December 6, 2023

Melanie Bachman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Tower Share Application

277 Huckleberry Hill Rd. Avon, CT 06013
Latitude: Lat.: 41.788219
Longitude: -72.918272
Site#: CT46143-A _BOBDL00139A_SBA_DISH

Dear Ms. Bachman:

This letter and attachments are submitted on behalf of Dish Wireless LLC. Dish Wireless LLC plans to install antennas and related equipment to the newly constructed tower site located at 277 Huckleberry Hill Rd.. Avon, CT

Dish Wireless LLC proposes to install three (3)600/1900/2100 MHz antennas and six (6) RRUs, at the 70-foot level of the newly constructed/existing 130-foot steel monopole tower, one (1) Fiber cables will also be installed. Dish Wireless LLC equipment cabinets will be placed within 7' x 5' lease area. Included are plans by Kimley-Horn November 6, 2023 Exhibit 6. Also included is a structural analysis prepared by TES, dated May 1, 2023, confirming that the existing tower is structurally capable of supporting the proposed equipment, attached as Exhibit 7. Also included is a mount analysis prepared by Kimley-Horn dated 6/06/2023 confirming that the mount is structurally capable of supporting the proposed equipment, attached as Exhibit 8. This facility was approved by the CT Siting Council on March 2, 2023 Petition # 1547. Please see attached Exhibit 5.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of Dish Wireless LLC intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A., a copy of this letter is being sent to Mr. Brandon Robertson Town Manager, Avon CT and Mr. Hiram Peck III Director of Planning Avon Ct.. (Separate notice is not being sent to SBA, as SBA is the tower owner making this submission).

The planned modifications of the facility fall squarely within those activities explicitly provided for in R.C.S.A. 16-50j-89.

1. The proposed modification will not result in an increase in the height of the existing structure. The top of the existing tower is 130-feet and the Dish Wireless LLC antennas will be located at a center line height of 70-feet.

2. The proposed modifications will not result in the increase of the site boundary as depicted on the attached site plan.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels

that exceed local and state criteria. The incremental effect of the proposed changes will be negligent.

4. The operation of the proposed antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. As indicated in the attached power density calculations, the combined site operations will result in a total power density of 29.35% as evidenced by Exhibit 9.

Connecticut General Statutes 16-50aa indicates that the Council must approve the shared use of a telecommunications facility provided it finds the shared use is technically, legally, environmentally, and economically feasible and meets public safety concerns. As demonstrated in this letter, Dish Wireless LLC respectfully indicates that the shared use of this facility satisfies these criteria.

A. Technical Feasibility. The existing monopole has been deemed structurally capable of supporting Dish Wireless LLC proposed loading. The structural analysis is included as Exhibit 7.

B. Legal Feasibility. As referenced above, C.G.S. 16-50aa has been authorized to issue orders approving the shared use of an existing tower such as this support tower in Sterling. Under the authority granted to the Council, an order of the Council approving the requested shared use would permit Dish Wireless LLC to obtain a building permit for the proposed installation.

C. Environmental Feasibility. The proposed shared use of this facility would have a minimal environmental impact. The installation of Dish Wireless LLC equipment at the 95-foot level of the existing 141-foot tower would have an insignificant visual impact on the area around the tower. Dish Wireless LLC ground equipment would be installed within the existing facility compound. Dish Wireless LLC shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, as evidenced by Exhibit 9, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.

D. Economic Feasibility. Dish Wireless LLC will be entering into an agreement with the owner of this facility to mutually agreeable terms. As previously mentioned, the Letter of Authorization has been provided by the owner to assist Dish Wireless LLC with this tower sharing application.

E. Public Safety Concerns. As discussed above, the tower is structurally capable of supporting Dish Wireless LLC proposed loading.

Dish Wireless LLC is not aware of any public safety concerns relative to the proposed sharing of the existing guyed tower. Dish Wireless LLC intentions of providing new and improved wireless service through the shared use of this facility is expected to enhance the safety and welfare of local residents and individuals traveling through Sterling .

Sincerely,

Catherine Ware

Catherine Ware
Site Development Specialist
SBA Communications Corporation
134 Flanders Road, Suite 125
Westborough, MA 01581

917.868.8365 + **T**
EJamieson@sbasite.com
Attachments:

cc:
Lincoln A. Cooper, Town of Sterling First Selectman, and ground landlord
183 Plainfield Pike, P.O. Box 157, Oneco, CT 06373
860-564-2904

Melissa Gill, Zoning Enforcement Officer 1183 Plainfield Pike, P.O. Box 157
Oneco, CT 06373
860-564-2904 x109

EXHIBIT LIST

Exhibit 1	Copy of Check	X
Exhibit 2	Notification Receipts	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Original Zoning Approval	March 2,2023 Petition #1547
Exhibit 6	Construction Drawings	Kimley-Horn 11/6/2023
Exhibit 7	Structural Analysis	
Exhibit 8	Mount Analysis	Kimley-Horn 6/06/2023
Exhibit 9	EME	Fox Hill Telecom – 12/04/2023

EXHIBIT 1

Copy of check

SBA Network Services, LLC

To: CONNECTICUT SITING COUNCIL 129986

Check Number: 2163370
Date: 12/16/2021

Invoice Number	Invoice Date	Description	Gross Amount	Taxes Withheld	Net Amount
PRSF12162110	12/16/2021	CSC FEE BOBDL00139A DISH	$ 625.00	$ 0.00	$ 625.00
			$ 625.00	$ 0.00	$ 625.00

SBA Network Services, LLC
8051 Congress Avenue
Boca Raton, FL 33487

(800) 487-7483

Wells Fargo Bank

061209756

2163370

129986

DATE	AMOUNT
12/16/2021	$ 625.00

Void After 120 Days

Six Hundred Twenty Five Dollars And 00 Cents

Pay to the Order of:

CONNECTICUT SITING COUNCIL
ACCOUNTS RECEIVABLE
TEN FRANKLIN SQUARE

NEW BRITAIN, CT 06051

⑈2163370⑈ ⑆061209756⑆ 20799004 24566⑈

EXHIBIT 2
Letter of Intent

December 11, 2023

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

RE: **Notice of Intent to Allow Shared Use of the Existing SBA Telecommunications Site**
Location: 277 Huckleberry Hill Road, Avon, CT
Dish Wireless Site No: BOBDL00139A
SBA Site No: CT46143-A

Dear Ms. Bachman:

Please let the following serve as Evidence of Intent to allow Dish's shared use of the existing SBA telecommunications site at **277 Huckleberry Hill Road, Avon, CT**.

SBA Properties, LLC ("Owner") and Dish Wireless ("Tenant") are entering into a Site Lease Agreement. Tenant will be provided ground space within the existing site compound for its base station equipment and space at the height of 70' for antennas and associated equipment.

Thank you,

Catherine Ware

Catherine Ware
Site Development Specialist
SBA COMMUNICATIONS CORPORATION
134 Flanders Road, Suite 125
Westboro, MA 01581

(917)868-8365 + C
CWare@sbasite.com

EXHIBIT 3

Fedex Labels

ORIGIN ID:ZRPA (917) 868-8365
CATHERINE WARE
SBA COMMUNICATIONS CORPORATION
101 INTERCHANGE PALZA

CRANBURY, NJ 08512
UNITED STATES US

SHIP DATE: 11DEC23
ACTWGT: 2.00 LB
CAD: 255382542/INET4535

BILL SENDER

TO **MS. MELANIE BACHMAN**
CONNECTICUT SITING COUNCIL
10 FRANKLIN SQUARE

NEW BRITAIN CT 06051
(860) 827-2935 REF: 10-56-92009-6089
INV:
PO: DEPT:

583J2/7C14/9AE3

FedEx Express

E

J234023101501uv

TUE - 12 DEC 5:00P
STANDARD OVERNIGHT

TRK# 0201 **7744 2799 8631**

06051
CT-US BDL

EB BDLA

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ORIGIN ID:ZRPA (917) 868-8365
CATHERINE WARE
SBA COMMUNICATIONS CORPORATION
101 INTERCHANGE PALZA

CRANBURY, NJ 08512
UNITED STATES US

SHIP DATE: 11DEC23
ACTWGT: 2.00 LB
CAD: 255382542/INET4535

BILL SENDER

TO **MR. HIRAM PECK III**
TOWN OF AVON - DIRECTOR OF PLANNING
60 WEST MAIN STREET (ROUTE 44)

AVON CT 06001
(860) 409-4300 REF: 10-56-92009-6089
INV:
PO: DEPT:

58332/7C14/9AE3

FedEx Express

E

J23402310150 1uv

TUE - 12 DEC 5:00P
STANDARD OVERNIGHT

TRK# 0201 **7744 2826 9334**

EB EHTA

06001
CT-US BDL

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ORIGIN ID:ZRPA (917) 868-8365
CATHERINE WARE
SBA COMMUNICATIONS CORPORATION
101 INTERCHANGE PALZA

CRANBURY, NJ 08512
UNITED STATES US

SHIP DATE: 11DEC23
ACTWGT: 2.00 LB
CAD: 255382542/INET4535

BILL SENDER

TO **MR. BRANDON ROBERTSON**
TOWN OF AVON - TOWN MANAGER
60 WEST MAIN STREET (ROUTE 44)

AVON CT 06001
(860) 409-4300 REF: 10-56-92009-6089
INV:
PO: DEPT:

583J2/7C14/9AE3

FedEx Express

E

J234023101501uv

TUE - 12 DEC 5:00P
STANDARD OVERNIGHT

TRK# 0201 **7744 2815 9352**

06001
EB EHTA CT-US **BDL**

After printing this label:
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2. Place label in shipping pouch and affix it to your shipment.

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Transaction Record

12/11/2023 4:19 PM

Part #5629235 RRD32 EXP 08/24

Thank you for using FedEx.

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1 Oak St
Westborough, MA 01581
DeviceID: AYEK-ROSA08

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Transaction Record

12/11/2023 4:18 PM

Part #5629235 RRD32 EXP 08/24

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1 Oak St
Westborough, MA 01581
DeviceID: AYEK-ROSA08

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fedex.com/welisten

Page 1 of 1

EXHIBIT 4

Property Card

Property at 00277 HUCKLEBERRY HILL RD | Prop ID 2810277 | Printed 17-Aug-2021 11:34 AM | Design and Layout (C) Right/Angles

BAAX

Administrative Information

Owner name: AVON TOWN OF
Second name:
Address: 60 WEST MAIN STREET
City/state: AVON CT Zip: 06001

Location Information

Map: 016 Clerk map:
Lot: 2810277 Neigh.: Zone: R40 Vol: 80 Page: 20

Assessments

Assmt category	Qty	Amount
Resident Excess	73.40	385,350
Resident Outbldg	3.00	28,460

Exemptions

Exempt	Cat	Amount

Last sale

Sale date: 19-Dec-1972
Sale price:
Sale valid:

Values

Mkt value :
Cost value: 591,157

Summary

Total assessments	413,810
Total exemptions	
Net assessment	413,810

Utilities

Water	None
Sewer	None
Gas	None

Sales ratios

Cost/sale :
Mkt/sale :
Assmt/sale:

Land Information

Type	Use	Acres/SqFt	Rate	Total	Infl Fact	Value	70% Value
RES	12	73.400	7,500	550,500		550,500	385,350
Residual		3,197,304					
		73.400 acres		Total land value		550,500	385,350

Outbuilding Information

Description	Wid	Len	Area	Rate	Year	Cnd	RCN	Depr	Value
C18 1 story frame	16	28	448	80.75	1957	C	36,176	50	18,090
RG1 Frame or Con Block Detach Garage	30	40	1,200	28.85		C	34,620	50	17,310
C84 Canopy	16	42	672	15.63	1992	C	10,503	50	5,250
			Value at 70%	28,455			Value at 100%		40,650

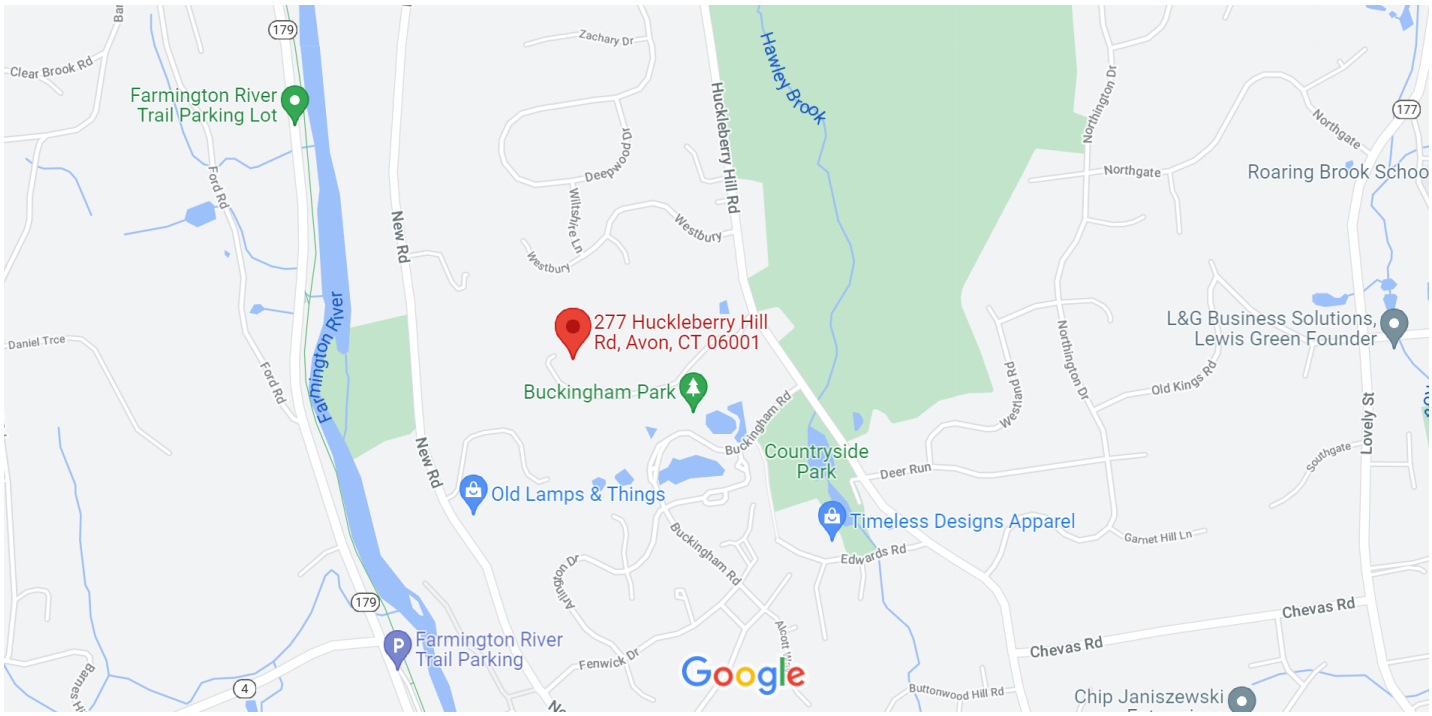
No sketch for this property

AVON LANDFILL

EXHIBIT 5

Property Map

Google Maps 277 Huckleberry Hill Rd



Map data ©2021 1000 ft

Google Maps 277 Huckleberry Hill Rd

Imagery ©2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2021 100 ft

EXHIBIT 6

Zoning Approval

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL & CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 3, 2023

Kenneth C. Baldwin, Esq.
Christopher Y. Eddy, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597
kbaldwin@rc.com
ceddy@rc.com

RE: **PETITION NO. 1547 –** SBA Communications Corporation petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed replacement and extension of an existing telecommunications facility located at 277 Huckleberry Hill Road, Avon, Connecticut.

Dear Attorney Baldwin and Attorney Eddy:

At a public meeting held on March 2, 2023, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need with recommendations that the finish on the replacement tower match the color of the existing tower to minimize visibility and the duration of emergency backup power generation at the site be maximized, and with the following conditions:

1. Approval of any project changes be delegated to Council staff;

2. Radio frequency access restriction and caution signage shall be installed at the site in compliance with FCC guidance;

3. Deployment of any 5G services must comply with FCC and FAA guidance relative to air navigation, as applicable;

4. Submission of final construction drawings stamped and signed by a Professional Engineer duly licensed in the State of Connecticut prior to commencement of construction;

5. Submission of a structural analysis for the replacement tower/antenna mounts and foundation stamped and signed by a Professional Engineer duly licensed in the State of Connecticut prior to commencement of construction;

6. Submission of written notification from the Town as to when it plans to commence its equipment installation, prior to the commencement of construction;

7. The Council shall be notified in writing at least two weeks prior to the commencement of site construction activities;

8. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

9. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the Town of Avon.

10. Unless otherwise approved by the Council, the existing wood laminate tower shall be removed within 180 days of the installation of the new steel monopole tower;

11. The Council shall be notified in writing within 45 days of when the existing wood laminate tower is removed and the new steel monopole tower is operational unless a written request for an extension is submitted to the Council within that timeframe;

12. The facility owner/operator shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v;

13. If the facility ceases to be used for signal transmission or reception in the electromagnetic spectrum pursuant to a Federal Communications Commission license for a period of one year, the facility owner/operator shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council within 90 days from the one year period of cessation of signal transmission or reception. The facility owner/operator may submit a written request to the Council for an extension of the 90 day period not later than 60 days prior to the expiration of the 90 day period; and

14. This Declaratory Ruling may be transferred or partially transferred, provided both the facility owner/operator/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. The Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer. Both the facility owner/operator/transferor and the transferee shall provide the Council with a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility, including contact information for the individual acting on behalf of the transferee.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated November 9, 2022, and additional information received on January 13, 2023 and February 2, 2023.

Enclosed for your information is a copy of the staff report on this project.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/RDM/lm

Enclosure: Staff Report dated March 2, 2023

c: The Honorable Heather Maguire, Chairperson, Town of Avon (hmaguire@avonct.gov)
Brandon Robertson, Town Manager, Town of Avon (brobertson@avonct.gov)

laf

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: portal.ct.gov/csc

Petition No. 1547
SBA Communications Corporation
277 Huckleberry Hill Road, Avon, Connecticut
Staff Report
March 2, 2023

Introduction

On November 9, 2022, SBA Communications Corporation (SBA) submitted a petition to the Connecticut Siting Council (Council) for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k for the proposed replacement and extension of an existing telecommunications facility located at 277 Huckleberry Hill Road, Connecticut (Petition or Project).

Specifically, SBA proposes to replace and extend the height of the existing telecommunications facility and expand the existing compound/lease area at the site to accommodate the co-location of Cellco Partnership d/b/a Verizon Wireless (Cellco) and the Town of Avon (Town). The existing 100-foot wood laminate monopole has limited structural capacity as it was designed to support three carriers and is not tall enough to support Cellco's or the Town's co-location.

Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40, on or about November 9, 2022, SBA provided notice to the abutting property owners and Town officials.

On November 10, 2022, the Council sent correspondence to the Town stating that the Council has received the Petition and invited the Town to contact the Council with any questions or comments by December 9, 2022. The Town Fire Chief, Town Manager, Town Council, Police Chief and Superintendent of Schools submitted correspondence in support of the Project on November 15, 16, 18, 23, and December 2, 2022, respectively.

On November 14, 2022, Cellco requested intervenor status. The Council granted Cellco intervenor status during a public meeting held on December 9, 2022.

The Council issued interrogatories to SBA and Cellco on December 9, 2022. Cellco and SBA submitted responses to the Council's interrogatories on December 14, 2022 and January 13, 2023, respectively. The Council issued a second set of interrogatories to SBA on January 23, 2023. SBA responded to the second set of interrogatories on February 2, 2023.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act, an administrative agency is required to take an action on a petition for a declaratory ruling within 60 days of receipt. On December 22, 2022, pursuant to CGS §4-176(e), the Council voted to set the date by which to render a decision on the Petition as no later than May 8, 2023, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

Jurisdiction

Pursuant to CGS §§16-50i(a)(6) and 16-50x, the Council has exclusive jurisdiction over telecommunications towers, including associated equipment, owned or operated by the state, a public service company or a certified telecommunications provider or used in a cellular system.

Under RCSA §16-50j-2a (30), "Tower" means a structure, whether free standing or attached to a building or another structure, that has a height greater than its diameter and that is high relative to its surroundings, or that is used to support antennas for sending or receiving radio frequency signals, or for sending or receiving signals to or from satellites, or any of these, which is or is to be:

a) **Used principally to support one or more antennas** for receiving or sending radio frequency signals, or for sending or receiving signals to or from satellites, or any of these, and
b) Owned or operated by the state, a public service company as defined in Section 16-1 of the Connecticut General Statutes, or a certified telecommunications provider, or used in a cellular system, as defined in Section 16-50i(a) of the Connecticut General Statutes.

Like the existing facility, the proposed replacement tower will be used principally to support antennas and used in a cellular system. Unlike the existing facility, the proposed replacement tower will host municipal communications equipment in addition to telecommunications carrier equipment. The Connecticut Supreme Court determined the Council has exclusive jurisdiction over facilities that would host both cellular and non-cellular attachments.[1] Thus, the Council has jurisdiction over the proposed replacement facility.

Pursuant to the tower sharing policy of the state under CGS §16-50aa, the Council must examine whether the proposed replacement facility may be shared with any public or private entity that provides service to the public, provided such shared use is technically, legally, environmentally and economically feasible and meets public safety concerns, to promote the immediate and shared use of telecommunications facilities and avoid the unnecessary proliferation of such facilities in the state. The proposed replacement facility is designed to accommodate a minimum of four wireless carriers and municipal antennas, and would have the ability to support up to five carriers.

Existing Facility

The Council issued a Certificate of Environmental Compatibility and Public Need (Certificate) to Sprint Spectrum, L.P. (Sprint) for this facility on January 24, 2005 in Docket No. 297, and included a condition that "the tower shall be designed as a laminated wood monopole and shall be constructed no taller than 100 feet above ground level (agl) to provide telecommunications services to both public and private entities." The Certificate was transferred from Sprint to TowerCo Assets LLC on January 23, 2009. SBA acquired TowerCo's tower sites in Connecticut on October 1, 2012.

The existing 100-foot monopole is located on the central portion of an approximately 73-acre parcel owned by the Town. The parcel, zoned residential, contains a former landfill and serves as the Town's Transfer Station. Abutting property to the west is owned by the Town. Abutting property to the north is developed residential. Abutting property to the east and south consists of a mix of Town property and residential development.

The existing tower currently supports Sprint at 100 feet agl, AT&T at 90-feet agl and T-Mobile at 80 feet agl. The existing tower is located in the northern corner of a 40-foot by 38-foot equipment compound. The compound contains an AT&T equipment shelter and equipment cabinets on concrete pads for T-Mobile and Sprint.

[1] *Town of Westport v. Conn. Siting Council*, 260 Conn. 266 (2002).

Proposed Project

SBA intends to replace the existing 100-foot tall wood laminate tower with a 130-foot tall steel monopole within the existing compound to accommodate Cellco, AT&T, T-Mobile, and municipal antennas, as well as provide space for future collocation. Sprint's equipment would be decommissioned and removed from the tower and compound as part of the Project.
The proposed replacement tower would be installed 34 feet from the existing tower. It would have a diameter of 51 inches at the base and 26 inches at the top. The existing tower has a diameter of 30 inches at the base and 26 inches at the top.

Cellco would install 9 antennas and 12 remote radio heads on an antenna platform at a tower height of 110 feet agl. Cellco's proposed antennas would provide services in the 700 MHz, 850 MHz, 1900 MHz, 2100 MHz, 3550 MHz, and 3700 MHz frequencies. The 850 MHz, and 3700 MHz frequencies are capable of supporting 5G services.

Cellco's installation would improve 700 MHz service to residential areas north and south of the site and to the Route 4 and Route 179 corridors west of the site, and provide 850 MHz, 1900 MHz, 2100 MHz and 5G services to the surrounding area. In addition to coverage improvements, the site would provide capacity relief to Cellco's adjacent sites to the north and east.

The Town would install three 16-foot tall whip antennas (one transmit and two receive) at the top of the tower as part of a new town-wide communication system. The Town's communication network would operate at the 770 MHz and 805 MHz frequencies. It was designed by Motorola Solutions and would achieve a minimum 95 percent coverage throughout Town by locating on the replacement tower and at two other existing towers in the Avon area.

The Department of Emergency Services and Public Protection received a grant from the State Bond Commission to purchase public safety equipment for installation on the tower, which will enhance coverage of the Connecticut Land Mobile Radio Network (CLMRN) and provide communication services for the Town. The CLMRN offers interoperability with other emergency response agencies such as the Connecticut State Police. The CLMRN would operate from the Town antennas and would utilize a fiber connection. A dish antenna would not be required.

AT&T and T-Mobile would relocate to the replacement tower, maintaining their existing antenna heights of 90 and 80-feet agl, respectively. The 120-foot and 100-foot levels would be available for future collocation.

The compound would be expanded by 160 feet along the length of the north side and expanded by 390 square feet along the southeast side, enclosed by a new 6-foot tall perimeter fence. SBA would utilize existing access and utilities to the site. The concrete pad previously used by Sprint would be resurfaced and expanded to accommodate the Town's 12-foot by 20-foot equipment shelter. A new access gate would be installed along the northwest side to access the Town's shelter. Cellco would install one radio and one battery cabinet on a concrete pad within the expanded portion of the compound. There would be no changes to AT&T's or T-Mobile's existing ground equipment.

The existing 100-foot wood laminate monopole would be decommissioned and removed within 90 days of operation of AT&T, T-Mobile's and Cellco's equipment on the replacement facility. No disruption to AT&T's and T-Mobile's wireless services are anticipated. The Town would locate its equipment at the site as soon as possible and would coordinate work within the compound with SBA and the carriers.

The Town would install a 40-kW diesel-fueled emergency backup generator within the compound. The generator includes a 275-gallon double walled fuel tank that would provide approximately 74 hours of run time before refueling is required. Cellco proposes to install a backup power battery on its proposed concrete pad at the site that would provide approximately 4 to 8 hours of run time before recharging is necessary. Both AT&T and T-Mobile have existing backup power sources at the site.

Commercial Mobile Radio Service (CMRS) providers are licensed by and are under the jurisdiction and authority of the Federal Communications Commission (FCC). At present, no standards for backup power for CMRS providers have been promulgated by the FCC.

The nearest property line and residence from the replacement tower is approximately 270 feet and 295 feet, respectively, to the south at 19 Berkshire Crossing. There are approximately 18 residences within 1,000 feet of the proposed replacement tower.

The estimated cost of the proposed replacement facility is $550,000, excluding the Town's and Cellco's installations, and AT&T's and T-Mobile's relocation costs. If the tower was designed to a height of 110 feet with the capability of supporting a 20-foot extension, the Project cost would increase to $650,000. Fabrication and installation of a 20-foot extension at a later date would be an additional $125,000.

Neither the Project, nor any portion thereof, is proposed to be undertaken by state departments, institutions or agencies, or funded in whole or in part by the state through any grant or contract. SBA is a private entity.

Facility Construction

Construction would occur over a 4 to 6 month period. Typical construction hours and workdays of the week are as follows: Monday through Saturday. 7:00 AM to 7:00 PM.

Environmental

Construction would occur within the existing compound and adjacent transfer station areas. Three existing trees would be removed to facilitate the expansion of the compound.

The Project site is not located within a Connecticut Department of Energy and Environmental Protection (DEEP) Natural Diversity Database buffered area. The proposed facility is not within a DEEP designated Aquifer Protection Area.

There are no Audubon-designated Important Bird Areas within two miles of the site. The proposed replacement tower would comply with the USFWS recommended best practices for Communication Tower Design, Siting, Construction, Operation, Maintenance and Decommissioning.

The existing compound is not located within a flood zone or within 200 feet of a wetland.

The foundation of the existing tower would be partially removed to a depth of two feet below grade. Approximately 53 cubic yards of material would be excavated to install a mat foundation for the replacement tower. Excess material would be spread within the expanded compound area or removed from the site. The installation of the replacement tower foundation would not interfere with any subsurface utilities or infrastructure. These areas would be marked prior to excavation.

SBA would incorporate appropriate soil erosion and sedimentation control measures consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* prior to the commencement of construction.

A visibility study within a two-mile radius (8,042 acres) of the site determined the proposed 130-foot replacement tower would be visible year-round from 27 acres (0.3%) compared to 11 acres (0.1%) for the existing tower. Most of the year-round visibility occurs within 0.5 mile of the site.

The replacement tower would be visible year-round from residential yards along Berkshire Way and Camden Crossing, approximately 480 feet to 0.25 mile to the south/southeast. It would also be visible year-round from the adjacent transfer station and ballfields within the Town's Buckingham Park, approximately 0.1 mile to the southeast. The replacement tower would be seasonally visible through the trees from adjacent residential areas along the edge of the host parcel to the north and residential areas to the south/southeast, out to a distance of approximately 0.4 mile.

The replacement tower would not be visible from the Farmington River, a designated Wild & Scenic River, or the Farmington River Recreation Trail, both approximately 1,700 feet to the west of the site at their closest point.

Whip antennas are generally not discernable when viewed from a distance beyond 1,300 feet. To reduce visibility of the whip antennas from areas closer to the tower, the antennas would be painted "horizon blue."

A steel monopole was selected over a wood laminate tower in order to provide the structural capacity to support tower sharing to the greatest extent practical. A galvanized tower would dull and blend in with the wooded surroundings and would soften views similar to a tower that was painted brown. A monopine design was not considered given the distance of the tower to neighboring parcels, the presence of intervening vegetation that would screen most views of the tower and additional cost.

Public Safety

The Project would be constructed in accordance with the Connecticut State Building Code, revised October 2022, Telecommunications Industry Association (TIA) 222-H Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the National Electrical Code, the Connecticut State Fire Safety Code, and the Occupational Safety and Health Administration standards (OSHA).

Access to the facility is restricted to the Town, tower tenant and SBA personnel. Carrier equipment would be fitted with silent intrusion alarms. Climbing pegs on the lower portion of the tower would be removed to deter unauthorized climbing of the tower. The expanded compound would be enclosed by a six-foot tall chain link fence with barbed wire on top.

Construction of the replacement tower would not impact or interfere with any existing nearby public utilities. Prior to commencement of construction, all existing utilities and infrastructure locations will be identified to ensure that proper construction measures can be incorporated to avoid impacts and interference.

The replacement tower would not constitute an obstruction or hazard to air navigation. Notice to the Federal Aviation Administration is not required.

The proposed replacement facility and associated equipment would comply with DEEP Noise Control Standards. Emergency backup generators are exempt from DEEP Noise Control Regulations §22a-69-1.8.

Cellco's antennas would support text-to-911 service and would comply with E911 requirements and the intent of the Warning, Alert and Response Network Act of 2006.

AT&T does not provide FirstNet Services[2] from the existing tower at this time.

The calculated cumulative worst-case power density from the operation of the Town's, Cellco's AT&T's, and T-Mobile's antennas would be 11.4% of the applicable exposure limit established by the Federal Communications Commission at ground level using a far field approximation.

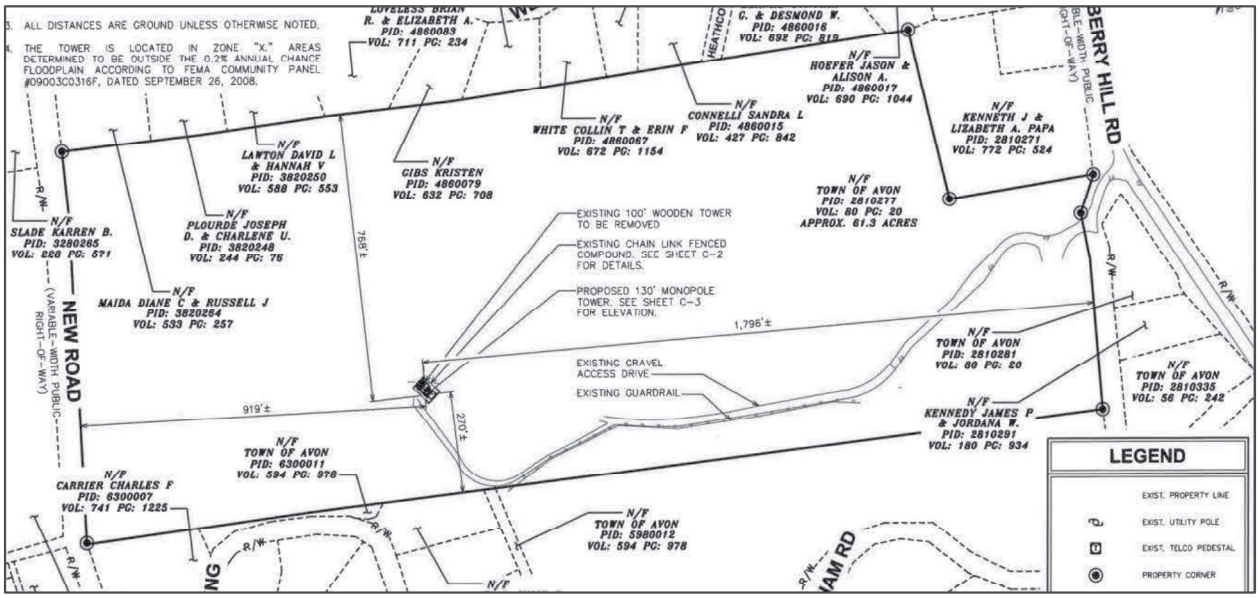
Conclusion

If approved, staff recommends the following conditions:

1) Approval of any project changes be delegated to Council staff;
2) Radio frequency access restriction and caution signage shall be installed at the site in compliance with FCC guidance;
3) Deployment of any 5G services must comply with FCC and FAA guidance relative to air navigation, as applicable;
4) Submission of final construction drawings stamped and signed by a Professional Engineer duly licensed in the State of Connecticut prior to commencement of construction;
5) Submission of a structural analysis for the replacement tower/antenna mounts and foundation stamped and signed by a Professional Engineer duly licensed in the State of Connecticut prior to commencement of construction; and
6) Submission of written notification from the Town as to when it plans to commence its equipment installation, prior to the commencement of construction.

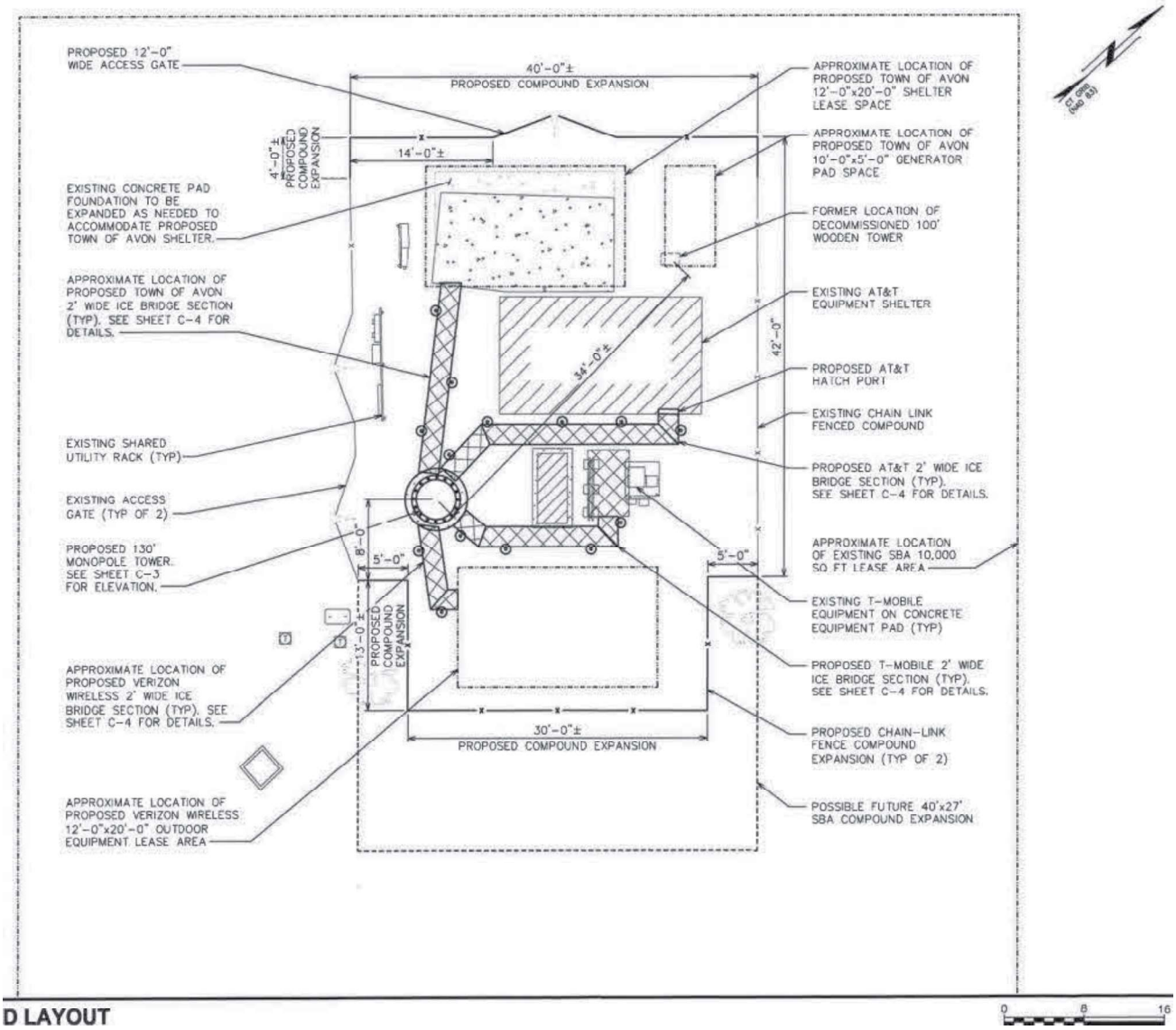
[2] FirstNet is a subscriber service available to local emergency response entities that would allow preferred wireless service on AT&T's 700 MHz system during emergencies.

Existing Site Parcel and Site Location

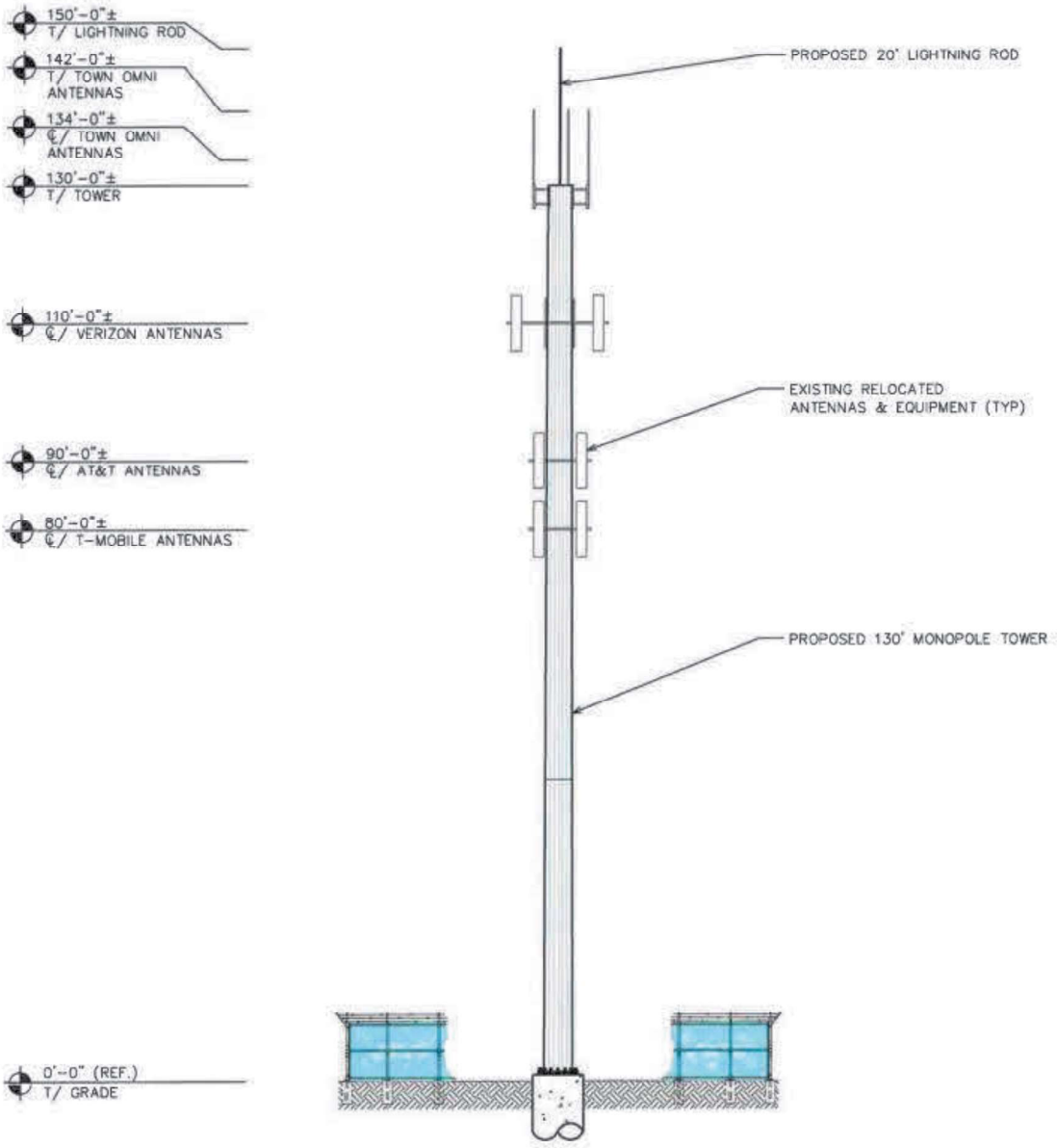


Proposed South Compound Expansion Area (red paint/stakes)

Proposed Site Plan



Proposed Replacement Tower Elevation Drawing



STATE OF CONNECTICUT)

: ss. Southington, Connecticut March 3, 2023

COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the Decision and Staff Report in Petition No. 1547 issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:

Melanie A. Bachman
Executive Director
Connecticut Siting Council

STATE OF CONNECTICUT)

: ss. New Britain, Connecticut March 3, 2023

COUNTY OF HARTFORD)

I certify that a copy of the Connecticut Siting Council Decision and Staff Report in Petition No. 1547 has been forwarded by Certified First Class Return Receipt Requested mail, on March 3, 2023, to all parties and intervenors of record as listed on the attached service list, dated December 8, 2022.

ATTEST:

Lisa A. Mathews
Office Assistant
Connecticut Siting Council

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Petitioner	☒ E-mail	SBA Communications Corporation	Kenneth C. Baldwin, Esq. Christopher Y. Eddy, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 (860) 275-8200 kbaldwin@rc.com ceddy@rc.com
Intervenor (granted 12/08/22)	☒ E-mail	Cellco Partnership d/b/a Verizon Wireless	Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 (860) 275-8200 kbaldwin@rc.com

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@po.state.ct.us
www.ct.gov/csc

January 26, 2005

Thomas J. Regan, Esq.
Brown Rudnick Berlack Israels LLP
CityPlace I, 38th Floor
185 Asylum Street
Hartford, CT 06103-3402

RE: **DOCKET NO. 297** – Sprint Spectrum, L.P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility in Avon, Connecticut.

Dear Attorney Regan:

By its Decision and Order dated January 24, 2005, the Connecticut Siting Council (Council) granted a Certificate of Environmental Compatibility ad Public Need (Certificate) to Sprint Spectrum L.P. for the construction, maintenance and operation of a telecommunications facility located at 277 Huckleberry Hill Road, Avon, Connecticut.

Enclosed are the Council's Certificate, Findings of Fact, Opinion, and Decision and Order.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/laf

Enclosures (4)

CSC
CONNECTICUT SITING COUNCIL

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@po.state.ct.us
Web Site: www.ct.gov/csc

CERTIFICATE

OF

ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

DOCKET NO. 297

Pursuant to General Statutes § 16-50k, as amended, the Connecticut Siting Council hereby issues a Certificate of Environmental Compatibility and Public Need to Sprint Spectrum, L.P. for the construction, maintenance and operation of a telecommunications facility located at 277 Huckleberry Hill Road, Avon, Connecticut. This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on January 24, 2005.

By order of the Council,

Colin C. Tait, Esq., Vice Chairman

January 24, 2005

DOCKET NO. 297 – Sprint Spectrum, L.P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility in Avon, Connecticut.	}	Connecticut
	}	Siting
	}	Council
		January 24, 2005

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Sprint Spectrum, L.P. for the construction, maintenance and operation of a wireless telecommunications facility at 277 Huckleberry Hill Road, Avon, Connecticut.

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

1. The tower shall be designed as a laminated wood monopole and shall be constructed no taller than 100 feet above ground level to provide telecommunications services to both public and private entities. The location of the tower and equipment compound shall be adjusted to avoid cutting down an existing 33" dbh tree.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on all parties and intervenors, as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:

    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, flush-mounted antennas, equipment building, access road, utility line, and landscaping; and

    b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council in the event other carriers locate at this facility or if circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

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

6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower.

7. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

8. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.

9. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved. Any request for extensions of the period shall be filed with the Council not later than sixty days prior to expiration date of the Certificate and shall be served on all parties and intervenors, as listed in the service list. Any proposed modifications to this Decision and Order shall likewise be so served.

10. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with notice in writing two weeks prior to the commencement of construction activities at the approved site. In addition, the Certificate Holder shall provide the Council with written notice of the completion of construction.

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

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

The parties and intervenors to this proceeding are:

Applicant
Sprint Spectrum, L.P.
d/b/a Sprint PCS

Its Representative
Thomas J. Regan, Esq.
Brown Rudnick Berlack Israels LLP
CityPlace I, 38th Floor
185 Asylum Street
Hartford, CT 06103-3402
(860) 509-6522
(860) 509-6501 – fax

CERTIFICATION

The undersigned members of the Connecticut Siting Council (Council) hereby certify that they have heard this case, or read the record thereof, in **DOCKET NO. 297** – Sprint Spectrum, L.P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility in Avon, Connecticut, and voted as follows to approve the proposed facility located at 277 Huckleberry Hill Road, Avon, Connecticut:

Council Members	Vote Cast
Pamela B. Katz, P.E., Chairman	Absent
Commissioner Donald W. Downes Designee: Gerald J. Heffernan	Yes
Commissioner Gina McCarthy Designee: Brian J. Emerick	Yes
Philip T. Ashton	Yes
Daniel P. Lynch, Jr.	Yes
James J. Murphy, Jr.	Abstain
Brian F. O'Neill	Yes
Colin C. Tait	Yes
Edward S. Wilensky	Yes

Dated at New Britain, Connecticut, January 24, 2005.

STATE OF CONNECTICUT)

ss. New Britain, Connecticut :

COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the Findings of Fact, Opinion, and Decision and Order issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:

S. Derek Phelps
Executive Director
Connecticut Siting Council

I certify that a copy of the Findings of Fact, Opinion, and Decision and Order in Docket No. 297 has been forwarded by Certified First Class Return Receipt Requested mail on January 26, 2005, to all parties and intervenors of record as listed on the attached service list, dated October 25, 2004.

ATTEST:

Lisa A. Fontaine
Administrative Assistant
Connecticut Siting Council

EXHIBIT 7

EME Report

FOX HILL TELECOM

Radio Frequency Emissions Analysis Report

Site ID: BOBDL00139A

SBA - Huckleberry Hill Road
277 Huckleberry Hill Road
Avon, CT 06001

December 4, 2023

Fox Hill Telecom Project Number: 231062

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**35.95 %**

FOX HILL TELECOM

December 4, 2023

Dish Wireless
5701 South Santa Fe Drive
Littleton, CO 80120

Emissions Analysis for Site: **BOBDL00139A – SBA - Huckleberry Hill Road**

Fox Hill Telecom, Inc ("Fox Hill") was directed to analyze the proposed radio installation for Dish Wireless, LLC (Dish) facility located at **277 Huckleberry Hill Road, Avon, CT**, for the purpose of determining whether the emissions from the Proposed Dish radio and antenna installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the 600 MHz band is approximately 400 $\mu W/cm^2$. The general population exposure limit for the 1900 MHz (PCS) and 2100 MHz (AWS / AWS-4) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed upgrades to the Dish Wireless antenna facility located at **277 Huckleberry Hill Road, Avon, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65 for far field modeling calculations.

In OET-65, plane wave power densities in the Far Field of an antenna are calculated by considering antenna gain and reflective waves that would contribute to exposure.

Since the radiation pattern of an antenna has developed in the **Far Field** region the power gain in specific directions needs to be considered in exposure predictions to yield an Effective Radiated Power (ERP) in each specific direction from the antenna. Also, since the vertical radiation pattern of the antenna is considered, the exposure calculations would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels. To determine a worst-case scenario at each point along the calculation radials, each point was calculated using the antenna gain value at each angle of incident and compared against the result using an isotropic radiator at the antenna height with the greater of the two used to yield the more pessimistic far field value for each point along the calculation radial.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential 1.6 times increase in power density in calculating far field power density values.

With these factors Considered, the worst case **Far Field prediction model** utilized in this analysis is determined by the following equation:

Equation 9 per FCC OET65 for Far Field Modeling

$$S = \frac{33.4\ ERP}{R^2}$$

S = Power Density (in μw/cm^2)
ERP = Effective Radiated Power from antenna (watts)
R = Distance from the antenna (meters)

Predicted far field power density values for all carriers identified in this report were calculated 6 feet above the ground level and are displayed as a percentage of the applicable FCC standards. All emissions values for other carriers were calculated using the same Far Field model outlined above, using industry standard radio configurations and frequency band selection based upon available licenses in this geographic area for emissions contribution estimates.

