



T-Mobile
Cullen Morgan
Site Acquisition Consultant
750 W Center Street
Suite 301
West Bridgewater, MA 02379
(941)549-7263
cmorgan@clinellc.com

July 30, 2024

Members of the Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: NOTICE OF EXEMPT MODIFICATION
87 Monce Avenue, Burlington, CT 06013
Latitude: 41.739127
Longitude: -72.907811
T-Mobile Site #: CTHA560B

Dear Members of the Siting Council:

T-Mobile currently maintains nine (9) antennas at the 100-foot level of the existing 120-foot monopole tower at 87 Monce Road, Burlington, CT 06013. The 120-foot tower is owned by American Tower Corporation and the property is owned by InSite Towers Development LLC. T-Mobile now intends to replace (6) antennas, (3) RRUs, (2) Hybrid Cables, and (1) cabinet, and install (1) cabinet to their existing telecommunications facility. All tower-mounted equipment will be installed at the 100-foot level of the tower.

Planned Modifications:

Remove Existing:

- (3) Air32 KRD901146-1_B66A_B2A Antennas
- (3) APX16DWV-16DWV-S-E-A20 Antennas
- (3) RRUS11 B4
- (2) 1.99" Hybrid cables
- (1) RBS6102 Cabinet

Install New:

- (3) APXVLL19P_43-C-A20 Antennas
- (3) AIR6419 B41 Antennas
- (3) Radio 4460 B25+B60 RRUs
- (2) 1.99" Hybrid Cables
- (1) 6160 Cabinet
- (1) B160 Cabinet

750 W Center St, Suite 301
West Bridgewater, MA 02379
781-713-4725

Existing to Remain:

- (3) APXVAALL24_43-U-NA20 Antennas
- (3) Radio 4480 B71+B85 RRUs

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, or 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 First Selectman Douglas Thompson, chief elected official, Larry Farrell, Building Official for the Town of Burlington as well as the property owner and the tower owner.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications 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 Communications 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, T-Mobile respectfully submits that the proposed modifications to the above referenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Respectfully Submitted,



Cullen Morgan
Site Acquisition Consultant
Centerline Communications, LLC (Agent to T-Mobile)
Mobile: (941) 549-7263
cmorgan@clinellc.com

Attachments

cc: First Selectman Douglas Thompson, chief elected official – Town of Burlington
Larry Farrell, Building Official – Town of Burlington
American Tower Corporation – Tower Owner
InSite Towers Development LLC – Property Owner

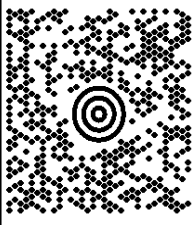
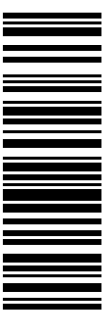
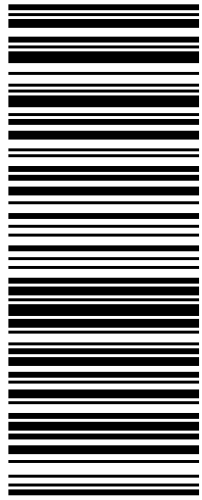
C/O CULLEN MORGAN 941-549-7263 CENTERLINE COMMUNICATIONS LLC 12579 SAGEWOOD DRIVE VENICE FL 34293		2 LBS	1 OF 1
SHIP TO: CONNECTICUT SITING COUNCIL 10 FRANKLIN SQUARE NEW BRITAIN CT 06051-2655			
	CT 067 9-06 		
UPS GROUND			
TRACKING #: 1Z 9Y4 503 03 1740 2897			
			
BILLING: P/P			
Reference # 1: CTHA560B			
CS 24.3.00. MACNV50 31.0A 07/202.4*			
 ™			

EXHIBIT A

Letter of Authorization



LETTER OF AUTHORIZATION FOR PERMITTING

ATC SITE#/NAME/PROJECT: 209185 / Burlington / OAA792268
SITE ADDRESS: 87 Monce Road, Burlington, CT 6013
APN: BURL M:11-06 L:33-CEL
SITE ACQUISITION VENDOR: Centerline
LICENSEE: T-Mobile

I, Margaret Robinson, Vice President, UST Legal for American Tower*, owner/operator of the tower facility located at the address identified above (the "Tower Facility"), do hereby authorize **T-Mobile**, their successors and assigns, and/or their agent, (collectively, the "Licensee") to act as American Tower's non-exclusive agent for the sole purpose of filing and consummating any land-use, building, or electrical permit application(s) as may be required by the applicable permitting authorities for the telecommunications installation/modification on the Tower Facility.

I understand that these applications may approved with conditions. The above authorization is limited to the acceptance by Licensee only of conditions related to Licensee's installation and any such conditions of approval or modifications will be Licensee's sole responsibility.

Signature:

Print Name: Margaret Robinson
Vice President, UST Legal
American Tower*

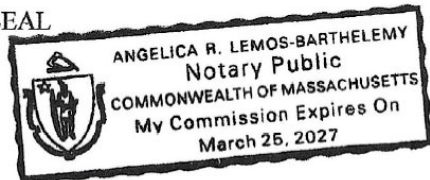
NOTARY BLOCK

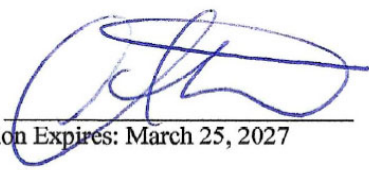
Commonwealth of MASSACHUSETTS
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Vice President, UST Legal for American Tower*, personally known to me (or proved to me based on satisfactory evidence of identification) to be the person whose name is signed on the preceding or attached document and acknowledged to me that they signed it voluntarily for its stated purpose.

WITNESS my hand and official seal, this 1st day of July 2024.

NOTARY SEAL



Notary Public 
My Commission Expires: March 25, 2027

* American Tower is defined as American Tower Corporation and any of its affiliates or subsidiaries.

EXHIBIT B

Original Facility Approval



Town of Burlington

ZONING BOARD OF APPEALS

TOWN OF BURLINGTON
Burlington, CT 06013

Certificate of Variance
Special Permit/Special Exception
(Granted by the Town of Burlington)
Zoning Board of Appeals
To Public Act 75-317

At a meeting held on July 15, 2014 the Zoning Board of Appeals of the Town of Burlington voted to approve the following variance:

- Application No: 2014- 523
- Owner of Record: Burlington Volunteer Fire Department
- Applicant: Burlington Volunteer Fire Department

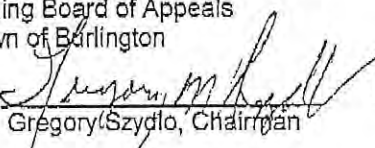
Description and Location of Premises:

To request a variance from Section IV.R44. Section 5 of the Zoning Regulations to allow a rear yard variance of 21 feet from 60 feet to 39 feet and side yard variance of 14 feet from 25 feet to 11 feet for proposed new firehouse building on property located at 87 Monce Road submitted by Burlington Volunteer Fire Department.

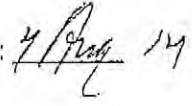
The provisions of the variance, including the specific section of the Zoning Regulation of the Town of Burlington, are as follows:

Variance from Section IV.R44. Section 5 of the Zoning Regulations to allow a rear yard variance of 21 feet from 60 feet to 39 feet and side yard variance of 14 feet from 25 feet to 11 feet for proposed new firehouse building on property located at 87 Monce Road submitted by Burlington Volunteer Fire Department.
Hardship being the lot size and the need for public safety resource in the area.

Zoning Board of Appeals
Town of Burlington

By: 

Gregory Szydio, Chairman

Date: 



Town of Burlington

August 15, 2014

Hartford Courant
Classified Department – Legal
Via email: Publicnotices@courant.com

To Whom It May Concern:

Please publish the following legal notice **ONCE** upon receipt in Zone 5 section of your newspaper. Thank you.

**NOTICE OF DECISION
TOWN OF BURLINGTON
PLANNING & ZONING COMMISSION**

The Planning and Zoning Commission at its August 14, 2014 regular meeting took the following action:

Approved: Application 2062-Tharau-Special Use Permit-Dog Grooming-281 Spielman Highway.
IN FAVOR: Miller, Lostocco, Franciamore, Dahle, DiPaola, DiChiara, Parente. OPPOSED, none.
ABSTAINED, none.

Approved: Application 2063-Burlington Volunteer Fire Department-Site plan approval & Special Use Permit for new firehouse building to replace existing building and telecommunications tower-87 Monce Road.
IN FAVOR: Miller, Lostocco, Franciamore, Dahle, DiPaola, DiChiara, Parente. OPPOSED, none.
ABSTAINED, none.

Approved: Application 2061-Lamothe-Special Use Permit-Indoor shooting range-713 George Washington Tpke.
IN FAVOR: Miller, Lostocco, Franciamore, Dahle, DiPaola, DiChiara, Parente. OPPOSED, none.
ABSTAINED, none.

Richard Miller, Chairman
Planning & Zoning Commission
Dated this 14th Day of August 2014

Please forward an affidavit of publication with tearsheet to the Planning and Zoning Commission, ATTN:Allison Yudelson, 200 Spielman Highway, Burlington, CT, 06013.

Cc: Town Clerk
File 2062
File 2063
File 2061

EXHIBIT C

Property Card



Town of Burlington, CT

Property Listing Report

Map Block Lot

11-06-33-CEL

Building # 1

Section # 1

Account

00039410

Property Information

Property Location	87 MONCE RD
Owner	INSITE TOWERS DEVT LLC
Co-Owner	LEGAL DEPT
Mailing Address	CO RYAN PTS DEPT 607 HOUSTON TX 77056
Land Use	402V Ind Bldg Mdl-00
Land Class	I
Zoning Code	R44
Census Tract	

Street Index	
Acreage	0.23
Utilities	
Lot Setting/Desc	Rural Level
Additional Info	

Photo



Sketch



Primary Construction Details

Year Built	0
Stories	
Building Style	
Building Use	Vacant
Building Condition	
Occupancy	
Extra Fixtures	
Bath Style	
Kitchen Style	
AC Type	
Heating Type	
Heating Fuel	

Bedrooms	
Full Bathrooms	
Half Bathrooms	
Total Rooms	
Roof Style	
Roof Cover	
Interior Floors 1	
Interior Floors 2	
Exterior Walls	
Exterior Walls 2	
Interior Walls	
Interior Walls 2	

(*Industrial / Commercial Details)

Building Desc.	Ind Bldg Mdl-00
Building Grade	
Heat / AC	
Frame Type	
Baths / Plumbing	
Ceiling / Wall	
Rooms / Prtns	
Wall Height	0
First Floor Use	NA

Town of Burlington, CT

Property Listing Report

Map Block Lot

11-06-33-CEL

Building # **1**Section # **1**

Account

00039410

Valuation Summary (Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Improvements		
Outbuildings	6100	4270
Land	306000	214200
Total	312100	218470

Sub Areas

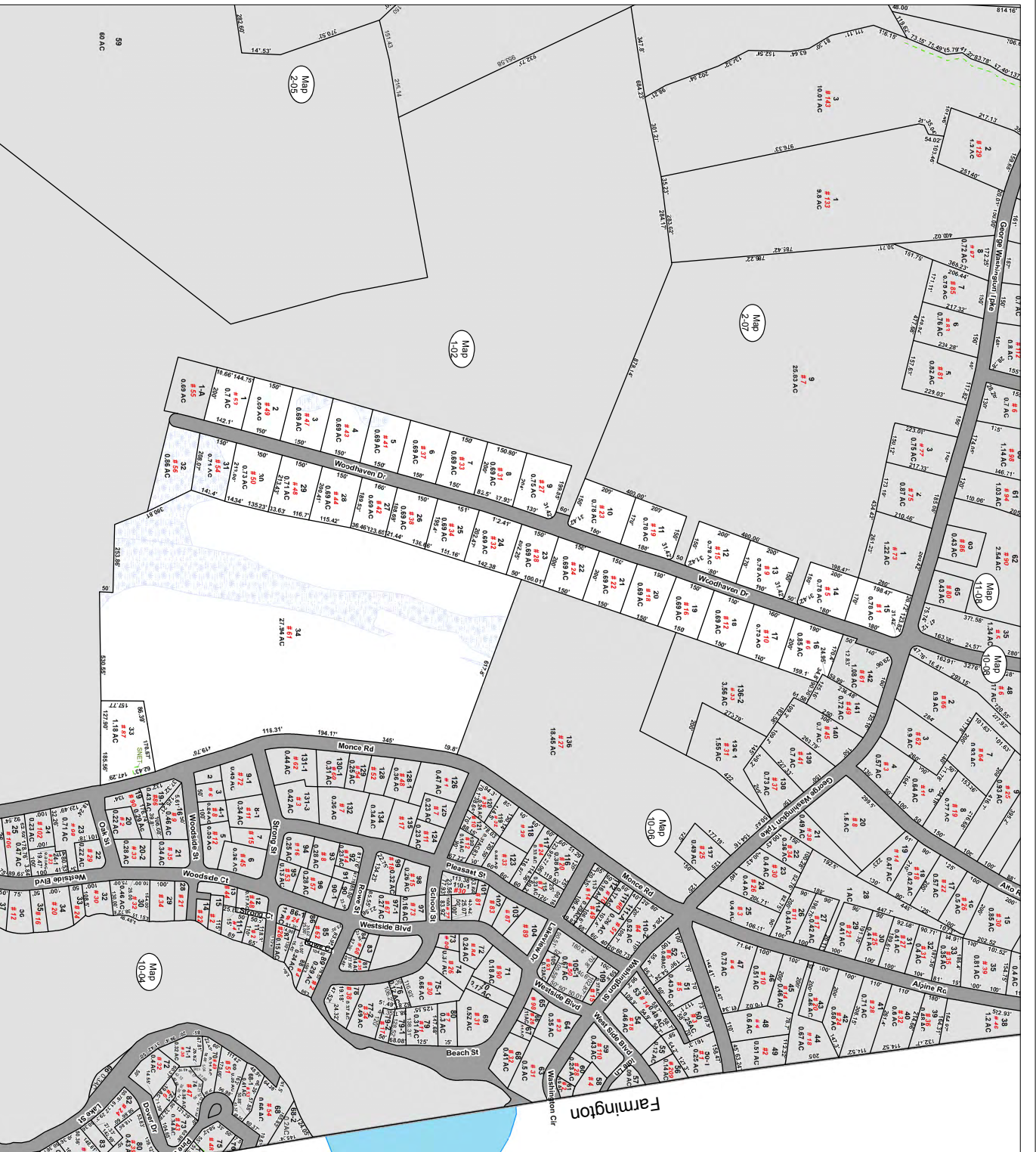
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Outbuilding and Extra Features

[illegible]

Sales History

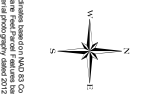
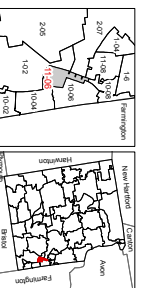
Owner of Record	Book/ Page	Sale Date	Sale Price
INSITE TOWERS DEVT LLC	0335/0780	2015-04-06	0



**Town of Burlington,
Connecticut**
2023
Assessment Parcel Map

- 13 Parcel Lot
- #17 House Number
- 2.4 Ac Acreage
- 264.3 Parcel Dimension
- Parcels
- Water features courtesy of CT DEP

1 inch = 185 feet
Map: 11-06
Print Date: June 2023
Carted: June 2023



This map is for informational purposes only. It is not a legal document. The Town of Burlington and its mapping department are not responsible for any errors or omissions. The map is based on data provided by the town's GIS department.

EXHIBIT D

Construction Drawings

PROJECT INFORMATION

SITE NAME:	CTHA560B
SITE NUMBER:	CTHA560B
SITE ADDRESS:	87 MONCE ROAD BURLINGTON, CT 06013
COUNTY	HARTFORD
MUNICIPALITY:	HARTFORD COUNTY
LATITUDE:	N 41° 44' 20.86" (41.739127°) (NAD83)
LONGITUDE:	W 72° 54' 28.12" (-72.907811°) (NAD83)
TYPE OF SITE:	MONOPOLE
STRUCTURE HEIGHT:	120'-0" AGL
ANTENNA CENTER:	100'-0" AGL
GROUND ELEVATION:	288'-0" (NAVD 88)
TOWER OWNER NAME:	AMERICAN TOWER
TOWER OWNER ADDRESS:	10 PRESIDENTIAL WAY WOBURN, MA 01801
APPLICANT:	T-MOBILE NORTHEAST, LLC. 35 GRIFFIN RD S BLOOMFIELD, CONNECTICUT 06002
APPLICANT PHONE:	(860) 692-7100

PROJECT DIRECTORY

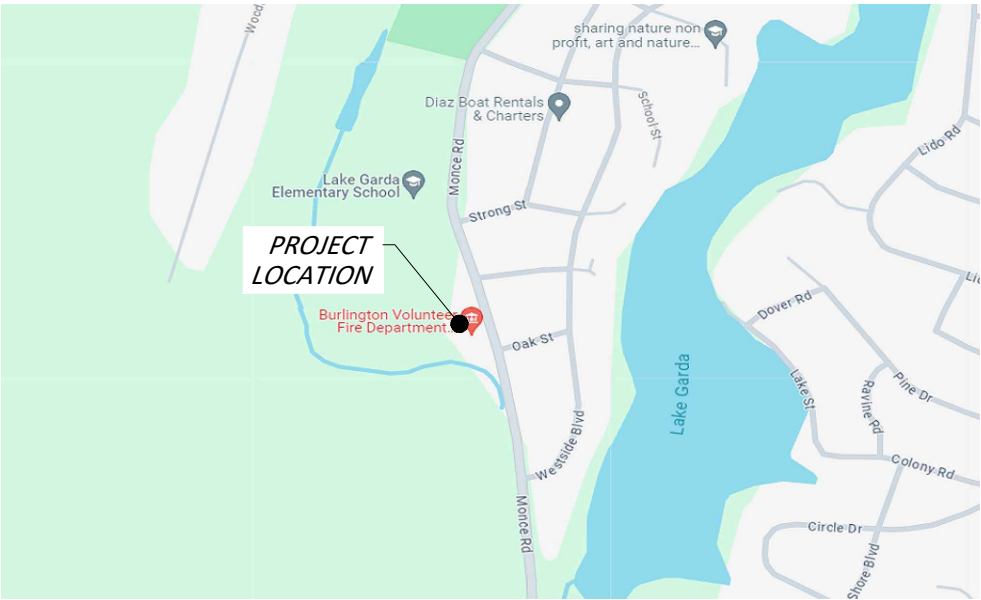
ENGINEERING FIRM:
CENTERLINE ENGINEERING SERVICES, PA
750 WEST CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
DEREK CREASER (617) 306-3034
CARRIER:
T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 692-1700



Know what's below.
Call before you dig.



T - Mobile
NORTHEAST LLC



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

SITE NAME: CTHA560B
SITE ID: CTHA560B
ADDRESS: 87 MONCE ROAD
BURLINGTON, CT 06013

TECHNOLOGY: 67E5D998E 6160
MODIFICATION: ANCHOR_PHASE 3

GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSE OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SCOPE OF WORK

1. REMOVE SIX EXISTING ANTENNAS
2. INSTALL SIX NEW ANTENNAS
3. REMOVE THREE RRUS
4. INSTALL THREE NEW RRUS
5. REMOVE TWO EXISTING 6x12 HYBRID CABLES
6. INSTALL TWO NEW 6x24 HYBRID CABLES
7. INSTALL ONE NEW ERICSSON 6160 V2 AC EQUIPMENT ENCLOSURE
8. INSTALL ONE NEW ERICSSON B160 BATTERY CABINET
9. REMOVE RBS 6102 EQUIPMENT CABINET
10. REMOVE ALL UNUSED CABLES AND EQUIPMENT

DRAWING INDEX

NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES, RF NOTES, CABLING NOTES
A-1	COMPOUND PLAN
A-2	EQUIPMENT LAYOUT
A-3	EQUIPMENT DETAILS
A-4	WEST ELEVATION
A-5	ANTENNA LAYOUT & SCHEDULE
SN-1	STRUCTURAL NOTES & SPECIAL INSPECTIONS
S-1	ANTENNA & RRU MOUNTING DETAILS
G-1	GROUNDING & ONE LINE DIAGRAM

DRAWING SCALE NOTES:

THESE DRAWINGS ARE FORMATTED TO BE FULL SIZE AT 22"x34". CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

T - Mobile
NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700

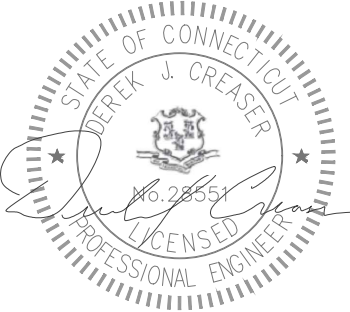


750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS

REV	DATE	DESCRIPTION	BY
1	06/20/24	REVISED PER COMMENT	RC
0	04/04/24	ISSUED FOR CONSTRUCTION	RC
B	03/27/24	REVISED PER MAPPING	AB
A	01/30/24	ISSUE FOR REVIEW	

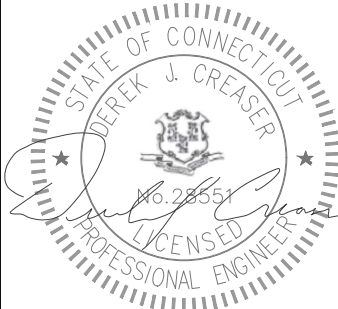
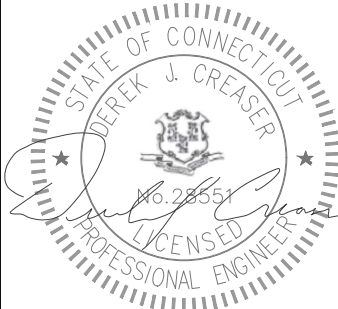
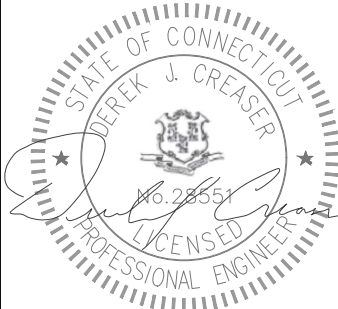
DESIGNED BY: TA	APPROVED BY: DC
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DATE: 06/20/2024

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. UNLESS EXPLICITLY AGREED TO BY THE ENGINEER IN WRITING, THE ENGINEER DISCLAIMS ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN.

SITE NAME:	CTHA560B
SITE ID:	CTHA560B
SITE ADDRESS:	87 MONCE ROAD BURLINGTON, CT 06013 HARTFORD COUNTY
SHEET TITLE:	TITLE SHEET
DRAWING:	T-1

RF NOTES	ANTENNA CABLE & SCHEDULING NOTES	GENERAL NOTES				T - Mobile NORTHEAST LLC T-MOBILE NORTHEAST, LLC. 35 GRIFFIN RD S BLOOMFIELD, CT 06002 PHONE: (860) 629-1700  750 W CENTER ST, SUITE 301 WEST BRIDGEWATER, MA 02379 PHONE: 781.713.4725 REVISIONS <table><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>06/20/24</td><td>REVISED PER COMMENT</td><td>RC</td></tr><tr><td>0</td><td>04/04/24</td><td>ISSUED FOR CONSTRUCTION</td><td>RC</td></tr><tr><td>B</td><td>03/27/24</td><td>REVISED PER MAPPING</td><td>AB</td></tr><tr><td>A</td><td>01/30/24</td><td>ISSUE FOR REVIEW</td><td></td></tr><tr><td>REV</td><td>DATE</td><td>DESCRIPTION</td><td>BY</td></tr><tr><td colspan="2">DESIGNED BY: TA</td><td colspan="2">APPROVED BY: DC</td></tr><tr><td colspan="4">  DATE: 06/20/2024 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. UNLESS EXPLICITLY AGREED TO BY THE ENGINEER IN WRITING, THE ENGINEER DISCLAIMS ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN. </td></tr><tr><td colspan="4">SITE NAME: CTHA560B</td></tr><tr><td colspan="4">SITE ID: CTHA560B</td></tr><tr><td colspan="4">SITE ADDRESS: 87 MONCE ROAD BURLINGTON, CT 06013 HARTFORD COUNTY</td></tr><tr><td colspan="4">SHEET TITLE: GENERAL NOTES, RF NOTES, CABLING NOTES</td></tr><tr><td colspan="4">DRAWING: GN-1</td></tr></table>																									1	06/20/24	REVISED PER COMMENT	RC	0	04/04/24	ISSUED FOR CONSTRUCTION	RC	B	03/27/24	REVISED PER MAPPING	AB	A	01/30/24	ISSUE FOR REVIEW		REV	DATE	DESCRIPTION	BY	DESIGNED BY: TA		APPROVED BY: DC		 DATE: 06/20/2024 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. UNLESS EXPLICITLY AGREED TO BY THE ENGINEER IN WRITING, THE ENGINEER DISCLAIMS ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN.				SITE NAME: CTHA560B				SITE ID: CTHA560B				SITE ADDRESS: 87 MONCE ROAD BURLINGTON, CT 06013 HARTFORD COUNTY				SHEET TITLE: GENERAL NOTES, RF NOTES, CABLING NOTES				DRAWING: GN-1			
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1. ACTUAL LENGTHS SHALL BE DETERMINED PER SITE CONDITION BY SUBCONTRACTOR 2. THE DESIGN IS BASED ON RF DATA SHEETS, SIGNED AND APPROVED. 3. RADIO SIGNAL CABLE AND RACEWAY SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC, NFPA 70), CHAPTER 8. 4. ALL SPECIFIED MATERIAL FOR EACH LOCATION (E.G. OUT DOORS-OCCUPIED, INDOORS-UNOCCUPIED, PLENUMS, RISER SHAFTS, ETC.) SHALL BE APPROVED, LISTED, OR LABELED AS REQUIRED BY THE NEC. 5. RADIO SIGNAL CABLE SHALL BE SUPPORTED AT MINIMUM OF EVERY THREE (3) FEET EXCEPT INSIDE MONOPOLES OR MONOPOLES WHERE CABLE AND CONNECTOR MANUFACTURERS SUPPORT RECOMMENDATIONS SHALL BE FOLLOWED. MANUFACTURER RECOMMENDATION CABLES SUPPORT ACCESSORIES SHALL BE USED. 6. THE OUTDOOR CABLE SUPPORT SYSTEM SHALL BE PROVIDED WITH AN ICE SHIELD TO SUPPORT AND PROTECT ANTENNA CABLE RUNS. 7. DRIP LOOPS SHALL BE REQUIRED ON ALL OUTSIDE CABLES. CABLES SHALL BE SLOPED AWAY FROM BUILDING OR OUTDOOR BTS CABINETS TO PREVENT WATER FROM ENTERING THROUGH THE COAXIAL CABLE PORT. 8. ALL FEEDER LINE AND JUMPER CONNECTORS SHALL BE 7/16 DIN CABLE CONNECTORS THAT MEET IP68 STANDARDS. 9. 7/16 DIN CONNECTORS REQUIRE NO ADDITIONAL WEATHER PROOFING IN INDOOR APPLICATIONS IF INSTALLED AND TORQUED PROPERLY. IN OUTDOOR APPLICATIONS WEATHER PROOFING IS REQUIRED AND THE FOLLOWING PROCEDURE SHOULD BE FOLLOWED. 10. USING WEATHERPROOFING KIT APPROVED BY CABLE MANUFACTURER AND CONTRACTOR START TAPE APPROXIMATELY 5 INCHES FROM THE CONNECTOR, AND WRAP 2 INCHES TOWARD THE CONNECTOR, THEN REVERSE THE TAPE SO THAT THE STICKY SIDE IS UP. TAPE OVER THE CONNECTOR OR SURGE ARRESTOR UNTIL THREE (3) TO FOUR (4) INCHES BEYOND THE CONNECTOR AND REVERSE AGAIN WITH THE STICKY SIDE DOWN FOR ANOTHER INCH OR TWO. PASS THE BUTYL RUBBER AND FINISH WITH A FINAL LAYER OF TAPE. 11. ANTENNAS SHALL BE PAINTED,WHEN REQUIRED, BY THE LANDLORD OR AUTHORITY OF HAVING JURISDICTION IN ACCORDANCE WITH ANTENNA MANUFACTURERS' SURFACES PREPARATION AND PAINTING REQUIREMENTS. 12. CABLE SHIELDS AND TOWER CONDUITS SHALL BE GROUNDED AT THE TOP OF THE TOWER WITHIN 10 FEET OF THEIR CONNECTORS, AND AT THE BOTTOM OF THE TOWER ABOUT 6 INCHES BEFORE THEY TURN TOWARD THE FACILITY. THEY SHALL BE GROUNDED AT THE MIDPOINT OF THE TOWERS THAT ARE BETWEEN 60 FEET AND 200 FEET HIGH, AND AT INTERVALS OF 60 FEET OR LESS ON TOWERS THAT ARE HIGHER THAN 200 FEET.	1. SUBCONTRACTOR SHALL VERIFY THE ACTUAL LENGTH IN THE FIELD BEFORE INSTALLATION. 2. TAG AND COLOR CODE ALL MAIN CABLES AT LOCATIONS PER T-MOBILE ANTENNA CABLE MARKING STANDARD: TOP OF TOWER END OF MAIN COAX BOTTOM OF TOWER END OF MAIN COAX DIRECTLY BEFORE AND AFTER RF EQUIPMENT END OF JUMPERS AT BTS EQUIPMENT 3. ANTENNAS SHALL BE PROCURED AND INSTALLED WITH DOWN TILT MOUNTING BRACKETS SUPPLIED BY ANTENNA MANUFACTURER. 4. PRIOR APPROVAL IS REQUIRED BEFORE PERFORMING ANY WORK ON EXISTING CELL SITE EQUIPMENT.	1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY: CONTRACTOR - CENTERLINE COMMUNICATIONS SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION) OWNER - T-MOBILE MOBILITY 2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR 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 CONTRACTOR. 3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR 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. 4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY. 5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. 6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR. 7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE. 8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR. 9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR. 10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER. 11. SUBCONTRACTOR 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. 12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. 13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301. 14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.	15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT. 16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T-MOBILE MOBILITY SITES." 17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION. 18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT. 19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS. 20. APPLICABLE BUILDING CODES: SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN. BUILDING CODE: IBC 2015 & CONNECTICUT STATE BUILDING CODE 2018 ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE LIGHTNING CODE: NFPA 780-2017 SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS: AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE; AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FIFTEENTH EDITION; TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS. FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.																																																																											
ABBREVIATIONS																																																																														
AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY																																																																									
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS																																																																											
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED																																																																									
BTS	BASE TRANSCEIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED																																																																									
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED																																																																									
EG	EQUIPMENT GROUND	REF	REFERENCE																																																																											
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED	TYP	TYPICAL																																																																									

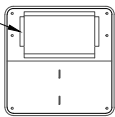
NOTES

1.
- CONTRACTOR SHALL MAKE A UTILITY 811 DIG SAFE CALL TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.

2.
- REFERENCE MOUNT ANALYSIS BY PM&A, DATED 03/29/2024, FOR FURTHER INFORMATION REGARDING THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THIS EQUIPMENT UPGRADE.

3.
- REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA MODELS AND SETTINGS.

EXISTING TELCO CABINET



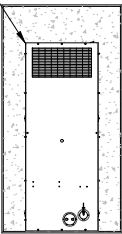
EXISTING DOUBLE
ACCESS GATE

EXISTING
ELECTRICAL BACKBOARD



EXISTING
ICE BRIDGE
(TYP)

EXISTING
GENERATOR



SECTOR 3
T-MOBILE ANTENNA AZ: 240°

EXISTING 120'-0"
HIGH MONOPOLE

PROPOSED T-MOBILE ANTENNA SECTORS
(SEE SHEET A-5 FOR DETAILS)

EXISTING T-MOBILE
ICE BRIDGE

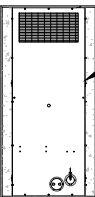
EXISTING DOUBLE
ACCESS GATE

EXISTING
GENERATOR



EXISTING 9'-0"x11'-0"
CONCRETE EQUIPMENT PAD

EXISTING
GENERATOR



EXISTING
12'x12'
SHELTER



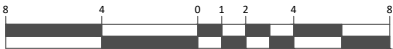
EXISTING 10'-0"x20'-0"
T-MOBILE CONCRETE EQUIPMENT PAD

X X X

T-MOBILE SECTOR 2
ANTENNA AZ: 120°

1
A-1
COMPOUND PLAN

GRAPHIC SCALE



1/4 INCH = 1 FOOT (22X34)
1/8 INCH = 1 FOOT (11X17)



T - Mobile
NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700



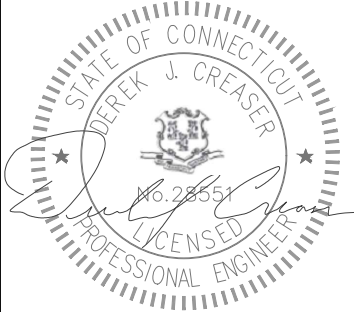
750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS

REV	DATE	DESCRIPTION	BY
1	06/20/24	REVISED PER COMMENT	RC
0	04/04/24	ISSUED FOR CONSTRUCTION	RC
B	03/27/24	REVISED PER MAPPING	AB
A	01/30/24	ISSUE FOR REVIEW	

DESIGNED BY:
TA

APPROVED BY:
DC



DATE: 06/20/2024

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SITE NAME:

CTHA560B

SITE ID:

CTHA560B

SITE ADDRESS:

87 MONCE ROAD
BURLINGTON, CT 06013
HARTFORD COUNTY

SHEET TITLE:

COMPOUND PLAN

DRAWING:

A-1

RAN EQUIPMENT		
CABINET	EXISTING	PROPOSED
ERICSSON 6160	N/A	(3) RP 6651 (1) CSR IXRe V2
TBD	N/A	RBS6601
NOTE: RAN EQUIPMENT IS BASED ON RFDS REV4 DATED 01/23/24		

T - Mobile

NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.

35 GRIFFIN RD S

BLOOMFIELD, CT 06002

PHONE: (860) 629-1700

CENTERLINE

ENGINEERING SERVICES, PA

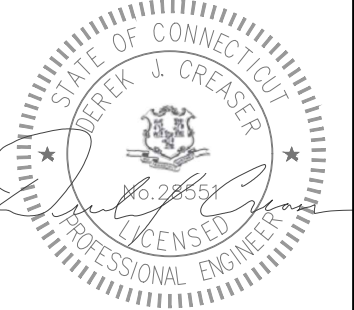
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PHONE: 781.713.4725

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REV	DATE	DESCRIPTION	BY

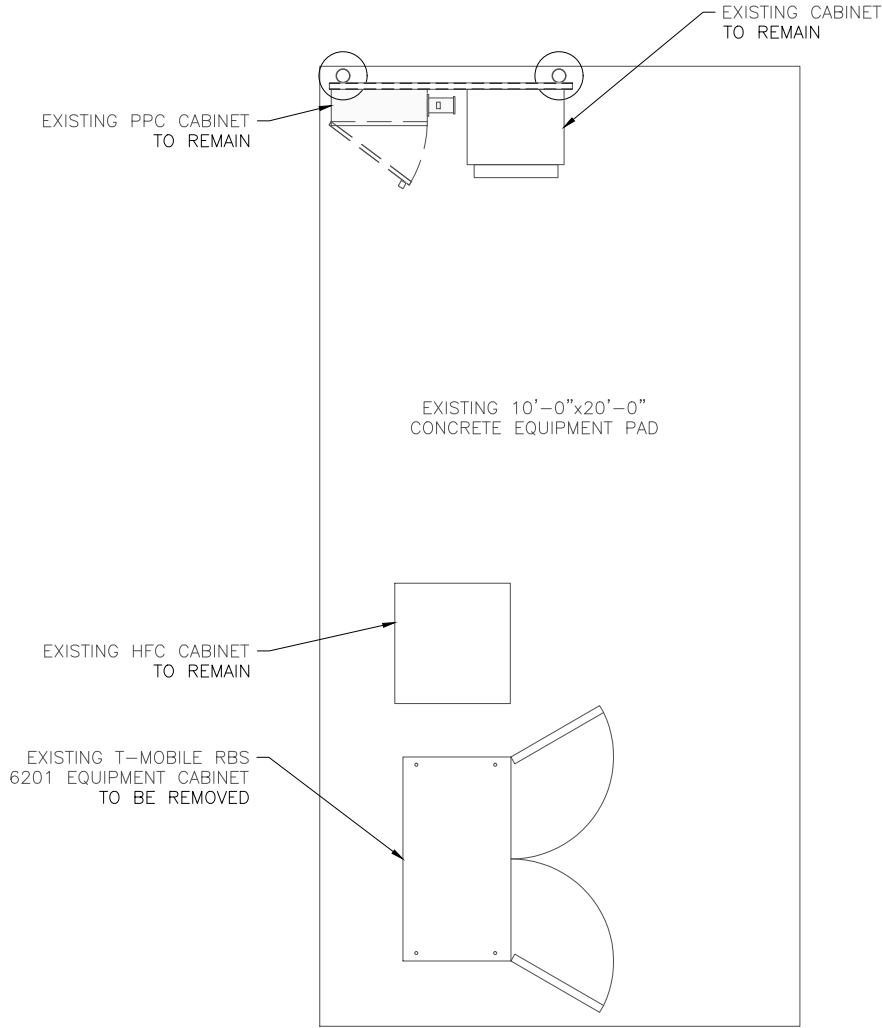
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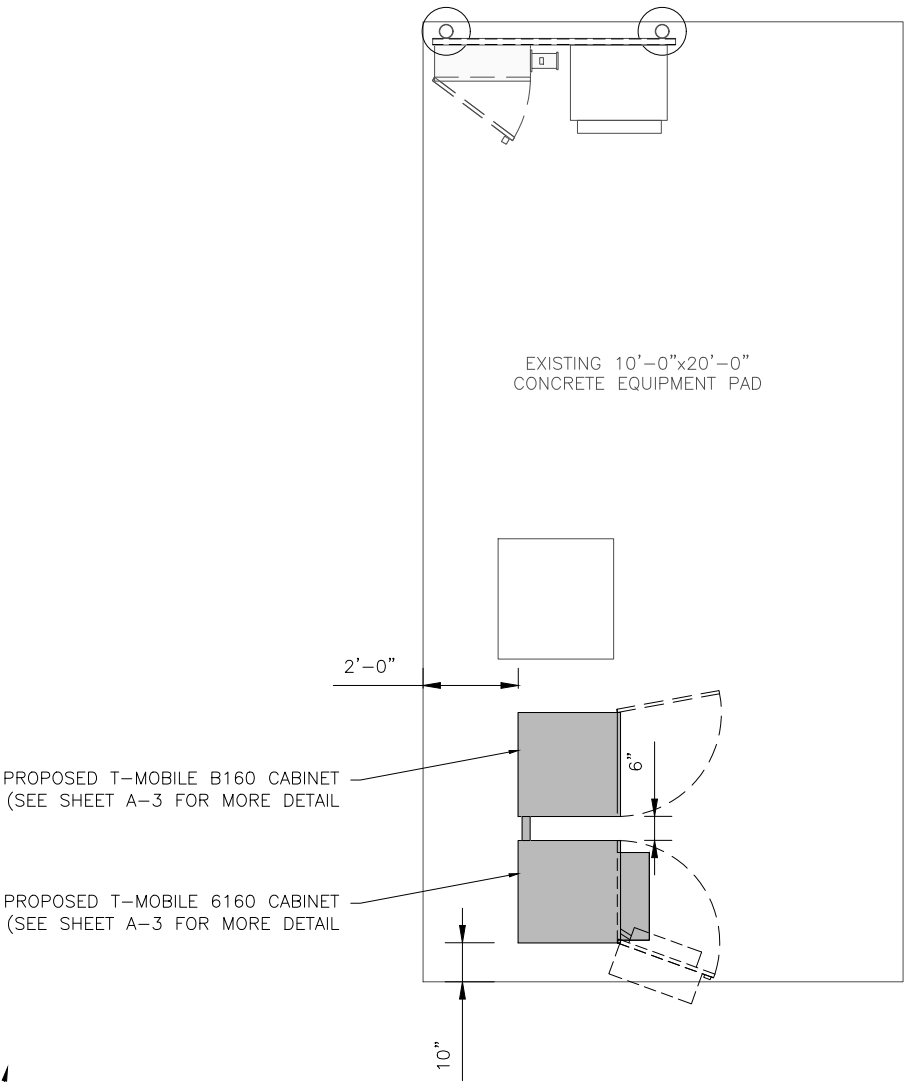
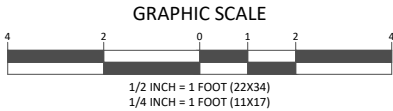
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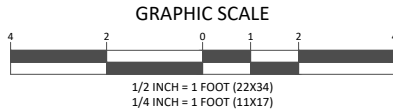
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SITE ID:	CTHA560B
SITE ADDRESS:	87 MONCE ROAD BURLINGTON, CT 06013 HARTFORD COUNTY
SHEET TITLE:	EQUIPMENT LAYOUT
DRAWING:	A-2



1
A-2
EXISTING EQUIPMENT PLAN



2
A-2
PROPOSED EQUIPMENT PLAN



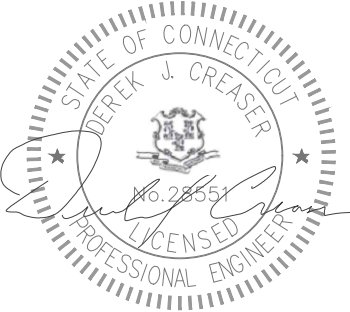


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WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

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DATE: 06/20/2024

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CTHA560B

SITE ID:
CTHA560B

SITE ADDRESS:
87 MONCE ROAD
BURLINGTON, CT 06013
HARTFORD COUNTY

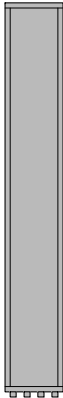
SHEET TITLE:
EQUIPMENT DETAILS

DRAWING:
A-3

RFS APXVLL19_43-C-A20	
MODEL #	APXVLL19_43-C-A20
MANUF.	RFS
HEIGHT	75.8"
WIDTH	11.3"
DEPTH	4.6"
WEIGHT	40.9 LBS W/O MTG HARDWARE 44.1 LBS W/ MTG HARDWARE
FRONT EPA:	6.01 FT ²
SIDE EPA:	2.67 FT ²



PLAN



FRONT



SIDE

ERICSSON AIR 6419 B41	
MODEL #	AIR 6419 B41
MANUF.	ERICSSON
HEIGHT	34.5"
WIDTH	20.0"
DEPTH	8.0"
WEIGHT	68.5 LBS W/O MTG HARDWARE
FRONT EPA:	4.8 FT ²
SIDE EPA:	1.92 FT ²



PLAN



FRONT



SIDE



PLAN



FRONT



SIDE

RADIO DIMENSIONS	
MODEL #	RADIO 4460 B25_B66
MANUF.	ERICSSON
HEIGHT	15.1"
WIDTH	17.0"
DEPTH	11.9"
WEIGHT	108 LBS
FRONT EPA:	
SIDE EPA:	

RADIO DETAILS

2

A-3



6160 AC ENCLOSURE

CAPACITY	19U(19" RACK)
RACK SPACE USER EQUIP.	POWER AND CPRI SUPPORT FOR
HARDWARE CAPABILITIES	MULTI-STANDARD REMOTE RADIOS (RRU OR AIR)
	ERS BASEBAND AND TRANSPORT UNITS
	Li-ION BATTERIES
	3PP EQUIPMENT
	ADDITIONAL POWER FEED OPTIONS AVAILABLE
MECHANICAL SPECIFICATIONS	
WEIGHT	320lbs (INCLUDING ACTIVE EQUIPMENT)
DIMENSIONS (HWD)	63"x26"x26" (INCLUDING BASE FRAME)
BASE FRAME HEIGHT	6"
MOUNTING POSITION	GROUND
ENCLOSURE MATERIAL	ALUMINUM
COLOR	POWDER PAINT NCS 2002-B
DOOR	FRONT ACCESS
RACK TYPE	19" (IEC 60297-3-100)
LOCK TYPE	CYLINDER/PAD LOCK
POWER SYSTEM	
INPUT VOLTAGE	3P+N+PE 346/200-415/240 VAC 2P+N+PE 208/120-220/127 VAC 1P+N+PE 200-250 VAC



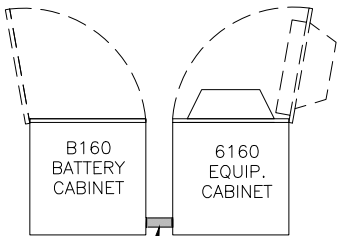
B160 BATTERY ENCLOSURE

CAPACITY	100Ah/150Ah/170Ah/190Ah/210Ah
VRLA12V:	24U 19"/23"
Li-ION	3xFIAMM
SODIUM-NICKEL	
ELECTRICAL SPECIFICATIONS	
DC OUTPUT	-48VDC/200A
BATTERY BREAKERS	2x125/2p
ALARMS	DOOR OPEN, CLIMATE FAILURE, MCB CONNECTION
MECHANICAL SPECIFICATIONS	
WEIGHT	295 lbs (PLUS 3 STRINGS OF RECOMMENDED 190 aHR FOR ADDITIONAL 1588LBS)
DIMENSIONS (HWD)	63"x26"x26" (INCLUDING BASE FRAME)
BASE FRAME HEIGHT	6"
MATERIAL	GALVANIZED STEEL (180g/m ²)
COLOR	POWDER PAINT NCS 2002-B
LOCKING TYPE	CYLINDER/PAD LOCK

