

Oscar Posada
Network Towers II, LLC
3095 Marshalee Drive, Suite 300
Elkridge, MD 21075

February 18, 2025

Subject: Certification of Code Compliance for Proposed Telecommunications Tower
TKK Project No. 100793

Dear Oscar Posada,

TKK Engineering, P.C. (TKK) is pleased to submit this certification letter outlining the approximate geometry and design parameters for a proposed telecommunications structure. It is our understanding that Network Towers II, LLC intends to build a new wireless telecommunications facility at the below-mentioned site to include a new monopole tower and fenced compound as defined in the zoning drawings by TKK dated November 14, 2024.

This letter certifies that the tower will be designed and manufactured to meet all structural requirements and safety specifications outlined in the codes and standards listed below as well as local code requirements. Please see below for tower site information, approximate geometry, design parameters, and design loading summary:

Tower Site Information

Tower Owner:	Network Towers II
Site Name:	Dobbins
Site ID:	NC-T23.12
Lat:	35° 56' 16.3" N
Long:	79° 1' 37.2" W
Address:	1721 E Franklin Street, Chapel Hill, NC, 27514, Town of Chapel Hill

Approximate Monopole Tower Geometry

Tower Height:	195 ft
Base Diameter:	6 ft
Anchor Rod Diameter:	2-1/4"
Foundation Type:	Drilled Shaft or Pad-Pier
# of Design Carriers:	4
Fall Zone:	The fall zone shall not exceed 55' by employing breakpoint design methodology.
Breakpoint Elevation:	149'-155'

*Predesigned breakpoint location shall be located within the elevation range prescribed above.

Tower Site Design Parameters

Building Code:	2018 North Carolina Building Code (2015 IBC)
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	115 mph
Exposure Category:	C
Topographic Cat:	1
Ice Thickness:	1.5 in
Wind Speed w/ Ice:	30 mph
Seismic S_s :	0.157
Seismic S_1 :	0.078
Service Wind Speed:	60 mph

Tower Design Loading

Antenna Centerline Elevation (ft)	Appurtenance Loading	Feed Lines	Carrier	Effective Projected Area (EPA)	Weight
190.0	Total Design EPA	(4) 1-5/8	Verizon	25,000 in ²	4,500 lbs
178.0	Total Design EPA	(4) 1-5/8	-	34,000 in ²	5,000 lbs
168.0	Total Design EPA	(4) 1-5/8	-	20,000 in ²	5,000 lbs

Note:

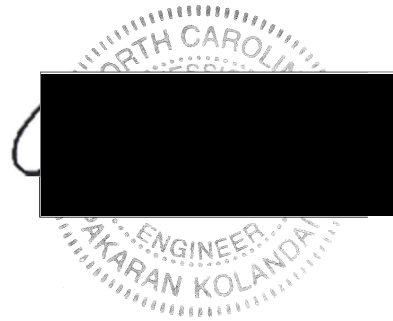
- 1) Feedlines to be installed inside the pole shaft.

Should you have any questions or require additional information, please feel free to contact us.

Respectfully Prepared by: Ross Alexander, PE

NB&C ENGINEERING SERVICES, LLC

Krupakaran Kolandaivelu, PE
Vice President - Engineering
NC PE License No. 039073
NC Firm License No. C-4682



2/18/2025

Visual Impact Assessment

April 24, 2025

Town of Chapel Hill
405 Martin Luther King Jr Blvd
Chapel Hill, NC 27514
(919) 968-2718

Re: Dobbins
NB+C Job No. 100793
Visual Impact Assessment

To Whom It May Concern:

On April 124, 2025, a visual impact assessment was conducted for the Network Towers II site Dobbins, located at East Franklin Street by Karl Lennox-Barbru, NB+C Senior Engineering Specialist.

General Balloon Test Information

Starting at 10:00 am, a 3 ft red balloon was raised to a height of 195 feet. The balloon was attached to a 50lb monofilament fishing line. A measuring wheel was used to measure out the correct length of line on ground level prior to the balloon test to verify the elevation, as well as the use of a ranger finder. All photographs were taken with a Canon camera. The balloon was tethered at ground elevation. The balloon test lasted approximately 4 hours, ending at 2:00 pm. An NB+C employee remained on site for the duration of the balloon test.

Weather Conditions At the time of the test weather conditions were mostly cloudy with a high around 80°F with relatively clear visibility and fair winds.

9:51 AM	70 °F	49 °F	47 %	E	6 mph	0 mph	29.86 in	0.0 in	Mostly Cloudy
10:51 AM	73 °F	47 °F	39 %	ENE	5 mph	0 mph	29.86 in	0.0 in	Mostly Cloudy
11:51 AM	76 °F	45 °F	33 %	ESE	5 mph	0 mph	29.87 in	0.0 in	Mostly Cloudy
12:51 PM	78 °F	45 °F	31 %	VAR	5 mph	0 mph	29.85 in	0.0 in	Mostly Cloudy
1:51 PM	80 °F	47 °F	31 %	CALM	0 mph	0 mph	29.83 in	0.0 in	Mostly Cloudy
2:51 PM	80 °F	46 °F	30 %	ESE	5 mph	0 mph	29.81 in	0.0 in	Mostly Cloudy

The above image represents the documented wind and weather conditions as recorded by undergroundweather.com.

04/24/25 9:53 A.M.



The above image documents the conditions at the start of the balloon test.

Thank you for your time and attention to this matter. If you have any questions regarding this assessment, let me know.

Respectfully submitted,
NETWORK BUILDING + CONSULTING

Emilie Buck
Senior Graphic Designer
410.949.7698
ebuck@nbcllc.com

STORMWATER IMPACT STATEMENT – REV. 1

For

NETWORK TOWERS II – TELECOMMUNICATION TOWER

1721 E Franklin St

Chapel Hill, NC 27514

PIN: 9799261213

ORANGE COUNTY

Prepared by:

Trent T. Snarr, PE

DATE: 03/12/2025



TH CARO

T. SN

I. Stormwater Impact Statement

A. Site Analysis and Narrative

1. The subject parcel (4.29 acres) contains a parking lot, dentist office, and existing guy tower. The rest of the parcel is made up of grass and wooded area, with existing slopes going up to 14%. The parcel is also in an existing flood zone. The land observed drains water to the east. Proposed site construction will create a total disturbed area of 4,900 S.F., of which 3,000 S.F. will be impervious surface and the remaining 1,900 S.F. will be managed turf.

IMPERVIOUS SURFACE TALLIES		
	SQ.FT.	ACRES
TOTAL PARCEL AREA	186,872	4.290
EX. DRIVEWAY/ PARKING AREA	8,185	0.188
EX. BUILDING AREA	2,700	0.062
EX. PAVED TRAIL AREA	3,737	0.086
EX. TOTAL IMPERVIOUS AREA	17,622	0.405
PROP. COMPOUND IMPERV. AREA	3,000	0.069
PROP. TOTAL IMPERVIOUS AREA	3,000	0.069
TOTAL IMPERVIOUS AREA	20,622	0.473
PROP. DISTURBED AREA	5,056	0.116
PROP. AREA INSIDE FLOOD ZONE	1,626	0.037

2. Please see attached drainage map for location, topography, and on-site and off-site drainage conditions

3. Volumes, and discharges:

	PREDEVELOPMENT	POSTDEVELOPMENT	POSTDEVELOPMENT (TREATED)
1-YEAR			
VOLUME (CU.FT.)	33,615	33,615	33,217
PEAK DISCHARGE (CFS)	8.21	8.21	8.11
2-YEAR			
VOLUME	46,840	46,840	46,284
PEAK DISCHARGE	11.59	11.59	11.45
25-YEAR			
VOLUME	106,669	106,669	105,404
PEAK DISCHARGE	26.67	26.67	26.35

4. As the site's pre-development and post-development conditions are equal, there is no impact on any existing upstream or downstream conveyance facilities.

5. N/A

6. N/A

7. N/A

B. Release Rate Management

Peak flow rate for the 1-year, 24-hour duration, 2-year 24-hour duration, and 25-year, 24-hour duration storm are the same for both pre- and post-development conditions. Please see attached drainage area map and calculations.

C. Volume Management

There is no increase in the volume of runoff for the 2-year, 24-hour duration storm from pre-development to post-development conditions. Please see attached drainage area map and calculations.

D. Water Quality Management

A 12", stone-lined retention basin is being proposed to satisfy water quality expectations per City of Chapel Hill stormwater and water quality requirements.

E. Nutrient Load Calculations

This site is less than (1) acre and is therefore exempt from nutrient load calculations.

F. Maintenance and Operations Plan

Regular landscaping maintenance will occur on a quarterly basis to keep any overgrow vegetation down.

STORMWATER RUNOFF CALCULATIONS:

NARRATIVE
THE SUBJECT PARCEL (4.29 ACRES) CONTAINS A PARKING LOT, DENTIST OFFICE, AND EXISTING GUY TOWER. THE REST OF THE PARCEL IS MADE UP OF GRASS AND WOODED AEA, WITH EXISTING SLOPES GOING UP TO 14%. THE PARCEL IS ALSO IN AN EXISTING FLOOD ZONE. THE LAND OBSERVED DRAINS WATER TO THE EAST. PROPOSED SITE CONSTRUCTION WILL CREATE A TOTAL DISTURBED AREA OF 4,900 SQUARE FEET, OF WHICH 3,000 S.F. WILL BE IMPERVIOUS SURFACE AND THE REMAINING 1,900 S.F. WILL BE MANAGED TURF.

ANALYSIS METHODOLOGIES AND PROCEDURES
PRE AND POST DEVELOPMENT RUNOFF VALUES FOR THE DRAINAGE AREA WERE CALCULATED USING THE SCS METHOD, OUTLINED IN THE JOHNSTON COUNTY STORMWATER DESIGN MANUAL, USING THE MODELING PROGRAM HYDRAFLOW HYDROGRAPHS EXTENSION FOR AUTOCAD CIVIL 3D 2022. THE DRAINAGE AREAS WERE DETERMINED USING A LOCAL SURVEY. PERVIOUS AND IMPERVIOUS AREAS WERE DETERMINED BY AERIAL PHOTOGRAPHY.

PREDEVELOPMENT				
HYDRO SOIL GROUP	GROUND CONDITION	CN	AREA (SQ.FT.)	AREA (ACRES)
D	WOODED	77	163,032	3.74
	GRASS	80	139,111	3.19
	IMPERVIOUS	98	28,314	0.65
TOTAL AREA			330,457	7.59
WEIGHTED CN		80		

POSTDEVELOPMENT				
HYDRO SOIL GROUP	GROUND CONDITION	CN	AREA (SQ.FT.)	AREA (ACRES)
D	WOODED	77	159,742	3.67
	GRASS	80	139,111	3.19
	IMPERVIOUS	98	31,604	0.73
TOTAL AREA			330,457	7.59
WEIGHTED CN		80		

POSTDEVELOPMENT - RETENTION BASIN				
HYDRO SOIL GROUP	GROUND CONDITION	CN	AREA (SQ.FT.)	AREA (ACRES)
D	GRASS	77	662	0.015
	IMPERVIOUS	98	3,290	0.076
TOTAL			3,952	0.091
WEIGHTED CN		94		

POSTDEVELOPMENT - BYPASS				
HYDRO SOIL GROUP	GROUND CONDITION	CN	AREA (SQ.FT.)	AREA (ACRES)
D	WOODED	77	159,742	3.67
	GRASS	80	138,449	3.18
	IMPERVIOUS	98	28,314	0.65
TOTAL AREA			326,505	7.50
WEIGHTED CN		80		

STORMWATER RUNOFF CONSIDERATIONS:

THE NATURAL DRAINAGE CONDITION FROM THE THE PROPOSED SITE WILL BE MAINTAINED TO THE GREATEST EXTENT POSSIBLE. PEAK FLOW FOR POST-DEVELOPMENT PEAK FLOW FOR THE 1-YEAR, 2-YEAR, AND 25-YEAR STORMS DO NOT EXCEED THE PRE-DEVELOPMENT PEAK FLOW THUS SATISFYING THE STANDARD SET IN SECTION II-B IN THE TOWN OF CHAPEL HILL STORMWATER IMPACT STATEMENT AND STORMWATER MANAGEMENT PLAN GUIDELINES.

FOR WATER QUALITY CONTROL, 12" DEEP, ROCK-LINED RETENTION POND IS BEING PROPOSED TO SATISFY THE STANDARD SET IN SECTION II-B IN THE TOWN OF CHAPEL HILL STORMWATER IMPACT STATEMENT AND STORMWATER MANAGEMENT PLAN GUIDELINES.

PREDEVELOPMENT – 1-YEAR, 24-HOUR

Hydrograph type	= SCS Runoff	Peak discharge	= 8.206 cfs
Storm frequency	= 1 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 33,615 cuft
Drainage area	= 7.590 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 28.90 min
Total precip.	= 2.96 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

PREDEVELOPMENT – 2-YEAR, 24-HOUR

Hydrograph type	= SCS Runoff	Peak discharge	= 11.59 cfs
Storm frequency	= 2 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 46,840 cuft
Drainage area	= 7.590 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 28.90 min
Total precip.	= 3.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

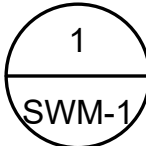
PREDEVELOPMENT – 25-YEAR, 24-HOUR

Hydrograph type	= SCS Runoff	Peak discharge	= 26.67 cfs
Storm frequency	= 25 yrs	Time to peak	= 730 min
Time interval	= 2 min	Hyd. volume	= 106,669 cuft
Drainage area	= 7.590 ac	Curve number	= 80
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 28.90 min
Total precip.	= 6.10 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

SITE CONDITION	DRAINAGE AREA TOTALS STORM EVENT PEAK DISCHARGE (CFS)		
	1-YR	2-YR	25-YR
PREDEVELOPMENT:	8.2060	11.5900	26.6700
POSTDEVELOPMENT:	8.2060	11.5900	26.6700
POSTDEVELOPMENT - TREATED:	8.1090	11.4500	26.3500

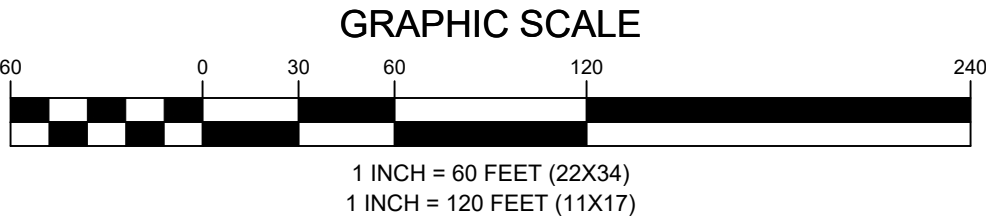
IMPERVIOUS SURFACE TALLIES

TOTAL PARCEL AREA:	186,872 SQ.FT. (4.290 AC) ±
EX. DRIVEWAY/PARKING AREA:	8,185 SQ.FT. (0.188 AC) ±
EX. BUILDING AREA:	2,700 SQ.FT. (0.062 AC) ±
EX. PAVED TRAIL AREA:	3,737 SQ.FT. (0.086 AC) ±
EX. OTHER IMPERVIOUS AREA:	3,000 SQ.FT. (0.069 AC) ±
EX. TOTAL IMPERVIOUS AREA:	17,622 SQ.FT. (0.405 AC) ±
PROP. COMPOUND IMPERV. AREA:	3,000 SQ.FT. (0.069 AC) ±
PROP. TOTAL IMPERVIOUS AREA:	3,000 SQ.FT. (0.069 AC) ±
PROP. TOTAL IMPERVIOUS AREA:	20,622 SQ.FT. (0.473 AC) ±
PROP. DISTURBED AREA:	5,056 SQ.FT. (0.116 AC) ±
PROP. AREA INSIDE FLOOD ZONE:	1,626 SQ.FT. (0.037 AC) ±



GRADING, EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 60' (22X34)
SCALE: 1" = 120' (11X17)



LEGEND

---	PROPERTY LINE - SUBJECT PARCEL
---	PROPERTY LINE - ABUTTERS
---	EXISTING ROAD
[]	EXISTING BUILDING
---	EXISTING TREE LINE
[]	EXISTING FEMA FLOODWAY
[]	EXISTING FEMA FLOOD AE ZONE
---	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	DRAINAGE AREA

APPLICANT



ENGINEER



SITE INFORMATION

NT SITE NAME: DOBBINS
NT SITE ID: NC-T23.12

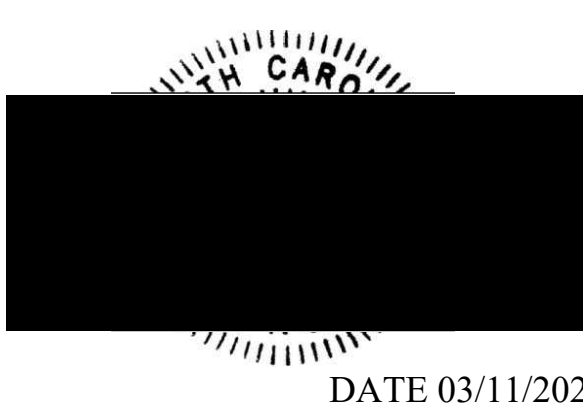
NB+C PROJ. # 100793
(TOWER 911 ADDRESS TBD)
1721 E FRANKLIN STREET
CHAPEL HILL, NC 27514
ORANGE COUNTY

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
1	01/31/2025	SITE PLAN	BMB
0	11/14/2024	ZONING DRAWINGS	OP

PROFESSIONAL STAMP



ENGINEER

TRENT T. SNARR, P.E.
NC PROFESSIONAL ENGINEER LIC. #037977

SHEET TITLE

PRE-DEVELOPMENT
DRAINAGE AREA MAP

SHEET NUMBER

SWM-1

STORMWATER RUNOFF CALCULATIONS:

NARRATIVE
THE SUBJECT PARCEL (4.29 ACRES) CONTAINS A PARKING LOT, DENTIST OFFICE, AND EXISTING GUY TOWER. THE REST OF THE PARCEL IS MADE UP OF GRASS AND WOODED AEA, WITH EXISTING SLOPES GOING UP TO 14%. THE PARCEL IS ALSO IN AN EXISTING FLOOD ZONE. THE LAND OBSERVED DRAINS WATER TO THE EAST. PROPOSED SITE CONSTRUCTION WILL CREATE A TOTAL DISTURBED AREA OF 5,056 SQUARE FEET, OF WHICH 3,000 S.F. WILL BE IMPERVIOUS SURFACE AND THE REMAINING 2,056 S.F. WILL BE MANAGED TURF.

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	GRASS	80	139,111	3.19
	IMPERVIOUS	98	28,314	0.65
TOTAL AREA			330,457	7.59
WEIGHTED CN		80		

POSTDEVELOPMENT				
HYDRO SOIL GROUP	GROUND CONDITION	CN	AREA (SQ.FT.)	AREA (ACRES)
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POSTDEVELOPMENT - RETENTION BASIN				
HYDRO SOIL GROUP	GROUND CONDITION	CN	AREA (SQ.FT.)	AREA (ACRES)
D	GRASS	77	662	0.015
	IMPERVIOUS	98	3,290	0.076
TOTAL			3,952	0.091
WEIGHTED CN		94		

POSTDEVELOPMENT - BYPASS				
HYDRO SOIL GROUP	GROUND CONDITION	CN	AREA (SQ.FT.)	AREA (ACRES)
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FOR WATER QUALITY CONTROL, A 12" DEEP, ROCK-LINED RETENTION BASIN IS BEING PROPOSED. THE RETENTION BASIN HAS A TOTAL STORAGE CAPACITY OF 233 CU. FT. WHICH IS SUFFICIENT TO CONTROL THE FIRST 1" OF RUNOFF FROM THE PROPOSED IMPERVIOUS COMPOUND (220 CU. FT.). THIS SATISFIES THE STANDARD SET IN SECTION II-D IN THE TOWN OF CHAPEL HILL STORMWATER IMPACT STATEMENT AND STORMWATER MANAGEMENT PLAN GUIDELINES.

POSTDEVELOPMENT (TREATED) – 1-YEAR, 24-HOUR

Hydrograph type	= Combine	Peak discharge	= 8.109 cfs
Storm frequency	= 1 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 33,217 cuft
Inflow hyds.	= 4, 5	Contrib. drain. area	= 7.500 ac

POSTDEVELOPMENT (TREATED) – 2-YEAR, 24-HOUR

Hydrograph type	= Combine	Peak discharge	= 11.45 cfs
Storm frequency	= 2 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 46,284 cuft
Inflow hyds.	= 4, 5	Contrib. drain. area	= 7.500 ac

POSTDEVELOPMENT (TREATED) – 25-YEAR, 24-HOUR

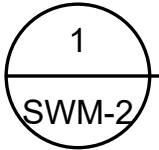
Hydrograph type	= Combine	Peak discharge	= 26.35 cfs
Storm frequency	= 25 yrs	Time to peak	= 730 min
Time interval	= 2 min	Hyd. volume	= 105,404 cuft
Inflow hyds.	= 4, 5	Contrib. drain. area	= 7.500 ac



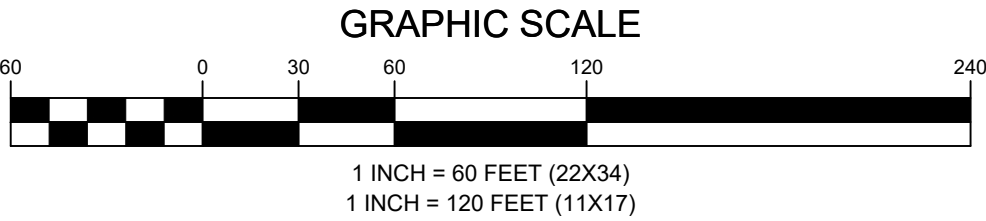
SITE CONDITION	DRAINAGE AREA TOTALS STORM EVENT PEAK DISCHARGE (CFS)		
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PREDEVELOPMENT:	8.2060	11.5900	26.6700
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EX. OTHER IMPERVIOUS AREA:	3,000 SQ.FT. (0.069 AC) ±
EX. TOTAL IMPERVIOUS AREA:	17,622 SQ.FT. (0.405 AC) ±
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PROP. TOTAL IMPERVIOUS AREA:	20,622 SQ.FT. (0.473 AC) ±
PROP. DISTURBED AREA:	5,056 SQ.FT. (0.116 AC) ±
PROP. AREA INSIDE FLOOD ZONE:	1,626 SQ.FT. (0.037 AC) ±



GRADING, EROSION & SEDIMENT CONTROL PLAN
SCALE: 1" = 60' (22X34)
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LEGEND	
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	EXISTING FEMA FLOODWAY
	EXISTING FEMA FLOOD AE ZONE
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	EXISTING MINOR CONTOUR
	DRAINAGE AREA

APPLICANT



ENGINEER



SITE INFORMATION

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NT SITE ID: NC-T23.12

NB+C PROJ. # 100793
(TOWER 911 ADDRESS TBD)
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DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
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PROFESSIONAL STAMP



ENGINEER

TRENT T. SNARR, P.E.
NC PROFESSIONAL ENGINEER L.C. #037977

SHEET TITLE

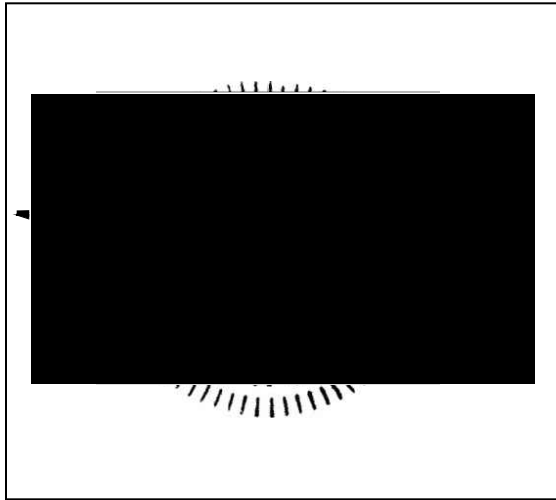
POST-DEVELOPMENT
DRAINAGE AREA MAP

SHEET NUMBER

SWM-2

NO-RISE CERTIFICATION

This document is to certify that I am duly qualified engineer licensed to practice in the State of North Carolina. It is to further certify that the attached technical data supports the fact that the proposed telecommunications site will not increase the base flood elevations or floodway elevations, or impact the floodway widths, on Booker Creek at published cross-sections in the Flood Insurance Study for Town of Chapel Hill, Panel 9799, dated October 19, 2018 and will not increase the base flood elevations or floodway elevations, or impact the floodway widths at unpublished cross-sections in the area of the proposed development.



Seal and Signature

Trent T. Snarr
Name

Chief Engineer
Title

120 Eastshore Dr, Suite 300, Glenn Allen, VA 23059

Address

January 31, 2025
Date

FOR COMMUNITY USE ONLY

☐ Approved

☐ Disapproved

Name and Title

Signature

Date

April 24, 2025

1721 E Franklin Street

Chapel Hill NC 27514

RE: Proposed Cellco Partnership d/b/a Verizon Wireless telecommunications tower facility on 1721 E Franklin Street (Site Name: DOBBINS_CHDR)

Two Whom it May Concern,

I am the Verizon RF engineer responsible for this site.

I have enclosed plots depicting the signal strength and service area at the requested 190' antenna center line for the licensed frequencies for this site.

The 190' antenna centerline is the minimum height needed to achieve Verizon's service objectives for this site.

Thank you for your consideration,

A handwritten signature in black ink, appearing to read 'Kul Singh', is written over the printed name and title.

Kulbhushan Singh (Kul)
Sr RF Engineer - Raleigh
Verizon Wireless
8921 Research Drive
Charlotte, NC 28262

O 704- 510 -8704 | M 704-975-7673
kulbhushan.singh@verizonwireless.com

DOBBINS_CHDR - Zoning Plots

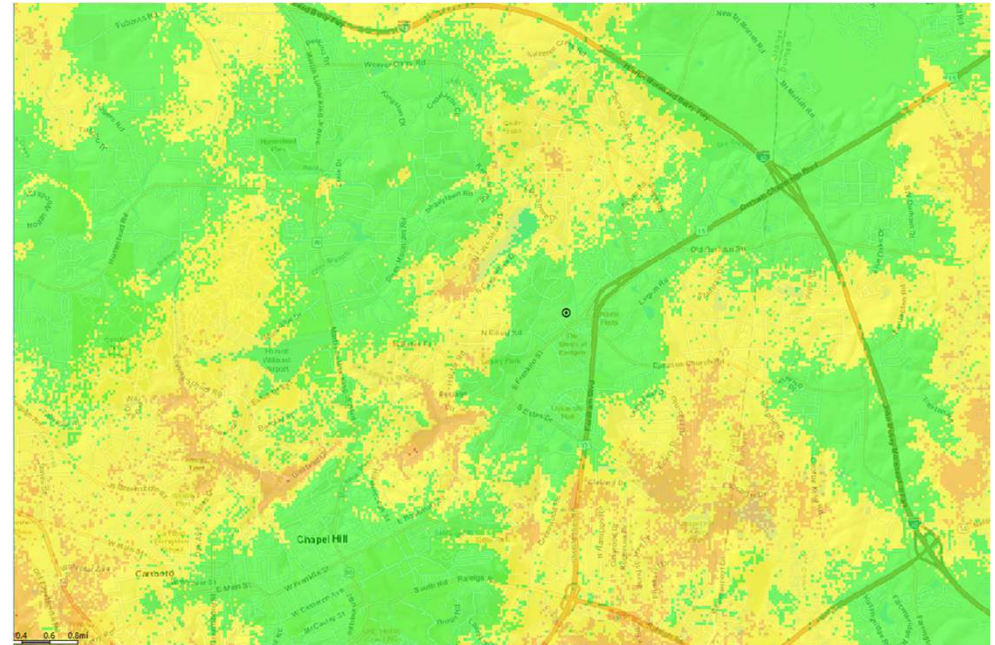
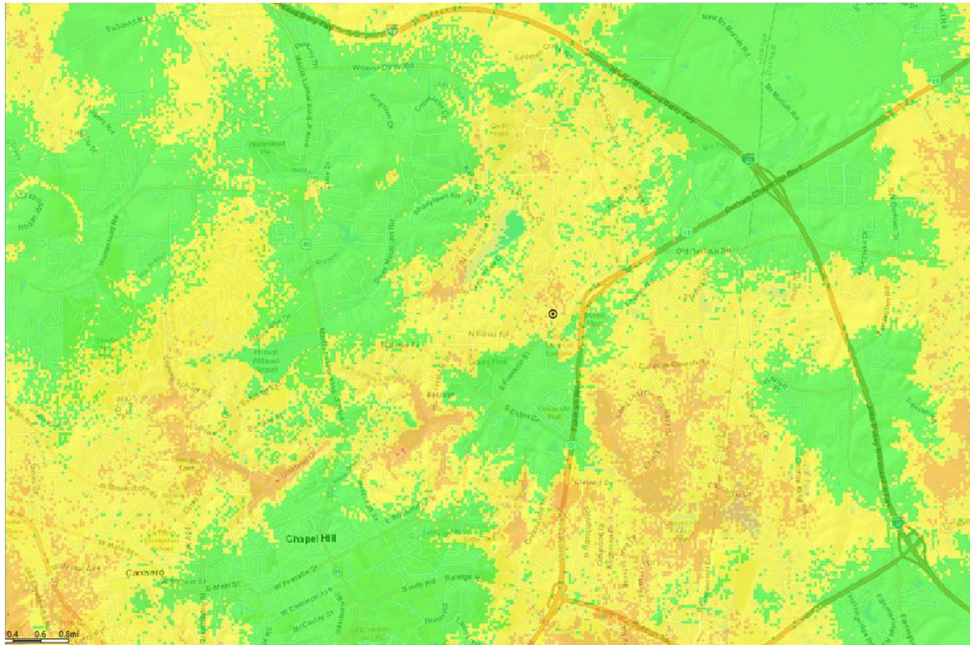


Verizon confidential and proprietary. Unauthorized disclosure, reproduction or other use prohibited.

Plots - Pre and Post RSRP Coverage

Pre

Post @ 120ft



Coverage Level	Color
In-Building	Green
In-Vehicle	Yellow
On-Street	Orange
low/No	Red

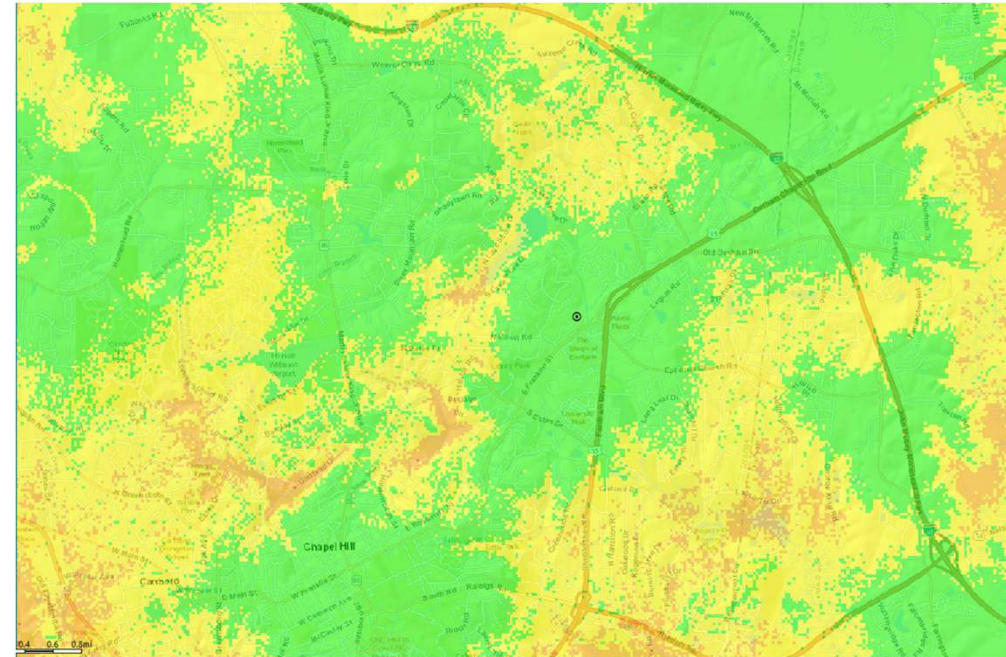
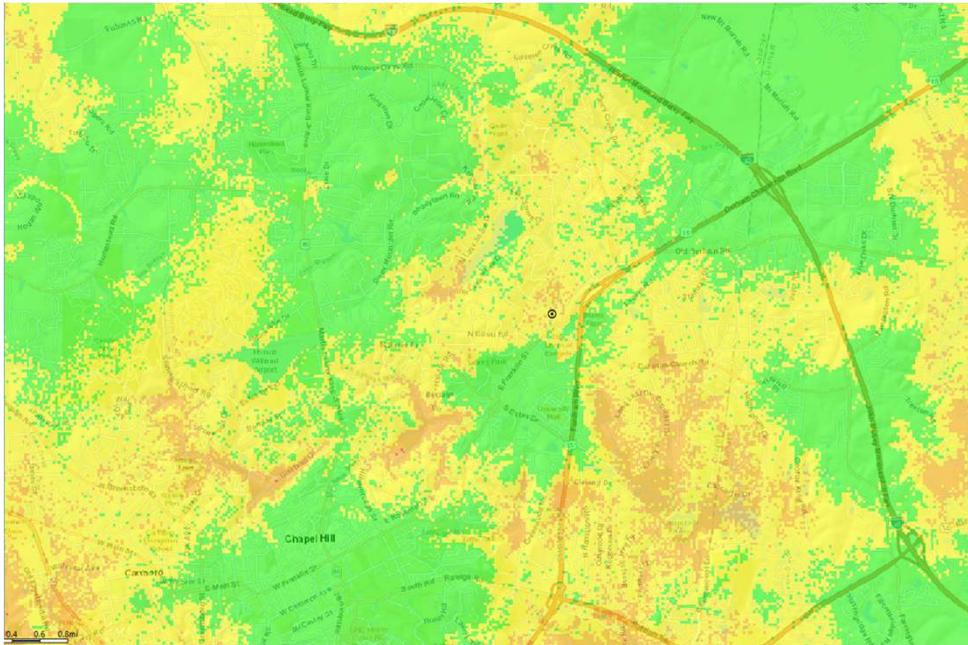


Verizon confidential and proprietary. Unauthorized disclosure, reproduction or other use prohibited.

Plots - Pre and Post RSRP Coverage

Pre

Post @ 190ft



Coverage Level	Color
In-Building	Green
In-Vehicle	Yellow
On-Street	Orange
low/No	Red



Verizon confidential and proprietary. Unauthorized disclosure, reproduction or other use prohibited.

Site Objective

- **Coverage and Capacity site to serve the mobility users on HWY-501 , The Shops at Eastgate and Rams Plaza and Residential neighborhoods**
- **Major gap in current coverage along HWY-501 and commercial areas due to high intersite distance between neighboring sites.**



CERTIFICATION STATEMENTS

The undersigned representative of Network Towers II, LLC, a Maryland limited liability company ("**Network Towers**"), with respect to the application for a special use permit ("**Application**") allowing for the development of the wireless telecommunications tower proposed by Network Towers at 1721 E. Franklin Street, Chapel Hill, North Carolina 27514 ("**Tower**"), hereby certifies that:

1. Radio frequency emissions from the Tower will comply with Federal Communications Commission ("**FCC**") standards for such emissions as set forth in 47 CFR 1.1307, 1.310, 2.091 or 2.093, as applicable (*Report and Order*, ET Docket 93-62 (Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation), 11 FCC Rcd 15123 (1996); *Second Memorandum Opinion and Order and Notice of Proposed Rule Making*, ET Docket 93-62 (WT Docket 97-192), 12 FCC Rcd 13494 (1997).
2. Any collocation, modification or upgrade application concerning the Tower shall contain an analytical report which confirms that, following installation, the composite facility will remain in compliance with FCC standards as stated in OET-65.

[Signature Page Follows]

CERTIFICATION STATEMENTS

[Signature Page]

NETWORK TOWERS II, LLC
a Maryland limited liability company

By: 
Name: Sam Averna
Title: Land Use Manager
Date: 9/29/25

STATE OF NORTH CAROLINA

SITE ACQUISITION AFFIDAVIT

ORANGE COUNTY

Brandi Hale, after being first duly sworn, does hereby depose and state as follows:

1. I am a Program Manager with Network Towers II, LLC, a Maryland limited liability company ("**NT2**").

2. Verizon Wireless ("**VZW**") provided Brandi Hale with a search ring ("**Search Ring**") for Dobbins Site ID NC-T23.12 in the Town of Chapel Hill, North Carolina ("**Town**") and requested that Brandi Hale explore the availability of existing structures or potential new tower sites within the Search Ring that meet VZW's needs and network objectives. The Search Ring is attached to this Site Acquisition Affidavit as Exhibit A.

3. NT2's objective for the tower location within the Search Ring is to improve VZW's network in the Town, and, more specifically, the area along Route 501 near the Town.

4. Pursuant to Section 5.20.6 (specifically Table 5.20-1.6) of the Land Use Management Ordinance ("**Ordinance**") and N.C.G.S. § 160D-933(b)(3), Brandi Hale evaluated existing structures and potential tower sites within the Search Ring in light of the site hierarchy set forth in Section 5.20.6 (specifically Table 5.20-1.6) of the Ordinance. During Brandi Hale's search, NT2 found no Town-owned land or other publicly-owned land within the Search Ring that met VZW's network objectives.

5. Based upon Brandi Hale's search, NT2 identified one (1) candidate within the Search Ring that complied with VZW's objectives and the Ordinance (which site is now the basis of the application that this Site Acquisition Affidavit is submitted with) and provided it to the RF engineers at VZW for consideration.

[SIGNATURE PAGE FOLLOWS]

SITE ACQUISITION AFFIDAVIT

[Signature Page]

This the 18th day of June 2025.

By: _____

Name: _____

Title: _____

Brandi Hale
Program manager

COMMONWEALTH OF VIRGINIA
COUNTY OF Chesterfield

I certify that the following person personally appeared before me this day, acknowledging to me that such person voluntarily signed the foregoing document for the purpose stated therein and in the capacity indicated: Brandi Hale as Program Manager with Network Towers II, LLC.

Date: June 18, 2025

Jacob Townsend

Signature of Notary

Jacob Townsend

Notary Printed Name

My Commission Expires: September 30, 2027

(Official Seal)

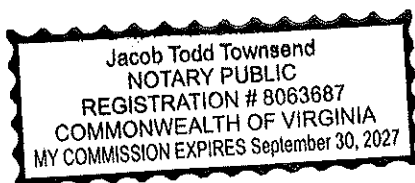
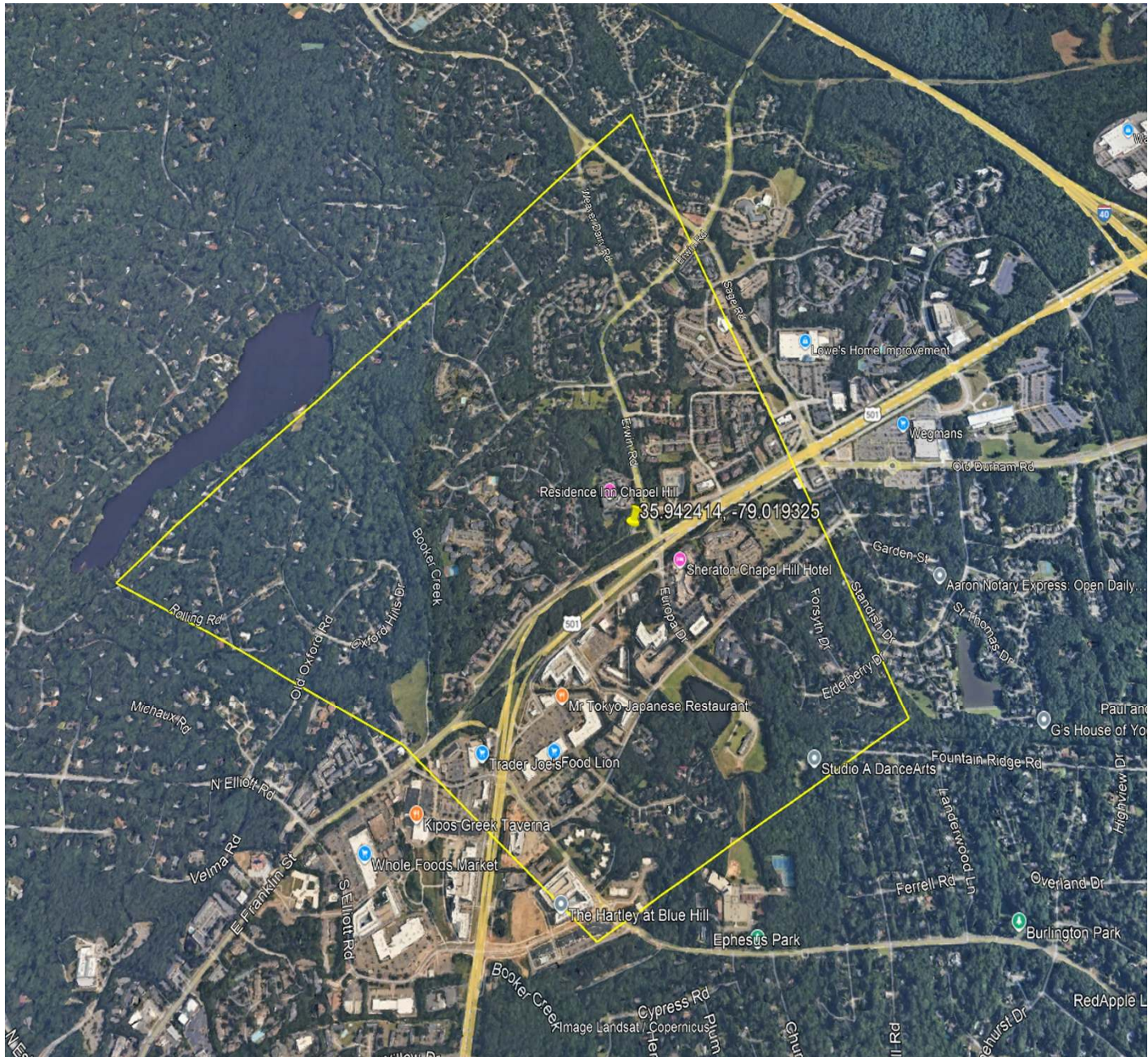


EXHIBIT A
Search Ring



To Whom It May Concern,

Below is the Network Towers Dobbins search ring, developed based on Verizon Wireless' identified area for improved coverage. This search ring guided the selection of a viable site for a new 199-foot telecommunications tower





Brandi Hale

Program Manager

NETWORK TOWERS

8601 Six Forks Road | Suite 540 | Raleigh, NC | 27615



NORTH CAROLINA

RADIOFREQUENCY AFFIDAVIT

Orange COUNTY

Kulbhashan Singh, after being first duly sworn, does hereby depose and state as follows:

1. I have been a Radiofrequency ("RF") Engineer with Verizon ("Verizon") for years and am qualified to render RF engineering opinions. Currently, I am the RF Engineer for the CAR/TN Submarket that includes the Eastern NC Region.

2. I am providing this Affidavit in compliance with Section Telecomm of the Orange Cty ("Ordinance") and N.C.G.S. § 160D-933(b).

3. Concurrently, Network Towers is providing propagation maps ("Propagation Maps") in connection with the application for a [major special use permit] ("Application") relating to a wireless telecommunications tower for Network Towers Site ID 378153 (15428419) in Orange County, North Carolina.

4. In my position with Verizon, it has been determined that Chapel Hill needs to improve Verizon's [network] in Orange County, and more specifically, along E. Franklin St. in Chapel Hill, North Carolina. Based upon this need, Verizon issued a search ring ("Search Ring") within which to identify potential existing structures or tower sites within the Search Ring to meet Verizon's RF objectives. The Site Acquisition Affidavit and Justification of no Collocations within the Search Ring is attached to this Affidavit as Exhibit A.

5. The Propagation Maps are attached to this Affidavit as Exhibit B. The Propagation Map identifies the need for improved coverage in the area of the Search Ring. Specifically, the existing coverage plot shows no or marginal service in the area of the Search Ring. On the Propagation Maps, the E. Franklin St. areas show no coverage and the E. Franklin St. areas indicate weak coverage that can lead to no service or dropped calls. Effective service requires the coverage shown in yellow polygon (best coverage) or yellow polygon (better coverage).

6. RF engineers with Verizon provide the Search Ring with height objectives to a site acquisition specialist to find sites within the Search Ring that meet Verizon's objectives and comply with the County ordinance. The site acquisition specialist identified one (1) candidates within the Search Ring that complied with Verizon's objectives. We received those one (1) candidates and based upon location, topography and other proprietary technical information determined that the site known as Dobbins CH PR Site ID 378153 (15428419) in Orange County, North Carolina and the subject of the special use permit application was the best site within the Search Ring to meet Verizon's objectives for this area.

[SIGNATURE PAGE FOLLOWS]

RADIOFREQUENCY AFFIDAVIT

[Signature Page]

This the 23 day of Sep., 2025.

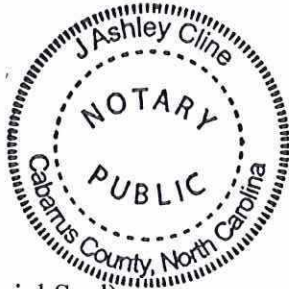
By: [Signature]
Name: Kulbhushan Singh
Title: Sr. RF Engineer

STATE OF NORTH CAROLINA

COUNTY OF Maitlenburg

I certify that the following person personally appeared before me this day, acknowledging to me that such person voluntarily signed the foregoing document for the purpose stated therein and in the capacity indicated: Kulbhushan Singh as RF Engineer of Verizon.

Date: September 23, 2025



(Official Seal)

[Signature]
Signature of Notary

J. Ashley Cline
Notary Printed Name

My Commission Expires: 1/12/26

EXHIBIT A

STATE OF NORTH CAROLINA

SITE ACQUISITION AFFIDAVIT

ORANGE COUNTY

Brandi Hale, after being first duly sworn, does hereby depose and state as follows:

1. I am a Program Manager with Network Towers II, LLC, a Maryland limited liability company ("NT2").
2. Verizon Wireless ("VZW") provided Brandi Hale with a search ring ("*Search Ring*") for Dobbins Site ID NC-T23.12 in the Town of Chapel Hill, North Carolina ("*Town*") and requested that Brandi Hale explore the availability of existing structures or potential new tower sites within the Search Ring that meet VZW's needs and network objectives. The Search Ring is attached to this Site Acquisition Affidavit as Exhibit A.
3. NT2's objective for the tower location within the Search Ring is to improve VZW's network in the Town, and, more specifically, the area along Route 501 near the Town.
4. Pursuant to Section 5.20.6 (specifically Table 5.20-1.6) of the Land Use Management Ordinance ("*Ordinance*") and N.C.G.S. § 160D-933(b)(3), Brandi Hale evaluated existing structures and potential tower sites within the Search Ring in light of the site hierarchy set forth in Section 5.20.6 (specifically Table 5.20-1.6) of the Ordinance. During Brandi Hale's search, NT2 found no Town-owned land or other publicly-owned land within the Search Ring that met VZW's network objectives.
5. Based upon Brandi Hale's search, NT2 identified one (1) candidate within the Search Ring that complied with VZW's objectives and the Ordinance (which site is now the basis of the application that this Site Acquisition Affidavit is submitted with) and provided it to the RF engineers at VZW for consideration.

[SIGNATURE PAGE FOLLOWS]

SITE ACQUISITION AFFIDAVIT
[Signature Page]

This the 18th day of June 2025.

By: [Signature]
Name: Brandi Hale
Title: Program Manager

COMMONWEALTH OF VIRGINIA
COUNTY OF Chesterfield

I certify that the following person personally appeared before me this day, acknowledging to me that such person voluntarily signed the foregoing document for the purpose stated therein and in the capacity indicated: Brandi Hale as Program Manager with Network Towers II, LLC.

Date: June 18, 2025

[Signature]

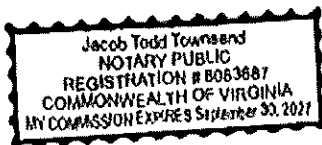
Signature of Notary

Jacob Townsend

Notary Printed Name

My Commission Expires: September 30, 2027

(Official Seal)





August 12, 2025

Re: No Colocation Opportunities

The two existing broadcast towers are located within a designated floodway, and any attempt to collocate on these structures would result in additional disturbance to that environmentally sensitive area. After consultation with the Stormwater Engineering Department, it was advised that further disturbance within the floodway is not recommended. As depicted in the submitted zoning drawings, both broadcast towers are located directly in the floodway.

Furthermore, the existing compounds—currently measuring 30'x30'—is insufficient to accommodate Verizon's required equipment footprint of 20'x25', along with the necessary space for up to two additional future colocators. Both broadcast tower compounds would also need to host space for up to three propane tank generators in order to provide potential back-up power for each colocator. To meet base flood elevation (BFE) requirements, all carrier equipment would also need to be placed on elevated platforms (roughly 11'-12'), further complicating site logistics and footprint requirements.

In addition, a new access road would need to be constructed to reach the broadcast tower sites, which would create even more disruption within the floodplain and floodway. For these reasons, collocation on the existing broadcast towers is not a viable or environmentally responsible alternative.

The applicant has submitted two tower feasibility study evaluating the two existing broadcast towers located on the subject parcel. As detailed in Section 6: Conclusions and Recommendations of the report, neither of the existing structures is structurally suitable for collocation. Furthermore, the studies confirm that reinforcing the towers to meet current structural and safety code requirements is not a viable option. Both existing broadcasting towers are not viable colocation opportunities, thus a new tower is needed.

6095 Marshalee Drive, Suite 300, Elkridge, Maryland 21075- Office 410-712-7092/Cell 410-703-1845

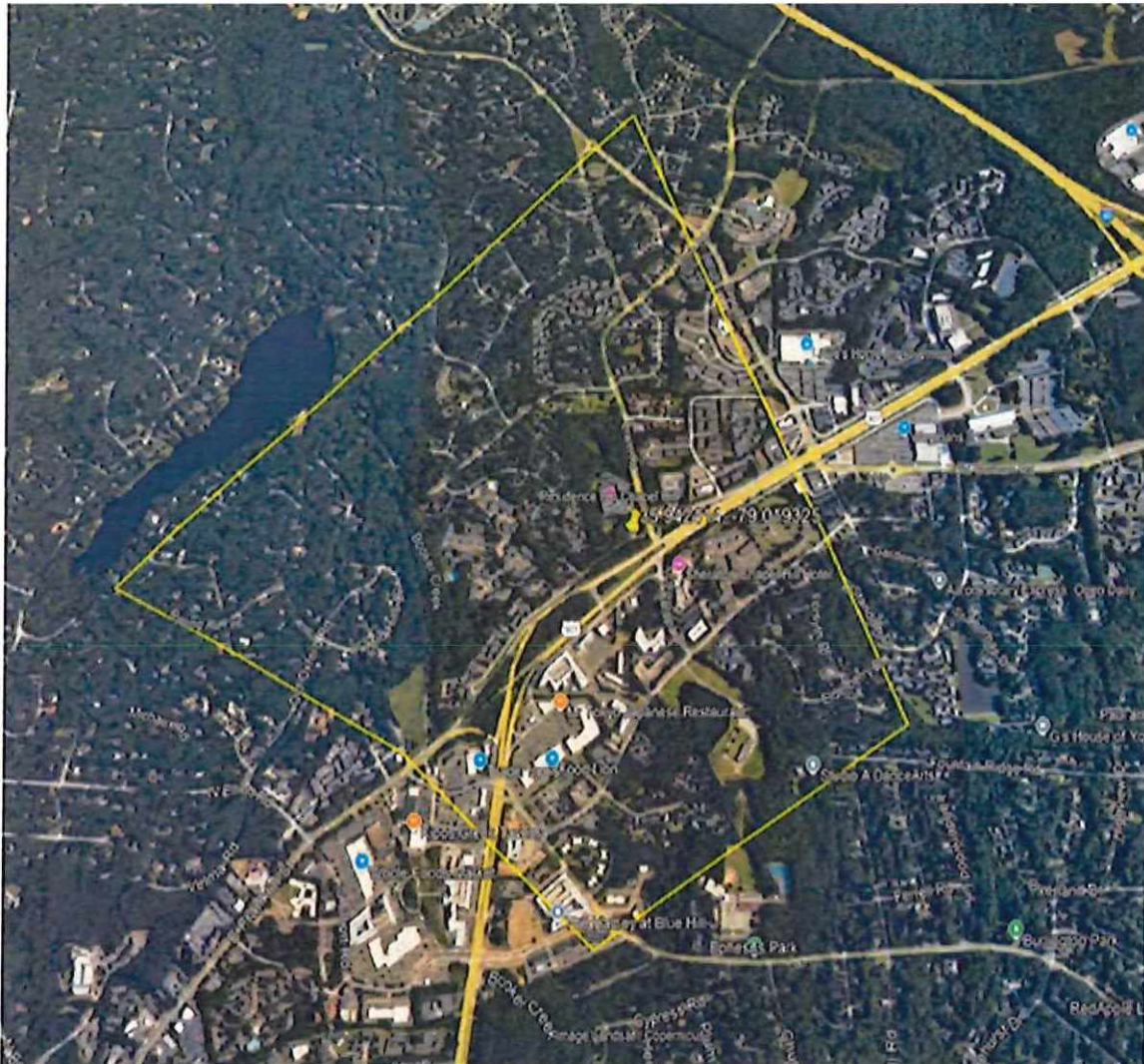
EXHIBIT B

Propagation Maps



To Whom It May Concern,

Below is the Network Towers Dobbins search ring, developed based on Verizon Wireless' identified area for improved coverage. This search ring guided the selection of a viable site for a new 199-foot telecommunications tower



NB&C

Site ID – NC-t23.12

Site Name – Dobbins

Site Compliance Report

**1721 E. Franklin Street
Chapel Hill, NC 27514**

Latitude: N35-56-16.29

Longitude: W79-1-37.18

Structure Type: Monopole

Report generated date: June 17, 2025

Report by: Benjamin Schnable

Customer Contact: Jacob Townsend

**NB&C is compliant with the FCC Rules and
Regulations, as described in OET Bulletin 65.**

NB&C
Dobbins- NC-t23.12
Radio Frequency (RF) Site Compliance Report



1721 E. Franklin Street, Chapel Hill, NC 27514



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1 Information

Original Report Date:	June 17, 2025
Total Report Revisions:	NA
Report Revision Date:	NA
Software Used:	RFMaster, Version 1.0092.31
Calculation Methodology:	Sula09
DOCUMENTS USED:	CD: Dobbins_FZDs_Rev 0_11-14-2024 RFDS: RFDS DOBBINS_CHDR_RFDS_V1_13052025
POWERS USED:	Max RRH Powers
Compliance Statement:	NB&C is compliant with the FCC Rules and Regulations, as described in OET Bulletin 65.



