

KNOXVILLE/KNOX COUNTY METROPOLITAN PLANNING COMMISSION WIRELESS COMMUNICATION FACILITY REPORT

► FILE #: 5-A-18-WCF AGENDA ITEM #: 40

AGENDA DATE: 5/10/2018

► APPLICANT: VERIZON WIRELESS TENNESSEE PARTNERSHIP

OWNER(S): Christus Victor Lutheran Church

► PROPOSED USE: Wireless communication facility: New tower

COMPLETE APPLICATION

DATE:

3/26/2018

TAX ID NUMBER: 69 P C 013 <u>View map on KGIS</u>

JURISDICTION: City Council District 5

STREET ADDRESS: 4110 Central Avenue Pike

► LOCATION: Northeast side of Central Avenue Pike, southeast of Bookwalter Dr.

► APPX. SIZE OF TRACT: 5.03 acres

SECTOR PLAN: North City

ACCESSIBILITY: Access is via Central Avenue Pike, a minor arterial street with a 22'

pavement width within a 60' right-of-way.

ZONING:
R-2 (General Residential)

► EXISTING LAND USE: Church

SURROUNDING LAND North: R-1A (Low Density Residential) - Railroad and residences

USE AND ZONING: South: C-3 (General Commercial) & C-4 (Highway and Arterial

Commercial) - Mixed businesses

East: C-6 (General Commercial Park) - Business

West: R-2 (General Residential) - Residences

NEIGHBORHOOD CONTEXT: The site is located in an area along Central Avenue Pike and I-75 that

includes a mix of residential, institutional and commercial uses.

STAFF RECOMMENDATION:

POSTPONE until the June 14, 2018 MPC meeting as requested by the applicant.

The applicant has requested a postponement to allow time to address comments from staff.

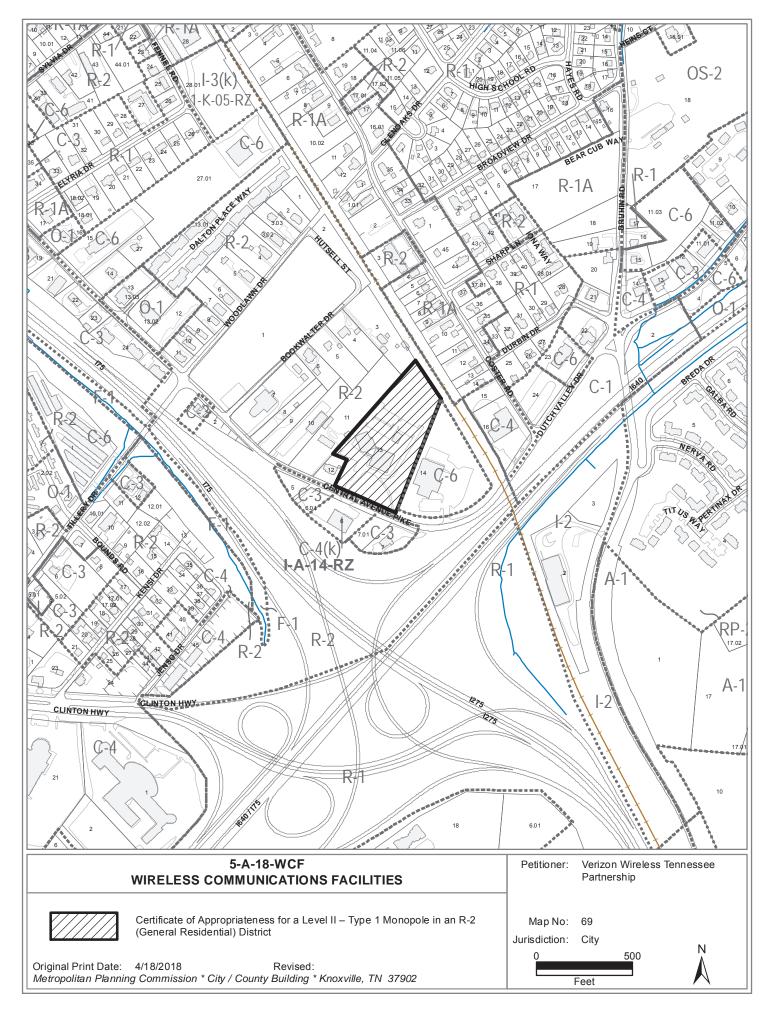
COMMENTS:

This is a request for a new, 110 foot monopole that will support two wireless communication antenna arrays. The tower is proposed to be located at the rear of the Christus Victor Lutheran Church located on Central Avenue Pike. The proposed tower will be located within a 2500 square foot fenced enclosure. The tower will be setback 121 feet from the closest property line. The tower will be owned by Verizon Wireless and they will be the primary occupant on the tower. The tower is classified as a Type 1 monopole which is designed for the antenna arrays to be located within the tower.

AGENDA ITEM #: 40 FILE #: 5-A-18-WCF 5/2/2018 01:13 PM TOM BRECHKO PAGE #: 40-1

MPC's approval or denial of this request is final, unless the action is appealed to the Knoxville City Council. The date of the Knoxville City Council hearing will depend on when the appeal application is filed. Appellants have 15 days to appeal an MPC decision in the City.

AGENDA ITEM #: 40 FILE #: 5-A-18-WCF 5/2/2018 01:13 PM TOM BRECHKO PAGE #: 40-2



PROIECT SUMMARY

SITE NAME:

BOOKWALTER UNITED

SITE ADDRESS:

CENTRAL AVENUE PIKE KNOXVILLE, TN 37912

JURISDICTION:

CITY OF KNOXVILLE KNOX COUNTY

COUNTY: ZONING:

PROPERTY OWNER:

CHURCH CHRISTUS VICTOR LUTHERN INC. 4110 CENTER AVENUE PIKE KNOXVILLE, TN 37912

TOWER OWNER:

VERIZON WIRELESS TENNESSEE PARTNERSHIP 575 HICKORY HILLS BLVD, WHITES CREEK, TN 37189

PROJECT NUMBER:

20141145655

316354

<u>1A</u>

SITE LOCATION CODE:

(615) 714-7114

KEVIN CALDWELL

SITE COORDINATES:

LATITUDE: LONGITUDE: ELEVATION: 36° 00' 13.78" N 83° 57' 28.46" W 1.019.1 UNMANNED

(NAD 83)

OCCUPANCY:

RAWIAND CONSTRUCTION TYPE:

TELEPHONE COMPANY POWER COMPANY:

CONTACT: TBD

KNOXVILLE FIRE DEPT. PHONE: (865) 595-4480

KNOXVILLE UTILITIES BOARD CONTACT: CUSTOMER SERVICE PHONE: (865) 524-2911

FIRE DEPARTMENT: POLICE DEPARTMENT

KNOX COUNTY SHERIFF PHONE; (865) 671-5989

E911 ADDRESSING:

METRO PLANNING COMMISSION CONTACT: DONNA HILL PHONE: (865) 215-2507

verizon

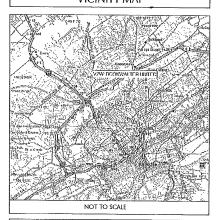
TENNESSEE PARTNERSHIP (HERE IN AFTER REFERRED TO AS "LESSEE")

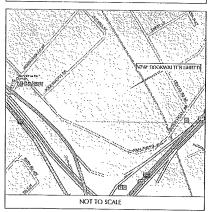
575 HICKORY HILLS BLVD. WHITES CREEK, TN 37189 ATTN: KEVIN CALDWELL (615)-714-7114

SITE NAME: BOOKWALTER UNITED **CENTRAL AVENUE PIKE** KNOXVILLE, TN 37912

VICINITY MAP

LOCATION MAP





DRIVING DIRECTIONS

FROM VERIZON MTSO, NASHVILLE, TN:

GET ON 140 E/1-55 S (0.7 MI), KEEP LEFT AT THE FORK TO CONTINUE ON 1-40 E, FOLLOW SIGNS FOR 1-24 E/KNOXVILLE/CHATTANOOCA (1.0 MI), KEEP RIGHT TO STAY ON 1-40 E (2.1 MI), KEEP LEFT AT THE FORK TO STAY ON 1-40 E, FOLLOW SIGNS FOR INTERSTATE 40 DEFORMANCE IT AT THE FORT TO STAY ON 1-40 E, 2.1 MI), KEEP LEFT AT THE FORT TO STAY ON 1-40 E, 2.1 MI, KEEP LEFT AT THE FORT TO STAY ON 1-40 E, 2.1 MI, KEEP LEFT AT THE FORT TO STAY ON 1-40 E, 2.1 MI, KEEP LEFT AT THE FORT TO STAY ON 1-40 E, 2.1 MI, LEFT AT THE RIGHT ON 1-40 E, 2.1 MI, LEFT AT THE FORT TO STAY ON 1-40 E, 2.1 MI, LEFT AT THE FORT TO S

SHEET SCALE FACTOR:

PLOT SIZE: 11'x17": "TO SCALE"
24'x36": 2X SCALE AS NOTED



1 (800) 351-1111 www.lenn811.com CONTRACTOR TO CALL TENNESSEE DNE-CALL SYSTEMS AT LEAST (2) WORKING DAYS PRIOR TO DIGGING

SHEET INDEX

TITLE SHEET ▲ 03-02-18 GENERAL NOTES OVERALL SITE LAYOUT PLAN C1A SITE GRADING PLAN

C2 SITE LAYOUT PLAN C2A EQUIPMENT LAYOUT PLAN

NO. DESCRIPTION

C3 SITE DETAILS C3A SITE DETAILS C3B

SITE DETAILS SITE DETAILS A 03-02-18

C4A SITE DETAILS

C5 SITE DETAILS C5A SITE DETAILS

FENCE DETAILS C7 SIGNAGE DETAILS

LANDSCAPE PLAN LANDSCAPE DETAILS

OVERALL ELECTRICAL SITE PLAN

ELECTRICAL SITE PLAN E2 SITE GROUNDING PLAN

EQUIPMENT GROUNDING PLAN ELECTRICAL SPECIFICATIONS

ELECTRICAL DETAILS E5 **ELECTRICAL DETAILS**

E6 ELECTRICAL DETAILS EGA ELECTRICAL DETAILS EGB ELECTRICAL DETAILS

E7 SINGLE LINE DIAGRAM EB GROUNDING SINGLE LINE

STATE COUNTY MAP

5-A-18-WCF

TENNESSEE



LESSEE



HIXSON, TN 37343 PH: 423-843-9500 FAX: 423-843-9500

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED. A&E PROJECT #

20141145655 ALP CHECKED BY

REVISIONS A 02/20/18 ALP TOWER CHANGE OUT 11/13/17 BES COMPOUND CHANGE A 02/14/17 BNS CONSTRUCTION ISSUE A 01/13/17 BES PRELIMINARY REVIEW
NO. DATE BY DESCRIPTION



