Robinson+Cole

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Also admitted in Massachusetts

August 29, 2017

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**
32 Valley Street (a/k/a 225 North Main Street), Bristol, Connecticut

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) antennas (six (6) antennas at the 98-foot level and six (6) antennas at the 108-foot level) on an existing roof-top tower at 32 Valley Street in Bristol, Connecticut (the "Property"). The tower and building are owned by Carpenter Realty. The Council approved Cellco's shared use of this roof-top tower in 1992. Cellco now intends to replace the six (6) existing antennas at the 108-foot level with three (3) model JAHH-65B-R3B, 700 MHz antennas and three (3) model JAHH-65B-R3B, 2100 MHz antennas. Cellco also intends to install twelve (12) remote radio heads ("RRHs") at the 108-foot level and two (2) HYBRIFLEX™ fiber optic antenna cables. Included in Attachment 1 are specifications for Cellco's replacement antennas, RRHs and HYBRIFLEX™ cables.

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 Kenneth B. Cockayne, Mayor of the City of Bristol; Robert Flanagan, Bristol's City Planner; and Carpenter Realty, the owner of the tower and the Property.

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

1. The proposed modifications will not result in an increase in the height of the existing structure. Cellco's replacement antennas and RRHs will be installed at the 108-foot level on the tower.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A General Power Density table for Cellco's modified facility is included in Attachment 2.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The tower and its foundation can support Cellco's proposed modifications. (*See* Structural Analysis Report included in Attachment 3).

A copy of the parcel map and property owner information is included in Attachment 4. A Certificate of Mailing verifying that this filing was sent to municipal officials and the owner of the Property is included in Attachment 5.

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:
Kenneth B. Cockayne, Bristol Mayor
Robert Flanagan, Bristol City Planner
Carpenter Realty
Tim Parks

ATTACHMENT 1

Product Specifications

COMMSCOPE®

JAHH-65B-R3B

8-port sector antenna, 2x 698–787, 2x 824-894 and 4x 1695–2360 MHz, 65° HPBW, 3x RET and low bands have diplexers. Internal SBT's on first LB(Port 1) and first HB (Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

Electrical Specifications

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.5	15.8	18.0	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2–14	2–14	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR | Return Loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350	350	350	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.3	14.9	17.6	18.1	18.2	18.5
Gain by all Beam Tilts Tolerance, dB	±0.3	±0.5	±0.6	±0.4	±0.5	±0.6
	2 ° | 14.3	2 ° | 15.0	0 ° | 17.2	0 ° | 17.6	0 ° | 17.7	0 ° | 17.9
Gain by Beam Tilt, average, dBi	8 ° | 14.3	8 ° | 14.9	5 ° | 17.6	5 ° | 18.2	5 ° | 18.3	5 ° | 18.7
	14 ° | 14.3	14 ° | 15.4	10 ° | 17.6	10 ° | 18.2	10 ° | 18.3	10 ° | 18.7
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.4	±4	±2.4	±2.9	±2.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.5	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	18	17	17	18	19	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	26	29	27	29
CPR at Boresight, dB	22	23	20	21	21	24
CPR at Sector, dB	11	12	11	11	11	8

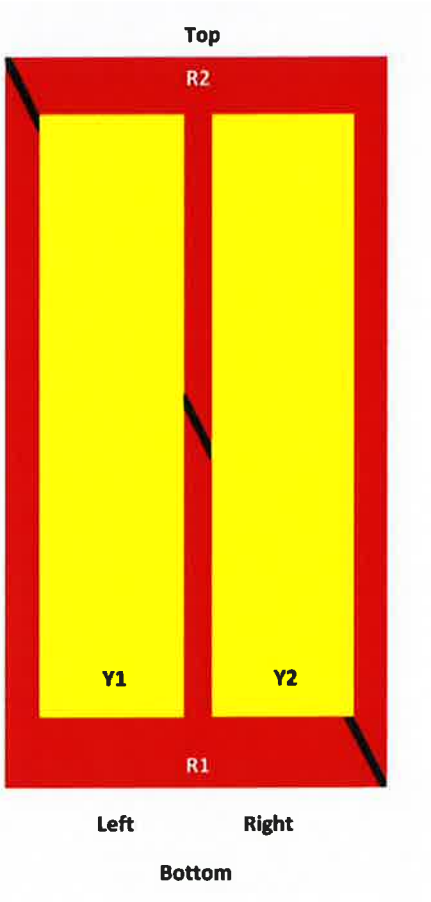
* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, download the whitepaper Time to Raise the Bar on BSAs.

Array Layout

Product Specifications

JAHH-65B-R3B

JAHH-65A-R3B JAHH-65B-R3B JAHH-65C-R3B



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-798	1-2	1	ANxxxxxxxxxxxxxxx1
R2	824-894	3-4	2	ANxxxxxxxxxxxxxxx2
Y1	1695-2360	5-6	3	ANxxxxxxxxxxxxxxx3
Y2	1695-2360	7-8		

View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

General Specifications

Operating Frequency Band	1695 – 2360 MHz | 698 – 787 MHz | 824 – 894 MHz
Antenna Type	Sector
Band	Multiband
Performance Note	Outdoor usage

Mechanical Specifications

RF Connector Quantity, total	8
RF Connector Quantity, low band	4
RF Connector Quantity, high band	4
RF Connector Interface	4.3-10 Female
Color	Light gray

Product Specifications

JAHH-65B-R3B

Grounding Type	RF connector body grounded to reflector and mounting bracket
Radiator Material	Aluminum | Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Location	Bottom
Wind Loading, frontal	746.0 N @ 150 km/h 167.7 lbf @ 150 km/h
Wind Loading, lateral	243.0 N @ 150 km/h 54.6 lbf @ 150 km/h
Wind Loading, rear	776.0 N @ 150 km/h 174.5 lbf @ 150 km/h
Wind Speed, maximum	241 km/h | 150 mph

Dimensions

Length	1828.0 mm | 72.0 in
Width	350.0 mm | 13.8 in
Depth	208.0 mm | 8.2 in
Net Weight, without mounting kit	28.7 kg | 63.3 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 | Port 5
Internal RET	High band (1) | Low band (2)
Power Consumption, idle state, maximum	2.0 W
Power Consumption, normal conditions, maximum	13.0 W
Protocol	3GPP/AISG 2.0 (Single RET)
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	2 female | 2 male

Packed Dimensions

Length	1975.0 mm | 77.8 in
Width	456.0 mm | 18.0 in
Depth	357.0 mm | 14.1 in
Shipping Weight	42.0 kg | 92.6 lb

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Product Specifications

JAHH-65B-R3B

Included Products

BSAMNT-1 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

ALCATEL-LUCENT B13 RRH4X30-4R

Alcatel-Lucent B13 Remote Radio Head 4x30-4R is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B13 RRH4x30-4R allows operators to have a compact radio solution to deploy LTE in the 700U band (700 MHz, 3GPP band 13), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.

The Alcatel-Lucent B13 RRH4x30-4R product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity and up to 10MHz instantaneous bandwidth.

