

FRANKLIN COUNTY
PETITION/APPLICATION FOR COMPREHENSIVE PLAN CONFORMANCE
REVIEW
(Type or Print)

I/We, Blue Ridge Towers, Inc, as Owner(s), Contract Purchasers, or Owner's Authorized Agent of the property described below, hereby apply to the Franklin County Board of Supervisors for a Comprehensive Plan conformance review on the property as described below:

1. Petitioners Name: Blue Ridge Towers, Inc

2. Property Owner's Name: County of Franklin VA

Phone Number: 540-595-7060

Address: 1125 1st St SW
Roanoke, VA Zip: 24016

3. Exact Directions to Property from Rocky Mount: @ Summit View Business Park
located off Rt 220, 21745 Virgil H. Gorge Hwy

4. Tax Map and Parcel Number: 0360019700

5. Magisterial District: Boone

6. Property Information:

A. Size of Property: 60' x 60' leased with a 12' Access Road

B. Existing Zoning: REP Regional Enterprise Park

C. Existing Land Use: REP

D. Is property located within any of the following overlay zoning districts:

Corridor District Westlake Overlay District Smith Mountain Lake Surface District

E. Is any land submerged under water or part of a lake? Yes No If yes, explain.

NO

7. Proposed Comprehensive Plan conformance review information:

A. Proposed Land Use: SUP to construct wireless comm tower & facility

B. Size of Proposed Use: 60' x 60' fenced in area

C. Other Details of Proposed Use: to construct a 175' monopole
within the leased area of 60' x 60' located
at the Summit View Business Park. Tower owner
will be Blue Ridge Towers Inc, and Verizon
Wireless will be its anchor tenant.

Checklist for completed items:

- Application Form
- Letter of Application
- Concept Plan
- Application Fee

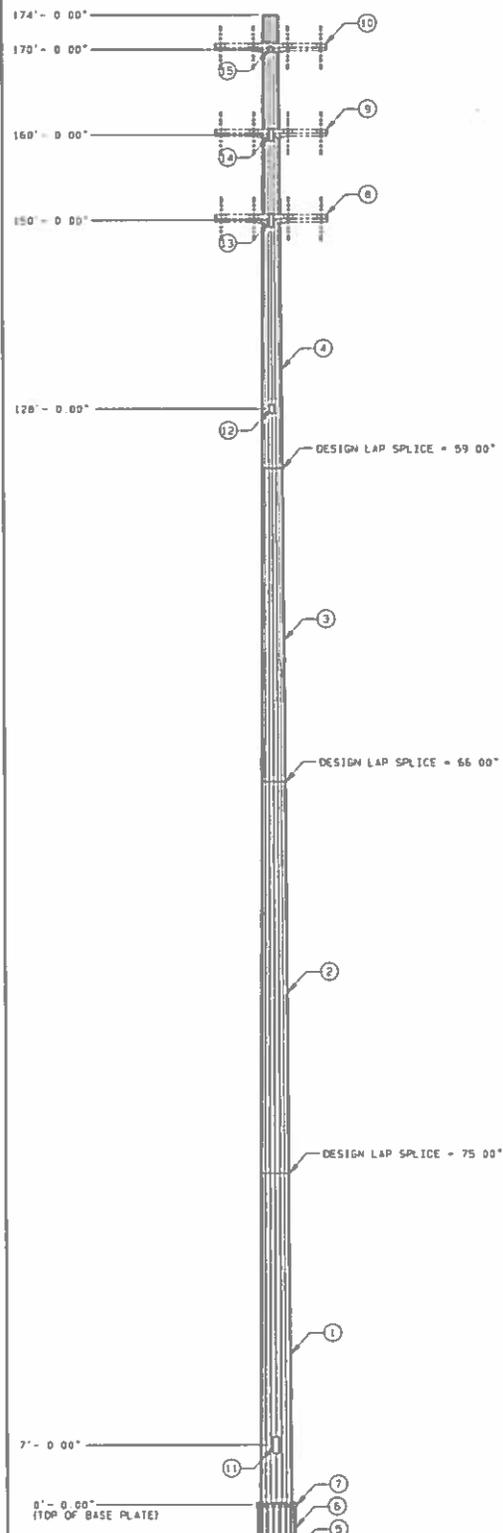
****I certify that this application for a Comprehensive Plan conformance review and the information submitted herein is correct and accurate.**

Petitioner's Name (Print): Blue Ridge Towers, Inc
Signature of Petitioner: [Signature]
Date: 7/24/2018
Mailing Address: 1125 1st St. SW
Roanoke, VA 24016
Telephone: 540-595-7060
Email Address: asmith@blueridgetowers.com

Owner's consent, if petitioner is not property owner:
Owner's Name (Print): W Brent Robertson
Signature of Owner: [Signature]
Date: July 25, 2018

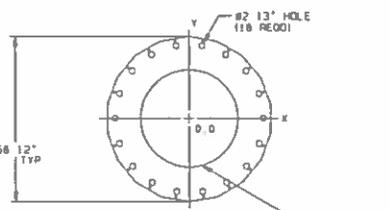
Date Received by Planning Staff: _____
Time: _____
Clerk's Initials: _____

CHECK #: _____
RECPT. #: _____
AMOUNT: _____



ITEM NO	REQD	FEATURES	UNIT	WEIGHT (LBS)	HEIGHT (LBS)
1	1	SECTION A VALMONT 5-22 0 438" THK (A572 GR65)		8,891	0.891
2	1	SECTION B VALMONT 5-22 0 375" THK (A572 GR65)		7,593	7.593
3	1	SECTION C VALMONT 5-22 0 313" THK (A572 GR65)		4,393	4.393
4	1	SECTION D VALMONT 5-22 0 250" THK (A572 GR65)		3,689	3.689
5	1	BOTTOM CAGE PLATE		105	105
6	18	1.75" ANCHOR BOLT, LENGTH=5.50" A615 GR75		64	1.142
7	1	BASE PLATE VALMONT 5-56 2 500" THK (A572 GR50)		1,298	1,298
8	1	MCG23-12		1,800	1,800
9	1	MCG23-12		1,800	1,800
10	1	MCG23-12		1,800	1,800
11	1	TOP CAGE PLATE (REMOVE BEFORE SETTING POLE)		138	138
12	1	SAFETY CLIMBING CABLE (LENGTH = 164.00')		120	120
13	3	GROUNDING LUG		2	6
14	3	GALVANIZING		493	493
15	130	STEP AND CLIP (VALMONT STANDARD)		1	65
16	11	3 HAND HOLE STD (19" x 24")		48	144
17	12	2 HAND HOLE STD (16" x 12")		22	44
18	13	3 HAND HOLE STD (16" x 18")		18	54
19	14	3 HAND HOLE STD (16" x 18")		18	54
20	15	3 HAND HOLE UR (16" x 18")		18	54
21	1	POLE CAP		26	26

HOLE COORDS (INCHES)	
X COORD	Y COORD
26.00	0.00
28.43	0.89
19.92	16.71
13.00	22.52
4.51	25.61



- NOTES:
1. BASE PLATE THICKNESS = 2.500"
 2. BASE PLATE ALLOWABLE STRESS (KSI) = 50
 3. ANGLES ARE MEASURED CLOCKWISE FROM 0 DEGREES
 4. BOLT CIRCLE DIAMETER = 52.00"
 5. CAGE TEMPLATE DIAMETER = 35.50"

BASE PLATE / ANCHORAGE CHARACTERISTICS

- NOTES:
1. FACTORED REACTIONS FOR FOUNDATION DESIGN:
 MOMENT = 48,239 IN-KIPS
 SHEAR = 29,197 #
 VERTICAL = 43,014 #
 2. GALVANIZED PER ASTM A-123
 3. DESIGN CRITERIA: ANSI/TIA 222-G ADDENDUM 2
 4. THIS STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING LOADING:
 EXPOSURE CATEGORY = C
 STRUCTURE CLASSIFICATION = 2
 TOPOGRAPHY CATEGORY = 1
 WIND LOAD CASES ARE BASED ON 3 SECOND GUST AND 50 YEAR WIND RETURN PERIOD
 A CASE 1: WIND = 90 MPH WIND SPEED
 B CASE 2: WIND = 30 MPH ICE AND WIND SPEED
 DESIGN ICE THICKNESS = 0.75 INCH
 C CASE 3: WIND = 60 MPH WIND SPEED
 D EQUIPMENT
- | DESCRIPTION | WIND | | WITHOUT ICE | | WITH ICE | |
|--------------------------------|----------|---------|-------------|---------|----------|---------|
| | WT (LBS) | HT (FT) | WT (LBS) | HT (FT) | WT (LBS) | HT (FT) |
| 1-MCG23-12 | 170.00 | 170.00 | 40.50 | 1800 | 60.75 | 2700 |
| 1-MCG23-12 | 160.00 | 160.00 | 40.50 | 1800 | 60.75 | 2700 |
| 1-MCG23-12 | 150.00 | 150.00 | 40.50 | 1800 | 60.75 | 2700 |
| 1-1/2" x 4" LIGHTNING ROD | 174.00 | 176.50 | 0.20 | 14 | 1.23 | 36 |
| 6-PANEL (8' x 1' x 8') | 170.00 | 170.00 | 52.14 | 584 | 64.98 | 2736 |
| 6-RRU (24" x 13" x 7') | 170.00 | 170.00 | 18.84 | 474 | 31.74 | 1392 |
| 1-RAVCAP RWSOC-3315-PF-48 (28) | 170.00 | 170.00 | 3.03 | 26 | 3.70 | 150 |
| 6-PANEL (8' x 1' x 8') | 160.00 | 160.00 | 52.14 | 584 | 64.92 | 2718 |
| 6-RRU (24" x 13" x 7') | 160.00 | 160.00 | 18.84 | 474 | 31.68 | 1380 |
| 6-PANEL (8' x 1' x 8') | 150.00 | 150.00 | 52.14 | 584 | 64.06 | 2706 |
| 6-RRU (24" x 13" x 7') | 150.00 | 150.00 | 18.84 | 474 | 31.52 | 1374 |
| 1-CANBULM 450 ADP | 130.00 | 130.00 | 0.57 | 15 | 1.01 | 48 |
| 1-36" STANDOFF | 130.00 | 130.00 | 5.18 | 66 | 9.67 | 249 |
5. FEEDLINES ARE PLACED INTERIOR TO POLE SHAFT (UNLESS NOTED OTHERWISE)
 6. TOTAL POLE HEIGHT IS 175 FT AGL
 7. ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE (APPROX 1 FT AGL)
 8. 18 SIDED SHAFT

SECTION INFORMATION					
ITEM NO	LENGTH	BASE OD	TOP OD	THK	MATL
1	45'-0.00"	48.50"	39.00"	0.438"	A572 65 KSI
2	51'-3.00"	40.65"	33.25"	0.375"	A572 65 KSI
3	41'-6.00"	34.67"	28.68"	0.313"	A572 65 KSI
4	52'-11.00"	29.89"	22.25"	0.250"	A572 65 KSI

DESIGNER: PROJECT: 421135, TITLE: 421135R0, SCALE: NONE, DATE: 08/03/18, ENGR: AM70, valmont

DESCRIPTION: BLUE RIDGE 174 D POLE, SITE, FRANKLIN CO, VIRGINIA, 421135



Blue Ridge Towers Inc
1125 1st Street
Roanoke, VA 24016
540-595-7060

Application for
Industrial Park
VA024
Proposed 175' Monopole/
Wireless Cellular Facility
@21745 Virgil H Goode HWY
Rocky Mount, VA 24151

APPLICATION SUMMARY

Blue Ridge Towers Inc. do hereby submit an application for a Special Exemption Permit to construct a new wireless cellular facility to be located off RT 220, @ 21745 Virgil H Goode HWY, in Franklin County, VA. Blue Ridge Towers, along with its anchor tenant Verizon Wireless, are submitting the application for a new 175' monopole within a total leased area of 60' x60', to be constructed within the newly constructed Summit View Business Park to provide the necessary wireless coverage to its customer base and fill in the needed 4G and LTE coverage gap in this vicinity. Due to the fact of no other existing structures within the proximal area, Blue Ridge Towers is proposing to construct a brand new 175 foot monopole within the leased property on a 87.94 acre parcel, Tax Map ID # 0360019700.