PROPOSED EQUIPMENT CABINET SPECIFICATIONS

4

A-3



(1) PROPOSED 2"ØX 8" GALV. NIPPLE, (4) 2"Ø LOCK RINGS. & (2) 2"Ø PLASTIC BUSHING (NOT SHOWN)

PROPOSED EQUIPMENT CONDUIT DETAIL

3

A-3

T - Mobile
NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700

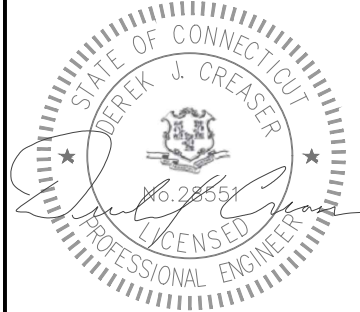


750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

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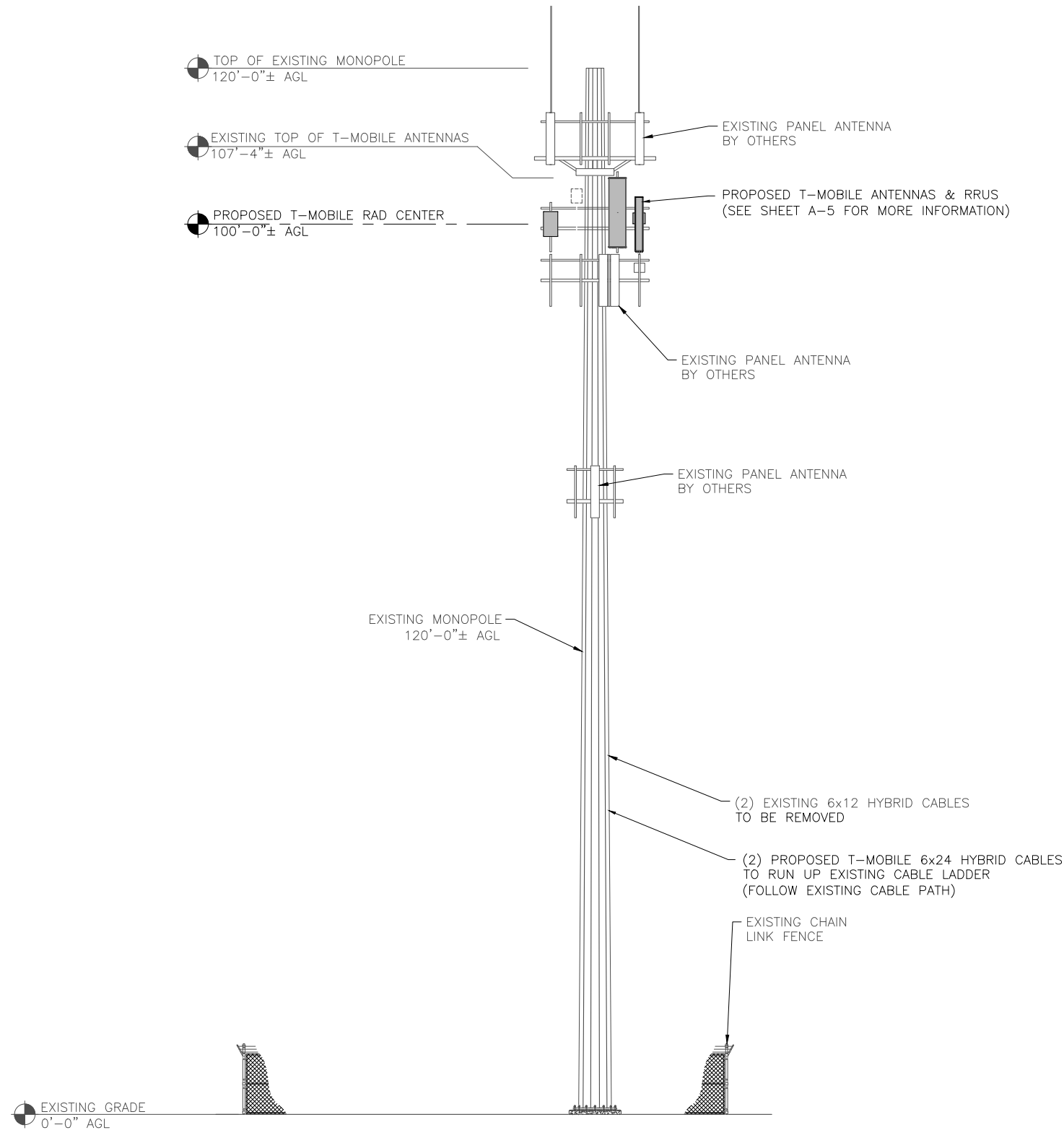
DESIGNED BY: TA	APPROVED BY: DC
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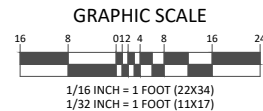
DATE: 06/20/2024

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SITE NAME:	CTHA560B
SITE ID:	CTHA560B
SITE ADDRESS:	87 MONCE ROAD BURLINGTON, CT 06013 HARTFORD COUNTY
SHEET TITLE:	WEST ELEVATION
DRAWING:	A-4



1 WEST ELEVATION
A-4



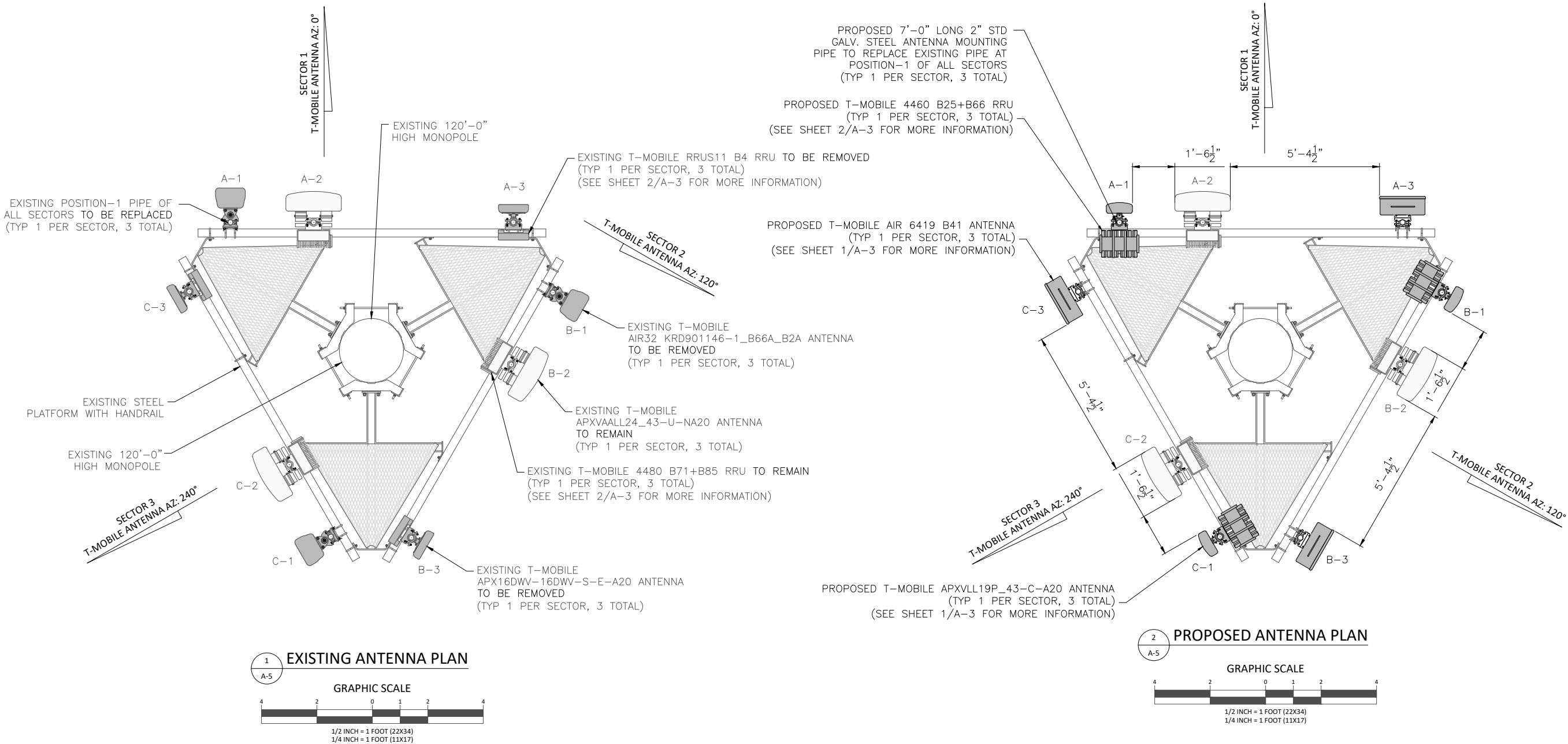


ANTENNA & CABLE NOTES:

- REFERENCE MOUNT ANALYSIS BY PM&A, DATED 03/29/2024, FOR FURTHER INFORMATION REGARDING THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THIS EQUIPMENT UPGRADE.
- REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.
- REMOVE ALL UNUSED CABLE, RRUs and TMAs.
- PAINT ANTENNAS AND EQUIP. TO MATCH EXISTING.

ANTENNA & CABLE SCHEDULE:

LOCATION	AZIMUTH	RAD CENTER	STATUS	TECHNOLOGY	ANTENNA MODEL NO.	MECH DOWNTILT	ELEC DOWNTILT	CABLES	DIPLEXERS	TMA/RRU	CABLE SIZE	CABLE LENGTH
ALPHA	A-1	0°	PROPOSED	L2100, L1900, G1900 & U2100	APXVLL19P_43-C-A20	0°	4°/4°	COAX JUMPERS (X4) FIBER JUMPERS (X2)	N/A	4460 B25+B66 RRU	6x24 HYBRID	165'
	A-2	0°	EXISTING	L700, L600 & N600	APXVAALL24_43-U-NA20	0°	2°/2°	COAX JUMPERS (X4) FIBER JUMPERS (X2)	N/A	4480 B71+B85 RRU	SHARED	N/A
	A-3	0°	PROPOSED	L2500, N2500	AIR6419 B41	0°	2°/2°	FIBER JUMPERS (X4)	N/A	N/A	SHARED	N/A
BETA	B-1	120°	PROPOSED	L2100, L1900, G1900 & U2100	APXVLL19P_43-C-A20	0°	4°/4°	FIBER JUMPERS (X2)	N/A	4460 B25+B66 RRU	6x24 HYBRID	165'
	B-2	120°	EXISTING	L700, L600 & N600	APXVAALL24_43-U-NA20	0°	2°/2°	COAX JUMPERS (X4) FIBER JUMPERS (X2)	N/A	4480 B71+B85 RRU	SHARED	N/A
	B-3	120°	PROPOSED	L2500, N2500	AIR6419 B41	0°	2°/2°	FIBER JUMPERS (X4)	N/A	N/A	SHARED	N/A
GAMMA	C-1	240°	PROPOSED	L2100, L1900, G1900 & U2100	APXVLL19P_43-C-A20	0°	4°/4°	FIBER JUMPERS (X2)	N/A	4460 B25+B66 RRU	SHARED	N/A
	C-2	240°	EXISTING	L700, L600 & N600	APXVAALL24_43-U-NA20	0°	2°/2°	COAX JUMPERS (X4) FIBER JUMPERS (X2)	N/A	4480 B71+B85 RRU	SHARED	N/A
	C-3	240°	PROPOSED	L2500, N2500	AIR6419 B41	0°	2°/2°	FIBER JUMPERS (X4)	N/A	N/A	SHARED	N/A
NOTE: DARK TEXT IN TABLE ABOVE DENOTES PROPOSED EQUIPMENT										(2) TOTAL 6x24 HYBRID CABLES	330'	



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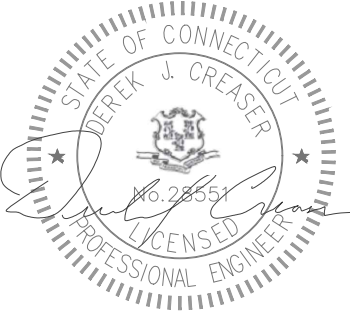


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REVISIONS

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DESIGNED BY: TA	APPROVED BY: DC
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SITE NAME: CTHA560B
SITE ID: CTHA560B
SITE ADDRESS: 87 MONCE ROAD BURLINGTON, CT 06013 HARTFORD COUNTY
SHEET TITLE: ANTENNA PLAN & SCHEDULE
DRAWING: A-5

STRUCTURAL NOTES:

1. DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D.I.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
11. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
12. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
13. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
14. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
15. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
16. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
17. ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
18. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
19. SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
N/A	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS ³
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

NOTES:

1. ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"Ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
2. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
3. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
4. VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
5. CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
6. EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

T - Mobile
NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.
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PHONE: (860) 629-1700

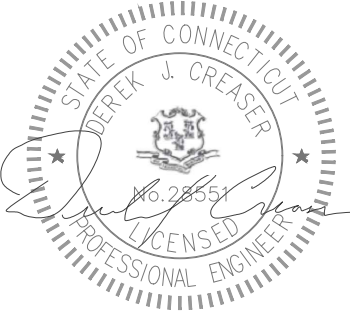


750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS

1	06/20/24	REVISED PER COMMENT	RC
0	04/04/24	ISSUED FOR CONSTRUCTION	RC
B	03/27/24	REVISED PER MAPPING	AB
A	01/30/24	ISSUE FOR REVIEW	
REV	DATE	DESCRIPTION	BY

DESIGNED BY: TA	APPROVED BY: DC
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SITE NAME:	CTHA560B
SITE ID:	CTHA560B
SITE ADDRESS:	87 MONCE ROAD BURLINGTON, CT 06013 HARTFORD COUNTY
SHEET TITLE:	STRUCTURAL NOTES & SPECIAL INSPECTIONS
DRAWING:	SN-1

- NOTES FOR ANTENNA MOUNTS:
- APXVLL19P_43-C-A-20 ANTENNA : RFS APM40-5E PIPE MOUNT KIT
 - AIR 6419 B41: ERICSSON R2A PIPE MOUNT KIT

T - Mobile
NORTHEAST LLC

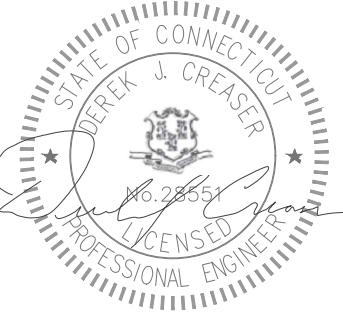
T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700

CENTERLINE
ENGINEERING SERVICES, PA

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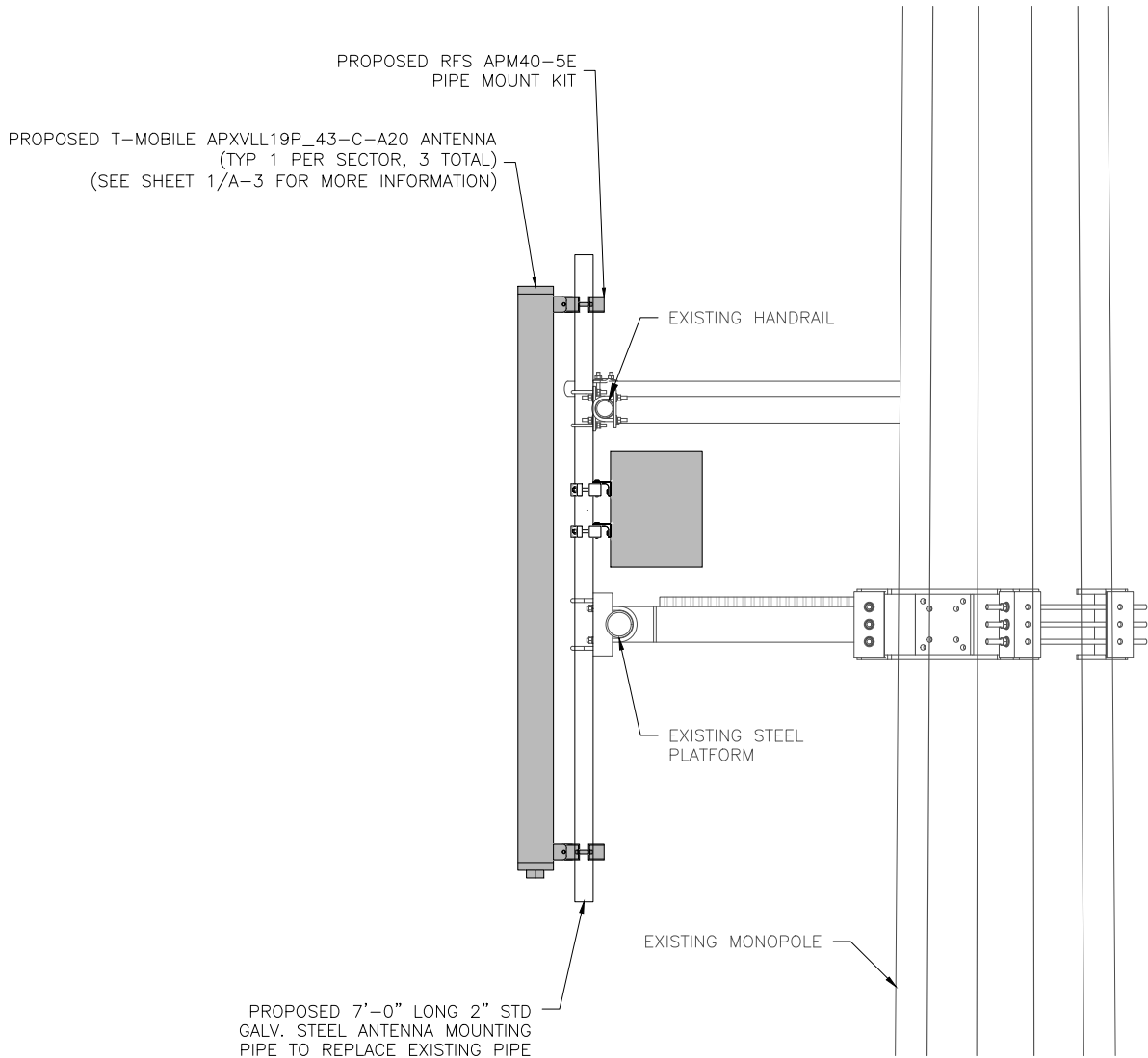


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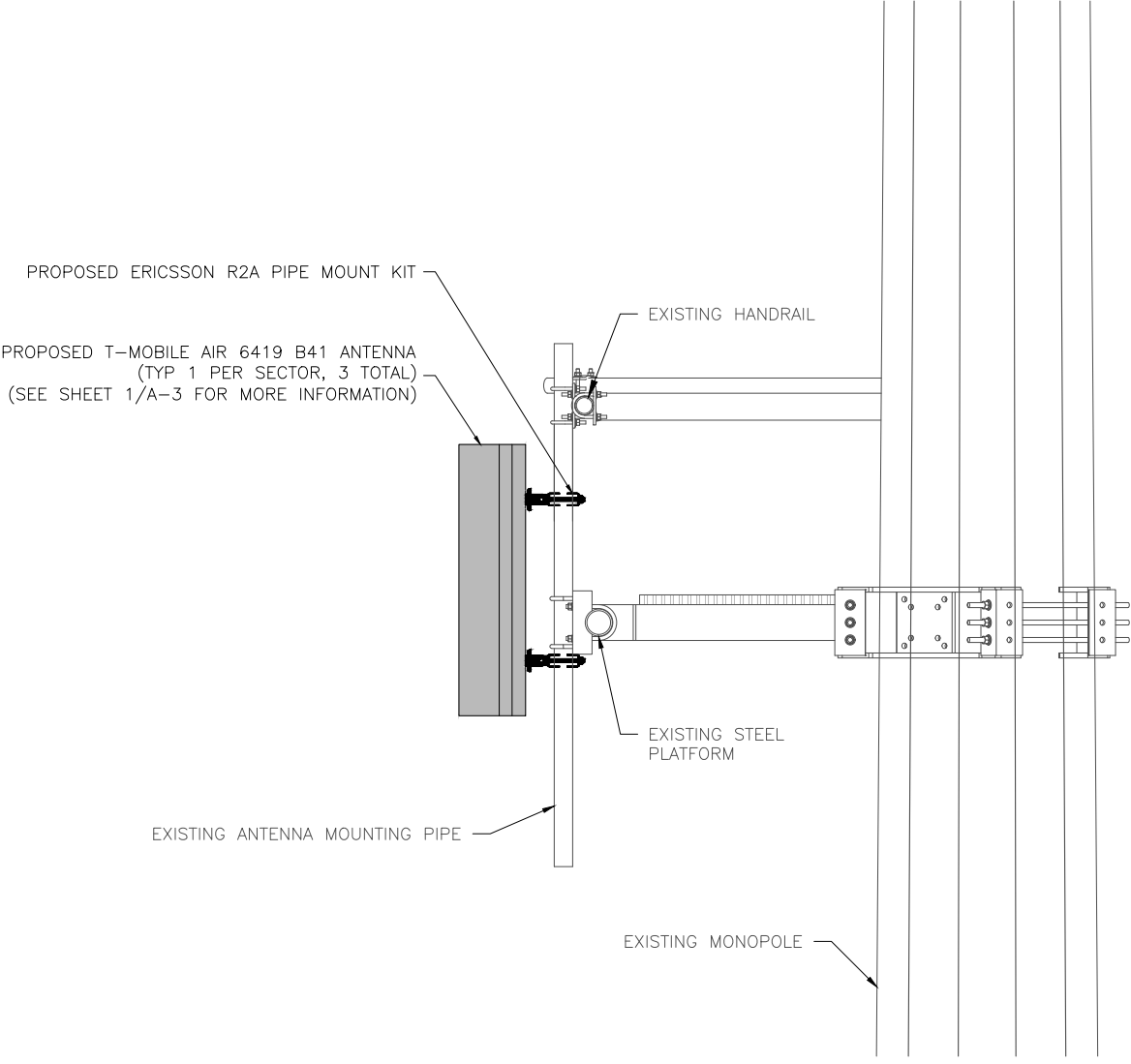
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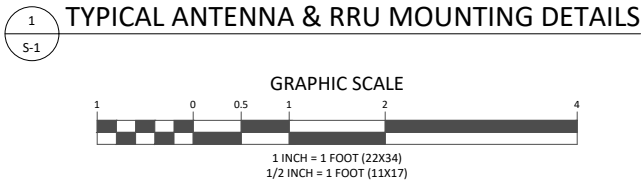
SHEET TITLE:	ANTENNA & RRU MOUNTING DETAILS
DRAWING:	S-1

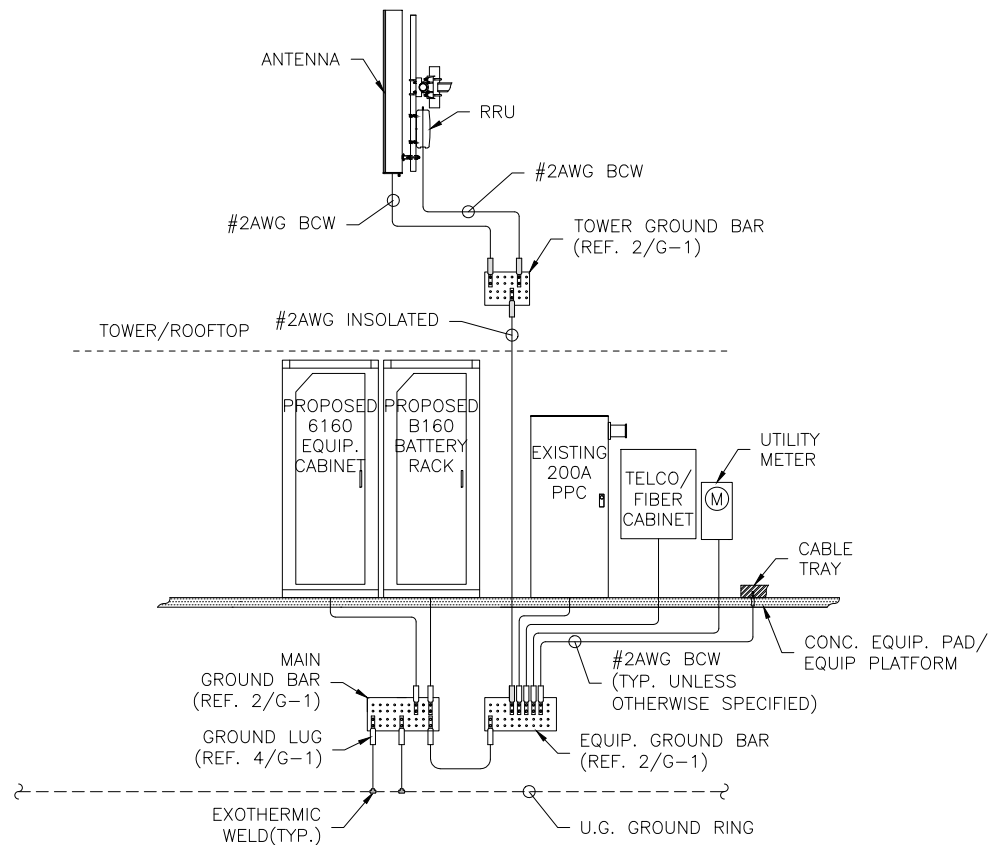


AT POSITIONS A-1, B-1 & C-1



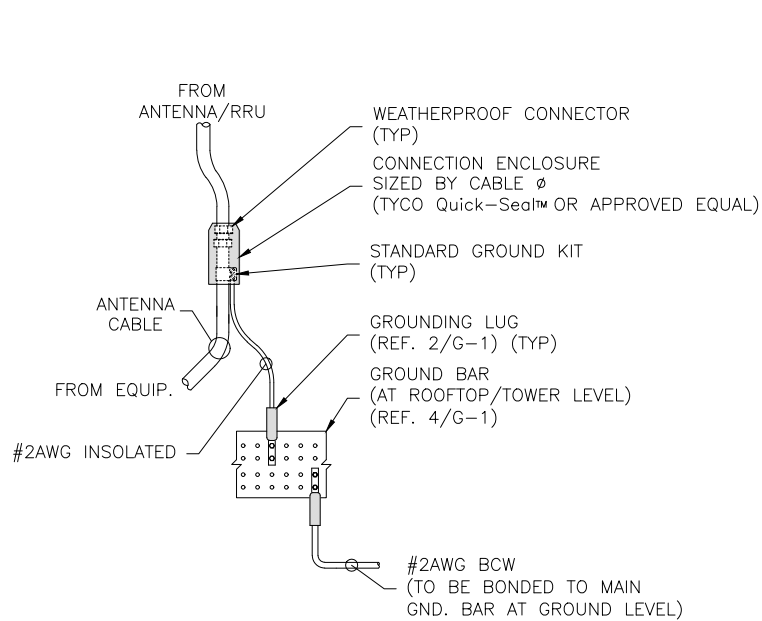
AT POSITIONS A-3, B-3 & C-3





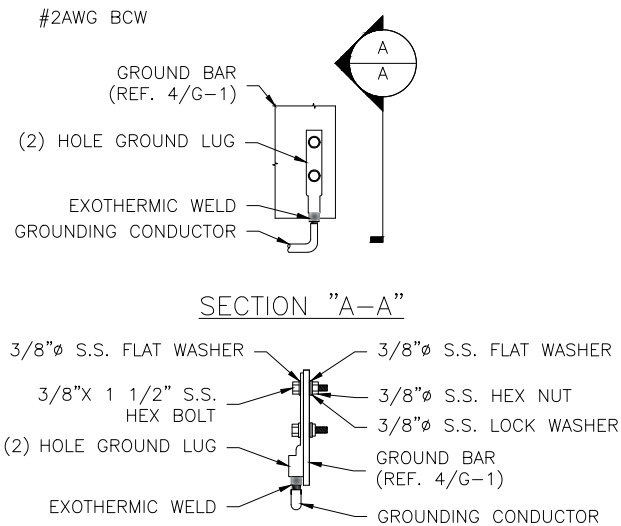
GROUNDING RISER NOTE:
UNLESS OTHERWISE SPECIFIED ALL GROUNDING CONDUCTORS ARE TO BE #2AWG BCW

1
G-1
GROUNDING RISER DIAGRAM



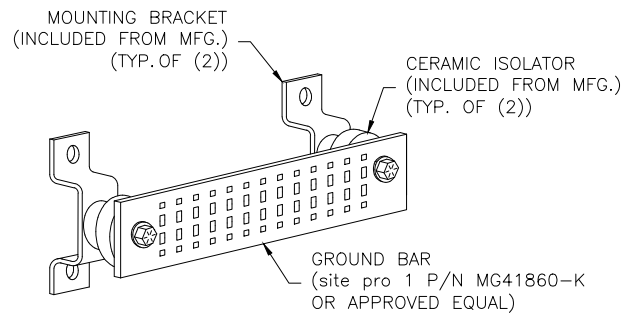
- NOTES:
- DO NOT INSTALL CABLE GROUND KIT AT BEND IN CABLE.
 - GROUND CABLES DIRECTLY TO CIGBE
 - JUMPER REQUIRED ONLY WHEN CABLE IS 1 1/4" OR LARGER

4
G-1
ANTENNA/RRU GROUNDING DETAIL



- GROUNDING LUG NOTES:
- DO NOT DOUBLE UP OR STACK LUGS.
 - OXIDE INHIBITING COMPOUND TO BE APPLIED TO ALL LUGS.
 - ALL LUGS ARE TO BE EXOTHERMIC WELDED TO GROUNDING CONDUCTORS.
 - FOR INSULATED GROUNDING CONDUCTORS, EXPOSED BARE COPPER TO BE KEPT TO ABSOLUTE MINIMUM.
 - NO INSULATION IS ALLOWED WITHIN THE BARREL OF THE COMPRESSION TERMINAL.

5
G-1
GROUND LUG DETAIL



2
G-1
GROUND BAR DETAIL

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

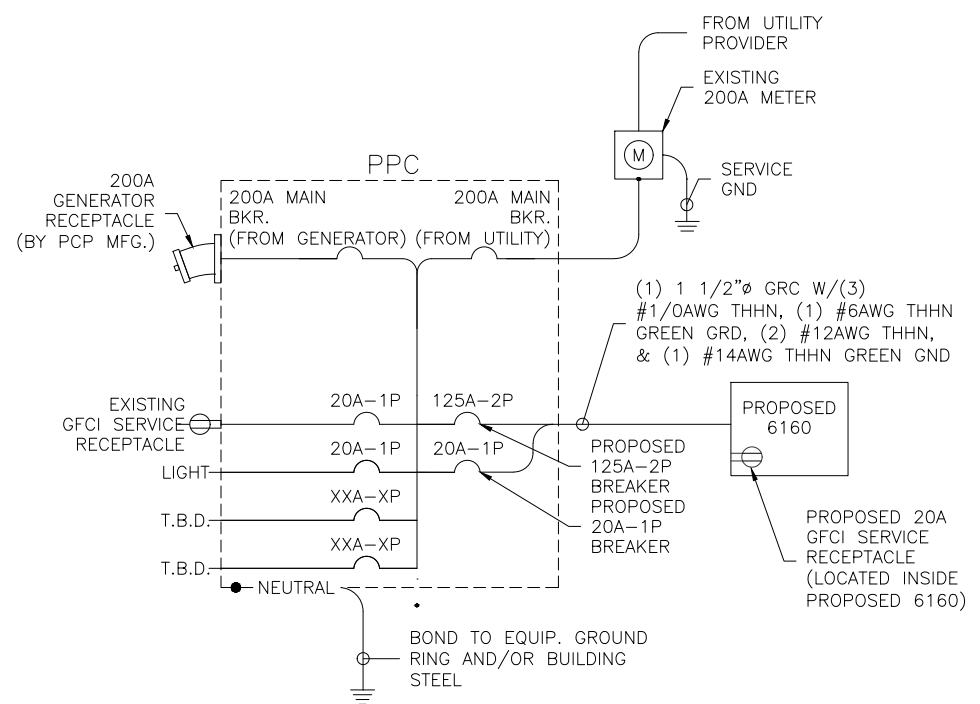
SECTION "P" - SURGE PRODUCERS

CABLE ENTRY PORTS (HATCH PLATES) (#2)
GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
TELCO GROUND BAR
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
+24V POWER SUPPLY RETURN BAR (#2)
-48V POWER SUPPLY RETURN BAR (#2)
RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

INTERIOR GROUND RING (#2)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
BUILDING STEEL (IF AVAILABLE) (#2)

3
G-1
GROUND WIRE SCHEDULE



6
G-1
ONE LINE DIAGRAM

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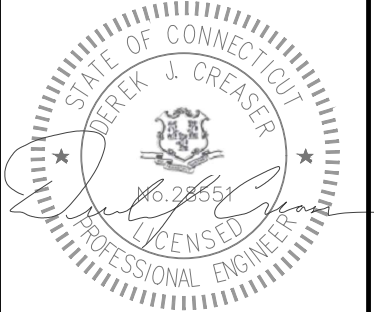


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SITE NAME:	CTHA560B
SITE ID:	CTHA560B
SITE ADDRESS:	87 MONCE ROAD BURLINGTON, CT 06013 HARTFORD COUNTY
SHEET TITLE:	GROUNDING & ONE LINE DIAGRAM
DRAWING:	G-1

EXHIBIT E

Structural Analysis Report



Structural Analysis Report

Structure : 119 ft Monopole
ATC Asset Name : Burlington 2
ATC Asset Number : 209185
Engineering Number : OAA792268_C3_02
Proposed Carrier : T-MOBILE
Carrier Site Name : CTHA560B
Carrier Site Number : CTHA560B
Site Location : 87 Monce Road
Burlington, CT 6013-2542
41.7392° N, 72.9078° W
County : Hartford
Date : May 30, 2024
Max Usage : 59%
Analysis Result : Pass



COA: PEC.0001553

Table of Contents

Introduction	3
Supporting Documents	3
Analysis	3
Conclusion	3
Structure Usages	4
Maximum Reactions	4
Tower Loading	5
Standard Conditions	Attached
Calculations	Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 119 ft Monopole tower to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower:	Sabre Job #160579, dated April 5, 2017
Foundation:	Sabre Job #160579, dated April 5, 2017
Geotechnical:	Geotechnical Report by Dr. Clarence Welty, P.E., dated March 17, 2014

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	116 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.50" radial ice concurrent
Code(s):	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Feature:	Flat
Spectral Response:	$S_s = 0.18$, $S_i = 0.05$
Site Class:	D - Stiff Soil - Default

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact Engineering@americantower.com. Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Result
Pole Shaft	59.6%	1.2D + 1.0W	Pass
Serviceability Usage	27.6%	1.0D + 1.0W	Pass
Base Plate @ 0.0 ft	49.5%	Rods	Pass
Pier	47.6%	Flexure [Steel]	Pass
Mat & Pier	50.3%	Moment [Soil]	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	2,671.7	46.7	30.4

**Reactions shown reflect the results from the Load Case with maximum Moment*

Structure base reactions were analyzed using available geotechnical and foundation information.

T-MOBILE Final Loading

Elev (ft)	Qty	Equipment	Lines
100.0	1	Mount Reinforcement	(2) 1.99" (50.7mm) Hybrid
	1	Low Profile Platform	
	3	Ericsson 4480 BAND 71	
	3	Ericsson AIR 6419 B41	
	3	Ericsson Radio 4460 B25+B66	
	3	RFS APXVAALL24 43-U-NA20	
	3	RFS APXVLL19P_43-C-A20	

Install proposed lines inside the pole shaft.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
129.0	-	-	(3) 7/8" Coax	OTHER
128.9	2	22' Omni	-	OTHER
123.5	1	12' Omni	-	OTHER
118.0	3	Stand-Off	-	OTHER
111.0	-	-	(3) 2" conduit	AT&T MOBILITY
110.0	1	Square Platform with Handrails	(2) 0.39" (10mm) Fiber Trunk (8) 0.76" (19.2mm) 8 AWG 6	AT&T MOBILITY
	3	Ericsson RRUS 32 B66A		
	3	Ericsson RRUS-32 (77 lbs)		
	4	Raycap DC6-48-60-18-8F (31.25" Height)		
	6	Ericsson RRUS-11 (19.7")		
	6	Ericsson RRUS-12 B2		
	12	CCI HPA-65R-BUU-H8		
109.0	1	Mount Reinforcement	-	AT&T MOBILITY
91.2	1	Raycap RVZDC-6627-PF-48	-	VERIZON WIRELESS
	3	Samsung B2/B66A RRH-BR049		
	3	Samsung B5/B13 RRH-BR04C		
91.0	1	Raycap RVZDC-6627-PF-48	(2) 1 5/8" Hybriflex	VERIZON WIRELESS
	2	Kaelus KA-6030		
	3	Commscope NHH-65B-R2B		
	3	Commscope NHHSS-65B-R2BT4		
	3	Samsung B2/B66A RRH-BR049		
	3	Samsung B5/B13 RRH-BR04C		
	3	Samsung MT6407-77A		
	3	Samsung RT4401-48A		
90.1	6	Commscope NHH-65B-R2B	-	VERIZON WIRELESS
90.0	1	Platform with Handrails	-	VERIZON WIRELESS
89.0	1	Mount Reinforcement	-	VERIZON WIRELESS
70.0	1	Commscope RDIDC-9181-PF-48	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	1	Platform with Handrails		
	3	Fujitsu TA08025-B604		
	3	Fujitsu TA08025-B605		
	3	JMA Wireless MX08FRO665-21		
3.0	3	Ericsson RRUS E2	-	AT&T MOBILITY

(If table breaks across pages, please see previous page for data in merged cells)



Standard Conditions

All engineering services performed by A.T. Engineering Services LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Services LLC

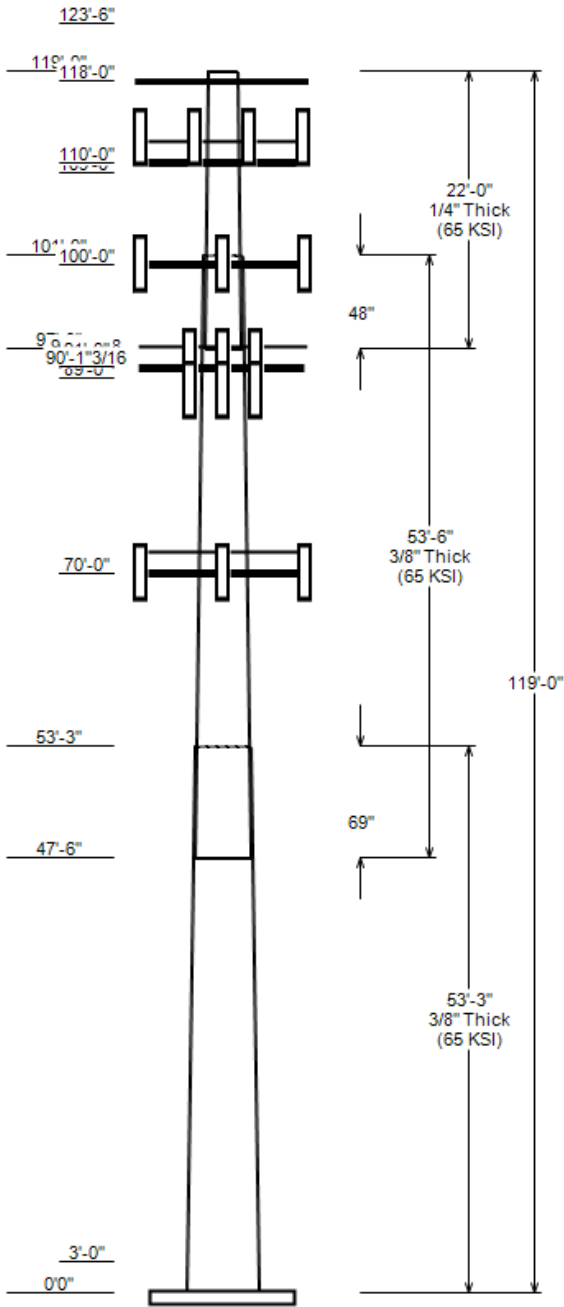
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ANALYSIS PARAMETERS					POLE SECTION PROPERTIES									
Nominal Wind:	116 mph	Ice Wind:	50 mph w/ 1.5" ice	Service Wind:	60 mph									
Risk Category:	II	Exposure:	C	S ₁ : 0.184	S ₂ : 0.054	Section	Length (ft)	Flat Diameter (in)		Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
Topo Category:	1	Topo Factor:	Method 1	Topo Feature:	Top			Bottom						
Structure Height:	119 ft	Base Elevation:	0.00 ft	Structure Type:	Taper									
Base Diameter:	53.34 in	Base Rotation:	0°	Taper:	0.2780 (in/ft)									
						1	53.250	38.56	53.34	0.375		0.000	18 Sides	65
						2	53.500	26.05	40.90	0.375	Slip Joint	69.000	18 Sides	65
						3	22.000	21.55	27.66	0.250	Slip Joint	48.000	18 Sides	65



DISCRETE APPURTENANCE				LINEAR APPURTENANCE			
Elev (ft)	Description	Elev To (ft)	Description	Elev To (ft)	Description	Elev To (ft)	Description
128.9	(2) Generic 22' Omni	129.0	(3) 7/8" Coax	129.0	(3) 7/8" Coax	129.0	(3) 7/8" Coax
123.5	(1) Generic 12' Omni	111.0	(3) 2" conduit	111.0	(3) 2" conduit	111.0	(3) 2" conduit
118.0	(3) Generic Flat Stand-Off	110.0	(8) 0.76" (19.2mm) 8 AWG 6	110.0	(8) 0.76" (19.2mm) 8 AWG 6	110.0	(8) 0.76" (19.2mm) 8 AWG 6
110.0	(3) Ericsson RRUS 32 B66A	110.0	(2) 0.39" (10mm) Fiber Trunk	110.0	(2) 0.39" (10mm) Fiber Trunk	110.0	(2) 0.39" (10mm) Fiber Trunk
110.0	(6) Ericsson RRUS-11 (19.7")	100.0	(1) 1.99" (50.7mm) Hybrid	100.0	(1) 1.99" (50.7mm) Hybrid	100.0	(1) 1.99" (50.7mm) Hybrid
110.0	(6) Ericsson RRUS-12 B2	100.0	(1) 1.99" (50.7mm) Hybrid	100.0	(1) 1.99" (50.7mm) Hybrid	100.0	(1) 1.99" (50.7mm) Hybrid
110.0	(3) Ericsson RRUS-32 (77 lbs)	91.0	(1) 1 5/8" Hybriflex	91.0	(1) 1 5/8" Hybriflex	91.0	(1) 1 5/8" Hybriflex
110.0	(4) Raycap DC6-48-60-18-8F (31.25")	91.0	(1) 1 5/8" Hybriflex	91.0	(1) 1 5/8" Hybriflex	91.0	(1) 1 5/8" Hybriflex
110.0	(12) CCI HPA-65R-BUU-H8	70.0	(1) 1.60" (40.6mm) Hybrid	70.0	(1) 1.60" (40.6mm) Hybrid	70.0	(1) 1.60" (40.6mm) Hybrid
110.0	(1) Generic Square Platform with H						
109.0	(1) Generic Mount Reinforcement						
100.0	(3) Ericsson Radio 4460 B25+B66						
100.0	(3) Ericsson 4480 BAND 71						
100.0	(3) Ericsson AIR 6419 B41						
100.0	(1) Generic Mount Reinforcement						
100.0	(3) RFS APXVLL19P_43-C-A20						
100.0	(3) RFS APXVAALL24 43-U-NA20						
100.0	(1) Generic Round Low Profile Plat						
91.2	(3) Samsung B2/B66A RRH-BR049						
91.2	(3) Samsung B5/B13 RRH-BR04C						
91.2	(1) Raycap RVZDC-6627-PF-48						
91.0	(2) Kaelus KA-6030						
91.0	(3) Samsung RT4401-48A						
91.0	(3) Samsung B5/B13 RRH-BR04C						
91.0	(3) Samsung B2/B66A RRH-BR049						
91.0	(1) Raycap RVZDC-6627-PF-48						
91.0	(3) Samsung MT6407-77A						
91.0	(3) Commscope NHH-65B-R2B						
91.0	(3) Commscope NHHSS-65B-R2BT4						
90.1	(6) Commscope NHH-65B-R2B						
90.0	(1) Generic Round Platform with Ha						
89.0	(1) Generic Mount Reinforcement						
70.0	(1) Commscope RDIDC-9181-PF-48						
70.0	(3) Fujitsu TA08025-B605						
70.0	(3) Fujitsu TA08025-B604						
70.0	(3) JMA Wireless MX08FRO665-21						
70.0	(1) Generic Round Platform with Ha						
3.0	(3) Ericsson RRUS E2						

GLOBAL BASE REACTIONS			
Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	2671.68	46.73	30.42
0.9D + 1.0W	2648.50	35.04	30.41
1.2D + 1.0Di + 1.0Wi	853.37	73.45	9.48
1.2D + 1.0Ev + 1.0Eh	118.15	47.40	1.24
0.9D - 1.0Ev + 1.0Eh	116.80	32.92	1.24
1.0D + 1.0W	636.13	38.96	7.28

ANALYSIS PARAMETERS			
Location:	Hartford County,CT	Height:	119 ft
Type and Shape:	Taper, 18 Sides	Base Diameter:	53.34 in
Manufacturer:	Sabre	Top Diameter:	21.55 in
K _d (non-service):	0.95	Taper:	0.2780 in/ft
K _e :	0.99	Rotation:	0.000°

ICE & WIND PARAMETERS			
Risk Category:	II	Design Wind Speed:	116 mph
Exposure Category:	C	Design Wind Speed w/ Ice:	50 mph
Topo Factor Procedure:	Method 1	Design Ice Thickness:	1.50 in
Topographic Category:	1	Service Wind Speed:	60 mph
Crest Height:	0 ft	HMSL:	288.00 ft

