



Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

May 2, 2022

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: **Notice of Exempt Modification for ATT
Crown #806939; ATT Site ID CTL02159
800 Ogg Meadow Road, Orange, CT 06477
Latitude: 41° 18' 28.36" / Longitude: -73° 1' 56.22"**

Dear Ms. Bachman:

AT&T currently maintains twelve (12) antennas at the 152-foot level of the existing 161-foot monopole tower at 800 Ogg Meadow Road, Orange, CT. The tower is owned by Crown Castle USA Inc. and the property is owned by the South Central Regional Water Authority. AT&T now intends to replace eleven (11) antennas, relocate one (1) existing antenna, install eleven (11) new antennas and ancillary equipment at the 152-foot level. This modification may include B2, B5, B17, B14, B29, B30, B66 & n77 hardware that is 4G(LTE) and/or 5GNR capable through remote software configuration and either or both services may be turned on or off at various times.

Panned Modification:

Tower:

Installed New:

- (3) QUINTTEL-QD6616-7 Antennas
- (2) DMP65R-BU6DA Antennas (1) per Beta & Gamma
- (3+3) Ericsson-AIR6449 N77D + AIR6419 N77G Stacked Antennas
- (3) Ericsson-RRUS 4415 B25 RRUs
- (1) DC6-48-60-18-8F Squid
- (2) PWRT-606-S DC Trunks & (1) FB-L98B-034-XXX Fiber Trunk
- (3) Y CABLES

Remove:

- (3) KATHREIN-800-10121 Antennas
- (3) QUINTTEL-QS66512-2 Antennas
- (5) CCI-OPA65R-BU6DA-K Antennas
- (3) ERICSSON-RRUS-32 B2 RRUs
- (3) TT19-08BP111-001 TMAs
- (6) K SBT 782-10253 BIAS-T TMAs
- (2) WCS-IMFQ-AMT Filter TMAs
- (6) 1-1/4" COAX CABLES

The Foundation for a Wireless World.

CrownCastle.com

Melanie A. Bachman

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Ground:

Install New:

- (1) 6648 FHG (+XCEDE) 4-way GPS splitter
- (4) Rectifiers in existing power plant
- (1) Battery Rack w/(3) Shelves
- (8) 170AH Batteries in new Battery Rack

Remove:

- (12) POWERWAVE-LGP 21901 Diplexers

The facility was approved by the Connecticut Siting Council in Docket No. 177A on August 6, 1997. Said approval given with conditions. AT&T's proposed exempt modification complies with the conditions of approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Peter A. Nystrom, Mayor for the City of Norwich, as both the municipality and property owner, Deanna Rhoades, City Planner, and Crown Castle is the tower owner.

1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, ATT respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Domenica Tatasciore.

Sincerely,



Domenica Tatasciore
Site Acquisition Specialist
1800 W. Park Drive
Westborough, MA 01581
(508) 621-9161/ Domenica.Tatasciore@crowncastle.com

Melanie A. Bachman

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Attachments

cc:

James Zeoli, First Selectman
Orange Town Hall
617 Orange Center Road
Orange, CT 06477

Jack Demirjian, Zoning Administrator & Enforcement Officer
Orange Town Hall
617 Orange Center Road
Orange, CT 06477

South Central Regional Water Authority
90 Sargent Drive
New Haven, CT 06511-5966

Crown Castle, Tower Owner

From: TrackingUpdates@fedex.com
To: Tatasciore, Domenica
Subject: FedEx Shipment 776707757245: Your package has been delivered
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Delivered to 617 ORANGE CENTER RDZONE, ORANGE, CT 06477
Received by A.DENNY

OBTAI PROOF OF DELIVERY

TRACKING NUMBER [776707757245](#)

FROM Domenica Tatasciore
1800 West Park Drive

Suite 200
WESTBOROUGH, MA, US, 01581

TO: James Zeoli, First Selectman
Orange Town Hall
617 Orange Center Road
ORANGE, CT, US, 06477

REFERENCE 799001.7680

SHIPPER REFERENCE 799001.7680

SHIP DATE Mon 5/02/2022 05:26 PM

DELIVERED TO Receptionist/Front Desk

PACKAGING TYPE FedEx Pak

ORIGIN WESTBOROUGH, MA, US, 01581

DESTINATION ORANGE, CT, US, 06477

SPECIAL HANDLING Deliver Weekday

NUMBER OF PIECES 1

TOTAL SHIPMENT WEIGHT 1.00 LB

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Received by J.JACK

OBTAI^N PROOF OF DELIVERY

TRACKING NUMBER [776707778931](#)

FROM Domenica Tatasciore
1800 West Park Drive

Suite 200
WESTBOROUGH, MA, US, 01581

TO Jack Demirjian, Zoning & Enforcement
Orange Town Hall
617 Orange Center Road
ORANGE, CT, US, 06477

REFERENCE 799001.7680

SHIPPER REFERENCE 799001.7680

SHIP DATE Mon 5/02/2022 05:26 PM

DELIVERED TO Receptionist/Front Desk

PACKAGING TYPE FedEx Pak

ORIGIN WESTBOROUGH, MA, US, 01581

DESTINATION ORANGE, CT, US, 06477

SPECIAL HANDLING Deliver Weekday

NUMBER OF PIECES 1

TOTAL SHIPMENT WEIGHT 1.00 LB

SERVICE TYPE FedEx Priority Overnight

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A large redacted area containing the FedEx logo, which typically includes the word "fedEx" and a blue square with a white question mark.

Hi. Your package was
delivered Tue, 05/03/2022 at
10:02am.



Delivered to 90 SARGENT DR, NEW HAVEN, CT 06511
Received by J.JOHN

OBTAI^N PROOF OF DELIVERY

TRACKING NUMBER [776707820733](#)

FROM Domenica Tatasciore
1800 West Park Drive

Suite 200
WESTBOROUGH, MA, US, 01581

TO South Central Regional Water Author
90 Sargent Drive
NEW HAVEN, CT, US, 06511

REFERENCE 799001.7680

SHIPPER REFERENCE 799001.7680

SHIP DATE Mon 5/02/2022 05:26 PM

DELIVERED TO Shipping/Receiving

PACKAGING TYPE FedEx Pak

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DESTINATION NEW HAVEN, CT, US, 06511

SPECIAL HANDLING Deliver Weekday

NUMBER OF PIECES 1

TOTAL SHIPMENT WEIGHT 1.00 LB

SERVICE TYPE FedEx Priority Overnight

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Melanie Bachman,
Executive Director

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DOCKET NO. 177A - An amended application of Celco Partnership d/b/a Bell Atlantic NYNEX Mobile for a Certificate of Environmental Compatibility and Public Need for a two cell-site configuration in the Town of Orange. The proposed Prime A site would be located approximately 875 feet east of Orange Center Road at the rear of the High Plains Community Center, 525 Orange Center Road, with the Prime B site located approximately 400 feet northwest from the end of Ogg Meadow Road. These sites would replace the previously proposed Camp Cedarcrest site. A proposed alternate site is located within a 5.5 acre parcel of property approximately 250 feet south and west of Robert Treat Drive Extension, Orange, Connecticut.

ConnecticutSitingCouncil**August 6, 1997****Decision and Order**

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a two-cell site configuration consisting of a prime A site at the High Plains Community Center property on Orange Center Road and a prime B site on South Central Regional Water Authority (SCRWA) property located off the end of Ogg Meadow Road in Orange, Connecticut, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Celco Partnership d/b/a Bell Atlantic NYNEX Mobile (BANM) for the construction, operation, and maintenance of two cellular telecommunications towers and associated equipment. We deny the alternate site on Robert Treat Drive Extension.

The facilities shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The towers shall be constructed as proposed, no taller than necessary to provide the proposed communications service, sufficient to accommodate the antennas of BANM, Springwich Cellular Limited Partnership (Springwich), Smart SMR of New York, Inc. d/b/a Nextel Communications (Nextel), and Sprint Spectrum L.P. d/b/a Sprint PCS (Sprint). Neither tower, excluding antennas, shall exceed 160 feet above ground level.
2. The Certificate Holder shall prepare Development and Management (D&M) Plans for the prime A and prime B sites in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plans shall be submitted to and approved by the Council prior to the commencement of facility construction. The prime A D&M plan shall include a tower and foundation plan, signed by a professionally licensed engineer, designed to be safe and adequate to protect the electric supply system, and provisions for landscaping, architectural treatment, and traffic management consistent with terms established with the Town. The prime B D&M plan shall include relocation of the prime B tower within the leased parcel to prevent the fall zone of the tower from crossing paved sections of the Route 15 right-of-way; a tower and foundation plan, signed by a professionally licensed engineer; plans for dewatering the site if necessary; installation of a propane tank to fuel the emergency generator; placement of a counter-sunk and sealed concrete floor for the equipment building; traffic management with schedule to construct during daytime hours; and best management practices for on-site use of construction equipment. In addition, we will require landscaping and the establishment of vegetation to stabilize the site consistent with watershed management plans. Both site plans shall provide specifications for the placement of all antennas to be attached to the towers, and plans for the equipment buildings, foundation pads for Sprint's equipment, security fencing and gate, access roads, utility lines, site clearing, tree trimming, and erosion and sedimentation control consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
3. Consistent with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council notification of:
 - a. commencement of construction;
 - b. completion of construction;
 - c. completion of site rehabilitation;
 - d. commencement of operation;
 - e. transfer of ownership of the prime A tower to the Town of Orange; and
 - f. final construction cost.
4. Upon the establishment of any new State or federal radio frequency power density standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall provide the Council a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels originally calculated and provided in the application.

6. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

7. If the facility does not initially provide, or permanently ceases to provide telecommunications services following completion of construction, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapplication for any continued or new use shall be made to the Council before any such use is made.

8. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the New Haven Register.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

APPLICANT

Cellco Partnership d/b/a

ITS REPRESENTATIVE

Kenneth C. Baldwin, Esq.

Brian C. S. Freeman, Esq.

Bell Atlantic NYNEX Mobile

Robinson & Cole

One Commercial Plaza

Hartford, CT 06103-3597

Mr. David S. Malko, P.E.

Jennifer Young Gaudet, Mgr. - Regulatory

Bell Atlantic NYNEX Mobile

20 Alexander Drive

Wallingford, CT 06492

PARTY

Residents of Robert Treat Extension,

Elvera Spinaci

Ross Court, and Mapledale Road

829 Robert Treat Extension

Orange, CT 06477

INTERVENOR

Eugene Burshulik

864 Mapledale Road

Orange, CT 06477

INTERVENOR

Springwich Cellular Limited Partnership

ITS REPRESENTATIVE

Peter J. Tyrrell, Esq.

Springwich Cellular Limited Partnership

500 Enterprise Drive

Rocky Hill, CT 06067-3900

ITS REPRESENTATIVE

Francis A. Teodosio, Esq.

Orange Town Hall

617 Orange Center Road

Orange, CT 06477

PARTY

Town of Orange

INTERVENOR

Smart SMR of New York, Inc.

ITS REPRESENTATIVE

Christopher B. Fisher, Esq.

d/b/a Nextel Communications Cuddy, Feder & Worby

90 Maple Avenue

White Plains, NY 10601-5196

PARTY

John Rechi

805 Grassy Hill Road

Orange, CT 06477

PARTY

Erwin H. Levine

875 Robert Treat Extension

Orange, CT 06477

PARTY

Jeffery Friedrichs
248 Ross Court
Orange, CT 06477

PARTY

Orange Land Trust, Inc.

ITS REPRESENTATIVE

Edmund B. Tucker, President
Orange Land Trust, Inc.
433 Pudden Lane
Orange, CT 06477
ITS REPRESENTATIVE
Elias A. Alexiades, Esq.
d/b/a Sprint PCS Andrew C. Kruger, Esq.
Harris, Beach & Wilcox, LLP
147 North Broad Street
Milford, CT 06460

INTERVENOR

Sprint Spectrum L.P.

PARTY

Jay Nastri
820 Ogg Meadow Road
Orange, CT 06477

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Ten Franklin Square New Britain, CT 06051 / 860- 827-2935

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800 OGG MEADOW RD

Location	800 OGG MEADOW RD	Mblu	97/ 4/ 2-1/ /
Acct#	85805	Owner	SOUTH CENTRAL REGIONAL WATER AUTHORITY
Assessment	\$71,900	Appraisal	\$102,500
PID	5565	Building Count	1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$24,800	\$77,700	\$102,500
Assessment			
Valuation Year	Improvements	Land	Total
2017	\$17,500	\$54,400	\$71,900

Owner of Record

Owner SOUTH CENTRAL REGIONAL WATER AUTHORITY **Sale Price** \$0

Co-Owner CROWN ATLANTIC COMPANY LLC
Address 4017 WASHINGTON RD PMB 353
MCMURRAY, PA 15317

Certificate
Book & Page 0/0
Sale Date

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
SOUTH CENTRAL REGIONAL WATER AUTHORITY	\$0		0/0	

Building Information

Building 1 : Section 1

Year Built:

Living Area: 0

Replacement Cost

Less Depreciation: \$0

Building Photo



(https://images.vgsi.com/photos/OrangeCTPhotos/100100150127.JPG)

Building Attributes	
Field	Description
Style	Vacant Land
Model	
Grade	
Stories	
Occupancy	
Exterior Wall 1	

Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Floor 1	
Interior Floor 2	
Heat Fuel	
Heat Type	
AC Type	
Bedrooms	
Full Baths	
Half Baths	
Extra Fixtures	
Total Rooms	
Bathrm Style	
Kitchen Style	
Stacks	
Fireplace(S)	
Gas Fireplace(s)	
Attic	
Frame	
Traffic	
Bsmt Gar(s)	

Building Layout

(https://images.vgsi.com/photos/OrangeCTPhotos//Sketches/5565_5565.jpg)

Building Sub-Areas (sq ft)	<u>Legend</u>
No Data for Building Sub-Areas	

Fireplaces	
SF FBM	
SF Rec Rm	
Basement_2	
Bsmt Floor	
Fndtn Cndtn	
Basement	



Extra Features

Extra Features	<u>Legend</u>
No Data for Extra Features	

Land

Land Use		Land Line Valuation	
Use Code	520	Size (Acres)	0.23
Description	Comm Vacant	Frontage	
Zone	RES	Depth	
Neighborhood	010	Assessed Value	\$54,400
Alt Land Appr	No	Appraised Value	\$77,700
Category			

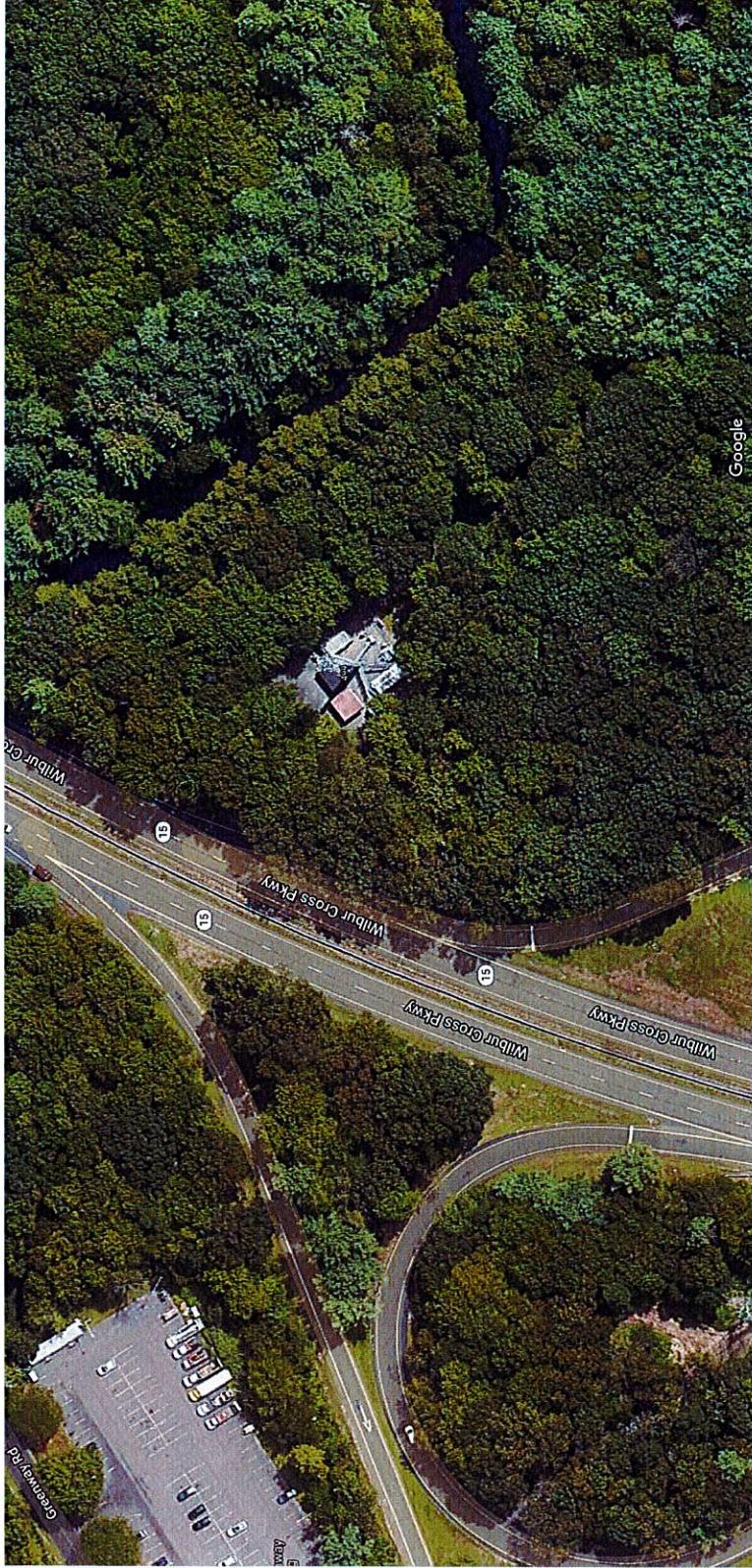
Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
SHD1	Shed - Wood			400.00 UNITS	\$5,500	1
SHD1	Shed - Wood			400.00 UNITS	\$5,500	1
SHD9	Shed - Block			400.00 UNITS	\$6,300	1
SHD7	Cell Shed			200.00 UNITS	\$7,500	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$24,800	\$77,700	\$102,500
2019	\$24,800	\$77,700	\$102,500
2018	\$24,800	\$77,700	\$102,500

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$17,500	\$54,400	\$71,900
2019	\$17,500	\$54,400	\$71,900
2018	\$17,500	\$54,400	\$71,900



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50 ft



800 Ogg Meadow Rd
Orange, CT 06477

- Directions
- Save
- Nearby
- Share

8X39+N7 Orange, Connecticut

Photos



EBI Consulting

environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

AT&T Existing Facility

Site ID: CTL02159

806939
800 OGG Meadow Road
Orange, Connecticut 06477

March 11, 2022

EBI Project Number: 6222001777

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	36.35%



March 11, 2022

AT&T

Emissions Analysis for Site: CTL02159 - 806939

EBI Consulting was directed to analyze the proposed AT&T facility located at **800 OGG Meadow Road in Orange, Connecticut** for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu\text{W}/\text{cm}^2$ and 467 $\mu\text{W}/\text{cm}^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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



Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed AT&T Wireless antenna facility located at 800 OGG Meadow Road in Orange, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower. For power density calculations, the broadcast footprint of the AIR6449 antenna has been considered. Due to the beamforming nature of this antenna, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 4 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 2) 2 LTE DE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 3) 4 LTE FN channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 4) 4 5G channels (850 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 5) 4 LTE / 5G channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 6) 4 LTE / 5G channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.



- 7) 4 LTE channels (WCS Band – 2300 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 25 Watts per Channel.
- 8) 1 5G Channel (3500 MHz Band) was considered for each sector of the proposed installation. This Channels has a transmit power of 144.58 Watts per Channel.
- 9) 1 C-Band Channel (3700 MHz Band) was considered for each sector of the proposed installation. This Channels has a transmit power of 144.58 Watts per Channel.
- 10) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 11) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 12) The antennas used in this modeling are the Quintel QD6616-7 for the 700 MHz / 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 3700 MHz channel(s), the Ericsson AIR 6449 for the 3500 MHz channel(s), the CCI DMP65R-BU6DA for the 700 MHz / 850 MHz / 2300 MHz channel(s) in Sector A, the Quintel QD6616-7 for the 700 MHz / 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 3700 MHz channel(s), the Ericsson AIR 6449 for the 3500 MHz channel(s), the CCI DMP65R-BU6DA for the 700 MHz / 850 MHz / 2300 MHz channel(s) in Sector B, the Quintel QD6616-7 for the 700 MHz / 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 3700 MHz channel(s), the Ericsson AIR 6449 for the 3500 MHz channel(s), the CCI DMP65R-BU6DA for the 700 MHz / 850 MHz / 2300 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.



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- 13) The antenna mounting height centerlines of the proposed antennas are 148, 149, and 150 feet above ground level (AGL).
- 14) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 15) All calculations were done with respect to uncontrolled / general population threshold limits.



AT&T Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Quintel QD6616-7	Make / Model:	Quintel QD6616-7	Make / Model:	Quintel QD6616-7
Frequency Bands:	700 MHz / 700 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	700 MHz / 700 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	700 MHz / 700 MHz / 1900 MHz / 2100 MHz
Gain:	11.97 dBd / 11.97 dBd / 15.11 dBd / 15.33 dBd	Gain:	11.97 dBd / 11.97 dBd / 15.11 dBd / 15.33 dBd	Gain:	11.97 dBd / 11.97 dBd / 15.11 dBd / 15.33 dBd
Height (AGL):	149 feet	Height (AGL):	149 feet	Height (AGL):	149 feet
Channel Count:	14	Channel Count:	14	Channel Count:	14
Total TX Power (W):	560.00 Watts	Total TX Power (W):	560.00 Watts	Total TX Power (W):	560.00 Watts
ERP (W):	14,426.08	ERP (W):	14,426.08	ERP (W):	14,426.08
Antenna A1 MPE %:	3.29%	Antenna B1 MPE %:	3.29%	Antenna C1 MPE %:	3.29%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	3700 MHz	Frequency Bands:	3700 MHz	Frequency Bands:	3700 MHz
Gain:	23.45 dBd	Gain:	23.45 dBd	Gain:	23.45 dBd
Height (AGL):	150 feet	Height (AGL):	150 feet	Height (AGL):	150 feet
Channel Count:	1	Channel Count:	1	Channel Count:	1
Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts
ERP (W):	31,996.92	ERP (W):	31,996.92	ERP (W):	31,996.92
Antenna A2 MPE %:	5.55%	Antenna B2 MPE %:	5.55%	Antenna C2 MPE %:	5.55%
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	3500 MHz	Frequency Bands:	3500 MHz	Frequency Bands:	3500 MHz
Gain:	23.45 dBd	Gain:	23.45 dBd	Gain:	23.45 dBd
Height (AGL):	148 feet	Height (AGL):	148 feet	Height (AGL):	148 feet
Channel Count:	1	Channel Count:	1	Channel Count:	1
Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts
ERP (W):	31,996.92	ERP (W):	31,996.92	ERP (W):	31,996.92
Antenna A3 MPE %:	5.70%	Antenna B3 MPE %:	5.70%	Antenna C3 MPE %:	5.70%
Antenna #:	4	Antenna #:	4	Antenna #:	4
Make / Model:	CCI DMP65R-BU6DA	Make / Model:	CCI DMP65R-BU6DA	Make / Model:	CCI DMP65R-BU6DA
Frequency Bands:	700 MHz / 850 MHz / 2300 MHz	Frequency Bands:	700 MHz / 850 MHz / 2300 MHz	Frequency Bands:	700 MHz / 850 MHz / 2300 MHz
Gain:	11.85 dBd / 12.45 dBd / 16.25 dBd	Gain:	11.85 dBd / 12.45 dBd / 16.25 dBd	Gain:	11.85 dBd / 12.45 dBd / 16.25 dBd
Height (AGL):	149 feet	Height (AGL):	149 feet	Height (AGL):	149 feet
Channel Count:	12	Channel Count:	12	Channel Count:	12
Total TX Power (W):	420.00 Watts	Total TX Power (W):	420.00 Watts	Total TX Power (W):	420.00 Watts
ERP (W):	9,479.38	ERP (W):	9,479.38	ERP (W):	9,479.38
Antenna A4 MPE %:	2.54%	Antenna B4 MPE %:	2.54%	Antenna C4 MPE %:	2.54%

- An adjusted power reduction factor of 0.32 was applied to the AIR 6449 antennas per guidance from AT&T.



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- Specifications were not available for the Ericsson AIR 6419 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6419 due to its similarity.



Site Composite MPE %	
Carrier	MPE %
AT&T (Max at Sector A):	17.08%
Dish	1.29%
Metro PCS	0.77%
Verizon	1.95%
Clearwire	0.17%
T-Mobile	14.8%
Metricom	0.06%
XM Sat Radio	0.23%
Site Total MPE % :	36.35%

AT&T MPE % Per Sector	
AT&T Sector A Total:	17.08%
AT&T Sector B Total:	17.08%
AT&T Sector C Total:	17.08%
Site Total MPE % :	36.35%

AT&T Maximum MPE Power Values (Sector A)

AT&T Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
AT&T 700 MHz LTE FN	4	629.59	149.0	4.43	700 MHz LTE FN	467	0.95%
AT&T 700 MHz LTE DE	2	629.59	149.0	2.21	700 MHz LTE DE	467	0.47%
AT&T 1900 MHz LTE/5G	4	1297.36	149.0	9.12	1900 MHz LTE/5G	1000	0.91%
AT&T 2100 MHz LTE/5G	4	1364.77	149.0	9.60	2100 MHz LTE/5G	1000	0.96%
AT&T 3700 MHz C-Band	1	31996.92	150.0	55.48	3700 MHz C-Band	1000	5.55%
AT&T 3500 MHz 5G	1	31996.92	148.0	57.05	3500 MHz 5G	1000	5.70%
AT&T 700 MHz LTE	4	612.43	149.0	4.31	700 MHz LTE	467	0.92%
AT&T 850 MHz 5G	4	703.17	149.0	4.94	850 MHz 5G	567	0.87%
AT&T 2300 MHz LTE	4	1054.24	149.0	7.41	2300 MHz LTE	1000	0.74%
						Total:	17.08%

- NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.



Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	17.08%
Sector B:	17.08%
Sector C:	17.08%
AT&T Maximum MPE % (Sector A):	17.08%
Site Total:	36.35%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **36.35%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.



Date: November 15, 2021

B+T Group
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630
towersupport@btgrp.com

Subject:	Mount Analysis - Conditional Passing Report	
Carrier Designation:	AT&T Mobility Equipment Change-Out	
	Carrier Site Number:	CTL02159
	Carrier Site Name:	NHV 2071 143137
	Carrier FA Number:	10035121
Crown Castle Designation:	BU Number:	806939
	Site Name:	NHV 2071 143137
	JDE Job Number:	686207
	Order Number:	586241, Rev. 0
Engineering Firm Designation:	B+T Group Report Designation:	136352.015.01
Site Data:	800 OGG Meadow Road, Orange, CT, New Haven County, 06477 Latitude 41° 18' 28.36" Longitude -73° 1' 56.22"	
Structure Information:	Tower Height & Type:	160 ft. Monopole
	Mount Elevation:	147 ft.
	Mount Type:	12.87 ft. Platform Mount

B+T Group is pleased to submit this “Mount Analysis - Conditional Passing Report” to determine the structural integrity of AT&T Mobility’s antenna mounting system with the proposed appurtenance and equipment addition on the above mentioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount’s stress level. Based on our analysis we have determined the stress level to be:

Platform Mount

*See Section 4.1 of this report for the structural modifications required in order for the mount to support the loading listed in Table 1

Sufficient

This analysis has been performed in accordance with the 2018 International Building Code based upon an ultimate 3-second gust wind speed of 119 mph. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount structural analysis prepared by: Erik Perez

Respectfully submitted by: B&T Engineering, Inc.
COA: PEC.0001564 Expires: 02/10/2022

Chad E. Tuttle, P.E.

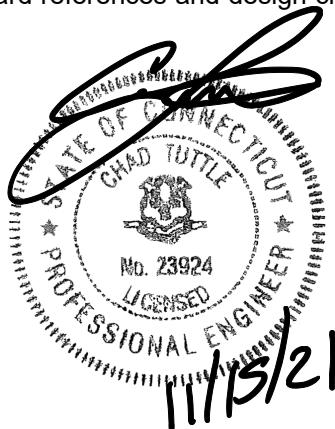


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Additional Calculations

1) INTRODUCTION

This is an existing 3 - sector 12.87' Platform Mount, mapped and analyzed by B+T Group.

The mount has been modified per reinforcement drawings prepared by B+T Group, in April of 2020.
Reinforcement consists of:

1. New Telescopic Arm Kit, SitePro1 (X-SNP-ST8) connected to tower with new Ring Mount Assembly.
2. New Corner Bracing Pipe 2-1/2" Std. x 4'-6" Long connected to existing support rails.

2) ANALYSIS CRITERIA

Building Code:	2018 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	119 mph
Exposure Category:	B
Topographic Factor at Base:	1
Topographic Factor at Mount:	1
Ice Thickness:	1.0 in
Wind Speed with Ice:	50 mph
Seismic S _s :	0.201
Seismic S ₁ :	0.054
Live Loading Wind Speed:	30 mph
Man Live Load at Mid/End-Points:	250 lb.
Man Live Load at Mount Pipes:	500 lb.

Table 1 - Proposed Equipment Configuration

Mount Centerline (ft.)	Antenna Centerline (ft.)	Qty.	Manufacturer	Model / Type	Mount / Modification Details
147	149	150	3	Ericsson	AIR 6449 N77
		3	CCI Antennas	DMP65R-BU6D	12.87' Platform Mount
		3	Quintel Technology	QD6616-7	
		3	Ericsson	RRUS 32 B30	
		3	Ericsson	RRUS 32 B66A	
		3	Ericsson	RRUS 4415 B25	
		3	Ericsson	RRUS 4449 B5/B12	
		3	Ericsson	RRUS 4478 B14 CCIV2	
		1	Raycap	DC6-48-60-18-8C-EV	
		3	Raycap	DC6-48-60-18-8F	
148	3	3	Ericsson	AIR 6419 B77G	

Table 2 - Documents Provided

Document	Remarks	Reference	Source
CCI Order	Existing Loading Proposed Loading	Date: 11/04/2021	Crown Castle
Mount Mapping	B+T Group	Date: 03/20/2020	On File
Mount Modification Report		Date: 04/06/2020	
Previous Failing Mount Analysis		Date: 03/30/2020	

3) ANALYSIS PROCEDURE

3.1) Analysis Method

RISA-3D (Version 19.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

A tool internally developed by B+T Group, was used to calculate wind loading on all appurtenances, dishes, and mount members for various loading cases. Selected output from the analysis is included in Appendix B "Software Input Calculations".

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Tower Mount Analysis* (Revision D). In addition, this analysis is in accordance with AT&T's *Mount Technical Directive – R15*.

3.2) Assumptions

1. The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design, TIA Standards, and/or manufacturer's specifications.
2. The configuration of antennas, mounts, and other appurtenances are as specified in Table-1.
3. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected members unless otherwise specified in this report.
4. Mount areas and weights are determined from field measurements, standard material properties, and/or manufacturer product data.

The following assumptions have been included in the analysis of the mount:

Component	Section	Length	Note
Raycap Mount Pipes	2" Std. Pipe	2'-0"	On the Telescopic Arms
Supporting Bracing Pipes	2" Std. Pipe	4'-0"	-

5. Serviceability with respect to antenna twist, tilt, roll, or lateral translation is not checked and is left to the carrier or tower owner to ensure conformance.
6. All prior structural modifications if any are assumed to be correctly installed and fully effective.
7. The analysis will be required to be revised if the existing conditions in the field differ from those shown in the above-referenced documents or assumed in this analysis. No allowance was made for any damaged, missing, or rusted members.
8. The following material grades were assumed (Unless Noted Otherwise):
 - (a) Connection Bolts : ASTM A325
 - (b) Steel Pipe : ASTM A53 (GR. 35)
 - (c) HSS (Round) : ASTM 500 (GR. B-42)
 - (d) HSS (Rectangular) : ASTM 500 (GR. B-46)
 - (e) Channel : ASTM A36 (GR. 36)
 - (f) Steel Solid Rod : ASTM A36 (GR. 36)
 - (g) Steel Plate : ASTM A36 (GR. 36)
 - (h) Steel Angle : ASTM A36 (GR. 36)
 - (i) UNISTRUT : ASTM A570 (GR. 33)

This analysis may be affected if any assumptions are not valid or have been made in error. B+T Group should be notified to determine the effect on the structural integrity of the antenna mounting system.

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity (Platform Mount)

Notes	Component	Centerline (ft.)	Critical Member	% Capacity	Pass / Fail
1,2	Mount Pipes	147	57	23.3	Pass
	Support Rails	147	80	52.2	Pass
	Main Horizontals	147	3	27.0	Pass
	Support Tubes	147	47	36.1	Pass
	Support Angles	147	10	63.6	Pass
	Connection Plates	147	9	29.6	Pass
	Support Pipes	147	108	68.2	Pass
	Telescopic Arm	147	91	28.9	Pass
3	Connection Bolts	147	--	23.8	Pass

Structure Rating with Recommendations (max from all components) =	68.2%
--	--------------

Notes:

- 1) Capacities listed are based on recommendations listed in Sec.4.1 being installed
- 2) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
- 3) See additional documentation in "Appendix D - Additional Calculations" for calculations supporting the % capacity reported.

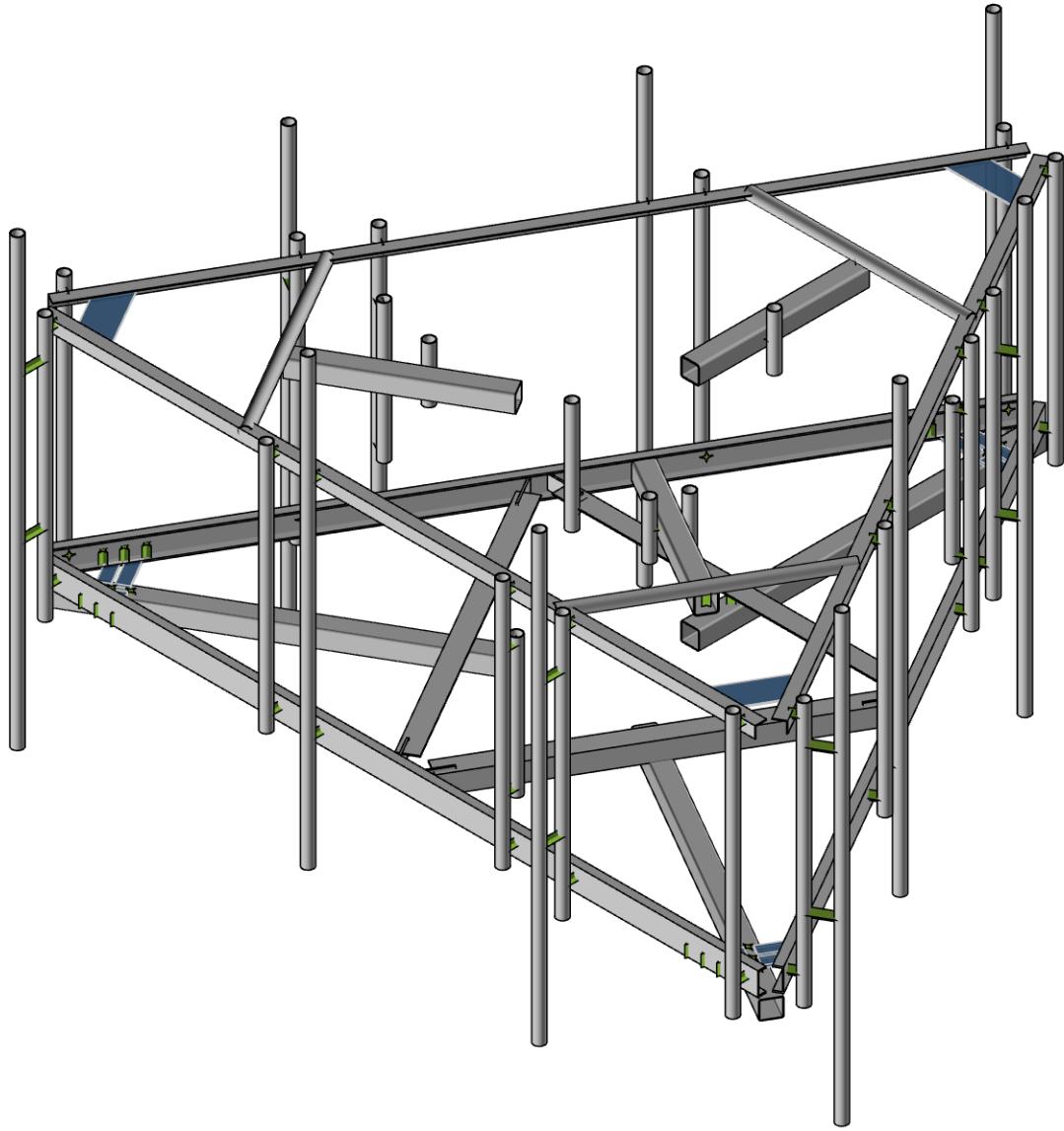
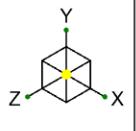
4.1) Recommendations

The mount has sufficient capacity to carry the proposed loading configuration. In order for the results of the analysis to be considered valid, the loading modification listed below must be completed.

1. Maintain Minimum 4'-7" separation between mount pipes Position 2 & Position 3 same sector.
2. Maintain Minimum 4'-9" separation between mount pipes Position 3 & Position 4 same sector.

No modifications are required at this time provided that the above-listed changes are completed.