The Alcatel-Lucent B13 RRH4x30-4R is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

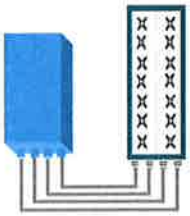
Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 700 MHz band (700U, 3GPP band 13)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- 10MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in 700U band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through MIMO4
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



4x30W with 4T4R
or
2x60W with 2T4R

Can be switched between modes via SW w/o site visit

Alcatel·Lucent

TECHNICAL SPECIFICATIONS

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	U700 (C) (3GPP bands 13): DL: 746 - 756 MHz / UL: 777 - 787 MHz
Instantaneous bandwidth - #carriers	10MHz – 1 LTE carrier (in 10MHz occupied bandwidth)
LTE carrier bandwidth	10 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure – RX Diversity scheme	2 dB typ. (<2.5 dB max) – 2 or 4 way Rx diversity
Sizes (HxWxD) in mm (in.) **Volume in L** **Weight in kg (lb) (w/o mounting HW)**	550 x 305 x 230 (21.6" x 12.0" x 9") (with solar shield) 38 (with solar shield) 26 (57.2) (with solar shield)
DC voltage range **DC power consumption**	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption 550W typical @100% RF load (in 2Tx or 4TX mode)
Environmental conditions **Wind load (@150km/h or 93mph)**	-40°C (-40°F) /+55°C (+131°F) IP65 Frontal:<200N / Lateral :<150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate7, 9.8 Gbps) SFP single mode dual fiber
AISG interfaces	1 AISG2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) – 4 RF Tx & 4 RF Rx monitor ports - 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

ALCATEL-LUCENT B25 RRH4X30

Alcatel-Lucent Band 25 Remote Radio Head 4x30W is the new addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B25 RRH4x30 allows operators to have a compact radio solution to deploy LTE in the PCS band (1.9 GHz, 3GPP band 25), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.

The Alcatel-Lucent B25 RRH4x30 product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity, LTE carriers from 3 MHz up to 20 MHz and up to 65 MHz instantaneous bandwidth.

The Alcatel-Lucent B25 RRH4x30 is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

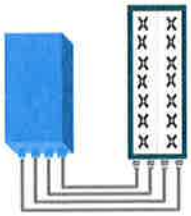
Its compactness and slim design makes the Alcatel-Lucent B25 RRH4x30 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 1.9 GHz band (PCS, 3GPP band 2 & 25)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- Ready for 3, 5, 10, 15 or 20MHz LTE carrier operation with 4Rx Diversity
- Ready to support up to 4 carriers anywhere in 65MHz instantaneous bandwidth
- Convection-cooled (fan-less)
- Supports AISG 2.0 devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in PCS band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Full flexibility for multiple carriers operation over entire PCS spectrum
- Improves downlink spectral efficiency and cell edge throughput through MIMO4
- Increases LTE coverage thanks to 4-way Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options (Pole or Wall)



4x30W with 4T4R
or
2x60W with 2T4R

Can be switched between modes via SW w/o site visit

Alcatel·Lucent

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	3GPP bands 2 & 25 (PCS-G) DL: 1930 - 1995 MHz UL: 1850 - 1915 MHz
Instantaneous bandwidth - #carriers	65MHz – Up to 4 LTE carriers (in 40MHz occupied bandwidth)
LTE carrier bandwidth	3, 5, 10, 15 or 20 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure (3GPP band 2) **RX Diversity scheme**	2.0 dB typ. (<2.5 dB max) 2 or 4 way Rx diversity
Sizes (HxWxD)(w/ solar shield) in mm (in.) **Volume (w/ solar shield) in L** **Weight (w/ solar shield) in kg (lb)**	538 x 304 x 182 (21.2" x 12.0" x 7.2") 30 24 (53)
DC voltage range **DC power consumption**	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption 580W typical @100% RF load
Environmental conditions **Wind load (@150km/h or 93mph)**	-40°C (-40°F) /+55°C (+131°F) IP65 Frontal:<200N / Lateral :<150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5 (> 14dB)
CPRI ports	2 CPRI ports (HW ready for Rate7 / 9.8 Gbps)
AISG interfaces	1 AISG2.0 output (RS485), +24V/2A DC power Integrated Smart Bias Tees (x2)
Misc. Interfaces	1 external alarms connector (4 alarms) 4 RF Tx & 4 RF Rx monitor ports 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

ALCATEL-LUCENT B66A RRH4X45

The Alcatel-Lucent B66a Remote Radio Head 4x45 is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering. Its operational range covers beyond that of B4 (AWS) and B10 (AWS+).

Supporting 2Tx/4Tx MIMO and 2-way/4-way Rx diversity, the Alcatel-Lucent B66a RRH4x45 allows operators to have a compact radio solution to deploy LTE in the 2100 band (3GPP band 4, 10, and 66), providing them with the means to achieve high capacity, high quality, high reliability, large instantaneous bandwidth, and high coverage with minimum site requirements.

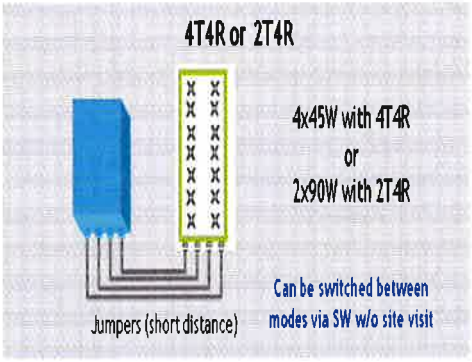
The Alcatel-Lucent B66a RRH4x45 product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x90W or 4x45W RF output power. It also supports 4-way Rx diversity at the 70 MHz instantaneous bandwidth.

The Alcatel-Lucent B66a RRH4x45 is a compact (near zero-footprint) solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

Its compactness and slim design makes the Alcatel-Lucent B66a RRH4x45 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 2110 - 2180 MHz band/DL, 1710-1780MHz/UL (3GPP band 4, 10, and 66a)
- LTE 2Tx or 4Tx MIMO (SW selectable)
- Configuration: 2T2R/2T4R/4T4R
- Output power: Up to 2x90W or 4x45W (SW configurable)
- 70MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports



BENEFITS

- Compact to reduce additional footprint when adding LTE in AWS 1-3 band
- Selection of MIMO configuration (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through 4Tx MIMO
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall

Features & Performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R selectable by SW)
Frequency band	AWS 1-3, B4/B66a DL: 2110-2180 MHz / UL: 1710-1780 MHz
Instantaneous bandwidth - #carriers	70 MHz – 4 LTE MIMO carriers (in 70 MHz occupied bandwidth)
LTE carrier bandwidth	5, 10, 15, 20 MHz
RF output power	2x90W or 4x45W (selectable by SW)
Noise figure – RX Diversity scheme **Receiver Sensivity (FRC A1-3)**	2 dB typical (<2.5 dB max) – 2 or 4 way Rx diversity -104.5 dBm maximum
Sizes (HxWxD) in mm (in.) **Volume in Liters** **Weight in kg (lb) (w/o mounting HW)**	655x299x182 (25.8x11.8x7.2) (with solar shield) 640x290x160 (25.2x11.4x6.3) (without solar shield) 35.5 (with solar shield) 29.7 (without solar shield) 25.8kg (56.8lb) (with solar shield)
DC voltage range **DC power consumption**	Nominal: -48V, -40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption 750W typical @100% RF load (In 2Tx or 4Tx mode); Add 58W for 2A*29V for AISG
Environmental conditions **Wind load (@150km/h or 93mph)**	-40°C (-40°F) /+55°C (+131°F) UL50E Type 4 Enclosure 250N (56lb) Frontal/150N (34lb) Lateral
Antenna ports	4 ports 4.3-10 female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate 7, 9.8 Gbps) SFP: SMDF (HW supports also SMSF and MMDF)
AISG interfaces	1 AISG 2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-487 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27 / FCC Part 15 / GR-3178-CORE

NOKIA

AirScale RRH 4T4R B5 160W AHCA

Capacity, performance, low total cost of ownership and investment protection

Nokia AirScale Remote Radio Head (RRH) AHCA supports band 5 - full band - along with 4×4 MIMO and 256QAM modulation to deliver higher data rates. It offers Nokia's unique book mounting for faster roll out and radio-integrated Passive Intermodulation (PIM) cancellation for enhanced network performance.