SEISMIC PARAMETERS					
Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil	Period Based on Rayleigh Method (sec):		1.81	
T _L (sec):	6	P:	1	C _s :	0.032
S _s :	0.184	S ₁ :	0.054	C _s Max:	0.032
F _a :	1.600	F _v :	2.400	C _s Min:	0.030
S _{ds} :	0.196	S _{d1} :	0.086		

LOAD CASES	
1.2D + 1.0W	116 mph Wind with No Ice
0.9D + 1.0W	116 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph Wind with 1.5" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

SHAFT SECTION PROPERTIES																			
Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	53.25	0.3750	65		0.00	9,828	53.34	0.000	63.04	22,343.1	23.32	142.24	38.56	53.25	45.44	8,369.4	16.37	102.81	0.2776
2-18	53.50	0.3750	65	Slip	69.00	7,172	40.90	47.500	48.24	10,009.2	17.47	109.07	26.05	101.00	30.56	2,544.4	10.48	69.46	0.2776
3-18	22.00	0.2500	65	Slip	48.00	1,447	27.66	97.000	21.75	2,064.1	17.74	110.63	21.55	119.00	16.90	968.8	13.44	86.20	0.2776
Total Shaft Weight						18,447													

DISCRETE APPURTENANCE PROPERTIES										
Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice			Ice		
					Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor
128.90	Generic 22' Omni	2	1.00	0.000	70.00	6.600	1.00	231.75	14.214	1.00
123.50	Generic 12' Omni	1	1.00	0.000	40.00	3.600	1.00	128.86	7.805	1.00
118.00	Generic Flat Stand-Off	3	1.00	0.000	187.50	6.300	0.67	317.68	9.345	0.67
110.00	Ericsson RRUS 32 B66A	3	0.75	0.000	50.70	2.720	0.67	121.87	3.850	0.67
110.00	Generic Square Platform with H	1	1.00	0.000	3790.00	49.300	1.00	8097.15	132.007	1.00
110.00	CCI HPA-65R-BUU-H8	12	0.75	1.600	68.00	12.976	0.67	317.50	16.452	0.67
110.00	Raycap DC6-48-60-18-8F (31.25"	4	0.75	0.000	32.80	3.340	0.67	127.36	4.761	0.67
110.00	Ericsson RRUS-32 (77 lbs)	3	0.75	0.000	77.00	3.314	0.71	171.43	4.560	0.71
110.00	Ericsson RRUS-12 B2	6	0.75	0.000	58.00	3.145	0.62	136.55	4.270	0.62
110.00	Ericsson RRUS-11 (19.7")	6	0.75	0.000	51.00	2.791	0.67	124.90	3.854	0.67
109.00	Generic Mount Reinforcement	1	1.00	0.000	200.00	7.500	1.00	387.49	14.753	1.00
100.00	Ericsson Radio 4460 B25+B66	3	0.75	0.000	109.00	2.564	0.67	193.92	3.577	0.67
100.00	Ericsson 4480 BAND 71	3	0.80	0.000	81.00	2.878	0.67	154.14	3.957	0.67
100.00	Ericsson AIR 6419 B41	3	0.75	0.000	68.50	5.600	0.60	184.59	7.122	0.60
100.00	Generic Round Low Profile Plat	1	1.00	0.000	1875.00	21.700	1.00	2653.10	40.146	1.00
100.00	RFS APXVAALL24 43-U-NA20	3	0.80	0.000	122.80	20.243	0.63	497.03	23.806	0.63
100.00	RFS APXVLL19P_43-C-A20	3	0.75	0.000	40.90	8.250	0.65	187.31	11.088	0.65
100.00	Generic Mount Reinforcement	1	1.00	0.000	200.00	7.500	1.00	385.94	14.694	1.00
91.20	Samsung B5/B13 RRH-BR04C	3	0.75	0.000	70.30	1.875	0.50	124.83	2.735	0.50
91.20	Raycap RVZDC-6627-PF-48	1	0.75	0.000	32.00	3.781	0.69	136.54	5.042	0.69
91.20	Samsung B2/B66A RRH-BR049	3	0.75	0.000	84.40	1.875	0.50	145.22	2.735	0.50
91.00	Commscope NHHSS-65B-R2BT4	3	0.75	0.000	51.00	8.079	0.69	216.59	10.744	0.69
91.00	Samsung MT6407-77A	3	0.75	0.000	81.60	4.709	0.61	178.71	6.156	0.61
91.00	Commscope NHH-65B-R2B	3	0.75	0.000	43.70	8.079	0.69	209.81	10.733	0.69
91.00	Samsung B5/B13 RRH-BR04C	3	0.75	0.000	70.30	1.875	0.50	124.80	2.735	0.50
91.00	Samsung B2/B66A RRH-BR049	3	0.75	0.000	84.40	1.875	0.50	145.18	2.735	0.50
91.00	Raycap RVZDC-6627-PF-48	1	0.75	0.000	32.00	3.781	1.00	136.48	5.041	1.00
91.00	Kaelus KA-6030	2	0.75	0.000	17.60	0.963	0.50	40.06	1.586	0.50
91.00	Samsung RT4401-48A	3	0.75	0.000	18.60	0.996	0.50	44.33	1.648	0.50
90.10	Commscope NHH-65B-R2B	6	0.75	-1.000	43.70	8.079	0.69	209.72	10.732	0.69
90.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	4041.36	50.462	1.00
89.00	Generic Mount Reinforcement	1	1.00	0.000	200.00	7.500	1.00	383.65	14.605	1.00
70.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	3998.49	49.815	1.00
70.00	Fujitsu TA08025-B605	3	0.75	0.000	75.00	1.962	0.50	132.96	2.813	0.50
70.00	JMA Wireless MX08FRO665-21	3	0.75	0.000	64.50	12.489	0.64	302.29	15.089	0.64
70.00	Fujitsu TA08025-B604	3	0.75	0.000	63.90	1.962	0.50	117.85	2.813	0.50
70.00	Commscope RDIDC-9181-PF-48	1	0.75	0.000	21.90	1.867	1.00	74.55	2.700	1.00
3.00	Ericsson RRUS E2	3	1.00	0.000	52.90	2.475	0.67	92.46	3.127	0.67
Totals		Row Count: 38		109		17,923.50		39,102.69		

LINEAR APPURTENANCE PROPERTIES													
Load Case Azimuth (deg): 0.00													
Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/ Row	Distance Between Rows(in)	Distance Between Cols(in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
0.00	129.00	3	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	OTHER
0.00	111.00	3	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	110.00	8	0.76" (19.2mm) 8 AWG	0.76	0.53	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	110.00	2	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	100.00	1	1.99" (50.7mm) Hybrid	1.99	1.9	N	0	0	0	0	0	N	T-MOBILE

LINEAR APPURTENANCE PROPERTIES													
Load Case Azimuth (deg): 0.00													
Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/ Row	Distance Between Rows(in)	Distance Between Cols(in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
0.00	100.00	1	1.99" (50.7mm) Hybrid	1.99	1.9	N	0	0	0	0	0	N	T-MOBILE
0.00	91.00	1	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	91.00	1	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	70.00	1	1.60" (40.6mm) Hybrid	1.6	2.34	N	0	0	0	0	0	N	DISH WIRELESS L.L.C.

SEGMENT PROPERTIES												
Seg Top Elev (ft)	Description	(Max Length: 5 ft)	Thick (in)	Flat Dia (in)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in³)	Z (in³)	Weight (lb)
0.00	Bot - Section 2		0.3750	53.340	63.039	22,343.10	23.32	142.24	74	825.0	0.0	0.0
3.00			0.3750	52.507	62.048	21,305.40	22.93	140.02	74.4	799.2	0.0	638.5
5.00			0.3750	51.952	61.387	20,631.80	22.66	138.54	74.7	782.2	0.0	420.0
10.00			0.3750	50.564	59.735	19,010.30	22.01	134.84	75.5	740.5	0.0	1,030.4
15.00			0.3750	49.175	58.082	17,476.00	21.36	131.13	76.3	700.0	0.0	1,002.3
20.00			0.3750	47.787	56.430	16,026.60	20.71	127.43	77	660.6	0.0	974.2
25.00			0.3750	46.399	54.778	14,659.70	20.05	123.73	77.8	622.3	0.0	946.0
30.00			0.3750	45.011	53.126	13,372.70	19.40	120.03	78.6	585.2	0.0	917.9
35.00			0.3750	43.622	51.473	12,163.40	18.75	116.33	79.3	549.2	0.0	889.8
40.00			0.3750	42.234	49.821	11,029.20	18.10	112.62	80.1	514.4	0.0	861.7
45.00	Top - Section 1		0.3750	40.846	48.169	9,967.90	17.44	108.92	80.9	480.7	0.0	833.6
47.50			0.3750	40.152	47.343	9,463.80	17.12	107.07	81.3	464.2	0.0	406.3
50.00			0.3750	39.458	46.516	8,976.90	16.79	105.22	81.7	448.1	0.0	806.0
53.25			0.3750	39.305	46.335	8,872.40	16.72	104.81	81.7	444.6	0.0	1,026.8
55.00			0.3750	38.819	45.757	8,544.30	16.49	103.52	82	433.5	0.0	274.2
60.00			0.3750	37.431	44.105	7,651.70	15.84	99.82	82.6	402.6	0.0	764.4
65.00			0.3750	36.043	42.452	6,823.50	15.18	96.11	82.6	372.9	0.0	736.3
70.00			0.3750	34.655	40.800	6,057.40	14.53	92.41	82.6	344.3	0.0	708.2
75.00			0.3750	33.266	39.148	5,350.90	13.88	88.71	82.6	316.8	0.0	680.1
80.00			0.3750	31.878	37.495	4,701.60	13.23	85.01	82.6	290.5	0.0	652.0
85.00	Bot - Section 3		0.3750	30.490	35.843	4,107.00	12.57	81.31	82.6	265.3	0.0	623.9
89.00			0.3750	29.379	34.521	3,669.20	12.05	78.35	82.6	246.0	0.0	478.9
90.00			0.3750	29.102	34.191	3,564.80	11.92	77.60	82.6	241.3	0.0	116.9
90.10			0.3750	29.074	34.158	3,554.50	11.91	77.53	82.6	240.8	0.0	11.6
91.00			0.3750	28.824	33.860	3,462.40	11.79	76.86	82.6	236.6	0.0	104.2
91.20			0.3750	28.769	33.794	3,442.20	11.76	76.72	82.6	235.7	0.0	23.0
95.00			0.3750	27.714	32.539	3,072.60	11.27	73.90	82.6	218.4	0.0	428.9
97.00			0.3750	27.158	31.878	2,889.10	11.01	72.42	82.6	209.5	0.0	219.2
100.00			0.3750	26.325	30.886	2,627.90	10.62	70.20	82.6	196.6	0.0	539.0
101.00			Top - Section 2		0.2500	26.548	20.866	1,823.20	16.96	106.19	81.5	135.3
105.00	0.2500	25.437			19.985	1,601.80	16.18	101.75	82.4	124.0	0.0	278.0
109.00	0.2500	24.326			19.104	1,399.10	15.39	97.31	82.6	113.3	0.0	266.0
110.00	0.2500	24.049			18.884	1,351.30	15.20	96.20	82.6	110.7	0.0	64.6
115.00	0.2500	22.661			17.782	1,128.40	14.22	90.64	82.6	98.1	0.0	311.9
118.00	0.2500	21.828			17.121	1,007.20	13.63	87.31	82.6	90.9	0.0	178.2
119.00	0.2500	21.550			16.901	968.80	13.44	86.20	82.6	88.5	0.0	57.9
Total:												18,446.8

CALCULATED FORCES													
Load Case: 1.2D + 1.0W			116 mph Wind with No Ice									21 Iterations	
Gust Response Factor:		1.10											
Dead load Factor:		1.20											
Wind Load Factor:		1.00											
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-46.73	-30.42	0.00	-2,671.7	0.00	2,671.68	4,197.01	1,106.34	5,292.54	4,577.40	0	0	0.596
3.00	-45.64	-30.09	0.00	-2,580.4	0.00	2,580.42	4,156.73	1,088.94	5,127.40	4,461.67	0.03	-0.1	0.590
5.00	-45.01	-29.84	0.00	-2,520.2	0.00	2,520.24	4,129.42	1,077.34	5,018.76	4,384.81	0.09	-0.17	0.586
10.00	-43.54	-29.49	0.00	-2,371.0	0.00	2,371.03	4,059.55	1,048.34	4,752.26	4,193.75	0.36	-0.34	0.577

ASSET: 209185, Burlington 2
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
PROJECT: OAA792268_C3_02

CALCULATED FORCES

15.00	-42.10	-29.15	0.00	-2,223.6	0.00	2,223.56	3,987.39	1,019.35	4,493.02	4,004.43	0.8	-0.51	0.567
20.00	-40.70	-28.78	0.00	-2,077.8	0.00	2,077.83	3,912.95	990.35	4,241.06	3,817.03	1.43	-0.68	0.556
25.00	-39.33	-28.41	0.00	-1,933.9	0.00	1,933.92	3,836.23	961.35	3,996.37	3,631.76	2.24	-0.86	0.544
30.00	-38.00	-28.02	0.00	-1,791.9	0.00	1,791.88	3,757.23	932.35	3,758.94	3,448.80	3.24	-1.04	0.531
35.00	-36.70	-27.63	0.00	-1,651.8	0.00	1,651.78	3,675.94	903.36	3,528.79	3,268.37	4.44	-1.23	0.516
40.00	-35.44	-27.23	0.00	-1,513.6	0.00	1,513.64	3,592.36	874.36	3,305.91	3,090.65	5.82	-1.41	0.501
45.00	-34.24	-26.92	0.00	-1,377.5	0.00	1,377.48	3,506.51	845.36	3,090.30	2,915.85	7.4	-1.6	0.483
47.50	-33.64	-26.72	0.00	-1,310.2	0.00	1,310.17	3,462.72	830.86	2,985.22	2,829.60	8.26	-1.69	0.474
50.00	-32.55	-26.48	0.00	-1,243.4	0.00	1,243.36	3,418.37	816.36	2,881.95	2,744.16	9.17	-1.79	0.464
53.25	-31.19	-26.25	0.00	-1,157.3	0.00	1,157.31	3,408.56	813.18	2,859.53	2,725.51	10.44	-1.91	0.435
55.00	-30.76	-25.98	0.00	-1,111.4	0.00	1,111.38	3,377.08	803.03	2,788.61	2,666.32	11.15	-1.98	0.427
60.00	-29.63	-25.56	0.00	-981.5	0.00	981.49	3,276.75	774.03	2,590.88	2,492.78	13.32	-2.15	0.404
65.00	-28.55	-25.15	0.00	-853.7	0.00	853.68	3,153.99	745.04	2,400.42	2,308.60	15.67	-2.33	0.380
70.00	-23.84	-22.44	0.00	-728.0	0.00	727.95	3,031.23	716.04	2,217.23	2,131.50	18.19	-2.49	0.350
75.00	-22.85	-22.02	0.00	-615.8	0.00	615.77	2,908.48	687.04	2,041.31	1,961.46	20.89	-2.65	0.323
80.00	-21.89	-21.61	0.00	-505.7	0.00	505.68	2,785.72	658.04	1,872.66	1,798.48	23.74	-2.8	0.290
85.00	-20.99	-21.24	0.00	-397.6	0.00	397.65	2,662.96	629.05	1,711.29	1,642.58	26.75	-2.93	0.251
89.00	-20.07	-20.68	0.00	-312.7	0.00	312.71	2,564.76	605.85	1,587.42	1,522.95	29.25	-3.03	0.214
90.00	-16.97	-19.27	0.00	-292.0	0.00	292.03	2,540.21	600.05	1,557.18	1,493.74	29.89	-3.06	0.203
90.10	-16.70	-18.12	0.00	-290.1	0.00	290.10	2,537.75	599.47	1,554.17	1,490.84	29.95	-3.06	0.202
91.00	-15.30	-16.21	0.00	-273.8	0.00	273.80	2,515.65	594.25	1,527.23	1,464.83	30.53	-3.08	0.194
91.20	-14.69	-15.76	0.00	-270.6	0.00	270.56	2,510.74	593.09	1,521.27	1,459.08	30.66	-3.08	0.192
95.00	-14.08	-15.52	0.00	-210.7	0.00	210.67	2,417.45	571.05	1,410.34	1,351.98	33.14	-3.16	0.162
97.00	-13.77	-15.32	0.00	-179.6	0.00	179.64	2,368.35	559.45	1,353.64	1,297.25	34.47	-3.19	0.145
100.00	-9.27	-10.95	0.00	-133.7	0.00	133.67	2,294.69	542.05	1,270.77	1,217.28	36.5	-3.24	0.114
101.00	-9.05	-10.76	0.00	-122.7	0.00	122.72	1,529.64	366.21	869.88	826.32	37.18	-3.25	0.155
105.00	-8.64	-10.46	0.00	-79.7	0.00	79.68	1,481.61	350.74	797.97	766.26	39.92	-3.3	0.111
109.00	-8.03	-9.91	0.00	-37.8	0.00	37.84	1,419.33	335.28	729.16	701.36	42.71	-3.34	0.060
110.00	-1.46	-1.90	0.00	-22.2	0.00	22.16	1,402.96	331.41	712.44	685.20	43.41	-3.35	0.033
115.00	-1.09	-1.61	0.00	-12.7	0.00	12.66	1,321.13	312.08	631.76	607.20	46.92	-3.37	0.022
118.00	-0.24	-0.84	0.00	-7.8	0.00	7.82	1,272.02	300.48	585.68	562.66	49.04	-3.37	0.014
119.00	0.00	-0.83	0.00	-7.0	0.00	6.98	1,255.66	296.61	570.71	548.20	49.75	-3.38	0.013

CALCULATED FORCES

Load Case: 0.9D + 1.0W

116 mph Wind with No Ice (Reduced DL)

21 Iterations

Gust Response Factor: 1.10
 Dead Load Factor: 0.90
 Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-35.04	-30.41	0.00	-2,648.5	0.00	2,648.50	4,197.01	1,106.34	5,292.54	4,577.40	0	0	0.588
3.00	-34.21	-30.06	0.00	-2,557.3	0.00	2,557.27	4,156.73	1,088.94	5,127.40	4,461.67	0.03	-0.1	0.582
5.00	-33.73	-29.79	0.00	-2,497.2	0.00	2,497.15	4,129.42	1,077.34	5,018.76	4,384.81	0.09	-0.17	0.578
10.00	-32.60	-29.41	0.00	-2,348.2	0.00	2,348.19	4,059.55	1,048.34	4,752.26	4,193.75	0.35	-0.33	0.569
15.00	-31.51	-29.03	0.00	-2,201.1	0.00	2,201.14	3,987.39	1,019.35	4,493.02	4,004.43	0.8	-0.5	0.558
20.00	-30.43	-28.64	0.00	-2,056.0	0.00	2,055.98	3,912.95	990.35	4,241.06	3,817.03	1.42	-0.68	0.547
25.00	-29.39	-28.24	0.00	-1,912.8	0.00	1,912.78	3,836.23	961.35	3,996.37	3,631.76	2.22	-0.85	0.535
30.00	-28.37	-27.82	0.00	-1,771.6	0.00	1,771.60	3,757.23	932.35	3,758.94	3,448.80	3.21	-1.03	0.522
35.00	-27.38	-27.41	0.00	-1,632.5	0.00	1,632.48	3,675.94	903.36	3,528.79	3,268.37	4.39	-1.21	0.508
40.00	-26.42	-26.99	0.00	-1,495.4	0.00	1,495.44	3,592.36	874.36	3,305.91	3,090.65	5.76	-1.4	0.492
45.00	-25.50	-26.67	0.00	-1,360.5	0.00	1,360.51	3,506.51	845.36	3,090.30	2,915.85	7.32	-1.58	0.475
47.50	-25.04	-26.45	0.00	-1,293.8	0.00	1,293.85	3,462.72	830.86	2,985.22	2,829.60	8.18	-1.68	0.465
50.00	-24.22	-26.20	0.00	-1,227.7	0.00	1,227.71	3,418.37	816.36	2,881.95	2,744.16	9.08	-1.77	0.456
53.25	-23.19	-25.96	0.00	-1,142.6	0.00	1,142.57	3,408.56	813.18	2,859.53	2,725.51	10.33	-1.89	0.427
55.00	-22.86	-25.68	0.00	-1,097.1	0.00	1,097.13	3,377.08	803.03	2,788.61	2,666.32	11.04	-1.96	0.419
60.00	-22.00	-25.25	0.00	-968.7	0.00	968.72	3,276.75	774.03	2,590.88	2,492.78	13.18	-2.13	0.396
65.00	-21.17	-24.83	0.00	-842.5	0.00	842.46	3,153.99	745.04	2,400.42	2,308.60	15.5	-2.3	0.373
70.00	-17.65	-22.15	0.00	-718.3	0.00	718.33	3,031.23	716.04	2,217.23	2,131.50	18	-2.46	0.344
75.00	-16.90	-21.73	0.00	-607.6	0.00	607.59	2,908.48	687.04	2,041.31	1,961.46	20.66	-2.62	0.317
80.00	-16.18	-21.31	0.00	-499.0	0.00	498.97	2,785.72	658.04	1,872.66	1,798.48	23.48	-2.76	0.284
85.00	-15.49	-20.94	0.00	-392.4	0.00	392.42	2,662.96	629.05	1,711.29	1,642.58	26.45	-2.9	0.246
89.00	-14.81	-20.39	0.00	-308.7	0.00	308.66	2,564.76	605.85	1,587.42	1,522.95	28.93	-3	0.210
90.00	-12.49	-19.02	0.00	-288.3	0.00	288.27	2,540.21	600.05	1,557.18	1,493.74	29.56	-3.02	0.199
90.10	-12.30	-17.87	0.00	-286.4	0.00	286.37	2,537.75	599.47	1,554.17	1,490.84	29.62	-3.02	0.198
91.00	-11.28	-15.99	0.00	-270.3	0.00	270.29	2,515.65	594.25	1,527.23	1,464.83	30.19	-3.04	0.190
91.20	-10.82	-15.54	0.00	-267.1	0.00	267.09	2,510.74	593.09	1,521.27	1,459.08	30.32	-3.05	0.188
95.00	-10.37	-15.30	0.00	-208.0	0.00	208.04	2,417.45	571.05	1,410.34	1,351.98	32.77	-3.12	0.159
97.00	-10.13	-15.11	0.00	-177.4	0.00	177.43	2,368.35	559.45	1,353.64	1,297.25	34.09	-3.16	0.142
100.00	-6.81	-10.81	0.00	-132.1	0.00	132.10	2,294.69	542.05	1,270.77	1,217.28	36.09	-3.2	0.112
101.00	-6.65	-10.62	0.00	-121.3	0.00	121.29	1,529.64	366.21	869.88	826.32	36.76	-3.22	0.152
105.00	-6.35	-10.32	0.00	-78.8	0.00	78.82	1,481.61	350.74	797.97	766.26	39.47	-3.26	0.108
109.00	-5.89	-9.78	0.00	-37.5	0.00	37.54	1,419.33	335.28	729.16	701.36	42.23	-3.3	0.059
110.00	-1.07	-1.88	0.00	-22.0	0.00	21.98	1,402.96	331.41	712.44	685.20	42.92	-3.31	0.033
115.00	-0.79	-1.60	0.00	-12.6	0.00	12.61	1,321.13	312.08	631.76	607.20	46.39	-3.33	0.021
118.00	-0.17	-0.84	0.00	-7.8	0.00	7.82	1,272.02	300.48	585.68	562.66	48.48	-3.33	0.014
119.00	0.00	-0.83	0.00	-7.0	0.00	6.98	1,255.66	296.61	570.71	548.20	49.18	-3.34	0.013

ASSET: 209185, Burlington 2
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
PROJECT: OAA792268_C3_02

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi						50 mph Wind with 1.5" Radial Ice						20 Iterations		
Gust Response Factor:		1.10	Ice Dead Load Factor			1.00		Ice Importance Factor						1.00
Dead load Factor:		1.20												
Wind Load Factor:		1.00												
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio	
0.00	-73.45	-9.48	0.00	-853.4	0.00	853.37	4,197.01	1,106.34	5,292.54	4,577.40	0	0	0.204	
3.00	-72.08	-9.40	0.00	-825.0	0.00	824.95	4,156.73	1,088.94	5,127.40	4,461.67	0.01	-0.03	0.202	
5.00	-71.35	-9.33	0.00	-806.2	0.00	806.16	4,129.42	1,077.34	5,018.76	4,384.81	0.03	-0.05	0.201	
10.00	-69.54	-9.25	0.00	-759.5	0.00	759.49	4,059.55	1,048.34	4,752.26	4,193.75	0.11	-0.11	0.198	
15.00	-67.74	-9.16	0.00	-713.3	0.00	713.26	3,987.39	1,019.35	4,493.02	4,004.43	0.26	-0.16	0.195	
20.00	-65.98	-9.06	0.00	-667.5	0.00	667.48	3,912.95	990.35	4,241.06	3,817.03	0.46	-0.22	0.192	
25.00	-64.26	-8.96	0.00	-622.2	0.00	622.16	3,836.23	961.35	3,996.37	3,631.76	0.72	-0.28	0.188	
30.00	-62.57	-8.86	0.00	-577.3	0.00	577.34	3,757.23	932.35	3,758.94	3,448.80	1.04	-0.33	0.184	
35.00	-60.92	-8.76	0.00	-533.0	0.00	533.04	3,675.94	903.36	3,528.79	3,268.37	1.42	-0.39	0.180	
40.00	-59.31	-8.65	0.00	-489.3	0.00	489.27	3,592.36	874.36	3,305.91	3,090.65	1.87	-0.45	0.175	
45.00	-57.74	-8.56	0.00	-446.0	0.00	446.03	3,506.51	845.36	3,090.30	2,915.85	2.37	-0.51	0.170	
47.50	-56.97	-8.51	0.00	-424.6	0.00	424.63	3,462.72	830.86	2,985.22	2,829.60	2.65	-0.54	0.167	
50.00	-55.72	-8.44	0.00	-403.4	0.00	403.37	3,418.37	816.36	2,881.95	2,744.16	2.95	-0.58	0.163	
53.25	-54.13	-8.37	0.00	-376.0	0.00	375.95	3,408.56	813.18	2,859.53	2,725.51	3.35	-0.62	0.154	
55.00	-53.60	-8.30	0.00	-361.3	0.00	361.30	3,377.08	803.03	2,788.61	2,666.32	3.58	-0.64	0.151	
60.00	-52.14	-8.18	0.00	-319.8	0.00	319.82	3,276.75	774.03	2,590.88	2,492.78	4.28	-0.69	0.144	
65.00	-50.73	-8.05	0.00	-278.9	0.00	278.94	3,153.99	745.04	2,400.42	2,308.60	5.04	-0.75	0.137	
70.00	-43.41	-7.22	0.00	-238.7	0.00	238.67	3,031.23	716.04	2,217.23	2,131.50	5.85	-0.8	0.126	
75.00	-42.10	-7.10	0.00	-202.6	0.00	202.55	2,908.48	687.04	2,041.31	1,961.46	6.72	-0.86	0.118	
80.00	-40.83	-6.97	0.00	-167.1	0.00	167.07	2,785.72	658.04	1,872.66	1,798.48	7.65	-0.91	0.108	
85.00	-39.62	-6.85	0.00	-132.2	0.00	132.23	2,662.96	629.05	1,711.29	1,642.58	8.62	-0.95	0.095	
89.00	-38.28	-6.65	0.00	-104.8	0.00	104.82	2,564.76	605.85	1,587.42	1,522.95	9.43	-0.98	0.084	
90.00	-33.75	-6.15	0.00	-98.2	0.00	98.17	2,540.21	600.05	1,557.18	1,493.74	9.64	-0.99	0.079	
90.10	-32.57	-5.85	0.00	-97.6	0.00	97.55	2,537.75	599.47	1,554.17	1,490.84	9.66	-0.99	0.078	
91.00	-29.45	-5.33	0.00	-92.3	0.00	92.29	2,515.65	594.25	1,527.23	1,464.83	9.85	-1	0.075	
91.20	-28.43	-5.19	0.00	-91.2	0.00	91.23	2,510.74	593.09	1,521.27	1,459.08	9.89	-1	0.074	
95.00	-27.59	-5.11	0.00	-71.5	0.00	71.49	2,417.45	571.05	1,410.34	1,351.98	10.7	-1.03	0.064	
97.00	-27.16	-5.05	0.00	-61.3	0.00	61.27	2,368.35	559.45	1,353.64	1,297.25	11.13	-1.04	0.059	
100.00	-19.42	-3.78	0.00	-46.1	0.00	46.13	2,294.69	542.05	1,270.77	1,217.28	11.79	-1.05	0.046	
101.00	-19.13	-3.72	0.00	-42.4	0.00	42.35	1,529.64	366.21	869.88	826.32	12.01	-1.06	0.064	
105.00	-18.50	-3.61	0.00	-27.5	0.00	27.49	1,481.61	350.74	797.97	766.26	12.9	-1.07	0.048	
109.00	-17.48	-3.41	0.00	-13.0	0.00	13.05	1,419.33	335.28	729.16	701.36	13.81	-1.09	0.031	
110.00	-2.70	-0.68	0.00	-8.3	0.00	8.28	1,402.96	331.41	712.44	685.20	14.04	-1.09	0.014	
115.00	-2.05	-0.58	0.00	-4.9	0.00	4.87	1,321.13	312.08	631.76	607.20	15.19	-1.1	0.010	
118.00	-0.68	-0.34	0.00	-3.1	0.00	3.14	1,272.02	300.48	585.68	562.66	15.88	-1.1	0.006	
119.00	0.00	-0.33	0.00	-2.8	0.00	2.79	1,255.66	296.61	570.71	548.20	16.11	-1.1	0.005	

CALCULATED FORCES

Load Case: 1.0D + 1.0W

60 mph Wind with No Ice

20 Iterations

Gust Response Factor: 1.10
Dead Load Factor: 1.00
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-38.96	-7.28	0.00	-636.1	0.00	636.13	4,197.01	1,106.34	5,292.54	4,577.40	0	0	0.148
3.00	-38.09	-7.20	0.00	-614.3	0.00	614.29	4,156.73	1,088.94	5,127.40	4,461.67	0.01	-0.02	0.147
5.00	-37.61	-7.14	0.00	-599.9	0.00	599.89	4,129.42	1,077.34	5,018.76	4,384.81	0.02	-0.04	0.146
10.00	-36.45	-7.05	0.00	-564.2	0.00	564.22	4,059.55	1,048.34	4,752.26	4,193.75	0.09	-0.08	0.144
15.00	-35.32	-6.96	0.00	-529.0	0.00	528.98	3,987.39	1,019.35	4,493.02	4,004.43	0.19	-0.12	0.141
20.00	-34.22	-6.87	0.00	-494.2	0.00	494.19	3,912.95	990.35	4,241.06	3,817.03	0.34	-0.16	0.138
25.00	-33.14	-6.77	0.00	-459.9	0.00	459.86	3,836.23	961.35	3,996.37	3,631.76	0.53	-0.21	0.135
30.00	-32.09	-6.68	0.00	-426.0	0.00	425.99	3,757.23	932.35	3,758.94	3,448.80	0.77	-0.25	0.132
35.00	-31.07	-6.58	0.00	-392.6	0.00	392.61	3,675.94	903.36	3,528.79	3,268.37	1.06	-0.29	0.129
40.00	-30.08	-6.48	0.00	-359.7	0.00	359.71	3,592.36	874.36	3,305.91	3,090.65	1.38	-0.34	0.125
45.00	-29.12	-6.41	0.00	-327.3	0.00	327.30	3,506.51	845.36	3,090.30	2,915.85	1.76	-0.38	0.121
47.50	-28.65	-6.36	0.00	-311.3	0.00	311.29	3,462.72	830.86	2,985.22	2,829.60	1.97	-0.4	0.118
50.00	-27.78	-6.30	0.00	-295.4	0.00	295.40	3,418.37	816.36	2,881.95	2,744.16	2.18	-0.43	0.116
53.25	-26.67	-6.24	0.00	-274.9	0.00	274.94	3,408.56	813.18	2,859.53	2,725.51	2.48	-0.45	0.109
55.00	-26.35	-6.17	0.00	-264.0	0.00	264.02	3,377.08	803.03	2,788.61	2,666.32	2.65	-0.47	0.107
60.00	-25.45	-6.07	0.00	-233.1	0.00	233.14	3,276.75	774.03	2,590.88	2,492.78	3.17	-0.51	0.101
65.00	-24.59	-5.97	0.00	-202.8	0.00	202.78	3,153.99	745.04	2,400.42	2,308.60	3.73	-0.55	0.096
70.00	-20.63	-5.33	0.00	-172.9	0.00	172.91	3,031.23	716.04	2,217.23	2,131.50	4.33	-0.59	0.088
75.00	-19.83	-5.23	0.00	-146.3	0.00	146.27	2,908.48	687.04	2,041.31	1,961.46	4.97	-0.63	0.081
80.00	-19.06	-5.13	0.00	-120.1	0.00	120.12	2,785.72	658.04	1,872.66	1,798.48	5.65	-0.66	0.074
85.00	-18.33	-5.04	0.00	-94.5	0.00	94.47	2,662.96	629.05	1,711.29	1,642.58	6.36	-0.7	0.064
89.00	-17.56	-4.91	0.00	-74.3	0.00	74.31	2,564.76	605.85	1,587.42	1,522.95	6.96	-0.72	0.056
90.00	-14.92	-4.58	0.00	-69.4	0.00	69.40	2,540.21	600.05	1,557.18	1,493.74	7.11	-0.73	0.052
90.10	-14.65	-4.30	0.00	-68.9	0.00	68.94	2,537.75	599.47	1,554.17	1,490.84	7.12	-0.73	0.052
91.00	-13.41	-3.85	0.00	-65.1	0.00	65.07	2,515.65	594.25	1,527.23	1,464.83	7.26	-0.73	0.050
91.20	-12.89	-3.74	0.00	-64.3	0.00	64.30	2,510.74	593.09	1,521.27	1,459.08	7.29	-0.73	0.049
95.00	-12.38	-3.69	0.00	-50.1	0.00	50.08	2,417.45	571.05	1,410.34	1,351.98	7.88	-0.75	0.042
97.00	-12.13	-3.64	0.00	-42.7	0.00	42.70	2,368.35	559.45	1,353.64	1,297.25	8.2	-0.76	0.038
100.00	-8.20	-2.60	0.00	-31.8	0.00	31.79	2,294.69	542.05	1,270.77	1,217.28	8.68	-0.77	0.030
101.00	-8.01	-2.56	0.00	-29.2	0.00	29.19	1,529.64	366.21	869.88	826.32	8.84	-0.77	0.041
105.00	-7.66	-2.49	0.00	-19.0	0.00	18.96	1,481.61	350.74	797.97	766.26	9.49	-0.78	0.030
109.00	-7.13	-2.35	0.00	-9.0	0.00	9.02	1,419.33	335.28	729.16	701.36	10.16	-0.79	0.018
110.00	-1.30	-0.45	0.00	-5.3	0.00	5.28	1,402.96	331.41	712.44	685.20	10.32	-0.8	0.009
115.00	-0.98	-0.38	0.00	-3.0	0.00	3.02	1,321.13	312.08	631.76	607.20	11.16	-0.8	0.006
118.00	-0.24	-0.20	0.00	-1.9	0.00	1.87	1,272.02	300.48	585.68	562.66	11.66	-0.8	0.004
119.00	0.00	-0.20	0.00	-1.7	0.00	1.67	1,255.66	296.61	570.71	548.20	11.83	-0.8	0.003

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

(Based on ASCE7-16 Chapters 11, 12 and 15)

Spectral Response Acceleration for Short Period (S_S):	0.184
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.054
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.000
Site Coefficient F_a :	1.600
Site Coefficient F_v :	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.196
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.086
Seismic Response Coefficient (C_s):	0.032
Upper Limit C_s :	0.032
Lower Limit C_s :	0.030
Period based on Rayleigh Method (sec):	1.810
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.650
Total Unfactored Dead Load:	38.960 k
Seismic Base Shear (E):	1.240 k

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh	Seismic	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
Segment							
35		118.5	59	159	0.003	4	73
34		116.5	181	475	0.009	12	224
33		112.5	328	811	0.016	20	406
32		109.5	81	191	0.004	5	100
31		107	331	754	0.015	18	410
30		103	343	734	0.014	18	425
29		100.5	192	395	0.008	10	238
28		98.5	599	1,190	0.023	29	743
27		96	259	494	0.010	12	321
26		93.1	505	914	0.018	22	626
25		91.1	27	47	0.001	1	34
24		90.55	125	215	0.004	5	154
23		90.05	14	24	0.000	1	17
22		89.5	140	237	0.005	6	173
21		87	570	921	0.018	22	706
20		82.5	737	1,092	0.021	26	914
19		77.5	765	1,022	0.020	25	949
18		72.5	794	949	0.019	23	983
17		67.5	833	886	0.017	21	1,033
16		62.5	862	806	0.016	20	1,068
15		57.5	890	725	0.014	18	1,102
14		54.125	318	235	0.005	6	394
13		51.625	1,108	756	0.015	18	1,373
12		48.75	869	539	0.010	13	1,076
11		46.25	469	267	0.005	6	581
10		42.5	959	474	0.009	11	1,188
9		37.5	987	397	0.008	10	1,223
8		32.5	1,015	322	0.006	8	1,258
7		27.5	1,043	251	0.005	6	1,293
6		22.5	1,071	185	0.004	4	1,328
5		17.5	1,099	125	0.002	3	1,362
4		12.5	1,127	74	0.001	2	1,397
3		7.5	1,156	32	0.001	1	1,432
2		4	470	5	0.000	0	583
1		1.5	714	1	0.000	0	884
Generic 22' Omni		119	140	380	0.007	9	173
Generic 12' Omni		119	40	109	0.002	3	50
Generic Flat Stand-Off		118	562	1,506	0.029	37	697

SEISMIC FORCES						
1.2D + 1.0Ev + 1.0Eh	Seismic					
Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
Ericsson RRUS 32 B66A	110	152	363	0.007	9	188
Ericsson RRUS-11 (19.7")	110	306	729	0.014	18	379
Ericsson RRUS-12 B2	110	348	830	0.016	20	431
Ericsson RRUS-32 (77 lbs)	110	231	551	0.011	13	286
Raycap DC6-48-60-18-8F (31.25" Height)	110	131	313	0.006	8	163
CCI HPA-65R-BUU-H8	110	816	1,945	0.038	47	1,011
Generic Square Platform with Handrails	110	3,790	9,035	0.177	219	4,697
Generic Mount Reinforcement	109	200	470	0.009	11	248
Generic Mount Reinforcement	100	200	407	0.008	10	248
Generic Mount Reinforcement	89	200	336	0.007	8	248
Ericsson Radio 4460 B25+B66	100	327	666	0.013	16	405
Ericsson 4480 BAND 71	100	243	495	0.010	12	301
Ericsson AIR 6419 B41	100	206	418	0.008	10	255
RFS APXVLL19P_43-C-A20	100	123	250	0.005	6	152
RFS APXVAALL24 43-U-NA20	100	368	750	0.015	18	457
Generic Round Low Profile Platform	100	1,875	3,818	0.075	93	2,324
Samsung B2/B66A RRH-BR049	91.2	253	443	0.009	11	314
Samsung B2/B66A RRH-BR049	91	253	441	0.009	11	314
Samsung B5/B13 RRH-BR04C	91.2	211	369	0.007	9	261
Samsung B5/B13 RRH-BR04C	91	211	367	0.007	9	261
Raycap RVZDC-6627-PF-48	91.2	32	56	0.001	1	40
Raycap RVZDC-6627-PF-48	91	32	56	0.001	1	40
Kaelus KA-6030	91	35	61	0.001	1	44
Samsung RT4401-48A	91	56	97	0.002	2	69
Samsung MT6407-77A	91	245	426	0.008	10	303
Commscope NHHSS-65B-R2BT4	91	153	267	0.005	6	190
Commscope NHH-65B-R2B	91	131	228	0.004	6	162
Commscope NHH-65B-R2B	90.1	262	449	0.009	11	325
Generic Round Platform with Handrails	90	2,500	4,276	0.084	104	3,098
Generic Round Platform with Handrails	70	2,500	2,821	0.055	68	3,098
Commscope RDIDC-9181-PF-48	70	22	25	0.000	1	27
Fujitsu TA08025-B604	70	192	216	0.004	5	238
Fujitsu TA08025-B605	70	225	254	0.005	6	279
JMA Wireless MX08FRO665-21	70	194	218	0.004	5	240
Ericsson RRUS E2	3	159	1	0.000	0	197
Totals:		38,964	51,143	1.000	1,241	48,286

SEISMIC FORCES						
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)					
Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
35	118.5	59	159	0.003	4	51
34	116.5	181	475	0.009	12	156
33	112.5	328	811	0.016	20	282
32	109.5	81	191	0.004	5	70
31	107	331	754	0.015	18	285
30	103	343	734	0.014	18	295
29	100.5	192	395	0.008	10	165
28	98.5	599	1,190	0.023	29	516
27	96	259	494	0.010	12	223
26	93.1	505	914	0.018	22	435
25	91.1	27	47	0.001	1	23
24	90.55	125	215	0.004	5	107
23	90.05	14	24	0.000	1	12
22	89.5	140	237	0.005	6	120
21	87	570	921	0.018	22	490
20	82.5	737	1,092	0.021	26	635
19	77.5	765	1,022	0.020	25	659
18	72.5	794	949	0.019	23	683
17	67.5	833	886	0.017	21	717
16	62.5	862	806	0.016	20	742

SEISMIC FORCES						
0.9D - 1.0Ev + 1.0Eh		Seismic (Reduced DL)				
Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
15	57.5	890	725	0.014	18	766
14	54.125	318	235	0.005	6	274
13	51.625	1,108	756	0.015	18	954
12	48.75	869	539	0.010	13	748
11	46.25	469	267	0.005	6	404
10	42.5	959	474	0.009	11	825
9	37.5	987	397	0.008	10	849
8	32.5	1,015	322	0.006	8	874
7	27.5	1,043	251	0.005	6	898
6	22.5	1,071	185	0.004	4	922
5	17.5	1,099	125	0.002	3	946
4	12.5	1,127	74	0.001	2	970
3	7.5	1,156	32	0.001	1	995
2	4	470	5	0.000	0	405
1	1.5	714	1	0.000	0	614
Generic 22' Omni	119	140	380	0.007	9	121
Generic 12' Omni	119	40	109	0.002	3	34
Generic Flat Stand-Off	118	562	1,506	0.029	37	484
Ericsson RRUS 32 B66A	110	152	363	0.007	9	131
Ericsson RRUS-11 (19.7")	110	306	729	0.014	18	263
Ericsson RRUS-12 B2	110	348	830	0.016	20	300
Ericsson RRUS-32 (77 lbs)	110	231	551	0.011	13	199
Raycap DC6-48-60-18-8F (31.25" Height)	110	131	313	0.006	8	113
CCI HPA-65R-BUU-H8	110	816	1,945	0.038	47	702
Generic Square Platform with Handrails	110	3,790	9,035	0.177	219	3,262
Generic Mount Reinforcement	109	200	470	0.009	11	172
Generic Mount Reinforcement	100	200	407	0.008	10	172
Generic Mount Reinforcement	89	200	336	0.007	8	172
Ericsson Radio 4460 B25+B66	100	327	666	0.013	16	281
Ericsson 4480 BAND 71	100	243	495	0.010	12	209
Ericsson AIR 6419 B41	100	206	418	0.008	10	177
RFS APXVLL19P_43-C-A20	100	123	250	0.005	6	106
RFS APXVAALL24 43-U-NA20	100	368	750	0.015	18	317
Generic Round Low Profile Platform	100	1,875	3,818	0.075	93	1,614
Samsung B2/B66A RRH-BR049	91.2	253	443	0.009	11	218
Samsung B2/B66A RRH-BR049	91	253	441	0.009	11	218
Samsung B5/B13 RRH-BR04C	91.2	211	369	0.007	9	182
Samsung B5/B13 RRH-BR04C	91	211	367	0.007	9	182
Raycap RVZDC-6627-PF-48	91.2	32	56	0.001	1	28
Raycap RVZDC-6627-PF-48	91	32	56	0.001	1	28
Kaelus KA-6030	91	35	61	0.001	1	30
Samsung RT4401-48A	91	56	97	0.002	2	48
Samsung MT6407-77A	91	245	426	0.008	10	211
Commscope NHHSS-65B-R2BT4	91	153	267	0.005	6	132
Commscope NHH-65B-R2B	91	131	228	0.004	6	113
Commscope NHH-65B-R2B	90.1	262	449	0.009	11	226
Generic Round Platform with Handrails	90	2,500	4,276	0.084	104	2,152
Generic Round Platform with Handrails	70	2,500	2,821	0.055	68	2,152
Commscope RDIDC-9181-PF-48	70	22	25	0.000	1	19
Fujitsu TA08025-B604	70	192	216	0.004	5	165
Fujitsu TA08025-B605	70	225	254	0.005	6	194
JMA Wireless MX08FRO665-21	70	194	218	0.004	5	167
Ericsson RRUS E2	3	159	1	0.000	0	137
Totals:		38,964	51,143	1.000	1,241	33,538

1.2D + 1.0Ev + 1.0Eh

Seismic

CALCULATED FORCES													
Seg Elev (ft)	P _u FY (-) (kips)	V _u FX (-) (kips)	T _u MY (ft-kips)	M _u MZ (fr-kips)	M _u Mx (ft-kips)	Resultant Moment (ft-kips)	Phi P _n (kips)	Phi V _n (kips)	Phi T _n (kips)	Phi M _n (kips)	Total Deflect (in)	Rotation (deg)	Ratio