APPENDIX A
WIRE FRAME AND RENDERED MODELS



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VP

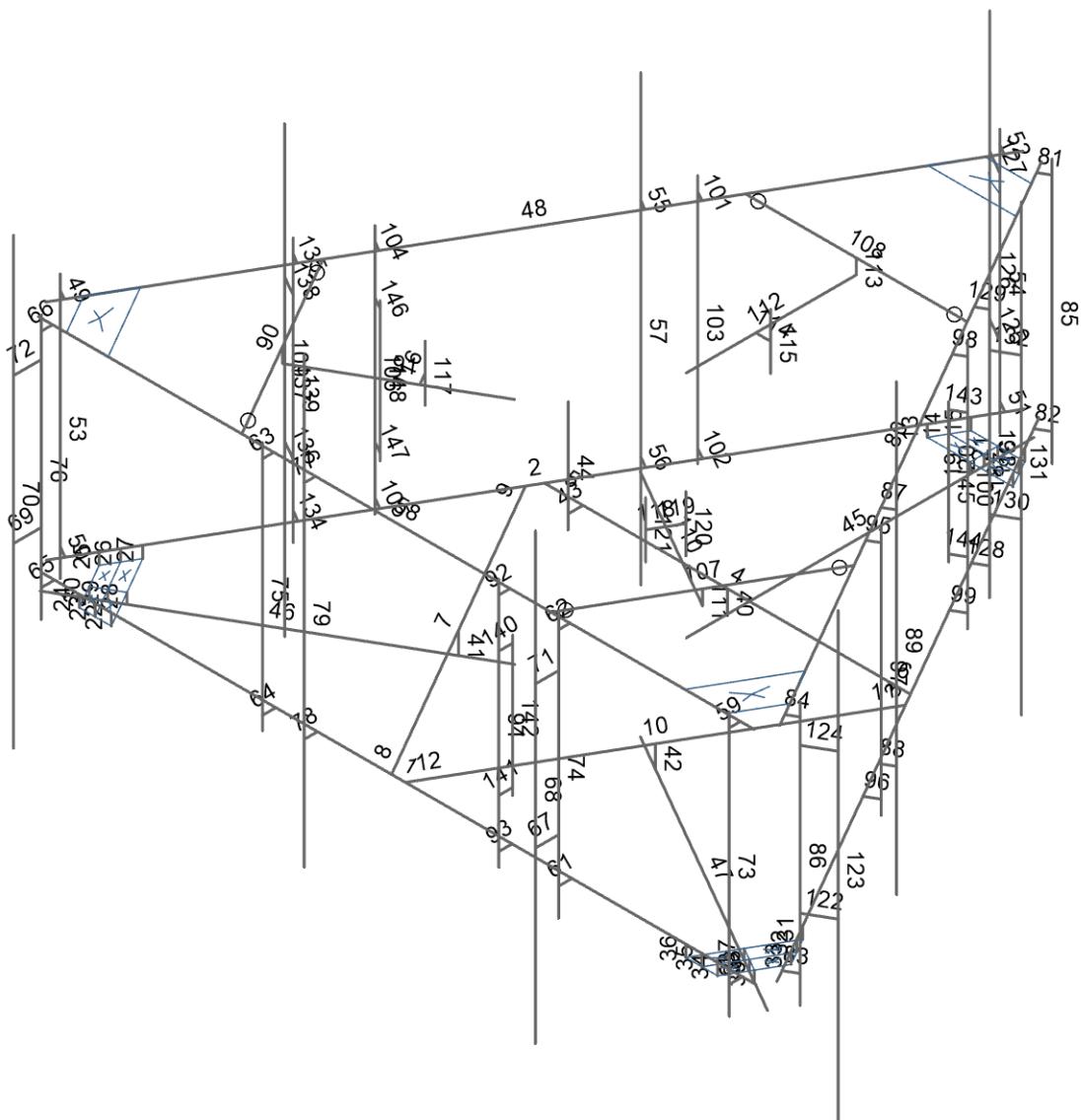
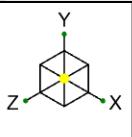
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SK-1

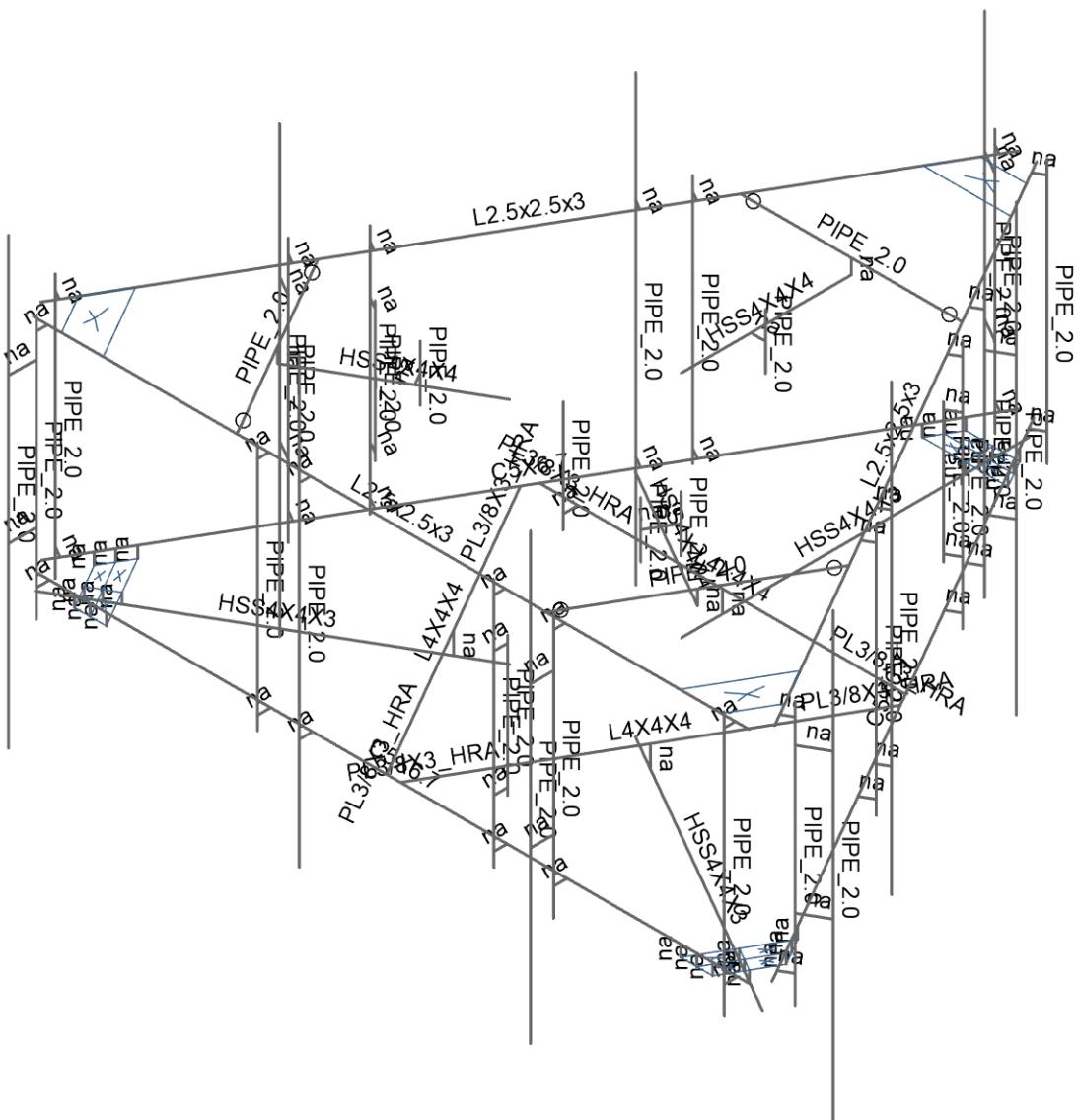
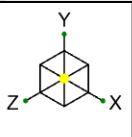
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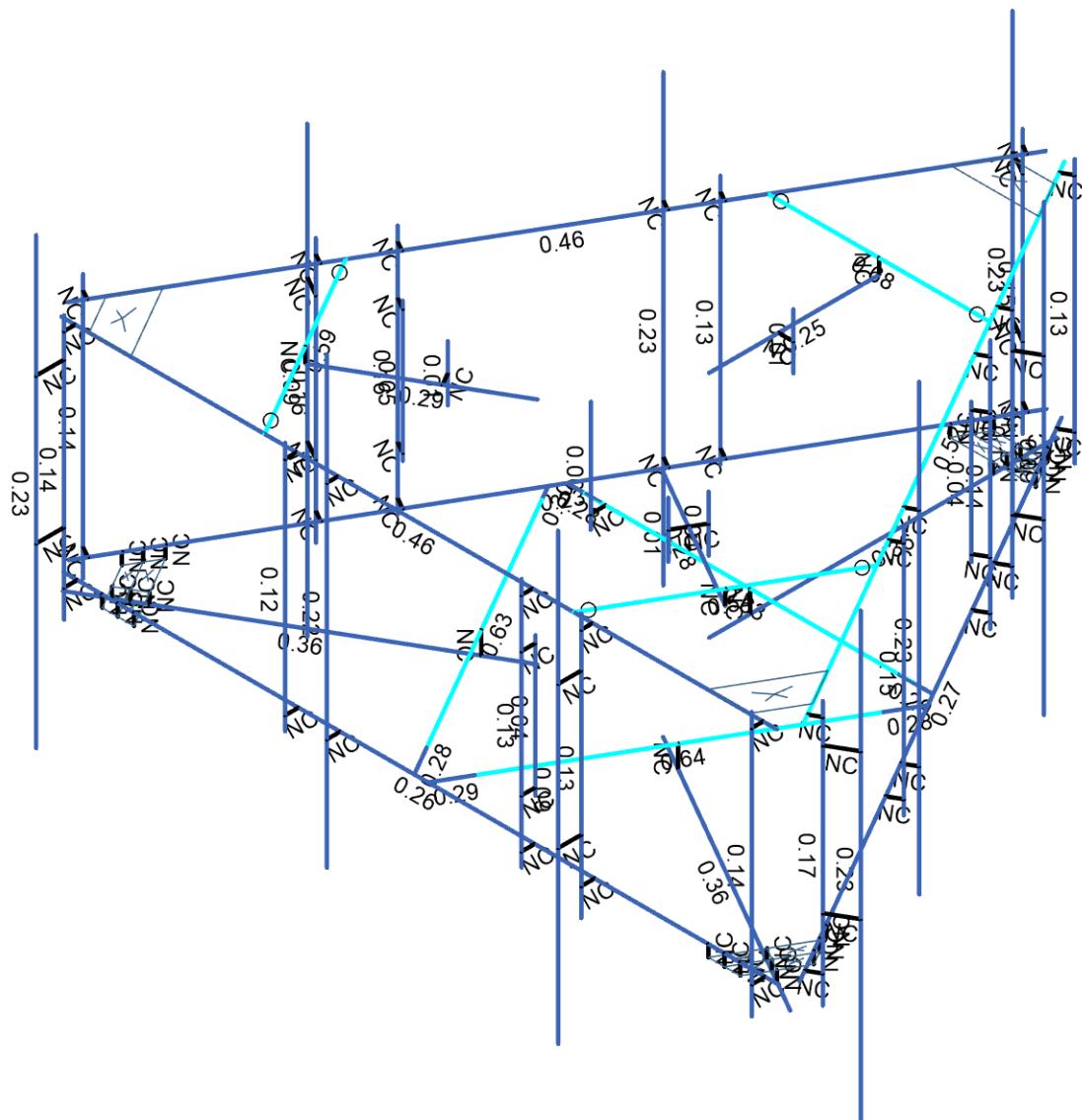
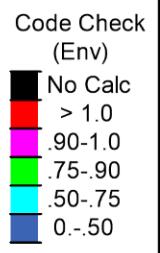
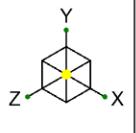
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Member Code Checks Displayed (Enveloped)
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B+T Group

VP

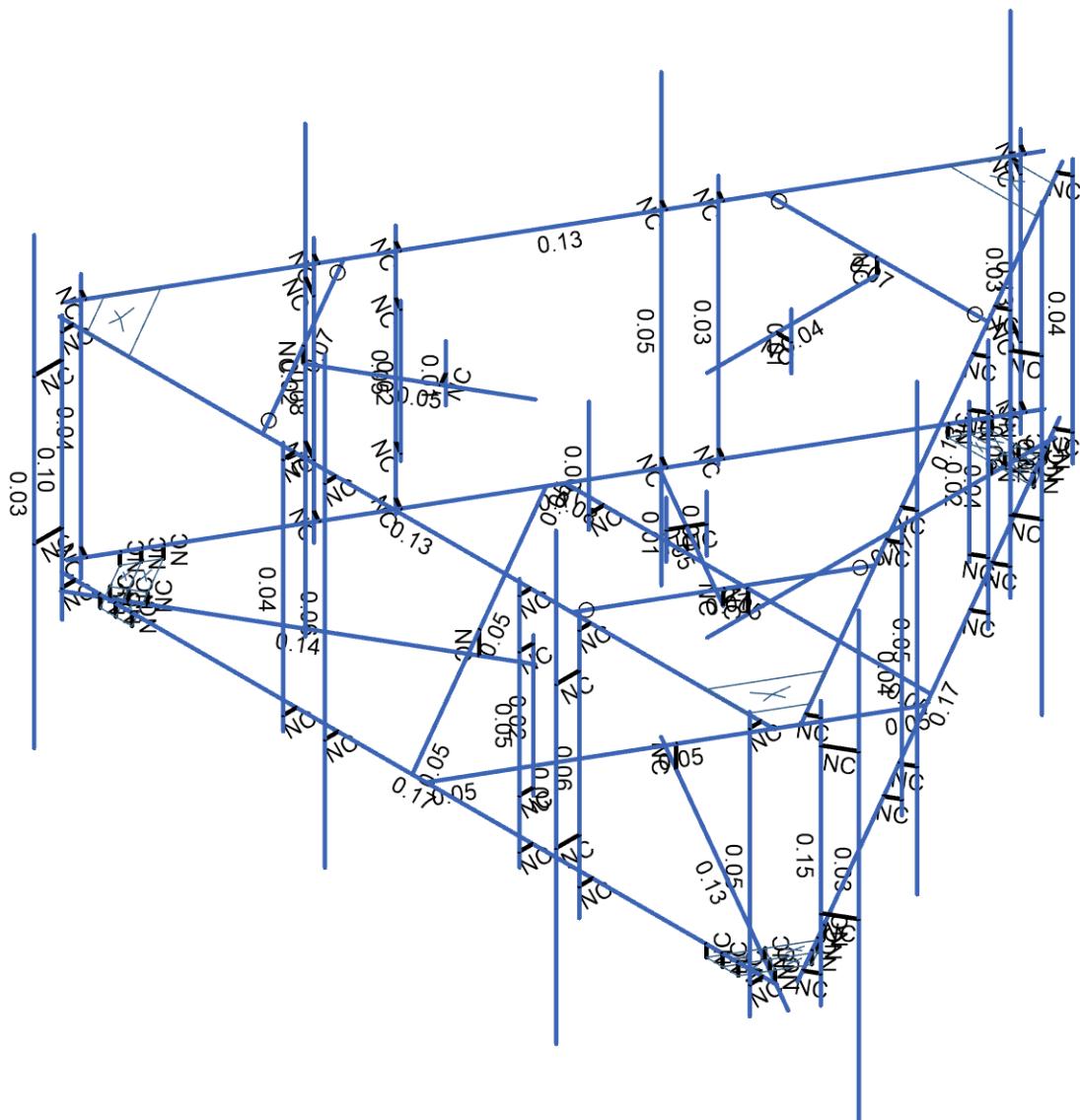
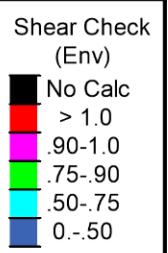
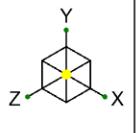
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Member Shear Checks Displayed (Enveloped)
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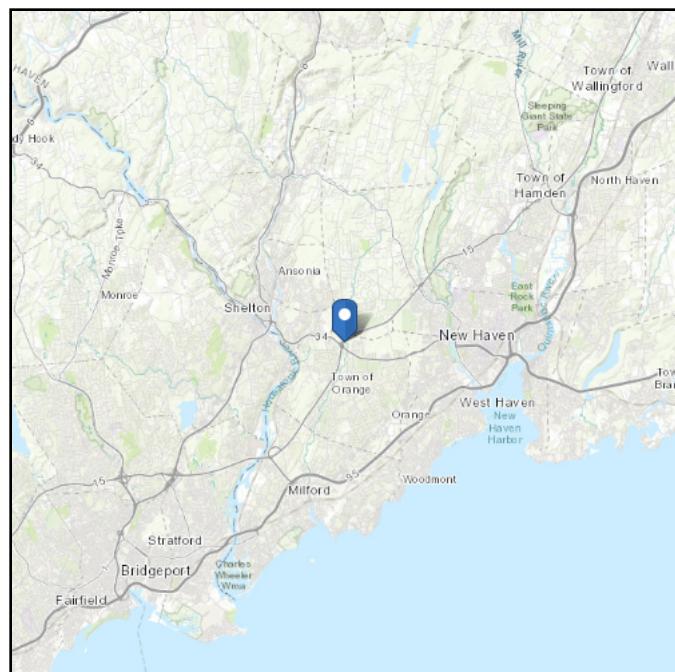
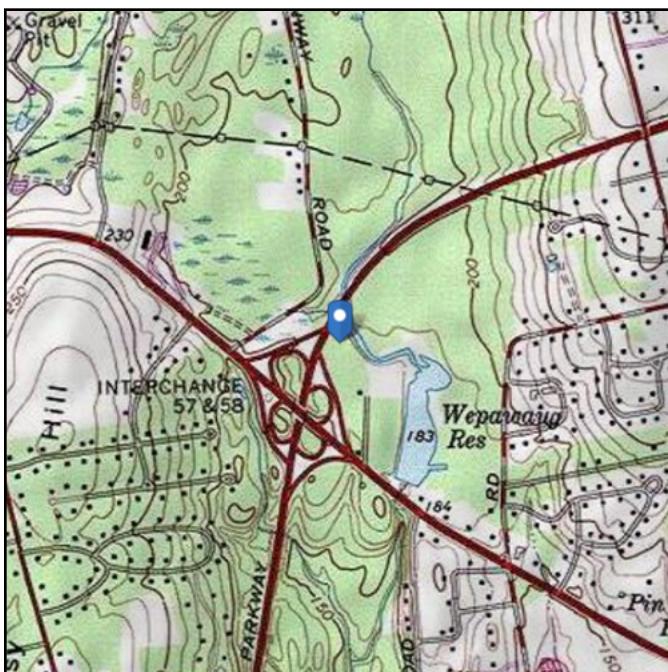
APPENDIX B
SOFTWARE INPUT CALCULATIONS

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Elevation: 191.26 ft (NAVD 88)
Latitude: 41.307878
Longitude: -73.032283



Wind

Results:

Wind Speed:	119 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	98 Vmph

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

Date Accessed: Fri Nov 12 2021

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

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

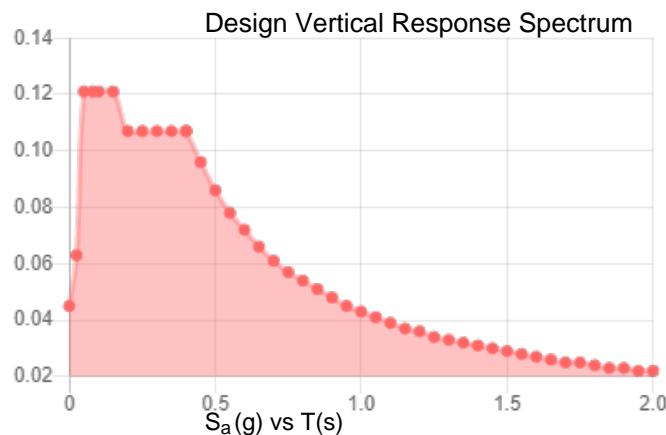
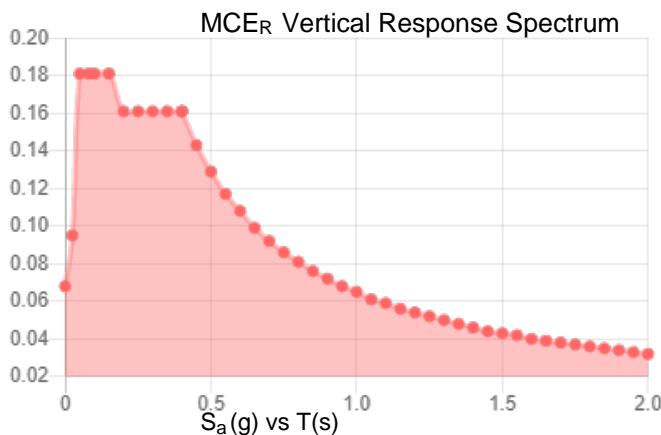
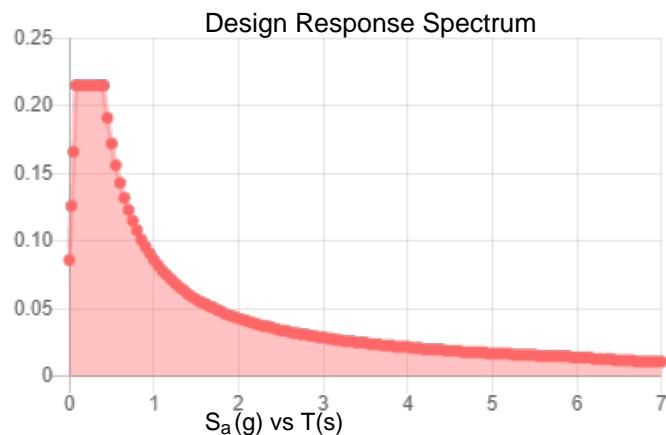
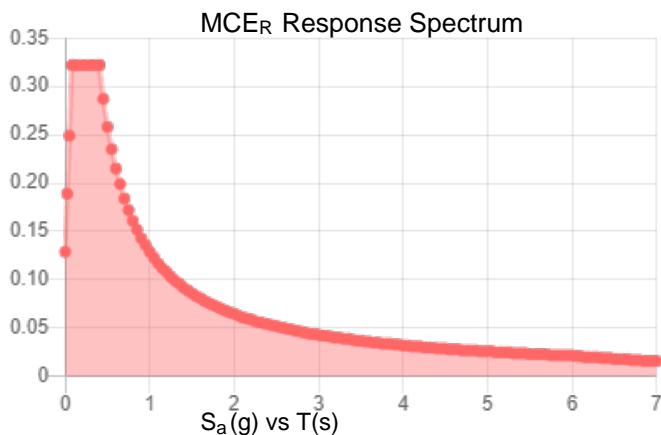
Seismic

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

Results:

S_s :	0.201	S_{D1} :	0.086
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.113
F_v :	2.4	PGA_M :	0.178
S_{MS} :	0.322	F_{PGA} :	1.574
S_{M1} :	0.129	I_e :	1
S_{DS} :	0.215	C_v :	0.703

Seismic Design Category B



Data Accessed:

Fri Nov 12 2021

Date Source:

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

Ice

Results:

Ice Thickness: 1.00 in.

Concurrent Temperature: 15 F

Gust Speed: 50 mph

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

Date Accessed: Fri Nov 12 2021

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

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

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Tower Type	:	Monopole	
Ground Elevation	z_s	: 191	ft [ASCE7 Hazard Tool]
Tower Height		: 160.00	ft
Mount Elevation		: 147.00	ft
Antenna Elevation		: 150.00	ft
Crest Height		: 0	ft
Risk Category		: II	[Table 2-1]
Exposure Category		: B	[Sec. 2.6.5.1.2]
Topography Category		: 1.00	[Sec. 2.6.6.2]
Wind Velocity	V	: 119	mph [ASCE7 Hazard Tool]
Ice wind Velocity	V_i	: 50	mph [ASCE7 Hazard Tool]
Service Velocity	V_s	: 30	mph [ASCE7 Hazard Tool]
Base Ice thickness	t_i	: 1.00	in [ASCE7 Hazard Tool]
Seismic Design Cat.		: B	[ASCE7 Hazard Tool]
	S_s	: 0.20	
	S_1	: 0.05	
	S_{DS}	: 0.22	
	S_{D1}	: 0.09	
Gust Factor	G_h	: 1.00	[Sec. 16.6]
Pressure Coefficient	K_z	: 1.11	[Sec. 2.6.5.2]
Topography Factor	K_{zt}	: 1.00	[Sec. 2.6.6]
Elevation Factor	K_e	: 0.99	[Sec. 2.6.8]
Directionality Factor	K_d	: 0.95	[Sec. 16.6]
Shielding Factor	K_a	: 0.90	[Sec. 16.6]
Design Ice Thickness	t_{iz}	: 1.16	in [Sec. 2.6.10]
Importance Factor	I_e	: 1	[Table 2-3]
Response Coefficient	C_s	: 0.108	[Sec. 2.7.7.1]
Amplification	A_s	: 2.675	[Sec. 16.7]
	q_z	: 37.73	psf

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Manufacturer	Model	Qty	Aspect Ratio	C _a flat/round	EPA _N (ft ²)	EPA _T (ft ²)	EPA _{N-Ice} (ft ²)	EPA _{T-Ice} (ft ²)	F _A No Ice (N)	F _A No Ice (T)	F _A Ice (N)	F _A Ice (T)
ERICSSON	AIR 6449 N77	0.5	1.93	1.20	1.69	1.12	2.08	1.47	0.07	0.05	0.01	0.01
ERICSSON	AIR 6449 N77	0.5	1.93	1.20	1.69	1.12	2.08	1.47	0.07	0.05	0.01	0.01
ERICSSON	AIR 6419 B77G	0.5	1.77	1.20	1.53	0.65	1.90	0.95	0.06	0.03	0.01	0.00
ERICSSON	AIR 6419 B77G	0.5	1.77	1.20	1.53	0.65	1.90	0.95	0.06	0.03	0.01	0.00
QUINTEL TECHNOLOG	QD6616-7	0.5	3.27	1.23	5.50	2.40	6.28	3.08	0.23	0.10	0.04	0.02
QUINTEL TECHNOLOG	QD6616-7	0.5	3.27	1.23	5.50	2.40	6.28	3.08	0.23	0.10	0.04	0.02
ERICSSON	RRUS 32 B30	1	3.89	1.26	1.32	2.28	1.91	2.95	0.06	0.10	0.01	0.02
ERICSSON	RRUS 4478 B14_CCIV2	1	2.19	1.20	1.04	1.68	1.50	2.23	0.04	0.07	0.01	0.01
ERICSSON	RRUS 4415 B25	1	2.78	1.21	0.56	1.37	0.93	1.86	0.02	0.06	0.00	0.01
ERICSSON	RRUS 32 B66A	1	3.72	1.25	1.42	2.39	2.02	3.07	0.06	0.10	0.01	0.02
CCI ANTENNAS	DMP65R-BU6D	0.5	3.44	1.24	5.97	2.24	6.72	2.89	0.23	0.08	0.05	0.02
CCI ANTENNAS	DMP65R-BU6D	0.5	3.44	1.24	5.97	2.24	6.72	2.89	0.23	0.08	0.05	0.02
ERICSSON	RRUS 4449 B5/B12	1	1.36	1.20	1.64	1.17	2.18	1.65	0.07	0.05	0.01	0.01
RAYCAP	DC6-48-60-18-8C-EV	1	3.07	1.23	2.23	2.23	2.94	2.94	0.09	0.09	0.02	0.02

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Manufacturer	Model	Qty	Aspect Ratio	C _a flat/round	EPA _N (ft ²)	EPA _T (ft ²)	EPA _{N-Ice} (ft ²)	EPA _{T-Ice} (ft ²)	F _A No Ice (N)	F _A No Ice (T)	F _A Ice (N)	F _A Ice (T)
ERICSSON	AIR 6449 N77	0.5	1.93	1.20	1.69	1.12	2.08	1.47	0.07	0.05	0.01	0.01
ERICSSON	AIR 6449 N77	0.5	1.93	1.20	1.69	1.12	2.08	1.47	0.07	0.05	0.01	0.01
ERICSSON	AIR 6419 B77G	0.5	1.77	1.20	1.53	0.65	1.90	0.95	0.06	0.03	0.01	0.00
ERICSSON	AIR 6419 B77G	0.5	1.77	1.20	1.53	0.65	1.90	0.95	0.06	0.03	0.01	0.00
QUINTEL TECHNOLOG	QD6616-7	0.5	3.27	1.23	5.50	2.40	6.28	3.08	0.23	0.10	0.04	0.02
QUINTEL TECHNOLOG	QD6616-7	0.5	3.27	1.23	5.50	2.40	6.28	3.08	0.23	0.10	0.04	0.02
ERICSSON	RRUS 32 B30	1	3.89	1.26	1.32	2.28	1.91	2.95	0.06	0.10	0.01	0.02
ERICSSON	RRUS 4478 B14_CCIV2	1	2.19	1.20	1.04	1.68	1.50	2.23	0.04	0.07	0.01	0.01
ERICSSON	RRUS 4415 B25	1	2.78	1.21	0.56	1.37	0.93	1.86	0.02	0.06	0.00	0.01
ERICSSON	RRUS 32 B66A	1	3.72	1.25	1.42	2.39	2.02	3.07	0.06	0.10	0.01	0.02
CCI ANTENNAS	DMP65R-BU6D	0.5	3.44	1.24	5.97	2.24	6.72	2.89	0.23	0.08	0.05	0.02
CCI ANTENNAS	DMP65R-BU6D	0.5	3.44	1.24	5.97	2.24	6.72	2.89	0.23	0.08	0.05	0.02
ERICSSON	RRUS 4449 B5/B12	1	1.36	1.20	1.64	1.17	2.18	1.65	0.07	0.05	0.01	0.01
RAYCAP	DC6-48-60-18-8F	1	2.18	1.20	1.83	1.83	2.44	2.44	0.08	0.08	0.01	0.01

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Manufacturer	Model	Qty	Aspect Ratio	C _a flat/round	EPA _N (ft ²)	EPA _T (ft ²)	EPA _{N-Ice} (ft ²)	EPA _{T-Ice} (ft ²)	F _A No Ice (N)	F _A No Ice (T)	F _A Ice (N)	F _A Ice (T)
RAYCAP	DC6-48-60-18-8F	1	2.18	1.20	1.83	1.83	2.44	2.44	0.08	0.08	0.01	0.01
ERICSSON	AIR 6449 N77	0.5	1.93	1.20	1.69	1.12	2.08	1.47	0.07	0.05	0.01	0.01
ERICSSON	AIR 6449 N77	0.5	1.93	1.20	1.69	1.12	2.08	1.47	0.07	0.05	0.01	0.01
ERICSSON	AIR 6419 B77G	0.5	1.77	1.20	1.53	0.65	1.90	0.95	0.06	0.03	0.01	0.00
ERICSSON	AIR 6419 B77G	0.5	1.77	1.20	1.53	0.65	1.90	0.95	0.06	0.03	0.01	0.00
QUINTEL TECHNOLOG	QD6616-7	0.5	3.27	1.23	5.50	2.40	6.28	3.08	0.23	0.10	0.04	0.02
QUINTEL TECHNOLOG	QD6616-7	0.5	3.27	1.23	5.50	2.40	6.28	3.08	0.23	0.10	0.04	0.02
ERICSSON	RRUS 32 B30	1	3.89	1.26	1.32	2.28	1.91	2.95	0.06	0.10	0.01	0.02
ERICSSON	RRUS 4478 B14_CCIV2	1	2.19	1.20	1.04	1.68	1.50	2.23	0.04	0.07	0.01	0.01
ERICSSON	RRUS 4415 B25	1	2.78	1.21	0.56	1.37	0.93	1.86	0.02	0.06	0.00	0.01
ERICSSON	RRUS 32 B66A	1	3.72	1.25	1.42	2.39	2.02	3.07	0.06	0.10	0.01	0.02
CCI ANTENNAS	DMP65R-BU6D	0.5	3.44	1.24	5.97	2.24	6.72	2.89	0.23	0.08	0.05	0.02
CCI ANTENNAS	DMP65R-BU6D	0.5	3.44	1.24	5.97	2.24	6.72	2.89	0.23	0.08	0.05	0.02
ERICSSON	RRUS 4449 B5/B12	1	1.36	1.20	1.64	1.17	2.18	1.65	0.07	0.05	0.01	0.01

APPENDIX C
SOFTWARE ANALYSIS OUTPUT

Node Coordinates

Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	1	0	0	
2	2	6.4374	0	3.873
3	3	-6.4374	0	3.873
4	4	-6.57282	0	3.63845
5	5	-0.135417	0	-7.51145
6	6	0.135417	0	-7.51145
7	7	6.57282	0	3.63845
8	8	-2.97703	0	-2.04475
9	9	2.97703	0	-2.04475
10	10	-3.29162	0	-2.04475
11	11	-2.68245	0	-2.04475
12	12	2.68245	0	-2.04475
13	13	3.29162	0	-2.04475
14	14	-0.282292	0	3.60056
15	15	-3.25932	0	-1.55581
16	16	-0.125	0	3.873
17	17	-0.429583	0	3.34545
18	18	-3.11203	0	-1.30069
19	19	-3.416618	0	-1.828247
20	20	3.25932	0	-1.55581
21	21	0.282292	0	3.60056
22	22	3.416618	0	-1.828247
23	23	3.11203	0	-1.30069
24	24	0.429583	0	3.34545
25	25	0.125	0	3.873
26	26	-0.770832	0	-6.41088
27	27	-0.625	-0.208333	-6.66347
28	28	-0.624999	0	-6.66347
29	29	-0.484166	0	-6.9074
30	30	0.484166	0	-6.9074
31	31	0.625	-0.208333	-6.66347
32	32	0.624999	0	-6.66347
33	33	0.770832	0	-6.41088
34	34	0	-0.395833	-6.41088
35	35	0	-0.208333	-6.41088
36	36	0	-0.395833	-6.66347
37	37	0	-0.208333	-6.66347
38	38	0	-0.395833	-6.9074
39	39	0	-0.208333	-6.9074
40	40	-5.16657	0	3.873
41	41	-5.45823	-0.208333	3.873
42	42	-5.45823	0	3.873
43	43	-5.7399	0	3.873
44	44	-6.224071	0	3.0344
45	45	-6.08323	-0.208333	2.79047
46	46	-6.083238	0	2.79047
47	47	-5.937405	0	2.53788
48	48	-5.551979	-0.395833	3.20544
49	49	-5.55198	-0.208333	3.20544
50	50	-5.77072	-0.395833	3.33173
51	51	-5.77073	-0.208333	3.33173
52	52	-5.981978	-0.395833	3.4537
53	53	-5.98198	-0.208333	3.4537
54	54	5.937405	0	2.53788
55	55	6.08323	-0.208333	2.79047

Node Coordinates (Continued)

Label		X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
56	56	6.083238	0	2.79047	
57	57	6.224071	0	3.0344	
58	58	5.7399	0	3.873	
59	59	5.45823	-0.208333	3.873	
60	60	5.45823	0	3.873	
61	61	5.16657	0	3.873	
62	62	5.55198	-0.395833	3.20544	
63	63	5.55198	-0.208333	3.20544	
64	64	5.77073	-0.395833	3.33173	
65	65	5.77073	-0.208333	3.33173	
66	66	5.98198	-0.395833	3.4537	
67	67	5.98198	-0.208333	3.4537	
68	68	0	0	-2.04475	
69	69	0	-0.395833	-2.04475	
70	70	-1.770809	0	1.02237	
71	71	-1.770809	-0.395833	1.02237	
72	72	1.770809	0	1.02237	
73	73	1.770809	-0.395833	1.02237	
74	74	-2.599201	0	-2.04475	
75	75	-2.599201	0	-1.778915	
76	76	-2.599199	1.75	-1.778915	
77	77	-2.599199	-0.25	-1.778915	
78	78	0	-0.395833	-1.30533	
79	79	0	-0.395833	-7.55533	
80	80	-1.13045	-0.395833	0.652667	
81	81	-6.54311	-0.395833	3.77767	
82	82	1.13045	-0.395833	0.652667	
83	83	6.54311	-0.395833	3.77767	
84	84	-5.7399	-0.208333	3.873	
85	85	-6.22407	-0.208333	3.0344	
86	86	-5.9374	-0.208333	2.53788	
87	87	-5.16657	-0.208333	3.873	
88	88	0.484167	-0.208333	-6.9074	
89	89	-0.484167	-0.208333	-6.9074	
90	90	-0.770833	-0.208333	-6.41088	
91	91	0.770833	-0.208333	-6.41088	
92	92	5.16657	-0.208333	3.873	
93	93	5.9374	-0.208333	2.53788	
94	94	6.22407	-0.208333	3.0344	
95	95	5.7399	-0.208333	3.873	
96	96	-6.604083	4	3.6204	
97	97	-0.166679	4	-7.5295	
98	98	-6.479086	4	3.403898	
99	99	-6.655173	4	3.30223	
100	100	-6.447823	0	3.421948	
101	101	-6.655173	0	3.30223	
102	102	-0.260414	0	-7.294949	
103	103	-0.467768	0	-7.41466	
104	104	-0.291677	4	-7.312999	
105	105	-0.467768	4	-7.41466	
106	106	-0.467768	0.939494	-7.41466	
107	107	-0.467768	3.55746	-7.41466	
108	108	-6.655173	4.25	3.30223	
109	109	-6.655173	-0.5	3.30223	
110	110	-0.467768	4.25	-7.41466	

Node Coordinates (Continued)

