

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE: :
: :
A PETITION FOR A DECLARATORY : PETITION NO. _____
RULING ON THE NEED TO OBTAIN A : :
SITING COUNCIL CERTIFICATE FOR THE : :
INSTALLATION OF A TEMPORARY : :
TELECOMMUNICATIONS FACILITY AT : :
1052 BOSTON POST ROAD, MILFORD, : :
CONNECTICUT : JULY 1, 2019

PETITION FOR A DECLARATORY RULING:
INSTALLATION HAVING NO
SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT

I. Introduction

Pursuant to Sections 16-50j-38 and 16-50j-39 of the Regulations of Connecticut State Agencies (“R.C.S.A.”), Cellco Partnership d/b/a Verizon Wireless (“Verizon”); T-Mobile Northeast, LLC (“T-Mobile”); and New Cingular Wireless PCS, LLC (“AT&T”) (collectively the “Petitioners”) hereby petition the Connecticut Siting Council (the “Council”) for a declaratory ruling (“Petition”) that no Certificate of Environmental Compatibility and Public Need (“Certificate”) is required under Section 16-50k(a) of the Connecticut General Statutes (“C.G.S.”) to install a temporary telecommunications facility on an approximately 7.21-acre parcel at 1052 Boston Post Road in Milford, Connecticut (the “Property”). The Property is located in Milford’s Light Industrial (ICD) zone district. The owner of the Property, Turnpike Lodge Inc. (the “Owner”), is currently redeveloping the Property for commercial purposes. Included in Attachment 1 are a series of photographs of the Property, taken from various surrounding locations, showing the existing structures and uses on and around the Property.

II. Factual Background

Verizon Wireless, AT&T and T-Mobile each maintain and operate wireless telecommunications facilities at the Property. These facilities are located on the roof of the existing five-story Howard Johnson Hotel building in the southerly portion of the Property.¹

The Owner is in the process of redeveloping the Property. The redevelopment plans, already approved by the City of Milford Planning and Zoning Commission, involve the demolition of the Howard Johnson Hotel; and the construction of an approximately 75,000 square foot retail building, a 5,000 square-foot stand-alone retail building and new four-story Fairfield Inn Hotel. The new Fairfield Inn Hotel has been designed to accommodate all of the existing wireless antennas on its roof, behind RF transparent screening panels. Equipment associated with each of the Petitioners' antennas will be located inside new equipment space in the basement of the Fairfield Inn Hotel. Three (3) natural gas back-up generators for use by the Petitioners, will be located at grade on the west side of the Property. The new hotel, including all new wireless facility antennas, equipment and generators, was approved by the Milford Planning and Zoning Commission on January 2, 2019. Included in Attachment 2 is a Site Plan drawing showing the approved 75,000 square foot retail building (Floor & Décor), the 5,000 square foot retail building, the Fairfield Inn Hotel, the existing Howard Johnson Hotel building (shaded in gray) and the proposed temporary tower location.

III. Temporary Telecommunications Facility

In an effort to maintain the continuity of existing wireless service along I-95 and Route 1 in Milford for Verizon, AT&T and T-Mobile customers while the new Fairfield Inn Hotel is

¹ In addition to the roof-top wireless facility, Verizon Wireless also recently received Council approval to install a Centralized Radio Access Network (C-RAN) shelter on the Property.

constructed, the Petitioners seek the Council's approval for the installation of a temporary telecommunications facility at the Property. The temporary facility will consist of a 126-foot tall ballast-mounted monopole tower located in the easterly portion of the Property.²

Verizon will install nine (9) antennas at the top of the temporary tower at a centerline height of 123 feet above ground level ("AGL"). T-Mobile will install three (3) antennas at a centerline height of 104 feet AGL. AT&T will install six (6) antennas at a centerline height of 70 feet AGL. The temporary tower and all equipment associated with the Petitioners' antennas will be installed within a 40' x 50' fenced compound. Power and telephone service will extend from existing service on or adjacent to the Property. Based on the Owner's current construction schedule, the Petitioners anticipate the need to maintain the temporary telecommunications facility at the Property for approximately two (2) years while construction of the new Fairfield Inn Hotel is completed.

Included in Attachment 3 are a set of Project Drawings showing the temporary tower location and facility details. Included in Attachment 4 is a Structural Analysis Report confirming that the temporary tower can support the proposed antennas and related equipment.

IV. Discussion

A. The Proposed Installation of Temporary Tower And Related Equipment Will Not Have A Substantial Adverse Environmental Effect

The Public Utility Environmental Standards Act (the "Act"), C.G.S. § 16-50g et seq., provides for the orderly and environmentally compatible development of telecommunications towers in the state to avoid "a significant impact on the environment and ecology of the State of Connecticut." C.G.S. § 16-50g. To achieve these goals, the Act established the Council, and

² A portion of the existing Howard Johnson Hotel will need to be demolished to accommodate the temporary telecommunications facility.

requires a Certificate of Environmental Compatibility and Public Need for the construction of cellular telecommunication towers “that may, as determined by the Council, have a substantial adverse environmental effect”. C.G.S. § 16-50k(a).

1. Physical Environmental Effects

The Petitioners respectfully submit that the installation of a temporary tower supporting antennas and the installation of radio and electrical equipment within a fenced facility compound, will not involve a significant alteration in the physical and environmental characteristics of the Property. The temporary tower facility will be placed in the easterly portion of the Property; an area currently occupied by the Howard Johnson Hotel building. This portion of the existing hotel building will be demolished to allow for installation of the temporary facility. The existing rooftop facilities will remain operational until the temporary facility is activated. Access to the temporary facility compound will extend from Boston Post Road over existing paved surfaces. No trees will be removed and no on-site or off-site wetlands or watercourses will be impacted by the temporary facility.

2. Visual Effects

The visibility of the proposed temporary telecommunications facility would be limited to neighboring commercial parcels along Route 1 and from portions of I-95. The temporary tower facility would be located more than 400 feet from the nearest residential units to the northwest. Based on the nature of development in the area, the Petitioners believe that the proposed temporary telecommunications facility will have a minimal and short-term visual impacts on existing views in the area.

3. FCC Compliance

Radio frequency (“RF”) emissions from the proposed temporary installation will be well

below the standards adopted by the Federal Communications Commission (“FCC”). Included in Attachment 5 is a Calculated Radio Frequency Exposure Report for the proposed temporary tower facility. This report confirms that the temporary facility will operate well within the RF emission standards established by the FCC.

4. FAA Summary Report

Included in Attachment 6 of this Petition is a Federal Airways & Airspace Summary Report verifying that the temporary tower described in this Petition would not constitute an obstruction or hazard to air navigation and that notification to the FAA is not required.

B. Notice to the City, Property Owner and Abutting Landowners

On July 1, 2019, a copy of this Petition was sent to Milford Mayor, Benjamin G. Blake; David B. Sulkis, Milford’s City Planner; and Turnpike Lodge Inc., the Owner of the Property. A notice and a copy of the Petition was also sent to the owners of land that abuts the Property. Included in Attachment 7 are copies of the letters sent to Mayor Blake, Mr. Sulkis and the Owner. Included in Attachment 8 is a sample abutter’s letter and the list of those abutting landowners who were sent notice and a copy of the Petition.

V. Conclusion

Based on the information provided above, the Petitioners respectfully requests that the Council issue a determination in the form of a declaratory ruling that the installation of a temporary tower at the Property will not have a substantial adverse environmental effect and does not require the issuance of a Certificate of Environmental Compatibility and Public Need pursuant to § 16-50k of the General Statutes.

Respectfully submitted,

By



Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597
(860) 275-8200
Its Attorneys

ATTACHMENT 1

Prepared For:
AT&T / T-MOBILE / VERIZON
 Site Name:
HOJO TEMPORARY MONOPOLE
 1052 BOSTON POST ROAD
 MILFORD, CT 06460



THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.


SITE TYPE: TEMPORARY MONOPOLE
 DATE: 06/14/2019 REV: 1
 DRAWN BY: KAM
 SCALE: N.T.S.

H D S O N
Design Group LLC
 45 BECKWOOD DRIVE
 N ANDOVER, MA 01845
 TEL: 978-537-6553
 FAX: 978-536-3388

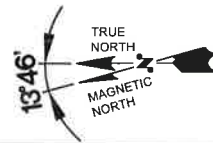
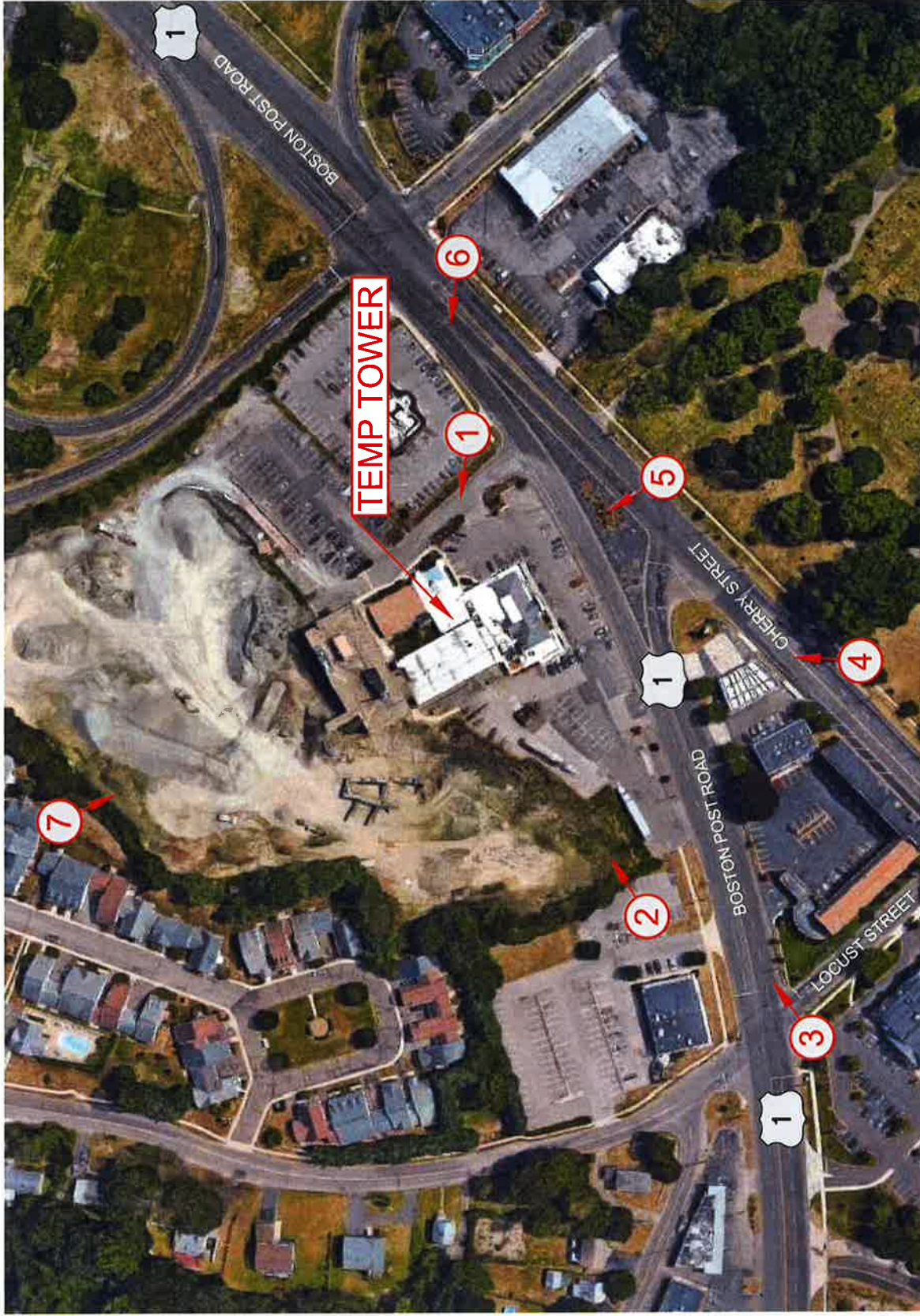
PREPARED FOR:

at&t
 550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

T-MOBILE

NORTHEAST LLC

verizon

SITE NAME: HOJO TEMPORARY MONOPOLE
ADDRESS: 1052 BOSTON POST ROAD
 MILFORD, CT 06460



LEGEND: DIRECTION OF VIEW PHOTO LOCATION

THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.

SITE TYPE: TEMPORARY MONOPOLE	REV: 1
DATE: 06/14/2019	DRAWN BY: KAM
SCALE: N.T.S.	

HDS
HUDSON
Design Group LLC

45 BECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: 978 557-5953
FAX: 978 535-2528

PREPARED FOR:

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

T-MOBILE
NORTHEAST LLC

verizon

SITE NAME: HOJO TEMPORARY MONOPOLE
ADDRESS: 1052 BOSTON POST ROAD MILFORD, CT 06460

EXISTING CONDITIONS

LOCATION # 1

DATE OF PHOTO: 06/10/19



VIEW WEST FROM PARKING LOT AREA NEXT TO BOSTON POST ROAD FACING BUILDING

SITE NAME: HOJO TEMPORARY
MONOPOLE

ADDRESS: 1052 BOSTON POST ROAD
MILFORD, CT 06460

PREPARED FOR:



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

**T-MOBILE
NORTHEAST LLC**



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 536-5586

SITE TYPE: TEMPORARY
MONOPOLE

DATE: 06/14/2019 **REV:** 1

DRAWN BY: KAM

SCALE: N.T.S.

THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.

EXISTING CONDITIONS

LOCATION # 2

DATE OF PHOTO: 06/10/19



VIEW NORTHEAST FROM PARKING LOT AREA NEXT TO BOSTON POST ROAD

SITE NAME: HOJO TEMPORARY
MONOPOLE

ADDRESS: 1052 BOSTON POST ROAD
MILFORD, CT 06460

PREPARED FOR:



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

**T-MOBILE
NORTHEAST LLC**



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: 978.357-5553
FAX: 978.356-5861

SITE TYPE: TEMPORARY
MONOPOLE

DATE: 06/14/2019 **REV:** 1

DRAWN BY: KAM

SCALE: N.T.S.

THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.

EXISTING CONDITIONS

LOCATION # 3

DATE OF PHOTO: 06/10/19



VIEW NORTHEAST FROM SIDEWALK NEXT TO LOCUST ST AND BOSTON POST ROAD

<p>SITE NAME: HOJO TEMPORARY MONOPOLE</p> <p>ADDRESS: 1052 BOSTON POST ROAD MILFORD, CT 06460</p>	<p>PREPARED FOR:</p> <p>at&t 550 COCHITUATE ROAD FRAMINGHAM, MA 01701</p> <p>T-MOBILE NORTHEAST LLC</p> <p>verizon</p>	<p>HDS HUDSON Design Group LLC</p> <p>45 BEECHWOOD DRIVE N. ANDOVER, MA 01845 TEL: 978.557.5553 FAX: 978.536.5586</p>	<p>SITE TYPE: TEMPORARY MONOPOLE</p> <p>DATE: 06/14/2019 REV: 1</p> <p>DRAWN BY: KAM</p> <p>SCALE: N.T.S.</p>	<p>THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.</p> <p>PAGE 5 OF 9</p>
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EXISTING CONDITIONS

LOCATION # 4

DATE OF PHOTO: 06/10/19




VIEW NORTH FROM CHERRY STREET FACING BUILDING

THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.

SITE TYPE: TEMPORARY MONOPOLE
 DATE: 06/14/2019 REV: 1
 DRAWN BY: KAM
 SCALE: N.T.S.

HG
HUDSON
 Design Group LLC
 45 BEECHWOOD DRIVE
 N. ANDOVER, MA 01845
 TEL: (978) 557-5553
 FAX: (978) 356-3586

PREPARED FOR:

at&t
 550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

T-MOBILE
NORTHEAST LLC

verizon

SITE NAME: HOJO TEMPORARY MONOPOLE
ADDRESS: 1052 BOSTON POST ROAD MILFORD, CT 06460

EXISTING CONDITIONS

LOCATION # 5

DATE OF PHOTO: 06/10/19



VIEW NORTHWEST FROM CHERRY STREET FACING BUILDING

SITE NAME: HOJO TEMPORARY
MONOPOLE

ADDRESS: 1052 BOSTON POST ROAD
MILFORD, CT 06460

PREPARED FOR:



550 COCHITUAETE ROAD
FRAMINGHAM, MA 01701

**T-MOBILE
NORTHEAST LLC**



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01855
TEL: 978.557.5533
FAX: 978.356.3585

SITE TYPE: TEMPORARY
MONOPOLE

DATE: 06/14/2019 | **REV:** 1

DRAWN BY: KAM

SCALE: N.T.S.

THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.

EXISTING CONDITIONS

LOCATION # 6

DATE OF PHOTO: 06/10/19



VIEW WEST FROM BOSTON POST ROAD FACING BUILDING

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SITE TYPE: TEMPORARY MONOPOLE
 DATE: 06/14/2019 REV: 1
 DRAWN BY: KAM
 SCALE: N.T.S.

H D G
HUDSON
 Design Group LLC
 45 BRECKWOOD DRIVE
 N. ANDOVER, MA 01845
 TEL: 978.557.5553
 FAX: 978.536.5566

PREPARED FOR:
at&t
 550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

T-MOBILE
NORTHEAST LLC

verizon

SITE NAME: HOJO TEMPORARY MONOPOLE
ADDRESS: 1052 BOSTON POST ROAD MILFORD, CT 06460

EXISTING CONDITIONS

LOCATION # 7

DATE OF PHOTO: 06/10/19



VIEW SOUTHEAST FROM FOREST PARK FACING BUILDING

SITE NAME: HOJO TEMPORARY
MONOPOLE

ADDRESS: 1052 BOSTON POST ROAD
MILFORD, CT 06460

PREPARED FOR:



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

**T-MOBILE
NORTHEAST LLC**



45 BECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5584

SITE TYPE: TEMPORARY
MONOPOLE

DATE: 06/14/2019 | **REV:** 1

DRAWN BY: KAM

SCALE: N.T.S.

THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.

ATTACHMENT 2

ZONING DATA TABLE # 1052 BOSTON POST ROAD*

REGULATIONS/DESC.	REGULATIONS	EXISTING	PROPOSED
ZONE	C2	C2B	C2B
AREA (ACRES)	8.818	7.211	8.125
LOT WIDTH (FEET)	125	80/27.5	80/27.5
LOT DEPTH (FEET)	125	80/27.5	80/27.5
MAXIMUM HEIGHT	35 STORIES OR 120'	4 STORIES	4 STORIES
MAXIMUM FLOOR AREA	30 STORIES OR 120'	444,724	274,724
MAXIMUM LOT COVERAGE	30%	32.6%	32.6%
MAXIMUM SETBACK	35' FROM 222.4' (10)	184'-0"	324'-0"
MAXIMUM SETBACK	25' FROM 222.4' (10)	184'-0"	324'-0"
MAXIMUM SETBACK	50' FROM 222.4' (10)	184'-0"	324'-0"
MAXIMUM SETBACK	50' FROM 222.4' (10)	184'-0"	324'-0"
FLOOR AREA RATIO	1.5	0.6	0.6
MAXIMUM FLOOR AREA	8	27	27
MAXIMUM FLOOR AREA	8	27	27

* EXISTING AND PROPOSED AREAS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED BY THE ARCHITECT. ALL VARIATIONS AND INCREASES IN THE GROUND LEVEL SHALL BE SHOWN BY THE ARCHITECT. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE NOTED.

PARKING ANALYSIS

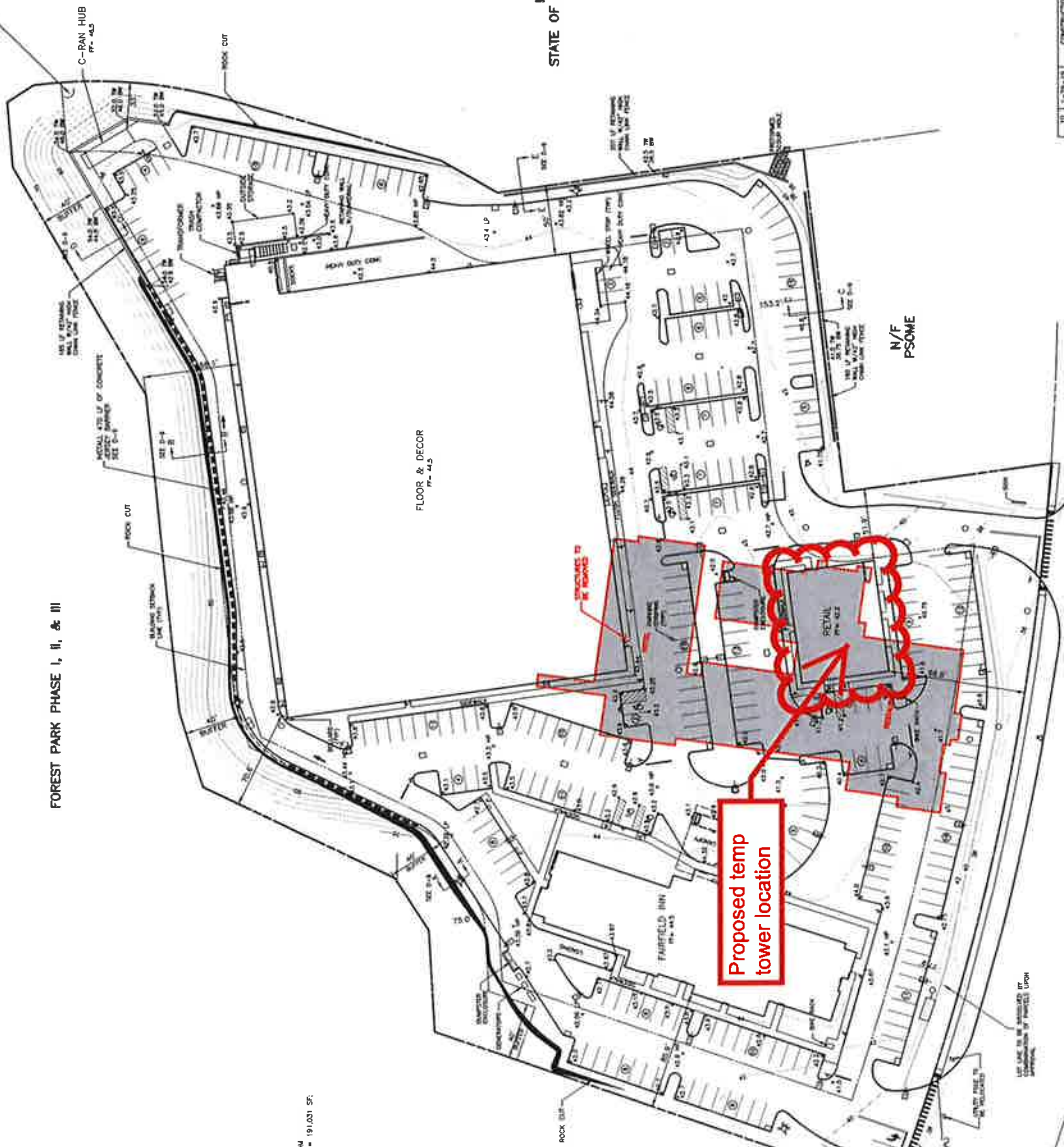
BUILDING	USE	INTENSITY (1/1000)	SQUARE FOOTAGE	PARKING SPACES REQUIRED	PARKING SPACES PROVIDED
1052 BOSTON POST ROAD	OFFICE	1.1	1,000,000	1,100	151
EXISTING MAIN BUILDING	RETAIL	1.1	1,000,000	1,100	20
PROPOSED MAIN BUILDING	RETAIL	1.1	1,000,000	1,100	20
TOTAL					279

* ASSUMED HEALTH CLUB AND GYM FACILITIES FOR HOTEL, OFFICE USE ONLY.