Furthermore, 4TX and 4RX paths in a single radio unit gives the flexibility to support 2T2R-2 sectors or 4T4R-single sector from a single unit, for cost-effective scaling of both coverage and capacity.

Capacity and performance

AirScale RRH 4T4R delivers 160 W (4×40 W) transmit power and can support 2×2 MIMO, 4×2 MIMO and 4×4 MIMO. The radio supports 256 QAM modulation in the downlink (DL) for up to 30 percent higher throughput. The Virtual Spectrum Analyzer feature enables both uplink and downlink spectrum to be analyzed.

Low total cost of ownership

With up to two sectors in a single radio, light weight and zero-bolt book mounting, AirScale RRH 4T4R allows operators to achieve faster roll outs and more cost-effective installation and maintenance of radios and tower space.

Investment protection

AirScale RRH 4T4R complements the AirScale System Module, offering a complete base station solution that is software upgradeable to 5G. AirScale System

Module offers 28 Gbps capacity that can be further enhanced by chaining more modules or through Cloud RAN. AirScale RRH is part of the AirScale Base Station portfolio, the next generation Nokia base station platform, and is backwards-compatible with the Nokia Flexi Multiradio 10 Base Station to best use an operator's existing investments.

NOKIA

Product name	AirScale RRH 4T4R B5 160W AHCA - 473966A
Supported frequency bands	3GPP band 5
Frequencies	DL 869-894MHz, UL 824-849MHz
Number of TX/RX ports	4/4
Instantaneous Bandwidth IBW	25MHz
Occupied Bandwidth OBW	25MHz
Output power	4T4R 40 W/ 2T4R 60W
Dimensions (mm) height x width x depth	337 x 295 x 165
Volume (liters)	16.4
Weight (kg)	16
Supply Voltage / Voltage Range	DC-48V / -36V to -60V
Typical Power Consumption	207 W (ETSI 24h Avg – 4x20W mode)
Antenna ports	4TX/4RX, 4.3-10+
Optical ports	2 x CPRI 9.8 Gbps
ALD control interfaces	AISG3.0 from ANT1, 2, 3, 4 and RET (Power supply ANT1 and ANT3)
Other interfaces	External alarm MDR-26 serial connector (4 inputs, 1 output) DC circular power connector
Operational temperature range	-40°C to 55°C (with no solar load)
Ingress protection class	IP65
Installation options	Pole or wall, RAS, vertical or horizontal book mount
Surge protection	Class II 5kA

Nokia Oyj
Karaportti 3
FI-02610 Espoo
Finland
Tel. +358 (0) 10 44 88 000

Product code: SR1611002341EN (April)

Product Data Sheet HB158-1-08U8-S8J18

HYBRIFLEX™ RRH Hybrid Feeder Cabling Solution, 1-5/8", Single-Mode Fiber

Product Description

RFS' HYBRIFLEX Remote Radio Head (RRH) hybrid feeder cabling solution combines optical fiber and DC power for RRHs in a single lightweight aluminum corrugated cable, making it the world's most innovative solution for RRH deployments.

It was developed to reduce installation complexity and costs at Cellular sites. HYBRIFLEX allows mobile operators deploying an RRH architecture to standardize the RRH installation process and eliminate the need for and cost of cable grounding. HYBRIFLEX combines optical fiber (multi-mode or single-mode) and power in a single corrugated cable. It eliminates the need for junction boxes and can connect multiple RRHs with a single feeder. Standard RFS CELLFLEX® accessories can be used with HYBRIFLEX cable. Both pre-connectorized and on-site options are available.

Figure 1: HYBRIFLEX Series

Features/Benefits

- Aluminum corrugated armor with outstanding bending characteristics – minimizes installation time and enables mechanical protection and shielding
- Same accessories as 1 5/8" coaxial cable
- Outer conductor grounding – Eliminates typical grounding requirements and saves on installation costs
- Lightweight solution and compact design – Decreases tower loading
- Robust cabling – Eliminates need for expensive cable trays and ducts
- Installation of tight bundled fiber optic cable pairs directly to the RRH – Reduces CAPEX and wind load by eliminating need for interconnection
- Optical fiber and power cables housed in single corrugated cable – Saves CAPEX by standardizing RRH cable installation and reducing installation requirements
- Outdoor polyethylene jacket – Ensures long-lasting cable protection

Technical Specifications

Outer Conductor Armor	Corrugated Aluminum	[mm (in)]	46.5 (1.83)
Jacket	Polyethylene, PE	[mm (in)]	50.3 (1.98)
UV-Protection	Individual and External Jacket		Yes
Weight, Approximate		[kg/m (lb/ft)]	1.9 (1.30)
Minimum Bending Radius, Single Bending		[mm (in)]	200 (8)
Minimum Bending Radius, Repeated Bending		[mm (in)]	500 (20)
Recommended/Maximum Clamp Spacing		[m (ft)]	1.0 / 1.2 (3.25 / 4.0)
DC-Resistance Outer Conductor Armor		[Ω/km (Ω/1000ft)]	068 (0.205)
DC-Resistance Power Cable, 8.4mm²(8AWG)		[Ω/km (Ω/1000ft)]	2.1 (0.307)
Version			Single-mode OM3
Quantity, Fiber Count			16 (8 pairs)
Core/Clad		[µm]	50/125
Primary Coating (Acrylate)		[µm]	245
Buffer Diameter, Nominal		[µm]	900
Secondary Protection, Jacket, Nominal		[mm (in)]	2.0 (0.08)
Minimum Bending Radius		[mm (in)]	104 (4.1)
Insertion Loss @ wavelength 850nm		dB/km	3.0
Insertion Loss @ wavelength 1310nm		dB/km	1.0
Standards (Meets or exceeds)			UL94-V0, UL1666 RoHS Compliant
Size (Power)		[mm² (AWG)]	8.4 (8)
Quantity, Wire Count (Power)			16 (8 pairs)
Size (Alarm)		[mm² (AWG)]	0.8 (18)
Quantity, Wire Count (Alarm)			4 (2 pairs)
Type			UV protected
Strands			19
Primary Jacket Diameter, Nominal		[mm (in)]	6.8 (0.27)
Standards (Meets or exceeds)			NFPA 130, ICEA S-95-658 UL Type XHHW-2, UL 44 UL-LS Limited Smoke, UL VW-1 IEEE-383 (1974), IEEE1202/FT4 RoHS Compliant
Installation Temperature		[°C (°F)]	-40 to +65 (-40 to149)
Operation Temperature		[°C (°F)]	-40 to +65 (-40 to149)

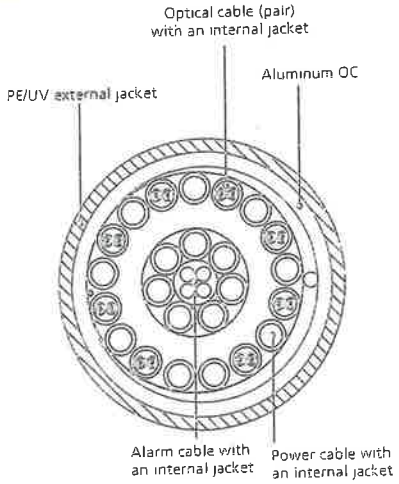


Figure 2: Construction Detail

* This data is provisional and subject to change

ATTACHMENT 2

Site Name: Bristol, CT
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissable Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW PCS	1970	1	5025	5025	107.7	0.1558	1.0	15.58%
VZW Cellular	869	9	422	3795.443	97.7	0.1430	0.579333333	24.68%
VZW AWS	2145	1	7500	7500	107.7	0.2325	1.0	23.25%
VZW 700	746	1	4935	4935	107.7	0.1530	0.497333333	30.76%

