DESIGNED FOR A MAX 36-FT FALL RADIUS
PINE TREE BRANCHES SPACED EVENLY FROM 15'-0"

STRUCTURE PROPERTIES

Cross-Section: 18-Sided	Taper: 0.21672 in/ft
Shaft Steel: ASTM A572 GR 65	Baseplate Steel: ASTM A572 GR 50
Anchor Rods: 2.5 in. F1554 GR. 105 X 8'-0"	

Sect.	Length (ft)	Thickness (in)	Splice (ft)	Top Dia. (in)	Bot Dia. (in)
1	49.00	0.2500	5.25	27.50	38.12
2	43.50	0.4375	6.25	36.48	45.91
3	40.00	0.7500	7.00	43.68	52.35
4	40.00	0.8750	0.00	49.33	58.00

MICHAEL F. PLAHOVINSAK, P.E. #12326
Sole Proprietor - Independent Engineer
18301 S.R. 161, Plain City, OH 43064
614-398-6250 / mike@mfpeng.com

BASE REACTIONS FOR FOUNDATION DESIGN

Moment: 13468 ft-kip
Shear: 141 kip
Axial: 90 kip

TAPP
QUALITY STEEL POLES. DELIVERED.
2427 Kelly Lane
Houston, Texas 77066
281-444-8277

Page 2 of 2		Job Number:	23518-104 r3
Eng: MFP		Customer Ref:	TP-19494
		Date:	12/29/2020
Structure:	155-FT PINE TREE MONOPOLE		
Site:	202096 HUDSON 3 NH		
Location:	HILLSBOROUGH CO., NH / 42°42'1", -71°23'32"		
Owner:	AMERICAN TOWER		
Revision No.:	Revision Date:		

FOUNDATION NOTES:

1. ALL FOUNDATION CONCRETE SHALL USE TYPE II CEMENT AND ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.45 AND SHALL BE AIR ENTRAINED 6% (±1.5%). ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318, "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", LATEST EDITION.

2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 VERTICAL BARS SHALL BE GRADE 60, AND TIES OR STIRRUPS SHALL BE A MINIMUM OF GRADE 40. THE PLACEMENT OF ALL REINFORCEMENT SHALL CONFORM TO ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.

3. THE CONTRACTOR SHALL DETERMINE THE MEANS AND METHODS TO SUPPORT THE EXCAVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT AND SHALL CONSULT THE GEOTECHNICAL ENGINEER AS NECESSARY PRIOR TO CONSTRUCTION.

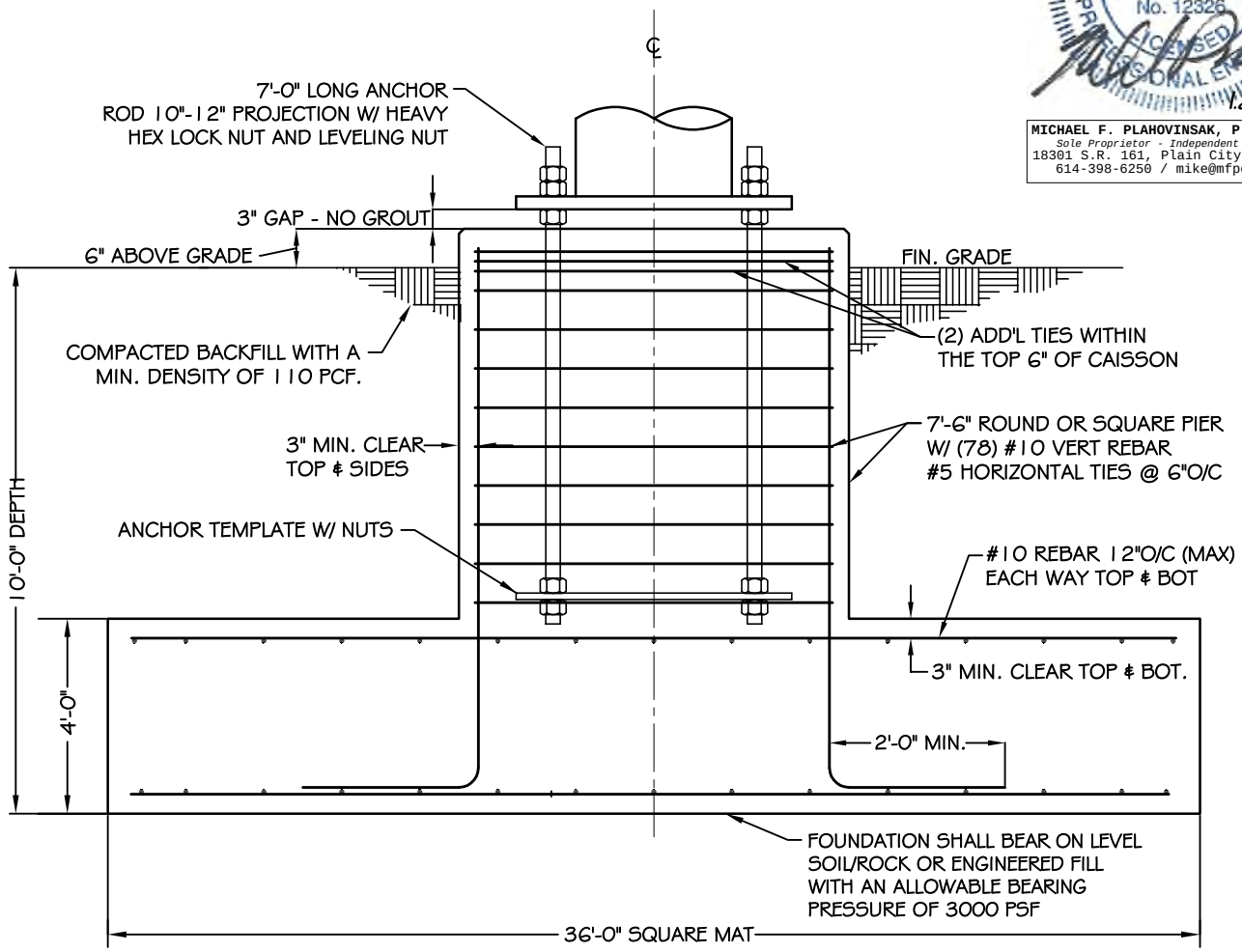
4. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL REPORT BY:
ENGINEER: SGS, INC.
REPORT NO.: 2006026 (DATED 10/28/20)

5. ESTIMATED CONCRETE VOLUME = 205 CUBIC YARDS.

6. THE FOUNDATION HAS BEEN DESIGNED TO RESIST THE FOLLOWING FACTORED LOADS:
MOMENT: 13468 FT*KIPS
SHEAR: 141 KIPS
AXIAL: 90 KIPS

STATE OF NEW HAMPSHIRE
MICHAEL F. PLAHOVINSAK No. 12326
LICENSED PROFESSIONAL ENGINEER
1.22.2021

MICHAEL F. PLAHOVINSAK, P.E. #12326
Sole Proprietor - Independent Engineer
18301 S.R. 161, Plain City, OH 43064
614-398-6250 / mike@mfpeng.com



SPREAD FOOTING

NOT TO SCALE

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in Hillsborough County, New Hampshire.
Basic wind speed of 97 mph.
Structure Class II.
Exposure Category C.
Topographic Category 1.
Crest Height 0.00 ft.
Nominal ice thickness of 1.0000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 40 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	155.00-106.00	49.00	5.25	18	27.5000	38.1193	0.2500	1.0000	A572-65 (65 ksi)
L2	106.00-67.75	43.50	6.25	18	36.4815	45.9089	0.4375	1.7500	A572-65 (65 ksi)
L3	67.75-34.00	40.00	7.00	18	43.6794	52.3482	0.7500	3.0000	A572-65 (65 ksi)
L4	34.00-1.00	40.00		18	49.3312	58.0000	0.8750	3.5000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	27.8857	21.6229	2028.5415	9.6738	13.9700	145.2070	4059.7522	10.8135	4.4000	17.6
	38.6688	30.0493	5444.3600	13.4436	19.3646	281.1499	10895.8838	15.0275	6.2690	25.076
L2	38.1322	50.0516	8215.2844	12.7956	18.5326	443.2878	16441.3787	25.0306	5.6507	12.916
	46.5496	63.1427	16494.4205	16.1423	23.3217	707.2559	33010.5449	31.5774	7.3100	16.708
L3	45.6129	102.1934	23794.1161	15.2399	22.1891	1072.3323	47619.5411	51.1064	6.3676	8.49
	53.0401	122.8295	41315.1795	18.3174	26.5929	1553.6174	82684.7226	61.4264	7.8933	10.524
L4	51.4976	134.5749	39920.8382	17.2019	25.0602	1592.9954	79894.2053	67.3002	7.1423	8.163
	58.7598	158.6504	65408.0294	20.2794	29.4640	2219.9304	130902.124	79.3403	8.6680	9.906

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 155.00-106.00				1	1	1			
L2 106.00-67.75				1	1	1			
L3 67.75-34.00				1	1	1			
L4 34.00-1.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
1 5/8"	C	No	Yes	Inside Pole	151.00 - 1.00	9	No Ice	0.00	0.92
							1/2" Ice	0.00	0.92
							1" Ice	0.00	0.92
1 5/8"	C	No	Yes	Inside Pole	141.00 - 1.00	12	No Ice	0.00	0.92
							1/2" Ice	0.00	0.92
							1" Ice	0.00	0.92
1 5/8"	C	No	Yes	Inside Pole	131.00 - 1.00	12	No Ice	0.00	0.92
							1/2" Ice	0.00	0.92
							1" Ice	0.00	0.92
1 5/8"	C	No	Yes	Inside Pole	121.00 - 1.00	9	No Ice	0.00	0.92
							1/2" Ice	0.00	0.92
							1" Ice	0.00	0.92

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	155.00-106.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	1.16
L2	106.00-67.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	1.47
L3	67.75-34.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	1.30
L4	34.00-1.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	1.27

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	155.00-106.00	A	2.293	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	1.16
L2	106.00-67.75	A	2.202	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C		0.000	0.000	0.000	0.000	1.47
L3	67.75-34.00	A	2.088	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	1.30
L4	34.00-1.00	A	1.878	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	1.27

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Pine Tree Branches	C	None		0.0000	149.70	No Ice	127.00	124.00	1.04
						1/2" Ice	147.00	143.00	1.23
						1" Ice	162.00	71.00	0.61
Pine Tree Branches	C	None		0.0000	124.90	No Ice	272.00	252.00	2.23
						1/2" Ice	314.00	291.00	2.62
						1" Ice	330.00	110.00	0.93
Pine Tree Branches	C	None		0.0000	93.80	No Ice	344.00	307.00	2.82
						1/2" Ice	397.00	355.00	3.32
						1" Ice	403.00	131.00	1.11
Pine Tree Branches	C	None		0.0000	62.70	No Ice	417.00	362.00	3.42
						1/2" Ice	481.00	418.00	4.02
						1" Ice	474.00	154.00	1.30
Pine Tree Branches	C	None		0.0000	31.60	No Ice	489.00	417.00	4.01
						1/2" Ice	565.00	482.00	4.72
						1" Ice	547.00	175.00	1.49
**									
Antennas + Mount (EPA 125 ft2 / 2,000 lbs)	C	None		0.0000	151.00	No Ice	125.00	125.00	2.00
						1/2" Ice	175.00	175.00	2.50
						1" Ice	225.00	225.00	3.00
Antennas + Mount (EPA 175 ft2 / 2,250 lbs)	C	None		0.0000	141.00	No Ice	175.00	175.00	2.25
						1/2" Ice	200.00	200.00	2.75
						1" Ice	225.00	225.00	3.25
Antennas + Mount (EPA 175 ft2 / 2,250 lbs)	C	None		0.0000	131.00	No Ice	175.00	175.00	2.25
						1/2" Ice	200.00	200.00	2.75
						1" Ice	225.00	225.00	3.25
Antennas + Mount (EPA 125 ft2 / 2,000 lbs)	C	None		0.0000	121.00	No Ice	125.00	125.00	2.00
						1/2" Ice	175.00	175.00	2.50
						1" Ice	225.00	225.00	3.00

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 90 deg - No Ice
5	0.9 Dead+1.6 Wind 90 deg - No Ice
6	1.2 Dead+1.6 Wind 180 deg - No Ice
7	0.9 Dead+1.6 Wind 180 deg - No Ice

Comb. No.	Description
8	1.2 Dead+1.0 Ice+1.0 Temp
9	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
10	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
11	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
12	Dead+Wind 0 deg - Service
13	Dead+Wind 90 deg - Service
14	Dead+Wind 180 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	155 - 106	Pole	Max Tension	4	0.00	0.00	0.00
			Max. Compression	8	-32.24	0.00	0.00
			Max. Mx	4	-13.77	-1413.36	0.00
			Max. My	2	-13.77	0.00	1413.36
			Max. Vy	4	60.11	-1413.36	0.00
			Max. Vx	2	-60.11	0.00	1413.36
L2	106 - 67.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-49.97	0.00	0.00
			Max. Mx	4	-28.95	-4079.74	0.00
			Max. My	2	-28.95	0.00	4079.74
			Max. Vy	4	81.79	-4079.74	0.00
			Max. Vx	2	-81.79	0.00	4079.74
L3	67.75 - 34	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-75.44	0.00	0.00
			Max. Mx	4	-52.58	-7264.32	0.00
			Max. My	2	-52.58	0.00	7264.32
			Max. Vy	4	104.83	-7264.32	0.00
			Max. Vx	2	-104.83	0.00	7264.32
L4	34 - 1	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-113.50	0.00	0.00
			Max. Mx	4	-90.12	-12120.98	0.00
			Max. My	2	-90.12	0.00	12120.98
			Max. Vy	4	126.99	-12120.98	0.00
			Max. Vx	2	-126.99	0.00	12120.98

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	155 - 106	27.454	12	1.5567	0.0000
L2	111.25 - 67.75	13.997	12	1.2463	0.0000
L3	74 - 34	5.982	12	0.7526	0.0000
L4	41 - 1	1.862	12	0.4114	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
151.00	Antennas + Mount (EPA 125 ft2 / 2,000 lbs)	12	26.141	1.5363	0.0000	36842

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
149.70	Pine Tree Branches	12	25.715	1.5296	0.0000	34756
141.00	Antennas + Mount (EPA 175 ft2 / 2,250 lbs)	12	22.887	1.4827	0.0000	13157
131.00	Antennas + Mount (EPA 175 ft2 / 2,250 lbs)	12	19.723	1.4202	0.0000	7674
124.90	Pine Tree Branches	12	17.866	1.3750	0.0000	6119
121.00	Antennas + Mount (EPA 125 ft2 / 2,000 lbs)	12	16.716	1.3425	0.0000	5417
93.80	Pine Tree Branches	12	9.782	1.0217	0.0000	4485
62.70	Pine Tree Branches	12	4.258	0.6241	0.0000	4728
31.60	Pine Tree Branches	12	1.200	0.3185	0.0000	5902

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	155 - 106	128.305	2	7.2838	0.0000
L2	111.25 - 67.75	65.482	2	5.8331	0.0000
L3	74 - 34	28.005	2	3.5239	0.0000
L4	41 - 1	8.720	2	1.9267	0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
151.00	Antennas + Mount (EPA 125 ft2 / 2,000 lbs)	2	122.178	7.1886	0.0000	8112
149.70	Pine Tree Branches	2	120.190	7.1573	0.0000	7652
141.00	Antennas + Mount (EPA 175 ft2 / 2,250 lbs)	2	106.987	6.9379	0.0000	2895
131.00	Antennas + Mount (EPA 175 ft2 / 2,250 lbs)	2	92.220	6.6460	0.0000	1686
124.90	Pine Tree Branches	2	83.550	6.4350	0.0000	1342
121.00	Antennas + Mount (EPA 125 ft2 / 2,000 lbs)	2	78.181	6.2832	0.0000	1187
93.80	Pine Tree Branches	2	45.778	4.7830	0.0000	973
62.70	Pine Tree Branches	2	19.935	2.9226	0.0000	1015
31.60	Pine Tree Branches	2	5.618	1.4917	0.0000	1262

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	155 - 106 (1)	TP38.1193x27.5x0.25	49.00	0.00	0.0	29.1465	-13.77	1910.96	0.007
L2	106 - 67.75 (2)	TP45.9089x36.4815x0.4375	43.50	0.00	0.0	61.2618	-28.95	4542.58	0.006
L3	67.75 - 34 (3)	TP52.3482x43.6794x0.75	40.00	0.00	0.0	119.2180	-52.58	8857.32	0.006
L4	34 - 1 (4)	TP58x49.3312x0.875	40.00	0.00	0.0	158.6500	-90.12	11786.90	0.008

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	155 - 106 (1)	TP38.1193x27.5x0.25	1413.36	1444.90	0.978	0.00	1444.90	0.000
L2	106 - 67.75 (2)	TP45.9089x36.4815x0.4375	4079.74	4112.58	0.992	0.00	4112.58	0.000
L3	67.75 - 34 (3)	TP52.3482x43.6794x0.75	7264.32	9057.58	0.802	0.00	9057.58	0.000
L4	34 - 1 (4)	TP58x49.3312x0.875	12121.00	13744.17	0.882	0.00	13744.17	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	155 - 106 (1)	TP38.1193x27.5x0.25	60.11	955.48	0.063	0.00	2896.31	0.000
L2	106 - 67.75 (2)	TP45.9089x36.4815x0.4375	81.79	2271.29	0.036	0.00	8247.52	0.000
L3	67.75 - 34 (3)	TP52.3482x43.6794x0.75	104.83	4428.66	0.024	0.00	18178.08	0.000
L4	34 - 1 (4)	TP58x49.3312x0.875	126.99	5893.47	0.022	0.00	27585.17	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	155 - 106 (1)	0.007	0.978	0.000	0.063	0.000	0.989 ✔	1.000	4.8.2 ✔
L2	106 - 67.75 (2)	0.006	0.992	0.000	0.036	0.000	1.000 ✔	1.000	4.8.2 ✔
L3	67.75 - 34 (3)	0.006	0.802	0.000	0.024	0.000	0.809 ✔	1.000	4.8.2 ✔
L4	34 - 1 (4)	0.008	0.882	0.000	0.022	0.000	0.890 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	155 - 106	Pole	TP38.1193x27.5x0.25	1	-13.77	1910.96	98.9	Pass
L2	106 - 67.75	Pole	TP45.9089x36.4815x0.4375	2	-28.95	4542.58	100.0	Pass
L3	67.75 - 34	Pole	TP52.3482x43.6794x0.75	3	-52.58	8857.32	80.9	Pass
L4	34 - 1	Pole	TP58x49.3312x0.875	4	-90.12	11786.90	89.0	Pass
							Summary	
						Pole (L2)	100.0	Pass
						RATING =	**100.0**	**Pass**

Michael F. Plahovinsak, P.E.
18301 State Route 161 W
Plain City, OH 43064
Phone: 614-398-6250
email: mike@mfpeng.com

Job: 155-ft pine tree monopole - MFP #23518-104 r3	Page: BP & AB Calc
Project: 202096 Hudson 3 NH	Date: 12/29/2020
Client: TAPP TP-19494	Designed by: Mike

Anchor Rod and Base Plate Calculation

ANSI/TIA-222-G

Factored Base Reactions:		***Pole Shape:***	***Anchor Rods:***	***Base Plate:***
Moment:	12121 ft-kips	18-Sided	(24) 2.5 in. F1554 GR. 105	3.5 in. x 73 in. Round
Shear:	127 kips	***Pole Dia. (D_f):***	Anchor Rods Evenly Spaced	fy = 50 ksi
Axial:	90 kips	58.00 in	On a 67 in Bolt Circle	

Anchor Rod Calculation According to TIA-222-G section 4.9.9

ϕ_t , ϕ_v = 0.80 TIA 4.9.9
I_{bolts} = 13467.00 in^2 Momet of Inertia
P_u = 366 kips Compr Force
V_u = 5.3 kips Shear Force
Rnt = 500.00 kips Nominal Tensile Strength
n 0.50 for detail type (d)
Stress Rating = **94.0%** Satisfies TIA-G 4.9.9

Base Plate Calculation According to TIA-222-G

ϕ = 0.90 TIA 4.7
M_{PL} = 989.8 in-kip Plate Moment
L = 7.6 in Section Length
Z = 23.3 Plastic Section Modulus
M_P = 1162.6 in-kip Plastic Moment
ϕM_n = 1046.3 in-kip Factored Resistance

Calculated Moment vs Factored Resistance
989.80 in-kip $\leq$ 1046 in-kip

Stress Rating = **94.6%**

Anchor Rods Are Adequate	**94.0%** ☑
Base Plate is Adequate	**94.6%** ☑

EXHIBIT 5

ZONING DETERMINATION LETTERS

TOWN OF HUDSON

Land Use Division

12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-594-1142

Zoning Determination #20-011

February 12, 2020

Daniel D. Klasnick
210 Broadway
Suite 204
Lynnfield, MA 01940

Re: **143 Dracut Road Map 259 Lot 011-000**
District: Residential Two (R-2) and General One (G-1)

Dear Mr. Klasnick,

Your request: Permitting requirements for:
Installation of 155' multi-user monopole camouflage tower,
Setback requirements for monopole tower, T-Mobile ground equipment and fenced compound from side yard,
Article XVIII Commercial Wireless Telecommunications use in General One (G-1) zoning district.
Based on submitted plans, reference: Title Sheet – G-001 rev D.

