



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

February 8, 2019

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

RE: Notice of Exempt Modification for Verizon Wireless: 876348
Verizon Site ID: 388472
1 Bright Meadow Boulevard, Enfield, CT 06082
Latitude: 42° 1' 14.91"/ Longitude: -72° 35' 7.01"

Dear Ms. Bachman:

Verizon currently maintains Fifteen (12) antennas at the 137-foot level of the existing 147'-6" foot monopole at 1 Bright Meadow Boulevard, Enfield, CT. The tower is owned by Crown Castle. The property is owned by Connecticut Light & Power. Verizon now intends to replace nine (9) remote radio units with six (6) new remote radio units at the 137' level of the tower.

This facility was approved on July 2, 1998 by the Town of Enfield Planning & Zoning Commission.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.S.C.A. § 16-50j-73, a copy of this letter is being sent to the Town of Enfield Mr. Michael Ludwick, Mayor and Councilor at Large, the Town of Enfield Planning & Zoning Department and the land owner Connecticut Light & Power Company. Crown Castle is the tower owner.

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

Melanie A. Bachman

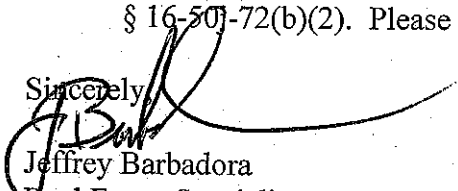
February 8, 2019

Page 2

6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,



Jeffrey Barbadora

Real Estate Specialist

12 Gill Street, Suite 5800, Woburn, MA 01801

781-729-0053

Jeff.Barbadora@crowncastle.com

Attachments:

Tab 1: Exhibit-1: Compound plan and elevation depicting the planned changes

Tab 2: Exhibit-2: Structural Modification Report

Tab 3: Exhibit-3: General Power Density Table Report (RF Emissions Analysis Report)

cc: Mr. Michael Ludwick,
Mayor and Councilor at Large
Town of Enfield
820 Enfield Street
Enfield, CT 06082

Town of Enfield Planning & Zoning Department
Town of Clinton
820 Enfield Street
Enfield, CT 06082

Connecticut Light & Power Company (Eversource)
Property Owner
300 Cadwell Drive
Springfield, MA 01104

BRIGHT MEADOW BLVD

Location BRIGHT MEADOW BLVD

Mblu 035/ / 0219/ /

Acct# 048700010005

Owner CONN LIGHT + POWER
COMPANY

Assessment \$485,710

Appraisal \$693,860

PID 11009

Building Count 1

Fire District 4

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$419,280	\$274,580	\$693,860

Assessment			
Valuation Year	Improvements	Land	Total
2017	\$293,500	\$192,210	\$485,710

Owner of Record

Owner CONN LIGHT + POWER COMPANY

Sale Price \$0

Co-Owner

Certificate 1

Address PO BOX 270
HARTFORD, CT 06140-0270

Book & Page 237/ 455

Sale Date

Instrument

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
CONN LIGHT + POWER COMPANY	\$0	1	237/ 455		

Building Information

Building 1 : Section 1

Year Built:

Living Area: 0

Replacement Cost: \$0

Building Percent

Good:

No Data for Extra Features

Land

Land Use

Use Code 300
Description Ind Land
Zone BR
Neighborhood
Alt Land Appr Category No

Land Line Valuation

Size (Acres) 12.61
Frontage
Depth
Assessed Value \$192,210
Appraised Value \$274,580

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
FN2	FENCE-6' CHAIN			400 L.F.	\$3,400	1
	CMEQ			360	\$13,500	1
	CMEQ			240	\$9,000	1
	CMEQ			240	\$9,000	1
TWR3	Cell Twr3 Carriers			1 UNITS	\$384,380	1

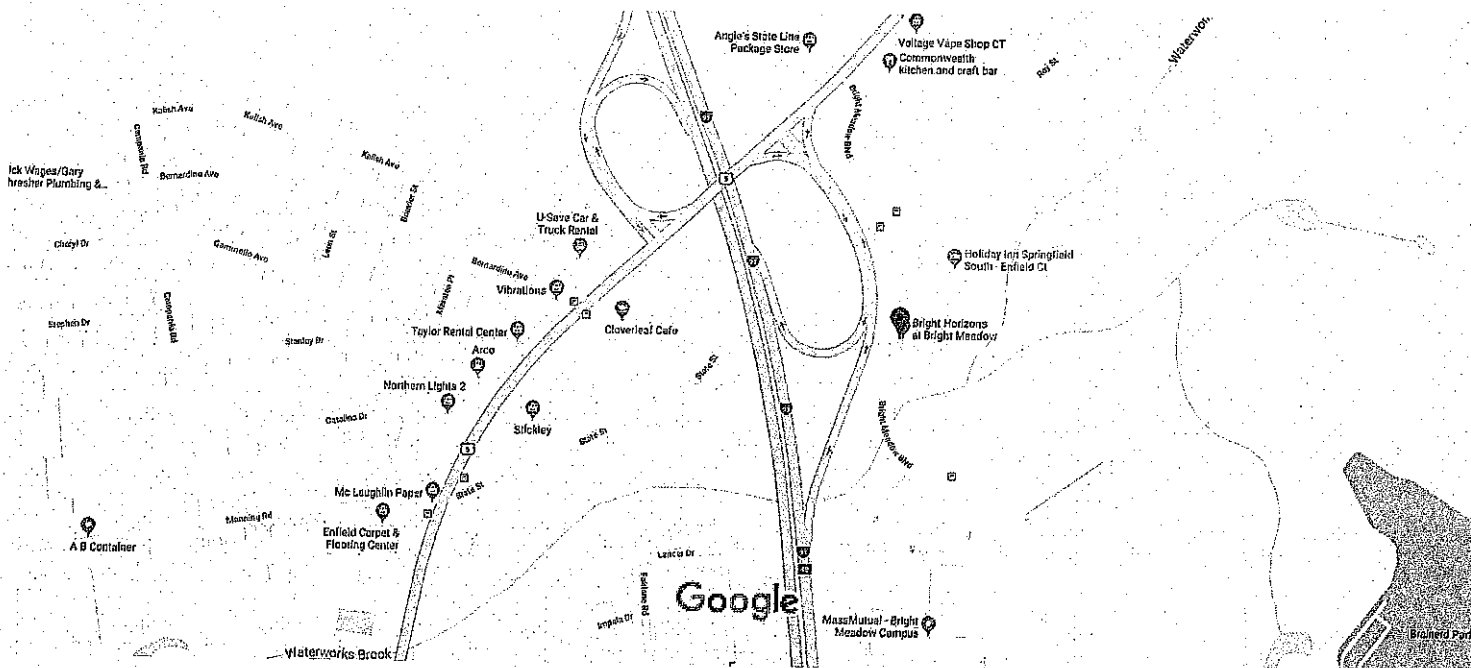
Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$419,280	\$274,580	\$693,860
2016	\$419,280	\$274,580	\$693,860
2015	\$419,280	\$274,580	\$693,860

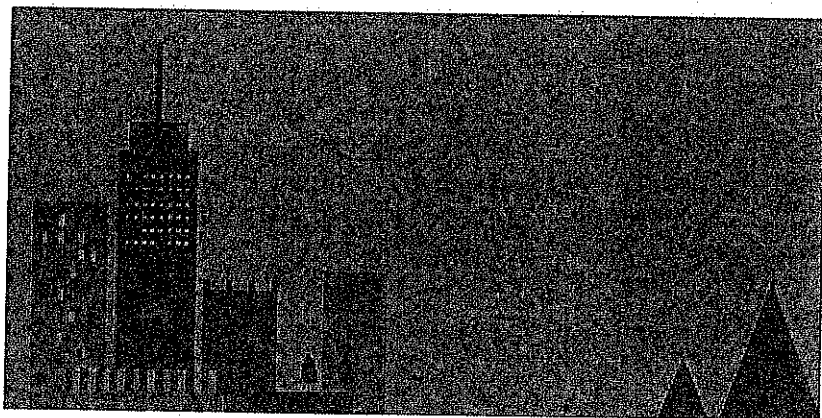
Assessment			
Valuation Year	Improvements	Land	Total
2017	\$293,500	\$192,210	\$485,710
2016	\$293,500	\$192,210	\$485,710
2015	\$293,500	\$192,210	\$485,710

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Bright Meadow Blvd

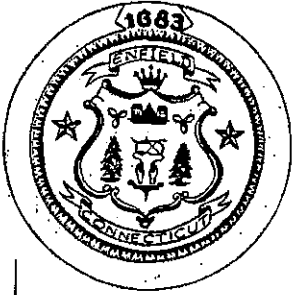


Map data ©2019 Google 200 ft



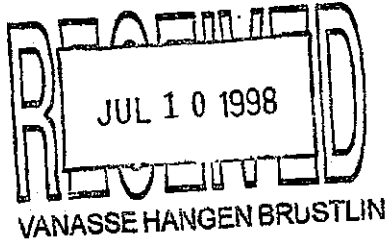
Bright Meadow Blvd

Enfield, CT 06082



TOWN OF ENFIELD

CERTIFIED MAIL Z205 375 469



July 7, 1998

Karen Johnson
Vanasse Hangen Brustlin Inc.
54 Tuttle Place
Middletown, CT 06457

Dear Ms. Johnson:

At the July 2, 1998 Regular Meeting of the Enfield Planning & Zoning Commission the following action was taken:

PH 2053 – Special Use Permit for a Commercial Wireless Telecommunication Service including site plan review of a wireless telecommunication facility consisting of a 150-foot Monopole and associated equipment surrounded by a chain link fence located east of Bright Meadow Blvd. adjacent to the Harley Hotel (Assessor's Map 35, Lot 219 - Old Enfield St) BR zone – The Connecticut Light and Power Company, owner / Sprint Spectrum L.P. (Sprint PCS) aplct.

The Commission approved the application with the following conditions:

1. An engineering bond for removal of the wireless telecommunications facility including the tower and base components in an amount to be determined by the town engineer shall be submitted to the town prior to the start of construction and prior to the issuance of any building permits. Any need to use the bond by the town shall be binding on the site regardless of name of the bond obligee.

820 Enfield Street/Enfield, Connecticut 06082 / (860) 253-6300

2. An erosion and sedimentation control passbook, pledged to the town, in an amount to be determined by the town engineer, shall be submitted to the town prior to the start of construction.
3. A preconstruction meeting between the applicant, site contractors, project engineer and town staff shall be held prior to the beginning of any site work.
4. The tower shall accommodate both the applicant's Antennas and comparable Antennas for at least two additional users.
5. The tower shall allow for future rearrangement of Antennas upon the tower and shall accommodate Antennas mounted at varying heights.
6. The wireless communication facility shall not interfere with existing or proposed public safety communications, commercial television and radio signals or other forms of communication transmissions. Penalty for subsequent interference shall void the approval of the facility.
7. The wireless communication facility shall comply with the standards promulgated by the Federal Communication Commission (FCC).
8. All generators installed in conjunction with the wireless communications facility shall comply with all State and local noise regulators.
9. On or before August 31 every year, the applicant or wireless telecommunications service provider shall submit information to the Planning Zoning Commission file in support of the provision of Section 14-8.6 of the Zoning Ordinance.
10. If the wireless communications facility is not in use for 12 consecutive months, it shall be removed within 90 days from the end of such 12 month period, including any towers and base components by the last service provider using the site or owner, whichever has a contractual obligation to perform the removal. The site shall be restored to an appearance that is compatible with the surrounding neighborhood and where appropriate, re-vegetated to blend with surrounding area.
11. The special use permit for a commercial wireless telecommunication service shall be valid for a maximum period of 10 years with a right of reapplication under regulations in effect at that time.

Karen Johnson

-3-

July 7, 1998

12. The approval of an application for special use permit shall be void and of no effect unless construction of the project commences within one year from the date of the approval granted by the commission in accordance with Section 14-10.2 of the Zoning Ordinance.
13. Arrangements shall be made with the fire department regarding emergency access to the compound.
14. The plans shall be modified to show a paved apron at the driveway entrance that conforms to town paving specifications.
15. The plans shall be modified to include standard notes as recommended by the town engineer.
16. Monopole shall be maintained if becomes rusty or eye sore.

If you have any questions regarding this action, please contact me at (860)253-6358.

Very truly yours,



Laurie P. Whitten
Acting Town Planner

LPW/vch

**NOTICE OF ACTION
ENFIELD PLANNING AND ZONING COMMISSION**

ANNOTATED AGENDA

At a regular meeting of the Enfield Planning and Zoning Commission held July 2, 1998, the Commission took the following substantive actions:

REGULAR MEETING

1. Call to Order & Pledge of Allegiance 7:30
2. Roll Call Crowley, Howard, Costanzo, Lefakis, Duren, Ballard, Crane, [Dentamaro, DiPace 7:38]
3. Approval of Minutes – 7/2/98 Approved (7-0-0)
4. Staff Reports
 - a. Town Attorney Report-from packet
 - b. Zoning Enforcement Officer Report-from packet
 - c. Town Planner Report-from packet
5. Public Participation -none
6. Correspondence -from packet; request for policy of Town Green signs to be sent out to Commissioners.
7. Commissioner's Correspondence
8. PUBLIC HEARINGS 8:00 P.M.

READING OF THE LEGAL NOTICE

1. PH 1414.02 – Application to locate, maintain and conduct a crematory at Leete-Stevens Enfield Chapels, 61 South Road and abutting land (Map 73, Lots 88 & 89) R-33 zone - Leete-Stevens, Inc. applct/owner – Section 19a-320, Connecticut General Statutes (MPHCD 7/4/98, MAD 9/4/98)Public Hearing Closed. Action tabled pending report form Town Engineer.(7-0-0)
2. PH 2046 – Site Plan Review for Wireless Telecommunication Facility consisting of 12 cellular panel-type antennas mounted to roof of existing building and equipment area located inside existing building at 90 Enfield Street (Map 35, Lot 42) – BG zone – Bell Atlantic Mobile, Inc., applct, Robert M. Nuger and Steven M. Nuger, owner – Chapter 14 (MPHCD 7/18/98, MAD 9/4/98) Public Hearing Continued to meeting of July 23, 1998

3. PH 2053 – Special Use Permit for a Commercial Wireless Telecommunication Service including site plan review of a wireless telecommunication facility consisting of a 150-foot monopole and associated equipment surrounded by a chain link fence located east of Bright Meadow Blvd. adjacent to the Harley Hotel (Assesor's Map 35, Lot 219 - Old Enfield St) BR zone – The Connecticut Light and Power Company, owner / Sprint Spectrum L.P. (Sprint PCS) aplct. – Section 14 (MPHC 8/7/98, MAD 9/4/98) Public Hearing Closed. Approved with the following conditions(7-0-0):
 1. An engineering bond for removal of the wireless telecommunications facility including the tower and base components in an amount to be determined by the town engineer shall be submitted to the town prior to the start of construction and prior to the issuance of any building permits. Any need to use the bond by the town shall be binding on the site regardless of name of the bond obligee.
 2. An erosion and sedimentation control passbook, pledged to the town, in an amount to be determined buy the town engineer, shall be submitted to the town prior to the start of construction.
 3. A preconstruction meeting between the applicant, site contractors, project engineer and town staff shall be held prior to the beginning of any site work.
 4. The tower shall accommodate both the applicant's Antennas and comparable Antennas for at least two additional users.
 5. The tower shall allow for future rearrangement of Antennas upon the tower and shall accommodate Antennas mounted at varying heights.
 6. The wireless communication facility shall not interfere with existing or proposed public safety communications, commercial television and radio signals or other forms of communication transmissions. Penalty for subsequent interference shall void the approval of the facility.
 7. The wireless communication facility shall comply with the standards promulgated by the Federal Communication Commission (FCC).
 8. All generators installed in conjunction with the wireless communications facility shall comply with all State and local noise regulators.
 9. On or before August 31 every year, the applicant or wireless telecommunications service provider shall submit information to the Planning Zoning Commission file in support of the provision of Section 14-8.6 of the Zoning Ordinance.

10. If the wireless communications facility is not in use for 12 consecutive months, it shall be removed within 90 days from the end of such 12 month period, including any towers and base components by the last service provider using the site or owner, whichever has a contractual obligation to perform the removal. The site shall be restored to an appearance that is compatible with the surrounding neighborhood and where appropriate, re-vegetated to blend with surrounding area.
11. The special use permit for a commercial wireless telecommunication service shall be valid for a maximum period of 10 years with a right of reapplication under regulations in effect at that time.
12. The approval of an application for special use permit shall be void and of no effect unless construction of the project commences within one year from the date of the approval granted by the commission in accordance with Section 14-10.2 of the Zoning Ordinance.
13. Arrangements shall be made with the fire department regarding emergency access to the compound.
14. The plans shall be modified to show a paved apron at the driveway entrance that conforms to town paving specifications.
15. The plans shall be modified to include standard notes as recommended by the town engineer.
16. Monopole shall be maintained if becomes rusty or eye sore.

9. Old Business

ITEMS READY FOR ACTION

a. Pending Applications

1. PH 2043 – Petition for text amendment to Chapter 9 of the Zoning Ordinance to create a new section 9.1.13 to provide for development of assisted living facilities on appropriate sites - Elm Development Services, Inc. petitioner – Sec. 21 (MAD 8/21/98) APPROVED AS AMENDED (7-0-0)

TOWN OF ENFIELD, CONNECTICUT
SELECTED ORDINANCE PROVISIONS PERTAINING TO
ASSISTED LIVING

Revised Petitioned 6/19/98

Chapter 9

Zoning

ASSISTED LIVING DEVELOPMENTS

A PETITION OFFERED BY A DEVELOPER INTERESTED IN BUILDING AN ASSISTED LIVING FACILITY EITHER SEPARATE AND APART FROM A CONTINUING CARE RETIREMENT COMMUNITY OR AS A PART OF THEM. AMEND CHAPTER 9 TO ADD NEW TEXT SHOWN IN BOLD FACE

9-1.13 Assisted Living Facilities as managed residential communities providing support services that encourage elderly residents of sixty-two years of age or older to maintain a maximum level of independence which may include the following services: (1) Twenty-four (24) hour protective oversight, (2) care for seniors who need assistance with activities of daily living, (3) arranging for health-related services, (4) social and recreational activities, (5) meals, including snacks and special diets, (6) transportation, (7) housekeeping, (8) laundry, and (9) emergency call systems and security.

An assisted living facility may be permitted within the R-33 and R-44 Districts subject to the granting of a Special Use Permit by the Enfield Planning and Zoning Commission, provided such use shall comply, if applicable, with the provisions of Chapter 16 of this Ordinance except as modified by the following conditions.

- a. The following area, density, parking, and setback requirements shall apply:
 1. Minimum Lot Area: Ten (10) acres.
 2. Maximum Number of Dwelling Units Per Acre:
Residential-33 District: Ten (10)
Residential-44 District: Eight (8).
 3. Maximum Lot Coverage (total of all buildings): Twenty-five percent (25%).
 4. Minimum Floor Area (gross area):
 - a. Studio (efficiency) dwelling units: Four hundred fifty (450) square feet.
 - b. One-bedroom dwelling units: Five hundred twenty five (525) square feet.
 - c. Two or more bedroom dwelling units: Seven hundred (700) square feet.
 5. Minimum Setback Distances for all buildings, including porches and patios:
Front yard: Sixty (60) Feet.
Side and rear yards: Fifty (50) Feet.
 6. Maximum Building Height: Thirty-five (35) feet.

7. Minimum Number of Parking Spaces: One (1) space for every two (2) dwelling units (includes coverage for visitors, and deliveries) and one (1) space for every two (2) employees.
- b. Accessory Uses
 1. Permitted accessory uses to the Assisted Living Facility Services, exclusively for the use of the residents thereof and their guests, shall be limited to the following:
 - a. twenty four (24) hour protective oversight;
 - b. care for seniors who need assistance with activities of daily living;
 - c. arranging for health-related services;
 - d. social and recreational activities;
 - e. meals, including snacks and special diets;
 - f. transportation;
 - g. housekeeping;
 - h. laundry;
 - i. emergency call systems and security shall be exclusively for the use of the residents of the assisted living facility and their guests;
 - j. emergency call systems;
 - k. security; and,
 - l. convenience retail shop with a maximum of 1,000 (excluding storage area) square feet of floor area for the sale of food items, prescription and/or nonprescription drugs, household items and gifts for the use of the occupants.
 - m. Storage buildings for maintenance equipment for the subject site.
 - c. The following residency requirements shall apply:
 1. Occupancy of dwelling units shall be for persons at least sixty-two (62) years of age and in the case of multiple occupancy of a dwelling unit, one (1) person shall be at least sixty-two (62) years of age and all others shall be fifty-five (55) years or older.
 2. The owner(s) management company of each assisted living facility shall, on an annual basis, if requested to do so, present a report to the Zoning Enforcement Officer certifying as to compliance with the above age restriction requirement, by disclosing the number of dwelling units being occupied by persons at least sixty-two (62) years of age.
 - d. The following miscellaneous requirements shall apply:

1. The site shall be serviced in full by public sewer and public water supply.
2. No assisted living facility shall be either partially or totally converted to a Planned Residential Development.
3. continuing care retirement community (Section 9-1.11).
4. Each dwelling unit shall have an emergency call/intercom system connected to a central station staffed twenty-four (24) hours per day.
5. Outdoor recreational amenities including but not limited landscaped walking trails and community flower and/or vegetable gardens, shall be provided to the satisfaction of the Commission.
6. Buffer/screening shall be provided at abutting residential locations to the satisfaction of the Commission.
7. All signs shall be located on the site development plan and shall be described as to location, dimension, height, materials, and purpose.
8. Outdoor lighting shall be provided to insure proper and safe illumination of driveways and parking areas. The type and location of such outdoor lighting shall be as approved by the Commission.
9. Solid waste disposal: Any solid waste stations or dumpsters shall be placed on a concrete pad designed to Town specifications, appropriately screened, maintained, and shown on the site development plan.
10. Each dwelling unit shall include a bathroom with at least one (1) toilet, one (1) sink, and one (1) shower all handicapped accessible.
11. Each dwelling unit shall include a mini-kitchen or kitchenette consisting of at least a refrigerator and microwave oven.
- 2.

b. Pending Requests

NONE

ITEMS NOT READY FOR ACTION

- a. Section 8-24 C.G.S. - (PH 1933 Woodrook Estates Subdivision - Towards Road Acceptance) - Request for review of completed improvements AND request for recommendation to the Town Council to accept an extension of Lake Dr. (a cul de sac, length = 120 ft.) together with a maintenance bond in the amount to be established by the Town Engineer - George Colli, applicant (MAD N/A - STAFF REVIEWS ARE PENDING)

b. Pending Initiatives

1. PH 2007 - Initiative to amend Section 11-5.2.2 of the Zoning Ordinance, in order to modify regulations that limit filling stations and auto repair shops in BR zones - Planning and Zoning Commission, applct. Section 21 (MinPHC 7/16/98) **Tabled**
2. PH 2008 - Initiative to amend Section 15-3.4B of the Zoning Ordinance, in order to modify regulation standards for free standing signs in commercial zones - Planning and Zoning Commission, applct. Section 21 (MinPHC 7/16/98) **Tabled**
3. PH 2034 - Initiative to amend Chapter 22, Special Development Districts, of the Zoning Ordinance, in order to broaden the scope of buildings and properties that may qualify for SDD designation - all zones - Planning and Zoning Commission, applct. Section 21 (MinPHC 7/16/98) **Tabled**
4. PH 2035 - Initiative to amend Chapter 10, Special Residential Development Regulations, of the Zoning Ordinance, in order to broaden single family open space cluster planned residential developments - all residential and industrial zones - Planning and Zoning Commission, applct. Section 21 (MinPHC 7/16/98) **Tabled**
5. PH 2036 - Initiative to amend Section 13-6.8, Parking Lot Design and Landscaping - subsection 13-6.8d, Lighting to establish performance criteria for light intensity - all zones - Planning and Zoning Commission, applct. Section 21 (MinPHC 7/16/98) **Tabled**
6. PH 2037 - Initiative to amend Chapters 11 and 12, Repeal of Special Use Permits for unlisted uses which are similar to Permitted Uses - BL and BG zones, TV zone and IP zone - Planning and Zoning Commission, applct. Section 21 (MinPHC 7/16/98) **Tabled**
7. PH 2049 - Initiative to amend Sections 15-4.3.5 and 15-6.3.5 of the Zoning Ordinance, in order to change the text which permits decorative flags as signs - Planning and Zoning Commission, applct. Section 21 (MinPHC 7/16/98) **Tabled**

3. Bond Releases

ITEMS READY FOR ACTION

- a. SPR 906 - Turf Products Corporation, 157 Moody Rd - Request for release of insurance bond in the amount of \$3,000 for site landscaping - Fredrick N. Zeytoonjian, applct/owner **Approved (7-0-0)**

- b. SPR 906.03 - Turf Products Corporation, 157 Moody Rd - Request for release of insurance bond in the amount of \$30,550 for site engineering work and passbook in the amount of \$960 for erosion and sedimentation control - Fredrick N. Zeytoonjian, applct/owner **Approved (7-0-0)**

ITEMS NOT READY FOR ACTION

- c. PH 1902.04 - Stateline Plaza, Auto Palace - Request release of insurance bond in the amount of \$18,500 for site engineering and release of insurance bond in the amount of \$3,000 for site landscaping - Konover Development Corp., applct/owner
- d. PH 1933 - Woodbrook Estates Subdivision, Spruceland Rd. and Lake Dr. - Request release of passbook in the amount of \$36,520 for site engineering work and passbook for \$2,170 for erosion control - George Colli applct/owner

4. New Business

ITEMS NOT READY FOR ACTION

a. New Applications

1. PH 1067.05 - Modification of plans previously approved to add parking spaces at 90 Phoenix Avenue (former site of Digital Equipment, a.k.a. I Vision Drive) - (Map 46, Lot 37) IP zone - Dairy Mart Convenience Stores, Inc. owner / Town of Enfield, Department of Economic Development, applct (MAD 8/21/98, IWA)
2. SPR 297.04 - Modification of plans previously approved for a 50-foot by 60-foot warehouse addition at 245 Shaker Road, Camerota Truck Parts (Map 95, Lot 7) I-1 zone - S. Camerota & Sons applct/ Mary A. Camerota, owner (MAD 9/4/98)
3. SPR #992 - Development of a new 32,000 sq. ft. Industrial Building to be located at 31 Pearson Way (Map #75, Lot #41) I-1 Zone; Pearson Enfield Development applct. (MAD 9/5/98RECEIVED)
4. SPR #862.02 - Modification of plans previously approved for a gravel parking area for storage of empty box trailers at 300 Shaker Road, LEGO Warehouse and Distribution Center (Map #99 & 112, Lot # 8 & 11) I-1 Zone; LEGO Building Corp. applct. **RECEIVED**

b. New Requests

1.

c. New Initiatives

- 1.
- d. Set Public Hearing Dates

HEARINGS TO BE SCHEDULED

1. PH 1902.05 FLD 1902.05-- Amendment of a Special Use Permit for a planned commercial development, and Site Plan Review together with a Flood Hazard Permit to construct a 5,700 square foot TGIF Restaurant in existing parking area at Stateline Plaza (130 Elm Street) west side of Freshwater Blvd. including recertification of parking and access drives, landscaping etc. (Map 57, Lots 329, 344, 345, 346) BR zone - Sections 16-2.8, 16-14.1 of the Zoning Ordinance and Article II, Section 4-15 through 4-32 of the Town Code (MPHC 8/21/98) **Scheduled public hearing for July 23, 1998**
2. PH 2054 - Special Use Permit and Site Plan Review for a day care center at the plaza at 284 North Maple Street (Map 80, Lot 203) BL zone - Diane Stoner applct / Tartsinis, owner - Section 11-1.2.4 and 16-2.12 (MPHC 9/4/98) **Scheduled public hearing for July 23, 1998**
3. PH 2055 - Special Use Permit to change a non-conforming structure and Site Plan Review for 24 x 38 foot overhead canopy installation at existing gasoline dispensing islands at 126 South Road, (Map 66, Lot 1) BL Zone - Roger E. Williams Owner/Getty Petroleum Corp. Applct (MPHC 9/4/98) **Scheduled public hearing for September 3, 1998**
4. PH 1959.02 - Special Use Permit to convert an existing building in order to add a dwelling unit at 14 Powder Hill Rd (Map 85, Lot 6) R-88 zone - John & Mavis Collins owner/applct - Chapter 9-1.6 (MPHC 9/4/98) **Scheduled public hearing for September 3, 1998**

HEARINGS ALREADY SCHEDULED TO JULY 23

5. PH 1970.02 - Modification of Special Use Permit #1970 to include full body piercing at The Edge, 55 Enfield Street (Map 35, Lot 207) BL Zone - Elia Realty LLC owner/Edge Beauty Shop applc. - Chapter 11, Section 1.2.2 (MPHC 8/7/98, MAD 9/26/98)
6. PH 2052 - Petition for text amendment to Chapter 11 of the Zoning Ordinance Sections 11-1.2.4 to change the maximum capacity of dry cleaning equipment to 50 lbs. and remove reference to coin operation - Jong Nam Joo petitioner - Sec. 21(MPHC 8/7/98, MAD 9/26/98)
7. PH 1438.05 - Amendment of a Special Use Permit for a planned commercial development and Site Plan Review for the construction of an 8,000 sf auto parts store at "Stop and Shop Plaza", 54 Hazard Ave (Map 56, Lot 26) BR

Zone - Hazard Avenue Associates owner/applct. - Chapter , 16 (MPHC
8/7/98, MAD 9/26/98)

5. Other Business

a. SPR 958 - Town Planner Review of modification of a previously approved site plan to replace an outparcel restaurant with a smaller retail use at Freshwater Commons, at 51 Palomba Drive (Map 56, Lot 40) **Formed Consensus that the Town Planner may approve as submitted.**

6. Adjournment 11:00 p.m.

MAD = Mandatory Action Date

MAD = Mandatory Action Extended Date

MPHC = Mandatory Public Hearing Commencement

MinPHC = Minimum Public Hearing Commencement

MPHCD = Mandatory Public Hearing Closure Date

MPHCDX = Mandatory Public Hearing Closure Extended Date

IWA = Inland Wetland Permit Required

TOWN OF ENFIELD, CONNECTICUT
SELECTED ORDINANCE PROVISIONS PERTAINING TO
ASSISTED LIVING
Revised Petitioned 6/19/98

Chapter 9

Zoning

ASSISTED LIVING DEVELOPMENTS

A PETITION OFFERED BY A DEVELOPER INTERESTED IN BUILDING AN ASSISTED LIVING FACILITY EITHER SEPARATE AND APART FROM A CONTINUING CARE RETIREMENT COMMUNITY OR AS A PART OF THEM. AMEND CHAPTER 9 TO ADD NEW TEXT SHOWN IN BOLD FACE

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An assisted living facility may be permitted within the R-33 and R-44 Districts subject to the granting of a Special Use Permit by the Enfield Planning and Zoning Commission, provided such use shall comply, if applicable, with the provisions of Chapter 16 of this Ordinance except as modified by the following conditions.

- a. The following area, density, parking, and setback requirements shall apply:
1. Minimum Lot Area: Ten (10) acres.
 2. Maximum Number of Dwelling Units Per Acre:

Residential-33 District: Ten (10)
Residential-44 District: Eight (8).
 3. Maximum Lot Coverage (total of all buildings): Twenty-five percent (25%).
 4. Minimum Floor Area (gross area):
 - a. Studio (efficiency) dwelling units: Four hundred fifty (450) square feet.
 - b. One-bedroom dwelling units: Five hundred twenty five (525) square feet.
 - c. Two or more bedroom dwelling units: Seven hundred (700) square feet.
 5. Minimum Setback Distances for all buildings, including porches and patios:

Front yard: Sixty (60) Feet.

Side and rear yards: Fifty (50) Feet.

6. **Maximum Building Height:** Thirty-five (35) feet.
7. **Minimum Number of Parking Spaces:** One (1) space for every two (2) dwelling units (includes coverage for visitors, and deliveries) and one (1) space for every two (2) employees.

b. **Accessory Uses**

1. **Permitted accessory uses to the Assisted Living Facility Services, exclusively for the use of the residents thereof and their guests, shall be limited to the following:**
 - a. twenty four (24) hour protective oversight;
 - b. care for seniors who need assistance with activities of daily living;
 - c. arranging for health-related services;
 - d. social and recreational activities;
 - e. meals, including snacks and special diets;
 - f. transportation;
 - g. housekeeping;
 - h. laundry;
 - i. emergency call systems and security shall be exclusively for the use of the residents of the assisted living facility and their guests;
 - j. emergency call systems;
 - k. security; and,
 - l. convenience retail shop with a maximum of 1,000 (excluding storage area) square feet of floor area for the sale of food items, prescription and/or nonprescription drugs, household items and gifts for the use of the occupants.
 - m. Storage buildings for maintenance equipment for the subject site.

c. **The following residency requirements shall apply:**

1. **Occupancy of dwelling units shall be for persons at least sixty-two (62) years of age and in the case of multiple occupancy of a dwelling unit, one (1) person shall be at least sixty-two (62) years of age and all others shall be fifty-five (55) years or older.**
2. **The owner(s) management company of each assisted living facility shall, on an annual basis, if requested to do so, present a report to the Zoning Enforcement Officer certifying as to compliance with the above age restriction requirement, by disclosing the number of dwelling units being occupied by persons at least sixty-two (62) years of age.**

d. The following miscellaneous requirements shall apply:

1. The site shall be serviced in full by public sewer and public water supply.
2. No assisted living facility shall be either partially or totally converted to a Planned Residential Development.
3. continuing care retirement community (Section 9-1.11).
4. Each dwelling unit shall have an emergency call/intercom system connected to a central station staffed twenty-four (24) hours per day.
5. Outdoor recreational amenities including but not limited landscaped walking trails and community flower and/or vegetable gardens, shall be provided to the satisfaction of the Commission.
6. Buffer/screening shall be provided at abutting residential locations to the satisfaction of the Commission.
7. All signs shall be located on the site development plan and shall be described as to location, dimension, height, materials, and purpose.
8. Outdoor lighting shall be provided to insure proper and safe illumination of driveways and parking areas. The type and location of such outdoor lighting shall be as approved by the Commission.
9. Solid waste disposal: Any solid waste stations or dumpsters shall be placed on a concrete pad designed to Town specifications, appropriately screened, maintained, and shown on the site development plan.
10. Each dwelling unit shall include a bathroom with at least one (1) toilet, one (1) sink, and one (1) shower all handicapped accessible.
11. Each dwelling unit shall include a mini-kitchen or kitchenette consisting of at least a refrigerator and microwave oven.



May 20, 1998

TOWN OF ENFIELD

CERTIFIED MAIL Z392 898 405

Karen Johnson
Sprint PCS
9 Barnes Industrial Rd South
Wallingford, CT 06492

Dear Ms. Johnson:

At the May 19, 1998 Regular Meeting of the Enfield Conservation Commission (Inland Wetland and Watercourses Agency), the following action was taken:

IW 273 - Application of Sprint PCS (Telecommunications) requesting a permit or regulated activities associated with the erection of a telecommunications tower accesses from Brightmeadow Boulevard.

The Commission approved the application with the following conditions:

1. The permittee shall notify the Planning Department at 253-6358 immediately upon the commencement of work and upon its completion.
2. If the authorized activity has not been initiated before May 19, 2000, this permit shall be null and void if not previously revoked or specifically extended. The duration of the permit once initiated shall be 5 years from the date of approval.
3. All work and all regulated activities conducted pursuant to this authorization shall be consistent with these terms and conditions of this permit. Any structures, excavation, fill, obstruction, encroachments or regulated activities not specifically identified and authorized herein shall constitute a violation of this permit and may result in its modification, suspension, or revocation. Upon initiation of the activities authorized herein, the permittee thereby accepts and agrees to comply with the terms and conditions of this permit.
4. The authorization is not transferable without the written consent of the Enfield Conservation Commission.
5. In evaluating this application, the Commission has relied on information provided by the applicant and, if such information subsequently proves to be false, deceptive, incomplete and/or inaccurate this permit shall be modified, suspended or revoked.

820 Enfield Street/Enfield, Connecticut 06082/(860) 253-6300

May 20, 1998

6. This permittee shall employ best management practices, consistent with the terms and conditions of the permit, to control stormwater discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands or watercourses. For information and technical assistance, contact the Town Planner. The permittee shall immediately inform the Planning Department of any problems involving wetlands or watercourses which have developed in the course of, or which are caused by, the authorized work.
7. No equipment or material including without limitation, fill, construction materials, or debris, shall be deposited, placed, or stored in any wetland or watercourse on or off site unless specifically authorized by this permit.
8. This permit is subject to and does not derogate any present or future property rights or other rights or powers of the Town of Enfield, and conveys no property rights or in real estate of material nor any exclusive privileges, and is further subject to any and all public and private rights and to any activity affected hereby.
9. Timely implementation and maintenance of sediment and erosion control measures are a condition of this permit. (All sediment and erosion control measures must be maintained until all disturbed areas are stabilized.)
10. A pre-construction meeting shall be held prior to the commencement of any construction activities on the site with the applicant, contractor, and Town staff.
11. A landscape/performance bond shall be posted prior to any clearing of the site.

If you have any questions regarding this action, please contact me at (860)253-6358.

Very truly yours,



Laurie P. Whitten
Assistant Town Planner

LPW/vch

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Monday, February 11, 2019 9:26 AM
To: Barbadora, Jeff
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Tracking # 774427099563

Ship date:
Fri, 2/8/2019

Jeff Barbadora
Crown Castle
WOBURN, MA 01801
US

Delivery date:
Mon, 2/11/2019 9:20
am

Real Estate
Conn Light & Power
(Eversource)
300 Cadwell Drive
SPRINGFIELD, MA 01104
US



FedEx

Shipment Facts

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Signed for by: D.LEDOUX
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Delivered to: Shipping/Receiving
Service type: FedEx Priority Overnight®
Packaging type: FedEx® Envelope
Number of pieces: 1

Barbadora, Jeff

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Fri, 2/8/2019

Jeff Barbadora
Crown Castle
WOBURN, MA 01801
US



Delivery date:
Mon, 2/11/2019 3:44
pm

Planning & Zoning Dept
Town of Enfield
820 enfield Street
ENFIELD, CT 06082
US

FedEx

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: 774427012995
Status: Delivered: 02/11/2019 3:44 PM Signed for By: R.OCASIO
Reference: 1766.6680
Signed for by: R.OCASIO
Delivery location: ENFIELD, CT
Delivered to: Receptionist/Front Desk
Service type: FedEx Priority Overnight®
Packaging type: FedEx® Envelope
Number of pieces: 1
Weight: 1.00 lb.
Special handling/Services: Deliver Weekday

Barbadora, Jeff

From: TrackingUpdates@fedex.com
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Fri, 2/8/2019

Jeff Barbadora
Crown Castle
WOBURN, MA 01801
US



Delivery date:
Mon, 2/11/2019 3:44 pm

Michael Ludwick - Mayor
Town of Enfield
820 Enfield Street
ENFIELD, CT 06082
US

FedEx[®]

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Signed for by: M.MATTHEWS
Delivery location: ENFIELD, CT
Delivered to: Receptionist/Front Desk
Service type: FedEx Priority Overnight®
Packaging type: FedEx® Envelope
Number of pieces: 1
Weight: 1.00 lb.

General Power Density

Site Name: North Thompsonville, CT
 Cumulative Power Density

Operator	Operating Frequency (MHz)	Number of Trans	ERP Per Trans (watts)	Total ERP (watts)	Distance to Target (feet)	Calculated Power Density (mW/cm ²)	Maximum Permissible Exposure (mW/cm ²)	Fraction of MPE (%)
VZW PCS	1970	1	5900	5900	137	0.1130	1.0	11.30%
VZW Cellular LTE	869	1	2100	2100	137	0.0402	0.5793333333	6.95%
VZW Cellular	869	3	393	1179	137	0.0226	0.5793333333	3.90%
VZW AWS	2145	1	6600	6600	137	0.1265	1.0	12.65%
VZW 700	746	1	2700	2700	137	0.0517	0.4973333333	10.40%
Total Percentage of Maximum Permissible Exposure								45.20%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1

MHz = Megahertz
 mW/cm² = milliwatts per square centimeter
 ERP = Effective Radiated Power

- Absolute worst case maximum values used, including the following assumptions:
1. closest accessible point is distance from antenna to base of pole;
 2. continuous transmission from all available channels at full power for indefinite time period; and,
 3. all RF energy is assumed to be directed solely to the base of the pole.

-1992

Date: January 30, 2019

Denice Nicholson
Crown Castle
46 Broadway
Albany, NY 12204

 **BLACK & VEATCH**
Building a world of difference.
Black & Veatch Corp.
6800 W. 115th St., Suite 2292
Overland Park, KS 66211
(913) 458-8145

Subject: Structural Analysis Report

Carrier Designation: Verizon Wireless Co-Locate
Carrier Site Number: NG20679
Carrier Site Name: N Thompsonville CT

Crown Castle Designation: Crown Castle BU Number: 876348
Crown Castle Site Name: Enfield
Crown Castle JDE Job Number: 548269
Crown Castle Work Order Number: 1687859
Crown Castle Order Number: 471268 Rev. 6

Engineering Firm Designation: Black & Veatch Corp. Project Number: 400087

Site Data: Bright Meadow Blvd., Enfield, Hartford County, CT
Latitude 42° 1' 14.91", Longitude -72° 35' 6.59"
147.5 Foot - Monopole Tower

Dear Denice Nicholson,

Black & Veatch Corp. is pleased to submit this "Structural Analysis Report" to determine the structural integrity of the above mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration

Sufficient Capacity

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Anup Chitale / Vishal Muley

Respectfully submitted by:

Joshua J. Riley, P.E.
Professional Engineer

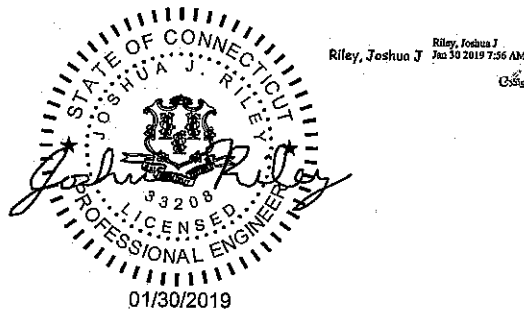


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1) INTRODUCTION

This tower is a 147.5 ft Monopole tower designed by Paul J. Ford and Company.

The tower has been modified per reinforcement drawings prepared by Paul J. Ford and Company February of 2013. Reinforcement consists of addition of (3) channel sections from 39' to 49' and addition of (3) anchor rods. Tower is passing considerably without considering channel reinforcement so considered as ineffective in this analysis. Anchor rod reinforcement considered effective in the analysis per post modification inspection report prepared by Tower Engineering Professionals in August of 2013.

2) ANALYSIS CRITERIA

TIA-222 Revision: TIA-222-H
 Risk Category: II
 Wind Speed: 125 mph
 Exposure Category: B
 Topographic Factor: 1
 Ice Thickness: 2 in
 Wind Speed with Ice: 50 mph
 Service Wind Speed: 60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
132.0	137.0	3	antel	BXA-171063-12BF w/ Mount Pipe	8	1 5/8
		3	antel	BXA-70063-4CF-EDIN-X w/ Mount Pipe		
		6	commscope	SBNHH-1D65B w/ Mount Pipe		
		2	rfs celwave	DB-T1-6Z-8AB-0Z		
		3	samsung telecommunications	RFV01U-D1A		
		3	samsung telecommunications	RFV01U-D2A		
	132.0	3	miscellaneous	2.0SCH40 x 3ft Pipe with (2) SitePro Puck Clamp Plate		
		3	miscellaneous	3.0SCH40 x 13ft Pipe with (4) SitePro SCX43-K Crossover Plate		
		1	cci tower mounts	Miscellaneous [NA 510-1]		
		1	cci tower mounts	Platform Mount [LP 1201-1]		
		3	commscope	BSAMNT-SBS-2-2 Side By Side Bracket		
49.0	50.0	1	symmetricom	58532A	1	1/2
	49.0	1	cci tower mounts	Side Arm Mount [SO 901-1]		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
147.0	147.0	3	alcatel lucent	TD-RRH8x20-25	3 1 1	1 1/4 5/8 3/4
		1	cci tower mounts	Platform Mount [LP 1201-1]		
		3	rfs celwave	APXVSP18-C-A20 w/ Mount Pipe		
		3	rfs celwave	APXVTM14-ALU-I20 w/ Mount Pipe		
145.0	146.0	3	alcatel lucent	PCS 1900MHz 4x45W-65MHz	-	-
	145.0	1	cci tower mounts	Side Arm Mount [SO 102-3]		
	144.0	3	alcatel lucent	800MHz 2X50W RRH w/ Filter		
117.0	119.0	1	andrew	SBNHH-1D65A w/ Mount Pipe	9 2 1 1	1 5/8 3/4 3/8 2 Conduit
		1	cci antennas	HPA-65R-BUU-H6 w/ Mount Pipe		
		1	cci antennas	HPA-65R-BUU-H8 w/ Mount Pipe		
		3	ericsson	RRUS 32 B2		
		4	kathrein	860 10025		
	3	powerwave technologies	7770.00 w/ Mount Pipe			
	117.0	1	cci tower mounts	Platform Mount [LP 1201-1]		
		2	powerwave technologies	LGP17201		
115.0	119.0	1	raycap	TME-DC6-48-60-18-8F	-	-
		3	ericsson	TME-RRU-11		
	115.0	1	cci tower mounts	Side Arm Mount [SO 102-3]		
107.0	107.0	1	cci tower mounts	Side Arm Mount [SO 102-3]	7 2	1 5/8 1 3/8
		1	cci tower mounts	T-Arm Mount [TA 701-3] w/o Short Walkway		
		3	ericsson	AIR 32 B2A B66AA w/ Mount Pipe		
		3	ericsson	ERICSSON AIR 21 B2A B4P w/ Mount Pipe		
		3	ericsson	KRY 112 144/1		
		3	ericsson	RADIO 4449 B12/B71		
		3	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	FDH Engineering, Inc.	1532963	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	FDH Engineering, Inc. (Mapped)	1613614	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Paul J. Ford and Company	1613591	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	Paul J. Ford and Company	3667620	CCISITES
4-POST-MODIFICATION INSPECTION	Tower Engineering Professionals	3966655	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

- 1) Tower and structures were built and maintained in accordance with the manufacturer's specifications.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
- 3) This analysis was performed under the assumption that all information provided to Black & Veatch is current and correct. This is to include site data, appurtenance loading, tower/foundation details, and geotechnical data. The loading on the structure is based on CAD level drawings and carrier orders provided by the owner. If any of this information is not current and correct, this report should be considered obsolete and further analysis will be required.

This analysis may be affected if any assumptions are not valid or have been made in error. Black & Veatch Corp. should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary) (Monopole Tower)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P allow (K)	% Capacity	Pass / Fail
L1	147.5 - 108.5	Pole	TP29.41x22x0.25	1	-14.92	1279.90	37.5	Pass
L2	108.5 - 72.25	Pole	TP35.798x28.1975x0.25	2	-23.20	1690.96	77.7	Pass
L3	72.25 - 35.75	Pole	TP42.23x34.4429x0.3125	3	-31.44	2493.11	77.7	Pass
L4	35.75 - 0	Pole	TP48.4x40.6079x0.375	4	-43.35	3511.16	72.2	Pass
							Summary	
						Pole (L3)	77.7	Pass
						Rating =	77.7	Pass

Table 5 - Tower Component Stresses vs. Capacity (Monopole Tower) - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	72.4	Pass
	Base Plate		57.8	Pass
	Additional Anchor Rods		55.0	Pass
1	Base Foundation	0	49.7	Pass
	Base Foundation Soil Interaction		54.8	Pass
Structure Rating (max from all components) =				77.7%

Note:

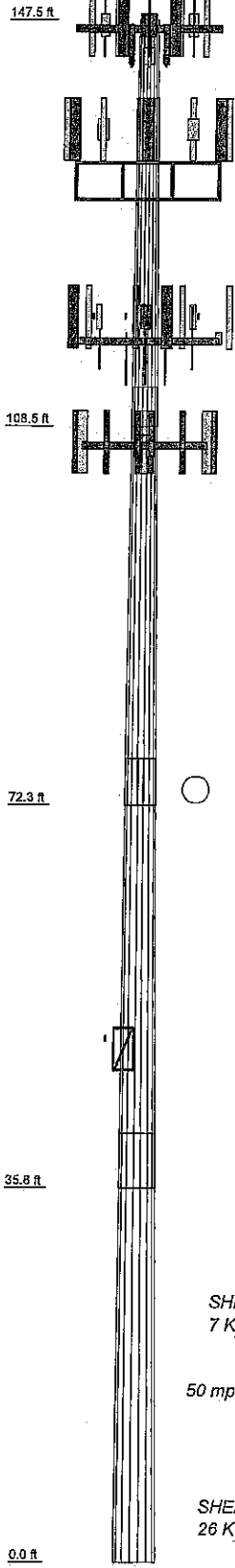
- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed. Rating per TIA-222-H Section 15.5.

4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A
TNXTOWER OUTPUT

Section	1	2	3	4	5.3	3.4	2.7
Length (ft)	38.00	40.00	41.00	41.00	41.00	41.00	41.00
Number of Sides	18	18	18	18	18	18	18
Thickness (in)	0.2500	0.2500	0.3125	0.3750	0.3125	0.2500	0.2500
Socket Length (ft)	3.75	4.50	5.25	6.00	5.25	4.50	3.75
Top Dia (in)	22.0000	28.1975	34.4429	40.6079	34.4429	28.1975	22.0000
Bot Dia (in)	29.4100	35.7980	42.2300	48.4000	42.2300	35.7980	29.4100
Grade	A607-60	A607-60	A607-65	A607-65	A607-65	A607-60	A607-60
Weight (K)	18.7	7.3	5.3	3.4	2.7	18.7	18.7



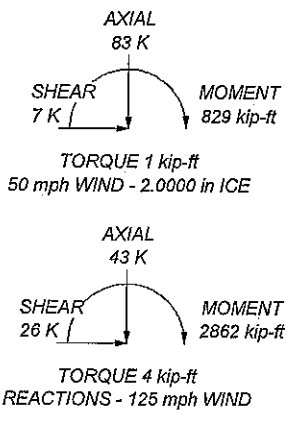
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-60	60 ksi	75 ksi	A607-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 125 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 2.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TIA-222-H Annex S
9. TOWER RATING: 77.7%

ALL REACTIONS ARE FACTORED



BLACK & VEATCH Building a world of difference.	Black & Veatch Corp. 6800 W. 115th St., Suite 2292 Overland Park, KS 66211 Phone: (913) 458-8145 FAX: (913) 458-8136		Job: Enfield (BU# 876348) Project: 400087 (876348.1687859) Client: Crown Castle Drawn by: Aditya Kulkarni App'd:	
	Code: TIA-222-H Date: 01/30/19 Scale: NTS		Path: _____ Dwg No. E-1	

Tower Input Data

The tower is a monopole.

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

The following design criteria apply:

1. Tower is located in Hartford County, Connecticut.
2. Tower base elevation above sea level: 110.00 ft.
3. Basic wind speed of 125 mph.
4. Risk Category II.
5. Exposure Category B.
6. Simplified Topographic Factor Procedure for wind speed-up calculations is used.
7. Topographic Category: 1.
8. Crest Height: 0.00 ft.
9. Nominal ice thickness of 2.0000 in.
10. Ice thickness is considered to increase with height.
11. Ice density of 56 pcf.
12. A wind speed of 50 mph is used in combination with ice.
13. Temperature drop of 50 °F.
14. Deflections calculated using a wind speed of 60 mph.
15. TIA-222-H Annex S.
16. A non-linear (P-delta) analysis was used.
17. Pressures are calculated at each section.
18. Stress ratio used in pole design is 1.05.
19. Tower analysis based on target reliabilities in accordance with Annex S.
20. Load Modification Factors used: $K_{as}(F_w) = 0.95$, $K_{as}(t_i) = 0.85$.
21. Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification Use Code Stress Ratios Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile Include Bolts In Member Capacity Leg Bolts Are At Top Of Section Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric	Distribute Leg Loads As Uniform Assume Legs Pinned ✓ Assume Rigid Index Plate ✓ Use Clear Spans For Wind Area Use Clear Spans For KL/r Retension Guys To Initial Tension ✓ Bypass Mast Stability Checks ✓ Use Azimuth Dish Coefficients ✓ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs	Use ASCE 10 X-Brace Ly Rules Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation ✓ Consider Feed Line Torque Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption <div style="background-color: #cccccc; padding: 2px; text-align: center; font-weight: bold;">Poles</div> ✓ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known
--	---	---

Tapered Pole Section Geometry

Section	Elevation	Section Length	Splice Length	Number of Sides	Top Diameter	Bottom Diameter	Wall Thickness	Bend Radius	Pole Grade
	ft	ft	ft		in	in	in	in	

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	147.50-108.50	39.00	3.75	18	22.0000	29.4100	0.2500	1.0000	A607-60 (60 ksi)
L2	108.50-72.25	40.00	4.50	18	28.1975	35.7980	0.2500	1.0000	A607-65 (65 ksi)
L3	72.25-35.75	41.00	5.25	18	34.4429	42.2300	0.3125	1.2500	A607-65 (65 ksi)
L4	35.75-0.00	41.00		18	40.6079	48.4000	0.3750	1.5000	A607-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
L1	22.3008	17.2586	1031.4832	7.7212	11.1760	92.2945	2064.3237	8.6310	3.4320	13.728
	29.8251	23.1385	2485.6899	10.3518	14.9403	166.3751	4974.6504	11.5714	4.7362	18.945
L2	29.3175	22.1763	2188.3323	9.9214	14.3243	152.7703	4379.5441	11.0903	4.5228	18.091
	36.3117	28.2073	4503.2898	12.6195	18.1854	247.6324	9012.5051	14.1063	5.8604	23.442
L3	35.7939	33.8531	4982.1891	12.1163	17.4970	284.7451	9970.9339	16.9298	5.5120	17.638
	42.8333	41.5769	9229.5497	14.8807	21.4528	430.2251	18471.243	20.7924	6.8825	22.024
L4	42.1896	47.8872	9793.0711	14.2827	20.6288	474.7281	19599.028	23.9481	6.4870	17.299
	49.0888	57.1618	16656.270	17.0489	24.5872	677.4366	33334.457	28.5863	7.8584	20.956

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 147.50-108.50				1	1	1			
L2 108.50-72.25				1	1	1			
L3 72.25-35.75				1	1	1			
L4 35.75-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
Safety Line 3/8	B	No	Surface Ar (CaAa)	147.50 - 2.00	1	1	0.000 0.010	0.3750		0.22
107										
(6) LDF7-50A(1-5/8) + (1) MLE HYBRID 9POWER/18FIBER RL 2 (1-5/8)+ (2) HCS 6X12 6AWG (1-3/8)	A	No	Surface Ar (CaAa)	107.00 - 0.00	9	9	0.000 0.360	1.9800		0.82

Aero Channel MP303	A	No	Surface Af (CaAa)	49.00 - 39.00	1	1	0.000 0.000	4.0625	11.2600	9.90
Aero Channel MP303	B	No	Surface Af (CaAa)	49.00 - 39.00	1	1	0.000 0.000	4.0625	11.2600	9.90
Aero Channel MP303	C	No	Surface Af (CaAa)	49.00 - 39.00	1	1	0.000 0.000	4.0625	11.2600	9.90

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
**										
**										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C _{AA} A _A ft ² /ft	Weight plf
147									
HB058-M12-XXXX(5/8)	A	No	No	Inside Pole	147.00 - 0.00	1	No Ice	0.00	0.24
							1/2" Ice	0.00	0.24
							1" Ice	0.00	0.24
							2" Ice	0.00	0.24
WR-VG86ST-BRD(3/4)	A	No	No	Inside Pole	147.00 - 0.00	1	No Ice	0.00	0.58
							1/2" Ice	0.00	0.58
							1" Ice	0.00	0.58
							2" Ice	0.00	0.58
HB114-1-08U4-M5J(1-1/4)	A	No	No	Inside Pole	147.00 - 0.00	3	No Ice	0.00	1.08
							1/2" Ice	0.00	1.08
							1" Ice	0.00	1.08
							2" Ice	0.00	1.08
132									
LDF7-50A(1-5/8)	B	No	No	Inside Pole	132.00 - 0.00	6	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" Ice	0.00	0.82
							2" Ice	0.00	0.82
HB158-1-08U8-S8J18(1-5/8)	B	No	No	inside Pole	132.00 - 0.00	2	No Ice	0.00	1.30
							1/2" Ice	0.00	1.30
							1" Ice	0.00	1.30
							2" Ice	0.00	1.30
117									
LDF7-50A(1-5/8)	C	No	No	Inside Pole	117.00 - 0.00	9	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" Ice	0.00	0.82
							2" Ice	0.00	0.82
FB-L98B-002-75000(3/8)	C	No	No	Inside Pole	117.00 - 0.00	1	No Ice	0.00	0.06
							1/2" Ice	0.00	0.06
							1" Ice	0.00	0.06
							2" Ice	0.00	0.06
WR-VG86ST-BRD(3/4)	C	No	No	Inside Pole	117.00 - 0.00	2	No Ice	0.00	0.58
							1/2" Ice	0.00	0.58
							1" Ice	0.00	0.58
							2" Ice	0.00	0.58
2" innerduct conduit	C	No	No	Inside Pole	117.00 - 0.00	1	No Ice	0.00	0.20
							1/2" Ice	0.00	0.20
							1" Ice	0.00	0.20
							2" Ice	0.00	0.20
49									
LDF4-50A(1/2)	B	No	No	Inside Pole	49.00 - 0.00	1	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
**									
**									

Feed Line/Linear Appurtenances Section Areas

Tower Section n	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L1	147.50-108.50	A	0.000	0.000	0.000	0.000	0.16
		B	0.000	0.000	1.462	0.000	0.19
		C	0.000	0.000	0.000	0.000	0.07
L2	108.50-72.25	A	0.000	0.000	61.925	0.000	0.40
		B	0.000	0.000	1.359	0.000	0.28
		C	0.000	0.000	0.000	0.000	0.32
L3	72.25-35.75	A	0.000	0.000	71.814	0.000	0.52
		B	0.000	0.000	8.140	0.000	0.38
		C	0.000	0.000	6.771	0.000	0.42
L4	35.75-0.00	A	0.000	0.000	63.706	0.000	0.41
		B	0.000	0.000	1.266	0.000	0.28
		C	0.000	0.000	0.000	0.000	0.31

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section n	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L1	147.50-108.50	A	1.946	0.000	0.000	0.000	0.000	0.16
		B		0.000	0.000	16.639	0.000	0.40
		C		0.000	0.000	0.000	0.000	0.07
L2	108.50-72.25	A	1.879	0.000	0.000	94.309	0.000	1.65
		B		0.000	0.000	15.466	0.000	0.48
		C		0.000	0.000	0.000	0.000	0.32
L3	72.25-35.75	A	1.785	0.000	0.000	107.557	0.000	1.92
		B		0.000	0.000	24.192	0.000	0.71
		C		0.000	0.000	9.104	0.000	0.55
L4	35.75-0.00	A	1.595	0.000	0.000	95.591	0.000	1.58
		B		0.000	0.000	13.318	0.000	0.44
		C		0.000	0.000	0.000	0.000	0.31

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
L1	147.50-108.50	0.2625	-0.1479	1.4164	-0.7981
L2	108.50-72.25	-4.7452	-6.2478	-2.9415	-5.2110
L3	72.25-35.75	-4.5956	-6.0430	-3.0488	-5.2946
L4	35.75-0.00	-5.5086	-7.2270	-3.6580	-6.1605