We hope that you will find this application meets Franklin County's standards of approval

Sincerely,

Anthony Smith
Founder/President
Blue Ridge Towers

Contact Information

Applicant: Blue Ridge Towers Inc
1125 1st Street
Roanoke, VA 24016
O (540) 595-7060

Engineer: Foresite Group Inc
5185 Peachtree Pkwy
Suite 240
Norcross, GA 30092
770-368-1399

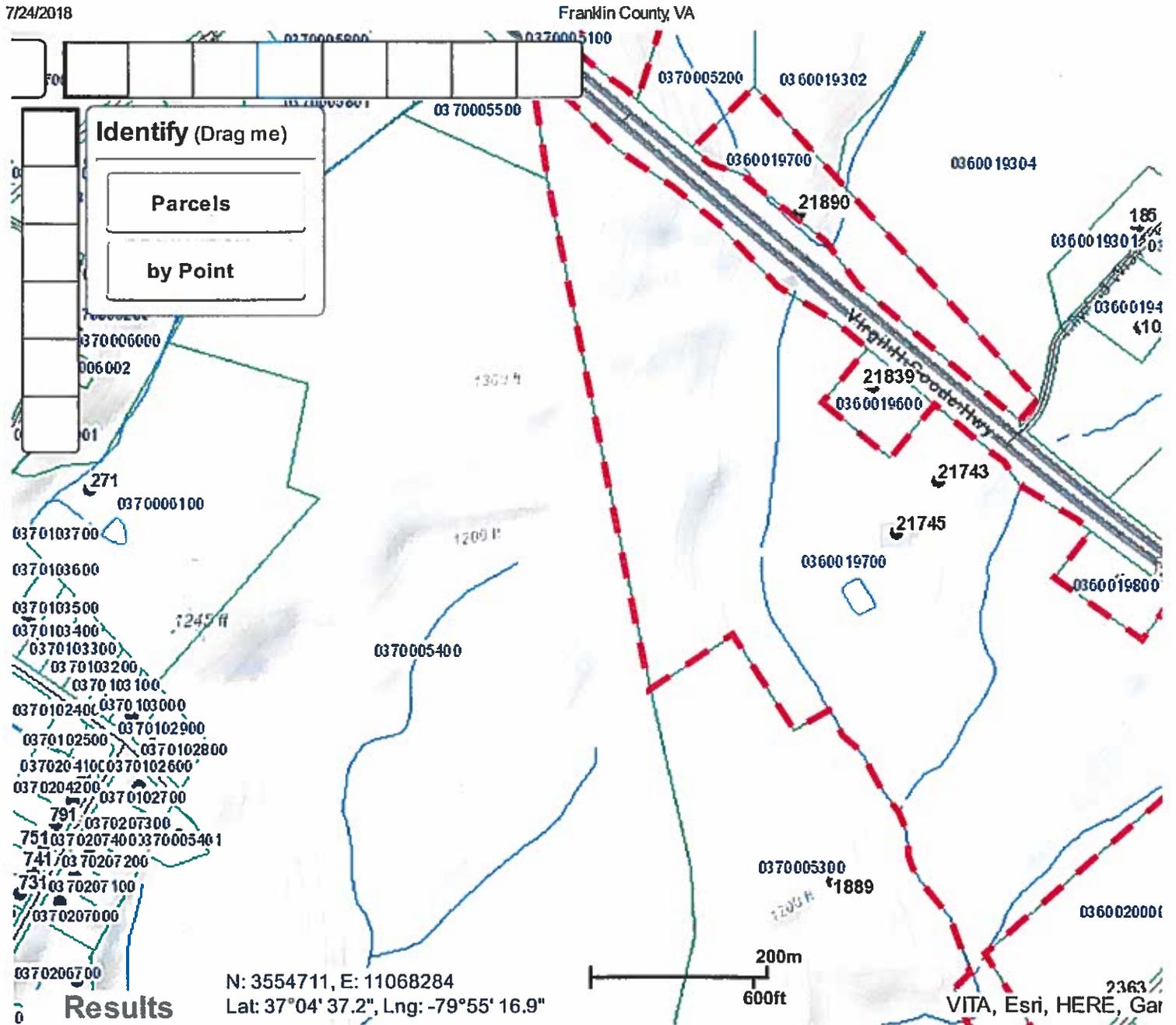
Architect: Tower Engineering Professionals, Inc
326 Tryon Road
Raleigh, NC 27603
919-661-6351

Parcel owner: Franklin County
1255 Franklin St
Rocky Mount, VA 24151
O (540) 480-3030

Total Area of Parcels in Acres and Square feet

Parcel is 0360019700

Total area is 87.941 Acres, or 3,830,709.96 square feet



Boundary Lines and approximate dimensions and bearings



Location and description of any existing or proposed easements,
deed restrictions or covenants

There are no deed restrictions or covenants

The proposed easement will be coming off the existing road from RT 220, Virgil H Goode HWY, going up and through existing paved road and extending to the tower site, all within the owned property.

All Natural Features, such as streams, ponds, wetlands, etc

There are no streams, ponds, or wetlands present on the proposed location or within the leased property



Existing and Proposed Grades/Contours and base elevations

The Existing Ground elevation of Proposed Wireless Facility is located at 1283 feet AMSL.

The proposed monopole is 175'

Top of proposed monopole elevation will be 1458 feet AMSL.

Existing and Proposed grade/Contours of ground elevation will not change

FAA 2-C SURVEY CERTIFICATION

Applicant: Blue Ridge Towers, LLC

Site Name: Industrial Park

Site Number: VA024

Site Address: Rt. 220 Virgil H Goode Hwy
Rocky Mount, VA 24151

Horizontal Datum Source (Circle all that apply):

Ground Survey GPS Survey NAD 83 NAD 27

Vertical Datum Source (Circle all that apply):

Ground Survey GPS Survey NAVD 88 NGVD 29

Structure Type (Circle One):

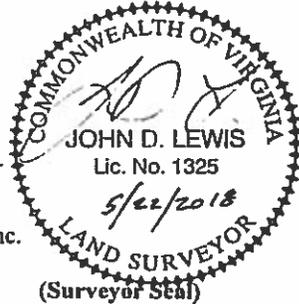
Proposed Existing
Enclosed Monopole Existing Tower Roof Top Water Tank

Other: _____

Latitude: N 37° 04' 55.42" NAD 83
Longitude: W 79° 55' 29.11" NAD 83
Ground Elevation: 1283 feet AMSL
Top of Proposed Monopole Height: 175 feet AGL
Top of Proposed Monopole Elevation: 1458 feet AMSL

CERTIFICATION: I certify that the latitude of N 37° 04' 55.42" and the longitude of W 79° 55' 29.11" are accurate to within ± 50 feet horizontally and that the site ground elevation of 1283 feet AMSL is accurate to within ± 20 feet vertically. The horizontal coordinates are based on the North American Datum of 1983 (NAD 83) and are expressed in degrees, minutes and seconds to the nearest hundredth of a second. The vertical heights are based on the North American Vertical Datum of 1988 (NAVD 88) and are determined to the nearest foot.

Surveyor Signature: John D. Lewis
Printed Name: John D. Lewis, L.S.
Professional Surveyor #: #1325 Commonwealth of Virginia
Company: Fork Mountain Surveying & Mapping, Inc.
Phone: 276-952-6110
Date: May 22, 2018



(Surveyor Seal)

Blue Ridge Towers, Inc.

Showing property situated on the west side of US Highway 220 (Virgil H. Goode Highway) lying in the Boone Magisterial District of Franklin County, Virginia. County Tax Map 37 - 54 being a portion of the property COUNTY OF FRANKLIN acquired from SOUTHWAY FARM, L.L.C. by deed dated 13 December 2015 of record in Deed Book 1071 pg. 23. Also see for further reference Plat Book 1071, pgs. 23 - 50. All of the aforementioned documents are recorded in the Office of the Clerk of the Circuit Court of Franklin County located in Rocky Mount, Virginia.

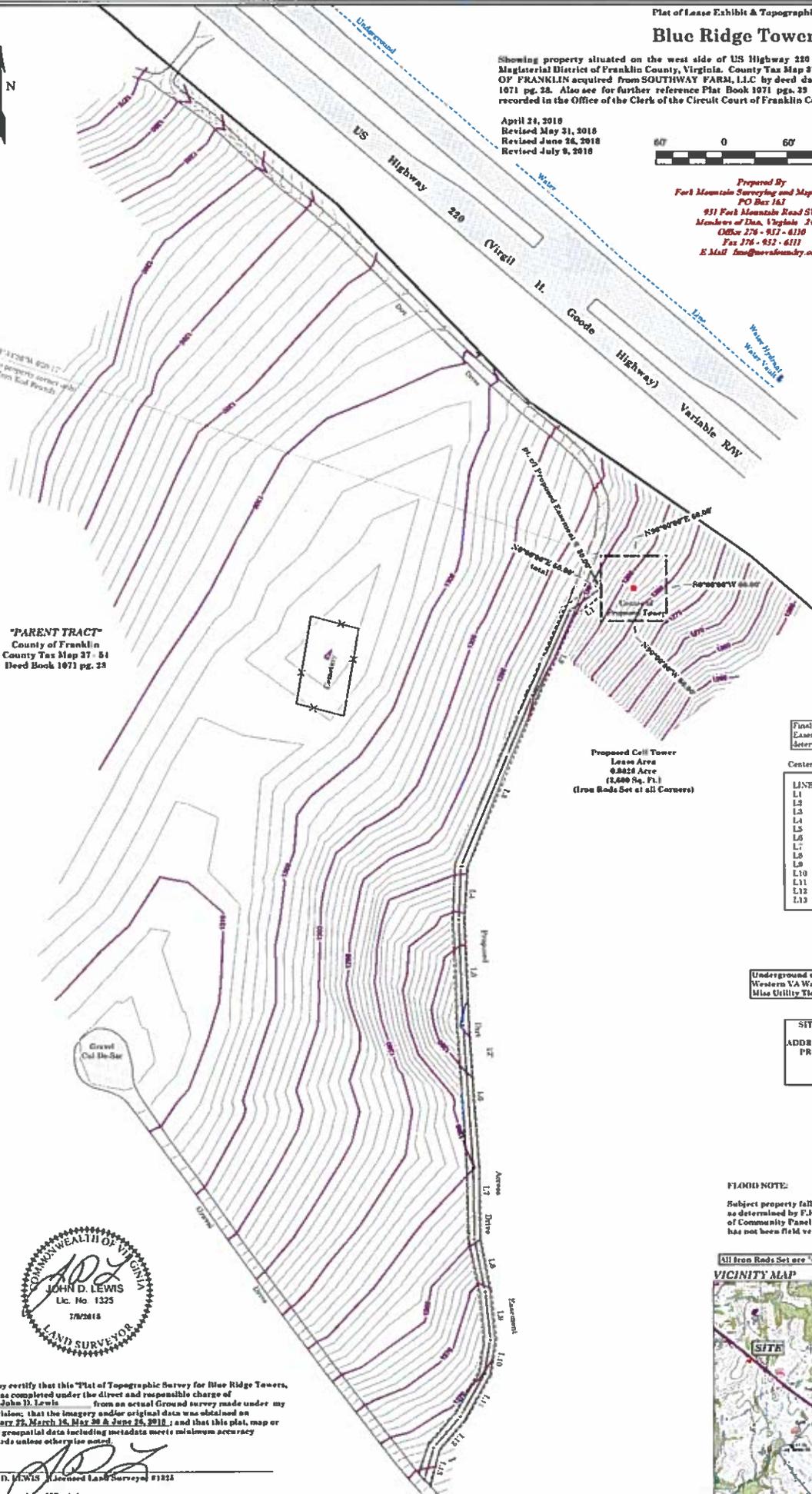
April 21, 2010
Revised May 21, 2016
Revised June 24, 2018
Revised July 9, 2018

Scale: 1" = 60'



Prepared By
Fort Mountain Surveying and Mapping Inc.
PO Box 163
931 Fort Mountain Road SW
Members of Dca, Virginia 24120
Office 276 - 937 - 6116
Fax 276 - 937 - 6111
E-Mail fm@fortmountainva.com

VA Coastal System of 1983
South Fork



"PARENT TRACT"
County of Franklin
County Tax Map 37 - 54
Deed Book 1071 pg. 23

Final Location of Proposed 17 Acre Easement and 20' Inroad is to be determined after final construction

Proposed Cell Tower Lease Area 0.8258 Acre (1,200 Sq. Ft.) (from Rods Set at all Corners)

Center of Proposed 17 Acre Easement

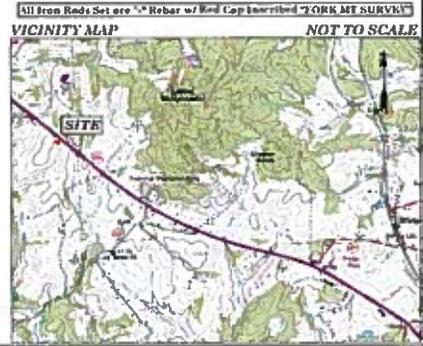
LINE	BEARING	HORIZ DIST
L1	S51°03'17"W	33.15'
L2	S22°56'53"W	83.69'
L3	S22°39'13"W	170.79'
L4	S70°52'17"W	49.49'
L5	S2°11'12"E	97.26'
L6	S3°39'33"E	133.11'
L7	S0°19'51"E	68.12'
L8	S10°54'10"E	49.26'
L9	S5°41'02"E	41.65'
L10	S9°10'11"W	32.10'
L11	S30°0'52"W	41.75'
L12	S40°48'57"W	37.25'
L13	S16°56'30"W	31.02'

Underground utilities shown hereon are as marked by Western VA Water & Sewer personnel responding to Miss Utility Ticket No. A395106315-80A

SITE NAME: INDUSTRIAL PARK
SITE NUMBER: VAR24
ADDRESS: Rte. 220 Virgil H. Goode Hwy
PROPOSED TOWER LOCATION:
37°43'55.12"N
79°51'28.11"W
Ground Elevation 1245'

CONTOUR INTERVALS
Major = 5'
Minor = 1'

FLOOD NOTE:
Subject property falls within Zone X (areas outside 0.2% annual chance) as determined by F.E.M.A. This opinion is based upon an examination of Community Panel 81047C 0155 C, effective December 14, 2008 and has not been field verified.



I hereby certify that this "Plat of Topographic Survey for Blue Ridge Towers, Inc." was completed under the direct and responsible charge of John D. Lewis from an actual Ground survey made under my supervision; that the imagery and/or original data was obtained on February 25, March 16, Mar 29 & June 25, 2018; and that this plat, map or digital geospatial data including metadata meets minimum accuracy standards unless otherwise noted.

JOHN D. LEWIS (Licensed Land Surveyor) 91823
Commonwealth of Virginia

Access to the site, with location and width of existing and proposed driveways

Public Access will come off state road RT 220, Virgil H Goode HWY then turning into the Summit View Business Park, right onto an existing paved driveway to top of the hill, site is located adjacent the fence line at 21745 Virgil H Goode Hwy,

Final Road profile and cross section of new road

The NEW proposed access road will be a 12' wide gravel road

Emergency and Service vehicle access and turn around space

There is vehicle access and turn around space

Location & description of all electric & telephone utilities serving site

Existing Power and Telco are located on the property @21734 Virgil H Goode Hwy, coming underground from RT 220 to the leased parcel,

Power Company is AEP

Telco/Fiber provided by Mid-Atlantic Fiber

Existing and proposed methods of handling storm water runoff, and the direction of flow indicated by arrows

None proposed currently, Not applicable

Size and location of all storm water drainage lines, catch basins, drywells, drainage ditches, retention basins, and culverts

None proposed currently or TBD, Not applicable

Location, Type and size of all existing and proposed landscaping and vegetative screening

Landscaping and vegetative screening will be provided upon final site approval or in compliance with conditions set forth with the ordinance

Description of any proposed lighting

No lighting are proposed or required by the FAA for this site. Other lighting within the compound will be installed by the wireless tenants specifications and requirements

Copy of FCC license for each wireless service provider proposing facilities

Applicant is Blue Ridge Towers Inc, as the tower owner and not an actual wireless carrier, FCC license is not required

Verizon Wireless will be the first wireless service provider to collocate on the tower, and the carrier will provide FCC license within their application process

Radio frequency engineer's statement describing the geographical coverage objective and level of service requirements to be achieved

Per Verizon Wireless RF engineer, there is currently no 4G or LTE coverage in the Industrial Park area, off RT 220, Virgil H Goode Hwy. This proposed location will provide the optimal and required coverage for continued service in the area, with a rad center of 175' and provide the necessary voice and data coverage along the 220 Corridor.

