STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS FOR A DECLARATORY RULING ON THE NEED TO OBTAIN A SITING COUNCIL CERTIFICATE FOR THE INSTALLATION OF A WIRELESS TELECOMMUNICATIONS FACILITY AT 19 KENOSIA AVENUE, DANBURY, CONNECTICUT	:	PETITION NO. ____
	:	OCTOBER 28, 2022

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

I. Introduction

Pursuant to Sections 16-50j-38 and 16-50j-39 of the Regulations of Connecticut State Agencies ("R.C.S.A."), Cellco Partnership d/b/a Verizon Wireless ("Cellco") hereby petitions the Connecticut Siting Council (the "Council") for a declaratory ruling ("Petition") that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required under Section 16-50k(a) of the Connecticut General Statutes ("C.G.S.") for the installation of a wireless telecommunications facility on the roof of a commercial building on an approximately 5.61-acre parcel at 19 Kenosia Avenue in Danbury, Connecticut (the "Property"). *See* Attachment 1 –Site Schematic Map (Aerial Photograph). The Property is owned by Sovran Acquisition Limited ("Sovran") and is occupied by a four-story self-storage building (Life Storage), surface parking area and related site improvements. The Property is in Danbury's IL-40 Industrial zone district.

The Property is surrounded by undeveloped land to the west, and commercial and industrial uses to the north, south and east. Cellco refers to its proposed facility as its

"Ridgefield Boehringer" cell site.

II. Proposed Construction Activity

A. Cellco's Proposed Ridgefield Boehringer Facility

The Ridgefield Boehringer Facility will consist of the installation of eight (8) panel type antennas and eight (8) remote radio heads ("RRHs") attached to two, metal frame lattice antenna support structures, one located in the northwest portion and one in the northeast portion of the roof. Both antenna support structures will be surrounded by radio frequency ("RF") transparent screening enclosures. The top of the screening enclosures would extend approximately ten feet above the roof. Equipment associated with the antennas will be located on a steel platform in the center of the roof. (*See* Cellco's Project Plans included in Attachment 2).

Cellco will provide wireless telecommunications services in its 700 MHz, 850 MHz, 1900 MHz, 2100 MHz and C-Band (3730 MHz and 3625 MHz) frequency ranges from the proposed Ridgefield Boehringer Facility. Specifications for Cellco's antennas and remote radio heads are included in Attachment 3. The Ridgefield Boehringer Facility will be capable of providing 5G wireless service.

Cellco's project engineer, Centek Engineering, prepared a Structural Analysis ("SA") that confirms the antenna mounting structures, equipment platform and host-building roof are structurally capable of supporting the Ridgefield Boehringer Facility improvements. A copy of the SA is included in Attachment 4.

III. Discussion

A. The Proposed Facility Will Not Have A Substantial Adverse Environmental Effect

The Public Utility Environmental Standards Act (the "Act"), C.G.S. § 16-50g et seq., provides for the orderly and environmentally compatible development of telecommunications

facilities in the state to avoid "a significant impact on the environment and ecology of the State of Connecticut." C.G.S. § 16-50g. To achieve these goals, the Act established the Council, and requires a Certificate of Environmental Compatibility and Public Need for the construction of cellular telecommunication towers "that may, as determined by the council, have a substantial adverse environmental effect". C.G.S. § 16-50k(a).

1. Physical Environmental Effects

Cellco respectfully submits that the proposed facility will not involve a significant impact on the physical and environmental characteristics of the Property or the surrounding community. All improvements associated with the Ridgefield Boehringer Facility will be located on the roof of the existing four-story self-storage building, behind antenna screening panels. No ground disturbance, tree removal or site grading is required to develop or maintain the Ridgefield Boehringer Facility.

2. Visual Effects

As described above, the antennas, RRHs and antenna mounting structures will be located behind radio frequency transparent screening panels on the roof of the building. The screening enclosures will be designed and painted to mimic the building's architecture and appear as mechanical equipment on the roof. Visual effects associated with the proposed Ridgefield Boehringer Facility would, therefore, be minimal or non-existent. Views of the proposed antenna mounting structure screening enclosures would be limited to areas along Kenosia Avenue and the northerly portion of Apple Ridge Road. Given its location in the center of the roof, the proposed equipment platform and equipment cabinets will not be visible from adjacent roadways. Photo Simulations of the proposed improvements are included in Attachment 5.

3. FCC Compliance

Radio frequency ("RF") emissions from the Ridgefield Boehringer Facility will not exceed the maximum permissible exposure limits established by the Federal Communications Commission ("FCC"). Included in Attachment 6 is a far field RF exposure calculation confirming that the proposed facility will operate well within the FCC safety standards.

4. FAA Notification Not Required

Cellco's proposed facility improvements will not extend above the height of the tallest existing architectural feature on the building, the clock tower in the northeast corner of the roof. Therefore, no Federal Airways and Airspace Report will be performed since no FAA notification is required.

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

On October 28, 2022, a copy of this Petition was sent to Danbury's Mayor, Dean Esposito; Sharon Calitro, Danbury's Director of Planning and Zoning; and Sovran Acquisition Limited, the Owner of the Property. Because the Property is located within 2,500 feet of the Ridgefield/Danbury town line, copies of this Petition were also sent to Ridgefield's First Selectman, Rudy Marconi and Ridgefield's Planning and Zoning Director, Alice Dew. Copies of the letters sent to these public officials and the Property owner are included in Attachment 7.

A copy of this Petition was also sent to the owners of land considered to abut the Property. A sample abutter's notice letter and the list of those abutting landowners to whom notice was sent is included in Attachment 8.

IV. Conclusion

Based on the information provided above, Cellco respectfully requests that the Council issue a determination, in the form of a declaratory ruling, that the installation of the two proposed rooftop telecommunications tower structures described above, will not have a substantial adverse

environmental effect and does not require the issuance of a Certificate of Environmental Compatibility and Public Need pursuant to § 16-50k of the General Statutes.

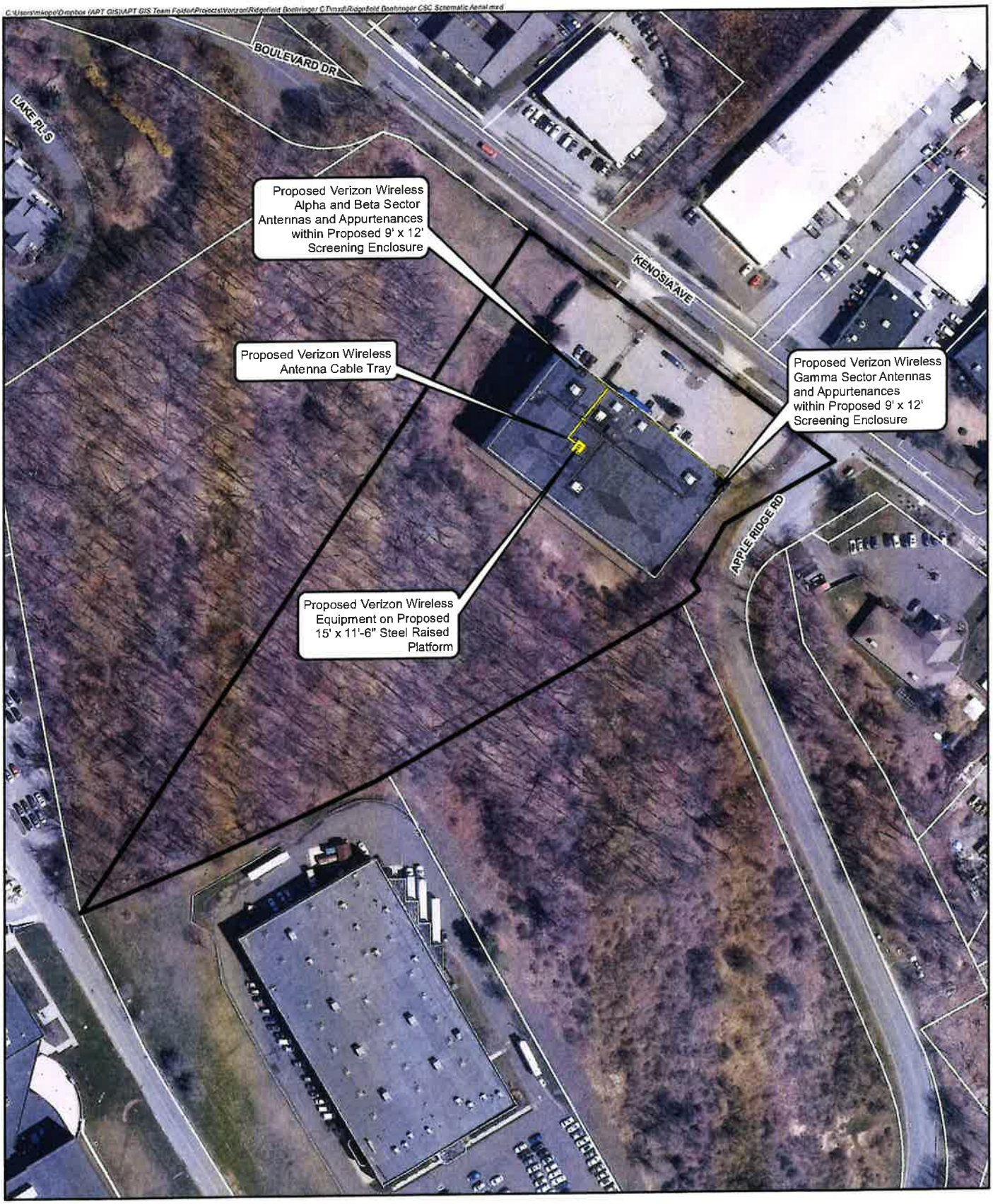
Respectfully submitted,

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

By _____

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

ATTACHMENT 1



Legend

- Proposed Verizon Wireless Equipment
- Subject Property
- Approximate Parcel Boundary

N

150 75 0 150 Feet

Site Schematic

Proposed Wireless
Telecommunications Facility
Ridgefield Boehringer CT
19 Kenosia Avenue
Danbury, Connecticut

verizon

ALL-POINTS TECHNOLOGY CORPORATION

Map Notes:
Base Map Source: 2019 CT ECO Imagery
Map Scale:1 inch = 150 feet
Map Date: October 2022

ATTACHMENT 2

verizon

WIRELESS COMMUNICATIONS FACILITY

RIDGEFIELD BOEHRINGER - LIFE STORAGE

19 KENOSIA AVE

DANBURY, CT 06811

SITE DIRECTIONS

FROM: 20 ALEXANDER DRIVE, WALLINGFORD, CT **TO:** 19 KENOSIA AVE, DANBURY, CT 06811

1.	TURN RIGHT ONTO ALEXANDER DR	0.30 MI.
2.	TURN RIGHT ONTO BARNES INDUSTRIAL PARK RD	0.10 MI.
3.	TURN LEFT AT THE 1ST CROSS STREET ONTO CT-68 W	0.40 MI.
4.	TURN RIGHT	0.20 MI.
5.	TURN RIGHT ONTO N COLONY RD	0.30 MI.
6.	TURN RIGHT TO MERGE ONTO CT-15 N TOWARD HARTFORD	0.20 MI.
7.	MERGE ONTO CT-15 N	3.70 MI.
8.	TAKE EXIT 66W TO MERGE ONTO I-691 W TOWARD MERIDEN/WATERBURY	7.80 MI.
9.	MERGE ONTO I-84	38.2 MI.
10.	USE THE LEFT LANE TO TAKE EXIT 3 TOWARD US-7 S	0.40 MI.
11.	TAKE EXIT 8 FOR PARK AVE	0.50 MI.
12.	USE THE LEFT LANE TO KEEP LEFT AT THE FORK AND FOLLOW SIGNS FOR BACKUS AVE	0.01 MI.
13.	TURN LEFT ONTO BACKUS AVE	0.60 MI.
14.	TURN RIGHT ONTO KENOSIA AVE	0.50 MI.

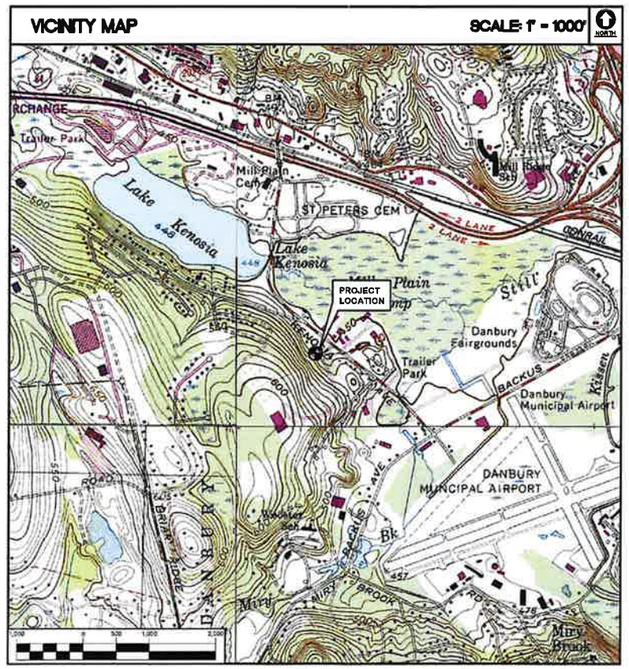
SITE INFORMATION

THE SCOPE OF WORK SHALL GENERALLY INCLUDE:

1. THE PROPOSED CELLCO PARTNERSHIP ANTENNA INSTALLATION TO CONSIST OF A TOTAL OF (3) SECTORS WITH A TOTAL OF (9) ANTENNAS. APPURTENANCES INCLUDE (9) REMOTE RADIO HEADS (RRHs), AND (3) OVERVOLTAGE PROTECTION BOXES (OVPs) AND ASSOCIATED CABLES.
2. POWER AND TELCO UTILITIES SHALL BE ROUTED FROM EXISTING DEMARCS WITHIN THE SUBJECT BUILDING. FINAL UTILITY DEMARC LOCATIONS AND ROUTING TO BE DETERMINED DURING CONSTRUCTION DOCUMENT PHASE OF THE PROJECT, AND WILL BE COORDINATED WITH BUILDING OWNER AND LOCAL UTILITY COMPANY REQUIREMENTS.
3. EQUIPMENT LAYOUT SHOWN HEREIN IS PRELIMINARY AND SCHEMATIC. FINAL LAYOUT TO BE DETERMINED DURING THE CONSTRUCTION PHASE OF THE PROJECT.
4. THE PROPOSED CELLCO PARTNERSHIP ANTENNA SCREENING ENCLOSURES SHALL MATCH THE EXISTING BUILDING FACADE IN COLOR AND ARCHITECTURAL APPEARANCE.
5. PROPOSED ENCLOSURE DIMENSIONS SHOWN ARE APPROXIMATE AND WILL BE FINALIZED DURING THE CONSTRUCTION DOCUMENT PHASE OF THE PROJECT.

VICINITY MAP

SCALE: 1" = 1000'



PROJECT SUMMARY

SITE NAME:	RIDGEFIELD BOEHRINGER – LIFE STORAGE
SITE ADDRESS:	19 KENOSIA AVE DANBURY, CT 06811
PROPERTY OWNER:	SOVRAN ACQUISITION LIMITED 6467 MAIN ST WILLIAMSVILLE, NY 14221-5880
LESSEE/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 20 ALEXANDER DRIVE, FLOOR 2 WALLINGFORD, CT 06492
VERIZON SITE ACQUISITION CONTACT:	CHRISTINA GLASS SAI COMMUNICATIONS LLC (603) 212-6328
LEGAL/REGULATORY COUNSEL:	KENNETH C. BALDWIN, ESQ. ROBINSON & COLE (860) 275-8345
PROPOSED TOWER COORDINATES:	LATITUDE 41°-22'-42.74" LONGITUDE 73°-29'-41.56" GROUND ELEVATION: 458.19'± A.M.S.L. COORDINATES AND GROUND ELEVATION REFERENCED FROM FAA 2-C CERTIFICATION PREPARED BY CENTEK ENGINEERING FOR VERIZON WIRELESS, DATE (REVISED) 10/21/2021.

SHEET INDEX

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	10/28/22	RTS	TJR	CT SITING COUNCIL DRAWINGS – APPROVED FINAL
C	10/20/22	RTS	TJR	CT SITING COUNCIL DRAWINGS – REVISED PER STRUCTURAL ANALYSIS REV.
B	09/10/22	DMD	TJL	CT SITING COUNCIL DRAWINGS – REVISED PER CLIENT COMMENTS
A	08/02/22	AMC	DMD	CT SITING COUNCIL DRAWINGS – ISSUED FOR CLIENT REVIEW

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Centered on Solutions
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Branford, CT 06405
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Cellco Partnership d/b/a Verizon Wireless

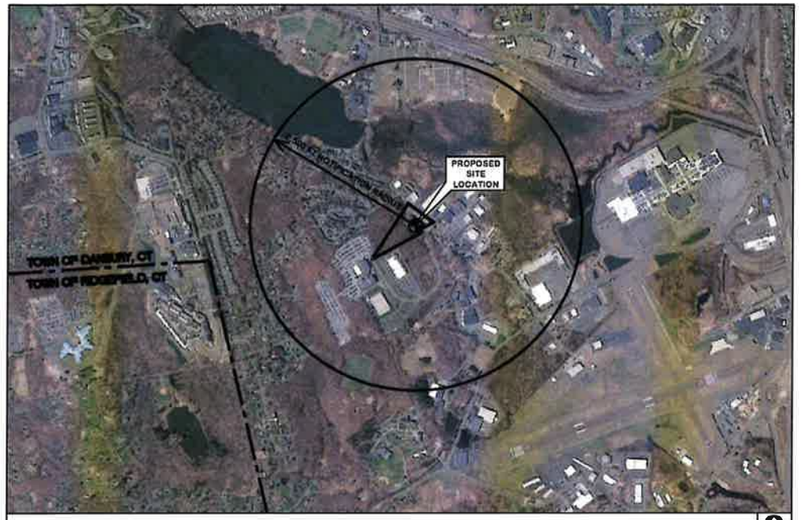
RIDGEFIELD BOEHRINGER
LIFE STORAGE
19 KENOSIA AVE
DANBURY, CT 06811

DATE: 08/02/22
SCALE: AS NOTED
JOB NO. 21058.02

TITLE SHEET

T-1

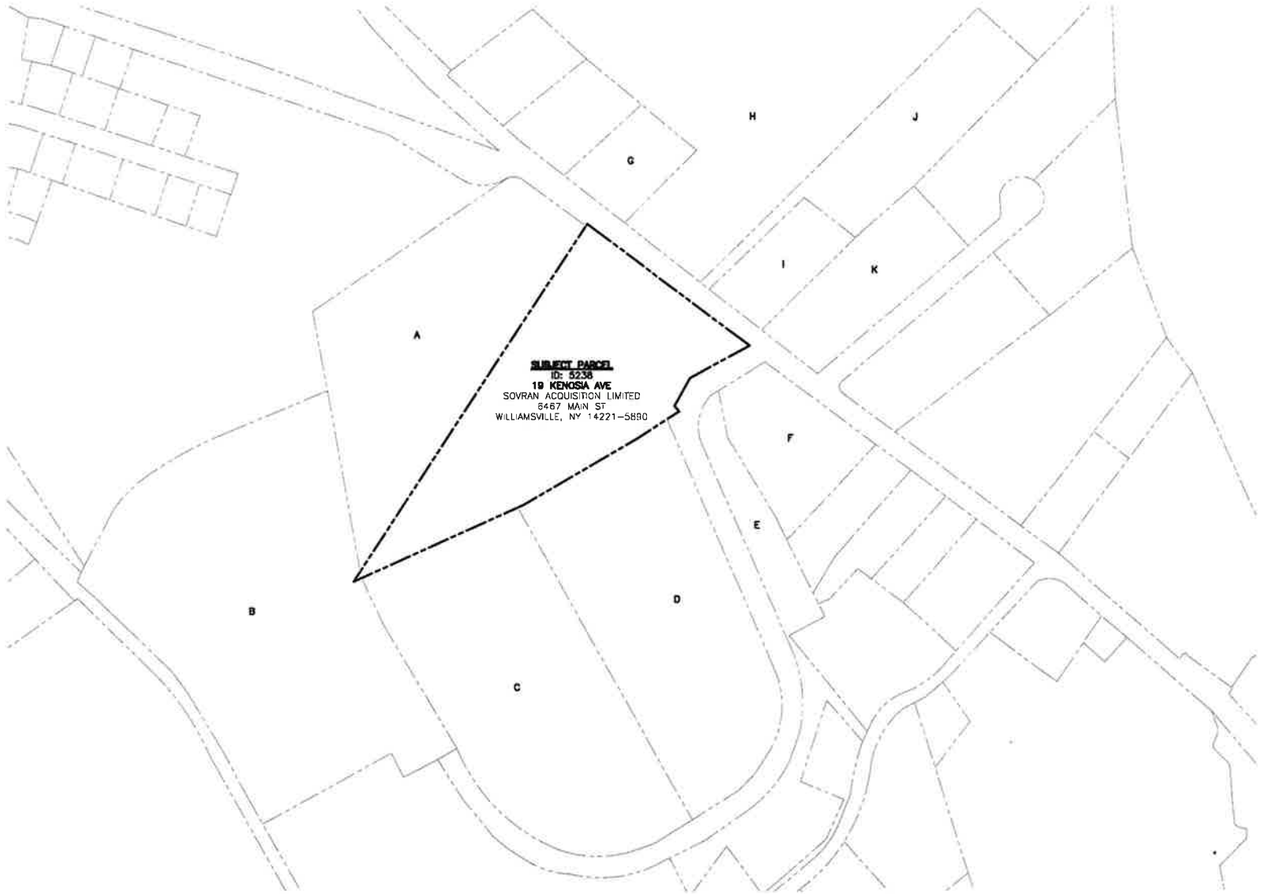
Sheet No. 1 of 4



MUNICIPALITY NOTIFICATION LIMIT MAP

ABUTTERS LIST

REF.	ID	ADDRESS	OWNER	OWNER ADDRESS
A	5294	15 KENOSIA	SOVRAN ACQUISITION LIMITED	6467 MAIN ST, BUFFALO, NY 14221
B	5224	40 APPLE RIDGE	DELEWARE MMP REALTY LLC	PO BOX 561, DANBURY, CT, 06813
C	5235	APPLE RIDGE	COMMERCE PARK REALTY LLC	35 CROSBY DR, BEDFORD, MA, 01730
D	5295	APPLE RIDGE	COMMERCE PARK REALTY LLC	35 CROSBY DR, BEDFORD, MA, 01730
E	5227	APPLE RIDGE	POWERS MELVYN J	7 FINANCE DR, DANBURY, CT, 06813
F	5236	KENOSIA	SHERIFF LLC	27 KENOSIA AVE, DANBURY, CT, 06813
G	5233	24 KENOSIA	PN LLC	24 KENOSIA AVE, DANBURY, CT, 06813
H	5292	KENOSIA	36 KENOSIA AVENUE REALTY LLC	440 MAMARONECK STE N-503, HARRISON, NY, 10528
I	5290	KENOSIA	36 KENOSIA AVENUE LLC	154 WHITE ST, DANBURY, CT, 06813
J	5291	KENOSIA	BELMI MANAGEMENT PARTNERSHIP	17 PILGRIM HILL RD, RIDGEFIELD, CT, 06877
K	5289	2 PRECISION	TWF ASSOCIATES LLC	29 THRONWOOD RD, STAMFORD, CT, 06903



1 / C-1 ABUTTERS MAP
SCALE: 1"=300'

APPROXIMATE NORTH

GRAPHIC SCALE
300 0 150 300 600 1200
(IN FEET)
1 inch = 300 ft.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
D	10/28/22	RTS	TJR	CT SITING COUNCIL DRAWINGS – APPROVED FINAL
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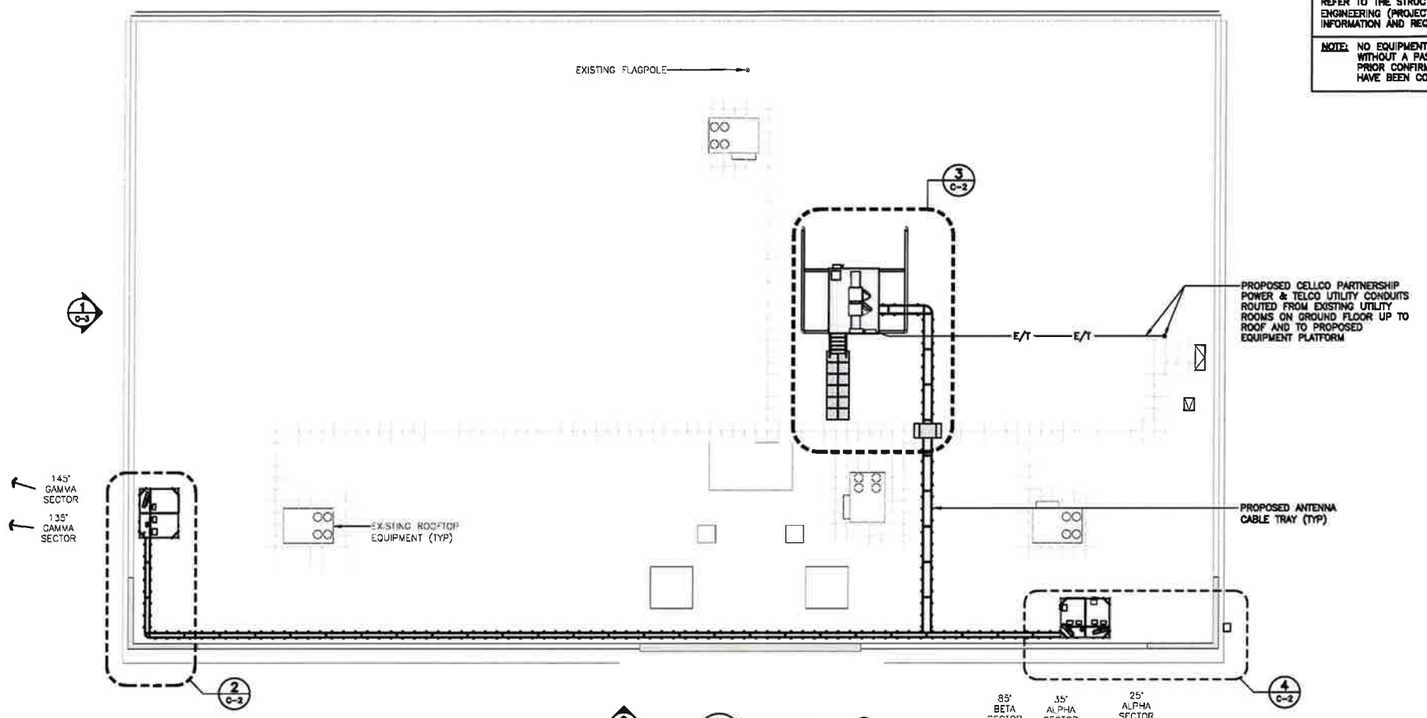
SCALE: AS NOTED
JOB NO. 21058.02

ABUTTERS MAP AND LIST

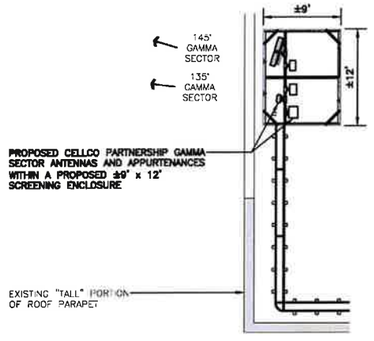
C-1

Sheet No. 2 of 4

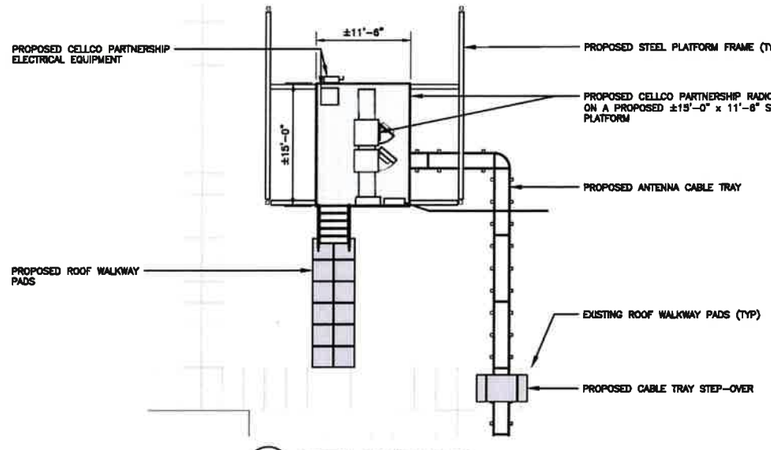
STRUCTURAL COMPLIANCE
ANTENNA MOUNTS & EQUIPMENT PLATFORM A STRUCTURAL ANALYSIS OF THE ANTENNA MOUNTS AND EQUIPMENT PLATFORM WAS PERFORMED FOR THE PROPOSED EQUIPMENT INSTALLATION AND THEY WERE FOUND TO BE STRUCTURALLY SUFFICIENT TO ACCOMMODATE THE PROPOSED LOADING. REFER TO THE STRUCTURAL ANALYSIS REPORT PREPARED BY CENTEK ENGINEERING (PROJECT # 21058.02) DATED 10/21/22 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
NOTE: NO EQUIPMENT SHALL BE INSTALLED ON THE HOSTING STRUCTURE WITHOUT A PASSING STRUCTURAL ANALYSIS REPORT AND CONTRACTOR PRIOR CONFIRMATION THAT ANY AND ALL REQUISITE MODIFICATIONS HAVE BEEN COMPLETED.



