Robinson+Cole

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Also admitted in Massachusetts

June 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**
1218 Cromwell Avenue, Rocky Hill, Connecticut

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) antennas at the 150-foot level of the existing 173-foot tower at 1218 Cromwell Avenue in Rocky Hill, Connecticut (the "Property"). The tower is owned by Crown Castle ("Crown"). The Council approved Cellco's use of this tower in 2000. Cellco now intends to replace six (6) of its existing antennas with three (3) model SBNHH-1D65B, 1900 MHz antennas and three (3) model SBNHH-1D65B, 2100 MHz antennas, all at the same 150-foot level on the tower. Cellco also intends to replace three (3) remote radio heads ("RRHs") and install six (6) new RRHs behind its antennas and one (1) HYBRIFLEX™ fiber optic antenna cable inside the monopole shaft. Included in Attachment 1 are specifications for Cellco's replacement antennas, RRHs and HYBRIFLEX™ cable.

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 John Mehr, Rocky Hill Interim Town Manager; Kim Ricci, Zoning Enforcement Officer/Town Planner; Crown, the owner of the tower; and Tabshey Development, LLC, the owner of 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 tower. Cellco's replacement antennas and RRH's will be located at the 150-foot level on the 173-foot 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 cumulative worst-case 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. A copy of the stamped Certificate of Mailing will be forwarded to the Council upon receipt.

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:
John Mehr, Rocky Hill Interim Town Manager (*via Certificate of Mailing*)
Kim Ricci, Zoning Enforcement Officer/Town Planner (*via Certificate of Mailing*)
Tabshey Development, LLC (*via Certificate of Mailing*)
Crown Castle (*via Electronic Mail*)
Tim Parks, Verizon Wireless (*via Electronic Mail*)

ATTACHMENT 1

Product Specifications

COMMSCOPE®

SBNHH-1D65B

6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 2x RET. Both high bands share the same electrical tilt.

- Interleaved dipole technology providing for attractive, low wind load mechanical package

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.9	14.7	17.7	18.2	18.6	18.6
Beamwidth, Horizontal, degrees	68	66	69	66	63	58
Beamwidth, Vertical, degrees	12.1	10.7	5.6	5.2	5.0	4.5
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	14	13	15	15	15	13
Front-to-Back Ratio at 180°, dB	27	29	28	28	28	27
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	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.5	14.3	17.4	17.9	18.2	18.3
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.8	±0.4	±0.3	±0.5	±0.3
Gain by Beam Tilt, average, dBi	0 ° | 14.6	0 ° | 14.5	0 ° | 17.4	0 ° | 17.8	0 ° | 18.1	0 ° | 18.2
	7 ° | 14.6	7 ° | 14.4	3 ° | 17.5	3 ° | 17.9	3 ° | 18.3	3 ° | 18.4
	14 ° | 14.2	14 ° | 13.6	7 ° | 17.4	7 ° | 17.9	7 ° | 18.2	7 ° | 18.4
Beamwidth, Horizontal Tolerance, degrees	±2.2	±3.4	±2	±4.6	±5.7	±4.3
Beamwidth, Vertical Tolerance, degrees	±0.8	±1	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	16	14	16	16	16	15
Front-to-Back Total Power at 180° ± 30°, dB	25	26	27	26	26	26
CPR at Boresight, dB	22	23	21	20	20	22
CPR at Sector, dB	13	11	16	12	11	4

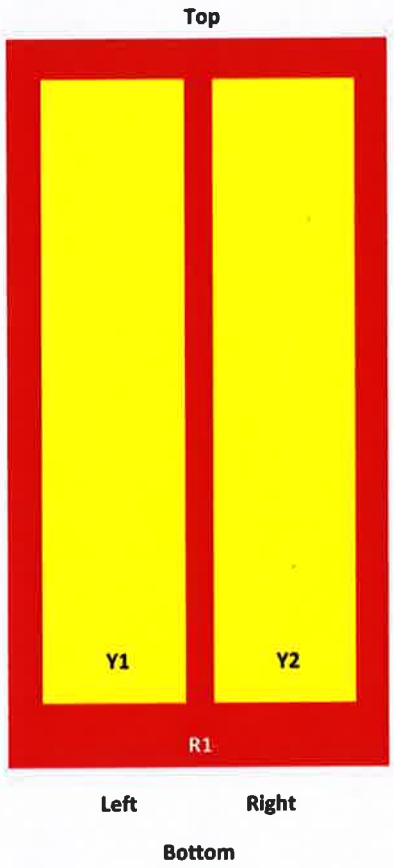
* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, download the whitepaper Time to Raise the Bar on BSAs.

Array Layout

Product Specifications

SBNHH-1D65B

SBNHH 65



Array	Freq (MHz)	Conns	RET (MRET)	AISG RET UID
R1	698-896	1-2	1	ANxxxxxxxxxxxxxxxx.1
Y1	1695-2360	3-4	2	ANxxxxxxxxxxxxxxxx.2
Y2	1695-2360	5-6		

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 – 896 MHz
Antenna Type	Sector
Band	Multiband
Performance Note	Outdoor usage

Mechanical Specifications

RF Connector Quantity, total	6
RF Connector Quantity, low band	2
RF Connector Quantity, high band	4
RF Connector Interface	7-16 DIN Female

Product Specifications

SBNHH-1D65B

Color	Light gray
Grounding Type	RF connector inner conductor and 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	618.0 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Loading, lateral	197.0 N @ 150 km/h 44.3 lbf @ 150 km/h
Wind Loading, rear	728.0 N @ 150 km/h 163.7 lbf @ 150 km/h
Wind Speed, maximum	241 km/h | 150 mph

Dimensions

Length	1851.0 mm | 72.9 in
Width	301.0 mm | 11.9 in
Depth	180.0 mm | 7.1 in
Net Weight, without mounting kit	18.4 kg | 40.6 lb

Remote Electrical Tilt (RET) Information

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

Packed Dimensions

Length	2025.0 mm | 79.7 in
Width	390.0 mm | 15.4 in
Depth	296.0 mm | 11.7 in
Shipping Weight	31.0 kg | 68.3 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

SBNHH-1D65B

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.

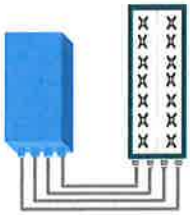
Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the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

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.

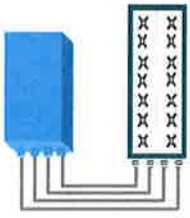
Its compactness and slim design makes the Alcatel-Lucent B25 RRH4x30 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the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

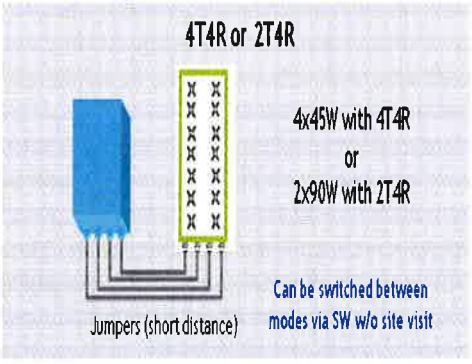
The Alcatel-Lucent B66a RRH4x45 product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x90W or 4x45W RF output power. It also supports 4-way Rx diversity at the 70 MHz instantaneous bandwidth.

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

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)

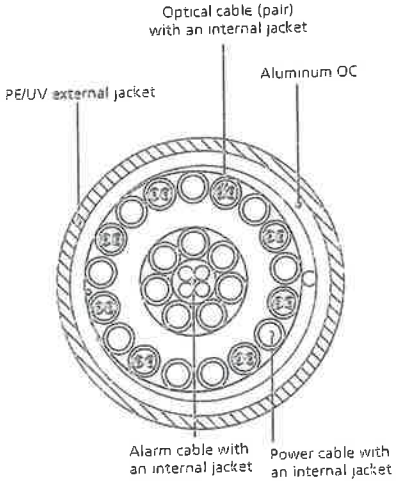


Figure 2: Construction Detail

* This data is provisional and subject to change

ATTACHMENT 2

	General	Power	Density					
Site Name: Rocky Hill 2								
Tower Height: 173 ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*Metricom			156		0.0144	1.0000	0.14%	
Verizon	**1**	**5000**	**150**	**0.0799**	**1970**	**1.0000**	**7.99%**	
Verizon	**9**	**387**	**150**	**0.0557**	**869**	**0.5793**	**9.61%**	
Verizon	**1**	**7400**	**150**	**0.1183**	**2145**	**1.0000**	**11.83%**	
Verizon	**1**	**2200**	**150**	**0.0352**	**746**	**0.4973**	**7.07%**	
								36.64%
* Source: Siting Council								

ATTACHMENT 3

Date: **February 24, 2017**

Charles Trask
Crown Castle
3530 Toringdon Way Suite 300
Charlotte, NC 28277

Crown Castle
2000 Corporate Drive
Canonsburg, PA, 15317
724-416-2000

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Verizon Wireless* Co-Locate**	
	Carrier Site Number:	119642
	Carrier Site Name:	Rocky Hill 2, CT
Crown Castle Designation:	**Crown Castle BU Number:**	801366
	Crown Castle Site Name:	ROCKY HILL 2
	Crown Castle JDE Job Number:	426055
	Crown Castle Work Order Number:	1365592
	Crown Castle Application Number:	379485 Rev. 2
Engineering Firm Designation:	**Crown Castle Project Number:**	1365592
Site Data:	**1218 Cromwell Ave, Rocky Hill, Hartford County, CT** **Latitude *41° 38' 16.5"*, Longitude *-72° 40' 24.1"*** **173 Foot - Monopole Tower**	

Dear Charles Trask,

Crown Castle is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 1365592, in accordance with application 379485, revision 2.