2 Actions for Site Compliance:

Based on common industry practice and our understanding of FCC and OSHA requirements, this section provides a statement of recommendations for site compliance. If required, RF alert signage recommendations have been proposed based on theoretical analysis of MPE levels.

NB&C is compliant with the FCC Rules and Regulations, as described in OET Bulletin 65, and with internal policy.

3 RF Exposure Diagram

The RF diagram(s) below display theoretical percentage of the Maximum Permissible Exposure for all systems at the site. These diagrams use modeling as prescribed in OET Bulletin 65 and assumptions detailed in Appendix B.

The key at the bottom of each diagram indicates if percentages displayed are referenced to FCC **General Public** Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:



This table displays the maximum theoretical percentage of the FCC's General Public MPE limits:

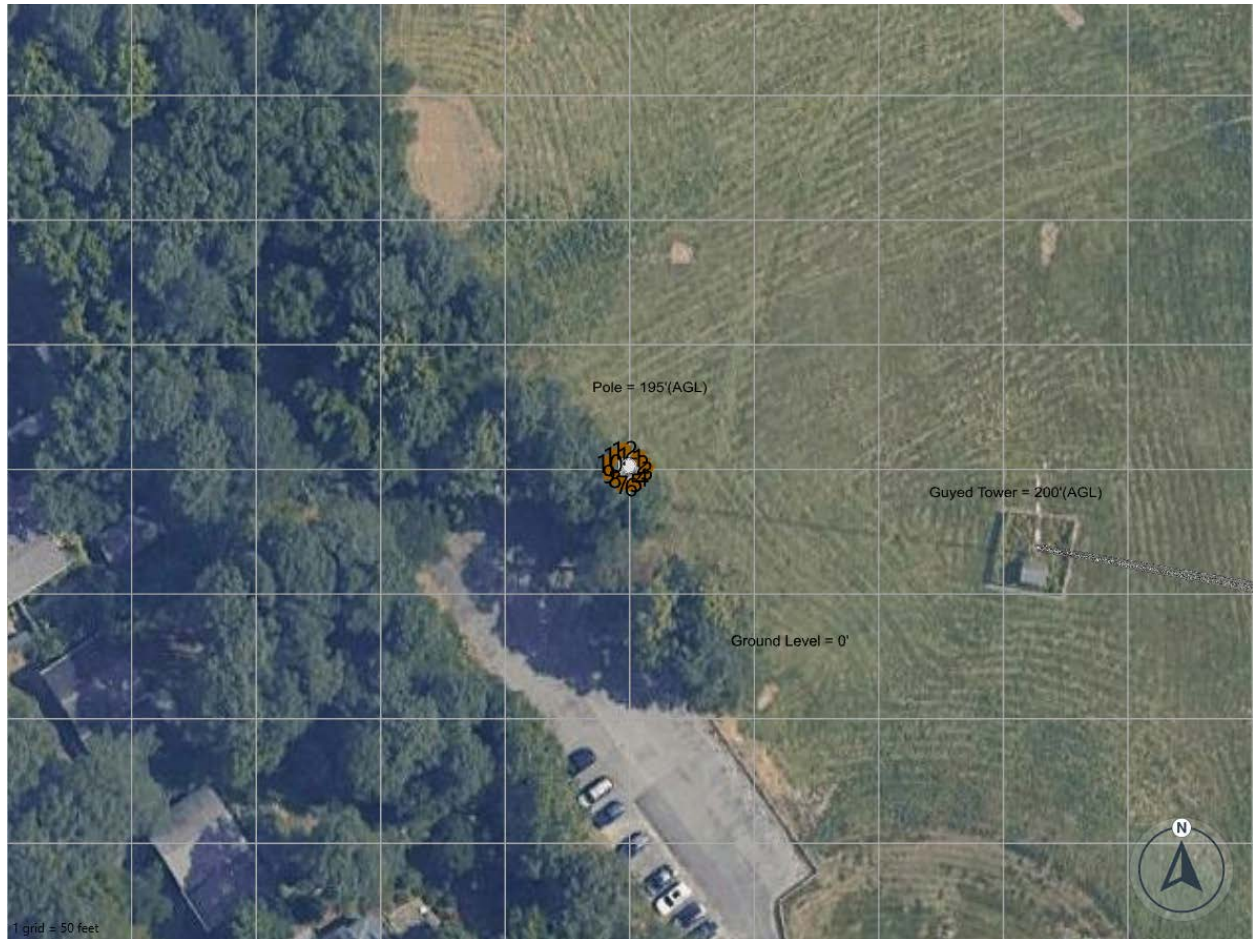
	General Public Levels:	
Exposure Type:	Maximum	Spatial Average
Reference Level:	Antenna	Ground
Composite:	16,840.9%	<1.0%

In the RF exposure simulations below, all heights are reflected with respect to the main site level. In most rooftop cases, this is the height of the main rooftop, and in other cases, this may be ground level. Each different area, rooftop, or platform level is labeled with its height relative to the main site level. Exposure is calculated appropriately based on the relative height and location of that area to all antennas. The analyzed elevations in the RF exposure simulations are as follows:

- GROUND LEVEL = 0'

RF Exposure Analysis for: Dobbins

Overhead View



Legend

Study Zone	Elev. (ft)	Type	Exposure Profile	Max MPE	Att	Carriers
Ground Level	0.0	Floor	2D Sula9 GP 5.0 res	0.14%	0.00	VZW
5% - 100%	100% - 500%	500% - 5000%	5000% +			
Exposure Profile Name	Model	Exposure Area	Standard	Resolution	RCF	
2D Sula9 GP 5.0 res	Sula 9	Spatial Avg. (6 ft)	FCC General Public	5	1.0	

 VZW

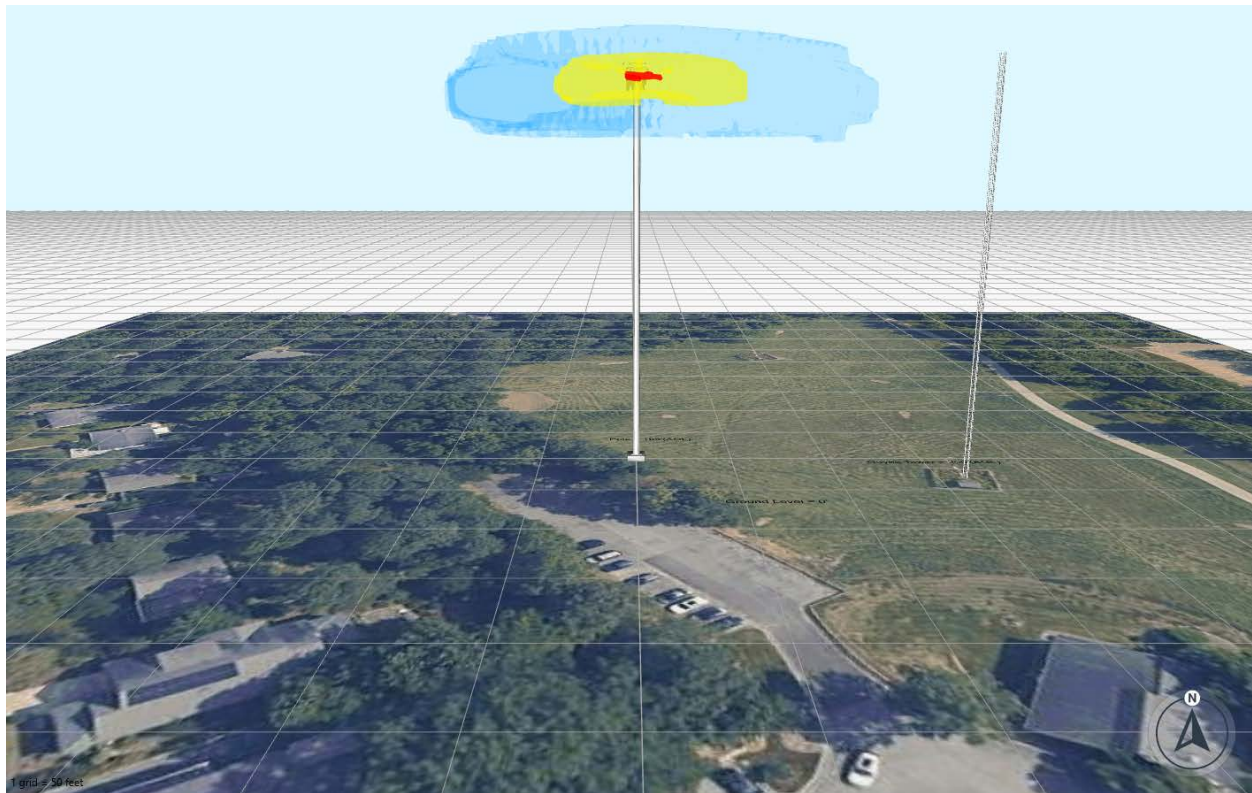
 Max MPE

Grid Size: 50.00 feet

Floor = Elevation + 6' | Mid-Level = Elevation +/- 3'

RF Exposure Analysis for: Dobbins

Elevation View



Legend

Study Zone	Elev. (ft)	Type	Exposure Profile	Max MPE	Att	Carriers
Elevation View	160.0 - 220.0	3D Area	3D Sula9 GP 5.0 res	16840.86%	0.00	VZW

100%-500%	500%-5000%	5000%+
-----------	------------	--------

Exposure Profile Name	Model	Exposure Area	Standard	Resolution	RCF
3D Sula9 GP 5.0 res	Sula 9	Spatial Avg. (6 ft)	FCC General Public	5	1.0

● VZW

● Max MPE

Grid Size: 50.00 feet

Floor = Elevation +6' | Mid-Level = Elevation +/- 3'



4 Antenna Inventory

The following antenna inventory and representative photographs were obtained or verified during the site visit and were utilized to create the site model diagrams:

ANT ID	Operator	Antenna Make and Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	Power	Power Type	Power Units	TX Count	Misc Loss	Total ERP (Watts)	Z (ft)	MDT (Deg)	EDT (Deg)
1	VZW	JMA SON_MX04FRO845-02E	Directional	700	LTE	60	48	8.0052	13.45	240	TPO	Watt	1	0	5311.41	190	0	2 to 12
1	VZW	JMA SON_MX04FRO845-02E	Directional	850	LTE	60	44	8.0052	14.05	120	TPO	Watt	1	0	3049.16	190	0	2 to 12
1	VZW	JMA SON_MX04FRO845-02E	Directional	850	5G	60	44	8.0052	14.05	120	TPO	Watt	1	0	3049.16	190	0	2 to 12
2	VZW	ERICSSON SON_AIR3283 LTE Macro TB	Directional	1900	LTE	60	61	3.937	17.66	160	TPO	Watt	1	0	9335.13	190	0	2 to 12
2	VZW	ERICSSON SON_AIR3283 LTE Macro TB	Directional	2100	LTE	60	61	3.937	18.2	80	TPO	Watt	1	0	5285.54	190	0	2 to 12
2	VZW	ERICSSON SON_AIR3283 LTE Macro TB	Directional	2100	LTE	60	61	3.937	18.2	80	TPO	Watt	1	0	5285.54	190	0	2 to 12
3	VZW	ERICSSON SON_AIR6419 B77D TB	Directional	3700	C-BAND	60	11	2.3524	23.45	320	TPO	Watt	1	0	70818.96	190	0	6
4	VZW	JMA SON_MX08FHG865-BHG	Directional	700	LTE	135	62	8.0052	14.95	240	TPO	Watt	1	0	7502.57	190	0	0 to 10
4	VZW	JMA SON_MX08FHG865-BHG	Directional	850	LTE	135	54	8.0052	15.05	120	TPO	Watt	1	0	3838.67	190	0	0 to 10
4	VZW	JMA SON_MX08FHG865-BHG	Directional	850	5G	135	54	8.0052	15.05	120	TPO	Watt	1	0	3838.67	190	0	0 to 10
5	VZW	ERICSSON SON_AIR3283 LTE Macro TB	Directional	1900	LTE	135	61	3.937	17.66	160	TPO	Watt	1	0	9335.13	190	0	2 to 12
5	VZW	ERICSSON SON_AIR3283 LTE Macro TB	Directional	2100	LTE	135	61	3.937	18.2	80	TPO	Watt	1	0	5285.54	190	0	2 to 12
5	VZW	ERICSSON SON_AIR3283 LTE Macro TB	Directional	2100	LTE	135	61	3.937	18.2	80	TPO	Watt	1	0	5285.54	190	0	2 to 12
6	VZW	ERICSSON SON_AIR6419 B77D TB	Directional	3700	C-BAND	135	11	2.3524	23.45	320	TPO	Watt	1	0	70818.96	190	0	6
7	VZW	JMA SON_MX04FRO845-02E	Directional	700	LTE	215	48	8.0052	13.45	240	TPO	Watt	1	0	5311.41	190	0	2 to 12
7	VZW	JMA SON_MX04FRO845-02E	Directional	850	LTE	215	44	8.0052	14.05	120	TPO	Watt	1	0	3049.16	190	0	2 to 12
7	VZW	JMA SON_MX04FRO845-02E	Directional	850	5G	215	44	8.0052	14.05	120	TPO	Watt	1	0	3049.16	190	0	2 to 12
8	VZW	ERICSSON SON_AIR3283 LTE Macro TB	Directional	1900	LTE	215	61	3.937	17.66	160	TPO	Watt	1	0	9335.13	190	0	2 to 12
8	VZW	ERICSSON SON_AIR3283 LTE Macro TB	Directional	2100	LTE	215	61	3.937	18.2	80	TPO	Watt	1	0	5285.54	190	0	2 to 12
8	VZW	ERICSSON SON_AIR3283 LTE Macro TB	Directional	2100	LTE	215	61	3.937	18.2	80	TPO	Watt	1	0	5285.54	190	0	2 to 12
9	VZW	ERICSSON SON_AIR6419 B77D TB	Directional	3700	C-BAND	215	11	2.3524	23.45	320	TPO	Watt	1	0	70818.96	190	0	6



ANT ID	Operator	Antenna Make and Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	Power	Power Type	Power Units	TX Count	Misc Loss	Total ERP (Watts)	Z (ft)	MDT (Deg)	EDT (Deg)
10	VZW	JMA SON_MX08FHG865-BHG	Directional	700	LTE	310	62	8.0052	14.95	240	TPO	Watt	1	0	7502.57	190	0	0 to 10
10	VZW	JMA SON_MX08FHG865-BHG	Directional	850	LTE	310	54	8.0052	15.05	120	TPO	Watt	1	0	3838.67	190	0	0 to 10
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11	VZW	ERICSSON SON_AIR3283 LTE Macro TB	Directional	2100	LTE	310	61	3.937	18.2	80	TPO	Watt	1	0	5285.54	190	0	2 to 12
12	VZW	ERICSSON SON_AIR6419 B77D TB	Directional	3700	C-BAND	310	11	2.3524	23.45	320	TPO	Watt	1	0	70818.96	190	0	6

Note: The Z reference indicates antenna height above the ground level (AGL). ERP values provided by the client and used in the modeling may be greater than are currently deployed. For additional modeling information, refer to Appendix B. Proposed equipment is tagged as *(Proposed)* under *Operator* or *Antenna Make and Model*.



5 Reviewer Certification

The reviewer whose signature appears below hereby certifies and affirms:

That I am an employee of InfraServices Group Wireless LLC at which the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Benjamin Schnable.

June 17, 2025

Mahmoud Eid



Appendix A – Statement of Limiting Conditions

Sitesafe™ will not be responsible for matters of a legal nature that affect the site or property.

Due to the complexity of some wireless sites, Sitesafe™ performed this analysis and created this report utilizing best industry practices and due diligence. Sitesafe™ cannot be held accountable or responsible for anomalies or discrepancies due to actual site conditions (i.e., mislabeling of antennas or equipment, inaccessible cable runs, inaccessible antennas or equipment, etc.) or information or data supplied by NB&C, the site manager, or their affiliates, subcontractors or assigns.

Sitesafe™ has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe™'s recommendations.

Sitesafe™ may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, observed during the survey of the subject property or that Sitesafe™ became aware of during the normal research involved in performing this survey. Sitesafe™ will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe™ is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe™ obtained information used in this Site Compliance Report from sources that Sitesafe™ considers reliable and believes them to be true and correct. Sitesafe™ does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data provided by a second party and physical data collected by Sitesafe™, the physical data will be used.



Appendix B – Assumptions and Definitions

General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at **full power at all times**. Software modeling was performed for all transmitting antennas located on the site. Sitesafe™ has further assumed a 100% duty cycle and maximum radiated power.

The site has been modeled with these assumptions to show the maximum RF energy density. Sitesafe™ believes this to be a *worst-case* analysis, based on best available data. Areas modeled to predict exposure greater than 100% of the applicable MPE level may not actually occur but are shown as a *worst-case* prediction that could be realized real time. Sitesafe™ believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

Thus, at any time, if power density measurements were made, we believe the real-time measurements would indicate levels below those depicted in the RF exposure diagram(s) in this report. By modeling in this way, Sitesafe™ has conservatively shown exclusion areas – areas that should not be entered without the use of a personal monitor, carriers reducing power, or performing real-time measurements to indicate real-time exposure levels.

Definitions

5% Rule – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible for taking corrective actions to bring the site into compliance.

Compliance – The determination of whether a site complies with FCC standards with regards to Human Exposure to Radio Frequency Electromagnetic Fields from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to a half-wave dipole antenna.

Gain (of an antenna) – The ratio, usually expressed in decibels, of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power density at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. Gain may be considered for a specified polarization. Gain may be referenced to an isotropic antenna (dBi) or a half-wave dipole (dBd) antenna.

General Population/Uncontrolled Environment – Defined by the FCC as an area where RF exposure may occur to persons who are *unaware* of the potential for exposure and who have no control over their exposure. General Population is also referenced as General Public.

Generic Antenna – For the purposes of this report, the use of “Generic” as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe™ will use its industry specific knowledge of antenna models to select a worst-case scenario antenna to model the site.

Isotropic Antenna – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.



Maximum Measurement – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

Maximum Permissible Exposure (MPE) – The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

Occupational/Controlled Environment – Defined by the FCC as an area where RF exposure may occur to persons who are **aware** of the potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of RF exposure on humans. The guideline was published in August 1997.

OSHA (Occupational Safety and Health Administration) – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit www.osha.gov.

Radio Frequency Exposure or Electromagnetic Fields – Electromagnetic waves that are propagated from antennas through space.

Spatial Average Measurement – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average energy a 6-foot tall human body will absorb while present in an electromagnetic field of energy.

Transmitter Power Output (TPO) – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.



Appendix C – Rules & Regulations

Explanation of Applicable Rules and Regulations

The FCC has set forth guidelines in OET Bulletin 65 for human exposure to radio frequency electromagnetic fields. Specific regulations regarding this topic are listed in Part 1, Subpart I, of Title 47 in the Code of Federal Regulations. Currently, there are two different levels of MPE - General Public MPE and Occupational MPE. An individual classified as Occupational can be defined as an individual who has received appropriate RF training and meets the conditions outlined below. General Public is defined as anyone who does not meet the conditions of being Occupational. FCC and OSHA Rules and Regulations define compliance in terms of total exposure to total RF energy, regardless of location of or proximity to the sources of energy.

It is the responsibility of all licensees to ensure these guidelines are maintained at all times. It is the ongoing responsibility of all licensees composing the site to maintain ongoing compliance with FCC rules and regulations. Individual licensees that contribute less than 5% MPE to any total area out of compliance are not responsible for corrective actions.

OSHA has adopted and enforces the FCC's exposure guidelines. A building owner or site manager can use this report as part of an overall RF Health and Safety Policy. It is important for building owners/site managers to identify areas in excess of the General Population MPE and ensure that only persons qualified as Occupational are granted access to those areas.

Occupational Environment Explained

The FCC definition of Occupational exposure limits apply to persons who:

- are exposed to RF energy as a consequence of their employment;
- have been made aware of the possibility of exposure; and
- can exercise control over their exposure.

OSHA guidelines go further to state that persons must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

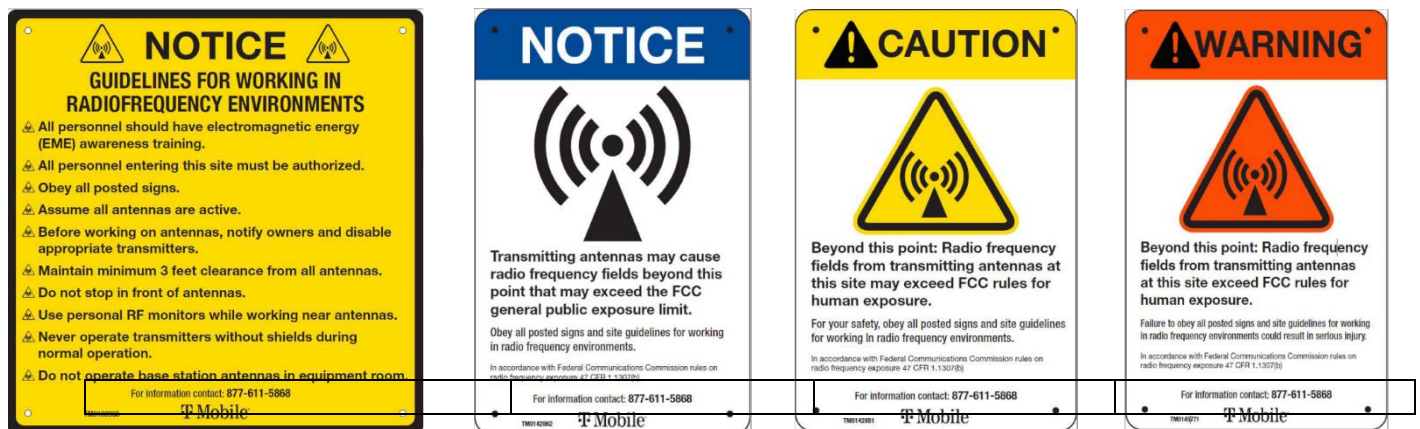
In order to consider this site an Occupational Environment, the site must be controlled to prevent access by any individuals classified as the General Public. Compliance is also maintained when any non-occupational individuals (the General Public) are prevented from accessing areas indicated as Red or Yellow in the attached RF exposure diagram. In addition, a person must be aware of the RF environment into which they are entering. This can be accomplished by an RF Safety Awareness class, and by appropriate written documentation such as this Site Compliance Report.

All employees who require access to this site must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

Appendix D – General Safety Recommendations

The following are *general recommendations* appropriate for any site with accessible areas in excess of 100% General Public MPE. These recommendations are not specific to this site. These are safety recommendations appropriate for typical site management, building management, and other tenant operations.

1. All individuals needing access to the main site (or the area indicated to be in excess of General Public MPE) should wear a personal protective monitor (PPM), successfully complete proper RF Safety Awareness training, and have and be trained in the use of appropriate personal protective equipment.
2. All individuals needing access to the main site should be instructed to read and obey all posted placards and signs.
3. The site should be routinely inspected and this or similar report updated with the addition of any antennas or upon any changes to the RF environment including:
 - adding new antennas that may have been located on the site
 - removing of any existing antennas
 - changes in the radiating power or number of RF emitters
4. Post the appropriate **NOTICE**, **CAUTION**, or **WARNING** sign at the main site access point(s) and other locations as required. Note: Please refer to RF Exposure Diagrams in Section 3.1 to inform everyone who has access to this site that beyond posted signs there may be levels in excess of the limits prescribed by the FCC. In addition to RF Advisory Signage, a RF Guideline Signage is recommended to be posted at the main site access point(s). The signs below are examples of signs meeting FCC guidelines.



5. Ensure that the site door remains locked (or appropriately controlled) to deny access to the general public if deemed as policy by the building/site owner.
6. For a General Public environment the five color levels identified in this analysis can be interpreted in the following manner:



- Gray represents areas predicted to be at 5% or less of the General Public MPE limits. *The General Public can access these areas with no restrictions.*
- Green represents areas predicted to be between 5% and 100% of the General Public MPE limits. *The General Public can access these areas with no restrictions.*
- Blue represents areas predicted to be between 100% and 500% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*
- Yellow represents areas predicted to be between 500% and 5000% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*
- Red represents areas predicted to be greater than 5000% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*

7. For an Occupational environment the five color levels identified in this analysis can be interpreted in the following manner:

- Gray represents areas predicted to be at 1% or less of the Occupational MPE limits. *Workers can access these areas with no restrictions.*
- Green represents areas predicted to be between 1% and 20% of the Occupational MPE limits. *Workers can access these areas with no restrictions.*
- Blue represents areas predicted to be between 20% and 100% of the Occupational MPE limits. Workers can access these areas assuming they have basic understanding of EME awareness and RF safety procedures and understand how to limit their exposure.
- Yellow represents areas predicted to be between 100% and 1000% of the Occupational MPE limits. Workers can access these areas assuming they have basic understanding of EME awareness and RF safety procedures and understand how to limit their exposure. Transmitter power reduction and/or time-averaging may be required.
- Red represents areas predicted to be greater than 1000% of the Occupational MPE limits. These areas are not safe for workers to be in for prolonged periods of time. Special procedures must be adhered to, such as lockout/tagout or transmitter power reduction, to minimize worker exposure to EME.

8. Use of a Personal Protective Monitor (PPM): When working around antennas, Sitesafe™ strongly recommends the use of a PPM. Wearing a PPM will properly forewarn the individual prior to entering an RF exposure area.

Keep a copy of this report available for all persons who must access the site. They should read this report and be aware of the potential hazards with regards to RF and MPE limits.

Additional Information

Additional RF information is available at the following sites:

<https://www.fcc.gov/general/radio-frequency-safety-0>
<https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety>

OSHA has additional information available at:

<https://www.osha.gov/SLTC/radiofrequencyradiation/index.html>

Appendix E – Regulatory Basis

FCC Rules and Regulations

In 1996, the Federal Communications Commission (FCC) adopted regulations for evaluating the effects of RF exposure in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 (“OET Bulletin 65”), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

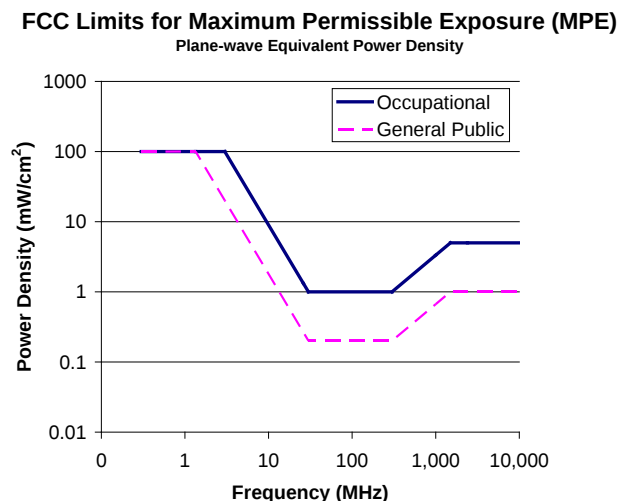
FCC regulations define two separate tiers of exposure limits: Occupational or “Controlled environment” and General Public or “Uncontrolled environment”. The General Public limits are generally five times more conservative or restrictive than the Occupational limits. The General Public limits apply to *accessible* areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF hazard signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF hazard signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:



Limits for Occupational/Controlled Exposure (MPE)				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
Limits for General Population/Uncontrolled Exposure (MPE)				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30
f = frequency in MHz *Plane-wave equivalent power density				

Appendix F – Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

General Maintenance Work: Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

Training and Qualification Verification: All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a worker's understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet-based courses).

Physical Access Control: Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:

- Locked door or gate
- Alarmed door
- Locked ladder access
- Restrictive Barrier at antenna (e.g. Chain link with posted RF Sign)

RF Signage: Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

Assume all antennas are active: Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

Site RF Exposure Diagram(s): Section 3 of this report contains RF Diagram(s) that outline various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst-case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.



TKK Engineering P.C.

Feasibility Study of an Existing Structure

Prepared for Network Towers
Revision 0

Date:
July 29, 2025

Tower Owner Information

Tower Owner Chapel Hill Media Group
Site Name: WCHL – North Tower

Client Information

Carrier Network Towers
Site Name: Dobbins NT2 – North Tower

Structure Information

Structure Data: 200.0 ft Guyed Tower
Structure Location: 1721 E Franklin Street, Chapel Hill, NC 27514 (Orange County)
Latitude: 35° 56' 16.2901" N **Longitude:** 79° 1' 37.1788" W

TKK Engineering P.C.

Project Number: 100793

Load Case: Existing Equipment Configuration		
Structure Capacity	Foundation Capacity	Rating
>200%	Not Analyzed	Insufficient

Structural Analysis per 2024 North Carolina State Building Code and ANSI/TIA-222-H

Prepared By:

Ben Wright
Structural Engineer II

Submitted By:

Krupakaran Kolandaivelu, PE
Vice President of Engineering
NC PE License #039073
NC Firm License No. C-4682

7/28/2025



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Appendix A

tnxTower Analysis Output

Appendix B

Loading Parameters

1. Introduction

The existing structure is a 200.0 ft Guyed Tower located in Orange County, NC.

Pursuant to your request, **TKK Engineering, P.C. (“TKK P.C.”)** has performed a **Feasibility Study** of the existing structure to determine if existing structure is in code compliance with the applicable codes and standards outlined in **Section 2** of this report. Additional criteria, methodology, and assumptions are discussed in **Section 4**. A summary of the analysis results is outlined in detail in **Section 5**. To meet the requirements of the analysis, please see the conclusions and recommendations discussed in **Section 6**.

This report shall only be considered as a preliminary structural analysis of the existing structure to evaluate the feasibility of future changed conditions, limited to the overall stability of the structure and the strength requirements for the main load carrying members of the structure and does not include an assessment of the foundation(s).

2. Analysis Criteria

Table 2.1 – Reference Documentation	
Document Type	Description
Tower Mapping Report	NB+C ES, Site Name: Dobbins, dated July 14, 2025

Table 2.2 – Criteria and Parameters			
Codes and Standards			
Building Code		2024 North Carolina State Building Code	
ASCE 7 Standard		ASCE 7-16	
TIA Standard		ANSI/TIA-222-H	
General Analysis Parameters			
Risk Category		II	
Service Wind Speed, Vs		60 mph	
Wind Parameters		Ice and Seismic Parameters	
Wind Speed, V	114 mph	Ice Wind Speed, Vi	30 mph
Exposure Category	C	Ice Thickness, ti	1.50 inch
Ground Elevation Factor, Ke	0.990	0.2-Second Period, Ss	0.122 g
Topographic Factor, Kzt	1.000	1-Second Period, S1	0.061 g

3. Loading Configuration

The structure has been analyzed for the existing appurtenance and feed line configurations outlined in the tables below, as per the information provided to us. Please refer to **Table 2.1** for the loading information provided. **TKK P.C.** should be notified immediately if deviations are determined with the configurations outlined below to perform a revised analysis.

Table 3.1 – Existing Loading Configuration						
Equipment Centerline	Quantity	Manufacturer	Model	Feed Lines	Carrier	Notes
201.0 ft	1	-	Flash Beacon Lighting	-	-	-
			Lightning Rod			
100.0 ft	2		Side Marker			
22.0 ft	1		Empty Mount Pipe			

4. Analysis Procedure

4.1 Methodology

tnxTower (version 8.3.1.2), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in **Appendix A**.

4.2 Assumptions

This **Feasibility Study of an Existing Structure** is based upon the theoretical capacity of the structure based on the information provided in **Table 2.1** and is not a condition assessment of the structure. All elements assumed to be in satisfactory condition. The analysis may be affected if any assumptions are not valid or have been made in error, **TKK P.C.** should be notified to determine the effect on the structural integrity of the structure. The following assumptions were made for this analysis:

- 1) The tower and structures were built in accordance with the manufacturer's specifications and/or engineering design documentation.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in **Table 3.1**.
- 3) All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
- 4) The location of the existing and proposed equipment on the proposed mount structure is based on information provided to **TKK P.C.**
- 5) Material grades were not provided and were assumed to be in accordance with Table 2-4 "Applicable ASTM Specifications for Various Structural Shapes" per the AISC 15th Edition of the Steel Construction Manual. The following material grades were assumed based on information stated in **Table 4.1** below: Tower Legs (A36), Tower Bracing (A36), and Guy Wires (A475 EHS).
- 6) Existing tower geometry is based on information provided in the Tower Mapping by **NB+C ES** dated July 14, 2025.

Table 4.1 – Material Grades		
Material	Component Type	Grade
Steel	Tower Legs	A36
Steel	Tower Bracing	A36
Steel	Guy Wires	A475 EHS

5. Results Summary

This analysis has been performed in accordance with the documentation, analysis criteria, and the loading configuration outlined in **Section 2** and **Section 3**, as well as any assumptions outlined in **Section 4**, of this report. If the assumptions outlined in this report differ from actual field conditions, **TKK P.C.** should be contacted to perform a revised analysis. See **Appendix A** for additional documentation.

Table 5.1 – tnxTower Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (kip)	ϕP_{allow} (kip)	Capacity	Pass / Fail
T1	201 - 191	Leg	1 1/2	3	-0.07	57.23	26.3	Pass
T2	191 - 181	Leg	1 1/2	27	-4.01	57.23	50.3	Pass
T3	181 - 171	Leg	1 1/2	51	-4.00	57.23	48.0	Pass
T4	171 - 161	Leg	1 1/2	73	-5.27	57.23	84.2	Pass
T5	161 - 151	Leg	1 1/2	97	-5.26	57.23	85.7	Pass
T6	151 - 141	Leg	1 1/2	121	-11.38	57.23	>200.0	Fail
T7	141 - 131	Leg	1 1/2	145	-11.37	57.23	>200.0	Fail
T8	131 - 121	Leg	1 1/2	169	-26.69	57.23	>200.0	Fail
T9	121 - 111	Leg	1 1/2	193	-26.67	57.23	>200.0	Fail
T10	111 - 101	Leg	1 1/2	219	36.13	57.26	>200.0	Fail
T11	101 - 91	Leg	1 1/2	243	-17.54	57.23	>200.0	Fail
T12	91 - 81	Leg	1 1/2	266	-28.43	57.23	>200.0	Fail
T13	81 - 71	Leg	1 1/2	290	-29.03	57.23	>200.0	Fail
T14	71 - 61	Leg	1 1/2	314	-76.38	57.23	>200.0	Fail
T15	61 - 51	Leg	1 1/2	338	-386.96	56.68	>200.0	Fail
T16	51 - 41	Leg	1 1/2	362	-273.86	56.68	>200.0	Fail
T17	41 - 31	Leg	1 1/2	385	-61.79	57.23	>200.0	Fail
T18	31 - 21	Leg	1 1/2	410	-86.79	57.23	>200.0	Fail
T19	21 - 11	Leg	1 1/2	434	-85.77	57.23	>200.0	Fail
T20	11 - 1	Leg	1 1/2	457	-61.09	57.23	>200.0	Fail
T1	201 - 191	Horizontal	2x1/4	12	-0.03	3.23	113.9	Fail
T2	191 - 181	Horizontal	2x1/4	36	-0.07	3.23	185.8	Fail
T3	181 - 171	Horizontal	2x1/4	60	-0.12	3.23	>200.0	Fail
T4	171 - 161	Horizontal	2x1/4	92	-0.20	3.23	>200.0	Fail
T5	161 - 151	Horizontal	2x1/4	106	-0.02	3.23	>200.0	Fail
T6	151 - 141	Horizontal	2x1/4	132	1.84	16.20	>200.0	Fail
T7	141 - 131	Horizontal	2x1/4	156	2.56	16.20	>200.0	Fail
T8	131 - 121	Horizontal	2x1/4	178	3.00	16.20	>200.0	Fail
T9	121 - 111	Horizontal	2x1/4	213	-0.25	3.23	>200.0	Fail
T10	111 - 101	Horizontal	2x1/4	236	-0.75	3.23	>200.0	Fail
T11	101 - 91	Horizontal	2x1/4	250	-0.41	3.23	>200.0	Fail
T12	91 - 81	Horizontal	2x1/4	280	-0.46	3.23	>200.0	Fail
T13	81 - 71	Horizontal	2x1/4	299	-1.35	3.23	>200.0	Fail
T14	71 - 61	Horizontal	2x1/4	324	-2.35	3.23	>200.0	Fail
T15	61 - 51	Horizontal	2x1/4	352	-1.87	3.23	>200.0	Fail
T16	51 - 41	Horizontal	2x1/4	377	-1.83	3.23	>200.0	Fail
T17	41 - 31	Horizontal	2x1/4	398	-2.10	3.23	>200.0	Fail
T18	31 - 21	Horizontal	2x1/4	426	-24.72	3.23	>200.0	Fail
T19	21 - 11	Horizontal	2x1/4	442	-1.99	3.23	>200.0	Fail
T20	11 - 1	Horizontal	2x1/4	473	-1.34	3.23	>200.0	Fail
T1	201 - 191	Top Girt	2x1/4	6	-0.03	3.23	74.5	Pass
T2	191 - 181	Top Girt	2x1/4	30	-0.07	3.23	132.4	Fail
T3	181 - 171	Top Girt	2x1/4	54	-0.15	3.23	192.2	Fail
T4	171 - 161	Top Girt	2x1/4	77	-0.20	3.23	>200.0	Fail

Feasibility Study of an Existing Structure – 200.0 ft Guyed Tower

Network Towers – Dobbins NT2 – North Tower

TKK P.C. Project Number: 100793

July 29, 2025



T5	161 - 151	Top Girt	2x1/4	100	-0.02	3.23	>200.0	Fail
T6	151 - 141	Top Girt	2x1/4	126	0.67	16.20	>200.0	Fail
T7	141 - 131	Top Girt	2x1/4	150	1.79	16.20	>200.0	Fail
T8	131 - 121	Top Girt	2x1/4	174	-0.56	3.23	>200.0	Fail
T9	121 - 111	Top Girt	2x1/4	196	-0.63	3.23	>200.0	Fail
T10	111 - 101	Top Girt	2x1/4	222	-0.77	3.23	>200.0	Fail
T11	101 - 91	Top Girt	2x1/4	246	-0.12	3.23	>200.0	Fail
T12	91 - 81	Top Girt	2x1/4	268	-0.31	3.23	>200.0	Fail
T13	81 - 71	Top Girt	2x1/4	294	-0.56	3.23	>200.0	Fail
T14	71 - 61	Top Girt	2x1/4	318	-2.30	3.23	>200.0	Fail
T15	61 - 51	Top Girt	2x1/4	342	-2.48	3.23	>200.0	Fail
T16	51 - 41	Top Girt	2x1/4	364	103.70	16.20	>200.0	Fail
T17	41 - 31	Top Girt	2x1/4	390	2.00	16.20	>200.0	Fail
T18	31 - 21	Top Girt	2x1/4	414	-1.76	3.23	>200.0	Fail
T19	21 - 11	Top Girt	2x1/4	438	-1.71	3.23	>200.0	Fail
T20	11 - 1	Top Girt	2x1/4	462	-0.67	3.23	>200.0	Fail
T1	201 - 191	Bottom Girt	2x1/4	9	-0.03	3.23	124.7	Fail
T2	191 - 181	Bottom Girt	2x1/4	33	-0.07	3.23	190.5	Fail
T3	181 - 171	Bottom Girt	2x1/4	56	-0.15	3.23	>200.0	Fail
T4	171 - 161	Bottom Girt	2x1/4	79	0.45	16.20	199.3	Fail
T5	161 - 151	Bottom Girt	2x1/4	104	-0.13	3.23	>200.0	Fail
T6	151 - 141	Bottom Girt	2x1/4	129	2.08	16.20	>200.0	Fail
T7	141 - 131	Bottom Girt	2x1/4	153	2.20	16.20	>200.0	Fail
T8	131 - 121	Bottom Girt	2x1/4	175	-0.53	3.23	>200.0	Fail
T9	121 - 111	Bottom Girt	2x1/4	201	-0.64	3.23	>200.0	Fail
T10	111 - 101	Bottom Girt	2x1/4	225	-0.25	3.23	>200.0	Fail
T11	101 - 91	Bottom Girt	2x1/4	247	-0.41	3.23	>200.0	Fail
T12	91 - 81	Bottom Girt	2x1/4	272	-0.30	3.23	>200.0	Fail
T13	81 - 71	Bottom Girt	2x1/4	296	-1.35	3.23	>200.0	Fail
T14	71 - 61	Bottom Girt	2x1/4	321	-2.35	3.23	>200.0	Fail
T15	61 - 51	Bottom Girt	2x1/4	343	60.56	16.20	>200.0	Fail
T16	51 - 41	Bottom Girt	2x1/4	369	-0.55	3.23	>200.0	Fail
T17	41 - 31	Bottom Girt	2x1/4	392	-1.65	3.23	>200.0	Fail
T18	31 - 21	Bottom Girt	2x1/4	417	-2.01	3.23	>200.0	Fail
T19	21 - 11	Bottom Girt	2x1/4	439	-1.99	3.23	>200.0	Fail
T20	11 - 1	Bottom Girt	2x1/4	465	-13.79	3.23	>200.0	Fail
T3	181 - 171	Guy A@179.336	5/16	483	3.29	6.72	49.0	Pass
T8	131 - 121	Guy A@130.568	5/16	486	3.11	6.72	46.3	Pass
T13	81 - 71	Guy A@74.5938	5/16	489	3.48	6.72	51.7	Pass
T17	41 - 31	Guy A@39.3359	5/16	492	2.74	6.72	40.7	Pass
T3	181 - 171	Guy B@179.336	5/16	482	3.29	6.72	49.0	Pass
T8	131 - 121	Guy B@130.568	5/16	485	3.11	6.72	46.3	Pass
T13	81 - 71	Guy B@74.5938	5/16	488	2.91	6.72	43.3	Pass
T17	41 - 31	Guy B@39.3359	5/16	491	2.90	6.72	43.1	Pass
T3	181 - 171	Guy C@179.336	5/16	481	3.29	6.72	49.0	Pass
T8	131 - 121	Guy C@130.568	5/16	484	3.11	6.72	46.3	Pass
T13	81 - 71	Guy C@74.5938	5/16	487	2.91	6.72	43.3	Pass
T17	41 - 31	Guy C@39.3359	5/16	490	4.19	6.72	62.4	Pass
							Summary	
						Leg (T15)	>200.0	Fail
						Horizontal (T15)	>200.0	Fail
						Top Girt (T16)	>200.0	Fail
						Bottom Girt (T14)	>200.0	Fail
						Guy A (T13)	51.7	Pass
						Guy B (T3)	49.0	Pass
						Guy C (T17)	62.4	Pass
						Bolt Checks	>200.0	Fail
						RATING =	>200.0	Fail

6. Conclusion and Recommendations

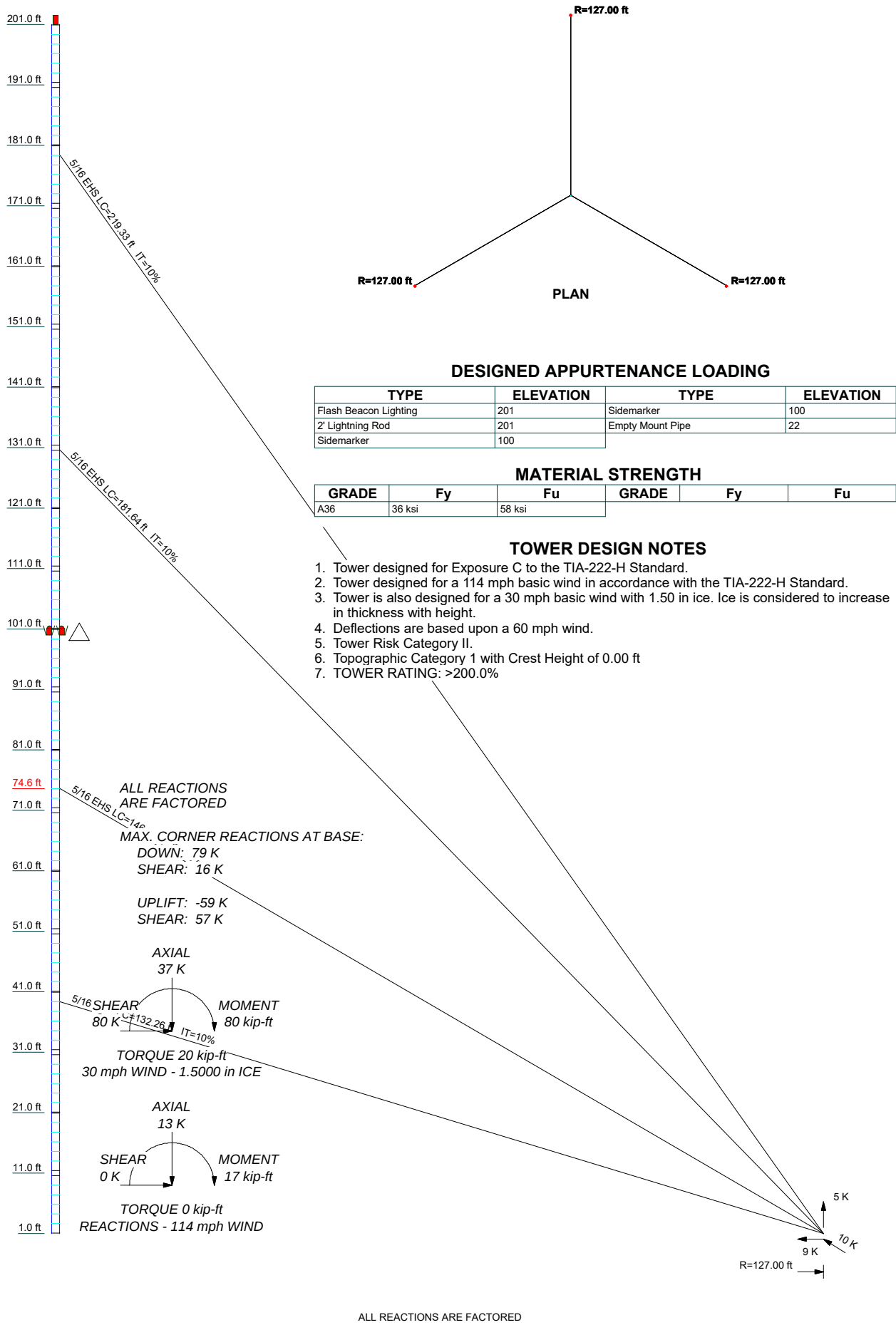
Based on the performed analysis of the existing structure for applied gravity and lateral loads of the currently installed loading, the existing structure does not comply with the 2024 North Carolina State Building Code and the ANSI/TIA-222-H standard. Installation of new commercial telecommunications equipment that results in a changed condition as defined by *ANSI/TIA-222-H Ch. 15* is not permitted.

It is recommended an alternative structure be located or constructed to support any proposed telecommunications installations at this location. Reinforcement of the existing structure to bring the structure into code compliance is not feasible.

The original design codes and standards are unknown. It may be assumed the existing structure remains adequate per its original design. Minor loading modifications may be permissible if the specifications of *2021 International Existing Building Code Section 1103* are not exceeded.

Appendix A – tnxTower Analysis

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20	
Legs																					
Leg Grade																					
Diagonals																					
Diagonal Grade																					
Top Girts																					
Bottom Girts																					
Horizontals																					
Face Width (ft)																					
# Panels @ (ft)																					
Weight (K)																					



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Flash Beacon Lighting	201	Sidemarker	100
2' Lightning Rod	201	Empty Mount Pipe	22
Sidemarker	100		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A36	36 ksi	58 ksi			

TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 114 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 30 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TOWER RATING: >200.0%

ALL REACTIONS ARE FACTORED

NB+C

8601 Six Forks Road, Suite 540

Raleigh, NC 27615

Phone:

FAX:

Job: **Dobbins NT2 - Existing Tower - North**

Project: **100773**

Client: Network Towers	Drawn by: ralexander	App'd:
Code: TIA-222-H	Date: 07/28/25	Scale: NTS
Path:		Dwg No. E-1

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Tower Input Data

The main tower is a 3x guyed tower with an overall height of 201.00 ft above the ground line.

The base of the tower is set at an elevation of 1.00 ft above the ground line.

The face width of the tower is 1.25 ft at the top and 1.25 ft at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower base elevation above sea level: 265.00 ft.

Basic wind speed of 114 mph.