Total Percentage of Maximum Permissible Exposure 94.28%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

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

ATTACHMENT 3

STRUCTURAL ANALYSIS REPORT

For

verizonwireless

On Air Engineering, LLC
88 Foundry Pond Road
Cold Spring, NY 10516

VZW Site Name: Bristol CT
KM No. 170109.00

40' Self-Support Tower
32 Valley Street
Bristol, CT 06010

Prepared By:

KM CONSULTING ENGINEERS, INC.
262 Upper Ferry Road, Ewing, NJ 08628
Ph: (609) 538-0400 www.kmengr.com

August 16, 2017

Prepared to ANSI/TIA-222-G-4 December 2014
Structural Standards for Antenna Supporting
Structures and Antennas

On Air Engineering, LLC
Bristol CT

TABLE OF CONTENTS

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2.0 TOWER INVENTORY	4
3.0 COMMENTARY	5
4.0 ANALYSIS PROCEDURE	6
5.0 TOWER ANALYSIS RESULT	7
6.0 RECOMMENDATIONS	8
7.0 APPENDIX	9

Load Case No. 1: Existing self-support tower with existing inventory and proposed Verizon installation.

1.0 EXECUTIVE SUMMARY

Structure

Owner/Manager: Unknown

Location: 32 Valley Street
Bristol, CT 06010

Manufacturer: Rohn

Equipment

Existing tower inventory plus the proposed installation are detailed in Section 2.0 "Tower Inventory."

Synopsis

Load Case No. 1: The existing self-support tower with the existing inventory and proposed Verizon installation.

The tower superstructure has sufficient capacity and therefore meets the current ANSI/TIA-222-G standards. The tower superstructure is rated at 86.3%.

The tower is attached to steel framing on the top of the existing building. This analysis is limited to the tower superstructure only and does not include any analysis on the steel framing supporting the tower.

2.0 TOWER INVENTORY

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
B66A RRH4x45 w/mount (Verizon)	108	(2) JAHH-65B-R3B (Verizon)	107.67
B66A RRH4x45 w/mount (Verizon)	108	(2) JAHH-65B-R3B (Verizon)	107.67
B66A RRH4x45 w/mount (Verizon)	108	(2) JAHH-65B-R3B (Verizon)	107.67
B25 RRH4x30 w/mount (Verizon)	108	BSAMNT-SBS-2-3 mount	107.67
B25 RRH4x30 w/mount (Verizon)	108	BSAMNT-SBS-2-3 mount	107.67
B25 RRH4x30 w/mount (Verizon)	108	BSAMNT-SBS-2-3 mount	107.67
B13 RRH4x30 w/mount (Verizon)	108	Raycap Dist. Box. (Verizon)	105
B13 RRH4x30 w/mount (Verizon)	108	Raycap Dist. Box. (Verizon)	105
B13 RRH4x30 w/mount (Verizon)	108	(2) LPA-80080-4CF (Verizon)	97.67
4T4R B5 160W (Verizon)	108	(2) LPA-80080-4CF (Verizon)	97.67
4T4R B5 160W (Verizon)	108	(2) LPA-80063-4CF (Verizon)	97.67
4T4R B5 160W (Verizon)	108	Pipe to pipe standoff (Verizon)	97.67
RRH's mount	108	Pipe to pipe standoff (Verizon)	97.67
RRH's mount	108	Pipe to pipe standoff (Verizon)	97.67
RRH's mount	108		

Proposed Verizon Loading:

*(6) JAHH-65B-R3B panel antennas @ 107'-8" AGL
*(3) B66a RRH4x45s @ 108' AGL
*(3) B25 RRH4x30s @ 108' AGL
*(3) B13 RRH4x30s @ 108' AGL
*(3) 4T4R B4 160W RRH's @ 108' AGL
*(2) Raycap distribution boxes @ 105' AGL
*(2) Hybrid cables
*(3) BSAMNT pipe mounts @ 107'-8" AGL
*(3) RRH mounts @ 108' AGL

Existing Verizon Loading to Remain:

*(4) LPA-80080-4CF panel antennas @ 97'-8" AGL
*(2) LPA-80063-4CF panel antennas @ 97'-8" AGL
*(6) 1-5/8" coax lines
*Existing antennas relocated from existing T-frames to proposed pipe mounts

Loading To Be Removed:

*(6) Panel antennas @ 107'-8" AGL
*(6) Panel antennas @ 97'-8" AGL
*(3) T-frame mounts @ 97'-8" AGL
*(12) 1-5/8" coax lines

3.0 COMMENTARY

Our scope of work is to determine if the existing structure is capable of withstanding the additional stresses/forces imposed by the installation of the proposed Verizon equipment noted in the tower inventory.

The tower member layout/sizes were obtained from a previous analysis by Centek Engineering dated 1/3/14. Proposed reinforcement from the analysis was not included in the model as it has not been installed. Upon a visual inspection of photographs of the tower, the top girt sizes listed in the Centek report appear to be too small compared to the members on the tower. The smaller member sizes noted in the Centek analysis were used to be conservative.

The existing loading was obtained from the previous analysis by Centek Engineering. Proposed Verizon installation was obtained from correspondence from the client.

The following report will provide analytical calculations and commentary regarding the capacity of the proposed tower and subsequent recommendations.

4.0 ANALYSIS PROCEDURE

KM Consulting Engineers, Inc. carried out their structural analysis by correlating field inspection and tower member data into proprietary software designed specifically for communication tower analysis.

These programs run in conjunction with the guidelines set down in the ANSI/TIA-222-G (Addendum 4) Dec 2014 Standard entitled "Structural Standards for Antenna Supporting Structures and Antennas."

The existing tower is analyzed by placing wind forces on the structure in 30° positional increments around the tower (i.e. wind pressure directly onto the tower corners, faces and parallel to the faces). This enables the user to "create" a three-dimensional representation, yielding results for worst case scenarios. In effect, the production of these results allows the user to study the structural integrity of the tower when influenced by wind forces from any direction.

The proceeding report includes analysis for the tower with the addition of antennas in the scenarios stated. For clarity, the analysis shall include worst case loadings and a typical elevation view with maximum foundation loads tabulated.

Should the client require to be furnished with a full copy of our analysis, we will gladly do so.

Codes and Standards

CSBC - Connecticut State Building Code 2016

TIA - Telecommunications Industry Association – ANSI/TIA-222-G-4 Structural Standards for Antenna Supporting Structures and Antennas, 2014

AISC - American Institute of Steel Construction - Steel Construction Manual, 14th edition, 2011

ASCE - Minimum Design Loads for Buildings and Other Structures (ASCE/SEI 7-05)

5.0 TOWER ANALYSIS RESULTS

The tower was analyzed for the inventory detailed in Section 2.0 "Tower Inventory".

Structural wind speed is in accordance with ANSI/TIA-222-G listing applicable to Hartford County, CT: 105 MPH, no ice and 50 MPH (3 SG), 1" radial ice. Additional criteria include Structure Class II, Exposure Category B, and Topographic Category 1.