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

LC5: Existing + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

This analysis has been performed in accordance with the 2016 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 125 mph converted to a nominal 3-second gust wind speed of 97 mph per Section 1609.3 and Appendix N as required for use in the TIA-222-G Standard per Exception #5 of Section 1609.1.1. Exposure Category C and Risk Category II were used in this analysis.

All modifications and equipment proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

We at *Crown Castle* appreciate the opportunity of providing our continuing professional services to you and Crown Castle. If you have any questions or need further assistance on this or any other projects please give us a call.

Structural analysis prepared by: Mark E. Mlynarski, E.I.T./ AGH

Respectfully submitted by:

2/28/2017

Terry P. Styran, P.E.
Senior Project Engineer
tnxTower Report - version 7.0.5.1

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 173 ft Monopole tower designed by SUMMIT in June of 2000. The tower was originally designed for a wind speed of 80 mph per TIA/EIA-222-F.

2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of TIA-222-G Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a 3-second gust wind speed of 97 mph with no ice, 50 mph with 1 inch ice thickness and 60 mph under service loads, exposure category C.

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
150.0	150.0	3	alcatel lucent	B13 RRH 4X30	1	1-5/8	-
		3	alcatel lucent	B25 RRH4X30			
		3	alcatel lucent	B66A RRH4X45			
		1	commscope	RC2DC-3315-PF-48			
		6	commscope	SBNHH-1D65B w/ Mount Pipe			

Table 2 - Existing Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
174.0	174.0	1	tower mounts	Platform Mount [LP 1201-1]	13	1-5/8	1
150.0	150.0	3	alcatel lucent	RRH2X60-AWS	-	-	2
		6	andrew	HBXX-6517DS-A2M w/ Mount Pipe			
		3	andrew	LNX-6514DS-T4M w/ Mount Pipe	-	-	1
		3	andrew	LNX-8513DS-A1M w/ Mount Pipe			
		1	commscope	RC2DC-3315-PF-48			
		6	rfs celwave	FD9R6004/2C-3L			
		1	tower mounts	Platform Mount [LP 601-1]			

Notes:
1) Existing Equipment
2) Equipment To Be Removed; Not Considered in Analysis

Table 3 - Design Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
174	174	12	SWEDCOM	ALP-9212-N	-	-
166	166	12	SWEDCOM	ALP-9212-N	-	-

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
156	156	12	SWEDCOM	ALP-9212-N	-	-
146	146	12	SWEDCOM	ALP-9212-N	-	-
136	136	12	SWEDCOM	ALP-9212-N	-	-
126	126	12	SWEDCOM	ALP-9212-N	-	-
101	101	2	generic	GPS ANTENNA	-	-

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Rizzo Associates, Inc.	639257	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Summit Manufacturing, LLC	679665	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Summit Manufacturing, LLC	639263	CCISITES

3.1) Analysis Method

tnxTower (version 7.0.5.1), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) Tower and structures were built in accordance with the manufacturer's specifications.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

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

4) ANALYSIS RESULTS

Table 5 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	173 - 127	Pole	TP35.568x26x0.25	1	-9.574	1836.500	25.2	Pass
L2	127 - 86.5	Pole	TP43.493x34.132x0.313	2	-16.756	2830.080	39.3	Pass
L3	86.5 - 42.5	Pole	TP52.02x41.724x0.375	3	-28.157	4067.630	44.3	Pass
L4	42.5 - 0	Pole	TP60.11x49.918x0.438	4	-46.104	5595.410	46.0	Pass
							Summary	
						Pole (L4)	46.0	Pass
						Rating =	46.0	Pass

Table 6 - Tower Component Stresses vs. Capacity – LC5

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	44.7	Pass
1	Base Plate	0	23.7	Pass
1,2	Base Foundation	0	47.2	Pass
1,2	Base Foundation Soil Interaction	0	41.5	Pass

Structure Rating (max from all components) =	47.2%

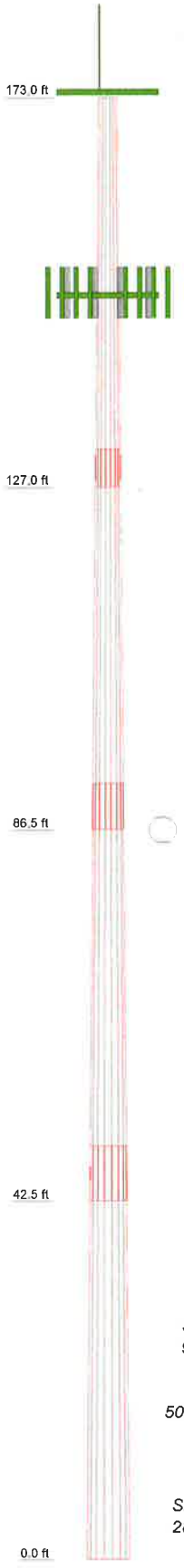
Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
2) It is unknown whether the foundation is a drilled shaft or pier and pad. Both designs were analyzed and determined to be sufficient. Drilled Pier is controlling.

4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT



Section	1	2	3	4
Length (ft)	46.000	45.000	49.500	49.000
Number of Sides	18	18	18	18
Thickness (in)	0.250	0.313	0.375	0.438
Socket Length (ft)	4.500	5.500	6.500	
Top Dia (in)	26.000	34.132	41.724	49.918
Bot Dia (in)	35.568	43.493	52.020	60.110
Grade				
Weight (K)	3.8	5.8	9.3	12.6

Total Weight: 31.6

ALL REACTIONS ARE FACTORED

AXIAL 80 K

SHEAR 9 K — *MOMENT 1012 kip-ft*

TORQUE 0 kip-ft
50 mph WIND - 1.000 in ICE

AXIAL 46 K

SHEAR 28 K — *MOMENT 3100 kip-ft*

TORQUE 1 kip-ft
REACTIONS - 97 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod 1"x10'	174	RC2DC-3315-PF-48	150
(4) 6' x 2" Mount Pipe	174	(2) SBNHH-1D65B w/ Mount Pipe	150
(4) 6' x 2" Mount Pipe	174	(2) SBNHH-1D65B w/ Mount Pipe	150
(4) 6' x 2" Mount Pipe	174	(2) SBNHH-1D65B w/ Mount Pipe	150
Platform Mount [LP 1201-1]	174	B13 RRH 4X30	150
Platform Mount [LP 601-1]	150	B13 RRH 4X30	150
LNX-6514DS-T4M w/ Mount Pipe	150	B13 RRH 4X30	150
LNX-8513DS-A1M w/ Mount Pipe	150	B66A RRH4X45	150
LNX-6514DS-T4M w/ Mount Pipe	150	B66A RRH4X45	150
LNX-6514DS-T4M w/ Mount Pipe	150	B66A RRH4X45	150
LNX-8513DS-A1M w/ Mount Pipe	150	B25 RRH4X30	150
LNX-8513DS-A1M w/ Mount Pipe	150	B25 RRH4X30	150
(2) FD9R6004/2C-3L	150	B25 RRH4X30	150
(2) FD9R6004/2C-3L	150	RC2DC-3315-PF-48	150
(2) FD9R6004/2C-3L	150		

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 97 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 0.000 ft
8. TOWER RATING: 46%

CROWN CASTLE
The Foundation for a Wireless World

Crown Castle
2000 Corporate Drive
Canonsburg, PA, 15317
Phone: 724-416-2000
FAX: 724-416-4623

Job: **BU#801366**			
Project:			
Client: Crown Castle	Drawn by: agholami	App'd:	
Code: TIA-222-G	Date: 02/24/17	Scale: N	
Path: R:\SA Models - Letters\Work Area\MMyers\MWP\801366 WD 1365592-QA-AGH\801366.eri		Dwg No.	

Tower Input Data

There is a pole section.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

3) Tower is located in Hartford County, Connecticut.
4) Basic wind speed of 97 mph.
5) Structure Class II.
6) Exposure Category C.
7) Topographic Category 1.
8) Crest Height 0.000 ft.
9) Nominal ice thickness of 1.000 in.
10) Ice thickness is considered to increase with height.
11) Ice density of 56 pcf.
12) A wind speed of 50 mph is used in combination with ice.
13) Temperature drops of 50 °F.
14) Deflections calculated using a wind speed of 60 mph.
15) A non-linear (P-delta) analysis was used.
16) Pressures are calculated at each section.
17) Stress ratio used in pole design is 1.
18) Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Horizontals	Assume Legs Pinned	Calculate Redundant Bracing Forces
Consider Moments - Diagonals	√ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Use Moment Magnification	√ Use Clear Spans For Wind Area	SR Leg Bolts Resist Compression
√ Use Code Stress Ratios	Use Clear Spans For KL/r	All Leg Panels Have Same Allowable
√ Use Code Safety Factors - Guys	Retension Guys To Initial Tension	Offset Girt At Foundation
Escalate Ice	√ Bypass Mast Stability Checks	√ Consider Feed Line Torque
Always Use Max Kz	√ Use Azimuth Dish Coefficients	Include Angle Block Shear Check
Use Special Wind Profile	√ Project Wind Area of Appurt.	Use TIA-222-G Bracing Resist. Exemption
Include Bolts In Member Capacity	Autocalc Torque Arm Areas	Use TIA-222-G Tension Splice Exemption
Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	Poles
Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	√ Include Shear-Torsion Interaction
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Always Use Sub-Critical Flow
SR Members Have Cut Ends	Treat Feed Line Bundles As Cylinder	Use Top Mounted Sockets
SR Members Are Concentric		

