

**BOARD OF ADJUSTMENT
MEETING
THURSDAY, MAY 28, 2020
6:30 PM
Council Chambers
300 West Crowell Street
Monroe NC**

AGENDA

- Item 1.** **Call to Order**
- Item 2.** **Approval of Minutes**
- Item 3.** **Variance from Section 156.137 of Unified Development Ordinance for Properties Located at 417 Hill Street and 420 Miller Street (Tabled from February 27, 2020 Meeting)**
- Item 4.** **Variance from Sections 156.137 and 156.140 of Unified Development Ordinance for Properties Located at 314, 316 and 318 Cemetery Drive (Tabled from February 27, 2020 Meeting)**
- Item 5.** **Special Use Permit Request to Allow Construction of Telecommunications Tower in General Business (GB) Zoning District for Property Located at 1504 Miller Street**
- Item 6.** **Next Meeting**
- Item 7.** **Adjournment**

Attention: BOARD MEMBERS:

Please call Maryann Brown at 704.282.4527 to confirm your attendance. Thank you!

***cc: Mujeeb Shah-Khan
 Ashley Duncan
 Doug Britt
 Keri Hutchins***

**MINUTES OF THE
BOARD OF ADJUSTMENT MEETING
FEBRUARY 27, 2020 at 6:30 P.M.
Council Chambers
300 West Crowell Street
Monroe NC**

To S. Laney – e-mailed 2-28-20

Item 1. Call to Order

Chairman George Massey called the February 27, 2020 meeting to order at 6:30 p.m. The Clerk of the Board called the roll. Mr. Massey noted that there was a quorum present with 2 members.

Members Present: George Massey, Louis Philippi (alternate)

Members Absent: David Covington

Staff Present: Doug Britt, Senior Planner; Mujeeb Shah-Khan, City Attorney; Joe McCollum, BOA Attorney and Maryann Brown, Administrative Assistant

Guests: Zach Mendelson; Omar Nunez; Marisol Nunez; Arturo Nunez; Luis Melendez

Mr. Massey said that this Board can hear the Special Use Permit request but the Variance requests will have to be postponed. Mr. McCollum said a Special Use Permit request can be heard by a majority of the Board present. He said by North Carolina statute, a Variance cannot be granted except by a vote of 4/5 of the total Board. He said we do not have 4/5 of the total Board here tonight. He said there is no way we can grant the Variance so he would suggest that there be a motion the Variance requests be postponed to the next meeting.

Mujeeb Shah-Khan, City Attorney, said one (1) additional motion is needed that the Variance requests be continued without further advertising.

Mr. Massey asked for a motion. Louis Philippi asked if there was anyone who showed up for the Variances. There were two (2) people. He asked if they were aware that the Variance requests were going to be postponed until next month. They said yes and said they made a trip to Monroe for this meeting.

Mr. Shah-Khan said this was something that the staff nor the Board knew would happen until everyone walked in here about five (5) minutes ago. He said it is not an intentional thing directed to anyone. He said staff did not know there would be two (2) members here tonight. He said we apologize on behalf of the City that this happened; however, there was nothing that staff could do nor Members of the Board.

Motion: Louis Philippi made a motion that we postpone Items #5 and #6 until the March meeting without further advertisement.
Second: George Massey
Action: The motion to postpone the meeting passed unanimously.

Mr. Shah-Khan thanked the Chairman for his assistance in this matter. Mr. Massey said this time of year, with the flu and everything else going around, sometimes you are lucky to have anybody here.

Item 2. Approval of Minutes – Meeting of January 23, 2020 Meeting

Approval of the minutes for the meeting was requested.

Motion: Louis Philippi moved to adopt the minutes of the January 23, 2020 Meeting.
Second: George Massey
Action: The motion to approve the minutes passed unanimously.

Item 3. Case #20-11000004 – George Massey said the applicant, Omar Nunez, is requesting a Special Use Permit to allow an Event Facility in the General Business (GB) zoning district located at the property of 1819 Dickerson Blvd. (Tax ID #09-264-026)

Mr. Massey said that anyone who is going to give testimony in this case needs to be administered the oath. Doug Britt and Omar Nunez came forward to be sworn in.

Doug Britt, Senior Planner, introduced this item. He said this is a Special Use Permit request by Omar Nunez for the property located at 1819 Dickerson Blvd. He said the applicant is requesting a Special Use Permit to allow an Event Facility in the General Business (GB) zoning district. He said at this time he will present the findings:

1. The property at 1819 Dickerson Blvd. is owned by John Couchell and is zoned GB (General Business). (Exhibit 1, 2)
2. The applicant submitted a Special Use Permit Application on February 6, 2020 requesting to operate an Event Facility on the property. (Exhibit 3)
3. According to Section 156.110 of the City of Monroe Unified Development Ordinance titled “Table of Permissible Uses”, Event Facilities are only allowed in the GB zoning district with the issuance of a Special Use Permit from the Board of Adjustment (Exhibit 4).
4. A Standard 5 Appraisal Impact Study was completed by Morrison Appraisal, Inc. It is the opinion of Morrison Appraisal, Inc. that the proposed Event Center use will not adversely affect the value of the adjoining properties. (Exhibit 5)
5. All adjoining property owners have been properly notified of this special use permit. (Exhibit 6)

Doug said he would be glad to answer any questions. He said the applicant is here tonight to answer any questions as well.

Mr. Massey asked Doug if staff received any calls or requests from the adjacent property owners. Doug said they just received a few calls or inquiries as to what was being requested.

Mr. Massey asked if anyone would like to give testimony or speak, you may come forward.

Mr. Omar Nunez came forward and said his address is 1706 Polk Street, Monroe, NC.

Mr. Massey said to Mr. Nunez that he was given a list of questions to answer. He asked Mr. Nunez if there was anything he would like to add.

Mr. Nunez said he just wanted to make it clear that what they are doing is more of a banquet hall style, specifically for weddings and sweet 16 parties. He said basically family-based events. He said it is not a nightclub. He said alcohol sales will not occur there. He said it will not bring the typical crowd a nightclub would bring. He said usually friends and family do not want to cause trouble at a wedding, per se. He said typically their events are peaceful.

Mr. Nunez said they have another location that they are currently operating on Sutherland Avenue. He said they have been operating there for about 2.5 years. He said they normally don't have any trouble with the City and the past two (2) years they have only received two (2) noise complaints. He said other than that they do not have any trouble. He said he knows there is a demand for event centers here in Monroe.

Mr. Nunez said we've been in this business, we know what we are doing and there is a need for this in Monroe. Mr. Massey asked Mr. Nunez where his business was on Sutherland Avenue. Mr. Nunez said it used to be a nightclub (Rhythms). Mr. Massey asked if it was besides the American Legion. Mr. Nunez said yes.

Mr. Nunez said people have fun. He said he does not want to say it's the nicest building in the area, but the people know how to have a good time.

Louis Philippi asked Mr. Nunez to point out the building he will be renting. Mr. Nunez pointed out the old Harris Teeter store. He said right next to it is the old CVS pharmacy. He said that is the area that he will be using for the events center. He said one of the reasons they liked the space is that it is cinder blocked completely on three ends. He said this will help with the noise. He said the cinder block was dry walled.

Louis Philippi asked Mr. Nunez how many square feet would he have. Mr. Nunez said 8,400 square feet.

Louis Philippi asked Mr. Nunez how many entrances/exits are there. Mr. Nunez said there is an entrance in the front and an exit in the back. He said the front is a sliding door, about 72 inches. He said since it is a sliding door there is a few extra inches of clearance to get out in case of an emergency. He said the back door is not as large as the one in front, about 36 inches and is steel.

Mr. Nunez said the building is not that long, 130 feet long. He said this would make it easy to disperse the crowd at both ends in case of an emergency. He said the building has a sprinkler system and does have a fire system. He said other than the restrooms, it meets all the building requirements.

Louis Philippi asked if the Fire Marshall has been consulted. Doug Britt said tonight's hearing is just a rezoning matter. He said if approved, and he has to submit plans, and they will be reviewed by Building Standards, Fire and all other departments.

Mr. Nunez said they are trying to do their due diligence before they sign the lease.

Mr. Massey asked if any Board Members had any questions. There were none.

Mr. Massey asked for a motion from the Board on each standard:

A. The use will not materially endanger the public health or safety if located, designed, and proposed to be operated according to plan.

Motion: Louis Philippi made a motion that this standard is met because he felt they would not endanger the public health or safety.
Second: George Massey
Action: The motion that the standard was met passed unanimously.

Mr. Nunez said regarding public safety, they typically have security during our events and also in the larger events we have City of Monroe Police there to assist us in maintaining peace.

B. The use or development complies with all regulations and standards of the City of Monroe Zoning Ordinance, as well as any other state or local rule or regulation governing the development of land.

Motion: Louis Philippi made a motion that this standard is met and that the use or development complies with all regulations and standards of the City of Monroe Zoning Ordinance.
Second: George Massey
Action: The motion that the standard was met passed unanimously.

C. The use or development will not adversely impact surrounding property and will not substantially injure the value of adjoining property.

Motion: Louis Philippi made a motion that the standard is met and the use or development will not adversely impact surrounding property and will not injure the value of adjoining property. He said it is a commercial development with adequate parking, etc.
Second: George Massey
Action: The motion that the standard was met passed unanimously.

D. The location and character of the use, if developed according to the plan as submitted and approved, will be in harmony with the area in which it is to be located and will be in general conformity with the Monroe Land Development Plan.

Motion: Louis Philippi made a motion that the standard is met and is in conformity with the Monroe Land Development Plan as it will fit right in with the area.
Second: George Massey
Action: The motion that the standard was met passed unanimously.

Mr. Massey asked for a motion to grant or deny the Special Use Permit request.

Motion: Louis Philippi made a motion to grant the Special Use Permit based on the fact that all standards have been met, with no conditions.
Second: George Massey
Action: The motion to approve the Special Use Permit passed unanimously.

Mr. Massey said the Special Use Permit has been granted.

Item 4. Case #20-34000006 – The applicant, Carolina Tractor & Equipment, is requesting a Variance to the sign section of the Zoning Code for a larger directional sign at 2211 Morgan Mill Road (Tax ID # 09-143-007F)

THIS ITEM HAS BEEN WITHDRAWN BY THE APPLICANT.

Item 5. Case #20-34000004 – The applicant, Zach Mendelson, is requesting a Variance from Section 156.137 of the Unified Development Ordinance titled Minimum Lot Size for the properties located at 417 Hill Street and 420 Miller Street (Tax ID # 09-228-221)

TABLED

Item 6. Case #20-34000005 – The applicant, Zach Mendelson, is requesting a Variance from Section 156.137 of the Unified Development Ordinance titled Minimum Lot Size and Section 156.140 of the Unified Development Ordinance titled Building Setback Requirements for the properties located at 314, 316 and 318 Cemetery Drive (Tax ID #09-235-113)

TABLED

Item 7. Other

Louis Philippi said he sits on the County Planning Board and he noticed that they do not do the Pledge of Allegiance nor an Invocation. He said the County Commission does this and now the Planning Board will do this because they think it is a good idea. He said he wanted it put in these minutes that he has made this request for the Board of Adjustment and when there is a full Board here let's see what they have to say.

Mujeeb Shah-Khan said as City Attorney we would not necessarily recommend an Invocation or the Pledge of Allegiance. He said this is something you may wish to go to City Council to discuss. He said the City Council, the body that appoints all the members, does not do either the Pledge of Allegiance or an Invocation. He said they have discussed the issue and it is something that the Council has chosen to not do. He said we don't encourage it. He said we would be happy to talk with you as a Board at the appropriate time. He said as your attorney would tell you, there are issues with that with recent Supreme Court cases that restrict the use of a prayer. He said while everyone may feel it is the appropriate thing to do, you also have to understand that given the primacy of the First Amendment there are some concerns. He said the City Council does not do this either. Mr. Philippi said the County does this. Mr. Shah-Khan said the County is the County, and this is the City. He said if that is something the County wishes to do, that is their choice.

Louis Philippi said now the City knows that at least one (1) of its citizens does not agree with the policy. He said he would ask that they change it.

Mujeeb Shah-Khan said thank you to Mr. Philippi. He said if you want to discuss this with the full board, we do not recommend the March meeting because that, depending on scheduling, would occur when he is not here. He said he would need to be there to discuss the City's position.

Item 8. Next Meeting - March 26, 2020

Item 9. Adjournment

Mr. Massey said he would entertain a motion to adjourn at this time.

Motion: Louis Philippi made a motion to adjourn the meeting.

Second: George Massey

Action: The motion to adjourn passed unanimously.

The meeting was adjourned at 7:02 p.m.

Respectfully submitted,

George Massey
Chairman

Maryann Brown
Clerk of the Board



STAFF REPORT

Case # 20-34000004

TO: Board of Adjustment Members

DATE: May 28, 2020

FROM: Doug Britt, Senior Planner

SUBJECT: Variance Request by Zach Mendelson for the minimum lot size of 417 Hill Street and 420 Miller Street

SUMMARY STATEMENT

Zach Mendelson, is requesting a variance to the minimum lot size section of the Zoning Code for the dwellings located at 417 Hill Street and 420 Miller Street. The addresses of 417 Hill Street and 420 Miller Street are currently improved with a house at each address, but are located on one parcel. The applicant is requesting a variance to the minimum lot size requirement for the R-10 zoning district in order to subdivide the property so each house would be located on its own parcel.

SITE DATA

Type of Action:	Variance
Date of Petition:	January 9, 2020
Name of Petitioner:	Zach Mendelson
Location:	417 Hill Street & 420 Miller Street
Tax ID #:	09-228-221
Lot Size:	.37 Acres
Zoning Classification:	R-10

REVIEW

Findings:

1. The dwellings located at 417 Hill Street and 420 Miller Street are owned by Kbud, LLC and are zoned R-10 (single family residential). (Exhibit 1 & 2)

2. On January 9, 2020, the applicant submitted a variance application in order to request a variance to the minimum lot size requirement for the R-10 zoning district in order to subdivide the property so each dwelling would be located on its own parcel. (Exhibit 3)
3. According to Section 156.137 titled Minimum Lot Size of the Unified Development Ordinance the minimum lot size required for the R-10 zoning district is 10,000 square feet. The applicant is requesting a variance to subdivide the 16,009 square feet parcel to create a lot for each dwelling. The applicant is requesting a 2,000 square foot variance for each lot. (Exhibit 4 & 5)
4. All adjacent property owners have been notified of the proposed variance. (Exhibit 6)

Conclusions:

1. It is the Board's CONCLUSION, that unnecessary hardship (would/would not) result from the strict application of the ordinance.
2. It is the Board's CONCLUSION, that the hardship (is/is not) peculiar to the applicant's property.
3. It is the Board's CONCLUSION, that the hardship (is/is not) the result of the applicant's own actions.
4. (a) It is the Board's CONCLUSION, that the variance (is/is not) consistent with the spirit, purpose, and intent of the ordinance.

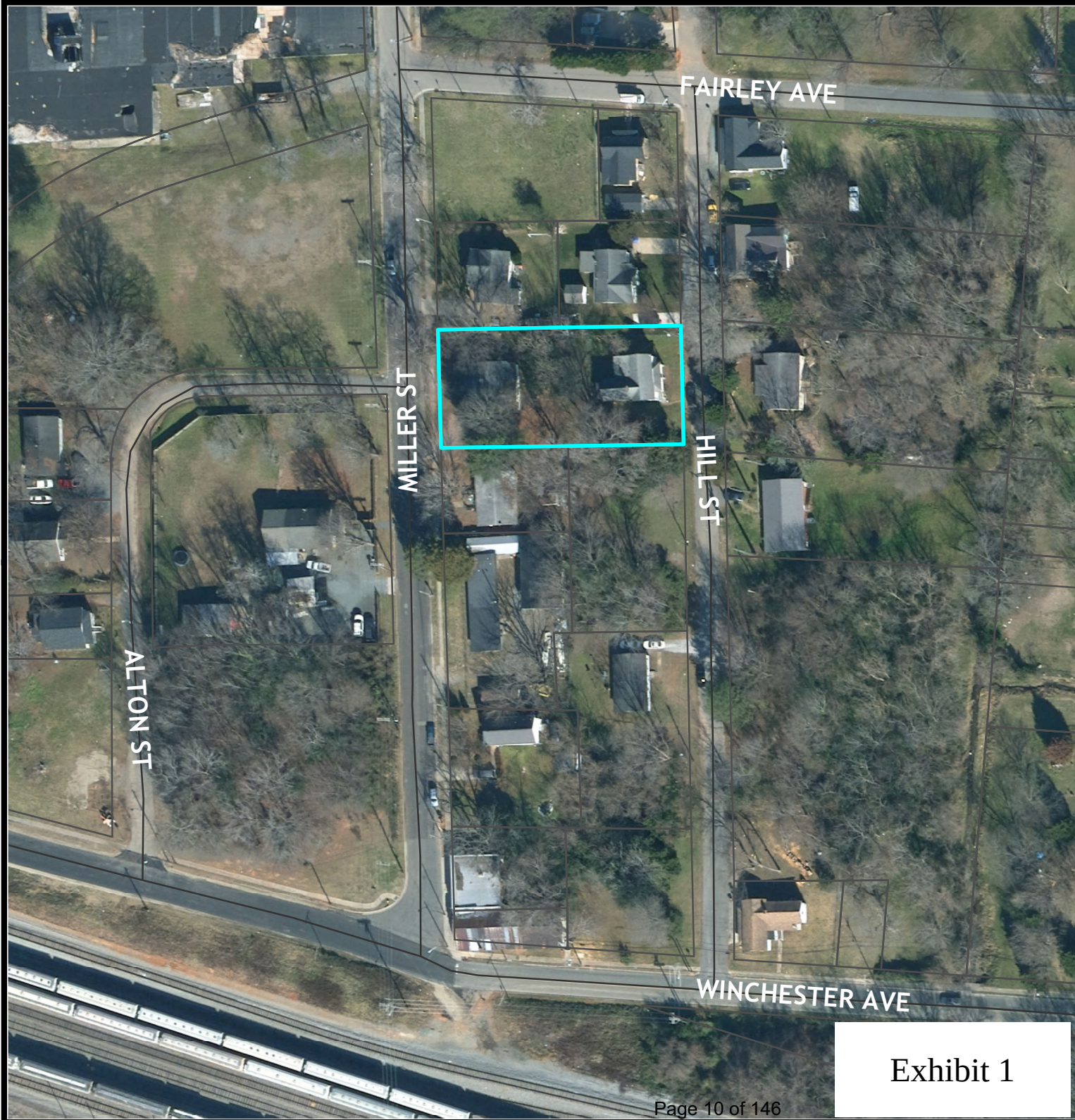
(b) It is the Board's CONCLUSION, that in granting of the variance, the public safety (will/will not) be secured and substantial justice (will/will not) be achieved.
5. The variance (will/will not) result in the extension of a nonconforming situation in violation of § 156.90, and it (will/will not) authorize the initiation of a nonconforming use of land.

THEREFORE, on the basis of all foregoing, IT IS ORDERED that the application Variance 20-34000004 be (**approved/denied**).

Attachments:

Exhibit 1: Aerial Map
Exhibit 2: Zoning Map
Exhibit 3: Application
Exhibit 4: Section 156.137 of UDO
Exhibit 5: Survey
Exhibit 6: APOs

Prepared by: DB 3-18-20



Ortho Map

Case #: 20-34000004

Legend

-  Centerlines
-  Parcels

**Existing: R-10
(Residential- High Density)**

Owner: KBUD, LLC

Acres: .37



0 90 180
 Feet

Exhibit 1

Zoning Map

Case #: 20-34000004

Legend

— Centerlines

□ Parcels

Zoning Districts

Code

■ R-10

■ G-I

**Existing: R-10
(Residential- High Density)**

Owner: KBUD, LLC

Acres: .37



0 90 180
Feet

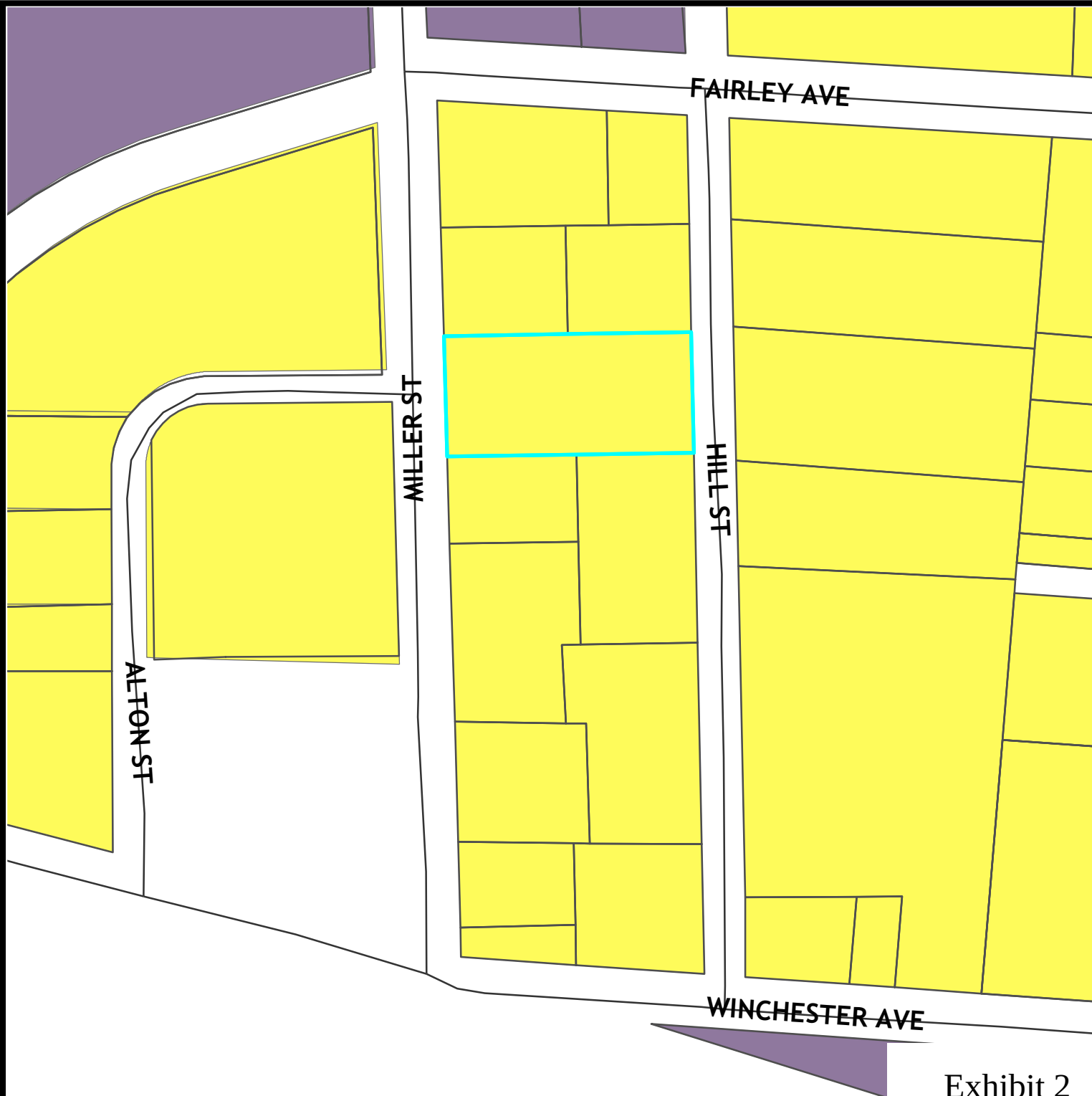


Exhibit 2



City of Monroe
Variance Application Form
5219 The Plaza, Charlotte, NC 28215

Applicant's Name: Zach Mendelson -

Applicant's Address: 5219 The Plaza, Charlotte, NC 28215

Property Owner's Name: Kbud LLC

Property Owner's Address: 5219 The Plaza, Charlotte, NC 28215

For Staff Use Only

Application #: 20-3400004

Date Submitted: _____

Approved: _____

Denied: _____

Legal Relationship of Applicant to Property Owner: Project Manager of Kbud LLC

Contact Person Name and Phone Number: Zach Mendelson 704-345-2830

Existing Use of Property: Rental

Property Location: 417 Hill St and . 420 Miller St

Tax Map Number: 09 - 228 - 221 Lot Size: 16,009 Zoning District: R-10

Ordinance section number to which a variance is being sought. 156.137

Proposed variance description: - minimum lot size

The Board of Adjustment does not have unlimited discretion in deciding whether to grant a variance. Under NC State law, the Board must reach the conclusions listed below before it can issue a variance. When unnecessary hardships would result from carrying out the strict letter of a zoning ordinance, the board of adjustment shall vary any of the provisions of the ordinance upon a showing of the conclusions below.

Please provide facts and arguments on how the request for a variance meets each of the conclusions listed below. Please be as specific as possible in your statements. Should you need more room to complete the information, please attach a separate sheet.

1. **There are unnecessary hardships in the way of carrying out the strict letter of the ordinance.** [It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property, and it is not sufficient that failure to grant the variance will simply make the property less valuable.]

We acquired this lot with 2 single family structures. To conform with Sec 5.020 and to create two lots that are identical to adjacent lots on either side of property. See parcels 09228220 and 09228218

2. **The hardship results from conditions that are peculiar to the property, such as location, size, or topography.** [Hardships resulting from personal circumstances, as well as hardships resulting from conditions that are common to the neighborhood or the general public, may not be the basis for granting a variance]

The two units are on single lot, size 16,009 sqft and with variance the new proposed lot sizes would be 8,004 each. These lots will be identical to neighboring lots.

3. **The hardship did not result from actions taken by the applicant or the property owner.** [The act of purchasing property with knowledge that circumstances exist that may justify the granting of a variance shall not be regarded as a self-created hardship]

We acquired the existing 2 structures on a single lot.

4. **The requested variance is consistent with the spirit, purpose and intent of the ordinance, such that public safety is secured, and substantial justice is achieved.**

Our goal is to subdivide , so 1 unit per lot can be achieved, creating consistency on the block.

5. **The variance will neither result in the extension of a nonconforming situation in violation of § [156.90](#), nor authorize the initiation of a nonconforming use of land.**

We will continue to use the properties as rental properties.

Request for variances may need to be accompanied by a sketch plan or survey from a Registered Land Surveyor. Said plan shall show, in a scaled form, the location and size of:

1. The boundaries of the lot(s) in question,
2. The size, shape and location of all existing buildings, parking facilities and accessory buildings,
3. The size, shape and location of all proposed buildings, parking facilities and accessory uses,
4. The location of all setbacks and front lot widths as measured at the front setback,
5. The location and type of screening and buffering proposed; and
6. Other information deemed by the Zoning Officer necessary to consider the application complete.

Zach Mendelson

Printed name of Applicant

[Signature]

Signature of Applicant

2-19-20

Date

Travis Howard

Printed name of Owner

[Signature]

Signature of Owner

2-19-20

Date

FOR STAFF USE ONLY

(PLEASE DO NOT WRITE BELOW THIS LINE)

Scaled plan attached: Yes ☒ _____

No _____

Fee Attached: Yes ☒ _____

No

Adjoining property owner's information attached: Yes ☒ _____

No _____

Public hearing date: 2-27-20

Notice to applicant and adjoining property owners mailed on: _____ INT. _____

Action taken by the Board of Adjustment: _____

Notification of Action Mailed to applicant on: _____

§ 156.137 MINIMUM LOT SIZE.

Subject to the provisions allowed for in any conditional zoning district and/or § [156.131](#) Single Family Supplementary Standards, all lots in the following zones shall have at least the amount of square footage indicated in the following table:

<i>Zone</i>	<i>Minimum Square Feet</i>
R-40	40,000
R-20	20,000
R-10	10,000
R-MF	40,000
CBD	No minimum
OT	10,000 - single-familyNo minimum for all other uses
G-B	No minimum
G-1	No minimum
C	0

* As adopted and noted in the conditional district file for each district.

(Ord. O-2003-63, passed 12-16-03)

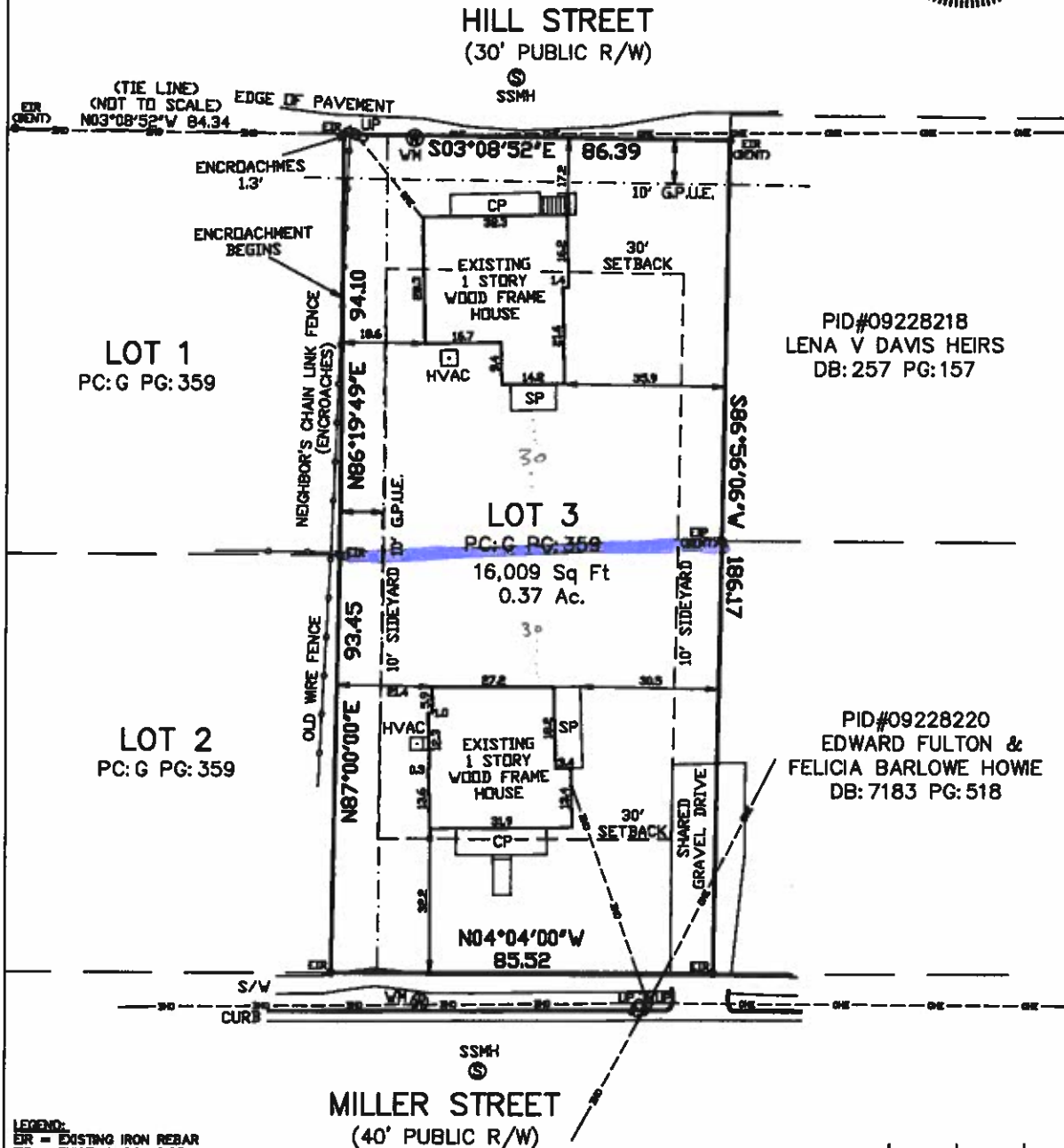
Exhibit 4

THIS IS TO CERTIFY THAT ON THE 13th DAY OF NOVEMBER, 2019 AN ACTUAL SURVEY WAS MADE UNDER MY SUPERVISION OF THE PROPERTY SHOWN ON THIS PLAT, AND THAT THE BOUNDARY LINES AND THE IMPROVEMENTS, IF ANY, ARE AS SHOWN HEREON.

NOTES:

1. PARCEL ID# 09228221
2. DEED RECORDED AT DB: 7010 PG: 825
MAP RECORDED AT PG: G PG: 359
3. AREA COMPUTED BY COORDINATE METHOD.
4. THIS PROPERTY MAY BE SUBJECT TO ADDITIONAL RECORDED OR UNRECORDED EASEMENTS, RIGHTS-OF-WAY, OR RESTRICTIVE COVENANTS, OTHER THAN SHOWN.
5. THE SUBJECT PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON MAPS PREPARED BY THE F.E.M.A. AND FEDERAL INSURANCE ADMINISTRATION.
6. SETBACKS SHOWN ARE PER PLAT SPECIFICATIONS.

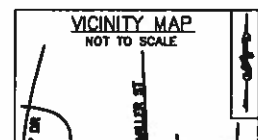
Justin Mckeown
JUSTIN MCKEOWN, PLS L-4739



MILLER STREET
(40' PUBLIC R/W)



SCALE 1"=30'



ON POINT SURVEYING, PLLC
2119 STATION ROAD
MARRIETTEVILLE, NC 28103
980-338-8300
LICENSE NO. P-0716

A PHYSICAL SURVEY
OF
#420 MILLER ST & 417 HILL ST
CITY OF MONROE, UNION COUNTY, NC

Exhibit 5

DRAWN BY: JOM FIELDWORK BY: AC, JOM
LDO: MILLER420 CGO: MILLER420

ACCTNO	OWNERNAME1	OWNERADDRE	OWNERCITY	OWNERSTATE
09228223	HERNANDEZ ESDRAS JESUS MADRID	304 FAIRLEY AVE	MONROE	NC
09228221	TOMS TEDDY W	605 LANCASTER AVE	MONROE	NC
09228222	CASTILLO FRANCISCO SANDOVAL	419 HILL ST	MONROE	NC
09228206	D K PROPERTIES OF UNION LLC	4001 SIKES MILL RD	MONROE	NC
09228225	VACA DIANA CORTEZ	409 MILLER ST	MONROE	NC
09228222A	GODINEZ JOSE ANTONIO SANCHEZ	424 MILLER ST	MONROE	NC
09228218	DAVIS LENA V HEIRS	415 HILL ST	MONROE	NC
09228216	GARCIA ELIZABETH	704 S BRANCH ST	MONROE	NC
09228217	BARTELL JASON R	PO BOX 639	LOCUST	NC
09228219	CAMPBELL JOHN M CO	P O BOX 687	MONROE	NC
09228224	D K PROPERTIES OF UNION LLC	4001 SIKES MILL RD	MONROE	NC
09228208	MONDRAGON LUIS AGUILAR	412 HILL ST	MONROE	NC
09228207	XALOCAN CLAUDIO SANTILLO	416 N HILL ST	MONROE	NC
09228220	HOWIE FELICIA BARLOWE	3802 PARKWOOD SCHOOL RD	MONROE	NC
09228221	TOMS TEDDY W	605 LANCASTER AVE	MONROE	NC
09228210	BARTELL JASON R	PO BOX 639	LOCUST	NC
09228209	WILLIAMS STEPHANIE LYNNE	PO BOX 3317	MONROE	NC
09229015	NETTLES MARK A	7121 STRAWBERRY LN	STANFIELD	NC
09229015	NETTLES MARK A	7121 STRAWBERRY LN	STANFIELD	NC

Exhibit 6

Order

RE: Variance Application for 417 Hill Street and 420 Miller Street

This matter coming on to be heard and being heard by the City of Monroe Board of Adjustment at its meeting held on the 23RD day of April, 2020 to consider application number 20-34000004, submitted by Zach Mendelson of Kbud, LLC requesting a variance to Section 156.137 titled Minimum Lot Size and having heard all the evidence and arguments presented at the hearing, makes the following FINDINGS OF FACT and draws the following CONCLUSIONS:

Findings:

1. The dwellings located at 417 Hill Street and 420 Miller Street are owned by Kbud, LLC and are zoned R-10 (single family residential). (Exhibit 1 & 2)
2. On January 9, 2020, the applicant submitted a variance application in order to request a variance to the minimum lot size requirement for the R-10 zoning district in order to subdivide the property so each dwelling would be located on its own parcel. (Exhibit 3)
3. According to Section 156.137 titled Minimum Lot Size of the Unified Development Ordinance the minimum lot size required for the R-10 zoning district is 10,000 square feet. The applicant is requesting a variance to subdivide the 16,009 square feet parcel to create a lot for each dwelling. The applicant is requesting a 2,000 square foot variance for each lot. (Exhibit 4 & 5)
4. All adjacent property owners have been notified of the proposed variance. (Exhibit 6)

Conclusions:

1. It is the Board's CONCLUSION, that unnecessary hardship (would/would not) result from the strict application of the ordinance.
2. It is the Board's CONCLUSION, that the hardship (is/is not) peculiar to the applicant's property.
3. It is the Board's CONCLUSION, that the hardship (is/is not) the result of the applicant's own actions.
4. (a) It is the Board's CONCLUSION, that the variance (is/is not) consistent with the spirit, purpose, and intent of the ordinance.

(b) It is the Board's CONCLUSION, that in granting of the variance, the public safety (will/will not) be secured and substantial justice (will/will not) be achieved.
5. The variance (will/will not) result in the extension of a nonconforming situation in violation of § 156.90, and it (will/will not) authorize the initiation of a nonconforming

use of land.

THEREFORE, on the basis of all the foregoing, IT IS ORDERED that the application for Variance application 20-34000004 be (**approved/denied**).

Ordered this 28th day of May, 2020

George Massey, Chairman-Board of Adjustment

Date



STAFF REPORT

Case # 20-34000005

TO: Board of Adjustment Members

DATE: May 28, 2020

FROM: Doug Britt, Senior Planner

SUBJECT: Variance Request by Zach Mendelson for the minimum lot size and setback requirements of 314, 316, and 318 Cemetery Drive

SUMMARY STATEMENT

Zach Mendelson, is requesting a variance to the minimum lot size and setback requirements of the Zoning Code for the dwellings located at 314, 316, and 318 Cemetery Drive. All of the addresses are currently improved with a single family home but are located on one parcel. The applicant is requesting a variance to the minimum lot size for the R-10 zoning district and setback requirements in order to subdivide the property so each house would be located on its own parcel.

SITE DATA

Type of Action:	Variance
Date of Petition:	January 9, 2020
Name of Petitioner:	Zach Mendelson
Location:	314, 316, 318 Cemetery Drive
Tax ID #:	09-235-113
Lot Size:	.63 Acres
Zoning Classification:	R-10

REVIEW

Findings:

1. The dwellings located at 314, 316, and 318 Cemetery Drive are owned by Kbud, LLC and are zoned R-10 (single family residential). (Exhibit 1 & 2)
2. On January 9, 2020, the applicant submitted a variance application in order to request a variance to the minimum lot size for the R-10 zoning district and setback requirements in

order to subdivide the property so each dwelling would be located on its own parcel. (Exhibit 3)

3. According to Section 156.137 titled Minimum Lot Size of the Unified Development Ordinance the minimum lot size required for the R-10 zoning district is 10,000 square feet and the side yard setback pursuant to Section 156.140 of the Unified Development Ordinance titled Building Setback Requirements is ten (10) foot. The applicant is requesting a variance to subdivide the 28,347 square feet parcel to create three separate parcels for each dwelling. The applicant is requesting the lot size for 314 Cemetery Drive to be 7,525 square feet (2,475 square foot variance request) and the lot size for 316 Cemetery Drive to be 9,112 square feet (888 square foot variance request) Additionally, the applicant is requesting a 1-foot variance for the side yard setbacks for both 316 and 318 Cemetery Drive. (Exhibit 4 & 5)
4. All adjacent property owners have been notified of the proposed variance. (Exhibit 6)

Conclusions:

1. It is the Board's CONCLUSION, that unnecessary hardship (would/would not) result from the strict application of the ordinance.
2. It is the Board's CONCLUSION, that the hardship (is/is not) peculiar to the applicant's property.
3. It is the Board's CONCLUSION, that the hardship (is/is not) the result of the applicant's own actions.
4. (a) It is the Board's CONCLUSION, that the variance (is/is not) consistent with the spirit, purpose, and intent of the ordinance.

(b) It is the Board's CONCLUSION, that in granting of the variance, the public safety (will/will not) be secured and substantial justice (will/will not) be achieved.
5. The variance (will/will not) result in the extension of a nonconforming situation in violation of § 156.90, and it (will/will not) authorize the initiation of a nonconforming use of land.

THEREFORE, on the basis of all foregoing, IT IS ORDERED that the application Variance 20-34000005 be (**approved/denied**).

Attachments:

Exhibit 1: Aerial Map
Exhibit 2: Zoning Map
Exhibit 3: Application
Exhibit 4: Section 156.137 of UDO
Exhibit 5: Survey
Exhibit 6: APOs

Prepared by: DB 3-18-20



Ortho Map

Case #: 20-34000005

Legend

- Centerlines
- Parcels

**Existing: R-10
(Residential- High Density)**

Owner: KBUD, LLC

Acres: .63

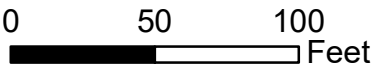


Exhibit 1

Zoning Map

Case #: 20-34000005

Legend

— Centerlines

----- City Limits

□ Parcels

Zoning Districts

Code

■ R-10

■ CD

**Existing: R-10
(Residential- High Density)**

Owner: KBUD, LLC

Acres: .63



0 50 100
Feet

Exhibit 2



City of Monroe

Variance Application Form

Applicant's Name: Zach Mendelson -

Applicant's Address: 5219 The Plaza, Charlotte, NC 28215

Property Owner's Name: Kbud LLC

Property Owner's Address: 5219 The Plaza, Charlotte, NC 28215

For Staff Use Only	
Application #:	_____
Date Submitted:	_____
Approved:	_____
Denied:	_____

Legal Relationship of Applicant to Property Owner: Project Manager of Kbud LLC

Contact Person Name and Phone Number: Zach Mendelson 704-345-2830

Existing Use of Property: Rental

Property Location: 314, 316, and 318 Cemetery

Tax Map Number: 09 - 235 - 113 Lot Size: 28348 Zoning District: R-10

Ordinance section number to which a variance is being sought. 156.137

Proposed variance description: - minimum lot size and minimum set backs (side)

The Board of Adjustment does not have unlimited discretion in deciding whether to grant a variance. Under NC State law, the Board must reach the conclusions listed below before it can issue a variance. When unnecessary hardships would result from carrying out the strict letter of a zoning ordinance, the board of adjustment shall vary any of the provisions of the ordinance upon a showing of the conclusions below.

Please provide facts and arguments on how the request for a variance meets each of the conclusions listed below. Please be as specific as possible in your statements. Should you need more room to complete the information, please attach a separate sheet.

1. **There are unnecessary hardships in the way of carrying out the strict letter of the ordinance.** [It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property, and it is not sufficient that failure to grant the variance will simply make the property less valuable.]

We acquired this lot with 3 single family structures. To conform with Sec 5.020 and to create three lots with one structure each. We are requesting variance on lot size and set-back in order to subdivide a large single lot with 3 structures, to 3 separate lots with one unit each.

2. **The hardship results from conditions that are peculiar to the property, such as location, size, or topography.** [Hardships resulting from personal circumstances, as well as hardships resulting from conditions that are common to the neighborhood or the general public, may not be the basis for granting a variance]

The new proposed property lines are as fairly and practically dividing the property into 3 lots. Due to the existing locations of the structures, we proposed new lines within the best of what was given.

3. **The hardship did not result from actions taken by the applicant or the property owner.** [The act of purchasing property with knowledge that circumstances exist that may justify the granting of a variance shall not be regarded as a self-created hardship]

We acquired the existing 3 structures on a single lot as is.

4. **The requested variance is consistent with the spirit, purpose and intent of the ordinance, such that public safety is secured, and substantial justice is achieved.**

Our goal is to subdivide , so 1 unit per lot can be achieved, creating consistency on the block and throughout the county. This also allows for overarching management to be more efficient for tracking one house, one lot.

5. **The variance will neither result in the extension of a nonconforming situation in violation of § [156.90](#), nor authorize the initiation of a nonconforming use of land.**

We will continue to use the properties as rental properties.

Request for variances may need to be accompanied by a sketch plan or survey from a Registered Land Surveyor. Said plan shall show, in a scaled form, the location and size of:

1. The boundaries of the lot(s) in question,
2. The size, shape and location of all existing buildings, parking facilities and accessory buildings,
3. The size, shape and location of all proposed buildings, parking facilities and accessory uses,
4. The location of all setbacks and front lot widths as measured at the front setback,
5. The location and type of screening and buffering proposed; and
6. Other information deemed by the Zoning Officer necessary to consider the application complete.

Zach Mendelson
Printed name of Applicant

[Signature]
Signature of Applicant

2-19-20
Date

Travis Howard
Printed name of Owner

[Signature]
Signature of Owner

2-19-20
Date

FOR STAFF USE ONLY
(PLEASE DO NOT WRITE BELOW THIS LINE)

Scaled plan attached: Yes ☒ No ☐ Fee Attached: Yes ☒ No ☐

Adjoining property owner's information attached: Yes ☐ No ☐

Public hearing date: 2-27-20

Notice to applicant and adjoining property owners mailed on: _____ INT. _____

Action taken by the Board of Adjustment: _____

Notification of Action Mailed to applicant on: _____

§ 156.137 MINIMUM LOT SIZE.