Load Case No. 1: Proposed Verizon loading consists of (6) JAHH-65B-R3B panel antennas, (3) B66a RRH4x45s, (3) B25 RRH4x30s, (3) B13 RRH4x30s, (3) 4T4R B5 160W RRHs, (2) Raycap distribution boxes, (2) hybrid cables, (3) BSAMNT pipe mounts and (3) RRH mounts. (4) LPA-80080-4CF panel antennas, (2) LPA-80063-4CF panel antennas, and (6) 1-5/8" coax lines will remain on the tower. The panel antennas remaining on the tower will be relocated and mounted to new pipe-to-pipe standoff mounts. (12) Panel antennas, (3) T-frames, and (12) 1-5/8" coax lines will be removed from the tower.

The tower superstructure has sufficient capacity and therefore meets the current ANSI/TIA-222-G standards. The tower superstructure is rated at 86.3%.

The tower is attached to steel framing on the top of the existing building. This analysis is limited to the tower superstructure only and does not include any analysis on the steel framing supporting the tower.

6.0 RECOMMENDATIONS

Further to our calculations, we conclude that the tower superstructure has adequate capacity to support the proposed Verizon installation and therefore meets the current ANSI/TIA-222-G design standards.

Please do not hesitate to contact our office with any questions or concerns regarding this report.

Sincerely,
KM CONSULTING ENGINEERS, INC

Domenic Aversa, PE
Project Manager

Reviewed and Approved by:

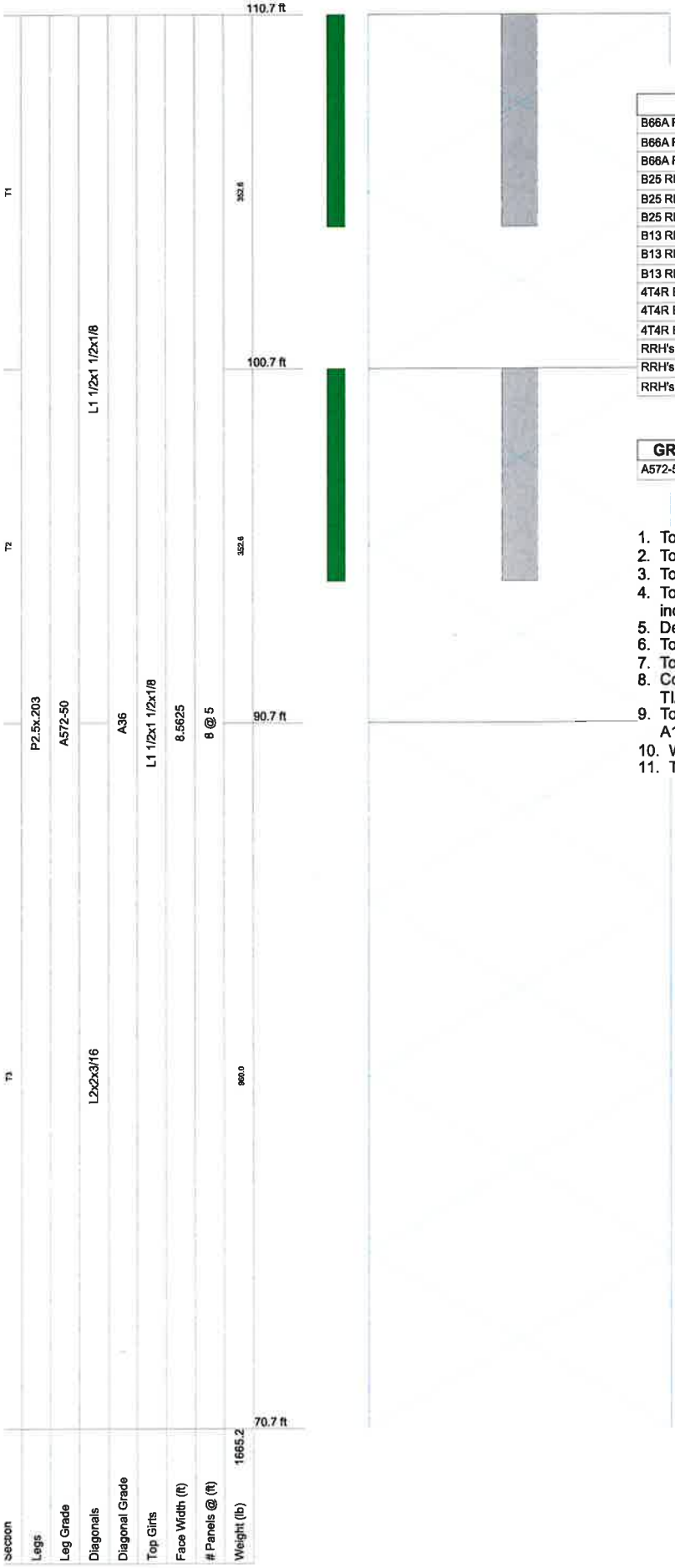
STATE OF CONNECTICUT
MICHAEL L BOHLINGER
20405
LICENSED
PROFESSIONAL ENGINEER

8/16/17

Michael L. Bohlinger, PE
Principal
CT License # 20405

7.0 APPENDIX

LOAD CASE 1



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
B66A RRH4x45 w/mount (Verizon)	108	(2) JAHH-65B-R3B (Verizon)	107.67
B66A RRH4x45 w/mount (Verizon)	108	(2) JAHH-65B-R3B (Verizon)	107.67
B66A RRH4x45 w/mount (Verizon)	108	(2) JAHH-65B-R3B (Verizon)	107.67
B25 RRH4x30 w/mount (Verizon)	108	BSAMNT-SBS-2-3 mount	107.67
B25 RRH4x30 w/mount (Verizon)	108	BSAMNT-SBS-2-3 mount	107.67
B25 RRH4x30 w/mount (Verizon)	108	BSAMNT-SBS-2-3 mount	107.67
B13 RRH4x30 w/mount (Verizon)	108	Raycap Dist. Box. (Verizon)	105
B13 RRH4x30 w/mount (Verizon)	108	Raycap Dist. Box. (Verizon)	105
B13 RRH4x30 w/mount (Verizon)	108	(2) LPA-80080-4CF (Verizon)	97.67
4T4R B5 160W (Verizon)	108	(2) LPA-80080-4CF (Verizon)	97.67
4T4R B5 160W (Verizon)	108	(2) LPA-80063-4CF (Verizon)	97.67
4T4R B5 160W (Verizon)	108	Pipe to pipe standoff (Verizon)	97.67
RRH's mount	108	Pipe to pipe standoff (Verizon)	97.67
RRH's mount	108	Pipe to pipe standoff (Verizon)	97.67
RRH's mount	108		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 105 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
9. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
10. Welds are fabricated with ER-70S-6 electrodes.
11. TOWER RATING: 86.3%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 27239 lb
SHEAR: 3861 lb