Label		X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
111	111	-0.467768	-0.5	-7.41466	
112	112	-2.656679	4	-3.216698	
113	113	-2.832773	4	-3.31836	
114	114	-2.625416	0	-3.198648	
115	115	-2.832773	0	-3.31836	
116	116	-2.832773	6	-3.31836	
117	117	-2.832773	-2	-3.31836	
118	118	6.4374	4	3.909104	
119	119	-6.437399	4	3.909099	
120	120	6.187405	4	3.909104	
121	121	6.187405	4	4.112434	
122	122	6.187406	0	3.873	
123	123	6.187406	0	4.112434	
124	124	3.120502	0	3.873	
125	125	3.120502	0	4.112434	
126	126	3.120502	4	3.909104	
127	127	3.120502	4	4.112434	
128	128	-2.207402	4	3.909104	
129	129	-2.207402	4	4.112433	
130	130	-2.207402	0	3.873	
131	131	-2.207402	0	4.112433	
132	132	-6.187404	0	3.873	
133	133	-6.187404	0	4.112429	
134	134	-6.187404	4	3.909104	
135	135	-6.187404	4	4.112429	
136	136	3.120502	0.802353	4.112434	
137	137	3.120502	0.802353	4.529098	
138	138	3.120499	5.75	4.529098	
139	139	3.120499	-2.25	4.529098	
140	140	-6.1874	0.939494	4.112429	
141	141	-6.1874	0.939494	4.612398	
142	142	-6.187406	5.75	4.612398	
143	143	-6.187406	-2.25	4.612398	
144	144	3.120502	3.36187	4.112434	
145	145	3.120499	3.36187	4.529098	
146	146	-6.1874	3.55746	4.112429	
147	147	-6.187406	3.55746	4.612398	
148	148	6.187402	4.25	4.112434	
149	149	6.187402	-0.5	4.112434	
150	150	3.120502	4.25	4.112434	
151	151	3.120502	-0.5	4.112434	
152	152	-2.207406	4.25	4.112433	
153	153	-2.207406	-0.25	4.112433	
154	154	-6.1874	4.25	4.112429	
155	155	-6.1874	-0.5	4.112429	
156	156	-1.457402	4	3.909104	
157	157	-1.457402	4	4.112434	
158	158	-1.457402	0	3.873	
159	159	-1.457402	0	4.112434	
160	160	-1.457398	6	4.112434	
161	161	-1.457398	-2	4.112434	
162	162	0.166684	4	-7.529504	
163	163	6.604078	4	3.620402	
164	164	0.291681	4	-7.313002	
165	165	0.467772	4	-7.414664	

Node Coordinates (Continued)

Label		X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
166	166	0.260413	0	-7.29495	
167	167	0.467772	0	-7.414664	
168	168	6.447822	0	3.421947	
169	169	6.655168	0	3.302231	
170	170	6.479081	4	3.4039	
171	171	6.655168	4	3.302231	
172	172	6.655168	0.939494	3.302231	
173	173	6.655168	3.55746	3.302231	
174	174	0.467772	4.25	-7.414664	
175	175	0.467772	-0.5	-7.414664	
176	176	6.655168	4.25	3.302231	
177	177	6.655168	-0.5	3.302231	
178	178	4.114082	4	-0.692403	
179	179	4.290171	4	-0.794074	
180	180	4.082819	0	-0.674354	
181	181	4.290171	0	-0.794074	
182	182	4.290171	6	-0.794074	
183	183	4.290171	-2	-0.794074	
184	184	5.979094	4	2.537896	
185	185	5.187428	4	3.909104	
186	186	5.937428	4	3.909104	
187	187	6.354094	4	3.187416	
188	188	-0.791664	4	-6.446996	
189	189	0.791669	4	-6.446996	
190	190	0.416669	4	-7.096515	
191	191	-0.416664	4	-7.096515	
192	192	-5.18743	4	3.909099	
193	193	-5.979097	4	2.537893	
194	194	-6.354097	4	3.187412	
195	195	-5.937431	4	3.909099	
196	196	0.893109	0	-2.04475	
197	197	-1.324251	0	1.79583	
198	198	2.21736	0	0.24892	
199	199	1.324251	0	1.79583	
200	200	0	4	-4.796176	
201	201	-1.130452	3.7344	0.652667	
202	202	2.042598	4	3.909104	
203	203	2.042598	4	4.112433	
204	204	2.042598	0	3.873	
205	205	2.042598	0	4.112433	
206	206	2.042594	4.25	4.112433	
207	207	2.042594	-0.25	4.112433	
208	208	4.489081	4	-0.042884	
209	209	4.665167	4	-0.144547	
210	210	4.45782	0	-0.024835	
211	211	4.665166	0	-0.144547	
212	212	4.665174	4.25	-0.144547	
213	213	4.665174	-0.25	-0.144547	
214	214	2.364083	4	-3.723493	
215	215	2.540167	4	-3.825155	
216	216	2.332818	0	-3.705442	
217	217	2.540166	0	-3.825155	
218	218	2.540174	4.25	-3.825155	
219	219	2.540174	-0.25	-3.825155	
220	220	-2.281679	4	-3.866217	

Node Coordinates (Continued)

Label		X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
221	221	-2.457776	4	-3.967886	
222	222	-2.250416	0	-3.848167	
223	223	-2.457776	0	-3.967886	
224	224	-2.457768	4.25	-3.967886	
225	225	-2.457768	-0.25	-3.967886	
226	226	-4.406681	4	-0.185609	
227	227	-4.582776	4	-0.287278	
228	228	-4.375418	0	-0.167559	
229	229	-4.582776	0	-0.287278	
230	230	-4.582768	4.25	-0.287278	
231	231	-4.582768	-0.25	-0.287278	
232	232	-2.781225	4	3.909104	
233	233	-4.775995	4	0.454061	
234	234	-3.77861	3.7344	2.181582	
235	235	4.775994	4	0.454063	
236	236	2.781225	4	3.909104	
237	237	-1.994767	4	-4.363163	
238	238	1.994769	4	-4.363163	
239	239	-3.77861	4	2.181582	
240	240	-2.212983	3.7344	1.277667	
241	241	1.130452	3.7344	0.652666	
242	242	3.77861	3.7344	2.181582	
243	243	3.77861	4	2.181582	
244	244	2.212983	3.7344	1.277667	
245	245	0	3.7344	-1.305333	
246	246	0	3.7344	-4.363163	
247	247	0	4	-4.363163	
248	248	0	3.7344	-2.555333	
249	249	0.265625	3.7344	-2.555333	
250	250	0.265625	4.2344	-2.555333	
251	251	0.265625	3.2344	-2.555333	
252	252	-2.345796	3.7344	1.047629	
253	253	-2.345796	4.2344	1.047629	
254	254	-2.345796	3.2344	1.047629	
255	255	2.080171	3.7344	1.507704	
256	256	2.345796	3.7344	1.047629	
257	257	2.080171	4.2344	1.507704	
258	258	2.345796	4.2344	1.047629	
259	259	2.080171	3.2344	1.507704	
260	260	2.345796	3.2344	1.047629	
261	261	7.088144	0.939494	3.052252	
262	262	7.088157	5.75	3.052252	
263	263	7.088157	-2.25	3.052252	
264	264	7.088157	3.55746	3.052252	
265	265	-0.900764	0.939494	-7.66465	
266	266	-0.900751	5.75	-7.66465	
267	267	-0.900751	-2.25	-7.66465	
268	268	-0.900751	3.55746	-7.66465	
269	269	1.793866	0	-4.638934	
270	270	2.001222	0	-4.758651	
271	271	1.825131	4	-4.656985	
272	272	2.001222	4	-4.758651	
273	273	2.001221	0.802353	-4.758651	
274	274	2.362058	0.802353	-4.96698	
275	275	2.362064	5.75	-4.96698	

Node Coordinates (Continued)

Label		X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
276	276	2.362064	-2.25	-4.96698	
277	277	2.001221	3.36187	-4.758651	
278	278	2.362064	3.36187	-4.96698	
279	279	2.001221	4.25	-4.758651	
280	280	2.001221	-0.5	-4.758651	
281	281	-4.91437	0	0.765933	
282	282	-5.121723	0	0.646217	
283	283	-4.945633	4	0.747882	
284	284	-5.121722	4	0.646217	
285	285	-5.121723	0.802353	0.646217	
286	286	-5.48257	0.802353	0.437882	
287	287	-5.482563	5.75	0.437882	
288	288	-5.482563	-2.25	0.437882	
289	289	-5.121723	3.36187	0.646217	
290	290	-5.482563	3.36187	0.437882	
291	291	-5.121723	4.25	0.646217	
292	292	-5.121723	-0.5	0.646217	
293	293	2.042594	3.125	4.112433	
294	294	2.042594	0.875	4.112433	
295	295	2.042594	3.125	3.862433	
296	296	2.042594	0.875	3.862433	
297	297	2.042594	3.25	3.862433	
298	298	2.042594	0.75	3.862433	
299	299	2.540174	3.125	-3.825155	
300	300	2.540174	0.875	-3.825155	
301	301	2.323668	3.125	-3.700155	
302	302	2.323668	0.875	-3.700155	
303	303	2.323668	3.25	-3.700155	
304	304	2.323668	0.75	-3.700155	
305	305	-4.582768	3.125	-0.287278	
306	306	-4.582768	0.875	-0.287278	
307	307	-4.366262	3.125	-0.162278	
308	308	-4.366262	0.875	-0.162278	
309	309	-4.366262	3.25	-0.162278	
310	310	-4.366262	0.75	-0.162278	

Node Boundary Conditions

Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1 80	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2 82	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3 78	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4 201	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5 241	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6 245	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Properties

Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e ⁵ °F ⁻¹]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1 A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2 A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3 A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4 A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5 A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6 A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2

Hot Rolled Steel Properties (Continued)

Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e ⁵ °F ⁻¹]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
7 A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3

Hot Rolled Steel Section Sets

Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1 MF-P1	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
2 Support Rail	L2.5x2.5x3	Beam	Single Angle	A36 Gr.36	Typical	0.901	0.535	0.535	0.011
3 MF-H1	C5X6.7	Beam	Channel	A36 Gr.36	Typical	1.97	0.47	7.48	0.055
4 F1-S1	HSS4X4X3	Beam	Tube	A500 Gr.B Rect	Typical	2.58	6.21	6.21	10
5 F1-SA1	L4X4X4	Beam	Single Angle	A36 Gr.36	Typical	1.93	3	3	0.044
6 CP-1	PL3/8X3_HRA	Beam	RECT	A36 Gr.36	Typical	1.14	0.014	0.855	0.05
7 F1-SP1	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
8 Corner Pipe	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
9 Telescopic Arm	HSS4X4X4	Beam	Tube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8

Member Primary Data

Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1 1	2	3		MF-H1	Beam	Channel	A36 Gr.36	Typical
2 2	4	5		MF-H1	Beam	Channel	A36 Gr.36	Typical
3 3	6	7		MF-H1	Beam	Channel	A36 Gr.36	Typical
4 4	8	9	90	F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
5 5	10	11		CP-1	Beam	RECT	A36 Gr.36	Typical
6 6	12	13		CP-1	Beam	RECT	A36 Gr.36	Typical
7 7	14	15	90	F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
8 8	16	17		CP-1	Beam	RECT	A36 Gr.36	Typical
9 9	18	19		CP-1	Beam	RECT	A36 Gr.36	Typical
10 10	20	21	90	F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
11 11	22	23		CP-1	Beam	RECT	A36 Gr.36	Typical
12 12	24	25		CP-1	Beam	RECT	A36 Gr.36	Typical
13 13	90	26		RIGID	None	None	RIGID	Typical
14 14	27	28		RIGID	None	None	RIGID	Typical
15 15	89	29		RIGID	None	None	RIGID	Typical
16 16	88	30		RIGID	None	None	RIGID	Typical
17 17	31	32		RIGID	None	None	RIGID	Typical
18 18	91	33		RIGID	None	None	RIGID	Typical
19 19	34	35		RIGID	None	None	RIGID	Typical
20 20	36	37		RIGID	None	None	RIGID	Typical
21 21	38	39		RIGID	None	None	RIGID	Typical
22 22	87	40		RIGID	None	None	RIGID	Typical
23 23	41	42		RIGID	None	None	RIGID	Typical
24 24	84	43		RIGID	None	None	RIGID	Typical
25 25	85	44		RIGID	None	None	RIGID	Typical
26 26	45	46		RIGID	None	None	RIGID	Typical
27 27	86	47		RIGID	None	None	RIGID	Typical
28 28	48	49		RIGID	None	None	RIGID	Typical
29 29	50	51		RIGID	None	None	RIGID	Typical
30 30	52	53		RIGID	None	None	RIGID	Typical
31 31	93	54		RIGID	None	None	RIGID	Typical
32 32	55	56		RIGID	None	None	RIGID	Typical
33 33	94	57		RIGID	None	None	RIGID	Typical
34 34	95	58		RIGID	None	None	RIGID	Typical
35 35	59	60		RIGID	None	None	RIGID	Typical
36 36	92	61		RIGID	None	None	RIGID	Typical
37 37	62	63		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
38	38	64	65	RIGID	None	None	RIGID	Typical
39	39	66	67	RIGID	None	None	RIGID	Typical
40	40	68	69	RIGID	None	None	RIGID	Typical
41	41	70	71	RIGID	None	None	RIGID	Typical
42	42	72	73	RIGID	None	None	RIGID	Typical
43	43	74	75	RIGID	None	None	RIGID	Typical
44	44	76	77	MF-P1	Column	Pipe	A53 Gr.B	Typical
45	45	78	79	F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
46	46	80	81	F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
47	47	82	83	F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
48	48	96	97	90	Support Rail	Beam	Single Angle	A36 Gr.36
49	49	98	99	RIGID	None	None	RIGID	Typical
50	50	100	101	RIGID	None	None	RIGID	Typical
51	51	102	103	RIGID	None	None	RIGID	Typical
52	52	104	105	RIGID	None	None	RIGID	Typical
53	53	108	109	MF-P1	Column	Pipe	A53 Gr.B	Typical
54	54	110	111	MF-P1	Column	Pipe	A53 Gr.B	Typical
55	55	112	113	RIGID	None	None	RIGID	Typical
56	56	114	115	RIGID	None	None	RIGID	Typical
57	57	116	117	MF-P1	Column	Pipe	A53 Gr.B	Typical
58	58	118	119	90	Support Rail	Beam	Single Angle	A36 Gr.36
59	59	120	121	RIGID	None	None	RIGID	Typical
60	60	122	123	RIGID	None	None	RIGID	Typical
61	61	124	125	RIGID	None	None	RIGID	Typical
62	62	126	127	RIGID	None	None	RIGID	Typical
63	63	128	129	RIGID	None	None	RIGID	Typical
64	64	130	131	RIGID	None	None	RIGID	Typical
65	65	132	133	RIGID	None	None	RIGID	Typical
66	66	134	135	RIGID	None	None	RIGID	Typical
67	67	136	137	RIGID	None	None	RIGID	Typical
68	68	138	139	MF-P1	Column	Pipe	A53 Gr.B	Typical
69	69	140	141	RIGID	None	None	RIGID	Typical
70	70	142	143	MF-P1	Column	Pipe	A53 Gr.B	Typical
71	71	144	145	RIGID	None	None	RIGID	Typical
72	72	146	147	RIGID	None	None	RIGID	Typical
73	73	148	149	MF-P1	Column	Pipe	A53 Gr.B	Typical
74	74	150	151	MF-P1	Column	Pipe	A53 Gr.B	Typical
75	75	152	153	MF-P1	Column	Pipe	A53 Gr.B	Typical
76	76	154	155	MF-P1	Column	Pipe	A53 Gr.B	Typical
77	77	156	157	RIGID	None	None	RIGID	Typical
78	78	158	159	RIGID	None	None	RIGID	Typical
79	79	160	161	MF-P1	Column	Pipe	A53 Gr.B	Typical
80	80	162	163	90	Support Rail	Beam	Single Angle	A36 Gr.36
81	81	164	165	RIGID	None	None	RIGID	Typical
82	82	166	167	RIGID	None	None	RIGID	Typical
83	83	168	169	RIGID	None	None	RIGID	Typical
84	84	170	171	RIGID	None	None	RIGID	Typical
85	85	174	175	MF-P1	Column	Pipe	A53 Gr.B	Typical
86	86	176	177	MF-P1	Column	Pipe	A53 Gr.B	Typical
87	87	178	179	RIGID	None	None	RIGID	Typical
88	88	180	181	RIGID	None	None	RIGID	Typical
89	89	182	183	MF-P1	Column	Pipe	A53 Gr.B	Typical
90	90	232	233	Corner Pipe	Beam	Pipe	A53 Gr.B	Typical
91	91	201	234	Telescopic Arm	Beam	Tube	A500 Gr.B Rect	Typical
92	92	202	203	RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
93	93	204	205	RIGID	None	None	RIGID	Typical
94	94	206	207	MF-P1	Column	Pipe	A53 Gr.B	Typical
95	95	208	209	RIGID	None	None	RIGID	Typical
96	96	210	211	RIGID	None	None	RIGID	Typical
97	97	212	213	MF-P1	Column	Pipe	A53 Gr.B	Typical
98	98	214	215	RIGID	None	None	RIGID	Typical
99	99	216	217	RIGID	None	None	RIGID	Typical
100	100	218	219	MF-P1	Column	Pipe	A53 Gr.B	Typical
101	101	220	221	RIGID	None	None	RIGID	Typical
102	102	222	223	RIGID	None	None	RIGID	Typical
103	103	224	225	MF-P1	Column	Pipe	A53 Gr.B	Typical
104	104	226	227	RIGID	None	None	RIGID	Typical
105	105	228	229	RIGID	None	None	RIGID	Typical
106	106	230	231	MF-P1	Column	Pipe	A53 Gr.B	Typical
107	107	235	236	Corner Pipe	Beam	Pipe	A53 Gr.B	Typical
108	108	237	238	Corner Pipe	Beam	Pipe	A53 Gr.B	Typical
109	109	239	234	RIGID	None	None	RIGID	Typical
110	110	241	242	Telescopic Arm	Beam	Tube	A500 Gr.B Rect	Typical
111	111	243	242	RIGID	None	None	RIGID	Typical
112	112	245	246	Telescopic Arm	Beam	Tube	A500 Gr.B Rect	Typical
113	113	247	246	RIGID	None	None	RIGID	Typical
114	114	248	249	RIGID	None	None	RIGID	Typical
115	115	250	251	MF-P1	Column	Pipe	A53 Gr.B	Typical
116	116	240	252	RIGID	None	None	RIGID	Typical
117	117	253	254	MF-P1	Column	Pipe	A53 Gr.B	Typical
118	118	244	255	RIGID	None	None	RIGID	Typical
119	119	244	256	RIGID	None	None	RIGID	Typical
120	120	258	260	MF-P1	Column	Pipe	A53 Gr.B	Typical
121	121	257	259	MF-P1	Column	Pipe	A53 Gr.B	Typical
122	122	172	261	RIGID	None	None	RIGID	Typical
123	123	262	263	MF-P1	Column	Pipe	A53 Gr.B	Typical
124	124	173	264	RIGID	None	None	RIGID	Typical
125	125	106	265	RIGID	None	None	RIGID	Typical
126	126	266	267	MF-P1	Column	Pipe	A53 Gr.B	Typical
127	127	107	268	RIGID	None	None	RIGID	Typical
128	128	269	270	RIGID	None	None	RIGID	Typical
129	129	271	272	RIGID	None	None	RIGID	Typical
130	130	273	274	RIGID	None	None	RIGID	Typical
131	131	275	276	MF-P1	Column	Pipe	A53 Gr.B	Typical
132	132	277	278	RIGID	None	None	RIGID	Typical
133	133	279	280	MF-P1	Column	Pipe	A53 Gr.B	Typical
134	134	281	282	RIGID	None	None	RIGID	Typical
135	135	283	284	RIGID	None	None	RIGID	Typical
136	136	285	286	RIGID	None	None	RIGID	Typical
137	137	287	288	MF-P1	Column	Pipe	A53 Gr.B	Typical
138	138	289	290	RIGID	None	None	RIGID	Typical
139	139	291	292	MF-P1	Column	Pipe	A53 Gr.B	Typical
140	140	293	295	RIGID	None	None	RIGID	Typical
141	141	294	296	RIGID	None	None	RIGID	Typical
142	142	297	298	MF-P1	Column	Pipe	A53 Gr.B	Typical
143	143	299	301	RIGID	None	None	RIGID	Typical
144	144	300	302	RIGID	None	None	RIGID	Typical
145	145	303	304	MF-P1	Column	Pipe	A53 Gr.B	Typical
146	146	305	307	RIGID	None	None	RIGID	Typical
147	147	306	308	RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
148	148	309	310	MF-P1	Column	Pipe	A53 Gr.B	Typical

Member Advanced Data

Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
1	1		Yes	N/A	None
2	2		Yes	N/A	None
3	3		Yes	N/A	None
4	4		Yes	N/A	None
5	5		Yes	N/A	None
6	6		Yes	N/A	None
7	7		Yes	N/A	None
8	8		Yes	N/A	None
9	9		Yes	N/A	None
10	10		Yes	N/A	None
11	11		Yes	N/A	None
12	12		Yes	N/A	None
13	13		Yes	** NA **	None
14	14		Yes	** NA **	None
15	15		Yes	** NA **	None
16	16		Yes	** NA **	None
17	17		Yes	** NA **	None
18	18		Yes	** NA **	None
19	19		Yes	** NA **	None
20	20		Yes	** NA **	None
21	21		Yes	** NA **	None
22	22		Yes	** NA **	None
23	23		Yes	** NA **	None
24	24		Yes	** NA **	None
25	25		Yes	** NA **	None
26	26		Yes	** NA **	None
27	27		Yes	** NA **	None
28	28		Yes	** NA **	None
29	29		Yes	** NA **	None
30	30		Yes	** NA **	None
31	31		Yes	** NA **	None
32	32		Yes	** NA **	None
33	33		Yes	** NA **	None
34	34		Yes	** NA **	None
35	35		Yes	** NA **	None
36	36		Yes	** NA **	None
37	37		Yes	** NA **	None
38	38		Yes	** NA **	None
39	39		Yes	** NA **	None
40	40		Yes	** NA **	None
41	41		Yes	** NA **	None
42	42		Yes	** NA **	None
43	43		Yes	** NA **	None
44	44		Yes	** NA **	None
45	45		Yes	N/A	None
46	46		Yes	N/A	None
47	47		Yes	N/A	None
48	48		Yes	N/A	None
49	49		Yes	** NA **	None
50	50		Yes	** NA **	None
51	51		Yes	** NA **	None

Member Advanced Data (Continued)

Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
52	52		Yes	** NA **	None
53	53		Yes	** NA **	None
54	54		Yes	** NA **	None
55	55		Yes	** NA **	None
56	56		Yes	** NA **	None
57	57		Yes	** NA **	None
58	58		Yes	N/A	None
59	59		Yes	** NA **	None
60	60		Yes	** NA **	None
61	61		Yes	** NA **	None
62	62		Yes	** NA **	None
63	63		Yes	** NA **	None
64	64		Yes	** NA **	None
65	65		Yes	** NA **	None
66	66		Yes	** NA **	None
67	67		Yes	** NA **	None
68	68		Yes	** NA **	None
69	69		Yes	** NA **	None
70	70		Yes	** NA **	None
71	71		Yes	** NA **	None
72	72		Yes	** NA **	None
73	73		Yes	** NA **	None
74	74		Yes	** NA **	None
75	75		Yes	** NA **	None
76	76		Yes	** NA **	None
77	77		Yes	** NA **	None
78	78		Yes	** NA **	None
79	79		Yes	** NA **	None
80	80		Yes	N/A	None
81	81		Yes	** NA **	None
82	82		Yes	** NA **	None
83	83		Yes	** NA **	None
84	84		Yes	** NA **	None
85	85		Yes	** NA **	None
86	86		Yes	** NA **	None
87	87		Yes	** NA **	None
88	88		Yes	** NA **	None
89	89		Yes	** NA **	None
90	90	BenPIN	BenPIN	Default	None
91	91		Yes	N/A	None
92	92		Yes	** NA **	None
93	93		Yes	** NA **	None
94	94		Yes	** NA **	None
95	95		Yes	** NA **	None
96	96		Yes	** NA **	None
97	97		Yes	** NA **	None
98	98		Yes	** NA **	None
99	99		Yes	** NA **	None
100	100		Yes	** NA **	None
101	101		Yes	** NA **	None
102	102		Yes	** NA **	None
103	103		Yes	** NA **	None
104	104		Yes	** NA **	None
105	105		Yes	** NA **	None
106	106		Yes	** NA **	None

Member Advanced Data (Continued)

Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
107	107	BenPIN	Yes	N/A	None
108	108	BenPIN	Yes	N/A	None
109	109		Yes	** NA **	None
110	110		Yes	N/A	None
111	111		Yes	** NA **	None
112	112		Yes	N/A	None
113	113		Yes	** NA **	None
114	114		Yes	** NA **	None
115	115		Yes	** NA **	None
116	116		Yes	** NA **	None
117	117		Yes	** NA **	None
118	118		Yes	** NA **	None
119	119		Yes	** NA **	None
120	120		Yes	** NA **	None
121	121		Yes	** NA **	None
122	122		Yes	** NA **	None
123	123		Yes	** NA **	None
124	124		Yes	** NA **	None
125	125		Yes	** NA **	None
126	126		Yes	** NA **	None
127	127		Yes	** NA **	None
128	128		Yes	** NA **	None
129	129		Yes	** NA **	None
130	130		Yes	** NA **	None
131	131		Yes	** NA **	None
132	132		Yes	** NA **	None
133	133		Yes	** NA **	None
134	134		Yes	** NA **	None
135	135		Yes	** NA **	None
136	136		Yes	** NA **	None
137	137		Yes	** NA **	None
138	138		Yes	** NA **	None
139	139		Yes	** NA **	None
140	140		Yes	** NA **	None
141	141		Yes	** NA **	None
142	142		Yes	** NA **	None
143	143		Yes	** NA **	None
144	144		Yes	** NA **	None
145	145		Yes	** NA **	None
146	146		Yes	** NA **	None
147	147		Yes	** NA **	None
148	148		Yes	** NA **	None

Hot Rolled Steel Design Parameters

Label	Shape	Length [ft]	Lcomp top [ft]	Function
1	MF-H1	12.875	Lbyy	Lateral
2	MF-H1	12.875	Lbyy	Lateral
3	MF-H1	12.875	Lbyy	Lateral
4	F1-SA1	5.954	Lbyy	Lateral
5	CP-1	0.609	Lbyy	Lateral
6	CP-1	0.609	Lbyy	Lateral
7	F1-SA1	5.954	Lbyy	Lateral
8	CP-1	0.609	Lbyy	Lateral
9	CP-1	0.609	Lbyy	Lateral
10	F1-SA1	5.954	Lbyy	Lateral

Hot Rolled Steel Design Parameters (Continued)

Label	Shape	Length [ft]	Lcomp top [ft]	Function
11	11	CP-1	0.609	Lbby
12	12	CP-1	0.609	Lateral
13	44	MF-P1	2	Lbby
14	45	F1-S1	6.25	Lbby
15	46	F1-S1	6.25	Lbby
16	47	F1-S1	6.25	Lbby
17	48	Support Rail	12.875	Lbby
18	53	MF-P1	4.75	Lbby
19	54	MF-P1	4.75	Lateral
20	57	MF-P1	8	Lbby
21	58	Support Rail	12.875	Lbby
22	68	MF-P1	8	Lbby
23	70	MF-P1	8	Lbby
24	73	MF-P1	4.75	Lbby
25	74	MF-P1	4.75	Lbby
26	75	MF-P1	4.5	Lbby
27	76	MF-P1	4.75	Lbby
28	79	MF-P1	8	Lbby
29	80	Support Rail	12.875	Lbby
30	85	MF-P1	4.75	Lbby
31	86	MF-P1	4.75	Lateral
32	89	MF-P1	8	Lbby
33	90	Corner Pipe	3.99	Lbby
34	91	Telescopic Arm	3.058	Lbby
35	94	MF-P1	4.5	Lbby
36	97	MF-P1	4.5	Lbby
37	100	MF-P1	4.5	Lbby
38	103	MF-P1	4.5	Lbby
39	106	MF-P1	4.5	Lbby
40	107	Corner Pipe	3.99	Lbby
41	108	Corner Pipe	3.99	Lateral
42	110	Telescopic Arm	3.058	Lbby
43	112	Telescopic Arm	3.058	Lateral
44	115	MF-P1	1	Lbby
45	117	MF-P1	1	Lbby
46	120	MF-P1	1	Lbby
47	121	MF-P1	1	Lbby
48	123	MF-P1	8	Lbby
49	126	MF-P1	8	Lbby
50	131	MF-P1	8	Lbby
51	133	MF-P1	4.75	Lbby
52	137	MF-P1	8	Lbby
53	139	MF-P1	4.75	Lbby
54	142	MF-P1	2.5	Lbby
55	145	MF-P1	2.5	Lbby
56	148	MF-P1	2.5	Lbby

Member Point Loads (BLC 1 : Dead)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	68	Y	-0.048 %5
2	68	Y	-0.048 %35
3	68	Y	-0.033 %60
4	68	Y	-0.033 %90
5	68	Y	0 0
6	79	Y	-0.065 %5

Member Point Loads (BLC 1 : Dead) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
7	79	Y	-0.065 %80
8	79	Y	-0.053 %45
9	79	Y	-0.059 %45
10	79	Y	0 0
11	73	Y	-0.044 %50
12	73	Y	-0.055 %50
13	73	Y	0 0
14	73	Y	0 0
15	73	Y	0 0
16	70	Y	-0.045 %5
17	70	Y	-0.045 %65
18	70	Y	0 0
19	70	Y	0 0
20	70	Y	0 0
21	76	Y	-0.071 %35
22	76	Y	0 0
23	76	Y	0 0
24	76	Y	0 0
25	76	Y	0 0
26	117	Y	-0.026 %35
27	117	Y	0 0
28	117	Y	0 0
29	117	Y	0 0
30	117	Y	0 0
31	137	Y	-0.048 %5
32	137	Y	-0.048 %35
33	137	Y	-0.033 %60
34	137	Y	-0.033 %90
35	137	Y	0 0
36	57	Y	-0.065 %5
37	57	Y	-0.065 %80
38	57	Y	-0.053 %45
39	57	Y	-0.059 %45
40	57	Y	0 0
41	53	Y	-0.044 %50
42	53	Y	-0.055 %50
43	53	Y	0 0
44	53	Y	0 0
45	53	Y	0 0
46	126	Y	-0.045 %5
47	126	Y	-0.045 %65
48	126	Y	0 0
49	126	Y	0 0
50	126	Y	0 0
51	54	Y	-0.071 %35
52	54	Y	0 0
53	54	Y	0 0
54	54	Y	0 0
55	54	Y	0 0
56	120	Y	-0.019 %35
57	120	Y	0 0
58	120	Y	0 0
59	120	Y	0 0
60	120	Y	0 0
61	121	Y	-0.019 %35

Member Point Loads (BLC 1 : Dead) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
62	121	Y	0
63	121	Y	0
64	121	Y	0
65	121	Y	0
66	131	Y	-0.048
67	131	Y	-0.048
68	131	Y	-0.033
69	131	Y	-0.033
70	131	Y	0
71	89	Y	-0.065
72	89	Y	-0.065
73	89	Y	-0.053
74	89	Y	-0.059
75	89	Y	0
76	85	Y	-0.044
77	85	Y	-0.055
78	85	Y	0
79	85	Y	0
80	85	Y	0
81	123	Y	-0.045
82	123	Y	-0.045
83	123	Y	0
84	123	Y	0
85	123	Y	0
86	86	Y	-0.071
87	86	Y	0
88	86	Y	0
89	86	Y	0
90	86	Y	0
91	115	Y	-0.019
92	115	Y	0
93	115	Y	0
94	115	Y	0
95	115	Y	0

Member Point Loads (BLC 2 : 0 Wind - No Ice)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	68	Z	-0.069
2	68	Z	-0.069
3	68	Z	-0.063
4	68	Z	-0.063
5	68	Z	0
6	79	Z	-0.232
7	79	Z	-0.232
8	79	Z	-0.057
9	79	Z	-0.043
10	79	Z	0
11	73	Z	-0.023
12	73	Z	-0.061
13	73	Z	0
14	73	Z	0
15	73	Z	0
16	70	Z	-0.226
17	70	Z	-0.226
18	70	Z	0

Member Point Loads (BLC 2 : 0 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
19	70	Z	0
20	70	Z	0
21	76	Z	-0.067
22	76	Z	0
23	76	Z	0
24	76	Z	0
25	76	Z	0
26	117	Z	-0.093
27	117	Z	0
28	117	Z	0
29	117	Z	0
30	117	Z	0
31	137	Z	-0.069
32	137	Z	-0.069
33	137	Z	-0.063
34	137	Z	-0.063
35	137	Z	0
36	57	Z	-0.232
37	57	Z	-0.232
38	57	Z	-0.057
39	57	Z	-0.043
40	57	Z	0
41	53	Z	-0.023
42	53	Z	-0.061
43	53	Z	0
44	53	Z	0
45	53	Z	0
46	126	Z	-0.226
47	126	Z	-0.226
48	126	Z	0
49	126	Z	0
50	126	Z	0
51	54	Z	-0.067
52	54	Z	0
53	54	Z	0
54	54	Z	0
55	54	Z	0
56	120	Z	-0.075
57	120	Z	0
58	120	Z	0
59	120	Z	0
60	120	Z	0
61	121	Z	-0.075
62	121	Z	0
63	121	Z	0
64	121	Z	0
65	121	Z	0
66	131	Z	-0.069
67	131	Z	-0.069
68	131	Z	-0.063
69	131	Z	-0.063
70	131	Z	0
71	89	Z	-0.232
72	89	Z	-0.232
73	89	Z	-0.057

Member Point Loads (BLC 2 : 0 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
74 89	Z	-0.043	%45
75 89	Z	0	0
76 85	Z	-0.023	%50
77 85	Z	-0.061	%50
78 85	Z	0	0
79 85	Z	0	0
80 85	Z	0	0
81 123	Z	-0.226	%5
82 123	Z	-0.226	%65
83 123	Z	0	0
84 123	Z	0	0
85 123	Z	0	0
86 86	Z	-0.067	%35
87 86	Z	0	0
88 86	Z	0	0
89 86	Z	0	0
90 86	Z	0	0
91 115	Z	-0.075	%35
92 115	Z	0	0
93 115	Z	0	0
94 115	Z	0	0
95 115	Z	0	0

Member Point Loads (BLC 3 : 90 Wind - No Ice)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1 68	X	-0.046	%5
2 68	X	-0.046	%35
3 68	X	-0.027	%60
4 68	X	-0.027	%90
5 68	X	0	0
6 79	X	-0.101	%5
7 79	X	-0.101	%80
8 79	X	-0.098	%45
9 79	X	-0.069	%45
10 79	X	0	0
11 73	X	-0.057	%50
12 73	X	-0.102	%50
13 73	X	0	0
14 73	X	0	0
15 73	X	0	0
16 70	X	-0.085	%5
17 70	X	-0.085	%65
18 70	X	0	0
19 70	X	0	0
20 70	X	0	0
21 76	X	-0.048	%35
22 76	X	0	0
23 76	X	0	0
24 76	X	0	0
25 76	X	0	0
26 117	X	-0.093	%35
27 117	X	0	0
28 117	X	0	0
29 117	X	0	0
30 117	X	0	0

Member Point Loads (BLC 3 : 90 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
31	137	X	-0.046 %5
32	137	X	-0.046 %35
33	137	X	-0.027 %60
34	137	X	-0.027 %90
35	137	X	0 0
36	57	X	-0.101 %5
37	57	X	-0.101 %80
38	57	X	-0.098 %45
39	57	X	-0.069 %45
40	57	X	0 0
41	53	X	-0.057 %50
42	53	X	-0.102 %50
43	53	X	0 0
44	53	X	0 0
45	53	X	0 0
46	126	X	-0.085 %5
47	126	X	-0.085 %65
48	126	X	0 0
49	126	X	0 0
50	126	X	0 0
51	54	X	-0.048 %35
52	54	X	0 0
53	54	X	0 0
54	54	X	0 0
55	54	X	0 0
56	120	X	-0.075 %35
57	120	X	0 0
58	120	X	0 0
59	120	X	0 0
60	120	X	0 0
61	121	X	-0.075 %35
62	121	X	0 0
63	121	X	0 0
64	121	X	0 0
65	121	X	0 0
66	131	X	-0.046 %5
67	131	X	-0.046 %35
68	131	X	-0.027 %60
69	131	X	-0.027 %90
70	131	X	0 0
71	89	X	-0.101 %5
72	89	X	-0.101 %80
73	89	X	-0.098 %45
74	89	X	-0.069 %45
75	89	X	0 0
76	85	X	-0.057 %50
77	85	X	-0.102 %50
78	85	X	0 0
79	85	X	0 0
80	85	X	0 0
81	123	X	-0.085 %5
82	123	X	-0.085 %65
83	123	X	0 0
84	123	X	0 0
85	123	X	0 0

Member Point Loads (BLC 3 : 90 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
86	X	-0.048	%35
87	X	0	0
88	X	0	0
89	X	0	0
90	X	0	0
91	X	-0.075	%35
92	X	0	0
93	X	0	0
94	X	0	0
95	X	0	0

Member Point Loads (BLC 4 : 0 Wind - Ice)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	Z	-0.012	%5
2	Z	-0.012	%35
3	Z	-0.011	%60
4	Z	-0.011	%90
5	Z	0	0
6	Z	-0.041	%5
7	Z	-0.041	%80
8	Z	-0.01	%45
9	Z	-0.008	%45
10	Z	0	0
11	Z	-0.004	%50
12	Z	-0.011	%50
13	Z	0	0
14	Z	0	0
15	Z	0	0
16	Z	-0.045	%5
17	Z	-0.045	%65
18	Z	0	0
19	Z	0	0
20	Z	0	0
21	Z	-0.012	%35
22	Z	0	0
23	Z	0	0
24	Z	0	0
25	Z	0	0
26	Z	-0.017	%35
27	Z	0	0
28	Z	0	0
29	Z	0	0
30	Z	0	0
31	Z	-0.012	%5
32	Z	-0.012	%35
33	Z	-0.011	%60
34	Z	-0.011	%90
35	Z	0	0
36	Z	-0.041	%5
37	Z	-0.041	%80
38	Z	-0.01	%45
39	Z	-0.008	%45
40	Z	0	0
41	Z	-0.004	%50
42	Z	-0.011	%50