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	173.000-127.000	46.000	4.500	18	26.000	35.568	0.250	1.000	A607-65 (65 ksi)
L2	127.000-86.500	45.000	5.500	18	34.132	43.493	0.313	1.250	A607-65 (65 ksi)
L3	86.500-42.500	49.500	6.500	18	41.724	52.020	0.375	1.500	A607-65 (65 ksi)
L4	42.500-0.000	49.000		18	49.918	60.110	0.438	1.750	A607-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	26.401	20.433	1711.654	9.141	13.208	129.592	3425.561	10.218	4.136	16.544
	36.117	28.025	4416.444	12.538	18.069	244.427	8838.698	14.015	5.820	23.28
L2	35.609	33.545	4847.256	12.006	17.339	279.557	9700.890	16.776	5.457	17.463
	44.164	42.830	10089.215	15.329	22.094	456.640	20191.706	21.419	7.105	22.735
L3	43.529	49.216	10630.821	14.679	21.196	501.555	21275.631	24.612	6.683	17.822
	52.822	61.470	20713.834	18.334	26.426	783.838	41454.923	30.741	8.496	22.655
L4	52.061	68.710	21253.196	17.566	25.358	838.115	42534.357	34.361	8.016	18.321
	61.037	82.863	37277.358	21.184	30.536	1220.772	74603.767	41.439	9.809	22.421

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 173.000-127.000				1	1	1			
L2 127.000-86.500				1	1	1			
L3 86.500-42.500				1	1	1			
L4 42.500-0.000				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
***										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
***								
LDF7-50A(1-5/8)	C	No	Inside Pole	150.000 - 0.000	12	No Ice	0.000	0.001
						1/2" Ice	0.000	0.001
						1" Ice	0.000	0.001
HB158-1-08U8-S8J18(1-5/8)	C	No	Inside Pole	150.000 - 0.000	1	No Ice	0.000	0.001
						1/2" Ice	0.000	0.001
						1" Ice	0.000	0.001
HB158-1-08U8-S8J18(1-5/8)	C	No	Inside Pole	150.000 - 0.000	1	No Ice	0.000	0.001
						1/2" Ice	0.000	0.001
						1" Ice	0.000	0.001
***								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	173.000-127.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.286

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L2	127.000-86.500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.504
L3	86.500-42.500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.547
L4	42.500-0.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.529

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	173.000-127.000	A	2.325	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.286
L2	127.000-86.500	A	2.248	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.504
L3	86.500-42.500	A	2.138	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.547
L4	42.500-0.000	A	1.916	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.529

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	173.000-127.000	0.000	0.000	0.000	0.000
L2	127.000-86.500	0.000	0.000	0.000	0.000
L3	86.500-42.500	0.000	0.000	0.000	0.000
L4	42.500-0.000	0.000	0.000	0.000	0.000

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Lightning Rod 1"x10'	C	From Leg	0.000 0.000	0.000	174.000	No Ice 1/2"	1.000 2.017	1.000 2.017	0.040 0.049

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			5.000			Ice 1" Ice	3.050	3.050	0.065
***									
(4) 6' x 2" Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	174.000	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
(4) 6' x 2" Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	174.000	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
(4) 6' x 2" Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	174.000	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
Platform Mount [LP 1201-1]	C	None		0.000	174.000	No Ice 1/2" Ice 1" Ice	23.100 26.800 30.500	23.100 26.800 30.500	2.100 2.500 2.900
***									
Platform Mount [LP 601-1]	C	None		0.000	150.000	No Ice 1/2" Ice 1" Ice	28.470 33.590 38.710	28.470 33.590 38.710	1.122 1.514 1.905
LNX-6514DS-T4M w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	8.316 8.876 9.402	7.004 8.185 9.081	0.058 0.127 0.203
LNX-8513DS-A1M w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	8.411 8.975 9.505	7.082 8.273 9.185	0.065 0.134 0.211
LNX-6514DS-T4M w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	8.316 8.876 9.402	7.004 8.185 9.081	0.058 0.127 0.203
LNX-6514DS-T4M w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	8.316 8.876 9.402	7.004 8.185 9.081	0.058 0.127 0.203
LNX-8513DS-A1M w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	8.411 8.975 9.505	7.082 8.273 9.185	0.065 0.134 0.211
LNX-8513DS-A1M w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	8.411 8.975 9.505	7.082 8.273 9.185	0.065 0.134 0.211
(2) FD9R6004/2C-3L	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	0.314 0.386 0.466	0.076 0.119 0.169	0.003 0.005 0.009
(2) FD9R6004/2C-3L	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	0.314 0.386 0.466	0.076 0.119 0.169	0.003 0.005 0.009
(2) FD9R6004/2C-3L	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	0.314 0.386 0.466	0.076 0.119 0.169	0.003 0.005 0.009
RC2DC-3315-PF-48	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	3.792 4.044 4.303	2.512 2.725 2.945	0.032 0.063 0.099
(2) SBNHH-1D65B w/	A	From Leg	4.000	0.000	150.000	No Ice	8.386	7.084	0.076

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Mount Pipe			0.000 0.000			1/2" Ice 1" Ice	8.950 9.480	8.275 9.188	0.146 0.223
(2) SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	8.386 8.950 9.480	7.084 8.275 9.188	0.076 0.146 0.223
(2) SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	8.386 8.950 9.480	7.084 8.275 9.188	0.076 0.146 0.223
B13 RRH 4X30	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	2.055 2.241 2.433	1.320 1.475 1.638	0.056 0.073 0.093
B13 RRH 4X30	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	2.055 2.241 2.433	1.320 1.475 1.638	0.056 0.073 0.093
B13 RRH 4X30	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	2.055 2.241 2.433	1.320 1.475 1.638	0.056 0.073 0.093
B66A RRH4X45	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	2.580 2.794 3.015	1.630 1.811 1.999	0.067 0.087 0.111
B66A RRH4X45	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	2.580 2.794 3.015	1.630 1.811 1.999	0.067 0.087 0.111
B66A RRH4X45	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	2.580 2.794 3.015	1.630 1.811 1.999	0.067 0.087 0.111
B25 RRH4X30	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	2.200 2.393 2.593	1.742 1.920 2.106	0.055 0.075 0.099
B25 RRH4X30	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	2.200 2.393 2.593	1.742 1.920 2.106	0.055 0.075 0.099
B25 RRH4X30	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	2.200 2.393 2.593	1.742 1.920 2.106	0.055 0.075 0.099
RC2DC-3315-PF-48	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	3.792 4.044 4.303	2.512 2.725 2.945	0.032 0.063 0.099
***									

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice

Comb. No.	Description
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	173 - 127	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-25.735	1.178	0.508
			Max. Mx	20	-9.579	319.143	-0.532
			Max. My	2	-9.576	-0.396	319.682
			Max. Vy	20	-13.609	319.143	-0.532
			Max. Vx	2	-13.645	-0.396	319.682
			Max. Torque	5			0.763
L2	127 - 86.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-37.847	1.178	0.508
			Max. Mx	20	-16.760	943.691	-1.784
			Max. My	2	-16.757	-1.638	945.679
			Max. Vy	20	-18.053	943.691	-1.784
			Max. Vx	2	-18.090	-1.638	945.679

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	17			-0.763
L3	86.5 - 42.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-55.273	1.178	0.508
			Max. Mx	20	-28.159	1829.471	-3.152
			Max. My	2	-28.157	-3.000	1833.041
			Max. Vy	20	-23.107	1829.471	-3.152
			Max. Vx	2	-23.144	-3.000	1833.041
			Max. Torque	17			-0.762
L4	42.5 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-80.305	1.178	0.508
			Max. Mx	20	-46.104	3092.421	-4.687
			Max. My	2	-46.104	-4.535	3097.763
			Max. Vy	20	-28.196	3092.421	-4.687
			Max. Vx	2	-28.232	-4.535	3097.763
			Max. Torque	17			-0.761

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	27	80.305	-0.006	9.037
	Max. H_x	20	46.117	28.175	-0.031
	Max. H_z	2	46.117	-0.031	28.211
	Max. M_x	2	3097.763	-0.031	28.211
	Max. M_z	8	3091.955	-28.175	0.031
	Max. Torsion	5	0.761	-14.114	24.446
	Min. Vert	11	34.588	-24.385	-14.079
	Min. H_x	8	46.117	-28.175	0.031
	Min. H_z	14	46.117	0.031	-28.211
	Min. M_x	14	-3097.605	0.031	-28.211
	Min. M_z	20	-3092.421	28.175	-0.031
	Min. Torsion	17	-0.761	14.114	-24.446