UPLIFT: -23292 lb
SHEAR: 3561 lb

AXIAL
18017 lb

SHEAR
2011 lb

MOMENT
55456 lb-ft

TORQUE 182 lb-ft
50 mph WIND - 1.0000 in ICE

AXIAL
4414 lb

SHEAR
7345 lb

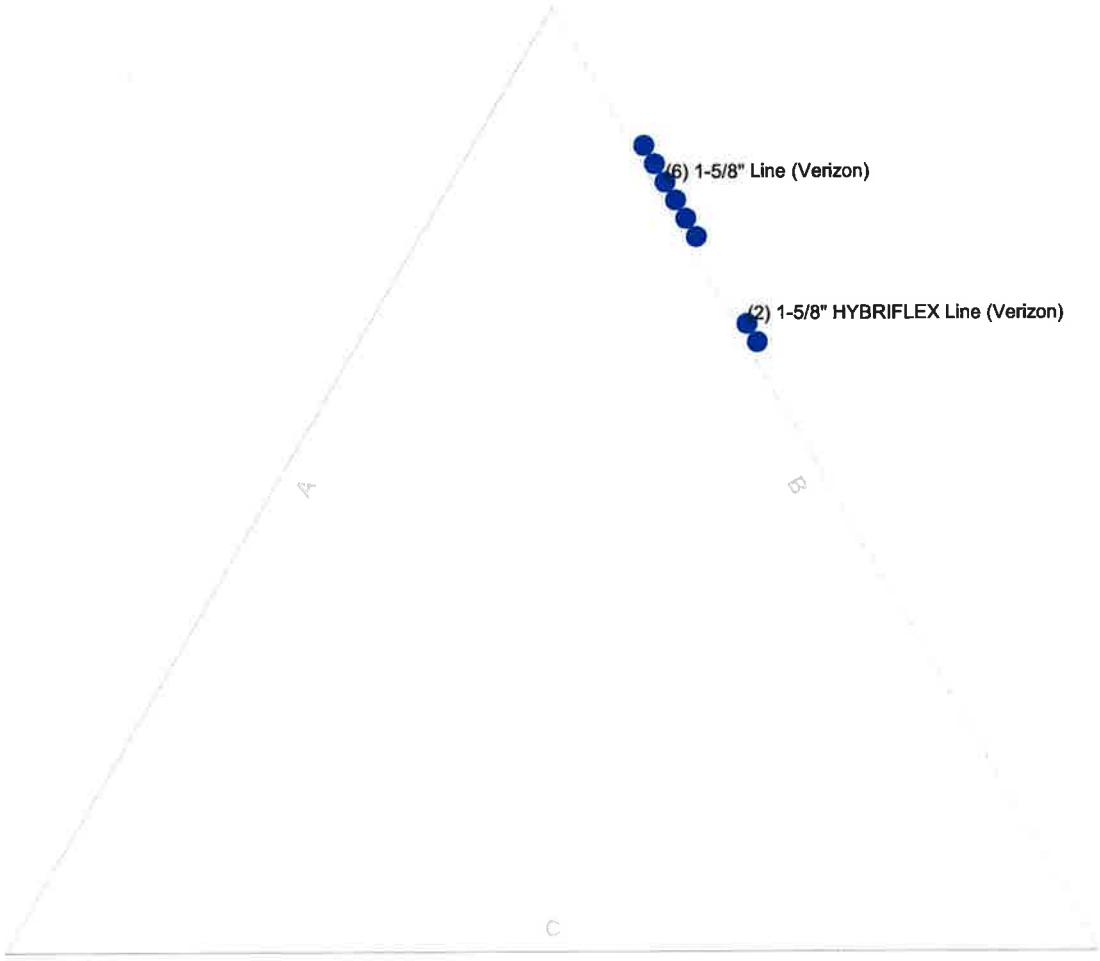
MOMENT
191076 lb-ft

TORQUE 1525 lb-ft
REACTIONS - 105 mph WIND

KM Consulting Engineers, Inc.
262 Upper Ferry Road
Ewing, NJ 08628
Phone: (609) 538-0400
FAX:
Consulting Engineers

Job: Bristol CT LC1
Project: 40' Self-Support Tower
Client: On Air Engineering, LLC Drawn by: DCA App'd:
Code: TIA-222-G Date: 08/16/17 Scale: N
Path: K:\On Air Engineering\Bristol CT\Engineering\Bristol CT.eri Dwg No.

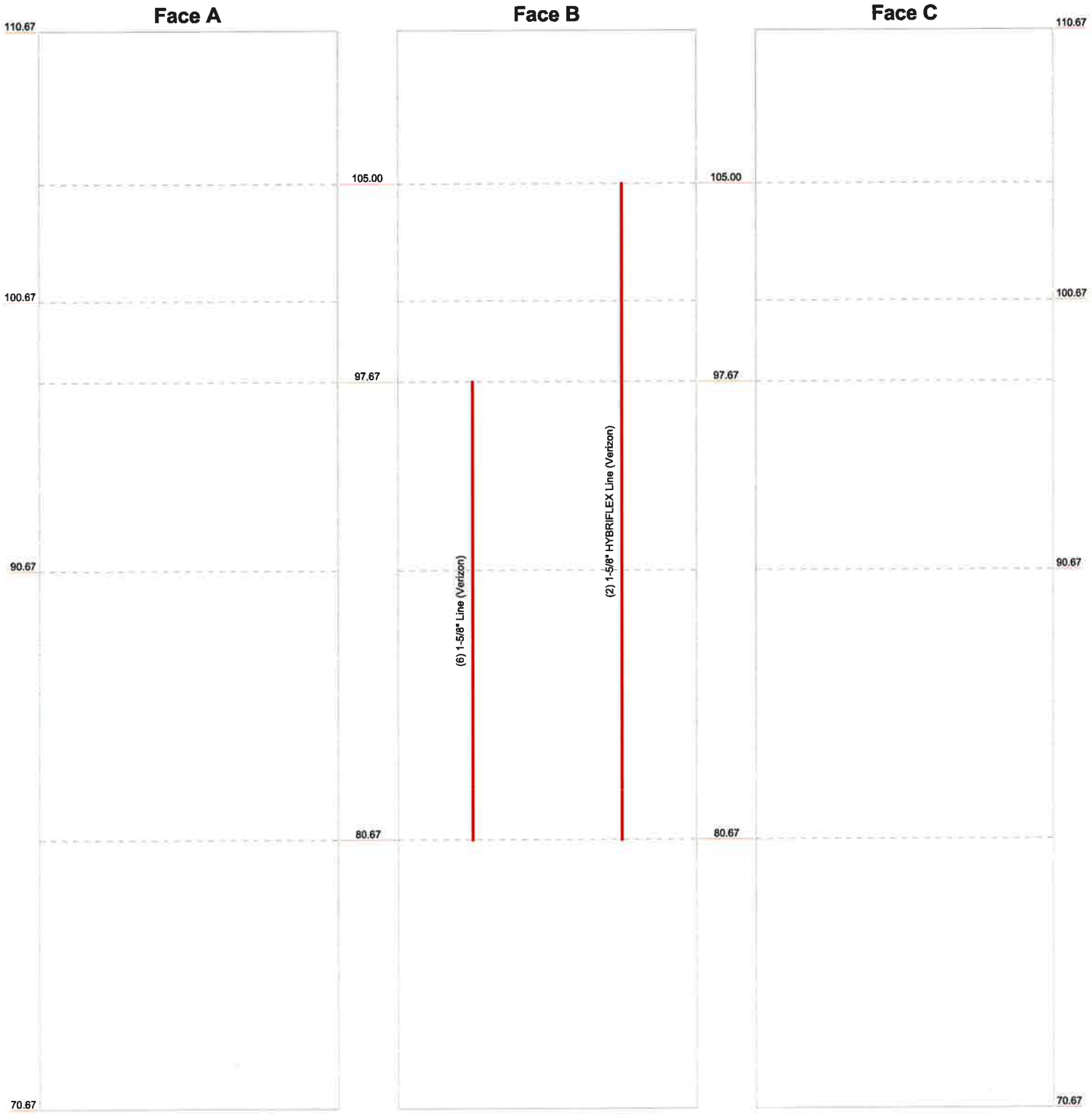
Round Flat App In Face App Out Face



Consulting Engineers	**KM Consulting Engineers, Inc.** 262 Upper Ferry Road Ewing, NJ 08628 Phone: (609) 538-0400 FAX:	Job: **Bristol CT LC1** Project: **40' Self-Support Tower** Client: On Air Engineering, LLC Drawn by: DCA App'd: Code: TIA-222-G Date: 08/16/17 Scale: N Path: K:\On Air Engineering\Bristol CT\Engineering\Bristol CT.eri Dwg No.