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

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L1	1	Safety Line 3/8	108.50 - 147.50	1.0000	1.0000
L1	17	(6) LDF7-50A(1-5/8) + (1) MLE HYBRID 9POWER/18FIBER RL 2 (1-5/8)+ (2) HCS 6X12 6AWG (1-3/8)	108.50 - 107.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L2	1	Safety Line 3/8	72.25 - 108.50	1.0000	1.0000
L2	17	(6) LDF7-50A(1-5/8) + (1) MLE HYBRID 9POWER/18FIBER RL 2 (1-5/8)+ (2) HCS 6X12 6AWG (1-3/8)	72.25 - 107.00	1.0000	1.0000
L2	27	Aero Channel MP303	72.25 - 49.00	1.0000	1.0000
L2	28	Aero Channel MP303	72.25 - 49.00	1.0000	1.0000
L2	29	Aero Channel MP303	72.25 - 49.00	1.0000	1.0000
L3	1	Safety Line 3/8	35.75 - 72.25	1.0000	1.0000
L3	17	(6) LDF7-50A(1-5/8) + (1) MLE HYBRID 9POWER/18FIBER RL 2 (1-5/8)+ (2) HCS 6X12 6AWG (1-3/8)	35.75 - 72.25	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K	
Top Hat 14" Diameter x 3'-6" Tall	C	None		0.0000	149.00	No Ice	2.09	2.09	0.20
						1/2" Ice	3.17	3.17	0.24
						Ice	3.45	3.45	0.28
						1" Ice	4.03	4.03	0.37
						2" Ice			
147 Platform Mount [LP 1201-1]	C	None		0.0000	147.00	No Ice	23.10	23.10	2.10
						1/2" Ice	26.80	26.80	2.50
						Ice	30.50	30.50	2.90
						1" Ice	37.90	37.90	3.70
						2" Ice			
(3) 6' x 2" Mount Pipe	A	From Face	4.00 0.00 0.00	0.0000	147.00	No Ice	1.43	1.43	0.02
						1/2" Ice	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
(3) 6' x 2" Mount Pipe	B	From Face	4.00 0.00 0.00	0.0000	147.00	No Ice	1.43	1.43	0.02
						1/2" Ice	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
(3) 6' x 2" Mount Pipe	C	From Face	4.00 0.00 0.00	0.0000	147.00	No Ice	1.43	1.43	0.02
						1/2" Ice	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
APXVSP18-C-A20 w/ Mount Pipe	A	From Face	4.00 -2.50 0.00	0.0000	147.00	No Ice	8.26	6.95	0.08
						1/2" Ice	8.82	8.13	0.15
						Ice	9.35	9.02	0.23
						1" Ice	10.42	10.84	0.41
						2" Ice			
APXVSP18-C-A20 w/	B	From Face	4.00	0.0000	147.00	No Ice	8.26	6.95	0.08

Description	Face or Leg	Offset Type	Offsets:			Azimuth Adjustment	Placement	C _A A _A Front	C _A A _A Side	Weight
			Horz	Lateral	Vert					
Mount Pipe			-2.50				1/2"	8.82	8.13	0.15
			0.00				Ice	9.35	9.02	0.23
							1" Ice	10.42	10.84	0.41
							2" Ice			
APXVSP18-C-A20 w/ Mount Pipe	C	From Face	4.00	0.0000	147.00	No Ice	8.26	6.95	0.08	
			-2.50			1/2"	8.82	8.13	0.15	
			0.00			Ice	9.35	9.02	0.23	
						1" Ice	10.42	10.84	0.41	
APXVTM14-ALU-I20 w/ Mount Pipe	A	From Face	4.00	0.0000	147.00	No Ice	6.58	4.96	0.08	
			2.50			1/2"	7.03	5.75	0.13	
			0.00			Ice	7.47	6.47	0.19	
						1" Ice	8.38	7.94	0.34	
APXVTM14-ALU-I20 w/ Mount Pipe	B	From Face	4.00	0.0000	147.00	No Ice	6.58	4.96	0.08	
			2.50			1/2"	7.03	5.75	0.13	
			0.00			Ice	7.47	6.47	0.19	
						1" Ice	8.38	7.94	0.34	
APXVTM14-ALU-I20 w/ Mount Pipe	C	From Face	4.00	0.0000	147.00	No Ice	6.58	4.96	0.08	
			2.50			1/2"	7.03	5.75	0.13	
			0.00			Ice	7.47	6.47	0.19	
						1" Ice	8.38	7.94	0.34	
TD-RRH8x20-25	A	From Face	4.00	0.0000	147.00	No Ice	4.05	1.53	0.07	
			0.00			1/2"	4.30	1.71	0.10	
			0.00			Ice	4.56	1.90	0.13	
						1" Ice	5.10	2.30	0.20	
TD-RRH8x20-25	B	From Face	4.00	0.0000	147.00	No Ice	4.05	1.53	0.07	
			0.00			1/2"	4.30	1.71	0.10	
			0.00			Ice	4.56	1.90	0.13	
						1" Ice	5.10	2.30	0.20	
TD-RRH8x20-25	C	From Face	4.00	0.0000	147.00	No Ice	4.05	1.53	0.07	
			0.00			1/2"	4.30	1.71	0.10	
			0.00			Ice	4.56	1.90	0.13	
						1" Ice	5.10	2.30	0.20	
145 Side Arm Mount [SO 102-3]	C	None		0.0000	145.00	No Ice	3.00	3.00	0.08	
					1/2"	3.48	3.48	0.11		
					Ice	3.96	3.96	0.14		
					1" Ice	4.92	4.92	0.20		
4.5" x 4' Pipe (4STD)	A	From Leg	1.00	0.0000	145.00	No Ice	1.16	1.16	0.04	
			0.00			1/2"	1.58	1.58	0.06	
			0.00			Ice	1.84	1.84	0.07	
						1" Ice	2.40	2.40	0.11	
4.5" x 4' Pipe (4STD)	B	From Leg	1.00	0.0000	145.00	No Ice	1.16	1.16	0.04	
			0.00			1/2"	1.58	1.58	0.06	
			0.00			Ice	1.84	1.84	0.07	
						1" Ice	2.40	2.40	0.11	
4.5" x 4' Pipe (4STD)	C	From Leg	1.00	0.0000	145.00	No Ice	1.16	1.16	0.04	
			0.00			1/2"	1.58	1.58	0.06	
			0.00			Ice	1.84	1.84	0.07	
						1" Ice	2.40	2.40	0.11	
PCS 1900MHz 4x45W-65MHz	A	From Leg	1.00	0.0000	145.00	No Ice	2.32	2.24	0.06	
			0.00			1/2"	2.53	2.44	0.08	
			1.00			Ice	2.74	2.65	0.11	
						1" Ice	3.19	3.09	0.17	
							2" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		CAAA Front ft²	CAAA Side ft²	Weight K
PCS 1900MHz 4x45W-65MHz	B	From Leg	1.00	0.0000	145.00	No Ice	2.32	2.24	0.06
			0.00			1/2"	2.53	2.44	0.08
			1.00			Ice	2.74	2.65	0.11
						1" Ice	3.19	3.09	0.17
						2" Ice			
PCS 1900MHz 4x45W-65MHz	C	From Leg	1.00	0.0000	145.00	No Ice	2.32	2.24	0.06
			0.00			1/2"	2.53	2.44	0.08
			1.00			Ice	2.74	2.65	0.11
						1" Ice	3.19	3.09	0.17
						2" Ice			
800MHz 2X50W RRH W/FILTER	A	From Leg	1.00	0.0000	145.00	No Ice	2.06	1.93	0.06
			0.00			1/2"	2.24	2.11	0.09
			-1.00			Ice	2.43	2.29	0.11
						1" Ice	2.83	2.68	0.17
						2" Ice			
800MHz 2X50W RRH W/FILTER	B	From Leg	1.00	0.0000	145.00	No Ice	2.06	1.93	0.06
			0.00			1/2"	2.24	2.11	0.09
			-1.00			Ice	2.43	2.29	0.11
						1" Ice	2.83	2.68	0.17
						2" Ice			
800MHz 2X50W RRH W/FILTER	C	From Leg	1.00	0.0000	145.00	No Ice	2.06	1.93	0.06
			0.00			1/2"	2.24	2.11	0.09
			-1.00			Ice	2.43	2.29	0.11
						1" Ice	2.83	2.68	0.17
						2" Ice			
132 Platform Mount [LP 1201-1]	C	None		0.0000	132.00	No Ice	23.10	23.10	2.10
						1/2"	26.80	26.80	2.50
						Ice	30.50	30.50	2.90
						1" Ice	37.90	37.90	3.70
						2" Ice			
Miscellaneous [NA 510-1]	C	None		0.0000	132.00	No Ice	6.00	6.00	0.26
						1/2"	8.50	8.50	0.34
						Ice	11.00	11.00	0.42
						1" Ice	16.00	16.00	0.59
						2" Ice			
3.0SCH40 x 13ft Pipe with (4) sitePro SCX43-K Crossover Plate	A	From Face	4.00	0.0000	132.00	No Ice	4.55	0.10	0.11
			0.00			1/2"	5.44	0.14	0.15
			0.00			Ice	6.34	0.19	0.20
						1" Ice	8.15	0.32	0.34
						2" Ice			
3.0SCH40 x 13ft Pipe with (4) sitePro SCX43-K Crossover Plate	B	From Face	4.00	0.0000	132.00	No Ice	4.55	0.10	0.11
			0.00			1/2"	5.44	0.14	0.15
			0.00			Ice	6.34	0.19	0.20
						1" Ice	8.15	0.32	0.34
						2" Ice			
3.0SCH40 x 13ft Pipe with (4) sitePro SCX43-K Crossover Plate	C	From Face	4.00	0.0000	132.00	No Ice	4.55	0.10	0.11
			0.00			1/2"	5.44	0.14	0.15
			0.00			Ice	6.34	0.19	0.20
						1" Ice	8.15	0.32	0.34
						2" Ice			
BSAMNT-SBS-2-2 Side By Side Bracket	A	From Face	4.00	0.0000	132.00	No Ice	0.00	0.00	0.07
			-7.00			1/2"	0.00	0.00	0.09
			0.00			Ice	0.00	0.00	0.11
						1" Ice	0.00	0.00	0.15
						2" Ice			
BSAMNT-SBS-2-2 Side By Side Bracket	B	From Face	4.00	0.0000	132.00	No Ice	0.00	0.00	0.07
			-7.00			1/2"	0.00	0.00	0.09
			0.00			Ice	0.00	0.00	0.11
						1" Ice	0.00	0.00	0.15
						2" Ice			
BSAMNT-SBS-2-2 Side By Side Bracket	C	From Face	4.00	0.0000	132.00	No Ice	0.00	0.00	0.07
			-7.00			1/2"	0.00	0.00	0.09
			0.00			Ice	0.00	0.00	0.11
						1" Ice	0.00	0.00	0.15
						2" Ice			

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz	Vert						
			Lateral	ft	°	ft	ft ²	ft ²	K	
2.0SCH40 x 3ft Pipe with (2) SitePro Puck Clamp Plate	A	From Face	4.00	0.00	0.0000	132.00	2" Ice			
							No Ice	0.71	0.00	0.01
							1/2"	1.02	0.01	0.02
							Ice	1.33	0.02	0.02
							1" Ice	1.96	0.03	0.04
2.0SCH40 x 3ft Pipe with (2) SitePro Puck Clamp Plate	B	From Face	4.00	0.00	0.0000	132.00	2" Ice			
							No Ice	0.71	0.00	0.01
							1/2"	1.02	0.01	0.02
							Ice	1.33	0.02	0.02
							1" Ice	1.96	0.03	0.04
2.0SCH40 x 3ft Pipe with (2) SitePro Puck Clamp Plate	C	From Face	4.00	0.00	0.0000	132.00	2" Ice			
							No Ice	0.71	0.00	0.01
							1/2"	1.02	0.01	0.02
							Ice	1.33	0.02	0.02
							1" Ice	1.96	0.03	0.04
Site Pro SCX43-K Crossover Plate	A	From Face	4.00	0.00	0.0000	132.00	2" Ice			
							No Ice	0.00	0.00	0.00
							1/2"	0.00	0.00	0.00
							Ice	0.00	0.00	0.00
							1" Ice	0.00	0.00	0.00
Site Pro SCX43-K Crossover Plate	B	From Face	4.00	0.00	0.0000	132.00	2" Ice			
							No Ice	0.00	0.00	0.00
							1/2"	0.00	0.00	0.00
							Ice	0.00	0.00	0.00
							1" Ice	0.00	0.00	0.00
Site Pro SCX43-K Crossover Plate	C	From Face	4.00	0.00	0.0000	132.00	2" Ice			
							No Ice	0.00	0.00	0.00
							1/2"	0.00	0.00	0.00
							Ice	0.00	0.00	0.00
							1" Ice	0.00	0.00	0.00
SBNHH-1D65B w/ Mount Pipe	A	From Face	4.00	-7.00	0.0000	132.00	2" Ice			
							No Ice	8.44	7.10	0.07
							1/2"	9.00	8.30	0.14
							Ice	9.53	9.21	0.21
							1" Ice	10.62	11.06	0.40
SBNHH-1D65B w/ Mount Pipe	B	From Face	4.00	-7.00	0.0000	132.00	2" Ice			
							No Ice	8.44	7.10	0.07
							1/2"	9.00	8.30	0.14
							Ice	9.53	9.21	0.21
							1" Ice	10.62	11.06	0.40
SBNHH-1D65B w/ Mount Pipe	C	From Face	4.00	-7.00	0.0000	132.00	2" Ice			
							No Ice	8.44	7.10	0.07
							1/2"	9.00	8.30	0.14
							Ice	9.53	9.21	0.21
							1" Ice	10.62	11.06	0.40
SBNHH-1D65B w/ Mount Pipe	A	From Face	4.00	-7.00	0.0000	132.00	2" Ice			
							No Ice	8.44	7.10	0.07
							1/2"	9.00	8.30	0.14
							Ice	9.53	9.21	0.21
							1" Ice	10.62	11.06	0.40
SBNHH-1D65B w/ Mount Pipe	B	From Face	4.00	-7.00	0.0000	132.00	2" Ice			
							No Ice	8.44	7.10	0.07
							1/2"	9.00	8.30	0.14
							Ice	9.53	9.21	0.21
							1" Ice	10.62	11.06	0.40
SBNHH-1D65B w/ Mount Pipe	C	From Face	4.00	-7.00	0.0000	132.00	2" Ice			
							No Ice	8.44	7.10	0.07
							1/2"	9.00	8.30	0.14
							Ice	9.53	9.21	0.21
							1" Ice	10.62	11.06	0.40
BXA-171063-12BF w/ Mount Pipe	A	From Face	4.00	0.00	0.0000	132.00	2" Ice			
							No Ice	4.97	5.23	0.04
							1/2"	5.52	6.39	0.09
							Ice	6.04	7.26	0.14
							1" Ice	7.09	9.05	0.27

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _A A _A Front	C _A A _A Side	Weight
			Horz	Lateral					
			ft	ft	°	ft	ft ²	ft ²	K
BXA-171063-12BF w/ Mount Pipe	B	From Face	4.00	0.0000	132.00	2" Ice			
			0.00			No Ice	4.97	5.23	0.04
			5.00			1/2"	5.52	6.39	0.09
						Ice	6.04	7.26	0.14
BXA-171063-12BF w/ Mount Pipe	C	From Face	4.00	0.0000	132.00	1" Ice	7.09	9.05	0.27
			0.00			2" Ice			
			5.00			No Ice	4.97	5.23	0.04
						1/2"	5.52	6.39	0.09
BXA-70063-4CF-EDIN-X w/ Mount Pipe	A	From Face	4.00	0.0000	132.00	Ice	6.04	7.26	0.14
			7.00			1" Ice	7.09	9.05	0.27
			5.00			2" Ice			
						No Ice	4.95	3.69	0.03
BXA-70063-4CF-EDIN-X w/ Mount Pipe	B	From Face	4.00	0.0000	132.00	1/2"	5.32	4.29	0.07
			7.00			Ice	5.71	4.91	0.12
			5.00			1" Ice	6.51	6.18	0.23
						2" Ice			
BXA-70063-4CF-EDIN-X w/ Mount Pipe	C	From Face	4.00	0.0000	132.00	No Ice	4.95	3.69	0.03
			7.00			1/2"	5.32	4.29	0.07
			5.00			Ice	5.71	4.91	0.12
						1" Ice	6.51	6.18	0.23
RFV01U-D1A	A	From Face	4.00	0.0000	132.00	2" Ice			
			0.00			No Ice	1.88	1.25	0.08
			5.00			1/2"	2.05	1.39	0.10
						Ice	2.22	1.54	0.12
RFV01U-D1A	B	From Face	4.00	0.0000	132.00	1" Ice	2.60	1.86	0.18
			0.00			2" Ice			
			5.00			No Ice	1.88	1.25	0.08
						1/2"	2.05	1.39	0.10
RFV01U-D1A	A	From Face	4.00	0.0000	132.00	Ice	2.22	1.54	0.12
			0.00			1" Ice	2.60	1.86	0.18
			5.00			2" Ice			
						No Ice	1.88	1.25	0.08
RFV01U-D2A	A	From Face	4.00	0.0000	132.00	1/2"	2.05	1.14	0.09
			0.00			Ice	2.22	1.28	0.11
			5.00			1" Ice	2.60	1.59	0.15
						2" Ice			
RFV01U-D2A	B	From Face	4.00	0.0000	132.00	No Ice	1.88	1.01	0.07
			0.00			1/2"	2.05	1.14	0.09
			5.00			Ice	2.22	1.28	0.11
						1" Ice	2.60	1.59	0.15
RFV01U-D2A	C	From Face	4.00	0.0000	132.00	2" Ice			
			0.00			No Ice	1.88	1.01	0.07
			5.00			1/2"	2.05	1.14	0.09
						Ice	2.22	1.28	0.11
DB-T1-6Z-8AB-0Z	A	From Face	4.00	0.0000	132.00	1" Ice	2.60	1.59	0.15
			0.00			2" Ice			
			5.00			No Ice	4.80	2.00	0.04
						1/2"	5.07	2.19	0.08
DB-T1-6Z-8AB-0Z	B	From Face	4.00	0.0000	132.00	Ice	5.35	2.39	0.12
			0.00			1" Ice	5.93	2.81	0.21
			5.00			2" Ice			
						No Ice	4.80	2.00	0.04
DB-T1-6Z-8AB-0Z	B	From Face	4.00	0.0000	132.00	1/2"	5.07	2.19	0.08
			0.00			Ice	5.35	2.39	0.12
			5.00			1" Ice	5.93	2.81	0.21
						2" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
						2" Ice			
117 Platform Mount [LP 1201-1]	C	None		0.0000	117.00	No Ice	23.10	23.10	2.10
						1/2"	26.80	26.80	2.50
						Ice	30.50	30.50	2.90
						1" Ice	37.90	37.90	3.70
						2" Ice			
(2) 6' x 2" Mount Pipe	A	From Face	4.00 0.00 0.00	0.0000	117.00	No Ice	1.43	1.43	0.02
						1/2"	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
(2) 6' x 2" Mount Pipe	B	From Face	4.00 0.00 0.00	0.0000	117.00	No Ice	1.43	1.43	0.02
						1/2"	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
(2) 6' x 2" Mount Pipe	C	From Face	4.00 0.00 0.00	0.0000	117.00	No Ice	1.43	1.43	0.02
						1/2"	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
7770.00 w/ Mount Pipe	A	From Face	4.00 -2.00 2.00	0.0000	117.00	No Ice	5.75	4.25	0.06
						1/2"	6.18	5.01	0.10
						Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
7770.00 w/ Mount Pipe	B	From Face	4.00 -2.00 2.00	0.0000	117.00	No Ice	5.75	4.25	0.06
						1/2"	6.18	5.01	0.10
						Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
7770.00 w/ Mount Pipe	C	From Face	4.00 -2.00 2.00	0.0000	117.00	No Ice	5.75	4.25	0.06
						1/2"	6.18	5.01	0.10
						Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
HPA-65R-BUU-H8 w/ Mount Pipe	A	From Face	4.00 7.00 2.00	0.0000	117.00	No Ice	13.21	9.58	0.10
						1/2"	13.90	11.05	0.20
						Ice	14.59	12.50	0.30
						1" Ice	15.91	14.75	0.55
						2" Ice			
SBNHH-1D65A w/ Mount Pipe	B	From Face	4.00 7.00 2.00	0.0000	117.00	No Ice	6.19	5.25	0.05
						1/2"	6.64	6.04	0.11
						Ice	7.07	6.74	0.17
						1" Ice	7.97	8.18	0.31
						2" Ice			
HPA-65R-BUU-H6 w/ Mount Pipe	C	From Face	4.00 7.00 2.00	0.0000	117.00	No Ice	9.90	8.11	0.08
						1/2"	10.47	9.30	0.16
						Ice	11.01	10.21	0.25
						1" Ice	12.11	12.01	0.46
						2" Ice			
RRUS 32 B2	A	From Face	4.00 0.00 2.00	0.0000	117.00	No Ice	2.73	1.67	0.05
						1/2"	2.95	1.86	0.07
						Ice	3.18	2.05	0.10
						1" Ice	3.66	2.46	0.16
						2" Ice			
RRUS 32 B2	B	From Face	4.00 0.00 2.00	0.0000	117.00	No Ice	2.73	1.67	0.05
						1/2"	2.95	1.86	0.07
						Ice	3.18	2.05	0.10
						1" Ice	3.66	2.46	0.16
						2" Ice			
RRUS 32 B2	C	From Face	4.00 0.00 2.00	0.0000	117.00	No Ice	2.73	1.67	0.05
						1/2"	2.95	1.86	0.07
						Ice	3.18	2.05	0.10

Description	Face or Leg	Offset Type	Offsets:			Azimuth Adjustment	Placement	C _A A _A Front	C _A A _A Side	Weight
			Horz	Lateral	Vert					
			ft	ft	ft	°	ft	ft ²	ft ²	K
(2) 860 10025	A	From Face	4.00 0.00 2.00	0.0000	117.00		1" Ice	3.66	2.46	0.16
							2" Ice	0.14	0.12	0.00
							No Ice	0.20	0.17	0.00
							1/2" Ice	0.26	0.23	0.01
(2) 860 10025	C	From Face	4.00 0.00 2.00	0.0000	117.00		1" Ice	0.41	0.38	0.01
							2" Ice	0.14	0.12	0.00
							No Ice	0.20	0.17	0.00
							1/2" Ice	0.26	0.23	0.01
(2) LGP17201	B	From Face	4.00 0.00 0.00	0.0000	117.00		1" Ice	0.41	0.38	0.01
							2" Ice	1.67	0.47	0.03
							No Ice	1.83	0.57	0.04
							1/2" Ice	2.00	0.68	0.06
115 Side Arm Mount [SO 102-3]	C	None		0.0000	115.00		1" Ice	2.36	0.91	0.09
							2" Ice	3.00	3.00	0.08
							No Ice	3.48	3.48	0.11
							1/2" Ice	3.96	3.96	0.14
5' x 2" Pipe Mount	A	From Face	1.00 0.00 0.00	0.0000	115.00		1" Ice	4.92	4.92	0.20
							2" Ice	1.00	1.00	0.03
							No Ice	1.39	1.39	0.04
							1/2" Ice	1.70	1.70	0.05
5' x 2" Pipe Mount	B	From Face	1.00 0.00 0.00	0.0000	115.00		1" Ice	2.35	2.35	0.08
							2" Ice	1.00	1.00	0.03
							No Ice	1.39	1.39	0.04
							1/2" Ice	1.70	1.70	0.05
5' x 2" Pipe Mount	C	From Face	1.00 0.00 0.00	0.0000	115.00		1" Ice	2.35	2.35	0.08
							2" Ice	1.00	1.00	0.03
							No Ice	1.39	1.39	0.04
							1/2" Ice	1.70	1.70	0.05
TME-RRU-11	A	From Face	1.50 0.00 4.00	0.0000	115.00		1" Ice	2.34	1.90	0.12
							2" Ice	1.64	1.26	0.04
							No Ice	1.80	1.41	0.06
							1/2" Ice	1.97	1.57	0.08
TME-RRU-11	B	From Face	1.50 0.00 4.00	0.0000	115.00		1" Ice	2.34	1.90	0.12
							2" Ice	1.64	1.26	0.04
							No Ice	1.80	1.41	0.06
							1/2" Ice	1.97	1.57	0.08
TME-RRU-11	C	From Face	1.50 0.00 4.00	0.0000	115.00		1" Ice	2.34	1.90	0.12
							2" Ice	1.64	1.26	0.04
							No Ice	1.80	1.41	0.06
							1/2" Ice	1.97	1.57	0.08
TME-DC6-48-60-18-8F	A	From Face	1.50 0.00 4.00	0.0000	115.00		1" Ice	2.04	2.04	0.11
							2" Ice	0.92	0.92	0.02
							No Ice	1.46	1.46	0.04
							1/2" Ice	1.64	1.64	0.06
107 T-Arm Mount [TA 701-3] w/o Short Walkway	A	None		0.0000	107.00		1" Ice	43.07	43.07	1.81
							2" Ice	19.39	19.39	0.98
							No Ice	25.31	25.31	1.19
							1/2" Ice	31.23	31.23	1.40
Side Arm Mount [SO 102-	C	None		0.0000	107.00		No Ice	3.00	3.00	0.08

Description	Face or Leg	Offset Type	Offsets:			Azimuth Adjustment	Placement	C _A A _A Front	C _A A _A Side	Weight
			Horz	Lateral	Vert					
3]							1/2"	3.48	3.48	0.11
							Ice	3.96	3.96	0.14
							1" Ice	4.92	4.92	0.20
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	A	From Leg	3.00		0.0000	107.00	2" Ice			
			-6.00				No Ice	6.33	5.64	0.11
			0.00				1/2"	6.78	6.43	0.17
							Ice	7.21	7.13	0.23
							1" Ice	8.12	8.59	0.38
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	B	From Leg	3.00		0.0000	107.00	2" Ice			
			0.00				No Ice	6.33	5.64	0.11
			0.00				1/2"	6.78	6.43	0.17
							Ice	7.21	7.13	0.23
							1" Ice	8.12	8.59	0.38
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	C	From Leg	3.00		0.0000	107.00	2" Ice			
			-6.00				No Ice	6.33	5.64	0.11
			0.00				1/2"	6.78	6.43	0.17
							Ice	7.21	7.13	0.23
							1" Ice	8.12	8.59	0.38
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	3.00		0.0000	107.00	2" Ice			
			0.00				No Ice	20.48	11.02	0.16
			0.00				1/2"	21.23	12.55	0.30
							Ice	21.99	14.10	0.44
							1" Ice	23.44	16.45	0.78
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	3.00		0.0000	107.00	2" Ice			
			-6.00				No Ice	20.48	11.02	0.16
			0.00				1/2"	21.23	12.55	0.30
							Ice	21.99	14.10	0.44
							1" Ice	23.44	16.45	0.78
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	3.00		0.0000	107.00	2" Ice			
			0.00				No Ice	20.48	11.02	0.16
			0.00				1/2"	21.23	12.55	0.30
							Ice	21.99	14.10	0.44
							1" Ice	23.44	16.45	0.78
AIR 32 B2A B66AA w/ Mount Pipe	A	From Leg	3.00		0.0000	107.00	2" Ice			
			6.00				No Ice	7.09	6.37	0.16
			0.00				1/2"	7.56	7.23	0.23
							Ice	8.02	7.97	0.30
							1" Ice	8.97	9.51	0.46
AIR 32 B2A B66AA w/ Mount Pipe	B	From Leg	3.00		0.0000	107.00	2" Ice			
			6.00				No Ice	7.09	6.37	0.16
			0.00				1/2"	7.56	7.23	0.23
							Ice	8.02	7.97	0.30
							1" Ice	8.97	9.51	0.46
AIR 32 B2A B66AA w/ Mount Pipe	C	From Leg	3.00		0.0000	107.00	2" Ice			
			6.00				No Ice	7.09	6.37	0.16
			0.00				1/2"	7.56	7.23	0.23
							Ice	8.02	7.97	0.30
							1" Ice	8.97	9.51	0.46
KRY 112 144/1	A	From Leg	3.00		0.0000	107.00	2" Ice			
			0.00				No Ice	0.35	0.17	0.01
			0.00				1/2"	0.43	0.23	0.01
							Ice	0.51	0.30	0.02
							1" Ice	0.70	0.46	0.03
KRY 112 144/1	B	From Leg	3.00		0.0000	107.00	2" Ice			
			0.00				No Ice	0.35	0.17	0.01
			0.00				1/2"	0.43	0.23	0.01
							Ice	0.51	0.30	0.02
							1" Ice	0.70	0.46	0.03
KRY 112 144/1	C	From Leg	3.00		0.0000	107.00	2" Ice			
			0.00				No Ice	0.35	0.17	0.01
			0.00				1/2"	0.43	0.23	0.01
							Ice	0.51	0.30	0.02
							1" Ice	0.70	0.46	0.03
RADIO 4449 B12/B71	A	From Leg	3.00		0.0000	107.00	2" Ice			
							No Ice	1.65	1.30	0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K	
			0.00		1/2"	1.81	1.44	0.09	
			0.00		Ice	1.98	1.60	0.11	
					1" Ice	2.34	1.92	0.16	
					2" Ice				
RADIO 4449 B12/B71	B	From Leg	3.00	0.0000	107.00	No Ice	1.65	1.30	0.08
			0.00			1/2"	1.81	1.44	0.09
			0.00			Ice	1.98	1.60	0.11
						1" Ice	2.34	1.92	0.16
						2" Ice			
RADIO 4449 B12/B71	C	From Leg	3.00	0.0000	107.00	No Ice	1.65	1.30	0.08
			0.00			1/2"	1.81	1.44	0.09
			0.00			Ice	1.98	1.60	0.11
						1" Ice	2.34	1.92	0.16
						2" Ice			
49 Side Arm Mount [SO 901-1]	A	From Face	0.00	0.0000	49.00	No Ice	0.50	0.88	0.11
			0.00			1/2"	0.68	1.13	0.11
			0.00			Ice	0.86	1.38	0.11
						1" Ice	1.22	1.88	0.12
						2" Ice			
58532A	A	From Face	2.00	0.0000	49.00	No Ice	0.19	0.19	0.00
			0.00			1/2"	0.25	0.25	0.00
			1.00			Ice	0.31	0.31	0.01
						1" Ice	0.47	0.47	0.02
						2" Ice			
**									
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Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice

Comb. No.	Description
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	147.5 - 108.5	Pole	Max Tension	48	0.00	-0.00	-0.00
			Max. Compression	26	-36.14	1.60	5.23
			Max. Mx	20	-14.92	330.65	1.86
			Max. My	2	-14.95	0.74	328.16
			Max. Vy	20	-15.44	330.65	1.86
			Max. Vx	2	-15.25	0.74	328.16
			Max. Torque	7			2.03
L2	108.5 - 72.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-53.31	2.26	9.47
			Max. Mx	20	-23.20	1038.43	2.95
			Max. My	2	-23.22	1.56	1029.63
			Max. Vy	20	-21.60	1038.43	2.95
			Max. Vx	2	-21.41	1.56	1029.63
			Max. Torque	9			4.11
L3	72.25 - 35.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-66.24	4.77	11.74
			Max. Mx	20	-31.44	1850.00	3.93
			Max. My	2	-31.45	2.69	1834.36
			Max. Vy	20	-23.68	1850.00	3.93
			Max. Vx	2	-23.50	2.69	1834.36
			Max. Torque	9			4.11
L4	35.75 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-83.18	7.42	13.78
			Max. Mx	20	-43.35	2862.39	4.67
			Max. My	2	-43.35	3.66	2839.41
			Max. Vy	20	-25.59	2862.39	4.67
			Max. Vx	2	-25.42	3.66	2839.41
			Max. Torque	9			4.10

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	38	83.18	3.39	5.86
	Max. H _x	20	43.37	25.55	0.01
	Max. H _z	2	43.37	0.01	25.39
	Max. M _x	2	2839.41	0.01	25.39
	Max. M _z	8	2858.51	-25.55	-0.01
	Max. Torsion	9	4.10	-25.55	-0.01
	Min. Vert	25	32.53	12.78	21.99
	Min. H _x	8	43.37	-25.55	-0.01
	Min. H _z	14	43.37	-0.01	-25.39
	Min. M _x	14	-2833.36	-0.01	-25.39
	Min. M _z	20	-2862.39	25.55	0.01
	Min. Torsion	21	-4.09	25.55	0.01

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Dead Only	36.14	-0.00	-0.00	-2.43	1.57	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	43.37	-0.01	-25.39	-2839.41	3.66	0.46
0.9 Dead+1.0 Wind 0 deg - No Ice	32.53	-0.01	-25.39	-2789.61	3.11	0.45
1.2 Dead+1.0 Wind 30 deg - No Ice	43.37	12.77	-21.98	-2458.53	-1426.87	-1.65
0.9 Dead+1.0 Wind 30 deg - No Ice	32.53	12.77	-21.98	-2415.32	-1402.69	-1.66
1.2 Dead+1.0 Wind 60 deg - No Ice	43.37	22.13	-12.69	-1419.67	-2474.49	-3.31
0.9 Dead+1.0 Wind 60 deg - No Ice	32.53	22.13	-12.69	-1394.41	-2432.20	-3.33
1.2 Dead+1.0 Wind 90 deg - No Ice	43.37	25.55	0.01	-1.27	-2858.51	-4.08
0.9 Dead+1.0 Wind 90 deg - No Ice	32.53	25.55	0.01	-0.50	-2809.59	-4.10
1.2 Dead+1.0 Wind 120 deg - No Ice	43.37	22.14	12.70	1416.64	-2476.13	-3.75
0.9 Dead+1.0 Wind 120 deg - No Ice	32.53	22.14	12.70	1392.92	-2433.82	-3.77
1.2 Dead+1.0 Wind 150 deg - No Ice	43.37	12.78	21.99	2454.20	-1429.77	-2.42
0.9 Dead+1.0 Wind 150 deg - No Ice	32.53	12.78	21.99	2412.57	-1405.54	-2.43
1.2 Dead+1.0 Wind 180 deg - No Ice	43.37	0.01	25.39	2833.36	0.26	-0.45
0.9 Dead+1.0 Wind 180 deg - No Ice	32.53	0.01	25.39	2785.20	-0.22	-0.45
1.2 Dead+1.0 Wind 210 deg - No Ice	43.37	-12.77	21.98	2452.50	1430.73	1.64
0.9 Dead+1.0 Wind 210 deg - No Ice	32.53	-12.77	21.98	2410.91	1405.54	1.65
1.2 Dead+1.0 Wind 240 deg - No Ice	43.37	-22.13	12.69	1413.69	2478.33	3.29
0.9 Dead+1.0 Wind 240 deg - No Ice	32.53	-22.13	12.69	1390.04	2435.03	3.31
1.2 Dead+1.0 Wind 270 deg - No Ice	43.37	-25.55	-0.01	-4.67	2862.39	4.07
0.9 Dead+1.0 Wind 270 deg - No Ice	32.53	-25.55	-0.01	-3.84	2812.45	4.09
1.2 Dead+1.0 Wind 300 deg - No Ice	43.37	-22.14	-12.70	-1422.59	2480.06	3.76

Load Combination	Vertical	Shear _x	Shear _z	Overturning Moment, M _x	Overturning Moment, M _z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
0.9 Dead+1.0 Wind 300 deg - No Ice	32.53	-22.14	-12.70	-1397.27	2436.72	3.78
1.2 Dead+1.0 Wind 330 deg - No Ice	43.37	-12.78	-21.99	-2460.20	1433.72	2.44
0.9 Dead+1.0 Wind 330 deg - No Ice	32.53	-12.78	-21.99	-2416.96	1408.45	2.45
1.2 Dead+1.0 Ice+1.0 Temp	83.18	-0.00	-0.00	-13.78	7.42	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	83.18	0.00	-6.77	-825.92	7.26	0.04
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	83.18	3.40	-5.86	-717.23	-401.10	-0.34
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	83.18	5.89	-3.38	-420.06	-699.98	-0.63
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	83.18	6.79	-0.00	-14.06	-809.30	-0.75
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	83.18	5.88	3.38	392.00	-699.78	-0.67
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	83.18	3.39	5.86	689.31	-400.75	-0.41
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	83.18	-0.00	6.77	798.21	7.66	-0.04
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	83.18	-3.40	5.86	689.51	416.02	0.34
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	83.18	-5.89	3.38	392.35	714.90	0.63
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	83.18	-6.79	0.00	-13.65	824.22	0.75
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	83.18	-5.88	-3.38	-419.71	714.69	0.67
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	83.18	-3.39	-5.86	-717.02	415.67	0.41
Dead+Wind 0 deg - Service	36.14	-0.00	-5.51	-612.13	1.98	0.10
Dead+Wind 30 deg - Service	36.14	2.77	-4.77	-530.28	-305.49	-0.36
Dead+Wind 60 deg - Service	36.14	4.80	-2.75	-307.00	-530.66	-0.73
Dead+Wind 90 deg - Service	36.14	5.55	0.00	-2.14	-613.20	-0.90
Dead+Wind 120 deg - Service	36.14	4.80	2.76	302.62	-531.02	-0.83
Dead+Wind 150 deg - Service	36.14	2.77	4.77	525.63	-306.12	-0.54
Dead+Wind 180 deg - Service	36.14	0.00	5.51	607.11	1.25	-0.10
Dead+Wind 210 deg - Service	36.14	-2.77	4.77	525.26	308.71	0.36
Dead+Wind 240 deg - Service	36.14	-4.80	2.75	301.99	533.88	0.73
Dead+Wind 270 deg - Service	36.14	-5.55	-0.00	-2.87	616.42	0.90
Dead+Wind 300 deg - Service	36.14	-4.80	-2.76	-307.64	534.25	0.83
Dead+Wind 330 deg - Service	36.14	-2.77	-4.77	-530.64	309.34	0.54

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-36.14	0.00	0.00	36.14	0.00	0.000%
2	-0.01	-43.37	-25.39	0.01	43.37	25.39	0.000%
3	-0.01	-32.53	-25.39	0.01	32.53	25.39	0.000%
4	12.77	-43.37	-21.98	-12.77	43.37	21.98	0.000%
5	12.77	-32.53	-21.98	-12.77	32.53	21.98	0.000%
6	22.13	-43.37	-12.69	-22.13	43.37	12.69	0.000%
7	22.13	-32.53	-12.69	-22.13	32.53	12.69	0.000%
8	25.55	-43.37	0.01	-25.55	43.37	-0.01	0.000%
9	25.55	-32.53	0.01	-25.55	32.53	-0.01	0.000%

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
10	22.14	-43.37	12.70	-22.14	43.37	-12.70	0.000%
11	22.14	-32.53	12.70	-22.14	32.53	-12.70	0.000%
12	12.78	-43.37	21.99	-12.78	43.37	-21.99	0.000%
13	12.78	-32.53	21.99	-12.78	32.53	-21.99	0.000%
14	0.01	-43.37	25.39	-0.01	43.37	-25.39	0.000%
15	0.01	-32.53	25.39	-0.01	32.53	-25.39	0.000%
16	-12.77	-43.37	21.98	12.77	43.37	-21.98	0.000%
17	-12.77	-32.53	21.98	12.77	32.53	-21.98	0.000%
18	-22.13	-43.37	12.69	22.13	43.37	-12.69	0.000%
19	-22.13	-32.53	12.69	22.13	32.53	-12.69	0.000%
20	-25.55	-43.37	-0.01	25.55	43.37	0.01	0.000%
21	-25.55	-32.53	-0.01	25.55	32.53	0.01	0.000%
22	-22.14	-43.37	-12.70	22.14	43.37	12.70	0.000%
23	-22.14	-32.53	-12.70	22.14	32.53	12.70	0.000%
24	-12.78	-43.37	-21.99	12.78	43.37	21.99	0.000%
25	-12.78	-32.53	-21.99	12.78	32.53	21.99	0.000%
26	0.00	-83.18	0.00	0.00	83.18	0.00	0.000%
27	0.00	-83.18	-6.76	-0.00	83.18	6.77	0.000%
28	3.40	-83.18	-5.86	-3.40	83.18	5.86	0.000%
29	5.89	-83.18	-3.38	-5.89	83.18	3.38	0.000%
30	6.79	-83.18	-0.00	-6.79	83.18	0.00	0.000%
31	5.88	-83.18	3.38	-5.88	83.18	-3.38	0.000%
32	3.39	-83.18	5.86	-3.39	83.18	-5.86	0.000%
33	-0.00	-83.18	6.76	0.00	83.18	-6.77	0.000%
34	-3.40	-83.18	5.86	3.40	83.18	-5.86	0.000%
35	-5.89	-83.18	3.38	5.89	83.18	-3.38	0.000%
36	-6.79	-83.18	0.00	6.79	83.18	-0.00	0.000%
37	-5.88	-83.18	-3.38	5.88	83.18	3.38	0.000%
38	-3.39	-83.18	-5.86	3.39	83.18	5.86	0.000%
39	-0.00	-36.14	-5.51	0.00	36.14	5.51	0.000%
40	2.77	-36.14	-4.77	-2.77	36.14	4.77	0.000%
41	4.80	-36.14	-2.75	-4.80	36.14	2.75	0.000%
42	5.55	-36.14	0.00	-5.55	36.14	-0.00	0.000%
43	4.80	-36.14	2.76	-4.80	36.14	-2.76	0.000%
44	2.77	-36.14	4.77	-2.77	36.14	-4.77	0.000%
45	0.00	-36.14	5.51	-0.00	36.14	-5.51	0.000%
46	-2.77	-36.14	4.77	2.77	36.14	-4.77	0.000%
47	-4.80	-36.14	2.75	4.80	36.14	-2.75	0.000%
48	-5.55	-36.14	-0.00	5.55	36.14	0.00	0.000%
49	-4.80	-36.14	-2.76	4.80	36.14	2.76	0.000%
50	-2.77	-36.14	-4.77	2.77	36.14	4.77	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	5	0.00000001	0.00007612
3	Yes	5	0.00000001	0.00003442
4	Yes	6	0.00000001	0.00057917
5	Yes	6	0.00000001	0.00018776
6	Yes	6	0.00000001	0.00062753
7	Yes	6	0.00000001	0.00020569
8	Yes	5	0.00000001	0.00080532
9	Yes	5	0.00000001	0.00038922
10	Yes	6	0.00000001	0.00056306
11	Yes	6	0.00000001	0.00018193
12	Yes	6	0.00000001	0.00061429
13	Yes	6	0.00000001	0.00020127
14	Yes	5	0.00000001	0.00009397
15	Yes	5	0.00000001	0.00004356
16	Yes	6	0.00000001	0.00060740
17	Yes	6	0.00000001	0.00019869
18	Yes	6	0.00000001	0.00056524
19	Yes	6	0.00000001	0.00018273

20	Yes	5	0.00000001	0.00083071
21	Yes	5	0.00000001	0.00040080
22	Yes	6	0.00000001	0.00063457
23	Yes	6	0.00000001	0.00020789
24	Yes	6	0.00000001	0.00057710
25	Yes	6	0.00000001	0.00018659
26	Yes	4	0.00000001	0.00023392
27	Yes	6	0.00000001	0.00031913
28	Yes	6	0.00000001	0.00049970
29	Yes	6	0.00000001	0.00051950
30	Yes	6	0.00000001	0.00031640
31	Yes	6	0.00000001	0.00046418
32	Yes	6	0.00000001	0.00047845
33	Yes	6	0.00000001	0.00030321
34	Yes	6	0.00000001	0.00048972
35	Yes	6	0.00000001	0.00047379
36	Yes	6	0.00000001	0.00032163
37	Yes	6	0.00000001	0.00053068
38	Yes	6	0.00000001	0.00051172
39	Yes	4	0.00000001	0.00018729
40	Yes	5	0.00000001	0.00008110
41	Yes	5	0.00000001	0.00010591
42	Yes	4	0.00000001	0.00055683
43	Yes	5	0.00000001	0.00007541
44	Yes	5	0.00000001	0.00009713
45	Yes	4	0.00000001	0.00018438
46	Yes	5	0.00000001	0.00009404
47	Yes	5	0.00000001	0.00007605
48	Yes	4	0.00000001	0.00056330
49	Yes	5	0.00000001	0.00010991
50	Yes	5	0.00000001	0.00008111

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	147.5 - 108.5	25.548	49	1.4574	0.0066
L2	112.25 - 72.25	15.143	49	1.3071	0.0060
L3	76.75 - 35.75	6.856	49	0.8702	0.0027
L4	41 - 0	1.907	49	0.4265	0.0010

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
149.00	Top Hat 14" Diameter x 3'-6" Tall	49	25.548	1.4574	0.0067	44142
147.00	Platform Mount [LP 1201-1]	49	25.394	1.4563	0.0067	44142
145.00	Side Arm Mount [SO 102-3]	49	24.782	1.4519	0.0067	44142
132.00	Platform Mount [LP 1201-1]	49	20.832	1.4176	0.0066	14239
117.00	Platform Mount [LP 1201-1]	49	16.459	1.3435	0.0062	7235
115.00	Side Arm Mount [SO 102-3]	49	15.900	1.3291	0.0061	6799
107.00	T-Arm Mount [TA 701-3] w/o Short Walkway	49	13.739	1.2579	0.0056	5868
49.00	Side Arm Mount [SO 901-1]	49	2.695	0.5185	0.0012	4125

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	147.5 - 108.5	118.615	20	6.7713	0.0303
L2	112.25 - 72.25	70.362	20	6.0779	0.0271
L3	76.75 - 35.75	31.866	20	4.0478	0.0121
L4	41 - 0	8.860	20	1.9824	0.0045

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
149.00	Top Hat 14" Diameter x 3'-6" Tall	20	118.615	6.7713	0.0304	9795
147.00	Platform Mount [LP 1201-1]	20	117.905	6.7664	0.0304	9795
145.00	Side Arm Mount [SO 102-3]	20	115.064	6.7465	0.0305	9795
132.00	Platform Mount [LP 1201-1]	20	96.750	6.5891	0.0303	3157
117.00	Platform Mount [LP 1201-1]	20	76.467	6.2465	0.0285	1601
115.00	Side Arm Mount [SO 102-3]	20	73.874	6.1798	0.0280	1503
107.00	T-Arm Mount [TA 701-3] w/o Short Walkway	20	63.844	5.8499	0.0255	1293
49.00	Side Arm Mount [SO 901-1]	20	12.522	2.4109	0.0055	890

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
L1	147.5 - 108.5 (1)	TP29.41x22x0.25	39.00	0.00	0.0	22.573 1	-14.92	1218.95	0.012
L2	108.5 - 72.25 (2)	TP35.798x28.1975x0.25	40.00	0.00	0.0	27.528 9	-23.20	1610.44	0.014
L3	72.25 - 35.75 (3)	TP42.23x34.4429x0.3125	41.00	0.00	0.0	40.587 9	-31.44	2374.39	0.013
L4	35.75 - 0 (4)	TP48.4x40.6079x0.375	41.00	0.00	0.0	57.161 8	-43.35	3343.96	0.013

Pole Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{ux} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M _{uy} kip-ft	φM _{uy} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
L1	147.5 - 108.5 (1)	TP29.41x22x0.25	330.78	872.02	0.379	0.00	872.02	0.000
L2	108.5 - 72.25 (2)	TP35.798x28.1975x0.25	1038.44	1300.01	0.799	0.00	1300.01	0.000
L3	72.25 - 35.75 (3)	TP42.23x34.4429x0.3125	1850.01	2309.59	0.801	0.00	2309.59	0.000
L4	35.75 - 0 (4)	TP48.4x40.6079x0.375	2862.39	3847.06	0.744	0.00	3847.06	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio V_u ϕV_n	Actual T_u kip-ft	ϕT_n kip-ft	Ratio T_u ϕT_n
L1	147.5 - 108.5 (1)	TP29.41x22x0.25	15.41	365.68	0.042	1.23	911.02	0.001
L2	108.5 - 72.25 (2)	TP35.798x28.1975x0.25	21.60	483.13	0.045	4.06	1467.87	0.003
L3	72.25 - 35.75 (3)	TP42.23x34.4429x0.3125	23.68	712.32	0.033	4.08	2552.66	0.002
L4	35.75 - 0 (4)	TP48.4x40.6079x0.375	25.59	1003.19	0.026	4.07	4219.20	0.001

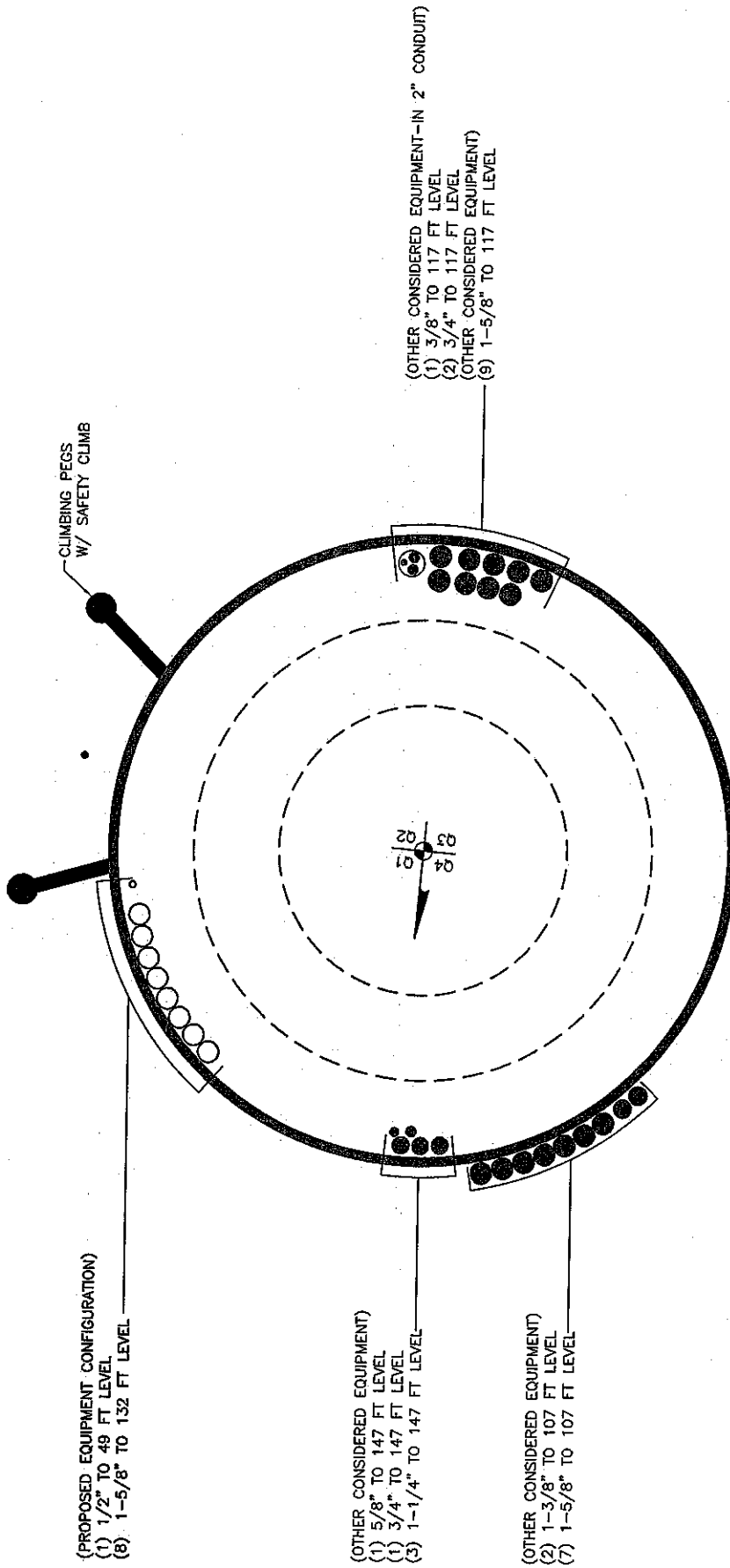
Pole Interaction Design Data

Section No.	Elevation ft	Ratio P_u ϕP_n	Ratio M_{ux} ϕM_{nx}	Ratio M_{uy} ϕM_{ny}	Ratio V_u ϕV_n	Ratio T_u ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	147.5 - 108.5 (1)	0.012	0.379	0.000	0.042	0.001	0.393	1.050	4.8.2
L2	108.5 - 72.25 (2)	0.014	0.799	0.000	0.045	0.003	0.815	1.050	4.8.2
L3	72.25 - 35.75 (3)	0.013	0.801	0.000	0.033	0.002	0.815	1.050	4.8.2
L4	35.75 - 0 (4)	0.013	0.744	0.000	0.026	0.001	0.758	1.050	4.8.2

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	147.5 - 108.5	Pole	TP29.41x22x0.25	1	-14.92	1279.90	37.5	Pass
L2	108.5 - 72.25	Pole	TP35.798x28.1975x0.25	2	-23.20	1690.96	77.7	Pass
L3	72.25 - 35.75	Pole	TP42.23x34.4429x0.3125	3	-31.44	2493.11	77.7	Pass
L4	35.75 - 0	Pole	TP48.4x40.6079x0.375	4	-43.35	3511.16	72.2	Pass
Summary								
Pole (L3)							77.7	Pass
RATING =							77.7	Pass

APPENDIX B
BASE LEVEL DRAWING



(PROPOSED EQUIPMENT CONFIGURATION)
(1) 1/2" TO 49 FT LEVEL
(8) 1-5/8" TO 132 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)
(1) 5/8" TO 147 FT LEVEL
(1) 3/4" TO 147 FT LEVEL
(3) 1-1/4" TO 147 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)
(2) 1-3/8" TO 107 FT LEVEL
(7) 1-5/8" TO 107 FT LEVEL

(OTHER CONSIDERED EQUIPMENT-IN 2" CONDUIT)
(1) 5/8" TO 117 FT LEVEL
(2) 3/4" TO 117 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(9) 1-5/8" TO 117 FT LEVEL

BUSINESS UNIT: 876348 TOWER ID: C_BASELEVEL

APPENDIX C
ADDITIONAL CALCULATIONS

Monopole Base Plate Connection

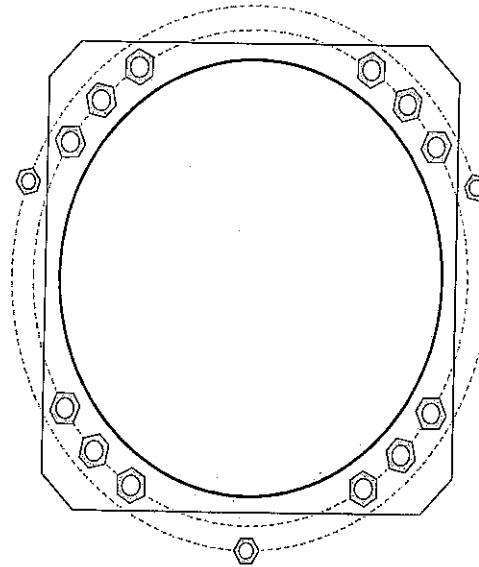


Site Info	
BU #	876348
Site Name	Enfield
Order #	471268 Rev. 6

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (In)	0

Applied Loads	
Moment (kip-ft)	2862.39
Axial Force (kips)	43.35
Shear Force (kips)	25.59

*TIA-222-H Section 15.5 Applied



Connection Properties		Analysis Results	
Anchor Rod Data		Anchor Rod Summary <i>(units of kips, kip-in)</i>	
GROUP 1: (12) 2-1/4" ϕ bolts (A615-75 N; $F_y=75$ ksi, $F_u=100$ ksi) on 55" BC		GROUP 1:	
GROUP 2: (3) 1-3/4" ϕ bolts (A193 Gr. B7 N; $F_y=105$ ksi, $F_u=125$ ksi) on 60.4" BC		$Pu_c = 185.04$	$\phi Pn_c = 243.75$ Stress Rating
Base Plate Data		$Vu = 2.13$	$\phi Vn = 73.13$ 72.4%
52" OD x 3" Plate (A572-50; $F_y=50$ ksi, $F_u=65$ ksi)		$Mu = n/a$	$\phi Mn = n/a$ Pass
Stiffener Data		GROUP 2:	
N/A		$Pu_c = 115.13$	$\phi Pn_c = 199.5$ Stress Rating
Pole Data		$Vu = 0$	$\phi Vn = 59.85$ 55.0%
48.4" x 0.375" 18-sided pole (A607-65; $F_y=65$ ksi, $F_u=80$ ksi)		$Mu = n/a$	$\phi Mn = n/a$ Pass
		Base Plate Summary	
		Max Stress (ksi):	27.3 (Flexural)
		Allowable Stress (ksi):	45
		Stress Rating:	57.8% Pass

Anchor Rod Bracket Calculations

Analyze the anchor rod bracket and all components to resist the demand load of the additional anchors.