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	38.431	0.000	0.000	-0.063	0.184	0.000
1.2 Dead+1.6 Wind 0 deg - No Ice	46.117	0.031	-28.211	-3097.763	-4.535	-0.686
0.9 Dead+1.6 Wind 0 deg - No Ice	34.588	0.031	-28.211	-3075.291	-4.557	-0.687
1.2 Dead+1.6 Wind 30 deg - No Ice	46.117	14.114	-24.446	-2685.134	-1549.987	-0.760
0.9 Dead+1.6 Wind 30 deg - No Ice	34.588	14.114	-24.446	-2665.648	-1538.809	-0.761
1.2 Dead+1.6 Wind 60 deg - No Ice	46.117	24.416	-14.132	-1553.048	-2680.062	-0.629
0.9 Dead+1.6 Wind 60 deg - No Ice	34.588	24.416	-14.132	-1541.767	-2660.695	-0.631
1.2 Dead+1.6 Wind 90 deg - No Ice	46.117	28.175	-0.031	-4.844	-3091.955	-0.331
0.9 Dead+1.6 Wind 90 deg - No Ice	34.588	28.175	-0.031	-4.785	-3069.609	-0.332
1.2 Dead+1.6 Wind 120 deg - No Ice	46.117	24.385	14.079	1544.643	-2675.304	0.057
0.9 Dead+1.6 Wind 120 deg - No Ice	34.588	24.385	14.079	1533.469	-2655.977	0.056
1.2 Dead+1.6 Wind 150 deg	46.117	14.061	24.416	2680.219	-1541.737	0.429

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
- No Ice 0.9 Dead+1.6 Wind 150 deg	34.588	14.061	24.416	2660.813	-1530.626	0.429
- No Ice 1.2 Dead+1.6 Wind 180 deg	46.117	-0.031	28.211	3097.605	4.996	0.686
- No Ice 0.9 Dead+1.6 Wind 180 deg	34.588	-0.031	28.211	3075.173	4.897	0.687
- No Ice 1.2 Dead+1.6 Wind 210 deg	46.117	-14.114	24.446	2684.978	1550.448	0.760
- No Ice 0.9 Dead+1.6 Wind 210 deg	34.588	-14.114	24.446	2665.533	1539.150	0.761
- No Ice 1.2 Dead+1.6 Wind 240 deg	46.117	-24.416	14.132	1552.894	2680.525	0.630
- No Ice 0.9 Dead+1.6 Wind 240 deg	34.588	-24.416	14.132	1541.653	2661.038	0.631
- No Ice 1.2 Dead+1.6 Wind 270 deg	46.117	-28.175	0.031	4.688	3092.421	0.331
- No Ice 0.9 Dead+1.6 Wind 270 deg	34.588	-28.175	0.031	4.669	3069.953	0.332
- No Ice 1.2 Dead+1.6 Wind 300 deg	46.117	-24.385	-14.079	-1544.801	2675.770	-0.057
- No Ice 0.9 Dead+1.6 Wind 300 deg	34.588	-24.385	-14.079	-1533.587	2656.321	-0.056
- No Ice 1.2 Dead+1.6 Wind 330 deg	46.117	-14.061	-24.416	-2680.380	1542.200	-0.429
- No Ice 0.9 Dead+1.6 Wind 330 deg	34.588	-14.061	-24.416	-2660.932	1530.968	-0.429
- No Ice 1.2 Dead+1.0 Ice+1.0 Temp	80.305	-0.000	-0.000	-0.508	1.178	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	80.305	0.006	-9.037	-1011.452	0.399	-0.194
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	80.305	4.520	-7.829	-876.486	-504.377	-0.194
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	80.305	7.823	-4.523	-506.820	-873.648	-0.141
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	80.305	9.030	-0.006	-1.506	-1008.470	-0.051
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	80.305	7.817	4.513	504.058	-872.717	0.053
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	80.305	4.510	7.823	874.406	-502.763	0.143
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	80.305	-0.006	9.037	1010.304	2.263	0.194
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	80.305	-4.520	7.829	875.338	507.039	0.194
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	80.305	-7.823	4.523	505.672	876.311	0.141
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	80.305	-9.030	0.006	0.358	1011.134	0.051
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	80.305	-7.817	-4.513	-505.206	875.380	-0.053
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	80.305	-4.510	-7.823	-875.554	505.425	-0.143
Dead+Wind 0 deg - Service	38.431	0.007	-6.036	-659.976	-0.822	-0.148
Dead+Wind 30 deg - Service	38.431	3.020	-5.231	-572.072	-330.055	-0.163
Dead+Wind 60 deg - Service	38.431	5.224	-3.024	-330.900	-570.798	-0.136
Dead+Wind 90 deg - Service	38.431	6.028	-0.007	-1.081	-658.545	-0.071
Dead+Wind 120 deg - Service	38.431	5.217	3.012	329.010	-569.784	0.012
Dead+Wind 150 deg - Service	38.431	3.008	5.224	570.925	-328.297	0.092
Dead+Wind 180 deg - Service	38.431	-0.007	6.036	659.844	1.208	0.148
Dead+Wind 210 deg - Service	38.431	-3.020	5.231	571.940	330.441	0.163
Dead+Wind 240 deg - Service	38.431	-5.224	3.024	330.768	571.184	0.136
Dead+Wind 270 deg - Service	38.431	-6.028	0.007	0.949	658.931	0.071
Dead+Wind 300 deg -	38.431	-5.217	-3.012	-329.142	570.170	-0.012

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Service Dead+Wind 330 deg - Service	38.431	-3.008	-5.224	-571.057	328.683	-0.092

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.000	-38.431	0.000	0.000	38.431	0.000	0.000%
2	0.031	-46.117	-28.211	-0.031	46.117	28.211	0.000%
3	0.031	-34.588	-28.211	-0.031	34.588	28.211	0.000%
4	14.114	-46.117	-24.446	-14.114	46.117	24.446	0.000%
5	14.114	-34.588	-24.446	-14.114	34.588	24.446	0.000%
6	24.416	-46.117	-14.132	-24.416	46.117	14.132	0.000%
7	24.416	-34.588	-14.132	-24.416	34.588	14.132	0.000%
8	28.175	-46.117	-0.031	-28.175	46.117	0.031	0.000%
9	28.175	-34.588	-0.031	-28.175	34.588	0.031	0.000%
10	24.385	-46.117	14.079	-24.385	46.117	-14.079	0.000%
11	24.385	-34.588	14.079	-24.385	34.588	-14.079	0.000%
12	14.061	-46.117	24.416	-14.061	46.117	-24.416	0.000%
13	14.061	-34.588	24.416	-14.061	34.588	-24.416	0.000%
14	-0.031	-46.117	28.211	0.031	46.117	-28.211	0.000%
15	-0.031	-34.588	28.211	0.031	34.588	-28.211	0.000%
16	-14.114	-46.117	24.446	14.114	46.117	-24.446	0.000%
17	-14.114	-34.588	24.446	14.114	34.588	-24.446	0.000%
18	-24.416	-46.117	14.132	24.416	46.117	-14.132	0.000%
19	-24.416	-34.588	14.132	24.416	34.588	-14.132	0.000%
20	-28.175	-46.117	0.031	28.175	46.117	-0.031	0.000%
21	-28.175	-34.588	0.031	28.175	34.588	-0.031	0.000%
22	-24.385	-46.117	-14.079	24.385	46.117	14.079	0.000%
23	-24.385	-34.588	-14.079	24.385	34.588	14.079	0.000%
24	-14.061	-46.117	-24.416	14.061	46.117	24.416	0.000%
25	-14.061	-34.588	-24.416	14.061	34.588	24.416	0.000%
26	0.000	-80.305	0.000	0.000	80.305	0.000	0.000%
27	0.006	-80.305	-9.037	-0.006	80.305	9.037	0.000%
28	4.520	-80.305	-7.829	-4.520	80.305	7.829	0.000%
29	7.823	-80.305	-4.523	-7.823	80.305	4.523	0.000%
30	9.030	-80.305	-0.006	-9.030	80.305	0.006	0.000%
31	7.817	-80.305	4.513	-7.817	80.305	-4.513	0.000%
32	4.510	-80.305	7.823	-4.510	80.305	-7.823	0.000%
33	-0.006	-80.305	9.037	0.006	80.305	-9.037	0.000%
34	-4.520	-80.305	7.829	4.520	80.305	-7.829	0.000%
35	-7.823	-80.305	4.523	7.823	80.305	-4.523	0.000%
36	-9.030	-80.305	0.006	9.030	80.305	-0.006	0.000%
37	-7.817	-80.305	-4.513	7.817	80.305	4.513	0.000%
38	-4.510	-80.305	-7.823	4.510	80.305	7.823	0.000%
39	0.007	-38.431	-6.036	-0.007	38.431	6.036	0.000%
40	3.020	-38.431	-5.231	-3.020	38.431	5.231	0.000%
41	5.224	-38.431	-3.024	-5.224	38.431	3.024	0.000%
42	6.028	-38.431	-0.007	-6.028	38.431	0.007	0.000%
43	5.217	-38.431	3.012	-5.217	38.431	-3.012	0.000%
44	3.008	-38.431	5.224	-3.008	38.431	-5.224	0.000%
45	-0.007	-38.431	6.036	0.007	38.431	-6.036	0.000%
46	-3.020	-38.431	5.231	3.020	38.431	-5.231	0.000%
47	-5.224	-38.431	3.024	5.224	38.431	-3.024	0.000%
48	-6.028	-38.431	0.007	6.028	38.431	-0.007	0.000%
49	-5.217	-38.431	-3.012	5.217	38.431	3.012	0.000%
50	-3.008	-38.431	-5.224	3.008	38.431	5.224	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00018110
3	Yes	4	0.00000001	0.00011214
4	Yes	5	0.00000001	0.00017844
5	Yes	5	0.00000001	0.00008266
6	Yes	5	0.00000001	0.00018513
7	Yes	5	0.00000001	0.00008599
8	Yes	4	0.00000001	0.00013442
9	Yes	4	0.00000001	0.00007892
10	Yes	5	0.00000001	0.00018059
11	Yes	5	0.00000001	0.00008386
12	Yes	5	0.00000001	0.00017832
13	Yes	5	0.00000001	0.00008273
14	Yes	4	0.00000001	0.00021845
15	Yes	4	0.00000001	0.00013728
16	Yes	5	0.00000001	0.00018604
17	Yes	5	0.00000001	0.00008641
18	Yes	5	0.00000001	0.00017904
19	Yes	5	0.00000001	0.00008296
20	Yes	4	0.00000001	0.00010481
21	Yes	4	0.00000001	0.00005692
22	Yes	5	0.00000001	0.00018017
23	Yes	5	0.00000001	0.00008363
24	Yes	5	0.00000001	0.00018276
25	Yes	5	0.00000001	0.00008489
26	Yes	4	0.00000001	0.00000205
27	Yes	5	0.00000001	0.00020203
28	Yes	5	0.00000001	0.00023977
29	Yes	5	0.00000001	0.00024039
30	Yes	5	0.00000001	0.00020085
31	Yes	5	0.00000001	0.00023891
32	Yes	5	0.00000001	0.00023859
33	Yes	5	0.00000001	0.00020151
34	Yes	5	0.00000001	0.00024147
35	Yes	5	0.00000001	0.00024060
36	Yes	5	0.00000001	0.00020209
37	Yes	5	0.00000001	0.00024071
38	Yes	5	0.00000001	0.00024130
39	Yes	4	0.00000001	0.00001688
40	Yes	4	0.00000001	0.00006160
41	Yes	4	0.00000001	0.00006902
42	Yes	4	0.00000001	0.00001500
43	Yes	4	0.00000001	0.00006474
44	Yes	4	0.00000001	0.00006227
45	Yes	4	0.00000001	0.00001711
46	Yes	4	0.00000001	0.00007013
47	Yes	4	0.00000001	0.00006221
48	Yes	4	0.00000001	0.00001489
49	Yes	4	0.00000001	0.00006434
50	Yes	4	0.00000001	0.00006732