RF propagation maps demonstrating coverage achievable at proposed antenna location. All information (antenna model, azimuth, downtilt, ERP, cable size, etc.), including methodology and assumptions, necessary to replicate and interpret the results should be explicitly stated?

RF propagation maps attached separately

Antenna specs, downtilt, azimuth, ERP, cable, and equipment specs all attached

SPECIFICATION COMPOSITE HYBRID CABLE

24 OS2 FIBER & 10 #8AWG COPPER

Specification Sheet AFOP-NTD1B-01; Page 2

CONDUCTOR SUB-COMPONENT:

CONDUCTORS (10)	#8AWG 19 STRAND THHN/THWN PVC INSULATION THICKNESS: 0.030" (0.76mm) NYLON COATING THICKNESS: 0.006" (.15mm) OD OVER NYLON: 0.218" (5.5mm)
FILLER	FLAME RETARDANT FIBRILLATED PP
SHIELD	005" BARE CORRUGATED COPPER TAPE
FIBER CABLES (x3)	FIBER TYPE: OS2 BEND-INSENSITIVE LOW WATER-PEAK SINGLE-MODE – G.657.A2 FIBER COUNT (1): 8 FIBER OD: 0.010" (0.25 mm) NOMINAL DIAMETER: 0.315" (8 mm) JACKET: PVC COLOR: BLACK

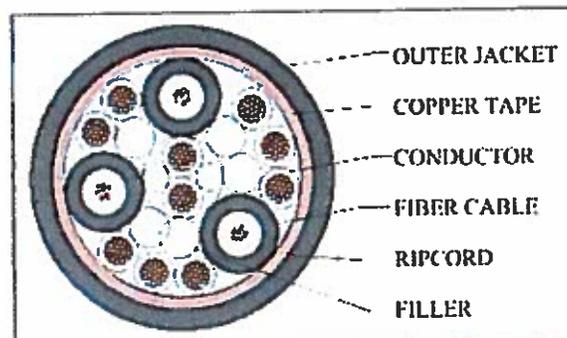
ASSEMBLY
3 X 80S2 .A2 FIBER CABLES AND 10
CONDUCTORS, STRANDED TOGETHER WITH
FILLERS AND CORRUGATED COPPER TAPE
SHIELD

OUTER JACKET
MATERIAL: PVC
COLOR: BLACK
NOMINAL WALL: 0.085" (2.2 mm)
NOMINAL OD: 1.40" (35.6 mm)
RIPCORD UNDER JACKET

LISTING
UL TC-OF
FT-4 (FIBER)

	WAVELENGTH (nm)	ATTENUATION (dB/km)
OPTICAL SPECIFICATIONS	1310	0.4 Max
	1550	0.3 Max

The above optical specifications meet or exceed the requirements of TIA/EIA-568B, Gigabit Ethernet and ATM applications.
Fiber conforms to ITU G.652.d and ITU G.657.A2



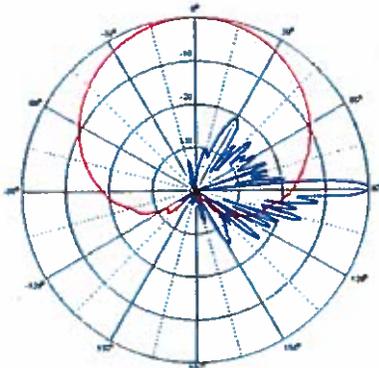
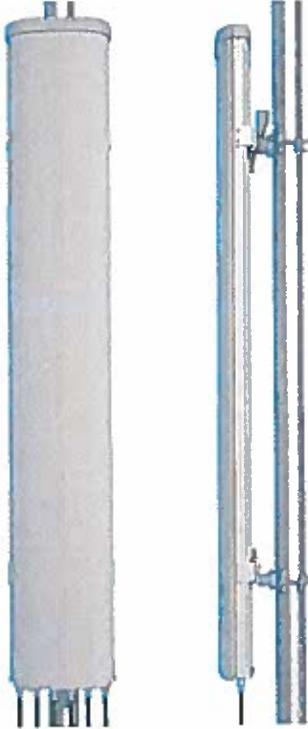
Hybrid Composite Cable Construction

RATINGS:

Min. Bend Radius long term:	15x Cable diameter
Min. Bend Radius short term:	20x Cable diameter
Operating Temp. (Fiber):	-40°C to 70°C
Storage Temp. (Fiber):	-40°C to 75°C
Installation Temp. (Fiber):	-30°C to 60°C
Maximum Long Term Load (Fiber):	800 N (180 lbf)
Maximum Short Term Load (Fiber):	2700 N (600 lbf)

CMA-BTLBHH/6516/20/20

XXX-Pol: 698-896/1710-2180 / 1710-2180



Electrical specification:

Frequency range per input (MHz) Frequency band definitions (MHz)	2 x 698-896		4 x 1710-2180	
	698-806	806-896	1710-1990	1920-2180
Polarization	Dual linear $\pm 45^\circ$		2 x Dual linear $\pm 45^\circ$	
Gain (dBi)	16.1	16.0	20.2	20.4
Horizontal = 3 dB beamwidth ($^\circ$) $\pm 4^\circ$ Vertical = 3 dB beamwidth ($^\circ$) $\pm 0.5^\circ$	67	72	63	61
Adjustable electrical downtilt	0° - 10°		2° - 8°	
Front to back ratio (dB)	>25		>25	
First upper sidelobe suppression	>17		>17	
First nullfill below horizon (dB)			<-20	
Cross-polar discrimination +/-0° (dB)	>20		>20	
Cross-polar discrimination +/-40° (dB)	>10		>10	
VSWR	<1.5:1		<1.5:1	
Isolation between inputs (dB)	>25		>25	
Isolation between bands (dB)			>30	
Antenna Efficiency*	94 %		93 %	
Inter modulation, IM3 (dBc)			>153 @2x43 dBm	
Inter modulation, IM3 (dBc)			>163 @2x43 dBm	
Nominal impedance			50 Ω	
Max power per input			500 W	

Mechanical specification:

Connectors	6 x 7/16 female
Connector position	Bottom
Lightning protection	DC grounded
Height/Width/Depth mm (in)	1830 (72.0) / 412 (16.2) / 200 (7.8)
Antenna weight kg(lb)	40 (88)
Wind load at 42 m/s (94 mph)	
Frontal:	746 N
Lateral:	162 N
Rear:	914 N
Survival wind speed	70 m/s (156 mph)
Colour radome	Light Grey, RAL 7035
Radome material	ASA
Mounting hardware:	
Mounting bracket	2
Bracket weight (complete)	6.5 kg (14.3 lb)
Pole diameter	45-120 mm (1.8-4.7 in)
Tilt bracket	0° - 5° mechanical
Product Numbers:	
CMA-BTLBHH/6516/20/20/MEY	110305
CMA-BTLBHH/6516/20/20/RET	110310

ALCATEL-LUCENT REMOTE RADIO HEAD

RRH2X50 800 MHZ (3GPP B26/ 3GPP2 BC10)

The Alcatel-Lucent RRH2x50-08 is a high power Dual Technology Remote Radio Head (RRH) operating in the 800 MHz frequency band (3GPP Band 26/3GPP2 BC10). The Alcatel-Lucent RRH2x50-08 is capable of supporting dual technologies (CDMA and LTE) with multiple carriers within 6.725 MHz contiguous BW of the Band 26 (or 3GPP2 Band Class 10 Blocks C & D) spectrum. It is designed with an eco-efficient approach, providing operators with the means to achieve high quality and capacity coverage with minimum site requirements.



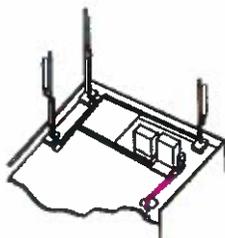
A distributed eNodeB expands deployment options by using two components, an LTE Base Band Unit (BBU) containing the digital assets and a separate RRH containing the radio frequency (RF) elements. This modular design optimizes available space and allows the main components of an eNodeB to be installed separately, within the same site or several kilometres apart.

RRH2x50-08 has two CPRI ports, each port is connected to a Baseband Unit (BBU) (CDMA or LTE) by CPRI fiber-optic connections carrying downlink and uplink digital radio signals along with operations, administration and maintenance (OA&M) information. This product is ideally suited for macro coverage with 50W RF output at each of its antenna ports and offers multiple-input multiple-output (MIMO) 2x2 operation for a 1.4/3/5 MHz LTE carrier or 2 branch receive diversity for supported CDMA carriers. RRH2x50-08 can be operated in multiple modes; CDMA carriers only, a mix of CDMA and LTE carriers, or LTE only carriers. Full benefits of LTE can be realized using the Alcatel-Lucent RRH2x50-08 in distributed eNodeB architecture and achieve excellent RF characteristics at minimum cost.

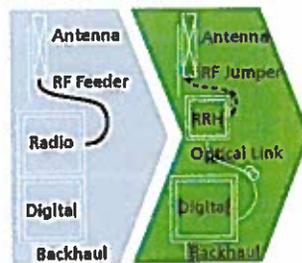
The limited space available at some sites may prevent the installation of traditional single cabinet BTS equipments, leaving coverage holes, or it may require costly cranes to achieve rooftop installation. However, many of these sites can easily host an Alcatel-Lucent RRH2x50-08, providing more flexible site selection and improved network quality along with greatly reduced installation times and costs. An external filter may be used to meet stringent FCC emission requirements.

Fast, low-cost installation and deployment

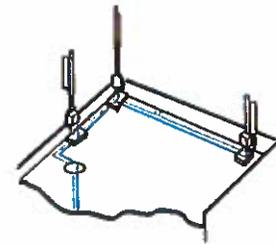
The Alcatel-Lucent RRH2x50-08 is a zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts. Installation can easily be done by a single person because the Alcatel-Lucent RRH2x50-08 is compact weighing around 24 kgs can be carried separately and assembled on site, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day — a fraction of the time required for a traditional BTS.



Macro



RRH for space-constrained cell sites



Distributed

Excellent RF performance

The compact Alcatel-Lucent RRH2x50-08 can be installed close to the antenna. Operators can therefore locate the Alcatel-Lucent RRH2x50-08 where RF engineering is deemed ideal, minimizing trade-offs between available sites and RF optimum sites. The RF feeder cost and installation costs are reduced or eliminated, and there is no need for a Tower Mounted Amplifier (TMA) because losses

introduced by the RF feeder are greatly reduced. The Alcatel-Lucent RRH2x50-08 provides more RF power while at the same time consuming less electricity.

FEATURES

- Zero-footprint deployment with flexible mounting options: Pole/Wall/Floor Mounting Options
- Easy installation, with a unit that can be carried and set up by one person
- Optimized RF power, with flexible site selection and elimination of a TMA
- Convection-cooled (fanless), noise free, and heater-less unit
- Best-in-class power efficiency, with significantly reduced energy consumption
- Supports up to 4 carriers of CDMA and one 1.4 MHz LTE MIMO carrier or 1 carrier CDMA and one 5 MHz LTE (dual technology)
- Supports up to 5 carriers of CDMA (single technology)
- -48V DC may be powered from Alcatel-Lucent cabinet
- Supports Hybriflex fiber / power cable bundle
- Supports AISG for LTE carriers

BENEFITS

- Leverages existing real estate with lower site costs
- Smaller in size, reduces installation costs, with fewer installation materials and simplified logistics
- High efficiency and minimizes environmental impacts, with the potential for eco-sustainable power options
- Improves RF performance and adds flexibility to network planning

TECHNICAL SPECIFICATIONS

Dimensions (HxWxD)

- Approx. 15.7" x 13" x 9.8"

Weight

- Approx. 24 kg (excluding solar shield and mounting bracket)

Mount

- Pole/Wall/Floor mounting options

Optical Interface

Type/number of fibers:

- Up to 2.4 Gbps
 - Single-Mode: one SM fibre per RRH2x40 carrying UL + DL using CWDM (@1550/1310nm)
 - Multi-Mode: Two MM fibers per RRH2x40, one for UL, 2nd for DL (@850nm)
- Optical fiber length
 - Up to 300m, using MM fiber
 - Up to 15/40km, using SM fiber

Operating Temperature

- Outdoor: -40°C to +55°C, Passive convection cooling

Power

- DC variant : - 48V
- Typical power consumption ≈ 370W @ 2x50W

Electromagnetic Compatibility (EMC)

- FCC, GR1089

Safety

- CSA / UL

Radio Characteristics

- Frequency Band: Part of B26: 862.275-869 MHz (DL) & 817.275-824 MHz (UL)
- Bandwidth: 7 MHz (Instantaneous)
- RF Output power @ antenna port: 50W nominal
- RX Noise Figure: 2.3 dB
- Rx diversity : 2-way diversity
- RF features : TMA and RET support (AISG 1.0, 1.1, 2.0), VSWR test

About Alcatel-Lucent

Alcatel-Lucent (Euronext Paris and NYSE: ALU) provides solutions that enable service providers, enterprises and governments worldwide, to deliver voice, data and video communication services to end-users. As a leader in fixed, mobile and converged broadband networking, IP technologies, applications, and services, Alcatel-Lucent offers the end-to-end solutions that enable compelling communications services for people at home, at work and on the move. For more information, visit Alcatel-Lucent on the Internet: <http://www.alcatel-lucent.com>. Copyright © 2012 by Alcatel-Lucent. All Rights Reserved. January, 2012

Expected 9929 Site Preparation Guide Additions Pertaining to 4X45W 1900 MHz Remote Radio Head

The following pages reflect expected changes to the 9929 Site Preparation Guide to include the 4X45W 1900 MHz Remote Radio Head product. This information is provided solely for preliminary planning purposes only and should not be interpreted as the final version.