Bracket Demand Load:

$$\phi P_n := 115.13 \text{ kip}$$

Tube Design (Square HSS)

Member Size: HSS 4" x 4" x 1/2"

Member Properties
(AISC 15th Ed., Table 1-12):

Outside Diameter: $OD_{HSS} := 4 \text{ in}$

Area: $A_{HSS} := 6.95 \text{ in}^2$

Thickness: $t_{HSS} := 0.5 \text{ in}$

Yield Strength: $F_{y,HSS} := 46 \text{ ksi}$

Length: $L_{HSS} := 12 \text{ in}$

Moment of Inertia: $I_{HSS} := 11.9 \text{ in}^4$

Radius of Gyration: $r_{HSS} := 1.41 \text{ in}$

Inside Dimension: $ID_{HSS} := OD_{HSS} - 2 \cdot t_{HSS} = 3 \text{ in}$

$$A_{e,HSS} := 0.75 \cdot A_{HSS} = 5.21 \text{ in}^2$$

$$F_{u,HSS} := 58 \text{ ksi}$$

Bearing Check
(AISC 15th Ed., Equation J7-1):

$$\phi_b := 0.75$$

$$\phi P_n = \phi_b \cdot R_n = \phi_b \cdot 1.8 \cdot F_{y,HSS} \cdot A_{pb}$$

$$A_{pb} := \frac{\phi P_n}{\phi_b \cdot 1.8 \cdot F_{y,HSS}} = 1.85 \text{ in}^2$$

$$\text{Check}_{\text{bear}} := \begin{cases} \text{"OK"} & \text{if } A_{HSS} \geq A_{pb} \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

$$\text{Check}_{\text{bear}} := \text{"OK"}$$

Compression Check
 (AISC 15th Ed., Eqs. E3-1 to E3-4):

$$\phi_c := 0.9$$

$$K_{sw} := 1$$

$$\phi P_{n_comp} = \phi_c \cdot F_{cr} \cdot A_g$$

$$L_c := K \cdot L_{HSS} = 12 \cdot \text{in}$$

$$F_e := \frac{\pi^2 \cdot 29000 \text{ksi}}{\left(\frac{L_c}{r_{HSS}}\right)^2} = 3951.6 \cdot \text{ksi}$$

$$\frac{L_c}{r_{HSS}} = 8.51 < 4.71 \cdot \sqrt{\frac{29000 \cdot \text{ksi}}{F_{y_HSS}}} = 118.26$$

$$\therefore F_{cr} := 0.658 \cdot \frac{F_{y_HSS}}{F_e} \cdot F_{y_HSS} = 45.78 \cdot \text{ksi}$$

(AISC 15th Ed., Equation J4-6):

$$\phi P_{n_comp} := \begin{cases} \phi_c \cdot F_{y_HSS} \cdot A_{HSS} & \text{if } \frac{L_c}{r_{HSS}} \leq 25 \\ \phi_c \cdot F_{cr} \cdot A_{HSS} & \text{otherwise} \end{cases}$$

$$\phi P_{n_comp} = 287.73 \cdot \text{kip}$$

$$\text{Check}_{comp} := \begin{cases} \text{"OK"} & \text{if } \phi P_{n_comp} \geq \phi P_n \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

Check_{comp} = OK

Gusset Plate Design

Gusset Plate width:	$w_{plate} = 4 \text{in}$
Gusset Plate thickness:	$t_{plate} = 1.25 \text{in}$
	$L_{plate1} = 24 \text{in}$
	$L_{plate2} = 12 \text{in}$
Gusset Plate Strength:	$F_{y_plate} = 65 \text{ksi}$
	$F_{u_plate} = 80 \text{ksi}$
Pole thickness:	$t_{pole} = 0.375 \text{in}$

Shear Check

(AISC 15th Ed., Eqs. J4-3 and J4-4):

$$A_g := t_{plate} \cdot L_{plate2} = 15 \cdot \text{in}^2$$

$$A_{nv} := A_g = 15 \cdot \text{in}^2$$

Shear Yielding

$$\phi_v := 1$$

$$\phi V_{plate} := \phi_v \cdot 0.6 \cdot A_g \cdot F_{yplate} = 585 \cdot \text{kip}$$

$$\text{Check}_{shear} := \begin{cases} \text{"OK"} & \text{if } \phi V_{plate} \geq \phi P_n \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

Check_shear = OK

Shear Rupture

$$\phi_{nv} := 0.75$$

$$\phi V_{plate} := \phi_{nv} \cdot 0.6 \cdot A_{nv} \cdot F_{uplate} = 540 \cdot \text{kip}$$

$$\text{Check}_{shear} := \begin{cases} \text{"OK"} & \text{if } \phi V_{plate} \geq \phi P_n \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

Check_shear = OK

**Gusset Plate to Pole and Base Plate
 Weld Design (Horizontal and Vertical
 Weld):**

(AISC 15th Ed., Part 8)

Gusset plate thickness:

$$t_{plate} = 1.25 \cdot \text{in}$$

Pole Grade:

$$F_{y\ pole} = 65 \cdot \text{ksi}$$

$$F_{u\ pole} = 80 \cdot \text{ksi}$$

Base Plate Grade:

$$F_{y\ base} = 50 \cdot \text{ksi}$$

$$F_{u\ base} = 65 \cdot \text{ksi}$$

Gusset Plate Grade:

$$F_{y\ plate} = 65 \cdot \text{ksi} \quad F_{u\ plate} = 80 \cdot \text{ksi}$$

Height of vertical weld from base plate:

$$H_w := L_{plate1} = 24 \cdot \text{in}$$

$$\text{Notch} = 0.75 \cdot \text{in}$$

Gap between Base Plate and HSS:

$$\text{Gap} = 0 \cdot \text{in}$$

Vertical fillet weld size to pole:
 (in sixteenths of an inch)

$$D_{vpole} = 6$$

$$\text{weldsize}_{pole} := \frac{D_{vpole}}{16} = \frac{3}{8}$$

Weld Material Grade:

$$F_{EXX} = 80 \cdot \text{ksi}$$

Check := "OK" if Capacity < 100%
"INSUFFICIENT" otherwise
Check = OK

Gusset Plate to HSS Weld Design
(AISC 15th Ed., Table 8-4)

Electrode Strength:

$F_{EXX} = 80 \text{ ksi}$

Weld Size (in sixteenths
of an inch):

$D_1 = 10$

$weldsize_1 := \frac{D_1}{16} = \frac{5}{8}$

Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$ecc_2 := OD_{HSS} - t_{HSS} - \frac{D_{new}}{2} = 2.63\text{-in}$

Load not in plane with weld
group:

$k := 0$

$a := \frac{ecc_2}{L_{plate2}} = 0.22$

$$C_1 := 1.00$$

$$\text{Coeff}_1 := 3.43$$

$$\phi_w := 0.75$$

$$D_{\min 1} := \text{ceil} \left(\frac{\phi P_n \cdot \text{in}}{\phi_w \cdot \text{Coeff}_1 \cdot C_1 \cdot L_{\text{plate2}} \cdot \text{kip}} \right) = 4$$

$$\text{minweldsize} := \frac{D_{\min 1}}{16} = \frac{1}{4}$$

$$\text{Check}_{\text{weld}} := \begin{cases} \text{"OK"} & \text{if } D_1 \geq D_{\min 1} \wedge D_1 \geq \text{Min}_{\text{weldsize}} \wedge D_1 \leq \text{Max}_{\text{weldsize}} \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

$$\text{Check}_{\text{weld}} = \text{"N/G"}$$

$$\phi R_{n\text{weld1}} := \phi_w \cdot \text{Coeff}_1 \cdot \text{ksi} \cdot \text{in} \cdot C_1 \cdot D_1 \cdot L_{\text{plate2}} = 308.7 \cdot \text{kip}$$

$$\text{Check}_{\text{weld1}} := \begin{cases} \text{"OK"} & \text{if } \phi R_{n\text{weld1}} \geq \phi P_n \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

$$\text{Check}_{\text{weld1}} = \text{"OK"}$$

**Gusset Plate to Pole Punching
 Shear Check
 (max per unit length):
 (AISC 15th Ed., Section J4.2)**

Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$$\phi_{sy} := 1.0$$

$$\phi_{sr} := 0.75$$

$$ecc_1 := w_{\text{plate}} + OD_{\text{HSS}} - t_{\text{HSS}} - \frac{D_{\text{new}}}{2} = 6.63 \cdot \text{in}$$

$$M_1 := \phi P_n \cdot ecc_1 = 762.74 \cdot \text{kip} \cdot \text{in}$$

$$S_1 := \frac{t_{\text{plate}} \cdot L_{\text{plate1}}^2}{6} = 120 \cdot \text{in}^3$$

$$f_{ww} := \frac{M_1}{S_1} \cdot t_{\text{plate}} \cdot \text{lin} = 7.95 \cdot \text{kip}$$

$$\phi F_{sy} := \phi_{sy} \cdot 0.6 \cdot F_y \cdot \text{pole} \cdot 2 \cdot t_{\text{pole}} \cdot \text{lin} = 29.25 \cdot \text{kip}$$

$$\phi F_{sr} := \phi_{sr} \cdot 0.6 \cdot F_u \cdot \text{pole} \cdot 2 \cdot t_{\text{pole}} \cdot \text{lin} = 27 \cdot \text{kip}$$

AISC 15th Ed., Equation J4-3:

AISC 15th Ed., Equation J4-4:

$$\phi F_{www} := \min(\phi F_{sy}, \phi F_{sr}) = 27 \cdot \text{kip}$$

$$\text{Check}_{PS1} := \begin{cases} \text{"OK"} & \text{if } \phi F_v \geq f_v \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

Check_{PS1} = OK

Gusset Plate to HSS Punching
Shear Check
(max per unit length):
(AISC 15th Ed., Section J4.2)

Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$$ecc_2 := OD_{HSS} - t_{HSS} - \frac{D_{new}}{2} = 2.63 \cdot \text{in}$$

$$M_2 := \phi P_n \cdot ecc_2 = 302.22 \cdot \text{kip} \cdot \text{in}$$

$$S_2 := \frac{t_{plate} \cdot L_{plate}^2}{6} = 30 \cdot \text{in}^3$$

$$f_{ww} := \frac{M_2}{S_2} \cdot t_{plate} \cdot 1 \text{in} = 12.59 \cdot \text{kip}$$

AISC 15th Ed., Equation J4-3:

$$\phi F_{www} := \phi_{sy} \cdot 0.6 \cdot F_{y_{pole}} \cdot 2 \cdot t_{pole} \cdot 1 \text{in} = 29.25 \cdot \text{kip}$$

AISC 15th Ed., Equation J4-4:

$$\phi F_{www} := \phi_{sr} \cdot 0.6 \cdot F_{u_{pole}} \cdot 2 \cdot t_{pole} \cdot 1 \text{in} = 27 \cdot \text{kip}$$

$$\phi F_{www} := \min(\phi F_{sy}, \phi F_{sr}) = 27 \cdot \text{kip}$$

$$\text{Check}_{PS2} := \begin{cases} \text{"OK"} & \text{if } \phi F_v \geq f_v \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

Check_{PS2} = OK

Embedment Depth Calculations

Projected Embedment Depth:	$L_{em} = 7 \text{ ft}$	
Yield Strength of Rebar:	$f_y = 150 \text{ ksi}$	
Concrete Strength:	$f'_c = 3000 \text{ psi}$	
Transverse Reinforcement Index:	$k_{tr} = 0$	Can be taken as 0 for design per ACI 318-14
Epoxy Factor:	$\psi_e = 1$	
Rebar Size Factor:	$\psi_s = 1$	
Casting Position Factor:	$\psi_t = 1$	
Concrete Weight Factor:	$\lambda = 1 \sqrt{\text{psi}}$	
Pier Diameter:	$D_{pier} = 7 \text{ ft}$	
Cover	$c_c = 3 \text{ in}$	
Rebar Size:	$d_s = 11$	
Tie Size:	$Tie = 5$	
Number of Vertical Rebar:	$n = 24$	

$$d_b := \text{vlookup}(d_s, \text{Rebar}, 2) \cdot \text{in} = 1.41 \cdot \text{in}$$

Development Length (ACI 318-14 Chapter 25):

$$BC_{rebar} := D_{pier} - 2 \cdot c_c - \frac{Tie \cdot \text{in}}{4} - d_b = 75.34 \cdot \text{in}$$

$$S_{rebar} := \frac{\pi \cdot BC_{rebar}}{n} = 9.862 \cdot \text{in}$$

$$c_b := \min\left(c_c + \frac{Tie \cdot \text{in}}{8} + \frac{d_b}{2}, S_{rebar} \cdot 0.5\right) = 4.33 \cdot \text{in}$$

ACI 318-14, Equation 25.4.2.3a:

$$l_d := \left[\frac{3}{40} \frac{f_y}{\lambda \sqrt{f'_c}} \frac{\psi_t \psi_e \psi_s}{\min\left[\left(\frac{c_b + k_{tr}}{d_b}\right), 2.5\right]} \right] \cdot d_b = 115.84 \cdot \text{in}$$

Calculate Max Distance Between Rebar and New Anchor Rods:

$$A := \frac{1}{2} \cdot S_{\text{rebar}} = 4.931 \cdot \text{in}$$

$$B := \frac{BC_{\text{rebar}}}{2} - \frac{BC_{\text{new}}}{2} = 7.47 \cdot \text{in}$$

$$G := \sqrt{A^2 + B^2} = 8.951 \cdot \text{in}$$

$$l_d := l_d + \frac{G}{1.5} + 3 \text{in} = 10.4 \text{ft}$$

Epoxy Development Length:

Bond Strength:

Epoxy :=

$$\phi_{\text{bond}} := 0.65$$

$$S_b := \begin{cases} S_{bh} & \text{if Epoxy} = 0 \\ S_{bA} & \text{otherwise} \end{cases}$$

$$S_b = 1450 \text{psi}$$

$$L_{be} := \frac{\phi P_n}{\pi \cdot D_{\text{new}} \cdot S_b \cdot \phi_{\text{bond}}} = 22.22 \cdot \text{in}$$

Required Embedment Length:

$$L_{\text{min}} := \max(L_{be} + 12 \text{in}, l_d + 0.25 \cdot L_{be}) = 10.86 \text{ft}$$

$$L_{\text{min}} := \text{ceil}\left(\frac{L_{\text{min}}}{0.5 \text{ft}}\right) \cdot 0.5 \text{ft}$$

$$L_{\text{min}} = 11 \text{ft}$$

$$\text{Check} := \begin{cases} \text{"OK"} & \text{if } L_{\text{min}} \leq L_{\text{em}} \\ \text{"N/G"} & \text{otherwise} \end{cases}$$



Anchor Rod Pullout Test:

$$\phi_p := 0.75$$

Is this a CA DSA site?

Yes
 No

$$\text{Pullout} := \begin{cases} \frac{\phi_p \cdot F_{u_{rod}} \cdot A_{new}}{1.6} & \text{if } CA = 0 \\ (0.8 \cdot F_{y_{rod}} \cdot A_{new}) & \text{otherwise} \end{cases} = 111 \cdot \text{kip}$$

Pier and Pad Foundation



BU #: 876348
 Site Name: Enfield
 App. Number: 471268 Rev. 6

TIA-222 Revision: H
 Tower Type: Monopole

Top & Bot. Pad Rein. Different?:
 Block Foundation?:

Superstructure Analysis Reactions		
Compression, P_{comp} :	43	kips
Base Shear, $V_{u,comp}$:	26	kips
Moment, M_u :	2862	ft-kips
Tower Height, H:	147.5	ft
BP Dist. Above Fdn, $b_{p,dis}$:	5	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	450.60	26.00	5.5%	Pass
Bearing Pressure (ksf)	5.49	2.15	39.1%	Pass
Overtuming (kip*ft)	5738.81	3145.83	54.8%	Pass
Pier Flexure (Comp.) (kip*ft)	5860.81	3057.00	49.7%	Pass
Pier Compression (kip)	23390.64	98.14	0.4%	Pass
Pad Flexure (kip*ft)	3536.13	1070.18	28.8%	Pass
Pad Shear - 1-way (kips)	725.36	175.91	23.1%	Pass
Pad Shear - 2-way (Comp) (ksi)	0.164	0.032	18.5%	Pass
Flexural 2-way (Comp) (kip*ft)	4752.32	1834.20	36.8%	Pass

Pier Properties		
Pier Shape:	Square	
Pier Diameter, d_{pier} :	7	ft
Ext. Above Grade, E:	0.5	ft
Pier Rebar Size, S_c :	11	
Pier Rebar Quantity, m_c :	24	
Pier Tie/Spiral Size, S_t :	5	
Pier Tie/Spiral Quantity, m_t :	12	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier} :	3	in

Pad Properties		
Depth, D:	10	ft
Pad Width, W:	23.5	ft
Pad Thickness, T:	3	ft
Pad Rebar Size (Bottom), S_p :	9	
Pad Rebar Quantity (Bottom), m_p :	26	
Pad Clear Cover, cc_{pad} :	3	in

Material Properties		
Rebar Grade, F_y :	60000	psi
Concrete Compressive Strength, F'_c :	3000	psi
Dry Concrete Density, δ_c :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	120	pcf
Ultimate Net Bearing, Q_{net} :	6.500	ksf
Cohesion, C_u :	2.000	ksf
Friction Angle, ϕ :	0	degrees
SPT Blow Count, N_{blows} :		
Base Friction, μ :	0.3	
Neglected Depth, N:	3.33	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, gw:	4	ft

<--Toggle between Gross and Net

*Rating per TIA-222-H Section 15.5

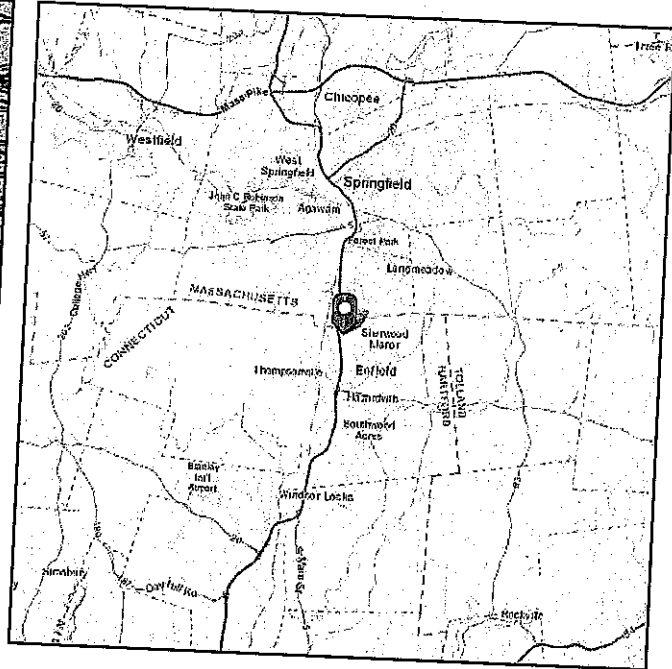
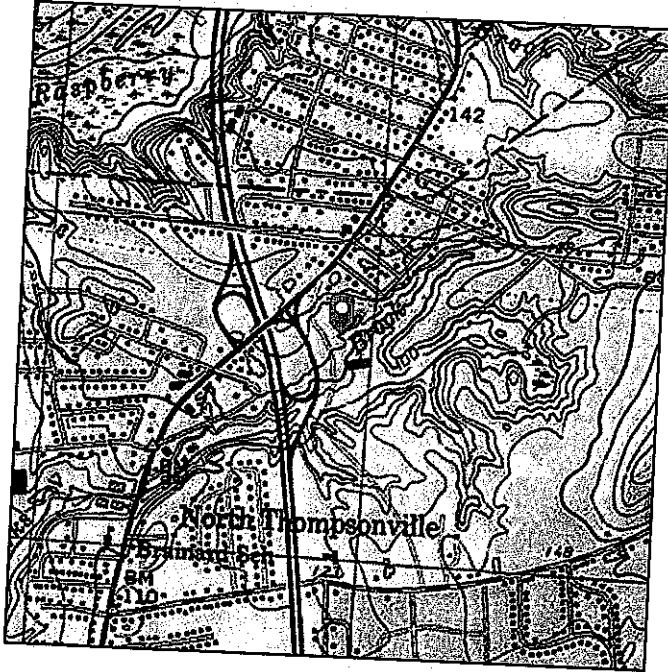
Soil Rating*:	54.8%
Structural Rating*:	49.7%

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 110.38 ft (NAVD 88)
Latitude: 42.020808
Longitude: -72.585164



Wind

Results:

Wind Speed:	120 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	92 Vmph
100-year MRI	99 Vmph

Data Source:

ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1-CC-4, incorporating errata of March 12, 2014

Date Accessed:

Tue Jan 29 2019

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 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

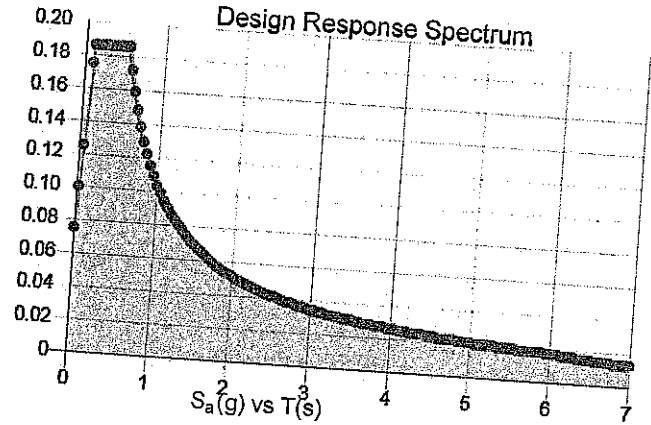
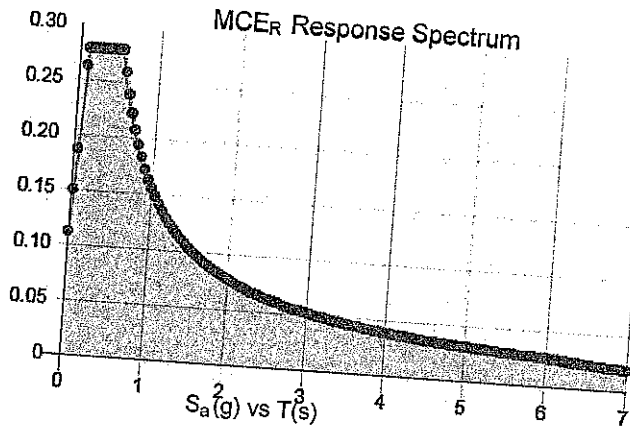
Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

Site Soil Class: D - Stiff Soil
 Results:

S_s :	0.175	S_{DS} :	0.186
S_1 :	0.065	S_{D1} :	0.103
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.085
S_{MS} :	0.279	PGA _M :	0.137
S_{M1} :	0.155	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B



Data Accessed:

Date Source:

Tue Jan 29 2019
 USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 1.00 in.
Concurrent Temperature: 5 F
Gust Speed: 50 mph

Data Source: Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed: Tue Jan 29 2019

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

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January 22, 2019

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Subject: Mount Modification Analysis

Carrier Designation: Verizon Wireless Equipment Change-Out
Client Site Number: NG20679
Client Site Name: N Thompsonville CT

Crown Castle Designation: Crown Castle BU Number: 876348
Crown Castle Site Name: Enfield
Crown Castle JDE Job Number: 548267
Crown Castle Order Number: 471268 Rev. 6

Engineering Firm Designation: TEP Project Number: 25725.212923

Site Data: Bright Meadow Blvd., Enfield, Hartford County, CT 06082
Latitude 42° 01' 14.91", Longitude -72° 35' 06.59"

Structure Information: Tower Height & Type: 147.5± ft Monopole
Mount Elevation: 132.0 ft
Mount Width & Type: 14 ft Platform w/ Handrail

Dear Charles McGuirt,

Tower Engineering Professionals is pleased to submit this "Mount Modification Analysis" to determine the structural integrity of Verizon Wireless's antenna mounting system with proposed appurtenance and equipment addition on the above mentioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

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

Platform w/ Handrail Mount

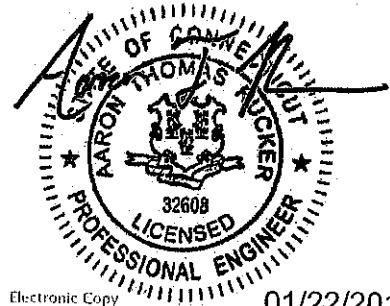
Sufficient Capacity

This analysis utilizes an ultimate 3-second gust wind speed of 120 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Daniel Cisneros

Respectfully submitted by:

Aaron T. Rucker, P.E.
Structural Division Manager



Electronic Copy

01/22/2019

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Mount Modification Design Drawings (MDD)

1) INTRODUCTION

The mount is an existing 14-ft Platform w/ Handrail mount, designed by Paul J. Ford and Co.

2) ANALYSIS CRITERIA

Building Code:	2018 Connecticut State Building Code
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	120 mph
Exposure Category:	B
Topographic Category at Base:	1.0
Topographic Category at Mount:	1.0
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic Design Category:	B
Seismic S_s:	0.171
Seismic S_1:	0.055
Live Loading Wind Speed:	30 mph
Live Loading at Mid/End-Points:	250 lb
Man Live Loading at Mount Pipes:	500 lb

Table 1 - Proposed Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
132.0	137.0	6	Commscope	SBNHH-1D65B	Platform w/ Handrail Mount
		3	Antel	BXA-171063-12BF	
		3	Antel	BXA-70063-4CF-EDIN-X	
		3	Samsung	RFV01U-D1A	
		3	Samsung	RFV01U-D2A	
		2	RFS/Celwave	DB-T1-6Z-8AB-0Z	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Previous Mount Analysis	Tower Engineering Professionals	25725.201197	TEP
Site Photos	Verizon Wireless	826506	CCIsites
Loading Application	Verizon Wireless	Order 471268 Rev. 6	CCIsites

3.1) Analysis Method

RISA-3D (Version 17.0.1), a commercially available analysis software package, was used to create a three-dimensional model of the mount and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A and Appendix C.

TEP Mount Analysis Tool, a tool internally developed by TEP using Microsoft Excel, was used to calculate member loading for various load cases. Selected output from the analysis is included in Appendix B.

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Tower Mount Analysis (Revision C)*.

In addition, this analysis is in accordance with NSTD-445 *Antennas Mounting System Classification Standard*.

3.2) Assumptions

- 1) The mount was built in accordance with the manufacturer's specifications.
- 2) The mount has been maintained in accordance with the manufacturer's specification.
- 3) The configuration of antennas, mounts and other appurtenances are as specified in Table 1. All mount components have been assumed to be in sufficient condition to carry their full design capacity for this analysis. Refer to the issued mapping for any structural and/or maintenance issues found during our site visit if applicable.
- 4) All mount components are in sufficient condition to carry their full design capacity.
- 5) TEP did not analyze the collar mount connection to the pole and assumes it to have sufficient structural capacity to transfer the applied forces from the mount to the tower.
- 6) All material grades used for this analysis, unless verified by mount manufacturer design, were assumed per AISC Table 2-4, 15th Edition. See RISA-3D output for confirmation on grades used in this analysis.

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

4) ANALYSIS RESULTS

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

Notes	Component	Critical Member	Mount Centerline (ft)	% Capacity	Pass / Fail
1	Face Horizontals	FH-1	132.0	72.1	Pass
1	Handrails	HRMOD-1	132.0	68.3	Pass
1	Grating Supports	GSIP-1	132.0	44.0	Pass
1	Support Arms	SA-1A	132.0	70.1	Pass
1	Mount Pipes	MP-1	132.0	59.4	Pass

Structure Rating (max from all components) =	72.1%
---	--------------

Notes:

- 1) See additional documentation in "Appendix C - Analysis Output" for calculations supporting the % capacity listed.

Table 4 - Tieback Connection Data Table

Tower Connection Node No.	Existing/Proposed	Resultant End Reaction (lb)	Connected Member Type	Connected Member Size	Member Compressive Capacity (lb) ³	Notes
-	-	-	-	-	-	-

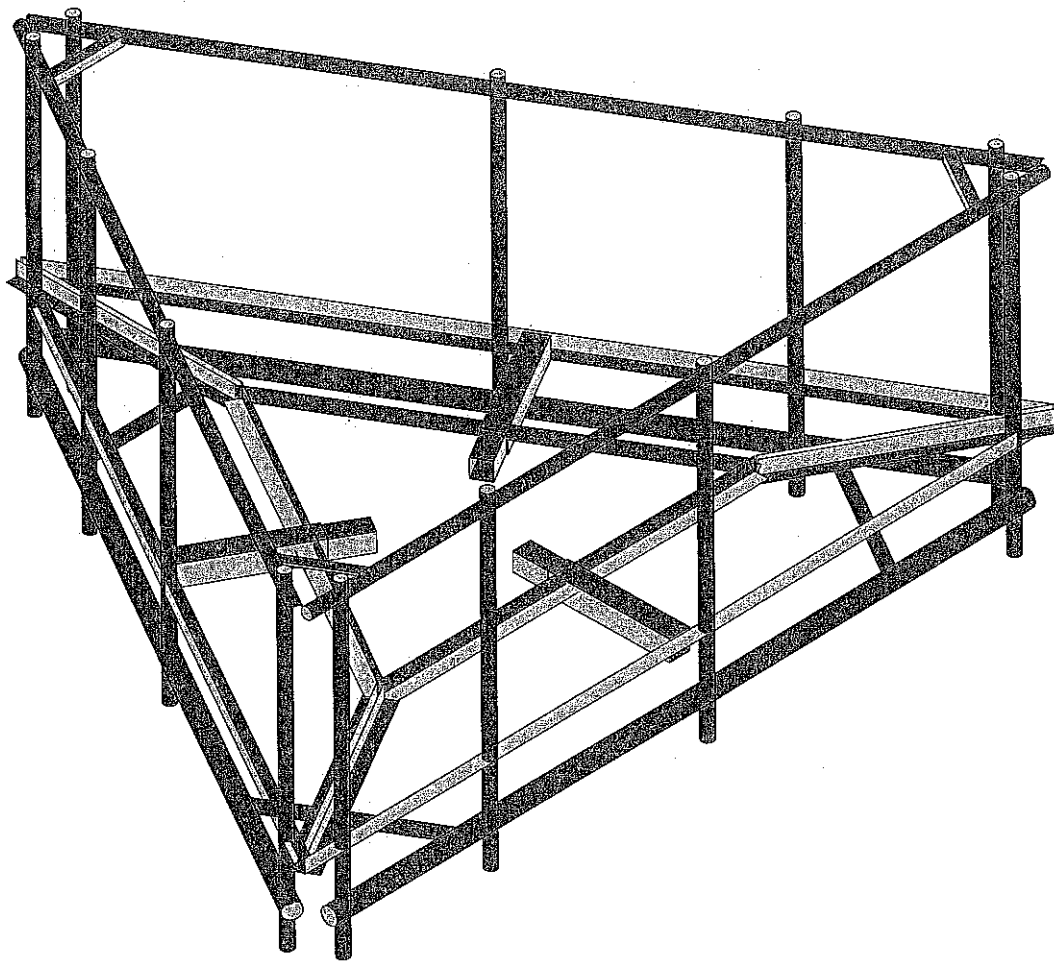
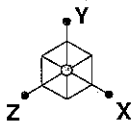
Notes:

- 1) Tieback connection point is within 25% of either end of the connected tower member.
- 2) Tower connection point is NOT within 25% of either end of the connected tower member.
- 3) Reduced member compressive capacity according to CED-STD-10294 *Standard for Installation of Mounts and Appurtenances*.

4.1) Recommendations

- 1) If the load differs from that described in Table 1 of this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
- 2) The modifications depicted in "Appendix E – Mount Modification Design Drawings" shall be installed and, upon completion, inspected. The mount has sufficient capacity to support the proposed loading configuration once the proposed modifications listed below are completed.
 - a) Bottom Rail, 3.0SCH40 x 13 ft Pipe, ASTM A53-B-35 or greater (Total of 3)
 - b) Handrail Brace, 2.0SCH40 x 3ft Pipe, ASTM A53-B-35 or greater (Total of 3)
 - c) Clamp Plate, SitePro Part No. Puck (Total of 6)
 - d) Crossover Plate Kit, SitePro Part No. SCX43-K (Total of 12)

APPENDIX A
WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

Tower Engineering Profes...

DC

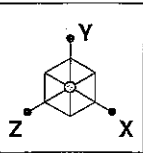
TEP No. 25725.212923

CCI BU No. 876348

SK - 1

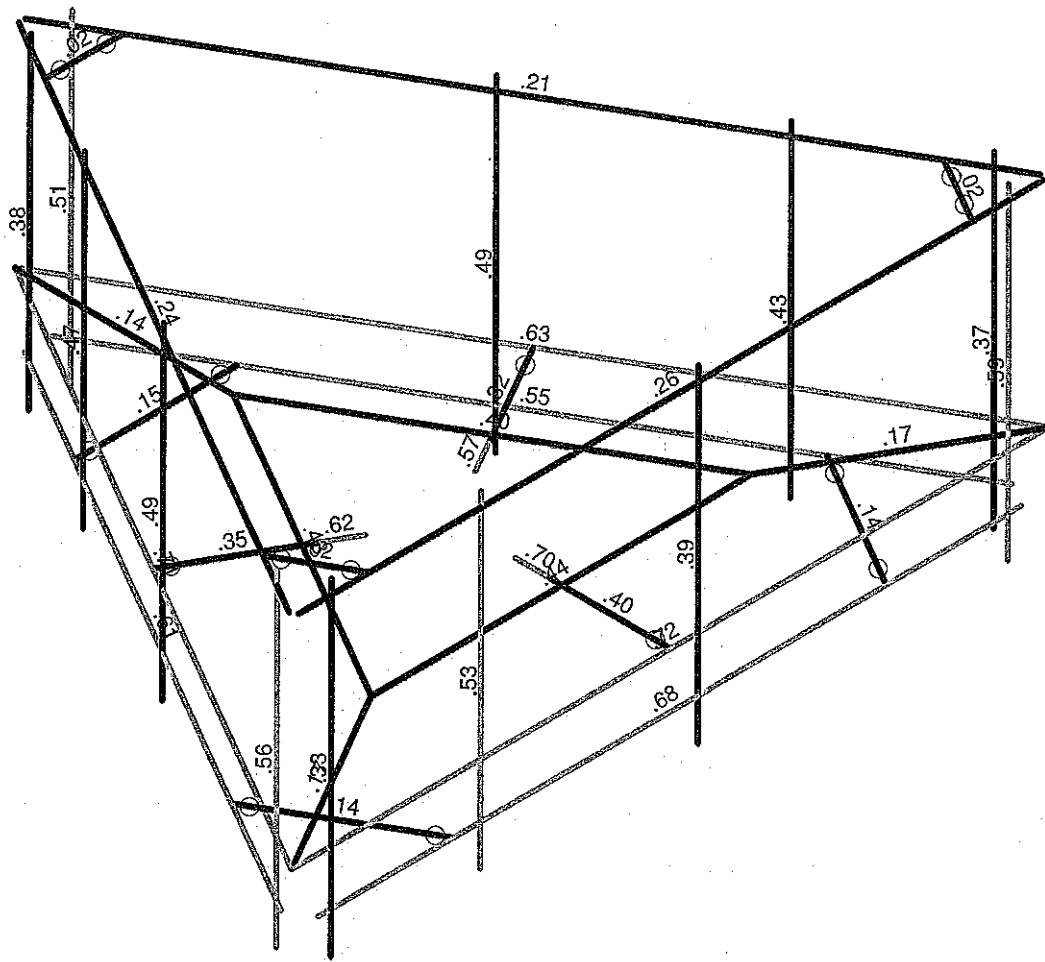
Jan 22, 2019 at 9:50 AM

REV H.r.3d



Code Check (Env)

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■	.90-1.0
■	.75-.90
■	.50-.75
■	0-.50

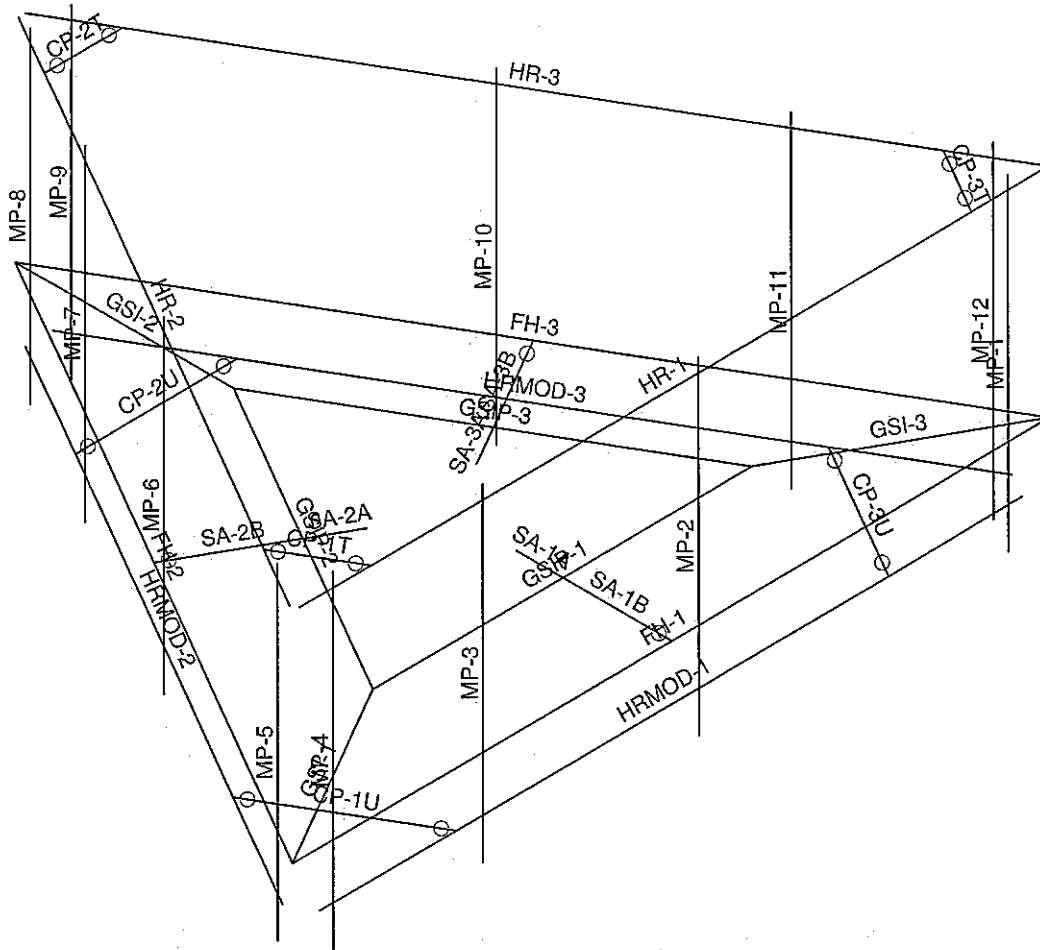
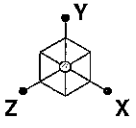


Member Code Checks Displayed (Enveloped)
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TEP No. 25725.212923

CCI BU No. 876348

SK - 3
Jan 22, 2019 at 9:50 AM
REV H.r3d



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DC

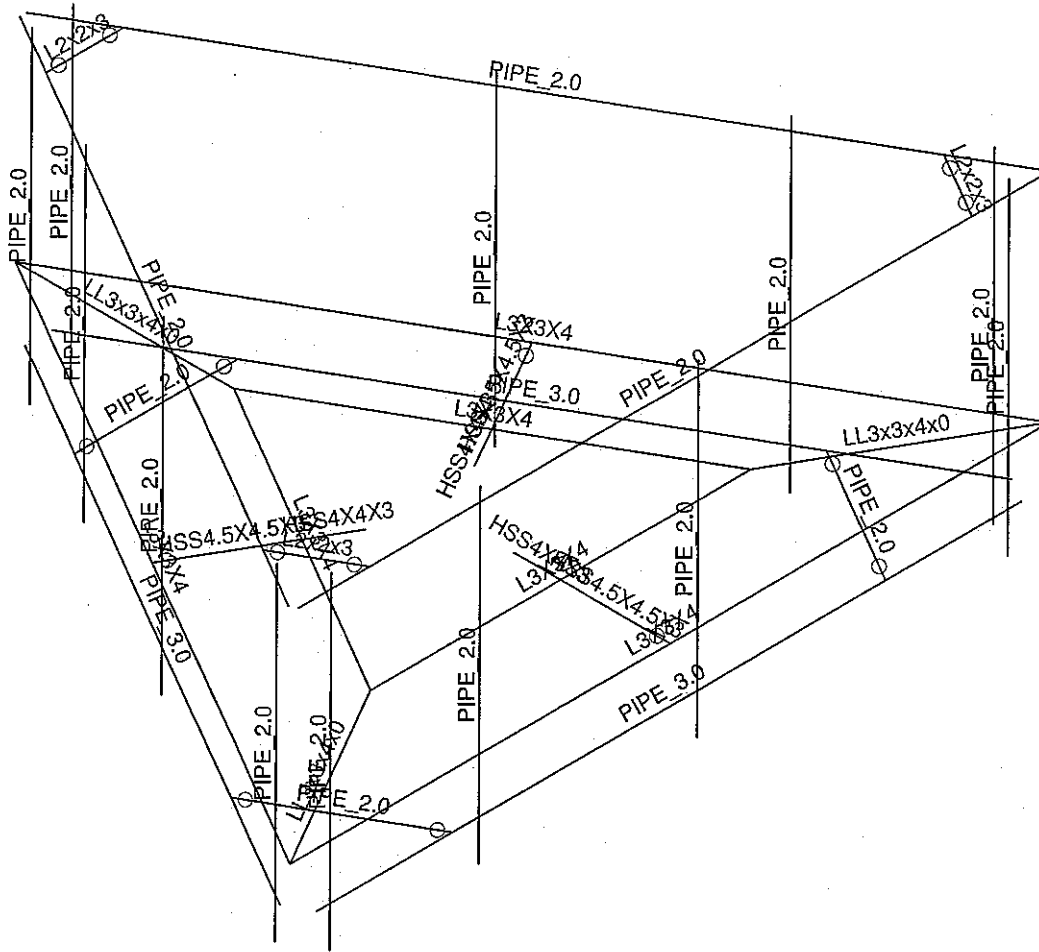
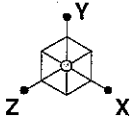
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SK - 4

Jan 22, 2019 at 9:50 AM

REV H.r3d



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SK - 5

Jan 22, 2019 at 9:51 AM

REV H.r3d

APPENDIX B
SOFTWARE INPUT CALCULATIONS



Code Revisions:	TIA-222-H	IBC 2015
Tower Type:	Monopole	

Wind Inputs:

Ult. Wind Velocity:	120.0	mph
Live Load Velocity:	30.0	mph
Ice Wind Velocity:	50.0	mph
Base Ice Thickness:	1.50	inches
Mount Centerline:	132.0	ft
Antenna Centerline:	137.0	ft
Exposure Category:	B	
Topo Category:	1	
Risk Category:	II	
Ground Elevation:	110.38	ft

Wind Calculations:

K_{zt} :	1.000	Section 2.6.6
K_d :	0.950	
$K_{z-Mount}$:	1.070	Section 2.6.5.2
$K_{z-Antenna}$:	1.081	Section 2.6.5.2
K_{iz} :	1.151	Section 2.6.10
Ice Thickness:	1.726	inches - Section 2.6.10

Without Ice - (psf)		With Ice - (psf)	
$(q_z G_h)_{Mount}$:	37.32	$(q_z G_h)_{Mount}$:	6.48
$(q_z G_h)_{Antenna}$:	37.71	$(q_z G_h)_{Antenna}$:	6.55

Antenna TME Input



CC BU No. 876348
 TEP No. 25725.212923
 Analysis By: DC
 Checked By: NWS
 1/22/2019

Antenna Loads are Calculated in Accordance with TIA-222-H
 Azimuth is the absolute angle measured clockwise from RISA-3D global X-axis.

Antenna Description	Height (in)	Width (in)	Depth (in)	Wt. (lbs)	Aimuth*	Qty	Shape	Member Label	Location #1 (ft,%)	Location #2 (ft,%)	Location #3 (ft,%)
Alpha Sector											
Antel BXA-70063-4XF-EDIN-X	47.40	11.20	5.20	9.90	0.00	1	Flat	MP-1	0.17	3.75	
Samsung REV01U-D1A	15.00	15.00	10.00	84.40	0.00	1	Flat	MP-1	1.50		
Antel BXA-171063-12BF	71.70	6.10	4.10	15.00	0.00	1	Flat	MP-2	0.08	3.75	
Commscope SBMHH-1D65B	72.90	11.90	7.10	40.60	0.00	1	Flat	MP-3	0.50	4.75	
Commscope SBMHH-1D65B	72.90	11.90	7.10	40.60	0.00	1	Flat	MP-4	0.50	4.75	
Samsung REV01U-D2A	15.00	15.00	8.10	78.30	0.00	1	Flat	MP-4	1.50		
Beta Sector											
Antel BXA-70063-4XF-EDIN-X	47.40	11.20	5.20	9.90	120.00	1	Flat	MP-5	0.17	3.75	
Samsung REV01U-D1A	15.00	15.00	10.00	84.40	120.00	1	Flat	MP-5	1.50		
Commscope SBMHH-1D65B	72.90	11.90	7.10	40.60	120.00	1	Flat	MP-5	0.50	4.75	
Antel BXA-171063-12BF	71.70	6.10	4.10	15.00	120.00	1	Flat	MP-7	0.08	3.75	
Commscope SBMHH-1D65B	72.90	11.90	7.10	40.60	120.00	1	Flat	MP-8	0.50	4.75	
Samsung REV01U-D2A	15.00	15.00	8.10	78.30	120.00	1	Flat	MP-8	1.50		
Gamma Sector											
Antel BXA-70063-4XF-EDIN-X	47.40	11.20	5.20	9.90	240.00	1	Flat	MP-9	0.17	3.75	
Samsung REV01U-D1A	15.00	15.00	10.00	84.40	240.00	1	Flat	MP-9	1.50		
Commscope SBMHH-1D65B	72.90	11.90	7.10	40.60	240.00	1	Flat	MP-10	0.50	4.75	
Antel BXA-171063-12BF	71.70	6.10	4.10	15.00	240.00	1	Flat	MP-11	0.08	3.75	
Commscope SBMHH-1D65B	72.90	11.90	7.10	40.60	240.00	1	Flat	MP-12	0.50	4.75	
Samsung REV01U-D2A	15.00	15.00	8.10	78.30	240.00	1	Flat	MP-12	1.50		
Junction Box											
RES DB-T1-6Z-8AB-0Z	24.00	24.00	10.00	44.00	90.00	1	Flat	SA-1A	0.25		
RES DB-T1-6Z-8AB-0Z	24.00	24.00	10.00	44.00	210.00	1	Flat	SA-2A	0.25		



Member Forces are Calculated in Accordance with TIA-222-H

Member Name	Wind Proj. (in)	Length (in)	Shape	θ (°)	Perimeter (in)
FH-1	3.000	168.00	Flat	90.00	12.00
HR-1	2.400	165.00	Round	90.00	7.54
FH-2	3.000	168.00	Flat	-30.00	12.00
HR-2	2.400	165.00	Round	-30.00	7.54
FH-3	3.000	168.00	Flat	30.00	12.00
HR-3	2.400	165.00	Round	30.00	7.54
CP-1T	2.000	17.20	Flat	30.00	8.00
CP-2T	2.000	17.20	Flat	90.00	8.00
CP-3T	2.000	17.20	Flat	-30.00	8.00
GSIP-1	3.000	84.00	Flat	90.00	12.00
GSIP-2	3.000	84.00	Flat	-30.00	12.00
GSIP-3	3.000	84.00	Flat	30.00	12.00
GSI-1	3.000	48.00	Flat	-60.00	18.00
GSI-2	3.000	48.00	Flat	0.00	18.00
GSI-3	3.000	48.00	Flat	60.00	18.00
SA-1A	4.000	8.00	Flat	0.00	16.00
SA-1B	4.500	26.51	Flat	0.00	18.00
SA-2A	4.000	8.00	Flat	60.00	16.00
SA-2B	4.500	26.51	Flat	60.00	18.00
SA-3A	4.000	8.00	Flat	-60.00	16.00
SA-3B	4.500	26.51	Flat	-60.00	18.00
MP-1	2.400	72.00	Round		7.54
MP-2	2.400	72.00	Round		7.54
MP-3	2.400	72.00	Round		7.54
MP-4	2.400	72.00	Round		7.54
MP-5	2.400	72.00	Round		7.54
MP-6	2.400	72.00	Round		7.54
MP-7	2.400	72.00	Round		7.54
MP-8	2.400	72.00	Round		7.54
MP-9	2.400	72.00	Round		7.54
MP-10	2.400	72.00	Round		7.54
MP-11	2.400	72.00	Round		7.54
MP-12	2.400	72.00	Round		7.54
HRMOD-1	3.500	165.00	Round	90.00	11.00
HRMOD-1	3.500	165.00	Round	-30.00	11.00
HRMOD-1	3.500	165.00	Round	30.00	11.00
CP-1U	2.400	36.00	Round	30.00	7.54
CP-1U	2.400	36.00	Round	90.00	7.54
CP-1U	2.400	36.00	Round	-30.00	7.54

APPENDIX C
SOFTWARE ANALYSIS OUTPUT



(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Bwtn Intersheathing Wood Wall?	Yes
Area Load Mesh (in ²)	144
Warping Tolerance (in)	12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec ²)	32.2
Wall Mesh Size (in)	24
Eigenolution Convergence Tol. (I.E.)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Slab Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	No
RISA Connection Code	None
Cold Formed Steel Code	None
Wood Code	None
Wood Temperature	<=100F
Concrete Code	None
Masonry Code	None - Building
Aluminum Code	None
Stainless Steel Code	None

Number of Shear Regions	4
Region Spacing Increment (in)	4
Blaxial Column Method	Exact Integration
Frame Beta Factor (PCA)	65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min. Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR SET_ASTMA615
Min. % Steel for Column	1
Max. % Steel for Column	8



(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
C1 X	.02
C1 Z	.02
T-X (sec)	Not Entered
T-Z (sec)	Not Entered
R-X	3
R-Z	3
Cl Exp. X	.75
Cl Exp. Z	.75
SD1	1
SDS	1
TL (sec)	1
Risk Cat.	I or II
Drift Cat	Other
Om Z	1
Om X	1
Od Z	1
Od X	1
Rho Z	1
Rho X	1

Hot Rolled Steel Properties

Label	E (ksi)	G (ksi)	Nu	Therm. IV	Density (pcf)	Yield (ksi)	By	Fy (ksi)	Rt	
1	A992	29000	11154	3	.65	49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	3	.65	49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	3	.65	49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	3	.65	527	42	1.4	58	1.3
5	A500 Gr.B Red	29000	11154	3	.65	527	48	1.4	58	1.3
6	A53 Gr.B	29000	11154	3	.65	49	35	1.6	60	1.2
7	A1085	29000	11154	3	.65	49	50	1.4	65	1.3

Hot Rolled Steel Section Sets

Label	Shapa	Type	Design List	Material	Design	A Lin2	Iy (in ⁴)	Iz (in ⁴)	J (in ⁶)
1	Face Horizontal	None	None	A36 Gr.36	Typical	1.44	1.23	1.23	.031
2	Handrail	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
3	Internal	None	None	A36 Gr.36	Typical	1.44	1.23	1.23	.031
4	Support Arm 1	None	None	A500 Gr.B	Typical	2.58	6.21	6.21	10
5	Support Arm 2	None	None	A500 Gr.B	Typical	2.93	9.02	9.02	14.4
6	Corner Internal	None	None	A36 Gr.36	Typical	2.88	1.45	2.46	.063
7	Mount Pipe	None	None	A36 Gr.36	Typical	1.02	.627	.627	1.25
8	Handrail Connection	None	None	A36 Gr.36	Typical	.721	.271	.271	.009
9	Proposed Handrail	None	None	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
10	HB Bracing	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25

Cold Formed Steel Section Sets

Label	Shapa	Type	Design List	Material	Design	A Lin2	Iy (in ⁴)	Iz (in ⁴)	J (in ⁶)
1	CE1A	Beam	None	A653 SS G.I.	Typical	.581	.057	4.41	.00063

Material Takeoff

Material	Size	Pieces	Length(ft)	Weight(k)
1 Hot Rolled Steel				
2 A36 Gr.36	L2x2x3	3	4.3	0
3 A36 Gr.36	L1.5x3x4.9	3	12.1	1
4 A36 Gr.36	L3x3x4	6	6.6	3
5 A500 Gr.B Rect	HSS4.5x4.5x3	3	6.6	0
6 A500 Gr.B Rect	HSS4x4x3	3	2.2	0
7 A53 Gr.B	PIPE 2.0	18	122.3	4
8 A53 Gr.B	PIPE 3.0	3	39	3
9 Total HR Steel		39	249.3	1.2

Joint Boundary Conditions

Joint Label	X Joint	Y Joint	Z Joint	X Rot. (ft/rad)	Y Rot. (ft/rad)	Z Rot. (ft/rad)	Reaction	Reaction	Reaction
1 SA-1A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2 SA-3A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3 SA-2A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

Label	J-1 Joint	J-2 Joint	K-1 Joint	Rotated(deg)	Section/Shape	Type	Design List	Material	Design Rules
1 CP-1T	CA-2	CA-2	None	180	Handrail Connection	None	None	A36 Gr.36	Typical
2 CP-1U	N110A	N113	None	180	HR Bracing	None	None	A53 Gr.B	Typical
3 CP-2T	CA-3	CA-4	None	180	Handrail Connection	None	None	A36 Gr.36	Typical
4 CP-2U	N111A	N114	None	180	HR Bracing	None	None	A53 Gr.B	Typical
5 CP-3T	CA-5	CA-6	None	180	Handrail Connection	None	None	A36 Gr.36	Typical
6 CP-3U	N112A	N109A	None	180	HR Bracing	None	None	A53 Gr.B	Typical
7 FH-1	FE-1	FE-2	None	180	Face Horizontal	None	None	A36 Gr.36	Typical
8 FH-2	FE-2	FE-3	None	180	Face Horizontal	None	None	A36 Gr.36	Typical
9 FH-3	FE-3	FE-1	None	180	Face Horizontal	None	None	A36 Gr.36	Typical
10 GSI-1	GSP-2	FE-2	None	180	Corner Internal	None	None	A36 Gr.36	Typical
11 GSI-2	GSP-3	FE-1	None	180	Corner Internal	None	None	A36 Gr.36	Typical
12 GSI-3	GSP-1	FE-3	None	180	Corner Internal	None	None	A36 Gr.36	Typical
13 GSP-1	GSP-1	GSP-2	None	270	Internal	None	None	A36 Gr.36	Typical
14 GSP-2	GSP-2	GSP-3	None	270	Internal	None	None	A36 Gr.36	Typical
15 GSP-3	GSP-3	GSP-1	None	270	Internal	None	None	A36 Gr.36	Typical
16 HR-1	HR-1	HR-2	None	Handrail	Handrail	None	None	A53 Gr.B	Typical
17 HR-2	HR-3	HR-4	None	Handrail	Handrail	None	None	A53 Gr.B	Typical
18 HR-3	HR-5	HR-6	None	Handrail	Handrail	None	None	A53 Gr.B	Typical
19 HRMOD-1	X79	X80	None	Proposed Handrail	Proposed Handrail	None	None	A53 Gr.B	Typical
20 HRMOD-2	N109	N110	None	Proposed Handrail	Proposed Handrail	None	None	A53 Gr.B	Typical
21 HRMOD-3	N111	N112	None	Proposed Handrail	Proposed Handrail	None	None	A53 Gr.B	Typical
22 MP-1	MP-1A	MP-1B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
23 MP-2	MP-2A	MP-2B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
24 MP-3	MP-3A	MP-3B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
25 MP-4	MP-4A	MP-4B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
26 MP-5	MP-5A	MP-5B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
27 MP-6	MP-10A	MP-10B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
28 MP-7	MP-11A	MP-11B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
29 MP-8	MP-12A	MP-12B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
30 MP-9	MP-17A	MP-17B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
31 MP-10	MP-18A	MP-18B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
32 MP-11	MP-19A	MP-19B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
33 MP-12	MP-20A	MP-20B	None	Mount Pipe	Mount Pipe	None	None	A53 Gr.B	Typical
34 SA-1A	SA-1A	SA-1B	None	Support Arm 1	Support Arm 1	None	None	A500 Gr.B	Typical
35 SA-1B	SA-1B	SA-1C	None	Support Arm 2	Support Arm 2	None	None	A500 Gr.B	Typical

Member Primary Data (Continued)

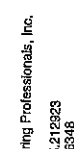
Label	J-1 Joint	J-2 Joint	K-1 Joint	Rotated(deg)	Section/Shape	Type	Design List	Material	Design Rules
36 SA-2A	SA-2A	SA-2B	None	None	Support Arm 1	None	None	A500 Gr.B	Typical
37 SA-2B	SA-2B	SA-2C	None	None	Support Arm 2	None	None	A500 Gr.B	Typical
38 SA-3A	SA-3A	SA-3B	None	None	Support Arm 1	None	None	A500 Gr.B	Typical
39 SA-3B	SA-3B	SA-3C	None	None	Support Arm 2	None	None	A500 Gr.B	Typical

Member Advanced Data

Label	Release	J-Release	J-Offset(ft)	T/C Only	Physical Defl	Ratio	Options	Analysts	Inactive	Seisml
1 CP-1T	BenPIN	BenPIN			Yes	** NA **				None
2 CP-1U	BenPIN	BenPIN			Yes	** NA **				None
3 CP-2T	BenPIN	BenPIN			Yes	** NA **				None
4 CP-2U	BenPIN	BenPIN			Yes	** NA **				None
5 CP-3T	BenPIN	BenPIN			Yes	** NA **				None
6 CP-3U	BenPIN	BenPIN			Yes	** NA **				None
7 FH-1					Yes	** NA **				None
8 FH-2					Yes	** NA **				None
9 FH-3					Yes	** NA **				None
10 GSI-1					Yes	** NA **				None
11 GSI-2					Yes	** NA **				None
12 GSI-3					Yes	** NA **				None
13 GSP-1					Yes	** NA **				None
14 GSP-2					Yes	** NA **				None
15 GSP-3					Yes	** NA **				None
16 HR-1					Yes	** NA **				None
17 HR-2					Yes	** NA **				None
18 HR-3					Yes	** NA **				None
19 HRMOD-1					Yes	** NA **				None
20 HRMOD-2					Yes	** NA **				None
21 HRMOD-3					Yes	** NA **				None
22 MP-1					Yes	** NA **				None
23 MP-2					Yes	** NA **				None
24 MP-3					Yes	** NA **				None
25 MP-4					Yes	** NA **				None
26 MP-5					Yes	** NA **				None
27 MP-6					Yes	** NA **				None
28 MP-7					Yes	** NA **				None
29 MP-8					Yes	** NA **				None
30 MP-9					Yes	** NA **				None
31 MP-10					Yes	** NA **				None
32 MP-11					Yes	** NA **				None
33 MP-12					Yes	** NA **				None
34 SA-1A					Yes	** NA **				None
35 SA-1B					Yes	** NA **				None
36 SA-2A					Yes	** NA **				None
37 SA-2B					Yes	** NA **				None
38 SA-3A					Yes	** NA **				None
39 SA-3B					Yes	** NA **				None

Hot Rolled Steel Design Parameters

Label	Shape	Length(ft)	Comp. bot.	L-Form	Kyz	Cb	Funci.
1 CP-1T	Handrail Connec	1.433			1	1	Lateral
2 CP-1U	HR Bracing	3			1	1	Lateral
3 CP-2T	Handrail Connec	1.433			1	1	Lateral
4 CP-2U	HR Bracing	3			1	1	Lateral
5 CP-3T	Handrail Connec	1.433			1	1	Lateral



Hot Rolled Steel Design Parameters (Continued)

Label	Share	Length(ft)	Lb/wft	Comp. bot.	Comp. top.	L. area	Kw	Kzz	Cb	Funcn
6	CP-3U	HR Bracing	3				1	1	1	Lateral
7	FH-1	Face Horizontal	14				1	1	1	Lateral
8	FH-2	Face Horizontal	14				1	1	1	Lateral
9	FH-3	Face Horizontal	14				1	1	1	Lateral
10	GSL-1	Corner Internal	4.04				1	1	1	Lateral
11	GSL-2	Corner Internal	4.04				1	1	1	Lateral
12	GSL-3	Corner Internal	4.04				1	1	1	Lateral
13	GSP-1	Internal	7.003	3.5			1	1	1	Lateral
14	GSP-2	Internal	7.003	3.5			1	1	1	Lateral
15	GSP-3	Internal	7.003	3.5			1	1	1	Lateral
16	HR-1	Handrail	13.75				2.1	2.1	2.1	Lateral
17	HR-2	Handrail	13.75				2.1	2.1	2.1	Lateral
18	HR-3	Handrail	13.75				2.1	2.1	2.1	Lateral
19	HRMOD-1	Proposed Handrail	13				2.1	2.1	2.1	Lateral
20	HRMOD-2	Proposed Handrail	13				2.1	2.1	2.1	Lateral
21	HRMOD-3	Proposed Handrail	13				2.1	2.1	2.1	Lateral
22	MP-1	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
23	MP-2	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
24	MP-3	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
25	MP-4	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
26	MP-5	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
27	MP-6	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
28	MP-7	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
29	MP-8	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
30	MP-9	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
31	MP-10	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
32	MP-11	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
33	MP-12	Mount Pipe	6	Segment	Segment		2.1	2.1	2.1	Lateral
34	SA-1A	Support Arm 1	667				2.1	2.1	2.1	Lateral
35	SA-1B	Support Arm 1	2,209				2.1	2.1	2.1	Lateral
36	SA-2A	Support Arm 2	667				2.1	2.1	2.1	Lateral
37	SA-2B	Support Arm 2	2,209				2.1	2.1	2.1	Lateral
38	SA-3A	Support Arm 3	667				2.1	2.1	2.1	Lateral
39	SA-3B	Support Arm 3	2,209				2.1	2.1	2.1	Lateral