For each Dish sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
5G	n71 (600 MHz)	4	61.5
5G	n70 (AWS-4 / 1995-2020)	4	40
5G	n66 (AWS-4 / 2180-2200)	4	40

Table 1: Channel Data Table

The following **Dish** antennas listed in *Table 2* were used in the modeling for transmission in the 600 MHz (n71) frequency band and the 2100 MHz (AWS 4) frequency bands at 1995-2020 MHz (n70) and 2180-2200 MHz (n66). This is based on feedback from Dish regarding anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	JMA MX08FRO665-21	70
B	1	JMA MX08FRO665-21	70
C	1	JMA MX08FRO665-21	70

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.

RESULTS

Per the calculations completed for the proposed **Dish** configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	JMA MX08FRO665-21	n71 (600 MHz) / n70 (AWS-4 / 1995-2020) / n66 (AWS-4 / 2180-2200)	11.45 / 16.15 / 16.65	12	566	17,426.72	8.29
						Sector A Composite MPE%	**8.29**
Antenna B1	JMA MX08FRO665-21	n71 (600 MHz) / n70 (AWS-4 / 1995-2020) / n66 (AWS-4 / 2180-2200)	11.45 / 16.15 / 16.65	12	566	17,426.72	8.29
						Sector B Composite MPE%	**8.29**
Antenna C1	JMA MX08FRO665-21	n71 (600 MHz) / n70 (AWS-4 / 1995-2020) / n66 (AWS-4 / 2180-2200)	11.45 / 16.15 / 16.65	12	566	17,426.72	8.29
						Sector C Composite MPE%	**8.29**

Table 3: Dish Emissions Levels

The Following table (*Table 4*) shows all additional carriers on site and their emissions contribution estimates, along with the newly calculated **Dish** far field emissions contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas, the highest recorded sector value be used for composite site emissions values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results for all three sectors. *Table 5* below shows a summary for each **Dish** Sector as well as the composite emissions value for the site.

Site Composite MPE%	
Carrier	**MPE%**
Dish – Max Per Sector Value	**8.29 %**
AT&T	9.68 %
T-Mobile	11.66 %
Verizon Wireless	6.32 %
Site Total MPE %:	**35.95 %**

Table 4: All Carrier MPE Contributions

Dish Sector A Total:	8.29 %
Dish Sector B Total:	8.29 %
Dish Sector C Total:	8.29 %
Site Total:	35.95 %

Table 5: Site MPE Summary

Table 6 below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated **Dish** sector(s). For this site, all three sectors have the same configuration yielding the same results for all three sectors.

Dish _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
Dish n71 (600 MHz) 5G	4	858.77	70	21.96	n71 (600 MHz)	400	5.49%
Dish n70 (AWS-4 / 1995-2020) 5G	4	1,648.39	70	14.00	n70 (AWS-4 / 1995-2020)	1000	1.40%
Dish n66 (AWS-4 / 2180-2200) 5G	4	1,849.52	70	14.00	n66 (AWS-4 / 2180-2200)	1000	1.40%
						Total:	**8.29 %**

Table 6: Dish Maximum Sector MPE Power Values

Summary

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

The anticipated maximum composite contributions from the Dish facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

Dish Sector	Power Density Value (%)
Sector A:	8.29 %
Sector B:	8.29 %
Sector C:	8.29 %
Dish Maximum Total (per sector):	8.29 %
Site Total:	35.95 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite emissions value for this site, assuming all carriers present, is **35.95 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon the far field calculations performed for all carriers identified in this report.

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

Scott Heffernan
Principal RF Engineer
Fox Hill Telecom, Inc
Worcester, MA 01609
(978)660-3998

EXHIBIT 8

Structural Analysis

Sabre Industries™
INNOVATION DELIVERED

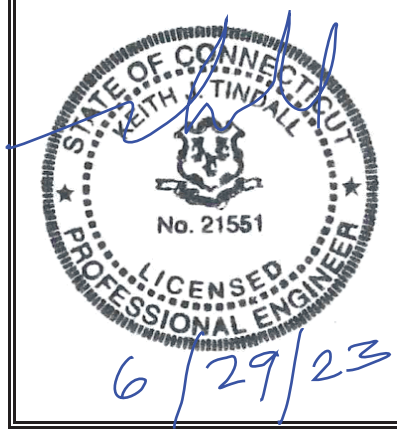
Structural Design Report

131' Monopole
Site: Burlington Avon Landfill, CT
Site Number: CT46143

Prepared for: SBA NETWORK SERVICES INC
by: Sabre Industries ™

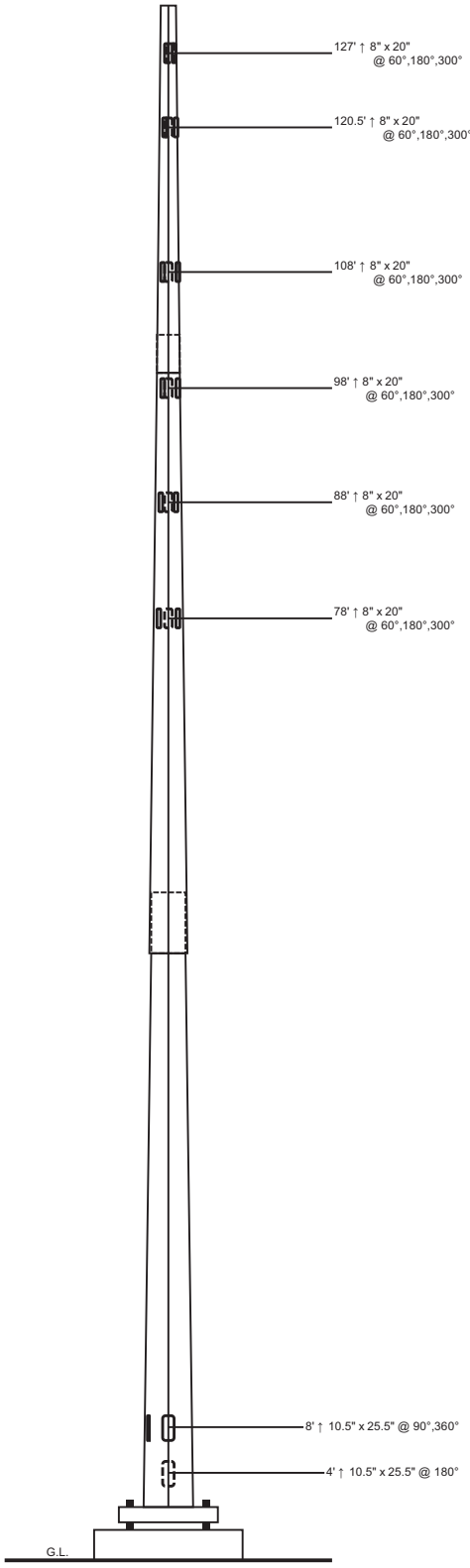
Job Number: 521586
Revision A

June 29, 2023



6/29/23

Length (ft)	31'-9"	53'-6"	53'-3"
Number Of Sides		18	
Thickness (in)	1/4"	3/8"	7/16"
Lap Splice (ft)	A		5' - 3"
Top Diameter (in)	14"	21.92"	35.41"
Bottom Diameter (in)	23.38"	37.71"	51.14"
Taper (in/ft)	0.2953		
Grade	A572-65		
Weight (lbs)	2145	7231	12969
Overall Steel Height (ft)	130		



Designed Appurtenance Loading

Elev	Description	Tx-Line
138	(1) 50 SQFT	(8) 1 5/8"
122.5	(1) 125 Sq. Ft. EPA (2,000 lbs)	(8) 1 5/8"
110	(1) 150 Sq. Ft. EPA (2250 lbs)	(8) 1 5/8"
100	(1) 150 Sq. Ft. EPA (2250 lbs)	(8) 1 5/8"
90	(1) 175 Sq. Ft. EPA (2500 lbs)	(8) 1 5/8"
80	(1) 150 Sq. Ft. EPA (2250 lbs)	(12) 1 5/8"

Design Criteria - ANSI/TIA-222-H

Wind Speed (No Ice)	120 mph
Wind Speed (Ice)	50 mph
Design Ice Thickness	1.50 in
Risk Category	II
Exposure Category	C
Topographic Factor Procedure	Method 1 (Simplified)
Topographic Category	1
Ground Elevation	468 ft
Seismic Importance Factor, Ie	1.00
0.2-sec Spectral Response, Ss	0.182 g
1-sec Spectral Response, S1	0.064 g
Site Class	B
Seismic Design Category	A
Basic Seismic Force-Resisting System	Telecommunication Tower (Pole: Steel)

Limit State Load Combination Reactions

Load Combination	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
1.2 D + 1.0 Wo	43.46	48.17	4630.55	10.47	8.9
0.9 D + 1.0 Wo	32.55	48.02	4571.06	10.31	8.75
1.2 D + 1.0 Di + 1.0 Wi	71.7	15.17	1527.91	3.65	3.19
1.2 D + 1.0 Ev + 1.0 Eh	44.16	1.09	114.34	0.28	0.25
0.9 D - 1.0 Ev + 1.0 Eh	31.74	1.08	112.61	0.28	0.24
1.0 D + 1.0 Wo (Service @ 60 mph)	36.2	10.77	1034.29	2.38	2

Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	63.75"	2.25"	58"	18	2.25"

Anchor Bolt Dimensions

Length	Diameter	Hole Diameter	Weight	Type	Finish
84"	2.25"	2.625"	2179.8	A615-75	Galv

Material List

Display	Value
A	3' - 3"

Notes

1) Antenna Feed Lines Run Inside Pole
2) All dimensions are above ground level, unless otherwise specified.
3) Weights shown are estimates. Final weights may vary.
4) Full Height Step Bolts
5) Anchor bolt template must be 1/2" thick minimum-50 ksi
6) Tower Rating: 92.9%
7) This tower and foundation design shown on the following page meets or exceeds the requirements of the 2022 Connecticut Building Code.

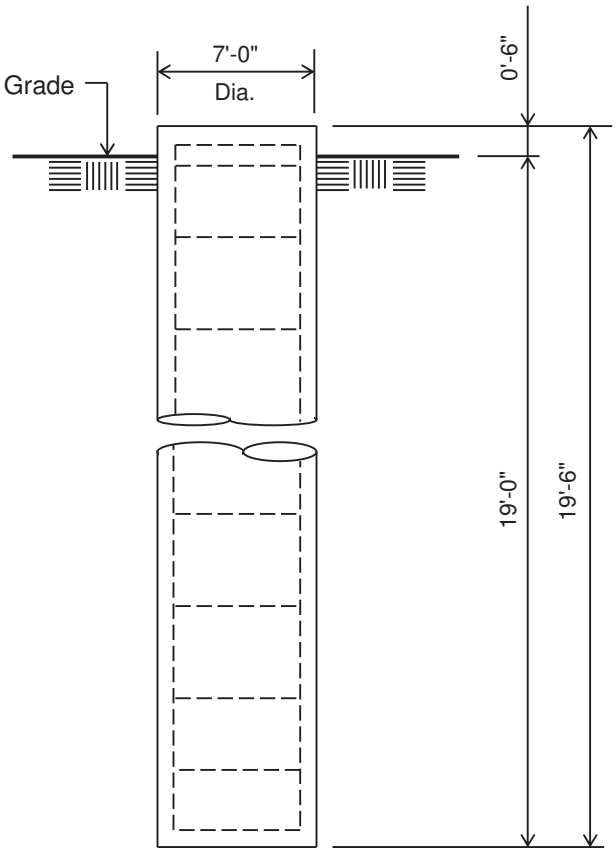
Sabre Industries
INNOVATION DELIVERED

Sabre Industries
7101 Southbridge Drive
P.O. Box 658
Sioux City, IA 51102-0658
Phone: (712) 258-6690
Fax: (712) 279-0814

Job:	**521586**
Customer:	SBA NETWORK SERVICES INC
Site Name:	Burlington Avon Landfill, CT CT46143
Description:	130' Monopole
Date:	3/15/2023 By: REB Page: 1

No.: 521586
Date: 06/29/23
By: KJT
Revision A

Customer: SBA NETWORK SERVICES INC
Site: Burlington Avon Landfill, CT CT46143
131' Monopole



ELEVATION VIEW
(27.79 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
2) Rebar to conform to ASTM specification A615 Grade 60.
3) All rebar to have a minimum of 3" concrete cover.
4) All exposed concrete corners to be chamfered 3/4".
5) The foundation design is based on the geotechnical report by Delta Oaks Group, Project GEO 23-19365-01, dated June 28, 2023.
6) See the geotechnical report for drilled pier installation requirements, if specified.
7) This foundation is designed for a max capacity ratio of 95%.
8) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pier	
Pier	(46) #10 vertical rebar w/ #7 ties, (2) within top 5" of pier, then 4.5" C/C

7101 Southbridge Drive - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.279.0814

131' Monopole / Burlington Avon Landfill, CT

* All pole diameters shown on the following pages are across corners.
See profile drawing for widths across flats.

POLE GEOMETRY

ELEV ft	SECTION NAME	No. SIDE	OUTSIDE DIAM in	THICK -NESS in	RESISTANCES ϕ*Pn kip	ϕ*Mn ft-kip	SPLICE TYPE	...OVERLAP... LENGTH ft	RATIO	w/t
130.0										
			14.22	0.250	810.6	227.0				
	A	18								8.6
			22.75	0.250	1306.3	593.4				
101.5										
			22.75	0.250	1306.3	593.4				
	A/B	18					SLIP	3.25	1.70	
			23.24	0.375	1990.4	913.7				
98.2										
			23.24	0.375	1990.4	913.7				
	B	18								9.8
			36.71	0.375	3162.4	2321.3				
53.2										
			36.71	0.375	3162.4	2321.3				
	B/C	18					SLIP	5.25	1.70	
			37.55	0.438	3769.5	2821.7				
48.0										
			37.55	0.438	3769.5	2821.7				
	C	18								14.0
			51.93	0.438	4952.9	5161.4				
0.0										

POLE ASSEMBLY

SECTION NAME	BASE ELEV ft	.....BOLTS AT BASE OF SECTION..... NUMBER	TYPE	DIAM in	STRENGTH ksi	THREADS IN SHEAR PLANE	CALC BASE ELEV ft
A	98.250	0	A325	0.00	92.0	0	98.250
B	48.000	0	A325	0.00	92.0	0	48.000
C	0.000	0	A325	0.00	92.0	0	0.000

POLE SECTIONS

SECTION NAME	No.of SIDES	LENGTH ft	OUTSIDE.DIAMETER BOT * in	TOP * in	BEND RAD in	MAT-ERIAL ID	FLANGE.ID BOT	TOP	FLANGE.WELD ..GROUP.ID.. BOT	TOP
A	18	31.75	23.74	14.22	0.625	1	0	0	0	0
B	18	53.50	38.30	22.25	0.625	2	0	0	0	0
C	18	53.25	51.93	35.96	0.625	3	0	0	0	0

* - Diameter of circumscribed circle

MATERIAL TYPES
==============

TYPE OF SHAPE	TYPE NO	NO OF ELEM.	ORIENT & deg	HEIGHT in	WIDTH in	.THICKNESS. WEB in	.THICKNESS. FLANGE in	IRREGULARITY .PROJECTION. % OF AREA	ORIENT deg
PL	1	1	0.0	23.74	0.25	0.250	0.250	0.00	0.0
PL	2	1	0.0	38.30	0.38	0.375	0.375	0.00	0.0
PL	3	1	0.0	51.93	0.44	0.438	0.438	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES
==================

MATERIAL TYPE NO.	ELASTIC MODULUS ksi	UNIT WEIGHT pcf	.. STRENGTH .. Fu ksi	Fy ksi	THERMAL COEFFICIENT /deg
1	29000.0	490.0	80.0	65.0	0.00001170
2	29000.0	490.0	80.0	65.0	0.00001170
3	29000.0	490.0	80.0	65.0	0.00001170

* Only 5 condition(s) shown in full
* Some concentrated wind loads may have been derived from full-scale wind tunnel testing

==========

LOADING CONDITION A ==========

120 mph wind with no ice. Wind Azimuth: 0° (1.2 D + 1.0 Wo)

LOADS ON POLE
=============

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	......FORCES...... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	137.000	0.00	0.0	0.0	2.5650	0.6000	0.0000	0.0000
C	128.000	0.00	0.0	0.0	0.0000	1.2780	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0367	0.0168	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0000	1.2131	0.0000	0.0000
C	121.500	0.00	0.0	0.0	6.2536	2.4000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0360	0.0168	0.0000	0.0000
C	109.000	0.00	0.0	0.0	0.0000	1.0883	0.0000	0.0000
C	109.000	0.00	0.0	0.0	7.3362	2.7000	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0354	0.0168	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.0000	0.9884	0.0000	0.0000
C	99.000	0.00	0.0	0.0	7.1904	2.7000	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0346	0.0168	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	0.8886	0.0000	0.0000
C	89.000	0.00	0.0	0.0	8.2048	3.0000	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0338	0.0168	0.0000	0.0000
C	79.000	0.00	0.0	0.0	0.0000	1.1831	0.0000	0.0000
C	79.000	0.00	0.0	0.0	6.8605	2.7000	0.0000	0.0000

C	75.000	0.00	0.0	0.0	0.0329	0.0168	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0320	0.0168	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0309	0.0168	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0296	0.0168	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0281	0.0168	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0261	0.0168	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0235	0.0168	0.0000	0.0000
D	130.000	0.00	180.0	0.0	0.0414	0.0492	0.0000	0.0000
D	101.500	0.00	180.0	0.0	0.0546	0.0672	0.0000	0.0000
D	101.500	0.00	180.0	0.0	0.0586	0.1807	0.0000	0.0000
D	98.250	0.00	180.0	0.0	0.0586	0.1807	0.0000	0.0000
D	98.250	0.00	180.0	0.0	0.0630	0.1204	0.0000	0.0000
D	83.250	0.00	180.0	0.0	0.0630	0.1204	0.0000	0.0000
D	83.250	0.00	180.0	0.0	0.0714	0.1417	0.0000	0.0000
D	68.250	0.00	180.0	0.0	0.0714	0.1417	0.0000	0.0000
D	68.250	0.00	180.0	0.0	0.0784	0.1630	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0784	0.1630	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0821	0.3805	0.0000	0.0000
D	48.000	0.00	180.0	0.0	0.0821	0.3805	0.0000	0.0000
D	48.000	0.00	180.0	0.0	0.0829	0.2174	0.0000	0.0000
D	36.000	0.00	180.0	0.0	0.0829	0.2174	0.0000	0.0000
D	36.000	0.00	180.0	0.0	0.0844	0.2373	0.0000	0.0000
D	24.000	0.00	180.0	0.0	0.0844	0.2373	0.0000	0.0000
D	24.000	0.00	180.0	0.0	0.0826	0.2572	0.0000	0.0000
D	12.000	0.00	180.0	0.0	0.0826	0.2572	0.0000	0.0000
D	12.000	0.00	180.0	0.0	0.0847	0.2771	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0847	0.2771	0.0000	0.0000

==========

LOADING CONDITION M ==========

120 mph wind with no ice. Wind Azimuth: 0° (0.9 D + 1.0 Wo)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	......FORCES...... HORIZ	DOWN	......MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	137.000	0.00	0.0	0.0	2.5650	0.4500	0.0000	0.0000
C	128.000	0.00	0.0	0.0	0.0000	0.9585	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0367	0.0126	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0000	0.9098	0.0000	0.0000
C	121.500	0.00	0.0	0.0	6.2536	1.8000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0360	0.0126	0.0000	0.0000
C	109.000	0.00	0.0	0.0	0.0000	0.8162	0.0000	0.0000
C	109.000	0.00	0.0	0.0	7.3362	2.0250	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0354	0.0126	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.0000	0.7413	0.0000	0.0000
C	99.000	0.00	0.0	0.0	7.1904	2.0250	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0346	0.0126	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	0.6664	0.0000	0.0000
C	89.000	0.00	0.0	0.0	8.2048	2.2500	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0338	0.0126	0.0000	0.0000
C	79.000	0.00	0.0	0.0	0.0000	0.8873	0.0000	0.0000
C	79.000	0.00	0.0	0.0	6.8605	2.0250	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0329	0.0126	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0320	0.0126	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0309	0.0126	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0296	0.0126	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0281	0.0126	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0261	0.0126	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0235	0.0126	0.0000	0.0000

D	130.000	0.00	180.0	0.0	0.0414	0.0369	0.0000	0.0000
D	101.500	0.00	180.0	0.0	0.0546	0.0504	0.0000	0.0000
D	101.500	0.00	180.0	0.0	0.0586	0.1355	0.0000	0.0000
D	98.250	0.00	180.0	0.0	0.0586	0.1355	0.0000	0.0000
D	98.250	0.00	180.0	0.0	0.0630	0.0903	0.0000	0.0000
D	83.250	0.00	180.0	0.0	0.0630	0.0903	0.0000	0.0000
D	83.250	0.00	180.0	0.0	0.0714	0.1063	0.0000	0.0000
D	68.250	0.00	180.0	0.0	0.0714	0.1063	0.0000	0.0000
D	68.250	0.00	180.0	0.0	0.0784	0.1222	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0784	0.1222	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0821	0.2853	0.0000	0.0000
D	48.000	0.00	180.0	0.0	0.0821	0.2853	0.0000	0.0000
D	48.000	0.00	180.0	0.0	0.0829	0.1631	0.0000	0.0000
D	36.000	0.00	180.0	0.0	0.0829	0.1631	0.0000	0.0000
D	36.000	0.00	180.0	0.0	0.0844	0.1780	0.0000	0.0000
D	24.000	0.00	180.0	0.0	0.0844	0.1780	0.0000	0.0000
D	24.000	0.00	180.0	0.0	0.0826	0.1929	0.0000	0.0000
D	12.000	0.00	180.0	0.0	0.0826	0.1929	0.0000	0.0000
D	12.000	0.00	180.0	0.0	0.0847	0.2078	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0847	0.2078	0.0000	0.0000

==========

LOADING CONDITION Y ==========

50 mph wind with 1.5 ice. Wind Azimuth: 0° (1.2 D + 1.0 Di + 1.0 Wi)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	137.000	0.00	0.0	0.0	1.2160	1.4654	0.0000	0.0000
C	128.000	0.00	0.0	0.0	0.0000	1.2780	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0494	0.0288	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0000	1.2131	0.0000	0.0000
C	121.500	0.00	0.0	0.0	1.8284	5.8205	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0482	0.0288	0.0000	0.0000
C	109.000	0.00	0.0	0.0	0.0000	1.0883	0.0000	0.0000
C	109.000	0.00	0.0	0.0	2.1356	6.5068	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0469	0.0288	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.0000	0.9884	0.0000	0.0000
C	99.000	0.00	0.0	0.0	2.0852	6.4707	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0455	0.0288	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	0.8886	0.0000	0.0000
C	89.000	0.00	0.0	0.0	2.3693	7.1458	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0441	0.0288	0.0000	0.0000
C	79.000	0.00	0.0	0.0	0.0000	1.1831	0.0000	0.0000
C	79.000	0.00	0.0	0.0	1.9719	6.3875	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0425	0.0288	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0407	0.0288	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0387	0.0288	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0365	0.0288	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0339	0.0288	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0307	0.0288	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0264	0.0288	0.0000	0.0000
D	130.000	0.00	180.0	0.0	0.0153	0.0856	0.0000	0.0000
D	120.500	0.00	180.0	0.0	0.0153	0.0856	0.0000	0.0000
D	120.500	0.00	180.0	0.0	0.0173	0.1002	0.0000	0.0000
D	111.000	0.00	180.0	0.0	0.0173	0.1002	0.0000	0.0000
D	111.000	0.00	180.0	0.0	0.0191	0.1147	0.0000	0.0000
D	101.500	0.00	180.0	0.0	0.0191	0.1147	0.0000	0.0000
D	101.500	0.00	180.0	0.0	0.0203	0.2318	0.0000	0.0000
D	98.250	0.00	180.0	0.0	0.0203	0.2318	0.0000	0.0000

D	98.250	0.00	180.0	0.0	0.0216	0.1755	0.0000	0.0000
D	83.250	0.00	180.0	0.0	0.0216	0.1755	0.0000	0.0000
D	83.250	0.00	180.0	0.0	0.0240	0.2047	0.0000	0.0000
D	68.250	0.00	180.0	0.0	0.0240	0.2047	0.0000	0.0000
D	68.250	0.00	180.0	0.0	0.0260	0.2333	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0260	0.2333	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0270	0.4553	0.0000	0.0000
D	48.000	0.00	180.0	0.0	0.0270	0.4553	0.0000	0.0000
D	48.000	0.00	180.0	0.0	0.0271	0.2944	0.0000	0.0000
D	36.000	0.00	180.0	0.0	0.0271	0.2944	0.0000	0.0000
D	36.000	0.00	180.0	0.0	0.0274	0.3182	0.0000	0.0000
D	24.000	0.00	180.0	0.0	0.0274	0.3182	0.0000	0.0000
D	24.000	0.00	180.0	0.0	0.0266	0.3404	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0270	0.3578	0.0000	0.0000

==========

LOADING CONDITION AK ==========

Seismic - Azimuth: 0° (1.2 D + 1.0 Ev + 1.0 Eh)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	137.000	0.00	0.0	0.0	0.0405	0.6109	0.0000	0.0000
C	128.000	0.00	0.0	0.0	0.0755	1.3012	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0009	0.0171	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0646	1.2351	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.1278	2.4436	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0008	0.0171	0.0000	0.0000
C	114.120	0.00	0.0	0.0	0.0890	1.9273	0.0000	0.0000
C	109.000	0.00	0.0	0.0	0.0467	1.1081	0.0000	0.0000
C	109.000	0.00	0.0	0.0	0.1159	2.7490	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0007	0.0171	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.0351	1.0064	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.0958	2.7490	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0005	0.0171	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0255	0.9047	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0862	3.0545	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0004	0.0171	0.0000	0.0000
C	79.000	0.00	0.0	0.0	0.0268	1.2046	0.0000	0.0000
C	79.000	0.00	0.0	0.0	0.0613	2.7490	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0003	0.0171	0.0000	0.0000
C	74.750	0.00	0.0	0.0	0.1552	7.7735	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0003	0.0171	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0002	0.0171	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0001	0.0171	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0001	0.0171	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0339	13.1368	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0000	0.0171	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0000	0.0171	0.0000	0.0000
D	130.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

==========

LOADING CONDITION AL ==========

Seismic - Azimuth: 0° (0.9 D - 1.0 Ev + 1.0 Eh)

LOADS ON POLE
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	137.000	0.00	0.0	0.0	0.0405	0.4391	0.0000	0.0000
C	128.000	0.00	0.0	0.0	0.0755	0.9353	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0009	0.0123	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0646	0.8878	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.1278	1.7564	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0008	0.0123	0.0000	0.0000
C	114.120	0.00	0.0	0.0	0.0890	1.3853	0.0000	0.0000
C	109.000	0.00	0.0	0.0	0.0467	0.7964	0.0000	0.0000
C	109.000	0.00	0.0	0.0	0.1159	1.9760	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0007	0.0123	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.0351	0.7233	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.0958	1.9760	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0005	0.0123	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0255	0.6504	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0862	2.1955	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0004	0.0123	0.0000	0.0000
C	79.000	0.00	0.0	0.0	0.0268	0.8658	0.0000	0.0000
C	79.000	0.00	0.0	0.0	0.0613	1.9760	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0003	0.0123	0.0000	0.0000
C	74.750	0.00	0.0	0.0	0.1552	5.5874	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0003	0.0123	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0002	0.0123	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0001	0.0123	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0001	0.0123	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0339	9.4424	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0000	0.0123	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0000	0.0123	0.0000	0.0000
D	130.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

on: 29 jun 2023 at: 14:56:05

131' Monopole / Burlington Avon Landfill, CT

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)
==========

MAST ELEV ft	.....DEFLECTIONS (ft)..... HORIZONTAL ..... ALONG	ACROSS	DOWN	.....ROTATIONS (deg)..... TILT ..... ALONG	ACROSS	TWIST
130.0	10.47A	-0.02N	1.16F	8.90A	-0.02N	0.00B
120.5	9.05A	-0.02N	0.94F	8.66A	-0.02N	0.00B
111.0	7.68A	-0.02N	0.74F	8.21A	-0.02N	0.00B

101.5	6.39A	-0.02N	0.56F	7.55A	-0.02N	0.00B
98.2	5.98A	-0.01N	0.51F	7.37A	-0.02N	0.00B
83.2	4.21A	-0.01N	0.30F	6.29A	-0.02N	0.00B
68.2	2.74A	-0.01N	0.15K	5.01A	-0.01N	0.00B
53.2	1.61A	0.00N	0.07K	3.67A	-0.01N	0.00B
48.0	1.30A	0.00N	0.05K	3.27A	-0.01N	0.00B
36.0	0.71A	0.00N	0.02K	2.36A	-0.01N	0.00B
24.0	0.31A	0.00N	0.01K	1.51A	0.00N	0.00B
12.0	0.07A	0.00N	0.00F	0.72A	0.00N	0.00B
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	ACROSS ft-kip	TORSION ft-kip
130.0	1.47 AA	2.57 T	0.00 R	-17.96 N	0.00 R	0.00 R
	10.62 AA	9.27 T	0.00 R	-53.09 E	-0.01 E	-0.01 E
120.5	10.62 AG	9.27 P	0.00 X	-53.09 E	-0.01 E	-0.01 E
	11.60 AG	9.76 P	0.00 X	-150.03 F	0.03 B	-0.05 E
111.0	11.60 AG	9.76 P	0.01 X	-150.03 F	0.03 F	-0.05 E
	20.31 AG	17.62 P	0.01 X	-310.01 C	0.09 B	-0.11 E
101.5	20.32 AD	17.71 N	-0.07 X	-310.08 C	-0.17 X	-0.11 E
	28.53 AD	25.09 N	-0.07 X	-376.99 C	0.13 B	-0.13 E
98.2	28.53 AA	25.20 A	-0.14 N	-376.94 I	0.20 I	-0.13 E
	39.26 AA	34.41 A	-0.14 N	-834.25 A	1.95 N	0.41 B
83.2	39.25 Z	34.38 A	-0.11 T	-834.25 A	1.95 N	0.41 B
	49.92 Z	42.34 A	-0.11 T	-1462.30 A	3.36 N	0.74 B
68.2	49.92 Z	42.36 A	-0.11 N	-1462.29 A	3.36 N	0.74 B
	53.47 Z	43.60 A	-0.11 N	-2134.88 A	4.92 N	0.98 B
53.2	53.47 Z	43.59 A	-0.11 T	-2134.88 A	4.93 N	0.98 B
	55.86 Z	44.02 A	-0.11 T	-2373.58 A	5.48 N	1.05 B
48.0	55.86 Z	44.06 A	-0.13 N	-2373.57 A	5.47 N	1.05 B
	59.42 Z	45.08 A	-0.13 N	-2926.29 A	7.01 N	1.18 B
36.0	59.42 Z	45.08 A	-0.14 N	-2926.29 A	7.02 N	1.18 B
	63.30 Z	46.15 A	-0.14 N	-3487.28 A	8.65 N	1.28 B

```
   24.0   ..........................................................................
          63.30 Z     46.14 A     -0.14 N  -3487.28 A      8.65 N      1.28 B

          67.46 Z     47.15 A     -0.14 N  -4055.57 A     10.29 N      1.34 B
   12.0   ..........................................................................
          67.46 Z     47.15 A     -0.13 N  -4055.57 A     10.29 N      1.34 B

          71.70 Z     48.17 A     -0.13 N  -4630.55 A     11.86 N      1.36 B
-------------------------------------------------------------------------------
 base
 reaction   71.70 Z    -48.17 A      0.13 N   4630.55 A    -11.86 N     -1.36 B
-------------------------------------------------------------------------------


 COMPLIANCE WITH 4.8.2 & 4.5.4
 =============================

   ELEV       AXIAL   BENDING SHEAR +       TOTAL SATISFIED  D/t(w/t)   MAX
                            TORSIONAL                                    ALLOWED
     ft

 130.00  ..........................................................................
             0.00AA    0.08N     0.01T     0.08L     YES       8.64A       45.2

             0.01AA    0.16E     0.02T     0.17E     YES      10.62A       45.2
 120.50  ..........................................................................
             0.01AG    0.16E     0.02P     0.17E     YES      10.62A       45.2

             0.01AG    0.33F     0.02P     0.34F     YES      12.60A       45.2
 111.00  ..........................................................................
             0.01AG    0.33F     0.02P     0.34F     YES      12.60A       45.2

             0.02AG    0.52C     0.03P     0.53C     YES      14.58A       45.2
 101.50  ..........................................................................
             0.01AD    0.35C     0.02N     0.36C     YES       9.60A       45.2

             0.01AD    0.39C     0.02N     0.40C     YES      10.05A       45.2
  98.25  ..........................................................................
             0.01AA    0.41I     0.03A     0.42I     YES       9.82A       45.2

             0.02AA    0.64A     0.03A     0.65A     YES      11.90A       45.2
  83.25  ..........................................................................
             0.02Z     0.64A     0.03A     0.65A     YES      11.90A       45.2

             0.02Z     0.82A     0.03A     0.83A     YES      13.98A       45.2
  68.25  ..........................................................................
             0.02Z     0.82A     0.03A     0.83A     YES      13.98A       45.2

             0.02Z     0.92A     0.03A     0.93A     YES      16.06A       45.2
  53.25  ..........................................................................
             0.01Z     0.79A     0.02A     0.80A     YES      13.72A       45.2

             0.01Z     0.81A     0.02A     0.82A     YES      14.34A       45.2
  48.00  ..........................................................................
             0.01Z     0.84A     0.02A     0.85A     YES      14.04A       45.2

             0.01Z     0.86A     0.02A     0.87A     YES      15.47A       45.2
  36.00  ..........................................................................
             0.01Z     0.86A     0.02A     0.87A     YES      15.47A       45.2

             0.01Z     0.88A     0.02A     0.89A     YES      16.90A       45.2
  24.00  ..........................................................................
             0.01Z     0.88A     0.02A     0.89A     YES      16.90A       45.2

             0.01Z     0.89A     0.02A     0.90A     YES      18.33A       45.2
  12.00  ..........................................................................
             0.01Z     0.89A     0.02A     0.90A     YES      18.33A       45.2

             0.01Z     0.90A     0.02A     0.91A     YES      19.75A       45.2
```

0.00 .....

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
==========

DOWN	SHEAR.w.r.t.WIND.DIR ALONG	ACROSS	MOMENT.w.r.t.WIND.DIR ALONG	ACROSS	TORSION
kip	kip	kip	ft-kip	ft-kip	ft-kip
71.70	48.17	-0.13	-4630.55	11.86	1.36
Z	A	N	A	N	B

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Sabre Towers and Poles on: 29 jun 2023 at: 14:56:20
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131' Monopole / Burlington Avon Landfill, CT

****
********** Service Load Condition **********
****

* Only 1 condition(s) shown in full
* Some concentrated wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A ==========

60 mph wind with no ice. Wind Azimuth: 0° (1.0 D + 1.0 Wo)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	137.000	0.00	0.0	0.0	0.5737	0.5000	0.0000	0.0000
C	128.000	0.00	0.0	0.0	0.0000	1.0650	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0082	0.0140	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0000	1.0109	0.0000	0.0000
C	121.500	0.00	0.0	0.0	1.3988	2.0000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0081	0.0140	0.0000	0.0000
C	109.000	0.00	0.0	0.0	0.0000	0.9069	0.0000	0.0000
C	109.000	0.00	0.0	0.0	1.6410	2.2500	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0079	0.0140	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.0000	0.8237	0.0000	0.0000
C	99.000	0.00	0.0	0.0	1.6084	2.2500	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0077	0.0140	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	0.7405	0.0000	0.0000
C	89.000	0.00	0.0	0.0	1.8353	2.5000	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0076	0.0140	0.0000	0.0000
C	79.000	0.00	0.0	0.0	0.0000	0.9859	0.0000	0.0000
C	79.000	0.00	0.0	0.0	1.5346	2.2500	0.0000	0.0000

C	75.000	0.00	0.0	0.0	0.0074	0.0140	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0071	0.0140	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0069	0.0140	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0066	0.0140	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0063	0.0140	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0058	0.0140	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0053	0.0140	0.0000	0.0000
D	130.000	0.00	180.0	0.0	0.0093	0.0410	0.0000	0.0000
D	101.500	0.00	180.0	0.0	0.0122	0.0560	0.0000	0.0000
D	101.500	0.00	180.0	0.0	0.0131	0.1506	0.0000	0.0000
D	98.250	0.00	180.0	0.0	0.0131	0.1506	0.0000	0.0000
D	98.250	0.00	180.0	0.0	0.0141	0.1004	0.0000	0.0000
D	83.250	0.00	180.0	0.0	0.0141	0.1004	0.0000	0.0000
D	83.250	0.00	180.0	0.0	0.0160	0.1181	0.0000	0.0000
D	68.250	0.00	180.0	0.0	0.0160	0.1181	0.0000	0.0000
D	68.250	0.00	180.0	0.0	0.0175	0.1358	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0175	0.1358	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0184	0.3170	0.0000	0.0000
D	48.000	0.00	180.0	0.0	0.0184	0.3170	0.0000	0.0000
D	48.000	0.00	180.0	0.0	0.0185	0.1812	0.0000	0.0000
D	36.000	0.00	180.0	0.0	0.0185	0.1812	0.0000	0.0000
D	36.000	0.00	180.0	0.0	0.0189	0.1978	0.0000	0.0000
D	24.000	0.00	180.0	0.0	0.0189	0.1978	0.0000	0.0000
D	24.000	0.00	180.0	0.0	0.0185	0.2144	0.0000	0.0000
D	12.000	0.00	180.0	0.0	0.0185	0.2144	0.0000	0.0000
D	12.000	0.00	180.0	0.0	0.0190	0.2309	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0190	0.2309	0.0000	0.0000

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MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	.....DEFLECTIONS (ft)..... HORIZONTAL ALONG	ACROSS	DOWN	.....ROTATIONS (deg)..... TILT ALONG	ACROSS	TWIST
130.0	2.38I	0.00F	0.06E	2.00I	0.00F	0.00I
120.5	2.05I	0.00F	0.05E	1.95I	0.00F	0.00I
111.0	1.74I	0.00F	0.04E	1.84I	0.00F	0.00I
101.5	1.44I	0.00F	0.03E	1.70I	0.00F	0.00I
98.2	1.35I	0.00F	0.03E	1.65I	0.00F	0.00I
83.2	0.95I	0.00F	0.02E	1.41I	0.00F	0.00I
68.2	0.62I	0.00F	0.01E	1.12I	0.00F	0.00I
53.2	0.36I	0.00F	0.00E	0.82I	0.00F	0.00I
48.0	0.29I	0.00F	0.00E	0.73I	0.00F	0.00I
36.0	0.16I	0.00F	0.00I	0.53I	0.00F	0.00I
24.0	0.07I	0.00F	0.00I	0.34I	0.00F	0.00I
12.0	0.02I	0.00F	0.00I	0.16I	0.00F	0.00I
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

==========

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	ACROSS ft-kip	TORSION ft-kip
130.0						
	0.50 F	0.57 F	0.00 F	-4.02 E	0.00 F	0.00 F
	5.00 F	2.07 F	0.00 F	-11.94 B	0.00 I	0.00 I
120.5						
	5.00 K	2.07 I	0.00 C	-11.94 E	0.00 L	0.00 I
	5.48 K	2.18 I	0.00 C	-33.77 I	0.00 F	0.00 C
111.0						
	5.48 L	2.19 I	0.00 B	-33.77 I	0.00 F	0.00 C
	9.16 L	3.95 I	0.00 B	-69.77 I	0.01 B	0.00 I
101.5						
	9.16 B	3.97 C	-0.01 I	-69.79 L	-0.02 I	0.00 I
	12.72 B	5.62 C	-0.01 I	-84.84 E	0.02 I	0.00 E
98.2						
	12.72 E	5.62 I	0.02 F	-84.85 E	0.03 I	0.00 E
	17.50 E	7.68 I	0.02 F	-187.19 I	-0.39 F	0.01 I
83.2						
	17.50 D	7.69 I	0.02 F	-187.19 I	-0.39 F	0.01 I
	22.52 D	9.47 I	0.02 F	-327.60 I	-0.74 F	0.02 I
68.2						
	22.52 D	9.47 I	0.02 F	-327.60 I	-0.74 F	0.02 I
	24.58 D	9.75 I	0.02 F	-477.68 I	-1.06 F	0.02 I
53.2						
	24.58 D	9.75 I	0.02 F	-477.68 I	-1.06 F	0.02 I
	26.25 D	9.85 I	0.02 F	-530.93 I	-1.18 F	0.02 I
48.0						
	26.25 D	9.85 I	0.02 F	-530.91 I	-1.18 F	0.02 I
	28.44 D	10.08 I	0.02 F	-654.05 I	-1.48 F	0.03 I
36.0						
	28.44 D	10.08 I	0.02 F	-654.05 I	-1.48 F	0.03 I
	30.84 D	10.31 I	0.02 F	-779.04 I	-1.75 F	0.03 I
24.0						
	30.84 D	10.32 I	0.02 F	-779.04 I	-1.75 F	0.03 I
	33.42 D	10.54 I	0.02 F	-905.83 I	-2.03 F	0.03 I
12.0						
	33.42 D	10.54 I	0.02 F	-905.83 I	-2.03 F	0.03 I
	36.20 D	10.77 I	0.02 F	-1034.29 I	-2.31 F	0.03 I
base reaction	36.20 D	-10.77 I	-0.02 F	1034.29 I	2.31 F	-0.03 I

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL		TOTAL	SATISFIED	D/t(w/t)	MAX ALLOWED
130.00								
	0.00F	0.02E	0.00F	0.02E	YES		8.64A	45.2

```
           0.01F     0.04B     0.00F     0.04B     YES      10.62A       45.2
120.50  ..........................................................................
           0.01K     0.04E     0.00I     0.04E     YES      10.62A       45.2

           0.00K     0.07I     0.00I     0.08I     YES      12.60A       45.2
111.00  ..........................................................................
           0.00L     0.07I     0.00I     0.08I     YES      12.60A       45.2

           0.01L     0.12I     0.01I     0.12I     YES      14.58A       45.2
101.50  ..........................................................................
           0.00B     0.08L     0.00C     0.08L     YES       9.60A       45.2

           0.01B     0.09E     0.01C     0.10E     YES      10.05A       45.2
 98.25  ..........................................................................
           0.01E     0.09E     0.01I     0.10E     YES       9.82A       45.2

           0.01E     0.14I     0.01I     0.15I     YES      11.90A       45.2
 83.25  ..........................................................................
           0.01D     0.14I     0.01I     0.15I     YES      11.90A       45.2

           0.01D     0.18I     0.01I     0.19I     YES      13.98A       45.2
 68.25  ..........................................................................
           0.01D     0.18I     0.01I     0.19I     YES      13.98A       45.2

           0.01D     0.21I     0.01I     0.21I     YES      16.06A       45.2
 53.25  ..........................................................................
           0.01D     0.18I     0.01I     0.18I     YES      13.72A       45.2

           0.01D     0.18I     0.01I     0.19I     YES      14.34A       45.2
 48.00  ..........................................................................
           0.01D     0.19I     0.01I     0.20I     YES      14.04A       45.2

           0.01D     0.19I     0.00I     0.20I     YES      15.47A       45.2
 36.00  ..........................................................................
           0.01D     0.19I     0.00I     0.20I     YES      15.47A       45.2

           0.01D     0.20I     0.00I     0.20I     YES      16.90A       45.2
 24.00  ..........................................................................
           0.01D     0.20I     0.00I     0.20I     YES      16.90A       45.2

           0.01D     0.20I     0.00I     0.21I     YES      18.33A       45.2
 12.00  ..........................................................................
           0.01D     0.20I     0.00I     0.21I     YES      18.33A       45.2

           0.01D     0.20I     0.00I     0.21I     YES      19.75A       45.2
  0.00  ..........................................................................

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
====================================================

    DOWN    SHEAR.w.r.t.WIND.DIR   MOMENT.w.r.t.WIND.DIR     TORSION
               ALONG      ACROSS       ALONG      ACROSS
     kip         kip         kip      ft-kip      ft-kip      ft-kip

   36.20       10.77        0.02    -1034.29       -2.31        0.03
      D           I           F           I           F           I


================================================================================
```

Seismic Load Effects
Equivalent Lateral Force Procedure
ANSI/TIA-222-H

Parameters	
Risk Category	II
R	1.500
S_S	0.182
S_1	0.064
Site Class	B
T_L (sec)	6.000
F_a	0.900
F_v	0.800
S_{MS}	0.164
S_{M1}	0.051
S_{DS}	0.109
S_{D1}	0.034
T_s	0.312
I_e	1.000
Ω	1.500
C_S	0.030
E (ksi)	29,000
I_{top} (in^4)	261
I_{bot} (in^4)	22,922
I_{avg} (in^4)	11,592
g (in/s^2)	386.4
W_t (kips)	36.143
W_u (kips)	9.500
W_L (kips)	26.643
L_p (in)	1560
f_1 (Hertz)	0.406
T (sec)	2.464
k_e	1.9820
V_s (kips)	1.084
Seismic Design Category	A

Vertical Distribution of Seismic Forces

Description	h_i (ft.)	w_i (kips)	W_u (kips)	$w_i h_i^{ke}$	F_{sz} or E_h (kips)	E_V (kips)	1.2 D + 1.0 E_V (kips)	0.9 D - 1.0 E_V (kips)
Antenna Load	137.00	0.5000	0.5000	8,589.1496	0.0405	0.0109	0.6109	0.4391
Line Deadload	128.00	1.0650	0.0000	15,989.6798	0.0755	0.0232	1.3012	0.9353
Step Bolts/Safety Climb Load	125.00	0.0140	0.0000	200.5412	0.0009	0.0003	0.0171	0.0123
Antenna Load	121.50	2.0000	2.0000	27,080.7182	0.1278	0.0436	2.4436	1.7564
Line Deadload	121.50	1.0109	0.0000	13,687.9490	0.0646	0.0220	1.2351	0.8878
Step Bolts/Safety Climb Load	115.00	0.0140	0.0000	169.9930	0.0008	0.0003	0.0171	0.0123
Structure - Section 1	114.12	1.5774	0.0000	18,863.9593	0.0890	0.0344	1.9273	1.3853
Antenna Load	109.00	2.2500	2.2500	24,567.5493	0.1159	0.0490	2.7490	1.9760
Line Deadload	109.00	0.9069	0.0000	9,902.3602	0.0467	0.0198	1.1081	0.7964
Step Bolts/Safety Climb Load	105.00	0.0140	0.0000	141.9467	0.0007	0.0003	0.0171	0.0123
Antenna Load	99.00	2.2500	2.2500	20,301.6564	0.0958	0.0490	2.7490	1.9760
Line Deadload	99.00	0.8237	0.0000	7,432.2108	0.0351	0.0180	1.0064	0.7233
Step Bolts/Safety Climb Load	95.00	0.0140	0.0000	116.4062	0.0005	0.0003	0.0171	0.0123
Antenna Load	89.00	2.5000	2.5000	18,265.4763	0.0862	0.0545	3.0545	2.1955
Line Deadload	89.00	0.7405	0.0000	5,410.2341	0.0255	0.0161	0.9047	0.6504
Step Bolts/Safety Climb Load	85.00	0.0140	0.0000	93.3762	0.0004	0.0003	0.0171	0.0123
Antenna Load	79.00	2.2500	0.0000	12,980.1411	0.0613	0.0490	2.7490	1.9760
Line Deadload	79.00	0.9859	0.0000	5,687.6094	0.0268	0.0215	1.2046	0.8658
Step Bolts/Safety Climb Load	75.00	0.0140	0.0000	72.8617	0.0003	0.0003	0.0171	0.0123
Structure - Section 2	74.75	6.3623	0.0000	32,893.6098	0.1552	0.1387	7.7735	5.5874
Step Bolts/Safety Climb Load	65.00	0.0140	0.0000	54.8684	0.0003	0.0003	0.0171	0.0123
Step Bolts/Safety Climb Load	55.00	0.0140	0.0000	39.4028	0.0002	0.0003	0.0171	0.0123
Step Bolts/Safety Climb Load	45.00	0.0140	0.0000	26.4725	0.0001	0.0003	0.0171	0.0123
Step Bolts/Safety Climb Load	35.00	0.0140	0.0000	16.0868	0.0001	0.0003	0.0171	0.0123
Structure - Section 3	26.62	10.7520	0.0000	7,182.1027	0.0339	0.2344	13.1368	9.4424
Step Bolts/Safety Climb Load	25.00	0.0140	0.0000	8.2574	0.0000	0.0003	0.0171	0.0123
Step Bolts/Safety Climb Load	15.00	0.0140	0.0000	3.0001	0.0000	0.0003	0.0171	0.0123
	Σ	36.14	9.5000	229,777.62	1.08	0.79	44.16	31.74

SO#: 521586A
Site Name: Burlington Avon Landfill, CT
Date: 6/29/2023

Round Base Plate and Anchor Rods, per ANSI/TIA 222-H

Pole Data

Diameter:	51.140	in (flat to flat)
Thickness:	0.4375	in
Yield (Fy):	65	ksi
# of Sides:	18	"0" IF Round
Strength (Fu):	80	ksi

Reactions

Moment, Mu:	4630.55	ft-kips
Axial, Pu:	43.46	kips
Shear, Vu:	48.17	kips

Anchor Rod Data

Quantity:	18		
Diameter:	2.25	in	
Rod Material:	A615		
Strength (Fu):	100	ksi	
Yield (Fy):	75	ksi	
BC Diam. (in):	58	BC Override:	58

Plate Data

Diameter (in):	63.75	Dia. Override:	63.75
Thickness:	2.25	in	
Yield (Fy):	50	ksi	
Eff Width/Rod:	9.02	in	
Drain Hole:	2.625	in. diameter	
Drain Location:	23.25	in. center of pole to center of drain hole	
Center Hole:	38.5	in. diameter	

Anchor Rod Results

(per 4.9.9)

Maximum Put:	211.09	Kips
Φt*Rnt:	243.75	Kips
Vu:	2.68	Kips
Φv*Rnv:	149.10	Kips
Tension Interaction Ratio:	0.75	
Maximum Puc:	215.31	Kips
Φc*Rnc:	268.39	Kips
Vu:	2.68	Kips
Φc*Rnvc:	120.77	Kips
Compression Interaction Ratio:	0.80	
Maximum Interaction Ratio:	**80.3%**	**Pass**

Base Plate Results

Base Plate (Mu/Z):	41.0	ksi	
Allowable Φ*Fy:	45.0	ksi	(per AISC)
Base Plate Interaction Ratio:	**91.1%**	**Pass**	

```
================================================================================

                    LPile for Windows, Version 2019-11.009

                Analysis of Individual Piles and Drilled Shafts
               Subjected to Lateral Loading Using the p-y Method
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================================================================================

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--------------------------------------------------------------------------------
                            Files Used for Analysis
--------------------------------------------------------------------------------

Path to file locations:
\Program Files (x86)\Ensoft\Lpile2019\files\

Name of input data file:
521586A.lp11d

Name of output report file:
521586A.lp11o

Name of plot output file:
521586A.lp11p

Name of runtime message file:
521586A.lp11r



--------------------------------------------------------------------------------
                           Date and Time of Analysis
--------------------------------------------------------------------------------

               Date:  June 29, 2023              Time:  15:18:01



--------------------------------------------------------------------------------
                                 Problem Title
--------------------------------------------------------------------------------

Site         : Burlington Avon Landfill, CT


Tower        : 131' Monopole


Prepared for : SBA NETWORK SERVICES INC


Job Number   : 521586 Revision A
```

Engineer : KJT

Program Options and Settings

Computational Options:
- Conventional Analysis

Engineering Units Used for Data Input and Computations:
- US Customary System Units (pounds, feet, inches)

Analysis Control Options:
- Maximum number of iterations allowed = 999
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 100.0000 in
- Number of pile increments = 100

Loading Type and Number of Cycles of Loading:
- Static loading specified

- Use of p-y modification factors for p-y curves not selected
- Analysis uses layering correction (Method of Georgiadis)
- No distributed lateral loads are entered
- Loading by lateral soil movements acting on pile not selected
- Input of shear resistance at the pile tip not selected
- Input of moment resistance at the pile tip not selected
- Input of side resistance moment along pile not selected
- Computation of pile-head foundation stiffness matrix not selected
- Push-over analysis of pile not selected
- Buckling analysis of pile not selected

Output Options:
- Output files use decimal points to denote decimal symbols.
- Report only summary tables of pile-head deflection, maximum bending moment, and maximum shear force in output report file.
- No p-y curves to be computed and reported for user-specified depths
- Print using wide report formats

Pile Structural Properties and Geometry

Number of pile sections defined = 1
Total length of pile = 19.500 ft
Depth of ground surface below top of pile = 0.5000 ft

Pile diameters used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile. A summary of values of pile diameter vs. depth follows.