Subject to the provisions allowed for in any conditional zoning district and/or § 156.131 Single Family Supplementary Standards, all lots in the following zones shall have at least the amount of square footage indicated in the following table:

<i>Zone</i>	<i>Minimum Square Feet</i>
R-40	40,000
R-20	20,000
R-10	10,000
R-MF	40,000
CBD	No minimum
OT	10,000 - single-familyNo minimum for all other uses
G-B	No minimum
G-1	No minimum
C	0

(Ord. O-2003-63, passed 12-16-03)

§ 156.140 BUILDING SETBACK REQUIREMENTS.

(A) No portion of any building may be located on any lot closer to any lot line or to the right-of-way line, whichever is more restrictive, than is authorized in the table set forth in this section.

(B) As used in this section, the term "building" includes any substantial structure which by nature of its size, scale, dimensions, bulk, or use tends to constitute a visual obstruction or generate activity similar to that usually associates with a building. Without limitation the generality of the foregoing, the following structures shall be deemed to fall within this description: Fences running along lot boundaries adjacent to public street right-of-way if such fences exceed six feet in height and are substantially opaque.

(C) Notwithstanding any other provisions of this chapter, a sign may be erected on or affixed to a structure that (i) has a principal function that is something other than the support of the sign (e.g., a fence), but (ii) does not constitute a building as defined in this chapter, only if such sign is located so as to comply with the setback requirement applicable to freestanding signs in the district where such sign is located.

(D) Gas pumps and overhead canopies or roofs shall have a 5 foot setback minimum from all public right-of-ways.

(E) With the exception of properties outlined in Subsections (F) and (G) of this section and §§ 156.132 and 156.98 of this chapter, setbacks from all property lines shall be a minimum of 10 feet from all right-of-ways.

(F) Minimum setbacks for properties within the Central Business District shall be all property lines.

(G) Properties having frontage along any of the following streets shall have a minimum of a 50-foot setback from all public right-of-ways: *

(Ord. O-2003-63, passed 12-16-03; Am. Ord. O-2004-18, passed 6-1-04)

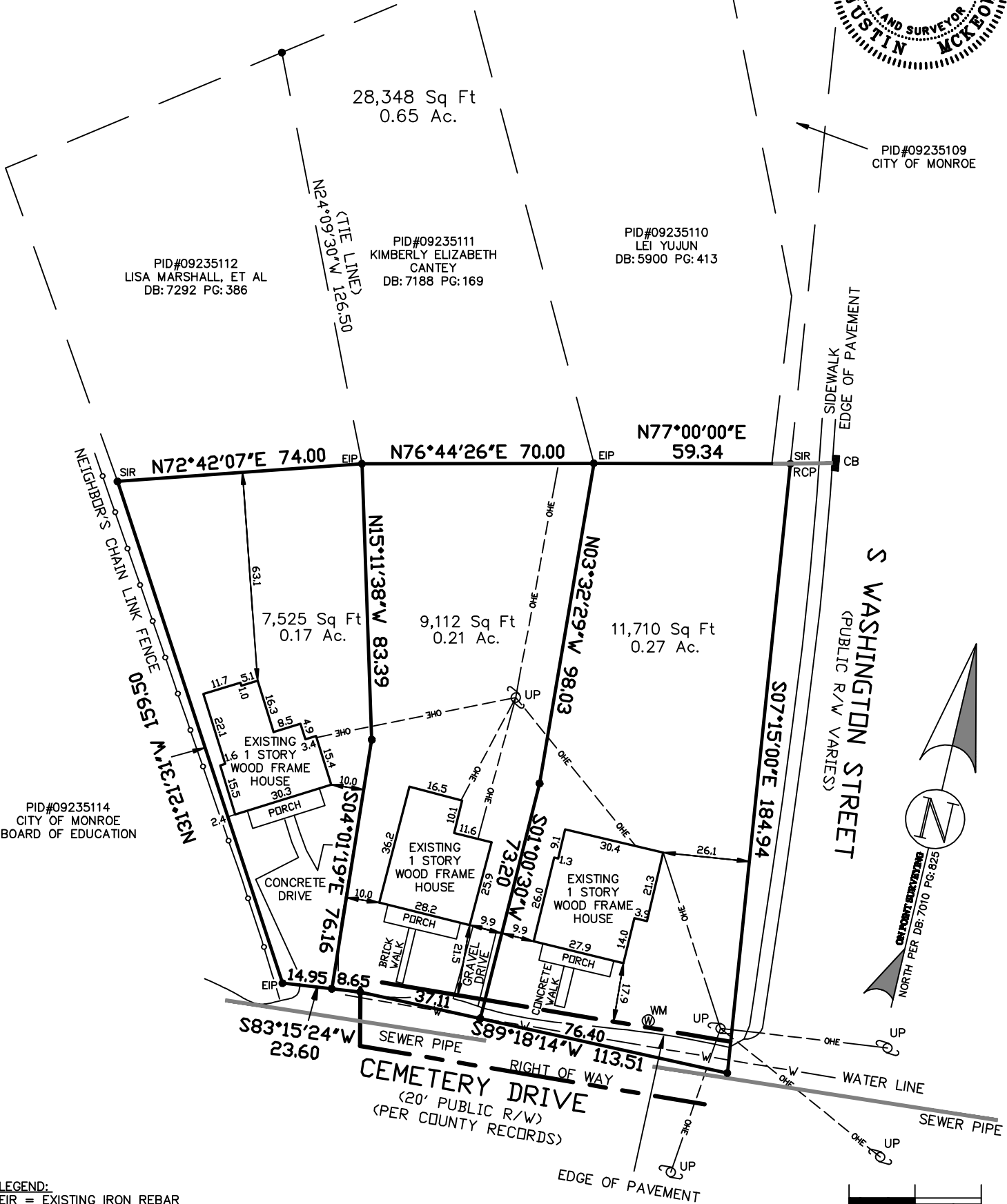
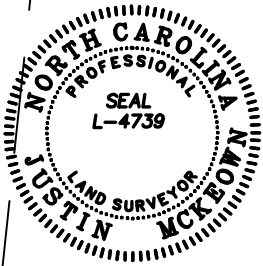
Exhibit 4

THIS IS TO CERTIFY THAT ON THE 18TH DAY OF FEBRUARY, 2020 AN ACTUAL SURVEY WAS MADE UNDER MY SUPERVISION OF THE PROPERTY SHOWN ON THIS PLAT, AND THAT THE BOUNDARY LINES AND THE IMPROVEMENTS, IF ANY, ARE AS SHOWN HEREON.

NOTES:

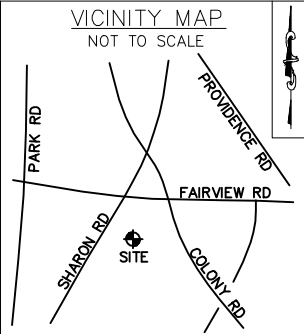
- 1. PARCEL ID#: 09235113
- 2. DEED RECORDED AT DB: 7010 PG: 825
- 3. AREA COMPUTED BY COORDINATE METHOD.
- 4. THIS PROPERTY MAY BE SUBJECT TO ADDITIONAL RECORDED OR UNRECORDED EASEMENTS, RIGHTS-OF-WAY, OR RESTRICTIVE COVENANTS, OTHER THAN SHOWN.
- 5. THE SUBJECT PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON MAPS PREPARED BY THE F.E.M.A. AND FEDERAL INSURANCE ADMINISTRATION.
- 6. CURRENT ZONING OF PROPERTY IS R-10.
- 7. ZONING CALLS FOR 10' SETBACKS ON ALL PROPERTY LINES AND RIGHT OF WAY. NOT SHOWN FOR CLARITY.

Justin McKeown
JUSTIN MCKEOWN, PLS L-4739



- LEGEND:
- EIR = EXISTING IRON REBAR
 - EIP = EXISTING IRON PIPE
 - R/W = RIGHT OF WAY
 - DB = DEED BOOK
 - MB = MAP BOOK
 - PG = PAGE
 - HV = HVAC
 - UP = UTILITY POLE
 - OHE = OVERHEAD ELECTRIC
 - WM = WATER METER
 - RCP = REINFORCED CONCRETE PIPE

SCALE 1"=30'




ON POINT SURVEYING, PLLC
2110 STATON ROAD
MARSHVILLE, NC 28103
980-328-8300
LICENSE NO: P-0716

A PROPOSED SUBDIVISION
OF
#314, 316 & 318 CEMETERY DRIVE
CITY OF MONROE, UNION COUNTY, NC

DRAWN BY: CCM FIELDWORK BY: CCM, AJC, JGM
LDD: WAMATH3121 COGO: WAMATH3121

ACCTNO	OWNERNAME1	OWNERADDRE	OWNERCITY	OWNERS	OWNERZIP
09235114	MONROE CITY BOARD OF EDUCATION	500 N MAIN ST	MONROE	NC	28110
09235112	MARSHALL LISA ET AL	6425 TIMBER HITCH DR	OCEAN ISLE BEACH	NC	28469
09235114	MONROE CITY BOARD OF EDUCATION	500 N MAIN ST	MONROE	NC	28110
09235204	SONG REALTY LLC	P O BOX 79192	CHARLOTTE	NC	28271
09235107A	MCBETH TESHA M & DAMON T	2221 EQUESTRIAN DR	MATTHEWS	NC	28105
09235109	CITY OF MONROE	P O BOX 69	MONROE	NC	28111-0069
09235114	MONROE CITY BOARD OF EDUCATION	500 N MAIN ST	MONROE	NC	28110
09235248	HAMILTON GERONDALON	625 WASHINGTON ST	MONROE	NC	28112
09235249	HIDALGO ENRIQUE	621 WASHINGTON ST	MONROE	NC	28110
09235097	CITY OF MONROE	P O BOX 69	MONROE	NC	28111-0069
09235110	LEI YUJUN	10003 SILVER LAKE CT	CHARLOTTE	NC	28277
09235113	TOMS TEDDY W	605 LANCASTER AVE	MONROE	NC	28112
09235114	MONROE CITY BOARD OF EDUCATION	500 N MAIN ST	MONROE	NC	28110
09235205	SMITH PATTI	502 LANCASTER AVE	MONROE	NC	28112
09235114	MONROE CITY BOARD OF EDUCATION	500 N MAIN ST	MONROE	NC	28110
09235111	CANTEY KIMBERLY ELIZABETH	405 LANCASTER AVE	MONROE	NC	28112
09235113	TOMS TEDDY W	605 LANCASTER AVE	MONROE	NC	28112
09235114	MONROE CITY BOARD OF EDUCATION	500 N MAIN ST	MONROE	NC	28110
09235216	FOMEN ASHLEY	408 LANCASTER AVE	MONROE	NC	28112
09235217	BELK MATTHEW	400 LANCASTER AVE	MONROE	NC	28112
09235107C	ALDACO JAIME JUACHE	2720 BRIAR TRAIL CT	MATTHEWS	NC	28104
09235114	MONROE CITY BOARD OF EDUCATION	500 N MAIN ST	MONROE	NC	28110
09235114	MONROE CITY BOARD OF EDUCATION	500 N MAIN ST	MONROE	NC	28110

Exhibit 6

Order

RE: Variance Application for 314, 316, and 318 Cemetery Drive

This matter coming on to be heard and being heard by the City of Monroe Board of Adjustment at its meeting held on the 23RD day of April, 2020 to consider application number 20-34000005, submitted by Zach Mendelson of Kbud, LLC requesting a variance to Section 156.137 titled Minimum Lot Size and Section 156.140 titled Building Setback Requirements and having heard all the evidence and arguments presented at the hearing, makes the following FINDINGS OF FACT and draws the following CONCLUSIONS:

Findings:

1. The dwellings located at 314, 316, and 318 Cemetery Drive are owned by Kbud, LLC and are zoned R-10 (single family residential). (Exhibit 1 & 2)
2. On January 9, 2020, the applicant submitted a variance application in order to request a variance to the minimum lot size for the R-10 zoning district and setback requirements in order to subdivide the property so each dwelling would be located on its own parcel. (Exhibit 3)
3. According to Section 156.137 titled Minimum Lot Size of the Unified Development Ordinance the minimum lot size required for the R-10 zoning district is 10,000 square feet and the side yard setback pursuant to Section 156.140 of the Unified Development Ordinance titled Building Setback Requirements is ten (10) foot. The applicant is requesting a variance to subdivide the 28,347 square feet parcel to create three separate parcels for each dwelling. The applicant is requesting the lot size for 314 Cemetery Drive to be 7,525 square feet (2,475 square foot variance request) and the lot size for 316 Cemetery Drive to be 9,112 square feet (888 square foot variance request) Additionally, the applicant is requesting a 1-foot variance for the side yard setbacks for both 316 and 318 Cemetery Drive. (Exhibit 4 & 5)
4. All adjacent property owners have been notified of the proposed variance. (Exhibit 6)

Conclusions:

1. It is the Board's CONCLUSION, that unnecessary hardship (would/would not) result from the strict application of the ordinance.
2. It is the Board's CONCLUSION, that the hardship (is/is not) peculiar to the applicant's property.
3. It is the Board's CONCLUSION, that the hardship (is/is not) the result of the applicant's own actions.
4. (a) It is the Board's CONCLUSION, that the variance (is/is not) consistent with the

spirit, purpose, and intent of the ordinance.

(b) It is the Board's CONCLUSION, that in granting of the variance, the public safety (will/will not) be secured and substantial justice (will/will not) be achieved.

5. The variance (will/will not) result in the extension of a nonconforming situation in violation of § 156.90, and it (will/will not) authorize the initiation of a nonconforming use of land.

THEREFORE, on the basis of all the foregoing, IT IS ORDERED that the application for Variance application 20-34000005 be (**approved/denied**).

Ordered this 28th day of May, 2020

George Massey, Chairman-Board of Adjustment

Date



STAFF REPORT
Case #20-11000005

TO: Board of Adjustment Members

DATE: May 28, 2020

FROM: Doug Britt, Senior Planner

SUBJECT: Special Use Permit Request by Faulk & Foster on Behalf of Verizon Wireless to Allow the Construction of a Telecommunication Tower in the GB (General Business) Zoning District Located at 1504 Miller Street (Tax Parcel ID's # 09-225-037-D & E)

SUMMARY STATEMENT

The Board of Adjustment is requested to consider a Special Use Permit request by Jim Lapann of Faulk & Foster on behalf of Verizon Wireless in order to construct a 180-foot stealth monopole tower on the properties located at 1504 Miller Street and further identified as tax parcel ID 09-225-037-E.

SITE DATA

Type of Action:	Special Use Permit
Date of Petition:	March 2, 2020
Name of Petitioner:	Verizon Wireless by Faulk & Foster
Location:	1504 Miller Street
Tax ID #:	09-225-037E
Lot Size:	1.58 acres
Zoning Classification:	GB (General Business)

FINDINGS

Staff offers the following Findings:

1. The subject property located at 1504 Miller Street is a total of 1.58 acres and is owned by Poindexter Properties, LLC and zoned GB (General Business). (Exhibits 1 & 2)
2. The applicant, Jim Lapann of Faulk & Foster on behalf of Verizon Wireless is requesting to construct a 180-foot stealth monopole tower that is to be located within a 100 ft. by 100 ft. leased area on the subject property.
3. Telecommunication towers are permitted in the GB (General Business) zoning district with the approval of a Special Use Permit in accordance with Sections 156.110 and 156.125 of the Monroe Unified Development Ordinance. (Exhibits 3 & 4)
4. The applicant, Jim Lapann of Faulk & Foster on behalf of Verizon Wireless submitted a Special Use Permit application on March 2, 2020 requesting to construct a 180-foot stealth monopole tower on March 2, 2020. (Exhibits 5 & 6A-6g)
5. The proposed tower will satisfy the 50 ft. setback requirement from all property lines in the GB (General Business) zoning district.
6. The applicant has provided a statement that collocation of the required additional telecommunications equipment on an existing structure is not technically or practically possible as there are no existing towers or feasible alternative support structures within the search ring for the proposed tower.
7. The applicant has provided documentation they acknowledge a no hazard to air navigation must be received from the Federal Aviation Administration prior to the tower construction.
8. The applicant has provided a no hazard determination documentation from the Federal Aviation Administration.
9. An Impact Analysis has been conducted for this Special Use Permit as required by Section 156.37 (G) and the Special Use Permit application to determine whether or not the telecommunication tower would have an adverse impact on the surrounding properties. It is the opinion of appraiser Michael Berkowitz; the proposed monopole tower will not adversely impact the adjoining properties.
10. All adjoining property owners have been properly notified of this special use permit. (Exhibit 7)

CONCLUSIONS

If the Board of Adjustment wishes to approve the Special Use Permit request, staff recommends the following conditions:

1. Applicant shall obtain any and all federal, state and local permits prior to construction.

Please see attached Special Use Permit Worksheet.

Attachment(s):

Exhibit 1: Ortho Map
Exhibit 2: Zoning Map
Exhibit 3: Table of Permissible Uses
Exhibit 4: Telecommunication Ord.
Exhibit 5: Application
Exhibit 6A-0: Compliance & Statement
Narrative
Exhibit 6A-1: Construction Drawings
Exhibit 6B-0-Analysis of Existing Structs.
Exhibit 6B-1-Crown Castle aerial - 4,800 ft.
Exhibit 6B-2-Search Ring Aerial View
Exhibit 6B-3-Towercom 1.34 miles
Exhibit 6B-4-Towercom 1.45 miles
Exhibit 6B-5 WKRE 1.66 miles
Exhibit 6B-6-Map of 4 Towers Constructed
or to be Constructed
Exhibit 6C-No residences within 500 feet
Exhibit 6D-Affidavit-Signed
Exhibit 6E-Engineering Specification Letter
Exhibit 6F-No Hazard Determination
Exhibit 6G-Valuation Report
Exhibit 7-APO Mailing List

Prepared by: DB 5-15-20

**SPECIAL USE PERMIT WORKSHEET
TO ALLOW A CELL TOWER TO BE CONSTRUCTED AT 1504 MILLER STREET
(TAX PARCEL # 09-225-037E)**

Before the Board of Adjustment makes a decision concerning the proposed Special Use Permit, they shall consider the following:

I. Completeness of Application:

Staff finds the application to be complete and the jurisdiction proper.

II. Special Use General Standards:

- A. The use will not materially endanger the public health or safety if located, designed, and proposed to be operated according to plan.*

Petitioner's Response: The proposed tower will not physically endanger the public health or safety since the engineer stamped plans for the project show that the tower will fall within the leased area (100' x 100') if it were to fall during an extreme weather condition. Also, the addition of this tower will greatly enhance the safety of the individuals in the area since the people travelling through the area, or living or working in the area, will be able to be in contact with first responders such as police, fire and ambulances better due to the vastly improved network.

☐ Motion standard is met; or

☐ Motion standard is NOT met based on the following findings of fact:

- B. The use or development complies with all regulations and standards of the City of Monroe Zoning Ordinance, as well as any other state or local rule or regulation governing the development of land.*

Petitioner's Response: The proposal for this development includes an Ordinance Compliance Statement that demonstrates on a paragraph by paragraph basis that the application is in full compliance with the Telecom Ordinances of the City of Monroe, and the applicant has submitted the required documentation and proof of compliance with the Federal standards as applied by the Federal Aviation Administration. Since the proposal complies with the zoning code it therefore is in conformity with the Monroe Land Development Plans.

☐ Motion standard is met; or

☐ Motion standard is NOT met based on the following findings of fact:

-
-
- C. *The use or development will not adversely impact surrounding property and will not substantially injure the value of adjoining property.*

Petitioner's Response: The applicant proved through the testimony and introduction of a report from an expert appraiser as Exhibit 6G that states that the proposed project will not substantially injure the value of adjoining or abutting property.

☐ Motion standard is met; or

☐ Motion standard is NOT met based on the following findings of fact:

- D. *The location and character of the use, if developed according to the plan as submitted and approved, will be in harmony with the area in which it is to be located and will be in general conformity with the Monroe Land Development Plan.*

Petitioner's Response: The proposed tower will be in harmony with the business district that it will be located in. This part of Monroe is a commercial area and the area has a wide variety of buildings and businesses. The base of the tower and the ground equipment will be hidden from view of the people in the area through extensive landscaping, as well as the presence of large commercial buildings. Since the project complies with the City's current ordinance it is in conformity with the Development Plan.

☐ Motion standard is met; or

☐ Motion standard is NOT met based on the following findings of fact:

Section 156.125(H) (3) - Additional Findings of Fact Required for Telecommunication Towers:

- (a) *The use will not interfere with the FAA Part 77 surfaces surrounding the Monroe Regional Airport or affect the radio and navigation signals of the operating ground and airborne equipment in the vicinity of the airport.*

Petitioner's Response: The applicant has submitted a No Hazard Determination issued by the FAA for the specific location of the proposed cell tower site. As part of the No Hazard Determination the FAA states that it has made the determination: "...based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power..." . Therefore, the No Hazard Determination does state that the use will not interfere with the Monroe Regional Airport or affect the radio and

navigational signals of the operating ground and airborne equipment in the vicinity of the airport.

(b) For any tower proposed to be located in a residential zoning district or within 500 feet of the nearest property line of a legal conforming residential use. The applicant has submitted substantial evidence that the tower cannot, by technical necessity, be located more than 500 feet from the nearest property line of a legal conforming residential use.

Petitioner's Response: The applicant has established through the use of an aerial photograph that there are no residences within 500 feet of the proposed tower (Exhibit C) and this project is not located in a residential zoning district.

(c) For any tower proposed to be located in a non-residential zoning district or within 500 feet of the nearest property line of a legal conforming residential use or residential zoning district. The applicant has submitted substantial evidence that the tower cannot, by technical necessity, be located more than 500 feet from the nearest property line of a legal conforming residential use or residential zoning district.

Petitioner's Response: The applicant has established through the use of an aerial photograph that there are no residences within 500 feet of the proposed tower (Exhibit C) and this project is not located in a residential zoning district.

(d) The height of the tower, as proposed, is required to: (1) provide a reasonable level of service; or (2) meet the co-location requirements /policy of this section; or (3) prevent the need for another tower in the search area. (Ord. O-2003-63, passed 12-16-03)

Petitioner's Response: The applicant submitted proof from the Verizon radio frequency engineer that the tower needed to be of the height proposed to provide the support for the existing towers that will allow the service provided to the cellular users in the region to have an acceptable level of service that is currently not present.

III. Permit Action

A. **Motion** to GRANT the special use permit. *(Board of Adjustment may add conditions as deemed necessary).*

OR;

B. **Motion** to DENY the special use permit based on the finding that general standard(s) _____ above is/are not met.



Ortho Map

Case #: 20-11000005

Legend

-  Centerlines
-  Parcels

**Existing: GB
(General Business)**

**Owner: Poindexter
Properties**

Acres: 1.58

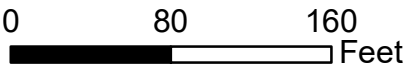
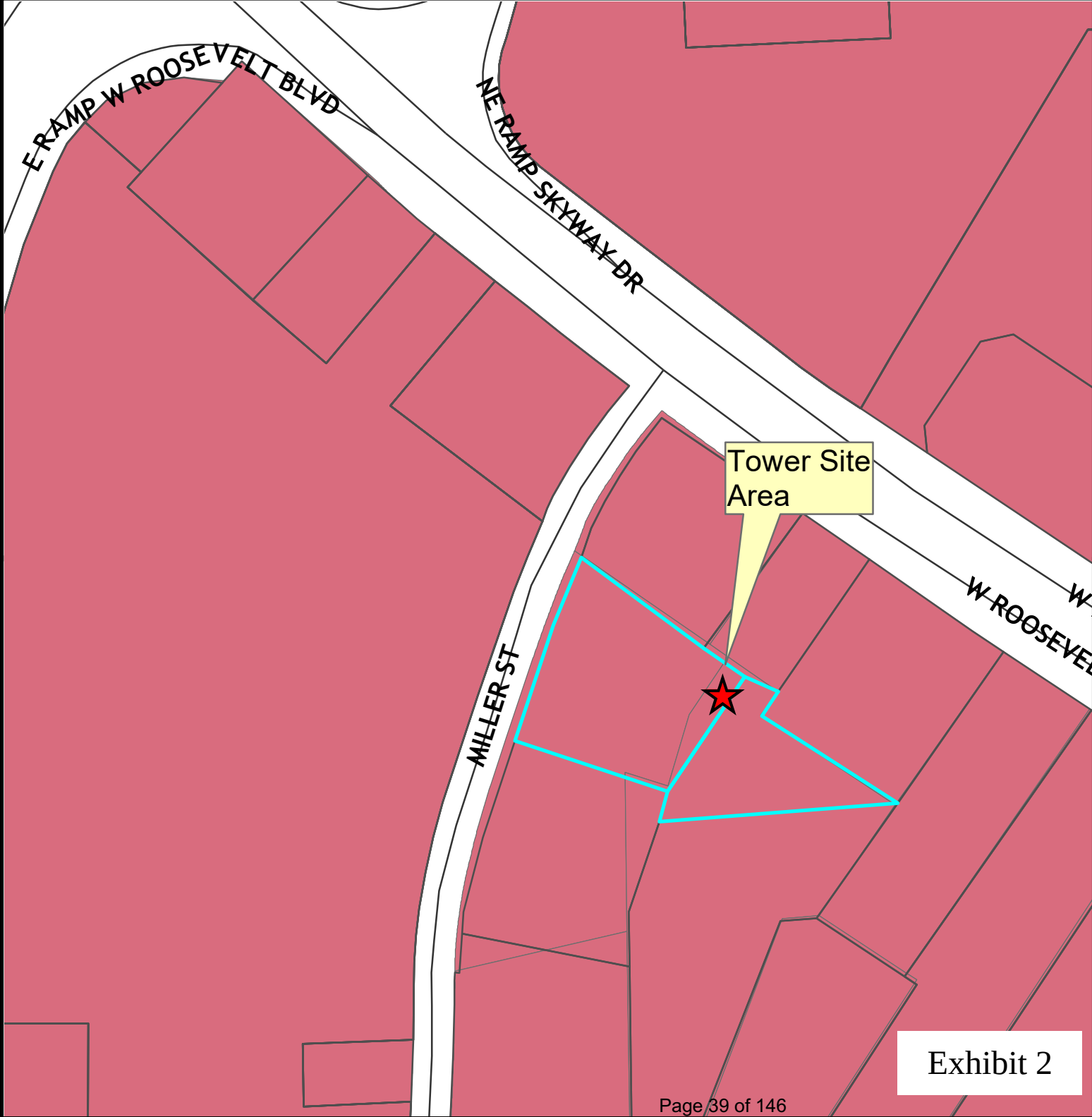


Exhibit 1



Zoning Map

Case #: 20-11000005

Legend

Centerlines

Parcels

Zoning Districts

Code

GB

Existing: GB
(General Business)

Owner: Poindexter Properties

Acres: 1.58

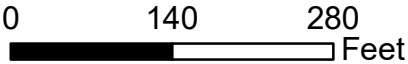


Exhibit 2

DESCRIPTION	R-40/ R-20	R-10	R- MF	R-MH	OT	CB D	GB	GI	C
MISCELLANEOUS PUBLIC AND SEMI-PUBLIC FACILITIES (Cont'd)									
Military Reserve, National Guard Centers					S	Z	Z		ZS
DRY CLEANER, LAUNDROMAT					Z	Z	Z		ZS
UTILITY FACILITIES									
Neighborhood	Z	Z	Z	Z	Z	Z	Z	Z	ZS
Community or Regional	S	S	S	S	S	S	Z	Z	ZS
TOWERS AND RELATED STRUCTURES									
Towers and antennas	S	S	S	S	S	S	S	S	ZS
OPEN AIR MARKETS AND HORTICULTURAL SALES									
Produce stands	Z					Z			ZS
Open air markets (farm and craft markets, flea markets, produce markets)						S			ZS
Horticulture sales and outdoor display						Z	Z		ZS
FUNERAL HOME					Z	Z	Z		ZS

§ 156.125 TELECOMMUNICATIONS TOWERS.

(A) *Intent.* It is the intent of the City of Monroe to allow telecommunication providers the opportunity to locate towers and related facilities within its jurisdiction in order to provide an adequate level of service to its customers while protecting the health, safety, and welfare of the citizens of Monroe and its extraterritorial jurisdiction. No tower shall be constructed nor shall any existing tower be altered from and after the effective date of this section except in conformance to the provisions stated herein.

(B) *Co-location required.* It is the policy of the City of Monroe to limit the number of towers needed within its jurisdiction. To accomplish this, the city requires co-location of antennas whenever possible and permits towers of sufficient height to allow space for multiple antennas.

(C) *Application requirements.*

(1) No new towers shall be permitted within the City of Monroe unless the applicant submits documentation prepared and sealed by a professional engineer registered in North Carolina declaring that it is technically or practically impossible to provide the desired level of service by co-locating the tower and antenna on an existing structure. As part of the technical documentation, the engineer must include a map of the search area, all potential co-location sites stating why each is not suitable, and the total number of towers the service provider currently owns and plans to construct over the next two years within the city's jurisdiction. In order to prove that it is practically impossible to co-locate, the applicant must submit, in writing, a declaration from all owners of possible co-location sites (that are technically feasible to co-locate on) that they are unwilling to negotiate space or evidence that the applicant has tried, in good faith, to negotiate reasonable terms for colocation and failed.

(2) In addition, a complete site plan, which demonstrates that the site and the tower complies as constructed with the standards for towers as outlined in the following section, is required prior to issuance of the special use permit.

(D) *Standards for towers.* All requests for telecommunication towers shall be accompanied by a site plan and shall be subject to the following standards:

(1) *Location.*

(a) Towers not exceeding 25 feet in height and antennas colocated on existing structures shall be permitted by right in all zoning districts as long as the structure on which they are located is a legal conforming structure or such structure is a legal non-conformance and the addition of the tower or antenna will not increase the degrees of non-conformance.

(b) Towers greater than 25 feet in height (including ancillary structures and guy wires) shall be permitted by right within the G-B and G-I districts provided that no part of the tower site is located within 500 feet of the nearest lot line of a legal conforming residential use or residential zoning district line, or anywhere within the approach/departure path to the Monroe Regional Airport. Requests to permit towers in other districts and/or locations must be approved by the Board of Adjustment as a special use and must meet all of the findings as set forth in [§ 156.33](#). However, in no case shall a new tower, as so defined, be permitted in the central business zoning district, a locally designated historic district, a National Register Historic District, or within 500 feet of a property listed on the National Register of Historic Places.

(2) *Height.* No tower permitted by right shall exceed 180 feet in height. Any request for additional height, up to a maximum of 250 feet, must be approved by the Board of Adjustment as a special use and must meet all of the findings as set forth in § [156.33](#).

(3) *Tower type.* Monopole towers are required for any tower 150 feet or less in height and for any tower constructed within or immediately adjacent to (less than 500 feet from) a residential district. Lattice towers are permitted for any other location. Any request for a guyed tower more than 25 feet in height must be approved by the Board of Adjustment as a special use and must meet all of the findings as set forth in § [156.185](#).

(4) *Co-location opportunities.* All new towers exceeding 75 feet in height must be constructed to permit a minimum of three antennas to be co-located on the tower. Applicants must submit a notarized statement signed by the owner or its legal representative of the number of co-location sites on the tower which will be made available and a declaration that such site will be negotiated in good faith at reasonable terms to other service providers. Documentation sealed by a professional engineer registered in North Carolina is also required to demonstrate that the tower has sufficient structural integrity the intended users.

(5) *Stealth locations and aesthetics.* Stealth locations and/or aesthetic design are required for all towers. To minimize the visual impact of new telecommunication towers when stealth is not possible, the following will apply:

(a) Towers shall not be lighted unless specifically required by the FAA. If FAA lighting is required, strobe lights shall be avoided unless specifically required by the FAA. Lighting of all towers in any district shall be directed toward the tower and/or equipment shelters.

(b) The base of towers, to a minimum height of ten feet above average grade at the tower base, shall not be visible from major thoroughfares.

(c) Two-way and microwave antennas shall be located inside accessory buildings when technically possible.

(d) Towers located in residential districts and the O-T district shall be located on non-residential sites, such as schools, churches, and public facilities unless the search area does not include such sites or the applicant demonstrates that he has made a good faith effort to negotiate space at such sites and been denied. Otherwise, the tower shall be the principle use of the property and must meet all standards defined herein and any others imposed by the Board of Adjustment in the special use permit.

(e) Wherever feasible, all accessory structures must be designed to closely resemble the neighborhood's basic architecture. This applies to towers within and immediately adjacent to a residential district line and the nearest lot line of a legal conforming residential use, pursuant to a special use permit.

(f) Outdoor storage of equipment or other related items is prohibited on tower sites.

(6) *Fencing.* In order to secure the site from unauthorized use, an eight foot high fence shall be constructed around the tower and all ancillary structures housing equipment. The gate into the fenced area shall be located so that it is not easily visible from a public street or adjacent residence, if possible.

(7) *Screening.* Screening is required along all exterior sides of the fence, excluding the gate, described in subsection (6) of this division. Such screen shall consist of evergreen shrubs or trees or any combination thereof planted in such numbers and intervals which will provide an opaque screen within two years. All plantings shall be at least three feet in height at the time of planting and capable of reaching a height of six feet within two years. The owner of the property and the owner of the tower shall be jointly and severally responsible for the maintenance of all screen materials. Such maintenance shall include all actions necessary to keep the screened area free of litter and debris, to keep plantings healthy, and to keep planting areas neat in appearance. Any vegetation that constitutes part of the screening shall be promptly replaced in the event it dies.

(8) *Signage.* No advertising signs are permitted on a tower site where the tower is the principal use of the property. No advertising signs are permitted within or on the fence securing the tower site. No advertising signs are permitted to be located anywhere on a tower. Signs for the purpose of safety and information, not legible from a public right-of-way or adjacent residential lots, are permitted within the fenced area of any tower site. Freestanding signs are prohibited. Each tower shall have one sign posted on the fence gate identifying the current owner of the tower and contact person (or agency) and phone number in case of emergencies.

(9) *Easements and driveways.* All easements to the site, if the site does not abut a public right-of-way, and all driveways shall be shown on the site plan.

(10) *Lot size.* Tower sites must be at least 10,000 square feet in size or meet the minimum lot size for the district in which it is located, whichever is greater. A tower site shall include the entire legal parcel on which the tower is located, even if the tower is an accessory use of the property. When towers are located as accessory uses, any undeveloped/un-impervious requirements which apply to the property must continue to be met for the property as a whole. In addition, if the principal use requires a minimum lot size then the minimum lot size for the tower shall be in addition to that established for the principal use.

(11) *Setbacks.* All towers, including ancillary structures and guy wires, must meet the following setback requirements as measured from the lot line or street right-of-way:

<i>District</i>	<i>Minimum Setback</i>
(All sides)	
All residential districts	150 feet
("R"), O-T, G-B, and G-I	
O-T district	50 feet
G-B district	50 feet
G-I district	50 feet

Note: When the property abuts a residentially zoned lot, the setback from such residential lot line shall be a minimum of 150 feet. The sealed plan for all towers shall indicate that the "fall

zone" for the tower as designed lies within the tower site as shown on the site plan and that such zone does not include any uses or structures unrelated to the tower use.

(E) *Certifications required.* Prior to the release of the certification of occupancy, the applicant must submit federal/local documentation that the tower complies with (or is not subject to) all requirements of the Federal Communications Commission (FCC), the National Environmental Policy Act (NEPA), and state building code requirements. In addition, prior to the release of the zoning permit (for towers by right) or as part of the conditional use permit process, the applicant shall submit a copy of the Federal Aviation Administration's (FAA) comments for review by staff.

(F) *Standards for existing towers.*

(1) All towers which existed prior to January 1, 1998, and which do not meet one or more of the requirements for location, lot size, or setback for towers as listed above shall be permitted to continue as legal non-conforming structures. Such structures shall not be made more non-conforming except that the Board of Adjustment may waive one or more setback requirements for height extensions to towers, and/or ancillary equipment and structures, whenever the applicant can demonstrate that extension of such tower, or placement of such equipment and structures within the setback area, will preclude the need to construct a new tower and such extension will not pose a threat to the public health, safety, or general welfare, and potential negative impacts to adjacent residential properties have been minimized. In no case, however, shall a non-conforming tower be permitted to exceed 250 feet in height.

(2) All extensions to legal, conforming existing towers located in the G-B, and G-I districts which are not located within 500 feet of the nearest lot line of a legal conforming residential use or residential zoning district line, or within the approach/departure path to the Monroe Municipal Airport and which, once extended, will not exceed 180 feet in height shall be permitted as a use by right. All other requests for extensions must be approved by the Board of Adjustment as a special use request. Whenever an extension to any existing tower is permitted, the tower shall be made to conform to fencing, screening, and signage requirements.

(3) In lieu of extension, an existing tower may be replaced by a new tower whenever, in the opinion of staff or the Board of Adjustment, whichever has approval authority, the new tower furthers the intent of this section. The existing (or "old") tower must be completely removed within one month of the completion of the new tower.

(G) *Abandonment.* Whenever a tower, antenna, or related equipment ceases to be in active operation for more than 180 days, it shall be removed. The City Council may grant a one time extension equal to 180 days whenever it finds that such an extension will not compromise the public health, safety, or welfare and that such extension is not solely for the purpose of delaying the cost of removing the tower. The owner of the tower shall be responsible for the removal of an abandoned antenna or related equipment. The owner of the property and the owner of the tower shall be jointly and severally responsible for the removal of an abandoned tower. Whenever a tower or antenna are abandoned, the owner of the tower shall notify the City Department of Planning and Development within 30 days immediately following abandonment.

(H) *Special use permit process.*

(1) *Application.* A complete application for a special use permit shall consist of a completed application form, a site plan, and documentation prepared and sealed by a professional engineer registered in North Carolina sufficient to address co-location requirements and the findings of fact as listed in § [156.185](#).

(2) *Additional Review Procedures Review.*

(a) The applicant and public must present their comments and arguments to the Land Use Administrator in written form prior to addressing the Board of Adjustment.

(b) Decisions by the Board of Adjustment to approve or deny a tower must be in writing to the applicant, along with detailed reasoning for the approval/denial. The decision of the Board of Adjustment shall be based on substantial evidence which shall be recorded in the minutes.

(c) In determining if a telecommunication tower should be approved or denied, the Board of Adjustment may take into account the tower's harmony with the surrounding area, its compatibility with adjacent properties, and the availability or lack thereof of other more suitable sites. The aesthetic effects of the tower, as well as any mitigating factors concerning the aesthetics, may be used to evaluate the application. In reaching a decision, the Board of Adjustment may request the height, design, screening, placement, or other characteristics of the tower be modified to produce a more harmonious situation.

(3) *Additional findings of fact required.*

(a) The use will not interfere with the FAA Part 77 surfaces surrounding the Monroe Regional Airport or affect the radio and navigation signals of the operating ground and airborne equipment in the vicinity of the airport.

(b) For any tower proposed to be located in a residential zoning district or within 500 feet of the nearest property line of a legal conforming residential use. The applicant has submitted substantial evidence that the tower cannot, by technical necessity, be located more than 500 feet from the nearest property line of a legal conforming residential use.

(c) For any tower proposed to be located in a non-residential zoning district or within 500 feet of the nearest property line of a legal conforming residential use or residential zoning district. The applicant has submitted substantial evidence that the tower cannot, by technical necessity, be located more than 500 feet from the nearest property line of a legal conforming residential use or residential zoning district.

(d) The height of the tower, as proposed, is required to: (1) provide a reasonable level of service; or (2) meet the co-location requirements /policy of this section; or (3) prevent the need for another tower in the search area.(Ord. O-2003-63, passed 12-16-03)



SPECIAL USE PERMIT APPLICATION

Applicant's Name: Verizon Wireless by Faulk & Foster

Applicant's Mailing Address: 584 Laurel Lane
Lancaster, Pa 17601

For Staff Use Only

Project Number: 20-1100000.5

Date Submitted: 3/02/20

Approved _____

Denied _____

Applicant's Phone Number: 518-791-3740

Applicant's Facsimile Number: None

Applicant's Email Address: jim.lapann@faulkandfoster.com

Property Location: 1504 Miller Street, Monroe, NC 28110

Tax ID Number: 092-250-37E Deed Reference Number: BOOK 5741 PAGE 601

Existing Zoning: G-B

Proposed Special Use:

Construction and operation of a 180' stealth monopole on a 100'x100' leased lot with a leased access road.

Proposed Conditions:

None

Every petition for a reclassification of property shall be accompanied by a site plan drawn to scale and sealed by a registered engineer, surveyor, architect, or landscape architect licensed to practice in the State of North Carolina. Site plans for subdivision applications shall be in the form of a preliminary plat with all information that is required per Chapter 156 of the Monroe Code of Ordinances – Zoning Code, and specifically listed in the Appendix *Standards*. In addition, all applications for a Special Use Permit shall be accompanied by a written consulting report from a North Carolina State Certified Real Estate Appraisal that conforms to Standard 5 of the Uniform Standards of Professional Appraisal Practice (single family homes on single family lots are exempt from this requirement). The site plan shall include the following information; however, the Zoning Administrator may require additional information whenever necessary and may waive one or more of the requirements if such is found to be irrelevant to the proposed project.

General Information Required

- A location map that shows the project in relation to surrounding parcels, zones, streets, right of ways, and utility services and easements, total acreage, north arrow, legend, and a vicinity map.
- Name of the applicant(s) and the name of the proposed development including a copy of the current deed.
- The names and address of all adjoining property owners referenced by tax ID numbers. (This information can be obtained at the office of the Union County Tax Collector located in the Old Courthouse)
- Scale, at one (1) inch equals 100 feet, unless otherwise approved by the Zoning Administrator.

Revised 12-22-15

SUP Application.doc REVISED 2-99, 7-99, 2/00, 12/03, 7/04, 9/13, 1/14, 12/15

Exhibit 5

Information on Natural, Historic, and Recreational Features Required

- Contour lines at no greater than five (5) foot intervals.
- Location and dimensions of all recreational areas, equipment, features, historic sites and open space.
- Natural screening (woods, thickets, etc.), streams, ponds, rivers and similar natural or man-made features.

Zoning and Lot Information Required

- Existing and proposed zoning district lines, flood plain delineation, property lines, existing and proposed parking, trash collection systems and screening (include a copy of the planting schedule) and building footprints for any structure or walls to be placed on the property. Residential uses shall include the number of units per building and the total project.
- Proposed lot dimensions and setbacks, with diagrams of proposed signs showing location on the lot, size, height, and attachment (if indicated).
- Watershed data to demonstrate compliance with sections 156.101 of the Monroe Code of Ordinances.
- Boundary of any phase lines, for phased development plans. (Include a statement for future building time line)
- Detailed landscape plan in compliance with section Chapter 156, Article XVII of the Monroe Code of Ordinances issued by a certified landscape architect, or other certified professional preparer

Transportation and Utilities Information Required

- Existing and proposed streets, sidewalks, easements, parking and loading areas, drainage facilities, storm water control devices, and public utilities.
- A driveway permit from NCDOT for developments on state maintained roads, and a city driveway permit for development on city maintained streets.
- A letter from the Director of Water Resources stating that adequate water and sewer is available, or can be made available, to the site in adequate capacities.

Special use permit approval requires several standard findings of fact (see below). It shall be the responsibility of the applicant to address all findings related to the development proposal. The burden of submitting competent evidence that the findings have been met is the applicant's responsibility. Every application shall include an appraisal report from a certified appraiser that the proposed use will not substantially injure the value of the adjoining property, as specified in the findings below. Additional information supporting the special use permit application shall be the responsibility of the petitioner and not the responsibility of the city.

At the Board of Adjustment hearing, petitioners should be prepared to testify to the following standard findings of fact for all special uses:

- (1) Will not endanger the public health or safety,
- (2) Will not injure the value of adjoining or abutting property,
- (3) Will be in harmony with the area in which it is located, and
- (4) Will be in conformity with the land-use plan, thoroughfare plan, or other plan officially adopted by the Council.

Note: Due to the amount of detailed information needing to be submitted to the city, it is *requested* that early contact with the city planning department be accomplished to avoid unnecessary delays. All applications for a special use permit shall be reviewed by the Zoning Administrator prior to Board of Adjustment review. The applicant shall submit a completed application no later than 30 days prior to the Board of Adjustment meeting at which the petition is to be heard. If the application is found to be incomplete or the development is found to be in conflict with the requirements of this application, the developer shall be notified and the petition rejected.

Upon acceptance of the site plan by planning staff, the petitioner shall provide fifteen (15) copies of the site plan for review by the Board of Adjustment.

Revised 12-22-15
SUP Application doc REVISED 2-99, 7-99, 2/00, 12/03, 7/04, 9/13, 1/14, 12/15



It is understood and acknowledged that if the Special Use Permit is authorized, the property involved in this request will be perpetually bound to the use(s) authorized and subject to such conditions as imposed, unless subsequently changed or amended as provided for in Chapter 156.42 of the Zoning Ordinance of the City of Monroe Code of Ordinances.

I. Special Use General Standards:

- A. The use will not materially endanger the public health or safety if located, designed, and proposed to be operated according to plan

Please see attached

- B. The use or development complies with all regulations and standards of the City of Monroe Zoning Ordinance, as well as any other state or local rule or regulation governing the development of land

- C. The use or development will not adversely impact surrounding property and will not substantially injure the value of adjoining property.

- D. The location and character of the use, if developed according to the plan as submitted and approved, will be in harmony with the area in which it is to be located and will be in general conformity with the Monroe Land Development Plan.

To the best of my knowledge, all of the information herein submitted is accurate and complete.

