

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

Also admitted in Massachusetts
and New York

September 24, 2024

Via Electronic and U.S. Mail

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

Re: **Notice of Exempt Modification – Facility Modification
109 Federal Road, Danbury, Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains an existing wireless telecommunications facility at the above-referenced property address (the “Property”). The facility consists of antennas on an existing rooftop tower and associated equipment located on a lower portion of the building roof. The tower and antennas are concealed behind a faux chimney structure. The existing telecommunications facility was approved by the Siting Council (“Council”) in April of 2015 (Petition No. 1149). A copy of the Council’s Petition No. 1149 Decision letter and Staff Report is included in Attachment 1.

Cellco now intends to modify its facility by removing two (2) antennas and four (4) remote radio heads (“RRHs”) and installing two (2) new antennas and two (2) RRHs on the existing antenna mounting structure. To accommodate the new antenna configuration the faux chimney enclosure will be enlarged to six feet by six feet. The height of the antennas and chimney will remain the same. A set of project plans showing Cellco’s proposed facility modifications and the specifications for Cellco’s new antennas and RRHs are included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Danbury’s Chief Elected Official and Land Use Officer. A copy of this letter is being sent to the owner of the Property.

The planned modifications to the facility fall squarely within those activities explicitly

30424454-v1

Melanie A. Bachman, Esq.

September 24, 2024

Page 2

provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure. Cellco's new antennas and RRHs will be installed at the same height on the rooftop tower.
2. The proposed modifications will not require the extension of the project site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Included in Attachment 3 is a far field approximation table demonstrating that the proposed modified facility will comply with the FCC safety standards. The modified facility will be capable of providing Cellco's 5G wireless service.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. According to the attached Structural Analysis Report ("SA"), the existing antenna frame and host building can support Cellco's proposed modifications. A copy of the SA is included in Attachment 4.

A copy of the parcel map and Property owner information is included in Attachment 5. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 6.

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,



Kenneth C. Baldwin

Enclosures

Copy to:

Roberto Alves, Mayor
Waleed Albakry, Planning Director
109 Federal Road, LLC, Property Owner
Aleksey Tyurin

ATTACHMENT 1



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

CERTIFIED MAIL RETURN RECEIPT REQUESTED

April 20, 2015

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **PETITION NO. 1149** - Cellco Partnership d/b/a Verizon Wireless petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a small cell telecommunications facility on the roof of an existing commercial building located at 109 Federal Road, Danbury, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on April 16, 2015, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need with the following conditions:

- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by the Petitioner shall be removed within 60 days of the date the antenna ceased to function;
- If the facility ceases to provide wireless services for a period of one year the Petitioner shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council within 90 days from the one year period of cessation of service. The Petitioner may submit a written request to the Council for an extension of the 90 day period not later than 60 days prior to the expiration of the 90 day period; and
- This Declaratory Ruling may be transferred or partially transferred, provided both the facility owner/operator/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. The Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer. Both the facility owner/operator/transferor and the transferee shall provide the Council with a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated March 18, 2015.

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

Very truly yours,



Robert Stein
Chairman

RS/RM/lm

Enclosure: Staff Report dated April 16, 2015

- c: The Honorable Mark D. Boughton, Mayor, City of Danbury
- Dennis Elpern, City Planner, City of Danbury
- The Honorable William N. Tinsley, First Selectman, Town of Brookfield
- Katherine Daniel, Community Development Director, Town of Brookfield
- Alice Dew, Zoning Enforcement Officer, Town of Brookfield
- 109 Federal Road, LLC



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

Petition No. 1149

Cellco Partnership d/b/a Verizon Wireless

109 Federal Road, Danbury

Staff Report

April 16, 2015

On March 18, 2015, the Connecticut Siting Council (Council) received a petition from Cellco Partnership d/b/a Verizon Wireless (Cellco) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a small cell telecommunications facility on a commercial building at 109 Federal Road in Danbury. Cellco seeks to improve 1900 MHz and 2100 MHz services in the surrounding area. Two adjacent Cellco sites that provide wireless service to this commercial and heavily trafficked area of Route 7 are beyond their capacity limits. The proposed site would alleviate capacity issues at these two sites as well as provide some coverage to existing service gaps in the area.

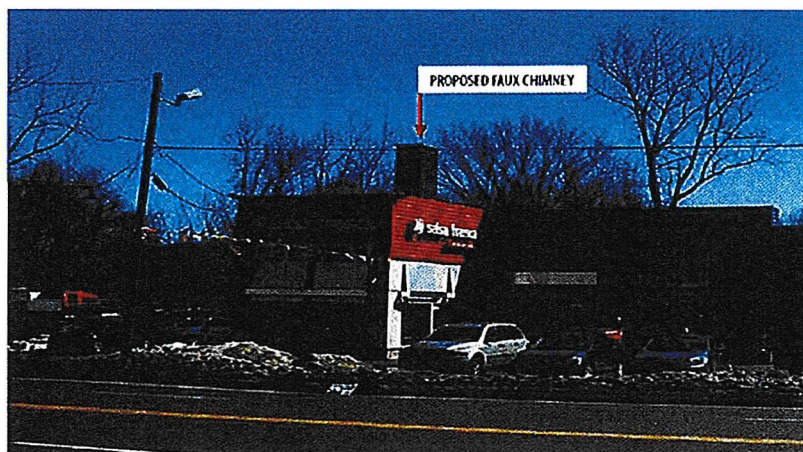
Cellco would install four small cell antennas with four remote radio heads on two pipe masts attached to the roof of the building. The masts and antennas would be concealed within a faux chimney structure extending 10.5 feet above the roof.

Two equipment cabinets would be installed on a lower roof of the building. Power and telephone service would be connected to existing service inside the building.

The maximum worst-case power density would be 69.5 percent of the applicable limit established by the Federal Communications Commission.

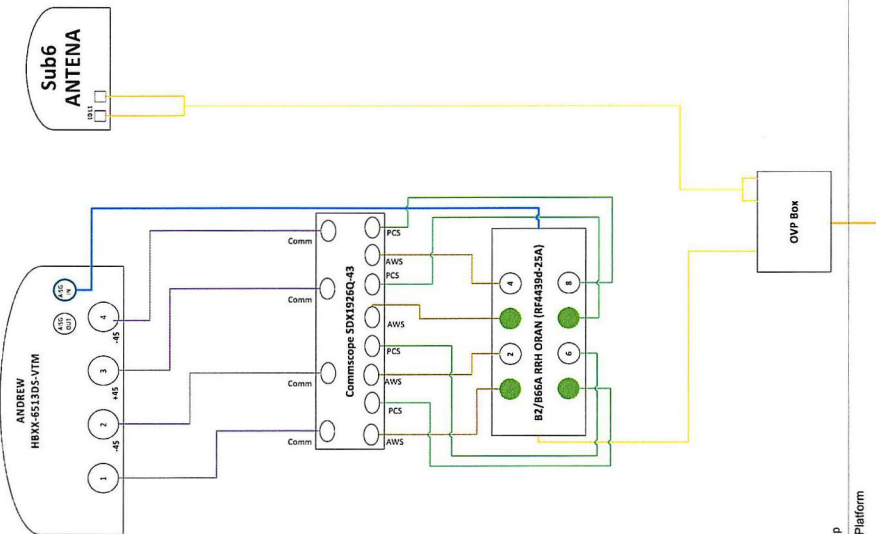
The visual impact of the project is expected to be negligible as the faux chimney appears similar to the building structure. The building is located in a commercial zone. The small cell would not be an aviation hazard.

Notice was provided to the City of Danbury and the Town of Brookfield (within 2,500 feet), the property owner, and abutting property owners. No comments have been received to date.



CONNECTICUT SITING COUNCIL
Affirmative Action / Equal Opportunity Employer

ATTACHMENT 2



- FLAMINGO DIAGRAM NOTES:**
1. PORTS 1 & 2 ARE FOR LOW BAND (668-686 MHz).
 2. PORTS 3 & 4 ARE FOR HIGH BAND (1834-2350 MHz).
 3. SWAPT BAND THE (LEFT) IS THROUGH INTERNAL PORTS 1 & 3 (1 FOR LOW BAND & 3 FOR HIGH BAND).
 4. ONLY 10 DB LOSS ALLOWED IN THE RADIUMS AND IF IT IS NOT HADN'T BEEN SET TO ENOUGH TO CONTROL ALL RET MOTORS.
 5. NOT ALL RET PORTS ARE NEEDED TO CONTROL RET. ONLY GREEN PORT CONNECTION TO GREEN PORT WILL CONTROL RET.
-
- RET
- RET SIGNAL PASS FOR RET
(PORT THAT WILL CONTROL RET)

- FLUORESCENCE DIAGRAM COMMENTS:**
- A. DIAGRAMS SHOW ANTENNA PORT CONFIGURATIONS AS VIEWED FROM BELOW ANTENNAS.
 - B. ANTENNA POSITIONS ARE INDICATED AS VIEWED FROM IN FRONT OF ANTENNAS.
 - C. CAP AND WEATHERPROOF UNUSED ANTENNA PORTS.
 - D. ALL FLUORESCENCE DIAGRAM COLORS ARE RELEVANT EXCEPT FOR ASES AND INTERSTIC CABLE (FOR THE COAX COLORS, FOLLOW COAX COLORS GUIDE ABOVE).

Roof/Top	Equipment Platform
----------	--------------------

NOTES:

1. INFO
2. THIS PREP/EQUIP

1. INFORMATION SHOWN HEREIN IS FOR USE BY VERIZON WIRELESS EQUIPMENT OPERATIONS.
2. THIS B.O.M. DRAWING IS BASED OFF FIELD MEASUREMENTS, FACILITY UPGRADE DESIGN DRAWINGS PREPARED BY CENTEX ENGINEERING (REV.3 DATED: 08.26.24), & VERIZON WIRELESS RF ANTENNA EQUIPMENT RECOMMENDATION (DATED 10.09.23).