N/F
VIBER ASSOCIATES LLC.

THESE CONSTRUCTION, EXISTING AND PROPOSED DIMENSIONS SHALL BE VERIFIED BY THE ARCHITECT. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE NOTED.

FOREST PARK PHASE I, II, & III



SITE PLAN
1040 & 1052 BOSTON POST ROAD
MILFORD, CONNECTICUT
PREPARED FOR
TURNPIKE LODGE, INC. & CONNECTICUT FOODS, INC.

DATE: 11-15-18
SCALE: 1"=40'
DRAWN BY: [Name]
CHECKED BY: [Name]
PROJECT NO.: [Number]
FILE NUMBER: [Number]
JOB NO.: [Number]
JOB NAME: [Number]
JOB ADDRESS: [Number]
JOB CITY: [Number]
JOB STATE: [Number]
JOB ZIP: [Number]
JOB PHONE: [Number]
JOB FAX: [Number]

NO.	DATE	DESCRIPTION	BY
1	11-15-18	ISSUED FOR PERMIT	[Name]
2	11-15-18	ISSUED FOR PERMIT	[Name]
3	11-15-18	ISSUED FOR PERMIT	[Name]
4	11-15-18	ISSUED FOR PERMIT	[Name]
5	11-15-18	ISSUED FOR PERMIT	[Name]
6	11-15-18	ISSUED FOR PERMIT	[Name]
7	11-15-18	ISSUED FOR PERMIT	[Name]
8	11-15-18	ISSUED FOR PERMIT	[Name]
9	11-15-18	ISSUED FOR PERMIT	[Name]
10	11-15-18	ISSUED FOR PERMIT	[Name]

ATTACHMENT 3

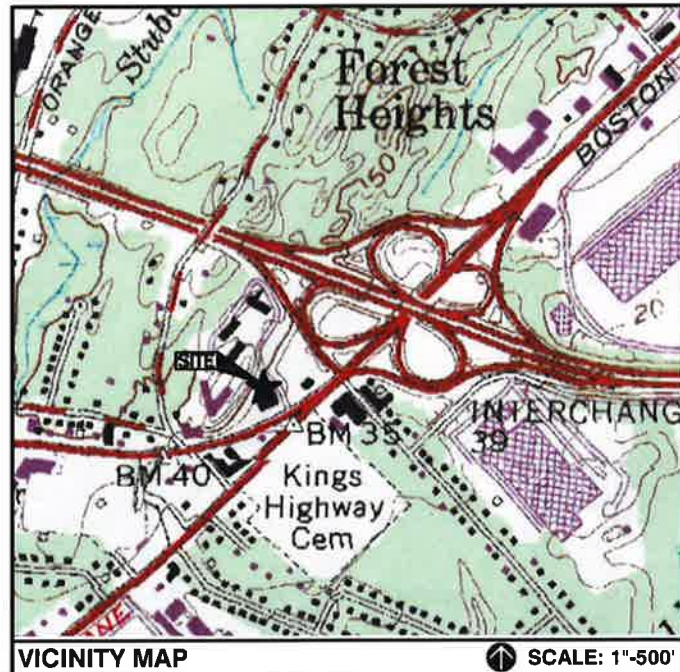
CELLCO PARTNERSHIP

d.b.a. **verizon**

WIRELESS COMMUNICATIONS FACILITY

FOREST HEIGHTS CT RELO

TEMPORARY SITE
1052 BOSTON POST ROAD
MILFORD, CT 06460



DIRECTIONS TO SITE:

GET ON I-91 S FROM CT-68 E
 HEAD NORTH ON ALEXANDER DR TOWARD BARNES INDUSTRIAL RD S
 TURN RIGHT ONTO BARNES INDUSTRIAL RD S
 TURN RIGHT ONTO CT-68 E
 TURN RIGHT ONTO THE INTERSTATE 91 S RAMP TO NEW HAVEN
 FOLLOW I-91 S AND I-95 S TO US-1 S/BOSTON POST RD IN MILFORD. TAKE
 EXIT 39A FROM I-95 S
 MERGE ONTO I-91 S
 MERGE ONTO I-95 S
 TAKE EXIT 39A TO MERGE ONTO US-1 S/BOSTON POST RD
 MERGE ONTO US-1 S/BOSTON POST RD
 DESTINATION WILL BE ON THE RIGHT
 1052 BOSTON POST RD, MILFORD, CT 06460

CONSULTANT TEAM	
PROJECT ENGINEER	HUDSON DESIGN GROUP, LLC 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: 1-(978)-557-5553 FAX: 1-(978)-336-5586
MEP ENGINEER	HUDSON DESIGN GROUP, LLC 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: 1-(978)-557-5553 FAX: 1-(978)-336-5586

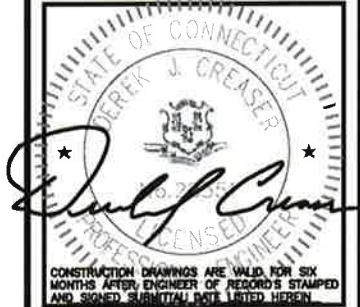
PROJECT SUMMARY	
VERIZON SITE NAME:	FOREST HEIGHTS CT RELO
AT&T SITE NAME:	CT2327
T-MOBILE SITE NAME:	CTNH007
SITE ADDRESS:	1052 BOSTON POST ROAD MILFORD, CT 06460
PROPERTY OWNER:	TURNPIKE LODGE INC C/O A L CRAFT 1052 BOSTON POST ROAD MILFORD, CT 06460
APPLICANT:	CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492
CO-APPLICANT:	AT&T 550 COCHITUATE ROAD FRAMINGHAM, MA 01701
CO-APPLICANT:	T-MOBILE NORTHEAST LLC 35 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002
LEGAL/REGULATORY COUNSEL:	KENNETH C. BALDWIN ESQ. ROBINSON + COLE LLP (860)275-8345
LATITUDE:	N41° 13' 58.31"
LONGITUDE:	W73° 02' 41.98"

SHEET INDEX	
SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
C-1	ABUTTERS PLAN
A-1	COMPOUND PLAN
A-2	ANTENNA LAYOUTS & ELEVATION

VERIZON SCOPE OF WORK INFO.	
VERIZON WIRELESS IS PROPOSING TO INSTALL THE FOLLOWING IMPROVEMENTS TO PROPOSED TELECOMMUNICATION SITE:	
• NEW ANTENNAS: (3) ANTENNA PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (9) ANTENNAS.	
• NEW RRHs: (3) RRH PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (9) RRHs	
• NEW TRIPLEXERS: (2) TRIPLEXERS PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (6) TRIPLEXERS	
NEW OVPs: (1) OVP TOTAL WITH ASSOCIATED CABLING AND APPURTENANCE ITEMS LISTED ABOVE TO BE MOUNTED ON PROPOSED TEMPORARY TOWER.	
• NEW EQUIPMENT CABINETS: (2) EQUIPMENT CABINETS ON PROPOSED CONCRETE PAD	
• NEW TRIPLEXERS: (2) TRIPLEXERS PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (6) TRIPLEXERS	
ITEMS LISTED ABOVE TO BE INSTALLED WITHIN PROPOSED TEMPORARY 10'x20' LEASE AREA	
• POWER AND TELCO SERVICES WILL BE ROUTED UNDERGROUND FROM LANDLORD PROVIDED METER CENTER TO PROPOSED H-FRAME. FINAL UTILITY ROUTING TO BE DETERMINED/VERIFIED BY UTILITY COMPANIES.	

AT&T SCOPE OF WORK INFO.	
THE PROPOSED ANTENNA INSTALLATION TO CONSIST OF (3) SECTORS OF (3) PANEL ANTENNAS EACH FOR A TOTAL OF (9) PANEL ANTENNAS AND ASSOCIATED CABLES & APPURTENANCES.	
THE PROPOSED RRH INSTALLATION TO CONSIST OF (3) SECTORS OF (5) RRH'S EACH FOR A TOTAL OF (15) RRHs	
THE PROPOSED JUNCTION BOX INSTALLATION TO CONSIST OF (12) JUNCTION BOX	

PREPARED FOR: CELLCO PARTNERSHIP D.B.A.



CHECKED BY: DJR

APPROVED BY: DPH

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
2	08/10/19	REVISED PER COMMENTS	GA
1	04/22/19	REVISED PER COMMENTS	GA
0	04/08/19	ISSUED FOR REVIEW	GA

SITE NAME:
FOREST HEIGHTS CT RELO
(TEMPORARY SITE)
CT2327
CTNH007
 SITE ADDRESS:
 1052 BOSTON POST ROAD
 MILFORD, CT 06460
 NEW HAVEN COUNTY

SHEET TITLE
TITLE SHEET

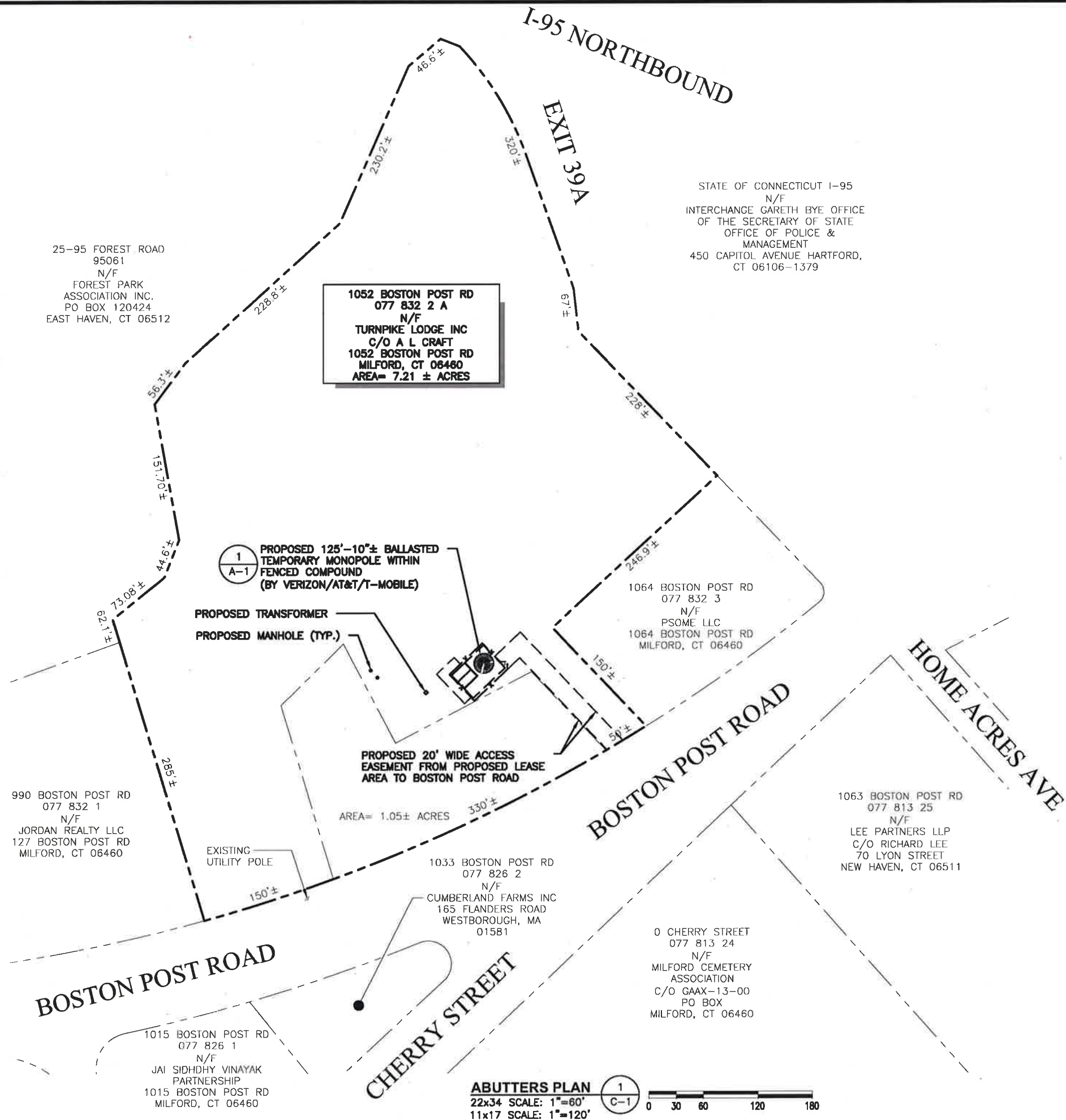
SHEET NUMBER
T-1

SOURCE:

CITY OF MILFORD, CT ONLINE GIS MAPS AND GOOGLE EARTH ACCESSED ON 04/02/19., AND SPATH-BJORKLUND ASSOCIATES, INC. DRAWING S-1 DATED 08/23/18.

SITE SPECIFIC NOTES:

1. VERIFY AZIMUTHS W/ RF ENGINEER.
2. PROPERTY LINE INFORMATION IS COMPILED FROM ASSESSORS PLAN AND RECORD DOCUMENTS AND IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. **A FULL BOUNDARY SURVEY WAS NOT PERFORMED.**



25-95 FOREST ROAD
95061
N/F
FOREST PARK
ASSOCIATION INC.
PO BOX 120424
EAST HAVEN, CT 06512

1052 BOSTON POST RD
077 832 2 A
N/F
TURNPIKE LODGE INC
C/O A L CRAFT
1052 BOSTON POST RD
MILFORD, CT 06460
AREA= 7.21 ± ACRES

STATE OF CONNECTICUT I-95
N/F
INTERCHANGE GARETH BYE OFFICE
OF THE SECRETARY OF STATE
OFFICE OF POLICE &
MANAGEMENT
450 CAPITOL AVENUE HARTFORD,
CT 06106-1379

1064 BOSTON POST RD
077 832 3
N/F
PSOME LLC
1064 BOSTON POST RD
MILFORD, CT 06460

990 BOSTON POST RD
077 832 1
N/F
JORDAN REALTY LLC
127 BOSTON POST RD
MILFORD, CT 06460

1033 BOSTON POST RD
077 826 2
N/F
CUMBERLAND FARMS INC
165 FLANDERS ROAD
WESTBOROUGH, MA
01581

1063 BOSTON POST RD
077 813 25
N/F
LEE PARTNERS LLP
C/O RICHARD LEE
70 LYON STREET
NEW HAVEN, CT 06511

0 CHERRY STREET
077 813 24
N/F
MILFORD CEMETERY
ASSOCIATION
C/O GAAX-13-00
PO BOX
MILFORD, CT 06460

1015 BOSTON POST RD
077 826 1
N/F
JAI SIDHDHY VINAYAK
PARTNERSHIP
1015 BOSTON POST RD
MILFORD, CT 06460



ABUTTERS PLAN
22x34 SCALE: 1"=60'
11x17 SCALE: 1"=120'

PREPARED FOR: CELCO PARTNERSHIP D.B.A.



**T-MOBILE
NORTHEAST LLC**
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 648-1116

**HG
HUDSON
Design Group LLC**
45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586



CHECKED BY: DJR

APPROVED BY: DPH

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
2	06/10/19	REVISED PER COMMENTS	GA
1	04/22/19	REVISED PER COMMENTS	GA
0	04/08/19	ISSUED FOR REVIEW	GA

SITE NAME:
**FOREST HEIGHTS CT
RELO
(TEMPORARY SITE)
CT2327
CTNH007**
SITE ADDRESS:
1052 BOSTON POST ROAD
MILFORD, CT 06460
NEW HAVEN COUNTY

SHEET TITLE
ABUTTERS PLAN

SHEET NUMBER
C-1

NOTE:
 AN ANALYSIS OF THE CAPACITY OF THE TEMPORARY STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC.
 DATED: APRIL 23, 2019

PREPARED FOR: CELCO PARTNERSHIP D.B.A.



CHECKED BY: DJR

APPROVED BY: DPH

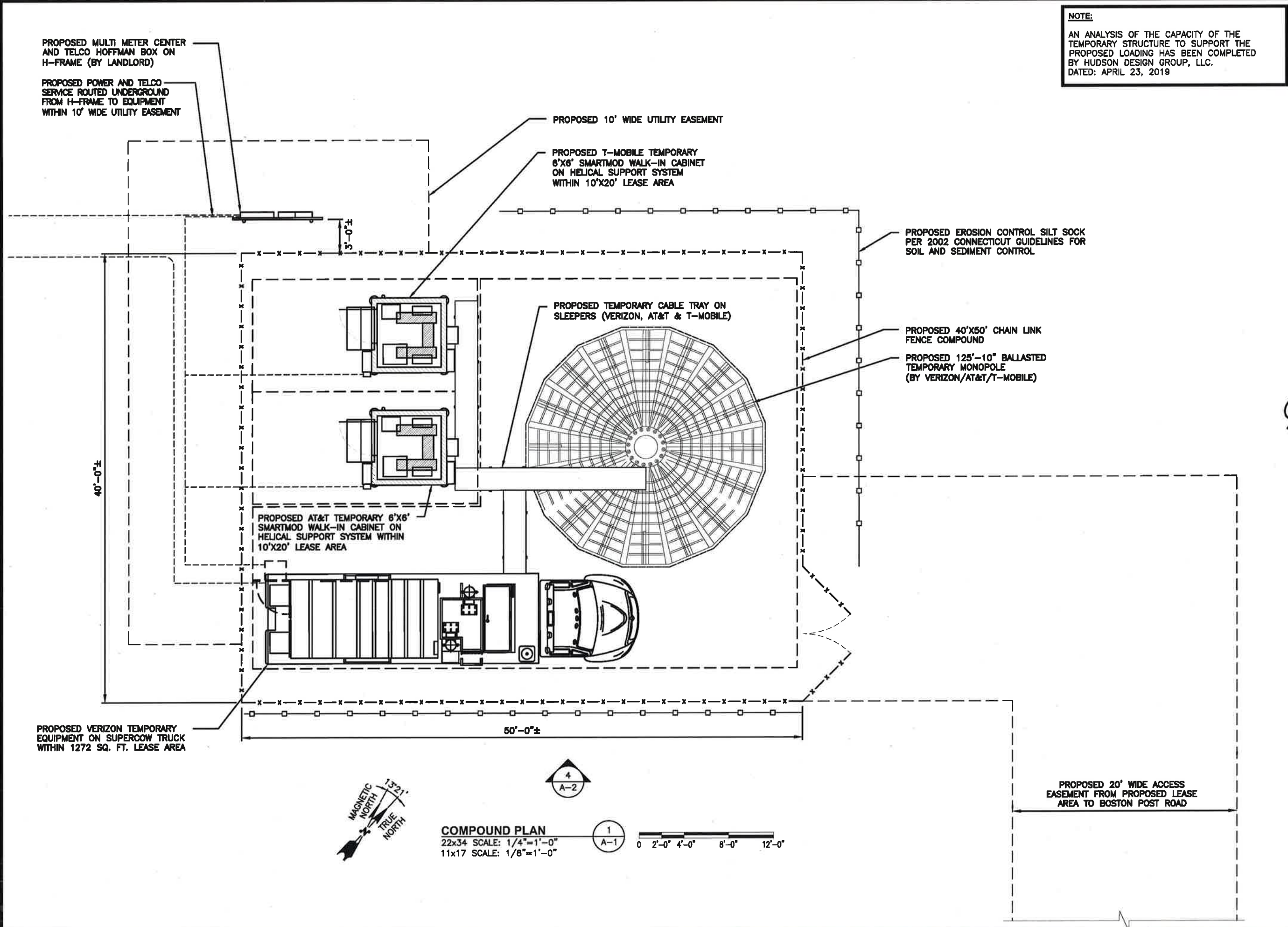
SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	06/10/19	REVISED PER COMMENTS	GA
1	04/22/19	REVISED PER COMMENTS	GA
0	04/08/19	ISSUED FOR REVIEW	GA