70'8-1/32" - 110'8-1/32"

Round | Flat | App In Face | App Out Face | Truss Leg

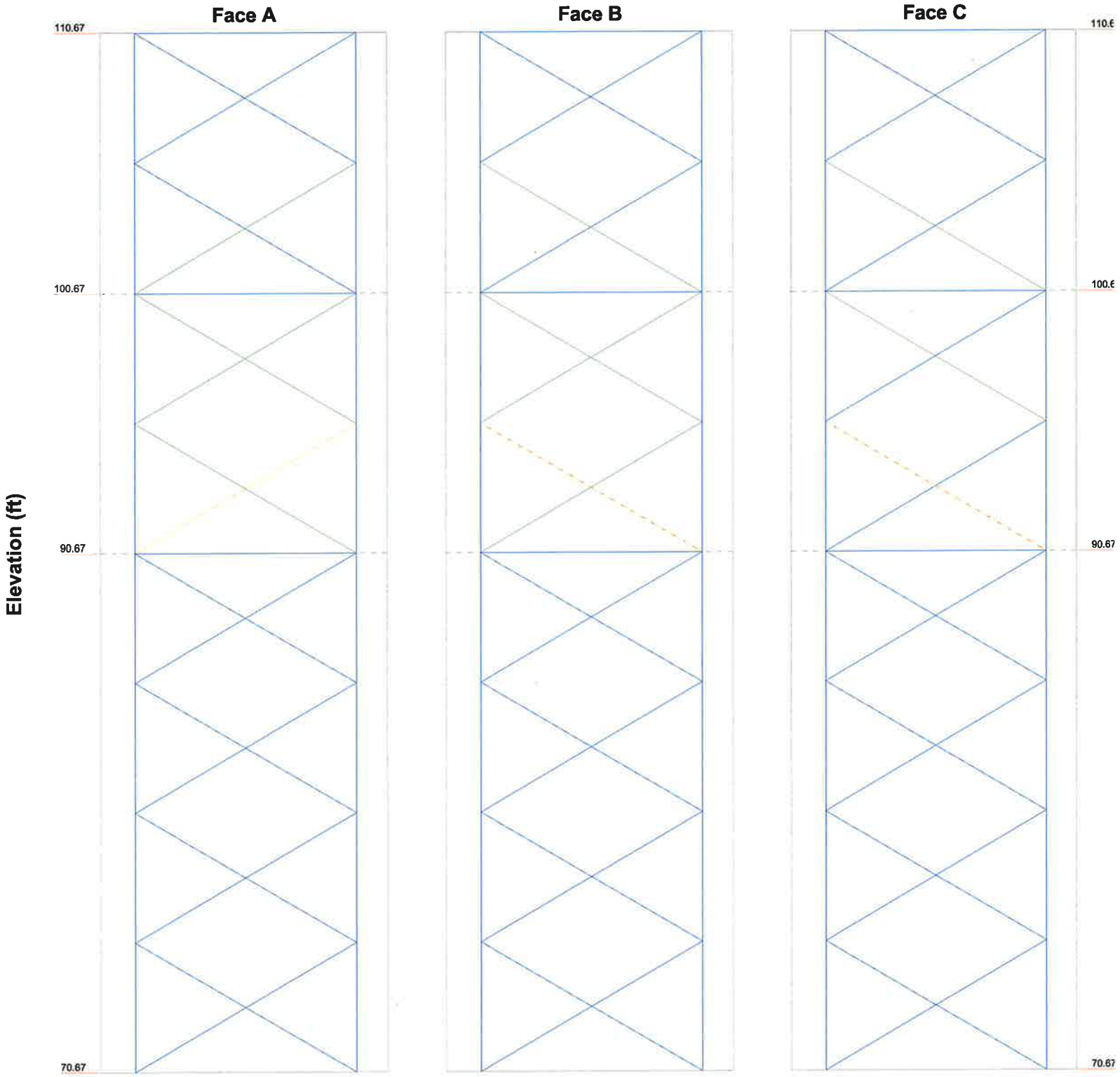


KM Consulting Engineers, Inc.
262 Upper Ferry Road
Ewing, NJ 08628
Phone: (609) 538-0400
FAX:
Consulting Engineers

Job:	Bristol CT LC1
Project:	40' Self-Support Tower
Client:	On Air Engineering, LLC
Drawn by:	DCA
App'd:	
Code:	TIA-222-G
Date:	08/16/17
Scale:	N
Path:	K:\On Air Engineering\Bristol CT\Engineering\Bristol CT.eri
Dwg No.	

70'8-1/32" - 110'8-1/32"

> 100% | 90%-100% | 75%-90% | 50%-75% | < 50% Overstress



KM Consulting Engineers, Inc.
262 Upper Ferry Road
Ewing, NJ 08628
Phone: (609) 538-0400
FAX:
Consulting Engineers

Job:	Bristol CT LC1		
Project:	40' Self-Support Tower		
Client:	On Air Engineering, LLC	Drawn by: DCA	App'd:
Code:	TIA-222-G	Date: 08/16/17	Scale: N
Path:	K:\On Air Engineering\Bristol CT\Engineering\Bristol CT.eri		Dwg No.