Zoning Review / Determination:

This lot is a legal non-conforming lot with regards to the area and frontage requirements per §334-32. This lot is bisected with 2 zoning districts: R-2 & G-1. The proposed siting of the tower etc. is in the G-1 district. The proposed use is allowed as secondary use per §334-95 A.
This development is subject to a conditional use permit and concurrent site plan approval by the Planning Board per §334-96.2 Conditional use permit required, and in accordance with §334-96.1 Table of Conditionally Permitted Facilities, which may require a submission of an RF Engineering/Facilities Master Plan per §334-95 E.

This proposal does not appear to satisfy the required fall zone calculations per §334-102, for the monopole tower, in regards to the (southerly) property line, as the proposed height is 155', thus the base must be at least 155' from the property line.
Fences are regulated per §334-12 Fences and similar enclosures.

NOTE: this determination may be appealed to the Hudson Zoning Board of Adjustment within 30 days of the receipt of this letter.

Ground equipment setbacks are regulated in accordance with §334-27 Table of Minimum Dimensional Requirements, per §334-6 Definitions (Structure).

Please contact Brian Groth – Town Planner (603) 886-6008 for the Planning Board conditional use permit and site plan approval process/procedure.

Building permit process would apply if successful with the required approvals from the Planning Board.

Sincerely,

Bruce Buttrick, MCP
Zoning Administrator/Code Enforcement Officer
(603) 816-1275
bbuttrick@hudsonnh.gov

cc: Public File
B. Groth, Town Planner
File

NOTE: this determination may be appealed to the Hudson Zoning Board of Adjustment within 30 days of the receipt of this letter.

TOWN OF HUDSON

Land Use Division

12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-594-1142

Zoning Determination #20-039

April 29, 2020

Daniel D. Klasnick
210 Broadway Street
Suite 203
Lynnfield, MA 01940

Re: **143 Dracut Road Map 259 Lot 011-000**
District: Residential Two (R-2) and General One (G-1)

Dear Mr. Klasnick,

Your request: Satisfaction of Fall Zone requirement.
Based on submitted plan, reference: Grading Plan & Profile C-102 dated 01/02/20 rev F.

Zoning Review / Determination:

This proposal would appear to satisfy the required fall zone per §334-102A, based on engineering details (not submitted) of a collapsible tower framework, capable of satisfying §334-102A.

A variance would not be required from the Zoning Board of Adjustment, if you wish to proceed with this proposal as presented.

NOTE: this determination may be appealed to the Hudson Zoning Board of Adjustment within 30 days of the receipt of this letter.

Sincerely,

Bruce Buttrick

Bruce Buttrick, MCP
Zoning Administrator/Code Enforcement Officer
(603) 816-1275
bbuttrick@hudsonnh.gov

cc: Public File
B. Groth, Town Planner
File

NOTE: this determination may be appealed to the Hudson Zoning Board of Adjustment within 30 days of the receipt of this letter.

EXHIBIT 6

STATEMENT OF SHARED USE EVALUATION AND TOWER AVAILABILITY

AMERICAN TOWER™
CORPORATION

August 1, 2020

Town of Hudson, NH
Zoning Board of Adjustment
12 School Street
Hudson, NH 03051

American Tower Corporation: Wireless Communications Facility Project in Hudson, NH **Statement of Shared Use Evaluation and Tower Availability**

To Whom It May Concern:

This letter is written in connection with a proposal by American Tower Corporation ("ATC") to install a new wireless telecommunications facility consisting of a 155' monopine tower and compound at 143 Dracut Road, Hudson, NH, 33011. The proposed coordinates for the Tower at the time of the municipal permit application submission are as follows:

Lat.: 42-42-00.15, **Long**.: 71-23-27.40

By this letter, and in accordance with the Town of Hudson Zoning Ordinance, you are hereby notified that the proposed Tower has been designed to be structurally capable of accommodating multiple communications providers, and that ATC will lease space on the Tower and within the compound at industry-standard, commercially-reasonable rates. Heights of up to 150' are available for commercial carrier equipment. For further information concerning the Tower in Hudson, please contact Justine Paul at 781-926-7191 or via email at Justine.Paul@AmericanTower.com.

Sincerely,

American Tower Corporation

By: Justine Paul
[ATC leasing contact]

cc: Regional Commercial Carriers, including:
New Cingular Wireless PCS, LLC d/b/a AT&T Mobility
Sprint U.S.A. U.S. Cellular
Verizon Wireless

EXHIBIT 7

REMOVAL COST ESTIMATE

AMERICAN TOWER™
CORPORATION

Oct 5, 2020

Mr. Gregory Csapo
Network Development Project Manager
American Tower Corporation
10 Presidential Way
Woburn, MA 01801

Re: Tower Facility Removal Estimate
ATC Site Name: Hudson NH
143 Dracut Road Hudson NH 33011
ATC Site Number: 202096

Mr. Csapo,

Removal estimate below for Hudson NH

155' Monopine removal and disposal – 11,000.00
Remove Foundation 1ft below grade - $6,500.00
Meter Bank, Fence and Bollard removal - $3,000.00
Restore compound area remove stone - $3,500
Remove culvert and restore Ditch line – 1,500.00
Remove underground utilities 6'' below grade - $2,500.00

Total = $28,000.00

Please let me know if you have any questions.

Thanks,

Jon Rodgers
Sr. Construction Manager
American Tower Corporation
10 Presidential Way
Woburn, MA. 01801
(781)-926-7855 (Office)
(617)-839-5143 (Mobile)
jon.rodgers@americantower.com

EXHIBIT 8

T-MOBILE RADIO FREQUENCY REPORT

REPORT OF

RADIO FREQUENCY ENGINEER

The undersigned hereby states the following in support of the application by American Tower Corporation ("***American Tower***") and T-Mobile Northeast LLC ("***T-Mobile***") (together, the "***Applicants***") to construct a 155' above ground level (hereafter "AGL") monopole-style tower (the "Monopole"), install panel antennas at the 151' AGL antenna centerline mark on the Monopole, together with related amplifiers, cables, fiber and other associated antenna equipment, including remote radio heads, surge arrestors, and global positioning system antennas with associated electronic equipment, emergency backup power generator and other appurtenances located on the proposed concrete equipment pad located within a compound enclosed by a chain link fence (the "Facility") located at 143 Dracut Road, Hudson, New Hampshire (the "Site").

1. I am a Radio Frequency Engineer working on behalf of T-Mobile, with an office located at 15 Commerce Way, Suite B, Norton, Massachusetts. Attached is a copy of my qualifications.

2. My primary responsibilities include radio frequency design and planning in the State of New Hampshire, including the Town of Hudson and surrounding communities.

3. As enabled under its Federal Communications Commission ("FCC") License, T-Mobile seeks to design its wireless network to provide reliable and adequate wireless services to its customers, whether those customers are on the street, in a vehicle, or in a building. Providing reliable and adequate service to its customers in each context is critical for T-Mobile to provide the quality of wireless service that customers demand, and to meet the objectives of Congress that a robust, competitive and low cost wireless communications capacity be developed to serve the entire nation.

4. T-Mobile is also designing its network to provide enhanced high speed data services commonly referred to as LTE - "long term evolution" service. LTE will be incorporated into this Facility.

5. T-Mobile is using its best efforts, to the maximum extent possible, to install its wireless communications services facilities network utilizing existing structures to avoid the need to construct new towers.

6. I have thoroughly reviewed the radio frequency engineering studies, reports and computer models prepared by T-Mobile with respect to the Facility.

7. In order to build out its network and meet customer demand for voice and data services, as well as enhance its network to improve high speed data services, T-Mobile must have in place a system of low power 'cell sites' to serve mobile devices. A typical cell site, such as the one proposed, consists of antennas mounted to a building, tower, church or other structure. The antennas are connected to radio operating equipment housed at or near the structure.

8. To maintain effective, reliable and uninterrupted service, there must be a continuous series of cell sites located within close proximity to each other so as to overlap in a system comparable to a honeycomb pattern. If there is no cell site available to accept/receive the signal, network service to the mobile device, will terminate involuntarily. Accordingly, the overlap of coverage is necessary for the signal to transfer from one cell site to another cell site seamlessly and without involuntary termination.

9. A number of factors determine the distance between cell sites, including, but not limited to, topography, physical obstructions, foliage, antenna height, operating frequency and line-of-sight.

10. Based on the radio frequency studies, reports and computer models prepared in connection with this project, it is my professional assertion that there is inadequate network service available to existing and potential T-Mobile customers within the Town of Hudson, especially along Dracut Road, Sanders Road, NH Route 3A/Frost Road, Norris Road including surrounding residential homes and commercial establishments

11. Based on the radio frequency studies, reports and computer models prepared in connection with this Facility, it is my further professional opinion that T-Mobile would be able to achieve the coverage objective by filling these significant gaps in coverage through the installation of the Facility at the Site.

12. Based on the above-mentioned studies, an installation located on the Site at the proposed height would provide adequate coverage for T-Mobile.

13. The Facility will enhance T-Mobile's ability to provide adequate coverage in the area and will increase its capacity to better serve the residents and businesses around these areas of Hudson and to individuals traveling through these areas.

14. The Facility will be in compliance with the FCC Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation.

15. The Facility will be installed, erected, maintained and used in compliance with all applicable Federal, State and local regulations, including, but not limited to applicable regulations administered by the Federal Aviation Administration, Massachusetts Aeronautics Commission and the FCC.

16. T-Mobile is assigned specific frequencies within which it must operate its facilities. The proposed Facility will not interfere with existing public safety communications systems, television or radio signals.

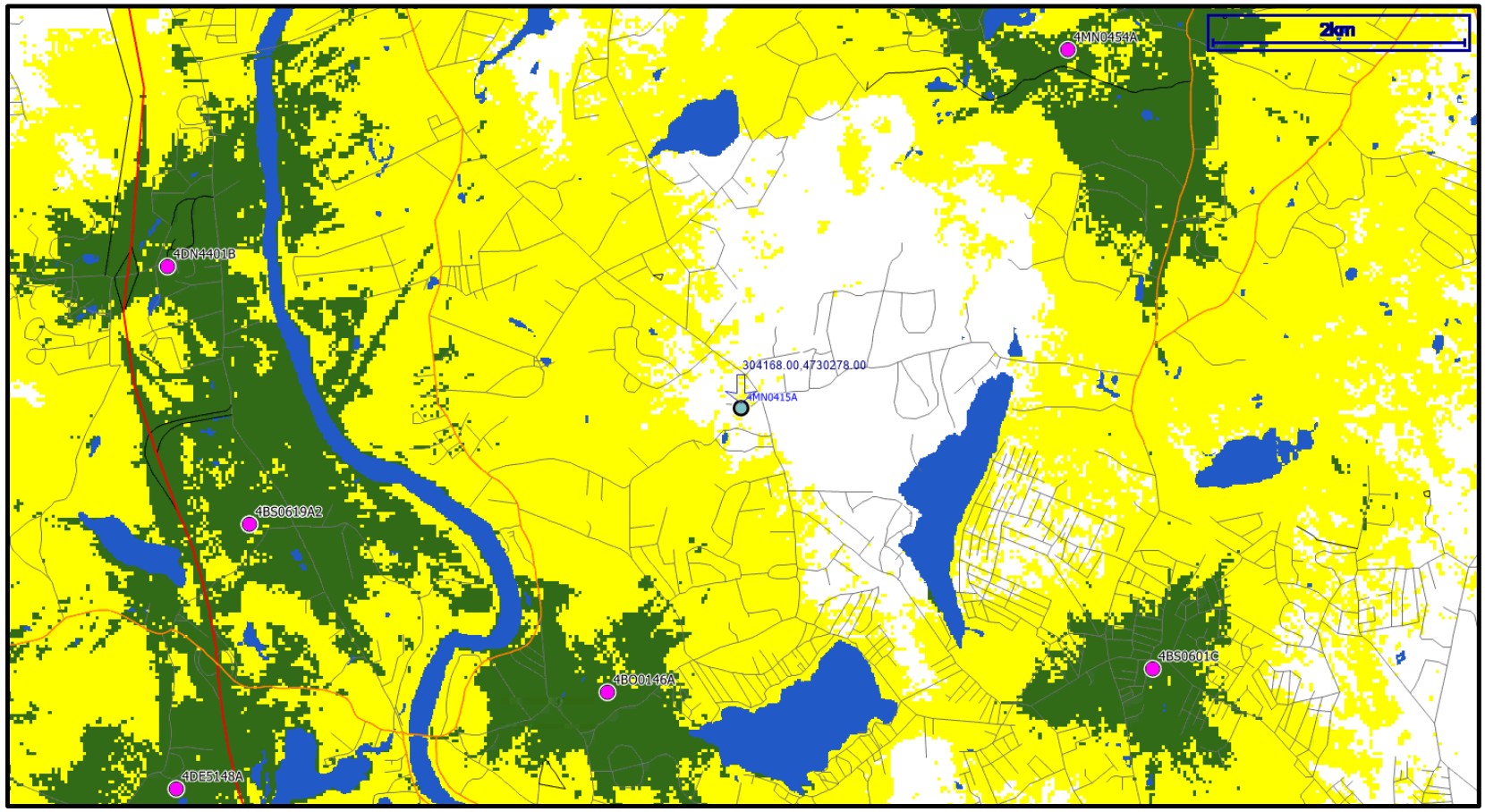
17. Based upon the best radio frequency technology available at this time, it is my professional opinion that the Facility is at the height necessary to ensure adequate service to area residents and businesses and those traveling within the geographic area described above.

Executed this 12th day of October, 2020.

Ryan Monte de Ramos

Ryan Monte de Ramos, Radio Frequency Engineer for T-Mobile

Existing LTE Midband Coverage in Hudson, NH



Existing T-Mobile On-Air Site

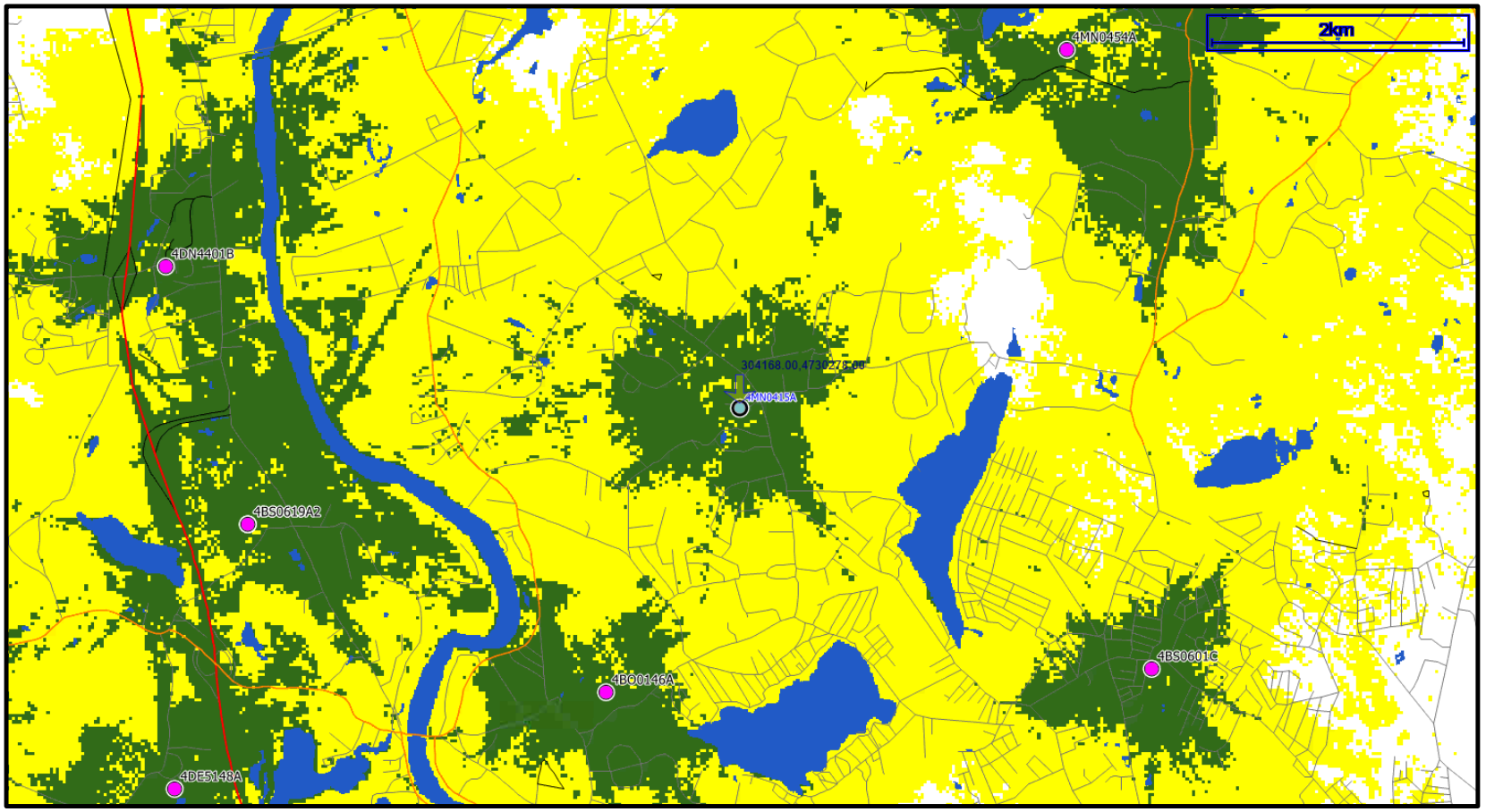
Propose T-Mobile Site

- Other_Road
  - Line
    - Line 1
- Primary_Road
  - Line
    - Line 1
- Secondary_Road
  - Line
    - Line 1
- Neighborhood_Road
  - Line
    - Line 1