20141145655

BOOKWALTER UNITED

SITE NUMBER 316354

SITE ADDRESS CENTRAL AVENUE PIKE KNOXVILLE, TN 37912

RAWLAND

TITLE SHEET

DRAWING NO

REVISION

MPC May 10, 2018

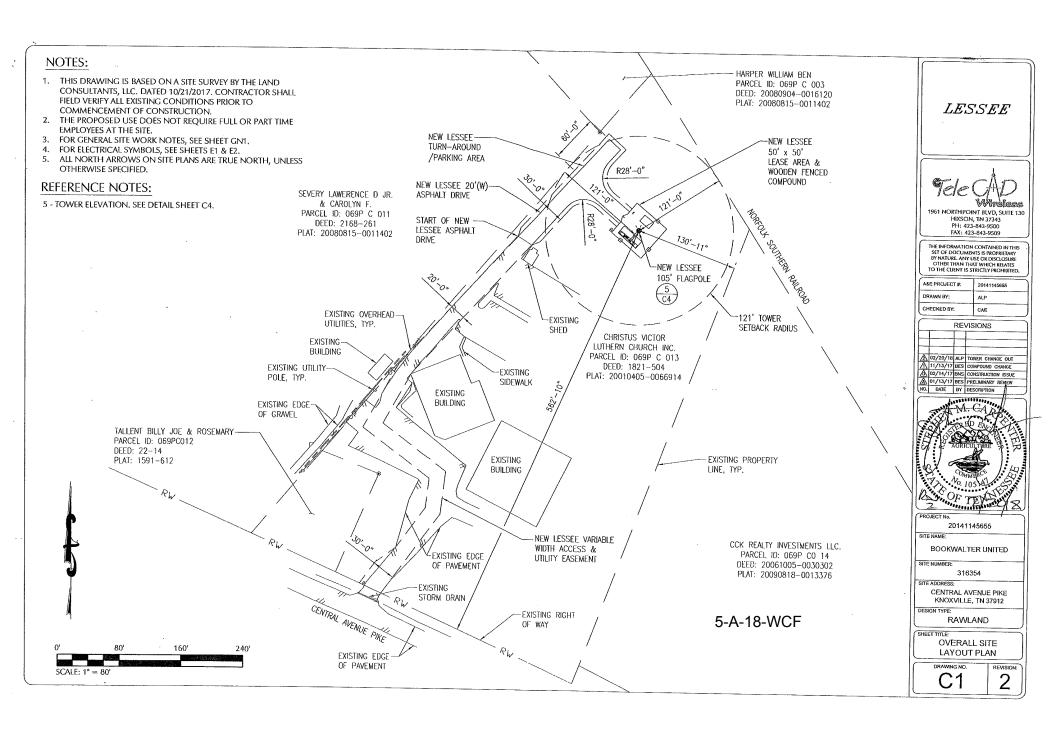
STRUCTURAL REVIEW

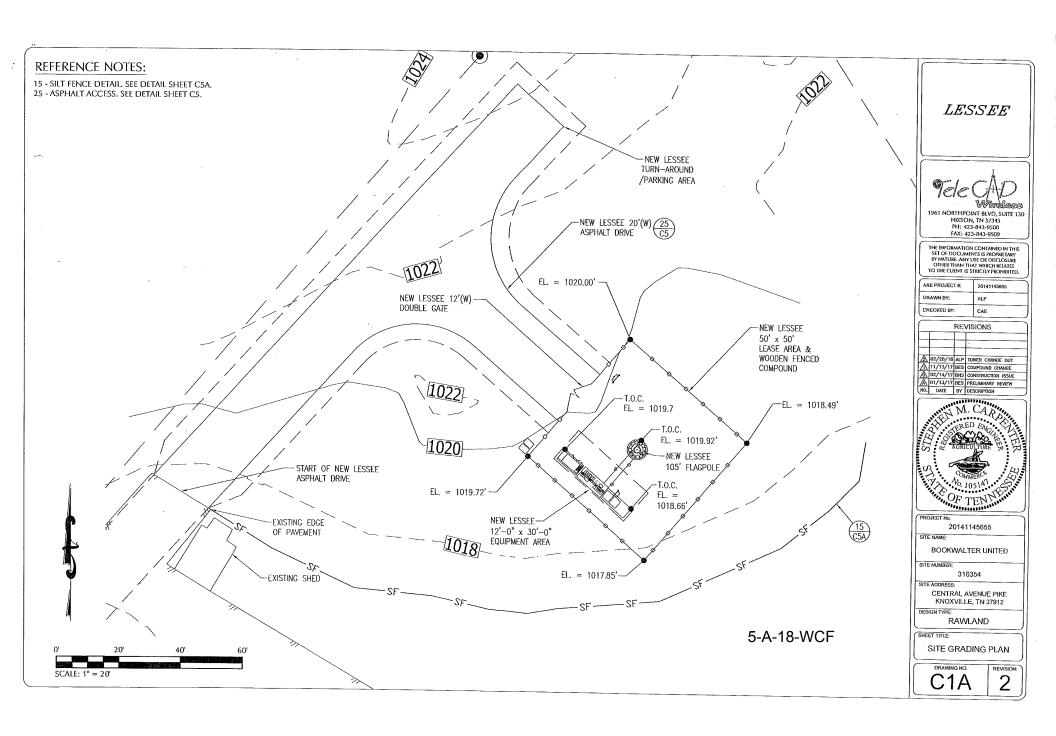
CONTRACTOR SHALL ATTAIN AND VERIFY STRUCTURAL EVALUATION REPORT OF EXISTING TOWER FOR EXACT PLACEMENT OF ANTENNAS AND COAX

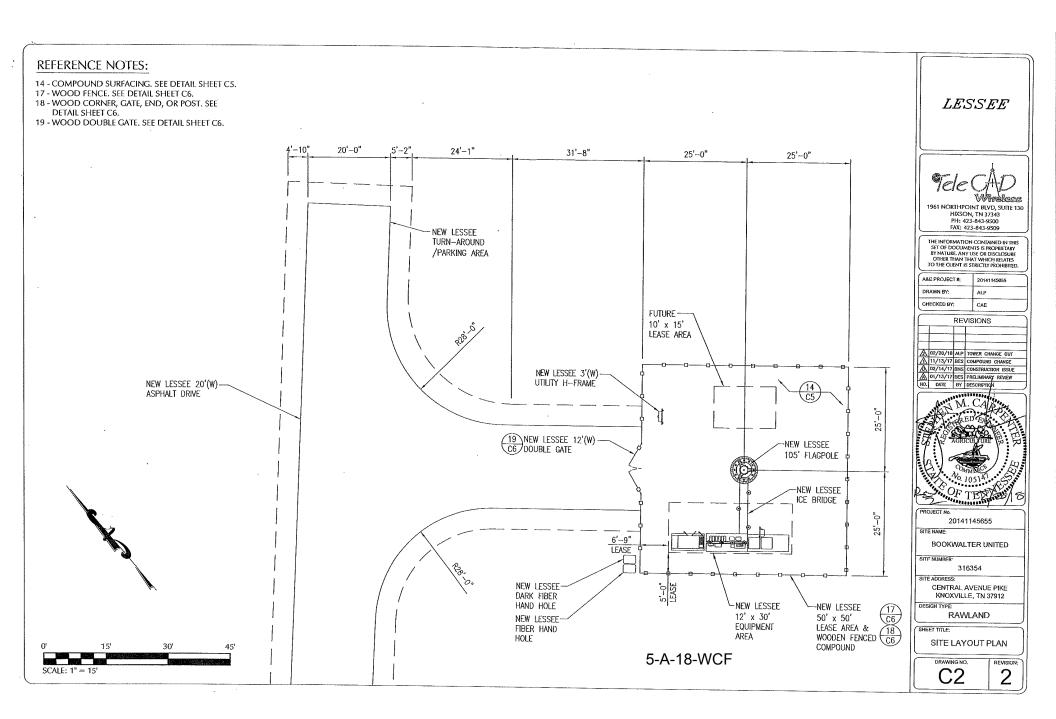
CABLES, CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE STRUCTURAL EVALUATION REPORT AND NOTIFY VERIZON'S CONSTRUCTION

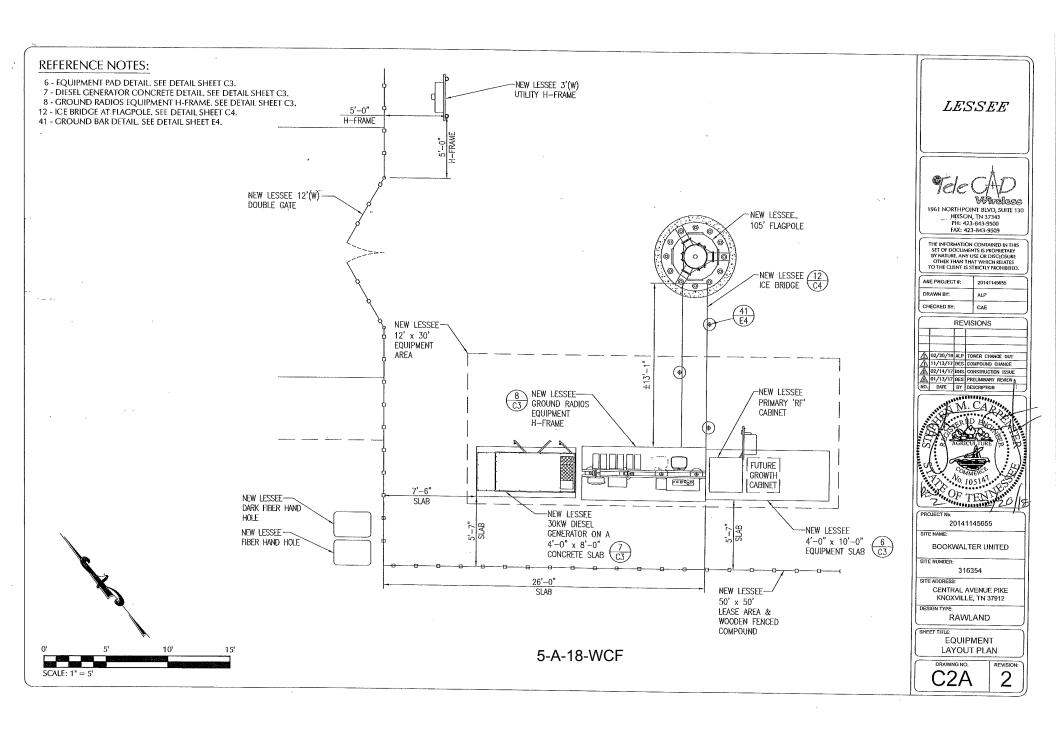
MÖDIFICATION, IF REQUIRED, SHALL BE DONE PRIOR TO THE INSTALLATION OF ANTENNAS.