Risk Category II.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.5000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 30 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

TOWER RATING: >200.0%.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

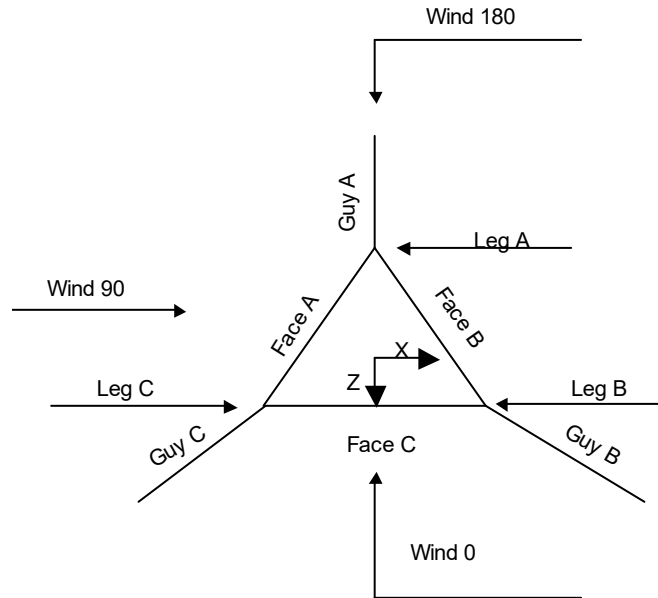
Safety factor used in guy design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Assume Legs Pinned	√ Calculate Redundant Bracing Forces
Consider Moments - Horizontals	√ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Consider Moments - Diagonals	√ Use Clear Spans For Wind Area	√ SR Leg Bolts Resist Compression
Use Moment Magnification	√ Use Clear Spans For KL/r	All Leg Panels Have Same Allowable
√ Use Code Stress Ratios	√ Retension Guys To Initial Tension	Offset Girt At Foundation
√ Use Code Safety Factors - Guys	√ Bypass Mast Stability Checks	√ Consider Feed Line Torque
Escalate Ice	√ Use Azimuth Dish Coefficients	√ Include Angle Block Shear Check
Always Use Max Kz	√ Project Wind Area of Appurtenances	Use TIA-222-H Bracing Resist. Exemption
Kz In Exposure D Hurricane Region	Alternative Appurt. EPA Calculation	Use TIA-222-H Tension Splice Exemption
√ Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Poles
Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	Include Shear-Torsion Interaction
√ Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
√ SR Members Have Cut Ends	Treat Feed Line Bundles As Cylinder	Pole Without Linear Attachments
SR Members Are Concentric	Ignore KL/ry For 60 Deg. Angle Legs	Pole With Shroud Or No Appurtenances
Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules	Outside and Inside Corner Radii Are Known
Use Special Wind Profile		

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Corner & Starmount Guyed Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	201.00-191.00			1.25	1	10.00
T2	191.00-181.00			1.25	1	10.00
T3	181.00-171.00			1.25	1	10.00
T4	171.00-161.00			1.25	1	10.00
T5	161.00-151.00			1.25	1	10.00
T6	151.00-141.00			1.25	1	10.00
T7	141.00-131.00			1.25	1	10.00
T8	131.00-121.00			1.25	1	10.00
T9	121.00-111.00			1.25	1	10.00
T10	111.00-101.00			1.25	1	10.00
T11	101.00-91.00			1.25	1	10.00
T12	91.00-81.00			1.25	1	10.00
T13	81.00-71.00			1.25	1	10.00
T14	71.00-61.00			1.25	1	10.00
T15	61.00-51.00			1.25	1	10.00
T16	51.00-41.00			1.25	1	10.00
T17	41.00-31.00			1.25	1	10.00
T18	31.00-21.00			1.25	1	10.00
T19	21.00-11.00			1.25	1	10.00
T20	11.00-1.00			1.25	1	10.00

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	Network Towers	ralexander

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	201.00-191.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T2	191.00-181.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T3	181.00-171.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T4	171.00-161.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T5	161.00-151.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T6	151.00-141.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T7	141.00-131.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T8	131.00-121.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T9	121.00-111.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T10	111.00-101.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T11	101.00-91.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T12	91.00-81.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T13	81.00-71.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T14	71.00-61.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T15	61.00-51.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T16	51.00-41.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T17	41.00-31.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T18	31.00-21.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T19	21.00-11.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T20	11.00-1.00	1.58	TX Brace	No	Yes	5.1875	1.0000

Tower Section Geometry (cont'd)

Tower Elevation	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
ft						
T1 201.00-191.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T2 191.00-181.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T3 181.00-171.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T4 171.00-161.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T5 161.00-151.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T6 151.00-141.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T7 141.00-131.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T8 131.00-121.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T9 121.00-111.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T10 111.00-101.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T11 101.00-91.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T12 91.00-81.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T13 81.00-71.00	Solid Round	1 1/2	A36	Solid Round		A572-50

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<i>Tower Elevation ft</i>	<i>Leg Type</i>	<i>Leg Size</i>	<i>Leg Grade</i>	<i>Diagonal Type</i>	<i>Diagonal Size</i>	<i>Diagonal Grade</i>
T14 71.00-61.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T15 61.00-51.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T16 51.00-41.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T17 41.00-31.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T18 31.00-21.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T19 21.00-11.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T20 11.00-1.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50

Tower Section Geometry (*cont'd*)

<i>Tower Elevation ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
T1 201.00-191.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T2 191.00-181.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T3 181.00-171.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T4 171.00-161.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T5 161.00-151.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T6 151.00-141.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T7 141.00-131.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T8 131.00-121.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T9 121.00-111.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T10 111.00-101.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T11 101.00-91.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T12 91.00-81.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T13 81.00-71.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T14 71.00-61.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T15 61.00-51.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T16 51.00-41.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T17 41.00-31.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T18 31.00-21.00	Flat Bar	2x1/4	A36	Flat Bar	2x1/4	A36

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<i>Tower Elevation ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
T19 21.00-11.00	Flat Bar	2x1/4	(36 ksi) A36	Flat Bar	2x1/4	(36 ksi) A36
T20 11.00-1.00	Flat Bar	2x1/4	(36 ksi) A36	Flat Bar	2x1/4	(36 ksi) A36
			(36 ksi)			(36 ksi)

Tower Section Geometry (cont'd)

<i>Tower Elevation ft</i>	<i>No. of Mid Girts</i>	<i>Mid Girt Type</i>	<i>Mid Girt Size</i>	<i>Mid Girt Grade</i>	<i>Horizontal Type</i>	<i>Horizontal Size</i>	<i>Horizontal Grade</i>
T1 201.00-191.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T2 191.00-181.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T3 181.00-171.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T4 171.00-161.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T5 161.00-151.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T6 151.00-141.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T7 141.00-131.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T8 131.00-121.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T9 121.00-111.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T10 111.00-101.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T11 101.00-91.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T12 91.00-81.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T13 81.00-71.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T14 71.00-61.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T15 61.00-51.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T16 51.00-41.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T17 41.00-31.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T18 31.00-21.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T19 21.00-11.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T20 11.00-1.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)

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Tower Section Geometry (cont'd)

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft ²	in					in	in	in
T1	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
201.00-191.00			(36 ksi)						
T2	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
191.00-181.00			(36 ksi)						
T3	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
181.00-171.00			(36 ksi)						
T4	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
171.00-161.00			(36 ksi)						
T5	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
161.00-151.00			(36 ksi)						
T6	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
151.00-141.00			(36 ksi)						
T7	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
141.00-131.00			(36 ksi)						
T8	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
131.00-121.00			(36 ksi)						
T9	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
121.00-111.00			(36 ksi)						
T10	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
111.00-101.00			(36 ksi)						
T11	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
101.00-91.00			(36 ksi)						
T12	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
91.00-81.00			(36 ksi)						
T13	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
81.00-71.00			(36 ksi)						
T14	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
71.00-61.00			(36 ksi)						
T15	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
61.00-51.00			(36 ksi)						
T16	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
51.00-41.00			(36 ksi)						
T17	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
41.00-31.00			(36 ksi)						
T18	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
31.00-21.00			(36 ksi)						
T19	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
21.00-11.00			(36 ksi)						
T20	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
11.00-1.00			(36 ksi)						

Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	Legs	K Factors ¹						
				X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
				X Y	X Y	X Y	X Y	X Y	X Y	X Y
ft										
T1	No	Yes	1	1	1	1	1	1	1	1
201.00-191.00				1	1	1	1	1	1	1
T2	No	Yes	1	1	1	1	1	1	1	1

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Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T3 181.00-171.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 171.00-161.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 161.00-151.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 151.00-141.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 141.00-131.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 131.00-121.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 121.00-111.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 111.00-101.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T11 101.00-91.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T12 91.00-81.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T13 81.00-71.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T14 71.00-61.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T15 61.00-51.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T16 51.00-41.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T17 41.00-31.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T18 31.00-21.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T19 21.00-11.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T20 11.00-1.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical	Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	Net Width Deduct in	U	Net Width Deduct in	U
T1 201.00-191.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)		0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)						0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)						0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)						0.0000	0.75 (4)	0.0000	0.75 (4)
T2 191.00-181.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)		0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)						0.0000	0.75 (2)	0.0000	0.75 (2)

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Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T17 41.00-31.00	0.0000	0.75 (3)	0.0000	0.75 (3)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)							0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
T18 31.00-21.00	0.0000	0.75 (4)	0.0000	0.75 (4)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)							0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T19 21.00-11.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)							0.0000	0.75 (1)	0.0000	0.75 (1)
T20 11.00-1.00	0.0000	0.75 (2)	0.0000	0.75 (2)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)							0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)

Tower Section Geometry (cont'd)

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Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
201.00-191.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T2	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
191.00-181.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T3	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
181.00-171.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T4	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
171.00-161.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T5	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
161.00-151.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T6	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
151.00-141.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T7	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
141.00-131.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T8	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
131.00-121.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T9	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
121.00-111.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T10	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
111.00-101.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T11	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
101.00-91.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T12	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
91.00-81.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T13	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
81.00-71.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T14	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
71.00-61.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T15	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
61.00-51.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T16	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
51.00-41.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T17	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
41.00-31.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T18	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
31.00-21.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T19	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
21.00-11.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T20 11.00-1.00	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	

Guy Data

Guy Elevation	Guy Grade	Guy Size	Initial Tension	%	Guy Modulus	Guy Weight	L _u	Anchor Radius	Anchor Azimuth Adj.	Anchor Elevation	End Fitting Efficiency
ft			K		ksi	plf	ft	ft	°	ft	%
179.336	EHS	A 5/16	1.12	10%	21000	0.205	219.14	127.00	0.0000	0.00	100%
		B 5/16	1.12	10%	21000	0.205	219.14	127.00	0.0000	0.00	100%
		C 5/16	1.12	10%	21000	0.205	219.14	127.00	0.0000	0.00	100%
130.568	EHS	A 5/16	1.12	10%	21000	0.205	181.48	127.00	0.0000	0.00	100%
		B 5/16	1.12	10%	21000	0.205	181.48	127.00	0.0000	0.00	100%
		C 5/16	1.12	10%	21000	0.205	181.48	127.00	0.0000	0.00	100%

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74.5938	EHS	A	5/16	1.12	10%	21000	0.205	146.54	127.00	0.0000	0.00	100%
		B	5/16	1.12	10%	21000	0.205	146.54	127.00	0.0000	0.00	100%
		C	5/16	1.12	10%	21000	0.205	146.54	127.00	0.0000	0.00	100%
39.3359	EHS	A	5/16	1.12	10%	21000	0.205	132.15	127.00	0.0000	0.00	100%
		B	5/16	1.12	10%	21000	0.205	132.15	127.00	0.0000	0.00	100%
		C	5/16	1.12	10%	21000	0.205	132.15	127.00	0.0000	0.00	100%

Guy Data(cont'd)

Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
179.336	Corner						
130.568	Corner						
74.5938	Corner						
39.3359	Corner						

Guy Data (cont'd)

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
179.34	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	
130.57	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	
74.59	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	
39.34	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	

Guy Data (cont'd)

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
179.336	0.04	0.04	0.04		4.33	4.33	4.33	
					3.6 sec/pulse	3.6 sec/pulse	3.6 sec/pulse	
130.568	0.04	0.04	0.04		2.98	2.98	2.98	
					3.0 sec/pulse	3.0 sec/pulse	3.0 sec/pulse	
74.5938	0.03	0.03	0.03		1.95	1.95	1.95	
					2.4 sec/pulse	2.4 sec/pulse	2.4 sec/pulse	
39.3359	0.03	0.03	0.03		1.59	1.59	1.59	
					2.2 sec/pulse	2.2 sec/pulse	2.2 sec/pulse	

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Guy Data (cont'd)

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm		Pull Off		Diagonal	
			K _x	K _y	K _x	K _y	K _x	K _y
179.336	No	No			1	1	1	1
130.568	No	No			1	1	1	1
74.5938	No	No			1	1	1	1
39.3359	No	No			1	1	1	1

Guy Data (cont'd)

Guy Elevation ft	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
179.336	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
130.568	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
74.5938	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
39.3359	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q _z		Ice Thickness in
			psf	Ice psf	
179.336	A	89.67	35	2	1.6577
	B	89.67	35	2	1.6577
	C	89.67	35	2	1.6577
130.568	A	65.28	32	2	1.6059
	B	65.28	32	2	1.6059
	C	65.28	32	2	1.6059
74.5938	A	37.30	29	2	1.5185
	B	37.30	29	2	1.5185
	C	37.30	29	2	1.5185
39.3359	A	19.67	25	2	1.4243
	B	19.67	25	2	1.4243
	C	19.67	25	2	1.4243

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	201.00-191.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00

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<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face</i>	<i>A_R</i>	<i>A_F</i>	<i>C_AA_A In Face</i>	<i>C_AA_A Out Face</i>	<i>Weight</i>
			<i>ft²</i>	<i>ft²</i>	<i>ft²</i>	<i>ft²</i>	<i>K</i>
T2	191.00-181.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T3	181.00-171.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T4	171.00-161.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T5	161.00-151.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T6	151.00-141.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T7	141.00-131.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T8	131.00-121.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T9	121.00-111.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T10	111.00-101.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T11	101.00-91.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T12	91.00-81.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T13	81.00-71.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T14	71.00-61.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T15	61.00-51.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T16	51.00-41.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T17	41.00-31.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T18	31.00-21.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T19	21.00-11.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T20	11.00-1.00	C	0.000	0.000	0.000	0.000	0.00
		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	0.00

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Feed Line/Linear Appurtenances Section Areas - With Ice
--

<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face or Leg</i>	<i>Ice Thickness in</i>	<i>A_R ft²</i>	<i>A_F ft²</i>	<i>C_AA_A In Face ft²</i>	<i>C_AA_A Out Face ft²</i>	<i>Weight K</i>
T1	201.00-191.00	A	1.793	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	0.00
T2	191.00-181.00	A	1.783	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	0.00
T3	181.00-171.00	A	1.773	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	0.00
T4	171.00-161.00	A	1.763	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	0.00
T5	161.00-151.00	A	1.752	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	0.00
T6	151.00-141.00	A	1.741	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	0.00
T7	141.00-131.00	A	1.728	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	0.00
T8	131.00-121.00	A	1.715	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	0.00
T9	121.00-111.00	A	1.701	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	0.00
T10	111.00-101.00	A	1.686	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	0.00
T11	101.00-91.00	A	1.669	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	0.00
T12	91.00-81.00	A	1.651	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	0.00
T13	81.00-71.00	A	1.631	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	0.00
T14	71.00-61.00	A	1.608	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	0.00
T15	61.00-51.00	A	1.581	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	0.00
T16	51.00-41.00	A	1.551	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	0.00
T17	41.00-31.00	A	1.513	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	0.00
T18	31.00-21.00	A	1.465	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	0.00
T19	21.00-11.00	A	1.395	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	0.00
T20	11.00-1.00	A	1.265	0.000	0.000	0.000	0.000	0.00

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Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
T1	201.00-191.00	0.0000	0.0000	0.0000	0.0000
T2	191.00-181.00	0.0000	0.0000	0.0000	0.0000
T3	181.00-171.00	0.0000	0.0000	0.0000	0.0000
T4	171.00-161.00	0.0000	0.0000	0.0000	0.0000
T5	161.00-151.00	0.0000	0.0000	0.0000	0.0000
T6	151.00-141.00	0.0000	0.0000	0.0000	0.0000
T7	141.00-131.00	0.0000	0.0000	0.0000	0.0000
T8	131.00-121.00	0.0000	0.0000	0.0000	0.0000
T9	121.00-111.00	0.0000	0.0000	0.0000	0.0000
T10	111.00-101.00	0.0000	0.0000	0.0000	0.0000
T11	101.00-91.00	0.0000	0.0000	0.0000	0.0000
T12	91.00-81.00	0.0000	0.0000	0.0000	0.0000
T13	81.00-71.00	0.0000	0.0000	0.0000	0.0000
T14	71.00-61.00	0.0000	0.0000	0.0000	0.0000
T15	61.00-51.00	0.0000	0.0000	0.0000	0.0000
T16	51.00-41.00	0.0000	0.0000	0.0000	0.0000
T17	41.00-31.00	0.0000	0.0000	0.0000	0.0000
T18	31.00-21.00	0.0000	0.0000	0.0000	0.0000
T19	21.00-11.00	0.0000	0.0000	0.0000	0.0000
T20	11.00-1.00	0.0000	0.0000	0.0000	0.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
Flash Beacon Lighting	C	None		0.0000	201.00	No Ice	1.06	0.02
						1/2" Ice	1.65	0.04
						1" Ice	1.84	0.07
						2" Ice	3.42	0.10
						No Ice	0.15	0.03
2' Lightning Rod	C	None		0.0000	201.00	1/2" Ice	0.29	0.03
						1" Ice	0.42	0.03
						2" Ice	0.72	0.04
						No Ice	0.22	0.00
						1/2" Ice	0.28	0.00
*** Sidemarker	B	From Leg	0.50	0.0000	100.00	1" Ice	0.36	0.01
			0.00			2" Ice	0.53	0.02
			0.00			No Ice	0.22	0.00
Sidemarker	C	From Leg	0.50	0.0000	100.00	No Ice	0.22	0.00

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
*** Empty Mount Pipe ***	C	From Leg	0.00	0.0000	22.00	1/2" Ice	0.28	0.00
			0.00			1" Ice	0.36	0.01
						2" Ice	0.53	0.02
			0.50			No Ice	0.87	0.01
			0.00			1/2" Ice	1.11	0.02
			0.00			1" Ice	1.36	0.03
						2" Ice	1.90	0.06

Feasibility Study of an Existing Structure – 200.0 ft Guyed Tower

Network Towers – Dobbins NT2 – North Tower

TKK P.C. Project Number: 100793

July 29, 2025



Appendix B – Loading Parameters

ASCE Hazards Report

Address:

No Address at This Location

Standard:

ASCE/SEI 7-16

Risk Category: II**Soil Class:**

D - Default (see
Section 11.4.3)

Latitude:

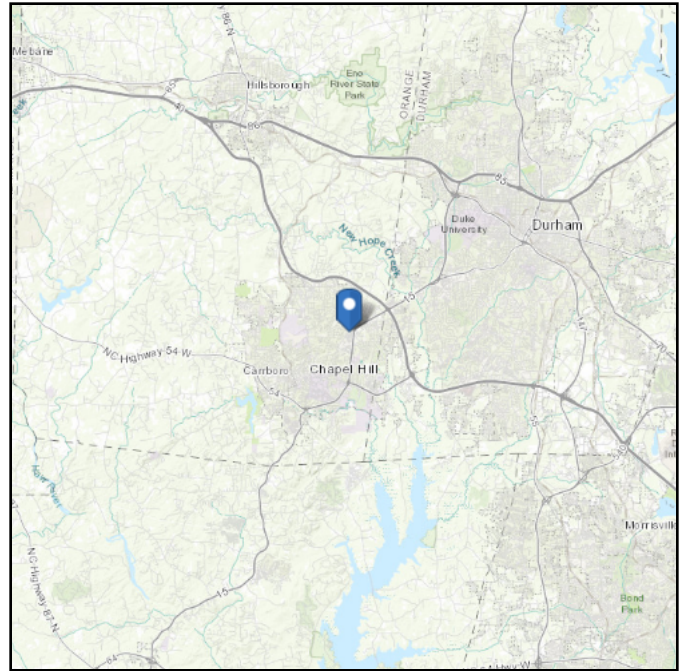
35.937858

Longitude:

-79.026994

Elevation:

264.47772574675156 ft
(NAVD 88)



Wind

Results:

Wind Speed	114 Vmph
10-year MRI	75 Vmph
25-year MRI	83 Vmph
50-year MRI	89 Vmph
100-year MRI	95 Vmph

Data Source:

ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2

Date Accessed:

Thu Jul 17 2025

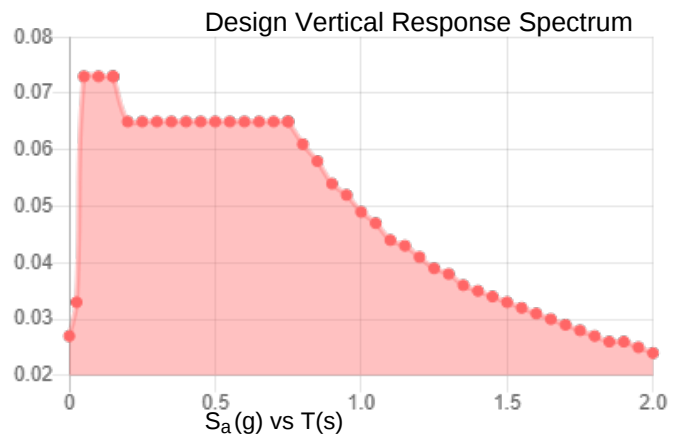
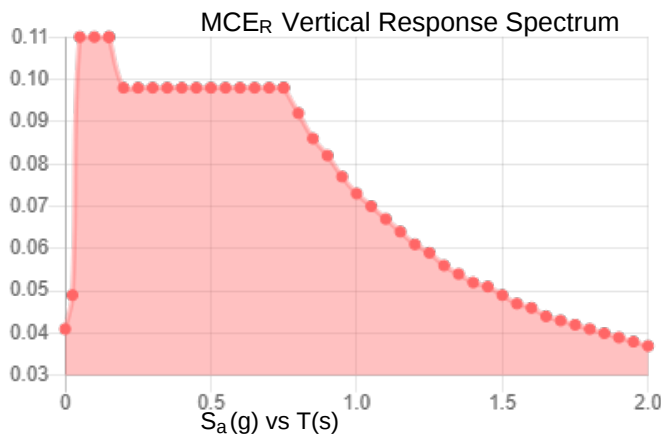
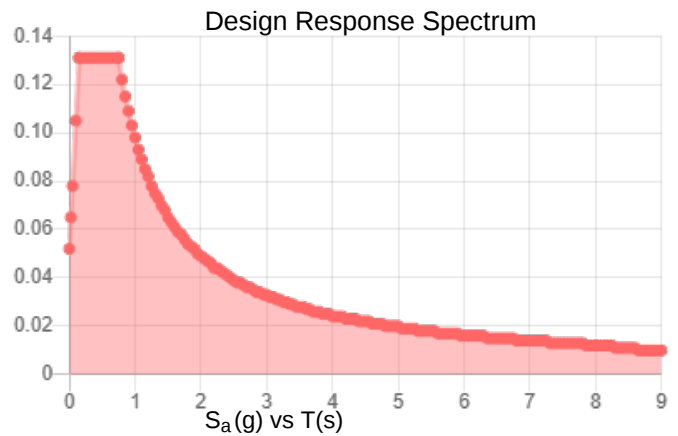
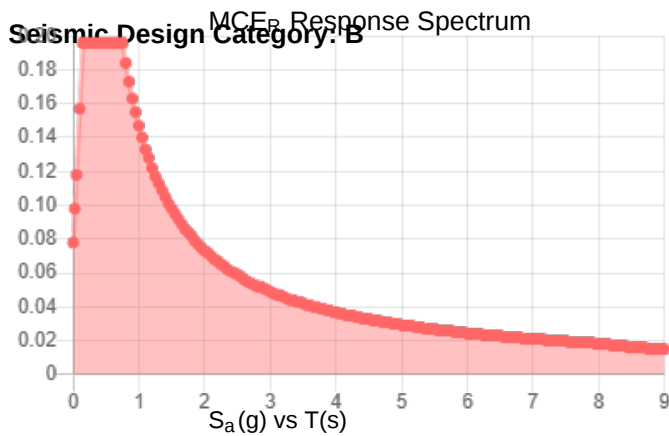
Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Site Soil Class: D - Default (see Section 11.4.3)

Results:

S_S :	0.122	S_{D1} :	0.098
S_1 :	0.061	T_L :	8
F_a :	1.6	PGA :	0.058
F_v :	2.4	PGA _M :	0.093
S_{MS} :	0.196	F_{PGA} :	1.6
S_{M1} :	0.147	I_e :	1
S_{DS} :	0.131	C_v :	0.7



Data Accessed: Thu Jul 17 2025

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 1.50 in.
Concurrent Temperature: 15 F
Gust Speed 30 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Thu Jul 17 2025

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Snow

Results:

Ground Snow Load, p_g : 15 lb/ft²
Mapped Elevation: 264.5 ft

Data Source: ASCE/SEI 7-16, Table 7.2-8

Date Accessed: Thu Jul 17 2025

Values provided are ground snow loads. In areas designated "case study required," extreme local variations in ground snow loads preclude mapping at this scale. Site-specific case studies are required to establish ground snow loads at elevations not covered.

Snow load values are mapped to a 0.5 mile resolution. This resolution can create a mismatch between the mapped elevation and the site-specific elevation in topographically complex areas. Engineers should consult the local authority having jurisdiction in locations where the reported 'elevation' and 'mapped elevation' differ significantly from each other.

The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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TKK Engineering P.C.

Feasibility Study of an Existing Structure

Prepared for Network Towers
Revision 0

Date:
July 29, 2025

Tower Owner Information

Tower Owner Chapel Hill Media Group
Site Name: WCHL – South Tower

Client Information

Carrier Network Towers
Site Name: Dobbins NT2 – South Tower

Structure Information

Structure Data: 200.0 ft Guyed Tower
Structure Location: 1721 E Franklin Street, Chapel Hill, NC 27514 (Orange County)
Latitude: 35° 56' 16.2901" N **Longitude:** 79° 1' 37.1788" W

NB+C Engineering Services, LLC

Project Number: 100793

Load Case: Existing Equipment Configuration		
Structure Capacity	Foundation Capacity	Rating
>200%	Not Analyzed	Insufficient

Structural Analysis per 2024 North Carolina Building Code and ANSI/TIA-222-H

Prepared By:

Ben Wright
Structural Engineer II

Submitted By:

Krupakaran Kolandaivelu, PE
Vice President of Engineering
NC PE License #039073
NC Firm License No. C-4682

5/23/2025



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Appendix A

tnxTower Analysis Output

Appendix B

Loading Parameters

1. Introduction

The existing structure is a 200.0 ft Guyed Tower located in Orange County, NC.

Pursuant to your request, **TKK Engineering, P.C. (“TKK P.C.”)** has performed a **Feasibility Study** of the existing structure to determine if the existing structure is in code compliance with the applicable codes and standards outlined in **Section 2** of this report. Additional criteria, methodology, and assumptions are discussed in **Section 4**. A summary of the analysis results is outlined in detail in **Section 5**. To meet the requirements of the analysis, please see the conclusions and recommendations discussed in **Section 6**.

This report shall only be considered as a preliminary structural analysis of the existing structure to evaluate the feasibility of future changed conditions, limited to the overall stability of the structure and the strength requirements for the main load carrying members of the structure and does not include an assessment of the foundation(s).

2. Analysis Criteria

Table 2.1 – Reference Documentation	
Document Type	Description
Tower Mapping Report	NB+C ES, Site Name: Dobbins, dated July 14, 2025

Table 2.2 – Criteria and Parameters			
Codes and Standards			
Building Code		2024 North Carolina State Building Code	
ASCE 7 Standard		ASCE 7-16	
TIA Standard		ANSI/TIA-222-H	
General Analysis Parameters			
Risk Category		II	
Service Wind Speed, Vs		60 mph	
Wind Parameters		Ice and Seismic Parameters	
Wind Speed, V	114 mph	Ice Wind Speed, Vi	30 mph
Exposure Category	C	Ice Thickness, ti	1.50 inch
Ground Elevation Factor, Ke	0.990	0.2-Second Period, Ss	0.122 g
Topographic Factor, Kzt	1.000	1-Second Period, S1	0.061 g

3. Loading Configuration

The structure has been analyzed for the existing appurtenance and feed line configurations outlined in the tables below, as per the information provided to us. Please refer to **Table 2.1** for the loading information provided. **TKK P.C.** should be notified immediately if deviations are determined with the configurations outlined below to perform a revised analysis.

Table 3.1 – Existing Loading Configuration						
Equipment Centerline	Quantity	Manufacturer	Model	Feed Lines	Carrier	Notes
201.0 ft	1	-	Flash Beacon Lighting	-	-	-
			Lightning Rod			
186.0 ft	1		10' Omni			
	1		Standoff Mount			
183.0 ft	1		Grid Dish			
108.5 ft	2		Side Marker			

4. Analysis Procedure

4.1 Methodology

tnxTower (version 8.3.1.2), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in **Appendix A**.

4.2 Assumptions

This **Feasibility Study of an Existing Structure** is based upon the theoretical capacity of the structure based on the information provided in **Table 2.1** and is not a condition assessment of the structure. All elements assumed to be in satisfactory condition. The analysis may be affected if any assumptions are not valid or have been made in error, **TKK P.C.** should be notified to determine the effect on the structural integrity of the structure. The following assumptions were made for this analysis:

- 1) The tower and structures were built in accordance with the manufacturer's specifications and/or engineering design documentation.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in **Table 3.1**.
- 3) All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
- 4) The location of the existing and proposed equipment on the proposed mount structure is based on information provided to **TKK P.C.**
- 5) Material grades were not provided and were assumed to be in accordance with Table 2-4 "Applicable ASTM Specifications for Various Structural Shapes" per the AISC 15th Edition of the Steel Construction Manual. The following material grades were assumed based on information stated in **Table 4.1** below: Tower Legs (A36), Tower Bracing (A36), and Guy Wires (A475 EHS).
- 6) Existing tower geometry is based on information provided in the Tower Mapping by **NB+C ES** dated July 14, 2025.

Table 4.1 – Material Grades		
Material	Component Type	Grade
Steel	Tower Legs	A36
Steel	Tower Bracing	A36
Steel	Guy Wires	A475 EHS

5. Results Summary

This analysis has been performed in accordance with the documentation, analysis criteria, and the loading configuration outlined in **Section 2** and **Section 3**, as well as any assumptions outlined in **Section 4**, of this report. If the assumptions outlined in this report differ from actual field conditions, **TKK P.C.** should be contacted to perform a revised analysis. See **Appendix A** for additional documentation.

Table 5.1 – tnxTower Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (kip)	ϕP_{allow} (kip)	Capacity	Pass / Fail
T1	201 - 191	Leg	1 1/2	1	-0.18	57.23	41.6	Pass
T2	191 - 181	Leg	1 1/2	26	-5.15	57.23	104.6	Fail
T3	181 - 171	Leg	1 1/2	50	-5.14	57.23	102.0	Fail
T4	171 - 161	Leg	1 1/2	74	-14.96	57.23	111.5	Fail
T5	161 - 151	Leg	1 1/2	98	-14.94	57.23	113.3	Fail
T6	151 - 141	Leg	1 1/2	121	17.48	57.26	124.3	Fail
T7	141 - 131	Leg	1 1/2	147	18.47	57.26	125.8	Fail
T8	131 - 121	Leg	1 1/2	169	-11.07	57.23	>200	Fail
T9	121 - 111	Leg	1 1/2	193	-11.09	57.23	>200	Fail
T10	111 - 101	Leg	1 1/2	219	40.94	57.26	>200	Fail
T11	101 - 91	Leg	1 1/2	242	33.81	57.26	>200	Fail
T12	91 - 81	Leg	1 1/2	266	-54.16	57.23	>200	Fail
T13	81 - 71	Leg	1 1/2	290	-54.28	57.23	>200	Fail
T14	71 - 61	Leg	1 1/2	314	-27.78	57.23	>200	Fail
T15	61 - 51	Leg	1 1/2	338	-24.91	57.23	>200	Fail
T16	51 - 41	Leg	1 1/2	361	76.06	57.26	>200	Fail
T17	41 - 31	Leg	1 1/2	385	68.02	57.26	>200	Fail
T18	31 - 21	Leg	1 1/2	409	57.29	57.26	>200	Fail
T19	21 - 11	Leg	1 1/2	433	57.31	57.26	>200	Fail
T20	11 - 1	Leg	1 1/2	459	-68.15	57.23	>200	Fail
T1	201 - 191	Horizontal	2x1/4	11	-0.03	3.23	118.3	Fail
T2	191 - 181	Horizontal	2x1/4	35	-0.09	3.23	>200	Fail
T3	181 - 171	Horizontal	2x1/4	58	-0.19	3.23	>200	Fail
T4	171 - 161	Horizontal	2x1/4	92	-0.26	3.23	>200	Fail
T5	161 - 151	Horizontal	2x1/4	108	1.01	16.20	>200	Fail
T6	151 - 141	Horizontal	2x1/4	135	-0.59	3.23	>200	Fail
T7	141 - 131	Horizontal	2x1/4	154	2.63	16.20	>200	Fail
T8	131 - 121	Horizontal	2x1/4	185	-0.30	3.23	>200	Fail
T9	121 - 111	Horizontal	2x1/4	204	-0.55	3.23	>200	Fail
T10	111 - 101	Horizontal	2x1/4	228	-0.61	3.23	>200	Fail
T11	101 - 91	Horizontal	2x1/4	252	-0.92	3.23	>200	Fail
T12	91 - 81	Horizontal	2x1/4	286	9.71	16.20	>200	Fail
T13	81 - 71	Horizontal	2x1/4	299	-0.99	3.23	>200	Fail
T14	71 - 61	Horizontal	2x1/4	327	-2.59	3.23	>200	Fail
T15	61 - 51	Horizontal	2x1/4	346	642.70	16.20	>200	Fail
T16	51 - 41	Horizontal	2x1/4	372	2533.87	16.20	>200	Fail
T17	41 - 31	Horizontal	2x1/4	402	3089.43	16.20	>200	Fail
T18	31 - 21	Horizontal	2x1/4	432	1195.67	16.20	>200	Fail
T19	21 - 11	Horizontal	2x1/4	456	783.67	16.20	>200	Fail
T20	11 - 1	Horizontal	2x1/4	475	-1.66	3.23	>200	Fail
T1	201 - 191	Top Girt	2x1/4	4	-0.03	3.23	74.1	Pass
T2	191 - 181	Top Girt	2x1/4	29	-0.09	3.23	140.2	Fail
T3	181 - 171	Top Girt	2x1/4	53	-0.19	3.23	>200	Fail
T4	171 - 161	Top Girt	2x1/4	77	-0.26	3.23	>200	Fail

Feasibility Study of an Existing Structure – 200.0 ft Guyed Tower

Network Towers – Dobbins NT2 –South Tower

TKK P.C. Project Number: 100793

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T5	161 - 151	Top Girt	2x1/4	101	-0.28	3.23	>200	Fail
T6	151 - 141	Top Girt	2x1/4	126	-0.27	3.23	>200	Fail
T7	141 - 131	Top Girt	2x1/4	149	2.42	16.20	>200	Fail
T8	131 - 121	Top Girt	2x1/4	172	-0.69	3.23	>200	Fail
T9	121 - 111	Top Girt	2x1/4	197	2.50	16.20	>200	Fail
T10	111 - 101	Top Girt	2x1/4	222	-0.77	3.23	>200	Fail
T11	101 - 91	Top Girt	2x1/4	246	-0.75	3.23	>200	Fail
T12	91 - 81	Top Girt	2x1/4	270	-1.06	3.23	>200	Fail
T13	81 - 71	Top Girt	2x1/4	293	-0.57	3.23	>200	Fail
T14	71 - 61	Top Girt	2x1/4	317	-3.42	3.23	>200	Fail
T15	61 - 51	Top Girt	2x1/4	341	457.99	16.20	>200	Fail
T16	51 - 41	Top Girt	2x1/4	366	999.24	16.20	>200	Fail
T17	41 - 31	Top Girt	2x1/4	390	2606.25	16.20	>200	Fail
T18	31 - 21	Top Girt	2x1/4	414	1734.48	16.20	>200	Fail
T19	21 - 11	Top Girt	2x1/4	438	655.11	16.20	>200	Fail
T20	11 - 1	Top Girt	2x1/4	460	265.18	16.20	>200	Fail
T1	201 - 191	Bottom Girt	2x1/4	8	-0.03	3.23	131.0	Fail
T2	191 - 181	Bottom Girt	2x1/4	32	-0.17	3.23	>200	Fail
T3	181 - 171	Bottom Girt	2x1/4	55	-0.19	3.23	>200	Fail
T4	171 - 161	Bottom Girt	2x1/4	80	-0.26	3.23	>200	Fail
T5	161 - 151	Bottom Girt	2x1/4	105	0.73	16.20	>200	Fail
T6	151 - 141	Bottom Girt	2x1/4	128	1.83	16.20	>200	Fail
T7	141 - 131	Bottom Girt	2x1/4	151	-0.51	3.23	>200	Fail
T8	131 - 121	Bottom Girt	2x1/4	176	-0.03	3.23	>200	Fail
T9	121 - 111	Bottom Girt	2x1/4	201	-0.58	3.23	>200	Fail
T10	111 - 101	Bottom Girt	2x1/4	225	-0.61	3.23	>200	Fail
T11	101 - 91	Bottom Girt	2x1/4	249	-0.92	3.23	>200	Fail
T12	91 - 81	Bottom Girt	2x1/4	272	2.74	16.20	>200	Fail
T13	81 - 71	Bottom Girt	2x1/4	296	-0.99	3.23	>200	Fail
T14	71 - 61	Bottom Girt	2x1/4	320	437.30	16.20	>200	Fail
T15	61 - 51	Bottom Girt	2x1/4	343	604.23	16.20	>200	Fail
T16	51 - 41	Bottom Girt	2x1/4	369	2589.78	16.20	>200	Fail
T17	41 - 31	Bottom Girt	2x1/4	393	2065.47	16.20	>200	Fail
T18	31 - 21	Bottom Girt	2x1/4	417	644.25	16.20	>200	Fail
T19	21 - 11	Bottom Girt	2x1/4	439	313.89	16.20	>200	Fail
T20	11 - 1	Bottom Girt	2x1/4	464	-14.87	3.23	>200	Fail
T3	181 - 171	Guy A@179.336	5/16	483	3.30	6.72	49.0	Pass
T8	131 - 121	Guy A@130.568	5/16	486	3.11	6.72	46.3	Pass
T13	81 - 71	Guy A@74.5938	5/16	489	2.91	6.72	43.3	Pass
T17	41 - 31	Guy A@39.3359	5/16	492	4.63	6.72	68.9	Pass
T3	181 - 171	Guy B@179.336	5/16	482	3.29	6.72	48.9	Pass
T8	131 - 121	Guy B@130.568	5/16	485	3.12	6.72	46.4	Pass
T13	81 - 71	Guy B@74.5938	5/16	488	4.03	6.72	60.0	Pass
T17	41 - 31	Guy B@39.3359	5/16	491	3.08	6.72	45.8	Pass
T3	181 - 171	Guy C@179.336	5/16	481	3.30	6.72	49.0	Pass
T8	131 - 121	Guy C@130.568	5/16	484	3.11	6.72	46.3	Pass
T13	81 - 71	Guy C@74.5938	5/16	487	2.91	6.72	43.3	Pass
T17	41 - 31	Guy C@39.3359	5/16	490	3.74	6.72	55.6	Pass
							Summary	
						Leg (T14)	>200	Fail
						Horizontal (T17)	>200	Fail
						Top Girt (T17)	>200	Fail
						Bottom Girt (T16)	>200	Fail
						Guy A (T17)	68.9	Pass
						Guy B (T13)	60.0	Pass
						Guy C (T17)	55.6	Pass
						Bolt Checks	>200	Fail
						RATING =	>200	Fail

6. Conclusion and Recommendations

Based on the performed analysis of the existing structure for applied gravity and lateral loads of the currently installed loading, the existing structure does not comply with the 2024 North Carolina State Building Code and the ANSI/TIA-222-H standard. Installation of new commercial telecommunications equipment that results in a changed condition as defined by *ANSI/TIA-222-H Ch. 15* is not permitted.

It is recommended an alternative structure be located or constructed to support any proposed telecommunications installations at this location. Reinforcement of the existing structure to bring the structure into code compliance is not feasible.

The original design codes and standards are unknown. It may be assumed the existing structure remains adequate per its original design. Minor loading modifications may be permissible if the specifications of *2021 International Existing Building Code Section 1103* are not exceeded.

Feasibility Study of an Existing Structure – 200.0 ft Guyed Tower

Network Towers – Dobbins NT2 –South Tower

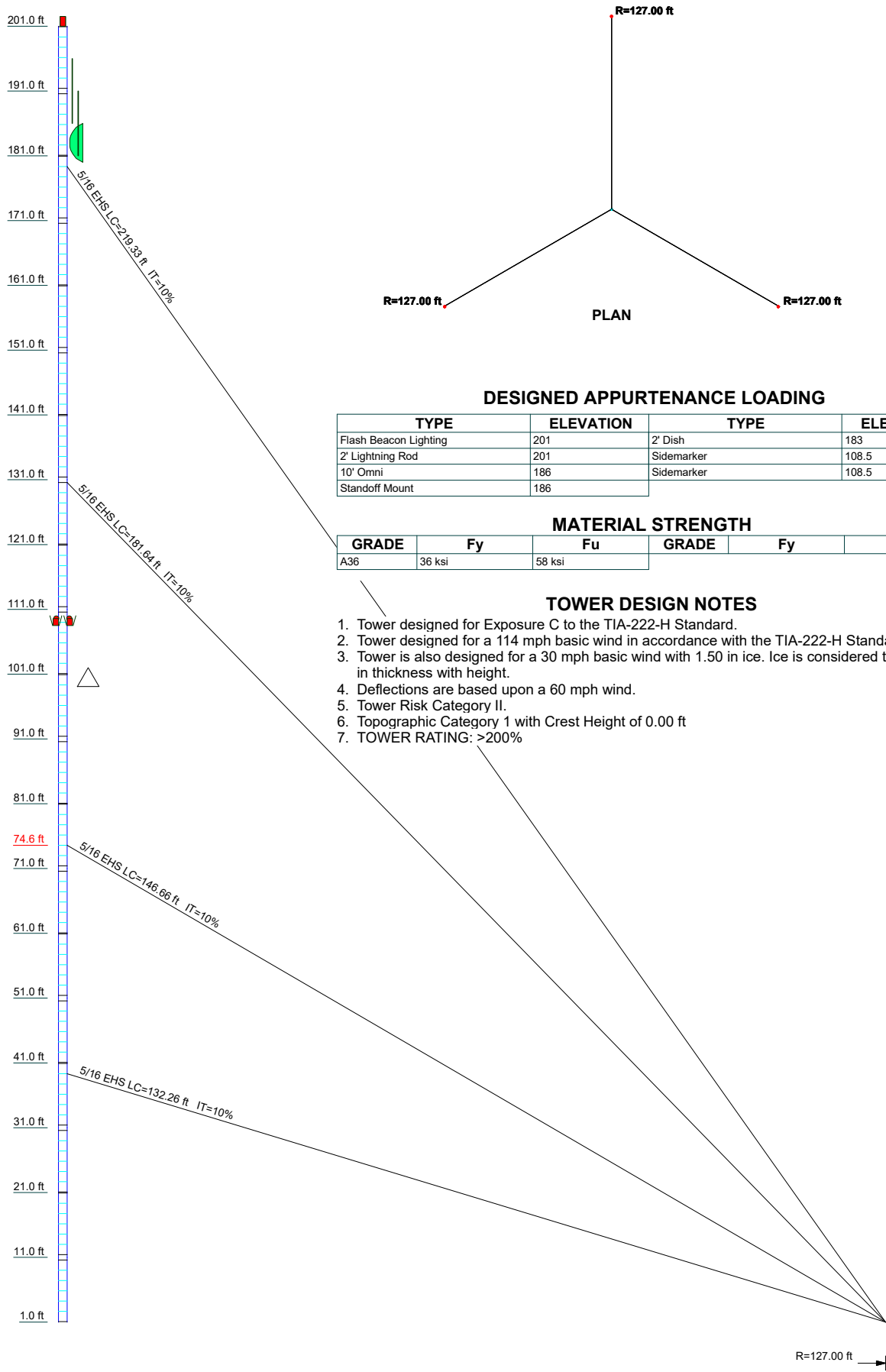
TKK P.C. Project Number: 100793

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Appendix A – tnxTower Analysis

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
Legs																				
Leg Grade	SR 1 1/2																			
Diagonals	A36																			
Diagonal Grade	N.A.																			
Top Girts	N.A.																			
Bottom Girts	2x1/4																			
Horizontals	2x1/4																			
Face Width (ft)	1.25																			
# Panels @ (ft)	120 @ 1.56073																			
Weight (K)	4.5																			



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Flash Beacon Lighting	201	2' Dish	183
2' Lightning Rod	201	Sidemarker	108.5
10' Omni	186	Sidemarker	108.5
Standoff Mount	186		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A36	36 ksi	58 ksi			

TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 114 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 30 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TOWER RATING: >200%

NB+C

8601 Six Forks Road, Suite 540

Raleigh, NC 27615

Phone:

FAX:

Job: **Dobbins NT2 - Existing Tower - South**

Project: **100793**

Client: Network Towers	Drawn by: ralexander	App'd:
Code: TIA-222-H	Date: 07/29/25	Scale: NTS
Path:		Dwg No. E-1

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	Client	Network Towers	Designed by	ralexander

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 201.00 ft above the ground line.

The base of the tower is set at an elevation of 1.00 ft above the ground line.

The face width of the tower is 1.25 ft at the top and 1.25 ft at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower base elevation above sea level: 265.00 ft.

Basic wind speed of 114 mph.

Risk Category II.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.5000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 30 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

TOWER RATING: >200%.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

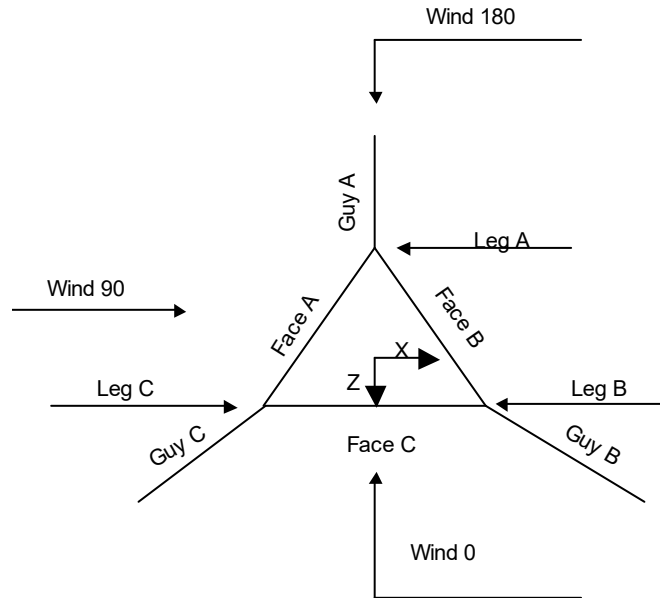
Safety factor used in guy design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Assume Legs Pinned	√ Calculate Redundant Bracing Forces
Consider Moments - Horizontals	√ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Consider Moments - Diagonals	√ Use Clear Spans For Wind Area	√ SR Leg Bolts Resist Compression
Use Moment Magnification	√ Use Clear Spans For KL/r	All Leg Panels Have Same Allowable
√ Use Code Stress Ratios	√ Retension Guys To Initial Tension	Offset Girt At Foundation
√ Use Code Safety Factors - Guys	√ Bypass Mast Stability Checks	√ Consider Feed Line Torque
Escalate Ice	√ Use Azimuth Dish Coefficients	√ Include Angle Block Shear Check
Always Use Max Kz	√ Project Wind Area of Appurtenances	Use TIA-222-H Bracing Resist. Exemption
Kz In Exposure D Hurricane Region	Alternative Appurt. EPA Calculation	Use TIA-222-H Tension Splice Exemption
√ Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Poles
Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	Include Shear-Torsion Interaction
√ Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
√ SR Members Have Cut Ends	Treat Feed Line Bundles As Cylinder	Pole Without Linear Attachments
SR Members Are Concentric	Ignore KL/ry For 60 Deg. Angle Legs	Pole With Shroud Or No Appurtenances
Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules	Outside and Inside Corner Radii Are Known
Use Special Wind Profile		

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	Client Network Towers	Designed by ralexander



Corner & Starmount Guyed Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	201.00-191.00			1.25	1	10.00
T2	191.00-181.00			1.25	1	10.00
T3	181.00-171.00			1.25	1	10.00
T4	171.00-161.00			1.25	1	10.00
T5	161.00-151.00			1.25	1	10.00
T6	151.00-141.00			1.25	1	10.00
T7	141.00-131.00			1.25	1	10.00
T8	131.00-121.00			1.25	1	10.00
T9	121.00-111.00			1.25	1	10.00
T10	111.00-101.00			1.25	1	10.00
T11	101.00-91.00			1.25	1	10.00
T12	91.00-81.00			1.25	1	10.00
T13	81.00-71.00			1.25	1	10.00
T14	71.00-61.00			1.25	1	10.00
T15	61.00-51.00			1.25	1	10.00
T16	51.00-41.00			1.25	1	10.00
T17	41.00-31.00			1.25	1	10.00
T18	31.00-21.00			1.25	1	10.00
T19	21.00-11.00			1.25	1	10.00
T20	11.00-1.00			1.25	1	10.00

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	Client	Designed by
	Network Towers	ralexander

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	201.00-191.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T2	191.00-181.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T3	181.00-171.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T4	171.00-161.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T5	161.00-151.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T6	151.00-141.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T7	141.00-131.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T8	131.00-121.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T9	121.00-111.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T10	111.00-101.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T11	101.00-91.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T12	91.00-81.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T13	81.00-71.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T14	71.00-61.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T15	61.00-51.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T16	51.00-41.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T17	41.00-31.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T18	31.00-21.00	1.58	TX Brace	No	Yes	5.1875	1.0000
T19	21.00-11.00	1.58	TX Brace	No	Yes	1.0000	5.1875
T20	11.00-1.00	1.58	TX Brace	No	Yes	5.1875	1.0000

Tower Section Geometry (cont'd)

Tower Elevation	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
ft						
T1 201.00-191.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T2 191.00-181.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T3 181.00-171.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T4 171.00-161.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T5 161.00-151.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T6 151.00-141.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T7 141.00-131.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T8 131.00-121.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T9 121.00-111.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T10 111.00-101.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T11 101.00-91.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T12 91.00-81.00	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T13 81.00-71.00	Solid Round	1 1/2	A36	Solid Round		A572-50

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<i>Tower Elevation ft</i>	<i>Leg Type</i>	<i>Leg Size</i>	<i>Leg Grade</i>	<i>Diagonal Type</i>	<i>Diagonal Size</i>	<i>Diagonal Grade</i>
T14 71.00-61.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T15 61.00-51.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T16 51.00-41.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T17 41.00-31.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T18 31.00-21.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T19 21.00-11.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50
T20 11.00-1.00	Solid Round	1 1/2	(36 ksi) A36	Solid Round		(50 ksi) A572-50

Tower Section Geometry (cont'd)

<i>Tower Elevation ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
T1 201.00-191.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T2 191.00-181.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T3 181.00-171.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T4 171.00-161.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T5 161.00-151.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T6 151.00-141.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T7 141.00-131.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T8 131.00-121.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T9 121.00-111.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T10 111.00-101.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T11 101.00-91.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T12 91.00-81.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T13 81.00-71.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T14 71.00-61.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T15 61.00-51.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T16 51.00-41.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T17 41.00-31.00	Flat Bar	2x1/4	A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T18 31.00-21.00	Flat Bar	2x1/4	A36	Flat Bar	2x1/4	A36

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<i>Tower Elevation ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
T19 21.00-11.00	Flat Bar	2x1/4	(36 ksi) A36	Flat Bar	2x1/4	(36 ksi) A36
T20 11.00-1.00	Flat Bar	2x1/4	(36 ksi) A36	Flat Bar	2x1/4	(36 ksi) A36
			(36 ksi)			(36 ksi)

Tower Section Geometry (cont'd)

<i>Tower Elevation ft</i>	<i>No. of Mid Girts</i>	<i>Mid Girt Type</i>	<i>Mid Girt Size</i>	<i>Mid Girt Grade</i>	<i>Horizontal Type</i>	<i>Horizontal Size</i>	<i>Horizontal Grade</i>
T1 201.00-191.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T2 191.00-181.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T3 181.00-171.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T4 171.00-161.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T5 161.00-151.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T6 151.00-141.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T7 141.00-131.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T8 131.00-121.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T9 121.00-111.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T10 111.00-101.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T11 101.00-91.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T12 91.00-81.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T13 81.00-71.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T14 71.00-61.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T15 61.00-51.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T16 51.00-41.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T17 41.00-31.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T18 31.00-21.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T19 21.00-11.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)
T20 11.00-1.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	2x1/4	A36 (36 ksi)

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Tower Section Geometry (cont'd)

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft ²	in					in	in	in
T1	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
201.00-191.00			(36 ksi)						
T2	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
191.00-181.00			(36 ksi)						
T3	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
181.00-171.00			(36 ksi)						
T4	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
171.00-161.00			(36 ksi)						
T5	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
161.00-151.00			(36 ksi)						
T6	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
151.00-141.00			(36 ksi)						
T7	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
141.00-131.00			(36 ksi)						
T8	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
131.00-121.00			(36 ksi)						
T9	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
121.00-111.00			(36 ksi)						
T10	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
111.00-101.00			(36 ksi)						
T11	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
101.00-91.00			(36 ksi)						
T12	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
91.00-81.00			(36 ksi)						
T13	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
81.00-71.00			(36 ksi)						
T14	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
71.00-61.00			(36 ksi)						
T15	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
61.00-51.00			(36 ksi)						
T16	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
51.00-41.00			(36 ksi)						
T17	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
41.00-31.00			(36 ksi)						
T18	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
31.00-21.00			(36 ksi)						
T19	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
21.00-11.00			(36 ksi)						
T20	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
11.00-1.00			(36 ksi)						

Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	Legs	K Factors ¹						
				X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
				X Y	X Y	X Y	X Y	X Y	X Y	X Y
ft										
T1	No	Yes	1	1	1	1	1	1	1	1
201.00-191.00				1	1	1	1	1	1	1
T2	No	Yes	1	1	1	1	1	1	1	1

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Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T3 181.00-171.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 171.00-161.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 161.00-151.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 151.00-141.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 141.00-131.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 131.00-121.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 121.00-111.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 111.00-101.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T11 101.00-91.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T12 91.00-81.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T13 81.00-71.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T14 71.00-61.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T15 61.00-51.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T16 51.00-41.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T17 41.00-31.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T18 31.00-21.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T19 21.00-11.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T20 11.00-1.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical	Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	Net Width Deduct in	U	Net Width Deduct in	U
T1 201.00-191.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)		0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)						0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)						0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)						0.0000	0.75 (4)	0.0000	0.75 (4)
T2 191.00-181.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)		0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)						0.0000	0.75 (2)	0.0000	0.75 (2)

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Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T10 111.00-101.00	0.0000	0.75 (3)	0.0000	0.75 (3)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)							0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
T11 101.00-91.00	0.0000	0.75 (4)	0.0000	0.75 (4)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)							0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T12 91.00-81.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)							0.0000	0.75 (1)	0.0000	0.75 (1)
T13 81.00-71.00	0.0000	0.75 (2)	0.0000	0.75 (2)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)							0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
T14 71.00-61.00	0.0000	0.75 (3)	0.0000	0.75 (3)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)							0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
T15 61.00-51.00	0.0000	0.75 (4)	0.0000	0.75 (4)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)							0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T16 51.00-41.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)

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Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical	Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	Net Width Deduct in	U	Net Width Deduct in	U
T17 41.00-31.00	0.0000	0.75 (3)	0.0000	0.75 (3)	0.0000	0.75	0.0000	0.75	0.0000	0.75		0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)								0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)								0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)								0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)								0.0000	0.75 (3)
T18 31.00-21.00	0.0000	0.75 (4)	0.0000	0.75 (4)	0.0000	0.75	0.0000	0.75	0.0000	0.75		0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)								0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)								0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)								0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)								0.0000	0.75 (4)
T19 21.00-11.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75		0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)								0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)								0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)								0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)								0.0000	0.75 (1)
T20 11.00-1.00	0.0000	0.75 (2)	0.0000	0.75 (2)	0.0000	0.75	0.0000	0.75	0.0000	0.75		0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)								0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)								0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)								0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)								0.0000	0.75 (2)
	0.0000	0.75 (2)	0.0000	0.75 (2)								0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)								0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)								0.0000	0.75 (4)

Tower Section Geometry (cont'd)

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Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
201.00-191.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T2	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
191.00-181.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T3	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
181.00-171.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T4	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
171.00-161.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T5	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
161.00-151.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T6	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
151.00-141.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T7	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
141.00-131.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T8	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
131.00-121.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T9	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
121.00-111.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T10	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
111.00-101.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T11	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
101.00-91.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T12	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
91.00-81.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T13	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
81.00-71.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T14	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
71.00-61.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T15	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
61.00-51.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T16	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
51.00-41.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T17	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
41.00-31.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T18	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
31.00-21.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T19	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
21.00-11.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T20 11.00-1.00	Flange	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	

Guy Data

Guy Elevation	Guy Grade	Guy Size	Initial Tension	%	Guy Modulus	Guy Weight	L _u	Anchor Radius	Anchor Azimuth Adj.	Anchor Elevation	End Fitting Efficiency
ft			K		ksi	plf	ft	ft	°	ft	%
179.336	EHS	A 5/16	1.12	10%	21000	0.205	219.14	127.00	0.0000	0.00	100%
		B 5/16	1.12	10%	21000	0.205	219.14	127.00	0.0000	0.00	100%
		C 5/16	1.12	10%	21000	0.205	219.14	127.00	0.0000	0.00	100%
130.568	EHS	A 5/16	1.12	10%	21000	0.205	181.48	127.00	0.0000	0.00	100%
		B 5/16	1.12	10%	21000	0.205	181.48	127.00	0.0000	0.00	100%
		C 5/16	1.12	10%	21000	0.205	181.48	127.00	0.0000	0.00	100%