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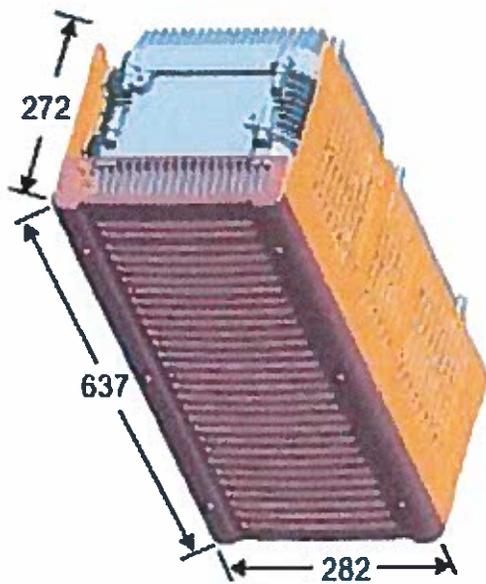
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Notice

Every effort was made to ensure that the information in this Information Product (IP) was complete and accurate at the time of printing. However, information is subject to change.

Orthogonal view of 1900 MHz (PCS), 4x45W (65 MHz) RRH

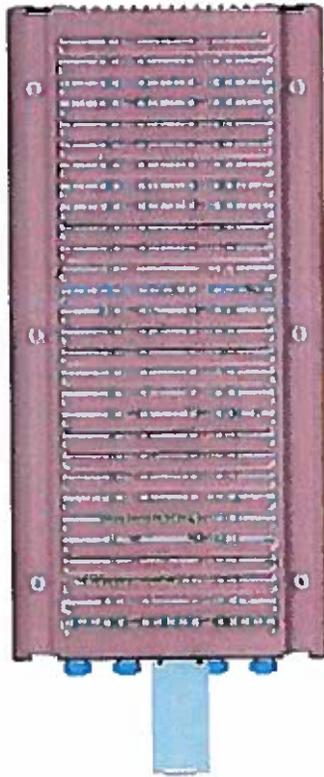
The following figure provides an orthogonal view of the 1900 MHz (PCS), 4x45W RRH. Dimensions are shown in mm.



PRELIMINARY

Front view of 1900 MHz, PCS, 4x45W (65 MHz) RRH

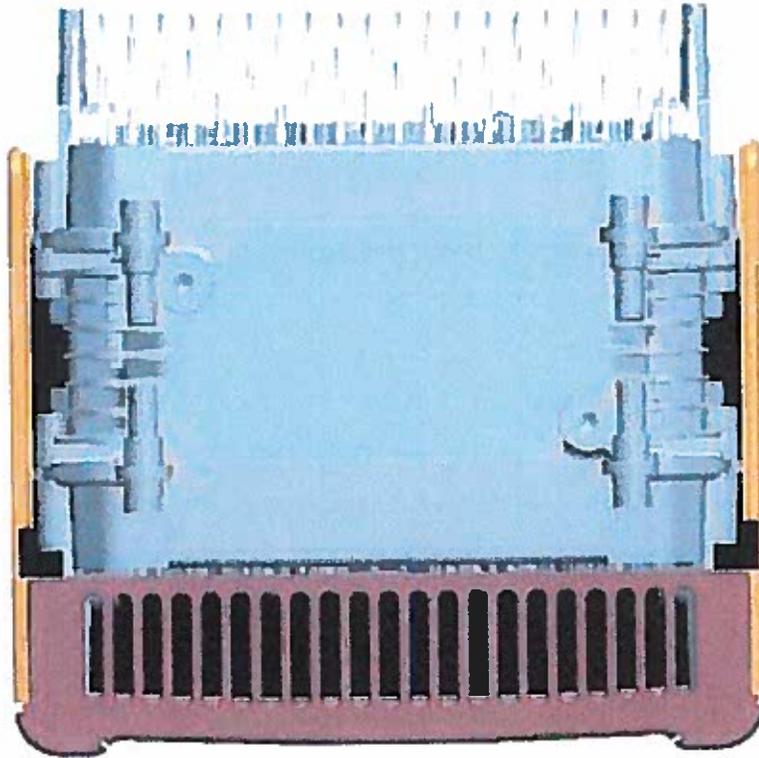
The following figure is a front view of the 1900 MHz, PCS, 4x45W (65 MHz) RRH.



PREL

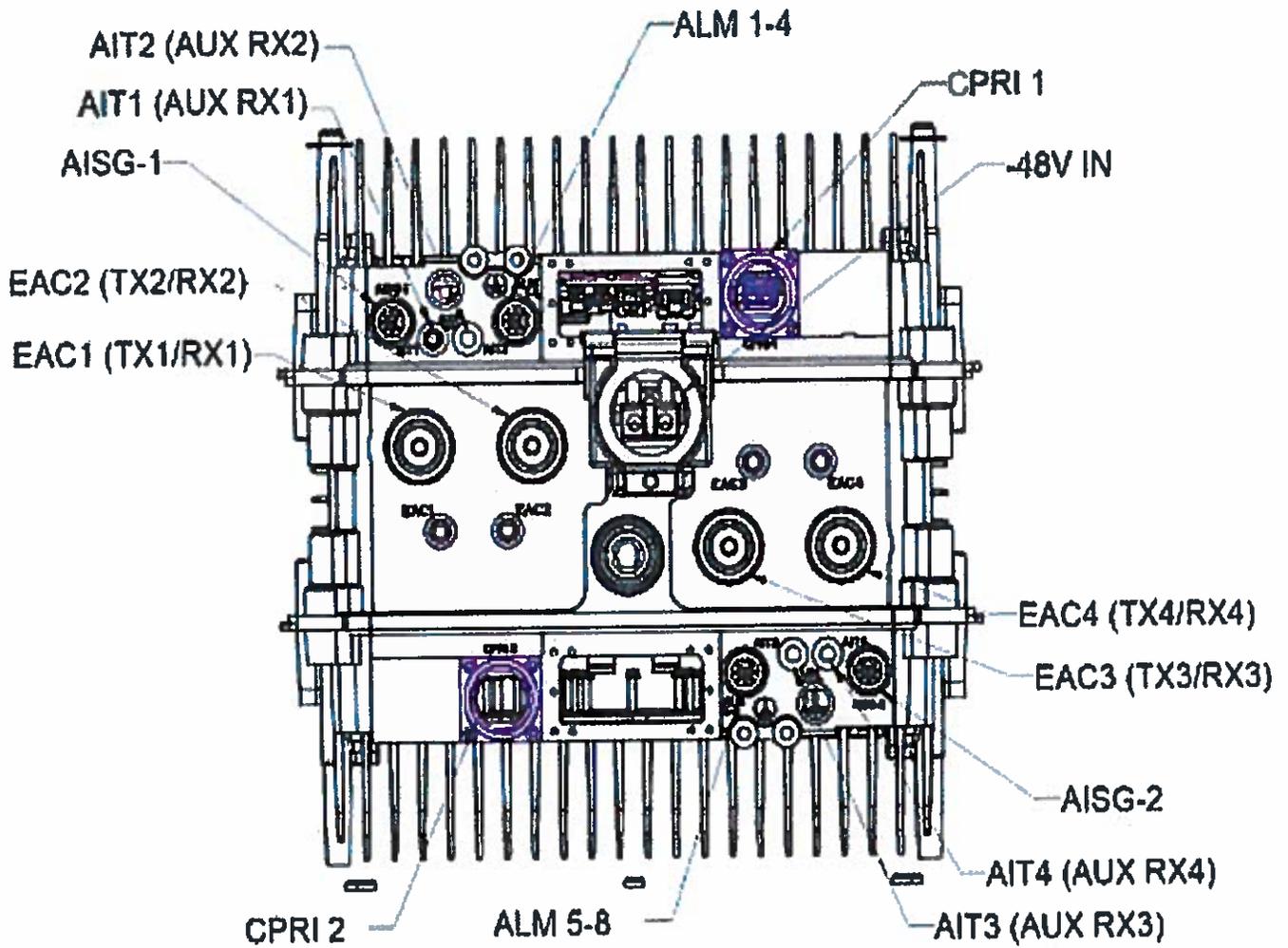
Top view of 1900 MHz, PCS, 4x45W (65 MHz) RRH

The following figure is a top view of the 1900 MHz, PCS, 4x45W (65 MHz) RRH.



Bottom view of 1900 MHz, 4x45W (65 MHz) RRH

The figure below calls out the connectors on the bottom of the 1900 MHz, 4x45W (65 MHz) RRH.



PRV

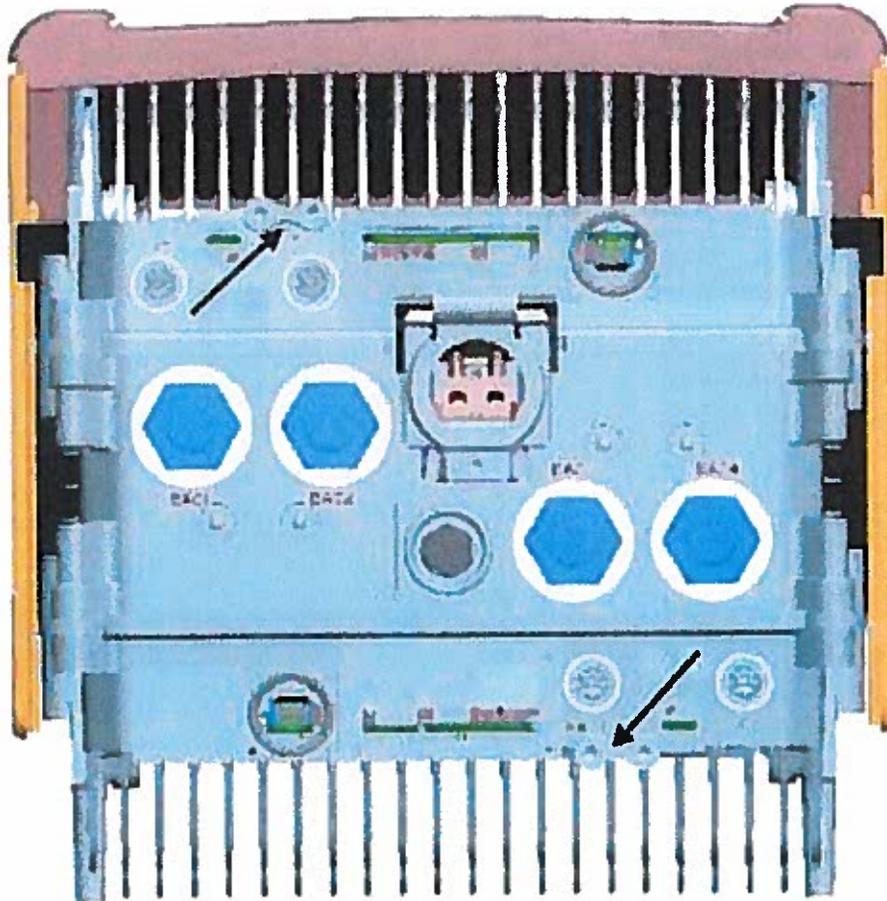
Connectors on 1900 MHz RRHs

The following table lists the connectors on the 1900 MHz RRHs and function of each connector.

Connectors on 1900 MHz RRHs

Connector	Function
TX1/RX1 (on top of 25 MHz RRH / on bottom of 65 MHz RRH)	Transmit and receive, antenna path 1
TX2/RX2 (on top of 25 MHz RRH / on bottom of 65 MHz RRH)	Transmit and receive, antenna path 2
TX3/RX3 (on top of 25 MHz RRH / on bottom of 65 MHz RRH)	Transmit and receive, antenna path 3
TX4/RX4 (on top of 25 MHz RRH / on bottom of 65 MHz RRH)	Transmit and receive, antenna path 4
AUX RX1	Antenna-sharing port
AUX RX2	N/A
CPRI PRI	CPRI optical main port
CPRI SEC	CPRI optical daisy-chained port
AISG	Remote Electronic Tilt (RET)
ALM	2 x 8 pin circular
TX1 MON	
TX2 MON	
-48 V	
Grounding Points (located on left and right side of 25 MHz RRH or bottom of 65 MHz RRH). See RRH grounding points .	Use 6 AWG ground cable (for outdoor) or 2 AWG ground cable (for indoor). Ground cable must be terminated with 2-hole lug at RRH end.

The grounding points on the 1900 MHz, 4x45W RRH are located on the bottom, as shown in the figure below.



PH

Weights and dimensions of RRHs and accessories

The following table provides weights and dimensions for the RRHs and floor stand.

RRH type or accessory	Description	Estimated maximum installed weight without mounting brackets kg (lbs)	Height mm (inches)	Width mm (inches)	Depth mm (inches)
RRH 4x40 1900 MHz	CDMA/LTE, Dual Technology, 4 x 40 Watts	47 (104) [includes 2 RRHs and mounting brackets]	580 (22.8)	330 (13.0)	440 (17.3)
RRH 4x45 1900 MHz	CDMA/LTE, Dual Technology, 4 x 45 Watts	27 (60)	637 (25.1)	282 (11.1)	272 (10.7)
Floor Stand	na	23 (51)	509 (20.1)	360 (14.2)	1226 (48.3)

RRH Power Consumption

The following table provides power consumption for the RRHs used with the 9929 Multi-Technology BTS Outdoor.

RRH type	Estimated power consumption
RRH 4x40 1900 MHz	690 watts
RRH 4x45 1900 MHz	690 watts

RRH heat dissipation

The following table provides heat dissipation for the RRHs used with the 9929 Multi-Technology BTS Outdoor.

RRH type	Estimated power consumption
RRH 4x40 1900 MHz	520 watts
RRH 4x45 1900 MHz	540 watts

Electrical power requirements for RRHs

The electrical power requirements for the RRHs, at full rated output power, are as follows.

RRH	Full rated output power at -48 VDC
RRH 4x40 1900 MHz	690 Watts, 15 Amps
RRH 4x45 1900 MHz	690 Watts, 15 Amps

Power consumption for RRHs

The table below lists the power consumption values for the two types of RRHs.

Power Consumption for RRHs	
RRH type	Power Draw Typical (watts)
1900 MHz, PCS, 4x40W (25 MHz)	655 Watts
1900 MHz, PCS, 4x45W (65 MHz)	655 Watts

The table below lists the wire gauges for various maximum lengths of copper DC feeder cable from the DC Distribution/Fiber Management Box to the RRHs.