Ranges

Minimum	Maximum	Label	Colour
-114	-97	In-Vehicle	
-97	0	In-Building	

Propose LTE Midband Coverage with Candidate 4MN0415A at 151 feet



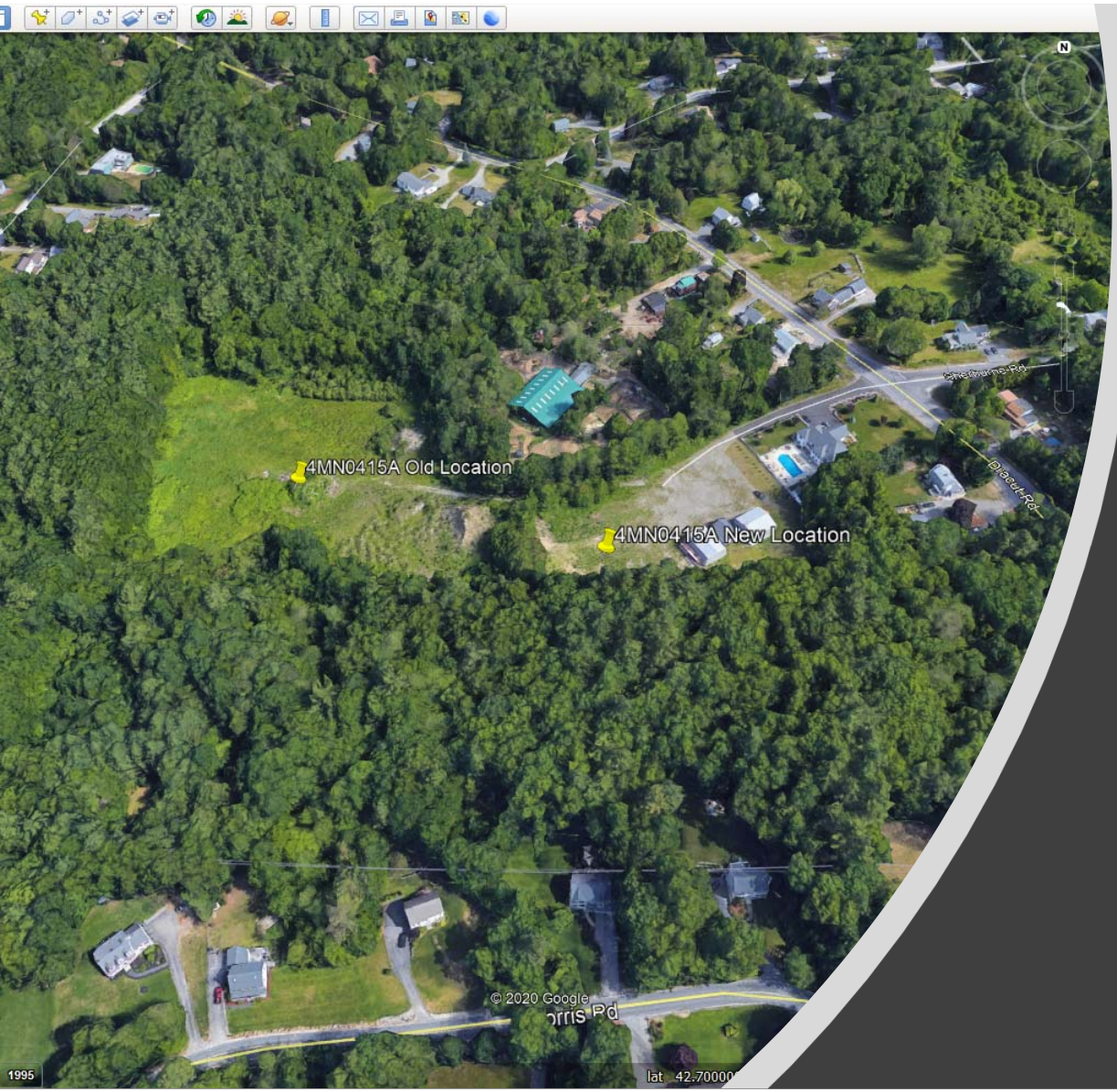
Existing T-Mobile On-Air Site

Propose T-Mobile Site

- Other_Road
  - Line
    - Line 1
- Primary_Road
  - Line
    - Line 1
- Secondary_Road
  - Line
    - Line 1
- Neighborhood_Road
  - Line
    - Line 1

Ranges

Minimum	Maximum	Label	Colour
-114	-97	In-Vehicle	
-97	0	In-Building	



Propose New Location for 4MN0415A

Site Address: 143 Dracut Road, Hudson, NH 03051

Latitude: 42°42’00.15” N

Longitude: 71°23’27.40” W

Structure Height: 155 Ft. AGL

EXHIBIT 9

T-MOBILE FCC LICENSES

ULS Lease

WRCQ555 - L000041679 - T-Mobile License LLC

License Details : Leases : **Lease Details**

Lease ID	L000041679	Radio Service	WT - 600 MHz Band
Status	Active	Classification of Lease	Spectrum Manager Lease
		Term of Lease	Long

Dates

Grant/Accepted	07/08/2020	Expiration	02/28/2023
Commencement	04/14/2020	Cancellation	

Lessee

FRN	0001565449	Type	Limited Liability Company

Lessee

T-Mobile License LLC
12920 SE 38th Street
Bellevue, WA 98006
ATTN FCC Regulatory Compliance

P:(425)383-8401
F:(425)383-4840
E:fccregulatorycompliancecontact@t-mobile.com

Real Party in Interest	T-Mobile License LLC	FRN of Real Party in Interest	0001565449

Contact

Kiechel Law

4005 Garrison Street NW
Washington, DC 20016
ATTN Doane Kiechel

P:(202)487-6770
E:doane@kiechellaw.com

Lessee Qualifications and Ownership Information

Radio Service Type

Regulatory Status Interconnected

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**

The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized. ✓

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Demographics

Race

Ethnicity

Gender

ULS Lease

WRCQ556 - L000041680 - T-Mobile License LLC

License Details : Leases : **Lease Details**

Lease ID	L000041680	Radio Service	WT - 600 MHz Band
Status	Active	Classification of Lease	Spectrum Manager Lease
		Term of Lease	Long

Dates

Grant/Accepted	07/08/2020	Expiration	02/28/2023
Commencement	04/14/2020	Cancellation	

Lessee

FRN	0001565449	Type	Limited Liability Company

Lessee

T-Mobile License LLC
12920 SE 38th Street
Bellevue, WA 98006
ATTN FCC Regulatory Compliance

P:(425)383-8401
F:(425)383-4840
E:fccregulatorycompliancecontact@t-mobile.com

Real Party in Interest	T-Mobile License LLC	FRN of Real Party in Interest	0001565449

Contact

Kiechel Law

4005 Garrison Street NW
Washington, DC 20016
ATTN Doane Kiechel

P:(202)487-6770
E:doane@kiechellaw.com

Lessee Qualifications and Ownership Information

Radio Service Type

Regulatory Status Interconnected

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**

The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized. ✓

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Demographics

Race

Ethnicity

Gender

ULS License

600 MHz Band License - WQZL962 - T-Mobile License LLC

Call Sign	WQZL962	Radio Service	WT - 600 MHz Band
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?	No

Reserved Spectrum

Reserved Spectrum	Yes

Market

Market	PEA060 - Manchester, NH	Channel Block	E
Submarket	0	Associated Frequencies (MHz)	000637.00000000-000642.00000000 000683.00000000-000688.00000000

Dates

Grant	06/14/2017	Expiration	06/14/2029
Effective	06/15/2017	Cancellation	

Buildout Deadlines

1st	06/14/2023	2nd	

Discontinuance Dates

1st	2nd

Notification Dates

1st	2nd

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

T-Mobile License LLC
12920 SE 38th Street
Bellevue, WA 98006

P:(425)383-8401
F:(425)383-4040
E:fccregulatorycompliancecontact@t-mobile.com

Contact

T-Mobile License LLC

12920 SE 38th St.
Bellevue, WA 98006
ATTN FCC Regulatory Comp

P:(425)383-8401
F:(202)637-5910
E:fccregulatorycompliancecontact@t-mobile.com

Ownership and Qualifications

Radio Service Type	Mobile

Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.	✓

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

600 MHz Band License - WQZL963 - T-Mobile License LLC

Call Sign	WQZL963	Radio Service	WT - 600 MHz Band
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?	No

Reserved Spectrum

Reserved Spectrum	No

Market

Market	PEA060 - Manchester, NH	Channel Block	B
Submarket	0	Associated Frequencies (MHz)	000622.00000000-000627.00000000 000668.00000000-000673.00000000

Dates

Grant	06/14/2017	Expiration	06/14/2029
Effective	06/15/2017	Cancellation	

Buildout Deadlines

1st	06/14/2023	2nd	

Discontinuance Dates

1st	2nd

Notification Dates

1st	2nd

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

T-Mobile License LLC
12920 SE 38th Street
Bellevue, WA 98006

P:(425)383-8401
F:(425)383-4040
E:fccregulatorycompliancecontact@t-mobile.com

Contact

T-Mobile License LLC

12920 SE 38th St.
Bellevue, WA 98006
ATTN FCC Regulatory Comp

P:(425)383-8401
F:(202)637-5910
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Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.	✓

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

600 MHz Band License - WQZL964 - T-Mobile License LLC

Call Sign	WQZL964	Radio Service	WT - 600 MHz Band
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?	No

Reserved Spectrum

Reserved Spectrum	No

Market

Market	PEA060 - Manchester, NH	Channel Block	C
Submarket	0	Associated Frequencies (MHz)	000627.00000000-000632.00000000 000673.00000000-000678.00000000

Dates

Grant	06/14/2017	Expiration	06/14/2029
Effective	06/15/2017	Cancellation	

Buildout Deadlines

1st	06/14/2023	2nd	

Discontinuance Dates

1st	2nd

Notification Dates

1st	2nd

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

T-Mobile License LLC
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F:(202)637-5910
E:fccregulatorycompliancecontact@t-mobile.com

Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.	✓

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

600 MHz Band License - WQZL965 - T-Mobile License LLC

Call Sign	WQZL965	Radio Service	WT - 600 MHz Band
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?	No

Reserved Spectrum

Reserved Spectrum	No

Market

Market	PEA060 - Manchester, NH	Channel Block	D
Submarket	0	Associated Frequencies (MHz)	000632.00000000-000637.00000000 000678.00000000-000683.00000000

Dates

Grant	06/14/2017	Expiration	06/14/2029
Effective	06/15/2017	Cancellation	

Buildout Deadlines

1st	06/14/2023	2nd	

Discontinuance Dates

1st	2nd

Notification Dates

1st	2nd

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

T-Mobile License LLC
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Contact

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E:fccregulatorycompliancecontact@t-mobile.com

Ownership and Qualifications

Radio Service Type	Mobile

Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.	✓

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

700 MHz Lower Band (Blocks A, B & E) License - WQIZ578 - T-Mobile License LLC

Call Sign	WQIZ578	Radio Service	WY - 700 MHz Lower Band (Blocks A, B & E)
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	BEA003 - Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH-RI-VT	Channel Block	A
Submarket	0	Associated Frequencies (MHz)	000698.00000000-000704.00000000 000728.00000000-000734.00000000

Dates

Grant	05/30/2019	Expiration	06/13/2029
Effective	05/30/2019	Cancellation	

Buildout Deadlines

1st		2nd	06/13/2019

Discontinuance Dates

1st		2nd	

Notification Dates

1st		2nd	03/21/2019

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

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Contact

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ATTN FCC Regulatory Comp

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E:fccregulatorycompliancecontact@t-mobile.com

Ownership and Qualifications

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	**Yes**
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?	**Yes**

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race	
Ethnicity	Gender

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGA731 - T-Mobile License LLC

Call Sign	WQGA731	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	REA001 - Northeast	Channel Block	D
Submarket	5	Associated Frequencies (MHz)	001735.00000000-001740.00000000 002135.00000000-002140.00000000

Dates

Grant	11/29/2006	Expiration	11/29/2021
Effective	11/30/2017	Cancellation	

Buildout Deadlines

1st 2nd

Discontinuance Dates

1st 2nd

Notification Dates

1st 2nd

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

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Contact

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E:FCCregulatorycompliancecontact@t-mobile.com

Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	**Yes**
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?	**Yes**

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGB373 - T-Mobile License LLC

Call Sign	WQGB373	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	REA001 - Northeast	Channel Block	E
Submarket	11	Associated Frequencies (MHz)	001740.00000000-001745.00000000 002140.00000000-002145.00000000

Dates

Grant	11/29/2006	Expiration	11/29/2021
Effective	11/30/2017	Cancellation	

Buildout Deadlines

1st 2nd

Discontinuance Dates

1st 2nd

Notification Dates

1st 2nd

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

T-Mobile License LLC
12920 SE 38th St.
Bellevue, WA 98006
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P:(425)383-4000
F:(425)378-4040
E:FCCRegulatoryComplianceContact@t-mobile.com

Contact

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Kathleen O Ham
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ATTN Dan Menser

P:(425)383-4000
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E:FCCRegulatoryComplianceContact@t-mobile.com

Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**

The Alien Ruling question is not answered.

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQPG202 - T-Mobile License LLC

Call Sign	WQPG202	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	BEA003 - Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH-RI-VT	Channel Block	C
Submarket	4	Associated Frequencies (MHz)	001730.00000000-001735.00000000 002130.00000000-002135.00000000

Dates

Grant	04/18/2012	Expiration	11/29/2021
Effective	04/18/2012	Cancellation	

Buildout Deadlines

1st 2nd

Discontinuance Dates

1st 2nd

Notification Dates

1st 2nd

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

T-Mobile License LLC
12920 SE 38th Street
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ATTN Dan Menser

P:(425)383-4000
F:(425)383-4840
E:fccregulatorycompliancecontact@t-mobile.com

Contact

Wiley Rein LLP

1776 K Street, NW
Washington, DC 20006
ATTN Nancy J. Victory

P:(202)719-7344
F:(202)719-7049
E:nvictory@wileyrein.com

Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**

The Alien Ruling question is not answered.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race	
Ethnicity	Gender

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQPZ969 - T-Mobile License LLC

Call Sign	WQPZ969	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	REA001 - Northeast	Channel Block	F
Submarket	9	Associated Frequencies (MHz)	001745.00000000-001755.00000000 002145.00000000-002155.00000000

Dates

Grant	08/23/2012	Expiration	11/29/2021
Effective	03/12/2014	Cancellation	

Buildout Deadlines

1st 2nd

Discontinuance Dates

1st 2nd

Notification Dates

1st 2nd

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

T-Mobile License LLC
12920 SE 38th Street
Bellevue, WA 98006
ATTN Kathleen O'Brien Ham

P:(425)383-8401
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Contact

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
Russell H Fox
701 Pennsylvania Avenue, N.W., Suite 900
Washington, DC 20004
ATTN Russell H. Fox

P:(202)434-7483
F:(202)434-7400
E:rfox@mintz.com

Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**

The Alien Ruling question is not answered.

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

PCS Broadband License - WPZY686 - T-Mobile License LLC

Call Sign	WPZY686	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	BTA274 - Manchester-Nashua-Concord, NH	Channel Block	C
Submarket	2	Associated Frequencies (MHz)	001895.00000000-001910.00000000 001975.00000000-001990.00000000

Dates

Grant	12/06/2016	Expiration	01/03/2027
Effective	02/28/2017	Cancellation	

Buildout Deadlines

1st	12/07/2003	2nd	01/03/2007

Discontinuance Dates

1st		2nd	

Notification Dates

1st	01/30/2002	2nd	12/22/2006

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

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E:doane@kiechellaw.com

Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.	✓

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

PCS Broadband License - WQCS431 - T-Mobile License LLC

Call Sign	WQCS431	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	BTA274 - Manchester-Nashua-Concord, NH	Channel Block	C
Submarket	6	Associated Frequencies (MHz)	001895.00000000-001910.00000000 001975.00000000-001990.00000000

Dates

Grant	04/23/2015	Expiration	05/13/2025
Effective	04/23/2015	Cancellation	

Buildout Deadlines

1st	05/13/2010	2nd	

Discontinuance Dates

1st		2nd	

Notification Dates

1st	03/26/2010	2nd	

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

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Contact

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E:doane@kiechellaw.com

Ownership and Qualifications

Radio Service Type Fixed, Mobile

Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.	✓

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

PCS Broadband License - WQCX686 - T-Mobile License LLC

Call Sign	WQCX686	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	BTA274 - Manchester-Nashua-Concord, NH	Channel Block	C
Submarket	4	Associated Frequencies (MHz)	001895.00000000-001910.00000000 001975.00000000-001990.00000000

Dates

Grant	06/29/2015	Expiration	06/20/2025
Effective	06/29/2015	Cancellation	

Buildout Deadlines

1st	06/20/2010	2nd	

Discontinuance Dates

1st		2nd	

Notification Dates

1st	06/16/2010	2nd	

Licensee

FRN	0001565449	Type	Limited Liability Company

Licensee

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Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	**Yes**
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?	**Yes**

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

EXHIBIT 10

RADIO FREQUENCY COMPLIANCE REPORT

DONALD L. HAES, JR., CHP, CLSO

Radiation Safety Specialist

PO Box 198, Hampstead, NH 03841 617-680-6262 Email: donald_haes_chp@comcast.net

October 2, 2020

RE: Installation of radio base station antennas and associated equipment for the proposed American Tower "Monopine" at 143 Dracut Road Hudson, NH.