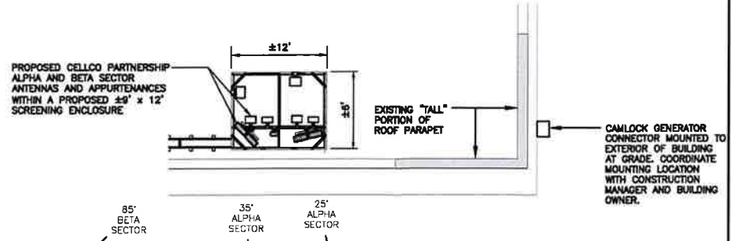
1 C-2 ROOF PLAN SCALE: 1" = 15' NORTH



2 C-2 PARTIAL ROOF PLAN SCALE: 1/8" = 1' NORTH



3 C-2 PARTIAL ROOF PLAN SCALE: 1/8" = 1' NORTH



4 C-2 PARTIAL ROOF PLAN SCALE: 1/8" = 1' NORTH

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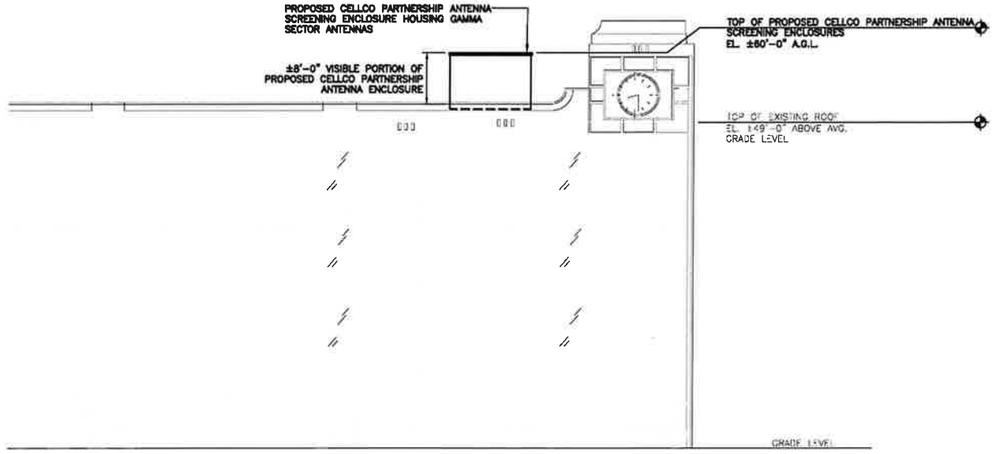
ROOF PLANS

C-2

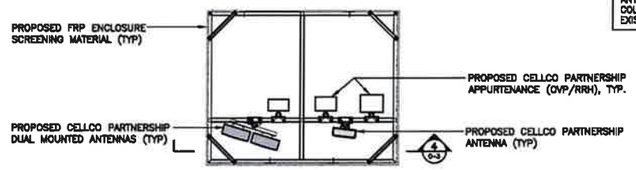
Sheet No. 3 of 4



1 C-3 **PARTIAL EAST BUILDING ELEVATION**
SCALE: 1" = 10'

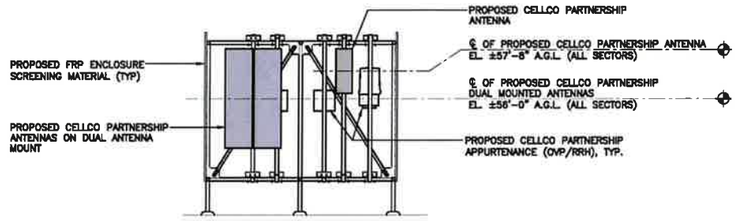
ANTENNA ENCLOSURE NOTE

ANTENNA SCREENING ENCLOSURES SHALL MATCH COLOR AND ARCHITECTURAL APPEARANCE OF THE EXISTING BUILDING FACADE.

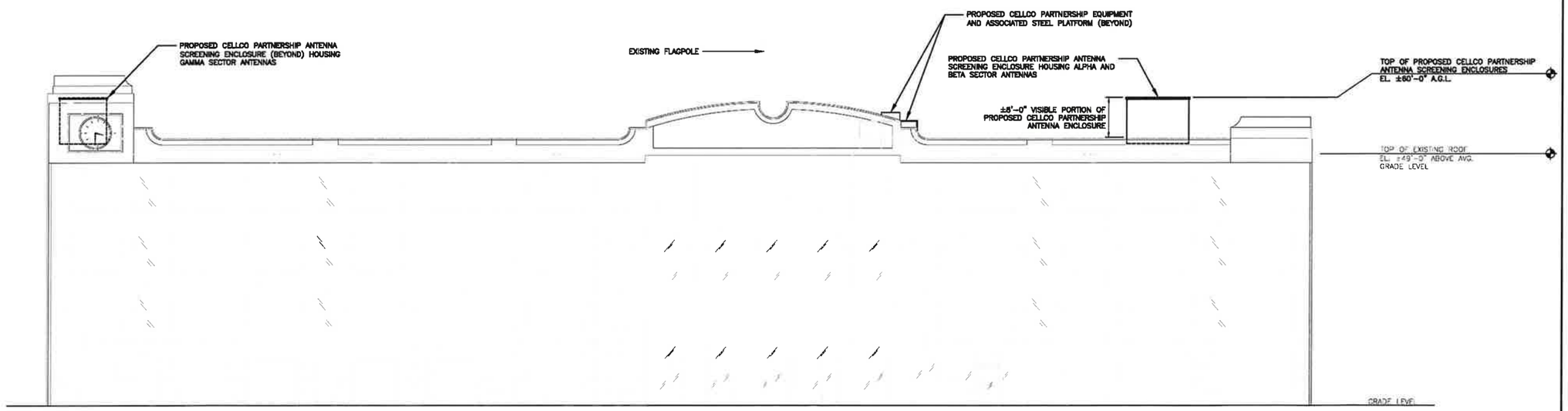


3 C-3 **TYPICAL SCHEMATIC ENCLOSURE PLAN**
SCALE: 1/4" = 1'- 0"

NOTE:
GAMMA SECTOR SHOWN. ALPHA/BETA SECTOR IS SIMILAR.



4 C-3 **TYPICAL SCHEMATIC ENCLOSURE SECTION**
SCALE: 1/4" = 1'- 0"



2 C-3 **NORTH BUILDING ELEVATION**
SCALE: 1" = 10'

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BUILDING ELEVATIONS AND ENCLOSURE PLANS

C-3

Sheet No. 4 of 4

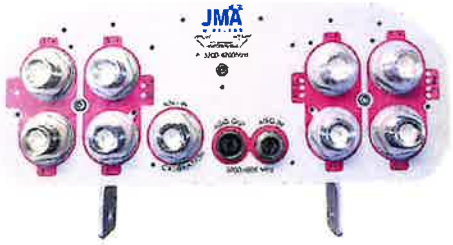
ATTACHMENT 3

MX08FIT265-01

NWAV™ Panel Antenna

8-Port 32 in. FIT (Form in Tighter), 3700 - 4200 MHz

- 5G C-Band 8T8R beamforming antenna
- Optimized antenna array design for all C-Band beam-forming combinations
- Excellent passive intermodulation (PIM) performance reduces harmful interference
- Integrated (internal RET) for remote electrical tilt control



nwav

Electrical specification (minimum/maximum)	Ports 1, 2, 3, 4, 5, 6, 7, 8
Frequency bands, MHz	3700-4200
Gain, dBi	17.1
Horizontal beamwidth (HBW), degrees	85
Horizontal beamwidth tolerance, degrees	±5
Front-to-back ratio, co-polar power @180°± 30°, dB	27
Vertical beamwidth (VBW), degrees[1]	5.5
Vertical beamwidth tolerance, degrees	±0.3
Remote electrical downtilt (EDT) range, degrees	2-12
First upper side lobe (USLS) suppression, dB[1]	15
Coupling level, Amp, Antenna port to Cal port, dB	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB	±0.6
Coupler, max Amp Δ, Antenna port to Cal port, dB	0.65
Coupler, max Phase Δ, Antenna port to Cal port, degrees	4
Cross-polar isolation, port-to-port, dB[1]	25
Max VSWR / return loss, dB	1.5:1 / -14.0
Max passive intermodulation (PIM), 2x20W carrier, dBc	-145
Max input power per port at 50 °C, watts	75

1 Typical value over frequency and tilt

MX08FIT265-01

NWAV™ Panel Antenna

Electrical specification, Broadcast 65°	Ports 1, 2, 3, 4, 5, 6, 7, 8
Frequency bands, MHz	3700-4200
Gain over all tilts, dBi	22.5
Horizontal beamwidth (HBW), degrees1	65
Horizontal beamwidth tolerance, degrees	±6
Vertical beamwidth (VBW), degrees[1]	5.5
Vertical beamwidth tolerance, degrees	±0.3
First upper side lobe (USLS) suppression, dB[1]	<-16

Electrical specification, Service Beam	Ports 1, 2, 3, 4, 5, 6, 7, 8
Frequency bands, MHz	3700-4200
Steered 0° gain, dBi	22.5
Steered 0° Gain tolerance, dBi	±0.6
Steered 0° Beamwidth, Horizontal, degrees	22
Steered 0° CPR at beampeak, dB	18
Steered 0° Horizontal Sidelobe, dB	12
Steered 30° Gain, dBi (max)	21.8
Steered 30° Gain tolerance, dBi	±0.6
Steered 30° Gain, dBi	21
Steered 30° Beamwidth, Horizontal, degree	22.2
Steered 30° CPR at beampeak, dB	18
Steered 30° Horizontal Sidelobe, dB	10

Electrical specification, Soft Split	Ports 1, 2, 3, 4, 5, 6, 7, 8
Frequency bands, MHz	3700-4200
Gain over all tilts, dBi	21.8
Horizontal beamwidth (HBW), degrees[1]	32
First upper side lobe (USLS) suppression, dB[1]	15

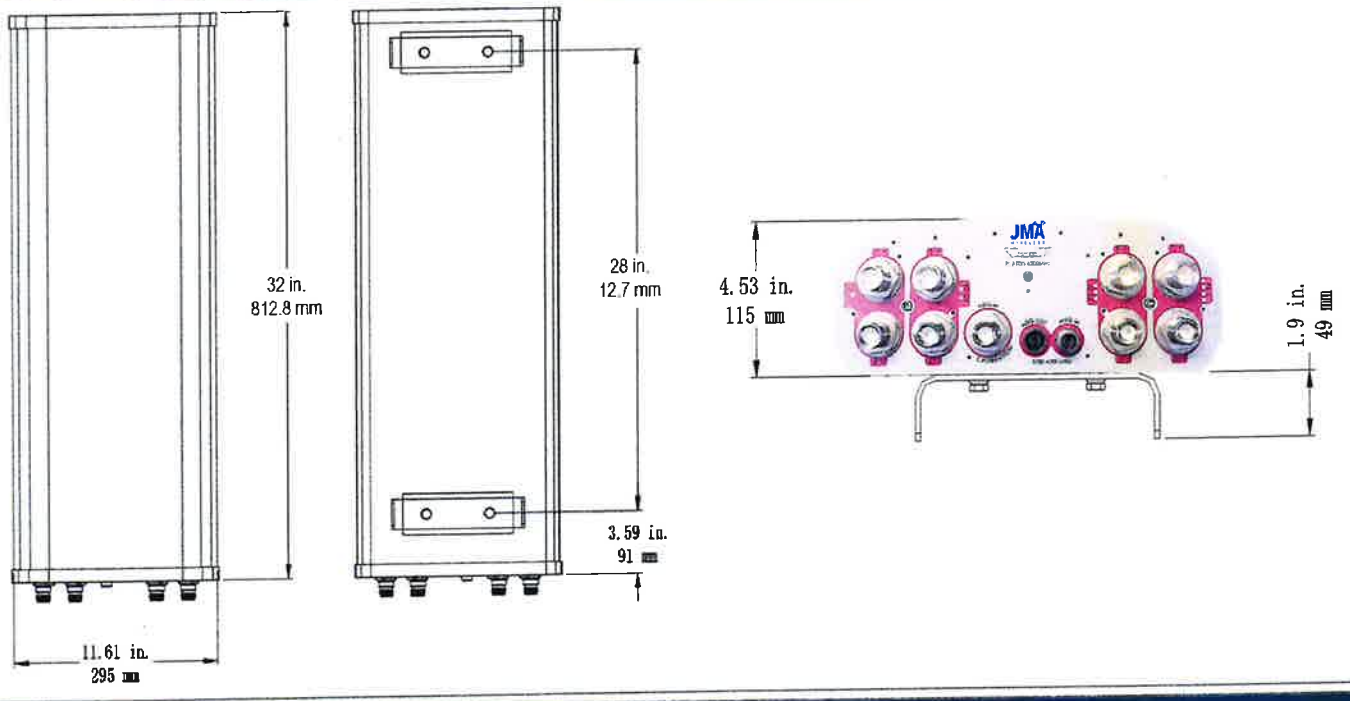
Beamforming weighting table available upon request

MX08FIT265-01

NWAV™ Panel Antenna

Mechanical specifications	
Dimensions height/width/depth, inches (mm)	32.0/ 11.6/ 4.53 (812.8/ 295/ 115)
Shipping dimensions length/width/height, inches (mm)	37.0/ 16.9/ 11.8 (939.8/ 430/ 300)
No. of RF input ports, connector type, and location	8 x 4.3-10 female, bottom
Calibration interface port, connector type, and location	1 x 4.3-10 female, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	23.2 (10.52)
Weight with supplied pipe mount bracket, lb (kg)	26.5 (12.02)
Shipping weight, lb (kg)	49.1 (22.27)
Rated wind survival speed, mph (km/h)	56.9 (253.1). 10.9 (48.5)
Frontal and lateral wind loading @ 150 km/h, lbf (N)	56.9
EPA frontal and lateral, ft^2, (m^2)	2.6 (0.24), 0.5 (0.05)

Front view | **Back view** | **Bottom view**



Ordering information	
Antenna model	**Description**
MX08FIT265-01	32-inch 8T8R beamforming antenna, 3700-4200 MHz with RET
Mounting kit (included)	91900330 BRACKET KIT, range of mechanical up/down tilt -2° to 12°
Optional accessories	
AISG cables	M/F cables for AISG connections
PCU-1000 RET controller	Stand-alone controller for RET control and configurations

MX08FIT265-01

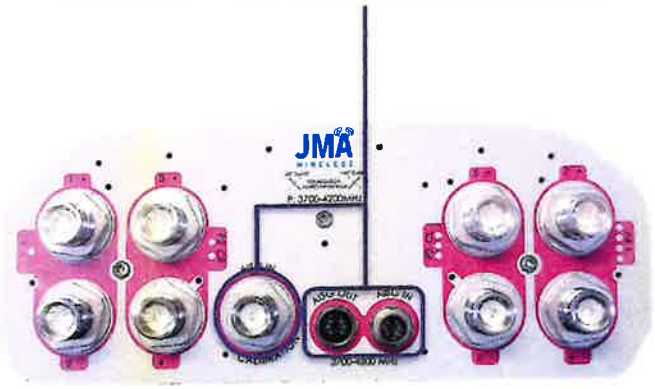
NWAV™ Panel Antenna

Remote electrical tilt (RET 1000) information	
RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9 or RF port Bias-T
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	1 pair of AISG male/female connectors and 1 RF port Bias-T
RET interface connector location	Bottom of the antenna
Total no. of internal RETs	1
RET input operating voltage, vdc	10-30
RET max power consumption, idle state, W	≤ 2.0
RET max power consumption, normal operating conditions, W	≤ 13.0
RET communication protocol	AISG 2.0 / 3GPP

RET and RF connector topology

Each RET device can be controlled either via the designated external AISG connector or RF port as shown below:

RET device	Band	RF port
1	3700-4200	1-8



Array topology

1 set of radiating arrays

P1: 3700-4200 MHz

Band	RF port
3700-4200	1-8

SAMSUNG

700/850MHZ MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This 700/850MHz 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code RF4440d-13A

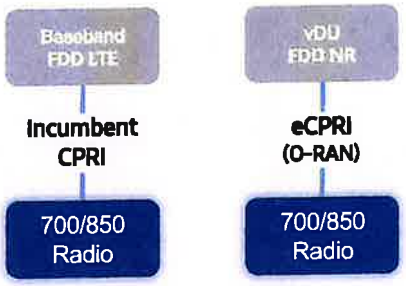
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

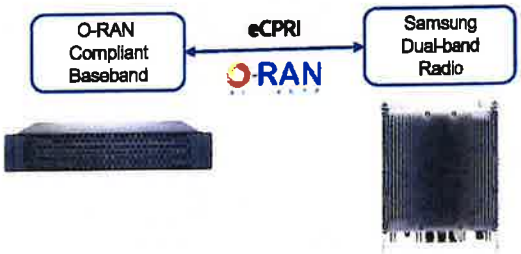
Samsung's 700/850MHz macro radio can support each incumbent CPRI interface as well as an advanced eCPRI interface. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help when implementing cost-effective networks because it is capable of sending more data without compromising additional investments.

Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

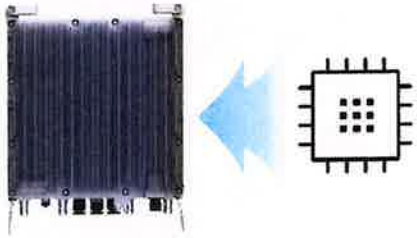
The number of required carriers varies according to site (region). The ability to support many carriers is essential for using all frequencies that the operator has available.

The new 700/850MHz dual-band radio can support up to 2 carriers in the B13 (700MHz) band and 3 carriers in the B5 (850MHz) band, respectively.

Secured Integrity

Access to sensitive data is allowed only to authorized software.

The Samsung radio's CPU can protect root of trust, which is credential information to verify SW integrity, and secure storage provides access control to sensitive data by using dedicated hardware (TPM).



Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B13(700MHz), B5(850MHz)
Frequency Band	DL: 746 – 756MHz, UL: 777 – 787MHz DL: 869 – 894MHz, UL: 824 – 849MHz
RF Power	(B13) 4 × 40W or 2 × 60W (B5) 4 × 40W or 2 × 60W
IBW/OBW	(B13) 10MHz / 10MHz (B5) 25MHz / 25MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 9.05inch (33.2L) / 70.33 lb

SAMSUNG

AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This AWS/PCS 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code	RF4439d-25A

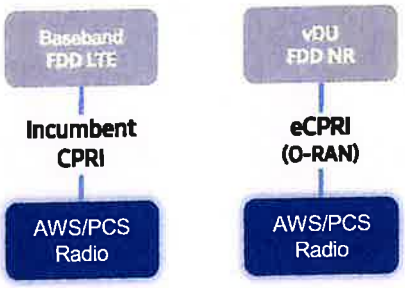
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

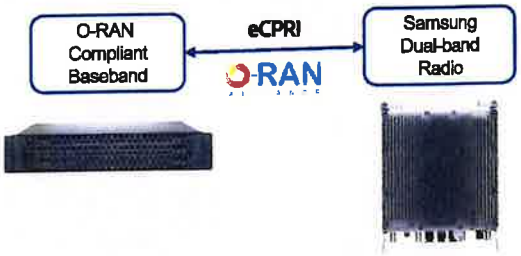
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

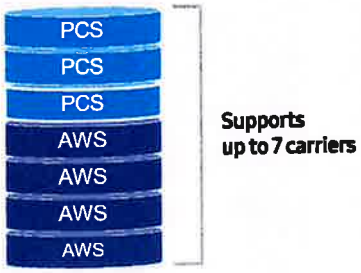
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

The new AWS/PCS dual-band radio can support up to 3 carriers in the PCS (1.9GHz) band and 4 carriers in the AWS (2.1GHz) band, respectively.



Supports up to 7 carriers

Brand New Features in a Compact Size

Samsung's AWS/PCS macro radio offers several features, such as dual connectivity for baseband for both CDU and vDU, O-RAN capability, more carriers and an enlarged PCS spectrum, combined into an incumbent radio volume of 36.8L.

\+

- **2 FH connectivity**
- **O-RAN capability**
- **More carriers and spectrum**

Same as an incumbent radio volume

Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B25(PCS), B66(AWS)
Frequency Band	DL: 1930 – 1995MHz, UL: 1850 – 1915MHz DL: 2110 – 2200MHz, UL: 1710 – 1780MHz
RF Power	(B25) 4 × 40W or 2 × 60W (B66) 4 × 60W or 2 × 80W
IBW/OBW	(B25) 65MHz / 30MHz (B66) DL 90MHz, UL 70MHz / 60MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 10.04inch (36.8L) / 74.7lb

Specifications

The following table outlines the main specifications of RT8808-77A.

Table 2. Specifications (RT8808-77A)

Item	RT8808-77A
Radio Technology	5G NR
Operating Frequency	3700 to 3980 MHz
Channel Bandwidth	20/40/60/80/100 MHz
RF Chain	• 8T8R, 4T4R+4T4R Bi-sector • 2T2R+2T2R+2T2R Tri-sector • 4T8R+4T8R split mode
RF Output Power	Max. 320W (8 x 40W)
Capacity	Total Max 2C
CPRI interface	15km, 2 ports (25Gbps x 2), SFP28, single mode, Bi-di (Option: Duplex)
Input Voltage	-48 V DC (-38 V DC to -57 V DC)
Power Consumption (Max.)	1,192 W (100% load, 25°C) (w/o RET)
Operating Humidity	5% to 100%RH (Condensing, not to exceed 30g/m3 absolute humidity)
Operating Temperature	-40°C to 55°C (without solar load)
Dimension (in./mm)	14.96/380 (W) × 6.82/173.3(D) × 14.96/380 (H)
Weight (kg)	27 or less than
Cooling	Natural convection
Waterproof/Dustproof	IP65
Wind Resistance	Telcordia GR-487-CORE Issue5 • Wind Resistance (Section 3.36)
Earthquake Specification	Telcordia GR-63-CORE, Issue5, □ Earthquake (Section 4.4.1)
Vibration Specification	Telcordia GR-63-CORE, Issue5, • Office Vibration (Section 4.4.4) • Transportation Vibration (Section 4.4.5)
Altitude	Telcordia GR-63-CORE, Issue5, • Altitude (Section 4.1.3)
EMC	FCC Title 47 CFR Part 15
RF	FCC Title 47 CFR Part 27, 24
Safety	UL 62368-1, 2nd Edition
Installation	Pole, Wall, Tower

The power consumption is predicted with a simulation and the measured value is subject to change by ±10%

ATTACHMENT 4

CENTEK engineering

Centered on Solutions℠

Structural Analysis Report

Antenna Screen Wall/Platform

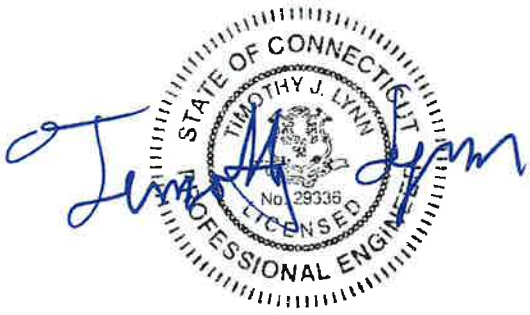
Proposed Verizon Wireless
Rooftop Site Build

Site Ref: Ridgefield-Boehringer

19 Kenosia Ave
Danbury, CT

CENTEK Project No. 21058.02

Date: October 21, 2022



Prepared for:

Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

63-2 North Branford Road, Branford, CT 06405 203.488.0580 Fax 203.488.8587 www.CentekEng.com

Table of Contents

Introduction

The purpose of this structural analysis report (SAR) is to summarize the results, of the impacted structural components, by the proposed equipment site build proposed by Verizon Wireless on the existing host building located in Danbury, CT.

The antennas are mounted within (2) proposed screen wall enclosures on roof of the host building. The Verizon equipment cabinets and other components are mounted on a proposed steel dunnage platform on roof of the host building. The screen wall enclosures and platform are anchored to the existing wide flange beams.

Primary Assumptions Used in the Analysis

- The host structure's theoretical capacity not including any assessment of the condition of the host structure.
- The proposed elevated steel antenna frames carry the horizontal and vertical loads due to the weight of equipment, and wind and transfers into host structure.
- Proposed reinforcement and support steel will be properly installed and maintained.
- Structure is in plumb condition.
- Loading for equipment and enclosure as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as observed during roof framing mapping.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.

Antenna and Equipment Summary

Location	Appurtenance / Equipment	Rad Center Elevation (AGL)	Mount Type
Alpha Sector	**(1) JMA MX08FIT265-01 Antenna** **(2) JMA MX10FR0640 Antenna** **(1) Samsung B5/B13 RRH–BR04C** **(1) Samsung B2/B66A RRH–BR049** **(1) Commscope CBC78T-DS-43 Diplexer** **(1) RT-8808-77A**	58-ft	Screen Wall Enclosure on host building roof
Beta Sector	**(2) JMA MX10FR0640 Antenna** **(1) Samsung B5/B13 RRH–BR04C** **(1) Samsung B2/B66A RRH–BR049** **(1) Commscope CBC78T-DS-43 Diplexer** **(1) RT-8808-77A**	58-ft	Screen Wall Enclosure on host building roof
Gamma Sector	**(1) JMA MX08FIT265-01 Antenna** **(2) JMA MX10FR0640 Antenna** **(1) Samsung B5/B13 RRH–BR04C** **(1) Samsung B2/B66A RRH–BR049** **(1) Commscope CBC78T-DS-43 Diplexer** **(1) RT-8808-77A**	58-ft	Screen Wall Enclosure on host building roof

Equipment – Indicates equipment to be installed.

Analysis

The roof framing were analyzed using a comprehensive computer program titled Risa3D. The program analyzes the equipment platform and antenna mounts considering the worst case code prescribed loading condition. The structures were considered to be loaded by concentric forces, and the model assumes that the members are subjected to bending, axial, and shear forces.

Design Loading

Loading was determined per the requirements of the 2021 International Building Code amended by the 2022 CSBC and ASCE 7-16 "Minimum Design Loads for Buildings and Other Structures".