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	173 - 127	15.610	46	0.754	0.001
L2	131.5 - 86.5	9.294	46	0.667	0.001
L3	92 - 42.5	4.515	46	0.467	0.000
L4	49 - 0	1.279	46	0.237	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
174.000	Lightning Rod 1"x10'	46	15.610	0.754	0.001	112224
150.000	Platform Mount [LP 601-1]	46	12.012	0.718	0.001	24396

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	173 - 127	73.317	16	3.543	0.004
L2	131.5 - 86.5	43.654	16	3.137	0.003
L3	92 - 42.5	21.205	16	2.193	0.001
L4	49 - 0	6.007	16	1.112	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
174.000	Lightning Rod 1"x10'	16	73.317	3.543	0.004	24058
150.000	Platform Mount [LP 601-1]	16	56.419	3.377	0.004	5228

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	173 - 127 (1)	TP35.568x26x0.25	46.000	0.000	0.0	27.282	-9.574	1836.500	0.005
L2	127 - 86.5 (2)	TP43.493x34.132x0.313	45.000	0.000	0.0	41.695	-16.756	2830.080	0.006
L3	86.5 - 42.5 (3)	TP52.02x41.724x0.375	49.500	0.000	0.0	59.861	-28.157	4067.630	0.007
L4	42.5 - 0 (4)	TP60.11x49.918x0.438	49.000	0.000	0.0	82.863	-46.104	5595.410	0.008

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	173 - 127 (1)	TP35.568x26x0.25	319.995	1299.175	0.246	0.000	1299.175	0.000
L2	127 - 86.5 (2)	TP43.493x34.132x0.313	946.717	2447.375	0.387	0.000	2447.375	0.000
L3	86.5 - 42.5 (3)	TP52.02x41.724x0.375	1834.875	4208.375	0.436	0.000	4208.375	0.000
L4	42.5 - 0 (4)	TP60.11x49.918x0.438	3100.483	6869.508	0.451	0.000	6869.508	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	173 - 127 (1)	TP35.568x26x0.25	13.664	918.248	0.015	0.762	2601.525	0.000
L2	127 - 86.5 (2)	TP43.493x34.132x0.313	18.108	1415.040	0.013	0.761	4900.733	0.000
L3	86.5 - 42.5 (3)	TP52.02x41.724x0.375	23.162	2033.810	0.011	0.760	8427.083	0.000
L4	42.5 - 0 (4)	TP60.11x49.918x0.438	28.250	2797.700	0.010	0.760	13755.833	0.000

Pole Interaction Design Data

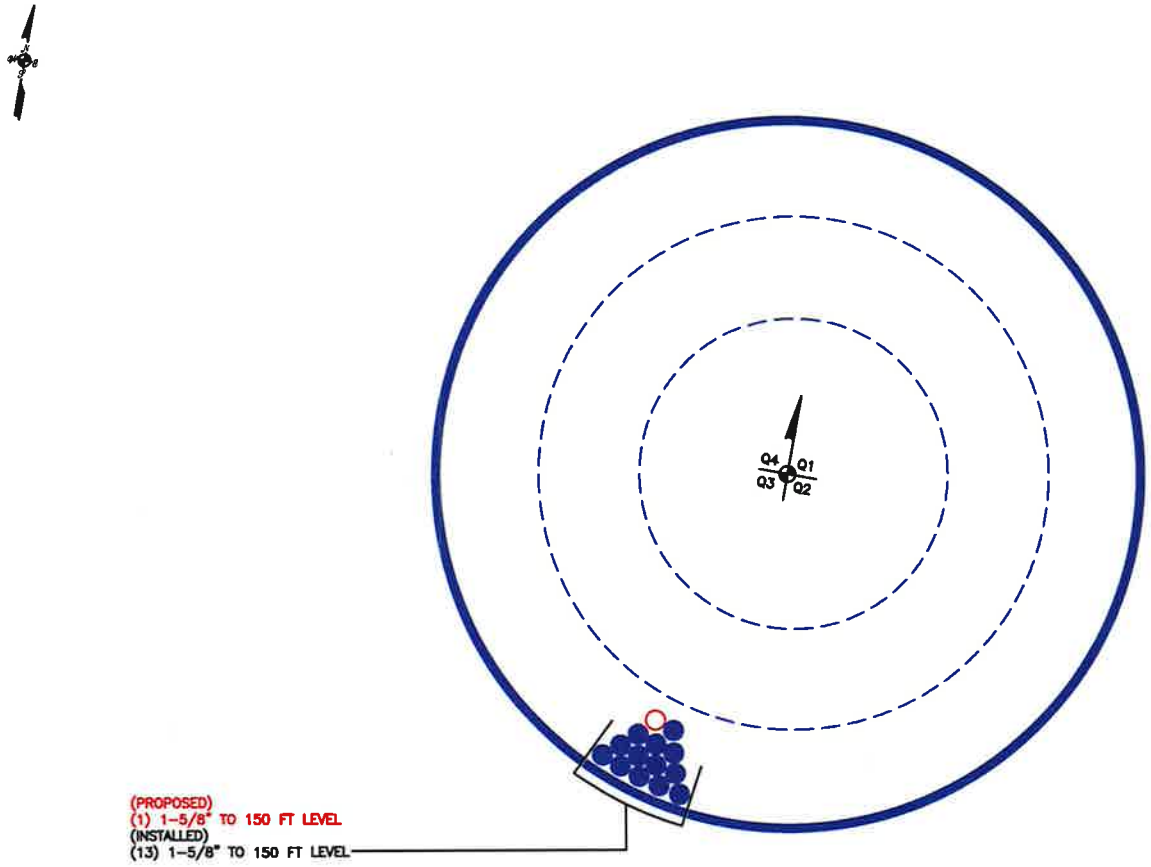
Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	173 - 127 (1)	0.005	0.246	0.000	0.015	0.000	0.252 ✔	1.000	4.8.2 ✔
L2	127 - 86.5 (2)	0.006	0.387	0.000	0.013	0.000	0.393 ✔	1.000	4.8.2 ✔
L3	86.5 - 42.5 (3)	0.007	0.436	0.000	0.011	0.000	0.443 ✔	1.000	4.8.2 ✔
L4	42.5 - 0 (4)	0.008	0.451	0.000	0.010	0.000	0.460 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	173 - 127	Pole	TP35.568x26x0.25	1	-9.574	1836.500	25.2	Pass
L2	127 - 86.5	Pole	TP43.493x34.132x0.313	2	-16.756	2830.080	39.3	Pass
L3	86.5 - 42.5	Pole	TP52.02x41.724x0.375	3	-28.157	4067.630	44.3	Pass
L4	42.5 - 0	Pole	TP60.11x49.918x0.438	4	-46.104	5595.410	46.0	Pass
							Summary	
						Pole (L4)	46.0	Pass
						RATING =	**46.0**	**Pass**

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 801366 TOWER ID: C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

Stiffened or Unstiffened, Ungrouted, Circular Base Plate - Any Rod Material

TIA Rev G Assumption: Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data

BU#: *801366*
Site Name: *ROCKY HILL 2*
App #: *379485 Rev. 2*
Pole Manufacturer: *Other*

Reactions		
Mu:	3100	ft-kips
Axial, Pu:	46	kips
Shear, Vu:	28	kips
Eta Factor, η	0.5	TIA G (Fig. 4-4)