PURPOSE

I have reviewed the information pertinent to the proposed installation at the above location. To determine regulatory compliance, theoretical calculations of maximal radio-frequency (RF) fields have been prepared. The physical conditions are that T-Mobile proposes to install personal wireless services (PWS) directional panel antennas (three antennas each in "arrays" aimed along the 30°, 150°, and 270° azimuths) on a proposed 155' American Tower "monopine" (monopole designed to look like a pine tree). For proposed location, see Figure 2. The mounting centerline of the antennas is proposed to be 150 feet above ground level (AGL). The proposed installation will allow T-Mobile to continue deployment of their long-term evolution ("LTE" a.k.a. "4G") and Advanced Wireless Services (AWS) systems. The monopine is designed to host up to three (3) additional PWS provider's antennas (See Figure 3). This report includes not only the T-Mobile, but the hypothetical condition of being "fully loaded" to capacity.

This report considers the contributions of all the proposed and hypothetical PWS transmitters operating at their typical FCC licensed capacities. The calculated values of RF fields are presented as a percent of current Maximum Permissible Exposures (%MPE) as adopted by the Federal Communications Commission (FCC).[i,ii]

SUMMARY

Theoretical RF field calculations data indicate the summation of the proposed T-Mobile maximum PWS RF contributions would be within the established RF exposure guidelines; see Figure 4. The additional calculations also suggest that even if the monopine had up to three (3) additional PWS provider's antennas attached, the site would comply with all established RF exposure guidelines; see Figure 5.

This includes all publicly accessible areas, and the surrounding neighborhood in general. The results support compliance with the pertinent sections of the FCC's guidelines for RF exposure.

Based on the results of the additional theoretical RF fields I have calculated, it is my expert opinion that this facility would comply with all regulatory guidelines for RF exposure.

EXPOSURE LIMITS AND GUIDELINES

RF exposure guidelines enforced by the FCC were established by the Institute of Electrical and Electronics Engineers (IEEE)[iii] and the National Council on Radiation Protection and Measurement (NCRP).[iv] The RF exposure guidelines are listed for RF workers and members of the public. The applicable FCC RF exposure guidelines for the public are listed in Table 1 and depicted in Figure 1. All listed values are intended to be averaged over any contiguous 30-minute period.

Table 1: Maximum Permissible Exposure (MPE) Values in Public Areas

Frequency Bands	Electric Fields	Magnetic Fields	Equivalent Power Density
0.3 – 1.34 MHz	614 (V/m)	1.63 (A/m)	(100) mW/cm^2
1.34 - 30 MHz	824/f (V/m)	2.19/f (A/m)	(100) mW/cm^2
30 - 300 MHz	27.5 (V/m)	0.073 (A/m)	0.2 mW/cm^2
300 - 1500 MHz	--	--	f / 1500 mW/cm^2
1500 - 100,000	--	--	1.0 mW/cm^2

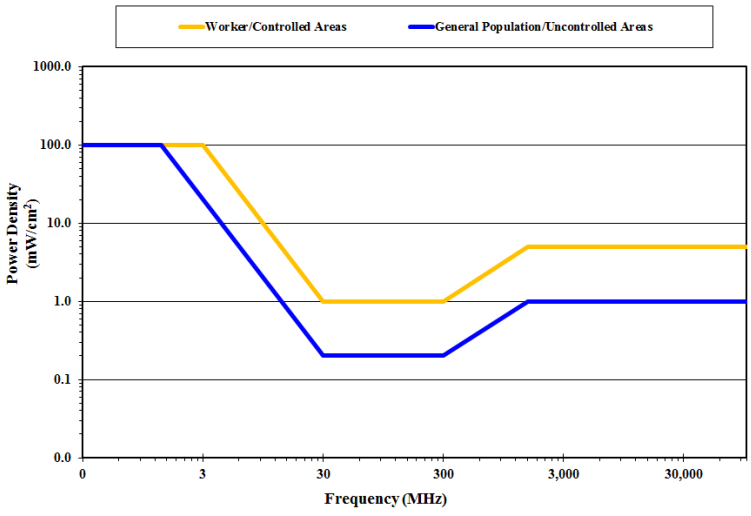


Figure 1: FCC Limits for Maximum Permissible Exposure (MPE)

NOTE: FCC "5% Rule" – When the exposure limits are exceeded in an accessible area due to the emissions from multiple fixed RF sources, actions necessary to bring the area into compliance are the shared responsibility of all licensees whose RF sources produce, at the area in question, levels that exceed 5% of the applicable exposure limit proportional to power. [v]

FACILITY LOCATION AND BUILD-OUT

Figure 2: Proposed Monopine Location
143 Dracut Road Hudson, NH
(Picture courtesy Google Earth Pro® and may not represent current conditions.)

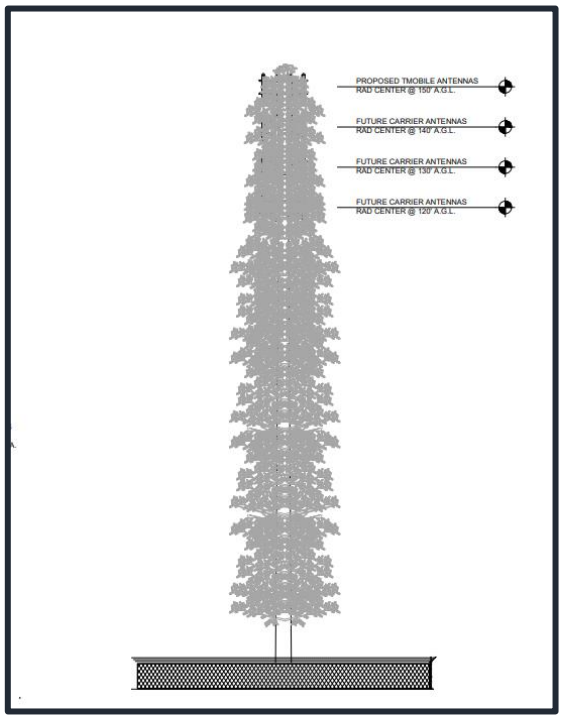


Figure 3: Hypothetical Loading of Monopine (T-Mobile Antennas at the Top)
143 Dracut Road Hudson, NH
(Picture courtesy American Tower.)

INTRODUCTORY INFORMATION: MAKING SENSE OF THE "G"S

There are many references to the so-called "generation" of wireless technologies in use. Each new "generation" of wireless technologies has colloquially been designated a numbered "G".[1] The latest "G" to come out, the fifth generation of wireless technologies or so called "5G", has attracted extensive research interest, both inside and outside the scientific community. According to the 3rd generation partnership project,[2] 5G networks should support three major families of applications: (1) Enhanced mobile broadband; (2) Machine type communications, and (3) Ultra-reliable and low-latency communications. There are also enhanced "vehicle-to-everything" communications which are expected to be supported by 5G networks. These situations require much more "connectivity" than the latest fourth generation (aka "4G" or "Long Term Evolution (LTE)") networks can handle.

Thus, new networks must be able to handle this high system throughput, in addition to supporting existing older technologies still in use. This is being accomplished through additional spectrum assignments both higher and lower than currently assigned frequencies used by PWS facilities. In fact, currently deployed 5G networks are operating at frequencies once used by television stations.

Nonetheless, frequencies assigned by the FCC for 5G use are all within the bands currently under regulatory oversight, including setting safe limits of exposure to RF energy for both workers, and members of the public. Just recently (4/2020) the FCC has reaffirmed the efficacy of their regulatory exposure limits to RF energy, including those for 5G. From an RF safety standpoint, there is nothing peculiar about the fifth generation of wireless technologies that would set it apart from any of the other advancements of technologies; including the first two generations (first analog then digital communications), the third generation (the first to be referred to a numbered-series as "3G"), and the currently deployed fourth generations (LTE). Recently published studies in peer-reviewed journals[vi] have shown typical exposures to RF energy from operating 5G systems to be well-within the exposure limits.

The FCC currently has categories for Citizens Broadband Radio Service (CBRS): Category "A" refers to a lower power base station, Category "B" must be deployed outdoors and has higher maximum power limits compared with Category "A" devices, and Category "C". The maximum allowable Equivalent Isotropically Radiated Power (EIRP; the total RF power radiated by the antenna.) is 30 dBm (1 watt), 47 dBm (50 watts), and 62 dBm (1585 watts) for the listed categories "A", "B", and "C", per 10 MHz of bandwidth, respectively.

[1] PWS "Generations": **1G**: Analog voice; **2G**: Digital voice; **3G**: Mobile data; **4G**: LTE and mobile Internet; **5G**: Mobile networks interconnect people, control machines, objects, and devices with multi-Gbps peak rates and ultra-low latency.

[2] SOURCE: (https://www.3gpp.org/about-3gpp) The 3rd Generation Partnership Project (3GPP) unites [Seven] telecommunications standard development organizations (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC), known as "Organizational Partners" and provides their members with a stable environment to produce the Reports and Specifications that define 3GPP technologies.

THEORETICAL RF FIELD CALCULATIONS - GROUND LEVELS

METHODOLOGY

These calculations are based on what are called "worst-case" estimates. That is, the estimates assume 100% use of all transmitters simultaneously. Additionally, the calculations make the assumption that the surrounding area is a flat plane, and there is no degradation of signal strength due to the presence of foliage, building materials, atmospheric conditions, etc. The resultant values are thus conservative in that they over predict actual resultant power densities.

The calculations are based on the following information (See Table 2 data for T-Mobile calculations, and Table 3 for hypothetical data representing a "fully loaded" monopine):

1. Effective Radiated Power (ERP).
2. Antenna height (centerline, above ground level (AGL)).
3. Antenna vertical energy patterns (See Appendix A); the source of the negative gain (G) values. "Directional" antennas are designed to focus the RF signal, resulting in "patterns" of signal loss and gain. Antenna energy patterns display the loss of signal strength relative to the direction of propagation due to elevation angle changes. The gain is expressed as "G^E".

   Note: "G" is a unitless factor usually expressed in decibels (dB); where $G = 10^{(dB/10)}$
   For example: for an antenna *gain* of 3 dB, the net factor (G) = $10^{(3/10)} = 2$
   For an antenna *loss* of -3 dB, the net factor (G) = $10^{(-3/10)} = 0.5$

To determine the magnitude of the RF field, the power density (S) from an isotropic RF source is calculated, making use of the power density formula as outlined in FCC's OET Bulletin 65, Edition 97-01:[vii]

$$S = \frac{P \cdot G}{4 \cdot \pi \cdot R^2}$$

Where:
- $P \rightarrow$ Power to antenna (watts)
- $G \rightarrow$ Gain of antenna
- $R \rightarrow$ Distance (range) from antenna source to point of intersection with the ground (feet)
- $R^2 = (\text{Height})^2 + (\text{Horizontal distance})^2$

Since: $P \cdot G = EIRP$ (Effective Isotropic Radiated Power) for broadcast antennas, the equation can be presented in the following form:

$$S = \frac{EIRP}{4 \cdot \pi \cdot R^2}$$

In the situation of off-axis power density calculations, apply the negative elevation gain (G^E) value from the vertical energy patterns with the following formula:

$$S = \frac{EIRP \cdot G^E}{4 \cdot \pi \cdot R^2}$$

Ground reflections may add in-phase with the direct wave, and essentially double the electric field intensity. Because power density is proportional to the *square* of the electric field, the power density may quadruple, that is, increase by a factor of four (4). Since ERP is routinely used, it is necessary to convert ERP into EIRP by multiplying by the factor of 1.64 (the gain of a half-wave dipole relative to an isotropic radiator). Therefore, downrange power density estimates can be calculated by using the formula:

$$S = \frac{4 \cdot (ERP \cdot 1.64) \cdot G^E}{4 \cdot \pi \cdot R^2} = \frac{ERP \cdot 1.64 \cdot G^E}{\pi \cdot R^2} = \frac{0.522 \cdot ERP \cdot G^E}{R^2}$$

To calculate the % MPE, use the formula:

$$\%\ MPE = \frac{S}{MPE} \cdot 100$$

The results of the calculations for the potential maximum RF emissions resulting from the summation of the ***proposed*** T-Mobile PWS system (See Table 2 inventory) are depicted in Figure 4 as plotted against linear distance from the base of the monopine in any direction. The results of the calculations for the potential maximum RF emissions resulting from the summation of the ***proposed*** T-Mobile PWS plus ***future hypothetical additional PWS carrier's*** transmitter and antenna installation (See Table 3 inventory) are similarly depicted in Figure 5. Note that the values have been calculated for a height of 6' AGL in accordance with regulatory rationale, and assumes all antennas are directed along the same azimuths.

Also depicted on the graphs are values for a height of 16' AGL (height of a typical 2nd story). A logarithmic scale was used to plot the calculated theoretical %MPE values in order to compare with the MPE limit values of 100% (Public) and 500% (note that 100% Worker limit = 500% Public limit), which are so much larger that they would be off the page in a linear plot. The curves are variable due to the application of the vertical energy patterns (See Appendix A).

OBSERVATIONS IN CONSIDERATION WITH FCC RULES §1.1307(B) & §1.1310

Will it be physically possible to stand next to or touch any omnidirectional antenna and/or stand in front of a directional antenna?

NO; access to the monopine will be restricted, and the site will adhere to RF safety guidelines regarding the transmitting antennas, including appropriate signage.

ANTENNA INVENTORY

Table 2: Proposed Antenna & Transmitter Inventory 155' Monopine at 143 Dracut Road Hudson, NH			
Antenna Centerline (AGL)	Typical Antenna Configuration	Typical Parameters: ERP & Transmit Frequencies	Typical Use
Proposed by T-Mobile			
150'	APXVAARR24	5014 watts ERP; ≈ 750 MHz	"700" (LTE)
150'	APXVAARR24	6313 watts ERP; ≈ 1900 MHz	PCS-LTE
150'	APXVAARR24	8714 watts ERP; ≈ 1700 MHz 7417 watts ERP; ≈ 2100 MHz	AWS-1700 AWS-2100
150'	25.7" "Microwave Dish" (30° azimuth only)	5660 watts ERP; ≈ 5-10 GHz	Back Haul (Point-to-Point Radio)

Table Notes:

AWS: Advanced Wireless Services
LTE: Long Term Evolution ("4G")
PCS: Personal Communication System

Table 3: Hypothetical Antenna & Transmitter Inventory
155' Monopine at 143 Dracut Road Hudson, NH

Antenna Centerline (AGL)	Typical Antenna Configuration	Typical Parameters: ERP & Transmit Frequencies	Typical Use
Hypothetical PWS Carrier #1			
140'	CCI / HPA-65R-BUU-H6	5677 watts ERP; ≈ 777 MHz 8516 watts ERP; ≈ 777 MHz 9777 watts ERP; ≈ 850 MHz 15,496 watts ERP; ≈ 2170 MHz 1930 watts ERP; ≈ 1950 MHz	LTE-700 LTE-700 UMTS-850 AWS-2100 PCS/LTE-1900
Hypothetical PWS Carrier #2			
130'	SBNHH-1D45	8322 watts ERP; ≈ 750 MHz 2807 watts ERP; ≈ 850 MHz 10,452 watts ERP; ≈ 2170 MHz 9083 watts ERP; ≈ 1950 MHz	LTE-700 CDMA-850 AWS-2100 PCS/LTE-1900
Hypothetical PWS Carrier #3			
120'	KMW EPBQ-654L8H8-L2	8322 watts ERP; ≈ 750 MHz 10,452 watts ERP; ≈ 2150 MHz	LTE-700 AWS-2100

Table Notes:

AWS: Advanced Wireless Services
CDMA: Code Division Multiple Access ("cellular"
LTE: Long Term Evolution (a.k.a. "4G")
PCS: Personal Communication System
UMTS: Universal Mobile Telecommunications Services

RESULTS OF THEORETICAL RF FIELD CALCULATIONS

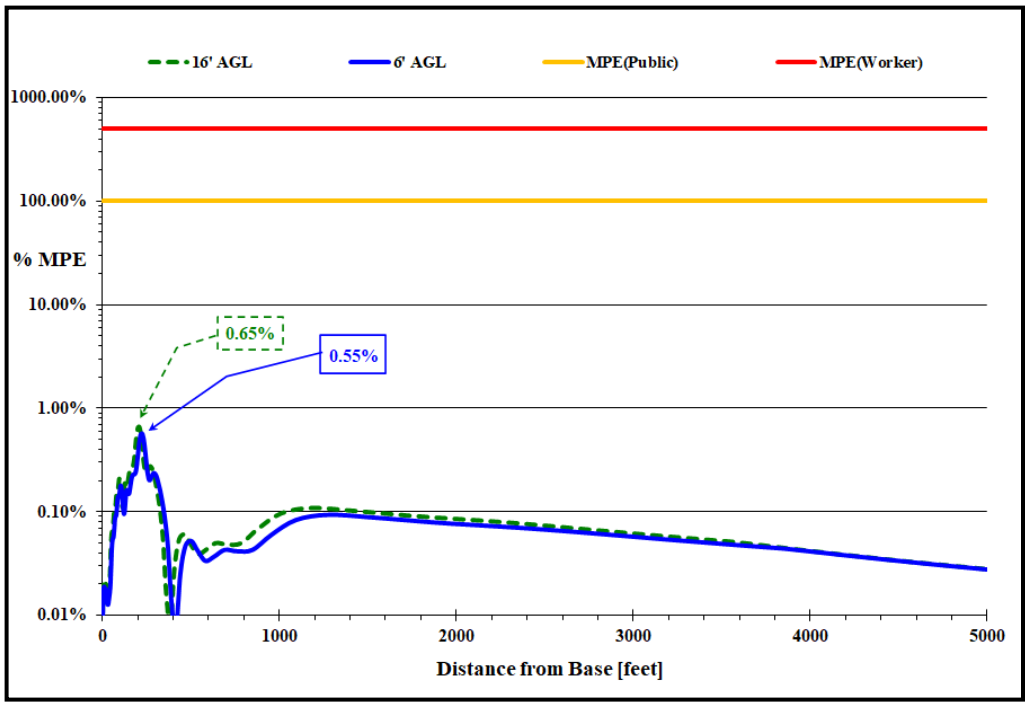


Figure 4: Theoretical Cumulative Maximum Percent MPE - vs. – Distance (Combined T-Mobile RF Contributions)

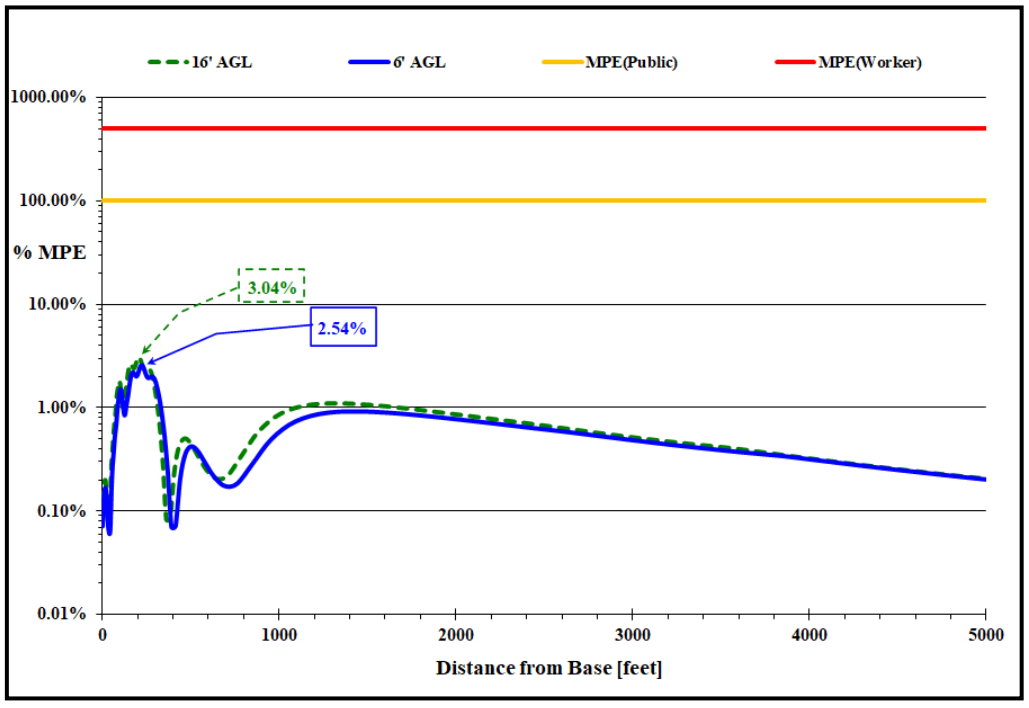


Figure 5: Theoretical Cumulative Maximum Percent MPE - vs. – Distance (Combined RF Contributions Representing a "Fully Loaded" Monopole)

CONCLUSION

Theoretical RF field calculations data indicate the summation of the proposed T-Mobile maximum PWS RF contributions would be within the established RF exposure guidelines; see Figure 4. The additional calculations also suggest that even if the monopine had up to three (3) additional PWS provider's antennas attached, the site would comply with all established RF exposure guidelines; see Figure 5.