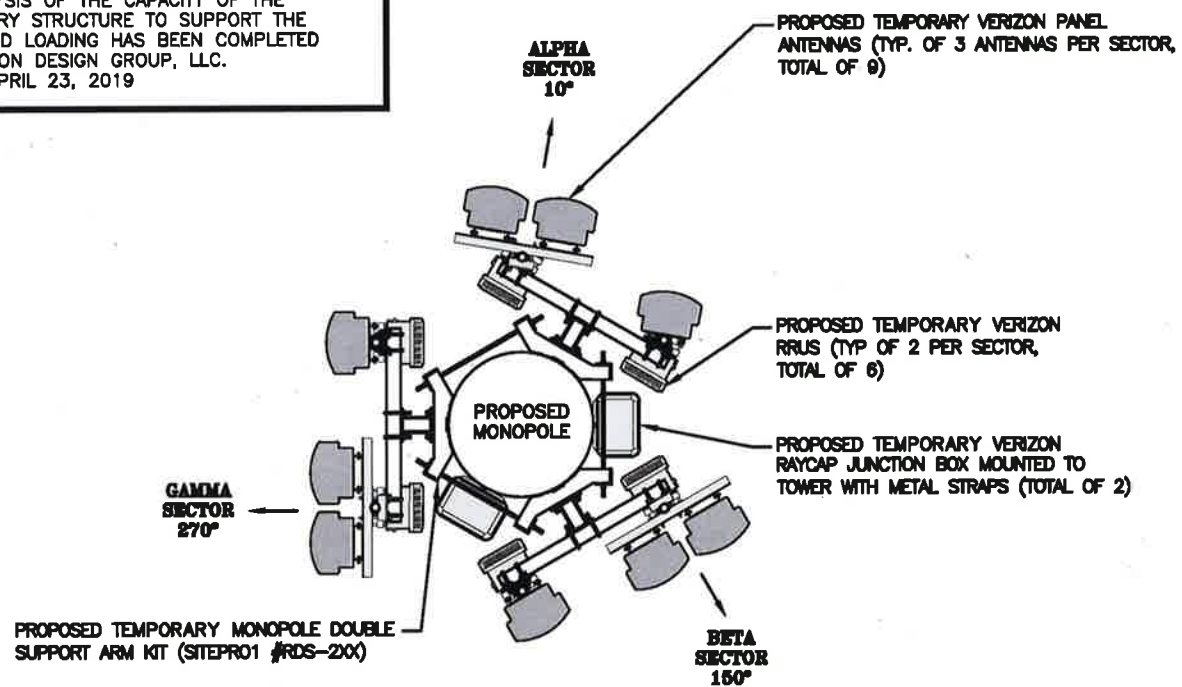
SITE NAME:
FOREST HEIGHTS CT RELO (TEMPORARY SITE)
 CT2327
 CTNH007
 SITE ADDRESS:
 1052 BOSTON POST ROAD
 MILFORD, CT 06460
 NEW HAVEN COUNTY

SHEET TITLE
COMPOUND PLAN

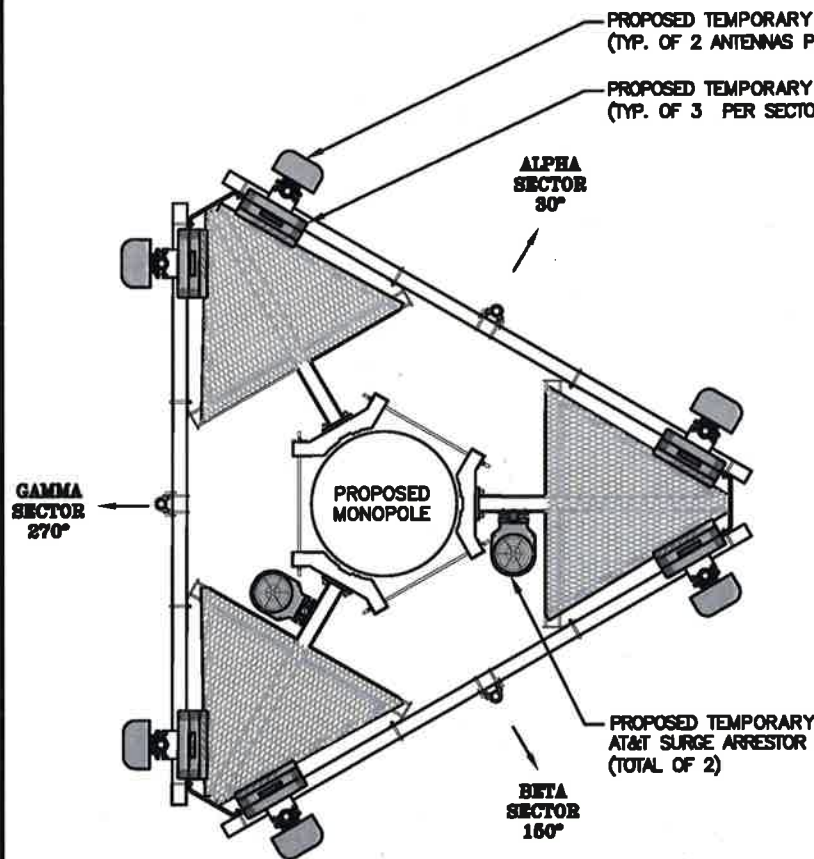
SHEET NUMBER
A-1



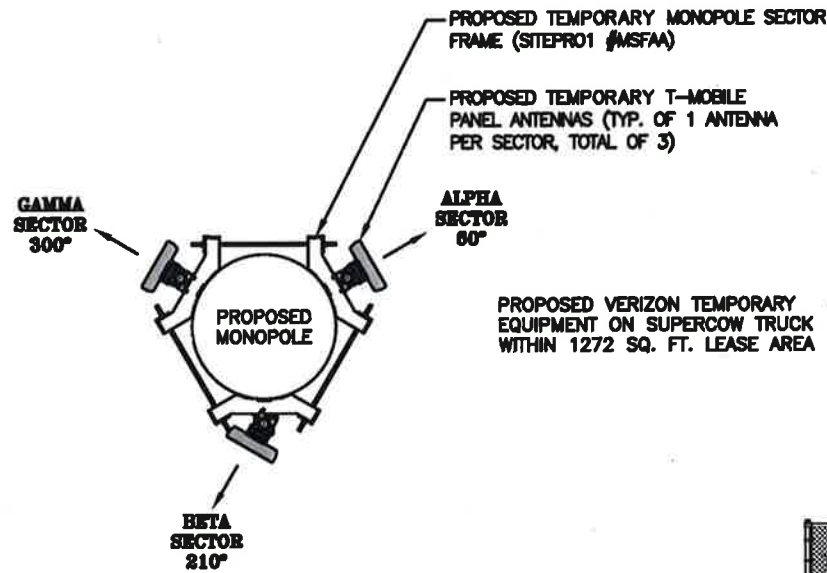
NOTE:
 AN ANALYSIS OF THE CAPACITY OF THE TEMPORARY STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DATED: APRIL 23, 2019



PROPOSED TEMPORARY VERIZON ANTENNA LAYOUT
 22x34 SCALE: 3/4"=1'-0"
 11x17 SCALE: 3/8"=1'-0"

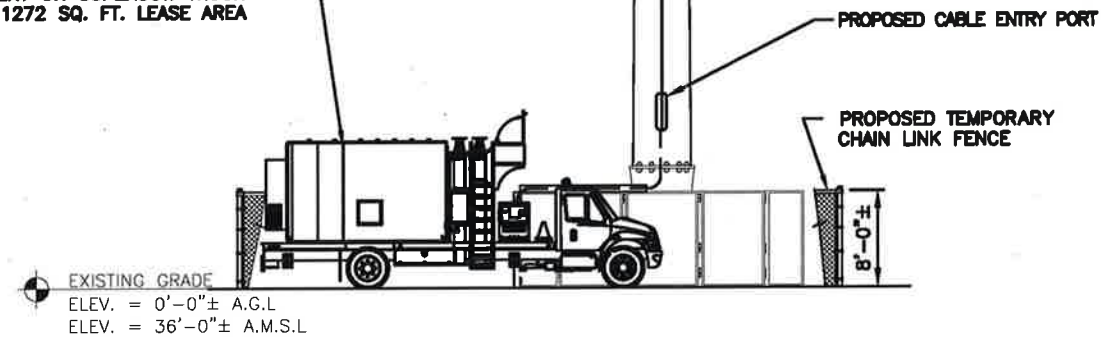


PROPOSED TEMPORARY AT&T ANTENNA LAYOUT
 22x34 SCALE: 1/2"=1'-0"
 11x17 SCALE: 1/4"=1'-0"

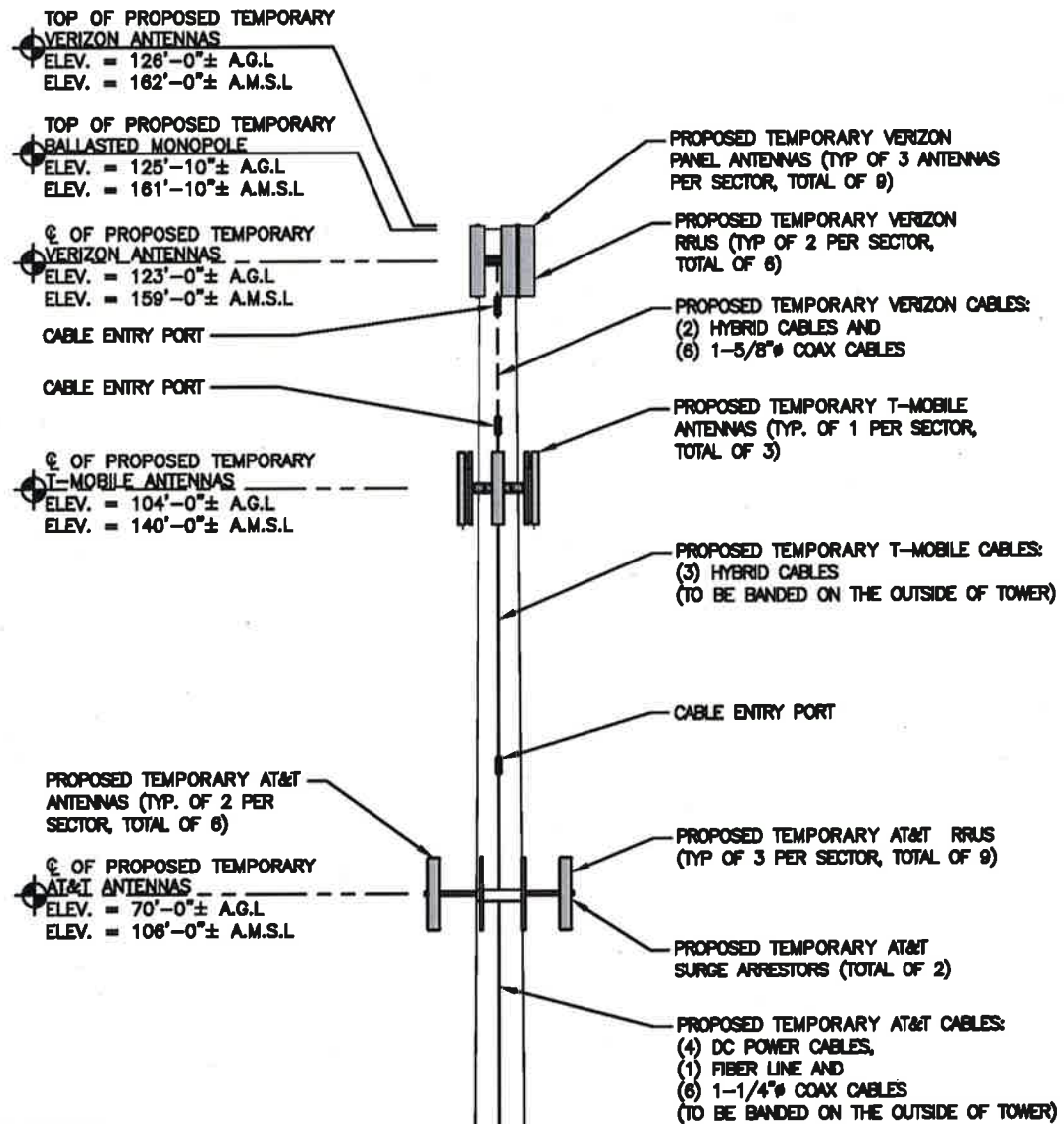


PROPOSED TEMPORARY T-MOBILE ANTENNA LAYOUT
 22x34 SCALE: 1/2"=1'-0"
 11x17 SCALE: 1/4"=1'-0"

PROPOSED VERIZON TEMPORARY EQUIPMENT ON SUPERCOW TRUCK WITHIN 1272 SQ. FT. LEASE AREA



TEMPORARY TOWER ELEVATION
 22x34 SCALE: 1/8"=1'-0"
 11x17 SCALE: 1/16"=1'-0"



PREPARED FOR: CELCO PARTNERSHIP D.B.A.



CHECKED BY: DJR

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	06/10/19	REVISED PER COMMENTS	GA
1	04/22/19	REVISED PER COMMENTS	GA
0	04/08/19	ISSUED FOR REVIEW	GA

SITE NAME:
FOREST HEIGHTS CT RELO (TEMPORARY SITE)
 CT2327
 CTNH007
 SITE ADDRESS:
 1052 BOSTON POST ROAD
 MILFORD, CT 06460
 NEW HAVEN COUNTY

SHEET TITLE
ANTENNA LAYOUTS & ELEVATION

SHEET NUMBER
A-2

ATTACHMENT 4

STRUCTURAL ANALYSIS REPORT

For

FOREST HEIGHTS CT RELO

1052 Boston Post Road
Milford, CT 06460

Antennas Mounted to the Temporary Monopole

Prepared for:

verizon[✓]

20 Alexander Drive
Wallingford, CT 06492

Dated: June 12, 2019 (Rev.1)
April 23, 2019

Prepared by:

H D G | **HUDSON**
Design Group LLC

45 Beechwood Drive
North Andover, MA 01845
(P) 978.557.5553 (F) 978.336.5586
www.hudsondesigngroupllc.com



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HUDSON
Design Group LLC

SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by Verizon to conduct a structural evaluation of the 117' monopole supporting the proposed Verizon's antennas located at elevation 123' above the ground level.

This report represents this office's findings, conclusions and recommendations pertaining to the support of Verizon's existing and proposed antennas listed below.

Drawings of the existing monopole prepared by Ambor Structures, dated June 29, 2015, were available for our use.

CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the existing monopole structure and base referenced above **IS IN CONFORMANCE** with the ANSI/TIA-222-G Standard for the loading considered under the criteria listed in this report. The monopole structure is rated at 90.0% - (Section L5 from EL.8.17 to EL.46.96' Controlling).



APPURTENANCES CONFIGURATION:

Tenant	Appurtenances	Elev.	Mount
VERIZON	(9) MX06FRO660 Antennas	123'	T-Arm
VERIZON	(3) B2/B66A RRH-BR049 RRHs	123'	T-Arm
VERIZON	(3) B5/B13 RRH-BR04C RRHs	123'	T-Arm
VERIZON	(2) OVPs	123'	T-Arm
T-Mobile	(3) APX16DWV-16DWVS Antennas	104'	Low-Profile Platform
T-Mobile	(6) Twin Style TMAs	104'	Low-Profile Platform
AT&T	(3) EPBQ-654L8H8 Antenna	70'	Low-Profile Platform
AT&T	(3) HPA6R-BU8A Antennas	70'	Low-Profile Platform
AT&T	(3) 4415 RRH's	70'	Low-Profile Platform
AT&T	(3) 4415 B30 RRH's	70'	Low-Profile Platform
AT&T	(3) B5/B12 4449 RRH's	70'	Low-Profile Platform
AT&T	(2) Squid Surge Arrestors	70'	Low-Profile Platform

***Proposed VERIZON Appurtenances shown in Bold.**

VERIZON EXISTING/PROPOSED COAX CABLES:

Tenant	Coax Cables	Elev.	Mount
VERIZON	(6) 1-5/8" Coax Cables	125'	Inside Monopole
VERIZON	(2) Hybrid Cables	125'	Inside Monopole
T-Mobile	(3) Hybrid Cables	104'	Face of Monopole
AT&T	(6) 1-1/4" Coax Cables	70'	Face of Monopole
AT&T	(1) Fiber Cable	70'	Face of Monopole
AT&T	(4) DC Power Cables	70'	Face of Monopole

***Proposed VERIZON Coax Cables shown in Bold.**



ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft)	Pass/Fail	Comments
Pole Section-L1	30.6 %	115.67 -125.67	PASS	
Pole Section-L2	69.0 %	105.67 – 115.67	PASS	
Pole Section-L3	79.7 %	85.67 – 105.67	PASS	
Pole Section-L4	82.7 %	46.96 – 85.67	PASS	
Pole Section-L5	90.0 %	8.17 – 46.96	PASS	Controlling
Base Plate	69.7 %	0	PASS	

BALLASTED FOUNDATION ANALYSIS RESULTS SUMMARY:

	Design Reactions*	Proposed Reactions	Max. Stress Ratio	Pass/Fail	Comments
Moment	2997 k-ft	2331.2 k-ft	77.8%	PASS	**w/ 251,000 lbs of ballast
Shear	35.1 k	35.3 k	100.6 %	ACCEPTABLE	

** Design Reactions have been multiplied by a factor of 1.35.*

*** Ballast to be 2'x2'x6' Concrete Waste Block, 3,600 lbs each.*



HUDSON
Design Group LLC

DESIGN CRITERIA:

1. EIA/TIA-222-G Structural Standards for Steel Antenna Towers and Antenna Supporting Structures
2. 2018 Connecticut State Building Code
 - County: New Haven
 - City/Town: Milford
 - Wind Load: 97 mph (3 second gust)
 - Structural Class: II
 - Exposure Category: B
 - Topographic Category: 1
 - Ice Thickness: 0.75 inch
3. Approximate height above grade to proposed antennas: 123'

Calculations and referenced documents are attached

ASSUMPTIONS:

1. The monopole dimensions, member sizes and material strength are as indicated in the construction drawings prepared by Ambor Structures, dated June 29, 2015.
2. The appurtenances configuration is as stated in the previous structural analysis reports. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
3. The monopole and foundation are properly constructed and maintained. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
4. The support mounts and platforms are not analyzed and are considered adequate to support the loading. The analysis is limited to the primary support structure itself.
5. All prior structural modification, if any, are assumed to be as per the data supplied (if available), and installed properly.

SUPPORT RECOMMENDATIONS:

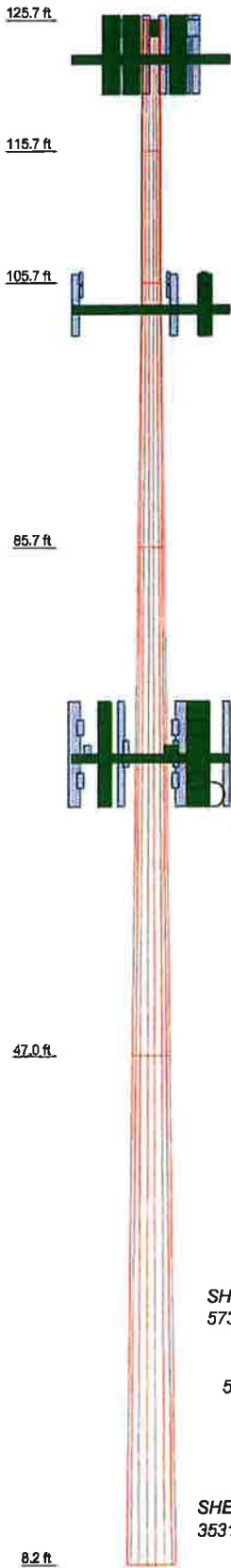
HDG recommends that the proposed antennas, RRHs and distribution box be mounted on the existing steel platform supported by the monopole.



HUDSON
Design Group LLC

CALCULATIONS

Section	1	2	3	4	5	
Length (ft)	10.00	10.00	20.00	38.71	38.79	9836.6
Number of Sides	18	18	18	18	18	
Thickness (in)	0.1570	0.1570	0.1970	0.2760	0.3150	
Top Dia (in)	15.7500	17.7200	17.7200	23.6200	33.8500	
Bot Dia (in)	17.7200	17.7200	23.6200	33.8600	44.0900	
Grade			A572-65			
Weight (lb)	281.1	297.8	871.2	3284.5	5101.9	



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
PIROD 10' Lightweight T-Frame (Verizon)	123	APX16DWV-16DWVS w/Mounting Pipe	104
PIROD 10' Lightweight T-Frame	123	APX16DWV-16DWVS w/Mounting Pipe	104
PIROD 10' Lightweight T-Frame	123	APX16DWV-16DWVS w/Mounting Pipe	104
MX06FRO660 Antenna w/Mounting Pipe	123	Gen. TMA	104
MX06FRO660 Antenna w/Mounting Pipe	123	Gen. TMA	104
MX06FRO660 Antenna w/Mounting Pipe	123	Gen. TMA	104
MX06FRO660 Antenna w/Mounting Pipe	123	Gen. TMA	104
MX06FRO660 Antenna w/Mounting Pipe	123	Gen. TMA	104
MX06FRO660 Antenna w/Mounting Pipe	123	PIROD 13' Low Profile Platform (Monopole) (AT)	70
MX06FRO660 Antenna w/Mounting Pipe	123	EPBQ-654L8H8-L2 w/Mounting Pipe	70
MX06FRO660 Antenna w/Mounting Pipe	123	HPA65R-BU8A w/Mounting Pipe	70
MX06FRO660 Antenna w/Mounting Pipe	123	4415 RRH	70
MX06FRO660 Antenna w/Mounting Pipe	123	4415 RRH	70
MX06FRO660 Antenna w/Mounting Pipe	123	4449 RRH	70
MX06FRO660 Antenna w/Mounting Pipe	123	4415 RRH	70
MX06FRO660 Antenna w/Mounting Pipe	123	4415 RRH	70
MX06FRO660 Antenna w/Mounting Pipe	123	4449 RRH	70
MX06FRO660 Antenna w/Mounting Pipe	123	4415 RRH	70
MX06FRO660 Antenna w/Mounting Pipe	123	4415 RRH	70
MX06FRO660 Antenna w/Mounting Pipe	123	4449 RRH	70
B2/B66A RRH-BRO049 RRH	123	4415 RRH	70
B2/B66A RRH-BRO049 RRH	123	4415 RRH	70
B2/B66A RRH-BRO049 RRH	123	4449 RRH	70
B5/B13 RRH-BR04C RRH	123	EPBQ-654L8H8-L2 w/Mounting Pipe	70
B5/B13 RRH-BR04C RRH	123	HPA65R-BU8A w/Mounting Pipe	70
B5/B13 RRH-BR04C RRH	123	4415 RRH	70
B5/B13 RRH-BR04C RRH	123	4415 RRH	70
B5/B13 RRH-BR04C RRH	123	4449 RRH	70
PIROD 13' Low Profile Platform (Monopole) (T-Mobile)	104	Squid Surge DC6-48-60-18-8F	70
APX16DWV-16DWVS w/Mounting Pipe	104	Squid Surge DC6-48-60-18-8F	70

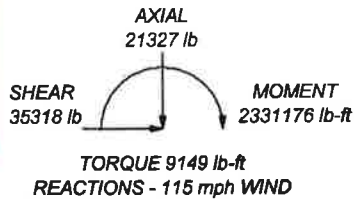
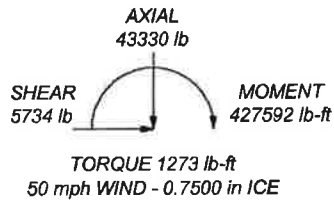
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 115 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 90%

ALL REACTIONS ARE FACTORED



Hudson Design Group LLC

45 Beechwood Drive
North Andover, MA 01845
Phone: (978) 557-5553
FAX: (978) 336-5586

Job: FOREST HEIGHTS CT RELO

Project:	Client: VERIZON	Drawn by: SO	App'd:
Code: TIA-222-G	Date: 06/11/19	Scale: NTS	Dwg No. E-1

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job FOREST HEIGHTS CT RELO	Page 1 of 15
	Project	Date 11:54:19 06/11/19
	Client VERIZON	Designed by SO

Tower Input Data

The tower is a monopole.