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	84.0000
2	19.500	84.0000

Input Structural Properties for Pile Sections:

Pile Section No. 1:

   Section 1 is a round drilled shaft, bored pile, or CIDH pile
   Length of section = 19.500000 ft
   Shaft Diameter = 84.000000 in
   Shear capacity of section = 0.0000 lbs

Ground Slope and Pile Batter Angles

Ground Slope Angle = 0.000 degrees
= 0.000 radians

Pile Batter Angle = 0.000 degrees
= 0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 6 layers

Layer 1 is soft clay, p-y criteria by Matlock, 1970

   Distance from top of pile to top of layer = 0.500000 ft
   Distance from top of pile to bottom of layer = 2.500000 ft
   Effective unit weight at top of layer = 115.000000 pcf
   Effective unit weight at bottom of layer = 115.000000 pcf
   Undrained cohesion at top of layer = 14.400000 psf
   Undrained cohesion at bottom of layer = 14.400000 psf
   Epsilon-50 at top of layer = 0.100000
   Epsilon-50 at bottom of layer = 0.100000

Layer 2 is soft clay, p-y criteria by Matlock, 1970

   Distance from top of pile to top of layer = 2.500000 ft
   Distance from top of pile to bottom of layer = 4.500000 ft
   Effective unit weight at top of layer = 120.000000 pcf
   Effective unit weight at bottom of layer = 120.000000 pcf
   Undrained cohesion at top of layer = 14.400000 psf
   Undrained cohesion at bottom of layer = 14.400000 psf
   Epsilon-50 at top of layer = 0.100000
   Epsilon-50 at bottom of layer = 0.100000

Layer 3 is sand, p-y criteria by Reese et al., 1974

   Distance from top of pile to top of layer = 4.500000 ft
   Distance from top of pile to bottom of layer = 6.500000 ft
   Effective unit weight at top of layer = 120.000000 pcf
   Effective unit weight at bottom of layer = 120.000000 pcf
   Friction angle at top of layer = 35.000000 deg.
   Friction angle at bottom of layer = 35.000000 deg.
   Subgrade k at top of layer = 90.000000 pci
   Subgrade k at bottom of layer = 90.000000 pci

Layer 4 is sand, p-y criteria by Reese et al., 1974

   Distance from top of pile to top of layer = 6.500000 ft
   Distance from top of pile to bottom of layer = 8.500000 ft
   Effective unit weight at top of layer = 120.000000 pcf

```
   Effective unit weight at bottom of layer           =   120.000000 pcf
   Friction angle at top of layer                     =    36.000000 deg.
   Friction angle at bottom of layer                  =    36.000000 deg.
   Subgrade k at top of layer                         =   225.000000 pci
   Subgrade k at bottom of layer                      =   225.000000 pci


Layer 5 is sand, p-y criteria by Reese et al., 1974

   Distance from top of pile to top of layer          =     8.500000 ft
   Distance from top of pile to bottom of layer       =    13.500000 ft
   Effective unit weight at top of layer              =   130.000000 pcf
   Effective unit weight at bottom of layer           =   130.000000 pcf
   Friction angle at top of layer                     =    41.000000 deg.
   Friction angle at bottom of layer                  =    41.000000 deg.
   Subgrade k at top of layer                         =   225.000000 pci
   Subgrade k at bottom of layer                      =   225.000000 pci


Layer 6 is strong rock (vuggy limestone)

   Distance from top of pile to top of layer          =    13.500000 ft
   Distance from top of pile to bottom of layer       =    19.500000 ft
   Effective unit weight at top of layer              =   150.000000 pcf
   Effective unit weight at bottom of layer           =   150.000000 pcf
   Uniaxial compressive strength at top of layer      =       16700. psi
   Uniaxial compressive strength at bottom of layer   =       16700. psi


 (Depth of the lowest soil layer extends 0.000 ft below the pile tip)


**** Warning - Possible Input Data Error ****

Values entered for effective unit weight of rock were outside the limits of
50 pcf to 150 pcf.

The maximum input value, in layer   1, for effective unit weight = 150.00 pcf

This data may be erroneous. Please check your data.


--------------------------------------------------------------------------------
                       Summary of Input Soil Properties
--------------------------------------------------------------------------------

Layer         Soil Type          Layer      Effective    Cohesion     Angle of     Uniaxial        E50

 Num.           Name             Depth       Unit Wt.                 Friction        qu           or           kpy

          (p-y Curve Type)        ft           pcf          psf          deg.         psi          krm          pci

-----   -------------------   ----------   ----------   ----------   ----------   ----------   ----------
----------
  1            Soft              0.5000     115.0000      14.4000       --           --          0.10000       --

               Clay              2.5000     115.0000      14.4000       --           --          0.10000       --

  2            Soft              2.5000     120.0000      14.4000       --           --          0.10000       --

               Clay              4.5000     120.0000      14.4000       --           --          0.10000       --

  3            Sand              4.5000     120.0000       --          35.0000       --           --
90.0000
          (Reese, et al.)        6.5000     120.0000       --          35.0000       --           --
90.0000
  4            Sand              6.5000     120.0000       --          36.0000       --           --
225.0000
```

```
          (Reese, et al.)         8.5000     120.0000       --          36.0000       --           --
225.0000
  5            Sand                8.5000     130.0000       --          41.0000       --           --
225.0000
          (Reese, et al.)        13.5000     130.0000       --          41.0000       --           --
225.0000
  6         Strong Rock           13.5000     150.0000       --           --           16700.       --           --

         (Vuggy Limestone)       19.5000     150.0000       --           --           16700.       --           --
```

Static Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 2

Load No.	Load Type	Condition 1	Condition 2	Axial Thrust Force, lbs	Compute Top y vs. Pile Length	Run Analysis
1	1	V = 67607. lbs	M = 77988211. in-lbs	60996.	No	Yes
2	1	V = 11337. lbs	M = 13064716. in-lbs	38105.	No	Yes

V = shear force applied normal to pile axis
M = bending moment applied to pile head
y = lateral deflection normal to pile axis
S = pile slope relative to original pile batter angle
R = rotational stiffness applied to pile head
Values of top y vs. pile lengths can be computed only for load types with
specified shear loading (Load Types 1, 2, and 3).
Thrust force is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

---

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Drilled Shaft (Bored Pile):

Length of Section	=	19.500000 ft
Shaft Diameter	=	84.000000 in
Concrete Cover Thickness (to edge of long. rebar)	=	3.875000 in
Number of Reinforcing Bars	=	46 bars
Yield Stress of Reinforcing Bars	=	60000. psi
Modulus of Elasticity of Reinforcing Bars	=	29000000. psi
Gross Area of Shaft	=	5542. sq. in.
Total Area of Reinforcing Steel	=	58.271360 sq. in.
Area Ratio of Steel Reinforcement	=	1.05 percent
Edge-to-Edge Bar Spacing	=	3.846816 in
Maximum Concrete Aggregate Size	=	0.750000 in
Ratio of Bar Spacing to Aggregate Size	=	5.13

Offset of Center of Rebar Cage from Center of Pile = 0.0000 in

Axial Structural Capacities:

Nom. Axial Structural Capacity = 0.85 Fc Ac + Fy As = 24470.662 kips
Tensile Load for Cracking of Concrete = -2609.093 kips
Nominal Axial Tensile Capacity = -3496.282 kips

Reinforcing Bar Dimensions and Positions Used in Computations:

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
1	1.270000	1.266769	37.490000	0.00000
2	1.270000	1.266769	37.140816	5.104888
3	1.270000	1.266769	36.099769	10.114681
4	1.270000	1.266769	34.386252	14.936057
5	1.270000	1.266769	32.032183	19.479202
6	1.270000	1.266769	29.081416	23.659487
7	1.270000	1.266769	25.588917	27.399040
8	1.270000	1.266769	21.619745	30.628201
9	1.270000	1.266769	17.247838	33.286817
10	1.270000	1.266769	12.554637	35.325362
11	1.270000	1.266769	7.627566	36.705862
12	1.270000	1.266769	2.558408	37.402602
13	1.270000	1.266769	-2.558408	37.402602
14	1.270000	1.266769	-7.627566	36.705862
15	1.270000	1.266769	-12.554637	35.325362
16	1.270000	1.266769	-17.247838	33.286817
17	1.270000	1.266769	-21.619745	30.628201
18	1.270000	1.266769	-25.588917	27.399040
19	1.270000	1.266769	-29.081416	23.659487
20	1.270000	1.266769	-32.032183	19.479202
21	1.270000	1.266769	-34.386252	14.936057
22	1.270000	1.266769	-36.099769	10.114681
23	1.270000	1.266769	-37.140816	5.104888
24	1.270000	1.266769	-37.490000	0.00000
25	1.270000	1.266769	-37.140816	-5.104888
26	1.270000	1.266769	-36.099769	-10.114681
27	1.270000	1.266769	-34.386252	-14.936057
28	1.270000	1.266769	-32.032183	-19.479202
29	1.270000	1.266769	-29.081416	-23.659487
30	1.270000	1.266769	-25.588917	-27.399040
31	1.270000	1.266769	-21.619745	-30.628201
32	1.270000	1.266769	-17.247838	-33.286817
33	1.270000	1.266769	-12.554637	-35.325362
34	1.270000	1.266769	-7.627566	-36.705862
35	1.270000	1.266769	-2.558408	-37.402602
36	1.270000	1.266769	2.558408	-37.402602
37	1.270000	1.266769	7.627566	-36.705862
38	1.270000	1.266769	12.554637	-35.325362
39	1.270000	1.266769	17.247838	-33.286817
40	1.270000	1.266769	21.619745	-30.628201
41	1.270000	1.266769	25.588917	-27.399040
42	1.270000	1.266769	29.081416	-23.659487
43	1.270000	1.266769	32.032183	-19.479202
44	1.270000	1.266769	34.386252	-14.936057
45	1.270000	1.266769	36.099769	-10.114681
46	1.270000	1.266769	37.140816	-5.104888

NOTE: The positions of the above rebars were computed by LPile

Minimum spacing between any two bars not equal to zero = 3.847 inches
between bars 31 and 32.

Ratio of bar spacing to maximum aggregate size = 5.13

Concrete Properties:

Compressive Strength of Concrete	=	4500. psi
Modulus of Elasticity of Concrete	=	3823676. psi
Modulus of Rupture of Concrete	=	-503.115295 psi
Compression Strain at Peak Stress	=	0.002001
Tensile Strain at Fracture of Concrete	=	-0.0001152
Maximum Coarse Aggregate Size	=	0.750000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 2

Number	Axial Thrust Force kips
1	38.105
2	60.996

Summary of Results for Nominal Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	38.105	120807.238	0.00300000
2	60.996	121469.864	0.00300000

Note that the values of moment capacity in the table above are not
factored by a strength reduction factor (phi-factor).

In ACI 318, the value of the strength reduction factor depends on whether
the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.75).

The above values should be multiplied by the appropriate strength reduction
factor to compute ultimate moment capacity according to ACI 318,
or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding
bending stiffnesses computed for common resistance factor values used for
reinforced concrete sections.

Axial Load No.	Resist. Factor	Nominal Ax. Thrust kips	Nominal Moment Cap in-kips	Ult. (Fac) Ax. Thrust kips	Ult. (Fac) Moment Cap in-kips	Bend. Stiff. at Ult Mom kip-in^2
1	0.65	38.105263	120807.	24.768421	78525.	2.3996E+09
2	0.65	60.996491	121470.	39.647719	78955.	2.4140E+09
1	0.75	38.105263	120807.	28.578947	90605.	2.3176E+09
2	0.75	60.996491	121470.	45.747368	91102.	2.3318E+09
1	0.90	38.105263	120807.	34.294737	108727.	1.5656E+09
2	0.90	60.996491	121470.	54.896842	109323.	1.5769E+09

Layering Correction Equivalent Depths of Soil & Rock Layers

Top of	Equivalent

Layer No.	Layer Below Pile Head ft	Top Depth Below Grnd Surf ft	Same Layer Type As Layer Above	Layer is Rock or is Below Rock Layer	F0 Integral for Layer lbs	F1 Integral for Layer lbs
1	0.5000	0.00	N.A.	No	0.00	1589.
2	2.5000	2.0001	Yes	No	1589.	1814.
3	4.5000	0.8985	No	No	3404.	35214.
4	6.5000	2.8178	Yes	No	38618.	82234.
5	8.5000	4.1757	Yes	No	120852.	565730.
6	13.5000	13.0000	No	Yes	N.A.	N.A.

Notes: The F0 integral of Layer n+1 equals the sum of the F0 and F1 integrals
for Layer n. Layering correction equivalent depths are computed only
for soil types with both shallow-depth and deep-depth expressions for
peak lateral load transfer. These soil types are soft and stiff clays,
non-liquefied sands, and cemented c-phi soil.

Summary of Pile-head Responses for Conventional Analyses

Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, V, lbs, and Load 2 = Moment, M, in-lbs
Load Type 2: Load 1 = Shear, V, lbs, and Load 2 = Slope, S, radians
Load Type 3: Load 1 = Shear, V, lbs, and Load 2 = Rot. Stiffness, R, in-lbs/rad.
Load Type 4: Load 1 = Top Deflection, y, inches, and Load 2 = Moment, M, in-lbs
Load Type 5: Load 1 = Top Deflection, y, inches, and Load 2 = Slope, S, radians

Load Case No.	Load Type 1	Pile-head Load 1	Load Type 2	Pile-head Load 2	Axial Loading lbs	Pile-head Deflection inches	Pile-head Rotation radians	Max Shear in Pile lbs	Max Moment in Pile in-lbs
1	V, lb	67607.	M, in-lb	7.80E+07	60996.	0.6135	-0.00644	-1839836.	8.40E+07
2	V, lb	11337.	M, in-lb	1.31E+07	38105.	0.02646	-2.48E-04	-298155.	1.42E+07

Maximum pile-head deflection = 0.6135234298 inches
Maximum pile-head rotation = -0.0064376210 radians = -0.368849 deg.

The analysis ended normally.

IBC 1807.3.2.1

Moment (ft·k)	4,874.26	
Shear (k)	50.71	
Caisson diameter (ft)	7	
Caisson height above ground (ft)	0.5	
Caisson height below ground (ft)	26	
Lateral soil pressure (lb/ft^2)	**386.54**	
Ground to application of force, h (ft)	96.63	
Applied lateral force, P (lb)	50,705	
Lateral soil bearing pressure, S_1 (lb/ft)	3,350.00	
Diameter, b (ft)	7	
A	5.06	$= (2.34P)/(S_1 b)$
Minimum depth of embedment, d (ft)	25.75	$= 0.5A[\ 1 + (\ 1 + (\ 4.36h / A\ )\ )^{1/2}\ ]$

EXHIBIT 9

Antenna Mount Analysis

Kimley»Horn

Mount Analysis for

Proposed Platform with Support Rails
Commscope Part #: MC-PK8-DSH

June 6, 2023

Site Name:	**Burlington – Avon Landfill**
SBA Site Number:	**CT46143-A**
Dish Site Number:	**BOBDL00139A**
Site Address:	**277 Huckleberry Road** **Avon, CT 06013** **Hartford County**
Site Coordinates:	**41.788219°, -72.918272°**

Kimley-Horn Job Number: 180000025.1.202
Kimley-Horn JIRA Ticket: KHCLE-40087

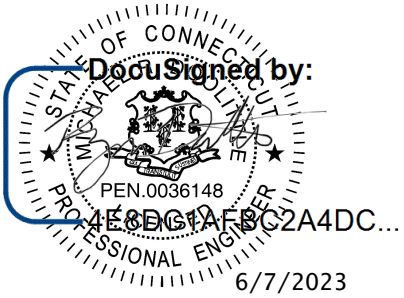
Analysis Results

Proposed Platform with Support Rails	**24.5%**	**Sufficient**
Mount Connections	**25.0%**	**Sufficient**

See additional details in the Conclusions and Recommendation section.

Prepared By:
Kevin Fraleigh, P.E.

Reviewed and Signed By:
Michael R. Doolittle, P.E.
Lic. #PEN.0036148, Exp. 01/31/2024
Kimley-Horn and Associates, Inc. COA #PEC.0000738



DocuSigned by:
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6/7/2023

▪ SUPPORTING DOCUMENTATION

Information on existing and proposed antennas as well as mount geometry was provided to Kimley-Horn and Associates in the documents listed below. It is assumed that all information provided to Kimley-Horn & Associates, Inc. is accurate. In the absence of information to the contrary, we assume the structure has been properly erected and maintained per the original design drawings and the capacity has not significantly changed from the "as new" condition.

Tenant Loading	Dish Wireless Collo App, dated 5/31/2023
Mount Design	Commscope Part #: MC-PK8-DSH, dated 10/16/2020

▪ ANALYSIS CRITERIA

Code	ANSI/TIA-222-H / 2021 IBC / ASCE 7-16
Basic Wind Speed	116 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice	50 mph (3-sec Gust) with 1.5" radial ice (escalating)
Risk Category	II
Exposure Category	C
Topographic Factor	$K_{zt} = 1.0$

This analysis utilizes an ultimate 3-second gust wind speed of 116 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

▪ APPURTENANCE LISTING

The tables below will show the final equipment configuration considered in the analysis. If the final equipment observed in the field deviates from the information shown below, Kimley-Horn & Associates, Inc. should be contacted to perform an analysis revision immediately.

Final Equipment Configuration:

Antenna RAD (ft)	Description	Feedlines	Mount Type	Mount Elevation (ft)	Carrier
70	(3) JMA Wireless MX08FR0665-21 (3) Fujitsu TA08025-B605 RRU (3) Fujitsu TA08025-B604 RRU (1) Raycap RDIDC-9181-PF-48 OVP	(1) 1.411" Hybrid	Platform with Support Rails	70	Dish

▪ CONCLUSIONS AND RECOMMENDATIONS

Per our rigorous structural analysis, the proposed Platform with Support Rails have been found to be **SUFFICIENT**. The mount can support the referenced loading in accordance with the structural strength requirements of ANSI/TIA-222-H and 2021 IBC with local amendments.

▪ ASSUMPTIONS AND LIMITATIONS

This report is not a condition assessment of the mount; It is an engineering analysis based upon the theoretical capacity of the structure. Unless told otherwise, we assume the mount components and connections to be in "like new" condition. If these assumptions are not accurate, Kimley-Horn & Associates, Inc. should be notified immediately to perform a revised analysis.

All services are performed, results obtained, and recommendation made in accordance with generally accepted engineering principles and practices. Kimley-Horn & Associates, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information in this report.

Kimley-Horn makes no warranties, expressed or implied in connection with this report and disclaims any liability arising from original design, material, fabrication, section deficiencies, corrosion, or insufficient maintenance of the structure.

APPENDIX

General Criteria	
TIA Standard	H
IBC Edition	2018
Structure Class	-
Risk Category	II

Site-Specific Criteria	
Exposure Category	C
Topographic Factor, K_{zt}	1.00
Structure Base Elev. (AMSL), z_s (ft)	467.00
Ground Effect Factor, K_e	0.98

Mount & Structure Criteria	
Mount Elevation (AGL) (ft)	70.00
Structure Height (ft)	100.00
Structure Type	Guyed Tower

Constants	
Wind Direction Probability Factor, K_d	0.95
Gust Effect Factor, G_h	1
Shielding Factor, K_a **(antenna)**	0.9
Shielding Factor, K_a **(mount)**	0.9

Wind Summary	
Basic Wind Speed w/o Ice, **V** (mph)	116.00
Velocity Pressure Coeff., K_z	1.17
Velocity Pressure, q_z **(w/o Ice)** (psf)	37.78

Ice Load Summary	
Basic Wind Speed w/ Ice, V_i (mph)	50.00
Design Ice Thick. (ASCE 7-16) , t_i (in)	1.5
Velocity Pressure, q_z **(w/ Ice)** (psf)	7.02
Escalated Ice Thick. @ Mount, t_{iz} (in)	1.62

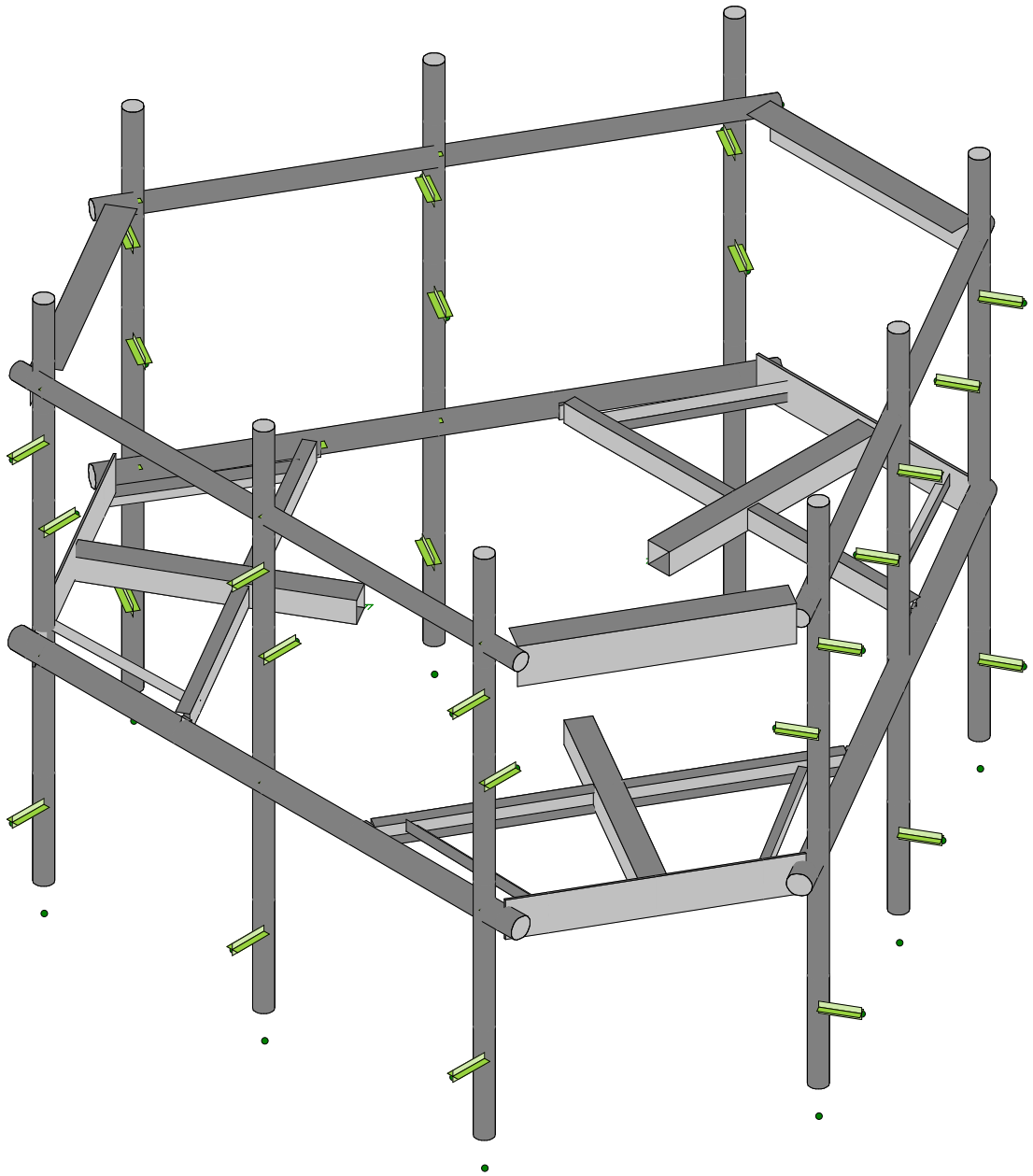
Seismic Load Summary	
Spectral Response (Short Periods), S_s	0.179
Spectral Response (1-Sec. Period), S_1	0.054
Site Class	D
Seismic Design Category	B
Seismic Risk Category	II

Snow Load Summary	
Ground Snow Load, p_g (psf)	-
Snow Load on Flat Roofs, p_f (psf)	-

Kimley»Horn

Date	June 06, 2023
Client	SBA
Site #	CT46143-A
Site Name	Burlington - Avon Landfill
Project #	KHCLE-40084

Antenna Name	Qty	Shape	Dimensions (in)			Weight (lb)	Joint Labels								EPA (ft²)		Wind Force, F_A (lb)			
																	No Ice		With Ice	
			H	W	D		Alpha		Beta		Gamma		Delta		Front	Side	Front	Side	Front	Side
MX08FRO665-21	3	Flat	72	20	8	64.5	A2T	A2B	B2T	B2B	G2T	G2B			12.49	5.87	424.62	199.46	94.53	51.41
TA08025-B604	3	Flat	15.8	15	7.9	63.9	A2R		B2R		G2R				0.52	1.96	17.56	66.76	5.55	18.18
TA08025-B605	3	Flat	15.8	15	9.1	75	A2R		B2R		G2R				0.59	1.96	20.19	66.76	6.14	18.18
RDIDC-9181-PF-48	1	Flat	16.6	14.6	8.5	21.9	P26								2.01	1.17	68.4	39.72	18.56	12.19



Envelope Only Solution

Kimley-Horn and Associate...		SK - 2
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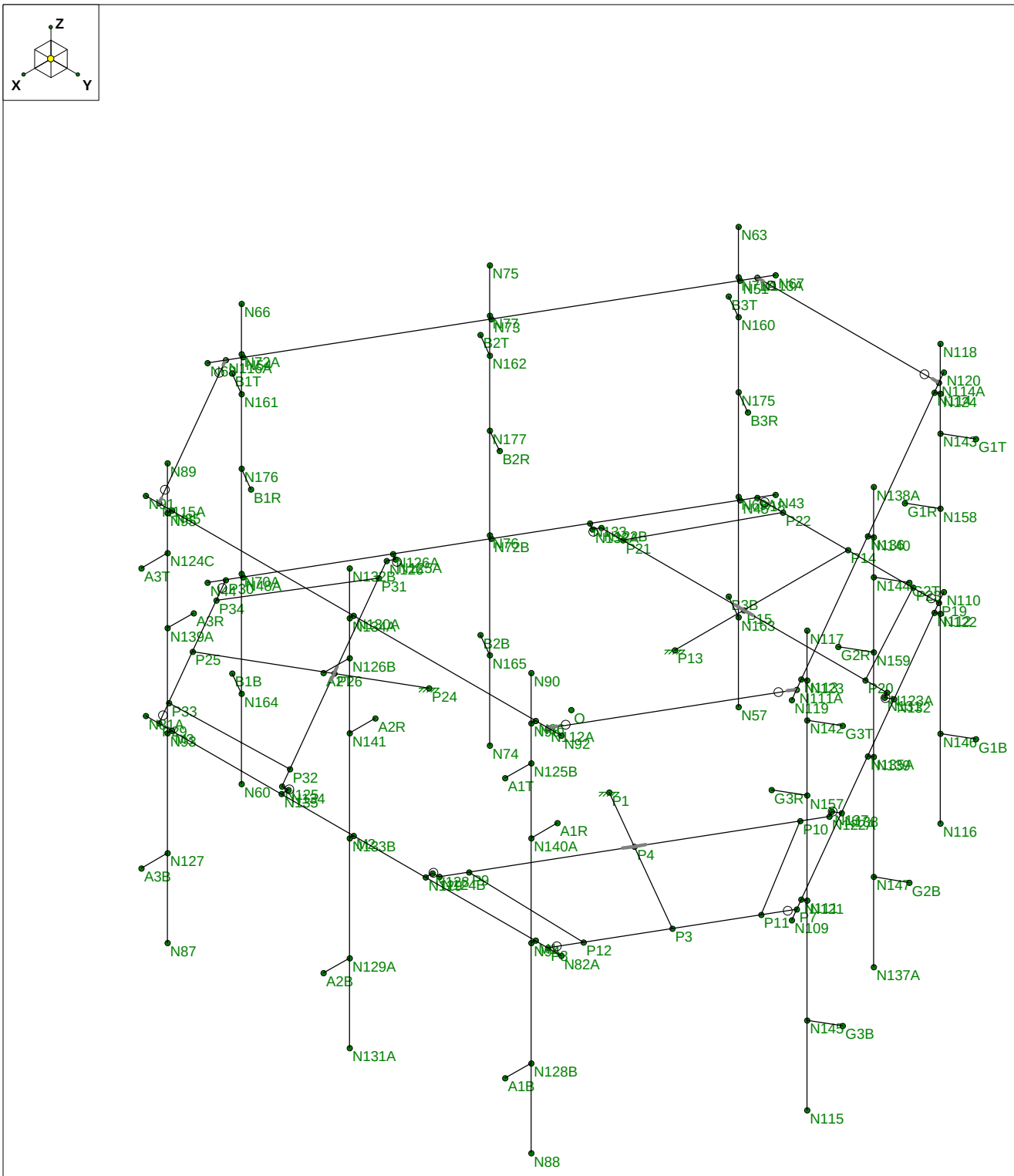
		CommScope MC-PK8-DSH.r3d



Envelope Only Solution

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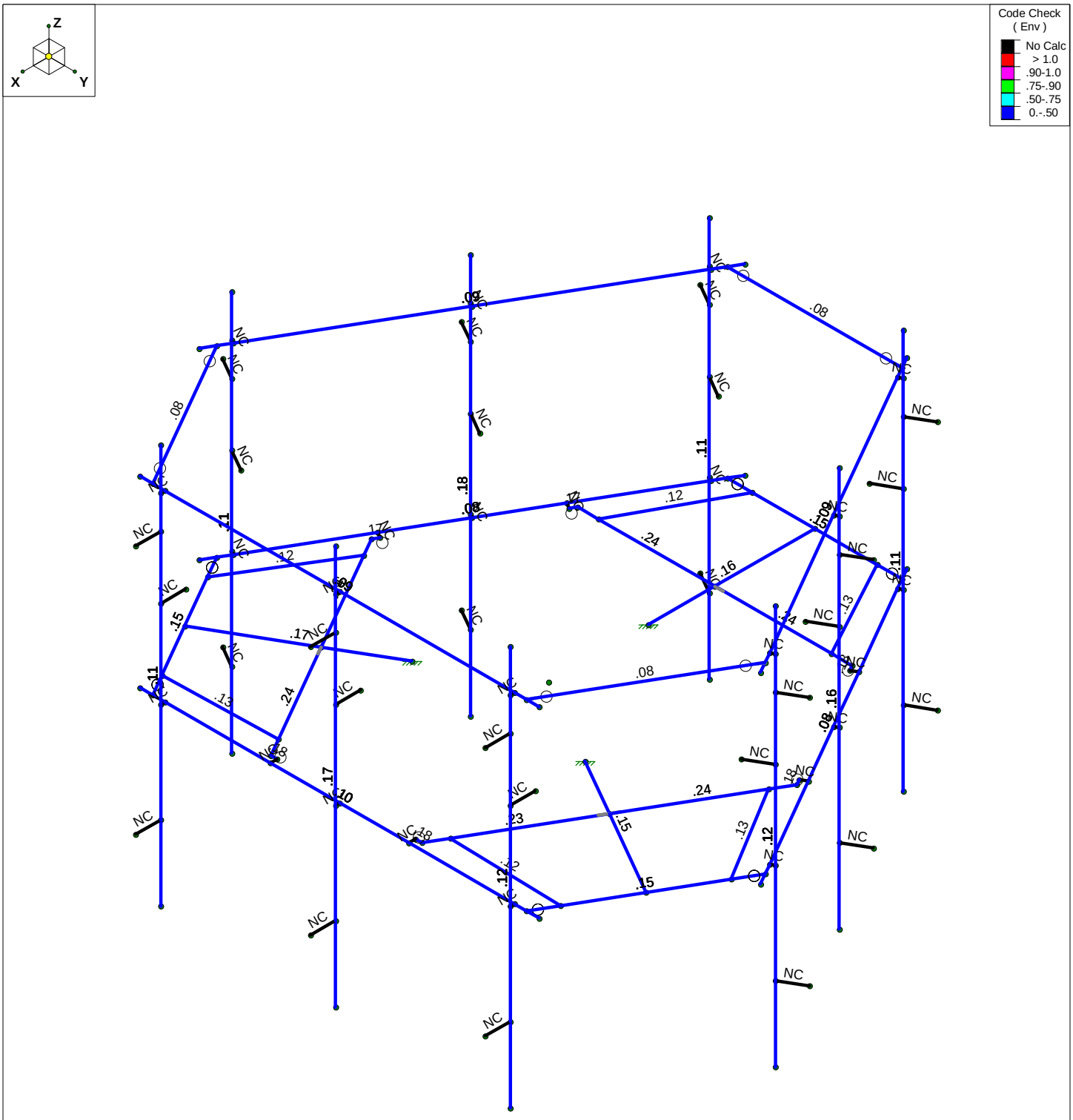

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Kimley-Horn and Associate...		SK - 3
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		CommScope MC-PK8-DSH.r3d

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[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 Rect	29000	11154	.3	.65	.527	46	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
8	A913 Gr.65	29000	11154	.3	.65	.49	65	1.1	80	1.1
9	A500 Gr.C Rnd	29000	11154	.3	.65	.49	46	1.6	62	1.2
10	A500 Gr.C Rect	29000	11154	.3	.65	.49	50	1.5	62	1.2
11	A529 Gr. 50	29000	11154	.3	.65	.49	50	1.1	65	1.1
12	A1011-33 ksi	29000	11154	.3	.65	.49	33	1.5	58	1.2
13	A1011 36 ksi	29000	11154	.3	.65	.49	36	1.5	58	1.2
14	A1018 50 ksi	29000	11154	.3	.65	.49	50	1.5	65	1.2
15	Q235	29000	11154	.3	.65	.49	35	1.5	58	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Corner Plate	PL6-1/2x3/8	Beam	None	A1011 36 ksi	Typical	2.438	.029	8.582	.11
2	Side Plate	PL2-3/8x1/2	Beam	None	A1011 36 ksi	Typical	1.188	.025	.558	.086
3	Grating Horiz	L2x2x4	Beam	None	A529 Gr. 50	Typical	.944	.346	.346	.021
4	Face Horiz	HSS3.500x0.1...	Beam	None	A500 Gr.C Rnd	Typical	1.729	2.409	2.409	4.819
5	Mount Pipe	HSS2.875x0.1...	Column	None	A500 Gr.C Rnd	Typical	1.039	.987	.987	1.975
6	Cross Horiz	C3.38x2.06x1/4	Beam	None	A1011 36 ksi	Typical	1.75	.715	3.026	.034
7	Stand-Off Horiz	HSS4X4X6	Beam	None	A500 Gr.C Rect	Typical	4.78	10.3	10.3	17.5
8	Support Rail	HSS2.875x0.1...	Beam	None	A500 Gr.C Rnd	Typical	1.039	.987	.987	1.975
9	SR Corner Brace	L6.6x4.46x0.25	Beam	None	A1011 36 ksi	Typical	2.703	4.759	12.473	.055

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	P1	12.	20.78461	-0.	0	
2	O	0	0	0	0	
3	P3	32.	55.425626	-0.	0	
4	P4	20.	34.641016	-0.	0	
5	P7	13.813467	65.925626	0.	0	
6	P8	50.186533	44.925626	-0.	0	
7	P9	44.248711	20.641016	-0.	0	
8	P10	-4.248711	48.641016	0.	0	
9	P11	19.009619	62.925626	0.	0	
10	P12	44.990381	47.925626	-0.	0	
11	P13	-24	0.	0.	0	
12	P14	-64	-0.	0.	0	
13	P15	-40	0.	0.	0	
14	P18	-64.	-21.	0.	0	
15	P19	-64.	21.	0.	0	
16	P20	-40	28	0.	0	
17	P21	-40	-28	0.	0	
18	P22	-64	-15.	0.	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
19	P23	-64.	15	0.	0	
20	P24	12	-20.78461	-0.	0	
21	P25	32	-55.425626	-0.	0	
22	P26	20.	-34.641016	-0.	0	
23	P29	50.186533	-44.925626	-0.	0	
24	P30	13.813467	-65.925626	0.	0	
25	P31	-4.248711	-48.641016	-0.	0	
26	P32	44.248711	-20.641016	-0.	0	
27	P33	44.990381	-47.925626	-0.	0	
28	P34	19.009619	-62.925626	-0.	0	
29	N43	-66.662486	-19.462813	0.	0	
30	N44	16.475953	-67.462813	-0.	0	
31	N45	-61.466333	-22.462813	0.	0	
32	N48A	11.2798	-64.462813	-0.	0	
33	N51	-61.466333	-22.462813	44	0	
34	N54	11.2798	-64.462813	44	0	
35	N57	-61.966333	-23.328838	-42	0	
36	N60	10.7798	-65.328838	-42	0	
37	N63	-61.966333	-23.328838	54	0	
38	N66	10.7798	-65.328838	54	0	
39	N67	-66.662486	-19.462813	44	0	
40	N68	16.475953	-67.462813	44	0	
41	N111A	13.813467	65.925626	44	0	
42	N112A	50.186533	44.925626	44	0	
43	N113A	-64	-21.	44	0	
44	N114A	-64	21.	44	0	
45	N115A	50.186533	-44.925626	44	0	
46	N116A	13.813467	-65.925626	44	0	
47	N69A	-61.966333	-23.328838	0.	0	
48	N70A	10.7798	-65.328838	-0.	0	
49	N71A	-61.966333	-23.328838	44	0	
50	N72A	10.7798	-65.328838	44	0	
51	N122A	-8.578838	51.141016	0.	0	
52	N124B	48.578838	18.141016	-0.	0	
53	N122B	-40.	-33.	0.	0	
54	N123A	-40.	33.	0.	0	
55	N125	48.578838	-18.141016	-0.	0	
56	N126	-8.578838	-51.141016	-0.	0	
57	N125A	-9.877877	-50.391016	-0.	0	
58	N126A	-10.681724	-51.783321	-0.	0	
59	N128	48.578838	16.641016	-0.	0	
60	N129	50.186533	16.641016	-0.	0	
61	N131	-38.700962	33.75	0.	0	
62	N132	-39.504809	35.142305	0.	0	
63	N132A	-38.700962	-33.75	0.	0	
64	N133	-39.504809	-35.142305	0.	0	
65	N134	48.578838	-16.641016	-0.	0	
66	N135	50.186533	-16.641016	-0.	0	
67	N137	-9.877877	50.391016	0.	0	
68	N138	-10.681724	51.783321	0.	0	
69	N72B	-25.093267	-43.462813	0.	0	
70	N73	-25.093267	-43.462813	44	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
71	N74	-25.593267	-44.328838	-42	0	
72	N75	-25.593267	-44.328838	54	0	
73	N76	-25.593267	-44.328838	0.	0	
74	N77	-25.593267	-44.328838	44	0	
75	N81A	50.186533	-48.	-0.	0	
76	N82A	50.186533	48.	-0.	0	
77	M3	50.186533	-42.	-0.	0	
78	M1	50.186533	42.	-0.	0	
79	N85	50.186533	-42.	44	0	
80	N86	50.186533	42.	44	0	
81	N87	51.186533	-42.	-42	0	
82	N88	51.186533	42.	-42	0	
83	N89	51.186533	-42.	54	0	
84	N90	51.186533	42.	54	0	
85	N91	50.186533	-48.	44	0	
86	N92	50.186533	48.	44	0	
87	N93	51.186533	-42.	-0.	0	
88	N94	51.186533	42.	-0.	0	
89	N95	51.186533	-42.	44	0	
90	N96	51.186533	42.	44	0	
91	N109	16.475952	67.462813	0.	0	
92	N110	-66.662486	19.462813	0.	0	
93	N111	11.2798	64.462813	0.	0	
94	N112	-61.466334	22.462813	0.	0	
95	N113	11.2798	64.462813	44	0	
96	N114	-61.466334	22.462813	44	0	
97	N115	10.7798	65.328838	-42	0	
98	N116	-61.966334	23.328838	-42	0	
99	N117	10.7798	65.328838	54	0	
100	N118	-61.966334	23.328838	54	0	
101	N119	16.475952	67.462813	44	0	
102	N120	-66.662486	19.462813	44	0	
103	N121	10.7798	65.328838	0.	0	
104	N122	-61.966334	23.328838	0.	0	
105	N123	10.7798	65.328838	44	0	
106	N124	-61.966334	23.328838	44	0	
107	M2	50.186533	0.	-0.	0	
108	N130A	50.186533	0.	44	0	
109	N131A	51.186533	0.	-42	0	
110	N132B	51.186533	0.	54	0	
111	N133B	51.186533	0.	-0.	0	
112	N134A	51.186533	0.	44	0	
113	N135A	-25.093267	43.462813	0.	0	
114	N136	-25.093267	43.462813	44	0	
115	N137A	-25.593267	44.328838	-42	0	
116	N138A	-25.593267	44.328838	54	0	
117	N139	-25.593267	44.328838	0.	0	
118	N140	-25.593267	44.328838	44	0	
119	N124C	51.186533	-42.	36	0	
120	N125B	51.186533	42.	36	0	
121	N126B	51.186533	0.	36	0	
122	N127	51.186533	-42.	-24	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
123	N128B	51.186533	42.	-24	0	
124	N129A	51.186533	0.	-24	0	
125	A3T	57.186533	-42.	36	0	
126	A1T	57.186533	42.	36	0	
127	A2T	57.186533	0.	36	0	
128	A3B	57.186533	-42.	-24	0	
129	A1B	57.186533	42.	-24	0	
130	A2B	57.186533	0.	-24	0	
131	A3R	45.186533	-42.	21	0	
132	A1R	45.186533	42.	21	0	
133	A2R	45.186533	0.	21	0	
134	N139A	51.186533	-42.	21	0	
135	N140A	51.186533	42.	21	0	
136	N141	51.186533	0.	21	0	
137	N142	10.7798	65.328838	36	0	
138	N143	-61.966334	23.328838	36	0	
139	N144	-25.593267	44.328838	36	0	
140	N145	10.7798	65.328838	-24	0	
141	N146	-61.966334	23.328838	-24	0	
142	N147	-25.593267	44.328838	-24	0	
143	G3T	7.7798	70.524991	36	0	
144	G1T	-64.966334	28.524991	36	0	
145	G2T	-28.593267	49.524991	36	0	
146	G3B	7.7798	70.524991	-24	0	
147	G1B	-64.966334	28.524991	-24	0	
148	G2B	-28.593267	49.524991	-24	0	
149	G3R	13.7798	60.132686	21	0	
150	G1R	-58.966334	18.132686	21	0	
151	G2R	-22.593267	39.132686	21	0	
152	N157	10.7798	65.328838	21	0	
153	N158	-61.966334	23.328838	21	0	
154	N159	-25.593267	44.328838	21	0	
155	N160	-61.966333	-23.328838	36	0	
156	N161	10.7798	-65.328838	36	0	
157	N162	-25.593267	-44.328838	36	0	
158	N163	-61.966333	-23.328838	-24	0	
159	N164	10.7798	-65.328838	-24	0	
160	N165	-25.593267	-44.328838	-24	0	
161	B3T	-64.966333	-28.524991	36	0	
162	B1T	7.7798	-70.524991	36	0	
163	B2T	-28.593267	-49.524991	36	0	
164	B3B	-64.966333	-28.524991	-24	0	
165	B1B	7.7798	-70.524991	-24	0	
166	B2B	-28.593267	-49.524991	-24	0	
167	B3R	-58.966333	-18.132686	21	0	
168	B1R	13.7798	-60.132686	21	0	
169	B2R	-22.593267	-39.132686	21	0	
170	N175	-61.966333	-23.328838	21	0	
171	N176	10.7798	-65.328838	21	0	
172	N177	-25.593267	-44.328838	21	0	