Wind Speed:	V_{ult} = 120 mph	*Appendix P of the 2022 CT State Building Code*
Risk Category:	II	*2021 IBC; Table 1604.05*
Exposure Category:	Surface Roughness B	*ASCE 7-16; Section 26.7.2*
Ground Snow Load	30 psf	*Appendix P of the 2022 CT State Building Code*
Dead Load	Equipment and framing self-weight	*Identified within SAR design calculations*
Live Load	20 psf	*ASCE 7-16; Table 4-1 "Roofs – All Other Construction"*

Reference Standards

2021 International Building Code:

1. ACI 318-14, *Building Code Requirements for Structural Concrete.*
2. ACI 530-13, *Building Code Requirements for Masonry Structures.*
3. AISC 360-10, *Specification for Structural Steel Buildings*

Results

Structure stresses were calculated utilizing the structural analysis software RISA 3D. The stresses were determined based on the AISC standard.

- Calculated stresses for the antenna screenwalls, platforms, and host building were found to **be within allowable** limits.

Sector	Component	Stress Ratio (percentage of capacity)	Result
Equipment Platform	W12X35 Platform Beam	15%	**PASS**
	W12X26 Platform Beam	32%	**PASS**
	W8X24 Platform Beam	21%	**PASS**
	HSS4x4x1/4 Platform Post	68%	**PASS**
	Connection to Existing Member(s)	39%	**PASS**
	Existing W18 Roof Member	89%	**PASS**
Alpha/Beta/Gamma	HSS2-1/2x2-1/2x5/16 Screen Wall Vertical Member	85%	**PASS**
	HSS2-1/2x2-1/2x1/4 Screen Wall Horizontal Member	65%	**PASS**
	L2x2x1/4 Screen Wall Bracing Member	92%	**PASS**
	Connection to Existing Member(s)	13%	**PASS**
	Existing W18 Roof Member	81%	**PASS**

Conclusion

This analysis shows that the subject antenna frames, platform & host roof **HAVE SUFFICIENT CAPACITY** to support the proposed antenna configuration.

The analysis is based, in part, on the information provided to this office by Verizon Wireless. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:

Timothy J. Lynn, PE
Structural Engineer

STATE OF CONNECTICUT
TIMOTHY J. LYNN
No. 29336
LICENSED
PROFESSIONAL ENGINEER

Luke A. Amiot
Engineer

Standard Conditions for Furnishing of Professional Engineering Services on Existing Structures

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the "as new" condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

CENTEK engineering
Centered on Solutions℠ www.centekeng.com
63-2 North Branford Road P: (203) 488-0580
Branford, CT 06405 F: (203) 488-8587

Subject: Wind Load on Equipment per ASCE 7-16

Location: Danbury,CT

Rev. 0: 10/18/2022

Prepared by: L.A.A.; Checked by: T.J.L.
Job No. 21058.02

Design Wind Load on Other Structures:

(Based on IBC 2021, CSBC 2022 and ASCE 7-16)

Wind Speed =	$V := 120$	mph	(User Input)	(CSBC Appendix-P)
Risk Category =	$BC := II$		(User Input)	(IBC Table 1604.5)
Exposure Category =	$Exp := C$		(User Input)	
Height Above Grade =	$Z := 60$	ft	(User Input)	
Structure Type =	$Structuretype := Square\_Chimney$			
Structure Height =	$Height := 8.0$	ft	(User Input) (User Input)	
Horizontal Dimension of Structure =	$Width := 12$	ft	(User Input)	

Terrain Exposure Constants:

Nominal Height of the Atmospheric Boundary Layer = (Table 26.9-1)

$$zg := \begin{cases} 1200 & \text{if } Exp = B \\ 900 & \text{if } Exp = C \\ 700 & \text{if } Exp = D \end{cases} = 900$$

3-Sec Gust Speed Power Law Exponent = (Table 26.9-1)

$$\alpha := \begin{cases} 7 & \text{if } Exp = B \\ 9.5 & \text{if } Exp = C \\ 11.5 & \text{if } Exp = D \end{cases} = 9.5$$

Integral Length Scale Factor = (Table 26.9-1)

$$l := \begin{cases} 320 & \text{if } Exp = B \\ 500 & \text{if } Exp = C \\ 650 & \text{if } Exp = D \end{cases} = 500$$

Integral Length Scale Power Law Exponent = (Table 26.9-1)

$$E := \begin{cases} \frac{1}{3} & \text{if } Exp = B \\ \frac{1}{5} & \text{if } Exp = C \\ \frac{1}{8} & \text{if } Exp = D \end{cases} = 0.2$$

Turbulence Intensity Factor = (Table 26.9-1)

$$c := \begin{cases} 0.3 & \text{if } Exp = B \\ 0.2 & \text{if } Exp = C \\ 0.15 & \text{if } Exp = D \end{cases} = 0.2$$

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Exposure Constant =	$Z_{min} := \begin{cases} 15 & \text{if } Exp = B \\ 30 & \text{if } Exp = C \\ 15 & \text{if } Exp = D \\ 7 & \end{cases}$	(Table 26.9-1)
Exposure Coefficient =	$K_z := \begin{cases} 2.01 \cdot \left(\frac{Z}{zg}\right)^{\left(\frac{2}{\alpha}\right)} & \text{if } 15 \le Z \le zg \\ 2.01 \cdot \left(\frac{15}{zg}\right)^{\left(\frac{2}{\alpha}\right)} & \text{if } Z < 15 \end{cases} = 1.14$	(Table 29.3-1)
Topographic Factor =	$K_{zt} := 1$	(Eq. 26.8-2)
Wind Directionality Factor =	$K_d = 0.9$	(Table 26.6-1)
Velocity Pressure =	$q_z := 0.00256 \cdot K_z \cdot K_{zt} \cdot K_d \cdot V^2 = 37.71$	(Eq. 29.3-1)
Peak Factor for Background Response =	$g_Q := 3.4$	(Sec 26.9.4)
Peak Factor for Wind Response =	$g_v := 3.4$	(Sec 26.9.4)
Equivalent Height of Structure =	$z := \begin{cases} Z_{min} & \text{if } Z_{min} > 0.6 \cdot Height \\ 0.6 \cdot Height & \text{else} \end{cases} = 15$	(Sec 26.9.4)
Intensity of Turbulence =	$I_z := c \cdot \left(\frac{33}{z}\right)^{\left(\frac{1}{6}\right)} = 0.228$	(Eq. 26.9-7)
Integral Length Scale of Turbulence =	$L_Z := l \cdot \left(\frac{z}{33}\right)^{\varepsilon} = 427.057$	(Eq. 26.9-9)
Background Response Factor =	$Q := \sqrt{\frac{1}{1 + 0.63 \cdot \left(\frac{Width + Height}{L_Z}\right)^{0.63}}} = 0.957$	(Eq. 26.9-8)
Gust Response Factor =	$G := 0.925 \cdot \left(\frac{(1 + 1.7 \cdot g_Q \cdot I_z \cdot Q)}{1 + 1.7 \cdot g_v \cdot I_z}\right) = 0.902$	(Eq. 26.9-6)
Force Coefficient =	$C_f = 1.3$	(Fig 29.5-1 - 29.5-3)
Wind Force =	$F := q_z \cdot G \cdot C_f = 44$	psf

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Subject: Wind Load on Equipment per ASCE 7-16

Location: Danbury,CT

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Job No. 21058.02

Development of Wind on Equipment Cabinets

Cabinet Data:

Cabinet Model =	Commscope RBA84-32 Cabinet (w/ Equip/Batteries)		
Cabinet Shape =	Flat		(User Input)
Cabinet Height =	$L_{Eq} := 85.5$	in	(User Input)
Cabinet Width =	$W_{Eq} := 45.4$	in	(User Input)
Cabinet Thickness =	$T_{Eq} := 44.6$	in	(User Input)
Cabinet Weight =	$WT_{Eq} := 3900$	lbs	(User Input)
Equipment Bearing Points =	$N_{Bp} := 4$		(User Input)
Number of Equipment =	$N_{Eq} := 1$		(User Input)

Wind Load (Front)

Surface Area for One Equipment =	$SA_{Eq} := \frac{L_{Eq} \cdot W_{Eq}}{144} = 27$	sf
Equipment Projected Surface Area =	$A_{Eq} := SA_{Eq} \cdot N_{Eq} = 27$	sf
Total Equipment Wind Force =	$F_{Eq} := \frac{F \cdot A_{Eq} \cdot \frac{\left(\frac{L_{Eq}}{12}\right)}{2}}{\frac{T_{Eq}}{12}} = 1143$	lbs
Total Equipment Shear Wind Force =	$F_{Eq} := \frac{F \cdot A_{Eq}}{N_{Bp}} = 298$	lbs

Wind Load (Side)

Surface Area for One Equipment =	$SA_{Eq} := \frac{L_{Eq} \cdot T_{Eq}}{144} = 26.5$	sf
Equipment Projected Surface Area =	$A_{Eq} := SA_{Eq} \cdot N_{Eq} = 26.5$	sf
Total Equipment Wind Force =	$F_{Eq} := \frac{F \cdot A_{Eq} \cdot \frac{\left(\frac{L_{Eq}}{12}\right)}{2}}{\frac{W_{Eq}}{12}} = 1103$	lbs
Total Equipment Shear Wind Force =	$F_{Eq} := \frac{F \cdot A_{Eq}}{N_{Bp}} = 293$	lbs

Gravity Load (without Ice)

Weight of All Equipments =	$\frac{WT_{Eq}}{N_{Bp}} = 975$	lbs

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Subject: Wind Load on Equipment per ASCE 7-16

Location: Danbury,CT

Rev. 0: 10/18/2022

Prepared by: L.A.A.; Checked by: T.J.L.
Job No. 21058.02

Development of Wind on Equipment Cabinets

Cabinet Data:

Cabinet Model =	Square D EXN30T3HC 45VA Transformer		
Cabinet Shape =	Flat		(User Input)
Cabinet Height =	$L_{Eq} := 28.3$	in	(User Input)
Cabinet Width =	$W_{Eq} := 25.5$	in	(User Input)
Cabinet Thickness =	$T_{Eq} := 24.1$	in	(User Input)
Cabinet Weight =	$WT_{Eq} := 356$	lbs	(User Input)
Equipment Bearing Points =	$N_{Bp} := 4$		(User Input)
Number of Equipment =	$N_{Eq} := 1$		(User Input)

Wind Load (Front)

Surface Area for One Equipment =	$SA_{Eq} := \frac{L_{Eq} \cdot W_{Eq}}{144} = 5$	sf
Equipment Projected Surface Area =	$A_{Eq} := SA_{Eq} \cdot N_{Eq} = 5$	sf
Total Equipment Wind Force =	$F_{Eq} := \frac{F \cdot A_{Eq} \cdot \frac{\left(\frac{L_{Eq}}{12}\right)}{2}}{\frac{T_{Eq}}{12}} = 130$	lbs
Total Equipment Shear Wind Force =	$F_{Eq} := \frac{F \cdot A_{Eq}}{N_{Bp}} = 55$	lbs

Wind Load (Side)

Surface Area for One Equipment =	$SA_{Eq} := \frac{L_{Eq} \cdot T_{Eq}}{144} = 4.7$	sf
Equipment Projected Surface Area =	$A_{Eq} := SA_{Eq} \cdot N_{Eq} = 4.7$	sf
Total Equipment Wind Force =	$F_{Eq} := \frac{F \cdot A_{Eq} \cdot \frac{\left(\frac{L_{Eq}}{12}\right)}{2}}{\frac{W_{Eq}}{12}} = 116$	lbs
Total Equipment Shear Wind Force =	$F_{Eq} := \frac{F \cdot A_{Eq}}{N_{Bp}} = 52$	lbs

Gravity Load (without ice)

Weight of All Equipments =	$\frac{WT_{Eq}}{N_{Bp}} = 89$	lbs

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Subject: Wind Load on Equipment per ASCE 7-16

Location: Danbury,CT

Rev. 0: 10/18/2022

Prepared by: L.A.A.; Checked by: T.J.L.
Job No. 21058.02

Development of Wind on Antennas

Antenna Data:

Antenna Model =	JMA MX10FR0640		
Antenna Shape =	Flat		(User Input)
Antenna Height =	$L_{ant} := 71.6$	in	(User Input)
Antenna Width =	$W_{ant} := 19.8$	in	(User Input)
Antenna Thickness =	$T_{ant} := 7.4$	in	(User Input)
Antenna Weight =	$WT_{ant} := 76.3$	lbs	(User Input)
Number of Antennas =	$N_{ant} := 1$		(User Input)

Wind Load (Front)

Surface Area for One Antenna =	$SA_{ant} := \frac{L_{ant} \cdot W_{ant}}{144} = 9.8$	sf
Antenna Projected Surface Area =	$A_{ant} := SA_{ant} \cdot N_{ant} = 9.8$	sf
Total Antenna Wind Force =	$F_{ant} := F \cdot A_{ant} = 436$	lbs

Wind Load (Side)

Surface Area for One Antenna =	$SA_{ant} := \frac{L_{ant} \cdot T_{ant}}{144} = 3.7$	sf
Antenna Projected Surface Area =	$A_{ant} := SA_{ant} \cdot N_{ant} = 3.7$	sf
Total Antenna Wind Force =	$F_{ant} := F \cdot A_{ant} = 163$	lbs

Gravity Load (without ice)

Weight of All Antennas =	$WT_{ant} \cdot N_{ant} = 76$	lbs

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Subject: Wind Load on Equipment per ASCE 7-16

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Job No. 21058.02

Development of Wind on Antennas

Antenna Data:

Antenna Model =	JMA MX08FIT265-01		
Antenna Shape =	Flat		(User Input)
Antenna Height =	$L_{ant} := 24$	in	(User Input)
Antenna Width =	$W_{ant} := 11.6$	in	(User Input)
Antenna Thickness =	$T_{ant} := 4.53$	in	(User Input)
Antenna Weight =	$WT_{ant} := 21.5$	lbs	(User Input)
Number of Antennas =	$N_{ant} := 1$		(User Input)

Wind Load (Front)

Surface Area for One Antenna =	$SA_{ant} := \frac{L_{ant} \cdot W_{ant}}{144} = 1.9$	sf
Antenna Projected Surface Area =	$A_{ant} := SA_{ant} \cdot N_{ant} = 1.9$	sf
Total Antenna Wind Force =	$F_{ant} := F \cdot A_{ant} = 86$	lbs

Wind Load (Side)

Surface Area for One Antenna =	$SA_{ant} := \frac{L_{ant} \cdot T_{ant}}{144} = 0.8$	sf
Antenna Projected Surface Area =	$A_{ant} := SA_{ant} \cdot N_{ant} = 0.8$	sf
Total Antenna Wind Force =	$F_{ant} := F \cdot A_{ant} = 33$	lbs

Gravity Load (without ice)

Weight of All Antennas =	$WT_{ant} \cdot N_{ant} = 22$	lbs

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Location: Danbury,CT

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Job No. 21058.02

Development of Wind on RRU

RRU Data:

RRU Model =	Samsung B2/B66A RRH-BR049		
RRU Shape =	Flat		(User Input)
RRU Height =	$L_{ant} := 15$	in	(User Input)
RRU Width =	$W_{ant} := 15$	in	(User Input)
RRU Thickness =	$T_{ant} := 10$	in	(User Input)
RRU Weight =	$WT_{ant} := 84.4$	lbs	(User Input)
Number of RRU =	$N_{ant} := 1$		(User Input)

Wind Load (Front)

Surface Area for One RRU =	$SA_{ant} := \frac{L_{ant} \cdot W_{ant}}{144} = 1.6$	sf
RRU Projected Surface Area =	$A_{ant} := SA_{ant} \cdot N_{ant} = 1.6$	sf
Total RRU Wind Force =	$F_{ant} := F \cdot A_{ant} = 69$	lbs

Wind Load (Side)

Surface Area for One RRU =	$SA_{ant} := \frac{L_{ant} \cdot T_{ant}}{144} = 1$	sf
RRU Projected Surface Area =	$A_{ant} := SA_{ant} \cdot N_{ant} = 1$	sf
Total RRU Wind Force =	$F_{ant} := F \cdot A_{ant} = 46$	lbs

Gravity Load (without ice)

Weight of All RRU=	$WT_{ant} \cdot N_{ant} = 84$	lbs

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Location: Danbury,CT

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Job No. 21058.02

Development of Wind on RRU

RRU Data:

RRU Model =	Samsung B5/B13 RRH-BR04C		
RRU Shape =	Flat		(User Input)
RRU Height =	$L_{ant} := 15$	in	(User Input)
RRU Width =	$W_{ant} := 15$	in	(User Input)
RRU Thickness =	$T_{ant} := 8.1$	in	(User Input)
RRU Weight =	$WT_{ant} := 70.3$	lbs	(User Input)
Number of RRU =	$N_{ant} := 1$		(User Input)

Wind Load (Front)

Surface Area for One RRU =	$SA_{ant} := \frac{L_{ant} \cdot W_{ant}}{144} = 1.6$	sf
RRU Projected Surface Area =	$A_{ant} := SA_{ant} \cdot N_{ant} = 1.6$	sf
Total RRU Wind Force =	$F_{ant} := F \cdot A_{ant} = 69$	lbs

Wind Load (Side)

Surface Area for One RRU =	$SA_{ant} := \frac{L_{ant} \cdot T_{ant}}{144} = 0.8$	sf
RRU Projected Surface Area =	$A_{ant} := SA_{ant} \cdot N_{ant} = 0.8$	sf
Total RRU Wind Force =	$F_{ant} := F \cdot A_{ant} = 37$	lbs

Gravity Load (without ice)

Weight of All RRU=	$WT_{ant} \cdot N_{ant} = 70$	lbs

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Location:

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Wind Load on Equipment per ASCE 7-16

Danbury,CT

Prepared by: L.A.A.; Checked by: T.J.L.
Job No. 21058.02

Development of Wind on RRU

RRU Data:

RRU Model =	Samsung RT-8808-77A		
RRU Shape =	Flat		(User Input)
RRU Height =	$L_{ant} := 15$	in	(User Input)
RRU Width =	$W_{ant} := 15$	in	(User Input)
RRU Thickness =	$T_{ant} := 6.8$	in	(User Input)
RRU Weight =	$WT_{ant} := 59.5$	lbs	(User Input)
Number of RRU =	$N_{ant} := 1$		(User Input)

Wind Load (Front)

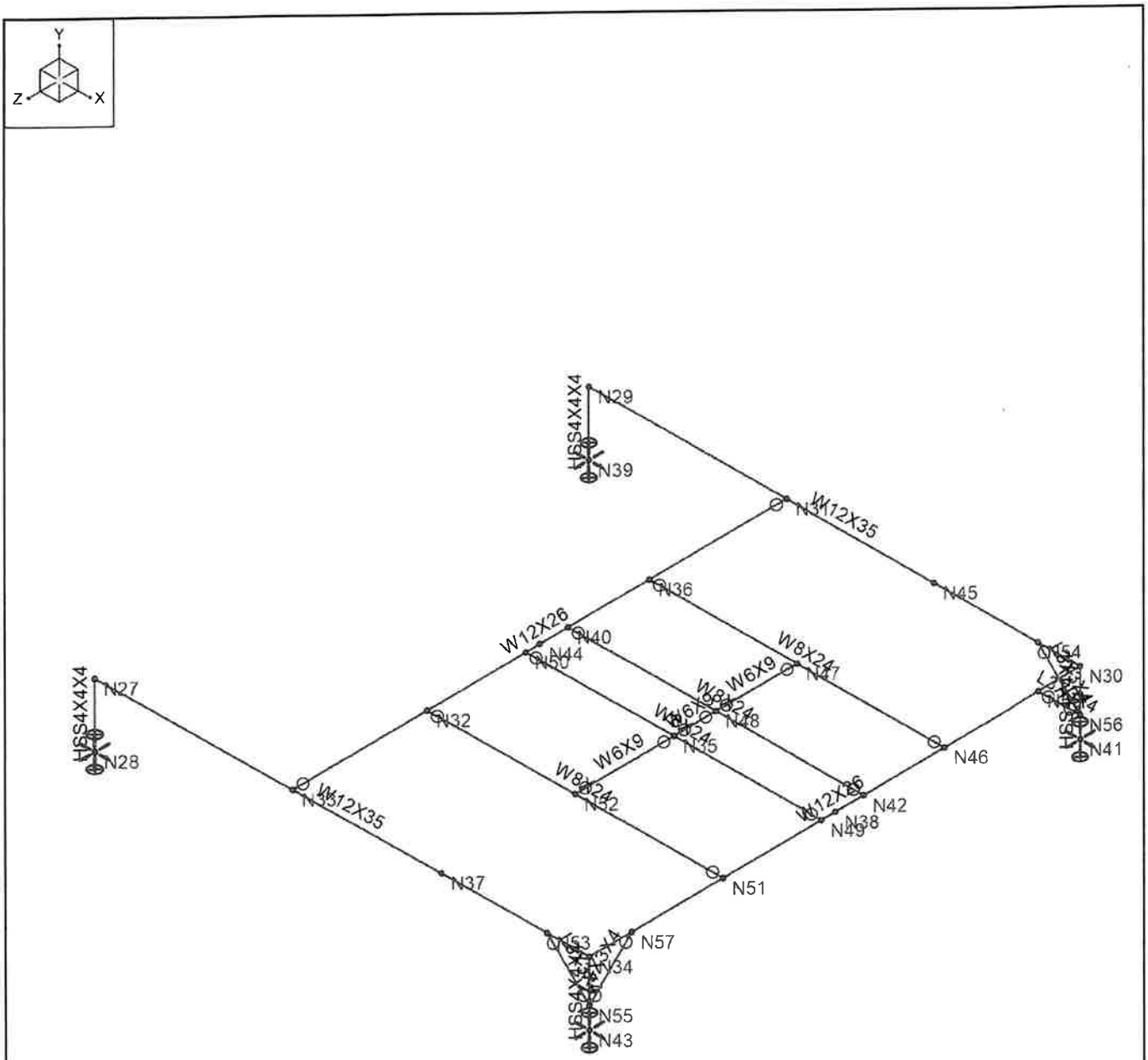
Surface Area for One RRU =	$SA_{ant} := \frac{L_{ant} \cdot W_{ant}}{144} = 1.6$	sf
RRU Projected Surface Area =	$A_{ant} := SA_{ant} \cdot N_{ant} = 1.6$	sf
Total RRU Wind Force =	$F_{ant} := F \cdot A_{ant} = 69$	lbs

Wind Load (Side)

Surface Area for One RRU =	$SA_{ant} := \frac{L_{ant} \cdot T_{ant}}{144} = 0.7$	sf
RRU Projected Surface Area =	$A_{ant} := SA_{ant} \cdot N_{ant} = 0.7$	sf
Total RRU Wind Force =	$F_{ant} := F \cdot A_{ant} = 31$	lbs

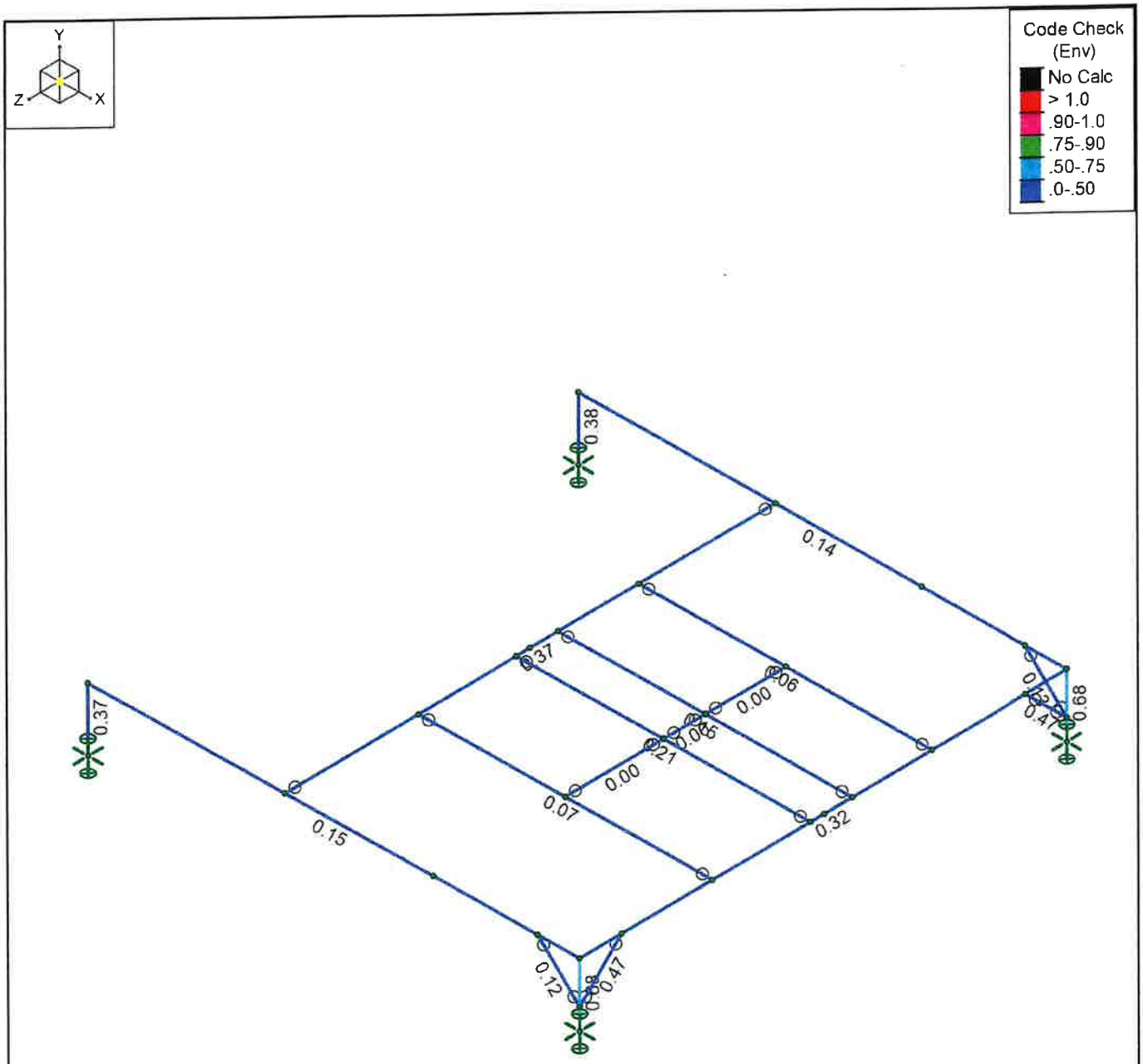
Gravity Load (without ice)

Weight of All RRU=	$WT_{ant} \cdot N_{ant} = 60$	lbs



Envelope Only Solution

Centek Engineering	Proposed Equipment Platform	SK-1
LAA		Oct 20, 2022
21058.02		21058.02 Proposed Equipment Pl...



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Centek Engineering	Proposed Equipment Platform	SK-2
LAA		Oct 20, 2022
21058.02		21058.02 Proposed Equipment Pl...

