

**KNOXVILLE/KNOX COUNTY METROPOLITAN PLANNING COMMISSION
 WIRELESS COMMUNICATION FACILITY REPORT**

▶ **FILE #:** 5-A-18-WCF **AGENDA ITEM #:** 46

POSTPONEMENT(S): 5/10/2018 **AGENDA DATE:** 6/14/2018

▶ **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

[View map on KGIS](#)

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 USE AND ZONING: North: R-1A (Low Density Residential) - Railroad and residences

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:

▶ **Approve the Wireless Communication Facilities (WCF) application for a new 110 foot type 1 monopole, subject to one condition and one waiver:**

Condition #1: Compliance with the access and paving standards set forth in the City's Land Development Manual. Before MPC staff issues a COA, the applicant has to provide the necessary information to City Engineering to ensure that the applicant is compliant with the City's Land Development Manual standards. Once this condition is met, City Engineering will communicate to MPC staff that this condition has been satisfied and a COA will be issued.

Waiver #1: A waiver is required for this application because the tower is located within 600 feet of an existing US Cellular tower. The ordinance has a 1,500 foot separation standard (distance between towers). The ordinance permits MPC to grant an exception to this separation standard, provided the applicant can demonstrate that technically neither coverage nor capacity can be achieved using these standards. The applicant has documented that the structure is incapable of supporting another antenna. This information was reaffirmed by MPC's consultant.

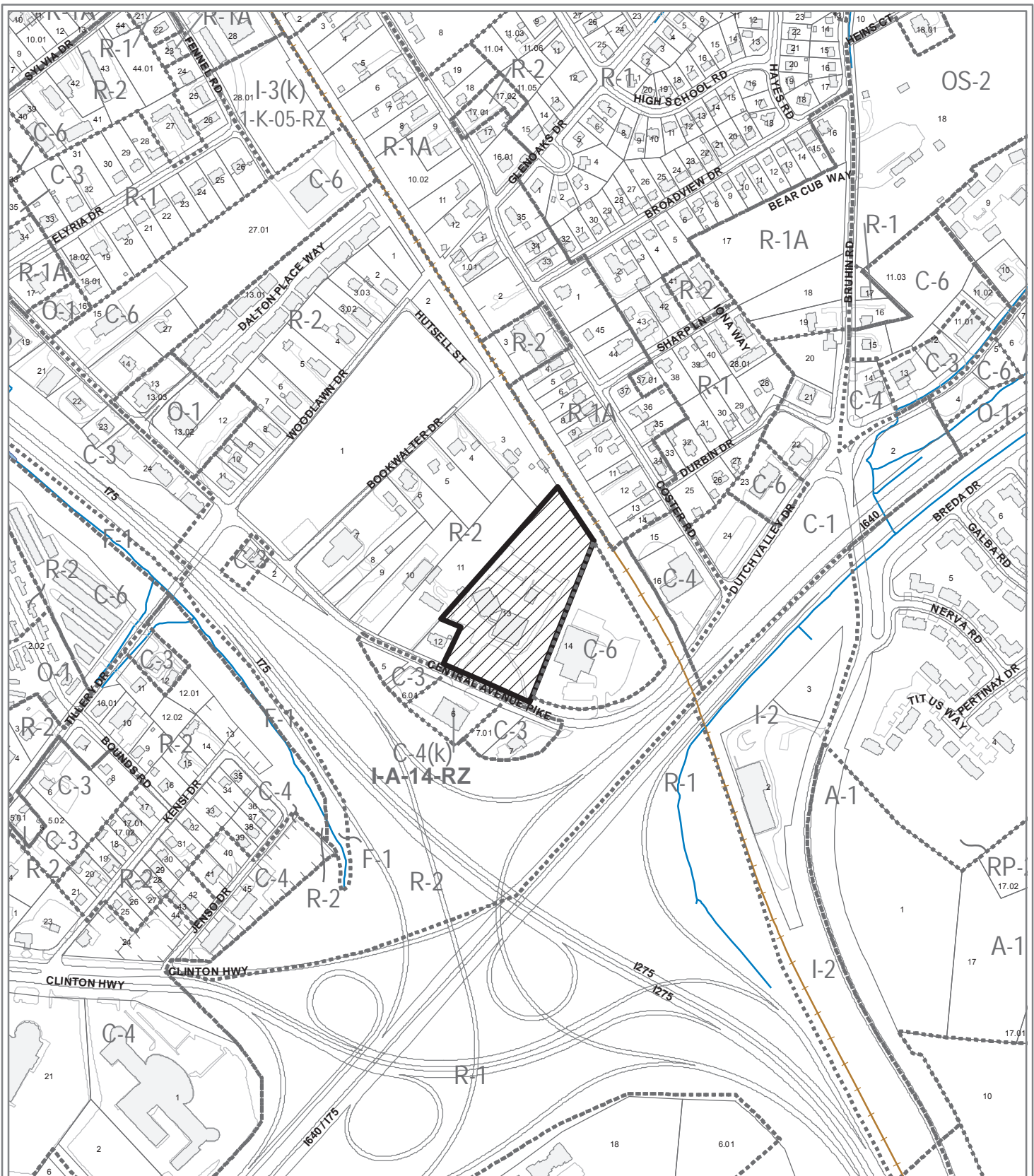
COMMENTS:

The proposed wireless communications facilities (WCF) application is for a 110 foot type 1 monopole cell tower, located at Christus Victor Lutheran Church, 4220 Central Avenue (Parcel# 069PC013). The proposed location is within a residential zoning district (R-2), and therefore, requires Level II review.

The tower has no visible exposed antennas and all the antennas are internal to the pole design. The applicant meets the 121 foot setback (110% of the height) from adjacent property lines. The tower is located on a church property that is bounded by Norfolk Southern railroad to the northeast. The applicant investigated alternative preferred site locations and possible collocation on existing towers in the surrounding area. All the sites investigated proved to be not feasible to address the applicants coverage needs.

MPC's consultant also recommends approval based on their analysis of this application.

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.



**5-A-18-WCF
WIRELESS COMMUNICATIONS FACILITIES**

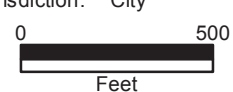


Certificate of Appropriateness for a Level II – Type 1 Monopole in an R-2 (General Residential) District

Petitioner: Verizon Wireless Tennessee Partnership

Map No: 69
Jurisdiction: City

Original Print Date: 4/18/2018 Revised:
Metropolitan Planning Commission * City / County Building * Knoxville, TN 37902



PROJECT SUMMARY

SITE NAME: BOOKWALTER UNITED
 SITE ADDRESS: CENTRAL AVENUE PIKE KNOXVILLE, TN 37912
 JURISDICTION: CITY OF KNOXVILLE
 COUNTY: KNOX COUNTY
 ZONING: N/A
 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
 SITE LOCATION CODE: 316354
 KEVIN CALDWELL (615) 714-7114
 SITE COORDINATES: 1A
 LATITUDE: 36° 00' 13.78" N (NAD 83)
 LONGITUDE: 83° 57' 28.46" W (NAD 83)
 ELEVATION: 1,019.1' (NAVD 88)
 OCCUPANCY: UNMANNED
 CONSTRUCTION TYPE: RAWLAND
 TELEPHONE COMPANY: TBD CONTACT: TBD PHONE: TBD
 POWER COMPANY: KNOXVILLE UTILITIES BOARD CONTACT: CUSTOMER SERVICE PHONE: (865) 524-2911
 FIRE DEPARTMENT: KNOXVILLE FIRE DEPT. PHONE: (865) 595-4480
 POLICE DEPARTMENT: KNOX COUNTY SHERIFF PHONE: (865) 671-5989
 E911 ADDRESSING: METRO PLANNING COMMISSION CONTACT: DONNA HILL PHONE: (865) 215-2507

5-A-18-WCF
 Revised: 5/18/2018

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 MANAGER IN THE CASE OF ANY DISCREPANCIES. ANY STRUCTURAL MODIFICATION, IF REQUIRED, SHALL BE DONE PRIOR TO THE INSTALLATION OF ANTENNAS.

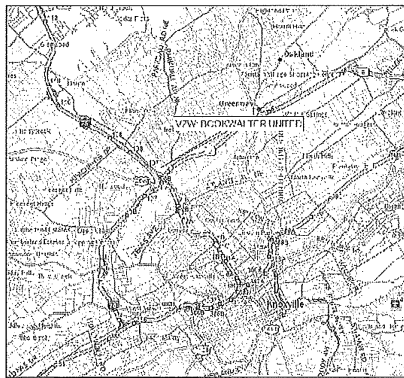


TENNESSEE PARTNERSHIP
 (HERE IN AFTER REFERRED TO AS 'LESSEE')

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

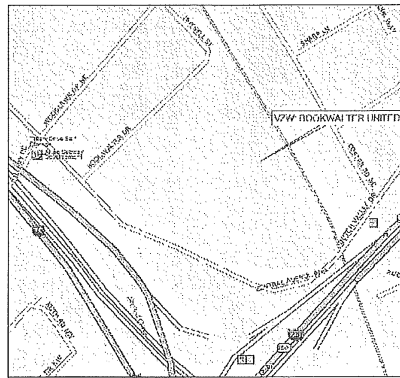
SITE NAME: BOOKWALTER UNITED
 CENTRAL AVENUE PIKE
 KNOXVILLE, TN 37912

VICINITY MAP



NOT TO SCALE

LOCATION MAP



NOT TO SCALE

DRIVING DIRECTIONS

FROM VERIZON MTSO, NASHVILLE, TN:
 GET ON I-40 E/I-65 S (0.7 MI), KEEP LEFT AT THE FORK TO CONTINUE ON I-40 E, FOLLOW SIGNS FOR I-24 E/KNOXVILLE/CHATTANOOGA (1.0 MI), KEEP RIGHT TO STAY ON I-40 E (2.1 MI), KEEP LEFT AT THE FORK TO STAY ON I-40 E, FOLLOW SIGNS FOR INTERSTATE 40 E/KNOXVILLE (172 MI), USE THE RIGHT 2 LANES TO TAKE EXIT 385 FOR INTERSTATE 75 N/INTERSTATE 640 E TOWARD LEXINGTON (0.7 MI), CONTINUE ONTO I-640 E/I-75 N (2.4 MI), TAKE EXIT 38 TOWARD STATE ROUTE 25W (0.3 MI), TURN LEFT ONTO GAP RD (0.2 MI), CONTINUE ONTO WILSON RD (0.2 MI), CONTINUE ONTO TILLERY RD (0.5 MI), TURN RIGHT ONTO CENTRAL AVENUE PIKE. SITE IS ON THE LEFT.

SHEET SCALE FACTOR:
 PLOT SIZE:
 11"x17", TO SCALE
 24"x36": 2X SCALE AS NOTED

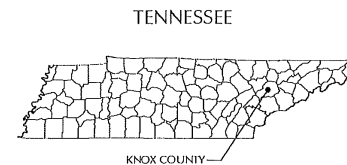


1 (800) 351-1111
 www.tenn811.com
 CONTRACTOR TO CALL TENNESSEE ONE-CALL SYSTEMS AT LEAST (2) WORKING DAYS PRIOR TO DIGGING.

SHEET INDEX

NO.	DESCRIPTION	
T1	TITLE SHEET	△ 05-10-18
GN1	GENERAL NOTES	
C1	OVERALL SITE LAYOUT PLAN	
C1A	SITE GRADING PLAN	△ 05-10-18
C1B	SITE GRADING PLAN	△ 05-10-18
C2	SITE LAYOUT PLAN	
C2A	EQUIPMENT LAYOUT PLAN	
C3	SITE DETAILS	
C3A	SITE DETAILS	
C3B	SITE DETAILS	
C4	SITE DETAILS	△ 03-02-18
C4A	SITE DETAILS	
C5	SITE DETAILS	
C5A	SITE DETAILS	
C6	FENCE DETAILS	
C7	SIGNAGE DETAILS	
L1	LANDSCAPE PLAN	△ 05-10-18
L2	LANDSCAPE DETAILS	
E1	OVERALL ELECTRICAL SITE PLAN	
E1A	ELECTRICAL SITE PLAN	
E2	SITE GROUNDING PLAN	
E2A	EQUIPMENT GROUNDING PLAN	
E3	ELECTRICAL SPECIFICATIONS	
E4	ELECTRICAL DETAILS	
E5	ELECTRICAL DETAILS	
E6	ELECTRICAL DETAILS	
E6A	ELECTRICAL DETAILS	
E6B	ELECTRICAL DETAILS	
E7	SINGLE LINE DIAGRAM	
E8	GROUNDING SINGLE LINE	

STATE COUNTY MAP



LESSEE



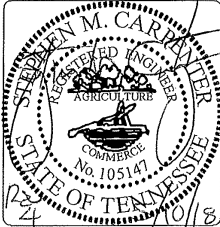
1961 NORTHPOINT BLVD, SUITE 130
 HIXSON, TN 37343
 PH: 423-843-9500
 FAX: 423-843-9500

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
 DRAWN BY: ALP
 CHECKED BY: CAE

REVISIONS

NO.	DATE	BY	DESCRIPTION
△ 05/10/18	BES		ZONING REDLINES
△ 03/01/18	CAE		TOWER CHANGE OUT
△ 02/20/18	ALP		TOWER CHANGE OUT
△ 11/13/17	BES		COMPOUND CHANGE
△ 02/14/17	BNS		CONSTRUCTION ISSUE
△ 01/13/17	BES		PRELIMINARY REVIEW



PROJECT No: 20141145655
 SITE NAME: BOOKWALTER UNITED
 SITE NUMBER: 316354
 SITE ADDRESS: CENTRAL AVENUE PIKE KNOXVILLE, TN 37912
 DESIGN TYPE: RAWLAND
 SHEET TITLE: TITLE SHEET