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74.5938	EHS	A	5/16	1.12	10%	21000	0.205	146.54	127.00	0.0000	0.00	100%
		B	5/16	1.12	10%	21000	0.205	146.54	127.00	0.0000	0.00	100%
		C	5/16	1.12	10%	21000	0.205	146.54	127.00	0.0000	0.00	100%
39.3359	EHS	A	5/16	1.12	10%	21000	0.205	132.15	127.00	0.0000	0.00	100%
		B	5/16	1.12	10%	21000	0.205	132.15	127.00	0.0000	0.00	100%
		C	5/16	1.12	10%	21000	0.205	132.15	127.00	0.0000	0.00	100%

Guy Data(cont'd)

Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
179.336	Corner						
130.568	Corner						
74.5938	Corner						
39.3359	Corner						

Guy Data (cont'd)

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
179.34	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	
130.57	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	
74.59	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	
39.34	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	

Guy Data (cont'd)

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
179.336	0.04	0.04	0.04		4.33	4.33	4.33	
130.568	0.04	0.04	0.04		3.6 sec/pulse	3.6 sec/pulse	3.6 sec/pulse	
					2.98	2.98	2.98	
74.5938	0.03	0.03	0.03		3.0 sec/pulse	3.0 sec/pulse	3.0 sec/pulse	
					1.95	1.95	1.95	
39.3359	0.03	0.03	0.03		2.4 sec/pulse	2.4 sec/pulse	2.4 sec/pulse	
					1.59	1.59	1.59	
					2.2 sec/pulse	2.2 sec/pulse	2.2 sec/pulse	

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Guy Data (cont'd)

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm		Pull Off		Diagonal	
			K _x	K _y	K _x	K _y	K _x	K _y
179.336	No	No			1	1	1	1
130.568	No	No			1	1	1	1
74.5938	No	No			1	1	1	1
39.3359	No	No			1	1	1	1

Guy Data (cont'd)

Guy Elevation ft	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
179.336	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
130.568	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
74.5938	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
39.3359	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z	q _z	q _z Ice	Ice Thickness
		ft	psf	psf	in
179.336	A	89.67	35	2	1.6577
	B	89.67	35	2	1.6577
	C	89.67	35	2	1.6577
130.568	A	65.28	32	2	1.6059
	B	65.28	32	2	1.6059
	C	65.28	32	2	1.6059
74.5938	A	37.30	29	2	1.5185
	B	37.30	29	2	1.5185
	C	37.30	29	2	1.5185
39.3359	A	19.67	25	2	1.4243
	B	19.67	25	2	1.4243
	C	19.67	25	2	1.4243

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	201.00-191.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00

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<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face</i>	<i>A_R</i>	<i>A_F</i>	<i>C_AA_A In Face</i>	<i>C_AA_A Out Face</i>	<i>Weight</i>
			<i>ft²</i>	<i>ft²</i>	<i>ft²</i>	<i>ft²</i>	<i>K</i>
T2	191.00-181.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T3	181.00-171.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T4	171.00-161.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T5	161.00-151.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T6	151.00-141.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T7	141.00-131.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T8	131.00-121.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T9	121.00-111.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T10	111.00-101.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T11	101.00-91.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T12	91.00-81.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T13	81.00-71.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T14	71.00-61.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T15	61.00-51.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T16	51.00-41.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T17	41.00-31.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T18	31.00-21.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T19	21.00-11.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
T20	11.00-1.00	C	0.000	0.000	0.000	0.000	0.00
		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	0.00

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Feed Line/Linear Appurtenances Section Areas - With Ice
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<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face or Leg</i>	<i>Ice Thickness in</i>	<i>A_R ft²</i>	<i>A_F ft²</i>	<i>C_AA_A In Face ft²</i>	<i>C_AA_A Out Face ft²</i>	<i>Weight K</i>
T1	201.00-191.00	A	1.793	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	0.00
T2	191.00-181.00	A	1.783	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	0.00
T3	181.00-171.00	A	1.773	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	0.00
T4	171.00-161.00	A	1.763	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	0.00
T5	161.00-151.00	A	1.752	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	0.00
T6	151.00-141.00	A	1.741	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	0.00
T7	141.00-131.00	A	1.728	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	0.00
T8	131.00-121.00	A	1.715	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	0.00
T9	121.00-111.00	A	1.701	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	0.00
T10	111.00-101.00	A	1.686	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	0.00
T11	101.00-91.00	A	1.669	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	0.00
T12	91.00-81.00	A	1.651	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	0.00
T13	81.00-71.00	A	1.631	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	0.00
T14	71.00-61.00	A	1.608	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	0.00
T15	61.00-51.00	A	1.581	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	0.00
T16	51.00-41.00	A	1.551	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	0.00
T17	41.00-31.00	A	1.513	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	0.00
T18	31.00-21.00	A	1.465	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	0.00
T19	21.00-11.00	A	1.395	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	0.00
T20	11.00-1.00	A	1.265	0.000	0.000	0.000	0.000	0.00

tnxTower NB+C 8601 Six Forks Road, Suite 540 Raleigh, NC 27615 Phone: FAX:	Job	Dobbins NT2 - Existing Tower - South	Page	17 of 18
	Project	100793	Date	14:23:45 07/29/25
	Client	Network Towers	Designed by	ralexander

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
T1	201.00-191.00	0.0000	0.0000	0.0000	0.0000
T2	191.00-181.00	0.0000	0.0000	0.0000	0.0000
T3	181.00-171.00	0.0000	0.0000	0.0000	0.0000
T4	171.00-161.00	0.0000	0.0000	0.0000	0.0000
T5	161.00-151.00	0.0000	0.0000	0.0000	0.0000
T6	151.00-141.00	0.0000	0.0000	0.0000	0.0000
T7	141.00-131.00	0.0000	0.0000	0.0000	0.0000
T8	131.00-121.00	0.0000	0.0000	0.0000	0.0000
T9	121.00-111.00	0.0000	0.0000	0.0000	0.0000
T10	111.00-101.00	0.0000	0.0000	0.0000	0.0000
T11	101.00-91.00	0.0000	0.0000	0.0000	0.0000
T12	91.00-81.00	0.0000	0.0000	0.0000	0.0000
T13	81.00-71.00	0.0000	0.0000	0.0000	0.0000
T14	71.00-61.00	0.0000	0.0000	0.0000	0.0000
T15	61.00-51.00	0.0000	0.0000	0.0000	0.0000
T16	51.00-41.00	0.0000	0.0000	0.0000	0.0000
T17	41.00-31.00	0.0000	0.0000	0.0000	0.0000
T18	31.00-21.00	0.0000	0.0000	0.0000	0.0000
T19	21.00-11.00	0.0000	0.0000	0.0000	0.0000
T20	11.00-1.00	0.0000	0.0000	0.0000	0.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
Flash Beacon Lighting	C	None		0.0000	201.00	No Ice	1.06	0.02
						1/2" Ice	1.65	0.04
						1" Ice	1.84	0.07
						2" Ice	3.42	0.10
2' Lightning Rod	C	None		0.0000	201.00	No Ice	0.15	0.03
						1/2" Ice	0.29	0.03
						1" Ice	0.42	0.03
						2" Ice	0.72	0.04
10' Omni	B	From Leg	2.00 0.00 0.00	0.0000	186.00	No Ice	3.00	0.03
						1/2" Ice	4.03	0.06
						1" Ice	5.06	0.08
						2" Ice	7.12	0.12
Standoff Mount	B	From Leg	1.00 0.00	0.0000	186.00	No Ice	1.67	0.06
						1/2" Ice	2.51	0.09

tnxTower NB+C 8601 Six Forks Road, Suite 540 Raleigh, NC 27615 Phone: FAX:	Job	Page
	Dobbins NT2 - Existing Tower - South	18 of 18
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	Client	Designed by
	Network Towers	ralexander

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
			5.00			1" Ice 3.35	6.71	0.12
						2" Ice 5.03	10.15	0.19
2' Dish	B	From Leg	0.50	0.0000	183.00	No Ice 1.50	1.50	0.06
			0.00			1/2" Ice 2.31	2.31	0.09
			0.00			1" Ice 2.53	2.53	0.13
						2" Ice 2.99	2.99	0.21
Sidemarker	B	From Leg	0.50	0.0000	108.50	No Ice 0.22	0.17	0.00
			0.00			1/2" Ice 0.28	0.23	0.00
			0.00			1" Ice 0.36	0.30	0.01
						2" Ice 0.53	0.46	0.02
Sidemarker	C	From Leg	0.50	0.0000	108.50	No Ice 0.22	0.17	0.00
			0.00			1/2" Ice 0.28	0.23	0.00
			0.00			1" Ice 0.36	0.30	0.01
						2" Ice 0.53	0.46	0.02

Appendix B – Loading Parameters

ASCE Hazards Report

Address:

No Address at This Location

Standard:

ASCE/SEI 7-16

Risk Category: II**Soil Class:**

D - Default (see
Section 11.4.3)

Latitude:

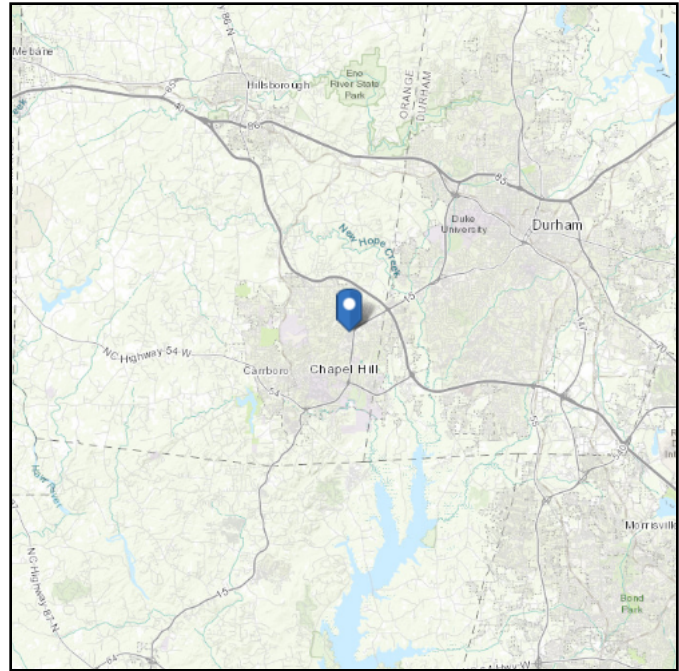
35.937858

Longitude:

-79.026994

Elevation:

264.47772574675156 ft
(NAVD 88)



Wind

Results:

Wind Speed	114 Vmph
10-year MRI	75 Vmph
25-year MRI	83 Vmph
50-year MRI	89 Vmph
100-year MRI	95 Vmph

Data Source:

ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2

Date Accessed:

Thu Jul 17 2025

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

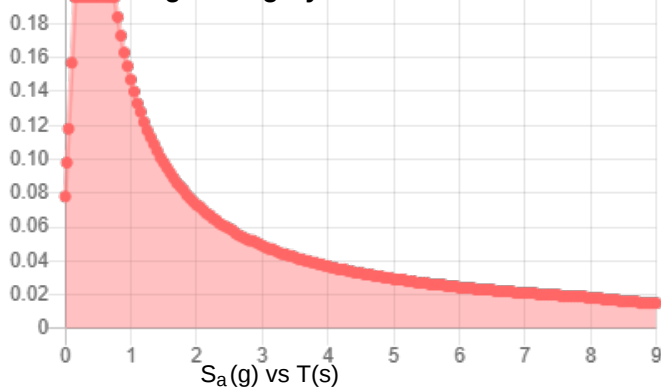
Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Site Soil Class: D - Default (see Section 11.4.3)

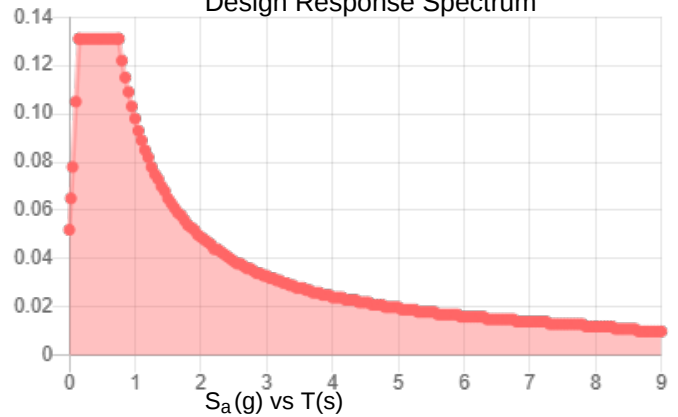
Results:

S_S :	0.122	S_{D1} :	0.098
S_1 :	0.061	T_L :	8
F_a :	1.6	PGA :	0.058
F_v :	2.4	PGA _M :	0.093
S_{MS} :	0.196	F_{PGA} :	1.6
S_{M1} :	0.147	I_e :	1
S_{DS} :	0.131	C_v :	0.7

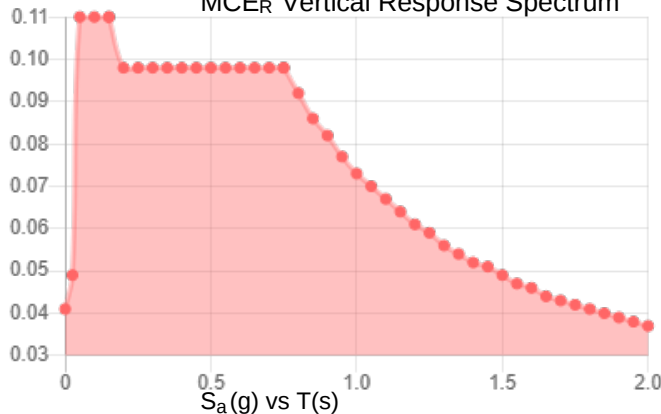
Seismic Design Category: B **MCE_R Response Spectrum**



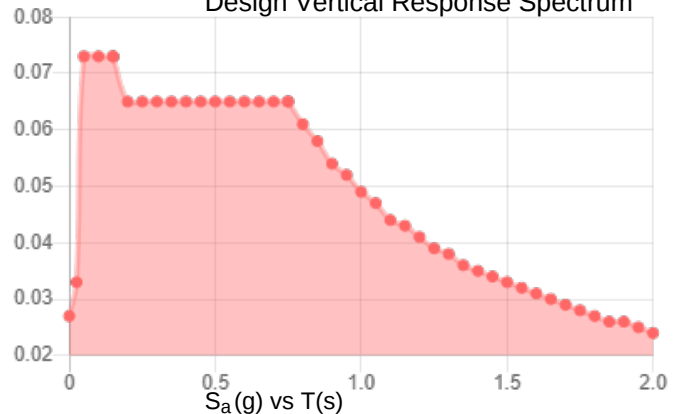
Design Response Spectrum



MCE_R Vertical Response Spectrum



Design Vertical Response Spectrum



Data Accessed: Thu Jul 17 2025

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 1.50 in.
Concurrent Temperature: 15 F
Gust Speed 30 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Thu Jul 17 2025

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Snow

Results:

Ground Snow Load, p_g : 15 lb/ft²
Mapped Elevation: 264.5 ft

Data Source: ASCE/SEI 7-16, Table 7.2-8

Date Accessed: Thu Jul 17 2025

Values provided are ground snow loads. In areas designated "case study required," extreme local variations in ground snow loads preclude mapping at this scale. Site-specific case studies are required to establish ground snow loads at elevations not covered.

Snow load values are mapped to a 0.5 mile resolution. This resolution can create a mismatch between the mapped elevation and the site-specific elevation in topographically complex areas. Engineers should consult the local authority having jurisdiction in locations where the reported 'elevation' and 'mapped elevation' differ significantly from each other.

The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE Hazard Tool.



NEPA Report

January 30, 2025



Dobbins

NC-T23.12

1721 East Franklin Street

Chapel Hill, Orange County, North Carolina 27514

Trileaf # 752127

Prepared For:

Network Towers

120 Eastshore Drive
Glen Allen, VA 23059

Prepared By:

Trileaf Corporation

8600 LaSalle Road, Suite 301
Towson, MD 21286

NEPA Report Summary

Site Name/Location:

Dobbins / NC-T23.12 / Trileaf # 752127
1721 East Franklin Street, Chapel Hill, Orange County, North Carolina 27514
Latitude: 35° 56' 16.2901" N, Longitude: 79° 1' 37.1788" W

Project Description:

Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street.

1. Is the facility located in an officially designated wilderness area? [47 CFR 1.1307 (a)(1)]

Yes	No	Data Sources:	Site Reconnaissance
☐	☒		Review of 7.5-Minute USGS Topographic Map (Appendix B)
			National Wilderness Preservation System Website (www.wilderness.net)

2. Is the facility located in an officially designated wildlife preserve? [47 CFR 1.1307 (a)(2)]

Yes	No	Data Sources:	Site Reconnaissance
☐	☒		Review of 7.5-Minute USGS Topographic Map (Appendix B)
			US Fish & Wildlife Service National Wildlife Refuge System Map (Appendix B)

3. Will the facility: (i) affect listed threatened or endangered species or designated critical habitats; or (ii) jeopardize the continued existence of any proposed endangered or threatened species; or is it likely to result in the destruction or adverse modification of proposed critical habitats, as determined by the Secretary of the Interior pursuant to the Endangered Species Act of 1973? [47 CFR 1.1307 (a)(3)]

Yes	No	Conditional Clearance	Data Sources:	Site Reconnaissance
☐	☒			Review of US Fish & Wildlife Service Critical Habitat and Federally Listed Endangered Species (Appendix D)
				Informal Biological Assessment (Appendix D)
				North Carolina Wildlife Resources Commission

4. Will the facility affect districts, sites, buildings, structures, or objects significant in American history, architecture, archeology, engineering or culture, that are listed, or are eligible for listing on the State or National Registers of Historic Places? [47 CFR 1.1307 (a)(4)]

Yes	No	Data Sources:	Site Reconnaissance
☐	☒		Cultural Resource Investigation (Appendix E)
			State Historic Preservation Office Section 106 Review (Appendix E)

5. Will the facility affect an Indian religious site? [47 CFR 1.1307 (a)(5)]

Yes	No	Data Sources:	Site Reconnaissance
☐	☒		Correspondence with Native American Tribes via FCC TCNS (Appendix F)
			Review of Bureau of Indian Affairs Indian Reservation Map (Appendix B)

6. Will the facility be located in a "floodplain", and not be placed at least one (1) foot above the base flood elevation of the floodplain? [47 CFR 1.1307 (a)(6)]

Yes	No	Conditional Clearance	Data Sources:	Review of FEMA Flood Map (Appendix B)
☐	☒			

7. Will the construction of the facility involve significant change in surface features (e.g. wetland fill, deforestation, or water diversion)? [47 CFR 1.1307 (a)(7)]

Yes	No	Data Sources:	Site Reconnaissance
☐	☒		Review of 7.5-Minute USGS Topographic Map (Appendix B)
			Review of US Fish & Wildlife Service National Wetlands Inventory Map (Appendix B)
			Review of USDA NRCS Web Soil Survey Map (Appendix B)

8. Will the antenna tower or supporting structure be equipped with high intensity white lights and located in a residential neighborhood, as defined by the applicable zoning law?

Yes	No	Data Sources:	Construction Drawings (Appendix A)
☐	☒		It is assumed that clients will not utilize high intensity white lights in residential areas

9. Will the facility cause human exposure to levels of radiofrequency radiation in excess of Commission-adopted guidelines?

Yes	No	Data Sources:	Construction Drawings (Appendix A) and/or interviews with clients
☐	☒		Clients will comply with the established criteria regarding radio frequency exposure limits, as established at the time of this report



Signature

Trenton Clark

Name

January 30, 2025

Date

Trileaf Corporation

Company



NEPA Report

Introduction

Trileaf Corporation (Trileaf) completed a NEPA Review for the above-referenced Network Towers II LLC (Network Towers) site. The purpose of a NEPA Review is to comply with the National Environmental Policy Act (NEPA) of 1969. Trileaf performed extensive research by consulting with appropriate state and federal agencies and reviewing readily available published lists, files, data, and maps to provide our clients with a complete NEPA document. The following summarizes the scope of work Trileaf performed in accordance with the Federal Communications Commission's (FCC's) rules implementing NEPA (47 CFR Section 1.1307 (a) (1) through (8) to determine whether any of the below listed FCC special interest items would be affected by the proposed action. Referenced materials are included as attachments, where applicable and available.

Network Towers proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The proposed project site is located at approximately 1721 East Franklin Street, Chapel Hill, Orange County, North Carolina 27514 at 35° 56' 16.29" North latitude and 79° 1' 37.18" West longitude.

During Trileaf's site reconnaissance, it was observed that the site is currently located within grass-covered land and wooded land, and the areas surrounding the site are currently residential and commercial properties.

1. Will the facility be located in an officially designated wilderness area?

Trileaf reviewed the USGS 7.5-minute topographic map titled "Chapel Hill" Quadrangle, North Carolina and information from the National Wilderness Preservation System (NWPS) (<http://www.wilderness.net>) to determine if the site is located within an officially designated wilderness area.

There are currently 12 officially designated wilderness areas in the State of North Carolina. The closest wilderness area to the project site is the Birkhead Mountains Wilderness Area, which is located approximately 52 miles southwest of the project site.

Based on this review, the project site is not located within an officially designated wilderness area.

2. Will the facility be located in an officially designated wildlife preserve?

Trileaf reviewed the USGS 7.5-minute topographic map titled "Chapel Hill" Quadrangle, North Carolina, and information from the National Wildlife Refuge (NWR) System (<http://www.fws.gov/refuges>) to determine if the site is located within an officially designated wildlife preserve or refuge.

Based on this review, the project site is not located within an officially designated wildlife preserve or refuge. A copy of the NWR System map is located in Appendix B.

3. Will the facility (i) affect listed threatened or endangered species or designated critical habitat; or (ii) likely jeopardize the continued existence of any proposed endangered or threatened species or likely result in the destruction or adverse modification of proposed critical habitats, as determined by the Secretary of the Interior pursuant to the Endangered Species Act of 1973?

The Endangered Species Act (ESA) of 1973 (16 U.S.C. §§ 1536), as amended, protects endangered and threatened species and the ecosystems upon which they depend. As interpreted and implemented by 50 CFR 402, Section 7 of the ESA directs Federal agencies, in consultation with and with the assistance of the Secretary of the Interior, to utilize their authorities to further the purposes of the ESA. It also requires every Federal agency to ensure that any action it authorizes, funds or carries out, is not likely to jeopardize the continued existence of any endangered or threatened species or results in the destruction or adverse modification of critical habitat.

On October 18, 2024, a Trileaf representative visited and photographed the project site to conduct an Informal Biological Assessment (IBA). In addition, Trileaf reviewed the United States Fish and Wildlife Service (USFWS) critical habitat information and determined that the site is not located within designated critical habitat. Based on the results of our assessment, potential habitat for the Northern Long-eared Bat (*Myotis Septentrionalis*) and the Tricolored Bat (*Perimyotis subflavus*) was observed. Trileaf determined that the proposed project site “may affect but is not likely to adversely affect” the Northern Long-eared Bat and the Tricolored Bat. Copies of the IBA and critical habitat review are located in Appendix D.

FEDERAL

On January 7, 2025, Trileaf reviewed the Section 7 Consultation guidance set forth by the USFWS – Raleigh, North Carolina Ecological Services Field Office. According to the USFWS, the Self-Certification Letter* is to be used for “may affect, not likely to adversely affect” determinations for proposed/listed species and/or proposed/designated critical habitat. Therefore, as Trileaf determined the project may affect but is not likely to adversely affect listed or proposed threatened or endangered species or critical habitats, the Self-Certification Letter was applied and submitted via email on January 17, 2025 to the USFWS for their records only. A copy of the USFWS Self-Certification letter is located in Appendix D.

Network Towers has agreed to a self-imposed time of year tree clearing restriction from April 1 to November 15 to avoid impacts to the Northern Long-eared Bat (*Myotis Septentrionalis*) and the Tricolored Bat (*Perimyotis subflavus*).

***This certification letter is valid for 1 year. If the proposed undertaking is not completed within 1-year, additional consultation with the USFWS will be required.**

STATE

On January 29, 2025, Trileaf submitted a query including project information to the North Carolina Natural Heritage Program (NCNHP) online submittal database. On January 29, 2025, the NCNHP indicated that “there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary.” A copy of the NCNHP response is included in Appendix D.

4. Will the facility affect districts, sites, buildings, structures, or objects significant in American history, architecture, archeology, engineering, or culture that are listed, or are eligible for listing, in the National Register of Historic Places?

Trileaf referred to Section 106 of the National Historic Preservation Act (NHPA) of 1966 as amended (16 U.S.C. §§ 470 et seq.), the Advisory Council on Historic Preservation (ACHP) implementing regulations (36 CFR Part 800) and the Nationwide Programmatic Agreement (NPA) for Review of Effects on Historic

Properties for Certain Undertakings Approved by the Federal Communications Commission dated September 2004 to determine if the project site is contained in, on, or within the viewshed of a building, site, district, structure, or object, significant in American history, architecture, archaeology, engineering, or culture, that is listed, or eligible for listing on the National Registers of Historic Places, or located in or on an Indian Religious Site.

A search of the *National Historic Landmarks* (NHL), *National Register of Historic Places* (NRHP), *State Historic Preservation Office* (SHPO) files, and a field survey was conducted by Mr. Michael Hart, Secretary of Interior-qualified Historian and Architectural Historian, Ms. Mackenzie Mulkey, Secretary of Interior-qualified Archaeologist, and Mr. William McLean, Project Scientist, of Trileaf, to identify any cultural resources within the area of direct effects and within a 0.50-mile radius for visual effects.

It was determined that there were no historic properties identified within the Area of Potential Effects (APE) for direct effects, and no historic properties identified within the APE for visual effects. Additionally, the identification process did not locate archaeological materials that would be directly affected, or sites that are of cultural or religious significance to Tribes/NHOs. Documentation of these reviews was submitted to the SHPO via the Communications Tower Information Form for North Carolina State Historic Preservation Office Review on November 7, 2024, and to E106 on December 2, 2024. The SHPO concurred that the proposed undertaking would have no direct or visual effects on historic properties on the completed form, dated November 21, 2024. A copy of the SHPO concurrence letter, Form 620, and associated documents are located in Appendix E.

On November 25, 2024, Ms. Anya Grahn, Planner for the Chapel Hill Historic District Commission, and the Chapel Hill Historical Society were notified of the proposed project and invited to comment on the proposed project's potential effect on Historic Properties as well as indicate whether they are interested in consulting further on the proposed project. Additionally, a legal notice regarding the proposed telecommunications tower construction was posted in *The News of Orange County* on December 4, 2024. No comments from the local government, historical society, or legal notice have been received by Trileaf. Copies of the correspondence and legal notice are located in Appendix E.

NATIONAL SCENIC TRAILS

On October 5, 1999, the Cellular Telecommunications Industry Association, Personal Communications Industry Association, Appalachian Trail Conference, American Hiking Society, and representative Managing and Supporting Trails Organizations (MSTOs) for the National Scenic Trails signed a resolution for the Siting of Wireless Telecommunications Facilities Near National Scenic Trails. This resolution states that if a wireless telecommunications or site management company plans a new or significantly expanded facility within one mile of a National Scenic Trail, it will notify the non-profit group that supports the trail.

In order to determine if the site is located within one mile of a National Scenic Trail, Trileaf reviewed information from the National Park Service (NPS) National Trails System created by the National Trails System Act of 1968.

Based on this review, the project site is not located within 1 mile of a National Scenic Trail. A copy of the trails map is located in Appendix B.

5. Will the facility affect any Indian religious sites?

Trileaf referred to Section 106 of the National Historic Preservation Act (NHPA) of 1966 as amended (16 U.S.C. §§ 470 et seq.), the Advisory Council on Historic Preservation (ACHP) implementing regulations (36 CFR Part 800) and the Nationwide Programmatic Agreement (NPA) for Review of Effects on Historic

Properties for Certain Undertakings Approved by the Federal Communications Commission dated September 2004 to determine if the project site is located in or on an Indian Religious Site.

On October 28, 2024, Trileaf submitted project information through the Tower Construction Notification System (TCNS) to the FCC who initiated contact with the tribes on November 1, 2024. As of January 24, 2025, all tribes have confirmed clearance either directly or by default via the FCC referral process. Trileaf determined that the subject Property is not located on or near a Native American Religious or Sacred Site. However, if archaeological remains or resources are unearthed during construction activities, Trileaf recommends that the client stop construction and notify our office immediately. Tribal consultation documentation and associated correspondence is located in Appendix F.

6. Will the facility be located in a floodplain and not be placed at least one (1) foot above the base flood elevation of the floodplain?

Trileaf reviewed the relevant Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel #3710979900L, dated October 19, 2018, to determine if the project was located within the 100-year floodplain.

Trileaf determined that the property is located in Zone AE which consists of areas located within the 100-year floodplain with a 1% annual chance of flooding. As of July 2, 2018, the FCC has dispensed with the existing requirement that an applicant file an EA solely due to the location of a proposed facility in a floodplain, so long as such equipment is at least one (1) foot above the base flood elevation of the floodplain. Therefore, the preparation and filing of an EA is not required. The client should ensure that all associated equipment is located at least one (1) foot above the base flood elevation of the floodplain. The base flood elevation for the site is 264.7 and is in the NAD88 vertical datum. The AMSL for this site is 265 feet and is in the NAD88 vertical datum. Therefore, equipment needs to be elevated 0.7 feet above the ground surface. Copies of the FEMA FIRM, the Elevation Certificate, and the 1A Certification are located in Appendix B.

7. Will the construction of the facility involve significant change in surface features (e.g. wetland fill, deforestation, or water diversion)?

Trileaf determined through site reconnaissance, review of the relevant USGS 7.5-minute topographic map titled “Chapel Hill” Quadrangle, North Carolina, and review of the relevant USFWS National Wetlands Inventory Map (<http://www.fws.gov/wetlands/Data/Mapper.html>) that there are no federally designated wetlands on or in the immediate vicinity of the proposed project site.

Trileaf’s site assessment did not reveal any evidence of potential wetlands or hydrophytic vegetation located on or in the immediate vicinity of the project site. Additionally, a review of the United States Department of Agriculture (USDA) Soil Survey (<http://websoilsurvey.sc.egov.usda.gov>) did not indicate hydric soils at the project site.

Based on this review, no designated wetland areas were located within the vicinity of this project and no significant changes in surface features resulting from the proposed undertaking are anticipated. Copies of the soil map and wetlands map are located in Appendix B.

8. Zoning/High Intensity White Lights/Radio Frequency

As a standard practice, Network Towers does not construct facilities requiring high intensity white lights that are to be located in residentially zoned neighborhoods. According to Network Towers, high intensity white lights will not be used for towers less than 500 feet in height.

9. Radio Frequency

FCC licensees transmitting from antennas mounted on Network Towers owned antenna structures will comply with the established criteria regarding radio frequency exposure limits in accordance with the *Second Report and Order*, as well as the FCC Code of Federal Regulations [47 CFR § 1.1307, § 1.1310] published at the time of this report.

Conclusion

A NEPA Review of the proposed undertaking was performed by Trileaf Corporation in conformance with the FCC rules and regulations for implementing NEPA; 47 CFR 1.1301 to 1.1319.

Based on data obtained during the Site visit, consultation with government agencies, and a review of readily available information from other sources, the preparation and filing of an Environmental Assessment will not be required and no further NEPA-related action is required for the proposed undertaking.

Qualifications



Trenton Clark
Assistant Project Manager II

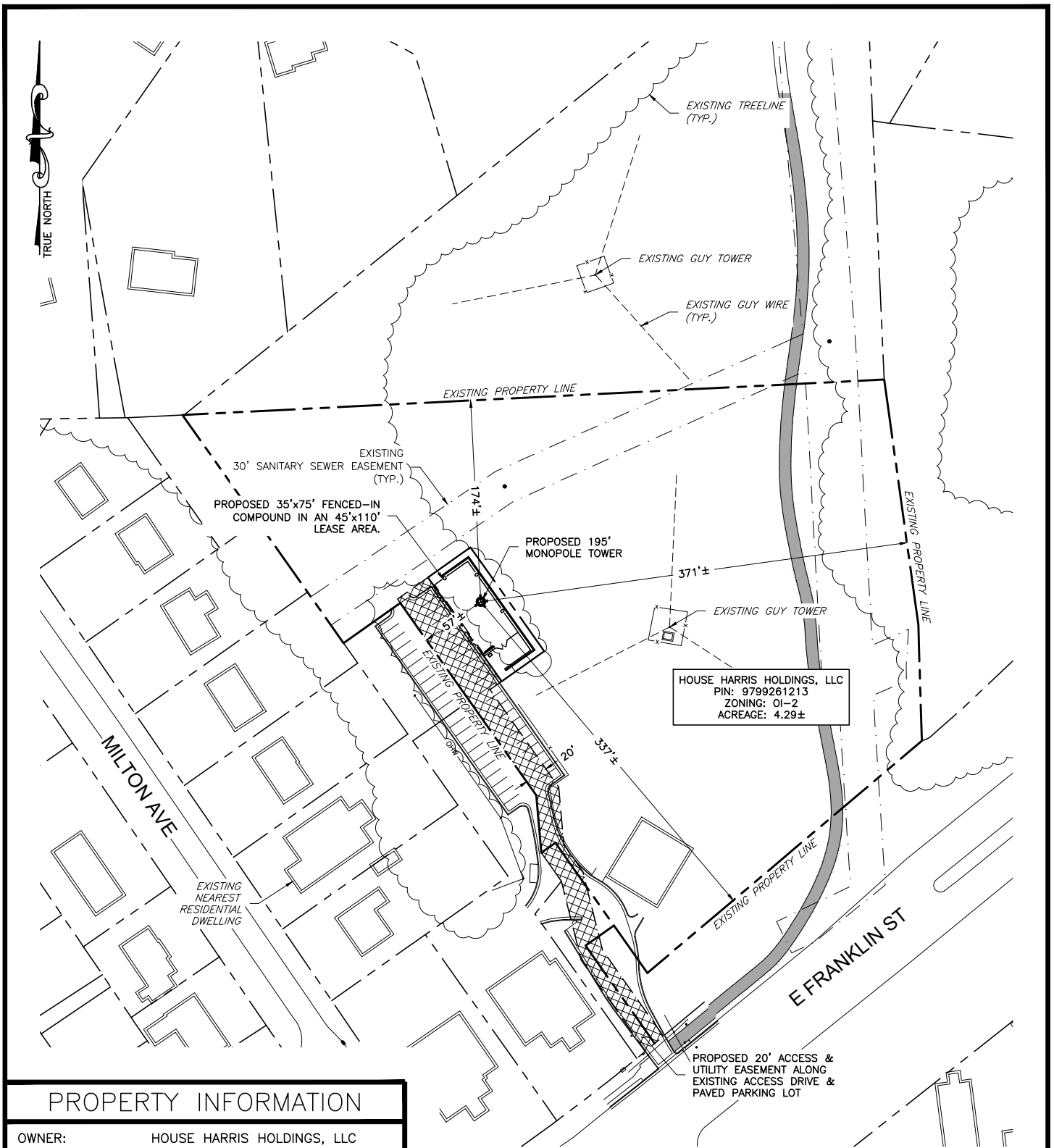


Brooks Thacker
Quality Assurance
Group Manager

Appendix A

Site Plans





PROPERTY INFORMATION

OWNER: HOUSE HARRIS HOLDINGS, LLC
OWNER ADDRESS: 199 CLIFFDALE RD
CHAPEL HILL, NC 27516
PIN: 9799261213
ZONING: OI-2
ACREAGE: 4.29 ± ACRES

PROPERTY PLAN



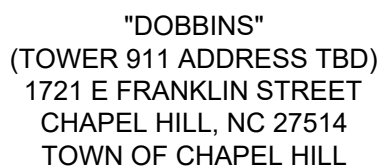
"DOBBINS"
(TOWER 911 ADDRESS TBD)
1721 E FRANKLIN STREET
CHAPEL HILL, NC 27514
TOWN OF CHAPEL HILL

SITE INFORMATION

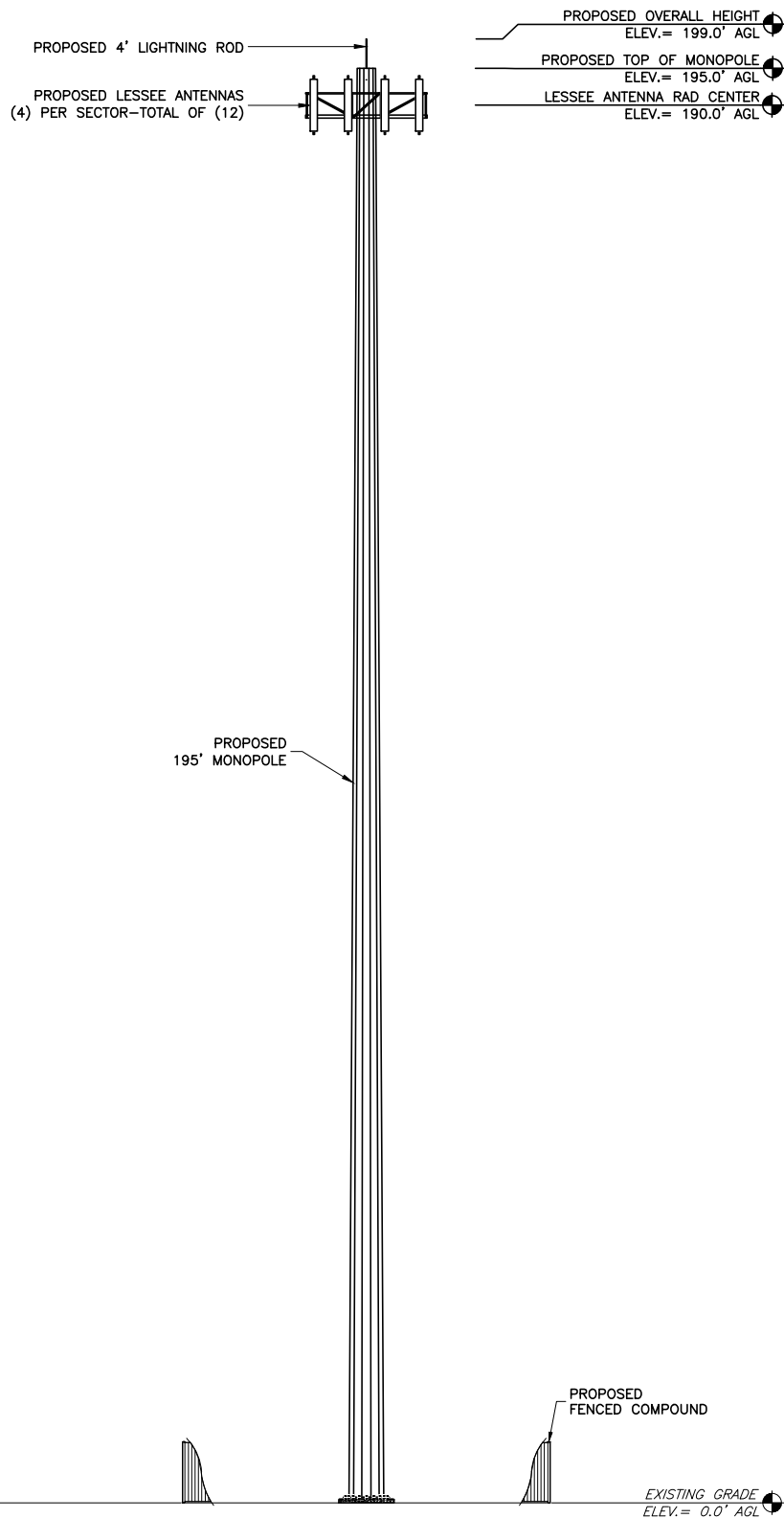
SITE VISIT BY: - DATE: -
LAT (NAD 83): 35° 56' 16.36" N
LONG (NAD 83): 79° 01' 37.25" W

SHEET 1

10/09/2024
BY: OP



10/09/2024
BY: OP



ELEVATION



"DOBBINS"
(TOWER 911 ADDRESS TBD)
1721 E FRANKLIN STREET
CHAPEL HILL, NC 27514
TOWN OF CHAPEL HILL

SITE INFORMATION

SITE VISIT BY: - DATE: -
LAT (NAD 83): 35° 56' 16.36" N
LONG (NAD 83): 79° 01' 37.25" W

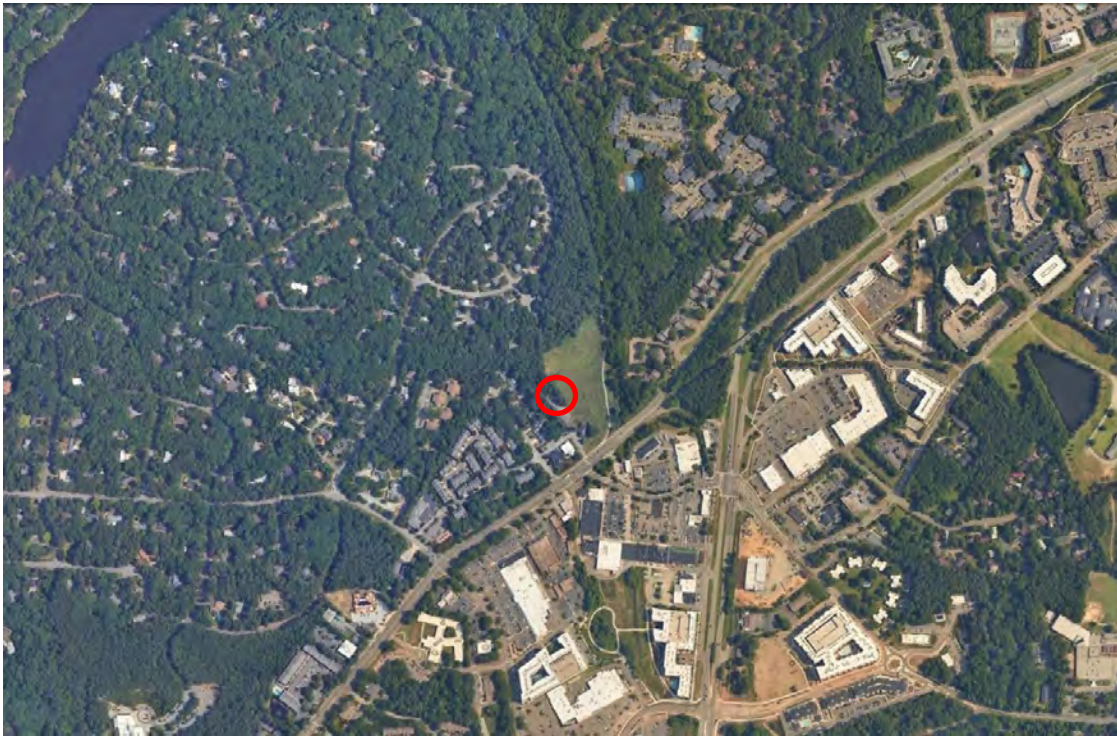
SHEET 3

10/09/2024
BY: OP

Appendix B

Site Maps





Site Location & Surrounding Properties



Site Location



Easement

Aerial Photographs (2023)

Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514



Chapel Hill Quadrangle, North Carolina (2022)

Contour Interval = 10 Feet

Scale 1 Inch = ~2,000 Feet

Latitude: 35° 56' 16.2901" N, Longitude: 79° 1' 37.1788" W



North



Site Vicinity Map

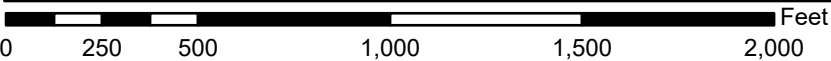
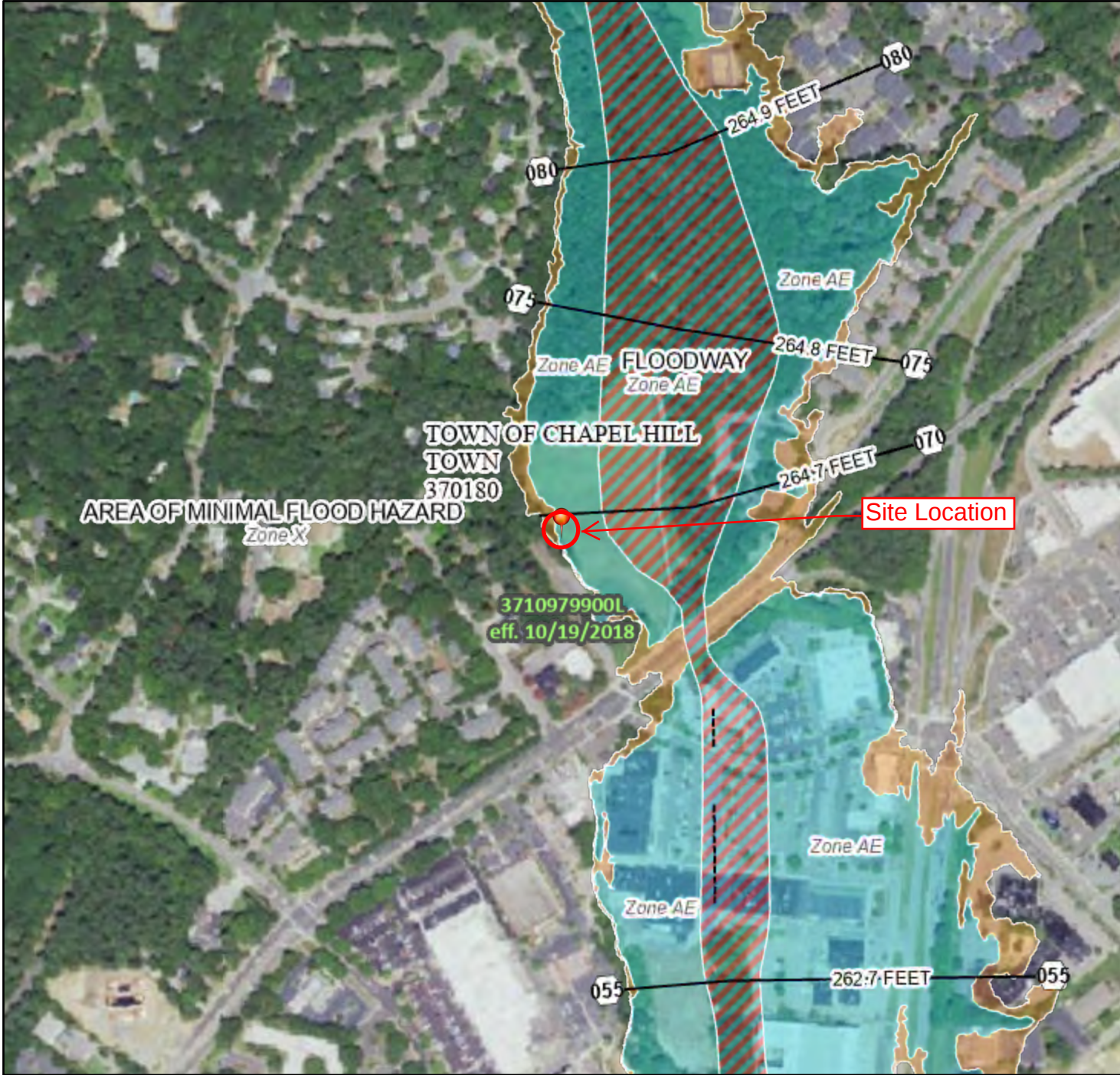
Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514



National Flood Hazard Layer FIRMMette



79°1'56"W 35°56'31"N



1:6,000

79°1'18"W 35°56'2"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/23/2025 at 4:44 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



November 15, 2024

Wetlands

	Estuarine and Marine Deepwater		Freshwater Emergent Wetland		Lake
	Estuarine and Marine Wetland		Freshwater Forested/Shrub Wetland		Other
			Freshwater Pond		Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Soil Map—Orange County, North Carolina



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

11/15/2024
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Orange County, North Carolina

Survey Area Data: Version 25, Sep 9, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 23, 2022—Apr 27, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ch	Chewacla loam, 0 to 2 percent slopes, frequently flooded	0.0	6.7%
WsB	White Store loam, 2 to 6 percent slopes	0.1	10.4%
WwC	White Store-Urban land complex, 2 to 8 percent slopes	0.6	82.9%
Totals for Area of Interest		0.7	100.0%

U.S. Fish and Wildlife Service
National Wildlife Refuge System Map



North



Ref
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Abb

USFWS – Wildlife Refuge Map

Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514

 **TRILEAF**
environmental architecture engineering

North American Migration Flyways



North



Migratory Bird Flyways – Location Map

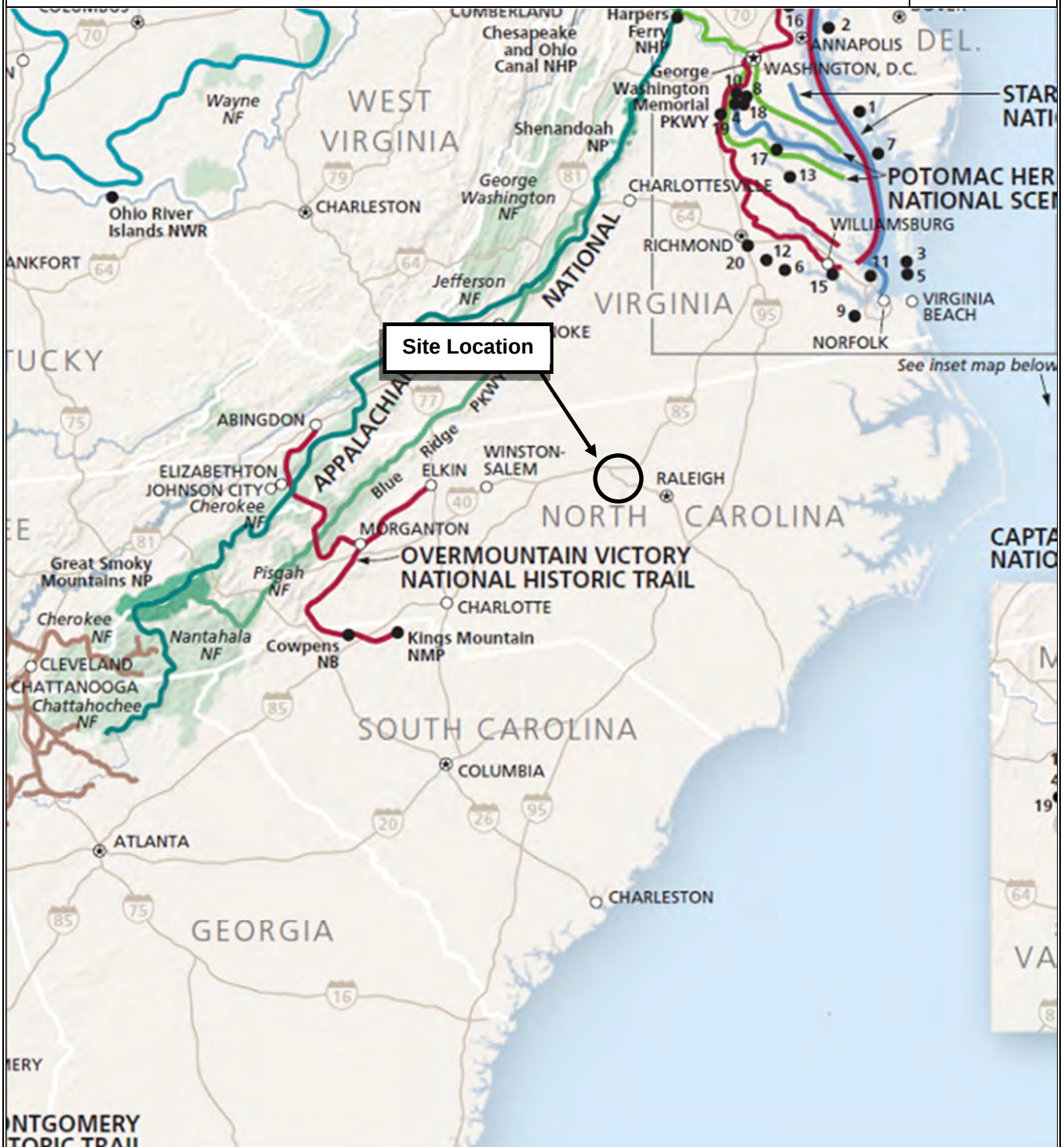
Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514



National Park Service
National Historic Trails and Scenic Routes



North



National Park Service – Trails and Routes Map

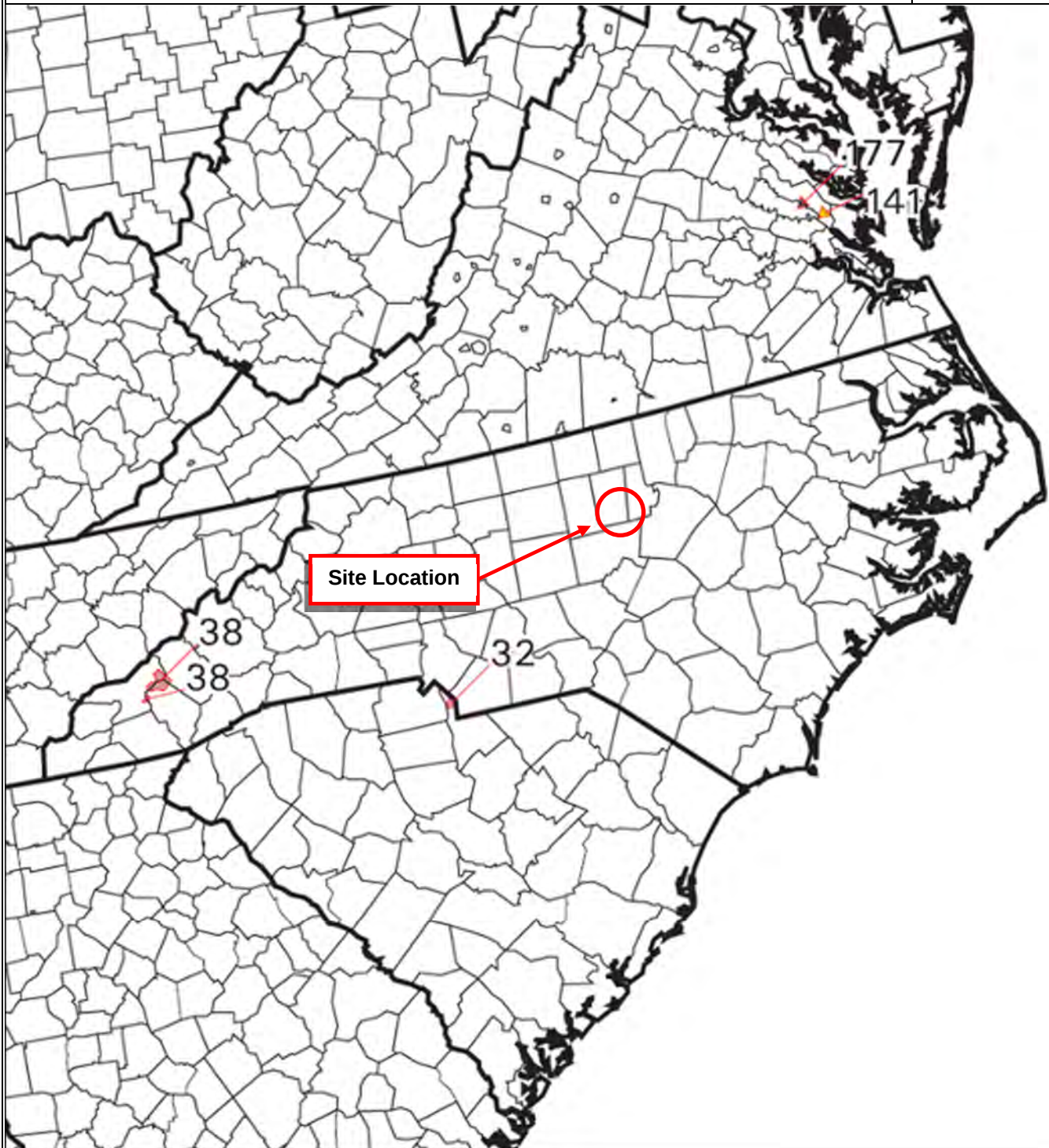
Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514



Bureau of Indian Affairs
Indian Reservation Map



North



Bureau of Indian Affairs – Reservation Map

Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514



Appendix C

Site Photographs





Site Photograph 1 – Looking north at the Site



Site Photograph 2 – Looking south at the Site

Site Photographs

Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514

Photographed:
October 18, 2024



Site Photograph 3 – Looking east at the Site



Site Photograph 4 – Looking west at the Site

Site Photographs

Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514

Photographed:
October 18, 2024



Site Photograph 5 – Looking north away from the Site



Site Photograph 6 – Looking south away from the Site

Site Photographs

Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514

Photographed:
October 18, 2024



Site Photograph 7 – Looking east away from the Site



Site Photograph 8 – Looking west away from the Site

Site Photographs

Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514

Photographed:
October 18, 2024



Site Photograph 9 – Looking north along the access/utility easement



Site Photograph 10 – Looking south along the access/utility easement

Site Photographs

Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514

Photographed:
October 18, 2024



Site Photograph 11 – Pine DBH within lease area



Site Photograph 12 – Pine DBH within lease area

Site Photographs

Network Towers II LLC – Dobbins
 1721 East Franklin Street
 Chapel Hill, North Carolina 27514

Photographed:
 October 18, 2024



Site Photograph 13 – Pine DBH within lease area



Site Photograph 14 – Canopy within lease area

Site Photographs

Network Towers II LLC – Dobbins
1721 East Franklin Street
Chapel Hill, North Carolina 27514

Photographed:
October 18, 2024

Appendix D

Documentation of Officially Designated Wilderness Areas, Wildlife Preserves and Endangered Species





United States Department of the Interior

FISH AND WILDLIFE SERVICE



Raleigh Field Office
P.O. Box 33726
Raleigh, NC 27636-3726

Date: _____

Self-Certification Letter

Project Name _____

IPaC Project Code: _____ IPaC Record Locator # _____

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Raleigh Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended (Eagle Act). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA and Eagle Act conclusions. Based on your analysis, mark all the determinations that apply:

- ☐ “no effect” determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- ☐ “may affect, not likely to adversely affect” determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- ☐ “no Eagle Act permit required” determinations for eagles.