DC feeders from DC Distribution/Fiber Management Box to RRHs			
Max Length	Wire Gauge (AWG)	Max Power (watts)	RRH type
400	4	690	4x40 4x45
250	6	690	
160	8	690	
100	10	690	

If drive test results are presented, all information, including methodology and assumption, necessary to replicate and intercept the results should be explicitly stated?

Drive Test data is not applicable currently as Verizon Wireless cannot drive test an actual site that hasn't been constructed

Written certification prepared by a licensed Professional Engineer attesting to the structural capacity of the structure to support the proposed loading in accordance with the latest revision to ANSI E1A/T1A-222?

Not applicable at this time, Structural certification cannot be submitted prior to the tower foundation design, once completed upon approval, the structural will meet all certification required within the standards of ANSI E1A/T1A-222.

An Inventory and map identifying the location (lat/long) and rad center of all existing and approved wireless facilities on which the applicant is located proximal to the site

There are NO other existing towers surrounding the proposed site location, While Verizon Wireless (Cellco Partnership) has other collocations on other existing wireless facilities within Franklin County, they currently have zero 4G or LTE coverage in the vicinity of the application area, therefore, the application for this new 175' monopole will provide the necessary coverage objective (175' rad center) for Verizon and fill in the much needed coverage gap to provide the requisite 911 and cellular service to its customer base.

An inventory map identifying all potential co-locatable structures (80' or greater) proximal to the proposed site. A justification statement should be provide indicating, with specific evidence, the rationale for rejecting any identified structures? The use of two (2) or more existing structures should be considered in the investigation of alternatives?

There are no other existing structures within the proposed area.

Photographic simulations of the proposed structures to include (before and after) photo images and a location map referencing the location from which each image was taken

Photo simulation package attached as a separate section to this application

Co-location policy of the structure owner for applications proposing the new structure?

Blue Ridge Towers, Inc's Collocation Policy

Blue Ridge Towers, Inc. is one of thirty-five cell tower providers in the country and currently develops, constructs and owns both traditional and stealth towers in the Eastern U.S. With a reputation for speed to market and attention to detail, Blue Ridge Towers, Inc. specializes in strategic built to suit tower development in hard to service areas, Site acquisition, turnkey zoning consultant services and the development and marketing of small cell networks on behalf of municipalities and large scale real estate developers.

Blue Ridge Towers, Inc has an open collocation policy with all the wireless cellular providers/carriers in the country. The company currently has sublease agreements with major carriers (T-Mobile, Shentel, Verizon) on existing towers owned by Blue Ridge Towers.

Collocation process begins with an application by the individual wireless carrier, and then by completing the application process, the carrier enters into a site lease agreement with Blue Ridge Towers, Inc., either site specific or through a master lease agreement.

FAA

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results	
Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.	
Your Specifications	
NAD83 Coordinates	
Latitude	37-04-55.4 north
Longitude	079-55-29.1 west
Measurements (Meters)	
Overall Structure Height (AGL)	53.3
Support Structure Height (AGL)	NaN
Site Elevation (AMSL)	391.1
Structure Type	
MTOWER - Monopole	

Tower Construction Notifications

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

An Environmental Compliance Report

Environmental Compliance Report has been ordered through Tower Engineering Professionals Inc. (of Raleigh, NC.) and upon completion, will be submitted as an application addition.

Response by the State Historic Preservation Officer regarding potential historic impacts?

Both SHPO and Impact study were ordered through Tower Engineering Professionals Inc. (of Raleigh, NC.) and upon study completion, will be submitted as application additions.

August 3, 2018



Mr. Terrance L. Harrington, AICP
Senior Planner/Current Planning Manager
Franklin County Department of Planning and Community Development
1255 Franklin Street
Rocky Mount, VA 24151

Re: **Franklin County Industrial Park (VA024) Environmental Regulatory Compliance**
Blue Ridge Towers, LLC
21743 Virgil II Goode Hwy
Rocky Mount, VA 24151 (Franklin County)

Dear Mr. Harrington:

Tower Engineering Professionals, Inc. (TEP) in the process of completing a FCC Compliance NEPA Checklist (NEPA) for the proposed tower compound lease area, access easement, and vehicle turnaround associated with the proposed construction of a 175-ft (175-ft with appurtenances) AGL Monopole Communications Tower for the site designated as Franklin County Industrial Park (VA024). We have completed the Cultural Resources Assessment for the proposed site and don't anticipate any impacts to historic resources listed in, or eligible for listing the National Register of Historic Places within the visual or direct effects area of potential effect (APE). A Phase I ESA was completed for the site on 8-2-18 and no further investigation is warranted and none was recommended. It is the understanding of TEP that upon completion of the aforementioned documents Blue Ridge Towers will submit these documents to Franklin County, VA for review. Please don't hesitate to contact me if there are any questions or concerns related to the above referenced information.

Sincerely

A handwritten signature in black ink, appearing to read "George T. Swearingen, III". The signature is fluid and cursive, with a prominent "G" and "S".

George T. Swearingen, III
Vice President - Environmental Resources Group Manager
Tower Engineering Professionals, Inc.



**Verizon Wireless
(Cellco Partnership d/b/a/ Verizon Wireless)**

PHASE I ENVIRONMENTAL SITE ASSESSMENT

**SITE NAME: INDUSTRIAL PARK
SITE NUMBER: VA024**

**RT 220 VIRGIL H GOODE HWY
ROCKY MOUNT, VA 24151
(FRANKLIN COUNTY)**

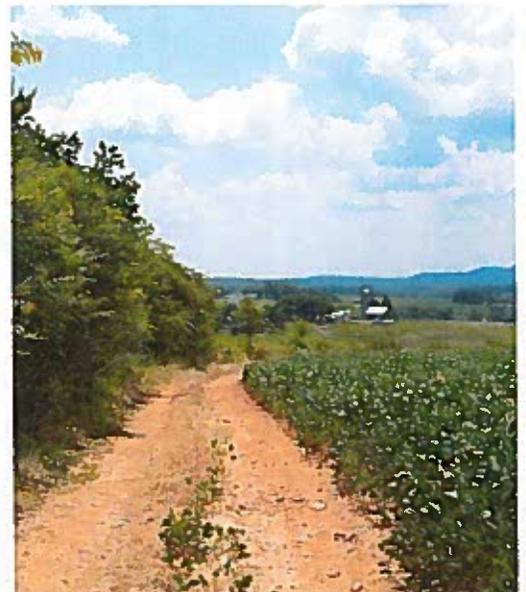
**LATITUDE: N37° 04' 55.42" ±
LONGITUDE: W79° 55' 29.11" ±**

**DATE INSPECTED: JULY 11, 2018
DATE PHASE I-ESA ISSUED: AUGUST 2, 2018**

COMPLETED BY:



**TOWER
ENGINEERING
PROFESSIONALS**



**Project Site Specific
Phase I Environmental Site Assessment
Blue Ridge Towers, LLC
Verizon Wireless
(Cellco Partnership d/b/a Verizon Wireless)
Industrial Park (VA024)**

1.0 EXECUTIVE SUMMARY

Tower Engineering Professionals, Inc. (TEP) has completed the Phase I Environmental Site Assessment (ESA) for a proposed tower compound lease area, access easement, and vehicle turnaround area (herein after referred to as the *subject property*) associated with the construction of a proposed 175-ft AGL monopole communications tower. The *subject property* will be located on the eastern portion of an approximately 87.9-acre parcel identified as Parcel ID: 0360019700 by the Franklin County, VA Tax Assessors Office and is herein referred to as the parent property. TEP is pleased to submit this report of our findings to Blue Ridge Towers, Inc./Verizon Wireless (Cellco Partnership d/b/a Verizon Wireless) (herein referred to as the Client). The *subject property* is located on Route 220 Virgil H Goode Highway, approximately 6.1-miles north-northwest of the City of Rocky Mount, in Franklin County, Virginia. The site inspection was performed on July 11, 2018.

The scope of work for this assessment included a review of available site history information for evidence that indicates a past release of any hazardous substances into structures on the property, into the ground, groundwater, or surface water of the property. In addition, research and a field investigation were performed to detect the presence or likely presence of hazardous substances, or any conditions that indicate the existing release of any hazardous substances.

The EDR Radius Map Report identified one (1) site of potential environmental concern within the standard ASTM radius of the subject property. Upon further review, the site is located generally to the northwest of and down-gradient from the *subject property*. Additionally, eleven (11) records associated with eight (8) orphan sites were identified by EDR as potentially being located in the vicinity of the *subject property*. All but one (1) orphan record, identified as Solar Greenhouse, were found to be located outside of the standard ASTM search radius. Due to the subject property being located at a higher topography than the surrounding area, all of the records identified by EDR are topographically separated from the *subject property*, and do not appear to have the potential to affect the soil and/or groundwater of the *subject property*.

The result of TEP's investigation and environmental records review has revealed no evidence of recognized environmental conditions in connection with the *subject property*. No environmental concerns which appear to pose a threat to the soil and/or groundwater of the proposed *subject property* were observed during the site inspection on July 12, 2018.

Based on review of the sites identified by EDR and practices set forth in Tier 1 of E2600 10, no potential petroleum hydrocarbon chemicals of concern (COCs) were identified within 0.1-miles of the *subject property*, and no non-petroleum hydrocarbon COCs were identified within 0.33-miles of the *subject property*. Therefore, it is the opinion of TEP that there does not appear to be the potential for vapor encroachment condition (VEC) onto the *subject property*.

We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Standard for Environmental Site Assessments: Phase I Environmental Site Assessment Process (E1527-13) for a portion of an approximately 87.9-acre parcel of real-estate identified as Parcel

Industrial Park (VA024) – Phase I ESA

Tower ID: 141951.164735

August 2, 2018

Page 2

0360019700 by the Franklin County, VA Tax Assessors Office and by Blue Ridge Towers, Inc./Verizon Wireless (Cellco Partnership d/b/a Verizon Wireless) as Industrial Park (VA024), the parent property. Any exceptions to, or deletions from, this practice are described in Sections 2.4, 2.5, & 11.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the *subject property*. No further environmental investigation is warranted or recommended for the proposed Blue Ridge Towers, Inc./Verizon Wireless (Cellco Partnership d/b/a Verizon Wireless) site identified as Industrial Park (VA024).

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2.0 INTRODUCTION

2.1 Purpose

The intent and purpose of this Environmental Site Assessment report (E1527-13) is to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability with respect to petroleum products and the contaminants within the scope of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Environmental Site Assessment (ESA) constitutes an “all appropriate inquiry” into the previous ownership and use of the *subject property* consistent with good commercial or customary practices. The objectives guiding the development of Practice E 1527 and E 1528 are (1) to synthesize and put in writing good commercial and customary practice for *environmental site assessments* for *commercial real estate*, (2) to facilitate high quality, standardized *environmental site assessments*, (3) to ensure that the standard of *appropriate inquiry* is practical and reasonable, and (4) to clarify an industry standard for *appropriate inquiry* in an effort to guide legal interpretation of CERCLA’s *innocent landowner defense*.

In essence, the intent of an ESA is to evaluate the presence of, or likely presence of, any hazardous substances or petroleum products on the *subject property* under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the *subject property*, or into the soil, groundwater or surface water of the *subject property*.

2.2 Scope of Services

The Phase I ESA serves to identify and record past and present conditions of any hazardous or toxic substances associated with the site that may impose an environmental liability to, or restrict the use of, the *subject property*. The scope of work for this project included research in identifying previous uses or occupancies of the property and any associated hazardous substance reports. In addition, several maps were reviewed including topographical, geological, soils, and hydrogeologic data. Aerial photographs were also interpreted to determine previous uses of the property and adjoining properties. Federal, state, and local environmental agency records were researched, and analytical data reviews were conducted to verify whether a hazardous substance release had been reported for the property. Interviews were conducted where applicable with pertinent users, managers, occupants, and government agencies in attempt to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the *subject property*. In addition, a site inspection was conducted to visually and physically observe the *subject property* and any structures on the site. Uses of properties in the vicinity of the *subject property* were also observed if feasible. Based on the results of this assessment, conclusions have been made that address the likelihood of the existence of any hazardous or toxic substances on the site.

The contractual and legal obligations between prior and subsequent users of environmental site assessments or between environmental professionals who conducted prior environmental site assessments and those who would like to use such prior environmental site assessments are beyond the scope of this practice.

2.3 Significant Assumptions

TEP has employed certain investigative and research procedures during the course of this assessment, and it should be understood that such procedures indicate actual conditions only at the precise locations investigated and that (as is customary) we have made certain inferences based on the results on our assessment. This environmental site assessment was performed to identify potential liabilities associated with current site conditions. TEP does not, and will not, be held liable for the discovery and elimination of hazards encountered that may potentially cause damage, accidents, or injuries. Recommendations rendered from work performed in no way eliminate hazards or the owner's obligation to federal, state, or local laws. The property owner is solely responsible for notifying the proper authorities of any conditions, which violate current applicable laws and regulations.

Data and information regarding test results and current site conditions and operations have been provided to TEP in part from the client and other sources. As is customary, we have assumed this data and information to be complete and factually correct. The conclusions rendered from this data and information is subject to professional opinion, and thus, could result in differing interpretations. Additionally, the conclusions rendered from this work are based on qualitative information gathered on or near the date of this report. This work has been performed in accordance with generally accepted engineering practices. No other warranty, expressed or implied, is made. Changes as to the content or form of this report may be made only with TEP's expressed written approval.

2.4 Limitations and Exceptions

The *subject property* is limited to the proposed 12-ft x ~630-ft access easement and approximately 60-ft x 60-ft tower compound lease area associated with the proposed 175-ft AGL monopole communications site identified as Industrial Park (VA024). This site assessment was limited to observations made during TEP's inspection and research of the site and the locations of the *subject property* as depicted on the "Plat of Lease Exhibit & Topographic Survey for Blue Ridge Towers, Inc." dated June 26, 2018, which was completed by Fork Mountain Surveying and Mapping, Inc. for Blue Ridge Towers, Inc. Any future or additional lease areas or access and/or utility easements not depicted on the aforementioned site plan were not assessed as part of this ESA and are not warranted with this document. No soil, surface water, or groundwater has been collected for laboratory analysis during this investigation. TEP makes no representations or certifications concerning soil, surface water, or ground water quality. No Phase I ESA can eliminate the uncertainty of the potential for recognized environmental conditions in connection with the *subject property*. This Phase I ESA is intended to reduce, but not

eliminate, uncertainty regarding the potential for recognized environmental conditions associated with the *subject property*.