ASSET: 209185, Burlington 2
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
PROJECT: OAA792268_C3_02

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-47.40	-1.24	0.00	-118.15	0.00	118.15	4,197.01	1,106.34	5,293	4,577.40	0.00	0.00	0.04
3.00	-46.62	-1.25	0.00	-114.43	0.00	114.43	4,156.73	1,088.94	5,127	4,461.67	0.00	0.00	0.04
5.00	-45.19	-1.25	0.00	-111.94	0.00	111.94	4,129.42	1,077.34	5,019	4,384.81	0.00	-0.01	0.04
10.00	-43.79	-1.25	0.00	-105.69	0.00	105.69	4,059.55	1,048.34	4,752	4,193.75	0.02	-0.01	0.04
15.00	-42.43	-1.25	0.00	-99.43	0.00	99.43	3,987.39	1,019.35	4,493	4,004.43	0.04	-0.02	0.04
20.00	-41.10	-1.25	0.00	-93.16	0.00	93.16	3,912.95	990.35	4,241	3,817.03	0.06	-0.03	0.04
25.00	-39.81	-1.25	0.00	-86.89	0.00	86.89	3,836.23	961.35	3,996	3,631.76	0.10	-0.04	0.03
30.00	-38.55	-1.25	0.00	-80.62	0.00	80.62	3,757.23	932.35	3,759	3,448.80	0.14	-0.05	0.03
35.00	-37.33	-1.25	0.00	-74.37	0.00	74.37	3,675.94	903.36	3,529	3,268.37	0.20	-0.05	0.03
40.00	-36.14	-1.24	0.00	-68.14	0.00	68.14	3,592.36	874.36	3,306	3,090.65	0.26	-0.06	0.03
45.00	-35.56	-1.23	0.00	-61.95	0.00	61.95	3,506.51	845.36	3,090	2,915.85	0.33	-0.07	0.03
47.50	-34.48	-1.22	0.00	-58.87	0.00	58.87	3,462.72	830.86	2,985	2,829.60	0.37	-0.08	0.03
50.00	-33.11	-1.21	0.00	-55.81	0.00	55.81	3,418.37	816.36	2,882	2,744.16	0.41	-0.08	0.03
53.25	-32.71	-1.20	0.00	-51.90	0.00	51.90	3,408.56	813.18	2,860	2,725.51	0.47	-0.09	0.03
55.00	-31.61	-1.19	0.00	-49.79	0.00	49.79	3,377.08	803.03	2,789	2,666.32	0.50	-0.09	0.03
60.00	-30.54	-1.17	0.00	-43.87	0.00	43.87	3,276.75	774.03	2,591	2,492.78	0.60	-0.10	0.03
65.00	-29.51	-1.15	0.00	-38.03	0.00	38.03	3,153.99	745.04	2,400	2,308.60	0.70	-0.10	0.03
70.00	-24.65	-1.03	0.00	-32.28	0.00	32.28	3,031.23	716.04	2,217	2,131.50	0.81	-0.11	0.02
75.00	-23.70	-1.01	0.00	-27.12	0.00	27.12	2,908.48	687.04	2,041	1,961.46	0.93	-0.12	0.02
80.00	-22.78	-0.98	0.00	-22.07	0.00	22.07	2,785.72	658.04	1,873	1,798.48	1.06	-0.13	0.02
85.00	-22.08	-0.96	0.00	-17.15	0.00	17.15	2,662.96	629.05	1,711	1,642.58	1.20	-0.13	0.02
89.00	-21.66	-0.95	0.00	-13.30	0.00	13.30	2,564.76	605.85	1,587	1,522.95	1.31	-0.14	0.02
90.00	-18.54	-0.84	0.00	-12.35	0.00	12.35	2,540.21	600.05	1,557	1,493.74	1.34	-0.14	0.02
90.10	-18.06	-0.82	0.00	-12.27	0.00	12.27	2,537.75	599.47	1,554	1,490.84	1.34	-0.14	0.02
91.00	-16.65	-0.77	0.00	-11.53	0.00	11.53	2,515.65	594.25	1,527	1,464.83	1.37	-0.14	0.01
91.20	-15.41	-0.72	0.00	-11.38	0.00	11.38	2,510.74	593.09	1,521	1,459.08	1.37	-0.14	0.01
95.00	-15.08	-0.71	0.00	-8.63	0.00	8.63	2,417.45	571.05	1,410	1,351.98	1.48	-0.14	0.01
97.00	-14.34	-0.68	0.00	-7.21	0.00	7.21	2,368.35	559.45	1,354	1,297.25	1.54	-0.14	0.01
100.00	-9.96	-0.49	0.00	-5.17	0.00	5.17	2,294.69	542.05	1,271	1,217.28	1.63	-0.14	0.01
101.00	-9.54	-0.48	0.00	-4.68	0.00	4.68	1,529.64	366.21	870	826.32	1.66	-0.14	0.01
105.00	-9.13	-0.46	0.00	-2.78	0.00	2.78	1,481.61	350.74	798	766.26	1.78	-0.15	0.01
109.00	-8.78	-0.44	0.00	-0.95	0.00	0.95	1,419.33	335.28	729	701.36	1.91	-0.15	0.01
110.00	-1.22	-0.07	0.00	-0.51	0.00	0.51	1,402.96	331.41	712	685.20	1.94	-0.15	0.00
115.00	-0.99	-0.05	0.00	-0.18	0.00	0.18	1,321.13	312.08	632	607.20	2.09	-0.15	0.00
118.00	-0.22	-0.01	0.00	-0.01	0.00	0.01	1,272.02	300.48	586	562.66	2.18	-0.15	0.00
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	1,255.66	296.61	571	548.20	2.22	-0.15	0.00

0.9D - 1.0Ev + 1.0Eh Seismic (Reduced DL)

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-32.92	-1.24	0.00	-116.80	0.00	116.80	4,197.01	1,106.34	5,293	4,577.40	0.00	0.00	0.03
3.00	-32.38	-1.24	0.00	-113.07	0.00	113.07	4,156.73	1,088.94	5,127	4,461.67	0.00	0.00	0.03
5.00	-31.39	-1.24	0.00	-110.59	0.00	110.59	4,129.42	1,077.34	5,019	4,384.81	0.00	-0.01	0.03
10.00	-30.42	-1.25	0.00	-104.37	0.00	104.37	4,059.55	1,048.34	4,752	4,193.75	0.02	-0.01	0.03
15.00	-29.47	-1.25	0.00	-98.13	0.00	98.13	3,987.39	1,019.35	4,493	4,004.43	0.04	-0.02	0.03
20.00	-28.55	-1.25	0.00	-91.90	0.00	91.90	3,912.95	990.35	4,241	3,817.03	0.06	-0.03	0.03
25.00	-27.65	-1.24	0.00	-85.67	0.00	85.67	3,836.23	961.35	3,996	3,631.76	0.10	-0.04	0.03
30.00	-26.78	-1.24	0.00	-79.45	0.00	79.45	3,757.23	932.35	3,759	3,448.80	0.14	-0.05	0.03
35.00	-25.93	-1.23	0.00	-73.26	0.00	73.26	3,675.94	903.36	3,529	3,268.37	0.20	-0.05	0.03
40.00	-25.10	-1.22	0.00	-67.10	0.00	67.10	3,592.36	874.36	3,306	3,090.65	0.26	-0.06	0.03
45.00	-24.70	-1.22	0.00	-60.98	0.00	60.98	3,506.51	845.36	3,090	2,915.85	0.33	-0.07	0.03
47.50	-23.95	-1.21	0.00	-57.93	0.00	57.93	3,462.72	830.86	2,985	2,829.60	0.36	-0.07	0.03
50.00	-23.00	-1.19	0.00	-54.92	0.00	54.92	3,418.37	816.36	2,882	2,744.16	0.40	-0.08	0.03
53.25	-22.72	-1.18	0.00	-51.05	0.00	51.05	3,408.56	813.18	2,860	2,725.51	0.46	-0.08	0.03
55.00	-21.96	-1.17	0.00	-48.98	0.00	48.98	3,377.08	803.03	2,789	2,666.32	0.49	-0.09	0.03
60.00	-21.21	-1.15	0.00	-43.14	0.00	43.14	3,276.75	774.03	2,591	2,492.78	0.59	-0.10	0.02
65.00	-20.50	-1.13	0.00	-37.39	0.00	37.39	3,153.99	745.04	2,400	2,308.60	0.69	-0.10	0.02
70.00	-17.12	-1.02	0.00	-31.74	0.00	31.74	3,031.23	716.04	2,217	2,131.50	0.80	-0.11	0.02

CALCULATED FORCES													
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
75.00	-16.46	-0.99	0.00	-26.65	0.00	26.65	2,908.48	687.04	2,041	1,961.46	0.92	-0.12	0.02
80.00	-15.82	-0.97	0.00	-21.69	0.00	21.69	2,785.72	658.04	1,873	1,798.48	1.05	-0.12	0.02
85.00	-15.33	-0.94	0.00	-16.85	0.00	16.85	2,662.96	629.05	1,711	1,642.58	1.18	-0.13	0.02
89.00	-15.04	-0.93	0.00	-13.07	0.00	13.07	2,564.76	605.85	1,587	1,522.95	1.29	-0.13	0.01
90.00	-12.88	-0.82	0.00	-12.14	0.00	12.14	2,540.21	600.05	1,557	1,493.74	1.32	-0.13	0.01
90.10	-12.55	-0.81	0.00	-12.06	0.00	12.06	2,537.75	599.47	1,554	1,490.84	1.32	-0.13	0.01
91.00	-11.56	-0.75	0.00	-11.33	0.00	11.33	2,515.65	594.25	1,527	1,464.83	1.35	-0.14	0.01
91.20	-10.70	-0.71	0.00	-11.18	0.00	11.18	2,510.74	593.09	1,521	1,459.08	1.35	-0.14	0.01
95.00	-10.48	-0.70	0.00	-8.49	0.00	8.49	2,417.45	571.05	1,410	1,351.98	1.46	-0.14	0.01
97.00	-9.96	-0.67	0.00	-7.09	0.00	7.09	2,368.35	559.45	1,354	1,297.25	1.52	-0.14	0.01
100.00	-6.92	-0.49	0.00	-5.09	0.00	5.09	2,294.69	542.05	1,271	1,217.28	1.61	-0.14	0.01
101.00	-6.62	-0.47	0.00	-4.60	0.00	4.60	1,529.64	366.21	870	826.32	1.64	-0.14	0.01
105.00	-6.34	-0.45	0.00	-2.73	0.00	2.73	1,481.61	350.74	798	766.26	1.76	-0.14	0.01
109.00	-6.10	-0.43	0.00	-0.93	0.00	0.93	1,419.33	335.28	729	701.36	1.88	-0.15	0.01
110.00	-0.85	-0.07	0.00	-0.50	0.00	0.50	1,402.96	331.41	712	685.20	1.91	-0.15	0.00
115.00	-0.69	-0.05	0.00	-0.17	0.00	0.17	1,321.13	312.08	632	607.20	2.06	-0.15	0.00
118.00	-0.15	-0.01	0.00	-0.01	0.00	0.01	1,272.02	300.48	586	562.66	2.15	-0.15	0.00
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	1,255.66	296.61	571	548.20	2.18	-0.15	0.00

ANALYSIS SUMMARY

Load Case	Base Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	30.42	0.00	46.73	0.00	0.00	2671.68	0.00	0.6
0.9D + 1.0W	30.41	0.00	35.04	0.00	0.00	2648.50	0.00	0.59
1.2D + 1.0Di + 1.0Wi	9.48	0.00	73.45	0.00	0.00	853.37	0.00	0.2
1.2D + 1.0Ev + 1.0Eh	1.25	0.00	47.40	0.00	0.00	118.15	0.00	0.04
0.9D - 1.0Ev + 1.0Eh	1.25	0.00	32.92	0.00	0.00	116.80	0.00	0.03
1.0D + 1.0W	7.28	0.00	38.96	0.00	0.00	636.13	0.00	0.15

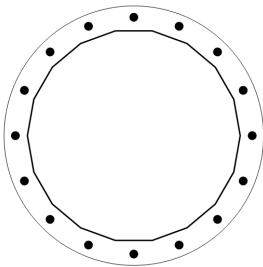
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
2671.68	46.73	30.42

PLATE PARAMETERS (ID# 10190)

Width:	65.75	in
Shape:	Round	
Thickness:	2	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Rod Detail Type:	d	
Clear Distance	3.25	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	79	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F _y (ksi)	F _u (ksi)	Spacing (in)	Offset (°)
Original [ID#986]	Radial	16	2.25	60	A615-75	75	100	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	53.34"Ø x 0.375" (18 Sides)	62.0816	-	-	21772.55	-
Bolt Group	Original (16) 2.25"Ø	3.9761	3.2477	0.8393	21395.50	4.5

REACTION DISTRIBUTION

Component	ID	Moment M _u (k-ft)	Axial Load P _u (k)	Shear V _u (k)	Moment Factor
Pole	53.34"Ø x 0.375" (18 Sides)	2671.7	46.73	30.42	1.000
Bolt Group	Original (16) 2.25"Ø	2671.7	-	30.42	1.000

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES					PLATE PROPERTIES		
Flat-to-Flat Diameter:	53.46	in	Flat Width:	9.427	in	Neutral Axis:	79 °
Point-to-Point Diameter:	54.29	in	Flat Radians:	0.349	rad	Bend Line Limits:	2.482 to 3.409 rad
Orientation Offset:	-	°					
Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in ³)	Applied Moment M _u (k-in)	Moment Capacity ΦM _n (k-in)	Flexure Result M _u /ΦM _n	
Flats	34.056	0.00	34.056	392.6	1532.5	25.6%	✓
Corners	32.725	0.00	32.725	277.2	1472.6	18.8%	✓
Circumferential	39.251	0.00	39.251	431.5	1766.3	24.4%	✓

PLASTIC ANCHOR ROD ANALYSIS

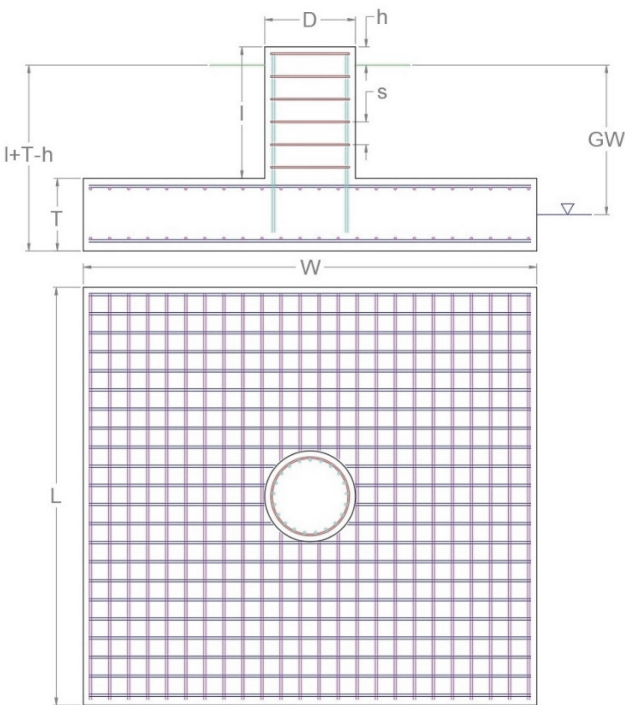
Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P _u (k)	Applied Shear Load V _u (k)	Compressive Capacity ΦP _n (k)	Interaction Result
Original	16	2.25	115.0	2.9	243.6	49.5% ✓



APPLIED GLOBAL REACTIONS		
Moment (k-ft)	Axial (k)	Shear (k)
2,671.68	46.73	30.42

FOUNDATION PARAMETERS

Mat Length:	L	24	ft
Mat Width:	W	24	ft
Mat Thickness:	T	1.5	ft
Base Depth:	L+T-h	6	ft
Pier Shape:		Round	
Pier Diameter:	D	8	ft
Pier Height above Grade:	h	0.5	ft
Concrete Compressive Strength:		4,500	psi
Mat Top Rebar:		(52) #8 bars [60 ksi]	
Mat Bottom Rebar:		(52) #8 bars [60 ksi]	
Pier Vertical Rebar:		(48) #8 bars [60 ksi]	
Pier Rebar Ties:	s	#5 bars @ 12.0" c/c [60 ksi]	
Rebar Clear Cover:		3.0	in
Tower Eccentricity:	ecc	0	ft
Tower Leg Count		1	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	ft
Soil Unit Weight:	125	pcf
Ultimate Skin Friction:		psf
Ultimate Bearing Pressure:	8,000	psf
Bearing Pressure Type:	Net	
Coefficient of Shear Friction:	0.2	

SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, Φ_s	Uplift Strength Reduction Factor, Φ_s	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$	
2,869.41	5,700.79	50.3%	✓

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$	
1,681.00	6,562.00	Diagonal to Pad Edge	25.6%	✓

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, V_u (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$	
30.42	0.00	656.2	23.62	93.01	33.0%	✓

MAT REINFORCING STEEL STRENGTH ANALYSIS

Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
29,000	0.9	0.75	0.65

MAT REINFORCING ONE WAY SHEAR ANALYSIS

One Way Design Shear, V_u (k)	Nominal One Way Shear Capacity, $\Phi_c V_n$ (k)	One Way Shear Controlling Load Direction	Mat One Way Shear Usage, $V_u / \Phi_c V_n$
129.73	399.08	Diagonal to Pad Edge	32.5%



MAT REINFORCING PUNCHING SHEAR ANALYSIS

Punching Shear Design Stress, v_u (psi)	Nominal Punching Shear Capacity, $\Phi_c V_n$ (psi)	Mat Punching Shear Usage, $v_u / \Phi_c V_n$
90.5	182.2	49.7%



MAT REINFORCING MOMENT TRANSFER ANALYSIS

Moment Transfer Effective Flexural Width, w_f (in)	Neutral Axis Depth (in)	Pier Moment at Joint, M_{ut} (k-in)	Nominal Moment Transfer Capacity, $\Phi M_{sc,f}$ (k-in)	Mat Moment Transfer Usage, $0.6 M_{ut} / \Phi M_{sc,f}$
12.50	2.33	0.00	15,638.6	0.0%



MAT REINFORCING FLEXURE ANALYSIS – UPPER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Upper Rebar Flexure Usage, $M_u / \Phi M_n$
604.80	2,412.25	Parallel to Pad Edge	25.1%



MAT REINFORCING FLEXURE ANALYSIS – LOWER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Lower Rebar Flexure Usage, $M_u / \Phi M_n$
1,037.60	2,412.25	Parallel to Pad Edge	43.0%



PIER REINFORCING STEEL STRENGTH ANALYSIS

Rebar Cage Diameter (in)	Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
87.75	29,000	0.9	0.75	0.65

PIER REINFORCING MOMENT ANALYSIS

Design Moment, M_u (k-ft)	Nominal Moment Capacity, $\Phi_b M_n$ (k-ft)	Bending Reinforcement Ratio	Pier Rebar Flexure Usage, $M_u / \Phi_b M_n$
2,823.78	7,322.04	0.005	38.6%



PIER REINFORCING COMPRESSION ANALYSIS

Design Compression, P_u (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$
46.73	14,346.06	0.3%



PIER REINFORCING SHEAR ANALYSIS

Design Shear, V_u (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$
30.42	909.24	3.3%



PIER FOUNDATION ANALYSIS

GLOBAL REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
2,671.68	46.73	30.42

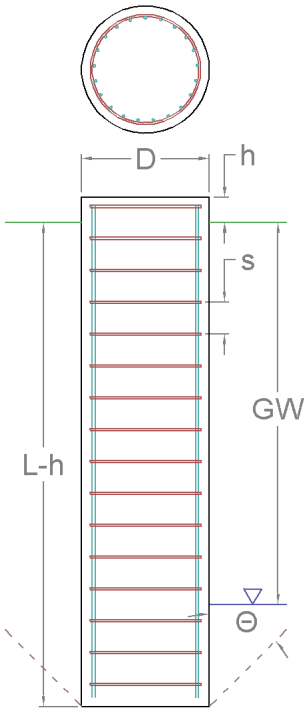
FOUNDATION PARAMETERS

Pier Diameter:	D	7.00	ft
Pier Embedment Depth:	L-h	24.0	ft
Pier Height above Grade:	h	0.50	ft
Concrete Compressive Strength:		4,500	psi
Vertical Rebar:		(34) #9 bars [60 ksi]	
Tie Rebar:	s	#5 bars @ 8.0" c/c [60 ksi]	
Rebar Clear Cover:		3.00	in

SOIL PARAMETERS

Water Table Depth [BGL]:	GW	24	ft
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Layer Depth (ft)		Unit Weight pcf	Cohesion psf	Friction Angle °	Ultimate Skin Friction psf	Ultimate Net Bearing psf
Top	Bottom					
0	3	105	0	0	0	0
3	23.9	120	0	34	0	0
23.9	28.9	130	0	36	0	12,400



SOIL STRENGTH ANALYSIS

Volume of Concrete (ft³)	Buoyant Weight of Concrete (k)	Skin Friction Resistance (k)	Inflection Point [BGL] (ft)
942.87	141.43	0.00	17.15

SOIL MOMENT ANALYSIS

Total Lateral Resistance (k)	Moment at Inflection Point, M _u (k-ft)	Additional Resistance (k-ft)	Nominal Moment Capacity, ΦM _n (k-ft)	Soil Moment Usage, M _u / ΦM _n
2,104.86	3,208.48	0.00	7,149.14	44.9%

SOIL COMPRESSION ANALYSIS

Compressive Bearing Resistance (k)	Compressive Force, P _u (k)	Additional Resistance (k)	Nominal Compressive Capacity, ΦP _n (k)	Soil Compressive Usage, P _u / ΦP _n
477.21	82.30	0.00	357.91	23.0%

REINFORCING STEEL STRENGTH ANALYSIS

Rebar Cage Diameter (in)	Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
75.622	29,000	0.9	0.75	0.65

PIER REINFORCING MOMENT ANALYSIS

Design Moment, M_u (k-ft)	Nominal Moment Capacity, $\Phi_b M_n$ (k-ft)	Bending Reinforcement Ratio	Pier Rebar Flexure Usage, $M_u / \Phi_b M_n$
2,691.02	5,657.91	0.01	47.6%



PIER REINFORCING COMPRESSION ANALYSIS

Buoyant Weight of Concrete (k)	Design Compression, P_u (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$
141.43	82.30	12,015.75	0.7%



PIER REINFORCING SHEAR ANALYSIS

Design Shear, V_u (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$
289.58	794.34	36.5%



EXHIBIT F

Mount Analysis Report

Date: **March 29, 2024**

T-Mobile
35 Griffin Rd S
Bloomfield, CT 06002



P. Marshall & Associates, LLC
1000 Holcomb Woods Pkwy, Suite 210
Roswell, GA 30076
(678) 280-2325

Subject:	Structural Mount Analysis Report	
Carrier Designation:	T-Mobile Co-Locate	
	Carrier Site Number:	CTHA560B
	Carrier Site Name:	CTHA560B
Engineering Firm Designation:	PM&A Report Designation:	CTHA560B
Site Data:	87 Monce Road Burlington, Hartford County, CT 06013 Latitude 41°44'20.85", Longitude -72°54'28.11"	
Structure Information:	Tower Height & Type:	119 ft Monopole
	Mount Elevation:	100 ft
	Mount Type:	12.5 ft Platform Mount

PM&A is pleased to submit this “**Structural Mount Analysis Report**” to determine the structural integrity of T-Mobile's antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned 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.

Based upon our analysis, we have determined the adequacy of the antenna mounting system that will support the existing and proposed loading to be:

Platform (typical)	Sufficient Capacity*
*The mount has sufficient capacity once the recommendations listed in Section 4.1 of this report are completed.	

This analysis has been performed in accordance with the 2018 International Building Code based upon an ultimate 3-second gust wind speed of 120 mph. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

We at PM&A appreciate the opportunity of providing our continuing professional services to you and T-Mobile. If you have any questions or need further assistance on this or any other projects, please give us a call.

Mount analysis prepared by: Ashim Pant
Respectfully Submitted by:

Derek Creaser, P.E.
Connecticut Professional Engineer
License Number: PEN.0028551

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1) INTRODUCTION

This is an existing 3-sector 12.5 ft Platform Mount.

2) ANALYSIS CRITERIA

Building Code:	2018 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	120 mph
Exposure Category:	C
Topographic Factor at Base:	1.000
Topographic Factor at Mount:	1.000
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic Ss:	0.180
Seismic S1:	0.054
Live Loading Wind Speed:	30 mph
Man Live Load at Mid/End-Points:	250 lbs
Man Live Load at Mount Pipes:	500 lbs

Table 1 - Proposed Equipment Loading Information

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Model Notes
100.0	100.0	3	RFS/CELWAVE	APXVLL19P_43-C-A20	Existing Platform Mount
100.0	100.0	3	ERICSSON	4460 B25+B66	
100.0	100.0	3	ERICSSON	AIR 6419 B41	

Table 2 - Existing and Reserved Equipment Loading Information

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Model Notes
100.0	100.0	3	RFS/CELWAVE	APXVAALL24_43-U-NA20	Existing Platform Mount
100.0	100.0	3	ERICSSON	4480 B71+B85	

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
Mount Mapping and Photos	Mount Mapping Report: CTHA560B	03/13/2024	Structural Components
Loading Document	TMO RFDS: CTHA560B_Anchor_4_draft	01/12/2024	T-Mobile

3.1) Analysis Method

RISA 3D (version 21.0.0), 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.

3.2) Assumptions

- 1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specifications.
- 2) The configuration of antennas, mounts, and other appurtenances are as specified in Tables 1 and 2 and the referenced documents.
- 3) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
- 4) Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked as a part of this analysis.
- 5) The use of this report shall be limited to the purpose of which it was commissioned and may not be used for any other purposes without the written consent of PM&A.
- 6) The analysis of this report does not include climbing facility or construction lift loading or structural evaluations.
- 7) Steel grades have been assumed as follows, unless noted otherwise:

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM A500 (GR B-46)
Pipe	ASTM A53 (GR 35)
Connection Bolts	ASTM A325

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

4) ANALYSIS RESULTS

Table 4 - Mount Component Stresses vs. Capacity (Platform, Typical)

Notes	Component	Mount Centerline (ft)	% Capacity	Pass / Fail
2, 3	Mount-to-Collar Connection	100.0	15.6	Pass
1, 3	Mount Pipes	100.0	81.8	Pass
1, 3	Face Horizontal	100.0	21.9	Pass
1, 3	Standoff Members	100.0	37.9	Pass
1, 3	Support Rail	100.0	42.8	Pass
1, 3	Grating Support	100.0	23.2	Pass
1, 3	Plates	100.0	62.6	Pass

Structure Rating (max from all components) =	81.8%
---	--------------

Notes:

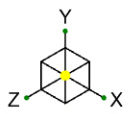
- 1) See additional documentation in "Appendix C – Software Analysis Output" for calculations supporting the % capacity consumed.
- 2) See additional documentation in "Appendix D – Additional Calculations" for detailed mount connection calculations.
- 3) All sectors are typical.

4.1) Recommendations

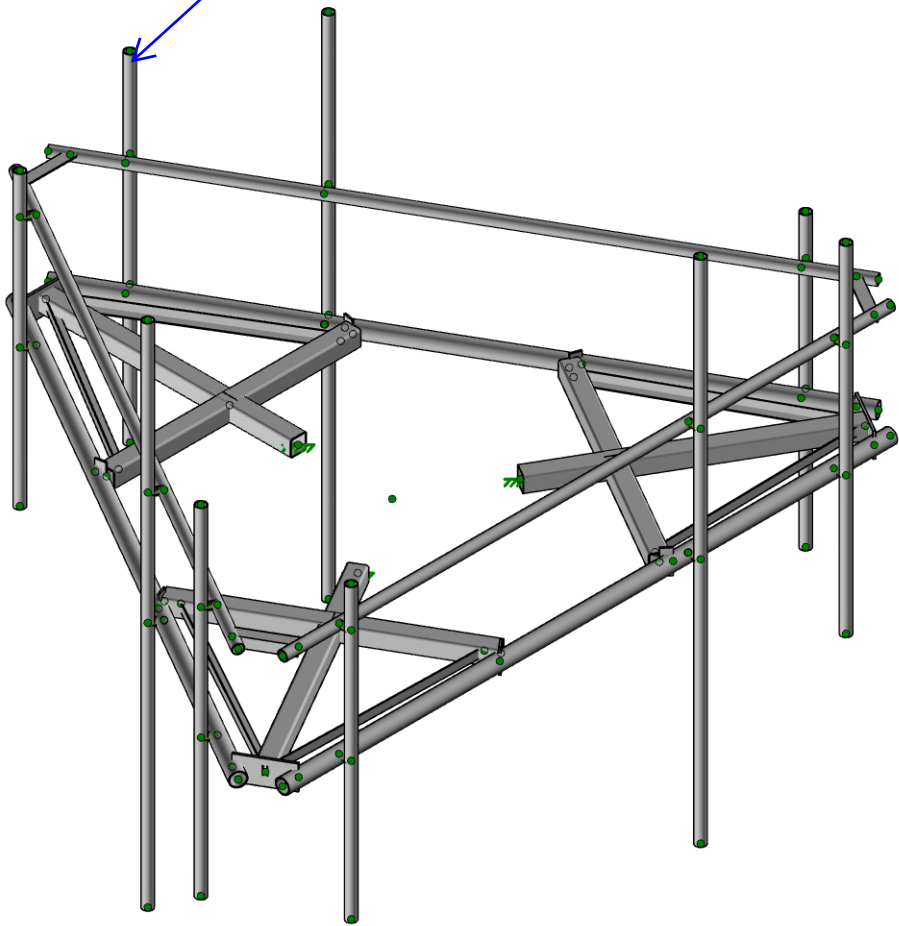
Once the following recommendations has been completed, the mount has sufficient capacity for the proposed and existing loading configuration.

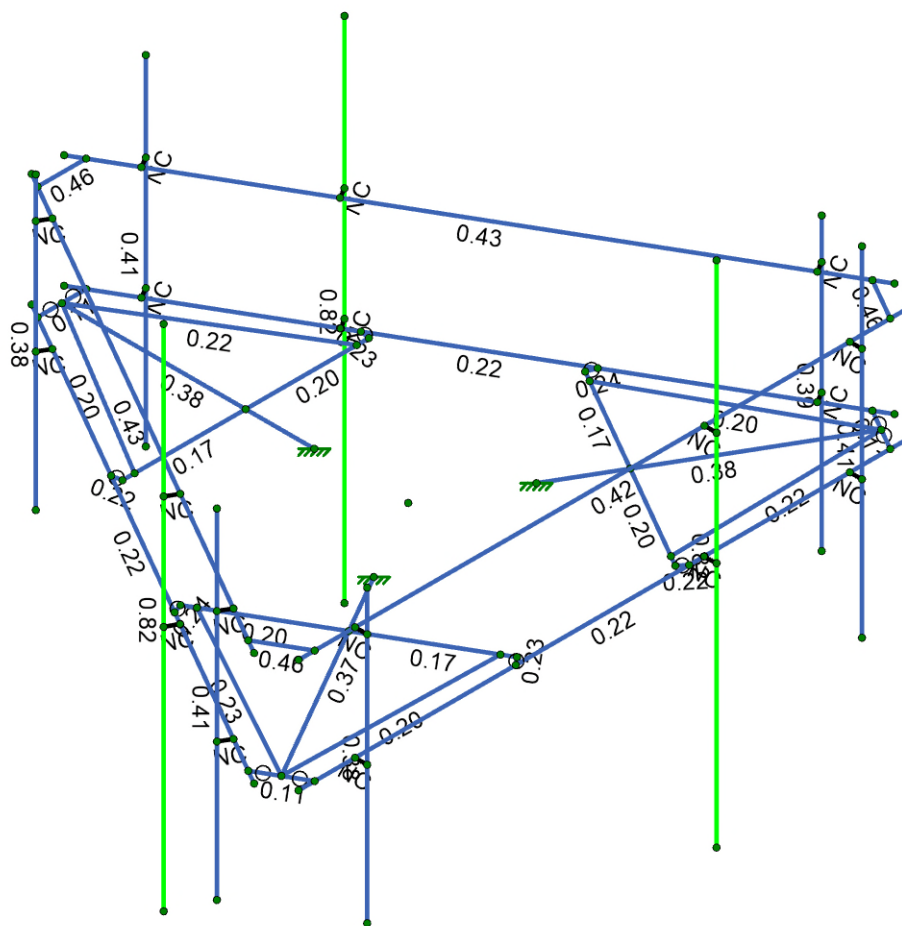
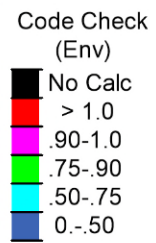
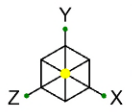
- a) Install (1) 2.0" STD., 7ft long mount pipe in Position 1 in all sectors.

APPENDIX A
WIRE FRAME AND RENDERED MODELS



Install (1) 2.0" STD., 7ft long mount pipe in
Position 1 in all sectors





Member Code Checks Displayed (Enveloped)

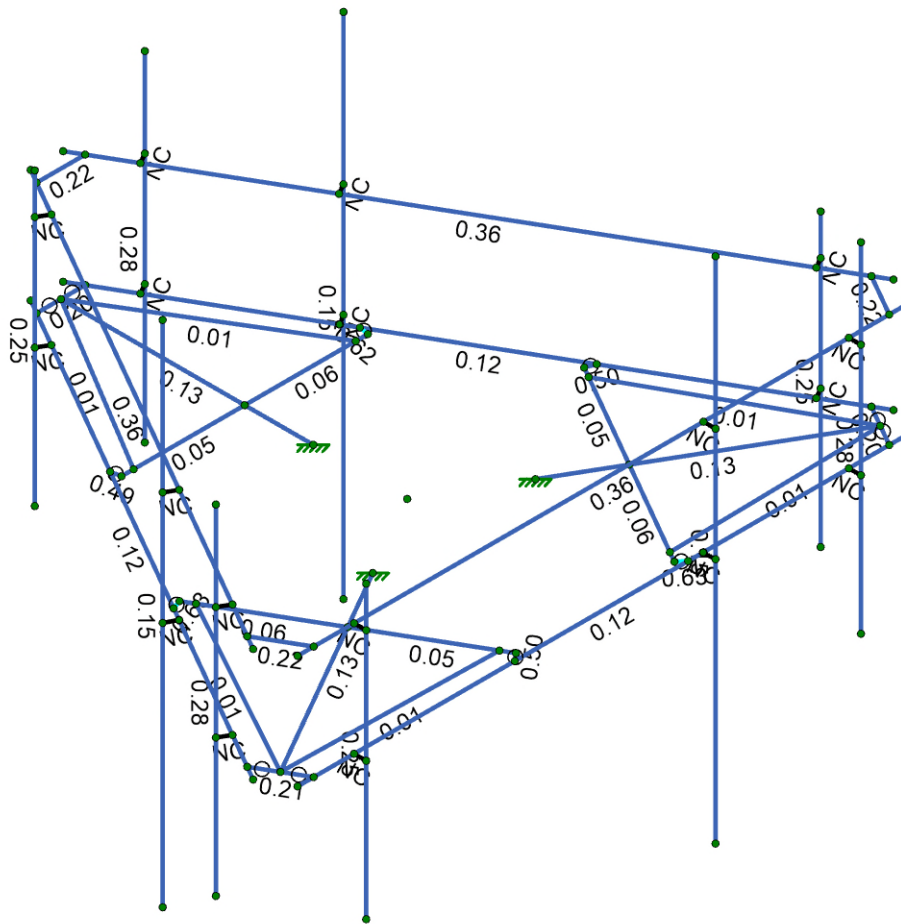
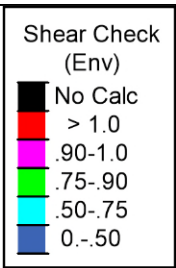
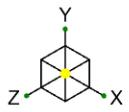


AP

SK-2

Mar 29, 2024 at 11:22 AM

CTHA560B.r3d



Member Shear Checks Displayed (Enveloped)

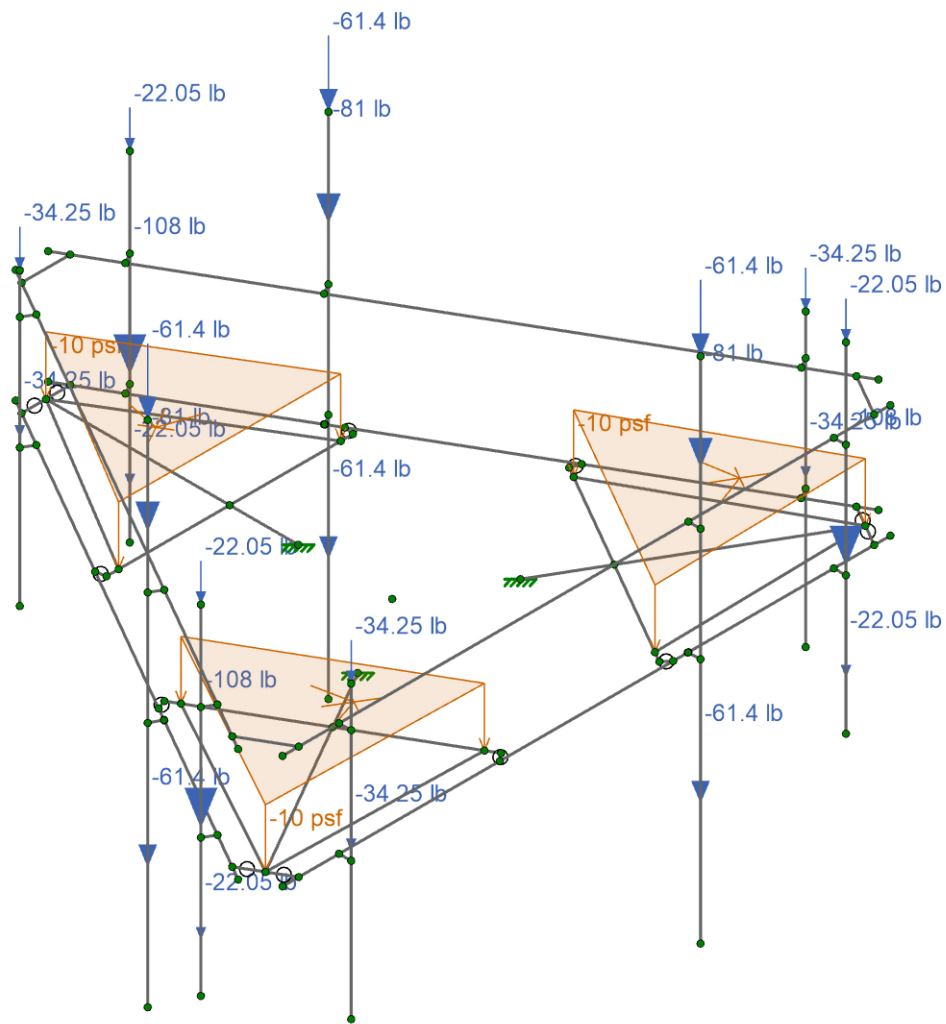
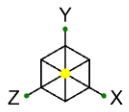


AP

SK-3

Mar 29, 2024 at 11:22 AM

CTHA560B.r3d



Loads: BLC 1, Dead

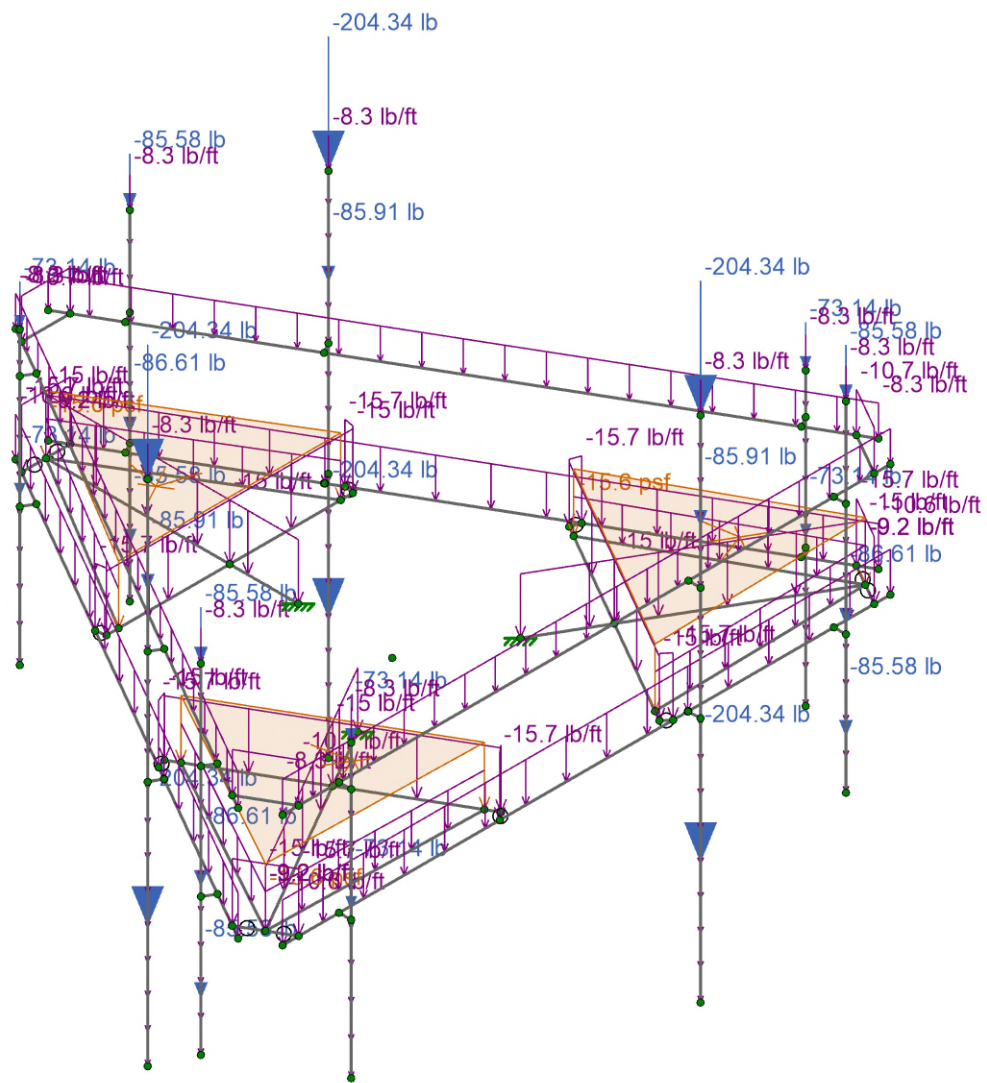


AP

SK-4

Mar 29, 2024 at 11:22 AM

CTHA560B.r3d



Loads: BLC 2, Ice

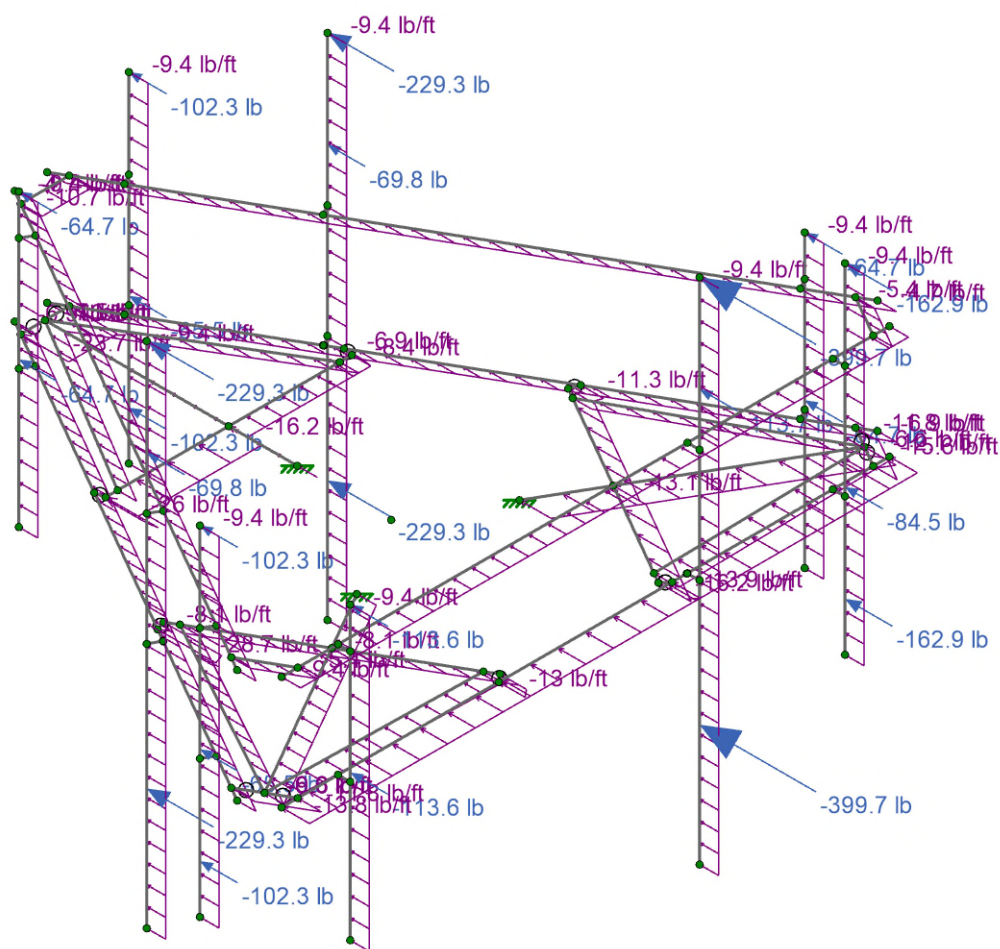


AP

SK-5

Mar 29, 2024 at 11:22 AM

CTHA560B.r3d

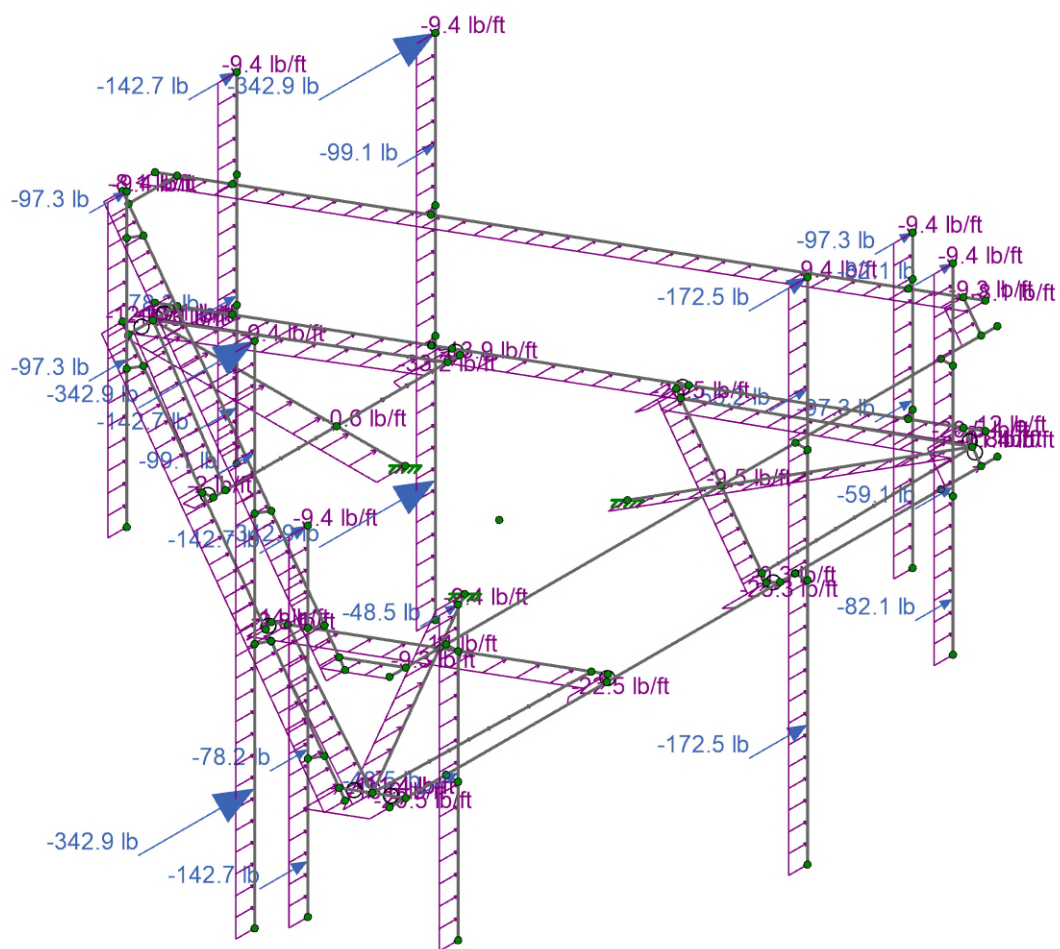


IRISA
A NEMETSCHEK COMPANY

SK-6

Mar 29, 2024 at 11:23 AM

CTHA560B.r3d



IRISA
A NEMETSCHEK COMPANY

CTHA560B.r3d

APPENDIX B
SOFTWARE INPUT CALCULATIONS



ASCE Hazards Report

Address:

No Address at This Location

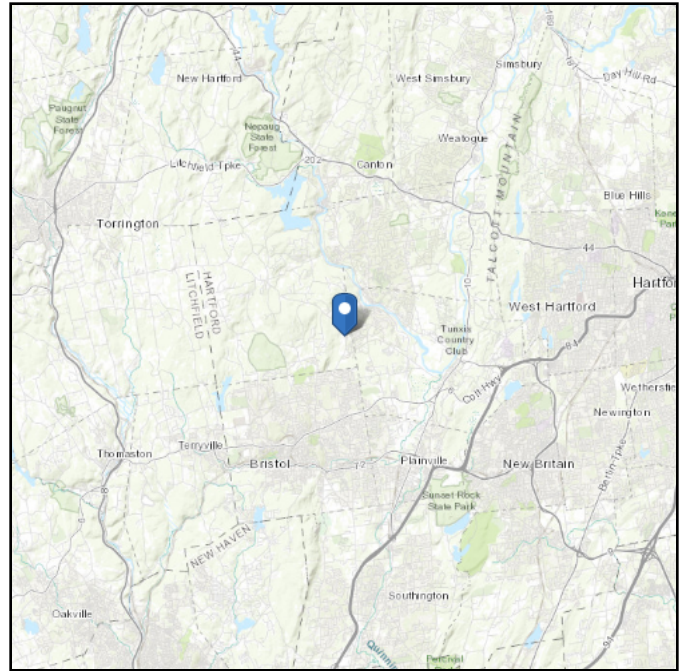
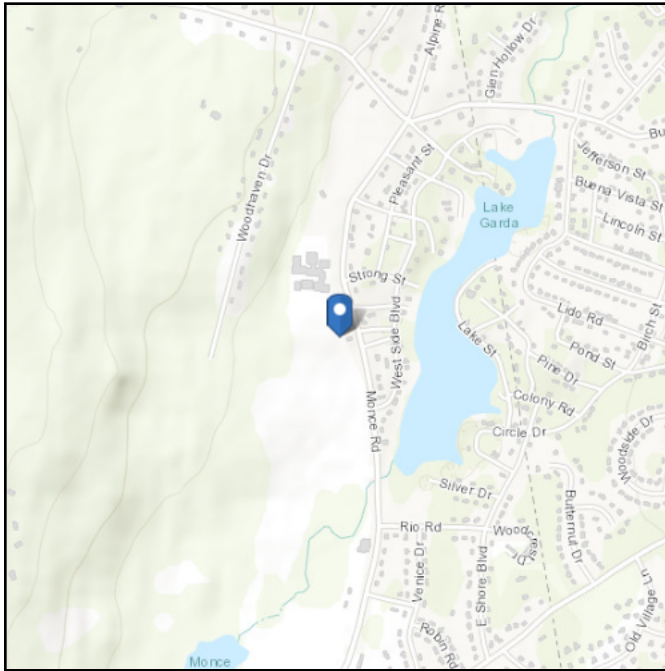
Standard: ASCE/SEI 7-16

Risk Category: II

Soil Class: D - Stiff Soil

Latitude: 41.739127

Longitude: -72.907811

Elevation: 288.0156101056068 ft
(NAVD 88)


Wind

Results:

Wind Speed	110 Vmph 120 mph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	96 Vmph

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

Date Accessed: Thu Mar 28 2024

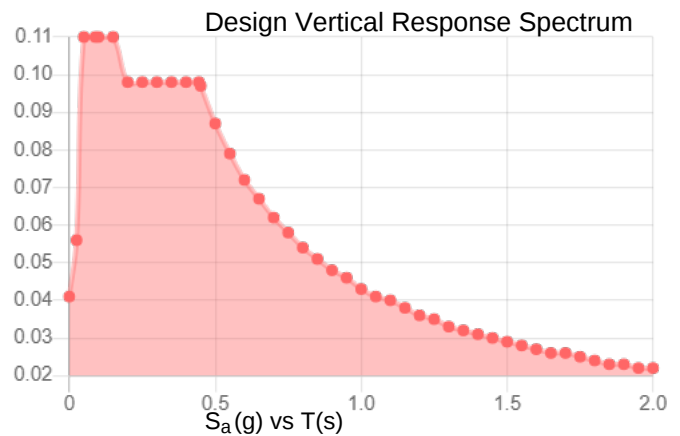
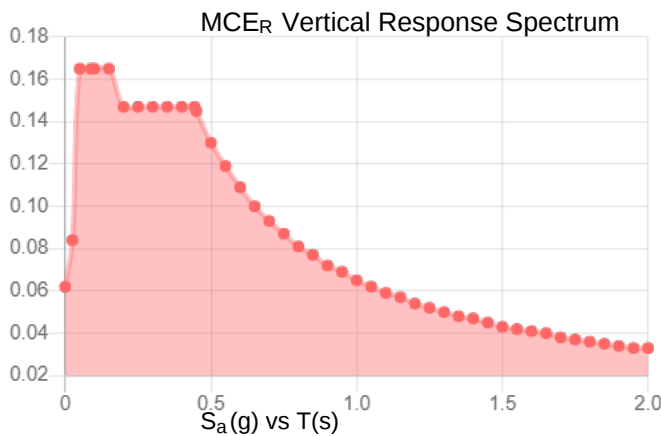
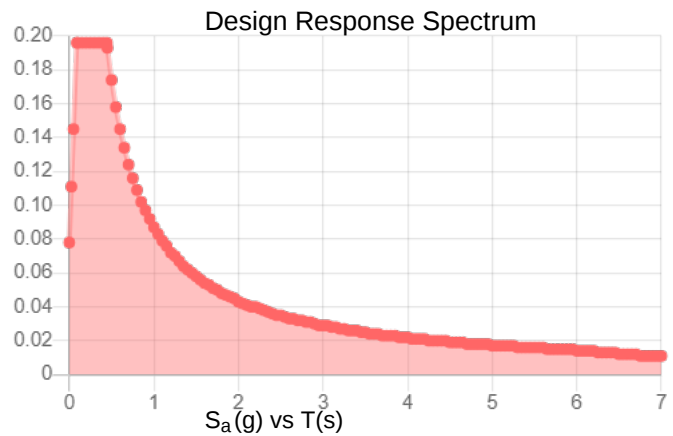
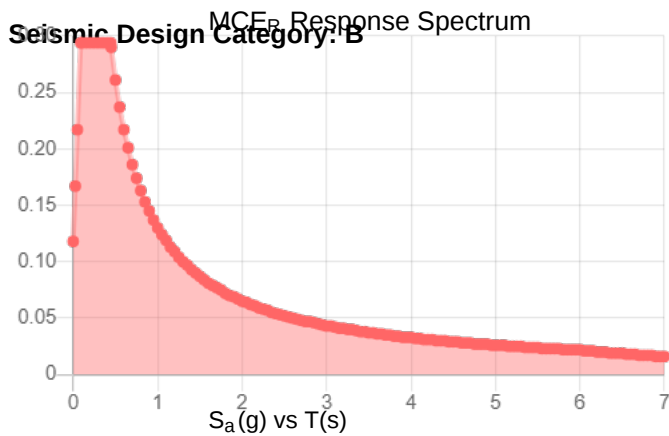
Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance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

Site Soil Class: D - Stiff Soil

Results:

S_S :	0.184 0.180	S_{D1} :	0.087
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.099
F_v :	2.4	PGA _M :	0.158
S_{MS} :	0.294	F_{PGA} :	1.6
S_{M1} :	0.13	I_e :	1
S_{DS} :	0.196	C_v :	0.7



Data Accessed: Thu Mar 28 2024

Date Source:

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

Ice

Results:

Ice Thickness: 1.50 in.

Concurrent Temperature: 15 F

Gust Speed 50 mph

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

Date Accessed: Thu Mar 28 2024

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

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

Snow

Results:

Ground Snow Load, p_g : 35 lb/ft² ← not required for this analysis

Mapped Elevation: 288.0 ft

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

Date Accessed: Thu Mar 28 2024

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

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

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

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

APPURTENANCE FORCE SUMMARY



P. Marshall Associates, LLC
1000 Holcomb Woods Pkwy, Suite 210
Roswell, GA 30076
(678) 280-2325

Wind Analysis Criteria	
Ultimate Wind Speed, Vult	120 mph
Antenna Rad Center, z	100.0 ft
Risk Category	II
Exposure Category	C
Mean Elevation Above Sea Level, zs	288.0 ft
Topographic Category	1

Seismic Analysis Criteria	
Seismic, S _s	0.18
Seismic, S ₁	0.054
Soil Type	D (Default)
Amplification Factor, A _s	1.64
Response Coefficient, R	2.00

Ice Criteria & Summary	
Basic Wind Speed with Ice, Vi	50 mph
Design Radial Ice Thickness, ti	1.50 in
Wind Pressure (Ice), q _{zi}	7.62 psf
Factored Radial Ice Thickness, t _{iz}	1.68 in
Importance Factor Wind on Ice, I _{wi}	1.00
Importance Factor Ice, I _i	1.00

Live Load Criteria	
Structure Live Load	250 lbs
Maintenance Live Load	500 lbs
Maintenance Wind Speed	30 mph

Wind Force Summary	
Importance Factor Wind, I _w	1.00
Topographic Factor at Base, K _{zt}	1.00
Topographic Factor at z, K _{zt}	1.00
Velocity Pressure Coefficient, K _z	1.27
Wind Direction Factor, K _d	0.95
Gust Effect Factor, G	1.00
Shielding Factor, K _a	0.90
Wind Pressure, q _z	43.88 psf
Ground Elevation Factor, K _e	0.99

Seismic Force Summary	
Importance Factor Seismic, I _e	1.000
Site Coefficient, F _a	1.600
Site Coefficient, F _v	2.400
Design Spectra Response, S _{ds}	0.192
Design Spectra Response, S _{d1}	0.086
Seismic Response Coefficient, C _s	0.096
Total Seismic Shear Force, V _s	259 lbs
Appurtenance Total Weight	1273 lbs
Structure Total Weight	1424 lbs
Total Weight	2698 lbs
Vertical Load Effect, E _v	170 lbs
Horizontal Load Effect, E _h	424 lbs

Appurtenance Information							Wind Force - No Ice				Escalated Ice Load				Wind Force - With Ice			
Dimensions & Shape							Front		Side		Appurtenance Ice Information				Front		Side	
Appurtenance Name	Height (in)	Width (in)	Depth (in)	Weight (lb)	Member Label	Flat or Round (F/R)	EPA (ft ²)	Design Wind Force (lb), F _A	EPA (ft ²)	Design Wind Force (lb), F _A	Height w/ Ice (in)	Width w/ Ice (in)	Depth w/ Ice (in)	Ice Weight, (lb)	EPA (ft ²)	Design Wind Force (lb), F _A	EPA (ft ²)	Design Wind Force (lb), F _A
RFS/CELWAVE APXVLL19P_43-C-A20	75.8	11.3	4.6	44.1	m33	F	8.25	325.80	4.15	164.10	79.15	14.65	7.95	171.16	9.51	65.20	5.32	36.50
ERICSSON 4460 B25+B66	15.1	17	11.9	108	M33	F	2.14	84.50	1.50	59.10	18.45	20.35	15.25	86.61	2.72	18.60	1.99	13.60
RFS/CELWAVE APXVAALL24_43-U-NA20	95.9	24	8.5	122.8	M26	F	20.24	799.40	8.73	344.90	99.25	27.35	11.85	408.67	22.06	151.20	10.27	70.40
ERICSSON 4480 B71+B85	22	15.7	7.5	81	M26	F	2.88	113.70	1.40	55.20	25.35	19.05	10.85	85.91	3.55	24.30	1.91	13.10
ERICSSON AIR 6419 B41	34.5	20	8	68.5	M25	F	5.75	227.10	2.45	96.90	37.85	23.35	11.35	146.28	6.69	45.90	3.14	21.50
RFS/CELWAVE APXVLL19P_43-C-A20	75.8	11.3	4.6	44.1	M22	F	8.25	325.80	4.15	164.10	79.15	14.65	7.95	171.16	9.51	65.20	5.32	36.50
ERICSSON 4460 B25+B66	15.1	17	11.9	108	M22	F	2.14	84.50	1.50	59.10	18.45	20.35	15.25	86.61	2.72	18.60	1.99	13.60
RFS/CELWAVE APXVAALL24_43-U-NA20	95.9	24	8.5	122.8	M28	F	20.24	799.40	8.73	344.90	99.25	27.35	11.85	408.67	22.06	151.20	10.27	70.40
ERICSSON 4480 B71+B85	22	15.7	7.5	81	M28	F	2.88	113.70	1.40	55.20	25.35	19.05	10.85	85.91	3.55	24.30	1.91	13.10
ERICSSON AIR 6419 B41	34.5	20	8	68.5	M29	F	5.75	227.10	2.45	96.90	37.85	23.35	11.35	146.28	6.69	45.90	3.14	21.50
RFS/CELWAVE APXVLL19P_43-C-A20	75.8	11.3	4.6	44.1	M24	F	8.25	325.80	4.15	164.10	79.15	14.65	7.95	171.16	9.51	65.20	5.32	36.50
ERICSSON 4460 B25+B66	15.1	17	11.9	108	M24	F	2.14	84.50	1.50	59.10	18.45	20.35	15.25	86.61	2.72	18.60	1.99	13.60
RFS/CELWAVE APXVAALL24_43-U-NA20	95.9	24	8.5	122.8	M31	F	20.24	799.40	8.73	344.90	99.25	27.35	11.85	408.67	22.06	151.20	10.27	70.40
ERICSSON 4480 B71+B85	22	15.7	7.5	81	M31	F	2.88	113.70	1.40	55.20	25.35	19.05	10.85	85.91	3.55	24.30	1.91	13.10
ERICSSON AIR 6419 B41	34.5	20	8	68.5	M30	F	5.75	227.10	2.45	96.90	37.85	23.35	11.35	146.28	6.69	45.90	3.14	21.50

*Appurtenance Wind and Ice forces were calculated based on EPA's provided and as required by the tower owner (highlighted in green). Values highlighted in white are per applicable TIA-222.

Appurtenance Structure Forces									
Member Information ¹					Wind Force - No Ice		Member Ice	Wind Force - With Ice	
Member Set	Flat / Round	Weight (lb/ft)	Depth / Diameter (in)	Width (in)	Ca	Design Wind Force (lb/ft), F _A	Ice Weight (lb/ft)	Ca	Design Wind Force (lb/ft), F _A
PIPE_3.0	R	7.58	3.5	–	1.20	13.82	10.60	1.13	4.57
PIPE_2.0	R	3.66	2.38	–	1.20	9.40	8.30	1.20	3.93
PL6X3/8	F	10.2	6	0.5	1.72	33.94	15.70	0.88	7.58
PL6X1/2	F	10.2	6	0.5	1.20	23.69	15.70	0.70	5.45
L2X2X3	F	2.44	2	2	2.00	13.16	9.20	1.00	4.19
L2.5X2.5X4	F	4.1	2.5	2.5	1.30	10.72	10.70	0.70	3.20
HSS4X4X4	HSS	12.21	4	4	1.46	19.15	15.00	0.83	4.92

1. Values shown in this table are the maximum forces applied to similar member types. This is not an exhaustive list. Wind load on members can fluctuate due to force coefficients being a function of length.

APPENDIX C
SOFTWARE ANALYSIS OUTPUT

Model Settings

Number of Reported Sections	5
Number of Internal Sections	100
Member Area Load Mesh Size (in ²)	144
Consider Shear Deformation	Yes
Consider Torsional Warping	Yes
Approximate Mesh Size (in)	24
Transfer Forces Between Intersecting Wood Walls	Yes
Increase Wood Wall Nailing Capacity for Wind Loads	Yes
Include P-Delta for Walls	Yes
Optimize Masonry and Wood Walls	Yes
Maximum Number of Iterations	3
Single	No
Multiple (Optimum)	Yes
Maximum	No

Global Axis corresponding to vertical direction	Y
Convert Existing Data	Yes
Default Global Plane for z-axis	XZ
Plate Local Axis Orientation	Global

Hot Rolled Steel	AISC 15th (360-16): LRFD
Stiffness Adjustment	Yes (Iterative)
Notional Annex	None
Connections	AISC 15th (360-16): LRFD
Cold Formed Steel	AISI S100-12: LRFD
Stiffness Adjustment	Yes (Iterative)
Wood	AWC NDS-18 / SDPWS-15 ASD
Temperature	< 100F
Concrete	ACI 318-14
Masonry	TMS 402-16: ASD
Aluminum	AA ADM1-15: ASD
Structure Type	Building
Stiffness Adjustment	Yes (Iterative)
Stainless	AISC 14th (360-10): ASD
Stiffness Adjustment	Yes (Iterative)

Analysis Methodology	Exact Integration Method
Parame Beta Factor	0.65

Compression Stress Block	Rectangular Stress Block
Analyze using Cracked Sections	Yes
Leave room for horizontal rebar splices (2*d bar spacing)	Yes
List forces which were ignored for design in the Detail Report	Yes

Column Min Steel	1
Column Max Steel	8
Rebar Material Spec	ASTM A615
Warn if beam-column framing arrangement is not understood	No
Number of Shear Regions	4
Region 2 & 3 Spacing Increase Increment (in)	4

Code	ASCE 7-16
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Model Settings (Continued)

Risk Category	I or II
Drift Cat	Other
Base Elevation (ft)	
Include the weight of the structure in base shear calcs	Yes
S_i (g)	1
SD_i (g)	1
SD_s (g)	1
T_L (sec)	5
T_Z (sec)	
T_X (sec)	
C_Z	0.02
C_X	0.02
$C_{Exp. Z}$	0.75
$C_{Exp. X}$	0.75
R_Z	3
R_X	3
$\Omega_e Z$	1
$\Omega_e X$	1
$C_a Z$	4
$C_a X$	4
ρ_Z	1
ρ_X	1

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [$10^{-6} F^{-1}$]	Density [lb/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	490	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	490	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	490	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	527	42	1.4	58	1.3
5	A500 Gr.B RECT	29000	11154	0.3	0.65	527	46	1.4	58	1.3
6	A500 Gr.C RND	29000	11154	0.3	0.65	527	46	1.4	62	1.3
7	A500 Gr.C RECT	29000	11154	0.3	0.65	527	50	1.4	62	1.3
8	A53 Gr.B	29000	11154	0.3	0.65	490	35	1.6	60	1.2
9	A1085	29000	11154	0.3	0.65	490	50	1.4	65	1.3
10	A913 Gr.65	29000	11154	0.3	0.65	490	65	1.1	80	1.1

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	N89	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N103	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N112	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

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	Pipe 3.0	PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Pipe 2.0	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
3	HSS4x4x4	HSS4X4X4	Beam	Tube	A500 Gr.B RECT	Typical	3.37	7.8	7.8	12.8
4	L2x2x3	L2X2X3	Beam	Single Angle	A36 Gr.36	Typical	0.722	0.271	0.271	0.009
5	L2.5x2.5x4	L2.5X2.5X4	Beam	Single Angle	A36 Gr.36	Typical	1.19	0.692	0.692	0.026
6	PL6x1/2	PL6X1/2	Beam	RECT	A36 Gr.36	Typical	3	0.062	9	0.237
7	PL6x3/8	PL6X3/8	Beam	RECT	A36 Gr.36	Typical	2.25	0.026	6.75	0.101

Node Coordinates

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
1	N1	123.34	0	27.16	
2	N2	123.34	0	-123.34	
3	N3	123.34	28	27.16	
4	N4	123.34	28	-123.34	
5	N5	123.34	0	23.16	
6	N6	123.34	28	23.16	
7	N7	123.34	0	-119.34	
8	N8	123.34	28	-119.34	
9	N9	123.34	0	-109.34	
10	N10	123.34	28	-109.34	
11	N11	123.34	0	-73.34	
12	N12	123.34	28	-73.34	
13	N13	123.34	0	13.16	
14	N14	123.34	28	13.16	
15	N15	126.34	0	-109.34	
16	N16	126.34	28	-109.34	
17	N17	126.34	0	-73.34	
18	N18	126.34	28	-73.34	
19	N19	126.34	0	13.16	
20	N20	126.34	28	13.16	
21	N21	123.34	0	-73.173333	
22	N22	126.34	50	-109.34	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
23	N23	126.34	38	13.16	
24	N24	126.34	-34	-109.34	
25	N25	126.34	-34	13.16	
26	N26	126.34	65	-73.34	
27	N27	126.34	-61	-73.34	
28	C1	75.25	0	-48.09	
29	N29	116.373412	0	-127.362162	
30	N30	112.90931	28	-125.362162	
31	N31	102.749056	28	-122.960238	
32	N32	-13.963412	0	-52.112162	
33	N33	116.373412	28	-127.362162	
34	N34	112.90931	0	-125.362162	
35	N35	-13.963412	28	-52.112162	
36	N36	-10.49931	28	-54.112162	
37	N37	-10.49931	0	-54.112162	
38	N38	-1.839056	0	-59.112162	
39	N39	-1.839056	28	-59.112162	
40	N40	29.337859	0	-77.112162	
41	N41	29.337859	28	-77.112162	
42	N42	102.749056	0	-122.960238	
43	N43	-3.339056	0	-61.710238	
44	N44	104.249056	0	-120.362162	
45	N45	104.249056	28	-120.362162	
46	N46	-3.339056	28	-61.710238	
47	N47	27.837859	0	-79.710238	
48	N48	27.837859	28	-79.710238	
49	N49	29.482196	0	-77.195495	
50	N50	-3.339056	50	-61.710238	
51	N51	-3.339056	-34	-61.710238	
52	N52	102.749056	38	-122.960238	
53	N53	102.749056	-34	-122.960238	
54	N54	27.837859	65	-79.710238	
55	N55	27.837859	-61	-79.710238	
56	N56	-13.963412	0	-44.067838	
57	N57	-10.49931	28	-42.067838	
58	N58	-3.339056	28	-34.469762	
59	N59	116.373412	0	31.182162	
60	N60	-13.963412	28	-44.067838	
61	N61	-10.49931	0	-42.067838	
62	N62	116.373412	28	31.182162	
63	N63	112.90931	28	29.182162	
64	N64	112.90931	0	29.182162	
65	N65	104.249056	0	24.182162	
66	N66	104.249056	28	24.182162	
67	N67	73.072141	0	6.182162	
68	N68	73.072141	28	6.182162	
69	N69	-3.339056	0	-34.469762	
70	N70	102.749056	0	26.780238	
71	N71	-1.839056	0	-37.067838	
72	N72	-1.839056	28	-37.067838	
73	N73	102.749056	28	26.780238	
74	N74	71.572141	0	8.780238	
75	N75	71.572141	28	8.780238	
76	N76	72.927804	0	6.098828	
77	N77	102.749056	50	26.780238	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
78	N78	102.749056	-34	26.780238	
79	N79	-3.339056	38	-34.469762	
80	N80	-3.339056	-34	-34.469762	
81	N81	71.572141	65	8.780238	
82	N82	71.572141	-61	8.780238	
83	N87	118.124655	0	26.171081	
84	N88	95.374655	0	-13.233075	
85	N89	86.874655	0	-27.955507	
86	N86	121.78843	0	-28.483075	
87	N90	68.96088	0	2.016925	
88	N91	123.34	0	-26.629	
89	N92	119.190354	0	-26.983075	
90	N93	71.558956	0	0.516925	
91	N96	69.790771	0	4.287662	
92	N94	118.124655	0	-122.351081	
93	N95	71.558956	0	-96.696925	
94	N97	123.34	0	-69.551	
95	N98	121.78843	0	-67.696925	
96	N99	95.374655	0	-82.946925	
97	N100	68.96088	0	-98.196925	
98	N101	119.190354	0	-69.196925	
99	N102	69.790771	0	-100.467662	
100	N103	86.874655	0	-68.224493	
101	N104	-10.49931	0	-48.09	
102	N105	35.00069	0	-20.59	
103	N106	32.619229	0	-79.006662	
104	N107	35.00069	0	-78.59	
105	N108	35.00069	0	-48.09	
106	N109	35.00069	0	-17.59	
107	N110	35.00069	0	-75.59	
108	N111	32.619229	0	-17.173338	
109	N112	52.00069	0	-48.09	

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N39	N46		RIGID	None	None	RIGID	Typical
2	M2	N66	N73		RIGID	None	None	RIGID	Typical
3	M3	N68	N75		RIGID	None	None	RIGID	Typical
4	M4	N76	N74		RIGID	None	None	RIGID	Typical
5	M5	N65	N70		RIGID	None	None	RIGID	Typical
6	M6	N38	N43		RIGID	None	None	RIGID	Typical
7	M7	N49	N47		RIGID	None	None	RIGID	Typical
8	M8	N41	N48		RIGID	None	None	RIGID	Typical
9	M9	N72	N58		RIGID	None	None	RIGID	Typical
10	M10	N71	N69		RIGID	None	None	RIGID	Typical
11	M11	N9	N15		RIGID	None	None	RIGID	Typical
12	M12	N10	N16		RIGID	None	None	RIGID	Typical
13	M13	N21	N17		RIGID	None	None	RIGID	Typical
14	M14	N12	N18		RIGID	None	None	RIGID	Typical
15	M15	N13	N19		RIGID	None	None	RIGID	Typical
16	M16	N14	N20		RIGID	None	None	RIGID	Typical
17	M17	N44	N42		RIGID	None	None	RIGID	Typical
18	M18	N45	N31		RIGID	None	None	RIGID	Typical
19	M19	N1	N2		Pipe 3.0	Beam	Pipe	A53 Gr.B	Typical
20	M20	N29	N32		Pipe 3.0	Beam	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
21	M21	N56	N59		Pipe 3.0	Beam	Pipe	A53 Gr.B	Typical
22	M22	N77	N78	270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
23	M23	N3	N4		Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
24	M24	N50	N51	270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
25	M25	N23	N25	270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
26	M26	N26	N27	270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
27	M27	N33	N35		Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
28	M28	N81	N82	270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
29	M29	N79	N80	270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
30	M30	N52	N53	270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
31	M31	N54	N55	270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
32	M32	N60	N62		Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
33	M33	N22	N24	270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
34	M34	N96	N90		PL6x3/8	Beam	RECT	A36 Gr.36	Typical
35	M35	N102	N100		PL6x3/8	Beam	RECT	A36 Gr.36	Typical
36	M36	N91	N86		PL6x3/8	Beam	RECT	A36 Gr.36	Typical
37	M37	N97	N98		PL6x3/8	Beam	RECT	A36 Gr.36	Typical
38	M38	N111	N109		PL6x3/8	Beam	RECT	A36 Gr.36	Typical
39	M39	N106	N107		PL6x3/8	Beam	RECT	A36 Gr.36	Typical
40	M40	N5	N64		PL6x1/2	Beam	RECT	A36 Gr.36	Typical
41	M41	N34	N7		PL6x1/2	Beam	RECT	A36 Gr.36	Typical
42	M42	N61	N37		PL6x1/2	Beam	RECT	A36 Gr.36	Typical
43	M43	N104	N105	270	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical
44	M44	N104	N110		L2x2x3	Beam	Single Angle	A36 Gr.36	Typical
45	M45	N94	N101		L2x2x3	Beam	Single Angle	A36 Gr.36	Typical
46	M46	N87	N92	270	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical
47	M47	N87	N93		L2x2x3	Beam	Single Angle	A36 Gr.36	Typical
48	M48	N94	N95	270	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical
49	M49	N30	N8	90	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical
50	M50	N57	N36	90	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical
51	M51	N6	N63	90	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical
52	M52	N98	N99		HSS4x4x4	Beam	Tube	A500 Gr.B RECT	Typical
53	M53	N99	N100		HSS4x4x4	Beam	Tube	A500 Gr.B RECT	Typical
54	M54	N94	N103		HSS4x4x4	Beam	Tube	A500 Gr.B RECT	Typical
55	M55	N88	N86		HSS4x4x4	Beam	Tube	A500 Gr.B RECT	Typical
56	M56	N87	N89		HSS4x4x4	Beam	Tube	A500 Gr.B RECT	Typical
57	M57	N90	N88		HSS4x4x4	Beam	Tube	A500 Gr.B RECT	Typical
58	M58	N107	N108		HSS4x4x4	Beam	Tube	A500 Gr.B RECT	Typical
59	M59	N108	N109		HSS4x4x4	Beam	Tube	A500 Gr.B RECT	Typical
60	M60	N104	N112		HSS4x4x4	Beam	Tube	A500 Gr.B RECT	Typical

Member Advanced Data

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
1	M1			Yes	** NA **	None
2	M2			Yes	** NA **	None
3	M3			Yes	** NA **	None
4	M4			Yes	** NA **	None
5	M5			Yes	** NA **	None
6	M6			Yes	** NA **	None
7	M7			Yes	** NA **	None
8	M8			Yes	** NA **	None
9	M9			Yes	** NA **	None
10	M10			Yes	** NA **	None
11	M11			Yes	** NA **	None
12	M12			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
13	M13			Yes	** NA **	None
14	M14			Yes	** NA **	None
15	M15			Yes	** NA **	None
16	M16			Yes	** NA **	None
17	M17			Yes	** NA **	None
18	M18			Yes	** NA **	None
19	M19			Yes	Default	None
20	M20			Yes	Default	None
21	M21			Yes	Default	None
22	M22			Yes	Default	None
23	M23			Yes	Default	None
24	M24			Yes	Default	None
25	M25			Yes	Default	None
26	M26			Yes	Default	None
27	M27			Yes	Default	None
28	M28			Yes	Default	None
29	M29			Yes	Default	None
30	M30			Yes	Default	None
31	M31			Yes	Default	None
32	M32			Yes	Default	None
33	M33			Yes	Default	None
34	M34	BenPIN		Yes	Default	None
35	M35	BenPIN		Yes	Default	None
36	M36	BenPIN		Yes	Default	None
37	M37	BenPIN		Yes	Default	None
38	M38	BenPIN		Yes	Default	None
39	M39	BenPIN		Yes	Default	None
40	M40	BenPIN	BenPIN	Yes	Default	None
41	M41	BenPIN	BenPIN	Yes	Default	None
42	M42	BenPIN	BenPIN	Yes	Default	None
43	M43			Yes	Default	None
44	M44			Yes	Default	None
45	M45			Yes	Default	None
46	M46			Yes	Default	None
47	M47			Yes	Default	None
48	M48			Yes	Default	None
49	M49			Yes	Default	None
50	M50			Yes	Default	None
51	M51			Yes	Default	None
52	M52			Yes	Default	None
53	M53			Yes	Default	None
54	M54			Yes	Default	None
55	M55			Yes	Default	None
56	M56			Yes	Default	None
57	M57			Yes	Default	None
58	M58			Yes	Default	None
59	M59			Yes	Default	None
60	M60			Yes	Default	None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lcomp top [in]	Channel Conn.	a [in]	Function
1	M19	Pipe 3.0	150.5	Lbyy	N/A	N/A	Lateral
2	M20	Pipe 3.0	150.5	Lbyy	N/A	N/A	Lateral
3	M21	Pipe 3.0	150.5	Lbyy	N/A	N/A	Lateral
4	M22	Pipe 2.0	84	Lbyy	N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lcomp top [in]	Channel Conn.	a [in]	Function
5	M23	Pipe 2.0	150.5	Lbyy	N/A	N/A	Lateral
6	M24	Pipe 2.0	84	Lbyy	N/A	N/A	Lateral
7	M25	Pipe 2.0	72	Lbyy	N/A	N/A	Lateral
8	M26	Pipe 2.0	126	Lbyy	N/A	N/A	Lateral
9	M27	Pipe 2.0	150.5	Lbyy	N/A	N/A	Lateral
10	M28	Pipe 2.0	126	Lbyy	N/A	N/A	Lateral
11	M29	Pipe 2.0	72	Lbyy	N/A	N/A	Lateral
12	M30	Pipe 2.0	72	Lbyy	N/A	N/A	Lateral
13	M31	Pipe 2.0	126	Lbyy	N/A	N/A	Lateral
14	M32	Pipe 2.0	150.5	Lbyy	N/A	N/A	Lateral
15	M33	Pipe 2.0	84	Lbyy	N/A	N/A	Lateral
16	M34	PL6x3/8	2.418	Lbyy	N/A	N/A	Lateral
17	M35	PL6x3/8	2.418	Lbyy	N/A	N/A	Lateral
18	M36	PL6x3/8	2.418	Lbyy	N/A	N/A	Lateral
19	M37	PL6x3/8	2.418	Lbyy	N/A	N/A	Lateral
20	M38	PL6x3/8	2.418	Lbyy	N/A	N/A	Lateral
21	M39	PL6x3/8	2.418	Lbyy	N/A	N/A	Lateral
22	M40	PL6x1/2	12.044	Lbyy	N/A	N/A	Lateral
23	M41	PL6x1/2	12.044	Lbyy	N/A	N/A	Lateral
24	M42	PL6x1/2	12.044	Lbyy	N/A	N/A	Lateral
25	M43	L2x2x3	53.165	Lbyy	N/A	N/A	Lateral
26	M44	L2x2x3	53.165	Lbyy	N/A	N/A	Lateral
27	M45	L2x2x3	53.165	Lbyy	N/A	N/A	Lateral
28	M46	L2x2x3	53.165	Lbyy	N/A	N/A	Lateral
29	M47	L2x2x3	53.165	Lbyy	N/A	N/A	Lateral
30	M48	L2x2x3	53.165	Lbyy	N/A	N/A	Lateral
31	M49	L2.5x2.5x4	12.044	Lbyy	N/A	N/A	Lateral
32	M50	L2.5x2.5x4	12.044	Lbyy	N/A	N/A	Lateral
33	M51	L2.5x2.5x4	12.044	Lbyy	N/A	N/A	Lateral
34	M52	HSS4x4x4	30.5	Lbyy	N/A	N/A	Lateral
35	M53	HSS4x4x4	30.5	Lbyy	N/A	N/A	Lateral
36	M54	HSS4x4x4	62.5	Lbyy	N/A	N/A	Lateral
37	M55	HSS4x4x4	30.5	Lbyy	N/A	N/A	Lateral
38	M56	HSS4x4x4	62.5	Lbyy	N/A	N/A	Lateral
39	M57	HSS4x4x4	30.5	Lbyy	N/A	N/A	Lateral
40	M58	HSS4x4x4	30.5	Lbyy	N/A	N/A	Lateral
41	M59	HSS4x4x4	30.5	Lbyy	N/A	N/A	Lateral
42	M60	HSS4x4x4	62.5	Lbyy	N/A	N/A	Lateral

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	Y	-22.05	0
2	M33	Y	-108	48
3	M26	Y	-61.4	0
4	M26	Y	-81	24
5	M25	Y	-34.25	0
6	M22	Y	-22.05	0
7	M22	Y	-108	48
8	M28	Y	-61.4	0
9	M28	Y	-81	24
10	M29	Y	-34.25	0
11	M24	Y	-22.05	0
12	M24	Y	-108	48
13	M31	Y	-61.4	0
14	M31	Y	-81	24

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
15	M30	Y	-34.25	0
16	M33	Y	-22.05	72
17	M33	Y	0	0
18	M26	Y	-61.4	96
19	M26	Y	0	0
20	M25	Y	-34.25	36
21	M22	Y	-22.05	72
22	M22	Y	0	0
23	M28	Y	-61.4	96
24	M28	Y	0	0
25	M29	Y	-34.25	36
26	M24	Y	-22.05	72
27	M24	Y	0	0
28	M31	Y	-61.4	96
29	M31	Y	0	0
30	M30	Y	-34.25	36

Member Point Loads (BLC 2 : Ice)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	Y	-85.58	0
2	M33	Y	-86.61	48
3	M26	Y	-204.34	0
4	M26	Y	-85.91	24
5	M25	Y	-73.14	0
6	M22	Y	-85.58	0
7	M22	Y	-86.61	48
8	M28	Y	-204.34	0
9	M28	Y	-85.91	24
10	M29	Y	-73.14	0
11	M24	Y	-85.58	0
12	M24	Y	-86.61	48
13	M31	Y	-204.34	0
14	M31	Y	-85.91	24
15	M30	Y	-73.14	0
16	M33	Y	-85.58	72
17	M33	Y	0	0
18	M26	Y	-204.34	96
19	M26	Y	0	0
20	M25	Y	-73.14	36
21	M22	Y	-85.58	72
22	M22	Y	0	0
23	M28	Y	-204.34	96
24	M28	Y	0	0
25	M29	Y	-73.14	36
26	M24	Y	-85.58	72
27	M24	Y	0	0
28	M31	Y	-204.34	96
29	M31	Y	0	0
30	M30	Y	-73.14	36

Member Point Loads (BLC 3 : Wind 0)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	-162.9	0
2	M33	X	-84.5	48
3	M26	X	-399.7	0
4	M26	X	-113.7	24
5	M25	X	-113.6	0
6	M22	X	-102.3	0
7	M22	X	-65.5	48
8	M28	X	-229.3	0
9	M28	X	-69.8	24
10	M29	X	-64.7	0
11	M24	X	-102.3	0
12	M24	X	-65.5	48
13	M31	X	-229.3	0
14	M31	X	-69.8	24
15	M30	X	-64.7	0
16	M33	X	-162.9	72
17	M33	X	0	0
18	M26	X	-399.7	96
19	M26	X	0	0
20	M25	X	-113.6	36
21	M22	X	-102.3	72
22	M22	X	0	0
23	M28	X	-229.3	96
24	M28	X	0	0
25	M29	X	-64.7	36
26	M24	X	-102.3	72
27	M24	X	0	0
28	M31	X	-229.3	96
29	M31	X	0	0
30	M30	X	-64.7	36
31	M33	Z	0	0
32	M33	Z	0	48
33	M26	Z	0	0
34	M26	Z	0	24
35	M25	Z	0	0
36	M22	Z	0	0
37	M22	Z	0	48
38	M28	Z	0	0
39	M28	Z	0	24
40	M29	Z	0	0
41	M24	Z	0	0
42	M24	Z	0	48
43	M31	Z	0	0
44	M31	Z	0	24
45	M30	Z	0	0
46	M33	Z	0	72
47	M33	Z	0	0
48	M26	Z	0	96
49	M26	Z	0	0
50	M25	Z	0	36
51	M22	Z	0	72
52	M22	Z	0	0
53	M28	Z	0	96
54	M28	Z	0	0
55	M29	Z	0	36

Member Point Loads (BLC 3 : Wind 0) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
56	M24	Z	0	72
57	M24	Z	0	0
58	M31	Z	0	96
59	M31	Z	0	0
60	M30	Z	0	36

Member Point Loads (BLC 4 : Wind 30)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	-123.6	0
2	M33	X	-67.7	48
3	M26	X	-296.9	0
4	M26	X	-85.8	24
5	M25	X	-84.2	0
6	M22	X	-71.1	0
7	M22	X	-51.2	48
8	M28	X	-149.3	0
9	M28	X	-47.8	24
10	M29	X	-42	0
11	M24	X	-123.6	0
12	M24	X	-67.7	48
13	M31	X	-296.9	0
14	M31	X	-85.8	24
15	M30	X	-84.2	0
16	M33	X	-123.6	72
17	M33	X	0	0
18	M26	X	-296.9	96
19	M26	X	0	0
20	M25	X	-84.2	36
21	M22	X	-71.1	72
22	M22	X	0	0
23	M28	X	-149.3	96
24	M28	X	0	0
25	M29	X	-42	36
26	M24	X	-123.6	72
27	M24	X	0	0
28	M31	X	-296.9	96
29	M31	X	0	0
30	M30	X	-84.2	36
31	M33	Z	-71.3	0
32	M33	Z	-39.1	48
33	M26	Z	-171.4	0
34	M26	Z	-49.5	24
35	M25	Z	-48.6	0
36	M22	Z	-41	0
37	M22	Z	-29.6	48
38	M28	Z	-86.2	0
39	M28	Z	-27.6	24
40	M29	Z	-24.2	0
41	M24	Z	-71.3	0
42	M24	Z	-39.1	48
43	M31	Z	-171.4	0
44	M31	Z	-49.5	24
45	M30	Z	-48.6	0
46	M33	Z	-71.3	72
47	M33	Z	0	0

Member Point Loads (BLC 4 : Wind 30) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
48	M26	Z	-171.4	96
49	M26	Z	0	0
50	M25	Z	-48.6	36
51	M22	Z	-41	72
52	M22	Z	0	0
53	M28	Z	-86.2	96
54	M28	Z	0	0
55	M29	Z	-24.2	36
56	M24	Z	-71.3	72
57	M24	Z	0	0
58	M31	Z	-171.4	96
59	M31	Z	0	0
60	M30	Z	-48.6	36

Member Point Loads (BLC 5 : Wind 60)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	-51.1	0
2	M33	X	-32.7	48
3	M26	X	-114.6	0
4	M26	X	-34.9	24
5	M25	X	-32.4	0
6	M22	X	-51.1	0
7	M22	X	-32.7	48
8	M28	X	-114.6	0
9	M28	X	-34.9	24
10	M29	X	-32.4	0
11	M24	X	-81.5	0
12	M24	X	-42.3	48
13	M31	X	-199.9	0
14	M31	X	-56.9	24
15	M30	X	-56.8	0
16	M33	X	-51.1	72
17	M33	X	0	0
18	M26	X	-114.6	96
19	M26	X	0	0
20	M25	X	-32.4	36
21	M22	X	-51.1	72
22	M22	X	0	0
23	M28	X	-114.6	96
24	M28	X	0	0
25	M29	X	-32.4	36
26	M24	X	-81.5	72
27	M24	X	0	0
28	M31	X	-199.9	96
29	M31	X	0	0
30	M30	X	-56.8	36
31	M33	Z	-88.6	0
32	M33	Z	-56.7	48
33	M26	Z	-198.5	0
34	M26	Z	-60.5	24
35	M25	Z	-56.1	0
36	M22	Z	-88.6	0
37	M22	Z	-56.7	48
38	M28	Z	-198.5	0
39	M28	Z	-60.5	24