Member Point Loads (BLC 4 : 0 Wind - Ice) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
43	53	Z	0
44	53	Z	0
45	53	Z	0
46	126	Z	-0.045
47	126	Z	-0.045
48	126	Z	0
49	126	Z	0
50	126	Z	0
51	54	Z	-0.012
52	54	Z	0
53	54	Z	0
54	54	Z	0
55	54	Z	0
56	120	Z	-0.013
57	120	Z	0
58	120	Z	0
59	120	Z	0
60	120	Z	0
61	121	Z	-0.013
62	121	Z	0
63	121	Z	0
64	121	Z	0
65	121	Z	0
66	131	Z	-0.012
67	131	Z	-0.012
68	131	Z	-0.011
69	131	Z	-0.011
70	131	Z	0
71	89	Z	-0.041
72	89	Z	-0.041
73	89	Z	-0.01
74	89	Z	-0.008
75	89	Z	0
76	85	Z	-0.004
77	85	Z	-0.011
78	85	Z	0
79	85	Z	0
80	85	Z	0
81	123	Z	-0.045
82	123	Z	-0.045
83	123	Z	0
84	123	Z	0
85	123	Z	0
86	86	Z	-0.012
87	86	Z	0
88	86	Z	0
89	86	Z	0
90	86	Z	0
91	115	Z	-0.013
92	115	Z	0
93	115	Z	0
94	115	Z	0
95	115	Z	0

Member Point Loads (BLC 5 : 90 Wind - Ice)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1 68	X	-0.008	%5
2 68	X	-0.008	%35
3 68	X	-0.005	%60
4 68	X	-0.005	%90
5 68	X	0	0
6 79	X	-0.018	%5
7 79	X	-0.018	%80
8 79	X	-0.017	%45
9 79	X	-0.012	%45
10 79	X	0	0
11 73	X	-0.01	%50
12 73	X	-0.018	%50
13 73	X	0	0
14 73	X	0	0
15 73	X	0	0
16 70	X	-0.019	%5
17 70	X	-0.019	%65
18 70	X	0	0
19 70	X	0	0
20 70	X	0	0
21 76	X	-0.009	%35
22 76	X	0	0
23 76	X	0	0
24 76	X	0	0
25 76	X	0	0
26 117	X	-0.017	%35
27 117	X	0	0
28 117	X	0	0
29 117	X	0	0
30 117	X	0	0
31 137	X	-0.008	%5
32 137	X	-0.008	%35
33 137	X	-0.005	%60
34 137	X	-0.005	%90
35 137	X	0	0
36 57	X	-0.018	%5
37 57	X	-0.018	%80
38 57	X	-0.017	%45
39 57	X	-0.012	%45
40 57	X	0	0
41 53	X	-0.01	%50
42 53	X	-0.018	%50
43 53	X	0	0
44 53	X	0	0
45 53	X	0	0
46 126	X	-0.019	%5
47 126	X	-0.019	%65
48 126	X	0	0
49 126	X	0	0
50 126	X	0	0
51 54	X	-0.009	%35
52 54	X	0	0
53 54	X	0	0
54 54	X	0	0
55 54	X	0	0

Member Point Loads (BLC 5 : 90 Wind - Ice) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
56	120	X	-0.013
57	120	X	0
58	120	X	0
59	120	X	0
60	120	X	0
61	121	X	-0.013
62	121	X	0
63	121	X	0
64	121	X	0
65	121	X	0
66	131	X	-0.008
67	131	X	-0.008
68	131	X	-0.005
69	131	X	-0.005
70	131	X	0
71	89	X	-0.018
72	89	X	-0.018
73	89	X	-0.017
74	89	X	-0.012
75	89	X	0
76	85	X	-0.01
77	85	X	-0.018
78	85	X	0
79	85	X	0
80	85	X	0
81	123	X	-0.019
82	123	X	-0.019
83	123	X	0
84	123	X	0
85	123	X	0
86	86	X	-0.009
87	86	X	0
88	86	X	0
89	86	X	0
90	86	X	0
91	115	X	-0.013
92	115	X	0
93	115	X	0
94	115	X	0
95	115	X	0

Member Point Loads (BLC 6 : 0 Wind - Service)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	68	Z	-0.004
2	68	Z	-0.004
3	68	Z	-0.004
4	68	Z	-0.004
5	68	Z	0
6	79	Z	-0.015
7	79	Z	-0.015
8	79	Z	-0.004
9	79	Z	-0.003
10	79	Z	0
11	73	Z	-0.002
12	73	Z	-0.004

Member Point Loads (BLC 6 : 0 Wind - Service) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
13	Z	0	0
14	Z	0	0
15	Z	0	0
16	Z	-0.014	%5
17	Z	-0.014	%65
18	Z	0	0
19	Z	0	0
20	Z	0	0
21	Z	-0.004	%35
22	Z	0	0
23	Z	0	0
24	Z	0	0
25	Z	0	0
26	Z	-0.006	%35
27	Z	0	0
28	Z	0	0
29	Z	0	0
30	Z	0	0
31	Z	-0.004	%5
32	Z	-0.004	%35
33	Z	-0.004	%60
34	Z	-0.004	%90
35	Z	0	0
36	Z	-0.015	%5
37	Z	-0.015	%80
38	Z	-0.004	%45
39	Z	-0.003	%45
40	Z	0	0
41	Z	-0.002	%50
42	Z	-0.004	%50
43	Z	0	0
44	Z	0	0
45	Z	0	0
46	Z	-0.014	%5
47	Z	-0.014	%65
48	Z	0	0
49	Z	0	0
50	Z	0	0
51	Z	-0.004	%35
52	Z	0	0
53	Z	0	0
54	Z	0	0
55	Z	0	0
56	Z	-0.005	%35
57	Z	0	0
58	Z	0	0
59	Z	0	0
60	Z	0	0
61	Z	-0.005	%35
62	Z	0	0
63	Z	0	0
64	Z	0	0
65	Z	0	0
66	Z	-0.004	%5
67	Z	-0.004	%35

Member Point Loads (BLC 6 : 0 Wind - Service) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
68	131	Z	-0.004
69	131	Z	-0.004
70	131	Z	0
71	89	Z	-0.015
72	89	Z	-0.015
73	89	Z	-0.004
74	89	Z	-0.003
75	89	Z	0
76	85	Z	-0.002
77	85	Z	-0.004
78	85	Z	0
79	85	Z	0
80	85	Z	0
81	123	Z	-0.014
82	123	Z	-0.014
83	123	Z	0
84	123	Z	0
85	123	Z	0
86	86	Z	-0.004
87	86	Z	0
88	86	Z	0
89	86	Z	0
90	86	Z	0
91	115	Z	-0.005
92	115	Z	0
93	115	Z	0
94	115	Z	0
95	115	Z	0

Member Point Loads (BLC 7 : 90 Wind - Service)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	68	X	-0.003
2	68	X	-0.003
3	68	X	-0.002
4	68	X	-0.002
5	68	X	0
6	79	X	-0.006
7	79	X	-0.006
8	79	X	-0.006
9	79	X	-0.004
10	79	X	0
11	73	X	-0.004
12	73	X	-0.007
13	73	X	0
14	73	X	0
15	73	X	0
16	70	X	-0.005
17	70	X	-0.005
18	70	X	0
19	70	X	0
20	70	X	0
21	76	X	-0.003
22	76	X	0
23	76	X	0
24	76	X	0

Member Point Loads (BLC 7 : 90 Wind - Service) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
25 76	X	0	0
26 117	X	-0.006	%35
27 117	X	0	0
28 117	X	0	0
29 117	X	0	0
30 117	X	0	0
31 137	X	-0.003	%5
32 137	X	-0.003	%35
33 137	X	-0.002	%60
34 137	X	-0.002	%90
35 137	X	0	0
36 57	X	-0.006	%5
37 57	X	-0.006	%80
38 57	X	-0.006	%45
39 57	X	-0.004	%45
40 57	X	0	0
41 53	X	-0.004	%50
42 53	X	-0.007	%50
43 53	X	0	0
44 53	X	0	0
45 53	X	0	0
46 126	X	-0.005	%5
47 126	X	-0.005	%65
48 126	X	0	0
49 126	X	0	0
50 126	X	0	0
51 54	X	-0.003	%35
52 54	X	0	0
53 54	X	0	0
54 54	X	0	0
55 54	X	0	0
56 120	X	-0.005	%35
57 120	X	0	0
58 120	X	0	0
59 120	X	0	0
60 120	X	0	0
61 121	X	-0.005	%35
62 121	X	0	0
63 121	X	0	0
64 121	X	0	0
65 121	X	0	0
66 131	X	-0.003	%5
67 131	X	-0.003	%35
68 131	X	-0.002	%60
69 131	X	-0.002	%90
70 131	X	0	0
71 89	X	-0.006	%5
72 89	X	-0.006	%80
73 89	X	-0.006	%45
74 89	X	-0.004	%45
75 89	X	0	0
76 85	X	-0.004	%50
77 85	X	-0.007	%50
78 85	X	0	0
79 85	X	0	0

Member Point Loads (BLC 7 : 90 Wind - Service) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
80	85	X	0
81	123	X	-0.005
82	123	X	-0.005
83	123	X	0
84	123	X	0
85	123	X	0
86	86	X	-0.003
87	86	X	0
88	86	X	0
89	86	X	0
90	86	X	0
91	115	X	-0.005
92	115	X	0
93	115	X	0
94	115	X	0
95	115	X	0

Member Point Loads (BLC 8 : Ice)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	68	Y	-0.037
2	68	Y	-0.037
3	68	Y	-0.03
4	68	Y	-0.03
5	68	Y	0
6	79	Y	-0.107
7	79	Y	-0.107
8	79	Y	-0.049
9	79	Y	-0.036
10	79	Y	0
11	73	Y	-0.027
12	73	Y	-0.051
13	73	Y	0
14	73	Y	0
15	73	Y	0
16	70	Y	-0.122
17	70	Y	-0.122
18	70	Y	0
19	70	Y	0
20	70	Y	0
21	76	Y	-0.037
22	76	Y	0
23	76	Y	0
24	76	Y	0
25	76	Y	0
26	117	Y	-0.058
27	117	Y	0
28	117	Y	0
29	117	Y	0
30	117	Y	0
31	137	Y	-0.037
32	137	Y	-0.037
33	137	Y	-0.03
34	137	Y	-0.03
35	137	Y	0
36	57	Y	-0.107

Member Point Loads (BLC 8 : Ice) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
37 57	Y	-0.107	%80
38 57	Y	-0.049	%45
39 57	Y	-0.036	%45
40 57	Y	0	0
41 53	Y	-0.027	%50
42 53	Y	-0.051	%50
43 53	Y	0	0
44 53	Y	0	0
45 53	Y	0	0
46 126	Y	-0.122	%5
47 126	Y	-0.122	%65
48 126	Y	0	0
49 126	Y	0	0
50 126	Y	0	0
51 54	Y	-0.037	%35
52 54	Y	0	0
53 54	Y	0	0
54 54	Y	0	0
55 54	Y	0	0
56 120	Y	-0.048	%35
57 120	Y	0	0
58 120	Y	0	0
59 120	Y	0	0
60 120	Y	0	0
61 121	Y	-0.048	%35
62 121	Y	0	0
63 121	Y	0	0
64 121	Y	0	0
65 121	Y	0	0
66 131	Y	-0.037	%5
67 131	Y	-0.037	%35
68 131	Y	-0.03	%60
69 131	Y	-0.03	%90
70 131	Y	0	0
71 89	Y	-0.107	%5
72 89	Y	-0.107	%80
73 89	Y	-0.049	%45
74 89	Y	-0.036	%45
75 89	Y	0	0
76 85	Y	-0.027	%50
77 85	Y	-0.051	%50
78 85	Y	0	0
79 85	Y	0	0
80 85	Y	0	0
81 123	Y	-0.122	%5
82 123	Y	-0.122	%65
83 123	Y	0	0
84 123	Y	0	0
85 123	Y	0	0
86 86	Y	-0.037	%35
87 86	Y	0	0
88 86	Y	0	0
89 86	Y	0	0
90 86	Y	0	0
91 115	Y	-0.048	%35

Member Point Loads (BLC 8 : Ice) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
92 115	Y	0	0
93 115	Y	0	0
94 115	Y	0	0
95 115	Y	0	0

Member Point Loads (BLC 9 : 0 Seismic)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1 68	Z	-0.028	%5
2 68	Z	-0.028	%35
3 68	Z	-0.019	%60
4 68	Z	-0.019	%90
5 68	Z	0	0
6 79	Z	-0.037	%5
7 79	Z	-0.037	%80
8 79	Z	-0.015	%45
9 79	Z	-0.017	%45
10 79	Z	0	0
11 73	Z	-0.013	%50
12 73	Z	-0.016	%50
13 73	Z	0	0
14 73	Z	0	0
15 73	Z	0	0
16 70	Z	-0.026	%5
17 70	Z	-0.026	%65
18 70	Z	0	0
19 70	Z	0	0
20 70	Z	0	0
21 76	Z	-0.02	%35
22 76	Z	0	0
23 76	Z	0	0
24 76	Z	0	0
25 76	Z	0	0
26 117	Z	-0.008	%35
27 117	Z	0	0
28 117	Z	0	0
29 117	Z	0	0
30 117	Z	0	0
31 137	Z	-0.028	%5
32 137	Z	-0.028	%35
33 137	Z	-0.019	%60
34 137	Z	-0.019	%90
35 137	Z	0	0
36 57	Z	-0.037	%5
37 57	Z	-0.037	%80
38 57	Z	-0.015	%45
39 57	Z	-0.017	%45
40 57	Z	0	0
41 53	Z	-0.013	%50
42 53	Z	-0.016	%50
43 53	Z	0	0
44 53	Z	0	0
45 53	Z	0	0
46 126	Z	-0.026	%5
47 126	Z	-0.026	%65
48 126	Z	0	0

Member Point Loads (BLC 9 : 0 Seismic) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
49	126	Z	0
50	126	Z	0
51	54	Z	-0.02
52	54	Z	0
53	54	Z	0
54	54	Z	0
55	54	Z	0
56	120	Z	-0.005
57	120	Z	0
58	120	Z	0
59	120	Z	0
60	120	Z	0
61	121	Z	-0.005
62	121	Z	0
63	121	Z	0
64	121	Z	0
65	121	Z	0
66	131	Z	-0.028
67	131	Z	-0.028
68	131	Z	-0.019
69	131	Z	-0.019
70	131	Z	0
71	89	Z	-0.037
72	89	Z	-0.037
73	89	Z	-0.015
74	89	Z	-0.017
75	89	Z	0
76	85	Z	-0.013
77	85	Z	-0.016
78	85	Z	0
79	85	Z	0
80	85	Z	0
81	123	Z	-0.026
82	123	Z	-0.026
83	123	Z	0
84	123	Z	0
85	123	Z	0
86	86	Z	-0.02
87	86	Z	0
88	86	Z	0
89	86	Z	0
90	86	Z	0
91	86	Z	-0.005
92	86	Z	0
93	86	Z	0
94	86	Z	0
95	86	Z	0

Member Point Loads (BLC 10 : 90 Seismic)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	68	X	-0.028
2	68	X	-0.028
3	68	X	-0.019
4	68	X	-0.019
5	68	X	0

Member Point Loads (BLC 10 : 90 Seismic) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
6 79	X	-0.037	%5
7 79	X	-0.037	%80
8 79	X	-0.015	%45
9 79	X	-0.017	%45
10 79	X	0	0
11 73	X	-0.013	%50
12 73	X	-0.016	%50
13 73	X	0	0
14 73	X	0	0
15 73	X	0	0
16 70	X	-0.026	%5
17 70	X	-0.026	%65
18 70	X	0	0
19 70	X	0	0
20 70	X	0	0
21 76	X	-0.02	%35
22 76	X	0	0
23 76	X	0	0
24 76	X	0	0
25 76	X	0	0
26 117	X	-0.008	%35
27 117	X	0	0
28 117	X	0	0
29 117	X	0	0
30 117	X	0	0
31 137	X	-0.028	%5
32 137	X	-0.028	%35
33 137	X	-0.019	%60
34 137	X	-0.019	%90
35 137	X	0	0
36 57	X	-0.037	%5
37 57	X	-0.037	%80
38 57	X	-0.015	%45
39 57	X	-0.017	%45
40 57	X	0	0
41 53	X	-0.013	%50
42 53	X	-0.016	%50
43 53	X	0	0
44 53	X	0	0
45 53	X	0	0
46 126	X	-0.026	%5
47 126	X	-0.026	%65
48 126	X	0	0
49 126	X	0	0
50 126	X	0	0
51 54	X	-0.02	%35
52 54	X	0	0
53 54	X	0	0
54 54	X	0	0
55 54	X	0	0
56 120	X	-0.005	%35
57 120	X	0	0
58 120	X	0	0
59 120	X	0	0
60 120	X	0	0

Member Point Loads (BLC 10 : 90 Seismic) (Continued)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
61 121	X	-0.005	%35
62 121	X	0	0
63 121	X	0	0
64 121	X	0	0
65 121	X	0	0
66 131	X	-0.028	%5
67 131	X	-0.028	%35
68 131	X	-0.019	%60
69 131	X	-0.019	%90
70 131	X	0	0
71 89	X	-0.037	%5
72 89	X	-0.037	%80
73 89	X	-0.015	%45
74 89	X	-0.017	%45
75 89	X	0	0
76 85	X	-0.013	%50
77 85	X	-0.016	%50
78 85	X	0	0
79 85	X	0	0
80 85	X	0	0
81 123	X	-0.026	%65
82 123	X	-0.026	0
83 123	X	0	0
84 123	X	0	0
85 123	X	0	%35
86 86	X	-0.02	%35
87 86	X	0	0
88 86	X	0	0
89 86	X	0	0
90 86	X	0	0
91 86	X	-0.005	%35
92 86	X	0	0
93 86	X	0	0
94 86	X	0	0
95 86	X	0	0

Member Point Loads (BLC 17 : Maint LL 1)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1 58	Y	-0.25	%5

Member Point Loads (BLC 18 : Maint LL 2)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1 1	Y	-0.25	%5

Member Point Loads (BLC 19 : Maint LL 3)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1 58	Y	-0.25	%95

Member Point Loads (BLC 20 : Maint LL 4)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	Y	-0.25	%95

Member Point Loads (BLC 21 : Maint LL 5)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
48	Y	-0.25	%5

Member Point Loads (BLC 22 : Maint LL 6)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
2	Y	-0.25	%5

Member Point Loads (BLC 23 : Maint LL 7)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
48	Y	-0.25	%95

Member Point Loads (BLC 24 : Maint LL 8)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
2	Y	-0.25	%95

Member Point Loads (BLC 25 : Maint LL 9)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
80	Y	-0.25	%5

Member Point Loads (BLC 26 : Maint LL 10)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
3	Y	-0.25	%5

Member Point Loads (BLC 27 : Maint LL 11)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
80	Y	-0.25	%95

Member Point Loads (BLC 28 : Maint LL 12)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
3	Y	-0.25	%95

Member Point Loads (BLC 29 : Maint LL 13)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
46	Y	-0.25	%95

Member Point Loads (BLC 30 : Maint LL 14)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1 45	Y	-0.25	%95

Member Point Loads (BLC 31 : Maint LL 15)

Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1 47	Y	-0.25	%95

Member Distributed Loads (BLC 2 : 0 Wind - No Ice)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1 1	Z	-0.029	-0.029	0	%100
2 2	Z	-0.029	-0.029	0	%100
3 3	Z	-0.029	-0.029	0	%100
4 4	Z	-0.02	-0.02	0	%100
5 5	Z	-0.01	-0.01	0	%100
6 6	Z	-0.01	-0.01	0	%100
7 7	Z	-0.02	-0.02	0	%100
8 8	Z	-0.01	-0.01	0	%100
9 9	Z	-0.01	-0.01	0	%100
10 10	Z	-0.02	-0.02	0	%100
11 11	Z	-0.01	-0.01	0	%100
12 12	Z	-0.01	-0.01	0	%100
13 44	Z	-0.006	-0.006	0	%100
14 45	Z	-0.02	-0.02	0	%100
15 46	Z	-0.02	-0.02	0	%100
16 47	Z	-0.02	-0.02	0	%100
17 48	Z	-0.014	-0.014	0	%100
18 53	Z	-0.008	-0.008	0	%100
19 54	Z	-0.008	-0.008	0	%100
20 57	Z	-0.008	-0.008	0	%100
21 58	Z	-0.014	-0.014	0	%100
22 68	Z	-0.008	-0.008	0	%100
23 70	Z	-0.008	-0.008	0	%100
24 73	Z	-0.008	-0.008	0	%100
25 74	Z	-0.008	-0.008	0	%100
26 75	Z	-0.008	-0.008	0	%100
27 76	Z	-0.008	-0.008	0	%100
28 79	Z	-0.008	-0.008	0	%100
29 80	Z	-0.014	-0.014	0	%100
30 85	Z	-0.008	-0.008	0	%100
31 86	Z	-0.008	-0.008	0	%100
32 89	Z	-0.008	-0.008	0	%100
33 90	Z	-0.007	-0.007	0	%100
34 91	Z	-0.016	-0.016	0	%100
35 94	Z	-0.008	-0.008	0	%100
36 97	Z	-0.008	-0.008	0	%100
37 100	Z	-0.008	-0.008	0	%100
38 103	Z	-0.008	-0.008	0	%100
39 106	Z	-0.008	-0.008	0	%100
40 107	Z	-0.007	-0.007	0	%100
41 108	Z	-0.007	-0.007	0	%100
42 110	Z	-0.016	-0.016	0	%100
43 112	Z	-0.016	-0.016	0	%100
44 115	Z	-0.006	-0.006	0	%100

Member Distributed Loads (BLC 2 : 0 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
45	117	Z	-0.006	-0.006	0 %100
46	120	Z	-0.006	-0.006	0 %100
47	121	Z	-0.006	-0.006	0 %100
48	123	Z	-0.008	-0.008	0 %100
49	126	Z	-0.008	-0.008	0 %100
50	131	Z	-0.008	-0.008	0 %100
51	133	Z	-0.008	-0.008	0 %100
52	137	Z	-0.008	-0.008	0 %100
53	139	Z	-0.008	-0.008	0 %100
54	142	Z	-0.006	-0.006	0 %100
55	145	Z	-0.006	-0.006	0 %100
56	148	Z	-0.006	-0.006	0 %100

Member Distributed Loads (BLC 3 : 90 Wind - No Ice)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.029	-0.029	0 %100
2	2	X	-0.029	-0.029	0 %100
3	3	X	-0.029	-0.029	0 %100
4	4	X	-0.02	-0.02	0 %100
5	5	X	-0.01	-0.01	0 %100
6	6	X	-0.01	-0.01	0 %100
7	7	X	-0.02	-0.02	0 %100
8	8	X	-0.01	-0.01	0 %100
9	9	X	-0.01	-0.01	0 %100
10	10	X	-0.02	-0.02	0 %100
11	11	X	-0.01	-0.01	0 %100
12	12	X	-0.01	-0.01	0 %100
13	44	X	-0.006	-0.006	0 %100
14	45	X	-0.02	-0.02	0 %100
15	46	X	-0.02	-0.02	0 %100
16	47	X	-0.02	-0.02	0 %100
17	48	X	-0.014	-0.014	0 %100
18	53	X	-0.008	-0.008	0 %100
19	54	X	-0.008	-0.008	0 %100
20	57	X	-0.008	-0.008	0 %100
21	58	X	-0.014	-0.014	0 %100
22	68	X	-0.008	-0.008	0 %100
23	70	X	-0.008	-0.008	0 %100
24	73	X	-0.008	-0.008	0 %100
25	74	X	-0.008	-0.008	0 %100
26	75	X	-0.008	-0.008	0 %100
27	76	X	-0.008	-0.008	0 %100
28	79	X	-0.008	-0.008	0 %100
29	80	X	-0.014	-0.014	0 %100
30	85	X	-0.008	-0.008	0 %100
31	86	X	-0.008	-0.008	0 %100
32	89	X	-0.008	-0.008	0 %100
33	90	X	-0.007	-0.007	0 %100
34	91	X	-0.016	-0.016	0 %100
35	94	X	-0.008	-0.008	0 %100
36	97	X	-0.008	-0.008	0 %100
37	100	X	-0.008	-0.008	0 %100
38	103	X	-0.008	-0.008	0 %100
39	106	X	-0.008	-0.008	0 %100
40	107	X	-0.007	-0.007	0 %100

Member Distributed Loads (BLC 3 : 90 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
41	108	X	-0.007	-0.007	0 %100
42	110	X	-0.016	-0.016	0 %100
43	112	X	-0.016	-0.016	0 %100
44	115	X	-0.006	-0.006	0 %100
45	117	X	-0.006	-0.006	0 %100
46	120	X	-0.006	-0.006	0 %100
47	121	X	-0.006	-0.006	0 %100
48	123	X	-0.008	-0.008	0 %100
49	126	X	-0.008	-0.008	0 %100
50	131	X	-0.008	-0.008	0 %100
51	133	X	-0.008	-0.008	0 %100
52	137	X	-0.008	-0.008	0 %100
53	139	X	-0.008	-0.008	0 %100
54	142	X	-0.006	-0.006	0 %100
55	145	X	-0.006	-0.006	0 %100
56	148	X	-0.006	-0.006	0 %100

Member Distributed Loads (BLC 4 : 0 Wind - Ice)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.008	-0.008	0 %100
2	2	Z	-0.008	-0.008	0 %100
3	3	Z	-0.008	-0.008	0 %100
4	4	Z	-0.006	-0.006	0 %100
5	5	Z	-0.004	-0.004	0 %100
6	6	Z	-0.004	-0.004	0 %100
7	7	Z	-0.006	-0.006	0 %100
8	8	Z	-0.004	-0.004	0 %100
9	9	Z	-0.004	-0.004	0 %100
10	10	Z	-0.006	-0.006	0 %100
11	11	Z	-0.004	-0.004	0 %100
12	12	Z	-0.004	-0.004	0 %100
13	44	Z	-0.002	-0.002	0 %100
14	45	Z	-0.006	-0.006	0 %100
15	46	Z	-0.006	-0.006	0 %100
16	47	Z	-0.006	-0.006	0 %100
17	48	Z	-0.005	-0.005	0 %100
18	53	Z	-0.002	-0.002	0 %100
19	54	Z	-0.002	-0.002	0 %100
20	57	Z	-0.002	-0.002	0 %100
21	58	Z	-0.005	-0.005	0 %100
22	68	Z	-0.002	-0.002	0 %100
23	70	Z	-0.002	-0.002	0 %100
24	73	Z	-0.002	-0.002	0 %100
25	74	Z	-0.002	-0.002	0 %100
26	75	Z	-0.002	-0.002	0 %100
27	76	Z	-0.002	-0.002	0 %100
28	79	Z	-0.002	-0.002	0 %100
29	80	Z	-0.005	-0.005	0 %100
30	85	Z	-0.002	-0.002	0 %100
31	86	Z	-0.002	-0.002	0 %100
32	89	Z	-0.002	-0.002	0 %100
33	90	Z	-0.002	-0.002	0 %100
34	91	Z	-0.005	-0.005	0 %100
35	94	Z	-0.002	-0.002	0 %100
36	97	Z	-0.002	-0.002	0 %100

Member Distributed Loads (BLC 4 : 0 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
37	100	Z	-0.002	-0.002	0 %100
38	103	Z	-0.002	-0.002	0 %100
39	106	Z	-0.002	-0.002	0 %100
40	107	Z	-0.002	-0.002	0 %100
41	108	Z	-0.002	-0.002	0 %100
42	110	Z	-0.005	-0.005	0 %100
43	112	Z	-0.005	-0.005	0 %100
44	115	Z	-0.002	-0.002	0 %100
45	117	Z	-0.002	-0.002	0 %100
46	120	Z	-0.002	-0.002	0 %100
47	121	Z	-0.002	-0.002	0 %100
48	123	Z	-0.002	-0.002	0 %100
49	126	Z	-0.002	-0.002	0 %100
50	131	Z	-0.002	-0.002	0 %100
51	133	Z	-0.002	-0.002	0 %100
52	137	Z	-0.002	-0.002	0 %100
53	139	Z	-0.002	-0.002	0 %100
54	142	Z	-0.002	-0.002	0 %100
55	145	Z	-0.002	-0.002	0 %100
56	148	Z	-0.002	-0.002	0 %100

Member Distributed Loads (BLC 5 : 90 Wind - Ice)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.008	-0.008	0 %100
2	2	X	-0.008	-0.008	0 %100
3	3	X	-0.008	-0.008	0 %100
4	4	X	-0.006	-0.006	0 %100
5	5	X	-0.004	-0.004	0 %100
6	6	X	-0.004	-0.004	0 %100
7	7	X	-0.006	-0.006	0 %100
8	8	X	-0.004	-0.004	0 %100
9	9	X	-0.004	-0.004	0 %100
10	10	X	-0.006	-0.006	0 %100
11	11	X	-0.004	-0.004	0 %100
12	12	X	-0.004	-0.004	0 %100
13	44	X	-0.002	-0.002	0 %100
14	45	X	-0.006	-0.006	0 %100
15	46	X	-0.006	-0.006	0 %100
16	47	X	-0.006	-0.006	0 %100
17	48	X	-0.005	-0.005	0 %100
18	53	X	-0.002	-0.002	0 %100
19	54	X	-0.002	-0.002	0 %100
20	57	X	-0.002	-0.002	0 %100
21	58	X	-0.005	-0.005	0 %100
22	68	X	-0.002	-0.002	0 %100
23	70	X	-0.002	-0.002	0 %100
24	73	X	-0.002	-0.002	0 %100
25	74	X	-0.002	-0.002	0 %100
26	75	X	-0.002	-0.002	0 %100
27	76	X	-0.002	-0.002	0 %100
28	79	X	-0.002	-0.002	0 %100
29	80	X	-0.005	-0.005	0 %100
30	85	X	-0.002	-0.002	0 %100
31	86	X	-0.002	-0.002	0 %100
32	89	X	-0.002	-0.002	0 %100

Member Distributed Loads (BLC 5 : 90 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
33	90	X	-0.002	-0.002	0 %100
34	91	X	-0.005	-0.005	0 %100
35	94	X	-0.002	-0.002	0 %100
36	97	X	-0.002	-0.002	0 %100
37	100	X	-0.002	-0.002	0 %100
38	103	X	-0.002	-0.002	0 %100
39	106	X	-0.002	-0.002	0 %100
40	107	X	-0.002	-0.002	0 %100
41	108	X	-0.002	-0.002	0 %100
42	110	X	-0.005	-0.005	0 %100
43	112	X	-0.005	-0.005	0 %100
44	115	X	-0.002	-0.002	0 %100
45	117	X	-0.002	-0.002	0 %100
46	120	X	-0.002	-0.002	0 %100
47	121	X	-0.002	-0.002	0 %100
48	123	X	-0.002	-0.002	0 %100
49	126	X	-0.002	-0.002	0 %100
50	131	X	-0.002	-0.002	0 %100
51	133	X	-0.002	-0.002	0 %100
52	137	X	-0.002	-0.002	0 %100
53	139	X	-0.002	-0.002	0 %100
54	142	X	-0.002	-0.002	0 %100
55	145	X	-0.002	-0.002	0 %100
56	148	X	-0.002	-0.002	0 %100

Member Distributed Loads (BLC 6 : 0 Wind - Service)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.002	-0.002	0 %100
2	2	Z	-0.002	-0.002	0 %100
3	3	Z	-0.002	-0.002	0 %100
4	4	Z	-0.001	-0.001	0 %100
5	5	Z	-0.0007	-0.0007	0 %100
6	6	Z	-0.0007	-0.0007	0 %100
7	7	Z	-0.001	-0.001	0 %100
8	8	Z	-0.0007	-0.0007	0 %100
9	9	Z	-0.0007	-0.0007	0 %100
10	10	Z	-0.001	-0.001	0 %100
11	11	Z	-0.0007	-0.0007	0 %100
12	12	Z	-0.0007	-0.0007	0 %100
13	44	Z	-0.0003	-0.0003	0 %100
14	45	Z	-0.001	-0.001	0 %100
15	46	Z	-0.001	-0.001	0 %100
16	47	Z	-0.001	-0.001	0 %100
17	48	Z	-0.0009	-0.0009	0 %100
18	53	Z	-0.0003	-0.0003	0 %100
19	54	Z	-0.0003	-0.0003	0 %100
20	57	Z	-0.0003	-0.0003	0 %100
21	58	Z	-0.0009	-0.0009	0 %100
22	68	Z	-0.0003	-0.0003	0 %100
23	70	Z	-0.0003	-0.0003	0 %100
24	73	Z	-0.0003	-0.0003	0 %100
25	74	Z	-0.0003	-0.0003	0 %100
26	75	Z	-0.0003	-0.0003	0 %100
27	76	Z	-0.0003	-0.0003	0 %100
28	79	Z	-0.0003	-0.0003	0 %100

Member Distributed Loads (BLC 6 : 0 Wind - Service) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
29	80	Z	-0.0009	-0.0009	0 %100
30	85	Z	-0.0003	-0.0003	0 %100
31	86	Z	-0.0003	-0.0003	0 %100
32	89	Z	-0.0003	-0.0003	0 %100
33	90	Z	-0.0003	-0.0003	0 %100
34	91	Z	-0.001	-0.001	0 %100
35	94	Z	-0.0003	-0.0003	0 %100
36	97	Z	-0.0003	-0.0003	0 %100
37	100	Z	-0.0003	-0.0003	0 %100
38	103	Z	-0.0003	-0.0003	0 %100
39	106	Z	-0.0003	-0.0003	0 %100
40	107	Z	-0.0003	-0.0003	0 %100
41	108	Z	-0.0003	-0.0003	0 %100
42	110	Z	-0.001	-0.001	0 %100
43	112	Z	-0.001	-0.001	0 %100
44	115	Z	-0.0002	-0.0002	0 %100
45	117	Z	-0.0002	-0.0002	0 %100
46	120	Z	-0.0002	-0.0002	0 %100
47	121	Z	-0.0002	-0.0002	0 %100
48	123	Z	-0.0003	-0.0003	0 %100
49	126	Z	-0.0003	-0.0003	0 %100
50	131	Z	-0.0003	-0.0003	0 %100
51	133	Z	-0.0003	-0.0003	0 %100
52	137	Z	-0.0003	-0.0003	0 %100
53	139	Z	-0.0003	-0.0003	0 %100
54	142	Z	-0.0003	-0.0003	0 %100
55	145	Z	-0.0003	-0.0003	0 %100
56	148	Z	-0.0003	-0.0003	0 %100

Member Distributed Loads (BLC 7 : 90 Wind - Service)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.002	-0.002	0 %100
2	2	X	-0.002	-0.002	0 %100
3	3	X	-0.002	-0.002	0 %100
4	4	X	-0.001	-0.001	0 %100
5	5	X	-0.0007	-0.0007	0 %100
6	6	X	-0.0007	-0.0007	0 %100
7	7	X	-0.001	-0.001	0 %100
8	8	X	-0.0007	-0.0007	0 %100
9	9	X	-0.0007	-0.0007	0 %100
10	10	X	-0.001	-0.001	0 %100
11	11	X	-0.0007	-0.0007	0 %100
12	12	X	-0.0007	-0.0007	0 %100
13	44	X	-0.0003	-0.0003	0 %100
14	45	X	-0.001	-0.001	0 %100
15	46	X	-0.001	-0.001	0 %100
16	47	X	-0.001	-0.001	0 %100
17	48	X	-0.0009	-0.0009	0 %100
18	53	X	-0.0003	-0.0003	0 %100
19	54	X	-0.0003	-0.0003	0 %100
20	57	X	-0.0003	-0.0003	0 %100
21	58	X	-0.0009	-0.0009	0 %100
22	68	X	-0.0003	-0.0003	0 %100
23	70	X	-0.0003	-0.0003	0 %100
24	73	X	-0.0003	-0.0003	0 %100

Member Distributed Loads (BLC 7 : 90 Wind - Service) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
25	74	X	-0.0003	-0.0003	0 %100
26	75	X	-0.0003	-0.0003	0 %100
27	76	X	-0.0003	-0.0003	0 %100
28	79	X	-0.0003	-0.0003	0 %100
29	80	X	-0.0009	-0.0009	0 %100
30	85	X	-0.0003	-0.0003	0 %100
31	86	X	-0.0003	-0.0003	0 %100
32	89	X	-0.0003	-0.0003	0 %100
33	90	X	-0.0003	-0.0003	0 %100
34	91	X	-0.001	-0.001	0 %100
35	94	X	-0.0003	-0.0003	0 %100
36	97	X	-0.0003	-0.0003	0 %100
37	100	X	-0.0003	-0.0003	0 %100
38	103	X	-0.0003	-0.0003	0 %100
39	106	X	-0.0003	-0.0003	0 %100
40	107	X	-0.0003	-0.0003	0 %100
41	108	X	-0.0003	-0.0003	0 %100
42	110	X	-0.001	-0.001	0 %100
43	112	X	-0.001	-0.001	0 %100
44	115	X	-0.0002	-0.0002	0 %100
45	117	X	-0.0002	-0.0002	0 %100
46	120	X	-0.0002	-0.0002	0 %100
47	121	X	-0.0002	-0.0002	0 %100
48	123	X	-0.0003	-0.0003	0 %100
49	126	X	-0.0003	-0.0003	0 %100
50	131	X	-0.0003	-0.0003	0 %100
51	133	X	-0.0003	-0.0003	0 %100
52	137	X	-0.0003	-0.0003	0 %100
53	139	X	-0.0003	-0.0003	0 %100
54	142	X	-0.0003	-0.0003	0 %100
55	145	X	-0.0003	-0.0003	0 %100
56	148	X	-0.0003	-0.0003	0 %100