Verizon Wireless, by
Faulk & Foster

Applicant (printed)

Signature for Faulk & Foster

Applicant's Signature

Date

POINDEXTER PROPERTIES / FRANK POINDEXTER

Property Owner (printed)

Signature

Property Owner's Signature

Date

Revised 12-22-15

SLIP Application.doc REVISED 2-99, 7-99, 2/00, 12/03, 7/04, 9/13, 1/14, 12/15

Special Use Permit Application – Page 3 of 3

1. Special Use General Standards

- A. The use will not endanger the public health or safety if located, designed, and proposed to be operated according to Plan.**

The proposed tower will not physically endanger the public health or safety since the engineer stamped plans for the project show that the tower will fall within the leased area (100' x 100') if it were to fall during an extreme weather condition. Also, the addition of this tower will greatly enhance the safety of the individuals in the area since the people travelling through the area, or living or working in the area will be able to be in contact with first responders such as police, fire and ambulances better due to the vastly improved network.

- B. The use or development complies with all regulations and standards of the City of Monroe Zoning ordinance, as well as any other state or local rule or regulation governing the development of land.**

The proposal for this development includes an Ordinance Compliance Statement that is in full compliance with the Telecom Ordinances of the City of Monroe, and the applicant has submitted the required documentation and proof of compliance with the Federal standards as applied by the Federal Aviation Administration. Since the proposal complies with the zoning code it therefore is in conformity with the Monroe Land Development Plans.

- C. The use or development will not adversely impact surrounding property and will not substantially injure the value of adjoining property.**

The applicant proved through the testimony and introduction of a report from an appraiser that states that the proposed project will not have substantially injure the value of adjoining or abutting property.s

- D. The location and character of the use, if developed according to the plan as submitted and approved will be in harmony with the area in which i is to be locatee and will be in general conformity with the Monroe Land Development Plan.**



Special Use Permit Application – Page 3 of 3

1. Special Use General Standards

- A. The use will not endanger the public health or safety if located, designed, and proposed to be operated according to Plan.**

The proposed tower will not physically endanger the public health or safety since the engineer stamped plans for the project show that the tower will fall within the leased area (100' x 100') if it were to fall during an extreme weather condition. Also, the addition of this tower will greatly enhance the safety of the individuals in the area since the people travelling through the area, or living or working in the area will be able to be in contact with first responders such as police, fire and ambulances better due to the vastly improved network.

- B. The use or development complies with all regulations and standards of the City of Monroe Zoning ordinance, as well as any other state or local rule or regulation governing the development of land.**

The proposal for this development includes an Ordinance Compliance Statement that demonstrates on a paragraph by paragraph basis that the application is in full compliance with the Telecom Ordinances of the City of Monroe, and the applicant has submitted the required documentation and proof of compliance with the Federal standards as applied by the Federal Aviation Administration. Since the proposal complies with the zoning code it therefore is in conformity with the Monroe Land Development Plans.

- C. The use or development will not adversely impact surrounding property and will not substantially injure the value of adjoining property.**

The applicant proved through the testimony and introduction of a report from an expert appraiser as Exhibit G that states that the proposed project will not substantially injure the value of adjoining or abutting property.

- D. The location and character of the use, if developed according to the plan as submitted and approved will be in harmony with the area in which it is to be located and will be in general conformity with the Monroe Land Development Plan.**

The proposed tower will be in harmony with the business district that it will be located in. This part of Monroe is a commercial area and the area has a wide variety of buildings and businesses. The base of the tower and the ground equipment will be hidden from view of the people in the area through extensive landscaping, as well as the presence of large commercial buildings. Since the project complies with the City's current ordinance it is in conformity with the Development Plan.

ORDINANCE COMPLIANCE STATEMENT AND NARRATIVE

Application: Land Use Review for proposed Verizon Wireless Communication Tower Site

Verizon Site Name: Holly Street

Project Description: Verizon proposes to place a 180' stealth monopole tower with a 9' lightning arrester and associated 12'6" x 21' equipment pad, with outdoor equipment, within a fenced compound on an irregularly shaped 10,000 square foot leased area. (See enclosed drawings for details **(Exhibit A)**). This tower will have provisions on the tower for multiple carriers.

Parcel Address: 1504 Miller Street, Monroe, NC 28110

Property Owner: Poindexter Properties, 2585 W. Roosevelt Blvd, Monroe, NC. 28110-0418

Zoning: GB

NARRATIVE

Verizon Wireless is continually improving its network to best meet the needs of the community. In the present case, the growth in usage and the exhaustion of capacity at existing locations requires a new location. The purpose of this proposed tower will be to improve coverage to the highly commercial area in the northern portion of the City of Monroe.

Two major highways intersect near the proposed tower. These are the main east/west highway, Route 70 (two lanes in each direction), and State Route 601 (Skyway Drive). The proposed tower is on the south east side of the intersection. There is a very heavy concentration of large commercial stores extending along the eastern side of 601 (south of the intersection) and along the southern side of Route 70 extending from the intersection to the east along Route 70.

The proposed tower will provide a significant improvement of cell service to individuals working and shopping in the stores, as well as those people travelling along Route 70 and 601. In addition, the proposed tower will improve service to individuals living in the residential areas near the south west corner of the intersection. This proposed tower will vastly improve the service to Verizon customers in a broad area by taking some of the load of data demand from three existing cell towers. This will allow much better streaming and downloading in a wide region.

The area where the tower is proposed to be placed contains three large groups of full growth trees. This proposed tower will be a “stealth” tower that will be disguised to be a pine tree. Although at 180 feet in height it may be taller than the surrounding trees, it will be a much lower impact aesthetically than a non-stealth tower.

Consideration of this application should not, however, be limited to examining how successfully Verizon Wireless has mitigated any negative impact through design and location. The positive impact of the site should be given full weight as well. We live in a society where the phone has become an essential tool for daily living. Furthermore, the benefits of this site to the community go beyond just convenience for residents and businesses. Quality wireless service is part of the critical infrastructure necessary for public safety in emergency situations such as accidents, crimes, health events and storms. Given the design, location and benefits provided by this proposed site, the lack of significant impacts, and compliance with the requirements of the ordinance as more fully demonstrated below, approval of this application is respectfully requested.

ORDINANCE COMPLIANCE STATEMENT

Verizon Wireless offers this Ordinance Compliance Statement in support of its application for permission pursuant to the City of Monroe, Chapter 156 Zoning Code section 156.125 Telecommunications codes.

Paragraphs followed by an asterisk (*) do not require a response or do not apply to this application.

§ 156.125 TELECOMMUNICATIONS TOWERS.

(A) Intent. It is the intent of the City of Monroe to allow telecommunication providers the opportunity to locate towers and related facilities within its jurisdiction in order to provide an adequate level of service to its customers while protecting the health, safety, and welfare of the citizens of Monroe and its extraterritorial jurisdiction. No tower shall be constructed nor shall any existing tower be altered from and after the effective date of this section except in conformance to the provisions stated herein.



(B) Co-location required. It is the policy of the City of Monroe to limit the number of towers needed within its jurisdiction. To accomplish this, the city requires co-location of antennas whenever possible and permits towers of sufficient height to allow space for multiple antennas.

Exhibit A – Drawing C-13 (Antenna and Tower ElevationDetails) shows that the proposed tower will have locations for three (3) additional co-locators. Drawing C2 (Site Plan Close Up) shows locations for the outdoor equipment for three additional co-locators.

(C) Application requirements.

(1) No new towers shall be permitted within the City of Monroe unless the applicant submits documentation prepared and sealed by a professional engineer registered in North Carolina declaring that it is technically or practically impossible to provide the desired level of service by co-locating the tower and antenna on an existing structure. As part of the technical documentation, the engineer must include a map of the search area, all potential co-location sites stating why each is not suitable, and the total number of towers the service provider currently owns and plans to construct over the next two years within the city's jurisdiction. In order to prove that it is practically impossible to co-locate, the applicant must submit, in writing, a declaration from all owners of possible co-location sites (that are technically feasible to co-locate on) that they are unwilling to negotiate space or evidence that the applicant has tried, in good faith, to negotiate reasonable terms for colocation and failed.

Exhibit B is a set of documents that respond to the elements of the ordinance paragraph above. The first document is a text statement that describes the exhibit and how it complies. The second set of documents in Exhibit B are six aerial views of the search ring. These six documents are a photo of the search ring, a photo showing the overall area and the location of four existing towers, and four photos showing the distance from the proposed site to the four towers.

Exhibit B also includes a set of propagation maps that show the existing Verizon Wireless network and how the proposed tower will fill a much needed weakness in the network, and why the tower needs to be in the location proposed.

(2) In addition, a complete site plan, which demonstrates that the site and the tower complies as constructed with the standards for towers as outlined in the following section, is required prior to issuance of the special use permit.

Exhibit A contains a complete site plan that complies with the standards set forth below.

(D) Standards for towers. All requests for telecommunication towers shall be accompanied by a site plan and shall be subject to the following standards:

(1) Location.

(a) Towers not exceeding 25 feet in height and antennas colocated on existing structures shall be permitted by right in all zoning districts as long as the structure on which they are located is a legal conforming structure or such structure is a legal non-conformance and the addition of the tower or antenna will not increase the degrees of non-conformance.



(b) Towers greater than 25 feet in height (including ancillary structures and guy wires) shall be permitted by right within the G-B and G-I districts provided that no part of the tower site is located within 500 feet of the nearest lot line of a legal conforming residential use or residential zoning district line, or anywhere within the approach/departure path to the Monroe Regional Airport. Requests to permit towers in other districts and/or locations must be approved by the Board of Adjustment as a special use and must meet all of the findings as set forth in § 156.33. However, in no case shall a new tower, as so defined, be permitted in the central business zoning district, a locally designated historic district, a National Register Historic District, or within 500 feet of a property listed on the National Register of Historic Places.

Exhibit C includes an aerial photograph that shows that the proposed tower will be located in an area that is populated with warehouses and businesses. There are no conforming residential uses or residential zoning district lines within 500 feet of the proposed tower.

(2) Height. No tower permitted by right shall exceed 180 feet in height. Any request for additional height, up to a maximum of 250 feet, must be approved by the Board of Adjustment as a special use and must meet all of the findings as set forth in § 156.33.

Exhibit A- Drawing C-13 (Antenna and Tower Elevation Details) shows that the proposed tower will be 180 feet in height.

(3) Tower type. Monopole towers are required for any tower 150 feet or less in height and for any tower constructed within or immediately adjacent to (less than 500 feet from) a residential district. Lattice towers are permitted for any other location. Any request for a guyed tower more than 25 feet in height must be approved by the Board of Adjustment as a special use and must meet all of the findings as set forth in § 156.185.

Exhibit A – Drawing C-13 (Antenna and Tower Elevation Details) shows that this proposed tower will be a monopole using stealth technologies.

(4) Co-location opportunities. All new towers exceeding 75 feet in height must be constructed to permit a minimum of three antennas to be co-located on the tower. Applicants must submit a notarized statement signed by the owner or its legal representative of the number of co-location sites on the tower which will be made available and a declaration that such site will be negotiated in good faith at reasonable terms to other service providers. Documentation sealed by a professional engineer registered in North Carolina is also required to demonstrate that the tower has sufficient structural integrity the intended users.

Exhibit D is a notarized statement from Verizon Wireless confirming that the proposed tower will include locations for three antennas to be co-located on the tower, and that the applicant will make co-locations available. The notarized statement further declares that the colocation sites will be offered at reasonable terms and negotiated in good faith.

Exhibit E is an engineering certification letter sealed by a professional engineer registered in North Carolina that states that the tower will have sufficient structural integrity for the intended users.

(5) Stealth locations and aesthetics. Stealth locations and/or aesthetic design are required for all towers. To minimize the visual impact of new telecommunication towers when stealth is not possible, the following will apply:

(a) Towers shall not be lighted unless specifically required by the FAA. If FAA lighting is required, strobe lights shall be avoided unless specifically required by the FAA. Lighting of all towers in any district shall be directed toward the tower and/or equipment shelters.

(b) The base of towers, to a minimum height of ten feet above average grade at the tower base, shall not be visible from major thoroughfares.

(c) Two-way and microwave antennas shall be located inside accessory buildings when technically possible.

(d) Towers located in residential districts and the O-T district shall be located on non-residential sites, such as schools, churches, and public facilities unless the search area does not include such sites or the applicant demonstrates that he has made a good faith effort to negotiate space at such sites and been denied. Otherwise, the tower shall be the principle use of the property and must meet all standards defined herein and any others imposed by the Board of Adjustment in the special use permit.

(e) Wherever feasible, all accessory structures must be designed to closely resemble the neighborhood's basic architecture. This applies to towers within and immediately adjacent to a residential district line and the nearest lot line of a legal conforming residential use, pursuant to a special use permit.

(f) Outdoor storage of equipment or other related items is prohibited on tower sites.

Exhibit A – Drawing C-13 (Antenna and Tower Elevation Details) shows that this proposed tower will be a monopole using stealth technologies so the provisions of this paragraph does not apply.

(6) Fencing. In order to secure the site from unauthorized use, an eight foot high fence shall be constructed around the tower and all ancillary structures housing equipment. The gate into the fenced area shall be located so that it is not easily visible from a public street or adjacent residence, if possible.

Exhibit A Drawing C7 (Fence, Gate and Compound Details) shows that the proposed site includes an eight foot high fence and locked gate with barbed wire around the top of the fence.

(7) Screening. Screening is required along all exterior sides of the fence, excluding the gate, described in subsection (6) of this division. Such screen shall consist of evergreen shrubs or trees or any combination thereof planted in such numbers and intervals which will provide an opaque screen within two years. All plantings shall be at least three feet in height at the time of planting and capable of reaching a height of six feet within two years. The owner of the property and the owner of the tower shall be jointly and severally responsible for the maintenance of all screen materials. Such maintenance shall include all actions necessary to keep the screened area free of litter and debris, to keep plantings healthy, and to keep planting areas neat in appearance. Any vegetation that constitutes part of the screening shall be promptly replaced in the event it dies.

Exhibit A Drawing L1 (Landscaping Plan and Notes) shows that the proposed site includes nineteen (19) Compact Carolina Cherry Laurel trees (6 feet minimum planting height). These will provide screening as required above.

(8) Signage. No advertising signs are permitted on a tower site where the tower is the principal use of the property. No advertising signs are permitted within or on the fence securing the tower site. No advertising signs are permitted to be located anywhere on a tower. Signs for the purpose of safety and information, not legible from a public right-of-way or adjacent residential lots, are permitted within the fenced area of any tower site. Freestanding signs are prohibited. Each tower shall have one sign posted on the fence gate identifying the current owner of the tower and contact person (or agency) and phone number in case of emergencies.

Exhibit A Drawing C11 (Site Signage Details) shows that the proposed site will have signs for safety and information that will be attached to the chain link fence.

(9) Easements and driveways. All easements to the site, if the site does not abut a public right-of-way, and all driveways shall be shown on the site plan.

Exhibit A Drawing C1 (Overall Site Plan) shows the access road to proposed site.

(10) Lot size. Tower sites must be at least 10,000 square feet in size or meet the minimum lot size for the district in which it is located, whichever is greater. A tower site shall include the entire legal parcel on which the tower is located, even if the tower is an accessory use of the property. When towers are located as accessory uses, any undeveloped/un-impervious requirements which apply to the property must continue to be met for the property as a whole. In addition, if the principal use requires a minimum lot size then the minimum lot size for the tower shall be in addition to that established for the principal use.

Exhibit A Drawing C1 (Overall Site Plan) shows that the tower site is on a 100' x 100' (10,000 square feet) leased area. This drawing also identifies the parcel ID, and ownership of the parent parcel.

(11) Setbacks. All towers, including ancillary structures and guy wires, must meet the following setback requirements as measured from the lot line or street right-of-way:

(11) Setbacks. All towers, including ancillary structures and guy wires, must meet the following setback requirements as measured from the lot line or street right-of-way.

District	Minimum Setback
<i>(All sides)</i>	
All residential districts	150 feet
<i>(R*, O-T, G-B, and G-I)</i>	
O-T district	50 feet
G-B district	50 feet
G-I district	50 feet

Note When the property abuts a residentially zoned lot, the setback from such residential lot line shall be a minimum of 150 feet. The sealed plan for all towers shall indicate that the "fall zone" for the tower as designed lies within the tower site as shown on the site plan and that such zone does not include any uses or structures unrelated to the tower use.

Exhibit A Drawing C1 (Overall Site Plan) shows that the tower is set back from the nearest boundary line a minimum of 78'-3", which is in excess of the setbacks required in the G-B district. There is a chart in the upper left hand corner of the C1 drawing showing all of the setbacks and they are all in excess of the minimum as shown above.

Note: When the property abuts a residentially zoned lot, the setback from such residential lot line shall be a minimum of 150 feet. The sealed plan for all towers shall indicate that the "fall zone" for the tower as designed lies within the tower site as shown on the site plan and that such zone does not include any uses or structures unrelated to the tower use.

(E) Certifications required. Prior to the release of the certification of occupancy, the applicant must submit federal/local documentation that the tower complies with (or is not subject to) all requirements of the Federal Communications Commission (FCC), the National Environmental Policy Act (NEPA), and state building code requirements. In addition, prior to the release of the zoning permit (for towers by right) or as part of the conditional use permit process, the applicant shall submit a copy of the Federal Aviation Administration's (FAA) comments for review by staff.

Exhibit F is a No Hazard Determination issued by the FAA for this site on 11/18/2019.

(F) Standards for existing towers.

(1) All towers which existed prior to January 1, 1998, and which do not meet one or more of the requirements for location, lot size, or setback for towers as listed above shall be permitted to continue as legal non-conforming structures. Such structures shall not be made more non-conforming except that the Board of Adjustment may waive one or more setback requirements for height extensions to towers, and/or ancillary equipment and structures, whenever the applicant can demonstrate that extension of such tower, or placement of such equipment and structures within the setback area, will preclude the need to construct a new tower and such extension will not pose a threat to the public health, safety, or general welfare, and potential negative impacts to adjacent residential properties have been minimized. In no case, however, shall a non-conforming tower be permitted to exceed 250 feet in height.

(2) All extensions to legal, conforming existing towers located in the G-B, and G-I districts which are not located within 500 feet of the nearest lot line of a legal conforming residential use or residential zoning district line, or within the approach/departure path to the Monroe Municipal Airport and which, once extended, will not exceed 180 feet in height shall be permitted as a use by right. All other requests for extensions must be approved by the Board of Adjustment as a special use request. Whenever an extension to any existing tower is permitted, the tower shall be made to conform to fencing, screening, and signage requirements.

(3) In lieu of extension, an existing tower may be replaced by a new tower whenever, in the opinion of staff or the Board of Adjustment, whichever has approval authority, the new tower furthers the intent of this section. The existing (or "old") tower must be completely removed within one month of the completion of the new tower.

(G) Abandonment. Whenever a tower, antenna, or related equipment ceases to be in active operation for more than 180 days, it shall be removed. The City Council may grant a one time extension equal to 180 days whenever it finds that such an extension will not compromise the public health, safety, or welfare and that such extension is not solely for the purpose of delaying the cost of removing the tower. The owner of the tower shall be responsible for the removal of an abandoned antenna or related equipment. The owner of the property and the owner of the tower shall be jointly and severally responsible for the removal of an abandoned tower. Whenever a tower or antenna are abandoned, the owner of the tower shall notify the City Department of Planning and Development within 30 days immediately following abandonment.



(H) Special use permit process.

(1) Application. A complete application for a special use permit shall consist of a completed application form, a site plan, and documentation prepared and sealed by a professional engineer registered in North Carolina sufficient to address co-location requirements and the findings of fact as listed in § 156.185.

(2) Additional Review Procedures Review.

(a) The applicant and public must present their comments and arguments to the Land Use Administrator in written form prior to addressing the Board of Adjustment.

(b) Decisions by the Board of Adjustment to approve or deny a tower must be in writing to the applicant, along with detailed reasoning for the approval/denial. The decision of the Board of Adjustment shall be based on substantial evidence which shall be recorded in the minutes.

(c) In determining if a telecommunication tower should be approved or denied, the Board of Adjustment may take into account the tower's harmony with the surrounding area, its compatibility with adjacent properties, and the availability or lack thereof of other more suitable sites. The aesthetic effects of the tower, as well as any mitigating factors concerning the aesthetics, may be used to evaluate the application. In reaching a decision, the Board of Adjustment may request the height, design, screening, placement, or other characteristics of the tower be modified to produce a more harmonious situation.

(3) Additional findings of fact required.

(a) The use will not interfere with the FAA Part 77 surfaces surrounding the Monroe Regional Airport or affect the radio and navigation signals of the operating ground and airborne equipment in the vicinity of the airport.

The applicant has submitted a No Hazard Determination issued by the FAA for the specific location of the proposed cell tower site. As part of the No Hazard Determination the FAA states that it has made the determination: "...based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power..." . Therefore, the No Hazard Determination does state that the use will not interfere with the Monroe Regional Airport or affect the radio and navigational signals of the operating ground and airborne equipment in the vicinity of the airport.

(b) For any tower proposed to be located in a residential zoning district or within 500 feet of the nearest property line of a legal conforming residential use. The applicant has submitted substantial evidence that the tower cannot, by technical necessity, be located more than 500 feet from the nearest property line of a legal conforming residential use.

The applicant has established through the use of an aerial photograph that there are no residences within 500 feet of the proposed tower (Exhibit C) and this project is not located in a residential zoning district.

(c) For any tower proposed to be located in a non-residential zoning district or within 500 feet of the nearest property line of a legal conforming residential use or residential zoning district. The applicant has submitted substantial evidence that the tower cannot, by technical necessity, be located more than 500 feet from the nearest property line of a legal conforming residential use or residential zoning district.

The applicant has established through the use of an aerial photograph that there are no residences within 500 feet of the proposed tower (Exhibit C) and this project is not located in a residential zoning district.

(d) The height of the tower, as proposed, is required to: (1) provide a reasonable level of service; or (2) meet the co-location requirements /policy of this section; or (3) prevent the need for another tower in the search area.(Ord. O-2003-63, passed 12-16-03)

The applicant submitted proof from the Verizon radio frequency engineer that the tower needed to be of the height proposed to provide the support for the existing towers that will allow the service provided to the cellular users in the region to have an acceptable level of service that is currently not present.

§ 156.33 SPECIAL USE PERMITS.

(C) Even if the permit-issuing board finds that the application complies with all other provisions of this chapter, it may still deny the permit if it concludes, based upon the information submitted at the hearing, that if completed, the development, more probably than not:

- (1) Will materially endanger the public health or safety;

The proposed tower will not physically endanger the public health or safety since the engineer stamped plans for the project show that the tower will fall within the leased area (100' x 100'). Also, the addition of this tower will greatly enhance the safety of the individuals in the area since the people travelling through the area, or living or working in the area will be able to be in contact with first responders such as police, fire and ambulances better due to the vastly improved network.

- (2) Will substantially injure the value of adjoining or abutting property;

The applicant proved through the testimony and introduction of a report from an expert appraiser as Exhibit G that states that the proposed project will not substantially injure the value of adjoining or abutting property.

- (3) Will not be in harmony with the area in which it is to be located; or

The proposed tower will be in harmony with the business district that it will be located in. This part of Monroe is a commercial area and the area has a wide variety of buildings and businesses.

- (4) Will not be in general conformity with the Monroe Land Development Plan, thoroughfare plan, or other plan officially adopted by the Council.

The proposal is in full compliance with the ordinances of the City of Monroe, and therefore is in conformity with the Monroe Land Development Plans.

§ 156.37 ADDITIONAL REQUIREMENTS ON SPECIAL USE PERMITS.

(A) Subject to Subsection (B), in granting a special use permit, the Board of Adjustment may attach to the permit such reasonable requirements in addition to those specified in this chapter as will ensure that the development in its proposed location:

- (1) Will not endanger the public health or safety;
- (2) Will not injure the value of adjoining or abutting property;
- (3) Will be in harmony with the area in which it is located; and
- (4) Will be in conformity with the land-use plan, thoroughfare plan, or other plan officially adopted by the Council.

(B) The permit-issuing board may not attach additional conditions that modify or alter the specific requirements set forth in this ordinance unless the development in question presents extraordinary circumstances that justify the variation from the specified requirements.

(C) Without limiting the foregoing, the board may attach to a permit a condition limiting the permit to a specified duration.

(D) All additional conditions or requirements shall be entered on the permit.

(E) All additional conditions or requirements authorized by this section are enforceable in the same manner and to the same extent as any other applicable requirement of this chapter.

(F) A vote may be taken on application conditions or requirements before consideration of whether the permit should be denied.

(G) Any request for a special use permit shall require the applicant to submit a written consulting report from a North Carolina State Certified Real Estate Appraiser that conforms to Standard 5 of the Uniform Standards of Professional Appraisal Practice. Single-family homes on individual lots are exempt from providing the consulting report.

(H) The Board may modify and/or adjust any numerical requirement of this Chapter within a special use permit application if the modification or adjustment meets the intent of the Land Development Plan and provides a development of equal or greater quality.

Verizon Wireless, through Faulk & Foster, respectfully requests that the Board of Adjustment grant them a Special Use permit to construct and operate a cell tower pursuant to the plans and exhibits submitted.

Dated: February 26, 2020

**James L. LaPann
Zoning Specialist-Faulk & Foster
518-791-3740 jim.lapann@faulkandfoster.com**

K:\ATL_Wireless\000_Verizon\2019 Sites\Holly St. (2019)\CAD\CD\ECor-G-B.dwg 09/30/19 2:41 PM by: christopher.strange



8921 RESEARCH DRIVE
CHARLOTTE, NC 28262

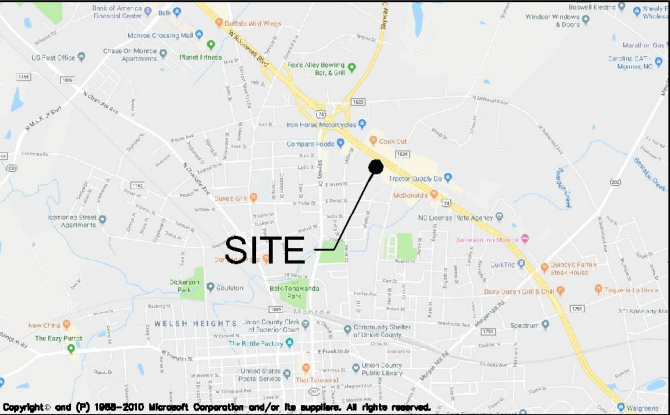
HOLLY ST

SITE ADDRESS (E-911 TBD)

1504 MILLER ST
MONROE, NC 28110
UNION COUNTY
LATITUDE:34° 59' 44.66" N
LONGITUDE: 80° 32' 44.75" W
TAX/PIN #: 09225037E/09225037D
ZONING: G-B

CITY OF MONROE POLICE DEPARTMENT
218 E FRANKLIN STREET
MONROE, NC 28112
PHONE: (704) 282-4700
ATTN.: CUSTOMER SERVICE

MONROE FIRE DEPARTMENT
117 N CHURCH STREET
MONROE, NC 28112
PHONE: (704) 282-4726
ATTN.: CUSTOMER SERVICE



FROM CHARLOTTE OFFICE: START OUT GOING SOUTHWEST ON RESEARCH DRIVE TOWARDS HARRIS BLVD. FOR 0.3 MILE; TURN LEFT ONTO W. WT HARRIS BLVD. / NC-24-E. FOR 0.4 MILE; MERGE ONTO I-85 N 2.0 MI; USE THE RIGHT 2 LANES TO TAKE EXIT 48 TOWARD MATTHEWS 0.9 MI; MERGE ONTO I-485 INNER 19.9 MI; TAKE EXIT 51B TO MERGE ONTO US-74 E TOWARD MONROE 1.6 MI; KEEP LEFT TO CONTINUE ON MONROE EXPY/U.S. 74 BYPASS RD 9.6 MI; TAKE THE EXIT TOWARD US-601 S 0.3 MI; TURN RIGHT ONTO US-601 S 1.9 MI; CONTINUE ONTO SKYWAY DR 0.1 MI; USE THE RIGHT LANE TO TAKE THE NC-200 N/US 601 S/US 74 E RAMP 0.2 MI; MERGE ONTO NC-200 S/US-601 S/US-74 E/W ROOSEVELT BLVD 0.3 MI; TURN RIGHT 69 FT. THE DESTINATION WILL BE ON THE RIGHT BEHIND THE BUILDINGS.

DRIVING DIRECTIONS

MUNICIPALITY:
CITY ON MONROE

STATE:
NORTH CAROLINA

TOWER TYPE:
MONOPINE TOWER

TOWER HEIGHT:
180' (189' TO HIGHEST APPURTENANCE)

NUMBER OF CARRIERS:
0 EXISTING, 1 PROPOSED

USE:
PROPOSED TELECOMMUNICATIONS TOWER
AND UNMANNED EQUIPMENT

FLOOD INFO
SITE IS LOCATED WITHIN FEMA FLOOD MAP
AREA 3710543500J DATED 10/16/2008 WITHIN
FLOOD ZONE X.

PROJECT SUMMARY

DEVELOPER
VERIZON WIRELESS
8921 RESEARCH DRIVE
CHARLOTTE, NC 28262
PHONE: (704) 577-8785
ATTN: MICHAEL HAVEN

POWER COMPANY
CITY OF MONROE ENERGY SERVICES
PHONE: (704) 282-4614
ATTN.: CUSTOMER SERVICE

PROPERTY OWNER
POINDEXTER PROPERTIES, LLC
1504 MILLER STREET
MONROE, NC 28110
PHONE: (704) 283-9122
ATTN.: FRANK POINDEXTER, SR.

CONSULTANT
KIMLEY-HORN AND ASSOCIATES, INC.
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GEORGIA 30009
PHONE: (770) 545-6105
ATTN.: DAVID FRANKLIN

CONTACTS

SHEET NO.	SHEET TITLE
T1	COVER SHEET
T2	APPENDIX B - BUILDING CODE SUMMARY
--	SITE SURVEY (SHEET 1 OF 4)
--	SITE SURVEY (SHEET 2 OF 4)
--	SITE SURVEY (SHEET 3 OF 4)
--	SITE SURVEY (SHEET 4 OF 4)
N1	GENERAL NOTES
C1	OVERALL SITE PLAN
C2	SITE PLAN
C3	EQUIPMENT PAD LAYOUT
C4	EQUIPMENT RACK DETAIL - FRONT
C5	EQUIPMENT RACK DETAIL - REAR
C6	CONCRETE PAD FOUNDATION DETAILS
C7	FENCE, GATE, AND COMPOUND DETAILS
C8	GRADING AND EROSION CONTROL PLAN
C9	GRADING AND EROSION CONTROL DETAILS
C10	ACCESS ROAD DETAILS
C11	SITE SIGNAGE DETAILS
C12	WAVEGUIDE BRIDGE DETAILS
C13	ANTENNA AND TOWER ELEVATION DETAILS
L1	LANDSCAPING PLAN AND NOTES
E1	ELECTRICAL NOTES
E2	UTILITY SERVICE ROUTING PLAN
E3	OVERALL UTILITY ROUTING PLAN
E4	METER RACK DETAILS
E5	ELECTRICAL SINGLE LINE DIAGRAM
E6	PANEL SCHEDULE
E7	ELECTRICAL DETAILS
E8	GROUNDING NOTES
E9	GROUNDING PLAN
E10	GROUNDING SINGLE LINE DIAGRAM
E11	GROUNDING DETAILS
E12	GROUNDING DETAILS

SHEET INDEX

CITY OF MONROE PLANNING & URBAN DEVELOPMENT
300 W. CROWELL STREET
MONROE, NC 28112
PHONE: (704) 282-4527
ATTN.: CUSTOMER SERVICE

PERMIT INFORMATION



8921 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

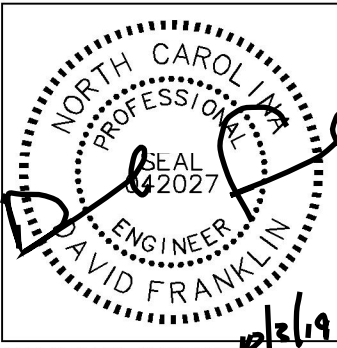


11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

SHEET TITLE:

COVER SHEET

SHEET NUMBER:

T1

K:\ATL_Wireless\000_Verizon\2019 Sites\Holly St. (2019)\CAD\GD\ECor-GB.dwg 09/30/19 2:41 PM by: christopher.strange

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: **VERIZON WIRELESS – HOLLY ST**
Address: **1504 MILLER ST, MONROE, NC** Zip Code **28110**
Owner/Authorized Agent: **DAVID FRANKLIN** Phone # (**770.**) **545 - 6105.** E-Mail **davidfranklin@kimley-horn.com**
Owned By: ☐ City/County ☒ Private ☐ State **Kimley-Horn**
Code Enforcement Jurisdiction: ☒ City **MONROE** ☐ County ☐ State

CONTACT: DAVID FRANKLIN, P.E. (#042027)

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural					
Civil	KIMLEY-HORN & ASSOC.	DAVID FRANKLIN	042027	(770.) 545-6105	davidfranklin@kimley-horn.com
Electrical	KIMLEY-HORN & ASSOC.	CORBIN C. HARDY	040828	(919.) 877-2000	cchardy@kimley-horn.com
Fire Alarm					
Plumbing					
Mechanical					
Sprinkler-Standpipe					
Structural					
Retaining Walls >5' High					
Other					

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ☒ New Building ☐ Addition ☐ Renovation
☐ 1st Time Interior Completion
☐ Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements
☐ Phased Construction - Shell/Core- Contact the local inspection jurisdiction for possible additional procedures and requirements

2018 NC EXISTING BUILDING CODE: EXISTING: ☐ Prescriptive ☐ Repair ☐ Chapter 14
Alteration: ☐ Level I ☐ Level II ☐ Level III
☐ Historic Property ☐ Change of Use

CONSTRUCTED: (date) _____ **CURRENT OCCUPANCY(S) (Ch. 3):** **TELECOMMUNICATIONS SITE**
RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S) (Ch. 3):** **TELECOMMUNICATIONS SITE**

RISK CATEGORY (Table 1604.5): **Current:** ☐ I ☐ II ☐ III ☐ IV
Proposed: ☐ I ☐ II ☐ III ☐ IV

BASIC BUILDING DATA
Construction Type: ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A
(check all that apply) ☐ I-B ☐ II-B ☐ III-B ☐ V-B
Sprinklers: ☐ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☐ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ☐ No ☐ Yes **Flood Hazard Area:** ☐ No ☒ Yes
Special Inspections Required: ☐ No ☐ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table			
FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3 rd Floor			
2 nd Floor			
Mezzanine			
1 st Floor			
Basement			
TOTAL			

ALLOWABLE AREA
Primary Occupancy Classification(s): Select one Select one Select one Select one Select one Select one
Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☐
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HIGH
Institutional ☐ I-1 Condition ☐ I 1 2
☐ I-2 Condition ☐ I 1 2
☐ I-3 Condition ☐ I 1 2 3 ☐ 4 ☐ 5
☐ I-4
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Accessory Occupancy Classification(s): _____
Incidental Uses (Table 509): _____
Special Uses (Chapter 4 – List Code Sections): _____
Special Provisions: (Chapter 5 – List Code Sections): _____
Mixed Occupancy: ☐ No ☐ Yes Separation: _____ Hr. Exception: _____
☐ Non-Separated Use (508.3) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
☐ Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} + \dots \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 ⁴ AREA	(C) AREA FOR FRONTAGE INCREASE ^{1,5}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{2,3}

- ¹ Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
b. Total Building Perimeter = _____ (P)
c. Ratio (F/P) = _____ (F/P)
d. W = Minimum width of public way = _____ (W)
e. Percent of frontage increase $f_f = 100[(F/P - 0.25) \times W/30] = \text{_____} (\%)$
² Unlimited area applicable under conditions of Section 507.
³ Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
⁴ The maximum area of open parking garages must comply with Table 406.4.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
⁵ Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT			
	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.4)			
Building Height in Stories (Table 504.4)			

Provide code reference (note "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS						
BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	PROVIDED (W/REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION
Structural Frame, including columns, girders, trusses						
Beating Walls						
Exterior						
North						
East						
West						
South						
Interior						
Nonbearing Walls and Partitions						
Exterior walls						
North						
East						
West						
South						
Interior walls and partitions						
Floor Construction including supporting beams and joists						
Floor Ceiling Assembly						
Columns Supporting Floors						
Roof Construction, including supporting beams and joists						
Roof Ceiling Assembly						
Columns Supporting Roof						
Shaft Enclosures - Exit						
Shaft Enclosures - Other						
Corridor Separation						
Occupancy/Fire Barrier Separation						
Party/Fire Wall Separation						
Smoke Barrier Separation						
Smoke Partition						
Tenant/Dwelling Unit/Sleeping Unit Separation						
Incidental Use Separation						

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS			
FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 703.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)

LIFE SAFETY SYSTEM REQUIREMENTS
Emergency Lighting: ☐ No ☐ Yes
Exit Signs: ☐ No ☐ Yes
Fire Alarm: ☐ No ☐ Yes
Smoke Detection Systems: ☐ No ☐ Yes ☐ Partial _____
Carbon Monoxide Detection: ☐ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS
Life Safety Plan Sheet #: _____
☐ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations (if not on the site plan)
☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
☐ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
☐ Occupant loads for each area
☐ Exit access travel distances (1017)
☐ Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
☐ Dead end lengths (1020.4)
☐ Clear exit widths for each exit door
☐ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
☐ Actual occupant load for each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☐ Location of doors with panic hardware (1010.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
☐ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows (1030)
☐ The square footage of each fire area (202)
☐ The square footage of each smoke compartment for Occupancy Classification 1-2 (407.5)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (SECTION 1107)							
TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING (SECTION 1106)					
LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	PROVIDED	# OF ACCESSIBLE SPACES PROVIDED		
			REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	8' ACCESS AISLE
TOTAL					

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)											
USE	WATERCLOSETS			URINALS			LAVATORIES			SHOWERS /TUBS	
	MALE	FEMALE	UNSEX	MALE	FEMALE	UNSEX	MALE	FEMALE	UNSEX	REGULAR	ACCESSIBLE
SPACE	EXIST'G										
	NEW										
	REQ'D										

SPECIAL APPROVALS
Special approval: Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: ☐ No ☐ Yes (The remainder of this section is not applicable)

Exempt Building: ☐ No ☐ Yes (Provide code or statutory reference): _____

Climate Zone: ☐ 3A ☐ 4A ☐ 5A

Method of Compliance: Energy Code ☐ Performance ☐ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive
(If "Other" specify source here)

THERMAL ENVELOPE (Prescriptive method only)

Roof/Ceiling Assembly (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Openings (windows or doors with glazing)
U-Value of assembly: _____
Solar heat gain coefficient: _____
projection factor: _____
Door R-Values: _____

Walls below grade (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors slab on grade
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement: _____
slab heated: _____

NOTE: SCOPE OF WORK INCLUDES INSTALLATION OF CAST IN PLACE CONCRETE PAD, PREFABRICATED EQUIPMENT CABINETS AND GENERATOR. NO NEW BUILDING BEING CONSTRUCTED.

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:
Importance Factors: Snow (Is) _____
Seismic (Is) _____
Live Loads: Roof _____ psf
Mezzanine _____ psf
Floor _____ psf
Ground Snow Load: _____ psf
Wind Load: Basic Wind Speed _____ mph (ASCE-7)
Exposure Category _____

NOTE: STRUCTURAL ANALYSIS COMPLETED BY TOWER OWNER. SEE ANALYSIS BY OTHERS FOR ADDITIONAL STRUCTURAL DATA.

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV
Spectral Response Acceleration S_s _____ %g
Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic structural system
☐ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic
Analysis Procedure: Architectural, Mechanical, Components anchored? ☐ Yes ☐ No
LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☐
SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity _____ psf
Pile size, type, and capacity _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
Thermal Zone
winter dry bulb: _____
summer dry bulb: _____
Interior design conditions
winter dry bulb: _____
summer dry bulb: _____
relative humidity: _____
Building heating load: _____
Building cooling load: _____
Mechanical Spacing Conditioning System
Unitary
description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____
Boiler
Size category. If oversized, state reason.: _____
Chiller
Size category. If oversized, state reason.: _____
List equipment efficiencies: _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

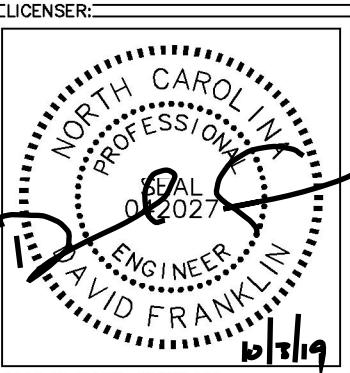
ELECTRICAL SUMMARY
ELECTRICAL SYSTEM AND EQUIPMENT
Method of Compliance: Energy Code ☐ Performance ☐ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive
Lighting schedule (each fixture type)
lamp type required in fixture _____
number of lamps in fixture _____
ballast type used in the fixture _____
number of ballasts in fixture _____
total wattage per fixture _____
total interior wattage specified vs. allowed (whole building or space by space) _____
total exterior wattage specified vs. allowed _____
Additional Efficiency Package Options
(When using the 2018 ASCECC; not required for ASHRAE 90.1)
☐ C406.2 More Efficient HVAC Equipment Performance
☐ C406.3 Reduced Lighting Power Density
☐ C406.4 Enhanced Digital Lighting Controls
☐ C406.5 On-Site Renewable Energy
☐ C406.6 Dedicated Outdoor Air System
☐ C406.7 Reduced Energy Use in Service Water Heating



PROJECT INFORMATION:
SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:
Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV:	DATE:	ISSUED FOR:	BY:
8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF



KHA PROJECT NUMBER:
018985923

DRAWN BY: _____ **CHECKED BY:** _____
TDM **KAB**

SHEET TITLE:
APPENDIX B - BUILDING CODE SUMMARY

SHEET NUMBER:
T2

SURVEYOR'S NOTES:

1.

NORTH ORIENTATION: North Carolina State Plane Coordinate System, NAD 83 (CORS), determined by GPS Survey
2.

ELEVATION DATUM: NAVD88, relative to Continuously Operating Reference Station (CORS) Benchmark as noted hereon. Onsite benchmark is as shown hereon
3.

This is a Tower Site Survey, made on the ground under the supervision of a Registered Land Surveyor. Date of field survey is 04-24-2019
4.

Instruments Used: Topcon GTS 212 and Prism, Topcon Hiperlite Plus GPS, TDS Nomad and/or Carlson Surveyor Data Collector.
5.

Surveyor hereby states the Geodetic Coordinates and the elevation shown for the centerline of the tower are accurate to within ± 15 feet horizontally and to within ± 3 feet vertically (FAA Accuracy Code 1A).
6.

Survey shown hereon conforms to the Minimum Requirements as set forth by the State Board for a Class B Survey. Field traverse did not require adjustment.
7.

Improvements (Utilities, Buildings, Trees, Fences, etc) not located, unless specifically shown hereon in the vicinity of surveyed property.
8.

No underground utilities, underground encroachments or building foundations were measured or located as a part of this survey, unless otherwise shown.
9.

This survey was conducted for the purpose of a Tower Site Survey only, and is not intended to delineate the regulatory jurisdiction of any federal, state, regional or local agency, board, commission or other similar entity. Survey as published is not intended to be suitable for recording as a Subdivision Plat
10.

Attention is directed to the fact that this survey may have been reduced or enlarged in size due to reproduction. This should be taken into consideration when obtaining scaled data.
11.

This survey is not valid without the original signature and the original seal of a State-Licensed Land Surveyor, and is not complete without all sheets.
12.

This survey does not constitute a complete boundary survey of the Parent Tract, or adjoining Parcels.
13.

Title Examination was not available at time of Survey.
14.

FLOOD ZONE DATA: By graphic plotting only, Lessee's Lease Area and Easement(s) appear to lie within ZONE "X" per F.E.M.A Flood Insurance Rate Map Community Panel No. 3710543500J dated 10/16/2008. Zone X: Areas of Minimal Flood Hazard

SURVEYOR'S CERTIFICATION:

To Verizon Wirelss:
I, Donald Cordell, certify that this project was completed under my direct and responsible charge from an actual Ground Survey made under my supervision.