BILL OF MATERIALS		ANTENNA
TECHNOLOGY	QUANTITY	SAMSUNG MODEL VTE413-77A ANTENNA
56	2	
CABLES	QUANTITY	COMMENTS
---	---	---
RG405	QUANTITY	COMMENTS
UTL PCS 1900	2	SAMSUNG MODEL B2766A RHN ORAN (RHN-4300-33A)
UTL AWS 2100	2	INTEGRATED INTO B2767-77A ANTENNA
56		
DIPLEXERS	QUANTITY	COMMENTS
FOR PCS 1900 ANTENNA	2	MODEL S0419260-43
FOR AWS 2100 ANTENNA		
DUP DUPLEXERS	QUANTITY	COMMENTS
ROOFTOP DUP	0	---
ANTENNA MOUNT	QUANTITY	COMMENTS
S30C-8P-SIDE MOUNTING KIT	0	---

[illegible]

Collico Partnership d/b/a Verizon Wireless	DANDURRY 10 CT 1009 FEDERAL ROAD, DANDURRY, CT 06811	DATE: 01/07/21 SCALES: AS NOTED JOB NO.: 20150007	RF BILL OF MATERIALS	B-1	Sheet No. 3 of 3
--	--	---	-------------------------	-----	------------------

JUL 14, 2015 01:07
ANTENNA SECTOR

DATE:	01/07/21
-------	----------

8

Disc

5

EXISTING ANTENNA



—0—

$$\frac{1}{1000}$$

BROBROED ANTENNIA



-0-

10

JUL 14, 2015 01:07
ANTENNA SECTOR

DATE:	01/07/21
-------	----------

8

Disc

5

1. ANTENNA CONCEALMENT ENCLOSURE (BT ENCLOSURE MANUFACTURED) TO BE FINISHED WITH CONTOUR PANELS TO MATCH COLOR AND APPEARANCE OF THE EXISTING CHIMNEYS.
2. FINAL PANEL DIMENSIONS TO BE COORDINATED WITH ANTENNA CONCEALMENT ENCLOSURE MANUFACTURER.
3. TWO PANELS ON FOUR CHIMNEY ANTENNA CONCEALMENT ENCLOSURE SHALL BE DESIGNED TO HAVE REMOVABLE PANELS (ON THE INSIDE SIDES OF THE ENCLOSURE FOR ACCESS TO VERIZON WIRELESS EQUIPMENT FOR MAINTENANCE AND UPGRADE PURPOSES).

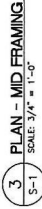


4 PROPOSED ANTENNA DETAIL

[illegible]

1. VERIFY ALL DIMENSIONS, ELEVATIONS, EXISTING UTILITY LOCATIONS, AND EXISTING ELEVATIONS. VERIFY ALL DIMENSIONS, ELEVATIONS, EXISTING UTILITY LOCATIONS, AND EXISTING ELEVATIONS. VERIFY ALL DIMENSIONS, ELEVATIONS, EXISTING UTILITY LOCATIONS, AND EXISTING ELEVATIONS.
2. (4"x-6") INDICATES ELEVATION RELATIVE TO GRADE ELEVATION $\pm 0'-0"$.
3. REF. CIVIL DRAWINGS FOR ANTENNA LAYOUT AND MOUNT ASSEMBLY CONFIGURATIONS.

1. ANTENNA CONCEALMENT ENCLOSURE PANELS TO BE DESIGNED BY ANTENNA CONCEALMENT MANUFACTURER AND SUBMITTED FOR REVIEW. REFERENCE SHEET N-1 FOR DESIGN REQUIREMENTS.
2. REFERENCE 'DESIGN BASIS' ON SHEET N-1 FOR CONCEALMENT ENCLOSURE LOADING REQUIREMENTS.
3. ENGINEERED PANELS SHALL TAKE INTO CONSIDERATION ALL FRAMING AND FASTENING DETAILED WITHIN THE CONTRACT DOCUMENTS. IF ADDITIONAL FRAMING OR FASTENING IS REQUIRED, THE MANUFACTURER SHALL CONTACT THE ENGINEER OF RECORD IMMEDIATELY.

[illegible]

ENTEK
Engineering
"Innovative Solutions"

(408) 488-0580
(408) 488-8587 Fax
1400 North Brandywine Road
Irvine, CT 06405
www.enteke.com

Partnership d/b/a Verizon Wireless

DA Cellico Part	DATE:	01/07/21
	SCALE:	AS NOTED
	JOB NO.	20150.07

RF ENCLOSURE MOD
FRAMING PLANS AND
DETAILS

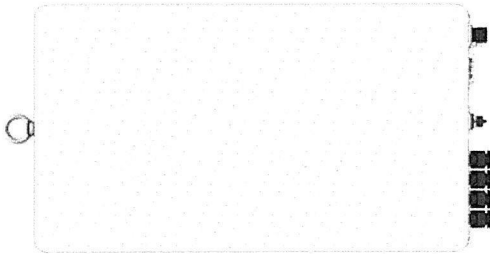
S-1

C-band 64T64R

Gen 2

SAMSUNG

Gen 2 : Higher conducted power radio with reduced size/volume/weight vs Gen 1 and also SOC embedded for flexibility to support new features



※ Preliminary Design: External appearance and mechanical design can be subject to change

Gen 2. 64T64R C-band MMU Dimensions		
Size (W×H×D)	400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)	
Weight	26kg (57.3 lb)	

Item	Gen 2 64T64R (MT6413-77A)
Air Technology	NR n77/TDD
Frequency	3700 ~ 3980 MHz
IBW	200 MHz
OBW	200 MHz
Carrier Bandwidth	20MHz ready/40/60/80/100 MHz
# of Carriers	2 carriers
Layer	DL : 16L, UL : 16RX (8L)
RF Chain	64T64R
Antenna Configuration	4V16H with 192 AE
EIRP	80.5 dBm @320W (55 dBm + 25.5 dBi)
Conductive Power	320W
Spectrum Analyzer	TX/RX support
RX Sensitivity	Typical -97.8dBm @1Rx, 18.36MHz with 30kHz 51RBs
Modulation	DL 256QAM support, (DL 1024QAM with 1~2dB power back-off)
Function Split	DL/UL option 7-2x
Input Power	-48 VDC (-38 VDC to -57 VDC)
Power Consumption	1.287W (100% load, room temp.)
Size (WHD)	400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)
Volume	41.1L
Weight	26kg (57.3 lb)
Operating Temperature	-40°C ~ 55°C (w/o solar load)
Cooling	Natural convection
	3GPP 38.104
Unwanted Emission	FCC 47 CFR 27.53 : < -13dBm/MHz < -40 dBm/MHz @ above 4 GHz < -50 dBm /MHz @ 4,040 ~ 4,050 MHz < -60 dBm /MHz @ above 4,050 MHz
Optic Interface	15km, 4 ports (25Gbps x 4), SFP28, single mode, Bi-di (Option: Duplex)
Mounting Options	Pole, wall
NB-IoT	Not support
External Alarm	4RX
Fronthaul Interface	eCPRI

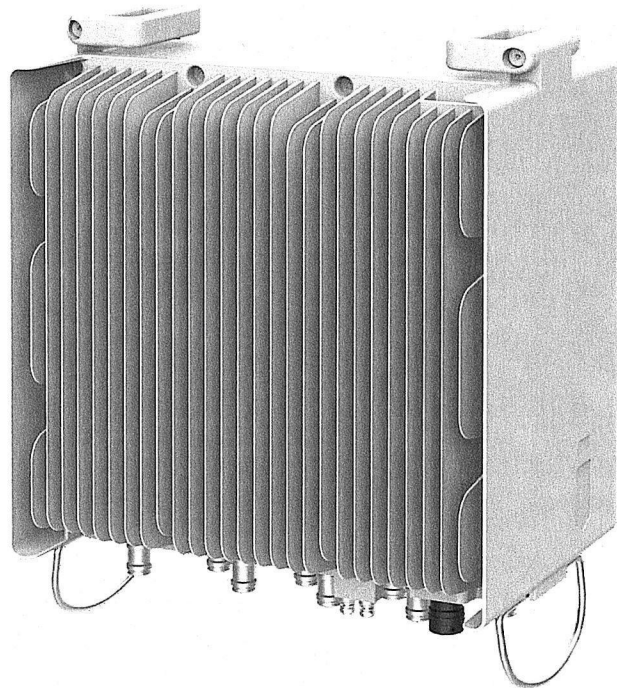
SAMSUNG

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

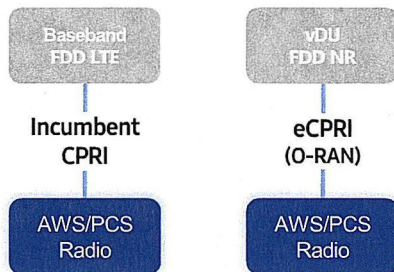


Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

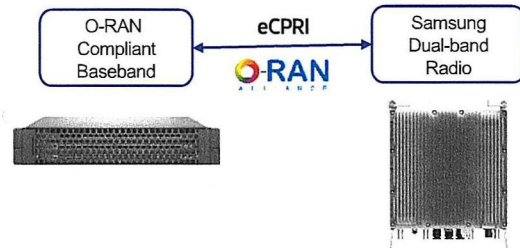
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



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.

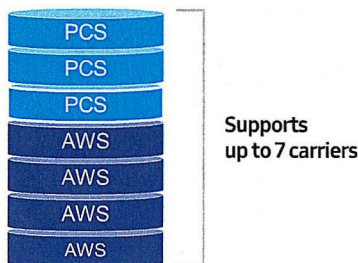
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

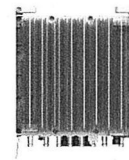
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

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.