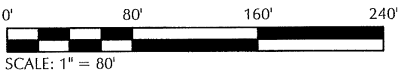
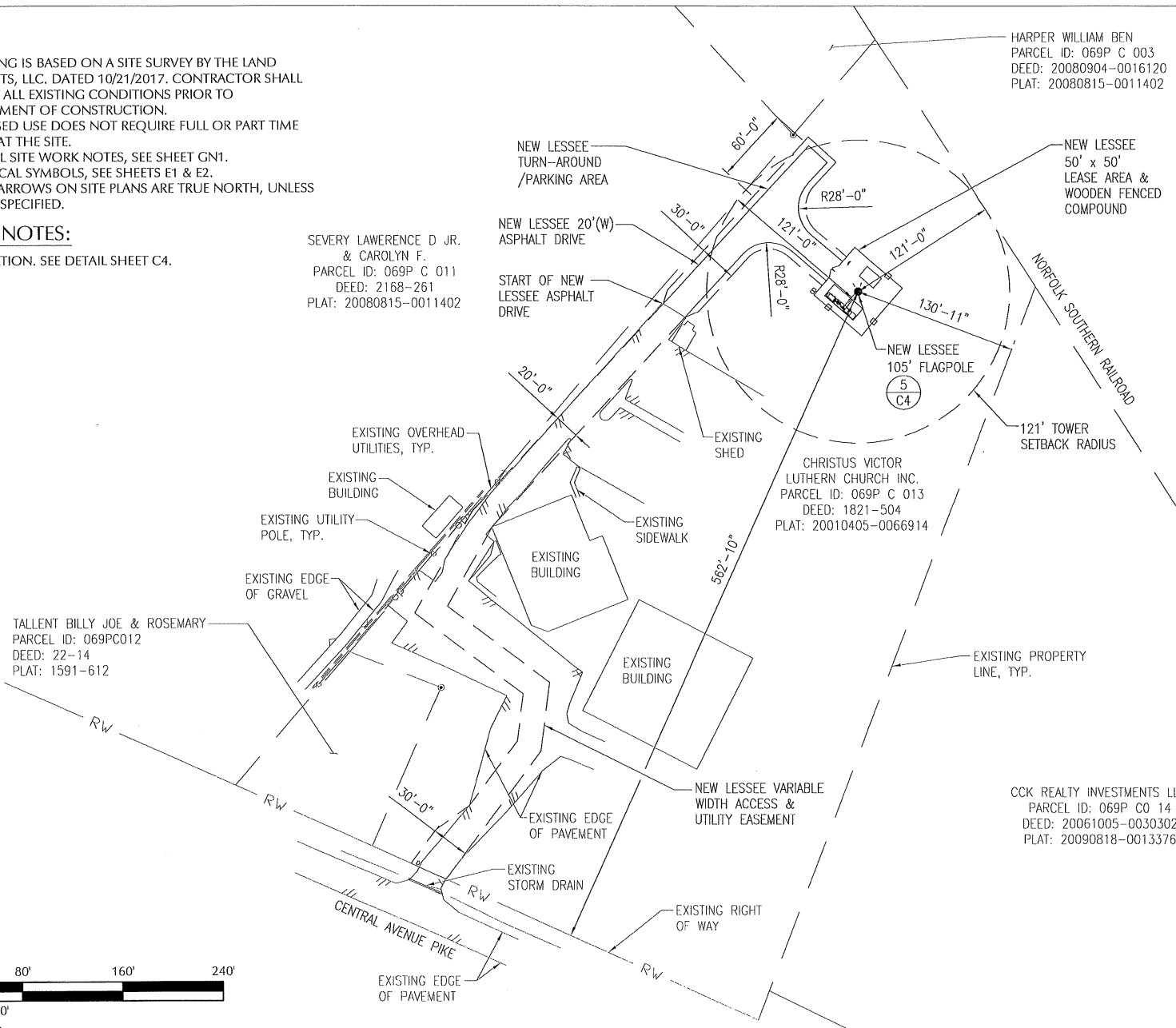
DRAWING NO. **T1** REVISION: **4**

NOTES:

1. THIS DRAWING IS BASED ON A SITE SURVEY BY THE LAND CONSULTANTS, LLC. DATED 10/21/2017. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. THE PROPOSED USE DOES NOT REQUIRE FULL OR PART TIME EMPLOYEES AT THE SITE.
3. FOR GENERAL SITE WORK NOTES, SEE SHEET GN1.
4. FOR ELECTRICAL SYMBOLS, SEE SHEETS E1 & E2.
5. ALL NORTH ARROWS ON SITE PLANS ARE TRUE NORTH, UNLESS OTHERWISE SPECIFIED.

REFERENCE NOTES:

- 5 - TOWER ELEVATION. SEE DETAIL SHEET C4.



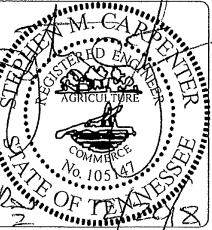
LESSEE

TeleCAD Wireless
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A&E PROJECT #:	20141145655
DRAWN BY:	ALP
CHECKED BY:	CAE

REVISIONS	
NO.	DATE BY DESCRIPTION
Δ	02/26/18 ALP TOWER CHANGE OUT
Δ	11/13/17 BES COMPOUND CHANGE
Δ	02/14/17 BNS CONSTRUCTION ISSUE
Δ	01/13/17 BES PRELIMINARY REVIEW



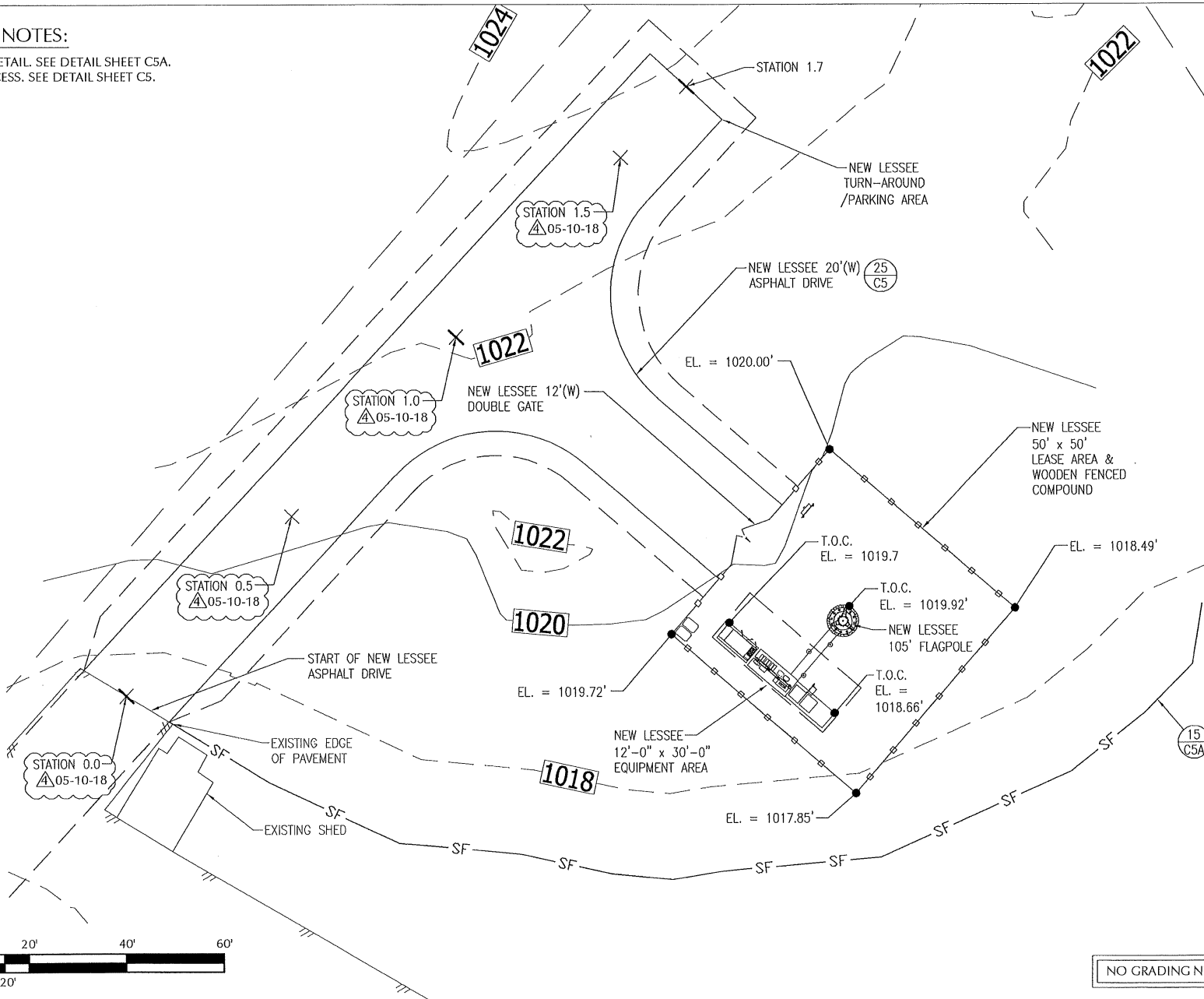
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SITE NAME:	BOOKWALTER UNITED
SITE NUMBER:	316354
SITE ADDRESS:	CENTRAL AVENUE PIKE KNOXVILLE, TN 37912
DESIGN TYPE:	RAWLAND

SHEET TITLE:	OVERALL SITE LAYOUT PLAN
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DRAWING NO.	REVISION:
C1	2

REFERENCE NOTES:

- 15 - SILT FENCE DETAIL. SEE DETAIL SHEET C5A.
- 25 - ASPHALT ACCESS. SEE DETAIL SHEET C5.



NO GRADING NEEDED

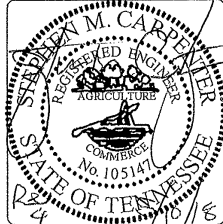
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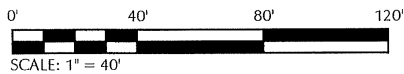
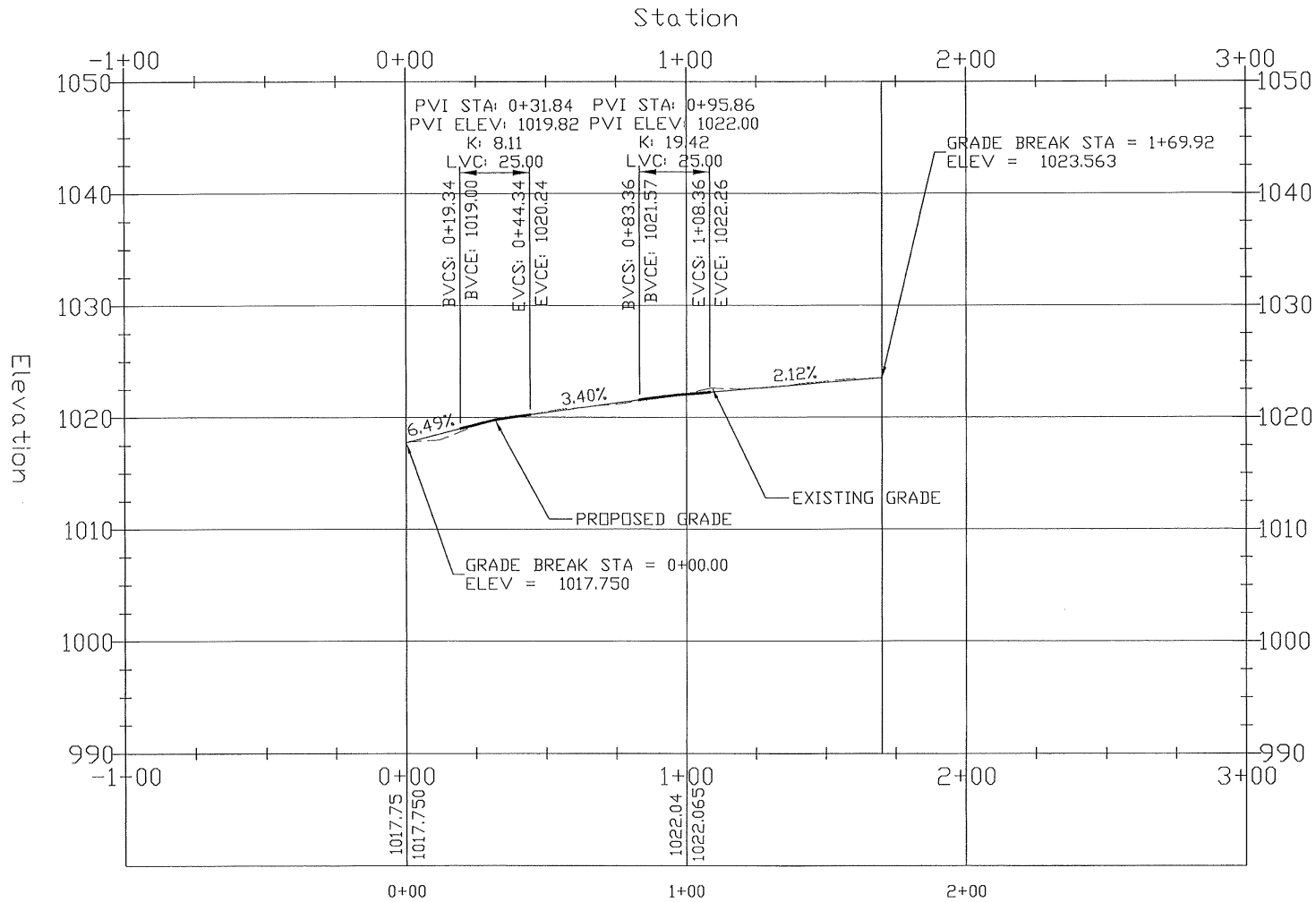
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NO.	DATE	BY	DESCRIPTION
05/10/18	BES		ZONING REDLINES
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01/13/17	BES		PRELIMINARY REVIEW



PROJECT NO. 20141145655
 SITE NAME: BOOKWALTER UNITED
 SITE NUMBER: 316354
 SITE ADDRESS: CENTRAL AVENUE PIKE, KNOXVILLE, TN 37912
 DESIGN TYPE: RAWLAND
 SHEET TITLE: SITE GRADING PLAN