We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the “no effect” or “not likely to adversely affect” determinations for proposed and listed species and proposed and designated critical habitat; the “may affect” determination for Northern long-eared bat; and/or the “no Eagle Act permit required” determinations for eagles. Additional coordination with this office is not needed. Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species. Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat, or bald eagles becomes available, this determination may be reconsidered. This certification letter is valid for 1 year. Information about the online project review process including instructions, species information, and other information regarding project reviews within North Carolina is available at our website <http://www.fws.gov>. If you have any questions, you can write to us at Raleigh@fws.gov or please contact Leigh Mann of this office at 919-856-4520, ext. 10.

Sincerely,

/s/Pete Benjamin

Pete Benjamin
Field Supervisor
Raleigh Ecological Services

Enclosures - project review package

Informal Biological Assessment

Network Towers II LLC

Project Name: Dobbins / NC-T23.12 - Trileaf #752127

Latitude: 35° 56' 16.2901" N, Longitude: 79° 1' 37.1788" W

Trileaf performed an Informal Biological Assessment for the subject site. The purpose is to document whether the proposed undertaking will affect listed or proposed threatened or endangered species, designated critical habitats, wetlands, and migratory birds. A project description, site photographs, topographical maps, wetland maps, and soil maps are included in this report.

Proposed Project Description:

The Site is located at 1721 East Franklin Street, Chapel Hill, Orange County, North Carolina 27514. Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The proposed structure site is approximately 265.0 feet above mean sea level.

Site and Surrounding Habitat:

The Site is currently located within grass-covered and wooded land. A tree survey was not conducted, however using the provided photographs it is assumed that the stand is a mature pine stand with an average diameter at breast height (DBH) of approximately 10 inches.

The surrounding habitat within a 0.5 mile radius of the proposed site consists predominantly of commercial and residential development. To the north is grass-covered land, followed by wooded land and residential development. To the east is grass-covered land, followed by commercial development, followed by East Franklin Street, followed by commercial development. To the south is East Franklin Street, followed by commercial development. To the west is residential development. The current habitat is not mapped as critical habitat.

Wetlands:

Trileaf has reviewed the topographic map, soil composition, as well as the National Wetlands Inventory Map to determine if the proposed lease area and easements would have an impact on any wetlands or require significant amounts of fill or grading. Trileaf determined that the site is not located in a recognized national wetland area.

Trileaf performed a field visit and identified surface water bodies. Using local maps in combination with an area reconnaissance the following water bodies have been identified in the table below:

Water Body Type	Water Body Name	Direction from Structure	Distance from Structure
Stream	Booker Creek	E	385 feet
Freshwater Pond	Unnamed	SW	0.45 miles
Freshwater Pond	Unnamed	NE	0.49 miles

Migratory Birds:

The proposed Site and design process for this project could not conform to all the USFWS recommendations to decrease potential effects on migratory birds. Therefore, it has included mitigating factors such as structure placement within minimally sensitive areas, avoiding placement near wetlands and large water bodies, limiting structure height to 199 feet, and eliminating the need for guy wires or FAA obstruction lighting. While the proposed Site is located near the Atlantic flyway, our site investigation has determined that the project area is not located in an NWI mapped wetland, waterway, wildlife refuge, national wilderness area, native grassland or forest area, ridgeline, mountain top, coastline or area commonly known to have high incidences of fog or low clouds, where migratory birds may be found. Based upon the efforts undertaken during this IBA as well as the current data made available, we have concluded that this project will not have a significant effect on migratory birds; however, the presence of migratory birds cannot be ruled out.

Soils:

According to the U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey of Orange County, North Carolina, the Site is underlain by Chewacla loam, 0 to 2 percent slopes, frequently flooded (northeastern portion of lease area), White Store loam, 2 to 6 percent slopes (northwest portion of lease area), and White Store-Urban land complex, 2 to 8 percent slopes (southern portion of lease area and proposed access/utility easement).

Chewacla soils consist of somewhat poorly drained soils that are formed from loamy alluvium derived from igneous and metamorphic rock and are found in flood plains. The depth to the most restrictive feature is more than 80 inches. The depth to the water table is about 6 to 24 inches. A typical profile of Chewacla soil consists of a surface layer of loam extending from 0 to 6 inches, subsurface layers of sandy clay loam extending from 6 to 52 inches, and stratified sandy loam extending from 52 to 80 inches. Chewacla soils frequently flood and have no frequency of ponding.

White Store soils consist of moderately well-drained soils that are formed from residuum weathered from mudstone and/or shale and siltstone and/or sandstone and are found in interfluvies. The depth to the most restrictive feature is 40 to 60 inches to paralithic bedrock. The depth to the water table is about 6 to 18 inches. A typical profile of White Store soil consists of a surface layer of loam extending from 0 to 6 inches, subsurface layers of clay extending from 6 to 34 inches, silt loam extending from 34 to 50 inches, and weathered bedrock extending from 50 to 80 inches. White Store soils have no frequency of flooding or ponding.

The soils encountered in areas classified as urban lands have been highly modified by developments where soil profiles vary greatly. The areas are typically covered by paved surfaces, buildings, utilities, and other structures. Some undisturbed soils may exist in playgrounds, parks, and landscaped areas.

Chewacla loam, 0 to 2 percent slopes, frequently flooded, White Store loam, 2 to 6 percent slopes, and White Store-Urban land complex, 2 to 8 percent slopes, are not considered hydric soils, and no hydrophytic vegetation or surface water was observed.

Threatened or Endangered Species:

Trileaf has researched the listed or proposed threatened or endangered species and designated critical habitat for the project area. This includes any such species that have been reported to exist within the action area where the project is located. The list of federally threatened or endangered species was acquired through the U.S. Fish and Wildlife Service's Information, Planning, and Consultation system (IPaC). The lease area is not located within an aquatic environment; therefore, any obligate aquatic species should not be directly impacted by this project and are not included in the table below. A list of remaining species and site observations are summarized in the following table:

Species / Resource Name	Federal / State Status	Habitat Description	Recommendation of Effect	Notes / Documentation
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Federal-Endangered	Roosts underneath shaggy bark, in cavities, or in crevices of both live and dead trees; hibernates in large caves or mines	May affect, not likely to adversely affect	Habitat assessment indicated potential habitat present
Tricolored Bat (<i>Perimyotis subflavus</i>)	Federal-Proposed Endangered	Foliage or in high tree cavities and crevices preferring edge habitats near areas of mixed agricultural use	May affect, not likely to adversely affect	Habitat assessment indicated potential habitat present
Monarch Butterfly (<i>Danaus plexippus</i>)	Federal-Proposed Threatened	Breeding habitat must contain milkweeds. Adults can be found in a variety of sunny, open spaces, both natural and disturbed	No effect	Habitat assessment indicated no potential habitat present

Northern Long-eared Bat (*Myotis septentrionalis*) and Tricolored Bat (*Perimyotis subflavus*):

During the site reconnaissance, potential habitat for the Northern Long-eared Bat (*Myotis septentrionalis*) and Tricolored Bat (*Perimyotis subflavus*) was observed within the proposed project area. Due to the partly open landscape, with large trees and plentiful woodland edges at the proposed site, potential habitat for these species may be affected. Due to the limited proposed tree removal and limited proposed ground disturbance, the proposed undertaking will not fracture the contiguous nature of the surrounding forested area and will not diminish the overall quality of the surrounding forested area. Trees will be removed as part of the proposed installation; however, various tree species will remain abundant outside of the lease area within 1,000 feet of the project area, and will remain available for roosting and foraging purposes. In addition, the client has agreed to a self-imposed time of year tree clearing restriction from April 1 to November 15. It is Trileaf's

Dobbins
Trileaf# 752127

opinion that the project area will not significantly impact the species' ability to roost, forage, or navigate within the landscape.

Conclusions:

Based on the efforts undertaken during our IBA, project specifications and the current data made available, we have concluded that there is little potential for the proposed project to have a significant effect on listed or proposed, threatened and endangered species, their designated critical habitat, or migratory birds.

It should be noted that this informal biological assessment was conducted in accordance with the Scope of Work and does not constitute a Section 7 Biological Assessment under the Endangered Species Act (50 CFR Part 402.01).

A handwritten signature in black ink, appearing to read 'Trenton Clark', is positioned above the printed name.

Trenton Clark
Natural Resource Specialist

Please refer to Appendix B for Site Maps



Please refer to Appendix C for Site Photographs



Orange County, North Carolina

Ch—Chewacla loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2vy6r

Elevation: 330 to 660 feet

Mean annual precipitation: 39 to 47 inches

Mean annual air temperature: 55 to 63 degrees F

Frost-free period: 200 to 250 days

Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Chewacla, frequently flooded, and similar soils: 90 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chewacla, Frequently Flooded

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread, talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy alluvium derived from igneous and metamorphic rock

Typical profile

Ap - 0 to 6 inches: loam

Bw - 6 to 52 inches: sandy clay loam

Cg - 52 to 80 inches: stratified sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.20 to 2.00 in/hr)

Depth to water table: About 6 to 24 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: B/D
Ecological site: F136XY610GA - Flood plain forest, wet
Hydric soil rating: No

Minor Components

Wehadkee, frequently flooded

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Orange County, North Carolina
Survey Area Data: Version 25, Sep 9, 2024

Orange County, North Carolina

WsB—White Store loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 3trg

Elevation: 200 to 1,400 feet

Mean annual precipitation: 37 to 60 inches

Mean annual air temperature: 59 to 66 degrees F

Frost-free period: 200 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

White store and similar soils: 90 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of White Store

Setting

Landform: Interfluves

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from mudstone and/or shale and siltstone and/or sandstone

Typical profile

H1 - 0 to 6 inches: loam

H2 - 6 to 34 inches: clay

H3 - 34 to 50 inches: silt loam

Cr - 50 to 80 inches: weathered bedrock

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: 40 to 60 inches to paralithic bedrock

Drainage class: Moderately well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Sodium adsorption ratio, maximum: 20.0

Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: D

Ecological site: F136XY400NC - Triassic basin upland woodland,
expansive clay, seasonally wet and dry
Hydric soil rating: No

Data Source Information

Soil Survey Area: Orange County, North Carolina
Survey Area Data: Version 25, Sep 9, 2024

Orange County, North Carolina

WwC—White Store-Urban land complex, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 3trj
Elevation: 200 to 1,400 feet
Mean annual precipitation: 37 to 60 inches
Mean annual air temperature: 59 to 66 degrees F
Frost-free period: 200 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

White store and similar soils: 60 percent
Urban land: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of White Store

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from mudstone and/or shale and siltstone and/or sandstone

Typical profile

H1 - 0 to 6 inches: loam
H2 - 6 to 34 inches: clay
H3 - 34 to 50 inches: silt loam
Cr - 50 to 80 inches: weathered bedrock

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Sodium adsorption ratio, maximum: 20.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F136XY400NC - Triassic basin upland woodland,
expansive clay, seasonally wet and dry
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Impervious layers over human transported material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Data Source Information

Soil Survey Area: Orange County, North Carolina
Survey Area Data: Version 25, Sep 9, 2024



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Ecological Services Field Office
3916 Sunset Ridge Rd
Raleigh, NC 27607
Phone: (919) 856-4520 Fax: (919) 856-4556



In Reply Refer To:
Project Code: 2025-0020198
Project Name: Dobbins

01/07/2025 15:01:52 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). If your project area contains suitable habitat for any of the federally-listed species on this species list, the proposed action has the potential to adversely affect those species. If suitable habitat is present, surveys should be conducted to determine the species' presence or absence within the project area. The use of this species list and/or North Carolina Natural Heritage program data should not be substituted for actual field surveys.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Raleigh Ecological Services Field Office
3916 Sunset Ridge Rd
Raleigh, NC 27607
(919) 856-4520

PROJECT SUMMARY

Project Code: 2025-0020198

Project Name: Dobbins

Project Type: Communication Tower New Construction

Project Description: Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The Site is located within grass-covered and wooded land.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@35.93736595,-79.0268192508061,14z>



Counties: Orange County, North Carolina

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

CLAMS

NAME	STATUS
Atlantic Pigtoe <i>Fusconaia masoni</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5164	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

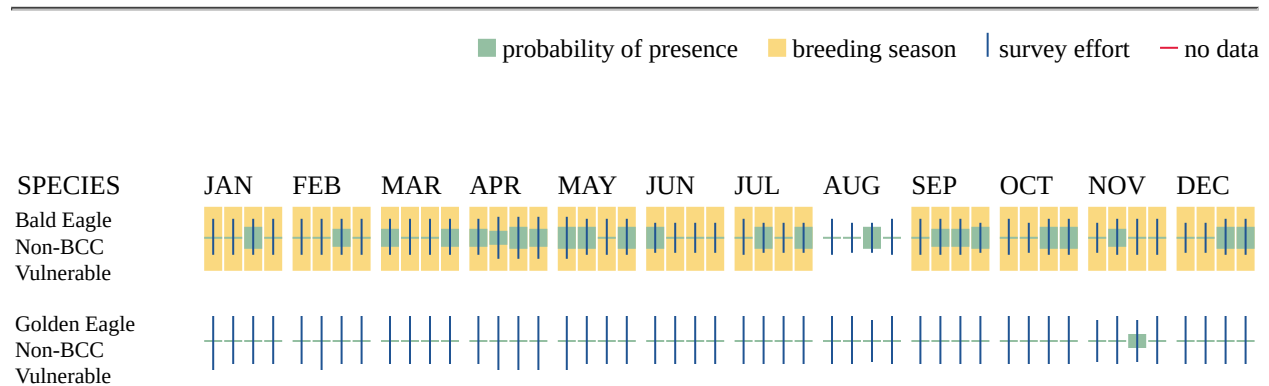
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.

3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Chuck-will's-widow <i>Antrostomus carolinensis</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9604	Breeds May 10 to Jul 10
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere
Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Kentucky Warbler <i>Geothlypis formosa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9443	Breeds Apr 20 to Aug 20

NAME	BREEDING SEASON
Prairie Warbler <i>Setophaga discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

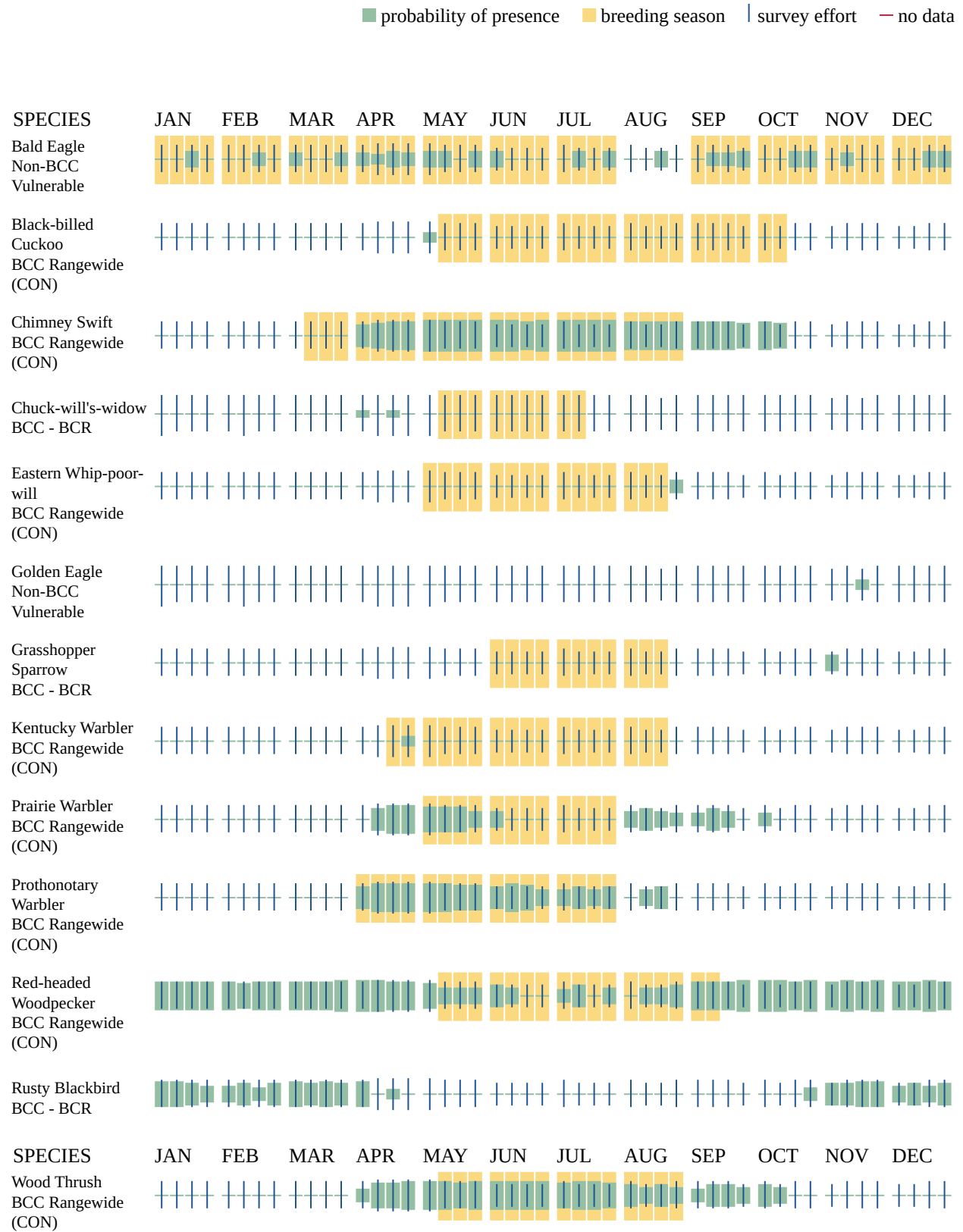
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

IPAC USER CONTACT INFORMATION

Agency: Trileaf
Name: Trenton Clark
Address: 1395 SOUTH MARIETTA PKWY
Address Line 2: BLDG 400, SUITE 209
City: MARIETTA
State: GA
Zip: 30067
Email: t.clark@trileaf.com
Phone: 6786538673

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Communications Commission



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Ecological Services Field Office
3916 Sunset Ridge Rd
Raleigh, NC 27607
Phone: (919) 856-4520 Fax: (919) 856-4556



In Reply Refer To:
Project code: 2025-0020198
Project Name: Dobbins

01/09/2025 22:04:39 UTC

Federal Nexus: yes
Federal Action Agency (if applicable): Federal Communications Commission

Subject: Federal agency coordination under the Endangered Species Act, Section 7 for 'Dobbins'

Dear Trenton Clark:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on January 09, 2025, for 'Dobbins' (here forward, Project). This project has been assigned Project Code 2025-0020198 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements may not be complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (DKey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid. Note that conservation measures for northern long-eared bat and tricolored bat may differ. If both bat species are present in the action area and the key suggests more conservative measures for one of the species for your Project, the Project may need to apply the most conservative measures in order to avoid adverse effects. If unsure which conservation measures should be applied, please contact the appropriate Ecological Services Field Office.***

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based on your IPaC submission and a standing analysis completed by the Service, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Endangered	NLAA
Tricolored Bat (<i>Perimyotis subflavus</i>)	Proposed	NLAA
	Endangered	

Federal agencies must consult with U.S. Fish and Wildlife Service under section 7(a)(2) of the Endangered Species Act (ESA) when an action *may affect* a listed species. Tricolored bat is proposed for listing as endangered under the ESA, but not yet listed. For actions that may affect a proposed species, agencies cannot consult, but they can *confer* under the authority of section 7(a)(4) of the ESA. Such conferences can follow the procedures for a consultation and be adopted as such if and when the proposed species is listed. Should the tricolored bat be listed, agencies must review projects that are not yet complete, or projects with ongoing effects within the tricolored bat range that previously received a NE or NLAA determination from the key to confirm that the determination is still accurate.

Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that consultation on the Action is complete for northern long-eared bat and/or tricolored bat and no further action is necessary unless either of the following occurs:

- new information reveals effects of the action that may affect the northern long-eared bat or tricolored bat in a manner or to an extent not previously considered; or,
- the identified action is subsequently modified in a manner that causes an effect to the northern long-eared bat or tricolored bat that was not considered when completing the determination key.

15-Day Review Period

As indicated above, the Service will notify you within 15 calendar days if we determine that this proposed Action does not meet the criteria for a “may affect, not likely to adversely affect” (NLAA) determination for the northern long-eared bat and/or tricolored bat. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NLAA concurrence provided here. This verification period allows the identified Ecological Services Field Office to apply local knowledge to evaluation of the Action, as we may identify a small subset of actions having impacts that we did not anticipate when developing the key. In such cases, the identified Ecological Services Field Office may request additional information to verify the effects determination reached through the Northern Long-eared Bat and Tricolored Bat DKey.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Atlantic Pigtoe *Fusconaia masoni* Threatened
- Monarch Butterfly *Danaus plexippus* Proposed Threatened

You may coordinate with our Office to determine whether the Action may affect the species and/or critical habitat listed above. Note that reinitiation of consultation would be necessary if a new species is listed or critical habitat designated that may be affected by the identified action before it is complete.

If you have any questions regarding this letter or need further assistance, please contact the Raleigh Ecological Services Field Office and reference Project Code 2025-0020198 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Dobbins

2. Description

The following description was provided for the project 'Dobbins':

Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The Site is located within grass-covered and wooded land.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@35.93736595,-79.0268192508061,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered

No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered

Yes

4. Your project overlaps with an area where northern long-eared bats or tricolored bats may be present and roosting in trees year-round.

Do you understand that your project may impact bats roosting in trees at any time during the year?

Yes

5. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

6. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

7. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

8. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

Yes

9. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

Yes

10. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

11. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

No

12. Will the action cause effects to a bridge?

Note: Covered bridges should be considered as bridges in this question.

No

13. Will the action result in effects to a culvert or tunnel at any time of year?

No

14. Are trees present within 1000 feet of the action area?

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

15. Does the action include the intentional exclusion of bats from a building or structure?

Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

No

16. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats**?

No

17. Will the action cause construction of one or more new roads open to the public?

For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

18. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic permanently or temporarily on one or more existing roads?

Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

20. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

Note: For information regarding NSF/ANSI 60 please visit <https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects>

No

21. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

No

22. Will the action include drilling or blasting?

No

23. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

No

24. Will the proposed action involve the use of herbicides or other pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

No

25. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

No

26. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

No

27. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

Yes

28. Will the proposed action occur exclusively in an already established and currently maintained utility right-of-way?

No

29. Does the action include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property? See hazard tree note at the bottom of the key for text that will be added to response letters

Note: A "hazard tree" is a tree that is an immediate threat to lives, public health and safety, or improved property.

No

30. Does the project intersect with the 0- 9.9% forest density category?

Automatically answered

No

31. Does the project intersect with the 10.0- 19.9% forest density category map?

Automatically answered

No

32. Does the project intersect with the 20.0- 29.9% forest density category map?

Automatically answered

No

33. Does the project intersect with the 30.0- 100% forest density category map?

Automatically answered

Yes

34. Will the action cause trees to be cut, knocked down, or otherwise brought down across an area greater than 100 acres in total extent?

No

35. Will the proposed action result in the use of prescribed fire?

Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

No

36. Does the action area intersect the northern long-eared bat species list area?

Automatically answered

Yes

37. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

Automatically answered

No

38. [Semantic] Is the action area located within 150 feet of a documented northern long-eared bat roost site?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

39. Your project overlaps with an area where northern long-eared bats may be present and roosting in trees year-round.

Is suitable northern long-eared bat habitat present within 1000 feet of project activities?

Yes

40. Your project overlaps with an area where northern long-eared bats may be present and roosting in trees year-round.

Has a presence/absence survey for the northern long-eared bat following the Service's [Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines](#) been conducted within the project area? If unsure, answer "No."

No

41. Are any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming suitable for northern long-eared bat roosting (i.e., live trees and/or snags ≥ 3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities)?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

42. Your project overlaps with an area where northern long-eared bats may be present and roosting in trees year-round.

Will tree cutting/trimming or other knocking or bringing down of trees occur during the Winter Torpor and/or Summer Occupancy periods?

No

43. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Summer Occupancy season** for northern long-eared bats in the action area?

Note: Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey [Guidelines](#).

No

44. Does the action area intersect the tricolored bat species list area?

Automatically answered

Yes

45. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

46. Your project overlaps with an area where tricolored bats may be present and roosting in trees year-round.

Is suitable tricolored bat habitat present within 1000 feet of project activities? Note: If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pines) answer "Yes." Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

47. Do any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pine trees)?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

48. Will tree cutting/trimming or other knocking or bringing down of trees occur during Winter Torpor and/or the Pup Season?

Note: Bat activity periods for your state can be found in Appendix L of the [Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines](#)

No

49. Do you have any documents that you want to include with this submission?

No

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

0.1

IPAC USER CONTACT INFORMATION

Agency: Trileaf
Name: Trenton Clark
Address: 1395 SOUTH MARIETTA PKWY
Address Line 2: BLDG 400, SUITE 209
City: MARIETTA
State: GA
Zip: 30067
Email: t.clark@trileaf.com
Phone: 6786538673

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Communications Commission



Professional Resume

TRENTON CLARK

ASSISTANT PROJECT MANAGER II

Education

B.S. Environmental Science
Minor in Geography
Western Carolina University / Cullowhee, NC

Areas of Expertise

Mr. Clark has experience performing site inspections and conducting due diligence pursuant to EPA All Appropriate Inquiries (AAI) and the American Society of Testing and Materials (ASTM) for commercial real estate and lending projects.

Environmental service expertise includes:

Phase I Environmental Site Assessments	Flood Insurance Rate Maps
Phase II Environmental Site Assessments	Critical Habitat Maps
Field Reconnaissance	Soil Characterization
Historical City Directories	Soil Management Plans
Historical Topographic Maps and Aerial Imagery	Indoor Air Quality Assessments
Land Use History	Migratory Bird Evaluations
National Wetlands Inventory Maps	Local Government Consultation
Section 106 Compliance	Form 620/621 Submittals
NEPA Environmental Assessments	Biological Habitat Surveys

Certifications/Affiliations

OSHA 40-Hour HAZWOPER
40-Hour Basic Wetland Delineation
ASHERA Asbestos Inspector
SC-Certified Asbestos Inspector
ANSI/FCC RF Radiation Safety Competent Person
Environmental Professional (EP) as defined by ASTM Standard E1527-21 (AAI)



Roy Cooper, Governor

D. Reid Wilson, Secretary

Misty Buchanan
Deputy Director, Natural Heritage Program

NCNHDE-29107

January 29, 2025

Trenton Clark
Trileaf Corporation
1395 S Marietta Parkway
Marietta, GA 30067
RE: Dobbins; 752127

Dear Trenton Clark:

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

Based on the project area mapped with your request, a query of the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. Please note that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence; the area may not have been surveyed. The results of this query should not be substituted for field surveys where suitable habitat exists. In the event that rare species are found within the project area, please contact the NCNHP so that we may update our records.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists. Tables of natural areas and conservation/managed areas within a one-mile radius of the project area, if any, are also included in this report.

If a Federally-listed species is found within the project area or is indicated within a one-mile radius of the project area, the NCNHP recommends contacting the US Fish and Wildlife Service (USFWS) for guidance. Contact information for USFWS offices in North Carolina is found here:

https://www.fws.gov/our-facilities?type=%5B%22Conservation%20Office%22%5D&state_name=%5B%22North%20Carolina%22%5D.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

The NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve, Registered Heritage Area, Land and Water Fund easement, or Federally-listed species are documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact the NCNHP at natural.heritage@dncr.nc.gov.

Sincerely,
NC Natural Heritage Program

Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area
Dobbins
Project No. 752127
January 29, 2025
NCNHDE-29107

Element Occurrences Documented Within a One-mile Radius of the Project Area

Taxonomic Group	EO ID	Scientific Name	Common Name	Last Observation Date	Element Occurrence Rank	Accuracy	Federal Status	State Status	Global Rank	State Rank
Bird	32268	Nyctanassa violacea	Yellow-crowned Night-Heron	2024-04-20	E	3-Medium	---	Significantly Rare	G5	S2B
Dragonfly or Damselfly	33764	Somatochlora georgiana	Coppery Emerald	2004-Pre	H?	5-Very Low	---	Significantly Rare	G3G4	S1?
Vascular Plant	34235	Crataegus succulenta	Fleshy Hawthorn	1932-Pre	H	5-Very Low	---	Significantly Rare Peripheral	G5	S1S2
Vascular Plant	3598	Echinacea laevigata	Smooth Coneflower	1922-05-27	X	3-Medium	Threatened	Threatened	G2G3	S1S2
Vascular Plant	3221	Liatris squarrulosa	Earle's Blazing-star	1944-10-07	H	4-Low	---	Significantly Rare Peripheral	G4G5	S2
Vascular Plant	36779	Orbexilum pedunculatum	Sampson's Snakeroot	1898-07	H	5-Very Low	---	Endangered	G5T5?	S1
Vascular Plant	5981	Parthenium auriculatum	Glade Wild Quinine	1949-05-08	X?	4-Low	---	Significantly Rare Throughout	G3G4	S3
Vascular Plant	41834	Phacelia covillei	Buttercup Phacelia	2022-04-14	E	2-High	---	Significantly Rare Throughout	G3	S3
Vascular Plant	22304	Tridens chapmanii	Chapman's Redtop	1894-08-21	H	5-Very Low	---	Threatened	G5T3	S1S2

No Natural Areas are Documented Within a One-mile Radius of the Project Area

Managed Areas Documented Within a One-mile Radius of the Project Area

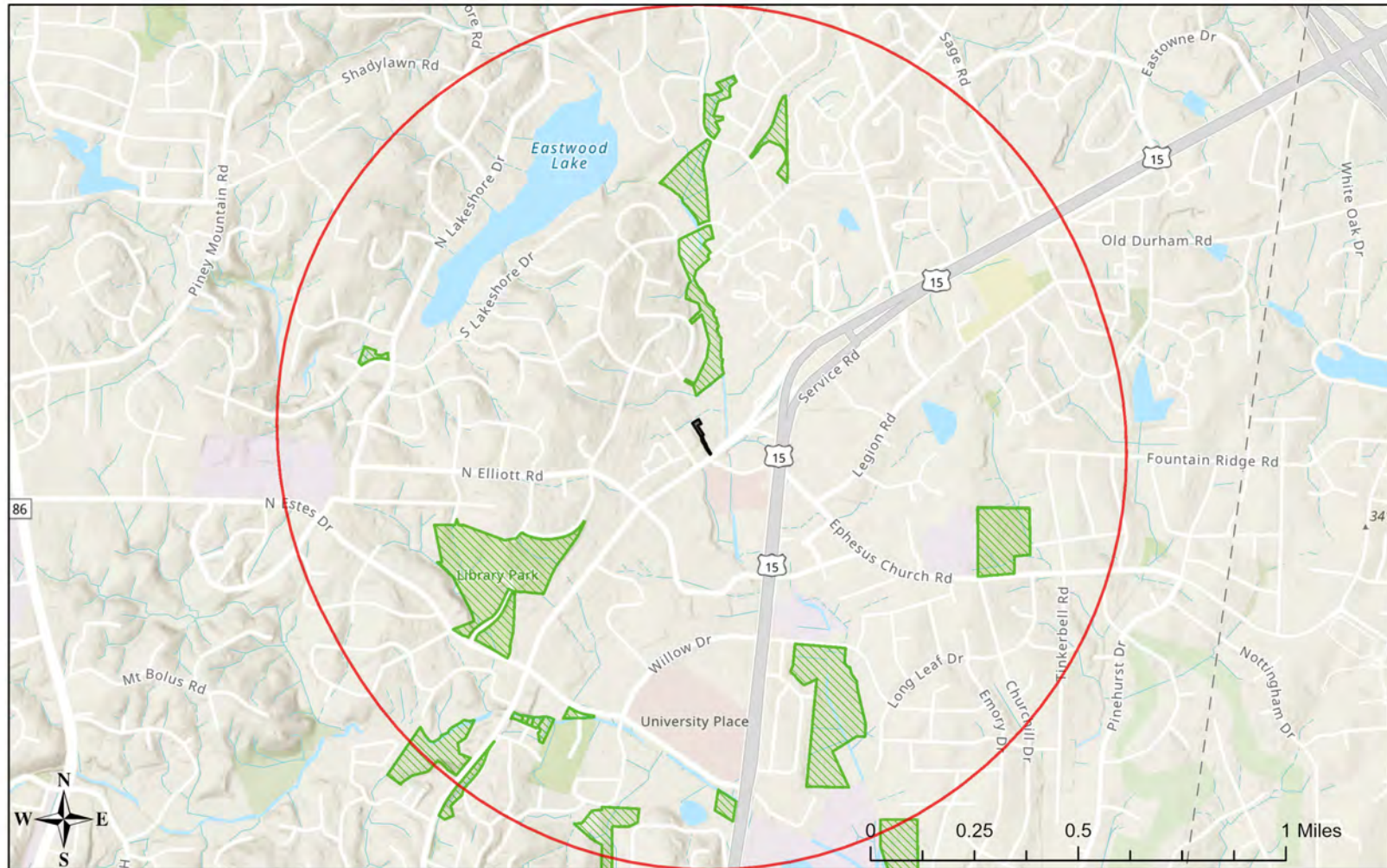
Managed Area Name	Owner	Owner Type
Town of Chapel Hill - Ephesus Park	Town of Chapel Hill	Local Government
Town of Chapel Hill - Library Park	Town of Chapel Hill	Local Government

Managed Areas Documented Within a One-mile Radius of the Project Area

Managed Area Name	Owner	Owner Type
Town of Chapel Hill Open Space	Town of Chapel Hill	Local Government
Town of Chapel Hill Open Space	Town of Chapel Hill	Local Government
Town of Chapel Hill Open Space	Town of Chapel Hill	Local Government
Town of Chapel Hill Open Space	Town of Chapel Hill	Local Government
Town of Chapel Hill Open Space	Town of Chapel Hill	Local Government
Town of Chapel Hill Open Space	Town of Chapel Hill	Local Government
Town of Chapel Hill Open Space	Town of Chapel Hill	Local Government
Town of Chapel Hill Open Space	Town of Chapel Hill	Local Government
Town of Chapel Hill Open Space	Town of Chapel Hill	Local Government
NC Hazard Mitigation Buyout Property - Chapel Hill	NC DPS, Division of Emergency Management	State
NC Hazard Mitigation Buyout Property - Chapel Hill	NC DPS, Division of Emergency Management	State
NC Hazard Mitigation Buyout Property - Chapel Hill	NC DPS, Division of Emergency Management	State

Definitions and an explanation of status designations and codes can be found at <https://ncnhde.natureserve.org/help>. Data query generated on January 29, 2025; source: NCNHP, Fall (October) 2024. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

NCNHDE-29107: Dobbins



January 29, 2025

- Managed Area (MAREA)
- Buffered Project Boundary
- Project Boundary

UNC, Town of Chapel Hill, State of North Carolina DOT, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METINASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
Esri, NASA, NGA, USGS, FEMA

Appendix E
Section 106 Review





1395 South Marietta Parkway, Building 400, Suite 209, Marietta, GA 30067 - 678-653-8673 - www.trileaf.com

December 2, 2024

North Carolina State Historic Preservation Office

Attn: Renee Gledhill-Early

4617 Mail Service Center

Raleigh, North Carolina 27699

RE: **Network Towers II LLC – Dobbins – Client #NC-T23.12 – Trileaf Project #752127**

1721 East Franklin Street, Chapel Hill, North Carolina 27514

Orange County, Chapel Hill Quadrangle (USGS)

Latitude: 35° 56' 16.2901" N, Longitude: 79° 1' 37.1788" W

Ms. Gledhill-Early:

Trileaf Corporation is in the process of completing a NEPA Review at the referenced property. Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The Site is located within grass-covered and wooded land. The antennas will be licensed by the Federal Communications Commission (FCC).

In accordance with the *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission*, dated September 2004, a cultural resource investigation has been conducted. Our investigation includes determining if the site is contained in, on, or within the viewshed of a building, site, district, structure or object, significant in American history, architecture, archeology, engineering or culture, that is listed, or eligible for listing on the State or National Registers of Historic Places, or located in or on an Indian Religious Site.

Summary reports of this investigation, maps, photographs and other information are provided in the attached Form 620. As noted in Attachment 5, there are **No Historic Properties in the APE for Direct Effects and No Historic Properties in the APE for Visual Effects**. Therefore, it is recommended that the proposed undertaking proceed without further archaeological review.

We appreciate your cooperation in this regard and anticipate your concurrence with these findings. Please call me at (678) 653-8673 or email t.clark@trileaf.com if you need any additional information or have any questions. Thank you for your assistance.

Sincerely,

Trenton Clark
Assistant Project Manager II

Notification Date: 7AM EST 12/03/2024

New Tower ("NT") Submission Packet

See instructions for

File Number: 0011350890

public burden estimates

General Information

1) (Select only one) (NE) NE – New UA – Update of Application WD – Withdrawal of Application	
2) If this application is for an Update or Withdrawal, enter the file number of the pending application currently on file.	File Number:

Applicant Information

3) FCC Registration Number (FRN): 0030164032
4) Name: Network Towers, LLC c/o Network Building & Consulting

Contact Name

5) First Name: Brandi	6) MI:	7) Last Name: Hale	8) Suffix:
9) Title: Project Manager			

Contact Information

10) P.O. Box:	And /Or	11) Street Address: 8601 Six Forks Road Suite 540	
12) City: Raleigh		13) State: NC	14) Zip Code: 27615
15) Telephone Number: (919)717-1941		16) Fax Number:	
17) E-mail Address: bhale@nttowers.com			

Consultant Information

18) FCC Registration Number (FRN): 0011724176
19) Name: Trileaf Corporation

Principal Investigator

20) First Name: Michael	21) MI:	22) Last Name: Hart	23) Suffix:
24) Title: Principal Investigator			

Principal Investigator Contact Information

25) P.O. Box:	And /Or	26) Street Address: 1395 S Marietta Parkway Building 400, Suite 209	
27) City: Marietta		28) State: GA	29) Zip Code: 30067
30) Telephone Number: (678)653-8673		31) Fax Number:	
32) E-mail Address: t.clark@trileaf.com			

Professional Qualification

33) Does the Principal Investigator satisfy the Secretary of the Interior's Professional Qualification Standards?	(☒) <u>Y</u> es () <u>N</u> o
34) Areas of Professional Qualification: () Archaeologist (☒) Architectural Historian (☒) Historian () Architect () Other (Specify) _____	

Additional Staff

35) Are there other staff involved who meet the Professional Qualification Standards of the Secretary of the Interior?	(☒) <u>Y</u> es () <u>N</u> o
--	--

If "YES," complete the following:

36) First Name: Mackenzie	37) MI:	38) Last Name: Mulkey	39) Suffix:
40) Title:			
41) Areas of Professional Qualification: (☒) Archaeologist () Architectural Historian () Historian () Architect () Other (Specify) _____			

Site Information

Tower Construction Notification System

1) TCNS Notification Number: **287334**

Site Information

2) Positive Train Control Filing Subject to Expedited Treatment Under Program Comment: () Yes (**X**) No

3) Site Name: **Dobbins**

4) Site Address: **1721 East Franklin Street**

5) Detailed Description of Project:

Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area.

6) City: **Chapel Hill**

7) State: **NC**

8) Zip Code: **27514**

9) County/Borough/Parish: **ORANGE**

10) Nearest Crossroads: **East Franklin Street and Eastgate Crossing**

11) NAD 83 Latitude (DD-MM-SS.S): **35-56-16.3**

(**X**) N or () S

12) NAD 83 Longitude (DD-MM-SS.S): **079-01-37.2**

() E or (**X**) W

Tower Information

13) Tower height above ground level (include top-mounted attachments such as lightning rods): **60.7** () Feet (**X**) Meters

14) Tower Type (Select One):

() Guyed lattice tower

() Self-supporting lattice

(**X**) Monopole

() Other (Describe):

Project Status

15) Current Project Status (Select One):

(**X**) Construction has not yet commenced

() Construction has commenced, but is not completed

Construction commenced on: _____

() Construction has been completed

Construction commenced on: _____

Construction completed on: _____

Determination of Effect

14) Direct Effects (Select One):

- (☒) No Historic Properties in Area of Potential Effects (APE)
- (☐) No Effect on Historic Properties in APE
- (☐) No Adverse Effect on Historic Properties in APE
- (☐) Adverse Effect on one or more Historic Properties in APE

15) Visual Effects (Select One):

- (☒) No Historic Properties in Area of Potential Effects (APE)
- (☐) No Effect on Historic Properties in APE
- (☐) No Adverse Effect on Historic Properties in APE
- (☐) Adverse Effect on one or more Historic Properties in APE

Tribal/NHO Involvement

1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects?		(☒) <u>Yes</u> () <u>No</u>
2a) Tribes/NHOs contacted through TCNS Notification Number: <u>287334</u>		Number of Tribes/NHOs: <u>5</u>
2b) Tribes/NHOs contacted through an alternate system:		Number of Tribes/NHOs: <u>0</u>

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:
4) Tribe/NHO Name: Catawba Indian Nation

Contact Name

5) First Name: Dr. Wenonah	6) MI: G	7) Last Name: Haire	8) Suffix: DMD
9) Title: THPO and Executive Director			

Dates & Response

10) Date Contacted <u>10/31/2024</u>	11) Date Replied _____
(☒) No Reply	
() Replied/No Interest	
() Replied/Have Interest	
() Replied/Other	

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:
4) Tribe/NHO Name: Eastern Shawnee Tribe of Oklahoma

Contact Name

5) First Name: Kelly	6) MI:	7) Last Name: Nelson	8) Suffix:
9) Title: Cell Tower Coordinator			

Dates & Response

10) Date Contacted <u>10/31/2024</u>	11) Date Replied <u>10/31/2024</u>
() No Reply	
() Replied/No Interest	
() Replied/Have Interest	
(☒) Replied/Other	

Tribal/NHO Involvement

1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects?		(☒) <u>Y</u> es () <u>N</u> o
2a) Tribes/NHOs contacted through TCNS Notification Number: <u>287334</u>		Number of Tribes/NHOs: <u>5</u>
2b) Tribes/NHOs contacted through an alternate system:		Number of Tribes/NHOs: <u>0</u>

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:
4) Tribe/NHO Name: Monacan Indian Nation

Contact Name

5) First Name: Diane	6) MI:	7) Last Name: Shields	8) Suffix:
9) Title: Chief			

Dates & Response

10) Date Contacted <u>10/30/2024</u>	11) Date Replied _____
(☒) No Reply	
() Replied/No Interest	
() Replied/Have Interest	
() Replied/Other	

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:
4) Tribe/NHO Name: Prairie Island Indian Community

Contact Name

5) First Name: Noah	6) MI: C	7) Last Name: White	8) Suffix: III
9) Title: THPO			

Dates & Response

10) Date Contacted <u>10/30/2024</u>	11) Date Replied _____
(☒) No Reply	
() Replied/No Interest	
() Replied/Have Interest	
() Replied/Other	

Tribal/NHO Involvement

1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects?	(☒) <u>Y</u> es () <u>N</u> o
2a) Tribes/NHOs contacted through TCNS Notification Number: <u>287334</u> Number of Tribes/NHOs: <u>5</u>	
2b) Tribes/NHOs contacted through an alternate system: Number of Tribes/NHOs: <u>0</u>	

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:
4) Tribe/NHO Name: Seminole Nation of Oklahoma

Contact Name

5) First Name: Ben	6) MI:	7) Last Name: Yahola	8) Suffix:
9) Title: Tribal Historic Preservation Officer			

Dates & Response

10) Date Contacted <u>10/30/2024</u>	11) Date Replied _____
(☒) No Reply	
() Replied/No Interest	
() Replied/Have Interest	
() Replied/Other	

Other Tribes/NHOs Contacted

Tribe/NHO Information

1) FCC Registration Number (FRN):
2) Name:

Contact Name

3) First Name:	4) MI:	5) Last Name:	6) Suffix:
7) Title:			

Contact Information

8) P.O. Box:	And /Or	9) Street Address:	
10) City:		11) State:	12) Zip Code:
13) Telephone Number:		14) Fax Number:	
15) E-mail Address:			
16) Preferred means of communication: () E-mail () Letter () Both			

Dates & Response

17) Date Contacted _____	18) Date Replied _____
() No Reply	
() Replied/No Interest	
() Replied/Have Interest	
() Replied/Other	

Historic Properties

Properties Identified

1) Have any historic properties been identified within the APEs for direct and visual effect?	() <u>Y</u> es (X) <u>N</u> o
2) Has the identification process located archaeological materials that would be directly affected, or sites that are of cultural or religious significance to Tribes/NHOs?	() <u>Y</u> es (X) <u>N</u> o
3) Are there more than 10 historic properties within the APEs for direct and visual effect? If "Yes", you are required to attach a Cultural Resources Report in lieu of adding the Historic Property below.	() <u>Y</u> es (X) <u>N</u> o

Historic Property

4) Property Name:
5) SHPO Site Number:

Property Address

6) Street Address:		
7) City:	8) State:	9) Zip Code:
10) County/Borough/Parish:		

Status & Eligibility

11) Is this property listed on the National Register? Source: _____	() <u>Y</u> es () <u>N</u> o
12) Is this property eligible for listing on the National Register? Source: _____	() <u>Y</u> es () <u>N</u> o
13) Is this property a National Historic Landmark?	() <u>Y</u> es () <u>N</u> o

14) Direct Effects (Select One): ☐ No Effect on this Historic Property in APE ☐ No Adverse Effect on this Historic Property in APE ☐ Adverse Effect on this Historic Property in APE
15) Visual Effects (Select One): ☐ No Effect on this Historic Property in APE ☐ No Adverse Effect on this Historic Property in APE ☐ Adverse Effect on this Historic Property in APE

Local Government Involvement

Local Government Agency

1) FCC Registration Number (FRN):
2) Name: Chapel Hill Historic District Commission

Contact Name

3) First Name: Anya	4) MI:	5) Last Name: Grahn	6) Suffix:
7) Title: Planner			

Contact Information

8) P.O. Box:	And /Or	9) Street Address: 405 Martin Luther King Boulevard	
10) City: Chapel Hill		11) State: NC	12) Zip Code: 27516
13) Telephone Number: (919)969-5059		14) Fax Number:	
15) E-mail Address: agrahn@townofchapelhill.org			
16) Preferred means of communication: () E-mail () Letter (X) Both			

Dates & Response

17) Date Contacted 11/25/2024	18) Date Replied _____
(X) No Reply	
() Replied/No Interest	
() Replied/Have Interest	
() Replied/Other	

Additional Information

19) Information on local government's role or interest (optional):
--

Other Consulting Parties

Other Consulting Parties Contacted

1) Has any other agency been contacted and invited to become a consulting party?	(☒) <u>Yes</u> () <u>No</u>
--	---

Consulting Party

2) FCC Registration Number (FRN):
3) Name: Chapel Hill Historical Society

Contact Name

4) First Name: To Whom	5) MI:	6) Last Name: It May Concern	7) Suffix:
8) Title:			

Contact Information

9) P.O. Box: P.O. Box 9032	And /Or	10) Street Address:
11) City: Chapel Hill	12) State: NC	13) Zip Code: 27515
14) Telephone Number: (919)929-1793	15) Fax Number:	
16) E-mail Address: chhistoricalsociety@gmail.com		
17) Preferred means of communication: () E-mail () Letter (☒) Both		

Dates & Response

18) Date Contacted 11/25/2024	19) Date Replied _____
(☒) No Reply () Replied/No Interest () Replied/Have Interest () Replied/Other	

Additional Information

20) Information on other consulting parties' role or interest (optional):

Designation of SHPO/THPO

1) Designate the Lead State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) based on the location of the tower.

SHPO/THPO

Name: **NC Historic Preservation Office (Deputy SHPO)**

2) You may also designate up to three additional SHPOs/THPOs if the APEs include multiple states. If the APEs include other countries, enter the name of the National Historic Preservation Agency and any state and provincial Historic Preservation Agency.

SHPO/THPO Name: _____

SHPO/THPO Name: _____

SHPO/THPO Name: _____

Certification

I certify that all representations on this FCC Form 620 Submission Packet and the accompanying attachments are true, correct, and complete.

Party Authorized to Sign

First Name: **Trenton**

MI:

Last Name: **Clark**

Suffix:

Signature: **Trenton Clark**

Date: **12/02/2024**

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

Attachments :

Type	Description	Date Entered
Other	Cover Letter	12/02/2024
Resumes/Vitae	Resumes	12/02/2024
Photographs	Photographs	12/02/2024
Map Documents	Site Maps	12/02/2024
Additional Site Information	Site Information	12/02/2024
Area of Potential Effects	APE	12/02/2024
Tribal/NHO Involvement	Tribal and NHO	12/02/2024
Historic Properties for Direct Effects	Direct APE	12/02/2024
Historic Properties for Visual Effects	Visual APE	12/02/2024
Local Government Involvement	Local Government	12/02/2024
Public Involvement	Public Notice	12/02/2024
State-Specific Forms	SHPO Specific	12/02/2024

NT SUBMISSION PACKET – FCC FORM 620

Approved by OMB

3060-1039

See instructions for
Public burden estimates

Attachment 1. Consultant Information

Provide a current copy of the resume or curriculum vitae for the Principal Investigator and any researcher or other person who contributed to, reviewed, or provided significant input into the research, analysis, writing or conclusions presented in this filing.