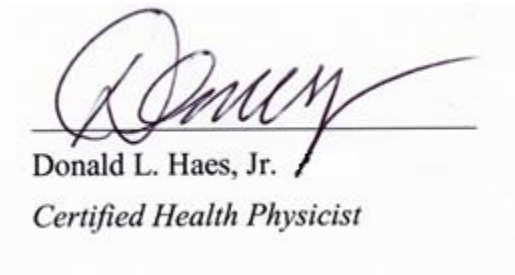
This includes all publicly accessible areas, and the surrounding neighborhood in general. The results support compliance with the pertinent sections of the FCC's guidelines for RF exposure.

The number and duration of calls passing through PWS facilities cannot be accurately predicted. Thus, in order to estimate the highest RF fields possible from operation of these installations, the maximal amount of usage was considered. Even in this so-called "worst-case", the resultant increase in RF field levels are far below established levels considered safe.

Based on the results of the additional theoretical RF fields I have calculated, it is my expert opinion that this facility would comply with all regulatory guidelines for RF exposure.

Feel free to contact me if you have any questions.

Sincerely,



Donald L. Haes, Jr.
Certified Health Physicist

DONALD L. HAES, JR., CHP, CLSO

Radiation Safety Specialist

PO Box 198, Hampstead, NH 03841 617-680-6262 Email: donald_haes_chp@comcast.net

STATEMENT OF CERTIFICATION

1. I certify to the best of my knowledge and belief, the statements of fact contained in this report are true and correct.

2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are personal, unbiased professional analyses, opinions and conclusions.

3. I have no present or prospective interest in the property that is the subject of this report and I have no personal interest or bias with respect to the parties involved.

4. My compensation is not contingent upon the reporting of a predetermined energy level or direction in energy level that favors the cause of the client, the amount of energy level estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.

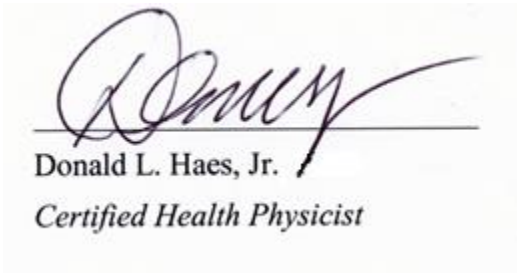
5. This assignment was not based on a requested minimum environmental energy level or specific power density.

6. My compensation is not contingent on an action or event resulting from the analyses, opinions, or conclusions in, or the use of, this report.

7. The consultant has accepted this assessment assignment having the knowledge and experience necessary to complete the assignment competently.

8. My analyses, opinions, and conclusions were developed and this report has been prepared, in conformity with the *American Board of Health Physics* (ABHP) statements of standards of professional responsibility for Certified Health Physicists.

Date: October 2, 2020

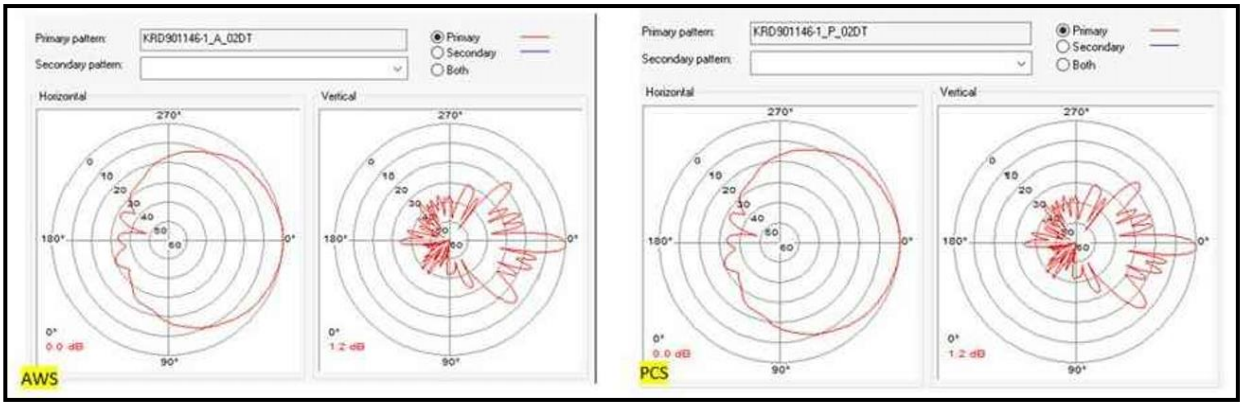


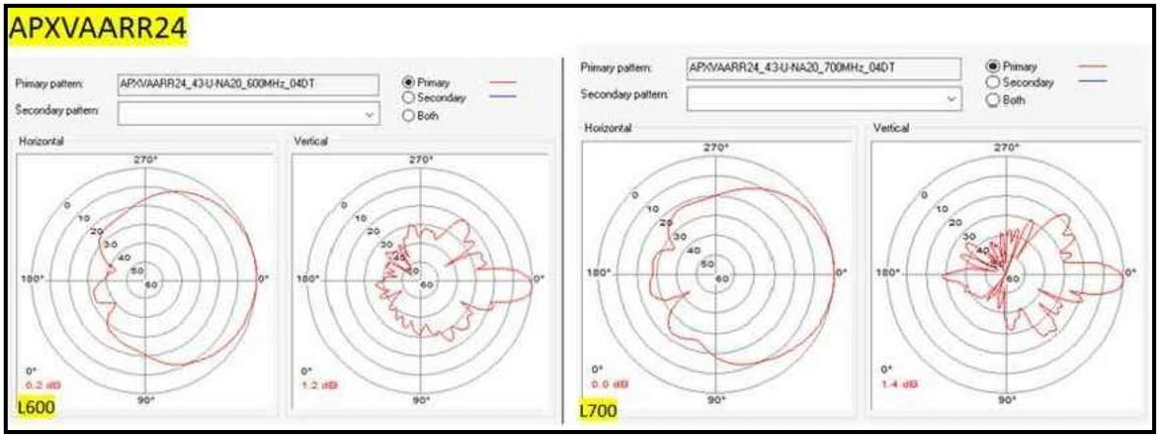
Donald L. Haes, Jr.

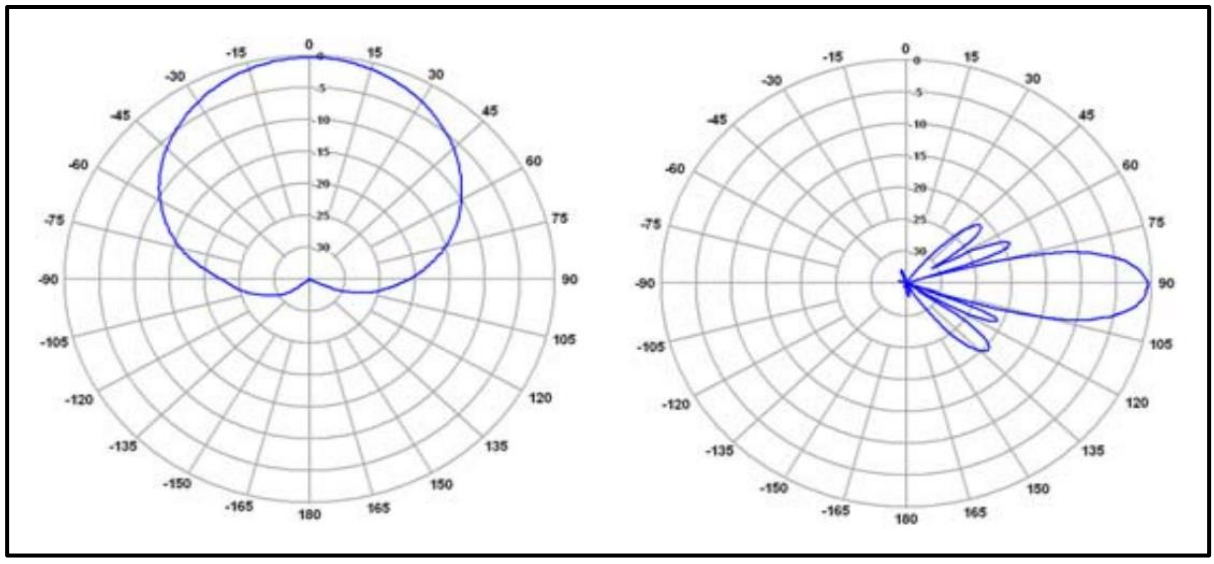
Certified Health Physicist

APPENDIX A

Vertical & Horizontal Energy Patterns







DONALD L. HAES, JR., CHP, CLSO

Radiation Safety Specialist

PO Box 198, Hampstead, NH 03841 617-680-6262 Email: donald_haes_chp@comcast.net

SUMMARY OF QUALIFICATIONS

- **Academic Training -**
  - Graduated from Chelmsford High School, Chelmsford, MA; June 1973.
  - Completed Naval Nuclear Naval Nuclear Power School, 6-12/1976.
  - Completed Naval Nuclear Reactor Plant Mechanical Operator and Engineering Laboratory Technician (ELT) schools and qualifications, Prototype Training Unit, Knolls Atomic Power Laboratory, Windsor, Connecticut, 1-9/1977.
  - Graduated Magna Cum Laude from University of Lowell with a Bachelor of Science Degree in *Radiological Health Physics*; 5/1987.
  - Graduated from University of Lowell with a Master of Science Degree in *Radiological Sciences and Protection*; 5/1988.

- **Certification -**
  - Board Certified by the American Board of Health Physics 1994; renewed 1998, 2002, 2006, 2010, 2014, and 2018. Expiration 12/31/2022.
  - Board Certified by the Board of Laser Safety 2008; renewed 2011, 2014, 2017. Expiration 12/31/2020.

- **Employment History -**
  - Consulting Health Physicist; Ionizing/Nonionizing Radiation, 1988 - present.
  - Radiation, RF and Laser Safety Officer; BAE Systems, 2005–2018 (retired).
  - Assistant Radiation Safety Officer; MIT, 1988 – 2005 (retired).
  - Radiopharmaceutical Production Supervisor - DuPont/NEN, 1981 – 1988 (retired).
  - United States Navy; Nuclear Power Qualifications, 1975 – 1981 (Honorably Discharged).

- **Professional Societies -**
  - Health Physics Society [HPS].
  - American Academy of Health Physics [AAHP]
  - Institute of Electrical and Electronics Engineers [IEEE];
  - International Committee on Electromagnetic Safety [ICES] (ANSI C95 series).
  - Laser Institute of America [LIA].
  - Board of Laser Safety [BLS].
  - American National Standards Institute Accredited Standards Committee [ASC Z136].
  - Committee on Man and Radiation [COMAR].

ENDNOTES

[i]. Federal Register, Federal Communications Commission Rules; *Radiofrequency radiation; environmental effects evaluation guidelines* Volume 1, No. 153, 41006-41199, August 7, 1996. (47 CFR Part 1; Federal Communications Commission).

[ii]. Telecommunications Act of 1996, 47 USC; Second Session of the 104th Congress of the United States of America, January 3, 1996.

[iii]. IEEE C95.1-1999: American National Standard, *Safety levels with respect to human exposure to radio frequency electromagnetic fields, from 3 kHz to 300 GHz* **(Updated in 2019)**.

[iv]. National Council on Radiation Protection and Measurements (NCRP); *Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields*, NCRP Report 86, 1986.

[v]. Federal Register, Federal Communications Commission Rules; Vol. 85, No. 63 / Wednesday, April 1, 2020 / Rules and Regulations 18145.

[vi]. Jamshed, Muhammad Ali (Institute of Communication Systems (ICS), Home of 5G Innovation entre (5GIC), University of Surrey, Guildford GU2 7XH, U.K). *Electro-magnetic field exposure reduction/avoidance for the next generations of wireless communication systems.* IEEE Journal of Electromagnetics, RF, And Microwaves in Medicine and Biology, Vol. 4, No. 1, March 2020.

[vii]. OET Bulletin 65: Federal Communications Commission Office of Engineering and Technology, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*; Edition 97-01, August 1999.

EXHIBIT 11

CERTIFICATE OF INSURANCE

CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY) 12/16/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Aon Risk Services Northeast, Inc.
Boston MA Office
53 State Street
Suite 2201
Boston MA 02109 USA

CONTACT NAME:
PHONE (A/C. No. Ext): (866) 283-7122 **FAX (A/C. No.):** (800) 363-0105
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	XL Specialty Insurance Co	37885
INSURER B:	Greenwich Insurance Company	22322
INSURER C:	Great American Insurance Company of NY	22136
INSURER D:		
INSURER E:		
INSURER F:		

INSURED
American Tower Corporation
116 Huntington Avenue
11th Floor
Boston MA 02116-5786 USA

COVERAGES **CERTIFICATE NUMBER:** 570085229755 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC OTHER:			RGD943761408	12/01/2020	12/01/2021	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$2,000,000 $1,000,000 $10,000 $2,000,000 $20,000,000 $2,000,000
B	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			RAD943761508	12/01/2020	12/01/2021	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$2,000,000
C	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** CLAIMS-MADE DED X RETENTION $25,000			UMB3414874	12/01/2020	12/01/2021	EACH OCCURRENCE AGGREGATE	$10,000,000 $10,000,000
A A	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N: N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		RWD943538608 Workers Comp (AOS) RWR943547008 Workers Comp (Retro Ded.)	12/01/2020 12/01/2020	12/01/2021 12/01/2021	X PER STATUTE OTH- E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT	$1,000,000 $1,000,000 $1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Evidence of Coverage

CERTIFICATE HOLDER

American Tower Corporation
116 Huntington Avenue, 11th Floor
Boston MA 02116-5786 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Northeast, Inc.

Holder Identifier :

Certificate No : 570085229755

AGENCY CUSTOMER ID: 570000069199

LOC #:

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
Aon Risk Services Northeast, Inc.	American Tower Corporation
POLICY NUMBER: See Certificate Number: 570085229755	
CARRIER: See Certificate Number: 570085229755 / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: ACORD 25 **FORM TITLE:** Certificate of Liability Insurance

ADDITIONAL INFORMATION
Named Insureds:
American Tower Corporation, including all subsidiaries and affiliated entities.

American Tower Corporation has Additional Insured Endorsements that apply to the Commercial General Liability and Automobile Liability policies issued by Greenwich Insurance Company. Because of the nature of these endorsements, it is not necessary to specifically schedule parties with a contractual and insurable interest, as Additional Insured status is extended to those parties by the nature of the written business relationship as follows:

BLANKET ADDITIONAL INSURED INCLUDES:
Any person or organization with an insurable interest is additional insured, as required by written contract with the named insured, but only in accordance with the policy terms.

ADDITIONAL INSURED - Scheduled Designated Person or Organization
Schedule: ALL PREMISES WHERE REQUIRED BY CONTRACT

The insurance provided will not exceed the lessor of:
1. The coverage and/or limits of this policy, or
2. The coverage and/or limits required by said contract or agreement.

The insurance provided does not apply to:
1. Any "occurrence" which takes place after you cease to be a tenant in that premises.
2. Structural alterations, new construction or demolition operations performed by or on behalf of the person or organization shown in the schedule.
3. Professional Services

CANCELLATION NOTIFICATION TO OTHERS ENDORSEMENT applies to GL, Auto, and WC Policies:
In the event coverage is cancelled for any statutorily permitted reason, other than nonpayment of premium, 30 days advanced written notice will be mailed or delivered to Certificate Holders by XL Specialty Insurance Co and Greenwich Insurance Company respectively.

ADDITIONAL INSURED LESSOR - Additional Insured and Loss payee - Automobile Liability
Schedule: Where required by written contract.

ADDITIONAL REMARKS SCHEDULE

AGENCY		NAMED INSURED
Aon Risk Services Northeast, Inc.		American Tower Corporation
POLICY NUMBER See Certificate Number: 570085229755		
CARRIER See Certificate Number: 570085229755	NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 **FORM TITLE:** Certificate of Liability Insurance

Description: Any auto leased or rented to you.

A. Coverage:
1. Any "leased auto" designated or described in the schedule will be considered a covered "auto" you own and not a covered "auto" you hire or borrow. For a covered "auto" that is a "leased auto", Who Is An Insured is changed to include as an "insured" the lessor named in the Schedule.
2. The coverages provided under this endorsement apply to any "leased auto" described in the Schedule until the expiration date shown in the Schedule, or when the lessor or his or her agent takes possession of the "leased auto", whichever occurs first.

B. Loss Payable Clause:
1. Greenwich Insurance Company will pay, as interest may appear, American Tower Corporation and the lessor named in this endorsement for "loss" to a "leased auto."
2. The insurance covers the interest of the lessor unless the "loss" results from fraudulent acts or omissions on your part.
3. If Greenwich Insurance Company makes any payment to the lessor, Greenwich Insurance Company will obtain his or her rights against any other party.

C. Cancellation:
1. If Greenwich Insurance Company cancels the policy, we will mail notice to the lessor in accordance with the cancellation Common Policy Condition.
2. If American Tower Corporation cancels the policy, Greenwich Insurance Company will mail notice to the lessor.
3. Cancellation ends this agreement.