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

ATTACHMENT 3

Location	Danbury 10 GT		
Date	9/19/2024		
Band	C-Band	AWS	PCS
Operating Frequency (MHz)	3,700	2,145	1,970
General Population MPE (mW/cm ²)	1	1	1
ERP Per Transmitter (Watts)	34,473	735	685
Number of Transmitters	2	4	4
Antenna Centerline (CL) (feet)	31.5	32.5	32.5
Total ERP (Watts)	68,945	2,938	2,742
Total ERP (dBm)	78	65	64
Maximum % of General Population Limit	48.2%		

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.1310 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz

mW/cm² = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used, including the following assumptions:

1. closest accessible point is distance from antenna to base of pole;
2. continuous transmission from all available channels at full power for indefinite time period;
3. calculation takes into account a point of interest of 2m or 6.56ft

RF Exposure 6.56ft Above Ground Level Far Field Formula (per FCC OET65)

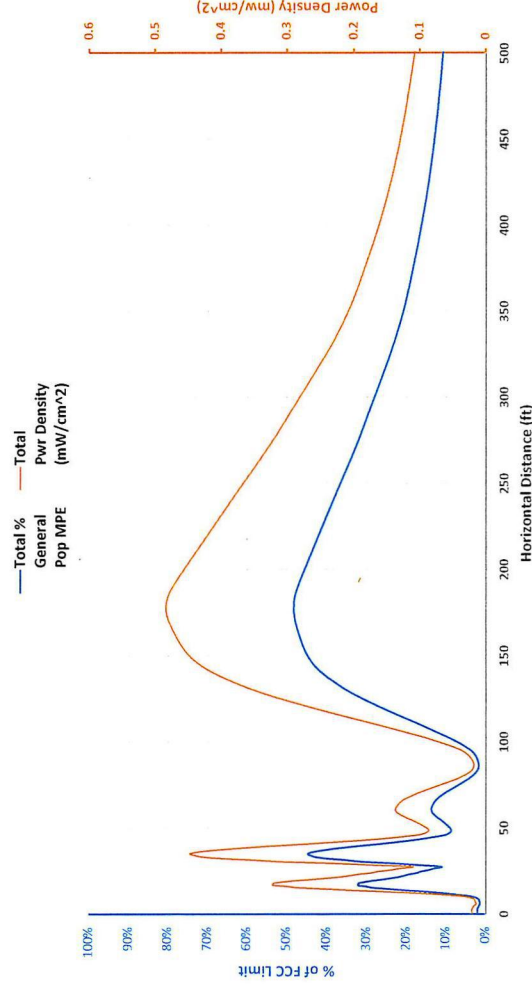
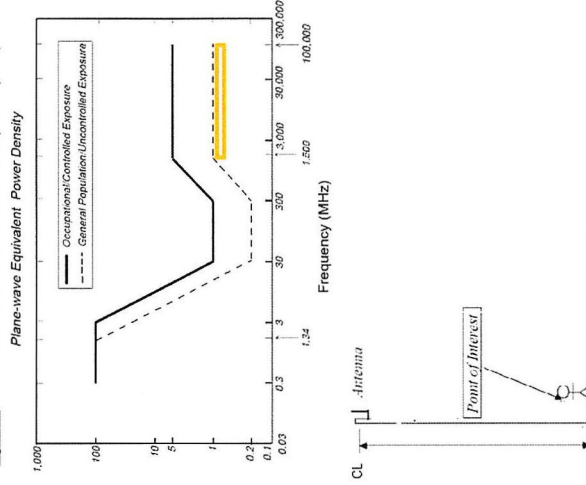


Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)



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	39GHz	28GHz	C-Band	AWS	PCS			
90	0.018644628	0.001204929	0.000414921	0.00%	0.00%	1.86%	0.00%	0.12%	0.00%	0.020264478	2.03%
89	0.018638691	0.001354671	0.000437358	0.00%	0.00%	1.86%	0.00%	0.14%	0.00%	0.02043072	2.04%
88	0.018620889	0.001480642	0.000462864	0.00%	0.00%	1.86%	0.00%	0.15%	0.00%	0.020564395	2.06%
87	0.018591247	0.001602546	0.000475132	0.00%	0.00%	1.86%	0.00%	0.16%	0.00%	0.020668924	2.07%
86	0.018549805	0.001794379	0.000487436	0.00%	0.00%	1.85%	0.00%	0.18%	0.00%	0.02083162	2.08%
85	0.018075586	0.001814517	0.000470722	0.00%	0.00%	1.81%	0.00%	0.18%	0.00%	0.020360825	2.04%
84	0.017602201	0.002033995	0.000525235	0.00%	0.00%	1.76%	0.00%	0.20%	0.00%	0.020161431	2.02%
83	0.017130195	0.002156155	0.000530498	0.00%	0.00%	1.71%	0.00%	0.22%	0.00%	0.019816848	1.98%
82	0.016660093	0.002161475	0.000520899	0.00%	0.00%	1.67%	0.00%	0.22%	0.00%	0.019342467	1.93%
81	0.015463621	0.002304406	0.000586898	0.00%	0.00%	1.55%	0.00%	0.23%	0.00%	0.018354925	1.84%
80	0.014343738	0.002410489	0.00063549	0.00%	0.00%	1.43%	0.00%	0.24%	0.00%	0.017389717	1.74%
79	0.012993598	0.002508343	0.00062735	0.00%	0.00%	1.30%	0.00%	0.25%	0.00%	0.016127676	1.61%
78	0.011495048	0.002675484	0.000694074	0.00%	0.00%	1.15%	0.00%	0.27%	0.00%	0.014864606	1.49%
77	0.01089419	0.002812868	0.000748433	0.00%	0.00%	1.08%	0.00%	0.28%	0.00%	0.01445072	1.45%
76	0.010794666	0.002822446	0.000936762	0.00%	0.00%	1.08%	0.00%	0.28%	0.00%	0.014553874	1.46%
75	0.010494841	0.003081973	0.001008863	0.00%	0.00%	1.04%	0.00%	0.31%	0.00%	0.015033477	1.50%
74	0.011085139	0.003131527	0.001207145	0.00%	0.00%	1.11%	0.00%	0.31%	0.00%	0.015423812	1.54%
73	0.011483221	0.003201878	0.001353344	0.00%	0.00%	1.15%	0.00%	0.32%	0.00%	0.016038443	1.60%

[illegible]

ATTACHMENT 4

Structural Analysis Report

Antenna Frame & Host Building

*Proposed Verizon
Antenna Upgrade*

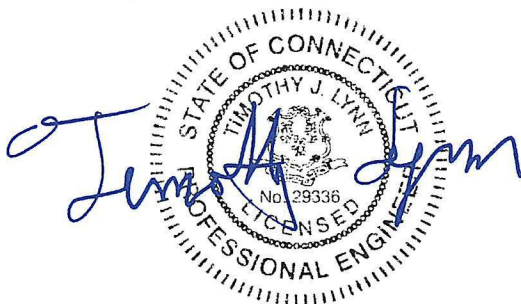
Site Ref: Danbury 10

*109 Federal Road
Danbury, CT*

CEN TEK Project No. 20150.07

~~Date: January 19, 2021~~

Rev 5: October 10, 2023



Prepared for:
Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

Table of Contents

SECTION 1 - REPORT

- INTRODUCTION
- PRIMARY ASSUMPTIONS USED IN THE ANALYSIS
- ANTENNA AND EQUIPMENT INSTALLATION SUMMARY
- ANALYSIS
- DESIGN LOADING
- RESULTS
- CONCLUSION

SECTION 2 – CONDITIONS & SOFTWARE

- STANDARD ENGINEERING CONDITIONS
- GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

SECTION 3 – CALCULATIONS

- WIND LOAD CALCULATION
- RISA 3D OUTPUT REPORT

SECTION 4 – REFERENCE MATERIAL

- RF DATA SHEET
- CONSTRUCTION DOCUMENTS PREPARED BY CENTEK
ENGINEERING REV.0 DATED JULY 10 2015 (not included)
- STEEL SHOP DRAWINGS PREPARED BY PND WELDING/GoodFAB
LLC DATED OCTOBER, 6 2016 (not included)

I n t r o d u c t i o n

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

The antennas are mounted on within a proposed replacement RF transparent screen enclosure attached to the roof top of the host building.

The mounts member sizes information and roof framing information were obtained from construction documents as prepared by Centek Engineering Rev.0, dated July 10, 2015, and steel shop drawings as prepared by PND WELDING/GoodFAB LLC dated October, 6 2016. Proposed/existing antenna and appurtenance information was taken from a RF data sheet dated 11/13/2020 provided by Verizon Wireless.

P r i m a r y A s s u m p t i o n s U s e d i n t h e A n a l y s i s

- The host structure's theoretical capacity not including any assessment of the condition of the host structure.
- The existing 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) HBXX-6513DS Antenna (1) B25-RRH-4x30 (1) B4 RRH 2x60 (1) HBXX-6513DS Antenna (1) Andrew HBXX-6513DS-VTM Antenna (1) Samsung B2/B66A RF4439d-25A (1) Commscope SDX1926Q-43 diplexer (1) Samsung MT6413-77A Antenna/RRU	31.9-ft	FRP enclosure attached to building rooftop
Gamma Sector	(1) HBXX-6513DS Antenna (1) B25-RRH-4x30 (1) B4 RRH 2x60 (1) HBXX-6513DS Antenna (1) Andrew HBXX-6513DS-VTM Antenna (1) Samsung B2/B66A RF4439d-25A (1) Commscope SDX1926Q-43 diplexer (1) Samsung MT6413-77A Antenna/RRU	31.9-ft	FRP enclosure attached to building rooftop

~~Equipment~~ – Indicates equipment to be removed.