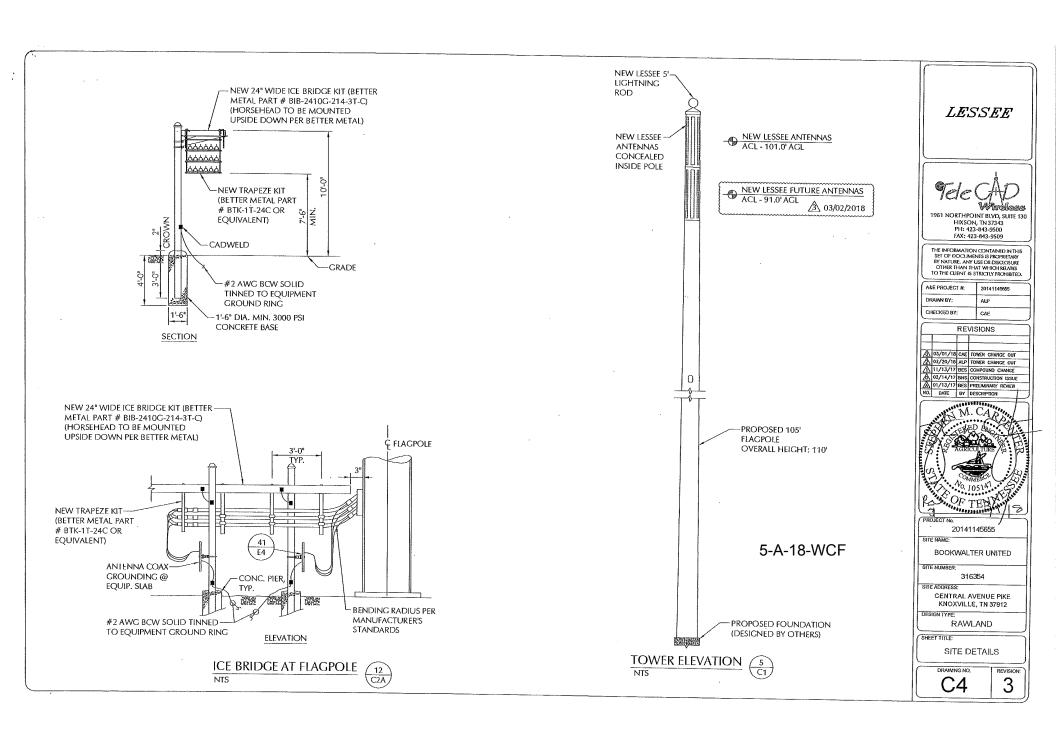
MANAGER IN THE CASE OF ANY DISCREPANCIES. ANY STRUCTURAL

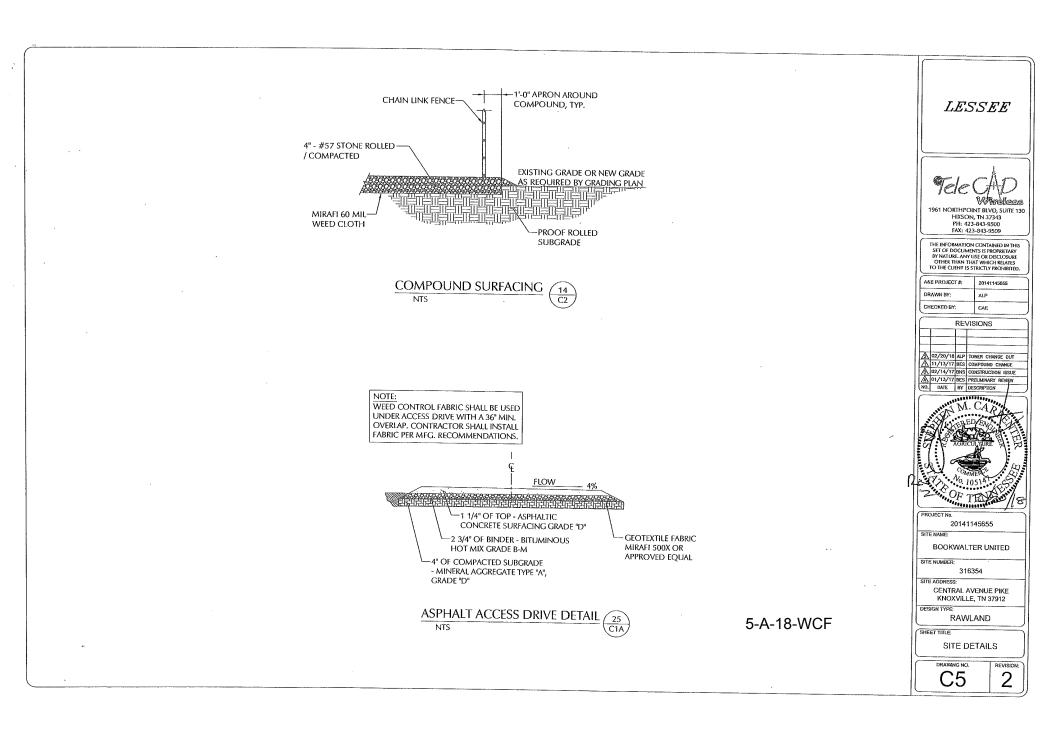


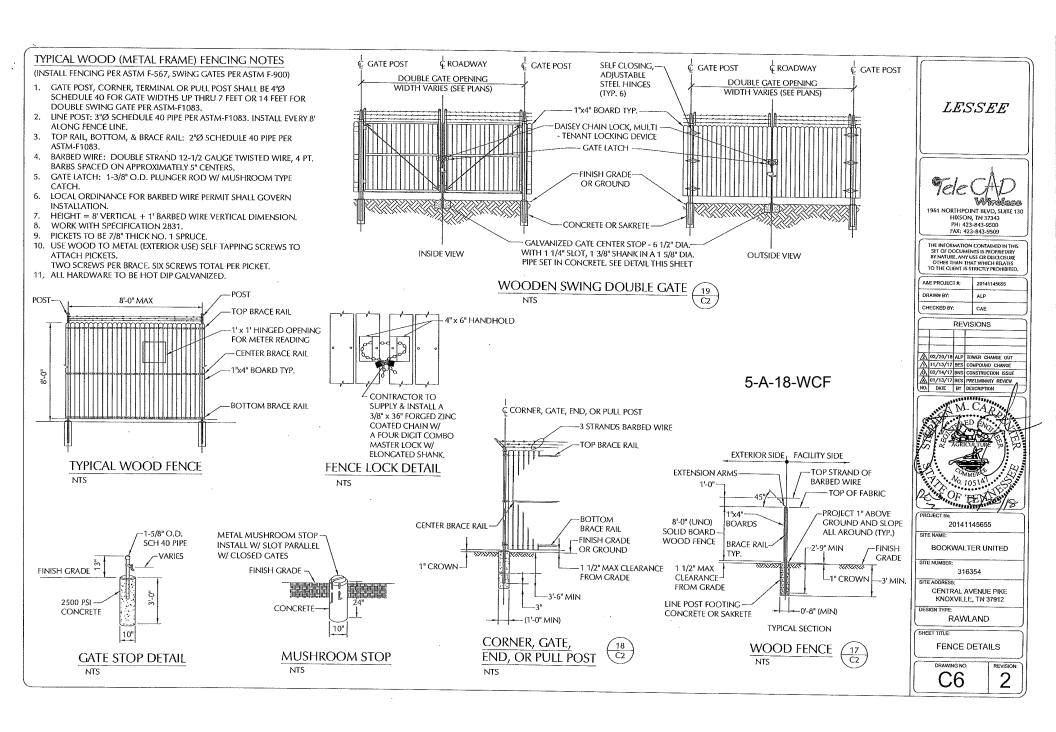


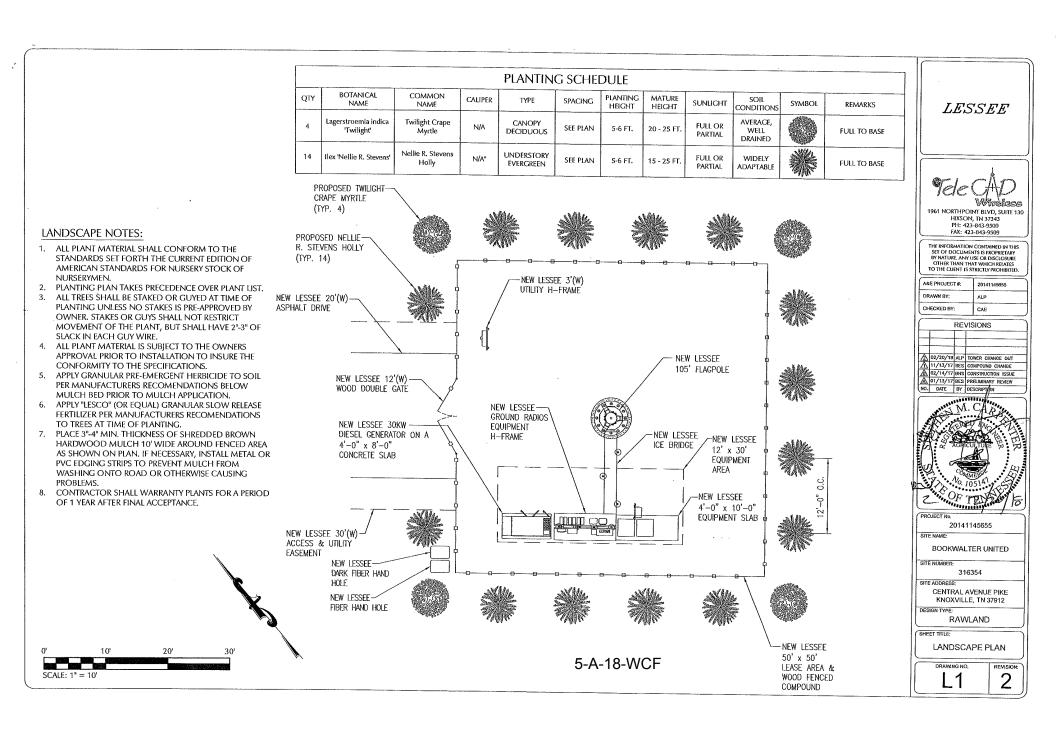












BAKER DONELSON BEARMAN, CALDWELL & BERKOWITZ, PC

BAKER DONELSON CENTER, SUITE 800 211 COMMERCE STREET NASHVILLE, TENNESSEE 37201

MAILING ADDRESS: P.O. BOX 190613 NASHVILLE, TENNESSEE 37219

PHONE: 615.726,5600

AX: 615.726.0464

www.bakerdonelson.com

JOEL K. HARGIS, ATTORNEY Direct Dial: 615.726.7391 Direct Fax: 615.744.7391 E-Mail Address: jhargis@bakerdonelson.com

5-A-18-WCF

March 16, 2018

Mr. Tom Brechko Knoxville / Knox County Planning Commission 400 Main Street City County Building, Suite 403 Knoxville, TN 37902

Re:

Proposed Wireless Telecommunications Facility located at

4110 Central Avenue Pike

Dear Mr. Brechko:

Enclosed are submittal materials associated with Verizon Wireless' Special Use Permit Application for the above-referenced location.

Verizon Wireless requests to construct a 110 foot tall Type I Wireless Communication Tower Facility in the R-2 zoning district as a Level II review from the Metropolitan Planning Commission of Knoxville / Knox County.

On behalf of our client, Verizon Wireless, we respectfully request approval of our special use permit. Enclosed are the following items which constitute our application:

- 1. 10 Copies of proposed site plans on 11 x 17.
- 2. 10 Copies of each exhibit
- 3. Certification of Zoning Compliance
- 4. Check in the amount of \$3000.

4832-0868-8735 v1 3000001-140107 03/16/2018

MPC May 10, 2018

March 16, 2018 Page 2

Please confirm that the materials enclosed with this letter are complete and that you do not need any further information from Verizon Wireless in order for the Metropolitan Planning Commission to consider Verizon's tower request at its meeting on May 10, 2018. If additional information is needed, please contact me and I will deliver it to you as soon as possible. Thank you very much for your kind assistance regarding this matter.

Respectfully submitted,

BAKER, DONELSON, BEARMAN, CALDWELL & BERKOWITZ, PC

Jall K. Hanjis

Joel K. (Joey) Hargis, Attorney

STATEMENT OF COMPLIANCE WITH THE KNOXVILLE ZONING ORDINANCE

Verizon Wireless is required to obtain a Use on Review from the City of Knoxville's Planning Commission for Verizon Wireless' 110 foot tall type 1 monopole pursuant to Section 20 of Article V of the City of Knoxville's Zoning Ordinance. The proposed tower is located on property owned by Church Christus Victor Lutheran, Inc. The proposed tower is located at 4110 Central Avenue Pike, which is zoned R-2. Verizon Wireless complies with the standards set forth in the Ordinance with the exception of item 3(c) and respectfully requests that the proposed tower be approved.

- I. <u>Section 20 Wireless communication facilities (WCF)</u>. Verizon Wireless complies with the Wireless Communications Facilities (WCF) set forth in Section 20 with the exception of item D3(c) of the Ordinance as follows:
 - 3. New tower development standards.
 - a. Tower type. All new towers shall be either type 1 or type 2 monopole design.
 - 1) Type 1 monopole is sometimes referred to as a slick stick or unipole. It is a type of monopole design where all antenna and related equipment are housed inside the pole structure rather than attached to the exterior of the pole in an effort to conceal the visual impact of the antennas.
 - The proposed 110 foot tall tower will be a type 1 monopole as defined by the zoning ordinance.
 - b. Height. The maximum height of new tower is regulated by the zoming districts in section E table 1.
 - The maximum allowable height in a R-2 zone is 125 feet. The tower proposed by Verizon Wireless is 110 feet in height
 - c. Separation. All towers shall have a minimum separation of one thousand five hundred (1,500) feet. This separation standard shall not apply to sites where applicants are proposing a new tower to replace an existing tower. The old tower shall be removed within sixty (60) days of the new tower becoming operational.
 - There is a single tenant tower located approximately 600 feet to the west of Verizon's proposed tower. This tower is designed only to accommodate one carrier, US Cellular. The tower is of insufficient height and does not have the structural capacity to allow Verizon Wireless to collocate upon this tower. Exhibit A Shows a photograph of the existing tower.
 - All other towers are more than 1,500 feet from the location that Verizon proposes as shown in Exhibits B & C. Exhibit C shows an existing Crown Castle site nearby which appears to be at capacity.

- d. Collocation. A new WCF tower proposed for construction must accommodate a minimum of two (2) antenna arrays if the tower is less than one hundred twentyfive (125) feet in height, and at least three (3) antenna arrays if the tower is one hundred twenty-five feet in height or greater. The base station area shall contain adequate space for ground equipment associated with the proposed number of antenna arrays.
 - Verizon Wireless will provide space for a total of two carriers as required by the zoning ordinance. As shown on pages C2 and C4 of the civil plans submitted with this application, Verizon is showing space for an additional collocators on both the pole and in the equipment area.
- e. Driveway access. Shall be paved meeting applicable city standards (land development manual). The driveway shall follow the existing topography as much as possible and limit views of the base station from the public street.
 - The access drive has been designed to comply with the applicable city standards including requirements of the Knoxville Fire Marshal's Office for turn around. The proposed driveway will be asphalt.
- f. Landscaping and screening.
 - 1) Towers on ridges. Not applicable
 - 2) Base Station
 - i. Landscaping. All landscaping shall be installed and maintained in accordance with this subsection.
 - 1. The outside perimeter of the base station shall be planted with at least a twelve-foot wide planting area that contains six-foot high (at the time of planting) columnar or pyramidal evergreens that will form a solid screen at maturity. A break in the planting area not to exceed twelve (12) feet in width shall be allowed for access.
 - Verizon Wireless will fully comply with this requirement
 - 2. Existing vegetation shall be used when feasible to camouflage the base station.
 - Verizon Wireless will be retaining existing vegetation to the north and east of the existing site to help screen the site from view of adjoining properties.
 - ii. Screening
 - 1. All base stations shall be fenced.
 - 2. In residential zones, scenic highway, and historic areas base stations may include wood or masonry fencing. Fencing shall be designed to blend in with existing surroundings, using architecturally compatible construction and colors.

• Verizon Wireless is proposing to erect an eight (8) foot tall wooden fence around the entire perimeter of the equipment area to screen the equipment from view. The fence details are shown on page C6 of the civil drawings submitted with this application.

g. Equipment shelter.

- 1) An equipment shelter used in connection with a WCF shall be limited to four hundred (400) square feet of gross floor area per provider and twelve (12) feet in height.
- 2) In residential zones, all equipment shelters should be designed to blend in with existing surroundings, using architecturally compatible construction and colors.
- Verizon Wireless will be utilizing outdoor equipment cabinets as shown on page C2A. This provision is not applicable to this request.

h. Setbacks

- 1) Towers
 - i. All towers shall be set back from the property line of all properties zoned A-1, R-1, R-1A, R-1E, R-2, R-3, RP-1, RP-2, RP-3, R-4, TC-1, or TND-1 (not including right-of-way), all properties with an H-1 or an NC-1 overlay, and any residentially zoned property within the Town of Farragut or the county, a minimum distance equal to one hundred ten (110) percent of the height of the tower.
- Verizon Wireless is required to provide a 121 foot setback from all adjoining property lines. Verizon Wireless fully complies with the setback requirements of the zoning ordinance as shown on page C1 of the civil drawings submitted.
- 2) Base station. Perimeter fencing shall meet the setback requirements of the base zoning district, but not less than twenty-five (25) feet.
- Verizon Wireless complies with this requirement.
- i. Lighting. For new wireless communication support towers, only such lighting as is necessary to satisfy FAA requirements is permitted. Dual (low intensity) lighting shall be encouraged. All FAA-required lighting shall use lights that are designed to minimize downward illumination. Security lighting for the equipment shelters or cabinets and other on-the-ground ancillary equipment is permitted as long as full cutoff fixtures are used.
 - Verizon Wireless is not proposing to place lighting on the tower. The FCC and FAA do not require lighting for towers less than 200 feet in height.

- j. Visual impact. All WCFs in residential zones, within two thousand (2,000) feet of a scenic highway or Tennessee parkway, and historic districts shall be sited and designed to minimize adverse visual impacts on surrounding properties and the traveling public to the greatest extent reasonably possible, consistent with the proper functioning of the WCF.
 - The visual impact of the proposed tower will be greatly minimized due to the slick stick design of the proposed pole. An elevation of the proposed pole is shown on page C4 of the civil drawings submitted with this application.
 - Additionally, a photo simulation was performed showing the proposed tower superimposed from views around the area. These photo simulations have been included with this submittal as Exhibit D. These photos show that the visual impact is minimal.
- k. Stealth design/technology. Stealth design is encouraged in zoning districts. Stealth and conceahment techniques must be appropriate given the proposed location, design, visual environment, and nearby uses, structures, and natural features (including, but not limited to clock towers, flag poles, or faux-tree). Stealth design shall be designed and constructed to substantially conform to surrounding building designs or natural settings, so as to be visually unobtrusive. Stealth design that relies on screening wireless communications facilities in order to reduce visual impact must screen all substantial portions of the facility from view. Stealth and concealment techniques do not include incorporating faux-tree designs of a kind that are not native to East Tennessee and out of scale with natural vegetation.
 - The proposed flag pole type construction of the proposed WCF greatly assists in the proposed tower in being visually unobtrusive. No flag is proposed to be placed on the proposed tower. Views of the photo simulations submitted with this request help to demonstrate the design and its visual unobtrusiveness.

Section 20 (I) Application Submittal Requirements.

- 1. General Requirements
 - a. For public hearing review, a pre-application meeting with MPC staff is required.
 - A pre-application conference was held on January 11, 2018 between Joey Hargis and Tom Brechko.
 - b. Letter of commitment. The applicant shall provide a written letter of commitment from at least one cellular provider to locate on an existing or proposed facility.

- Verizon Wireless is the applicant for this request and the owner of the proposed tower. Verizon Wireless will be the initial tenant of the tower after its construction.
- c. Site plans. Complete and accurate plans and drawings to scale, prepared, signed and sealed by a Tennessee-licensed engineer, land surveyor and/or architect, including:
 - 1) Plan views and elevations showing tower, base station, fencing, landscaping, associated ground equipment, driveway design, lease area, and access and utility easements. All items shall include required dimensions;
 - 2) Identification of distances to the lot lines for adjoining properties and right-of-way from proposed tower and base station.
 - Site plans conforming to the requirements listed above are included with this submittal.
- d. Statement of purpose. A clear and complete written statement of purpose shall minimally include: 1) A description of the technical objective to be achieved, whether it be to close a gap or address a deficiency in coverage, capacity, frequency and/or change in technology; 2) A scaled map that identifies the proposed site location and the targeted service area. The map will be used to determine potential collocation and preferred siting opportunities.
 - Although Tennessee law, (T.C.A. §13-24-305(2), prohibits a government from creating a regulation that would "Require the applicant to provide any sort of justification for radio frequency need", Verizon Wireless will voluntarily submit a report from a radio frequency engineer.
 - The site's objective is a capacity offload for two nearby Verizon sites known as Sharps Ridge Sector 2 and Pleasant Ridge Sector 1. A scaled map and information is included within this submittal as Exhibit E.
- 2. Collocation consent. A written statement, signed by a person with the legal authority to bind the applicant and the project owner, which indicates whether the applicant is willing to allow other transmission equipment owned by others to collocate with the proposed WCF whenever technically and economically feasible and aesthetically desirable.
 - Verizon Wireless is submitting a collocation consent letter from Jean Musa which states that Verizon Wireless agrees to allow additional carriers to collocation on the proposed tower. This letter is shown as Exhibit F
- 3. Not applicable to this request.
- 4. Additional requirements for new tower.
 - a. Collocation and alternative sites analysis.

- i. Collocation requirement for all new towers. All applications for a new tower shall demonstrate that existing towers within one (1) mile and other structures and buildings within a half mile are not feasible for collocation, consistent with subsection D.1.
 - 1. a) For all new towers the applicant shall provide a description of why each tower within one (1) mile of the proposed WCF is not feasible for collocation.
- Included with this submission as Exhibit G is a list of all towers within 1 mile of the proposed site along with a description of why each tower is not feasible for collocation.
 - 2. Alternative site analysis. All towers in a residential zone, within two thousand (2,000) feet of a scenic highway or Tennessee parkway, historic district or within 250 feet of a residential zone, a) The tower location preferences located in subsection C.3 must be addressed in a clear and complete written alternative site analysis that shows at least five (5) higher ranked preferred locations, alternative sites considered to the extent that such higher tanked alternative sites are located within one (1) mile of the proposed site. A factually detailed and meaningful comparative analysis between each alternative candidate and the proposed site that explains the substantive reasons why the applicant rejected the alternative candidate. An applicant may reject an alternative tower site for one (1) or more of the following reasons: (1) Inability to obtain authorization by the owner; (2) Failure to meet the service coverage objectives of the applicant; (3) Failure to meet other engineering requirements for such things as location, height and size; (4) Zoning constraints, such as the inability to meet setbacks; (5) Physical or environmental constraints, such as unstable soils or wetlands; and/or (6) Being a more intrusive location despite the higher priority in this chapter.

A complete alternative sites analysis provided under this subsection may include less than five (5) alternative sites so long as the applicant provides a factually detailed written rationale for why it could not identify at least five (5) potentially available, higher ranked, alternative sites.

- Included with this submission as Exhibit H is a detailed alternative site analysis as required by the ordinance.
- b. Visual analysis. For public hearing reviews, the applicant shall provide color photo simulations of the proposed tower. The photo simulations shall include before and after images of the site, taken from at least four (4) different perspectives and a map identifying the locations that the photos were taken.

- Verizon Wireless has submitted the photo simulations as required as shown in Exhibit D.
- c. Design justification. A clear and complete written analysis that explains how the proposed design complies with the applicable design standards under this chapter to the maximum extent feasible. A complete design justification must identify all applicable design standards under this chapter and provide a factually detailed reason why the proposed design either complies or cannot feasibly comply.
- Verizon Wireless has submitted drawings in full compliance of the standards set forth in Section 20 of the Knoxville Zoning Ordinance.
- The proposed tower is a Type 1 Monopole with a slick stick design which meets all required setbacks and landscaping requirements of the code. The proposed height of the tower is 110 feet which is 15 feet less than the maximum allowable height in the R-1 zoming district. Finally, the proposed tower is a stealth design with all antennae designed to be completely hidden from view within the proposed tower.

Respectfully submitted on March 20, 2018.

Joel K. Hargis, Esq.

Baker, Donelson, Bearman, Caldwell & Berkowitz,

PC

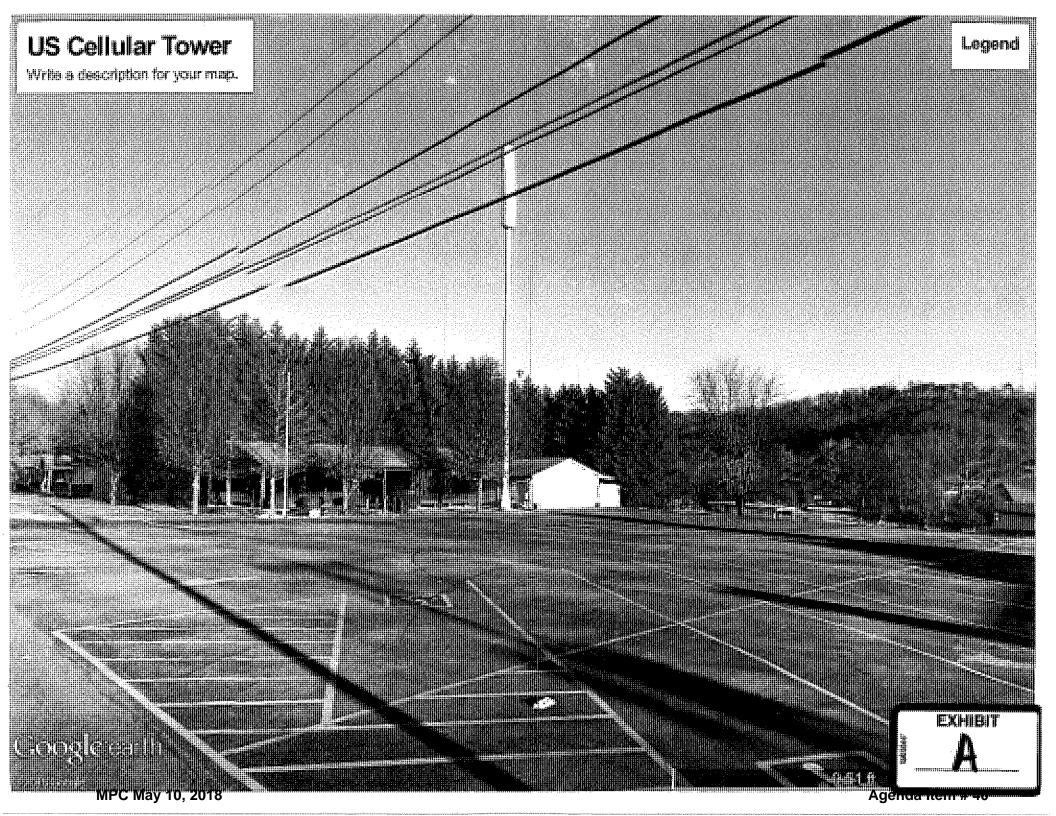
211 Commerce Street, Suite 800

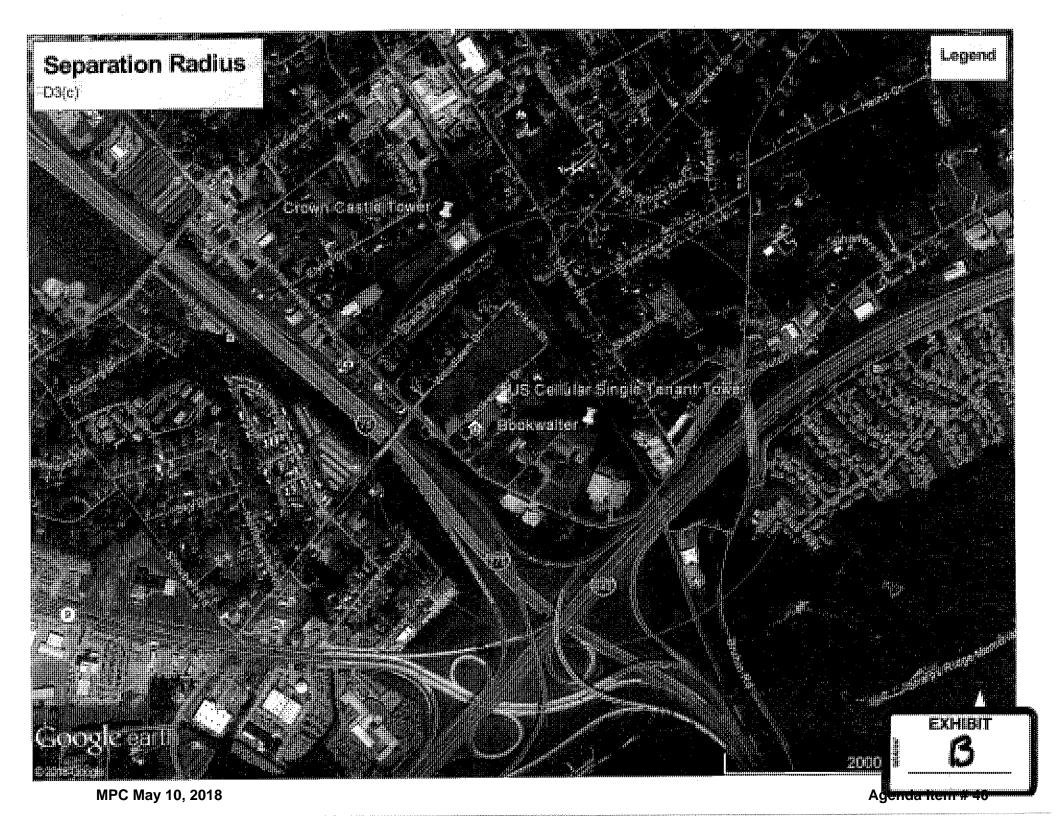
Nashville, Tennessee 37201

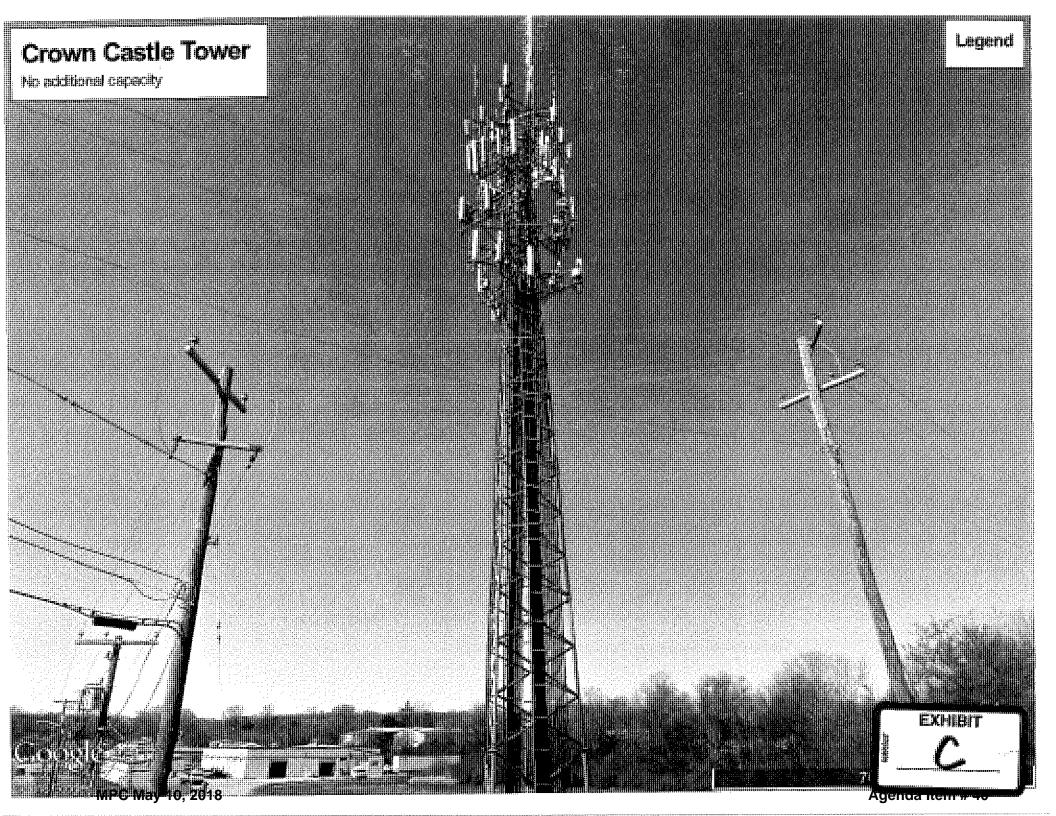
Phone: (615) 726-7391 Fax: (615) 744-7391

Email: jhargis@bakerdonelson.com

Attorney for Verizon Wireless









January 29, 2018

Verizon Wireless 8921 Research Drive Charlotte NC 28262

Attention:

Michael Haven, Senior Manager RE/Regulatory

Reference:

Visibility Assessment Bookwalter Tower Knoxville, Tennessee

S&ME Project No. 4143-18-001

Mr. Haven:

S&ME, Inc., has completed a visibility assessment for a new 110' monopole tower. The project area is located at 4110 Central Avenue Pike in Knoxville, Tennessee (Latitude 36° 00' 13.78" Longitude -83° 57' 28.46").

The goal of this study was to characterize potential visual impacts to the community by creating photosimulations of the proposed tower. To achieve this goal we used a DJI Phantom 4 Pro Unmanned Aerial System (UAS) with two 36 inch balloons suspended with a 10' tether underneath to position balloons at the location that will be the top of the proposed tower, and photographed the balloons from select locations in the project vicinity.

On Monday January 22, 2018 S&ME staff performed the fieldwork portion of this study. Jacob Foose served as the pilot, Aaron Brummitt served as the photographer, Josh Rowe and Sarah Rowe assisted by serving as safety observers. In order to conduct this study Mr. Foose flew the UAS to a height of 120' above ground level. Then Mr. Brummitt had photographed the balloons from each location. Each photograph was framed to include a field of view that was wide enough to encompass the balloon's location, the future location of the tower, if visible, and the surrounding view-shed.

This study found that the tower will be visible from all four of the photosimulation locations. However, in each case the view is partially obstructed by intervening buildings and vegetation. In many cases overhead powerlines and other communication antennas are also visible.

We have attached an aerial view (Appendix A-1) showing the location of the tower, and the locations of interest from where the photographs were taken and A photosimulation from each target location (Appendix A-2 through A-5).

EXHIBIT

D

genda Item # 40



Visibility Assessment Bookwalter Tower Knoxville, Tennessee S&ME Project No. 4143-18-001

We appreciate the opportunity to submit this report and provide you with this information. Should you have any questions, please feel free to contact us by email at ldouthat@smeinc.com or by telephone (865) 970-0003.

Sincerely,

S&ME, Inc.

Leira S. Douthat Project Manager

Attachments: Appendix A1-A5

Li S. Dorth

Aaron Brummitt, RPA

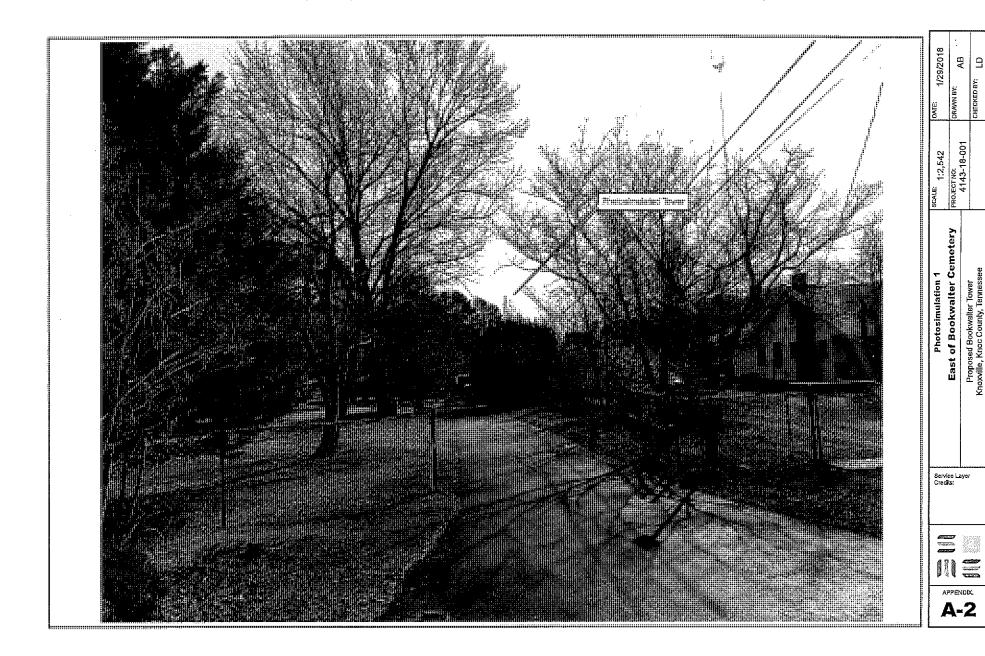
Aaron Brummitt, RPA
Senior Scientist

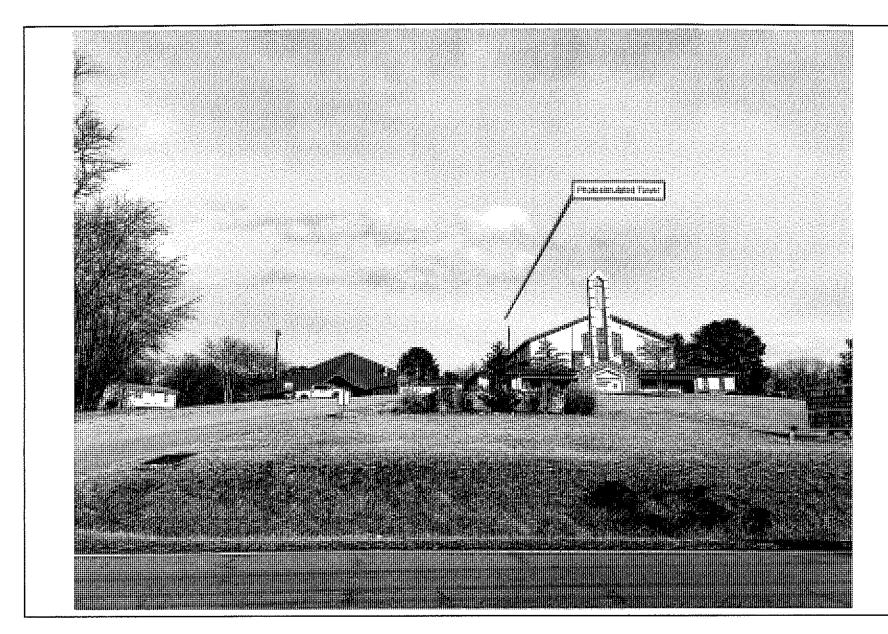
Visibility Assessment Bookwalter Tower Knoxville, Tennessee S&ME Project No. 4143-18-001