PROPOSED TOWER DATA

Latitude:

34° 59' 44.66" NORTH

Longitude:

80° 32' 44.75" WEST

Ground Elevation:

593.1 feet AMSL NAVD88

CORS Benchmark:

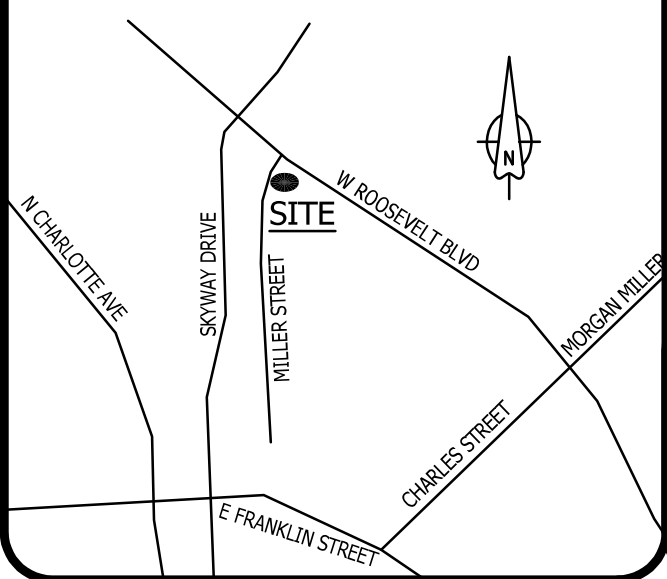
DF5880 NCMR

SURVEY RELEASE DATA

#	DETAILS	DATE	DRAWN	APP
0	Original Survey Issue	07-03-2019	NB	TLS

LOCATION MAP

NOT TO SCALE



LEGEND

- IRON ROD FOUND
- OPEN TOP PIPE FOUND
- UTILITY POLE

- R/W

RIGHT-OF-WAY
- OTP

OPEN TOP PIPE FOUND
- POC

POINT OF COMMENCEMENT
- POB

POINT OF BEGINNING
- AU

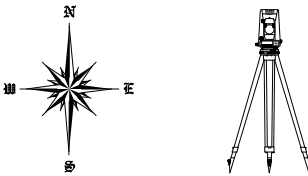
ACCESS & UTILITY
- ESMT

EASEMENT
- Sq Ft

SQUARE FEET

- PAVEMENT EDGE
- GRAVEL EDGE
- OVERHEAD UTILITY LINES
- STORMWATER PIPE
- DITCH
- 5' CONTOURS
- 1' CONTOURS
- TREE LINE

- PUBLIC R/W
- R/W CENETRLINE
- TAX PARCEL BOUNDARY
- TIE LINE
- ACCESS/UTILITY ESMT
- LEASE PREMISES



CORDELL
LAND SURVEYING
2857 Camp Creek Road,
Murphy, NC 28906
(828) 494-7058

PREPARED FOR

verizon
VERIZON WIRELESS

TOWER SITE SURVEY
SITE NAME:

HOLLY STREET

SITE#: 018985923
1504 Miller Street, Monroe, NC 28110

Monroe Township, Union County, North Carolina

REVISTION #: 0
ISSUE DATE: 07-03-2019
SEE SHEET #1

COVER SHEET

SHEET 1 OF 4

PROPERTY INFORMATION

PARENT PARCELS

- A.

POINDEXTER PROPERTIES LLC
TAX PARCEL: 09225037E
Deed Book 904, Page 892
Deed Book 1196, Page 623
- B.

POINDEXTER PROPERTIES LLC
TAX PARCEL: 09225037D
Deed Book 5099 , Page 103

ACCESS PARCEL

- C.

POINDEXTER PROPERTIES LLC
TAX PARCEL: 09225036
Deed Book 5741, Page 601
(other Deeds, not found)

ADJOINING TAX PARCELS

- D.

ROOSEVELT BLVD LLC
TAX PARCEL: 09225035
Deed Book 1139, Page 145
- E.

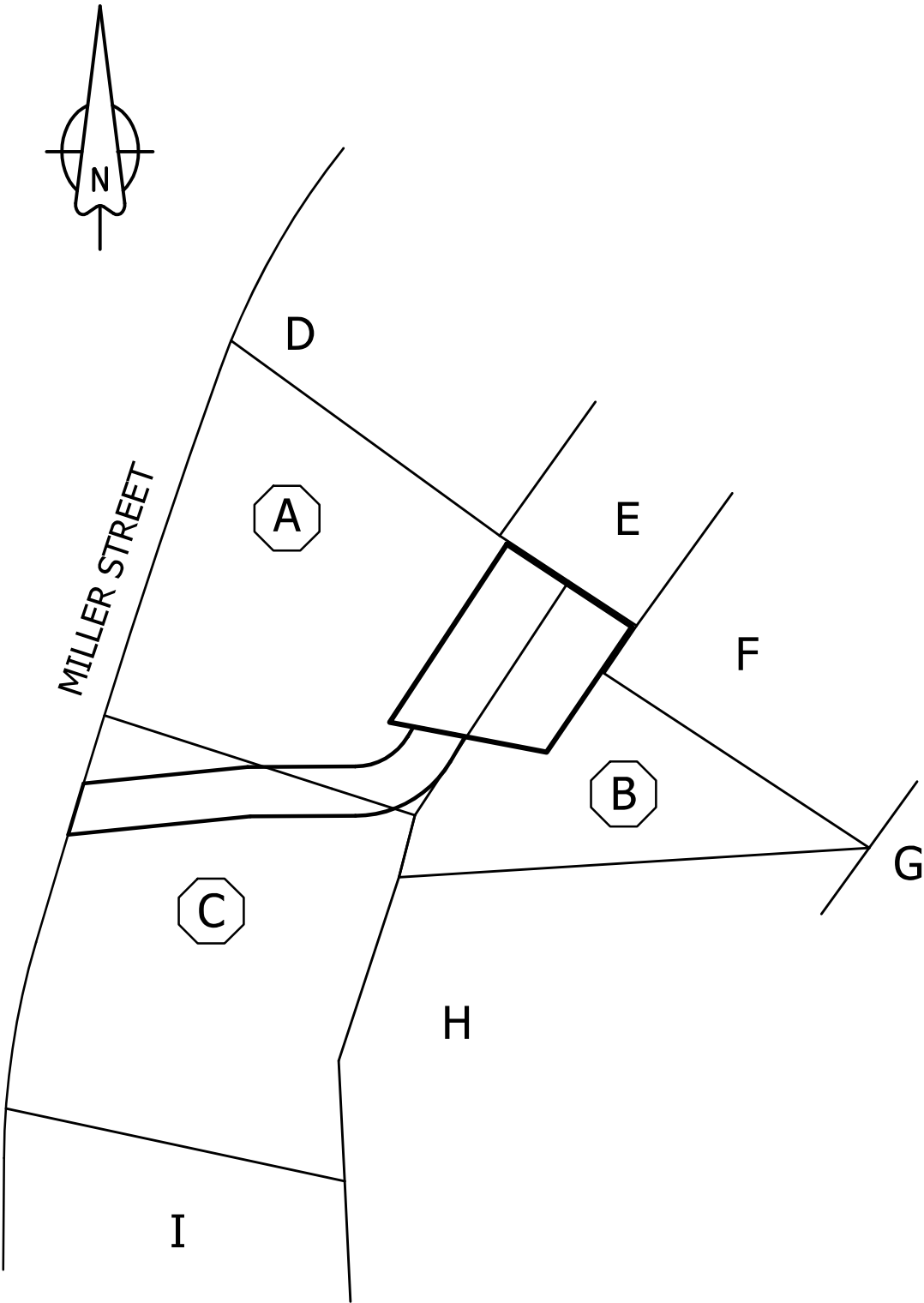
JAMES W. TICE
TAX PARCEL: 09225034
Deed Book 4902, Page 176
- F.

BOULEVARD SPECIALTY SHOPPES LLC
TAX PARCEL: 09225033
Deed Book 6462, Page 546
- G.

BOULEVARD SPECIALTY SHOPPES LLC
TAX PARCEL: 09225032
Deed Book 6462, Page 546
- H.

JOHN F. HOWIE
TAX PARCEL: 09225037
Deed Book 6462, Page 546
- H.

DONALD W. WILBURN
TAX PARCEL: 09225037C
Deed Book 6462, Page 546

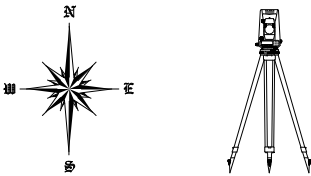


SURVEY & MAP CAVEATS:

Surveyed Data is as shown on Survey Map Sheets herein.

This is not a Boundary Survey of any Tax Parcels. Parent Parcel Property lines are shown based on record Deed Data plotted from Boundary Evidence found in the field.

Adjoining Parcel Lines are for reference only and are shown according to available record Deed Data.



CORDELL
LAND SURVEYING
2857 Camp Creek Road,
Murphy, NC 28906
(828) 494-7058

PREPARED FOR



VERIZON WIRELESS

TOWER SITE SURVEY

SITE NAME:

HOLLY STREET

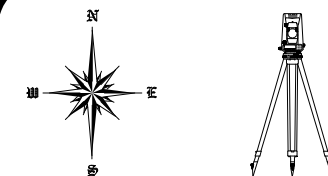
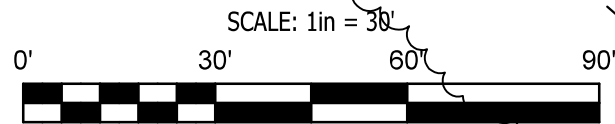
SITE#: 018985923
1504 Miller Street, Monroe, NC 28110

Monroe Township, Union County, North Carolina

REVISION #: 0
ISSUE DATE: 07-03-2019
SEE SHEET #1

OVERVIEW

SHEET 2 OF 4



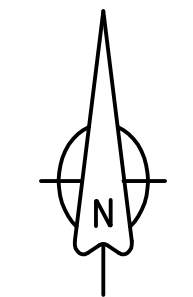
CORDELL
LAND SURVEYING
2857 Camp Creek Road,
Murphy, NC 28906
(828) 494-7058

PREPARED FOR
verizon
VERIZON WIRELESS

TOWER SITE SURVEY
SITE NAME:
HOLLY STREET
SITE#: 018985923
1504 Miller Street, Monroe, NC 28110

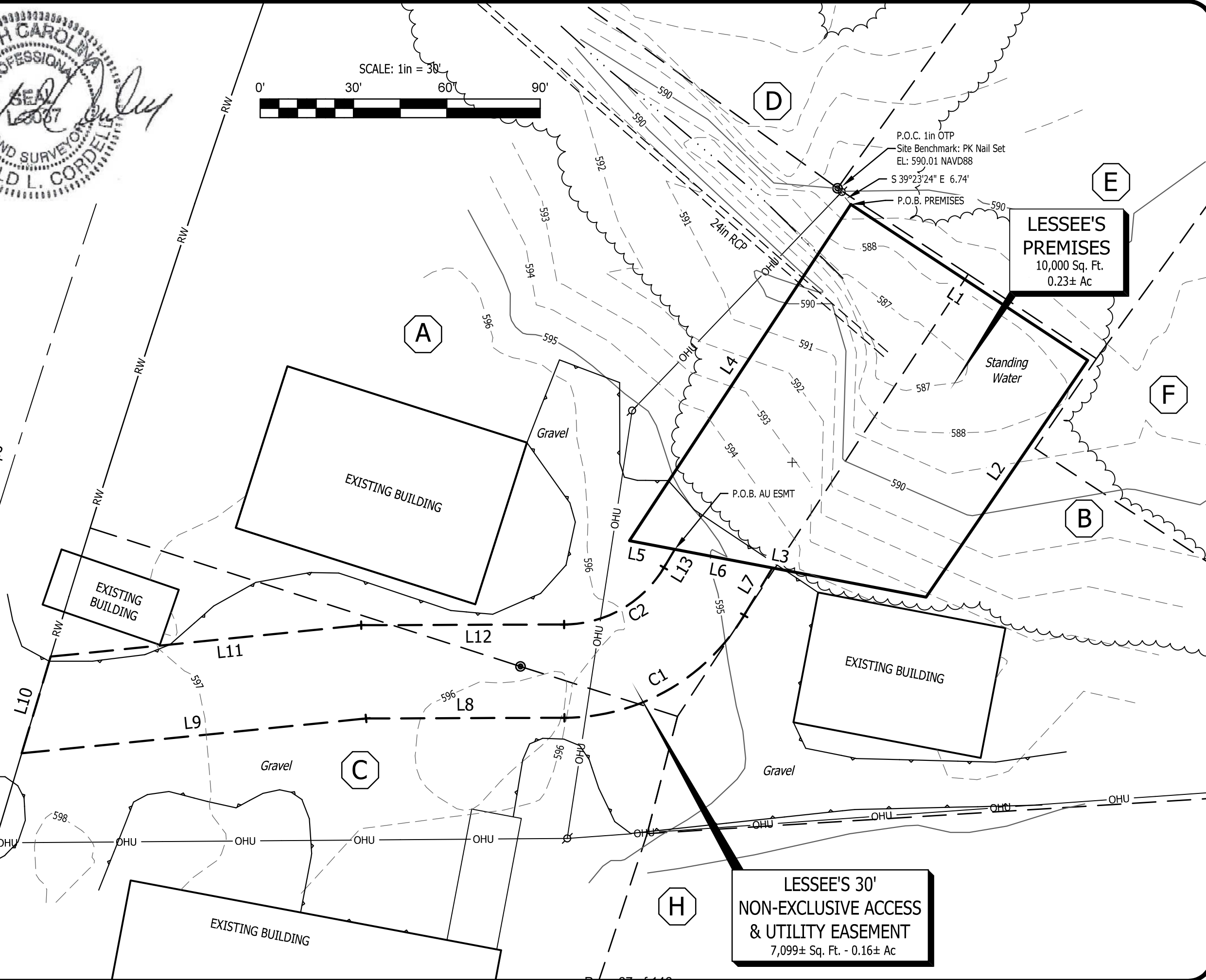
REVISION #: 0
ISSUE DATE: 07-03-2019
SEE SHEET #1

LEASE & ACCESS
SHEET 3 OF 4



NORTH CAROLINA
STATE PLANE

Miller Street
Public R/W - 60' per Assessor's Tax Maps



LESSEE'S LEASE AREA (PROPOSED)

All that Tract or Parcel of Land lying and being in Monroe Township, Union County, North Carolina, and being part of the lands owned by Poindexter Properties, LLC., as recorded in Deeds: Book 904, Page 892, Book 1196, Page 623 and Book 5099, Page 103, Union County Registry, and being more particularly described as follows:

COMMENCE at a One-inch Open Top Pipe (found) in the Northeast Line of aforesaid recorded Lands;
Thence along a Chord Tie Line having a Bearing of S 39°23'24" E, a distance of 6.74 feet to the POINT OF BEGINNING.

Thence S 56°39'03" E, a distance of 91.17 feet;
Thence S 34°18'16" W, a distance of 92.17 feet;
Thence N 79°13'08" W, a distance of 97.06 feet;
Thence N 33°20'57" E, a distance of 129.40 feet to the POINT OF BEGINNING.

Said tract contains 0.23 Acres (10,000 Square Feet), more or less.

LESSEE'S 30' NON-EXCLUSIVE ACCESS & UTILITY EASEMENT (PROPOSED)

All that Tract or Parcel of Land lying and being in Monroe Township, Union County, North Carolina, and being part of the lands owned by Poindexter Properties, LLC., as recorded in Deeds: Book 904, Page 892, Book 1196, Page 623, Book 5099, Page 103 and Book 5741, Page 601, Union County Registry, and being more particularly described as follows:

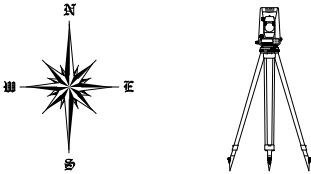
COMMENCE at a One-inch Open Top Pipe (found) in the Northeast Line of aforesaid recorded Lands;
Thence along a Chord Tie Line having a Bearing of S 39°23'24" E, a distance of 6.74 feet;
Thence S 33°20'57" W, a distance of 129.40 feet;
Thence S 79°13'08" E, a distance of 14.85 feet to the POINT OF BEGINNING;

Thence S 79°13'08" E, a distance of 31.93 feet;
Thence S 30°48'39" W, a distance of 17.78 feet;
Thence with a curve to the right with an arc length of 69.49 feet, with a radius of 67.50 feet, with a chord bearing of S 60°18'12" W, with a chord length of 66.46 feet;
Thence S 89°47'45" W, a distance of 63.77 feet;
Thence S 84°13'11" W, a distance of 111.23 feet to appoint on the Eastern Right-of-Way Line of Miller Street;
Thence N 16°38'46" E, along said Right-of-Way Line, a distance of 32.45 feet;
Thence N 84°13'11" E, leaving said Right-of-Way Line, a distance of 100.31 feet;
Thence N 89°47'45" E, a distance of 65.23 feet;
Thence with a curve to the left with an arc length of 38.61 feet, with a radius of 37.50 feet, with a chord bearing of N 60°18'12" E, with a chord length of 36.92 feet;
Thence N 30°48'39" E, a distance of 6.84 feet to the POINT OF BEGINNING.

Said tract contains 0.16 Acres (7,099 Square Feet), more or less, as shown in a survey prepared for Verizon Wireless by Cordell Land Surveying dated July 3, 2019.

CURVE DATA TABLE						
CURVE	RADIUS	ARC LEN	TANGENT	DELTA ANGLE	CHORD BEARING	CHORD LEN
C1	67.50'	69.49'	38.18'	58°59'06"	S 60°18'12" W	66.46'
C2	37.50'	38.61'	21.21'	58°59'06"	N 60°18'12" E	36.92'

LINE DATA TABLE		
LINE	BEARING	DISTANCE
L1	S 56°39'03" E	91.17'
L2	S 34°18'16" W	92.17'
L3	N 79°13'08" W	97.06'
L4	N 33°20'57" E	129.40'
L5	S 79°13'08" E	14.85'
L6	S 79°13'08" E	31.93'
L7	S 30°48'39" W	17.78'
L8	S 89°47'45" W	63.77'
L9	S 84°13'11" W	111.23'
L10	N 16°38'46" E	32.45'
L11	N 84°13'11" E	100.31'
L12	N 89°47'45" E	65.23'
L13	N 30°48'39" E	6.84'



CORDELL
LAND SURVEYING
2857 Camp Creek Road,
Murphy, NC 28906
(828) 494-7058

PREPARED FOR
verizon
VERIZON WIRELESS

TOWER SITE SURVEY
SITE NAME:
HOLLY STREET
SITE#: 018985923
1504 Miller Street, Monroe, NC 28110

Monroe Township, Union County, North Carolina

REVISTION #: 0
ISSUE DATE: 07-03-2019
SEE SHEET #1

SURVEYOR'S
DESCRIPTIONS
SHEET 6 OF 4

K:\ATL_Wireless\000_Verizon\2019 Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:41 PM by: christopher.strange

1.00 GENERAL NOTES

- 1.01 ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE, LOCAL AND NATIONAL CODES, ORDINANCES AND OR REGULATIONS APPLICABLE TO THIS PROJECT.
- 1.02 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE PROJECT MANAGER AND/OR ENGINEER AND BE RESOLVED BEFORE PROCEEDING WITH WORK. WHERE THERE IS A CONFLICT BETWEEN DRAWING AND VERIZON SPECIFICATIONS, THE VERIZON PROJECT ENGINEER SHOULD BE CONTACTED FOR CLARIFICATION.
- 1.03 ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE PROJECT MANAGER AND/OR ENGINEER SO THAT PROPER REVISIONS MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE PROJECT MANAGER AND/OR ENGINEER.
- 1.04 CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH SITE CONDITIONS AS SHOWN ON THE ATTACHED SITE PLAN AND/OR SURVEY DRAWINGS.
- 1.05 WAVEGUIDE BRIDGE AND EQUIPMENT CABINETS ARE SHOWN FOR REFERENCE ONLY. REFER TO SEPARATE DRAWINGS FOR SPECIFIC INFORMATION.
- 1.06 ALL FINISHED GRADES SHALL SLOPE MINIMUM 1/4 IN./FT. AWAY FROM EQUIPMENT IN ALL DIRECTIONS. CONTRACTOR SHALL SLOPE SWALES AS REQUIRED ALONG EXISTING TERRAIN TO DRAIN AWAY FROM COMPOUND AND ACCESS DRIVE.
- 1.07 THE PROPOSED TOWER AND TOWER FOUNDATIONS WERE DESIGNED BY OTHERS. TOWER INFORMATION PROVIDED ON THESE PLANS ARE PROVIDED FOR REFERENCE PURPOSES ONLY. NOTIFY ENGINEER OR PROJECT MANAGER OF ANY CONFLICTS OR DISCREPANCIES. CONTRACTOR TO OBTAIN COPY OF TOWER DESIGN DRAWINGS, IF AVAILABLE, FROM VERIZON PROJECT MANAGER TO CONFIRM COAX ROUTING AND ANTENNA MOUNT INFORMATION.
- 1.08 THE CONTRACTOR SHALL PROVIDE ADEQUATE EXCAVATION SLOPING, SHORING, BRACING, AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
- 1.09 UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE EXISTING ACCESS ROAD AND COMPOUND GRAVEL AREAS. ANY NEW FILL MATERIALS SHALL BE COMPACTED.
- 1.10 THE CONTRACTOR IS HEREBY NOTIFIED THAT PRIOR TO COMMENCING CONSTRUCTION, HE IS RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES INVOLVED AND SHALL REQUEST A VERIFICATION AT THE CONSTRUCTION SITE OF THE LOCATIONS OF THEIR UNDERGROUND UTILITIES AND WHERE THEY MAY POSSIBLY CONFLICT WITH THE PLACEMENT OF IMPROVEMENTS AS SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT WILL BE REQUIRED TO NOTIFY "NORTH CAROLINA 811" 48 HOURS IN ADVANCE OF PERFORMING ANY WORK BY CALLING THE TOLL FREE NUMBER (800) 632-4949 (OR 811). ANY UTILITIES DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR, AT NO EXPENSE TO THE OWNER.
- 1.11 CONTRACTOR TO PROVIDE DUMPSTER AND PORTABLE TOILET FACILITY DURING CONSTRUCTION.
- 1.12 CONTRACTOR TO PROVIDE STYMIE LOCK OR EQUIVALENT AS APPROVED BY VERIZON PROJECT MANAGER.
- 1.13 CONTRACTOR TO PROVIDE ANY NECESSARY SIGNAGE PER VERIZON PROJECT MANAGER'S INSTRUCTIONS. SEE DETAIL ON SHEET C11.

2.00 EQUIPMENT FOUNDATION NOTES

- 2.01 FOUNDATIONS ARE DESIGNED FOR A PRESUMPTIVE ALLOWABLE SOIL BEARING CAPACITY OF 2,000 PSF. CONTRACTOR SHALL VERIFY SOIL CONDITIONS AND BEARING CAPACITY PRIOR TO CONSTRUCTION.
- 2.02 EXCAVATE A MINIMUM 18" BELOW PROPOSED EQUIPMENT FOUNDATIONS OF EXPANSIVE, ORGANIC, UNCONSOLIDATED OR OTHERWISE UNACCEPTABLE MATERIAL AND REPLACE WITH WELL-COMPACTED MATERIAL ACCEPTABLE TO VERIZON.
- 2.03 CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE WORK SITE. ALL EXCAVATIONS NEAR THESE LINES TO BE CARRIED OUT WITH EXTREME CAUTION. COORDINATE ALL RELOCATIONS WITH THE PROPERTY OWNER.
- 2.04 CONTRACTOR TO CUT/FILL EXISTING COMPOUND SUBSOIL TO PROVIDE AN AREA AS LEVEL AS POSSIBLE FOR THE EQUIPMENT FOUNDATIONS. ALL FILL AREAS ARE TO BE FILLED WITH SUITABLE MATERIALS. FILL MATERIALS ARE TO BE PLACED, COMPACTED, AND TESTED IN MAXIMUM LAYERS OF 8". COMPACTION OF ALL FILL MATERIAL SHALL ACHIEVE 95 PERCENT OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D 698. ALL TESTS MUST MEET THE MINIMUM SPECIFIED SOIL BEARING CAPACITY. COMPACTION TESTING IS BY THE GEOTECHNICAL TESTING COMPANY DESIGNATED FOR THE PROJECT. SCHEDULING AND COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. REPORTS OF ALL TESTING ARE TO BE PROMPTLY DELIVERED OR FAXED TO THE VERIZON WIRELESS PROJECT MANAGER.
- 2.05 CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION TO ACI-318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- 2.06 CONCRETE SHALL HAVE A SLUMP BETWEEN 3" AND 6".
- 2.07 FIBERS FOR CONCRETE SHALL BE FIBERMESH 650, 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED FIBERS, e3 PATENTED TECHNOLOGY PATENTED TECHNOLOGY, CONTAINING NO REPROCESSED OLEFIN MATERIALS. THE FIBERS SHALL CONFORM TO ASTM C1116 TYPE III AND MANUFACTURED SPECIFICALLY FOR THE SECONDARY REINFORCEMENT OF CONCRETE.
- 2.08 THE FIBERS SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED MANUFACTURING FACILITY. UNLESS OTHERWISE STATED, FIBERMESH 650 MACRO-SYNTHETIC FIBERS SHALL BE ADDED TO THE CONCRETE AT THE BATCHING PLANT AT THE RECOMMENDED APPLICATION RATE OF 3 LBS/YD³ AND MIXED FOR A SUFFICIENT TIME (MINIMUM 5 MINUTES AT FULL MIXING SPEED) TO ENSURE UNIFORM DISTRIBUTION OF THE FIBERS THROUGHOUT THE CONCRETE. FIBROUS CONCRETE REINFORCEMENT SHALL BE MANUFACTURED BY FIBERMESH, 4019 INDUSTRY DRIVE, CHATTANOOGA, TN 37416 USA, TEL: 800 621-1273, WEBSITE: WWW.FIBERMESH.COM
- 2.09 AT THE REQUEST OF THE VERIZON WIRELESS PROJECT MANAGER, TEST CYLINDERS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31. THREE CYLINDERS SHALL BE TAKEN FOR EACH DAY'S CONCRETE PLACEMENT. CYLINDERS SHALL BE TESTED IN ACCORDANCE WITH THE LATEST REVISION TO ASTM C39.
- 2.10 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH ¾" x 45° CHAMFER, UNLESS OTHERWISE NOTED.
- 2.11 CONCRETE FORMWORK IS TO BE STRIPPED WITHIN 48 HOURS. VIBRATION OF THE CONCRETE MUST ASSURE THAT HONEYCOMBING WILL BE AT A MINIMUM. MECHANICAL VIBRATION OF ALL CONCRETE IS REQUIRED UNLESS OTHERWISE DIRECTED BY VERIZON WIRELESS' PROJECT MANAGER. ABOVE GRADE CONCRETE IS TO BE RUBBED AND PATCHED TO ASSURE SMOOTH FINISH AT TIME OF FORMS REMOVAL. CONTRACTOR SHALL PROVIDE A BROOM FINISH ON THE TOP SURFACE OF THE EQUIPMENT FOUNDATION UNLESS OTHERWISE DIRECTED BY VERIZON WIRELESS' PROJECT MANAGER.
- 2.12 TOPS OF CONCRETE FOUNDATION MUST BE WITHIN 0.02' OF ELEVATION REQUIRED.
- 2.13 TOP OF FOUNDATION FINISH TO BE LEVEL ± ⅛" IN 10'.
- 2.14 TOP OF FOUNDATION TO HAVE MEDIUM BROOM FINISH.
- 2.15 CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS. CONTRACTOR SHALL VERIFY PLACEMENT OF EQUIPMENT AND LOCATION OF CONDUIT FOR MANUFACTURER'S AND VENDORS SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION OF ALL UTILITIES.



PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

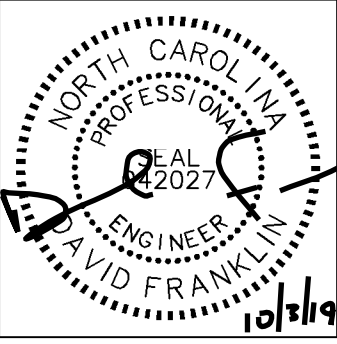


11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

SHEET TITLE:

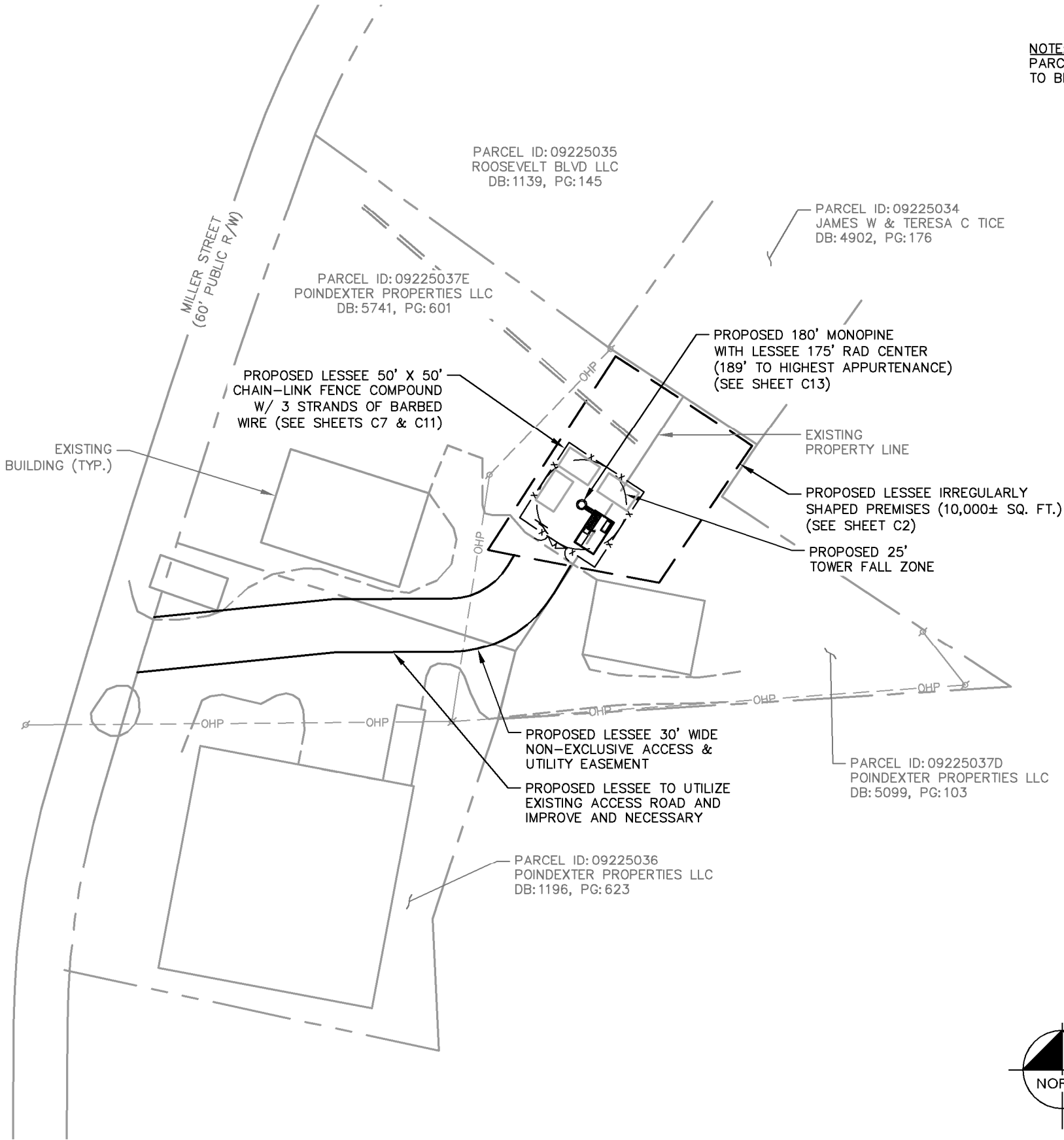
GENERAL NOTES

SHEET NUMBER:

N1

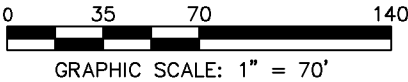
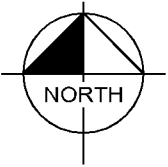
TOWER SETBACKS TO PROPERTY LINES (FROM TOWER CENTER)	
NORTH	81'-8"
SOUTH	89'-7"
EAST	78'-3"
WEST	208'-5"

NOTE:
PARCEL 09225037D & 09225037E
TO BE COMBINED.



SURVEY NOTE:
1. VERIZON WIRELESS STAFF SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY CORDELL LAND SURVEYING DATED 07/03/19 AND SITE VISIT ON 04/23/19.

1 OVERALL SITE PLAN
C1 SCALE: 1" = 70'



8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

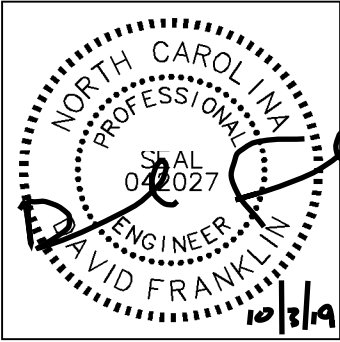
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM KAB

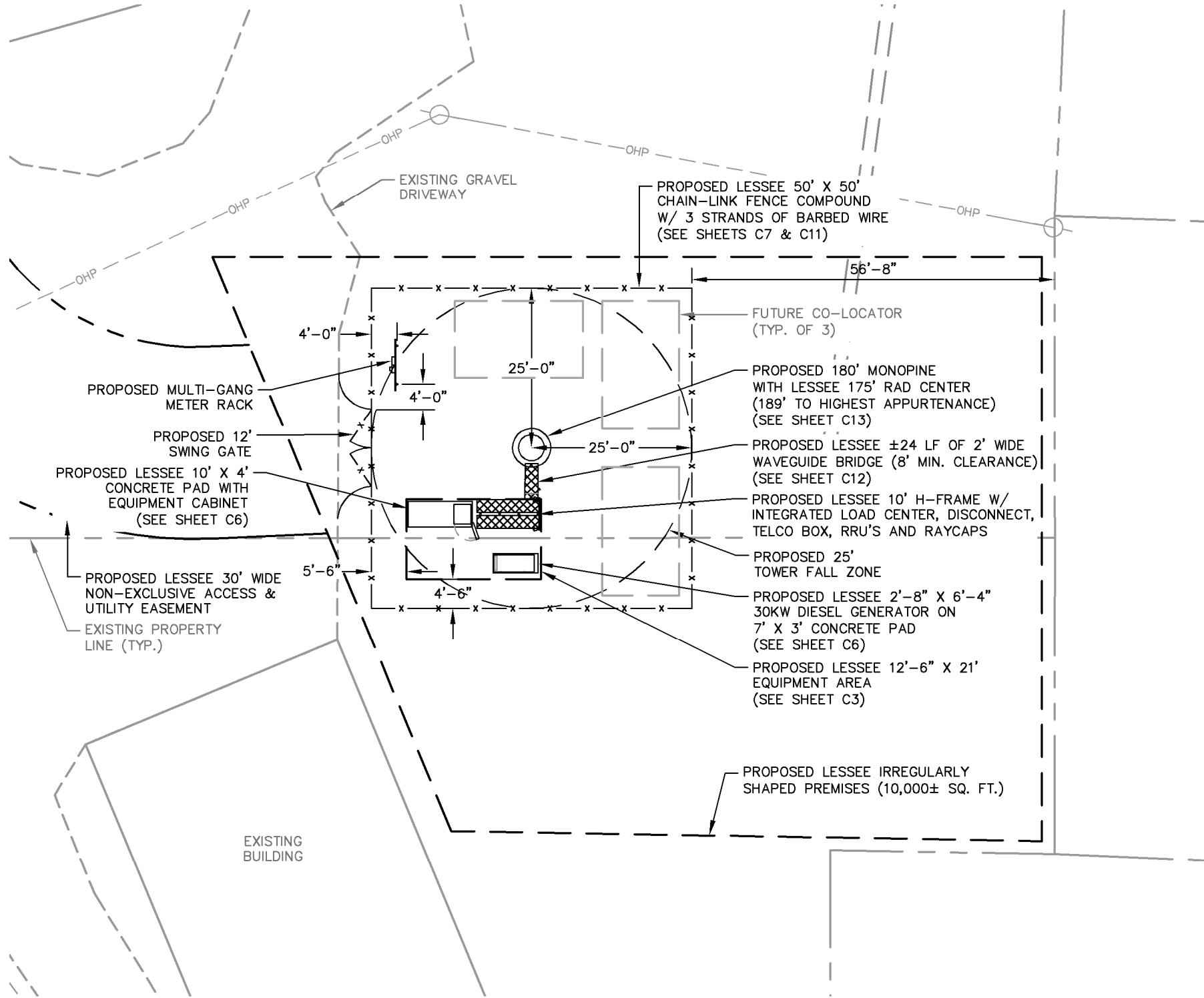
SHEET TITLE:

**OVERALL SITE
PLAN**

SHEET NUMBER:

C1

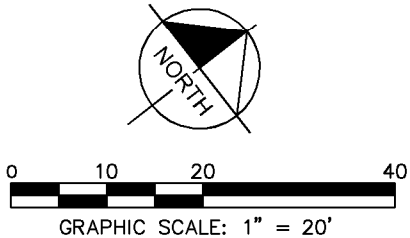
K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:41 PM by: christopher.strange



1 SITE PLAN
C2 SCALE: 1" = 20'

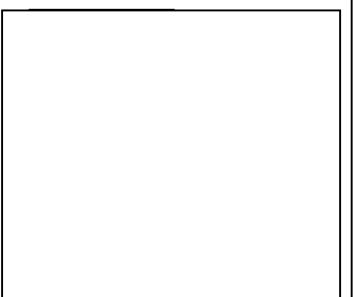
- SITE NOTES:**
1. VERIZON WIRELESS STAFF SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
 2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY CORDELL LAND SURVEYING DATED 07/03/19 AND SITE VISIT ON 04/23/19.
 3. CONTRACTOR TO CONFIRM WITH VERIZON CONSTRUCTION MANAGER THAT THE EQUIPMENT SHOWN HAS BEEN ORDERED/SCHEDULED FOR DELIVERY TO THIS SITE.
 4. THE BASIS OF EQUIPMENT DESIGN INCLUDES ONE (1) RF CABINET, ONE (1) FUTURE BATTERY CABINET, AND ONE (1) FUTURE EXPANSION CABINET.
 5. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND MODIFYING SCOPE OF WORK TO ACCOMMODATE ANY CHANGES IN THE EXACT EQUIPMENT PROCURED BY VERIZON WIRELESS. COORDINATE ANY CHANGES WITH VERIZON WIRELESS CONSTRUCTION MANAGER.
 6. ROUTE FIBER UP TOWER PER STRUCTURAL ANALYSIS BY TOWER OWNER.
 7. TOWER DIMENSIONS SHOWN ON THIS PLAN ARE FOR TOWER CENTER LOCATION. CONTRACTOR TO OBTAIN COPY OF TOWER ERECTION DRAWINGS FROM VERIZON CONSTRUCTION MANAGER PRIOR TO DRILLING TOWER FOUNDATIONS. CASSIONS AND TOWER SHOWN ON THIS PLAN ARE ILLUSTRATIVE, SEE DESIGN DRAWING BY OTHERS. DO NOT SCALE.

NOTE:
PARCEL 09225037D & 09225037E TO BE COMBINED.

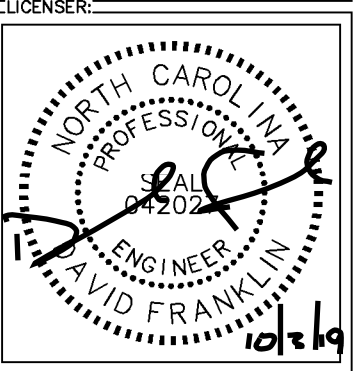


PROJECT INFORMATION:
SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:
Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102



REV:	DATE:	ISSUED FOR:	BY:
8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF



KHA PROJECT NUMBER:
018985923

DRAWN BY: TDM
CHECKED BY: KAB

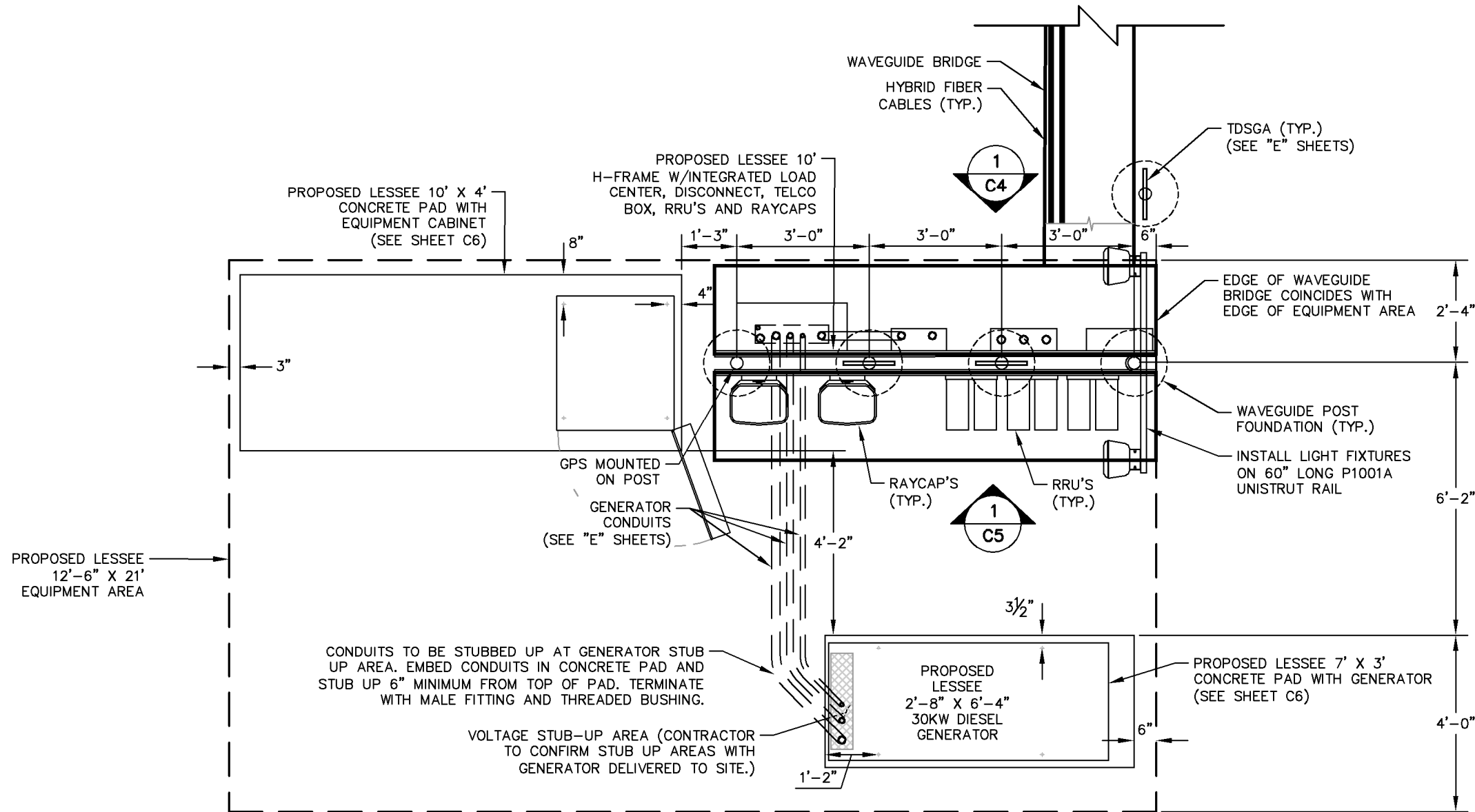
SHEET TITLE:

SITE PLAN

SHEET NUMBER:

C2

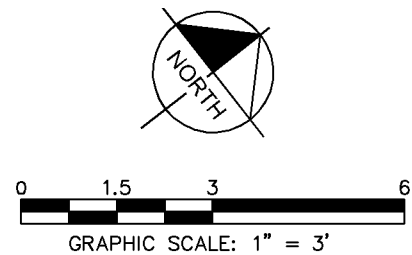
K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-G8.dwg 09/30/19 2:41 PM by: christopher.strange



1 EQUIPMENT PAD LAYOUT
C3 SCALE: 1" = 3'

EQUIPMENT PAD/ROUTING NOTES:

1. REFER TO THE SITE PLAN FOR EQUIPMENT PAD LOCATION AND ORIENTATION.
2. RUN 2" FLEX TELCO CONDUIT FROM BOTTOM OF TELCO BOX TO SIDE OF RF CABINET WITH CHASE NIPPLE THROUGH FACTORY KNOCKOUT.
3. RUN 2" FLEX POWER CONDUIT AND 1" FLEX ALARM CONDUIT FROM BOTTOM OF ILC TO SIDE OF RF CABINET WITH CHASE NIPPLES THROUGH FACTORY KNOCKOUTS.
4. RUN 2" FLEX FIBER CONDUIT FROM BOTTOM OF OVP TO SIDE OF RF CABINET WITH CHASE NIPPLE THROUGH FACTORY KNOCKOUT.
5. RUN (1) 1 1/2" FLEX POWER CONDUIT FOR EVERY (6) RRU CIRCUITS FROM BOTTOM OF OVP TO SIDE OF RF CABINET WITH CHASE NIPPLE THROUGH FACTORY KNOCKOUT.
6. SUPPORT FLEX CONDUIT ON HORIZONTAL H-FRAME RAILS OR ON VERTICAL SITE STRUT SNT10 RAILS ADDED TO H-FRAME FOR CONDUIT/CABLE MANAGEMENT.
7. RUN HYBRID CABLE FOR TOWER MOUNTED RRU'S OVERHEAD ON TRAPEZE SUSPENDED FROM WAVE GUIDE BRIDGE. SWEEP DOWN ONTO H-FRAME RAILS, THEN LOOP UNDER OVP AND CONNECT TO BOTTOM OF OVP. ATTACH GROUND KITS TO HYBRID CABLE BEFORE LOOPING UNDER OVP, AND BOND TO TDSGA GROUND BAR AT BASE OF H-FRAME.
8. RUN COAX CABLE FOR GROUND MOUNTED RRU'S (IF USED) OVERHEAD ON TRAPEZE SUSPENDED FROM WAVE GUIDE BRIDGE. TERMINATE COAX ON ICE BRIDGE AND TRANSITION TO JUMPERS JUST BEFORE REACHING H-FRAME. ATTACH GROUND KITS TO COAX CABLE ON TOWER SIDE OF LAST ICE BRIDGE POST AND BOND TO TDSGA GROUND BAR NEAR TOP OF POST.
9. GPS ANTENNA TO BE MOUNTED TO STANDARD HEIGHT POST WITH EXTENDED MOUNTING PIPE, USING COMMSCOPE GPS-U MOUNTING KIT. MOUNT AS NEAR AS PRACTICAL TO RBA84 CABINET.
10. BOLT CABINETS AND GENERATOR TO SLAB USING FASTENERS SPECIFIED BY EQUIPMENT MANUFACTURER IN FACTORY PROVIDED MOUNTING HOLES.