Cold Formed Steel Design Parameters

Label Shape Length Lb/wft Lb/ft² Lb/ft³ Lb/ft⁴ Lb/ft⁵ Lb/ft⁶ Lb/ft⁷ Lb/ft⁸ Lb/ft⁹ Lb/ft¹⁰ Lb/ft¹¹ Lb/ft¹² Lb/ft¹³ Lb/ft¹⁴ Lb/ft¹⁵ Lb/ft¹⁶ Lb/ft¹⁷ Lb/ft¹⁸ Lb/ft¹⁹ Lb/ft²⁰ Lb/ft²¹ Lb/ft²² Lb/ft²³ Lb/ft²⁴ Lb/ft²⁵ Lb/ft²⁶ Lb/ft²⁷ Lb/ft²⁸ Lb/ft²⁹ Lb/ft³⁰ Lb/ft³¹ Lb/ft³² Lb/ft³³ Lb/ft³⁴ Lb/ft³⁵ Lb/ft³⁶ Lb/ft³⁷ Lb/ft³⁸ Lb/ft³⁹ Lb/ft⁴⁰ Lb/ft⁴¹ Lb/ft⁴² Lb/ft⁴³ Lb/ft⁴⁴ Lb/ft⁴⁵ Lb/ft⁴⁶ Lb/ft⁴⁷ Lb/ft⁴⁸ Lb/ft⁴⁹ Lb/ft⁵⁰ Lb/ft⁵¹ Lb/ft⁵² Lb/ft⁵³ Lb/ft⁵⁴ Lb/ft⁵⁵ Lb/ft⁵⁶ Lb/ft⁵⁷ Lb/ft⁵⁸ Lb/ft⁵⁹ Lb/ft⁶⁰ Lb/ft⁶¹ Lb/ft⁶² Lb/ft⁶³ Lb/ft⁶⁴ Lb/ft⁶⁵ Lb/ft⁶⁶ Lb/ft⁶⁷ Lb/ft⁶⁸ Lb/ft⁶⁹ Lb/ft⁷⁰ Lb/ft⁷¹ Lb/ft⁷² Lb/ft⁷³ Lb/ft⁷⁴ Lb/ft⁷⁵ Lb/ft⁷⁶ Lb/ft⁷⁷ Lb/ft⁷⁸ Lb/ft⁷⁹ Lb/ft⁸⁰ Lb/ft⁸¹ Lb/ft⁸² Lb/ft⁸³ Lb/ft⁸⁴ Lb/ft⁸⁵ Lb/ft⁸⁶ Lb/ft⁸⁷ Lb/ft⁸⁸ Lb/ft⁸⁹ Lb/ft⁹⁰ Lb/ft⁹¹ Lb/ft⁹² Lb/ft⁹³ Lb/ft⁹⁴ Lb/ft⁹⁵ Lb/ft⁹⁶ Lb/ft⁹⁷ Lb/ft⁹⁸ Lb/ft⁹⁹ Lb/ft¹⁰⁰ Lb/ft¹⁰¹ Lb/ft¹⁰² Lb/ft¹⁰³ Lb/ft¹⁰⁴ Lb/ft¹⁰⁵ Lb/ft¹⁰⁶ Lb/ft¹⁰⁷ Lb/ft¹⁰⁸ Lb/ft¹⁰⁹ Lb/ft¹¹⁰ Lb/ft¹¹¹ Lb/ft¹¹² Lb/ft¹¹³ Lb/ft¹¹⁴ Lb/ft¹¹⁵ Lb/ft¹¹⁶ Lb/ft¹¹⁷ Lb/ft¹¹⁸ Lb/ft¹¹⁹ Lb/ft¹²⁰ Lb/ft¹²¹ Lb/ft¹²² Lb/ft¹²³ Lb/ft¹²⁴ Lb/ft¹²⁵ Lb/ft¹²⁶ Lb/ft¹²⁷ Lb/ft¹²⁸ Lb/ft¹²⁹ Lb/ft¹³⁰ Lb/ft¹³¹ Lb/ft¹³² Lb/ft¹³³ Lb/ft¹³⁴ Lb/ft¹³⁵ Lb/ft¹³⁶ Lb/ft¹³⁷ Lb/ft¹³⁸ Lb/ft¹³⁹ Lb/ft¹⁴⁰ Lb/ft¹⁴¹ Lb/ft¹⁴² Lb/ft¹⁴³ Lb/ft¹⁴⁴ Lb/ft¹⁴⁵ Lb/ft¹⁴⁶ Lb/ft¹⁴⁷ Lb/ft¹⁴⁸ Lb/ft¹⁴⁹ Lb/ft¹⁵⁰ Lb/ft¹⁵¹ Lb/ft¹⁵² Lb/ft¹⁵³ Lb/ft¹⁵⁴ Lb/ft¹⁵⁵ Lb/ft¹⁵⁶ Lb/ft¹⁵⁷ Lb/ft¹⁵⁸ Lb/ft¹⁵⁹ Lb/ft¹⁶⁰ Lb/ft¹⁶¹ Lb/ft¹⁶² Lb/ft¹⁶³ Lb/ft¹⁶⁴ Lb/ft¹⁶⁵ Lb/ft¹⁶⁶ Lb/ft¹⁶⁷ Lb/ft¹⁶⁸ Lb/ft¹⁶⁹ Lb/ft¹⁷⁰ Lb/ft¹⁷¹ Lb/ft¹⁷² Lb/ft¹⁷³ Lb/ft¹⁷⁴ Lb/ft¹⁷⁵ Lb/ft¹⁷⁶ Lb/ft¹⁷⁷ Lb/ft¹⁷⁸ Lb/ft¹⁷⁹ Lb/ft¹⁸⁰ Lb/ft¹⁸¹ Lb/ft¹⁸² Lb/ft¹⁸³ Lb/ft¹⁸⁴ Lb/ft¹⁸⁵ Lb/ft¹⁸⁶ Lb/ft¹⁸⁷ Lb/ft¹⁸⁸ Lb/ft¹⁸⁹ Lb/ft¹⁹⁰ Lb/ft¹⁹¹ Lb/ft¹⁹² Lb/ft¹⁹³ Lb/ft¹⁹⁴ Lb/ft¹⁹⁵ Lb/ft¹⁹⁶ Lb/ft¹⁹⁷ Lb/ft¹⁹⁸ Lb/ft¹⁹⁹ Lb/ft²⁰⁰ Lb/ft²⁰¹ Lb/ft²⁰² Lb/ft²⁰³ Lb/ft²⁰⁴ Lb/ft²⁰⁵ Lb/ft²⁰⁶ Lb/ft²⁰⁷ Lb/ft²⁰⁸ Lb/ft²⁰⁹ Lb/ft²¹⁰ Lb/ft²¹¹ Lb/ft²¹² Lb/ft²¹³ Lb/ft²¹⁴ Lb/ft²¹⁵ Lb/ft²¹⁶ Lb/ft²¹⁷ Lb/ft²¹⁸ Lb/ft²¹⁹ Lb/ft²²⁰ Lb/ft²²¹ Lb/ft²²² Lb/ft²²³ Lb/ft²²⁴ Lb/ft²²⁵ Lb/ft²²⁶ Lb/ft²²⁷ Lb/ft²²⁸ Lb/ft²²⁹ Lb/ft²³⁰ Lb/ft²³¹ Lb/ft²³² Lb/ft²³³ Lb/ft²³⁴ Lb/ft²³⁵ Lb/ft²³⁶ Lb/ft²³⁷ Lb/ft²³⁸ Lb/ft²³⁹ Lb/ft²⁴⁰ Lb/ft²⁴¹ Lb/ft²⁴² Lb/ft²⁴³ Lb/ft²⁴⁴ Lb/ft²⁴⁵ Lb/ft²⁴⁶ Lb/ft²⁴⁷ Lb/ft²⁴⁸ Lb/ft²⁴⁹ Lb/ft²⁵⁰ Lb/ft²⁵¹ Lb/ft²⁵² Lb/ft²⁵³ Lb/ft²⁵⁴ Lb/ft²⁵⁵ Lb/ft²⁵⁶ Lb/ft²⁵⁷ Lb/ft²⁵⁸ Lb/ft²⁵⁹ Lb/ft²⁶⁰ Lb/ft²⁶¹ Lb/ft²⁶² Lb/ft²⁶³ Lb/ft²⁶⁴ Lb/ft²⁶⁵ Lb/ft²⁶⁶ Lb/ft²⁶⁷ Lb/ft²⁶⁸ Lb/ft²⁶⁹ Lb/ft²⁷⁰ Lb/ft²⁷¹ Lb/ft²⁷² Lb/ft²⁷³ Lb/ft²⁷⁴ Lb/ft²⁷⁵ Lb/ft²⁷⁶ Lb/ft²⁷⁷ Lb/ft²⁷⁸ Lb/ft²⁷⁹ Lb/ft²⁸⁰ Lb/ft²⁸¹ Lb/ft²⁸² Lb/ft²⁸³ Lb/ft²⁸⁴ Lb/ft²⁸⁵ Lb/ft²⁸⁶ Lb/ft²⁸⁷ Lb/ft²⁸⁸ Lb/ft²⁸⁹ Lb/ft²⁹⁰ Lb/ft²⁹¹ Lb/ft²⁹² Lb/ft²⁹³ Lb/ft²⁹⁴ Lb/ft²⁹⁵ Lb/ft²⁹⁶ Lb/ft²⁹⁷ Lb/ft²⁹⁸ Lb/ft²⁹⁹ Lb/ft³⁰⁰ Lb/ft³⁰¹ Lb/ft³⁰² Lb/ft³⁰³ Lb/ft³⁰⁴ Lb/ft³⁰⁵ Lb/ft³⁰⁶ Lb/ft³⁰⁷ Lb/ft³⁰⁸ Lb/ft³⁰⁹ Lb/ft³¹⁰ Lb/ft³¹¹ Lb/ft³¹² Lb/ft³¹³ Lb/ft³¹⁴ Lb/ft³¹⁵ Lb/ft³¹⁶ Lb/ft³¹⁷ Lb/ft³¹⁸ Lb/ft³¹⁹ Lb/ft³²⁰ Lb/ft³²¹ Lb/ft³²² Lb/ft³²³ Lb/ft³²⁴ Lb/ft³²⁵ Lb/ft³²⁶ Lb/ft³²⁷ Lb/ft³²⁸ Lb/ft³²⁹ Lb/ft³³⁰ Lb/ft³³¹ Lb/ft³³² Lb/ft³³³ Lb/ft³³⁴ Lb/ft³³⁵ Lb/ft³³⁶ Lb/ft³³⁷ Lb/ft³³⁸ Lb/ft³³⁹ Lb/ft³⁴⁰ Lb/ft³⁴¹ Lb/ft³⁴² Lb/ft³⁴³ Lb/ft³⁴⁴ Lb/ft³⁴⁵ Lb/ft³⁴⁶ Lb/ft³⁴⁷ Lb/ft³⁴⁸ Lb/ft³⁴⁹ Lb/ft³⁵⁰ Lb/ft³⁵¹ Lb/ft³⁵² Lb/ft³⁵³ Lb/ft³⁵⁴ Lb/ft³⁵⁵ Lb/ft³⁵⁶ Lb/ft³⁵⁷ Lb/ft³⁵⁸ Lb/ft³⁵⁹ Lb/ft³⁶⁰ Lb/ft³⁶¹ Lb/ft³⁶² Lb/ft³⁶³ Lb/ft³⁶⁴ Lb/ft³⁶⁵ Lb/ft³⁶⁶ Lb/ft³⁶⁷ Lb/ft³⁶⁸ Lb/ft³⁶⁹ Lb/ft³⁷⁰ Lb/ft³⁷¹ Lb/ft³⁷² Lb/ft³⁷³ Lb/ft³⁷⁴ Lb/ft³⁷⁵ Lb/ft³⁷⁶ Lb/ft³⁷⁷ Lb/ft³⁷⁸ Lb/ft³⁷⁹ Lb/ft³⁸⁰ Lb/ft³⁸¹ Lb/ft³⁸² Lb/ft³⁸³ Lb/ft³⁸⁴ Lb/ft³⁸⁵ Lb/ft³⁸⁶ Lb/ft³⁸⁷ Lb/ft³⁸⁸ Lb/ft³⁸⁹ Lb/ft³⁹⁰ Lb/ft³⁹¹ Lb/ft³⁹² Lb/ft³⁹³ Lb/ft³⁹⁴ Lb/ft³⁹⁵ Lb/ft³⁹⁶ Lb/ft³⁹⁷ Lb/ft³⁹⁸ Lb/ft³⁹⁹ Lb/ft⁴⁰⁰ Lb/ft⁴⁰¹ Lb/ft⁴⁰² Lb/ft⁴⁰³ Lb/ft⁴⁰⁴ Lb/ft⁴⁰⁵ Lb/ft⁴⁰⁶ Lb/ft⁴⁰⁷ Lb/ft⁴⁰⁸ Lb/ft⁴⁰⁹ Lb/ft⁴¹⁰ Lb/ft⁴¹¹ Lb/ft⁴¹² Lb/ft⁴¹³ Lb/ft⁴¹⁴ Lb/ft⁴¹⁵ Lb/ft⁴¹⁶ Lb/ft⁴¹⁷ Lb/ft⁴¹⁸ Lb/ft⁴¹⁹ Lb/ft⁴²⁰ Lb/ft⁴²¹ Lb/ft⁴²² Lb/ft⁴²³ Lb/ft⁴²⁴ Lb/ft⁴²⁵ Lb/ft⁴²⁶ Lb/ft⁴²⁷ Lb/ft⁴²⁸ Lb/ft⁴²⁹ Lb/ft⁴³⁰ Lb/ft⁴³¹ Lb/ft⁴³² Lb/ft⁴³³ Lb/ft⁴³⁴ Lb/ft⁴³⁵ Lb/ft⁴³⁶ Lb/ft⁴³⁷ Lb/ft⁴³⁸ Lb/ft⁴³⁹ Lb/ft⁴⁴⁰ Lb/ft⁴⁴¹ Lb/ft⁴⁴² Lb/ft⁴⁴³ Lb/ft⁴⁴⁴ Lb/ft⁴⁴⁵ Lb/ft⁴⁴⁶ Lb/ft⁴⁴⁷ Lb/ft⁴⁴⁸ Lb/ft⁴⁴⁹ Lb/ft⁴⁵⁰ Lb/ft⁴⁵¹ Lb/ft⁴⁵² Lb/ft⁴⁵³ Lb/ft⁴⁵⁴ 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Lb/ft⁶⁷⁷ Lb/ft⁶⁷⁸ Lb/ft⁶⁷⁹ Lb/ft⁶⁸⁰ Lb/ft⁶⁸¹ Lb/ft⁶⁸² Lb/ft⁶⁸³ Lb/ft⁶⁸⁴ Lb/ft⁶⁸⁵ Lb/ft⁶⁸⁶ Lb/ft⁶⁸⁷ Lb/ft⁶⁸⁸ Lb/ft⁶⁸⁹ Lb/ft⁶⁹⁰ Lb/ft⁶⁹¹ Lb/ft⁶⁹² Lb/ft⁶⁹³



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

Member Label	Direction	Magnitude(k,k-ft)	Location(ft,%)
27	MP-7	-0.07	3.75
28	MP-8	-0.02	4.75
29	MP-9	-0.05	3.75
30	MP-10	-0.02	4.75
31	MP-11	-0.07	3.75
32	MP-12	-0.02	4.75

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

Member Label	Direction	Magnitude(k,k-ft)	Location(ft,%)
1	MP-1	-0.08	1.67
2	MP-1	-0.64	1.5
3	MP-2	-0.08	0.83
4	MP-3	-1.39	5
5	MP-4	-1.39	5
6	MP-4	-0.64	1.5
7	MP-5	-0.52	1.67
8	MP-5	-0.48	1.5
9	MP-6	-1.04	5
10	MP-7	-0.66	0.83
11	MP-8	-1.04	5
12	MP-8	-0.42	1.5
13	MP-9	-0.52	1.67
14	MP-9	-0.48	1.5
15	MP-10	-1.04	5
16	MP-11	-0.66	0.83
17	MP-12	-1.04	5
18	MP-12	-0.42	1.5
19	SA-1A	-0.68	2.5
20	SA-2A	-1.39	2.5
21	MP-1	-0.08	3.75
22	MP-2	-0.08	3.75
23	MP-3	-1.39	4.75
24	MP-4	-1.39	4.75
25	MP-5	-0.52	3.75
26	MP-6	-1.04	4.75
27	MP-7	-0.66	3.75
28	MP-8	-1.04	4.75
29	MP-9	-0.52	3.75
30	MP-10	-1.04	4.75
31	MP-11	-0.66	3.75
32	MP-12	-1.04	4.75

Member Point Loads (BLC 3 : 30 Wind - No Ice)

Member Label	Direction	Magnitude(k,k-ft)	Location(ft,%)
1	MP-1	-0.61	1.67
2	MP-1	-0.51	1.5
3	MP-2	-0.65	0.83
4	MP-3	-1.1	5
5	MP-4	-1.1	5
6	MP-4	-0.49	1.5
7	MP-5	-0.37	1.67
8	MP-5	-0.37	1.5
9	MP-6	-0.8	5
10	MP-7	-0.52	0.83
11	MP-8	-0.8	5
12	MP-8	-0.8	1.5



Member Point Loads (BLC 3 : 30 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k,k-ft)	Location(ft,%)
13	MP-9	-0.61	1.67
14	MP-9	-0.51	1.5
15	MP-10	-1.1	5
16	MP-11	-0.65	0.83
17	MP-12	-1.1	5
18	MP-12	-0.49	1.5
19	SA-1A	-0.79	2.5
20	SA-2A	-1.41	2.5
21	MP-1	-0.61	3.75
22	MP-2	-0.65	3.75
23	MP-3	-1.1	4.75
24	MP-4	-1.1	4.75
25	MP-5	-0.37	3.75
26	MP-6	-0.8	4.75
27	MP-7	-0.52	3.75
28	MP-8	-0.8	4.75
29	MP-9	-0.61	3.75
30	MP-10	-1.1	4.75
31	MP-11	-0.65	3.75
32	MP-12	-1.1	4.75
33	MP-1	-0.35	1.67
34	MP-2	-0.29	1.5
35	MP-3	-0.38	0.83
36	MP-3	-0.64	5
37	MP-4	-0.64	5
38	MP-4	-0.28	1.5
39	MP-5	-0.21	1.67
40	MP-5	-0.21	1.5
41	MP-6	-0.46	5
42	MP-7	-0.3	0.83
43	MP-8	-0.46	5
44	MP-8	-0.17	1.5
45	MP-8	-0.35	1.67
46	MP-9	-0.29	1.5
47	MP-10	-0.64	5
48	MP-11	-0.38	0.83
49	MP-12	-0.64	5
50	MP-12	-0.28	1.5
51	SA-1A	-0.46	2.5
52	SA-2A	-0.81	2.5
53	MP-1	-0.35	3.75
54	MP-2	-0.38	3.75
55	MP-3	-0.64	4.75
56	MP-4	-0.64	4.75
57	MP-5	-0.21	3.75
58	MP-6	-0.46	4.75
59	MP-7	-0.3	3.75
60	MP-8	-0.46	4.75
61	MP-9	-0.35	3.75
62	MP-10	-0.64	4.75
63	MP-11	-0.38	3.75
64	MP-12	-0.64	4.75

Member Point Loads (BLC 4 : 45 Wind - No Ice)

Member Label	Direction	Magnitude(k,k-ft)	Location(ft,%)
1	MP-1	-0.43	1.67

Member Point Loads (BLC 4 : 45 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k/ft)	Location(ft.)
2	X	-0.038	1.5
3	X	-0.05	0.83
4	X	-0.82	5
5	X	-0.82	5
6	X	-0.35	1.5
7	X	-0.32	1.67
8	X	-0.31	1.5
9	X	-0.67	5
10	X	-0.44	0.83
11	X	-0.67	5
12	X	-0.26	1.5
13	X	-0.55	1.67
14	X	-0.44	1.5
15	X	-0.96	5
16	X	-0.56	0.83
17	X	-0.96	5
18	X	-0.44	1.5
19	X	-0.82	2.5
20	X	-0.43	3.75
21	X	-0.5	3.75
22	X	-0.82	4.75
23	X	-0.82	4.75
24	X	-0.32	3.75
25	X	-0.67	4.75
26	X	-0.44	3.75
27	X	-0.67	4.75
28	X	-0.55	3.75
29	X	-0.96	4.75
30	X	-0.56	3.75
31	X	-0.96	4.75
32	X	-0.43	1.67
33	X	-0.83	1.5
34	X	-0.5	0.83
35	X	-0.82	5
36	X	-0.35	1.5
37	X	-0.32	1.67
38	X	-0.31	1.5
39	X	-0.67	5
40	X	-0.44	0.83
41	X	-0.67	5
42	X	-0.44	0.83
43	X	-0.67	5
44	X	-0.26	1.5
45	X	-0.55	1.67
46	X	-0.44	1.5
47	X	-0.96	0.83
48	X	-0.56	5
49	X	-0.96	5
50	X	-0.44	1.5
51	X	-0.82	2.5
52	X	-1.11	3.75
53	X	-0.43	4.75
54	X	-0.5	3.75
55	X	-0.82	4.75
56	X	-0.82	4.75
57	X	-0.32	3.75
58	X	-0.67	4.75

Member Point Loads (BLC 4 : 45 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k/ft)	Location(ft.)
59	X	-0.44	3.75
60	X	-0.67	4.75
61	X	-0.55	3.75
62	X	-0.96	4.75
63	X	-0.56	3.75
64	X	-0.96	4.75

Member Label	Direction	Magnitude(k/ft)	Location(ft.)
1	X	-0.26	1.67
2	X	-0.24	1.5
3	X	-0.53	0.83
4	X	-0.52	5
5	X	-0.52	5
6	X	-0.21	1.5
7	X	-0.26	1.67
8	X	-0.24	1.5
9	X	-0.52	5
10	X	-0.53	0.83
11	X	-0.52	5
12	X	-0.21	1.5
13	X	-0.4	1.67
14	X	-0.82	1.5
15	X	-0.7	5
16	X	-0.4	0.83
17	X	-0.7	5
18	X	-0.82	1.5
19	X	-0.7	2.5
20	X	-0.7	2.5
21	X	-0.26	3.75
22	X	-0.53	3.75
23	X	-0.52	4.75
24	X	-0.52	4.75
25	X	-0.26	3.75
26	X	-0.52	4.75
27	X	-0.53	3.75
28	X	-0.52	4.75
29	X	-0.4	3.75
30	X	-0.7	4.75
31	X	-0.4	3.75
32	X	-0.7	4.75
33	X	-0.45	1.67
34	X	-0.41	1.5
35	X	-0.57	0.83
36	X	-0.9	5
37	X	-0.9	5
38	X	-0.96	1.5
39	X	-0.45	1.67
40	X	-0.41	1.5
41	X	-0.9	5
42	X	-0.67	0.83
43	X	-0.9	5
44	X	-0.56	1.5
45	X	-0.69	1.67
46	X	-0.55	1.5
47	X	-1.21	5



Member Point Loads (BLC 5 : 60 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k-ft)	Location(ft, %)
48	MP-11	-07	.083
49	MP-12	-121	.5
50	MP-12	-055	1.5
51	SA-1A	-121	.25
52	SA-2A	-121	.25
53	MP-1	-045	3.75
54	MP-2	-057	3.75
55	MP-3	-09	4.75
56	MP-4	-09	4.75
57	MP-5	-045	3.75
58	MP-6	-09	4.75
59	MP-7	-057	3.75
60	MP-8	-09	4.75
61	MP-9	-069	3.75
62	MP-10	-121	4.75
63	MP-11	-07	3.75
64	MP-12	-121	4.75

Member Point Loads (BLC 6 : 90 Wind - No Ice)

Member Label	Direction	Magnitude(k-ft)	Location(ft, %)
1	MP-1	-043	.167
2	MP-1	.042	1.5
3	MP-2	.061	.083
4	MP-3	-.082	.5
5	MP-4	-.092	.5
6	MP-4	-.034	1.5
7	MP-5	-.071	.167
8	MP-5	-.058	1.5
9	MP-6	-.127	.5
10	MP-7	-.075	.083
11	MP-8	-.127	.5
12	MP-8	-.056	1.5
13	MP-9	-.071	.167
14	MP-9	-.058	1.5
15	MP-10	-.127	.5
16	MP-11	-.075	.083
17	MP-12	-.127	.5
18	MP-12	-.056	1.5
19	SA-1A	-.163	.25
20	SA-2A	-.092	.25
21	MP-1	-.043	3.75
22	MP-2	-.061	3.75
23	MP-3	-.092	4.75
24	MP-4	-.092	4.75
25	MP-5	-.071	3.75
26	MP-6	-.127	4.75
27	MP-7	-.075	3.75
28	MP-8	-.127	4.75
29	MP-9	-.071	3.75
30	MP-10	-.127	4.75
31	MP-11	-.075	3.75
32	MP-12	-.127	4.75

Member Point Loads (BLC 7 : 120 Wind - No Ice)

Member Label	Direction	Magnitude(k-ft)	Location(ft, %)
1	MP-1	.026	.167



Member Point Loads (BLC 7 : 120 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k-ft)	Location(ft, %)
2	MP-1	.024	1.5
3	MP-2	.053	.083
4	MP-3	.5	.5
5	MP-4	.052	.5
6	MP-4	.021	1.5
7	MP-5	.04	.167
8	MP-5	.082	1.5
9	MP-6	.07	.5
10	MP-7	.04	.083
11	MP-8	.07	.5
12	MP-8	.032	1.5
13	MP-9	.026	.167
14	MP-9	.024	1.5
15	MP-10	.052	.5
16	MP-11	.033	.083
17	MP-12	.052	.5
18	MP-12	.021	1.5
19	SA-1A	.07	.25
20	SA-2A	.034	.25
21	MP-1	.026	3.75
22	MP-2	.033	3.75
23	MP-3	.052	4.75
24	MP-4	.052	4.75
25	MP-5	.04	3.75
26	MP-6	.07	4.75
27	MP-7	.04	3.75
28	MP-8	.07	4.75
29	MP-9	.026	3.75
30	MP-10	.052	4.75
31	MP-11	.033	3.75
32	MP-12	.052	4.75
33	MP-1	-.045	.167
34	MP-1	-.041	1.5
35	MP-2	-.057	.083
36	MP-3	-.09	.5
37	MP-4	-.09	.5
38	MP-4	-.036	1.5
39	MP-5	-.069	.167
40	MP-5	-.055	1.5
41	MP-6	-.121	.5
42	MP-7	-.07	.083
43	MP-8	-.121	.5
44	MP-8	-.055	1.5
45	MP-9	-.045	.167
46	MP-9	-.041	1.5
47	MP-10	-.09	.5
48	MP-11	-.09	.5
49	MP-12	-.09	.5
50	MP-12	-.036	1.5
51	SA-1A	-.121	.25
52	SA-2A	-.059	.25
53	MP-1	-.045	3.75
54	MP-2	-.057	3.75
55	MP-3	-.09	4.75
56	MP-4	-.089	4.75
57	MP-5	-.089	3.75
58	MP-6	-.121	4.75



Member Point Loads (BLC 9 : 150 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k.ft)	Location(ft.)
37	MP-4	-0.64	5
38	MP-4	-0.28	1.5
39	MP-5	-0.65	1.67
40	MP-5	-0.29	1.5
41	MP-6	-0.64	5
42	MP-7	-0.68	0.83
43	MP-8	-0.64	5
44	MP-8	-0.29	1.5
45	MP-9	-0.21	1.67
46	MP-9	-0.21	1.5
47	MP-10	-0.46	5
48	MP-11	-0.03	0.83
49	MP-12	-0.46	5
50	MP-12	-0.17	1.5
51	SA-1A	-0.46	2.5
52	SA-2A	-0.46	2.5
53	MP-1	-0.35	3.75
54	MP-2	-0.38	3.75
55	MP-3	-0.64	4.75
56	MP-4	-0.64	4.75
57	MP-5	-0.35	3.75
58	MP-6	-0.64	4.75
59	MP-7	-0.38	3.75
60	MP-8	-0.64	4.75
61	MP-9	-0.21	3.75
62	MP-10	-0.46	4.75
63	MP-11	-0.3	3.75
64	MP-12	-0.46	4.75

Member Point Loads (BLC 10 : 180 Wind - No Ice)

Member Label	Direction	Magnitude(k.ft)	Location(ft.)
1	MP-1	.08	1.67
2	MP-1	.064	1.5
3	MP-2	.08	0.83
4	MP-3	.139	5
5	MP-4	.139	5
6	MP-4	.064	1.5
7	MP-5	.052	1.67
8	MP-5	.048	1.5
9	MP-6	.104	5
10	MP-7	.066	0.83
11	MP-8	.104	5
12	MP-8	.042	1.5
13	MP-9	.052	1.67
14	MP-9	.048	1.5
15	MP-10	.104	5
16	MP-11	.066	0.83
17	MP-12	.104	5
18	MP-12	.042	1.5
19	SA-1A	.068	2.5
20	SA-2A	.139	2.5
21	MP-1	.08	3.75
22	MP-2	.08	3.75
23	MP-3	.139	4.75
24	MP-4	.139	4.75
25	MP-4	.052	1.5



Member Point Loads (BLC 10 : 180 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k.ft)	Location(ft.)
26	MP-6	.104	4.75
27	MP-7	.066	3.75
28	MP-8	.104	4.75
29	MP-9	.052	3.75
30	MP-10	.104	4.75
31	MP-11	.066	3.75
32	MP-12	.104	4.75

Member Point Loads (BLC 11 : 210 Wind - No Ice)

Member Label	Direction	Magnitude(k.ft)	Location(ft.)
1	MP-1	.061	1.67
2	MP-1	.051	1.5
3	MP-2	.065	0.83
4	MP-3	.11	5
5	MP-4	.11	5
6	MP-4	.049	1.5
7	MP-5	.037	1.67
8	MP-5	.037	1.5
9	MP-6	.08	5
10	MP-7	.052	0.83
11	MP-8	.08	5
12	MP-8	.03	1.5
13	MP-9	.061	1.67
14	MP-9	.051	1.5
15	MP-10	.11	5
16	MP-11	.065	0.83
17	MP-12	.11	5
18	MP-12	.049	1.5
19	SA-1A	.079	2.5
20	SA-2A	.141	2.5
21	MP-1	.061	3.75
22	MP-2	.065	3.75
23	MP-3	.11	4.75
24	MP-4	.11	4.75
25	MP-5	.037	3.75
26	MP-6	.08	4.75
27	MP-7	.052	3.75
28	MP-8	.08	4.75
29	MP-9	.061	3.75
30	MP-10	.11	4.75
31	MP-11	.065	3.75
32	MP-12	.11	4.75
33	MP-1	.035	1.67
34	MP-1	.029	1.5
35	MP-2	.038	0.83
36	MP-3	.064	5
37	MP-4	.064	5
38	MP-4	.028	1.5
39	MP-5	.021	1.67
40	MP-5	.021	1.5
41	MP-6	.046	5
42	MP-7	.03	0.83
43	MP-8	.046	5
44	MP-8	.017	1.5
45	MP-9	.035	1.67
46	MP-9	.029	1.5



Company : Tower Engineering Professionals, Inc.
 Designer : DC
 Job Number : TEP No. 25725.212823
 Model Name : CCI BU No. 876348

Jan. 22, 2019
 12:35 PM
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Member Point Loads (BLC 11 : 210 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(kN-ft)	Location(ft-%)
47	MP-10	.064	.5
48	MP-11	.038	.083
49	MP-12	.064	.5
50	MP-12	.028	1.5
51	SA-1A	.046	.25
52	SA-2A	.081	.25
53	MP-1	.035	3.75
54	MP-2	.038	3.75
55	MP-3	.064	4.75
56	MP-4	.064	4.75
57	MP-5	.021	4.75
58	MP-6	.046	4.75
59	MP-7	.03	3.75
60	MP-8	.046	4.75
61	MP-9	.035	3.75
62	MP-10	.064	4.75
63	MP-11	.038	3.75
64	MP-12	.064	4.75

Member Point Loads (BLC 12 : 225 Wind - No Ice)

Member Label	Direction	Magnitude(kN-ft)	Location(ft-%)
1	MP-1	.043	.167
2	MP-1	.038	1.5
3	MP-2	.05	.083
4	MP-3	.082	.5
5	MP-4	.082	.5
6	MP-4	.035	1.5
7	MP-5	.032	.167
8	MP-5	.031	1.5
9	MP-6	.067	.5
10	MP-7	.044	.083
11	MP-8	.067	.5
12	MP-8	.026	1.5
13	MP-9	.055	.167
14	MP-9	.044	1.5
15	MP-10	.096	.5
16	MP-11	.056	.083
17	MP-12	.096	.5
18	MP-12	.044	1.5
19	SA-1A	.082	.25
20	SA-2A	.111	.25
21	MP-1	.043	3.75
22	MP-2	.05	3.75
23	MP-3	.082	4.75
24	MP-4	.082	4.75
25	MP-5	.032	4.75
26	MP-6	.067	4.75
27	MP-7	.044	3.75
28	MP-8	.067	4.75
29	MP-9	.055	3.75
30	MP-10	.096	4.75
31	MP-11	.056	3.75
32	MP-12	.096	4.75
33	MP-1	.043	.167
34	MP-1	.038	1.5
35	MP-2	.05	.083



Company : Tower Engineering Professionals, Inc.
 Designer : DC
 Job Number : TEP No. 25725.212823
 Model Name : CCI BU No. 876348

Jan. 22, 2019
 12:42 PM
 Checked By: NWS

Member Point Loads (BLC 12 : 225 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(kN-ft)	Location(ft-%)
36	MP-3	.082	.5
37	MP-4	.082	.5
38	MP-4	.035	1.5
39	MP-5	.082	.167
40	MP-5	.031	1.5
41	MP-6	.067	.5
42	MP-7	.044	.083
43	MP-8	.067	.5
44	MP-8	.026	1.5
45	MP-9	.055	.167
46	MP-9	.044	1.5
47	MP-10	.096	.5
48	MP-11	.056	.083
49	MP-12	.096	.5
50	MP-12	.044	1.5
51	SA-1A	.082	.25
52	SA-2A	.111	.25
53	MP-1	.043	3.75
54	MP-2	.05	3.75
55	MP-3	.082	4.75
56	MP-4	.082	4.75
57	MP-5	.032	4.75
58	MP-6	.067	4.75
59	MP-7	.044	3.75
60	MP-8	.067	4.75
61	MP-9	.055	3.75
62	MP-10	.096	4.75
63	MP-11	.056	3.75
64	MP-12	.096	4.75

Member Point Loads (BLC 13 : 240 Wind - No Ice)

Member Label	Direction	Magnitude(kN-ft)	Location(ft-%)
1	MP-1	.026	.167
2	MP-1	.024	1.5
3	MP-2	.033	.083
4	MP-3	.052	.5
5	MP-4	.052	.5
6	MP-4	.021	1.5
7	MP-5	.026	.167
8	MP-5	.024	1.5
9	MP-6	.052	.5
10	MP-7	.033	.083
11	MP-8	.052	.5
12	MP-8	.021	1.5
13	MP-9	.04	.167
14	MP-9	.032	1.5
15	MP-10	.07	.5
16	MP-11	.04	.083
17	MP-12	.07	.5
18	MP-12	.032	1.5
19	SA-1A	.07	.25
20	SA-2A	.07	.25
21	MP-1	.026	3.75
22	MP-2	.033	4.75
23	MP-3	.052	4.75
24	MP-4	.052	4.75



Member Point Loads (BLC 13 : 240 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k-ft-lb)	Location(ft-%)
25	MP-5	.026	3.75
26	MP-6	.052	4.75
27	MP-7	.033	3.75
28	MP-8	.052	4.75
29	MP-9	.04	3.75
30	MP-10	.07	4.75
31	MP-11	.04	3.75
32	MP-12	.07	4.75
33	MP-1	.045	1.67
34	MP-2	.041	1.5
35	MP-3	.057	.083
36	MP-4	.09	.5
37	MP-5	.09	.5
38	MP-6	.038	1.5
39	MP-7	.045	1.67
40	MP-8	.041	1.5
41	MP-9	.09	.5
42	MP-10	.057	.083
43	MP-11	.09	.5
44	MP-12	.036	1.5
45	MP-1	.069	1.67
46	MP-2	.055	1.5
47	MP-3	.121	.5
48	MP-4	.07	.083
49	MP-5	.121	.5
50	MP-6	.055	1.5
51	SA-1A	.121	.25
52	SA-2A	.121	.25
53	MP-1	.045	3.75
54	MP-2	.057	3.75
55	MP-3	.09	4.75
56	MP-4	.09	4.75
57	MP-5	.045	3.75
58	MP-6	.09	4.75
59	MP-7	.057	3.75
60	MP-8	.09	4.75
61	MP-9	.069	3.75
62	MP-10	.121	4.75
63	MP-11	.07	3.75
64	MP-12	.121	4.75

Member Point Loads (BLC 14 : 270 Wind - No Ice)

Member Label	Direction	Magnitude(k-ft-lb)	Location(ft-%)
1	MP-1	.043	1.67
2	MP-2	.042	1.5
3	MP-3	.061	.083
4	MP-4	.092	.5
5	MP-5	.092	.5
6	MP-6	.034	1.5
7	MP-7	.071	1.67
8	MP-8	.058	1.5
9	MP-9	.127	.5
10	MP-10	.076	.083
11	MP-11	.127	.5
12	MP-12	.056	1.5
13	MP-1	.071	1.67



Member Point Loads (BLC 14 : 270 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k-ft-lb)	Location(ft-%)
14	MP-9	.058	1.5
15	MP-10	.127	.5
16	MP-11	.075	.083
17	MP-12	.127	.5
18	SA-1A	.056	1.5
19	SA-2A	.056	1.5
20	MP-1	.092	.25
21	MP-2	.043	3.75
22	MP-3	.061	3.75
23	MP-4	.092	4.75
24	MP-5	.071	4.75
25	MP-6	.127	3.75
26	MP-7	.075	4.75
27	MP-8	.075	4.75
28	MP-9	.071	4.75
29	MP-10	.127	4.75
30	MP-11	.075	4.75
31	MP-12	.127	4.75
32	MP-1	.127	4.75

Member Point Loads (BLC 15 : 300 Wind - No Ice)

Member Label	Direction	Magnitude(k-ft-lb)	Location(ft-%)
1	MP-1	.028	1.67
2	MP-2	.024	1.5
3	MP-3	.033	.083
4	MP-4	.052	.5
5	MP-5	.052	.5
6	MP-6	.021	1.5
7	MP-7	.04	1.67
8	MP-8	.032	1.5
9	MP-9	.07	.5
10	MP-10	.04	.083
11	MP-11	.07	.5
12	MP-12	.04	.5
13	MP-1	.032	1.5
14	MP-2	.024	1.5
15	MP-3	.052	.5
16	MP-4	.033	.083
17	MP-5	.052	.5
18	MP-6	.021	1.5
19	SA-1A	.07	.25
20	SA-2A	.07	.25
21	MP-1	.026	3.75
22	MP-2	.033	3.75
23	MP-3	.052	4.75
24	MP-4	.052	4.75
25	MP-5	.04	3.75
26	MP-6	.07	4.75
27	MP-7	.04	4.75
28	MP-8	.07	4.75
29	MP-9	.127	3.75
30	MP-10	.052	4.75
31	MP-11	.127	3.75
32	MP-12	.033	4.75
33	MP-1	.045	1.67
34	MP-1	.041	1.5

Member Point Loads (BLC 15 : 300 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft, %)
35	MP-2	.057	.083
36	MP-3	.09	.5
37	MP-4	.09	.5
38	MP-4	.036	1.5
39	MP-5	.069	.167
40	MP-5	.055	1.5
41	MP-6	.121	.5
42	MP-7	.07	.083
43	MP-8	.121	1.5
44	MP-8	.055	1.5
45	MP-9	.045	.167
47	MP-10	.09	.5
48	MP-11	.057	.083
49	MP-12	.09	.5
50	MP-12	.036	1.5
51	SA-1A	.121	.25
52	SA-2A	.059	.25
53	MP-1	.045	3.75
54	MP-2	.057	3.75
55	MP-3	.09	4.75
56	MP-4	.09	4.75
57	MP-5	.069	3.75
58	MP-5	.121	4.75
59	MP-7	.07	3.75
60	MP-8	.121	4.75
61	MP-9	.045	3.75
62	MP-10	.09	4.75
63	MP-11	.057	3.75
64	MP-12	.09	4.75

Member Point Loads (BLC 16 : 315 Wind - No Ice)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft, %)
1	MP-1	-.043	.167
2	MP-1	-.038	1.5
3	MP-2	-.05	.083
4	MP-3	-.082	.5
5	MP-4	-.082	.5
6	MP-4	-.035	1.5
7	MP-5	-.055	.167
8	MP-5	-.044	1.5
9	MP-6	-.096	.5
10	MP-7	-.056	.083
11	MP-8	-.096	.5
12	MP-8	-.044	1.5
13	MP-9	-.032	.167
14	MP-9	-.031	.5
15	MP-10	-.067	.5
16	MP-11	-.044	.083
17	MP-12	-.067	.5
18	MP-12	-.026	1.5
19	SA-1A	-.082	.25
20	SA-2A	-.053	.25
21	MP-1	-.043	3.75
22	MP-2	-.05	3.75
23	MP-3	-.082	4.75

Member Point Loads (BLC 16 : 315 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft, %)
24	MP-4	-.055	4.75
25	MP-5	-.082	3.75
26	MP-6	-.056	4.75
27	MP-7	-.056	3.75
28	MP-8	-.096	4.75
29	MP-9	-.096	3.75
30	MP-10	-.067	4.75
31	MP-11	-.044	3.75
32	MP-12	-.067	4.75
33	MP-1	.043	.167
34	MP-1	.038	1.5
35	MP-2	.05	.083
36	MP-3	.082	.5
37	MP-4	.082	.5
38	MP-4	.035	1.5
39	MP-5	.055	.167
40	MP-5	.044	1.5
41	MP-6	.096	.5
42	MP-7	.066	.083
43	MP-8	.096	.5
44	MP-8	.044	1.5
45	MP-9	.032	.167
46	MP-9	.031	1.5
47	MP-10	.067	.5
48	MP-11	.044	.083
49	MP-12	.067	.5
50	MP-12	.026	1.5
51	SA-1A	.082	.25
52	SA-2A	.053	.25
53	MP-1	.043	3.75
54	MP-2	.05	3.75
55	MP-3	.082	4.75
56	MP-4	.082	4.75
57	MP-5	.055	3.75
58	MP-6	.096	4.75
59	MP-7	.096	3.75
60	MP-8	.096	4.75
61	MP-8	.032	3.75
62	MP-9	.067	4.75
63	MP-10	.044	3.75
64	MP-12	.067	4.75

Member Point Loads (BLC 17 : 330 Wind - No Ice)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft, %)
1	MP-1	-.061	.167
2	MP-1	-.051	1.5
3	MP-2	-.065	.083
4	MP-3	-.11	.5
5	MP-4	-.11	.5
6	MP-4	-.049	1.5
7	MP-5	-.061	.167
8	MP-5	-.051	1.5
9	MP-6	-.11	.5
10	MP-7	-.065	.083
11	MP-8	-.11	.5
12	MP-8	-.049	1.5



Member Point Loads (BLC 17 : 330 Wind - No Ice) (Continued)

Member Label	Direction	Magnitude(k-ft/l)	Location(ft.%)
13	X	-0.37	1.67
14	X	-0.37	1.5
15	X	-0.8	5
16	X	-0.52	0.83
17	X	-0.8	5
18	X	-0.3	1.5
19	X	-0.79	25
20	X	-0.79	25
21	X	-0.61	3.75
22	X	-0.65	3.75
23	X	-1.1	4.75
24	X	-1.1	4.75
25	X	-0.61	4.75
26	X	-1.1	4.75
27	X	-0.65	3.75
28	X	-1.1	4.75
29	X	-0.37	3.75
30	X	-0.8	4.75
31	X	-0.52	4.75
32	X	0.35	1.67
34	Z	0.29	1.5
35	Z	0.38	0.83
36	Z	0.64	5
37	Z	0.64	5
38	Z	0.28	1.5
39	Z	0.35	1.67
40	Z	0.29	1.5
41	Z	0.64	5
42	Z	0.38	0.83
43	Z	0.64	5
44	Z	0.28	1.5
45	Z	0.21	1.67
46	Z	0.21	1.5
47	Z	0.46	5
48	Z	0.9	0.83
49	Z	0.46	5
50	Z	0.17	1.5
51	Z	0.46	25
52	Z	0.46	25
53	Z	0.35	3.75
54	Z	0.38	4.75
55	Z	0.64	4.75
56	Z	0.64	4.75
57	Z	0.35	3.75
58	Z	0.64	4.75
59	Z	0.38	3.75
60	Z	0.64	4.75
61	Z	0.21	3.75
62	Z	0.46	4.75
63	Z	0.3	3.75
64	Z	0.46	4.75

Member Point Loads (BLC 18 : Ice Weight)

Member Label	Direction	Magnitude(k-ft/l)	Location(ft.%)
1	Y	-0.6	1.67



Member Point Loads (BLC 18 : Ice Weight) (Continued)

Member Label	Direction	Magnitude(k-ft/l)	Location(ft.%)
2	Y	-0.76	1.5
3	Y	-0.69	0.83
4	Y	-1.01	5
5	Y	-1.01	5
6	Y	-0.68	1.5
7	Y	-0.6	1.67
8	Y	-0.76	1.5
9	Y	-1.01	5
10	Y	-0.59	0.83
11	Y	-1.01	5
12	Y	-0.68	1.5
13	Y	-0.6	1.67
14	Y	-0.76	1.5
15	Y	-1.01	5
16	Y	-0.68	0.83
17	Y	-1.01	5
18	Y	-0.68	1.5
19	Y	-1.42	25
20	Y	-1.42	25
21	Y	-0.6	3.75
22	Y	-0.59	3.75
23	Y	-1.01	4.75
24	Y	-1.01	4.75
25	Y	-0.6	3.75
26	Y	-1.01	4.75
27	Y	-0.59	3.75
28	Y	-1.01	4.75
29	Y	-0.6	3.75
30	Y	-1.01	4.75
31	Y	-0.59	3.75
32	Y	-1.01	4.75

Member Point Loads (BLC 19 : 0 Wind - Ice)

Member Label	Direction	Magnitude(k-ft/l)	Location(ft.%)
1	X	-0.19	1.67
2	X	-0.17	1.5
3	X	-0.21	0.83
4	X	-0.31	5
5	X	-0.31	5
6	X	-0.17	1.5
7	X	-0.19	1.67
8	X	-0.17	1.5
9	X	-0.31	0.83
10	X	-0.21	3
11	X	-0.31	1.5
12	X	-0.17	1.5
13	X	-0.19	1.67
14	X	-0.17	1.5
15	X	-0.31	0.83
16	X	-0.21	3
17	X	-0.31	1.5
18	X	-0.17	1.5
19	X	-0.37	25
20	X	-0.37	25
21	X	-0.19	3.75
22	X	-0.21	3.75



Member Point Loads (BLC 19 : 0 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k-ft)	Location(ft,%)
23	MP-9	X	4.75
24	MP-4	-0.31	4.75
25	MP-5	-0.19	3.75
26	MP-6	-0.31	4.75
27	MP-7	-0.21	3.75
28	MP-8	-0.31	4.75
29	MP-9	-0.19	3.75
30	MP-10	-0.31	4.75
31	MP-11	-0.21	3.75
32	MP-12	-0.31	4.75

Member Point Loads (BLC 20 : 30 Wind - Ice)

Member Label	Direction	Magnitude(k-ft)	Location(ft,%)
1	MP-1	-0.15	1.67
2	MP-1	1.5	1.5
3	MP-2	-0.63	0.83
4	MP-3	-0.25	5
5	MP-4	-0.25	5
6	MP-4	-0.13	1.67
7	MP-5	-0.11	1.67
8	MP-5	-0.11	1.5
9	MP-6	-0.2	5
10	MP-7	-0.15	0.83
11	MP-8	-0.2	5
12	MP-8	-0.09	1.5
13	MP-9	-0.13	1.5
14	MP-9	-0.25	5
15	MP-10	-0.25	5
16	MP-11	-0.17	0.83
17	MP-12	-0.25	5
18	MP-12	-0.13	1.5
19	SA-1A	-0.2	2.5
20	SA2A	-0.32	2.5
21	MP-1	-0.15	3.75
22	MP-2	-0.17	3.75
23	MP-3	-0.25	4.75
24	MP-4	-0.25	4.75
25	MP-5	-0.11	3.75
26	MP-5	-0.2	4.75
27	MP-7	-0.15	3.75
28	MP-8	-0.2	4.75
29	MP-9	-0.15	3.75
30	MP-10	-0.25	4.75
31	MP-11	-0.17	3.75
32	MP-12	-0.25	4.75
33	MP-1	-0.09	1.67
34	MP-1	-0.08	1.5
35	MP-2	-0.1	0.83
36	MP-3	-0.15	5
37	MP-4	-0.15	5
38	MP-4	-0.06	1.67
39	MP-5	-0.06	1.5
40	MP-5	-0.12	5
41	MP-6	-0.09	0.83
42	MP-7	-0.09	1.67
43	MP-8	-0.12	5



Member Point Loads (BLC 20 : 30 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k-ft)	Location(ft,%)
44	MP-8	-0.05	1.5
45	MP-9	-0.09	1.67
46	MP-9	-0.08	1.5
47	MP-10	-0.15	5
48	MP-11	-0.1	0.83
49	MP-12	-0.15	5
50	MP-12	-0.08	1.5
51	SA-1A	-0.11	2.5
52	SA-2A	-0.19	2.5
53	MP-1	-0.09	3.75
54	MP-2	-0.1	3.75
55	MP-3	-0.15	4.75
56	MP-4	-0.15	4.75
57	MP-5	-0.06	3.75
58	MP-6	-0.12	4.75
59	MP-7	-0.09	3.75
60	MP-8	-0.12	4.75
61	MP-9	-0.09	3.75
62	MP-10	-0.15	4.75
63	MP-11	-0.1	3.75
64	MP-12	-0.15	4.75

Member Point Loads (BLC 21 : 45 Wind - Ice)

Member Label	Direction	Magnitude(k-ft)	Location(ft,%)
1	MP-1	X	1.67
2	MP-1	-0.11	1.5
3	MP-2	-0.14	0.83
4	MP-3	-0.19	5
5	MP-4	-0.19	5
6	MP-4	-0.1	1.5
7	MP-5	-0.09	1.67
8	MP-6	-0.09	1.5
9	MP-6	-0.17	5
10	MP-7	-0.12	0.83
11	MP-8	-0.17	5
12	MP-8	-0.08	1.5
13	MP-9	-0.13	1.67
14	MP-9	-0.12	1.5
15	MP-10	-0.22	5
16	MP-11	-0.15	0.83
17	MP-12	-0.22	5
18	MP-12	-0.12	1.5
19	SA-1A	-0.19	2.5
20	SA-2A	-0.25	2.5
21	MP-1	-0.11	3.75
22	MP-2	-0.14	3.75
23	MP-3	-0.19	4.75
24	MP-4	-0.19	4.75
25	MP-5	-0.09	3.75
26	MP-6	-0.09	3.75
27	MP-7	-0.12	3.75
28	MP-8	-0.17	4.75
29	MP-9	-0.13	3.75
30	MP-10	-0.22	4.75
31	MP-11	-0.15	3.75
32	MP-12	-0.22	4.75



Member Point Loads (BLC 22 : 60 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k.k-ft)	Location(ft, %)
22	X	-0.09	3.75
23	X	-0.13	4.75
24	X	-0.13	4.75
25	X	-0.07	3.75
26	X	-0.13	4.75
27	X	-0.09	3.75
28	X	-0.13	4.75
29	X	-0.09	3.75
30	X	-0.16	4.75
31	X	-0.16	4.75
32	X	-0.12	1.67
33	X	-0.12	1.5
34	X	-0.16	0.83
35	X	-0.16	0.83
36	X	-0.22	5
37	X	-0.22	5
38	X	-0.1	1.5
39	X	-0.12	1.67
40	X	-0.12	1.5
41	X	-0.22	5
42	X	-0.16	0.83
43	X	-0.22	5
44	X	-0.1	1.5
45	X	-0.16	1.67
46	X	-0.14	1.5
47	X	-0.27	5
48	X	-0.18	0.83
49	X	-0.27	5
50	X	-0.14	1.5
51	SA-1A	-0.28	2.5
52	SA-2A	-0.28	2.5
53	MP-1	-0.12	3.75
54	MP-2	-0.16	3.75
55	MP-3	-0.22	4.75
56	MP-4	-0.22	4.75
57	MP-5	-0.12	3.75
58	MP-6	-0.22	4.75
59	MP-7	-0.16	3.75
60	MP-8	-0.22	4.75
61	MP-9	-0.16	3.75
62	MP-10	-0.27	4.75
63	MP-11	-0.18	3.75
64	MP-12	-0.18	4.75

Member Point Loads (BLC 23 : 90 Wind - Ice)

Member Label	Direction	Magnitude(k.k-ft)	Location(ft, %)
1	X	-0.12	1.67
2	X	-0.12	1.5
3	X	-0.17	0.83
4	X	-0.23	5
5	X	-0.23	5
6	X	-0.1	1.5
7	X	-0.12	1.67
8	X	-0.12	1.5
9	X	-0.23	5
10	X	-0.17	0.83



Member Point Loads (BLC 21 : 45 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k.k-ft)	Location(ft, %)
33	X	-0.11	1.67
34	X	-0.1	1.5
35	X	-0.14	0.83
36	X	-0.19	5
37	X	-0.19	5
38	X	-0.15	1.5
39	X	-0.09	1.67
40	X	-0.09	1.5
41	X	-0.17	0.83
42	X	-0.12	0.83
43	X	-0.17	5
44	X	-0.08	1.5
45	X	-0.13	1.67
46	X	-0.12	1.5
47	X	-0.22	5
48	X	-0.15	0.83
49	X	-0.22	5
50	X	-0.12	1.5
51	SA-1A	-0.19	2.5
52	SA-2A	-0.25	2.5
53	MP-1	-0.11	3.75
54	MP-2	-0.14	3.75
55	MP-3	-0.19	4.75
56	MP-4	-0.19	4.75
57	MP-5	-0.09	3.75
58	MP-6	-0.12	4.75
59	MP-7	-0.12	4.75
60	MP-8	-0.17	4.75
61	MP-9	-0.13	3.75
62	MP-10	-0.22	4.75
63	MP-11	-0.15	3.75
64	MP-12	-0.22	4.75

Member Point Loads (BLC 22 : 60 Wind - Ice)

Member Label	Direction	Magnitude(k.k-ft)	Location(ft, %)
1	X	-0.07	1.67
2	X	-0.07	1.5
3	X	-0.09	0.83
4	X	-0.13	5
5	X	-0.13	5
6	X	-0.06	1.5
7	X	-0.07	1.67
8	X	-0.07	1.5
9	X	-0.13	5
10	X	-0.09	0.83
11	X	-0.13	5
12	X	-0.16	1.67
13	X	-0.09	1.5
14	X	-0.08	1.5
15	X	-0.16	5
16	X	-0.1	0.83
17	X	-0.16	5
18	X	-0.08	1.5
19	X	-0.16	2.5
20	SA-2A	-0.16	2.5
21	MP-1	-0.07	3.75



Member Point Loads (BLC 23 : 90 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k.k-ft)	Location(ft.%)
11	MP-8	-0.23	5
12	MP-8	-0.12	1.5
13	MP-9	-0.12	1.5
14	MP-9	-0.12	1.5
15	MP-10	-0.23	5
16	MP-11	-0.17	0.83
17	MP-12	-0.23	5
18	MP-12	-0.1	1.5
19	SA-1A	-0.18	25
20	SA-2A	-0.18	25
21	MP-1	-0.12	3.75
22	MP-2	-0.17	3.75
23	MP-3	-0.23	4.75
24	MP-4	-0.23	4.75
25	MP-5	-0.12	3.75
26	MP-6	-0.23	4.75
27	MP-7	-0.17	3.75
28	MP-8	-0.23	4.75
29	MP-9	-0.12	3.75
30	MP-10	-0.23	4.75
31	MP-11	-0.17	3.75
32	MP-12	-0.23	4.75

Member Point Loads (BLC 24 : 120 Wind - Ice)

Member Label	Direction	Magnitude(k.k-ft)	Location(ft.%)
1	MP-1	0.07	1.67
2	MP-1	0.07	1.5
3	MP-2	0.09	0.83
4	MP-3	0.13	5
5	MP-4	0.13	5
6	MP-4	0.06	1.5
7	MP-5	0.09	1.67
8	MP-5	0.08	1.5
9	MP-6	0.16	5
10	MP-7	0.1	0.83
11	MP-8	0.16	5
12	MP-8	0.08	1.5
13	MP-9	0.07	1.67
14	MP-9	0.07	1.5
15	MP-10	0.13	5
16	MP-11	0.09	0.83
17	MP-12	0.13	5
18	MP-12	0.08	1.5
19	SA-1A	0.16	25
20	SA-2A	0.09	25
21	MP-1	0.07	3.75
22	MP-2	0.09	3.75
23	MP-3	0.13	4.75
24	MP-4	0.13	4.75
25	MP-5	0.09	3.75
26	MP-6	0.16	4.75
27	MP-7	0.1	3.75
28	MP-8	0.16	4.75
29	MP-9	0.07	3.75
30	MP-10	0.13	4.75
31	MP-11	0.09	3.75



Member Point Loads (BLC 24 : 120 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k.k-ft)	Location(ft.%)
32	MP-12	0.12	4.75
33	MP-1	-0.12	1.67
34	MP-1	-0.12	1.5
35	MP-2	-0.16	0.83
36	MP-3	-0.22	5
37	MP-4	-0.22	5
38	MP-4	-0.1	1.5
39	MP-5	-0.16	1.67
40	MP-5	-0.14	1.5
41	MP-6	-0.27	5
42	MP-7	-0.18	0.83
43	MP-8	-0.27	5
44	MP-8	-0.14	1.5
45	MP-9	-0.12	1.67
46	MP-9	-0.12	1.5
47	MP-10	-0.22	5
48	MP-11	-0.16	0.83
49	MP-12	-0.22	5
50	MP-12	-0.1	1.5
51	SA-1A	-0.28	25
52	SA-2A	-0.16	25
53	MP-1	-0.12	3.75
54	MP-2	-0.16	3.75
55	MP-3	-0.22	4.72
56	MP-4	-0.22	4.75
57	MP-5	-0.16	3.75
58	MP-6	-0.27	4.75
59	MP-7	-0.18	3.75
60	MP-8	-0.27	4.75
61	MP-9	-0.12	3.75
62	MP-10	-0.22	4.75
63	MP-11	-0.16	3.75
64	MP-12	-0.22	4.75

Member Point Loads (BLC 25 : 135 Wind - Ice)

Member Label	Direction	Magnitude(k.k-ft)	Location(ft.%)
1	MP-1	0.11	1.67
2	MP-1	0.1	1.5
3	MP-2	0.14	0.83
4	MP-3	0.19	5
5	MP-4	0.19	5
6	MP-4	0.1	1.5
7	MP-5	0.13	1.67
8	MP-5	0.12	1.5
9	MP-6	0.22	5
10	MP-7	0.15	0.83
11	MP-8	0.22	5
12	MP-8	0.12	1.5
13	MP-9	0.09	1.67
14	MP-9	0.09	1.5
15	MP-10	0.17	5
16	MP-11	0.12	0.83
17	MP-12	0.17	5
18	MP-12	0.08	1.5
19	SA-1A	0.19	25
20	SA-2A	0.14	25



Member Point Loads (BLC 25 : 135 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k-k-ft)	Location(ft.)
21	MP-1	.011	3.75
22	MP-2	.014	3.75
23	MP-3	.019	4.75
24	MP-4	.019	4.75
25	MP-5	.013	3.75
26	MP-6	.022	4.75
27	MP-7	.015	3.75
28	MP-8	.022	4.75
29	MP-9	.009	3.75
30	MP-10	.017	4.75
31	MP-11	.012	3.75
32	MP-12	.017	4.75
33	MP-1	-.011	1.67
34	MP-1	-.01	1.5
35	MP-2	-.014	.083
36	MP-3	-.019	5
37	MP-4	-.019	5
38	MP-4	-.01	1.5
39	MP-5	-.013	1.67
40	MP-5	-.012	1.5
41	MP-6	-.022	5
42	MP-7	-.015	.083
43	MP-8	-.022	5
44	MP-8	-.012	1.5
45	MP-9	-.009	1.67
46	MP-9	-.009	1.5
47	MP-10	-.017	5
48	MP-11	-.012	.083
49	MP-12	-.017	5
50	MP-12	-.008	1.5
51	SA-1A	-.019	25
52	SA-2A	-.014	25
53	MP-1	-.011	3.75
54	MP-2	-.014	3.75
55	MP-3	-.019	4.75
56	MP-4	-.019	4.75
57	MP-5	-.013	3.75
58	MP-6	-.022	4.75
59	MP-7	-.015	3.75
60	MP-8	-.022	4.75
61	MP-9	-.009	3.75
62	MP-10	-.017	4.75
63	MP-11	-.012	3.75
64	MP-12	-.017	4.75

Member Point Loads (BLC 26 : 150 Wind - Ice)

Member Label	Direction	Magnitude(k-k-ft)	Location(ft.)
1	MP-1	.015	1.67
2	MP-1	.013	1.5
3	MP-2	.017	.083
4	MP-3	.025	5
5	MP-4	.025	5
6	MP-4	.013	1.5
7	MP-5	.015	1.67
8	MP-5	.013	1.5
9	MP-6	.025	5



Member Point Loads (BLC 26 : 150 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k-k-ft)	Location(ft.)
10	MP-7	.017	.083
11	MP-8	.025	5
12	MP-8	1.5	1.5
13	MP-9	.011	1.67
14	MP-9	1.5	1.5
15	MP-10	.02	5
16	MP-11	.015	.083
17	MP-12	.02	5
18	MP-12	.009	1.5
19	SA-1A	.02	25
20	SA-2A	.02	25
21	MP-1	.015	3.75
22	MP-2	.017	3.75
23	MP-3	.025	4.75
24	MP-4	.025	4.75
25	MP-5	.015	3.75
26	MP-6	.025	4.75
27	MP-7	.017	3.75
28	MP-8	.025	4.75
29	MP-9	.011	3.75
30	MP-10	.02	4.75
31	MP-11	.015	3.75
32	MP-12	.02	4.75
33	MP-1	-.009	1.67
34	MP-1	-.008	1.5
35	MP-2	-.01	.083
36	MP-3	-.015	5
37	MP-4	-.015	5
38	MP-5	-.008	1.67
39	MP-5	-.009	1.67
40	MP-5	-.008	1.5
41	MP-6	-.015	5
42	MP-7	-.01	.083
43	MP-8	-.015	5
44	MP-8	-.008	1.5
45	MP-9	-.006	1.67
46	MP-9	-.006	1.5
47	MP-10	-.012	5
48	MP-11	-.009	.083
49	MP-12	-.012	5
50	MP-12	-.005	1.5
51	SA-1A	-.011	25
52	SA-2A	-.011	25
53	MP-1	-.009	3.75
54	MP-2	-.01	3.75
55	MP-3	-.015	4.75
56	MP-4	-.015	4.75
57	MP-5	-.009	3.75
58	MP-6	-.015	4.75
59	MP-7	-.01	3.75
60	MP-8	-.015	4.75
61	MP-9	-.006	3.75
62	MP-10	-.012	4.75
63	MP-11	-.009	3.75
64	MP-12	-.012	4.75