D. The lessor is not liable for payment of your premium.

E. Additional Definition:
"Leased Auto" means an "auto" leased or rented to you, including any substitute, replacement or extra "auto" needed to meet seasonal or other needs, under a leasing or rental agreement that requires you to provide direct primary insurance for the lessor.

EXHIBIT 12

REAL ESTATE MARKET STUDY

Daniel D. Klasnick, Esq.
Duval & Klasnick, LLC
210 Broadway #204
Lynnfield, MA 01940

RE: Proposed Wireless Communication Facility December 1, 2020
Site: Hudson 3 NH
143 Dracut Rd
Hudson, NH 03051

Atty. Klasnick,

I have completed a market study investigating the potential impact that cellular towers may have on adjacent residential property values.

The intended user of this report is the Hudson, NH Land Use Permitting Boards in their deliberations relative to the applications submitted for your client.

The purpose of this study is to provide substantive data to answer the following question: *Will the granting of the application diminish the value of surrounding properties?*

This letter contains a summary of my research into this question and the rationale used to arrive at my conclusions.

The work consists of a viewing of the area around the tower site, a review of the materials relating to the proposed tower and research into sales of properties throughout the region that are located in close proximity or have visual exposure to a cellular communication tower.

Also included in this report are the results of a national survey of appraisers regarding this question and information obtained from other appraisers known to have researched this same question.

It is my opinion that the proposed tower will have no measurable impact on surrounding property values due to proximity or visibility.

Sincerely,

Mark Correnti, SRA
New Hampshire NHCR #460
Massachusetts # 103752

Copyright

Assumptions and Limiting Conditions

This report is written subject to the following assumptions and limiting conditions. Because a proper understanding of the analysis and conclusions contained in this report requires an awareness of these assumptions and limiting conditions, parties using this report are asked to carefully review and consider them when reading the report.

This report is written with the understanding and intention that it is to be used *only* in conjunction with the request before the Hudson, New Hampshire Land Use Permitting Boards.

The information contained in this report is specific to the needs of the client and for the intended use stated in the report. Parties using this report for any purpose other than that stated herein must assume full responsibility and do so at their own risk. I cannot accept any responsibility for any damages suffered by third parties because of the unauthorized or inappropriate use of this report.

This report is prepared for the exclusive use of the client identified in this report. The report is based upon the data available to me at the time of preparation of this document.

Distances estimated from the sales to the towers are based upon GIS technology, not physical measurements by the author.

Because of this report, I am not required to give further consultation, testimony, depositions, or be in attendance for any legal proceeding regarding the subject property unless prior arrangements have been previously made.

Information contained herein that has been obtained from third parties is assumed to be correct and reliable.

General comment

A commonly held opinion is that the value of a home is negatively affected if it is close to a cell tower or a cell tower can be seen from the property.

Randall Bell, PhD. MAI has written extensively about property damages: in his work Real Estate Damages: An Analysis of Detrimental Conditions[1], makes the following statement:

> "The most significant issue in assessing the consequences of a detrimental condition on residential property values is the general predisposition of people to believe that detrimental conditions affect residential property values…*If market value is going to be affected, then this particular detrimental condition has to be given enough weight in the decision process of buyers and sellers to have a material effect on the price*.
> In other words, the detrimental condition issue has to be important relative to all the other variables that influence the home purchase decision, (public safety, quality of schools, access to employment … special features of the home, affordability, etc.)"

Appraisers can examine data to determine if a detrimental condition affects value by application of sensitivity analysis which is a method used to isolate the effect of individual variables on value.

The two most common types of sensitivity analysis used in general real estate practice are:

1. Paired sales by which two properties - One with cell tower influence is matched to a similar property without cell tower influence to see if there is a price difference that can be attributed to the cell tower.
2. Grouped data analysis which matches a property with cell tower influence to the median price paid for groups of sales of similar properties without the cell tower influence. Again, to see if there is a price difference attributable to the cell tower. Similar properties are properties a buyer would find to be acceptable alternatives to the property with the cell tower influence (similar style, size, etc.).

Due to the diversity of home styles in New England, most appraisers use grouped data analysis.

Buyers are the *market makers*; only through their buying decisions can it be determined if and to what extent the presence or absence of a neighborhood attribute has an effect on value.

[1] Bell, Randall, Real Estate Damages: An Analysis if Detrimental Conditions, Chicago: Appraisal Institute 1999, page 38.

Data limitations – Scarcity

Whenever possible there is an attempt to obtain local data first, however sales with a view of a tower in Hudson are scarce. In considering properties for comparison in this assignment, they must have sold and have visibility of a tower. Although there are various cell towers in Hudson, not all had sales of single-family residences that included the tower in its view shed. This scarcity of sales is why local data is supplemented with sales from other communities.

This report contains information on seven single-family residences or developments that have sold. One in Hudson, two in Nashua, three in Pelham, and one in Windham, NH.

The view from each sale included in this report is different and depends on topography, distance, tree cover and home orientation to the tower.

Certification

The undersigned certifies that, to the best of my knowledge and belief:

The statements of fact contained in this report are true and correct.

The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, are my personal, impartial, and unbiased professional analyses, opinions, conclusions and recommendations.

I have provided the following valuation[2] services on the property within the preceding three years from the date of this letter: None.

I have no present or prospective interest in the subject property, I have no personal interest with respect to the parties and have no bias with respect to the subject property or to the parties involved with this assignment.

My engagement in this assignment was not contingent upon developing or reporting predetermined results.

My compensation for completing this assignment is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this information.

My analyses, opinions and conclusions were developed, and this letter has been prepared in conformity with the Uniform Standards of Professional Appraisal Practice.

I have inspected the subject property. I have studied the plans, reviewed the community GIS data and municipal records about the property. I have also discussed the property with the client and believe I have a sufficient understanding of the attributes unique to the property.

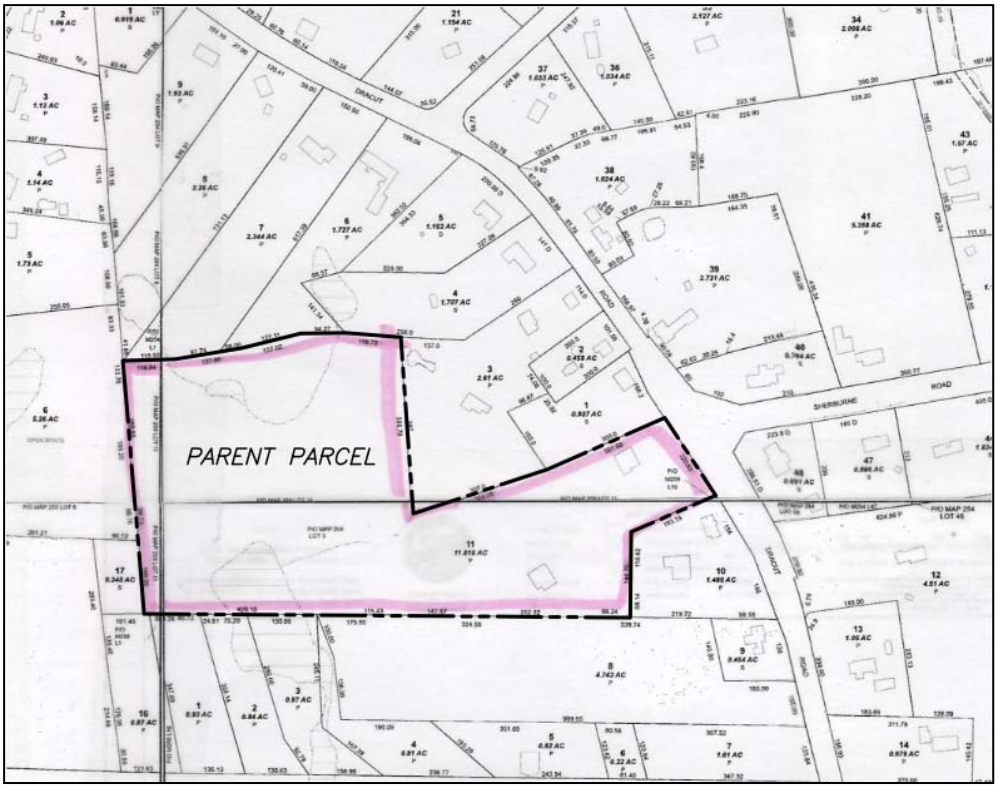
Mark Correnti, SRA
New Hampshire NHCR #460
Massachusetts # 103752

[2] Listing, selling, repairs, maintenance, appraisal, consulting, review, property inspections, tax abatements

Property Description: 143 Dracut Road, Hudson NH 03051

Proposed Site

The lot is identified as in the Hudson assessment records as lot 259-11 and is located in two residential zones. The frontage is located in the "R-2" (Residential-2) zone and the majority of the land is located in the "G-1" (General) zone. The 11.82-acre irregular shaped site is currently used as a 2,739 square foot, ranch-style, single-unit dwelling with an attached 697 square foot garage. According to town assessing records, the house was built in 2004



The site is situated on a well-travelled, yellow-line road that connects Hudson to Tyngsboro MA. Most of the properties in the immediate vicinity are single-family houses built in the mid-1900s. Adjacent to the site is a small auto-body shop.

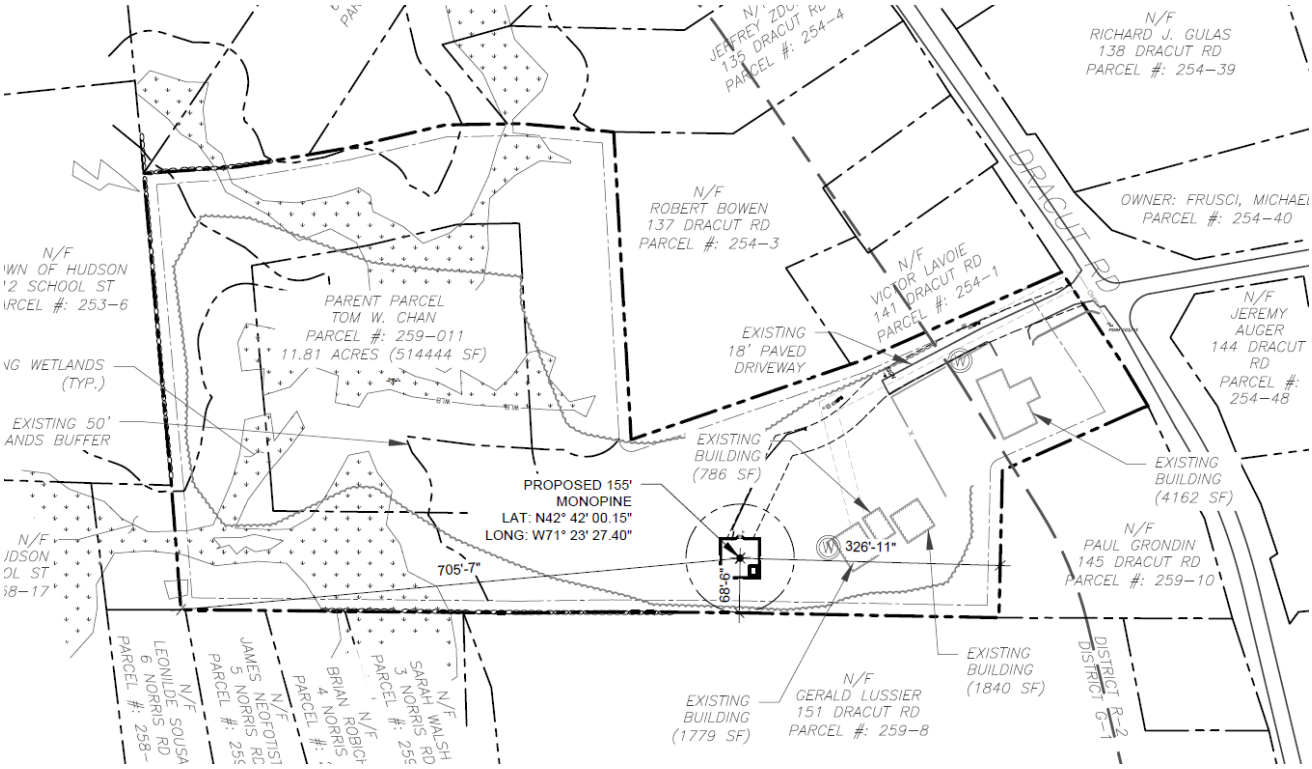
Subject neighborhood views

Front view

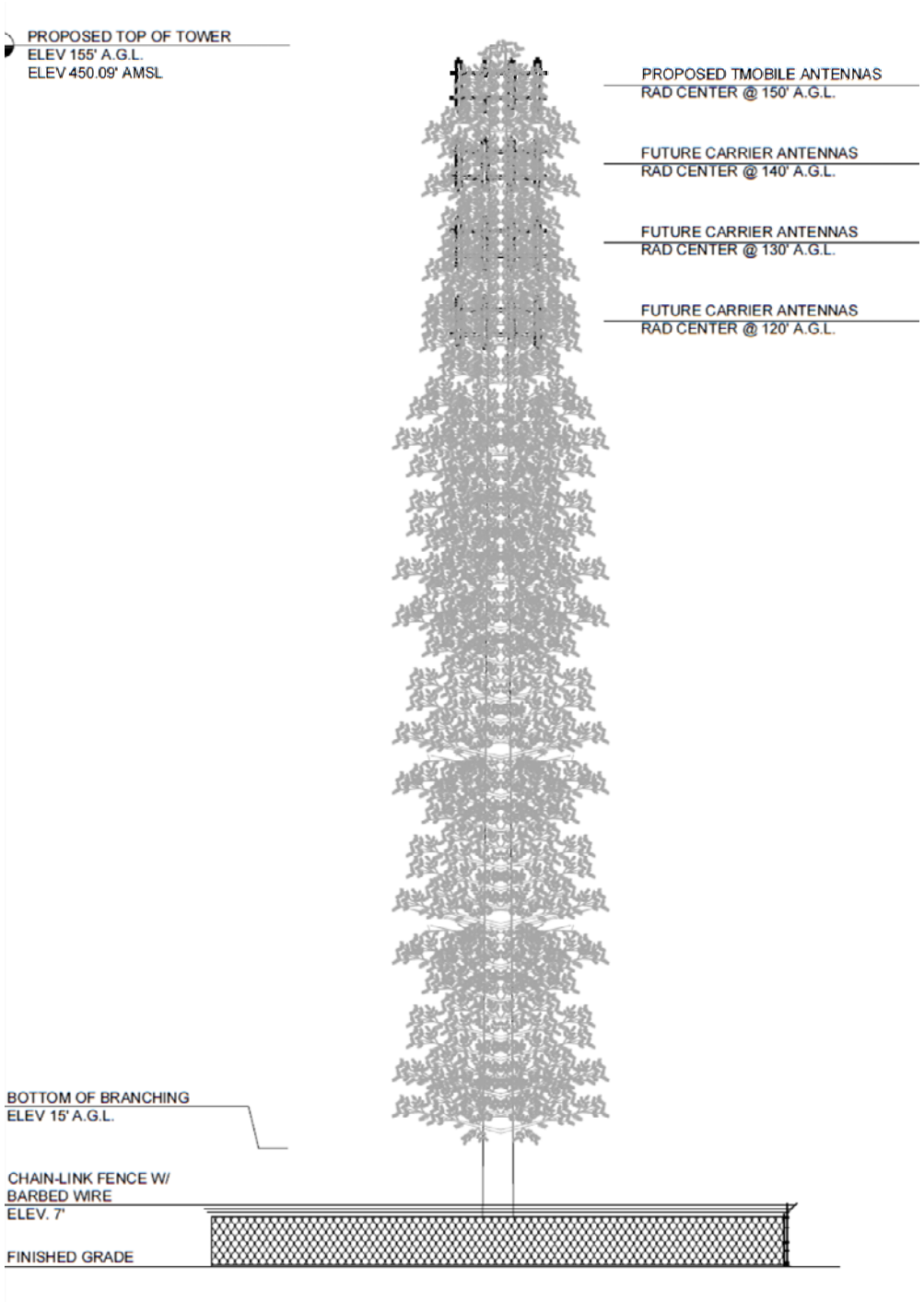
Street view


N
DRACUT RD
SITE LOCATION

The tower compound will be 50’ x 50’ in size and will be accessed by a right of way that will extend off of the existing residential driveway.



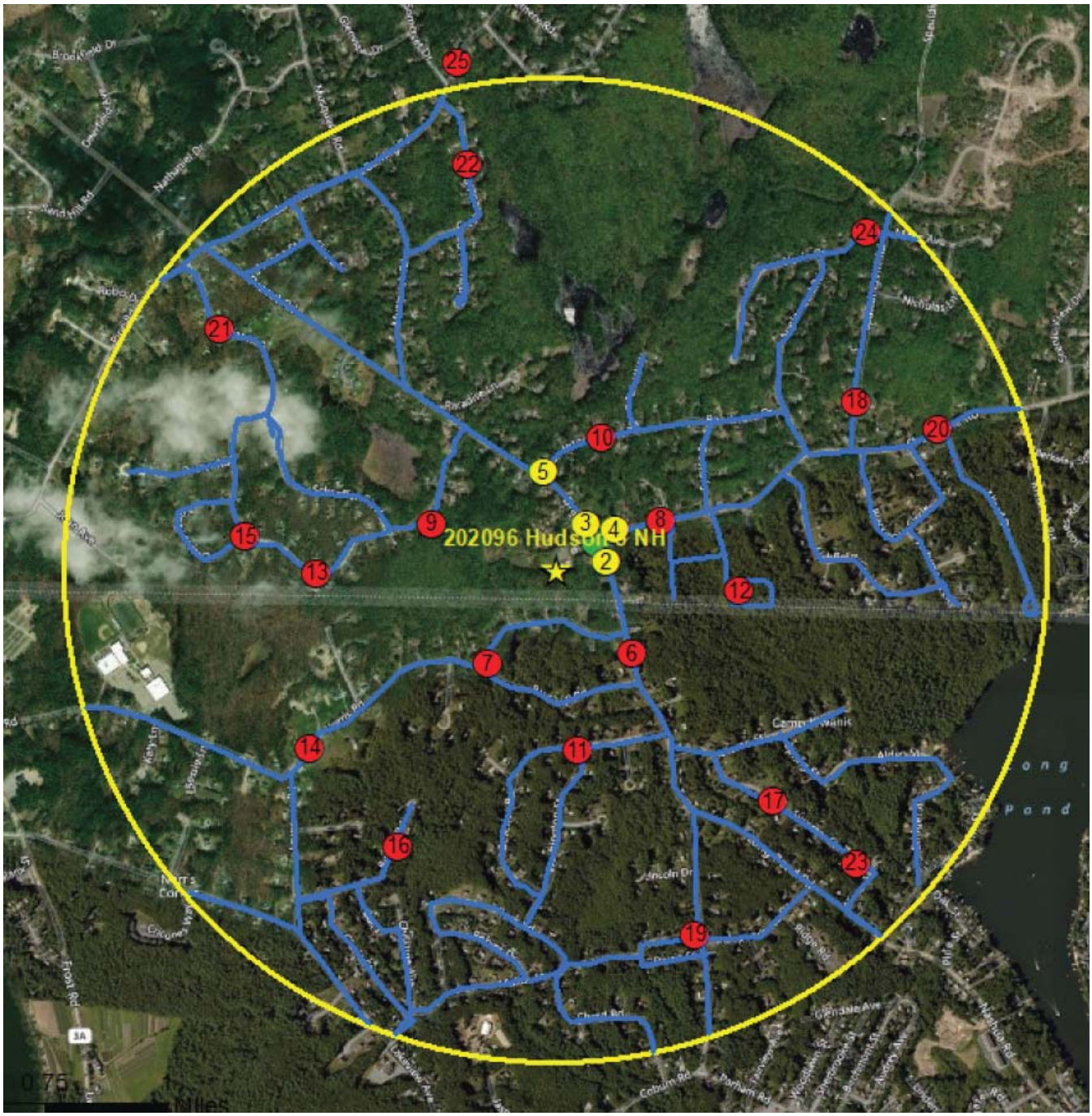
The proposed 'mono-pine' tower will be 155' in height. The schematic below is representative of what will be placed on site.