A current copy of the resume for the Principal Investigator and any researcher or other person who contributed to, reviewed, or provided significant input into the research, analysis, writing, or conclusions presented in this filing.

Applicant's Name: Network Towers II LLC

Project Name: Dobbins

Project Number: 752127

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MICHAEL HART

ASSISTANT PROJECT MANAGER

SENIOR HISTORIAN/ARCHITECTURAL HISTORIAN

Education

History/Anthropology, B.A.
Social Science Education, M.S.
Florida State University / Tallahassee, FL

Areas of Expertise

Mr. Hart operates as the primary professional point-of-contact regarding History, Architectural History, and Historic Preservation. Mr. Hart is a Secretary of the Interior (SOI) qualified Architectural Historian and Historian with fourteen years of professional experience in Historic Preservation.

Architectural History and Historic Preservation service expertise include:

Architectural Impacts	Form 620/621 Submittals
National Register Nominations	Historical Topographic Maps and Aerial Imagery
Historical Marker Applications	Local Government Consultation
Historic Resource Reports and Forms	Native American Consultation
SHPO Consultation	Section 106 Compliance
Field Reconnaissance	

Certifications/Affiliations

Historic Sites Specialist/Historic Preservationist for Florida Division of Historical Resources,
Tallahassee, FL, 2008-2022
Adjunct Instructor, Tallahassee Community College, Tallahassee, FL, 2010-Present

Applicant's Name: Network Towers II LLC

Project Name: Dobbins

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MACKENZIE MULKEY

SENIOR PROJECT ARCHAEOLOGIST

Education

M.A. Anthropology
East Carolina University / Greenville, NC

B.A. Anthropology
Clemson University / Clemson, SC

Areas of Expertise

Mrs. Mulkey is a SOI-qualified professional archaeologist with over 2 years of experience in terrestrial cultural resources management in the Southeast region. She has directed several Phase I archaeological projects of varying complexity, conducted archaeological assessments, historic context development, and public outreach activities. She has completed historical and archival research; artifact conservation, identification and cataloging; report preparation; and environmental assessment of sites. Mrs. Mulkey specializes in the archaeological investigation of 18th and 19th century archaeological sites.

Environmental service expertise includes:

Archaeological and Architectural Impacts	Field Reconnaissance
Soil Characterization	Section 106 Compliance
Historical Topographic Maps and Aerial Imagery	NEPA Environmental Assessments
Land Use History	

Certifications/Affiliations

OSHA 10-Hour Construction
Register of Professional Archaeologists (RPA), member since 2022
Section 106 Essentials, February 2023

Applicant's Name: Network Towers II LLC

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Professional Resume

WILLIAM McLEAN

PROJECT SCIENTIST II

Education

B.S. Biology
University of North Carolina at Charlotte / Charlotte, NC

Areas of Expertise

Mr. McLean has experience performing site inspections and conducting due diligence pursuant to EPA All Appropriate Inquiries (AAI) and the American Society of Testing and Materials (ASTM) for commercial real estate and lending projects.

Environmental service expertise includes:

Phase I Environmental Site Assessments	Flood Insurance Rate Maps
Field Reconnaissance	Critical Habitat Maps
Historical City Directories	Soil Characterization
Historical Topographic Maps and Aerial Imagery	Migratory Bird Evaluations
Land Use History	Local Government Consultation
National Wetlands Inventory Maps	

Certifications/Affiliations

ANSI/FCC RF Radiation Safety Competent Person
CPR

Applicant's Name: Network Towers II LLC

Project Name: Dobbins

Project Number: 752127

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Professional Resume

TRENTON CLARK

ASSISTANT PROJECT MANAGER II

Education

B.S. Environmental Science
Minor in Geography
Western Carolina University / Cullowhee, NC

Areas of Expertise

Mr. Clark has experience performing site inspections and conducting due diligence pursuant to EPA All Appropriate Inquiries (AAI) and the American Society of Testing and Materials (ASTM) for commercial real estate and lending projects.

Environmental service expertise includes:

Phase I Environmental Site Assessments	Flood Insurance Rate Maps
Phase II Environmental Site Assessments	Critical Habitat Maps
Field Reconnaissance	Soil Characterization
Historical City Directories	Soil Management Plans
Historical Topographic Maps and Aerial Imagery	Indoor Air Quality Assessments
Land Use History	Migratory Bird Evaluations
National Wetlands Inventory Maps	Local Government Consultation
Section 106 Compliance	Form 620/621 Submittals
NEPA Environmental Assessments	Biological Habitat Surveys

Certifications/Affiliations

OSHA 40-Hour HAZWOPER
40-Hour Basic Wetland Delineation
ASHERA Asbestos Inspector
SC-Certified Asbestos Inspector
ANSI/FCC RF Radiation Safety Competent Person
Environmental Professional (EP) as defined by ASTM Standard E1527-21 (AAI)

Attachment 2. Site Information – Photographs

You are required to provide photographs and maps as part of this filing. Additional site information can be provided in an optional attachment.

Photograph Requirements:

Except in cases where no Historic Properties were identified within the Areas of Potential Effects, submit photographs as described below. Photographs should be in color, marked so as to identify the project, keyed to the relevant map or text, and dated; the focal length of the lens and the height of the camera should be noted. The source of any photograph included but not taken by the Applicant or its consultant (including copies of historic images) should be identified on the photograph.

- a. Photographs taken from the site should show views from the proposed location in all directions. The direction (e.g., north, south, etc.) should be indicated on each photograph, and, as a group, the photographs should present a complete (360 degree) view of the area around the proposed site.**

Please reference the following directional photographs of the project area, which were taken by William McLean on October 18, 2024, unless otherwise noted.

- b. Photographs of all listed in and eligible properties within the Areas of Potential Effects.**

N/A

- c. If any listed or eligible properties are visible from the proposed site, photographs looking at the site from each historic property. The approximate distance in feet (meters) between the site and the historic property should be included. If any listed or eligible properties are within the APE, photos looking at each historic property should be included.**

N/A

Aerial photographs of the site were obtained via Google Earth, imagery is dated to 2023.

Applicant's Name: Network Towers II LLC

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Please refer to Appendix C for Site Photographs



Please refer to Appendix B for Site Maps



Attachment 3. Site Information – Map Requirements

Include one or more 7.5-minute quad USGS topographical maps that:

- a. Identify the Areas of Potential Effects for both Direct and Visual Effects. If a map is copied from the original, include a key with the name of quad and date.**
- b. Show the location of the proposed site and any access roads or other easements including excavations.**
- c. Show the locations of each property listed.**
- d. Include keys for any symbols, colors, or other identifiers.**
- e. Submit color maps whenever possible.**

The following maps have been attached to this report:

7.5-min Topographic Quad Map with Project Location, 2022

Aerial Imagery with Project Location and APE

Modern Soil Map with Project Location

Map of Archaeological Surveys within 1-mile of the Project Location

Map of Architectural Resources within the APE-VE

7.5-min Topographic Quad Map with Project Location, 1946

Applicant's Name: Network Towers II LLC

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Please refer to Appendix B for Site Maps

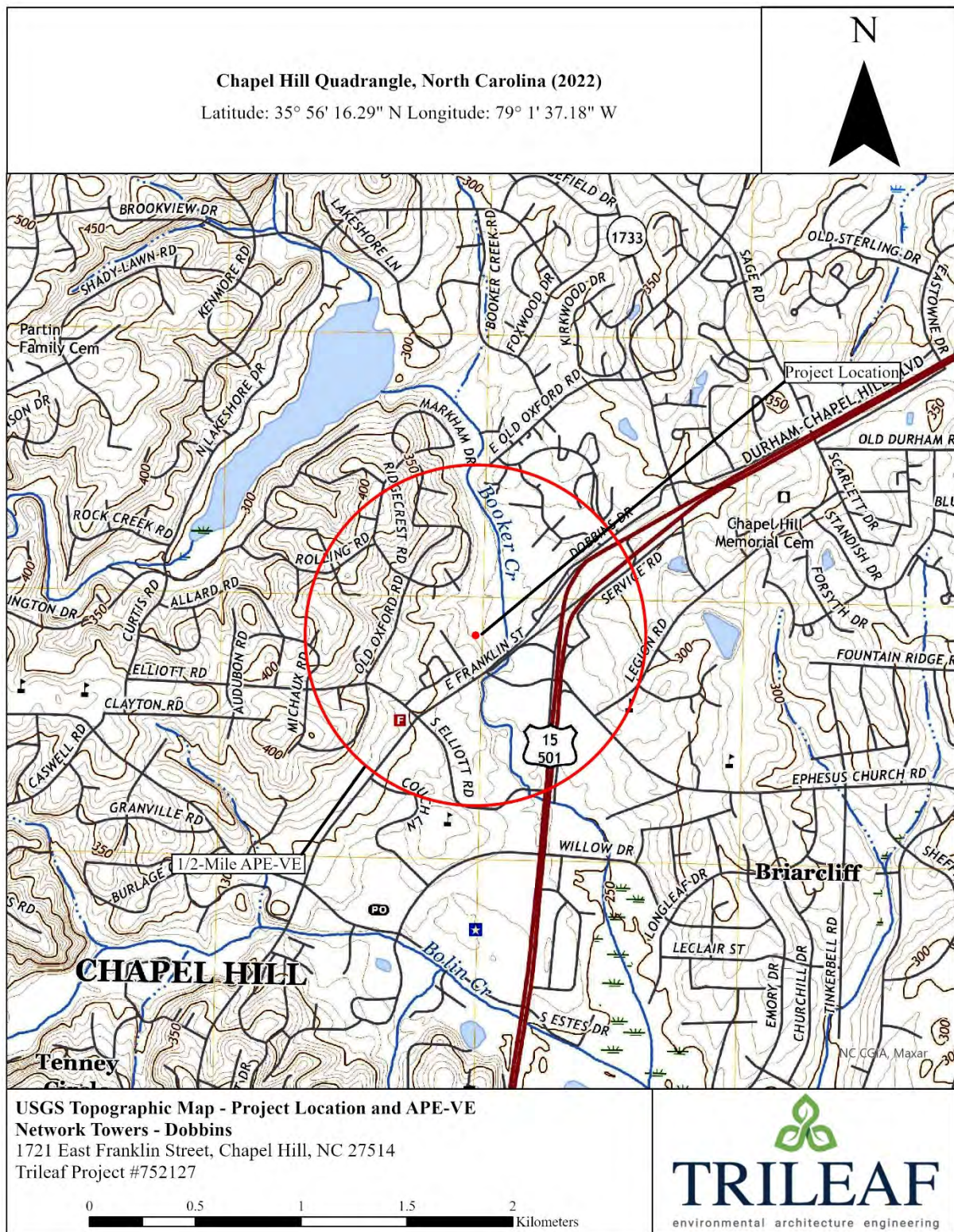


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3060-1039

See instructions for
Public burden estimates



Applicant's Name: Network Towers II LLC

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Project Number: 752127

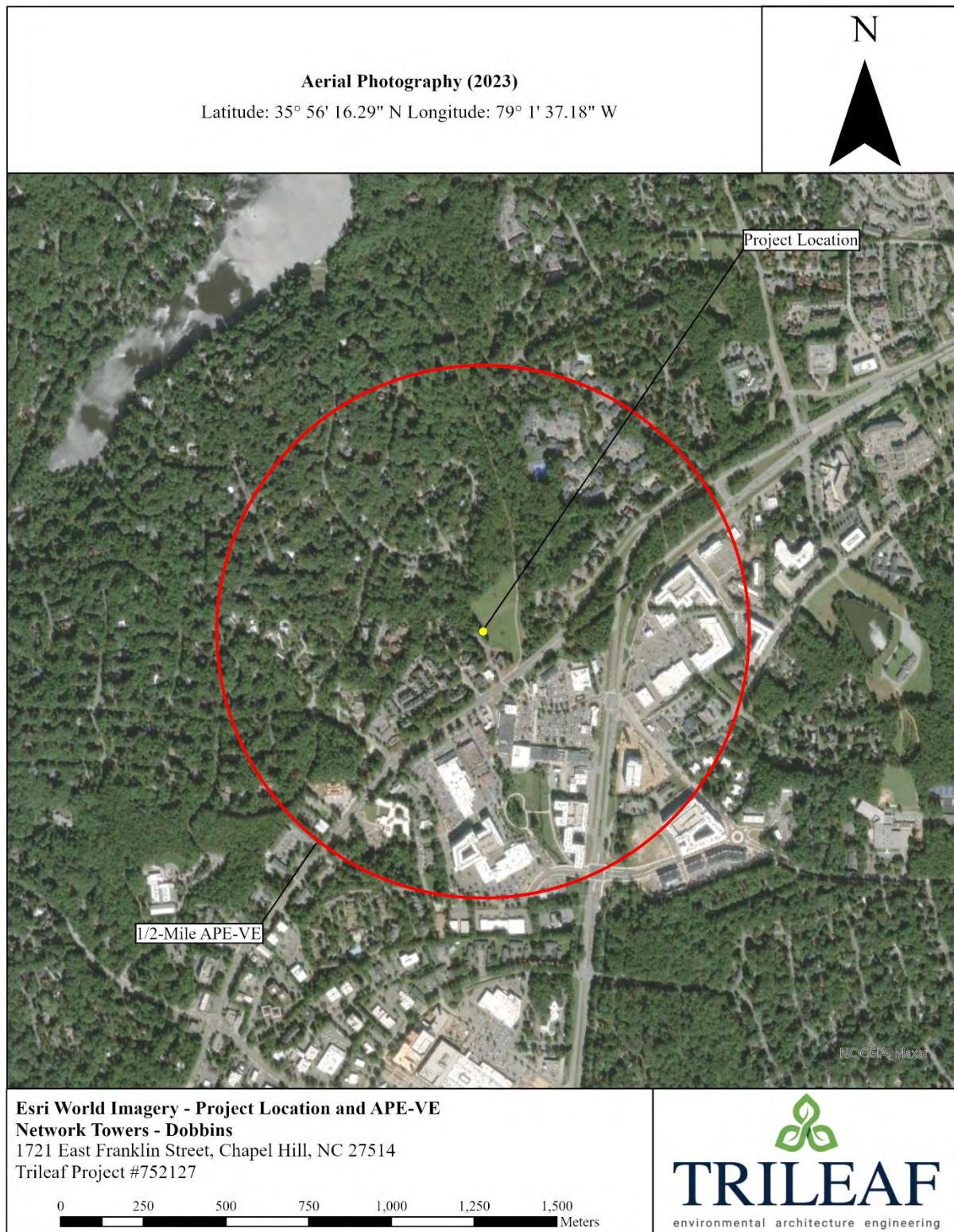
FCC Form 620

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Public burden estimates



Applicant's Name: Network Towers II LLC

Project Name: Dobbins

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Public burden estimates



Applicant's Name: Network Towers II LLC

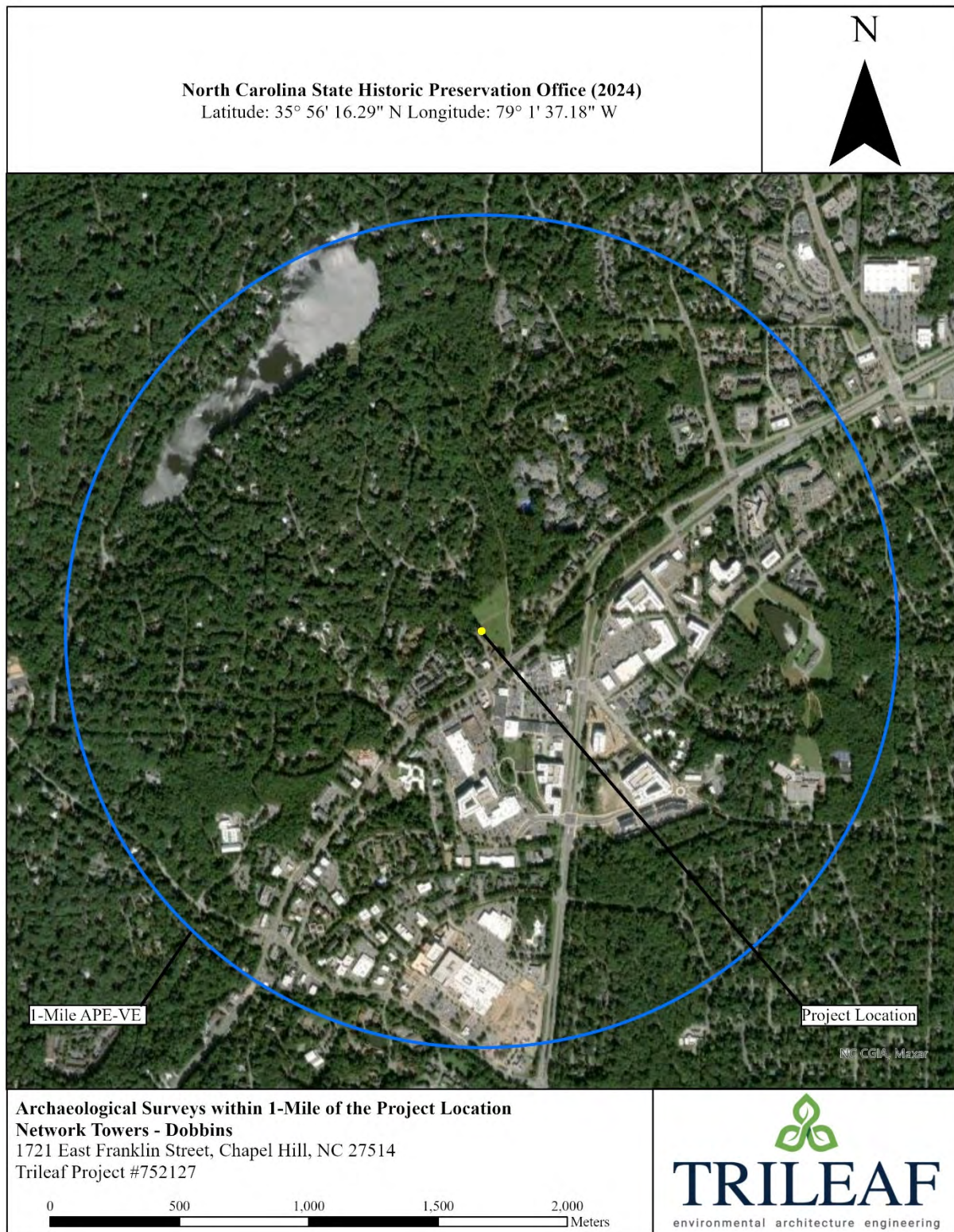
Project Name: Dobbins

Project Number: 752127

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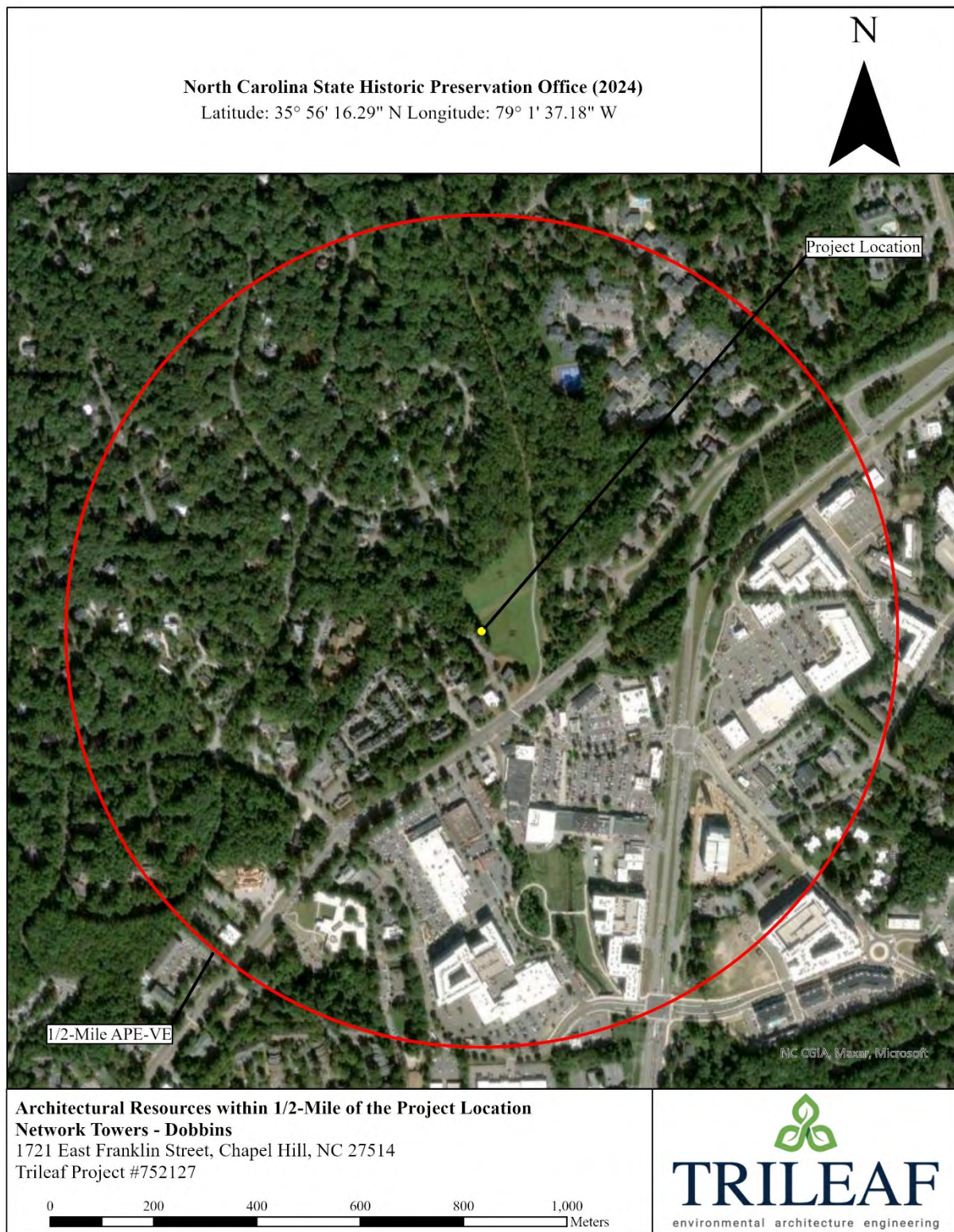
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Applicant's Name: Network Towers II LLC
Project Name: Dobbins
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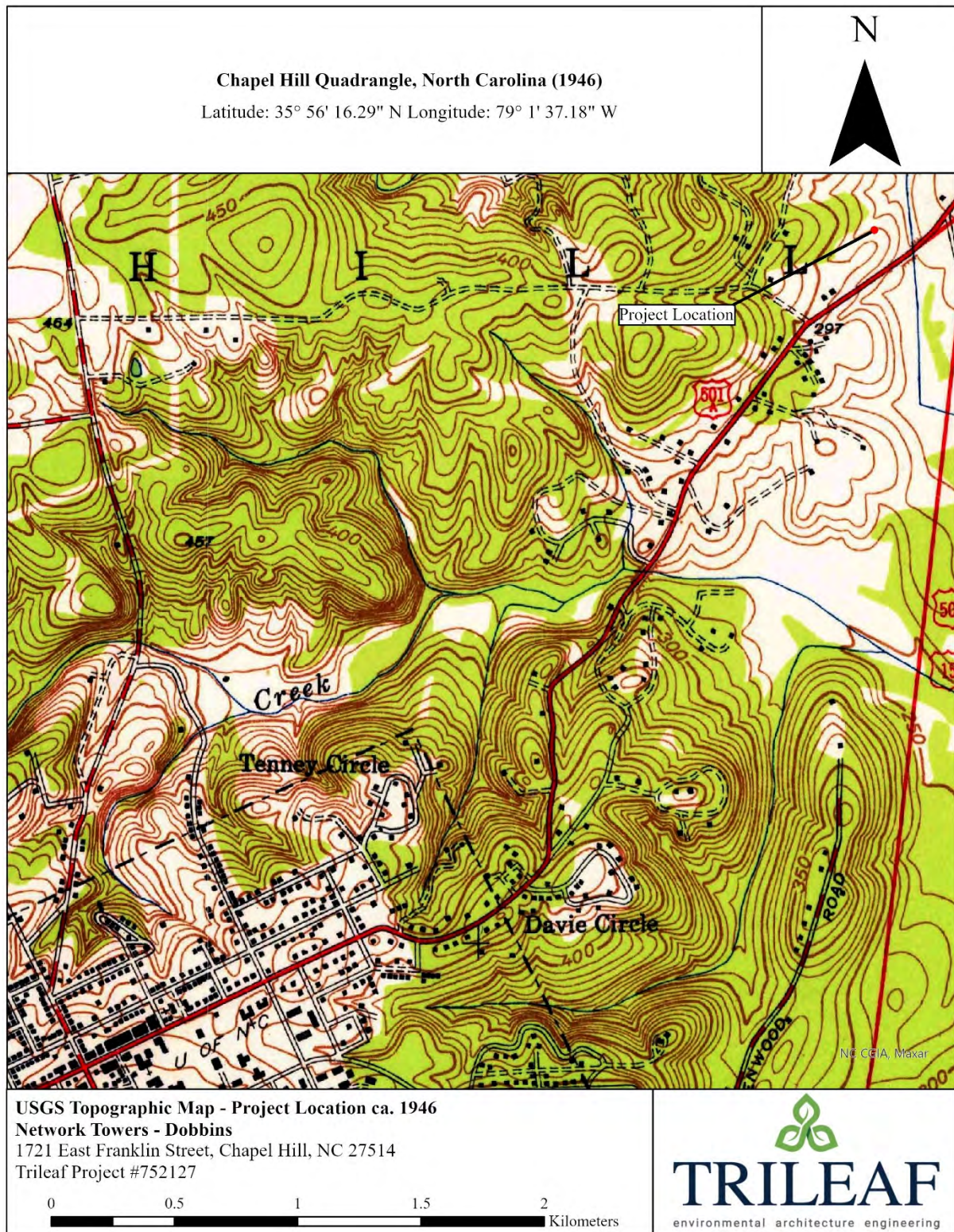
Applicant's Name: Network Towers II LLC
Project Name: Dobbins
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Applicant's Name: Network Towers II LLC

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Attachment 4. Site Information – Additional Site Information

Describe any additional structures, access roads, utility lines, fences, easements, or other construction planned for the site.

The proposed project is for a monopole telecommunications tower in Chapel Hill, Orange County, North Carolina. Dobbins (35° 56' 16.2901" N, 79° 1' 37.1788" W), is within a grass-covered and wooded land, located south of the intersection of East Franklin Street and Milton Avenue.

With this project, *Network Towers II LLC* proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The project is located within grass-covered and wooded land.

Total acreage of the project area will be approximately 0.11 acre (0.04 hectare).

The construction drawings provided by *Network Towers II LLC* are included in this attachment.

Applicant's Name: Network Towers II LLC

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Please refer to Appendix A for Site Plans



Attachment 5. Area of Potential Effects

You are required to provide two attachments regarding the Determination of Effect: Areas of Potential Effect and Mitigation of Effect (if applicable).

Areas of Potential Effect Guidelines:

a. Describe the APE for direct effects and explain how this APE was determined.

Under the NPA for FCC Projects, the Direct APE (APE-DE) “is defined as the area of potential ground disturbance and any property, or any portion thereof that will be physically altered or destroyed by the undertaking” (FCC 2004). On November 24, 2008, the FCC further clarified that the APE-DE is limited to the tower or non-tower structure on which the collocation will be mounted as well as the lease area including the access route and utility corridor. The APE-DE for this project consists of the 110-foot by 45-foot lease area and an existing paved access/utility easement that extends approximately 360 feet southeast from the lease area and terminating at East Franklin Street.

b. Describe the APE for visual effects and explain how this APE was determined.

Per the NPA, the Visual APE (APE-VE) is the “geographic area in which the project has the potential to introduce visual elements that diminish or alter the setting, including the landscape, where the setting is a character-defining feature of a historic property that makes it eligible for listing on the National Register of Historic Places (NRHP)” (FCC 2004). The presumed APE-VE for construction of new facilities is the area from where the tower will be visible: a. Within a ½ mile from the tower site if the proposed tower is 200 feet or less in height; b. Within ¾ of a mile from the tower site if the proposed tower is more than 200 but no more than 400 feet in overall height; or c. Within 1½ miles from the tower site if the proposed tower is more than 400 feet in overall height.

Taking into consideration the maximum height of the proposed undertaking (199 feet), the scale of the installation, and nearby historic properties, Trileaf determined that the APE for visual effects, according to the above definition, would encompass a ½-mile radius from the subject property.

Applicant's Name: Network Towers II LLC

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Attachment 5. Continued

Mitigation of Effect Guidelines:

In the case of where an Adverse Visual Effect or Adverse Direct Effect has been determined you must provide the following:

- a. **Copies of any correspondence and summaries of any oral communication with the SHPO/THPO and any consulting parties.**

N/A

- b. **Describe any alternatives that have been considered that might avoid, minimize, or mitigate any adverse effects. Explain the Applicant's conclusion regarding the feasibility of each alternative.**

N/A

For each property identified as a Historic Property in the online e-106 form:

- a. **Indicate whether the Applicant believes the proposed undertaking would have a) no effect; b) no adverse effect; or, c) an adverse effect. Explain how each such assessment was made. Provide supporting documentation where necessary.**

Trileaf Project Scientist, William McLean, under the direction of Trileaf Senior Project Archaeologist Mackenzie Mulkey performed this survey in response to the planned use of the above-described parcel and the potential impacts that such use might present to any archaeological and architectural cultural resources within the project area. Mrs. Mulkey meets the Secretary of the Interior's Historic Preservation Professional Qualifications Standards for Archaeology and is currently certified by the Register of Professional Archaeologists.

The records search for this project included a review of the North Carolina State Historic Preservation Office GIS Web Service (NC HPOWEB) for any known historic properties within the project's APE for Direct Effects and a ¾-mile radius for the APE for Visual Effects. Trileaf submitted a NC Environmental Review Form to NC SHPO on November 7, 2024. On November 21, 2024, NC SHPO responded that archaeological survey was not required for the proposed project and the proposed undertaking will not affect historic properties. Based on a review of these records, there are no previously recorded archaeological sites or surveys within the 1-mile search radius. Additionally, there are no NRHP-eligible or NRHP-listed resources located within the ½-mile APE for Visual Effects. There is one (1) NC Study Listed historic neighborhood within the ½-mile APE-VE, but no determination of eligibility was listed.

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Public burden estimates

Attachment 5. Continued

Based on the findings of this survey, it is recommended that there will be ***No Historic Properties within both the Direct APE and the Visual APE***. It is therefore recommended that project clearance be granted with no further investigation or evaluation of the project area.

Please see the attached correspondence with the NCSHPO and Attachments 7 and 8 of this form for additional information.

Applicant's Name: Network Towers II LLC

Project Name: Dobbins

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Public burden estimates

CLEAR FORM

COMMUNICATIONS TOWER INFORMATION FORM
FOR NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICE REVIEW

I. Submitted by:
Preparer Name, Company: Mackenzie Mulkey, Trileaf
Company Address: 1515 Des Peres Rd, Suite 200, Saint Louis, MO, 63131
Phone, E-mail: 864-630-4367, m.mulkey@trileaf.com
Co./NCHPO/FCC No.: _____

II. Project Information: (Small-Cell projects may be submitted in batches if they meet the requirements listed on the NCHPO SMALL-CELL BATCH SUBMISSION FORM)
Project Type: Raw Land (NEW) ☐ Co-Location ☐ Other ☒
Location: Street Address/PIN, County 1721 East Franklin Street, Orange County
GPS Coordinates (decimal degrees), Topo Quad Name 35.93785836111111, -79.02699411111111, Chapel Hill, NC
Details: Tower Type (select from list) Monopole Height 199 feet
If "Other", describe _____ FCC 620/621 included? Yes ☐ No ☒

III. Identification of Historic Properties: (List by site number and status: (NR = National Register listed; SL = Study List; DOE = Determination of Eligibility; LD = Local Designation; UA = Unannounced).
Archaeology – _____
of recorded sites in immediate area of siting location: _____
Architecture – Visit [NCHPO/ER 2.0 Buffer Tool](#)
of recorded sites within 0.5 Mile radius: _____

FOR HPO USE ONLY

____ Survey Needed
____ Site Testing NC- CAO
OSA Comment & Date: 11/13/2024
(Office of State Archaeology)

____ Photo Reconnaissance/Simulation
____ Balloon Test NC- RTB
Survey Comment & Date: 11/20/2024
(NCHPO Survey & Planning Branch)

IV. Recommendations/Final Determination:
____ Recommendations for additional work: shown above -or- see attached letter.
☒ The proposed communication tower will not affect historic properties

Renee Gledhill-Earley
Renee Gledhill-Earley, Environmental Review Coordinator
cc: FCC

11/21/2024
Date
July 2020
ER-KISH

FOR NCHPO USE ONLY
Tracking:
CT 24-2529
Received: 11/7/2024
Due: 11/27/2024

To ensure timely review, submission must include a legible map with all siting locations & disturbance boundaries clearly marked. Designs are required for projects that have historic properties within the APE/Visual APE. The FCC 620/621 is not required by NCHPO for review and does not meet the OSA reporting standards for archaeological survey. Submit the completed form and map to: Renee Gledhill-Earley, Environmental Review Coordinator, State Historic Preservation Office, at Environmental.Review@ncdcr.gov (phone 919-814-6584). **Allow at least thirty days for our review and comment**

Applicant's Name: Network Towers II LLC
Project Name: Dobbins
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Attachment 6. Tribal and NHO Involvement

At an early stage in the planning process, the Nationwide Agreement requires the Applicant to gather information from appropriate Indian Tribes or Native Hawaiian Organizations (“NHOs”) to assist in the identification of Historic Properties of religious and cultural significance to them. Describe measures taken to identify Indian tribes and NHOs that may attach religious and cultural significance to Historic Properties that may be affected by the construction within the Areas of Potential Effects (“APE”) for direct and visual effects. If such Indian tribes or NHOs were identified, list them and provide a summary of contacts by either the FCC, the Applicant, or the Applicant’s representative. Provide copies of relevant documents, including correspondence. If no such Indian tribes or NHOs were identified, please explain.

Trileaf Corporation completed the Tower Construction Notification System (TCNS) on October 28, 2024, and received the notification of interested tribes on November 1, 2024. The attached FCC Notification email lists the Tribes identified through the TCNS process. A second notice will be sent to all interested tribes/organizations, after a period of 30 days and the consultation process will continue per the FCC’s guidelines. Any relevant comments from Tribes received by Trileaf will be forwarded to your office.

Applicant’s Name: Network Towers II LLC

Project Name: Dobbins

Project Number: 752127

FCC Form 620

Courtney Miranda

From: towernotifyinfo@fcc.gov
Sent: Friday, November 1, 2024 2:01 AM
To: Tribal
Cc: tcnsweekly@fcc.gov
Subject: NOTICE OF ORGANIZATION(S) WHICH WERE SENT PROPOSED TOWER CONSTRUCTION NOTIFICATION INFORMATION - Email ID #9024092

Categories: Courtney

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Applicant:

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this electronic mail message is to inform you that the following authorized persons were sent the notification that you provided through TCNS, which relates to your proposed antenna structure. The information was forwarded by the FCC to authorized TCNS users by electronic mail and/or regular mail (letter). We note that the review period for all parties begins upon receipt of the Submission Packet pursuant to Section VII.A of the NPA and notifications that do not provide this serve as information only.

Persons who have received the notification that you provided include leaders or their designees of federally-recognized American Indian Tribes, including Alaska Native Villages (collectively "Tribal Nations"), Native Hawaiian Organizations (NHOs), and State Historic Preservation Officers (SHPOs). For your convenience in identifying the referenced Tribal Nations and NHOs and in making further contacts, the City and State of the Seat of Government for each Tribal Nation and NHO, as well as the designated contact person, is included in the listing below. We note that Tribal Nations may have Section 106 cultural interests in ancestral homelands or other locations that are far removed from their current Seat of Government. Pursuant to the Commission's rules as set forth in the Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (NPA), all Tribal Nations and NHOs listed below must be afforded a reasonable opportunity to respond to this notification, consistent with the procedures set forth below, unless the proposed construction falls within an exclusion designated by the Tribal Nation or NHO. (NPA, Section IV.F.4).

The notification that you provided was forwarded to the following Tribal Nations and NHOs. A Tribal Nation or NHO may not respond until a full Submission Packet is provided. If, upon receipt, the Tribal Nation or NHO does not respond within a reasonable time, you should make a reasonable effort at follow-up contact, unless the Tribal Nation or NHO has agreed to different procedures (NPA, Section IV.F.5). In the event a Tribal Nation or NHO does not respond to a follow-up inquiry, or if a substantive or procedural disagreement arises between you and a Tribal Nation or NHO, you must seek guidance from the Commission (NPA, Section IV.G). These procedures are further set forth in the FCC's Second Report and Order released on March 30, 2018 (FCC 18-30).

1. THPO Noah C White III - Prairie Island Indian Community - 5636 Sturgeon Lake Road Welch, MN - celltower@piic.org - 651-385-4175 - electronic mail

If the applicant/tower builder receives no response from the Prairie Island Indian Community within 30 days after notification through TCNS, the Prairie Island Indian Community has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder,

however, must immediately notify the Prairie Island Indian Community in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

2. Tribal Historic Preservation Officer Ben Yahola - Seminole Nation of Oklahoma - (PO Box: 1498) Wewoka, OK - tcns-sno@sno-nsn.gov - 405-234-5218 - electronic mail
Exclusions: Please send all inquiries to email address: tcns-sno@sno-nsn.gov

If the applicant/tower builder receives no response from the Seminole Nation of Oklahoma within 30 days after notification through TCNS, the Seminole Nation of Oklahoma has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder,

however, must immediately notify the Seminole Nation of Oklahoma in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

3. Cell Tower Coordinator Kelly Nelson - Eastern Shawnee Tribe of Oklahoma - 70500 East 128 Road Wyandotte, OK - celltower@estoo.net - 918-238-5151 (ext: 1861) - regular mail
Exclusions: DO NOT EMAIL DOCUMENTATION; it will be deleted without being opened.
Submit one printed color copy by US postal mail or other parcel carrier of all documentation to:

Eastern Shawnee Tribe
Attn: CellTower Program
70500 E. 128 Rd.
Wyandotte, OK 74370

Provide a 1-page cover letter with the following information:

- a. TCNS Number
- b. Company Name
- c. Project Name, City, County, State
- d. Project type
- e. Project coordinates
- f. Contact information

The Eastern Shawnee Procedures document is available and highly recommended for guidance; send an email to celltower@estoo.net requesting our most current copy.

4. THPO and Executive Director Dr. Wenonah G Haire DMD - Catawba Indian Nation - 1536 Tom Steven Road
Catawba Cultural Center Rock Hill, SC - Wenonah.Haire@catawba.com; Caitlin.Rogers@catawba.com - 803-417-9057 -
regular mail

Exclusions: Please do not email documentation; it will be deleted without being opened. Mail one printed color copy of
all documentation to address:

Dr. Wenonah G. Haire
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, SC 29730

Please submit by US Postal mail or other parcel carrier complete information for all telecommunication projects:

1. Please provide 1 page cover letter with following information

- a. TCNS Number
- b. Company Name
- c. Project Name, City, County, State
- d. Project Type
- e. Project coordinates
- f. Contact information

2. We also request photographs of project area, previous land use history and copy of SHPO Letter.

If you have any questions about our process or timeline of project notifications you can email Caitlin Rogers at
Caitlinh@ccppcrafts.com

5. Chief Diane Shields - Monacan Indian Nation - 111 Highview Dr Madison Heights, VA -
Consultation@MonacanNation.com - 434-363-4864 - electronic mail

The notification that you provided was also forwarded to the following SHPOs in the State in which you propose
to construct and neighboring States. The information was provided to these SHPOs as a courtesy for their information
and planning. You need make no effort at this time to follow up with any SHPO that does not respond to this
notification. Prior to construction, you must provide the SHPO of the State in which you propose to construct (or the
Tribal Historic Preservation Officer, if the project will be located on certain Tribal lands), with a Submission Packet
pursuant to Section VII.A of the NPA unless the project is excluded from SHPO review under Section III D or E of the NPA.

6. Environmental Review Coordinator Renee GledhillEarley - NC State Historic Preservation Office - 4617 Mail Service
Center Raleigh, NC - renee.gledhill-earley@ncmail.net - 919-733-4763 - electronic mail

7. Deputy SHPO David Brook - Historic Preservation Office - 4610 Mail Service Center Raleigh, NC -
david.brook@ncmail.net - 919-807-7283 - electronic mail

TCNS automatically forwards all notifications to all Tribal Nations and SHPOs that have an expressed interest in the geographic area of a proposal. However, if a proposal for PTC wayside poles falls within a designated exclusion, you need not expect any response and need not pursue any additional process with that Tribal Nation or SHPO. In addition, a particular Tribal Nation or SHPO may also set forth policies or procedures within its details box that exclude from review certain facilities (for example, a statement that it does not review collocations with no ground disturbance; or that indicates that no response within 30 days indicates no interest in participating in pre-construction review).

Please be advised that the FCC cannot guarantee that the contact(s) listed above have opened and reviewed an electronic or regular mail notification. If you learn that any of the above contact information is no longer valid, please contact the FCC by emailing tcnshelp@fcc.gov. The following information relating to the proposed tower was forwarded to the person(s) listed above:

Notification Received: 10/28/2024

Notification ID: 287334

Excluded from SHPO Review: No

Tower Owner Individual or Entity Name: Network Towers II LLC

Consultant Name: Michael Romanoski

Street Address: 1515 Des Peres Rd. Ste 200

Suite 200

City: St. Louis

State: MISSOURI

Zip Code: 63131

Phone: 314-997-6111

Email: tribal@trileaf.com

Structure Type: MTOWER - Monopole

Latitude: 35 deg 56 min 16.3 sec N

Longitude: 79 deg 1 min 37.2 sec W

Location Description: 1721 East Franklin Street

City: Chapel Hill

State: NORTH CAROLINA

County: ORANGE

Detailed Description of Project: Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area.

Ground Elevation: 80.8 meters

Support Structure: 59.4 meters above ground level

Overall Structure: 60.7 meters above ground level

Overall Height AMSL: 141.5 meters above mean sea level

If you have any questions or comments regarding this notice, please contact the FCC using the electronic Help Request form located on the FCC's website at:

https://urldefense.proofpoint.com/v2/url?u=https-3A__www.fcc.gov_wireless_available-2Dsupport-2Dservices&d=DwlFaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=tVy9dfE6fJUkHc15_Itk39MNoGtgWe1vmeedh3_FbFk&m=jE2_NC3oSnL3YFbExG1qNwjbU9Llgt0ZxptMVhZYLrCMhugidGV6EFE9W5AGpXSP&s=gZ-dKXTIVISjLRzFWm9g_Lox_ZojlBLG-v0rArnCS0&e=

You may also call the FCC Support Center at (877) 480-3201 (TTY 717-338-2824). Hours are from 8:00 a.m. to 6:00 p.m. Eastern Time, Monday through Friday (except Federal holidays). To provide quality service and ensure security, all telephone calls are recorded.

Thank you,
Federal Communications Commission

This email has been scanned for spam and viruses by Proofpoint Essentials. = Visit the following link to report this email as spam:

https://us1.proofpointessentials.com/app/report_spam.php?mod_id=3D11&mod_op=tion=3Dlogitem&report=3D1&type=3Deasyspam&k=3Dk1&payload=3D53616c7465645f5f527ddf52208da81c434045f50876a9ffbc5b18af84e4321fdd259864f144b4bc69039e7ca33=23d89be58cfaafd35ab7cca175fbec12fc124ef4b70c14a69e03a01774b7da6aaae96b5ea75=981ecf08135f047dba6ff82c1539ef5f529d4ec1904066f1326db4396f581c8bb229fc246a9=127b1177539b871b87ed9ebae671fafd7673424cf0d94cb05b02bc45abcd4cfe94adf031439=44ad=0D

NT SUBMISSION PACKET – FCC FORM 620

Approved by OMB
3060-1039
See instructions for
Public burden estimates

Attachment 7. Historic Properties Direct Effects

a. List all properties within the APE for direct effects.

Project # and Status of Subject Property (Monopole)	Project Name/ Address of Subject Property	Photograph of Subject Property	Description of Subject Property	Summary of Effects on Subject Property
752127 Not Eligible or Contributing	Dobbins 1721 East Franklin Street, Chapel Hill, NC 27514 35.93785836111111, -79.02699411111111		The Subject Property is not an individually listed historic structure. Further is not a designated National Historic Landmark nor is it a property listed in, or eligible for listing on the NRHP.	No Effect The proposed design is minor and necessary for the community. This will have no adverse effect on the Subject Property.

b. Provide the name and address (including U.S. Postal Service ZIP Code) of each property in the APE for direct effects, not listed in part “a” (above), that the Applicant considers to be eligible for listing in the National Register as a result of the Applicant’s research. For each such property, describe how it satisfies the criteria of eligibility (36 C.F.R. Part 63). For each property that was specifically considered and determined not to be eligible, describe why it does not satisfy the criteria of eligibility.

There are no additional properties in the APE for direct effects not listed in part “a.”

Applicant’s Name: Network Towers II LLC
Project Name: Dobbins
Project Number: 752127
FCC Form 620

Attachment 7. Continued

- c. Describe the techniques and the methodology, including any field survey, used to identify Historic Properties within the APE for direct effects.¹ If no archeological field survey was performed, provide a report substantiating that: i) the depth of previous disturbance exceeds the proposed construction depth (excluding footings and other anchoring mechanisms) by at least 2 feet; or, ii) geomorphological evidence indicates that cultural resource-bearing soils do not occur within the project area or may occur but at depths that exceed 2 feet below the proposed construction depth.²

The field investigation at this location was conducted by William McLean, Project Scientist II for Trileaf, under the direction of Trileaf Senior Project Archaeologist Mackenzie Mulkey, on October 18, 2024. Based on the Communications Tower Information Form for North Carolina State Historic Preservation Office Review completed for this project, no archaeological survey was recommended by the NCSHPO, and thus field survey was limited to visual inspection.

Based on the findings of this survey, Trileaf recommends that there are ***No Historic Properties in the Direct APE***. It is therefore recommended that project clearance be granted with no further investigation or evaluation of the project area.

¹ Pursuant to Section VI.D.2.a. of the Nationwide Agreement, Applicants shall make a reasonable and good faith effort to identify above ground and archeological Historic Properties, including buildings, structures, and historic districts, that lie within the APE for direct effects. Such reasonable and good faith efforts may include a field survey where appropriate.

² Under Section VI.D.2.d. of the Nationwide Agreement, an archeological field survey is required even if none of these conditions applies, if an Indian tribe or NHO provides evidence that supports a high probability of the presence of intact archeological Historic Properties within the APE for direct effects.

Attachment 8. Historic Properties Visual Effects**Historic Properties Identified for Visual Effects Guidelines**

- a. Provide the name and address (including U.S. Postal Service ZIP Code) of each property in the APE for visual effects that is listed in the National Register, has been formally determined eligible for listing by the Keeper of the National Register, or is identified as considered eligible for listing in the records of the SHPO/THPO, pursuant to Section VI.D.I.a. of the Nationwide Agreement.

A review of the NC SHPO database of National Register Sites and Districts, Certified Local Districts and Architectural Surveys, Archaeology Viewer, National Register Information System website (<http://www.nr.nps.gov/>) and interactive map conducted on October 23, 2024, by Michael Hart, Senior Historian at Trileaf. Based upon this review, Trileaf recommends that there are ***No Historic Properties in the APE-VE.***

- b. Provide the name and address (including U.S. Postal Service ZIP Code) of each Historic Property in the APE for visual effects, not listed in part “a”, identified through the comments of Indian Tribes, NHOs, local governments, or members of the public. Identify each individual or group whose comments led to the inclusion of a Historic Property in this attachment. For each such property, describe how it satisfies the criteria of eligibility (36 C.F.R. Part 63).

As of the date of this report, Trileaf Corporation has not received comments from Indian Tribes, NHOs, local governments, or members of the public that identify Historic Properties in the APE for visual effects.

- c. For any properties listed in the above Historic Properties list, that the Applicant considers no longer eligible for inclusion in the National Register, explain the basis for this recommendation.

N/A

Applicant's Name: Network Towers II LLC

Project Name: Dobbins

Project Number: 752127

FCC Form 620

NT SUBMISSION PACKET – FCC FORM 620

Approved by OMB

3060-1039

See instructions for
Public burden estimates

Attachment 9. Local Government

- a. **If any local government has been contacted and invited to become a consulting party pursuant to Section V.A. of the Nationwide Programmatic Agreement, list the local government agencies contacted. Provide a summary of contacts and copies of any relevant documents (e.g., correspondence or notices).**

On November 25, 2024, Ms. Anya Grahn, Planner of the Chapel Hill Historic District Commission, was notified of the proposed project. She has been invited to comment on the proposed project's potential effect on Historic Properties and to indicate whether she is interested in consulting further on the proposed project. A copy of Trileaf Corporation's correspondence with Ms. Grahn is attached. As of this date, no response has been received from Ms. Grahn. Should a response be received, a copy will be forwarded to all consulting parties as an addendum to this packet.

- b. **If a local government agency will be contacted but has not been to date, explain why and when such contact will take place.**

N/A

Applicant's Name: Network Towers II LLC

Project Name: Dobbins

Project Number: 752127

FCC Form 620



1395 South Marietta Parkway, Building 400, Suite 209, Marietta, GA 30067 - 678-653-8673 - www.trileaf.com

November 25, 2024

Chapel Hill Historic District Commission

Attn: Ms. Anya Grahn - Planner

405 Martin Luther King Boulevard

Chapel Hill, North Carolina 27516

Phone: (919) 969-5059

Email: agrahn@townofchapelhill.org

RE: **Network Towers II LLC – Dobbins – Client #NC-T23.12 – Trileaf Project #752127**

1721 East Franklin Street, Chapel Hill, North Carolina 27514

Orange County, Chapel Hill Quadrangle (USGS)

Latitude: 35° 56' 16.2901" N, Longitude: 79° 1' 37.1788" W

Ms. Grahn,

Trileaf Corporation is in the process of completing a NEPA Review at the referenced property. Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The Site is located within grass-covered and wooded land. The antennas will be licensed by the Federal Communications Commission (FCC).

Our investigation includes determining if the site is contained in, on or within the viewshed of a building, site, district, structure or object, significant in American history, architecture, archaeology, engineering or culture, that is listed, or eligible for listing on the State or National Registers of Historic Places, or located in or on an Indian Religious Site.

Trileaf is requesting information regarding this tower's potential effect on Historic Properties. All information received will be forwarded to the State Historic Preservation Office (SHPO) as part of the NEPA review process. *Additionally, this invitation to comment is separate from any local planning/zoning process that may apply to this project.*

If you wish to comment or be considered a consulting party, please respond within thirty (30) days of the date of this letter. If a response is not received within thirty (30) days, it will be assumed that you have no objections to this undertaking. A site topography map and aerial photograph are enclosed for your reference.

Please call me at (678) 653-8673 or email t.clark@trileaf.com if you need additional information or have any questions. Thank you for your assistance in this regard.

Sincerely,

Trenton Clark
Assistant Project Manager II

NT SUBMISSION PACKET – FCC FORM 620

Approved by OMB

3060-1039

See instructions for
Public burden estimates

Attachment 10. Other Consulting Parties and Public Notice

List additional consulting parties that were invited to participate by the Applicant, or independently requested to participate. Provide any relevant correspondence or other documents.

On November 25, 2024, the Chapel Hill Historical Society was notified of the proposed project. They were invited to comment on the proposed project's potential effect on Historic Properties and to indicate whether they are interested in consulting further on the proposed project. A copy of Trileaf's correspondence with the Chapel Hill Historical Society is attached. As of this date, no response has been received from the Chapel Hill Historical Society. Should a response be received, a copy will be forwarded to all consulting parties as an addendum to this packet.

You are required to provide a Public Notice Attachment.

Attached, please find a copy of a legal notice regarding the proposed telecommunications tower construction that is to be posted in the *News of Orange County* on December 4, 2024. Should a response be received, copies will be forwarded to all consulting parties as an addendum to this submission packet.

Applicant's Name: Network Towers II LLC

Project Name: Dobbins

Project Number: 752127

FCC Form 620



1395 South Marietta Parkway, Building 400, Suite 209, Marietta, GA 30067 - 678-653-8673 - www.trileaf.com

November 25, 2024

Chapel Hill Historical Society

P.O. Box 9032
Chapel Hill, North Carolina 27515
Phone: (919) 929-1793
Email: chhistoricalsociety@gmail.com

RE: **Network Towers II LLC – Dobbins – Client #NC-T23.12 – Trileaf Project #752127**
1721 East Franklin Street, Chapel Hill, North Carolina 27514
Orange County, Chapel Hill Quadrangle (USGS)
Latitude: 35° 56' 16.2901" N, Longitude: 79° 1' 37.1788" W

To Whom It May Concern,

Trileaf Corporation is in the process of completing a NEPA Review at the referenced property. Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The Site is located within grass-covered and wooded land. The antennas will be licensed by the Federal Communications Commission (FCC).

Our investigation includes determining if the site is contained in, on or within the viewshed of a building, site, district, structure or object, significant in American history, architecture, archaeology, engineering or culture, that is listed, or eligible for listing on the State or National Registers of Historic Places, or located in or on an Indian Religious Site.

Trileaf is requesting information regarding this tower's potential effect on Historic Properties. All information received will be forwarded to the State Historic Preservation Office (SHPO) as part of the NEPA review process. *Additionally, this invitation to comment is separate from any local planning/zoning process that may apply to this project.*

If you wish to comment or be considered a consulting party, please respond within thirty (30) days of the date of this letter. If a response is not received within thirty (30) days, it will be assumed that you have no objections to this undertaking. A site topography map and aerial photograph are enclosed for your reference.