Member Point Loads (BLC 5 : Wind 60) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
40	M29	Z	-56.1	0
41	M24	Z	-141.1	0
42	M24	Z	-73.2	48
43	M31	Z	-346.2	0
44	M31	Z	-98.5	24
45	M30	Z	-98.3	0
46	M33	Z	-88.6	72
47	M33	Z	0	0
48	M26	Z	-198.5	96
49	M26	Z	0	0
50	M25	Z	-56.1	36
51	M22	Z	-88.6	72
52	M22	Z	0	0
53	M28	Z	-198.5	96
54	M28	Z	0	0
55	M29	Z	-56.1	36
56	M24	Z	-141.1	72
57	M24	Z	0	0
58	M31	Z	-346.2	96
59	M31	Z	0	0
60	M30	Z	-98.3	36

Member Point Loads (BLC 6 : Wind 90)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	0	0
2	M33	X	0	48
3	M26	X	0	0
4	M26	X	0	24
5	M25	X	0	0
6	M22	X	0	0
7	M22	X	0	48
8	M28	X	0	0
9	M28	X	0	24
10	M29	X	0	0
11	M24	X	0	0
12	M24	X	0	48
13	M31	X	0	0
14	M31	X	0	24
15	M30	X	0	0
16	M33	X	0	72
17	M33	X	0	0
18	M26	X	0	96
19	M26	X	0	0
20	M25	X	0	36
21	M22	X	0	72
22	M22	X	0	0
23	M28	X	0	96
24	M28	X	0	0
25	M29	X	0	36
26	M24	X	0	72
27	M24	X	0	0
28	M31	X	0	96
29	M31	X	0	0
30	M30	X	0	36
31	M33	Z	-82.1	0

Member Point Loads (BLC 6 : Wind 90) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
32	M33	Z	-59.1	48
33	M26	Z	-172.5	0
34	M26	Z	-55.2	24
35	M25	Z	-48.5	0
36	M22	Z	-142.7	0
37	M22	Z	-78.2	48
38	M28	Z	-342.9	0
39	M28	Z	-99.1	24
40	M29	Z	-97.3	0
41	M24	Z	-142.7	0
42	M24	Z	-78.2	48
43	M31	Z	-342.9	0
44	M31	Z	-99.1	24
45	M30	Z	-97.3	0
46	M33	Z	-82.1	72
47	M33	Z	0	0
48	M26	Z	-172.5	96
49	M26	Z	0	0
50	M25	Z	-48.5	36
51	M22	Z	-142.7	72
52	M22	Z	0	0
53	M28	Z	-342.9	96
54	M28	Z	0	0
55	M29	Z	-97.3	36
56	M24	Z	-142.7	72
57	M24	Z	0	0
58	M31	Z	-342.9	96
59	M31	Z	0	0
60	M30	Z	-97.3	36

Member Point Loads (BLC 7 : Wind 120)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	51.1	0
2	M33	X	32.7	48
3	M26	X	114.6	0
4	M26	X	34.9	24
5	M25	X	32.4	0
6	M22	X	81.5	0
7	M22	X	42.3	48
8	M28	X	199.9	0
9	M28	X	56.9	24
10	M29	X	56.8	0
11	M24	X	51.1	0
12	M24	X	32.7	48
13	M31	X	114.6	0
14	M31	X	34.9	24
15	M30	X	32.4	0
16	M33	X	51.1	72
17	M33	X	0	0
18	M26	X	114.6	96
19	M26	X	0	0
20	M25	X	32.4	36
21	M22	X	81.5	72
22	M22	X	0	0
23	M28	X	199.9	96

Member Point Loads (BLC 7 : Wind 120) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
24	M28	X	0	0
25	M29	X	56.8	36
26	M24	X	51.1	72
27	M24	X	0	0
28	M31	X	114.6	96
29	M31	X	0	0
30	M30	X	32.4	36
31	M33	Z	-88.6	0
32	M33	Z	-56.7	48
33	M26	Z	-198.5	0
34	M26	Z	-60.5	24
35	M25	Z	-56.1	0
36	M22	Z	-141.1	0
37	M22	Z	-73.2	48
38	M28	Z	-346.2	0
39	M28	Z	-98.5	24
40	M29	Z	-98.3	0
41	M24	Z	-88.6	0
42	M24	Z	-56.7	48
43	M31	Z	-198.5	0
44	M31	Z	-60.5	24
45	M30	Z	-56.1	0
46	M33	Z	-88.6	72
47	M33	Z	0	0
48	M26	Z	-198.5	96
49	M26	Z	0	0
50	M25	Z	-56.1	36
51	M22	Z	-141.1	72
52	M22	Z	0	0
53	M28	Z	-346.2	96
54	M28	Z	0	0
55	M29	Z	-98.3	36
56	M24	Z	-88.6	72
57	M24	Z	0	0
58	M31	Z	-198.5	96
59	M31	Z	0	0
60	M30	Z	-56.1	36

Member Point Loads (BLC 8 : Wind 150)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	123.6	0
2	M33	X	67.7	48
3	M26	X	296.9	0
4	M26	X	85.8	24
5	M25	X	84.2	0
6	M22	X	123.6	0
7	M22	X	67.7	48
8	M28	X	296.9	0
9	M28	X	85.8	24
10	M29	X	84.2	0
11	M24	X	71.1	0
12	M24	X	51.2	48
13	M31	X	149.3	0
14	M31	X	47.8	24
15	M30	X	42	0

Member Point Loads (BLC 8 : Wind 150) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
16	M33	X	123.6	72
17	M33	X	0	0
18	M26	X	296.9	96
19	M26	X	0	0
20	M25	X	84.2	36
21	M22	X	123.6	72
22	M22	X	0	0
23	M28	X	296.9	96
24	M28	X	0	0
25	M29	X	84.2	36
26	M24	X	71.1	72
27	M24	X	0	0
28	M31	X	149.3	96
29	M31	X	0	0
30	M30	X	42	36
31	M33	Z	-71.3	0
32	M33	Z	-39.1	48
33	M26	Z	-171.4	0
34	M26	Z	-49.5	24
35	M25	Z	-48.6	0
36	M22	Z	-71.3	0
37	M22	Z	-39.1	48
38	M28	Z	-171.4	0
39	M28	Z	-49.5	24
40	M29	Z	-48.6	0
41	M24	Z	-41	0
42	M24	Z	-29.6	48
43	M31	Z	-86.2	0
44	M31	Z	-27.6	24
45	M30	Z	-24.2	0
46	M33	Z	-71.3	72
47	M33	Z	0	0
48	M26	Z	-171.4	96
49	M26	Z	0	0
50	M25	Z	-48.6	36
51	M22	Z	-71.3	72
52	M22	Z	0	0
53	M28	Z	-171.4	96
54	M28	Z	0	0
55	M29	Z	-48.6	36
56	M24	Z	-41	72
57	M24	Z	0	0
58	M31	Z	-86.2	96
59	M31	Z	0	0
60	M30	Z	-24.2	36

Member Point Loads (BLC 9 : Wind Ice 0)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	-32.6	0
2	M33	X	-18.6	48
3	M26	X	-75.6	0
4	M26	X	-24.3	24
5	M25	X	-23	0
6	M22	X	-21.8	0
7	M22	X	-14.9	48

Member Point Loads (BLC 9 : Wind Ice 0) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
8	M28	X	-45.3	0
9	M28	X	-15.9	24
10	M29	X	-13.8	0
11	M24	X	-21.8	0
12	M24	X	-14.9	48
13	M31	X	-45.3	0
14	M31	X	-15.9	24
15	M30	X	-13.8	0
16	M33	X	-32.6	72
17	M33	X	0	0
18	M26	X	-75.6	96
19	M26	X	0	0
20	M25	X	-23	36
21	M22	X	-21.8	72
22	M22	X	0	0
23	M28	X	-45.3	96
24	M28	X	0	0
25	M29	X	-13.8	36
26	M24	X	-21.8	72
27	M24	X	0	0
28	M31	X	-45.3	96
29	M31	X	0	0
30	M30	X	-13.8	36
31	M33	Z	0	0
32	M33	Z	0	48
33	M26	Z	0	0
34	M26	Z	0	24
35	M25	Z	0	0
36	M22	Z	0	0
37	M22	Z	0	48
38	M28	Z	0	0
39	M28	Z	0	24
40	M29	Z	0	0
41	M24	Z	0	0
42	M24	Z	0	48
43	M31	Z	0	0
44	M31	Z	0	24
45	M30	Z	0	0
46	M33	Z	0	72
47	M33	Z	0	0
48	M26	Z	0	96
49	M26	Z	0	0
50	M25	Z	0	36
51	M22	Z	0	72
52	M22	Z	0	0
53	M28	Z	0	96
54	M28	Z	0	0
55	M29	Z	0	36
56	M24	Z	0	72
57	M24	Z	0	0
58	M31	Z	0	96
59	M31	Z	0	0
60	M30	Z	0	36

Member Point Loads (BLC 10 : Wind Ice 30)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	-25.1	0
2	M33	X	-15	48
3	M26	X	-56.7	0
4	M26	X	-18.6	24
5	M25	X	-17.2	0
6	M22	X	-15.8	0
7	M22	X	-11.8	48
8	M28	X	-30.5	0
9	M28	X	-11.3	24
10	M29	X	-9.3	0
11	M24	X	-25.1	0
12	M24	X	-15	48
13	M31	X	-56.7	0
14	M31	X	-18.6	24
15	M30	X	-17.2	0
16	M33	X	-25.1	72
17	M33	X	0	0
18	M26	X	-56.7	96
19	M26	X	0	0
20	M25	X	-17.2	36
21	M22	X	-15.8	72
22	M22	X	0	0
23	M28	X	-30.5	96
24	M28	X	0	0
25	M29	X	-9.3	36
26	M24	X	-25.1	72
27	M24	X	0	0
28	M31	X	-56.7	96
29	M31	X	0	0
30	M30	X	-17.2	36
31	M33	Z	-14.5	0
32	M33	Z	-8.7	48
33	M26	Z	-32.8	0
34	M26	Z	-10.8	24
35	M25	Z	-10	0
36	M22	Z	-9.1	0
37	M22	Z	-6.8	48
38	M28	Z	-17.6	0
39	M28	Z	-6.6	24
40	M29	Z	-5.4	0
41	M24	Z	-14.5	0
42	M24	Z	-8.7	48
43	M31	Z	-32.8	0
44	M31	Z	-10.8	24
45	M30	Z	-10	0
46	M33	Z	-14.5	72
47	M33	Z	0	0
48	M26	Z	-32.8	96
49	M26	Z	0	0
50	M25	Z	-10	36
51	M22	Z	-9.1	72
52	M22	Z	0	0
53	M28	Z	-17.6	96
54	M28	Z	0	0
55	M29	Z	-5.4	36

Member Point Loads (BLC 10 : Wind Ice 30) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
56	M24	Z	-14.5	72
57	M24	Z	0	0
58	M31	Z	-32.8	96
59	M31	Z	0	0
60	M30	Z	-10	36

Member Point Loads (BLC 11 : Wind Ice 60)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	-10.9	0
2	M33	X	-7.4	48
3	M26	X	-22.7	0
4	M26	X	-8	24
5	M25	X	-6.9	0
6	M22	X	-10.9	0
7	M22	X	-7.4	48
8	M28	X	-22.7	0
9	M28	X	-8	24
10	M29	X	-6.9	0
11	M24	X	-16.3	0
12	M24	X	-9.3	48
13	M31	X	-37.8	0
14	M31	X	-12.2	24
15	M30	X	-11.5	0
16	M33	X	-10.9	72
17	M33	X	0	0
18	M26	X	-22.7	96
19	M26	X	0	0
20	M25	X	-6.9	36
21	M22	X	-10.9	72
22	M22	X	0	0
23	M28	X	-22.7	96
24	M28	X	0	0
25	M29	X	-6.9	36
26	M24	X	-16.3	72
27	M24	X	0	0
28	M31	X	-37.8	96
29	M31	X	0	0
30	M30	X	-11.5	36
31	M33	Z	-18.9	0
32	M33	Z	-12.9	48
33	M26	Z	-39.2	0
34	M26	Z	-13.8	24
35	M25	Z	-12	0
36	M22	Z	-18.9	0
37	M22	Z	-12.9	48
38	M28	Z	-39.2	0
39	M28	Z	-13.8	24
40	M29	Z	-12	0
41	M24	Z	-28.2	0
42	M24	Z	-16.1	48
43	M31	Z	-65.5	0
44	M31	Z	-21	24
45	M30	Z	-19.9	0
46	M33	Z	-18.9	72
47	M33	Z	0	0

Member Point Loads (BLC 11 : Wind Ice 60) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
48	M26	Z	-39.2	96
49	M26	Z	0	0
50	M25	Z	-12	36
51	M22	Z	-18.9	72
52	M22	Z	0	0
53	M28	Z	-39.2	96
54	M28	Z	0	0
55	M29	Z	-12	36
56	M24	Z	-28.2	72
57	M24	Z	0	0
58	M31	Z	-65.5	96
59	M31	Z	0	0
60	M30	Z	-19.9	36

Member Point Loads (BLC 12 : Wind Ice 90)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	0	0
2	M33	X	0	48
3	M26	X	0	0
4	M26	X	0	24
5	M25	X	0	0
6	M22	X	0	0
7	M22	X	0	48
8	M28	X	0	0
9	M28	X	0	24
10	M29	X	0	0
11	M24	X	0	0
12	M24	X	0	48
13	M31	X	0	0
14	M31	X	0	24
15	M30	X	0	0
16	M33	X	0	72
17	M33	X	0	0
18	M26	X	0	96
19	M26	X	0	0
20	M25	X	0	36
21	M22	X	0	72
22	M22	X	0	0
23	M28	X	0	96
24	M28	X	0	0
25	M29	X	0	36
26	M24	X	0	72
27	M24	X	0	0
28	M31	X	0	96
29	M31	X	0	0
30	M30	X	0	36
31	M33	Z	-18.3	0
32	M33	Z	-13.6	48
33	M26	Z	-35.2	0
34	M26	Z	-13.1	24
35	M25	Z	-10.8	0
36	M22	Z	-29	0
37	M22	Z	-17.4	48
38	M28	Z	-65.5	0
39	M28	Z	-21.5	24

Member Point Loads (BLC 12 : Wind Ice 90) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
40	M29	Z	-19.9	0
41	M24	Z	-29	0
42	M24	Z	-17.4	48
43	M31	Z	-65.5	0
44	M31	Z	-21.5	24
45	M30	Z	-19.9	0
46	M33	Z	-18.3	72
47	M33	Z	0	0
48	M26	Z	-35.2	96
49	M26	Z	0	0
50	M25	Z	-10.8	36
51	M22	Z	-29	72
52	M22	Z	0	0
53	M28	Z	-65.5	96
54	M28	Z	0	0
55	M29	Z	-19.9	36
56	M24	Z	-29	72
57	M24	Z	0	0
58	M31	Z	-65.5	96
59	M31	Z	0	0
60	M30	Z	-19.9	36

Member Point Loads (BLC 13 : Wind Ice 120)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	10.9	0
2	M33	X	7.4	48
3	M26	X	22.7	0
4	M26	X	7.9	24
5	M25	X	6.9	0
6	M22	X	16.3	0
7	M22	X	9.3	48
8	M28	X	37.8	0
9	M28	X	12.2	24
10	M29	X	11.5	0
11	M24	X	10.9	0
12	M24	X	7.4	48
13	M31	X	22.7	0
14	M31	X	7.9	24
15	M30	X	6.9	0
16	M33	X	10.9	72
17	M33	X	0	0
18	M26	X	22.7	96
19	M26	X	0	0
20	M25	X	6.9	36
21	M22	X	16.3	72
22	M22	X	0	0
23	M28	X	37.8	96
24	M28	X	0	0
25	M29	X	11.5	36
26	M24	X	10.9	72
27	M24	X	0	0
28	M31	X	22.7	96
29	M31	X	0	0
30	M30	X	6.9	36
31	M33	Z	-18.9	0

Member Point Loads (BLC 13 : Wind Ice 120) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
32	M33	Z	-12.9	48
33	M26	Z	-39.2	0
34	M26	Z	-13.8	24
35	M25	Z	-12	0
36	M22	Z	-28.2	0
37	M22	Z	-16.1	48
38	M28	Z	-65.5	0
39	M28	Z	-21	24
40	M29	Z	-19.9	0
41	M24	Z	-18.9	0
42	M24	Z	-12.9	48
43	M31	Z	-39.2	0
44	M31	Z	-13.8	24
45	M30	Z	-12	0
46	M33	Z	-18.9	72
47	M33	Z	0	0
48	M26	Z	-39.2	96
49	M26	Z	0	0
50	M25	Z	-12	36
51	M22	Z	-28.2	72
52	M22	Z	0	0
53	M28	Z	-65.5	96
54	M28	Z	0	0
55	M29	Z	-19.9	36
56	M24	Z	-18.9	72
57	M24	Z	0	0
58	M31	Z	-39.2	96
59	M31	Z	0	0
60	M30	Z	-12	36

Member Point Loads (BLC 14 : Wind Ice 150)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	25.1	0
2	M33	X	15	48
3	M26	X	56.7	0
4	M26	X	18.6	24
5	M25	X	17.2	0
6	M22	X	25.1	0
7	M22	X	15	48
8	M28	X	56.7	0
9	M28	X	18.6	24
10	M29	X	17.2	0
11	M24	X	15.8	0
12	M24	X	11.8	48
13	M31	X	30.5	0
14	M31	X	11.3	24
15	M30	X	9.3	0
16	M33	X	25.1	72
17	M33	X	0	0
18	M26	X	56.7	96
19	M26	X	0	0
20	M25	X	17.2	36
21	M22	X	25.1	72
22	M22	X	0	0
23	M28	X	56.7	96

Member Point Loads (BLC 14 : Wind Ice 150) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
24	M28	X	0	0
25	M29	X	17.2	36
26	M24	X	15.8	72
27	M24	X	0	0
28	M31	X	30.5	96
29	M31	X	0	0
30	M30	X	9.3	36
31	M33	Z	-14.5	0
32	M33	Z	-8.7	48
33	M26	Z	-32.8	0
34	M26	Z	-10.8	24
35	M25	Z	-10	0
36	M22	Z	-14.5	0
37	M22	Z	-8.7	48
38	M28	Z	-32.8	0
39	M28	Z	-10.8	24
40	M29	Z	-10	0
41	M24	Z	-9.1	0
42	M24	Z	-6.8	48
43	M31	Z	-17.6	0
44	M31	Z	-6.6	24
45	M30	Z	-5.4	0
46	M33	Z	-14.5	72
47	M33	Z	0	0
48	M26	Z	-32.8	96
49	M26	Z	0	0
50	M25	Z	-10	36
51	M22	Z	-14.5	72
52	M22	Z	0	0
53	M28	Z	-32.8	96
54	M28	Z	0	0
55	M29	Z	-10	36
56	M24	Z	-9.1	72
57	M24	Z	0	0
58	M31	Z	-17.6	96
59	M31	Z	0	0
60	M30	Z	-5.4	36

Member Point Loads (BLC 15 : Live Load Point (1))

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M19	Y	-250	75.25

Member Point Loads (BLC 16 : Live Load Point (2))

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M20	Y	-250	75.25

Member Point Loads (BLC 17 : Live Load Point (3))

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M21	Y	-250	75.25

Member Point Loads (BLC 51 : Horizontal Seismic Load Effect.)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	X	-22.1	0
2	M33	X	-108	48
3	M26	X	-61.4	0
4	M26	X	-81	24
5	M25	X	-34.3	0
6	M22	X	-22.1	0
7	M22	X	-108	48
8	M28	X	-61.4	0
9	M28	X	-81	24
10	M29	X	-34.3	0
11	M24	X	-22.1	0
12	M24	X	-108	48
13	M31	X	-61.4	0
14	M31	X	-81	24
15	M30	X	-34.3	0
16	M33	X	-22.1	72
17	M33	X	0	0
18	M26	X	-61.4	96
19	M26	X	0	0
20	M25	X	-34.3	36
21	M22	X	-22.1	72
22	M22	X	0	0
23	M28	X	-61.4	96
24	M28	X	0	0
25	M29	X	-34.3	36
26	M24	X	-22.1	72
27	M24	X	0	0
28	M31	X	-61.4	96
29	M31	X	0	0
30	M30	X	-34.3	36

Member Point Loads (BLC 52 : Horizontal Seismic Load Effect.)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	M33	Z	-22.1	0
2	M33	Z	-108	48
3	M26	Z	-61.4	0
4	M26	Z	-81	24
5	M25	Z	-34.3	0
6	M22	Z	-22.1	0
7	M22	Z	-108	48
8	M28	Z	-61.4	0
9	M28	Z	-81	24
10	M29	Z	-34.3	0
11	M24	Z	-22.1	0
12	M24	Z	-108	48
13	M31	Z	-61.4	0
14	M31	Z	-81	24
15	M30	Z	-34.3	0
16	M33	Z	-22.1	72
17	M33	Z	0	0
18	M26	Z	-61.4	96
19	M26	Z	0	0
20	M25	Z	-34.3	36
21	M22	Z	-22.1	72

Member Point Loads (BLC 52 : Horizontal Seismic Load Effect,) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
22	M22	Z	0	0
23	M28	Z	-61.4	96
24	M28	Z	0	0
25	M29	Z	-34.3	36
26	M24	Z	-22.1	72
27	M24	Z	0	0
28	M31	Z	-61.4	96
29	M31	Z	0	0
30	M30	Z	-34.3	36

Member Distributed Loads (BLC 2 : Ice)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	Y	-10.6	-10.6	0	%100
2	M20	Y	-10.6	-10.6	0	%100
3	M21	Y	-10.6	-10.6	0	%100
4	M22	Y	-8.3	-8.3	0	%100
5	M23	Y	-8.3	-8.3	0	%100
6	M24	Y	-8.3	-8.3	0	%100
7	M25	Y	-8.3	-8.3	0	%100
8	M26	Y	-8.3	-8.3	0	%100
9	M27	Y	-8.3	-8.3	0	%100
10	M28	Y	-8.3	-8.3	0	%100
11	M29	Y	-8.3	-8.3	0	%100
12	M30	Y	-8.3	-8.3	0	%100
13	M31	Y	-8.3	-8.3	0	%100
14	M32	Y	-8.3	-8.3	0	%100
15	M33	Y	-8.3	-8.3	0	%100
16	M34	Y	-15.7	-15.7	0	%100
17	M35	Y	-15.7	-15.7	0	%100
18	M36	Y	-15.7	-15.7	0	%100
19	M37	Y	-15.7	-15.7	0	%100
20	M38	Y	-15.7	-15.7	0	%100
21	M39	Y	-15.7	-15.7	0	%100
22	M40	Y	-15.7	-15.7	0	%100
23	M41	Y	-15.7	-15.7	0	%100
24	M42	Y	-15.7	-15.7	0	%100
25	M43	Y	-9.2	-9.2	0	%100
26	M44	Y	-9.2	-9.2	0	%100
27	M45	Y	-9.2	-9.2	0	%100
28	M46	Y	-9.2	-9.2	0	%100
29	M47	Y	-9.2	-9.2	0	%100
30	M48	Y	-9.2	-9.2	0	%100
31	M49	Y	-10.7	-10.7	0	%100
32	M50	Y	-10.7	-10.7	0	%100
33	M51	Y	-10.7	-10.7	0	%100
34	M52	Y	-15	-15	0	%100
35	M53	Y	-15	-15	0	%100
36	M54	Y	-15	-15	0	%100
37	M55	Y	-15	-15	0	%100
38	M56	Y	-15	-15	0	%100
39	M57	Y	-15	-15	0	%100
40	M58	Y	-15	-15	0	%100
41	M59	Y	-15	-15	0	%100
42	M60	Y	-15	-15	0	%100

Member Distributed Loads (BLC 3 : Wind 0)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	-13.8	-13.8	0	%100
2	M20	X	-6.9	-6.9	0	%100
3	M21	X	-6.9	-6.9	0	%100
4	M22	X	-9.4	-9.4	0	%100
5	M23	X	-9.4	-9.4	0	%100
6	M24	X	-9.4	-9.4	0	%100
7	M25	X	-9.4	-9.4	0	%100
8	M26	X	-9.4	-9.4	0	%100
9	M27	X	-4.7	-4.7	0	%100
10	M28	X	-9.4	-9.4	0	%100
11	M29	X	-9.4	-9.4	0	%100
12	M30	X	-9.4	-9.4	0	%100
13	M31	X	-9.4	-9.4	0	%100
14	M32	X	-4.7	-4.7	0	%100
15	M33	X	-9.4	-9.4	0	%100
16	M34	X	-28.7	-28.7	0	%100
17	M35	X	-11.3	-11.3	0	%100
18	M36	X	-13	-13	0	%100
19	M37	X	-13.9	-13.9	0	%100
20	M38	X	-26	-26	0	%100
21	M39	X	-6.9	-6.9	0	%100
22	M40	X	-11.8	-11.8	0	%100
23	M41	X	-11.8	-11.8	0	%100
24	M42	X	-23.7	-23.7	0	%100
25	M43	X	-7	-7	0	%100
26	M44	X	-1.5	-1.5	0	%100
27	M45	X	-12.1	-12.1	0	%100
28	M46	X	-6.6	-6.6	0	%100
29	M47	X	-6.6	-6.6	0	%100
30	M48	X	-6.6	-6.6	0	%100
31	M49	X	-5.4	-5.4	0	%100
32	M50	X	-10.7	-10.7	0	%100
33	M51	X	-5.4	-5.4	0	%100
34	M52	X	-16.2	-16.2	0	%100
35	M53	X	-13.1	-13.1	0	%100
36	M54	X	-15.6	-15.6	0	%100
37	M55	X	-8.1	-8.1	0	%100
38	M56	X	-9.6	-9.6	0	%100
39	M57	X	-8.1	-8.1	0	%100
40	M58	X	-8.4	-8.4	0	%100
41	M59	X	-16.2	-16.2	0	%100
42	M60	X	-10	-10	0	%100
43	M19	Z	0	0	0	%100
44	M20	Z	0	0	0	%100
45	M21	Z	0	0	0	%100
46	M22	Z	0	0	0	%100
47	M23	Z	0	0	0	%100
48	M24	Z	0	0	0	%100
49	M25	Z	0	0	0	%100
50	M26	Z	0	0	0	%100
51	M27	Z	0	0	0	%100
52	M28	Z	0	0	0	%100
53	M29	Z	0	0	0	%100
54	M30	Z	0	0	0	%100
55	M31	Z	0	0	0	%100

Member Distributed Loads (BLC 3 : Wind 0) (Continued)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
56	M32	Z	0	0	%100
57	M33	Z	0	0	%100
58	M34	Z	0	0	%100
59	M35	Z	0	0	%100
60	M36	Z	0	0	%100
61	M37	Z	0	0	%100
62	M38	Z	0	0	%100
63	M39	Z	0	0	%100
64	M40	Z	0	0	%100
65	M41	Z	0	0	%100
66	M42	Z	0	0	%100
67	M43	Z	0	0	%100
68	M44	Z	0	0	%100
69	M45	Z	0	0	%100
70	M46	Z	0	0	%100
71	M47	Z	0	0	%100
72	M48	Z	0	0	%100
73	M49	Z	0	0	%100
74	M50	Z	0	0	%100
75	M51	Z	0	0	%100
76	M52	Z	0	0	%100
77	M53	Z	0	0	%100
78	M54	Z	0	0	%100
79	M55	Z	0	0	%100
80	M56	Z	0	0	%100
81	M57	Z	0	0	%100
82	M58	Z	0	0	%100
83	M59	Z	0	0	%100
84	M60	Z	0	0	%100

Member Distributed Loads (BLC 4 : Wind 30)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	-12	0	%100
2	M20	X	-10.4	0	%100
3	M21	X	0	0	%100
4	M22	X	-8.1	0	%100
5	M23	X	-8.1	0	%100
6	M24	X	-8.1	0	%100
7	M25	X	-8.1	0	%100
8	M26	X	-8.1	0	%100
9	M27	X	-7.1	0	%100
10	M28	X	-8.1	0	%100
11	M29	X	-8.1	0	%100
12	M30	X	-8.1	0	%100
13	M31	X	-8.1	0	%100
14	M32	X	0	0	%100
15	M33	X	-8.1	0	%100
16	M34	X	-22.8	0	%100
17	M35	X	-1.7	0	%100
18	M36	X	-19.5	0	%100
19	M37	X	-21.4	0	%100
20	M38	X	-18.6	0	%100
21	M39	X	-19.6	0	%100
22	M40	X	-17.8	0	%100
23	M41	X	0	0	%100

Member Distributed Loads (BLC 4 : Wind 30) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
24	M42	X	-20.5	-20.5	0	%100
25	M43	X	-0.5	-0.5	0	%100
26	M44	X	-4.6	-4.6	0	%100
27	M45	X	-9.4	-9.4	0	%100
28	M46	X	-9.9	-9.9	0	%100
29	M47	X	-9.9	-9.9	0	%100
30	M48	X	-9.9	-9.9	0	%100
31	M49	X	0	0	0	%100
32	M50	X	-9.3	-9.3	0	%100
33	M51	X	-8	-8	0	%100
34	M52	X	-12.3	-12.3	0	%100
35	M53	X	-13.9	-13.9	0	%100
36	M54	X	-7	-7	0	%100
37	M55	X	-12.1	-12.1	0	%100
38	M56	X	-14.4	-14.4	0	%100
39	M57	X	-12.1	-12.1	0	%100
40	M58	X	-0.3	-0.3	0	%100
41	M59	X	-11.9	-11.9	0	%100
42	M60	X	-14.6	-14.6	0	%100
43	M19	Z	0	0	0	%100
44	M20	Z	-6	-6	0	%100
45	M21	Z	0	0	0	%100
46	M22	Z	-4.7	-4.7	0	%100
47	M23	Z	0	0	0	%100
48	M24	Z	-4.7	-4.7	0	%100
49	M25	Z	-4.7	-4.7	0	%100
50	M26	Z	-4.7	-4.7	0	%100
51	M27	Z	-4.1	-4.1	0	%100
52	M28	Z	-4.7	-4.7	0	%100
53	M29	Z	-4.7	-4.7	0	%100
54	M30	Z	-4.7	-4.7	0	%100
55	M31	Z	-4.7	-4.7	0	%100
56	M32	Z	0	0	0	%100
57	M33	Z	-4.7	-4.7	0	%100
58	M34	Z	-13.1	-13.1	0	%100
59	M35	Z	-1	-1	0	%100
60	M36	Z	-11.2	-11.2	0	%100
61	M37	Z	-12.3	-12.3	0	%100
62	M38	Z	-10.7	-10.7	0	%100
63	M39	Z	-11.3	-11.3	0	%100
64	M40	Z	-10.3	-10.3	0	%100
65	M41	Z	0	0	0	%100
66	M42	Z	0	0	0	%100
67	M43	Z	-0.3	-0.3	0	%100
68	M44	Z	-2.6	-2.6	0	%100
69	M45	Z	-5.4	-5.4	0	%100
70	M46	Z	-5.7	-5.7	0	%100
71	M47	Z	-5.7	-5.7	0	%100
72	M48	Z	-5.7	-5.7	0	%100
73	M49	Z	0	0	0	%100
74	M50	Z	0	0	0	%100
75	M51	Z	-4.6	-4.6	0	%100
76	M52	Z	-7.1	-7.1	0	%100
77	M53	Z	-8.1	-8.1	0	%100
78	M54	Z	-4	-4	0	%100

Member Distributed Loads (BLC 4 : Wind 30) (Continued)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
79	M55	Z	-7	0	%100
80	M56	Z	-8.3	0	%100
81	M57	Z	-7	0	%100
82	M58	Z	-0.2	0	%100
83	M59	Z	-6.8	0	%100
84	M60	Z	-8.4	0	%100

Member Distributed Loads (BLC 5 : Wind 60)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	-6.9	0	%100
2	M20	X	-6.9	0	%100
3	M21	X	-3.5	0	%100
4	M22	X	-4.7	0	%100
5	M23	X	-4.7	0	%100
6	M24	X	-4.7	0	%100
7	M25	X	-4.7	0	%100
8	M26	X	-4.7	0	%100
9	M27	X	-4.7	0	%100
10	M28	X	-4.7	0	%100
11	M29	X	-4.7	0	%100
12	M30	X	-4.7	0	%100
13	M31	X	-4.7	0	%100
14	M32	X	-2.4	0	%100
15	M33	X	-4.7	0	%100
16	M34	X	-8.4	0	%100
17	M35	X	-7.4	0	%100
18	M36	X	-13	0	%100
19	M37	X	-14.4	0	%100
20	M38	X	-5.6	0	%100
21	M39	X	-16.1	0	%100
22	M40	X	-11.8	0	%100
23	M41	X	-5.9	0	%100
24	M42	X	-11.8	0	%100
25	M43	X	-3.1	0	%100
26	M44	X	-5.3	0	%100
27	M45	X	-3.4	0	%100
28	M46	X	-6.6	0	%100
29	M47	X	-6.6	0	%100
30	M48	X	-6.6	0	%100
31	M49	X	-2.7	0	%100
32	M50	X	-5.4	0	%100
33	M51	X	-5.4	0	%100
34	M52	X	-4.2	0	%100
35	M53	X	-7.4	0	%100
36	M54	X	-0.9	0	%100
37	M55	X	-8.1	0	%100
38	M56	X	-9.6	0	%100
39	M57	X	-8.1	0	%100
40	M58	X	-3.9	0	%100
41	M59	X	-3.8	0	%100
42	M60	X	-9.6	0	%100
43	M19	Z	0	0	%100
44	M20	Z	-12	0	%100
45	M21	Z	-6	0	%100
46	M22	Z	-8.1	0	%100

Member Distributed Loads (BLC 5 : Wind 60) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
47	M23	Z	0	0	0	%100
48	M24	Z	-8.1	-8.1	0	%100
49	M25	Z	-8.1	-8.1	0	%100
50	M26	Z	-8.1	-8.1	0	%100
51	M27	Z	-8.1	-8.1	0	%100
52	M28	Z	-8.1	-8.1	0	%100
53	M29	Z	-8.1	-8.1	0	%100
54	M30	Z	-8.1	-8.1	0	%100
55	M31	Z	-8.1	-8.1	0	%100
56	M32	Z	-4.1	-4.1	0	%100
57	M33	Z	-8.1	-8.1	0	%100
58	M34	Z	-14.5	-14.5	0	%100
59	M35	Z	-12.7	-12.7	0	%100
60	M36	Z	-22.5	-22.5	0	%100
61	M37	Z	-25	-25	0	%100
62	M38	Z	-9.7	-9.7	0	%100
63	M39	Z	-27.9	-27.9	0	%100
64	M40	Z	-20.5	-20.5	0	%100
65	M41	Z	-10.3	-10.3	0	%100
66	M42	Z	0	0	0	%100
67	M43	Z	-5.3	-5.3	0	%100
68	M44	Z	-9.2	-9.2	0	%100
69	M45	Z	-5.8	-5.8	0	%100
70	M46	Z	-11.4	-11.4	0	%100
71	M47	Z	-11.4	-11.4	0	%100
72	M48	Z	-11.4	-11.4	0	%100
73	M49	Z	-4.6	-4.6	0	%100
74	M50	Z	0	0	0	%100
75	M51	Z	-9.3	-9.3	0	%100
76	M52	Z	-7.2	-7.2	0	%100
77	M53	Z	-12.8	-12.8	0	%100
78	M54	Z	-1.5	-1.5	0	%100
79	M55	Z	-14	-14	0	%100
80	M56	Z	-16.6	-16.6	0	%100
81	M57	Z	-14	-14	0	%100
82	M58	Z	-6.8	-6.8	0	%100
83	M59	Z	-6.5	-6.5	0	%100
84	M60	Z	-16.6	-16.6	0	%100

Member Distributed Loads (BLC 6 : Wind 90)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	0	0	0	%100
2	M20	X	0	0	0	%100
3	M21	X	0	0	0	%100
4	M22	X	0	0	0	%100
5	M23	X	0	0	0	%100
6	M24	X	0	0	0	%100
7	M25	X	0	0	0	%100
8	M26	X	0	0	0	%100
9	M27	X	0	0	0	%100
10	M28	X	0	0	0	%100
11	M29	X	0	0	0	%100
12	M30	X	0	0	0	%100
13	M31	X	0	0	0	%100
14	M32	X	0	0	0	%100

Member Distributed Loads (BLC 6 : Wind 90) (Continued)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
15	M33	X	0	0	0	%100
16	M34	X	0	0	0	%100
17	M35	X	0	0	0	%100
18	M36	X	0	0	0	%100
19	M37	X	0	0	0	%100
20	M38	X	0	0	0	%100
21	M39	X	0	0	0	%100
22	M40	X	0	0	0	%100
23	M41	X	0	0	0	%100
24	M42	X	0	0	0	%100
25	M43	X	0	0	0	%100
26	M44	X	0	0	0	%100
27	M45	X	0	0	0	%100
28	M46	X	0	0	0	%100
29	M47	X	0	0	0	%100
30	M48	X	0	0	0	%100
31	M49	X	0	0	0	%100
32	M50	X	0	0	0	%100
33	M51	X	0	0	0	%100
34	M52	X	0	0	0	%100
35	M53	X	0	0	0	%100
36	M54	X	0	0	0	%100
37	M55	X	0	0	0	%100
38	M56	X	0	0	0	%100
39	M57	X	0	0	0	%100
40	M58	X	0	0	0	%100
41	M59	X	0	0	0	%100
42	M60	X	0	0	0	%100
43	M19	Z	0	0	0	%100
44	M20	Z	-12	-12	0	%100
45	M21	Z	-12	-12	0	%100
46	M22	Z	-9.4	-9.4	0	%100
47	M23	Z	0	0	0	%100
48	M24	Z	-9.4	-9.4	0	%100
49	M25	Z	-9.4	-9.4	0	%100
50	M26	Z	-9.4	-9.4	0	%100
51	M27	Z	-8.1	-8.1	0	%100
52	M28	Z	-9.4	-9.4	0	%100
53	M29	Z	-9.4	-9.4	0	%100
54	M30	Z	-9.4	-9.4	0	%100
55	M31	Z	-9.4	-9.4	0	%100
56	M32	Z	-8.1	-8.1	0	%100
57	M33	Z	-9.4	-9.4	0	%100
58	M34	Z	-2.8	-2.8	0	%100
59	M35	Z	-23.5	-23.5	0	%100
60	M36	Z	-22.5	-22.5	0	%100
61	M37	Z	-25.3	-25.3	0	%100
62	M38	Z	-2	-2	0	%100
63	M39	Z	-33.2	-33.2	0	%100
64	M40	Z	-20.5	-20.5	0	%100
65	M41	Z	-20.5	-20.5	0	%100
66	M42	Z	0	0	0	%100
67	M43	Z	-11.1	-11.1	0	%100
68	M44	Z	-13.1	-13.1	0	%100
69	M45	Z	-0.8	-0.8	0	%100

Member Distributed Loads (BLC 6 : Wind 90) (Continued)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
70	M46	Z	-11.4	-11.4	0 %100
71	M47	Z	-11.4	-11.4	0 %100
72	M48	Z	-11.4	-11.4	0 %100
73	M49	Z	-9.3	-9.3	0 %100
74	M50	Z	0	0	0 %100
75	M51	Z	-9.3	-9.3	0 %100
76	M52	Z	-0.3	-0.3	0 %100
77	M53	Z	-9.5	-9.5	0 %100
78	M54	Z	-11	-11	0 %100
79	M55	Z	-14	-14	0 %100
80	M56	Z	-16.6	-16.6	0 %100
81	M57	Z	-14	-14	0 %100
82	M58	Z	-13.9	-13.9	0 %100
83	M59	Z	-0.6	-0.6	0 %100
84	M60	Z	-16.3	-16.3	0 %100

Member Distributed Loads (BLC 7 : Wind 120)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	6.9	6.9	0 %100
2	M20	X	3.5	3.5	0 %100
3	M21	X	6.9	6.9	0 %100
4	M22	X	4.7	4.7	0 %100
5	M23	X	4.7	4.7	0 %100
6	M24	X	4.7	4.7	0 %100
7	M25	X	4.7	4.7	0 %100
8	M26	X	4.7	4.7	0 %100
9	M27	X	2.4	2.4	0 %100
10	M28	X	4.7	4.7	0 %100
11	M29	X	4.7	4.7	0 %100
12	M30	X	4.7	4.7	0 %100
13	M31	X	4.7	4.7	0 %100
14	M32	X	4.7	4.7	0 %100
15	M33	X	4.7	4.7	0 %100
16	M34	X	6	6	0 %100
17	M35	X	13	13	0 %100
18	M36	X	6.5	6.5	0 %100
19	M37	X	7.5	7.5	0 %100
20	M38	X	7.4	7.4	0 %100
21	M39	X	12.7	12.7	0 %100
22	M40	X	5.9	5.9	0 %100
23	M41	X	11.8	11.8	0 %100
24	M42	X	11.8	11.8	0 %100
25	M43	X	6.6	6.6	0 %100
26	M44	X	6	6	0 %100
27	M45	X	2.7	2.7	0 %100
28	M46	X	3.3	3.3	0 %100
29	M47	X	3.3	3.3	0 %100
30	M48	X	3.3	3.3	0 %100
31	M49	X	5.4	5.4	0 %100
32	M50	X	5.4	5.4	0 %100
33	M51	X	2.7	2.7	0 %100
34	M52	X	3.9	3.9	0 %100
35	M53	X	0.8	0.8	0 %100
36	M54	X	8.7	8.7	0 %100
37	M55	X	4	4	0 %100

Member Distributed Loads (BLC 7 : Wind 120) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
38	M56	X	4.8	4.8	0	%100
39	M57	X	4	4	0	%100
40	M58	X	8.1	8.1	0	%100
41	M59	X	4.3	4.3	0	%100
42	M60	X	4.6	4.6	0	%100
43	M19	Z	0	0	0	%100
44	M20	Z	-6	-6	0	%100
45	M21	Z	-12	-12	0	%100
46	M22	Z	-8.1	-8.1	0	%100
47	M23	Z	0	0	0	%100
48	M24	Z	-8.1	-8.1	0	%100
49	M25	Z	-8.1	-8.1	0	%100
50	M26	Z	-8.1	-8.1	0	%100
51	M27	Z	-4.1	-4.1	0	%100
52	M28	Z	-8.1	-8.1	0	%100
53	M29	Z	-8.1	-8.1	0	%100
54	M30	Z	-8.1	-8.1	0	%100
55	M31	Z	-8.1	-8.1	0	%100
56	M32	Z	-8.1	-8.1	0	%100
57	M33	Z	-8.1	-8.1	0	%100
58	M34	Z	-10.3	-10.3	0	%100
59	M35	Z	-22.5	-22.5	0	%100
60	M36	Z	-11.2	-11.2	0	%100
61	M37	Z	-13	-13	0	%100
62	M38	Z	-12.7	-12.7	0	%100
63	M39	Z	-21.9	-21.9	0	%100
64	M40	Z	-10.3	-10.3	0	%100
65	M41	Z	-20.5	-20.5	0	%100
66	M42	Z	0	0	0	%100
67	M43	Z	-11.4	-11.4	0	%100
68	M44	Z	-10.4	-10.4	0	%100
69	M45	Z	-4.7	-4.7	0	%100
70	M46	Z	-5.7	-5.7	0	%100
71	M47	Z	-5.7	-5.7	0	%100
72	M48	Z	-5.7	-5.7	0	%100
73	M49	Z	-9.3	-9.3	0	%100
74	M50	Z	0	0	0	%100
75	M51	Z	-4.6	-4.6	0	%100
76	M52	Z	-6.8	-6.8	0	%100
77	M53	Z	-1.5	-1.5	0	%100
78	M54	Z	-15.1	-15.1	0	%100
79	M55	Z	-7	-7	0	%100
80	M56	Z	-8.3	-8.3	0	%100
81	M57	Z	-7	-7	0	%100
82	M58	Z	-14	-14	0	%100
83	M59	Z	-7.5	-7.5	0	%100
84	M60	Z	-7.9	-7.9	0	%100

Member Distributed Loads (BLC 8 : Wind 150)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	12	12	0	%100
2	M20	X	0	0	0	%100
3	M21	X	10.4	10.4	0	%100
4	M22	X	8.1	8.1	0	%100
5	M23	X	8.1	8.1	0	%100

Member Distributed Loads (BLC 8 : Wind 150) (Continued)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
6	M24	X	8.1	8.1	0	%100
7	M25	X	8.1	8.1	0	%100
8	M26	X	8.1	8.1	0	%100
9	M27	X	0	0	0	%100
10	M28	X	8.1	8.1	0	%100
11	M29	X	8.1	8.1	0	%100
12	M30	X	8.1	8.1	0	%100
13	M31	X	8.1	8.1	0	%100
14	M32	X	7.1	7.1	0	%100
15	M33	X	8.1	8.1	0	%100
16	M34	X	20.3	20.3	0	%100
17	M35	X	18.6	18.6	0	%100
18	M36	X	0	0	0	%100
19	M37	X	0.5	0.5	0	%100
20	M38	X	20.3	20.3	0	%100
21	M39	X	9.2	9.2	0	%100
22	M40	X	0	0	0	%100
23	M41	X	17.8	17.8	0	%100
24	M42	X	20.5	20.5	0	%100
25	M43	X	10.1	10.1	0	%100
26	M44	X	6.8	6.8	0	%100
27	M45	X	8.8	8.8	0	%100
28	M46	X	0	0	0	%100
29	M47	X	0	0	0	%100
30	M48	X	0	0	0	%100
31	M49	X	8	8	0	%100
32	M50	X	9.3	9.3	0	%100
33	M51	X	0	0	0	%100
34	M52	X	12	12	0	%100
35	M53	X	5.7	5.7	0	%100
36	M54	X	16.5	16.5	0	%100
37	M55	X	0	0	0	%100
38	M56	X	0	0	0	%100
39	M57	X	0	0	0	%100
40	M58	X	12.3	12.3	0	%100
41	M59	X	12.4	12.4	0	%100
42	M60	X	0.4	0.4	0	%100
43	M19	Z	0	0	0	%100
44	M20	Z	0	0	0	%100
45	M21	Z	-6	-6	0	%100
46	M22	Z	-4.7	-4.7	0	%100
47	M23	Z	0	0	0	%100
48	M24	Z	-4.7	-4.7	0	%100
49	M25	Z	-4.7	-4.7	0	%100
50	M26	Z	-4.7	-4.7	0	%100
51	M27	Z	0	0	0	%100
52	M28	Z	-4.7	-4.7	0	%100
53	M29	Z	-4.7	-4.7	0	%100
54	M30	Z	-4.7	-4.7	0	%100
55	M31	Z	-4.7	-4.7	0	%100
56	M32	Z	-4.1	-4.1	0	%100
57	M33	Z	-4.7	-4.7	0	%100
58	M34	Z	-11.7	-11.7	0	%100
59	M35	Z	-10.7	-10.7	0	%100
60	M36	Z	0	0	0	%100