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

The following design criteria apply:

Tower is located in New Haven County, Connecticut.

Basic wind speed of 115 mph.

Structure Class II.

Exposure Category B.

Topographic Category 1.

Crest Height 0.00 ft.

Nominal ice thickness of 0.7500 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

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

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	125.67-115.67	10.00	0.00	18	15.7500	17.7200	0.1570	0.6280	A572-65 (65 ksi)
L2	115.67-105.67	10.00	0.00	18	17.7200	17.7200	0.1570	0.6280	A572-65 (65 ksi)
L3	105.67-85.67	20.00	0.00	18	17.7200	23.6200	0.1970	0.7880	A572-65 (65 ksi)
L4	85.67-46.96	38.71	0.00	18	23.6200	33.8600	0.2760	1.1040	A572-65 (65 ksi)
L5	46.96-8.17	38.79		18	33.8600	44.0900	0.3150	1.2600	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
L1	15.9687	7.7703	238.6894	5.5355	8.0010	29.8324	477.6928	3.8859	2.4957	15.896
	17.9691	8.7520	341.0673	6.2349	9.0018	37.8890	682.5835	4.3768	2.8424	18.104
L2	17.9691	8.7520	341.0673	6.2349	9.0018	37.8890	682.5835	4.3768	2.8424	18.104
	17.9691	8.7520	341.0673	6.2349	9.0018	37.8890	682.5835	4.3768	2.8424	18.104
L3	17.9630	10.9567	425.0460	6.2207	9.0018	47.2181	850.6514	5.4794	2.7720	14.071
	23.9540	14.6459	1015.1685	8.3152	11.9990	84.6047	2031.6729	7.3243	3.8104	19.342
L4	23.9418	20.4499	1407.9242	8.2871	11.9990	117.3372	2817.7010	10.2269	3.6714	13.302

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	FOREST HEIGHTS CT RELO	Page	2 of 15
	Project		Date	11:54:19 06/11/19
	Client	VERIZON	Designed by	SO

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
	34.3398	29.4204	4192.2842	11.9223	17.2009	243.7250	8390.0848	14.7130	5.4736	19.832
L5	34.3338	33.5386	4768.0227	11.9085	17.2009	277.1964	9542.3193	16.7725	5.4050	17.159
	44.7216	43.7667	10595.7912	15.5401	22.3977	473.0745	21205.5246	21.8875	7.2054	22.874

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A _r	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
L1 125.67-115.67				1	1	1			
L2 115.67-105.67				1	1	1			
L3 105.67-85.67				1	1	1			
L4 85.67-46.96				1	1	1			
L5 46.96-8.17				1	1	1			

Monopole Base Plate Data

Base Plate Data

Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615-75
Anchor bolt size	2.2500 in
Number of bolts	12
Embedment length	5.0000 in
f _c	3 ksi
Grout space	0.0000 in
Base plate grade	A572-60
Base plate thickness	2.7500 in
Bolt circle diameter	54.0000 in
Outer diameter	60.0000 in
Inner diameter	42.0000 in
Base plate type	Plain Plate

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
***** Hybrid Cable (T-Mobile) *****	C	No	Surface Ar (CaAa)	104.00 - 8.17	3	3	0.000 0.000	1.2500		1.70
DC Cable (AT&T)	C	No	Surface Ar (CaAa)	70.00 - 8.17	4	4	0.000 0.000	1.2500		0.40
Fiber Cable (AT&T)	C	No	Surface Ar (CaAa)	70.00 - 8.17	1	1	0.000 0.000	1.2500		0.48
LCF114-50J (1-1/4 FOAM) (AT&T)	C	No	Surface Af (CaAa)	70.00 - 8.17	6	1	0.000 0.000	1.5800	4.9612	0.70

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	FOREST HEIGHTS CT RELO	Page	3 of 15
	Project		Date	11:54:19 06/11/19
	Client	VERIZON	Designed by	SO

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C _{AA} ft ² /ft	Weight plf
LCF158-50J (1 5/8 FOAM) (VERIZON)	C	No	No	Inside Pole	123.00 - 8.17	6	No Ice	0.00	0.92
							1/2" Ice	0.00	0.92
							1" Ice	0.00	0.92
Hybrid Cable (VERIZON)	C	No	No	Inside Pole	123.00 - 8.17	2	No Ice	0.00	1.70
							1/2" Ice	0.00	1.70
							1" Ice	0.00	1.70

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight lb
L1	125.67-115.67	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	65.38
L2	115.67-105.67	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	89.20
L3	105.67-85.67	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	6.874	0.000	271.88
L4	85.67-46.96	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	34.983	0.000	687.50
L5	46.96-8.17	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	49.005	0.000	787.59

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight lb
L1	125.67-115.67	A	1.708	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	65.38
L2	115.67-105.67	A	1.693	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	89.20
L3	105.67-85.67	A	1.668	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	16.234	0.000	445.06
L4	85.67-46.96	A	1.607	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	117.161	0.000	2364.70
L5	46.96-8.17	A	1.470	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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Tower Section	Tower Elevation ft	Face or Leg C	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 lb
				0.000	0.000	168.954	0.000	3059.55

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
L1	125.67-115.67	0.0000	0.0000	0.0000	0.0000
L2	115.67-105.67	0.0000	0.0000	0.0000	0.0000
L3	105.67-85.67	0.0000	2.5756	0.0000	2.3886
L4	85.67-46.96	0.0000	6.0608	0.0000	7.7364
L5	46.96-8.17	0.0000	7.9297	0.0000	10.3942

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L3	4	Hybrid Cable	85.67 - 104.00	1.0000	1.0000
L4	4	Hybrid Cable	46.96 - 85.67	1.0000	1.0000
L4	6	DC Cable	46.96 - 70.00	1.0000	1.0000
L4	7	Fiber Cable	46.96 - 70.00	1.0000	1.0000
L4	8	LCF114-50J (1-1/4 FOAM)	46.96 - 70.00	1.0000	1.0000
L5	4	Hybrid Cable	8.17 - 46.96	1.0000	1.0000
L5	6	DC Cable	8.17 - 46.96	1.0000	1.0000
L5	7	Fiber Cable	8.17 - 46.96	1.0000	1.0000
L5	8	LCF114-50J (1-1/4 FOAM)	8.17 - 46.96	1.0000	1.0000

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 lb	
PiROD 10' Lightweight T-Frame (Verizon)	A	From Face	0.00	0.0000	123.00	No Ice	9.30	9.30	251.00
			0.00			1/2" Ice	14.50	14.50	344.00
			0.00			1" Ice	19.70	19.70	437.00
PiROD 10' Lightweight T-Frame	B	From Face	0.00	0.0000	123.00	No Ice	9.30	9.30	251.00
			0.00			1/2" Ice	14.50	14.50	344.00

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _A A _A Front	C _A A _A Side	Weight	
			Horz	Lateral						ft
			ft	ft	°	ft	ft ²	ft ²	lb	
w/Mounting Pipe			-4.00			1/2" Ice	7.26	4.41	111.44	
			0.00			1" Ice	7.73	5.13	166.82	
APX16DWV-16DWVS	C	From Face	3.50		0.0000	104.00	No Ice	6.78	3.57	62.60
w/Mounting Pipe			-4.00				1/2" Ice	7.26	4.41	111.44
			0.00				1" Ice	7.73	5.13	166.82
Gen. TMA	A	From Face	3.00		0.0000	104.00	No Ice	0.56	0.37	16.00
			-4.00				1/2" Ice	0.66	0.45	21.11
			1.00				1" Ice	0.76	0.55	27.78
Gen. TMA	B	From Face	3.00		0.0000	104.00	No Ice	0.56	0.37	16.00
			-4.00				1/2" Ice	0.66	0.45	21.11
			1.00				1" Ice	0.76	0.55	27.78
Gen. TMA	C	From Face	3.00		0.0000	104.00	No Ice	0.56	0.37	16.00
			-4.00				1/2" Ice	0.66	0.45	21.11
			1.00				1" Ice	0.76	0.55	27.78
Gen. TMA	A	From Face	3.00		0.0000	104.00	No Ice	0.56	0.37	16.00
			-4.00				1/2" Ice	0.66	0.45	21.11
			2.00				1" Ice	0.76	0.55	27.78
Gen. TMA	B	From Face	3.00		0.0000	104.00	No Ice	0.56	0.37	16.00
			-4.00				1/2" Ice	0.66	0.45	21.11
			2.00				1" Ice	0.76	0.55	27.78
Gen. TMA	C	From Face	3.00		0.0000	104.00	No Ice	0.56	0.37	16.00
			-4.00				1/2" Ice	0.66	0.45	21.11
			2.00				1" Ice	0.76	0.55	27.78

PiROD 13' Low Profile Platform (Monopole) (AT&T)	C	None			0.0000	70.00	No Ice	15.70	15.70	1300.00
							1/2" Ice	20.10	20.10	1765.00
							1" Ice	24.50	24.50	2230.00
EPBQ-654L8H8-L2 w/Mounting Pipe	A	From Face	3.50		0.0000	70.00	No Ice	18.09	8.93	115.20
			-3.50				1/2" Ice	18.72	10.35	229.55
			0.00				1" Ice	19.36	11.61	354.16
HPA65R-BU8A w/Mounting Pipe	A	From Face	3.50		0.0000	70.00	No Ice	11.23	9.94	83.20
			3.50				1/2" Ice	11.85	11.37	170.99
			0.00				1" Ice	12.47	12.64	268.54
4415 RRH	A	From Face	3.00		0.0000	70.00	No Ice	1.64	0.68	44.00
			-3.50				1/2" Ice	1.80	0.79	56.43
			2.00				1" Ice	1.97	0.91	71.23
4415 RRH	A	From Face	3.00		0.0000	70.00	No Ice	1.64	0.68	44.00
			-3.50				1/2" Ice	1.80	0.79	56.43
			-2.00				1" Ice	1.97	0.91	71.23
4449 RRH	A	From Face	3.50		0.0000	70.00	No Ice	1.63	1.16	74.00
			-1.50				1/2" Ice	1.78	1.29	89.95
			0.00				1" Ice	1.95	1.44	108.51
EPBQ-654L8H8-L2 w/Mounting Pipe	B	From Face	3.50		0.0000	70.00	No Ice	18.09	8.93	115.20
			-3.50				1/2" Ice	18.72	10.35	229.55
			0.00				1" Ice	19.36	11.61	354.16
HPA65R-BU8A w/Mounting Pipe	B	From Face	3.50		0.0000	70.00	No Ice	11.23	9.94	83.20
			3.50				1/2" Ice	11.85	11.37	170.99
			0.00				1" Ice	12.47	12.64	268.54
4415 RRH	B	From Face	3.00		0.0000	70.00	No Ice	1.64	0.68	44.00
			-3.50				1/2" Ice	1.80	0.79	56.43
			2.00				1" Ice	1.97	0.91	71.23
4415 RRH	B	From Face	3.00		0.0000	70.00	No Ice	1.64	0.68	44.00
			-3.50				1/2" Ice	1.80	0.79	56.43
			-2.00				1" Ice	1.97	0.91	71.23
4449 RRH	B	From Face	3.50		0.0000	70.00	No Ice	1.63	1.16	74.00
			-1.50				1/2" Ice	1.78	1.29	89.95

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			ft	°	ft	ft ²	ft ²	lb
			0.00			1" Ice 1.95	1.44	108.51
EPBQ-654L8H8-L2 w/Mounting Pipe	C	From Face	3.50	0.0000	70.00	No Ice 18.09	8.93	115.20
			-3.50			1/2" Ice 18.72	10.35	229.55
			0.00			1" Ice 19.36	11.61	354.16
HPA65R-BU8A w/Mounting Pipe	C	From Face	3.50	0.0000	70.00	No Ice 11.23	9.94	83.20
			3.50			1/2" Ice 11.85	11.37	170.99
			0.00			1" Ice 12.47	12.64	268.54
4415 RRH	C	From Face	3.00	0.0000	70.00	No Ice 1.64	0.68	44.00
			-3.50			1/2" Ice 1.80	0.79	56.43
			2.00			1" Ice 1.97	0.91	71.23
4415 RRH	C	From Face	3.00	0.0000	70.00	No Ice 1.64	0.68	44.00
			-3.50			1/2" Ice 1.80	0.79	56.43
			-2.00			1" Ice 1.97	0.91	71.23
4449 RRH	C	From Face	3.50	0.0000	70.00	No Ice 1.63	1.16	74.00
			-1.50			1/2" Ice 1.78	1.29	89.95
			0.00			1" Ice 1.95	1.44	108.51
Squid Surge DC6-48-60-18-8F	A	From Face	1.00	0.0000	70.00	No Ice 0.81	0.81	33.00
			0.00			1/2" Ice 1.30	1.30	48.38
			0.00			1" Ice 1.48	1.48	66.11
Squid Surge DC6-48-60-18-8F	B	From Face	1.00	0.0000	70.00	No Ice 0.81	0.81	33.00
			0.00			1/2" Ice 1.30	1.30	48.38
			0.00			1" Ice 1.48	1.48	66.11

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice

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Comb. No.	Description
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	26	43329.90	-0.98	1.01
	Max. H _x	20	21326.46	35317.88	-0.02
	Max. H _z	3	15994.81	0.00	23978.27
	Max. M _x	2	1913777.70	0.00	23977.15
	Max. M _z	8	2330070.89	-35317.88	-0.02
	Max. Torsion	20	9148.53	35317.88	-0.02
	Min. Vert	21	15994.77	35317.59	-0.03
	Min. H _x	8	21326.46	-35317.88	-0.02
	Min. H _z	15	15994.81	0.00	-23978.27
	Min. M _x	14	-1915985.67	0.00	-23977.15
	Min. M _z	20	-2331175.29	35317.88	-0.02
	Min. Torsion	8	-9148.64	-35317.88	-0.02

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead Only	17772.22	0.08	0.05	911.92	444.84	-0.03
1.2 Dead+1.6 Wind 0 deg - No Ice	21326.39	-0.00	-23977.15	-1913777.70	559.27	-275.90
0.9 Dead+1.6 Wind 0 deg - No Ice	15994.81	-0.00	-23978.27	-1900119.23	412.39	-282.23

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<i>Load Combination</i>	<i>Vertical lb</i>	<i>Shear_x lb</i>	<i>Shear_z lb</i>	<i>Overturing Moment, M_x lb-ft</i>	<i>Overturing Moment, M_z lb-ft</i>	<i>Torque lb-ft</i>
1.2 Dead+1.6 Wind 30 deg - No Ice	21326.66	11990.38	-20767.93	-1657542.07	-957061.32	-410.05
0.9 Dead+1.6 Wind 30 deg - No Ice	15994.99	11990.37	-20767.92	-1645650.02	-950182.98	-418.12
1.2 Dead+1.6 Wind 60 deg - No Ice	21326.66	25439.11	-14687.28	-1022493.85	-1772358.36	2296.04
0.9 Dead+1.6 Wind 60 deg - No Ice	15994.99	25439.10	-14687.27	-1015556.78	-1760012.85	2288.42
1.2 Dead+1.6 Wind 90 deg - No Ice	21326.46	35317.88	0.02	1081.77	-2330070.89	9148.64
0.9 Dead+1.6 Wind 90 deg - No Ice	15994.77	35317.59	0.03	812.79	-2314543.68	9144.27
1.2 Dead+1.6 Wind 120 deg - No Ice	21326.66	25439.11	14687.28	1024697.03	-1772361.22	2571.54
0.9 Dead+1.6 Wind 120 deg - No Ice	15994.99	25439.10	14687.27	1017208.81	-1760014.84	2570.34
1.2 Dead+1.6 Wind 150 deg - No Ice	21326.66	11990.38	20767.93	1659750.31	-957060.98	67.78
0.9 Dead+1.6 Wind 150 deg - No Ice	15994.99	11990.37	20767.92	1647305.63	-950182.63	70.68
1.2 Dead+1.6 Wind 180 deg - No Ice	21326.39	-0.00	23977.15	1915985.67	559.31	275.93
0.9 Dead+1.6 Wind 180 deg - No Ice	15994.81	-0.00	23978.27	1901774.57	412.41	282.26
1.2 Dead+1.6 Wind 210 deg - No Ice	21326.66	-11990.38	20767.93	1659745.94	958176.57	410.07
0.9 Dead+1.6 Wind 210 deg - No Ice	15994.99	-11990.37	20767.92	1647302.57	951005.05	418.15
1.2 Dead+1.6 Wind 240 deg - No Ice	21326.66	-25439.11	14687.28	1024692.56	1773471.08	-2296.11
0.9 Dead+1.6 Wind 240 deg - No Ice	15994.99	-25439.10	14687.27	1017205.70	1760833.25	-2288.48
1.2 Dead+1.6 Wind 270 deg - No Ice	21326.46	-35317.88	0.02	1081.80	2331175.29	-9148.53
0.9 Dead+1.6 Wind 270 deg - No Ice	15994.77	-35317.59	0.03	812.80	2315358.25	-9144.20
1.2 Dead+1.6 Wind 300 deg - No Ice	21326.66	-25439.11	-14687.28	-1022489.30	1773468.16	-2571.53
0.9 Dead+1.6 Wind 300 deg - No Ice	15994.99	-25439.10	-14687.27	-1015553.61	1760831.23	-2570.32
1.2 Dead+1.6 Wind 330 deg - No Ice	21326.66	-11990.38	-20767.93	-1657537.64	958176.84	-67.80
0.9 Dead+1.6 Wind 330 deg - No Ice	15994.99	-11990.37	-20767.92	-1645646.93	951005.36	-70.70
1.2 Dead+1.0 Ice+1.0 Temp	43329.90	0.98	-1.01	8128.05	964.23	-0.12
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	43329.89	0.00	-4770.99	-382272.94	1073.81	-39.47
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	43329.89	2385.50	-4131.80	-329947.87	-194206.83	-63.93
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	43329.89	4341.20	-2506.39	-189311.47	-341178.06	252.62
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	43329.89	5734.13	-0.00	8286.29	-425365.46	1272.32
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	43329.89	4341.20	2506.38	205886.79	-341177.59	291.99
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	43329.89	2385.50	4131.79	346522.77	-194206.17	4.26
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	43329.89	0.00	4770.98	398847.48	1073.82	39.28
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	43329.89	-2385.49	4131.79	346522.37	196353.56	63.74

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Load Combination	Vertical	Shear _x	Shear _y	Overturning Moment, M _x	Overturning Moment, M _y	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	43329.89	-4341.19	2506.38	205886.40	343324.49	-252.81
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	43329.89	-5734.12	-0.00	8286.30	427511.99	-1272.50
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	43329.89	-4341.19	-2506.39	-189311.04	343324.95	-292.18
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	43329.89	-2385.49	-4131.80	-329947.44	196354.20	-4.45
Dead+Wind 0 deg - Service	17772.21	0.00	-3649.67	-289730.90	468.68	-43.65
Dead+Wind 30 deg - Service	17772.21	1824.84	-3160.71	-250791.99	-144853.72	-64.63
Dead+Wind 60 deg - Service	17772.21	3871.76	-2235.36	-154446.66	-268623.18	348.18
Dead+Wind 90 deg - Service	17772.21	5375.75	0.00	913.35	-353425.53	1398.33
Dead+Wind 120 deg - Service	17772.21	3871.76	2235.36	156273.98	-268623.23	391.79
Dead+Wind 150 deg - Service	17772.21	1824.84	3160.71	252619.40	-144853.72	10.96
Dead+Wind 180 deg - Service	17772.21	0.00	3649.67	291558.31	468.68	43.64
Dead+Wind 210 deg - Service	17772.21	-1824.83	3160.71	252619.31	145791.03	64.62
Dead+Wind 240 deg - Service	17772.21	-3871.75	2235.36	156273.89	269560.42	-348.19
Dead+Wind 270 deg - Service	17772.21	-5375.74	0.00	913.35	354362.61	-1398.34
Dead+Wind 300 deg - Service	17772.21	-3871.75	-2235.36	-154446.56	269560.36	-391.80
Dead+Wind 330 deg - Service	17772.21	-1824.83	-3160.71	-250791.90	145791.02	-10.98

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
1	0.00	-17772.22	0.00	-0.08	17772.22	-0.05	0.001%
2	0.00	-21326.66	-23980.85	0.00	21326.39	23977.15	0.012%
3	0.00	-15995.00	-23980.85	0.00	15994.81	23978.27	0.009%
4	11990.42	-21326.66	-20768.02	-11990.38	21326.66	20767.93	0.000%
5	11990.42	-15995.00	-20768.02	-11990.37	15994.99	20767.92	0.000%
6	25439.20	-21326.66	-14687.33	-25439.11	21326.66	14687.28	0.000%
7	25439.20	-15995.00	-14687.33	-25439.10	15994.99	14687.27	0.000%
8	35320.40	-21326.66	0.00	-35317.88	21326.46	-0.02	0.006%
9	35320.40	-15995.00	0.00	-35317.59	15994.77	-0.03	0.007%
10	25439.20	-21326.66	14687.33	-25439.11	21326.66	-14687.28	0.000%
11	25439.20	-15995.00	14687.33	-25439.10	15994.99	-14687.27	0.000%
12	11990.42	-21326.66	20768.02	-11990.38	21326.66	-20767.93	0.000%
13	11990.42	-15995.00	20768.02	-11990.37	15994.99	-20767.92	0.000%
14	0.00	-21326.66	23980.85	0.00	21326.39	-23977.15	0.012%
15	0.00	-15995.00	23980.85	0.00	15994.81	-23978.27	0.009%
16	-11990.42	-21326.66	20768.02	11990.38	21326.66	-20767.93	0.000%
17	-11990.42	-15995.00	20768.02	11990.37	15994.99	-20767.92	0.000%
18	-25439.20	-21326.66	14687.33	25439.11	21326.66	-14687.28	0.000%
19	-25439.20	-15995.00	14687.33	25439.10	15994.99	-14687.27	0.000%
20	-35320.40	-21326.66	0.00	35317.88	21326.46	-0.02	0.006%
21	-35320.40	-15995.00	0.00	35317.59	15994.77	-0.03	0.007%
22	-25439.20	-21326.66	-14687.33	25439.11	21326.66	14687.28	0.000%
23	-25439.20	-15995.00	-14687.33	25439.10	15994.99	14687.27	0.000%
24	-11990.42	-21326.66	-20768.02	11990.38	21326.66	20767.93	0.000%
25	-11990.42	-15995.00	-20768.02	11990.37	15994.99	20767.92	0.000%
26	0.00	-43329.90	0.00	-0.98	43329.90	1.01	0.003%
27	0.00	-43329.90	-4771.63	-0.00	43329.89	4770.99	0.001%
28	2385.81	-43329.90	-4132.35	-2385.50	43329.89	4131.80	0.001%
29	4341.75	-43329.90	-2506.71	-4341.20	43329.89	2506.39	0.001%
30	5734.79	-43329.90	0.00	-5734.13	43329.89	0.00	0.002%
31	4341.75	-43329.90	2506.71	-4341.20	43329.89	-2506.38	0.001%
32	2385.81	-43329.90	4132.35	-2385.50	43329.89	-4131.79	0.001%