Equipment – Indicates equipment to be installed.

Analysis

The existing antenna frames 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	<i>Appendix N of the 2022 CT State Building Code</i>
Risk Category:	II	<i>2021 IBC; Table 1604.05</i>
Exposure Category:	Surface Roughness B	<i>ASCE 7-16; Section 26.7.2</i>
Dead Load	Equipment and framing self-weight	<i>Identified within SAR design calculations</i>

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*
4. AWS D1.1 – 00, *Structural Welding Code – Steel*.
5. AF&PA-12, *Span Tables for Joists and Rafters*.

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 frame were found to **be within allowable** limits.

Sector	Component	Stress Ratio (percentage of capacity)	Result
All Sectors	L5x5x3/8 FRP	96.5%	PASS
	Pipe 2.5 X-Strong	28.3%	PASS
	Pipe 3.5 X-Strong	27.2%	PASS
	(3) 2x8	73.4%	PASS

Conclusion

This analysis shows that the subject antenna frame and host building **HAVE SUFFICIENT CAPACITY** to support the proposed modified antenna configuration.

The analysis is based, in part, on the information provided to this office by Verizon. 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:



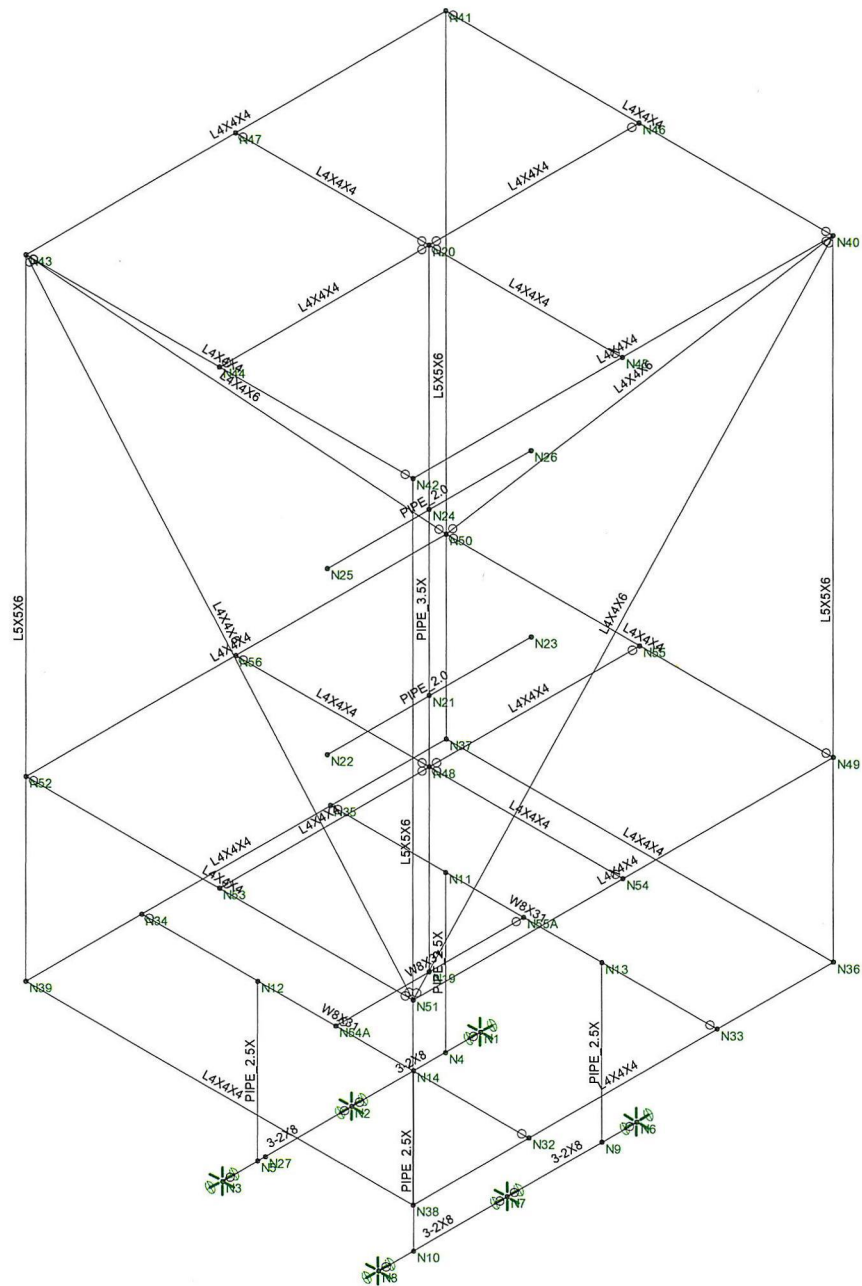
Timothy J. Lynn, PE
Structural Engineer



*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.



Envelope Only Solution

Centek Engineering

TJL

20150.07

Danbury 10 CT
Member Framing

Mar 5, 2021 at 7:58 AM

Antenna Frame.r3d

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	12
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): ASD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 14th(360-10): ASD
Cold Formed Steel Code	AISI S100-10: ASD
Wood Code	AWC NDS-12: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-11
Masonry Code	ACI 530-11: ASD
Aluminum Code	AA ADM1-10: ASD - Building
Stainless Steel Code	AISC 14th(360-10): ASD
Adjust Stiffness?	Yes(Iterative)

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parame Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	4
Cd X	4
Rho Z	1
Rho X	1
Footing Overturning Safety Factor	1
Optimize for OTM/Sliding	No
Check Concrete Bearing	No
Footing Concrete Weight (k/ft^3)	0
Footing Concrete f'c (ksi)	4
Footing Concrete Ec (ksi)	3644
Lambda	1
Footing Steel fy (ksi)	60
Minimum Steel	0.0018
Maximum Steel	0.0075
Footing Top Bar	#3
Footing Top Bar Cover (in)	2
Footing Bottom Bar	#3
Footing Bottom Bar Cover (in)	3.5
Pedestal Bar	#3
Pedestal Bar Cover (in)	1.5
Pedestal Ties	#3

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\...	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	58	1.2
3	A992	29000	11154	.3	.65	.49	50	1.1	58	1.2
4	A500 Gr.42	29000	11154	.3	.65	.49	42	1.3	58	1.1
5	A500 Gr.46	29000	11154	.3	.65	.49	46	1.2	58	1.1
6	FRP	2800	450	.35	.44	.12	10	1.5	58	1.2
7	A53 Grade B	29000	11154	.3	.65	.49	35	1.5	58	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rul...A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Base_Pipe_2....	PIPE 2.5X	Column	Pipe	A53 Grade B	Typical	2.1	1.83	3.66
2	Pipe 3.5 XStrong	PIPE 3.5X	Column	Pipe	A53 Grade B	Typical	3.43	5.94	11.9
3	L3X3X3/8	L4X4X6	Column	Single Angle	FRP	Typical	2.86	4.32	.141
4	L5X5X3/8 V	L5X5X6	Column	Single Angle	FRP	Typical	3.65	8.76	.183
5	Pipe 2.0 STD	PIPE 2.0	Column	Pipe	A53 Grade B	Typical	1.02	.627	1.25
6	L4x4x1/4	L4X4X4	Beam	Single Angle	A36 Gr.36	Typical	1.93	3	.044
7	W8	W8X31	Beam	Wide Flange	A992	Typical	9.13	37.1	110

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[...Lcomp botf...	L-torq...	Kyy	Kzz	Cb	Funci...
1	M7	Mount Base_Pipe_2...	2.417								Lateral
2	M8	Mount Base_Pipe_2...	2.417								Lateral
3	M9	Mount Base_Pipe_2...	2.417								Lateral
4	M10	Mount Base_Pipe_2...	2.417								Lateral
5	M17	Pipe 3.5 XStrong	9.75								Lateral
6	M26	L5X5X3/8 V	9.75								Lateral
7	M27	L5X5X3/8 V	9.75								Lateral
8	M28	L5X5X3/8 V	9.75								Lateral
9	M29	L5X5X3/8 V	9.75								Lateral
10	M30	L4x4x1/4	6								Lateral
11	M31	L4x4x1/4	6.517								Lateral
12	M32	L4x4x1/4	6								Lateral
13	M33	L4x4x1/4	6.517								Lateral
14	M34	L4x4x1/4	3.258								Lateral
15	M35	L4x4x1/4	2.998								Lateral
16	M36	L4x4x1/4	3.258								Lateral
17	M37	L4x4x1/4	3.002								Lateral
18	M38	Pipe 2.0 STD	3.167								Lateral
19	M39	Pipe 2.0 STD	3.167								Lateral
20	M40	L4x4x1/4	6.517			Lbyy					Lateral
21	M41	L4x4x1/4	6			Lbyy					Lateral
22	M42	L4x4x1/4	6.517			Lbyy					Lateral
23	M43	L4x4x1/4	6			Lbyy					Lateral
24	M36A	L4x4x1/4	6								Lateral
25	M37A	L4x4x1/4	6.517								Lateral
26	M38B	L4x4x1/4	6								Lateral
27	M39B	L4x4x1/4	6.517								Lateral
28	M40A	L4x4x1/4	3.258								Lateral
29	M41A	L4x4x1/4	2.998								Lateral
30	M42A	L4x4x1/4	3.258								Lateral
31	M43A	L4x4x1/4	3.002								Lateral
32	M40B	W8	6			Lbyy					Lateral
33	M41B	W8	6			Lbyy					Lateral
34	M42B	W8	2.917			Lbyy					Lateral
35	M39A	L3X3X3/8	9.22								Lateral
36	M40C	L3X3X3/8	9.22								Lateral
37	M41C	L3X3X3/8	9.564								Lateral
38	M42C	L3X3X3/8	9.564								Lateral