Company : Tower Engineering Professionals, Inc.
 Designer :
 Job Number : TEP No. 25725.212923
 Model Name : CCI BU No. 876348

Jan 22, 2019
 12:02 PM
 Checked By: NWS

Member Point Loads (BLC 27 : 180 Wind - Ice)

Member Label	Direction	Magnitude(k,kl)	Location(ft, %)
1	MP-1	.019	.167
2	MP-1	.017	.167
3	MP-2	.021	.083
4	MP-3	.031	.5
5	MP-4	.031	.5
6	MP-4	.017	1.5
7	MP-5	.019	.167
8	MP-5	.017	1.5
9	MP-6	.031	.083
10	MP-7	.021	.5
11	MP-8	.031	.5
12	MP-8	.017	1.5
13	MP-9	.019	.167
14	MP-9	.017	1.5
15	MP-10	.031	.5
16	MP-11	.021	.083
17	MP-12	.031	.5
18	MP-12	.037	1.5
19	SA-1A	.037	.25
20	SA-2A	.019	.25
21	MP-1	.019	3.75
22	MP-2	.021	3.75
23	MP-3	.031	4.75
24	MP-4	.031	4.75
25	MP-5	.019	3.75
26	MP-6	.031	4.75
27	MP-7	.021	3.75
28	MP-8	.031	4.75
29	MP-9	.019	3.75
30	MP-10	.031	4.75
31	MP-11	.021	3.75
32	MP-12	.031	4.75

Member Point Loads (BLC 28 : 210 Wind - Ice)

Member Label	Direction	Magnitude(k,kl)	Location(ft, %)
1	MP-1	.015	.167
2	MP-1	.013	1.5
3	MP-2	.017	.083
4	MP-3	.025	.5
5	MP-4	.025	.5
6	MP-4	.013	1.5
7	MP-5	.011	.167
8	MP-5	.011	1.5
9	MP-6	.02	.5
10	MP-7	.015	.083
11	MP-8	.02	.5
12	MP-8	.009	1.5
13	MP-9	.015	.167
14	MP-9	.013	1.5
15	MP-10	.025	.5
16	MP-11	.017	.083
17	MP-12	.025	.5
18	MP-12	.013	1.5
19	SA-1A	.02	.25
20	SA-2A	.032	.25
21	MP-1	.015	3.75



Company : Tower Engineering Professionals, Inc.
 Designer :
 Job Number : TEP No. 25725.212923
 Model Name : CCI BU No. 876348

Jan 22, 2019
 12:02 PM
 Checked By: NWS

Member Point Loads (BLC 28 : 210 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k,kl)	Location(ft, %)
22	MP-2	.017	3.75
23	MP-3	.025	4.75
24	MP-4	.025	4.75
25	MP-5	.011	.083
26	MP-6	.02	3.75
27	MP-7	.02	4.75
28	MP-8	.015	.083
29	MP-9	.015	3.75
30	MP-10	.025	4.75
31	MP-11	.017	3.75
32	MP-12	.025	4.75
33	MP-1	.009	.167
34	MP-1	.008	1.5
35	MP-2	.01	.083
36	MP-3	.015	.5
37	MP-4	.015	.5
38	MP-4	.008	1.5
39	MP-5	.006	.167
40	MP-5	.006	1.5
41	MP-6	.012	.5
42	MP-7	.009	.083
43	MP-8	.012	.5
44	MP-8	.005	1.5
45	MP-9	.009	.167
46	MP-9	.008	1.5
47	MP-10	.015	.5
48	MP-11	.01	.083
49	MP-12	.015	.5
50	MP-12	.008	1.5
51	SA-1A	.011	.25
52	SA-2A	.019	.25
53	MP-1	.009	3.75
54	MP-2	.01	3.75
55	MP-3	.015	4.75
56	MP-4	.015	4.75
57	MP-5	.006	3.75
58	MP-6	.012	4.75
59	MP-7	.009	3.75
60	MP-8	.012	4.75
61	MP-9	.009	3.75
62	MP-10	.015	4.75
63	MP-11	.01	3.75
64	MP-12	.015	4.75

Member Point Loads (BLC 29 : 225 Wind - Ice)

Member Label	Direction	Magnitude(k,kl)	Location(ft, %)
1	MP-1	.011	.167
2	MP-1	.01	1.5
3	MP-2	.014	.083
4	MP-3	.019	.5
5	MP-4	.019	.5
6	MP-4	.01	1.5
7	MP-5	.009	.167
8	MP-5	.009	1.5
9	MP-6	.017	.5
10	MP-7	.012	.083



Member Point Loads (BLC 29 : 225 Wind - Ice) (Continued)

Member Label	Direction	Magnitude, k-ft-l	Location (ft, %)
11	MP-8	.017	.5
12	MP-8	.008	1.5
13	MP-9	.013	.167
14	MP-9	.012	1.5
15	MP-10	.022	.5
16	MP-11	.015	.083
17	MP-12	.022	.5
18	MP-12	.012	1.5
19	SA-1A	.019	.25
20	SA-2A	.023	.25
21	MP-1	.011	3.75
22	MP-2	.014	3.75
23	MP-3	.019	4.75
24	MP-4	.019	4.75
25	MP-5	.009	3.75
26	MP-6	.017	4.75
27	MP-7	.012	3.75
28	MP-8	.017	4.75
29	MP-9	.013	3.75
30	MP-10	.022	4.75
31	MP-11	.015	3.75
32	MP-12	.022	4.75
33	MP-1	.011	.167
34	MP-1	.01	1.5
35	MP-2	.014	.083
36	MP-3	.019	.5
37	MP-4	.019	.5
38	MP-4	.01	1.5
39	MP-5	.009	.167
40	MP-5	.009	1.5
41	MP-6	.017	.5
42	MP-7	.012	.083
43	MP-8	.017	.5
44	MP-8	.008	1.5
45	MP-9	.013	.167
46	MP-9	.012	1.5
47	MP-10	.022	.5
48	MP-11	.015	.083
49	MP-12	.022	.5
50	MP-12	.012	1.5
51	SA-1A	.019	.25
52	SA-2A	.025	.25
53	MP-1	.011	3.75
54	MP-2	.014	3.75
55	MP-3	.019	4.75
56	MP-4	.018	4.75
57	MP-5	.009	3.75
58	MP-6	.017	3.75
59	MP-7	.012	3.75
60	MP-8	.017	4.75
61	MP-9	.013	3.75
62	MP-10	.022	4.75
63	MP-11	.015	3.75
64	MP-12	.022	4.75

Member Point Loads (BLC 30 : 240 Wind - Ice)

Member Label	Direction	Magnitude, k-ft-l	Location (ft, %)
1	MP-1	.007	.167
2	MP-1	.007	1.5
3	MP-2	.009	.083
4	MP-3	.013	.5
5	MP-4	.013	.5
6	MP-4	.006	1.5
7	MP-5	.007	.167
8	MP-5	.007	1.5
9	MP-6	.013	.5
10	MP-7	.009	.083
11	MP-8	.013	.5
12	MP-8	.006	1.5
13	MP-9	.009	.167
14	MP-9	.008	1.5
15	MP-10	.016	.5
16	MP-11	.01	.083
17	MP-12	.016	.5
18	MP-12	.008	1.5
19	SA-1A	.016	.25
20	SA-2A	.016	.25
21	MP-1	.007	3.75
22	MP-2	.009	3.75
23	MP-3	.013	4.75
24	MP-4	.013	4.75
25	MP-5	.007	3.75
26	MP-6	.013	4.75
27	MP-7	.009	4.75
28	MP-8	.013	3.75
29	MP-9	.009	3.75
30	MP-10	.016	4.75
31	MP-11	.01	3.75
32	MP-12	.016	4.75
33	MP-1	.016	.167
34	MP-1	.012	1.5
35	MP-2	.012	.083
36	MP-3	.016	.5
37	MP-4	.022	.5
38	MP-4	.01	1.5
39	MP-5	.012	.167
40	MP-5	.022	1.5
41	MP-6	.022	.5
42	MP-7	.016	.083
43	MP-8	.022	.5
44	MP-8	.01	1.5
45	MP-9	.016	.167
46	MP-9	.014	1.5
47	MP-10	.018	.5
48	MP-11	.018	.083
49	MP-12	.014	.5
50	MP-12	.014	1.5
51	SA-1A	.028	.25
52	SA-2A	.028	.25
53	MP-1	.016	3.75
54	MP-2	.016	3.75
55	MP-3	.022	4.75
56	MP-4	.022	4.75
57	MP-5	.016	3.75
58	MP-6	.022	4.75
59	MP-7	.016	3.75
60	MP-8	.022	4.75
61	MP-9	.016	3.75
62	MP-10	.022	4.75
63	MP-11	.016	3.75
64	MP-12	.022	4.75



Member Point Loads (BLC 30 : 240 Wind - Ice) (Continued)

Member Label	Direction	Magnitude, k-ft-l	Location (ft, %)
1	MP-1	.007	.167
2	MP-1	.007	1.5
3	MP-2	.009	.083
4	MP-3	.013	.5
5	MP-4	.013	.5
6	MP-4	.006	1.5
7	MP-5	.007	.167
8	MP-5	.007	1.5
9	MP-6	.013	.5
10	MP-7	.009	.083
11	MP-8	.013	.5
12	MP-8	.006	1.5
13	MP-9	.009	.167
14	MP-9	.008	1.5
15	MP-10	.016	.5
16	MP-11	.01	.083
17	MP-12	.016	.5
18	MP-12	.008	1.5
19	SA-1A	.016	.25
20	SA-2A	.016	.25
21	MP-1	.007	3.75
22	MP-2	.009	3.75
23	MP-3	.013	4.75
24	MP-4	.013	4.75
25	MP-5	.007	3.75
26	MP-6	.013	4.75
27	MP-7	.009	4.75
28	MP-8	.013	3.75
29	MP-9	.009	3.75
30	MP-10	.016	4.75
31	MP-11	.01	3.75
32	MP-12	.016	4.75
33	MP-1	.016	.167
34	MP-1	.012	1.5
35	MP-2	.012	.083
36	MP-3	.016	.5
37	MP-4	.022	.5
38	MP-4	.01	1.5
39	MP-5	.012	.167
40	MP-5	.022	1.5
41	MP-6	.022	.5
42	MP-7	.016	.083
43	MP-8	.022	.5
44	MP-8	.01	1.5
45	MP-9	.016	.167
46	MP-9	.014	1.5
47	MP-10	.018	.5
48	MP-11	.018	.083
49	MP-12	.014	.5
50	MP-12	.014	1.5
51	SA-1A	.028	.25
52	SA-2A	.028	.25
53	MP-1	.016	3.75
54	MP-2	.016	3.75
55	MP-3	.022	4.75
56	MP-4	.022	4.75
57	MP-5	.016	3.75
58	MP-6	.022	4.75
59	MP-7	.016	3.75
60	MP-8	.022	4.75
61	MP-9	.016	3.75
62	MP-10	.022	4.75
63	MP-11	.016	3.75
64	MP-12	.022	4.75

Member Point Loads (BLC 30 : 240 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft-%)
58	MP-6	.022	4.75
59	MP-7	.016	3.75
60	MP-8	.022	4.75
61	MP-9	.016	3.75
62	MP-10	.027	4.75
63	MP-11	.018	3.75
64	MP-12	.027	4.75

Member Point Loads (BLC 31 : 270 Wind - Ice)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft-%)
1	MP-1	.012	1.67
2	MP-2	.012	1.5
3	MP-3	.017	.083
4	MP-3	.023	.5
5	MP-4	.023	.5
6	MP-4	.01	1.5
7	MP-5	.012	1.67
8	MP-5	.012	.5
9	MP-6	.023	.5
10	MP-7	.017	.083
11	MP-8	.023	.5
12	MP-8	.023	.5
13	MP-9	.01	1.5
14	MP-9	.012	1.67
15	MP-10	.012	1.5
16	MP-11	.023	.5
17	MP-12	.017	.083
18	MP-12	.023	.5
19	SA-1A	.018	1.5
20	SA-2A	.018	.25
21	MP-1	.012	.25
22	MP-2	.017	3.75
23	MP-3	.023	3.75
24	MP-4	.023	4.75
25	MP-5	.023	4.75
26	MP-6	.023	3.75
27	MP-7	.017	3.75
28	MP-8	.023	3.75
29	MP-9	.012	3.75
30	MP-10	.023	3.75
31	MP-11	.017	3.75
32	MP-12	.023	4.75

Member Point Loads (BLC 32 : 300 Wind - Ice)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft-%)
1	MP-1	.007	1.67
2	MP-2	.007	1.5
3	MP-3	.009	.083
4	MP-3	.013	.5
5	MP-4	.013	.5
6	MP-4	.006	1.5
7	MP-5	.009	1.67
8	MP-5	.008	1.5
9	MP-6	.016	.5
10	MP-7	.01	.083
11	MP-8	.016	.5

Member Point Loads (BLC 32 : 300 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft-%)
12	MP-8	.008	1.5
13	MP-9	.007	1.67
14	MP-9	.007	1.5
15	MP-10	.013	.5
16	MP-11	.009	.083
17	MP-12	.013	.5
18	SA-1A	.008	1.5
19	SA-2A	.016	.25
20	MP-1	.009	.25
21	MP-2	.007	3.75
22	MP-3	.009	3.75
23	MP-3	.013	4.75
24	MP-4	.013	4.75
25	MP-5	.009	3.75
26	MP-6	.016	4.75
27	MP-7	.01	3.75
28	MP-8	.016	4.75
29	MP-9	.007	4.75
30	MP-10	.013	4.75
31	MP-11	.009	4.75
32	MP-12	.013	4.75
33	MP-1	.012	1.67
34	MP-2	.012	1.5
35	MP-3	.016	.083
36	MP-4	.022	.5
37	MP-4	.022	.5
38	MP-4	.01	1.5
39	MP-5	.016	1.67
40	MP-5	.014	1.5
41	MP-6	.027	.5
42	MP-7	.027	.5
43	MP-8	.018	.083
44	MP-8	.027	.5
45	MP-9	.014	1.5
46	MP-9	.012	1.67
47	MP-10	.012	1.5
48	MP-11	.022	.5
49	MP-12	.022	.5
50	MP-12	.01	1.5
51	SA-1A	.028	.25
52	SA-2A	.016	.25
53	MP-1	.012	.25
54	MP-2	.016	3.75
55	MP-3	.022	4.75
56	MP-4	.022	4.75
57	MP-5	.016	3.75
58	MP-6	.027	4.75
59	MP-7	.018	4.75
60	MP-8	.027	4.75
61	MP-9	.012	4.75
62	MP-10	.022	4.75
63	MP-11	.016	4.75
64	MP-12	.022	4.75

Member Point Loads (BLC 33 : 315 Wind - Ice)



Member Point Loads (BLC 33 : 315 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k,kl)	Location(ft,%)
1	MP-1	-0.11	.167
2	MP-2	-0.15	.167
3	MP-3	-0.14	.083
4	MP-4	-0.19	.5
5	MP-5	-0.19	.5
6	MP-6	-0.17	.167
7	MP-7	-0.12	.15
8	MP-8	-0.15	.5
9	MP-9	-0.15	.083
10	MP-10	-0.12	.15
11	MP-11	-0.12	.15
12	MP-12	-0.09	.167
13	MP-1	-0.09	.167
14	MP-2	-0.09	.15
15	MP-3	-0.17	.5
16	MP-4	-0.12	.083
17	MP-5	-0.17	.5
18	MP-6	-0.08	.15
19	SA-1A	-0.19	.25
20	SA-2A	-0.14	.25
21	MP-1	-0.11	.375
22	MP-2	-0.14	.375
23	MP-3	-0.19	.475
24	MP-4	-0.19	.475
25	MP-5	-0.13	.375
26	MP-6	-0.22	.475
27	MP-7	-0.15	.375
28	MP-8	-0.22	.475
29	MP-9	-0.09	.375
30	MP-10	-0.17	.475
31	MP-11	-0.12	.375
32	MP-12	-0.17	.475
33	MP-1	-0.11	.167
34	MP-2	-0.14	.167
35	MP-3	-0.18	.083
36	MP-4	-0.19	.5
37	MP-5	-0.13	.15
38	MP-6	-0.13	.167
39	MP-7	-0.12	.15
40	MP-8	-0.22	.5
41	MP-9	-0.15	.083
42	MP-10	-0.22	.5
43	MP-11	-0.15	.5
44	MP-12	-0.22	.5
45	MP-1	-0.09	.167
46	MP-2	-0.17	.15
47	MP-3	-0.12	.083
48	MP-4	-0.17	.5
49	MP-5	-0.08	.15
50	MP-6	-0.14	.25
51	SA-1A	-0.19	.25
52	SA-2A	-0.14	.25
53	MP-1	-0.11	.375
54	MP-2	-0.14	.375
55	MP-3	-0.19	.475
56	MP-4	-0.19	.475
57	MP-5	-0.13	.375



Member Point Loads (BLC 33 : 315 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k,kl)	Location(ft,%)
58	MP-6	-0.22	.475
59	MP-7	-0.15	.375
60	MP-8	-0.15	.475
61	MP-9	-0.09	.375
62	MP-10	-0.17	.475
63	MP-11	-0.12	.375
64	MP-12	-0.17	.475

Member Label	Direction	Magnitude(k,kl)	Location(ft,%)
1	MP-1	-0.15	.167
2	MP-2	-0.13	.15
3	MP-3	-0.17	.083
4	MP-4	-0.25	.5
5	MP-5	-0.23	.5
6	MP-6	-0.13	.15
7	MP-7	-0.15	.167
8	MP-8	-0.13	.15
9	MP-9	-0.25	.5
10	MP-10	-0.17	.083
11	MP-11	-0.25	.5
12	MP-12	-0.13	.15
13	MP-1	-0.11	.167
14	MP-2	-0.11	.15
15	MP-3	-0.2	.5
16	MP-4	-0.15	.083
17	MP-5	-0.2	.5
18	MP-6	-0.09	.15
19	SA-1A	-0.2	.25
20	SA-2A	-0.2	.25
21	MP-1	-0.15	.375
22	MP-2	-0.17	.375
23	MP-3	-0.25	.475
24	MP-4	-0.25	.475
25	MP-5	-0.15	.375
26	MP-6	-0.25	.475
27	MP-7	-0.17	.375
28	MP-8	-0.25	.475
29	MP-9	-0.11	.375
30	MP-10	-0.25	.475
31	MP-11	-0.15	.375
32	MP-12	-0.15	.375
33	MP-1	-0.09	.167
34	MP-2	-0.15	.15
35	MP-3	-0.1	.083
36	MP-4	-0.15	.5
37	MP-5	-0.08	.15
38	MP-6	-0.15	.167
39	MP-7	-0.09	.15
40	MP-8	-0.15	.167
41	MP-9	-0.1	.083
42	MP-10	-0.15	.167
43	MP-11	-0.15	.167
44	MP-12	-0.15	.167
45	MP-1	-0.09	.167
46	MP-2	-0.15	.167
47	MP-3	-0.1	.083
48	MP-4	-0.15	.167
49	MP-5	-0.09	.167
50	MP-6	-0.15	.167
51	SA-1A	-0.1	.25
52	SA-2A	-0.1	.25
53	MP-1	-0.1	.375
54	MP-2	-0.15	.375
55	MP-3	-0.15	.475
56	MP-4	-0.06	.475
57	MP-5	-0.06	.475



Member Point Loads (BLC 34 : 330 Wind - Ice) (Continued)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft-%)
47	MP-10	0.12	5
48	MP-11	0.083	0.83
49	MP-12	0.12	5
50	MP-12	0.083	0.83
51	SA-1A	0.11	25
52	SA-2A	0.14	25
53	MP-1	0.09	3.75
54	MP-2	0.1	3.75
55	MP-3	0.15	4.75
56	MP-4	0.15	4.75
57	MP-5	0.09	3.75
58	MP-6	0.15	4.75
59	MP-7	0.1	3.75
60	MP-8	0.1	3.75
61	MP-9	0.06	3.75
62	MP-10	0.12	4.75
63	MP-11	0.09	3.75
64	MP-12	0.12	4.75

Member Point Loads (BLC 37 : Seismic Load X)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft-%)
1	MP-1	-0.05	1.67
2	MP-1	-0.04	1.5
3	MP-2	-0.07	0.83
4	MP-3	-0.2	5
5	MP-4	-0.2	5
6	MP-4	-0.7	1.5
7	MP-5	-0.05	1.67
8	MP-5	-0.84	1.5
9	MP-6	-0.2	5
10	MP-7	-0.07	0.83
11	MP-8	-0.7	1.5
12	MP-8	-0.7	1.5
13	MP-9	-0.05	1.67
14	MP-9	-0.84	1.5
15	MP-10	-0.2	5
16	MP-11	-0.07	0.83
17	MP-12	-0.2	5
18	MP-12	-0.7	1.5
19	SA-1A	-0.44	25
20	SA-2A	-0.44	25
21	MP-1	-0.05	3.75
22	MP-2	-0.07	3.75
23	MP-3	-0.2	4.75
24	MP-4	-0.2	4.75
25	MP-5	-0.05	3.75
26	MP-6	-0.2	4.75
27	MP-7	-0.07	3.75
28	MP-8	-0.2	4.75
29	MP-9	-0.05	3.75
30	MP-10	-0.2	4.75
31	MP-11	-0.07	3.75
32	MP-12	-0.2	4.75

Member Point Loads (BLC 38 : Seismic Load Z)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft-%)
1	MP-1	-0.05	1.67
2	MP-1	-0.04	1.5
3	MP-2	-0.07	0.83
4	MP-3	-0.2	5
5	MP-4	-0.2	5
6	MP-4	-0.7	1.5
7	MP-5	-0.05	1.67
8	MP-5	-0.84	1.5
9	MP-6	-0.2	5
10	MP-7	-0.07	0.83
11	MP-8	-0.7	1.5
12	MP-8	-0.7	1.5
13	MP-9	-0.05	1.67
14	MP-9	-0.84	1.5
15	MP-10	-0.2	5
16	MP-11	-0.07	0.83
17	MP-12	-0.2	5
18	MP-12	-0.7	1.5
19	SA-1A	-0.44	25
20	SA-2A	-0.44	25
21	MP-1	-0.05	3.75
22	MP-2	-0.07	3.75
23	MP-3	-0.2	4.75
24	MP-4	-0.2	4.75
25	MP-5	-0.05	3.75
26	MP-6	-0.2	4.75
27	MP-7	-0.07	3.75
28	MP-8	-0.2	4.75
29	MP-9	-0.05	3.75
30	MP-10	-0.2	4.75
31	MP-11	-0.07	3.75
32	MP-12	-0.2	4.75



Member Point Loads (BLC 38 : Seismic Load Z) (Continued)

Member Label	Direction	Magnitude(k-ft-l)	Location(ft-%)
1	MP-1	-0.05	1.67
2	MP-1	-0.04	1.5
3	MP-2	-0.07	0.83
4	MP-3	-0.2	5
5	MP-4	-0.2	5
6	MP-4	-0.7	1.5
7	MP-5	-0.05	1.67
8	MP-5	-0.84	1.5
9	MP-6	-0.2	5
10	MP-7	-0.07	0.83
11	MP-8	-0.7	1.5
12	MP-8	-0.7	1.5
13	MP-9	-0.05	1.67
14	MP-9	-0.84	1.5
15	MP-10	-0.2	5
16	MP-11	-0.07	0.83
17	MP-12	-0.2	5
18	MP-12	-0.7	1.5
19	SA-1A	-0.44	25
20	SA-2A	-0.44	25
21	MP-1	-0.05	3.75
22	MP-2	-0.07	3.75
23	MP-3	-0.2	4.75
24	MP-4	-0.2	4.75
25	MP-5	-0.05	3.75
26	MP-6	-0.2	4.75
27	MP-7	-0.07	3.75
28	MP-8	-0.2	4.75
29	MP-9	-0.05	3.75
30	MP-10	-0.2	4.75
31	MP-11	-0.07	3.75
32	MP-12	-0.2	4.75

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

Member Label	Direction	Start Magnitude(k-ft-l)	End Magnitude(k-ft-l)	Start Location(ft-%)	End Location(ft-%)
1	FH-1	-0.17	-0.17	0	0
2	FH-1	-0.08	-0.08	0	0
3	FH-2	-0.08	-0.08	0	0
4	FH-3	-0.04	-0.04	0	0
5	FH-3	-0.08	-0.08	0	0
6	HR-3	-0.04	-0.04	0	0
7	GP-1T	-0.04	-0.04	0	0
8	GP-2T	-0.08	-0.08	0	0
9	GP-3T	-0.04	-0.04	0	0
10	GSIP-1	-0.17	-0.17	0	0
11	GSIP-2	-0.07	-0.07	0	0
12	GSIP-3	-0.12	-0.12	0	0
13	GSIP-3	0	0	0	0
14	GSIP-3	-0.12	-0.12	0	0
15	GSIP-3	0	0	0	0
16	SA-1A	0	0	0	0
17	SA-1B	0	0	0	0
18	SA-2A	-0.12	-0.12	0	0
19	SA-2B	-0.14	-0.14	0	0
20	SA-3A	-0.12	-0.12	0	0



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

Member Label	Direction	Start Magnitude(kN, E.kst)	End Magnitude(kN, E.kst)	Start Location(ft, %)	End Location(ft, %)
21	SA-3B	-0.14	-0.14	0	%100
22	MP-1	-0.08	-0.08	0	%100
23	MP-2	-0.08	-0.08	0	%100
24	MP-3	-0.08	-0.08	0	%100
25	MP-4	-0.08	-0.08	0	%100
26	MP-5	-0.08	-0.08	0	%100
27	MP-6	-0.08	-0.08	0	%100
28	MP-7	-0.08	-0.08	0	%100
29	MP-8	-0.08	-0.08	0	%100
30	MP-9	-0.08	-0.08	0	%100
31	MP-10	-0.08	-0.08	0	%100
32	MP-11	-0.08	-0.08	0	%100
33	MP-12	-0.08	-0.08	0	%100
34	HRMOD-1	-0.01	-0.01	0	%100
35	HRMOD-1	-0.05	-0.05	0	%100
36	HRMOD-1	-0.05	-0.05	0	%100
37	CP-1U	-0.03	-0.03	0	%100
38	CP-1U	-0.07	-0.07	0	%100
39	CP-1U	-0.03	-0.03	0	%100

Member Distributed Loads (BLC 3 : 30 Wind - No Ice)

Member Label	Direction	Start Magnitude(kN, E.kst)	End Magnitude(kN, E.kst)	Start Location(ft, %)	End Location(ft, %)
1	FH-1	-0.13	-0.13	0	%100
2	HR-1	-0.06	-0.06	0	%100
3	FH-2	0	0	0	%100
4	HR-2	0	0	0	%100
5	FH-3	-0.13	-0.13	0	%100
6	HR-3	-0.06	-0.06	0	%100
7	CP-1T	-0.05	-0.05	0	%100
8	CP-2T	-0.06	-0.06	0	%100
9	CP-3T	0	0	0	%100
10	GSP-1	-0.13	-0.13	0	%100
11	GSP-2	0	0	0	%100
12	GSP-3	-0.01	-0.01	0	%100
13	GSP-1	-0.06	-0.06	0	%100
14	GSP-2	-0.04	-0.04	0	%100
15	GSP-3	-0.12	-0.12	0	%100
16	SA-1A	-0.06	-0.06	0	%100
17	SA-1B	-0.07	-0.07	0	%100
18	SA-2A	-0.12	-0.12	0	%100
19	SA-2B	-0.14	-0.14	0	%100
20	SA-3A	-0.06	-0.06	0	%100
21	SA-3B	-0.07	-0.07	0	%100
22	MP-1	-0.07	-0.07	0	%100
23	MP-2	-0.07	-0.07	0	%100
24	MP-3	-0.07	-0.07	0	%100
25	MP-4	-0.07	-0.07	0	%100
26	MP-5	-0.07	-0.07	0	%100
27	MP-6	-0.07	-0.07	0	%100
28	MP-7	-0.07	-0.07	0	%100
29	MP-8	-0.07	-0.07	0	%100
30	MP-9	-0.07	-0.07	0	%100
31	MP-10	-0.07	-0.07	0	%100
32	MP-11	-0.07	-0.07	0	%100
33	MP-12	-0.07	-0.07	0	%100
34	HRMOD-1	-0.08	-0.08	0	%100



Member Distributed Loads (BLC 3 : 30 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, E.kst)	End Magnitude(kN, E.kst)	Start Location(ft, %)	End Location(ft, %)
35	HRMOD-1	0	0	0	%100
36	HRMOD-1	-0.08	-0.08	0	%100
37	CP-1U	-0.04	-0.04	0	%100
38	CP-1U	-0.05	-0.05	0	%100
39	CP-1U	0	0	0	%100
40	FH-1	-0.07	-0.07	0	%100
41	HR-1	-0.03	-0.03	0	%100
42	FH-2	0	0	0	%100
43	HR-2	0	0	0	%100
44	FH-3	-0.07	-0.07	0	%100
45	HR-3	-0.03	-0.03	0	%100
46	CP-1T	-0.03	-0.03	0	%100
47	CP-2T	-0.04	-0.04	0	%100
48	CP-3T	0	0	0	%100
49	GSP-1	-0.07	-0.07	0	%100
50	GSP-2	0	0	0	%100
51	GSP-3	-0.07	-0.07	0	%100
52	GSP-1	-0.03	-0.03	0	%100
53	GSP-2	-0.04	-0.04	0	%100
54	GSP-3	-0.06	-0.06	0	%100
55	SA-1A	-0.03	-0.03	0	%100
56	SA-1B	-0.04	-0.04	0	%100
57	SA-2A	-0.07	-0.07	0	%100
58	SA-2B	-0.08	-0.08	0	%100
59	SA-3A	-0.03	-0.03	0	%100
60	SA-3B	-0.04	-0.04	0	%100
61	MP-1	-0.04	-0.04	0	%100
62	MP-2	-0.04	-0.04	0	%100
63	MP-3	-0.04	-0.04	0	%100
64	MP-4	-0.04	-0.04	0	%100
65	MP-5	-0.04	-0.04	0	%100
66	MP-6	-0.04	-0.04	0	%100
67	MP-7	-0.04	-0.04	0	%100
68	MP-8	-0.04	-0.04	0	%100
69	MP-9	-0.04	-0.04	0	%100
70	MP-10	-0.04	-0.04	0	%100
71	MP-11	-0.04	-0.04	0	%100
72	MP-12	-0.04	-0.04	0	%100
73	HRMOD-1	-0.04	-0.04	0	%100
74	HRMOD-1	0	0	0	%100
75	HRMOD-1	-0.04	-0.04	0	%100
76	CP-1U	-0.03	-0.03	0	%100
77	CP-1U	-0.03	-0.03	0	%100
78	CP-1U	0	0	0	%100

Member Distributed Loads (BLC 4 : 45 Wind - No Ice)

Member Label	Direction	Start Magnitude(kN, E.kst)	End Magnitude(kN, E.kst)	Start Location(ft, %)	End Location(ft, %)
1	FH-1	-0.08	-0.08	0	%100
2	HR-1	-0.04	-0.04	0	%100
3	FH-2	-0.03	-0.03	0	%100
4	HR-2	-0.01	-0.01	0	%100
5	FH-3	-0.11	-0.11	0	%100
6	HR-3	-0.06	-0.06	0	%100
7	CP-1T	-0.05	-0.05	0	%100
8	CP-2T	-0.04	-0.04	0	%100
9	CP-3T	-0.01	-0.01	0	%100



Member Distributed Loads (BLC 4 : 45 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude (kN, F, kst)	End Magnitude (kN, F, kst)	Start Location (ft, %)	End Location (ft, %)
10	GSIP-1	X	-0.008	0	%100
11	GSIP-2	X	-0.003	0	%100
12	GSIP-3	X	-0.009	0	%100
13	GS1	X	-0.003	0	%100
14	GS1-2	X	-0.005	0	%100
15	GS1-3	X	-0.009	0	%100
16	SA-1A	X	-0.007	0	%100
17	SA-1B	X	-0.008	0	%100
18	SA-2A	X	-0.009	0	%100
19	SA-2B	X	-0.011	0	%100
20	SA-3A	X	-0.002	0	%100
21	SA-3B	X	-0.003	0	%100
22	MP-1	X	-0.006	0	%100
23	MP-2	X	-0.006	0	%100
24	MP-3	X	-0.006	0	%100
25	MP-4	X	-0.006	0	%100
26	MP-5	X	-0.006	0	%100
27	MP-6	X	-0.006	0	%100
28	MP-7	X	-0.006	0	%100
29	MP-8	X	-0.006	0	%100
30	MP-9	X	-0.006	0	%100
31	MP-10	X	-0.006	0	%100
32	MP-11	X	-0.006	0	%100
33	MP-12	X	-0.006	0	%100
34	HRMOD-1	X	-0.005	0	%100
35	HRMOD-1	X	-0.002	0	%100
36	HRMOD-1	X	-0.007	0	%100
37	CP-1U	X	-0.004	0	%100
38	CP-1U	X	-0.003	0	%100
39	CP-1U	X	-0.00987	0	%100
40	FH-1	Z	-0.008	0	%100
41	HR-1	Z	-0.004	0	%100
42	HR-2	Z	-0.003	0	%100
43	HR-2	Z	-0.001	0	%100
44	HR-3	Z	-0.011	0	%100
45	HR-3	Z	-0.006	0	%100
46	CP-1T	Z	-0.005	0	%100
47	CP-2T	Z	-0.004	0	%100
48	CP-3T	Z	-0.001	0	%100
49	GSIP-1	Z	-0.008	0	%100
50	GSIP-2	Z	-0.003	0	%100
51	GSIP-3	Z	-0.011	0	%100
52	GS1-1	Z	-0.002	0	%100
53	GS1-2	Z	-0.007	0	%100
54	GS1-3	Z	-0.008	0	%100
55	SA-1A	Z	-0.007	0	%100
56	SA-1B	Z	-0.009	0	%100
57	SA-2A	Z	-0.009	0	%100
58	SA-2B	Z	-0.011	0	%100
59	SA-3A	Z	-0.002	0	%100
60	SA-3B	Z	-0.003	0	%100
61	MP-1	Z	-0.006	0	%100
62	MP-2	Z	-0.006	0	%100
63	MP-3	Z	-0.006	0	%100
64	MP-4	Z	-0.006	0	%100
65	MP-5	Z	-0.006	0	%100
66	MP-6	Z	-0.006	0	%100



Member Distributed Loads (BLC 4 : 45 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude (kN, F, kst)	End Magnitude (kN, F, kst)	Start Location (ft, %)	End Location (ft, %)
67	MP-7	Z	-0.006	0	%100
68	MP-8	Z	-0.006	0	%100
69	MP-9	Z	-0.006	0	%100
70	MP-10	Z	-0.006	0	%100
71	MP-11	Z	-0.006	0	%100
72	MP-12	Z	-0.006	0	%100
73	HRMOD-1	Z	-0.005	0	%100
74	HRMOD-1	Z	-0.002	0	%100
75	HRMOD-1	Z	-0.007	0	%100
76	CP-1U	Z	-0.004	0	%100
77	CP-1U	Z	-0.003	0	%100
78	CP-1U	Z	-0.001	0	%100

Member Label	Direction	Start Magnitude (kN, F, kst)	End Magnitude (kN, F, kst)	Start Location (ft, %)	End Location (ft, %)
1	HR-1	X	-0.004	0	%100
2	HR-1	X	-0.002	0	%100
3	HR-2	X	-0.004	0	%100
4	HR-2	X	-0.002	0	%100
5	HR-3	X	-0.008	0	%100
6	HR-3	X	-0.004	0	%100
7	CP-1T	X	-0.004	0	%100
8	CP-1T	X	-0.002	0	%100
9	CP-3T	X	-0.002	0	%100
10	GSIP-1	X	-0.004	0	%100
11	GSIP-2	X	-0.003	0	%100
12	GSIP-3	X	-0.007	0	%100
13	GS1	X	0	0	%100
14	GS1-2	X	-0.004	0	%100
15	GS1-3	X	-0.006	0	%100
16	SA-1A	X	-0.006	0	%100
17	SA-1B	X	-0.007	0	%100
18	SA-2A	X	-0.006	0	%100
19	SA-2B	X	-0.007	0	%100
20	SA-3A	X	0	0	%100
21	SA-3B	X	0	0	%100
22	MP-1	X	-0.004	0	%100
23	MP-2	X	-0.004	0	%100
24	MP-3	X	-0.004	0	%100
25	MP-4	X	-0.004	0	%100
26	MP-5	X	-0.004	0	%100
27	MP-6	X	-0.004	0	%100
28	MP-7	X	-0.004	0	%100
29	MP-8	X	-0.004	0	%100
30	MP-9	X	-0.004	0	%100
31	MP-10	X	-0.004	0	%100
32	MP-11	X	-0.004	0	%100
33	MP-12	X	-0.004	0	%100
34	HRMOD-1	X	-0.003	0	%100
35	HRMOD-1	X	-0.003	0	%100
36	HRMOD-1	X	-0.005	0	%100
37	CP-1U	X	-0.003	0	%100
38	CP-1U	X	-0.002	0	%100
39	CP-1U	X	-0.001	0	%100
40	HR-1	Z	-0.007	0	%100
41	HR-1	Z	-0.003	0	%100



Member Distributed Loads (BLC 7 : 120 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
31	MP-10				
32	MP-11	.004	.004	0	%100
33	MP-12	.004	.004	0	%100
34	HRMOD-1	.003	.003	0	%100
35	HRMOD-1	.005	.005	0	%100
36	HRMOD-1	.003	.003	0	%100
37	CP-1U	.001	.001	0	%100
38	CP-1U	.002	.002	0	%100
39	CP-1U	.003	.003	0	%100
40	FH-1	.007	.007	0	%100
41	HR-1	.003	.003	0	%100
42	FH-2	.015	.015	0	%100
43	HR-2	.007	.007	0	%100
44	HR-3	.007	.007	0	%100
45	HR-3	.003	.003	0	%100
46	CP-1T	.003	.003	0	%100
47	CP-2T	.004	.004	0	%100
48	CP-3T	.007	.007	0	%100
49	GSIP-1	.007	.007	0	%100
50	GSIP-2	.014	.014	0	%100
51	GSIP-3	.007	.007	0	%100
52	GSIP-1	.009	.009	0	%100
53	GSIP-2	.011	.011	0	%100
54	GSIP-3	.0	.0	0	%100
55	SA-1A	.01	.01	0	%100
56	SA-1B	.013	.013	0	%100
57	SA-2A	.0	.0	0	%100
58	SA-2B	.0	.0	0	%100
59	SA-3A	.01	.01	0	%100
60	SA-3B	.012	.012	0	%100
61	MP-1	.007	.007	0	%100
62	MP-2	.007	.007	0	%100
63	MP-3	.007	.007	0	%100
64	MP-4	.007	.007	0	%100
65	MP-5	.007	.007	0	%100
66	MP-6	.007	.007	0	%100
67	MP-7	.007	.007	0	%100
68	MP-8	.007	.007	0	%100
69	MP-9	.007	.007	0	%100
70	MP-10	.007	.007	0	%100
71	MP-11	.007	.007	0	%100
72	MP-12	.007	.007	0	%100
73	HRMOD-1	.004	.004	0	%100
74	HRMOD-1	.009	.009	0	%100
75	HRMOD-1	.004	.004	0	%100
76	CP-1U	.003	.003	0	%100
77	CP-1U	.003	.003	0	%100
78	CP-1U	.005	.005	0	%100

Member Distributed Loads (BLC 8 : 135 Wind - No Ice)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
1	FH-1	.008	.008	0	%100
2	HR-1	.004	.004	0	%100
3	FH-2	.011	.011	0	%100
4	HR-2	.006	.006	0	%100
5	FH-3	.003	.003	0	%100



Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
6	HR-3	.001	.001	0	%100
7	CP-1T	.001	.001	0	%100
8	CP-2T	.004	.004	0	%100
9	CP-3T	.005	.005	0	%100
10	GSIP-1	.008	.008	0	%100
11	GSIP-2	.009	.009	0	%100
12	GSIP-3	.003	.003	0	%100
13	GSIP-1	.009	.009	0	%100
14	GSIP-2	.005	.005	0	%100
15	GSIP-3	.003	.003	0	%100
16	SA-1A	.007	.007	0	%100
17	SA-1B	.008	.008	0	%100
18	SA-2A	.002	.002	0	%100
19	SA-2B	.003	.003	0	%100
20	SA-3A	.009	.009	0	%100
21	SA-3B	.011	.011	0	%100
22	MP-1	.006	.006	0	%100
23	MP-2	.006	.006	0	%100
24	MP-3	.006	.006	0	%100
25	MP-4	.006	.006	0	%100
26	MP-5	.006	.006	0	%100
27	MP-6	.006	.006	0	%100
28	MP-7	.006	.006	0	%100
29	MP-8	.006	.006	0	%100
30	MP-9	.006	.006	0	%100
31	MP-10	.006	.006	0	%100
32	MP-11	.006	.006	0	%100
33	MP-12	.006	.006	0	%100
34	HRMOD-1	.005	.005	0	%100
35	HRMOD-1	.007	.007	0	%100
36	HRMOD-1	.002	.002	0	%100
37	CP-1U	.003	.003	0	%100
38	CP-1U	.004	.004	0	%100
39	CP-1U	.004	.004	0	%100
40	FH-1	.004	.004	0	%100
41	HR-1	.004	.004	0	%100
42	FH-2	.011	.011	0	%100
43	HR-2	.006	.006	0	%100
44	HR-3	.003	.003	0	%100
45	HR-3	.001	.001	0	%100
46	CP-1T	.001	.001	0	%100
47	CP-2T	.004	.004	0	%100
48	CP-3T	.005	.005	0	%100
49	GSIP-1	.008	.008	0	%100
50	GSIP-2	.009	.009	0	%100
51	GSIP-3	.003	.003	0	%100
52	GSIP-1	.009	.009	0	%100
53	GSIP-2	.005	.005	0	%100
54	GSIP-3	.003	.003	0	%100
55	SA-1A	.007	.007	0	%100
56	SA-1B	.008	.008	0	%100
57	SA-2A	.002	.002	0	%100
58	SA-2B	.003	.003	0	%100
59	SA-3A	.009	.009	0	%100
60	SA-3B	.011	.011	0	%100
61	MP-1	.006	.006	0	%100
62	MP-2	.006	.006	0	%100



Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude(kN.F.ksi)	End Magnitude(kN.F.ksi)	Start Location(ft.)	End Location(ft.)	Start Location(ft.)	End Location(ft.)
63	MP-3						
64	MP-4	Z	-0.006	0	0	0	%100
65	MP-5	Z	-0.006	0	0	0	%100
66	MP-6	Z	-0.006	0	0	0	%100
67	MP-7	Z	-0.006	0	0	0	%100
68	MP-8	Z	-0.006	0	0	0	%100
69	MP-9	Z	-0.006	0	0	0	%100
70	MP-10	Z	-0.006	0	0	0	%100
71	MP-11	Z	-0.006	0	0	0	%100
72	MP-12	Z	-0.006	0	0	0	%100
73	HRMOD-1	Z	-0.006	0	0	0	%100
74	HRMOD-1	Z	-0.007	0	0	0	%100
75	HRMOD-1	Z	-0.002	0	0	0	%100
76	CP-1U	Z	-0.001	0	0	0	%100
77	CP-1U	Z	-0.003	0	0	0	%100
78	CP-1U	Z	-0.004	0	0	0	%100

Member Distributed Loads (BLC 9 : 150 Wind - No Ice)

Member Label	Direction	Start Magnitude(kN.F.ksi)	End Magnitude(kN.F.ksi)	Start Location(ft.)	End Location(ft.)	Start Location(ft.)	End Location(ft.)
1	FH-1	X	0.13	0	0	0	%100
2	HR-1	X	0.006	0	0	0	%100
3	FH-2	X	0.13	0	0	0	%100
4	HR-2	X	0.006	0	0	0	%100
5	FH-3	X	0	0	0	0	%100
6	HR-3	X	0	0	0	0	%100
7	CP-1T	X	0	0	0	0	%100
8	CP-2T	X	0.006	0	0	0	%100
9	CP-3T	X	0.005	0	0	0	%100
10	GSIP-1	X	0.013	0	0	0	%100
11	GSIP-2	X	0.01	0	0	0	%100
12	GSIP-3	X	0.012	0	0	0	%100
13	GSIP-1	X	0.004	0	0	0	%100
14	GSIP-2	X	0.006	0	0	0	%100
15	GSIP-3	X	0.006	0	0	0	%100
16	SA-1A	X	0.006	0	0	0	%100
17	SA-2A	X	0.007	0	0	0	%100
18	SA-3A	X	0.006	0	0	0	%100
19	SA-2B	X	0.007	0	0	0	%100
20	SA-3B	X	0.012	0	0	0	%100
21	SA-3B	X	0.014	0	0	0	%100
22	MP-1	X	0.007	0	0	0	%100
23	MP-2	X	0.007	0	0	0	%100
24	MP-3	X	0.007	0	0	0	%100
25	MP-4	X	0.007	0	0	0	%100
26	MP-5	X	0.007	0	0	0	%100
27	MP-6	X	0.007	0	0	0	%100
28	MP-7	X	0.007	0	0	0	%100
29	MP-8	X	0.007	0	0	0	%100
30	MP-9	X	0.007	0	0	0	%100
31	MP-10	X	0.007	0	0	0	%100
32	MP-11	X	0.007	0	0	0	%100
33	MP-12	X	0.007	0	0	0	%100
34	HRMOD-1	X	0.008	0	0	0	%100
35	HRMOD-1	X	0.008	0	0	0	%100
36	HRMOD-1	X	0	0	0	0	%100
37	CP-1U	X	0	0	0	0	%100



Member Distributed Loads (BLC 9 : 150 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude(kN.F.ksi)	End Magnitude(kN.F.ksi)	Start Location(ft.)	End Location(ft.)	Start Location(ft.)	End Location(ft.)
38	CP-1U	X	0.005	0	0	0	%100
39	GP-1U	X	0.004	0	0	0	%100
40	FH-1	Z	-0.007	0	0	0	%100
41	HR-1	Z	-0.003	0	0	0	%100
42	FH-2	Z	-0.007	0	0	0	%100
43	HR-2	Z	-0.003	0	0	0	%100
44	FH-3	Z	0	0	0	0	%100
45	HR-3	Z	0	0	0	0	%100
46	CP-1T	Z	0	0	0	0	%100
47	CP-2T	Z	-0.004	0	0	0	%100
48	CP-3T	Z	-0.003	0	0	0	%100
49	GSIP-1	Z	-0.007	0	0	0	%100
50	GSIP-2	Z	-0.007	0	0	0	%100
51	GSIP-3	Z	0	0	0	0	%100
52	GSIP-1	Z	-0.006	0	0	0	%100
53	GSIP-2	Z	-0.004	0	0	0	%100
54	GSIP-3	Z	-0.003	0	0	0	%100
55	SA-1A	Z	-0.003	0	0	0	%100
56	SA-1B	Z	-0.004	0	0	0	%100
57	SA-2A	Z	-0.004	0	0	0	%100
58	SA-2B	Z	-0.003	0	0	0	%100
59	SA-3A	Z	-0.004	0	0	0	%100
60	SA-3B	Z	-0.007	0	0	0	%100
61	MP-1	Z	-0.008	0	0	0	%100
62	MP-2	Z	-0.004	0	0	0	%100
63	MP-3	Z	-0.004	0	0	0	%100
64	MP-4	Z	-0.004	0	0	0	%100
65	MP-5	Z	-0.004	0	0	0	%100
66	MP-6	Z	-0.004	0	0	0	%100
67	MP-7	Z	-0.004	0	0	0	%100
68	MP-8	Z	-0.004	0	0	0	%100
69	MP-9	Z	-0.004	0	0	0	%100
70	MP-10	Z	-0.004	0	0	0	%100
71	MP-11	Z	-0.004	0	0	0	%100
72	MP-12	Z	-0.004	0	0	0	%100
73	HRMOD-1	Z	-0.004	0	0	0	%100
74	HRMOD-1	Z	-0.004	0	0	0	%100
75	HRMOD-1	Z	0	0	0	0	%100
76	CP-1U	Z	0	0	0	0	%100
77	CP-1U	Z	-0.003	0	0	0	%100
78	CP-1U	Z	-0.003	0	0	0	%100

Member Distributed Loads (BLC 10 : 180 Wind - No Ice)

Member Label	Direction	Start Magnitude(kN.F.ksi)	End Magnitude(kN.F.ksi)	Start Location(ft.)	End Location(ft.)	Start Location(ft.)	End Location(ft.)
1	FH-1	X	0.17	0	0	0	%100
2	HR-1	X	0.008	0	0	0	%100
3	FH-2	X	0.008	0	0	0	%100
4	HR-2	X	0.004	0	0	0	%100
5	FH-3	X	0.008	0	0	0	%100
6	HR-3	X	0.004	0	0	0	%100
7	CP-1T	X	0.004	0	0	0	%100
8	CP-2T	X	0.008	0	0	0	%100
9	CP-3T	X	0.004	0	0	0	%100
10	GSIP-1	X	0.017	0	0	0	%100
11	GSIP-2	X	0.007	0	0	0	%100
12	GSIP-3	X	0.007	0	0	0	%100



Member Distributed Loads (BLC 10 : 180 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude (kN F. ksf)	End Magnitude (kN F. ksf)	Start Location (ft. %)	End Location (ft. %)
13	GSI-1	X	.012	0	0
14	GSI-2	X	.012	0	0
15	GSI-3	X	.012	0	0
16	SA-1A	X	.012	0	0
17	SA-1B	X	.012	0	0
18	SA-2A	X	.012	0	0
19	SA-2B	X	.014	0	0
20	SA-3A	X	.012	0	0
21	SA-3B	X	.014	0	0
22	MP-1	X	.008	0	0
23	MP-2	X	.008	0	0
24	MP-3	X	.008	0	0
25	MP-4	X	.008	0	0
26	MP-5	X	.008	0	0
27	MP-6	X	.008	0	0
28	MP-7	X	.008	0	0
29	MP-8	X	.008	0	0
30	MP-9	X	.008	0	0
31	MP-10	X	.008	0	0
32	MP-11	X	.008	0	0
33	MP-12	X	.008	0	0
34	HRMOD-1	X	.01	0	0
35	HRMOD-1	X	.005	0	0
36	HRMOD-1	X	.005	0	0
37	CP-1U	X	.003	0	0
38	CP-1U	X	.007	0	0
39	CP-1U	X	.003	0	0

Member Distributed Loads (BLC 11 : 210 Wind - No Ice)

Member Label	Direction	Start Magnitude (kN F. ksf)	End Magnitude (kN F. ksf)	Start Location (ft. %)	End Location (ft. %)
1	FH-1	X	.013	0	0
2	HR-1	X	.008	0	0
3	HR-2	X	.008	0	0
4	HR-2	X	.008	0	0
5	HR-3	X	.013	0	0
6	HR-3	X	.006	0	0
7	CP-1T	X	.005	0	0
8	CP-2T	X	.005	0	0
9	CP-3T	X	.006	0	0
10	GSI-1	X	.013	0	0
11	GSI-2	X	.01	0	0
12	GSI-3	X	.006	0	0
13	GSI-1	X	.006	0	0
14	GSI-2	X	.004	0	0
15	GSI-3	X	.012	0	0
16	SA-1A	X	.006	0	0
17	SA-1B	X	.007	0	0
18	SA-2A	X	.012	0	0
19	SA-2B	X	.014	0	0
20	SA-3A	X	.006	0	0
21	SA-3B	X	.007	0	0
22	MP-1	X	.007	0	0
23	MP-2	X	.007	0	0
24	MP-3	X	.007	0	0
25	MP-4	X	.007	0	0
26	MP-5	X	.007	0	0



Member Distributed Loads (BLC 11 : 210 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude (kN F. ksf)	End Magnitude (kN F. ksf)	Start Location (ft. %)	End Location (ft. %)
27	MP-6	X	.007	0	0
28	MP-7	X	.007	0	0
29	MP-8	X	.007	0	0
30	MP-9	X	.007	0	0
31	MP-10	X	.007	0	0
32	MP-11	X	.007	0	0
33	MP-12	X	.007	0	0
34	HRMOD-1	X	.008	0	0
35	HRMOD-1	X	.008	0	0
36	HRMOD-1	X	.008	0	0
37	CP-1U	X	.004	0	0
38	CP-1U	X	.005	0	0
39	CP-1U	X	.005	0	0
40	FH-1	X	.007	0	0
41	HR-1	X	.003	0	0
42	HR-2	X	.003	0	0
43	HR-2	X	.003	0	0
44	HR-3	X	.007	0	0
45	HR-3	X	.003	0	0
46	CP-1T	X	.003	0	0
47	CP-2T	X	.004	0	0
48	CP-3T	X	.004	0	0
49	GSI-1	X	.007	0	0
50	GSI-2	X	.007	0	0
51	GSI-3	X	.003	0	0
52	GSI-1	X	.004	0	0
53	GSI-2	X	.006	0	0
54	GSI-3	X	.003	0	0
55	SA-1A	X	.004	0	0
56	SA-1B	X	.004	0	0
57	SA-2A	X	.008	0	0
58	SA-2B	X	.008	0	0
59	SA-3A	X	.003	0	0
60	SA-3B	X	.004	0	0
61	MP-1	X	.004	0	0
62	MP-2	X	.004	0	0
63	MP-3	X	.004	0	0
64	MP-4	X	.004	0	0
65	MP-5	X	.004	0	0
66	MP-6	X	.004	0	0
67	MP-7	X	.004	0	0
68	MP-8	X	.004	0	0
69	MP-9	X	.004	0	0
70	MP-10	X	.004	0	0
71	MP-11	X	.004	0	0
72	MP-12	X	.004	0	0
73	HRMOD-1	X	.004	0	0
74	HRMOD-1	X	.004	0	0
75	HRMOD-1	X	.003	0	0
76	CP-1U	X	.003	0	0
77	CP-1U	X	.003	0	0
78	CP-1U	X	.003	0	0

Member Distributed Loads (BLC 12 : 225 Wind - No Ice)

Member Label	Direction	Start Magnitude (kN F. ksf)	End Magnitude (kN F. ksf)	Start Location (ft. %)	End Location (ft. %)
1	FH-1	X	.008	0	0



Member Distributed Loads (BLC 12 : 225 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude(kN.F.kst)	End Magnitude(kN.F.kst)	Start Location(ft.%)	End Location(ft.%)
2	HR-1	.004	.004	0	%100
3	FH-2	.003	.003	0	%100
4	HR-2	.001	.001	0	%100
5	FH-3	.011	.011	0	%100
6	HR-3	.006	.006	0	%100
7	CP-1T	.005	.005	0	%100
8	CP-2T	.004	.004	0	%100
9	CP-3T	.001	.001	0	%100
10	GSIP-1	.008	.008	0	%100
11	GSIP-2	.003	.003	0	%100
12	GSIP-3	.009	.009	0	%100
13	GSI-1	.003	.003	0	%100
14	GSI-2	.005	.005	0	%100
15	GSI-3	.009	.009	0	%100
16	SA-1A	.007	.007	0	%100
17	SA-1B	.008	.008	0	%100
18	SA-2A	.009	.009	0	%100
19	SA-2B	.011	.011	0	%100
20	SA-3A	.002	.002	0	%100
21	SA-3B	.003	.003	0	%100
22	MP-1	.006	.006	0	%100
23	MP-2	.008	.008	0	%100
24	MP-3	.006	.006	0	%100
25	MP-4	.006	.006	0	%100
26	MP-5	.006	.006	0	%100
27	MP-6	.006	.006	0	%100
28	MP-7	.006	.006	0	%100
29	MP-8	.006	.006	0	%100
30	MP-9	.006	.006	0	%100
31	MP-10	.006	.006	0	%100
32	MP-11	.006	.006	0	%100
33	MP-12	.006	.006	0	%100
34	HRMOD-1	.005	.005	0	%100
35	HRMOD-1	.002	.002	0	%100
36	CP-1U	.007	.007	0	%100
37	CP-1U	.004	.004	0	%100
38	CP-1U	.003	.003	0	%100
39	CP-1U	.009	.009	0	%100
40	FH-1	.008	.008	0	%100
41	HR-1	.004	.004	0	%100
42	FH-2	.003	.003	0	%100
43	HR-2	.001	.001	0	%100
44	FH-3	.011	.011	0	%100
45	HR-3	.006	.006	0	%100
46	CP-1T	.005	.005	0	%100
47	CP-2T	.004	.004	0	%100
48	CP-3T	.001	.001	0	%100
49	GSIP-1	.008	.008	0	%100
50	GSIP-2	.003	.003	0	%100
51	GSIP-3	.009	.009	0	%100
52	GSI-1	.003	.003	0	%100
53	GSI-2	.005	.005	0	%100
54	GSI-3	.009	.009	0	%100
55	SA-1A	.007	.007	0	%100
56	SA-1B	.008	.008	0	%100
57	SA-2A	.009	.009	0	%100
58	SA-2B	.011	.011	0	%100



Member Distributed Loads (BLC 12 : 225 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude(kN.F.kst)	End Magnitude(kN.F.kst)	Start Location(ft.%)	End Location(ft.%)
59	SA-3A	.002	.002	0	%100
60	SA-3B	.003	.003	0	%100
61	MP-1	.006	.006	0	%100
62	MP-2	.006	.006	0	%100
63	MP-3	.006	.006	0	%100
64	MP-4	.006	.006	0	%100
65	MP-5	.006	.006	0	%100
66	MP-6	.006	.006	0	%100
67	MP-7	.006	.006	0	%100
68	MP-8	.006	.006	0	%100
69	MP-9	.006	.006	0	%100
70	MP-10	.006	.006	0	%100
71	MP-11	.006	.006	0	%100
72	MP-12	.006	.006	0	%100
73	HRMOD-1	.005	.005	0	%100
74	HRMOD-1	.002	.002	0	%100
75	HRMOD-1	.007	.007	0	%100
76	CP-1U	.004	.004	0	%100
77	CP-1U	.003	.003	0	%100
78	CP-1U	.001	.001	0	%100

Member Distributed Loads (BLC 13 : 240 Wind - No Ice)

Member Label	Direction	Start Magnitude(kN.F.kst)	End Magnitude(kN.F.kst)	Start Location(ft.%)	End Location(ft.%)
1	FH-1	.004	.004	0	%100
2	HR-1	.002	.002	0	%100
3	FH-2	.004	.004	0	%100
4	HR-2	.002	.002	0	%100
5	FH-3	.008	.008	0	%100
6	HR-3	.004	.004	0	%100
7	CP-1T	.004	.004	0	%100
8	CP-2T	.002	.002	0	%100
9	CP-3T	.002	.002	0	%100
10	GSIP-1	.004	.004	0	%100
11	GSIP-2	.003	.003	0	%100
12	GSIP-3	.007	.007	0	%100
13	GSI-1	.004	.004	0	%100
14	GSI-2	.006	.006	0	%100
15	GSI-3	.006	.006	0	%100
16	SA-1A	.007	.007	0	%100
17	SA-1B	.007	.007	0	%100
18	SA-2A	.006	.006	0	%100
19	SA-2B	.007	.007	0	%100
20	SA-3A	.006	.006	0	%100
21	SA-3B	.006	.006	0	%100
22	MP-1	.004	.004	0	%100
23	MP-2	.004	.004	0	%100
24	MP-3	.004	.004	0	%100
25	MP-4	.004	.004	0	%100
26	MP-5	.004	.004	0	%100
27	MP-6	.004	.004	0	%100
28	MP-7	.004	.004	0	%100
29	MP-8	.004	.004	0	%100
30	MP-9	.004	.004	0	%100
31	MP-10	.004	.004	0	%100
32	MP-11	.004	.004	0	%100
33	MP-12	.004	.004	0	%100