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Load Comb.	Sum of Applied Forces				Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb		
33	0.00	-43329.90	4771.63	-0.00	43329.89	-4770.98	0.001%	
34	-2385.81	-43329.90	4132.35	2385.49	43329.89	-4131.79	0.001%	
35	-4341.75	-43329.90	2506.71	4341.19	43329.89	-2506.38	0.001%	
36	-5734.79	-43329.90	0.00	5734.12	43329.89	0.00	0.002%	
37	-4341.75	-43329.90	-2506.71	4341.19	43329.89	2506.39	0.001%	
38	-2385.81	-43329.90	-4132.35	2385.49	43329.89	4131.80	0.001%	
39	0.00	-17772.22	-3650.45	-0.00	17772.21	3649.67	0.004%	
40	1825.23	-17772.22	-3161.38	-1824.84	17772.21	3160.71	0.004%	
41	3872.45	-17772.22	-2235.76	-3871.76	17772.21	2235.36	0.004%	
42	5376.60	-17772.22	0.00	-5375.75	17772.21	-0.00	0.005%	
43	3872.45	-17772.22	2235.76	-3871.76	17772.21	-2235.36	0.004%	
44	1825.23	-17772.22	3161.38	-1824.84	17772.21	-3160.71	0.004%	
45	0.00	-17772.22	3650.45	-0.00	17772.21	-3649.67	0.004%	
46	-1825.23	-17772.22	3161.38	1824.83	17772.21	-3160.71	0.004%	
47	-3872.45	-17772.22	2235.76	3871.75	17772.21	-2235.36	0.004%	
48	-5376.60	-17772.22	0.00	5375.74	17772.21	-0.00	0.005%	
49	-3872.45	-17772.22	-2235.76	3871.75	17772.21	2235.36	0.004%	
50	-1825.23	-17772.22	-3161.38	1824.83	17772.21	3160.71	0.004%	

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	13	0.00000001	0.00000001
2	Yes	25	0.00007641	0.00009337
3	Yes	25	0.00005349	0.00007151
4	Yes	32	0.00000001	0.00008278
5	Yes	31	0.00000001	0.00009593
6	Yes	32	0.00000001	0.00008385
7	Yes	31	0.00000001	0.00009649
8	Yes	26	0.00004833	0.00008309
9	Yes	25	0.00005274	0.00009238
10	Yes	32	0.00000001	0.00008324
11	Yes	31	0.00000001	0.00009576
12	Yes	32	0.00000001	0.00008335
13	Yes	31	0.00000001	0.00009668
14	Yes	25	0.00007644	0.00009339
15	Yes	25	0.00005351	0.00007153
16	Yes	32	0.00000001	0.00008493
17	Yes	31	0.00000001	0.00009851
18	Yes	32	0.00000001	0.00008287
19	Yes	31	0.00000001	0.00009517
20	Yes	26	0.00004829	0.00008314
21	Yes	25	0.00005271	0.00009242
22	Yes	32	0.00000001	0.00008347
23	Yes	31	0.00000001	0.00009589
24	Yes	32	0.00000001	0.00008433
25	Yes	31	0.00000001	0.00009771
26	Yes	13	0.00000001	0.00009955
27	Yes	28	0.00000001	0.00001266
28	Yes	28	0.00000001	0.00002458
29	Yes	28	0.00000001	0.00002505
30	Yes	28	0.00000001	0.00001343
31	Yes	28	0.00000001	0.00002548
32	Yes	28	0.00000001	0.00002513
33	Yes	28	0.00000001	0.00001288

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34	Yes	28	0.00000001	0.00002625
35	Yes	28	0.00000001	0.00002595
36	Yes	28	0.00000001	0.00001363
37	Yes	28	0.00000001	0.00002550
38	Yes	28	0.00000001	0.00002566
39	Yes	24	0.00000001	0.00003586
40	Yes	24	0.00000001	0.00003123
41	Yes	24	0.00000001	0.00003242
42	Yes	24	0.00000001	0.00003884
43	Yes	24	0.00000001	0.00003202
44	Yes	24	0.00000001	0.00003147
45	Yes	24	0.00000001	0.00003578
46	Yes	24	0.00000001	0.00003233
47	Yes	24	0.00000001	0.00003196
48	Yes	24	0.00000001	0.00003917
49	Yes	24	0.00000001	0.00003231
50	Yes	24	0.00000001	0.00003198

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	125.67 - 115.67	16.003	48	1.3192	0.0021
L2	115.67 - 105.67	13.259	48	1.2859	0.0020
L3	105.67 - 85.67	10.686	48	1.1541	0.0024
L4	85.67 - 46.96	6.515	48	0.8334	0.0028
L5	46.96 - 8.17	1.552	48	0.3876	0.0018

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
123.00	PiROD 10' Lightweight T-Frame	48	15.264	1.3163	0.0019	14607
104.00	PiROD 13' Low Profile Platform (Monopole)	48	10.287	1.1272	0.0024	3333
70.00	PiROD 13' Low Profile Platform (Monopole)	48	4.027	0.6289	0.0026	4547

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	125.67 - 115.67	104.746	20	8.6064	0.0136
L2	115.67 - 105.67	86.898	20	8.4048	0.0130
L3	105.67 - 85.67	70.111	20	7.5610	0.0153
L4	85.67 - 46.96	42.810	20	5.4749	0.0179
L5	46.96 - 8.17	10.211	20	2.5497	0.0115

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Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
123.00	PiROD 10' Lightweight T-Frame	20	99.940	8.5914	0.0129	2497
104.00	PiROD 13' Low Profile Platform (Monopole)	20	67.503	7.3873	0.0157	532
70.00	PiROD 13' Low Profile Platform (Monopole)	20	26.478	4.1354	0.0167	701

Base Plate Design Data

Plate Thickness	Number of Anchor Bolts	Anchor Bolt Size	Actual Allowable Ratio Bolt Tension lb	Actual Allowable Ratio Concrete Stress ksi	Actual Allowable Ratio Plate Stress ksi	Actual Allowable Ratio Stiffener Stress ksi	Controlling Condition	Critical Ratio
in		in						
2.7500	12	2.2500	135310.00 223654.40 0.60	2.134 3.060 0.70	35.714 54.000 0.66		Conc fc	0.70 ✓

Compression Checks

Pole Design Data

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio P _u / φP _n
	ft		ft	ft		in ²	lb	lb	
L1	125.67 - 115.67 (1)	TP17.72x15.75x0.157	10.00	117.50	226.1	8.7520	-1708.68	38659.90	0.044
L2	115.67 - 105.67 (2)	TP17.72x17.72x0.157	10.00	117.50	226.1	8.7520	-2214.21	38659.90	0.057
L3	105.67 - 85.67 (3)	TP23.62x17.72x0.197	20.00	117.50	169.6	14.6459	-5392.98	115069.00	0.047
L4	85.67 - 46.96 (4)	TP33.86x23.62x0.276	38.71	117.50	118.3	29.4204	-13067.50	475195.00	0.027
L5	46.96 - 8.17 (5)	TP44.09x33.86x0.315	38.79	117.50	90.7	43.7667	-21288.70	1196820.00	0.018

Pole Bending Design Data

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Section No.	Elevation ft	Size	M_{ux} lb-ft	ϕM_{nx} lb-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} lb-ft	ϕM_{ny} lb-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	125.67 - 115.67 (1)	TP17.72x15.75x0.157	59522.58	227636.67	0.261	0.00	227636.67	0.000
L2	115.67 - 105.67 (2)	TP17.72x17.72x0.157	143779.17	227636.67	0.632	0.00	227636.67	0.000
L3	105.67 - 85.67 (3)	TP23.62x17.72x0.197	373872.50	499067.50	0.749	0.00	499067.50	0.000
L4	85.67 - 46.96 (4)	TP33.86x23.62x0.276	1139591.67	1427158.33	0.799	0.00	1427158.33	0.000
L5	46.96 - 8.17 (5)	TP44.09x33.86x0.315	2331175.00	2643175.00	0.882	0.00	2643175.00	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	125.67 - 115.67 (1)	TP17.72x15.75x0.157	8132.69	315490.00	0.026	114.38	456444.17	0.000
L2	115.67 - 105.67 (2)	TP17.72x17.72x0.157	8721.03	315490.00	0.028	114.18	456444.17	0.000
L3	105.67 - 85.67 (3)	TP23.62x17.72x0.197	12335.80	518360.00	0.024	257.77	1000625.00	0.000
L4	85.67 - 46.96 (4)	TP33.86x23.62x0.276	26317.00	1033650.00	0.025	3158.63	2861350.00	0.001
L5	46.96 - 8.17 (5)	TP44.09x33.86x0.315	35340.60	1467210.00	0.024	9148.58	5298566.67	0.002

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	125.67 - 115.67 (1)	0.044	0.261	0.000	0.026	0.000	0.306	1.000	4.8.2 ✓
L2	115.67 - 105.67 (2)	0.057	0.632	0.000	0.028	0.000	0.690	1.000	4.8.2 ✓
L3	105.67 - 85.67 (3)	0.047	0.749	0.000	0.024	0.000	0.797	1.000	4.8.2 ✓
L4	85.67 - 46.96 (4)	0.027	0.799	0.000	0.025	0.001	0.827	1.000	4.8.2 ✓
L5	46.96 - 8.17 (5)	0.018	0.882	0.000	0.024	0.002	0.900	1.000	4.8.2 ✓

Section Capacity Table

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Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail	
L1	125.67 - 115.67	Pole	TP17.72x15.75x0.157	1	-1708.68	38659.90	30.6	Pass	
L2	115.67 - 105.67	Pole	TP17.72x17.72x0.157	2	-2214.21	38659.90	69.0	Pass	
L3	105.67 - 85.67	Pole	TP23.62x17.72x0.197	3	-5392.98	115069.00	79.7	Pass	
L4	85.67 - 46.96	Pole	TP33.86x23.62x0.276	4	-13067.50	475195.00	82.7	Pass	
L5	46.96 - 8.17	Pole	TP44.09x33.86x0.315	5	-21288.70	1196820.00	90.0	Pass	
							Summary		
							Pole (L5)	90.0	Pass
							Base Plate	69.7	Pass
							RATING =	90.0	Pass

Program Version 8.0.5.0 - 11/28/2018 File:W:/STRUCTURAL DEPARTMENT/ANALYSIS SOFTWARE/TnxTower/Tnx Projects/VERIZON/CT/Forest Heights CT RELO/Rev1/Forest Heights CT RELO Rev1.eri



HUDSON
Design Group LLC

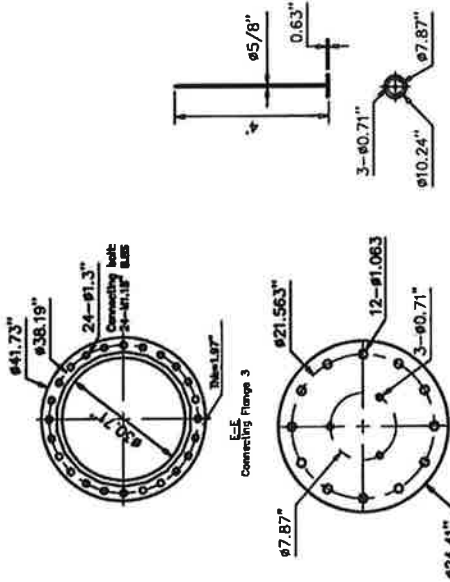
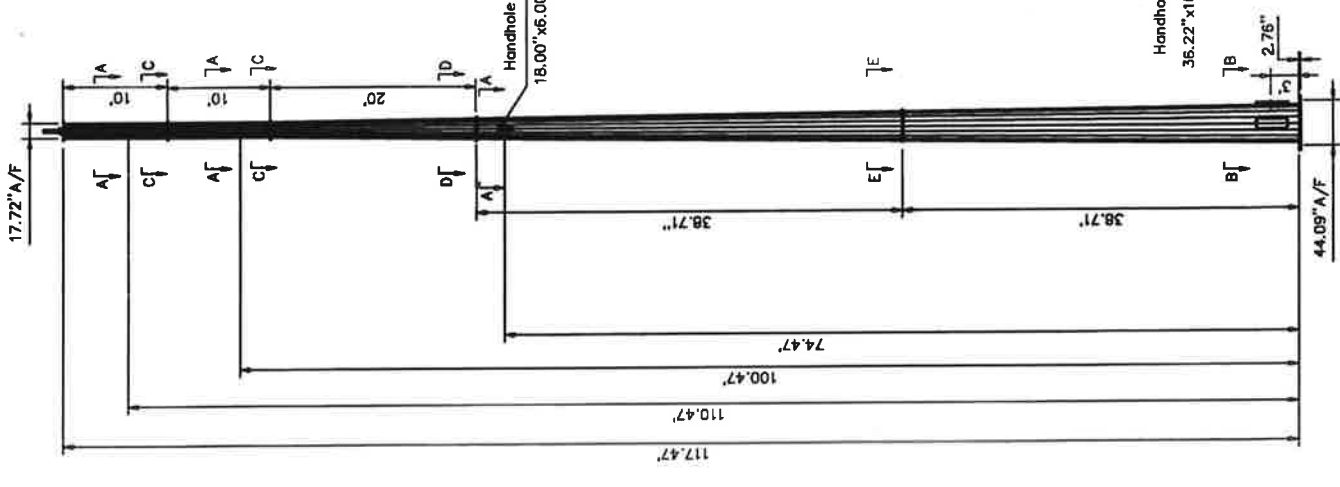
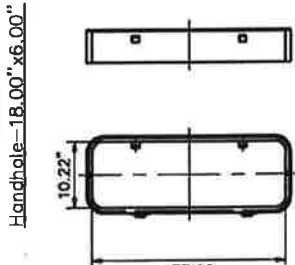
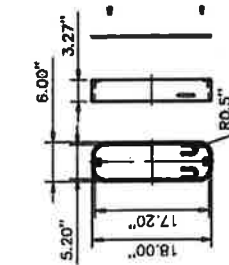
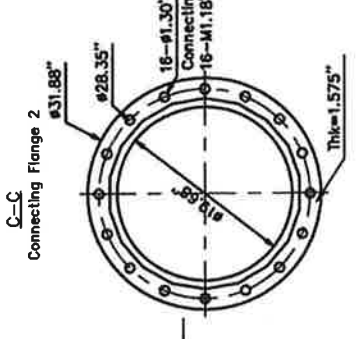
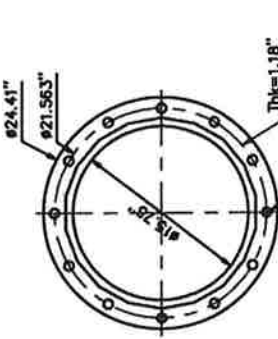
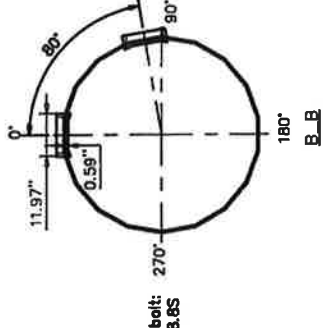
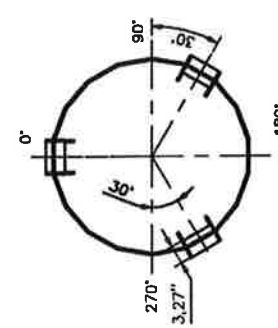
REFERENCE DOCUMENTS

Design Output:
 1. Material: Pole shaft: ASTM A572 GR65
 Baseplate, Connection Flange, Top Flange: Q345B or ASTM A572 GR50
 2. Pole section has 18 sides
 3. Finished: Finish Paint Over galvanizing per ASTM A123
 4. Lightning Rod :copper clad

Section #	1st	2nd	3rd	4th	5th
Thickness (in):	0.315	0.276	0.197	0.157	0.157
Length (ft):	38.714	38.714	20.0	10.0	10.0
Top (in):	33.86	23.62	17.72	17.72	17.72
Bottom (in):	44.09	33.86	23.62	17.72	17.72

5. Charpy impact requirement

Material	Charpy V-Notch Test
ASTM A572 GR65	Minimum Impact Energy(J)
Q345B	34
	Test Temperature(°C)
	-30
	20



4. Lightning Rod (copper clad)
 Please find attached documents with the safety device

NO	PART NO.	DESCRIPTION	WEIGHT	QTY
10	Connecting Flange 3			2
9	Connecting Flange 2			2
8	Connecting Flange 1			2
7	4" Steel Lightning Rod			4
6	Top Cap			1
5	Safety Device			1
4	Step Bolts			1
3	Handhole 18.00"x6.00"			9
2	Hand Hole 36.22"x10.24"			2
1	Pole			1

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DWG SIZE	AAY	CLASS CODE	BILUSKY
CUSTOMER	120ft. CP		
DESCRIPTION			
DRAWN	chwz	MATERIAL	120ft. CP
ENGR	chwz	DATE	Jan. 29 2015
CHECKED	WJ	SCALE	1:1
APPROVED		VERSION	E



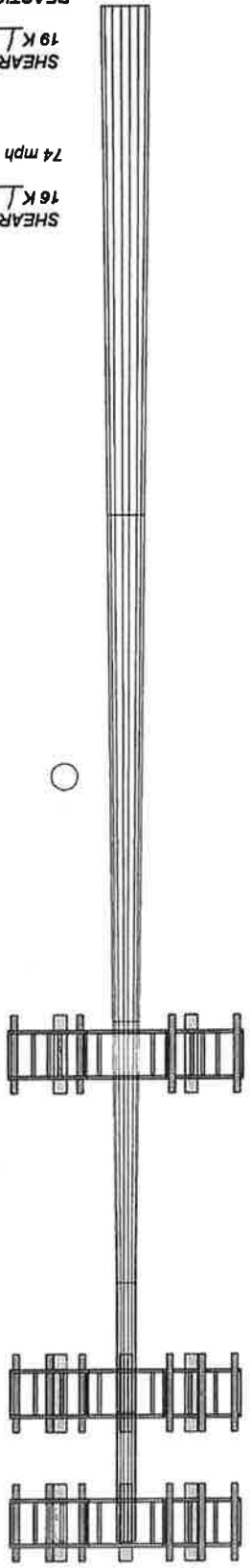
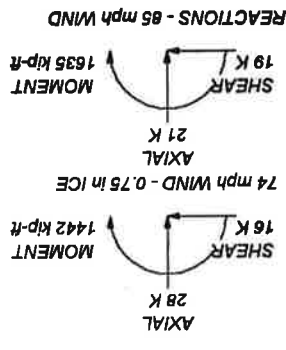
08/21/2015

Bennett & Pless
 550 River Drive
 North Sioux City, SD 57049
 Phone: 605-540-4621
 FAX: 678-990-8701

Experience Structural Expertise

Job: 120FT CP
 Project: Evergreen Street
 Client: Bluesky Tower
 Code: TIA/EIA-222-F
 Date: 11/12/15
 Scale: NTS
 App'd: _____
 Drawn by: Chunhui Song
 Path: _____
 Dwg No. E-1

11/16/2015



Section	5	4	3	2	1
Length (ft)	389'-10"	389'-17.32"	20'	10'	10'
Number of Sides	18	18	18	18	18
Thickness (in)	0.32	0.28	0.20	0.16	0.16
Top Dia (in)	33.86	23.62	17.72	17.72	17.72
Bot Dia (in)	44.08	33.86	23.62	17.72	17.72
Grade		A572-65			
Weight (k)	5.1	3.3	0.9	0.3	0.3

117.5 ft
107.5 ft
92.5 ft
77.5 ft
38.9 ft
9.1 ft

TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 74 mph basic wind with 0.75 in ice.
4. Deflections are based upon a 60 mph wind.
5. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
6. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
7. Tower will meet or exceed the required 100 mph (3-sec gust) wind speed for Bridgeport, CT.
8. IBC 2003 in conjunction with the 2005 CT supplement and 2013 Amendments.
9. TOWER RATING: 93.8%

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(12) OPA-65R-LCUU-H4	106	(12) TMA8PDB7823	106
(9) OPA-65R-LCUU-H4	116	(12) TMA8PDB7823	116
(12) OPA-65R-LCUU-H4	106	(12) TMA8PDB7823	106
(12) OPA-65R-LCUU-H4	80	(12) Low Profile	80
(12) OPA-65R-LCUU-H4	80	(12) Low Profile	80

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09/04/2015



SHEET INDEX:

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- N1- Notes Page
- D1- Assembly Drawing
- D2- Base Pedestal
- D3- Primary Angle Pipe
- D4- Secondary Angle Pipe
- D5- Floor Plates
- D6- Side Frame

PROJECT: Evergreen Street 120ft Monopole

CUSTOMER:

Blue Sky Tower Partners, LLC
SITE:
220 Evergreen Street
Bridgeport, CT 06605 (Fairfield County)

CUSTOMER PO #:

DESCRIPTION:

DRAWING #:

DRAWN: KE July 16, 2015

ENGR:

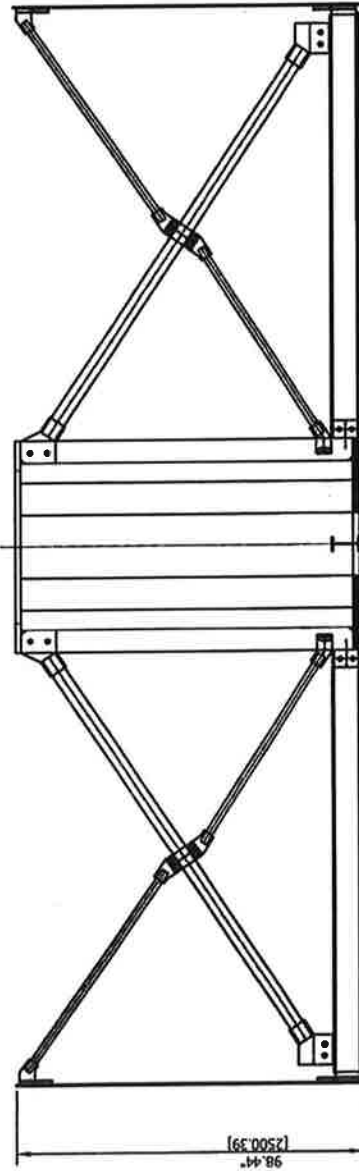
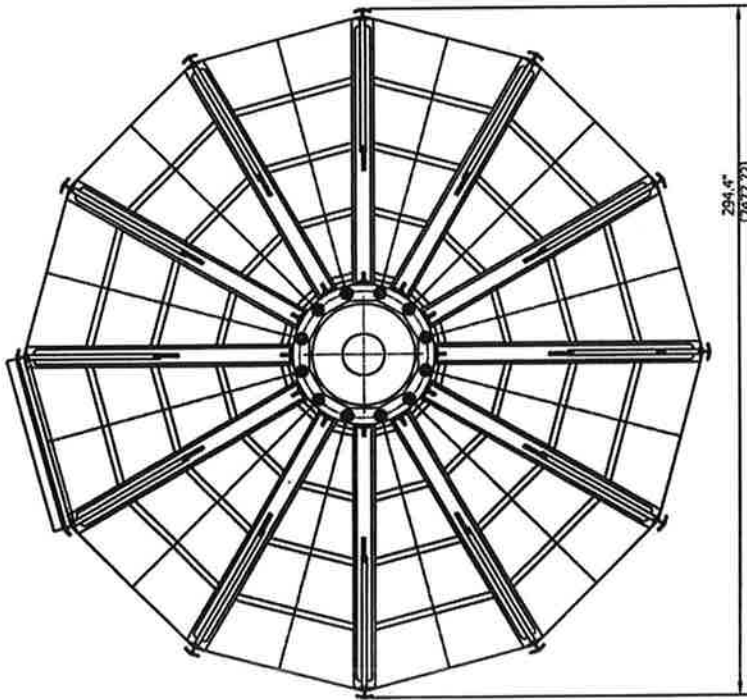
CHECKED:

SPECS:

VERSION:

A

QuikBase 12-B
Capacity: 2500ft-kip
Ballast: Concrete Block
Non-Penetrating Foundation



PROJECT INFORMATION:

Date: September 4 2015
 Customer: Blue Sky Tower Partners, LLC
 Tower Design: 117Rt 85mph Monopole with Ballasted Foundation
 Site #: CT-5020

Site Location:
 270 Evergreen Street
 Bridgeport, CT 06606
 Fairfield County, Connecticut
 41.1978, -73.1908

Design Criteria:

WIND
 85mph basic wind in accordance with TIA-222-F Standard, IBC 2003 in conjunction with the 2005 CT supplement and 2013 amendments.
 74mph basic wind w/ 0.75 in ice. Ice is considered to increase in thickness with height.

EXPOSURE
 C

TOWER CLASS:
 II

TOPOGRAPHIC CATEGORY:
 1 with Crest Height: 0ft

Tower Reactions:
 Moment: 2220 kip-ft
 Shear: 26k
 Axial: 25k

Ballast Requirement:
 251,000lbs

Preferred Ballast Type:
 Concrete waste block - 2ft x 2ft x 6ft; 3,600lbs

Qty per Sector (12):
 6 blocks (can be stood on end to achieve ballast requirement within the space provided)

IF RELOCATED, ADDITIONAL CALCULATIONS WILL NEED TO BE RUN FOR VERIFICATION.

REV	DATE	REV DESCRIPTION

STRUCTURAL STEEL:
 1. PROVIDE STRUCTURAL STEEL CONFORMING TO THE FOLLOWING STANDARDS:
 1.1. AISC MANUAL OF STEEL CONSTRUCTION, 13TH EDITION
 1.2. AISC 360-05, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
 1.3. AISC 303-05, CODE OF STANDARD PRACTICE FOR STRUCTURAL STEEL BUILDINGS AND BRIDGES
 1.4. AISC 326-02, DETAILING FOR STEEL CONSTRUCTION, 2ND EDITION

SHOP DRAWINGS:
 1. SUBMIT SHOP DRAWINGS PREPARED IN ACCORDANCE WITH AISC 326-02.
 2. PROVIDE COMPLETE WELDING INFORMATION USING AWS SYMBOLS.
 3. USE PREQUALIFIED WELDED JOINTS PER AISC AND AWS D1.1 "STRUCTURAL WELDING CODE."
 4. DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS ARE COMPLETED AND REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD.

UNLESS NOTED OTHERWISE PROVIDE STRUCTURAL STEEL CONFORMING TO:
 1. WIDE FLANGE SHAPES: ASTM A992 OR EQUIVALENT
 2. CHANNELS, ANGLES AND PLATES: ASTM A36 OR EQUIVALENT
 3. HOLLOW STEEL SECTIONS (HSS): ASTM A500, GRADE B OR EQUIVALENT
 4. STRUCTURAL PIPES: ASTM A53, TYPE E OR S, GRADE B
 5. HEADED STUDS: ASTM A 29
 6. DEFORMED BAR ANCHORS (DBA): ASTM A 496
 7. ANCHOR RODS: ASTM F 1554, GRADE 36.

BOLTED CONNECTIONS:
 1. UNLESS NOTED OTHERWISE, MAKE ALL CONNECTIONS WITH 3/4" DIAMETER ASTM A 325 BOLTS OR EQUIVALENT.
 2. ASSEMBLE AND INSPECT BOLTED CONNECTIONS IN ACCORDANCE WITH AISC "SPECIFICATION FOR JOINTS USING ASTM A 325 OR ASTM A 490 BOLTS", 2004. PROVIDE SNUG TIGHT JOINTS.

WELDED CONNECTIONS:
 a. MAKE ALL WELDED CONNECTIONS IN ACCORDANCE WITH AWS D1.1-04 "STRUCTURAL WELDING CODE", USING TYPE EXXX ELECTRODES.
 b. EMPLOY ONLY CERTIFIED WELDERS.
 c. MAINTAIN PROOF OF CERTIFICATION AT THE JOB SITE.

PROVIDE CONNECTIONS FOR BEAMS WHICH CANNOT CONFORM TO THE TYPICAL CONNECTION DETAILS IN ACCORDANCE WITH THE FOLLOWING:
 1. WHERE MEMBER REACTIONS ARE NOT SHOWN ON THE DRAWINGS, DETAIL CONNECTIONS FOR THE MAXIMUM UNIFORM LOAD SHOWN IN THE MAXIMUM TOTAL UNIFORM LOAD TABLES, IN TABLE 3-4 OF THE AISC STEEL CONSTRUCTION MANUAL FOR THE SPAN SHOWN ON THE DRAWING.
 2. WHERE MEMBER REACTIONS ARE SHOWN, PROVIDE CONNECTIONS TO DEVELOP THE REACTIONS SHOWN.
 3. WHERE CONNECTIONS ARE SUBJECT TO ECCENTRICITY, DETAIL CONNECTIONS THAT ACCOUNT FOR THE ECCENTRICITY.

PROVIDE SPECIAL CONNECTIONS BETWEEN STEEL FRAMING COMPONENTS NOT DETAILED BY THE STRUCTURAL ENGINEER OF RECORD DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS TO BE CONSTRUCTED INCLUDING BUT NOT LIMITED TO BRACE END CONNECTIONS, MOMENT RESISTING CONNECTIONS, MODIFIED BEAM SEAT CONNECTIONS, AND MEMBER SPLICE CONNECTIONS.
 1. DO NOT USE GAS CUTTING TORCHES TO CORRECT FABRICATION ERRORS IN STRUCTURAL STEEL FRAMING.
 2. PROVIDE TEMPORARY BRACING FOR STRUCTURAL STEEL FRAMING UNTIL ALL PERMANENT BRACING, MOMENT CONNECTIONS, AND FLOOR/ROOF DECKS (DIAPHRAGMS) ARE COMPLETELY INSTALLED.
 3. PAINT STRUCTURAL STEEL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. DO NOT PAINT STEEL SURFACES TO BE ENCASED IN CONCRETE; SURFACES TO RECEIVE FIREPROOFING, CONNECTIONS DESIGNATED AS FRICTION TYPE, SURFACES TO BE WELDED, OR SURFACES RECEIVING WELDED STUDS OR DEFORMED BAR ANCHORS ("DBAs") IN THE FIELD.



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PROJECT: Evergreen Street 120ft Monopole
 CUSTOMER: Blue Sky Tower Partners, LLC
 SITE: R20 Evergreen Street, Bridgeport, CT 06606 (Fairfield County)
 CUSTOMER PO #:

DESCRIPTION:
 DRAWINGS#: KE July 16, 2015
 DRAWN:
 ENGR:
 CHECKED:
 SHEET:
 VERSION:

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- D3- Primary Angle Pipe
- D4- Secondary Angle Pipe
- D5- Floor Plates
- D6- Perimeter Frame

PROJECT: Evergreen Street 120ft Monopole

CUSTOMER:

Blue Sky Tower Partners, LLC

SITE:

220 Evergreen Street
 Bridgeport, CT 06606 (Fair-Field County)

CUSTOMER PO #:

DESCRIPTION:

DRAWING #:

DRAWN: KE July 16, 2015

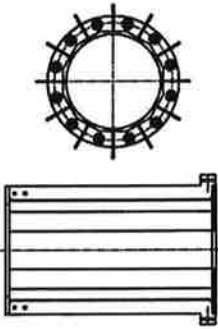
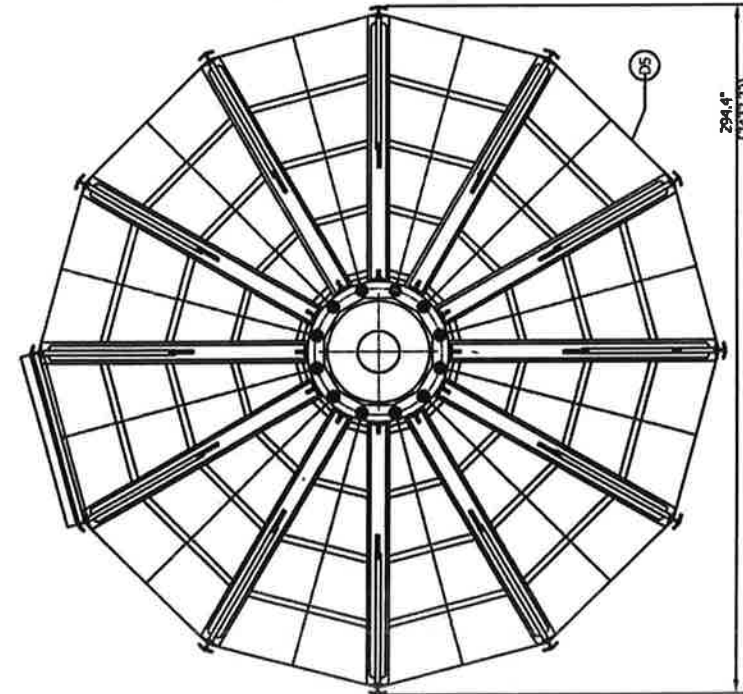
ENGR:

CHECKED:

SPECS:

VERSION:

A



(D2) - Base Pedestal



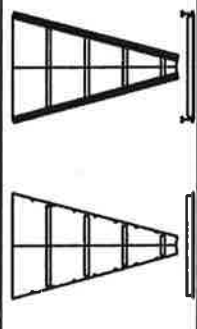
(D3) - Primary Angle Pipe



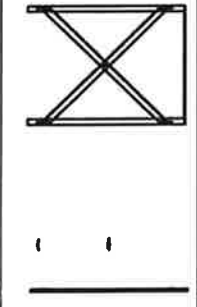
(D4) - Secondary Angle Pipe (top)



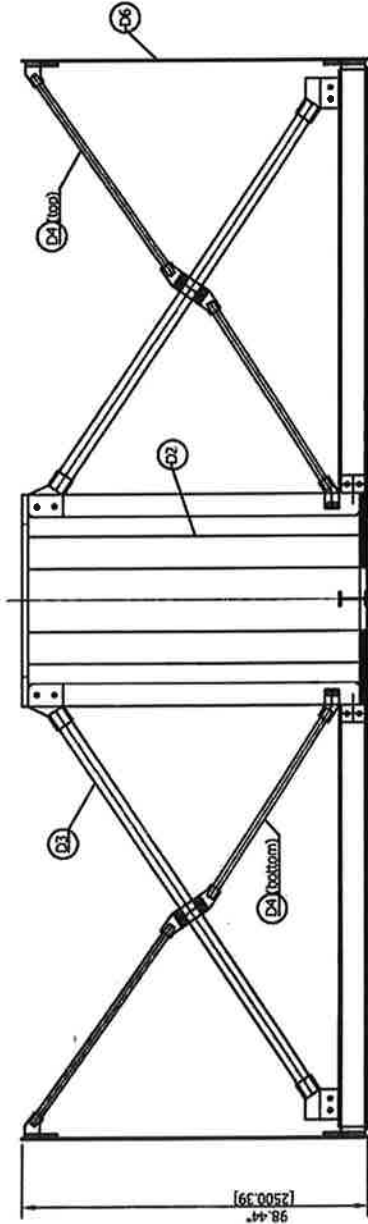
(D4) - Secondary Angle Pipe (Bottom)



(D5) - Floor Plates



(D6) - Perimeter Frame



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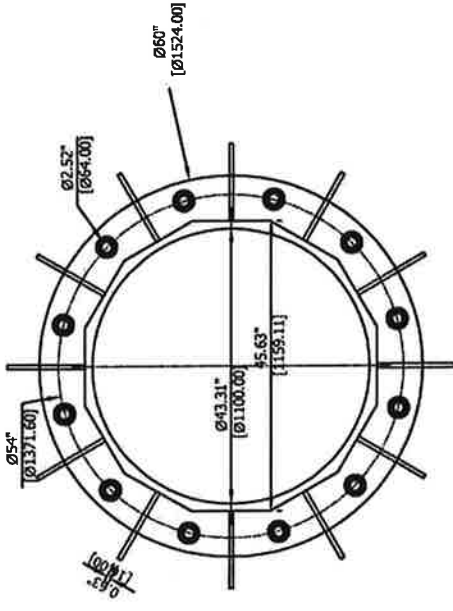
PROJECT: Evergreen Street 120ft Monopole
CUSTOMER: Blue Sky Tower Partners, LLC
SITE: 220 Evergreen Street, Bridgeport, CT 06606 (Fairfield County)
CUSTOMER PO #:

DESCRIPTION:

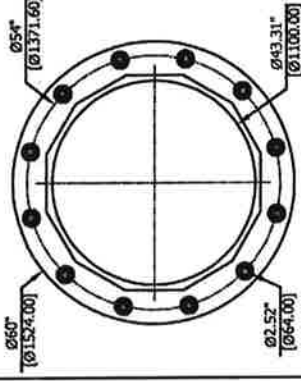
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DRAWN: KE
July 16, 2015

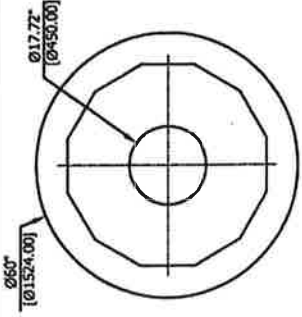
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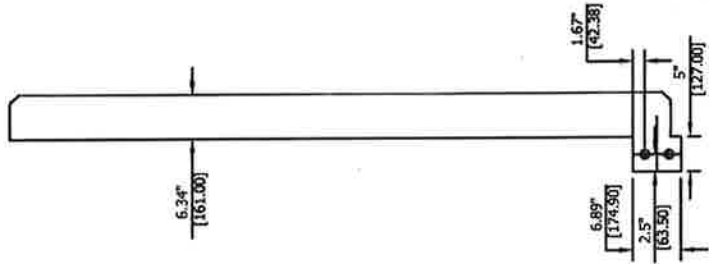
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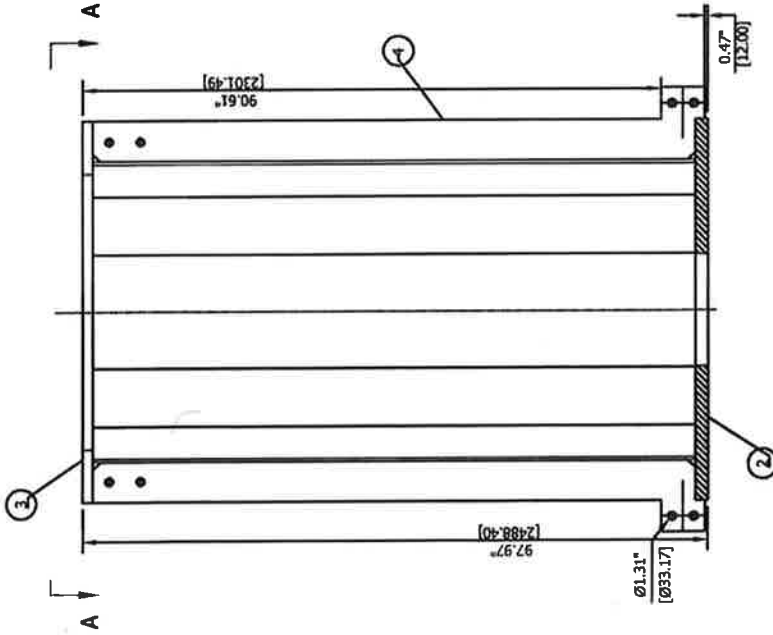
3 - Top Flange



2 - Bottom Flange



4 - Stiffener



Material Notes:

1. Pedestal Shaft - 12mm thk
2. Pedestal Bottom Plate - 50mm thk
3. Pedestal Top Flange - 40mm thk
4. Stiffener Plate - 16mm thk



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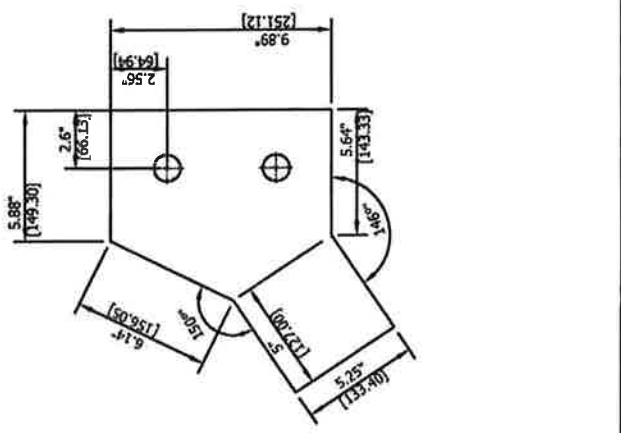
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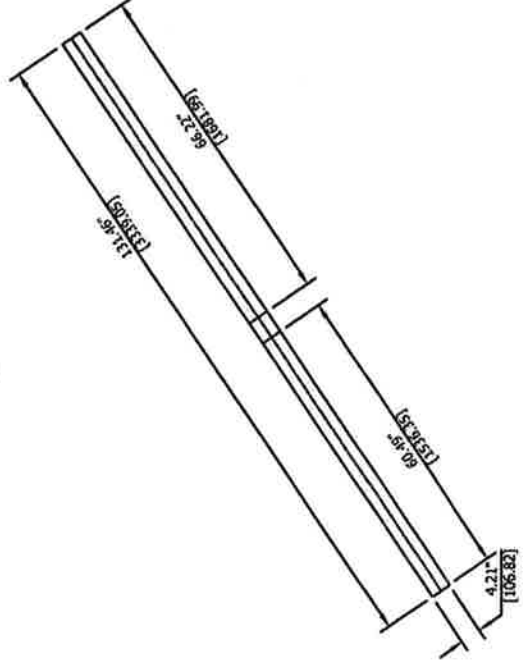
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PROJECT: Evergreen Street 120ft Monopole
CUSTOMER: Blue Sky Tower Partners, LLC
SITE: 220 Evergreen Street (Fairfield County)
CUSTOMER PO #:

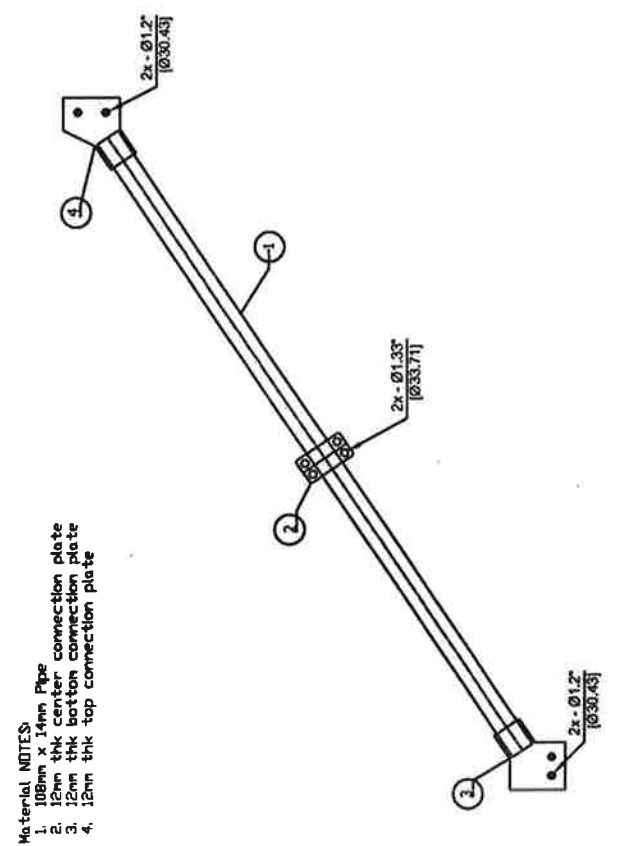
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DRAWN: KE
ENGINEER: KE
CHECKED:
VERSION:
DATE: July 16, 2015
SPECS:



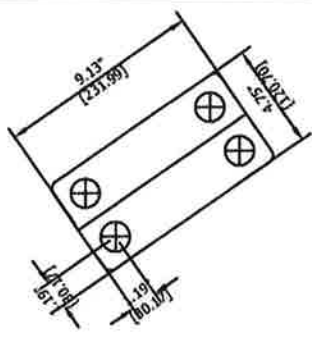
④ 12mm thk top connection plate



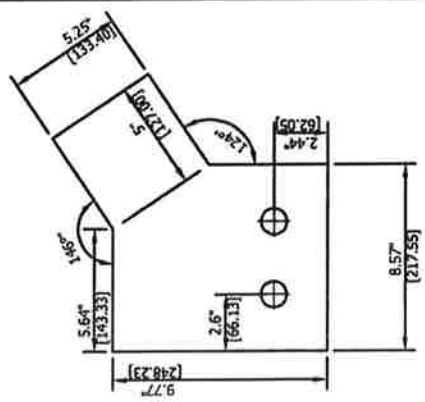
① 108mm x 14mm pipe



Material NOTES:
1. 108mm x 14mm Pipe
2. 12mm thk center connection plate
3. 12mm thk bottom connection plate
4. 12mm thk top connection plate



② 12mm thk center connection plate



③ 12mm thk bottom connection plate



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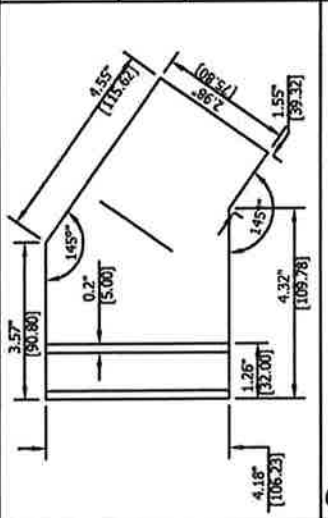
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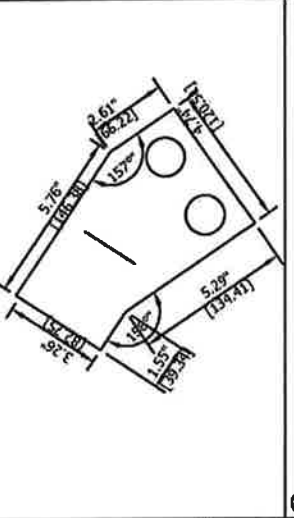
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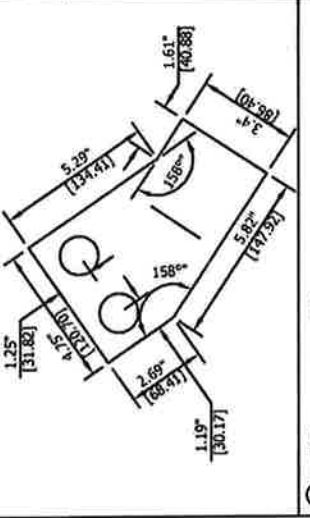
CUSTOMER PO #:	Blue Sky Tower Partners, LLC
SITE:	220 Evergreen Street Bridgewater, CT 06606 (Fairfield County)
PROJECT:	Evergreen Street 120ft Monopole
CUSTOMER:	
DESCRIPTION:	
DRAWING #:	KE
DRAWN:	July 16, 2015
ENGR:	
CHECKED:	
SPECS:	
VERSION:	



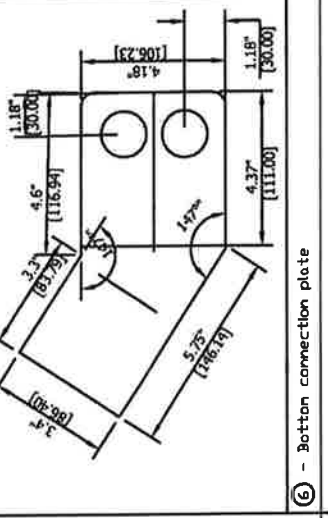
② - Top connection plate



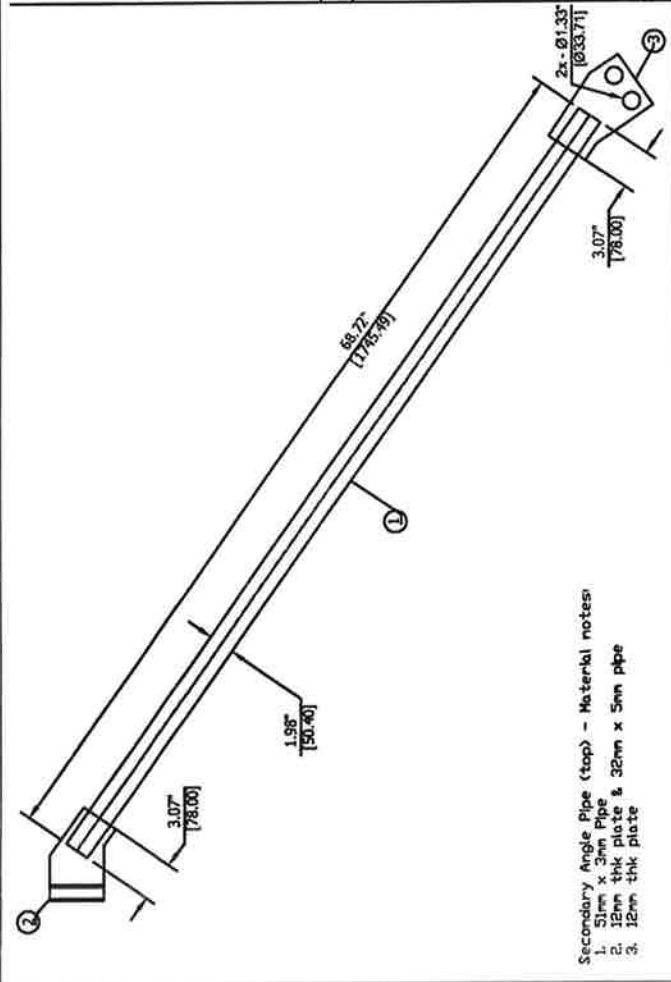
③ - Bottom connection plate



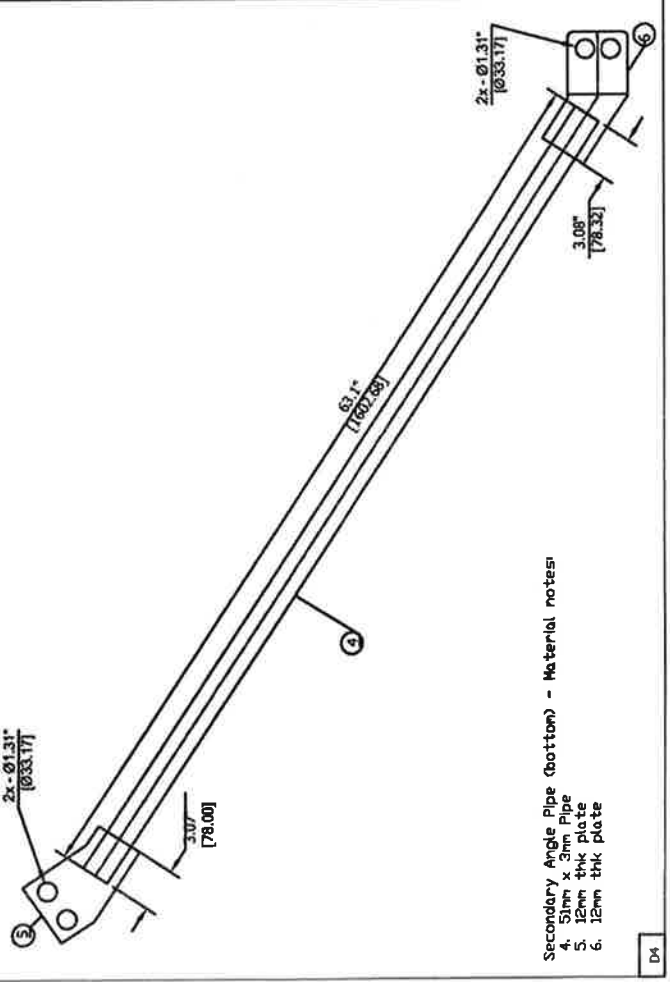
⑤ - Top connection plate



⑥ - Bottom connection plate



Secondary Angle Pipe (top) - Material notes
 1. 51mm x 3mm Pipe
 2. 12mm thk plate & 32mm x 5mm pipe
 3. 12mm thk plate

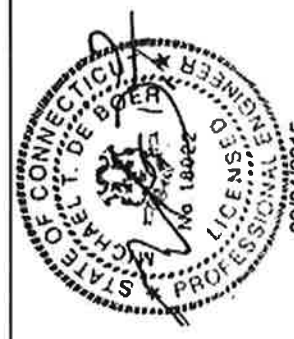


Secondary Angle Pipe (bottom) - Material notes
 4. 51mm x 3mm Pipe
 5. 12mm thk plate
 6. 12mm thk plate



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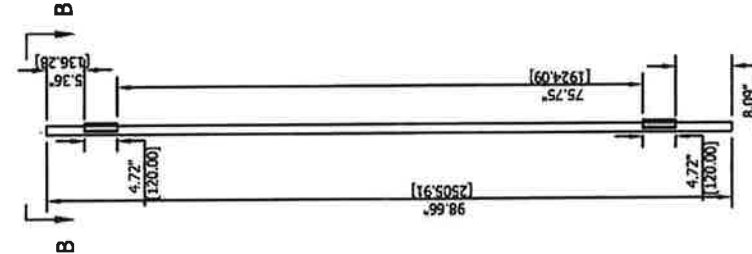
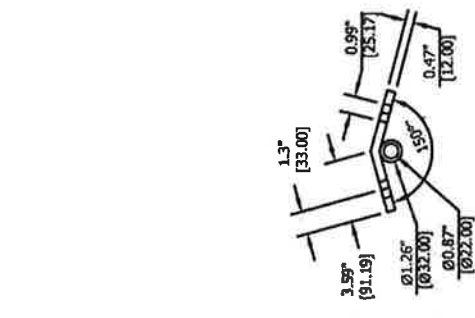
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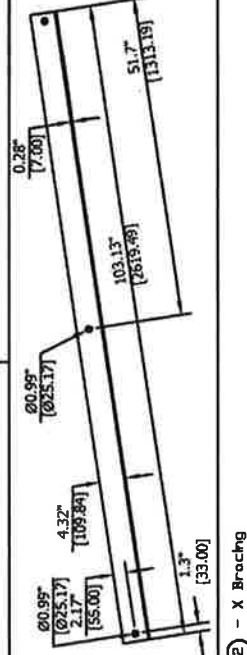
CUSTOMER PO #:
PROJECT: Evergreen Street 120ft Monopole
CUSTOMER: Blue Sky Tower Partners, LLC
SITE: 220 Evergreen Street (Fairfield County) Bridgeport, CT 06608

DESCRIPTION:
DRAWING#: KE
DRAWN: July 16, 2015
ENGR:
CHECKED:
VERSION:
SPECS:

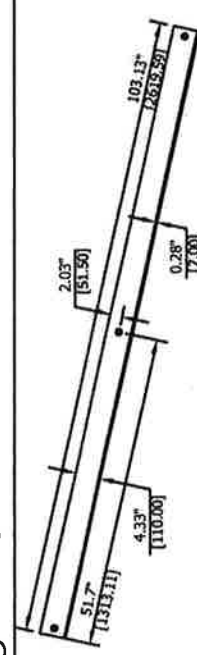


① - Perimeter Post

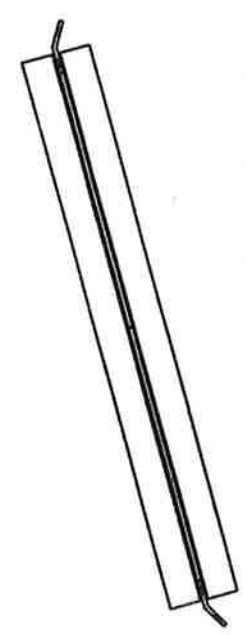
B-B Top View



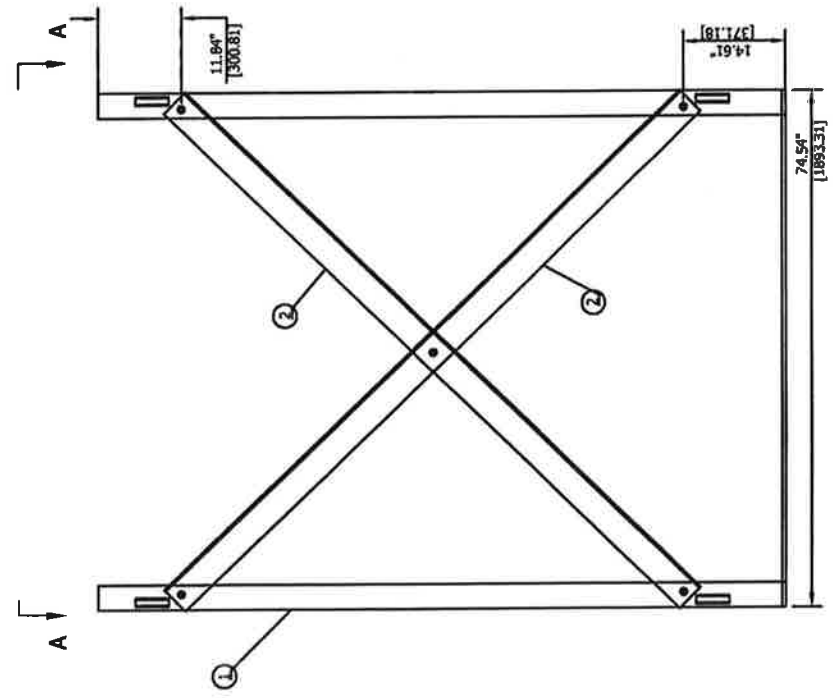
② - X Bracing



② - X Bracing



A-A Top View



Perimeter Bracing Material Notes:
1. Posts - 1/2" Thk Plate Posts - bent to 150° & 32mm x 5mm Pipe
2. X-Bracing - 110mm x 10mm x 7mm Angle Iron

ATTACHMENT 5



C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
603-644-2800
support@csquaredsystems.com

Calculated Radio Frequency Exposure Report

Verizon Site – Forest Heights CT Relo

T-Mobile Site – CTCOW07A

AT&T Site – CT5981 Milford Temp

1052 Boston Post Road, Milford, CT 06460

June 24, 2019

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the antenna arrays to be mounted on the proposed temporary monopole at 1052 Boston Post Road in Milford, CT. The coordinates of the proposed tower are 41° 13' 58.35" N, 73° 2' 41.96" W.

Verizon, T-Mobile, and AT&T are proposed to locate the following equipment:

- Verizon – Nine (9) multi-band antennas (three per sector) to support its LTE network and legacy CDMA network;
- T-Mobile – Three (3) antennas (one per sector) to support its LTE network and legacy GSM network;
- AT&T – Nine (9) multi-band antennas (three per sector) to support its LTE network and legacy UMTS network;

This report considers the planned antenna configurations of each operator to calculate the % MPE (Maximum Permissible Exposure) of the proposed installation.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm²). The general population exposure limits for the various frequency ranges are defined in the attached “FCC Limits for Maximum Permissible Exposure (MPE)” in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

3. RF Exposure Calculation Methods

The power density calculation results were generated using the following formula as outlined in FCC bulletin OET 65, and Connecticut Siting Council recommendations:

$$\text{Power Density} = \left(\frac{1.6^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power = 1.64 x ERP

R = Radial Distance = $\sqrt{H^2 + V^2}$

H = Horizontal Distance from antenna

V = Vertical Distance from radiation center of antenna

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all antenna channels are transmitting simultaneously. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not consider actual terrain elevations which could attenuate the signal. As a result, the calculated power density and corresponding % MPE levels reported below are much higher than the actual levels will be from the final installation.

4. Calculation Results

Table 1 below outlines the power density information for the proposed installation. All proposed antennas are directional in nature; therefore, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to Attachments C, D, and E for the vertical patterns of the proposed Verizon, T-Mobile, and AT&T antennas, respectively. The calculated results in Table 1 include a nominal 10 dB off-beam pattern loss to account for the lower relative gain below the antennas.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm ²)	Limit	% MPE
Verizon LTE	123	751	1	2686	0.0071	0.5007	1.41%
Verizon LTE	123	869	1	1935	0.0051	0.5793	0.88%
Verizon CDMA	123	869	3	198	0.0016	0.5793	0.27%
Verizon LTE	123	1900	1	6153	0.0162	1.0000	1.62%
Verizon LTE	123	2100	1	6443	0.0169	1.0000	1.69%
T-Mobile LTE	104	2100	1	4615	0.0173	1.0000	1.73%
T-Mobile LTE	104	1900	1	3077	0.0115	1.0000	1.15%
T-Mobile GSM	104	1900	1	1538	0.0058	1.0000	0.58%
AT&T LTE	70	734	1	3794	0.0333	0.4893	6.81%
AT&T LTE	70	880	1	4066	0.0357	0.5867	6.09%
AT&T UMTS	70	880	1	845	0.0074	0.5867	1.27%
AT&T LTE	70	1900	1	5743	0.0504	1.0000	5.04%
AT&T LTE	70	2300	1	5877	0.0516	1.0000	5.16%
						Total	33.69%

Table 1: Proposed Tower % MPE^{1 2}

¹ In the case where antenna models are not uniform across all 3 sectors for the same frequency band, the antenna model with the highest gain was used for the calculations to present a worse-case scenario.

² Antenna heights listed are in reference to the Hudson Design Group site drawings dated 5/28//2019 (Rev. 3).

5. Conclusion

The above analysis concludes that RF exposure at ground level from the proposed temporary tower will be below the maximum power density limits as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods discussed herein, the highest expected percent of Maximum Permissible Exposure at ground level from the proposed installation is **33.69% of the FCC General Population/Uncontrolled limit.**

As noted previously, the calculated % MPE levels are more conservative (higher) than the actual levels will be from the finished installation.

6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in FCC OET Bulletin 65 Edition 97-01, ANSI/IEEE Std. C95.1, and ANSI/IEEE Std. C95.3.

Keith Vellante

Report Prepared By: Keith Vellante
Director of RF Services
C Squared Systems, LLC

June 24, 2019
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2005, IEEE Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2002 (R2008), IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, 100 kHz-300 GHz IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure³

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (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

(B) Limits for General Population/Uncontrolled Exposure⁴

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (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

Table 2: FCC Limits for Maximum Permissible Exposure (MPE)

³ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure

⁴ General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure

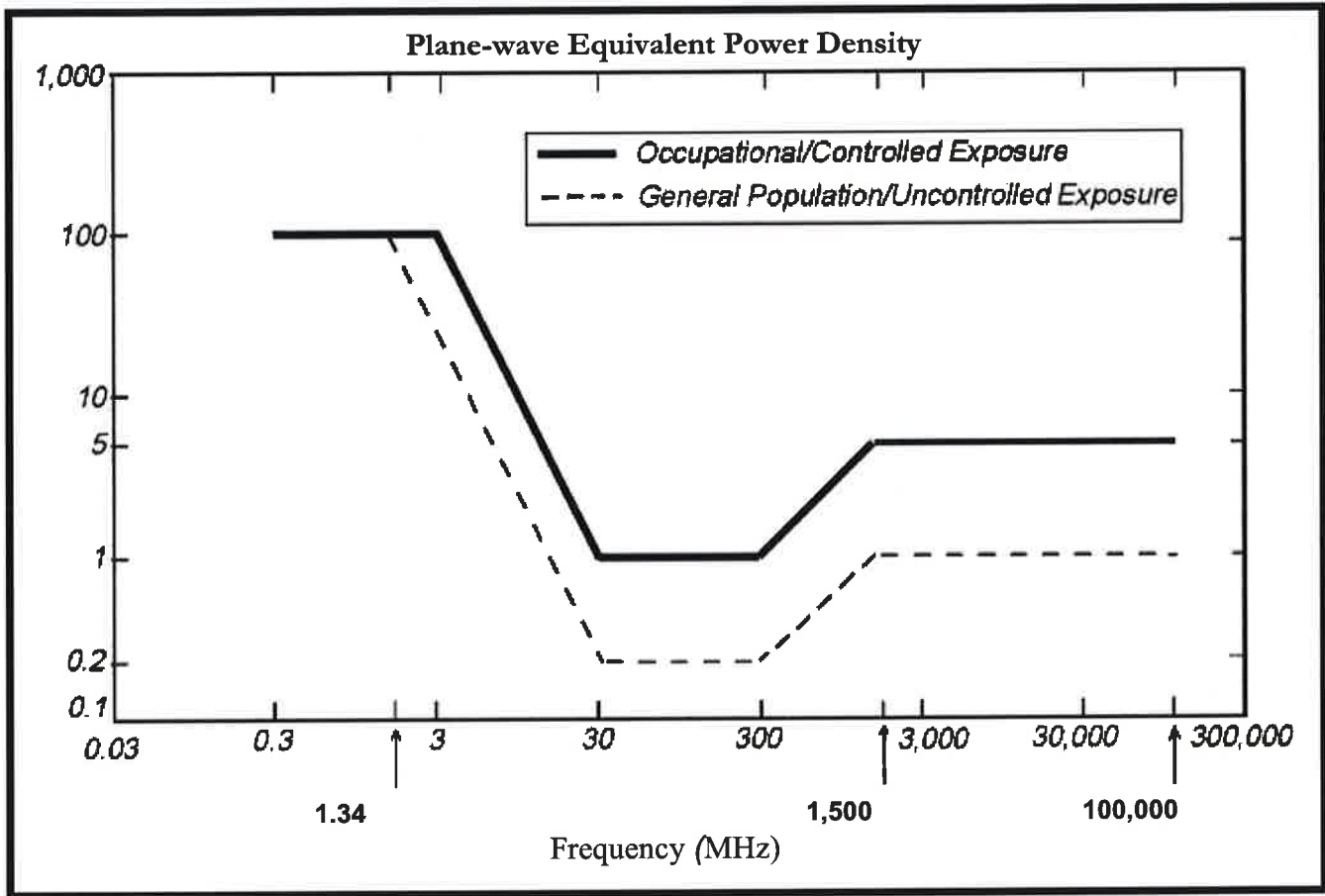
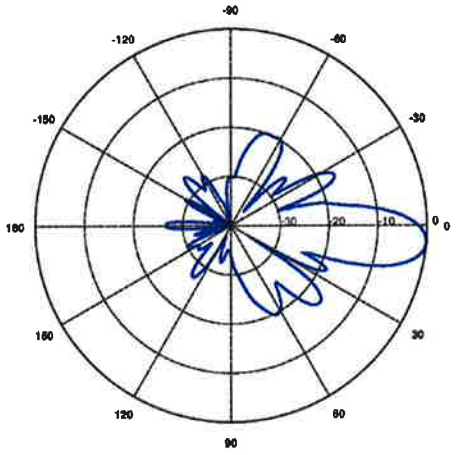
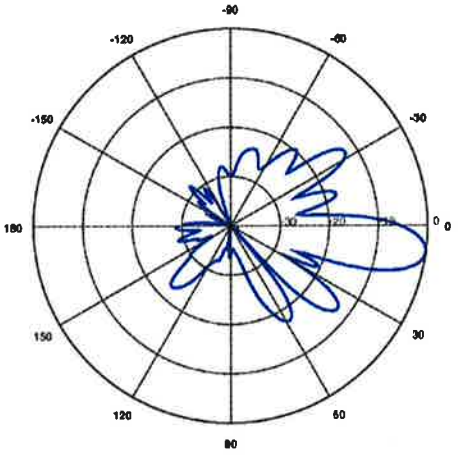
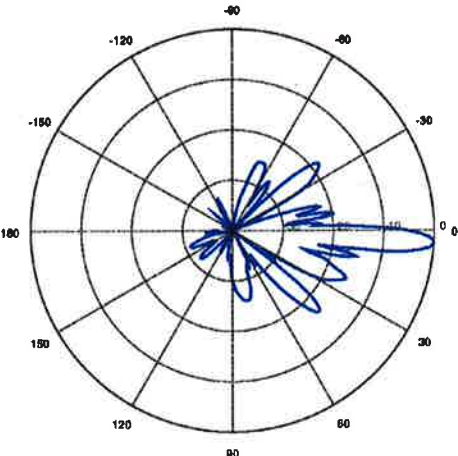