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(...)	Section/Shape	Type	Design List	Material	Design R...
1	M3	N3	N2			Mount Base- (3-2x8)	Beam	Rectangular	DF	Typical
2	M4	N2	N1			Mount Base- (3-2x8)	Beam	Rectangular	DF	Typical
3	M5	N8	N7			Mount Base- (3-2x8)	Beam	Rectangular	DF	Typical
4	M6	N7	N6			Mount Base- (3-2x8)	Beam	Rectangular	DF	Typical
5	M7	N5	N12			Mount Base_Pipe_2.5 XStr.	Column	Pipe	A53 Grade B	Typical
6	M8	N10	N14			Mount Base_Pipe_2.5 XStr.	Column	Pipe	A53 Grade B	Typical
7	M9	N4	N11			Mount Base_Pipe_2.5 XStr.	Column	Pipe	A53 Grade B	Typical
8	M10	N9	N13			Mount Base_Pipe_2.5 XStr.	Column	Pipe	A53 Grade B	Typical
9	M17	N19	N20			Pipe 3.5 XStrong	Column	Pipe	A53 Grade B	Typical
10	M26	N39	N43		180	L5X5X3/8 V	Column	Single Angle	FRP	Typical
11	M27	N36	N40			L5X5X3/8 V	Column	Single Angle	FRP	Typical
12	M28	N41	N37		180	L5X5X3/8 V	Column	Single Angle	FRP	Typical
13	M29	N38	N42		270	L5X5X3/8 V	Column	Single Angle	FRP	Typical
14	M30	N43	N42		180	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
15	M31	N42	N40		180	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
16	M32	N40	N41		180	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
17	M33	N41	N43		180	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
18	M34	N44	N20		180	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
19	M35	N20	N45		180	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
20	M36	N20	N46		90	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
21	M37	N20	N47		180	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
22	M38	N22	N23			Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
23	M39	N25	N26			Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
24	M40	N39	N37			L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
25	M41	N37	N36			L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
26	M42	N36	N38			L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
27	M43	N38	N39			L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
28	M36A	N52	N51		270	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
29	M37A	N51	N49		270	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
30	M38B	N49	N50		270	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
31	M39B	N50	N52		270	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
32	M40A	N53	N48		180	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
33	M41A	N48	N54		180	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
34	M42A	N48	N55		90	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
35	M43A	N48	N56		180	L4x4x1/4	Beam	Single Angle	A36 Gr.36	Typical
36	M40B	N35	N33			W8	Beam	Wide Flange	A992	Typical
37	M41B	N34	N32			W8	Beam	Wide Flange	A992	Typical
38	M42B	N54A	N55A			W8	Beam	Wide Flange	A992	Typical
39	M39A	N50	N40			L3X3X3/8	Column	Single Angle	FRP	Typical
40	M40C	N51	N43			L3X3X3/8	Column	Single Angle	FRP	Typical
41	M41C	N40	N51			L3X3X3/8	Column	Single Angle	FRP	Typical
42	M42C	N43	N50			L3X3X3/8	Column	Single Angle	FRP	Typical

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Dia...
1	N1	0	0	0	0	
2	N2	0	0	2	0	
3	N3	0	0	4	0	
4	N4	0	0	0.541667	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Dia...
5	N5	0	0	3.458333	0	
6	N6	2.416667	0	0	0	
7	N7	2.416667	0	2	0	
8	N8	2.416667	0	4	0	
9	N9	2.416667	0	0.541667	0	
10	N10	2.416667	0	3.458333	0	
11	N11	0	2.416667	0.541667	0	
12	N12	0	2.416667	3.458333	0	
13	N13	2.416667	2.416667	0.541667	0	
14	N14	2.416667	2.416667	3.458333	0	
15	N19	1.208333	2.416667	2	0	
16	N20	1.208333	12.166667	2	0	
17	N21	1.208333	6.125	2	0	
18	N22	1.208333	6.125	3.583333	0	
19	N23	1.208333	6.125	0.416667	0	
20	N24	1.208333	8.625	2	0	
21	N25	1.208333	8.625	3.583333	0	
22	N26	1.208333	8.625	0.416667	0	
23	N27	0	0	3.333333	0	
24	N32	4.206667	2.416667	3.458333	0	
25	N33	4.206667	2.416667	0.541667	0	
26	N34	-1.793333	2.416667	3.458333	0	
27	N35	-1.793333	2.416667	0.541667	0	
28	N36	4.206667	2.416667	-1.258333	0	
29	N37	-1.793333	2.416667	-1.258333	0	
30	N38	4.206667	2.416667	5.258333	0	
31	N39	-1.793333	2.416667	5.258333	0	
32	N40	4.206667	12.166667	-1.258333	0	
33	N41	-1.793333	12.166667	-1.258333	0	
34	N42	4.206667	12.166667	5.258333	0	
35	N43	-1.793333	12.166667	5.258333	0	
36	N44	1.206667	12.166667	5.258333	0	
37	N45	4.206667	12.166667	2	0	
38	N46	1.206667	12.166667	-1.258333	0	
39	N47	-1.793333	12.166667	2	0	
40	N48	1.208333	5.166667	2	0	
41	N49	4.206667	5.166667	-1.258333	0	
42	N50	-1.793333	5.166667	-1.258333	0	
43	N51	4.206667	5.166667	5.258333	0	
44	N52	-1.793333	5.166667	5.258333	0	
45	N53	1.206667	5.166667	5.258333	0	
46	N54	4.206667	5.166667	2	0	
47	N55	1.206667	5.166667	-1.258333	0	
48	N56	-1.793333	5.166667	2	0	
49	N54A	1.206667	2.416667	3.458333	0	
50	N55A	1.206667	2.416667	0.541667	0	

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N1	Reaction	Reaction	Reaction			Reaction
2	N2	Reaction	Reaction	Reaction			Reaction
3	N3	Reaction	Reaction	Reaction			Reaction
4	N6	Reaction	Reaction	Reaction			Reaction
5	N7	Reaction	Reaction	Reaction			Reaction
6	N8	Reaction	Reaction	Reaction			Reaction

Member Point Loads (BLC 3 : Dead: Equipment)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M38	Y	-.041	.833
2	M39	Y	-.041	.833
3	M38	Y	-.006	1
4	M39	Y	-.006	1
5	M38	Y	-.043	2.333
6	M39	Y	-.043	2.333
7	M38	Y	-.02	2.333
8	M39	Y	-.02	2.333

Member Distributed Loads (BLC 6 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f...]	Start Location[ft,%]	End Location[ft,%]
1	M26	Y	-.026	-.067	0	1.95
2	M26	Y	-.067	-.071	1.95	3.9
3	M26	Y	-.071	-.035	3.9	5.85
4	M26	Y	-.035	-.013	5.85	7.8
5	M26	Y	-.013	-.012	7.8	9.75
6	M29	Y	-.04	-.045	0	1.95
7	M29	Y	-.045	-.032	1.95	3.9
8	M29	Y	-.032	-.021	3.9	5.85
9	M29	Y	-.021	-.045	5.85	7.8
10	M29	Y	-.045	-.083	7.8	9.75
11	M40C	Y	-.024	-.02	0	1.844
12	M40C	Y	-.02	-.023	1.844	3.688
13	M40C	Y	-.023	-.023	3.688	5.532
14	M40C	Y	-.023	-.02	5.532	7.376
15	M40C	Y	-.02	-.024	7.376	9.22
16	M27	Y	-.026	-.067	0	1.95
17	M27	Y	-.067	-.071	1.95	3.9
18	M27	Y	-.071	-.035	3.9	5.85
19	M27	Y	-.035	-.013	5.85	7.8
20	M27	Y	-.013	-.012	7.8	9.75
21	M41C	Y	-.025	-.021	0	1.913
22	M41C	Y	-.021	-.024	1.913	3.826
23	M41C	Y	-.024	-.024	3.826	5.738
24	M41C	Y	-.024	-.021	5.738	7.651
25	M41C	Y	-.021	-.025	7.651	9.564
26	M28	Y	-.083	-.045	0	1.95
27	M28	Y	-.045	-.021	1.95	3.9
28	M28	Y	-.021	-.032	3.9	5.85
29	M28	Y	-.032	-.045	5.85	7.8

Member Distributed Loads (BLC 6 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f..	Start Location[ft, %]	End Location[ft, %]
30	M28	Y	-.045	-.04	7.8	9.75
31	M39A	Y	-.024	-.02	0	1.844
32	M39A	Y	-.02	-.023	1.844	3.688
33	M39A	Y	-.023	-.023	3.688	5.532
34	M39A	Y	-.023	-.02	5.532	7.376
35	M39A	Y	-.02	-.024	7.376	9.22
36	M42C	Y	-.025	-.021	0	1.913
37	M42C	Y	-.021	-.024	1.913	3.826
38	M42C	Y	-.024	-.024	3.826	5.738
39	M42C	Y	-.024	-.021	5.738	7.651
40	M42C	Y	-.021	-.025	7.651	9.564