If No stiffeners, Criteria: AISC LRFD <-Only Applcable to Unstiffened Cases

Anchor Rod Data		
Qty:	20	
Diam:	2.25	in
Rod Material:	A615-J	
Strength (Fu):	100	ksi
Yield (Fy):	75	ksi
Bolt Circle:	67	in

Anchor Rod Results

Max Rod (Cu+ Vu/ή):	116.2 Kips	Rigid
Allowable Axial, Φ*Fu*Anet:	260.0 Kips	AISC LRFD
Anchor Rod Stress Ratio:	44.7% Pass	φ*Tn

Plate Data		
Diam:	66	in
Thick:	3	in
Grade:	55	ksi
Single-Rod B-eff:	9.54	in

Base Plate Results Flexural Check

Base Plate Stress:	11.7 ksi	Rigid
Allowable Plate Stress:	49.5 ksi	AISC LRFD
Base Plate Stress Ratio:	23.7% Pass	φ*Fy
		Y.L. Length: 29.59

Stiffener Data (Welding at both sides)		
Config:	0	*
Weld Type:		
Groove Depth:		<-- Disregard
Groove Angle:		<-- Disregard
Fillet H. Weld:		in
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

n/a

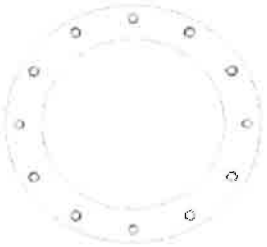
Stiffener Results

Horizontal Weld :	n/a
Vertical Weld:	n/a
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	n/a
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	n/a
Plate Comp. (AISC Bracket):	n/a

Pole Results

Pole Punching Shear Check: n/a

Pole Data		
Diam:	60.11	in
Thick:	0.4375	in
Grade:	65	ksi
# of Sides:	18	"0" IF Round
Fu	80	ksi
Reinf. Fillet Weld	0	"0" if None



* 0 = none, 1 = every bolt, 2 = every 2 bolts, 3 = 2 per bolt

** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

CCI Foundation Tool Suite - Monopole Pier

CCIFTS 1.2.108.14286 - Phase 1-2 Date: 2/24/2017

BU:	801366
Site Name:	ROCKY HILL 2
App Number:	379485 Rev. 2
Work Order:	1365592

CROWN CASTLE

Monopole Drilled Pier

Input

Criteria

TIA Revision:	G
ACI 318 Revision:	2008
Seismic Category:	B

Forces

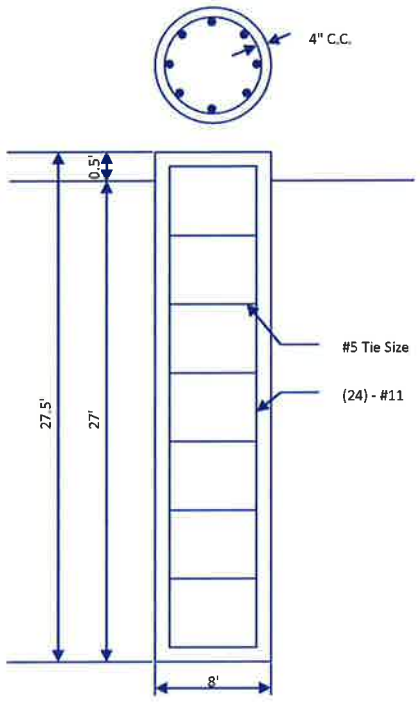
Compression	46 kips
Shear	28 kips
Moment	3100 k-ft
Swelling Force	0 kips

Foundation Dimensions

Pier Diameter:	8 ft
Ext. above grade:	0.5 ft
Depth below grade:	27 ft

Material Properties

Number of Rebar:	24
Rebar Size:	11
Tie Size	5
Rebar tensile strength:	60 ksi
Concrete Strength:	3000 psi
Ultimate Concrete Strain	0.003 in/in
Clear Cover to Ties:	4 in



Soil Profile: 1

Layer	Thickness (ft)	From (ft)	To (ft)	Unit Weight (pcf)	Cohesion (psf)	Friction Angle (deg)	Ultimate Uplift Skin Friction (ksf)	Ultimate Comp. Skin Friction (ksf)	Ultimate Bearing Capacity (ksf)	SPT 'N' Counts
1	4	0	4	120	0	0	0	0	0	
2	6	4	10	120		33			0	
3	3.5	10	13.5	57.6		33			0	
4	10	13.5	23.5	57.6		32			0	
5	3.5	23.5	27	52.6	1000				4	

Analysis Results

Soil Lateral Capacity

Depth to Zero Shear:	5.86 ft
Max Moment, Mu:	3236.92 k-ft
Soil Safety Factor:	3.21
Safety Factor Req'd:	1.33
RATING:	41.5%

Soil Axial Capacity

Skin Friction (k):	232.74 kips
End Bearing (k):	150.80 kips
Comp. Capacity (k), ϕCn:	383.54 kips
Comp. (k), Cu:	46.00 kips
RATING:	12.0%

Concrete/Steel Check

Mu (from soil analysis)	3236.92 k-ft
ϕMn	6854.81 k-ft
RATING:	47.2%

rho provided	0.52	
rho required	0.33	OK
Rebar Spacing	9.76	
Spacing required	22.56	OK
Dev. Length required	20.80	
Dev. Length provided	61.78	OK

Overall Foundation Rating: 47.2%

Monopole Pier and Pad Foundation

BU # : 801366
Site Name: ROCKY HILL 2
App. Number: 379485 Rev. 2
TIA-222 Revision: G

Design Reactions		
Shear, **S**:	28	kips
Moment, **M**:	3100	ft-kips
Tower Height, **H**:	173	ft
Tower Weight, **Wt**:	46	kips
Base Diameter, **BD**:	5.00	ft

Foundation Dimensions		
Depth, **D**:	8	ft
Pad Width, **W**:	26	ft
Neglected Depth, **N**:	4	ft
Thickness, **T**:	3.50	ft
Pier Diameter, **Pd**:	8.00	ft
Ext. Above Grade, **E**:	0.50	ft
BP Dist. Above Pier:	3	in.
Clear Cover, **Cc**:	3.0	in

Soil Properties		
Soil Unit Weight, **γ**:	0.120	kcf
Ult. Bearing Capacity, Bc:	6.0	ksf
Angle of Friction, **Φ**:	33	deg
Cohesion, **Co**:	0.000	ksf
Passive Pressure, **Pp**:	0.000	ksf
Base Friction, **μ**:	0.30	

Material Properties		
Rebar Yield Strength, **Fy**:	60000	psi
Concrete Strength, **F'c**:	3000	psi
Concrete Unit Weight, **δc**:	0.150	kcf
Seismic Zone, **z**:	1	

Rebar Properties		
Pier Rebar Size, **Sp**:	11	
Pier Rebar Quanity, **mp**:	40	24
Pad Rebar Size, **Spad**:	11	
Pad Rebar Quanity, **mpad**:	31	8
Pier Tie Size, **St**:	5	4
Tie Quanity, **mt**:	10	6

Design Checks	Capacity/ Availability	Demand/ Limits	Check
Req'd Pier Diam.(ft)	8	7	**OK**
Overturning (ft-kips)	7086.86	3100.00	**43.7%**
Shear Capacity (kips)	194.56	28.00	**14.4%**
Bearing (ksf)	4.50	2.12	**47.0%**
Pad Shear - 1-way (kips)	981.63	326.83	**33.3%**
Pad Shear - 2-way (kips)	2654.81	110.09	**4.1%**
Pad Moment Capacity (k-ft)	7936.92	994.66	**12.5%**
Pier Moment Capacity (k-ft)	11012.23	3240.00	**29.4%**

Maximum Allowable Moment of a Circular Pier

Axial Load (Negative for Compression) = -46.00 kips

Pier Properties

Concrete:

Pier Diameter = 8.0 ft

Concrete Area = 7238.2 in^2

Reinforcement:

Clear Cover = 3.00 in

Cage Diameter = 7.38 ft

Bar Size = 11

Bar Diameter = 1.41 in

Bar Area = 1.56 in^2

Number of Bars = 40

Material Properties

Concrete compressive strength = 3000 psi

Reinforcement yield strength = 60000 psi

Modulus of elasticity = 29000 ksi

Reinforcement yield strain = 0.00207

Limiting compressive strain = 0.003

Seismic Properties

Seismic Zone = 1

Minimum Area of Steel

Required area of steel = 36.19 in^2

Provided area of steel = 62.40 in^2 OK

Axial Loading

Load factor = 1

Reduction factor = 0.9

Factored axial load = -51.1111 kips

Neutral Axis

Distance from extreme edge to neutral axis =	18.11	in
Equivalent compression zone factor =	0.85	
Distance from extreme edge to equivalent compression zone factor =	15.40	in
Distance from centroid to neutral axis =	29.89	in

Compression Zone

Area of steel in compression zone =	14.04	in^2
Angle from centroid of pier to intersection of equivalent compression zone and edge of pier =	47.22	deg
Area of concrete in compression =	750.08	in^2
Force in concrete = 0.85 * f`c * Acc =	1912.70	kips
Total reinforcement forces =	-1861.59	kips
Factored axial load =	-51.11	kips
Force in concrete =	-1912.70	kips
Sum of the forces in concrete =	0.00	kips OK

Maximum Moment

First moment of the concrete area in compression about the centoid =	29144.86	in^3
Distance between centroid of concrete in compression and centroid of pier =	38.86	in
Moment of concrete in compression =	74319.40	in-kips
Total reinforcement moment =	72510.36	in-kips
Nominal moment strength of column =	146829.76	in-kips
Factored moment strength of column =	132146.78	in-kips