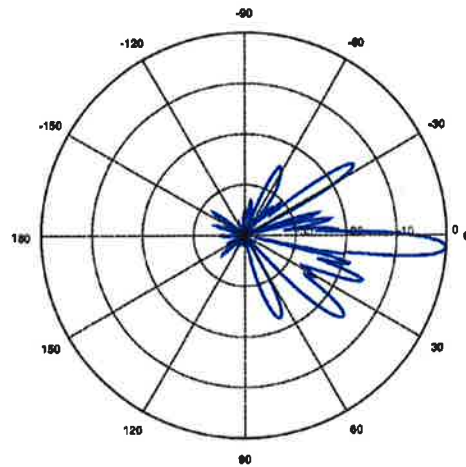
Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Verizon Antenna Data Sheets and Electrical Patterns

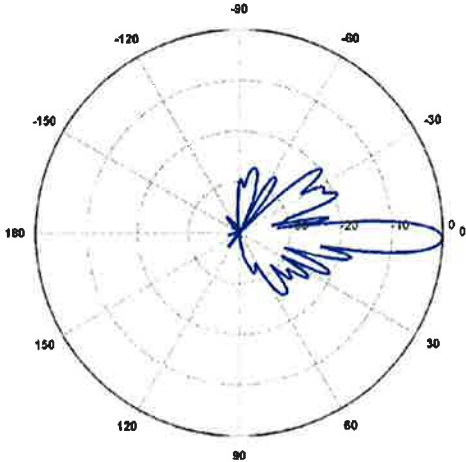
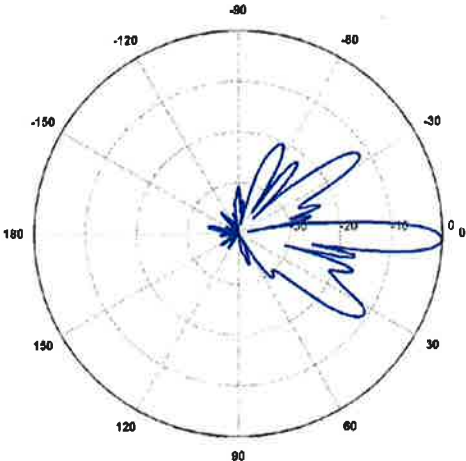
<p>751 MHz</p> <p>Manufacturer: JMA Model #: MX06FRO660-03 Frequency Band: 698-798 MHz Gain: 12.25 dBd Vertical Beamwidth: 13.1° Horizontal Beamwidth: 60.5° Polarization: ±45° Dimensions (L x W x D): 71.3" x 15.4" x 10.7"</p>	
<p>870 MHz</p> <p>Manufacturer: JMA Model #: MX06FRO660-03 Frequency Band: 824-894 MHz Gain: 11.85 dBd Vertical Beamwidth: 11.8° Horizontal Beamwidth: 53° Polarization: ±45° Dimensions (L x W x D): 71.3" x 15.4" x 10.7"</p>	
<p>1900 MHz</p> <p>Manufacturer: JMA Model #: MX06FRO660-03 Frequency Band: 1850-1990 MHz Gain: 15.85 dBd Vertical Beamwidth: 5.5° Horizontal Beamwidth: 55° Polarization: ±45° Dimensions (L x W x D): 71.3" x 15.4" x 10.7"</p>	

2100 MHz

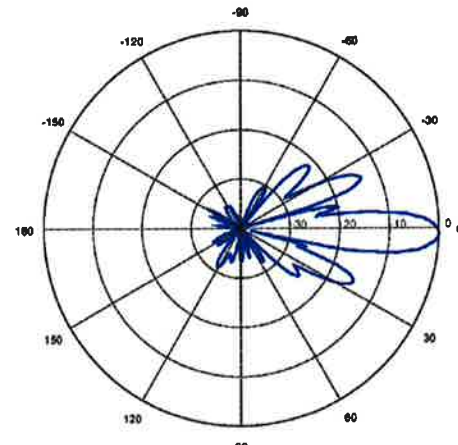
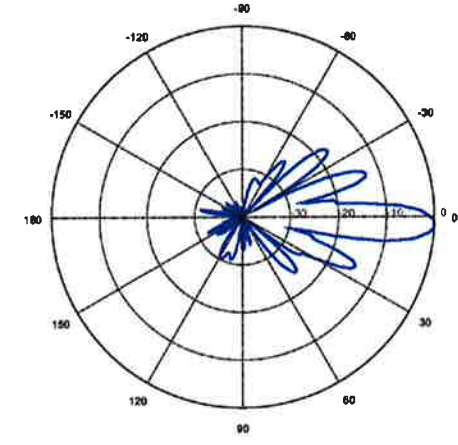
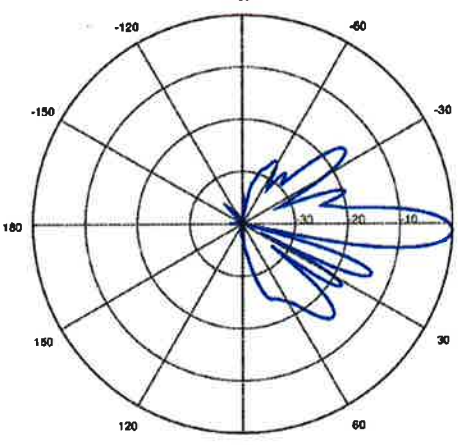
Manufacturer: JMA
Model #: MX06FRO660-03
Frequency Band: 1920-2180 MHz
Gain: 16.05 dBd
Vertical Beamwidth: 5.5°
Horizontal Beamwidth: 55.5°
Polarization: ±45°
Dimensions (L x W x D): 71.3" x 15.4" x 10.7"



Attachment D: T-Mobile Antenna Data Sheets and Electrical Patterns

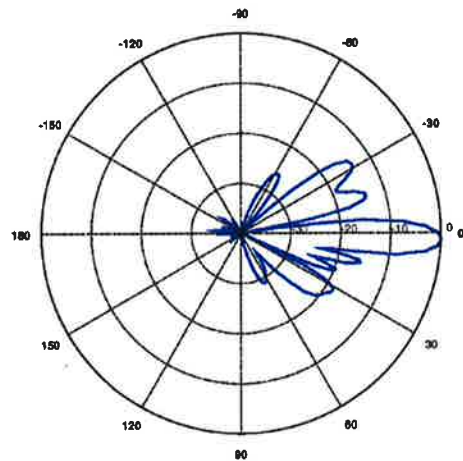
<p>1900 MHz</p> <p>Manufacturer: Ericsson Model #: AIR32 B2A B66A Frequency Band: 1850-1990 MHz Gain: 15.85 dBd Vertical Beamwidth: 6° Horizontal Beamwidth: 63° Polarization: ±45° Dimensions (L x W x D): 59.3" x 12.9" x 8.7"</p>	
<p>2100 MHz</p> <p>Manufacturer: Ericsson Model #: AIR32 B2A B66A Frequency Band: 2110-2180 MHz Gain: 15.85 dBd Vertical Beamwidth: 6° Horizontal Beamwidth: 61° Polarization: ±45° Dimensions (L x W x D): 59.3" x 12.9" x 8.7"</p>	

Attachment E: AT&T Antenna Data Sheets and Electrical Patterns

<p>734 MHz</p> <p>Manufacturer: KMW Model #: EPBQ-654L8H8-L2 Frequency Band: 698-806 MHz Gain: 13.75 dBd Vertical Beamwidth: 9.3° Horizontal Beamwidth: 67° Polarization: ±45° Dimensions (L x W x D): 96.0" x 21.0" x 6.3"</p>	
<p>880 MHz (LTE)</p> <p>Manufacturer: KMW Model #: EPBQ-654L8H8-L2 Frequency Band: 806-894 MHz Gain: 14.05 dBd Vertical Beamwidth: 8.7° Horizontal Beamwidth: 66° Polarization: ±45° Dimensions (L x W x D): 96.0" x 21.0" x 6.3"</p>	
<p>880 MHz (UMTS)</p> <p>Manufacturer: CCI Model #: HPA65R-BU8A Frequency Band: 824-896 MHz Gain: 13.25 dBd Vertical Beamwidth: 8.1° Horizontal Beamwidth: 67° Polarization: ±45° Dimensions (L x W x D): 96.0" x 11.7" x 7.7"</p>	

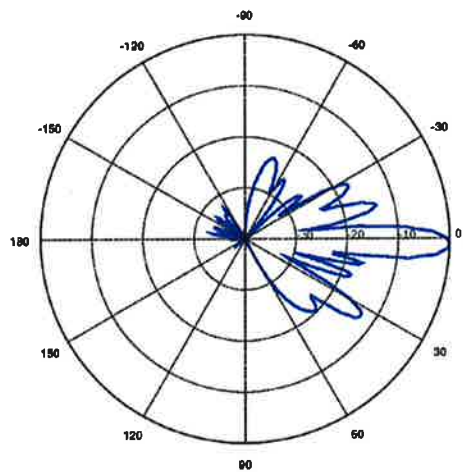
1900 MHz

Manufacturer: KMW
 Model #: EPBQ-654L8H8-L2
 Frequency Band: 1910-2180 MHz
 Gain: 15.55 dBd
 Vertical Beamwidth: 7.4°
 Horizontal Beamwidth: 60°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 21.0" x 6.3"



2300 MHz

Manufacturer: KMW
 Model #: EPBQ-654L8H8-L2
 Frequency Band: 2300-2400 MHz
 Gain: 15.65 dBd
 Vertical Beamwidth: 6.8°
 Horizontal Beamwidth: 60°
 Polarization: ±45°
 Dimensions (L x W x D): 96.0" x 21.0" x 6.3"



ATTACHMENT 6

* Federal Airways & Airspace *
* Summary Report: New Construction *
* Antenna Structure *

Airspace User: Not Identified

File: FOREST HEIGHTS CT

Location: Milford, CT

Latitude: 41°-13'-58.54" Longitude: 73°-2'-41.89"

SITE ELEVATION AMSL.....37 ft.
STRUCTURE HEIGHT.....128 ft.
OVERALL HEIGHT AMSL.....165 ft.
SURVEY HEIGHT AMSL.....165 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: NR Exceeds BDR Rwy 24, TERPS analysis required.
- FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for HVN
- FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required

NNR = Notice Not Required

PNR = Possible Notice Required (depends upon actual IFR procedure)

For new construction review Air Navigation Facilities at

bottom

of this report.

Notice is required. Height exceeds FAA IFR straight-in screening criteria.

The maximum height to avoid notice is: 106 ft AMSL.

OBSTRUCTION STANDARDS

- FAR 77.17(a) (1): DNE 499 ft AGL
- FAR 77.17(a) (2): DNE - Airport Surface
- FAR 77.19(a): DNE - Horizontal Surface
- FAR 77.19(b): DNE - Conical Surface
- FAR 77.19(c): DNE - Primary Surface
- FAR 77.19(d): DNE - Approach Surface
- FAR 77.19(e): DNE - Approach Transitional Surface
- FAR 77.19(e): DNE - Abeam Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: BDR: IGOR I SIKORSKY MEMORIAL
Type: A RD: 31910.26 RE: 6

FAR 77.17(a)(1): DNE
 FAR 77.17(a)(2): DNE - Height No Greater Than 200 feet AGL.
 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: HVN: TWEED-NEW HAVEN

Type: A RD: 43917.3 RE: 6.3
 FAR 77.17(a)(1): DNE
 FAR 77.17(a)(2): DNE - Greater Than 5.99 NM.
 VFR Horizontal Surface: DNE
 VFR Conical Surface: DNE
 VFR Primary Surface: DNE
 VFR Approach Surface: DNE
 VFR Transitional Surface: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)

FAR 77.17(a)(3) Departure Surface Criteria (40:1)
 DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)

FAR 77.17(a)(4) MOCA Altitude Enroute Criteria
 The Maximum Height Permitted is 500 ft AMSL

PRIVATE LANDING FACILITIES

ARP FAA	FACIL	BEARING	RANGE	DELTA
ELEVATION IFR	IDENT TYP NAME	To FACIL	IN NM	
+145	CT46 HEL MILFORD-ALEXANDER	81.41	.61	
	Possible Impact to Private landing Facility Exceeds Notice Standards by: 8 ft (N/A Private Heliport)			
	No Impact to Private Landing Facility No violation of Helicopter Approach Surface. Estimated safety margin is: 201 feet.			
+145	JSD HEL SIKORSKY	301.31	2.36	
	No Impact to Private Landing Facility Structure is beyond notice limit by 9340 feet.			
-162	CT89 HEL ITT	302.44	4.71	
	No Impact to Private Landing Facility Structure 162 ft below heliport.			

CT76 HEL CHASE MANHATTAN BANK OF CT 276.7 4.8 -35
 No Impact to Private Landing Facility
 Structure 35 ft below heliport.

AIR NAVIGATION ELECTRONIC FACILITIES

GRND	FAC	ST	DIST	DELTA				
ANGLE	IDNT	TYPE	AT	FREQ	VECTOR	(ft)	ELEVA	ST LOCATION
BEAR	-----							
.26	BDR	VOR/DME	R	108.8	219.7	34233	+156	CT BRIDGEPORT
	Alert! IFR Notice is not Required for this structure. Predict within Final Segment of Approach plus Fix Error Area.							
	Predict within FAR 77.9 IFR Notice Requirement Area for BDR: VOR RWY 24 The maximum IFR No Notice Height for new construction is: 200' AMSL.							
-.4	JWE	NDB	I	36	341.21	57520	-406	CT CLERA
-.03	MAD	VOR/DME	R	110.4	72.97	101361	-51	CT MADISON
.04	CCC	VOR/DME	R	117.2	148.53	129684	+80	NY CALVERTON
-.01	KOKX	RADAR WXL	Y		159.6	142866	-30	NY NEW YORK
-.2	CMK	VOR/DME	R	116.6	276.82	148472	-529	NY CARMEL
MacAR	ISP	RADAR	ON	2735.	185.11	156072	-17	NY LONG ISLAND
-.07	QVH	RADAR ARSR	Y	1326.9	142.72	162454	-186	NY RIVERHEAD
.01	DPK	VOR/DME	R	117.7	203.86	175889	+42	NY DEER PARK
.04	FOK	TACAN	R	111.0	141.77	183636	+115	NY SUFFOLK CO
COUNT	HPN	RADAR	ON	2735.	252.24	193631	-345	NY WESTCHESTER
-.19	HFD	VOR/DME	R	114.9	42.37	201820	-684	CT HARTFORD

CFR Title 47, §1.30000-§1.30004

AM STUDY NOT REQUIRED: Structure is not near a FCC licensed AM station.

Movement Method Proof as specified in §73.151(c) is not required. Please review 'AM Station Report' for details.

Nearest AM Station: WFIF @ 6489 meters.

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Airspace®
Copyright © 1989 - 2019

06-03-2019

13:46:03

ATTACHMENT 7

July 1, 2019

Benjamin G. Blake, Mayor
City of Milford
70 West River Street
Milford, CT 06460

Re: Petition for Declaratory Ruling Filed with the Connecticut Siting Council for the Installation of a Temporary Telecommunications Facility at 1052 Boston Post Road, Milford, Connecticut

Dear Mayor Blake:

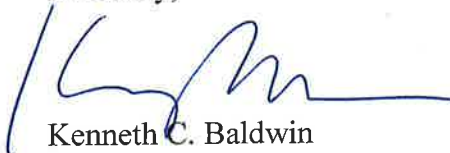
This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to establish a temporary telecommunications facility at 1052 Boston Post Road in Milford (the “Property”). The temporary facility is needed by Verizon Wireless, AT&T and T-Mobile to maintain continuity of service in the area during the redevelopment of the Property.

The temporary facility will consist of a 126-foot tall ballast-mounted monopole tower. The tower will be located in the southerly portion of the Property. The temporary tower and all related equipment will be installed within a 40’ x 50’ fenced compound.

A copy of the full Petition is attached for your review. Landowners whose parcels abut the Property were also sent notice and a copy of the Petition.

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

Attachment

19489680-v1

July 1, 2019

David B. Sulkis, City Planner
City of Milford
70 West River Street
Milford, CT 06460

Re: **Petition for Declaratory Ruling Filed with the Connecticut Siting Council for the Installation of a Temporary Telecommunications Facility at 1052 Boston Post Road, Milford, Connecticut**

Dear Mr. Sulkis:


This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to establish a temporary telecommunications facility at 1052 Boston Post Road in Milford (the “Property”). The temporary facility is needed by Verizon Wireless, AT&T and T-Mobile to maintain continuity of service in the area during the redevelopment of the Property.

The temporary facility will consist of a 126-foot tall ballast-mounted monopole tower. The tower will be located in the southerly portion of the Property. The temporary tower and all related equipment will be installed within a 40’ x 50’ fenced compound.

A copy of the full Petition is attached for your review. Landowners whose parcels abut the Property were also sent notice and a copy of the Petition.

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

Attachment

19489700-v1

July 1, 2019

Turnpike Lodge Inc.
3400 Fairfield Avenue
Bridgeport, CT 06605

Re: **Petition for Declaratory Ruling Filed with the Connecticut Siting Council for the Installation of a Temporary Telecommunications Facility at 1052 Boston Post Road, Milford, Connecticut**

Dear Sir or Madam:

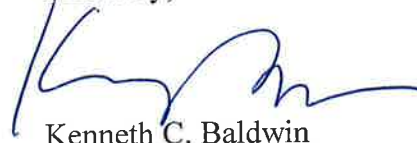
This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to establish a temporary telecommunications facility at 1052 Boston Post Road in Milford (the “Property”). The temporary facility is needed by Verizon Wireless, AT&T and T-Mobile to maintain continuity of service in the area during the redevelopment of the Property.

The temporary facility will consist of a 126-foot tall ballast-mounted monopole tower. The tower will be located in the southerly portion of the Property. The temporary tower and all related equipment will be installed within a 40’ x 50’ fenced compound.

A copy of the full Petition is attached for your review. Landowners whose parcels abut the Property were also sent notice and a copy of the Petition.

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

Attachment

19555713-v1

ATTACHMENT 8

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts

July 1, 2019

«Name_and_Address»

Re: Petition for Declaratory Ruling Filed with the Connecticut Siting Council for the Installation of a Temporary Telecommunications Facility at 1052 Boston Post Road, Milford, Connecticut

Dear «Salutation»:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to establish a temporary telecommunications facility at 1052 Boston Post Road in Milford (the “Property”). The temporary facility is needed by Verizon Wireless, AT&T and T-Mobile to maintain continuity of service in the area during the redevelopment of the Property.

The temporary facility will consist of a 126-foot tall ballast-mounted monopole tower. The tower will be located in the southerly portion of the Property. The temporary tower and all related equipment will be installed within a 40’ x 50’ fenced compound. A copy of the full Petition is attached for your review.

July 1, 2019
Page 2

This notice is being sent to you because you are listed on the City Assessor's records as an owner of land that abuts the Property. If you have any questions regarding the Petition, the Council's process for reviewing the Petition or the details of the filing itself, please feel free to contact me at the number listed above. You may also contact the Council directly at 860-827-2935.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth C. Baldwin

Attachment

**CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS
PETITION- TEMPORARY TOWER**

ABUTTING PROPERTY OWNERS

1052 BOSTON POST ROAD, MILFORD, CONNECTICUT

	Property Address	Owner's and Mailing Address
1.	Forest Road (Condos)	Forest Park Association, Inc. P.O. Box 120424 East Haven, CT 06512
2.	990 Boston Post Road	Jordan Realty LLC 127 Boston Post Road Milford, CT 06460
3.	1040 Boston Post Road	Turnpike Lodge Inc. 3400 Fairfield Avenue Bridgeport, CT 06605
4.	1064 Boston Post Road	PSOME LLC 1064 Boston Post Road Milford, CT 06460
5.	1063 Boston Post Road	Lee Partners LLP c/o Richard Lee 70 Lyon Street New Haven, CT 06511-4927
6.	Cherry Street	Milford Cemetery Association P.O. Box 227 Milford, CT 06460
7.	1023 Boston Post Road	Cumberland Farms Inc. 165 Flanders Road Westborough, MA 01581
8.	1015 Boston Post Road	JAI SIDHDHY VINAYAK Partnership 1015 Boston Post Road Milford, CT 06460
9.	Interstate 95	Gareth D. Bye, Director of Legal Affairs Office of the Secretary State of Connecticut Office of Policy and Management 450 Capitol Avenue Hartford, CT 06106-1379