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M3	P9	P12		270	Grating Horiz	Beam	None	A529 Gr. 50	Typical
2	M8	P20	P23		270	Grating Horiz	Beam	None	A529 Gr. 50	Typical
3	M13	P31	P34		270	Grating Horiz	Beam	None	A529 Gr. 50	Typical
4	M28	N114A	N113A		180	SR Corner Bra...	Beam	None	A1011 36 ...	Typical
5	M29	N112A	N111A		180	SR Corner Bra...	Beam	None	A1011 36 ...	Typical
6	M30	N116A	N115A		180	SR Corner Bra...	Beam	None	A1011 36 ...	Typical
7	M63A	P4	N124B		180	Cross Horiz	Beam	None	A1011 36 ...	Typical
8	M61B	P15	N123A		180	Cross Horiz	Beam	None	A1011 36 ...	Typical
9	M63B	P26	N126		180	Cross Horiz	Beam	None	A1011 36 ...	Typical
10	M25	N67	N68			Support Rail	Beam	None	A500 Gr.C...	Typical
11	M51	N91	N92			Support Rail	Beam	None	A500 Gr.C...	Typical
12	M65A	N119	N120			Support Rail	Beam	None	A500 Gr.C...	Typical
13	M2	P3	P1			Stand-Off Horiz	Beam	None	A500 Gr.C...	Typical
14	M7	P14	P13			Stand-Off Horiz	Beam	None	A500 Gr.C...	Typical
15	M12	P25	P24			Stand-Off Horiz	Beam	None	A500 Gr.C...	Typical
16	M32	N48A	N70A			RIGID	None	None	RIGID	Typical
17	M35	N45	N69A			RIGID	None	None	RIGID	Typical
18	M36	N51	N71A			RIGID	None	None	RIGID	Typical
19	M39A	N54	N72A			RIGID	None	None	RIGID	Typical
20	M64	N126A	N125A			RIGID	None	None	RIGID	Typical
21	M66	N129	N128			RIGID	None	None	RIGID	Typical
22	M68	N132	N131			RIGID	None	None	RIGID	Typical
23	M70	N133	N132A			RIGID	None	None	RIGID	Typical
24	M72	N135	N134			RIGID	None	None	RIGID	Typical
25	M74	N138	N137			RIGID	None	None	RIGID	Typical
26	M43	N72B	N76			RIGID	None	None	RIGID	Typical
27	M44	N73	N77			RIGID	None	None	RIGID	Typical
28	M52	M1	N94			RIGID	None	None	RIGID	Typical
29	M53	M3	N93			RIGID	None	None	RIGID	Typical
30	M54	N85	N95			RIGID	None	None	RIGID	Typical
31	M55	N86	N96			RIGID	None	None	RIGID	Typical
32	M66A	N112	N122			RIGID	None	None	RIGID	Typical
33	M67A	N111	N121			RIGID	None	None	RIGID	Typical
34	M68A	N113	N123			RIGID	None	None	RIGID	Typical
35	M69A	N114	N124			RIGID	None	None	RIGID	Typical
36	M68B	M2	N133B			RIGID	None	None	RIGID	Typical
37	M69B	N130A	N134A			RIGID	None	None	RIGID	Typical
38	M71B	N135A	N139			RIGID	None	None	RIGID	Typical
39	M72B	N136	N140			RIGID	None	None	RIGID	Typical
40	M67B	A1B	N128B			RIGID	None	None	RIGID	Typical
41	M68C	A2B	N129A			RIGID	None	None	RIGID	Typical
42	M69C	A3B	N127			RIGID	None	None	RIGID	Typical
43	M70A	A3T	N124C			RIGID	None	None	RIGID	Typical
44	M71A	A2T	N126B			RIGID	None	None	RIGID	Typical
45	M72A	A1T	N125B			RIGID	None	None	RIGID	Typical
46	M73A	N139A	A3R			RIGID	None	None	RIGID	Typical
47	M74A	N141	A2R			RIGID	None	None	RIGID	Typical
48	M75A	N140A	A1R			RIGID	None	None	RIGID	Typical
49	M76	G1B	N146			RIGID	None	None	RIGID	Typical
50	M77	G2B	N147			RIGID	None	None	RIGID	Typical
51	M78	G3B	N145			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
52	M79	G3T	N142			RIGID	None	None	RIGID	Typical
53	M80	G2T	N144			RIGID	None	None	RIGID	Typical
54	M81	G1T	N143			RIGID	None	None	RIGID	Typical
55	M82	N157	G3R			RIGID	None	None	RIGID	Typical
56	M83	N159	G2R			RIGID	None	None	RIGID	Typical
57	M84	N158	G1R			RIGID	None	None	RIGID	Typical
58	M85	B1B	N164			RIGID	None	None	RIGID	Typical
59	M86	B2B	N165			RIGID	None	None	RIGID	Typical
60	M87	B3B	N163			RIGID	None	None	RIGID	Typical
61	M88	B3T	N160			RIGID	None	None	RIGID	Typical
62	M89	B2T	N162			RIGID	None	None	RIGID	Typical
63	M90	B1T	N161			RIGID	None	None	RIGID	Typical
64	M91	N175	B3R			RIGID	None	None	RIGID	Typical
65	M92	N177	B2R			RIGID	None	None	RIGID	Typical
66	M93	N176	B1R			RIGID	None	None	RIGID	Typical
67	MP9	N60	N66			Mount Pipe	Column	None	A500 Gr.C...	Typical
68	MP7	N57	N63			Mount Pipe	Column	None	A500 Gr.C...	Typical
69	MP8	N74	N75			Mount Pipe	Column	None	A500 Gr.C...	Typical
70	MP3	N88	N90			Mount Pipe	Column	None	A500 Gr.C...	Typical
71	MP1	N87	N89			Mount Pipe	Column	None	A500 Gr.C...	Typical
72	MP6	N116	N118			Mount Pipe	Column	None	A500 Gr.C...	Typical
73	MP4	N115	N117			Mount Pipe	Column	None	A500 Gr.C...	Typical
74	MP2	N131A	N132B			Mount Pipe	Column	None	A500 Gr.C...	Typical
75	MP5	N137A	N138A			Mount Pipe	Column	None	A500 Gr.C...	Typical
76	M4	P10	P11			Grating Horiz	Beam	None	A529 Gr. 50	Typical
77	M9	P21	P22			Grating Horiz	Beam	None	A529 Gr. 50	Typical
78	M14	P32	P33			Grating Horiz	Beam	None	A529 Gr. 50	Typical
79	M18	N43	N44			Face Horiz	Beam	None	A500 Gr.C...	Typical
80	M48	N81A	N82A			Face Horiz	Beam	None	A500 Gr.C...	Typical
81	M62	N109	N110			Face Horiz	Beam	None	A500 Gr.C...	Typical
82	M61A	P4	N122A			Cross Horiz	Beam	None	A1011 36 ...	Typical
83	M60A	P15	N122B			Cross Horiz	Beam	None	A1011 36 ...	Typical
84	M62A	P26	N125			Cross Horiz	Beam	None	A1011 36 ...	Typical
85	M5	P7	P8			Corner Plate	Beam	None	A1011 36 ...	Typical
86	M10	P18	P19			Corner Plate	Beam	None	A1011 36 ...	Typical
87	M15	P29	P30			Corner Plate	Beam	None	A1011 36 ...	Typical
88	M88A	N124B	N128			Side Plate	Beam	None	A1011 36 ...	Typical
89	M89A	N125	N134			Side Plate	Beam	None	A1011 36 ...	Typical
90	M90A	N126	N125A			Side Plate	Beam	None	A1011 36 ...	Typical
91	M91A	N122B	N132A			Side Plate	Beam	None	A1011 36 ...	Typical
92	M92A	N123A	N131			Side Plate	Beam	None	A1011 36 ...	Typical
93	M93A	N122A	N137			Side Plate	Beam	None	A1011 36 ...	Typical

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Dead	DL			-1	13				
2	Dead of Ice	RL				13		42		
4	Structure Wind (0)	None						84		
5	Structure Wind (30)	None						84		
6	Structure Wind (45)	None						84		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
7	Structure Wind (60)	None						84		
8	Structure Wind (90)	None						84		
9	Structure Wind (120)	None						84		
10	Structure Wind (135)	None						84		
11	Structure Wind (150)	None						84		
12	Structure Wind w/ Ice...	None						84		
13	Structure Wind w/ Ice...	None						84		
14	Structure Wind w/ Ice...	None						84		
15	Structure Wind w/ Ice...	None						84		
16	Structure Wind w/ Ice...	None						84		
17	Structure Wind w/ Ice...	None						84		
18	Structure Wind w/ Ice...	None						84		
19	Structure Wind w/ Ice...	None						84		
20	Antenna Wind (0)	None				26				
21	Antenna Wind (30)	None				26				
22	Antenna Wind (45)	None				26				
23	Antenna Wind (60)	None				26				
24	Antenna Wind (90)	None				26				
25	Antenna Wind (120)	None				26				
26	Antenna Wind (135)	None				26				
27	Antenna Wind (150)	None				26				
28	Antenna Wind w/ Ice ...	None				26				
29	Antenna Wind w/ Ice ...	None				26				
30	Antenna Wind w/ Ice ...	None				26				
31	Antenna Wind w/ Ice ...	None				26				
32	Antenna Wind w/ Ice ...	None				26				
33	Antenna Wind w/ Ice ...	None				26				
34	Antenna Wind w/ Ice ...	None				26				
35	Antenna Wind w/ Ice ...	None				26				
36	Seismic X	ELX				13		42		
37	Seismic Y	ELY				13		42		
38	Maintenance Live Lm ...	OL1				1				
39	Maintenance Live Lm ...	OL2				1				
40	Maintenance Live Lm ...	OL3				1				

Load Combinations

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	Summary: 1.0D + ...	Yes	Y		DL	1	20	1																		
2	1.4D	Yes	Y		DL	1.4																				
3	1.2D + 1.0W(0)	Yes	Y		DL	1.2	4	1	20	1																
4	1.2D + 1.0W(30)	Yes	Y		DL	1.2	5	1	21	1																
5	1.2D + 1.0W(45)	Yes	Y		DL	1.2	6	1	22	1																
6	1.2D + 1.0W(60)	Yes	Y		DL	1.2	7	1	23	1																
7	1.2D + 1.0W(90)	Yes	Y		DL	1.2	8	1	24	1																
8	1.2D + 1.0W(120)	Yes	Y		DL	1.2	9	1	25	1																
9	1.2D + 1.0W(135)	Yes	Y		DL	1.2	10	1	26	1																
10	1.2D + 1.0W(150)	Yes	Y		DL	1.2	11	1	27	1																
11	1.2D + 1.0W(180)	Yes	Y		DL	1.2	4	-1	20	-1																
12	1.2D + 1.0W(210)	Yes	Y		DL	1.2	5	-1	21	-1																
13	1.2D + 1.0W(225)	Yes	Y		DL	1.2	6	-1	22	-1																

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
14	1.2D + 1.0W(240)	Yes	Y		DL	1.2	7	-1	23	-1														
15	1.2D + 1.0W(270)	Yes	Y		DL	1.2	8	-1	24	-1														
16	1.2D + 1.0W(300)	Yes	Y		DL	1.2	9	-1	25	-1														
17	1.2D + 1.0W(315)	Yes	Y		DL	1.2	10	-1	26	-1														
18	1.2D + 1.0W(330)	Yes	Y		DL	1.2	11	-1	27	-1														
19	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	12	1	28	1												
20	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	13	1	29	1												
21	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	14	1	30	1												
22	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	15	1	31	1												
23	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	16	1	32	1												
24	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	17	1	33	1												
25	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	18	1	34	1												
26	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	19	1	35	1												
27	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	12	-1	28	-1												
28	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	13	-1	39	-1												
29	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	14	-1	30	-1												
30	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	15	-1	31	-1												
31	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	16	-1	32	-1												
32	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	17	-1	33	-1												
33	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	18	-1	34	-1												
34	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	RL	1	19	-1	35	-1												
35	1.2D + 1.0E(0)	Yes	Y		DL	1.2	ELX	-1	ELY															
36	1.2D + 1.0E(30)	Yes	Y		DL	1.2	ELX	-.866	ELY	.5														
37	1.2D + 1.0E(45)	Yes	Y		DL	1.2	ELX	-.707	ELY	.707														
38	1.2D + 1.0E(60)	Yes	Y		DL	1.2	ELX	-.5	ELY	.866														
39	1.2D + 1.0E(90)	Yes	Y		DL	1.2	ELX	-2.2...	ELY	1														
40	1.2D + 1.0E(120)	Yes	Y		DL	1.2	ELX	.5	ELY	.866														
41	1.2D + 1.0E(135)	Yes	Y		DL	1.2	ELX	.707	ELY	.707														
42	1.2D + 1.0E(150)	Yes	Y		DL	1.2	ELX	.866	ELY	.5														
43	1.2D + 1.0E(180)	Yes	Y		DL	1.2	ELX	1	ELY	4.5...														
44	1.2D + 1.0E(210)	Yes	Y		DL	1.2	ELX	.866	ELY	-.5														
45	1.2D + 1.0E(225)	Yes	Y		DL	1.2	ELX	.707	ELY	-.707														
46	1.2D + 1.0E(240)	Yes	Y		DL	1.2	ELX	.5	ELY	-.866														
47	1.2D + 1.0E(270)	Yes	Y		DL	1.2	ELX	6.8...	ELY	-1														
48	1.2D + 1.0E(300)	Yes	Y		DL	1.2	ELX	-.5	ELY	-.866														
49	1.2D + 1.0E(315)	Yes	Y		DL	1.2	ELX	-.707	ELY	-.707														
50	1.2D + 1.0E(330)	Yes	Y		DL	1.2	ELX	-.866	ELY	-.5														
51	0.9D + 1.0E(0)	Yes	Y		DL	.9	ELX	-1	ELY															
52	0.9D + 1.0E(30)	Yes	Y		DL	.9	ELX	-.866	ELY	.5														
53	0.9D + 1.0E(45)	Yes	Y		DL	.9	ELX	-.707	ELY	.707														
54	0.9D + 1.0E(60)	Yes	Y		DL	.9	ELX	-.5	ELY	.866														
55	0.9D + 1.0E(90)	Yes	Y		DL	.9	ELX	-2.2...	ELY	1														
56	0.9D + 1.0E(120)	Yes	Y		DL	.9	ELX	.5	ELY	.866														
57	0.9D + 1.0E(135)	Yes	Y		DL	.9	ELX	.707	ELY	.707														
58	0.9D + 1.0E(150)	Yes	Y		DL	.9	ELX	.866	ELY	.5														
59	0.9D + 1.0E(180)	Yes	Y		DL	.9	ELX	1	ELY	4.5...														
60	0.9D + 1.0E(210)	Yes	Y		DL	.9	ELX	.866	ELY	-.5														
61	0.9D + 1.0E(225)	Yes	Y		DL	.9	ELX	.707	ELY	-.707														
62	0.9D + 1.0E(240)	Yes	Y		DL	.9	ELX	.5	ELY	-.866														
63	0.9D + 1.0E(270)	Yes	Y		DL	.9	ELX	6.8...	ELY	-1														
64	0.9D + 1.0E(300)	Yes	Y		DL	.9	ELX	-.5	ELY	-.866														
65	0.9D + 1.0E(315)	Yes	Y		DL	.9	ELX	-.707	ELY	-.707														

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
66	0.9D + 1.0E(330)	Yes	Y		DL	.9	ELX	-.866	ELY	-.5																
67	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	4	.067	20	.067	OL1	1.5														
68	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	5	.067	21	.067	OL1	1.5														
69	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	6	.067	22	.067	OL1	1.5														
70	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	7	.067	23	.067	OL1	1.5														
71	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	8	.067	24	.067	OL1	1.5														
72	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	9	.067	25	.067	OL1	1.5														
73	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	10	.067	26	.067	OL1	1.5														
74	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	11	.067	27	.067	OL1	1.5														
75	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	4	-.067	20	-.067	OL1	1.5														
76	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	5	-.067	21	-.067	OL1	1.5														
77	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	6	-.067	22	-.067	OL1	1.5														
78	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	7	-.067	23	-.067	OL1	1.5														
79	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	8	-.067	24	-.067	OL1	1.5														
80	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	9	-.067	25	-.067	OL1	1.5														
81	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	10	-.067	26	-.067	OL1	1.5														
82	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	11	-.067	27	-.067	OL1	1.5														
83	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	4	.067	20	.067	OL2	1.5														
84	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	5	.067	21	.067	OL2	1.5														
85	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	6	.067	22	.067	OL2	1.5														
86	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	7	.067	23	.067	OL2	1.5														
87	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	8	.067	24	.067	OL2	1.5														
88	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	9	.067	25	.067	OL2	1.5														
89	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	10	.067	26	.067	OL2	1.5														
90	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	11	.067	27	.067	OL2	1.5														
91	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	4	-.067	20	-.067	OL2	1.5														
92	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	5	-.067	21	-.067	OL2	1.5														
93	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	6	-.067	22	-.067	OL2	1.5														
94	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	7	-.067	23	-.067	OL2	1.5														
95	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	8	-.067	24	-.067	OL2	1.5														
96	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	9	-.067	25	-.067	OL2	1.5														
97	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	10	-.067	26	-.067	OL2	1.5														
98	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	11	-.067	27	-.067	OL2	1.5														
99	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	4	.067	20	.067	OL3	1.5														
100	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	5	.067	21	.067	OL3	1.5														
101	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	6	.067	22	.067	OL3	1.5														
102	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	7	.067	23	.067	OL3	1.5														
103	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	8	.067	24	.067	OL3	1.5														
104	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	9	.067	25	.067	OL3	1.5														
105	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	10	.067	26	.067	OL3	1.5														
106	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	11	.067	27	.067	OL3	1.5														
107	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	4	-.067	20	-.067	OL3	1.5														
108	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	5	-.067	21	-.067	OL3	1.5														
109	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	6	-.067	22	-.067	OL3	1.5														
110	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	7	-.067	23	-.067	OL3	1.5														
111	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	8	-.067	24	-.067	OL3	1.5														
112	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	9	-.067	25	-.067	OL3	1.5														
113	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	10	-.067	26	-.067	OL3	1.5														
114	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	11	-.067	27	-.067	OL3	1.5														

Joint Loads and Enforced Displacements (BLC 1 : Dead)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	Z	-32.25
2	A2B	L	Z	-32.25
3	B2T	L	Z	-32.25
4	B2B	L	Z	-32.25
5	G2T	L	Z	-32.25
6	G2B	L	Z	-32.25
7	A2R	L	Z	-63.9
8	B2R	L	Z	-63.9
9	G2R	L	Z	-63.9
10	A2R	L	Z	-75
11	B2R	L	Z	-75
12	G2R	L	Z	-75
13	P26	L	Z	-21.9

Joint Loads and Enforced Displacements (BLC 2 : Dead of Ice)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	Z	-127.351
2	A2B	L	Z	-127.351
3	B2T	L	Z	-127.351
4	B2B	L	Z	-127.351
5	G2T	L	Z	-127.351
6	G2B	L	Z	-127.351
7	A2R	L	Z	-60.301
8	B2R	L	Z	-60.301
9	G2R	L	Z	-60.301
10	A2R	L	Z	-64.414
11	B2R	L	Z	-64.414
12	G2R	L	Z	-64.414
13	P26	L	Z	-63.462

Joint Loads and Enforced Displacements (BLC 20 : Antenna Wind (0))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	-212.308
2	A2T	L	Y	0
3	A2B	L	X	-212.308
4	A2B	L	Y	0
5	B2T	L	X	-127.876
6	B2T	L	Y	0
7	B2B	L	X	-127.876
8	B2B	L	Y	0
9	G2T	L	X	-127.876
10	G2T	L	Y	0
11	G2B	L	X	-127.876
12	G2B	L	Y	0
13	A2R	L	X	-17.56
14	A2R	L	Y	0
15	B2R	L	X	-54.458
16	B2R	L	Y	0
17	G2R	L	X	-54.458
18	G2R	L	Y	0

Joint Loads and Enforced Displacements (BLC 20 : Antenna Wind (0)) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
19	A2R	L	X	-20.192
20	A2R	L	Y	0
21	B2R	L	X	-55.117
22	B2R	L	Y	0
23	G2R	L	X	-55.117
24	G2R	L	Y	0
25	P26	L	X	-68.403
26	P26	L	Y	0

Joint Loads and Enforced Displacements (BLC 21 : Antenna Wind (30))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	-159.491
2	A2T	L	Y	92.082
3	A2B	L	X	-159.491
4	A2B	L	Y	92.082
5	B2T	L	X	-86.37
6	B2T	L	Y	49.866
7	B2B	L	X	-86.37
8	B2B	L	Y	49.866
9	G2T	L	X	-159.491
10	G2T	L	Y	92.082
11	G2B	L	X	-159.491
12	G2B	L	Y	92.082
13	A2R	L	X	-25.859
14	A2R	L	Y	14.93
15	B2R	L	X	-57.814
16	B2R	L	Y	33.379
17	G2R	L	X	-25.859
18	G2R	L	Y	14.93
19	A2R	L	X	-27.569
20	A2R	L	Y	15.917
21	B2R	L	X	-57.814
22	B2R	L	Y	33.379
23	G2R	L	X	-27.569
24	G2R	L	Y	15.917
25	P26	L	X	-53.028
26	P26	L	Y	30.616

Joint Loads and Enforced Displacements (BLC 22 : Antenna Wind (45))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	-110.323
2	A2T	L	Y	110.323
3	A2B	L	X	-110.323
4	A2B	L	Y	110.323
5	B2T	L	X	-75.853
6	B2T	L	Y	75.853
7	B2B	L	X	-75.853
8	B2B	L	Y	75.853
9	G2T	L	X	-144.792
10	G2T	L	Y	144.792
11	G2B	L	X	-144.792

Joint Loads and Enforced Displacements (BLC 22 : Antenna Wind (45)) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
12	G2B	L	Y	144.792
13	A2R	L	X	-29.811
14	A2R	L	Y	29.811
15	B2R	L	X	-44.875
16	B2R	L	Y	44.875
17	G2R	L	X	-14.747
18	G2R	L	Y	14.747
19	A2R	L	X	-30.742
20	A2R	L	Y	30.742
21	B2R	L	X	-44.999
22	B2R	L	Y	44.999
23	G2R	L	X	-16.484
24	G2R	L	Y	16.484
25	P26	L	X	-38.226
26	P26	L	Y	38.226

Joint Loads and Enforced Displacements (BLC 23 : Antenna Wind (60))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	-63.938
2	A2T	L	Y	110.744
3	A2B	L	X	-63.938
4	A2B	L	Y	110.744
5	B2T	L	X	-63.938
6	B2T	L	Y	110.744
7	B2B	L	X	-63.938
8	B2B	L	Y	110.744
9	G2T	L	X	-106.154
10	G2T	L	Y	183.864
11	G2B	L	X	-106.154
12	G2B	L	Y	183.864
13	A2R	L	X	-27.229
14	A2R	L	Y	47.162
15	B2R	L	X	-27.229
16	B2R	L	Y	47.162
17	G2R	L	X	-8.78
18	G2R	L	Y	15.207
19	A2R	L	X	-27.558
20	A2R	L	Y	47.732
21	B2R	L	X	-27.558
22	B2R	L	Y	47.732
23	G2R	L	X	-10.096
24	G2R	L	Y	17.487
25	P26	L	X	-23.444
26	P26	L	Y	40.607

Joint Loads and Enforced Displacements (BLC 24 : Antenna Wind (90))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	-2.262e-5
2	A2T	L	Y	99.732
3	A2B	L	X	-2.262e-5
4	A2B	L	Y	99.732

Joint Loads and Enforced Displacements (BLC 24 : Antenna Wind (90)) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
5	B2T	L	X	-4.177e-5
6	B2T	L	Y	184.164
7	B2B	L	X	-4.177e-5
8	B2B	L	Y	184.164
9	G2T	L	X	-4.177e-5
10	G2T	L	Y	184.164
11	G2B	L	X	-4.177e-5
12	G2B	L	Y	184.164
13	A2R	L	X	-1.514e-5
14	A2R	L	Y	66.758
15	B2R	L	X	-6.772e-6
16	B2R	L	Y	29.859
17	G2R	L	X	-6.772e-6
18	G2R	L	Y	29.859
19	A2R	L	X	-1.514e-5
20	A2R	L	Y	66.758
21	B2R	L	X	-7.22e-6
22	B2R	L	Y	31.834
23	G2R	L	X	-7.22e-6
24	G2R	L	Y	31.834
25	P26	L	X	-9.008e-6
26	P26	L	Y	39.718

Joint Loads and Enforced Displacements (BLC 25 : Antenna Wind (120))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	63.938
2	A2T	L	Y	110.744
3	A2B	L	X	63.938
4	A2B	L	Y	110.744
5	B2T	L	X	106.154
6	B2T	L	Y	183.864
7	B2B	L	X	106.154
8	B2B	L	Y	183.864
9	G2T	L	X	63.938
10	G2T	L	Y	110.744
11	G2B	L	X	63.938
12	G2B	L	Y	110.744
13	A2R	L	X	27.229
14	A2R	L	Y	47.162
15	B2R	L	X	8.78
16	B2R	L	Y	15.207
17	G2R	L	X	27.229
18	G2R	L	Y	47.162
19	A2R	L	X	27.558
20	A2R	L	Y	47.732
21	B2R	L	X	10.096
22	B2R	L	Y	17.487
23	G2R	L	X	27.558
24	G2R	L	Y	47.732
25	P26	L	X	23.444
26	P26	L	Y	40.607

Joint Loads and Enforced Displacements (BLC 26 : Antenna Wind (135))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	110.323
2	A2T	L	Y	110.323
3	A2B	L	X	110.323
4	A2B	L	Y	110.323
5	B2T	L	X	144.792
6	B2T	L	Y	144.792
7	B2B	L	X	144.792
8	B2B	L	Y	144.792
9	G2T	L	X	75.853
10	G2T	L	Y	75.853
11	G2B	L	X	75.853
12	G2B	L	Y	75.853
13	A2R	L	X	29.811
14	A2R	L	Y	29.811
15	B2R	L	X	14.747
16	B2R	L	Y	14.747
17	G2R	L	X	44.875
18	G2R	L	Y	44.875
19	A2R	L	X	30.742
20	A2R	L	Y	30.742
21	B2R	L	X	16.484
22	B2R	L	Y	16.484
23	G2R	L	X	44.999
24	G2R	L	Y	44.999
25	P26	L	X	38.226
26	P26	L	Y	38.226

Joint Loads and Enforced Displacements (BLC 27 : Antenna Wind (150))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	159.49
2	A2T	L	Y	92.082
3	A2B	L	X	159.49
4	A2B	L	Y	92.082
5	B2T	L	X	159.49
6	B2T	L	Y	92.082
7	B2B	L	X	159.49
8	B2B	L	Y	92.082
9	G2T	L	X	86.37
10	G2T	L	Y	49.866
11	G2B	L	X	86.37
12	G2B	L	Y	49.866
13	A2R	L	X	25.859
14	A2R	L	Y	14.93
15	B2R	L	X	25.859
16	B2R	L	Y	14.93
17	G2R	L	X	57.814
18	G2R	L	Y	33.379
19	A2R	L	X	27.569
20	A2R	L	Y	15.917
21	B2R	L	X	27.569
22	B2R	L	Y	15.917

Joint Loads and Enforced Displacements (BLC 27 : Antenna Wind (150)) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
23	G2R	L	X	57.814
24	G2R	L	Y	33.379
25	P26	L	X	53.028
26	P26	L	Y	30.616

Joint Loads and Enforced Displacements (BLC 28 : Antenna Wind w/ Ice (0))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	-47.265
2	A2T	L	Y	0
3	A2B	L	X	-47.265
4	A2B	L	Y	0
5	B2T	L	X	-31.094
6	B2T	L	Y	0
7	B2B	L	X	-31.094
8	B2B	L	Y	0
9	G2T	L	X	-31.094
10	G2T	L	Y	0
11	G2B	L	X	-31.094
12	G2B	L	Y	0
13	A2R	L	X	-5.548
14	A2R	L	Y	0
15	B2R	L	X	-15.024
16	B2R	L	Y	0
17	G2R	L	X	-15.024
18	G2R	L	Y	0
19	A2R	L	X	-6.138
20	A2R	L	Y	0
21	B2R	L	X	-15.171
22	B2R	L	Y	0
23	G2R	L	X	-15.171
24	G2R	L	Y	0
25	P26	L	X	-18.561
26	P26	L	Y	0

Joint Loads and Enforced Displacements (BLC 29 : Antenna Wind w/ Ice (30))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	-36.265
2	A2T	L	Y	20.937
3	A2B	L	X	-36.265
4	A2B	L	Y	20.937
5	B2T	L	X	-22.26
6	B2T	L	Y	12.852
7	B2B	L	X	-22.26
8	B2B	L	Y	12.852
9	G2T	L	X	-36.265
10	G2T	L	Y	20.937
11	G2B	L	X	-36.265
12	G2B	L	Y	20.937
13	A2R	L	X	-7.54
14	A2R	L	Y	4.353
15	B2R	L	X	-15.746

Joint Loads and Enforced Displacements (BLC 29 : Antenna Wind w/ Ice (30)) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
16	B2R	L	Y	9.091
17	G2R	L	X	-7.54
18	G2R	L	Y	4.353
19	A2R	L	X	-7.923
20	A2R	L	Y	4.575
21	B2R	L	X	-15.746
22	B2R	L	Y	9.091
23	G2R	L	X	-7.923
24	G2R	L	Y	4.575
25	P26	L	X	-14.695
26	P26	L	Y	8.484

Joint Loads and Enforced Displacements (BLC 30 : Antenna Wind w/ Ice (45))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	-25.798
2	A2T	L	Y	25.798
3	A2B	L	X	-25.798
4	A2B	L	Y	25.798
5	B2T	L	X	-19.196
6	B2T	L	Y	19.196
7	B2B	L	X	-19.196
8	B2B	L	Y	19.196
9	G2T	L	X	-32.4
10	G2T	L	Y	32.4
11	G2B	L	X	-32.4
12	G2B	L	Y	32.4
13	A2R	L	X	-8.39
14	A2R	L	Y	8.39
15	B2R	L	X	-12.258
16	B2R	L	Y	12.258
17	G2R	L	X	-4.522
18	G2R	L	Y	4.522
19	A2R	L	X	-8.598
20	A2R	L	Y	8.598
21	B2R	L	X	-12.286
22	B2R	L	Y	12.286
23	G2R	L	X	-4.911
24	G2R	L	Y	4.911
25	P26	L	X	-10.873
26	P26	L	Y	10.873

Joint Loads and Enforced Displacements (BLC 31 : Antenna Wind w/ Ice (60))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	-15.547
2	A2T	L	Y	26.928
3	A2B	L	X	-15.547
4	A2B	L	Y	26.928
5	B2T	L	X	-15.547
6	B2T	L	Y	26.928
7	B2B	L	X	-15.547
8	B2B	L	Y	26.928

Joint Loads and Enforced Displacements (BLC 31 : Antenna Wind w/ Ice (60)) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
9	G2T	L	X	-23.633
10	G2T	L	Y	40.933
11	G2B	L	X	-23.633
12	G2B	L	Y	40.933
13	A2R	L	X	-7.512
14	A2R	L	Y	13.011
15	B2R	L	X	-7.512
16	B2R	L	Y	13.011
17	G2R	L	X	-2.774
18	G2R	L	Y	4.805
19	A2R	L	X	-7.586
20	A2R	L	Y	13.139
21	B2R	L	X	-7.586
22	B2R	L	Y	13.139
23	G2R	L	X	-3.069
24	G2R	L	Y	5.316
25	P26	L	X	-6.892
26	P26	L	Y	11.937

Joint Loads and Enforced Displacements (BLC 32 : Antenna Wind w/ Ice (90))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	-5.829e-6
2	A2T	L	Y	25.704
3	A2B	L	X	-5.829e-6
4	A2B	L	Y	25.704
5	B2T	L	X	-9.497e-6
6	B2T	L	Y	41.875
7	B2B	L	X	-9.497e-6
8	B2B	L	Y	41.875
9	G2T	L	X	-9.497e-6
10	G2T	L	Y	41.875
11	G2B	L	X	-9.497e-6
12	G2B	L	Y	41.875
13	A2R	L	X	-4.124e-6
14	A2R	L	Y	18.182
15	B2R	L	X	-1.975e-6
16	B2R	L	Y	8.707
17	G2R	L	X	-1.975e-6
18	G2R	L	Y	8.707
19	A2R	L	X	-4.124e-6
20	A2R	L	Y	18.182
21	B2R	L	X	-2.075e-6
22	B2R	L	Y	9.149
23	G2R	L	X	-2.075e-6
24	G2R	L	Y	9.149
25	P26	L	X	-2.765e-6
26	P26	L	Y	12.191

Joint Loads and Enforced Displacements (BLC 33 : Antenna Wind w/ Ice (120))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	15.547

Joint Loads and Enforced Displacements (BLC 33 : Antenna Wind w/ Ice (120)) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
2	A2T	L	Y	26.928
3	A2B	L	X	15.547
4	A2B	L	Y	26.928
5	B2T	L	X	23.633
6	B2T	L	Y	40.933
7	B2B	L	X	23.633
8	B2B	L	Y	40.933
9	G2T	L	X	15.547
10	G2T	L	Y	26.928
11	G2B	L	X	15.547
12	G2B	L	Y	26.928
13	A2R	L	X	7.512
14	A2R	L	Y	13.011
15	B2R	L	X	2.774
16	B2R	L	Y	4.805
17	G2R	L	X	7.512
18	G2R	L	Y	13.011
19	A2R	L	X	7.586
20	A2R	L	Y	13.139
21	B2R	L	X	3.069
22	B2R	L	Y	5.316
23	G2R	L	X	7.586
24	G2R	L	Y	13.139
25	P26	L	X	6.892
26	P26	L	Y	11.937

Joint Loads and Enforced Displacements (BLC 34 : Antenna Wind w/ Ice (135))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	25.798
2	A2T	L	Y	25.798
3	A2B	L	X	25.798
4	A2B	L	Y	25.798
5	B2T	L	X	32.4
6	B2T	L	Y	32.4
7	B2B	L	X	32.4
8	B2B	L	Y	32.4
9	G2T	L	X	19.196
10	G2T	L	Y	19.196
11	G2B	L	X	19.196
12	G2B	L	Y	19.196
13	A2R	L	X	8.39
14	A2R	L	Y	8.39
15	B2R	L	X	4.522
16	B2R	L	Y	4.522
17	G2R	L	X	12.258
18	G2R	L	Y	12.258
19	A2R	L	X	8.598
20	A2R	L	Y	8.598
21	B2R	L	X	4.911
22	B2R	L	Y	4.911
23	G2R	L	X	12.286

Joint Loads and Enforced Displacements (BLC 34 : Antenna Wind w/ Ice (135)) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
24	G2R	L	Y	12.286
25	P26	L	X	10.873
26	P26	L	Y	10.873

Joint Loads and Enforced Displacements (BLC 35 : Antenna Wind w/ Ice (150))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	36.265
2	A2T	L	Y	20.937
3	A2B	L	X	36.265
4	A2B	L	Y	20.937
5	B2T	L	X	36.265
6	B2T	L	Y	20.937
7	B2B	L	X	36.265
8	B2B	L	Y	20.937
9	G2T	L	X	22.26
10	G2T	L	Y	12.852
11	G2B	L	X	22.26
12	G2B	L	Y	12.852
13	A2R	L	X	7.54
14	A2R	L	Y	4.353
15	B2R	L	X	7.54
16	B2R	L	Y	4.353
17	G2R	L	X	15.746
18	G2R	L	Y	9.091
19	A2R	L	X	7.923
20	A2R	L	Y	4.575
21	B2R	L	X	7.923
22	B2R	L	Y	4.575
23	G2R	L	X	15.746
24	G2R	L	Y	9.091
25	P26	L	X	14.695
26	P26	L	Y	8.484

Joint Loads and Enforced Displacements (BLC 36 : Seismic X)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	X	3.079
2	A2B	L	X	3.079
3	B2T	L	X	3.079
4	B2B	L	X	3.079
5	G2T	L	X	3.079
6	G2B	L	X	3.079
7	A2R	L	X	6.1
8	B2R	L	X	6.1
9	G2R	L	X	6.1
10	A2R	L	X	7.16
11	B2R	L	X	7.16
12	G2R	L	X	7.16
13	P26	L	X	2.091

Joint Loads and Enforced Displacements (BLC 37 : Seismic Y)

Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...

Joint Loads and Enforced Displacements (BLC 37 : Seismic Y) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	A2T	L	Y	3.079
2	A2B	L	Y	3.079
3	B2T	L	Y	3.079
4	B2B	L	Y	3.079
5	G2T	L	Y	3.079
6	G2B	L	Y	3.079
7	A2R	L	Y	6.1
8	B2R	L	Y	6.1
9	G2R	L	Y	6.1
10	A2R	L	Y	7.16
11	B2R	L	Y	7.16
12	G2R	L	Y	7.16
13	P26	L	Y	2.091

Joint Loads and Enforced Displacements (BLC 38 : Maintenance Live Lm (1))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	M3	L	Z	-500

Joint Loads and Enforced Displacements (BLC 39 : Maintenance Live Lm (2))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	M2	L	Z	-500

Joint Loads and Enforced Displacements (BLC 40 : Maintenance Live Lm (3))

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
1	M1	L	Z	-500

Member Point Loads

Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
No Data to Print ...			

Member Distributed Loads (BLC 2 : Dead of Ice)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	Z	-8.008	-8.008	0	0
2	M8	Z	-8.008	-8.008	0	0
3	M13	Z	-8.008	-8.008	0	0
4	M28	Z	-16.888	-16.888	0	0
5	M29	Z	-16.888	-16.888	0	0
6	M30	Z	-16.888	-16.888	0	0
7	M63A	Z	-11.877	-11.877	0	0
8	M61B	Z	-11.877	-11.877	0	0
9	M63B	Z	-11.877	-11.877	0	0
10	M25	Z	-8.875	-8.875	0	0
11	M51	Z	-8.875	-8.875	0	0
12	M65A	Z	-8.875	-8.875	0	0
13	M2	Z	-13.257	-13.257	0	0
14	M7	Z	-13.257	-13.257	0	0
15	M12	Z	-13.257	-13.257	0	0

Member Distributed Loads (BLC 2 : Dead of Ice) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
16	MP9	Z	-8.875	-8.875	0	0
17	MP7	Z	-8.875	-8.875	0	0
18	MP8	Z	-8.875	-8.875	0	0
19	MP3	Z	-8.875	-8.875	0	0
20	MP1	Z	-8.875	-8.875	0	0
21	MP6	Z	-8.875	-8.875	0	0
22	MP4	Z	-8.875	-8.875	0	0
23	MP2	Z	-8.875	-8.875	0	0
24	MP5	Z	-8.875	-8.875	0	0
25	M4	Z	-8.008	-8.008	0	0
26	M9	Z	-8.008	-8.008	0	0
27	M14	Z	-8.008	-8.008	0	0
28	M18	Z	-10.11	-10.11	0	0
29	M48	Z	-10.11	-10.11	0	0
30	M62	Z	-10.11	-10.11	0	0
31	M61A	Z	-11.877	-11.877	0	0
32	M60A	Z	-11.877	-11.877	0	0
33	M62A	Z	-11.877	-11.877	0	0
34	M5	Z	-11.842	-11.842	0	0
35	M10	Z	-11.842	-11.842	0	0
36	M15	Z	-11.842	-11.842	0	0
37	M88A	Z	-6.811	-6.811	0	0
38	M89A	Z	-6.811	-6.811	0	0
39	M90A	Z	-6.811	-6.811	0	0
40	M91A	Z	-6.811	-6.811	0	0
41	M92A	Z	-6.811	-6.811	0	0
42	M93A	Z	-6.811	-6.811	0	0

Member Distributed Loads (BLC 4 : Structure Wind (0))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	-11.325	-11.325	0	0
2	M3	Y	0	0	0	0
3	M8	X	-2.571	-2.571	0	0
4	M8	Y	0	0	0	0
5	M13	X	-3.104	-3.104	0	0
6	M13	Y	0	0	0	0
7	M28	X	-37.399	-37.399	0	0
8	M28	Y	0	0	0	0
9	M29	X	-9.35	-9.35	0	0
10	M29	Y	0	0	0	0
11	M30	X	-9.35	-9.35	0	0
12	M30	Y	0	0	0	0
13	M63A	X	-4.788	-4.788	0	0
14	M63A	Y	0	0	0	0
15	M61B	X	-19.153	-19.153	0	0
16	M61B	Y	0	0	0	0
17	M63B	X	-4.788	-4.788	0	0
18	M63B	Y	0	0	0	0
19	M25	X	-2.444	-2.444	0	0
20	M25	Y	0	0	0	0
21	M51	X	-9.775	-9.775	0	0

Member Distributed Loads (BLC 4 : Structure Wind (0)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
22	M51	Y	0	0	0	0
23	M65A	X	-2.444	-2.444	0	0
24	M65A	Y	0	0	0	0
25	M2	X	-17	-17	0	0
26	M2	Y	0	0	0	0
27	M7	X	-2.096e-25	-2.096e-25	0	0
28	M7	Y	0	0	0	0
29	M12	X	-17	-17	0	0
30	M12	Y	0	0	0	0
31	MP9	X	-9.775	-9.775	0	0
32	MP9	Y	0	0	0	0
33	MP7	X	-9.775	-9.775	0	0
34	MP7	Y	0	0	0	0
35	MP8	X	-9.775	-9.775	0	0
36	MP8	Y	0	0	0	0
37	MP3	X	-9.775	-9.775	0	0
38	MP3	Y	0	0	0	0
39	MP1	X	-9.775	-9.775	0	0
40	MP1	Y	0	0	0	0
41	MP6	X	-9.775	-9.775	0	0
42	MP6	Y	0	0	0	0
43	MP4	X	-9.775	-9.775	0	0
44	MP4	Y	0	0	0	0
45	MP2	X	-9.775	-9.775	0	0
46	MP2	Y	0	0	0	0
47	MP5	X	-9.775	-9.775	0	0
48	MP5	Y	0	0	0	0
49	M4	X	-3.104	-3.104	0	0
50	M4	Y	0	0	0	0
51	M9	X	-2.571	-2.571	0	0
52	M9	Y	0	0	0	0
53	M14	X	-11.325	-11.325	0	0
54	M14	Y	0	0	0	0
55	M18	X	-2.975	-2.975	0	0
56	M18	Y	0	0	0	0
57	M48	X	-11.9	-11.9	0	0
58	M48	Y	0	0	0	0
59	M62	X	-2.975	-2.975	0	0
60	M62	Y	0	0	0	0
61	M61A	X	-4.788	-4.788	0	0
62	M61A	Y	0	0	0	0
63	M60A	X	-19.153	-19.153	0	0
64	M60A	Y	0	0	0	0
65	M62A	X	-4.788	-4.788	0	0
66	M62A	Y	0	0	0	0
67	M5	X	-9.208	-9.208	0	0
68	M5	Y	0	0	0	0
69	M10	X	-36.833	-36.833	0	0
70	M10	Y	0	0	0	0
71	M15	X	-9.208	-9.208	0	0
72	M15	Y	0	0	0	0
73	M88A	X	-13.458	-13.458	0	0

Member Distributed Loads (BLC 4 : Structure Wind (0)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
74	M88A	Y	0	0	0	0
75	M89A	X	-13.458	-13.458	0	0
76	M89A	Y	0	0	0	0
77	M90A	X	-3.365	-3.365	0	0
78	M90A	Y	0	0	0	0
79	M91A	X	-3.365	-3.365	0	0
80	M91A	Y	0	0	0	0
81	M92A	X	-3.365	-3.365	0	0
82	M92A	Y	0	0	0	0
83	M93A	X	-3.365	-3.365	0	0
84	M93A	Y	0	0	0	0

Member Distributed Loads (BLC 5 : Structure Wind (30))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	-7.588	-7.588	0	0
2	M3	Y	4.381	4.381	0	0
3	M8	X	-7.127	-7.127	0	0
4	M8	Y	4.115	4.115	0	0
5	M13	X	-.007	-.007	0	0
6	M13	Y	.004	.004	0	0
7	M28	X	-24.292	-24.292	0	0
8	M28	Y	14.025	14.025	0	0
9	M29	X	-2.452e-13	-2.452e-13	0	0
10	M29	Y	1.416e-13	1.416e-13	0	0
11	M30	X	-24.292	-24.292	0	0
12	M30	Y	14.025	14.025	0	0
13	M63A	X	-9.761e-14	-9.761e-14	0	0
14	M63A	Y	5.636e-14	5.636e-14	0	0
15	M61B	X	-12.44	-12.44	0	0
16	M61B	Y	7.182	7.182	0	0
17	M63B	X	-12.44	-12.44	0	0
18	M63B	Y	7.182	7.182	0	0
19	M25	X	-4.838e-14	-4.838e-14	0	0
20	M25	Y	2.793e-14	2.793e-14	0	0
21	M51	X	-6.349	-6.349	0	0
22	M51	Y	3.666	3.666	0	0
23	M65A	X	-6.349	-6.349	0	0
24	M65A	Y	3.666	3.666	0	0
25	M2	X	-19.63	-19.63	0	0
26	M2	Y	11.333	11.333	0	0
27	M7	X	-4.907	-4.907	0	0
28	M7	Y	2.833	2.833	0	0
29	M12	X	-4.907	-4.907	0	0
30	M12	Y	2.833	2.833	0	0
31	MP9	X	-8.465	-8.465	0	0
32	MP9	Y	4.887	4.887	0	0
33	MP7	X	-8.465	-8.465	0	0
34	MP7	Y	4.887	4.887	0	0
35	MP8	X	-8.465	-8.465	0	0
36	MP8	Y	4.887	4.887	0	0
37	MP3	X	-8.465	-8.465	0	0

Member Distributed Loads (BLC 5 : Structure Wind (30)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
38	MP3	Y	4.887	4.887	0	0
39	MP1	X	-8.465	-8.465	0	0
40	MP1	Y	4.887	4.887	0	0
41	MP6	X	-8.465	-8.465	0	0
42	MP6	Y	4.887	4.887	0	0
43	MP4	X	-8.465	-8.465	0	0
44	MP4	Y	4.887	4.887	0	0
45	MP2	X	-8.465	-8.465	0	0
46	MP2	Y	4.887	4.887	0	0
47	MP5	X	-8.465	-8.465	0	0
48	MP5	Y	4.887	4.887	0	0
49	M4	X	-7.588	-7.588	0	0
50	M4	Y	4.381	4.381	0	0
51	M9	X	-.007	-.007	0	0
52	M9	Y	.004	.004	0	0
53	M14	X	-7.127	-7.127	0	0
54	M14	Y	4.115	4.115	0	0
55	M18	X	-5.89e-14	-5.89e-14	0	0
56	M18	Y	3.4e-14	3.4e-14	0	0
57	M48	X	-7.729	-7.729	0	0
58	M48	Y	4.462	4.462	0	0
59	M62	X	-7.729	-7.729	0	0
60	M62	Y	4.462	4.462	0	0
61	M61A	X	-9.221e-14	-9.221e-14	0	0
62	M61A	Y	5.324e-14	5.324e-14	0	0
63	M60A	X	-12.44	-12.44	0	0
64	M60A	Y	7.182	7.182	0	0
65	M62A	X	-12.44	-12.44	0	0
66	M62A	Y	7.182	7.182	0	0
67	M5	X	-2.415e-13	-2.415e-13	0	0
68	M5	Y	1.394e-13	1.394e-13	0	0
69	M10	X	-23.924	-23.924	0	0
70	M10	Y	13.812	13.812	0	0
71	M15	X	-23.924	-23.924	0	0
72	M15	Y	13.812	13.812	0	0
73	M88A	X	-8.741	-8.741	0	0
74	M88A	Y	5.047	5.047	0	0
75	M89A	X	-8.741	-8.741	0	0
76	M89A	Y	5.047	5.047	0	0
77	M90A	X	-6.661e-14	-6.661e-14	0	0
78	M90A	Y	3.846e-14	3.846e-14	0	0
79	M91A	X	-6.661e-14	-6.661e-14	0	0
80	M91A	Y	3.846e-14	3.846e-14	0	0
81	M92A	X	-8.741	-8.741	0	0
82	M92A	Y	5.047	5.047	0	0
83	M93A	X	-8.741	-8.741	0	0
84	M93A	Y	5.047	5.047	0	0

Member Distributed Loads (BLC 6 : Structure Wind (45))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	-4.225	-4.225	0	0

Member Distributed Loads (BLC 6 : Structure Wind (45)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
2	M3	Y	4.225	4.225	0	0
3	M8	X	-7.363	-7.363	0	0
4	M8	Y	7.363	7.363	0	0
5	M13	X	-.433	-.433	0	0
6	M13	Y	.433	.433	0	0
7	M28	X	-13.223	-13.223	0	0
8	M28	Y	13.223	13.223	0	0
9	M29	X	-1.772	-1.772	0	0
10	M29	Y	1.772	1.772	0	0
11	M30	X	-24.674	-24.674	0	0
12	M30	Y	24.674	24.674	0	0
13	M63A	X	-.907	-.907	0	0
14	M63A	Y	.907	.907	0	0
15	M61B	X	-6.772	-6.772	0	0
16	M61B	Y	6.772	6.772	0	0
17	M63B	X	-12.636	-12.636	0	0
18	M63B	Y	12.636	12.636	0	0
19	M25	X	-.463	-.463	0	0
20	M25	Y	.463	.463	0	0
21	M51	X	-3.456	-3.456	0	0
22	M51	Y	3.456	3.456	0	0
23	M65A	X	-6.449	-6.449	0	0
24	M65A	Y	6.449	6.449	0	0
25	M2	X	-14.954	-14.954	0	0
26	M2	Y	14.954	14.954	0	0
27	M7	X	-8.014	-8.014	0	0
28	M7	Y	8.014	8.014	0	0
29	M12	X	-1.074	-1.074	0	0
30	M12	Y	1.074	1.074	0	0
31	MP9	X	-6.912	-6.912	0	0
32	MP9	Y	6.912	6.912	0	0
33	MP7	X	-6.912	-6.912	0	0
34	MP7	Y	6.912	6.912	0	0
35	MP8	X	-6.912	-6.912	0	0
36	MP8	Y	6.912	6.912	0	0
37	MP3	X	-6.912	-6.912	0	0
38	MP3	Y	6.912	6.912	0	0
39	MP1	X	-6.912	-6.912	0	0
40	MP1	Y	6.912	6.912	0	0
41	MP6	X	-6.912	-6.912	0	0
42	MP6	Y	6.912	6.912	0	0
43	MP4	X	-6.912	-6.912	0	0
44	MP4	Y	6.912	6.912	0	0
45	MP2	X	-6.912	-6.912	0	0
46	MP2	Y	6.912	6.912	0	0
47	MP5	X	-6.912	-6.912	0	0
48	MP5	Y	6.912	6.912	0	0
49	M4	X	-7.581	-7.581	0	0
50	M4	Y	7.581	7.581	0	0
51	M9	X	-.651	-.651	0	0
52	M9	Y	.651	.651	0	0
53	M14	X	-3.789	-3.789	0	0

Member Distributed Loads (BLC 6 : Structure Wind (45)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
54	M14	Y	3.789	3.789	0	0
55	M18	X	-.564	-.564	0	0
56	M18	Y	.564	.564	0	0
57	M48	X	-4.207	-4.207	0	0
58	M48	Y	4.207	4.207	0	0
59	M62	X	-7.851	-7.851	0	0
60	M62	Y	7.851	7.851	0	0
61	M61A	X	-.907	-.907	0	0
62	M61A	Y	.907	.907	0	0
63	M60A	X	-6.772	-6.772	0	0
64	M60A	Y	6.772	6.772	0	0
65	M62A	X	-12.636	-12.636	0	0
66	M62A	Y	12.636	12.636	0	0
67	M5	X	-1.745	-1.745	0	0
68	M5	Y	1.745	1.745	0	0
69	M10	X	-13.022	-13.022	0	0
70	M10	Y	13.022	13.022	0	0
71	M15	X	-24.3	-24.3	0	0
72	M15	Y	24.3	24.3	0	0
73	M88A	X	-4.758	-4.758	0	0
74	M88A	Y	4.758	4.758	0	0
75	M89A	X	-4.758	-4.758	0	0
76	M89A	Y	4.758	4.758	0	0
77	M90A	X	-.637	-.637	0	0
78	M90A	Y	.637	.637	0	0
79	M91A	X	-.637	-.637	0	0
80	M91A	Y	.637	.637	0	0
81	M92A	X	-8.879	-8.879	0	0
82	M92A	Y	8.879	8.879	0	0
83	M93A	X	-8.879	-8.879	0	0
84	M93A	Y	8.879	8.879	0	0