The use of this practice is strictly limited to the scope set forth in this section. Section 13 of this practice, identifies, for informational purposes, certain environmental conditions (not an all-inclusive list) that may exist on a *property* that are beyond the scope of this practice but may warrant consideration by parties to a *commercial real estate* transaction.

Additional Issues – There may be environmental issues or conditions at a property that parties may wish to assess in connection with *commercial real estate* that are outside the scope of this practice (the non-scope considerations). As noted by the legal analysis in Appendix X1 (see ASTM E1527-13) of this practice, some substances may be present on a property in quantities and under conditions that may lead to contamination of the property or of nearby properties but are not included in CERCLA's definition of hazardous substances (42 USC § 9601(14)) or do not otherwise present potential CERCLA liability. In any case, they are beyond the scope of this practice.

Outside Standard Practices – Whether or not a *user* elects to inquire into non-scope considerations in connection with this practice or any other environmental site assessment, no assessment of such non-scope considerations is required for appropriate inquiry as defined by this practice.

Other Standards – There may be standards or protocols for assessments of potential hazards and conditions associated with non-scope conditions developed by Governmental entities, professional organizations, or other private entities.

Compliance with Activity and Use Limitations (AUL) – Parties who wish to qualify for one of the landowner liability protections will need to know whether they are in compliance with AULs, including land use restrictions that were relied upon in connection with a response action. A determination of compliance with AULs is beyond the scope of this practice.

List of Additional Issues – Following are several non-scope considerations that persons may want to assess in connection with commercial real estate. No implication is intended as to the relative importance of inquiry into such non-scope considerations, and this list of non-scope considerations is not intended to be all-inclusive:

Radon,
Asbestos-Containing Materials,
Lead in Drinking Water,
Lead-Based Paint,
& Mold

2.5 Special Terms and Conditions

The scope of this ESA did not include investigations concerning radon, asbestos, lead-based paint, drinking water quality or air quality, surface water quality, delineation of wetlands, or inspections of the interior of houses and other buildings and/or structures. The scope of the site inspection portion of the ESA was limited to the approximate location of the *subject property*. The site inspection also included portions of the parent property that were at equal or higher elevations than the *subject property* that could have an effect on the soil or groundwater within the *subject property*. The adjoining properties were observed from property boundaries and/or public right-of ways when feasible.

2.6 User Reliance

The user of this report is assured that an Environmental Professional, as defined in 40 CFR § 312.10(e) & (f) has either conducted or supervised the completion of the assessment. The Environmental Professional responsible for the completion of this document has the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the *subject property*. TEP has developed and performed the appropriate inquiries in conformance with the standards and practices set forth in 42 U.S.C. § 9601 (35) (B).

3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The *subject property* is located at 21745 Route 220 Virgil H Goode Highway, Rocky Mount, Virginia, 24151, approximately 2.7 miles east-southeast of City of Boones Mill, in Franklin County, Virginia (See Appendix 15.1 - Site Vicinity Map). The *subject property* is located on the northeastern portion of an approximately 87.9-acre parcel identified as Parcel 0360019700 by the Franklin County, VA County Commissioner of Revenue. The elevation of the site is 1,283-ft AMSL. The proposed 12-ft wide access easement will proceed southeasterly from a portion of Virgil H Goode Highway for approximately 630-ft before reaching the proposed approximately 60-ft x 60-ft tower compound lease area.

The aforementioned parcel containing the *subject property* and parent property is reportedly owned by the County of Franklin.

3.2 Site and Vicinity General Characteristics

At the time of inspection, the parent property was primarily occupied by agricultural land. The parent property is located in a portion of Franklin County where the majority of the surrounding area is occupied by agricultural and low-density residential land.

3.3 Current Use of Subject Property

At the time of the site inspection, the *subject property* was primarily occupied by agricultural land and an existing unimproved two-track road.

3.4 Site Improvements

At the time of inspection, the proposed tower compound lease area was primarily occupied by agricultural land. The proposed access and utility easement was primarily occupied by an unimproved two-track road.

An existing approximately 4-ft tall 5-wire electric fence was observed bisecting the western portion of *subject property* running generally northeast to southwest.

An approximately 25-ft x 25-ft fenced area containing a cemetery was observed approximately 275-ft west-southwest of the proposed tower centerline.

A wooden utility pole and utility pedestal were located approximately 630-ft northwest of the proposed tower centerline.

An improved 4-lane highway identified as Highway 220 was observed approximately 140-ft northeast of the proposed tower centerline.

No additional structural improvements were observed within or in the immediate vicinity of the *subject property*. The electric service provider and telecommunications service provider to the parent property are unknown.

3.5 Current Uses of Adjoining Properties

At the time of inspection, the adjoining properties to the northeast and southeast primarily occupied by agricultural land. The adjoining properties to the north, west, and south were primarily occupied by low-density residential land and undeveloped forested land.

4.0 USER PROVIDED INFORMATION

4.1 Title Records

No Title Commitment or Supporting Documents were provided to TEP by the Client.

4.2 Environmental Liens or Activity and Use Limitations

No indications of environmental liens or activity and use limitations were noted for the parent property in the due diligence performed by TEP. However, this report was prepared without the aid of a Title Commitment.

4.3 Specialized Knowledge

No evidence of past or present recognized environmental conditions were noted for the *subject property* during the due diligence performed by TEP personnel. There is no specialized knowledge of any known contamination associated with the *subject property*. However, this report was prepared without the aid of a Title Commitment.

4.4 Commonly Known or Reasonably Ascertainable Information

No evidence of past or present recognized environmental conditions were noted for the *subject property* during the due diligence performed by TEP personnel. TEP has reviewed information that is generally considered commonly known and reasonable ascertainable regarding the land use history of the *subject property* in an attempt to gain a general knowledge of the land use history of the property. This allows TEP personnel to inform the user of any known or potential environmental conditions that may adversely affect the *subject property*. However, this report was prepared without the aid of a Title Commitment.

4.5 Valuation Reduction for Environmental Issues

No evidence of significant valuation reduction was noted for the parent property during the due diligence performed by TEP personnel. However, this report was prepared without the aid of a Title Commitment.

4.6 Owner, Property Manager, and Occupant Information

County of Franklin – Parent Property Owner
Michael Burnette – County of Franklin – Economic Development Office

4.7 Reason for Performing Phase I Environmental Site Assessment

TEP has completed the Phase I Environmental Site Assessment on the *subject property* for the commercial land transaction associated with the placement of a proposed telecommunications tower facility. The intent and purpose of this Environmental Site Assessment report (E1527-13) is to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability with respect to petroleum products and the contaminants within the scope of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Environmental Site Assessment (ESA) constitutes an “all appropriate inquiry” into the previous ownership and use of the *subject property* consistent with good commercial or customary practices. However, this report was prepared without the aid of a Title Commitment.

4.8 Other

No other user provided information was provided to TEP by the Client.

5.0 ENVIRONMENTAL RECORDS REVIEW

5.1 Standard Environmental Record Sources

Published environmental regulatory records reviewed included:

- National Priorities List (NPL) updated June 22, 2018. The National Priorities List is an inventory of facilities or locations with confirmed environmental contamination. The sites are often referred to as “Superfund” sites and are regulated by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA).
- Superfund Enterprise Management System (SEMS) updated June 22, 2018 tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA’s Superfund Program across the US. This list was formerly known as CERCLIS and was renamed to SEMS by the EPA in 2015.
- Resource Conservation and Recovery Act Information (RCRA CORRACTS) updated June 22, 2018. The RCRA list reports those facilities or locations that are handling, storing, or transporting hazardous substances or waste. Due to the activities relating to the handling of hazardous substances or wastes, these sites possess the potential for environmental contamination. CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.
- RCRA Conditionally Exempt Small Quantity Generators (RCRA-CESQG) list updated June 22, 2018. This database contains selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA. CESQG’s generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.
- Leaking Underground Storage Tank Incident Reports (LUST) list updated July 7, 2018. This list is an inventory of reported leaking underground storage tank incidents, and is managed by the Virginia Department of Environmental Quality (DEQ) – West Central Regional Office.
- Leaking Petroleum Storage Tanks (LTANKS) list updated July 6, 2018. This list included releases of petroleum from underground storage tanks and aboveground storage tanks, and is maintained by the Virginia DEQ.

- Underground Storage Tanks (UST) list updated June 6, 2018. This list is a database of registered underground petroleum storage tanks, and is maintained by Virginia DEQ. This list indicates the presence of underground storage tanks and the potential for petroleum releases. Inclusion on this list does not indicate an existing problem or related release incident.
- Aboveground Storage Tanks (AST) list updated June 6, 2018. This list is a database of registered aboveground petroleum storage tanks, and is maintained by Virginia DEQ. This list indicates the presence of underground storage tanks and the potential for petroleum releases. Inclusion on this list does not indicate an existing problem or related release incident.

The aforementioned lists were reviewed using at least the ASTM E1527-13 standard search radius summarized in the table below (Appendix 15.5 - EDR Report):

<u>List</u>	<u>Search Distance</u>
Federal NPL Site list No listings found	1.0 mile
Federal SEMS list No listings found	0.5 miles
Federal RCRA CORRACTS Facilities list No listings found	1.0 mile
Federal RCRA-CESQG list No listing found	0.25 miles
State LUST list No listings found	0.5 miles
State LTANKS list 1 listings found	0.5 miles
State Registered UST list No listings found	0.25 miles
State Registered AST list No listing found	0.25 miles

The EDR Radius Report identified one (1) site of potential environmental concern within the standard ASTM search radius of the *subject property*. This site was listed in FINDS, LTANKS, UST, Financial Assurance, US AIRS, and ECHO databases.

One (1) site, identified as Boones Mill Elementary School, is reportedly located at 265 Taylors Road, approximately 2,500-ft north-northwest of the *subject property*. The listing is associated with one (1) 2,000-gallon diesel UST and one (1) 1,000-gallon gasoline UST. Upon further review, the 1,000-gallon gasoline tank was reportedly installed on May 1, 1974 and removed on June 15, 1993. The 2,000-gallon diesel tank was reportedly installed on August 1, 1993. The existing tank is reportedly equipped with an automatic shutoff and an overfill ball float valve. There have been no reports of releases and the site is topologically and hydrologically separated from the *subject property*.

Additionally, eleven (11) records associated with eight (8) orphan sites were identified as potentially being located in the vicinity of the *subject property* and are listed in the LUST and LTANKS databases.

One (1) record associated with one (1) site, identified as Jerry's Steakhouse was found to be located approximately 4.1-miles southeast of the *subject property*. One (1) record associated with one (1) site, identified as Hop-In #2, (Former Getty Mart), GWM was found to be approximately 4,250-feet southeast of the *subject property* at 21230 Virgil Goode Hwy. One (1) record associated with one (1) site, identified as VDOT – Rocky Mount Area Headquarters was found to be approximately 5.7-miles south-southeast of the *subject property* at 239 State Street, Rocky Mount, VA. Three (3) records associated with two (2) sites, identified as Kurt's Truck Stop (Former) and Erma Myrtle Martin Residence, were found to be located approximately 16.5-miles south of the *subject property*. Two (2) records associated with one (1) site was identified as Former Union 76, along Highway 220 in Boones Mill, VA. The nearest gas station facility toward Boones Mill located along Highway 220 S is approximately 2.65-miles northwest of the *subject property*. Two (2) records associated with two (2) sites, were identified as Lucky #2 and Bypass Exxon, along Highway 220 in Rocky Mount, VA. The nearest gas station facility toward Rocky Mount is located along Highway 220 approximately 1.60-miles east-southeast of the *subject property*.

One (1) record associated with one (1) site, identified as Solar Greenhouse, was unable to be located.

Based on review of the sites identified by EDR and practices set forth in Tier 1 of E2600 10, no potential petroleum hydrocarbon chemicals of concern (COCs) were identified within 0.1-miles of the *subject property*, and no non-petroleum hydrocarbon COCs were identified within 0.33-miles of the *subject property*. Therefore, it is the opinion of TEP that there does not appear to be the potential for vapor encroachment condition (VEC) onto the *subject property*.

5.2 Additional Environmental Record Sources

No additional environmental records were reviewed as part of this assessment.

5.3 Physical Setting Sources

5.3.1 Topography

According to the USGS Geologic Map of Virginia, the *subject property* is located within the Northern Inner Piedmont (45e) ecoregion of the Piedmont Region of Virginia. The Northern Inner Piedmont ecoregion is described as a dissected upland composed of hills, irregular plains, and isolated ridges and mountains, characteristically underlain by highly deformed and deeply weathered Cambrian and Proterozoic feldspathic gneiss, schist, and melange. Where streams occur, they tend to have low to moderate gradients with silt, sand, gravel, and rubble bottoms with occasional exposed bedrock. The Piedmont Region is described as a transitional area with moderately dissected irregular plains and some hills, between the mostly mountainous ecoregions of the Appalachians and the relatively flat coastal plain. According to the USGS 7.5-minute Boones Mill, VA Topographic Quadrangle the *subject property's* elevation is approximately 1,280-ft AMSL.

See Appendix 15.4 for a portion of the USGS 7.5-minute Boones Mill, VA Topographic Quadrangle.

5.3.2 Geology

The *subject property* borders the Lovingston massif (Yma) and Alligator Back Formation (CZmy). The Lovingston massif is described as augen and flaser gneiss, light- to medium-gray, mesoscopically layered, medium- to coarse-grained muscovite-biotite gneiss that contains polycrystalline quartz-feldspar augen with an anastomosing mica-rich, schistose matrix that formed in the Middle Proterozoic Period. The Alligator Back Formation is described as laminated mica gneiss with medium- to light-gray, fine- to medium-grained, mica schist, quartzite, calc-gneiss, graphitic phyllite, marble, blue-quartz-granule and metaconglomerate beds that formed in the Late Proterozoic (Iapetan) Period.