Member Distributed Loads (BLC 8 : Ice)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Y	-0.01	-0.01	0 %100
2	2	Y	-0.01	-0.01	0 %100
3	3	Y	-0.01	-0.01	0 %100
4	4	Y	-0.01	-0.01	0 %100
5	5	Y	-0.006	-0.006	0 %100
6	6	Y	-0.006	-0.006	0 %100
7	7	Y	-0.01	-0.01	0 %100
8	8	Y	-0.006	-0.006	0 %100
9	9	Y	-0.006	-0.006	0 %100
10	10	Y	-0.01	-0.01	0 %100
11	11	Y	-0.006	-0.006	0 %100
12	12	Y	-0.006	-0.006	0 %100
13	44	Y	-0.005	-0.005	0 %100
14	45	Y	-0.01	-0.01	0 %100
15	46	Y	-0.01	-0.01	0 %100
16	47	Y	-0.01	-0.01	0 %100
17	48	Y	-0.007	-0.007	0 %100
18	53	Y	-0.005	-0.005	0 %100
19	54	Y	-0.005	-0.005	0 %100
20	57	Y	-0.005	-0.005	0 %100

Member Distributed Loads (BLC 8 : Ice) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
21	58	Y	-0.007	-0.007	0 %100
22	68	Y	-0.005	-0.005	0 %100
23	70	Y	-0.005	-0.005	0 %100
24	73	Y	-0.005	-0.005	0 %100
25	74	Y	-0.005	-0.005	0 %100
26	75	Y	-0.005	-0.005	0 %100
27	76	Y	-0.005	-0.005	0 %100
28	79	Y	-0.005	-0.005	0 %100
29	80	Y	-0.007	-0.007	0 %100
30	85	Y	-0.005	-0.005	0 %100
31	86	Y	-0.005	-0.005	0 %100
32	89	Y	-0.005	-0.005	0 %100
33	90	Y	-0.005	-0.005	0 %100
34	91	Y	-0.01	-0.01	0 %100
35	94	Y	-0.005	-0.005	0 %100
36	97	Y	-0.005	-0.005	0 %100
37	100	Y	-0.005	-0.005	0 %100
38	103	Y	-0.005	-0.005	0 %100
39	106	Y	-0.005	-0.005	0 %100
40	107	Y	-0.005	-0.005	0 %100
41	108	Y	-0.005	-0.005	0 %100
42	110	Y	-0.01	-0.01	0 %100
43	112	Y	-0.01	-0.01	0 %100
44	115	Y	-0.005	-0.005	0 %100
45	117	Y	-0.005	-0.005	0 %100
46	120	Y	-0.005	-0.005	0 %100
47	121	Y	-0.005	-0.005	0 %100
48	123	Y	-0.005	-0.005	0 %100
49	126	Y	-0.005	-0.005	0 %100
50	131	Y	-0.005	-0.005	0 %100
51	133	Y	-0.005	-0.005	0 %100
52	137	Y	-0.005	-0.005	0 %100
53	139	Y	-0.005	-0.005	0 %100
54	142	Y	-0.005	-0.005	0 %100
55	145	Y	-0.005	-0.005	0 %100
56	148	Y	-0.005	-0.005	0 %100

Member Distributed Loads (BLC 9 : 0 Seismic)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.002	-0.002	0 %100
2	2	Z	-0.002	-0.002	0 %100
3	3	Z	-0.002	-0.002	0 %100
4	4	Z	-0.002	-0.002	0 %100
5	5	Z	-0.001	-0.001	0 %100
6	6	Z	-0.001	-0.001	0 %100
7	7	Z	-0.002	-0.002	0 %100
8	8	Z	-0.001	-0.001	0 %100
9	9	Z	-0.001	-0.001	0 %100
10	10	Z	-0.002	-0.002	0 %100
11	11	Z	-0.001	-0.001	0 %100
12	12	Z	-0.001	-0.001	0 %100
13	44	Z	-0.001	-0.001	0 %100
14	45	Z	-0.003	-0.003	0 %100
15	46	Z	-0.003	-0.003	0 %100
16	47	Z	-0.003	-0.003	0 %100

Member Distributed Loads (BLC 9 : 0 Seismic) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
17	48	Z	-0.0009	-0.0009	0 %100
18	53	Z	-0.001	-0.001	0 %100
19	54	Z	-0.001	-0.001	0 %100
20	57	Z	-0.001	-0.001	0 %100
21	58	Z	-0.0009	-0.0009	0 %100
22	68	Z	-0.001	-0.001	0 %100
23	70	Z	-0.001	-0.001	0 %100
24	73	Z	-0.001	-0.001	0 %100
25	74	Z	-0.001	-0.001	0 %100
26	75	Z	-0.001	-0.001	0 %100
27	76	Z	-0.001	-0.001	0 %100
28	79	Z	-0.001	-0.001	0 %100
29	80	Z	-0.0009	-0.0009	0 %100
30	85	Z	-0.001	-0.001	0 %100
31	86	Z	-0.001	-0.001	0 %100
32	89	Z	-0.001	-0.001	0 %100
33	90	Z	-0.001	-0.001	0 %100
34	91	Z	-0.004	-0.004	0 %100
35	94	Z	-0.001	-0.001	0 %100
36	97	Z	-0.001	-0.001	0 %100
37	100	Z	-0.001	-0.001	0 %100
38	103	Z	-0.001	-0.001	0 %100
39	106	Z	-0.001	-0.001	0 %100
40	107	Z	-0.001	-0.001	0 %100
41	108	Z	-0.001	-0.001	0 %100
42	110	Z	-0.004	-0.004	0 %100
43	112	Z	-0.004	-0.004	0 %100
44	115	Z	-0.001	-0.001	0 %100
45	117	Z	-0.001	-0.001	0 %100
46	120	Z	-0.001	-0.001	0 %100
47	121	Z	-0.001	-0.001	0 %100
48	123	Z	-0.001	-0.001	0 %100
49	126	Z	-0.001	-0.001	0 %100
50	131	Z	-0.001	-0.001	0 %100
51	133	Z	-0.001	-0.001	0 %100
52	137	Z	-0.001	-0.001	0 %100
53	139	Z	-0.001	-0.001	0 %100
54	142	Z	-0.001	-0.001	0 %100
55	145	Z	-0.001	-0.001	0 %100
56	148	Z	-0.001	-0.001	0 %100

Member Distributed Loads (BLC 10 : 90 Seismic)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.002	-0.002	0 %100
2	2	X	-0.002	-0.002	0 %100
3	3	X	-0.002	-0.002	0 %100
4	4	X	-0.002	-0.002	0 %100
5	5	X	-0.001	-0.001	0 %100
6	6	X	-0.001	-0.001	0 %100
7	7	X	-0.002	-0.002	0 %100
8	8	X	-0.001	-0.001	0 %100
9	9	X	-0.001	-0.001	0 %100
10	10	X	-0.002	-0.002	0 %100
11	11	X	-0.001	-0.001	0 %100
12	12	X	-0.001	-0.001	0 %100

Member Distributed Loads (BLC 10 : 90 Seismic) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
13	44	X	-0.001	-0.001	0 %100
14	45	X	-0.003	-0.003	0 %100
15	46	X	-0.003	-0.003	0 %100
16	47	X	-0.003	-0.003	0 %100
17	48	X	-0.0009	-0.0009	0 %100
18	53	X	-0.001	-0.001	0 %100
19	54	X	-0.001	-0.001	0 %100
20	57	X	-0.001	-0.001	0 %100
21	58	X	-0.0009	-0.0009	0 %100
22	68	X	-0.001	-0.001	0 %100
23	70	X	-0.001	-0.001	0 %100
24	73	X	-0.001	-0.001	0 %100
25	74	X	-0.001	-0.001	0 %100
26	75	X	-0.001	-0.001	0 %100
27	76	X	-0.001	-0.001	0 %100
28	79	X	-0.001	-0.001	0 %100
29	80	X	-0.0009	-0.0009	0 %100
30	85	X	-0.001	-0.001	0 %100
31	86	X	-0.001	-0.001	0 %100
32	89	X	-0.001	-0.001	0 %100
33	90	X	-0.001	-0.001	0 %100
34	91	X	-0.004	-0.004	0 %100
35	94	X	-0.001	-0.001	0 %100
36	97	X	-0.001	-0.001	0 %100
37	100	X	-0.001	-0.001	0 %100
38	103	X	-0.001	-0.001	0 %100
39	106	X	-0.001	-0.001	0 %100
40	107	X	-0.001	-0.001	0 %100
41	108	X	-0.001	-0.001	0 %100
42	110	X	-0.004	-0.004	0 %100
43	112	X	-0.004	-0.004	0 %100
44	115	X	-0.001	-0.001	0 %100
45	117	X	-0.001	-0.001	0 %100
46	120	X	-0.001	-0.001	0 %100
47	121	X	-0.001	-0.001	0 %100
48	123	X	-0.001	-0.001	0 %100
49	126	X	-0.001	-0.001	0 %100
50	131	X	-0.001	-0.001	0 %100
51	133	X	-0.001	-0.001	0 %100
52	137	X	-0.001	-0.001	0 %100
53	139	X	-0.001	-0.001	0 %100
54	142	X	-0.001	-0.001	0 %100
55	145	X	-0.001	-0.001	0 %100
56	148	X	-0.001	-0.001	0 %100

Member Distributed Loads (BLC 32 : BLC 1 Transient Area Loads)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	3	Y	-0.01	-0.003	11.33 12.875
2	10	Y	-0.001	-0.01	0 1.191
3	10	Y	-0.01	-0.017	1.191 2.382
4	10	Y	-0.017	-0.015	2.382 3.572
5	10	Y	-0.015	-0.008	3.572 4.763
6	10	Y	-0.008	-0.002	4.763 5.954
7	11	Y	-0.0007756	-0.0007756	0 0.609
8	12	Y	-0.002	-0.0007756	0 0.609

Member Distributed Loads (BLC 32 : BLC 1 Transient Area Loads) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]	
9	2	Y	-0.0004836	-0.003	5.15	6.695
10	2	Y	-0.003	-0.011	6.695	8.24
11	2	Y	-0.011	-0.017	8.24	9.785
12	2	Y	-0.017	-0.012	9.785	11.33
13	2	Y	-0.012	-0.0004836	11.33	12.875
14	3	Y	-0.003	-0.01	0	1.545
15	3	Y	-0.01	-0.013	1.545	3.09
16	3	Y	-0.013	-0.009	3.09	4.635
17	3	Y	-0.009	-0.003	4.635	6.18
18	3	Y	-0.003	-0.0003417	6.18	7.725
19	4	Y	-0.001	-0.01	0	1.191
20	4	Y	-0.01	-0.014	1.191	2.382
21	4	Y	-0.014	-0.014	2.382	3.572
22	4	Y	-0.014	-0.01	3.572	4.763
23	4	Y	-0.01	-0.001	4.763	5.954
24	5	Y	-0.001	-0.001	0.038	0.282
25	7	Y	-0.004	-0.008	0	0.794
26	7	Y	-0.008	-0.007	0.794	1.588
27	7	Y	-0.007	-0.002	1.588	2.382
28	10	Y	-0.0001706	-0.005	3.572	4.168
29	10	Y	-0.005	-0.009	4.168	4.763
30	10	Y	-0.009	-0.007	4.763	5.359
31	10	Y	-0.007	-0.004	5.359	5.954
32	4	Y	-0.0001941	-0.004	3.572	4.049
33	4	Y	-0.004	-0.009	4.049	4.525
34	4	Y	-0.009	-0.009	4.525	5.001
35	4	Y	-0.009	-0.006	5.001	5.478
36	4	Y	-0.006	-0.002	5.478	5.954
37	6	Y	-0.002	-0.002	0	0.609
38	10	Y	-0.005	-0.007	0	0.476
39	10	Y	-0.007	-0.01	0.476	0.953
40	10	Y	-0.01	-0.01	0.953	1.429
41	10	Y	-0.01	-0.004	1.429	1.905
42	10	Y	-0.004	-5.794e-05	1.905	2.382
43	1	Y	-0.0004847	-0.003	5.15	6.695
44	1	Y	-0.003	-0.011	6.695	8.24
45	1	Y	-0.011	-0.017	8.24	9.785
46	1	Y	-0.017	-0.012	9.785	11.33
47	1	Y	-0.012	-0.0004847	11.33	12.875
48	2	Y	-0.003	-0.01	0	1.545
49	2	Y	-0.01	-0.013	1.545	3.09
50	2	Y	-0.013	-0.009	3.09	4.635
51	2	Y	-0.009	-0.003	4.635	6.18
52	2	Y	-0.003	-0.0003421	6.18	7.725
53	7	Y	-0.001	-0.01	0	1.191
54	7	Y	-0.01	-0.014	1.191	2.382
55	7	Y	-0.014	-0.014	2.382	3.572
56	7	Y	-0.014	-0.01	3.572	4.763
57	7	Y	-0.01	-0.002	4.763	5.954
58	8	Y	-0.001	-0.001	0.038	0.282
59	9	Y	-0.0003146	-0.001	0	0.609
60	1	Y	-0.0004911	-0.011	0	1.545
61	1	Y	-0.011	-0.016	1.545	3.09
62	1	Y	-0.016	-0.011	3.09	4.635
63	1	Y	-0.011	-0.003	4.635	6.18

Member Distributed Loads (BLC 32 : BLC 1 Transient Area Loads) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
64	1	Y	-0.003	-0.0004911	6.18
65	3	Y	-0.0003346	-0.003	5.15
66	3	Y	-0.003	-0.009	6.695
67	3	Y	-0.009	-0.013	8.24
68	3	Y	-0.013	-0.01	9.785
					11.33

Member Distributed Loads (BLC 33 : BLC 8 Transient Area Loads)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	7	Y	-0.002	-0.004	0
2	7	Y	-0.004	-0.004	0.794
3	7	Y	-0.004	-0.001	1.588
4	10	Y	-9.435e-05	-0.003	3.572
5	10	Y	-0.003	-0.005	4.168
6	10	Y	-0.005	-0.004	4.763
7	10	Y	-0.004	-0.002	5.359
8	4	Y	-0.0001073	-0.002	3.572
9	4	Y	-0.002	-0.005	4.049
10	4	Y	-0.005	-0.005	4.525
11	4	Y	-0.005	-0.003	5.001
12	4	Y	-0.003	-0.0009034	5.478
13	6	Y	-0.001	-0.001	0
14	10	Y	-0.003	-0.004	0
15	10	Y	-0.004	-0.005	0.476
16	10	Y	-0.005	-0.005	0.953
17	10	Y	-0.005	-0.002	1.429
18	10	Y	-0.002	-3.204e-05	1.905
19	1	Y	-0.000268	-0.002	5.15
20	1	Y	-0.002	-0.006	6.695
21	1	Y	-0.006	-0.009	8.24
22	1	Y	-0.009	-0.006	9.785
23	1	Y	-0.006	-0.000268	11.33
24	2	Y	-0.002	-0.005	0
25	2	Y	-0.005	-0.007	1.545
26	2	Y	-0.007	-0.005	3.09
27	2	Y	-0.005	-0.002	4.635
28	2	Y	-0.002	-0.0001892	6.18
29	7	Y	-0.0007124	-0.006	0
30	7	Y	-0.006	-0.008	1.191
31	7	Y	-0.008	-0.008	2.382
32	7	Y	-0.008	-0.006	3.572
33	7	Y	-0.006	-0.000852	4.763
34	8	Y	-0.0006591	-0.0006591	0.038
35	9	Y	-0.000174	-0.0006591	0
36	1	Y	-0.0002715	-0.006	0
37	1	Y	-0.006	-0.009	1.545
38	1	Y	-0.009	-0.006	3.09
39	1	Y	-0.006	-0.002	4.635
40	1	Y	-0.002	-0.0002715	6.18
41	3	Y	-0.000185	-0.002	5.15
42	3	Y	-0.002	-0.005	6.695
43	3	Y	-0.005	-0.007	8.24
44	3	Y	-0.007	-0.005	9.785
45	3	Y	-0.005	-0.002	11.33
46	10	Y	-0.0007482	-0.006	0
47	10	Y	-0.006	-0.009	1.191
					2.382

Member Distributed Loads (BLC 33 : BLC 8 Transient Area Loads) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
48	10	Y	-0.009	-0.008	2.382 3.572
49	10	Y	-0.008	-0.005	3.572 4.763
50	10	Y	-0.005	-0.001	4.763 5.954
51	11	Y	-0.0004288	-0.0004288	0 0.609
52	12	Y	-0.0009488	-0.0004288	0 0.609
53	2	Y	-0.0002674	-0.002	5.15 6.695
54	2	Y	-0.002	-0.006	6.695 8.24
55	2	Y	-0.006	-0.009	8.24 9.785
56	2	Y	-0.009	-0.006	9.785 11.33
57	2	Y	-0.006	-0.0002674	11.33 12.875
58	3	Y	-0.002	-0.005	0 1.545
59	3	Y	-0.005	-0.007	1.545 3.09
60	3	Y	-0.007	-0.005	3.09 4.635
61	3	Y	-0.005	-0.002	4.635 6.18
62	3	Y	-0.002	-0.0001889	6.18 7.725
63	4	Y	-0.0007146	-0.006	0 1.191
64	4	Y	-0.006	-0.008	1.191 2.382
65	4	Y	-0.008	-0.008	2.382 3.572
66	4	Y	-0.008	-0.006	3.572 4.763
67	4	Y	-0.006	-0.0007654	4.763 5.954
68	5	Y	-0.0006591	-0.0006591	0.038 0.282

Member Area Loads (BLC 1 : Dead)

Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	14	197	199	21	Y	Two Way -0.01
2	20	198	196	9	Y	Two Way -0.01
3	43	44	19	16	Y	Two Way -0.01
4	25	22	57	58	Y	Two Way -0.01
5	10	29	30	13	Y	Two Way -0.01

Member Area Loads (BLC 8 : Ice)

Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	14	197	199	21	Y	Two Way -0.006
2	20	198	196	9	Y	Two Way -0.006
3	43	44	19	16	Y	Two Way -0.006
4	25	22	57	58	Y	Two Way -0.006
5	10	29	30	13	Y	Two Way -0.006

Node Loads and Enforced Displacements (BLC 11 : Live Load a)

Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s^2/ft, k*s^2*ft)]
1	132	L	Y -0.5
2	102	L	Y -0.5
3	168	L	Y -0.5

Node Loads and Enforced Displacements (BLC 12 : Live Load b)

Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s^2/ft, k*s^2*ft)]
1	130	L	Y -0.5
2	210	L	Y -0.5
3	222	L	Y -0.5

Node Loads and Enforced Displacements (BLC 13 : Live Load c)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s^2/ft, k*s^2*ft)]
1	114	L	Y	-0.5
2	180	L	Y	-0.5
3	158	L	Y	-0.5

Node Loads and Enforced Displacements (BLC 14 : Live Load d)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s^2/ft, k*s^2*ft)]
1	204	L	Y	-0.5
2	216	L	Y	-0.5
3	228	L	Y	-0.5

Node Loads and Enforced Displacements (BLC 15 : Live Load e)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s^2/ft, k*s^2*ft)]
1	124	L	Y	-0.5
2	269	L	Y	-0.5
3	281	L	Y	-0.5

Node Loads and Enforced Displacements (BLC 16 : Live Load f)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s^2/ft, k*s^2*ft)]
1	100	L	Y	-0.5
2	122	L	Y	-0.5
3	166	L	Y	-0.5

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
1	Dead	DL	-1		95		5
2	0 Wind - No Ice	WLZ			95	56	
3	90 Wind - No Ice	WLX			95	56	
4	0 Wind - Ice	WLZ			95	56	
5	90 Wind - Ice	WLX			95	56	
6	0 Wind - Service	WLZ			95	56	
7	90 Wind - Service	WLX			95	56	
8	Ice	OL1			95	56	5
9	0 Seismic	ELZ			95	56	
10	90 Seismic	ELX			95	56	
11	Live Load a	LL		3			
12	Live Load b	LL		3			
13	Live Load c	LL		3			
14	Live Load d	LL		3			
15	Live Load e	LL		3			
16	Live Load f	LL		3			
17	Maint LL 1	LL			1		
18	Maint LL 2	LL			1		
19	Maint LL 3	LL			1		
20	Maint LL 4	LL			1		
21	Maint LL 5	LL			1		
22	Maint LL 6	LL			1		
23	Maint LL 7	LL			1		
24	Maint LL 8	LL			1		
25	Maint LL 9	LL			1		

Basic Load Cases (Continued)

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
26	Maint LL 10	LL			1		
27	Maint LL 11	LL			1		
28	Maint LL 12	LL			1		
29	Maint LL 13	LL			1		
30	Maint LL 14	LL			1		
31	Maint LL 15	LL			1		
32	BLC 1 Transient Area Loads	None				68	
33	BLC 8 Transient Area Loads	None				68	

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.4 Dead	Yes	Y	1	1.4						
2	1.2 D + 1.0 - 0 W	Yes	Y	1	1.2	2	1				
3	1.2 D + 1.0 - 30 W	Yes	Y	1	1.2	2	0.866	3	0.5		
4	1.2 D + 1.0 - 60 W	Yes	Y	1	1.2	3	0.866	2	0.5		
5	1.2 D + 1.0 - 90 W	Yes	Y	1	1.2	3	1				
6	1.2 D + 1.0 - 120 W	Yes	Y	1	1.2	3	0.866	2	-0.5		
7	1.2 D + 1.0 - 150 W	Yes	Y	1	1.2	2	-0.866	3	0.5		
8	1.2 D + 1.0 - 180 W	Yes	Y	1	1.2	2	-1				
9	1.2 D + 1.0 - 210 W	Yes	Y	1	1.2	2	-0.866	3	-0.5		
10	1.2 D + 1.0 - 240 W	Yes	Y	1	1.2	3	-0.866	2	-0.5		
11	1.2 D + 1.0 - 270 W	Yes	Y	1	1.2	3	-1				
12	1.2 D + 1.0 - 300 W	Yes	Y	1	1.2	3	-0.866	2	0.5		
13	1.2 D + 1.0 - 330 W	Yes	Y	1	1.2	2	0.866	3	-0.5		
14	1.2 D + 1.0 - 0 W/Ice	Yes	Y	1	1.2	4	1			8	1
15	1.2 D + 1.0 - 30 W/Ice	Yes	Y	1	1.2	4	0.866	5	0.5	8	1
16	1.2 D + 1.0 - 60 W/Ice	Yes	Y	1	1.2	5	0.866	4	0.5	8	1
17	1.2 D + 1.0 - 90 W/Ice	Yes	Y	1	1.2	5	1			8	1
18	1.2 D + 1.0 - 120 W/Ice	Yes	Y	1	1.2	5	0.866	4	-0.5	8	1
19	1.2 D + 1.0 - 150 W/Ice	Yes	Y	1	1.2	4	-0.866	5	0.5	8	1
20	1.2 D + 1.0 - 180 W/Ice	Yes	Y	1	1.2	4	-1			8	1
21	1.2 D + 1.0 - 210 W/Ice	Yes	Y	1	1.2	4	-0.866	5	-0.5	8	1
22	1.2 D + 1.0 - 240 W/Ice	Yes	Y	1	1.2	5	-0.866	4	-0.5	8	1
23	1.2 D + 1.0 - 270 W/Ice	Yes	Y	1	1.2	5	-1			8	1
24	1.2 D + 1.0 - 300 W/Ice	Yes	Y	1	1.2	5	-0.866	4	0.5	8	1
25	1.2 D + 1.0 - 330 W/Ice	Yes	Y	1	1.2	4	0.866	5	-0.5	8	1
26	1.2 D + 1.0 E - 0	Yes	Y	1	1.2	9	1				
27	1.2 D + 1.0 E - 30	Yes	Y	1	1.2	9	0.866	10	0.5		
28	1.2 D + 1.0 E - 60	Yes	Y	1	1.2	10	0.866	9	0.5		
29	1.2 D + 1.0 E - 90	Yes	Y	1	1.2	10	1				
30	1.2 D + 1.0 E - 120	Yes	Y	1	1.2	10	0.866	9	-0.5		
31	1.2 D + 1.0 E - 150	Yes	Y	1	1.2	9	-0.866	10	0.5		
32	1.2 D + 1.0 E - 180	Yes	Y	1	1.2	9	-1				
33	1.2 D + 1.0 E - 210	Yes	Y	1	1.2	9	-0.866	10	-0.5		
34	1.2 D + 1.0 E - 240	Yes	Y	1	1.2	10	-0.866	9	-0.5		
35	1.2 D + 1.0 E - 270	Yes	Y	1	1.2	10	-1				
36	1.2 D + 1.0 E - 300	Yes	Y	1	1.2	10	-0.866	9	0.5		
37	1.2 D + 1.0 E - 330	Yes	Y	1	1.2	9	0.866	10	-0.5		
38	1.2 D + 1.5 LL a + Service - 0 W	Yes	Y	1	1.2	6	1			11	1.5
39	1.2 D + 1.5 LL a + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	11	1.5
40	1.2 D + 1.5 LL a + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	11	1.5
41	1.2 D + 1.5 LL a + Service - 90 W	Yes	Y	1	1.2	7	1			11	1.5
42	1.2 D + 1.5 LL a + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	11	1.5
43	1.2 D + 1.5 LL a + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	11	1.5
44	1.2 D + 1.5 LL a + Service - 180 W	Yes	Y	1	1.2	6	-1			11	1.5

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
45	1.2 D + 1.5 LL a + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	11	1.5
46	1.2 D + 1.5 LL a + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	11	1.5
47	1.2 D + 1.5 LL a + Service - 270 W	Yes	Y	1	1.2	7	-1			11	1.5
48	1.2 D + 1.5 LL a + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	11	1.5
49	1.2 D + 1.5 LL a + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	11	1.5
50	1.2 D + 1.5 LL b + Service - 0 W	Yes	Y	1	1.2	6	1			12	1.5
51	1.2 D + 1.5 LL b + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	12	1.5
52	1.2 D + 1.5 LL b + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	12	1.5
53	1.2 D + 1.5 LL b + Service - 90 W	Yes	Y	1	1.2	7	1			12	1.5
54	1.2 D + 1.5 LL b + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	12	1.5
55	1.2 D + 1.5 LL b + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	12	1.5
56	1.2 D + 1.5 LL b + Service - 180 W	Yes	Y	1	1.2	6	-1			12	1.5
57	1.2 D + 1.5 LL b + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	12	1.5
58	1.2 D + 1.5 LL b + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	12	1.5
59	1.2 D + 1.5 LL b + Service - 270 W	Yes	Y	1	1.2	7	-1			12	1.5
60	1.2 D + 1.5 LL b + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	12	1.5
61	1.2 D + 1.5 LL b + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	12	1.5
62	1.2 D + 1.5 LL c + Service - 0 W	Yes	Y	1	1.2	6	1			13	1.5
63	1.2 D + 1.5 LL c + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	13	1.5
64	1.2 D + 1.5 LL c + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	13	1.5
65	1.2 D + 1.5 LL c + Service - 90 W	Yes	Y	1	1.2	7	1			13	1.5
66	1.2 D + 1.5 LL c + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	13	1.5
67	1.2 D + 1.5 LL c + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	13	1.5
68	1.2 D + 1.5 LL c + Service - 180 W	Yes	Y	1	1.2	6	-1			13	1.5
69	1.2 D + 1.5 LL c + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	13	1.5
70	1.2 D + 1.5 LL c + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	13	1.5
71	1.2 D + 1.5 LL c + Service - 270 W	Yes	Y	1	1.2	7	-1			13	1.5
72	1.2 D + 1.5 LL c + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	13	1.5
73	1.2 D + 1.5 LL c + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	13	1.5
74	1.2 D + 1.5 LL d + Service - 0 W	Yes	Y	1	1.2	6	1			14	1.5
75	1.2 D + 1.5 LL d + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	14	1.5
76	1.2 D + 1.5 LL d + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	14	1.5
77	1.2 D + 1.5 LL d + Service - 90 W	Yes	Y	1	1.2	7	1			14	1.5
78	1.2 D + 1.5 LL d + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	14	1.5
79	1.2 D + 1.5 LL d + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	14	1.5
80	1.2 D + 1.5 LL d + Service - 180 W	Yes	Y	1	1.2	6	-1			14	1.5
81	1.2 D + 1.5 LL d + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	14	1.5
82	1.2 D + 1.5 LL d + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	14	1.5
83	1.2 D + 1.5 LL d + Service - 270 W	Yes	Y	1	1.2	7	-1			14	1.5
84	1.2 D + 1.5 LL d + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	14	1.5
85	1.2 D + 1.5 LL d + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	14	1.5
86	1.2 D + 1.5 LL e + Service - 0 W	Yes	Y	1	1.2	6	1			15	1.5
87	1.2 D + 1.5 LL e + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	15	1.5
88	1.2 D + 1.5 LL e + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	15	1.5
89	1.2 D + 1.5 LL e + Service - 90 W	Yes	Y	1	1.2	7	1			15	1.5
90	1.2 D + 1.5 LL e + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	15	1.5
91	1.2 D + 1.5 LL e + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	15	1.5
92	1.2 D + 1.5 LL e + Service - 180 W	Yes	Y	1	1.2	6	-1			15	1.5
93	1.2 D + 1.5 LL e + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	15	1.5
94	1.2 D + 1.5 LL e + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	15	1.5
95	1.2 D + 1.5 LL e + Service - 270 W	Yes	Y	1	1.2	7	-1			15	1.5
96	1.2 D + 1.5 LL e + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	15	1.5
97	1.2 D + 1.5 LL e + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	15	1.5
98	1.2 D + 1.5 LL f + Service - 0 W	Yes	Y	1	1.2	6	1			16	1.5
99	1.2 D + 1.5 LL f + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	16	1.5



Company : B+T Group
Designer : VP
Job Number : 136352.015.01
Model Name : 806939 - NHV 2071 143137

11/13/2021
7:49:08 PM
Checked By : _____

Load Combinations (Continued)

Description		Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
100	1.2 D + 1.5 LL f + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	16	1.5
101	1.2 D + 1.5 LL f + Service - 90 W	Yes	Y	1	1.2	7	1			16	1.5
102	1.2 D + 1.5 LL f + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	16	1.5
103	1.2 D + 1.5 LL f + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	16	1.5
104	1.2 D + 1.5 LL f + Service - 180 W	Yes	Y	1	1.2	6	-1			16	1.5
105	1.2 D + 1.5 LL f + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	16	1.5
106	1.2 D + 1.5 LL f + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	16	1.5
107	1.2 D + 1.5 LL f + Service - 270 W	Yes	Y	1	1.2	7	-1			16	1.5
108	1.2 D + 1.5 LL f + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	16	1.5
109	1.2 D + 1.5 LL f + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	16	1.5
110	1.2 D + 1.5 LL Maint (1)	Yes	Y	1	1.2					17	1.5
111	1.2 D + 1.5 LL Maint (2)	Yes	Y	1	1.2					18	1.5
112	1.2 D + 1.5 LL Maint (3)	Yes	Y	1	1.2					19	1.5
113	1.2 D + 1.5 LL Maint (4)	Yes	Y	1	1.2					20	1.5
114	1.2 D + 1.5 LL Maint (5)	Yes	Y	1	1.2					21	1.5
115	1.2 D + 1.5 LL Maint (6)	Yes	Y	1	1.2					222	1.5
116	1.2 D + 1.5 LL Maint (7)	Yes	Y	1	1.2					23	1.5
117	1.2 D + 1.5 LL Maint (8)	Yes	Y	1	1.2					24	1.5
118	1.2 D + 1.5 LL Maint (9)	Yes	Y	1	1.2					25	1.5
119	1.2 D + 1.5 LL Maint (10)	Yes	Y	1	1.2					26	1.5
120	1.2 D + 1.5 LL Maint (11)	Yes	Y	1	1.2					27	1.5
121	1.2 D + 1.5 LL Maint (12)	Yes	Y	1	1.2					28	1.5
122	1.2 D + 1.5 LL Maint (13)	Yes	Y	1	1.2					29	1.5
123	1.2 D + 1.5 LL Maint (14)	Yes	Y	1	1.2					30	1.5
124	1.2 D + 1.5 LL Maint (15)	Yes	Y	1	1.2					31	1.5

Envelope Node Reactions

Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC	
1	80	max	-0.589	5	2.24	18	2.895	2	-0.013	2	1.202	3	-0.92	11
2		min	-4.079	47	0.862	12	-0.711	8	-2.172	20	-1.164	9	-3.497	17
3	82	max	4.171	17	2.258	22	2.731	2	-0.11	2	1.18	7	3.549	23
4		min	0.503	11	0.89	4	-0.641	8	-2.114	20	-1.157	13	0.866	5
5	78	max	1.48	5	2.248	14	-0.717	2	4.098	14	1.032	11	0.644	11
6		min	-1.526	11	0.798	8	-4.757	44	0.792	8	-1.005	5	-0.647	5
7	201	max	0.861	5	1.115	18	1.235	2	-0.159	13	2.741	3	-0.589	12
8		min	-0.925	11	0.346	12	-1.212	8	-1.547	19	-2.823	9	-2.702	18
9	241	max	1.03	5	1.171	22	1.17	2	-0.262	3	2.725	7	2.732	22
10		min	-0.979	11	0.36	4	-1.124	8	-1.621	21	-2.809	13	0.557	4
11	245	max	0.875	5	1.103	14	1.176	2	3.112	14	2.154	11	0.24	11
12		min	-0.862	11	0.285	8	-1.246	8	0.415	8	-2.236	5	-0.193	5
13	Totals:	max	6.871	5	9.84	20	8.49	2						
14		min	-6.871	11	4.953	2	-8.49	8						

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

Member	Shape	Code	Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	1	C5X6.7	0.255	6.572	8	0.169	12.204	y 40	4.448	63.828	1.604	6.853	1.522	H1-1b
2	2	C5X6.7	0.235	12.607	7	0.168	12.204	y 48	4.448	63.828	1.604	8.887	1.974	H1-1b
3	3	C5X6.7	0.27	12.204	2	0.168	12.204	y 44	4.448	63.828	1.604	7.825	1.738	H1-1b
4	4	L4X4X4	0.633	2.977	25	0.054	0.372	z 20	40.14	62.532	3.138	6.021	1.305	H2-1
5	5	PL3/8X3_HRA	0.278	0.311	18	0.077	0.311	y 20	29.236	36.936	0.292	2.308	1.454	H1-1b
6	6	PL3/8X3_HRA	0.291	0.298	23	0.052	0.298	y 14	29.236	36.936	0.292	2.308	1.435	H1-1b
7	7	L4X4X4	0.631	2.977	19	0.047	2.977	z 18	40.14	62.532	3.138	6.022	1.306	H2-1
8	8	PL3/8X3_HRA	0.281	0.311	22	0.054	0.311	y 18	29.236	36.936	0.292	2.308	1.452	H1-1b

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

Member	Shape	Code	Check Loc [ft]	LC Shear Check Loc [ft]	Dir	LC phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
9	9	PL3/8X3_HRA	0.296	0.298	14	0.053	0.298	y	18	29.236	36.936
10	10	L4X4X4	0.636	2.977	21	0.047	2.977	z	22	40.14	62.532
11	11	PL3/8X3_HRA	0.28	0.311	14	0.054	0.311	y	22	29.236	36.936
12	12	PL3/8X3_HRA	0.294	0.298	19	0.052	0.298	y	22	29.236	36.936
13	44	PIPE 2.0	0.005	1.75	3	0.001	1.75	3	30.625	32.13	1.872
14	45	HSS4X4X3	0.357	0	24	0.112	0	z	11	91.274	106.812
15	46	HSS4X4X3	0.356	0	16	0.135	0	z	9	91.274	106.812
16	47	HSS4X4X3	0.361	0	20	0.135	0	z	7	91.274	106.812
17	48	L2.5x2.5x3	0.458	3.621	2	0.133	0.268	z	114	1.981	29.192
18	53	PIPE 2.0	0.141	4.206	2	0.044	4.206	3	24.515	32.13	1.872
19	54	PIPE 2.0	0.151	4.206	6	0.131	4.206	7	24.515	32.13	1.872
20	57	PIPE 2.0	0.233	2	8	0.051	2	3	14.916	32.13	1.872
21	58	L2.5x2.5x3	0.464	9.254	9	0.134	0.268	z	110	1.981	29.192
22	68	PIPE 2.0	0.094	5	2	0.019	4.917	2	14.916	32.13	1.872
23	70	PIPE 2.0	0.226	2.167	8	0.026	4.833	8	14.916	32.13	1.872
24	73	PIPE 2.0	0.138	4.206	6	0.051	4.206	7	24.515	32.13	1.872
25	74	PIPE 2.0	0.126	4.206	6	0.055	4.206	12	24.515	32.13	1.872
26	75	PIPE 2.0	0.116	4.219	10	0.042	4.219	9	25.204	32.13	1.872
27	76	PIPE 2.0	0.144	4.206	22	0.096	0.297	7	24.515	32.13	1.872
28	79	PIPE 2.0	0.217	2	8	0.063	2	8	14.916	32.13	1.872
29	80	L2.5x2.5x3	0.522	9.254	2	0.133	0.268	z	118	1.981	29.192
30	85	PIPE 2.0	0.128	4.206	10	0.04	4.206	11	24.515	32.13	1.872
31	86	PIPE 2.0	0.174	4.206	2	0.15	4.206	2	24.515	32.13	1.872
32	89	PIPE 2.0	0.231	2	2	0.052	2	13	14.916	32.13	1.872
33	90	PIPE 2.0	0.59	1.995	7	0.067	1.995	13	26.548	32.13	1.872
34	91	HSS4X4X4	0.289	0	8	0.05	0	z	3	134.164	139.518
35	94	PIPE 2.0	0.127	4.219	6	0.052	4.219	7	25.204	32.13	1.872
36	97	PIPE 2.0	0.148	4.219	2	0.041	4.219	13	25.204	32.13	1.872
37	100	PIPE 2.0	0.145	4.219	9	0.04	4.219	11	25.204	32.13	1.872
38	103	PIPE 2.0	0.128	4.219	7	0.031	4.219	5	25.204	32.13	1.872
39	106	PIPE 2.0	0.162	4.219	2	0.054	4.219	2	25.204	32.13	1.872
40	107	PIPE 2.0	0.544	1.995	10	0.066	1.995	21	26.548	32.13	1.872
41	108	PIPE 2.0	0.682	1.995	2	0.074	1.995	8	26.548	32.13	1.872
42	110	HSS4X4X4	0.276	0	8	0.05	0	z	7	134.164	139.518
43	112	HSS4X4X4	0.249	0	4	0.04	0	z	11	134.164	139.518
44	115	PIPE 2.0	0.007	0.5	2	0.008	0.5	2	31.747	32.13	1.872
45	117	PIPE 2.0	0.008	0.5	6	0.01	0.5	6	31.747	32.13	1.872
46	120	PIPE 2.0	0.007	0.5	10	0.008	0.5	10	31.747	32.13	1.872
47	121	PIPE 2.0	0.007	0.5	10	0.008	0.5	10	31.747	32.13	1.872
48	123	PIPE 2.0	0.226	2.167	2	0.027	2.25	13	14.916	32.13	1.872
49	126	PIPE 2.0	0.226	2.167	8	0.026	4.833	8	14.916	32.13	1.872
50	131	PIPE 2.0	0.094	5	2	0.022	4.917	8	14.916	32.13	1.872
51	133	PIPE 2.0	0.13	4.206	9	0.064	4.206	3	24.515	32.13	1.872
52	137	PIPE 2.0	0.094	5	8	0.02	4.917	13	14.916	32.13	1.872
53	139	PIPE 2.0	0.159	4.206	2	0.078	4.206	8	24.515	32.13	1.872
54	142	PIPE 2.0	0.041	2.37	6	0.023	2.37	7	29.81	32.13	1.872
55	145	PIPE 2.0	0.043	2.37	9	0.017	2.37	11	29.81	32.13	1.872
56	148	PIPE 2.0	0.051	2.37	2	0.023	2.37	3	29.81	32.13	1.872