DRAWING NO. **C1A** REVISION: **4**

Alignment - Access Drive PROFILE



NO GRADING NEEDED

△ 05-10-18

LESSEE

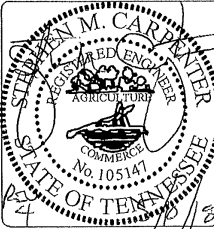
TeleCAD
Wireless

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DRAWN BY:	ALP
CHECKED BY:	CAE

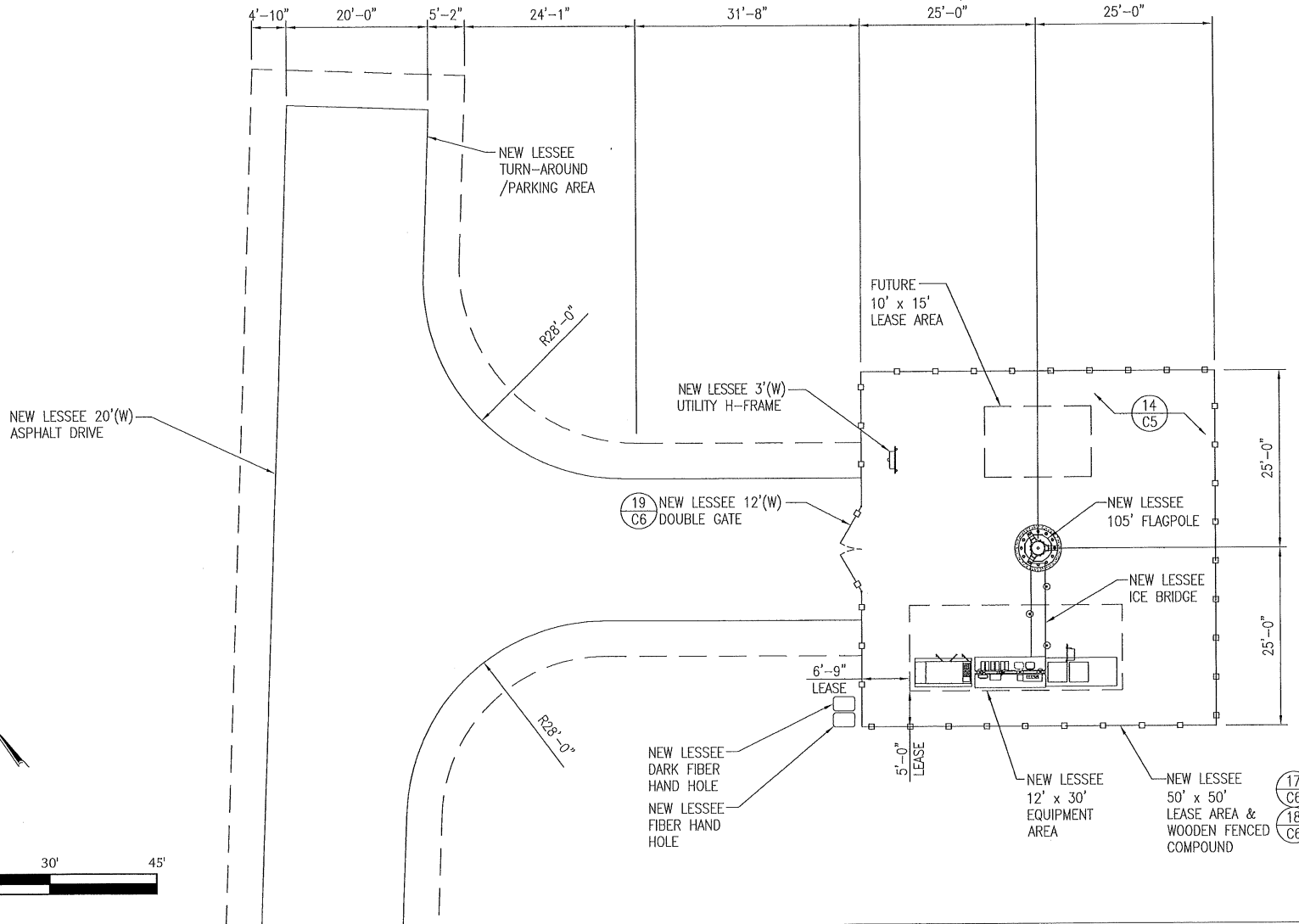
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NO.	DATE	BY DESCRIPTION
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SITE NAME:	BOOKWALTER UNITED
SITE NUMBER:	316354
SITE ADDRESS:	CENTRAL AVENUE PIKE KNOXVILLE, TN 37912
DESIGN TYPE:	RAWLAND
SHEET TITLE:	ACCESS ROAD PROFILE PLAN
DRAWING NO.	REVISION:
C1B	4

REFERENCE NOTES:

- 14 - COMPOUND SURFACING. SEE DETAIL SHEET C5.
- 17 - WOOD FENCE. SEE DETAIL SHEET C6.
- 18 - WOOD CORNER, GATE, END, OR POST. SEE DETAIL SHEET C6.
- 19 - WOOD DOUBLE GATE. SEE DETAIL SHEET C6.



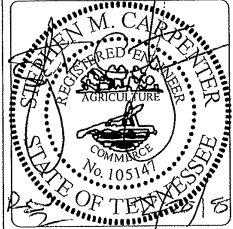
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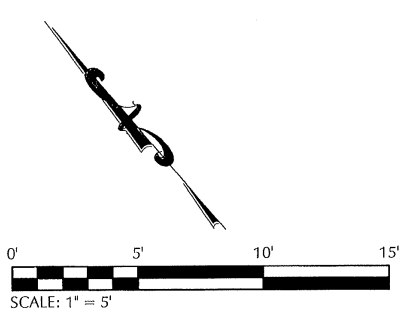
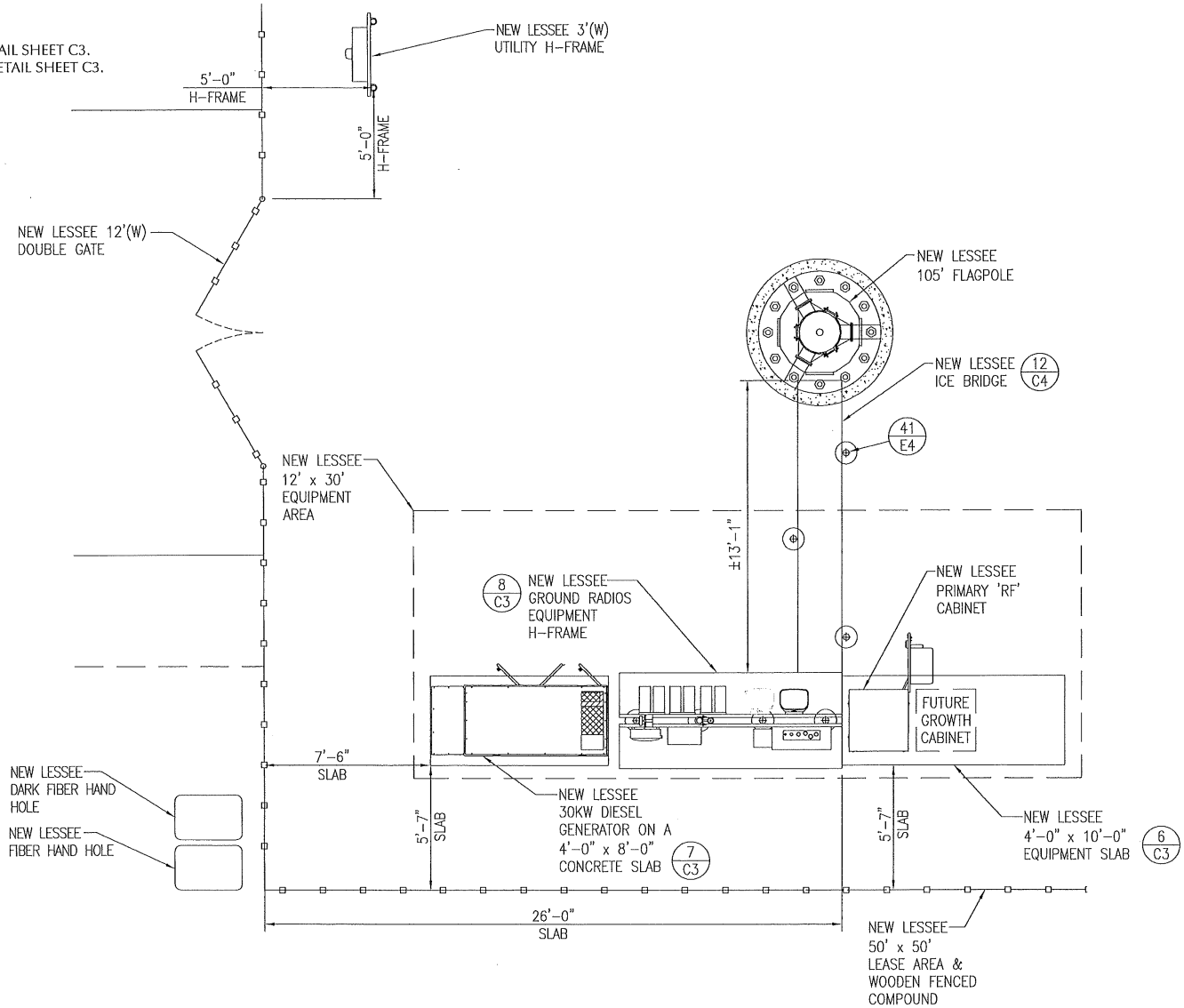
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SITE NAME:	BOOKWALTER UNITED
SITF NUMBER:	316354
SITE ADDRESS:	CENTRAL AVENUE PIKE KNOXVILLE, TN 37912
DESIGN TYPE:	RAWLAND
SHEET TITLE:	SITE LAYOUT PLAN
DRAWING NO.	REVISION:
C2	2

REFERENCE NOTES:

- 6 - EQUIPMENT PAD DETAIL. SEE DETAIL SHEET C3.
- 7 - DIESEL GENERATOR CONCRETE DETAIL. SEE DETAIL SHEET C3.
- 8 - GROUND RADIOS EQUIPMENT H-FRAME. SEE DETAIL SHEET C3.
- 12 - ICE BRIDGE AT FLAGPOLE. SEE DETAIL SHEET C4.
- 41 - GROUND BAR DETAIL. SEE DETAIL SHEET E4.



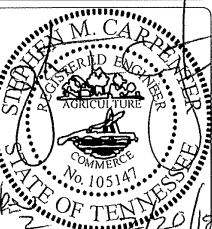
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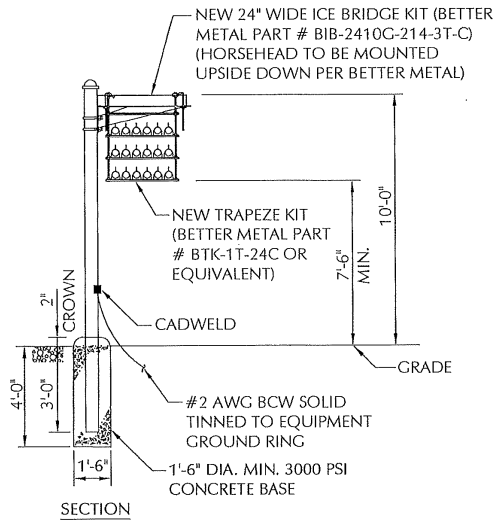
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GITE NUMBER:	316354
SITE ADDRESS:	CENTRAL AVENUE PIKE KNOXVILLE, TN 37912
DESIGN TYPE:	RAWLAND

SHEET TITLE:
EQUIPMENT LAYOUT PLAN

DRAWING NO.	REVISION:
C2A	2



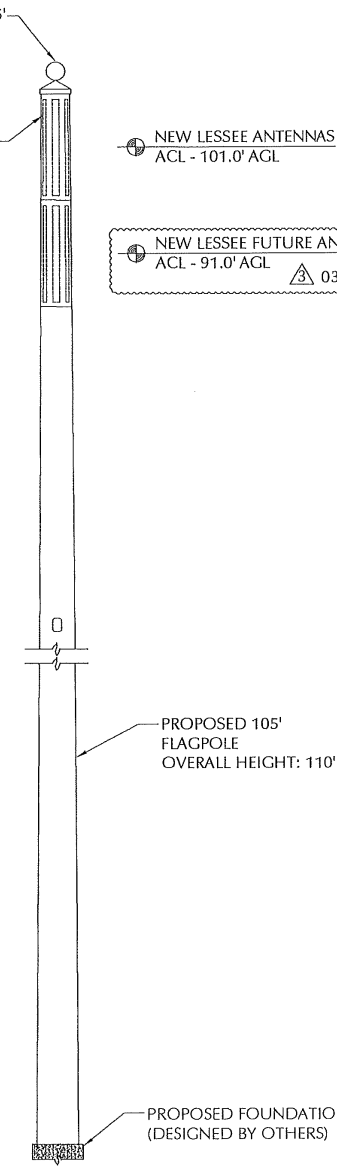
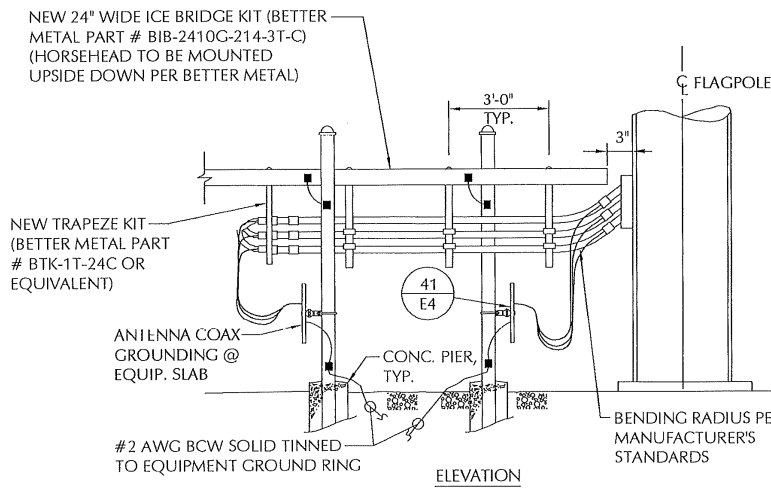
NEW LESSEE 5' LIGHTNING ROD

NEW LESSEE ANTENNAS CONCEALED INSIDE POLE

NEW LESSEE ANTENNAS
ACL - 101.0' AGL

NEW LESSEE FUTURE ANTENNAS
ACL - 91.0' AGL

03/02/2018



ICE BRIDGE AT FLAGPOLE
NTS (12 C2A)

TOWER ELEVATION
NTS (5 C1)

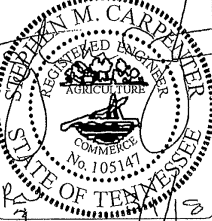
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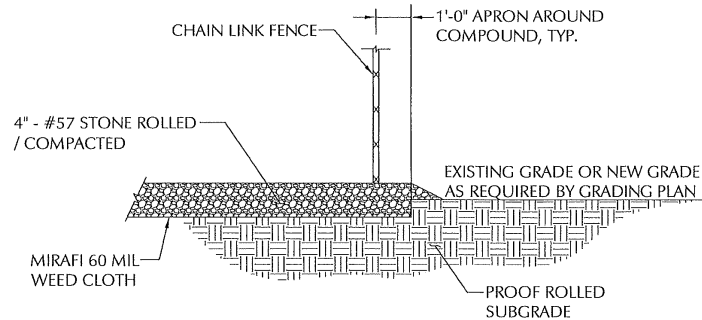
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CHECKED BY:	CAE

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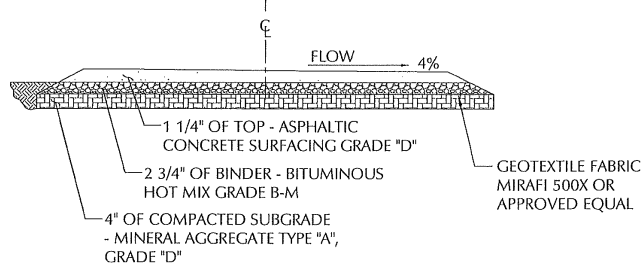
PROJECT No:	20141145655
SITE NAME:	BOOKWALTER UNITED
SITE NUMBER:	316354
SITE ADDRESS:	CENTRAL AVENUE PIKE KNOXVILLE, TN 37912
DESIGN TYPE:	RAWLAND
SHEET TITLE:	SITE DETAILS

DRAWING NO.	REVISION:
C4	3



COMPOUND SURFACING (14 / C2)
NTS

NOTE:
WEED CONTROL FABRIC SHALL BE USED UNDER ACCESS DRIVE WITH A 36" MIN. OVERLAP. CONTRACTOR SHALL INSTALL FABRIC PER MFG. RECOMMENDATIONS.



ASPHALT ACCESS DRIVE DETAIL (25 / C1A)
NTS

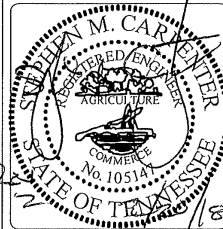
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SITE ADDRESS:	CENTRAL AVENUE PIKE KNOXVILLE, TN 37912
DESIGN TYPE:	RAWLAND

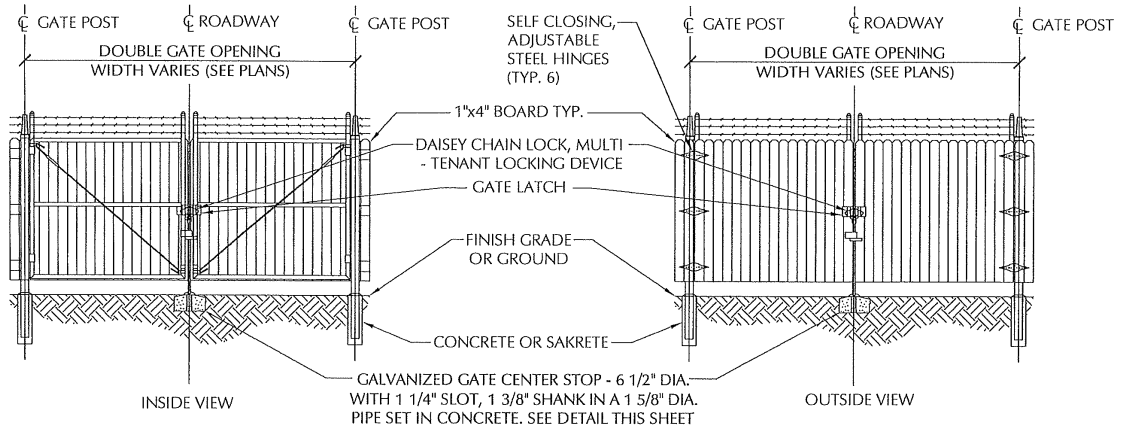
SHEET TITLE:
SITE DETAILS

DRAWING NO.	REVISION:
C5	2

TYPICAL WOOD (METAL FRAME) FENCING NOTES

(INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F-900)

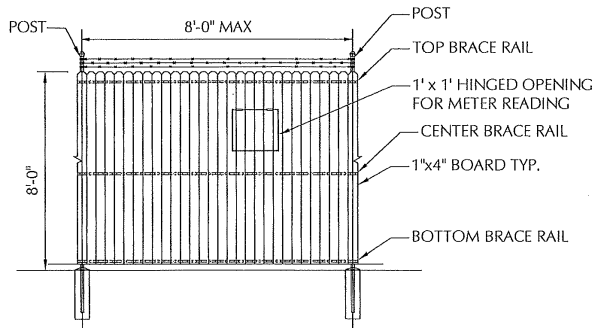
1. GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 4"Ø SCHEDULE 40 FOR GATE WIDTHS UP THRU 7 FEET OR 14 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 3"Ø SCHEDULE 40 PIPE PER ASTM-F1083. INSTALL EVERY 8' ALONG FENCE LINE.
3. TOP RAIL, BOTTOM, & BRACE RAIL: 2"Ø SCHEDULE 40 PIPE PER ASTM-F1083.
4. BARBED WIRE: DOUBLE STRAND 12-1/2 GAUGE TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
5. GATE LATCH: 1-3/8" O.D. PLUNGER ROD W/ MUSHROOM TYPE CATCH.
6. LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION.
7. HEIGHT = 8' VERTICAL + 1' BARBED WIRE VERTICAL DIMENSION.
8. WORK WITH SPECIFICATION 2831.
9. PICKETS TO BE 7/8" THICK NO. 1 SPRUCE.
10. USE WOOD TO METAL (EXTERIOR USE) SELF TAPPING SCREWS TO ATTACH PICKETS.
TWO SCREWS PER BRACE. SIX SCREWS TOTAL PER PICKET.
11. ALL HARDWARE TO BE HOT DIP GALVANIZED.



WOOD SWING DOUBLE GATE

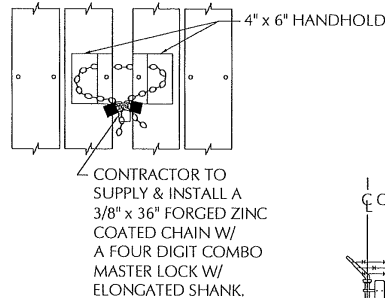
NTS

19
C2



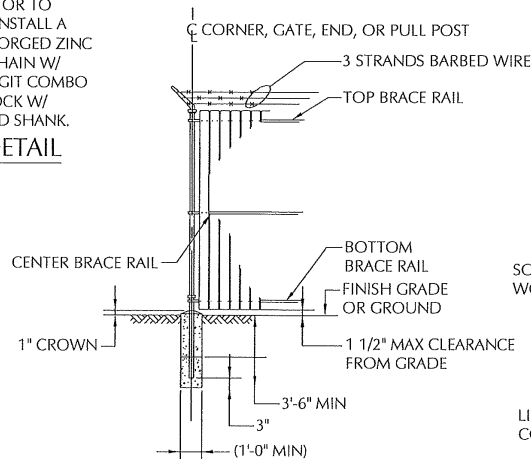
TYPICAL WOOD FENCE

NTS



FENCE LOCK DETAIL

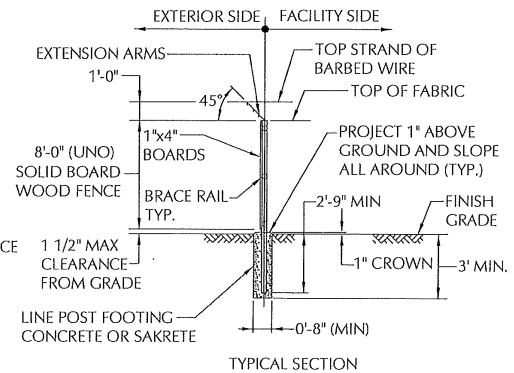
NTS



WOOD CORNER, GATE, END, OR PULL POST

NTS

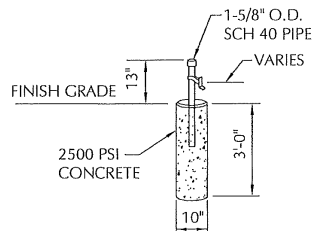
18
C2



WOOD FENCE

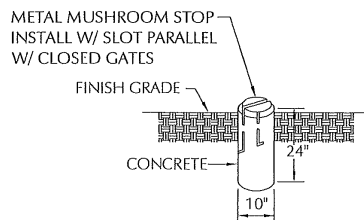
NTS

17
C2



GATE STOP DETAIL

NTS



MUSHROOM STOP

NTS

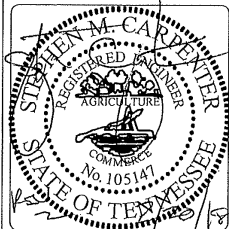
LESSEE

TeleCAD Wireless
1961 NORTHPOINT BLVD, SUITE 130
HIXSON, TN 37343
PH: 423-843-9500
FAX: 423-843-9509

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
DRAWN BY:	ALP
CHECKED BY:	CAE

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



PROJECT No.	20141145655
SITE NAME:	BOOKWALTER UNITED
SITE NUMBER:	316354
SITE ADDRESS:	CENTRAL AVENUE PIKE KNOXVILLE, TN 37912
DESIGN TYPE:	RAWLAND

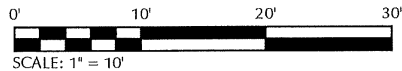
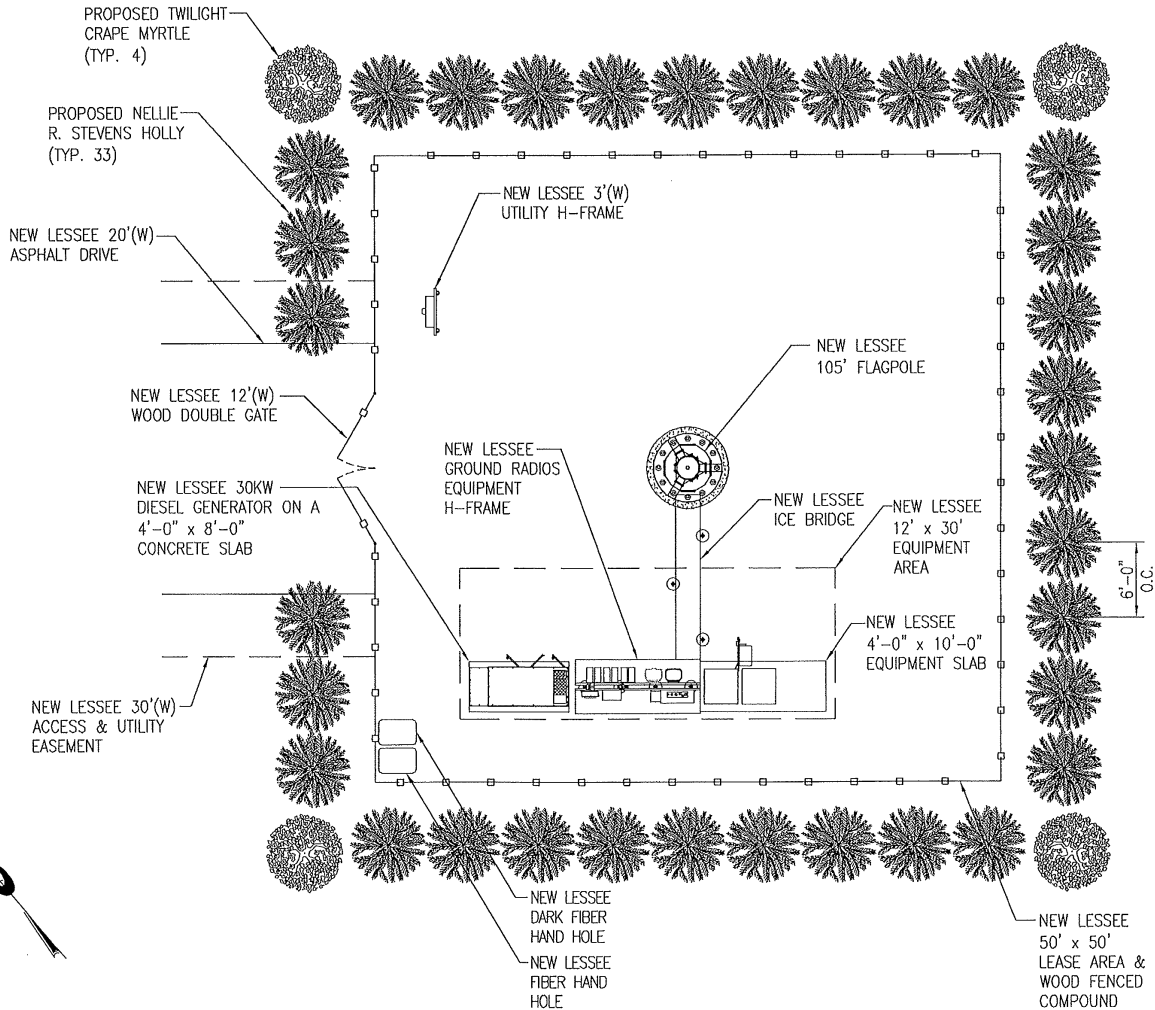
SHEET TITLE:	FENCE DETAILS
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DRAWING NO.	REVISION:
C6	2

PLANTING SCHEDULE											
QTY	BOTANICAL NAME	COMMON NAME	CALIPER	TYPE	SPACING	PLANTING HEIGHT	MATURE HEIGHT	SUNLIGHT	SOIL CONDITIONS	SYMBOL	REMARKS
4	Lagerstroemia indica 'Twilight'	Twilight Crape Myrtle	N/A	CANOPY DECIDUOUS	SEE PLAN	6 FT.	20 - 25 FT.	FULL OR PARTIAL	AVERAGE, WELL DRAINED		FULL TO BASE
33	Ilex 'Nellie R. Stevens'	Nellie R. Stevens Holly	N/A	UNDERSTORY EVERGREEN	SEE PLAN	6 FT.	15 - 25 FT.	FULL OR PARTIAL	WIDELY ADAPTABLE		FULL TO BASE

LANDSCAPE NOTES:

- ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS SET FORTH THE CURRENT EDITION OF AMERICAN STANDARDS FOR NURSERY STOCK OF NURSERYMEN.
- PLANTING PLAN TAKES PRECEDENCE OVER PLANT LIST.
- ALL TREES SHALL BE STAKED OR GUYED AT TIME OF PLANTING UNLESS NO STAKES IS PRE-APPROVED BY OWNER. STAKES OR GUYS SHALL NOT RESTRICT MOVEMENT OF THE PLANT, BUT SHALL HAVE 2"-3" OF SLACK IN EACH GUY WIRE.
- ALL PLANT MATERIAL IS SUBJECT TO THE OWNERS APPROVAL PRIOR TO INSTALLATION TO INSURE THE CONFORMITY TO THE SPECIFICATIONS.
- APPLY GRANULAR PRE-EMERGENT HERBICIDE TO SOIL PER MANUFACTURERS RECOMENDATIONS BELOW MULCH BED PRIOR TO MULCH APPLICATION.
- APPLY "LESCO" (OR EQUAL) GRANULAR SLOW RELEASE FERTILIZER PER MANUFACTURERS RECOMENDATIONS TO TREES AT TIME OF PLANTING.
- PLACE 3"-4" MIN. THICKNESS OF SHREDDED BROWN HARDWOOD MULCH 10' WIDE AROUND FENCED AREA AS SHOWN ON PLAN. IF NECESSARY, INSTALL METAL OR PVC EDGING STRIPS TO PREVENT MULCH FROM WASHING ONTO ROAD OR OTHERWISE CAUSING PROBLEMS.
- CONTRACTOR SHALL WARRANTY PLANTS FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE.



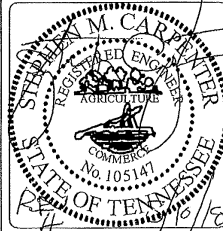
LESSEE

TeleCAD Wireless
 1961 NORTHPOINT BLVD, SUITE 130
 HIXSON, TN 37343
 PH: 423-843-9500
 FAX: 423-843-9509

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
DRAWN BY:	ALP
CHECKED BY:	CAE

REVISIONS			
NO.	DATE	BY	DESCRIPTION
05/10/18	BES		ZONING REDLINES
03/01/18	CAE		TOWER CHANGE OUT
02/20/18	ALP		TOWER CHANGE OUT
11/13/17	BES		COMPOUND CHANGE
02/14/17	BNS		CONSTRUCTION ISSUE
01/13/17	BES		PRELIMINARY REVIEW



PROJECT No.	20141145655
SITE NAME:	BOOKWALTER UNITED
SITE NUMBER:	316354
SITE ADDRESS:	CENTRAL AVENUE PIKE KNOXVILLE, TN 37912
DESIGN TYPE:	RAWLAND

SHEET TITLE:	LANDSCAPE PLAN
--------------	----------------

DRAWING NO.	REVISION:
L1	4

△ 05-10-18

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

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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

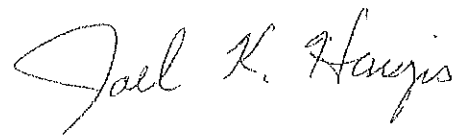
March 16, 2018

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

A handwritten signature in cursive script that reads "Joel K. Hargis".

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. Section 20 - Wireless communication facilities (WCF). 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 zoning 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 twenty-five (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 concealment 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.

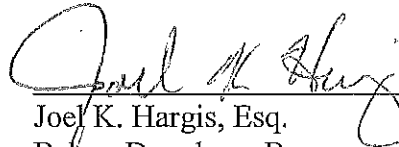
2. Alternative site analysis. All towers in a residential zone, within two thousand (2,000) feet of a scenic highway or Tennessee parkway, historic district or within 250 feet of a residential zone. a) The tower location preferences located in subsection C.3 must be addressed in a clear and complete written alternative site analysis that shows at least five (5) higher ranked preferred locations, alternative sites considered to the extent that such higher ranked 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 zoning 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.

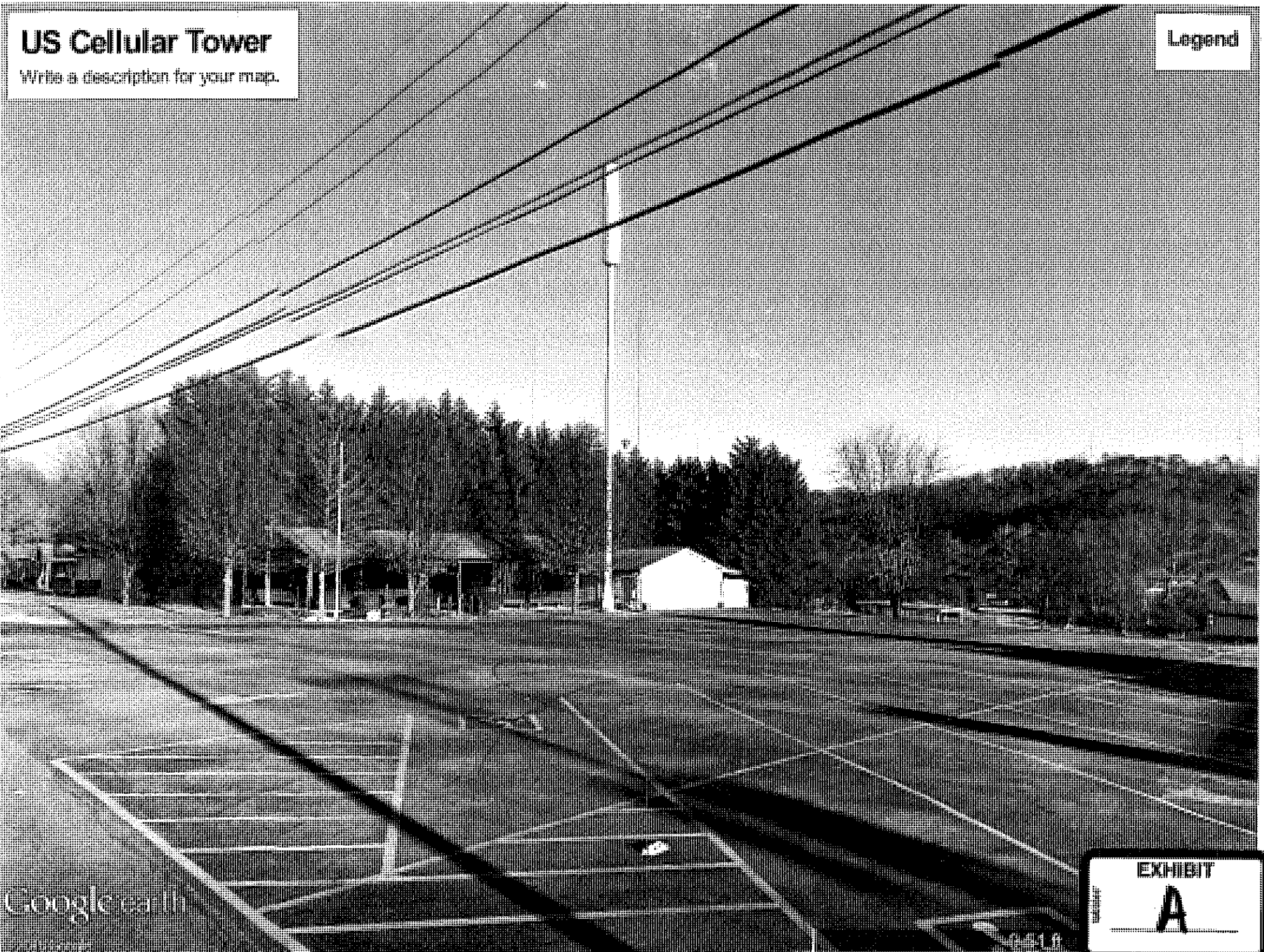


Joel K. Hargis, Esq.
Baker, Donelson, Bearman, Caldwell & Berkowitz,
PC
211 Commerce Street, Suite 800
Nashville, Tennessee 37201
Phone: (615) 726-7391
Fax: (615) 744-7391
Email: jhargis@bakerdonelson.com
Attorney for Verizon Wireless

US Cellular Tower

Write a description for your map.

Legend



Google Earth

EXHIBIT
A

Separation Radius

000(c)

Legend

Crown Castle Tower

US Cellular Single Tower

Blockwaller

Google Earth

2000

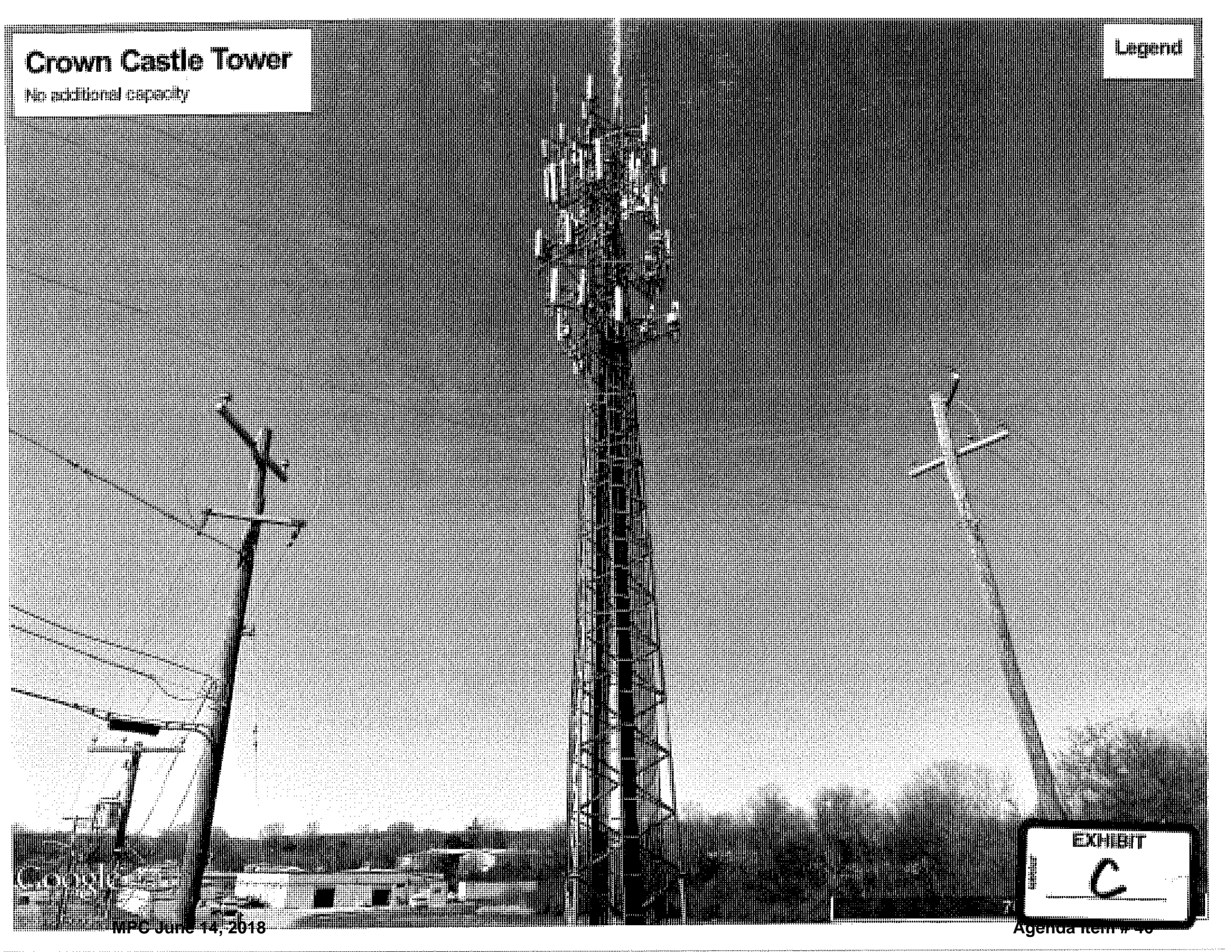
EXHIBIT

B

Crown Castle Tower

No additional capacity

Legend



EXHIBIT

C



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).



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.

A handwritten signature in black ink, appearing to read 'Leira S. Douthat'.

Leira S. Douthat
Project Manager

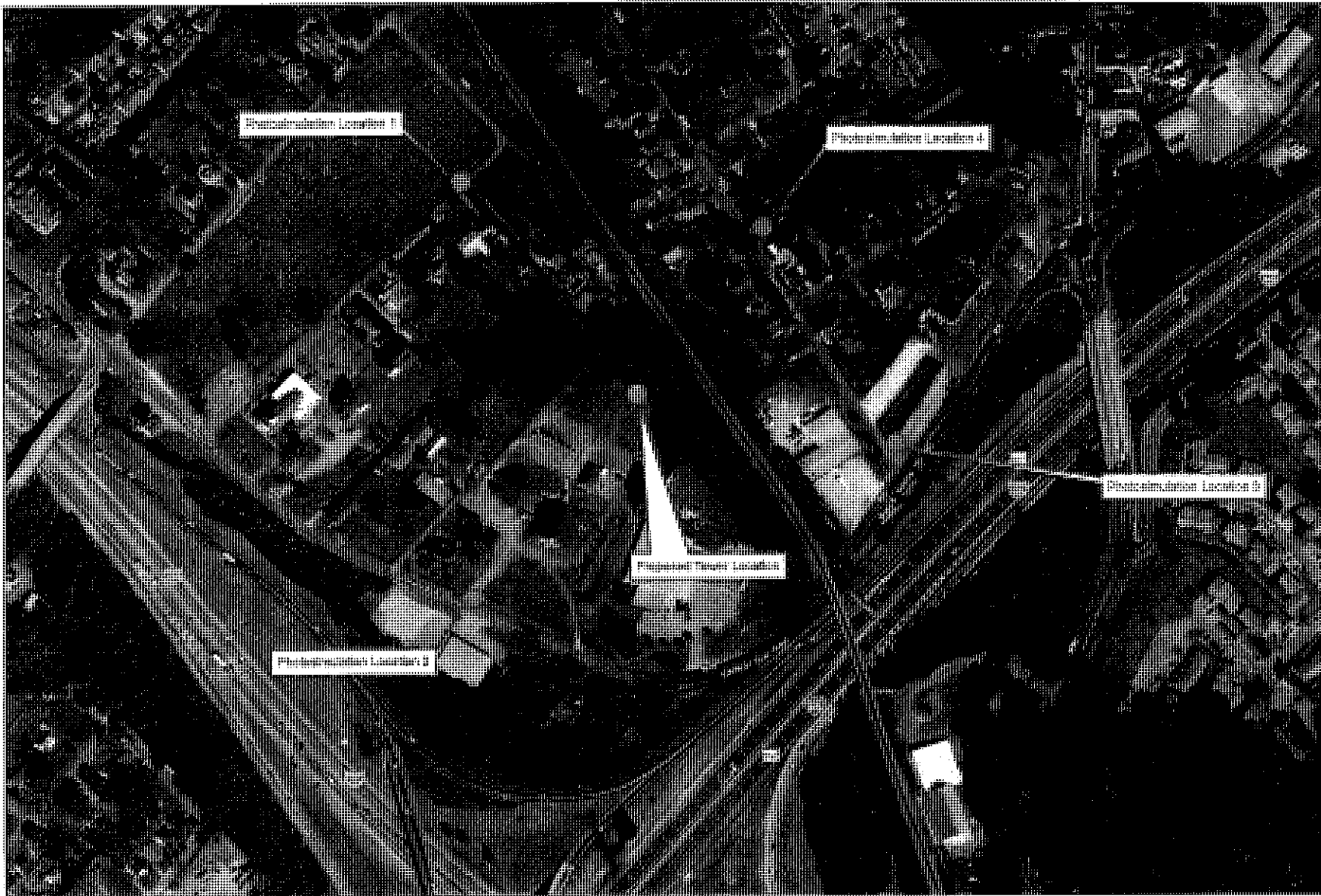
A handwritten signature in black ink, appearing to read 'Aaron Brummitt'.

Aaron Brummitt, RPA
Senior Scientist

Attachments: Appendix A1-A5



Attachments



Photostimulation Photograph Locations Proposed Bookwalter Tower Knoxville, Knox County, Tennessee	SCALE: 1:2,542 PROJECT NO: 4143-18-001	DATE: 1/29/2018 DRAWN BY: AB CHECKED BY: LD
	Service Layer Credit Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS,	APPENDIX A-1

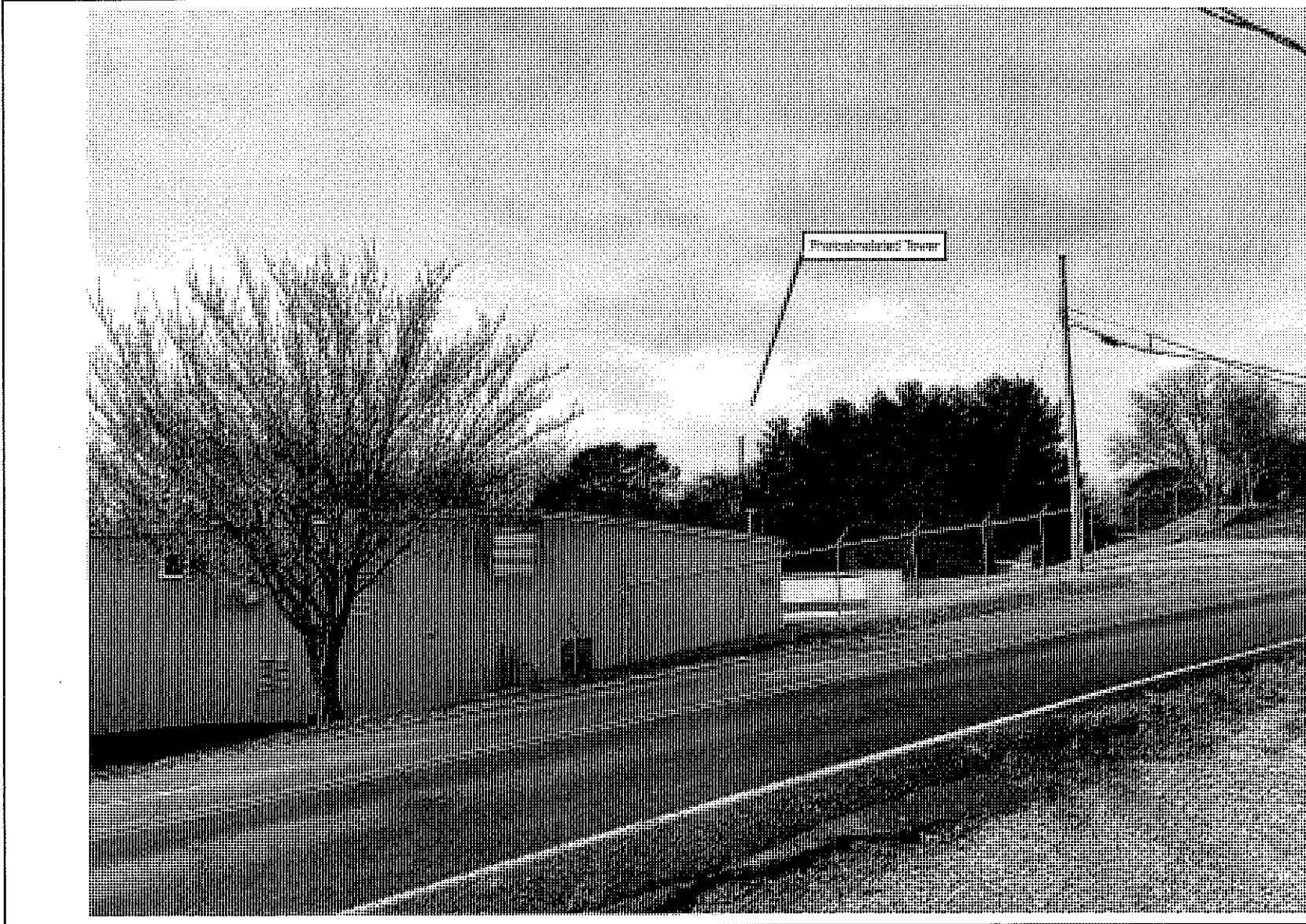


Proposed Bookwalter Tower

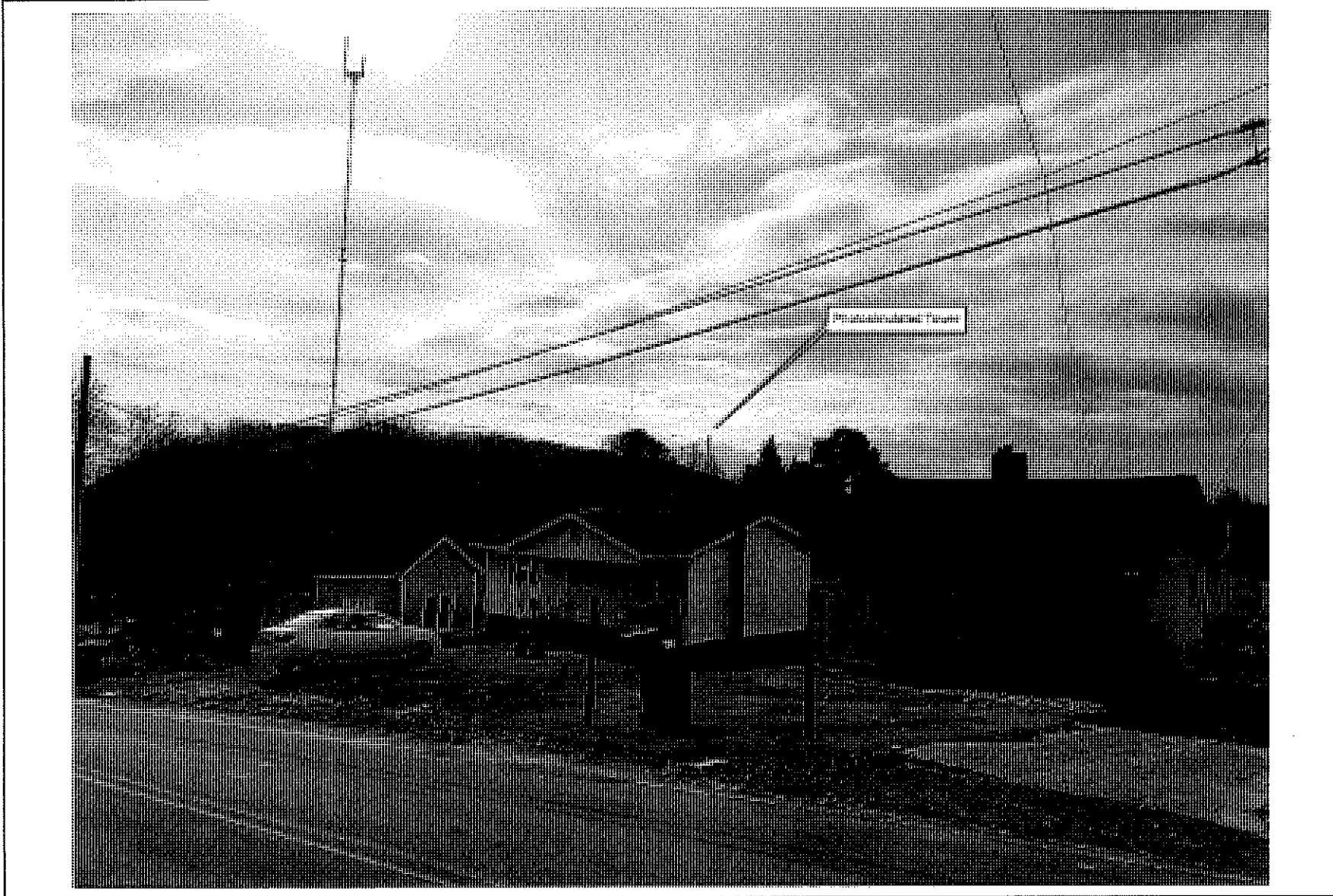
DATE: 1/29/2018 DRAWN BY: AB CHECKED BY: LD	SCALE: 1:2,542 PROJECT NO: 4143-18-001	Photosimulation 1 East of Bookwalter Cemetery Proposed Bookwalter Tower Knoxville, Knecc County, Tennessee	Service Layer Credits:		APPENDIX A-2
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Photosimulation 2 From Central Avenue Pike Proposed Bookwalker Tower Knoxville, Knox County, Tennessee	SCALE: 1:2,542 PROJECT NO: 4143-18-001	DATE: 1/29/2018 DRAWN BY: AB CHECKED BY: LD
	Service Layer Credits:	
APPENDIX A-3		



Photosimulation 3 From Dutch Valley Drive and Coster Road Proposed Bookwalter Tower Knoxville, Knox County, Tennessee	SCALE: 1:2,542 PROJECT NO.: 4143-18-001	DATE: 1/29/2018 DRAWN BY: AB CHECKED BY: LD
	Service Layer Credits:	
APPENDIX A-4		



Photosimulation 4 From Cosfer Road Proposed Bookwalker Tower Knoxville, Knox County, Tennessee	SCALE: 1:2,542 PROJECT NO: 4143-18-001	DATE: 1/29/2018 DRAWN BY: AB CHECKED BY: LD
	Service Layer Credits:	
APPENDIX A-5		

Network Operations

The Verizon Wireless logo, featuring the word "verizon" in a stylized font with a checkmark above the "i", followed by the word "wireless" in a smaller, sans-serif font.

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,

A handwritten signature in black ink, appearing to read "Jean M. Musa".

Jean M Musa
Specialist Regulatory/RE

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.

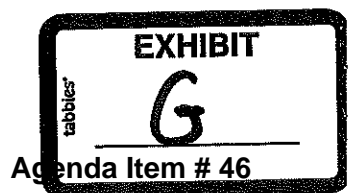
4. US Cellular – 223393

36.003700, -83.960300

Address: 4218 Central Avenue Pike, Knoxville, TN 37912

4834-3124-7964
3000001-140107

MPC June 14, 2018



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

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 (l)(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 (l)(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.

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 (l)(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 (l)(4)(a)(2)(a)(2)& (3)).