Member Distributed Loads (BLC 13 : 240 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
34	HRMOD-1	X	.003	0	%100
35	HRMOD-1	X	.003	0	%100
36	HRMOD-1	X	.005	0	%100
37	CP-1U	X	.003	0	%100
38	CP-1U	X	.002	0	%100
39	CP-1U	X	.001	0	%100
40	FH-1	Z	.007	0	%100
41	HR-1	Z	.003	0	%100
42	FH-2	Z	.007	0	%100
43	HR-2	Z	.003	0	%100
44	FH-3	Z	.015	0	%100
45	HR-3	Z	.007	0	%100
46	CP-1U	Z	.007	0	%100
47	CP-2T	Z	.004	0	%100
48	CP-3T	Z	.003	0	%100
49	GSIP-1	Z	.007	0	%100
50	GSIP-2	Z	.007	0	%100
51	GSIP-3	Z	.014	0	%100
52	GSH-1	Z	0	0	%100
53	GSH-2	Z	.011	0	%100
54	GSH-3	Z	.009	0	%100
55	SA-1A	Z	.01	0	%100
56	SA-1B	Z	.013	0	%100
57	SA-2A	Z	.01	0	%100
58	SA-2B	Z	.012	0	%100
59	SA-3A	Z	0	0	%100
60	SA-3B	Z	0	0	%100
61	MP-1	Z	.007	0	%100
62	MP-2	Z	.007	0	%100
63	MP-3	Z	.007	0	%100
64	MP-4	Z	.007	0	%100
65	MP-5	Z	.007	0	%100
66	MP-6	Z	.007	0	%100
67	MP-7	Z	.007	0	%100
68	MP-8	Z	.007	0	%100
69	MP-9	Z	.007	0	%100
70	MP-10	Z	.007	0	%100
71	MP-11	Z	.007	0	%100
72	MP-12	Z	.007	0	%100
73	HRMOD-1	Z	.004	0	%100
74	HRMOD-1	Z	.004	0	%100
75	HRMOD-1	Z	.009	0	%100
76	CP-1U	Z	.005	0	%100
77	CP-1U	Z	.003	0	%100
78	CP-1U	Z	.003	0	%100

Member Distributed Loads (BLC 14 : 270 Wind - No Ice)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
1	FH-1	Z	0	0	%100
2	HR-1	Z	0	0	%100
3	HR-2	Z	.015	0	%100
4	HR-2	Z	.007	0	%100
5	FH-3	Z	.015	0	%100
6	HR-3	Z	.007	0	%100
7	CP-1U	Z	.007	0	%100
8	CP-2T	Z	0	0	%100



Member Distributed Loads (BLC 14 : 270 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
9	CP-3T	Z	.007	0	%100
10	GSIP-1	Z	.014	0	%100
11	GSIP-2	Z	.014	0	%100
12	GSIP-3	Z	.014	0	%100
13	GSH-1	Z	.006	0	%100
14	GSH-2	Z	.014	0	%100
15	GSH-3	Z	.006	0	%100
16	SA-1A	Z	.013	0	%100
17	SA-1B	Z	.017	0	%100
18	SA-2A	Z	.007	0	%100
19	SA-2B	Z	.008	0	%100
20	SA-3A	Z	.007	0	%100
21	SA-3B	Z	.008	0	%100
22	MP-1	Z	.008	0	%100
23	MP-2	Z	.008	0	%100
24	MP-3	Z	.008	0	%100
25	MP-4	Z	.008	0	%100
26	MP-5	Z	.008	0	%100
27	MP-6	Z	.008	0	%100
28	MP-7	Z	.008	0	%100
29	MP-8	Z	.008	0	%100
30	MP-9	Z	.008	0	%100
31	MP-10	Z	.008	0	%100
32	MP-11	Z	.008	0	%100
33	MP-12	Z	.008	0	%100
34	HRMOD-1	Z	0	0	%100
35	HRMOD-1	Z	.009	0	%100
36	HRMOD-1	Z	.009	0	%100
37	CP-1U	Z	.005	0	%100
38	CP-1U	Z	0	0	%100
39	CP-1U	Z	.005	0	%100

Member Distributed Loads (BLC 15 : 300 Wind - No Ice)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
1	FH-1	X	-.004	0	%100
2	HR-1	X	-.002	0	%100
3	HR-2	X	-.003	0	%100
4	HR-2	X	-.004	0	%100
5	HR-3	X	-.004	0	%100
6	HR-3	X	-.002	0	%100
7	CP-1T	X	-.002	0	%100
8	CP-2T	X	-.002	0	%100
9	CP-3T	X	-.004	0	%100
10	GSIP-1	X	-.004	0	%100
11	GSIP-2	X	-.007	0	%100
12	GSIP-3	X	-.003	0	%100
13	GSH-1	X	-.004	0	%100
14	GSH-2	X	0	0	%100
15	GSH-3	X	0	0	%100
16	SA-1A	X	-.006	0	%100
17	SA-1B	X	-.007	0	%100
18	SA-2A	X	0	0	%100
19	SA-2B	X	0	0	%100
20	SA-3A	X	-.005	0	%100
21	SA-3B	X	-.007	0	%100
22	MP-1	X	-.004	0	%100



Member Distributed Loads (BLC 15 : 300 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude (kN)	End Magnitude (kN)	Start Location (ft)	End Location (ft)	%
23	MP-2					
24	MP-3	-0.04	-0.04	0	0	%100
25	MP-4	-0.04	-0.04	0	0	%100
26	MP-5	-0.04	-0.04	0	0	%100
27	MP-6	-0.04	-0.04	0	0	%100
28	MP-7	-0.04	-0.04	0	0	%100
29	MP-8	-0.04	-0.04	0	0	%100
30	MP-9	-0.04	-0.04	0	0	%100
31	MP-10	-0.04	-0.04	0	0	%100
32	MP-11	-0.04	-0.04	0	0	%100
33	MP-12	-0.04	-0.04	0	0	%100
34	HRMOD-1	-0.03	-0.03	0	0	%100
35	HRMOD-1	-0.03	-0.03	0	0	%100
36	HRMOD-1	-0.03	-0.03	0	0	%100
37	CP-1U	-0.01	-0.01	0	0	%100
38	CP-1U	-0.02	-0.02	0	0	%100
39	CP-1U	-0.03	-0.03	0	0	%100
40	HR-1	0.07	0.07	0	0	%100
41	HR-1	0.03	0.03	0	0	%100
42	HR-2	0.15	0.15	0	0	%100
43	HR-2	0.07	0.07	0	0	%100
44	HR-3	0.03	0.03	0	0	%100
45	HR-3	0.03	0.03	0	0	%100
46	CP-2T	0.04	0.04	0	0	%100
47	CP-2T	0.07	0.07	0	0	%100
48	CP-2T	0.07	0.07	0	0	%100
49	GSIP-1	0.14	0.14	0	0	%100
50	GSIP-2	0.07	0.07	0	0	%100
51	GSIP-3	0.09	0.09	0	0	%100
52	GSIP-3	0.11	0.11	0	0	%100
53	GSIP-3	0.11	0.11	0	0	%100
54	SA-1A	0	0	0	0	%100
55	SA-1B	0	0	0	0	%100
56	SA-2A	0	0	0	0	%100
57	SA-2B	0	0	0	0	%100
58	SA-3A	0	0	0	0	%100
59	SA-3B	0	0	0	0	%100
60	MP-1	0.12	0.12	0	0	%100
61	MP-1	0.07	0.07	0	0	%100
62	MP-2	0.07	0.07	0	0	%100
63	MP-3	0.07	0.07	0	0	%100
64	MP-4	0.07	0.07	0	0	%100
65	MP-5	0.07	0.07	0	0	%100
66	MP-6	0.07	0.07	0	0	%100
67	MP-7	0.07	0.07	0	0	%100
68	MP-8	0.07	0.07	0	0	%100
69	MP-9	0.07	0.07	0	0	%100
70	MP-10	0.07	0.07	0	0	%100
71	MP-11	0.07	0.07	0	0	%100
72	MP-12	0.07	0.07	0	0	%100
73	HRMOD-1	0.04	0.04	0	0	%100
74	HRMOD-1	0.09	0.09	0	0	%100
75	HRMOD-1	0.04	0.04	0	0	%100
76	CP-1U	0.03	0.03	0	0	%100
77	CP-1U	0.03	0.03	0	0	%100
78	CP-1U	0.05	0.05	0	0	%100



Member Distributed Loads (BLC 16 : 315 Wind - No Ice)

Member Label	Direction	Start Magnitude (kN)	End Magnitude (kN)	Start Location (ft)	End Location (ft)	%
1	HR-1	-0.08	-0.08	0	0	%100
2	HR-1	-0.04	-0.04	0	0	%100
3	HR-2	-0.11	-0.11	0	0	%100
4	HR-2	-0.06	-0.06	0	0	%100
5	HR-3	-0.03	-0.03	0	0	%100
6	HR-3	-0.01	-0.01	0	0	%100
7	CP-1T	-0.01	-0.01	0	0	%100
8	CP-2T	-0.04	-0.04	0	0	%100
9	CP-3T	-0.05	-0.05	0	0	%100
10	GSIP-1	-0.08	-0.08	0	0	%100
11	GSIP-2	-0.09	-0.09	0	0	%100
12	GSIP-3	-0.03	-0.03	0	0	%100
13	GSIP-3	-0.09	-0.09	0	0	%100
14	GSIP-3	-0.05	-0.05	0	0	%100
15	GSIP-3	-0.03	-0.03	0	0	%100
16	SA-1A	-0.07	-0.07	0	0	%100
17	SA-1B	-0.08	-0.08	0	0	%100
18	SA-2A	-0.02	-0.02	0	0	%100
19	SA-2B	-0.03	-0.03	0	0	%100
20	SA-3A	-0.09	-0.09	0	0	%100
21	SA-3B	-0.11	-0.11	0	0	%100
22	MP-1	-0.06	-0.06	0	0	%100
23	MP-2	-0.06	-0.06	0	0	%100
24	MP-3	-0.06	-0.06	0	0	%100
25	MP-4	-0.06	-0.06	0	0	%100
26	MP-5	-0.06	-0.06	0	0	%100
27	MP-6	-0.06	-0.06	0	0	%100
28	MP-7	-0.06	-0.06	0	0	%100
29	MP-8	-0.06	-0.06	0	0	%100
30	MP-9	-0.06	-0.06	0	0	%100
31	MP-10	-0.06	-0.06	0	0	%100
32	MP-11	-0.06	-0.06	0	0	%100
33	MP-12	-0.06	-0.06	0	0	%100
34	HRMOD-1	-0.05	-0.05	0	0	%100
35	HRMOD-1	-0.07	-0.07	0	0	%100
36	HRMOD-1	-0.02	-0.02	0	0	%100
37	CP-1U	-0.03	-0.03	0	0	%100
38	CP-1U	-0.04	-0.04	0	0	%100
39	CP-1U	-0.08	-0.08	0	0	%100
40	HR-1	0.04	0.04	0	0	%100
41	HR-1	0.11	0.11	0	0	%100
42	HR-2	0.06	0.06	0	0	%100
43	HR-2	0.06	0.06	0	0	%100
44	HR-3	0.03	0.03	0	0	%100
45	HR-3	0.01	0.01	0	0	%100
46	CP-1T	0.01	0.01	0	0	%100
47	CP-2T	0.04	0.04	0	0	%100
48	CP-3T	0.05	0.05	0	0	%100
49	GSIP-1	0.08	0.08	0	0	%100
50	GSIP-2	0.11	0.11	0	0	%100
51	GSIP-3	0.03	0.03	0	0	%100
52	GSIP-3	0.09	0.09	0	0	%100
53	GSIP-3	0.07	0.07	0	0	%100
54	GSIP-3	0.03	0.03	0	0	%100
55	SA-1A	0.07	0.07	0	0	%100
56	SA-1A	0.07	0.07	0	0	%100
57	SA-1A	0.09	0.09	0	0	%100
58	SA-2A	0.02	0.02	0	0	%100
59	SA-2A	0.03	0.03	0	0	%100
60	SA-3A	0.09	0.09	0	0	%100
61	SA-3A	0.11	0.11	0	0	%100
62	MP-1	0.06	0.06	0	0	%100
63	MP-2	0.06	0.06	0	0	%100
64	MP-3	0.06	0.06	0	0	%100
65	MP-4	0.06	0.06	0	0	%100
66	MP-5	0.06	0.06	0	0	%100
67	MP-6	0.06	0.06	0	0	%100
68	MP-7	0.06	0.06	0	0	%100
69	MP-8	0.06	0.06	0	0	%100
70	MP-9	0.06	0.06	0	0	%100
71	MP-10	0.06	0.06	0	0	%100
72	MP-11	0.06	0.06	0	0	%100
73	MP-12	0.06	0.06	0	0	%100
74	HRMOD-1	0.05	0.05	0	0	%100
75	HRMOD-1	0.07	0.07	0	0	%100
76	CP-1U	0.02	0.02	0	0	%100
77	CP-1U	0.07	0.07	0	0	%100
78	CP-1U	0.09	0.09	0	0	%100



Member Distributed Loads (BLC 16 : 315 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
58	SA-2B	Z	.003	0	%100
59	SA-3A	Z	.009	0	%100
60	SA-3B	Z	.01	0	%100
61	MP-1	Z	.006	0	%100
62	MP-2	Z	.006	0	%100
63	MP-3	Z	.006	0	%100
64	MP-4	Z	.006	0	%100
65	MP-5	Z	.006	0	%100
66	MP-6	Z	.006	0	%100
67	MP-7	Z	.006	0	%100
68	MP-8	Z	.006	0	%100
69	MP-9	Z	.006	0	%100
70	MP-10	Z	.006	0	%100
71	MP-11	Z	.006	0	%100
72	MP-12	Z	.006	0	%100
73	HRMOD-1	Z	.005	0	%100
74	HRMOD-1	Z	.007	0	%100
75	HRMOD-1	Z	.002	0	%100
76	CP-1U	Z	.001	0	%100
77	CP-1U	Z	.003	0	%100
78	CP-1U	Z	.004	0	%100

Member Distributed Loads (BLC 17 : 330 Wind - No Ice)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
1	FH-1	X	-.013	0	%100
2	FH-1	X	-.006	0	%100
3	FH-2	X	-.013	0	%100
4	HR-2	X	-.006	0	%100
5	FH-3	X	0	0	%100
6	HR-3	X	0	0	%100
7	CP-1T	X	0	0	%100
8	CP-2T	X	-.006	0	%100
9	CP-3T	X	-.005	0	%100
10	GSLP-1	X	-.013	0	%100
11	GSLP-2	X	-.01	0	%100
12	GSLP-3	X	-.012	0	%100
13	GSLP-1	X	-.004	0	%100
14	GSL-2	X	-.006	0	%100
15	GSL-3	X	-.006	0	%100
16	SA-1A	X	-.006	0	%100
17	SA-1B	X	-.007	0	%100
18	SA-2A	X	-.006	0	%100
19	SA-2B	X	-.007	0	%100
20	SA-3A	X	-.012	0	%100
21	SA-3B	X	-.014	0	%100
22	MP-1	X	-.007	0	%100
23	MP-2	X	-.007	0	%100
24	MP-3	X	-.007	0	%100
25	MP-4	X	-.007	0	%100
26	MP-5	X	-.007	0	%100
27	MP-6	X	-.007	0	%100
28	MP-7	X	-.007	0	%100
29	MP-8	X	-.007	0	%100
30	MP-9	X	-.007	0	%100
31	MP-10	X	-.007	0	%100
32	MP-11	X	-.007	0	%100



Member Distributed Loads (BLC 17 : 330 Wind - No Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
33	MP-12	X	-.007	0	%100
34	HRMOD-1	X	-.008	0	%100
35	HRMOD-1	X	-.008	0	%100
36	HRMOD-1	X	0	0	%100
37	CP-1U	X	0	0	%100
38	CP-1U	X	-.005	0	%100
39	CP-1U	X	-.004	0	%100
40	FH-1	Z	.007	0	%100
41	HR-1	Z	.003	0	%100
42	FH-2	Z	.007	0	%100
43	HR-2	Z	.003	0	%100
44	FH-3	Z	0	0	%100
45	HR-3	Z	0	0	%100
46	CP-1T	Z	0	0	%100
47	CP-2T	Z	.004	0	%100
48	CP-3T	Z	.003	0	%100
49	GSLP-1	Z	.007	0	%100
50	GSLP-2	Z	.007	0	%100
51	GSLP-3	Z	0	0	%100
52	GSL-1	Z	.006	0	%100
53	GSL-2	Z	.004	0	%100
54	GSL-3	Z	.003	0	%100
55	SA-1A	Z	.003	0	%100
56	SA-1B	Z	.004	0	%100
57	SA-2A	Z	.003	0	%100
58	SA-2B	Z	.004	0	%100
59	SA-3A	Z	.007	0	%100
60	SA-3B	Z	.008	0	%100
61	MP-1	Z	.004	0	%100
62	MP-2	Z	.004	0	%100
63	MP-3	Z	.004	0	%100
64	MP-4	Z	.004	0	%100
65	MP-5	Z	.004	0	%100
66	MP-6	Z	.004	0	%100
67	MP-7	Z	.004	0	%100
68	MP-8	Z	.004	0	%100
69	MP-9	Z	.004	0	%100
70	MP-10	Z	.004	0	%100
71	MP-11	Z	.004	0	%100
72	MP-12	Z	.004	0	%100
73	HRMOD-1	Z	.004	0	%100
74	HRMOD-1	Z	.004	0	%100
75	HRMOD-1	Z	0	0	%100
76	CP-1U	Z	0	0	%100
77	CP-1U	Z	.003	0	%100
78	CP-1U	Z	.003	0	%100

Member Distributed Loads (BLC 18 : Ice Weight)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
1	FH-1	Y	-.008	0	%100
2	HR-1	Y	-.009	0	%100
3	FH-2	Y	-.008	0	%100
4	HR-2	Y	-.008	0	%100
5	FH-3	Y	-.008	0	%100
6	HR-3	Y	-.009	0	%100
7	CP-1T	Y	-.006	0	%100



Member Distributed Loads (BLC 18 : Ice Weight) (Continued)

Member Label	Direction	Start Magnitude(kN), F, ksf	End Magnitude(kN), F, ksf	Start Location(ft), %	End Location(ft), %
8	CP-2T	-0.06	-0.06	0	%100
9	CP-3T	-0.06	-0.06	0	%100
10	GSP-1	-0.08	-0.08	0	%100
11	GSP-2	-0.08	-0.08	0	%100
12	GSP-3	-0.08	-0.08	0	%100
13	GSI-1	-0.13	-0.13	0	%100
14	GSI-2	-0.13	-0.13	0	%100
15	GSI-3	-0.13	-0.13	0	%100
16	SA-1A	-0.15	-0.15	0	%100
17	SA-1B	-0.14	-0.14	0	%100
18	SA-2A	-0.15	-0.15	0	%100
19	SA-2B	-0.14	-0.14	0	%100
20	SA-3A	-0.15	-0.15	0	%100
21	SA-3B	-0.14	-0.14	0	%100
22	MP-1	-0.09	-0.09	0	%100
23	MP-2	-0.09	-0.09	0	%100
24	MP-3	-0.09	-0.09	0	%100
25	MP-4	-0.09	-0.09	0	%100
26	MP-5	-0.09	-0.09	0	%100
27	MP-6	-0.09	-0.09	0	%100
28	MP-7	-0.09	-0.09	0	%100
29	MP-8	-0.09	-0.09	0	%100
30	MP-9	-0.09	-0.09	0	%100
31	MP-10	-0.09	-0.09	0	%100
32	MP-11	-0.09	-0.09	0	%100
33	MP-12	-0.09	-0.09	0	%100
34	HRMOD-1	-0.11	-0.11	0	%100
35	HRMOD-2	-0.11	-0.11	0	%100
36	HRMOD-3	-0.11	-0.11	0	%100
37	CP-1U	-0.1	-0.1	0	%100
38	CP-2U	-0.1	-0.1	0	%100
39	CP-3U	-0.1	-0.1	0	%100

Member Distributed Loads (BLC 19 : 0 Wind - Ice)

Member Label	Direction	Start Magnitude(kN), F, ksf	End Magnitude(kN), F, ksf	Start Location(ft), %	End Location(ft), %
1	FH-1	-0.06	-0.06	0	%100
2	HR-1	-0.03	-0.03	0	%100
3	HR-2	-0.05	-0.05	0	%100
4	HR-3	-0.03	-0.03	0	%100
5	HR-4	-0.05	-0.05	0	%100
6	HR-5	-0.03	-0.03	0	%100
7	CP-1T	-0.04	-0.04	0	%100
8	CP-2T	-0.04	-0.04	0	%100
9	CP-3T	-0.05	-0.05	0	%100
10	GSP-1	-0.05	-0.05	0	%100
11	GSP-2	-0.05	-0.05	0	%100
12	GSP-3	-0.05	-0.05	0	%100
13	GSI-1	-0.05	-0.05	0	%100
14	GSI-2	-0.04	-0.04	0	%100
15	GSI-3	-0.05	-0.05	0	%100
16	SA-1A	-0.06	-0.06	0	%100
17	SA-1B	-0.05	-0.05	0	%100
18	SA-2A	-0.06	-0.06	0	%100
19	SA-2B	-0.05	-0.05	0	%100
20	SA-3A	-0.06	-0.06	0	%100
21	SA-3B	-0.05	-0.05	0	%100



Member Distributed Loads (BLC 19 : 0 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude(kN), F, ksf	End Magnitude(kN), F, ksf	Start Location(ft), %	End Location(ft), %
22	MP-1	-0.02	-0.02	0	%100
23	MP-2	-0.02	-0.02	0	%100
24	MP-3	-0.02	-0.02	0	%100
25	MP-4	-0.02	-0.02	0	%100
26	MP-5	-0.02	-0.02	0	%100
27	MP-6	-0.02	-0.02	0	%100
28	MP-7	-0.02	-0.02	0	%100
29	MP-8	-0.02	-0.02	0	%100
30	MP-9	-0.02	-0.02	0	%100
31	MP-10	-0.02	-0.02	0	%100
32	MP-11	-0.02	-0.02	0	%100
33	MP-12	-0.02	-0.02	0	%100
34	HRMOD-1	-0.04	-0.04	0	%100
35	HRMOD-2	-0.03	-0.03	0	%100
36	HRMOD-3	-0.03	-0.03	0	%100
37	CP-1U	-0.02	-0.02	0	%100
38	CP-2U	-0.02	-0.02	0	%100
39	CP-3U	-0.02	-0.02	0	%100

Member Distributed Loads (BLC 20 : 30 Wind - Ice)

Member Label	Direction	Start Magnitude(kN), F, ksf	End Magnitude(kN), F, ksf	Start Location(ft), %	End Location(ft), %
1	FH-1	-0.05	-0.05	0	%100
2	HR-1	0	0	0	%100
3	HR-2	0	0	0	%100
4	HR-3	0	0	0	%100
5	HR-4	-0.04	-0.04	0	%100
6	HR-5	-0.02	-0.02	0	%100
7	CP-1T	-0.03	-0.03	0	%100
8	CP-2T	-0.03	-0.03	0	%100
9	CP-3T	0	0	0	%100
10	GSP-1	-0.04	-0.04	0	%100
11	GSP-2	0	0	0	%100
12	GSP-3	-0.03	-0.03	0	%100
13	GSI-1	-0.02	-0.02	0	%100
14	GSI-2	-0.02	-0.02	0	%100
15	GSI-3	-0.04	-0.04	0	%100
16	SA-1A	-0.03	-0.03	0	%100
17	SA-1B	-0.03	-0.03	0	%100
18	SA-2A	-0.02	-0.02	0	%100
19	SA-2B	-0.05	-0.05	0	%100
20	SA-3A	-0.03	-0.03	0	%100
21	SA-3B	-0.02	-0.02	0	%100
22	MP-1	-0.02	-0.02	0	%100
23	MP-2	-0.02	-0.02	0	%100
24	MP-3	-0.02	-0.02	0	%100
25	MP-4	-0.02	-0.02	0	%100
26	MP-5	-0.02	-0.02	0	%100
27	MP-6	-0.02	-0.02	0	%100
28	MP-7	-0.02	-0.02	0	%100
29	MP-8	-0.02	-0.02	0	%100
30	MP-9	-0.02	-0.02	0	%100
31	MP-10	-0.02	-0.02	0	%100
32	MP-11	-0.02	-0.02	0	%100
33	MP-12	-0.02	-0.02	0	%100
34	HRMOD-1	-0.03	-0.03	0	%100
35	HRMOD-2	0	0	0	%100



Member Distributed Loads (BLC 20 : 30 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
36	HRMOD-1	-0.002	-0.002	0	0
37	CP-1U	-0.002	-0.002	0	0
38	CP-1U	-0.002	-0.002	0	0
39	CP-1U	0	0	0	0
40	FH-1	-0.002	-0.002	0	0
41	HR-1	-0.001	-0.001	0	0
42	FH-2	0	0	0	0
43	HR-2	0	0	0	0
44	FH-3	-0.003	-0.003	0	0
45	HR-3	-0.002	-0.002	0	0
46	CP-1T	-0.002	-0.002	0	0
47	CP-2T	-0.002	-0.002	0	0
48	CP-3T	-0.002	-0.002	0	0
49	GSP-1	-0.002	-0.002	0	0
50	GSP-2	0	0	0	0
51	GSP-3	-0.002	-0.002	0	0
52	GSI-1	-0.001	-0.001	0	0
53	GSI-2	-0.001	-0.001	0	0
54	GSI-3	-0.002	-0.002	0	0
55	SA-1A	-0.001	-0.001	0	0
56	SA-1B	-0.001	-0.001	0	0
57	SA-2A	-0.003	-0.003	0	0
58	SA-2B	-0.003	-0.003	0	0
59	SA-3A	-0.002	-0.002	0	0
60	SA-3B	-0.001	-0.001	0	0
61	MP-1	-0.001	-0.001	0	0
62	MP-2	-0.001	-0.001	0	0
63	MP-3	-0.001	-0.001	0	0
64	MP-4	-0.001	-0.001	0	0
65	MP-5	-0.001	-0.001	0	0
66	MP-6	-0.001	-0.001	0	0
67	MP-7	-0.001	-0.001	0	0
68	MP-8	-0.001	-0.001	0	0
69	MP-9	-0.001	-0.001	0	0
70	MP-10	-0.001	-0.001	0	0
71	MP-11	-0.001	-0.001	0	0
72	MP-12	-0.001	-0.001	0	0
73	HRMOD-1	-0.002	-0.002	0	0
74	HRMOD-1	0	0	0	0
75	HRMOD-1	-0.001	-0.001	0	0
76	CP-1U	-0.00965	-0.00965	0	0
77	CP-1U	0	0	0	0
78	CP-1U	0	0	0	0

Member Distributed Loads (BLC 21 : 45 Wind - Ice)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
1	FH-1	-0.003	-0.003	0	0
2	HR-1	-0.002	-0.002	0	0
3	FH-2	-0.00948	-0.00948	0	0
4	HR-2	-0.00516	-0.00516	0	0
5	FH-3	-0.004	-0.004	0	0
6	HR-3	-0.002	-0.002	0	0
7	CP-1T	-0.003	-0.003	0	0
8	CP-2T	-0.002	-0.002	0	0
9	CP-3T	-0.00659	-0.00659	0	0
10	GSP-1	-0.003	-0.003	0	0



Member Distributed Loads (BLC 21 : 45 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
11	GSP-2	-0.00837	-0.00837	0	0
12	GSP-3	-0.003	-0.003	0	0
13	GSI-1	-0.00886	-0.00886	0	0
14	GSI-2	-0.002	-0.002	0	0
15	GSI-3	-0.003	-0.003	0	0
16	SA-1A	-0.003	-0.003	0	0
17	SA-1B	-0.003	-0.003	0	0
18	SA-2A	-0.004	-0.004	0	0
19	SA-2B	-0.004	-0.004	0	0
20	SA-3A	-0.001	-0.001	0	0
21	SA-3B	-0.00988	-0.00988	0	0
22	MP-1	-0.002	-0.002	0	0
23	MP-2	-0.002	-0.002	0	0
24	MP-3	-0.002	-0.002	0	0
25	MP-4	-0.002	-0.002	0	0
26	MP-5	-0.002	-0.002	0	0
27	MP-6	-0.002	-0.002	0	0
28	MP-7	-0.002	-0.002	0	0
29	MP-8	-0.002	-0.002	0	0
30	MP-9	-0.002	-0.002	0	0
31	MP-10	-0.002	-0.002	0	0
32	MP-11	-0.002	-0.002	0	0
33	MP-12	-0.002	-0.002	0	0
34	HRMOD-1	-0.002	-0.002	0	0
35	HRMOD-1	-0.0058	-0.0058	0	0
36	HRMOD-1	-0.002	-0.002	0	0
37	CP-1U	-0.001	-0.001	0	0
38	CP-1U	-0.00414	-0.00414	0	0
39	CP-1U	-0.003	-0.003	0	0
40	HR-1	-0.002	-0.002	0	0
41	HR-1	-0.003	-0.003	0	0
42	HR-2	-0.001	-0.001	0	0
43	HR-2	-0.00638	-0.00638	0	0
44	HR-3	-0.004	-0.004	0	0
45	HR-3	-0.002	-0.002	0	0
46	CP-1T	-0.002	-0.002	0	0
47	CP-2T	-0.002	-0.002	0	0
48	CP-3T	-0.00721	-0.00721	0	0
49	GSP-1	-0.002	-0.002	0	0
50	GSP-2	-0.00932	-0.00932	0	0
51	GSP-3	-0.003	-0.003	0	0
52	GSI-1	-0.00786	-0.00786	0	0
53	GSI-2	-0.002	-0.002	0	0
54	GSI-3	-0.003	-0.003	0	0
55	SA-1A	-0.003	-0.003	0	0
56	SA-1B	-0.004	-0.004	0	0
57	SA-2A	-0.004	-0.004	0	0
58	SA-2B	-0.004	-0.004	0	0
59	SA-3A	-0.00959	-0.00959	0	0
60	SA-3B	-0.001	-0.001	0	0
61	MP-1	-0.002	-0.002	0	0
62	MP-2	-0.002	-0.002	0	0
63	MP-3	-0.002	-0.002	0	0
64	MP-4	-0.002	-0.002	0	0
65	MP-5	-0.002	-0.002	0	0
66	MP-6	-0.002	-0.002	0	0
67	MP-7	-0.002	-0.002	0	0



Member Distributed Loads (BLC 23 : 90 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
18	SA-2A	-0.003	-0.003	0	0
19	SA-2B	-0.003	-0.003	0	0
20	SA-3A	-0.003	-0.003	0	0
21	SA-3B	-0.003	-0.003	0	0
22	MP-1	-0.003	-0.003	0	0
23	MP-2	-0.003	-0.003	0	0
24	MP-3	-0.003	-0.003	0	0
25	MP-4	-0.003	-0.003	0	0
26	MP-5	-0.003	-0.003	0	0
27	MP-6	-0.003	-0.003	0	0
28	MP-7	-0.003	-0.003	0	0
29	MP-8	-0.003	-0.003	0	0
30	MP-9	-0.003	-0.003	0	0
31	MP-10	-0.003	-0.003	0	0
32	MP-11	-0.003	-0.003	0	0
33	MP-12	-0.003	-0.003	0	0
34	HRMOD-1	0	0	0	0
35	HRMOD-1	-0.003	-0.003	0	0
36	HRMOD-1	-0.003	-0.003	0	0
37	CP-1U	-0.002	-0.002	0	0
38	CP-1U	-0.002	-0.002	0	0
39	CP-1U	-0.002	-0.002	0	0

Member Distributed Loads (BLC 24 : 120 Wind - Ice)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
1	FH-1	0.002	0.002	0	0
2	FH-2	0.00871	0.00871	0	0
3	FH-2	0.003	0.003	0	0
4	FH-2	0.001	0.001	0	0
5	FH-3	0.001	0.001	0	0
6	CP-1T	-0.00705	-0.00705	0	0
7	CP-2T	-0.00954	-0.00954	0	0
8	CP-2T	0.001	0.001	0	0
9	CP-3T	0.002	0.002	0	0
10	GSP-1	0.001	0.001	0	0
11	GSP-2	0.002	0.002	0	0
12	GSP-3	0.001	0.001	0	0
13	GSI-1	0.002	0.002	0	0
14	GSI-2	0.002	0.002	0	0
15	GSI-3	0	0	0	0
16	SA-1A	0.003	0.003	0	0
17	SA-1B	0.002	0.002	0	0
18	SA-2A	0	0	0	0
19	SA-2B	0	0	0	0
20	SA-3A	0.003	0.003	0	0
21	SA-3B	0.002	0.002	0	0
22	MP-1	0.001	0.001	0	0
23	MP-2	0.001	0.001	0	0
24	MP-3	0.001	0.001	0	0
25	MP-4	0.001	0.001	0	0
26	MP-5	0.001	0.001	0	0
27	MP-6	0.001	0.001	0	0
28	MP-7	0.001	0.001	0	0
29	MP-8	0.001	0.001	0	0
30	MP-9	0.001	0.001	0	0
31	MP-10	0.001	0.001	0	0



Member Distributed Loads (BLC 24 : 120 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
32	MP-11	0.001	0.001	0	0
33	MP-12	0.001	0.001	0	0
34	HRMOD-1	0.001	0.001	0	0
35	HRMOD-1	0.002	0.002	0	0
36	HRMOD-1	-0.00793	-0.00793	0	0
37	CP-1U	0.00566	0.00566	0	0
38	CP-1U	0.00619	0.00619	0	0
39	CP-1U	0.001	0.001	0	0
40	FH-1	-0.002	-0.002	0	0
41	HR-1	-0.001	-0.001	0	0
42	FH-2	-0.005	-0.005	0	0
43	HR-2	-0.003	-0.003	0	0
44	FH-3	-0.003	-0.003	0	0
45	HR-3	-0.002	-0.002	0	0
46	CP-1T	-0.002	-0.002	0	0
47	CP-2T	-0.002	-0.002	0	0
48	CP-3T	-0.003	-0.003	0	0
49	GSP-1	-0.002	-0.002	0	0
50	GSP-2	-0.004	-0.004	0	0
51	GSP-3	-0.002	-0.002	0	0
52	GSI-1	-0.003	-0.003	0	0
53	GSI-2	-0.004	-0.004	0	0
54	GSI-3	0	0	0	0
55	SA-1A	-0.005	-0.005	0	0
56	SA-1B	-0.004	-0.004	0	0
57	SA-2A	0	0	0	0
58	SA-2B	0	0	0	0
59	SA-3A	-0.005	-0.005	0	0
60	SA-3B	-0.004	-0.004	0	0
61	MP-1	-0.002	-0.002	0	0
62	MP-2	-0.002	-0.002	0	0
63	MP-3	-0.002	-0.002	0	0
64	MP-4	-0.002	-0.002	0	0
65	MP-5	-0.002	-0.002	0	0
66	MP-6	-0.002	-0.002	0	0
67	MP-7	-0.002	-0.002	0	0
68	MP-8	-0.002	-0.002	0	0
69	MP-9	-0.002	-0.002	0	0
70	MP-10	-0.002	-0.002	0	0
71	MP-11	-0.002	-0.002	0	0
72	MP-12	-0.002	-0.002	0	0
73	HRMOD-1	-0.002	-0.002	0	0
74	HRMOD-1	-0.003	-0.003	0	0
75	HRMOD-1	-0.002	-0.002	0	0
76	CP-1U	-0.001	-0.001	0	0
77	CP-1U	-0.00965	-0.00965	0	0
78	CP-1U	-0.002	-0.002	0	0

Member Distributed Loads (BLC 25 : 135 Wind - Ice)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
1	FH-1	0.003	0.003	0	0
2	HR-1	-0.002	-0.002	0	0
3	FH-2	0.004	0.004	0	0
4	HR-2	-0.002	-0.002	0	0
5	FH-3	0.00948	0.00948	0	0
6	HR-3	-0.00516	-0.00516	0	0



Member Distributed Loads (BLC 25 : 135 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, F, list)	End Magnitude(kN, F, list)	Start Location(ft, %)	End Location(ft, %)
7	CP-11	X	.000599	0	%100
8	CP-21	X	.002	0	%100
9	CP-31	X	.003	0	%100
10	GSP-1	X	.003	0	%100
11	GSP-2	X	.003	0	%100
12	GSP-3	X	.000837	0	%100
13	GSI-1	X	.003	0	%100
14	GSI-2	X	.002	0	%100
15	GSI-3	X	.00086	0	%100
16	SA-1A	X	.003	0	%100
17	SA-1B	X	.003	0	%100
18	SA-2A	X	.001	0	%100
19	SA-2B	X	.000988	0	%100
20	SA-3A	X	.004	0	%100
21	SA-3B	X	.004	0	%100
22	MP-1	X	.002	0	%100
23	MP-2	X	.002	0	%100
24	MP-3	X	.002	0	%100
25	MP-4	X	.002	0	%100
26	MP-5	X	.002	0	%100
27	MP-6	X	.002	0	%100
28	MP-7	X	.002	0	%100
29	MP-8	X	.002	0	%100
30	MP-9	X	.002	0	%100
31	MP-10	X	.002	0	%100
32	MP-11	X	.002	0	%100
33	MP-12	X	.002	0	%100
34	HRMOD-1	X	.002	0	%100
35	HRMOD-1	X	.002	0	%100
36	HRMOD-1	X	.00058	0	%100
37	CP-1U	X	.000414	0	%100
38	CP-1U	X	.001	0	%100
39	CP-1U	X	.002	0	%100
40	FH-1	Z	.003	0	%100
41	HR-1	Z	.002	0	%100
42	HR-2	Z	.004	0	%100
43	HR-2	Z	.002	0	%100
44	FH-3	Z	.001	0	%100
45	HR-3	Z	.000638	0	%100
46	CP-21	Z	.000721	0	%100
47	CP-21	Z	.002	0	%100
48	CP-31	Z	.003	0	%100
49	GSP-1	Z	.002	0	%100
50	GSP-2	Z	.003	0	%100
51	GSP-3	Z	.000932	0	%100
52	GSI-1	Z	.003	0	%100
53	GSI-2	Z	.002	0	%100
54	GSI-3	Z	.000786	0	%100
55	SA-1A	Z	.003	0	%100
56	SA-1B	Z	.003	0	%100
57	SA-2A	Z	.001	0	%100
58	SA-2B	Z	.000959	0	%100
59	SA-3A	Z	.004	0	%100
60	SA-3B	Z	.004	0	%100
61	MP-1	Z	.002	0	%100
62	MP-2	Z	.002	0	%100
63	MP-3	Z	.002	0	%100



Member Distributed Loads (BLC 25 : 135 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, F, list)	End Magnitude(kN, F, list)	Start Location(ft, %)	End Location(ft, %)
64	MP-4	Z	.002	0	%100
65	MP-5	Z	.002	0	%100
66	MP-6	Z	.002	0	%100
67	MP-7	Z	.002	0	%100
68	MP-8	Z	.002	0	%100
69	MP-9	Z	.002	0	%100
70	MP-10	Z	.002	0	%100
71	MP-11	Z	.002	0	%100
72	MP-12	Z	.002	0	%100
73	HRMOD-1	Z	.002	0	%100
74	HRMOD-1	Z	.003	0	%100
75	HRMOD-1	Z	.000702	0	%100
76	CP-1U	Z	.000443	0	%100
77	CP-1U	Z	.001	0	%100
78	CP-1U	Z	.002	0	%100

Member Distributed Loads (BLC 26 : 150 Wind - Ice)

Member Label	Direction	Start Magnitude(kN, F, list)	End Magnitude(kN, F, list)	Start Location(ft, %)	End Location(ft, %)
1	FH-1	X	.005	0	%100
2	HR-1	X	.003	0	%100
3	HR-2	X	.004	0	%100
4	HR-2	X	.002	0	%100
5	FH-3	X	0	0	%100
6	HR-3	X	0	0	%100
7	CP-11	X	0	0	%100
8	CP-21	X	.003	0	%100
9	CP-31	X	.003	0	%100
10	GSP-1	X	.004	0	%100
11	GSP-2	X	.003	0	%100
12	GSP-3	X	0	0	%100
13	GSI-1	X	.004	0	%100
14	GSI-2	X	.002	0	%100
15	GSI-3	X	.002	0	%100
16	SA-1A	X	.003	0	%100
17	SA-1B	X	.002	0	%100
18	SA-2A	X	.003	0	%100
19	SA-2B	X	.002	0	%100
20	SA-3A	X	.005	0	%100
21	SA-3B	X	.005	0	%100
22	MP-1	X	.002	0	%100
23	MP-2	X	.002	0	%100
24	MP-3	X	.002	0	%100
25	MP-4	X	.002	0	%100
26	MP-5	X	.002	0	%100
27	MP-6	X	.002	0	%100
28	MP-7	X	.002	0	%100
29	MP-8	X	.002	0	%100
30	MP-9	X	.002	0	%100
31	MP-10	X	.002	0	%100
32	MP-11	X	.002	0	%100
33	MP-12	X	.002	0	%100
34	HRMOD-1	X	.002	0	%100
35	HRMOD-1	X	.003	0	%100
36	HRMOD-1	X	.002	0	%100
37	CP-1U	X	0	0	%100
38	CP-1U	X	.002	0	%100

Member Distributed Loads (BLC 26 : 150 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, E, Isd)	End Magnitude(kN, E, Isd)	Start Location(ft, %)	End Location(ft, %)
39	CP-1U	X	.002	0	%100
40	FH-1	Z	-.002	0	%100
41	FH-1	Z	-.001	0	%100
42	FH-2	Z	-.003	0	%100
43	FH-2	Z	-.002	0	%100
44	FH-3	Z	0	0	%100
45	FH-3	Z	0	0	%100
46	CP-1T	Z	-.002	0	%100
47	CP-2T	Z	-.002	0	%100
48	CP-3T	Z	-.002	0	%100
49	GSP-1	Z	-.002	0	%100
50	GSP-2	Z	-.002	0	%100
51	GSP-3	Z	0	0	%100
52	GSP-3	Z	-.002	0	%100
53	GSI-2	Z	-.001	0	%100
54	GSI-3	Z	-.001	0	%100
55	SA-1A	Z	-.002	0	%100
56	SA-1B	Z	-.001	0	%100
57	SA-2A	Z	-.002	0	%100
58	SA-2B	Z	-.001	0	%100
59	SA-3A	Z	-.003	0	%100
60	SA-3B	Z	-.003	0	%100
61	MP-1	Z	-.001	0	%100
62	MP-2	Z	-.001	0	%100
63	MP-3	Z	-.001	0	%100
64	MP-4	Z	-.001	0	%100
65	MP-5	Z	-.001	0	%100
66	MP-6	Z	-.001	0	%100
67	MP-7	Z	-.001	0	%100
68	MP-8	Z	-.001	0	%100
69	MP-9	Z	-.001	0	%100
70	MP-10	Z	-.001	0	%100
71	MP-11	Z	-.001	0	%100
72	MP-12	Z	-.001	0	%100
73	HRMOD-1	Z	-.002	0	%100
74	HRMOD-1	Z	0	0	%100
75	HRMOD-1	Z	0	0	%100
76	CP-1U	Z	-.000965	0	%100
77	CP-1U	Z	-.000965	0	%100
78	CP-1U	Z	-.001	0	%100

Member Distributed Loads (BLC 27 : 180 Wind - Ice)

Member Label	Direction	Start Magnitude(kN, E, Isd)	End Magnitude(kN, E, Isd)	Start Location(ft, %)	End Location(ft, %)
1	FH-1	X	.006	0	%100
2	FH-1	X	.003	0	%100
3	FH-2	X	.005	0	%100
4	FH-2	X	.003	0	%100
5	FH-3	X	.005	0	%100
6	FH-3	X	.003	0	%100
7	CP-1T	X	.004	0	%100
8	CP-2T	X	.004	0	%100
9	CP-3T	X	.004	0	%100
10	GSP-1	X	.005	0	%100
11	GSP-2	X	.005	0	%100
12	GSP-3	X	.005	0	%100

Member Distributed Loads (BLC 27 : 180 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, E, Isd)	End Magnitude(kN, E, Isd)	Start Location(ft, %)	End Location(ft, %)
14	GSI-2	X	.004	0	%100
15	GSI-3	X	.005	0	%100
16	SA-1A	X	.006	0	%100
17	SA-1B	X	.005	0	%100
18	SA-2A	X	.006	0	%100
19	SA-2B	X	.005	0	%100
20	SA-3A	X	.006	0	%100
21	SA-3B	X	.005	0	%100
22	MP-1	X	.002	0	%100
23	MP-2	X	.002	0	%100
24	MP-3	X	.002	0	%100
25	MP-4	X	.002	0	%100
26	MP-5	X	.002	0	%100
27	MP-6	X	.002	0	%100
28	MP-7	X	.002	0	%100
29	MP-8	X	.002	0	%100
30	MP-9	X	.002	0	%100
31	MP-10	X	.002	0	%100
32	MP-11	X	.002	0	%100
33	MP-12	X	.002	0	%100
34	HRMOD-1	X	.004	0	%100
35	HRMOD-1	X	.003	0	%100
36	HRMOD-1	X	.003	0	%100
37	CP-1U	X	.002	0	%100
38	CP-1U	X	.002	0	%100
39	CP-1U	X	.002	0	%100

Member Distributed Loads (BLC 28 : 210 Wind - Ice)

Member Label	Direction	Start Magnitude(kN, E, Isd)	End Magnitude(kN, E, Isd)	Start Location(ft, %)	End Location(ft, %)
1	FH-1	X	.005	0	%100
2	FH-1	X	.003	0	%100
3	FH-2	X	0	0	%100
4	FH-2	X	0	0	%100
5	FH-3	X	.004	0	%100
6	FH-3	X	-.002	0	%100
7	CP-1T	X	.003	0	%100
8	CP-2T	X	.003	0	%100
9	CP-3T	X	0	0	%100
10	GSP-1	X	.004	0	%100
11	GSP-2	X	0	0	%100
12	GSP-3	X	.003	0	%100
13	GSI-1	X	.002	0	%100
14	GSI-2	X	.002	0	%100
15	GSI-3	X	.004	0	%100
16	SA-1A	X	.003	0	%100
17	SA-1B	X	.002	0	%100
18	SA-2A	X	.005	0	%100
19	SA-2B	X	.005	0	%100
20	SA-3A	X	.003	0	%100
21	SA-3B	X	.002	0	%100
22	MP-1	X	.002	0	%100
23	MP-2	X	.002	0	%100
24	MP-3	X	.002	0	%100
25	MP-4	X	.002	0	%100
26	MP-5	X	.002	0	%100
27	MP-6	X	.002	0	%100



Member Distributed Loads (BLC 28 : 210 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, E, Isel)	End Magnitude(kN, E, Isel)	Start Location(ft, %)	End Location(ft, %)
28	MP-7	.002	.002	0	0
29	MP-8	.002	.002	0	0
30	MP-9	.002	.002	0	0
31	MP-10	.002	.002	0	0
32	MP-11	.002	.002	0	0
33	MP-12	.002	.002	0	0
34	HRMOD-1	.003	.003	0	0
35	HRMOD-1	.003	.003	0	0
36	HRMOD-1	.002	.002	0	0
37	CP-1U	.002	.002	0	0
38	CP-1U	.002	.002	0	0
39	CP-1U	.002	.002	0	0
40	CP-1U	.002	.002	0	0
41	HR-1	.001	.001	0	0
42	HR-2	.001	.001	0	0
43	HR-3	.003	.003	0	0
44	HR-3	.003	.003	0	0
45	HR-3	.002	.002	0	0
46	CP-2T	.002	.002	0	0
47	CP-2T	.002	.002	0	0
48	CP-3T	.002	.002	0	0
49	GSIP-1	.002	.002	0	0
50	GSIP-2	.002	.002	0	0
51	GSIP-3	.001	.001	0	0
52	GSIP-1	.001	.001	0	0
53	GSIP-3	.001	.001	0	0
54	SA-1A	.002	.002	0	0
55	SA-2A	.001	.001	0	0
56	SA-1A	.003	.003	0	0
57	SA-2B	.003	.003	0	0
58	SA-3A	.002	.002	0	0
59	SA-3B	.001	.001	0	0
60	MP-1	.001	.001	0	0
61	MP-1	.001	.001	0	0
62	MP-2	.001	.001	0	0
63	MP-3	.001	.001	0	0
64	MP-4	.001	.001	0	0
65	MP-5	.001	.001	0	0
66	MP-6	.001	.001	0	0
67	MP-7	.001	.001	0	0
68	MP-8	.001	.001	0	0
69	MP-9	.001	.001	0	0
70	MP-10	.001	.001	0	0
71	MP-11	.001	.001	0	0
72	MP-12	.001	.001	0	0
73	HRMOD-1	.002	.002	0	0
74	HRMOD-1	.002	.002	0	0
75	HRMOD-1	.002	.002	0	0
76	CP-1U	.001	.001	0	0
77	CP-1U	.00965	.00965	0	0
78	CP-1U	.002	.002	0	0

Member Distributed Loads (BLC 29 : 225 Wind - Ice)

Member Label	Direction	Start Magnitude(kN, E, Isel)	End Magnitude(kN, E, Isel)	Start Location(ft, %)	End Location(ft, %)
1	MP-7	.003	.003	0	0
2	MP-8	.003	.003	0	0
3	MP-9	.003	.003	0	0
4	MP-10	.003	.003	0	0
5	MP-11	.003	.003	0	0
6	MP-12	.003	.003	0	0
7	HRMOD-1	.003	.003	0	0
8	HRMOD-1	.003	.003	0	0
9	HRMOD-1	.003	.003	0	0
10	CP-1U	.003	.003	0	0
11	CP-1U	.003	.003	0	0
12	CP-1U	.003	.003	0	0
13	CP-1U	.003	.003	0	0
14	HR-1	.003	.003	0	0
15	HR-2	.003	.003	0	0
16	HR-3	.003	.003	0	0
17	HR-3	.003	.003	0	0
18	HR-3	.003	.003	0	0
19	CP-2T	.003	.003	0	0
20	CP-2T	.003	.003	0	0
21	CP-3T	.003	.003	0	0
22	GSIP-1	.003	.003	0	0
23	GSIP-2	.003	.003	0	0
24	GSIP-3	.003	.003	0	0
25	GSIP-1	.003	.003	0	0
26	GSIP-3	.003	.003	0	0
27	SA-1A	.003	.003	0	0
28	SA-2A	.003	.003	0	0
29	SA-3A	.003	.003	0	0
30	MP-1	.003	.003	0	0
31	MP-2	.003	.003	0	0
32	MP-3	.003	.003	0	0
33	MP-4	.003	.003	0	0
34	MP-5	.003	.003	0	0
35	MP-6	.003	.003	0	0
36	MP-7	.003	.003	0	0
37	MP-8	.003	.003	0	0
38	MP-9	.003	.003	0	0
39	MP-10	.003	.003	0	0
40	MP-11	.003	.003	0	0
41	MP-12	.003	.003	0	0
42	HRMOD-1	.003	.003	0	0
43	HRMOD-1	.003	.003	0	0
44	HRMOD-1	.003	.003	0	0
45	CP-1U	.003	.003	0	0
46	CP-1U	.003	.003	0	0
47	CP-1U	.003	.003	0	0
48	CP-1U	.003	.003	0	0
49	HR-1	.003	.003	0	0
50	HR-2	.003	.003	0	0
51	HR-3	.003	.003	0	0
52	HR-3	.003	.003	0	0
53	HR-3	.003	.003	0	0
54	CP-2T	.003	.003	0	0
55	CP-2T	.003	.003	0	0
56	CP-3T	.003	.003	0	0
57	GSIP-1	.003	.003	0	0
58	GSIP-2	.003	.003	0	0
59	GSIP-3	.003	.003	0	0
60	GSIP-1	.003	.003	0	0
61	GSIP-3	.003	.003	0	0
62	SA-1A	.003	.003	0	0
63	SA-2A	.003	.003	0	0
64	SA-3A	.003	.003	0	0
65	MP-1	.003	.003	0	0
66	MP-2	.003	.003	0	0
67	MP-3	.003	.003	0	0
68	MP-4	.003	.003	0	0
69	MP-5	.003	.003	0	0
70	MP-6	.003	.003	0	0
71	MP-7	.003	.003	0	0
72	MP-8	.003	.003	0	0
73	MP-9	.003	.003	0	0
74	MP-10	.003	.003	0	0
75	MP-11	.003	.003	0	0
76	MP-12	.003	.003	0	0
77	HRMOD-1	.003	.003	0	0
78	HRMOD-1	.003	.003	0	0
79	HRMOD-1	.003	.003	0	0
80	CP-1U	.003	.003	0	0
81	CP-1U	.003	.003	0	0
82	CP-1U	.003	.003	0	0
83	CP-1U	.003	.003	0	0
84	HR-1	.003	.003	0	0
85	HR-2	.003	.003	0	0
86	HR-3	.003	.003	0	0
87	HR-3	.003	.003	0	0
88	HR-3	.003	.003	0	0
89	CP-2T	.003	.003	0	0
90	CP-2T	.003	.003	0	0
91	CP-3T	.003	.003	0	0
92	GSIP-1	.003	.003	0	0
93	GSIP-2	.003	.003	0	0
94	GSIP-3	.003	.003	0	0
95	GSIP-1	.003	.003	0	0
96	GSIP-3	.003	.003	0	0
97	SA-1A	.003	.003	0	0
98	SA-2A	.003	.003	0	0
99	SA-3A	.003	.003	0	0
100	MP-1	.003	.003	0	0
101	MP-2	.003	.003	0	0
102	MP-3	.003	.003	0	0
103	MP-4	.003	.003	0	0
104	MP-5	.003	.003	0	0
105	MP-6	.003	.003	0	0
106	MP-7	.003	.003	0	0
107	MP-8	.003	.003	0	0
108	MP-9	.003	.003	0	0
109	MP-10	.003	.003	0	0
110	MP-11	.003	.003	0	0
111	MP-12	.003	.003	0	0
112	HRMOD-1	.003	.003	0	0
113	HRMOD-1	.003	.003	0	0
114	HRMOD-1	.003	.003	0	0
115	CP-1U	.003	.003	0	0
116	CP-1U	.003	.003	0	0
117	CP-1U	.003	.003	0	0
118	CP-1U	.003	.003	0	0
119	HR-1	.003	.003	0	0
120	HR-2	.003	.003	0	0
121	HR-3	.003	.003	0	0
122	HR-3	.003	.003	0	0
123	HR-3	.003	.003	0	0
124	CP-2T	.003	.003	0	0
125	CP-2T	.003	.003	0	0
126	CP-3T	.003	.003	0	0
127	GSIP-1	.003	.003	0	0
128	GSIP-2	.003	.003	0	0
129	GSIP-3	.003	.003	0	0
130	GSIP-1	.003	.003	0	0
131	GSIP-3	.003	.003	0	0
132	SA-1A	.003	.003	0	0
133	SA-2A	.003	.003	0	0
134	SA-3A	.003	.003	0	0
135	MP-1	.003	.003	0	0
136	MP-2	.003	.003	0	0
137	MP-3	.003	.003	0	0
138	MP-4	.003	.003	0	0
139	MP-5	.003	.003	0	0
140	MP-6	.003	.003	0	0
141	MP-7	.003	.003	0	0
142	MP-8	.003	.003	0	0
143	MP-9	.003	.003	0	0
144	MP-10	.003	.003	0	0
145	MP-11	.003	.003	0	0
146	MP-12	.003	.003	0	0
147	HRMOD-1	.003	.003	0	0
148	HRMOD-1	.003	.003	0	0
149	HRMOD-1	.003	.003	0	0
150	CP-1U	.003	.003	0	0
151	CP-1U	.003	.003	0	0
152	CP-1U	.003	.003	0	0
153	CP-1U	.003	.003	0	0
154	HR-1	.003	.003	0	0
155	HR-2	.003	.003	0	0
156	HR-3	.003	.003	0	0
157	HR-3	.003	.003	0	0
158	HR-3	.003	.003	0	0
159	CP-2T	.003	.003	0	0
160	CP-2T	.003	.003	0	0
161	CP-3T	.003	.003	0	0
162	GSIP-1	.003	.003	0	0
163	GSIP-2	.003	.003	0	0
164	GSIP-3	.003	.003	0	0
165	GSIP-1	.003	.003	0	0
166	GSIP-3	.003	.003	0	0
167	SA-1A	.003	.003	0	0
168	SA-2A	.003	.003	0	0
169	SA-3A	.003	.003	0	0
170	MP-1	.003	.003	0	0
171	MP-2	.003	.003	0	0
172	MP-3	.003	.003	0	0
173	MP-4	.003	.003	0	0
174	MP-5	.003	.003	0	0
175	MP-6	.003	.003	0	0
176	MP-7	.003	.003	0	0
177	MP-8	.003	.003	0	0
178	MP-9	.003	.003	0	0
179	MP-10	.003	.003	0	0
180	MP-11	.003	.003	0	0
181	MP-12	.003	.003	0	0
182	HRMOD-1	.003	.003	0	0
183	HRMOD-1	.003	.003	0	0
184	HRMOD-1	.003	.003	0	0
185	CP-1U	.003	.003	0	0
186	CP-1U	.003	.003	0	0
187	CP-1U	.003	.003	0	0
188	CP-1U	.003	.003	0	0
189	HR-1	.003	.003	0	0
190	HR-2	.003	.003	0	0
191	HR-3	.003	.00		



Member Distributed Loads (BLC 29 : 225 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude (k/ft E, ksf)	End Magnitude (k/ft E, ksf)	Start Location (ft %)	End Location (ft %)
60	SA-3B				
61	MP-1	.002	.002	0	0
62	MP-2	.002	.002	0	0
63	MP-3	.002	.002	0	0
64	MP-4	.002	.002	0	0
65	MP-5	.002	.002	0	0
66	MP-6	.002	.002	0	0
67	MP-7	.002	.002	0	0
68	MP-8	.002	.002	0	0
69	MP-9	.002	.002	0	0
70	MP-10	.002	.002	0	0
71	MP-11	.002	.002	0	0
72	MP-12	.002	.002	0	0
73	HRMOD-1	.002	.002	0	0
74	HRMOD-1	.000702	.000702	0	0
75	HRMOD-1	.003	.003	0	0
76	CP-1U	.002	.002	0	0
77	CP-1U	.001	.001	0	0
78	CP-1U	.000443	.000443	0	0

Member Distributed Loads (BLC 30 : 240 Wind - Ice)

Member Label	Direction	Start Magnitude (k/ft E, ksf)	End Magnitude (k/ft E, ksf)	Start Location (ft %)	End Location (ft %)
1	FH-1				
2	HR-1	.002	.002	0	0
3	FH-2	.000871	.000871	0	0
4	HR-2	.001	.001	0	0
5	FH-3	.000705	.000705	0	0
6	HR-3	.003	.003	0	0
7	CP-1T	.001	.001	0	0
8	CP-2T	.002	.002	0	0
9	CP-3T	.001	.001	0	0
10	GSIP-1	.000954	.000954	0	0
11	GSIP-2	.001	.001	0	0
12	GSIP-3	.001	.001	0	0
13	GSIP-1	.002	.002	0	0
14	GSIP-2	.002	.002	0	0
15	GSIP-3	.002	.002	0	0
16	SA-1A	.003	.003	0	0
17	SA-1B	.002	.002	0	0
18	SA-2A	.003	.003	0	0
19	SA-2B	.002	.002	0	0
20	SA-3A	.002	.002	0	0
21	SA-3B	.002	.002	0	0
22	MP-1	.001	.001	0	0
23	MP-2	.001	.001	0	0
24	MP-3	.001	.001	0	0
25	MP-4	.001	.001	0	0
26	MP-5	.001	.001	0	0
27	MP-6	.001	.001	0	0
28	MP-7	.001	.001	0	0
29	MP-8	.001	.001	0	0
30	MP-9	.001	.001	0	0
31	MP-10	.001	.001	0	0
32	MP-11	.001	.001	0	0
33	MP-12	.001	.001	0	0
34	HRMOD-1	.001	.001	0	0