APPENDIX D
ADDITIONAL CALCULATIONS

PROJECT	136352.015.01 - NHV 2071 143137, C1 KSC		
SUBJECT	Platform Mount Analysis		
DATE	11/15/21	PAGE	1 OF 1



B+T Group
 1717 S. Boulder, Suite 300
 Tulsa, OK 74119
 (918) 587-4630

[REF: AISC 360-05]

Reactions at Bolted Connection

Tension	:	1.176	k
Vertical Shear	:	1.103	k
Horizontal Shear	:	0.875	k
Torsion	:	0.24	k.ft
Moment from Horizontal Forces	:	2.154	k.ft
Moment from Vertical Forces	:	3.112	k.ft

Bolt Parameters

Bolt Grade	:	A325	
Bolt Diameter	:	0.625	in
Nominal Bolt Area	:	0.307	in ²
Bolt spacing, Horizontal	:	6	in
Bolt spacing, Vertical	:	6	in
Bolt edge distance, plate height	:	1.5	in
Bolt edge distance, plate width	:	1.5	in
Total Number of Bolts	:	4	bolts

Summary of Forces

Shear Resultant Force	:	1.41	k
Force from Horz. Moment	:	3.90	k
Force from Vert. Moment	:	5.64	k
Shear Load / Bolt	:	0.35	k
Tension Load / Bolt	:	0.29	k
Resultant from Moments / Bolt	:	3.43	k

Bolt Checks

Nominal Tensile Stress, F_{nt}	:	90.00	ksi	[AISC Table J3.2]
Available Tensile Stress, ΦR_{nt}	:	20.72	k/bolt	[Eq. J3-1]
Unity Check, Bolt Tension	:	17.96%		OKAY
Nominal Shear Stress, F_{nv}	:	48.00	ksi	[AISC Table J3.2]
Available Shear Stress, ΦR_{nv}	:	11.05	k/bolt	[Eq. J3-1]
Unity Check, Bolt Shear	:	5.84%		OKAY
Unity Check, Combined	:	23.80%		OKAY
Available Bearing Strength, ΦR_n	:	34.66	k/bolt	
Unity Check, Bolt Bearing	:	1.02%		OKAY



AT&T



AT&T SITE NUMBER: ORANGE NORTH
AT&T SITE NAME: NHV 2071 143137
AT&T FA CODE: 10035121
AT&T PACE NUMBER: MRCTB054673, MRCTB054148, MRCTB060387, MRCTB060998
AT&T PROJECT: 5G NR 1SR CBAND, 5G NR UPGRADE

BUSINESS UNIT #: 806939
SITE ADDRESS: 800 OGG MEADOW ROAD
COUNTY: ORANGE, CT 06477
NEW HEAVEN
SITE TYPE: MONOPOLE
TOWER HEIGHT: 160'-0"

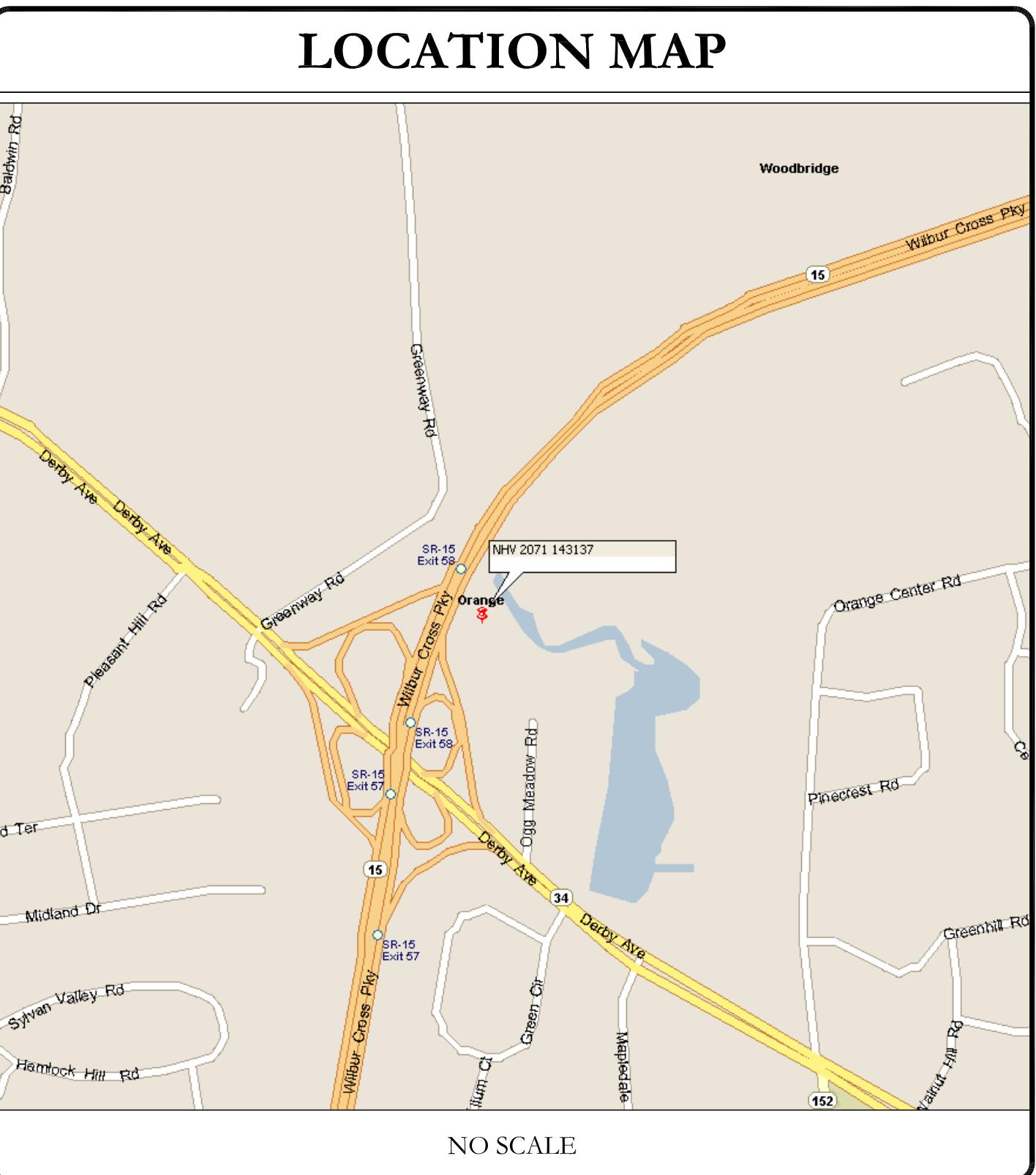


SITE INFORMATION	
CROWN CASTLE USA INC.	NHV 2071 143137
SITE NAME:	
SITE ADDRESS:	800 OGG MEADOW ROAD ORANGE, CT 06477
COUNTY:	NEW HEAVEN
MAP/PARCEL #:	97-4-2
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41.307878
LONGITUDE:	-73.032283
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	240'
CURRENT ZONING:	RES - RESIDENTIAL DISTRICT
JURISDICTION:	CONNECTICUT SITING COUNCIL
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	S CENTRAL REGIONAL WATER AUTH DBA NEW HAVEN WATER CO
	90 SARGENT DR ROSE JONES-FIXED ASSETS
	NEW HAVEN, CT 6511
TOWER OWNER:	CROWN CASTLE USA INC
	2000 CORPORATE DRIVE
	CANONSBURG, PA 15317
CARRIER/APPLICANT:	AT&T TOWER ASSET GROUP
	575 MOROSGO DRIVE
	ATLANTA, GA 30324-3300
ELECTRIC PROVIDER:	UNITED ILLUMINATING CO. - CONNECTICUT
	203-499-2000
TELCO PROVIDER:	AT&T
	866-825-2721

DRAWING INDEX	
SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1.1	SITE PLAN
C-1.2	EXISTING & FINAL EQUIPMENT PLANS
C-2	FINAL ELEVATION & ANTENNA PLANS
C-3	FINAL EQUIPMENT SCHEDULE
C-4	EQUIPMENT MOUNTING DETAILS
C-5	EQUIPMENT SPECS
G-1	GROUNDING SCHEMATIC
G-2	GROUNDING DETAILS
ATTACHED	PLUMBING DIAGRAM

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR FULL SIZE. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

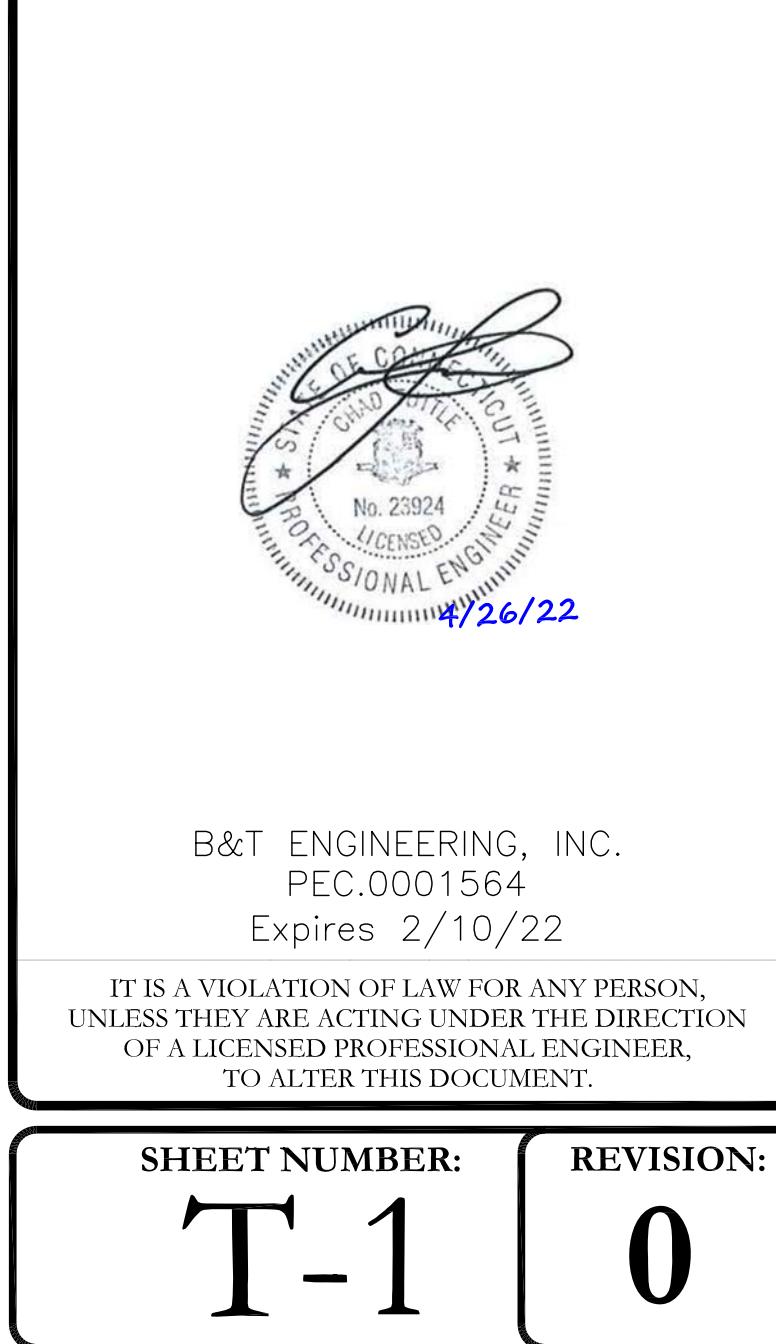
CALL CONNECTICUT ONE CALL
(800) 922-4455 CBYD.COM
CALL 2 WORKING DAYS
BEFORE YOU DIG!



PROJECT TEAM	
A&E FIRM:	B+T GROUP 1717 S. BOULDER AVE. TULSA, OK 74119 MARVIN PHILLIPS marvin.phillips@btgrp.com
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3530 TORINGDON WAY, SUITE 300 CHARLOTTE, NC 28277
	PAUL PEDICONE - PROJECT MANAGER PAUL.PEDICONE@CROWNCastle.COM
	JASON D'AMICO - CONSTRUCTION MANAGER JASON.DAMICO@CROWNCastle.COM
NOTE:	PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

PROJECT DESCRIPTION	
THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.	
TOWER SCOPE OF WORK:	
<ul style="list-style-type: none"> • REMOVE (3) KATHREIN - 800-10121 ANTENNAS • REMOVE (3) QUINTEL - QS66512-2 ANTENNAS • REMOVE (5) CCI - OPA65R-BU6DA-K ANTENNAS • REMOVE (3) ERICSSON - RRUS-32 B2 RRUs • REMOVE (3) TT19-08BP11-001 TMAs • REMOVE (6) K SBT 782-10253 BIAs - TTMs • REMOVE (2) WCS-IMFQ-AMT FILTER TMAs • REMOVE (6) COAX CABLE (1-1/4") • RELOCATE (1) CCI DMP65R-BU6DA ANTENNAS (ALPHA) • RELOCATE (3) ERICSSON - RRUS-32 B30 RRHs • RELOCATE (3) ERICSSON - 4478 B14 RRHs • RELOCATE (3) ERICSSON - RRUS-32 B66 RRHs • INSTALL (3) QUINTEL - QD6616-7 ANTENNAS • INSTALL (2) DMP65R-BU6DA ANTENNA (1) PER BETA & GAMMA • INSTALL (3+3) ERICSSON - AIR6449 N77D+AIR6419 N77G STACKED ANTENNAS • INSTALL (3) ERICSSON - RRUS 4415 B25 RRUs • INSTALL (1) DC6-48-18-8F SQUID • INSTALL (2) PWRT-606-S DC TRUNKS & (1) FB-L98B-034-XXX FIBER TRUNK • INSTALL (3) Y CABLES 	
GROUND SCOPE OF WORK:	
<ul style="list-style-type: none"> • REMOVE (12) POWERWAVE - LGP 21901 DIPLEXERS • INSTALL (1) 6648 FHG (+XCEDE) • INSTALL (4) RECTIFIERS IN EXISTING POWER PLANT • INSTALL (1) BATTERY RACK W/ (3) SHELVES • INSTALL (8) 170AH BATTERIES IN NEW BATTERY RACK 	

APPLICABLE CODES/REFERENCE DOCUMENTS	
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:	
CODE TYPE	CODE
BUILDING	2015 IBC
MECHANICAL	2015 IMC
ELECTRICAL	2017 NEC
REFERENCE DOCUMENTS:	
STRUCTURAL ANALYSIS:	MORRISON HERSHFIELD
	DATED: 11/17/21
MOUNT ANALYSIS:	B+T GROUP
	DATED: 11/15/21
RFDS REVISION:	PRELIMINARY
	DATED: 10/6/21
ORDER ID:	586241
REVISION:	0



CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED – NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800-788-7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
2. "LOOK UP" – CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:
THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED-STD-10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA-322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH QAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED-STD-10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA-1019-A-2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GREENFIELD GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIODANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6' FT OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT, THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
CARRIER: AT&T
TOWER OWNER: CROWN CASTLE USA INC.
- THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
- THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR CONSTRUCTION OBSERVATION OF THE FINISHED STRUCTURE ONLY.
- NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED, CONTACT THE ENGINEER OF RECORD.
- SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
- ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
- THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

ELECTRICAL INSTALLATION NOTES:

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
- ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
- EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THHN-2, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THHN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THHN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
- LIQUID-TIGHT FLEXIBLE METAL CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
- SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUITS SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALLS AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
- METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
- INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "AT&T".
- ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE		
SYSTEM	CONDUCTOR	COLOR

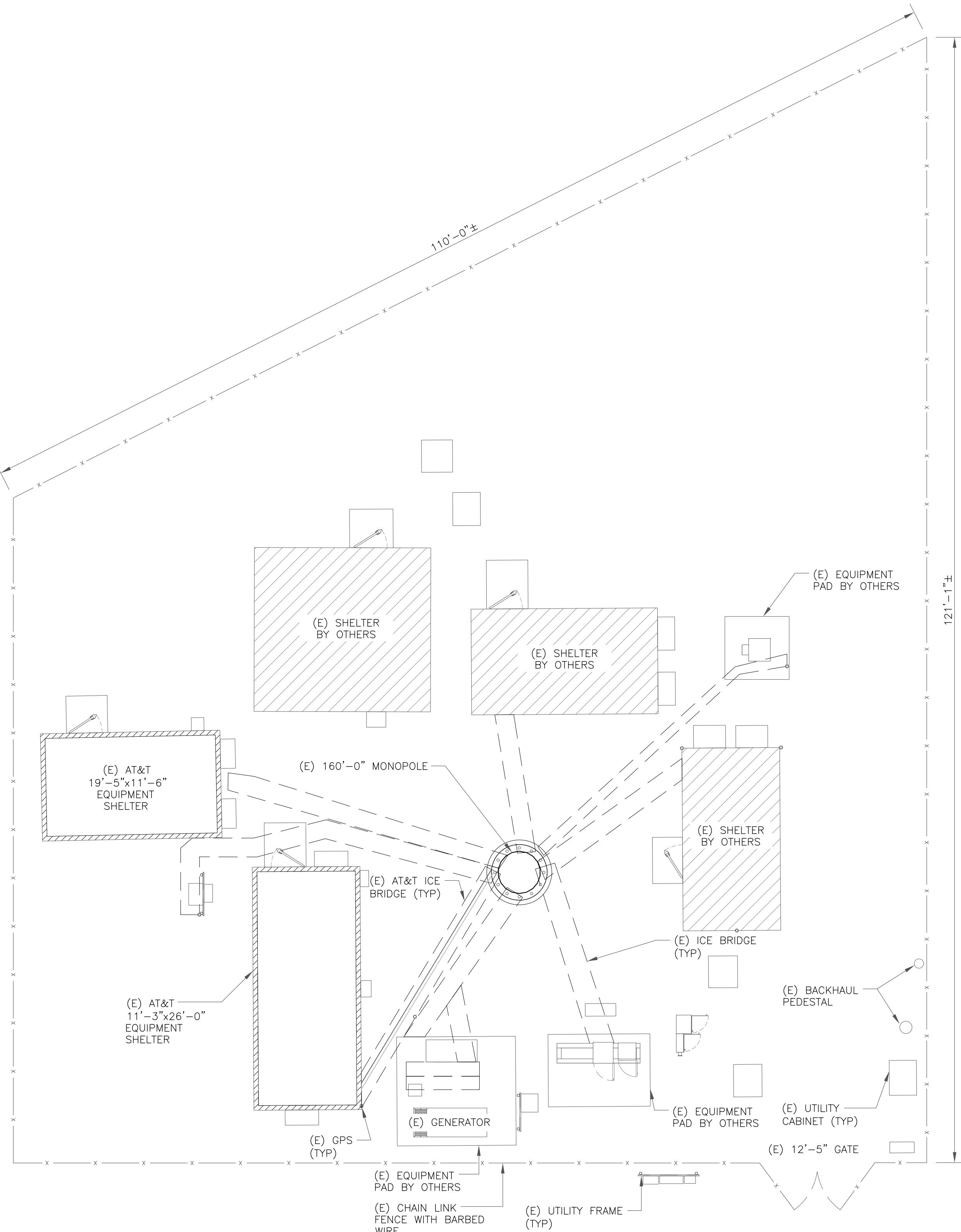
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AT&T SITE NUMBER:
ORANGE NORTH

BU #: 806939
NHV 2071 143137

800 OGG MEADOW ROAD
ORANGE, CT 06477

EXISTING
160'-0" MONOPOLE



ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	1/14/22	BMK	PRELIMINARY REVIEW	VP
B	3/8/22	BMK	PRELIMINARY REVIEW	VP
C	3/24/22	BMK	PRELIMINARY REVIEW	VP
0	4/26/22	FWP	CONSTRUCTION	MTJ

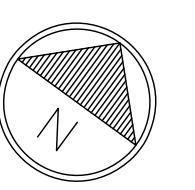


B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

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UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

1 SITE PLAN

SCALE: 8' 6" 4' 2' 0" 8' 1/8"=1'-0" (FULL SIZE)
1/16"=1'-0" (11x17)



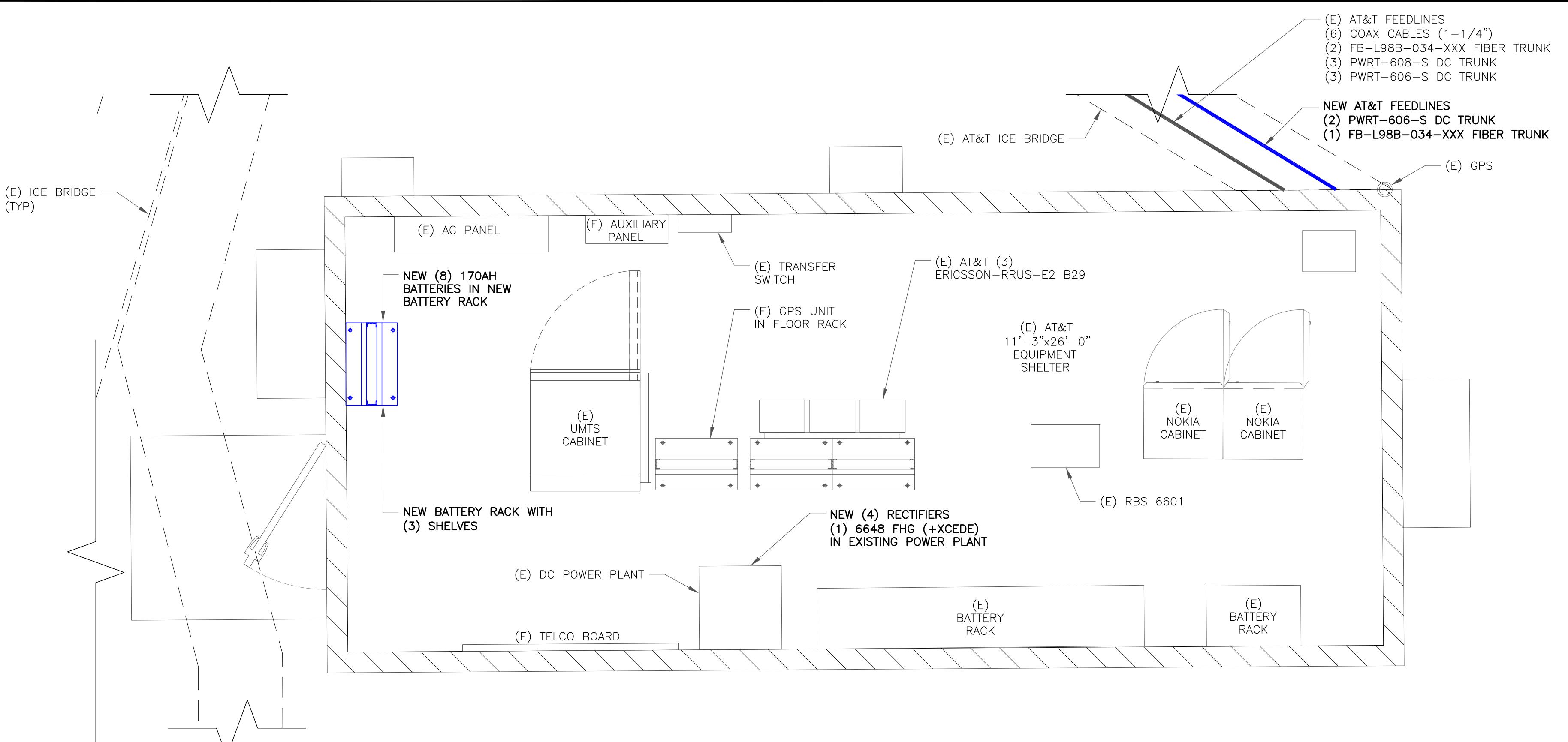
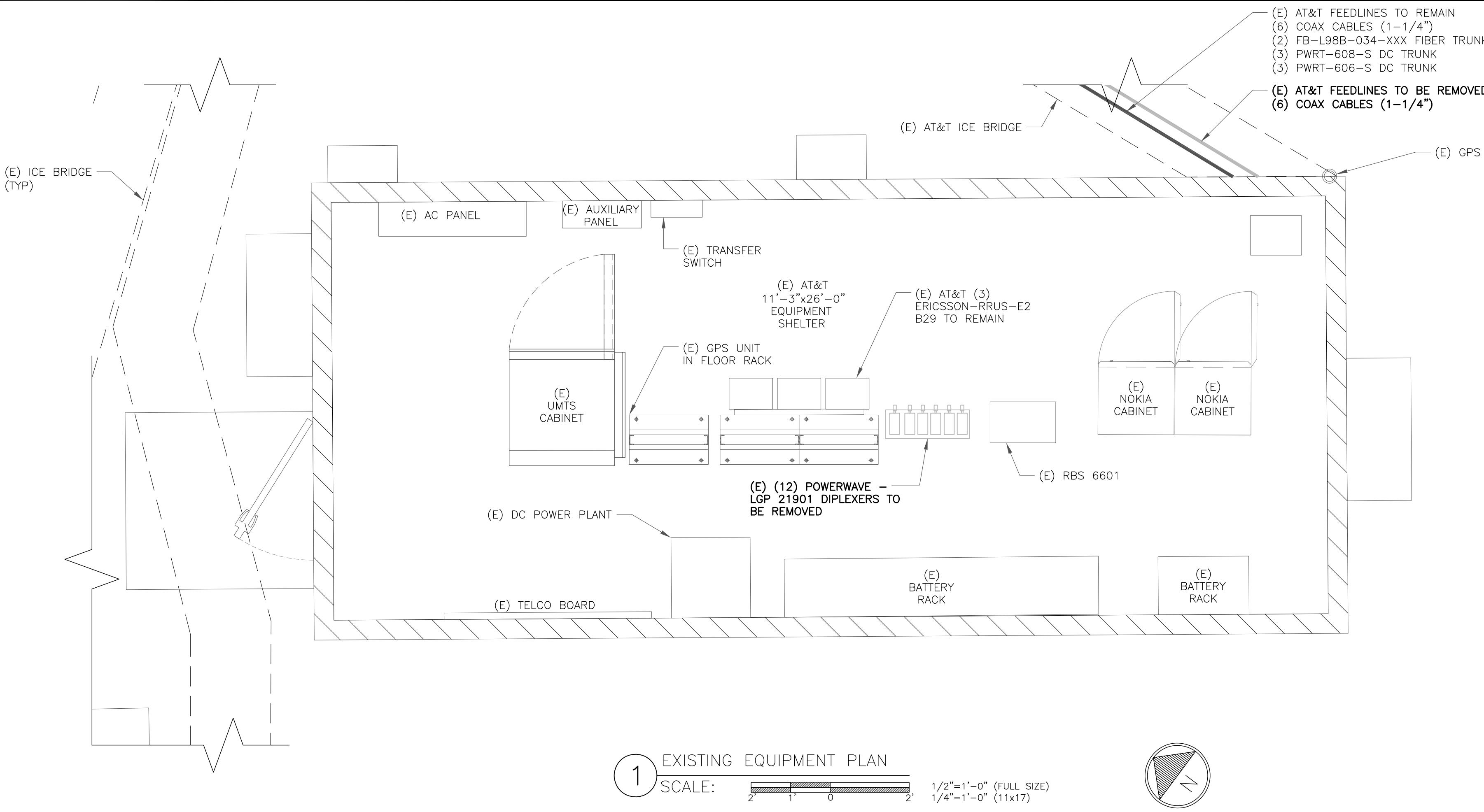
SHEET NUMBER: C-1.1 REVISION: 0

AT&T SITE NUMBER:
ORANGE NORTH

BU #: 806939
NHV 2071 143137

800 OGG MEADOW ROAD
ORANGE, CT 06477

EXISTING
160'-0" MONOPOLE



2 FINAL EQUIPMENT PLAN
SCALE: 1/2"=1'-0" (FULL SIZE)
1/4"=1'-0" (11x17)

GROUND SCOPE OF WORK:

- INSTALL (1) 6648 FHG (+XCEDE)
- INSTALL (4) RECTIFIERS IN EXISTING POWER PLANT
- INSTALL (1) BATTERY RACK W/ (3) SHELVES
- INSTALL (8) 170AH BATTERIES IN NEW BATTERY RACK

NOTE:
THE POWER DESIGN FOR ANY AC ELECTRICAL POWER CHANGES IS TO BE PERFORMED BY OTHERS AND IS SHOWN HERE FOR REFERENCE PURPOSES ONLY.
AT&T IS SOLELY RESPONSIBLE FOR THE ELECTRICAL POWER DESIGN.

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	1/14/22	BMK	PRELIMINARY REVIEW	VP
B	3/8/22	BMK	PRELIMINARY REVIEW	VP
C	3/24/22	BMK	PRELIMINARY REVIEW	VP
0	4/26/22	FWP	CONSTRUCTION	MTJ



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SHEET NUMBER: **C-1.2** REVISION: **0**

AT&T SITE NUMBER:
ORANGE NORTH

BU #: 806939
NHV 2071 143137

800 OGG MEADOW ROAD
ORANGE, CT 06477

EXISTING
160'-0" MONOPOLE

ISSUED FOR:

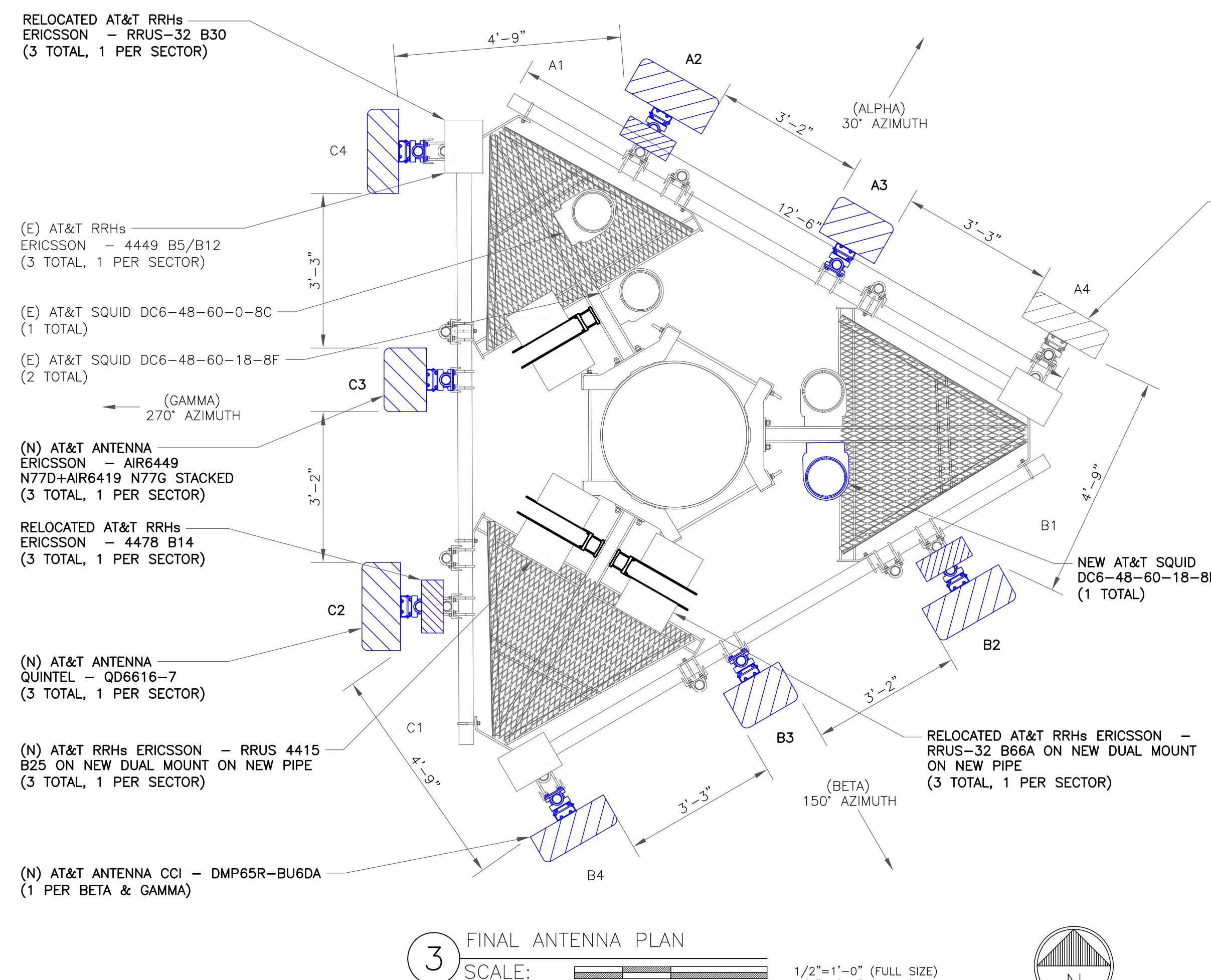
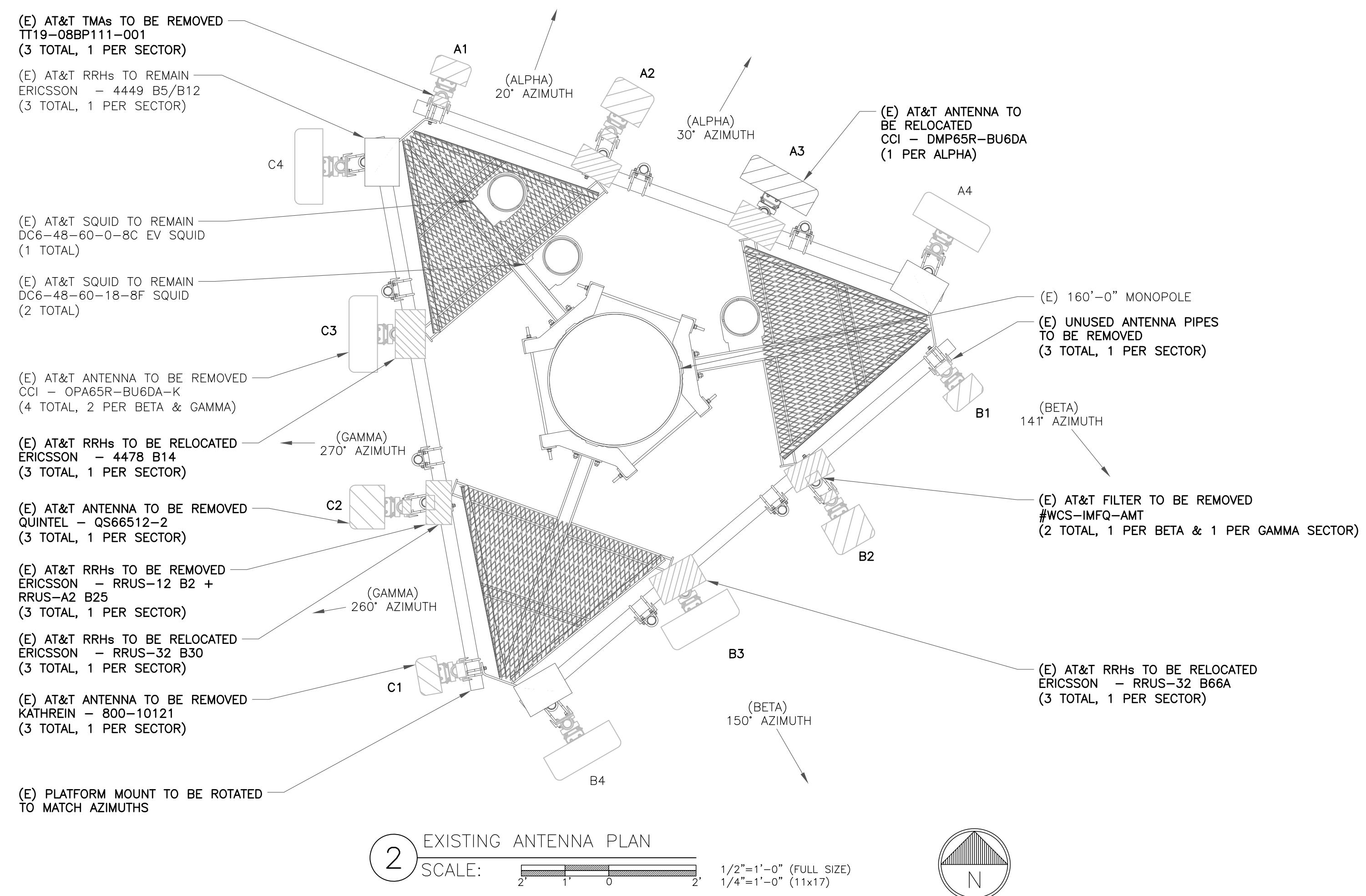
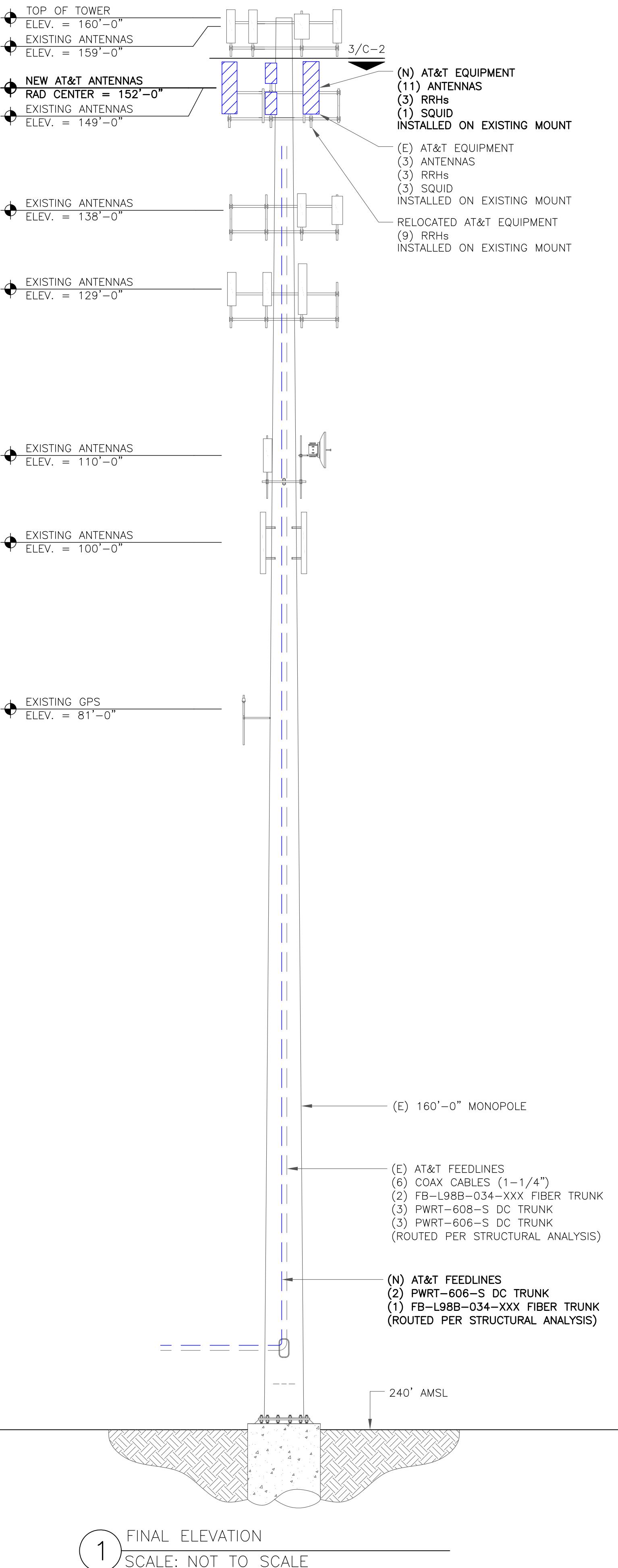
REV	DATE	DRWN	DESCRIPTION	DES./QA
A	1/14/22	BMK	PRELIMINARY REVIEW	VP
B	3/8/22	BMK	PRELIMINARY REVIEW	VP
C	3/24/22	BMK	PRELIMINARY REVIEW	VP
0	4/26/22	FWP	CONSTRUCTION	MTJ