Maximum Allowable Moment = **11012.23** **ft-kips**

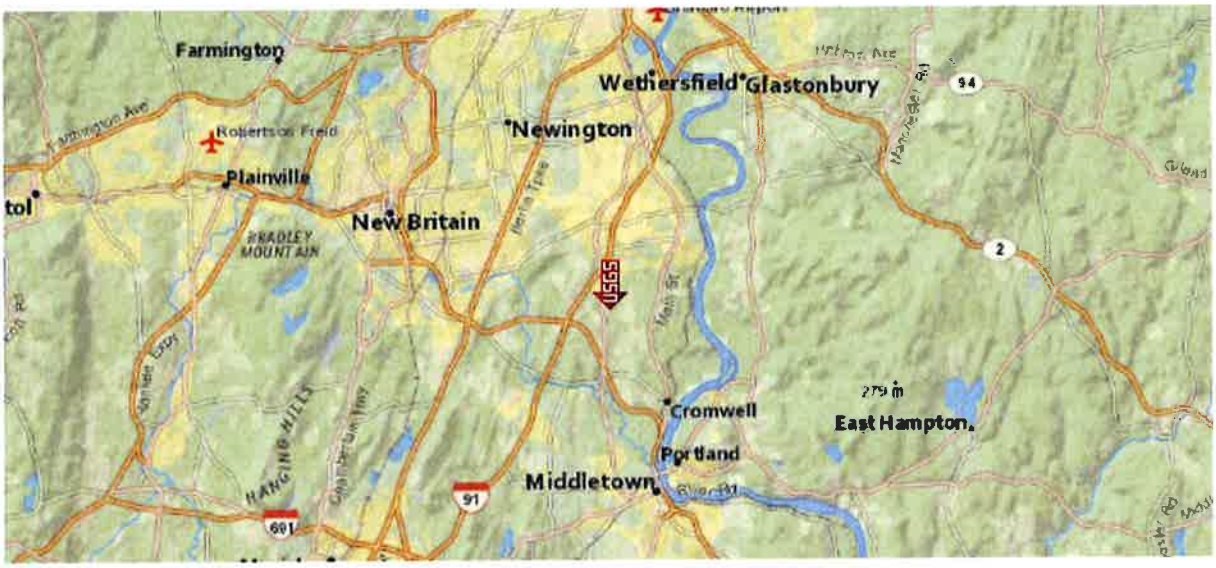
Individual Bars

Bar #	Angle from first bar (deg)	Distance to centroid (in)	Distance to neutral axis (in)	Distance to equivalent comp. zone (in)	Strain	Area of steel in compression (in^2)	Stress (ksi)	Axial force (kips)
1	0.00	0.00	-29.89	-32.60	-0.00495	0.00	-60.00	-93.60
2	9.00	6.93	-22.96	-25.67	-0.0038024	0.00	-60.00	-93.60
3	18.00	13.69	-16.20	-18.92	-0.002683	0.00	-60.00	-93.60
4	27.00	20.11	-9.78	-12.49	-0.0016194	0.00	-46.96	-73.26
5	36.00	26.04	-3.85	-6.57	-0.0006378	0.00	-18.50	-28.85
6	45.00	31.32	1.43	-1.28	0.0002376	0.00	6.89	10.75
7	54.00	35.84	5.95	3.23	0.0009852	1.56	28.57	40.59
8	63.00	39.47	9.58	6.86	0.0015867	1.56	46.02	67.81
9	72.00	42.13	12.24	9.52	0.0020273	1.56	58.79	87.74
10	81.00	43.75	13.86	11.15	0.002296	1.56	60.00	89.62
11	90.00	44.30	14.41	11.69	0.0023864	1.56	60.00	89.62
12	99.00	43.75	13.86	11.15	0.002296	1.56	60.00	89.62
13	108.00	42.13	12.24	9.52	0.0020273	1.56	58.79	87.74
14	117.00	39.47	9.58	6.86	0.0015867	1.56	46.02	67.81
15	126.00	35.84	5.95	3.23	0.0009852	1.56	28.57	40.59
16	135.00	31.32	1.43	-1.28	0.0002376	0.00	6.89	10.75
17	144.00	26.04	-3.85	-6.57	-0.0006378	0.00	-18.50	-28.85
18	153.00	20.11	-9.78	-12.49	-0.0016194	0.00	-46.96	-73.26
19	162.00	13.69	-16.20	-18.92	-0.002683	0.00	-60.00	-93.60
20	171.00	6.93	-22.96	-25.67	-0.0038024	0.00	-60.00	-93.60
21	180.00	0.00	-29.89	-32.60	-0.00495	0.00	-60.00	-93.60
22	189.00	-6.93	-36.82	-39.53	-0.0060977	0.00	-60.00	-93.60
23	198.00	-13.69	-43.57	-46.29	-0.0072171	0.00	-60.00	-93.60
24	207.00	-20.11	-50.00	-52.71	-0.0082807	0.00	-60.00	-93.60
25	216.00	-26.04	-55.92	-58.64	-0.0092622	0.00	-60.00	-93.60
26	225.00	-31.32	-61.21	-63.93	-0.0101376	0.00	-60.00	-93.60
27	234.00	-35.84	-65.72	-68.44	-0.0108853	0.00	-60.00	-93.60
28	243.00	-39.47	-69.35	-72.07	-0.0114868	0.00	-60.00	-93.60
29	252.00	-42.13	-72.01	-74.73	-0.0119273	0.00	-60.00	-93.60
30	261.00	-43.75	-73.64	-76.35	-0.0121961	0.00	-60.00	-93.60
31	270.00	-44.30	-74.18	-76.90	-0.0122864	0.00	-60.00	-93.60
32	279.00	-43.75	-73.64	-76.35	-0.0121961	0.00	-60.00	-93.60
33	288.00	-42.13	-72.01	-74.73	-0.0119273	0.00	-60.00	-93.60
34	297.00	-39.47	-69.35	-72.07	-0.0114868	0.00	-60.00	-93.60
35	306.00	-35.84	-65.72	-68.44	-0.0108853	0.00	-60.00	-93.60
36	315.00	-31.32	-61.21	-63.93	-0.0101376	0.00	-60.00	-93.60
37	324.00	-26.04	-55.92	-58.64	-0.0092622	0.00	-60.00	-93.60
38	333.00	-20.11	-50.00	-52.71	-0.0082807	0.00	-60.00	-93.60
39	342.00	-13.69	-43.57	-46.29	-0.0072171	0.00	-60.00	-93.60
40	351.00	-6.93	-36.82	-39.53	-0.0060977	0.00	-60.00	-93.60

USGS Design Maps Summary Report

User–Specified Input

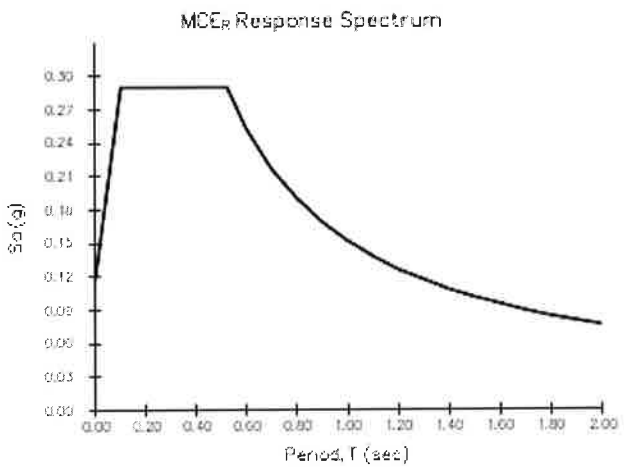
Report Title	801366 Wed February 22, 2017 21:19:25 UTC
Building Code Reference Document	2012/2015 International Building Code (which utilizes USGS hazard data available in 2008)
Site Coordinates	41.63792°N, 72.67336°W
Site Soil Classification	Site Class D – "Stiff Soil"
Risk Category	I/II/III

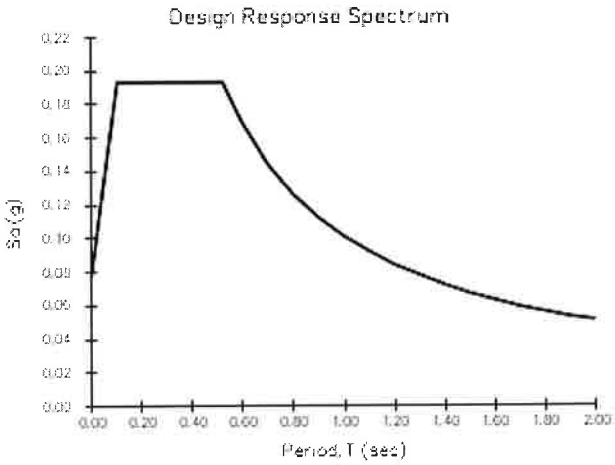


USGS–Provided Output

S_S =	0.181 g	S_{MS} =	0.290 g	S_{DS} =	0.193 g
S_1 =	0.063 g	S_{M1} =	0.152 g	S_{D1} =	0.101 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.