Member Distributed Loads (BLC 7 : Structure Wind (60))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	-1.552	-1.552	0	0
2	M3	Y	2.688	2.688	0	0
3	M8	X	-5.662	-5.662	0	0
4	M8	Y	9.808	9.808	0	0
5	M13	X	-1.285	-1.285	0	0
6	M13	Y	2.226	2.226	0	0
7	M28	X	-4.675	-4.675	0	0
8	M28	Y	8.097	8.097	0	0
9	M29	X	-4.675	-4.675	0	0
10	M29	Y	8.097	8.097	0	0
11	M30	X	-18.7	-18.7	0	0
12	M30	Y	32.389	32.389	0	0
13	M63A	X	-2.394	-2.394	0	0
14	M63A	Y	4.147	4.147	0	0
15	M61B	X	-2.394	-2.394	0	0
16	M61B	Y	4.147	4.147	0	0
17	M63B	X	-9.577	-9.577	0	0

Member Distributed Loads (BLC 7 : Structure Wind (60)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
18	M63B	Y	16.587	16.587	0	0
19	M25	X	-1.222	-1.222	0	0
20	M25	Y	2.116	2.116	0	0
21	M51	X	-1.222	-1.222	0	0
22	M51	Y	2.116	2.116	0	0
23	M65A	X	-4.887	-4.887	0	0
24	M65A	Y	8.465	8.465	0	0
25	M2	X	-8.5	-8.5	0	0
26	M2	Y	14.722	14.722	0	0
27	M7	X	-8.5	-8.5	0	0
28	M7	Y	14.722	14.722	0	0
29	M12	X	-2.526e-13	-2.526e-13	0	0
30	M12	Y	4.376e-13	4.376e-13	0	0
31	MP9	X	-4.887	-4.887	0	0
32	MP9	Y	8.465	8.465	0	0
33	MP7	X	-4.887	-4.887	0	0
34	MP7	Y	8.465	8.465	0	0
35	MP8	X	-4.887	-4.887	0	0
36	MP8	Y	8.465	8.465	0	0
37	MP3	X	-4.887	-4.887	0	0
38	MP3	Y	8.465	8.465	0	0
39	MP1	X	-4.887	-4.887	0	0
40	MP1	Y	8.465	8.465	0	0
41	MP6	X	-4.887	-4.887	0	0
42	MP6	Y	8.465	8.465	0	0
43	MP4	X	-4.887	-4.887	0	0
44	MP4	Y	8.465	8.465	0	0
45	MP2	X	-4.887	-4.887	0	0
46	MP2	Y	8.465	8.465	0	0
47	MP5	X	-4.887	-4.887	0	0
48	MP5	Y	8.465	8.465	0	0
49	M4	X	-5.662	-5.662	0	0
50	M4	Y	9.808	9.808	0	0
51	M9	X	-1.552	-1.552	0	0
52	M9	Y	2.688	2.688	0	0
53	M14	X	-1.285	-1.285	0	0
54	M14	Y	2.226	2.226	0	0
55	M18	X	-1.487	-1.487	0	0
56	M18	Y	2.576	2.576	0	0
57	M48	X	-1.487	-1.487	0	0
58	M48	Y	2.576	2.576	0	0
59	M62	X	-5.95	-5.95	0	0
60	M62	Y	10.306	10.306	0	0
61	M61A	X	-2.394	-2.394	0	0
62	M61A	Y	4.147	4.147	0	0
63	M60A	X	-2.394	-2.394	0	0
64	M60A	Y	4.147	4.147	0	0
65	M62A	X	-9.577	-9.577	0	0
66	M62A	Y	16.587	16.587	0	0
67	M5	X	-4.604	-4.604	0	0
68	M5	Y	7.975	7.975	0	0
69	M10	X	-4.604	-4.604	0	0

Member Distributed Loads (BLC 7 : Structure Wind (60)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
70	M10	Y	7.975	7.975	0	0
71	M15	X	-18.416	-18.416	0	0
72	M15	Y	31.898	31.898	0	0
73	M88A	X	-1.682	-1.682	0	0
74	M88A	Y	2.914	2.914	0	0
75	M89A	X	-1.682	-1.682	0	0
76	M89A	Y	2.914	2.914	0	0
77	M90A	X	-1.682	-1.682	0	0
78	M90A	Y	2.914	2.914	0	0
79	M91A	X	-1.682	-1.682	0	0
80	M91A	Y	2.914	2.914	0	0
81	M92A	X	-6.729	-6.729	0	0
82	M92A	Y	11.655	11.655	0	0
83	M93A	X	-6.729	-6.729	0	0
84	M93A	Y	11.655	11.655	0	0

Member Distributed Loads (BLC 8 : Structure Wind (90))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	-1.898e-9	-1.898e-9	0	0
2	M3	Y	.008	.008	0	0
3	M8	X	-1.987e-6	-1.987e-6	0	0
4	M8	Y	8.762	8.762	0	0
5	M13	X	-1.866e-6	-1.866e-6	0	0
6	M13	Y	8.229	8.229	0	0
7	M28	X	-4.363e-19	-4.363e-19	0	0
8	M28	Y	1.924e-12	1.924e-12	0	0
9	M29	X	-6.361e-6	-6.361e-6	0	0
10	M29	Y	28.05	28.05	0	0
11	M30	X	-6.361e-6	-6.361e-6	0	0
12	M30	Y	28.05	28.05	0	0
13	M63A	X	-3.258e-6	-3.258e-6	0	0
14	M63A	Y	14.365	14.365	0	0
15	M61B	X	-2.335e-19	-2.335e-19	0	0
16	M61B	Y	1.03e-12	1.03e-12	0	0
17	M63B	X	-3.258e-6	-3.258e-6	0	0
18	M63B	Y	14.365	14.365	0	0
19	M25	X	-1.663e-6	-1.663e-6	0	0
20	M25	Y	7.331	7.331	0	0
21	M51	X	-1.14e-19	-1.14e-19	0	0
22	M51	Y	5.028e-13	5.028e-13	0	0
23	M65A	X	-1.663e-6	-1.663e-6	0	0
24	M65A	Y	7.331	7.331	0	0
25	M2	X	-1.285e-6	-1.285e-6	0	0
26	M2	Y	5.667	5.667	0	0
27	M7	X	-5.141e-6	-5.141e-6	0	0
28	M7	Y	22.666	22.666	0	0
29	M12	X	-1.285e-6	-1.285e-6	0	0
30	M12	Y	5.667	5.667	0	0
31	MP9	X	-2.217e-6	-2.217e-6	0	0
32	MP9	Y	9.775	9.775	0	0
33	MP7	X	-2.217e-6	-2.217e-6	0	0

Member Distributed Loads (BLC 8 : Structure Wind (90)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
34	MP7	Y	9.775	9.775	0	0
35	MP8	X	-2.217e-6	-2.217e-6	0	0
36	MP8	Y	9.775	9.775	0	0
37	MP3	X	-2.217e-6	-2.217e-6	0	0
38	MP3	Y	9.775	9.775	0	0
39	MP1	X	-2.217e-6	-2.217e-6	0	0
40	MP1	Y	9.775	9.775	0	0
41	MP6	X	-2.217e-6	-2.217e-6	0	0
42	MP6	Y	9.775	9.775	0	0
43	MP4	X	-2.217e-6	-2.217e-6	0	0
44	MP4	Y	9.775	9.775	0	0
45	MP2	X	-2.217e-6	-2.217e-6	0	0
46	MP2	Y	9.775	9.775	0	0
47	MP5	X	-2.217e-6	-2.217e-6	0	0
48	MP5	Y	9.775	9.775	0	0
49	M4	X	-1.866e-6	-1.866e-6	0	0
50	M4	Y	8.229	8.229	0	0
51	M9	X	-1.987e-6	-1.987e-6	0	0
52	M9	Y	8.762	8.762	0	0
53	M14	X	-1.898e-9	-1.898e-9	0	0
54	M14	Y	.008	.008	0	0
55	M18	X	-2.024e-6	-2.024e-6	0	0
56	M18	Y	8.925	8.925	0	0
57	M48	X	-1.388e-19	-1.388e-19	0	0
58	M48	Y	6.121e-13	6.121e-13	0	0
59	M62	X	-2.024e-6	-2.024e-6	0	0
60	M62	Y	8.925	8.925	0	0
61	M61A	X	-3.258e-6	-3.258e-6	0	0
62	M61A	Y	14.365	14.365	0	0
63	M60A	X	-2.136e-19	-2.136e-19	0	0
64	M60A	Y	9.418e-13	9.418e-13	0	0
65	M62A	X	-3.258e-6	-3.258e-6	0	0
66	M62A	Y	14.365	14.365	0	0
67	M5	X	-6.265e-6	-6.265e-6	0	0
68	M5	Y	27.625	27.625	0	0
69	M10	X	-4.297e-19	-4.297e-19	0	0
70	M10	Y	1.895e-12	1.895e-12	0	0
71	M15	X	-6.265e-6	-6.265e-6	0	0
72	M15	Y	27.625	27.625	0	0
73	M88A	X	-1.57e-19	-1.57e-19	0	0
74	M88A	Y	6.922e-13	6.922e-13	0	0
75	M89A	X	-1.57e-19	-1.57e-19	0	0
76	M89A	Y	6.922e-13	6.922e-13	0	0
77	M90A	X	-2.289e-6	-2.289e-6	0	0
78	M90A	Y	10.094	10.094	0	0
79	M91A	X	-2.289e-6	-2.289e-6	0	0
80	M91A	Y	10.094	10.094	0	0
81	M92A	X	-2.289e-6	-2.289e-6	0	0
82	M92A	Y	10.094	10.094	0	0
83	M93A	X	-2.289e-6	-2.289e-6	0	0
84	M93A	Y	10.094	10.094	0	0

Member Distributed Loads (BLC 9 : Structure Wind (120))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	1.285	1.285	0	0
2	M3	Y	2.226	2.226	0	0
3	M8	X	1.552	1.552	0	0
4	M8	Y	2.688	2.688	0	0
5	M13	X	5.662	5.662	0	0
6	M13	Y	9.808	9.808	0	0
7	M28	X	4.675	4.675	0	0
8	M28	Y	8.097	8.097	0	0
9	M29	X	18.7	18.7	0	0
10	M29	Y	32.389	32.389	0	0
11	M30	X	4.675	4.675	0	0
12	M30	Y	8.097	8.097	0	0
13	M63A	X	9.577	9.577	0	0
14	M63A	Y	16.587	16.587	0	0
15	M61B	X	2.394	2.394	0	0
16	M61B	Y	4.147	4.147	0	0
17	M63B	X	2.394	2.394	0	0
18	M63B	Y	4.147	4.147	0	0
19	M25	X	4.887	4.887	0	0
20	M25	Y	8.465	8.465	0	0
21	M51	X	1.222	1.222	0	0
22	M51	Y	2.116	2.116	0	0
23	M65A	X	1.222	1.222	0	0
24	M65A	Y	2.116	2.116	0	0
25	M2	X	1.036e-12	1.036e-12	0	0
26	M2	Y	1.795e-12	1.795e-12	0	0
27	M7	X	8.5	8.5	0	0
28	M7	Y	14.722	14.722	0	0
29	M12	X	8.5	8.5	0	0
30	M12	Y	14.722	14.722	0	0
31	MP9	X	4.887	4.887	0	0
32	MP9	Y	8.465	8.465	0	0
33	MP7	X	4.887	4.887	0	0
34	MP7	Y	8.465	8.465	0	0
35	MP8	X	4.887	4.887	0	0
36	MP8	Y	8.465	8.465	0	0
37	MP3	X	4.887	4.887	0	0
38	MP3	Y	8.465	8.465	0	0
39	MP1	X	4.887	4.887	0	0
40	MP1	Y	8.465	8.465	0	0
41	MP6	X	4.887	4.887	0	0
42	MP6	Y	8.465	8.465	0	0
43	MP4	X	4.887	4.887	0	0
44	MP4	Y	8.465	8.465	0	0
45	MP2	X	4.887	4.887	0	0
46	MP2	Y	8.465	8.465	0	0
47	MP5	X	4.887	4.887	0	0
48	MP5	Y	8.465	8.465	0	0
49	M4	X	1.285	1.285	0	0
50	M4	Y	2.226	2.226	0	0
51	M9	X	5.662	5.662	0	0
52	M9	Y	9.808	9.808	0	0

Member Distributed Loads (BLC 9 : Structure Wind (120)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
53	M14	X	1.552	1.552	0	0
54	M14	Y	2.688	2.688	0	0
55	M18	X	5.95	5.95	0	0
56	M18	Y	10.306	10.306	0	0
57	M48	X	1.487	1.487	0	0
58	M48	Y	2.576	2.576	0	0
59	M62	X	1.487	1.487	0	0
60	M62	Y	2.576	2.576	0	0
61	M61A	X	9.577	9.577	0	0
62	M61A	Y	16.587	16.587	0	0
63	M60A	X	2.394	2.394	0	0
64	M60A	Y	4.147	4.147	0	0
65	M62A	X	2.394	2.394	0	0
66	M62A	Y	4.147	4.147	0	0
67	M5	X	18.416	18.416	0	0
68	M5	Y	31.898	31.898	0	0
69	M10	X	4.604	4.604	0	0
70	M10	Y	7.975	7.975	0	0
71	M15	X	4.604	4.604	0	0
72	M15	Y	7.975	7.975	0	0
73	M88A	X	1.682	1.682	0	0
74	M88A	Y	2.914	2.914	0	0
75	M89A	X	1.682	1.682	0	0
76	M89A	Y	2.914	2.914	0	0
77	M90A	X	6.729	6.729	0	0
78	M90A	Y	11.655	11.655	0	0
79	M91A	X	6.729	6.729	0	0
80	M91A	Y	11.655	11.655	0	0
81	M92A	X	1.682	1.682	0	0
82	M92A	Y	2.914	2.914	0	0
83	M93A	X	1.682	1.682	0	0
84	M93A	Y	2.914	2.914	0	0

Member Distributed Loads (BLC 10 : Structure Wind (135))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	3.789	3.789	0	0
2	M3	Y	3.789	3.789	0	0
3	M8	X	.651	.651	0	0
4	M8	Y	.651	.651	0	0
5	M13	X	7.581	7.581	0	0
6	M13	Y	7.581	7.581	0	0
7	M28	X	13.223	13.223	0	0
8	M28	Y	13.223	13.223	0	0
9	M29	X	24.674	24.674	0	0
10	M29	Y	24.674	24.674	0	0
11	M30	X	1.772	1.772	0	0
12	M30	Y	1.772	1.772	0	0
13	M63A	X	12.636	12.636	0	0
14	M63A	Y	12.636	12.636	0	0
15	M61B	X	6.772	6.772	0	0
16	M61B	Y	6.772	6.772	0	0

Member Distributed Loads (BLC 10 : Structure Wind (135)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
17	M63B	X	.907	.907	0	0
18	M63B	Y	.907	.907	0	0
19	M25	X	6.449	6.449	0	0
20	M25	Y	6.449	6.449	0	0
21	M51	X	3.456	3.456	0	0
22	M51	Y	3.456	3.456	0	0
23	M65A	X	.463	.463	0	0
24	M65A	Y	.463	.463	0	0
25	M2	X	1.074	1.074	0	0
26	M2	Y	1.074	1.074	0	0
27	M7	X	8.014	8.014	0	0
28	M7	Y	8.014	8.014	0	0
29	M12	X	14.954	14.954	0	0
30	M12	Y	14.954	14.954	0	0
31	MP9	X	6.912	6.912	0	0
32	MP9	Y	6.912	6.912	0	0
33	MP7	X	6.912	6.912	0	0
34	MP7	Y	6.912	6.912	0	0
35	MP8	X	6.912	6.912	0	0
36	MP8	Y	6.912	6.912	0	0
37	MP3	X	6.912	6.912	0	0
38	MP3	Y	6.912	6.912	0	0
39	MP1	X	6.912	6.912	0	0
40	MP1	Y	6.912	6.912	0	0
41	MP6	X	6.912	6.912	0	0
42	MP6	Y	6.912	6.912	0	0
43	MP4	X	6.912	6.912	0	0
44	MP4	Y	6.912	6.912	0	0
45	MP2	X	6.912	6.912	0	0
46	MP2	Y	6.912	6.912	0	0
47	MP5	X	6.912	6.912	0	0
48	MP5	Y	6.912	6.912	0	0
49	M4	X	.433	.433	0	0
50	M4	Y	.433	.433	0	0
51	M9	X	7.363	7.363	0	0
52	M9	Y	7.363	7.363	0	0
53	M14	X	4.225	4.225	0	0
54	M14	Y	4.225	4.225	0	0
55	M18	X	7.851	7.851	0	0
56	M18	Y	7.851	7.851	0	0
57	M48	X	4.207	4.207	0	0
58	M48	Y	4.207	4.207	0	0
59	M62	X	.564	.564	0	0
60	M62	Y	.564	.564	0	0
61	M61A	X	12.636	12.636	0	0
62	M61A	Y	12.636	12.636	0	0
63	M60A	X	6.772	6.772	0	0
64	M60A	Y	6.772	6.772	0	0
65	M62A	X	.907	.907	0	0
66	M62A	Y	.907	.907	0	0
67	M5	X	24.3	24.3	0	0
68	M5	Y	24.3	24.3	0	0

Member Distributed Loads (BLC 10 : Structure Wind (135)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
69	M10	X	13.022	13.022	0	0
70	M10	Y	13.022	13.022	0	0
71	M15	X	1.745	1.745	0	0
72	M15	Y	1.745	1.745	0	0
73	M88A	X	4.758	4.758	0	0
74	M88A	Y	4.758	4.758	0	0
75	M89A	X	4.758	4.758	0	0
76	M89A	Y	4.758	4.758	0	0
77	M90A	X	8.879	8.879	0	0
78	M90A	Y	8.879	8.879	0	0
79	M91A	X	8.879	8.879	0	0
80	M91A	Y	8.879	8.879	0	0
81	M92A	X	.637	.637	0	0
82	M92A	Y	.637	.637	0	0
83	M93A	X	.637	.637	0	0
84	M93A	Y	.637	.637	0	0

Member Distributed Loads (BLC 11 : Structure Wind (150))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	7.127	7.127	0	0
2	M3	Y	4.115	4.115	0	0
3	M8	X	.007	.007	0	0
4	M8	Y	.004	.004	0	0
5	M13	X	7.588	7.588	0	0
6	M13	Y	4.381	4.381	0	0
7	M28	X	24.292	24.292	0	0
8	M28	Y	14.025	14.025	0	0
9	M29	X	24.292	24.292	0	0
10	M29	Y	14.025	14.025	0	0
11	M30	X	4.352e-12	4.352e-12	0	0
12	M30	Y	2.513e-12	2.513e-12	0	0
13	M63A	X	12.44	12.44	0	0
14	M63A	Y	7.182	7.182	0	0
15	M61B	X	12.44	12.44	0	0
16	M61B	Y	7.182	7.182	0	0
17	M63B	X	2.383e-12	2.383e-12	0	0
18	M63B	Y	1.376e-12	1.376e-12	0	0
19	M25	X	6.349	6.349	0	0
20	M25	Y	3.666	3.666	0	0
21	M51	X	6.349	6.349	0	0
22	M51	Y	3.666	3.666	0	0
23	M65A	X	1.209e-12	1.209e-12	0	0
24	M65A	Y	6.983e-13	6.983e-13	0	0
25	M2	X	4.907	4.907	0	0
26	M2	Y	2.833	2.833	0	0
27	M7	X	4.907	4.907	0	0
28	M7	Y	2.833	2.833	0	0
29	M12	X	19.63	19.63	0	0
30	M12	Y	11.333	11.333	0	0
31	MP9	X	8.465	8.465	0	0
32	MP9	Y	4.887	4.887	0	0

Member Distributed Loads (BLC 11 : Structure Wind (150)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
33	MP7	X	8.465	8.465	0	0
34	MP7	Y	4.887	4.887	0	0
35	MP8	X	8.465	8.465	0	0
36	MP8	Y	4.887	4.887	0	0
37	MP3	X	8.465	8.465	0	0
38	MP3	Y	4.887	4.887	0	0
39	MP1	X	8.465	8.465	0	0
40	MP1	Y	4.887	4.887	0	0
41	MP6	X	8.465	8.465	0	0
42	MP6	Y	4.887	4.887	0	0
43	MP4	X	8.465	8.465	0	0
44	MP4	Y	4.887	4.887	0	0
45	MP2	X	8.465	8.465	0	0
46	MP2	Y	4.887	4.887	0	0
47	MP5	X	8.465	8.465	0	0
48	MP5	Y	4.887	4.887	0	0
49	M4	X	.007	.007	0	0
50	M4	Y	.004	.004	0	0
51	M9	X	7.127	7.127	0	0
52	M9	Y	4.115	4.115	0	0
53	M14	X	7.588	7.588	0	0
54	M14	Y	4.381	4.381	0	0
55	M18	X	7.729	7.729	0	0
56	M18	Y	4.462	4.462	0	0
57	M48	X	7.729	7.729	0	0
58	M48	Y	4.462	4.462	0	0
59	M62	X	1.472e-12	1.472e-12	0	0
60	M62	Y	8.501e-13	8.501e-13	0	0
61	M61A	X	12.44	12.44	0	0
62	M61A	Y	7.182	7.182	0	0
63	M60A	X	12.44	12.44	0	0
64	M60A	Y	7.182	7.182	0	0
65	M62A	X	2.356e-12	2.356e-12	0	0
66	M62A	Y	1.36e-12	1.36e-12	0	0
67	M5	X	23.924	23.924	0	0
68	M5	Y	13.812	13.812	0	0
69	M10	X	23.924	23.924	0	0
70	M10	Y	13.812	13.812	0	0
71	M15	X	4.286e-12	4.286e-12	0	0
72	M15	Y	2.475e-12	2.475e-12	0	0
73	M88A	X	8.741	8.741	0	0
74	M88A	Y	5.047	5.047	0	0
75	M89A	X	8.741	8.741	0	0
76	M89A	Y	5.047	5.047	0	0
77	M90A	X	8.741	8.741	0	0
78	M90A	Y	5.047	5.047	0	0
79	M91A	X	8.741	8.741	0	0
80	M91A	Y	5.047	5.047	0	0
81	M92A	X	1.665e-12	1.665e-12	0	0
82	M92A	Y	9.614e-13	9.614e-13	0	0
83	M93A	X	1.665e-12	1.665e-12	0	0
84	M93A	Y	9.615e-13	9.615e-13	0	0

Member Distributed Loads (BLC 12 : Structure Wind w/ Ice (0))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	-2.217	-2.217	0	0
2	M3	Y	0	0	0	0
3	M8	X	-.503	-.503	0	0
4	M8	Y	0	0	0	0
5	M13	X	-.608	-.608	0	0
6	M13	Y	0	0	0	0
7	M28	X	-2.622	-2.622	0	0
8	M28	Y	0	0	0	0
9	M29	X	-.656	-.656	0	0
10	M29	Y	0	0	0	0
11	M30	X	-.656	-.656	0	0
12	M30	Y	0	0	0	0
13	M63A	X	-.585	-.585	0	0
14	M63A	Y	0	0	0	0
15	M61B	X	-2.34	-2.34	0	0
16	M61B	Y	0	0	0	0
17	M63B	X	-.585	-.585	0	0
18	M63B	Y	0	0	0	0
19	M25	X	-.965	-.965	0	0
20	M25	Y	0	0	0	0
21	M51	X	-3.859	-3.859	0	0
22	M51	Y	0	0	0	0
23	M65A	X	-.965	-.965	0	0
24	M65A	Y	0	0	0	0
25	M2	X	-1.795	-1.795	0	0
26	M2	Y	0	0	0	0
27	M7	X	-2.21e-26	-2.21e-26	0	0
28	M7	Y	0	0	0	0
29	M12	X	-1.795	-1.795	0	0
30	M12	Y	0	0	0	0
31	MP9	X	-3.859	-3.859	0	0
32	MP9	Y	0	0	0	0
33	MP7	X	-3.859	-3.859	0	0
34	MP7	Y	0	0	0	0
35	MP8	X	-3.859	-3.859	0	0
36	MP8	Y	0	0	0	0
37	MP3	X	-3.859	-3.859	0	0
38	MP3	Y	0	0	0	0
39	MP1	X	-3.859	-3.859	0	0
40	MP1	Y	0	0	0	0
41	MP6	X	-3.859	-3.859	0	0
42	MP6	Y	0	0	0	0
43	MP4	X	-3.859	-3.859	0	0
44	MP4	Y	0	0	0	0
45	MP2	X	-3.859	-3.859	0	0
46	MP2	Y	0	0	0	0
47	MP5	X	-3.859	-3.859	0	0
48	MP5	Y	0	0	0	0
49	M4	X	-.608	-.608	0	0
50	M4	Y	0	0	0	0
51	M9	X	-.503	-.503	0	0
52	M9	Y	0	0	0	0

Member Distributed Loads (BLC 12 : Structure Wind w/ Ice (0)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
53	M14	X	-2.217	-2.217	0	0
54	M14	Y	0	0	0	0
55	M18	X	-1.063	-1.063	0	0
56	M18	Y	0	0	0	0
57	M48	X	-4.254	-4.254	0	0
58	M48	Y	0	0	0	0
59	M62	X	-1.063	-1.063	0	0
60	M62	Y	0	0	0	0
61	M61A	X	-.585	-.585	0	0
62	M61A	Y	0	0	0	0
63	M60A	X	-2.34	-2.34	0	0
64	M60A	Y	0	0	0	0
65	M62A	X	-.585	-.585	0	0
66	M62A	Y	0	0	0	0
67	M5	X	-1.539	-1.539	0	0
68	M5	Y	0	0	0	0
69	M10	X	-6.156	-6.156	0	0
70	M10	Y	0	0	0	0
71	M15	X	-1.539	-1.539	0	0
72	M15	Y	0	0	0	0
73	M88A	X	-3.576	-3.576	0	0
74	M88A	Y	0	0	0	0
75	M89A	X	-3.576	-3.576	0	0
76	M89A	Y	0	0	0	0
77	M90A	X	-.894	-.894	0	0
78	M90A	Y	0	0	0	0
79	M91A	X	-.894	-.894	0	0
80	M91A	Y	0	0	0	0
81	M92A	X	-.894	-.894	0	0
82	M92A	Y	0	0	0	0
83	M93A	X	-.894	-.894	0	0
84	M93A	Y	0	0	0	0

Member Distributed Loads (BLC 13 : Structure Wind w/ Ice (30))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	-1.485	-1.485	0	0
2	M3	Y	.858	.858	0	0
3	M8	X	-1.395	-1.395	0	0
4	M8	Y	.805	.805	0	0
5	M13	X	-.001	-.001	0	0
6	M13	Y	.000819	.000819	0	0
7	M28	X	-1.703	-1.703	0	0
8	M28	Y	.983	.983	0	0
9	M29	X	-1.719e-14	-1.719e-14	0	0
10	M29	Y	9.927e-15	9.927e-15	0	0
11	M30	X	-1.703	-1.703	0	0
12	M30	Y	.983	.983	0	0
13	M63A	X	-1.192e-14	-1.192e-14	0	0
14	M63A	Y	6.884e-15	6.884e-15	0	0
15	M61B	X	-1.52	-1.52	0	0
16	M61B	Y	.877	.877	0	0

Member Distributed Loads (BLC 13 : Structure Wind w/ Ice (30)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
17	M63B	X	-1.52	-1.52	0	0
18	M63B	Y	.877	.877	0	0
19	M25	X	-1.91e-14	-1.91e-14	0	0
20	M25	Y	1.103e-14	1.103e-14	0	0
21	M51	X	-2.507	-2.507	0	0
22	M51	Y	1.447	1.447	0	0
23	M65A	X	-2.507	-2.507	0	0
24	M65A	Y	1.447	1.447	0	0
25	M2	X	-2.073	-2.073	0	0
26	M2	Y	1.197	1.197	0	0
27	M7	X	-.518	-.518	0	0
28	M7	Y	.299	.299	0	0
29	M12	X	-.518	-.518	0	0
30	M12	Y	.299	.299	0	0
31	MP9	X	-3.342	-3.342	0	0
32	MP9	Y	1.93	1.93	0	0
33	MP7	X	-3.342	-3.342	0	0
34	MP7	Y	1.93	1.93	0	0
35	MP8	X	-3.342	-3.342	0	0
36	MP8	Y	1.93	1.93	0	0
37	MP3	X	-3.342	-3.342	0	0
38	MP3	Y	1.93	1.93	0	0
39	MP1	X	-3.342	-3.342	0	0
40	MP1	Y	1.93	1.93	0	0
41	MP6	X	-3.342	-3.342	0	0
42	MP6	Y	1.93	1.93	0	0
43	MP4	X	-3.342	-3.342	0	0
44	MP4	Y	1.93	1.93	0	0
45	MP2	X	-3.342	-3.342	0	0
46	MP2	Y	1.93	1.93	0	0
47	MP5	X	-3.342	-3.342	0	0
48	MP5	Y	1.93	1.93	0	0
49	M4	X	-1.485	-1.485	0	0
50	M4	Y	.858	.858	0	0
51	M9	X	-.001	-.001	0	0
52	M9	Y	.000819	.000819	0	0
53	M14	X	-1.395	-1.395	0	0
54	M14	Y	.805	.805	0	0
55	M18	X	-2.105e-14	-2.105e-14	0	0
56	M18	Y	1.216e-14	1.216e-14	0	0
57	M48	X	-2.763	-2.763	0	0
58	M48	Y	1.595	1.595	0	0
59	M62	X	-2.763	-2.763	0	0
60	M62	Y	1.595	1.595	0	0
61	M61A	X	-1.126e-14	-1.126e-14	0	0
62	M61A	Y	6.503e-15	6.503e-15	0	0
63	M60A	X	-1.52	-1.52	0	0
64	M60A	Y	.877	.877	0	0
65	M62A	X	-1.52	-1.52	0	0
66	M62A	Y	.877	.877	0	0
67	M5	X	-4.036e-14	-4.036e-14	0	0
68	M5	Y	2.33e-14	2.33e-14	0	0

Member Distributed Loads (BLC 13 : Structure Wind w/ Ice (30)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
69	M10	X	-3.998	-3.998	0	0
70	M10	Y	2.308	2.308	0	0
71	M15	X	-3.998	-3.998	0	0
72	M15	Y	2.308	2.308	0	0
73	M88A	X	-2.323	-2.323	0	0
74	M88A	Y	1.341	1.341	0	0
75	M89A	X	-2.323	-2.323	0	0
76	M89A	Y	1.341	1.341	0	0
77	M90A	X	-1.77e-14	-1.77e-14	0	0
78	M90A	Y	1.022e-14	1.022e-14	0	0
79	M91A	X	-1.77e-14	-1.77e-14	0	0
80	M91A	Y	1.022e-14	1.022e-14	0	0
81	M92A	X	-2.323	-2.323	0	0
82	M92A	Y	1.341	1.341	0	0
83	M93A	X	-2.323	-2.323	0	0
84	M93A	Y	1.341	1.341	0	0

Member Distributed Loads (BLC 14 : Structure Wind w/ Ice (45))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	-.827	-.827	0	0
2	M3	Y	.827	.827	0	0
3	M8	X	-1.441	-1.441	0	0
4	M8	Y	1.441	1.441	0	0
5	M13	X	-.085	-.085	0	0
6	M13	Y	.085	.085	0	0
7	M28	X	-.927	-.927	0	0
8	M28	Y	.927	.927	0	0
9	M29	X	-.124	-.124	0	0
10	M29	Y	.124	.124	0	0
11	M30	X	-1.73	-1.73	0	0
12	M30	Y	1.73	1.73	0	0
13	M63A	X	-.111	-.111	0	0
14	M63A	Y	.111	.111	0	0
15	M61B	X	-.827	-.827	0	0
16	M61B	Y	.827	.827	0	0
17	M63B	X	-1.544	-1.544	0	0
18	M63B	Y	1.544	1.544	0	0
19	M25	X	-.183	-.183	0	0
20	M25	Y	.183	.183	0	0
21	M51	X	-1.364	-1.364	0	0
22	M51	Y	1.364	1.364	0	0
23	M65A	X	-2.546	-2.546	0	0
24	M65A	Y	2.546	2.546	0	0
25	M2	X	-1.579	-1.579	0	0
26	M2	Y	1.579	1.579	0	0
27	M7	X	-.846	-.846	0	0
28	M7	Y	.846	.846	0	0
29	M12	X	-.113	-.113	0	0
30	M12	Y	.113	.113	0	0
31	MP9	X	-2.729	-2.729	0	0
32	MP9	Y	2.729	2.729	0	0

Member Distributed Loads (BLC 14 : Structure Wind w/ Ice (45)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
33	MP7	X	-2.729	-2.729	0	0
34	MP7	Y	2.729	2.729	0	0
35	MP8	X	-2.729	-2.729	0	0
36	MP8	Y	2.729	2.729	0	0
37	MP3	X	-2.729	-2.729	0	0
38	MP3	Y	2.729	2.729	0	0
39	MP1	X	-2.729	-2.729	0	0
40	MP1	Y	2.729	2.729	0	0
41	MP6	X	-2.729	-2.729	0	0
42	MP6	Y	2.729	2.729	0	0
43	MP4	X	-2.729	-2.729	0	0
44	MP4	Y	2.729	2.729	0	0
45	MP2	X	-2.729	-2.729	0	0
46	MP2	Y	2.729	2.729	0	0
47	MP5	X	-2.729	-2.729	0	0
48	MP5	Y	2.729	2.729	0	0
49	M4	X	-1.484	-1.484	0	0
50	M4	Y	1.484	1.484	0	0
51	M9	X	-.127	-.127	0	0
52	M9	Y	.127	.127	0	0
53	M14	X	-.742	-.742	0	0
54	M14	Y	.742	.742	0	0
55	M18	X	-.201	-.201	0	0
56	M18	Y	.201	.201	0	0
57	M48	X	-1.504	-1.504	0	0
58	M48	Y	1.504	1.504	0	0
59	M62	X	-2.806	-2.806	0	0
60	M62	Y	2.806	2.806	0	0
61	M61A	X	-.111	-.111	0	0
62	M61A	Y	.111	.111	0	0
63	M60A	X	-.827	-.827	0	0
64	M60A	Y	.827	.827	0	0
65	M62A	X	-1.544	-1.544	0	0
66	M62A	Y	1.544	1.544	0	0
67	M5	X	-.292	-.292	0	0
68	M5	Y	.292	.292	0	0
69	M10	X	-2.176	-2.176	0	0
70	M10	Y	2.176	2.176	0	0
71	M15	X	-4.061	-4.061	0	0
72	M15	Y	4.061	4.061	0	0
73	M88A	X	-1.264	-1.264	0	0
74	M88A	Y	1.264	1.264	0	0
75	M89A	X	-1.264	-1.264	0	0
76	M89A	Y	1.264	1.264	0	0
77	M90A	X	-.169	-.169	0	0
78	M90A	Y	.169	.169	0	0
79	M91A	X	-.169	-.169	0	0
80	M91A	Y	.169	.169	0	0
81	M92A	X	-2.359	-2.359	0	0
82	M92A	Y	2.359	2.359	0	0
83	M93A	X	-2.359	-2.359	0	0
84	M93A	Y	2.359	2.359	0	0

Member Distributed Loads (BLC 15 : Structure Wind w/ Ice (60))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	-.304	-.304	0	0
2	M3	Y	.526	.526	0	0
3	M8	X	-1.108	-1.108	0	0
4	M8	Y	1.92	1.92	0	0
5	M13	X	-.252	-.252	0	0
6	M13	Y	.436	.436	0	0
7	M28	X	-.328	-.328	0	0
8	M28	Y	.568	.568	0	0
9	M29	X	-.328	-.328	0	0
10	M29	Y	.568	.568	0	0
11	M30	X	-1.311	-1.311	0	0
12	M30	Y	2.271	2.271	0	0
13	M63A	X	-.292	-.292	0	0
14	M63A	Y	.507	.507	0	0
15	M61B	X	-.292	-.292	0	0
16	M61B	Y	.507	.507	0	0
17	M63B	X	-1.17	-1.17	0	0
18	M63B	Y	2.026	2.026	0	0
19	M25	X	-.482	-.482	0	0
20	M25	Y	.836	.836	0	0
21	M51	X	-.482	-.482	0	0
22	M51	Y	.836	.836	0	0
23	M65A	X	-1.93	-1.93	0	0
24	M65A	Y	3.342	3.342	0	0
25	M2	X	-.898	-.898	0	0
26	M2	Y	1.555	1.555	0	0
27	M7	X	-.898	-.898	0	0
28	M7	Y	1.555	1.555	0	0
29	M12	X	-2.668e-14	-2.668e-14	0	0
30	M12	Y	4.622e-14	4.622e-14	0	0
31	MP9	X	-1.93	-1.93	0	0
32	MP9	Y	3.342	3.342	0	0
33	MP7	X	-1.93	-1.93	0	0
34	MP7	Y	3.342	3.342	0	0
35	MP8	X	-1.93	-1.93	0	0
36	MP8	Y	3.342	3.342	0	0
37	MP3	X	-1.93	-1.93	0	0
38	MP3	Y	3.342	3.342	0	0
39	MP1	X	-1.93	-1.93	0	0
40	MP1	Y	3.342	3.342	0	0
41	MP6	X	-1.93	-1.93	0	0
42	MP6	Y	3.342	3.342	0	0
43	MP4	X	-1.93	-1.93	0	0
44	MP4	Y	3.342	3.342	0	0
45	MP2	X	-1.93	-1.93	0	0
46	MP2	Y	3.342	3.342	0	0
47	MP5	X	-1.93	-1.93	0	0
48	MP5	Y	3.342	3.342	0	0
49	M4	X	-1.108	-1.108	0	0
50	M4	Y	1.92	1.92	0	0
51	M9	X	-.304	-.304	0	0
52	M9	Y	.526	.526	0	0

Member Distributed Loads (BLC 15 : Structure Wind w/ Ice (60)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
53	M14	X	-.252	-.252	0	0
54	M14	Y	.436	.436	0	0
55	M18	X	-.532	-.532	0	0
56	M18	Y	.921	.921	0	0
57	M48	X	-.532	-.532	0	0
58	M48	Y	.921	.921	0	0
59	M62	X	-2.127	-2.127	0	0
60	M62	Y	3.684	3.684	0	0
61	M61A	X	-.292	-.292	0	0
62	M61A	Y	.507	.507	0	0
63	M60A	X	-.292	-.292	0	0
64	M60A	Y	.507	.507	0	0
65	M62A	X	-1.17	-1.17	0	0
66	M62A	Y	2.026	2.026	0	0
67	M5	X	-.769	-.769	0	0
68	M5	Y	1.333	1.333	0	0
69	M10	X	-.769	-.769	0	0
70	M10	Y	1.333	1.333	0	0
71	M15	X	-3.078	-3.078	0	0
72	M15	Y	5.331	5.331	0	0
73	M88A	X	-.447	-.447	0	0
74	M88A	Y	.774	.774	0	0
75	M89A	X	-.447	-.447	0	0
76	M89A	Y	.774	.774	0	0
77	M90A	X	-.447	-.447	0	0
78	M90A	Y	.774	.774	0	0
79	M91A	X	-.447	-.447	0	0
80	M91A	Y	.774	.774	0	0
81	M92A	X	-1.788	-1.788	0	0
82	M92A	Y	3.097	3.097	0	0
83	M93A	X	-1.788	-1.788	0	0
84	M93A	Y	3.097	3.097	0	0

Member Distributed Loads (BLC 16 : Structure Wind w/ Ice (90))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	-3.715e-10	-3.715e-10	0	0
2	M3	Y	.002	.002	0	0
3	M8	X	-3.89e-7	-3.89e-7	0	0
4	M8	Y	1.715	1.715	0	0
5	M13	X	-3.653e-7	-3.653e-7	0	0
6	M13	Y	1.611	1.611	0	0
7	M28	X	-3.059e-20	-3.059e-20	0	0
8	M28	Y	1.349e-13	1.349e-13	0	0
9	M29	X	-4.46e-7	-4.46e-7	0	0
10	M29	Y	1.967	1.967	0	0
11	M30	X	-4.46e-7	-4.46e-7	0	0
12	M30	Y	1.967	1.967	0	0
13	M63A	X	-3.98e-7	-3.98e-7	0	0
14	M63A	Y	1.755	1.755	0	0
15	M61B	X	-2.852e-20	-2.852e-20	0	0
16	M61B	Y	1.258e-13	1.258e-13	0	0

Member Distributed Loads (BLC 16 : Structure Wind w/ Ice (90)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
17	M63B	X	-3.98e-7	-3.98e-7	0	0
18	M63B	Y	1.755	1.755	0	0
19	M25	X	-6.564e-7	-6.564e-7	0	0
20	M25	Y	2.894	2.894	0	0
21	M51	X	-4.502e-20	-4.502e-20	0	0
22	M51	Y	1.985e-13	1.985e-13	0	0
23	M65A	X	-6.564e-7	-6.564e-7	0	0
24	M65A	Y	2.894	2.894	0	0
25	M2	X	-1.357e-7	-1.357e-7	0	0
26	M2	Y	.598	.598	0	0
27	M7	X	-5.429e-7	-5.429e-7	0	0
28	M7	Y	2.394	2.394	0	0
29	M12	X	-1.357e-7	-1.357e-7	0	0
30	M12	Y	.598	.598	0	0
31	MP9	X	-8.752e-7	-8.752e-7	0	0
32	MP9	Y	3.859	3.859	0	0
33	MP7	X	-8.752e-7	-8.752e-7	0	0
34	MP7	Y	3.859	3.859	0	0
35	MP8	X	-8.752e-7	-8.752e-7	0	0
36	MP8	Y	3.859	3.859	0	0
37	MP3	X	-8.752e-7	-8.752e-7	0	0
38	MP3	Y	3.859	3.859	0	0
39	MP1	X	-8.752e-7	-8.752e-7	0	0
40	MP1	Y	3.859	3.859	0	0
41	MP6	X	-8.752e-7	-8.752e-7	0	0
42	MP6	Y	3.859	3.859	0	0
43	MP4	X	-8.752e-7	-8.752e-7	0	0
44	MP4	Y	3.859	3.859	0	0
45	MP2	X	-8.752e-7	-8.752e-7	0	0
46	MP2	Y	3.859	3.859	0	0
47	MP5	X	-8.752e-7	-8.752e-7	0	0
48	MP5	Y	3.859	3.859	0	0
49	M4	X	-3.653e-7	-3.653e-7	0	0
50	M4	Y	1.611	1.611	0	0
51	M9	X	-3.89e-7	-3.89e-7	0	0
52	M9	Y	1.715	1.715	0	0
53	M14	X	-3.715e-10	-3.715e-10	0	0
54	M14	Y	.002	.002	0	0
55	M18	X	-7.236e-7	-7.236e-7	0	0
56	M18	Y	3.19	3.19	0	0
57	M48	X	-4.962e-20	-4.962e-20	0	0
58	M48	Y	2.188e-13	2.188e-13	0	0
59	M62	X	-7.236e-7	-7.236e-7	0	0
60	M62	Y	3.19	3.19	0	0
61	M61A	X	-3.98e-7	-3.98e-7	0	0
62	M61A	Y	1.755	1.755	0	0
63	M60A	X	-2.609e-20	-2.609e-20	0	0
64	M60A	Y	1.15e-13	1.15e-13	0	0
65	M62A	X	-3.98e-7	-3.98e-7	0	0
66	M62A	Y	1.755	1.755	0	0
67	M5	X	-1.047e-6	-1.047e-6	0	0
68	M5	Y	4.617	4.617	0	0

Member Distributed Loads (BLC 16 : Structure Wind w/ Ice (90)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
69	M10	X	-7.181e-20	-7.181e-20	0	0
70	M10	Y	3.166e-13	3.166e-13	0	0
71	M15	X	-1.047e-6	-1.047e-6	0	0
72	M15	Y	4.617	4.617	0	0
73	M88A	X	-4.172e-20	-4.172e-20	0	0
74	M88A	Y	1.839e-13	1.839e-13	0	0
75	M89A	X	-4.172e-20	-4.172e-20	0	0
76	M89A	Y	1.839e-13	1.839e-13	0	0
77	M90A	X	-6.083e-7	-6.083e-7	0	0
78	M90A	Y	2.682	2.682	0	0
79	M91A	X	-6.083e-7	-6.083e-7	0	0
80	M91A	Y	2.682	2.682	0	0
81	M92A	X	-6.083e-7	-6.083e-7	0	0
82	M92A	Y	2.682	2.682	0	0
83	M93A	X	-6.083e-7	-6.083e-7	0	0
84	M93A	Y	2.682	2.682	0	0

Member Distributed Loads (BLC 17 : Structure Wind w/ Ice (120))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	.252	.252	0	0
2	M3	Y	.436	.436	0	0
3	M8	X	.304	.304	0	0
4	M8	Y	.526	.526	0	0
5	M13	X	1.108	1.108	0	0
6	M13	Y	1.92	1.92	0	0
7	M28	X	.328	.328	0	0
8	M28	Y	.568	.568	0	0
9	M29	X	1.311	1.311	0	0
10	M29	Y	2.271	2.271	0	0
11	M30	X	.328	.328	0	0
12	M30	Y	.568	.568	0	0
13	M63A	X	1.17	1.17	0	0
14	M63A	Y	2.026	2.026	0	0
15	M61B	X	.292	.292	0	0
16	M61B	Y	.507	.507	0	0
17	M63B	X	.292	.292	0	0
18	M63B	Y	.507	.507	0	0
19	M25	X	1.93	1.93	0	0
20	M25	Y	3.342	3.342	0	0
21	M51	X	.482	.482	0	0
22	M51	Y	.836	.836	0	0
23	M65A	X	.482	.482	0	0
24	M65A	Y	.836	.836	0	0
25	M2	X	1.095e-13	1.095e-13	0	0
26	M2	Y	1.896e-13	1.896e-13	0	0
27	M7	X	.898	.898	0	0
28	M7	Y	1.555	1.555	0	0
29	M12	X	.898	.898	0	0
30	M12	Y	1.555	1.555	0	0
31	MP9	X	1.93	1.93	0	0
32	MP9	Y	3.342	3.342	0	0

Member Distributed Loads (BLC 17 : Structure Wind w/ Ice (120)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
33	MP7	X	1.93	1.93	0	0
34	MP7	Y	3.342	3.342	0	0
35	MP8	X	1.93	1.93	0	0
36	MP8	Y	3.342	3.342	0	0
37	MP3	X	1.93	1.93	0	0
38	MP3	Y	3.342	3.342	0	0
39	MP1	X	1.93	1.93	0	0
40	MP1	Y	3.342	3.342	0	0
41	MP6	X	1.93	1.93	0	0
42	MP6	Y	3.342	3.342	0	0
43	MP4	X	1.93	1.93	0	0
44	MP4	Y	3.342	3.342	0	0
45	MP2	X	1.93	1.93	0	0
46	MP2	Y	3.342	3.342	0	0
47	MP5	X	1.93	1.93	0	0
48	MP5	Y	3.342	3.342	0	0
49	M4	X	.252	.252	0	0
50	M4	Y	.436	.436	0	0
51	M9	X	1.108	1.108	0	0
52	M9	Y	1.92	1.92	0	0
53	M14	X	.304	.304	0	0
54	M14	Y	.526	.526	0	0
55	M18	X	2.127	2.127	0	0
56	M18	Y	3.684	3.684	0	0
57	M48	X	.532	.532	0	0
58	M48	Y	.921	.921	0	0
59	M62	X	.532	.532	0	0
60	M62	Y	.921	.921	0	0
61	M61A	X	1.17	1.17	0	0
62	M61A	Y	2.026	2.026	0	0
63	M60A	X	.292	.292	0	0
64	M60A	Y	.507	.507	0	0
65	M62A	X	.292	.292	0	0
66	M62A	Y	.507	.507	0	0
67	M5	X	3.078	3.078	0	0
68	M5	Y	5.331	5.331	0	0
69	M10	X	.769	.769	0	0
70	M10	Y	1.333	1.333	0	0
71	M15	X	.769	.769	0	0
72	M15	Y	1.333	1.333	0	0
73	M88A	X	.447	.447	0	0
74	M88A	Y	.774	.774	0	0
75	M89A	X	.447	.447	0	0
76	M89A	Y	.774	.774	0	0
77	M90A	X	1.788	1.788	0	0
78	M90A	Y	3.097	3.097	0	0
79	M91A	X	1.788	1.788	0	0
80	M91A	Y	3.097	3.097	0	0
81	M92A	X	.447	.447	0	0
82	M92A	Y	.774	.774	0	0
83	M93A	X	.447	.447	0	0
84	M93A	Y	.774	.774	0	0