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SHEET NUMBER: C-2 **REVISION:** 0



AT&T SITE NUMBER:
ORANGE NORTH

BU #: 806939
NHV 2071 143137

800 OGG MEADOW ROAD
ORANGE, CT 06477

EXISTING
160'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	1/14/22	BMK	PRELIMINARY REVIEW	VP
B	3/8/22	BMK	PRELIMINARY REVIEW	VP
C	3/24/22	BMK	PRELIMINARY REVIEW	VP
0	4/26/22	FWP	CONSTRUCTION	MTJ



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SHEET NUMBER: C-3 REVISION: 0

FINAL ANTENNA AND FEEDLINE SCHEDULE																			
POS.	TECH	STATUS	AZIMUTH	ANTENNA TYPE	ANTENNA RAD CENTER	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	MAIN COAX SIZE	MAIN COAX LENGTH	COAX QTY	TMA QTY AND MODEL	SURGE PROTECTION	DC/FIBER CABLES	RRHs QTY & MODEL ON TOWER	LOCATION	DIPLEXER ON TOWER	DIPLEXER ON GROUND	RET CABLE	
ALPHA SECTOR																			
A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	
A2	LTE 700/LTE 1900/LTE AWS/5G1900 /5G AWS	NEW	30°	QUINTEL - QD6616-7	152'-0"	2°	3'/3'/3'/3'/5'/5'	1-1/4"	199'-0"	2	-	DC6-48-60-18-8F SQUID	(1) FB-L98B-034-XXX FIBER TRUNK	(1) ERICSSON - 4478 B14 (1) ERICSSON - RRUS-32 B66A (1) ERICSSON - RRUS 4415 B25	TOWER	N	N	N	
A3	5G CBAND	NEW	30°	ERICSSON - AIR6449 N77D+AIR6419 N77G STACKED	150'-3" 153'-8"	0°	0°	-	-	-	-	DC6-48-60-0-8C-EC SQUID	(3) PWRT-608-S DC TRUNK	-	TOWER	N	N	N	
A4	LTE 700/LTE WCS/5G 850	EXISTING	30°	CCI - DMP65R-BU6DA	152'-0"	0°	8'/3"/4"	-	-	-	-		(1) ERICSSON - 4449 B5/B12 (1) ERICSSON - RRUS-32 B30	TOWER	N	N	N		
BETA SECTOR																			
B1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	
B2	LTE 700/LTE 1900/LTE AWS/5G1900 /5G AWS	NEW	150°	QUINTEL - QD6616-7	152'-0"	0°	3'/3'/3'/3'/5'/5'	1-1/4"	199'-0"	2	-	DC6-48-60-18-8F SQUID	(1) FB-L98B-034-XXX FIBER TRUNK	(1) ERICSSON - 4478 B14 (1) ERICSSON - RRUS-32 B66A (1) ERICSSON - RRUS 4415 B25	TOWER	N	N	N	
B3	5G CBAND	NEW	150°	ERICSSON - AIR6449 N77D+AIR6419 N77G STACKED	150'-3" 153'-8"	0°	0°	-	-	-	-		(3) PWRT-606-S DC TRUNK	-	TOWER	N	N	N	
B4	LTE 700/LTE WCS/5G 850	NEW	150°	CCI - DMP65R-BU6DA	152'-0"	0°	8'/3"/4"	-	-	-	-		(1) ERICSSON - 4449 B5/B12 (1) ERICSSON - RRUS-32 B30	TOWER	N	N	N		
GAMMA SECTOR																			
C1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	
C2	LTE 700/LTE 1900/LTE AWS/5G1900 /5G AWS	NEW	270°	QUINTEL - QD6616-7	152'-0"	0°	3'/3'/3'/3'/5'/5'	1-1/4"	199'-0"	2	-	DC6-48-60-18-8F SQUID	(2) PWRT-606-S DC TRUNK (1) FB-L98B-034-XXX FIBER TRUNK	(1) ERICSSON - 4478 B14 (1) ERICSSON - RRUS-32 B66A (1) ERICSSON - RRUS 4415 B25	TOWER	N	N	N	
C3	5G CBAND	NEW	270°	ERICSSON - AIR6449 N77D+AIR6419 N77G STACKED	150'-3" 153'-8"	0°	0°	-	-	-	-		(1) ERICSSON - 4449 B5/B12 (1) ERICSSON - RRUS-32 B30	TOWER	N	N	N		
C4	LTE 700/LTE WCS/5G 850	NEW	270°	CCI - DMP65R-BU6DA	152'-0"	0°	8'/3"/4"	-	-	-	-			-	TOWER	N	N	N	

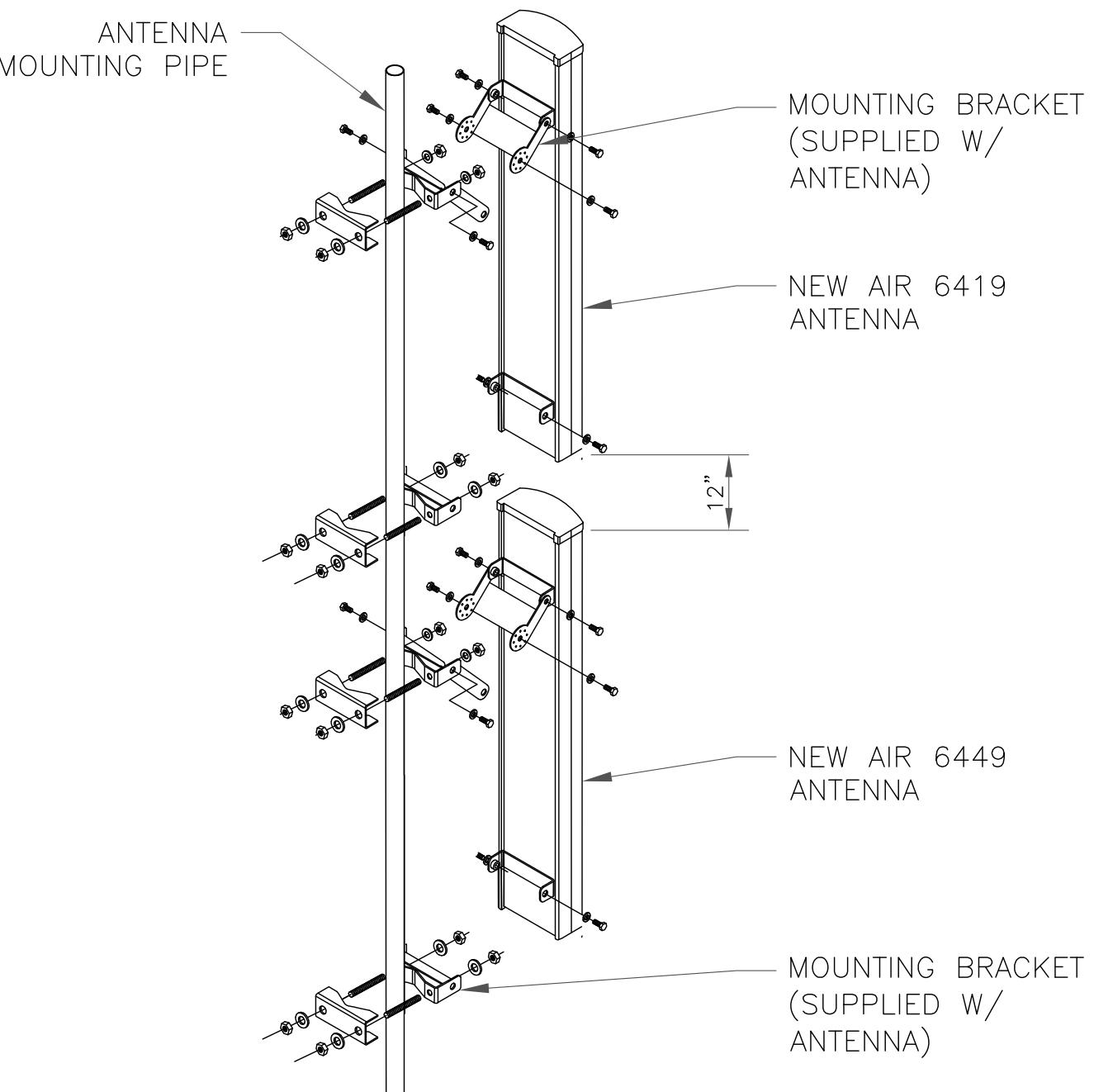
NOTE: BOLD DENOTES NEW EQUIPMENT

AT&T SITE NUMBER:
ORANGE NORTH

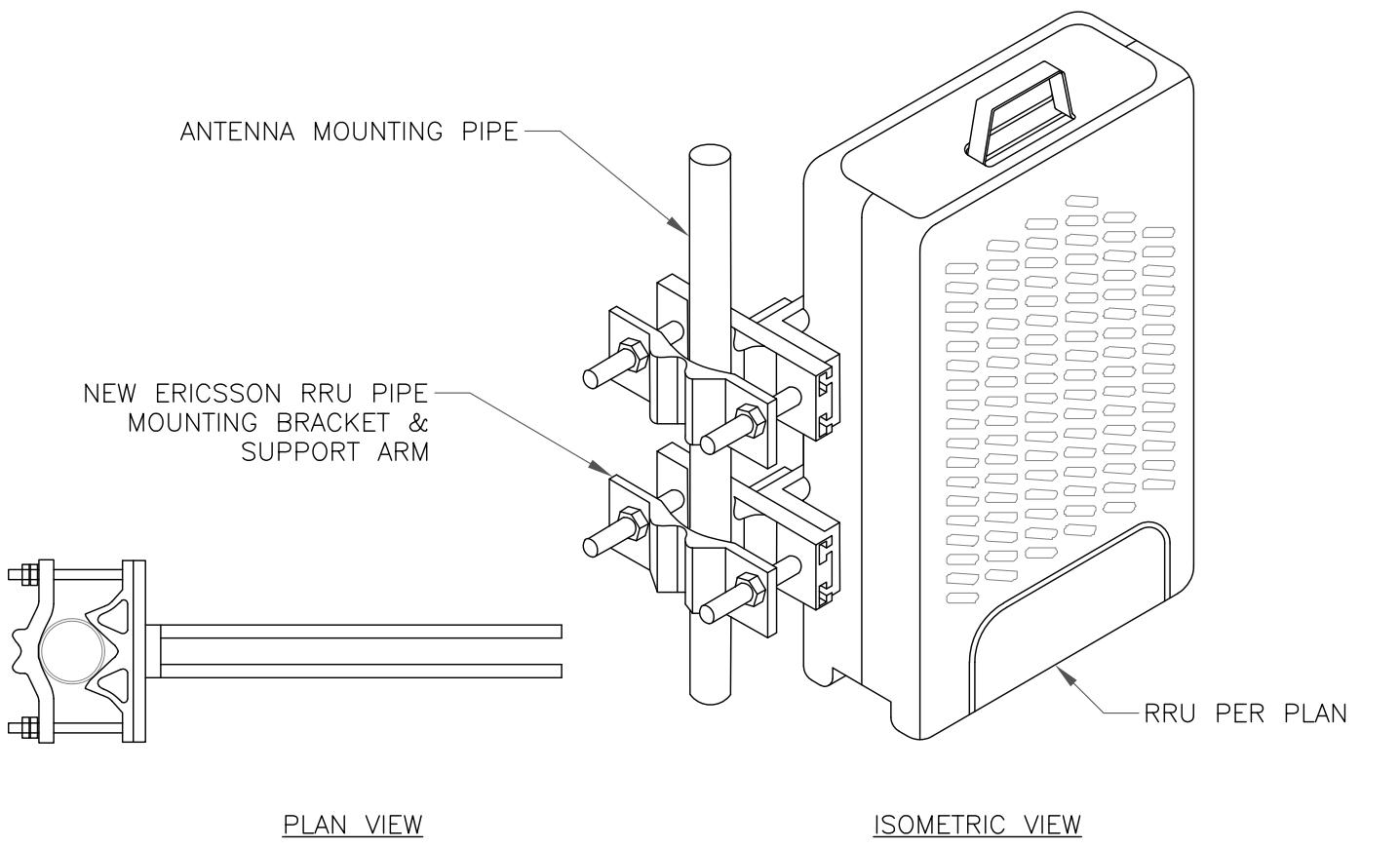
BU #: 806939
NHV 2071 143137

800 OGG MEADOW ROAD
ORANGE, CT 06477

EXISTING
160'-0" MONOPOLE



1 ANTENNA MOUNT DETAIL
SCALE: NOT TO SCALE



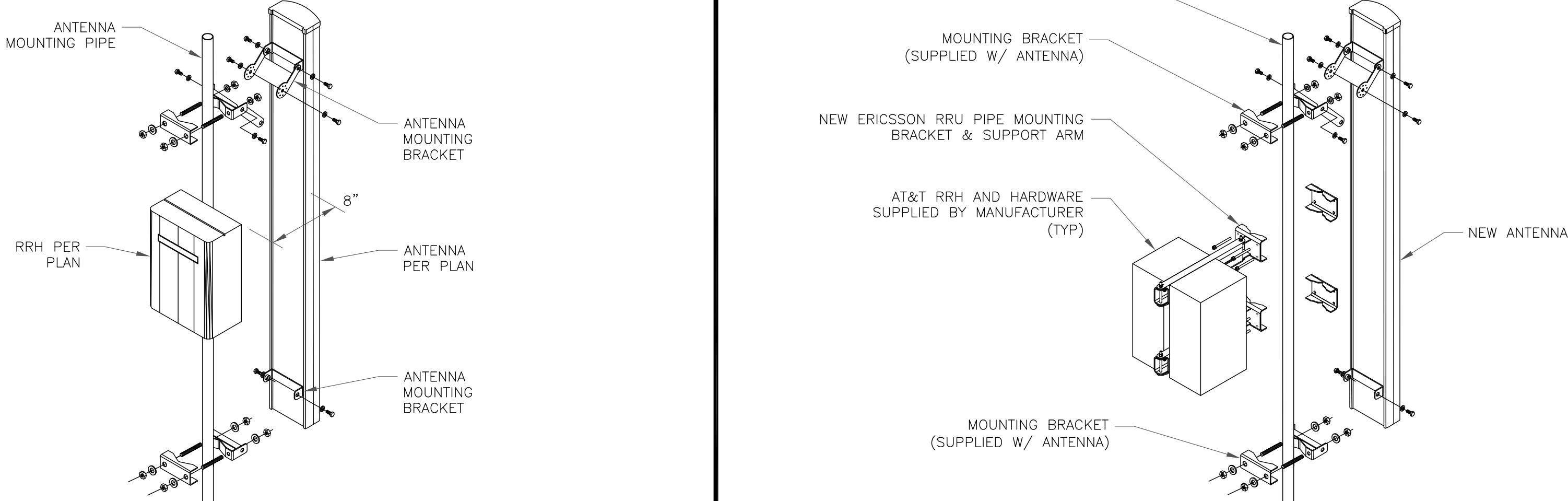
2 ERICSSON - SXK 107 2839
SCALE: NOT TO SCALE

INSTALLER NOTES:

1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRHs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.

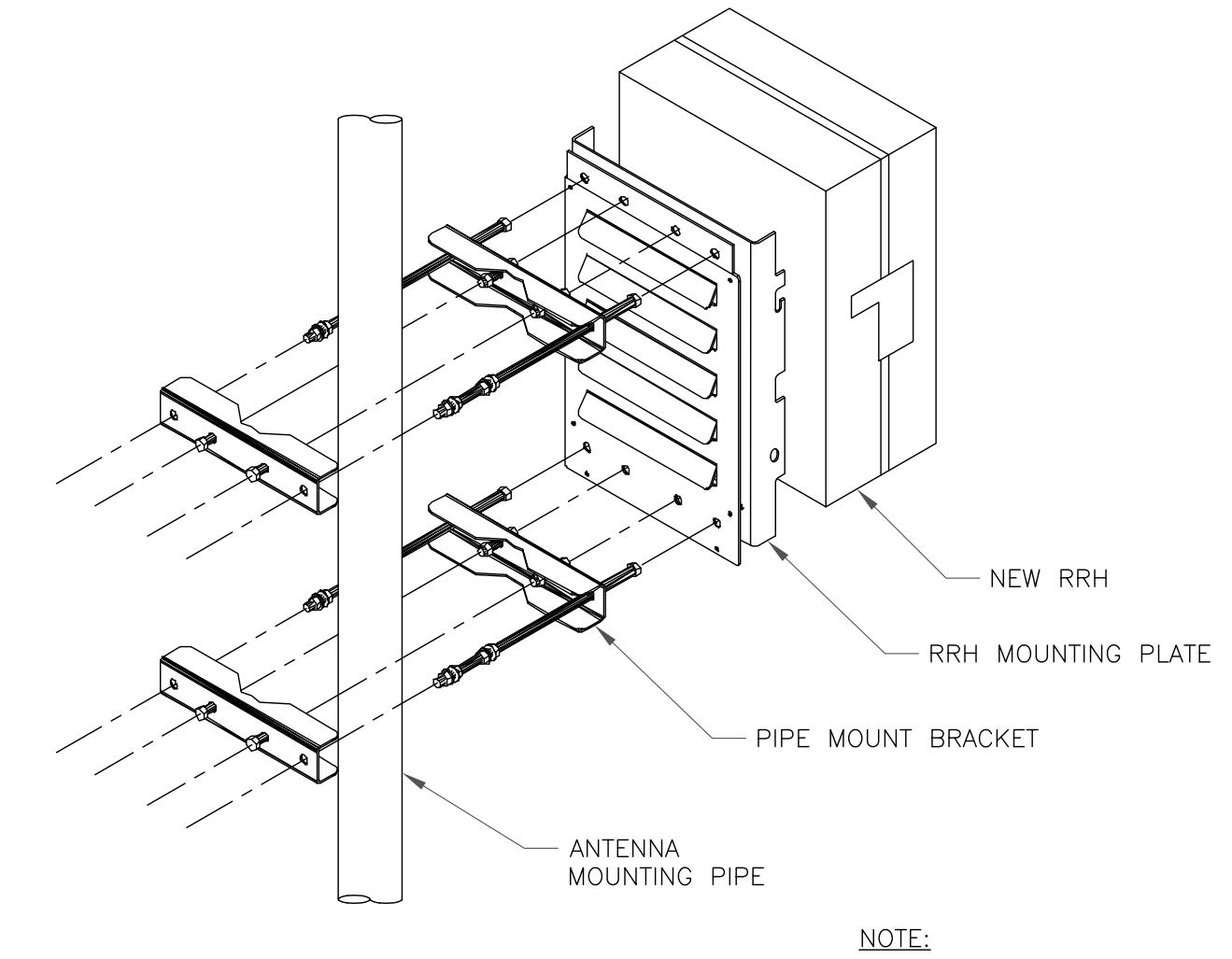
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4 ANTENNA WITH RRH MOUNTING DETAIL
SCALE: NOT TO SCALE

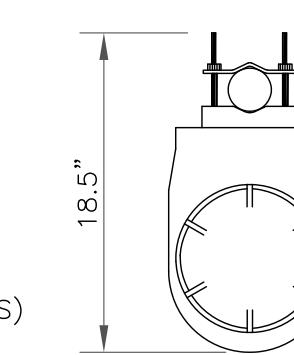
5 ANTENNA WITH DUAL RRH MOUNTING DETAIL
SCALE: NOT TO SCALE



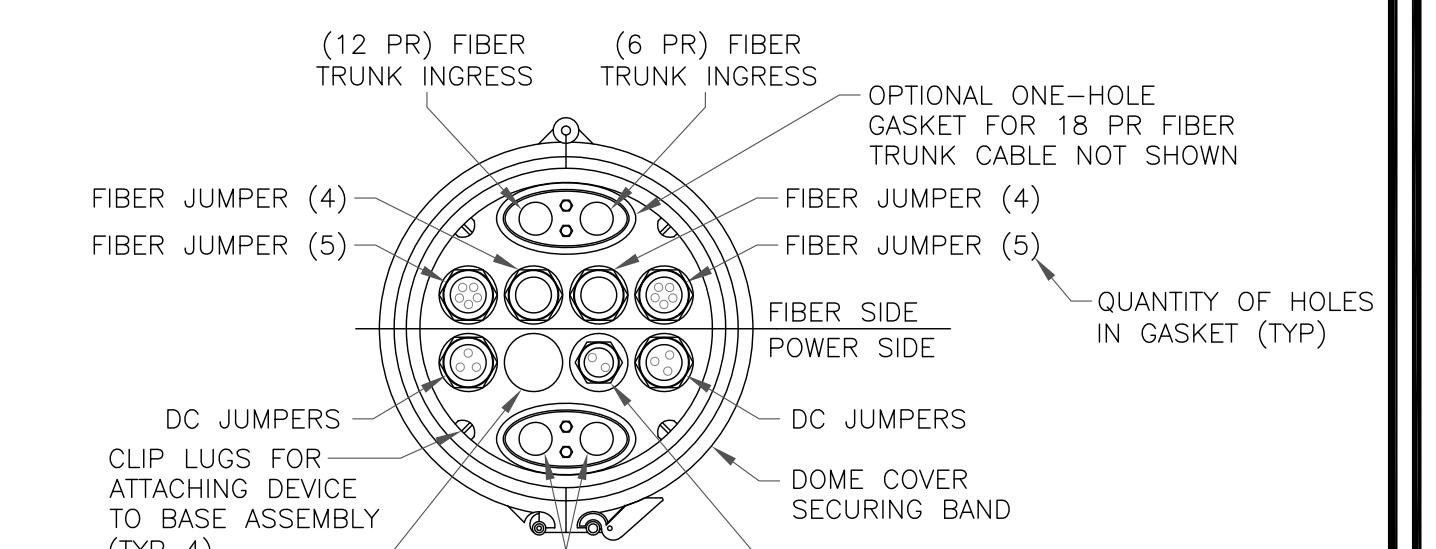
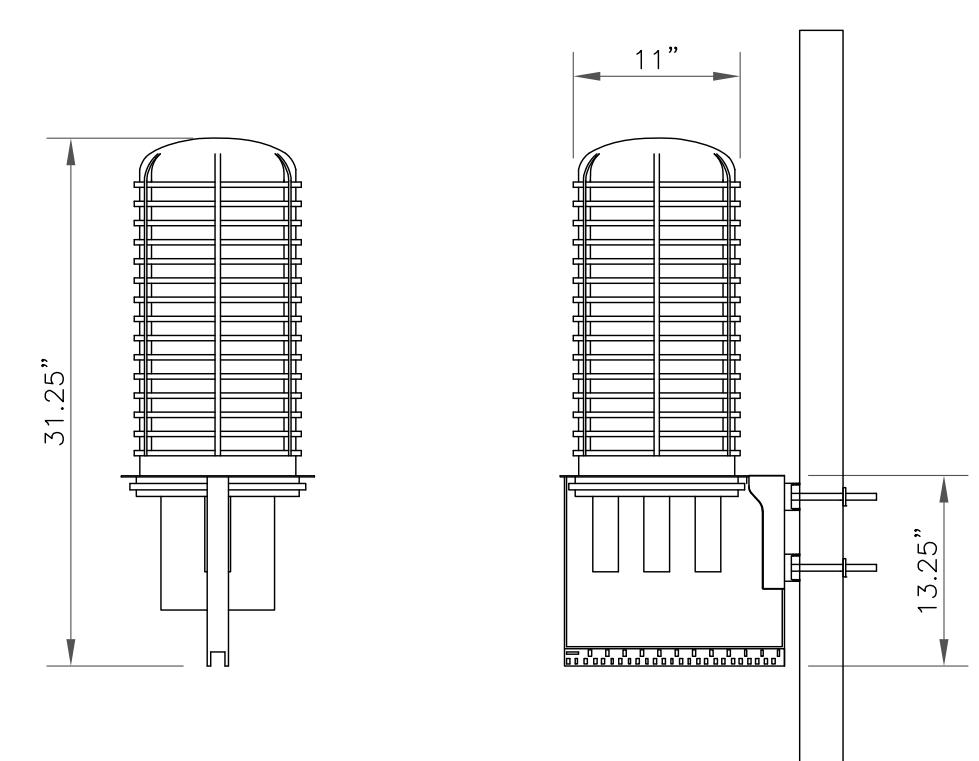
3 SINGLE RRH MOUNTING DETAIL
SCALE: NOT TO SCALE

RAYCAP
DC6-48-60-18-8F

RAYCAP - DC6-48-60-18-8F
SIZE: 11x31.25 IN.
WEIGHT: 32.8 LBS
NOMINAL OPERATING VOLTAGE: 48 VDC
VOLTAGE PROTECTION RATING: 400 V
WIND LOADING: 150 MPH SUSTAINED (105.7 LBS)
WIND LOADING: 195 MPH GUST (213.6 LBS)



CONTRACTOR TO USE "THREAD LUBRICANT" ON MOUNTING BOLTS DURING INSTALLATION



1. REMOVE CABLE SEALING GLAND AND INSTALL M32x1.5 METRIC-TO-1" NPT ADAPTER (COOPER CROUSE-HINES P/N CAP 740 994 OR EQUIVALENT MFR) WHEN CONNECTING CONDUIT TO OVP.

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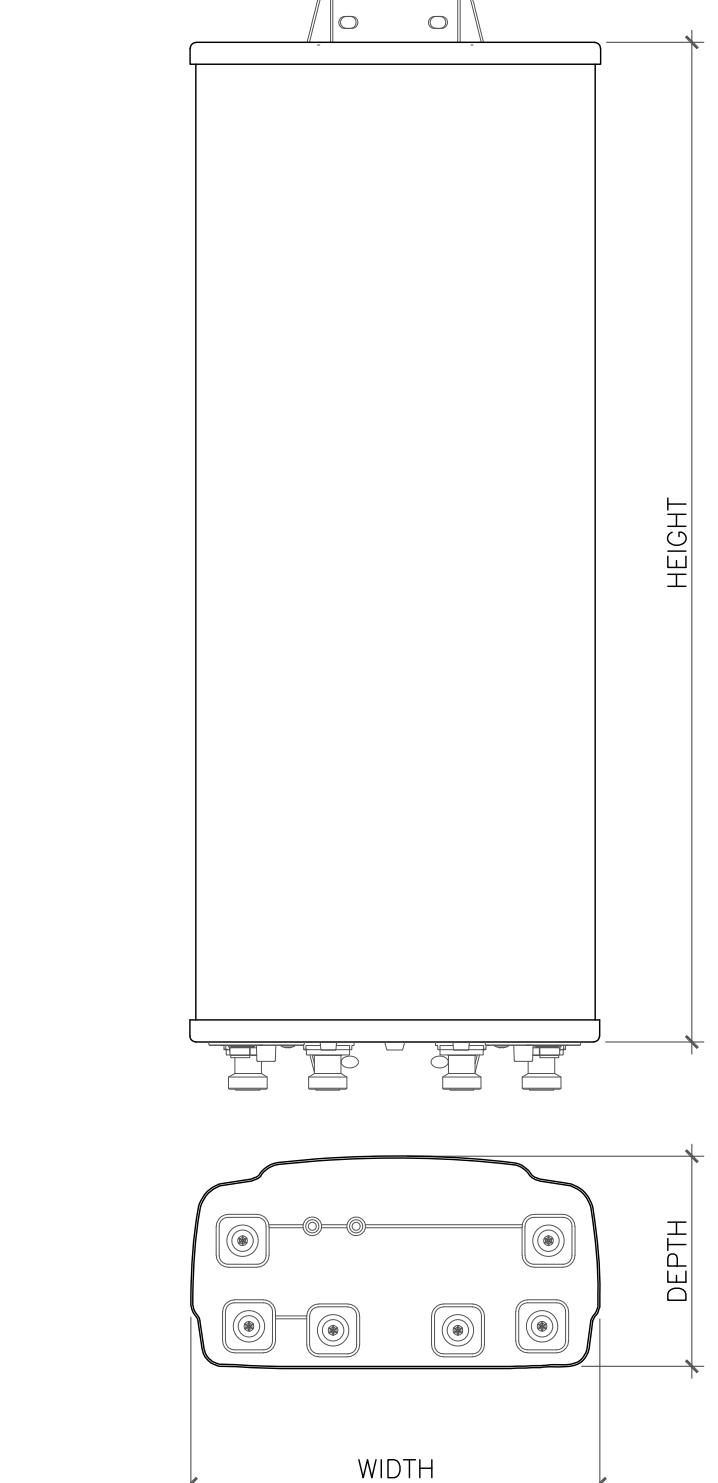


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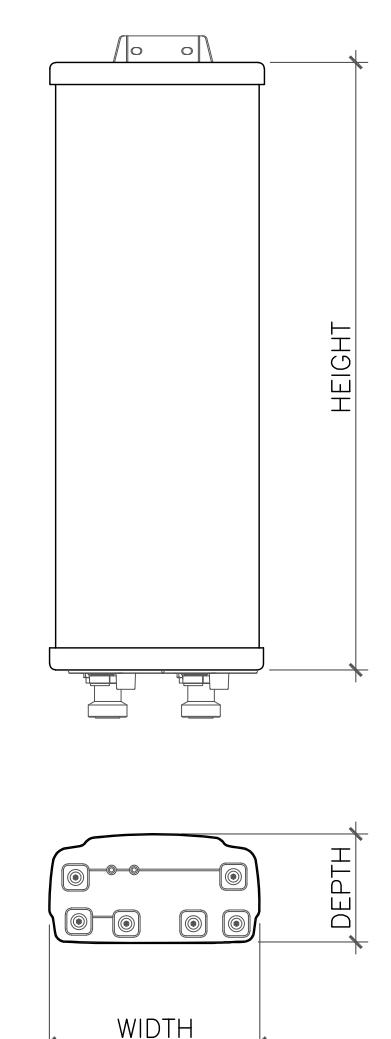
800 OGG MEADOW ROAD
ORANGE, CT 06477

EXISTING
160'-0" MONOPOLE



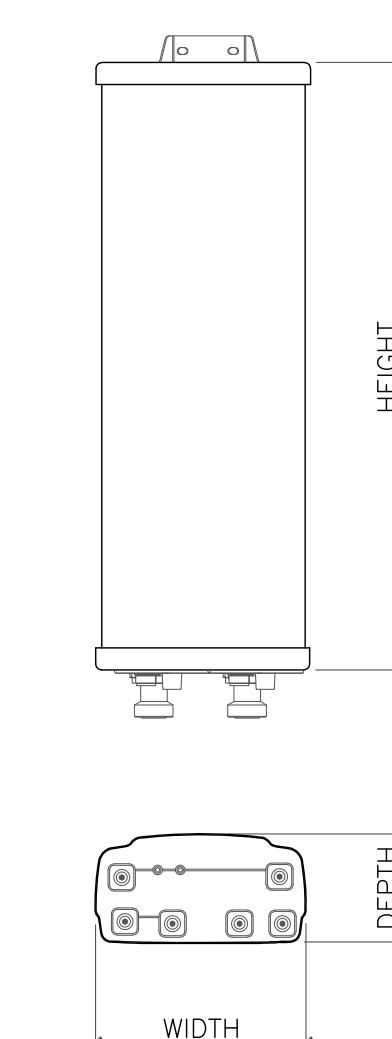
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
QD6616-7	72"	22.00"	9.60"	130.00lbs

1 ANTENNA DETAIL
SCALE: NOT TO SCALE



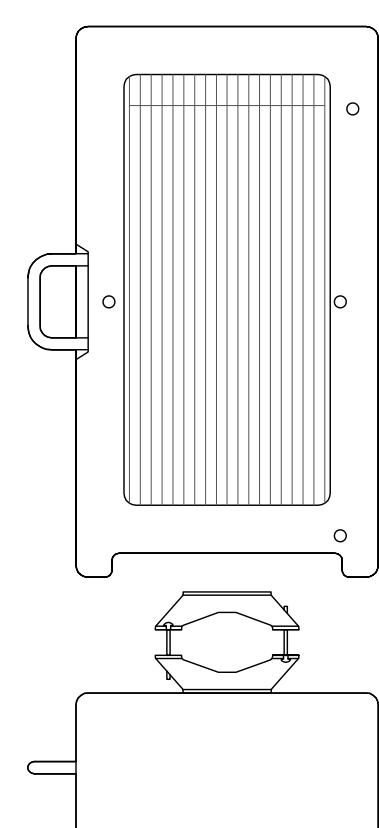
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
AIR6449 N77D	30.63"	15.87"	10.55"	96.80 lbs