verizon
8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

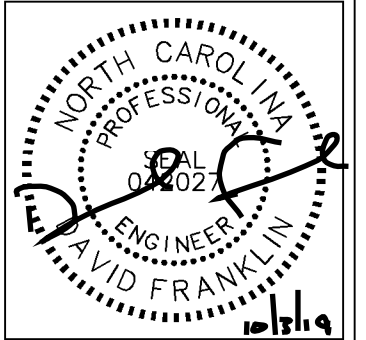
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

SHEET TITLE:

EQUIPMENT PAD
LAYOUT

SHEET NUMBER:

C3

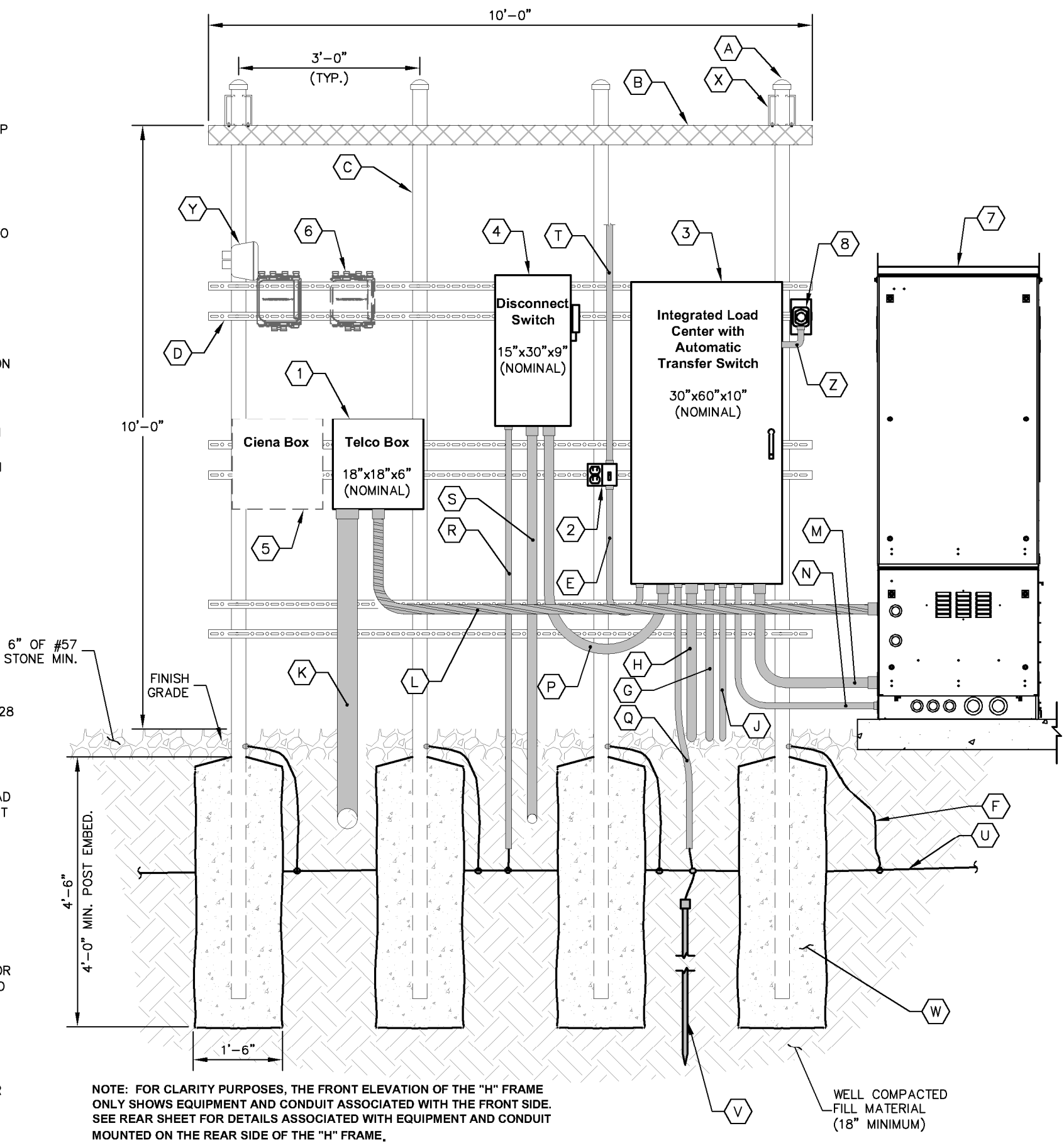
K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-CB.dwg 09/30/19 2:41 PM by: christopher.strange

KEY NOTES - CONDUIT, CONDUCTORS, & MISC

- (A) GALVANIZED RIGID STEEL CAP, TYPICAL.
- (B) ICE BRIDGE, SEE CIVIL SHEETS FOR ADDITIONAL DETAILS.
- (C) 3" GALVANIZED RIGID STEEL PIPE, TYPICAL.
- (D) 1 5/8" X 1 5/8" GALVANIZED STEEL CHANNEL (UNISTRUT #P1000) WITH PLASTIC END CAP (UNISTRUT #P2860), TYPICAL.
- (E) 1" PVC CONDUIT FOR ROUTING POWER CONDUCTORS TO LIGHTS/DUPLEX OUTLET.
- (F) ONE (1) #2 AWG BARE SOLID TINNED COPPER BONDING CONDUCTOR (BC) FROM H-FRAME VERTICAL PIPE TO GROUND RING, EXOTHERMIC WELD BOTH ENDS.
- (G) 1" PVC CONDUIT FOR ROUTING GENERATOR CONTROL AND ALARM SIGNAL CABLES TO THE GENERATOR.
- (H) 1 1/2" PVC CONDUIT FOR ROUTING POWER CONDUCTORS TO THE GENERATOR.
- (J) 1" PVC CONDUIT FOR ROUTING POWER CONDUCTORS TO THE GENERATOR BATTERY CHARGER AND THE GENERATOR BLOCK HEATER.
- (K) 4" PVC TELCO CONDUIT, WITH TWO (2) PULL ROPES.
- (L) 2" FLEX CONDUIT FOR TELCO CABLES TO RF CABINET. REFER TO ROUTING NOTES ON EQUIPMENT PAD LAYOUT.
- (M) 2" PVC CONDUIT FOR ROUTING POWER CONDUCTORS TO RF CABINET. REFER TO ROUTING NOTES ON EQUIPMENT PAD LAYOUT.
- (N) 1" PVC CONDUIT FROM INTEGRATED LOAD CENTER (ILC) TO RF CABINET FOR ALARM SIGNAL CABLE. REFER TO ROUTING NOTES ON EQUIPMENT PAD LAYOUT.
- (P) 2" PVC CONDUIT FOR ROUTING POWER CONDUCTORS FROM THE DISCONNECT SWITCH TO THE UTILITY BREAKER IN THE ILC.
- (Q) 3/4" PVC CONDUIT WITH ONE (1) - #2 BARE STRANDED TINNED COPPER GEC FROM GROUNDING LUG IN ILC TO GROUND ROD, EXOTHERMIC WELD GEC TO GROUND ROD.
- (R) 3/4" PVC CONDUIT WITH ONE (1) - #2 BARE STRANDED TINNED COPPER GEC FROM GROUNDING LUG IN DISCONNECT SWITCH TO GROUND RING, EXOTHERMIC WELD TO GROUND RING.
- (S) 2" PVC CONDUIT FOR ROUTING POWER CONDUCTORS FROM THE UTILITY COMPANY METER TO THE DISCONNECT SWITCH.
- (T) 1" PVC CONDUIT FOR ROUTING POWER CONDUCTORS TO AREA LIGHTS.
- (U) GROUND RING (SEE "E" SHEETS).
- (V) GROUND ROD, EXOTHERMIC WELD TO GROUND RING (SEE "E" SHEETS).
- (W) CONCRETE FOUNDATION FOR H-FRAME VERTICAL PIPE. CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI. AND INCLUDE FIBERMESH 650.
- (X) WB-K210-B15 HORSEHEAD SUPPORT BRACKET (SEE "WAVEGUIDE BRIDGE DETAILS" SHEET). THRU BOLTS REQUIRED FOR ATTACHMENT IN LIEU OF FACTORY PROVIDED U-BOLTS.
- (Y) INSTALL LIGHT FIXTURES ON 60" LONG P1001A UNISTRUT RAIL (SEE "EQUIPMENT PAD LAYOUT" SHEET). ATTACH P1001A TO H-FRAME POST USING TWO (2) UB3 UNISTRUT CLAMPS. LIGHTS TO BE INSTALLED 7'-6" ABOVE GRADE.
- (Z) 1" PVC CONDUIT FOR ROUTING POWER CONDUCTORS FROM THE ILC TO THE EMERGENCY GENERATOR STOP SWITCH.

KEY NOTES - ELECTRICAL EQUIPMENT

- (1) NEMA 3R ENCLOSURE TELCO BOX WITH REMOVABLE FRONT PANEL, PVC, (18" X 18" X 6" NOMINAL).
- (2) 20 AMP GFCI DUPLEX RECEPTACLE AND TIMER SWITCH, ENERLITES HET06 SERIES (OR APPROVED EQUIVALENT) IN LOCKABLE NEMA 3R ENCLOSURE, 2 GANG BOX WITH RED DOT 2CKPM-W COVER.
- (3) 200 AMP, 120/240 VOLT, INTEGRATED LOAD CENTER WITH 42 SPACE PANEL AND AUTOMATIC TRANSFER SWITCH (30" X 60" X 10" NOMINAL).
- (4) SE RATED, 240 V, 200 AMP, 2-POLE, NON-FUSED DISCONNECT IN NEMA 3R ENCLOSURE.
- (5) CIENA ETHERNET IF REQUIRED (COORDINATE WITH VERIZON CONSTRUCTION MANAGER FOR ADDITIONAL CONDUIT AND WIRING REQUIREMENTS).
- (6) DIPLEXERS "AS NEEDED".
- (7) VERIZON RF CABINET-REAR VIEW.
- (8) EMERGENCY SHUTOFF SWITCH FOR GENERATOR MOUNTED ON 4" X 7" GALVANIZED J-BOX COVER PLATE



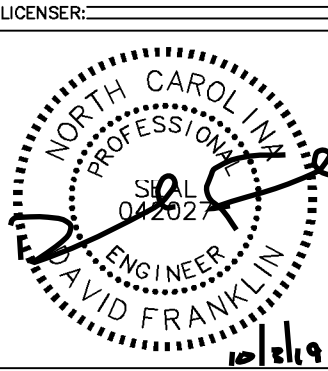
1 EQUIPMENT RACK DETAILS - FRONT
C4 NOT TO SCALE



PROJECT INFORMATION:
SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:
Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV:	DATE:	ISSUED FOR:	BY:
8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF



KHA PROJECT NUMBER:
018985923

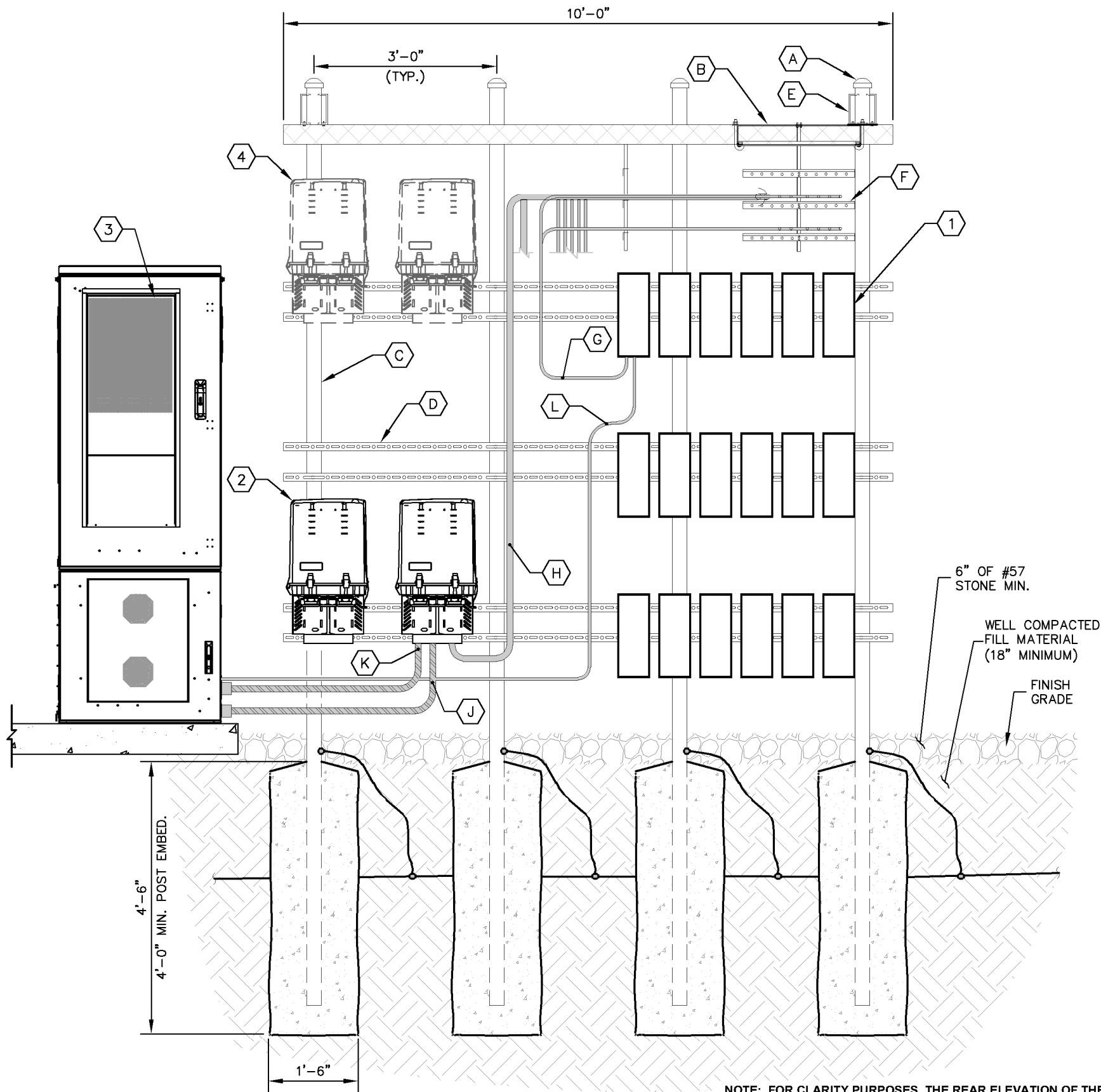
DRAWN BY: TDM
CHECKED BY: KAB

SHEET TITLE:

EQUIPMENT RACK
DETAIL - FRONT

SHEET NUMBER:
C4

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:41 PM by: christopher.strange



1
C5

EQUIPMENT RACK DETAILS - REAR
NOT TO SCALE

NOTE: FOR CLARITY PURPOSES, THE REAR ELEVATION OF THE "H" FRAME ONLY SHOWS EQUIPMENT AND CONDUIT ASSOCIATED WITH THE REAR SIDE. SEE FRONT SHEET FOR DETAILS ASSOCIATED WITH EQUIPMENT AND CONDUIT MOUNTED ON THE FRONT SIDE OF THE "H" FRAME.

KEY NOTES - CONDUIT, CONDUCTORS, & MISC

- A GALVANIZED RIGID STEEL CAP, TYPICAL.
- B ICE BRIDGE, SEE CIVIL SHEETS FOR ADDITIONAL DETAILS.
- C 3" GALVANIZED RIGID STEEL PIPE, TYPICAL.
- D 1½" X 1½" GALVANIZED STEEL CHANNEL (UNISTRUT #P1000) WITH PLASTIC END CAP (UNISTRUT #P2860), TYPICAL.
- E WB-K210-B15 HORSEHEAD SUPPORT BRACKET (SEE "WAVEGUIDE BRIDGE DETAILS" SHEET). THRU BOLTS REQUIRED FOR ATTACHMENT IN LIEU OF FACTORY PROVIDED U-BOLTS.
- F ICE BRIDGE RUNNING TOWARDS TOWER (SEE "EQUIPMENT PAD LAYOUT" SHEET).
- G COAX JUMPER CABLES INTO BOTTOM OF RRU'S, TYPICAL.
- H HYBRID CABLES RUNNING INTO BOTTOM OF RAYCAPS, TYPICAL (SEE NOTE 7 ON "EQUIPMENT PAD LAYOUT" SHEET).
- J 1½" POWER FLEX CONDUIT RUNNING FROM BOTTOM OF RAYCAPS TO CABINET, TYPICAL (SEE "EQUIPMENT PAD LAYOUT" SHEET).
- K 2" FIBER FLEX CONDUIT RUNNING FROM BOTTOM OF RAYCAPS TO CABINET, TYPICAL (SEE "EQUIPMENT PAD LAYOUT" SHEET).
- L FIBER/POWER JUMPER TO RRU (TYP. FOR EACH RRU).

KEY NOTES - ELECTRICAL EQUIPMENT

- 1 VERIZON RF RRU'S (MODEL, QUANTITY OF, AND CONFIGURATION DETERMINED BY RF DESIGN).
- 2 VERIZON RAYCAPS (MODEL, QUANTITY OF, AND CONFIGURATION DETERMINED BY RF DESIGN).
- 3 VERIZON RF CABINET-FRONT VIEW.
- 4 FUTURE VERIZON RAYCAPS.

verizon

8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

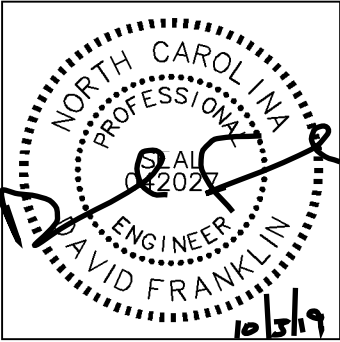
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

SHEET TITLE:

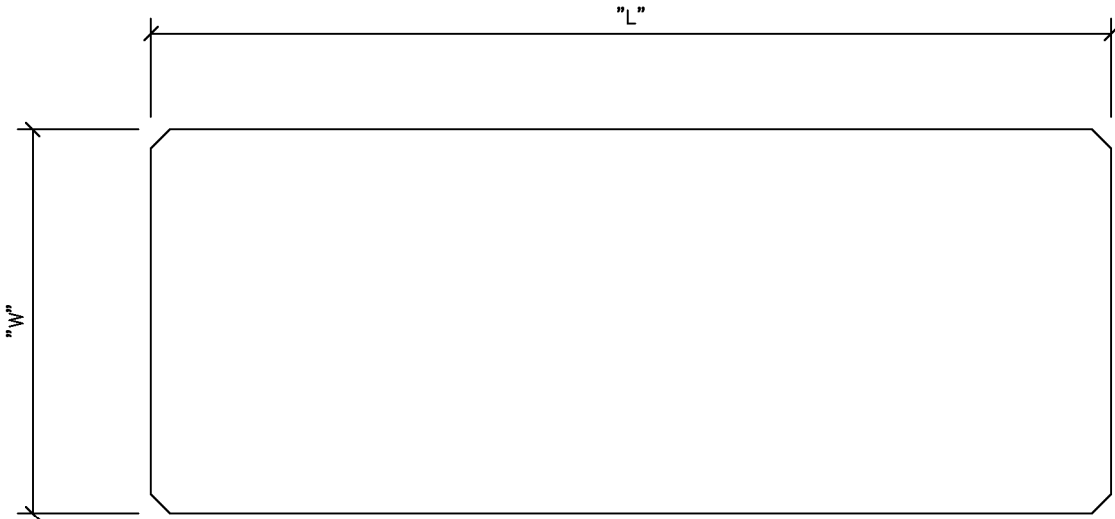
EQUIPMENT RACK
DETAIL - REAR

SHEET NUMBER:

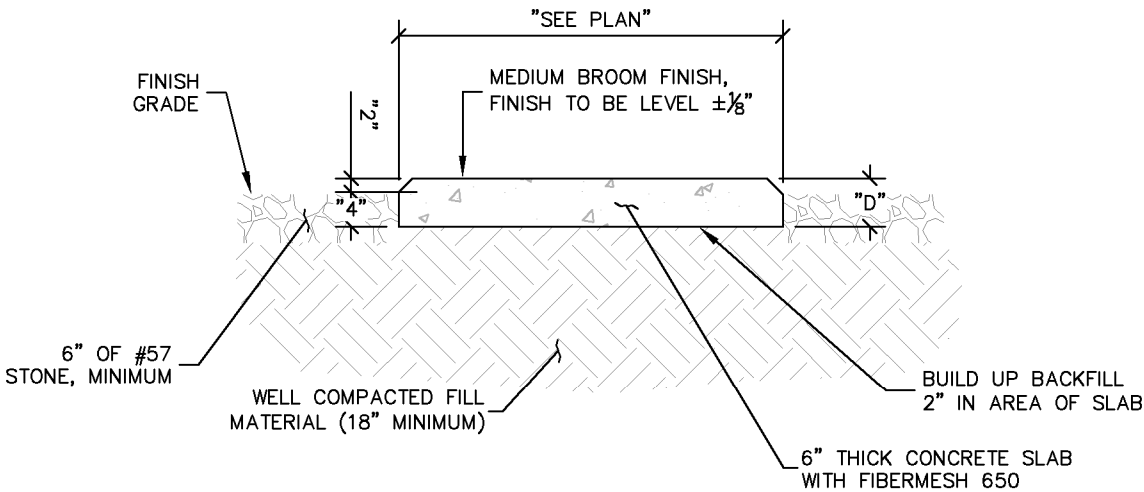
C5

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg ----- 09/30/19 2:41 PM by: christopher.strange

CONCRETE PAD SCHEDULE				
PAD TYPE	"L"	"W"	"D"	REINFORCEMENT
EQUIPMENT PAD	10'-0"	4'-0"	6"	SEE DETAIL 2/C6
GENERATOR PAD	7'-0"	3'-0"	6"	SEE DETAIL 2/C6



1 CONCRETE PAD PLAN
C6 NOT TO SCALE



2 CONCRETE PAD FOUNDATION SECTION
C6 NOT TO SCALE



8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

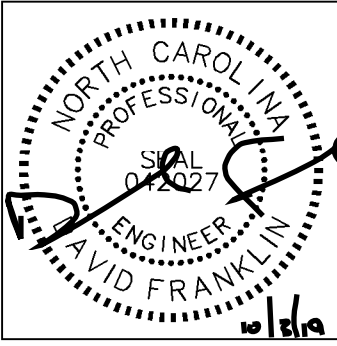
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

SHEET TITLE:

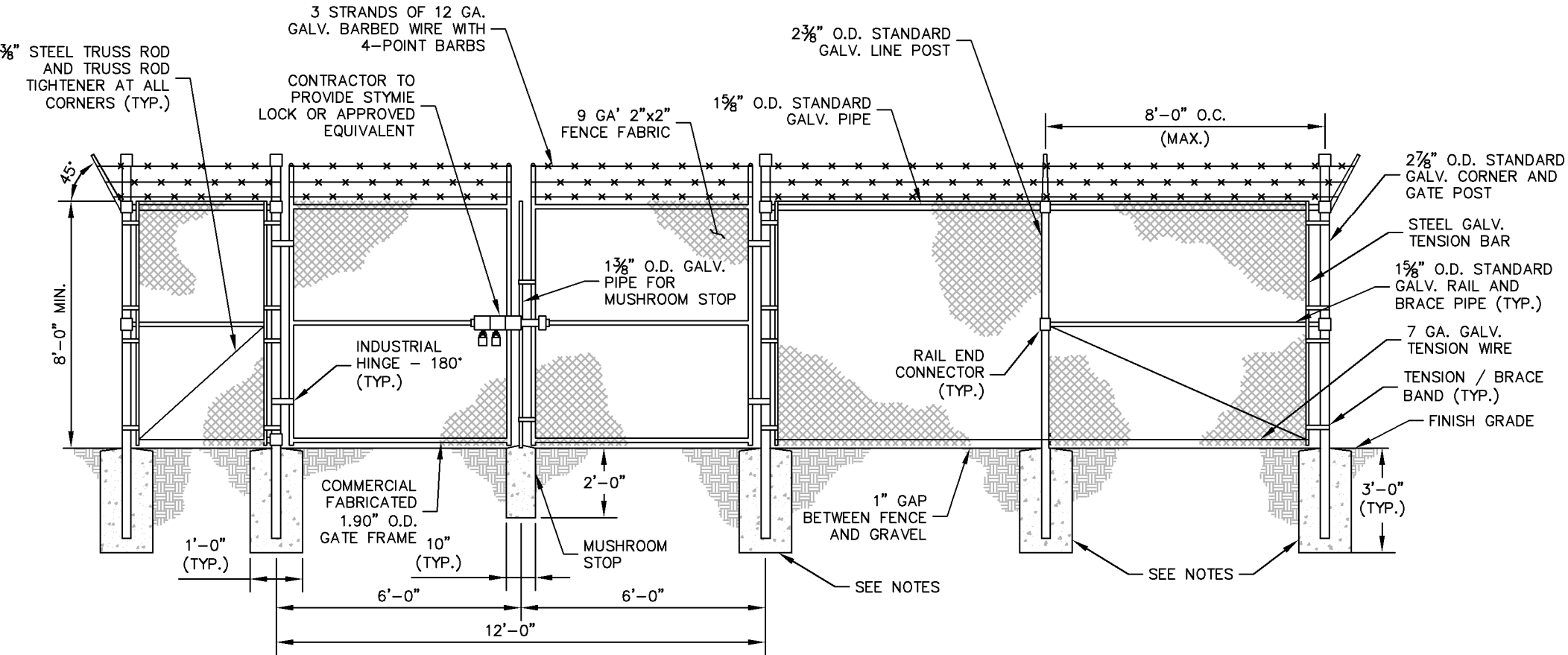
CONCRETE PAD
FOUNDATION
DETAILS

SHEET NUMBER:

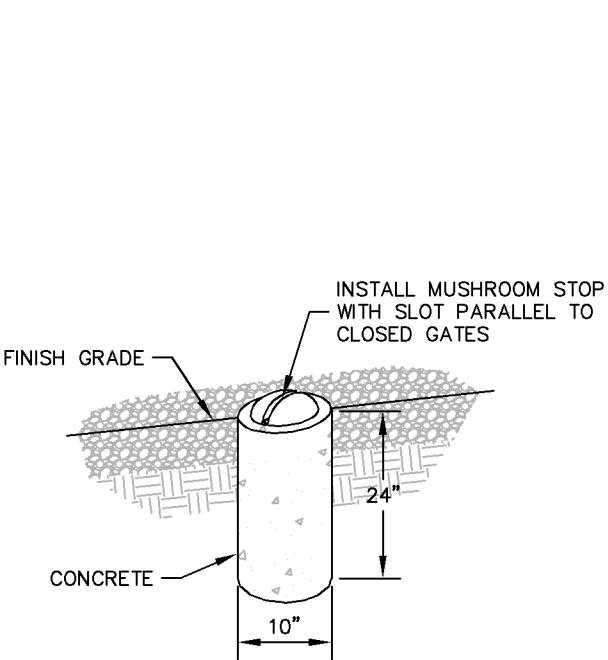
C6

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:41 PM by: christopher.strange

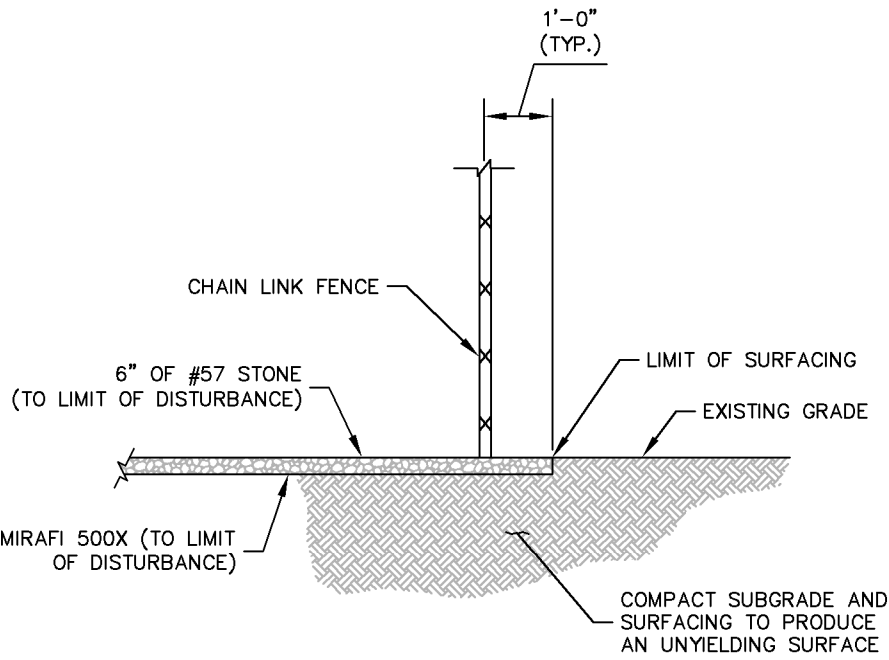
- FENCE NOTES:**
1. USE 3,000-PSI CONCRETE, FULLY CONSOLIDATED AROUND THE POST.
 2. WHERE THE POST IS SET IN ROCK OR CONCRETE, CORE A HOLE 12" DEEP AND 1" LARGER IN DIAMETER THAN THE POST. SET THE POST AND GROUT IN PLACE USING NON-SHRINK GROUT.
 3. ALL POSTS MUST BE PLUMB AND ALIGNED WITH ONE ANOTHER IN BOTH HORIZONTAL AND VERTICAL PLANES.
 4. CORNERS AND GATEPOSTS FOR CHAIN LINK FENCES SHALL EXTEND ABOVE THE TOP STRAND OF BARBED WIRE TO PROVIDE TENSIONING FOR THE BARBED WIRE.
 5. PROVIDE MIDRAILS AND BRACING AT ALL CORNER POSTS WHERE THE FENCE CHANGES DIRECTION BY MORE THAN 30 DEGREES.
 6. THE GRADE OF THE SITE AND INSTALLATION OF THE FENCE SHALL PROVIDE FOR NO MORE THAN A 1" GAP BETWEEN THE BOTTOM OF THE FENCE MATERIAL AND FINISH GRADE.
 7. CONTRACTOR SHALL PROVIDE HOLD OPEN DEVICES FOR ALL GATES AT THE SPECIFIED OPEN POSITIONS, DRIVEN PIPE TYPE RECEIVERS ARE NOT AUTHORIZED.
 8. CONTRACTOR SHALL ALSO PROVIDE A MUSHROOM TYPE RECEIVER AT THE CLOSE POSITION.



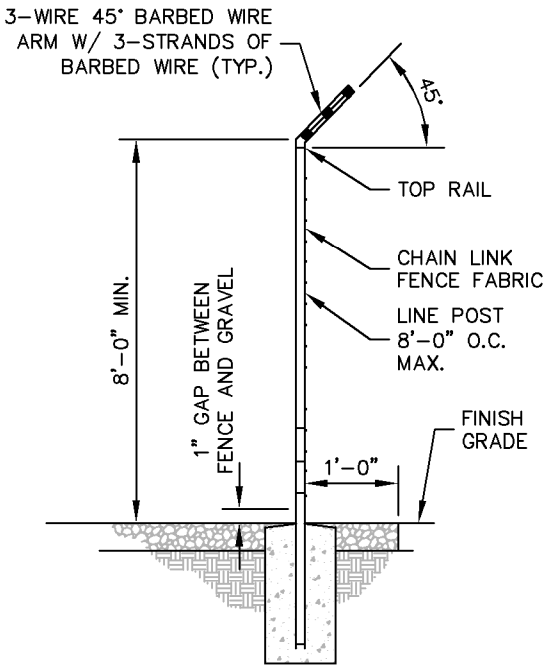
1
C7 CHAIN LINK FENCE AND GATE ELEVATION
NOT TO SCALE



2
C7 MUSHROOM STOP
NOT TO SCALE



3
C7 SITE COMPOUND SURFACE DETAIL
NOT TO SCALE



4
C7 SECTION AT FENCE
NOT TO SCALE

verizon

8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

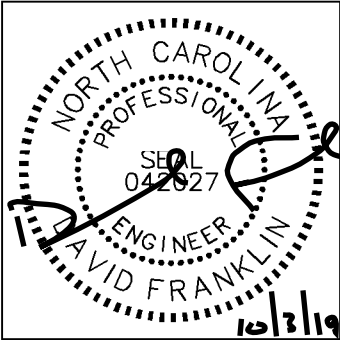
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

SHEET TITLE:

**FENCE, GATE, AND
COMPOUND
DETAILS**

SHEET NUMBER:

C7

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\GD\ECor-GB.dwg ----- 09/30/19 2:41 PM by: christopher.strange

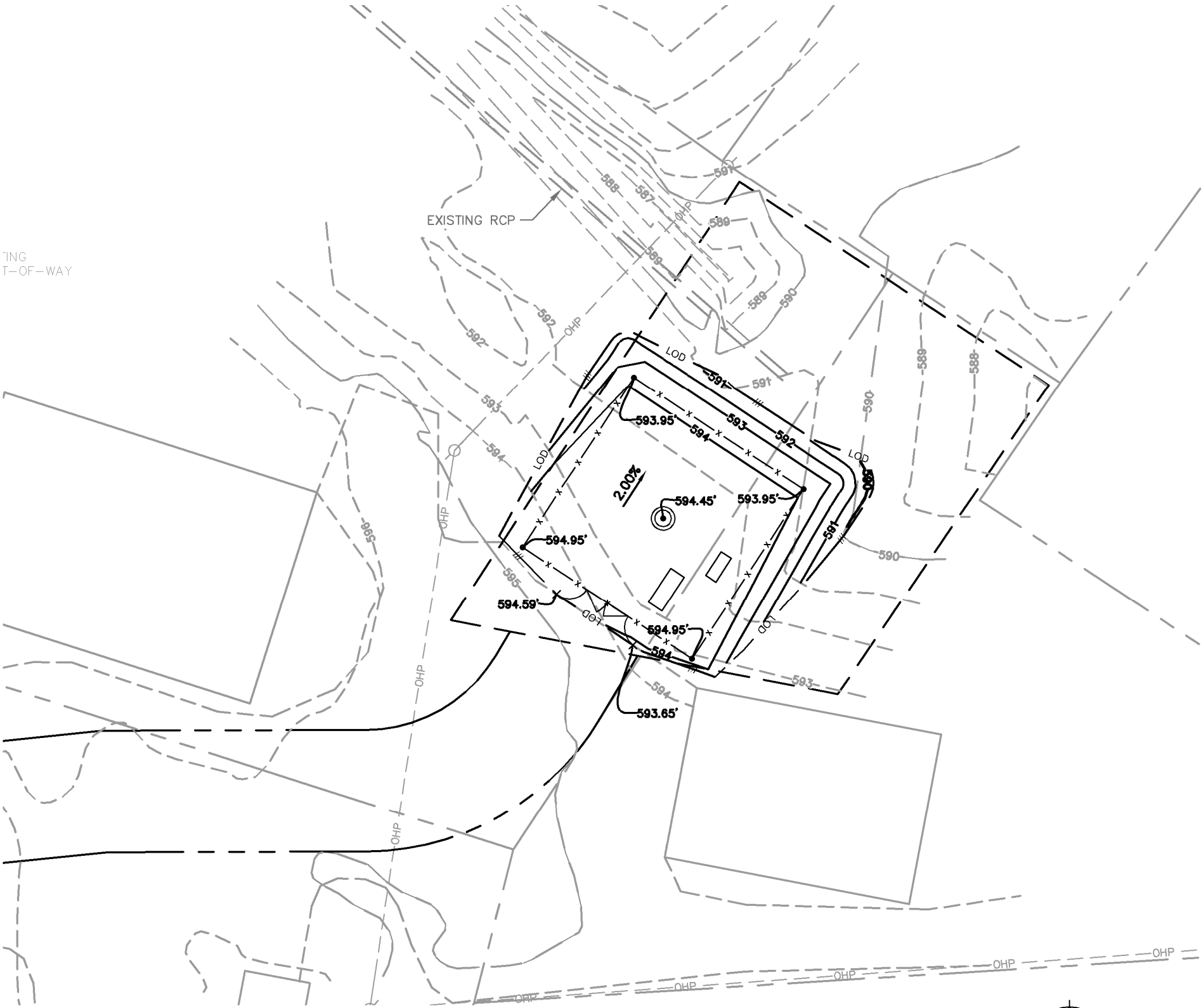
NOTE:
CURRENT DESIGN ANTICIPATES APPROXIMATELY 4,598± SQ. FT. (0.11 ACRES) OF CLEARING AND GRADING FOR THE PROPOSED PROJECT. IF ADDITIONAL CLEARING IS REQUIRED BEYOND WHAT IS SHOWN IN THE PLANS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND/OR PROJECT MANAGER. IF DURING THE BID WALK OR CONSTRUCTION IT IS DETERMINED THAT MORE THAN (1) ACRE OF LAND IS TO BE DISTURBED FOR CONSTRUCTION AN EROSION AND SEDIMENTATION CONTROL PLAN MUST BE FILED 30 DAYS PRIOR TO CONSTRUCTION.

- GRADING NOTES:**
1. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEERS SPECIFICATIONS. FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
 2. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
 3. CONTRACTOR SHALL BLEND EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
 4. PORTIONS OF THE SITE NOT SPECIFICALLY MENTIONED WITHIN THE GEOTECHNICAL REPORT SHALL BE COMPACTED TO 95 PERCENT OF THE MATERIALS MAXIMUM DRY DENSITY WITHIN 3 PERCENT OF OPTIMUM MOISTURE CONTENT.
 5. FILL SHALL BE PLACED IN MAXIMUM 8 INCH LOOSE LIFTS.
 6. UNDISTURBED AREAS WITHIN 30' INGRESS/EGRESS EASEMENT NOT NEEDED FOR UTILITY ROUTING TO BE LEFT UNDISTURBED.
 7. GROUND WATER SHOULD BE REASONABLY EXPECTED. ANY DE-WATERING OR MOISTURE CONDITIONING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE INCLUDED IN THE CONTRACT PRICE.
 8. SEED ALL DISTURBED AREAS NOT TOPPED WITH GRAVEL PER SEEDING SCHEDULE ON DETAIL ON SHEET C9.
 9. MAXIMUM CUT SLOPE = 2H:1V UNLESS OTHERWISE NOTED.
 10. MAXIMUM FILL SLOPE = 3H:1V UNLESS OTHERWISE NOTED.

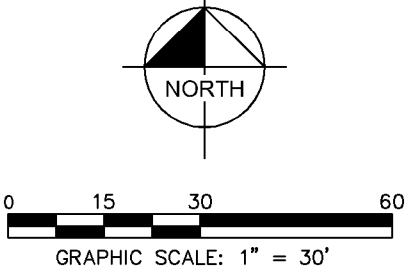
LEGEND

EXISTING CONTOURS ————
PROPOSED CONTOURS ————
LOD/SILT FENCE ——— LOD ———
TPF ——— TPF ——— TPF ———
EXISTING SPOT ELEVATION x XXX
PROPOSED SPOT ELEVATION • XXX

TING
T—OF—WAY



1 GRADING & EROSION CONTROL PLAN
C8 SCALE: 1" = 30'

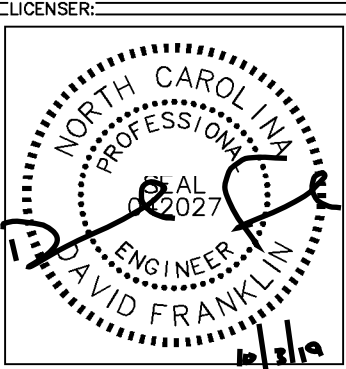


verizon
8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:
SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:
Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV:	DATE:	ISSUED FOR:	BY:
8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF



KHA PROJECT NUMBER:
018985923
DRAWN BY: TDM CHECKED BY: KAB
SHEET TITLE:
**GRADING AND
EROSION
CONTROL PLAN**
SHEET NUMBER:
C8

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:41 PM by: christopher.strange

EROSION CONTROL NOTES:

1. EROSION CONTROLS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE ADEQUATE TO MAINTAIN SEDIMENT ON SITE.
2. ALL EXCAVATED SOILS NOT NEEDED ON SITE FOR BACKFILL OPERATIONS SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE TAKEN OFF SITE AND LEGALLY DISPOSED OF.
3. SOIL REMAINING ON SITE SHALL HAVE SILT FENCE TIGHTLY PLACED AROUND THE ENTIRE CIRCUMFERENCE OF THE PILE.
4. PROVIDE EROSION CONTROLS AS NECESSARY TO PREVENT EXISTING SOILS FROM DRAINING OFF SITE OR INTO EXISTING DRAINAGE STRUCTURES.
5. ERECTION OF EROSION CONTROLS SHALL BE IN ACCORDANCE WITH STATE AND LOCAL EROSION CONTROL REGULATIONS.

SEEDING SCHEDULE FOR WINTER / SPRING CONSTRUCTION ACTIVITIES

SEEDING MIXTURE

Species	Rate (lb/acre)
Rye (grain)	120
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

SEEDING DATES

Mountains-- Above 2500 ft: Feb 15 - May 15
Below 2500 ft.: feb. 1 - May 1
Piedmont--Jan. 1 - May 1
Coastal Plain--Dec. 1 - Apr. 15

SOIL AMENDMENTS

Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

MULCH

Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

MAINTENANCE

Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

SEEDING SCHEDULE FOR SUMMER CONSTRUCTION ACTIVITIES

SEEDING MIXTURE

Species	Rate (lb/acre)
Common Bermudagrass	40-80 (1-2 lb/1,000 sq. ft.)

SEEDING DATES

Coastal Plain--Apr. 1 - July
Piedmont--Apr. 15 - June 30

SOIL AMENDMENTS

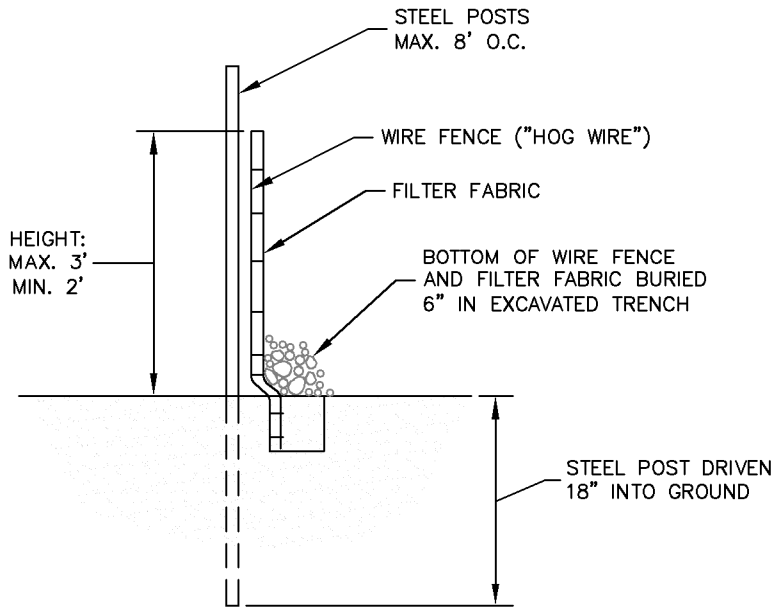
Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10-10-10 fertilizer.

MULCH

Use jute, excelsior matting, or other effective channel lining material to cover the bottom of channels and ditches. The lining should extend above the highest calculated depth of flow. On channel side slopes above this height, and in drainages not requiring temporary lining, apply 4,000 lb/acre grain straw and anchor straw by stapling netting over the top.

MAINTENANCE

A minimum of 3 weeks is required for establishment. Inspect and repair mulch frequently. Refertilize the following Apr. with 50 lb/acre nitrogen.



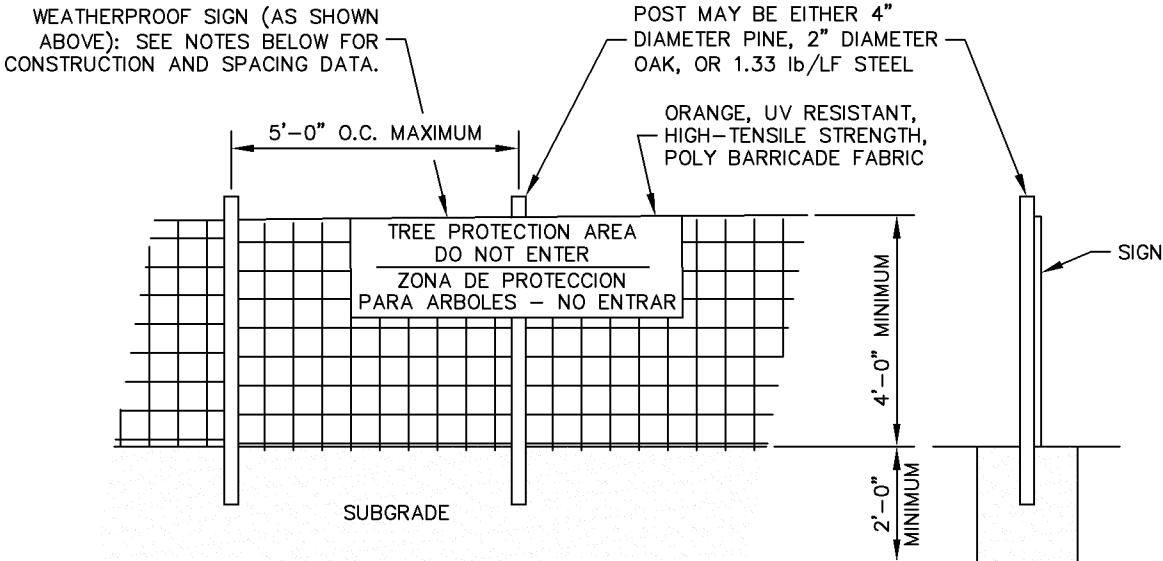
SECTION

1

SEDIMENT FENCE (SILT FENCE)

C9

NOT TO SCALE



NOTES

INSTALL TREE PROTECTION FENCE AND SIGNAGE PRIOR TO CALLING FOR SITE INSPECTION. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT. ADDITIONAL SIGNS MAY BE REQUIRED BASED ON ACTUAL FIELD CONDITIONS.