Member Distributed Loads (BLC 18 : Structure Wind w/ Ice (135))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	.742	.742	0	0
2	M3	Y	.742	.742	0	0
3	M8	X	.127	.127	0	0
4	M8	Y	.127	.127	0	0
5	M13	X	1.484	1.484	0	0
6	M13	Y	1.484	1.484	0	0
7	M28	X	.927	.927	0	0
8	M28	Y	.927	.927	0	0
9	M29	X	1.73	1.73	0	0
10	M29	Y	1.73	1.73	0	0
11	M30	X	.124	.124	0	0
12	M30	Y	.124	.124	0	0
13	M63A	X	1.544	1.544	0	0
14	M63A	Y	1.544	1.544	0	0
15	M61B	X	.827	.827	0	0
16	M61B	Y	.827	.827	0	0
17	M63B	X	.111	.111	0	0
18	M63B	Y	.111	.111	0	0
19	M25	X	2.546	2.546	0	0
20	M25	Y	2.546	2.546	0	0
21	M51	X	1.364	1.364	0	0
22	M51	Y	1.364	1.364	0	0
23	M65A	X	.183	.183	0	0
24	M65A	Y	.183	.183	0	0
25	M2	X	.113	.113	0	0
26	M2	Y	.113	.113	0	0
27	M7	X	.846	.846	0	0
28	M7	Y	.846	.846	0	0
29	M12	X	1.579	1.579	0	0
30	M12	Y	1.579	1.579	0	0
31	MP9	X	2.729	2.729	0	0
32	MP9	Y	2.729	2.729	0	0
33	MP7	X	2.729	2.729	0	0
34	MP7	Y	2.729	2.729	0	0
35	MP8	X	2.729	2.729	0	0
36	MP8	Y	2.729	2.729	0	0
37	MP3	X	2.729	2.729	0	0
38	MP3	Y	2.729	2.729	0	0
39	MP1	X	2.729	2.729	0	0
40	MP1	Y	2.729	2.729	0	0
41	MP6	X	2.729	2.729	0	0
42	MP6	Y	2.729	2.729	0	0
43	MP4	X	2.729	2.729	0	0
44	MP4	Y	2.729	2.729	0	0
45	MP2	X	2.729	2.729	0	0
46	MP2	Y	2.729	2.729	0	0
47	MP5	X	2.729	2.729	0	0
48	MP5	Y	2.729	2.729	0	0
49	M4	X	.085	.085	0	0
50	M4	Y	.085	.085	0	0
51	M9	X	1.441	1.441	0	0
52	M9	Y	1.441	1.441	0	0

Member Distributed Loads (BLC 18 : Structure Wind w/ Ice (135)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
53	M14	X	.827	.827	0	0
54	M14	Y	.827	.827	0	0
55	M18	X	2.806	2.806	0	0
56	M18	Y	2.806	2.806	0	0
57	M48	X	1.504	1.504	0	0
58	M48	Y	1.504	1.504	0	0
59	M62	X	.201	.201	0	0
60	M62	Y	.201	.201	0	0
61	M61A	X	1.544	1.544	0	0
62	M61A	Y	1.544	1.544	0	0
63	M60A	X	.827	.827	0	0
64	M60A	Y	.827	.827	0	0
65	M62A	X	.111	.111	0	0
66	M62A	Y	.111	.111	0	0
67	M5	X	4.061	4.061	0	0
68	M5	Y	4.061	4.061	0	0
69	M10	X	2.176	2.176	0	0
70	M10	Y	2.176	2.176	0	0
71	M15	X	.292	.292	0	0
72	M15	Y	.292	.292	0	0
73	M88A	X	1.264	1.264	0	0
74	M88A	Y	1.264	1.264	0	0
75	M89A	X	1.264	1.264	0	0
76	M89A	Y	1.264	1.264	0	0
77	M90A	X	2.359	2.359	0	0
78	M90A	Y	2.359	2.359	0	0
79	M91A	X	2.359	2.359	0	0
80	M91A	Y	2.359	2.359	0	0
81	M92A	X	.169	.169	0	0
82	M92A	Y	.169	.169	0	0
83	M93A	X	.169	.169	0	0
84	M93A	Y	.169	.169	0	0

Member Distributed Loads (BLC 19 : Structure Wind w/ Ice (150))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	1.395	1.395	0	0
2	M3	Y	.805	.805	0	0
3	M8	X	.001	.001	0	0
4	M8	Y	.000819	.000819	0	0
5	M13	X	1.485	1.485	0	0
6	M13	Y	.858	.858	0	0
7	M28	X	1.703	1.703	0	0
8	M28	Y	.983	.983	0	0
9	M29	X	1.703	1.703	0	0
10	M29	Y	.983	.983	0	0
11	M30	X	3.051e-13	3.051e-13	0	0
12	M30	Y	1.762e-13	1.762e-13	0	0
13	M63A	X	1.52	1.52	0	0
14	M63A	Y	.877	.877	0	0
15	M61B	X	1.52	1.52	0	0
16	M61B	Y	.877	.877	0	0

Member Distributed Loads (BLC 19 : Structure Wind w/ Ice (150)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
17	M63B	X	2.911e-13	2.911e-13	0	0
18	M63B	Y	1.681e-13	1.681e-13	0	0
19	M25	X	2.507	2.507	0	0
20	M25	Y	1.447	1.447	0	0
21	M51	X	2.507	2.507	0	0
22	M51	Y	1.447	1.447	0	0
23	M65A	X	4.775e-13	4.775e-13	0	0
24	M65A	Y	2.757e-13	2.757e-13	0	0
25	M2	X	.518	.518	0	0
26	M2	Y	.299	.299	0	0
27	M7	X	.518	.518	0	0
28	M7	Y	.299	.299	0	0
29	M12	X	2.073	2.073	0	0
30	M12	Y	1.197	1.197	0	0
31	MP9	X	3.342	3.342	0	0
32	MP9	Y	1.93	1.93	0	0
33	MP7	X	3.342	3.342	0	0
34	MP7	Y	1.93	1.93	0	0
35	MP8	X	3.342	3.342	0	0
36	MP8	Y	1.93	1.93	0	0
37	MP3	X	3.342	3.342	0	0
38	MP3	Y	1.93	1.93	0	0
39	MP1	X	3.342	3.342	0	0
40	MP1	Y	1.93	1.93	0	0
41	MP6	X	3.342	3.342	0	0
42	MP6	Y	1.93	1.93	0	0
43	MP4	X	3.342	3.342	0	0
44	MP4	Y	1.93	1.93	0	0
45	MP2	X	3.342	3.342	0	0
46	MP2	Y	1.93	1.93	0	0
47	MP5	X	3.342	3.342	0	0
48	MP5	Y	1.93	1.93	0	0
49	M4	X	.001	.001	0	0
50	M4	Y	.000819	.000819	0	0
51	M9	X	1.395	1.395	0	0
52	M9	Y	.805	.805	0	0
53	M14	X	1.485	1.485	0	0
54	M14	Y	.858	.858	0	0
55	M18	X	2.763	2.763	0	0
56	M18	Y	1.595	1.595	0	0
57	M48	X	2.763	2.763	0	0
58	M48	Y	1.595	1.595	0	0
59	M62	X	5.264e-13	5.264e-13	0	0
60	M62	Y	3.039e-13	3.039e-13	0	0
61	M61A	X	1.52	1.52	0	0
62	M61A	Y	.877	.877	0	0
63	M60A	X	1.52	1.52	0	0
64	M60A	Y	.877	.877	0	0
65	M62A	X	2.878e-13	2.878e-13	0	0
66	M62A	Y	1.662e-13	1.662e-13	0	0
67	M5	X	3.998	3.998	0	0
68	M5	Y	2.308	2.308	0	0

Member Distributed Loads (BLC 19 : Structure Wind w/ Ice (150)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
69	M10	X	3.998	3.998	0	0
70	M10	Y	2.308	2.308	0	0
71	M15	X	7.164e-13	7.164e-13	0	0
72	M15	Y	4.136e-13	4.136e-13	0	0
73	M88A	X	2.323	2.323	0	0
74	M88A	Y	1.341	1.341	0	0
75	M89A	X	2.323	2.323	0	0
76	M89A	Y	1.341	1.341	0	0
77	M90A	X	2.323	2.323	0	0
78	M90A	Y	1.341	1.341	0	0
79	M91A	X	2.323	2.323	0	0
80	M91A	Y	1.341	1.341	0	0
81	M92A	X	4.425e-13	4.425e-13	0	0
82	M92A	Y	2.555e-13	2.555e-13	0	0
83	M93A	X	4.425e-13	4.425e-13	0	0
84	M93A	Y	2.555e-13	2.555e-13	0	0

Member Distributed Loads (BLC 36 : Seismic X)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	X	.307	.307	0	0
2	M8	X	.307	.307	0	0
3	M13	X	.307	.307	0	0
4	M28	X	.878	.878	0	0
5	M29	X	.878	.878	0	0
6	M30	X	.878	.878	0	0
7	M63A	X	.568	.568	0	0
8	M61B	X	.568	.568	0	0
9	M63B	X	.568	.568	0	0
10	M25	X	.338	.338	0	0
11	M51	X	.338	.338	0	0
12	M65A	X	.338	.338	0	0
13	M2	X	1.553	1.553	0	0
14	M7	X	1.553	1.553	0	0
15	M12	X	1.553	1.553	0	0
16	MP9	X	.338	.338	0	0
17	MP7	X	.338	.338	0	0
18	MP8	X	.338	.338	0	0
19	MP3	X	.338	.338	0	0
20	MP1	X	.338	.338	0	0
21	MP6	X	.338	.338	0	0
22	MP4	X	.338	.338	0	0
23	MP2	X	.338	.338	0	0
24	MP5	X	.338	.338	0	0
25	M4	X	.307	.307	0	0
26	M9	X	.307	.307	0	0
27	M14	X	.307	.307	0	0
28	M18	X	.562	.562	0	0
29	M48	X	.562	.562	0	0
30	M62	X	.562	.562	0	0
31	M61A	X	.568	.568	0	0
32	M60A	X	.568	.568	0	0

Member Distributed Loads (BLC 36 : Seismic X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
33	M62A	X	.568	.568	0	0
34	M5	X	.792	.792	0	0
35	M10	X	.792	.792	0	0
36	M15	X	.792	.792	0	0
37	M88A	X	.386	.386	0	0
38	M89A	X	.386	.386	0	0
39	M90A	X	.386	.386	0	0
40	M91A	X	.386	.386	0	0
41	M92A	X	.386	.386	0	0
42	M93A	X	.386	.386	0	0

Member Distributed Loads (BLC 37 : Seismic Y)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M3	Y	.307	.307	0	0
2	M8	Y	.307	.307	0	0
3	M13	Y	.307	.307	0	0
4	M28	Y	.878	.878	0	0
5	M29	Y	.878	.878	0	0
6	M30	Y	.878	.878	0	0
7	M63A	Y	.568	.568	0	0
8	M61B	Y	.568	.568	0	0
9	M63B	Y	.568	.568	0	0
10	M25	Y	.338	.338	0	0
11	M51	Y	.338	.338	0	0
12	M65A	Y	.338	.338	0	0
13	M2	Y	1.553	1.553	0	0
14	M7	Y	1.553	1.553	0	0
15	M12	Y	1.553	1.553	0	0
16	MP9	Y	.338	.338	0	0
17	MP7	Y	.338	.338	0	0
18	MP8	Y	.338	.338	0	0
19	MP3	Y	.338	.338	0	0
20	MP1	Y	.338	.338	0	0
21	MP6	Y	.338	.338	0	0
22	MP4	Y	.338	.338	0	0
23	MP2	Y	.338	.338	0	0
24	MP5	Y	.338	.338	0	0
25	M4	Y	.307	.307	0	0
26	M9	Y	.307	.307	0	0
27	M14	Y	.307	.307	0	0
28	M18	Y	.562	.562	0	0
29	M48	Y	.562	.562	0	0
30	M62	Y	.562	.562	0	0
31	M61A	Y	.568	.568	0	0
32	M60A	Y	.568	.568	0	0
33	M62A	Y	.568	.568	0	0
34	M5	Y	.792	.792	0	0
35	M10	Y	.792	.792	0	0
36	M15	Y	.792	.792	0	0
37	M88A	Y	.386	.386	0	0
38	M89A	Y	.386	.386	0	0

Member Distributed Loads (BLC 37 : Seismic Y) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
39	M90A	Y	.386	.386	0	0
40	M91A	Y	.386	.386	0	0
41	M92A	Y	.386	.386	0	0
42	M93A	Y	.386	.386	0	0

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
No Data to Print ...						

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	P24	max	1274.404	18	865.405	16	1833.988	30	-.234	6	-.135	7	1.659	18
2		min	-1276.852	10	-866.636	8	327.256	6	-3.328	30	-2.806	79	-1.671	10
3	P13	max	559.816	3	1390.924	15	1695.954	19	.16	15	3.596	19	1.581	7
4		min	-564.334	11	-1395.508	7	287.484	11	-.141	7	.216	11	-1.556	15
5	P1	max	1194.211	4	817.886	14	1648.961	24	2.998	24	-.072	15	1.53	12
6		min	-1188.705	12	-811.988	6	273.618	16	.17	16	-2.732	103	-1.542	4
7	Totals:	max	2945.045	3	2916.366	15	4925.971	32						
8		min	-2945.043	11	-2916.367	7	1432.149	56						

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

	Member	Shape	Code...	Loc[in]	LC	Shear Check	Loc[...	Dir	LC	phi*Pn...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
1	M62A	C3.38x2.06x1/4	.245	0	30	.045	26.1...	y	21	48281....	56700	2.203	5.751	1...	H1-1b
2	M61B	C3.38x2.06x1/4	.242	0	19	.045	26.1...	y	28	48281....	56700	2.203	5.751	1...	H1-1b
3	M63B	C3.38x2.06x1/4	.240	0	30	.045	26.1...	y	22	48281....	56700	2.203	5.751	1...	H1-1b
4	M61A	C3.38x2.06x1/4	.236	0	24	.044	26.1...	y	32	48281....	56700	2.203	5.751	1...	H1-1b
5	M60A	C3.38x2.06x1/4	.236	0	27	.044	26.1...	y	28	48281....	56700	2.203	5.751	1...	H1-1b
6	M63A	C3.38x2.06x1/4	.234	0	32	.044	26.1...	y	32	48281....	56700	2.203	5.751	1...	H1-1b
7	M92A	PL2-3/8x1/2	.181	1.5	16	.219	0	y	28	38256....	38475	.401	1.904	2...	H1-1b
8	M93A	PL2-3/8x1/2	.181	1.5	11	.214	0	y	22	38256....	38475	.401	1.904	2...	H1-1b
9	M89A	PL2-3/8x1/2	.177	1.5	16	.222	0	y	27	38256....	38475	.401	1.904	2...	H1-1b
10	M88A	PL2-3/8x1/2	.177	1.5	14	.216	0	y	26	38256....	38475	.401	1.904	1...	H1-1b
11	MP8	HSS2.875x0.1...	.176	42.442	5	.058	63.1...		12	22397....	43014.6	3.143	3.143	1...	H1-1b
12	M91A	PL2-3/8x1/2	.174	1.5	14	.223	0	y	28	38256....	38475	.401	1.904	1...	H1-1b
13	M90A	PL2-3/8x1/2	.174	1.5	3	.223	0	y	31	38256....	38475	.401	1.904	1...	H1-1b
14	M12	HSS4X4X6	.173	40	27	.084	40	y	79	20373...	215100	23.963	23.963	2...	H1-1b
15	MP2	HSS2.875x0.1...	.171	42.442	7	.058	63.1...		15	22397....	43014.6	3.143	3.143	1...	H1-1b
16	MP5	HSS2.875x0.1...	.165	41.937	14	.059	42.4...		18	22397....	43014.6	3.143	3.143	1...	H1-1b
17	M7	HSS4X4X6	.162	40	22	.036	24	z	15	20373...	215100	23.963	23.963	2...	H1-1b
18	M2	HSS4X4X6	.155	40	22	.082	40	y	103	20373...	215100	23.963	23.963	2...	H1-1b
19	M10	PL6-1/2x3/8	.152	21	3	.060	36.0...	y	14	3658.14	78975	.617	7.447	1...	H1-1b
20	M15	PL6-1/2x3/8	.151	21	14	.086	5.968	y	67	3658.14	78975	.617	7.433	1...	H1-1b
21	M5	PL6-1/2x3/8	.147	21	104	.084	36.0...	y	99	3658.14	78975	.617	8.646	1...	H1-1b
22	M8	L2x2x4	.130	0	3	.012	0	y	11	29527....	42480	.96	2.19	2...	H2-1
23	M14	L2x2x4	.125	0	14	.012	0	z	21	29527....	42480	.96	2.19	2...	H2-1
24	M4	L2x2x4	.125	0	8	.012	27.2...	y	100	29527....	42480	.96	2.19	2...	H2-1
25	M3	L2x2x4	.118	0	16	.012	0	y	32	29527....	42480	.96	2.19	2...	H2-1

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

	Member	Shape	Code...	Loc[in]	LC	Shear Check	Loc[...	Dir	LC	phi*Pn...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
26	MP3	HSS2.875x0.1...	.117	42.442	7	.045	42.4...		4	22397....	43014.6	3.143	3.143	1...	H1-1b
27	MP4	HSS2.875x0.1...	.117	42.442	10	.043	42.4...		12	22397....	43014.6	3.143	3.143	2...	H1-1b
28	M13	L2x2x4	.116	0	6	.012	27.2...	z	67	29527....	42480	.96	2.19	2...	H2-1
29	M9	L2x2x4	.115	0	11	.012	0	z	27	29527....	42480	.96	2.19	2...	H2-1
30	MP7	HSS2.875x0.1...	.114	42.442	4	.047	42.4...		7	22397....	43014.6	3.143	3.143	2...	H1-1b
31	MP6	HSS2.875x0.1...	.113	42.442	18	.043	42.4...		15	22397....	43014.6	3.143	3.143	1...	H1-1b
32	MP9	HSS2.875x0.1...	.108	42.442	12	.047	42.4...		10	22397....	43014.6	3.143	3.143	2...	H1-1b
33	MP1	HSS2.875x0.1...	.107	42.442	15	.045	42.4...		18	22397....	43014.6	3.143	3.143	1...	H1-1b
34	M48	HSS3.500x0.1...	.101	48	95	.036	3.537		79	45873....	71580.6	6.338	6.338	1...	H1-1b
35	M51	HSS2.875x0.1...	.093	89.937	7	.031	90.4...		14	22397....	43014.6	3.143	3.143	1...	H1-1b
36	M65A	HSS2.875x0.1...	.089	6.063	10	.032	90.4...		9	22397....	43014.6	3.143	3.143	1...	H1-1b
37	M25	HSS2.875x0.1...	.088	6.063	4	.030	5.558		13	22397....	43014.6	3.143	3.143	1...	H1-1b
38	M28	L6.6x4.46x0.25	.084	0	9	.011	19.5	z	7	51434....	87561	2.465	7.125	1...	H2-1
39	M62	HSS3.500x0.1...	.083	31.326	3	.038	48		17	45873....	71580.6	6.338	6.338	1...	H1-1b
40	M29	L6.6x4.46x0.25	.082	39	3	.011	0	z	4	51434....	87561	2.465	7.125	1...	H2-1
41	M18	HSS3.500x0.1...	.080	31.326	14	.030	48		14	45873....	71580.6	6.338	6.338	1...	H1-1b
42	M30	L6.6x4.46x0.25	.077	39	8	.011	5.953	z	10	51434....	87561	2.465	7.125	1...	H2-1

Square/Rectangular Flange Connection

TIA-222-H

Site Number	CT46143-A
Job number	KHCLE-40084
Code	TIA-222-H

Member/Node Under Consideration	
Controlling Load Combination	

Normalize usages per TIA-222-H, Sec. 15.5	☐

REACTIONS		
Moment, Mu (kip-ft)	3.328	*About X*
Axial, Pu (kips) - *Negative for tension*	-1.276	
Shear, Vu (kips)	1.833	

BOLT CONFIGURATION	
Bolt Quantity, n_b	4
Bolt Diameter, d_b (in)	0.625
Bolt Grade	A325
Width between bolts, s (in)	7.00

BOLT USAGE	
Maximum Tension in Bolt, Tub (kip)	4.353
Nominal Tensile Strength, ϕRnt (kip)	20.340
Tensile Usage (Section 4.9.6.1)	21%

PLATE CONFIGURATION	
Plate Grade	A572-50
Thickness of plate, t (in)	0.750
Width of plate, w (in)	9.00

PLATE USAGE	
Ultimate flexural load in plate, Mu (kip-in)	7.124
Factored flexural capacity, ϕMn (kip-in)	28.430
Flexural Usage	25%

SUPPORT ARM CONFIGURATION	
Member Shape	Square
Member Grade	A500-50
Thickness of Member, t (in)	0.375
Width of member, w (in)	4.000

SUPPORT ARM USAGE	
Ultimate flexural load in member, Mu (kip-ft)	3.328
Factored flexural capacity, ϕMn (kip-ft)	27.817
Flexural Usage	12%

Stiffeners present?	☐

EXHIBIT 10

Construction Drawings

DISH Wireless L.L.C. SITE ID:

BOBDL00139A

DISH Wireless L.L.C. SITE ADDRESS:

277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SBA APPROVED

By Stephen Roth at 1:27:33 AM, 11/17/2023

SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

TOWER SCOPE OF WORK:
- INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
- INSTALL (1) PROPOSED ANTENNA PLATFORM
- INSTALL PROPOSED JUMPERS
- INSTALL (6) PROPOSED RRUs (2 PER SECTOR)
- INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
- INSTALL (1) PROPOSED HYBRID CABLE

GROUND SCOPE OF WORK:
- INSTALL (1) PROPOSED METAL PLATFORM
- INSTALL (1) PROPOSED ICE BRIDGE
- INSTALL (1) PROPOSED PPC CABINET
- INSTALL (1) PROPOSED EQUIPMENT CABINET
- INSTALL (1) PROPOSED POWER CONDUIT
- INSTALL (1) PROPOSED TELCO CONDUIT
- INSTALL (1) PROPOSED TELCO-FIBER BOX
- INSTALL (1) PROPOSED GPS UNIT
- INSTALL (1) PROPOSED FIBER NID (IF REQUIRED)

SITE INFORMATION

PROPERTY OWNER:	TOWN OF AVON
ADDRESS:	60 WEST MAIN STREET AVON, CT 06001
TOWER TYPE:	MONOPOLE
SBA SITE ID:	CT46143-A
SBA APP NUMBER:	211810
COUNTY:	HARTFORD
LATITUDE (NAD 83):	41° 47' 17.59" N 41.788219° N
LONGITUDE (NAD 83):	72° 55' 5.78" W 72.918272° W
ZONING JURISDICTION:	CITY OF AVON
ZONING DISTRICT:	R40
PARCEL NUMBER:	2810277
OCCUPANCY GROUP:	U
CONSTRUCTION TYPE:	II-B
POWER COMPANY:	EVERSOURCE CT ELECTRIC
FIBER PROVIDER:	CROWN CASTLE

PROJECT DIRECTORY

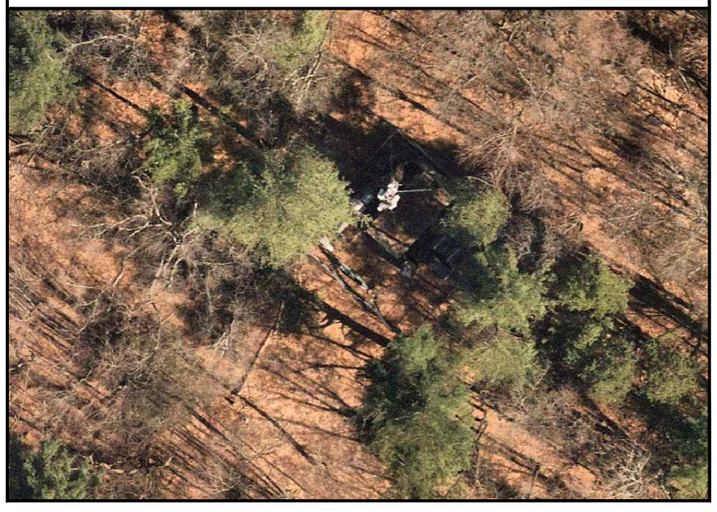
APPLICANT:	DISH Wireless L.L.C. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120 (303) 706-5008
TOWER OWNER:	SBA COMMUNICATIONS 470 DAVIDSON ROAD PITTSBURGH, PA 15239
SITE DESIGNER:	KIMLEY-HORN & ASSOCIATES COA: PEC.0000738 3875 EMBASSY PKWY, SUITE 280 AKRON, OH 44333 (216) 505-7771
SITE ACQUISITION:	APRIL PARROTT APRIL.PARROTT@DISH.COM
CONSTRUCTION MANAGER:	CHAD WILCOX CHAD.WILCOX@DISH.COM
RF ENGINEER:	DIPESH PARIKH DIPESH.PARIKH@DISH.COM

CONNECTICUT CODE OF COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES

CODE TYPE	CODE
BUILDING	2022 CT STATE BUILDING CODE/2021 IBC W/ CT AMENDMENTS
MECHANICAL	2022 CT STATE BUILDING CODE/2021 IMC W/ CT AMENDMENTS
ELECTRICAL	2022 CT STATE BUILDING CODE/2020 NEC W/ CT AMENDMENTS

SITE PHOTO



DIRECTIONS

DIRECTIONS FROM BRADLEY INTERNATIONAL AIRPORT:
- HEAD NORTH TOWARD BRADLEY INTERNATIONAL AIRPORT
- SLIGHT LEFT ONTO BRADLEY INTERNATIONAL AIRPORT
- CONTINUE STRAIGHT
- KEEP RIGHT TO CONTINUE TOWARD BRADLEY INTERNATIONAL AIRPORT CON
- CONTINUE ONTO BRADLEY INTERNATIONAL AIRPORT CON
- TAKE THE CT-20 W EXIT TOWARD E GRANBY/GRANBY
- CONTINUE ONTO CT-20 W
- SLIGHT LEFT ONTO CT-20 W/W GRANBY RD
- TURN LEFT ONTO CT-219 S
- TURN LEFT ONTO CASE ST
- SLIGHT LEFT ONTO CT-179 S
- TURN RIGHT ONTO BRIDGE ST
- SLIGHT LEFT ONTO CENTER ST
- CONTINUE ONTO HUCKLEBERRY HILL RD
- TURN RIGHT
- DESTINATION WILL BE ON THE LEFT

SHEET INDEX

SHEET NO.	SHEET TITLE
T-1	TITLE SHEET
A-1	OVERALL AND ENLARGED SITE PLAN
A-2	ELEVATION, ANTENNA LAYOUT AND SCHEDULE
A-3	EQUIPMENT PLATFORM AND H-FRAME DETAILS
A-4	EQUIPMENT DETAILS
A-5	EQUIPMENT DETAILS
A-6	EQUIPMENT DETAILS
E-1	ELECTRICAL/FIBER ROUTE PLAN AND NOTES
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL ONE-LINE & PANEL SCHEDULE
E-4	PPC NEUTRAL-TO-GROUND SCHEMATIC
G-1	GROUNDING PLANS AND NOTES
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS
RF-1	RF CABLE COLOR CODE
GN-1	LEGEND AND ABBREVIATIONS
GN-2	RF SIGNAGE
GN-3	GENERAL NOTES
GN-4	GENERAL NOTES
GN-5	GENERAL NOTES

UNDERGROUND SERVICE ALERT CBYD 811
UTILITY NOTIFICATION CENTER OF CONNECTICUT
(800) 922-4455
WWW.CBYD.COM
CALL 2 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

811

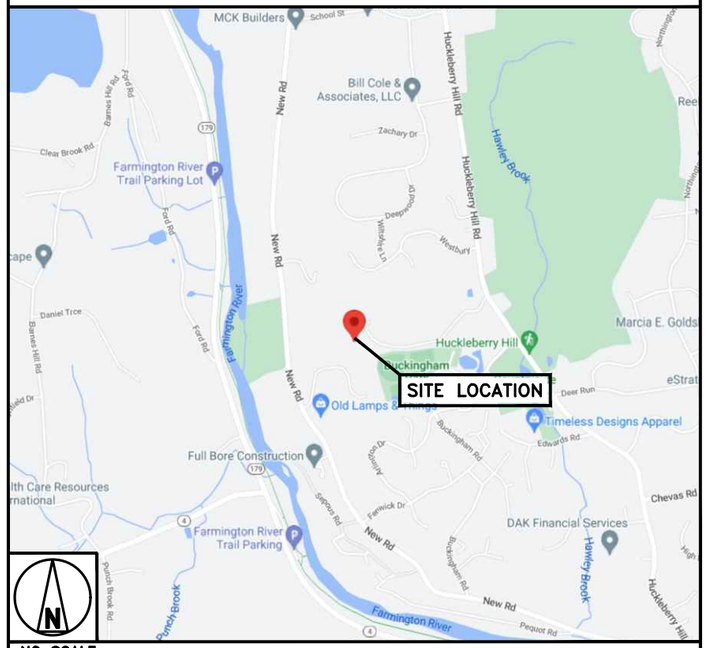
GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE. NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE JOB SITE, AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

VICINITY MAP



NO SCALE

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Kimley»Horn

COA: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, NC 27601

SBA

470 DAVIDSON ROAD
PITTSBURGH, PA 15239
TEL: (740) 260-9710

STATE OF CONNECTICUT
WILLIAM C. EDMONDSON
36630
LICENSED PROFESSIONAL ENGINEER
11/6/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
LMS	WRS	KJC

APPLICATION REV #: 1

CONSTRUCTION DOCUMENTS

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2	11/06/2023	REVISED PER NEW FIBER ROUTE

A&E PROJECT NUMBER

KHCLE-40084

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE

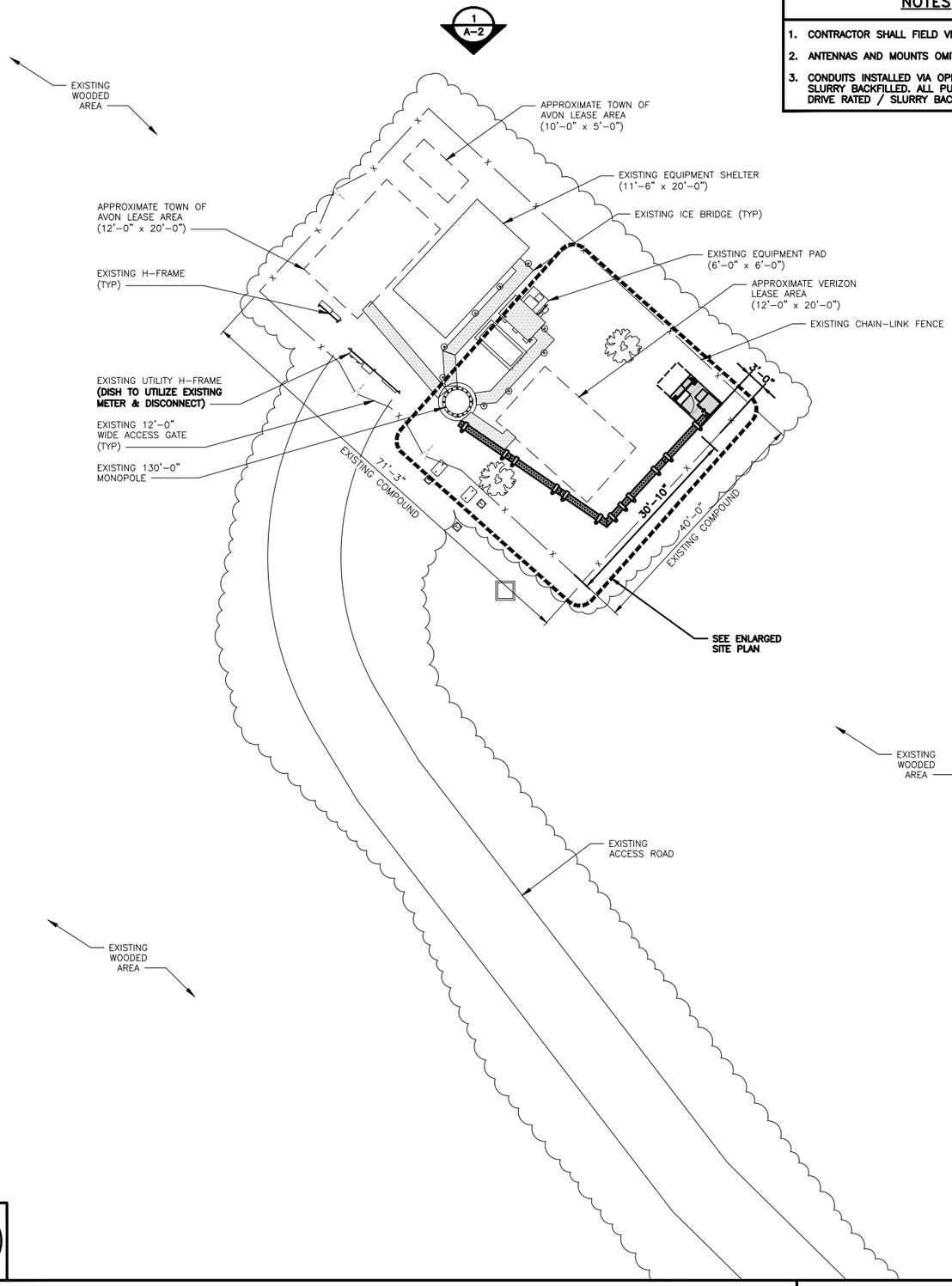
TITLE SHEET

SHEET NUMBER

T-1

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.
3. CONDUITS INSTALLED VIA OPEN TRENCH MUST BE SLURRY BACKFILLED. ALL PULL BOXES MUST BE DRIVE RATED / SLURRY BACKFILL.



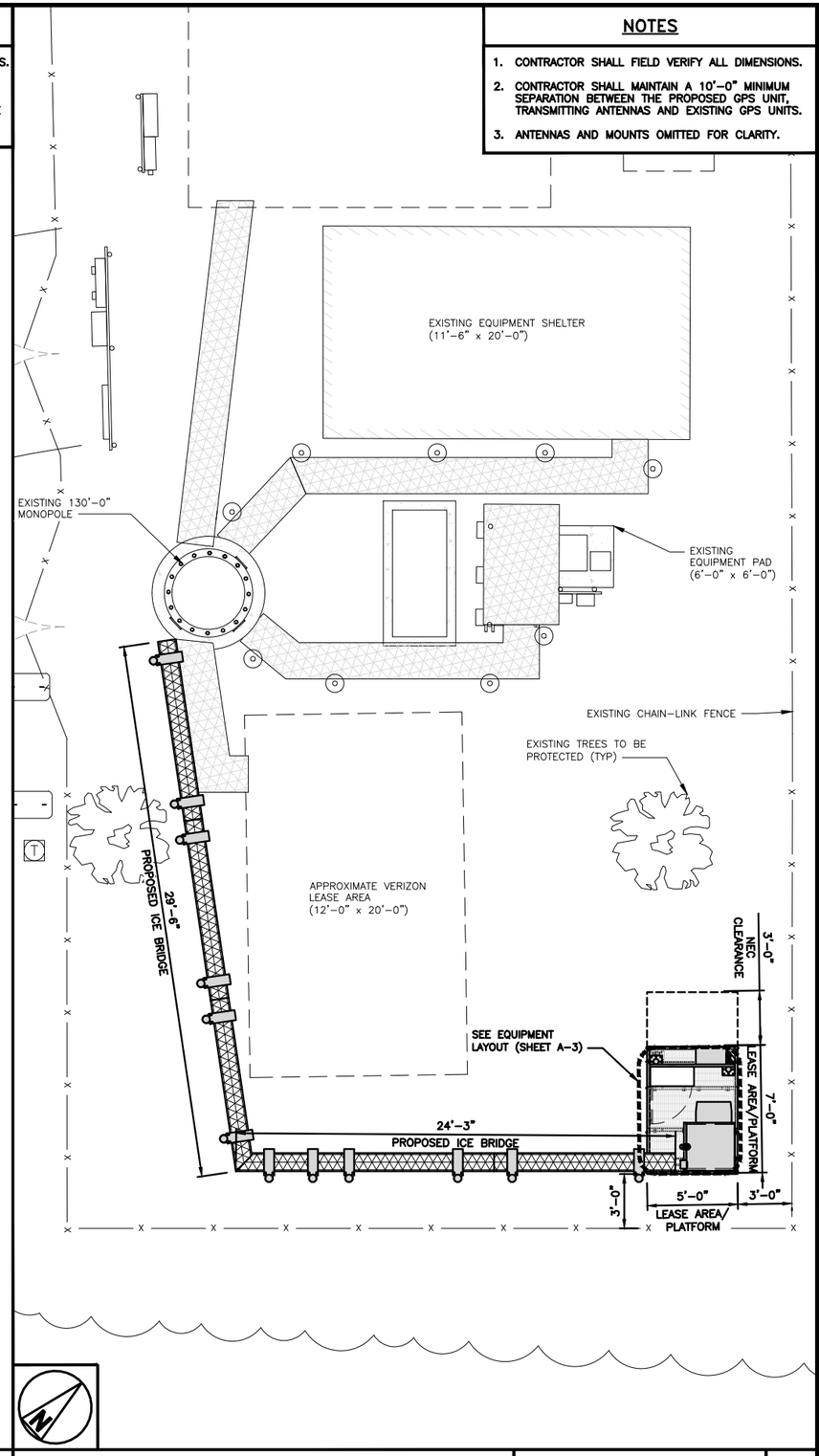
OVERALL SITE PLAN

12' 8' 4' 0 10' 20'
3/32"=1'-0"

1

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.
3. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



ENLARGED SITE PLAN

12" 6" 0 1' 2' 3' 4' 5'
1/2"=1'-0"

2

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Kimley»Horn

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277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE

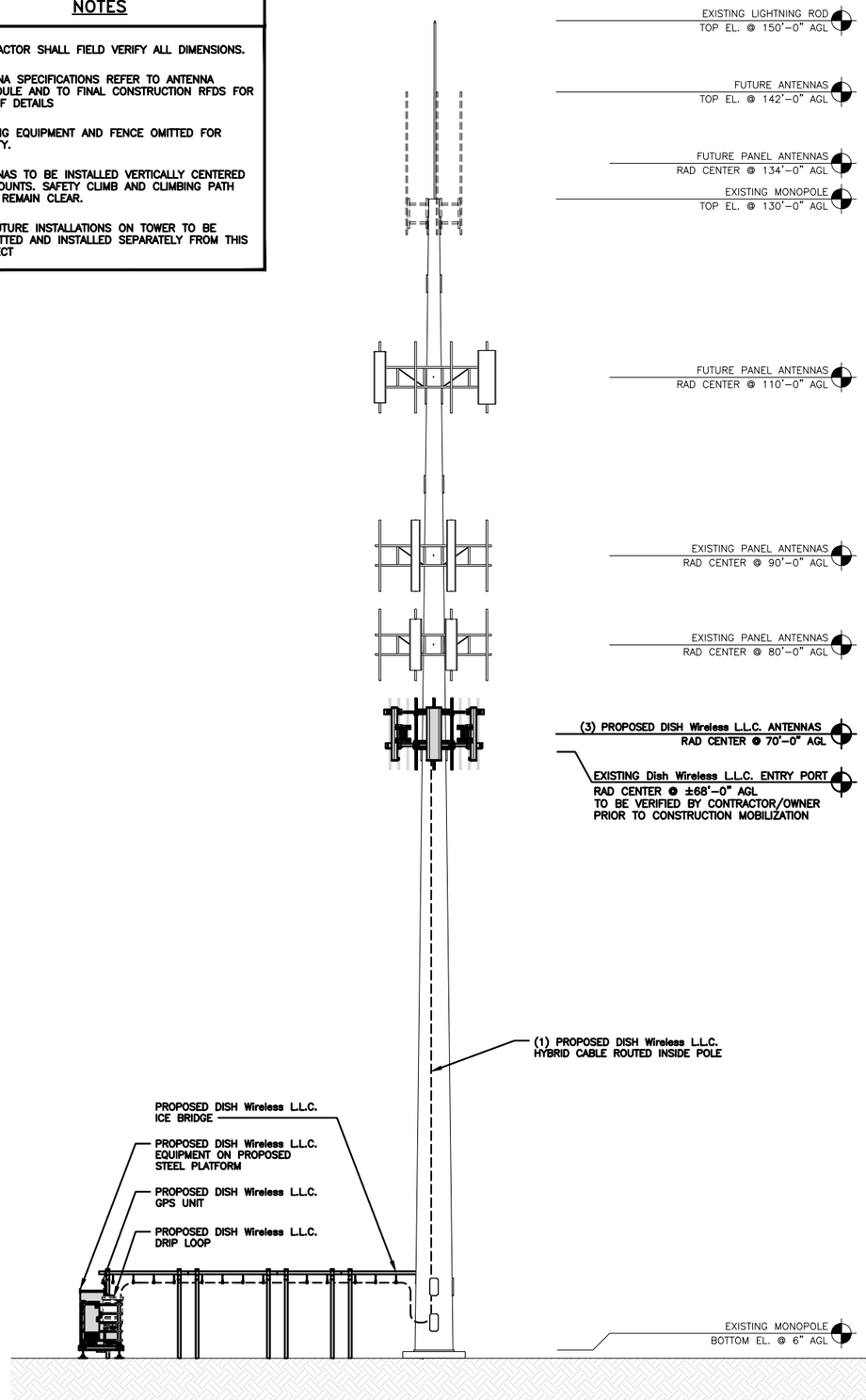
OVERALL AND ENLARGED SITE PLAN

SHEET NUMBER

A-1

NOTES

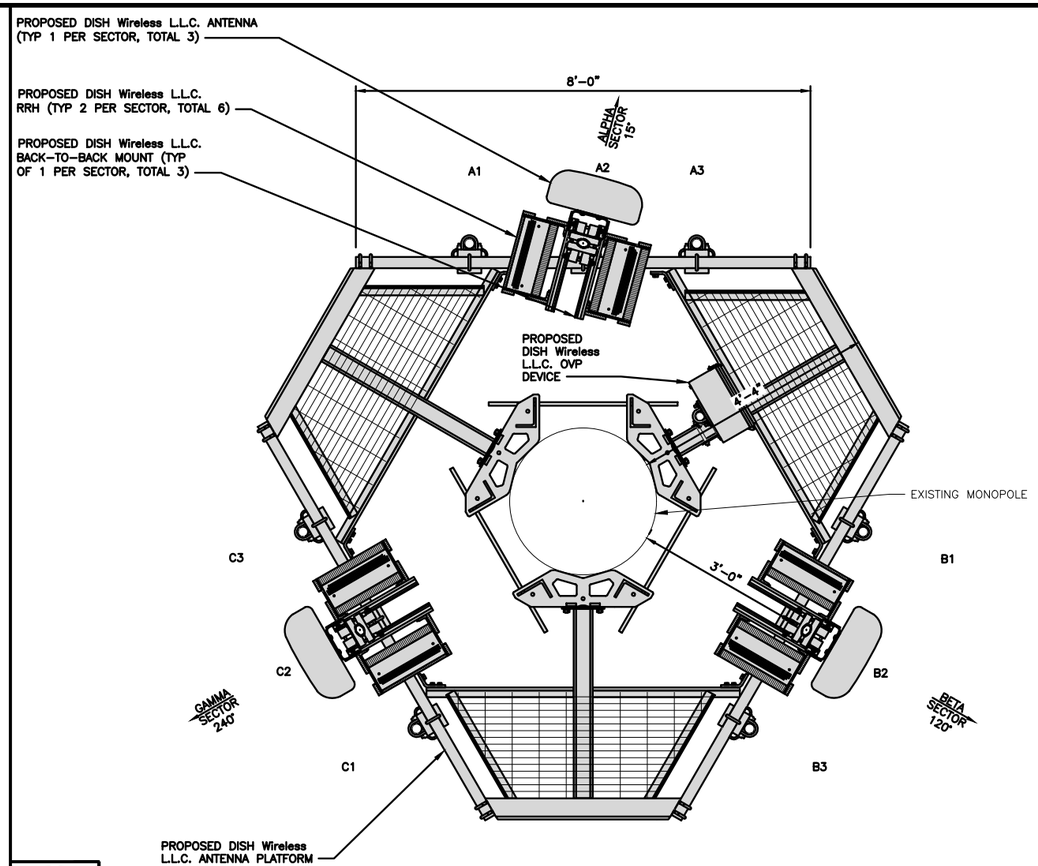
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.
4. ANTENNAS TO BE INSTALLED VERTICALLY CENTERED ON MOUNTS. SAFETY CLIMB AND CLIMBING PATH MUST REMAIN CLEAR.
5. ALL FUTURE INSTALLATIONS ON TOWER TO BE PERMITTED AND INSTALLED SEPARATELY FROM THIS PROJECT



PROPOSED NORTH ELEVATION

8' 4' 0 8' 16'
1/8"=1'-0"

1



ANTENNA LAYOUT

12" 6" 0 1' 2' 3'
3/4"=1'-0"

2

SECTOR POS.	ANTENNA					TRANSMISSION CABLE	RRH			OVP
	EXISTING OR PROPOSED	MANUFACTURER – MODEL NUMBER	TECH	AZIMUTH	RAD CENTER	FEED LINE TYPE AND LENGTH	MANUFACTURER – MODEL NUMBER	TECH	POS	MANUFACTURER MODEL
A-1	--	--	--	--	--	(1) HIGH-CAPACITY HYBRID CABLE (160' LONG)	FUJITSU – TA08025-B604	5G	A2	RAYCAP RDIDC – 9181-PF-48
A-2	PROPOSED	JMA – MX08FR0665-21	5G	15°	70'-0"		FUJITSU – TA08025-B605	5G	A2	
A-3	--	--	--	--	--		--	--	--	
B-1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU – TA08025-B604	5G	B2	SHARED W/ALPHA
B-2	PROPOSED	JMA – MX08FR0665-21	5G	120°	70'-0"		FUJITSU – TA08025-B605	5G	B2	
B-3	--	--	--	--	--		--	--	--	
C-1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU – TA08025-B604	5G	C2	SHARED W/ALPHA
C-2	PROPOSED	JMA – MX08FR0665-21	5G	240°	70'-0"		FUJITSU – TA08025-B605	5G	C2	
C-3	--	--	--	--	--		--	--	--	

NOTES
1. CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.
2. ANTENNA AND RRH MODELS MAY CHANGE DUE TO EQUIPMENT AVAILABILITY. ALL EQUIPMENT CHANGES MUST BE APPROVED AND REMAIN IN COMPLIANCE WITH THE PROPOSED DESIGN AND STRUCTURAL ANALYSES.

ANTENNA SCHEDULE

NO SCALE

3

dish wireless.
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

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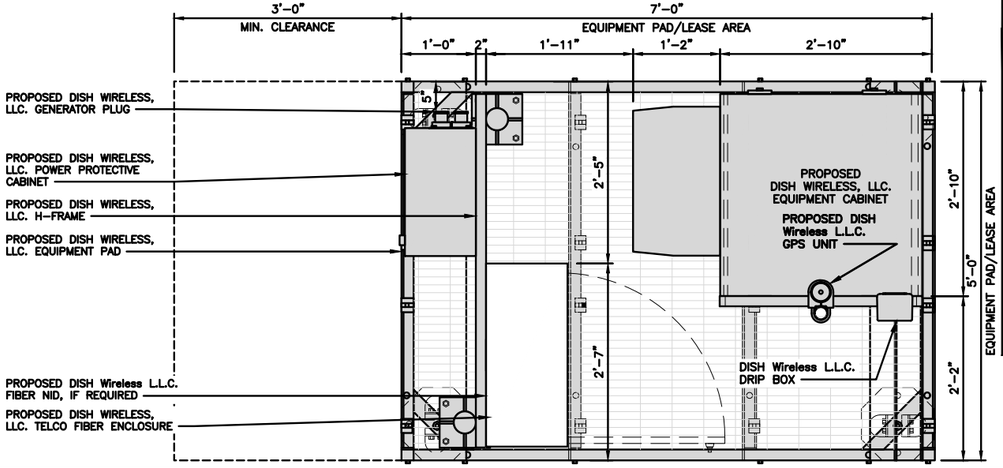
KHCLE-40084

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE
ELEVATION, ANTENNA LAYOUT AND SCHEDULE

SHEET NUMBER
A-2



PLATFORM EQUIPMENT PLAN

12" 9" 6" 3" 0 1' 2'
1"=1'-0"

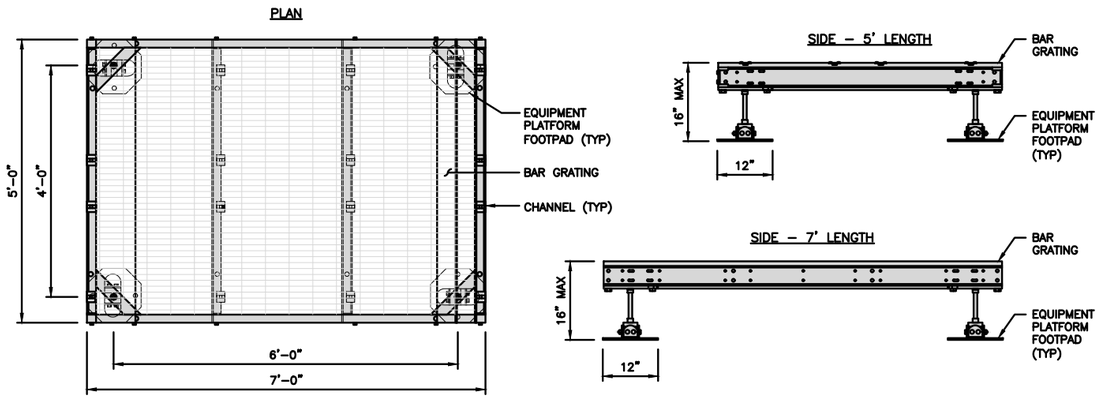
1

NOTES

1. INSTALL POSTS BASES TO GRATING JUST INSIDE PLATFORM FRAME. NO DRILLING REQUIRED.
2. GPS MAY BE MOVED TO ICE BRIDGE OR H-FRAME.
3. ALL CONDUIT TO BE ROUTED THROUGH PLATFORM GRATING USING LIQUIDTIGHT, EMT, RIGID OR PVC COUPLERS. CONDUIT QUANTITY AND SIZES ARE PER ONE-LINE DIAGRAM ON E-3 SHEET OF CDS. (DC PLANT DEPENDENT.)
4. CONTRACTOR MAY FIELD INSTALL CONDUIT HOLES IN BOTTOM OF PPC CABINET TO MATCH CONDUIT SIZES. (SEAL TO PPC MANUFACTURER SPECIFICATIONS).
5. H-FRAME POSTS ARE STAGGERED TO ALLOW FIBER NID BOXES TO BE INSTALLED CLOSE TO PERIMETER FRAME OF PLATFORM.
6. CONDUITS FROM PPC/FIBER DEMARK CABINETS TO EQUIPMENT CABINET (BBU) SHALL BE INSTALLED INSIDE PERIMETER OF PLATFORM AND UNDER GRATING.
7. KIMLEY-HORN DID NOT EVALUATE THE PLATFORM STRUCTURE TO SUPPORT THE PROPOSED EQUIPMENT CONFIGURATION. CONTRACTOR TO OBTAIN PASSING PLATFORM ANALYSIS REPORT PRIOR TO INSTALLING THE PROPOSED PLATFORM.