Member Distributed Loads (BLC 8 : Wind 150) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
61	M37	Z	-0.3	-0.3	0	%100
62	M38	Z	-11.7	-11.7	0	%100
63	M39	Z	-5.3	-5.3	0	%100
64	M40	Z	0	0	0	%100
65	M41	Z	-10.3	-10.3	0	%100
66	M42	Z	0	0	0	%100
67	M43	Z	-5.8	-5.8	0	%100
68	M44	Z	-3.9	-3.9	0	%100
69	M45	Z	-5.1	-5.1	0	%100
70	M46	Z	0	0	0	%100
71	M47	Z	0	0	0	%100
72	M48	Z	0	0	0	%100
73	M49	Z	-4.6	-4.6	0	%100
74	M50	Z	0	0	0	%100
75	M51	Z	0	0	0	%100
76	M52	Z	-6.9	-6.9	0	%100
77	M53	Z	-3.3	-3.3	0	%100
78	M54	Z	-9.5	-9.5	0	%100
79	M55	Z	0	0	0	%100
80	M56	Z	0	0	0	%100
81	M57	Z	0	0	0	%100
82	M58	Z	-7.1	-7.1	0	%100
83	M59	Z	-7.2	-7.2	0	%100
84	M60	Z	-0.3	-0.3	0	%100

Member Distributed Loads (BLC 9 : Wind Ice 0)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	-4.6	-4.6	0	%100
2	M20	X	-2.3	-2.3	0	%100
3	M21	X	-2.3	-2.3	0	%100
4	M22	X	-3.5	-3.5	0	%100
5	M23	X	-3.9	-3.9	0	%100
6	M24	X	-3.5	-3.5	0	%100
7	M25	X	-3.4	-3.4	0	%100
8	M26	X	-3.8	-3.8	0	%100
9	M27	X	-2	-2	0	%100
10	M28	X	-3.8	-3.8	0	%100
11	M29	X	-3.4	-3.4	0	%100
12	M30	X	-3.4	-3.4	0	%100
13	M31	X	-3.8	-3.8	0	%100
14	M32	X	-2	-2	0	%100
15	M33	X	-3.5	-3.5	0	%100
16	M34	X	-6.5	-6.5	0	%100
17	M35	X	-2.5	-2.5	0	%100
18	M36	X	-2.9	-2.9	0	%100
19	M37	X	-3.1	-3.1	0	%100
20	M38	X	-5.9	-5.9	0	%100
21	M39	X	-1.5	-1.5	0	%100
22	M40	X	-2.7	-2.7	0	%100
23	M41	X	-2.7	-2.7	0	%100
24	M42	X	-5.5	-5.5	0	%100
25	M43	X	-2.1	-2.1	0	%100
26	M44	X	-0.5	-0.5	0	%100
27	M45	X	-3.7	-3.7	0	%100
28	M46	X	-2	-2	0	%100

Member Distributed Loads (BLC 9 : Wind Ice 0) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
29	M47	X	-2	-2	0	%100
30	M48	X	-2	-2	0	%100
31	M49	X	-1.6	-1.6	0	%100
32	M50	X	-3.2	-3.2	0	%100
33	M51	X	-1.6	-1.6	0	%100
34	M52	X	-4.2	-4.2	0	%100
35	M53	X	-3.4	-3.4	0	%100
36	M54	X	-4	-4	0	%100
37	M55	X	-2.1	-2.1	0	%100
38	M56	X	-2.5	-2.5	0	%100
39	M57	X	-2.1	-2.1	0	%100
40	M58	X	-2.2	-2.2	0	%100
41	M59	X	-4.2	-4.2	0	%100
42	M60	X	-2.6	-2.6	0	%100
43	M19	Z	0	0	0	%100
44	M20	Z	0	0	0	%100
45	M21	Z	0	0	0	%100
46	M22	Z	0	0	0	%100
47	M23	Z	0	0	0	%100
48	M24	Z	0	0	0	%100
49	M25	Z	0	0	0	%100
50	M26	Z	0	0	0	%100
51	M27	Z	0	0	0	%100
52	M28	Z	0	0	0	%100
53	M29	Z	0	0	0	%100
54	M30	Z	0	0	0	%100
55	M31	Z	0	0	0	%100
56	M32	Z	0	0	0	%100
57	M33	Z	0	0	0	%100
58	M34	Z	0	0	0	%100
59	M35	Z	0	0	0	%100
60	M36	Z	0	0	0	%100
61	M37	Z	0	0	0	%100
62	M38	Z	0	0	0	%100
63	M39	Z	0	0	0	%100
64	M40	Z	0	0	0	%100
65	M41	Z	0	0	0	%100
66	M42	Z	0	0	0	%100
67	M43	Z	0	0	0	%100
68	M44	Z	0	0	0	%100
69	M45	Z	0	0	0	%100
70	M46	Z	0	0	0	%100
71	M47	Z	0	0	0	%100
72	M48	Z	0	0	0	%100
73	M49	Z	0	0	0	%100
74	M50	Z	0	0	0	%100
75	M51	Z	0	0	0	%100
76	M52	Z	0	0	0	%100
77	M53	Z	0	0	0	%100
78	M54	Z	0	0	0	%100
79	M55	Z	0	0	0	%100
80	M56	Z	0	0	0	%100
81	M57	Z	0	0	0	%100
82	M58	Z	0	0	0	%100
83	M59	Z	0	0	0	%100

Member Distributed Loads (BLC 9 : Wind Ice 0) (Continued)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
84	M60	Z	0	0	%100

Member Distributed Loads (BLC 10 : Wind Ice 30)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	-4	0	%100
2	M20	X	-3.4	0	%100
3	M21	X	0	0	%100
4	M22	X	-3	0	%100
5	M23	X	-3.4	0	%100
6	M24	X	-3	0	%100
7	M25	X	-2.9	0	%100
8	M26	X	-3.3	0	%100
9	M27	X	-2.9	0	%100
10	M28	X	-3.3	0	%100
11	M29	X	-2.9	0	%100
12	M30	X	-2.9	0	%100
13	M31	X	-3.3	0	%100
14	M32	X	0	0	%100
15	M33	X	-3	0	%100
16	M34	X	-5.1	0	%100
17	M35	X	-0.4	0	%100
18	M36	X	-4.4	0	%100
19	M37	X	-4.8	0	%100
20	M38	X	-4.2	0	%100
21	M39	X	-4.4	0	%100
22	M40	X	-4.1	0	%100
23	M41	X	0	0	%100
24	M42	X	-4.7	0	%100
25	M43	X	-0.1	0	%100
26	M44	X	-1.5	0	%100
27	M45	X	-2.8	0	%100
28	M46	X	-3	0	%100
29	M47	X	-3	0	%100
30	M48	X	-3	0	%100
31	M49	X	0	0	%100
32	M50	X	-2.8	0	%100
33	M51	X	-2.4	0	%100
34	M52	X	-3.2	0	%100
35	M53	X	-3.6	0	%100
36	M54	X	-1.8	0	%100
37	M55	X	-3.2	0	%100
38	M56	X	-3.7	0	%100
39	M57	X	-3.2	0	%100
40	M58	X	-0.1	0	%100
41	M59	X	-3.1	0	%100
42	M60	X	-3.7	0	%100
43	M19	Z	0	0	%100
44	M20	Z	-2	0	%100
45	M21	Z	0	0	%100
46	M22	Z	-1.7	0	%100
47	M23	Z	0	0	%100
48	M24	Z	-1.7	0	%100
49	M25	Z	-1.7	0	%100
50	M26	Z	-1.9	0	%100
51	M27	Z	-1.7	0	%100

Member Distributed Loads (BLC 10 : Wind Ice 30) (Continued)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
52	M28	Z	-1.9	-1.9	0	%100
53	M29	Z	-1.7	-1.7	0	%100
54	M30	Z	-1.7	-1.7	0	%100
55	M31	Z	-1.9	-1.9	0	%100
56	M32	Z	0	0	0	%100
57	M33	Z	-1.7	-1.7	0	%100
58	M34	Z	-3	-3	0	%100
59	M35	Z	-0.2	-0.2	0	%100
60	M36	Z	-2.5	-2.5	0	%100
61	M37	Z	-2.8	-2.8	0	%100
62	M38	Z	-2.4	-2.4	0	%100
63	M39	Z	-2.5	-2.5	0	%100
64	M40	Z	-2.4	-2.4	0	%100
65	M41	Z	0	0	0	%100
66	M42	Z	0	0	0	%100
67	M43	Z	-0.1	-0.1	0	%100
68	M44	Z	-0.8	-0.8	0	%100
69	M45	Z	-1.6	-1.6	0	%100
70	M46	Z	-1.7	-1.7	0	%100
71	M47	Z	-1.7	-1.7	0	%100
72	M48	Z	-1.7	-1.7	0	%100
73	M49	Z	0	0	0	%100
74	M50	Z	0	0	0	%100
75	M51	Z	-1.4	-1.4	0	%100
76	M52	Z	-1.8	-1.8	0	%100
77	M53	Z	-2.1	-2.1	0	%100
78	M54	Z	-1	-1	0	%100
79	M55	Z	-1.8	-1.8	0	%100
80	M56	Z	-2.1	-2.1	0	%100
81	M57	Z	-1.8	-1.8	0	%100
82	M58	Z	0	0	0	%100
83	M59	Z	-1.8	-1.8	0	%100
84	M60	Z	-2.2	-2.2	0	%100

Member Distributed Loads (BLC 11 : Wind Ice 60)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	-2.3	-2.3	0	%100
2	M20	X	-2.3	-2.3	0	%100
3	M21	X	-1.1	-1.1	0	%100
4	M22	X	-1.7	-1.7	0	%100
5	M23	X	-2	-2	0	%100
6	M24	X	-1.7	-1.7	0	%100
7	M25	X	-1.7	-1.7	0	%100
8	M26	X	-1.9	-1.9	0	%100
9	M27	X	-2	-2	0	%100
10	M28	X	-1.9	-1.9	0	%100
11	M29	X	-1.7	-1.7	0	%100
12	M30	X	-1.7	-1.7	0	%100
13	M31	X	-1.9	-1.9	0	%100
14	M32	X	-1	-1	0	%100
15	M33	X	-1.7	-1.7	0	%100
16	M34	X	-1.9	-1.9	0	%100
17	M35	X	-1.7	-1.7	0	%100
18	M36	X	-2.9	-2.9	0	%100
19	M37	X	-3.2	-3.2	0	%100

Member Distributed Loads (BLC 11 : Wind Ice 60) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
20	M38	X	-1.3	-1.3	0	%100
21	M39	X	-3.6	-3.6	0	%100
22	M40	X	-2.7	-2.7	0	%100
23	M41	X	-1.4	-1.4	0	%100
24	M42	X	-2.7	-2.7	0	%100
25	M43	X	-0.9	-0.9	0	%100
26	M44	X	-1.7	-1.7	0	%100
27	M45	X	-1	-1	0	%100
28	M46	X	-2	-2	0	%100
29	M47	X	-2	-2	0	%100
30	M48	X	-2	-2	0	%100
31	M49	X	-0.8	-0.8	0	%100
32	M50	X	-1.6	-1.6	0	%100
33	M51	X	-1.6	-1.6	0	%100
34	M52	X	-1.1	-1.1	0	%100
35	M53	X	-1.9	-1.9	0	%100
36	M54	X	-0.2	-0.2	0	%100
37	M55	X	-2.1	-2.1	0	%100
38	M56	X	-2.5	-2.5	0	%100
39	M57	X	-2.1	-2.1	0	%100
40	M58	X	-1	-1	0	%100
41	M59	X	-1	-1	0	%100
42	M60	X	-2.5	-2.5	0	%100
43	M19	Z	0	0	0	%100
44	M20	Z	-4	-4	0	%100
45	M21	Z	-2	-2	0	%100
46	M22	Z	-3	-3	0	%100
47	M23	Z	0	0	0	%100
48	M24	Z	-3	-3	0	%100
49	M25	Z	-2.9	-2.9	0	%100
50	M26	Z	-3.3	-3.3	0	%100
51	M27	Z	-3.4	-3.4	0	%100
52	M28	Z	-3.3	-3.3	0	%100
53	M29	Z	-2.9	-2.9	0	%100
54	M30	Z	-2.9	-2.9	0	%100
55	M31	Z	-3.3	-3.3	0	%100
56	M32	Z	-1.7	-1.7	0	%100
57	M33	Z	-3	-3	0	%100
58	M34	Z	-3.3	-3.3	0	%100
59	M35	Z	-2.9	-2.9	0	%100
60	M36	Z	-5.1	-5.1	0	%100
61	M37	Z	-5.6	-5.6	0	%100
62	M38	Z	-2.2	-2.2	0	%100
63	M39	Z	-6.2	-6.2	0	%100
64	M40	Z	-4.7	-4.7	0	%100
65	M41	Z	-2.4	-2.4	0	%100
66	M42	Z	0	0	0	%100
67	M43	Z	-1.6	-1.6	0	%100
68	M44	Z	-2.9	-2.9	0	%100
69	M45	Z	-1.8	-1.8	0	%100
70	M46	Z	-3.4	-3.4	0	%100
71	M47	Z	-3.4	-3.4	0	%100
72	M48	Z	-3.4	-3.4	0	%100
73	M49	Z	-1.4	-1.4	0	%100
74	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 11 : Wind Ice 60) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
75	M51	Z	-2.8	-2.8	0	%100
76	M52	Z	-1.9	-1.9	0	%100
77	M53	Z	-3.3	-3.3	0	%100
78	M54	Z	-0.4	-0.4	0	%100
79	M55	Z	-3.7	-3.7	0	%100
80	M56	Z	-4.3	-4.3	0	%100
81	M57	Z	-3.7	-3.7	0	%100
82	M58	Z	-1.8	-1.8	0	%100
83	M59	Z	-1.7	-1.7	0	%100
84	M60	Z	-4.3	-4.3	0	%100

Member Distributed Loads (BLC 12 : Wind Ice 90)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	0	0	0	%100
2	M20	X	0	0	0	%100
3	M21	X	0	0	0	%100
4	M22	X	0	0	0	%100
5	M23	X	0	0	0	%100
6	M24	X	0	0	0	%100
7	M25	X	0	0	0	%100
8	M26	X	0	0	0	%100
9	M27	X	0	0	0	%100
10	M28	X	0	0	0	%100
11	M29	X	0	0	0	%100
12	M30	X	0	0	0	%100
13	M31	X	0	0	0	%100
14	M32	X	0	0	0	%100
15	M33	X	0	0	0	%100
16	M34	X	0	0	0	%100
17	M35	X	0	0	0	%100
18	M36	X	0	0	0	%100
19	M37	X	0	0	0	%100
20	M38	X	0	0	0	%100
21	M39	X	0	0	0	%100
22	M40	X	0	0	0	%100
23	M41	X	0	0	0	%100
24	M42	X	0	0	0	%100
25	M43	X	0	0	0	%100
26	M44	X	0	0	0	%100
27	M45	X	0	0	0	%100
28	M46	X	0	0	0	%100
29	M47	X	0	0	0	%100
30	M48	X	0	0	0	%100
31	M49	X	0	0	0	%100
32	M50	X	0	0	0	%100
33	M51	X	0	0	0	%100
34	M52	X	0	0	0	%100
35	M53	X	0	0	0	%100
36	M54	X	0	0	0	%100
37	M55	X	0	0	0	%100
38	M56	X	0	0	0	%100
39	M57	X	0	0	0	%100
40	M58	X	0	0	0	%100
41	M59	X	0	0	0	%100
42	M60	X	0	0	0	%100

Member Distributed Loads (BLC 12 : Wind Ice 90) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
43	M19	Z	0	0	0	%100
44	M20	Z	-4	-4	0	%100
45	M21	Z	-4	-4	0	%100
46	M22	Z	-3.5	-3.5	0	%100
47	M23	Z	0	0	0	%100
48	M24	Z	-3.5	-3.5	0	%100
49	M25	Z	-3.4	-3.4	0	%100
50	M26	Z	-3.8	-3.8	0	%100
51	M27	Z	-3.4	-3.4	0	%100
52	M28	Z	-3.8	-3.8	0	%100
53	M29	Z	-3.4	-3.4	0	%100
54	M30	Z	-3.4	-3.4	0	%100
55	M31	Z	-3.8	-3.8	0	%100
56	M32	Z	-3.4	-3.4	0	%100
57	M33	Z	-3.5	-3.5	0	%100
58	M34	Z	-0.6	-0.6	0	%100
59	M35	Z	-5.3	-5.3	0	%100
60	M36	Z	-5.1	-5.1	0	%100
61	M37	Z	-5.7	-5.7	0	%100
62	M38	Z	-0.5	-0.5	0	%100
63	M39	Z	-7.4	-7.4	0	%100
64	M40	Z	-4.7	-4.7	0	%100
65	M41	Z	-4.7	-4.7	0	%100
66	M42	Z	0	0	0	%100
67	M43	Z	-3.4	-3.4	0	%100
68	M44	Z	-4.2	-4.2	0	%100
69	M45	Z	-0.2	-0.2	0	%100
70	M46	Z	-3.4	-3.4	0	%100
71	M47	Z	-3.4	-3.4	0	%100
72	M48	Z	-3.4	-3.4	0	%100
73	M49	Z	-2.8	-2.8	0	%100
74	M50	Z	0	0	0	%100
75	M51	Z	-2.8	-2.8	0	%100
76	M52	Z	-0.1	-0.1	0	%100
77	M53	Z	-2.5	-2.5	0	%100
78	M54	Z	-2.8	-2.8	0	%100
79	M55	Z	-3.7	-3.7	0	%100
80	M56	Z	-4.3	-4.3	0	%100
81	M57	Z	-3.7	-3.7	0	%100
82	M58	Z	-3.6	-3.6	0	%100
83	M59	Z	-0.2	-0.2	0	%100
84	M60	Z	-4.2	-4.2	0	%100

Member Distributed Loads (BLC 13 : Wind Ice 120)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	2.3	2.3	0	%100
2	M20	X	1.1	1.1	0	%100
3	M21	X	2.3	2.3	0	%100
4	M22	X	1.7	1.7	0	%100
5	M23	X	2	2	0	%100
6	M24	X	1.7	1.7	0	%100
7	M25	X	1.7	1.7	0	%100
8	M26	X	1.9	1.9	0	%100
9	M27	X	1	1	0	%100
10	M28	X	1.9	1.9	0	%100

Member Distributed Loads (BLC 13 : Wind Ice 120) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
11	M29	X	1.7	1.7	0	%100
12	M30	X	1.7	1.7	0	%100
13	M31	X	1.9	1.9	0	%100
14	M32	X	2	2	0	%100
15	M33	X	1.7	1.7	0	%100
16	M34	X	1.3	1.3	0	%100
17	M35	X	2.9	2.9	0	%100
18	M36	X	1.5	1.5	0	%100
19	M37	X	1.7	1.7	0	%100
20	M38	X	1.7	1.7	0	%100
21	M39	X	2.8	2.8	0	%100
22	M40	X	1.4	1.4	0	%100
23	M41	X	2.7	2.7	0	%100
24	M42	X	2.7	2.7	0	%100
25	M43	X	2	2	0	%100
26	M44	X	1.9	1.9	0	%100
27	M45	X	0.8	0.8	0	%100
28	M46	X	1	1	0	%100
29	M47	X	1	1	0	%100
30	M48	X	1	1	0	%100
31	M49	X	1.6	1.6	0	%100
32	M50	X	1.6	1.6	0	%100
33	M51	X	0.8	0.8	0	%100
34	M52	X	1	1	0	%100
35	M53	X	0.2	0.2	0	%100
36	M54	X	2.2	2.2	0	%100
37	M55	X	1.1	1.1	0	%100
38	M56	X	1.2	1.2	0	%100
39	M57	X	1.1	1.1	0	%100
40	M58	X	2.1	2.1	0	%100
41	M59	X	1.1	1.1	0	%100
42	M60	X	1.2	1.2	0	%100
43	M19	Z	0	0	0	%100
44	M20	Z	-2	-2	0	%100
45	M21	Z	-4	-4	0	%100
46	M22	Z	-3	-3	0	%100
47	M23	Z	0	0	0	%100
48	M24	Z	-3	-3	0	%100
49	M25	Z	-2.9	-2.9	0	%100
50	M26	Z	-3.3	-3.3	0	%100
51	M27	Z	-1.7	-1.7	0	%100
52	M28	Z	-3.3	-3.3	0	%100
53	M29	Z	-2.9	-2.9	0	%100
54	M30	Z	-2.9	-2.9	0	%100
55	M31	Z	-3.3	-3.3	0	%100
56	M32	Z	-3.4	-3.4	0	%100
57	M33	Z	-3	-3	0	%100
58	M34	Z	-2.3	-2.3	0	%100
59	M35	Z	-5.1	-5.1	0	%100
60	M36	Z	-2.5	-2.5	0	%100
61	M37	Z	-2.9	-2.9	0	%100
62	M38	Z	-2.9	-2.9	0	%100
63	M39	Z	-4.9	-4.9	0	%100
64	M40	Z	-2.4	-2.4	0	%100
65	M41	Z	-4.7	-4.7	0	%100

Member Distributed Loads (BLC 13 : Wind Ice 120) (Continued)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
66	M42	Z	0	0	%100
67	M43	Z	-3.4	0	%100
68	M44	Z	-3.3	0	%100
69	M45	Z	-1.4	0	%100
70	M46	Z	-1.7	0	%100
71	M47	Z	-1.7	0	%100
72	M48	Z	-1.7	0	%100
73	M49	Z	-2.8	0	%100
74	M50	Z	0	0	%100
75	M51	Z	-1.4	0	%100
76	M52	Z	-1.8	0	%100
77	M53	Z	-0.4	0	%100
78	M54	Z	-3.9	0	%100
79	M55	Z	-1.8	0	%100
80	M56	Z	-2.1	0	%100
81	M57	Z	-1.8	0	%100
82	M58	Z	-3.7	0	%100
83	M59	Z	-2	0	%100
84	M60	Z	-2	0	%100

Member Distributed Loads (BLC 14 : Wind Ice 150)

Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M19	X	4	0	%100
2	M20	X	0	0	%100
3	M21	X	3.4	0	%100
4	M22	X	3	0	%100
5	M23	X	3.4	0	%100
6	M24	X	3	0	%100
7	M25	X	2.9	0	%100
8	M26	X	3.3	0	%100
9	M27	X	0	0	%100
10	M28	X	3.3	0	%100
11	M29	X	2.9	0	%100
12	M30	X	2.9	0	%100
13	M31	X	3.3	0	%100
14	M32	X	2.9	0	%100
15	M33	X	3	0	%100
16	M34	X	4.6	0	%100
17	M35	X	4.2	0	%100
18	M36	X	0	0	%100
19	M37	X	0.1	0	%100
20	M38	X	4.6	0	%100
21	M39	X	2.1	0	%100
22	M40	X	0	0	%100
23	M41	X	4.1	0	%100
24	M42	X	4.7	0	%100
25	M43	X	3.1	0	%100
26	M44	X	2.2	0	%100
27	M45	X	2.6	0	%100
28	M46	X	0	0	%100
29	M47	X	0	0	%100
30	M48	X	0	0	%100
31	M49	X	2.4	0	%100
32	M50	X	2.8	0	%100
33	M51	X	0	0	%100

Member Distributed Loads (BLC 14 : Wind Ice 150) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
34	M52	X	3.1	3.1	0	%100
35	M53	X	1.5	1.5	0	%100
36	M54	X	4.2	4.2	0	%100
37	M55	X	0	0	0	%100
38	M56	X	0	0	0	%100
39	M57	X	0	0	0	%100
40	M58	X	3.2	3.2	0	%100
41	M59	X	3.2	3.2	0	%100
42	M60	X	0.1	0.1	0	%100
43	M19	Z	0	0	0	%100
44	M20	Z	0	0	0	%100
45	M21	Z	-2	-2	0	%100
46	M22	Z	-1.7	-1.7	0	%100
47	M23	Z	0	0	0	%100
48	M24	Z	-1.7	-1.7	0	%100
49	M25	Z	-1.7	-1.7	0	%100
50	M26	Z	-1.9	-1.9	0	%100
51	M27	Z	0	0	0	%100
52	M28	Z	-1.9	-1.9	0	%100
53	M29	Z	-1.7	-1.7	0	%100
54	M30	Z	-1.7	-1.7	0	%100
55	M31	Z	-1.9	-1.9	0	%100
56	M32	Z	-1.7	-1.7	0	%100
57	M33	Z	-1.7	-1.7	0	%100
58	M34	Z	-2.6	-2.6	0	%100
59	M35	Z	-2.4	-2.4	0	%100
60	M36	Z	0	0	0	%100
61	M37	Z	-0.1	-0.1	0	%100
62	M38	Z	-2.7	-2.7	0	%100
63	M39	Z	-1.2	-1.2	0	%100
64	M40	Z	0	0	0	%100
65	M41	Z	-2.4	-2.4	0	%100
66	M42	Z	0	0	0	%100
67	M43	Z	-1.8	-1.8	0	%100
68	M44	Z	-1.2	-1.2	0	%100
69	M45	Z	-1.5	-1.5	0	%100
70	M46	Z	0	0	0	%100
71	M47	Z	0	0	0	%100
72	M48	Z	0	0	0	%100
73	M49	Z	-1.4	-1.4	0	%100
74	M50	Z	0	0	0	%100
75	M51	Z	0	0	0	%100
76	M52	Z	-1.8	-1.8	0	%100
77	M53	Z	-0.9	-0.9	0	%100
78	M54	Z	-2.4	-2.4	0	%100
79	M55	Z	0	0	0	%100
80	M56	Z	0	0	0	%100
81	M57	Z	0	0	0	%100
82	M58	Z	-1.8	-1.8	0	%100
83	M59	Z	-1.9	-1.9	0	%100
84	M60	Z	-0.1	-0.1	0	%100

Member Distributed Loads (BLC 53 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M46	Y	-1.358	-5.313	0	26.582
2	M46	Y	-5.313	-9.268	26.582	53.165
3	M47	Y	-1.358	-5.313	0	26.582
4	M47	Y	-5.313	-9.268	26.582	53.165
5	M55	Y	-9.469	-9.469	0.021	12.021
6	M56	Y	-12.017	-12.017	12.956	33.803
7	M57	Y	-9.469	-9.469	18.479	30.479
8	M45	Y	-1.359	-5.313	0	26.582
9	M45	Y	-5.313	-9.267	26.582	53.165
10	M48	Y	-1.359	-5.313	0	26.582
11	M48	Y	-5.313	-9.267	26.582	53.165
12	M52	Y	-9.47	-9.47	18.479	30.479
13	M53	Y	-9.47	-9.47	0.021	12.021
14	M54	Y	-12.016	-12.016	12.957	33.804
15	M43	Y	-1.358	-5.313	0	26.582
16	M43	Y	-5.313	-9.268	26.582	53.165
17	M44	Y	-1.358	-5.313	0	26.582
18	M44	Y	-5.313	-9.268	26.582	53.165
19	M58	Y	-9.469	-9.469	18.479	30.479
20	M59	Y	-9.469	-9.469	0.021	12.021
21	M60	Y	-12.017	-12.017	12.956	33.803

Member Distributed Loads (BLC 54 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/in]	End Magnitude [lb/ft, F, psf, lb-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M46	Y	-8.288	-14.458	26.582	53.165
2	M47	Y	-2.118	-8.288	0	26.582
3	M47	Y	-8.288	-14.458	26.582	53.165
4	M55	Y	-14.772	-14.772	0.021	12.021
5	M56	Y	-18.747	-18.747	12.956	33.803
6	M57	Y	-14.772	-14.772	18.479	30.479
7	M45	Y	-2.12	-8.288	0	26.582
8	M45	Y	-8.288	-14.456	26.582	53.165
9	M48	Y	-2.12	-8.288	0	26.582
10	M48	Y	-8.288	-14.456	26.582	53.165
11	M52	Y	-14.773	-14.773	18.479	30.479
12	M53	Y	-14.773	-14.773	0.021	12.021
13	M54	Y	-18.745	-18.745	12.957	33.804
14	M43	Y	-2.118	-8.288	0	26.582
15	M43	Y	-8.288	-14.458	26.582	53.165
16	M44	Y	-2.118	-8.288	0	26.582
17	M44	Y	-8.288	-14.458	26.582	53.165
18	M58	Y	-14.772	-14.772	18.479	30.479
19	M59	Y	-14.772	-14.772	0.021	12.021
20	M60	Y	-18.747	-18.747	12.956	33.803
21	M46	Y	-2.118	-8.288	0	26.582

Diaphragm Distributed Loads

No Data to Print...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Point	Distributed	Area(Member)
1	Dead	None		-1.05			30		3
2	Ice	None					30	42	3
3	Wind 0	None					60	84	
4	Wind 30	None					60	84	
5	Wind 60	None					60	84	
6	Wind 90	None					60	84	
7	Wind 120	None					60	84	
8	Wind 150	None					60	84	
9	Wind Ice 0	None					60	84	
10	Wind Ice 30	None					60	84	
11	Wind Ice 60	None					60	84	
12	Wind Ice 90	None					60	84	
13	Wind Ice 120	None					60	84	
14	Wind Ice 150	None					60	84	
15	Live Load Point (1)	None					1		
16	Live Load Point (2)	None					1		
17	Live Load Point (3)	None					1		
18	Live Load Point (4)	None							
19	Live Load Point (5)	None							
20	Live Load Point (6)	None							
21	Live Load Point (7)	None							
22	Live Load Point (8)	None							
23	Live Load Point (9)	None							
24	Live Load Point (10)	None							
25	Live Load Point (11)	None							
26	Live Load Point (12)	None							
27	Live Load Point (13)	None							
28	Live Load Point (14)	None							
29	Live Load Point (15)	None							
30	Live Load Point (16)	None							
31	Live Load Point (17)	None							
32	Live Load Point (18)	None							
33	Live Load Point (19)	None							
34	Live Load Point (20)	None							
35	Live Load Point (21)	None							
36	Live Load Point (22)	None							
37	Live Load Point (23)	None							
38	Live Load Point (24)	None							
39	Live Load Point (25)	None							
40	Live Load Point (26)	None							
41	Live Load Point (27)	None							
42	Live Load Point (28)	None							
43	Live Load Point (29)	None							
44	Live Load Point (30)	None							
45	Maintenance Load (1)	None				1			
46	Maintenance Load (2)	None				1			
47	Maintenance Load (3)	None				1			
48	Maintenance Load (4)	None				1			
49	Maintenance Load (5)	None				1			
50	Maintenance Load (6)	None							
51	Horizontal Seismic Load Effect,	None	-1				30		
52	Horizontal Seismic Load Effect,	None			-1		30		
53	BLC 1 Transient Area Loads	None						21	
54	BLC 2 Transient Area Loads	None						21	

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.4 D	Yes	Y	1	1.4						
2	1.2 D + 1.0 W 0	Yes	Y	1	1.2	3	1				
3	1.2 D + 1.0 W 30	Yes	Y	1	1.2	4	1				
4	1.2 D + 1.0 W 60	Yes	Y	1	1.2	5	1				
5	1.2 D + 1.0 W 90	Yes	Y	1	1.2	6	1				
6	1.2 D + 1.0 W 120	Yes	Y	1	1.2	7	1				
7	1.2 D + 1.0 W 150	Yes	Y	1	1.2	8	1				
8	1.2 D + 1.0 W 180	Yes	Y	1	1.2	3	-1				
9	1.2 D + 1.0 W 210	Yes	Y	1	1.2	4	-1				
10	1.2 D + 1.0 W 240	Yes	Y	1	1.2	5	-1				
11	1.2 D + 1.0 W 270	Yes	Y	1	1.2	6	-1				
12	1.2 D + 1.0 W 300	Yes	Y	1	1.2	7	-1				
13	1.2 D + 1.0 W 330	Yes	Y	1	1.2	8	-1				
14	1.2 D + 1.0 I + 1.0 W/I 0	Yes	Y	1	1.2	2	1	9	1		
15	1.2 D + 1.0 I + 1.0 W/I 30	Yes	Y	1	1.2	2	1	10	1		
16	1.2 D + 1.0 I + 1.0 W/I 60	Yes	Y	1	1.2	2	1	11	1		
17	1.2 D + 1.0 I + 1.0 W/I 90	Yes	Y	1	1.2	2	1	12	1		
18	1.2 D + 1.0 I + 1.0 W/I 120	Yes	Y	1	1.2	2	1	13	1		
19	1.2 D + 1.0 I + 1.0 W/I 150	Yes	Y	1	1.2	2	1	14	1		
20	1.2 D + 1.0 I + 1.0 W/I 180	Yes	Y	1	1.2	2	1	9	-1		
21	1.2 D + 1.0 I + 1.0 W/I 210	Yes	Y	1	1.2	2	1	10	-1		
22	1.2 D + 1.0 I + 1.0 W/I 240	Yes	Y	1	1.2	2	1	11	-1		
23	1.2 D + 1.0 I + 1.0 W/I 270	Yes	Y	1	1.2	2	1	12	-1		
24	1.2 D + 1.0 I + 1.0 W/I 300	Yes	Y	1	1.2	2	1	13	-1		
25	1.2 D + 1.0 I + 1.0 W/I 330	Yes	Y	1	1.2	2	1	14	-1		
26	1.2 D + 1.5 LV1	Yes	Y	1	1.2	15	1.5				
27	1.2 D + 1.5 LV2	Yes	Y	1	1.2	16	1.5				
28	1.2 D + 1.5 LV3	Yes	Y	1	1.2	17	1.5				
29	1.2 D + 1.5 LV4	Yes	Y	1	1.2	18	1.5				
30	1.2 D + 1.5 LV5	Yes	Y	1	1.2	19	1.5				
31	1.2 D + 1.5 LV6	Yes	Y	1	1.2	20	1.5				
32	1.2 D + 1.5 LV7	Yes	Y	1	1.2	21	1.5				
33	1.2 D + 1.5 LV8	Yes	Y	1	1.2	22	1.5				
34	1.2 D + 1.5 LV9	Yes	Y	1	1.2	23	1.5				
35	1.2 D + 1.5 LV10	Yes	Y	1	1.2	24	1.5				
36	1.2 D + 1.5 LV11	Yes	Y	1	1.2	25	1.5				
37	1.2 D + 1.5 LV12	Yes	Y	1	1.2	26	1.5				
38	1.2 D + 1.5 LV13	Yes	Y	1	1.2	27	1.5				
39	1.2 D + 1.5 LV14	Yes	Y	1	1.2	28	1.5				
40	1.2 D + 1.5 LV15	Yes	Y	1	1.2	29	1.5				
41	1.2 D + 1.5 LV16	Yes	Y	1	1.2	30	1.5				
42	1.2 D + 1.5 LV17	Yes	Y	1	1.2	31	1.5				
43	1.2 D + 1.5 LV18	Yes	Y	1	1.2	32	1.5				
44	1.2 D + 1.5 LV19	Yes	Y	1	1.2	33	1.5				
45	1.2 D + 1.5 LV20	Yes	Y	1	1.2	34	1.5				
46	1.2 D + 1.5 LV21	Yes	Y	1	1.2	35	1.5				
47	1.2 D + 1.5 LV22	Yes	Y	1	1.2	36	1.5				
48	1.2 D + 1.5 LV23	Yes	Y	1	1.2	37	1.5				
49	1.2 D + 1.5 LV24	Yes	Y	1	1.2	38	1.5				
50	1.2 D + 1.5 LV25	Yes	Y	1	1.2	39	1.5				
51	1.2 D + 1.5 LV26	Yes	Y	1	1.2	40	1.5				
52	1.2 D + 1.5 LV27	Yes	Y	1	1.2	41	1.5				
53	1.2 D + 1.5 LV28	Yes	Y	1	1.2	42	1.5				
54	1.2 D + 1.5 LV29	Yes	Y	1	1.2	43	1.5				
55	1.2 D + 1.5 LV30	Yes	Y	1	1.2	44	1.5				

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
56	1.2 D + 1.5 LM1 + 1.0 W 0 (Maintenance)	Yes	Y	1	1.2	45	1.5	3	0.063		
57	1.2 D + 1.5 LM1 + 1.0 W 30 (Maintenance)	Yes	Y	1	1.2	45	1.5	4	0.063		
58	1.2 D + 1.5 LM1 + 1.0 W 60 (Maintenance)	Yes	Y	1	1.2	45	1.5	5	0.063		
59	1.2 D + 1.5 LM1 + 1.0 W 90 (Maintenance)	Yes	Y	1	1.2	45	1.5	6	0.063		
60	1.2 D + 1.5 LM1 + 1.0 W 120 (Maintenance)	Yes	Y	1	1.2	45	1.5	7	0.063		
61	1.2 D + 1.5 LM1 + 1.0 W 150 (Maintenance)	Yes	Y	1	1.2	45	1.5	8	0.063		
62	1.2 D + 1.5 LM1 + 1.0 W 180 (Maintenance)	Yes	Y	1	1.2	45	1.5	3	-0.063		
63	1.2 D + 1.5 LM1 + 1.0 W 210 (Maintenance)	Yes	Y	1	1.2	45	1.5	4	-0.063		
64	1.2 D + 1.5 LM1 + 1.0 W 240 (Maintenance)	Yes	Y	1	1.2	45	1.5	5	-0.063		
65	1.2 D + 1.5 LM1 + 1.0 W 270 (Maintenance)	Yes	Y	1	1.2	45	1.5	6	-0.063		
66	1.2 D + 1.5 LM1 + 1.0 W 300 (Maintenance)	Yes	Y	1	1.2	45	1.5	7	-0.063		
67	1.2 D + 1.5 LM1 + 1.0 W 330 (Maintenance)	Yes	Y	1	1.2	45	1.5	8	-0.063		
68	1.2 D + 1.5 LM2 + 1.0 W 0 (Maintenance)	Yes	Y	1	1.2	46	1.5	3	0.063		
69	1.2 D + 1.5 LM2 + 1.0 W 30 (Maintenance)	Yes	Y	1	1.2	46	1.5	4	0.063		
70	1.2 D + 1.5 LM2 + 1.0 W 60 (Maintenance)	Yes	Y	1	1.2	46	1.5	5	0.063		
71	1.2 D + 1.5 LM2 + 1.0 W 90 (Maintenance)	Yes	Y	1	1.2	46	1.5	6	0.063		
72	1.2 D + 1.5 LM2 + 1.0 W 120 (Maintenance)	Yes	Y	1	1.2	46	1.5	7	0.063		
73	1.2 D + 1.5 LM2 + 1.0 W 150 (Maintenance)	Yes	Y	1	1.2	46	1.5	8	0.063		
74	1.2 D + 1.5 LM2 + 1.0 W 180 (Maintenance)	Yes	Y	1	1.2	46	1.5	3	-0.063		
75	1.2 D + 1.5 LM2 + 1.0 W 210 (Maintenance)	Yes	Y	1	1.2	46	1.5	4	-0.063		
76	1.2 D + 1.5 LM2 + 1.0 W 240 (Maintenance)	Yes	Y	1	1.2	46	1.5	5	-0.063		
77	1.2 D + 1.5 LM2 + 1.0 W 270 (Maintenance)	Yes	Y	1	1.2	46	1.5	6	-0.063		
78	1.2 D + 1.5 LM2 + 1.0 W 300 (Maintenance)	Yes	Y	1	1.2	46	1.5	7	-0.063		
79	1.2 D + 1.5 LM2 + 1.0 W 330 (Maintenance)	Yes	Y	1	1.2	46	1.5	8	-0.063		
80	1.2 D + 1.5 LM3 + 1.0 W 0 (Maintenance)	Yes	Y	1	1.2	47	1.5	3	0.063		
81	1.2 D + 1.5 LM3 + 1.0 W 30 (Maintenance)	Yes	Y	1	1.2	47	1.5	4	0.063		
82	1.2 D + 1.5 LM3 + 1.0 W 60 (Maintenance)	Yes	Y	1	1.2	47	1.5	5	0.063		
83	1.2 D + 1.5 LM3 + 1.0 W 90 (Maintenance)	Yes	Y	1	1.2	47	1.5	6	0.063		
84	1.2 D + 1.5 LM3 + 1.0 W 120 (Maintenance)	Yes	Y	1	1.2	47	1.5	7	0.063		
85	1.2 D + 1.5 LM3 + 1.0 W 150 (Maintenance)	Yes	Y	1	1.2	47	1.5	8	0.063		
86	1.2 D + 1.5 LM3 + 1.0 W 180 (Maintenance)	Yes	Y	1	1.2	47	1.5	3	-0.063		
87	1.2 D + 1.5 LM3 + 1.0 W 210 (Maintenance)	Yes	Y	1	1.2	47	1.5	4	-0.063		
88	1.2 D + 1.5 LM3 + 1.0 W 240 (Maintenance)	Yes	Y	1	1.2	47	1.5	5	-0.063		
89	1.2 D + 1.5 LM3 + 1.0 W 270 (Maintenance)	Yes	Y	1	1.2	47	1.5	6	-0.063		
90	1.2 D + 1.5 LM3 + 1.0 W 300 (Maintenance)	Yes	Y	1	1.2	47	1.5	7	-0.063		
91	1.2 D + 1.5 LM3 + 1.0 W 330 (Maintenance)	Yes	Y	1	1.2	47	1.5	8	-0.063		
92	1.2 D + 1.5 LM4 + 1.0 W 0 (Maintenance)	Yes	Y	1	1.2	48	1.5	3	0.063		
93	1.2 D + 1.5 LM4 + 1.0 W 30 (Maintenance)	Yes	Y	1	1.2	48	1.5	4	0.063		
94	1.2 D + 1.5 LM4 + 1.0 W 60 (Maintenance)	Yes	Y	1	1.2	48	1.5	5	0.063		
95	1.2 D + 1.5 LM4 + 1.0 W 90 (Maintenance)	Yes	Y	1	1.2	48	1.5	6	0.063		
96	1.2 D + 1.5 LM4 + 1.0 W 120 (Maintenance)	Yes	Y	1	1.2	48	1.5	7	0.063		
97	1.2 D + 1.5 LM4 + 1.0 W 150 (Maintenance)	Yes	Y	1	1.2	48	1.5	8	0.063		
98	1.2 D + 1.5 LM4 + 1.0 W 180 (Maintenance)	Yes	Y	1	1.2	48	1.5	3	-0.063		
99	1.2 D + 1.5 LM4 + 1.0 W 210 (Maintenance)	Yes	Y	1	1.2	48	1.5	4	-0.063		
100	1.2 D + 1.5 LM4 + 1.0 W 240 (Maintenance)	Yes	Y	1	1.2	48	1.5	5	-0.063		
101	1.2 D + 1.5 LM4 + 1.0 W 270 (Maintenance)	Yes	Y	1	1.2	48	1.5	6	-0.063		
102	1.2 D + 1.5 LM4 + 1.0 W 300 (Maintenance)	Yes	Y	1	1.2	48	1.5	7	-0.063		
103	1.2 D + 1.5 LM4 + 1.0 W 330 (Maintenance)	Yes	Y	1	1.2	48	1.5	8	-0.063		
104	1.2 D + 1.5 LM5 + 1.0 W 0 (Maintenance)	Yes	Y	1	1.2	49	1.5	3	0.063		
105	1.2 D + 1.5 LM5 + 1.0 W 30 (Maintenance)	Yes	Y	1	1.2	49	1.5	4	0.063		
106	1.2 D + 1.5 LM5 + 1.0 W 60 (Maintenance)	Yes	Y	1	1.2	49	1.5	5	0.063		
107	1.2 D + 1.5 LM5 + 1.0 W 90 (Maintenance)	Yes	Y	1	1.2	49	1.5	6	0.063		
108	1.2 D + 1.5 LM5 + 1.0 W 120 (Maintenance)	Yes	Y	1	1.2	49	1.5	7	0.063		
109	1.2 D + 1.5 LM5 + 1.0 W 150 (Maintenance)	Yes	Y	1	1.2	49	1.5	8	0.063		
110	1.2 D + 1.5 LM5 + 1.0 W 180 (Maintenance)	Yes	Y	1	1.2	49	1.5	3	-0.063		