Member Distributed Loads (BLC 7 : BLC 4 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f..	Start Location[ft, %]	End Location[ft, %]
1	M26	X	.041	.104	0	1.95
2	M26	X	.104	.111	1.95	3.9
3	M26	X	.111	.055	3.9	5.85
4	M26	X	.055	.021	5.85	7.8
5	M26	X	.021	.018	7.8	9.75
6	M28	X	.13	.071	0	1.95
7	M28	X	.071	.033	1.95	3.9
8	M28	X	.033	.05	3.9	5.85
9	M28	X	.05	.07	5.85	7.8
10	M28	X	.07	.062	7.8	9.75
11	M42C	X	.076	.062	0	1.913
12	M42C	X	.062	.072	1.913	3.826
13	M42C	X	.072	.072	3.826	5.738
14	M42C	X	.072	.062	5.738	7.651
15	M42C	X	.062	.076	7.651	9.564
16	M27	X	.014	.035	0	1.95
17	M27	X	.035	.037	1.95	3.9
18	M27	X	.037	.018	3.9	5.85
19	M27	X	.018	.007	5.85	7.8
20	M27	X	.007	.006	7.8	9.75
21	M29	X	.021	.023	0	1.95
22	M29	X	.023	.017	1.95	3.9
23	M29	X	.017	.011	3.9	5.85
24	M29	X	.011	.024	5.85	7.8
25	M29	X	.024	.043	7.8	9.75
26	M41C	X	.025	.021	0	1.913
27	M41C	X	.021	.024	1.913	3.826
28	M41C	X	.024	.024	3.826	5.738
29	M41C	X	.024	.021	5.738	7.651
30	M41C	X	.021	.025	7.651	9.564

Member Distributed Loads (BLC 8 : BLC 5 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f..	Start Location[ft, %]	End Location[ft, %]
1	M27	Z	.037	.096	0	1.95
2	M27	Z	.096	.102	1.95	3.9
3	M27	Z	.102	.05	3.9	5.85
4	M27	Z	.05	.019	5.85	7.8

Member Distributed Loads (BLC 8 : BLC 5 Transient Area Loads) (Continued)

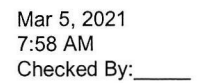
	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f..Start Location[ft,%]	End Location[ft,%]
5	M27	Z	.019	.017 7.8	9.75
6	M28	Z	.119	.065 0	1.95
7	M28	Z	.065	.031 1.95	3.9
8	M28	Z	.031	.046 3.9	5.85
9	M28	Z	.046	.065 5.85	7.8
10	M28	Z	.065	.057 7.8	9.75
11	M39A	Z	.073	.059 0	1.844
12	M39A	Z	.059	.069 1.844	3.688
13	M39A	Z	.069	.069 3.688	5.532
14	M39A	Z	.069	.059 5.532	7.376
15	M39A	Z	.059	.073 7.376	9.22
16	M26	Z	.012	.032 0	1.95
17	M26	Z	.032	.034 1.95	3.9
18	M26	Z	.034	.017 3.9	5.85
19	M26	Z	.017	.006 5.85	7.8
20	M26	Z	.006	.006 7.8	9.75
21	M29	Z	.019	.022 0	1.95
22	M29	Z	.022	.015 1.95	3.9
23	M29	Z	.015	.01 3.9	5.85
24	M29	Z	.01	.022 5.85	7.8
25	M29	Z	.022	.04 7.8	9.75
26	M40C	Z	.024	.02 0	1.844
27	M40C	Z	.02	.023 1.844	3.688
28	M40C	Z	.023	.023 3.688	5.532
29	M40C	Z	.023	.02 5.532	7.376
30	M40C	Z	.02	.024 7.376	9.22

Basic Load Cases

	BLC Description	Category	X Gra...	Y Gra...	Z Gra...	Joint	Point	Distrib..	Area(...	Surfa...
1	Dead: Self	DL								
2	Dead: Enclosure	DL							4	
3	Dead: Equipment	DL					8			
4	Wind X-Dir. (29psf)	WLX							2	
5	Wind Z-Dir.(29psf)	WLZ							2	
6	BLC 2 Transient Area Loads	None						40		
7	BLC 4 Transient Area Loads	None						30		
8	BLC 5 Transient Area Loads	None						30		

Load Combinations

	Description	Solve	P...	S...	B...	Fa...	BLC Fact..	BLC Fa...	BLC Fa...	BLC Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
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	.75	LLS	.75	SL	.75	SLN	.75						
5	IBC 16-12 (a) (a)	Yes	Y		DL	1	WLX	.6												
6	IBC 16-12 (a) (b)	Yes	Y		DL	1	WLZ	.6												
7	IBC 16-12 (a) (c)	Yes	Y		DL	1	WLX	-.6												
8	IBC 16-12 (a) (d)	Yes	Y		DL	1	WLZ	-.6												
9	IBC 16-13 (a) (a)	Yes	Y		DL	1	WLX	.45	LL	.75	LLS	.75								

[illegible]

Joint			X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	.275	19	1.802	7	.247	20	0	20	0	20	.352	5
2		min	-.301	5	-1.02	17	-.279	6	0	1	0	1	-.337	19
3	N2	max	.191	19	1.432	7	.193	8	0	20	0	20	.258	5
4		min	-.209	5	-.843	17	-.193	6	0	1	0	1	-.247	19
5	N3	max	.269	19	2.125	7	.279	8	0	20	0	20	.342	5
6		min	-.294	5	-1.356	17	-.247	18	0	1	0	1	-.329	19
7	N6	max	.3	7	1.955	8	.239	20	0	20	0	20	.338	17
8		min	-.276	17	-1.179	18	-.273	6	0	1	0	1	-.352	7
9	N7	max	.209	7	1.433	5	.188	20	0	20	0	20	.247	17
10		min	-.191	17	-.842	19	-.187	18	0	1	0	1	-.258	7
11	N8	max	.294	7	2.128	5	.273	8	0	20	0	20	.328	17
12		min	-.268	17	-1.352	19	-.239	18	0	1	0	1	-.342	7
13	Totals:	max	1.525	19	2.661	16	1.404	20						
14		min	-1.525	5	1.597	17	-1.404	6						

Joint			X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotatio...	LC	Z Rotatio...	LC
1	N1	max	0	20	0	20	0	20	0	20	0	20	0	20
2		min	0	1	0	1	0	1	0	1	0	1	0	1
3	N2	max	0	20	0	20	0	20	0	20	0	20	0	20
4		min	0	1	0	1	0	1	0	1	0	1	0	1
5	N3	max	0	20	0	20	0	20	0	20	0	20	0	20
6		min	0	1	0	1	0	1	0	1	0	1	0	1
7	N4	max	0	5	.001	17	0	6	1.703e-04	7	7.542e-05	5	2.978e-04	19
8		min	0	19	-.002	7	0	20	-9.158e-05	17	-6.942e-05	19	-3.106e-04	5
9	N5	max	0	5	.002	17	0	18	1.279e-04	17	5.988e-05	19	2.901e-04	19
10		min	0	19	-.003	7	0	8	-2.058e-04	7	-6.612e-05	5	-3.02e-04	5
11	N6	max	0	20	0	20	0	20	0	20	0	20	0	20
12		min	0	1	0	1	0	1	0	1	0	1	0	1
13	N7	max	0	20	0	20	0	20	0	20	0	20	0	20
14		min	0	1	0	1	0	1	0	1	0	1	0	1
15	N8	max	0	20	0	20	0	20	0	20	0	20	0	20
16		min	0	1	0	1	0	1	0	1	0	1	0	1
17	N9	max	0	17	.001	19	0	6	1.703e-04	5	6.94e-05	17	3.104e-04	7
18		min	0	7	-.002	5	0	20	-9.158e-05	19	-7.551e-05	7	-2.981e-04	17