Section Capacity Table

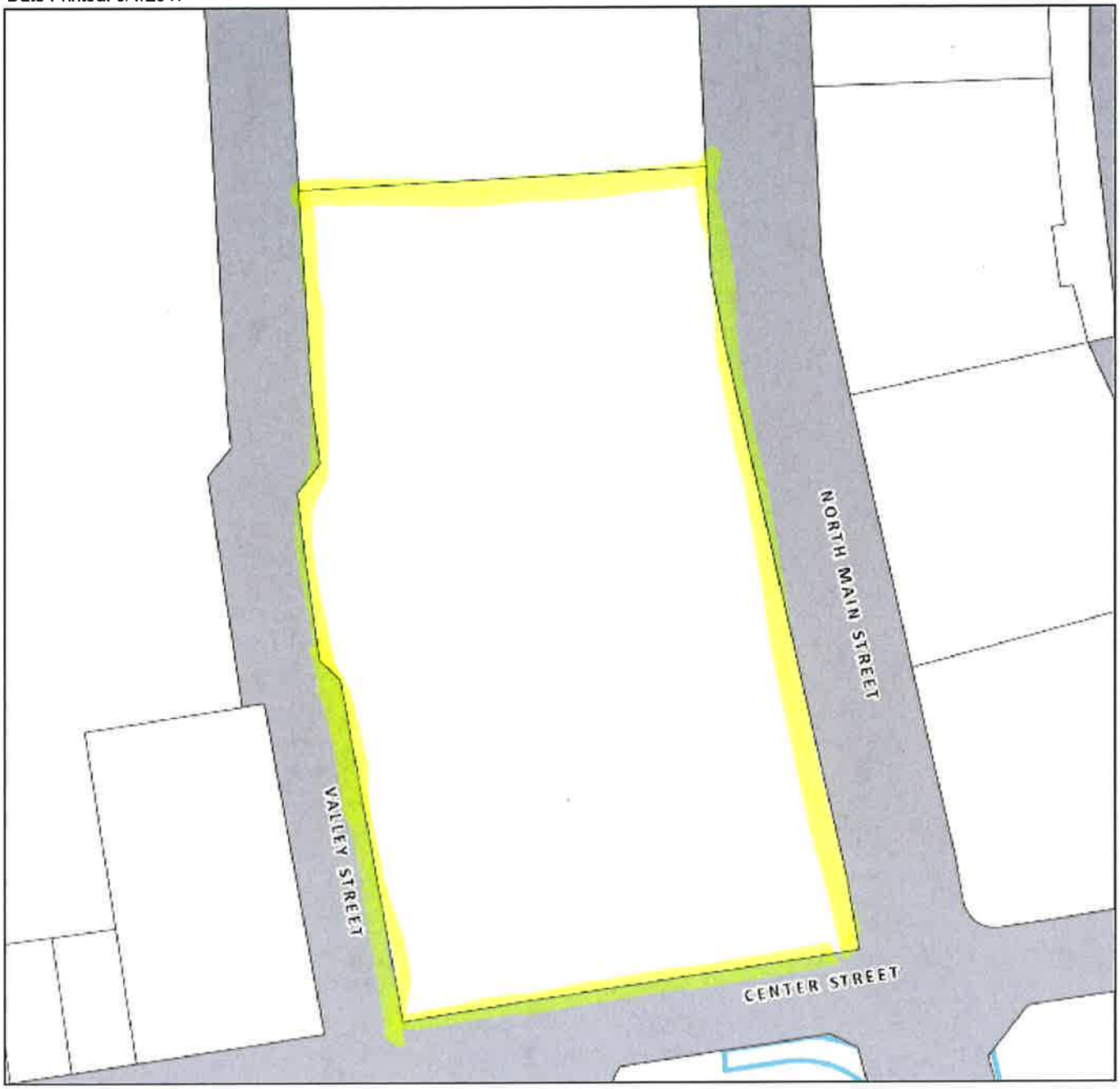
Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T1	110.67 - 100.67	Leg	P2.5x.203	3	-2916.48	57192.30	5.1	Pass
		Diagonal	L1 1/2x1 1/2x1/8	10	-1237.99	2129.82	58.1	Pass
		Top Girt	L1 1/2x1 1/2x1/8	4	-86.38	714.02	12.1	Pass
T2	100.67 - 90.67	Leg	P2.5x.203	21	-8022.19	57192.30	14.0	Pass
		Diagonal	L1 1/2x1 1/2x1/8	26	-1837.45	2129.82	86.3	Pass
		Top Girt	L1 1/2x1 1/2x1/8	22	-152.53	714.02	21.4	Pass
T3	90.67 - 70.67	Leg	P2.5x.203	39	-24660.40	57192.30	43.1	Pass
		Diagonal	L2x2x3/16	46	-2603.39	7498.25	34.7 40.7 (b)	Pass
		Top Girt	L1 1/2x1 1/2x1/8	40	-73.47	714.02	10.3 11.0 (b)	Pass
							Summary	
						Leg (T3)	43.1	Pass
						Diagonal (T2)	86.3	Pass
						Top Girt (T2)	21.4	Pass
						Bolt Checks	44.2	Pass
						RATING =	**86.3**	**Pass**

ATTACHMENT 4

City of Bristol

Geographic Information System (GIS)

Date Printed: 5/1/2017



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The City of Bristol and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 100 feet

0 100 Feet

N W E S

City of Bristol, CT

Property Listing Report

Map Block Lot **26-21B** | Account **0026670**

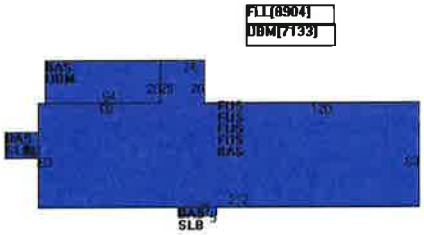
Property Information

Property Location	225 NORTH MAIN ST
Owner	CARPENTER REALTY COMPANY
Co-Owner	
Mailing Address	PO BOX 176 BRISTOL CT 06011
Land Use	340 Off Bldg
Land Class	C
Zoning Code	BD-1
Census Tract	04061

Neighborhood	
Acreage	3.19
Utilities	All Public
Lot Setting/Desc	Level
Additional Info	

Photo

Sketch



Primary Construction Details

Year Built	1912
Stories	5
Building Style	Office Bldg
Building Use	Comm/Ind
Building Condition	
Floors	Carpet
Total Rooms	

Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	Flat
Roof Cover	T+G/Rubber

Exterior Walls	Brick/Masonry
Interior Walls	Drywall/Sheetr
Heating Type	Forced Air-Duc
Heating Fuel	Propane Gas
AC Type	Central
Gross Bldg Area	90051
Total Living Area	80861

Report Created On 5/1/2017

City of Bristol, CT

Property Listing Report | **Map Block Lot** 26-21B | **Account** 0026670

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	3432100	2402470
Extras	632400	442680
Improvements	4373500	3061450
Outbuildings	309000	216300
Land	279000	195300
Total	4652500	3256750

Outbuilding and Extra Items

Type	Description
Elevator	5 Units
Load Leveler	1 Units
Paving Asph.	9000 S.F.
Load Leveler	6 Units
Elevator	6 Units
Elevator	5 Units
Elevator	5 Units
Overhead Door	7 Units
Elevator	6 Units
Sprinklers	87601 S.F.

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Finished Lower Level	8904	8904
Upper Story, Finished	55920	55920
Basement, Unfinished	8797	0
First Floor	16037	16037
Slab	393	0
Total Area	90051	80861

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
CARPENTER REALTY COMPANY	692/ 54	10/4/1978	0

Report Created On 5/1/2017

City of Bristol, CT

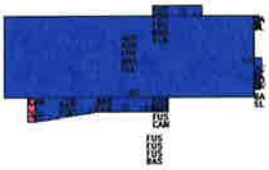
Property Listing Report

Map Block Lot **26-21B**

Account **0026670**

Photo

Sketch



Primary Construction Details

Year Built	1930
Stories	4
Building Style	Mill Building
Building Use	Comm/Ind
Building Condition	
Floors	Carpet
Total Rooms	
Bedrooms	
Bathrooms	
Bath Style	
Half Baths	

Kitchen Style	
Roof Style	Flat
Roof Cover	T+G/Rubber
Exterior Walls	Brick/Masonry
Interior Walls	Drywall/Sheetr
Heating Type	Forced Air-Duc
Heating Fuel	Propane Gas
AC Type	Central
Gross Bldg Area	
Total Living Area	

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Upper Story,	57831	57831
Office	102912	102912
Finished Lower	54506	54506
Canopy	1008	0
First Floor	58649	58649
Slab	3913	0
Total Area		

Report Created On **5/1/2017**

ATTACHMENT 5

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here ***Postmark with Date of Receipt.***
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3	3	neopost 08/29/2017 US POSTAGE $002.38 ZIP 06103 041L122033
	Postmaster, per *(name of receiving employee)*		

	USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.		Kenneth B. Cockayne, Mayor City of Bristol 111 North Main Street Bristol, CT 06010		OLD STATE HOUSE STATION 06103 AUG 29 2017 USPS		
2.		Robert Flanagan, AICP, City Planner City of Bristol 111 North Main Street Bristol, CT 06010				
3.		Carpenter Realty 10 North Main Street P.O. Box 176 Bristol, CT 06010				
4.						
5.						
6.						