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N27	35	0	23.333	
2	N28	35	-3	23.333	
3	N29	35	0	0	
4	N30	58.333	0	0	
5	N31	44.333	0	0	
6	N32	44.333	0	17	
7	N33	44.333	0	23.333	
8	N34	58.333	0	23.333	
9	N35	51.333	0	12.333	
10	N36	44.333	0	6.5	
11	N37	51.333	0	23.333	
12	N38	58.333	0	11.6665	
13	N39	35	-3	0	
14	N40	44.333	0	10.333	
15	N41	58.333	-3	0	
16	N42	58.333	0	10.333	
17	N43	58.333	-3	23.333	
18	N44	44.333	0	11.6665	
19	N45	51.333	0	0	
20	N46	58.333	0	6.5	
21	N47	51.333	0	6.5	
22	N48	51.333	0	10.333	
23	N49	58.333	0	12.333	
24	N50	44.333	0	12.333	
25	N51	58.333	0	17	
26	N52	51.333	0	17	
27	N53	56.333	0	23.333	
28	N54	56.333	0	0	
29	N55	58.333	-2	23.333	
30	N56	58.333	-2	0	
31	N57	58.333	0	21.333	
32	N58	58.333	0	2	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	Y Rot [k-ft/rad]
1	N28	Reaction	Reaction	Reaction	Reaction
2	N39	Reaction	Reaction	Reaction	Reaction
3	N41	Reaction	Reaction	Reaction	Reaction
4	N43	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{5}F^{-1}]	Density [k/ft^{3}]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lb y-y [ft]	Lcomp top [ft]	Function
1	M18	W12X35	23.333	Segment	Lbyy	Lateral
2	M19	W8X24	14	Segment	Lbyy	Lateral
3	M20	W6X9	3.833		Lbyy	Lateral
4	M21	W6X9	2		Lbyy	Lateral
5	M22	W6X9	4.667		Lbyy	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lb y-y [ft]	Lcomp top [ft]	Function
6	M23	HSS4X4X4	3		Lbyy	Lateral
7	M24	HSS4X4X4	3		Lbyy	Lateral
8	M25	HSS4X4X4	3		Lbyy	Lateral
9	M26	HSS4X4X4	3		Lbyy	Lateral
10	M27	W8X24	14	Segment	Lbyy	Lateral
11	M28	W12X26	23.333	Segment	Lbyy	Lateral
12	M29	W12X35	23.333	Segment	Lbyy	Lateral
13	M30	W12X26	23.333	Segment	Lbyy	Lateral
14	M31	W8X24	14	Segment	Lbyy	Lateral
15	M32	W8X24	14	Segment	Lbyy	Lateral
16	M33	L3X3X4	2.828		Lbyy	Lateral
17	M34	L3X3X4	2.828		Lbyy	Lateral
18	M35	L3X3X4	2.828		Lbyy	Lateral
19	M36	L3X3X4	2.828		Lbyy	Lateral

Member Point Loads

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M27	Y	-0.975	11.5	Active
2	M27	Y	-0.09	2.5	Active
3	M27	Y	-0.975	8	Active
4	M27	Y	-0.09	0.5	Active
5	M31	Y	-0.09	2.5	Active
6	M31	Y	-0.09	0.5	Active
7	M31	Y	-0.975	8	Active
8	M31	Y	-0.975	11.5	Active

Member Point Loads

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M27	X	0.293	11.5	Active
2	M27	X	0.055	2.5	Active
3	M27	X	0.293	8	Active
4	M27	Y	-1.103	11.5	Active
5	M27	X	0.055	0.5	Active
6	M27	Y	-0.116	2.5	Active
7	M27	Y	0.116	0.5	Active
8	M27	Y	1.103	8	Active
9	M31	X	0.293	8	Active
10	M31	X	0.055	0.5	Active
11	M31	Y	-0.116	2.5	Active
12	M31	X	0.293	11.5	Active
13	M31	X	0.055	2.5	Active
14	M31	Y	1.103	8	Active
15	M31	Y	0.116	0.5	Active
16	M31	Y	-1.103	11.5	Active

Member Point Loads

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M27	Y	-1.143	8	Active
2	M27	Y	-0.116	2.5	Active
3	M27	Y	-0.116	0.5	Active
4	M27	Z	0.052	2.5	Active
5	M27	Y	-1.143	11.5	Active
6	M27	Z	0.052	0.5	Active
7	M31	Y	0.116	2.5	Active
8	M31	Y	0.116	0.5	Active
9	M31	Z	0.052	0.5	Active
10	M31	Z	0.052	2.5	Active

Member Point Loads (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
11	M31	Y	1.143	11.5	Active
12	M31	Y	1.143	8	Active

Member Distributed Loads

	Member Label	Direction	Start Magnitude [k/ft, F, ksf]	End Magnitude [k/ft, F, ksf]	Start Location [(ft, %)]	End Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M19	Y	-0.015	-0.015	0	%100	Active
2	M28	Y	-0.015	-0.015	6.5	17	Active
3	M30	Y	-0.015	-0.015	6.5	17	Active
4	M32	Y	-0.015	-0.015	0	%100	Active

Member Distributed Loads

	Member Label	Direction	Start Magnitude [k/ft, F, ksf]	End Magnitude [k/ft, F, ksf]	Start Location [(ft, %)]	End Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M27	Y	-0.023	-0.023	0	14	Active
2	M27	Y	-0.023	-0.023	0	14	Active
3	M32	Y	-0.023	-0.023	0	14	Active
4	M32	Y	-0.023	-0.023	0	14	Active
5	M27	Y	-0.01	-0.01	0	14	Active
6	M27	Y	-0.01	-0.01	0	14	Active
7	M31	Y	-0.01	-0.01	0	14	Active
8	M31	Y	-0.01	-0.01	0	14	Active
9	M19	Y	-0.019	-0.019	0	14	Active
10	M19	Y	-0.019	-0.019	0	14	Active
11	M31	Y	-0.019	-0.019	0	14	Active
12	M31	Y	-0.019	-0.019	0	14	Active

Member Distributed Loads

	Member Label	Direction	Start Magnitude [k/ft, F, ksf]	End Magnitude [k/ft, F, ksf]	Start Location [(ft, %)]	End Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M19	Y	-0.038	-0.038	0	14	Active
2	M19	Y	-0.038	-0.038	0	14	Active
3	M31	Y	-0.038	-0.038	0	14	Active
4	M31	Y	-0.038	-0.038	0	14	Active
5	M27	Y	-0.02	-0.02	0	14	Active
6	M27	Y	-0.02	-0.02	0	14	Active
7	M31	Y	-0.02	-0.02	0	14	Active
8	M31	Y	-0.02	-0.02	0	14	Active
9	M27	Y	-0.047	-0.047	0	14	Active
10	M27	Y	-0.047	-0.047	0	14	Active
11	M32	Y	-0.047	-0.047	0	14	Active
12	M32	Y	-0.047	-0.047	0	14	Active

Member Distributed Loads

	Member Label	Direction	Start Magnitude [k/ft, F, ksf]	End Magnitude [k/ft, F, ksf]	Start Location [(ft, %)]	End Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M27	Y	-0.07	-0.07	0	14	Active
2	M27	Y	-0.07	-0.07	0	14	Active
3	M32	Y	-0.07	-0.07	0	14	Active
4	M32	Y	-0.07	-0.07	0	14	Active
5	M27	Y	-0.03	-0.03	0	14	Active
6	M27	Y	-0.03	-0.03	0	14	Active
7	M31	Y	-0.03	-0.03	0	14	Active
8	M31	Y	-0.03	-0.03	0	14	Active
9	M19	Y	-0.057	-0.057	0	14	Active
10	M19	Y	-0.057	-0.057	0	14	Active
11	M31	Y	-0.057	-0.057	0	14	Active
12	M31	Y	-0.057	-0.057	0	14	Active

Member Area Loads

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N32	N50	N49	N51	Y	A-B	-0.01	Active
2	N50	N40	N42	N49	Y	A-B	-0.01	Active
3	N40	N36	N46	N42	Y	A-B	-0.01	Active

Member Area Loads

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N40	N36	N46	N42	Y	A-B	-0.02	Active
2	N50	N40	N42	N49	Y	A-B	-0.02	Active
3	N32	N50	N49	N51	Y	A-B	-0.02	Active

Member Area Loads

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N32	N50	N49	N51	Y	A-B	-0.03	Active
2	N50	N40	N42	N49	Y	A-B	-0.03	Active
3	N40	N36	N46	N42	Y	A-B	-0.03	Active

Member Area Loads

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N33	N32	N51	N34	Y	A-B	-0.02	Active
2	N32	N50	N49	N51	Y	A-B	-0.02	Active
3	N50	N40	N42	N49	Y	A-B	-0.02	Active
4	N40	N36	N46	N42	Y	A-B	-0.02	Active
5	N36	N31	N30	N46	Y	A-B	-0.02	Active

Load Combinations

	Description	Solve	PDelta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	IBC 16-8	Yes	Y	DL	1										
2	IBC 16-9	Yes	Y	DL	1	LL	1	LLS	1						
3	IBC 16-10 (b)	Yes	Y	DL	1	SL	1	SLN	1						
4	IBC 16-11 (b)	Yes	Y	DL	1	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75		
5	IBC 16-12 (a) (a)	Yes	Y	DL	1	WLX	0.6								
6	IBC 16-12 (a) (b)	Yes	Y	DL	1	WLZ	0.6								
7	IBC 16-13 (a) (a)	Yes	Y	DL	1	WLX	0.45	LL	0.75	LLS	0.75				
8	IBC 16-13 (a) (b)	Yes	Y	DL	1	WLZ	0.45	LL	0.75	LLS	0.75				
9	IBC 16-13 (b) (a)	Yes	Y	DL	1	WLX	0.45	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
10	IBC 16-13 (b) (b)	Yes	Y	DL	1	WLZ	0.45	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
11	IBC 16-15 (a)	Yes	Y	DL	0.6	WLX	0.6								
12	IBC 16-15 (b)	Yes	Y	DL	0.6	WLZ	0.6								

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N28	max	1.265	4	2.462	10	0.041	10	0	12	0.006	4	0	12
2		min	0.325	11	0.814	11	-0.003	4	0	1	-0.581	10	0	1
3	N39	max	1.279	10	2.463	4	0.047	10	0	12	0.1	5	0	12
4		min	0.323	11	0.82	11	0.001	5	0	1	-0.598	10	0	1
5	N41	max	-0.453	12	5.939	9	5.488	9	0	12	0.01	4	0	12
6		min	-1.463	9	2.215	12	2.019	12	0	1	-0.444	5	0	1
7	N43	max	-0.533	12	5.866	9	-2.147	12	0	12	0.422	5	0	12
8		min	-1.445	9	2.41	12	-5.49	9	0	1	-0.301	10	0	1
9	Totals:	max	0	3	16.476	9	0	7						
10		min	-0.835	5	6.578	12	-0.125	12						

Envelope AISC 14th (360-10): ASD Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
1	M18	W12X35	0.146	9.236	10	0.055	9.236	y	10	175.362	308.383	28.693	127.745	1.928	H1-1b
2	M19	W8X24	0.058	7	9	0.026	0	y	10	153.022	211.976	21.382	57.635	1.304	H1-1b
3	M20	W6X9	0.001	1.917	6	0.001	3.833	y	10	66.458	80.24	4.29	15.54	1.136	H1-1b
4	M21	W6X9	0	1	9	0.002	2	y	6	76.227	80.24	4.29	15.54	1.136	H1-1b
5	M22	W6X9	0.002	2.333	6	0.001	4.667	y	6	60.682	80.24	4.29	15.54	1.136	H1-1b
6	M23	HSS4X4X4	0.681	1	9	0.254	1	z	9	89.395	92.826	10.765	10.765	1.453	H1-1b
7	M24	HSS4X4X4	0.377	3	10	0.116	3	y	10	89.395	92.826	10.765	10.765	1.667	H1-1b
8	M25	HSS4X4X4	0.373	3	10	0.113	3	y	10	89.395	92.826	10.765	10.765	1.667	H1-1b
9	M26	HSS4X4X4	0.679	1	9	0.251	1	z	9	89.395	92.826	10.765	10.765	1.453	H1-1b
10	M27	W8X24	0.207	8.021	10	0.088	14	y	10	153.022	211.976	21.382	57.635	1.263	H1-1b
11	M28	W12X26	0.366	12.153	9	0.06	23.333	y	10	98.585	229.042	20.384	92.814	1.001	H1-1b
12	M29	W12X35	0.142	9.236	10	0.048	9.236	y	10	175.362	308.383	28.693	127.745	1.936	H1-1b
13	M30	W12X26	0.315	12.153	9	0.081	21.389	y	9	98.585	229.042	20.384	92.814	1.001	H1-1b
14	M31	W8X24	0.153	8.021	4	0.069	14	y	9	153.022	211.976	21.382	57.635	1.265	H1-1b
15	M32	W8X24	0.067	7	10	0.029	0	y	4	153.022	211.976	21.382	57.635	1.304	H1-1b
16	M33	L3X3X4	0.471	1.385	9	0.01	2.828	y	5	26.001	31.042	1.123	2.488	1.136	H2-1
17	M34	L3X3X4	0.125	1.385	9	0.013	2.828	y	4	26.001	31.042	1.123	2.488	1.136	H2-1
18	M35	L3X3X4	0.471	1.385	9	0.01	2.828	y	5	26.001	31.042	1.123	2.488	1.136	H2-1
19	M36	L3X3X4	0.127	1.385	9	0.015	2.828	y	10	26.001	31.042	1.123	2.488	1.136	H2-1

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Subject: Connection to Host Structure

Location: Danbury, CT

Date: 10/20/2022

Prepared by: LAA; Checked by: TJL
Job No. 21058.02

Platform Connection to Building

Number of Thru Bolts =	$n_b := 4$	(User Input)
Bolt Diameter =	$d\phi := 0.625\ in$	(User Input)
Allowable Tensile Strength =	$r_{nt} := 13.8\ kip$	(User Input)
Allowable Shear Strength =	$r_{nv} := 8.25 \cdot kip$	(User Input)
Spacing Between Bolts =	$S := 2\ in$	(User Input - Assumed)

ASD Reactions at Connection Node :

Tension X =	$Tension_x := 2.147 \cdot kip$	(User Input)
Shear Y =	$Shear_y := 1.463\ kip$	(User Input)
Shear Z =	$Shear_z := 5.488 \cdot kip$	(User Input)
Moment X =	$M_X := 0.598 \cdot kip \cdot ft$	(User Input)
Moment Y =	$M_Y := 0 \cdot kip \cdot ft$	(User Input)
Moment Z =	$M_Z := 0 \cdot kip \cdot ft$	(User Input)

Anchor Check:

Shear Force per Bolt (ASD) =

$$V_{all} := \frac{\sqrt{Shear_z^{\,2} + Shear_y^{\,2}}}{n_b} + \frac{M_X}{S \cdot \frac{n_b}{2}} = 3.214\ kip$$

$$\frac{V_{all}}{r_{nv}} = 39\%$$

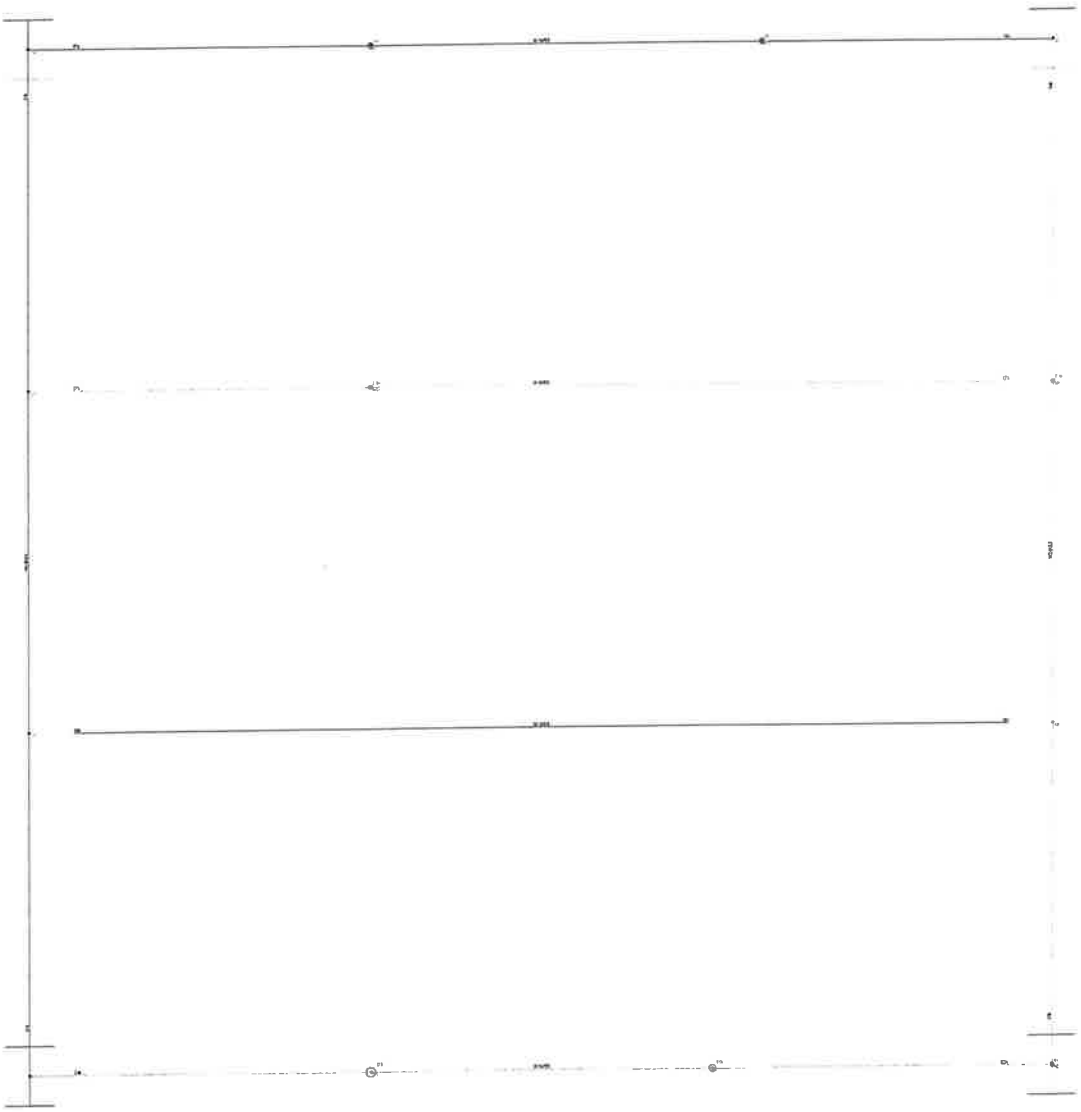
Tension Force per Bolt (ASD) =

$$T_{all} := \frac{Tension_x}{n_b} + \frac{M_Y + M_Z}{S \cdot \frac{n_b}{2}} = 0.537\ kip$$

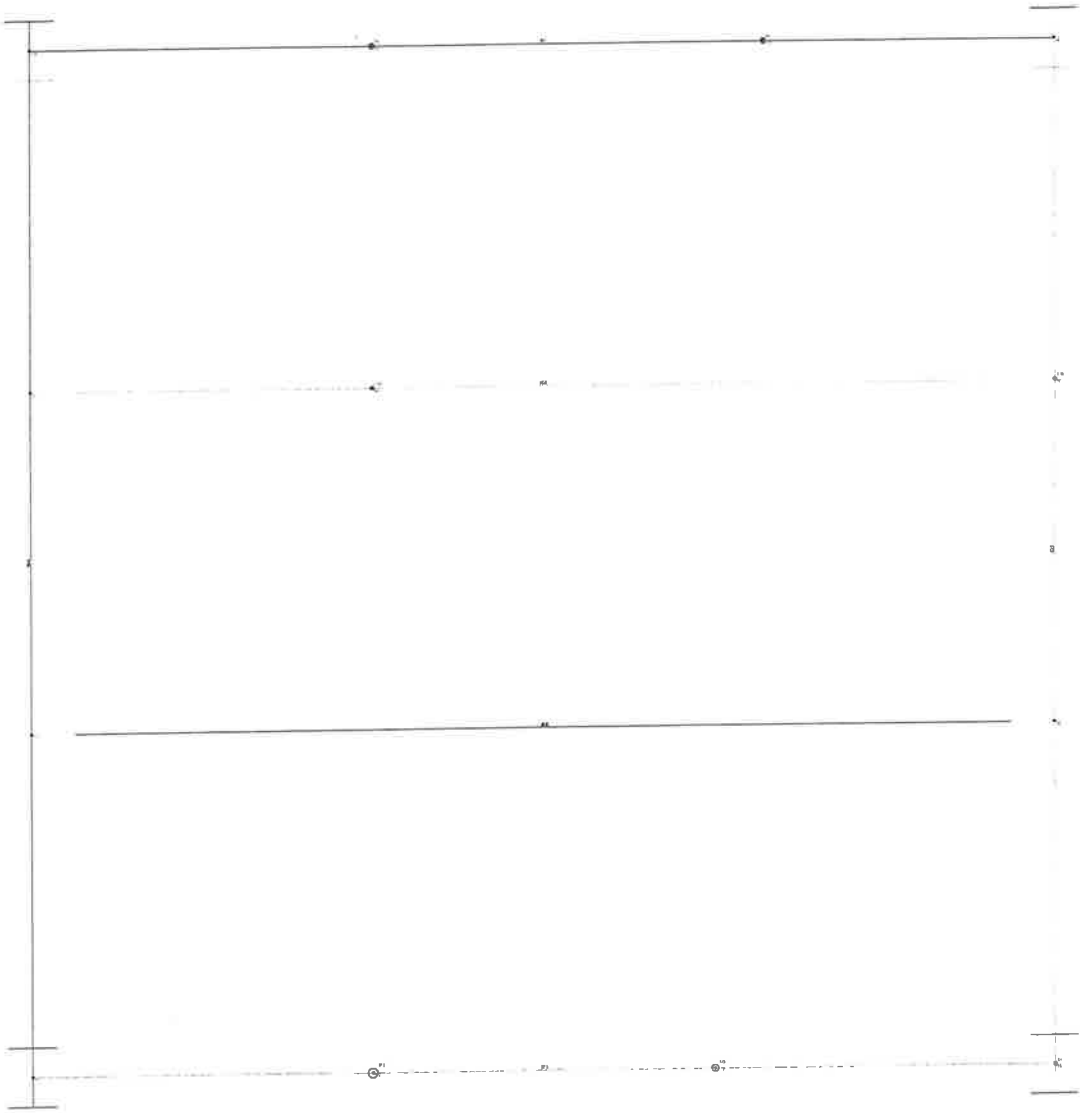
$$\frac{T_{all}}{r_{nt}} = 3.9\%$$

Combined Shear and Tension Ultimate Limit State =

$$Condition1 := \text{if}\left(\left(\frac{T_{all}}{r_{nt}}\right)^2 + \left(\frac{T_{all}}{r_{nt}}\right)^2 \le 1.0\ , \text{"OK"}\ , \text{"Overstressed"}\right) = \text{"OK"}$$



Centek Engineering	Roof Framing	SK - 1
Luke Amit		Oct 20, 2022 at 10:26 AM
	EXISTING ROOF FRAMING AT PLATFORM	Existing Framing Calculation.rfl



Centek Engineering	Roof Framing	SK - 2
Luke Amit		Oct 20, 2022 at 10:27 AM
	EXISTING ROOF UNITY CHECK AT PLATFORM	Existing Framing Calculation.rfl

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	1.25	65	1.15
8	A913 Gr.65	29000	11154	.3	.65	.49	65	1.1	80	1.1

Deck General Properties

	Label	Material Type	Deck	Unbraced[ft]	Max Spa...
1	Concrete Deck	Conc3000NW	1 in	3	10
2	Composite Deck	Vulcraft 3 VLI	7.5"NW 3VLI20, Conc3000NW, 3in, .75in, 65ksi	2	10
3	Metal Deck	Verco Steel Roof Deck	22ga PLB-36	2	4
4	Wood	Wood Deck	1 in	1	4

Deck Loads

	Label	Two Way	Self Wt [ksf]	Super DL [ksf]	Const DL [ksf]	Const LL [ksf]
1	Concrete Deck		.012	0	0	.02
2	Composite Deck		.075	0	0	.02
3	Metal Deck		.002	0	0	.02
4	Wood		.003	0	0	.02

Uniform Area Loads

	Label	Additive	PreDL[ksf]	PostDL[ksf]	LL[ksf]	LL Type	VL[ksf]	Dyn Load[...
1	Snow Load			.01	.03	SL	.004	.01
2	Add Piping	Yes		.02		LL-Non	.011	.02
3	Roof			.01	.02	RLL-Non	.011	.01

Point Locations : Roof Framing

	Label	Z [ft]	X [ft]	Elev Offset [ft]
1	N1	0	0	0
2	N2	35	0	0
3	N3	35	35	0
4	N4	0	35	0
5	N5	0	23.333333	0
6	N6	35	23.333333	0
7	N7	0	11.666667	0
8	N8	35	11.666667	0
9	N9	11.666667	0	0
10	N10	23.333333	0	0
11	N11	11.667	35	0
12	N12	25	35	0
13	N13	11.666667	23.333333	0

Beam Primary Data : Roof Framing

	Label	Start Point	End Point	Shape	Material	Design Rules	Function	Orientation	Start Rel...	End Rele...	Outrigger?
1	M1	N1	N2	W18X55	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
2	M2	N4	N3	W18X55	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	

Beam Primary Data : Roof Framing (Continued)

	Label	Start Point	End Point	Shape	Material	Design Rules	Function	Orientation	Start Rel...	End Rele...	Outrigger?
3	M3	N1	N4	W24X55	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
4	M4	N2	N3	W24X55	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
5	M5	N5	N6	W18X35	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
6	M6	N7	N8	W18X35	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	

Hot Rolled : Roof Framing

	Label	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp To...	Lcomp Bot...	L-torqu...	Cb	Composite	Camber[in]	B-eff Left[...	B-eff Righ...
1	M1	35	1		Framing				Yes			
2	M2	35	1		Framing				Yes			
3	M3	35	Segment		Framing				Yes			
4	M4	35	Segment		Framing				Yes			
5	M5	35	1		Framing				Yes			
6	M6	35	1		Framing				Yes			

Point Loads : Roof Framing

	Point Label	PreDL[k]	PostDL[k]	LL[k]	LL Type	Dyn Load[k]
1	N9		11		LL-Non	
2	N10		12		LL-Non	
3	N11		9		LL-Non	
4	N12		9		LL-Non	
5	N13		2.5		LL-Non	
6	N6		2.5		LL-Non	
7	N9		6		LL-Non	
8	N2		6		LL-Non	

Combinations

	Label	Sol...	Cat...	Fac...	Cat...	Fac...	Cat...	Fac...	Cat...	Fac...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...
1	Service ...	Yes	DL	1																		
2	Service ...	Yes	DL	1	LL	1	LLS	1														
3	IBC 16-8...	Yes	DLP...	1																		
4	IBC 16-9...	Yes	DLP...	1	LLC...	1																
5	IBC 16-1...	Yes	DL	1	RLL	1																
6	IBC 16-1...	Yes	DL	1	SL	1	SLN	1														
7	IBC 16-1...	Yes	DL	1	LL	.75	LLS	.75	RLL	.75												
8	IBC 16-1...	Yes	DL	1	LL	.75	LLS	.75	SL	.75	SLN	.75										
9	IBC 16-1...	Yes	DL	1	LL	.75	LLS	.75														

Floors

	Label	Elevation[ft]	Floor Type	Area Load Default	Inactive	Splice Dis...	Splice Type	No Wind/...	Parapet Hei...
1	Roof Framing	12	Floor Beam	Roof		12	Moment		0