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
111	1.2 D + 1.5 LM5 + 1.0 W 210 (Maintenance)	Yes	Y	1	1.2	49	1.5	4	-0.063		
112	1.2 D + 1.5 LM5 + 1.0 W 240 (Maintenance)	Yes	Y	1	1.2	49	1.5	5	-0.063		
113	1.2 D + 1.5 LM5 + 1.0 W 270 (Maintenance)	Yes	Y	1	1.2	49	1.5	6	-0.063		
114	1.2 D + 1.5 LM5 + 1.0 W 300 (Maintenance)	Yes	Y	1	1.2	49	1.5	7	-0.063		
115	1.2 D + 1.5 LM5 + 1.0 W 330 (Maintenance)	Yes	Y	1	1.2	49	1.5	8	-0.063		
116	1.2 D + 1.5 LM6 + 1.0 W 0 (Maintenance)	Yes	Y	1	1.2	50	1.5	3	0.063		
117	1.2 D + 1.5 LM6 + 1.0 W 30 (Maintenance)	Yes	Y	1	1.2	50	1.5	4	0.063		
118	1.2 D + 1.5 LM6 + 1.0 W 60 (Maintenance)	Yes	Y	1	1.2	50	1.5	5	0.063		
119	1.2 D + 1.5 LM6 + 1.0 W 90 (Maintenance)	Yes	Y	1	1.2	50	1.5	6	0.063		
120	1.2 D + 1.5 LM6 + 1.0 W 120 (Maintenance)	Yes	Y	1	1.2	50	1.5	7	0.063		
121	1.2 D + 1.5 LM6 + 1.0 W 150 (Maintenance)	Yes	Y	1	1.2	50	1.5	8	0.063		
122	1.2 D + 1.5 LM6 + 1.0 W 180 (Maintenance)	Yes	Y	1	1.2	50	1.5	3	-0.063		
123	1.2 D + 1.5 LM6 + 1.0 W 210 (Maintenance)	Yes	Y	1	1.2	50	1.5	4	-0.063		
124	1.2 D + 1.5 LM6 + 1.0 W 240 (Maintenance)	Yes	Y	1	1.2	50	1.5	5	-0.063		
125	1.2 D + 1.5 LM6 + 1.0 W 270 (Maintenance)	Yes	Y	1	1.2	50	1.5	6	-0.063		
126	1.2 D + 1.5 LM6 + 1.0 W 300 (Maintenance)	Yes	Y	1	1.2	50	1.5	7	-0.063		
127	1.2 D + 1.5 LM6 + 1.0 W 330 (Maintenance)	Yes	Y	1	1.2	50	1.5	8	-0.063		
128	1.2 D + 1.0 Ev + 1.0 Eh 0	Yes	Y	1	1.2	1	0.063	51	0.157	52	
129	1.2 D + 1.0 Ev + 1.0 Eh 30	Yes	Y	1	1.2	1	0.063	51	0.136	52	0.079
130	1.2 D + 1.0 Ev + 1.0 Eh 60	Yes	Y	1	1.2	1	0.063	51	0.079	52	0.136
131	1.2 D + 1.0 Ev + 1.0 Eh 90	Yes	Y	1	1.2	1	0.063	51		52	0.157
132	1.2 D + 1.0 Ev + 1.0 Eh 120	Yes	Y	1	1.2	1	0.063	51	-0.079	52	0.136
133	1.2 D + 1.0 Ev + 1.0 Eh 150	Yes	Y	1	1.2	1	0.063	51	-0.136	52	0.079
134	1.2 D + 1.0 Ev + 1.0 Eh 180	Yes	Y	1	1.2	1	0.063	51	-0.157	52	
135	1.2 D + 1.0 Ev + 1.0 Eh 210	Yes	Y	1	1.2	1	0.063	51	-0.136	52	-0.079
136	1.2 D + 1.0 Ev + 1.0 Eh 240	Yes	Y	1	1.2	1	0.063	51	-0.079	52	-0.136
137	1.2 D + 1.0 Ev + 1.0 Eh 270	Yes	Y	1	1.2	1	0.063	51		52	-0.157
138	1.2 D + 1.0 Ev + 1.0 Eh 300	Yes	Y	1	1.2	1	0.063	51	0.079	52	-0.136
139	1.2 D + 1.0 Ev + 1.0 Eh 330	Yes	Y	1	1.2	1	0.063	51	0.136	52	-0.079
140	0.9 D - 1.0 Ev + 1.0 Eh 0	Yes	Y	1	0.9	1	-0.063	51	0.157	52	
141	0.9 D - 1.0 Ev + 1.0 Eh 30	Yes	Y	1	0.9	1	-0.063	51	0.136	52	0.079
142	0.9 D - 1.0 Ev + 1.0 Eh 60	Yes	Y	1	0.9	1	-0.063	51	0.079	52	0.136
143	0.9 D - 1.0 Ev + 1.0 Eh 90	Yes	Y	1	0.9	1	-0.063	51		52	0.157
144	0.9 D - 1.0 Ev + 1.0 Eh 120	Yes	Y	1	0.9	1	-0.063	51	-0.079	52	0.136
145	0.9 D - 1.0 Ev + 1.0 Eh 150	Yes	Y	1	0.9	1	-0.063	51	-0.136	52	0.079
146	0.9 D - 1.0 Ev + 1.0 Eh 180	Yes	Y	1	0.9	1	-0.063	51	-0.157	52	
147	0.9 D - 1.0 Ev + 1.0 Eh 210	Yes	Y	1	0.9	1	-0.063	51	-0.136	52	-0.079
148	0.9 D - 1.0 Ev + 1.0 Eh 240	Yes	Y	1	0.9	1	-0.063	51	-0.079	52	-0.136
149	0.9 D - 1.0 Ev + 1.0 Eh 270	Yes	Y	1	0.9	1	-0.063	51		52	-0.157
150	0.9 D - 1.0 Ev + 1.0 Eh 300	Yes	Y	1	0.9	1	-0.063	51	0.079	52	-0.136
151	0.9 D - 1.0 Ev + 1.0 Eh 330	Yes	Y	1	0.9	1	-0.063	51	0.136	52	-0.079

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LCphi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
0	M31	PIPE 2.0	0.818	64.313	10	0.152	64.313	9	8922.084	32130	1871.625	1871.625	1	H1-1b
1	M28	PIPE 2.0	0.817	64.313	6	0.153	64.313	12	8922.084	32130	1871.625	1871.625	1	H1-1b
2	M26	PIPE 2.0	0.816	64.313	2	0.153	64.313	13	8922.084	32130	1871.625	1871.625	1	H1-1b
3	M49	L2.5X2.5X4	0.462	0	8	0.223	12.044	z 9	37309.2	38556	1113.554	2537.388	1.017	H2-1
4	M51	L2.5X2.5X4	0.462	0	12	0.223	12.044	z 13	37309.2	38556	1113.554	2537.388	1.007	H2-1
5	M50	L2.5X2.5X4	0.461	0	4	0.222	12.044	z 5	37309.2	38556	1113.554	2537.388	1.017	H2-1
6	M27	PIPE 2.0	0.428	101.901	9	0.358	136.391	10	6253.662	32130	1871.625	1871.625	1	H3-6
7	M32	PIPE 2.0	0.426	101.901	5	0.357	136.391	6	6253.662	32130	1871.625	1871.625	1	H3-6
8	M23	PIPE 2.0	0.422	101.901	13	0.357	136.391	2	6253.662	32130	1871.625	1871.625	1	H3-6
9	M22	PIPE 2.0	0.414	22.75	12	0.278	22.75	12	17855.085	32130	1871.625	1871.625	1	H3-6
10	M33	PIPE 2.0	0.412	22.75	8	0.276	22.75	8	17855.085	32130	1871.625	1871.625	1	H3-6

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

Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
11	M24	PIPE 2.0	0.409	22.75	4	0.276	22.75	4	17855.085	32130	1871.625	1871.625	1	H3-6
12	M30	PIPE 2.0	0.385	37.5	14	0.249	37.5	3	20866.733	32130	1871.625	1871.625	1	H1-1b
13	M29	PIPE 2.0	0.384	37.5	22	0.249	37.5	11	20866.733	32130	1871.625	1871.625	1	H1-1b
14	M25	PIPE 2.0	0.381	37.5	17	0.248	37.5	7	20866.733	32130	1871.625	1871.625	1	H1-1b
15	M54	HSS4X4X4	0.379	62.5	18	0.131	62.5	y	21	124544.812	139518	16180.5	2.965	H1-1b
16	M60	HSS4X4X4	0.379	62.5	16	0.131	62.5	y	17	124544.812	139518	16180.5	3	H1-1b
17	M56	HSS4X4X4	0.374	62.5	22	0.131	62.5	y	25	124544.812	139518	16180.5	2.962	H1-1b
18	M35	PL6X3/8	0.243	2.418	5	0.496	2.418	y	4	71010.729	72900	569.533	1.668	H1-1b
19	M34	PL6X3/8	0.242	2.418	13	0.626	2.418	y	6	71010.729	72900	569.533	1.668	H1-1b
20	M39	PL6X3/8	0.234	2.418	5	0.624	2.418	y	10	71010.729	72900	569.533	1.668	H1-1b
21	M47	L2X2X3	0.232	53.165	11	0.013	53.165	y	16	8732.272	23392.8	557.717	1.049	H2-1
22	M36	PL6X3/8	0.225	2.418	9	0.495	2.418	y	8	71010.729	72900	569.533	1.668	H1-1b
23	M38	PL6X3/8	0.225	2.418	2	0.495	2.418	y	12	71010.729	72900	569.533	1.668	H1-1b
24	M44	L2X2X3	0.223	53.165	3	0.013	53.165	y	20	8732.272	23392.8	557.717	1.126	H2-1
25	M45	L2X2X3	0.221	53.165	7	0.013	53.165	y	24	8732.272	23392.8	557.717	1.081	H2-1
26	M37	PL6X3/8	0.22	2.418	9	0.625	2.418	y	2	71010.729	72900	569.533	1.668	H1-1b
27	M20	PIPE 3.0	0.219	54.87	17	0.12	97.198	5	28093.202	65205	5748.75	5748.75	1	H1-1b
28	M21	PIPE 3.0	0.219	54.87	14	0.119	97.198	13	28093.202	65205	5748.75	5748.75	1	H1-1b
29	M19	PIPE 3.0	0.218	54.87	21	0.12	97.198	9	28093.202	65205	5748.75	5748.75	1	H1-1b
30	M46	L2X2X3	0.203	0	10	0.012	53.165	z	15	8732.272	23392.8	557.717	1.106	H2-1
31	M52	HSS4X4X4	0.202	30.5	20	0.055	30.5	y	18	135796.522	139518	16180.5	1.697	H1-1b
32	M57	HSS4X4X4	0.201	30.5	23	0.055	30.5	y	22	135796.522	139518	16180.5	1.7	H1-1b
33	M58	HSS4X4X4	0.201	30.5	16	0.055	30.5	y	14	135796.522	139518	16180.5	1.697	H1-1b
34	M48	L2X2X3	0.201	53.165	5	0.012	53.165	z	23	8732.272	23392.8	557.717	1.066	H2-1
35	M43	L2X2X3	0.201	0	2	0.012	53.165	z	19	8732.272	23392.8	557.717	1.126	H2-1
36	M53	HSS4X4X4	0.169	0	17	0.046	0	y	18	135796.522	139518	16180.5	1.676	H1-1b
37	M55	HSS4X4X4	0.169	0	21	0.046	0	y	22	135796.522	139518	16180.5	1.676	H1-1b
38	M59	HSS4X4X4	0.169	0	25	0.046	0	y	14	135796.522	139518	16180.5	1.677	H1-1b
39	M42	PL6X1/2	0.112	6.022	2	0.204	12.044	y	10	67369.97	97200	1012.5	1.507	H1-1b
40	M41	PL6X1/2	0.111	6.022	6	0.204	12.044	y	2	67369.97	97200	1012.5	1.512	H1-1b
41	M40	PL6X1/2	0.107	6.022	10	0.205	12.044	y	6	67369.97	97200	1012.5	1.504	H1-1b

Envelope Node Reactions

Node Label	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
0	N89	max	1023.273	2	2952.81	22	2339.47	5	-400.492	4	1393.631	13
1		min	-990.713	8	553.101	4	-2269.897	11	-5458.831	22	-1379.563	7
2	N103	max	1995.989	2	2952.762	18	1745.066	6	4940.46	17	1583.924	9
3		min	-1951.571	8	553.155	12	-1808.821	12	77.279	11	-1570.089	3
4	N112	max	2261.418	2	2956.169	14	1451.659	5	1200.135	5	1690.098	5
5		min	-2338.396	8	545.057	8	-1458.01	11	-816.337	11	-1676.106	11
6	Totals:	max	5280.68	2	8480.238	20	5279.244	5				
7		min	-5280.679	8	2284.495	140	-5279.245	11				

Member Area Loads (BLC 1 : Dead)

Node A	Node B	Node C	Direction	Load Direction	Magnitude [psf]
1	N87	N93	N92	Y	Two Way
2	N95	N101	N94	Y	Two Way
3	N104	N110	N105	Y	Two Way

Member Area Loads (BLC 2 : Ice)

	Node A	Node B	Node C	Direction	Load Direction	Magnitude [psf]
1	N87	N93	N92	Y	Two Way	-15.6
2	N95	N101	N94	Y	Two Way	-15.6
3	N104	N110	N105	Y	Two Way	-15.6

APPENDIX D
ADDITIONAL CALCULATIONS



P. Marshall Associates, LLC
1000 Holcomb Woods Pkwy, Suite 210
Roswell, GA 30076
(678) 280-2325

Outrigger Connection Check

Location: **Outrigger Arm Connection at 100 ft**
Code: **ANSI/TIA-222-H**
Bolt Info: **(4) 0.625 in. dia. bolts, grade A325N**
Plate Info: **8 in. x 8 in. x 0.75 in., 36/58 ksi steel plate**

Maximum Connection Reactions

<i>Tension</i>	2336	lbs
<i>Vertical Shear</i>	2955	lbs
<i>Horizontal Shear</i>	1458	lbs
<i>Torsion</i>	1203	lb-ft
<i>Vertical Moment</i>	6014	lb-ft
<i>Horizontal Moment</i>	1690	lb-ft

Combined Tension & Shear

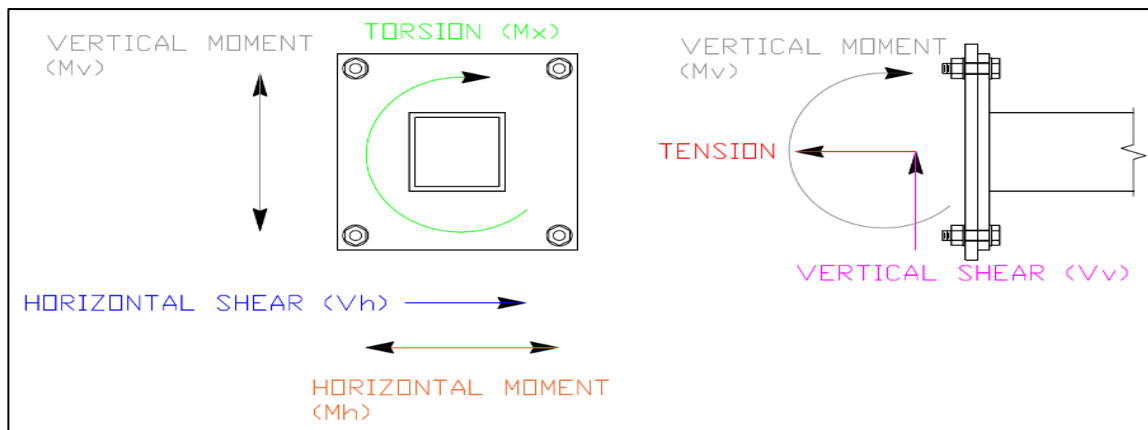
ϕR_{nt}	21.18	kips/bolt
ϕR_{nv}	27.63	kips/bolt
<i>Capacity</i>	15.6%	

Block Shear Strength

ϕR_n (Vertical)	134.24	kips
ϕR_n (Horizontal)	134.24	kips
<i>Capacity</i>	2.2%	

Bearing Strength

ϕR_n	102.77	kips
<i>Lc</i>	0.66	in
<i>Capacity</i>	2.9%	



Overall Capacity Usage: **15.6%** PASS

EXHIBIT G

Power Density/RF Emissions Report



CENTERLINE

Radio Frequency Exposure Analysis Report

June 25, 2024

T-Mobile

Site ID: CTHA560B

Site Name: CTHA560B

Site Address: 87 Monce Rd, Burlington, CT 06013



Michael Fischer, P.E.

Registered Professional Engineer (Electrical)

Connecticut License Number 33928

Expires January 31, 2025

Signed 25 June 2024

Site Compliance Summary

T-Mobile Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	42.13465 $\mu\text{W}/\text{cm}^2$
Cumulative General Population % MPE (Ground Level):	4.21395%
Cumulative Calculated Power Density (Adj. 30' Rooftop):	12.30288 $\mu\text{W}/\text{cm}^2$
Cumulative General Population % MPE (Adj. 30' Rooftop):	1.58613%



June 25, 2024

Centerline
Attn: Peter Fales, Vice President
750 W Center St, Suite 301
West Bridgewater, MA 02379

RF Exposure Analysis for Site: **CTHA560B**

Centerline was contracted to analyze the proposed T-Mobile facility at **87 Monce Rd, Burlington, CT 06013** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

All information used in this report was analyzed as a percentage of the Maximum Permissible Exposure (% MPE) limits as detailed in 47 CFR § 1.1310 as well as Federal Communications Commission (FCC) OET Bulletin 65 Edition 97-01. The FCC MPE limits are typically expressed in units of milliwatts per square centimeter (mW/cm^2) or microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The exposure limits vary depending upon the frequencies being utilized. The General Population/Uncontrolled MPE limit (in mW/cm^2) for frequencies between 300 and 1500 is defined as frequency (in MHz) divided by 1500 ($f_{\text{MHz}}/1500$). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of $1 \text{ mW}/\text{cm}^2$ ($1000 \mu\text{W}/\text{cm}^2$). The calculated power density at each sample point divided by the limit at each calculated frequency provides a result in % MPE. Summing the calculated % MPE from all contributors provides a cumulative % MPE at a particular sample point. Wireless carriers use different frequency bands with varying MPE limits; therefore, it is useful to report results in terms of % MPE as opposed to power density.

All results were compared to the FCC radio frequency exposure rules as detailed in 47 CFR § 1.1307(b) to determine compliance with the 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.

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, 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.



Calculation Methodology

Centerline has performed theoretical modeling of the site using a software tool, RoofMaster®, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.



Data & Results

The following table details the antennas and operating parameters for the T-Mobile antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at ground level and the adjacent 30' rooftop.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average) and the adjacent 30' rooftop (30-36' spatial average). The results from highest cumulative sample point at ground level and the adjacent 30' rooftop surrounding the site are displayed in the tables below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table(s) below. The cumulative power density and cumulative % MPE are displayed at the bottom of the table(s) below.



Maximum Calculated Cumulative Power Density
(Location: Ground Level – Approximately 285' Southwest of Site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (μW/cm ²)	General Population MPE Limit (μW/cm ²)	General Population % MPE
T-Mobile A 1	RFS APXVLL19P 43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.00000	1000.00	0.00000
T-Mobile A 1	RFS APXVLL19P 43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.00000	1000.00	0.00000
T-Mobile A 1	RFS APXVLL19P 43-C	2100	17.33	102.00	4.00	60.00	12978.10	0.00000	1000.00	0.00000
T-Mobile A 2	RFS APXVAALL24 43-U	600	12.95	102.00	4.00	60.00	4733.81	0.00001	400.00	0.00000
T-Mobile A 2	RFS APXVAALL24 43-U	700	13.65	102.00	4.00	20.00	1853.92	0.00000	466.67	0.00000
T-Mobile A 3	ERICSSON SON_AIR6419 LTE MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.00000	1000.00	0.00000
T-Mobile A 3	ERICSSON SON_AIR6419 NR MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.00000	1000.00	0.00000
T-Mobile A 3	ERICSSON SON_AIR6419 B41 LTE TB	2500	22.05	102.00	1.00	90.00	14429.21	0.44256	1000.00	0.04426
T-Mobile A 3	ERICSSON SON_AIR6419 B41 NR TB	2500	22.05	102.00	1.00	90.00	14429.21	0.44256	1000.00	0.04426
T-Mobile B 4	RFS APXVLL19P 43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.00000	1000.00	0.00000
T-Mobile B 4	RFS APXVLL19P 43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.00000	1000.00	0.00000
T-Mobile B 4	RFS APXVLL19P 43-C	2100	17.33	102.00	4.00	60.00	12978.10	0.00000	1000.00	0.00000
T-Mobile B 5	RFS APXVAALL24 43-U	600	12.95	102.00	4.00	60.00	4733.81	0.00000	400.00	0.00000
T-Mobile B 5	RFS APXVAALL24 43-U	700	13.65	102.00	4.00	20.00	1853.92	0.00000	466.67	0.00000
T-Mobile B 6	ERICSSON SON_AIR6419 LTE MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.00000	1000.00	0.00000
T-Mobile B 6	ERICSSON SON_AIR6419 NR MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.00000	1000.00	0.00000
T-Mobile B 6	ERICSSON SON_AIR6419 B41 LTE TB	2500	22.05	102.00	1.00	90.00	14429.21	0.09794	1000.00	0.00979
T-Mobile B 6	ERICSSON SON_AIR6419 B41 NR TB	2500	22.05	102.00	1.00	90.00	14429.21	0.09794	1000.00	0.00979
T-Mobile C 7	RFS APXVLL19P 43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.00041	1000.00	0.00004
T-Mobile C 7	RFS APXVLL19P 43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.00041	1000.00	0.00004
T-Mobile C 7	RFS APXVLL19P 43-C	2100	17.33	102.00	4.00	60.00	12978.10	0.00065	1000.00	0.00007
T-Mobile C 8	RFS APXVAALL24 43-U	600	12.95	102.00	4.00	60.00	4733.81	0.00050	400.00	0.00013
T-Mobile C 8	RFS APXVAALL24 43-U	700	13.65	102.00	4.00	20.00	1853.92	0.00021	466.67	0.00005
T-Mobile C 9	ERICSSON SON_AIR6419 LTE MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.00038	1000.00	0.00004
T-Mobile C 9	ERICSSON SON_AIR6419 NR MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.00038	1000.00	0.00004
T-Mobile C 9	ERICSSON SON_AIR6419 B41 LTE TB	2500	22.05	102.00	1.00	90.00	14429.21	20.51039	1000.00	2.05104
T-Mobile C 9	ERICSSON SON_AIR6419 B41 NR TB	2500	22.05	102.00	1.00	90.00	14429.21	20.51039	1000.00	2.05104
AT&T A 10	CCI HPA-65R-BUU-H8	700	13.35	110.00	4.00	40.00	3460.35	0.00000	466.67	0.00000
AT&T A 11	CCI HPA-65R-BUU-H8	1900	14.75	110.00	4.00	40.00	4776.61	0.00000	1000.00	0.00000
AT&T A 12	CCI HPA-65R-BUU-H8	2100	15.25	110.00	4.00	40.00	5359.45	0.00000	1000.00	0.00000
AT&T A 12	CCI HPA-65R-BUU-H8	850	14.35	110.00	4.00	40.00	4356.32	0.00001	566.67	0.00000
AT&T A 13	CCI HPA-65R-BUU-H8	2300	14.95	110.00	4.00	25.00	3126.08	0.00000	1000.00	0.00000
AT&T B 14	CCI HPA-65R-BUU-H8	700	13.35	110.00	4.00	40.00	3460.35	0.00000	466.67	0.00000
AT&T B 15	CCI HPA-65R-BUU-H8	1900	14.75	110.00	4.00	40.00	4776.61	0.00000	1000.00	0.00000
AT&T B 16	CCI HPA-65R-BUU-H8	2100	15.25	110.00	4.00	40.00	5359.45	0.00000	1000.00	0.00000
AT&T B 16	CCI HPA-65R-BUU-H8	850	14.35	110.00	4.00	40.00	4356.32	0.00000	566.67	0.00000
AT&T B 17	CCI HPA-65R-BUU-H8	2300	14.95	110.00	4.00	25.00	3126.08	0.00000	1000.00	0.00000
AT&T C 18	CCI HPA-65R-BUU-H8	700	13.35	110.00	4.00	40.00	3460.35	0.00043	466.67	0.00009
AT&T C 19	CCI HPA-65R-BUU-H8	1900	14.75	110.00	4.00	40.00	4776.61	0.00034	1000.00	0.00003
AT&T C 20	CCI HPA-65R-BUU-H8	2100	15.25	110.00	4.00	40.00	5359.45	0.00033	1000.00	0.00003
AT&T C 20	CCI HPA-65R-BUU-H8	850	14.35	110.00	4.00	40.00	4356.32	0.00043	566.67	0.00008
AT&T C 21	CCI HPA-65R-BUU-H8	2300	14.95	110.00	4.00	25.00	3126.08	0.00022	1000.00	0.00002
Verizon A 22	COMMScope NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.00000	566.67	0.00000
Verizon A 23	COMMScope NHH-65B-R2B	700	12.29	91.00	2.00	40.00	1355.47	0.00000	466.67	0.00000
Verizon A 23	COMMScope NHH-65B-R2B	1900	15.65	91.00	4.00	40.00	5876.52	0.00000	1000.00	0.00000
Verizon A 24	COMMScope NHHSS-65B-R2BT4	700	12.49	91.00	2.00	40.00	1419.35	0.00000	466.67	0.00000
Verizon A 24	COMMScope NHHSS-65B-R2BT4	2100	15.89	91.00	4.00	40.00	6210.41	0.00000	1000.00	0.00000
Verizon A 25	SAMSUNG RT4401	3550	8.40	91.00	4.00	5.00	138.37	0.00000	1000.00	0.00000
Verizon A 26	Samsung MT6407	3700	23.45	91.00	4.00	50.00	44261.89	0.00041	1000.00	0.00004
Verizon A 27	COMMScope NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.00000	566.67	0.00000
Verizon B 28	COMMScope NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.00000	566.67	0.00000
Verizon B 29	COMMScope NHH-65B-R2B	700	12.29	91.00	2.00	40.00	1355.47	0.00000	466.67	0.00000
Verizon B 29	COMMScope NHH-65B-R2B	1900	15.65	91.00	4.00	40.00	5876.52	0.00000	1000.00	0.00000
Verizon B 30	COMMScope NHHSS-65B-R2BT4	700	12.49	91.00	2.00	40.00	1419.35	0.00000	466.67	0.00000
Verizon B 30	COMMScope NHHSS-65B-R2BT4	2100	15.89	91.00	4.00	40.00	6210.41	0.00000	1000.00	0.00000
Verizon B 31	SAMSUNG RT4401	3550	8.40	91.00	4.00	5.00	138.37	0.00000	1000.00	0.00000



Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
Verizon B 32	Samsung MT6407	3700	23.45	91.00	4.00	50.00	44261.89	0.00048	1000.00	0.00005
Verizon B 33	COMMSCOPE NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.00000	566.67	0.00000
Verizon C 34	COMMSCOPE NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.00028	566.67	0.00005
Verizon C 35	COMMSCOPE NHH-65B-R2B	700	12.29	91.00	2.00	40.00	1355.47	0.00026	466.67	0.00006
Verizon C 35	COMMSCOPE NHH-65B-R2B	1900	15.65	91.00	4.00	40.00	5876.52	0.00050	1000.00	0.00005
Verizon C 36	COMMSCOPE NHHSS-65B-R2BT4	700	12.49	91.00	2.00	40.00	1419.35	0.00028	466.67	0.00006
Verizon C 36	COMMSCOPE NHHSS-65B-R2BT4	2100	15.89	91.00	4.00	40.00	6210.41	0.00054	1000.00	0.00005
Verizon C 37	SAMSUNG RT4401	3550	8.40	91.00	4.00	5.00	138.37	0.00021	1000.00	0.00002
Verizon C 38	Samsung MT6407	3700	23.45	91.00	4.00	50.00	44261.89	0.02114	1000.00	0.00211
Verizon C 39	COMMSCOPE NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.00028	566.67	0.00005
Dish A 40	JMA MX08FRO665-21	600	11.35	70.00	4.00	40.00	2183.33	0.00002	400.00	0.00000
Dish A 40	JMA MX08FRO665-21	1900	15.75	70.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish A 40	JMA MX08FRO665-21	2007	15.75	70.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish B 41	JMA MX08FRO665-21	600	11.35	70.00	4.00	40.00	2183.33	0.00000	400.00	0.00000
Dish B 41	JMA MX08FRO665-21	1900	15.75	70.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish B 41	JMA MX08FRO665-21	2007	15.75	70.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish C 42	JMA MX08FRO665-21	600	11.35	70.00	4.00	40.00	2183.33	0.00133	400.00	0.00033
Dish C 42	JMA MX08FRO665-21	1900	15.75	70.00	4.00	40.00	6013.40	0.00132	1000.00	0.00013
Dish C 42	JMA MX08FRO665-21	2007	15.75	70.00	4.00	40.00	6013.40	0.00111	1000.00	0.00011
Unknown A 43	GENERIC OMNI	150	8.96	128.90	1.00	12.70	99.95	0.00000	200.00	0.00000
Unknown A 44	GENERIC OMNI	150	8.96	123.50	1.00	12.70	99.95	0.00000	200.00	0.00000
							Cumulative Power Density:	42.13465 $\mu\text{W}/\text{cm}^2$	Cumulative % MPE:	4.21395%



Maximum Calculated Cumulative Power Density
(Location: Adjacent 30' Rooftop – Approximately 15' East of Site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
T-Mobile A 1	RFS APXVLL19P_43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.00100	1000.00	0.00010
T-Mobile A 1	RFS APXVLL19P_43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.00100	1000.00	0.00010
T-Mobile A 1	RFS APXVLL19P_43-C	2100	17.33	102.00	4.00	60.00	12978.10	0.00106	1000.00	0.00011
T-Mobile A 2	RFS APXVAALL24 43-U	600	12.95	102.00	4.00	60.00	4733.81	0.00208	400.00	0.00052
T-Mobile A 2	RFS APXVAALL24 43-U	700	13.65	102.00	4.00	20.00	1853.92	0.00134	466.67	0.00029
T-Mobile A 3	ERICSSON SON_AIR6419 LTE MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.00017	1000.00	0.00002
T-Mobile A 3	ERICSSON SON_AIR6419 NR MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.00017	1000.00	0.00002
T-Mobile A 3	ERICSSON SON_AIR6419 B41 LTE TB	2500	22.05	102.00	1.00	90.00	14429.21	0.01903	1000.00	0.00190
T-Mobile A 3	ERICSSON SON_AIR6419 B41 NR TB	2500	22.05	102.00	1.00	90.00	14429.21	0.01903	1000.00	0.00190
T-Mobile B 4	RFS APXVLL19P_43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.26294	1000.00	0.02629
T-Mobile B 4	RFS APXVLL19P_43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.26294	1000.00	0.02629
T-Mobile B 4	RFS APXVLL19P_43-C	2100	17.33	102.00	4.00	60.00	12978.10	0.38166	1000.00	0.03817
T-Mobile B 5	RFS APXVAALL24 43-U	600	12.95	102.00	4.00	60.00	4733.81	0.40026	400.00	0.10007
T-Mobile B 5	RFS APXVAALL24 43-U	700	13.65	102.00	4.00	20.00	1853.92	0.13150	466.67	0.02818
T-Mobile B 6	ERICSSON SON_AIR6419 LTE MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.04847	1000.00	0.00485
T-Mobile B 6	ERICSSON SON_AIR6419 NR MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.04847	1000.00	0.00485
T-Mobile B 6	ERICSSON SON_AIR6419 B41 LTE TB	2500	22.05	102.00	1.00	90.00	14429.21	0.86187	1000.00	0.08619
T-Mobile B 6	ERICSSON SON_AIR6419 B41 NR TB	2500	22.05	102.00	1.00	90.00	14429.21	0.86187	1000.00	0.08619
T-Mobile C 7	RFS APXVLL19P_43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.00052	1000.00	0.00005
T-Mobile C 7	RFS APXVLL19P_43-C	1900	16.24	102.00	4.00	40.00	6731.63	0.00052	1000.00	0.00005
T-Mobile C 7	RFS APXVLL19P_43-C	2100	17.33	102.00	4.00	60.00	12978.10	0.00018	1000.00	0.00002
T-Mobile C 8	RFS APXVAALL24 43-U	600	12.95	102.00	4.00	60.00	4733.81	0.00150	400.00	0.00037
T-Mobile C 8	RFS APXVAALL24 43-U	700	13.65	102.00	4.00	20.00	1853.92	0.00011	466.67	0.00002
T-Mobile C 9	ERICSSON SON_AIR6419 LTE MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.00008	1000.00	0.00001
T-Mobile C 9	ERICSSON SON_AIR6419 NR MACRO	2500	15.55	102.00	1.00	30.00	1076.77	0.00008	1000.00	0.00001
T-Mobile C 9	ERICSSON SON_AIR6419 B41 LTE TB	2500	22.05	102.00	1.00	90.00	14429.21	0.00381	1000.00	0.00038
T-Mobile C 9	ERICSSON SON_AIR6419 B41 NR TB	2500	22.05	102.00	1.00	90.00	14429.21	0.00381	1000.00	0.00038
AT&T A 10	CCI HPA-65R-BUU-H8	700	13.35	110.00	4.00	40.00	3460.35	0.00058	466.67	0.00013
AT&T A 11	CCI HPA-65R-BUU-H8	1900	14.75	110.00	4.00	40.00	4776.61	0.00016	1000.00	0.00002
AT&T A 12	CCI HPA-65R-BUU-H8	2100	15.25	110.00	4.00	40.00	5359.45	0.00001	1000.00	0.00000
AT&T A 12	CCI HPA-65R-BUU-H8	850	14.35	110.00	4.00	40.00	4356.32	0.00105	566.67	0.00019
AT&T A 13	CCI HPA-65R-BUU-H8	2300	14.95	110.00	4.00	25.00	3126.08	0.00013	1000.00	0.00001
AT&T B 14	CCI HPA-65R-BUU-H8	700	13.35	110.00	4.00	40.00	3460.35	0.21357	466.67	0.04577
AT&T B 15	CCI HPA-65R-BUU-H8	1900	14.75	110.00	4.00	40.00	4776.61	0.21871	1000.00	0.02187
AT&T B 16	CCI HPA-65R-BUU-H8	2100	15.25	110.00	4.00	40.00	5359.45	0.20811	1000.00	0.02081
AT&T B 16	CCI HPA-65R-BUU-H8	850	14.35	110.00	4.00	40.00	4356.32	0.23746	566.67	0.04190
AT&T B 17	CCI HPA-65R-BUU-H8	2300	14.95	110.00	4.00	25.00	3126.08	0.14184	1000.00	0.01418
AT&T C 18	CCI HPA-65R-BUU-H8	700	13.35	110.00	4.00	40.00	3460.35	0.00089	466.67	0.00019
AT&T C 19	CCI HPA-65R-BUU-H8	1900	14.75	110.00	4.00	40.00	4776.61	0.00043	1000.00	0.00004
AT&T C 20	CCI HPA-65R-BUU-H8	2100	15.25	110.00	4.00	40.00	5359.45	0.00052	1000.00	0.00005
AT&T C 20	CCI HPA-65R-BUU-H8	850	14.35	110.00	4.00	40.00	4356.32	0.00109	566.67	0.00019
AT&T C 21	CCI HPA-65R-BUU-H8	2300	14.95	110.00	4.00	25.00	3126.08	0.00064	1000.00	0.00006
Verizon A 22	COMMScope NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.00021	566.67	0.00004
Verizon A 23	COMMScope NHH-65B-R2B	700	12.29	91.00	2.00	40.00	1355.47	0.00143	466.67	0.00031
Verizon A 23	COMMScope NHH-65B-R2B	1900	15.65	91.00	4.00	40.00	5876.52	0.00079	1000.00	0.00008
Verizon A 24	COMMScope NHHSS-65B-R2BT4	700	12.49	91.00	2.00	40.00	1419.35	0.00018	466.67	0.00004
Verizon A 24	COMMScope NHHSS-65B-R2BT4	2100	15.89	91.00	4.00	40.00	6210.41	0.00022	1000.00	0.00002
Verizon A 25	SAMSUNG RT4401	3550	8.40	91.00	4.00	5.00	138.37	0.00019	1000.00	0.00002
Verizon A 26	Samsung MT6407	3700	23.45	91.00	4.00	50.00	44261.89	0.06542	1000.00	0.00654
Verizon A 27	COMMScope NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.00021	566.67	0.00004
Verizon B 28	COMMScope NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.19964	566.67	0.03523
Verizon B 29	COMMScope NHH-65B-R2B	700	12.29	91.00	2.00	40.00	1355.47	0.18846	466.67	0.04039
Verizon B 29	COMMScope NHH-65B-R2B	1900	15.65	91.00	4.00	40.00	5876.52	0.37184	1000.00	0.03718
Verizon B 30	COMMScope NHHSS-65B-R2BT4	700	12.49	91.00	2.00	40.00	1419.35	0.19271	466.67	0.04129
Verizon B 30	COMMScope NHHSS-65B-R2BT4	2100	15.89	91.00	4.00	40.00	6210.41	0.38971	1000.00	0.03897



Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (μW/cm²)	General Population MPE Limit (μW/cm²)	General Population % MPE
Verizon B 31	SAMSUNG RT4401	3550	8.40	91.00	4.00	5.00	138.37	0.04992	1000.00	0.00499
Verizon B 32	Samsung MT6407	3700	23.45	91.00	4.00	50.00	44261.89	2.85584	1000.00	0.28558
Verizon B 33	COMMSCOPE NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.19964	566.67	0.03523
Verizon C 34	COMMSCOPE NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.00001	566.67	0.00000
Verizon C 35	COMMSCOPE NHH-65B-R2B	700	12.29	91.00	2.00	40.00	1355.47	0.00049	466.67	0.00011
Verizon C 35	COMMSCOPE NHH-65B-R2B	1900	15.65	91.00	4.00	40.00	5876.52	0.00004	1000.00	0.00000
Verizon C 36	COMMSCOPE NHHSS-65B-R2BT4	700	12.49	91.00	2.00	40.00	1419.35	0.00008	466.67	0.00002
Verizon C 36	COMMSCOPE NHHSS-65B-R2BT4	2100	15.89	91.00	4.00	40.00	6210.41	0.00249	1000.00	0.00025
Verizon C 37	SAMSUNG RT4401	3550	8.40	91.00	4.00	5.00	138.37	0.00007	1000.00	0.00001
Verizon C 38	Samsung MT6407	3700	23.45	91.00	4.00	50.00	44261.89	0.05967	1000.00	0.00597
Verizon C 39	COMMSCOPE NHH-65B-R2B	850	12.70	91.00	2.00	40.00	1489.67	0.00001	566.67	0.00000
Dish A 40	JMA MX08FRO665-21	600	11.35	70.00	4.00	40.00	2183.33	0.00004	400.00	0.00001
Dish A 40	JMA MX08FRO665-21	1900	15.75	70.00	4.00	40.00	6013.40	0.00141	1000.00	0.00014
Dish A 40	JMA MX08FRO665-21	2007	15.75	70.00	4.00	40.00	6013.40	0.00018	1000.00	0.00002
Dish B 41	JMA MX08FRO665-21	600	11.35	70.00	4.00	40.00	2183.33	1.07648	400.00	0.26912
Dish B 41	JMA MX08FRO665-21	1900	15.75	70.00	4.00	40.00	6013.40	1.14541	1000.00	0.11454
Dish B 41	JMA MX08FRO665-21	2007	15.75	70.00	4.00	40.00	6013.40	1.15318	1000.00	0.11532
Dish C 42	JMA MX08FRO665-21	600	11.35	70.00	4.00	40.00	2183.33	0.00078	400.00	0.00020
Dish C 42	JMA MX08FRO665-21	1900	15.75	70.00	4.00	40.00	6013.40	0.00245	1000.00	0.00025
Dish C 42	JMA MX08FRO665-21	2007	15.75	70.00	4.00	40.00	6013.40	0.00002	1000.00	0.00000
Unknown A 43	GENERIC OMNI	150	8.96	128.90	1.00	12.70	99.95	0.00141	200.00	0.00071
Unknown A 44	GENERIC OMNI	150	8.96	123.50	1.00	12.70	99.95	0.00159	200.00	0.00080
							Cumulative Power Density:	12.30288 μW/cm²	Cumulative % MPE:	1.58613%



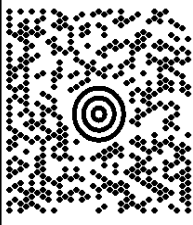
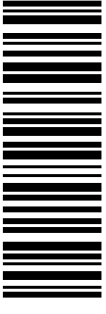
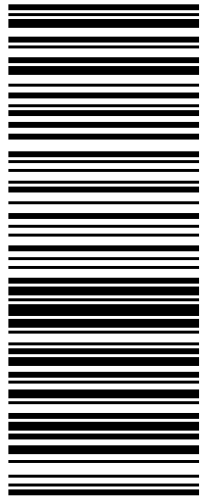
Summary

The theoretical calculations performed for this analysis yielded cumulative power density totals in all areas at and the adjacent 30' rooftop that are within the allowable federal limits for public exposure to RF energy. Therefore, the site is **compliant** with FCC rules and regulations.

Samuel Cosgrove
RF EME Technical Writer II
Centerline

EXHIBIT H

Mailing Receipts/Proof of Notice

C/O CULLEN MORGAN 9415497263 CENTERLINE COMMUNICATIONS LLC 12579 SAGEWOOD DRIVE VENICE FL 34293		2 LBS	1 OF 1
SHIP TO: INSITE TOWERS DEVELOPMENT LLC 11TH FLOOR 116 HUNTINGTON AVENUE BOSTON MA 02116-5749			
		MA 021 9-02 	
UPS GROUND			
TRACKING #: 1Z 9Y4 503 03 3765 0206			
			
BILLING: P/P			
Reference # 1: CTHA560B PROP OWNER CC			
CS 24.5.00. MACNV50 30.0A 07/202.4*			
 ™			

Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030337650206

Date: Monday, July 29, 2024 at 10:55:27 AM Eastern Daylight Time

From: UPS <pkginfo@ups.com>

To: Cullen Morgan <CMORGAN@CLINELLC.COM>



Hello, your package has been delivered.

Delivery Date: Monday, 07/29/2024

Delivery Time: 10:53 AM

Signed by: SHARINNA

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030337650206
Ship To:	INSITE TOWERS DEVELOPMENT LLC 116 HUNTINGTON AVENUE 11TH FLOOR BOSTON, MA 021165749 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.5 LBS
Reference Number:	CTHA560B PROP OWNER CC

Discover more about UPS:

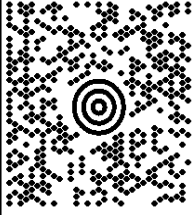
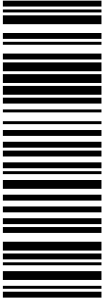
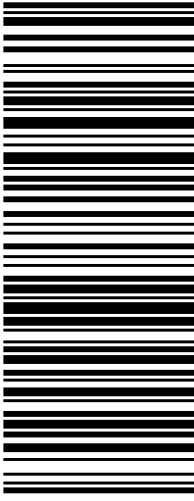
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C/O CULLEN MORGAN 941-549-7263 CENTERLINE COMMUNICATIONS LLC 12579 SAGEWOOD DRIVE VENICE FL 34293		2 LBS	1 OF 1
SHIP TO: AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN MA 01801-1053			
	MA 018 9-04 		
UPS GROUND			
TRACKING #: 1Z 9Y4 503 03 0183 8554			
			
BILLING: P/P			
Reference # 1: CTHA560B - TOWER OWNER CC			
CS 24.5.00. MACNV50 30.0A 07/202.4*			
 ™			

Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030301838554

Date: Monday, July 29, 2024 at 1:09:34 PM Eastern Daylight Time

From: UPS <pkginfo@ups.com>

To: Cullen Morgan <CMORGAN@CLINELLC.COM>



Hello, your package has been delivered.

Delivery Date: Monday, 07/29/2024

Delivery Time: 1:08 PM

Left At: DOCK

Signed by: LONG

CENTERLINE SITE ACQUISITION

Tracking Number:

[1Z9Y45030301838554](#)

Ship To:

AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN, MA 018011053
US

Number of Packages:

1

UPS Service:

UPS Ground

Package Weight:

1.5 LBS

Reference Number:

CTHA560B - TOWER OWNER CC

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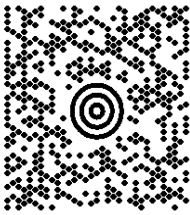
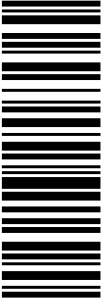
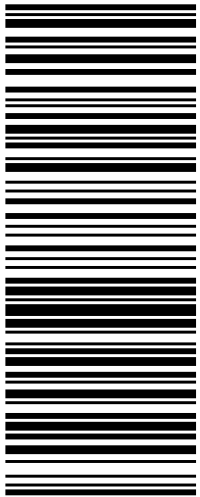
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C/O CULLEN MORGAN 9415497263 CENTERLINE COMMUNICATIONS LLC 12579 SAGEWOOD DRIVE VENICE FL 34293		2 LBS	1 OF 1
SHIP TO: 1ST SELECTWOMAN & BLDG OFFICIAL TOWN OF BURLINGTON 200 SPIELMAN HIGHWAY BURLINGTON CT 06013-1735			
	CT 067 9-01 		
UPS GROUND TRACKING #: 1Z 9Y4 503 03 0955 1563			
			
BILLING: P/P			
Reference # 1: CTHA560B TOWN CC			
CS 24.5.00. MACNV50 30.0A 07/202.4*			
 ™			

Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030309551563

Date: Monday, July 29, 2024 at 10:19:36 AM Eastern Daylight Time

From: UPS <pkginfo@ups.com>

To: Cullen Morgan <CMORGAN@CLINELLC.COM>



Hello, your package has been delivered.

Delivery Date: Monday, 07/29/2024

Delivery Time: 10:17 AM

Signed by: UGALDE

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030309551563
Ship To:	TOWN OF BURLINGTON 200 SPIELMAN HIGHWAY BURLINGTON, CT 060131735 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.5 LBS
Reference Number:	CTHA560B TOWN CC

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