5. Kerney Property

Address: 308 Tillery Drive, Knoxville, TN 37912

Zone: C-2

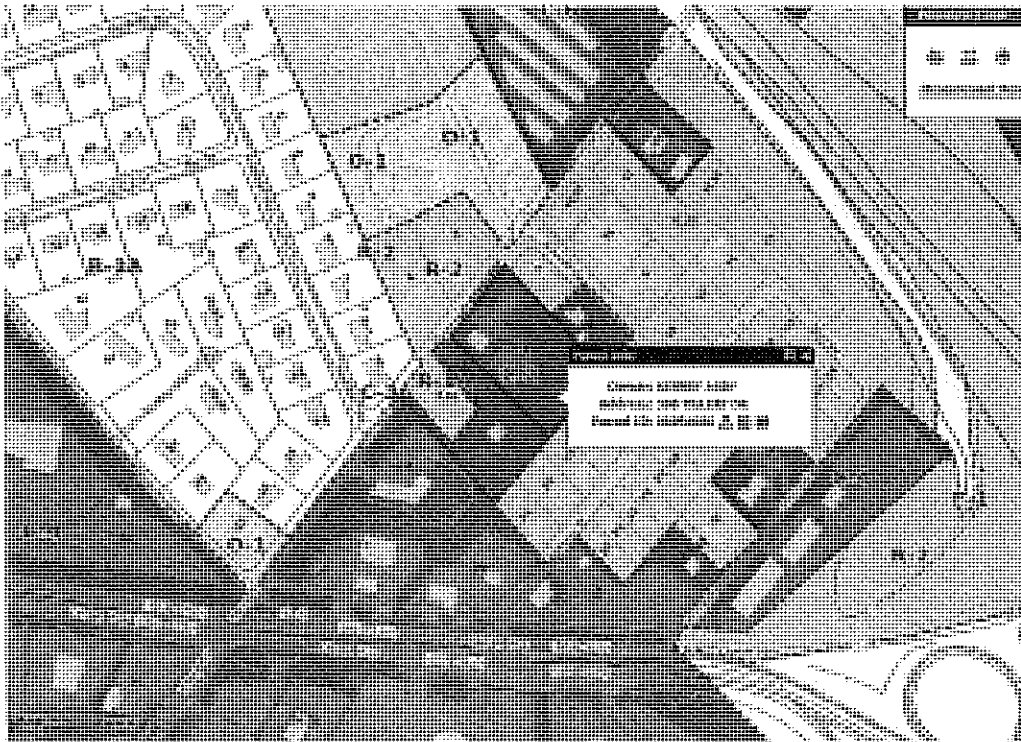
Analysis: Although located within more preferred zoning district, this candidate was located on a 1.05 acre parcel (069PA006). This candidate was rejected by Verizon Wireless due to its inability to comply with the setback requirements of Section 20. The parcel in question is only 200 feet in width and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

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)).

Network Operations



Verizon Wireless
8921 Research Drive
Charlotte, North Carolina 28262

Phone 704 510-8500

May 15, 2018

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

5-A-18-WCF

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 one additional carrier to locate their antenna.

Sincerely,

A handwritten signature in blue ink that reads "Jean M. Musa". The signature is fluid and cursive.

Jean M Musa
Specialist Reg/Real Estate

VERIZON WIRELESS

Telecommunications Tower Site Review

TOWER APPLICATION # 5-A-18-WCF

CONSULTANT'S SUMMARY

BOOKWALTER UNITED

Knoxville City

Location: 4110 Central Avenue Pike, Knoxville City

Proposed Tower Height: 105 foot Monopole Support Structure TYPE 1 Tower

Level II Review---Planning Commission

Address: 4110 Central Avenue Pike

Knoxville, Tennessee, 37912

District: # Parcel ID# 069P C 013 Deed: 1821 Page: 504

Use: Telecommunications antenna support structure

Zoning: R-2 (Residential)

Variances and waivers:. None required or requested.

Need: This is capacity fill site meaning that there is coverage in the area at the present but there is not enough capacity from existing sites to handle the increased traffic in the area resulting in dropped calls and sometime no access.

Instant Proposal: The instant proposal is for a short 110 foot monopole type I antenna. This means that the monopole is a "slick stick" with all antennae located within the structure and no external antennae. No lighting is required. The applicant meets the 121 foot setback requirement (110% of the height) from adjacent property lines. It is located on a church property abounded to the north east by the Norfolk Southern railroad. The applicant has made a showing of towers within a 1 mile radius and any co-location on these other structures is not feasible to allow the coverage needed.

Waiver: There is a waiver required for this application in that the proposed tower is located within about 600 feet of a pre-existing structure. The applicant has given justification for the waiver request.

Consultant's Recommendation: The applicant meets the requirements of the current Ordinance.

A handwritten signature in black ink, followed by the date "5-29-18" written below it.

**REPORT TO
METROPOLITAN PLANNING COMMISSION**

for

Proposed location of a Telecommunications Tower Site
Located at 4110 Central Avenue Pike
Knoxville, TN known as

“BOOKWALTER UNITED” SITE

VERIZON WIRELESS

UOR 5-A-18-WCF

COMPLIANCE WITH

THE MPC TELECOMMUNICATIONS FACILITY ORDINANCE

5/26/2018

The proposed site for the applicant is a 110 foot (overall height) Monopole antenna support structure type 1 (Slick Stick”). The supporting material from applicant has been reviewed for technical and Federal/State legal compliance as well as with the Knoxville City Wireless Communication Facilities Plan dated October 24, 2017.

REQUESTED

- 1. Location.** The location is within the City of Knox and is located at Parcel: ID# 069P C 013 Deed: 1821 Page: 504
- 2. Zoning.** R-2 (Residential)
- 3. Proposed Tower Height:** 105 foot Monopole tower (The maximum tower height in an R-2 zoned area is 125 feet AGL).
- 4. Address:** 4110 Central Avenue Pike
Knoxville, Tennessee
- 5. Tower height.** The requested height is 105 feet above ground level and will support up to 1 additional telecommunications carrier antennas for a total of 2 users. Lighting will **not** be required on this structure.
- 6. Variances.** The set back requirements in Article V Section 20 D(3)(h)(1)(a) of the Ordinance for Knoxville City in an R-1 zoned district is 110% of the height of the structure, in this case 116 feet, from the nearest property line. The proposed site meets that requirement and no variances are required.

7. **Site.** This application is for the construction of a new replacement Monopole type I antenna support structure to be located as a capacity fill site to provide added needed signal coverage in the area immediately surrounding the site.
8. **Use.** This antenna support structure will be used for telecommunications with the present state of the art communications technology using PCS and cellular communication sources. The need for the site has been justified and other sites within a mile of the proposed site are not feasible for this needed coverage.
9. **Setbacks.** The applicant meets the requirement of 110% of the height and no setback variances are required.
10. **Height.** The proposed structure is for 105 feet and no aviation lighting is required.
11. **Landscaping.** Landscaping is required for this site and the applicant proposes same.
12. **Other Towers for possible co-location:** There is one tower about 600 feet to the northwest of the proposed location that is owned by US Cellular, but it is too short and does not have the structural capacity for any additional antennae. There is a Crown Castle tower about a quarter mile to the northwest, but it is not feasible as it is filled to capacity from a structural standpoint. There are no other towers in the area.
13. **Stealth design/visual impact.** The proposed monopole is a slick stick design meaning that it appears as a vertical flag pole with no external antennae on it and is visually unobtrusive and virtually no impact on the area.
14. **Equipment cabinet.** The ordinance allows for a maximum of 400 square feet equipment shelter, however, the applicant is proposing small equipment cabinets for the equipment considerably less than 400 sq feet.

EVALUATION

The following is a list of items reviewed:

Check for other existing towers capable of supporting the load and elevation clearance requested by the applicant herein and within 1 mile radius of site.

Check for Antenna Support Structure stress analysis for co-location users' equipment support

Review support structure drawings and specifications with applicant

Review FAA lighting and marking requirements and proposals

Review FCC requirements regarding signal coverage, towers and lighting.

Review applicant's justification for site in compliance with the FCC's requirements for telecommunication company providers compliance with required coverage for the use of the general public.

Review Site plan by applicant

Check Zoning

Check setbacks for building and antenna support structure

Check proximity to other structures and district boundaries

Check nature of surrounding land uses

Check surrounding foliage and tree coverage

Check design of tower for esthetic changes

Check height requirements necessary for coverage

Check separation from other towers

Tennessee Code Annotated 13-24-305

Telecommunications Communications Act of 1996 as amended

Check frequencies proposed for possible interference to TV and radio reception in the immediate vicinity of the structure.

DISCUSSION

I visited and walked the proposed tower site that is a part of this review.

The site elevation at the new location is about 1019 feet. Sharp's Ridge to the south is only about a ¼ mile away and has an elevation of more than 1200 feet shadowing it from the city of Knoxville.

The proposed structure should not affect adjacent property as it is in an R-2 Residential zoned area but is near the parking lot of a church and abuts the Norfolk Southern Railroad tracks to the east. There are no residential units near the site.

The US Cellular tower about 600 feet northwest of the proposed site is too short and structurally incapable of supporting another antenna thus a waiver of the separation distance between towers is required.

The proposed access road to the site is level and access will be from Central Avenue Pike.

There is no emergency medical access issue with this site as it is at the end of the parking lot for the church and is level.

The fact that the applicant is proposing a vertical slick monopole with no external antennae...looking much like a flag pole should make the antenna stealth as to visual impact in the area. No lights are required for the structure.

SUMMARY

- (1) The proposed antenna support structure is a 105 foot Monopole structure including antennae. Lighting WILL NOT be required for this structure by the FAA due to its proposed height.
- (2) A review of the structure stress analysis on the proposed structure will support 1 other carrier near the upper level of the structure. It should be noted that the new 5G smart communications system are schedule for use beginning in 2020. This new system will require very small antennas within 35-75 feet of the ground when introduced. It is my recommendation that the monopole structure be designed to accommodate these additional 5 G antennae in the near future. It should be pointed out that to add future antennas to a structure such as the one proposed (i.e. "slick") it is very very difficult to add one internally within the structure. The applicant should attempt to convince another carrier to install its antenna and feedline from the beginning.
- (3) The structure design meets or exceeds FCC and EIA requirements.
- (4) The area surrounding the site is zoned residential but consists of churches and parking lots. There are no residences in the immediate area.
- (5) There is no general use technology (such as satellite communications) that is available at the present time nor in the immediate future that would negate the need for the structure. However, should such a technology become available and the structure of no further use, the Ordinance at Article 5 Section 20 requires it to be removed.
- (6) The proposed equipment housing facility consists of small equipment cabinets on a concrete slab and should have no visual impact.
- (7) The applicant tenants have received authorizations from the various governmental agencies, including the Federal Communications Commission, to provide communication service to the citizens of Knoxville, Tennessee.
- (8) The requested site will have minimal impact on the community involved by its very location and the wooded area at the back near the railroad tracks.
- (9) There is a waiver required as the proposed site is about 600 feet from an existing tower and the applicant has proposed a justification for the waiver.
- (10) The proposed site and structure will have no environmental impact within the federal guidelines.
- (11) Assuming that there are 2 carriers operating cellular or PCS transmitters/receivers at this site and all are operating at the same time, the radiation produced by the combination of all the users at the same time using the standards and protocols proposed and used by the carriers today, will be considerably below that established by the Federal Communications Commission and the EPA as creating any danger to humans or animals.

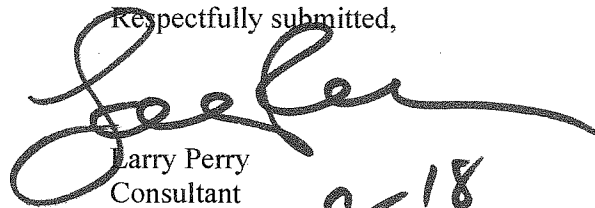
(12) The need for the structure in this area to provide for the wide spectrum wireless internet service and for other wireless voice and data services to be provided under government regulation by the various proposed carriers who plan to use the site has been previously established.

(13) The set backs required under the Ordinance are in compliance.

RECOMMENDATION

In light of the analysis and review of documents, it is my professional opinion that the applicant meets all requirements of the Ordinance and the federal requirements.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Larry Perry", with a long horizontal flourish extending to the right.

Larry Perry
Consultant

5-29-18

STATEMENT OF QUALIFICATIONS OF CONSULTANT

I, Larry Perry, do hereby state:

That I have degrees in Law and Engineering with extensive experience in towers and communications related activities;

That I have prepared numerous communications applications resulting in grants by the Federal Communications Commission and other federal agencies;

That I have been responsible for the design and construction of more than 3785 towers in 21 countries around the world;

That I have prepared Ordinances and other statutes for cities and states concerning tower usage within municipal boundaries, including many in Tennessee.

That my credentials are a matter of record with the FAA and the FCC;

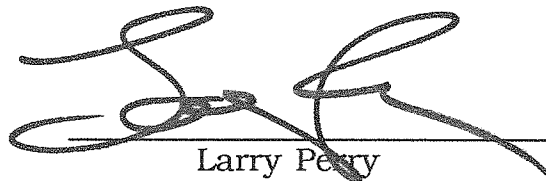
That I am a licensed attorney and Registered Professional Engineer in several states;

That I have testified before Congress on several occasions on communications related matters;

That I have served as an advisor to three FCC Chairmen and the US Department of State on International communications matters;

That I have more than 40 years experience in tower design, evaluation and construction;

That I have and presently do teach courses in communications and radiation at the college level at major universities and for private industry.