2 ANTENNA DETAIL
SCALE: NOT TO SCALE



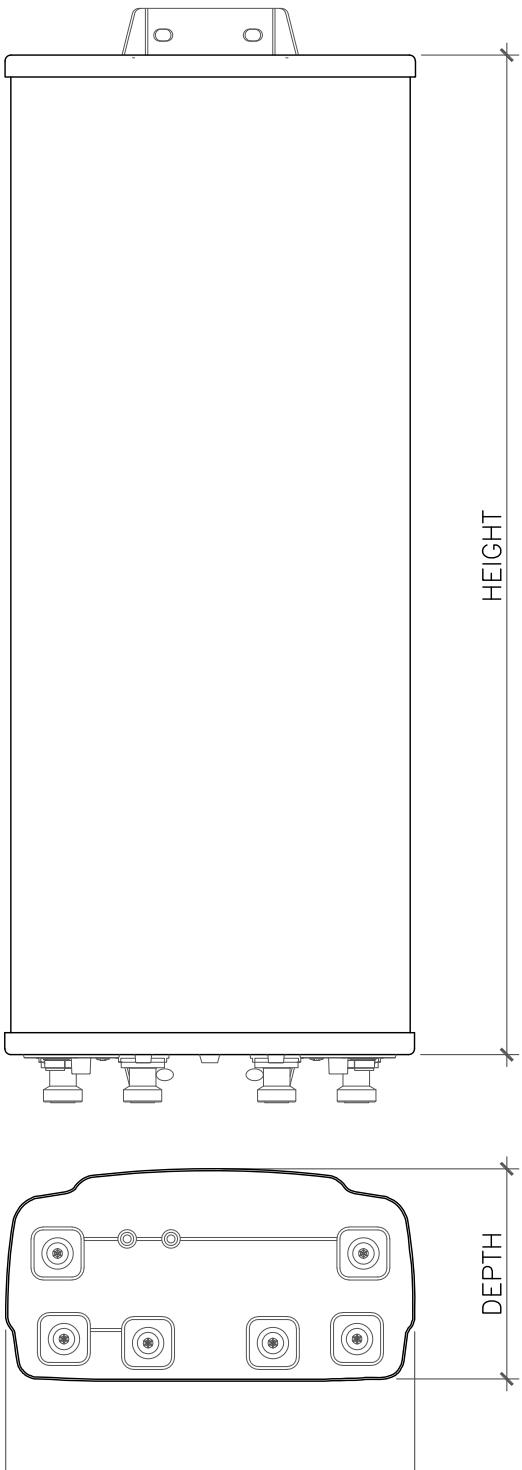
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
AIR6419 N77G	27.95"	15.75"	6.68"	66.20 lbs

3 ANTENNA DETAIL
SCALE: NOT TO SCALE



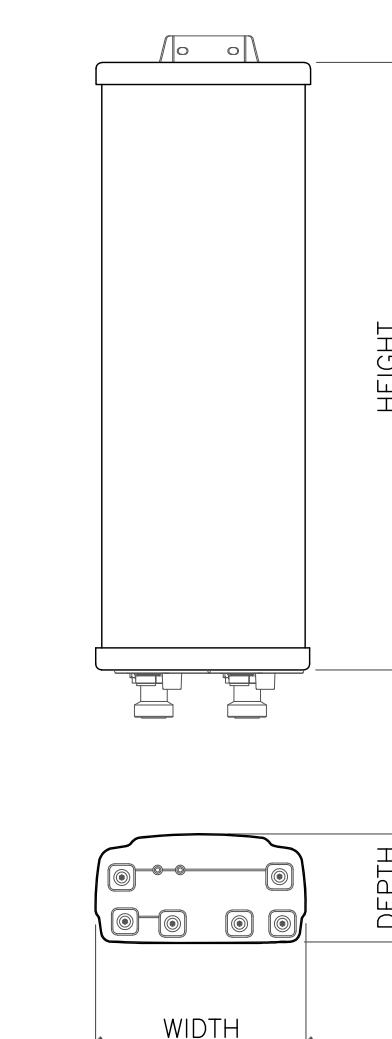
ERICSSON - RRUS 4415 B25
WEIGHT (FULLY EQUIPPED): 44.0 LBS
SIZE (HxWxD): 14.96x13.19x5.39 IN.
CONNECTOR TYPE: 4.3-10 FEMALE (4 TOTAL PORTS)

4 NOKIA - 4415 B25
SCALE: NOT TO SCALE



ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
DMP65R-BU6DA	71.2"	20.7"	7.7"	96.0lbs

5 ANTENNA DETAIL
SCALE: NOT TO SCALE



6 NOT USED
SCALE: NOT TO SCALE

ISSUED FOR:

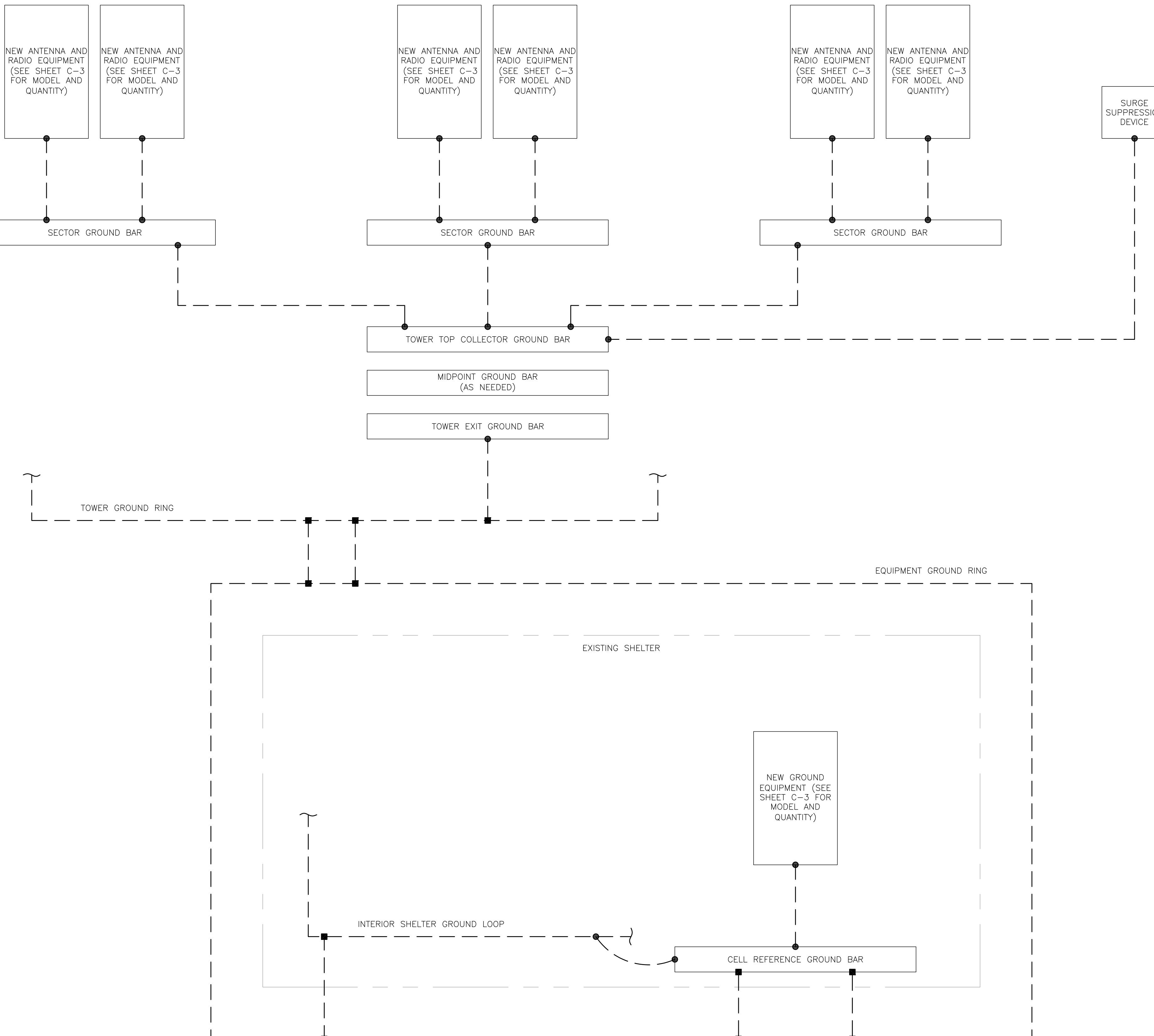
REV	DATE	DRWN	DESCRIPTION	DES./QA
A	1/14/22	BMK	PRELIMINARY REVIEW	VP
B	3/8/22	BMK	PRELIMINARY REVIEW	VP
C	3/24/22	BMK	PRELIMINARY REVIEW	VP
0	4/26/22	FWP	CONSTRUCTION	MTJ



B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

IT IS A VIOLATION OF LAW FOR ANY PERSON,
UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

SHEET NUMBER: C-5 REVISION: 0



1 GROUNDING SCHEMATIC
SCALE: NOT TO SCALE

GROUNDING PLAN LEGEND:	
--- GROUND WIRE	COPPER GROUND ROD
■ EXOTHERMIC WELD	GROUND ROD W/ TEST WELL
● MECHANICAL CONNECTION	

CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUITS (ATT-TP-76416 7.6.7).

HATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH (2) #2 STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CELL SITE REFERENCE GROUND BAR MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) #2 STRANDED GREEN INSULATED COPPER CONDUCTORS.

EXTERIOR CABLE ENTRY PORT GROUND BAR: LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE (ATT-TP-76416 7.6.7.2).

DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICES CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR PER TP76300 SECTION H 6 AND TP76416 FIGURE 7-11 REQUIREMENTS.



AT&T SITE NUMBER:
ORANGE NORTH

BU #: 806939
NHV 2071 143137

800 OGG MEADOW ROAD
ORANGE, CT 06477

EXISTING
160'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	1/14/22	BMK	PRELIMINARY REVIEW	VP
B	3/8/22	BMK	PRELIMINARY REVIEW	VP
C	3/24/22	BMK	PRELIMINARY REVIEW	VP
0	4/26/22	FWP	CONSTRUCTION	MTJ



B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

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TO ALTER THIS DOCUMENT.

SHEET NUMBER: **G-1** REVISION: **0**

AT&T SITE NUMBER:
ORANGE NORTH

BU #: 806939
NHV 2071 143137

800 OGG MEADOW ROAD
ORANGE, CT 06477

EXISTING
160'-0" MONOPOLE

ISSUED FOR:

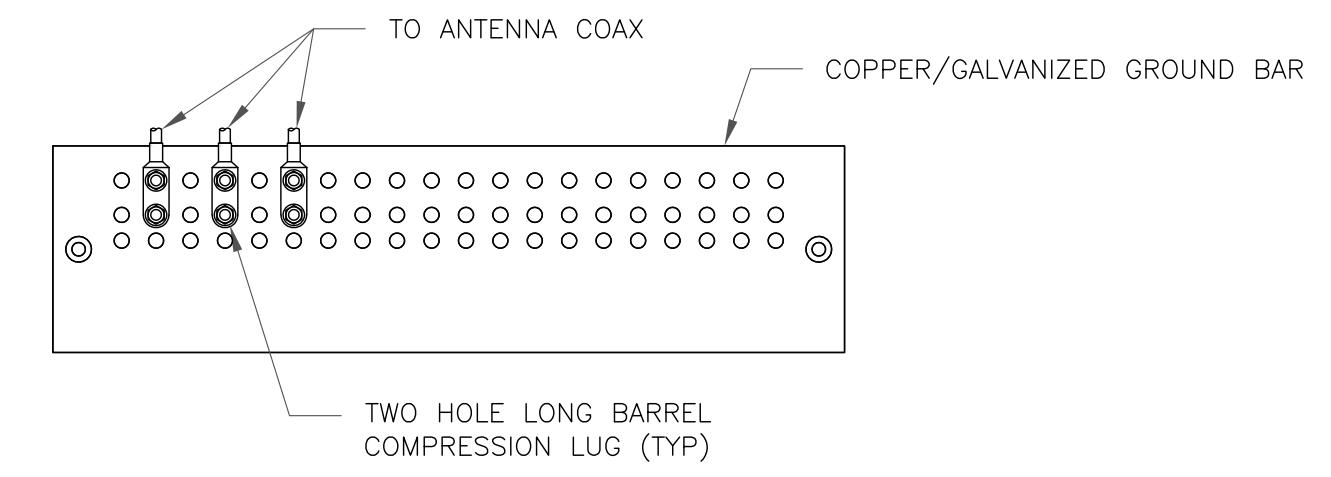
REV	DATE	DRWN	DESCRIPTION	DES/QA
A	1/14/22	BMK	PRELIMINARY REVIEW	VP
B	3/8/22	BMK	PRELIMINARY REVIEW	VP
C	3/24/22	BMK	PRELIMINARY REVIEW	VP
0	4/26/22	FWP	CONSTRUCTION	MTJ



B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

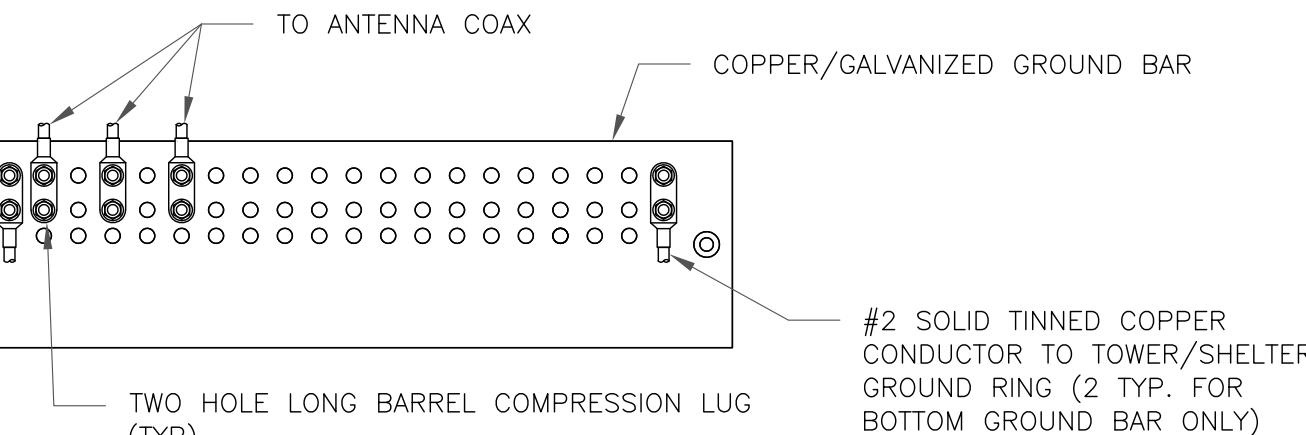
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SHEET NUMBER: **G-2** REVISION: **0**



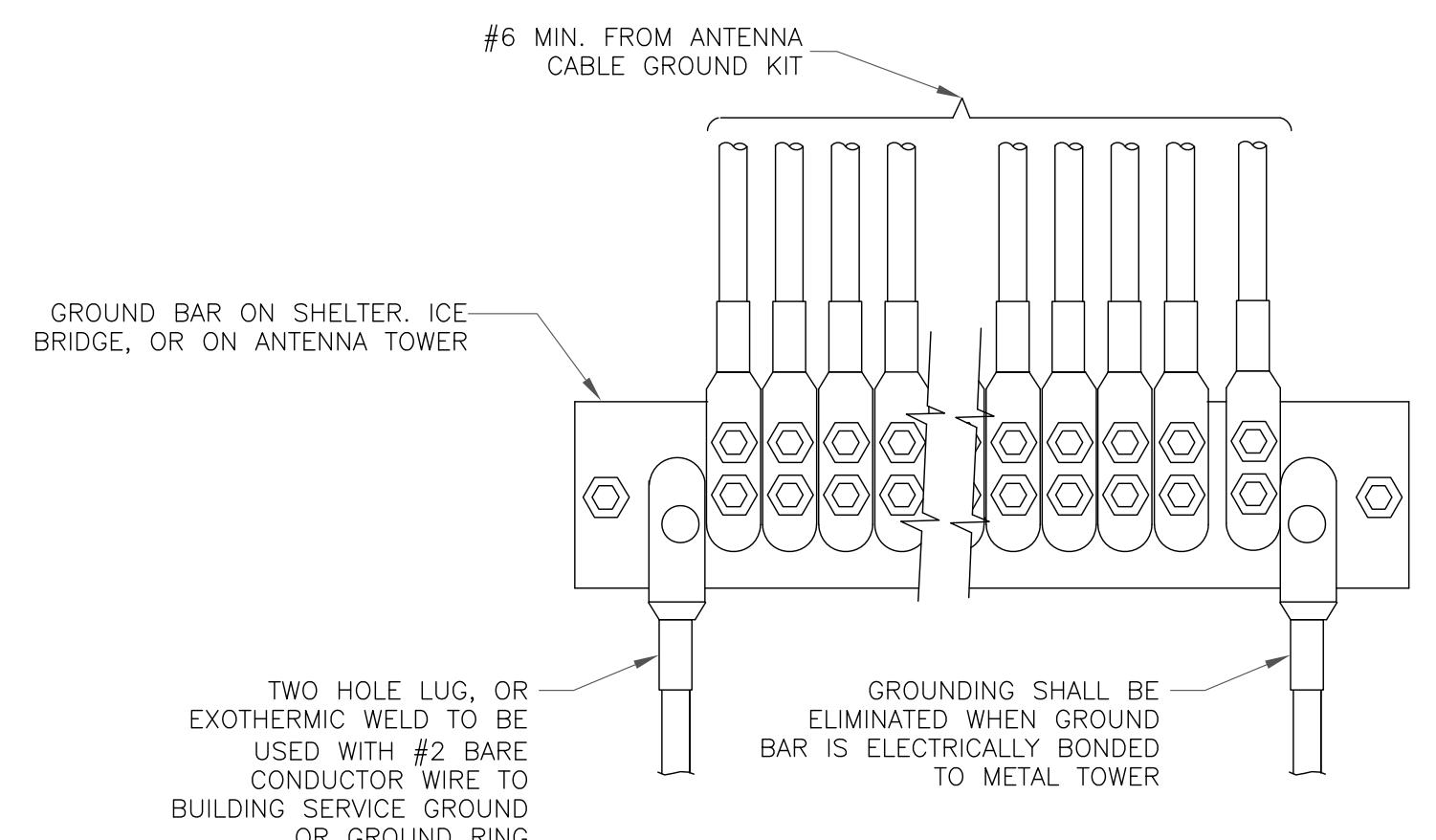
NOTES:
1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE

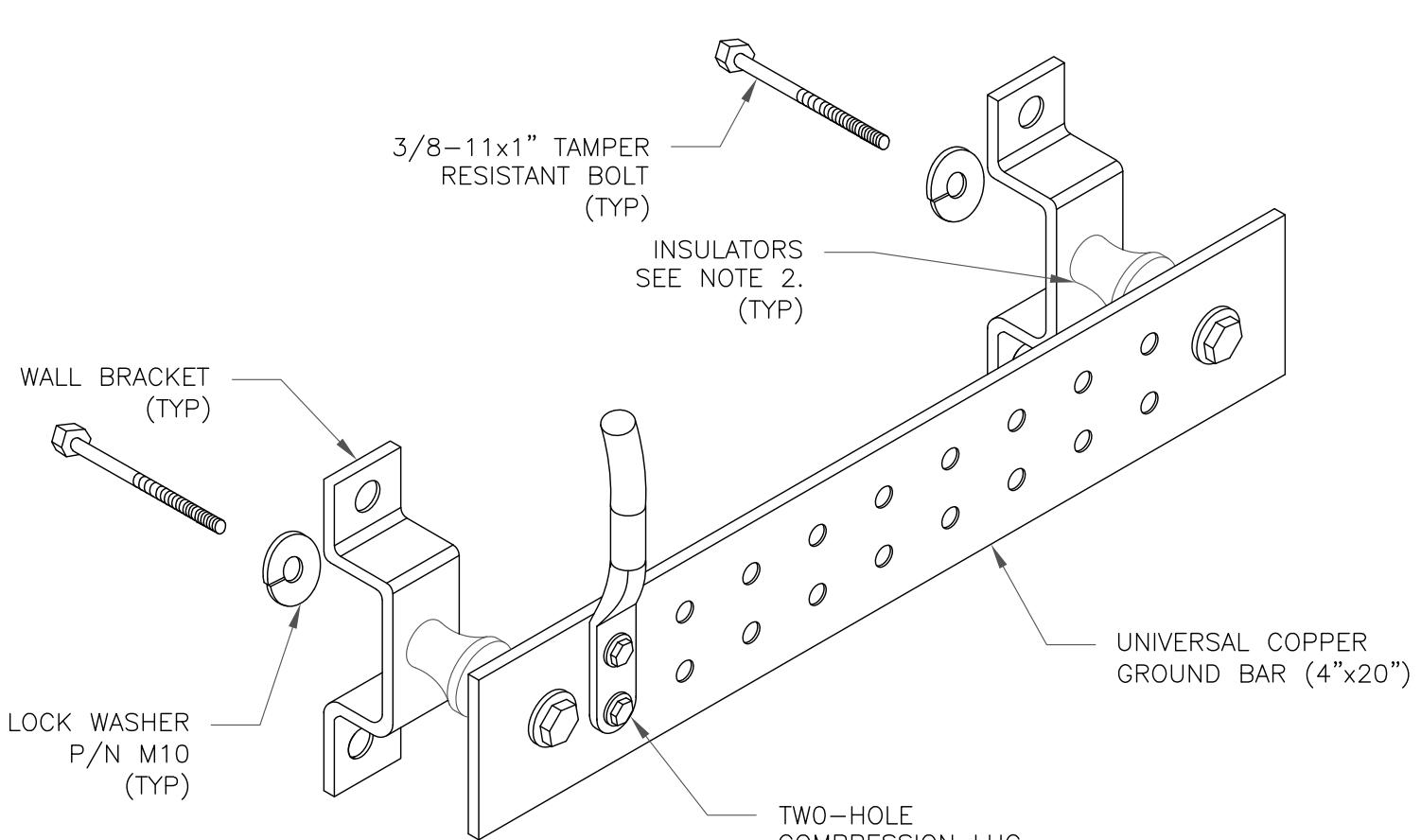


NOTES:
1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE

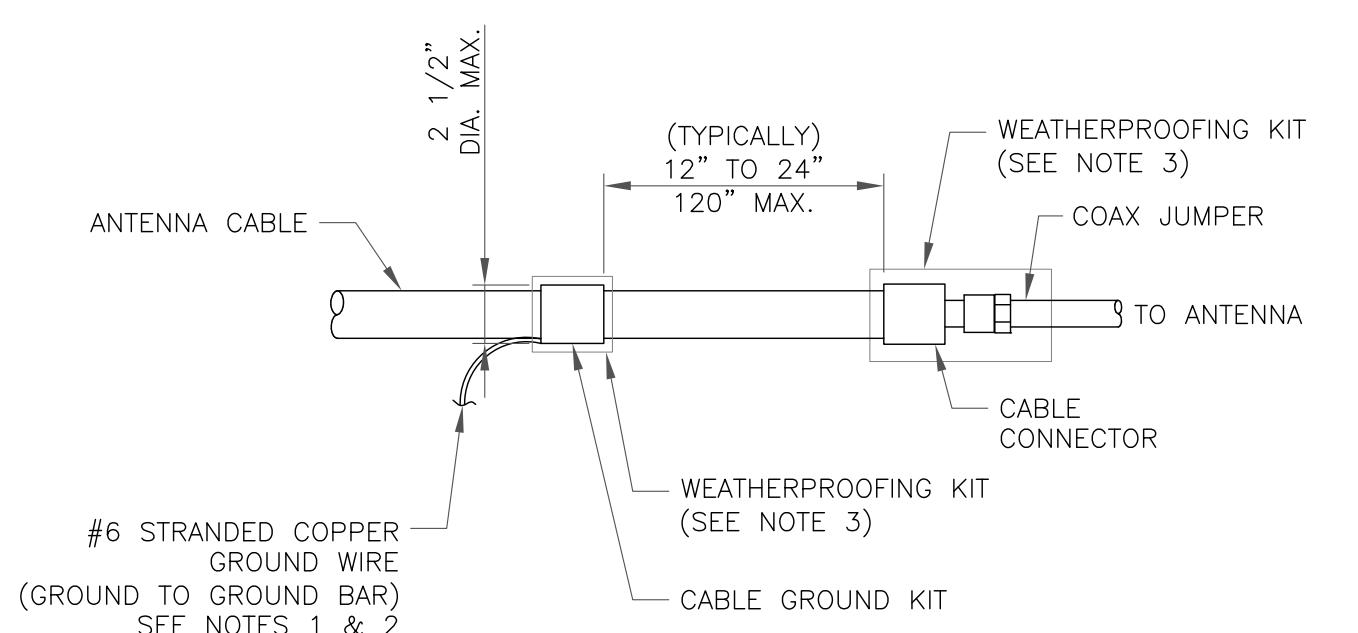


4 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



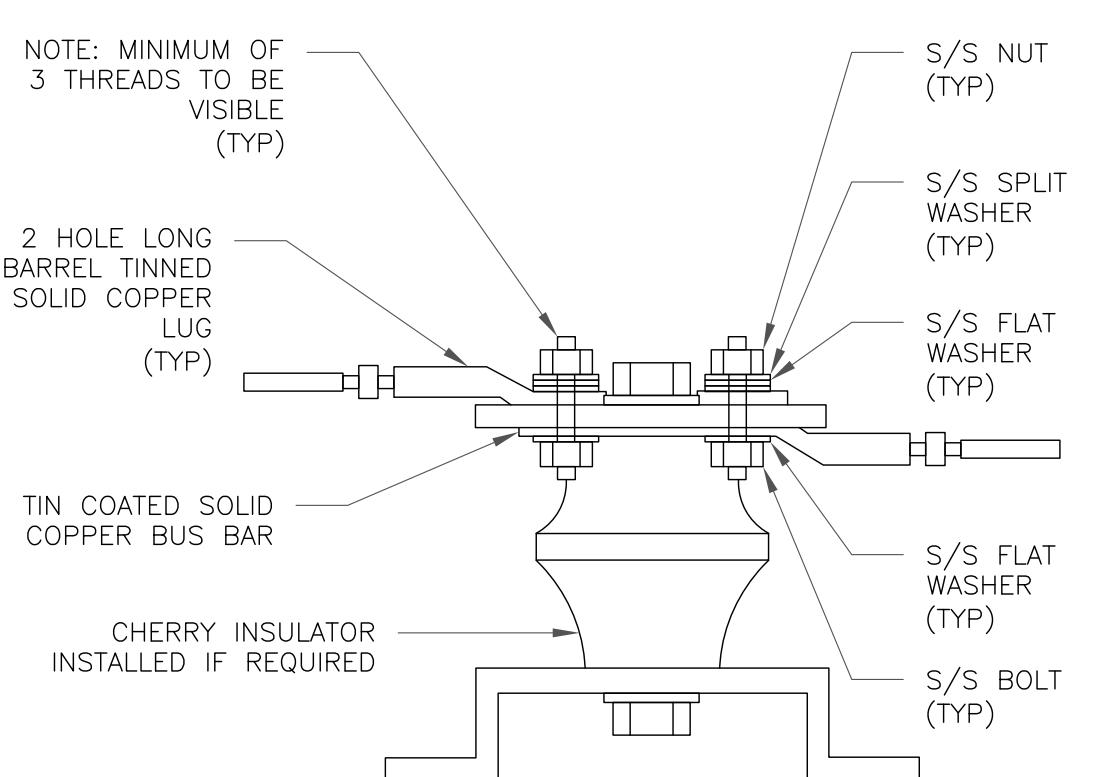
NOTES:
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER. PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091, NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

5 GROUND BAR DETAIL
SCALE: NOT TO SCALE



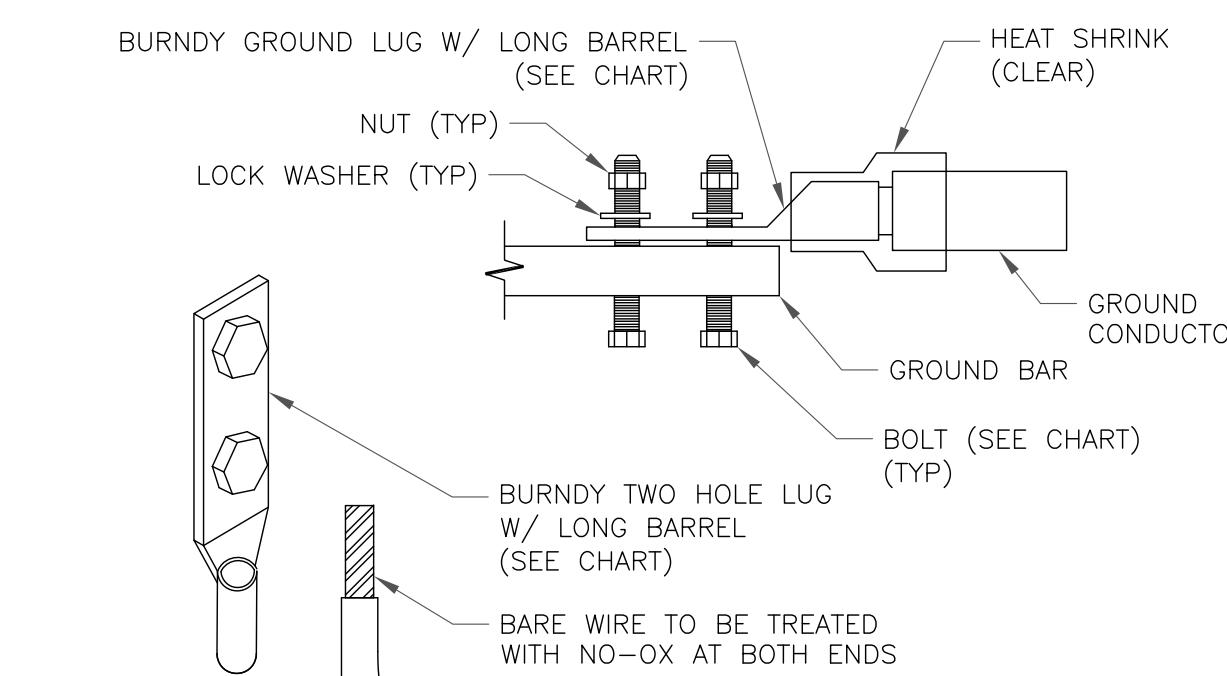
NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

6 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



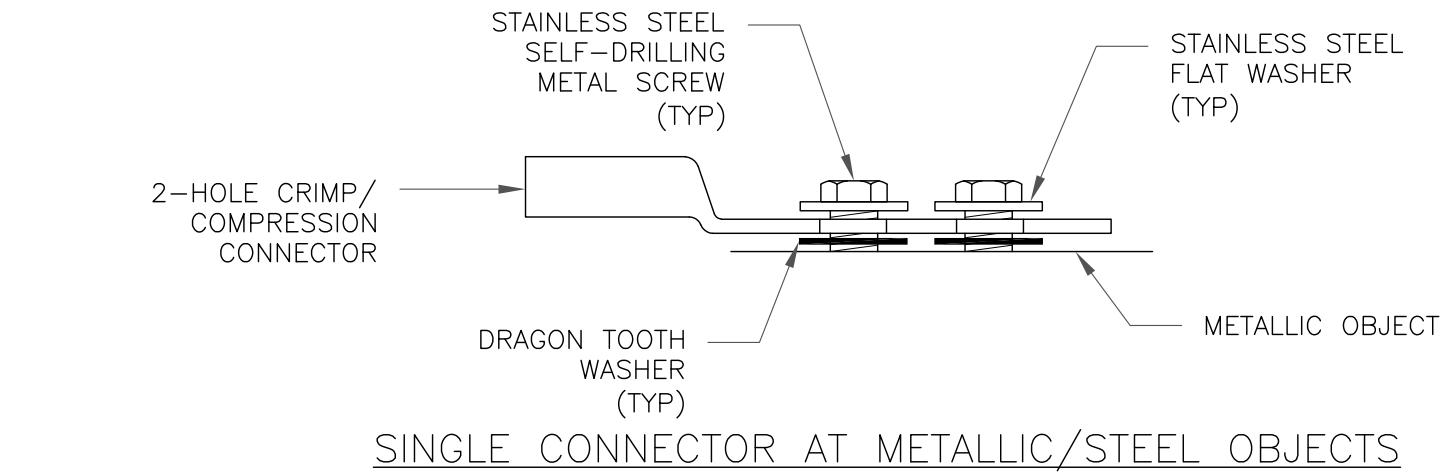
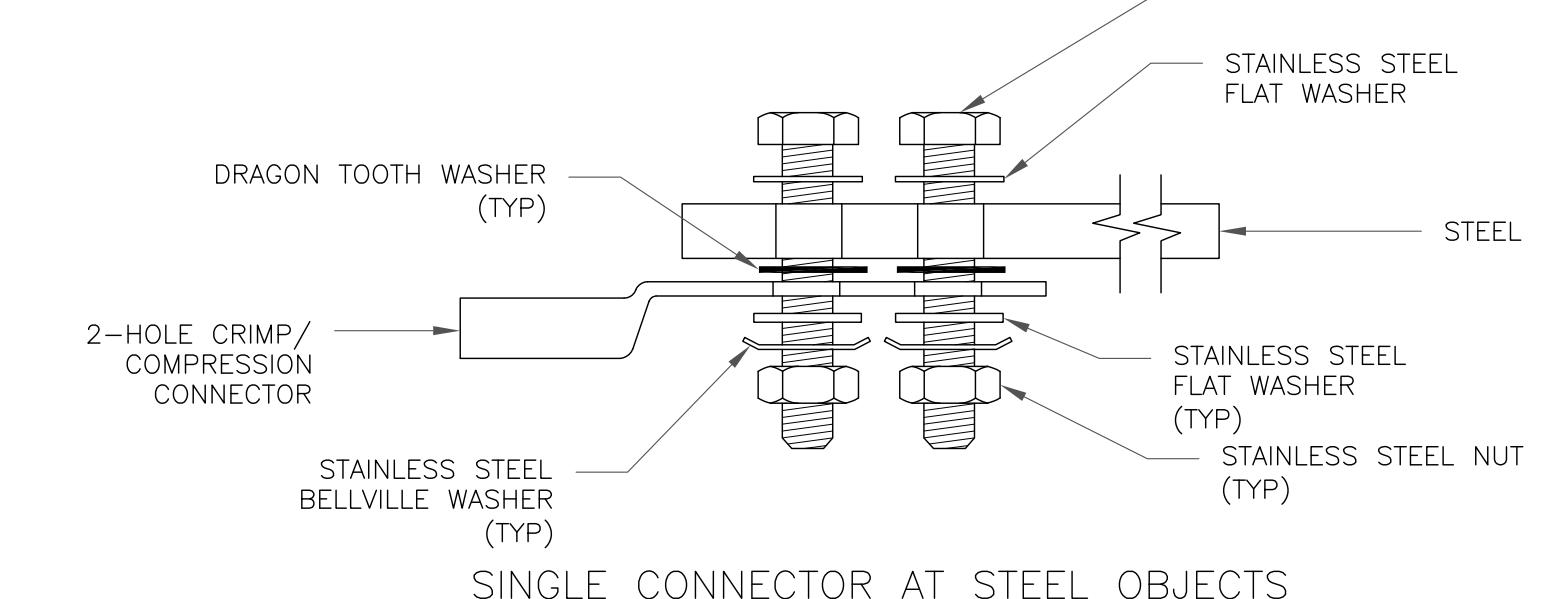
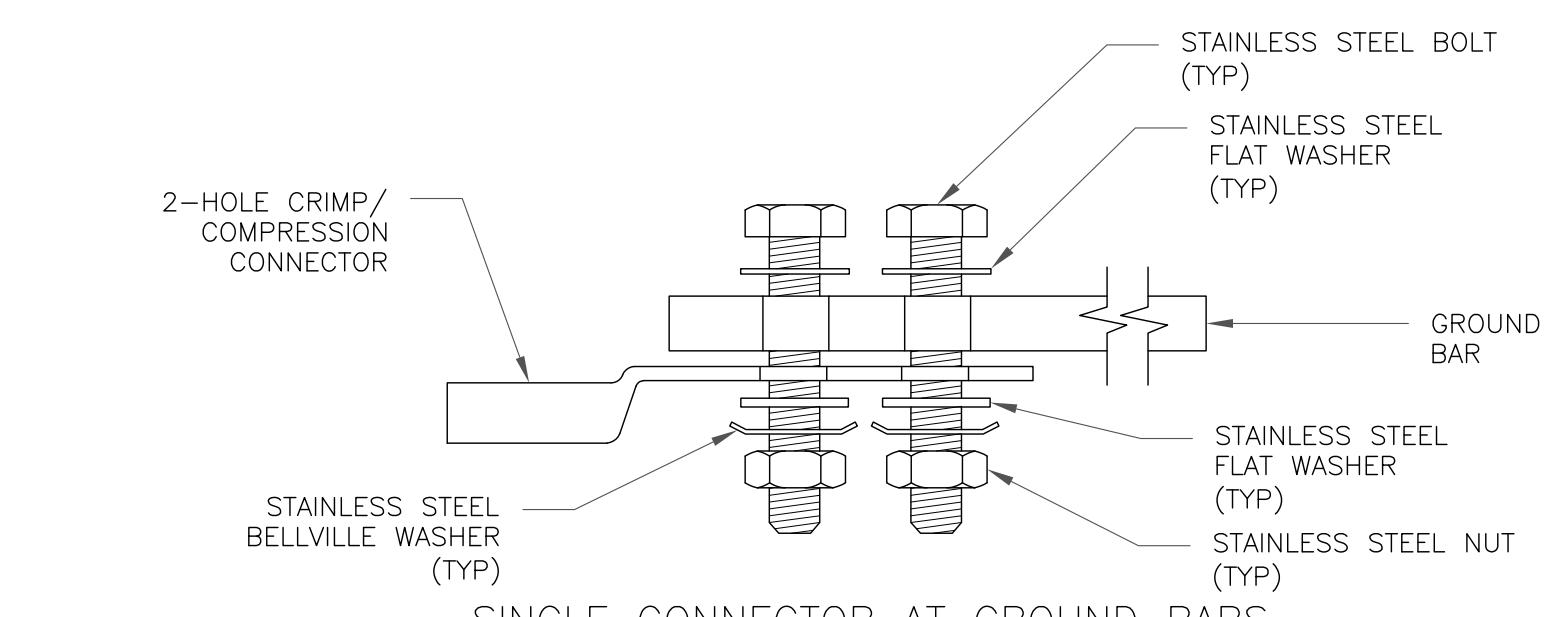
7 LUG DETAIL
SCALE: NOT TO SCALE

WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 SOLID TINNED	YA3C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 STRANDED	YA2C-2TC38	3/8" - 16 NC SS 2 BOLT
#2/0 STRANDED	YA26-2TC38	3/8" - 16 NC SS 2 BOLT
#4/0 STRANDED	YA28-2N	1/2" - 16 NC SS 2 BOLT



NOTE:
ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

3 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE