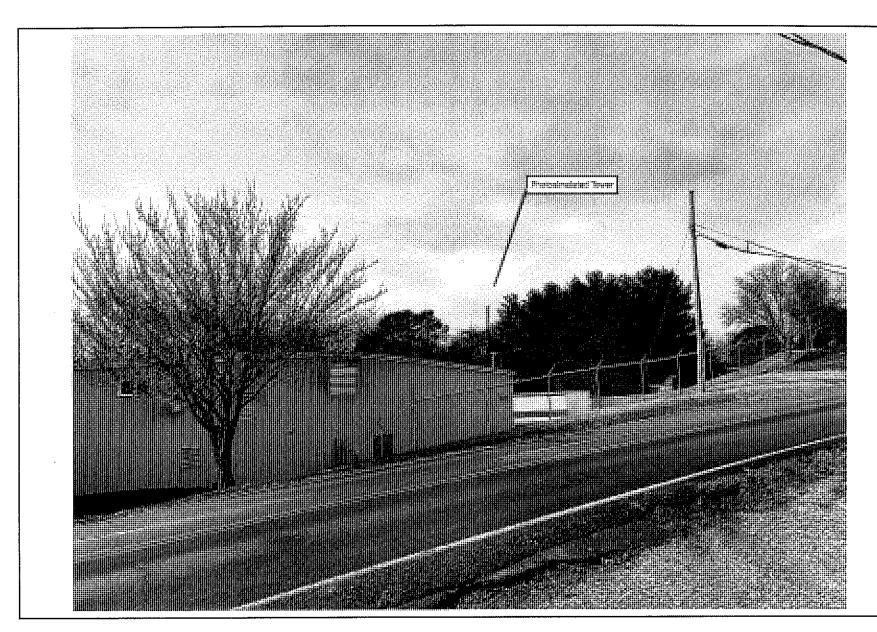
Attachments

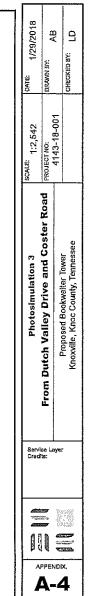


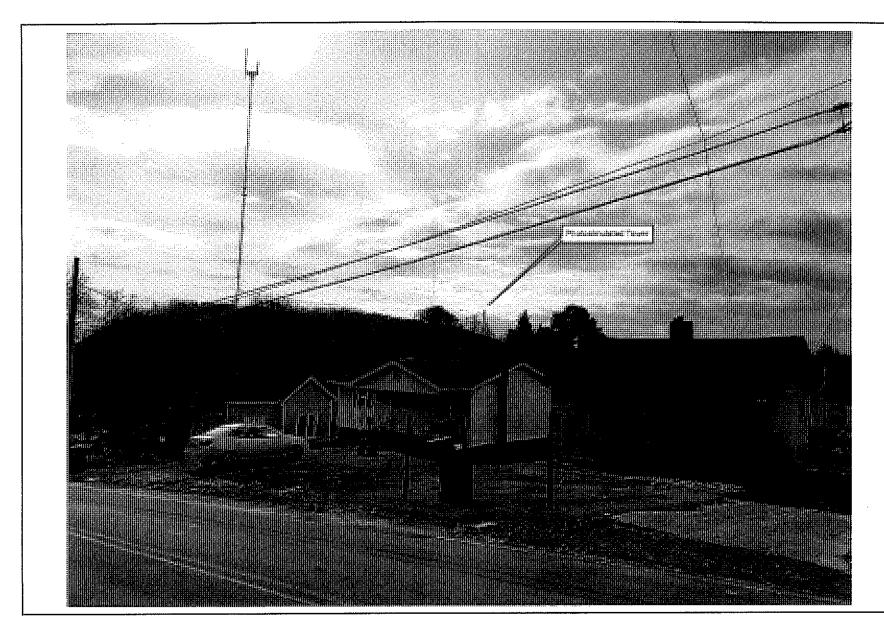




From Central Avenue Pike Project No. 4143-18-001 Knoxville, Knoc Courtly, Tennessee	A	Servi Cred	Photosimulation 2	SCALE 1:2,542	DATE: 1/29/2018
Proposed Bookwalter Tower Knoxville, Knoc County, Tennessee	PPE	ico La Its:	'	ROJECT NO:	DRAWN BY:
Friphosor Bookwater 19wer Knoxville, Knoc County, Tennessee	NDE	ayer	Description Destruction	4143-18-001	9
	×.		Frightsey bookwatter tower Knoxville, Knoc County, Tennessee		снескер вт: LD







Dranged Bookwaller Tourer
Knoxville, Knoc County, Tennessee

MPC May 10, 2018

Network Operations



Verizon Wireless 8921 Research Drive Charlotte, North Carolina 28262

Phone 704 510-8500

December 15, 2017

To Whom It May Concern City of Knoxville Metro Planning Commission 400 Main Street Knoxville, TN 37902

Re: Future Co-location statement: Bookwalter

Verizon Wireless agrees to accommodate collocation of additional antennae for future users and that the application will charge comparable rates, reasonable within the area market to all users. The proposed tower will provide space for two additional carriers to locate their antenna.

Sincerely,

Jean M Musa

Specialis Regulatory/RE

EXHIBIT

Separate of the separ

Bookwalter United - Towers within 1 mile

1. Crown Castle - 813399 INSKIP 232-011

Site Address: 4570 Fennel Road Knoxville, Tennessee 37912

Coordinates

36° 0′ 27.96", -83° 57′ 40.34"

Analysis: This tower was reviewed by Verizon Wireless RF and a traffic analysis study was conducted. The results of this study are provided within Exhibit E. This study is done by running coverage with a traffic map taken into account. The study was run with the current scenario without either site and then again with each site to compare how much offload each site provides. This shows that both candidates reduce traffic but the Church candidate reduces Sharps Ridge – 2 significantly more. Pleasant Ridge - 1 is basically reduced the same with each candidate.

Additionally, the Crown Castle tower appears to be at capacity as shown in Exhibit C.

2. American Tower - 282655

Lat/Long:

35.99566, -83.95641

Address: 1218 Broadcast Way KNOXVILLE, TN, 37921-1904

Analysis: This ATC site is located on the ridge and the existing ground elevation is too high to be able to meet the needed coverage objective. Additionally, this site is located outside the search ring area and would not effectively offload the two sectors on Sharps Ridge and Pleasant Ridge sites.

3. American Tower - 308966

Lat/Long:

36.00356, -83.94278

Address: 363 Sharps Ridge Memorial Park Drive Knoxville, TN, 37917

Analysis: This ATC site is located on the ridge and the existing ground elevation is too high to be able to meet the needed coverage objective. Additionally, this site is located outside the search ring area and would not effectively offload the two sectors on Sharps Ridge and Pleasant Ridge sites. This site is also located close to the previously mentioned Sharps Ridge site and would not be able to offload both the Pleasant Ridge and Sharps Ridge site.

4. US Cellular - 223393

36.003700, -83.960300

Address: 4218 Central Avenue Pike, Knoxville, TN 37912

4834-3124-7964 3000001-140107

Analysis: This tower is constructed solely for the existing caproposed antennas.	arrier and cannot accommodate Verizon's

4834-3124-7964 3000001-140107

Bookwalter United - Alternative Site Analysis

1. Crown Castle - 813399 INSKIP 232-011

Site Address: 4570 Fennel Road Knoxville, Tennessee 37912

Coordinates

36° 0' 27.96", -83° 57' 40.34"

Analysis: This tower was reviewed by Verizon Wireless RF and a traffic analysis study was conducted. The results of this study are provided within Exhibit E. This study is done by running coverage with a traffic map taken into account. The study was run with the current scenario without either site and then again with each site to compare how much offload each site provides. This shows that both candidates reduce traffic but the Church candidate reduces Sharps Ridge – 2 significantly more. Pleasant Ridge – 1 is basically reduced the same with each candidate.

This site was rejected because of its failure to meet the service coverage objects of Verizon Wireless.

(Sec. 20 (I)(4)(a)(2)(a)(2)).

2. American Tower - 282655

Lat/Long:

35.99566, -83.95641

Address: 1218 Broadcast Way KNOXVILLE, TN, 37921-1904

Analysis: This ATC site is located on the ridge and the existing ground elevation is too high to be able to meet the needed coverage objective. Additionally, this site is located outside the search ring area and would not effectively offload the two sectors on Sharps Ridge and Pleasant Ridge sites.

This site was rejected because of its failure to meet the service coverage objects of Verizon Wireless and is located outside of the search ring.

(Sec. 20 (I)(4)(a)(2)(a)(2)& (3)).

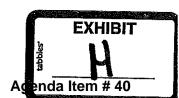
3. American Tower - 308966

Lat/Long:

36.00356, -83.94278

Address: 363 Sharps Ridge Memorial Park Drive Knoxville, TN, 37917

Analysis: This ATC site is located on the ridge and the existing ground elevation is too high to be able to meet the needed coverage objective. Additionally, this site is located outside the search ring area and would not effectively offload the two sectors on Sharps Ridge and Pleasant Ridge sites. This site is also located close to the previously mentioned Sharps Ridge site and would not be able to offload both the Pleasant Ridge and Sharps Ridge site.