CCISeismic - Design Category

Per *2012/2015 IBC*

Site BU:	801366
Work Order:	1365592
Application:	379485 Rev. 2

CROWN CASTLE

	Degrees	Minutes	Seconds		
Site Latitude =	42	-21	-43.49	41.6379	degrees
Site Longitude =	-72	40	24.09	-72.6734	degrees
Ground Supported Structure =	Yes				
Structure Class =	II				*(Table 2-1)*
Site Class =	D - Stiff Soil				*(Table 2-11)*

Spectral response acceleration short periods, S_S =	0.181	USGS Seismic Tool
Spectral response acceleration 1 s period, S_1 =	0.063	

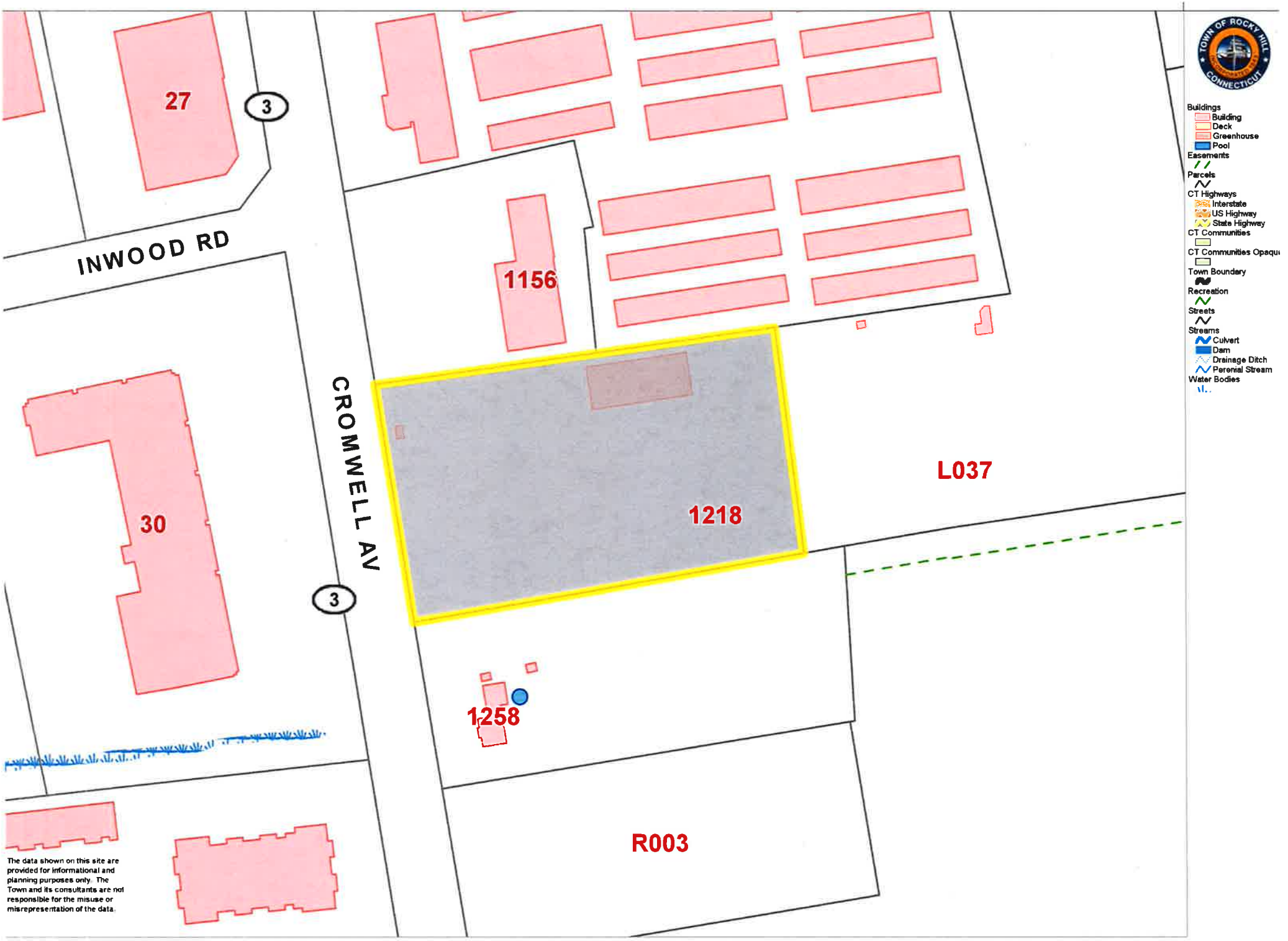
Importance Factor, I =	1.0	*(Table 2-3)*
Acceleration-based site coefficient, F_a =	1.6	*(Table 2-12)*
Velocity-based site coefficient, F_v =	2.4	*(Table 2-13)*

Design spectral response acceleration short period, S_{DS} =	0.193	*(2.7.6)*
Design spectral response acceleration 1 s period, S_{D1} =	0.101	*(2.7.6)*

Seismic Design Category - Short Period Response =	B	*ASCE 7-05 Table 11.6-1*
Seismic Design Category - 1s Period Response =	B	*ASCE 7-05 Table 11.6-2*

Worst Case Seismic Design Category =	B	*ASCE 7-05 Tables 11.6-1 and 6-2*

ATTACHMENT 4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INWOOD RD
1156
CROMWELL AV
30
3
1218
L037
1258
R003
The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.
TOWN OF ROCKY HILL CONNECTICUT
Buildings
Building
Deck
Greenhouse
Pool
Easements
Parcels
CT Highways
Interstate
US Highway
State Highway
CT Communities
CT Communities Opaqu
Town Boundary
Recreation
Streets
Streams
Culvert
Dam
Drainage Ditch
Perenial Stream
Water Bodies
0
200
400 ft
Printed on 06/27/2017 at 10:59 AM
MapsOnline by PeopleGIS

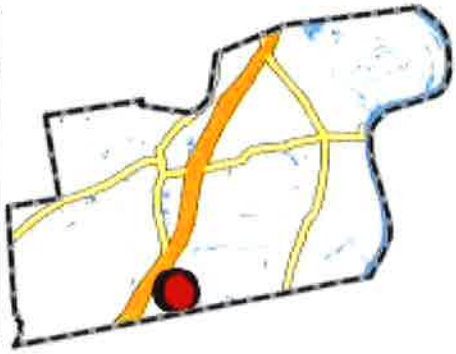
Town of Rocky Hill Property Summary Report

1218 CROMWELL AVENUE

PARCEL ID:	20-016	**ACCOUNT NUMBER:**	002288
LOCATION:	1218 CROMWELL AVENUE		
OWNER NAME:	TABSHEY DEVELOPMENT LLC		

20-016-001 11/11/2012

OWNER OF RECORD
TABSHEY DEVELOPMENT LLC
1218 CROMWELL AVENUE
ROCKY HILL, CT 06067-3741



LIVING AREA:	6925	**ZONING:**	BP	**ACREAGE:**	4.85

SALES HISTORY

OWNER	BOOK / PAGE	SALE DATE	SALE PRICE
TABSHEY DEVELOPMENT LLC	354/ 236	23-Feb-2000	$0.00

CURRENT PARCEL VALUE

TOTAL:	$579,180.00	**IMPROVEMENTS:**	$265,230.00	**LAND:**	$313,950.00

ASSESSING HISTORY

FISCAL YEAR	TOTAL VALUE	IMPROVEMENT VALUE	LAND VALUE
2014	$579,180.00	$265,230.00	$313,950.00
2013	$579,180.00	$265,230.00	$313,950.00
2012	$543,060.00	$170,310.00	$372,750.00
2011	$543,060.00	$170,310.00	$372,750.00
2010	$518,000.00	$145,250.00	$372,750.00
2009	$518,000.00	$145,250.00	$372,750.00
2008	$697,060.00	$232,890.00	$464,170.00
2007	$413,560.00	$138,810.00	$274,750.00
2006	$413,560.00	$0.00	$274,750.00

Town of Rocky Hill Property Summary Report

1218 CROMWELL AVENUE

PARCEL ID:	20-016	**ACCOUNT NUMBER:**	002288
LOCATION:	1218 CROMWELL AVENUE		
OWNER NAME:	TABSHEY DEVELOPMENT LLC		

BUILDING # 1

YEAR BUILT	1965	**ROOF STRUCTURE**	Flat
STYLE	Warehouse	**ROOF COVER**	Tar + Gravel
MODEL	Ind/Comm	**FLOOR COVER 1**	Average
GRADE	C	**FLOOR COVER 2**	
STORIES	1	**HEAT FUEL**	Gas
OCCUPANCY	Industrial 96	**HEAT TYPE**	Floor Furnace
EXT WALL 1	Concr/Cinder	**AC TYPE**	None
EXT WALL 2		**BEDROOMS**	
INT WALLS 1	Minim/Masonry	**FULL BATHS**	1
INT WALLS 2		**HALF BATHS**	
		TOT ROOMS	0

20-016-001 11/11/2012

EXTRA FEATURES

DESCRIPTION	CODE	UNITS
OVHD 14'	OD6	5 UNITS

OUTBUILDINGS

DESCRIPTION	CODE	UNITS
Cell Building	CBD1	460 UNITS
Cell Site	CELL	1 UNITS
Paving Asphalt	PAV1	0x0 (6000 S.F.)

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			
	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.	John Mehr, Interim Town Manager Town of Rocky Hill 761 Old Main Street Rocky Hill, CT 06067				
2.	Kim Ricci, Zoning Enforcement Officer/Town Planner Town of Rocky Hill 761 Old Main Street Rocky Hill, CT 06067				
3.	Tabshey Development, LLC 1218 Cromwell Avenue Rocky Hill, CT 06067				
4.					
5.					
6.					