Please call me at (678) 653-8673 or email t.clark@trileaf.com if you need additional information or have any questions. Thank you for your assistance in this regard.

Sincerely,

Trenton Clark
Assistant Project Manager II

**NORTH CAROLINA
ORANGE COUNTY**

AFFIDAVIT OF PUBLICATION

Before the undersigned, a Notary Public of Orange County, North Carolina, duly commissioned, qualified, and authorized by law to administer oaths and affirmations, personally appeared Melanie Davis who, being duly sworn or affirmed, according to law, do depose and say that they are an authorized employee of The News of Orange County Newspaper engaged in the publication of a newspaper known as The News of Orange County Newspaper, issue and entered as second class mail in the Town of Hillsborough in said County and State; that they are authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto was published in the News of Orange County on the following dates:

December 4, 2024; That the said newspapers in which such notice, paper, document, or legal advertisement was published at the time of each and every such publication, a newspaper meeting all of the requirements and qualifications of Section I-597 of the General Statutes of North Carolina and was a qualified newspaper within the meaning of Section I-597 of the General Statutes of North Carolina.

Melanie Davis
Sworn to and subscribed before me, this 5 day of December, 2024

Daniel Misner Notary Public

My Commission Expires: 9/2/2026



Network Towers II LLC proposes to construct a 199-foot-tall monopole communications tower/structure at the approx. vicinity of 1721 East Franklin Street, Chapel Hill, Orange County, NC 27514. Public comments regarding potential effects on historic properties may be submitted within 30 days from the date of this publication to: Trileaf Corp., Trenton Clark, t.clark@trileaf.com, 1395 South Marietta Parkway, Building 400, Suite 209, Marietta, GA 30067, (678) 653-8673.

NT SUBMISSION PACKET – FCC FORM 620

Approved by OMB

3060-1039

See instructions for
Public burden estimates

Attachment 11. SHPO Specific Forms

North Carolina Tower Review Form

Applicant's Name: Network Towers II LLC

Project Name: Dobbins

Project Number: 752127

FCC Form 620

COMMUNICATIONS TOWER INFORMATION FORM

FOR NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICE REVIEW

I. Submitted by:Preparer Name, Company: Mackenzie Mulkey, TrileafCompany Address: 1515 Des Peres Rd, Suite 200, Saint Louis, MO, 63131Phone, E-mail: 864-630-4367, m.mulkey@trileaf.com

Co./NCHPO/FCC No.: _____

II. Project Information: (Small-Cell projects may be submitted in batches if they meet the requirements listed on the NCHPO SMALL-CELL BATCH SUBMISSION FORM)Project Type: Raw Land (NEW) ☐ Co-Location ☐ Other ☒Location: Street Address/PIN, County 1721 East Franklin Street, Orange CountyGPS Coordinates (decimal degrees), Topo Quad Name 35.93785836111111, -79.02699411111111, Chapel Hill, NCDetails: Tower Type (select from list) Monopole Height 199 feetIf "Other", describe _____ FCC 620/621 included? Yes ☐ No ☒**III. Identification of Historic Properties:** (List by site number and status: NR = National Register listed; SL = Study List; DOE = Determination of Eligibility; LD = Local Designation; UA = Unassessed).**Archaeology –**

of recorded sites in immediate area of siting location: _____

Architecture – Visit [NC HPOWEB 2.0 Buffer Tool](#)# of recorded sites within 0.5 - Mile radius: _____**FOR HPO USE ONLY**

____ Survey Needed

____ Site Testing NC- CAOOSA Comment & Date: 11/13/2024

(Office of State Archaeology)

____ Photo Reconnaissance/Simulation

____ Balloon Test NC- RTBSurvey Comment & Date: 11/20/2024

(NCHPO Survey & Planning Branch)

IV. Recommendations/Final Determination:

____ Recommendations for additional work: shown above -or- see attached letter.

☒ The proposed communication tower will not affect historic properties.*Renee Gledhill-Earley*

Renee Gledhill-Earley, Environmental Review Coordinator

cc: FCC

11/21/2024

Date

July 2020
ER-KBH

To ensure timely review, submission must include a legible map with all siting locations & disturbance boundaries clearly marked. Designs are required for projects that have historic properties within the APE/Visual APE. The FCC 620/621 is not required by NCHPO for review and does not meet the OSA reporting standards for archaeological survey. Submit the completed form and map to: Renee Gledhill-Earley, Environmental Review Coordinator, State Historic Preservation Office, at Environmental.Review@ncdcr.gov (phone 919-814-6584). **Allow at least thirty days for our review and comment**

Trenton Clark

From: towernotifyinfo@fcc.gov
Sent: Monday, December 2, 2024 4:16 PM
To: Trenton Clark
Subject: Section 106 New Filing Submitted- Email ID #10481115

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

The following new Section 106 filing has been submitted:

File Number: 0011350890
TCNS Number: 287334
Purpose: New Tower Submission Packet

Notification Date: 7AM EST 12/03/2024

Applicant: Network Towers, LLC c/o Network Building & Consulting
Consultant: Trileaf Corporation
Positive Train Control Filing Subject to Expedited Treatment Under Program Comment: No
Site Name: Dobbins
Site Address: 1721 East Franklin Street
Detailed Description of Project: Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area.
Site Coordinates: 35-56-16.3 N, 79-1-37.2 W
City: Chapel Hill
County: ORANGE
State: NC
Lead SHPO/THPO: NC Historic Preservation Office (Deputy SHPO)

Consultant Contact Information:
Name: Trileaf Corporation
Title: Principal Investigator
PO Box:
Address: 1395 S Marietta Parkway
Building 400, Suite 209
City: Marietta
State: GA
Zip: 30067
Phone: 678-653-8673
Fax:
Email: t.clark@trileaf.com

NOTICE OF FRAUDULENT USE OF SYSTEM, ABUSE OF PASSWORD AND RELATED MISUSE

Use of the Section 106 system is intended to facilitate consultation under Section 106 of the National Historic Preservation Act and may contain information that is confidential, privileged or otherwise protected from disclosure under applicable laws. Any person having access to Section 106 information shall use it only for its intended purpose. Appropriate action will be taken with respect to any misuse of the system.

Appendix F

Native American Correspondence



Tribal Summary Table									
Site: Dobbins						Site ID: NC-T23.12			
TCNS Number: 287334						FCC Start: November 1, 2024			
Tribe	TCNS auto-reply	Follow Up Request from Tribe		Follow Up(s) to Tribe		Final Reply		FCC Referral	Standing Agreements & Comments
		Date	Requested Information	Date	Sent	Date	Comments		
Catawba Indian Nation				12/3/2024	Sent Letter & Form 620/621	1/9/2025	No immediate concerns with regard to traditional cultural properties, sacred sites or Native American archeological sites within the boundaries of the proposed project areas. Requests inadvertent discovery notification.	1/9/2025	
Eastern Shawnee Tribe of Oklahoma				12/3/2024	Sent Letter & Form 620/621	10/31/2024	This project will have No Adverse Effect on properties of sacred and/or cultural significance to the Tribe. The project site is within the known regional area of the Shawnee prehistorically and historically, be aware of inadvertent discoveries. However, ESTO has no objection to the project proceeding as described. Requests scope change and inadvertent discovery notification.		
Monacan Indian Nation				12/3/2024	Sent Letter & Form 620/621	1/24/2025	Cleared by Referral	1/9/2025	
Prairie Island Indian Community	30 days no interest Notify of inadvertent discovery			12/3/2024	Sent Letter & Form 620/621	1/2/2025	Cleared per NOO		
Seminole Nation of Oklahoma	30 days no interest Notify of inadvertent discovery			12/3/2024	Sent Letter & Form 620/621	1/2/2025	Cleared per NOO		

Courtney Miranda

From: towernotifyinfo@fcc.gov
Sent: Friday, November 1, 2024 2:01 AM
To: Tribal
Cc: tcnsweekly@fcc.gov
Subject: NOTICE OF ORGANIZATION(S) WHICH WERE SENT PROPOSED TOWER CONSTRUCTION NOTIFICATION INFORMATION - Email ID #9024092

Categories: Courtney

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Applicant:

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this electronic mail message is to inform you that the following authorized persons were sent the notification that you provided through TCNS, which relates to your proposed antenna structure. The information was forwarded by the FCC to authorized TCNS users by electronic mail and/or regular mail (letter). We note that the review period for all parties begins upon receipt of the Submission Packet pursuant to Section VII.A of the NPA and notifications that do not provide this serve as information only.

Persons who have received the notification that you provided include leaders or their designees of federally-recognized American Indian Tribes, including Alaska Native Villages (collectively "Tribal Nations"), Native Hawaiian Organizations (NHOs), and State Historic Preservation Officers (SHPOs). For your convenience in identifying the referenced Tribal Nations and NHOs and in making further contacts, the City and State of the Seat of Government for each Tribal Nation and NHO, as well as the designated contact person, is included in the listing below. We note that Tribal Nations may have Section 106 cultural interests in ancestral homelands or other locations that are far removed from their current Seat of Government. Pursuant to the Commission's rules as set forth in the Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (NPA), all Tribal Nations and NHOs listed below must be afforded a reasonable opportunity to respond to this notification, consistent with the procedures set forth below, unless the proposed construction falls within an exclusion designated by the Tribal Nation or NHO. (NPA, Section IV.F.4).

The notification that you provided was forwarded to the following Tribal Nations and NHOs. A Tribal Nation or NHO may not respond until a full Submission Packet is provided. If, upon receipt, the Tribal Nation or NHO does not respond within a reasonable time, you should make a reasonable effort at follow-up contact, unless the Tribal Nation or NHO has agreed to different procedures (NPA, Section IV.F.5). In the event a Tribal Nation or NHO does not respond to a follow-up inquiry, or if a substantive or procedural disagreement arises between you and a Tribal Nation or NHO, you must seek guidance from the Commission (NPA, Section IV.G). These procedures are further set forth in the FCC's Second Report and Order released on March 30, 2018 (FCC 18-30).

1. THPO Noah C White III - Prairie Island Indian Community - 5636 Sturgeon Lake Road Welch, MN - celltower@piic.org - 651-385-4175 - electronic mail

If the applicant/tower builder receives no response from the Prairie Island Indian Community within 30 days after notification through TCNS, the Prairie Island Indian Community has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder,

however, must immediately notify the Prairie Island Indian Community in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

2. Tribal Historic Preservation Officer Ben Yahola - Seminole Nation of Oklahoma - (PO Box: 1498) Wewoka, OK - tcns-sno@sno-nsn.gov - 405-234-5218 - electronic mail
Exclusions: Please send all inquiries to email address: tcns-sno@sno-nsn.gov

If the applicant/tower builder receives no response from the Seminole Nation of Oklahoma within 30 days after notification through TCNS, the Seminole Nation of Oklahoma has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder,

however, must immediately notify the Seminole Nation of Oklahoma in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

3. Cell Tower Coordinator Kelly Nelson - Eastern Shawnee Tribe of Oklahoma - 70500 East 128 Road Wyandotte, OK - celltower@estoo.net - 918-238-5151 (ext: 1861) - regular mail
Exclusions: DO NOT EMAIL DOCUMENTATION; it will be deleted without being opened.
Submit one printed color copy by US postal mail or other parcel carrier of all documentation to:

Eastern Shawnee Tribe
Attn: CellTower Program
70500 E. 128 Rd.
Wyandotte, OK 74370

Provide a 1-page cover letter with the following information:

- a. TCNS Number
- b. Company Name
- c. Project Name, City, County, State
- d. Project type
- e. Project coordinates
- f. Contact information

The Eastern Shawnee Procedures document is available and highly recommended for guidance; send an email to celltower@estoo.net requesting our most current copy.

4. THPO and Executive Director Dr. Wenonah G Haire DMD - Catawba Indian Nation - 1536 Tom Steven Road
Catawba Cultural Center Rock Hill, SC - Wenonah.Haire@catawba.com; Caitlin.Rogers@catawba.com - 803-417-9057 -
regular mail

Exclusions: Please do not email documentation; it will be deleted without being opened. Mail one printed color copy of
all documentation to address:

Dr. Wenonah G. Haire
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, SC 29730

Please submit by US Postal mail or other parcel carrier complete information for all telecommunication projects:

1. Please provide 1 page cover letter with following information

- a. TCNS Number
- b. Company Name
- c. Project Name, City, County, State
- d. Project Type
- e. Project coordinates
- f. Contact information

2. We also request photographs of project area, previous land use history and copy of SHPO Letter.

If you have any questions about our process or timeline of project notifications you can email Caitlin Rogers at
Caitlinh@ccppcrafts.com

5. Chief Diane Shields - Monacan Indian Nation - 111 Highview Dr Madison Heights, VA -
Consultation@MonacanNation.com - 434-363-4864 - electronic mail

The notification that you provided was also forwarded to the following SHPOs in the State in which you propose
to construct and neighboring States. The information was provided to these SHPOs as a courtesy for their information
and planning. You need make no effort at this time to follow up with any SHPO that does not respond to this
notification. Prior to construction, you must provide the SHPO of the State in which you propose to construct (or the
Tribal Historic Preservation Officer, if the project will be located on certain Tribal lands), with a Submission Packet
pursuant to Section VII.A of the NPA unless the project is excluded from SHPO review under Section III D or E of the NPA.

6. Environmental Review Coordinator Renee GledhillEarley - NC State Historic Preservation Office - 4617 Mail Service
Center Raleigh, NC - renee.gledhill-earley@ncmail.net - 919-733-4763 - electronic mail

7. Deputy SHPO David Brook - Historic Preservation Office - 4610 Mail Service Center Raleigh, NC -
david.brook@ncmail.net - 919-807-7283 - electronic mail

TCNS automatically forwards all notifications to all Tribal Nations and SHPOs that have an expressed interest in the geographic area of a proposal. However, if a proposal for PTC wayside poles falls within a designated exclusion, you need not expect any response and need not pursue any additional process with that Tribal Nation or SHPO. In addition, a particular Tribal Nation or SHPO may also set forth policies or procedures within its details box that exclude from review certain facilities (for example, a statement that it does not review collocations with no ground disturbance; or that indicates that no response within 30 days indicates no interest in participating in pre-construction review).

Please be advised that the FCC cannot guarantee that the contact(s) listed above have opened and reviewed an electronic or regular mail notification. If you learn that any of the above contact information is no longer valid, please contact the FCC by emailing tcnshelp@fcc.gov. The following information relating to the proposed tower was forwarded to the person(s) listed above:

Notification Received: 10/28/2024

Notification ID: 287334

Excluded from SHPO Review: No

Tower Owner Individual or Entity Name: Network Towers II LLC

Consultant Name: Michael Romanoski

Street Address: 1515 Des Peres Rd. Ste 200

Suite 200

City: St. Louis

State: MISSOURI

Zip Code: 63131

Phone: 314-997-6111

Email: tribal@trileaf.com

Structure Type: MTOWER - Monopole

Latitude: 35 deg 56 min 16.3 sec N

Longitude: 79 deg 1 min 37.2 sec W

Location Description: 1721 East Franklin Street

City: Chapel Hill

State: NORTH CAROLINA

County: ORANGE

Detailed Description of Project: Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area.

Ground Elevation: 80.8 meters

Support Structure: 59.4 meters above ground level

Overall Structure: 60.7 meters above ground level

Overall Height AMSL: 141.5 meters above mean sea level

If you have any questions or comments regarding this notice, please contact the FCC using the electronic Help Request form located on the FCC's website at:

https://urldefense.proofpoint.com/v2/url?u=https-3A__www.fcc.gov_wireless_available-2Dsupport-2Dservices&d=DwlFaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=tVy9dfE6fJUKhc15_Itk39MNoGtgWe1vmeedh3_FbFk&m=jE2_NC3oSnL3YFbExG1qNwjbU9Llgt0ZxptMVhZYLrCMhugidGV6EFE9W5AGpXSP&s=gZ-dKXTIVISjLRzFWm9g_Lox_ZojlBLG-v0rArnCS0&e=

You may also call the FCC Support Center at (877) 480-3201 (TTY 717-338-2824). Hours are from 8:00 a.m. to 6:00 p.m. Eastern Time, Monday through Friday (except Federal holidays). To provide quality service and ensure security, all telephone calls are recorded.

Thank you,
Federal Communications Commission

This email has been scanned for spam and viruses by Proofpoint Essentials. = Visit the following link to report this email as spam:

https://us1.proofpointessentials.com/app/report_spam.php?mod_id=3D11&mod_op=tion=3Dlogitem&report=3D1&type=3Deasyspam&k=3Dk1&payload=3D53616c7465645f5f527ddf52208da81c434045f50876a9ffbc5b18af84e4321fdd259864f144b4bc69039e7ca33=23d89be58cfaafd35ab7cca175fbec12fc124ef4b70c14a69e03a01774b7da6aaae96b5ea75=981ecf08135f047dba6ff82c1539ef5f529d4ec1904066f1326db4396f581c8bb229fc246a9=127b1177539b871b87ed9ebae671fafd7673424cf0d94cb05b02bc45abcd4cfe94adf031439=44ad=0D



1515 Des Peres Road, Suite 200, Saint Louis, Missouri 63131 - 314.997.6111 www.trileaf.com

December 3, 2024

Catawba Indian Nation

Dr. Wenonah G. Haire
1536 Tom Steven Road
Tribal Historic Preservation Office
Rock Hill, SC 29730

RE: Network Towers II LLC
Trileaf Project # 752127 / NC-T23.12 / Dobbins
1721 East Franklin Street, Chapel Hill, Orange County, NC 27514
Latitude: 35° 56' 16.29" N, Longitude: 79° 1' 37.18" W
TCNS # 287334

Dear Dr. Haire:

This project was originally submitted in TCNS on 11/1/2024. Trileaf Corporation is in the process of completing a NEPA Review at the above referenced property. Our investigation includes determining if the site is contained in, on, or within the viewshed of a building, site, district, structure or object, significant in American history, architecture, archeology, engineering or culture, that is listed or eligible for listing on the State or National Registers of Historic Places, or located in or on, or within the viewshed of an Indian Religious Site. Trileaf has learned your tribe has an interest in property located within this County.

Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The Site is located within grass-covered and wooded land.

The form 620/621 submission packet is attached for your review. Please let us know if you have any objections or comments on this project as soon as possible. Contact me at (314) 997-6111 or email tribal@trileaf.com if you have any questions. Thank you for your assistance in this regard.

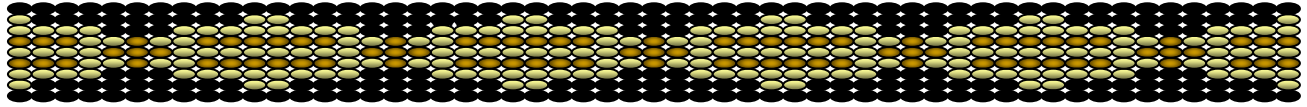
Sincerely,

A handwritten signature in dark ink, appearing to read "Michael Romanoski".

Michael Romanoski
Tribal Consultation Manager

Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Office 803-328-2427
Fax 803-328-5791



January 9, 2025

Attention: Michael Romanoski
Trileaf
1515 Des Peres Road, Suite 200
Saint Louis, Missouri 63131

Re. THPO #	TCNS #	Project Description
2025-160-35	287334	1721 East Franklin Street, Chapel Hill, Orange Co., NC

Dear Mr. Romanoski,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Wenonah G. Haire
Tribal Historic Preservation Officer

Lee Castile

From: towernotifyinfo@fcc.gov
Sent: Thursday, January 9, 2025 8:01 AM
To: Tribal
Cc: tcnsweekly@fcc.gov
Subject: Proposed Construction of Communications Facilities Notification of Final Contacts - Email ID #37358

Categories: Lee

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Michael Romanoski
1515 Des Peres Rd. Ste 200
Suite 200
St. Louis, MO 63131

Dear Applicant:

This letter addresses the proposed communications facilities listed below that you have referred to the Federal Communications Commission (Commission) for purposes of contacting federally recognized Indian Tribes, including Alaska Native Villages (collectively Indian Tribes), and Native Hawaiian Organizations (NHOs), as specified by Section IV.G of the Nationwide Programmatic Agreement (NPA). Consistent with the procedures outlined in the Commission's Wireless Infrastructure Second Report and Order (1), we have contacted the Indian Tribes or NHOs identified in the attached Table for the projects listed in the attached Table. You referred these projects to us between 01/02/2025 and 01/09/2025. Our contact with these Tribal Nations or NHOs was sent on 01/09/2025.

Thus, as described in the Wireless Infrastructure Second Report and Order (2), if you or Commission staff do not receive a statement of interest regarding a particular project from any Tribe or NHO within 15 calendar days of 01/09/2025, your obligations under Section IV of the NPA with respect to these Tribal Nations or NHOs are complete. If a Tribal Nation or NHO responds that it has concerns about a historic property of traditional religious and cultural significance that may be affected by the proposed construction within the 15 calendar day period, the Applicant must involve it in the review as set forth in the NPA, and may not begin construction until the process set forth in the NPA is completed.

You are reminded that Section IX of the NPA imposes independent obligations on an Applicant when a previously unidentified site that may be a historic property, including an archeological property, is discovered during construction or after the completion of review. In such instances, the Applicant must cease construction and promptly notify, among others, any potentially affected Tribal Nation or NHO. A Tribal Nation's or NHO's failure to express interest in participating in pre-construction review of an undertaking does not necessarily mean it is not interested in archeological properties or human remains that may inadvertently be discovered during construction. Hence, an Applicant is still required to notify any potentially affected Tribal Nation or NHO of any such finds pursuant to Section IX or other applicable law.

Sincerely,
Ellen Saint Onge
Federal Preservation Officer
Federal Communications Commission

Tribe Name: Sac & Fox Tribe of the Mississippi in Iowa
Tribe Name: Santee Sioux Nation of Nebraska
Tribe Name: Sisseton-Wahpeton Oyate of the Lake Traverse Reservation
Tribe Name: Winnebago Tribe of Nebraska
Tribe Name: Wyandotte Nation

TCNS# 287334 Referred Date: 01/08/2025 Location: 1721 East Franklin Street, Chapel Hill, NC
Detailed Description of Project: Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area.

Tribe Name: Catawba Indian Nation
Tribe Name: Monacan Indian Nation

TCNS# 287395 Referred Date: 01/08/2025 Location: Eagle Road, Sedan, KS
Detailed Description of Project: Our client proposes the installation of a 225-ft guyed communications tower, with an overall height of 235 feet within a 75-foot by 75-foot lease area. The site will include 20-ft wide guyed easements in the N, SW, and SE direction.

Tribe Name: Apache Tribe of Oklahoma
Tribe Name: Crow Tribe
Tribe Name: Ho-Chunk Nation
Tribe Name: Iowa Tribe of Oklahoma
Tribe Name: Kaw Nation
Tribe Name: Kiowa Indian Tribe THPO
Tribe Name: Omaha Tribe of Nebraska
Tribe Name: Osage Nation
Tribe Name: Otoe-Missouria Tribe of Indians
Tribe Name: Ponca Tribe of Indians of Oklahoma
Tribe Name: Rosebud Sioux Tribe
Tribe Name: Sac and Fox Nation
Tribe Name: Shawnee Tribe
Tribe Name: United Keetoowah Band of Cherokee Indians in Oklahoma
Tribe Name: Wichita and Affiliated Tribes
Tribe Name: Wyandotte Nation
Tribe Name: Yankton Sioux Tribe

TCNS# 287667 Referred Date: 01/08/2025 Location: 1101 North University, Ann Arbor, MI
Detailed Description of Project: Verizon Wireless proposes to collocate 2 antennae at CL heights of 60ft and 55.626ft on a 59.2ft rooftop. Assoc equip will be installed on the roof. The site is currently an existing university building. There is no ground disturbance.

Tribe Name: Chippewa Cree Tribe of the Rocky Boy's Reservation
Tribe Name: Citizen Potawatomi Nation
Tribe Name: Eastern Shawnee Tribe of Oklahoma
Tribe Name: Forest County Potawatomi Community
Tribe Name: Hannahville Indian Community
Tribe Name: Ho-Chunk Nation
Tribe Name: Huron Potawatomi
Tribe Name: Keweenaw Bay Indian Community
Tribe Name: Lac Vieux Desert Band of Lake Superior Chippewa Indians
Tribe Name: Little River Band of Ottawa Indians
Tribe Name: Match-e-be-nash-she-wish Band of Pottawatomi Indians of Michigan
Tribe Name: Miami Tribe of Oklahoma
Tribe Name: Otoe-Missouria Tribe of Indians



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December 3, 2024

Eastern Shawnee Tribe of Oklahoma

Ms. Kelly Nelson
Attn: CellTower Program
70500 East 128 Road
Wyandotte, OK 74370

RE: Network Towers II LLC
Trileaf Project # 752127 / NC-T23.12 / Dobbins
1721 East Franklin Street, Chapel Hill, Orange County, NC 27514
Latitude: 35° 56' 16.29" N, Longitude: 79° 1' 37.18" W
TCNS # 287334

Dear Ms. Nelson:

This project was originally submitted in TCNS on 11/1/2024. Trileaf Corporation is in the process of completing a NEPA Review at the above referenced property. Our investigation includes determining if the site is contained in, on, or within the viewshed of a building, site, district, structure or object, significant in American history, architecture, archeology, engineering or culture, that is listed or eligible for listing on the State or National Registers of Historic Places, or located in or on, or within the viewshed of an Indian Religious Site. Trileaf has learned your tribe has an interest in property located within this County.

Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The Site is located within grass-covered and wooded land.

The form 620/621 submission packet is attached for your review. Please let us know if you have any objections or comments on this project as soon as possible. Contact me at (314) 997-6111 or email tribal@trileaf.com if you have any questions. Thank you for your assistance in this regard.

Sincerely,

A handwritten signature in dark ink, appearing to read "Michael Romanoski".

Michael Romanoski
Tribal Consultation Manager



Tower Construction Notification

[FCC](#) > [WTB](#) > Tower Construction Notification

[FCC Site Map](#)

Logged In: ([Log Out](#)) [Section 106](#)

Tower Construction Notification Notification Reply

[Notifications Home](#) ▶ [Notification Replies](#)

The replies for Notification ID 287334 are shown.

Reply Information

Reply Date: **10/31/2024**

Name of Replier: **Kelly Nelson, Eastern Shawnee Tribe of Oklahoma**

Message

The Cultural Preservation Department of the Eastern Shawnee Tribe of Oklahoma (ESTO) has received the documentation for the referenced TCNS project. ESTO has reviewed the project in accordance with Section 106 of the National Historic Preservation Act (NHPA). Based on the information provided and a review of our records, we find that this project will have No Adverse Effect on properties of sacred and/or cultural significance to the Tribe. The project site is within the known regional area of the Shawneeprehistorically and historically, be aware of inadvertent discoveries. However, ESTO has no objection to the project proceeding as described. Please note that any future changes to this project will require additional consultation. In accordance with the NHPA of 1966 (16 U.S.C. § 470-470w-6), federally funded, licensed, or permitted undertakings that are subject to the Section 106 review process must determine effects to significant historic properties. As clarified in Section 101(d)(6)(A-B), historic properties may have religious and/or cultural significance to Indian Tribes. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on all significant historic properties (36 CFR Part 800) as does the National Environmental Policy Act of 1969 (43 U.S.C. § 4321-4347 and 40 CFR § 1501.7(a)). However, if during construction cultural objects or human remains are inadvertently discovered, please stop work immediately and contact the Cultural Preservation Department of the Eastern Shawnee Tribe of Oklahoma. (918)238-5151 x1861 Niyaawe, Kelly Nelson Cell Tower Coordinator Eastern Shawnee Tribe of Oklahoma

ASR Help

[ASR License Glossary](#) - [FAQ](#) - [Online Help](#) - [Documentation](#) - [Technical Support](#)

ASR Online Systems

[TOWAIR](#)- [CORES/ASR Registration](#) - [ASR Online Filing](#) - [Application Search](#) - [Registration Search](#)

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Federal Communications Commission
45 L Street NE
Washington, DC 20554
[More FCC Contact Information...](#)

Phone: 1-877-480-3201
ASL Videophone: 1-844-432-2275
Fax: 1-866-418-0232
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December 3, 2024

Monacan Indian Nation

Chief Kenneth Branham
111 Highview Dr
Madison Heights, VA 24572

RE: Network Towers II LLC
Trileaf Project # 752127 / NC-T23.12 / Dobbins
1721 East Franklin Street, Chapel Hill, Orange County, NC 27514
Latitude: 35° 56' 16.29" N, Longitude: 79° 1' 37.18" W
TCNS # 287334

Dear Chief Branham:

This project was originally submitted in TCNS on 11/1/2024. Trileaf Corporation is in the process of completing a NEPA Review at the above referenced property. Our investigation includes determining if the site is contained in, on, or within the viewshed of a building, site, district, structure or object, significant in American history, architecture, archeology, engineering or culture, that is listed or eligible for listing on the State or National Registers of Historic Places, or located in or on, or within the viewshed of an Indian Religious Site. Trileaf has learned your tribe has an interest in property located within this County.

Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The Site is located within grass-covered and wooded land.

The form 620/621 submission packet is attached for your review. Please let us know if you have any objections or comments on this project as soon as possible. Contact me at (314) 997-6111 or email tribal@trileaf.com if you have any questions. Thank you for your assistance in this regard.

Sincerely,

Michael Romanoski
Tribal Consultation Manager



1515 Des Peres Road, Suite 200, Saint Louis, Missouri 63131 - 314.997.6111 www.trileaf.com

December 3, 2024

Prairie Island Indian Community

Mr. Noah White III
5636 Sturgeon Lake Road
Welch, MN 55089

RE: Network Towers II LLC
Trileaf Project # 752127 / NC-T23.12 / Dobbins
1721 East Franklin Street, Chapel Hill, Orange County, NC 27514
Latitude: 35° 56' 16.29" N, Longitude: 79° 1' 37.18" W
TCNS # 287334

Dear Mr. White III:

This project was originally submitted in TCNS on 11/1/2024. Trileaf Corporation is in the process of completing a NEPA Review at the above referenced property. Our investigation includes determining if the site is contained in, on, or within the viewshed of a building, site, district, structure or object, significant in American history, architecture, archeology, engineering or culture, that is listed or eligible for listing on the State or National Registers of Historic Places, or located in or on, or within the viewshed of an Indian Religious Site. Trileaf has learned your tribe has an interest in property located within this County.

Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The Site is located within grass-covered and wooded land.

The form 620/621 submission packet is attached for your review. Please let us know if you have any objections or comments on this project as soon as possible. Contact me at (314) 997-6111 or email tribal@trileaf.com if you have any questions. Thank you for your assistance in this regard.

Sincerely,

A handwritten signature in dark ink, appearing to read "Michael Romanoski", with a stylized flourish at the end.

Michael Romanoski
Tribal Consultation Manager



1515 Des Peres Road, Suite 200, Saint Louis, Missouri 63131 - 314.997.6111 www.trileaf.com

December 3, 2024

Seminole Nation of Oklahoma

Mr. Ben Yahola
P.O.Box 1498
Wewoka, OK 74884

RE: Network Towers II LLC
Trileaf Project # 752127 / NC-T23.12 / Dobbins
1721 East Franklin Street, Chapel Hill, Orange County, NC 27514
Latitude: 35° 56' 16.29" N, Longitude: 79° 1' 37.18" W
TCNS # 287334

Dear Mr. Yahola:

This project was originally submitted in TCNS on 11/1/2024. Trileaf Corporation is in the process of completing a NEPA Review at the above referenced property. Our investigation includes determining if the site is contained in, on, or within the viewshed of a building, site, district, structure or object, significant in American history, architecture, archeology, engineering or culture, that is listed or eligible for listing on the State or National Registers of Historic Places, or located in or on, or within the viewshed of an Indian Religious Site. Trileaf has learned your tribe has an interest in property located within this County.

Network Towers II LLC proposes to construct a 195-foot-tall monopole telecommunications tower with an overall height of 199 feet, including appurtenances, to be located within a 110-foot by 45-foot lease area. Access and utilities will be provided via an existing asphalt-paved parking lot and drive which extends approximately 360 feet southeast from the lease area before terminating at East Franklin Street. The Site is located within grass-covered and wooded land.

The form 620/621 submission packet is attached for your review. Please let us know if you have any objections or comments on this project as soon as possible. Contact me at (314) 997-6111 or email tribal@trileaf.com if you have any questions. Thank you for your assistance in this regard.

Sincerely,

A handwritten signature in dark ink, appearing to read "Michael Romanoski", with a stylized flourish at the end.

Michael Romanoski
Tribal Consultation Manager

Appendix G

Resumes





Professional Resume

TRENTON CLARK

ASSISTANT PROJECT MANAGER II

Education

B.S. Environmental Science
Minor in Geography
Western Carolina University / Cullowhee, NC

Areas of Expertise

Mr. Clark has experience performing site inspections and conducting due diligence pursuant to EPA All Appropriate Inquiries (AAI) and the American Society of Testing and Materials (ASTM) for commercial real estate and lending projects.

Environmental service expertise includes:

Phase I Environmental Site Assessments	Flood Insurance Rate Maps
Phase II Environmental Site Assessments	Critical Habitat Maps
Field Reconnaissance	Soil Characterization
Historical City Directories	Soil Management Plans
Historical Topographic Maps and Aerial Imagery	Indoor Air Quality Assessments
Land Use History	Migratory Bird Evaluations
National Wetlands Inventory Maps	Local Government Consultation
Section 106 Compliance	Form 620/621 Submittals
NEPA Environmental Assessments	Biological Habitat Surveys

Certifications/Affiliations

OSHA 40-Hour HAZWOPER
40-Hour Basic Wetland Delineation
AHERA Asbestos Inspector
SC-Certified Asbestos Inspector
ANSI/FCC RF Radiation Safety Competent Person
Environmental Professional (EP) as defined by ASTM Standard E1527-21 (AAI)



Professional Resume

BROOKS THACKER

GROUP MANAGER

Education

B.S. in Chemistry
Villanova University / Villanova, PA

MSc in Environmental and Petroleum Geochemistry
Newcastle University / Newcastle-upon-Tyne, United Kingdom

Areas of Expertise

Mr. Thacker has experience with the investigation and management of environmental due diligence pursuant to EPA All Appropriate Inquiries (AAI) and the American Society of Testing and Materials (ASTM), as well as National Environmental Policy Act (NEPA) and environmental permitting projects. Mr. Thacker operates as the primary point-of-contact for clients over a large geography, specializing within the Mid-Atlantic and New England Regions of the United States.

Environmental service expertise includes:

Environmental Site Assessments
Soil and Groundwater Management Plans
Environmental Evaluation Summaries
Indoor Air Quality Assessments
Asbestos Inspections
DAS In-Building Limited Site Inspections
Mold and Lead-Based Paint Surveys
Vendor Management

Small Cell Solutions
NEPA Environmental Assessments
Critical Habitat and Species Review
Migratory Bird Evaluations
Nationwide Programmatic Agreement Review
Soil Characterization
FCC Regulatory Compliance

Certifications/Affiliations

OSHA 40-Hour HAZWOPER
ANSI/FCC RF Radiation Safety Competent Person
Environmental Professional (EP) as defined by ASTM Standard E1527-21 (AAI)

* ANALYSIS REPORT *

***** *
* Federal Airways & Airspace *
* Summary Report: New Construction *
* Monopole *
***** *

SITE ID: Dobbins - NC- TRANSACTION ID: 30290184
T23.12

LOCATION : Chapel Hill, NC RURAL TOWER ID: 15040

LATITUDE: 35° 56' 16.290" LONGITUDE: 79° 1' 37.180"

SITE ELEVATION AMSL 265 ft.
STRUCTURE HEIGHT. 199 ft.
OVERALL HEIGHT AMSL 464 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
FAR 77.9: NNR FAR 77.9 IFR Offset Notice Criteria
FAR 77.9: NNR (DNE EMI Notice Screening Criteria)
FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required
NNR = Notice Not Required
PNR = Possible Notice Required(depends upon actual IFR procedure)
Review Air Navigation Facilities at bottom of this report.

Notice to the FAA is not required
The maximum height to avoid notice is 465 ft. AMSL.

OBSTRUCTION STANDARDS

Civil airport imaginary surfaces

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 - Transitional Surface

Department of Defense (DOD) airport imaginary surfaces

FAR 77.21(a)(1): DNE - Inner Horizontal Surface
FAR 77.21(a)(2): DNE - Conical Surface
FAR 77.21(a)(3): DNE - Outer Horizontal Surface
FAR 77.21(b)(1): DNE - Primary Surface
FAR 77.21(b)(2): DNE - Clear Zone Surface
FAR 77.21(b)(3): DNE - Approach Surface
FAR 77.21(b)(4): DNE - Transitional Surface

Helipoint imaginary surfaces

FAR 77.23(b): DNE - Approach Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: RDU : RALEIGH-DURHAM INTL

Type: A RD: 69811.56 RE: 334

FAR 77.17(a)(1): DNE 499 ft. AGL
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: TDF : RALEIGH RGNL AT PERSON COUNTY

Type: A RD: 124811.7 RE: 591.5

FAR 77.17(a)(1): DNE 499 ft. AGL
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

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)

FAR 77.17(a)(4) MOCA Altitude Enroute Criteria
The Maximum Height Permitted is 900 ft. AMSL

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)

FAR 77.17(a)(3) Departure Surface Criteria (40:1)
DNE Departure Surface

PRIVATE LANDING FACILITIES

FAC IDNT	TYPE	NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAA IFR
83NC	HEL	HOLLY GREEN	116.2	2.11	+164	
No Impact to Private Landing Facility Structure is beyond notice limit by 7821 feet.						
3NC9	AIR	WOMBLE FLD	219.24	4.62	-11	
No Impact to VFR Transitional Surface. Below surface height of 362 ft above ARP.						
NC34	AIR	MILES	296.85	5.46	-116	
No Impact to VFR Transitional Surface. Below surface height of 446 ft above ARP.						

AIR NAVIGATION ELECTRONIC FACILITIES

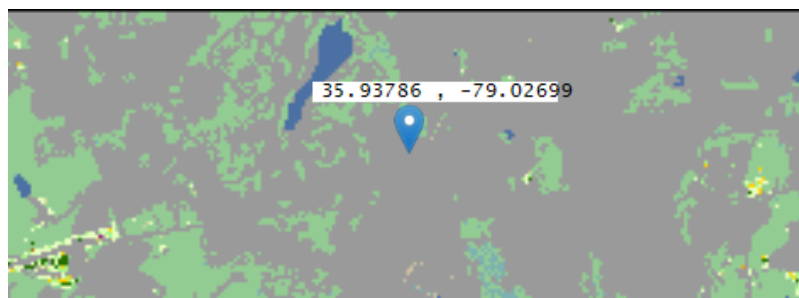
FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRD ANGLE	APCH BEAR
DMP	LOCALIZER	I	111.7	109.93	70090	+105	NC	RWY 23R RALEIGH-D	.09	234
LEI	LOCALIZER	I	108.5	112.2	72660	+83	NC	RWY 23L RALEIGH-D	.07	234
RDU	ATCT	I	A/G	106.31	74234	-197	NC	RALEIGH-DURHAM IN	-.15	
RDU	VORTAC	I	117.2	108.32	75986	+35	NC	RALEIGH/DURHAM	.03	
GKK	LOCALIZER	I	109.1	101.41	76265	+55	NC	RWY 05L RALEIGH-D	.04	54
RDU	LOCALIZER	U	109.5	105.65	76878	+40	NC	RWY 05R RALEIGH-D	.03	54
RDU	RADAR ASR	I	2750.	106.67	77505	-31	NC	RALEIGH-DURHAM IN	-.02	
Alert. Object Does Not Require Notice to the FAA based upon EMI. Maximum Not To Exceed Notice Height is: 928 ft AMSL										
KRDU	RADAR TDWR	Y	5647.	76.43	100327	-50	NC	RALEIGH-DURHAM TD	-.03	
Alert. Object does not require notice to the FAA based upon EMI. Objects not classified as Large are not considered.										
HUR	NDB	I	22	353.91	108155	-150	NC	PERSON	-.08	
TTA	LOCALIZER	I	110.7	189.28	127081	+242	NC	RWY 03 RALEIGH EX	.11	29
TDF	LOCALIZER	I	108.7	6.72	129153	-132	NC	RWY 06 RALEIGH RG	-.06	60
HBJ	LOCALIZER	I	111.3	288.59	135933	-106	NC	RWY 06 BURLINGTON	-.04	60
HB	NDB	I	36	275.24	165755	-220	NC	ALAMM	-.08	
HXO	NDB	I	27	42.25	179033	-29	NC	HUNTSBORO	-.01	
LIB	VORTAC	I	113.0	254.99	179484	-364	NC	LIBERTY	-.12	
KRAX	RADAR WXL	Y		122.05	187637	+6	NC	RALEIGH/DURHAM WX	0.00	
QRL	RADAR ARSR	Y	1266.4	137.72	210345	+113	NC	Raleigh (Benson)	.03	
LHZ	LOCALIZER	I	109.3	80.5	211214	+159	NC	RWY 05 TRIANGLE N	.04	46
HQT	NDB	I	41	150.45	211462	+166	NC	HARNETT	.04	

FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRD ANGLE	APCH BEAR
HNZ	LOCALIZER	I	109.7	43.57	215844	-38	NC	RWY 06 HENDERSON/	-.01	60
HRJ	LOCALIZER	I	108.3	156.02	219682	+265	NC	RWY 05 HARNETT RG	.07	48
JNX	LOCALIZER	I	111.1	126.57	236837	+300	NC	RWY 03 JOHNSTON R	.07	32

SECTION 2110 FAA EXTENSION, SAFETY AND SECURITY ACT - RURAL AREA ANALYSIS

Alert! The object is not within a rural area and is not on agricultural land. (View agricultural land-use image). Please use the Rural Tower Analysis (RTA) certification tool to confirm the object is compliant with the Section 2110 FAA EXTENSION, SAFETY AND SECURITY ACT, is eligible for an exemption, or if additional actions are required.

Agriculture Area



Map Legend

 Non-agricultural land at this location

CFR Title 47, §1.30000-§1.30004

Nearest AM Station: WCHL @ 100 meters.

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05-23-2025

8:33:00

* OBSTRUCTION CRITERIA *

SITE ID: Dobbins - NC-
T23.12

TRANSACTION ID:
30290184

LATITUDE: 35° 56' 16.290" LONGITUDE: 79° 1' 37.180"

SITE ELEVATION AMSL 265 ft.
STRUCTURE HEIGHT. 199 ft.
OVERALL HEIGHT AMSL 464 ft.

77.17(a)(1) A height more than 499 ft. Above Ground Level (AGL).

***** DOES NOT EXCEED *****

THE MAXIMUM ALLOWABLE HEIGHT IS:.....764 ft. AMSL

THE GROUND ELEVATION AT THE SITE IS:...265 ft. AMSL

THE OVERALL CASE ELEVATION IS:.....464 ft. AMSL

THE CASE IS BELOW THE ALLOWABLE BY:....300 ft. AMSL

BEGIN AIRPORT ANALYSIS FOR RDU

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....RDU

THE AIRPORT ELEVATION IS:.....435.2 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..12.2158 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....287.207 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> RDU <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 05L/23R
EXISTING RUNWAY 05L/23R

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 05L/23R

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS:.....63407.56 ft.

THE RUNWAY THRESHOLD ELEVATION IS:.....366.9 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...30834.79 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS:.....5125.218 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE NOT WITHIN APPROACH SURFACE AREA, OUT BY.....53282.34 ft.

RUNWAY CENTERLINE OFFSET IS.....63407.56 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....30834.79 ft.

THE SLOPE OF RUNWAY 05L IS: 50 TO 1.

The FAA has defined this runway as a non-utility runway. It has a precision approach. The obstacle surface extends 50,000 feet with a 50:1 Slope for the first 10,000 feet and a 40:1 Slope for 40,000 feet. The obstacle approach surface is centered symmetrically along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Precision instrument procedures will have the greatest impact between the final approach fix (FAF) and the runway end. The FAF is located approximately 5 NM from the runway end. This type of approach usually has a non-precision and a circling approach also. A circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

RUNWAY 05R/23L
EXISTING RUNWAY 05R/23L

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 05R/23L

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....66906.4 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....397.4 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...29299.19 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....4894.879 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE NOT WITHIN APPROACH SURFACE AREA, OUT BY.....57011.521 ft.

RUNWAY CENTERLINE OFFSET IS.....66906.4 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....29299.19 ft.

THE SLOPE OF RUNWAY 05R IS: 50 TO 1.

The FAA has defined this runway as a non-utility runway. It has a precision approach. The obstacle surface extends 50,000 feet with a 50:1 Slope for the first 10,000 feet and a 40:1 Slope for 40,000 feet. The obstacle approach surface is centered symmetrically along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Precision instrument procedures will have the greatest impact between the final approach fix (FAF) and the runway end. The FAF is located approximately 5 NM from the runway end. This type of approach usually has a non-precision and a circling approach also. A circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

RUNWAY 14/32
EXISTING RUNWAY 14/32

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 14/32

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....35095.67 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....432 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...66996.37 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....6949.637 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 16996.37 ft.

RUNWAY CENTERLINE OFFSET IS.....35095.67 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....66996.37 ft.

THE SLOPE OF RUNWAY 14 IS: 20 TO 1.

The FAA has defined this runway as a non-utility runway. It has a visual approach. The obstacle surface extends 5000 feet (20:1 Slope) symmetrically centered along the runway centerline extended. This airport may have a circling approach. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or this runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. A circling approach to the airport or any runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

RUNWAY 05P/23P
PROPOSED RUNWAY 05P/23P

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 05P/23P

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....62357.67 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....334 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...31330.32 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....5199.548 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE NOT WITHIN APPROACH SURFACE AREA, OUT BY.....52158.12 ft.

RUNWAY CENTERLINE OFFSET IS.....62357.67 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....31330.32 ft.

THE SLOPE OF RUNWAY 05P IS: 50 TO 1.

The FAA has defined this runway as a non-utility runway. It has a precision approach. The obstacle surface extends 50,000 feet with

a 50:1 Slope for the first 10,000 feet and a 40:1 Slope for 40,000 feet. The obstacle approach surface is centered symmetrically along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Precision instrument procedures will have the greatest impact between the final approach fix (FAF) and the runway end. The FAF is located approximately 5 NM from the runway end. This type of approach usually has a non-precision and a circling approach also. A circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

RUNWAY 14/32
PROPOSED RUNWAY 14/32

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 14/32

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....35095.67 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....432 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...66996.37 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....10299.46 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 16996.37 ft.

RUNWAY CENTERLINE OFFSET IS.....35095.67 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....66996.37 ft.

THE SLOPE OF RUNWAY 14 IS: 34 TO 1.

The FAA has defined this runway as a non-utility runway. It has a non-precision approach. The obstacle surface extends 10,000 feet (34:1 Slope) symmetrically centered along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Non-precision instrument procedures can extend 10 NM from the runway and a circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR 4W4

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....4W4

THE AIRPORT ELEVATION IS:.....653.0 ft. AMSL
THE DISTANCE FROM THE CASE TO ARP IS:..20.8515 NAUTICAL MILES
THE BEARING AIRPORT TO CASE IS:.....173.066 DEGREES
THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> 4W4 <<.

***** DOES NOT EXCEED *****
NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****
NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 03/21
EXISTING RUNWAY 03/21

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****
NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 03/21

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS:.....42211.27 ft.
THE RUNWAY THRESHOLD ELEVATION IS:.....648.3 ft.
THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...118910.9 ft.
THE CRITICAL WIDTH OF HALF THE APPROACH IS:.....12016.09 ft.
***** DOES NOT EXCEED *****
BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 68910.9 ft.

RUNWAY CENTERLINE OFFSET IS:.....42211.27 ft.
DISTANCE FROM THE THRESHOLD TO OFFSET IS:.....118910.9 ft.
THE SLOPE OF RUNWAY 03 IS: 20 TO 1.

The FAA has defined this runway as a utility runway. It has a
visual approach. The obstacle surface extends 5000 feet (20:1 Slope)
symmetrically centered along the runway centerline extended. This
airport may have a circling approach. Please review the US Terminal
Procedures volume associated with this airport. If a procedure for
this airport and/or this runway exist, use Terps® Professional
software to determine the height limits (if any) the procedure will
have on the proposed structure. A circling approach to the airport
or any runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****
NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR TDF

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....TDF

THE AIRPORT ELEVATION IS:.....608.9 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..20.8829 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....185.635 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> TDF <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 06/24
EXISTING RUNWAY 06/24

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 06/24

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....91939.23 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....591.5 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...84178.62 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....13126.79 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 34178.62 ft.

RUNWAY CENTERLINE OFFSET IS.....91939.23 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....84178.62 ft.

THE SLOPE OF RUNWAY 06 IS: 50 TO 1.

The FAA has defined this runway as a non-utility runway. It has a precision approach. The obstacle surface extends 50,000 feet with a 50:1 Slope for the first 10,000 feet and a 40:1 Slope for 40,000 feet. The obstacle approach surface is centered symmetrically along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Precision instrument procedures will have the greatest impact between the final approach fix (FAF) and the runway end. The FAF is located approximately 5 NM from the runway end. This type of approach usually has a non-precision and a circling approach also. A circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR TTA

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....TTA

THE AIRPORT ELEVATION IS:.....246.6 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..21.5969 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....9.662 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> TTA <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 03/21
EXISTING RUNWAY 03/21

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 03/21

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS:.....25434.96 ft.

THE RUNWAY THRESHOLD ELEVATION IS:.....229.6 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...125317.7 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS:.....16164.71 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 75317.7 ft.

RUNWAY CENTERLINE OFFSET IS:.....25434.96 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS:.....125317.7 ft.

THE SLOPE OF RUNWAY 03 IS: 34 TO 1.

The FAA has defined this runway as a non-utility runway. It has a non-precision approach. The obstacle surface extends 10,000 feet (34:1 Slope) symmetrically centered along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Non-precision instrument procedures can extend 10 NM from the runway and a circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

RUNWAY 03/21
PROPOSED RUNWAY 03/21

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 03/21

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....25434.96 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....230 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...125317.7 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....19047.65 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 75317.7 ft.

RUNWAY CENTERLINE OFFSET IS.....25434.96 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....125317.7 ft.

THE SLOPE OF RUNWAY 03 IS: 34 TO 1.

The FAA has defined this runway as a non-utility runway. It has a non-precision approach. The obstacle surface extends 10,000 feet (34:1 Slope) symmetrically centered along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Non-precision instrument procedures can extend 10 NM from the runway and a circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR BUY

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....BUY

THE AIRPORT ELEVATION IS:.....616.1 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..22.7289 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....107.28 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above airport elevation within a radius of >> BUY <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft. from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 06/24
EXISTING RUNWAY 06/24

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 06/24

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....113017.3 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....584.2 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...76844.57 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....10105.57 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 26844.57 ft.

RUNWAY CENTERLINE OFFSET IS.....113017.3 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....76844.57 ft.

THE SLOPE OF RUNWAY 06 IS: 34 TO 1.

The FAA has defined this runway as a non-utility runway. It has a non-precision approach. The obstacle surface extends 10,000 feet (34:1 Slope) symmetrically centered along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Non-precision instrument procedures can extend 10 NM from the runway and a circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

RUNWAY 10/28
EXISTING RUNWAY 10/28

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 10/28

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....43712.49 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....615 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...129775.5 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....13102.55 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 79775.5 ft.

RUNWAY CENTERLINE OFFSET IS.....43712.49 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....129775.5 ft.

THE SLOPE OF RUNWAY 10 IS: 20 TO 1.

The FAA has defined this runway as a utility runway. It has a visual approach. The obstacle surface extends 5000 feet (20:1 Slope) symmetrically centered along the runway centerline extended. This airport may have a circling approach. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or this runway exist, use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. A circling approach to the airport or any runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR N61

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....N61

THE AIRPORT ELEVATION IS:.....750.0 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..24.6955 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....80.926 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> N61 <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 03/21
EXISTING RUNWAY 03/21

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 03/21

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....122572.1 ft.

THE RUNWAY THRESHOLD ELEVATION IS:.....755 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...83332.19 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....8458.219 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 33332.19 ft.

RUNWAY CENTERLINE OFFSET IS.....122572.1 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....83332.19 ft.

THE SLOPE OF RUNWAY 03 IS: 20 TO 1.

The FAA has defined this runway as a utility runway. It has a visual approach. The obstacle surface extends 5000 feet (20:1 Slope) symmetrically centered along the runway centerline extended. This airport may have a circling approach. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or this runway exist, use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. A circling approach to the airport or any runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR 5W5

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....5W5

THE AIRPORT ELEVATION IS:.....244.0 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..24.8276 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....320.12 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> 5W5 <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 16/34
EXISTING RUNWAY 16/34

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 16/34

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....35686.04 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....243 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...144721.9 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....14597.19 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 94721.9 ft.

RUNWAY CENTERLINE OFFSET IS.....35686.04 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....144721.9 ft.

THE SLOPE OF RUNWAY 16 IS: 20 TO 1.

The FAA has defined this runway as a utility runway. It has a visual approach. The obstacle surface extends 5000 feet (20:1 Slope) symmetrically centered along the runway centerline extended. This airport may have a circling approach. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or this runway exist, use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. A circling approach to the airport or any runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR SCR

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....SCR

THE AIRPORT ELEVATION IS:.....615.6 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..27.1804 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....58.857 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> SCR <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 04/22
EXISTING RUNWAY 04/22

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 04/22

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....76423.81 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....615.1 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...143271.3 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....21740.7 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 93271.3 ft.

RUNWAY CENTERLINE OFFSET IS.....76423.81 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....143271.3 ft.

THE SLOPE OF RUNWAY 04 IS: 34 TO 1.