2

TREE PROTECTION FENCE

C9

NOT TO SCALE

verizon

8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

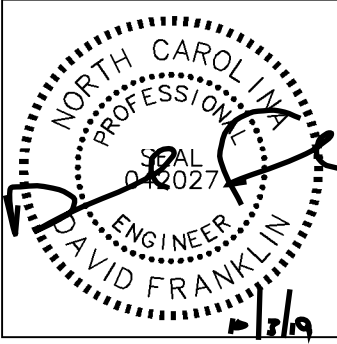
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

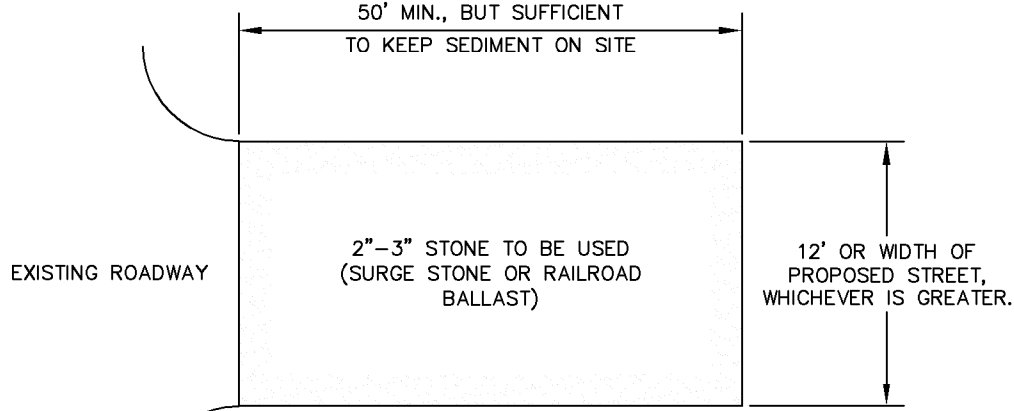
SHEET TITLE:

GRADING AND
EROSION
CONTROL DETAILS

SHEET NUMBER:

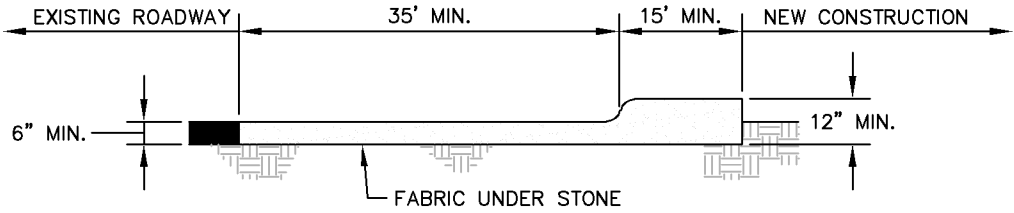
C9

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:42 PM by: christopher.strange



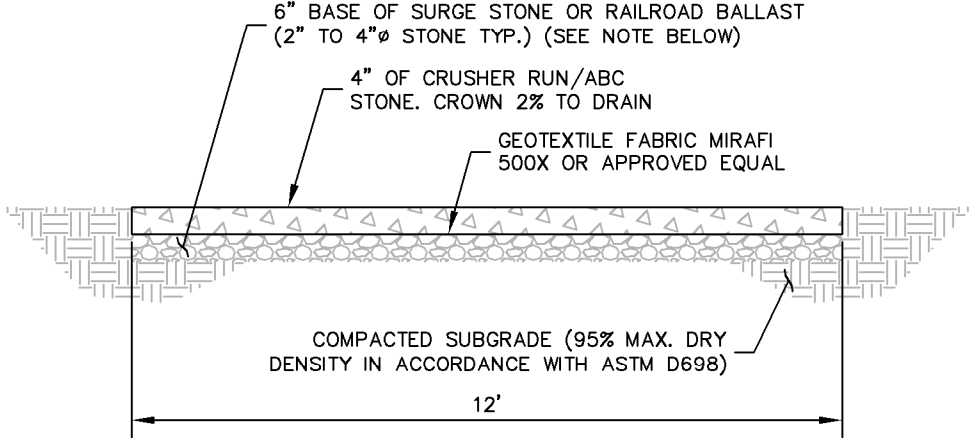
PLAN

- NOTES:
1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
 2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
 3. IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.



CROSS SECTION

1 CONSTRUCTION ENTRANCE
C10 NOT TO SCALE



NOTE:
IF DETERMINED NECESSARY DURING GRADING AND CONSTRUCTION OF THE ACCESS ROAD BY THE VERIZON WIRELESS PROJECT MANAGER, THE CONTRACTOR SHALL INSTALL 6" BASE OF SURGE STONE OR RAILROAD BALLAST (2" TO 4"Ø STONE TYP.)

2 STANDARD ACCESS ROAD AND TURN-AROUND DETAIL
C10 NOT TO SCALE



PROJECT INFORMATION:

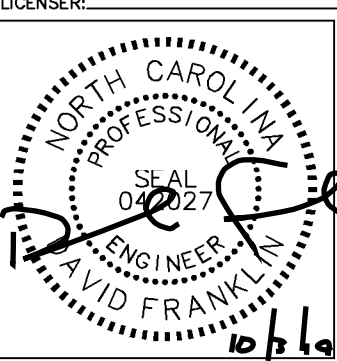
SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV:	DATE:	ISSUED FOR:	BY:
8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF



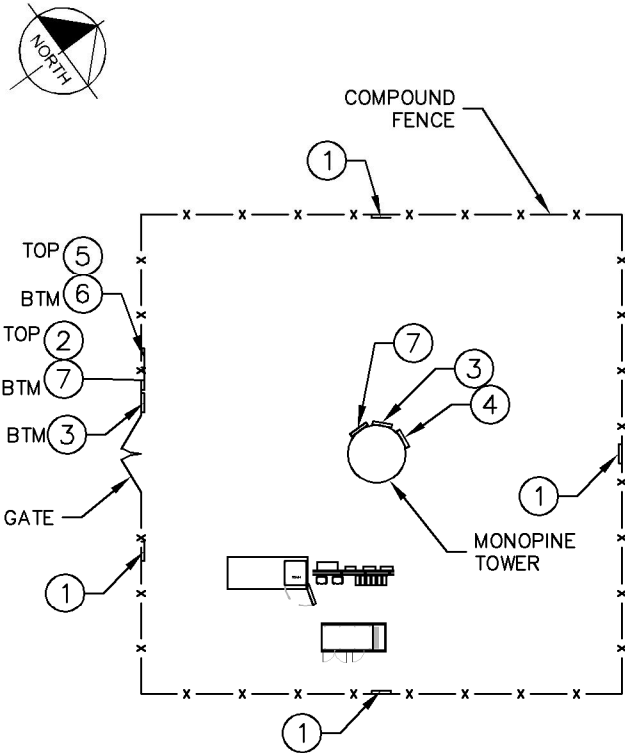
KHA PROJECT NUMBER:
018985923

DRAWN BY: TDM
CHECKED BY: KAB

SHEET TITLE:
**ACCESS ROAD
DETAILS**

SHEET NUMBER:
C10

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:42 PM by: christopher.strange

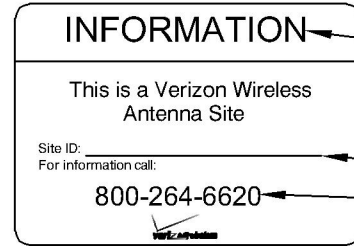


NOTE: SEE TYPICAL SIGNS AND SPECIFICATIONS
DETAIL ON THIS SHEET FOR SIGN DESIGNATIONS.

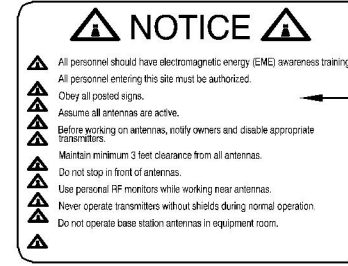
1 SIGN PLACEMENT PLAN VIEW
C11 NOT TO SCALE



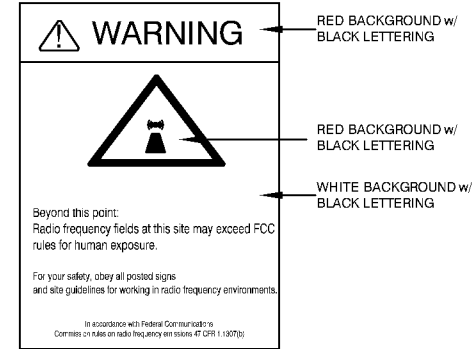
1 NO-TRESPASSING SIGN
18" HIGH X 24" WIDE
(OPERATIONS PROVIDED)



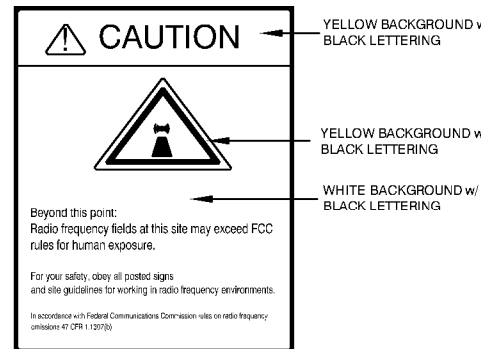
2 VERIZON WIRELESS - SITE ID SIGN
15" HIGH X 23" WIDE
(OPERATIONS PROVIDED)



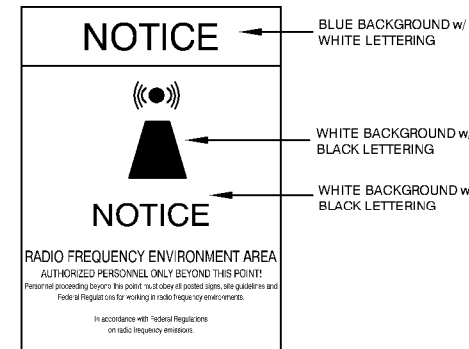
3 NOTICE-RFE SIGN
12" WIDE X 18" HIGH
(OPERATIONS PROVIDED)



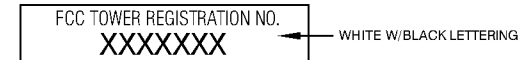
4 WARNING-RF SIGN (RED)
12" WIDE X 18" HIGH



5 CAUTION-RF SIGN (YELLOW)
12" WIDE X 18" HIGH

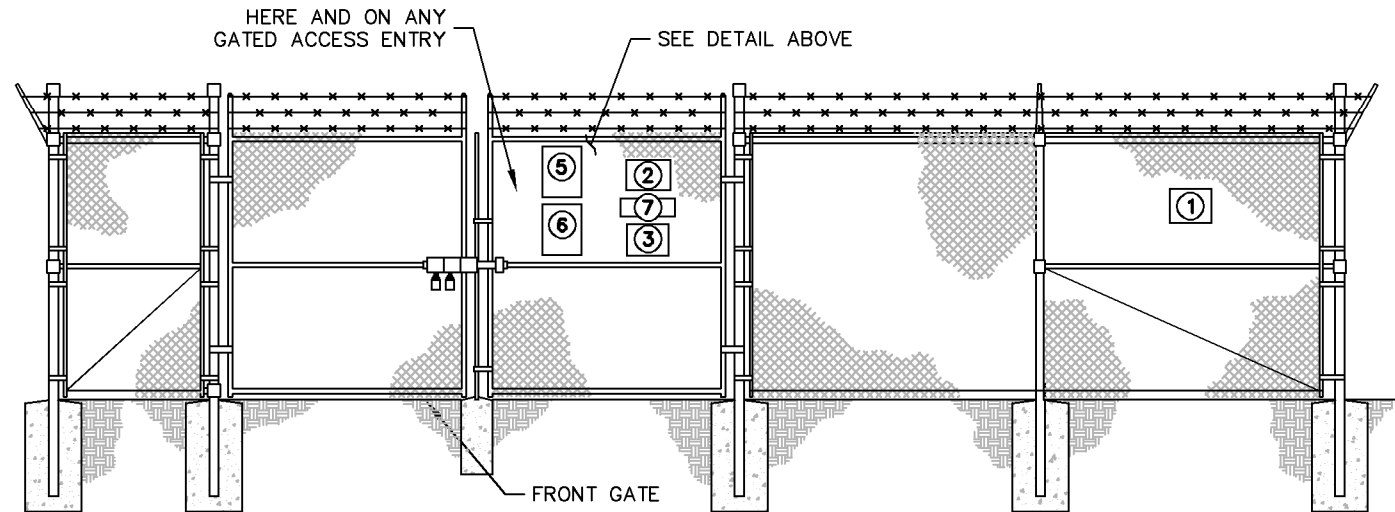


6 NOTICE-RF SIGN (BLUE)
12" WIDE X 18" HIGH



7 FCC REGISTRATION SIGN
20 WIDE X 4" HIGH

2 TYPICAL SIGNS AND SPECIFICATIONS
C11 NOT TO SCALE



3 SIGN PLACEMENT FRONT GATE VIEW
C11 NOT TO SCALE

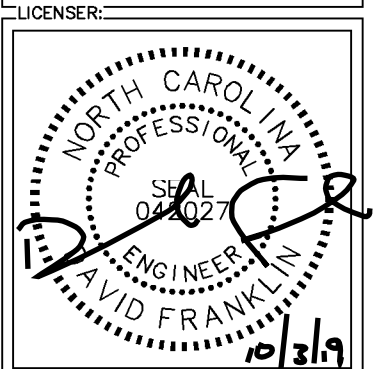
- SIGNAGE NOTES:**
- SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
 - SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE, AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.

verizon
8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:
SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:
Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV:	DATE:	ISSUED FOR:	BY:
8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

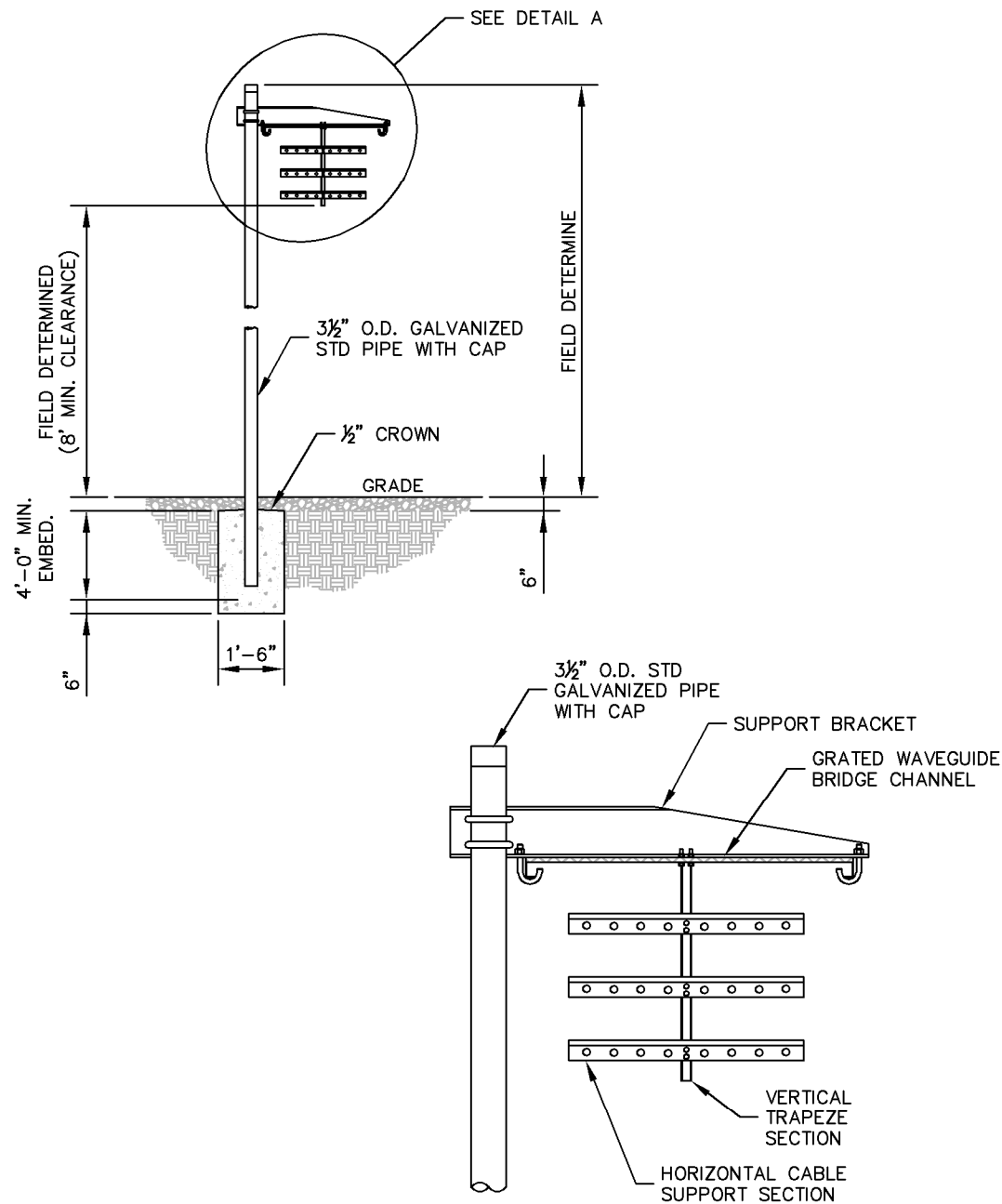


KHA PROJECT NUMBER:
018985923
DRAWN BY: TDM CHECKED BY: KAB
SHEET TITLE:

**SITE SIGNAGE
DETAILS**

SHEET NUMBER:
C11

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:42 PM by: christopher.strange



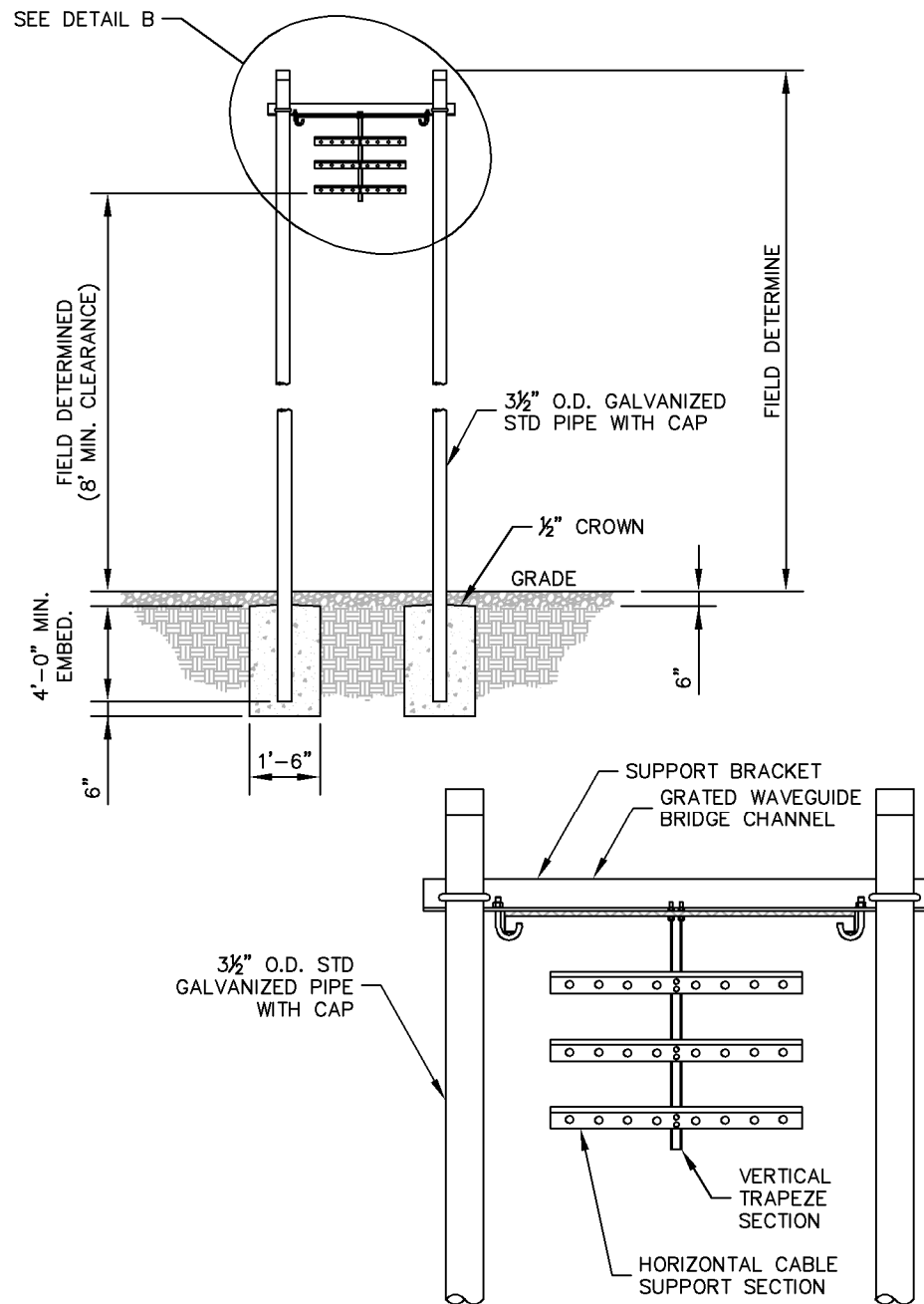
DETAIL A

ANDREW 1 POST WAVEGUIDE BRIDGE
KIT (PART #: WB-K210-B15, OR
APPROVED EQUIVALENT)

NOTE:

1. ALL MATERIALS FURNISHED BY CONTRACTOR
UNLESS OTHERWISE NOTED.

1 WAVEGUIDE BRIDGE DETAIL
C12 NOT TO SCALE



DETAIL B

ANDREW 2 POST WAVEGUIDE BRIDGE
KIT (PART #: WB-K410-B15, OR
APPROVED EQUIVALENT)

NOTE:

1. ALL MATERIALS FURNISHED BY CONTRACTOR
UNLESS OTHERWISE NOTED.

2 WAVEGUIDE BRIDGE DETAIL (ALT DESIGN - 2 PIPE COLUMNS)
C12 NOT TO SCALE

verizon

8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

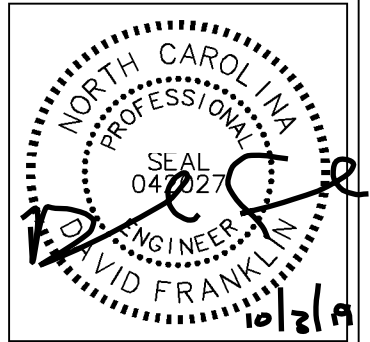
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

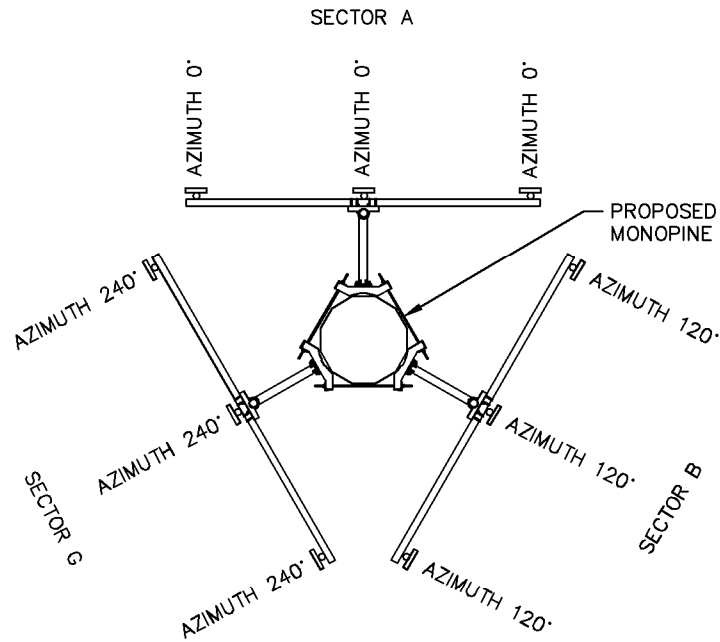
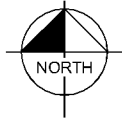
KAB

SHEET TITLE:

WAVEGUIDE
BRIDGE DETAILS

SHEET NUMBER:

C12



1 ANTENNA ORIENTATION PLAN
(NOT TO SCALE, FOR ILLUSTRATIVE PURPOSES ONLY, SEE STRUCTURAL ANALYSIS BY OTHERS TO CONFIRM ANTENNA MOUNT TYPE)

ANTENNA SECTOR	AZIMUTH IN DEGREES	MECHANICAL DOWN TILT	LICENSED FREQUENCY	ANTENNA* (QTY) MAKE/MODEL	REMOTE RADIO UNIT	COMPOSITION CABLES			
						LENGTH	COAX QTY	COAX SIZE	TOTAL HYBRID
A1	0°	0°	700/800/1900/2100	(1) COMMScope/NHH-65C-R2B	(1) RADIO 4449 (1) RADIO 8843	-	-	-	2
A2	0°	0°	700/800/1900/2100	(1) COMMScope/NHH-65C-R2B	(1) RADIO 4449 (1) RADIO 8843	-	-	-	
A3	0°	0°	700/800/1900/2100	(1) COMMScope/NHH-65C-R2B	SHARED W/ A1	-	-	-	
B1	120°	0°	700/800/1900/2100	(1) COMMScope/NHH-65C-R2B	(1) RADIO 4449 (1) RADIO 8843	-	-	-	
B2	120°	0°	700/800/1900/2100	(1) COMMScope/NHH-65C-R2B	(1) RADIO 4449 (1) RADIO 8843	-	-	-	
B3	120°	0°	700/800/1900/2100	(1) COMMScope/NHH-65C-R2B	SHARED W/ B1	-	-	-	
G1	240°	0°	700/800/1900/2100	(1) COMMScope/NHH-65C-R2B	(1) RADIO 4449 (1) RADIO 8843	-	-	-	
G2	240°	0°	700/800/1900/2100	(1) COMMScope/NHH-65C-R2B	(1) RADIO 4449 (1) RADIO 8843	-	-	-	
G3	240°	0°	700/800/1900/2100	(1) COMMScope/NHH-65C-R2B	SHARED W/ G1	-	-	-	

NOTES:

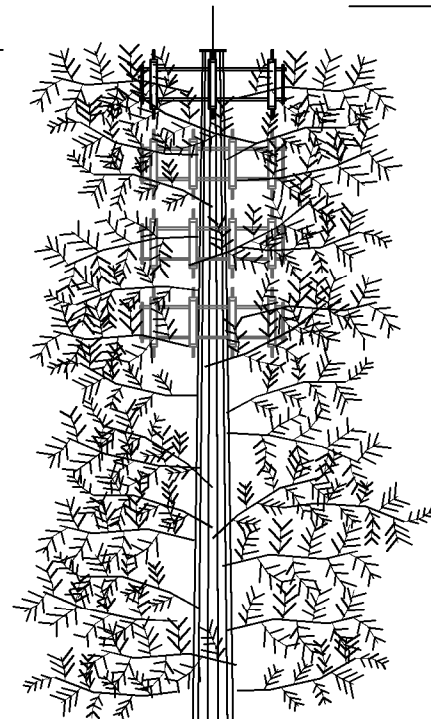
1. ALL INFORMATION ON THIS PAGE IS PROVIDED BY VERIZON WIRELESS AND/OR OTHERS AND IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHALL CONTACT THE VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION FOR ALL DETAILED ANTENNA, AND COAX CABLE INFORMATION.

2. REFER TO STRUCTURAL ANALYSIS BY TOWER OWNER FOR ANALYSIS OF PROPOSED TOWER.

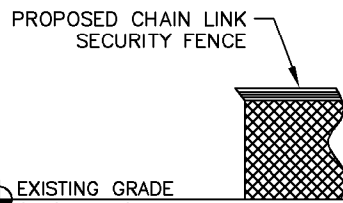
3. IT IS UNDERSTOOD THAT KIMLEY-HORN MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS, OPINION, OR PROFESSIONAL ADVICE RELATING TO THE STRUCTURAL ADEQUACY OF THE PROPOSED TOWER OR ATTACHMENT OF ANTENNAS OR OTHER APPURTENANCES.

NOTE: GENERAL CONTRACTOR TO INSTALL RAYCAP OVP, NUMBER AND TYPE PER VERIZON CONSTRUCTION MANAGER.

TOP OF TOWER
EL. 180' A.G.L.



- TOP OF LIGHTNING ROD
EL. 189' A.G.L.
- PROPOSED LESSEE ANTENNAS
EL. 175' A.G.L.
- FUTURE ANTENNAS
- FUTURE ANTENNAS
- FUTURE ANTENNAS



EXISTING GRADE
(±0' A.G.L.)

PROPOSED LESSEE 10' X 4'
CONCRETE PAD WITH
EQUIPMENT CABINET

2 MONOPINE TOWER ELEVATION - S VIEW (FACING N)
NOT TO SCALE

- NOTES:
- ALL PROPOSED ATTACHMENTS TO TOWER BASED ON TOWER DESIGN DRAWINGS BY OTHERS (SEE GENERAL NOTE 1.07, SHEET N1).
 - THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.
 - COAX/FIBER CABLE LENGTHS ARE APPROXIMATE. CONTRACTOR TO VERIFY CORRECT LENGTH IN FIELD AT TIME OF CONSTRUCTION.
 - PROPOSED TOWER WILL BE GALVANIZED STEEL-GRAY IN COLOR.



PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:

FOR ILLUSTRATIVE
PURPOSES ONLY-
NO SIGNATURE
REQUIRED

KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM KAB

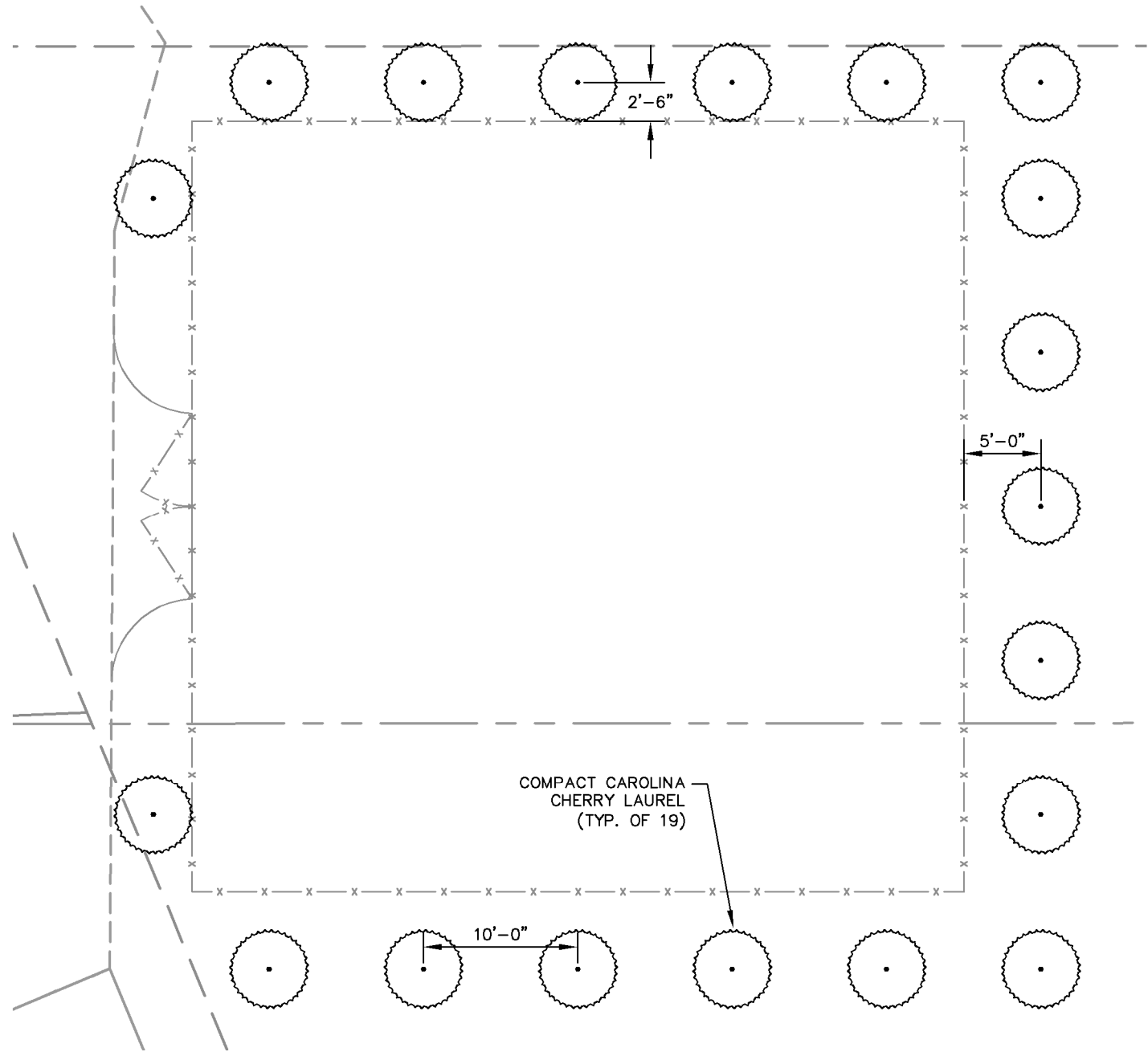
SHEET TITLE:

ANTENNA AND
TOWER ELEVATION
DETAILS

SHEET NUMBER:

C13

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg ----- 09/30/19 2:42 PM by: christopher.strange

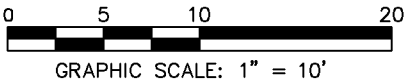


LEGEND	
	COMPACT CAROLINA CHERRY LAUREL

PLANTING LIST						
SYM./KEY	QTY.	BOTANICAL NAME	COMMON NAME	SPECIFICATION		
				PLANTING HEIGHT	CALIPER/ SIZE	SPACING
CCCL	19	PRUNUS CAROLINIANA	COMPACT CAROLINA CHERRY LAUREL	6' MIN.	N/A	10' O.C. MIN

GENERAL LANDSCAPE NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF HIS WORK WITH THAT OF ALL OTHER CONTRACTORS. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE OR NON-EXISTENCE OF ANY UTILITIES. PRIOR TO COMMENCEMENT OF ANY WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL ABOVE GROUND AND UNDERGROUND UTILITIES.
2. THE QUALITY AND SIZE OF ALL PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT STANDARDS AS SET FORTH IN ANSI Z60.180 - AMERICAN STANDARD FOR NURSERY STOCK.
3. ALL DISTURBED AREAS NOT COVERED BY HARDSCAPE OR PLANT MATERIALS SHALL BE COVERED WITH SEED AND STRAW.
4. PLANT SUBSTITUTION MAY BE PERMITTED ONLY AFTER PROOF THAT SPECIFIED PLANTS ARE UNAVAILABLE AND THE REQUEST HAS BEEN SUBMITTED TO THE OWNER OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL PROVIDE THE NEAREST EQUIVALENT OBTAINABLE SIZE AND VARIETY OF THE PLANT HAVING THE SAME ESSENTIAL CHARACTERISTICS AS THE PLANT SPECIFIED
5. MINOR PLANT LOCATION ADJUSTMENTS MAY BE MADE IN THE FIELD TO ENSURE ACCESS TO UTILITY JUNCTION BOXES, FREE SITE LIGHTING OF FUTURE TREE CANOPY INTERFERENCE AND ALLOW UNINHIBITED PEDESTRIAN / VEHICULAR CIRCULATION ON ALL PAVEMENTS OR FOUNDATIONS.
6. ALL SHRUB MASSES OF TWO OR MORE SHALL BE EDGED INTO A PLANTING BED AND MULCHED PER DETAIL. ALL INDIVIDUAL TREES AND SHRUBS SHALL HAVE A MULCH SAUCER EQUAL IN DIAMETER TO THE PLANTING PIT DIAMETER AND SHALL BE MULCHED AS SHOWN ON THE DETAILS. UNLESS OTHERWISE INDICATED, ALL BED EDGES SHALL BE A DEEP CUT CLEAN SPADE EDGE.
7. THE CONTRACTOR SHALL VERIFY THAT EACH TREE OR SHRUB PIT WILL DRAIN BEFORE INSTALLING PLANT MATERIAL. HE SHALL FILL THE HOLE WITH SIX INCHES (6") OF WATER THAT SHOULD PERCOLATE OUT WITHIN TWENTY-FOUR HOURS. SHOULD ANY AREA NOT DRAIN PROPERLY, A PERFORATED DRAIN LINE SHALL BE INSTALLED, OR THE PLANTS RELOCATED.
8. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF HE ENCOUNTERS ANY UNSUITABLE SURFACE OR SUBSURFACE DRAINAGE CONDITIONS, SOIL DEPTH, LATENT SOILS, HARD PAN, UTILITY LINES, OR OTHER CONDITIONS THAT WILL JEOPARDIZE THE HEALTH AND VIGOR OF THE PLANTS. SHOULD THE CONTRACTOR NOT NOTIFY THE OWNER OF A PROBLEM AREA, HE WARRANTS THAT THE AREAS ARE SUITABLE FOR PROPER GROWTH AND DEVELOPMENT OF ALL PLANTS INSTALLED.
9. THE CONTRACTOR SHOULD VERIFY LANDSCAPING/TREE PLANTING LOCATIONS WITH THE PUBLIC UTILITIES DEPARTMENT TO AVOID CONFLICTS WITH WATER, SEWER, AND GAS LINES.
10. PLANTS SHALL BE SO TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLE SUPERIOR IN FORM, COMPACTNESS AND SYMMETRY. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF, AND FREE OF DISEASE AND INSECT ADULT EGGS, PUPAE OR LARVAE. THEY SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS AND SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT THRIVING GROWTH.
11. THERE SHALL BE NO CIRCLING OR GIRDLING ROOTS. CIRCLING ROOTS SHOULD BE CUT IN AT LEAST ONE PLACE.
12. THERE SHOULD BE ONE DOMINANT LEADER TO THE TOP OF THE TREE WITH THE LARGEST BRANCHES SPACED AT LEAST 6 INCHES APART. THERE CAN BE TWO LEADERS IN THE TOP 10% OF THE TREE IF IT IS OTHERWISE OF GOOD QUALITY.
13. THE TREE CANOPY SHOULD BE SYMMETRICAL AND FREE OF LARGE VOIDS. CLEAR TRUNK SHOULD BE NO MORE THAN 40% OF TREE HEIGHT UNLESS OTHERWISE SPECIFIED IN THE PLANTING SPECIFICATIONS. CLEAR TRUNK SHALL BE OF SUFFICIENT HEIGHT TO CLEAR SURROUNDING USES THAT MAY BE IMPACTED BY THE FUTURE GROWTH OF THE TREE.
14. OPEN TRUNK AND BRANCH WOUNDS SHALL BE LESS THAN 10% OF THE CIRCUMFERENCE AT THE WOUND AND NO MORE THAN 2 INCHES TALL. PROPERLY MADE PRUNING CUTS ARE NOT CONSIDERED OPEN TRUNK WOUNDS. THERE SHOULD BE NO CONKS OR BLEEDING, AND THERE SHOULD BE NO SIGNS OF INSECTS OR DISEASE ON MORE THAN 5% OF THE TREE.
15. IF ANY OF THE ABOVE CONDITIONS ARE NOT MET, TREES MAY BE REJECTED.
16. TREE PROTECTION DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY CLEARING, GRUBBING, OR GRADING OF THE SITE BY THE LOCAL ARBORIST.



GRAPHIC SCALE: 1" = 10'



8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

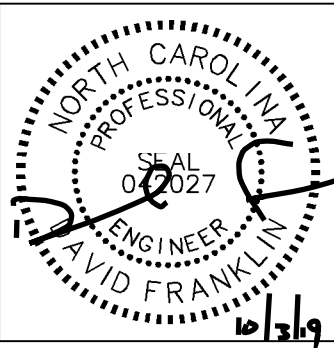
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	DMF

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

SHEET TITLE:

LANDSCAPING
PLAN AND NOTES

SHEET NUMBER:

L1

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\GC\ECor-GB.dwg ----- 09/30/19 2:42 PM by: christopher.strange

ELECTRICAL NOTES

1.00 CODES, STANDARDS, & SPECIFICATIONS

- 1.01 IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL MATERIALS AND LABOR RELATED DIRECTLY OR INDIRECTLY TO ALL ELECTRICAL WORK DOCUMENTED IN THESE DRAWINGS SHALL BE PROVIDED AND PERFORMED IN CONFORMANCE WITH ALL CURRENT GOVERNING CODES, STANDARDS, AND PROFESSIONAL STANDARD OF CARE TO INCLUDE THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM), UNDERWRITERS LABORATORY (UL), NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA), AMERICAN STANDARDS ASSOCIATION (ASA), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), AND THE NATIONAL ELECTRICAL CODE (NEC).
- 1.02 MATERIALS SHALL BE NEW AND SHALL CONFORM TO ALL APPLICABLE CURRENT GOVERNING STANDARDS ESTABLISHED FOR EACH ITEM BY ASTM, UL, NEMA, ASA, AND NFPA.
- 1.03 ALL ELECTRICAL WORK SHALL COMPLY WITH ALL APPLICABLE STATE, COUNTY, AND MUNICIPAL CODES AND ORDINANCES, AS WELL AS ALL CURRENT GOVERNING STANDARDS AND PRACTICES AS REQUIRED BY NEC, NEMA, ANSI, NFPA, UBC, UL, IEEE, AND THE LOCAL UTILITY COMPANY.
- 1.04 ALL ELECTRICAL GROUNDING SHALL COMPLY WITH THE CURRENT EDITION OF THE NEC.
- 1.05 CONTRACTOR SHALL MAINTAIN UL LISTED FIRE RATINGS AT ALL WALL PENETRATIONS.
- 1.06 CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE OF 36" IN FRONT OF ALL ELECTRICAL EQUIPMENT AS REQUIRED BY NEC. MINIMUM CLEARANCE SHALL BE OBSERVED FOR BOTH THE FRONT AND THE REAR OF THE METER H-FRAME RACK AND THE EQUIPMENT H-FRAME RACK.

2.00 GENERAL

- 2.01 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND ASSOCIATED FEES RELATED TO THE PROJECT AND SHALL DELIVER A COPY OF ALL PERMITS TO THE VERIZON REPRESENTATIVE.
- 2.02 CONTRACTOR SHALL SCHEDULE AND SHOULD ATTEND ALL INSPECTIONS REQUIRED BY THE JURISDICTION HAVING AUTHORITY.
- 2.03 CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, ACCESSORIES, ETC., FOR A COMPLETE WORKING ELECTRICAL INSTALLATION.
- 2.04 ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH APPLICABLE BUILDING CODES AND LOCAL ORDINANCES, INSTALLED IN A NEAT MANNER, AND SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.
- 2.05 CONTRACTOR SHALL PROTECT ADJACENT EQUIPMENT AND FINISHES FROM DAMAGE AND SHALL REPAIR TO ORIGINAL CONDITION ANY ITEMS DAMAGED AS A RESULT OF THE WORK.
- 2.06 CONTRACTOR SHALL REPAIR ANY LANDSCAPING DISTURBED DURING CONSTRUCTION.
- 2.07 IF CONDUIT RUNS HAVE MORE THAN THREE (3) CONSECUTIVE 90 DEGREE TURNS, THE CONTRACTOR SHALL INSTALL PULL BOXES AS REQUIRED BY NEC.
- 2.08 CONTRACTOR SHALL INDICATE THE LOCATION OF ALL CAPPED UNDERGROUND SPARE CONDUIT ON THE RECORD DRAWINGS SUBMITTED TO THE OWNER.
- 2.09 CONTRACTOR SHALL COORDINATE EXACT ROUTING OF CONDUIT WITH OWNER. ALL CONDUIT SHALL BE ROUTED WITHIN 3 FEET, EITHER SIDE, OF PERIMETER FENCING.