5.3.3 Soils

According to the USDA Web Soil Survey of Franklin County, VA, the soil of the proposed access easement is identified as Clifford fine sandy loam, 8 to 15% slopes, and the soil of the proposed tower compound area is primarily Clifford-Hickoryknob complex, 25 to 45% slopes. Clifford fine sandy loam is described as well drained, occurring on shoulders, backslopes, and sideslopes, and is formed from residuum weathered from mica schist residuum weathered from granite and gneiss. A typical profile of Clifford fine sandy loam consists of fine sandy loam from 0 to 7-inches, clay from 7 to 54-inches, clay loam from 54 to 62-inches, and fine sandy loam from 62 to 82-inches. Clifford-Hickoryknob complex is described as well drained, occurring on backslopes and sideslopes, and is formed from residuum from mica schist, mica gneiss, and metagrawacke. A typical profile of Clifford-Hickoryknob consists of fine sandy loam

from 0 to 7-inches, clay loam from 7 to 62-inches, and fine sandy loam from 62 to 82-inches.

5.3.4 Hydrogeology

The landscape of the *subject property* is sloping generally to the southeast. Local groundwater in the geologic environment is derived from incoming precipitation that infiltrates the ground and presumably follows existing topography before draining off-site to the southeast. Depth to seasonal high-water table is anticipated to be greater than 80-inches below land surface (BLS). Depth to restrictive feature is anticipated to be greater than 80-inches BLS.

5.3.5 Hydrology

The general topography of the parent property is primarily sloping to the southeast and southwest. Drainage from the parent property in the vicinity of the *subject property* is anticipated to flow offsite to the southeast into an intermittent tributary of Teels Creek which flows southeasterly into the Little Creek which flows southerly into the Blackwater River which flows easterly into Smith Mountain Lake which flows into the Roanoke River which flows generally southeasterly into the Atlantic Ocean. The *subject property* is located within the South Atlantic-Gulf Region, Chowan-Roanoke Sub-Region, Roanoke Basin, and the Upper Roanoke Watershed.

5.4 Historical Use Information on the Subject Property

According to reasonably ascertainable historical information reviewed by TEP personnel, the *subject property* appears to have been occupied by undeveloped and agricultural land from at least 1890 to the present day. Highway 220 is apparent on the northern border of the *subject property* from at least 1960 to present day.

5.4.1 Historical Aerial Photographs

Historical aerial photographs were provided to TEP by Environmental Data Resources, Inc. for the years of 1947, 1949, 1960, 1962, 1977, 1982, 1988, 1995, 2000, 2006, 2009, 2012, and 2016.

Dates	Subject Property/Parent Property	Adjoining Properties
1947	Parent property and <i>subject property</i> : Undeveloped/agricultural land	Surrounding area: undeveloped, forested, and agricultural land. North: An improved road is apparent running generally northwest to southeast Northwest: An improved road is apparent

		running generally southwest to northeast East: Apparent powerline easement running generally north to south
1949	No apparent changes	East: additional cleared agricultural land and several buildings apparent North: low-density residential buildings apparent
1960	Parent property: Forested land cleared for agriculture <i>Subject property: no apparent changes</i>	North: rerouting of Highway 220 apparent Southeast: Forested land cleared for agriculture Northwest: rerouting of improved road West, south: low-density residential structures apparent
1962	No apparent changes	No apparent changes
1977	No apparent changes	North: large building apparent West: additional low-density residential structures
1982	No apparent changes	No apparent changes
1988	No apparent changes	No apparent changes
1995	No apparent changes	No apparent changes
2005	No apparent changes	No apparent changes
2009	No apparent changes	No apparent changes
2012	No apparent changes	No apparent changes
2016	No apparent changes	No apparent changes

No readily apparent environmental concerns were observed in any of the historical aerial photographs reviewed by TEP.

Appendix 15.4 contains a copy of the Historical Aerial Photographs.

5.4.2 Sanborn Fire Insurance Maps

No Sanborn fire insurance map coverage was available for the parent property, adjoining properties, or the *subject property*.

5.4.3 Historical Topographic Maps

Historical topographic maps were obtained from EDR for the years of 1890, 1891, 1951, 1963, 1978, and 2013.

Dates	<i>Subject Property/Parent Property</i>	Adjoining Properties
1890	Undeveloped area on hilltop with improved roads adjacent to the northeast and northwest	Undeveloped land with the exception of improved roads south and southeast. Mill Creek is located to the southwest flowing generally northwest to southeast and several creeks crisscross the area.
1891	No changes apparent	No changes apparent
1951	A powerline is apparent running through the eastern side of the parent property	North, south: low-density residential East: low-density residential and improved road apparent Southwest: low-density residential, Mountain View Cemetery apparent Southeast: cemetery (presently Germantown Brick Cemetery) apparent West: no changes apparent
1963	Route 220 realigned and now adjacent to the northern border of <i>subject property</i>	East-southeast: Cemetery apparent (Franklin Memorial Park) West: low-density residential structures apparent, cemetery (presently Teel Cemetery) apparent South: former Mills Creek now named Teels Creek
1978	No apparent changes	West, south, east: additional low-density residential structures apparent South: unimproved roads apparent North: What is now Boones Mill Elementary school and one additional large building apparent

2013	No apparent changes	Southwest: improved roads apparent where previously unimproved
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Appendix 15.4 contains a copy of the Historical Topographic Maps.

5.5 Historical Use Information on Adjoining Properties

According to reasonably ascertainable historical information reviewed by TEP personnel the historical land uses of the adjoining properties appear similar to the land uses observed at the time of inspection. The eastern adjoining properties appear to have been occupied by undeveloped and agricultural land from at least 1890 to 1951, and low-density residential from 1951 to the present day. The adjoining properties to the west appear to have been occupied by undeveloped land from at least 1890 to 1949, and low-density residential from 1949 to the present day. The adjoining properties to the east appear to have been occupied by undeveloped and agricultural land from at least 1890 to 1949, and agricultural and low-density residential from 1949 to the present day. The adjoining properties to the south appear to have been occupied by undeveloped and agricultural land from at least 1890 to 1960, and by agricultural land and low-density residential form 1960 to the present day.

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

The site inspection was conducted to visually and physically observe the *subject property* and any structures on the site. The inspection included observations of the *subject property* and portion of the parent property located up gradient of the proposed communications tower site. The current land uses of the adjoining properties in the vicinity of the parent property were also observed. The area surrounding the *subject property* was inspected to the extent not obstructed by bodies of water, adjacent buildings, paved surfaces, asphalt or other obstacles. No soil, surface water, or groundwater has been collected for laboratory analysis during this investigation. No indication of the release or threatened release of petroleum products or hazardous substances was observed at the time of inspection.

6.2 General Site Setting

TEP personnel performed the site reconnaissance on July 11, 2018. At the time of the site inspection, the *subject property* was occupied by agricultural land and an unimproved two-track road.

6.3 Exterior Observations

At the time of inspection, the proposed tower compound lease area was primarily occupied by agricultural land. The proposed access and utility easement was occupied by

agricultural land and by an unimproved disturbed earthen access road.

A wooden utility pole and utility pedestal were located approximately 630-ft northwest of the proposed tower centerline.

An approximately 4-ft tall electric fence running generally northeast to southwest was observed in the western portion of the proposed tower lease area.

An improved 4-lane highway identified as Highway 220 was observed approximately 140-ft northeast of the proposed tower centerline.

No additional structural improvements were observed within or in the immediate vicinity of the *subject property*. No staining, stressed vegetation, or odor indicative of the release of petroleum products or hazardous materials was observed within the vicinity of the *subject property*.

6.4 Interior Observations

No interior observations were conducted as part of this assessment.

7.0 INTERVIEWS

7.1 Property Owner

Owner – County of Franklin – See Section 7.2

7.2 Site Manager

Michael Burnette – Economic Development - County of Franklin (7/23/2018)

TEP personnel contacted Michael Burnett with the County of Franklin Department of Economic Development via phone on July 23, 2018. Mr. Burnett completed the Landowner Questionnaire on July 23, 2018. Mr. Burnett responded that he is not aware of any environmental cleanups, liens, land use limitations, contamination, or environmental litigation related to the parent property. See Appendix 15.6 for a copy of the completed Landowner Questionnaire.

7.3 Occupants

No site occupants were interviewed as part of this assessment. The *subject property* was unoccupied.

7.4 Local Government Officials

Franklin County Environmental Health Department (7/26/2018)

TEP personnel submitted a FOI request for records of onsite septic systems, wells, or other environmental concerns with the Franklin County Environmental Health Department via email on July 26, 2018, July 30, 2018, and August 2, 2018. No response has been received to date, however, if TEP receives any pertinent information after the issuance of this report, the information will be forwarded to the Client immediately.

Boones Mill Volunteer Fire Department (7/23/2018)

TEP personnel contacted Boones Mill Volunteer Fire Department via phone on July 23, 2018 and August 2, 2018 to inquire if their office was aware of any records of fires, hazardous material spills, and/or any other environmental concerns associated with the parent property. The department advised that they would call back with information. No response has been received to date, however, if TEP receives any pertinent information after the issuance of this report, the information will be forwarded to the Client immediately.

7.5 Others

No others were interviewed as part of this assessment.

8.0 FINDINGS

According to reasonably ascertainable historical information reviewed by TEP personnel, the *subject property* appears to have been occupied by undeveloped and agricultural land from at least 1890 to the present day.

The EDR Radius Map Report identified one (1) site of potential environmental concern within the standard ASTM radius of the *subject property*. Upon further review, the site is located generally to the northwest of and down-gradient from the *subject property*. Additionally, eleven (11) records associated with eight (8) orphan sites were identified by EDR as potentially being located in the vicinity of the *subject property*. All but one (1) orphan record, identified as Solar Greenhouse, were found to be located outside of the standard ASTM search radius. Due to the *subject property* being located at a higher topography than the surrounding area, all of the records identified by EDR are topographically separated from the *subject property*, and do not appear to have the potential to affect the soil and/or groundwater of the *subject property*.

Based on review of the sites identified by EDR and practices set forth in Tier 1 of E2600 10, no potential petroleum hydrocarbon chemicals of concern (COCs) were identified within 0.1-miles of the *subject property*, and no non-petroleum hydrocarbon COCs were identified within 0.33-miles of the *subject property*. Therefore, it is the opinion of TEP that there does not appear to be the potential for vapor encroachment condition (VEC) onto the *subject property*.

TEP personnel performed the site reconnaissance on July 11, 2018. At the time of inspection, no indication of the release or threatened release of petroleum products or hazardous substances was observed in the vicinity of the *subject property*.

9.0 OPINION

It is the opinion of TEP that this assessment has revealed no evidence of recognized environmental conditions in connection with the *subject property* that warrant further investigation.

10.0 CONCLUSION

Within the bounds of the described study area, we (TEP personnel) have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice of the *subject property*. Any exceptions to, or deletions from, this practice are described in Section 2.4, 2.5, & 11.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the *subject property*. **No further environmental investigation is warranted or recommended for the proposed Blue Ridge Towers, Inc./Verizon Wireless (Cellco Partnership d/b/a Verizon Wireless) site identified as Industrial Park (VA024) at this time.**

11.0 DEVIATIONS

This Phase I ESA is limited to the proposed access & utility easement and tower compound lease area associated with the proposed **Blue Ridge Towers, Inc./Verizon Wireless (Cellco Partnership d/b/a Verizon Wireless)** site identified as **Industrial Park (VA024)**.

12.0 ADDITIONAL SERVICES

This Phase I ESA was completed based on the ASTM E1527-13 Standard. Any additional services contracted for between the Client and TEP are beyond the scope of this practice.

13.0 REFERENCES

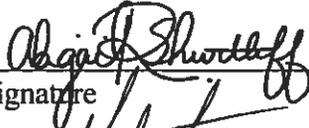
ASTM E1527-13
ASTM E2600-10
Environmental Data Resources, Inc.
USDA Web Soil Survey of Franklin County, VA
USGS 7.5-Minute Boones Mill, VA Topographic Quadrangle

USGS Online Geologic Map of Virginia
USGS Physiographic Regions Online Map

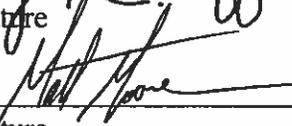
14.0 SIGNATURES & QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

Mr. Ryan Malek, Ms. Abigail Shurtleff, and Mr. Matt Moore conducted the research and site inspection necessary to complete this Phase I Environmental Site Assessment.

Abigail R. Shurtleff
Environmental Scientist I

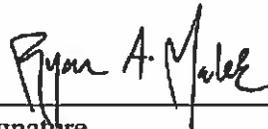

Signature

R. Matt Moore
Environmental Scientist I


Signature

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in 312.10 of 40 CFR 312 and I have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the *subject property*. I have developed and performed the all appropriate inquiries in conformance with the standards of this practices set forth in 40 CFR Part 312.

Ryan A. Malek
Environmental Division Manager


Signature

In the event that the monopole needs to be removed from the property, Blue Ridge Towers Inc, as the tower owner would absorb the cost of the removal within the company, since the removal and installation of towers is a normal operation within the business. However, if a cost estimate had to be attached to the cost of the job, it would likely cost around \$75000 -\$80000 to remove the monopole.

The backhaul network (T-1) telephone/fiber will be ordered and provided by Mid-Atlantic Fiber. Verizon Wireless will order/provide T-1 directly to the site through their internal process.

In the event that the tower should fall due to structural damage, the monopole is designed by manufacturer and industry standards to collapse straight down, and it would fall entirely within the fenced 60' by 60' area. Since the leased parcel is over 87 acres of agricultural farm and, the tower would not fall onto any neighboring property. Therefore, if the monopole did fail structurally and collapse, it would only fall within the leased area leased by Blue Ridge Towers.

Landscape Plan for Franklin County Monopole

Since the tower will be located in an uphill area in higher elevation, and the proposed compound area of 60' x 60' is already cleared, The height of the security fencing to enclose the 60' x 60' compound will be an eight (8') feet tall chain link fence securely installed to prevent trespassing.



Photosimulation of Monopole and WCF (Wireless Cellular Facility)



The proposed location for the monopole and WCF is located entirely within the 87.94 acres parcel (County tax map 0360019700) leased by Blue Ridge Towers. The nearest distance to the property line is about 1,361 feet from the tower to its West side, 1130 feet from the North, 1150 feet from the South, and 194 feet from the East side of the tower.