Beam Floors

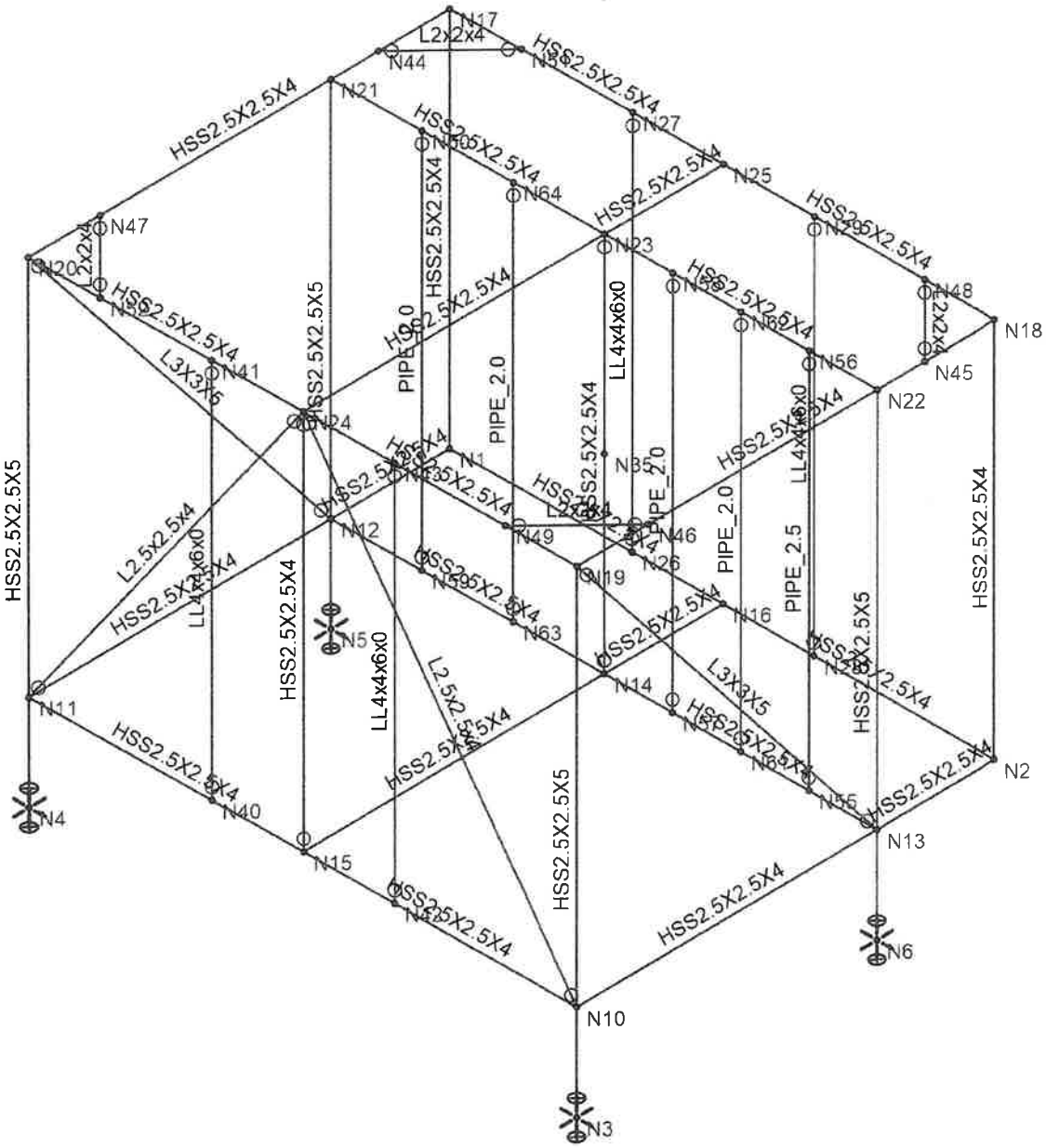
	Label	Deck Default	Deck Angle Default (deg)	Parent
1	Roof Framing	Concrete Deck	90	None

Beam Code Summary for Hot Rolled : Roof Framing

	Label	Size	Explicit	Studs	Camb...	Material	Bending...	Loc[ft]	LC	Defl Ch...	Loc[ft]	Cat	Shear C..	Loc[ft]	LC
1	M1	W18X55	Yes		0	A992	.876	13.854	6	1.218	17.5	DL+..	.168	0	6
2	M2	W18X55	Yes		0	A992	.61	16.771	6	.864	17.5	DL+..	.126	35	6
3	M3	W24X55	Yes		0	A992	.596	23.333	6	.661	17.5	DL+..	.104	35	6
4	M4	W24X55	Yes		0	A992	.635	23.333	6	.694	17.5	DL+..	.111	35	6
5	M5	W18X35	Yes		0	A992	.898	16.406	6	1.277	17.5	DL+..	.16	0	6
6	M6	W18X35	Yes		0	A992	.808	17.5	6	1.143	17.5	DL+..	.144	35	6

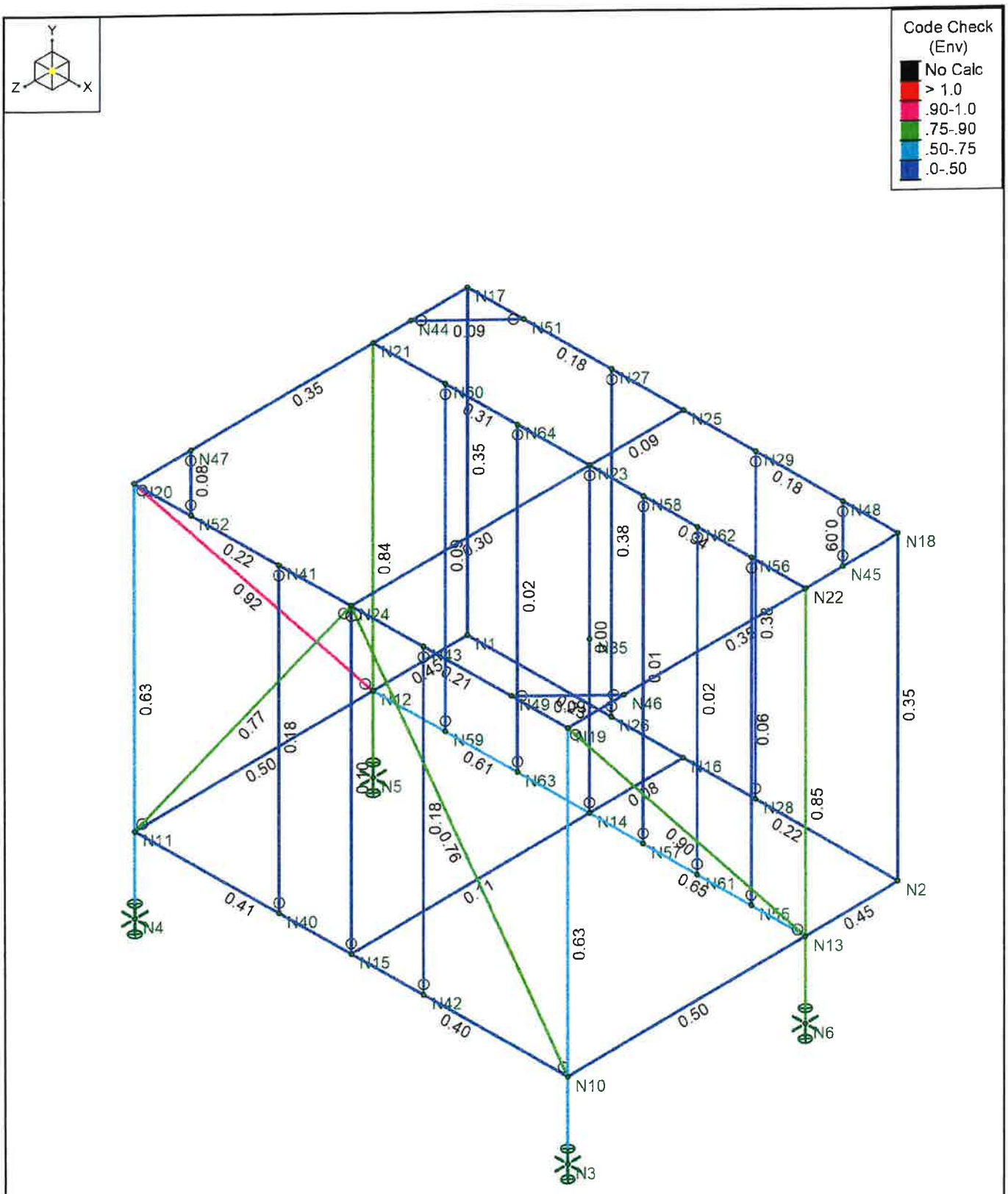
Beam End Reactions : Roof Framing

	Beam	End	PreDL[k]	DL[k]	LL[k]	LLS[k]	Roof[k]	Roof Cat	Max[k]	LC	Min[k]	LC
1	M1	Start	2.198	20.594	0	0	3.063	SL	23.657	6	2.198	3
2		End	2.198	18.927	0	0	3.063	SL	21.99	6	2.198	3
3	M2	Start	2.198	13.832	0	0	3.063	SL	16.895	6	2.198	3
4		End	2.198	14.689	0	0	3.063	SL	17.752	6	2.198	3
5	M3	Start	4.045	10.726	0	0	6.125	SL	16.851	6	4.045	3
6		End	4.045	11.281	0	0	6.125	SL	17.406	6	4.045	3
7	M4	Start	4.045	11.281	0	0	6.125	SL	17.406	6	4.045	3
8		End	4.045	12.392	0	0	6.125	SL	18.517	6	4.045	3
9	M5	Start	3.08	10.872	0	0	6.125	SL	16.997	6	3.08	3
10		End	3.08	10.039	0	0	6.125	SL	16.164	6	3.08	3
11	M6	Start	3.08	9.205	0	0	6.125	SL	15.33	6	3.08	3
12		End	3.08	9.205	0	0	6.125	SL	15.33	6	3.08	3



Envelope Only Solution

Centek Engineering Inc.	Westville CT	SK-1
LAA		Oct 21, 2022
21007.02		Antenna FRP Screenwall-Rev.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Centek Engineering Inc.	Westville CT	SK-2
LAA		Oct 21, 2022
21007.02		Antenna FRP Screenwall-Rev.r3d

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N1	0	0.5	0	
2	N2	11.5	0.5	0	
3	N3	11.5	-1.5	8.83	
4	N4	0	-1.5	8.83	
5	N5	0	-1.5	2.5	
6	N6	11.5	-1.5	2.5	
7	N10	11.5	0.5	8.83	
8	N11	0	0.5	8.83	
9	N12	0	0.5	2.5	
10	N13	11.5	0.5	2.5	
11	N14	5.75	0.5	2.5	
12	N15	5.75	0.5	8.83	
13	N16	5.75	0.5	0	
14	N17	0	8.5	0	
15	N18	11.5	8.5	0	
16	N19	11.5	8.5	8.83	
17	N20	0	8.5	8.83	
18	N21	0	8.5	2.5	
19	N22	11.5	8.5	2.5	
20	N23	5.75	8.5	2.5	
21	N24	5.75	8.5	8.83	
22	N25	5.75	8.5	0	
23	N26	3.833333	0.5	0	
24	N27	3.833333	8.5	0	
25	N28	7.666667	0.5	0	
26	N29	7.666667	8.5	0	
27	N35	5.75	4.5	2.5	
28	N55	10.0625	0.5	2.5	
29	N56	10.0625	8.5	2.5	
30	N57	7.1875	0.5	2.5	
31	N58	7.1875	8.5	2.5	
32	N59	1.916667	0.5	2.5	
33	N60	1.916667	8.5	2.5	
34	N61	8.625	0.5	2.5	
35	N62	8.625	8.5	2.5	
36	N63	3.833333	0.5	2.5	
37	N64	3.833333	8.5	2.5	
38	N40	3.833333	0.5	8.83	
39	N41	3.833333	8.5	8.83	
40	N42	7.666667	0.5	8.83	
41	N43	7.666667	8.5	8.83	
42	N44	0	8.5	1.5	
43	N45	11.5	8.5	1.5	
44	N46	11.5	8.5	7.33	
45	N47	0	8.5	7.33	
46	N48	10	8.5	0	
47	N49	10	8.5	8.83	
48	N51	1.5	8.5	0	
49	N52	1.5	8.5	8.83	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	Y Rot [k-ft/rad]
1	N6	Reaction	Reaction	Reaction	Reaction
2	N3	Reaction	Reaction	Reaction	Reaction
3	N5	Reaction	Reaction	Reaction	Reaction
4	N4	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{-5}F^{-1}]	Density [k/ft^3]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
3	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
8	FRP	2800	420	0.35	0.44	0.07	16.67	1.5	50	1.2

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Function
1	M1	HSS2.5X2.5X5	10	Lbyy	Lateral
2	M2	HSS2.5X2.5X4	8	Lbyy	Lateral
3	M3	HSS2.5X2.5X5	10	Lbyy	Lateral
4	M4	HSS2.5X2.5X4	8	Lbyy	Lateral
5	M5	HSS2.5X2.5X5	10	Lbyy	Lateral
6	M6	HSS2.5X2.5X5	10	Lbyy	Lateral
7	M7	HSS2.5X2.5X4	5.75	Lbyy	Lateral
8	M8	HSS2.5X2.5X4	5.75	Lbyy	Lateral
9	M9	HSS2.5X2.5X4	5.75	Lbyy	Lateral
10	M10	HSS2.5X2.5X4	5.75	Lbyy	Lateral
11	M11	HSS2.5X2.5X4	6.33	Lbyy	Lateral
12	M12	HSS2.5X2.5X4	2.5	Lbyy	Lateral
13	M13	HSS2.5X2.5X4	6.33	Lbyy	Lateral
14	M14	HSS2.5X2.5X4	2.5	Lbyy	Lateral
15	M15	HSS2.5X2.5X4	6.33	Lbyy	Lateral
16	M16	HSS2.5X2.5X4	2.5	Lbyy	Lateral
17	M17	HSS2.5X2.5X4	5.75	Lbyy	Lateral
18	M18	HSS2.5X2.5X4	5.75	Lbyy	Lateral
19	M19	HSS2.5X2.5X4	8.83	Lbyy	Lateral
20	M20	HSS2.5X2.5X4	8.83	Lbyy	Lateral
21	M21	HSS2.5X2.5X4	5.75	Lbyy	Lateral
22	M22	HSS2.5X2.5X4	5.75	Lbyy	Lateral
23	M23	HSS2.5X2.5X4	5.75	Lbyy	Lateral
24	M24	HSS2.5X2.5X4	5.75	Lbyy	Lateral
25	M25	HSS2.5X2.5X4	6.33	Lbyy	Lateral
26	M26	HSS2.5X2.5X4	2.5	Lbyy	Lateral
27	M27	HSS2.5X2.5X4	5.75	Lbyy	Lateral
28	M28	HSS2.5X2.5X4	5.75	Lbyy	Lateral
29	M29	HSS2.5X2.5X4	8	Lbyy	Lateral
30	M30	LL4x4x6x0	8	Lbyy	Lateral
31	M31	HSS2.5X2.5X4	8	Lbyy	Lateral
32	M32	LL4x4x6x0	8	Lbyy	Lateral
33	M38	PIPE_2.5	8	Lbyy	Lateral
34	M39	PIPE_2.0	8	Lbyy	Lateral
35	M40	PIPE_2.0	8	Lbyy	Lateral
36	M41	PIPE_2.0	8	Lbyy	Lateral
37	M42	PIPE_2.0	8	Lbyy	Lateral
38	M43	LL4x4x6x0	8	Lbyy	Lateral
39	M44	LL4x4x6x0	8	Lbyy	Lateral
40	M45	L3X3X5	10.201	Lbyy	Lateral
41	M46	L3X3X5	10.201	Lbyy	Lateral
42	M47	L2.5x2.5x4	9.852	Lbyy	Lateral
43	M48	L2.5x2.5x4	9.852	Lbyy	Lateral
44	M49	L2x2x4	2.121	Lbyy	Lateral
45	M50	L2x2x4	2.121	Lbyy	Lateral
46	M51	L2x2x4	2.121	Lbyy	Lateral
47	M52	L2x2x4	2.121	Lbyy	Lateral

Member Point Loads

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M5	Y	-0.2	%50	Active
2	M6	Y	-0.2	%50	Active
3	M31	Y	-0.2	%50	Active
4	M32	Y	-0.2	%50	Active
5	M30	Y	-0.2	%50	Active
6	M29	Y	-0.2	%50	Active
7	M3	Y	-0.2	%50	Active
8	M1	Y	-0.2	%50	Active
9	M2	Y	-0.2	%50	Active

Member Point Loads

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M38	Y	-0.076	%50	Active
2	M39	Y	-0.084	%50	Active
3	M40	Y	-0.07	%50	Active
4	M41	Y	-0.076	%50	Active
5	M42	Y	-0.041	%50	Active
6	M42	Y	-0.041	%50	Active

Member Distributed Loads

	Member Label	Direction	Start Magnitude [k/ft, F, ksf]	End Magnitude [k/ft, F, ksf]	Start Location [(ft, %)]	End Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M5	X	-0.208	-0.095	2	3.6	Active
2	M5	X	-0.208	-0.095	2	3.6	Active
3	M5	X	-0.095	-0.064	3.6	5.2	Active
4	M5	X	-0.095	-0.064	3.6	5.2	Active
5	M5	X	-0.064	-0.053	5.2	6.8	Active
6	M5	X	-0.064	-0.053	5.2	6.8	Active
7	M5	X	-0.053	-0.017	6.8	8.4	Active
8	M5	X	-0.053	-0.017	6.8	8.4	Active
9	M5	X	-0.017	-0.019	8.4	10	Active
10	M5	X	-0.017	-0.019	8.4	10	Active
11	M6	X	-0.101	-0.065	2	3.6	Active
12	M6	X	-0.101	-0.065	2	3.6	Active
13	M6	X	-0.065	-0.101	3.6	5.2	Active
14	M6	X	-0.065	-0.101	3.6	5.2	Active
15	M6	X	-0.101	-0.112	5.2	6.8	Active
16	M6	X	-0.101	-0.112	5.2	6.8	Active
17	M6	X	-0.112	-0.143	6.8	8.4	Active
18	M6	X	-0.112	-0.143	6.8	8.4	Active
19	M6	X	-0.143	-0.291	8.4	10	Active
20	M6	X	-0.143	-0.291	8.4	10	Active
21	M31	X	-0.055	-0.055	0	8	Active
22	M31	X	-0.055	-0.055	0	8	Active
23	M46	X	-0.097	-0.114	0	2.04	Active
24	M46	X	-0.097	-0.114	0	2.04	Active
25	M46	X	-0.114	-0.115	2.04	4.081	Active
26	M46	X	-0.114	-0.115	2.04	4.081	Active
27	M46	X	-0.115	-0.115	4.081	6.121	Active
28	M46	X	-0.115	-0.115	4.081	6.121	Active
29	M46	X	-0.115	-0.114	6.121	8.161	Active
30	M46	X	-0.115	-0.114	6.121	8.161	Active
31	M46	X	-0.114	-0.097	8.161	10.201	Active
32	M46	X	-0.114	-0.097	8.161	10.201	Active
33	M1	X	-0.208	-0.095	2	3.6	Active
34	M1	X	-0.208	-0.095	2	3.6	Active
35	M1	X	-0.095	-0.064	3.6	5.2	Active
36	M1	X	-0.095	-0.064	3.6	5.2	Active
37	M1	X	-0.064	-0.053	5.2	6.8	Active

Member Distributed Loads (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf]	End Magnitude [k/ft, F, ksf]	Start Location [(ft, %)]	End Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
37	M1	X	-0.064	-0.053	5.2	6.8	Active
38	M1	X	-0.064	-0.053	5.2	6.8	Active
39	M1	X	-0.053	-0.017	6.8	8.4	Active
40	M1	X	-0.053	-0.017	6.8	8.4	Active
41	M1	X	-0.017	-0.019	8.4	10	Active
42	M1	X	-0.017	-0.019	8.4	10	Active
43	M3	X	-0.101	-0.065	2	3.6	Active
44	M3	X	-0.101	-0.065	2	3.6	Active
45	M3	X	-0.065	-0.101	3.6	5.2	Active
46	M3	X	-0.065	-0.101	3.6	5.2	Active
47	M3	X	-0.101	-0.112	5.2	6.8	Active
48	M3	X	-0.101	-0.112	5.2	6.8	Active
49	M3	X	-0.112	-0.143	6.8	8.4	Active
50	M3	X	-0.112	-0.143	6.8	8.4	Active
51	M3	X	-0.143	-0.291	8.4	10	Active
52	M3	X	-0.143	-0.291	8.4	10	Active
53	M29	X	-0.055	-0.055	0	8	Active
54	M29	X	-0.055	-0.055	0	8	Active
55	M45	X	-0.097	-0.114	0	2.04	Active
56	M45	X	-0.097	-0.114	0	2.04	Active
57	M45	X	-0.114	-0.115	2.04	4.081	Active
58	M45	X	-0.114	-0.115	2.04	4.081	Active
59	M45	X	-0.115	-0.115	4.081	6.121	Active
60	M45	X	-0.115	-0.115	4.081	6.121	Active
61	M45	X	-0.115	-0.114	6.121	8.161	Active
62	M45	X	-0.115	-0.114	6.121	8.161	Active
63	M45	X	-0.114	-0.097	8.161	10.201	Active
64	M45	X	-0.114	-0.097	8.161	10.201	Active

Member Distributed Loads

	Member Label	Direction	Start Magnitude [k/ft, F, ksf]	End Magnitude [k/ft, F, ksf]	Start Location [(ft, %)]	End Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	M1	Z	-0.023	-0.021	2	3.6	Active
2	M1	Z	-0.023	-0.021	2	3.6	Active
3	M1	Z	-0.021	-0.044	3.6	5.2	Active
4	M1	Z	-0.021	-0.044	3.6	5.2	Active
5	M1	Z	-0.044	-0.065	5.2	6.8	Active
6	M1	Z	-0.044	-0.065	5.2	6.8	Active
7	M1	Z	-0.065	-0.087	6.8	8.4	Active
8	M1	Z	-0.065	-0.087	6.8	8.4	Active
9	M1	Z	-0.087	-0.139	8.4	10	Active
10	M1	Z	-0.087	-0.139	8.4	10	Active
11	M2	Z	-0.088	-0.089	0	2	Active
12	M2	Z	-0.088	-0.089	0	2	Active
13	M2	Z	-0.089	-0.088	2	4	Active
14	M2	Z	-0.089	-0.088	2	4	Active
15	M2	Z	-0.088	-0.059	4	6	Active
16	M2	Z	-0.088	-0.059	4	6	Active
17	M2	Z	-0.059	-0.003	6	8	Active
18	M2	Z	-0.059	-0.003	6	8	Active
19	M5	Z	-0.023	-0.021	2	3.6	Active
20	M5	Z	-0.023	-0.021	2	3.6	Active
21	M5	Z	-0.021	-0.044	3.6	5.2	Active
22	M5	Z	-0.021	-0.044	3.6	5.2	Active
23	M5	Z	-0.044	-0.065	5.2	6.8	Active
24	M5	Z	-0.044	-0.065	5.2	6.8	Active
25	M5	Z	-0.065	-0.087	6.8	8.4	Active
26	M5	Z	-0.065	-0.087	6.8	8.4	Active
27	M5	Z	-0.087	-0.139	8.4	10	Active

Member Distributed Loads (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf]	End Magnitude [k/ft, F, ksf]	Start Location [(ft, %)]	End Location [(ft, %)]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
28	M5	Z	-0.087	-0.139	8.4	10	Active
29	M43	Z	-0.147	-0.092	0	1.6	Active
30	M43	Z	-0.147	-0.092	0	1.6	Active
31	M43	Z	-0.092	-0.067	1.6	3.2	Active
32	M43	Z	-0.092	-0.067	1.6	3.2	Active
33	M43	Z	-0.067	-0.077	3.2	4.8	Active
34	M43	Z	-0.067	-0.077	3.2	4.8	Active
35	M43	Z	-0.077	-0.091	4.8	6.4	Active
36	M43	Z	-0.077	-0.091	4.8	6.4	Active
37	M43	Z	-0.091	-0.103	6.4	8	Active
38	M43	Z	-0.091	-0.103	6.4	8	Active
39	M44	Z	-0.147	-0.092	0	1.6	Active
40	M44	Z	-0.147	-0.092	0	1.6	Active
41	M44	Z	-0.092	-0.067	1.6	3.2	Active
42	M44	Z	-0.092	-0.067	1.6	3.2	Active
43	M44	Z	-0.067	-0.077	3.2	4.8	Active
44	M44	Z	-0.067	-0.077	3.2	4.8	Active
45	M44	Z	-0.077	-0.091	4.8	6.4	Active
46	M44	Z	-0.077	-0.091	4.8	6.4	Active
47	M44	Z	-0.091	-0.103	6.4	8	Active
48	M44	Z	-0.091	-0.103	6.4	8	Active
49	M47	Z	-0.089	-0.069	0	1.97	Active
50	M47	Z	-0.089	-0.069	0	1.97	Active
51	M47	Z	-0.069	-0.063	1.97	3.941	Active
52	M47	Z	-0.069	-0.063	1.97	3.941	Active
53	M47	Z	-0.063	-0.053	3.941	5.911	Active
54	M47	Z	-0.063	-0.053	3.941	5.911	Active
55	M47	Z	-0.053	-0.034	5.911	7.882	Active
56	M47	Z	-0.053	-0.034	5.911	7.882	Active
57	M47	Z	-0.034	-0.022	7.882	9.852	Active
58	M47	Z	-0.034	-0.022	7.882	9.852	Active
59	M48	Z	-0.089	-0.069	0	1.97	Active
60	M48	Z	-0.089	-0.069	0	1.97	Active
61	M48	Z	-0.069	-0.063	1.97	3.941	Active
62	M48	Z	-0.069	-0.063	1.97	3.941	Active
63	M48	Z	-0.063	-0.053	3.941	5.911	Active
64	M48	Z	-0.063	-0.053	3.941	5.911	Active
65	M48	Z	-0.053	-0.034	5.911	7.882	Active
66	M48	Z	-0.053	-0.034	5.911	7.882	Active
67	M48	Z	-0.034	-0.023	7.882	9.852	Active
68	M48	Z	-0.034	-0.023	7.882	9.852	Active
69	M29	Z	-0.084	-0.084	8.4e-05	8	Active
70	M29	Z	-0.084	-0.084	8.4e-05	8	Active
71	M30	Z	-0.169	-0.169	4.2e-05	8	Active
72	M30	Z	-0.169	-0.169	4.2e-05	8	Active
73	M31	Z	-0.084	-0.084	0.000251	8	Active
74	M31	Z	-0.084	-0.084	0.000251	8	Active
75	M32	Z	-0.169	-0.169	0.000293	8	Active
76	M32	Z	-0.169	-0.169	0.000293	8	Active

Member Area Loads

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N19	N18	N2	N10	X	A-B	-0.044	Active
2	N20	N17	N1	N11	X	A-B	-0.044	Active

Member Area Loads

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]	Inactive [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	N19	N20	N11	N10	Z	A-B	-0.044	Active
2	N18	N17	N1	N2	Z	A-B	-0.044	Active

Load Combinations

	Description	Solve	PDelta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Deflection 1	Yes	Y	DL	1										
2	Deflection 2	Yes	Y	LL	1										
3	Deflection 3	Yes	Y	DL	1	LL	1								
4	IBC 16-8	Yes	Y	DL	1										
5	IBC 16-9	Yes	Y	DL	1	LL	1	LLS	1						
6	IBC 16-10 (b)	Yes	Y	DL	1	SL	1	SLN	1						
7	IBC 16-11 (b)	Yes	Y	DL	1	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75		
8	IBC 16-12 (a) (a)	Yes	Y	DL	1	WLX	0.6								
9	IBC 16-12 (a) (b)	Yes	Y	DL	1	WLZ	0.6								
10	IBC 16-12 (a) (c)	Yes	Y	DL	1	WLX	-0.6								
11	IBC 16-12 (a) (d)	Yes	Y	DL	1	WLZ	-0.6								
12	IBC 16-13 (a) (a)	Yes	Y	DL	1	WLX	0.45	LL	0.75	LLS	0.75				
13	IBC 16-13 (a) (b)	Yes	Y	DL	1	WLZ	0.45	LL	0.75	LLS	0.75				
14	IBC 16-13 (a) (c)	Yes	Y	DL	1	WLX	-0.45	LL	0.75	LLS	0.75				
15	IBC 16-13 (a) (d)	Yes	Y	DL	1	WLZ	-0.45	LL	0.75	LLS	0.75				
16	IBC 16-13 (b) (a)	Yes	Y	DL	1	WLX	0.45	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
17	IBC 16-13 (b) (b)	Yes	Y	DL	1	WLZ	0.45	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
18	IBC 16-13 (b) (c)	Yes	Y	DL	1	WLX	-0.45	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
19	IBC 16-13 (b) (d)	Yes	Y	DL	1	WLZ	-0.45	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
20	IBC 16-15 (a)	Yes	Y	DL	0.6	WLX	0.6								
21	IBC 16-15 (b)	Yes	Y	DL	0.6	WLZ	0.6								
22	IBC 16-15 (c)	Yes	Y	DL	0.6	WLX	-0.6								
23	IBC 16-15 (d)	Yes	Y	DL	0.6	WLZ	-0.6								