Member Distributed Loads (BLC 30 : 240 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude (k/ft E, ksf)	End Magnitude (k/ft E, ksf)	Start Location (ft %)	End Location (ft %)
35	HRMOD-1	.002	.002	0	0
36	CP-1U	.001	.001	0	0
37	CP-1U	.000619	.000619	0	0
38	CP-1U	.005666	.005666	0	0
39	CP-1U	.002	.002	0	0
40	FH-1	.001	.001	0	0
41	HR-1	.003	.003	0	0
42	FH-2	.005	.005	0	0
43	HR-2	.002	.002	0	0
44	FH-3	.003	.003	0	0
45	HR-3	.005	.005	0	0
46	CP-1T	.003	.003	0	0
47	CP-2T	.002	.002	0	0
48	CP-3T	.002	.002	0	0
49	GSIP-1	.002	.002	0	0
50	GSIP-2	.002	.002	0	0
51	GSIP-3	.004	.004	0	0
52	GSIP-1	.004	.004	0	0
53	GSIP-2	.004	.004	0	0
54	GSIP-3	.003	.003	0	0
55	SA-1A	.005	.005	0	0
56	SA-1B	.004	.004	0	0
57	SA-2A	.005	.005	0	0
58	SA-2B	.004	.004	0	0
59	SA-3A	.004	.004	0	0
60	SA-3B	.004	.004	0	0
61	MP-1	.002	.002	0	0
62	MP-2	.002	.002	0	0
63	MP-3	.002	.002	0	0
64	MP-4	.002	.002	0	0
65	MP-5	.002	.002	0	0
66	MP-6	.002	.002	0	0
67	MP-7	.002	.002	0	0
68	MP-8	.002	.002	0	0
69	MP-9	.002	.002	0	0
70	MP-10	.002	.002	0	0
71	MP-11	.002	.002	0	0
72	MP-12	.002	.002	0	0
73	HRMOD-1	.002	.002	0	0
74	HRMOD-1	.003	.003	0	0
75	HRMOD-1	.002	.002	0	0
76	CP-1U	.002	.002	0	0
77	CP-1U	.00965	.00965	0	0
78	CP-1U	.001	.001	0	0

Member Distributed Loads (BLC 31 : 270 Wind - Ice)

Member Label	Direction	Start Magnitude (k/ft E, ksf)	End Magnitude (k/ft E, ksf)	Start Location (ft %)	End Location (ft %)
1	FH-1				
2	HR-1	.005	.005	0	0
3	FH-2	.003	.003	0	0
4	HR-2	.005	.005	0	0
5	FH-3	.003	.003	0	0
6	HR-3	.005	.005	0	0
7	CP-1T	.003	.003	0	0
8	CP-2T	.003	.003	0	0
9	CP-3T	.003	.003	0	0



Member Distributed Loads (BLC 31 : 270 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
10	GSIP-1	0	0	0	0
11	GSIP-2	0.04	0.04	0	0
12	GSIP-3	0.04	0.04	0	0
13	GSI-1	0.02	0.02	0	0
14	GSI-2	0.05	0.05	0	0
15	GSI-3	0.02	0.02	0	0
16	SA-1A	0.06	0.06	0	0
17	SA-1B	0.05	0.05	0	0
18	SA-2A	0.03	0.03	0	0
19	SA-2B	0.03	0.03	0	0
20	SA-3A	0.03	0.03	0	0
21	SA-3B	0.03	0.03	0	0
22	MP-1	0.03	0.03	0	0
23	MP-2	0.03	0.03	0	0
24	MP-3	0.03	0.03	0	0
25	MP-4	0.03	0.03	0	0
26	MP-5	0.03	0.03	0	0
27	MP-6	0.03	0.03	0	0
28	MP-7	0.03	0.03	0	0
29	MP-8	0.03	0.03	0	0
30	MP-9	0.03	0.03	0	0
31	MP-10	0.03	0.03	0	0
32	MP-11	0.03	0.03	0	0
33	MP-12	0.03	0.03	0	0
34	HRMOD-1	0.03	0.03	0	0
35	HRMOD-2	0.03	0.03	0	0
36	HRMOD-3	0.03	0.03	0	0
37	CP-1U	0.02	0.02	0	0
38	CP-1U	0	0	0	0
39	CP-1U	0.02	0.02	0	0

Member Distributed Loads (BLC 32 : 300 Wind - Ice)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
1	FH-1	-0.02	-0.02	0	0
2	HR-1	-0.00871	-0.00871	0	0
3	FH-2	-0.03	-0.03	0	0
4	HR-2	-0.01	-0.01	0	0
5	FH-3	-0.01	-0.01	0	0
6	HR-3	-0.00705	-0.00705	0	0
7	CP-1T	-0.00954	-0.00954	0	0
8	CP-2T	-0.01	-0.01	0	0
9	CP-3T	-0.02	-0.02	0	0
10	GSIP-1	-0.01	-0.01	0	0
11	GSIP-2	-0.02	-0.02	0	0
12	GSIP-3	-0.01	-0.01	0	0
13	GSI-1	-0.02	-0.02	0	0
14	GSI-2	-0.02	-0.02	0	0
15	GSI-3	0	0	0	0
16	SA-1A	-0.03	-0.03	0	0
17	SA-1B	-0.02	-0.02	0	0
18	SA-2A	0	0	0	0
19	SA-2B	0	0	0	0
20	SA-3A	-0.03	-0.03	0	0
21	SA-3B	-0.02	-0.02	0	0
22	MP-1	-0.01	-0.01	0	0
23	MP-2	-0.01	-0.01	0	0



Member Distributed Loads (BLC 32 : 300 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude(kN, F, ksf)	End Magnitude(kN, F, ksf)	Start Location(ft, %)	End Location(ft, %)
24	MP-3	-0.01	-0.01	0	0
25	MP-4	-0.01	-0.01	0	0
26	MP-5	-0.01	-0.01	0	0
27	MP-6	-0.01	-0.01	0	0
28	MP-7	-0.01	-0.01	0	0
29	MP-8	-0.01	-0.01	0	0
30	MP-9	-0.01	-0.01	0	0
31	MP-10	-0.01	-0.01	0	0
32	MP-11	-0.01	-0.01	0	0
33	MP-12	-0.01	-0.01	0	0
34	HRMOD-1	-0.01	-0.01	0	0
35	HRMOD-2	-0.02	-0.02	0	0
36	HRMOD-3	-0.00793	-0.00793	0	0
37	CP-1U	-0.00566	-0.00566	0	0
38	CP-1U	-0.00619	-0.00619	0	0
39	CP-1U	-0.01	-0.01	0	0
40	FH-1	0.02	0.02	0	0
41	HR-1	0.01	0.01	0	0
42	FH-2	0.05	0.05	0	0
43	HR-2	0.03	0.03	0	0
44	FH-3	0.03	0.03	0	0
45	HR-3	0.02	0.02	0	0
46	CP-1T	0.02	0.02	0	0
47	CP-2T	0.02	0.02	0	0
48	CP-3T	0.03	0.03	0	0
49	GSIP-1	0.02	0.02	0	0
50	GSIP-2	0.04	0.04	0	0
51	GSIP-3	0.02	0.02	0	0
52	GSI-1	0.03	0.03	0	0
53	GSI-2	0.04	0.04	0	0
54	GSI-3	0	0	0	0
55	SA-1A	0.05	0.05	0	0
56	SA-1B	0.04	0.04	0	0
57	SA-2A	0	0	0	0
58	SA-2B	0	0	0	0
59	SA-3A	0.05	0.05	0	0
60	SA-3B	0.04	0.04	0	0
61	MP-1	0.02	0.02	0	0
62	MP-2	0.02	0.02	0	0
63	MP-3	0.02	0.02	0	0
64	MP-4	0.02	0.02	0	0
65	MP-5	0.02	0.02	0	0
66	MP-6	0.02	0.02	0	0
67	MP-7	0.02	0.02	0	0
68	MP-8	0.02	0.02	0	0
69	MP-9	0.02	0.02	0	0
70	MP-10	0.02	0.02	0	0
71	MP-11	0.02	0.02	0	0
72	MP-12	0.02	0.02	0	0
73	HRMOD-1	0.02	0.02	0	0
74	HRMOD-2	0.03	0.03	0	0
75	HRMOD-3	0.02	0.02	0	0
76	CP-1U	0.01	0.01	0	0
77	CP-1U	0.00965	0.00965	0	0
78	CP-1U	0.02	0.02	0	0



Company : Tower Engineering Professionals, Inc.
 Designer : DC
 Job Number : TEP No. 25725.212923
 Model Name : CCI BU No. 876348

Jan 22, 2019
 12:02 PM
 Checked By: NWS

Member Distributed Loads (BLC 33 : 315 Wind - Ice)

Member Label	Direction	Start Magnitude (kN, E, Isf)	End Magnitude (kN, E, Isf)	Start Location (ft, %)	End Location (ft, %)
1	HH-1	X	-0.003	0	%100
2	HH-1	X	-0.002	0	%100
3	HH-2	X	-0.004	0	%100
4	HR-2	X	-0.002	0	%100
5	HR-3	X	-0.00948	0	%100
6	HR-3	X	-0.00516	0	%100
7	CP-1T	X	-0.00689	0	%100
8	CP-2T	X	-0.002	0	%100
9	CP-3T	X	-0.003	0	%100
10	GSIP-1	X	-0.003	0	%100
11	GSIP-2	X	-0.003	0	%100
12	GSIP-3	X	-0.00837	0	%100
13	GSI-1	X	-0.003	0	%100
14	GSI-2	X	-0.002	0	%100
15	GSI-3	X	-0.0086	0	%100
16	SA-1A	X	-0.003	0	%100
17	SA-2A	X	-0.001	0	%100
18	SA-2A	X	-0.00988	0	%100
19	SA-2A	X	-0.004	0	%100
20	SA-3B	X	-0.004	0	%100
21	MP-1	X	-0.002	0	%100
22	MP-2	X	-0.002	0	%100
23	MP-3	X	-0.002	0	%100
24	MP-4	X	-0.002	0	%100
25	MP-5	X	-0.002	0	%100
26	MP-6	X	-0.002	0	%100
27	MP-7	X	-0.002	0	%100
28	MP-8	X	-0.002	0	%100
29	MP-9	X	-0.002	0	%100
30	MP-10	X	-0.002	0	%100
31	MP-11	X	-0.002	0	%100
32	MP-12	X	-0.002	0	%100
33	HERMOD-1	X	-0.002	0	%100
34	HERMOD-1	X	-0.0058	0	%100
35	HERMOD-1	X	-0.00414	0	%100
36	CP-1U	X	-0.001	0	%100
37	CP-1U	X	-0.002	0	%100
38	CP-1U	X	-0.001	0	%100
39	CP-1U	X	-0.002	0	%100
40	HR-1	X	-0.003	0	%100
41	HR-1	X	-0.004	0	%100
42	HR-2	X	-0.002	0	%100
43	HR-2	X	-0.001	0	%100
44	HR-3	X	-0.00638	0	%100
45	CP-1T	X	-0.00721	0	%100
46	CP-2T	X	-0.002	0	%100
47	CP-3T	X	-0.003	0	%100
48	GSIP-1	X	-0.002	0	%100
49	GSIP-2	X	-0.003	0	%100
50	GSIP-3	X	-0.00932	0	%100
51	GSI-1	X	-0.002	0	%100
52	GSI-2	X	-0.003	0	%100
53	GSI-3	X	-0.00786	0	%100
54	SA-1A	X	-0.003	0	%100
55	SA-1B	X	-0.003	0	%100
56	SA-2A	X	-0.001	0	%100
57	SA-2A	X	-0.001	0	%100



Company : Tower Engineering Professionals, Inc.
 Designer : DC
 Job Number : TEP No. 25725.212923
 Model Name : CCI BU No. 876348

Jan 22, 2019
 12:02 PM
 Checked By: NWS

Member Distributed Loads (BLC 33 : 315 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude (kN, E, Isf)	End Magnitude (kN, E, Isf)	Start Location (ft, %)	End Location (ft, %)
58	SA-2B	Z	-0.00959	0	%100
59	SA-3A	Z	-0.004	0	%100
60	SA-3B	Z	-0.002	0	%100
61	MP-1	Z	-0.002	0	%100
62	MP-2	Z	-0.002	0	%100
63	MP-3	Z	-0.002	0	%100
64	MP-4	Z	-0.002	0	%100
65	MP-5	Z	-0.002	0	%100
66	MP-6	Z	-0.002	0	%100
67	MP-7	Z	-0.002	0	%100
68	MP-8	Z	-0.002	0	%100
69	MP-9	Z	-0.002	0	%100
70	MP-10	Z	-0.002	0	%100
71	MP-11	Z	-0.002	0	%100
72	MP-12	Z	-0.002	0	%100
73	HERMOD-1	Z	-0.002	0	%100
74	HERMOD-1	Z	-0.002	0	%100
75	HERMOD-1	Z	-0.00702	0	%100
76	CP-1U	Z	-0.00443	0	%100
77	CP-1U	Z	-0.001	0	%100
78	CP-1U	Z	-0.002	0	%100

Member Distributed Loads (BLC 34 : 330 Wind - Ice)

Member Label	Direction	Start Magnitude (kN, E, Isf)	End Magnitude (kN, E, Isf)	Start Location (ft, %)	End Location (ft, %)
1	HH-1	X	-0.005	0	%100
2	HR-1	X	-0.005	0	%100
3	HR-2	X	-0.004	0	%100
4	HR-2	X	-0.002	0	%100
5	HR-3	X	0	0	%100
6	HR-3	X	0	0	%100
7	CP-1T	X	0	0	%100
8	CP-2T	X	-0.003	0	%100
9	CP-3T	X	-0.003	0	%100
10	GSIP-1	X	-0.004	0	%100
11	GSIP-2	X	-0.003	0	%100
12	GSIP-3	X	0	0	%100
13	GSI-1	X	-0.004	0	%100
14	GSI-2	X	-0.002	0	%100
15	GSI-3	X	-0.003	0	%100
16	SA-1A	X	-0.003	0	%100
17	SA-1B	X	-0.002	0	%100
18	SA-2A	X	-0.002	0	%100
19	SA-2B	X	-0.002	0	%100
20	SA-3A	X	-0.005	0	%100
21	SA-3B	X	-0.005	0	%100
22	MP-1	X	-0.002	0	%100
23	MP-2	X	-0.002	0	%100
24	MP-3	X	-0.002	0	%100
25	MP-4	X	-0.002	0	%100
26	MP-5	X	-0.002	0	%100
27	MP-6	X	-0.002	0	%100
28	MP-7	X	-0.002	0	%100
29	MP-8	X	-0.002	0	%100
30	MP-9	X	-0.002	0	%100
31	MP-10	X	-0.002	0	%100
32	MP-11	X	-0.002	0	%100



Member Distributed Loads (BLC 34 : 330 Wind - Ice) (Continued)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
33	MP-12	X	-0.002	0	%100
34	HRMOD-1	X	-0.003	0	%100
35	HRMOD-1	X	-0.002	0	%100
36	HRMOD-1	X	0	0	%100
37	CP-1U	X	0	0	%100
38	CP-1U	X	-0.002	0	%100
39	CP-1U	X	-0.002	0	%100
40	HR-1	Z	0.001	0	%100
41	HR-1	Z	0.001	0	%100
42	HR-2	Z	0.003	0	%100
43	HR-2	Z	0.002	0	%100
44	HR-3	Z	0	0	%100
45	HR-3	Z	0	0	%100
46	CP-2T	Z	0.002	0	%100
47	CP-2T	Z	0.002	0	%100
48	CP-3T	Z	0.002	0	%100
49	CP-3T	Z	0.002	0	%100
50	GSP-2	Z	0.002	0	%100
51	GSP-3	Z	0	0	%100
52	GSP-1	Z	0.001	0	%100
53	GSP-2	Z	0.001	0	%100
54	GSP-3	Z	0.001	0	%100
55	SA-1A	Z	0.002	0	%100
56	SA-1B	Z	0.001	0	%100
57	SA-2A	Z	0.002	0	%100
58	SA-2B	Z	0.001	0	%100
59	SA-3A	Z	0.003	0	%100
60	SA-3B	Z	0.003	0	%100
61	MP-1	Z	0.001	0	%100
62	MP-2	Z	0.001	0	%100
63	MP-3	Z	0.001	0	%100
64	MP-4	Z	0.001	0	%100
65	MP-5	Z	0.001	0	%100
66	MP-6	Z	0.001	0	%100
67	MP-7	Z	0.001	0	%100
68	MP-8	Z	0.001	0	%100
69	MP-9	Z	0.001	0	%100
70	MP-10	Z	0.001	0	%100
71	MP-11	Z	0.001	0	%100
72	MP-12	Z	0.001	0	%100
73	HRMOD-1	Z	0.002	0	%100
74	HRMOD-1	Z	0.002	0	%100
75	HRMOD-1	Z	0	0	%100
76	CP-1U	Z	0	0	%100
77	CP-1U	Z	0.00965	0	%100
78	CP-1U	Z	0.001	0	%100

Member Distributed Loads (BLC 39 : BLC 1 Transient Area Loads)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
1	MP-1	Y	-0.009	0	2.333
2	MP-1	Y	-0.009	0	4.667
3	MP-1	Y	-0.009	0	7
4	MP-1	Y	-0.012	0	9.333
5	MP-1	Y	-0.012	0	11.667
6	MP-1	Y	-0.009	0	14
7	GSP-1	Y	-0.009	0	3.232



Member Distributed Loads (BLC 39 : BLC 1 Transient Area Loads) (Continued)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
8	GSP-3	Y	-0.007	0	3.232
9	GSP-1	Y	-0.007	0	3.501
10	GSP-1	Y	-0.007	0	7.002
11	SA-1B	Y	-0.023	0	1.184
12	FH-2	Y	-0.006	0	2.333
13	FH-2	Y	-0.006	0	4.667
14	FH-2	Y	-0.009	0	7
15	FH-2	Y	-0.009	0	9.333
16	FH-2	Y	-0.009	0	11.667
17	FH-2	Y	-0.006	0	14
18	GSP-1	Y	-0.006	0	2.02
19	GSP-1	Y	-0.006	0	4.04
20	GSP-2	Y	-0.012	0	2.02
21	GSP-2	Y	-0.012	0	4.04
22	GSP-2	Y	-0.009	0.00577	7.002
23	SA-2B	Y	-0.021	0	2.209
24	FH-3	Y	-0.006	0	2.333
25	FH-3	Y	-0.009	0	4.667
26	FH-3	Y	-0.009	0	7
27	FH-3	Y	-0.009	0	9.333
28	FH-3	Y	-0.009	0	11.667
29	FH-3	Y	-0.006	0	14
30	GSP-3	Y	-0.01	0	2.02
31	GSP-3	Y	-0.006	0	4.04
32	GSP-3	Y	-0.009	0.00577	7.002
33	SA-3B	Y	-0.021	0.188	2.209

Member Distributed Loads (BLC 40 : BLC 18 Transient Area Loads)

Member Label	Direction	Start Magnitude (kN, F, ksf)	End Magnitude (kN, F, ksf)	Start Location (ft, %)	End Location (ft, %)
1	FH-1	Y	-0.007217	0	2.333
2	FH-1	Y	-0.008	0	4.667
3	FH-1	Y	-0.008	0	7
4	FH-1	Y	-0.008	0	9.333
5	FH-1	Y	-0.008	0	11.667
6	FH-1	Y	-0.006	0	14
7	GSP-3	Y	-0.00965	0	3.232
8	GSP-3	Y	-0.009	0	3.232
9	GSP-1	Y	-0.005	0	3.501
10	GSP-1	Y	-0.005	0	7.003
11	SA-1B	Y	-0.015	0	1.184
12	FH-2	Y	-0.002	0	2.333
13	FH-2	Y	-0.004	0	4.667
14	FH-2	Y	-0.006	0	7
15	FH-2	Y	-0.006	0	9.333
16	FH-2	Y	-0.004	0	11.667
17	FH-2	Y	-0.004	0	14
18	GSP-1	Y	-0.004	0	2.02
19	GSP-1	Y	-0.004	0	4.04
20	GSP-2	Y	-0.014	0	2.02
21	GSP-2	Y	-0.006	0.00577	4.04
22	GSP-2	Y	-0.006	0.00577	7.002
23	SA-2B	Y	-0.014	0	2.209
24	FH-3	Y	-0.002	0	2.333
25	FH-3	Y	-0.004	0	4.667
26	FH-3	Y	-0.006	0	7
27	FH-3	Y	-0.006	0	9.333



Member Distributed Loads (BLC 40 - BLC 18 Transient Area Loads) (Continued)

Member Label	Direction	Start Magnitude (k/ft)	End Magnitude (k/ft)	Start Location (%)	End Location (%)
28 FH-3	Y	-0.06	0.00	9.333	11.667
29 FH-3	Y	-0.04	0.00	11.667	14
30 GS1-3	Y	-0.07	0.00	2.09	2.09
31 GS1-3	Y	-0.04	0.00	2.09	4.04
32 GS1-3	Y	-0.06	0.00	0.057	7.002
33 SA-3B	Y	-0.14	0.00	1.89	2.209

Member Area Loads (BLC 1 : Dead)

Joint	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude (k/ft)
1	FE-1	FE-2	GSIP-2	GSIP-1	Y	Two Way	-0.12
2	FE-2	FE-3	GSIP-3	GSIP-2	Y	Two Way	-0.12
3	FE-3	FE-1	GSIP-1	GSIP-3	Y	Two Way	-0.12

Member Area Loads (BLC 18 : Ice Weight)

Joint	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude (k/ft)
1	FE-1	FE-2	GSIP-2	GSIP-1	Y	Two Way	-0.08
2	FE-2	FE-3	GSIP-3	GSIP-2	Y	Two Way	-0.08
3	FE-3	FE-1	GSIP-1	GSIP-3	Y	Two Way	-0.08

Envelope Joint Reactions

Joint	Max	Min	X (ft)	Y (ft)	Z (ft)	LC	MX (k-ft)	LC	MY (k-ft)	LC	MZ (k-ft)	LC		
1 SA-1A	max	1.129	min	-1.195	26	0.16	2	1.981	29	-2.668	30	-1.297	24	-3.37
2 SA-3A	max	1.58	min	-1.558	10	-0.34	13	1.317	14	-28	13	-9.65	19	-3.52
3 SA-2A	max	1.975	min	-1.941	10	0.27	7	1.439	30	-6.769	47	-1.202	25	-3.636
4 Totals	max	4.675	min	-4.675	10	2.471	83	-4.601	14					

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

Member	Shape	Code Ch.	LC	Shear Ch.	Dir.	phi	Enc.	phi	Pn.	phi	Enc.	phi	Enc.	phi	Enc.
1 FH-1	L3X3X4	721	7	39	353	14	V	3.945	46.656	1.688	2.696	1	2		
2 FH-2	L3X3X4	710	7	45	365	14	V	3.945	46.656	1.688	2.696	1	2		
3 SA-1A	HSS4X4X3	701	0	41	146	0	Z	105.973	106.812	12.662	2.756	1	2		
4 FH-3	L3X3X4	683	6	094	42	159	2	5.999	65.205	1.688	2.756	1	2		
5 SA-2A	HSS4X4X3	628	14	22	361	0	V	3.945	46.656	1.688	2.756	1	2		
6 MP-1	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
7 MP-2	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
8 MP-3	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
9 MP-4	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
10 MP-5	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
11 MP-6	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
12 MP-7	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
13 MP-8	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
14 MP-9	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
15 MP-10	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
16 MP-11	PIPE 2.0	552	5	25	42	230	4	30.475	32.13	1.872	1.872	1	2		
17 GSIP-1	L3X3X4	440	3	501	44	023	3	35.588	46.656	1.688	3.201	1	2		
18 GSIP-2	L3X3X4	429	3	501	44	023	3	35.588	46.656	1.688	3.201	1	2		
19 MP-11	PIPE 2.0	425	5	25	36	185	4	30.475	32.13	1.872	1.872	1	2		
20 SA-1B	HSS4X4X3	397	0	3	119	0	V	113.362	121.302	16.25	16.25	1	2		



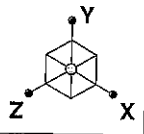
Envelope AISC 15th(360-16): LRFD Steel Code Checks (Continued)

Member	Shape	Code Ch.	LC	Shear Ch.	Dir.	phi	Enc.	phi	Pn.	phi	Enc.	phi	Enc.	phi	Enc.
21 GSIP-3	L3X3X4	395	3	501	3	021	3	35.588	46.656	1.688	3.218	1	2		
22 MP-2	PIPE 2.0	385	4	25	22	131	4	13.788	32.13	1.872	1.872	1	2		
23 MP-6	PIPE 2.0	383	4	25	30	131	4	13.788	32.13	1.872	1.872	1	2		
24 MP-12	PIPE 2.0	369	4	25	19	131	4	13.788	32.13	1.872	1.872	1	2		
25 SA-2B	HSS4X4X3	347	0	47	129	0	V	113.362	121.302	16.25	16.25	1	2		
26 MP-4	PIPE 2.0	334	4	25	24	137	4	13.788	32.13	1.872	1.872	1	2		
27 SA-3B	HSS4X4X3	323	0	37	110	0	V	113.362	121.302	16.25	16.25	1	2		
28 HR-1	PIPE 2.0	258	6	302	44	157	6	1.18	32.13	1.872	1.872	1	2		
29 HR-2	PIPE 2.0	244	6	302	34	152	6	1.18	32.13	1.872	1.872	1	2		
30 HR-3	PIPE 2.0	214	6	302	39	149	6	1.18	32.13	1.872	1.872	1	2		
31 GS1-1	L3X3X4X0	174	4	04	44	012	0	76.245	93.312	6.48	4.355	1	2		
32 GS1-3	L3X3X4X0	167	4	04	44	014	0	76.245	93.312	6.48	4.355	1	2		
33 CP-2U	PIPE 2.0	147	1	344	22	404	0	28.843	32.13	1.872	1.872	1	2		
34 GS1-2	L3X3X4X0	143	4	04	39	011	0	76.245	93.312	6.48	4.355	1	2		
35 CP-3U	PIPE 2.0	141	1	375	28	387	0	28.843	32.13	1.872	1.872	1	2		
36 CP-1U	PIPE 2.0	137	1	813	33	385	3	28.843	32.13	1.872	1.872	1	2		
37 CP-1T	L2X2X3	016	7	17	29	150	0	21.106	23.383	5.58	1.239	1	2		
38 CP-3T	L2X2X3	016	7	17	23	149	0	21.106	23.383	5.58	1.239	1	2		
39 CP-2T	L2X2X3	015	7	17	18	155	1	21.106	23.383	5.58	1.239	1	2		

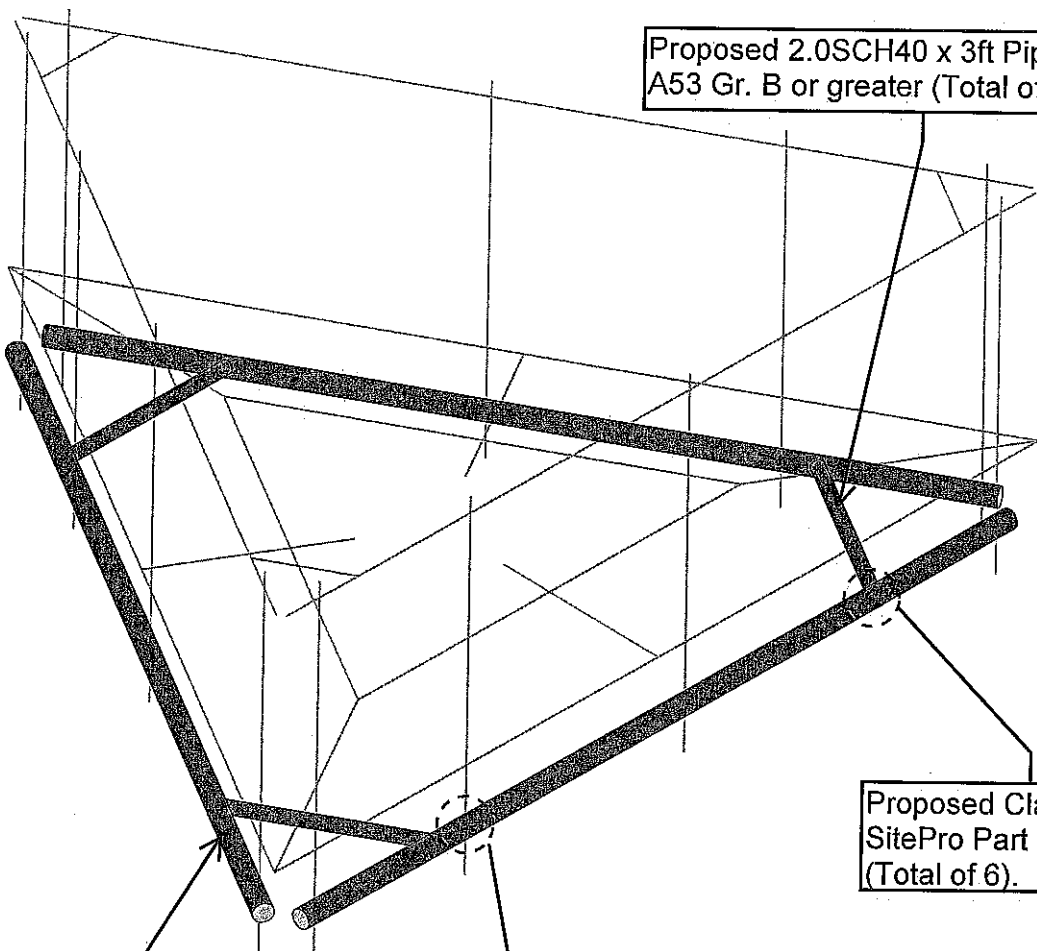
Envelope None Cold Formed Steel Code Checks

Member	Shape	Code Check	Location	Shape	Location	Min	Max	Min	Max	Code	Comment
			No Data to Print								

APPENDIX D
MOUNT MODIFICAITON DESIGN DRAWINGS



Isometric
View



Proposed 2.0SCH40 x 3ft Pipe, ASTM A53 Gr. B or greater (Total of 3).

Proposed Clamp Plate SitePro Part No. Puck (Total of 6).

Proposed 3.0SCH40 x 13ft Pipe, ASTM A53 Gr. B or greater (Total of 3).

Proposed Crossover Plate Kit SitePro Part No. SCX43-K (Total of 12) to connect proposed horizontal pipe to existing mount pipes.

Envelope Only Solution

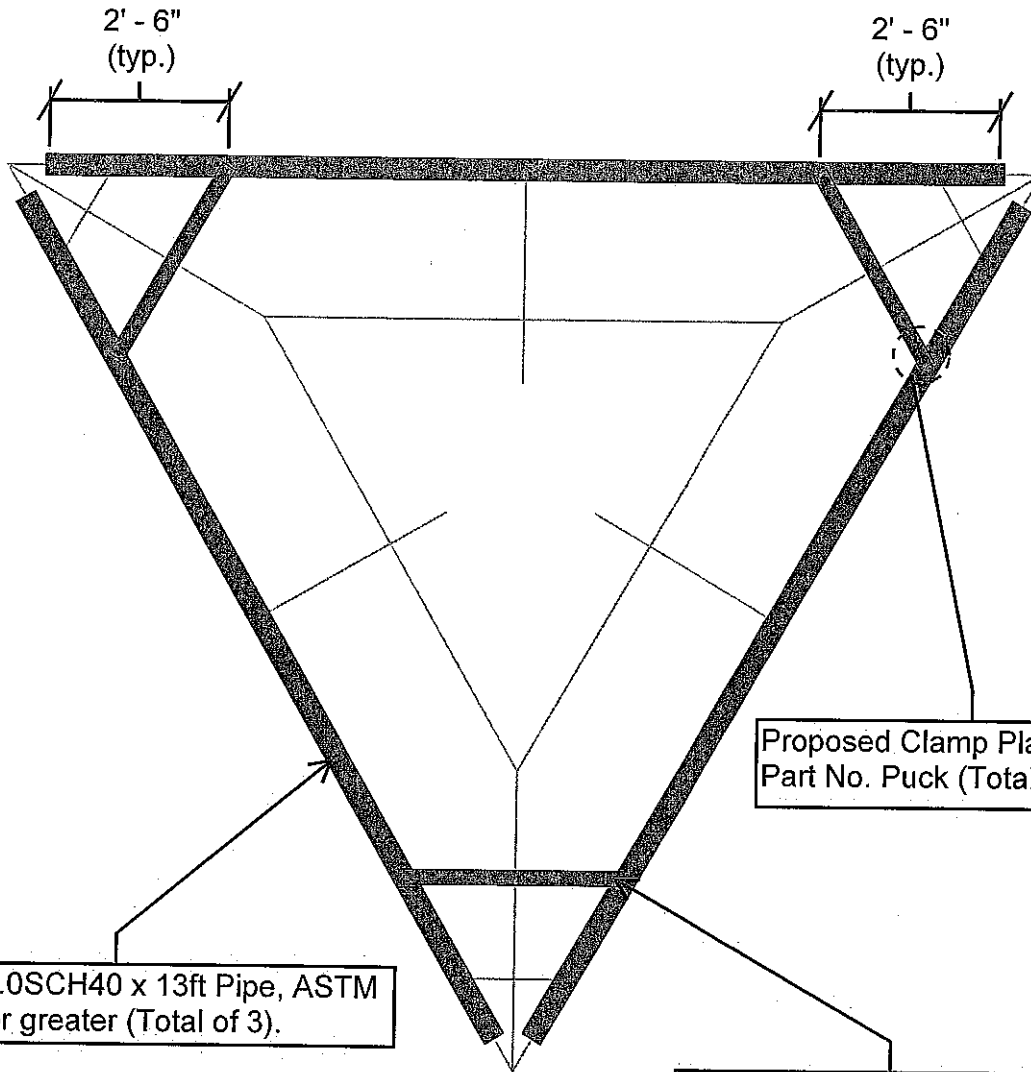
Tower Engineering Profes...
DC
TEP No. 25725.212923

CCI BU No. 876348

SK - 6
Jan 22, 2019 at 9:52 AM
REV H.r3d



Plan View



Proposed 3.0SCH40 x 13ft Pipe, ASTM A53 Gr. B or greater (Total of 3).

Proposed Clamp Plate SitePro Part No. Puck (Total of 6).

Proposed 2.0SCH40 x 3ft Pipe, ASTM A53 Gr. B or greater (Total of 3).

Envelope Only Solution

Tower Engineering Profes...

DC

TEP No. 25725.212923

CCI BU No. 876348

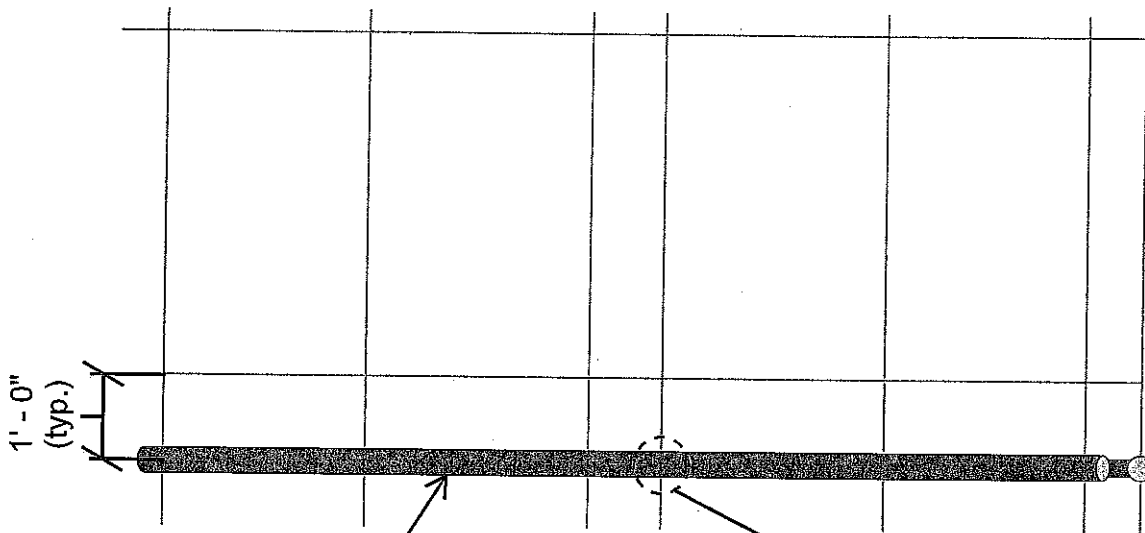
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Jan 22, 2019 at 9:53 AM

REV H.r3d



Elevation View



Proposed 3.0SCH40 x 13ft Pipe, ASTM A53 Gr. B or greater (Total of 3).

Proposed Crossover Plate Kit SitePro Part No. SCX43-K (Total of 12) to connect proposed horizontal pipe to existing mount pipes.

Envelope Only Solution

Tower Engineering Profes...

DC

TEP No. 25725.212923

CCI BU No. 876348

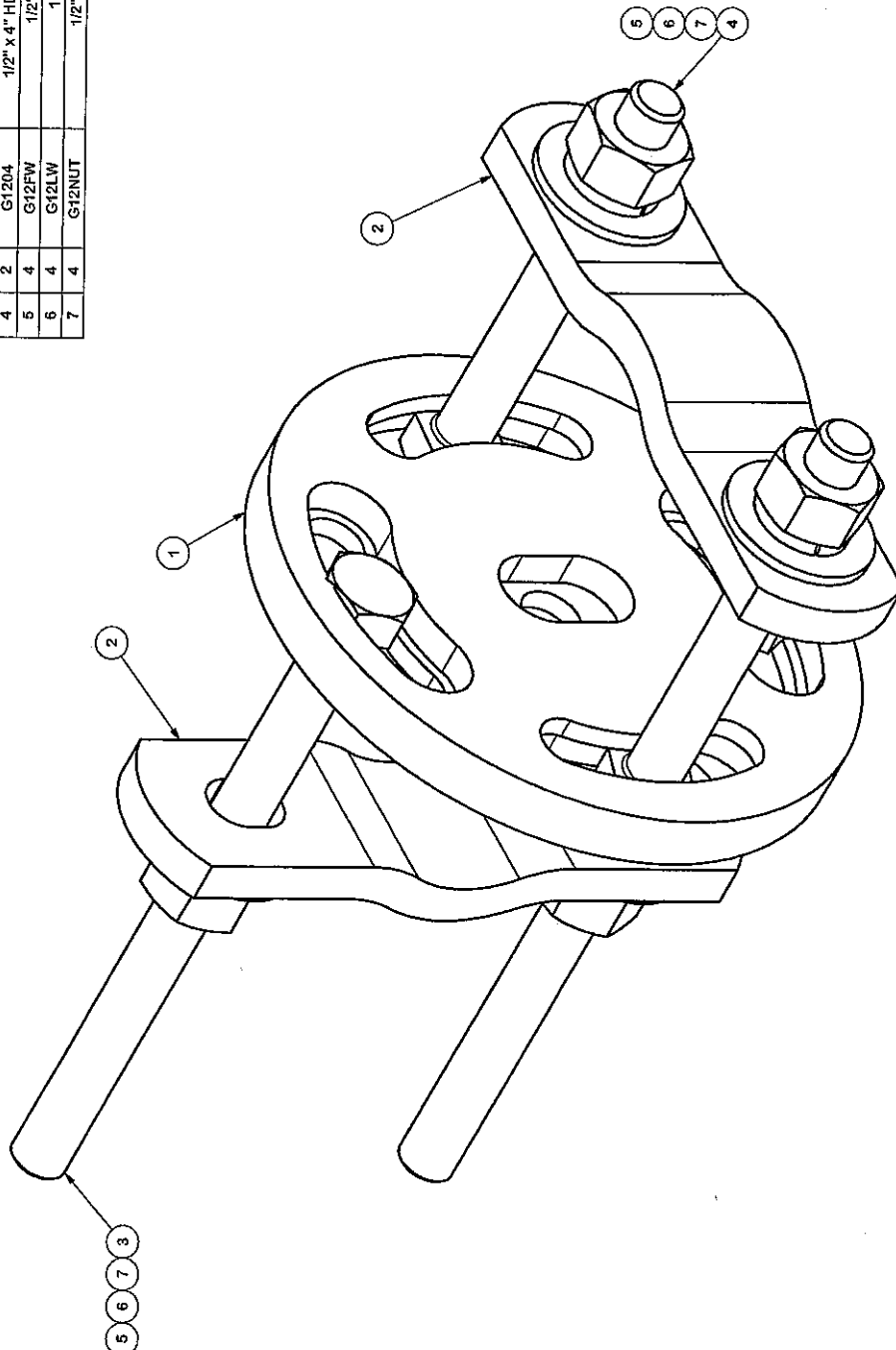
SK - 7

Jan 22, 2019 at 9:52 AM

REV H.r3d

PARTS LIST

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-127594	FLAT DISK CLAMP PLATE 4" CENTERS (GALVANIZED)		2.48	2.48
2	2	X-100064	CLAMP (S) (4" V-CLAMP) GALVANIZED		0.91	1.83
3	2	G12065	1/2" x 6-1/2" HDG HEX BOLT GR6 FULL THREAD	6 1/2 in	0.41	0.82
4	2	G1204	1/2" x 4" HDG HEX BOLT GR6 FULL THREAD	4 in	0.27	0.54
5	4	G12FW	1/2" HDG USS FLATWASHER		0.03	0.14
6	4	G12LW	1/2" HDG LOCKWASHER		0.01	0.06
7	4	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.29
TOTAL WT. #						6.16



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
 SAWED, SHEARED AND GAS CUT EDGES (± 0.007)
 DRILLED AND GAS CUT HOLES (± 0.007) - NO CONING OF HOLES
 LASER CUT EDGES AND HOLES (± 0.010) - NO CONING OF HOLES
 BENDS ARE $\pm 1/2$ DEGREE
 ALL OTHER MACHINING (± 0.007)
 ALL OTHER ASSEMBLY (± 0.007)

PROPRIETARY NOTE: UNLESS CONTAINED IN THIS DRAWING, ALL DIMENSIONS, MATERIALS, FINISHES, TOLERANCES, AND CONSTRUCTIONS ARE THE PROPERTY OF THE COMPANY AND SHALL BE KEPT AS A TRADE SECRET. ANY USE OR REPRODUCTION WITHOUT THE COMPANY'S WRITTEN PERMISSION IS STRICTLY PROHIBITED.

DESCRIPTION
 ADJUSTABLE CLAMP PLATE
 TIE-BACK ASSEMBLY

ENG. APPROVAL

CEK 8/30/2010

DRAWN BY

CUSTOMER

81 01

CLASS

81 01

CHKD BY

BMC 9/1/2010

DWG. NO.

PUCK

PART NO.

PUCK



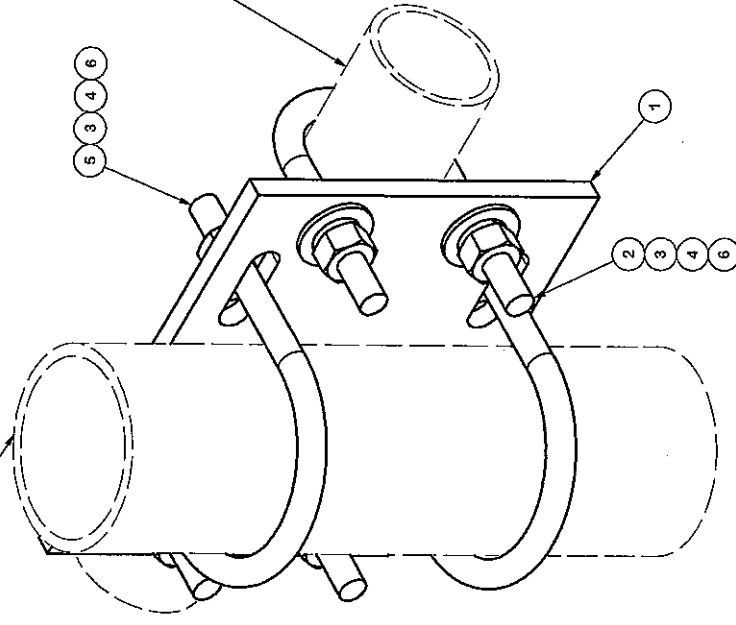
Locations:
 New York, NY
 Atlanta, GA
 Los Angeles, CA
 Plymouth, IN
 Chicago, IL
 Dallas, TX

Engineering
 Support Team:
 1-888-755-7446

PARTS LIST

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	6.02
2	2	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.88	1.25
3	8	G12FW	1/2" HDG USS FLATWASHER		0.03	0.27
4	8	G12LW	1/2" HDG LOCKWASHER		0.01	0.11
5	2	X-UB1358	1/2" X 3-5/8" X 5-1/2" X 3" U-BOLT (HDG.)		0.86	1.31
6	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
TOTAL WT. #						9.77

3-1/2" O.D. ANTENNA PIPE
(ORDERED SEPARATELY)



2-3/8" O.D. PIPE
(ORDERED SEPARATELY)

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
 SAWED, SHEARED AND GAS CUT EDGES (± 0.030)
 DRILLED AND GAS CUT HOLES (± 0.030) - NO CONING OF HOLES
 LASER CUT EDGES AND HOLES (± 0.010) - NO CONING OF HOLES
 BENDS ARE $\pm 1/2$ DEGREE
 ALL OTHER MACHINING (± 0.030)
 ALL OTHER ASSEMBLY (± 0.060)

PROPRIETARY NOTE:
 THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT
 AND ARE NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL,
 INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE
 WRITTEN PERMISSION OF VALMONT.

DESCRIPTION
CROSSOVER PLATE KIT

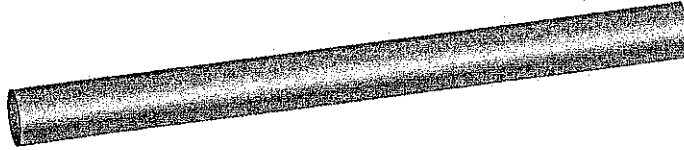
GPD NO. DRAWN BY
 CEK 7/1/2011
 ENG. APPROVAL
 CHECKED BY
 BMC 7/1/2011
 CUSTOMER

SITE PRO
 A Valmont Company

Locations:
 New York, NY
 Houston, TX
 Los Angeles, CA
 Plymouth, IN
 Salem, OR
 Dallas, TX

Engineering
 Support Team:
 1-888-753-7446

PART NO. SCX43-K
 DWG. NO. SCX43-K

Pxxx: Bulk Pipe

Features:

- Factory cut end, hot-dip galvanized pipe

Construction:

- ASTM A53 Grade B
- Schedule 40

Design Criteria:

- ASTM A53 Grade B (Yield $F_y = 35$ ksi [240 MPa] / Tensile $F_u = 60$ ksi [415 MPa])
- Hot dip galvanized in accordance with ASTM A123 requirements

Part #	Length	OD x Length (in)
P263	5'-3"	2-3/8" x 63"
P272	6'-0"	2-3/8" x 72"
P284	7'-0"	2-3/8" x 84"
P296	8'-0"	2-3/8" x 96"
P2120	10'-0"	2-3/8" x 120"
P2126	10'-6"	2-3/8" x 126"
P2150	12'-6"	2-3/8" x 150"
P2174	14'-6"	2-3/8" x 174"
P3084	7'-0"	2-7/8" x 84"
P3096	8'-0"	2-7/8" x 96"
P30120	10'-0"	2-7/8" x 120"
P30126	10'-6"	2-7/8" x 126"
P30150	12'-6"	2-7/8" x 150"
P30174	14'-6"	2-7/8" x 174"
P360	5'-0"	3-1/2" x 60"
P372	6'-0"	3-1/2" x 72"
P396	8'-0"	3-1/2" x 96"
P3150	12'-6"	3-1/2" x 150"
P3160	13'-4"	3-1/2" x 160"
P3174	14'-6"	3-1/2" x 174"
P3216	18'-0"	3-1/2" x 216"
P472	6'-0"	4-1/2" x 72"
P4126	10'-6"	4-1/2" x 126"

ELECTRICAL NOTES:

WORK INCLUDED

1. INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, PLANT SERVICES AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE THE ELECTRICAL WORK SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - A. PREPARE AND SUBMIT SHOP DRAWINGS, DIAGRAMS AND ILLUSTRATIONS.
 - B. PROCURE ALL NECESSARY PERMITS AND APPROVALS AND PAY ALL REQUIRED FEES AND CHARGES IN CONNECTION WITH THE WORK OF THIS CONTRACT.
 - C. SUBMIT AS-BUILT DRAWINGS, OPERATING AND MAINTENANCE INSTRUCTIONS AND MANUALS.
 - D. EXECUTE ALL CUTTING, DRILLING, ROUGH AND FINISH PATCHING OF EXISTING OR NEWLY INSTALLED CONSTRUCTION REQUIRED FOR THE WORK OF THIS CONTRACT. FOR SLAB PENETRATIONS THROUGH POST TENSION SLABS, X-RAY EXACT AREA OF PENETRATION PRIOR TO PERFORMING WORK. COORDINATE ALL X-RAY WORK WITH BUILDING ENGINEER.
 - E. PROVIDE HANGERS, SUPPORTS, FOUNDATIONS, STRUCTURAL FRAMING SUPPORTS, AND BASES FOR CONDUIT AND EQUIPMENT PROVIDED OR INSTALLED UNDER THE WORK OF HIS CONTRACT. PROVIDE COUNTER FLASHING, SLEEVES AND SEALS FOR FLOOR AND WALL PENETRATIONS.
 - F. MAINTAIN ALL EXISTING ELECTRICAL SERVICES IN THE BUILDING AREAS NOT AFFECTED BY THE ALTERATION DURING THE PROGRESS OF THE WORK INCLUDING PROVIDING ALL TEMPORARY JUMPERS, CONDUITS, CAPS, PROTECTIVE DEVICES, CONNECTIONS AND EQUIPMENT REQUIRED. PROVIDE TEMPORARY LIGHT AND POWER FOR CONSTRUCTION PURPOSES.
2. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO CALL FOR AN INSTALLATION THAT IS COMPLETE IN EVERY RESPECT. IT IS NOT THE INTENT TO GIVE EVERY DETAIL ON THE DRAWINGS AND IN THE SPECIFICATIONS. IF AN ITEM OF WORK IS INDICATED IN THE DRAWINGS, IT IS CONSIDERED SUFFICIENT FOR INCLUSION IN THE CONTRACT. FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT USUALLY FURNISHED OR NEEDED TO MAKE A COMPLETE INSTALLATION WHETHER OR NOT SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS.

GENERAL REQUIREMENTS

1. PROVIDE ALL WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND LOCAL AND STATE ELECTRICAL CODES.
 2. THE ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT DIMENSIONS OF THE BUILDING.
 3. LOAD CALCULATIONS ARE BASED ON EXISTING BUILDING INFORMATION/DRAWINGS PROVIDED TO ENGINEERING. CONTRACTOR IS TO VERIFY ALL EXISTING RATINGS AND LOADS PRIOR TO PURCHASING OF SPECIFIED EQUIPMENT FOR COMPLIANCE TO NEC. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES AND REQUEST FURTHER DIRECTION BY ENGINEER.
 4. EXISTING BUILDING EQUIPMENT IS SHOWN ON THE DRAWINGS. NEW OR RELOCATED EQUIPMENT IS NOTED WITH SOLID LINES. FUTURE EQUIPMENT (NOT IN THIS CONTRACT) IS DEPICTED WITH SHADED LINES. REQUEST CLARIFICATION OF DRAWINGS OR SPECIFICATIONS PRIOR TO PRICING OR INSTALLATION.
 5. GENERAL
 - A. AFTER CAREFULLY STUDYING THE DRAWINGS AND SPECIFICATIONS, AND BEFORE SUBMITTING THE PROPOSAL, MAKE A MANDATORY SITE VISIT TO ASCERTAIN CONDITIONS OF THE SITE, AND THE NATURE AND EXACT QUANTITY OF WORK TO BE PERFORMED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR FAILURE TO NOTIFY THE OWNER, IN WRITING, OF ANY DISCREPANCIES THAT MAY HAVE BEEN NOTED BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS AND SPECIFICATIONS.
 - B. VERIFY ALL MEASUREMENTS AT THE SITE AND BE RESPONSIBLE FOR CORRECTNESS OF SAME.
 6. QUALITY, WORKMANSHIP, MATERIALS AND SAFETY
 - A. PROVIDE NEW MATERIALS AND EQUIPMENT OF A DOMESTIC MANUFACTURER BY THOSE REGULARLY ENGAGED IN THE PRODUCTION AND MANUFACTURE OF SPECIFIED MATERIALS AND EQUIPMENT. WHERE UL, OR OTHER AGENCY, HAS ESTABLISHED STANDARDS FOR MATERIALS, PROVIDE MATERIALS WHICH ARE LISTED AND LABELED ACCORDINGLY. THE COMMERCIAL STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES MENTIONED HEREIN ARE INTENDED FOR THE PROPER FUNCTIONING OF THE WORK.
 - B. WORK SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE REQUIRED FOR THE WORK. INSTALL MATERIALS AND EQUIPMENT TO PRESENT A NEAT APPEARANCE WHEN COMPLETED AND IN ACCORDANCE WITH THE APPROVED RECOMMENDATIONS OF THE MANUFACTURER AND IN ACCORDANCE WITH CONTRACT DOCUMENTS.
 - C. PROVIDE LABOR, MATERIALS, APPARATUS AND APPLIANCES ESSENTIAL TO THE FUNCTIONING OF THE SYSTEMS DESCRIBED OR INDICATED HEREIN, OR WHICH MAY BE REASONABLY IMPLIED AS ESSENTIAL WHENEVER MENTIONED IN THE CONTRACT DOCUMENT OR NOT.
 - D. MAKE WRITTEN REQUESTS FOR SUPPLEMENTARY INSTRUCTIONS TO ARCHITECT/ENGINEER IN CASE OF DOUBT AS TO WORK INTENDED OR IN EVENT OF NEED FOR EXPLANATION THEREOF.
 - E. PERFORMANCE AND MATERIAL REQUIREMENTS SCHEDULED OR SPECIFIED ARE MINIMUM STANDARD ACCEPTABLE. THE RIGHT TO JUDGE THE QUALITY OF EQUIPMENT THAT DEVIATES FROM THE CONTRACT DOCUMENT REMAINS SOLELY WITH ARCHITECT/ENGINEER, CONTRACT DOCUMENT OR NOT.
- GUARANTEE**
1. GUARANTEE MATERIALS, PARTS AND LABOR FOR WORK FOR ONE YEAR FROM THE DATE OF ISSUANCE OF OCCUPANCY PERMIT. DURING THAT PERIOD, MAKE GOOD FAULTS OR IMPERFECTIONS THAT MAY ARISE DUE TO DEFECTS OR OMISSIONS IN MATERIALS OR WORKMANSHIP WITH NO ADDITIONAL COMPENSATION AND AS DIRECTED BY ARCHITECT.

CLEANING

1. REMOVE ALL CONSTRUCTION DEBRIS RESULTING FROM THE WORK.
2. CLEAN EQUIPMENT AND SYSTEMS FOLLOWING THE COMPLETION OF THE PROJECT TO THE SATISFACTION OF THE ENGINEER.

COORDINATION AND SUPERVISION

1. CAREFULLY LAY OUT ALL WORK IN ADVANCE TO AVOID UNNECESSARY CUTTING, CHANNELING, CHASING OR DRILLING OF FLOORS, WALLS, PARTITIONS, CEILING OR OTHER SURFACES. WHERE SUCH WORK IS NECESSARY, HOWEVER, PATCH AND REPAIR THE WORK IN AN APPROVED MANNER BY SKILLED MECHANICS AT NO ADDITIONAL COST TO THE OWNER. RENDER FULL COOPERATION TO OTHER TRADES WHERE WORK WILL BE INSTALLED IN CLOSE PROXIMITY TO WORK OF OTHER TRADES. ASSIST IN WORKING OUT SPACE CONDITIONS. IF WORK IS INSTALLED BEFORE COORDINATION WITH OTHER TRADES, OR CAUSES INTERFERENCE, MAKE CHANGES NECESSARY TO CORRECT CONDITIONS WITHOUT EXTRA CHARGE.

SUBMITTALS

1. AS-BUILT DRAWINGS:
 - A. UPON COMPLETION OF THE WORK, FURNISH TO THE OWNER "AS-BUILT" DRAWINGS.
2. SERVICE MANUALS:
 - A. UPON COMPLETION OF THE WORK, FULLY INSTRUCT VERIZON AS TO THE OPERATION AND MAINTENANCE OF ALL MATERIAL, EQUIPMENT AND SYSTEMS.
 - B. PROVIDE 3 COMPLETE BOUND SETS OF INSTRUCTIONS FOR OPERATING AND MAINTAINING ALL SYSTEMS AND EQUIPMENT.

CUTTING AND PATCHING

1. PROVIDE ALL CUTTING, DRILLING, ROUGH AND FINISH PATCHING REQUIRED TO COMPLETE THE WORK.
2. OBTAIN OWNER APPROVAL PRIOR TO CUTTING THROUGH FLOORS OR WALLS FOR PIPING OR CONDUIT.

TESTS, INSPECTION AND APPROVAL

1. BEFORE ENERGIZING ANY ELECTRICAL INSTALLATION, INSPECT EACH UNIT IN DETAIL. TIGHTEN ALL BOLTS AND CONNECTIONS (TORQUE-TIGHTEN WHERE REQUIRED) AND DETERMINE THAT ALL COMPONENTS ARE ALIGNED, AND THE EQUIPMENT IS IN SAFE, OPERATIONAL CONDITION.
2. PROVIDE THE COMPLETE ELECTRICAL SYSTEM FREE OF GROUND FAULTS AND SHORT CIRCUITS SUCH THAT THE SYSTEM WILL OPERATE SATISFACTORILY UNDER FULL LOAD CONDITIONS, WITHOUT EXCESSIVE HEATING AT ANY POINT IN THE SYSTEM.

SPECIAL REQUIREMENTS

1. DO NOT LEAVE ANY WORK INCOMPLETE NOR ANY HAZARDOUS SITUATIONS CREATED WHICH WILL AFFECT THE LIFE OR SAFETY OF THE PUBLIC AND/OR BUILDING OCCUPANTS. DO NOT INTERFERE WITH OR CUTOFF ANY OF THE EXISTING SERVICES WITHOUT THE OWNER'S WRITTEN PERMISSION.
2. WHEN NECESSARY TO TEMPORARILY DISCONNECT ANY EXISTING BUILDING UTILITIES AND SERVICE SYSTEMS, INCLUDING FEEDER OR BRANCH CIRCUITING SUPPLYING EXISTING FACILITIES, CONFER WITH THE OWNER AND ARRANGE THE PERIOD OF INTERRUPTION FOR A TIME MUTUALLY AGREED UPON. SHUTDOWN NOTE: SCHEDULE AND NOTIFY OWNER 48 HOURS PRIOR TO SHUTDOWN. ALL SHUTDOWN WORK TO BE SCHEDULED AT A TIME CONVENIENT TO OWNER.

GROUNDING

1. ROUTE ALL GROUNDING CONDUCTORS AS SHOWN ON CONDUIT/GROUNDING RISER.
2. ROUTE 600 KCMIL CU THHN CONDUCTOR FROM THE MGB LOCATION TO BUILDING STEEL. VERIFY BUILDING STEEL IS EFFECTIVELY GROUNDING PER NEC TO THE MAIN SERVICE GROUNDING ELECTRODE CONDUCTOR (GEC).
3. MAKE ALL GROUND CONNECTIONS FROM MGB TO ELECTRICAL EQUIPMENT WITH 2 HOLE, CRIMP TYPE, BURNDY COMPRESSION TERMINATIONS, SIZED AS REQUIRED.
4. USE 1 HOLE, CRIMP TYPE, BURNDY COMPRESSIONS TERMINATIONS, SIZED AS REQUIRED, AT EQUIPMENT GROUND CONNECTIONS.
5. HIRE AN INDEPENDENT LAB TO PERFORM THE SPECIFIED OHMS TESTING. PROVIDE 4 SETS OF THE CERTIFIED DOCUMENTS TO THE OWNER FOR VERIFICATION PRIOR TO THE PROJECT COMPLETION.

RACEWAYS

1. ALL WIRING TO BE INSTALLED IN CONDUIT SYSTEMS IN ACCORDANCE WITH THE FOLLOWING:
 - A. EXTERIOR FEEDERS AND CONTROL, WHERE UNDERGROUND, TO BE IN SCH 40 PVC.
 - B. EXTERIOR, ABOVE GROUND POWER CONDUITS TO BE GALVANIZED RIGID STEEL (RGS).
 - C. ALL TELECOMMUNICATION CONDUITS, INTERIOR/EXTERIOR, TO BE EMT.