The closest residential dwelling is .27 miles from the existing gravel road and near Virgil H Goode Hwy on property owned by the Don E Sink & Peggy H. No other residential dwellings are nearby. There are no setback concerns that will affect any residential houses from the proposed tower location

Delineation of set backs

Plat of Lease Exhibit & Topographic Survey for

Blue Ridge Towers, Inc.

Showing property situated on the west side of US Highway 230 (Virgil H. Goode Highway) lying in the Boone Magisterial District of Franklin County, Virginia. County Tax Map 87 - 84 being a portion of the property COUNTY OF FRANKLIN acquired from SOUTHWAY FARM, LLC by deed dated 15 December 2015 of record in Deed Book 1071 pg. 26. Also see for further reference Plat Book 1071 pgs. 29 - 50. All of the aforementioned documents are recorded in the Office of the Clerk of the Circuit Court of Franklin County located in Rocky Mount, Virginia.

April 24, 2018
 Revised May 31, 2018
 Revised June 26, 2018
 Revised July 9, 2018

Scale: 1" = 60'



Prepared By
Fork Mountain Surveying and Mapping, Inc.
 PO Box 163
 951 Fork Mountain Road SW
 Meadows of Dan, Virginia 24120
 Office 276-952-6118
 Fax 276-952-6111
 E-Mail info@forkmountain.com

VA Coord System of 1983
 South Zone



STIPPLED AREA 200.17'
 (the line to property corners and
 high Low Red Flood)

"PARENT TRACT"
 County of Franklin
 County Tax Map 87 - 84
 Deed Book 1071 pg. 26

Proposed Cell Tower
 Lease Area
 8,888 Area
 (Iron Rods Set at all Corners)

Final Location of Proposed 12' Access
 Easement and 20' turnaround is to be
 determined after final construction

Center of Proposed 12' Access Easement

LINE	BEARING	HORIZ DIST
L1	S84°02'16"W	56.15'
L2	S22°28'32"W	85.60'
L3	S22°28'12"W	170.79'
L4	S7°02'21"W	48.49'
L5	S87°11'11"E	97.85'
L6	S2°28'32"E	132.14'
L7	S0°49'31"E	68.12'
L8	S10°46'10"E	48.20'
L9	S2°41'02"E	42.89'
L10	S89°10'11"W	32.10'
L11	S87°07'52"W	44.75'
L12	S40°48'32"W	37.29'
L13	S10°44'28"W	81.00'

Underground utilities shown hereon are as marked by
 Western VA Water & Sewer personnel depending on
 Miles Utility Ticket No. A300100322-00A

SITE NAME: INDUSTRIAL PARK
 SITE NUMBER: VA914
 ADDRESS: Rt. 230 Virgil H. Goode Hwy
 PROPOSED TOWER LOCATION:
 37°45.62' N
 79°52.11' W
 Ground Elevation 1285'

CONTOUR INTERVALS:
 Major = 5'
 Minor = 1'

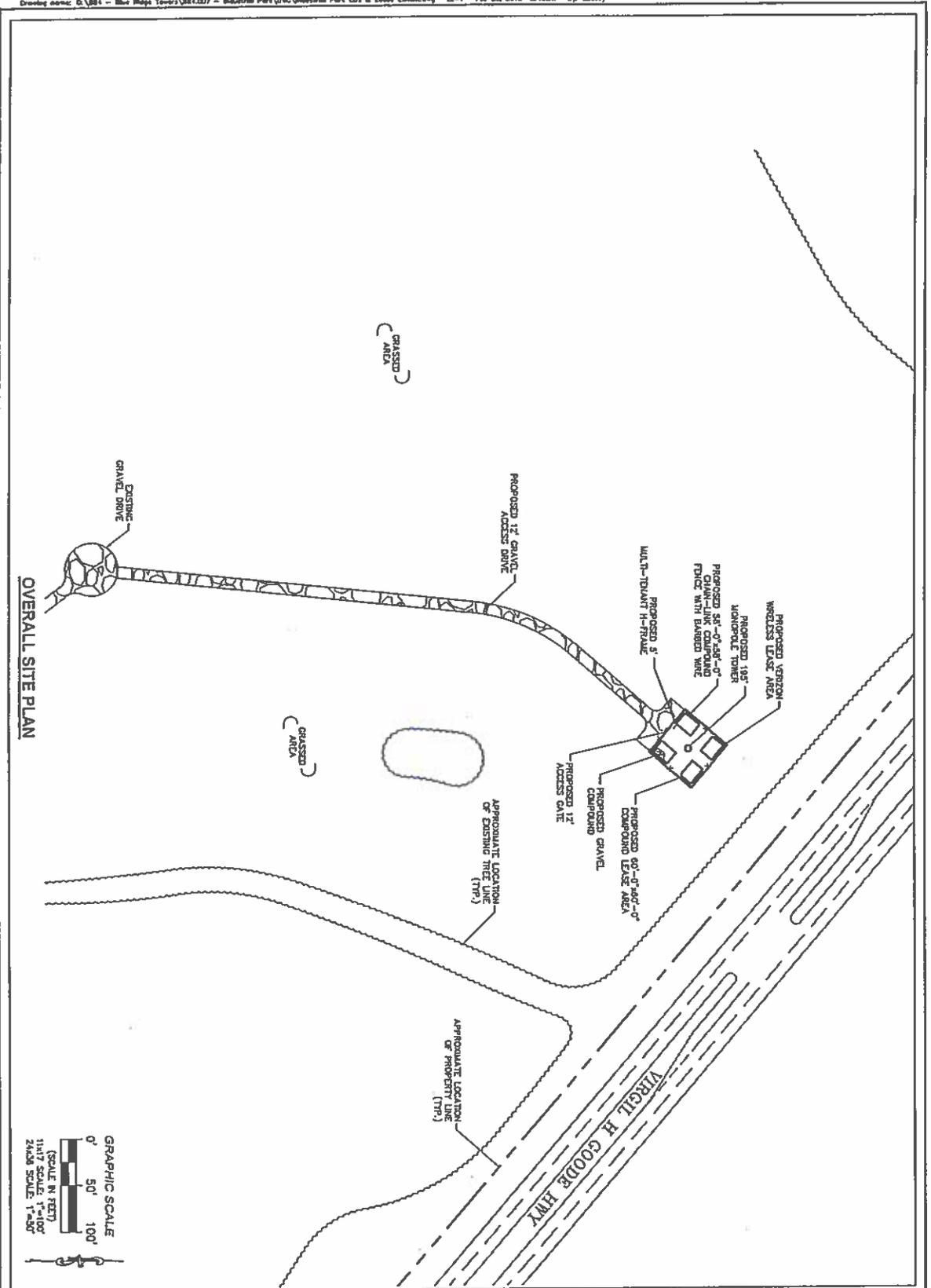
FLOOD NOTE:

Subject property falls within Zone X (areas outside 0.2% annual chance) as determined by F.E.M.A. This opinion is based upon an examination of Community Flood Insurance Policy Act (FIRM) 8155 C, effective December 14, 2009 and has not been field verified.

All Iron Rods Set are 1/2" Rubber of Red Cap Inscribed "FORK MT SURVEY"
VICINITY MAP NOT TO SCALE



I hereby certify that this "Plat of Topographic Survey for Blue Ridge Towers, Inc." was completed under the direct and responsible charge of
John D. Lewis, from an actual ground survey made under my supervision; that the summary and/or original data was obtained on **February 12, March 18, May 20 & June 21, 2018**; and that this plat, map or digital geospatial data including metadata meets minimum accuracy standards unless otherwise noted.



OVERALL SITE PLAN

GRAPHIC SCALE
 0' 50' 100'
 (SCALE IN FEET)
 1" = 50'
 1/4" = 12.5'
 3/16" = 18.75'

PROJECT: VA-024
 INDUSTRIAL PARK
 DEVELOPER: BLUE RIDGE TOWERS
 1125 1ST STREET
 ROANOKE, VA 24018
 (757) 940-985-7000

ISSUED FOR: REVIEW
 PROJECT MANAGER: DWB
 DRAWING BY: DWB
 DATE: 02/05/2018
 TITLE: OVERALL SITE PLAN

REVISIONS: _____ DATE: _____

SEAL: _____
 LEASE EXHIBIT

PROJECT: VA-024
 INDUSTRIAL PARK
 DEVELOPER: BLUE RIDGE TOWERS
 1125 1ST STREET
 ROANOKE, VA 24018
 (757) 940-985-7000

ISSUED FOR: REVIEW
 PROJECT MANAGER: DWB
 DRAWING BY: DWB
 DATE: 02/05/2018
 TITLE: OVERALL SITE PLAN

REVISIONS: _____ DATE: _____

SEAL: _____
 LEASE EXHIBIT

PROJECT: VA-024
 INDUSTRIAL PARK
 DEVELOPER: BLUE RIDGE TOWERS
 1125 1ST STREET
 ROANOKE, VA 24018
 (757) 940-985-7000

ISSUED FOR: REVIEW
 PROJECT MANAGER: DWB
 DRAWING BY: DWB
 DATE: 02/05/2018
 TITLE: OVERALL SITE PLAN

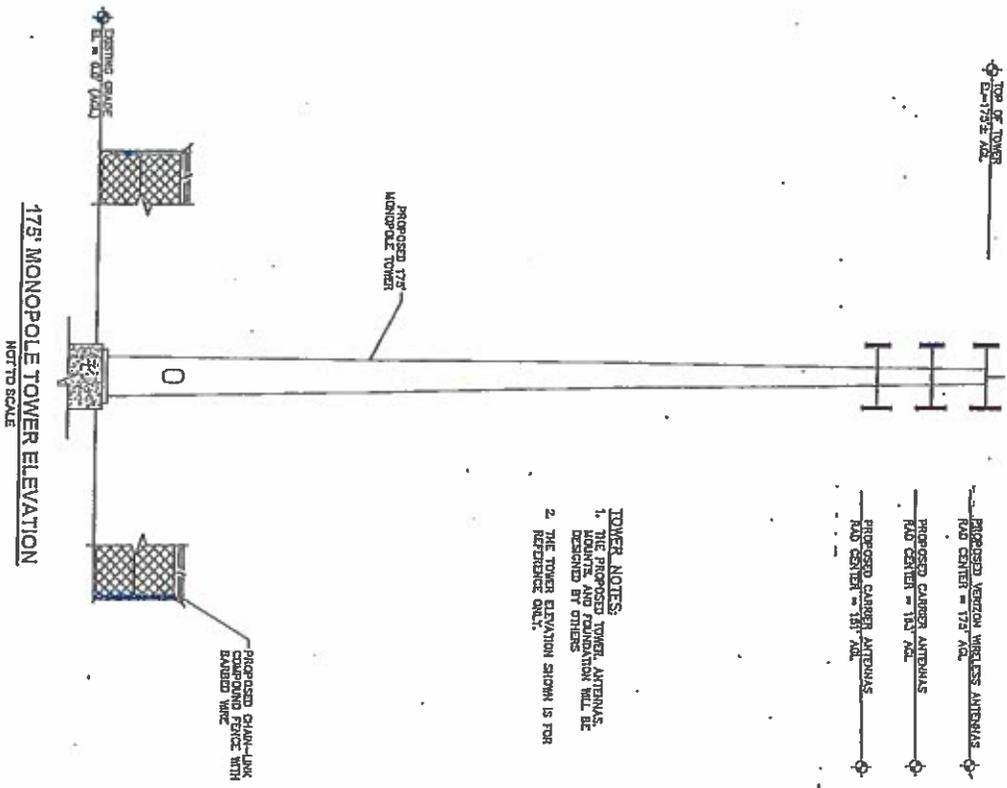
REVISIONS: _____ DATE: _____

SEAL: _____
 LEASE EXHIBIT

BLUE RIDGE TOWERS

FORESITE group
 ForeSite Group, Inc.
 2400 Duffield Court
 Suite 100
 Pasadena, California, CA 91107
 626.792.8412
 11770 Mainline
 Pasadena, California, CA 91107
 626.792.8412

NOTES:
 TOWER AND FOUNDATION DESIGN BY OTHERS.
 FORESITE GROUP HAS CONDUCTED VISUAL
 CHECKS AND VERIFIED THE QUALITY OF THE TOWER
 OR FOUNDATION. CONTRACTOR SHALL
 COORDINATE WITH AND COMPLY WITH THE
 PROVISIONS OF THE STRUCTURAL ANALYSIS PRIOR
 TO INSTALLATION OF EQUIPMENT ON TOWER.



- TOWER NOTES:**
1. THE PROPOSED TOWER, ANTENNAS, MOUNTS, AND FOUNDATION WILL BE DESCRIBED BY OTHERS
 2. THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.

FORESITE group
 Forest Site Group, Inc.
 11750 Lee Road
 Fredericksburg, VA 22402
 Phone: 540-241-1100
 Fax: 540-241-1101
 www.foresitegroup.com



SCALE: _____

LEASE EXHIBIT

PROJECT: **VA-024 INDUSTRIAL PARK**

LOCATED AT:
 1715 YONKER II COURT DR.
 SUITE 1000, VA 22411

DEVELOPER:
 BLUE RIDGE TOWERS
 1130 1ST STREET
 MANASSAS, VA 20108
 (703) 540-505-7080

REVISIONS: _____ DATE: _____

DESIGN FOR: _____

PROJECT MANAGER: _____ DATE: _____

DRAWING BY: _____ DATE: 02/03/2010

TITLE: **TOWER ELEVATION**

SHEET NUMBER: **3 OF 3**

JOB/FILE NUMBER: **884.007**



LEASE EXHIBIT

PROJECT: **VA-024 INDUSTRIAL PARK**

LOCATED AT:
2143 VANCE II COURT INT.
ROCKY MOUNT, VA 24151

DEVELOPER:
SCOTT RIDER TOWERS
1200 MARKET STREET
ROANOKE, VA 24016
(703) 540-8908-7080

ISSUED FOR:	REVIEW:
PROJECT MANAGER:	DWG:
DRAWING BY:	DWG:
DATE:	02/09/2015
TITLE:	

SITE PLAN
SHEET NUMBER: 2 OF 3
JOB/FILE NUMBER: 884.007