Larry Perry

SUPPORTING MATERIALS

Old Country Store

Sylvia Dr

Elyria Dr

Coster Rd

Inskip Pool and Park



Broadview Dr

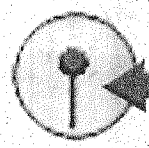
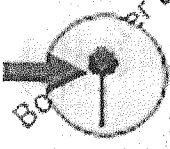


Dalton Pl Wy

Bookwalter Cemetery



US Cellular Site



Proposed Site

Dutch Valley Dr

Claudius Rd

Probus Rd

Geta Rd

Nerva Rd

Perintax Dr

Central Avenue Pike

Dutch Valley

Dutch V Dr

Alba Rd

Nicholas Rd NW

Tillery Dr



Schubert Rd

Sky Dr

Reeder Chevrolet

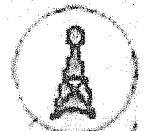


Tillery Rd

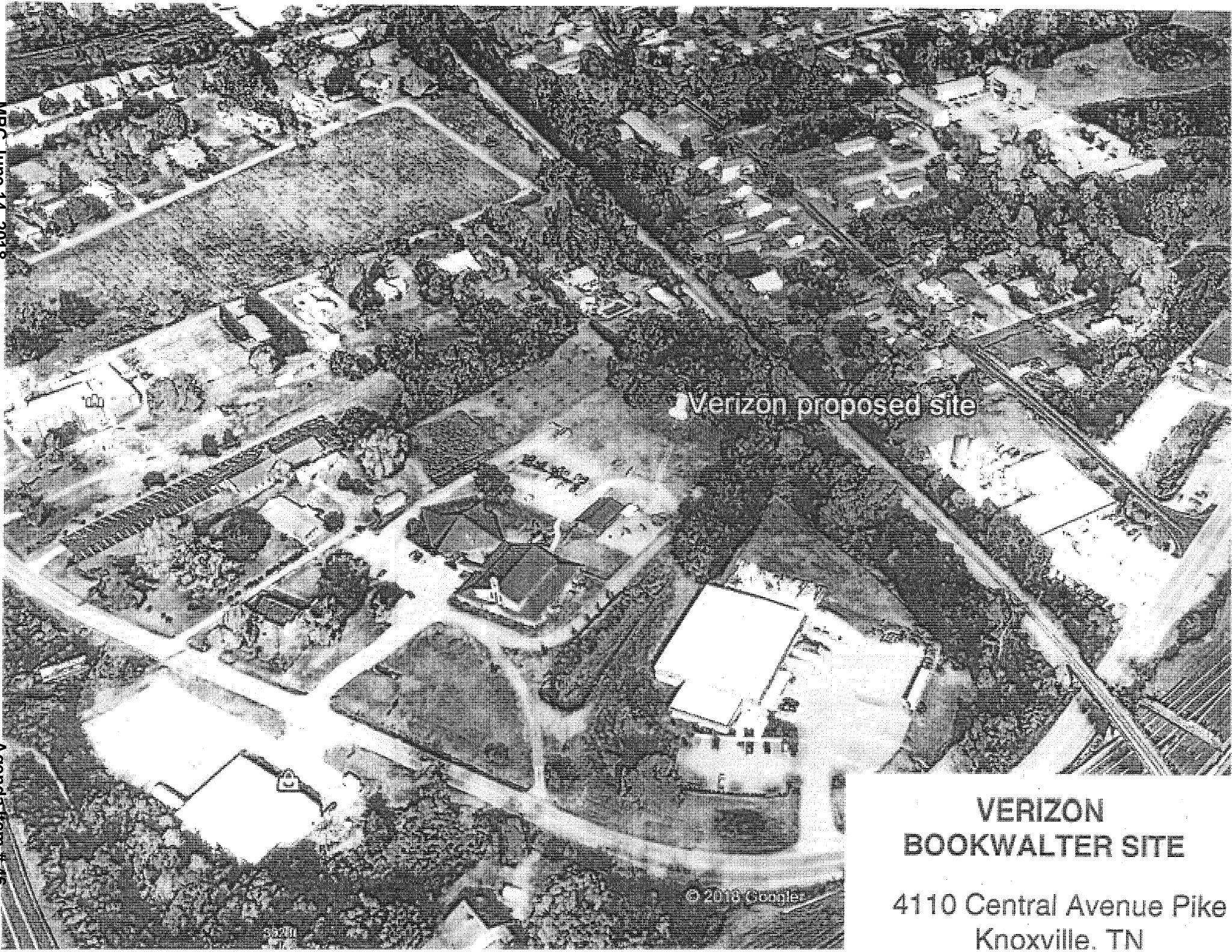


Bruhlin Rd

Share
Mem



MPC June 14, 2018



Verizon proposed site

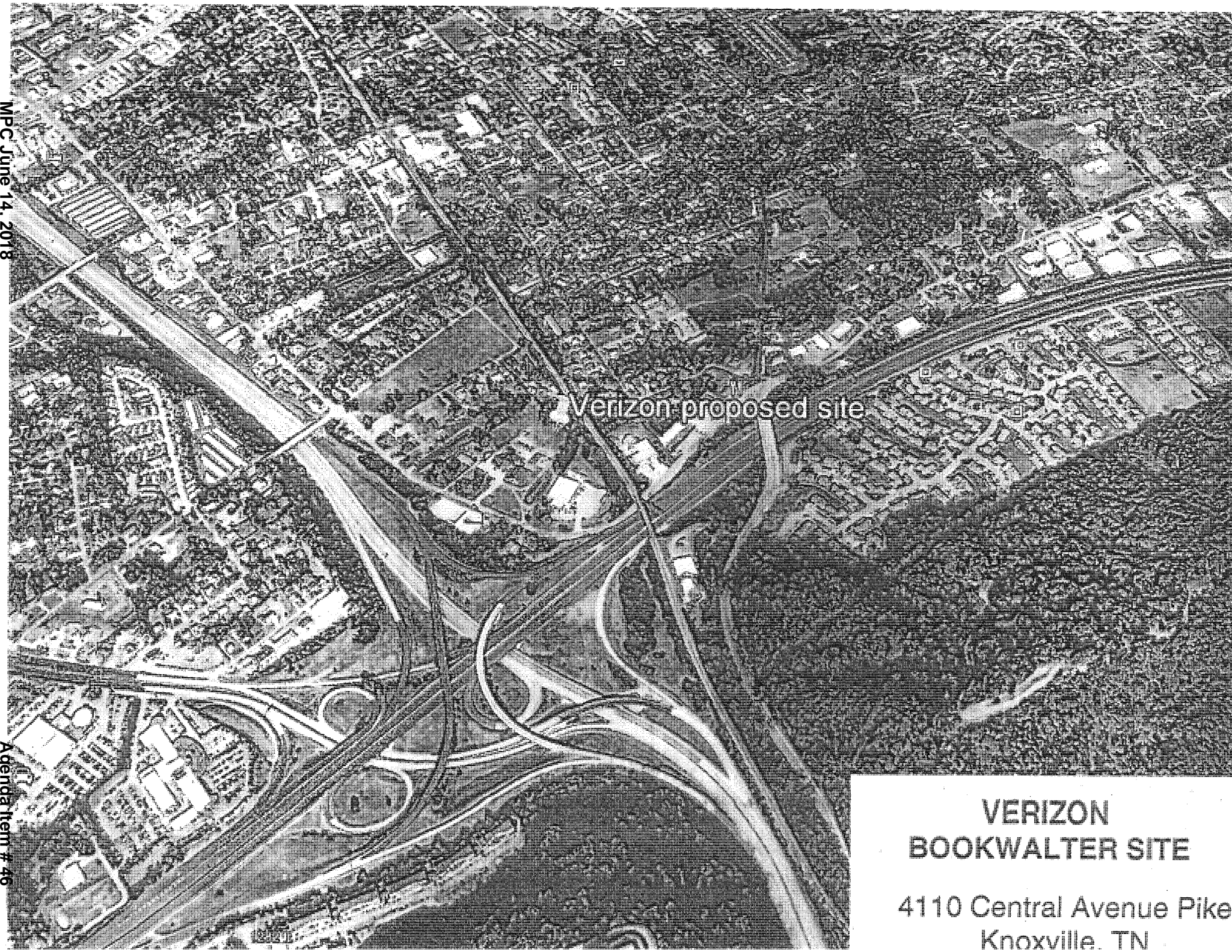
**VERIZON
BOOKWALTER SITE**

4110 Central Avenue Pike
Knoxville, TN

Agenda Item # 46

MPC June 14, 2018


Agenda Item # 46



Verizon proposed site

**VERIZON
BOOKWALTER SITE**

4110 Central Avenue Pike
Knoxville, TN

Tower Type	ID Num	Site Owner	Height	Dist
 Registered	(1)	<u>American Towers, Llc.</u>	1534 feet	.41 miles
	(2)	<u>Knox County Emergency Communication District</u>	171 feet	.55 miles
	(3)		215 feet	.85 miles
	(4)		460 feet	.85 miles
	(5)	<u>Pinnacle Towers Llc</u>	1030 feet	.87 miles
	(6)	<u>Spectrasite Communications, Llc.</u> <u>Through American Towers, Llc.</u>	1456 feet	.96 miles
	(7)	<u>Verizon Wireless Tennessee Partnership</u>	295 feet	1.08 miles

Sharp Ridge sit

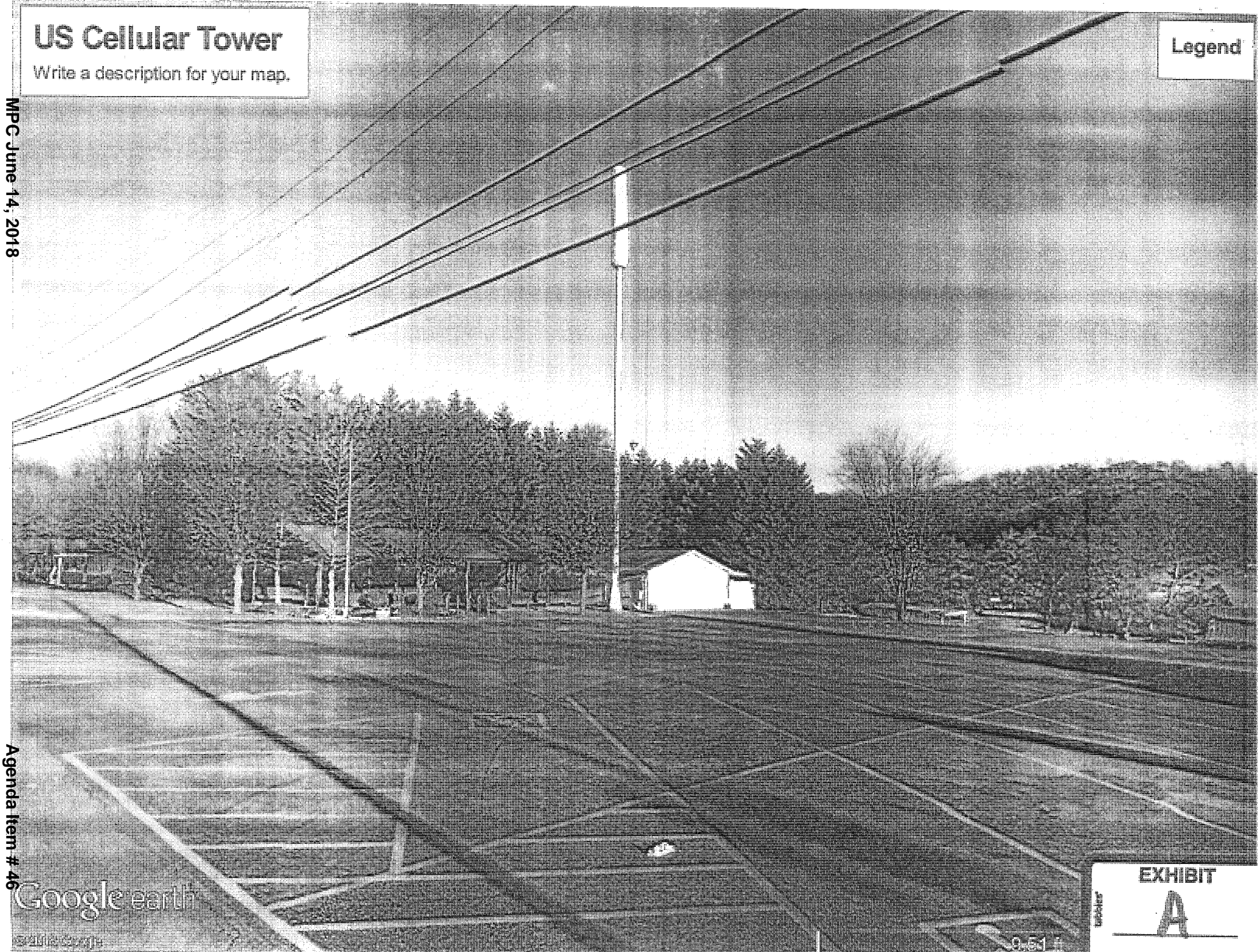
US Cellular Tower

Write a description for your map.

Legend

MPC June 14, 2018

Agenda Item # 46



Google earth

EXHIBIT

A

0.51 ft

Separation Radius

D3(c)

Legend



Google earth

2000

EXHIBIT

B

TABLE

APPLICATION FOR
 WIRELESS COMMUNICATION FACILITY
 CERTIFICATE OF APPROPRIATENESS



Name of Applicant: Verizon Wireless Tennessee Partnership
 Date Filed: 3-20-18 Fee Paid: \$3000.00 File Number: 5-A-18-WCF
FOR STAFF USE ONLY:
 Complete Application Date: _____ Lead Staff: _____

PROPERTY INFORMATION

Address: 4110 Central Avenue Pike
 General Location: Northeast side of Central Avenue Pike, southeast of Bookwalter Dr.
 Map/Parcel No.: 069P C 013 Size of Tract: 5.03ac
 Jurisdiction: City of Knoxville
 Zoning District: R-2
 Existing Land Use: Church

REQUEST

Type of Approval Requested: Level II - Type 1 Monopole
 Locating on a Structure or Building
 Small Cell
 New Tower
 Req'd Pre-Application Meeting: 1/11/2018
 MPC Meeting: May 10, 2018

General Requirements

- Letter of Commitment
- Site Plan
- Statement of Purpose
- Landscape Agreement

Additional Requirements for New Towers

- Collocation and alternative site analysis
- Alternative Site Analysis
- Visual Analysis
- Design Justification

Additional Req'ts for Locating on Structure/Building

- Collocation Consent

Additional Requirements for Small Cell

- Design Summary

PROPERTY OWNER

Name: Church Christus Victor Lutheran, Inc.
 Address: 4110 Central Avenue Pike
 City/St/Zip: Knoxville, TN 37912
 Telephone: _____ Fax: _____

APPLICATION CORRESPONDENCE

Name: Joey Hargis
 Address: 211 Commerce Street, Suite 800
 City/St/Zip: Nashville, TN 37201
 Telephone: 615-726-7391 Fax: _____

APPLICATION AUTHORIZATION

I hereby certify that I am the authorized applicant, representing the property owner involved in this request or the option holder on same.

Name: Joey Hargis, Attorney for Verizon Wireless Signature: *On correspondence dated March 16, 2018*
 Address: 211 Commerce Street, Suite 800
 City/St/Zip: Nashville, TN 37201 Telephone: 615-726-7391 Fax: _____ Email: jhargis@bakerdonelson.com

Application Accepted By: *Thomas Buchler*

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

A handwritten signature in cursive script that reads "Joel K. Hargis".

Joel K. (Joey) Hargis, Attorney