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N6	max	0.703	20	3.898	9	1.294	21	0	23	0.07	10	0	23
2		min	-1.084	10	-1.336	23	-1.484	11	0	1	-0.071	8	0	1
3	N3	max	1.074	20	2.885	10	1.171	9	0	23	0.201	21	0	23
4		min	-1.007	10	-2.169	20	-0.968	23	0	1	-0.202	11	0	1
5	N5	max	1.04	8	3.818	9	1.293	21	0	23	0.069	10	0	23
6		min	-0.668	22	-1.391	23	-1.488	11	0	1	-0.072	8	0	1
7	N4	max	1.01	8	2.902	8	1.167	9	0	23	0.201	23	0	23
8		min	-1.069	22	-2.159	22	-0.969	23	0	1	-0.202	9	0	1
9	Totals:	max	3.73	8	4.017	10	4.858	21						
10		min	-3.73	10	0	2	-4.858	11						

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
1	M1	HSS2.5X2.5X5	0.633	1.979	20	0.124	1.979	z	9	18.997	64.731	4.315	4.315	2.672	H1-1b
2	M2	HSS2.5X2.5X4	0.104	4	11	0.014	0	z	9	25.651	54.263	3.742	3.742	1	H1-1b
3	M3	HSS2.5X2.5X5	0.843	1.979	9	0.104	1.979	z	11	18.997	64.731	4.315	4.315	2.293	H1-1a
4	M4	HSS2.5X2.5X4	0.003	0	11	0.013	8	y	8	25.651	54.263	3.742	3.742	1	H1-1b*
5	M5	HSS2.5X2.5X5	0.632	1.979	22	0.124	1.979	z	9	18.997	64.731	4.315	4.315	2.678	H1-1b
6	M6	HSS2.5X2.5X5	0.851	1.979	9	0.104	1.979	z	11	18.997	64.731	4.315	4.315	2.227	H1-1a
7	M7	HSS2.5X2.5X4	0.406	0	8	0.077	3.833	z	11	36.847	54.263	3.742	3.742	2.454	H1-1b
8	M8	HSS2.5X2.5X4	0.403	5.75	10	0.077	5.75	z	11	36.847	54.263	3.742	3.742	2.454	H1-1b
9	M9	HSS2.5X2.5X4	0.605	0	8	0.101	0	y	8	36.847	54.263	3.742	3.742	3	H1-1b
10	M10	HSS2.5X2.5X4	0.645	5.75	10	0.125	5.75	y	10	36.847	54.263	3.742	3.742	3	H1-1b
11	M11	HSS2.5X2.5X4	0.109	0	11	0.013	6.33	z	8	33.946	54.263	3.742	3.742	2.335	H1-1b
12	M12	HSS2.5X2.5X4	0.083	0	10	0.031	2.5	z	8	50.435	54.263	3.742	3.742	1.604	H1-1b
13	M13	HSS2.5X2.5X4	0.497	0	9	0.049	6.33	y	9	33.946	54.263	3.742	3.742	2.231	H1-1b

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
14	M14	HSS2.5X2.5X4	0.447	0	11	0.158	0	y	10	50.435	54.263	3.742	3.742	1.967	H1-1b
15	M15	HSS2.5X2.5X4	0.496	0	9	0.047	6.33	y	9	33.946	54.263	3.742	3.742	2.231	H1-1b
16	M16	HSS2.5X2.5X4	0.448	0	11	0.166	0	y	8	50.435	54.263	3.742	3.742	1.967	H1-1b
17	M17	HSS2.5X2.5X4	0.227	0	11	0.03	3.833	z	9	36.847	54.263	3.742	3.742	1.567	H1-1b
18	M18	HSS2.5X2.5X4	0.224	5.75	11	0.03	5.75	z	9	36.847	54.263	3.742	3.742	1.573	H1-1b
19	M19	HSS2.5X2.5X4	0.349	6.347	9	0.086	1.472	z	10	21.782	54.263	3.742	3.742	1.932	H1-1b
20	M20	HSS2.5X2.5X4	0.349	6.347	9	0.091	1.472	z	8	21.782	54.263	3.742	3.742	1.932	H1-1b
21	M21	HSS2.5X2.5X4	0.215	1.557	8	0.065	1.497	z	10	36.847	54.263	3.742	3.742	1.761	H1-1b
22	M22	HSS2.5X2.5X4	0.212	4.193	10	0.066	5.75	z	8	36.847	54.263	3.742	3.742	1.754	H1-1b
23	M23	HSS2.5X2.5X4	0.183	5.75	11	0.046	1.497	z	9	36.847	54.263	3.742	3.742	1.531	H1-1b
24	M24	HSS2.5X2.5X4	0.184	0	11	0.046	5.75	z	9	36.847	54.263	3.742	3.742	1.521	H1-1b
25	M25	HSS2.5X2.5X4	0.304	0	8	0.024	6.33	z	8	33.946	54.263	3.742	3.742	1.801	H1-1b
26	M26	HSS2.5X2.5X4	0.094	2.5	8	0.032	2.5	z	8	50.435	54.263	3.742	3.742	1.647	H1-1b
27	M27	HSS2.5X2.5X4	0.308	0	10	0.056	0	y	10	36.847	54.263	3.742	3.742	1.449	H1-1b
28	M28	HSS2.5X2.5X4	0.336	5.75	8	0.074	5.75	y	8	36.847	54.263	3.742	3.742	1.41	H1-1b
29	M29	HSS2.5X2.5X4	0.347	0	11	0.046	8	y	9	2.567	19.665	1.356	1.356	2.491	H1-1b
30	M30	LL4x4x6x0	0.378	3.917	9	0.023	0	y	11	10.637	57.097	5.324	2.168	1	H1-1b
31	M31	HSS2.5X2.5X4	0.347	0	11	0.046	8	z	9	2.567	19.665	1.356	1.356	2.273	H1-1b
32	M32	LL4x4x6x0	0.378	3.917	9	0.023	8	y	11	10.637	57.097	5.324	2.168	1	H1-1b
33	M38	PIPE_2.5	0.063	0	10	0.011	8		21	19.986	33.743	2.393	2.393	1	H1-1b*
34	M39	PIPE_2.0	0.006	0	10	0.007	8		21	9.924	21.377	1.245	1.245	1	H1-1b*
35	M40	PIPE_2.0	0.093	0	8	0.011	8		21	9.924	21.377	1.245	1.245	1	H1-1b*
36	M41	PIPE_2.0	0.017	0	8	0.01	8		21	9.924	21.377	1.245	1.245	1	H1-1b*
37	M42	PIPE_2.0	0.017	0	10	0.009	8		21	9.924	21.377	1.245	1.245	1	H1-1b*
38	M43	LL4x4x6x0	0.18	4	9	0.013	0	y	9	10.637	57.097	5.324	2.168	1	H1-1b
39	M44	LL4x4x6x0	0.18	4	9	0.013	0	y	11	10.637	57.097	5.324	2.168	1	H1-1b
40	M45	L3X3X5	0.922	5.101	10	0.033	10.201	z	10	6.068	38.371	1.34	2.37	1.138	H2-1
41	M46	L3X3X5	0.901	5.101	8	0.033	10.201	z	8	6.068	38.371	1.34	2.37	1.138	H2-1
42	M47	L2.5x2.5x4	0.767	4.618	8	0.029	0	z	11	2.973	25.653	0.741	1.228	1.136	H2-1
43	M48	L2.5x2.5x4	0.762	4.618	10	0.029	0	z	11	2.973	25.653	0.741	1.228	1.136	H2-1
44	M49	L2x2x4	0.088	1.061	11	0.01	2.121	y	10	16.205	20.35	0.46	1.049	1.136	H2-1
45	M50	L2x2x4	0.085	1.061	8	0.006	2.121	y	11	16.205	20.35	0.46	1.049	1.136	H2-1
46	M51	L2x2x4	0.084	1.061	10	0.006	2.121	y	11	16.205	20.35	0.46	1.049	1.136	H2-1
47	M52	L2x2x4	0.088	1.061	11	0.008	2.121	y	8	16.205	20.35	0.46	1.049	1.136	H2-1

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Subject: Connection to Host Structure

Location: Danbury, CT

Date: 10/20/2022

Prepared by: LAA; Checked by: TJL
Job No. 21058.02

Screenwall Connection to Building

Number of Thru Bolts =	$n_b := 4$	(User Input)
Bolt Diameter =	$d\phi := 0.625\ in$	(User Input)
Allowable Tensile Strength =	$r_{nt} := 13.8\ kip$	(User Input)
Allowable Shear Strength =	$r_{nv} := 8.25 \cdot kip$	(User Input)
Spacing Between Bolts =	$S := 2\ in$	(User Input - Assumed)

ASD Reactions at Connection Node :

Tension X =	$Tension_x := 2.169 \cdot kip$	(User Input)
Shear Y =	$Shear_y := 1.488\ kip$	(User Input)
Shear Z =	$Shear_z := 1.084 \cdot kip$	(User Input)
Moment X =	$M_X := .202 \cdot kip \cdot ft$	(User Input)
Moment Y =	$M_Y := 0 \cdot kip \cdot ft$	(User Input)
Moment Z =	$M_Z := 0 \cdot kip \cdot ft$	(User Input)

Anchor Check:

Shear Force per Bolt (ASD) =

$$V_{all} := \frac{\sqrt{Shear_z^{\,2} + Shear_y^{\,2}}}{n_b} + \frac{M_X}{S \cdot \frac{n_b}{2}} = 1.066\ kip$$

$$\frac{V_{all}}{r_{nv}} = 12.9\%$$

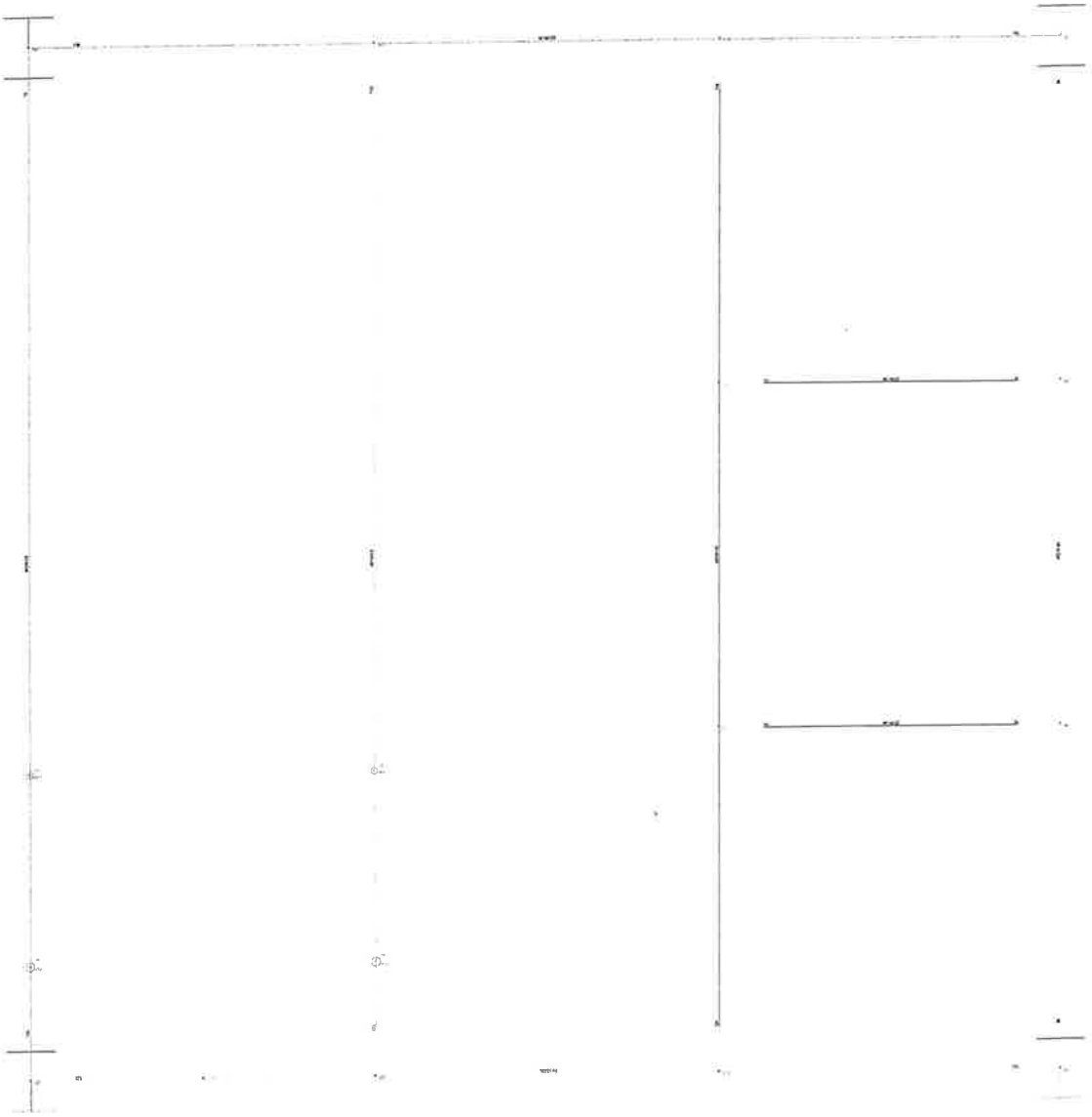
Tension Force per Bolt (ASD) =

$$T_{all} := \frac{Tension_x}{n_b} + \frac{M_Y + M_Z}{S \cdot \frac{n_b}{2}} = 0.542\ kip$$

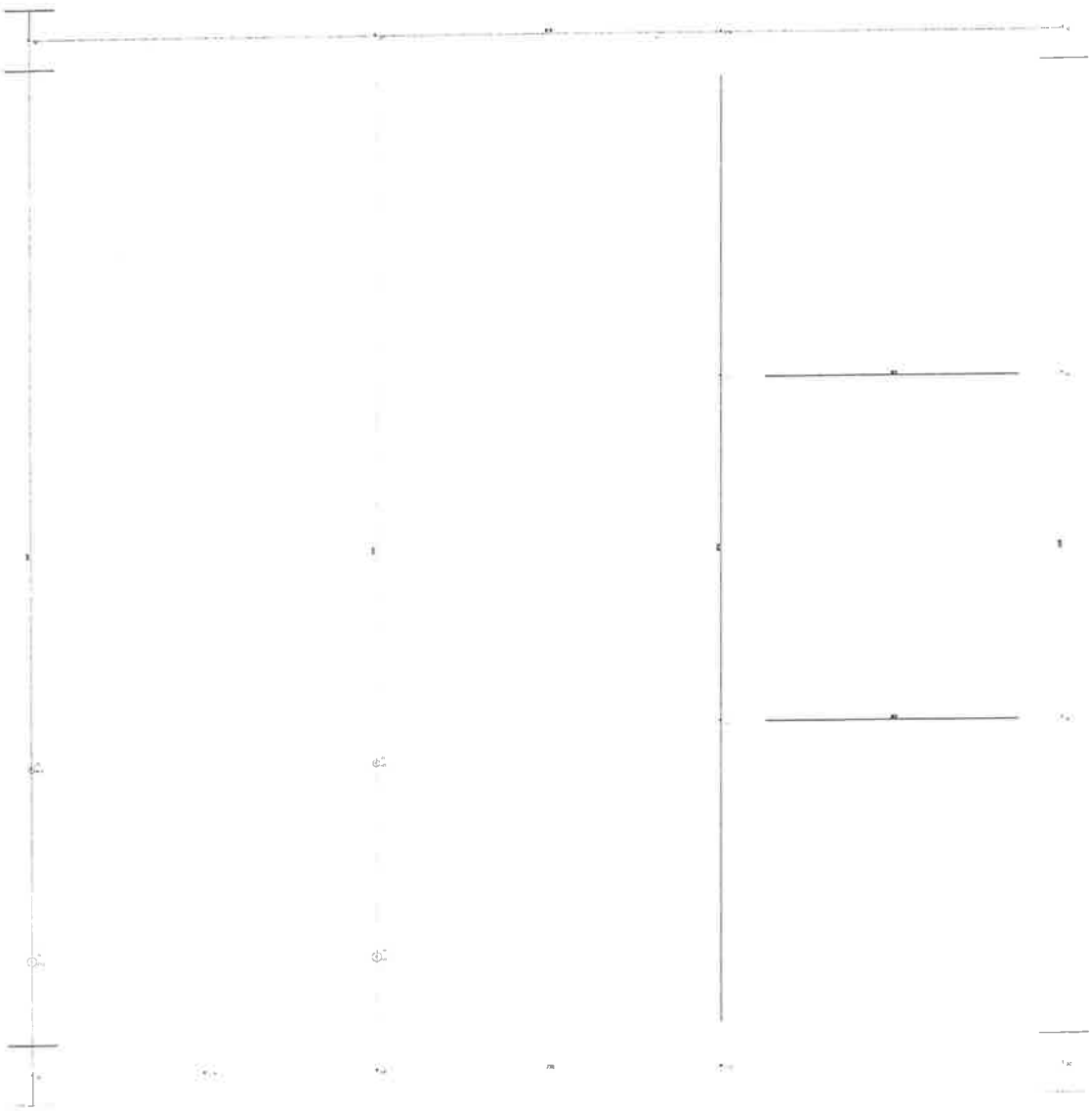
$$\frac{T_{all}}{r_{nt}} = 3.9\%$$

Combined Shear and Tension Ultimate Limit State =

$$Condition1 := \text{if}\left(\left(\frac{T_{all}}{r_{nt}}\right)^2 + \left(\frac{T_{all}}{r_{nt}}\right)^2 \le 1.0, \text{"OK"}, \text{"Overstressed"}\right) = \text{"OK"}$$



Centek Engineering	Roof Framing	SK - 1
Luke Amiot		Oct 21, 2022 at 8:49 AM
	EXISTING ROOF FRAMING AT ALPHA/BETA	Existing Framing Calculation-Screen...



Centek Engineering	Roof Framing	SK - 2
Luke Amiot		Oct 21, 2022 at 8:50 AM
	EXISTING ROOF UNIT CHECK ALPHA/BETA	Existing Framing Calculation-Screen...

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	1.25	65	1.15
8	A913 Gr.65	29000	11154	.3	.65	.49	65	1.1	80	1.1

Deck General Properties

	Label	Material Type	Deck	Unbraced[ft]	Max Spa...
1	Concrete Deck	Conc3000NW	1 in	3	10
2	Composite Deck	Vulcraft 3 VLI	7.5"NW 3VLI20, Conc3000NW, 3in, .75in, 65ksi	2	10
3	Metal Deck	Verco Steel Roof Deck	22ga PLB-36	2	4
4	Wood	Wood Deck	1 in	1	4

Deck Loads

	Label	Two Way	Self Wt [ksf]	Super DL [ksf]	Const DL [ksf]	Const LL [ksf]
1	Concrete Deck		.012	0	0	.02
2	Composite Deck		.075	0	0	.02
3	Metal Deck		.002	0	0	.02
4	Wood		.003	0	0	.02

Uniform Area Loads

	Label	Additive	PreDL[ksf]	PostDL[ksf]	LL[ksf]	LL Type	VL[ksf]	Dyn Load[...
1	Snow Load	Yes			.03	SL	.004	.01
2	Add Piping	Yes		.02		LL-Non	.011	.02
3	Roof			.01	.02	RLL-Non	.011	.01

Point Locations : Roof Framing

	Label	Z [ft]	X [ft]	Elev Offset [ft]
1	N1	0	0	0
2	N2	35	0	0
3	N3	35	35	0
4	N4	0	35	0
5	N5	23.333333	23.333333	0
6	N6	35	23.333333	0
7	N7	23.333333	11.666667	0
8	N8	35	11.666667	0
9	N9	11.666667	0	0
10	N10	23.333333	0	0
11	N11	11.667	35	0
12	N15	23.333333	35	0
13	N13	11.666765	10.333	0
14	N14	0	10.333	0
15	N17	5.833332	0	0
16	N18	11.666703	3.833	0
17	N19	0	3.833	0

Beam Primary Data : Roof Framing

	Label	Start Point	End Point	Shape	Material	Design Rules	Function	Orientation	Start Rel...	End Rele...	Outrigger?
1	M1	N1	N2	W21X44	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
2	M2	N4	N3	W18X55	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
3	M3	N1	N4	W18X35	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
4	M4	N2	N3	W21X44	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
5	M5	N11	N9	W18X35	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
6	M6	N15	N10	W18X35	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
7	M7	N6	N5	W14X22	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
8	M8	N7	N8	W14X22	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	

Hot Rolled : Roof Framing

	Label	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp To...	Lcomp Bot...	L-torqu...	Cb	Composite	Camber[in]	B-eff Left[...	B-eff Righ...
1	M1	35	Segment		Framing				Yes			
2	M2	35	Segment		Framing				Yes			
3	M3	35	1		Framing				Yes			
4	M4	35	1		Framing				Yes			
5	M5	35	1		Framing				Yes			
6	M6	35	1		Framing				Yes			
7	M7	11.667	Segment		Framing				Yes			
8	M8	11.667	Segment		Framing				Yes			

Point Loads : Roof Framing

	Point Label	PreDL[k]	PostDL[k]	LL[k]	LL Type	Dyn Load[k]
1	N19		4		LL-Non	
2	N18		4		LL-Non	
3	N14		3		LL-Non	
4	N13		3		LL-Non	

Combinations

	Label	Sol...	Cat...	Fac...	Cat...	Fac...	Cat...	Fac...	Cat...	Fac...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...
1	Service ...	Yes	DL	1																		
2	Service ...	Yes	DL	1	LL	1	LLS	1														
3	IBC 16-8...	Yes	DLP...	1																		
4	IBC 16-9...	Yes	DLP...	1	LLC...	1																
5	IBC 16-1...	Yes	DL	1	RLL	1																
6	IBC 16-1...	Yes	DL	1	SL	1	SLN	1														
7	IBC 16-1...	Yes	DL	1	LL	.75	LLS	.75	RLL	.75												
8	IBC 16-1...	Yes	DL	1	LL	.75	LLS	.75	SL	.75	SLN	.75										
9	IBC 16-1...	Yes	DL	1	LL	.75	LLS	.75														

Floors

	Label	Elevation[ft]	Floor Type	Area Load Default	Inactive	Splice Dis...	Splice Type	No Wind/...	Parapet Hei...
1	Roof Framing	12	Floor Beam	Roof		12	Moment		0

Beam Floors

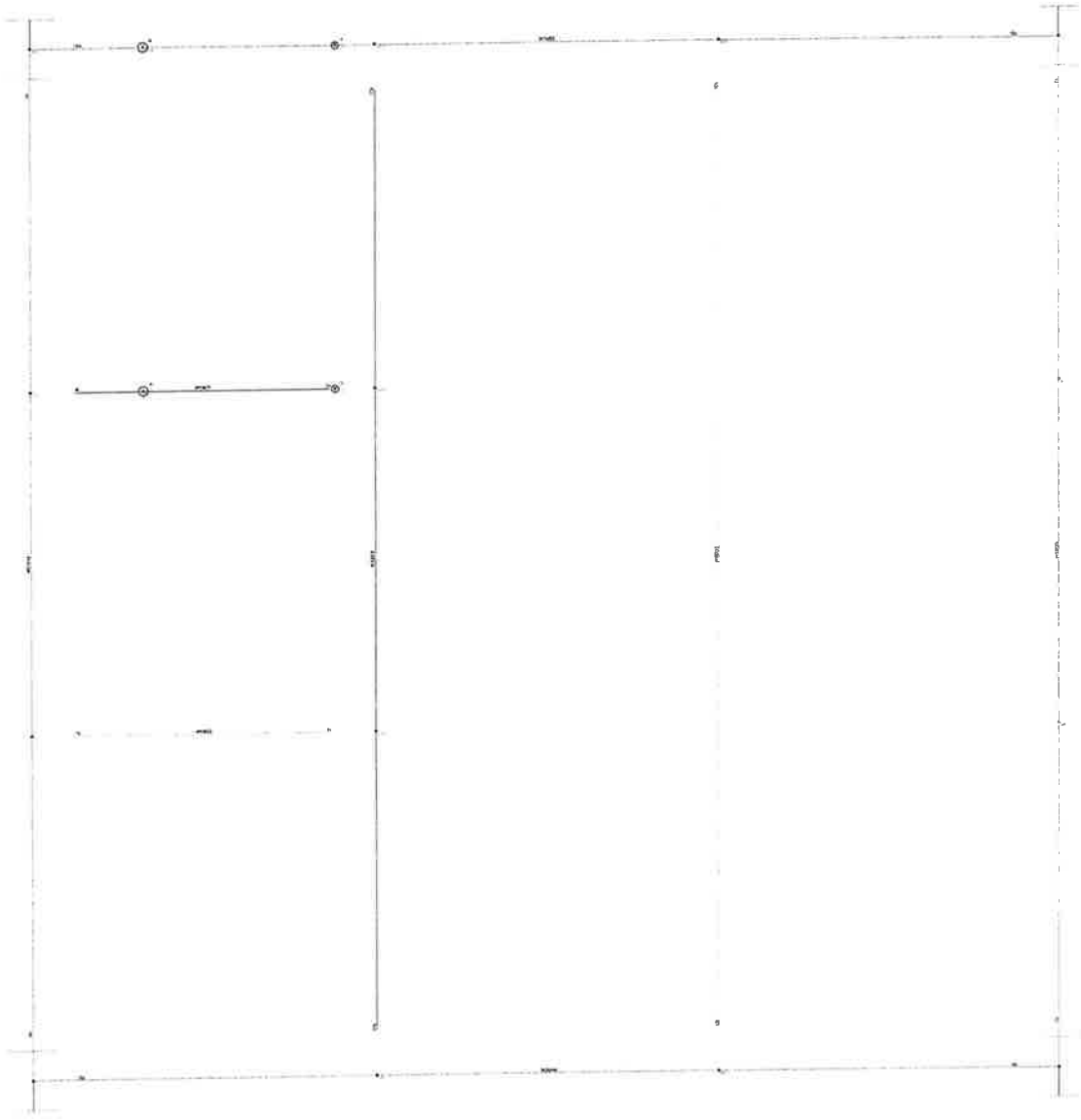
	Label	Deck Default	Deck Angle Default (deg)	Parent
1	Roof Framing	Concrete Deck	0	None

Beam Code Summary for Hot Rolled : Roof Framing

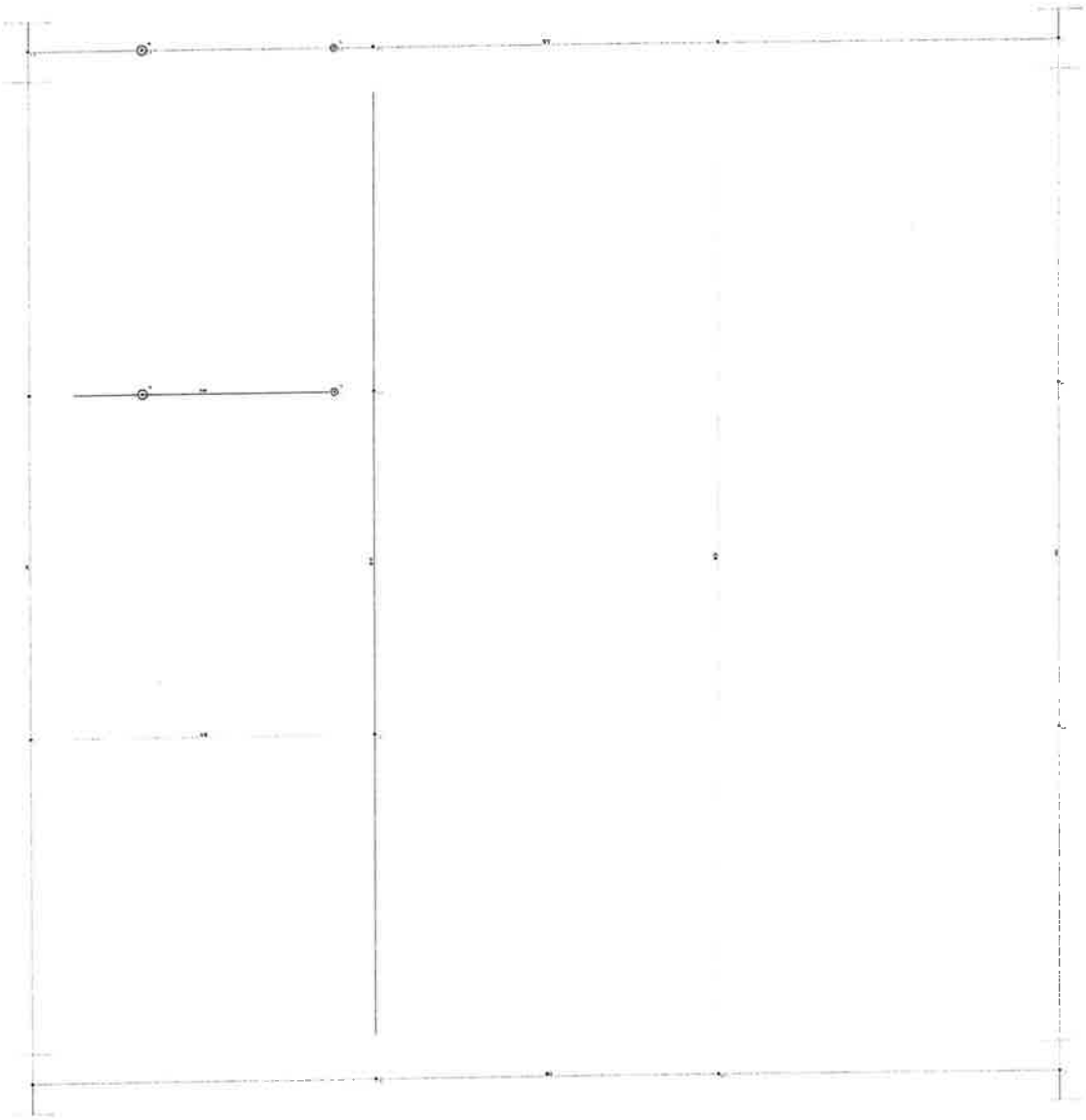
	Label	Size	Explicit	Studs	Camb...	Material	Bending...	Loc[ft]	LC	Defl Ch...	Loc[ft]	Cat	Shear C..	Loc[ft]	LC
1	M1	W21X44	Yes		0	A992	.798	13.854	6	1.015	17.5	DL+..	.114	0	5
2	M2	W18X55	Yes		0	A992	.618	23.333	6	.843	17.5	DL+..	.107	35	6
3	M3	W18X35	Yes		0	A992	.417	12.76	5	.588	16.406	DL+..	.1	0	5
4	M4	W21X44	Yes		0	A992	.305	17.5	6	.381	17.5	DL+..	.057	35	6
5	M5	W18X35	Yes		0	A992	.741	19.688	5	1.061	18.229	DL+..	.159	35	5
6	M6	W18X35	Yes		0	A992	.818	17.5	6	1.172	17.5	DL+..	.146	35	6
7	M7	W14X22	Yes		0	A992	.005	5.833	1	.036	0	LL	.002	11.6..	1
8	M8	W14X22	Yes		0	A992	.005	5.833	1	.036	0	LL	.002	11.6..	1

Beam End Reactions : Roof Framing

	Beam	End	PreDL[k]	DL[k]	LL[k]	LLS[k]	Roof[k]	Roof Cat	Max[k]	LC	Min[k]	LC
1	M1	Start	3.897	12.445	0	0	4.083	RLL	16.529	5	3.897	3
2		End	3.94	11.277	0	0	5.104	SL	16.381	6	3.94	3
3	M2	Start	4.088	9.734	0	0	4.083	RLL	13.818	5	4.088	3
4		End	4.131	10.017	0	0	5.104	SL	15.121	6	4.131	3
5	M3	Start	1.847	8.544	0	0	2.042	RLL	10.586	5	1.847	3
6		End	1.847	4.191	0	0	2.042	RLL	6.233	5	1.847	3
7	M4	Start	2.136	5.199	0	0	3.063	SL	8.261	6	2.136	3
8		End	2.136	5.199	0	0	3.062	SL	8.261	6	2.136	3
9	M5	Start	3.08	8.487	0	0	4.083	RLL	12.571	5	3.08	3
10		End	3.08	12.84	0	0	4.083	RLL	16.923	5	3.08	3
11	M6	Start	3.209	9.334	0	0	6.125	SL	15.459	6	3.209	3
12		End	3.209	9.334	0	0	6.125	SL	15.459	6	3.209	3
13	M7	Start	.129	.129	0	0	0	RLL	.129	9	.129	9
14		End	.129	.129	0	0	0	RLL	.129	9	.129	9
15	M8	Start	.129	.129	0	0	0	RLL	.129	9	.129	9
16		End	.129	.129	0	0	0	RLL	.129	9	.129	9



Centek Engineering	Roof Framing	SK - 1
Luke Amiot		Oct 21, 2022 at 8:58 AM
	EXISTING ROOF FRAMING AT GAMMA	Existing Framing Calculation-Scree...



Centek Engineering	Roof Framing	SK - 2
Luke Amiot		Oct 21, 2022 at 8:59 AM
	EXISTING ROOF UNITY CHECK AT GAMMA	Existing Framing Calculation-Scree...

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	1.25	65	1.15
8	A913 Gr.65	29000	11154	.3	.65	.49	65	1.1	80	1.1

Deck General Properties

	Label	Material Type	Deck	Unbraced[ft]	Max Spa...
1	Concrete Deck	Conc3000NW	1 in	3	10
2	Composite Deck	Vulcraft 3 VLI	7.5"NW 3VLI20, Conc3000NW, 3in, .75in, 65ksi	2	10
3	Metal Deck	Verco Steel Roof Deck	22ga PLB-36	2	4
4	Wood	Wood Deck	1 in	1	4

Deck Loads

	Label	Two Way	Self Wt [ksf]	Super DL [ksf]	Const DL [ksf]	Const LL [ksf]
1	Concrete Deck		.012	0	0	.02
2	Composite Deck		.075	0	0	.02
3	Metal Deck		.002	0	0	.02
4	Wood		.003	0	0	.02

Uniform Area Loads

	Label	Additive	PreDL[ksf]	PostDL[ksf]	LL[ksf]	LL Type	VL[ksf]	Dyn Load[...
1	Snow Load			.01	.03	SL	.004	.01
2	Add Piping	Yes		.01		LL-Non	.011	.02
3	Roof			.01	.02	RLL-Non	.011	.01

Point Locations : Roof Framing

	Label	Z [ft]	X [ft]	Elev Offset [ft]
1	N1	0	0	0
2	N2	35	0	0
3	N3	35	35	0
4	N4	0	35	0
5	N5	0	23.333333	0
6	N6	35	23.333333	0
7	N7	0	11.666667	0
8	N8	35	11.666667	0
9	N9	11.666667	0	0
10	N10	23.333333	0	0
11	N11	11.667	35	0
12	N14	11.666889	23.333333	0
13	N15	23.333333	35	0
14	N16	11.666778	11.666667	0
15	N19	10.333667	23.333333	0
16	N21	10.334	35	0
17	N22	3.833667	23.333333	0
18	N24	3.834	35	0

Beam Primary Data : Roof Framing

	Label	Start Point	End Point	Shape	Material	Design Rules	Function	Orientation	Start Rel...	End Rele...	Outrigger?
1	M1	N1	N2	W21X44	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
2	M2	N4	N3	W18X55	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
3	M3	N1	N4	W21X44	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
4	M4	N2	N3	W18X35	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
5	M5	N11	N9	W18X35	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
6	M6	N15	N10	W18X35	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
7	M7	N14	N5	W14X22	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	
8	M8	N7	N16	W14X22	A992	Typical	Gravity	Strong Axis	Pinned	Pinned	

Hot Rolled : Roof Framing

	Label	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp To...	Lcomp Bot...	L-torqu...	Cb	Composite	Camber[in]	B-eff Left[...	B-eff Righ...
1	M1	35	1		1				Yes			
2	M2	35	1		1				Yes			
3	M3	35	Segment		Framing				Yes			
4	M4	35	Segment		Framing				Yes			
5	M5	35	1		1				Yes			
6	M6	35	1		1				Yes			
7	M7	11.667	Segment		Framing				Yes			
8	M8	11.667	Segment		Framing				Yes			

Point Loads : Roof Framing

	Point Label	PreDL[k]	PostDL[k]	LL[k]	LL Type	Dyn Load[k]
1	N22		4		LL-Non	
2	N19		3		LL-Non	
3	N24		4		LL-Non	
4	N21		3		LL-Non	
5	N1				LL-Non	

Combinations

	Label	Sol...	Cat...	Fac...	Cat...	Fac...	Cat...	Fac...	Cat...	Fac...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...
1	IBC 16-8...	Yes	DLP...	1																
2	IBC 16-9...	Yes	DLP...	1	LLC...	1														
3	IBC 16-8...	Yes	DL	1																
4	IBC 16-9...	Yes	DL	1	LL	1	LLS	1												
5	IBC 16-1...	Yes	DL	1	RLL	1														
6	IBC 16-1...	Yes	DL	1	SL	1	SLN	1												
7	IBC 16-1...	Yes	DL	1	LL	.75	LLS	.75	RLL	.75										
8	IBC 16-1...	Yes	DL	1	LL	.75	LLS	.75	SL	.75	SLN	.75								
9	IBC 16-1...	Yes	DL	1	LL	.75	LLS	.75												

Floors

	Label	Elevation[ft]	Floor Type	Area Load Default	Inactive	Splice Dis...	Splice Type	No Wind/...	Parapet Hei...
1	Roof Framing	12	Floor Beam	Roof		12	Moment		0

Beam Floors

	Label	Deck Default	Deck Angle Default (deg)	Parent
1	Roof Framing	Concrete Deck	0	None

Beam Code Summary for Hot Rolled : Roof Framing

	Label	Size	Explicit	Studs	Camb...	Material	Bending...	Loc[ft]	LC	Defl Ch...	Loc[ft]	Cat	Shear C..	Loc[ft]	LC
1	M1	W21X44	Yes		0	A992	.496	11.667	5	.614	17.5	DL+...	.072	0	5
2	M2	W18X55	Yes		0	A992	.575	11.667	5	.757	16.771	DL+...	.121	0	5
3	M3	W21X44	Yes		0	A992	.28	19.688	6	.336	18.229	DL+...	.047	35	5
4	M4	W18X35	Yes		0	A992	.367	17.5	6	.518	17.5	DL+...	.065	35	6
5	M5	W18X35	Yes		0	A992	.616	14.583	5	.875	16.771	DL+...	.11	0	5
6	M6	W18X35	Yes		0	A992	.485	17.5	6	.686	17.5	DL+...	.087	35	6
7	M7	W14X22	Yes		0	A992	.144	7.778	3	.083	6.198	DL+...	.065	0	3
8	M8	W14X22	Yes		0	A992	.005	5.833	1	.036	0	LL	.002	11.6...	1

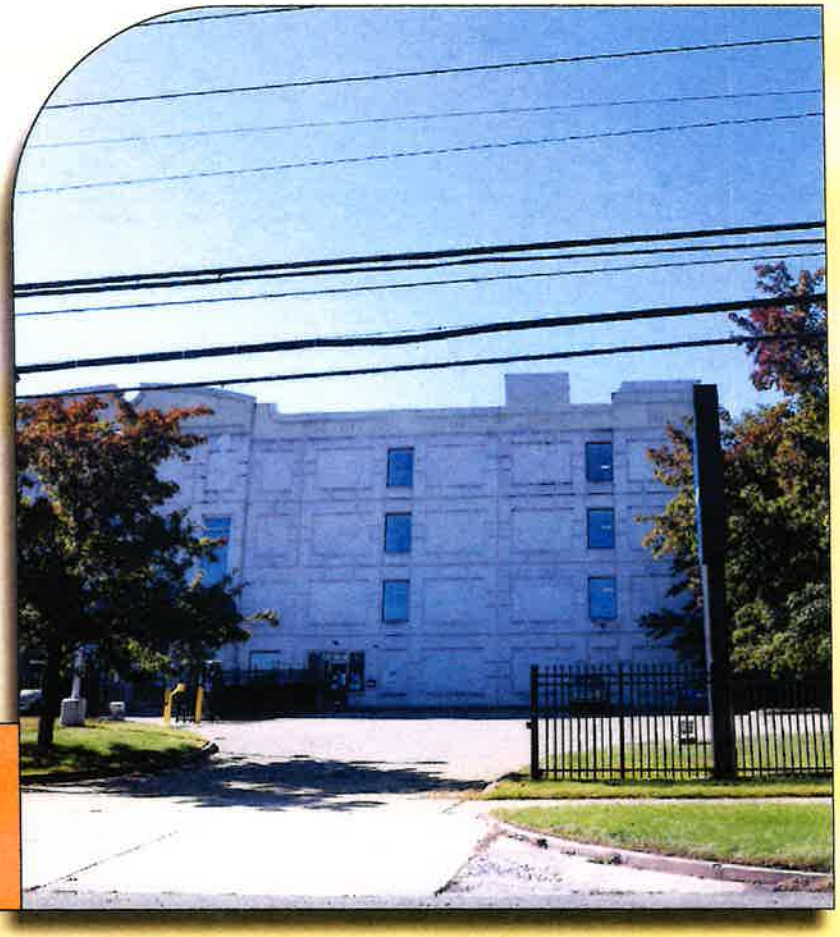
Beam End Reactions : Roof Framing

	Beam	End	PreDL[k]	DL[k]	LL[k]	LLS[k]	Roof[k]	Roof Cat	Max[k]	LC	Min[k]	LC
1	M1	Start	3.94	7.432	0	0	2.949	RLL	10.381	5	3.94	1
2		End	3.897	7.174	0	0	2.495	RLL	9.67	5	3.897	1
3	M2	Start	4.131	14.181	0	0	2.949	RLL	17.13	5	4.131	1
4		End	4.088	9.13	0	0	2.495	RLL	11.626	5	4.088	1
5	M3	Start	2.136	4.507	0	0	1.361	RLL	5.868	5	2.136	1
6		End	2.136	5.517	0	0	1.361	RLL	6.878	5	2.136	1
7	M4	Start	1.847	3.889	0	0	3.063	SL	6.951	6	1.847	1
8		End	1.847	3.889	0	0	3.063	SL	6.951	6	1.847	1
9	M5	Start	3.209	8.239	0	0	3.403	RLL	11.642	5	3.209	1
10		End	3.209	6.915	0	0	3.403	RLL	10.318	5	3.209	1
11	M6	Start	3.08	6.143	0	0	3.063	SL	9.205	6	3.08	1
12		End	3.08	6.143	0	0	3.063	SL	9.205	6	3.08	1
13	M7	Start	.129	4.1	0	0	0	RLL	4.1	9	.129	2
14		End	.129	3.157	0	0	0	RLL	3.157	9	.129	2
15	M8	Start	.129	.129	0	0	0	RLL	.129	9	.129	9
16		End	.129	.129	0	0	0	RLL	.129	9	.129	9

ATTACHMENT 5

Photo-Simulations

RIDGEFIELD BOEHRINGER - LIFE STORAGE
19 KENOSIA AVENUE
DANBURY, CT



Prepared in October 2022 by:
All-Points Technology Corporation, P.C.
567 Vauxhall Street Extension – Suite 311
Waterford, CT 06320

Prepared for Verizon Wireless

ALL-POINTS
TECHNOLOGY CORPORATION

VISUAL ASSESSMENT & PHOTO-SIMULATIONS

At the request of Cellco Partnership, d/b/a Verizon Wireless ("Verizon Wireless"), All-Points Technology Corporation, P.C. ("APT") completed a visual assessment and prepared computer-generated photographic simulations in association with a proposed wireless telecommunications facility (the "Facility") at 19 Kenosia Avenue in Danbury, Connecticut (the "Site").

Project Undertaking

Verizon Wireless plans to construct the Facility on the roof of an existing four-story self-storage building. The rooftop is ±49′ above ground level ("AGL"); a parapet surrounds the roof, with decorative extended features at the front center and northwest and northeast corners. The Facility would include three (3) antenna sectors (alpha, beta, and gamma), each consisting of three (3) panel antennas. The antennas and associated appurtenances (OVPs and RRHs[1]) would be concealed within two (2) ±9′ x ±12′ radio frequency-compatible enclosures at the east and west ends of the roof that would extend to ±60′ AGL.[2] The gamma sector enclosure would be located along the east façade roof edge near the northeast corner, behind the extended decorative parapet; the alpha and beta sector enclosure would be located along the north façade roof edge near the northwest corner.

Proposed Verizon Wireless equipment cabinets would be located on a steel platform near the center of the roof. Please refer to the Construction Drawings prepared by Centek Engineering (Rev. B dated August 10, 2022) provided under separate cover, for details regarding the proposed installation.

Project Setting

The Site is a four-story commercial self-storage building located on the south side of Kenosia Avenue. A wrought iron fence and mature landscaping border Kenosia Avenue. A wooded hillside is behind the building. Land use within the immediate vicinity of the Site is primarily commercial along Kenosia Avenue, with a residential condominium development to the west. Undeveloped land, including wetlands, Kenosia Lake, and the Still River, is to the north and east. Danbury Municipal Airport is located to the southeast.

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[1] OVPs means over voltage protectors; RRHs refers to remote radio heads.

[2] Note that the visible portions of the enclosures would extend to heights of approximately 8 feet above the parapet.

The ground elevation of the Site is approximately 460 feet above mean sea level ("AMSL"). The topography to the north and east of the Site is generally level. Land to the west and south of the Site rises to approximately 600 feet AMSL.

Photographic Documentation and Simulations

APT performed a field reconnaissance on October 6, 2022 and took photographs from locations in the vicinity of the Site, using the existing building as a landmark and point of reference. At each photo location, the geographic coordinates of the camera's position were logged using global positioning system ("GPS") technology. Photographs were taken with a Canon EOS 6D digital camera body[3] and Canon EF 24 to 105 millimeter ("mm") zoom lens. For this evaluation, APT used a standard focal length of 50mm to present a consistent field of view.

Three-dimensional computer models were developed for the existing building and infrastructure and components of the proposed Facility from plans supplied to APT by Verizon Wireless. Photographic simulations were generated to portray scaled renderings of the proposed Facility from five (5) locations presented herein where the Facility will be visible. Using field data, site plan information and 3-dimension (3D) modeling software, spatially referenced models of the Site and Facility were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo-simulations were then created using a combination of renderings generated in the 3D model and photo-rendering software programs, which were ultimately composited and merged with the existing conditions photographs (using Photoshop image editing software). The scale of the subjects in the photograph (the building) and the corresponding simulation (the Facility) is proportional to their surroundings.

For presentation purposes in this report, the photographs were produced in an approximate 7-inch by 10.5-inch format. This format size allows for the inclusion of key contextual landscape elements (existing development, street signs, utility poles, etc.) so that the viewer can understand the proportionate scale of each object within the scene.

Photo-documentation of the field reconnaissance and photo-simulations of the proposed Facility are presented in the attachment at the end of this report. Photographs were taken from publicly accessible areas and unobstructed view lines were chosen wherever possible.

[3] The Canon EOS 6D is a full-framed camera which includes a lens receptor of the same size as the film used in 35mm cameras. As such, the images produced are comparable to those taken with a conventional 35mm camera.

The following table (Table 1 – Photo Locations) summarizes the locations of the photographs presented in the attachment to this report, and includes a description of each location, view orientation, and the distance from the photograph location to the proposed Facility. The photo locations are also depicted on the photolog as an attachment to this report.

Table 1 – Photo Locations

Photo	Location	Orientation	Distance to Site
1	Apple Ridge Road	Northwest	±137 Feet
2	Kenosia Avenue	West	±334 Feet
3	Kenosia Avenue	Southwest	±220 Feet
4	Kenosia Avenue	Southwest	±178 Feet
5	Kenosia Avenue	Southeast	±337 Feet

Conclusions

Views of the proposed Facility would be limited to areas where portions of the existing building are currently visible. Representative photos from nearby locations demonstrate the limited visibility of the proposed Facility. Due to the combination of the antennas and ancillary equipment being concealed within the enclosures (designed to be consistent with the existing architecture and scale of the building), the surrounding woods behind the Site building, and the commercial nature of the area, the visual impact of the proposed Facility will be minimal. Overall, the Facility would not significantly alter the appearance of the Site or its visibility within the surrounding area.

Based on the results of this assessment, it is our opinion that the proposed Verizon Wireless Facility will neither significantly affect existing views nor adversely impact the overall character of the community.

Limitations

No access to private properties was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen. The photo-simulations provide a representation of the Facility under similar settings as those encountered during the field review and reconnaissance. Views of the Facility can change throughout the seasons and the time of day,

and are dependent on weather and other atmospheric conditions (e.g. haze, fog, clouds); the location, angle and intensity of the sun; and the specific viewer location. Weather conditions on the day of the field review included sunny skies.

All-Points Technology Corporation, P.C.

Report prepared by:

Jennifer Young Gaudet

Jennifer Young Gaudet
Project Manager

Report reviewed by:

Michael Libertine

Michael Libertine
Director of Siting & Permitting

ATTACHMENTS

PHOTO LOG

Legend

Site Photographic Location

1 inch = 150 feet

150 75 0 150 Feet

ALL-POINTS TECHNOLOGY CORPORATION

verizon

PHOTOGRAPHED ON 10/6/2022

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**APPLE RIDGE ROAD**	**NORTHWEST**	**+/- 137 FEET**	**VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**APPLE RIDGE ROAD**	**NORTHWEST**	**+/- 137 FEET**	**VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

PHOTOGRAPHED ON 10/6/2022

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	**KENOSIA AVENUE**	**WEST**	**+/- 334 FEET**	**VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	**KENOSIA AVENUE**	**WEST**	**+/- 334 FEET**	**VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

PHOTOGRAPHED ON 10/6/2022

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**KENOSIA AVENUE**	**SOUTHWEST**	**+/- 220 FEET**	**VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**KENOSIA AVENUE**	**SOUTHWEST**	**+/- 220 FEET**	**VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

PHOTOGRAPHED ON 10/6/2022

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	V SIBILITY
4	**KENOSIA AVENUE**	**SOUTHWEST**	**+/- 178 FEET**	**VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	KENOSIA AVENUE	SOUTHWEST	+/- 178 FEET	VISIBLE

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PHOTOGRAPHED ON 10/6/2022

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**KENOSIA AVENUE**	**SOUTHEAST**	**+/- 337 FEET**	**VISIBLE**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**KENOSIA AVENUE**	**SOUTHEAST**	**+/- 337 FEET**	**VISIBLE**

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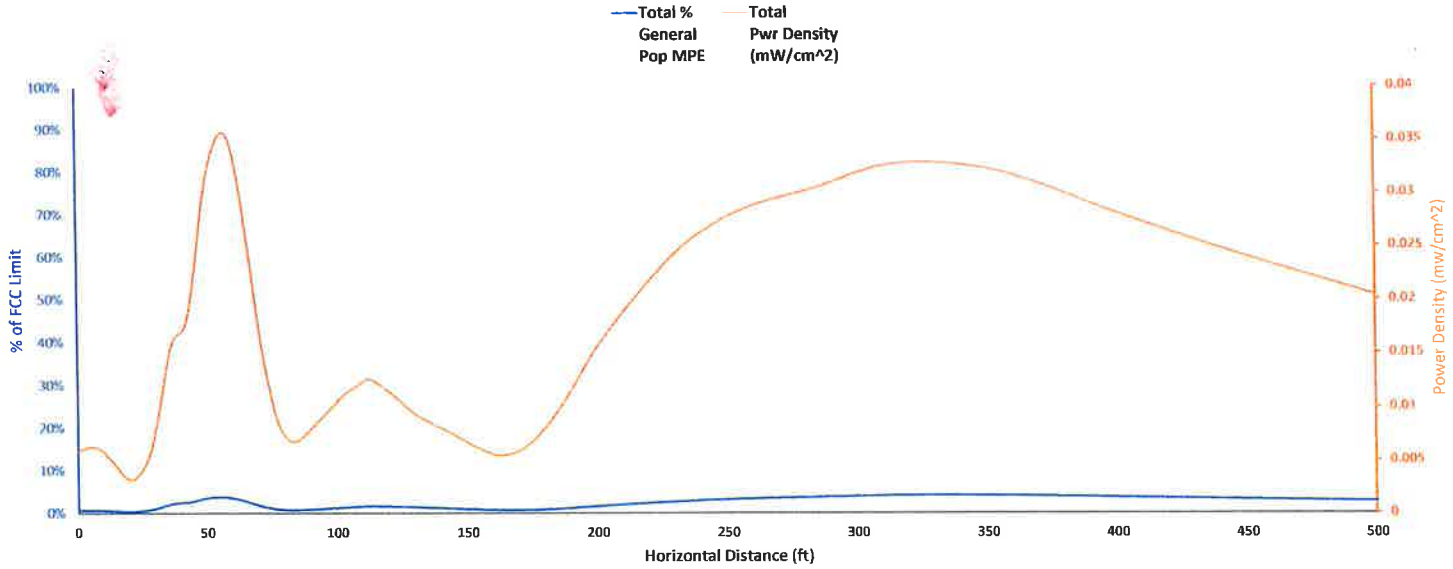
ATTACHMENT 6

Location	RIDGEFIELD BOEHRINGER CT					
Date	10/19/2022					
Band	C-Band	AWS	PCS	850-LTE	850-CDMA	700
Operating Frequency (MHz)	3,700	2,145	1,970	880	869	746
General Population MPE (mW/cm^2)	1	1	1	0.586666667	0.579333333	0.497333333
ERP Per Transmitter (Watts)	4,167	1,972	1,567	881	0	1,059
Number of Transmitters	2	4	4	4	2	4
Antenna Centerline (feet)	58	56	56	56	56	56
Total ERP (Watts)	8,334	7,890	6,267	3,524	0	4,237
Total ERP (dBm)	69	69	68	65	#N/A	66
Maximum % of General Population Limit	4.0%					

RF Exposure 6ft Above Ground Level
Far Field Formula (per FCC OET65)