COMMSCOPE MTC4045LP 5X7 PLATFORM	
DIMENSIONS (HxWxD)	16"x84"x60"
TOTAL WEIGHT	423 LBS

NOTE:
1. GC TO PROVIDE EXTENDED THREAD FOR PLATFORM IF REQUIRED HEIGHT EXCEEDS 16"
2. PLATFORM TO BE LEVEL WITHIN 1"

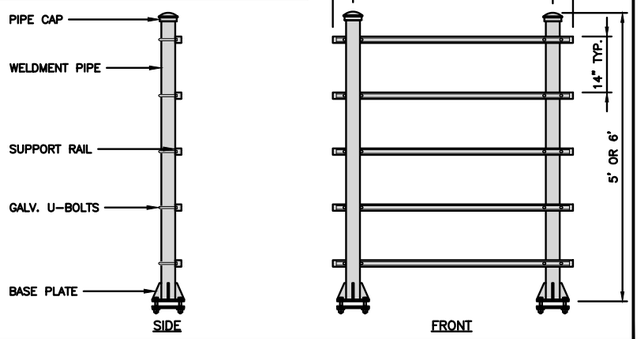


PLATFORM DETAIL

NO SCALE

2

COMMSCOPE MTC4045HFLD H-FRAME	
UNISTRUT/SUPPORT RAILS QTY	5
WEIGHT	59.74 lbs



H-FRAME DETAIL

NO SCALE

3

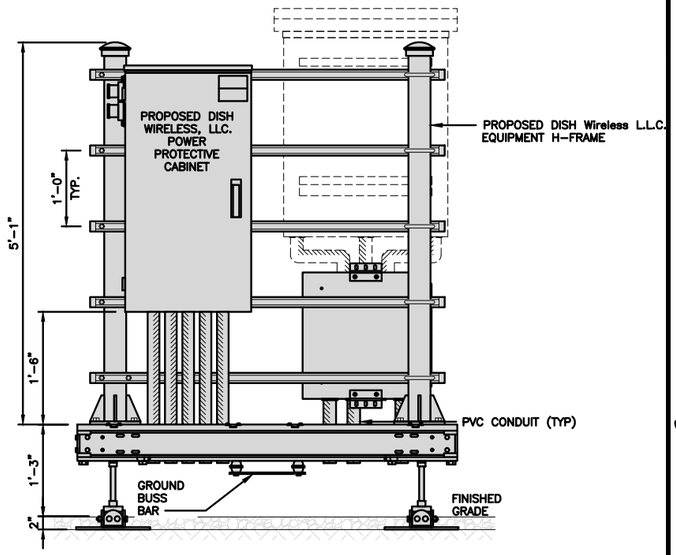
NOT USED

NO SCALE

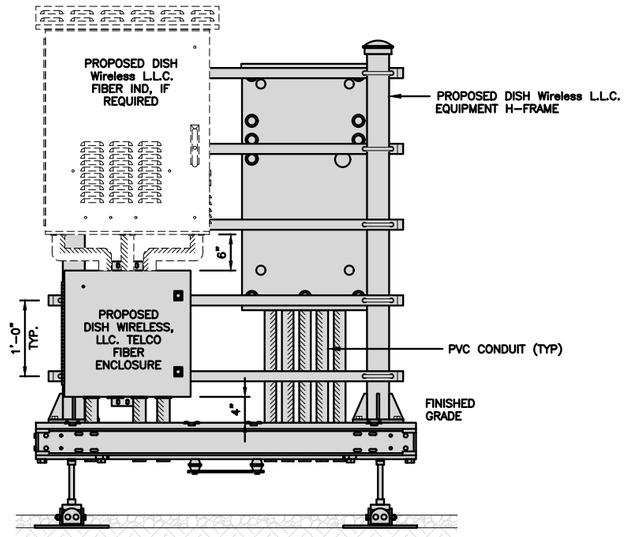
4

NOTES

1. CONTRACTOR TO BURY PLATFORM FEET WITH A MINIMUM OF 2" OF FILL PER EXISTING SITE SURFACE
2. WEED BARRIER FABRIC TO BE ADDED AT DISCRETION OF DISH Wireless L.L.C. CONSTRUCTION MANAGER AT TIME OF CONSTRUCTION. ONE SHEET 8'x8' INSTALLED UNDER ALL FOUR FEET OF THE PLATFORM (4 MIL BLACK PLASTIC)
3. EQUIPMENT CABINET OMITTED FOR CLARITY
4. NOTE FOR FIELD CREW: CONSULT WITH DISH CM FOR H-FRAME POST AND UNITSTRUT PLACEMENTS



FRONT ELEVATION



BACK ELEVATION

H-FRAME EQUIPMENT ELEVATION

12" 9" 6" 3" 0 1' 2'
1"=1'-0"

5

dish wireless.
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

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KHCLE-40084

DISH Wireless L.L.C.
PROJECT INFORMATION
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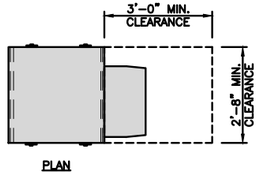
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

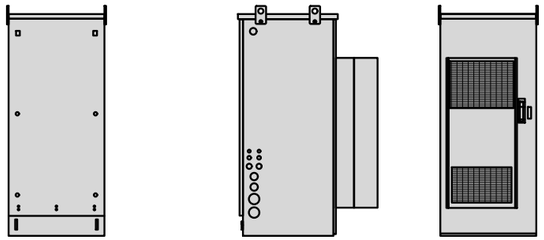
SHEET TITLE
EQUIPMENT PLATFORM AND H-FRAME DETAILS

SHEET NUMBER
A-3

CHARLES INDUSTRY HEX CUBE–PM639155N4	
DIMENSIONS (HxWxD)	74"x32"x32"
POWER PLANT	–48VDC ABB/600W
TOTAL WEIGHT (EMPTY)	408 lbs



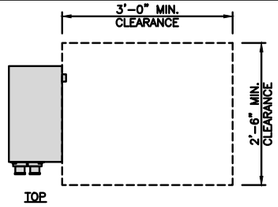
PLAN



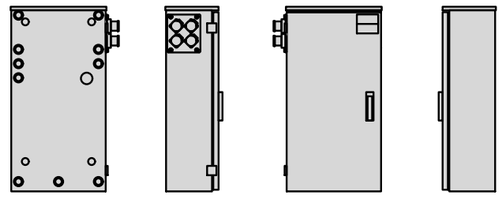
BACK SIDE FRONT

CABINET DETAIL | NO SCALE | 1

RAYCAP PPC RDIAC–2465–P–240–MTS	
ENCLOSURE DIMENSIONS (HxWxD):	39"x22.855"x12.593
WEIGHT:	80 lbs
OPERATING AC VOLTAGE	240/120 1 PHASE 3W+G



TOP



BACK SIDE FRONT SIDE

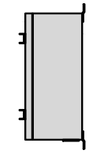
POWER PROTECTION CABINET (PPC) DETAIL | NO SCALE | 2

NOT USED | NO SCALE | 3

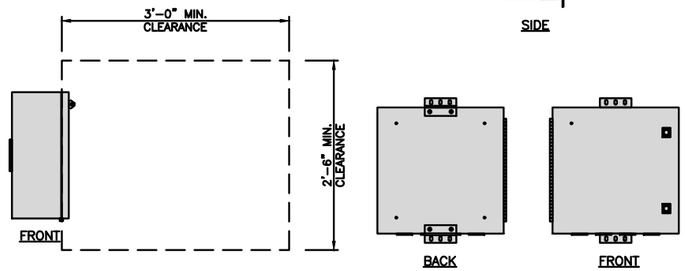
NOT USED | NO SCALE | 4

NOT USED | NO SCALE | 5

CHARLES CFIT–PF2020DSH1 FIBER TELCO ENCLOSURE	
ENCLOSURE DIMS (HxWxD)	20"x20"x9"
ENCLOSURE WEIGHT	20 lbs
MOUNTING	WALL
COMPLIANCE	TYPE 4



SIDE

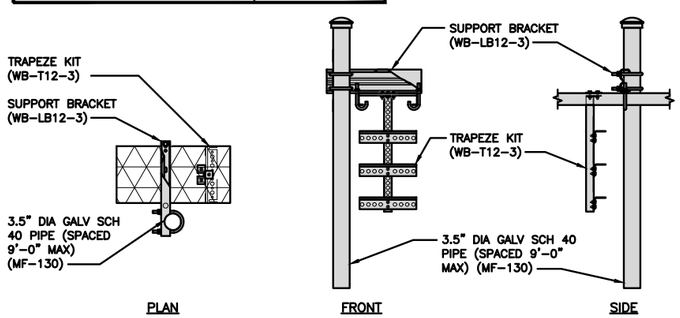


FRONT BACK FRONT

FIBER TELCO ENCLOSURE DETAIL | NO SCALE | 6

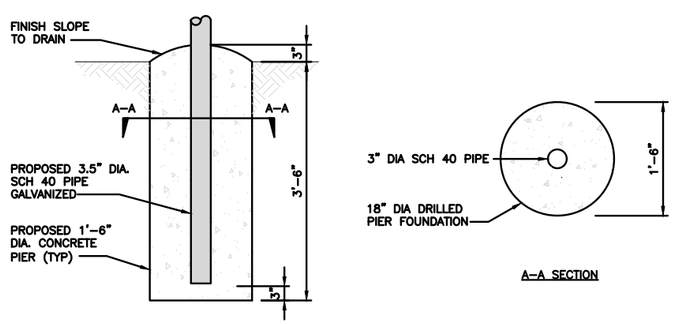
COMMSCOPE WB–K110–B WAVEGUIDE BRIDGE KIT	
DIMENSIONS (HxL)	160"x10'
WEIGHT/ VOLUME	325.0 LBS
CABLE RUN (QTY)	12

INCLUDED PRODUCTS:	
	WB–T12–3 TRAPEZE KIT, 3 RUNGS
	WB–LB12–3 SUPPORT BRACKET
	MF–130 DIRECT BURIAL PIPE COLUMN, 13'–4"



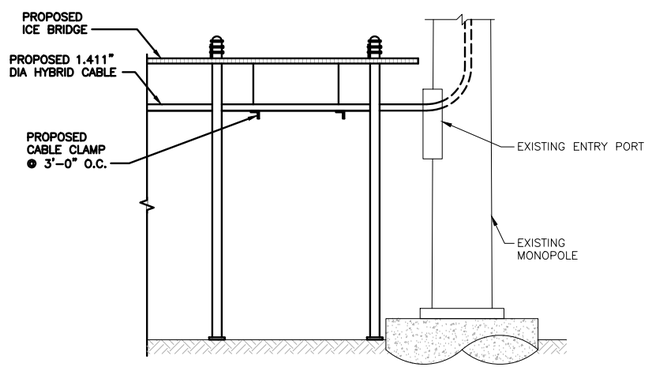
PLAN FRONT SIDE

ICE BRIDGE DETAIL | NO SCALE | 7



CONCRETE PIER A–A SECTION

TYPICAL ICE BRIDGE CONCRETE PIER DETAIL | NO SCALE | 8



HYBRID CABLE RUN | NO SCALE | 9

dish wireless.

5701 SOUTH SANTA FE DRIVE
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TEL: (740) 260–9710

STATE OF CONNECTICUT
WILLIAM C. EDMONDSON
36630
LICENSED PROFESSIONAL ENGINEER
11/6/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
LMS	WRS	KJC

APPLICATION REV #: 1

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A&E PROJECT NUMBER

KHCLE–40084

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

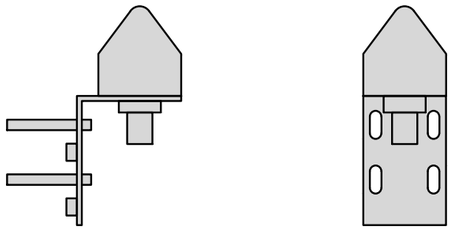
SHEET TITLE

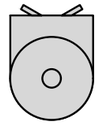
EQUIPMENT DETAILS

SHEET NUMBER

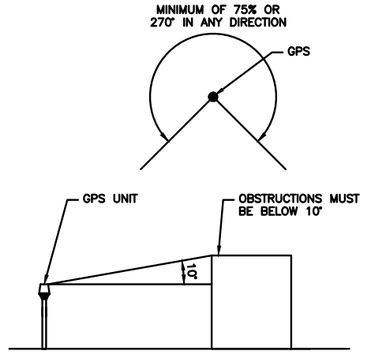
A-4

AMPHENOL GNS 2020–D	
DIMENSIONS (DIAxH)	1.97"x3.94"
WEIGHT W/ACCESSORIES	1 lb
CONNECTOR	N–FEMALE
FREQUENCY RANGE	1559–1610.5 MHz

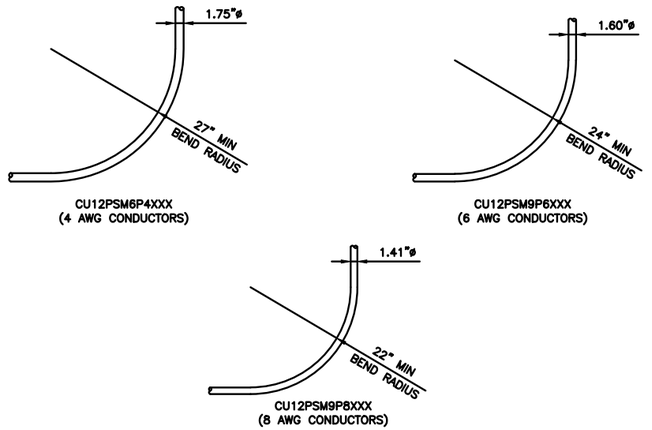




GPS DETAIL | NO SCALE | 1



GPS MINIMUM SKY VIEW REQUIREMENTS | NO SCALE | 2

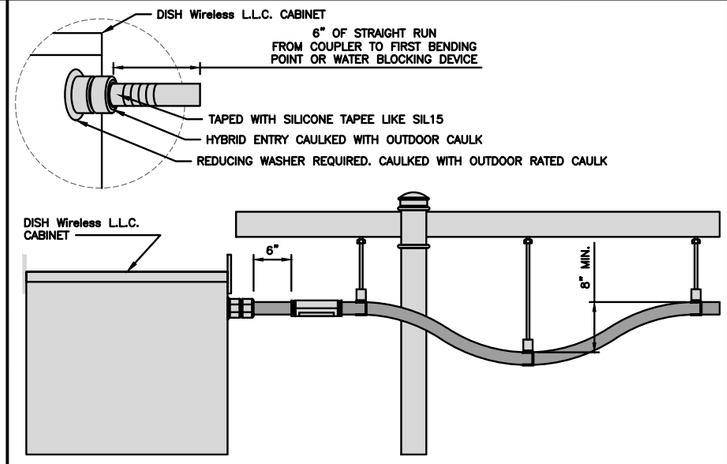


CABLES UNLIMITED HYBRID CABLE
MINIMUM BEND RADIUSES | NO SCALE | 3

NOTE:

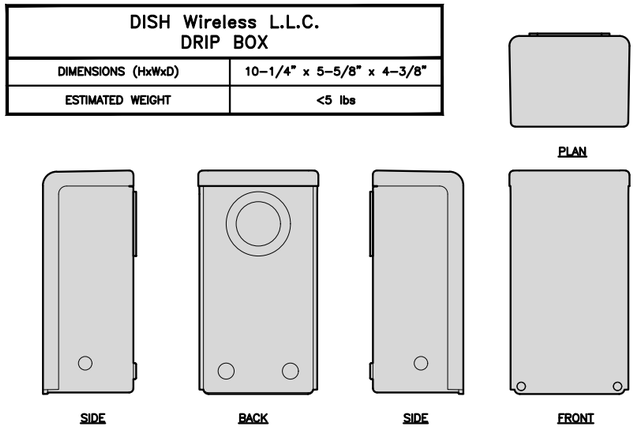
CONTRACTOR SHALL NOT LOOP EXCESS HYBRID OUTSIDE CABINET. EXCESS HYBRID LENGTH IS TO BE ADJUSTED BY STRIPPING JACKET AND SHIELDING AND TERMINATING DC CABLE TO LENGTH. FIBER EXCESS IS TO BE COILED IN FIBER SLACK TRAY INSIDE NETWORK CABINET.

HYBRID CABLE INSTALLATION NOTE | NO SCALE | 4



HYBRID CABLE INSTALLATION DETAIL | NO SCALE | 5

DISH Wireless L.L.C. DRIP BOX	
DIMENSIONS (HxWxD)	10–1/4" x 5–5/8" x 4–3/8"
ESTIMATED WEIGHT	<5 lbs



DISH Wireless L.L.C. DRIP BOX DETAIL | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 9

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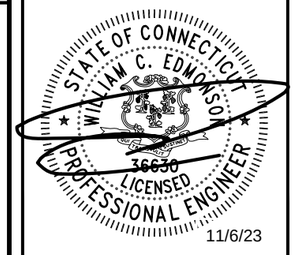

11/6/23

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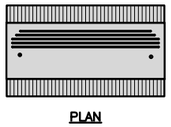
KHCLE–40084

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE
EQUIPMENT DETAILS

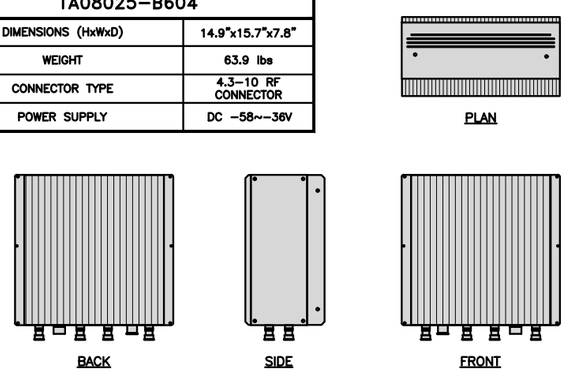
SHEET NUMBER
A-5

FUJITSU TRIPLE BAND TA08025-B605	
DIMENSIONS (HxWxD)	14.9"x15.7"x9"
WEIGHT	74.95 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V



RRH DETAIL | NO SCALE | 1

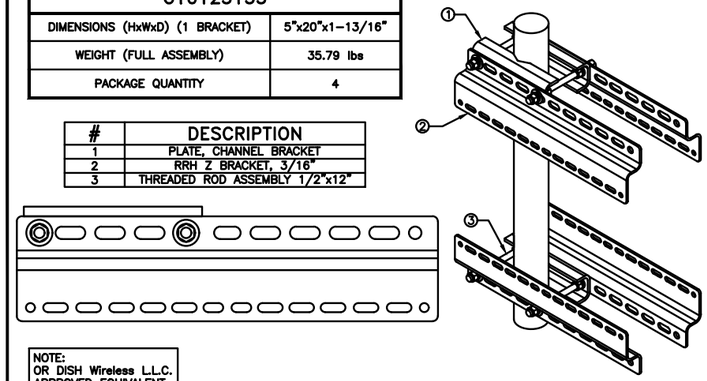
FUJITSU DUAL BAND TA08025-B604	
DIMENSIONS (HxWxD)	14.9"x15.7"x7.8"
WEIGHT	63.9 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V



RRH DETAIL | NO SCALE | 2

SABRE DOUBLE Z-BRACKET C10123155	
DIMENSIONS (HxWxD) (1 BRACKET)	5"x20"x1-13/16"
WEIGHT (FULL ASSEMBLY)	35.79 lbs
PACKAGE QUANTITY	4

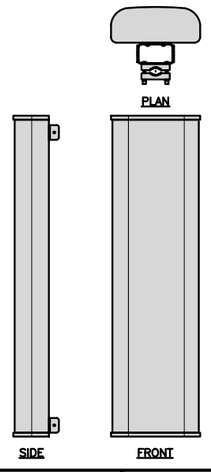
#	DESCRIPTION
1	PLATE, CHANNEL BRACKET
2	RRH Z BRACKET, 3/16"
3	THREADED ROD ASSEMBLY 1/2"x12"



NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT

RRH MOUNT DETAIL | NO SCALE | 3

JMA MX08FRO665-21	
DIMENSIONS (HxWxD)	72"x20.0"x8.0"
RF PORTS, CONNECTOR TYPE	8 x 4.3-10 FEMALE
WEIGHT	64.5 lbs
WEIGHT WITH BRACKETS	82.5 lbs



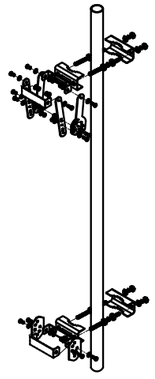
ANTENNA DETAIL | NO SCALE | 4

NOT USED | NO SCALE | 5

JMA ANTENNA MOUNT BRACKET #91900318	
TOTAL WEIGHT (WITH BRACKETS)	18 lbs (8.18 Kg)
POLE DIAMETER RANGE	2.5" TO 4.5"

NOTE:
KIT #91900318: TOP AND BOTTOM BRACKETS FOR 4-,6-, AND 8-FOOT ANTENNAS

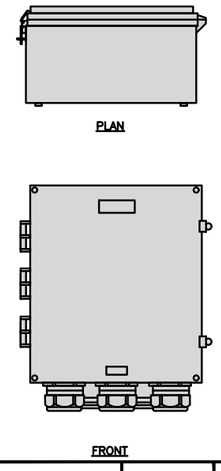
ANTENNA BRACKET NOT PART OF KIT



NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT

ANTENNA BRACKET DETAIL | NO SCALE | 6

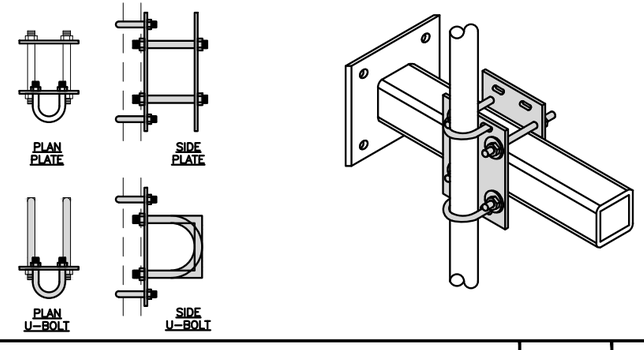
RAYCAP RDIDC-9181-PF-48 DC SURGE PROTECTION	
DIMENSIONS (HxWxD)	18.98"x14.39"x8.15"
WEIGHT	21.82 LBS



SURGE SUPPRESSION DETAIL | NO SCALE | 7

COMMSCOPE XP-2040 CROSSOVER PLATE	
DIMENSIONS (HxW)	10"x12"
WEIGHT	11 lbs

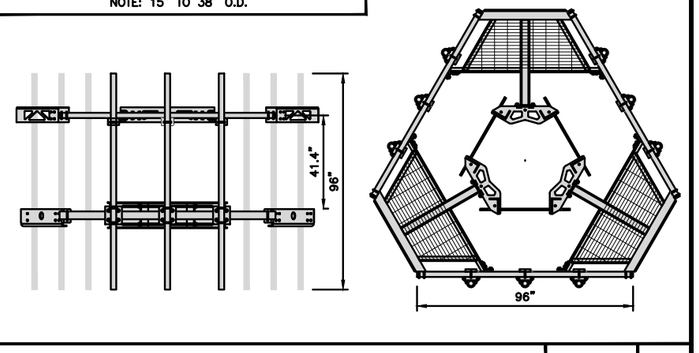
NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT



RRH/OVP MOUNT DETAIL | NO SCALE | 8

COMMSCOPE MC-PK8-DSH	
FACE WIDTH	96"
WEIGHT	1373.08 lbs
NOTE: 15" TO 38" O.D.	

NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT



ANTENNA PLATFORM DETAIL | NO SCALE | 9

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KHCLE-40084

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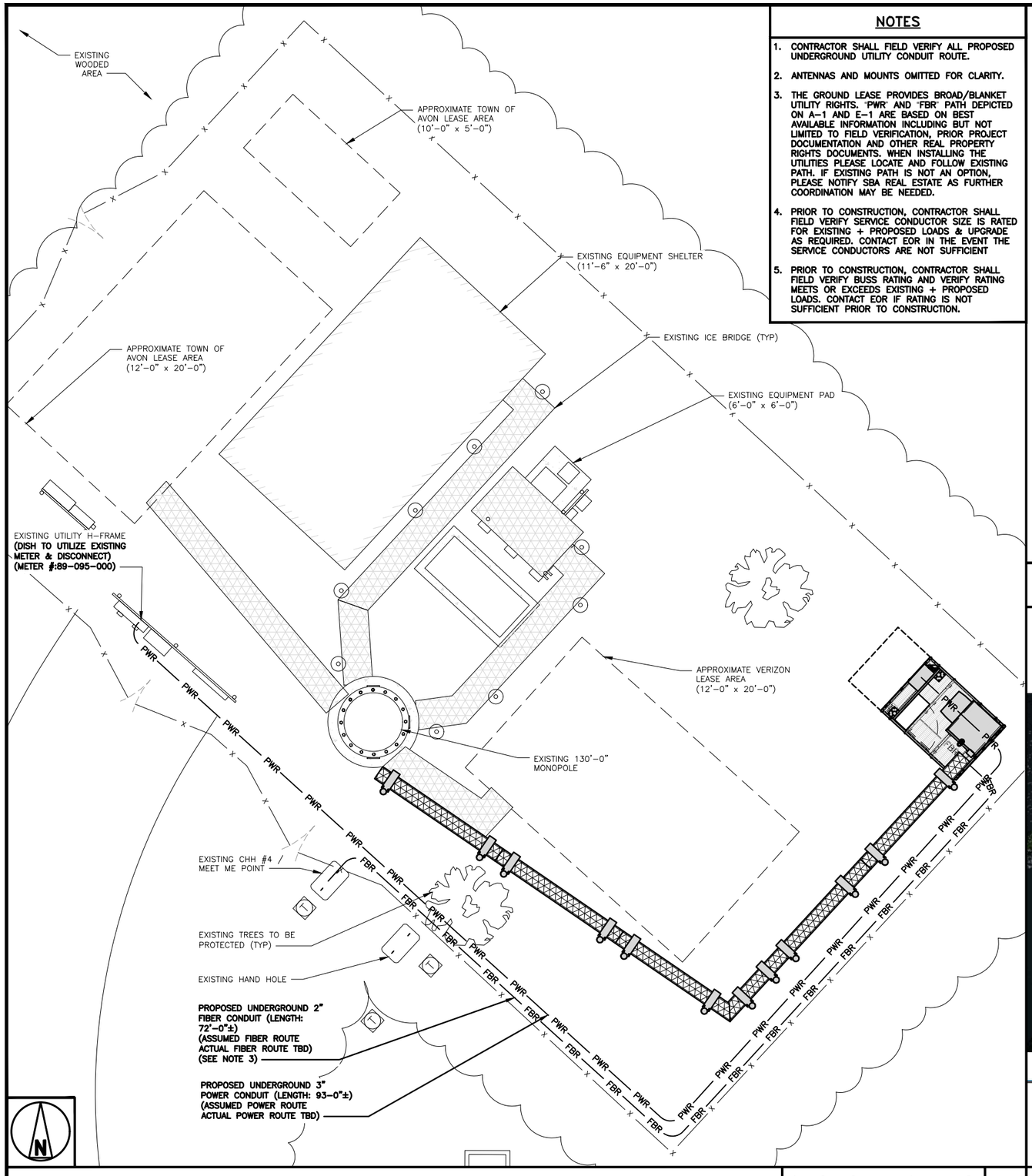
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-6



NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTE.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.
3. THE GROUND LEASE PROVIDES BROAD/BLANKET UTILITY RIGHTS. "PWR" AND "FBR" PATH DEPICTED ON A-1 AND E-1 ARE BASED ON BEST AVAILABLE INFORMATION INCLUDING BUT NOT LIMITED TO FIELD VERIFICATION, PRIOR PROJECT DOCUMENTATION AND OTHER REAL PROPERTY RIGHTS DOCUMENTS. WHEN INSTALLING THE UTILITIES PLEASE LOCATE AND FOLLOW EXISTING PATH. IF EXISTING PATH IS NOT AN OPTION, PLEASE NOTIFY SBA REAL ESTATE AS FURTHER COORDINATION MAY BE NEEDED.
4. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY SERVICE CONDUCTOR SIZE IS RATED FOR EXISTING + PROPOSED LOADS & UPGRADE AS REQUIRED. CONTACT EOR IN THE EVENT THE SERVICE CONDUCTORS ARE NOT SUFFICIENT
5. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY BUSS RATING AND VERIFY RATING MEETS OR EXCEEDS EXISTING + PROPOSED LOADS. CONTACT EOR IF RATING IS NOT SUFFICIENT PRIOR TO CONSTRUCTION.

UTILITY ROUTE PLAN

4' 2' 0 4' 8'
1/4"=1'-0"

1

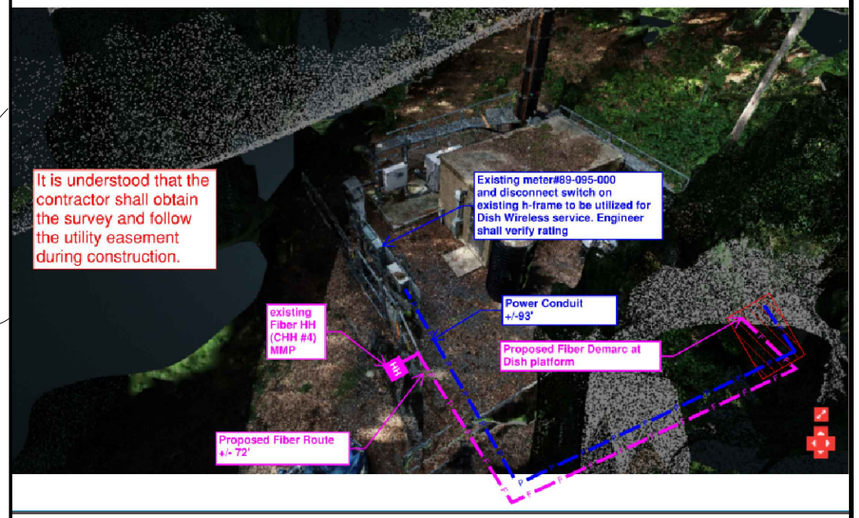
DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND -48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY -48V.

1. CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
2. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT NATIONAL ELECTRICAL CODES AND ALL STATE AND LOCAL CODES, LAWS, AND ORDINANCES. PROVIDE ALL COMPONENTS AND WIRING SIZES AS REQUIRED TO MEET NEC STANDARDS.
3. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO CONSTRUCTION.
4. CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION CONFLICTS. VERIFY WITH THE MECHANICAL EQUIPMENT CONTRACTOR AND COMPLY AS REQUIRED.
5. CONTRACTOR SHALL PROVIDE ALL BREAKERS, CONDUITS AND CIRCUITS AS REQUIRED FOR A COMPLETE SYSTEM.
6. CONTRACTOR SHALL PROVIDE PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NEC ARTICLE 314.
7. CONTRACTOR SHALL PROVIDE ALL STRAIN RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. ALL DISCONNECTS AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED PHENOLIC NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM.
9. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC 250. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, AND EQUIPMENT CABINETS.
10. ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
11. PANEL SCHEDULE LOADING AND CIRCUIT ARRANGEMENTS REFLECT POST-CONSTRUCTION EQUIPMENT.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR AS-BUILT PANEL SCHEDULE AND SITE DRAWINGS.
13. ALL TRENCHES IN COMPOUND TO BE HAND DUG

ELECTRICAL NOTES

NO SCALE

2



UTILITY ROUTING PLAN

NO SCALE

3

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KHCLE-40084

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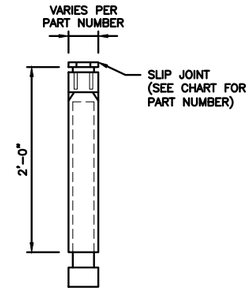
PROJECT INFORMATION
BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE
ELECTRICAL/FIBER ROUTE PLAN AND NOTES

SHEET NUMBER
E-1

CARLON EXPANSION FITTINGS

COUPLING END PART#	MALE TERMINAL ADAPTER END PART#	SIZE	STD CTN QTY.	TRAVEL LENGTH
E945D	E945DX	1/2"	20	4"
E945E	E945EX	3/4"	15	4"
E945F	E945FX	1"	10	4"
E945G	E945GX	1 1/4"	5	4"
E945H	E945HX	1 1/2"	5	4"
E945J	E945JX	2"	15	8"
E945K	E945KX	2 1/2"	10	8"
E945L	E945LX	3"	10	8"
E945M	E945MX	3 1/2"	5	8"
E945N	E945NX	4"	5	8"
E945P	E945PX	5"	1	8"
E945R	E945RX	6"	1	8"

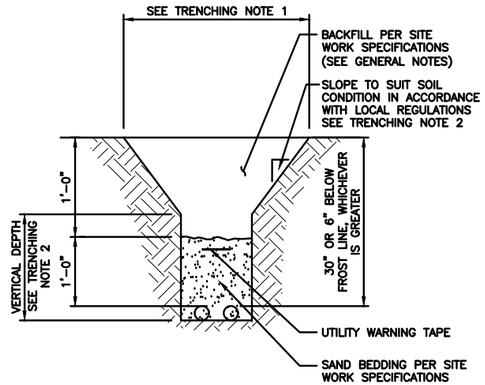


NOTE:
CONTRACTOR TO INSTALL EXPANSION FITTING SLIP JOINT AT METER CENTER CONDUIT TERMINATION, AS PER LOCAL UTILITY POLICY, ORDINANCE AND/OR SPECIFIED REQUIREMENT.

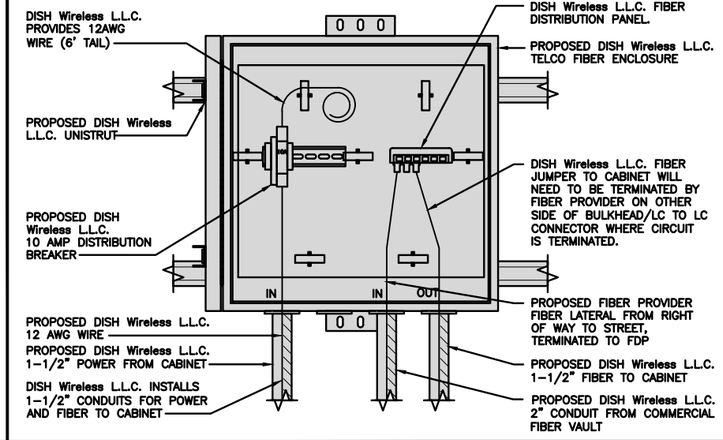
EXPANSION JOINT DETAIL | NO SCALE | 1

TRENCHING NOTES

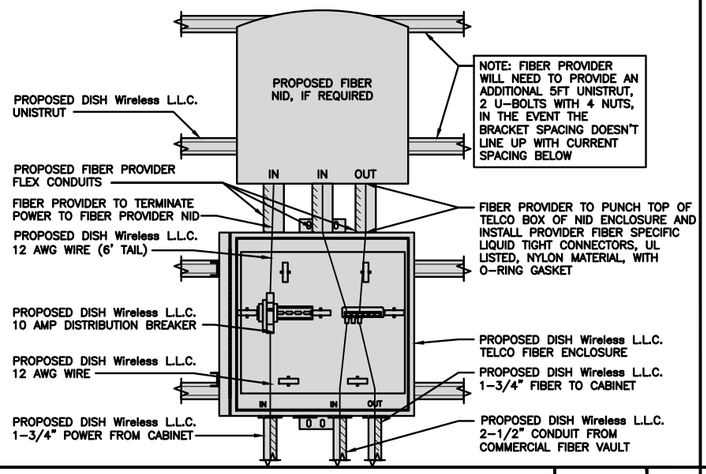
1. CONTRACTOR SHALL RESTORE THE TRENCH TO ITS ORIGINAL CONDITIONS BY EITHER SEEDING OR SODDING GRASS AREAS, OR REPLACING ASPHALT OR CONCRETE AREAS TO ITS ORIGINAL CROSS SECTION.
2. TRENCHING SAFETY; INCLUDING, BUT NOT LIMITED TO SOIL CLASSIFICATION, SLOPING, AND SHORING, SHALL BE GOVERNED BY THE CURRENT OSHA TRENCHING AND EXCAVATION SAFETY STANDARDS.
3. ALL CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT NATIONAL ELECTRIC CODE (NEC) OR AS REQUIRED BY THE LOCAL JURISDICTION, WHICHEVER IS THE MOST STRINGENT.



TYPICAL UNDERGROUND TRENCH DETAIL | NO SCALE | 2



DARK TELCO BOX – INTERIOR WIRING LAYOUT | NO SCALE | 3



LIT TELCO BOX – INTERIOR WIRING LAYOUT (OPTIONAL) | NO SCALE | 4

NOT USED | NO SCALE | 5

NOT USED | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 9

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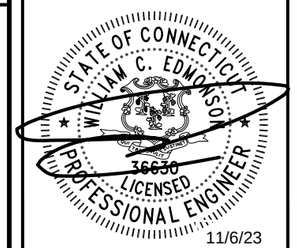

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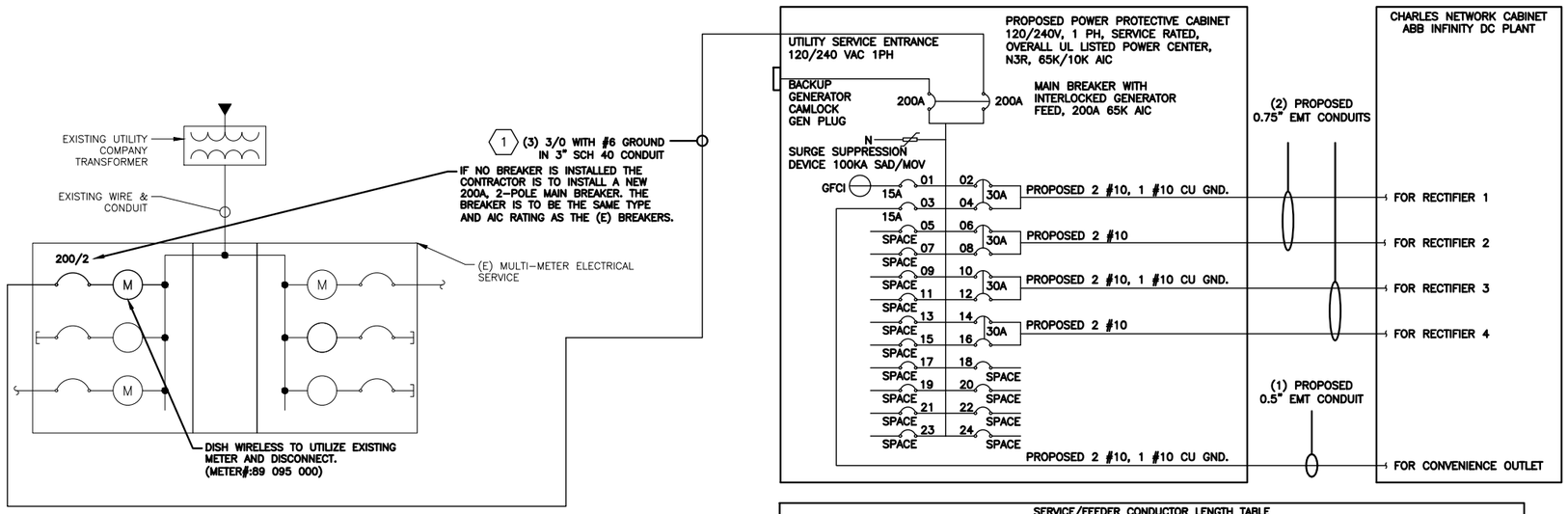
SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E-2



NOTE:
BRANCH CIRCUIT WIRING SUPPLYING RECTIFIERS ARE TO BE RATED UL1015, 105°C, 600V, AND PVC INSULATED, IN THE SIZES SHOWN IN THE ONE-LINE DIAGRAM. CONTRACTOR MAY SUBSTITUTE UL1015 WIRE FOR THWN-2 FOR CONVENIENCE OUTLET BRANCH CIRCUIT.

BREAKERS REQUIRED:
(4) 30A, 2P BREAKER - SQUARE D P/N:QO230
(2) 15A, 1P BREAKER - SQUARE D P/N:QO115

SERVICE/FEEDER CONDUCTOR LENGTH TABLE
(BASED ON INDUSTRY STANDARD 3% VOLTAGE DROP AND 5% NEC ALLOWABLE LIMIT)

	CONDUCTOR SIZES					
DESIGN LOADS	250 kcmil AL	300 kcmil AL	3/0 CU	4/0 CU	250 kcmil CU	300 kcmil CU
DISH Wireless L.L.C. MAXIMUM CONTINUOUS LOAD (160A) (NEC ARTICLE 220 & 230 3% VOLTAGE DROP)	130'	155'	145'	180'	215'	255'
DISH Wireless L.L.C. MAXIMUM CONTINUOUS LOAD (160A) (NEC ARTICLE 220 & 230 5% VOLTAGE DROP)	220'	260'	240'	300'	360'	425'

NOTES:
1. 250 MCM/KCMIL AL + #2 AL GRD MAY BE USED AS A REPLACEMENT FOR 3/0 CU + #6 CU GRD SERVICE CONDUCTOR FROM THE DISH Wireless L.L.C. FIRST MEANS OF DISCONNECT/UTILITY COMPANY MEET-ME POINT. REFER TO VALUES ABOVE TO LIMIT VOLTAGE DROP TO 3%.
2. ALUMINUM/COPPER CONDUCTORS MUST BE RATED 75°C.
3. ALUMINUM TO COPPER BUSS CONNECTIONS MUST MEET AND CONFORM TO ANSI AND BE UL LISTED. USE ANTI CORROSION CONDUCTIVE LUBRICANT ON CONNECTIONS
4. PPC MAIN DISCONNECT CIRCUIT BREAKERS ACCEPT #4 - 300KCMIL AL OR CU CONDUCTORS.
5. VOLTAGE DROP FOR SINGLE METER ENCLOSURE FED FROM TRANSFORMER WITH MULTIPLE CUSTOMERS IS CALCULATED FROM THE TRANSFORMER TO PPC. (SERVICE AND FEEDER CONDUCTOR LENGTH)
6. VOLTAGE DROP FOR MULTI-METER ENCLOSURE IS CALCULATED FROM THE METER TO PPC. (FEEDER CONDUCTOR LENGTH)
7. VOLTAGE DROP CALCULATIONS ARE BASED ON A POWER FACTOR OF 1, A LINE TO GROUND VOLTAGE PER CONDUCTOR OF 120V, NO CORRECTION FACTOR FOR AMBIENT TEMPERATURE OR ADJUSTMENT FACTOR FOR MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN A SINGLE CONDUCT OR RACEWAY. A POWER FACTOR LESS THAN 1 OR VOLTAGE LESS THAN 120 WILL RESULT IN SHORTER DISTANCES THAN SHOWN IN TABLE.

NOTES

THE ENGINEER OF RECORD HAS PERFORMED ALL REQUIRED SHORT CIRCUIT CALCULATIONS AND THE AIC RATINGS FOR EACH DEVICE IS ADEQUATE TO PROTECT THE EQUIPMENT AND THE ELECTRICAL SYSTEM.

THE ENGINEER OF RECORD HAS PERFORMED ALL REQUIRED VOLTAGE DROP CALCULATIONS AND ALL BRANCH CIRCUIT AND FEEDERS COMPLY WITH THE NEC (LISTED ON T-1) ARTICLE 210.19(A)(1) FPN NO. 4.

THE (2) CONDUITS WITH (4) CURRENT CARRYING CONDUCTORS EACH, SHALL APPLY THE ADJUSTMENT FACTOR OF 80% PER 2014/17 NEC TABLE 310.15(B)(3)(a) OR 2020 NEC TABLE 310.15(C)(1) FOR UL1015 WIRE.

#12 FOR 15A-20A/1P BREAKER: 0.8 x 30A = 24.0A
#10 FOR 25A-30A/2P BREAKER: 0.8 x 40A = 32.0A
#8 FOR 35A-40A/2P BREAKER: 0.8 x 55A = 44.0A
#6 FOR 45A-60A/2P BREAKER: 0.8 x 75A = 60.0A

CONDUIT SIZING: AT 40% FILL PER NEC CHAPTER 9, TABLE 4, ARTICLE 358.
0.5" CONDUIT - 0.122 SQ. IN AREA
0.75" CONDUIT - 0.213 SQ. IN AREA
2.0" CONDUIT - 1.316 SQ. IN AREA
3.0" CONDUIT - 2.907 SQ. IN AREA

CABINET CONVENIENCE OUTLET CONDUCTORS (1 CONDUIT): USING THWN-2, CU.

#10 - 0.0211 SQ. IN X 2 = 0.0422 SQ. IN
#10 - 0.0211 SQ. IN X 1 = 0.0211 SQ. IN <GROUND
TOTAL = 0.0633 SQ. IN

0.5" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (3) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

RECTIFIER CONDUCTORS (2 CONDUITS): USING UL1015, CU.

#10 - 0.0266 SQ. IN X 4 = 0.1064 SQ. IN
#10 - 0.0082 SQ. IN X 1 = 0.0082 SQ. IN <BARE GROUND
TOTAL = 0.1146 SQ. IN

0.75" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (5) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

PPC FEED CONDUCTORS (1 CONDUIT): USING THWN, CU.