3.00 MATERIALS

- 3.01 ALL EQUIPMENT AND MATERIALS SHOWN SHALL BE CONSIDERED NEW UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
- 3.02 FINAL CONNECTIONS OF EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS, AND INSTRUCTIONS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT SUPPLIED BY VERIZON.
- 3.03 CONTRACTOR SHALL PROVIDE AN UPDATED PANELBOARD DIRECTORY FOR THE PANEL FROM WHICH THE NEW VERIZON EQUIPMENT CIRCUIT WILL BE CONNECTED. CONTRACTOR SHALL SUBMIT UPDATED DIRECTORY IN A PLASTIC COVER TO THE BUILDING OWNER FOR APPROVAL PRIOR TO INSTALLATION.
- 3.04 CONTRACTOR SHALL FIELD DETERMINE ACTUAL CONDUIT ROUTING AND SHALL OBTAIN APPROVAL FROM THE TOWER OWNER OF THE PROPOSED ROUTING PRIOR TO CONDUIT INSTALLATION.
- 3.05 ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION AND ALL TERMINATIONS SHALL BE RATED FOR AT LEAST 75 DEGREES CELSIUS.
- 3.06 ALL NEUTRAL CONDUCTORS SHALL HAVE WHITE INSULATION. ALL GROUND CONDUCTORS SHALL HAVE GREEN INSULATION. COLOR TAPE IDENTIFICATION OF THESE CONDUCTORS IS NOT PERMITTED.
- 3.07 CONTRACTOR SHALL SEAL ALL CONDUITS ENTERING AN ENCLOSURE WITH CONDUIT SEALANT THAT IS COMPATIBLE WITH THE INSULATION OF THE CONDUCTORS IN THE CONDUIT.
- 3.08 CONDUIT RUNS SHALL HAVE A CONTINUOUS DOWNWARD SLOPE AWAY FROM ALL EQUIPMENT TO PREVENT WATER INFILTRATION.
- 3.09 ALL CONDUIT SHALL BE SCHEDULE 40 PVC UNLESS NOTED OTHERWISE ON THE PLANS. WHEN CONDUIT IS ROUTED UNDER A ROADWAY, SCHEDULE 80 PVC CONDUIT SHALL BE UTILIZED. MANUFACTURED BEND RADII SHALL BE PER NEC.
- 3.10 CONTRACTOR SHALL PROVIDE TWO (2) 200 POUND TEST POLYETHYLENE PULL CORDS IN ALL CONDUITS AND ALL INNERDUCTS. PULL CORDS SHALL BE SECURED AT EACH END OF CONDUIT RUNS. ALL SPARE CONDUIT ENDS SHALL BE CAPPED WITH MANUFACTURED PVC FITTINGS.
- 3.11 CONTRACTOR SHALL BOND EACH METALLIC CONDUIT ENTERING A METALLIC ENCLOSURE WITH A #8 MIN AWG INSULATED COPPER BONDING JUMPER PER NEC. CONTRACTOR SHALL BOND ALL ELECTRICAL EQUIPMENT TO THE H-FRAME RACK ON WHICH EQUIPMENT IS MOUNTED WITH #8 MIN AWG INSULATED COPPER BONDING JUMPERS PER NEC.
- 3.12 CONTRACTOR SHALL IDENTIFY THE END OF ALL SPARE UNDERGROUND CONDUITS AND PROVIDE AND INSTALL 90 DEGREE ELBOWS WITH VERTICAL CONDUIT EXTENSIONS TO EXTEND 3" ABOVE FINISHED CRUSHED AGGREGATE GRADE. CONTRACTOR SHALL TERMINATE CONDUITS WITH MANUFACTURED CONDUIT CAPS THAT THE CONTRACTOR HAS PAINTED ORANGE.
- 3.13 CONTRACTOR SHALL PROVIDE AND INSTALL AN ENGRAVED PHENOLIC PLATE ON THE FRONT OF THE INTEGRATED LOAD CENTER. THE WORDING ON THE PLATE SHALL READ AS FOLLOWS: "MAXIMUM DRAW OF ALL RECTIFIERS AND EQUIPMENT ON THE LOAD CENTER CANNOT EXCEED 30kW. IF ADDITIONAL POWER IS REQUIRED, THE EXISTING 30kW GENERATOR MUST BE REPLACED."

4.00 PRE-CONSTRUCTION COORDINATION

- 4.01 CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND NOTE EXISTING CONDITIONS THAT MIGHT AFFECT THEIR WORK. ALL SUCH CONDITIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO BID.
- 4.02 THE CONTRACTOR SHALL PROVIDE A UTILITY LOCATOR AND SHALL VERIFY THE ACTUAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 4.03 CONTRACTOR SHALL VERIFY, PRIOR TO ROUGH-IN, THAT SITE CONDITIONS ALLOW FOR THE PLACEMENT OF THE ELECTRICAL EQUIPMENT AS SHOWN ON THE PLANS.
- 4.04 CONTRACTOR SHALL COORDINATE WITH LOCAL ELECTRICAL UTILITY REGARDING THE EXACT LOCATION OF THE TRANSFORMER, ALL METERING REQUIREMENTS, AND CONDUIT ROUTING BETWEEN TRANSFORMER AND METER.
- 4.05 CONTRACTOR SHALL COORDINATE WITH LOCAL TELCO UTILITY REGARDING THE EXACT LOCATION OF THE TELCO SERVICE ENTRY POINT.
- 4.06 CONTRACTOR SHALL COORDINATE WITH AUTHORITY HAVING JURISDICTION REGARDING LOCAL FROST LINE REQUIREMENTS FOR RACEWAY MATERIAL SELECTION AND INSTALLATION.
- 4.07 CONTRACTOR SHALL PERFORM AN ARC FLASH ANALYSIS AT THE INTEGRATED LOAD CENTER AND PROVIDE ARC FLASH LABEL PER NEC.
- 4.08 ALL CIRCUIT BREAKERS AND EQUIPMENT SHALL HAVE A MINIMUM AIC RATING OF 10,000 AMPS. IF THE RATING OF THE UTILITY TRANSFORMER PROVIDING THE ELECTRICAL SERVICE IS GREATER THAN 75 kVA, THE CONTRACTOR SHALL PERFORM A SHORT CIRCUIT ANALYSIS TO DETERMINE THE REQUIRED AIC RATING FOR THE CIRCUIT BREAKERS AND EQUIPMENT. PRIOR TO PURCHASING EQUIPMENT, THE CONTRACTOR SHALL CONTACT THE ELECTRIC UTILITY AND OBTAIN IN WRITING THE MAXIMUM AVAILABLE FAULT CURRENT (AFC) AT THE UTILITY SERVICE POINT. PROVIDE MAX. AFC SIGNAGE AS REQUIRED PER NEC 110.24. THE CONTRACTOR SHALL ENSURE ALL ELECTRICAL EQUIPMENT, CIRCUIT BREAKERS, DISCONNECTS, FUSES, AND PANELBOARDS HAVE A FAULT CURRENT INTERRUPTING RATING GREATER THAN THE AVAILABLE FAULT CURRENT.

verizon

8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

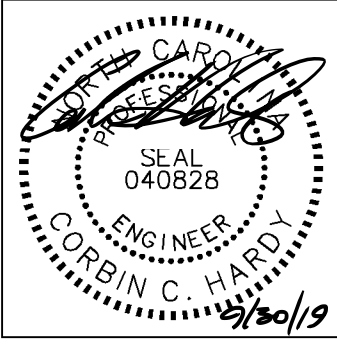
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV:____DATE:____ISSUED FOR:____BY:____

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY:____CHECKED BY:____

TDM

KAB

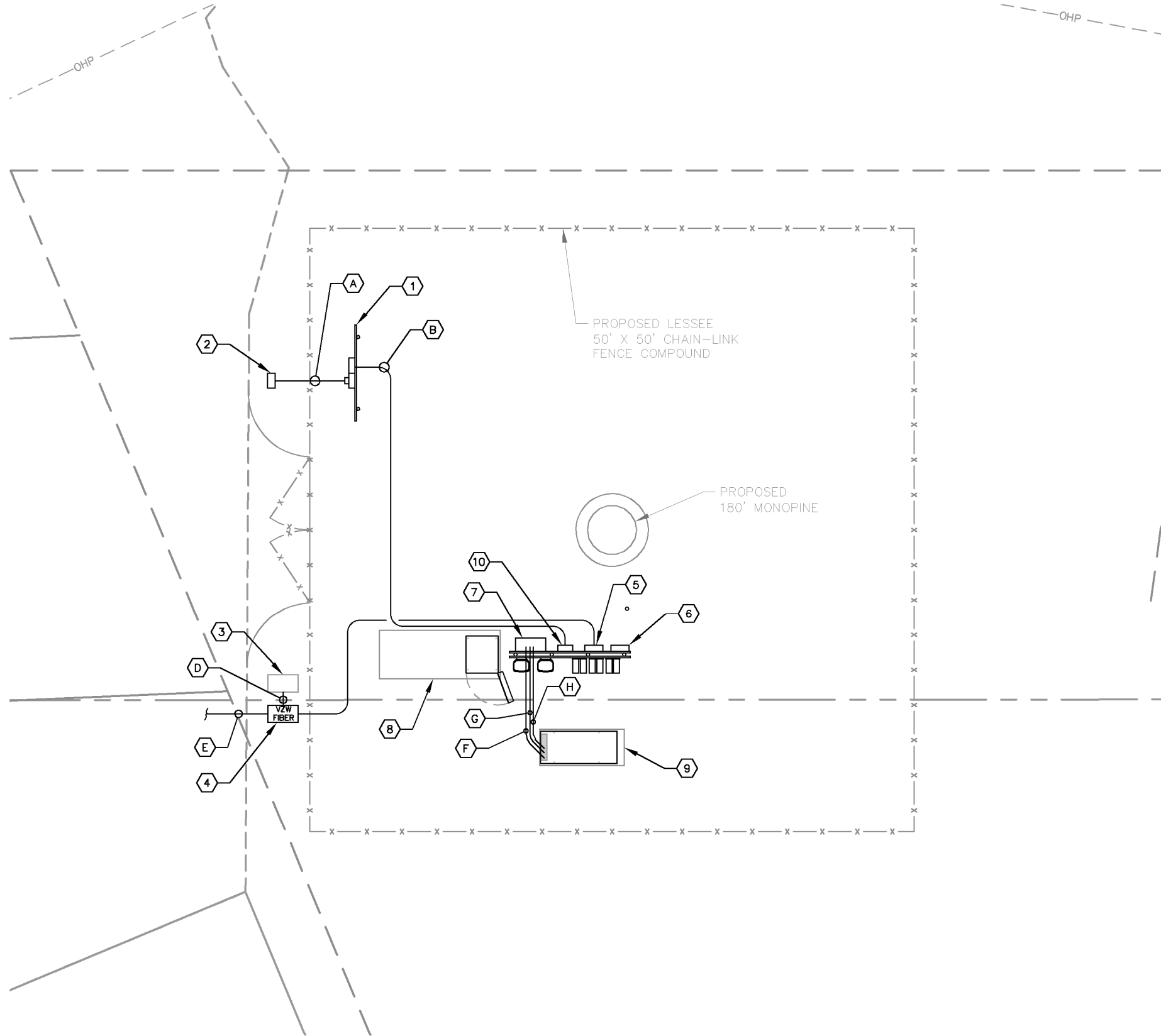
SHEET TITLE:

**ELECTRICAL
NOTES**

SHEET NUMBER:

E1

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg ----- 09/30/19 2:42 PM by: christopher.strange



1
E2 **UTILITY SERVICE ROUTING PLAN**
SCALE: 1" = 10'

KEY NOTES - ELECTRICAL EQUIPMENT

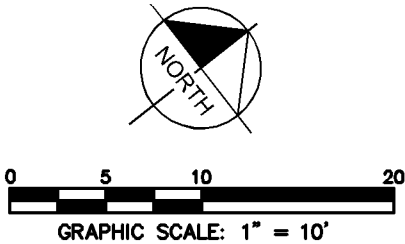
- ① UTILITY METER H-FRAME (SEE DETAIL 1/E4).
- ② POWER STUB UP (SEE NOTE 4.04 ON SHEET E1).
- ③ EXISTING LIT FIBER HANDHOLE/PEDESTAL. (CONTRACTOR TO CONFIRM EXISTENCE AND LOCATION).
- ④ TRAFFIC RATED TELCO VAULT LABELED "VZW FIBER". (SEE NOTE 4.05 ON SHEET E1)
- ⑤ TELCO BOX (SEE SHEET C4).
- ⑥ CIENA UNIT, IF NEEDED (SEE SHEET C4).
- ⑦ INTEGRATED LOAD CENTER (SEE SHEET C4).
- ⑧ VERIZON CONCRETE EQUIPMENT PAD (SEE SHEET C6).
- ⑨ VERIZON CONCRETE GENERATOR PAD (SEE SHEET C6).
- ⑩ DISCONNECT SWITCH (SEE SHEET C4).

KEY NOTES - CONDUIT, CONDUCTORS, & MISC.

- A TWO (2) 4" PVC POWER CONDUITS FOR INCOMING SERVICE LATERALS FROM LOCAL UTILITY (SEE TRENCH DETAIL 2/E7).
- B 2" PVC POWER CONDUIT FROM PROPOSED METER RACK TO EQUIPMENT RACK (SEE TRENCH DETAIL 2/E7).
- C 4" PVC TELCO CONDUIT, WITH TWO (2) PULL ROPES (SEE TRENCH DETAIL 2/E7).
- D 4" PVC BRIDGE FIBER CONDUIT. (IF NO EXISTING LIT FIBER HANDHOLE/PEDESTAL IS PRESENT CONTRACTOR TO PROVIDER A 5' LONG CAPPED STUB BRIDGE CONDUIT).
- E TWO (2) 2" PVC CONDUITS FROM RIGHT OF WAY W/TWO (2) PULL ROPES (SEE TRENCH DETAIL 2/E7 AND SHEET E3).
- F 1½" PVC POWER CONDUIT TO THE GENERATOR (SEE TRENCH DETAIL 2/E7).
- G 1" PVC CONDUIT FOR ROUTING GENERATOR CONTROL AND ALARM SIGNAL CABLES TO THE GENERATOR (SEE TRENCH DETAIL 2/E7).
- H 1" PVC CONDUIT FOR ROUTING POWER CONDUCTOR TO THE GENERATOR BATTERY CHARGER AND THE GENERATOR BLOCK HEATER (SEE TRENCH DETAIL 2/E7).

NOTES:

GENERAL CONTRACTOR IS TO CONFIRM WITH VERIZON CONSTRUCTION MANAGER WHETHER INSTALLATION OF THE TWO (2) 2" CONDUITS WILL BE PART OF THE INITIAL CONSTRUCTION.



8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

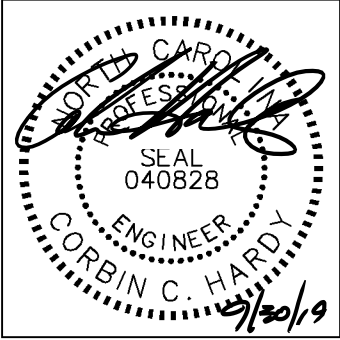
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

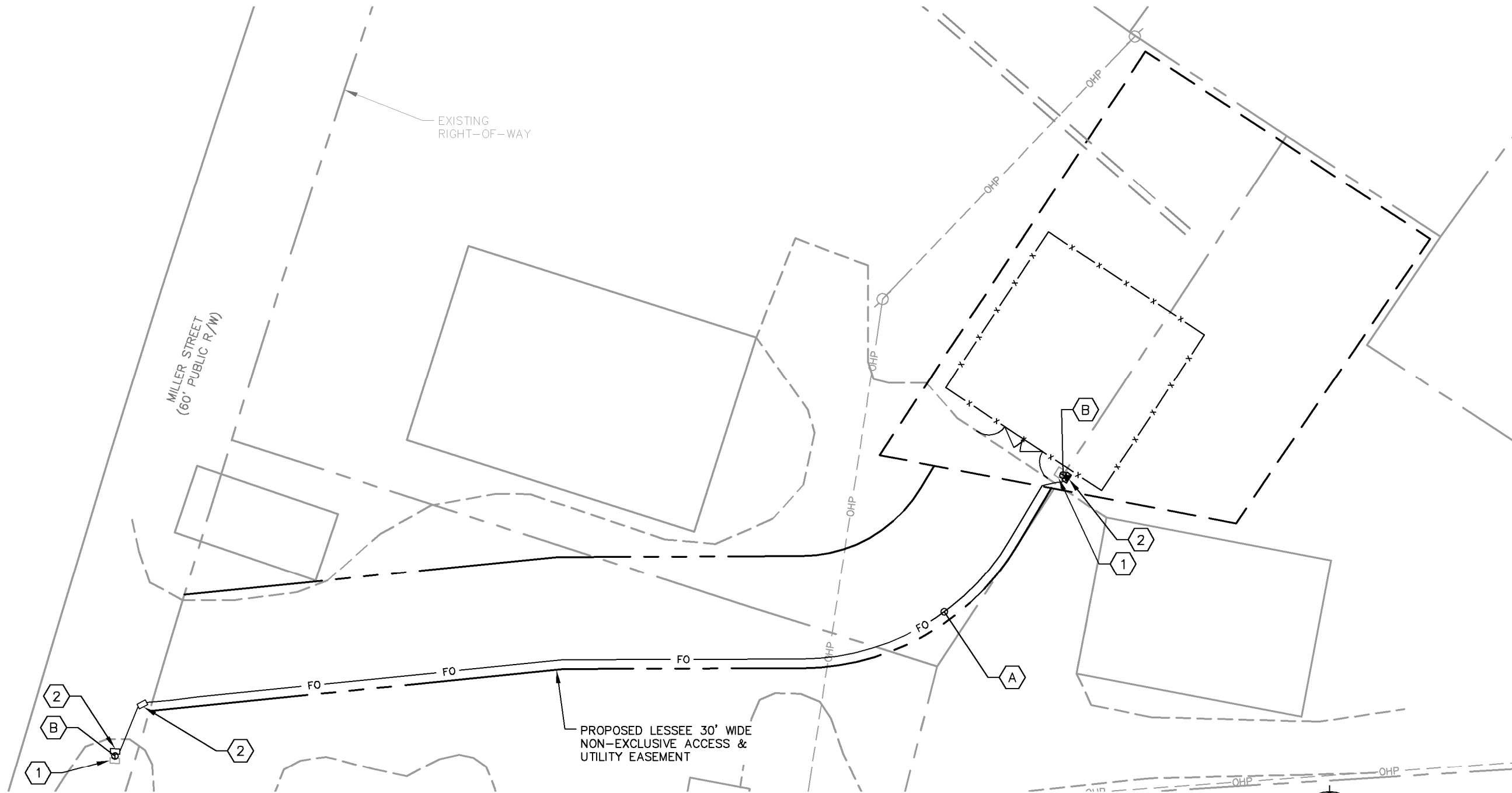
SHEET TITLE:

**UTILITY SERVICE
ROUTING PLAN**

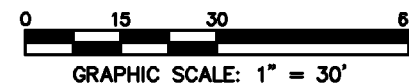
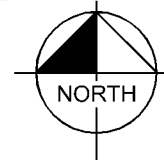
SHEET NUMBER:

E2

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:42 PM by: christopher.strange



1 OVERALL UTILITY SERVICE ROUTING PLAN
E3 SCALE: 1" = 30'



KEY NOTES - ELECTRICAL EQUIPMENT

- 1 EXISTING LIT FIBER HANDHOLE/PEDESTAL.
- 2 TRAFFIC RATED TELCO VAULT LABELED "VZW FIBER". (SPACED EVERY 500', AT MAJOR TRANSITIONS, AND AS NEEDED TO ALLOW DARK FIBER TO BE PULLED) (SEE NOTE 4.05 ON SHEET E1)

KEY NOTES - CONDUIT, CONDUCTORS, & MISC.

- A TWO (2) 2" PVC CONDUIT FOR "VZW FIBER" WITH TWO (2) PULL ROPES. (SEE DETAIL 2/E7) (APPROXIMATELY 266± LF); GENERAL CONTRACTOR TO CONFIRM NEED FOR CONDUITS TO RIGHT OF WAY AND HANDHOLE AT RIGHT OF WAY WITH VERIZON CONSTRUCTION MANAGER.
- B 4" PVC BRIDGE FIBER CONDUIT. (IF NO EXISTING LIT FIBER HANDHOLE/PEDESTAL IS PRESENT CONTRACTOR TO PROVIDER A 5' LONG CAPPED STUB BRIDGE CONDUIT.)

NOTES:

GENERAL CONTRACTOR IS TO CONFIRM WITH VERIZON CONSTRUCTION MANAGER WHETHER INSTALLATION OF THE TWO (2) 2" CONDUITS WILL BE PART OF THE INITIAL CONSTRUCTION.

PROPOSED VERIZON TELCO VAULT WITHIN RIGHT OF WAY LOCATED APPROXIMATELY 34' 59" 43.56"N, 80' 32' 47.79"W BASED ON GOOGLE EARTH IMAGERY.



8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

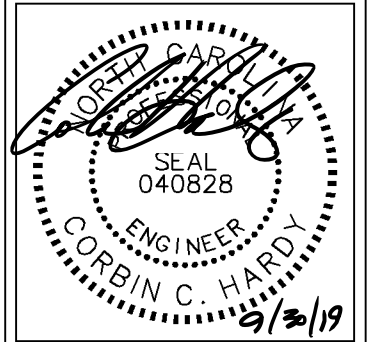
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

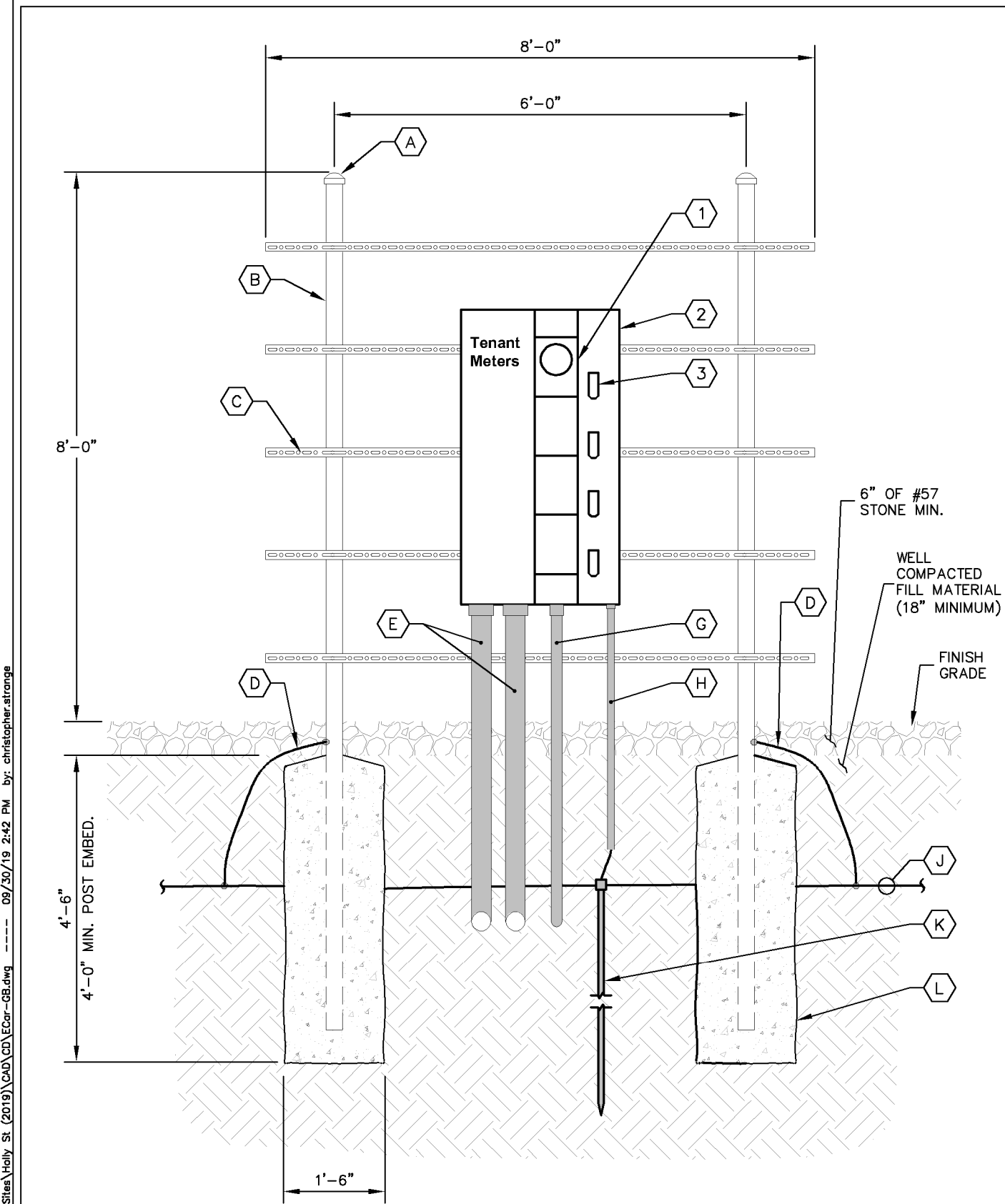
TDM KAB

SHEET TITLE:

**OVERALL UTILITY
ROUTING PLAN**

SHEET NUMBER:

E3



KEY NOTES - CONDUIT, CONDUCTORS, & MISC

- (A) GALVANIZED RIGID STEEL CAP, TYPICAL.
- (B) 3" GALVANIZED RIGID STEEL PIPE, TYPICAL.
- (C) 1 $\frac{5}{8}$ " x 1 $\frac{5}{8}$ " GALVANIZED STEEL CHANNEL (UNISTRUT #P1000 OR APPROVED EQUIVALENT) WITH PLASTIC END CAP (UNISTRUT #P2860), TYPICAL.
- (D) ONE (1) #2 AWG BARE SOLID TINNED COPPER BONDING CONDUCTORS (BC) FROM H-FRAME VERTICAL PIPE TO GROUND RING, EXOTHERMIC WELD BOTH ENDS.
- (E) 4" PVC CONDUIT FOR INCOMING SERVICE LATERALS FROM LOCAL UTILITY, TYPICAL OF 2.
- (F) KEYNOTE NOT USED.
- (G) 2" PVC CONDUIT FOR ROUTING FEEDERS TO NON-FUSED DISCONNECT SWITCH.
- (H) $\frac{3}{4}$ " PVC CONDUIT WITH ONE (1) - 2/0 BARE STRANDED TINNED COPPER GROUNDING ELECTRODE CONDUCTOR (GEC) FROM GROUNDING LUG TO GROUND ROD, EXOTHERMIC WELD GEC TO GROUND ROD.
- (J) GROUND RING (SEE "E" SHEETS).
- (K) GROUND ROD, EXOTHERMIC WELD TO GROUND RING. (SEE "E" SHEETS).
- (L) CONCRETE FOUNDATION FOR H-FRAME VERTICAL PIPE. CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI. AND INCLUDE FIBERMESH 650-3E.

KEY NOTES - ELECTRICAL EQUIPMENT

- (1) 200 AMP METER SOCKET IN NEMA 3R ENCLOSURE, TYPICAL OF 4. ONLY TOP SOCKET WILL RECEIVE METER UNDER THIS CONTRACT.
- (2) 800 AMP, 22KAIC, 4 GANG, SERVICE ENTRANCE RATED METER CENTER IN NEMA 3R ENCLOSURE. BOND TO RACK PER NEC.
- (3) 200 AMP, 2 POLE (22KAIC) DISCONNECT CIRCUIT BREAKER FOR TOP METER ONLY. CONTRACTOR SHALL MOUNT THE METER CENTER SUCH THAT THE TOP CIRCUIT BREAKER IS NO MORE THAN 6' ABOVE GRADE.

1 METER RACK DETAILS
E4 NOT TO SCALE



8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

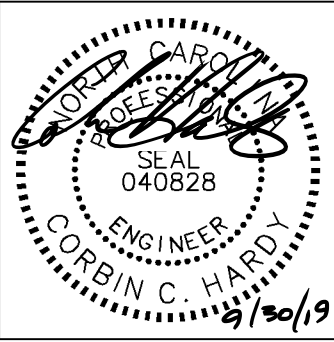
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

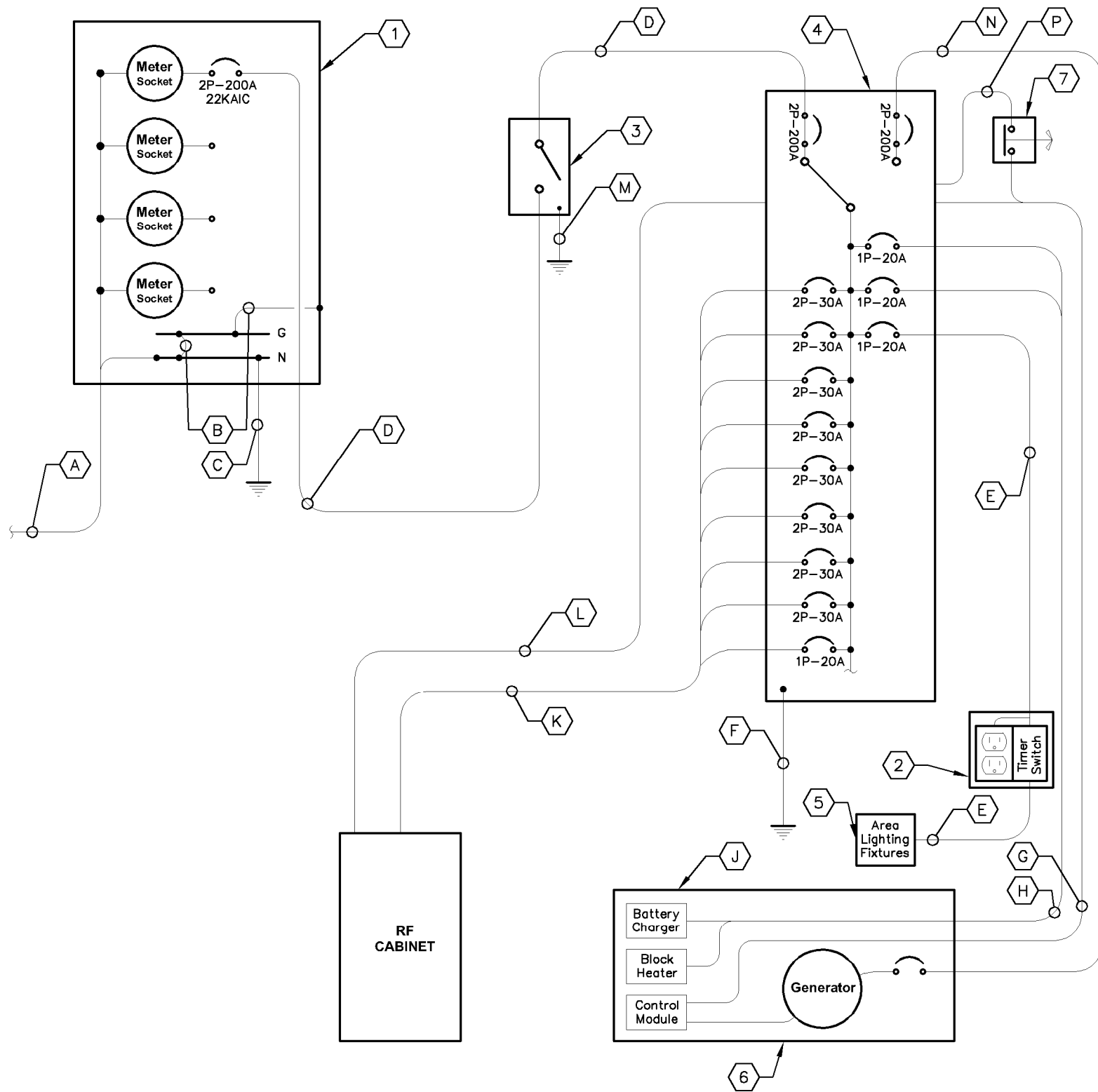
SHEET TITLE:

**METER RACK
DETAILS**

SHEET NUMBER:

E4

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:42 PM by: christopher.strange



REQUIRED SIGNAGE PER NEC 702 AT SERVICE DISCONNECT

"WARNING: Shock hazard exists if grounding electrode conductor or bonding jumper connection in this equipment is removed while alternate source(s) is energized. Opening the equipment disconnect will cause the stand-by generator to start. To remove power entirely from the equipment, the generator must be turned OFF using emergency stop switch."

REQUIRED SIGNAGE PER NEC 702 AT SERVICE DISCONNECT & INTEGRATED LOAD CENTER

"NOTE: Emergency power is supplied by a stand-by generator located behind Verizon equipment rack."

**1
E5** **ELECTRICAL SINGLE LINE DIAGRAM**
NOT TO SCALE

KEY NOTES - CONDUIT, CONDUCTORS, & MISC

- A TWO (2) 4" CONDUITS BY CONTRACTOR FOR INCOMING SERVICE LATERALS BY LOCAL UTILITY FOR 800 AMP, 120/240 VOLT SINGLE PHASE SERVICE.
- B BOND GROUND BUS TO NEUTRAL BUS AND GROUND BUS TO ENCLOSURE WITH 2/0 BONDING JUMPERS.
- C ONE (1) 2/0 BARE STRANDED TINNED COPPER GEC TO GROUND ROD, EXOTHERMIC WELD GEC TO GROUND ROD.
- D THREE (3) 3/0 CONDUCTORS AND ONE (1) #6 AWG GROUND IN 2" CONDUIT.
- E TWO (2) #12 AWG CONDUCTORS AND ONE (1) #12 AWG GROUND IN 1" CONDUIT.
- F ONE (1) #2 BARE STRANDED TINNED COPPER GEC FROM GROUNDING LUG IN ILC TO GROUND ROD, EXOTHERMIC WELD GEC TO GROUND ROD.
- G AUTOMATIC TRANSFER SWITCH ALARM AND GENERATOR CONTROL CABLES IN 1" CONDUIT.
- H FOUR (4) #12 CONDUCTORS AND ONE (1) #12 AWG GROUND IN 1" CONDUIT.
- J THE GENERATOR, WHEN UTILIZING A TWO POLE ATS WITH A SOLID NEUTRAL, IS NOT A SEPARATELY DERIVED SYSTEM. THEREFORE, DO NOT BOND THE NEUTRAL TO THE GROUND AT THE GENERATOR.
- K SIXTEEN (16) #6 AWG CONDUCTORS AND FOUR (4) #6 EG FOR 30 AMP CIRCUITS. TWO (2) #8 AWG CONDUCTORS AND ONE (1) #8 EG FOR 20 AMP CIRCUIT. ALL IN 2" PVC CONDUIT.
- L ALARM CABLES IN 1" PVC CONDUIT.
- M ONE (1) - #2 BARE STRANDED TINNED COPPER GEC FROM GROUNDING LUG IN DISCONNECT SWITCH TO GROUND RING, EXOTHERMIC WELD TO GROUND RING.
- N THREE (3) 1/0 AWG CONDUCTORS AND ONE (1) #6 AWG EG IN 1 1/2" CONDUIT. VERIFY GENERATOR BREAKER DOES NOT EXCEED 150 AMPS.
- P 1" PVC CONDUIT FOR ROUTING POWER CONDUCTORS FROM THE ILC TO THE EMERGENCY GENERATOR STOP SWITCH.

KEY NOTES - ELECTRICAL EQUIPMENT

- 1 FURNISH AND INSTALL 800 AMP, 3-WIRE, SINGLE PHASE, 120/240 VOLT, 22KAIC, FOUR-SPACE MULTI-GANG METER CENTER WITH 200 AMP RATED METER SOCKETS IN NEMA 3R ENCLOSURE, SE RATED. CONTRACTOR SHALL FURNISH AND INSTALL 200 AMP CIRCUIT BREAKER AT METER BASE IF NOT ALREADY EXISTING.
- 2 20 AMP GFCI DUPLEX OUTLET RECEPTACLE AND TIMER SWITCH, ENERLITES HET06 SERIES (OR APPROVED EQUIVALENT) IN LOCKABLE NEMA 3R ENCLOSURE.
- 3 FURNISH AND INSTALL SE RATED 240 V, 200 AMP, 2 POLE, NON-FUSED DISCONNECT IN NEMA 3R ENCLOSURE.
- 4 200 AMP, 120/240 VOLT, ILC WITH 42 SPACE PANEL AND AUTOMATIC TRANSFER SWITCH. ALL CIRCUIT BREAKERS SHALL BE RATED 10KAIC MINIMUM. ILC IS FURNISHED BY VZW AND INSTALLED BY GENERAL CONTRACTOR.
- 5 FURNISH AND INSTALL TWO (2) AREA LIGHTS, (LITHONIA HFR-250M-TA120-DNA-LP1), (OR APPROVED EQUIVALENT).
- 6 30 KW DIESEL GENERATOR, CONTRACTOR SHALL COORDINATE SPECIFIC GENERATOR CONFIGURATION WITH OWNER AND INSTALL THE GENERATOR IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. GENERATOR BREAKER SIZED AND PROVIDED BY GENERATOR MANUFACTURER.
- 7 EMERGENCY GENERATOR STOP SWITCH IN NEMA 3R ENCLOSURE WILL BE FURNISHED BY VERIZON AND INSTALLED BY GC.

verizon

8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

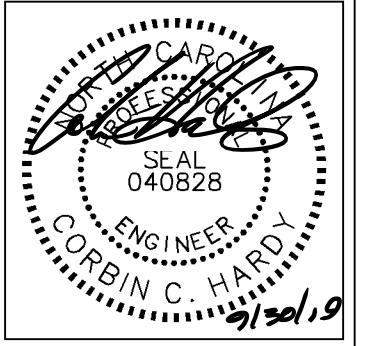
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: **CHECKED BY:**

TDM

KAB

SHEET TITLE:

**ELECTRICAL
SINGLE LINE
DIAGRAM**

SHEET NUMBER:

E5

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg ----- 09/30/19 2:42 PM by: christopher.strange

PANEL SCHEDULE - VERIZON INTEGRATED LOAD CENTER										
Voltage: 240/120 Volts Phase, Wires: Single Phase, 3 Wire Mounting Type: Surface Enclosure Type: NEMA 3R					MCB Size: 200 Amps AIC Rating: 10,000 Amps min Bus Rating: 200 Amps Neutral Rating: 100%					
Load Served	Load (kVA)		Circuit Bkr Size	Ckt Nbr	Phase A B	Ckt Nbr	Circuit Bkr Size	Load (kVA)		Load Served
	A	B						A	B	
*RECTIFIER 1	2.13		2P-30	1		2	1P-20	1.54		*AREA LIGHTS/GFCI
		2.13		3		4	1P-20		1.50	GEN BLOCK HEATER
*RECTIFIER 2	2.13		2P-30	5		6	1P-20	0.30		GEN BATTERY CHARGER
		2.13		7		8	1P-20		0.00	SPACE
*RECTIFIER 3	2.13		2P-30	9		10	-----	0.18		CAB DUPLEX OUTLET
		2.13		11		12	-----		0.00	SPACE
*RECTIFIER 4	2.13		2P-30	13		14	-----	0.00		SPACE
		2.13		15		16	-----		0.00	SPACE
*RECTIFIER 5	2.13		2P-30	17		18	-----	0.00		SPACE
		2.13		19		20	-----		0.00	SPACE
*RECTIFIER 6	2.13		2P-30	21		22	-----	0.00		SPACE
		2.13		23		24	-----		0.00	SPACE
RECTIFIER 7 (SPARE)	0.00		2P-30	25		26	-----	0.00		SPACE
		0.00		27		28	-----		0.00	SPACE
RECTIFIER 8 (SPARE)	0.00		2P-30	29		30	-----	0.00		SPACE
		0.00		31		32	-----		0.00	SPACE
SPACE	0.00		-----	33		34	-----	0.00		SPACE
SPACE		0.00	-----	35		36	-----		0.00	SPACE
SPACE	0.00		-----	37		38	-----	0.00		SPACE
TVSS (INTERNAL TO ILC)		0.00	2P-30	39		40	-----		0.00	SPACE
	0.00			41	42	-----	0.00		SPACE	
Sub-Total (kVA)	12.78	12.78						2.02	1.50	Sub-Total (kVA)
							A	B	Total Connected (kVA)	
							14.77	14.25		
						29.02				
LOAD SUMMARY										
Load Description				Connected Load (kVA)		Demand Factor	Demand Load (kVA)			
				A	B		A	B		
RECTIFIERS/EQUIP				12.78	12.78	1.00	12.78	12.78		
LARGEST MOTOR				0.00	0.00	1.25	0.00	0.00		
ALL OTHER MOTORS				0.00	0.00	1.00	0.00	0.00		
LIGHTING				1.54	0.00	1.25	1.93	0.00		
DUPLEX RECEPTACLES				0.18	0.00	1.25	0.23	0.00		
TOTAL MISCELLANEOUS				0.30	1.50	1.25	0.38	1.88		
Total Power per Phase							15.32	14.66	kVA	
Total Demand Current per Phase							127.67	122.17	Amps	
Total Demand Power							29.98		kVA	
**Generator Load							29.23		kVA	

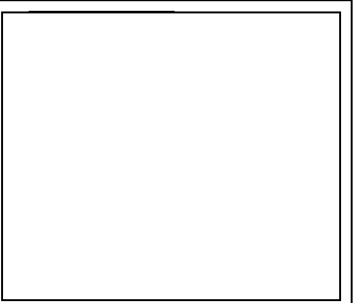
*NOTE: CIRCUIT LOAD AND DEMAND FACTOR PROVIDED BY VERIZON.
**NOTE: CHARGER LOAD REMOVED AND HEATER LOAD DEMAND FACTOR REDUCED TO 1.00 DURING GENERATOR OPERATION.