Simulated Proposed Tower Pictures

In this instance, the applicant has commissioned a "balloon simulation" to assist the Board in visualizing the proposed tower as it relates to surrounding properties.

Below is a map showing the locations from where photos were taken. The yellow star shows the proposed tower location, a green dot a view of the tower, a yellow indicates an obstructed view, and a red dot with no view. Those photos showing no view of the proposed tower are not included in this report.



The reader must keep in mind that every property is unique just as every tower is unique; as a result, the visual impact of the proposed tower to surrounding properties will not be identical to the examples contained herein. However, the examples illustrate a wide range of visual exposure which can be related to the simulations presented for the proposed tower.

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
1	Dracut Rd	42.70073	-71.38898	0.1 Miles	North-East	239	Year Round

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
2	Dracut Rd	42.70018	-71.3886	0.11 Miles	East	262	Obscured

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
3	Dracut Rd	42.70131	-71.38941	0.11 Miles	North-East	215	Obscured

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
4	Sherburne Rd	42.70113	-71.38827	0.15 Miles	North-East	237	Obscured

Photo #	Approximate Location	Gps Coordinates		Distance to site	Orientation	Bearing to site	Visibility
5	Ponderosa Dr	42.70287	-71.39109	0.2 Miles	North	174	Obscured

Community based research

Over the past several years FairMarket Advisors, LLC. has researched the issue of residential property values and cell towers throughout New England, the primary focus being in New Hampshire and Massachusetts.

The research consists of identifying recent sales of homes having either proximity to or a view of a communication tower with the community considering the development of a new tower. Often data from surrounding communities is researched and included to supplement local data.

Each identified sale is shown in ***bold italics;*** underneath it is the median calculated for the competitive sales examined. The data medians (from left to right) is: the number of competitive sales, the size range examined, lot size in acres, listing price, sale price, percent variance between the list and sale price, room, bedroom, bath count, garage size and days on market.

This type of comparison enables identification of sales with substantial deviation from the median. If a sale presents a substantial deviation from the median further review is done to determine the reason for the price deviation. An explanation for the deviation is provided, as necessary.

Hudson N.H. market research

A search was made for properties that have recently sold and are located within 1,000 feet of existing towers in Hudson. Most of the cell towers in Hudson are in commercial and/or industrial zones or otherwise located in rural areas with limited visibility to surrounding properties.

The property at 3 Sir Isaac Way Hudson NH sold August 19, 2013 for $359,000. This 12-year -old 3,000 square foot Colonial has 8 rooms, 4 bedrooms and built in 2-car garage. According to the agent it was in pristine condition with many built-ins. The top of the tower located off 166 Bush Hill Rd can be seen from this home because of the home's elevation. The tower is located about 1,700 feet to the north west.

count	Street	Dist to Twr	Acres	Style	Yr Built	Closed	List	Sale	Spread	SqFt Fin	Rms	BR	Baths	Gar.	DOM
194	median		0.805		1984		$269,900	$266,500	98%	2,128	7	3	3	2	58
	3 Sir Isaac Way	***1,700***	***0.87***	***Colonial***	***2001***	***8/19/2013***	***$359,000***	***$352,500***	***98%***	***3,059***	***8***	***4***	***3***	***2***	***30***
17	≥ 2,700 sf 3,400sf ≤		1.02		1,998		$362,400	$352,750	98%	3,001	9	4	3	2	75

Seventeen other colonial homes ranging in size from 2,700 to 3,400 square feet sold in Hudson in 2013. These homes are the most similar comparables to 3 Sir Isaac Way.

The median time on market for these comparables is 75 days; 3 Sir Isaac Way sold in 30 days. The median for all sales in Hudson in 2013 was 58.4 days.

The price paid for 3 Sir Isaac Way was equal to the median price paid for the 17 comparable homes. The median home price in Hudson for 2013 was $266,900.

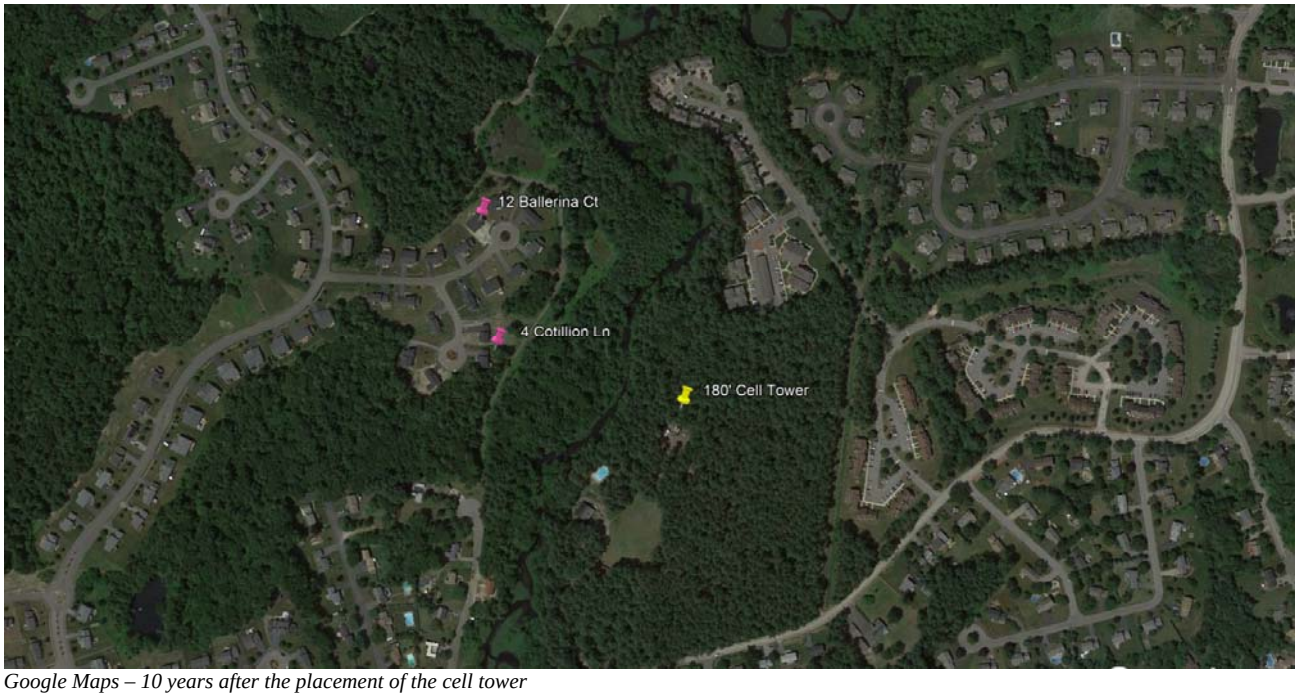
Finally, the difference between listing and sale price (spread) 98% reported for all sales in Hudson in 2013 is the same for 3 Sir Isaac Way and its comparable data set.

Based on this information, the sale was not impacted by the proximity of the tower.

Nashua, NH market research

In 2010 an application for a 180’ cell tower to be located on 19-acres at 124 Ridge Rd, Nashua was presented to the Nashua Zoning Board of Adjustment. 124 Ridge Rd is also known as Camp Doucet which is an open woodland camp for the Boys and Girls Club of Greater Nashua. Although the application was granted, the Nashua ZBA heard concerns from surrounding property owners during the public comment period. The below before and after aerial photos and data are presented to show how the market performed in the decade since the granting of the application for the 180’ cell tower at 124 Ridge Rd.

Google Maps – Prior to the placement of the cell tower - Camp Doucet is the large wooded are in the center



Google Maps – 10 years after the placement of the cell tower

What has occurred in the last ten years around the cell tower that was built in 2011 is that a significant amount of single-family residences were developed. The top aerial photo from 2009 show the neighborhood prior to the approval and placement of the 180' cell tower. The next aerial photo shows residential development in the top left- and right-hand corners.

Two residential sale that are the most recent and proximate to the cell tower are reviewed. Both 12 Ballerina Ct and 4 Cotillion Ln are sales of new construction that occurred in the last year. Both sales are within 1,000’ and both have views of the cell tower.

View from the corner of Ballerina and Cherrywood Ln

4 Cotillion is the blue house on the right

Both 12 Ballerina Ct and 4 Cotillion Ln were marketed as new construction in 2019 and both closed in early 2020. Both have been marketed, and are in, a neighborhood of predominantly high values.

count	Street	Acres	Style	Yr Built	Closed	List	Sale	Spread	SqFt Fin	Rms	BR	Baths	Gar.	DOM
690	Median	0.30		1978	≥ 6 months ≤	$399,250	$399,200	100%	1,924	8	4	2.5	2	7
Viz	***12 Ballerina Ct***	***0.3***	***Colonial***	***2020***	***3/12/2020***	***$619,900***	***$600,000***	***97%***	***3,054***	***9***	***4***	***3.5***	***2***	***106***
12		0.24		2019	≥ 6 months ≤	$429,450	$421,877	98%	2,115	7	3	2.5	2	46

count	Street	Acres	Style	Yr Built	Closed	List	Sale	Spread	SqFt Fin	Rms	BR	Baths	Gar.	DOM
693	Median	0.30		1978	≥ 6 months ≤	$399,450	$399,200	100%	1,947	8	4	2.5	2	7
Viz	***4 Cotillion Ln***	***0.3***	***Colonial***	***2020***	***3/4/2020***	***$559,900***	***$550,000***	***98%***	***2,464***	***9***	***4***	***2.5***	***2***	***172***
13		0.24		2019	≥ 6 months ≤	$429,900	$425,000	99%	2,157	7	3	2.5	2	51

In both cases 12 Ballerina and 4 Cotillion sold considerably above the median price point in Nashua (top line), as well as those homes with which they directly compete (bottom line). Days on market for new construction can be significant due to the construction process. What can be derived from the data is that buyers are placing a locational premium on the neighborhood where these residences are located.

Both 12 Ballerina and 4 Cotillion have a 180' cell tower in their view shed, yet both sold significantly above what competing properties have sold for. Based on the above data, there does not appear to be any adverse market reaction associated with a cell tower location or view in the neighborhood.

Windham N.H. market research

In Windham NH, there is a 140-foot-high tower at 14 Haverhill Rd (Rte111). A property located at 4 Yorkshire Rd Windham sold for $825,000 April 29, 2016. This property is located at the end of a cul-de-sac . The top of the 140 Ft tower and several arrays can be seen from in front of this home.

count	Street	Dist to Twr	Acres	Style	Yr Built	Closed	List	Sale	Spread	SqFt Fin	Rms	BR	Baths	Gar.	DOM
206	Averages		1.8		1989		$504,473	$497,444	99%	3,094	9	4	3	2	95
count	Street	Dist to Twr	Acres	Style	Yr Built	Closed	List	Sale	Spread	SqFt Fin	Rms	BR	Baths	Gar.	DOM
	4 Yorkshire Road	***990***	***4.28***	***Colonial***	***2002***	***4/29/2016***	***$825,000***	***$825,000***	100%	***5,074***	***11***	***4***	***5***	***3***	***2***
8	average ≥4,900sf - 5,900sf ≤		2		2,001		$700,950	$688,488	99%	5,342	11	4	4	3	121

This home sold for more than the average for 8 similarly sized homes in the community in a shorter period. This sale indicates that a view of the tower had no effect on the price or marketing time.

Pelham NH research

The property located at 10 Pondview Drive sold on June 22, 2016 for $318,000. This is a 6 room 3-bedroom colonial is facing Gumpas Hill with a view of the tower on Gumpas Hill from the front doorstep.

Photo credit to NEREN MLS

count	Street	Acres	Style	Yr Built	Closed	List	Sale	Spread	SqFt Fin	Rms	BR	Baths	Gar.	DOM
194	Median	2.00		1999		$399,900	$389,500	99%	2,255	8	3	2.5	2	31
Viz	***10 Pondview Dr***	***1.92***	***Colonial***	***1996***	***6/26/2016***	***$329,000***	***$318,000***	***97%***	***1,666***	***6***	***3***	***2.0***	***2***	***70***
41	≥ 1,500 sf - 1,900 sf≤	1.03		1980		$319,900	$320,000	100%	1,728	6	3	2.0	2	19

The listing agent for 10 Pondview reported that 10 Pondview Dr. was under contract within 8 days of its initial listing. However, due to buyer's financing falling through the property was re-listed on 04/28/2016 and under contract the second time 9 days later.

The listing agent for 10 Pondview reported that there were multiple showings on the property. There was no feedback from any buyer agent that the cell tower on Gumpas Hill was a concern.

A review of assessment records show that 10 Pondview Dr. is not discounted for a negative external influence, nor is there a history of a request for a tax abatement regarding a view of a tower.

The above data shows that 10 Pondview Dr. is 96.4% of the size of the residence that it directly competes against and sold at 99% of the median sales price, or expressed in terms of price per square foot, 10 Pondview sold at $191 per sf and the residence that it competes against sold at $185 per sf.

This sale indicates that a view of the tower had no effect on the price or marketing time.

The property located at 438 Mammoth Rd, Pelham sold October 14, 2016 for $378,642. This is a 6 room 1-bedroom ranch with an inground pool and in-law suite. It is located on Mammoth Road and directly faces the cell tower on Gumpas Hill directly across the street.

Photo credit to NEREN MLS

count	Street	Acres	Style	Yr Built	Closed	List	Sale	Spread	SqFt Fin	Rms	BR	Baths	Gar.	DOM
194	Median	2.00		1999		$399,900	$389,500	99%	2,255	8	3	2.5	2	31
Viz	***438 Mammoth Rd***	***1***	***Rsd Ranch***	***1968***	***10/14/2016***	***$374,900***	***$378,642***	***101%***	***1,417***	***6***	***1***	***2.0***	***1***	***25***
7	SFR with In law suite	1.06		1987		$355,000	$350,000	99%	2,298	6	3	2.0	2	91

Both the listing agent and the buyer's agent were interviewed regarding buyer feedback and motivations for the sale. The listing agent reported that the cell tower was a "non-event" for the listing. She reported that there were "countless" showings on the property. The listing agent believed that the buyers were motivated by the floor plan and in-law accessory unit.

The buyer's agent confirmed that the primary motivating factor for the buyers was in fact the in-law accessory unit. In addition to the dwelling meeting the buyer's lifestyle needs, the buyers found the grounds to be well kept and landscaped which contributed to the property's overall good curb appeal. The buyer's agent reported that the cell tower was not a factor in the buyer's purchase decision.

The above data compares 438 Mammoth Rd with the seven other sales in Pelham that have closed in the last year. It shows that 438 Mammoth Rd sold above the median sales price in Pelham for a residence with an in-law apartment as well as on a square foot basis.

A review of assessment records show that 438 Mammoth Rd is not discounted for a negative external influence, nor is there a history of a request for a tax abatement regarding a view of a tower.

This sale indicates that a view of the tower had no effect on the price or marketing time.

New Construction at Rolling Ridge


The prior examples provide a quantitative approach, whereas the new construction at Rolling Ridge (as well as the new homes at 12 Ballerina and 4 Cotillion previously analyzed) provides a qualitative approach to this assignment.

New construction answers a fundamental principle in real estate valuation: What is the highest and best use of land? Land, if left idle and vacant, is not productive and based on market forces (supply and demand) can transform to its highest and best use. In the case of Rolling Ridge 19.31 acres was purchased by a developer in 2015 and transformed into 17 house lots with new construction commencing in 2016. As of the date of this report all residential lots have sold.

The residential developments at Rolling Ridge and at Camp Doucet in Nashua are unique in this assignment as it represents a tower that predates the construction of nearby residential houses. Considering the economic risks, a developer would not subject investment to a negative external influence that would put capital at risk.

The listing agent for Rolling Ridge commented that the cell tower at the top of the hill had not been an issue for any prospective buyer. Motivating factors for most buyers are material and upgrade options to the houses.

In the case of the 17 houses built at Rolling Ridge, the proximity and view to a cell tower had not hindered or impacted the build out of the sub-division.

Summary and Conclusion

Based upon the national e-mail survey of appraisers and assessors, research into properties located close to or having visual exposure to communication towers that have sold in New Hampshire, data obtained from other appraisers researching this same issue and a review of numerous reports prepared by other qualified appraisers; I was unable to find any data or proof to support the contention that there is a measurable impact on home values due to the proximity of a communication tower, or that property values are diminished due to the ability to see a tower from a property.

Objection to site development for cell towers usually comes from a change in the view from an abutting property. This change causes surrounding landowners to assume that their property will lose value because the of a view of a tower reduces value. This report contains sale data of homes with a view of a cell tower that have sold; these sales do not support the value loss assumption

Therefore, it is my opinion that the construction of the tower at the proposed location identified in this report will have no measurable impact on surrounding property values.

ADDENDUM

General market research

A national e-mail survey of appraisers and assessors was initiated. The purpose of this survey is to obtain input from appraisal and assessment professionals from a broader perspective to see what other professionals have observed. On the following pages is an explanation of how the survey was conducted, quotations received from some of the respondents and a tabular summary of the communities covered by the responses.

The survey information is followed by statements and conclusions from reports prepared by other appraisers who have completed site-specific analysis or general market research in order to determine if verifiable market data exists supporting the opinion that the presence of a cell tower has a deleterious impact on surrounding property values.

National Survey of Appraisers & Assessors

A national e-mail survey of appraisers and assessors was initiated in 2009. The purpose of this survey is to obtain input from appraisal and assessment professionals from a broader perspective to see what other professionals have observed.

A total of 172 replies were received from 146 communities in 15 states with a total population more than 13,500,000 people. The communities range in size from Waterville Valley NH population 257 to Seattle WA population 3,554,760. This is a very diverse mix of communities with differences in socio-economic and geographic influences.