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotatio...	LC	Z Rotatio...	LC
19	N10	max	0	17	.002	19	0	18	1.276e-04	19	6.603e-05	7	3.022e-04	7
20		min	0	7	-.003	5	0	8	-2.06e-04	5	-5.99e-05	17	-2.898e-04	17
21	N11	max	.029	5	.002	17	.066	6	3.133e-03	18	9.541e-05	6	3.538e-04	7
22		min	-.029	7	-.004	7	-.066	8	-3.345e-03	8	-9.209e-05	20	-2.399e-04	17
23	N12	max	.029	5	.003	17	.066	6	3.344e-03	6	9.348e-05	18	4.238e-04	7
24		min	-.029	7	-.005	7	-.066	8	-3.131e-03	20	-9.39e-05	8	-3.117e-04	17
25	N13	max	.029	5	.002	19	.064	6	3.086e-03	18	5.649e-05	17	2.395e-04	19
26		min	-.029	7	-.004	5	-.064	8	-3.3e-03	8	-6.091e-05	7	-3.53e-04	5
27	N14	max	.029	5	.003	19	.064	6	3.298e-03	6	6.651e-05	5	3.111e-04	19
28		min	-.029	7	-.005	5	-.064	8	-3.087e-03	20	-6.642e-05	7	-4.245e-04	5
29	N19	max	.029	5	0	17	.065	6	1.056e-04	6	2.354e-06	8	5.712e-03	7
30		min	-.029	7	0	7	-.065	8	-1.061e-04	8	-2.913e-06	5	-5.716e-03	5
31	N20	max	.478	5	0	17	.339	6	2.403e-03	6	2.354e-06	8	2.161e-03	7
32		min	-.477	7	0	7	-.341	8	-2.4e-03	8	-2.913e-06	5	-2.166e-03	5
33	N21	max	.27	5	0	17	.159	6	2.627e-03	6	2.354e-06	8	4.296e-03	7
34		min	-.269	7	0	7	-.16	8	-2.666e-03	8	-2.913e-06	5	-4.301e-03	5
35	N22	max	.269	5	.049	20	.159	6	2.751e-03	6	2.354e-06	8	4.296e-03	7
36		min	-.269	7	-.053	6	-.16	8	-2.574e-03	20	-2.913e-06	5	-4.301e-03	5
37	N23	max	.27	5	.048	18	.159	6	2.521e-03	18	2.354e-06	8	4.296e-03	7
38		min	-.269	7	-.054	8	-.16	8	-2.841e-03	8	-2.913e-06	5	-4.301e-03	5
39	N24	max	.376	5	0	17	.235	6	2.471e-03	6	2.354e-06	8	2.895e-03	7
40		min	-.375	7	0	7	-.237	8	-2.506e-03	8	-2.913e-06	5	-2.9e-03	5
41	N25	max	.376	5	.046	20	.235	6	2.596e-03	6	2.354e-06	8	2.895e-03	7
42		min	-.375	7	-.05	6	-.237	8	-2.416e-03	20	-2.913e-06	5	-2.9e-03	5
43	N26	max	.376	5	.045	18	.235	6	2.366e-03	18	2.354e-06	8	2.895e-03	7
44		min	-.375	7	-.051	8	-.237	8	-2.681e-03	8	-2.913e-06	5	-2.9e-03	5
45	N27	max	0	5	.002	17	0	18	7.733e-05	17	3.583e-05	19	2.652e-04	19
46		min	0	19	-.003	7	0	8	-1.25e-04	7	-3.961e-05	5	-2.761e-04	5
47	N32	max	.029	5	.01	19	.064	6	5.079e-03	5	1.873e-03	5	2.776e-03	19
48		min	-.029	7	-.017	5	-.065	8	-1.47e-03	19	-1.644e-03	19	-4.097e-03	5
49	N33	max	.029	5	.008	19	.064	6	1.087e-03	19	1.549e-03	19	2.578e-03	19
50		min	-.029	7	-.014	5	-.064	8	-4.704e-03	5	-1.778e-03	5	-3.898e-03	5
51	N34	max	.029	5	.01	17	.068	6	5.069e-03	7	1.643e-03	17	4.046e-03	7
52		min	-.029	7	-.017	7	-.069	8	-1.476e-03	17	-1.868e-03	7	-2.734e-03	17
53	N35	max	.029	5	.008	17	.069	6	1.093e-03	17	1.774e-03	7	3.853e-03	7
54		min	-.029	7	-.014	7	-.068	8	-4.703e-03	7	-1.55e-03	17	-2.542e-03	17
55	N36	max	.063	5	.028	19	.065	6	1.897e-03	18	6.861e-04	7	2.457e-03	19
56		min	-.063	19	-.139	5	-.064	8	-6.284e-03	8	-1.265e-04	17	-3.775e-03	5
57	N37	max	.063	17	.028	17	.069	6	1.292e-03	18	1.299e-04	19	3.734e-03	7
58		min	-.063	7	-.139	7	-.068	8	-5.691e-03	8	-6.912e-04	5	-2.424e-03	17
59	N38	max	.068	5	.045	19	.064	6	6.274e-03	6	3.211e-04	17	2.898e-03	19
60		min	-.067	7	-.155	5	-.065	8	-1.903e-03	20	-8.817e-04	7	-4.22e-03	5
61	N39	max	.067	5	.045	17	.068	6	5.631e-03	6	8.922e-04	5	4.165e-03	7
62		min	-.067	7	-.155	7	-.069	8	-1.271e-03	20	-3.281e-04	19	-2.852e-03	17
63	N40	max	.443	5	.031	19	.359	18	1.33e-03	18	9.58e-04	17	3.412e-04	18
64		min	-.436	7	-.149	5	-.366	8	-1.466e-03	8	-1.087e-03	7	-3.929e-04	8
65	N41	max	.444	5	.028	17	.317	6	7.169e-04	18	8.306e-04	17	2.149e-03	17
66		min	-.436	7	-.144	7	-.313	20	-7.888e-04	8	-1.e-03	7	-2.22e-03	7
67	N42	max	.499	5	.044	19	.359	18	1.686e-03	6	7.361e-04	18	4.833e-04	8
68		min	-.506	7	-.161	5	-.366	8	-1.627e-03	20	-8.966e-04	8	-4.13e-04	18
69	N43	max	.499	5	.049	17	.317	6	1.502e-03	6	5.972e-04	17	9.409e-04	5
70		min	-.506	7	-.167	7	-.312	20	-1.381e-03	20	-7.214e-04	7	-9.011e-04	19

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotatio...	LC	Z Rotatio...	LC
71	N44	max	.499	5	.017	20	.339	6	1.594e-03	6	8.122e-04	7	2.538e-03	7
72		min	-.506	7	-.133	6	-.341	8	-1.504e-03	20	-6.84e-04	17	-2.512e-03	5
73	N45	max	.478	5	.038	19	.359	18	1.865e-03	18	7.387e-04	17	4.523e-05	8
74		min	-.477	7	-.154	5	-.366	8	-1.897e-03	8	-8.929e-04	7	-3.613e-05	17
75	N46	max	.444	5	.017	18	.339	6	1.023e-03	18	8.121e-04	7	2.021e-03	7
76		min	-.436	7	-.134	8	-.341	8	-1.128e-03	8	-6.839e-04	17	-2.059e-03	5
77	N47	max	.478	5	.044	17	.317	6	1.53e-03	6	7.519e-04	17	1.539e-03	17
78		min	-.477	7	-.16	7	-.312	20	-1.515e-03	20	-9.059e-04	7	-1.553e-03	7
79	N48	max	.216	5	0	17	.128	6	2.715e-03	6	2.354e-06	8	5.026e-03	7
80		min	-.216	7	0	7	-.129	8	-2.74e-03	8	-2.913e-06	5	-5.031e-03	5
81	N49	max	.254	5	.028	19	.201	6	3.207e-03	6	1.486e-03	7	6.424e-03	7
82		min	-.254	7	-.142	5	-.202	8	-2.515e-03	20	-1.342e-03	17	-6.15e-03	17
83	N50	max	.255	5	.029	17	.188	6	2.726e-03	6	1.357e-03	19	6.746e-03	19
84		min	-.254	7	-.142	7	-.189	8	-2.025e-03	20	-1.526e-03	5	-7.069e-03	5
85	N51	max	.273	5	.046	19	.202	6	2.169e-03	18	1.822e-03	17	6.88e-03	7
86		min	-.274	7	-.159	5	-.202	8	-2.891e-03	8	-2.002e-03	7	-6.561e-03	17
87	N52	max	.273	5	.046	17	.188	6	1.806e-03	18	2.041e-03	5	7.253e-03	19
88		min	-.273	7	-.159	7	-.188	8	-2.515e-03	8	-1.891e-03	19	-7.533e-03	5
89	N53	max	.273	5	-.022	20	.129	6	1.988e-03	18	2.199e-04	7	2.457e-03	7
90		min	-.273	7	-.09	6	-.129	8	-2.703e-03	8	-2.246e-04	5	-2.466e-03	5
91	N54	max	.216	5	.016	19	.201	6	1.292e-03	6	2.442e-04	5	6.652e-03	7
92		min	-.216	7	-.142	5	-.202	8	-1.291e-03	8	-2.519e-04	7	-6.355e-03	17
93	N55	max	.254	5	-.022	18	.129	6	2.966e-03	6	2.008e-04	7	1.99e-03	7
94		min	-.254	7	-.091	8	-.129	8	-2.27e-03	20	-2.056e-04	5	-1.991e-03	5
95	N56	max	.216	5	.014	17	.188	6	9.407e-04	18	4.455e-04	6	7.e-03	19
96		min	-.216	7	-.139	7	-.189	8	-9.557e-04	8	-4.491e-04	8	-7.301e-03	5
97	N54A	max	.029	5	0	20	.065	6	3.321e-03	6	6.45e-05	5	2.971e-04	7
98		min	-.029	7	-.001	6	-.065	8	-3.109e-03	20	-6.7e-05	7	-2.975e-04	5
99	N55A	max	.029	5	0	18	.065	6	3.109e-03	18	5.771e-05	5	2.369e-04	7
100		min	-.029	7	-.001	8	-.065	8	-3.322e-03	8	-6.02e-05	7	-2.366e-04	5

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

	Member	Shape	Code Check	Lo...	LC	She...Lo...	Dir	...	Pnc/...	Pnt/o...	Mny...	Mnz...	Cb	Eqn
1	M29	L5X5X6	.965	0	5	.0641....	y	5	3.762	21.856	1.007	2.089	3.2...	H2-1
2	M26	L5X5X6	.927	0	7	.063 0	z	7	3.762	21.856	1.371	2.089	3.1...	H2-1
3	M28	L5X5X6	.896	9.75	7	.0639....	z	7	3.762	21.856	1.371	2.089	3.0...	H2-1
4	M27	L5X5X6	.895	0	5	.064102	z	5	3.762	21.856	1.371	2.089	3.1...	H2-1
5	M42C	L4X4X6	.790	4....	7	.039 0	z	5	1.912	17.126	.813	.962	1.1...	H2-1
6	M42	L4X4X4	.700	4....	5	.1014....	y	5	24.609	41.605	2.088	3.749	1.1...	H2-1
7	M40	L4X4X4	.698	1....	7	.101 0	y	7	24.609	41.605	2.088	3.748	1.1...	H2-1
8	M39A	L4X4X6	.691	4....	8	.034 0	z	8	2.058	17.126	.813	.987	1.1...	H2-1
9	M40C	L4X4X6	.557	4....	5	.0139.22	y	5	2.058	17.126	.772	.987	1.1...	H2-1
10	M41C	L4X4X6	.541	5....	6	.016 0	y	7	1.912	17.126	.772	.962	1.1...	H2-1
11	M36A	L4X4X4	.290	3	8	.015 3	y	8	26.599	41.605	2.088	4.006	1.3...	H2-1
12	M38B	L4X4X4	.289	3	6	.016 0	y	8	26.599	41.605	2.088	4.006	1.3...	H2-1
13	M10	PIPE 2.5X	.283	0	8	.032 0		7	41.891	44.012	3.091	3.091	2.1...	H1-...
14	M8	PIPE 2.5X	.283	0	6	.035 0		7	41.891	44.012	3.091	3.091	2.1...	H1-...
15	M9	PIPE 2.5X	.283	0	8	.033 0		6	41.891	44.012	3.091	3.091	2.1...	H1-...
16	M7	PIPE 2.5X	.283	0	6	.035 0		5	41.891	44.012	3.091	3.091	2.1...	H1-...
17	M17	PIPE 3.5X	.272	0	8	.034 0		6	47.967	71.886	7.108	7.108	1.38	H1-...