4834-5915-7343 3000001-140107 This site was rejected due to its failure to meet the service coverage objectives of Verizon Wireless. The location of the tower is too close to a site intended to be offloaded by the new tower (Sharps Ridge) and too far from Pleasant Ridge.

(Sec. 20 (I)(4)(a)(2)(a)(2)& (3)).

4. US Cellular - 223393

36.003700, -83.960300

Address: 4218 Central Avenue Pike, Knoxville, TN 37912

Analysis: This tower is constructed solely for the existing carrier and cannot accommodate Verizon's proposed antennas. This site was rejected due to its failure to meet the service coverage objects of Verizon Wireless and its failure to meet the engineering requirements to be able to collocate on the tower.

(Sec. 20 (I)(4)(a)(2)(a)(2)& (3)).

5. Kerney Property

Address: 308 Tillery Drive, Knoxville, TN 37912

Zone: C-2

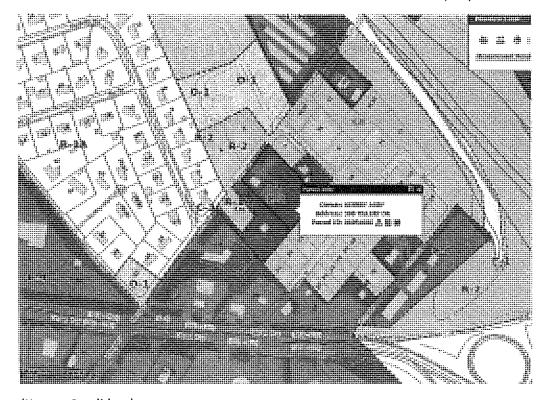
Analysis: Although located within more preferred zoning district, this candidate was located on a 1.05 acre parcel (069PA006). This candidate was rejected by Verizon Wireless due to its inability to comply with the setback requirements of Section 20. The parcel in question is only 200 feet in width and the required setback is 121 feet from the property lines.

In addition to its inability to meet the required setbacks, as previously mentioned is located on a tract of land that is over 4 acres smaller than the proposed parcel (5.03 acres vs 1.05 acres).

4834-S915-7343 3000001-140107 As noted in the figure below, the size and location within a more densely populated area with many more smaller single family lots would make this candidate a much more intrusive location despite being a higher priority location in the ordinance.



(Proposed Candidate)



(Kerney Candidate)

For the above mentioned reasons, Verizon Wireless rejected this site due to its failure to meet the setback requirements of the zoning ordinance and its being located in a more intrusive location despite the higher priority in this chapter. (Sec. 20 (1)(4)(a)(2)(a)(4)& (6)).

4834-591**S**-7343 3000001-140107

5-A-18-WCF_ PR 5-10-18



Tom Brechko <tom.brechko@knoxmpc.org>

Verizon Wireless Tennessee Partnership (5-A-18-WCF)

2 messages

Tom Brechko <tom.brechko@knoxmpc.org>
To: "Hargis, Joey" <jhargis@bakerdonelson.com>

Tue, May 1, 2018 at 9:17 PM

RECEIVED

Metropolitan
Planning Commission

Joey,

Is it still your intention to postpone the application to the June 14, 2018 MPC meeting?

Tom Brechko

Hargis, Joey <jhargis@bakerdonelson.com>
To: Tom Brechko <tom.brechko@knoxmpc.org>

Wed, May 2, 2018 at 9:35 AM

Tom.

We will need to postpone request 5-A-18-WCF until the meeting of June 14, 2018 to allow for additional time to provide the information requested

Sent from my iPhone [Quoted text hidden]

NOTICE: This electronic mail transmission with any attachments may constitute an attorney-client communication, protected health information (PHI) or other confidential information that is in fact confidential, legally protected from disclosure and/or protected by the attorney-client privilege. If you are the intended recipient, please maintain confidentiality and be aware that forwarding this e-mail to others may result in a waiver of these protections and privileges and regardless electronic communications may be at times illegally accessed and viewed. If you are not the intended recipient, this e-mail is not intended for transmission to you, nor to be read, reviewed, used, distributed or even received by you or any other unauthorized persons. If you have received this electronic mail transmission in error, please double delete it from your system immediately without copying, reading or disseminating it, and notify the sender by reply e-mail, so that our address record can be corrected. Thank you very much.

METROPOLITAN
PLANNING
COMMISSION
TENNESSEE
Suite 403 · Cily County Building
4 0 0 Main Street
Knoxyllle, Tennessee 37902
8 6 5 · 2 1 5 · 2 5 0 0
FAX · 2 1 5 · 2 0 6 8

APPLICATION FOR WIRELESS COMMUNICATION FACILITY CERTIFICATE OF APPROPRIATENESS



COMMISSION TENNESSEE	Name of Applicant: Verizon W	ireless Tenn	essee Partners	hip	
Sulte 403 • City County Building 4 0 0 Main Street	Date Filed: 3-20-18	Fee Paid	\$3000.00	File Number: 5-A - 18-1	NCF
Knoxville, Tennessee 37902 8 6 5 • 2 1 5 • 2 5 0 0 F A X • 2 1 5 • 2 0 6 8	FOR STAFF USE ONLY:				
www.kaoxmpc.org	Complete Application Date:		L	ead Staff:	
PROPERTY INFORMA	TION			W W	
Address: 4110 Centra	l Avenue Pike				
General Location: N	ortheast side of Central Au	ienve Pike	southeast a	of Bookwatter Di	^
Map/Parcel No.: 069P			Size	of Tract: 5.03ac	
Jurisdiction: City of Kr	noxville				
Zoning District: R-2					
Existing Land Use: Ch	nurch				
REQUEST					
Type of Approval Rec	uested: Level II - Type 1 Monop	ole			
Locating on a Structur	e or Building	-	Reg'd Pre-Appl	ication Meeting: 1/11/2018	
☐ Small Cell				MPC Meeting: May10, 2	018
■ New Tower				=	<i></i>
General Requirement	s	Addition	al Requiremen	nts for New Towers	
Letter of Commitment	■ Colloca	ation and alternat	ive site analysis		
Site Plan	■ Alternative Site Analysis				
Statement of Purpose		Visual Analysis Design Justification			
■ Landscape Agreemen	(■ Design	Justification		
Additional Req'ts for	Locating on Structure/Building	Addition	ıal Requiremer	nts for Small Cell	
☐ Collocation Consent		☐ Design	Summary		
PROPERTY OWNER		APPLICA	TION CORRE	SPONDENCE	3
Name: Church Christus	Victor Lutheran, Inc.	Name:	Joey Hargis		
Address: 4110 Central Ave	nue Pike	Address:	211 Commerce St	treet, Suite 800	
City/St/Zip: Knoxville, TN 379	712	City/St/Zip:	Nashville, TN 372	01	
Telephone:	Fax:	Telephone:	615-726-7391	Fax;	
APPLICATION AUTHO	DRIZATION				
	the authorized applicant, representing	the property	owner involved in	ı this request or the option hol	der
on same.		7		produce dated.	
	s, Attorney for Verizon Wireless	Signature	:Ma	rch 16,2018	 _
<u> </u>	erce Street, Suite 800				
City/St/Zip: Nashville, TN 3	37201 Telephone: 615-726-7391 F	Fax:	Email: [jhargis@bakerdonelson.com	
			e traditional traditional and activities and activities and activities and activities and activities and activi		Bargebra I
Application Accepted E	y: Thomas Breches				NEW Y

BAKER DONELSON BEARMAN, CALDWELL & BERKOWITZ, PC

BAKER DONELSON CENTER, SUITE 800 211 COMMERCE STREET NASHVILLE, TENNESSEE 37201

MAILING ADDRESS: P.O. BOX 190613 NASHVILLE, TENNESSEE 37219

PHONE: 615.726.5600 FAX: 615.726.0464

www.bakerdonelson.com

JOEL K. HARGIS, ATTORNEY Direct Dial: 615.726.7391 Direct Fax: 615.744.7391

E-Mail Address: jhargis@bakerdonelson.com

March 16, 2018

Mr. Tom Brechko Knoxville / Knox County Planning Commission 400 Main Street City County Building, Suite 403 Knoxville, TN 37902

Re:

Proposed Wireless Telecommunications Facility located at

4110 Central Avenue Pike

Dear Mr. Brechko:

Enclosed are submittal materials associated with Verizon Wireless' Special Use Permit Application for the above-referenced location.

Verizon Wireless requests to construct a 110 foot tall Type 1 Wireless Communication Tower Facility in the R-2 zoning district as a Level II review from the Metropolitan Planning Commission of Knoxville / Knox County.

On behalf of our client, Verizon Wireless, we respectfully request approval of our special use permit. Enclosed are the following items which constitute our application:

- 1. 10 Copies of proposed site plans on 11 x 17.
- 2. 10 Copies of each exhibit
- 3. Certification of Zoning Compliance
- 4. Check in the amount of \$3000.

4832-0868-8735 v1 3000001-140107 03/16/2018 March 16, 2018 Page 2

Please confirm that the materials enclosed with this letter are complete and that you do not need any further information from Verizon Wireless in order for the Metropolitan Planning Commission to consider Verizon's tower request at its meeting on May 10, 2018. If additional information is needed, please contact me and I will deliver it to you as soon as possible. Thank you very much for your kind assistance regarding this matter.

Respectfully submitted,

BAKER, DONELSON, BEARMAN, CALDWELL & BERKOWITZ, PC

Jal L. Hangis

Joel K. (Joey) Hargis, Attorney

	1	Level I Review	
, ž	1001	Collocation	\$50
2 7 %	1002	Small Cell	\$250
N 8	1003	New Tower	\$600
	1.70	Level II Review	
J. E. E.	1004	Small Cell	\$750
5 m 1/2	1005	New Tower	\$1,500
3 3	9902	Consultant Review Fee	(\$1,500)
6.	A-18-1	u E	\$ 3000-00

5-A-18-WCF

Verizon Wireless Tennessee Partnership

MPC May 10, 2018