- A. ON THIS PROJECT.
- E. ALL TELECOM CONDUITS AND PULL BOXES INSTALLED ON THIS PROJECT TO BE LABELED "VERIZON". OWNER WILL PROVIDE LABELS FOR CONTRACTOR TO INSTALL.
- F. INTERIOR FEEDERS TO BE INSTALLED IN E.M.T. WITH STEEL COMPRESSION FITTINGS.
- G. MINIMUM SIZE CONDUIT TO BE 3/4" TRADE SIZE UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- H. FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT TO BE INSTALLED IN LIQUID-TIGHT FLEXIBLE METAL CONDUIT.
- J. AREAS OR DRYWALL PARTITIONS, UNLESS OTHERWISE NOTED. THE ROUTING OF CONDUITS INDICATED ON THE DRAWINGS IS DIAGRAMMATIC. BEFORE INSTALLING ANY WORK, EXAMINE THE WORKING LAYOUTS AND SHOP DRAWINGS OF THE OTHER TRADES TO DETERMINE THE EXACT LOCATIONS AND CLEARANCES.
- K. ALL EXTERIOR MOUNTING HARDWARE TO BE GALVANIZED STEEL. COORDINATE WITH BUILDING ENGINEER PRIOR TO ATTACHING TO BUILDING STRUCTURE.

RACEWAYS CONT'D

- L. PENETRATIONS OF WALLS, FLOORS AND ROOFS, FOR THE PASSAGE OF ELECTRICAL RACEWAYS, TO BE PROPERLY SEALED AFTER INSTALLATION OF RACEWAYS SO AS TO MAINTAIN THE STRUCTURAL OR WATERPROOF INTEGRITY OF THE WALL, FLOOR OR ROOF SYSTEM TO BE PENETRATED. SEAL ALL CONDUIT PENETRATIONS THROUGH FIRE OR SMOKE RATED WALLS, CEILING OR SMOKE TIGHT CORRIDOR PARTITIONS TO MAINTAIN PROPER RATING OF WALL OR CEILING.
- M. PROVIDE ALL CONDUIT ENDS WITH INSULATED METALLIC GROUNDING BUSHINGS.
- N. CONDUIT TO BE SUPPORTED AT MAXIMUM DISTANCE OF 8'-0", OR AS REQUIRED BY NEC, IN HORIZONTAL AND VERTICAL DIRECTIONS.
- O. PROVIDE STAINLESS STEEL BLANK COVER PLATES FOR ALL JUNCTION BOXES AND/OR OUTLET BOXES NOT USED IN EXPOSED AREAS. PROVIDE ALL OTHER UNUSED BOXES WITH STANDARD STEEL COVER PLATES.
- P. WHERE APPLICABLE, PROVIDE ROOFTOP CONDUIT SUPPORT SYSTEM, CONFORMING TO ROOFTOP WARRANTY REQUIREMENTS, PER BUILDING.

WIRES AND CABLES

1. CONTRACTOR TO COORDINATE WITH EQUIPMENT SUPPLIER AND VENDOR FOR EXACT EQUIPMENT OVER-CURRENT PROTECTION VOLTAGE, WIRE SIZE AND PLUG CONFIGURATION, IF APPLICABLE, PRIOR TO BID.
2. ALL EQUIPMENT/DEVICES TO BE PROVIDED WITH INSULATED GROUND CONDUCTOR.
3. ALL WIRE AND CABLE TO BE 600VOLT, COPPER, WITH THWN/THHN INSULATION, EXCEPT AS NOTED.
4. WIRE FOR POWER AND LIGHTING WILL NOT BE LESS THAN NO. 12AWG. ALL WIRE NO. 8 AND LARGER TO BE STRANDED.
5. CONTROL WIRING IS NOT TO BE LESS THAN NO. 14AWG, FLEXIBLE IN SINGLE CONDUCTORS OR MULTI-CONDUCTOR CABLES. CONTROL WIRING WILL CONSIST OF MULTI-CONDUCTOR CABLES WHEREVER POSSIBLE. CABLES TO BE PROVIDED WITH AN OVERALL FLAME-RETARDANT, EXTRUDED JACKET AND RATED FOR FLEXIBLE USE. ALL CONTROL WIRE TO BE 600VOLT RATED.
6. WIRE PREVIOUSLY PULLED INTO CONDUIT IS CONSIDERED USED AND IS NOT TO BE RE-PULLED.
7. HOME RUNS AND BRANCH CIRCUIT WIRING FOR 20A, 120V CIRCUITS:

LENGTH (FT.)	HOME RUN WIRE SIZE
0 TO 50	NO. 12
51 TO 100	NO. 10
101 TO 150	NO. 8
8. VOLTAGE DROP IS NOT TO EXCEED 3%.
9. MAKE ALL CONNECTIONS WITH UL APPROVED, SOLDERLESS, PRESSURE TYPE INSULATED CONNECTORS; SCOTCHLOK OR AN APPROVED EQUAL.

WIRING DEVICES

1. ALL RECEPTACLES INSTALLED IN THIS PROJECT TO BE GROUNDING TYPE, WITH GROUNDING PIN SLOT CONNECTED TO DEVICE GROUND SCREW FOR GROUND WIRE CONNECTION. DISCONNECT SWITCHES AND FUSES
 1. DISCONNECT SWITCHES TO BE VOLTAGE-RATED TO SUIT THE CHARACTERISTICS OF THE SYSTEM FROM WHICH THEY ARE SUPPLIED.
 2. PROVIDE HEAVY-DUTY, METAL-ENCLOSED, EXTERNALLY-OPERATED DISCONNECT SWITCHES, FUSED OR UNFUSED, OF SUCH TYPE AND SIZE AS REQUIRED TO PROPERLY PROTECT OR DISCONNECT THE LOAD FOR WHICH THEY ARE INTENDED.
 3. PROVIDE NEMA 1 DISCONNECT SWITCHES FOR INTERIOR INSTALLATION, NEMA 3R FOR EXTERIOR INSTALLATION.
 4. DISCONNECT SWITCHES TO BE MANUFACTURED BY:
 - A. GENERAL ELECTRIC COMPANY
 - B. SQUARE-D
 5. PROVIDE RK-1 TYPE FUSES, UNLESS NOTED OTHERWISE.
1. INSTALL DISCONNECT SWITCHES WHERE INDICATED ON DRAWINGS.
2. INSTALL FUSES IN FUSIBLE DISCONNECT SWITCHES. FUSES MUST MATCH IN TYPE AND RATING.
3. FUSES TO BE MOUNTED SO THAT THE LABELS SHOWING THEIR RATINGS CAN BE READ WITHOUT REQUIRING FUSE REMOVAL.
4. FURNISH AND DEPOSIT SPARE FUSES AT THE JOB SITE AS FOLLOWS:
 - A. THREE SPARES FOR EACH TYPE AND SIZE, IN EXCESS OF 60A, USED FOR INITIAL FUSING.
 - B. TEN PERCENT SPARES FOR EACH TYPE AND SIZE, UP TO AND INCLUDING 60A, USED FOR INITIAL FUSING. IN NO CASE WILL LESS THAN THREE FUSES OF ONE PARTICULAR TYPE AND SIZE BE FURNISHED.

CONFLICTS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATIONS OF ALL MEASUREMENTS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK, NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE OWNER FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS.
2. THE BIDDER, IF AWARDED THE CONTRACT, WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING CONCERNING SUCH BIDDER MIGHT HAVE FULLY INFORMED THEMSELVES PRIOR TO THE BIDDING.
3. NO PLEA OF IGNORANCE OF CONDITIONS THAT EXIST, OR OF DIFFICULTIES OR CONDITIONS THAT MAY BE ENCOUNTERED, OR OF ANY OTHER RELEVANT MATTER CONCERNING THE WORK TO BE PERFORMED IN THE EXECUTION OF THE WORK WILL BE ACCEPTED AS AN EXCUSE FOR ANY FAILURE OR OMISSION ON THE PART OF THE CONTRACTOR TO FULFILL EVERY DETAIL OF ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS GOVERNING THE WORK.

CONTRACTS AND WARRANTIES

1. CONTRACTOR IS RESPONSIBLE FOR APPLICATION AND PAYMENT OF CONTRACTOR LICENSES AND BONDS.
2. SEE MASTER CONTRACTOR SERVICES AGREEMENT FOR ADDITIONAL DETAILS.

STORAGE

1. ALL MATERIALS MUST BE STORED IN A LEVEL AND DRY FASHION AND IN A MANNER THAT DOES NOT NECESSARILY OBSTRUCT THE FLOW OF OTHER WORK. ANY STORAGE METHOD MUST MEET ALL RECOMMENDATIONS OF THE ASSOCIATED MANUFACTURER.

CLEANUP

1. THE CONTRACTORS SHALL, AT ALL TIMES, KEEP THE SITE FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THEIR EMPLOYEES AT WORK AND AT THE COMPLETION OF THE WORK. THEY SHALL REMOVE ALL RUBBISH FROM AND ABOUT THE BUILDING AREA, INCLUDING ALL THEIR TOOLS, SCAFFOLDING AND SURPLUS MATERIALS AND SHALL LEAVE THEIR WORK CLEAN AND READY TO USE.
2. EXTERIOR
 - A. VISUALLY INSPECT EXTERIOR SURFACES AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER.
 - B. REMOVE ALL TRACES OF SPLASHED MATERIALS FROM ADJACENT SURFACES.
 - C. IF NECESSARY, TO ACHIEVE A UNIFORM DEGREE OF CLEANLINESS, HOSE DOWN THE EXTERIOR OF THE STRUCTURE.
3. INTERIOR
 - A. VISUALLY INSPECT INTERIOR SURFACE AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER FROM WALLS, FLOOR, AND CEILING.
 - B. REMOVE ALL TRACES OF SPLASHED MATERIALS FROM ADJACENT SURFACES.
 - C. REMOVE PAINT DROPPINGS, SPOTS, STAINS, AND DIRT FROM FINISHED SURFACES.

CHANGE ORDER PROCEDURE:

1. REFER TO SECTION 17 OF SIGNED MCSA: SEE PROFESSIONAL SERVICE AGREEMENT FOR MCSA.

RELATED DOCUMENTS AND COORDINATION

1. GENERAL CARPENTRY, ELECTRICAL AND ANTENNA DRAWINGS ARE INTERRELATED. IN PERFORMANCE OF THE WORK, THE CONTRACTOR MUST REFER TO ALL DRAWINGS. ALL COORDINATION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

SHOP DRAWINGS

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AS REQUIRED AND LISTED IN THESE SPECIFICATIONS TO THE OWNER FOR APPROVAL.
2. ALL SHOP DRAWINGS SHALL BE REVIEWED, CHECKED AND CORRECTED BY CONTRACTOR PRIOR TO SUBMITTAL TO THE OWNER.

PRODUCTS AND SUBSTITUTIONS

1. SUBMIT 3 COPIES OF EACH REQUEST FOR SUBSTITUTION. IN EACH REQUEST, IDENTIFY THE PRODUCT OR FABRICATION OR INSTALLATION METHOD TO BE REPLACED BY THE SUBSTITUTION. INCLUDE RELATED SPECIFICATION SECTION AND DRAWING NUMBERS AND COMPLETE DOCUMENTATION SHOWING COMPLIANCE WITH THE REQUIREMENTS FOR SUBSTITUTIONS.
2. SUBMIT ALL NECESSARY PRODUCT DATA AND CUT SHEETS WHICH PROPERLY INDICATE AND DESCRIBE THE ITEMS, PRODUCTS AND MATERIALS BEING INSTALLED. THE CONTRACTOR SHALL, IF DEEMED NECESSARY BY THE OWNER, SUBMIT ACTUAL SAMPLES TO THE OWNER FOR APPROVAL IN LIEU OF CUT SHEETS.

QUALITY ASSURANCE

1. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. THESE SHALL INCLUDE, BUT NOT BE LIMITED TO THE APPLICABLE CODES SET FORTH BY THE LOCAL GOVERNING BODY. SEE "CODE COMPLIANCE" T-1.

ADMINISTRATION

1. BEFORE THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR WILL ASSIGN A PROJECT MANAGER WHO WILL ACT AS A SINGLE POINT OF CONTACT FOR ALL PERSONNEL INVOLVED IN THIS PROJECT. THIS PROJECT MANAGER WILL DEVELOP A MASTER SCHEDULE FOR THE PROJECT WHICH WILL BE SUBMITTED TO THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK.
2. SUBMIT A BAR TYPE PROGRESS CHART, NOT MORE THAN 3 DAYS AFTER THE DATE ESTABLISHED FOR COMMENCEMENT OF THE WORK ON THE SCHEDULE, INDICATING A TIME BAR FOR EACH MAJOR CATEGORY OR UNIT OF WORK TO BE PERFORMED AT THE SITE, PROPERLY SEQUENCED AND COORDINATED WITH OTHER ELEMENTS OF WORK AND SHOWING COMPLETION OF THE WORK SUFFICIENTLY IN ADVANCE OF THE DATE ESTABLISHED FOR SUBSTANTIAL COMPLETION OF THE WORK.
3. PRIOR TO COMMENCING CONSTRUCTION, THE OWNER SHALL SCHEDULE AN ON-SITE MEETING WITH ALL MAJOR PARTIES. THIS WOULD INCLUDE, BUT NOT LIMITED TO, THE OWNER, PROJECT MANAGER, CONTRACTOR, LAND OWNER REPRESENTATIVE, LOCAL TELEPHONE COMPANY, TOWER ERECTION FOREMAN (IF SUBCONTRACTED).
4. CONTRACTOR SHALL BE EQUIPPED WITH SOME MEANS OF CONSTANT COMMUNICATIONS, SUCH AS A MOBILE PHONE OR A BEEPER. THIS EQUIPMENT WILL NOT BE SUPPLIED BY THE OWNER, NOR WILL WIRELESS SERVICE BE ARRANGED.
5. DURING CONSTRUCTION, CONTRACTOR MUST ENSURE THAT EMPLOYEES AND SUBCONTRACTORS WEAR HARD HATS AT ALL TIMES. CONTRACTOR WILL COMPLY WITH ALL WPCS SAFETY REQUIREMENTS IN THEIR AGREEMENT.
6. PROVIDE WRITTEN DAILY UPDATES ON SITE PROGRESS TO THE OWNER.
7. COMPLETE INVENTORY OF CONSTRUCTION MATERIALS AND EQUIPMENT IS REQUIRED PRIOR TO START OF CONSTRUCTION.
8. NOTIFY THE OWNER/PROJECT MANAGER IN WRITING NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, TOWER ERECTIONS, AND EQUIPMENT CABINET PLACEMENTS.

INSURANCE AND BONDS

1. CONTRACTOR, AT THEIR OWN EXPENSE, SHALL CARRY AND MAINTAIN, FOR THE DURATION OF THE PROJECT, ALL INSURANCE, AS REQUIRED AND LISTED, AND SHALL NOT COMMENCE WITH THEIR WORK UNTIL THEY HAVE PRESENTED AN ORIGINAL CERTIFICATE OF INSURANCE STATING ALL COVERAGES TO THE OWNER. REFER TO THE MASTER AGREEMENT FOR REQUIRED INSURANCE LIMITS.
2. THE OWNER SHALL BE NAMED AS AN ADDITIONAL INSURED ON ALL POLICES.
3. CONTRACTOR MUST PROVIDE PROOF OF INSURANCE.

GENERAL NOTES:

- INTENT**
1. THESE SPECIFICATIONS AND CONSTRUCTION DRAWINGS ACCOMPANYING THEM DESCRIBE THE WORK TO BE DONE AND THE MATERIALS TO BE FURNISHED FOR CONSTRUCTION.
 2. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY EXPLANATORY AND SUPPLEMENTARY. HOWEVER, SHOULD ANYTHING BE SHOWN, INDICATED, OR SPECIFIED ON ONE AND NOT THE OTHER, IT SHALL BE DONE THE SAME AS IF SHOWN/INDICATED OR SPECIFIED IN BOTH.
 3. THE INTENTION OF THE DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN THE CONTRACT.
 4. THE PURPOSE OF THE SPECIFICATIONS IS TO INTERPRET THE INTENT OF THE DRAWINGS AND TO DESIGNATE THE METHOD OF THE PROCEDURE, TYPE AND QUALITY OF MATERIALS REQUIRED TO COMPLETE THE WORK.
 5. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK. NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE MADE OR PERMITTED BY THE OWNER WITHOUT ISSUING A CHANGE ORDER.

ABBREVIATIONS

ADJ	ADJUSTABLE
AGL	ABOVE GROUND LINE
&	AND
APPROX	APPROXIMATE
@	AT
BTS	BASE TRANSMISSION STATION
CAB	CABINET
CLG	CEILING
CONC	CONCRETE
CONT	CONTINUOUS
DIA OR Ø	DIAMETER
DWG	DRAWING
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
EOB	EQUIPMENT GROUND BAR
(E)	EXISTING
EXT	EXTERIOR
FF	FINISHED FLOOR
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GRND	GROUND
LG	LONG
MAX	MAXIMUM
MECH	MECHANICAL
MW	MICROWAVE DISH
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
MTL	METAL
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OPP	OPPOSITE
(P)	PROPOSED
PCS	PERSONAL COMMUNICATION SYSTEM
PPC	POWER PROTECTION CABINET
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SS	STAINLESS STEEL
STL	STEEL
TOC	TOP OF CONCRETE
TOM	TOP OF MASONRY
TYP	TYPICAL
VIF	VERIFY IN FIELD
WON	UNLESS OTHERWISE NOTED
WWF	WELDED WIRE FABRIC
W/	WITH

PLANS PREPARED FOR:



160 WASHINGTON VALLEY ROAD
BEDMINSTER, NJ 07921

PLANS PREPARED BY:

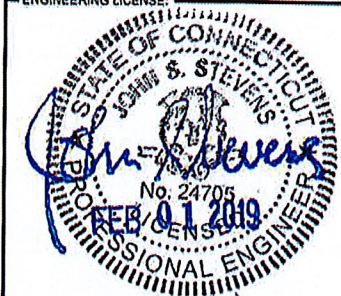


INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 680-0780
Fax # (518) 680-0783
JOB NUMBER: TBD

MLA PARTNER:



ENGINEERING LICENSE:



DRAWING NOTICE:

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REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	02/01/19	MAP	0

VERIZON SITE NAME:

N THOMPSONVILLE CT

CROWN CASTLE SITE NAME:

ENFIELD

CROWN CASTLE BU #:

876348

SITE ADDRESS:

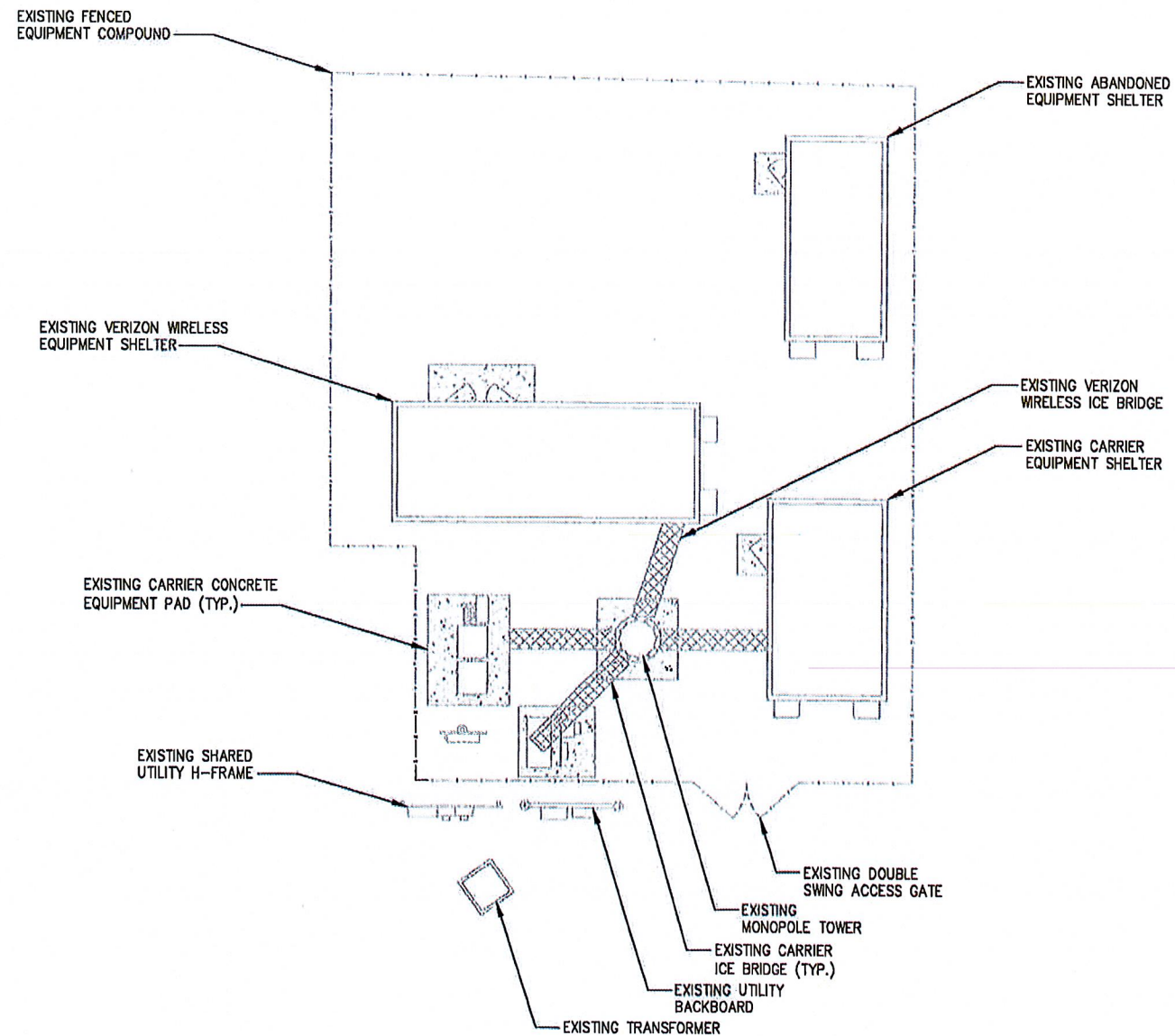
1 BRIGHT MEADOW
BOULEVARD
ENFIELD, CT 06082

SHEET DESCRIPTION:

VERIZON
SPECIFICATIONS

SHEET NUMBER:

SP-1



PLANS PREPARED FOR:
verizon
 180 WASHINGTON VALLEY ROAD
 BEDMINSTER, NJ 07921

PLANS PREPARED BY:
INFINIGY
 INFINIGY ENGINEERING, PLLC
 1033 Watervliet Shaker Rd
 Albany, NY 12205
 Office # (518) 690-0780
 Fax # (518) 690-0793
 JOB NUMBER: TBD

MLA PARTNER:
CROWN CASTLE

ENGINEERING LICENSE:

 JOHN S. STEVENS
 No. 24705
 FEB 01 2019
 PROFESSIONAL ENGINEER

DRAWING NOTICE:
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REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	02/01/18	MAP	0

VERIZON SITE NAME:
N THOMPSONVILLE CT

CROWN CASTLE SITE NAME:
ENFIELD

CROWN CASTLE BU #:
876348

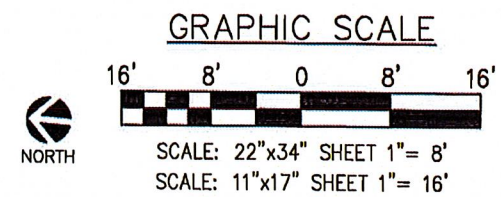
SITE ADDRESS:
**1 BRIGHT MEADOW BOULEVARD
 ENFIELD, CT 06082**

SHEET DESCRIPTION:
OVERALL SITE PLAN

SHEET NUMBER:
A-1

INFORMATION CONTAINED WITHIN DRAWINGS IS BASED ON PROVIDED INFORMATION AND IS NOT THE RESULT OF A FIELD SURVEY. CONTRACTOR TO VERIFY EXISTING FIELD CONDITIONS PRIOR TO ANY CONSTRUCTION

OVERALL SITE PLAN

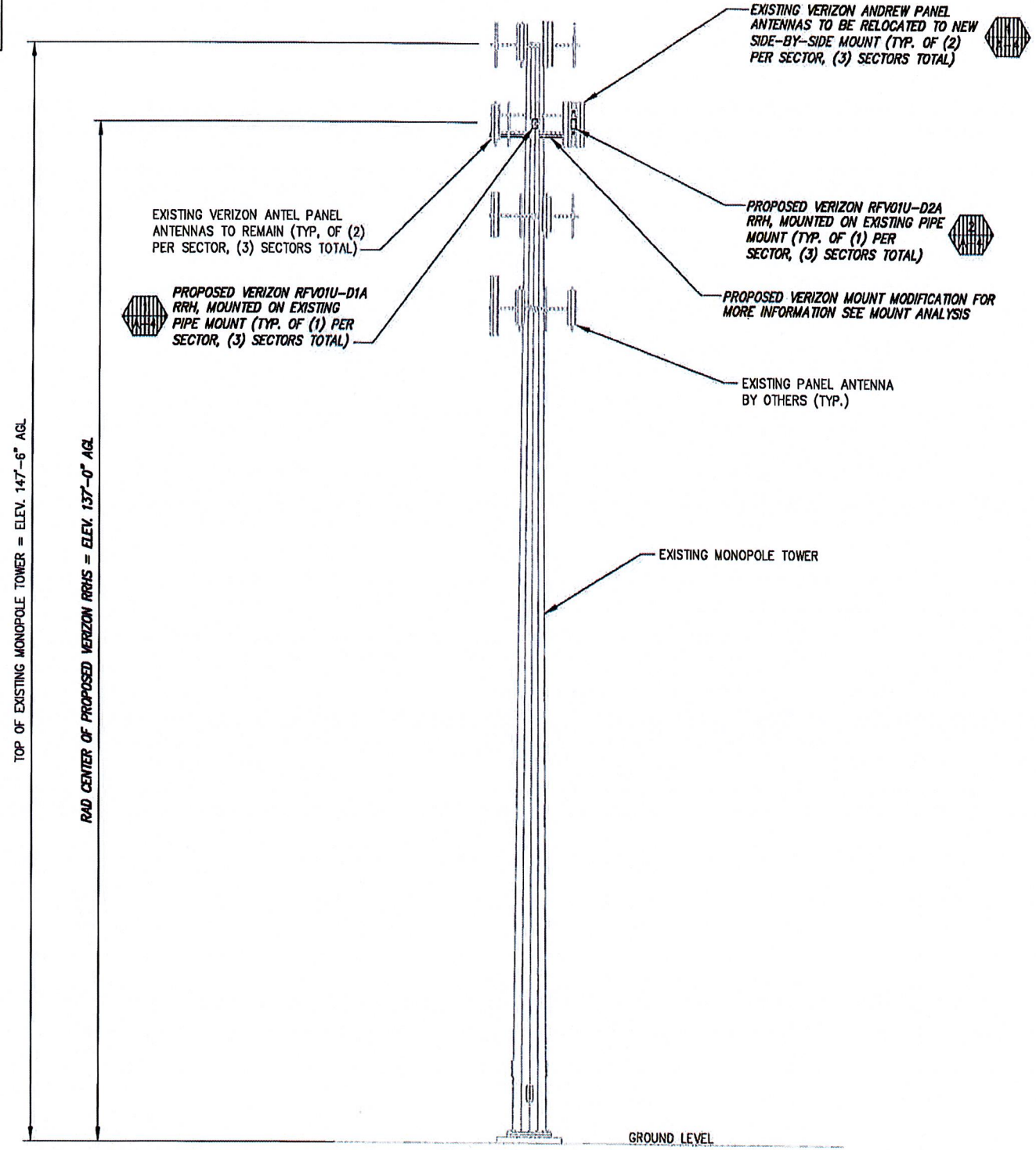


SCALE: AS NOTED 1

MOUNT ANALYSIS COMPLETED BY TOWER ENGINEERING PROFESSIONALS. FOR ADDITIONAL INFORMATION SEE REPORT TITLED "MOUNT MODIFICATION ANALYSIS"; DATED: "JANUARY 22, 2019" ACCORDING TO THE RESULTS OF THE MOUNT ANALYSIS THE STRUCTURE HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED LOADING WITH THE FOLLOWING CONTINGENCIES:

- BOTTOM RAIL, 3.0 SCH 40x13FT PIPE ASTM A53-B-35 OR GREATER (TOTAL OF 3)
- HANDRAIL BRACE, 2.0 SCH 40x3FT PIPE ASTM A53-B-35 OR GREATER (TOTAL OF 3)
- CLAMP PLATE, SITEPRO PART NO. PUCK (TOTAL OF 6)
- CROSSOVER PLATE KIT, SITE PRO PART NO. SCX43-K (TOTAL OF 12)


INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER FOR THIS SITE AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY. REFER TO STRUCTURAL ANALYSIS BY OTHERS PRIOR TO ANY CONSTRUCTION.



PLANS PREPARED FOR:
verizon
 180 WASHINGTON VALLEY ROAD
 BEDMINSTER, NJ 07921

PLANS PREPARED BY:
INFINIGY
 INFINIGY ENGINEERING, PLLC
 1033 Watervliet Shaker Rd
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 Office # (518) 890-0780
 Fax # (518) 890-0783
 JOB NUMBER: TBD

MLA PARTNER:
CROWN CASTLE

ENGINEERING LICENSE:


DRAWING NOTICE:
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REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	02/01/19	MAP	0

VERIZON SITE NAME:
N THOMPSONVILLE CT

CROWN CASTLE SITE NAME:
ENFIELD

CROWN CASTLE BU #:
876348

SITE ADDRESS:
**1 BRIGHT MEADOW
 BOULEVARD
 ENFIELD, CT 06082**

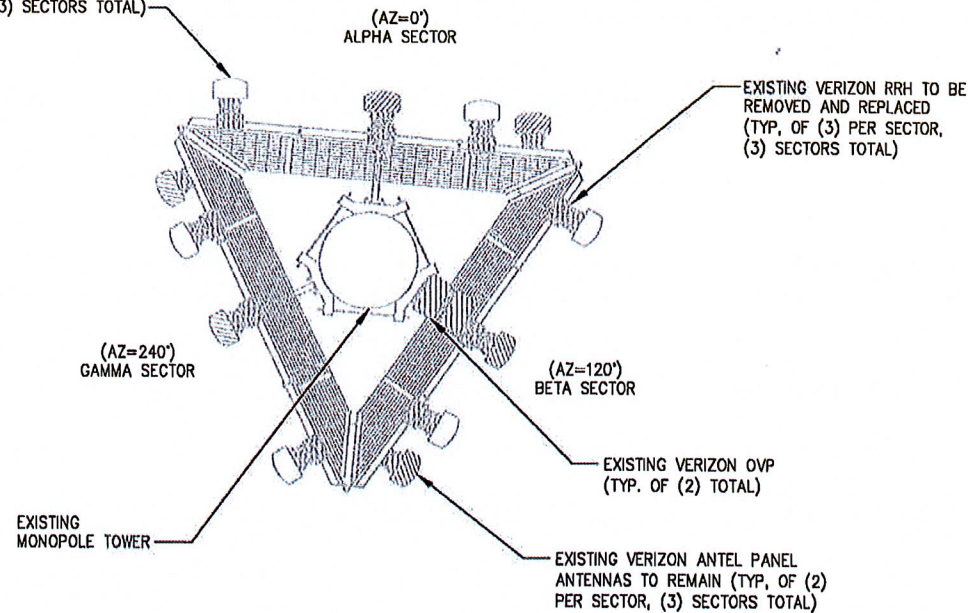
SHEET DESCRIPTION:
**TOWER
 ELEVATION**

SHEET NUMBER:
A-2

PROPOSED TOWER ELEVATION

NO SCALE 1

EXISTING VERIZON ANDREW PANEL ANTENNA TO BE RELOCATED TO NEW SIDE-BY-SIDE MOUNT (TYP. OF (2) PER SECTOR, (3) SECTORS TOTAL)



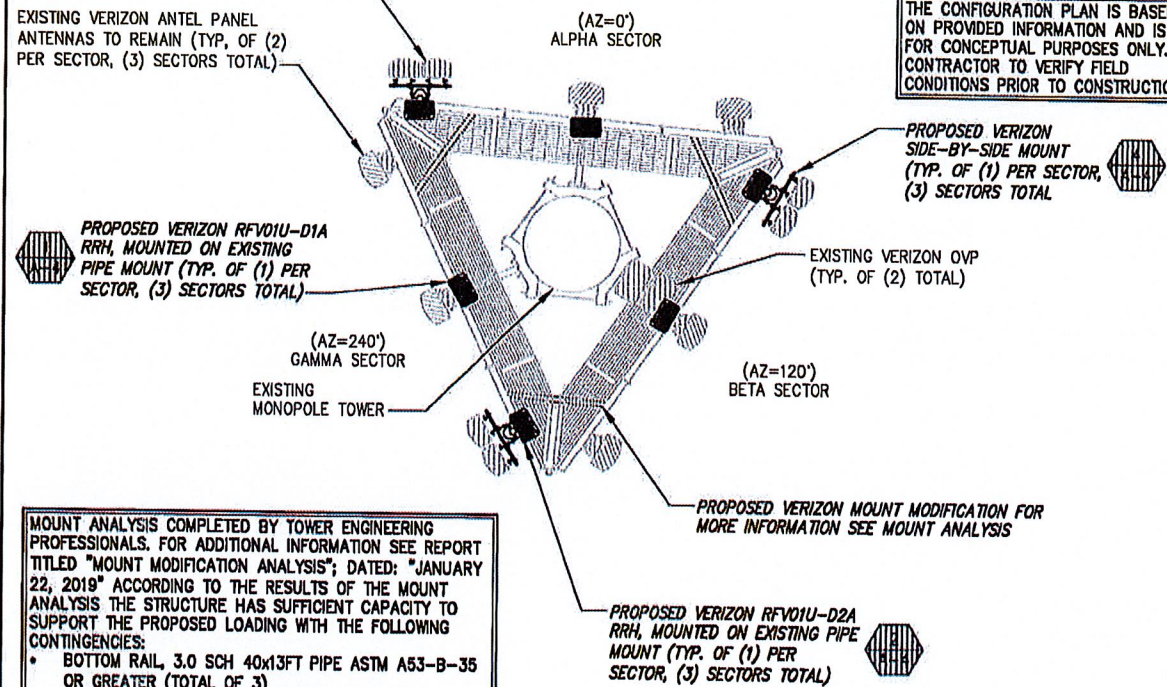
NOTE: CONTRACTOR TO VERIFY EQUIPMENT & MOUNTING HARDWARE DOES NOT TRAP OR INTERFERE WITH SAFETY CLIMB

EXISTING ANTENNA LAYOUT

NO SCALE

1

EXISTING VERIZON ANDREW PANEL ANTENNAS TO BE RELOCATED TO NEW SIDE-BY-SIDE MOUNT (TYP. OF (2) PER SECTOR, (3) SECTORS TOTAL)



MOUNT ANALYSIS COMPLETED BY TOWER ENGINEERING PROFESSIONALS. FOR ADDITIONAL INFORMATION SEE REPORT TITLED "MOUNT MODIFICATION ANALYSIS"; DATED: "JANUARY 22, 2019" ACCORDING TO THE RESULTS OF THE MOUNT ANALYSIS THE STRUCTURE HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED LOADING WITH THE FOLLOWING CONTINGENCIES:

- BOTTOM RAIL, 3.0 SCH 40x13FT PIPE ASTM A53-B-35 OR GREATER (TOTAL OF 3)
- HANDRAIL BRACE, 2.0 SCH 40x3FT PIPE ASTM A53-B-35 OR GREATER (TOTAL OF 3)
- CLAMP PLATE, SITEPRO PART NO. PUCK (TOTAL OF 6)
- CROSSOVER PLATE KIT, SITE PRO PART NO. SCX43-K (TOTAL OF 12)

INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER FOR THIS SITE AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY. REFER TO STRUCTURAL ANALYSIS BY OTHERS PRIOR TO ANY CONSTRUCTION.

THE CONFIGURATION PLAN IS BASED ON PROVIDED INFORMATION AND IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO CONSTRUCTION.

PROPOSED ANTENNA LAYOUT

NO SCALE

2

SITE LOADING CHART

SECTOR	POSITION	SECTOR COLOR	TECHNOLOGY	ANTENNA MODEL #	VENDOR	QTY. (REMOVED)	QTY. (NEW)	RRH (QTY/MODEL)	AZIMUTH	DOWNTILT		RAD CENTER	FEED LINE TYPE/LENGTH (FEET + 20%)
										MECHANICAL	ELECTRICAL		
ALPHA	A1	RED	700/850/PCS	SBNHH-1D65B	COMMSCOPE	---	---	(1) RRV01U-D1A (1) RRV01U-D2A	0°	0'	3'	±137' AGL	(1) EXISTING HYBRID CABLE (ALPHA)
ALPHA	A2	RED	700/850/AWS	SBNHH-1D65B	COMMSCOPE	---	---		0°	0'	7'	±137' AGL	EXISTING COAX
ALPHA	A3	RED	--	BXA-171063-12BF	ANTEL	---	---		0°	0'	4'	±137' AGL	HYBRID SHARED WITH ABOVE (ALPHA)
ALPHA	A4	RED	850	BXA-70063-4CF	ANTEL	---	---		0°	0'	2'	±137' AGL	EXISTING COAX
BETA	B1	BLUE	700/850/PCS	SBNHH-1D65B	COMMSCOPE	---	---	(1) RRV01U-D1A (1) RRV01U-D2A	120°	0'	2'	±137' AGL	(1) EXISTING HYBRID CABLE (ALPHA)
BETA	B2	BLUE	700/850/AWS	SBNHH-1D65B	COMMSCOPE	---	---		120°	0'	3'	±137' AGL	EXISTING COAX
BETA	B3	BLUE	--	BXA-70063-4CF	ANTEL	---	---		120°	0'	4'	±137' AGL	HYBRID SHARED WITH ABOVE (ALPHA)
BETA	B4	BLUE	850	BXA-70063-4CF	ANTEL	---	---		120°	0'	2'	±137' AGL	EXISTING COAX
GAMMA	G1	WHITE	700/850/PCS	SBNHH-1D65B	COMMSCOPE	---	---	(1) RRV01U-D1A (1) RRV01U-D2A	240°	0'	3'	±137' AGL	(1) EXISTING HYBRID CABLE (ALPHA)
GAMMA	G2	WHITE	700/850/AWS	SBNHH-1D65B	COMMSCOPE	---	---		240°	0'	3'	±137' AGL	EXISTING COAX
GAMMA	G3	WHITE	--	BXA-171063-12BF	ANTEL	---	---		240°	0'	3'	±137' AGL	HYBRID SHARED WITH ABOVE (ALPHA)
GAMMA	G4	WHITE	850	BXA-70063-4CF	ANTEL	---	---		240°	0'	2'	±137' AGL	EXISTING COAX

NOTE: CABLE LENGTHS ARE BASED ON PROVIDED INFORMATION. CONTRACTOR TO VERIFY REQUIRED CABLE LENGTHS PRIOR TO CONSTRUCTION.

SITE LOADING CHART

NO SCALE

3

PLANS PREPARED FOR:

180 WASHINGTON VALLEY ROAD
BEDMINSTER, NJ 07921

PLANS PREPARED BY:

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 680-0790
Fax # (518) 680-0783
JOB NUMBER: TBD

MLA PARTNER:

ENGINEERING LICENSE:

DRAWING NOTICE:

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REVISIONS:

DESCRIPTION	DATE	BY	REV

ISSUED FOR CONSTRUCTION: 02/01/19 MAP 0

VERIZON SITE NAME:
N THOMPSONVILLE CT

CROWN CASTLE SITE NAME:
ENFIELD

CROWN CASTLE BU #:
876348

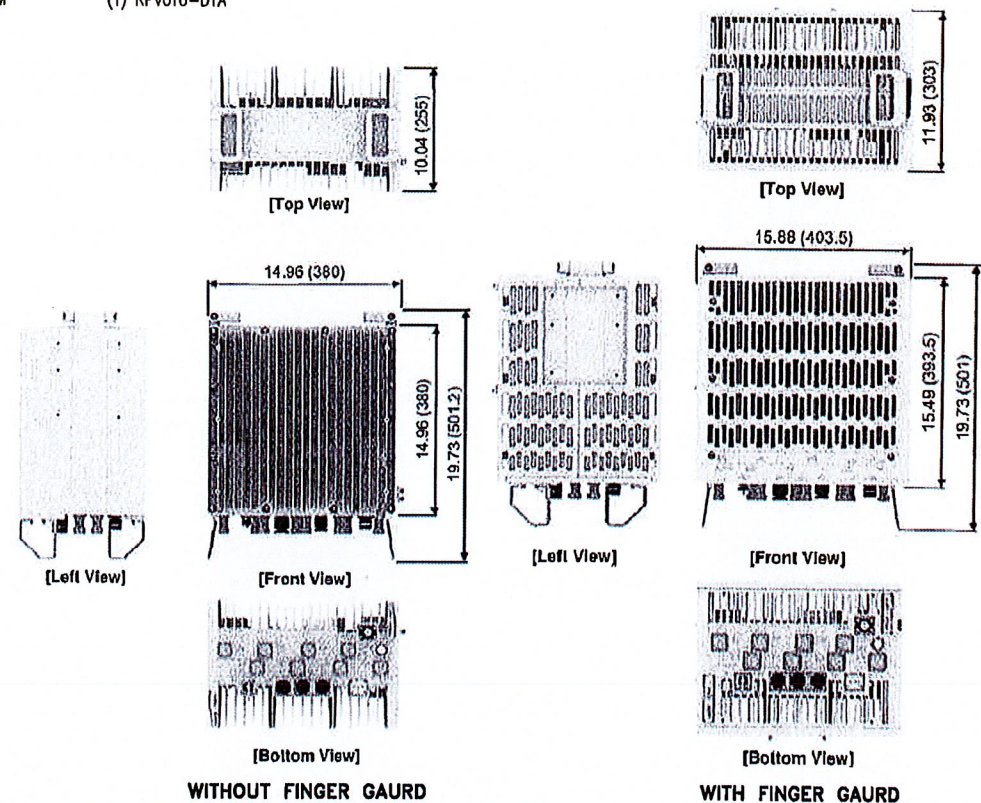
SITE ADDRESS:
**1 BRIGHT MEADOW BOULEVARD
ENFIELD, CT 06082**

SHEET DESCRIPTION:
ANTENNA LAYOUT & LOADING CHART

SHEET NUMBER:
A-3

COMMSCOPE REMOTE RADIO HEAD

PART NUM (1) RFV01U-D1A



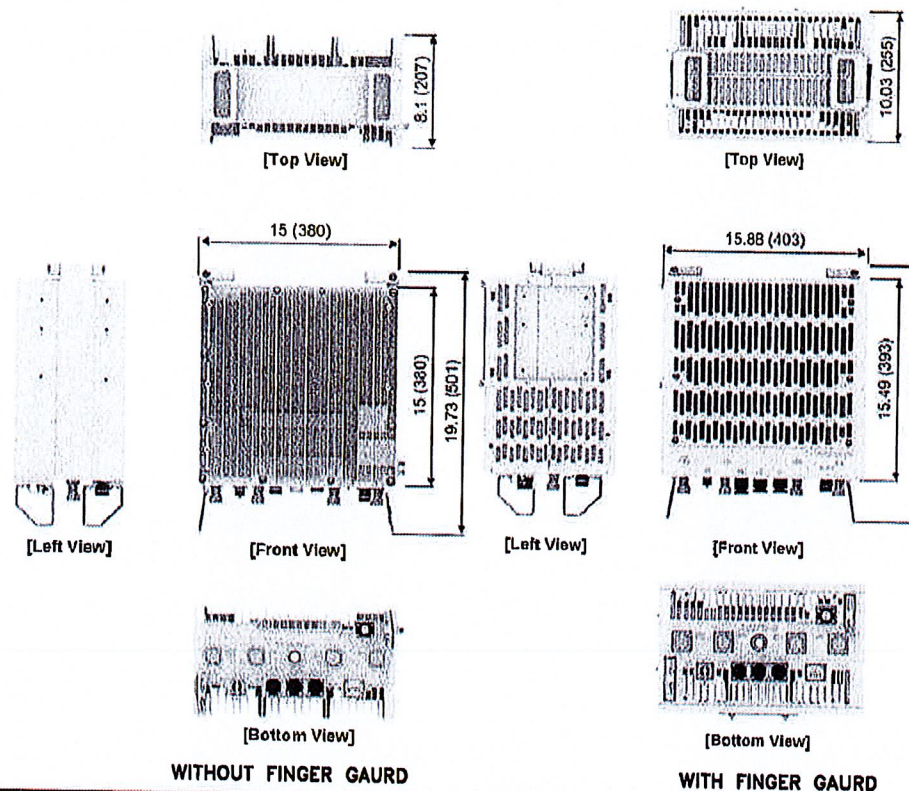
REMOTE RADIO HEAD SPECIFICATIONS

NO SCALE

1

COMMSCOPE REMOTE RADIO HEAD

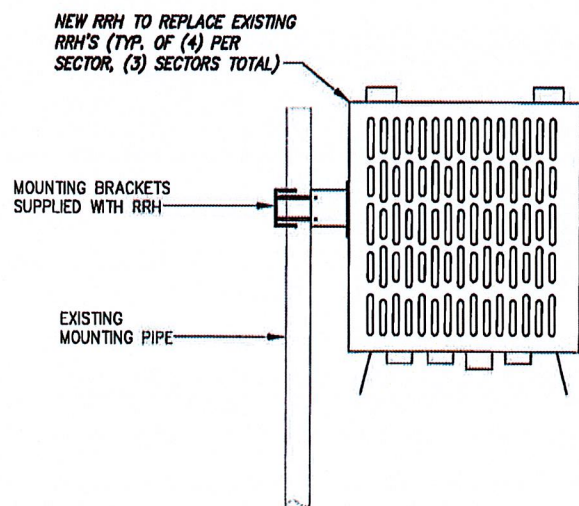
PART NUMBER: (1) RFV01U-D2A



REMOTE RADIO HEAD SPECIFICATIONS

NO SCALE

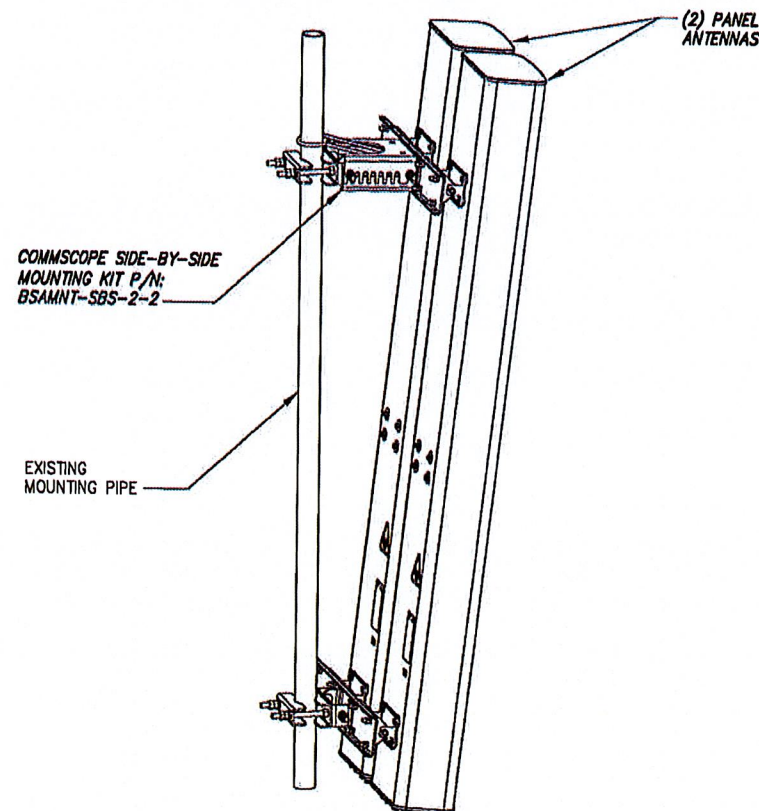
2



RRH MOUNTING DETAIL

NO SCALE

3



SIDE-BY-SIDE MOUNTING BRACKET

NO SCALE

4

PLANS PREPARED FOR:



180 WASHINGTON VALLEY ROAD
BEDMINSTER, NJ 07821

PLANS PREPARED BY:



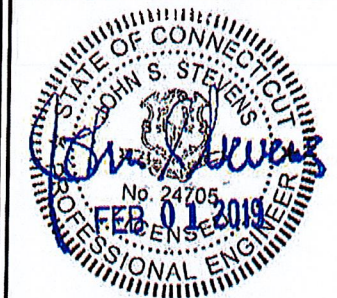
INFINIGY ENGINEERING, PLLC
1033 Waterlilet Shaker Rd
Albany, NY 12205
Office # (518) 890-0780
Fax # (518) 890-0783

JOB NUMBER: T80

MLA PARTNER:



ENGINEERING LICENSE:



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REVISIONS:

DESCRIPTION	DATE	BY	REV

ISSUED FOR CONSTRUCTION 02/01/19 MAP 0

VERIZON SITE NAME:

N THOMPSONVILLE CT

CROWN CASTLE SITE NAME:

ENFIELD

CROWN CASTLE BU #:

876348

SITE ADDRESS:

1 BRIGHT MEADOW
BOULEVARD
ENFIELD, CT 06082

SHEET DESCRIPTION:

EQUIPMENT &
MOUNTING DETAILS


SHEET NUMBER:

A-4

PLANS PREPARED FOR:
verizon
 180 WASHINGTON VALLEY ROAD
 BEDMINSTER, NJ 07921

PLANS PREPARED BY:
INFINIGY
 INFINIGY ENGINEERING, PLLC
 1033 Watervliet Shaker Rd
 Albany, NY 12205
 Office # (518) 890-0790
 Fax # (518) 890-0793
 JOB NUMBER: TBD

MLA PARTNER:
CROWN CASTLE

ENGINEERING LICENSE:


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REVISIONS:			
DESCRIPTION	DATE	BY	REV

VERIZON SITE NAME:
N THOMPSONVILLE CT

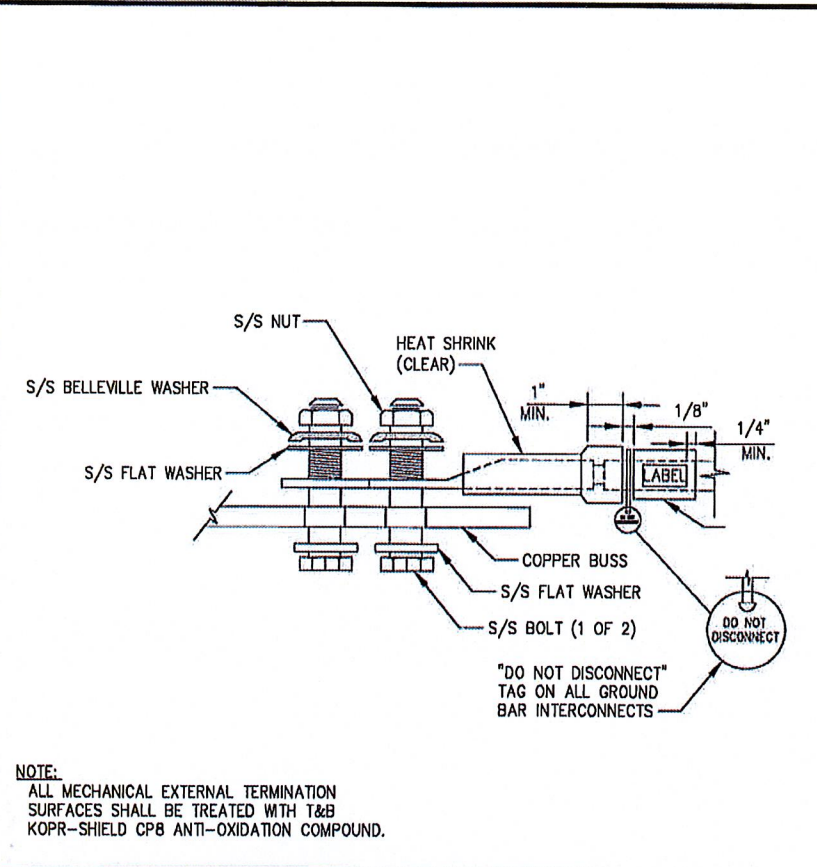
CROWN CASTLE SITE NAME:
ENFIELD

CROWN CASTLE BU #:
876348

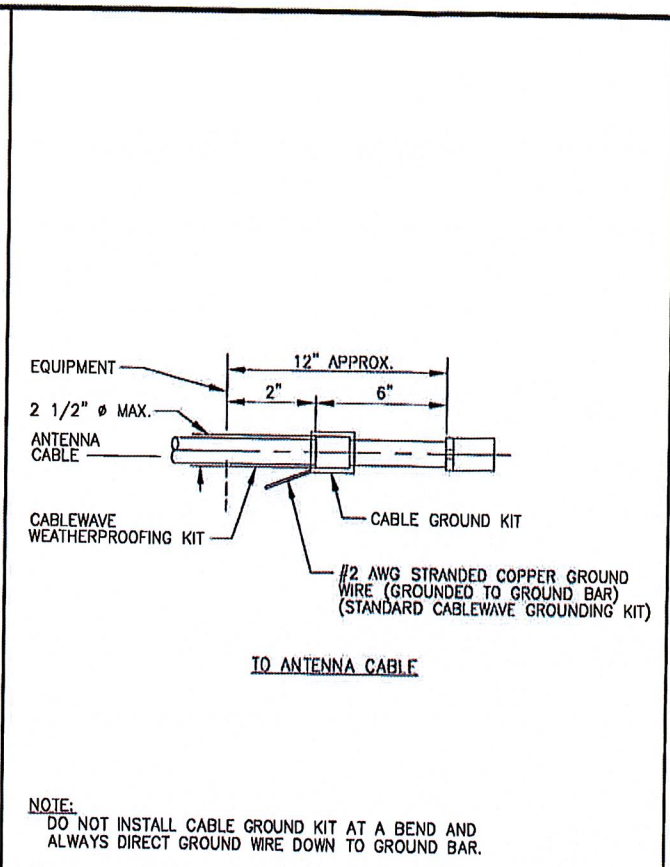
SITE ADDRESS:
**1 BRIGHT MEADOW BOULEVARD
 ENFIELD, CT 06082**

SHEET DESCRIPTION:
GROUNDING PLANS

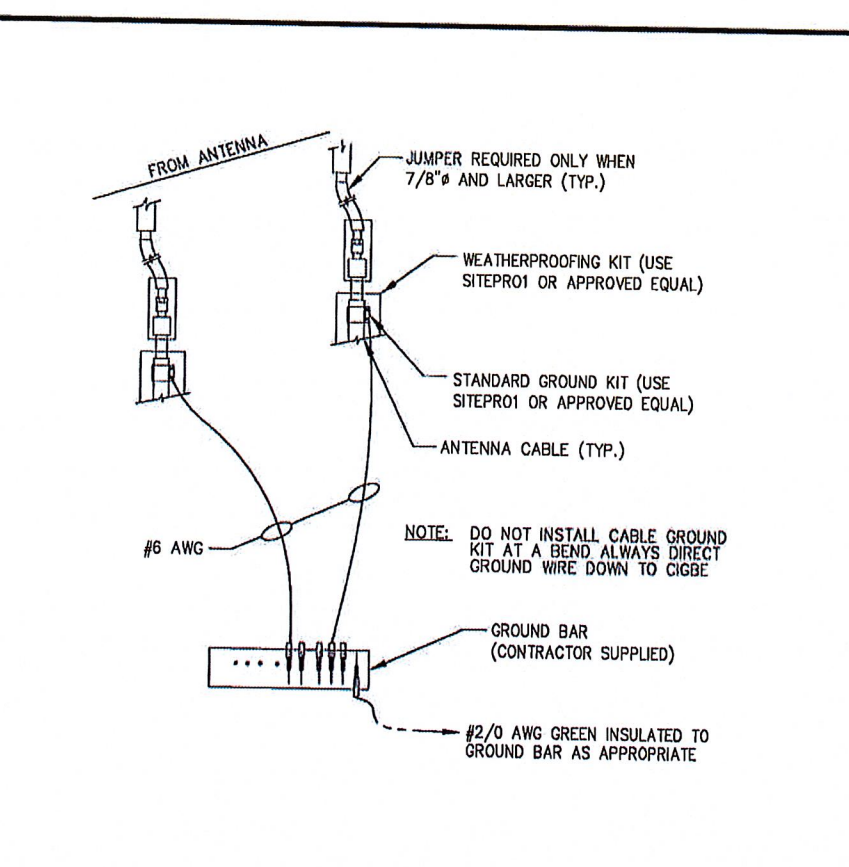
SHEET NUMBER:
G-1



TYPICAL EQUIPMENT GROUND CONNECTION NO SCALE 1



TYPICAL CABLE GROUND KIT CONNECTION NO SCALE 2



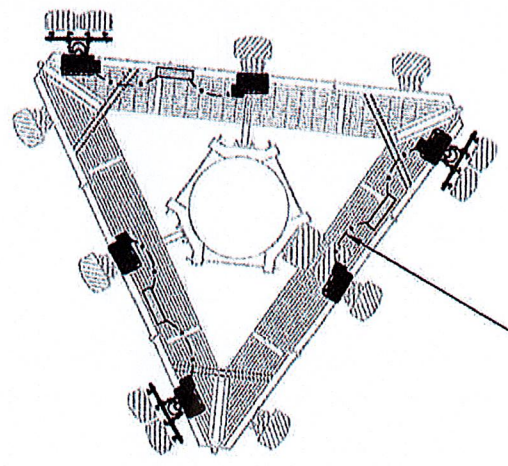
TYPICAL CONNECTION OF GROUND WIRES TO GROUNDING BARS & ANTENNAS NO SCALE 3

GENERAL GROUNDING NOTES:

- TO ENSURE PROPER BONDING, ALL CONNECTIONS SHALL BE AS FOLLOWS:
 - #2 BARE TINNED SOLID COPPER CONDUCTOR: EXOTHERMIC WELD TO RODS OR GROUND RING
 - LUGS AND BUS BAR (UNLESS NOTED OTHERWISE): SANDED CLEAN, COATED WITH OXIDE INHIBITOR AND BOLTED FOR MAXIMUM SURFACE CONTACT. ALL LUGS SHALL BE COPPER (NO ALUMINUM SHALL BE PERMITTED). PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
- ALL GROUNDING CABLE IN CONCRETE OR THROUGH WALLS SHALL BE IN 3/4" PVC CONDUIT. SEAL AROUND CONDUIT THROUGH WALLS. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTORS.
- OWNER'S REPRESENTATIVE WILL INSPECT EXOTHERMIC WELD AND CONDUCT MEGGER TEST PRIOR TO BURIAL. MAXIMUM 5 OHMS RESISTANCE IS REQUIRED.
- CONTRACTOR TO INSTALL GROUNDING IN CLOSE PROXIMITY TO EQUIPMENT PLATFORM OR PAD.
- MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. ALL BENDS SHALL BE A MINIMUM 8" RADIUS AND NO GREATER THAN 90 DEGREES.
- ALL CADWELDS TO BURIED GROUND RING SHALL BE THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS WHICH SHALL BE THE TEE TYPE.
- BOND SERVICE CONDUITS TO GROUND RING AS THEY CROSS. DO NOT EXOTHERMICALLY WELD TO CONDUITS.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.
- THE MINIMUM SPACING BETWEEN GROUND RODS SHALL BE 10'-0" (MAX. 15'-0").
- BOND CIGBE TO EXTERNAL GROUND RING WITH 2 RUNS OF #2 BARE, TINNED, SOLID COPPER CONDUCTOR IN PVC. CONNECT BAR END WITH 2 HOLE LUG, AND "CADWELD" THE OTHER END TO THE EXTERNAL GROUND ROD.
- THE PREFERRED LOCATION FOR COAX GROUNDING IS AT THE BASE OF THE TOWER PRIOR TO THE COAX BEND.
- BONDING OF THE GROUNDED CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS. BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE 250-30.

GROUNDING SYMBOLS:

⊗	GROUND ROD
□	ACCESS WELL
⊗	GROUND ROD WITH ACCESS
■	COMPRESSION TYPE CONNECTION
●	EXOTHERMIC WELD TYPE CONNECTION
—G—	#2/0 BTS COPPER CONDUCTOR BURIED GROUND CABLE
⊕	INDICATES CODED NOTE



NORTH = 0°

TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 4