The FAA has defined this runway as a non-utility runway. It has a non-precision approach. The obstacle surface extends 10,000 feet (34:1 Slope) symmetrically centered along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Non-precision instrument procedures can extend 10 NM from the runway and a circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR N88

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....N88

THE AIRPORT ELEVATION IS:.....724.0 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..29.2685 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....88.511 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> N88 <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 05/23
EXISTING RUNWAY 05/23

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 05/23

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....106735.7 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....715 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...140978.7 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....14222.87 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 90978.7 ft.

RUNWAY CENTERLINE OFFSET IS.....106735.7 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....140978.7 ft.

THE SLOPE OF RUNWAY 05 IS: 20 TO 1.

The FAA has defined this runway as a utility runway. It has a visual approach. The obstacle surface extends 5000 feet (20:1 Slope) symmetrically centered along the runway centerline extended. This airport may have a circling approach. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or this runway exist, use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. A circling approach to the airport or any runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR W17

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....W17

THE AIRPORT ELEVATION IS:.....313.0 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..29.9735 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....286.432 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> W17 <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 01/19
EXISTING RUNWAY 01/19
77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 01/19

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....176319.6 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....308.4 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...42824.12 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....4407.412 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE NOT WITHIN APPROACH SURFACE AREA, OUT BY.....166912.188 ft.

RUNWAY CENTERLINE OFFSET IS.....176319.6 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....42824.12 ft.

THE SLOPE OF RUNWAY 01 IS: 20 TO 1.

The FAA has defined this runway as a utility runway. It has a visual approach. The obstacle surface extends 5000 feet (20:1 Slope) symmetrically centered along the runway centerline extended. This airport may have a circling approach. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or this runway exist, use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. A circling approach to the airport or any runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR 3A4

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....3A4

THE AIRPORT ELEVATION IS:.....739.0 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..32.0876 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....90.63 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above airport elevation within a radius of >> 3A4 <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.

from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 17/35
EXISTING RUNWAY 17/35

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 17/35

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....187382.8 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....739 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...53362.88 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....5461.288 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 3362.88 ft.

RUNWAY CENTERLINE OFFSET IS.....187382.8 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....53362.88 ft.

THE SLOPE OF RUNWAY 17 IS: 20 TO 1.

The FAA has defined this runway as a utility runway. It has a visual approach. The obstacle surface extends 5000 feet (20:1 Slope) symmetrically centered along the runway centerline extended. This airport may have a circling approach. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or this runway exist, use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. A circling approach to the airport or any runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR 6W4

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....6W4

THE AIRPORT ELEVATION IS:.....648.0 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..32.8862 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....147.4 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> 6W4 <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft. from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 04/22
EXISTING RUNWAY 04/22

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 04/22

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....181138.2 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....620 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...83825.69 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....8507.569 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 33825.69 ft.

RUNWAY CENTERLINE OFFSET IS.....181138.2 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....83825.69 ft.

THE SLOPE OF RUNWAY 04 IS: 20 TO 1.

The FAA has defined this runway as a utility runway. It has a visual approach. The obstacle surface extends 5000 feet (20:1 Slope) symmetrically centered along the runway centerline extended. This airport may have a circling approach. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or this runway exist, use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. A circling approach to the airport or any runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR LHZ

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....LHZ

THE AIRPORT ELEVATION IS:.....368.0 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..34.3125 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....261.212 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> LHZ <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 05/23
EXISTING RUNWAY 05/23

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 05/23

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....145189.7 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....366.3 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...147706.7 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....22656.01 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 97706.7 ft.

RUNWAY CENTERLINE OFFSET IS.....145189.7 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....147706.7 ft.

THE SLOPE OF RUNWAY 05 IS: 50 TO 1.

The FAA has defined this runway as a non-utility runway. It has a precision approach. The obstacle surface extends 50,000 feet with a 50:1 Slope for the first 10,000 feet and a 40:1 Slope for 40,000 feet. The obstacle approach surface is centered symmetrically along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Precision instrument procedures will have the greatest impact between the final approach fix (FAF) and the runway end. The FAF is located approximately 5 NM from the runway end. This type of approach usually has a non-precision and a circling approach also. A circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR HNZ

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.
THE REFERENCE AIRPORT IDENT IS:.....HNZ
THE AIRPORT ELEVATION IS:.....526.3 ft. AMSL
THE DISTANCE FROM THE CASE TO ARP IS:..35.0278 NAUTICAL MILES
THE BEARING AIRPORT TO CASE IS:.....223.472 DEGREES
THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> HNZ <<.

***** DOES NOT EXCEED *****
NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****
NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 06/24
EXISTING RUNWAY 06/24

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****
NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 06/24

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....27525.66 ft.
THE RUNWAY THRESHOLD ELEVATION IS.....524.5 ft.
THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...208442.7 ft.
THE CRITICAL WIDTH OF HALF THE APPROACH IS.....31516.41 ft.
***** DOES NOT EXCEED *****

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 158442.7 ft.

RUNWAY CENTERLINE OFFSET IS.....27525.66 ft.
DISTANCE FROM THE THRESHOLD TO OFFSET IS.....208442.7 ft.
THE SLOPE OF RUNWAY 06 IS: 34 TO 1.

The FAA has defined this runway as a non-utility runway. It has a non-precision approach. The obstacle surface extends 10,000 feet (34:1 Slope) symmetrically centered along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Non-precision instrument procedures can extend 10 NM from the runway and a circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****
NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR HRJ

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....HRJ

THE AIRPORT ELEVATION IS:.....201.7 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..36.3801 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....336.747 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above airport elevation within a radius of >> HRJ <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft. from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 05/23

EXISTING RUNWAY 05/23

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 05/23

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS:.....197332.2 ft.

THE RUNWAY THRESHOLD ELEVATION IS:.....201.6 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...96400.36 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS:.....14710.05 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 46400.36 ft.

RUNWAY CENTERLINE OFFSET IS:.....197332.2 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS:.....96400.36 ft.

THE SLOPE OF RUNWAY 05 IS: 20 TO 1.

The FAA has defined this runway as a utility runway. It has a non-precision approach. The obstacle surface extends 5000 feet (20:1 Slope) symmetrically centered along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Non-precision instrument procedures can extend 10 NM from the runway and a circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

RUNWAY 05/23
PROPOSED RUNWAY 05/23
77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 05/23

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....197342.3 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....199 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...97079.74 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....14811.96 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 47079.74 ft.

RUNWAY CENTERLINE OFFSET IS.....197342.3 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....97079.74 ft.

THE SLOPE OF RUNWAY 05 IS: 34 TO 1.

The FAA has defined this runway as a non-utility runway. It has a non-precision approach. The obstacle surface extends 10,000 feet (34:1 Slope) symmetrically centered along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Non-precision instrument procedures can extend 10 NM from the runway and a circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

BEGIN AIRPORT ANALYSIS FOR JNX

77.17(a)(2) A height AGL or airport elevation, whichever is higher.

***** DOES NOT EXCEED *****

BECAUSE: Proposed height does not exceed 200 feet AGL.

THE REFERENCE AIRPORT IDENT IS:.....JNX

THE AIRPORT ELEVATION IS:.....164.0 ft. AMSL

THE DISTANCE FROM THE CASE TO ARP IS:..39.1532 NAUTICAL MILES

THE BEARING AIRPORT TO CASE IS:.....307.594 DEGREES

THE HEIGHT OF THE STRUCTURE IS:.....199 ft.

77.19(a) A height exceeding a horizontal surface 150 ft. above
airport elevation within a radius of >> JNX <<.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED HORIZONTAL SURFACE AREA

77.19(b) A height exceeding a conical surface (a slope outward 4000 ft.
from the horizontal surface at 20/1 ratio).

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED CONICAL SURFACE AREA

* BEGIN RUNWAY ANALYSIS *

RUNWAY 03/21
EXISTING RUNWAY 03/21

77.19(c) A height exceeding runway primary surface.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY PRIMARY SURFACE

77.19(d) A height exceeding an approach surface of RUNWAY 03/21

THE ABEAM DISTANCE TO CENTERLINE FROM CASE IS.....230706 ft.

THE RUNWAY THRESHOLD ELEVATION IS.....164 ft.

THE DISTANCE FROM THRESHOLD + 200' TO THE CASE IS...53494.36 ft.

THE CRITICAL WIDTH OF HALF THE APPROACH IS.....7186.795 ft.

***** DOES NOT EXCEED *****

BEYOND DEFINED APPROACH & TRANSITIONAL AREAS.

CASE MEETS ANGULAR CRITERIA BUT IS LOCATED
GREATER THAN 50,000 ft. FROM THE START OF
ANY APPROACH TYPE, OUT BY 3494.36 ft.

RUNWAY CENTERLINE OFFSET IS.....230706 ft.

DISTANCE FROM THE THRESHOLD TO OFFSET IS.....53494.36 ft.

THE SLOPE OF RUNWAY 03 IS: 34 TO 1.

The FAA has defined this runway as a non-utility runway. It has a non-precision approach. The obstacle surface extends 10,000 feet (34:1 Slope) symmetrically centered along the runway centerline extended. Please review the US Terminal Procedures volume associated with this airport. If a procedure for this airport and/or runway exist use Terps® Professional software to determine the height limits (if any) the procedure will have on the proposed structure. Non-precision instrument procedures can extend 10 NM from the runway and a circling approach to the airport or runway can extend out up to 4.5 NM from every runway end.

77.19(e) A height exceeding a transitional surface runway.

***** DOES NOT EXCEED *****

NOT WITHIN SPECIFIED RUNWAY TRANSITIONAL SURFACE

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05-23-2025

8:33:00

 * VFR - TRAFFIC PATTERN AIRSPACE ANALYSIS *

SITE ID: Dobbins - NC-
 T23.12

TRANSACTION ID:
 30290184

LATITUDE: 35° 56' 16.290" LONGITUDE: 79° 1' 37.180"

SITE ELEVATION AMSL 265 ft.
 STRUCTURE HEIGHT. 199 ft.
 OVERALL HEIGHT AMSL 464 ft.

Traffic Pattern Airspace, a structure that exceed any of the following maximum allowable heights is considered to constitute a hazard to air navigation :

1. The height of the transition surface (other than abeam the runway), the approach slope, the horizontal surface, and the conical surface(as applied to visual approach runways).
2. Beyond the lateral limits of the conical surface and in the climb/descent area - 350' above airport elevation or the height of part 77.17(a)(2), whichever is greater not to exceed 499' above ground level (AGL). The climb / descent area begins abeam the runway threshold being used and is the area where the pilot is either descending to land on the runway or climbing to pattern altitude after departure.
3. Beyond the lateral limits of the conical surface and NOT in the climb/descent area of any runway. - Above Airport Elevation not to exceed 499' AGL.

*****Landing Facility Identifier*****

RDU

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL

FAR 77.17(a)(2): DNE - Greater than 5.99 NM.

DNE VFR Horizontal Surface.

DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 05L/23R DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

Existing

Runway 05R/23L DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

Proposed

Runway 14/32 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

Proposed

Runway 05P/23P DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

Runway 14/32 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

TDF

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL

FAR 77.17(a)(2): DNE - Greater than 5.99 NM.

DNE VFR Horizontal Surface.

DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 06/24 DNE Runway VFR Approach Surface.

DNE Runway VFR Transitional Surface.
DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

4W4

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): Does Not Apply.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 03/21 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

TTA

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): DNE - Greater than 5.99 NM.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 03/21 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

Proposed

Runway 03/21 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

BUY

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): DNE - Greater than 5.99 NM.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 06/24 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

Existing

Runway 10/28 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

N61

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): Does Not Apply.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 03/21 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

5W5

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): Does Not Apply.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 16/34 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

SCR

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): DNE - Greater than 5.99 NM.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 04/22 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

N88

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): Does Not Apply.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 05/23 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

W17

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): Does Not Apply.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 01/19 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

3A4

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): Does Not Apply.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 17/35 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

6W4

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): Does Not Apply.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 04/22 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

LHZ

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): DNE - Greater than 5.99 NM.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 05/23 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

HNZ

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): DNE - Greater than 5.99 NM.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing

Runway 06/24 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

HRJ

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): DNE - Greater than 5.99 NM.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing
Runway 05/23 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

Proposed
Runway 05/23 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

*****Landing Facility Identifier*****

JNX

FAR 77.17(a)(1): DNE - Maximum Height Less Than 499 feet AGL
FAR 77.17(a)(2): DNE - Greater than 5.99 NM.
DNE VFR Horizontal Surface.
DNE VFR Conical Surface.

DNE VFR - Traffic Pattern Airspace Climb/Descent Area.

DNE VFR - Traffic Pattern Airspace Cross Traffic Area.

Existing
Runway 03/21 DNE Runway VFR Approach Surface.
 DNE Runway VFR Transitional Surface.
 DNE Runway VFR Primary Surface.

* ***** *
* The above analysis was conducted using default parameters - Category C *
* aircraft and a maximum of 4 like category aircraft in the VFR -Traffic *
* Pattern at one time. *
* *
* To view a graphical image of VFR - Traffic Pattern Airspace for these *
* airports use Terps® Professional Software. Open the airport and Airspace® *
* study. From the Map Menu select 'VFR - Traffic Pattern Airspace'. The *
* proposed structure, airport, and the traffic pattern will now be shown *
* together. Use this information to locate an alternate site if necessary. *
* ***** *

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*****
*                               AIRWAY ANALYSIS                               *
*   FAR 77.17(a)(4) (EN ROUTE CRITERIA)                                   *
*   MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)                             *
*   MINIMUM ENROUTE ALTITUDE (MEA)                                           *
*****

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SITE ID: Dobbins - NC-
T23.12

TRANSACTION ID:
30290184

LATITUDE: 35° 56' 16.290" LONGITUDE: 79° 1' 37.180"

SITE ELEVATION AMSL 265 ft.
STRUCTURE HEIGHT. 199 ft.
OVERALL HEIGHT AMSL 464 ft.

AIRWAY	SEQUENCE	LATITUDE	LONGITUDE	MEA	LENGTH (NM)
Q99	120	35-44-44.41N	079-11-07.71W	18000	51.5
Q99	130	36-26-44.93N	078-34-16.17W	18000	

Minimum Obstacle Clearance Altitude (MOCA) is: 18000 AMSL.

Proposed structure is between the above points along Airway Q99. The Abeam distance from the course centerline is 0.30 NM. The proposed structure is within the width of the primary area of this airway. The width of the primary area of this airway is 8 NM. The minimum en route altitude (MEA) for this airway segment is 17000 feet AMSL. Any Height above 17000 feet AMSL will not be approved. Your proposed structure must remain below this value.

AIRWAY	SEQUENCE	LATITUDE	LONGITUDE	MEA	LENGTH (NM)
V310	180	35-53-28.15N	079-02-56.34W	2400	13
V310	190	35-52-21.076N	078-47-00.032W	2600	

Minimum Obstacle Clearance Altitude (MOCA) is: 1900 AMSL.

Proposed structure is between the above points along Airway V310. The Abeam distance from the course centerline is 2.90 NM. The proposed structure is within the width of the primary area of this airway. The width of the primary area of this airway is 8 NM. The minimum en route altitude (MEA) for this airway segment is 900 feet AMSL. Any Height above 900 feet AMSL will not be approved. Your proposed structure must remain below this value.

AIRWAY	SEQUENCE	LATITUDE	LONGITUDE	MEA	LENGTH (NM)
V45	100	35-52-21.076N	078-47-00.032W	2400	13
V45	110	35-53-28.15N	079-02-56.34W	3100	

Minimum Obstacle Clearance Altitude (MOCA) is: 1900 AMSL.

Proposed structure is between the above points along Airway V45. The Abeam distance from the course centerline is 2.90 NM. The proposed structure is within the width of the primary area of this airway. The width of the primary area of this airway is 8 NM. The minimum en route altitude (MEA) for this airway segment is 900 feet AMSL. Any Height above 900 feet AMSL will not be approved. Your proposed structure must remain below this value.

LOW ALTITUDE AIRWAY

AIRWAY	SEQUENCE	LATITUDE	LONGITUDE	MEA	LENGTH (NM)
V194	220	35-50-30.3N	079-12-44.13W	3100	21
V194	230	35-52-21.076N	078-47-00.032W	2600	

Minimum Obstacle Clearance Altitude (MOCA) is: 3100 AMSL.

Proposed structure is between the above points along Airway V194. The Abeam distance from the course centerline is 4.90 NM. The proposed structure is within the width of the secondary area of this airway. The width of the primary area is 8 NM and the width of the secondary is 2 NM.

The maximum allowable height permitted by the secondary area MOCA of this airway

at this location is 2833 feet AMSL.

LOW ALTITUDE AIRWAY

AIRWAY	SEQUENCE	LATITUDE	LONGITUDE	MEA	LENGTH (NM)
V409	50	35-50-30.3N	079-12-44.13W	3100	21
V409	60	35-52-21.076N	078-47-00.032W	3100	

Minimum Obstacle Clearance Altitude (MOCA) is: 3100 AMSL.

Proposed structure is between the above points along Airway V409. The Abeam distance from the course centerline is 4.90 NM. The proposed structure is within the width of the secondary area of this airway. The width of the primary area is 8 NM and the width of the secondary is 2 NM.

The maximum allowable height permitted by the secondary area MOCA of this airway at this location is 2833 feet AMSL.

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 * IFR RUNWAY DEPARTURE SURFACE ANALYSIS *

SITE ID: Dobbins - NC-
 T23.12

TRANSACTION ID:
 30290184

LATITUDE: 35° 56' 16.290" LONGITUDE: 79° 1' 37.180"

SITE ELEVATION AMSL 265 ft.
 STRUCTURE HEIGHT. 199 ft.
 OVERALL HEIGHT AMSL 464 ft.

An airport with at least one instrument approach procedure (IAP) will require all airport runways to be analyzed using 40:1 criteria for Departure. FAA application of the 40:1 screening criteria extends 22.09 nautical miles and 180° semi-circle area around the Runway centerline extended. Penetration of the 40:1 surface will result initially in a determination of presumed hazard (NPH). An extended study is normally required to remove the NPH.

A specified climb gradient (CG) greater than the standard (200 ft / nm) is sometimes necessary to allow acceptable obstacle clearance. Should the proposed location exceed the maximum height you may need to determine if there is a published climb gradient and conduct additional calculations to determine if the climb gradient will provide proper clearance for the proposed structure. Should you require additional assistance please contact Federal Airways & Airspace or another aeronautical consult to perform these calculations.

Ident	Dep Rwy	Elev	Distance	40:1	Max Hgt	CG	Rwy Status
RDU	23R	366.9	70531	DNE	Below	DNE	Existing Rwy
RDU	23L	397.4	73058	DNE	Below	DNE	Existing Rwy
RDU	32	432	75887	DNE	Below	DNE	Existing Rwy
RDU	23P	334	69812	DNE	Below	DNE	Proposed Rwy
RDU	32	432	75887	DNE	Below	DNE	Proposed Rwy
4W4	21	648.3	126347	DNE	Below	DNE	Existing Rwy
TDF	24	591.5	124812	DNE	Below	DNE	Existing Rwy
TTA	03	229.6	128051	DNE	Below	DNE	Existing Rwy
TTA	03	230	128051	DNE	Below	DNE	Proposed Rwy
BUY	06	584.2	137068	DNE	Beyond	DNE	Existing Rwy
BUY	10	615	137318	DNE	Beyond	DNE	Existing Rwy
N61	03	755	148679	DNE	Beyond	DNE	Existing Rwy
5W5	34	243	149366	DNE	Beyond	DNE	Existing Rwy
SCR	04	615.1	162882	DNE	Beyond	DNE	Existing Rwy
N88	05	715	177507	DNE	Beyond	DNE	Existing Rwy
W17	01	308.4	181745	DNE	Beyond	DNE	Existing Rwy
3A4	17	739	194541	DNE	Beyond	DNE	Existing Rwy
6W4	22	620	199389	DNE	Beyond	DNE	Existing Rwy
LHZ	23	366.3	206524	DNE	Beyond	DNE	Existing Rwy
HNZ	24	524.5	210588	DNE	Beyond	DNE	Existing Rwy
HRJ	05	201.6	219973	DNE	Beyond	DNE	Existing Rwy
HRJ	05	199	220282	DNE	Beyond	DNE	Proposed Rwy
JNX	03	164	237213	DNE	Beyond	DNE	Existing Rwy

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* NAVAIDS IN PROXIMITY OF CASE *

SITE ID: Dobbins - NC-
T23.12

TRANSACTION ID:
30290184

LATITUDE: 35° 56' 16.290" LONGITUDE: 79° 1' 37.180"

SITE ELEVATION AMSL 265 ft.
STRUCTURE HEIGHT. 199 ft.
OVERALL HEIGHT AMSL 464 ft.

FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRD ANGLE	APCH BEAR
DMP	LOCALIZER	I	111.7	109.93	70090	+105	NC	RWY 23R RALEIGH-D	.09	234
GKK	GLIDE SLOPE	I	331.4	108.3	70627	+98	NC	RWY 05L RDU	.08	54
LEI	LOCALIZER	I	108.5	112.2	72660	+83	NC	RWY 23L RALEIGH-D	.07	234
RDU	GLIDE SLOPE	I	332.6	110.86	73845	+64	NC	RWY 05R RDU	.05	54
RDU	ATCT	I	A/G	106.31	74234	-197	NC	RALEIGH- DURHAM IN	-.15	
RDU	UN	I	122.95	107.24	74247	+29	NC	RALEIGH- DURHAM IN	.02	
DMP	GLIDE SLOPE	I	333.5	102.93	74492	+68	NC	RWY 23R RDU	.05	234
RDU	VORTAC	I	117.2	108.32	75986	+35	NC	RALEIGH/ DURHAM	.03	
LEI	GLIDE SLOPE	I	329.9	107.08	76133	+34	NC	RWY 23L RDU	.03	234
GKK	LOCALIZER	I	109.1	101.41	76265	+55	NC	RWY 05L RALEIGH-D	.04	54
RDU	LOCALIZER	U	109.5	105.65	76878	+40	NC	RWY 05R RALEIGH-D	.03	54
RDU	RADAR ASR	I	2750.	106.67	77505	-31	NC	RALEIGH- DURHAM IN	-.02	
KRDU	RADAR TDWR	Y	5647.	76.43	100327	-50	NC	RALEIGH- DURHAM TD	-.03	
HUR	NDB	I	22	353.91	108155	-150	NC	PERSON	-.08	
TDF	GLIDE SLOPE	I	330.5	5.09	125311	-121	NC	RWY 06 TDF	-.06	60
TDF	UN	I	122.70	5.65	126848	-145	NC	RALEIGH RGNL AT P	-.07	
TTA	LOCALIZER	I	110.7	189.28	127081	+242	NC	RWY 03 RALEIGH EX	.11	29
TDF	LOCALIZER	I	108.7	6.72	129153	-132	NC	RWY 06 RALEIGH RG	-.06	60
TTA	UN	I	123.07	189.65	131252	+217	NC	RALEIGH EXEC JETP	.09	
TTA	GLIDE SLOPE	I	330.0	189.76	133582	+224	NC	RWY 03 TTA	.10	29
HBJ	LOCALIZER	I	111.3	288.59	135933	-106	NC	RWY 06 BURLINGTON	-.04	60
BUY	UN	I	122.97	287.28	138087	-152	NC	BURLINGTON/ ALAMAN	-.06	
HBJ	GLIDE SLOPE	I	332.1	286.48	139206	-147	NC	RWY 06 BUY	-.06	60
5W5	UN	I	122.70	140.11	150824	+220	NC	TRIPLE W	.08	
QGY	RC	Y	7385.	75.93	160063	-278	NC	YOUNGSVILLE	-.1	
SCR	UN	I	122.70	238.86	165093	-151	NC	SILER CITY MUNI	-.05	
78NC	UN	I	122.80	150.33	165410	+115	NC	FUQUAY/ ANGIER FLD	.04	
HB	NDB	I	36	275.24	165755	-220	NC	ALAMM	-.08	

FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRD ANGLE	APCH BEAR
59NC	UN	I	122.80	290.54	166677	-232	NC	MCLEAN BROTHERS	-.08	
QGW	RC	Y	7665.	120.42	171179	+58	NC	AUBURN	.02	
NC74	UN	I	122.80	266.72	175146	-259	NC	CAUSEY	-.08	
HXO	NDB	I	27	42.25	179033	-29	NC	HUNTSBORO	-.01	
LIB	VORTAC	I	113.0	254.99	179484	-364	NC	LIBERTY	-.12	
W17	UN	I	122.80	106.44	182112	+151	NC	RALEIGH EAST	.05	
KRAX	RADAR WXL	Y		122.05	187637	+6	NC	RALEIGH/ DURHAM WX	0.00	
3A4	UN	I	122.80	270.63	194951	-275	NC	GREENSBORO EXEC	-.08	
LHZ	GLIDE SLOPE	I	331.8	81.62	207279	+106	NC	RWY 05 LHZ	.03	46
LHZ	UN	I	123.00	81.21	208495	+96	NC	TRIANGLE NORTH EX	.03	
QRL	RADAR ARSR	Y	1266.4	137.72	210345	+113	NC	Raleigh (Benson)	.03	
LHZ	LOCALIZER	I	109.3	80.5	211214	+159	NC	RWY 05 TRIANGLE N	.04	46
HQT	NDB	I	41	150.45	211462	+166	NC	HARNETT	.04	
QRL	RC	Y	7195.	137.99	211618	+31	NC	BENSON	.01	
HNZ	UN	I	122.80	43.47	212823	-62	NC	HENDERSON/ OXFORD	-.02	
HNZ	LOCALIZER	I	109.7	43.57	215844	-38	NC	RWY 06 HENDERSON/	-.01	60
QGX	RC	Y	7725.	39.7	216607	-427	NC	OXFORD	-.11	
HRJ	LOCALIZER	I	108.3	156.02	219682	+265	NC	RWY 05 HARNETT RG	.07	48
HRJ	UN	I	122.70	156.75	221096	+262	NC	HARNETT RGNL JETP	.07	
DAN	MK	I	75.0	333.62	224948	+28	VA	RWY 02 DANVILLE R	.01	
QRM	RC	Y	7205.	142.84	226729	-21	NC	COATS	-.01	
79NC	UN	I	122.80	71.8	231622	+98	NC	BALL	.02	
JNX	LOCALIZER	I	111.1	126.57	236837	+300	NC	RWY 03 JOHNSTON R	.07	32
JNX	UN	I	122.72	127.59	237874	+300	NC	JOHNSTON RGNL	.07	
JNX	GLIDE SLOPE	I	331.5	128.01	238053	+330	NC	RWY 03 JNX	.08	32

THE NEAREST AIR NAVIGATION FACILITY TO CASE COORDINATES IS: DMP (LOCALIZER)

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8:33:00

 * AM RADIO STATIONS *
 * Disturbance of AM Broadcast Station Antenna Pattern *
 * CFR Title 47, Part 1, Subpart BB *

SITE ID: Dobbins - NC-
 T23.12

TRANSACTION ID:
 30290184

LATITUDE: 35° 56' 16.290" LONGITUDE: 79° 1' 37.180"

SITE ELEVATION AMSL 265 ft.
 STRUCTURE HEIGHT. 199 ft.
 OVERALL HEIGHT AMSL 464 ft.

CALL SIGN	FREQ KHz	POWER Watts	ANT MOD	P T	DIST Meters	BEARING Degrees	NAD83 LATITUDE	NAD83 LONGITUDE	CITY	ST
WCHL	1360	5,000	D	T	100	33.19	35-56-19	079-01-35	CHAPEL HILL	NC

This station has a current license.
 The authorized directional antenna pattern is theoretical.
 This station is operating a directional type antenna system.
 NOTICE! Your proposed structure will be within 2204 meters of this station. This station has a directional antenna radiation pattern. FCC regulations require the responsible party to show that a new or significantly modified tower would not negatively impact a AM station (FCC 13-115). The critical tower height is 22 meters.

WLLQ	1530	10,000	D	S	4091	32.69	35-58-08	079-00-09	CHAPEL HILL	NC
------	------	--------	---	---	------	-------	----------	-----------	----------------	----

This station has a current license.
 The authorized directional antenna pattern is standard.
 This station is operating a directional type antenna system.
 The studied structure is not within 1959 meters of this AM station. 10 Wavelengths = 1959 meters.

WDNC	620	41	N	T	12999	75.02	35-58-05	078-53-16	DURHAM	NC
------	-----	----	---	---	-------	-------	----------	-----------	--------	----

The authorized directional antenna pattern is theoretical.
 This station is operating a non-directional type antenna system.
 Your structure is not within 1 wavelength of this station. The wavelength for this AM station is 484 meters. The critical tower height is 81 meters.

WDUR	1490	1,000	N	T	12999	75.02	35-58-05	078-53-16	DURHAM	NC
------	------	-------	---	---	-------	-------	----------	-----------	--------	----

The authorized directional antenna pattern is theoretical.
 This station is operating a non-directional type antenna system.
 Your structure is not within 1 wavelength of this station. The wavelength for this AM station is 201 meters. The critical tower height is 34 meters.

WTIK	1310	1,000	D	A	14875	49.27	36-01-31	078-54-07	DURHAM	NC
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The authorized directional antenna pattern is augmented.
 This station is operating a directional type antenna system.
 The studied structure is not within 2288 meters of this AM station. 10 Wavelengths = 2288 meters.

WRJD	1410	290	D	A	18927	57.59	36-01-45	078-50-59	DURHAM	NC
------	------	-----	---	---	-------	-------	----------	-----------	--------	----

The authorized directional antenna pattern is augmented.
 This station is operating a directional type antenna system.
 The studied structure is not within 2126 meters of this AM station. 10 Wavelengths = 2126 meters.

DEFINITIONS:

SIGNIFICANT MODIFICATION: A significant modification of a tower in the immediate vicinity of an AM station is defined in CFR Title 47, Part 1.30002, as follows;
 (1) any change that would alter the tower's physical height by 5 electrical degrees or more at the AM frequency; or
 (2) in addition or replacement of one or more antennas or trnasmission lines on a tower that has been detuned or base-insulated.
 The addition or modification of an antenna or antenna-supporting structure on a building shall be considered a construction modification subject to the analysis and notice requirements of this subpart if and only if the height of the antenna supporting structure

alone exceeds the thresholds in paragraphs(a) and(b) of this section.

CALL SIGN: The Call Sign of the station or application. For applications and construction permits which do not have Call Signs a value of 'NEW' is used.

FREQUENCY: in Kilohertz

POWER: The nominal power of the station, as defined in Section CFR 73.14. This is not necessarily the effective radiated power, the transmitter power, the antenna input power, etc.

ANT MOD: Antenna Mode, The mode of the complete antenna system. Indicates directional or non-directional. (D = Directional and N = Non-Directional) If a station is directional at one time during a day and non-directional at another time it is considered to be directional for the purpose of Movement Method Proof. If the same station has multiple locations these are listed as separate AM stations with the same Call Sign.

PT: The type of antenna pattern which has been notified to (or by) foreign countries.

DIST Meters: This is the calculated distance (in meters) between your proposed site and the latitude/longitude coordinates specified by the FCC data.

Bearing Degrees: This is the true bearing from your proposed site to the station.

LATITUDE: This is the latitude of the AM Station in NAD 1983 coordinates.

LONGITUDE: This is the longitude of the AM Station in NAD 1983 coordinates.

ST: This is the state where the AM Station is located.

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 * COMMUNICATION FACILITIES IN PROXIMITY OF CASE *

SITE ID: Dobbins - NC-
 T23.12

TRANSACTION ID:
 30290184

LATITUDE: 35° 56' 16.290" LONGITUDE: 79° 1' 37.180"

SITE ELEVATION AMSL 265 ft.
 STRUCTURE HEIGHT. 199 ft.
 OVERALL HEIGHT AMSL 464 ft.

IDENT	FACILITY	LOCATION NAME	ST	BEARING (deg) Case to FAC	DISTANCE (ft)
TQV	AWOS-3	DURHAM	NC	46.54	36581
RDU	ATCT	RALEIGH-DURHAM INTERN	NC	106.29	74298
RDU	ASOS	RALEIGH/DURHAM	NC	107.26	74333
RDU	UN	RALEIGH-DURHAM INTL	NC	107.26	74333
RDU	ASR	RALEIGH-DURHAM INTERN	NC	106.69	77540
TDF	AWOS-3	ROXBORO	NC	5.68	126794
TDF	UN	RALEIGH RGNL AT PERSO	NC	5.68	126794
TTA	UN	RALEIGH EXEC JETPORT	NC	189.62	131311
TTA	AWOS-3	SANFORD	NC	189.75	133515
BUY	ASOS	BURLINGTON	NC	287.29	138025
BUY	UN	BURLINGTON/ALAMANCE R	NC	287.29	138025
5W5	UN	TRIPLE W	NC	140.12	150855
QGY	RCL	YOUNGSVILLE	NC	75.93	160116
SCR	AWOS-3	SILER CITY	NC	239.04	165031
SCR	UN	SILER CITY MUNI	NC	238.84	165080
78NC	UN	FUQUAY/ANGIER FLD	NC	150.32	165435
59NC	UN	MCLEAN BROTHERS	NC	290.53	166663
QGW	RCL	AUBURN	NC	120.44	171234
NC74	UN	CAUSEY	NC	266.71	175107
W17	UN	RALEIGH EAST	NC	106.46	182151
KRAX	NEXRAD	RALEIGH/DURHAM WXL	NC	122.07	187701
3A4	UN	GREENSBORO EXEC	NC	270.63	194885
LHZ	AWOS-3	LOUISBURG	NC	81.2	207415
LHZ	UN	TRIANGLE NORTH EXEC	NC	81.22	208568
QRL	BUEC	BENSON	NC	137.76	210299
QRL	ARSR	Raleigh (Benson)	NC	137.72	210410
QRL	RCL	BENSON	NC	137.99	211721
HNZ	UN	HENDERSON/OXFORD	NC	43.47	212832
HNZ	AWOS-3	OXFORD	NC	43.39	213643
QGX	RCL	OXFORD	NC	39.72	216649
HRJ	AWOS-3	ERWIN	NC	157.01	220938
HRJ	UN	HARNETT RGNL JETPORT	NC	156.76	221142
QRM	RCL	COATS	NC	142.83	226806
79NC	UN	BALL	NC	71.81	231677
JNX	UN	JOHNSTON RGNL	NC	127.59	237899
JNX	AWOS-3	SMITHFIELD	NC	128.01	238110

THE NEAREST COMMUNICATION FACILITY TO CASE COORDINATES IS: TQV

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 * NOS OBSTRUCTIONS NEAR CASE *

SITE ID: Dobbins - NC-
 T23.12

TRANSACTION ID:
 30290184

LATITUDE: 35° 56' 16.290" LONGITUDE: 79° 1' 37.180"

SITE ELEVATION AMSL 265 ft.
 STRUCTURE HEIGHT. 199 ft.
 OVERALL HEIGHT AMSL 464 ft.

Obstacle Search Range = 40000

	TYPE OBSTACLE	CITY	ST	LATITUDE	LONGITUDE	RANGE	DEG	QU AN	AMSL	AGL	L	A H	A V	M K	FAA NUMBER	JULIN DATE	A
O	TOWER	CHAPEL HILL	NC	35-56-18.00	079-01-36.00		29	2	475	00206	R	4	D	M	0066_AT003170E	2014152	C
O	TOWER	CHAPEL HILL	NC	35-55-47.55	079-02-27.55		235	1	410	00048	N	1	A	N	2010ASO071200E	2011196	A
O	TOWER	CHAPEL HILL	NC	35-56-00.06	079-02-40.00		252	1	446	00048	N	1	A	N	2010ASO071190E	2011175	A
U	POLE	CHAPEL HILL	NC	35-55-14.20	079-01-30.00		175	1	367	00111	N	1	A	N	2012ASO026280E	2018026	A
O	TOWER	CHAPEL HILL	NC	35-55-48.59	079-02-49.52		245	1	434	00048	N	1	A	N	2010ASO071210E	2011196	A
O	POLE	CHAPEL HILL	NC	35-56-06.99	079-03-01.62		262	1	491	00049	N	1	A	N	2010ASO071180E	2011196	A
O	TOWER	CHAPEL HILL	NC	35-55-44.31	079-02-59.89		245	1	482	00048	N	1	A	N	2010ASO071220E	2011196	A
U	TOWER	CHAPEL HILL	NC	35-56-05.34	079-03-10.12		262	1	539	00094	D	1	A	N	2016ASO067440E	2018024	A
O	POLE	CHAPEL HILL	NC	35-56-07.04	079-03-23.17		264	1	516	00048	N	1	A	N	2010ASO071170E	2011196	A
O	TANK	CHAPEL HILL	NC	35-57-15.40	079-02-55.80		313	1	762	00140	D	1	A	N	2022ASO152780E	2025010	C
O	TOWER	CHAPEL HILL	NC	35-55-48.78	079-03-22.03		252	1	510	00047	N	1	A	N	2010ASO071230E	2011196	A
O	TOWER	CHAPEL HILL	NC	35-55-28.54	079-03-14.81		239	1	379	00048	N	1	A	N	2010ASO071240E	2011196	A
O	TOWER	CHAPEL HILL	NC	35-55-44.94	079-03-34.12		252	1	497	00048	N	1	A	N	2010ASO071270E	2011197	A
O	TOWER	CHAPEL HILL	NC	35-55-34.04	079-03-29.65		245	1	412	00048	N	1	A	N	2010ASO071310E	2011201	A
O	TOWER	DURHAM	NC	35-56-50.59	078-59-32.26		71	1	444	00129	N	1	A	N	2015ASO095060E	2018351	C
O	TOWER	CHAPEL HILL	NC	35-55-26.58	079-03-37.43		243	1	441	00048	N	1	A	N	2010ASO071320E	2011201	A
O	TOWER	CHAPEL HILL	NC	35-55-41.07	079-03-46.18		251	1	495	00048	N	1	A	N	2010ASO071330E	2011201	A
O	BLDG	CHAPEL HILL	NC	35-54-52.10	079-03-18.00		224	1	602	00136	N	5	D	N	2012ASO035940E	2012215	A
O	BLDG	CHAPEL HILL	NC	35-54-49.00	079-03-14.00		222	1	635	00154	N	5	D	U		2014152	C
O	TOWER	CHAPEL HILL	NC	35-57-43.00	078-59-53.00		44	1	652	00351	M	1	B	N	2001ASO027210E	2003194	C
U	BLDG	CHAPEL HILL	NC	35-54-31.00	079-02-57.00		212	1	630	00180	U			N		1994108	C
O	TOWER	CHAPEL HILL	NC	35-55-40.14	079-04-02.98		253	1	495	00049	N	1	A	N	2010ASO071280E	2011197	A
O	TOWER	CHAPEL HILL	NC	35-55-21.25	079-03-56.81		244	1	397	00048	N	1	A	N	2010ASO071300E	2011201	A
O	TOWER	CHAPEL HILL	NC	35-58-11.00	079-00-20.00		29	2	487	00198	N	5	D	M		2014152	C
O	TOWER	CHAPEL HILL	NC	35-55-49.50	079-04-14.62		258	1	508	00048	N	1	A	N	2010ASO071260E	2011196	A
O	TOWER	CHAPEL HILL	NC	35-58-29.32	079-01-51.80		355	1	639	00154	N	2	C	N	2018ASO068910E	2018199	C
O	TOWER	CHAPEL HILL	NC	35-55-26.72	079-04-12.46		249	1	444	00049	N	1	A	N	2010ASO071290E	2011201	A
O	TANK	CHAPEL HILL	NC	35-54-13.06	079-02-51.43		206	1	716	00252	D	1	C	N	2012ASO006240E	2012062	C
O	TOWER	CHAPEL HILL	NC	35-55-52.39	079-04-25.01		260	1	506	00049	N	1	A	N	2010ASO071250E	2011175	A
O	TOWER	CHAPEL HILL	NC	35-54-00.00	079-00-52.00		165	1	469	00195	N	5	D	N	2011ASO070260E	2012019	A
O	STACK	CHAPEL HILL	NC	35-54-25.00	079-03-44.00		223	2	671	00200	N	5	D	U		2014152	C
O	STACK	CHAPEL HILL	NC	35-54-22.00	079-03-44.00		222	1	677	00220	M	5	D	N	1987ASO016040E	2014152	C
O	TANK	CHAPEL HILL	NC	35-54-18.00	079-03-47.00		222	1	654	00215	D	5	D	N	1999ASO035480E	2014152	C
O	TOWER	CARRBORO	NC	35-54-08.90	079-04-11.59		225	1	609	00198	N	5	D	N	2012ASO019720E	2012082	C
O	TOWER	CHAPEL HILL	NC	35-56-54.70	079-05-29.30		282	1	758	00236	D	2	C	N	2016ASO252520E	2016336	C
O	TOWER	CHAPEL HILL	NC	35-57-05.00	079-05-29.00		285	1	749	00228	D	2	C	N	1996ASO030740E	2014152	C
O	TOWER	DURHAM	NC	35-59-15.34	078-59-40.03		28	1	451	00121	N	1	A	N	2010ASO004080E	2010175	A
O	TOWER	CHAPEL HILL	NC	35-56-54.00	079-05-45.00		281	1	761	00214	R	5	D	M	1986ASO007540E	2014152	C
O	TOWER	CHAPEL HILL	NC	35-53-20.00	079-03-57.30		213	1	527	00086	N	2	C	N	2011ASO065460E	2011349	A
O	TOWER	CHAPEL HILL	NC	35-58-33.70	079-05-00.50		310	1	723	00195	N	2	C	N	2021ASO173450E	2021278	C
O	TOWER	CHAPEL HILL	NC	35-55-04.10	079-05-57.30		251	1	704	00197	D	2	C	N	2010ASO009550E	2010181	C
O	BLDG	DURHAM	NC	35-58-17.92	078-57-33.38		58	1	727	00368	R	1	A	N	2012ASO083720E	2012296	A
O	TOWER	CHAPEL HILL	NC	35-51-52.85	079-01-50.84		182	1	474	00199	N	1	A	N	2015ASO159990E	2017285	C
O	TOWER	DURHAM	NC	36-00-54.38	079-00-15.31		13	1	725	00315	R	5	D	M	2004ASO058630E	2004340	C
O	TOWER	DURHAM	NC	35-55-28.90	078-55-44.40		99	1	456	00125	N	1	A	N	2011ASO048130E	2011312	A
O	TOWER	DURHAM	NC	35-57-22.90	078-55-43.70		77	1	480	00172	N	1	A	N	2021ASO323430E	2022054	C
O	TOWER	HILLS	NC	36-00-54.83	079-03-59.92		337	1	832	00266	D	4	D	N	2003ASO036060E	2020244	C
O	TOWER	CHAPEL HILL	NC	36-00-54.81	079-04-00.77		337	1	815	00246	D	1	A	N	2020ASO226420E	2021306	A
U	POLE	DURHAM	NC	35-59-44.29	078-56-36.49		50	1	528	00115	N	4	D	N	2021ASO488770E	2024054	A
U	TOWER	CHAPEL HILL	NC	35-53-57.71	079-07-34.50		244	1	673	00199	N	1	A	N	2013ASO023320E	2018023	A
O	TOWER	DURHAM	NC	35-54-23.40	078-55-08.30		110	1	612	00263	D	1	A	N	2015ASO067800E	2017307	C

V	TYPE	CITY	ST	LATITUDE	LONGITUDE	RANGE	DEG	QU	AMSL	AGL	L	A	A	M	FAA	NUMBER	JULIN	A
	OBSTACLE							AN			H	H	V	K			DATE	
U	STACK	DURHAM	NC	36-00-26.50	078-56-19.60		46	1	532	00136	R	4	D	N	2020ASO092510E	2022316	A	
U	BLDG	DURHAM	NC	36-00-34.22	078-56-12.92		46	1	494	00094	N	4	D	N	2021ASO421400E	2024088	A	
U	POLE	DURHAM	NC	36-01-02.60	078-56-42.60		40	1	476	00063	N	4	D	N	2015ASO007480E	2018026	A	
O	TOWER	HILLSBOROUGH	NC	36-02-09.00	079-04-47.00		336	1	844	00200	R	5	D	N			2014152	C
O	TOWER	DURHAM	NC	35-50-47.17	078-57-20.20		148	1	517	00228	D	1	A	N	2010ASO025060E		2010228	C

DEFINITIONS
The data for each obstacle record is in the following format:

Field	Data Element	Description
1	"O" or "U"	Verification Status "O": verified "U": unverified
2	Obstacle Type	1. Arch 15. Plant 2. Balloon 16. Pole' 3. Bridge 17. Rig 4. Bldg 18. Refinery 5. Bldg-Twr 19. Sign 6. Catenary 20. Spire 7. Cool TWR 21. Stack 8. Crane 22. Stacks 9. Crane T 23. Tank 10. Ctrl Twr 24. T-L Twr 11. Dam 25. Tower 12. Dome 26. Towers 13. Elevator 27. Tramway 14. Monument 28. Windmill
3	City Name	City
4	State Identifier	State
5	Latitude	Latitude (NAD 1883)
6	Longitude	Longitude (NAD 1983)
7	Range	Distance from Aeronautical Study to NOS Obstruction (feet)
8	DEG	Bearing from Aeronautical Study to NOS Obstruction (feet)
9	Freq	Charted AM station Frequency
10	AMSL	Above Mean Sea Level Height (Feet)
11	AGL	Above Ground Level Height (Feet)
12	Strobe Indicator	(L)ighting, type of "S": High Intensity White Strobe Lighting "M": Medium Intensity White Strobe Lighting "R": Red Lighting "H": Dual, Red with HIGH Intensit White Strobe "D": Dual, Red with MEDIUM Intensity White Strobe "F": Flood Lights "N": No Lights "L": Other, Lighting not listed above
13, 14	Accuracy H V	A Horizontal A Vertical Accuracy HORIZONTAL VERTICAL Code Tolerance Code Tolerance 1 +-20' A +-3' 2 +-50' B +-10' 3 +-100' C +-20' 4 +-250' D +-50' 5 +-500' E +-125' 6 +-1000' F +-250' 7 +-1/2 NM' G +-500' 8 +-1M' H +-1000' 9 Unknown I Unknown
15	Mark Indicator	Type of Marking "P": Orange or Orange and White Paint "W": White Paint Only "M": Marked "F": Flag Marker "S": Spherical Marker "N": None "U": Unknown

16	FAA Study Number or NOS Source Code	NOS Source Code (when FAA study number is not available)
		99CF0000 7610 Form
		99AM0000 FCC AM List
		99FM0000 FCC FM List
		99FC0000 Flight Check
		99SP0000 Stereoplot
		99IP0000 IAP Procedures
		99VR0000 Visual Reported
		99LR0000 Letter Reported
		99TR0000 Telephone Reported
		99MS0000 MSAW Reported
		99OC#### OC Charts
		99HC0000 Horizontal Ctrl Data
		99LM0000 Landmark for Charts
17	Action: A, C, D, Julian Date	Add, Change, Dismantle, Date of Action *

* A revision has modified the Julian date field by NOS. The numeric, 5-digit field (YYDDD) has changed to a 7-digit field (YYYYDDD) field.

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PRIVATE LANDING FACILITIES IN PROXIMITY OF CASE

SITE ID: Dobbins - NC-
T23.12

TRANSACTION ID:
30290184

LATITUDE: 35° 56' 16.290" LONGITUDE: 79° 1' 37.180"

SITE ELEVATION AMSL 265 ft.

STRUCTURE HEIGHT. 199 ft.

OVERALL HEIGHT AMSL 464 ft.

FACIL IDENT	TYP	NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAR P77	FAA PROTECTED IFR PROCEDURE
83NC	HEL	HOLLY GREEN	116.2	2.11	+164	NO	
3NC9	AIR	WOMBLE FLD	219.24	4.62	-11	NO	
NC34	AIR	MILES	296.85	5.46	-116	NO	
NC92	HEL	DUKE UNIVERSITY NORTH	46.49	6.02	-51	YES	IFR Procedure
3NR5	HEL	UNC HILLSBOROUGH HELIPAD	331.74	6.71	-218	NO	
29NC	AIR	LARRY F WARREN FLD	322.62	11.53	-186	NO	
5NC5	AIR	THE DUCHY	282.44	12.27	-186	NO	
NC11	AIR	DECK AIRPARK	157.03	12.76	+126	NO	
1NC1	AIR	RON'S ULTRALIGHT FLD	233.79	12.78	-61	NO	
NC81	AIR	COX	143.86	13.82	+9	NO	
8NC8	AIR	LAKE RIDGE AERO PARK	58.24	13.94	+155	NO	
2NR4	HEL	APEX HEALTHPLEX	146.89	14.27	+32	NO	
04NC	HEL	WAKEMED CARY HOSPITAL	135.04	16.84	+19	NO	
NC47	HEL	JOINT FORCE HQ	117.36	17.22	+29	NO	
44NR	HEL	UNC REX	114.63	17.32	-17	NO	
9NC8	AIR	EAGLES LANDING	211.88	17.71	+34	NO	
9NR0	AIR	SMOKE AND WINGS	336.52	18.31	-277	NO	
05NR	AIR	FOX FLD	318.71	18.4	-211	NO	
8NC4	AIR	TWIN SILOS	228.16	18.69	-61	NO	
2NC3	HEL	SKY-5	118.97	19.65	+64	NO	
NR85	HEL	UNC REX HOLLY SPRINGS	152.26	20.03	+21	NO	
80NR	HEL	WAKEMED NORTH HOSPITAL	94.72	20.98	+39	NO	
96NC	HEL	RALEIGH	110.66	21.63	+257	NO	
22NC	AIR	FLINT RIDGE	251.88	22.63	-186	NO	
3NC2	HEL	GARNER ROAD	122.48	23.01	+89	NO	
0NC4	HEL	WAKE MEDICAL CENTER	113.16	23.23	+190	YES	IFR Procedure
8NC6	AIR	BROOKS FLD	231.9	23.77	-156	NO	
NC00	AIR	MORETZ RIVERSIDE LANDING	199.73	24.05	+138	NO	
91NC	HEL	ALAMANCE REGNL MEDICAL CENTER	287.98	24.34	-224	NO	
11NC	HEL	SPRINT/MIDATLANTIC TELECOM	78.42	25.35	+37	NO	
NC99	AIR	BAGWELL	127.72	25.86	+164	NO	
84NR	HEL	DUPREE WILLOW	144.89	26.05	+96	NO	
NR21	AIR	HARDAWAY FLD	283.61	26.6	-136	NO	
78NC	AIR	FUQUAY/ANGIER FLD	150.34	27.21	+115	NO	
59NC	AIR	MCLEAN BROTHERS	290.53	27.43	-232	NO	
4NC7	AIR	PEACOCK	121.34	27.92	+74	NO	
68NC	AIR	WINSTEAD '76'	349.96	28.09	-151	NO	
71NC	AIR	K & D	313.62	28.34	-336	NO	

FACIL IDENT	TYP	NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAR P77	FAA PROTECTED IFR PROCEDURE
NR77	AIR	JOHNSON FLD	162.36	28.4	+199	NO	
NC74	AIR	CAUSEY	266.72	28.83	-259	NO	
NR35	HEL	CENTRAL CAROLINA HOSPITAL	195.46	29.15	+136	YES	IFR Procedure
0NC1	AIR	H & J STRIP	310.83	29.43	-222	NO	
52NR	AIR	DERKSEN	216.18	30.47	+15	NO	
03NR	HEL	JOHNSTON MEDICAL CENTER	125.96	31.49	+144	NO	
NC56	AIR	DEER RUN	59.33	31.51	+59	NO	
4NC2	AIR	NOLES FLD	138.08	31.66	+181	NO	
NR68	AIR	LOOP FLD	172.46	32.16	+159	NO	
42NR	HEL	HARNETT HEALTH	160.94	32.46	+279	NO	
NC44	AIR	BARCLAYSVILLE FLD	149.38	32.81	+164	NO	
1NC5	AIR	RILEY FLD	90.66	33.05	+104	NO	
00NC	AIR	NORTH RALEIGH	74.36	33.11	+116	NO	
NC13	AIR	YORKS FLD	250.4	33.14	-107	NO	
27NR	AIR	C A G FARMS	147.13	33.44	+154	NO	
51NC	AIR	PHILLIP R BUNN	98.15	33.55	+134	NO	
1NR7	AIR	BOYD FLD	53.23	33.8	+128	NO	
NC40	AIR	HOLEMAN FLD	352.5	33.96	-114	NO	
09NR	AIR	DAKOTA AIR RANCH	240.27	34.96	-97	NO	
8NC1	AIR	DEAN FLD	197.21	35.22	-16	NO	
64NC	AIR	FIELDS	266.4	36.4	-356	NO	
09NC	AIR	WILLIAM IRVING LEWIS	180.23	36.44	+154	NO	
0NC9	HEL	MARIA PARHAM HEALTH HOSPITAL	49.81	36.6	-11	YES	IFR Procedure
NR24	HEL	MARIA PERHAM FRANKLIN HOSPITAL	73.4	37.16	+164.3	YES	IFR Procedure
82NC	AIR	PINEVIEW AIR	183.43	37.79	+164	NO	
4NC1	HEL	FUTURISTICS	339.47	37.87	-56	NO	
25NC	AIR	SMITH AIR STRIP	241.12	38.01	-96	NO	
79NC	AIR	BALL	71.78	38.12	+98	NO	
7NC5	AIR	CROOKED CREEK	90.83	38.12	+214	NO	
00VA	AIR	VAUGHAN	2.01	38.27	-87	NO	
VA40	HEL	O'GARA TECH TRAINING FACILITY	347.15	38.57	+79	NO	
28NC	BAL	BALLOONPORT OF GREENSBORO	271.84	38.6	-336	NO	

THE NEAREST PRIVATE USE LANDING FACILITY IS: HOLLY GREEN
HOLLY GREEN is a Heliport type landing facility.

landing facilities with IFR procedures are protected under FAR 77.17 (a) (3).

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