3/0 - 0.2679 SQ. IN X 3 = 0.8037 SQ. IN
#6 - 0.0507 SQ. IN X 1 = 0.0507 SQ. IN <GROUND
TOTAL = 0.8544 SQ. IN

3.0" SCH 40 PVC CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (4) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

1 PPC FEED CONDUCTORS (1 CONDUIT): USING THWN, AL.

250kcmil AL - 0.3970 SQ. IN X 3 = 1.191 SQ. IN
#4 AL - 0.0824 SQ. IN X 1 = 0.0824 SQ.IN <GROUND
TOTAL = 1.2734 SQ. IN

3.0" SCH 40 PVC CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (4) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

PPC ONE-LINE DIAGRAM | NO SCALE | 1

PROPOSED CHARLES PANEL SCHEDULE

LOAD SERVED	VOLT AMPS (WATTS) L1	VOLT AMPS (WATTS) L2	TRIP	CKT #	PHASE	CKT #	TRIP	VOLT AMPS (WATTS) L1	VOLT AMPS (WATTS) L2	LOAD SERVED
PPC GFCI OUTLET	180		15A	1	A	2	30A	2880		ABB/GE INFINITY RECTIFIER 1
CHARLES GFCI OUTLET		180	15A	3	B	4			2880	
-SPACE-				5	A	6	30A	2880		ABB/GE INFINITY RECTIFIER 2
-SPACE-				7	B	8			2880	
-SPACE-				9	A	10	30A	2880		ABB/GE INFINITY RECTIFIER 3
-SPACE-				11	B	12			2880	
-SPACE-				13	A	14	30A	2880		ABB/GE INFINITY RECTIFIER 4
-SPACE-				15	B	16			2880	
-SPACE-				17	A	18				-SPACE-
-SPACE-				19	B	20				-SPACE-
-SPACE-				21	A	22				-SPACE-
-SPACE-				23	B	24				-SPACE-
VOLTAGE AMPS	180	180						11520	11520	
200A MCB, 1ϕ, 24 SPACE, 120/240V			L1		L2					
MB RATING: 65,000 AIC			11700		11700		VOLTAGE AMPS			
			98		98		AMPS			
			98				MAX AMPS			
			123				MAX 125%			

PANEL SCHEDULE | NO SCALE | 2

NOT USED | NO SCALE | 3

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WILLIAM C. EDMONDS
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11/6/23

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LMS	WRS	KJC

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A&E PROJECT NUMBER
KHCLE-40084

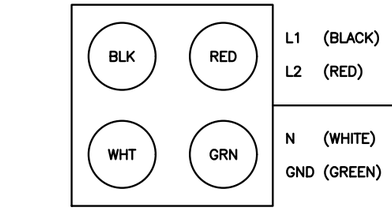
DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE
ELECTRICAL ONE-LINE & PANEL SCHEDULE

SHEET NUMBER
E-3

NOTES:

1. HAZARD OF ELECTRICAL SHOCK OR BURN. TURN OFF POWER SUPPLYING THIS EQUIPMENT BEFORE WORKING INSIDE.
2. 100 OR 200 AMP, 240 VOLTS, SINGLE PHASE ALTERNATING CURRENT CIRCUIT ONLY
3. GENERATOR SHORT CIRCUIT RATING: 10,000 / 20,000 AMPS RMS SYMMETRICAL, AMPERES AT 240 VOLTS
4. UTILITY SHORT CIRCUIT RATING: 65,000 AMPS RMS SYMMETRICAL, AMPERES AT 240 VOLTS
5. SUITABLE FOR USE AS SERVICE EQUIPMENT
6. SUITABLE FOR USE IN ACCORDANCE WITH ARTICLE 702 OF THE NATIONAL ELECTRIC CODE ANSI/NFPA 70
7. BONDED NEUTRAL WHEN INSTALLED AS SHOWN IN WIRING DIAGRAM
8. RAIN PROOF TYPE 3R
9. USE CU–AL WIRE 60–75 °C
10. EQUIPPED WITH SLIDE BAR MECHANICAL INTERLOCK
11. INTERLOCK PROHIBITS BOTH POWER SOURCES FROM BEING IN THE ON POSITION SIMULTANEOUSLY
12. EQUIPPED WITH SQUARE D BREAKERS OR ALTERNATIVE MANUFACTURER EQUIVALENT
13. WHEN REPLACE LOAD CENTER BREAKERS, USE ONLY SQUARE D (QO TYPE) OF THE SAME RATING OR EQUIVALENT
14. WHEN RESETTING BREAKERS TURN TO OFF POSITION, THEN TO ON POSITION
15. WARNING: MAKE CONTINUITY CHECK WITH OHM METER TO VERIFY CORRECT PHASING AND GROUNDING CONNECTIONS BEFORE POWER UP
16. VERIFY PIN OUT CONFIGURATION OF GENERATOR PRIOR TO USE.
17. RISK OF ELECTRIC SHOCK, BOTH ENDS OF DISCONNECTING MEANS MAY BE ENERGIZED. TEST BEFORE SERVICING
18. THIS SWITCH BOARD MAY CONTAIN A TAP ON THE SERVICE SIDE OF THE MAIN POWER DISCONNECT FOR REMOTE MONITORING OF UTILITY/STANDBY POWER
19. THE NORMAL AC POWER MONITORING CIRCUIT MUST UTILIZE A DISCONNECTING MEANS WITH A SHORT CIRCUIT RATING GREATER THAN THE AVAILABLE INTERRUPTING CURRENT
20. A RED PUSH–TO–TRIP BUTTON PROVIDES A MEANS TO MECHANICALLY TRIP THE CIRCUIT BREAKER. THIS ACTION EXERCISES THE TRIPPING PORTION OF THE MECHANISM AND ALLOWS MAINTENANCE CHECK ON THE BREAKER



L1 (BLACK)
L2 (RED)
N (WHITE)
GND (GREEN)

CAM–LOCK GENERATOR RECEPTACLE

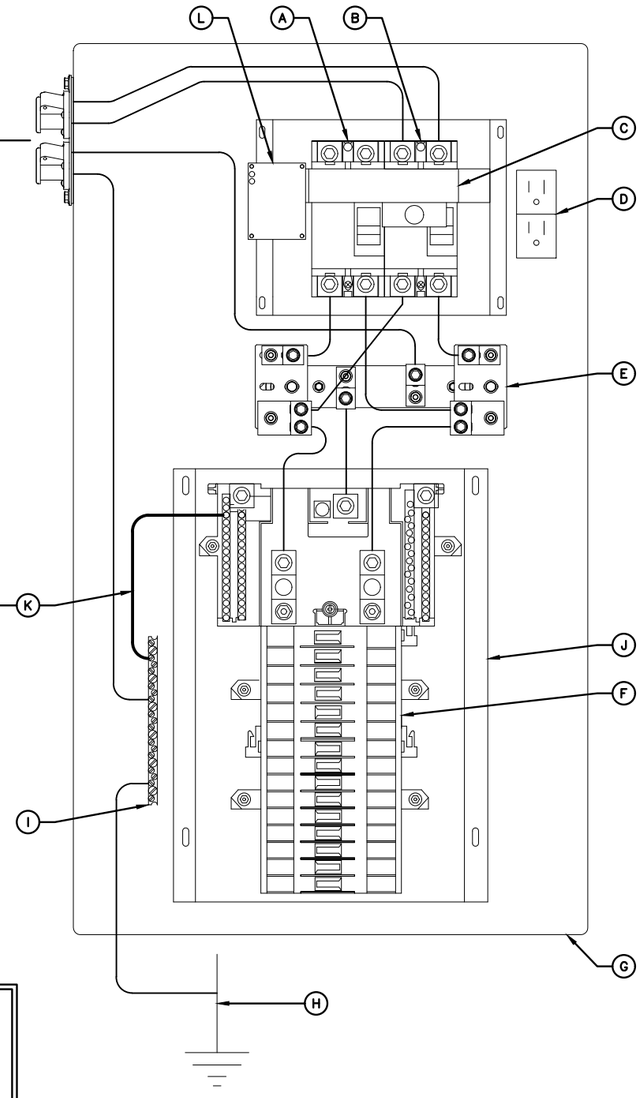
(AS VIEWED FROM OUTSIDE OF ENCLOSURE)
USE LINE UP PIN AS REFERENCE

REFER TO RECEPTACLE FOR MODEL NUMBER

DANGER:

HAZARD OF ELECTRICAL SHOCK OR BURN. TURN OFF POWER SUPPLYING THIS EQUIPMENT BEFORE WORKING INSIDE.

RAYCAP CUSTOMER SERVICE
(800) 890–2569



SUITABLE FOR USE AS SERVICE EQUIPMENT

ELECTRICAL RATING 120/240 VOLTS SINGLE PHASE 60 Hz	
NORMAL AC POWER 100A☐ 200A☐	GENERATOR POWER 100A☐ 200A☐

CAUTION:

- THE OPERATING HANDLE ASSUMES A CENTER POSITION WHEN THE CIRCUIT BREAKER IS TRIPPED
- THE BREAKER CAN BE RESET BY OPERATING THE HANDLE TO THE EXTREME OFF POSITION AND THEN TO ON
- SLIDE BAR MECHANICAL INTERLOCK TRANSFERS NORMAL AC POWER TO GENERATOR POWER. THE SLIDE BAR MECHANICAL INTERLOCK PROHIBITS BOTH POWER SOURCES FROM BEING IN THE ON POSITION SIMULTANEOUSLY
- TO TRANSFER FROM ON POWER SOURCE TO THE OTHER POWER SOURCE, SWITCH ON BREAKER TO THE OFF POSITION, MOVE THE SLIDE BAR TO THE OTHER SIDE AND THE SWITCH THE OTHER BREAKER TO THE ON POSITION

THIS SWITCHBOARD UTILITY MAN BREAKER IS SUITABLE FOR USE ON CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 65,000 RMS SYMMETRICAL AMPS, 240 VOLTS MAXIMUM.

200A UTILITY FEED

LOAD SIZE CIRCUIT BREAKERS				LINE SIDE MAIN CIRCUIT BREAKER					
MFR.	TYPE	POLES	AMP RATING	MFR.	TYPE	AMP RATING	SYMMET. AMP RMS	VOLTS AC	PHASES
SQ–D	QO	1 2	15–100A	SQ–D	QGL	200A	65,000A	240V	2

THIS SWITCHBOARD GENERATOR POWER CIRCUIT IS SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 10,000 RMS SYMMETRICAL AMPS, 240 VOLTS MAXIMUM.

200A GENERATOR FEED

LOAD SIZE CIRCUIT BREAKERS				LINE SIDE MAIN CIRCUIT BREAKER					
MFR.	TYPE	POLES	AMP RATING	MFR.	TYPE	AMP RATING	SYMMET. AMP RMS	VOLTS AC	PHASES
SQ–D	QO	1 2	15–100A	SQ–D	QGL	200A	65,000A	240V	2

MAXIMUM CONTINUOUS LOADS NOT TO EXCEED 80% OF THE OVER–CURRENT PROTECTIVE DEVICE (CIRCUIT BREAKER AND FUSES) RATINGS EMPLOYED IN OTHER THAN MOTOR CIRCUITS, EXCEPT FOR THOSE CIRCUITS EMPLOYING CIRCUIT BREAKERS MARKED AS SUITABLE FOR CONTINUOUS OPERATION AT 100% OF THEIR RATINGS. CONDUCTORS ARE NOT TO ENTER OR LEAVE THE ENCLOSURE DIRECTLY OPPOSITE THE WIRING TERMINAL

NEUTRAL–TO–GROUND NOTES:

- WHEN THE PPC IS USED AS THE SERVICE ENTRANCE DEVICE, THE NEUTRAL TO GROUND BOND NEEDS TO BE ESTABLISHED IN THE PPC.
- WHEN THE SERVICE ENTRY DEVICE IS A MULTI–METER CENTER OR A PRE–PPC DISCONNECT IS USED AND HAS "NEUTRAL TO GROUND" ACCOMMODATIONS, THE NEUTRAL TO GROUND WIRE IN THE PPC IS NOT REQUIRED.
- THE GREEN #6 WIRE IS PROVIDED WITH THE PPC CABINET AS A SEPARATE UNINSTALLED PART TO BE INSTALLED BY CONTRACTOR IF NEEDED.

NEUTRAL–TO–GROUND CONDING JUMPER

INSTALLTION INSTRUCTIONS:

- IF REQUIRED, THE N–G BONDING KIT SHOULD BE INSTALLED BY QUALIFIED PERSONNEL
- ENSURE THE MAIN BREAKERS ARE OFF
- USE THE GREEN #6 WIRE PROVIDED WITH THE PPC
- INSTALL THE JUMPER AS SHOWN IN THE WIRING DIAGRAM
- TIGHTEN TERMINALS TO TORQUE VALUE SHOWN IN TORQUE TABLE
- PLACE THE PROVIDED "SERVICE" LABEL IN THE SPACE BELOW THE WORDS "AC POWER" LOCATED ABODE THE MAIN CIRCUIT BREAKER IN THE UPPER PORTION OF THE DEAD FRONT

LEGEND:

A. UTILITY DISCONNECT (SERVICE RATED)
B. GENERATOR DISCONNECT
C. MAIN DISCONNECT CIRCUIT BREAKERS W/ MECHANICAL INTERLOCK
D. GFCI RECEPTACLE 15A
E. SPD STRIKESORB KELVIN CONNECTION (TYP OF 2)
F. BREAKER PANEL – 24 POSITION (CONTRACTOR TO ADD APPROPRIATE BREAKER PER ONE–LINE DIAGRAM PANEL SCHEDULE)
G. POWER PROTECTION CABINET (PPC) (FULLY ASSEMBLED FROM MANUFACTURER)
H. CONTRACTOR TO ATTACH TO UNDERGROUND GROUNDING HALO OR INSTALL GROUND ROD WHEN REQUIRED BY CODE
I. GROUND BAR
J. SQUARE D Q SERIES LOAD CENTER
K. NETURAL–TO–GROUND (N–G) BONDING JUMPER (CONTRACTOR INSTALLED IF REQUIRED)
L. OPTIONAL SPD STATUS INDICATORS

RAYCAP POWER PROTECTION CABINET – RDIAC–2465–P–240–MTS (NEUTRAL–TO–GROUND)

NO SCALE

1

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A&E PROJECT NUMBER

KHCLE–40084

DISH Wireless L.L.C.
PROJECT INFORMATION

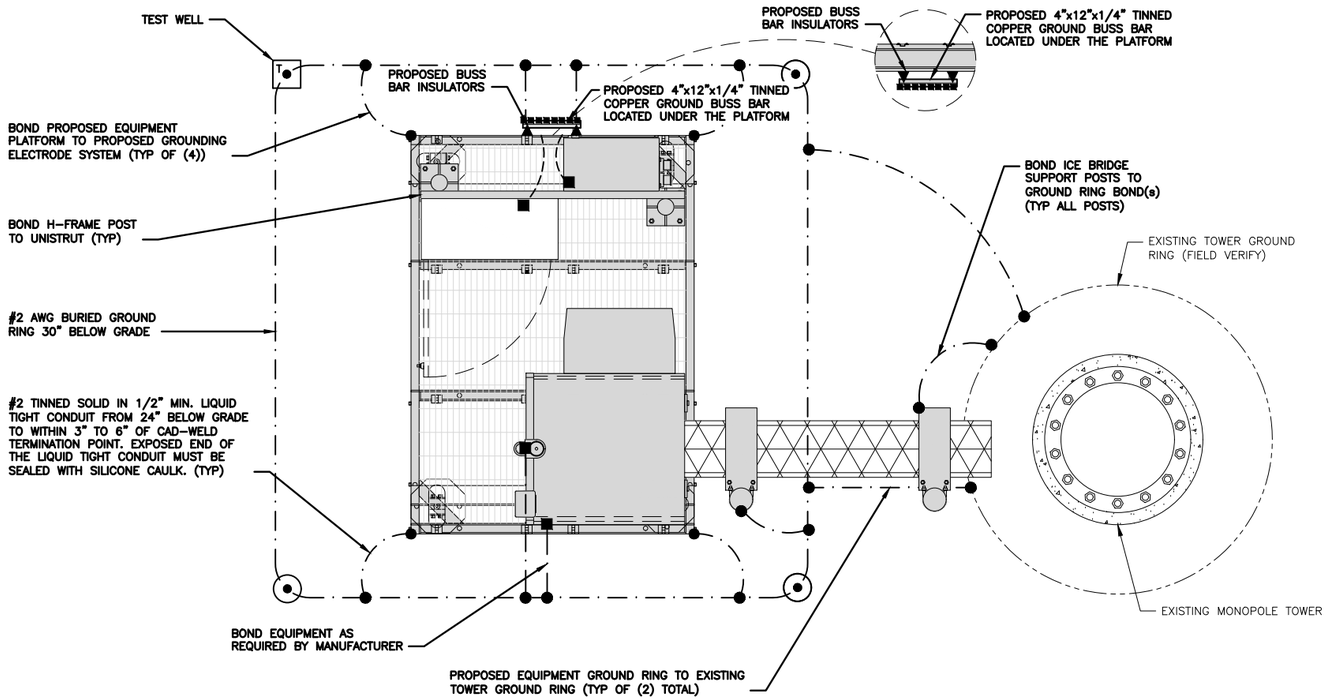
BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE

PPC NEUTRAL–TO–GROUND SCHEMATIC

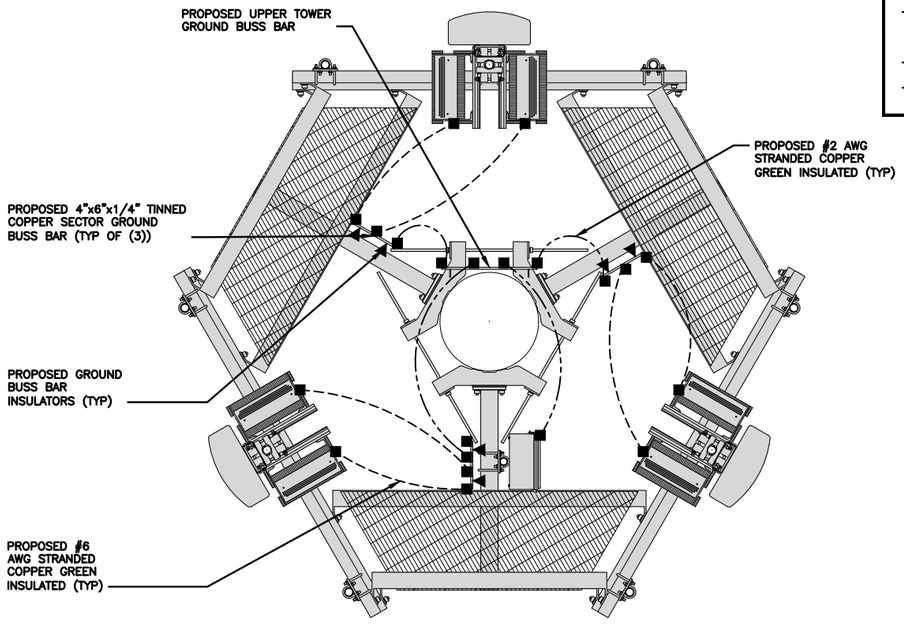
SHEET NUMBER

E-4



TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE | 1



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE | 2

NOTES

- ANTENNAS AND OVP SHOWN ARE GENERIC AND NOT REFERENCING TO A SPECIFIC MANUFACTURER. THIS LAYOUT IS FOR REFERENCE PURPOSES ONLY
- SECTOR BUSSBARS SHALL BE INSTALLED WITH INSULATORS
- UPPER TOWER BUSSBAR SHALL BE INSTALLED WITH OUT INSULATORS

EXOTHERMIC CONNECTION
MECHANICAL CONNECTION
GROUND BUS BAR
GROUND ROD
TEST GROUND ROD WITH INSPECTION SLEEVE
#6 AWG STRANDED & INSULATED
#2 AWG SOLID COPPER TINNED
BUSS BAR INSULATOR

GROUNDING LEGEND

1. GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
2. CONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE IN COMPLIANCE WITH NEC SECTION 250 AND DISH Wireless L.L.C. GROUNDING AND BONDING REQUIREMENTS AND MANUFACTURER'S SPECIFICATIONS.
3. ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.

GROUNDING KEY NOTES

(A) **EXTERIOR GROUND RING:** #2 AWG SOLID COPPER, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING.

(B) **TOWER GROUND RING:** THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS. WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING, AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS.

(C) **INTERIOR GROUND RING:** #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUNDED TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR.

(D) **BOND TO INTERIOR GROUND RING:** #2 AWG SOLID TINNED COPPER WIRE PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING.

(E) **GROUND ROD:** UL LISTED COPPER CLAD STEEL. MINIMUM 1/2" DIAMETER BY EIGHT FEET LONG. GROUND RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO THE DEPTH OF GROUND RING CONDUCTOR.

(F) **CELL REFERENCE GROUND BAR:** POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG UNLESS NOTED OTHERWISE STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.

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

(H) **EXTERIOR CABLE ENTRY PORT GROUND BARS:** LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE.

(I) **TELCO GROUND BAR:** BOND TO BOTH CELL REFERENCE GROUND BAR OR EXTERIOR GROUND RING.

(J) **FRAME BONDING:** THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE EQUIPMENTS METAL FRAMEWORK.

(K) **INTERIOR UNIT BONDS:** METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITH THE AREA OF THE INTERIOR GROUND RING REQUIRE A #6 AWG STRANDED GREEN INSULATED COPPER BOND TO THE INTERIOR GROUND RING.

(L) **FENCE AND GATE GROUNDING:** METAL FENCES WITHIN 7 FEET OF THE EXTERIOR GROUND RING OR OBJECTS BONDED TO THE EXTERIOR GROUND RING SHALL BE BONDED TO THE GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR AT AN INTERVAL NOT EXCEEDING 25 FEET. BONDS SHALL BE MADE AT EACH GATE POST AND ACROSS GATE OPENINGS.

(M) **EXTERIOR UNIT BONDS:** METALLIC OBJECTS, EXTERNAL TO OR MOUNTED TO THE BUILDING, SHALL BE BONDED TO THE EXTERIOR GROUND RING. USING #2 TINNED SOLID COPPER WIRE

(N) **ICE BRIDGE SUPPORTS:** EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE TINNED COPPER CONDUCTOR. PROVIDE EXOTHERMIC WELDS AT BOTH THE ICE BRIDGE LEG AND BURIED GROUND RING.

(O) DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICE CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH A MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR

(P) TOWER TOP COLLECTOR BUSS BAR IS TO BE MECHANICALLY BONDED TO PROPOSED ANTENNA MOUNT COLLAR.

REFER TO DISH Wireless L.L.C. GROUNDING NOTES.

GROUNDING KEY NOTES

NO SCALE | 3

dish wireless.
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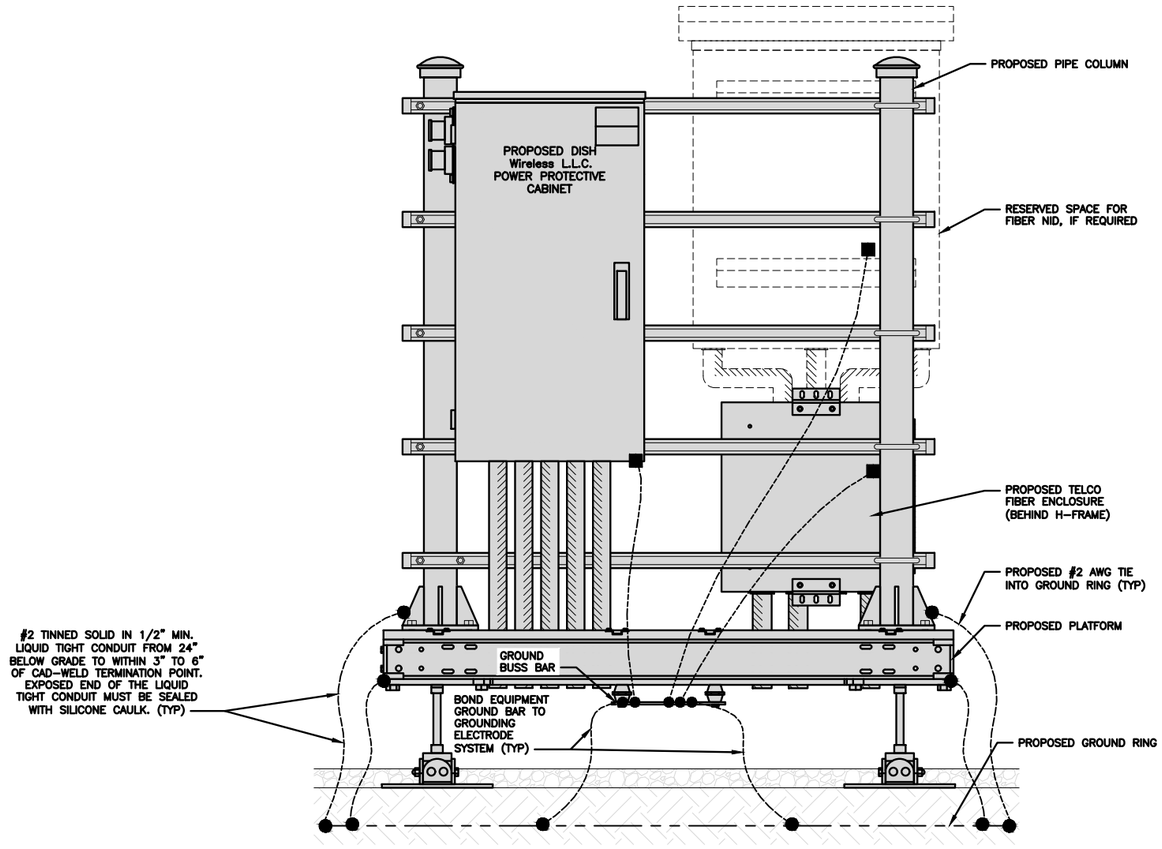
AVON, CT 06013

SHEET TITLE
GROUNDING PLANS AND NOTES

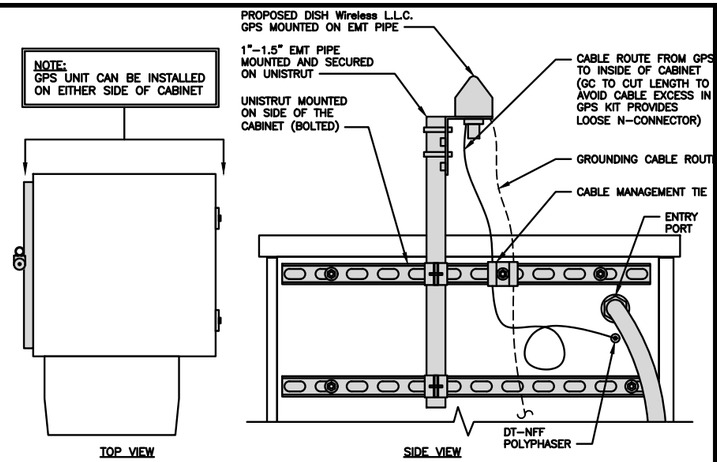
SHEET NUMBER
G-1



H-FRAME GROUNDING DETAIL | NO SCALE | 1

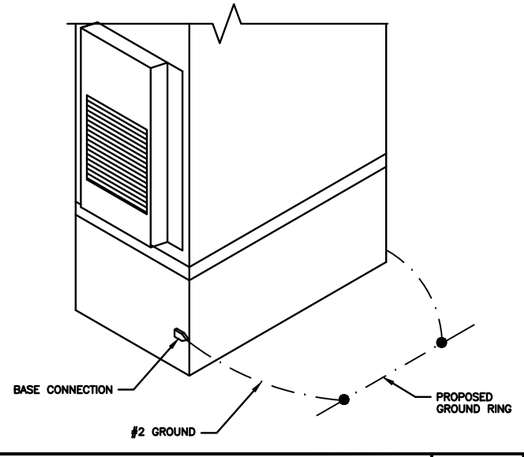
NOTES

EQUIPMENT CABINET OMITTED FOR CLARITY

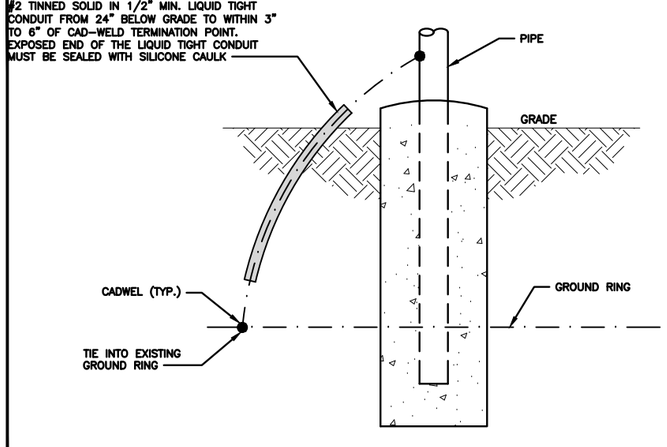


TYPICAL PCTEL GPS UNIT GROUNDING | NO SCALE | 2

NOT USED | NO SCALE | 3



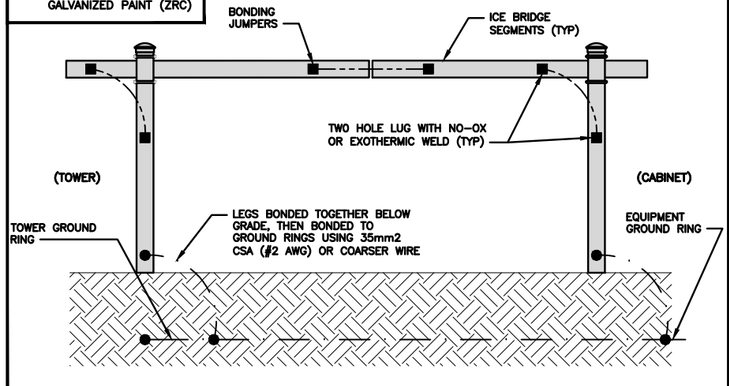
OUTDOOR CABINET GROUNDING | NO SCALE | 4



TRANSITIONING GROUND DETAIL | NO SCALE | 5

NOTES

- DRILLED HOLES TO BE SPRAYED WITH GALVANIZED PAINT (ZRC)



ICE BRIDGE GROUNDING DETAIL | NO SCALE | 6

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WILLIAM C. EDMONDSON
36630
LICENSED PROFESSIONAL ENGINEER
11/6/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
LMS	WRS	KJC

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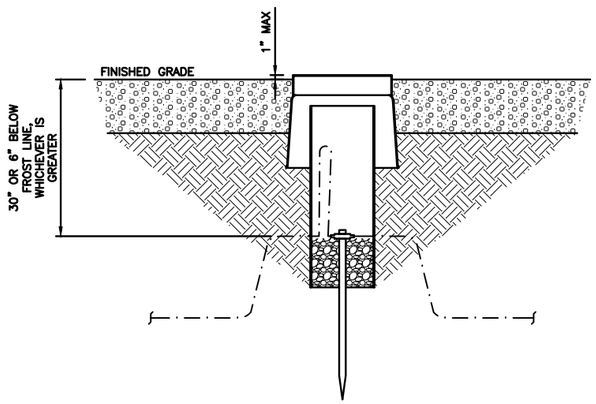
KHCLE-40084

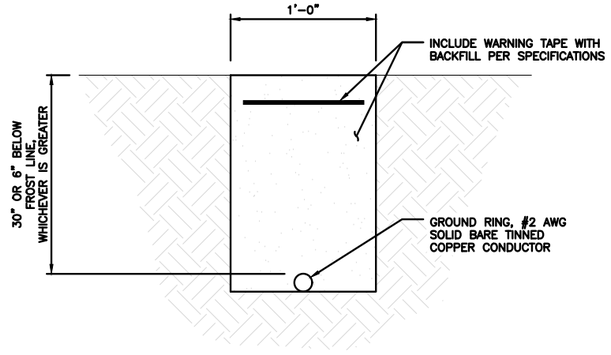
DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-2



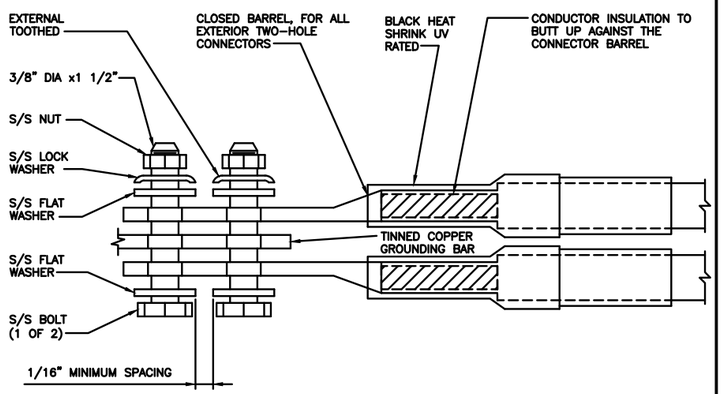
TYPICAL TEST GROUND ROD WITH INSPECTION SLEEVE | NO SCALE | 1



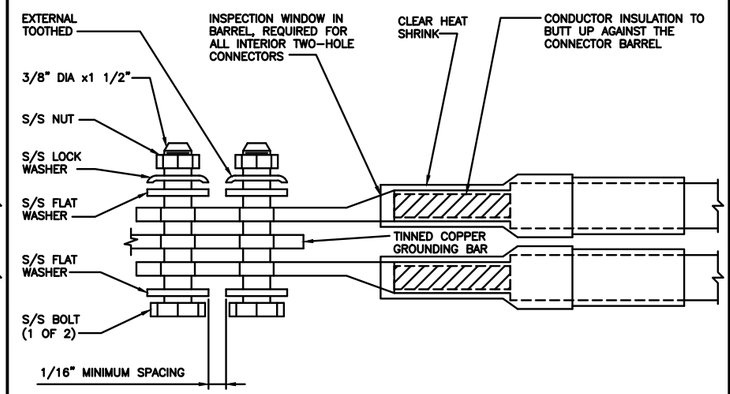
TYPICAL GROUND RING TRENCH | NO SCALE | 2

1. EXOTHERMIC WELD (2) TWO, #2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUND BAR. ROUTE CONDUCTORS TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. ALL EXTERIOR GROUNDING HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
3. FOR GROUND BOND TO STEEL ONLY: COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
4. DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUND CONDUCTOR DOWN TO GROUNDING BUS.
5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE.
6. ALL GROUNDING PARTS AND EQUIPMENT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED.
8. ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).

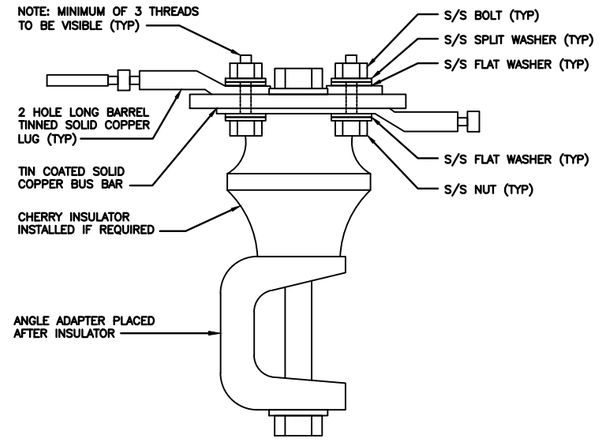
TYPICAL GROUNDING NOTES | NO SCALE | 3



TYPICAL EXTERIOR TWO HOLE LUG | NO SCALE | 4



TYPICAL INTERIOR TWO HOLE LUG | NO SCALE | 5



LUG DETAIL | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 9

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KHCLE-40084

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE
GROUNDING DETAILS

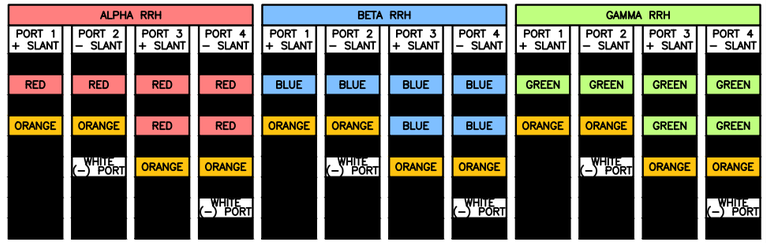
SHEET NUMBER
G-3

HYBRID/DISCREET CABLES

3/4" TAPE WIDTHS WITH 3/4" SPACING

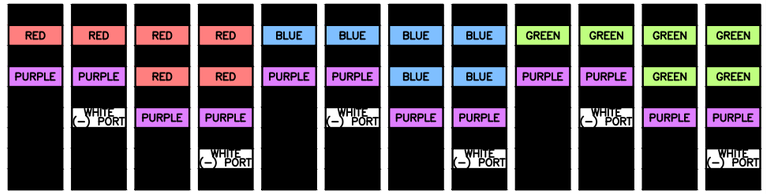
LOW–BAND RRH
(600 MHz N71 BASEBAND) +
(850 MHz N26 BAND) +
(700 MHz N29 BAND) – OPTIONAL PER MARKET

ADD FREQUENCY COLOR TO SECTOR BAND
(CBRS WILL USE YELLOW BAND)



MID–BAND RRH
(AWS BANDS N66+N70)

ADD FREQUENCY COLOR TO SECTOR BAND
(CBRS WILL USE YELLOW BANDS)



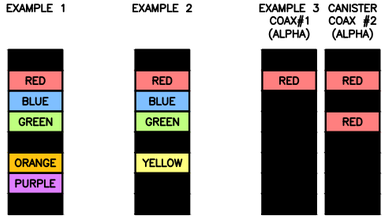
HYBRID/DISCREET CABLES

INCLUDE SECTOR BANDS BEING SUPPORTED ALONG WITH FREQUENCY BANDS.

EXAMPLE 1 – HYBRID, OR DISCREET, SUPPORTS ALL SECTORS, BOTH LOW–BANDS AND MID–BANDS.

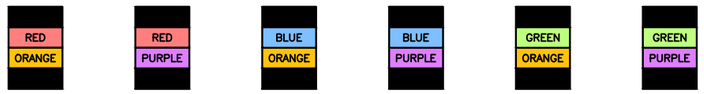
EXAMPLE 2 – HYBRID, OR DISCREET, SUPPORTS CBRS ONLY, ALL SECTORS.

EXAMPLE 3 – MAIN COAX WITH GROUND MOUNTED RRHs.



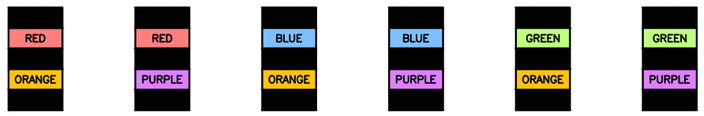
FIBER JUMPERS TO RRHs

LOW–BAND HHR FIBER CABLES HAVE SECTOR STRIPE ONLY.



POWER CABLES TO RRHs

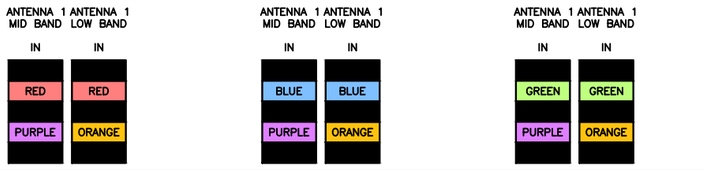
LOW–BAND RRH POWER CABLES HAVE SECTOR STRIPE ONLY



RET MOTORS AT ANTENNAS

RET CONTROL IS HANDLED BY THE MID–BAND RRH WHEN ONE SET OF RET PORTS EXIST ON ANTENNA.

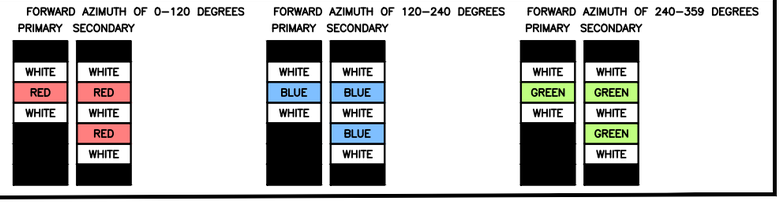
SEPARATE RET CABLES ARE USED WHEN ANTENNA PORTS PROVIDE INPUTS FOR BOTH LOW AND MID BANDS.



MICROWAVE RADIO LINKS

LINKS WILL HAVE A 1.5–2 INCH WHITE WRAP WITH THE AZIMUTH COLOR OVERLAPPING IN THE MIDDLE.
ADD ADDITIONAL SECTOR COLOR BANDS FOR EACH ADDITIONAL MW RADIO.

MICROWAVE CABLES WILL REQUIRE P–TOUCH LABELS INSIDE THE CABINET TO IDENTIFY THE LOCAL AND REMOTE SITE ID's.



LOW BANDS (N71+N26) OPTIONAL – (N29): ORANGE

AWS (N66+N70+H–BLOCK): PURPLE

CBRS TECH (3 GHz): YELLOW

NEGATIVE SLANT PORT ON ANT/RRH: WHITE

ALPHA SECTOR: RED

BETA SECTOR: BLUE

GAMMA SECTOR: GREEN

COLOR IDENTIFIER | 2

NOT USED | 3

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277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE
RF
CABLE COLOR CODES

SHEET NUMBER
RF-1

LEGEND

EXOTHERMIC CONNECTION

MECHANICAL CONNECTION

BUSS BAR INSULATOR

CHEMICAL ELECTROLYTIC GROUNDING SYSTEM

TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM

EXOTHERMIC WITH INSPECTION SLEEVE

GROUNDING BAR

GROUND ROD

TEST GROUND ROD WITH INSPECTION SLEEVE

SINGLE POLE SWITCH

DUPLEX RECEPTACLE

DUPLEX GFCI RECEPTACLE

FLUORESCENT LIGHTING FIXTURE
(2) TWO LAMPS 48–T8

SMOKE DETECTION (DC)

EMERGENCY LIGHTING (DC)

SECURITY LIGHT W/PHOTOCELL LITHONIA ALXW
LED–1–25A400/51K–SR4–120–PE–DDBTXD

CHAIN LINK FENCE

WOOD/WROUGHT IRON FENCE

WALL STRUCTURE

LEASE AREA

PROPERTY LINE (PL)

SETBACKS

ICE BRIDGE

CABLE TRAY

WATER LINE

UNDERGROUND POWER

UNDERGROUND TELCO

OVERHEAD POWER

OVERHEAD TELCO

UNDERGROUND TELCO/POWER

ABOVE GROUND POWER

ABOVE GROUND TELCO

ABOVE GROUND TELCO/POWER

WORKPOINT

SECTION REFERENCE

DETAIL REFERENCE

ABBREVIATIONS

AB	ANCHOR BOLT
ABV	ABOVE
AC	ALTERNATING CURRENT
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGL	ABOVE GROUND LEVEL
AIC	AMPERAGE INTERRUPTION CAPACITY
ALUM	ALUMINUM
ALT	ALTERNATE
ANT	ANTENNA
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BTC	BARE TINNED COPPER CONDUCTOR
BOF	BOTTOM OF FOOTING
CAB	CABINET
CANT	CANTILEVERED
CHG	CHARGING
CLG	CEILING
CLR	CLEAR
COL	COLUMN
COMM	COMMON
CONC	CONCRETE
CONSTR	CONSTRUCTION
DBL	DOUBLE
DC	DIRECT CURRENT
DEPT	DEPARTMENT
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DWG	DRAWING
DWL	DOWEL
EA	EACH
EC	ELECTRICAL CONDUCTOR
EL.	ELEVATION
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
ENG	ENGINEER
EQ	EQUAL
EXP	EXPANSION
EXT	EXTERIOR
EW	EACH WAY
FAB	FABRICATION
FF	FINISH FLOOR
FG	FINISH GRADE
FIF	FACILITY INTERFACE FRAME
FIN	FINISH(ED)
FLR	FLOOR
FDN	FOUNDATION
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FOW	FACE OF WALL
FS	FINISH SURFACE
FT	FOOT
FTG	FOOTING
GA	GAUGE
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GLB	GLUE LAMINATED BEAM
GLV	GALVANIZED
GPS	GLOBAL POSITIONING SYSTEM
GND	GROUND
GSM	GLOBAL SYSTEM FOR MOBILE
HDG	HOT DIPPED GALVANIZED
HDR	HEADER
HGR	HANGER
HVAC	HEAT/VENTILATION/AIR CONDITIONING
HT	HEIGHT
IGR	INTERIOR GROUND RING
IN	INCH
INT	INTERIOR
LB(S)	POUND(S)
LF	LINEAR FEET
LTE	LONG TERM EVOLUTION
MAS	MASONRY
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
MTS	MANUAL TRANSFER SWITCH
MW	MICROWAVE
NEC	NATIONAL ELECTRIC CODE
NM	NEWTON METERS
NO.	NUMBER
#	NUMBER
NTS	NOT TO SCALE
OC	ON–CENTER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OPNG	OPENING
P/C	PRECAST CONCRETE
PCS	PERSONAL COMMUNICATION SERVICES
PCU	PRIMARY CONTROL UNIT
PRC	PRIMARY RADIO CABINET
PP	POLARIZING PRESERVING
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PWR	POWER CABINET
QTY	QUANTITY
RAD	RADIUS
RECT	RECTIFIER
REF	REFERENCE
REINF	REINFORCEMENT
REQ'D	REQUIRED
RET	REMOTE ELECTRIC TILT
RF	RADIO FREQUENCY
RMC	RIGID METALLIC CONDUIT
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
RWY	RACEWAY
SCH	SCHEDULE
SHT	SHEET
SIAD	SMART INTEGRATED ACCESS DEVICE
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
TEMP	TEMPORARY
THK	THICKNESS
TMA	TOWER MOUNTED AMPLIFIER
TN	TOE NAIL
TOA	TOP OF ANTENNA
TOC	TOP OF CURB
TOF	TOP OF FOUNDATION
TOP	TOP OF PLATE (PARAPET)
TOS	TOP OF STEEL
TOW	TOP OF WALL
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
UPS	UNITERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
VIF	VERIFIED IN FIELD
W	WIDE
W/	WITH
WD	WOOD
WP	WEATHERPROOF
WT	WEIGHT

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DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE

LEGEND AND ABBREVIATIONS

SHEET NUMBER

GN-1

SIGN TYPES		
TYPE	COLOR	COLOR CODE PURPOSE
INFORMATION	GREEN	**"INFORMATIONAL SIGN"** TO NOTIFY OTHERS OF SITE OWNERSHIP & CONTACT NUMBER AND POTENTIAL RF EXPOSURE.
NOTICE	BLUE	**"NOTICE BEYOND THIS POINT"** RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
CAUTION	YELLOW	**"CAUTION BEYOND THIS POINT"** RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
WARNING	ORANGE/RED	**"WARNING BEYOND THIS POINT"** RF FIELDS AT THIS SITE EXCEED FCC RULES FOR HUMAN EXPOSURE. FAILURE TO OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS COULD RESULT IN SERIOUS INJURY. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)

SIGN PLACEMENT:

- RF SIGNAGE PLACEMENT SHALL FOLLOW THE RECOMMENDATIONS OF AN EXISTING EME REPORT, CREATED BY A THIRD PARTY PREVIOUSLY AUTHORIZED BY DISH Wireless L.L.C.
- INFORMATION SIGN (GREEN) SHALL BE LOCATED ON EXISTING DISH Wireless L.L.C EQUIPMENT.
  A) IF THE INFORMATION SIGN IS A STICKER, IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C EQUIPMENT CABINET.
  B) IF THE INFORMATION SIGH IS A METAL SIGN IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C H-FRAME WITH A SECURE ATTACH METHOD.
- IF EME REPORT IS NOT AVAILABLE AT THE TIME OF CREATION OF CONSTRUCTION DOCUMENTS; PLEASE CONTACT DISH Wireless L.L.C. CONSTRUCTION MANAGER FOR FURTHER INSTRUCTION ON HOW TO PROCEED.

NOTES:

1. FOR DISH Wireless L.L.C. LOGO, SEE DISH Wireless L.L.C. DESIGN SPECIFICATIONS (PROVIDED BY DISH Wireless L.L.C.)
2. SITE ID SHALL BE APPLIED TO SIGNS USING "LASER ENGRAVING" OR ANY OTHER WEATHER RESISTANT METHOD (DISH Wireless L.L.C. APPROVAL REQUIRED)
3. TEXT FOR SIGNAGE SHALL INDICATE CORRECT SITE NAME AND NUMBER AS PER DISH Wireless L.L.C. CONSTRUCTION MANAGER RECOMMENDATIONS.
4. CABINET/SHELTER MOUNTING APPLICATION REQUIRES ANOTHER PLATE APPLIED TO THE FACE OF THE CABINET WITH WATER PROOF POLYURETHANE ADHESIVE
5. ALL SIGNS WILL BE SECURED WITH EITHER STAINLESS STEEL ZIP TIES OR STAINLESS STEEL TECH SCREWS
6. ALL SIGNS TO BE 8.5"x11" AND MADE WITH 0.04" OF ALUMINUM MATERIAL

INFORMATION

This is an access point to an area with transmitting antennas.

Obey all signs and barriers beyond this point.
Call the DISH Wireless L.L.C. NOC at 1-866-624-6874

Site ID: BOBDL00139A

THIS SIGN IS FOR REFERENCE PURPOSES ONLY

NOTICE

Transmitting Antenna(s)

Radio frequency fields beyond this point MAY *EXCEED* the FCC Occupational exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

Call the DISH Wireless L.L.C. NOC at 1-866-624-6874 prior to working beyond this point.

Site ID: BOBDL00139A

dish

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WILLIAM C. EDMONDS
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LICENSED PROFESSIONAL ENGINEER
11/6/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
LMS	WRS	KJC

APPLICATION REV #: 1

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	06/21/2023	ISSUED FOR REVIEW
B	06/27/2023	REVISED PER NEW SITE INFO
0	08/03/2023	ISSUED FOR PERMIT
1	09/22/2023	REVISED PER NEW LAYOUT
2	11/06/2023	REVISED PER NEW FIBER ROUTE

A&E PROJECT NUMBER
KHCLE-40084

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL00139A
277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE
RF SIGNAGE

SHEET NUMBER
GN-2

SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED – NO WORK SHALL COMMENCE PRIOR TO CONTRACTOR RECEIVING A WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE DISH Wireless L.L.C. AND TOWER OWNER NOC & THE DISH Wireless L.L.C. AND TOWER OWNER CONSTRUCTION MANAGER.

2. "LOOK UP" – DISH Wireless L.L.C. AND TOWER OWNER SAFETY CLIMB REQUIREMENT:

THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR DISH Wireless L.L.C. AND DISH Wireless L.L.C. AND TOWER OWNER POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.

3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.

4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND DISH Wireless L.L.C. AND TOWER OWNER STANDARDS, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).

5. ALL SITE WORK TO COMPLY WITH DISH Wireless L.L.C. AND TOWER OWNER INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON DISH Wireless L.L.C. AND TOWER OWNER TOWER SITE AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."

6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY DISH Wireless L.L.C. AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.

7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES INCLUDING PRIVATE LOCATES SERVICES PRIOR TO THE START OF CONSTRUCTION.

10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.

11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND DISH PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.

12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF DISH Wireless L.L.C. AND TOWER OWNER, AND/OR LOCAL UTILITIES.

14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.

15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.

16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.

17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.

18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS AND RADIOS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

1.FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

CONTRACTOR:GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION

CARRIER:DISH Wireless L.L.C.

TOWER OWNER:TOWER OWNER

2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.

3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.

4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.

5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.

6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CARRIER POC AND TOWER OWNER.

7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.

11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION, BEFORE SUBMITTING BIDS, TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.

12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF DISH Wireless L.L.C. AND TOWER OWNER

13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

dish wireless.
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

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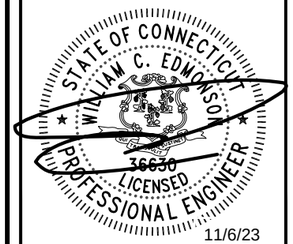

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277 HUCKLEBERRY HILL ROAD
AVON, CT 06013

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-3

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.

2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.

3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.

4. CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.

5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:

#4 BARS AND SMALLER 40 ksi

#5 BARS AND LARGER 60 ksi

6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
- CONCRETE EXPOSED TO EARTH OR WEATHER:
- #6 BARS AND LARGER 2"
- #5 BARS AND SMALLER 1-1/2"
- CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
- SLAB AND WALLS 3/4"
- BEAMS AND COLUMNS 1-1/2"

7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.

2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.

3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.

4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.

4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.

4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.

5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.

6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).

7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.

8. TIE WRAPS ARE NOT ALLOWED.

9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.

10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.

11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.

12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.

13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).

14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

16. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.

18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.

20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.

21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).

22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).

23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.

24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3 (OR BETTER) FOR EXTERIOR LOCATIONS.

25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.

26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.

27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR DISH Wireless L.L.C. AND TOWER OWNER BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.

29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "DISH Wireless L.L.C.".

30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

dish wireless.

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Kimley»Horn

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GENERAL NOTES

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GN-4

GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.

4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.

5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.

7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.

8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.

9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.

10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.

11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.

13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.

14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.

15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.

17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.

19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.

20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).

21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY). DO NOT ATTACH GROUNDING TO FIRE SPRINKLER SYSTEM PIPES.

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APPLICATION REV #: 1

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	06/21/2023	ISSUED FOR REVIEW
B	08/27/2023	REVISED PER NEW SITE INFO
0	08/03/2023	ISSUED FOR PERMIT
1	09/22/2023	REVISED PER NEW LAYOUT
2	11/06/2023	REVISED PER NEW FIBER ROUTE

A&E PROJECT NUMBER

KHCLE-40084

DISH Wireless L.L.C.
PROJECT INFORMATION

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SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-5