The survey solicited responses to the follow three questions:

1. Have you observed or are you aware of any loss in residential property value due to the presence of a cell tower? YES / NO

2. Have you observed or are you aware of any appeals filed in the last two years claiming property value loss due to the presence of a cell tower? YES / NO

3. ***Have you observed or are you aware of any property value loss due to the ABILITY to see ANY part of a cell tower from a residential property, regardless of distance? YES / NO.***

All the respondents answered "NO" to each of the above three questions.

Some of the respondents simply replied "no" without additional comment while others expanded their answers to include local information and experience. The expanded comments start on the following page. The survey data tabulated by State, Community and Population follow the comments.

Jason R. Streebel, MAA
Director of Assessing
Mashpee, MA
October 3, 2018 in a public letter to Mashpee town manager

"…in sixteen years, not one homeowner, property appraiser, or resident has suggested to this office that the nearby cell towers were a detriment to their property value or purchase price."

_____
Dick Harriman,
CEO/Assessor
Town of Orrington

"I have one tower and no problems or complaints"

_____
Michelle Boisjoly,
Assessor
Dayton, Ohio

"No to all three questions; we have 2 towers in town with several sales near 1 of them. Dayton is rural with 1.5-3 acre minimum house lots."

_____
Marlene Tepper
Certified Residential Appraiser
Westchester, NY

"My experience results in a "no" on all three questions"

_____
Leland T Bookhout MAI, SRA
Rhinebeck, NY

"New buyers tell me in interviews that I have conducted that they did not pay less because of cell towers. I recognize that existing property owners feel they have been invaded thus scream and yell that the world has come to an end.

The bigger issue is that the potential pool of buyers for any home today is so sophisticated that they will use the issue of a nearby cell tower to get the purchase price down but when they resell in a few years - no reduction in asking price to list their property! Those who really do not want to live near a cell tower, or any other conceivable excuse, will go elsewhere, they have choices. We lose sight of the fact that any pool of potential buyers has choices. Ask any developer the question and they will almost always say that a particular buyer backed away from the purchase but someone came along to buy at the full price.

Part of the reaction by buyers is different in a sellers market vs. a buyers market. In the latter the alternatives are greater and the buyers can be picky."

_____
Duane P. Willenbring CGB :GMB: CGP
Willenbring Const. Inc
St. Cloud, MN

"I am a Builder, Developer and Realtor and I serve on the Rockville, Mn. City Council. The answer to all three questions is No. I have not heard of any adverse opinions regarding cell towers"

_____
Melinda Fonda
Assessor
Stratford, CT

1. *Have you observed or are you aware of any loss in residential property value due to the presence of a cell tower? "**NO"***

2. *Have you observed or are you aware of any appeals filed in the last two years claiming property value loss due to the presence of a cell tower? "**NO we have not had any appeals regarding loss in value due to cell towers"***

3. *Have you observed or are you aware of any property value loss due to the ABILITY to see ANY part of a cell tower from a residential property, regardless of distance?* ***"I** have had people claim their value is affected because they have an obstructed view. I have not seen this affect value."*

_____
From: Orban Winton
Socorro, NM

"*I have not had the opportunity to appraise or be associated with questions 1 and 2. The majority of our small town can see a part of a cell tower and have not noted any reduction in sale prices".*

Carl Brinegar, SRA, SRPA
San Angelo, TX

"*Sorry I can't help much. Answer is no. For all of the properties that can see cell towers in this area, I have never noted any reduction in price, nor had a seller or Realtor tell me that there was a reduction in price due to that situation & some towers are quite visible from new moderate priced residential property subdivisions & builders are continuing to build closer & closer to the towers, apparently without any ill pricing effects yet at least*."

Linda Truitt, MAI
Springfield, MO

"Hi - I am not aware of any reduction in value to properties near a cell tower.
I know a local appraiser that an assignment to appraise a rural property with a small house before and after a cell tower was installed on their 10 acres. It was his opinion that the property was actually worth more with the tower because of the land lease income.
Not much help I'm afraid."

Ned Farrone, MAI
Larchmont, NY

"The answer is "NO" to all three questions. We have been doing ongoing studies of neighborhoods with cell towers for more than 10 years. Never once have we found that there was a diminution in value due to being able to see a cell tower."

Survey of New Hampshire, Massachusetts and Vermont Assessors

All assessors were asked the follow three questions:

1. ***Have you observed or are you aware of any loss in residential property value due to the presence of a cell tower?***
2. ***Have you observed or are you aware of any appeals filed in the last two years claiming property value loss due to the presence of a cell tower?***
3. ***Have you observed or are you aware of any property value loss due to the ABILITY to see ANY part of a cell tower from a residential property, regardless of distance?***

In New Hampshire twenty-six communities with populations from 2,000 to 110,000 responded. **All twenty-six communities answered "NO" to each of the above three questions.**

Population	Town	Population	Town	Population	Town	Population	Town
2,042	Newbury	5,620	Hopkinton	13,040	Durham	28,486	Dover
2,215	Andover	6,561	Newport	13,388	Claremont	29,558	Salem
2,460	Plainfield	7,098	Stratham	15,450	Hampton	42,336	Concord
3,537	Gilmanton	7,322	Belmont	17,060	Laconia	87,321	Nashua
4,463	New London	8,020	Bow	22,778	Keene	109,691	Manchester
4,867	Henniker	8,434	Seabrook	24,568	Hudson		
4,880	New Boston	11,156	Hanover	24,837	Londonderry		

Massachusetts assessor results

Andover	*Never seen an abatement for that*	Chelmsford	*Nothing*
Bedford	*No*	Lexington	*None to my knowledge*
Belmont	*Haven't seen any*	Lowell	*There were none*
Billerica	*No haven't seen anything yet*	Reading	*No*
Carlisle	*Not in this town*	Waltham	*Have not had any*
		Woburn	*No*

Vermont assessors / lister results

Bethel	*No; Our tower is 2 yrs old, no immediate neighbors; can be seen form Rte 107 & 12.*		
Cabot	*No; We have 2 towers*	Poultney	*No*
Charoltte	*No; not aware of any grievances re cell towers*		
So Burlington	*No; never had anyone broach the subject*	Dover	*No*
Weathersfield	*No to all 3 questions*	Mount Tabor	*No*
Royalton	*No; We have 2 towers in remote locations*		

The following statements and the conclusions are from reports by other appraisers who have completed site-specific analysis or general market research in order to determine if verifiable market data exists supporting the opinion that the presence of a cell tower has a deleterious impact on surrounding property values.

Edward J. Ferrarone, MAI – September 2008 – Danbury, CT

As you see from the data, the sales prices and price per square foot (a recognized unit of comparison) for those residences situated near a communication facility site are consistent with, and in some cases higher than, the prices achieved in the neighborhood further away from the communication facility site.

I have been conducting surveys of sales prices such as these for the last decade. The areas covered include Westchester, Rockland, Putnam, Dutchess, Orange, and Ulster Counties. In no instance have I ever found that values have been reduced by the presence of communications facilities such as those which are proposed for this site.

As a result of the foregoing analysis, it is our conclusion the installation, presence and/or operation of the proposed Facility on the subject Property, will not result in the diminution of real estate values of nearby properties or reduce the marketability of properties in the immediate area.

U.S. District Court Judge Charles L. Brieant, in a decision dated January 25, 2001, agreed with the conclusion"that the actual experience with similar wireless facilities within ... other communities has not supported a conclusion that these antennae have reduced the value of nearby property." Judge Brieant further states that "generalized concerns about a potential decrease in property values stemming from the construction of the proposed communications antenna, especially in light of the expert reports contained in this record before the Court, are not adequate to support the conclusion that a special use permit should be denied."

See U.S. District Court Southern District of New York (White Plains)
Civil Docket for case #: 7:00-CV-04828-CLB Sprint Spectrum, LP v Cestone et al.

Bill Pastuszek, Jr. SRA, MAI, MRA – December 2007 – Pepperell, Massachusetts

Summary. The preceding analysis demonstrates that cellular telecommunications facilities in competitive residential locations do not affect real estate prices adversely. Research and analysis in other areas supports this conclusion: there is no measurable impact on residential sales prices due to the presence of such facilities. *Conclusion.* Based upon my inspection of the subject site and neighborhood, of comparable sites, my detailed review of the proposed project, and my review of pertinent empirical studies, it is my professional opinion that the construction and operation of the project will not have any adverse effect upon the property values of any real estate located near the site.

Vern J. Gardner Jr. , SRA, MAI – February 2007 – Londonderry, New Hampshire

Based upon the material presented herein it is this appraiser's opinion that the Market Value of the Fee Simple Title to any of the properties in the vicinity of the proposed cell tower will experience no diminution in value resulting from its construction as of February 05, 2007.

Patricia Amadon, MAI - October 2006 – Falmouth ME

In terms of marketing time, I researched sales in the general area to investigate the number of days on the market for residential properties. The marketing time ranged from 0 days to 371 days. When the maximum and minimum values were eliminated, this range narrowed from 11 days to 134 days. The sales of the two properties in proximity to towers took 66 and 72 days to sell, selling times well within the range of residential properties within the area. Therefore, marketing time does not appear to be affected.

Based on my investigation summarized above, I have concluded the following:

The nearest property has sufficient natural coverage and distance from the proposed tower to significantly diminish visibility.

The addition of the proposed tower and associated equipment will have no measurable adverse impact on the value of surrounding property.

From a valuation perspective, the proposed tower is the most appropriate location for a telecommunications facility in the area.

Robert G. Bramley, MAI - May 2006 - Cornish NH

> In summary, while the existing tower, if constructed, may be visible at a distance, I know of no instance where local property values in rural locations such as the subject will diminish with the construction of said facilities nor will the region be impacted, except in a positive way, from said facilities because of improved communication facilities.

J. Nathan Godfrey Appraiser October 2002 – West Tisbury, Ma

"The surrounding neighborhood area will be unchanged by the introduction if the proposed wireless communications facility. The equipment shelter and base of the pole will not be visible from Old Courthouse Road and there will be no change to the overall character of the site. My research and investigations have concluded that there would be no diminution of value or difficulty in marketing a residence in the immediate area around the proposed installation."

Donald E. Watson, Certified General Appraiser – June 1998 – 5 communities in Southern NH

> The study of sales in Bedford, Nashua, Merrimack, Candia, and Manchester did not indicate any discernible trends or variations in the sale prices of properties in the vicinity of telecommunications towers or similar structures in relation to the overall sales ratios found in each community. The lack of any trend would indicate that in fact there is no diminution of value of properties near these structures. Given federally mandated guidelines, I am of the opinion that as more telecommunications tower are constructed, their presence will become more common, similar to the existing telephone poles. If any diminution of value were to occur, it would be evident during the early stages of placement of telecommunications towers.

Michael P. Wicker. MAI – April 1994 – Sullivan, New York

At your request, we have performed a detailed analysis of the effects of radio communication towers on surrounding property values. It is the conclusion of this analysis that the subject's proposed cell site to contain a 180-foot guyed tower and a 293 square foot prefabricated concrete shelter will have no effect upon surrounding property values. The location, nature, and height of buildings, walls, and fences will not discourage the appropriate development and use of adjacent land and buildings or impair their value.

Enclosed please find the results of this analysis which support the above conclusion.

Robert G. Bramley, MAI - August 1990 - Candia NH

demand. In short, diminution in value of surrounding property was not found in nearby areas of Chester or Candia and, as a matter of fact, in areas surrounding tower sites in more densely populated areas of Hudson and Merrimack, New Hampshire. Conversation with residents in periphery areas suggests that the sites are not objectionable from an aesthetic viewpoint and may in fact contribute somewhat to retaining the undeveloped or sparsely developed character of the area, unless of course development pressures are greater, in which case housing development appears to take place without any real measurable detriment to price or value. Safety is also not a detriment since towers are constructed to withstand hurricane force winds.

Robert H. McKennon, CRE, MAI - Wilmington, Delaware

Robert has researched the impact of telecommunications towers on residential property values in his area. The following summarizes the results of his research.

To all who took the time to respond to my AI forum request for info on the impact of telecommunications towers on residential property values: -Thanks very much for your input.

I looked this time at a potential tower site in a heavily developed and desirable residential area that was slated for a monopole installation behind a supermarket at a major commercial intersection.

After reviewing 8 tower sites in residential locations with varying price ranges, I was unable to find any evidence that there is a measurable impact on value due to the proximity of a tower.

For example: A Toll Brothers development currently underway has three contiguous towers that loom over the residential lots currently being sold. These are being developed with $700,000 homes that are selling at a similar absorption pace to other similar Toll communities in the area. The site manager indicated that the towers were not a factor in pricing or marketing. The developer did not provide extra buffers, larger lots, or open space nearby to alleviate any potential impact the towers might have.

Another area development has an unsightly latticework tower nearby that can be seen from various points in the development. **There is absolutely no difference in pricing of similar model homes that can see the tower as opposed to those that cannot.** The sales agent who sold the project noted that the tower had no impact on sales. Another agent who has sold several homes in the neighborhood indicated that her daughter lives in the neighborhood, that she has been in the neighborhood many times over the years and had never noticed it during her walks with her granddaughter, and that it was not a factor with buyers.

EXHIBIT 13

FAA/TOW AIR REPORT

****
* Federal Airways & Airspace *
* Summary Report: New Construction *
* Antenna Structure *
****

Airspace User:

File: 202096

Location: Nashua, NH

Latitude: 42°-42'-0.15" Longitude: 71°-23'-27.4"

SITE ELEVATION AMSL.....282 ft.
STRUCTURE HEIGHT.....160 ft.
OVERALL HEIGHT AMSL.....442 ft.

NOTICE CRITERIA
FAR 77.9(a): NNR (DNE 200 ft AGL)
FAR 77.9(b): NNR (DNE Notice Slope)
FAR 77.9(c): NNR (Not a Traverse Way)
FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for ASH
FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for LWM
FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required
NNR = Notice Not Required
PNR = Possible Notice Required (depends upon actual IFR procedure)
For new construction review Air Navigation Facilities at bottom of this report.

Notice to the FAA is not required at the analyzed location and height for slope, height or Straight-In procedures. Please review the 'Air Navigation' section for notice requirements for offset IFR procedures and EMI.

OBSTRUCTION STANDARDS
FAR 77.17(a)(1): DNE 499 ft AGL
FAR 77.17(a)(2): DNE - Airport Surface
FAR 77.19(a): DNE - Horizontal Surface
FAR 77.19(b): DNE - Conical Surface
FAR 77.19(c): DNE - Primary Surface
FAR 77.19(d): DNE - Approach Surface
FAR 77.19(e): DNE - Approach Transitional Surface
FAR 77.19(e): DNE - Abeam Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: ASH: BOIRE FIELD
Type: A RD: 41718.53 RE: 192
FAR 77.17(a)(1): DNE
FAR 77.17(a)(2): DNE - Greater Than 5.99 NM.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: LWM: LAWRENCE MUNI
Type: A RD: 70552.14 RE: 133.8
FAR 77.17(a)(1): DNE
FAR 77.17(a)(2): DNE - Greater Than 5.99 NM.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)
FAR 77.17(a)(3) Departure Surface Criteria (40:1)
DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)
FAR 77.17(a)(4) MOCA Altitude Enroute Criteria
The Maximum Height Permitted is 1920 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT	TYP	NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAA IFR
36NH	HEL	LONG POND LANDING	86.9	.88	+257	

No Impact to Private Landing Facility
Structure is beyond notice limit by 347 feet.

MA74	SEA	LARSON'S	246.59	1.31	+352	

Possible Impact to Private Landing Facility
Possible Exceeds Horizontal Surface (N/A Private Airport).
Possible Impact to Private Landing Facility.
Possible Exceeds VFR Transitional Surface (N/A Private Airport).

NH78	AIR	STECK FARM	18.79	2.99	-18	

No Impact to Private Landing Facility.
DNE 200 ft AGL within 3 NM of Airport.

15NH HEL NASHUA TECHNOLOGY PARK 279.49 3.02 +207
No Impact to Private Landing Facility
Structure is beyond notice limit by 13350 feet.

NH42 HEL C S S 298.8 4.56 +230
No Impact to Private Landing Facility
Structure is beyond notice limit by 22707 feet.

NH37 HEL SOUTHERN NH MEDICAL CENTER 316.82 4.57 +250 IFR
No Impact to Private Landing Facility
Structure is beyond notice limit by 22768 feet.

NH93 HEL SEAN 41.62 5.04 +292
No Impact to Private Landing Facility
Structure is beyond notice limit by 25624 feet.

NH03 HEL GRANITE 10.27 5.74 +225
No Impact to Private Landing Facility
Structure is beyond notice limit by 29877 feet.

AIR NAVIGATION ELECTRONIC FACILITIES

FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRND ANGLE	APCH BEAR
LW	NDB	D	40	111.4	55949	+317	MA	HAGET	.32	
MHT	VOR/DME	R	114.4	5.34	61674	-28	NH	MANCHESTER	-.03	

Does Not Exceed FAA's adverse obstacle height assumption rule.
Predict not within FAR 77.9 Final IFR Area for 6B6: VOR/DME RWY 21

MJ	NDB	I	20	328.29	70345	+208	NH	FITZY	.17	
MJE	LOM	I		328.31	70346	+208	NH	RWY 06 MANCHESTER	.17	
AS	NDB	D	35	308.46	72378	+225	NH	CHERN	.18	
BE	NDB	D	33	179.6	80296	+242	MA	BEDDS	.17	
LWM	VOR/DME	I	112.5	79.42	80925	+136	MA	LAWRENCE	.10	
MHT	RADAR	I	2805.	15.09	94367	-275	NH	MANCHESTER	-.17	

No Impact. This structure does not require Notice based upon EMI.
The studied location is within 20 NM of a Radar facility.
The calculated Radar Line-Of-Sight (LOS) distance is: 59 NM.
This location and height is within the Radar Line-Of-Sight.

BOS	RADAR	I	2820.	141.12	164842	+392	MA	GENERAL EDWARD LA	.14	
BOS	VOR/DME	R	112.7	139.22	165221	+424	MA	BOSTON	.15	
GDM	VOR/DME	I	110.6	252.41	188167	-838	MA	GARDNER	-.26	
CON	VOR/DME	R	112.9	345.45	195761	-273	NH	CONCORD	-.08	
ORH	RADAR WXL	I		219.53	202809	-561	MA	WORCESTER	-.16	
PSM	VOR/DME	R	116.5	46.73	205107	+334	NH	PEASE	.09	
KBOS	TD	I	5610.	148.12	232905	+177	MA	BOSTON TDWR	.04	

CFR Title 47, §1.30000-§1.30004
AM STUDY NOT REQUIRED: Structure is not near a FCC licensed AM station.
Movement Method Proof as specified in §73.151(c) is not required.
Please review 'AM Station Report' for details.

Nearest AM Station: WCAP @ 5615 meters.

Airspace® Summary Version 20.7.580

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