Angle Below Horizon	Power Density (mW/cm^2)						Percent of General Population MPE									Distance	Total Pwr Density (mW/cm^2)	Total % General Pop MPE
	C-Band	AWS	PCS	850-LTE	850-CDMA	700 MHz	39GHz	28GHz	C-Band	CBRS	AWS	PCS	Cellular	CDMA	700 MHz			
90	0.005478563	6.02509E-06	1.53803E-06	0.000246584	0	0.000179871	0.00%	0.00%	0.55%	0.00%	0.00%	0.00%	0.04%	0.00%	0.04%	0	0.005912581	0.63%
89	0.00547702	1.08851E-05	2.67197E-07	0.000242009	0	0.000184005	0.00%	0.00%	0.55%	0.00%	0.00%	0.00%	0.04%	0.00%	0.04%	0.872753246	0.005914187	0.63%
88	0.005599862	2.58484E-05	1.28066E-06	0.000235199	0	0.000175159	0.00%	0.00%	0.56%	0.00%	0.00%	0.00%	0.04%	0.00%	0.04%	1.746038475	0.006037349	0.64%
87	0.005669767	4.9519E-05	4.91782E-06	0.000223755	0	0.000156593	0.00%	0.00%	0.57%	0.00%	0.00%	0.00%	0.04%	0.00%	0.03%	2.620388964	0.006104552	0.64%
86	0.005790389	7.39341E-05	9.74642E-06	0.000206465	0	0.000134228	0.00%	0.00%	0.58%	0.00%	0.01%	0.00%	0.04%	0.00%	0.03%	3.496340597	0.006214762	0.65%
85	0.005775693	8.84406E-05	1.49504E-05	0.000184779	0	0.000113671	0.00%	0.00%	0.58%	0.00%	0.01%	0.00%	0.03%	0.00%	0.02%	4.374433176	0.006177534	0.64%
84	0.005891875	8.53477E-05	2.31842E-05	0.000162253	0	9.73175E-05	0.00%	0.00%	0.59%	0.00%	0.01%	0.00%	0.03%	0.00%	0.02%	5.255211763	0.006259977	0.65%
83	0.005870228	6.62925E-05	3.70224E-05	0.000142714	0	8.57953E-05	0.00%	0.00%	0.59%	0.00%	0.01%	0.00%	0.02%	0.00%	0.02%	6.139228045	0.006202052	0.64%
82	0.005845307	4.3E-05	5.38851E-05	0.000130158	0	7.95184E-05	0.00%	0.00%	0.58%	0.00%	0.00%	0.01%	0.02%	0.00%	0.02%	7.027041735	0.006151868	0.63%
81	0.005817134	2.87212E-05	6.70198E-05	0.000127704	0	7.87412E-05	0.00%	0.00%	0.58%	0.00%	0.00%	0.01%	0.02%	0.00%	0.02%	7.919222016	0.00611932	0.63%
80	0.005654038	2.90179E-05	7.42449E-05	0.000136354	0	8.23503E-05	0.00%	0.00%	0.57%	0.00%	0.00%	0.01%	0.02%	0.00%	0.02%	8.816349035	0.005976005	0.62%

79	0,005492302	3,72269E-05	8,01414E-05	0,000157347	0	8,90954E-05	0,00%	0,00%	0,55%	0,00%	0,00%	0,01%	0,03%	0,00%	0,02%	9,719015457	0,005856112	0,61%
78	0,005210676	4,19539E-05	8,96958E-05	0,000191326	0	9,74476E-05	0,00%	0,00%	0,52%	0,00%	0,00%	0,01%	0,03%	0,00%	0,02%	10,62782808	0,005631099	0,59%
77	0,004828094	3,75328E-05	0,000103851	0,000238458	0	0,000105296	0,00%	0,00%	0,48%	0,00%	0,00%	0,01%	0,04%	0,00%	0,02%	11,54340956	0,005313232	0,56%
76	0,00457506	2,72127E-05	0,000123815	0,000297011	0	0,000110096	0,00%	0,00%	0,46%	0,00%	0,00%	0,01%	0,05%	0,00%	0,02%	12,46640014	0,005133194	0,55%
75	0,004234037	1,71337E-05	0,000159166	0,00036212	0	0,000109106	0,00%	0,00%	0,42%	0,00%	0,00%	0,02%	0,06%	0,00%	0,02%	13,39745962	0,004881563	0,52%
74	0,003826894	1,11339E-05	0,00022576	0,000425253	0	0,000100843	0,00%	0,00%	0,38%	0,00%	0,00%	0,02%	0,07%	0,00%	0,02%	14,33726929	0,004589884	0,50%
73	0,003378074	1,10447E-05	0,000335086	0,000477702	0	8,53404E-05	0,00%	0,00%	0,34%	0,00%	0,00%	0,03%	0,08%	0,00%	0,02%	15,28653407	0,004287247	0,47%
72	0,002845899	1,77164E-05	0,000483477	0,000512126	0	6,72009E-05	0,00%	0,00%	0,28%	0,00%	0,00%	0,05%	0,09%	0,00%	0,01%	16,24598481	0,003926419	0,44%
71	0,002368611	2,78166E-05	0,000659635	0,000522763	0	5,47397E-05	0,00%	0,00%	0,24%	0,00%	0,00%	0,07%	0,09%	0,00%	0,01%	17,21638066	0,003633564	0,41%
70	0,001992912	3,24291E-05	0,000849054	0,000511606	0	5,33254E-05	0,00%	0,00%	0,20%	0,00%	0,00%	0,08%	0,09%	0,00%	0,01%	18,19851171	0,003439326	0,39%
69	0,001637565	2,51343E-05	0,00104056	0,000485588	0	7,01885E-05	0,00%	0,00%	0,16%	0,00%	0,00%	0,10%	0,08%	0,00%	0,01%	19,19320175	0,003259035	0,37%
68	0,001344686	1,12278E-05	0,001211421	0,000452164	0	0,000129209	0,00%	0,00%	0,13%	0,00%	0,00%	0,12%	0,08%	0,00%	0,03%	20,20131129	0,003148708	0,36%
67	0,001147493	4,11164E-06	0,001324389	0,000419775	0	0,000251197	0,00%	0,00%	0,11%	0,00%	0,00%	0,13%	0,07%	0,00%	0,05%	21,22374081	0,003146966	0,37%
66	0,001157661	9,96377E-06	0,001353393	0,000389426	0	0,000426995	0,00%	0,00%	0,12%	0,00%	0,00%	0,14%	0,07%	0,00%	0,09%	22,26143427	0,003337439	0,40%
65	0,001279705	2,32549E-05	0,001275014	0,000361007	0	0,000656922	0,00%	0,00%	0,13%	0,00%	0,00%	0,13%	0,06%	0,00%	0,13%	23,31538291	0,003595903	0,45%
64	0,001446537	4,32796E-05	0,001082141	0,000334414	0	0,000949036	0,00%	0,00%	0,14%	0,00%	0,00%	0,11%	0,06%	0,00%	0,19%	24,38662943	0,003855408	0,51%
63	0,001787453	9,21987E-05	0,000799328	0,000306003	0	0,001305341	0,00%	0,00%	0,18%	0,00%	0,01%	0,08%	0,05%	0,00%	0,26%	25,47627247	0,004290325	0,58%
62	0,002161816	0,000209331	0,000470797	0,000272794	0	0,001733134	0,00%	0,00%	0,22%	0,00%	0,02%	0,05%	0,05%	0,00%	0,35%	26,58547158	0,004847871	0,68%
61	0,002438234	0,000420341	0,000179722	0,000234209	0	0,002236664	0,00%	0,00%	0,24%	0,00%	0,04%	0,02%	0,04%	0,00%	0,45%	27,71545257	0,00550917	0,79%
60	0,002691519	0,000714537	2,60031E-05	0,000190557	0	0,002805586	0,00%	0,00%	0,27%	0,00%	0,07%	0,00%	0,03%	0,00%	0,56%	28,86751346	0,006428201	0,94%
59	0,00303094	0,001057047	0,000104977	0,000145578	0	0,003436319	0,00%	0,00%	0,30%	0,00%	0,11%	0,01%	0,02%	0,00%	0,69%	30,04303095	0,007774861	1,14%
58	0,003110336	0,001411901	0,000481731	0,000111636	0	0,004100183	0,00%	0,00%	0,31%	0,00%	0,14%	0,05%	0,02%	0,00%	0,82%	31,2434676	0,009215787	1,34%
57	0,003038638	0,001734387	0,001178003	0,00011565	0	0,004765902	0,00%	0,00%	0,30%	0,00%	0,17%	0,12%	0,02%	0,00%	0,96%	32,47037966	0,01083258	1,57%
56	0,002972921	0,001968392	0,002163276	0,000194587	0	0,00538407	0,00%	0,00%	0,30%	0,00%	0,20%	0,22%	0,03%	0,00%	1,08%	33,72542584	0,012683246	1,83%
55	0,002650398	0,002012298	0,003347284	0,000375572	0	0,005911413	0,00%	0,00%	0,27%	0,00%	0,20%	0,33%	0,06%	0,00%	1,19%	35,01037691	0,014296965	2,05%
54	0,002270137	0,001765544	0,004590699	0,000674341	0	0,006322336	0,00%	0,00%	0,23%	0,00%	0,18%	0,46%	0,11%	0,00%	1,27%	36,3271264	0,015623057	2,25%
53	0,001842451	0,001229307	0,005749906	0,00109059	0	0,006541232	0,00%	0,00%	0,18%	0,00%	0,12%	0,57%	0,19%	0,00%	1,32%	37,67770251	0,016453486	2,38%
52	0,001349992	0,000574153	0,006699275	0,001607047	0	0,006561854	0,00%	0,00%	0,13%	0,00%	0,06%	0,67%	0,27%	0,00%	1,32%	39,06428133	0,016792321	2,46%
51	0,000909591	0,000169421	0,007412568	0,002182577	0	0,006382157	0,00%	0,00%	0,09%	0,00%	0,02%	0,74%	0,37%	0,00%	1,28%	40,48920166	0,017056314	2,50%
50	0,000533246	0,000456532	0,007988614	0,002769952	0	0,005990599	0,00%	0,00%	0,05%	0,00%	0,05%	0,80%	0,47%	0,00%	1,20%	41,95498156	0,017738943	2,57%
49	0,000327011	0,001739895	0,008502042	0,003307685	0	0,005426528	0,00%	0,00%	0,03%	0,00%	0,17%	0,85%	0,56%	0,00%	1,09%	43,46433689	0,01930316	2,71%
48	0,000296304	0,003991261	0,009101447	0,003733458	0	0,004732703	0,00%	0,00%	0,03%	0,00%	0,40%	0,91%	0,64%	0,00%	0,95%	45,02020221	0,021855172	2,93%
47	0,000445077	0,006826815	0,009822419	0,003992264	0	0,003955644	0,00%	0,00%	0,04%	0,00%	0,68%	0,98%	0,68%	0,00%	0,80%	46,62575431	0,02504222	3,19%
46	0,000775605	0,00961239	0,010735733	0,004044199	0	0,00314652	0,00%	0,00%	0,08%	0,00%	0,96%	1,07%	0,69%	0,00%	0,63%	48,28443874	0,028314447	3,43%
45	0,001245478	0,011801392	0,011855873	0,003880917	0	0,002354682	0,00%	0,00%	0,12%	0,00%	1,18%	1,19%	0,66%	0,00%	0,47%	50	0,031138342	3,63%
44	0,001851412	0,013107074	0,013107084	0,003503539	0	0,001634951	0,00%	0,00%	0,19%	0,00%	1,31%	1,31%	0,60%	0,00%	0,33%	51,77651569	0,03320406	3,73%
43	0,002582985	0,013599717	0,014405561	0,002961632	0	0,001080262	0,00%	0,00%	0,26%	0,00%	1,36%	1,44%	0,50%	0,00%	0,22%	53,6184355	0,034630157	3,78%
42	0,003429028	0,01364536	0,015345651	0,002311991	0	0,000799805	0,00%	0,00%	0,34%	0,00%	1,36%	1,53%	0,39%	0,00%	0,16%	55,53062574	0,035531836	3,80%
41	0,004252338	0,013609716	0,015482795	0,001643805	0	0,000694781	0,00%	0,00%	0,43%	0,00%	1,36%	1,55%	0,28%	0,00%	0,14%	57,51842036	0,035683434	3,75%
40	0,005040429	0,013806965	0,014193795	0,001021173	0	0,000591694	0,00%	0,00%	0,50%	0,00%	1,38%	1,42%	0,17%	0,00%	0,12%	59,58767963	0,034654055	3,60%
39	0,005749946	0,014180999	0,011394811	0,000502005	0	0,000507815	0,00%	0,00%	0,57%	0,00%	1,42%	1,14%	0,09%	0,00%	0,10%	61,74485783	0,032335577	3,32%
38	0,006240053	0,014475953	0,007475625	0,000242465	0	0,000438174	0,00%	0,00%	0,62%	0,00%	1,45%	0,75%	0,04%	0,00%	0,09%	63,99708161	0,028872269	2,95%
37	0,006251875	0,014089295	0,003547232	0,000181506	0	0,000341105	0,00%	0,00%	0,63%	0,00%	1,41%	0,35%	0,03%	0,00%	0,07%	66,35224108	0,024411013	2,49%
36	0,00629646	0,012399398	0,000826801	0,000118414	0	0,00018681	0,00%	0,00%	0,63%	0,00%	1,24%	0,08%	0,02%	0,00%	0,04%	68,81909602	0,019827882	2,01%
35	0,005693913	0,009228812	2,70487E-05	0,00011753	0	0,000166397	0,00%	0,00%	0,57%	0,00%	0,92%	0,00%	0,02%	0,00%	0,03%	71,40740034	0,0152337	1,55%
34	0,005139421	0,0051771	0,000887333	0,000157068	0	0,000393628	0,00%	0,00%	0,51%	0,00%	0,52%	0,09%	0,03%	0,00%	0,08%	74,12804843	0,01175455	1,23%
33	0,004145376	0,001687255	0,002291823	0,000188878	0	0,000511894	0,00%	0,00%	0,41%	0,00%	0,17%	0,23%	0,03%	0,00%	0,10%	76,99324819	0,008825226	0,95%
32	0,003422264	7,75144E-05	0,002994904	0,000183393	0	0,000596186	0,00%	0,00%	0,34%	0,00%	0,01%	0,30%	0,03%	0,00%	0,12%	80,01672645	0,007274262	0,80%
31	0,002780429	0,000678644	0,002469689	0,000140813	0	0,000669331	0,00%	0,00%	0,28%	0,00%	0,07%	0,25%	0,02%	0,00%	0,13%	83,21397412	0,006738905	0,75%
30	0,002623632	0,002471173	0,001210329	9,26626E-05	0	0,000744564	0,00%	0,00%	0,26%	0,00%	0,25%	0,12%	0,02%	0,00%	0,15%	86,60254038	0,007142362	0,80%
29	0,003017347	0,003829179	0,00022496	9,59637E-05	0	0,000839662	0,00%	0,00%	0,30%	0,00%	0,38%	0,02%	0,02%	0,00%	0,17%	90,20238776	0,008007112	0,89%
28	0,003812506	0,00378601	0,000167565	0,000197325	0	0,000975396	0,00%	0,00%	0,38%	0,00%	0,38%	0,02%	0,03%	0,00%	0,20%	94,03632327	0,008938803	1,01%
27	0,004927011	0,002679518	0,000818572	0,000397245	0	0,001183194	0,00%	0,00%	0,49%	0,00%	0,27%	0,08%	0,07%	0,00%	0,24%	98,13052528	0,01000554	1,15%
26	0,005924612	0,001609338	0,001372927	0,000692864	0	0,001484726	0,00%	0,00%	0,59%	0,00%	0,16%	0,14%	0,12%	0,00%	0,30%	102,5151921	0,011084467	1,31%
25	0,006402448	0,001267243	0,001229872	0,001098654	0	0,001861482	0,00%	0,00%	0,64%	0,00%	0,13%	0,12%	0,19%	0,00%	0,37%	107,225346	0,011859698	1,45%
24	0,006800431	0,001363295	0,000565705	0,001612839	0	0,002231459	0,00%	0,00%	0,68%	0,00%	0,14%	0,06%	0,27%	0,00%	0,45%	112,3018387	0,012573729	1,60%
23	0,005862899	0,001176845	0,000118773	0,002166309	0	0,002487244	0,00%	0,00%	0,59%	0,00%	0,12%	0,01%	0,37%	0,00%	0,50%	117,7926183	0,01181207	1,59%
22	0,004476508	0,000553495	0,000409368	0,00265531	0	0,002547494	0,00%	0,00%	0,45%	0,00%	0,06%	0,04%	0,45%	0,00%	0,51%	123,7543427	0,010642176	1,51%
21	0,002587403	0,000164673	0,001190205	0,002969085	0	0,002363854	0,00%	0,00%	0,26%	0,00%	0,02%	0,12%	0,51%	0,00%	0,48%	130,2544532	0,00927522	1,38%
20	0,001024969	0,000666909	0,001675201	0,003020423	0	0,001950139	0,00%	0,00%	0,10%	0,00%	0,07%	0,17%	0,51%	0,00%	0,39%	137,373871	0,008337641	1,24%
19	8,61543E-05	0,001767043	0,00134044	0,002762156	0	0,00137799	0,00%	0,00%	0,01%	0,00%	0,18%	0,13%	0,47%	0,00%	0,28%	145,2105439	0,007333783	1,07%
18	0,000273103	0,002398435	0,000501104	0,002228071	0	0,000748044	0,00%	0,00%	0,03%	0,00%	0,24%	0,05%	0,38%	0,00%	0,15%	153,8841769	0,006148758	0,85%
17	0,001813783	0,001874278	3,53048E-06	0,001526986	0	0,000228999	0,00%	0,00%	0,18%	0,00%	0,19%	0,00%	0,26%	0,00%	0,05%	163,5426309	0,005447575	0,68%
16	0,004620887	0,000704108	0,0003738	0,000815907	0	8,82345E-05	0,00%	0,00%	0,46%	0,00%	0,07%	0,04%	0,14%	0,00%	0,02%	174,3707222	0,006602937	0,73%
15	0,008401529	2,98508E-05	0,001253014	0,000280515	0	0,000264213	0,00%	0,00%	0,84%	0,00%	0,00%	0,13%	0,05%	0,00%	0,05%	186,6025404	0,010229123	1,07%
14	0,012912626	0,000329848	0,00176325	7,78601E-05	0	0,00068126	0,00%	0,00%	1,29%	0,00%	0,03%	0,18%	0,01%	0,00%	0,14%	200,5390467	0,015764843	1,65%
13	0,016715517	0,000937863	0,001409742	0,000275512	0	0,00137448	0,00%	0,00%	1,67%	0,00%	0,09%	0,14%	0,05%	0,00%	0,28%	216,5737937	0,020713114	2,23%
12	0,020651993	0,000958785	0,000564575	0,000888633	0	0,002331955	0,00%	0,00%	2,07%	0,00%	0,10%	0,06%	0,15%	0,00%	0,47%	235,2315055	0,025395939	2,84%

11	0.022889838	0.000383849	4.81018E-05	0.001791274	0	0.003397504	0.00%	0.00%	2.29%	0.00%	0.04%	0.00%	0.31%	0.00%	0.68%	257.2277008	0.028510567	3.32%
10	0.022961831	2.99436E-06	0.000242272	0.002794505	0	0.004368202	0.00%	0.00%	2.30%	0.00%	0.00%	0.02%	0.48%	0.00%	0.88%	283.564091	0.030369805	3.68%
9	0.022936749	0.000297597	0.000744095	0.003669689	0	0.005077234	0.00%	0.00%	2.29%	0.00%	0.03%	0.07%	0.63%	0.00%	1.02%	315.6875757	0.032725364	4.04%
8	0.020661321	0.000816721	0.000885267	0.004217693	0	0.005383601	0.00%	0.00%	2.07%	0.00%	0.08%	0.09%	0.72%	0.00%	1.08%	355.7684861	0.031964604	4.04%
7	0.016595727	0.000837051	0.000504374	0.004322682	0	0.005233006	0.00%	0.00%	1.66%	0.00%	0.08%	0.05%	0.74%	0.00%	1.05%	407.2173214	0.02749284	3.58%
6	0.013086257	0.000356806	7.4376E-05	0.003957615	0	0.004660488	0.00%	0.00%	1.31%	0.00%	0.04%	0.01%	0.67%	0.00%	0.94%	475.7182227	0.022135542	2.96%
5	0.008996141	5.60474E-05	0.000108282	0.003232633	0	0.003754519	0.00%	0.00%	0.90%	0.00%	0.01%	0.01%	0.55%	0.00%	0.75%	571.5026151	0.016147622	2.22%
4	0.005504653	0.000340512	0.000556074	0.002307456	0	0.002673815	0.00%	0.00%	0.55%	0.00%	0.03%	0.06%	0.39%	0.00%	0.54%	715.0333128	0.01138251	1.57%
3	0.002872345	0.00079353	0.000886266	0.00137583	0	0.001616451	0.00%	0.00%	0.29%	0.00%	0.08%	0.09%	0.23%	0.00%	0.33%	954.0568344	0.007544422	1.01%
2	0.001084747	0.000773752	0.00071879	0.000617451	0	0.000742336	0.00%	0.00%	0.11%	0.00%	0.08%	0.07%	0.11%	0.00%	0.15%	1431.812664	0.003937076	0.51%
1	0.000220512	0.000295579	0.000248127	0.000148825	0	0.000185214	0.00%	0.00%	0.02%	0.00%	0.03%	0.02%	0.03%	0.00%	0.04%	2864.498082	0.001098257	0.14%

ATTACHMENT 7

Robinson+Cole

KENNETH C. BALDWIN

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

Also admitted in Massachusetts and New York

October 28, 2022

Via Certificate of Mailing

Dean Esposito, Mayor
City of Danbury
155 Deer Hill Avenue
Danbury, CT 06810

Re: **Petition for Declaratory Ruling Filed with the Connecticut Siting Council for Modifications to its Existing Wireless Telecommunications Facility at 19 Kenosia Avenue, Danbury, Connecticut**

Dear Mayo Esposito:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Petition for Declaratory Ruling ("Petition") with the Connecticut Siting Council ("Council") seeking approval for the installation of a wireless telecommunications facility on the roof of the building at 19 Kenosia Avenue in Danbury (the "Property").

The facility will consist of the installation of eight (8) panel type antennas and eight (8) remote radio heads attached to new pipes extended approximately 10' above the existing roof. Equipment associated with the antennas will be placed on a steel platform also on the roof of the building.

A copy of the full Petition is attached for your review. Landowners whose parcels are considered to abut the Property were also sent notice of this filing along with a copy of the Petition.

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

Sincerely,

Kenneth C. Baldwin

Attachment

Robinson+Cole

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October 28, 2022

Via Certificate of Mailing

Sharon Calitro, Director of Planning and Zoning
City of Danbury
155 Deer Hill Avenue
Danbury, CT 06810

Re: **Petition for Declaratory Ruling Filed with the Connecticut Siting Council for Modifications to its Existing Wireless Telecommunications Facility at 19 Kenosia Avenue, Danbury, Connecticut**

Dear Ms. Calitro:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Petition for Declaratory Ruling ("Petition") with the Connecticut Siting Council ("Council") seeking approval for the installation of a wireless telecommunications facility on the roof of the building at 19 Kenosia Avenue in Danbury (the "Property").

The facility will consist of the installation of eight (8) panel type antennas and eight (8) remote radio heads attached to new pipes extended approximately 10' above the existing roof. Equipment associated with the antennas will be placed on a steel platform also on the roof of the building.

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Kenneth C. Baldwin

Attachment

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October 28, 2022

Via Certificate of Mailing

Sovran Acquisition Limited Partnership
6467 Main Street
Williamsville, NY 14221

Re: **Petition for Declaratory Ruling Filed with the Connecticut Siting Council for Modifications to its Existing Wireless Telecommunications Facility at 19 Kenosia Avenue, Danbury, Connecticut**

Dear Sir or Madam:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Petition for Declaratory Ruling ("Petition") with the Connecticut Siting Council ("Council") seeking approval for the installation of a wireless telecommunications facility on the roof of the building at 19 Kenosia Avenue in Danbury (the "Property").

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

Sincerely,

Kenneth C. Baldwin

Attachment

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October 28, 2022

Via Certificate of Mailing

Rudy Marconi, First Selectman
Town of Ridgefield
400 Main Street
Ridgefield, CT 06877

Re: **Petition for Declaratory Ruling Filed with the Connecticut Siting Council for Modifications to its Existing Wireless Telecommunications Facility at 19 Kenosia Avenue, Danbury, Connecticut**

Dear First Selectman Marconi:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Petition for Declaratory Ruling ("Petition") with the Connecticut Siting Council ("Council") seeking approval for the installation of a wireless telecommunications facility on the roof of the building at 19 Kenosia Avenue in Danbury (the "Property").

The facility will consist of the installation of eight (8) panel type antennas and eight (8) remote radio heads attached to new pipes extended approximately 10' above the existing roof. Equipment associated with the antennas will be placed on a steel platform also on the roof of the building.

A copy of the full Petition is attached for your review. Landowners whose parcels are considered to abut the Property were also sent notice of this filing along with a copy of the Petition.

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

Sincerely,

Kenneth C. Baldwin

Attachment

Robinson+Cole

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Also admitted in Massachusetts and New York

October 28, 2022

Via Certificate of Mailing

Alice Dew, Planning and Zoning Director
Town of Ridgefield
400 Main Street
Ridgefield, CT 06877

Re: **Petition for Declaratory Ruling Filed with the Connecticut Siting Council for Modifications to its Existing Wireless Telecommunications Facility at 19 Kenosia Avenue, Danbury, Connecticut**

Dear Ms. Dew:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Petition for Declaratory Ruling ("Petition") with the Connecticut Siting Council ("Council") seeking approval for the installation of a wireless telecommunications facility on the roof of the building at 19 Kenosia Avenue in Danbury (the "Property").

The facility will consist of the installation of eight (8) panel type antennas and eight (8) remote radio heads attached to new pipes extended approximately 10' above the existing roof. Equipment associated with the antennas will be placed on a steel platform also on the roof of the building.

A copy of the full Petition is attached for your review. Landowners whose parcels are considered to abut the Property were also sent notice of this filing along with a copy of the Petition.

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

Sincerely,

Kenneth C. Baldwin

Attachment

ATTACHMENT 8

Robinson+Cole

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October 28, 2022

Via Certificate of Mailing

«Name_and_Address»

Re: **Petition for Declaratory Ruling Filed with the Connecticut Siting Council for Modifications to an Existing Wireless Telecommunications Facility at 19 Kenosia Avenue, Danbury, Connecticut**

Dear «Salutation»:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Petition for Declaratory Ruling ("Petition") with the Connecticut Siting Council ("Council") seeking approval for the installation of a wireless telecommunications facility on the roof of the building at 19 Kenosia Avenue in Danbury (the "Property").

The facility will consist of the installation of eight (8) panel type antennas and eight (8) remote radio heads attached to new pipes extended approximately 10' above the existing roof. Equipment associated with the antennas will be placed on a steel platform also on the roof of the building.

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

Sincerely,

Kenneth C. Baldwin

Attachment

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

ABUTTING PROPERTY OWNERS

19 KENOSIA AVENUE
DANBURY, CONNECTICUT

	Property Address	Owner's and Mailing Address
1.	15 Kenosia Avenue	Sovran Acquisition Limited Partnership 6467 Main Street Williamsville, NY 14221
2.	40 Apple Ridge	Delaware MMP Realty LLC c/o Cartus P.O. Box 381 Danbury, CT 06813
3.	Apple Ridge	Commerce Park Realty LLC c/o Hologic Inc. – Acct Payable 35 Crosby Drive Medford, MA 01730
4.	Apple Ridge	Commerce Park Realty LLC 7 Finance Drive Danbury, CT 06810
5.	Apple Ridge	Melvyn Powers 7 Finance Drive Danbury, CT 06810
6.	Kenosia Avenue	Melvyn and Mary Powers d/b/a M&M Realty P.O. Box 381 Danbury, CT 06813
7.	Kenosia Avenue	Sheriff LLC 27 Kenosia Avenue Danbury, CT 06810
8.	24 Kenosia Avenue	PN LLC 24 Kenosia Avenue Danbury, CT 06810

	Property Address	Owner's and Mailing Address
9.	Kenosia Avenue	36 Kenosia Avenue Realty LLC c/o Pyramid Real Estate Group P.O. Box 37214 Charlotte, NC 28237-7214
10.	Kenosia Avenue	Belmi Management Partnership c/o Elio Tropeano 17 Pilgrim Hill Road Ridgefield, CT 06877
11.	Kenosia Avenue	36 Kenosia Avenue LLC 154 White Street Danbury, CT 06810
12.	2 Precision Road	TWF Associates LLC 29 Thornwood Road Stamford, CT 06903