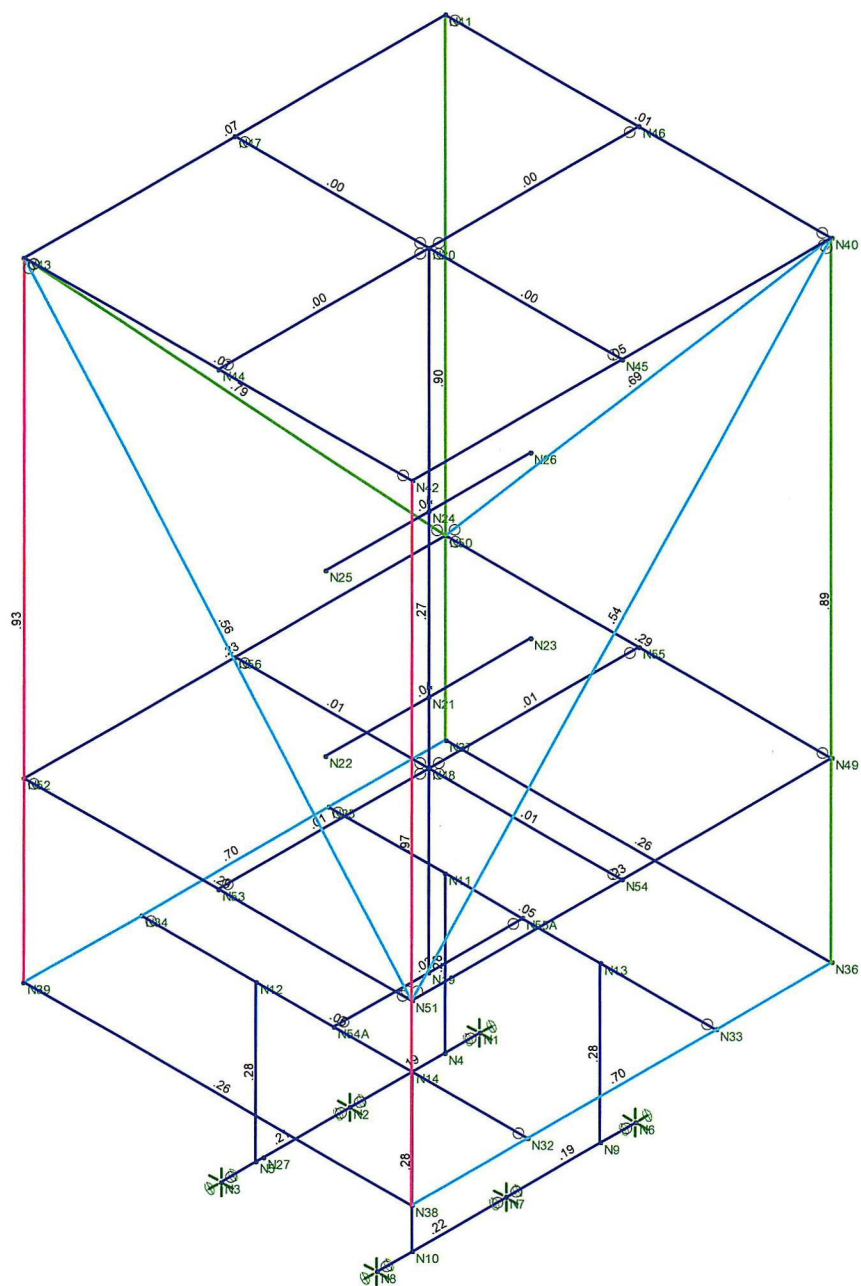
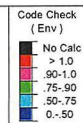


Company : Centek Engineering
 Designer : TJL
 Job Number : 20150.07
 Model Name : Danbury 10 CT

Mar 5, 2021
 7:58 AM
 Checked By: _____

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

Member	Shape	Code Check	Lo...	LC	She...	Lo...	Dir	...	Pnc/...	Pnt/o...	Mny...	Mnz...	Cb	Eqn
18	M41	L4X4X4	.258	6	5	.023	0	y	5	26.599	41.605	2.088	4.439	2.23 H2-1
19	M43	L4X4X4	.257	0	5	.027	0	y	5	26.599	41.605	2.088	4.44	2.2... H2-1
20	M37A	L4X4X4	.234	3....	5	.012	0	y	5	24.609	41.605	2.088	3.855	1.2... H2-1
21	M39B	L4X4X4	.228	3....	7	.012	0	y	7	24.609	41.605	2.088	3.861	1.23 H2-1
22	M33	L4X4X4	.072	0	6	.005	0	z	7	24.609	41.605	2.088	4.064	1.5... H2-1
23	M31	L4X4X4	.051	6....	6	.004	0	y	8	24.609	41.605	2.088	4.11	1.6... H2-1
24	M40B	W8X31	.047	4.25	8	.075	4.25	y	5	249....	273....	35.124	75.767	1.1... H1-...
25	M41B	W8X31	.047	4.25	6	.084	4.25	y	5	249....	273....	35.124	75.767	1.1... H1-...
26	M38	PIPE 2.0	.038	1....	16	.010	1....		...	18.956	21.377	1.245	1.245	1.9... H1-...
27	M39	PIPE 2.0	.038	1....	16	.010	1....		...	18.956	21.377	1.245	1.245	1.9... H1-...
28	M42B	W8X31	.016	1....	8	.086	1....	z	5	267....	273....	35.124	75.767	1.3... H1-...
29	M40A	L4X4X4	.012	0	8	.012	0	y	7	31.579	41.605	2.088	4.295	1 H2-1
30	M42A	L4X4X4	.012	0	6	.014	0	y	5	31.579	41.605	2.088	4.295	1 H2-1
31	M32	L4X4X4	.008	3	5	.003	0	z	7	26.599	41.605	2.088	4.019	1.3... H2-1
32	M41A	L4X4X4	.007	0	19	.007	0	y	8	31.894	41.605	2.088	4.36	1 H2-1
33	M43A	L4X4X4	.007	0	17	.009	0	y	8	31.89	41.605	2.088	4.359	1 H2-1
34	M30	L4X4X4	.006	3	8	.001	3	z	8	26.599	41.605	2.088	4.01	1.32 H2-1
35	M37	L4X4X4	.002	0	19	.004	0	y	8	31.89	41.605	2.088	4.359	1 H2-1
36	M35	L4X4X4	.001	0	17	.003	0	y	6	31.894	41.605	2.088	4.36	1 H2-1
37	M36	L4X4X4	.000	0	8	.001	0	y	8	31.579	41.605	2.088	4.295	1 H2-1
38	M34	L4X4X4	.000	0	8	.002	0	y	7	31.579	41.605	2.088	4.295	1 H2-1



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Centek Engineering

TJL

20150.07

Danbury 10 CT

Unity Check

Mar 5, 2021 at 7:57 AM

Antenna Frame.r3d

ATTACHMENT 5





Danbury,CT

109 FEDERAL RD

Location

109 FEDERAL RD

Mblu

L08/ / 30/ /

Acct#

Owner

109 FEDERAL ROAD LLC

Assessment

\$1,254,800

Appraisal

\$1,792,500

PID

5697

Building Count

1

Current Value

Appraisal

Valuation Year	Improvements	Land	Total
2020	\$811,200	\$981,300	\$1,792,500

Assessment

Valuation Year	Improvements	Land	Total
2020	\$567,900	\$686,900	\$1,254,800

Owner of Record

Owner 109 FEDERAL ROAD LLC

Co-Owner

Address 2 STONY HILL RD SUITE 201
BETHEL, CT 06801

Sale Price \$1,375,000

Book & Page 1425/ 348

Sale Date 03/22/2002

Instrument 00

Ownership History

Ownership History

Owner	Sale Price	Book & Page	Instrument	Sale Date
109 FEDERAL ROAD LLC	\$1,375,000	1425/ 348	00	03/22/2002
DIMASI PETER ESTATE	\$0	1405/ 937	01	12/28/2001
DIMASI PETER	\$0	0341/0337		04/03/1959

Building Information

Building 1 : Section 1

Year Built: 1966

Living Area: 10,455

Replacement Cost: \$1,104,654

Building Percent Good: 72

Replacement Cost

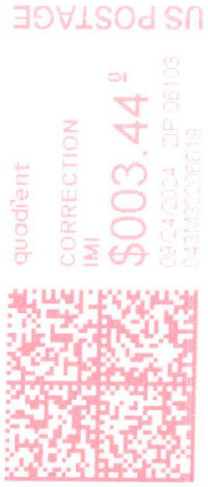
Less Depreciation: \$795,400

Building Attributes

ATTACHMENT 6



Certificate of Mailing — Firm

Name and Address of Sender Kenneth C. Baldwin, Esq. Robinson & Cole LLP One State Street Hartford, CT 06103	TOTAL NO. of Pieces Listed by Sender 3	TOTAL NO. of Pieces Received at Post Office™ 3	Affix Stamp Here Postmark with Date of Receipt. 			
USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)		Postage	Fee	Special Handling	Parcel Airlift
1.	Roberto Alves, Mayor City of Danbury 155 Deer Hill Avenue Danbury, CT 06810					
2.	Waleed Albakry, Planning Director City of Danbury 155 Deer Hill Avenue Danbury, CT 06810					
3.	109 Federal Road, LLC 2 Stony Hill Road, Suite 201 Bethel, CT 06801					
4.						
5.						
6.						