1 PANEL SCHEDULE
E6 NOT TO SCALE

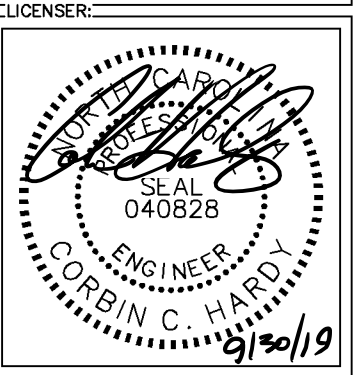


PROJECT INFORMATION:
SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:
Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102



8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

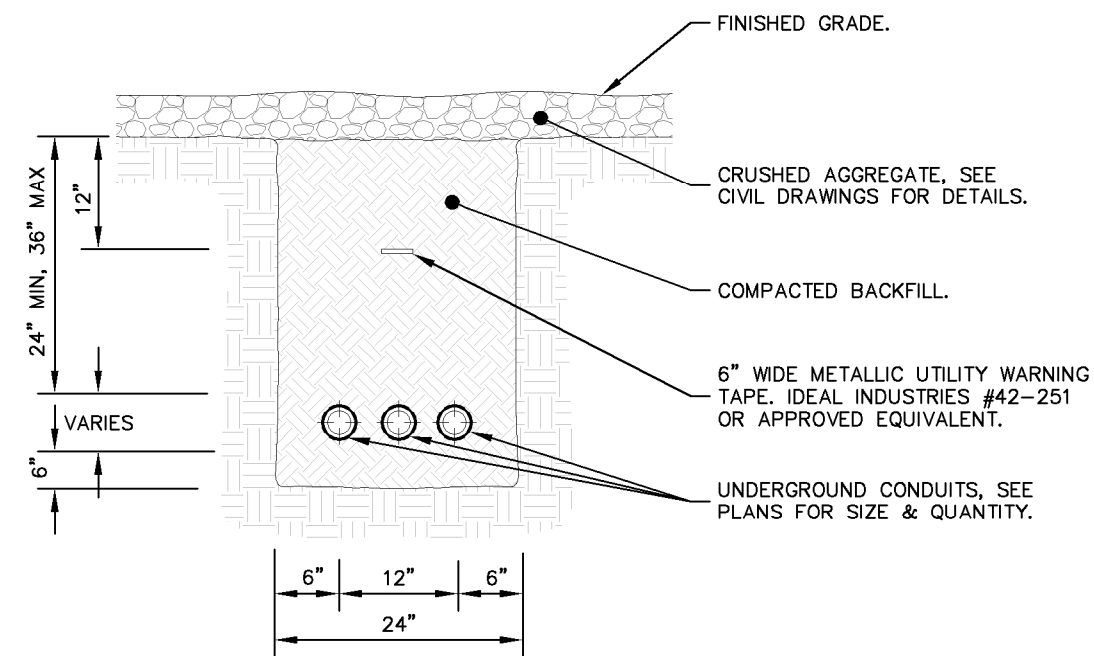
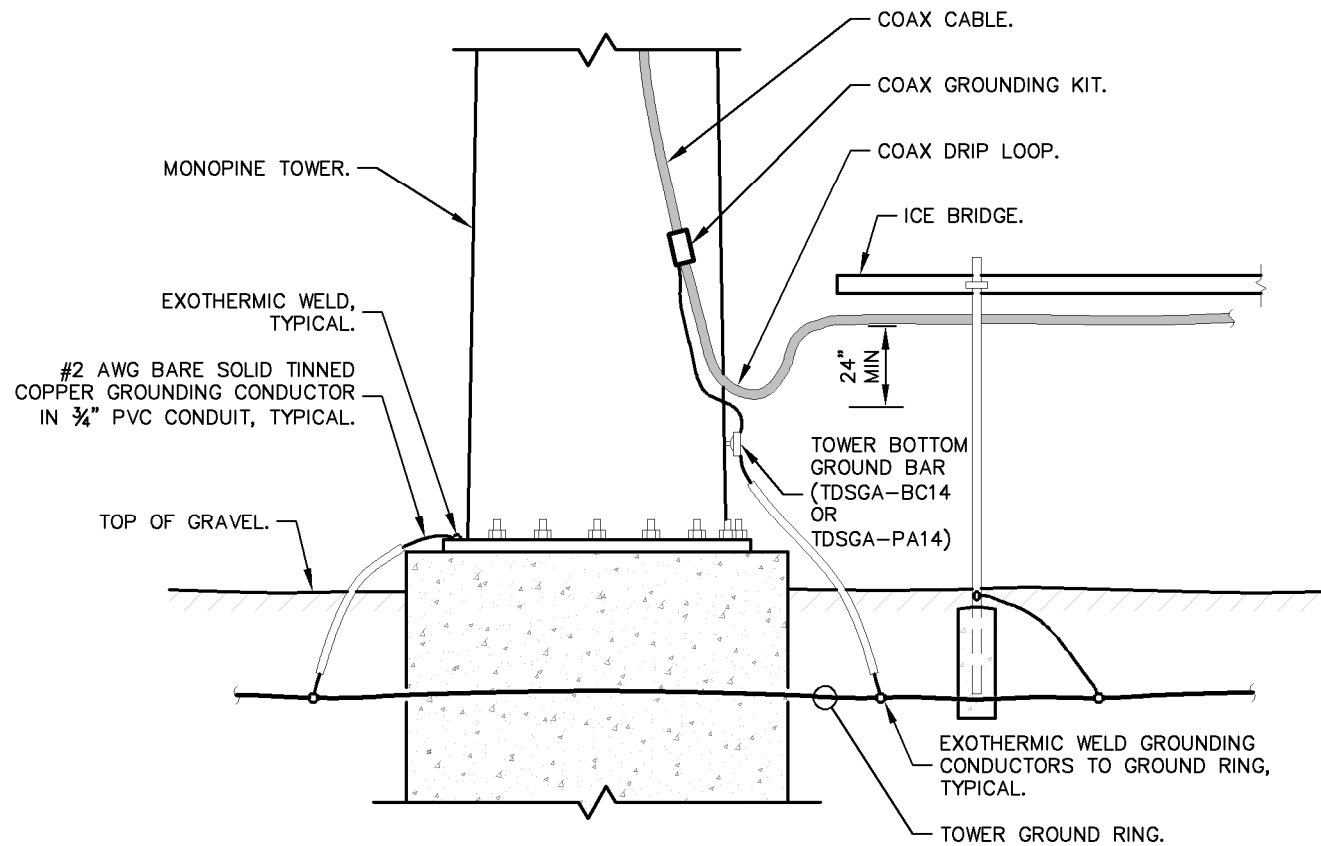


KHA PROJECT NUMBER:
018985923
DRAWN BY: TDM CHECKED BY: KAB

SHEET TITLE:
PANEL SCHEDULE

SHEET NUMBER:
E6

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:43 PM by: christopher.strange



- NOTES:
1. IF GROUND SURFACE IS OTHER THAN NEWLY GRAVELED AREA. CONTRACTOR IS TO RESTORE TO ORIGINAL CONDITION.
 2. PROVIDE PVC CONDUIT BELOW GRADE EXCEPT AS NOTED BELOW.
 3. PROVIDE SCHEDULE 40 OR SCHEDULE 80 PVC CONDUIT & ELBOWS AT STUB UP LOCATIONS (I.E. POLES, EQUIPMENT, ETC.)
 4. PROVIDE SCHEDULE 80 PVC CONDUIT BELOW PARKING LOTS AND ROADWAYS.

verizon
8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

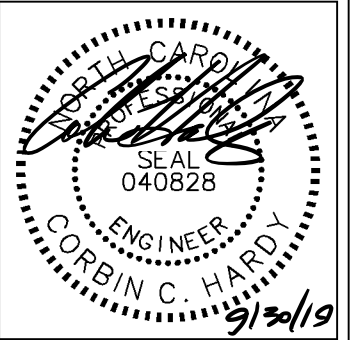
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM KAB

SHEET TITLE:

**ELECTRICAL
DETAILS**

SHEET NUMBER:

E7

K:\ATL_Wireless\000_Verizon\2019 Sites\Holly St. (2019)\CAD\GD\ECor-GB.dwg 09/30/19 2:43 PM by: christopher.strange

GROUNDING NOTES

1. THE GROUND RING SHALL CONSIST OF #2 AWG BARE SOLID TINNED COPPER (STC) CONDUCTOR, UNLESS NOTED OTHERWISE, BURIED AT 30" BELOW FINISHED GRADE (OR BELOW FROST LINE). LOCATE 24" MINIMUM AND 36" MAXIMUM FROM EQUIPMENT AREA AND FROM TOWER FOUNDATION. ALL CONNECTIONS SHALL BE MADE USING A PARALLEL TYPE EXOTHERMIC WELD, UNLESS NOTED OTHERWISE.
2. INSTALL GROUND RODS AS SHOWN AND AS REQUIRED. GROUND RODS TO BE COPPER CLAD STEEL, 5/8" DIAMETER AND 10FT IN LENGTH. SPACING BETWEEN GROUND RODS SHALL BE 10FT MINIMUM AND 15FT MAXIMUM. TOP OF GROUND ROD TO BE 30" MINIMUM BELOW GRADE (OR BELOW FROST LINE). BOND TOP OF GROUND ROD TO GROUND WIRE WITH EXOTHERMIC WELD. DO NOT EXOTHERMICALLY WELD ANYTHING TO GROUND ROD EXCEPT GROUND WIRE WHICH PASSES OVER TOP OF GROUND ROD (CLAMPED CONNECTIONS TO GROUND ROD PER TOWER MANUFACTURERS DETAILS ARE ACCEPTABLE).
3. EQUIPMENT GROUND RING SHALL HAVE A MINIMUM OF 4 GROUND RODS, INSTALLED AT THE CORNERS OF THE GROUND RING PLUS ADDITIONAL RODS AS REQUIRED TO COMPLY WITH THE SPACING REQUIREMENTS. TOWER GROUND RING SHALL HAVE A MINIMUM OF 3 GROUND RODS, EXCEPT USE 4 RODS AT A MONOPOLE TOWER. WHERE SPREAD TOWER FOOTING WOULD PREVENT GROUND RODS FROM BEING DRIVEN INTO SOIL ADJACENT TO TOWER, PROVIDE VERTICAL 1" DIAMETER PVC SLEEVES EMBEDDED IN FOOTING TO ALLOW INSTALLATION OF GROUND RODS.
4. EQUIPMENT GROUND RING AND TOWER GROUND RING SHALL BE BONDED TOGETHER WITH TWO #2 STC GROUND LEADS, TYPICALLY ONE ON EACH SIDE OF ICE BRIDGE.
5. BOND TOWER TO TOWER GROUND RING AT THREE LOCATIONS WITH #2 STC GROUND LEAD. SELF SUPPORT TOWERS SHALL HAVE EACH LEG BONDED TO GROUND RING, MONOPOLES AND GUYED TOWERS SHALL HAVE GROUND LEADS EQUALLY SPACED AROUND TOWER. EXOTHERMICALLY WELD GROUND LEADS TO TOP OF BASE PLATES, OR ATTACH TO TOWER USING TOWER MANUFACTURER PROVIDED DETAIL.
6. PROVIDE #2 STC RADIALS FROM THE TOWER GROUND RING TO EACH FENCE CORNER POST. RADIALS SHALL HAVE GROUND RODS AS PER THE REQUIRED SPACING. THE GROUND ROD AT THE END OF EACH RADIAL SHALL BE 24" MAXIMUM FROM FENCE CORNER POST. EQUIPMENT AREA GROUND RING AND CONNECTING GROUND LEADS [BETWEEN EQUIPMENT AREA AND TOWER GROUND RINGS] MAY BE USED AS PART OF THE RADIAL GOING TO THE FENCE CORNER POST CLOSEST TO THE EQUIPMENT AREA.
7. MINIMUM BEND RADIUS FOR #2 AWG GROUND WIRE IS 12", EXCEPT USE 24" FOR TOWER GROUND RINGS AND EQUIPMENT PAD GROUND RINGS.
8. GROUND ALL EXTERIOR EXPOSED METAL OBJECTS. USE TWO HOLE LUGS FOR CONNECTION TO FLAT METAL SURFACES. USE ONLY STAINLESS STEEL HARDWARE ON ALL MECHANICAL CONNECTIONS. CLEAN ALL SURFACES (AND STRIP PAINTED SURFACES) TO BARE BRIGHT METAL PRIOR TO MAKING GROUND CONNECTIONS. APPLY ANTI-OXIDE COMPOUND TO ALL CONNECTIONS. APPLY ZINC RICH PAINT (COLD GALV.) TO ALL EXOTHERMIC WELDS, AND TO ANY METAL EXPOSED BY CLEANING, STRIPPING, GRINDING, CUTTING OR DRILLING.
9. ALL GROUNDING CONDUCTORS ABOVE GRADE SHALL BE RUN IN 3/4" FLEXIBLE PVC CONDUIT. CONDUIT SHALL BEGIN WITHIN 3/4" OF ABOVE GROUND CONNECTION POINT, SHALL EXTEND 24" BELOW GRADE MINIMUM, AND SHALL BE FILLED WITH SEALANT AT ABOVE GROUND CONNECTION POINT. SECURE CONDUIT EVERY 24" ON VERTICAL RUNS AND EVERY 36" ELSEWHERE WITH NON-METALLIC TIES.
- 10A. AT GUYED AND SELF SUPPORT TOWERS MOUNT TDSGA-PA14 TOWER BOTTOM GROUND BAR ON DEDICATED POST DIRECTLY BELOW COAX CABLES COMING OFF TOWER. POST TO BE 3.5" OD GALVANIZED SCHEDULE 40 PIPE WITH GALVANIZED PIPE CAP. TOP OF POST TO BE 78" ABOVE GRADE. EMBED POST 30" MINIMUM IN 12" DIAMETER BY 36" DEEP MINIMUM CONCRETE FOOTING WITH TOP OF FOOTING 6" BELOW GRADE. IF TOWER FOUNDATION OBSTRUCTS AUGERED FOOTING, USE POST WITH 10" SQUARE GALVANIZED STEEL FLANGE PLATE WELDED TO BOTTOM AND BOLT FLANGE TO TOP OF CONCRETE TOWER FOOTING.
- 10B. AT MONOPOLE TOWERS CLAMP TDSGA-BC14 TOWER BOTTOM GROUND BAR DIRECTLY TO TOWER. IF RUNNING COAX INSIDE MONOPOLE, CLAMP ONTO BOTTOM LIP OF EXIT PORT. IF BANDING COAX TO OUTSIDE OF TOWER, CLAMP ONTO STEEL ANGLE WHICH IS Banded TO TOWER. BOND TDSGA-BC14 TO TOWER GROUND RING WITH TWO #2 STC LEADS LUGGED TO GROUND BAR AND EXOTHERMICALLY WELDED TO GROUND RING.
11. AT EQUIPMENT AREA, INSTALL TDSGA-PA14 EXTERIOR GROUND BAR (THRU-BOLTED STYLE) AT BASE OF (2) INTERIOR H-FRAME POSTS AND AT TOP OF ICE BRIDGE POST WHICH IS NEAREST TO (BUT CLOSER TO TOWER THAN) THE COAX CABLE TERMINATION. MOUNT GROUND BAR TO H-FRAME POSTS AT 6" ABOVE GRAVEL AND TO ICE BRIDGE POST AT 6FT ABOVE GRAVEL.
12. ALL ICE BRIDGE SECTIONS ARE TO BE JUMPERED TOGETHER WITH #2 WIRE, EITHER BARE TINNED COPPER OR GREEN INSULATED STRANDED. ICE BRIDGE SHALL BE GROUNDED AT EACH END WITH #2 STC WIRE LUGGED TO ICE BRIDGE AND EXOTHERMICALLY WELDED TO UPPER PORTION OF NEAREST ICE BRIDGE POST. ICE BRIDGE SECTIONS ABOVE H-FRAME SHALL BE BONDED TO EACH OTHER WITH JUMPERS AT EACH END - THIS ASSEMBLY WILL BE CONSIDERED AS A SINGLE ICE BRIDGE SECTION FOR GROUNDING PURPOSES.
13. BOND EACH ICE BRIDGE POST, H-FRAME POST OR DEDICATED GROUNDING POST TO BURIED GROUNDING SYSTEM WITH #2 STC LEAD EXOTHERMICALLY WELDED TO POST BELOW TOP OF GRAVEL AND EXOTHERMICALLY WELDED TO GROUND RING. EACH POST TO HAVE SEPARATE GROUND LEAD DIRECTLY TO GROUND RING - DO NOT DAISY CHAIN POSTS TOGETHER.
14. BOND EACH RF CABINET TO EQUIPMENT GROUND RING WITH #2 AWG TINNED SOLID BARE COPPER CONDUCTOR LUGGED TO CABINET BODY AND EXOTHERMICALLY WELDED TO GROUND RING. LUG TO CABINET BODY USING LOCATION AT WHICH STUDS ON CABINET CHASSIS HAVE DIRECT GROUND WIRE CONNECTION TO CABINET INTERNAL GROUND BAR. RUN CONDUIT AND CONDUCTOR ACROSS BACK OF CABINET (DO NOT RUN TOWARDS NEAREST CORNER OF CABINET AND THEN BEND GROUND WIRE SHARPLY), ACROSS CONCRETE PAD BELOW CABLE LADDER, THEN DOWN INTO GRAVEL AREA.
15. BOND EACH BATTERY CABINET TO GROUND RING WITH #2 AWG TINNED SOLID BARE COPPER CONDUCTOR LUGGED TO CABINET BODY AND EXOTHERMICALLY WELDED TO GROUND RING. RUN GROUND LEAD IN FLEX CONDUIT ALONG BACK OF RBA72 CABINET, ACROSS CONCRETE PAD BELOW CABLE LADDER, THEN DOWN INTO GRAVEL AREA. CONNECT TWO HOLE LUG TO BACK OF CABINET AT FACTORY PROVIDED GROUNDING STUDS.
16. BOND GENERATOR TO GROUND RING WITH #2 STC AT TWO DIAGONALLY OPPOSITE LOCATIONS BY DRILLING AND BOLTING TWO HOLE LUG TO FINS ON GENERATOR BASE STRUCTURE. GROUND LEADS SHOULD TAKE SHORTEST PATH ACROSS CONCRETE PAD TO GRAVEL AREA, THEN CONTINUE TO GROUND RING.
17. WHERE PROPANE TANK IS INSTALLED TO FUEL GENERATOR, BOND PROPANE TANK TO GROUND RING WITH A SINGLE #2 STC CLAMPED TO FILLER PIPE OF PROPANE TANK AND EXOTHERMICALLY WELDED TO GROUND RING. GROUND LEAD SHOULD RUN TO TANK SUPPORT AND TAKE SHORTEST PATH ACROSS CONCRETE PAD TO GRAVEL AREA, THEN CONTINUE TO GROUND RING. IF PROPANE TANK FUEL LINE IS METALLIC AND CROSSES EQUIPMENT GROUND RING, BOND FUEL LINE TO EQUIPMENT GROUND RING WHERE THE TWO LINES CROSS WITH A SINGLE #2 STC CLAMPED TO FUEL LINE AND EXOTHERMICALLY WELDED TO GROUND RING.
18. BOND GPS ANTENNA and GPS ANTENNA MOUNT TO TSDGA GROUND BAR AT BOTTOM OF H-FRAME POST WITH #2 GREEN INSULATED STRANDED GROUND WIRE.
19. PROVIDE TWO GROUND RODS OUTSIDE GATES OF COMPOUND. DISTANCE BETWEEN GROUND RODS SHALL MATCH WIDTH OF GATE OPENING, AND DISTANCE FROM FENCE SHALL MATCH LENGTH OF LONGEST INDIVIDUAL GATE LEAF. BOND GATE POSTS TOGETHER WITH #2 STC LEAD WHICH RUNS PAST AND CONNECTS TO GROUND RODS OUTSIDE GATES.
20. BOND EACH GATE POST WITH #2 STC TO NEAREST PORTION OF GROUNDING SYSTEM INSIDE COMPOUND.
21. BOND EACH GATE TO GATE POST WITH FLEXIBLE INSULATED OR BRAIDED #4/0 COPPER STRAP. EXOTHERMICALLY WELD STRAP TO BOTH GATE AND GATE POSTS.
22. ANY METAL FENCE POST WITHIN 6FT OF A GROUNDED METAL OBJECT SHALL BE BONDED TO THE NEAREST GROUND RING. ANY METAL FENCE WITHIN 6FT OF A GROUND RING SHALL HAVE THE LINE POSTS BONDED TO THE GROUND RING AT 20FT MAXIMUM INTERVALS AS MEASURED ALONG THE LENGTH OF THE FENCE.
23. WHERE GROUND BASED RRU'S, RAYCAP OVP'S OR DIPLEXERS ARE INSTALLED AT THE EQUIPMENT AREA, BOND EACH COMPONENT TO NEAREST TDSGA GROUND BAR BELOW THE COMPONENT WITH #2 GREEN INSULATED STRANDED GROUND WIRE. SINGLE HOLE LUG OR RING TYPE CONNECTOR IS SUITABLE FOR CONNECTION TO GROUNDING STUD ON EACH COMPONENT.
24. NOTIFY VZW CM TO INSPECT GROUND RING BEFORE BACKFILLING. CONTRACTOR SHALL HIRE A 3RD PARTY TO PERFORM AN IEEE81 FALL OF POTENTIAL METHOD GROUND TEST. MAXIMUM ALLOWABLE RESISTANCE TO GROUND IS 5 OHMS. PROVIDE ADDITIONAL GROUND SYSTEM COMPONENTS AS REQUIRED TO ACHIEVE THIS VALUE.
25. REFER TO TOWER GROUNDING DIAGRAM AND NOTES FOR GROUND SYSTEM REQUIREMENTS ON THE TOWER.
26. GROUNDING OF ALL ELECTRICAL EQUIPMENT SHALL BE AS PER NEC, MUNICIPAL AND UTILITY COMPANY REQUIREMENTS.

verizon
8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

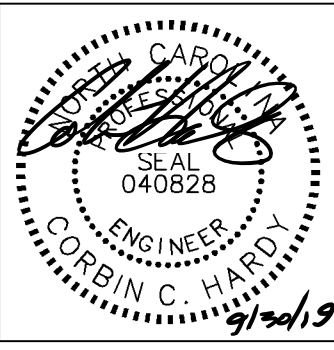
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

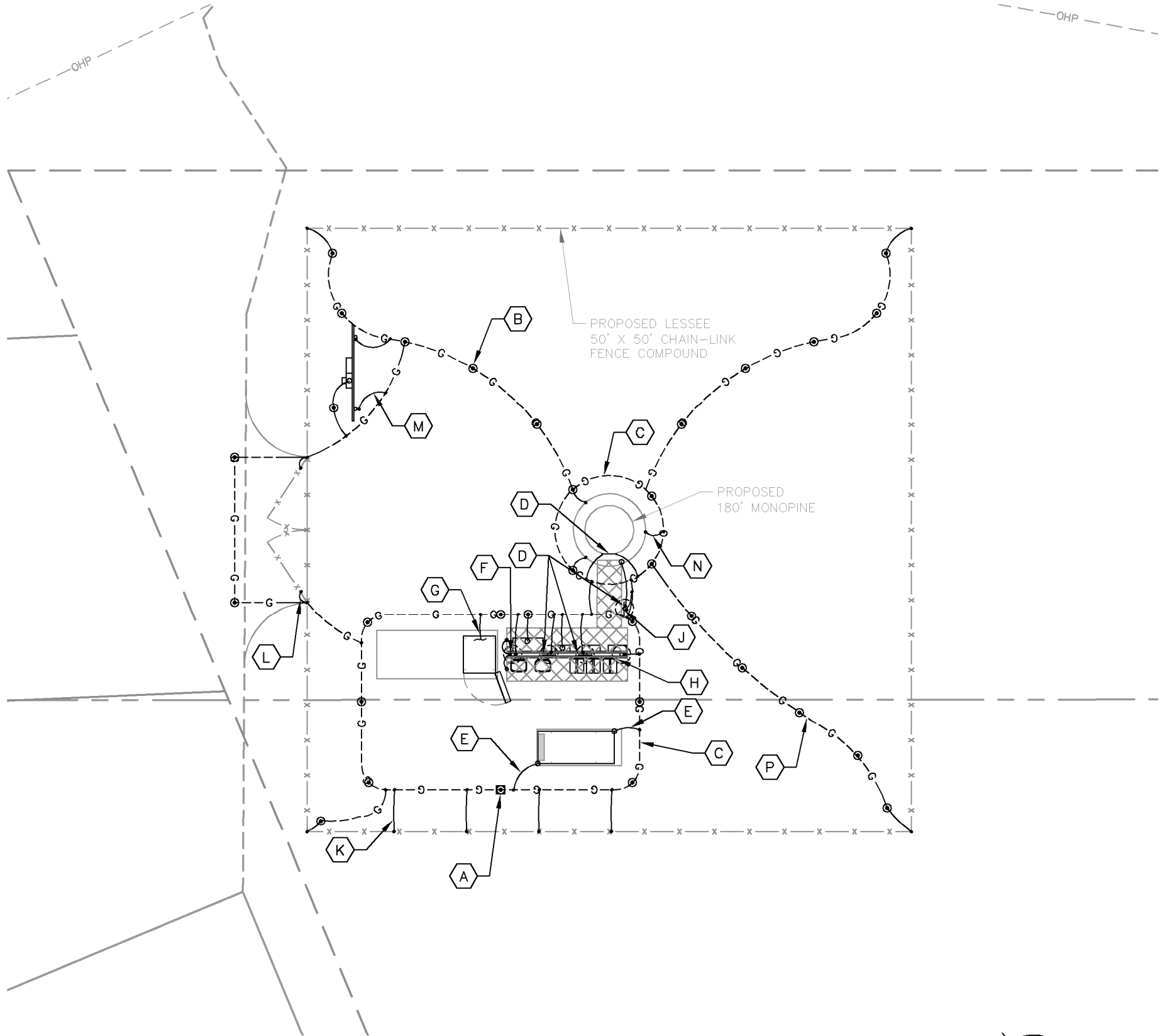
SHEET TITLE:

**GROUNDING
NOTES**

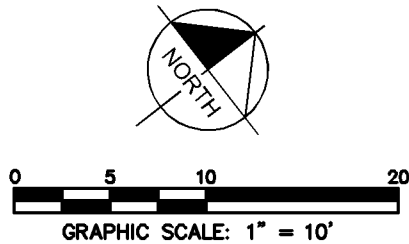
SHEET NUMBER:

E8

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:43 PM by: christopher.strange



1
E9
GROUNDING PLAN
SCALE: 1" = 10'



KEY NOTES - GROUNDING EQUIPMENT

- (A) GROUND ROD TEST WELL (SEE DETAIL 1/E11).
- (B) GROUND ROD, TYPICAL (SEE DETAIL 2/E11 AND NOTES 2 AND 3 ON E8).
- (C) TOWER AND EQUIPMENT GROUND RING (SEE NOTES 1, 3, 4, 5, 6 AND 7 ON E8).
- (D) TDSGA-PA14 OR TDSGA-BC14 WHERE APPLICABLE (SEE NOTES 10 AND 11 ON E8).
- (E) GENERATOR GROUNDING (SEE NOTE 16 ON E8).
- (F) GPS ANTENNA GROUNDING (SEE NOTE 18 ON E8).
- (G) RF CABINET GROUNDING (SEE NOTE 14 ON E8).
- (H) RRU'S AND OVP'S GROUNDING (SEE NOTE 23 ON E8).
- (J) ICE BRIDGE POST BOND TO GROUND RING, TYPICAL (SEE NOTES 12 AND 13 ON E8).
- (K) FENCE POST GROUNDING, TYPICAL (SEE NOTE 22 ON E8).
- (L) GATE GROUNDING, TYPICAL (SEE NOTES 19, 20 & 21 ON E8).
- (M) UTILITY H-FRAME GROUNDING, TYPICAL (SEE SHEET E3 AND NOTE 13 ON E8).
- (N) TOWER GROUNDING, TYPICAL (SEE NOTES 5, 6 & 25 ON E8).
- (P) GROUND RADIALS, TYPICAL (SEE NOTE 6 ON E8).
- (Q) REFER TO SHEETS E8, E10, E11 & E12 FOR GROUNDING NOTES, DETAILS, AND SPECIFICATIONS.

LEGEND:

- G---G--- GROUND RING
- G---G--- GROUND ROD EXOTHERMICALLY WELDED TO GROUND RING
- EXOTHERMIC WELD
- ⊙ GROUND ROD TEST WELL (SEE DETAIL 1/E11)
- MECHANICAL CONNECTION



8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

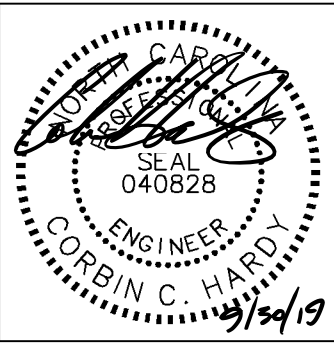
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

SHEET TITLE:

GROUNDING PLAN

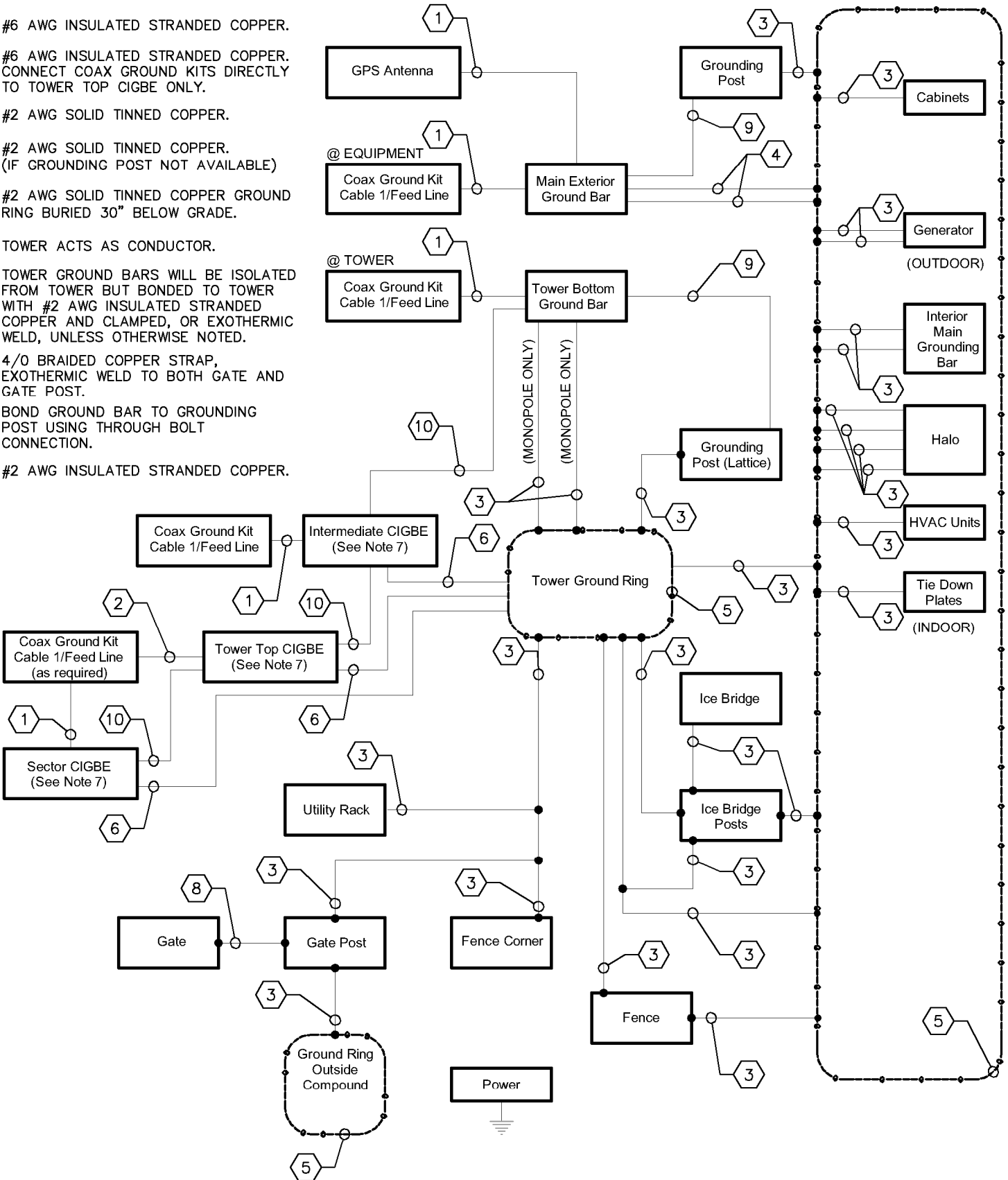
SHEET NUMBER:

E9

K:\ATL Wireless\000_Verizon\2019 Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:43 PM by: christopher.strange

KEY NOTES - ELECTRICAL EQUIPMENT

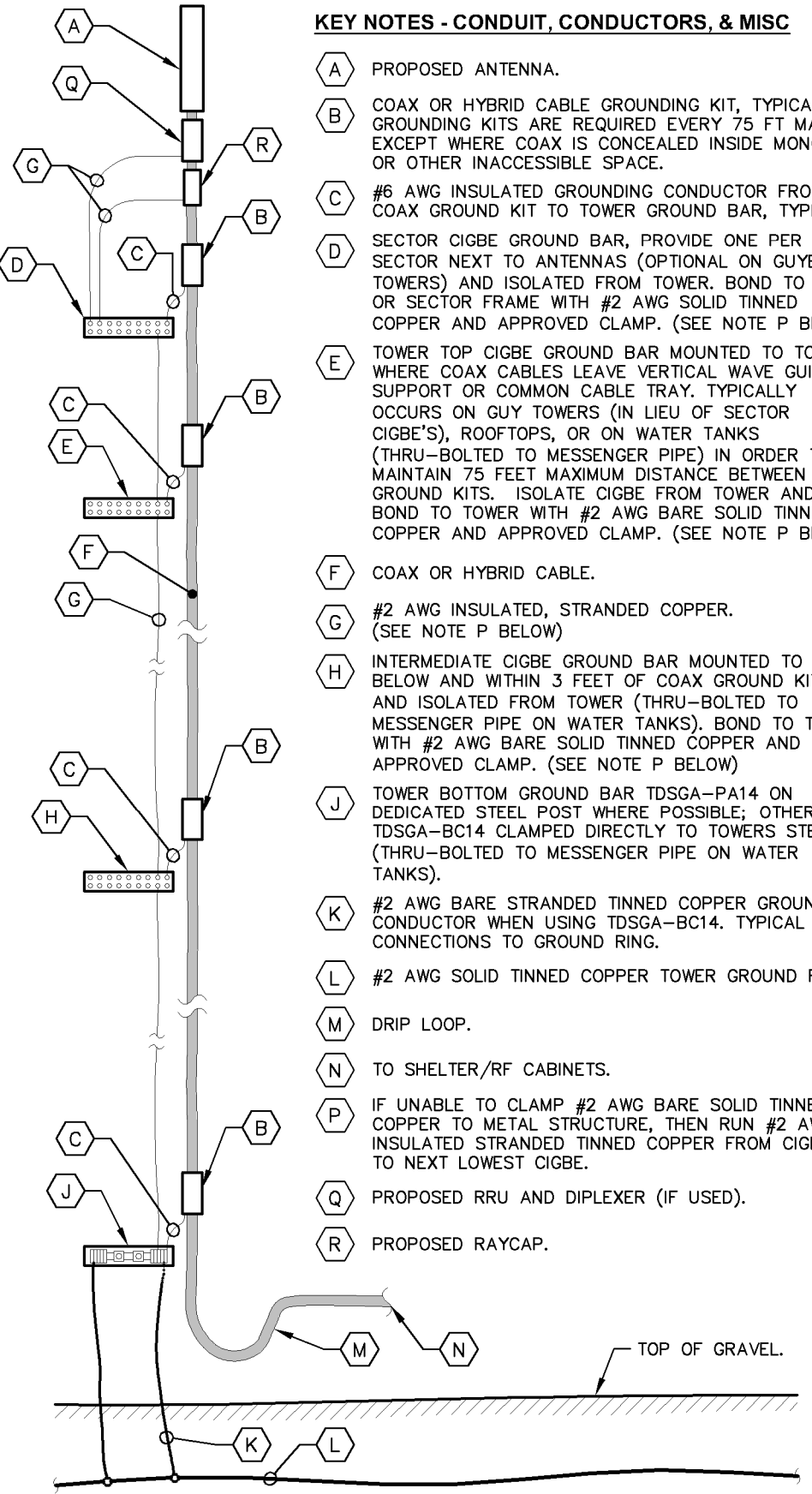
- 1 #6 AWG INSULATED STRANDED COPPER.
2 #6 AWG INSULATED STRANDED COPPER. CONNECT COAX GROUND KITS DIRECTLY TO TOWER TOP CIGBE ONLY.
3 #2 AWG SOLID TINNED COPPER.
4 #2 AWG SOLID TINNED COPPER. (IF GROUNDING POST NOT AVAILABLE)
5 #2 AWG SOLID TINNED COPPER GROUND RING BURIED 30" BELOW GRADE.
6 TOWER ACTS AS CONDUCTOR.
7 TOWER GROUND BARS WILL BE ISOLATED FROM TOWER BUT BONDED TO TOWER WITH #2 AWG INSULATED STRANDED COPPER AND CLAMPED, OR EXOTHERMIC WELD, UNLESS OTHERWISE NOTED.
8 4/0 BRAIDED COPPER STRAP, EXOTHERMIC WELD TO BOTH GATE AND GATE POST.
9 BOND GROUND BAR TO GROUNDING POST USING THROUGH BOLT CONNECTION.
10 #2 AWG INSULATED STRANDED COPPER.



1 GROUNDING SINGLE LINE DIAGRAM
E10 NOT TO SCALE

KEY NOTES - CONDUIT, CONDUCTORS, & MISC

- A PROPOSED ANTENNA.
B COAX OR HYBRID CABLE GROUNDING KIT, TYPICAL. GROUNDING KITS ARE REQUIRED EVERY 75 FT MAXIMUM EXCEPT WHERE COAX IS CONCEALED INSIDE MONOPOLE OR OTHER INACCESSIBLE SPACE.
C #6 AWG INSULATED GROUNDING CONDUCTOR FROM COAX GROUND KIT TO TOWER GROUND BAR, TYPICAL.
D SECTOR CIGBE GROUND BAR, PROVIDE ONE PER SECTOR NEXT TO ANTENNAS (OPTIONAL ON GUYED TOWERS) AND ISOLATED FROM TOWER. BOND TO TOWER OR SECTOR FRAME WITH #2 AWG SOLID TINNED COPPER AND APPROVED CLAMP. (SEE NOTE P BELOW)
E TOWER TOP CIGBE GROUND BAR MOUNTED TO TOWER WHERE COAX CABLES LEAVE VERTICAL WAVE GUIDE SUPPORT OR COMMON CABLE TRAY. TYPICALLY OCCURS ON GUY TOWERS (IN LIEU OF SECTOR CIGBE'S), ROOFTOPS, OR ON WATER TANKS (THRU-BOLTED TO MESSENGER PIPE) IN ORDER TO MAINTAIN 75 FEET MAXIMUM DISTANCE BETWEEN COAX GROUND KITS. ISOLATE CIGBE FROM TOWER AND BOND TO TOWER WITH #2 AWG BARE SOLID TINNED COPPER AND APPROVED CLAMP. (SEE NOTE P BELOW)
F COAX OR HYBRID CABLE.
G #2 AWG INSULATED, STRANDED COPPER. (SEE NOTE P BELOW)
H INTERMEDIATE CIGBE GROUND BAR MOUNTED TO TOWER BELOW AND WITHIN 3 FEET OF COAX GROUND KITS AND ISOLATED FROM TOWER (THRU-BOLTED TO MESSENGER PIPE ON WATER TANKS). BOND TO TOWER WITH #2 AWG BARE SOLID TINNED COPPER AND APPROVED CLAMP. (SEE NOTE P BELOW)
J TOWER BOTTOM GROUND BAR TDSCA-PA14 ON DEDICATED STEEL POST WHERE POSSIBLE; OTHERWISE TDSCA-BC14 CLAMPED DIRECTLY TO TOWERS STEEL (THRU-BOLTED TO MESSENGER PIPE ON WATER TANKS).
K #2 AWG BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR WHEN USING TDSCA-BC14. TYPICAL TWO CONNECTIONS TO GROUND RING.
L #2 AWG SOLID TINNED COPPER TOWER GROUND RING.
M DRIP LOOP.
N TO SHELTER/RF CABINETS.
P IF UNABLE TO CLAMP #2 AWG BARE SOLID TINNED COPPER TO METAL STRUCTURE, THEN RUN #2 AWG INSULATED STRANDED TINNED COPPER FROM CIGBE TO NEXT LOWEST CIGBE.
Q PROPOSED RRU AND DIPLEXER (IF USED).
R PROPOSED RAYCAP.



2 COAX-TOWER GROUNDING SCHEMATIC
E10 NOT TO SCALE



PROJECT INFORMATION:
SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:
Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV:	DATE:	ISSUED FOR:	BY:
8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH



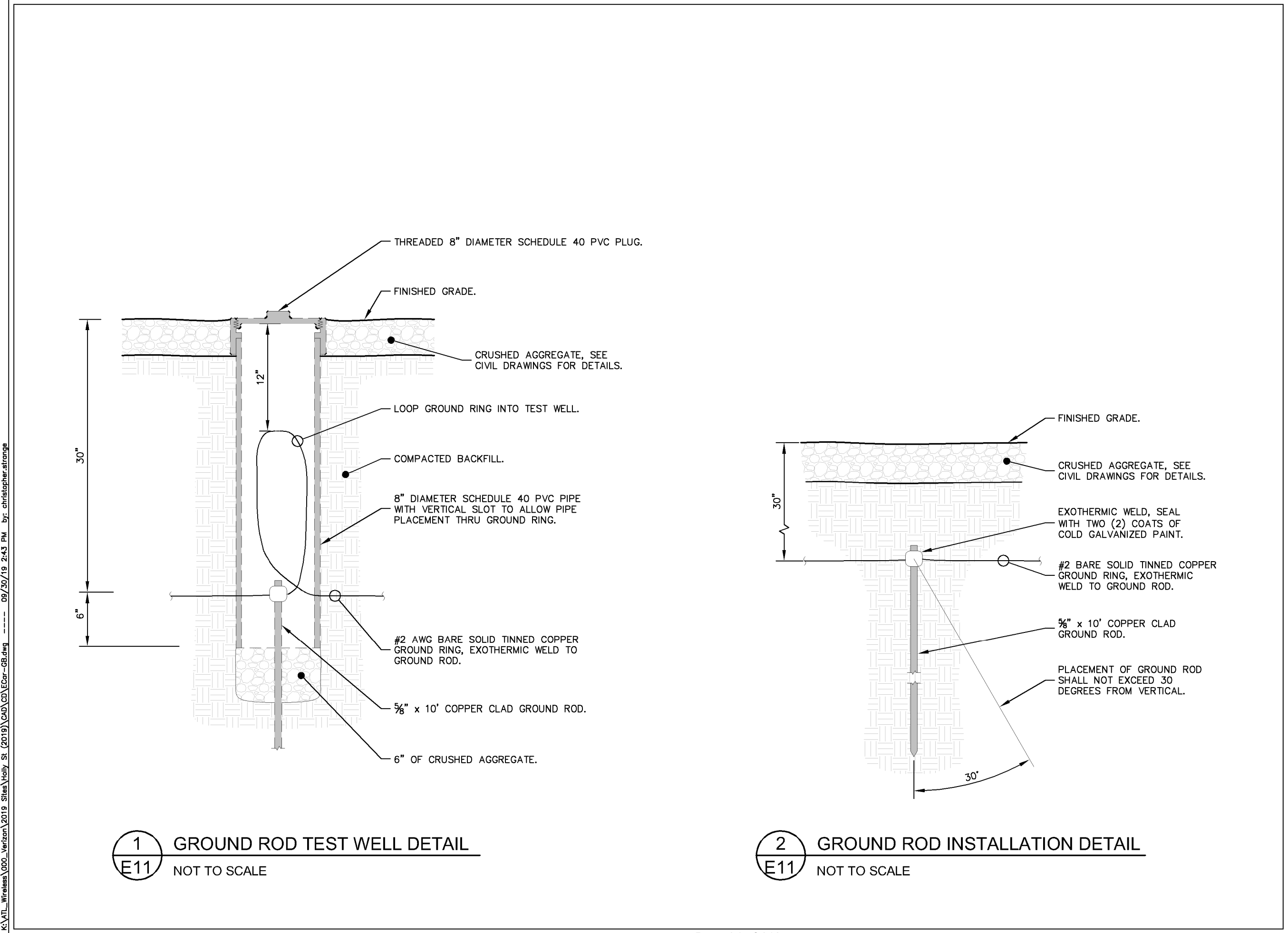
KHA PROJECT NUMBER:
018985923

DRAWN BY: TDM
CHECKED BY: KAB

SHEET TITLE:

GROUNDING
SINGLE LINE
DIAGRAM

SHEET NUMBER:
E10



K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg ----- 09/30/19 2:43 PM by: christopher.strange

verizon
8821 RESEARCH DRIVE
CHARLOTTE, NORTH CAROLINA 28262

PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:
Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV:DATE:ISSUED FOR:BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

LICENSER:

NORTH CAROLINA

PROFESSIONAL SEAL

040828

ENGINEER

CORBIN C. HARDY

5/30/19

KHA PROJECT NUMBER:

018985923

DRAWN BY:CHECKED BY:

TDMKAB

SHEET TITLE:

GROUNDING DETAILS

SHEET NUMBER:

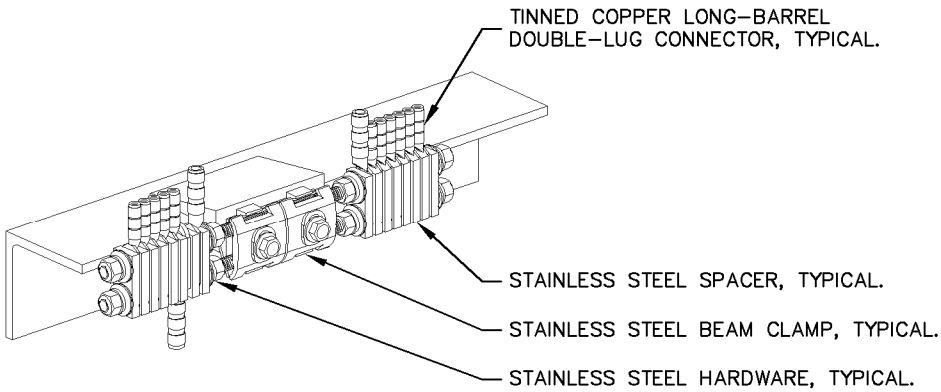
E11

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

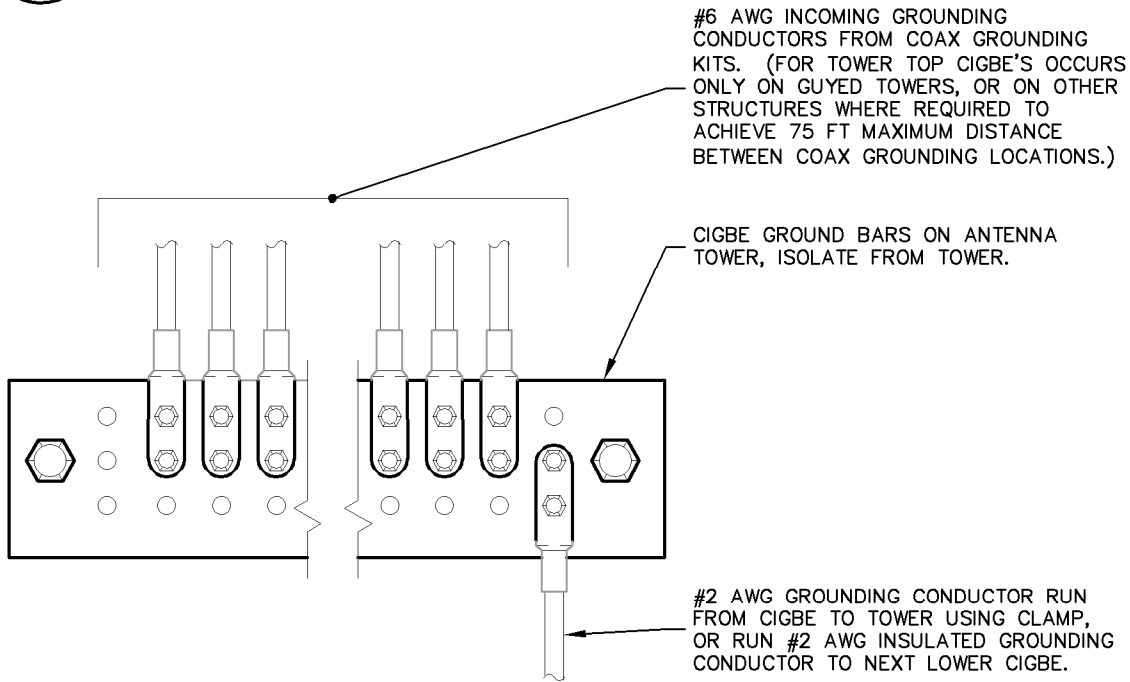
Page 94 of 146

Copyright Kimley-Horn and Associates, Inc., 2018

K:\ATL_Wireless\000_Verizon\2019_Sites\Holly St. (2019)\CAD\CD\ECor-GB.dwg 09/30/19 2:43 PM by: christopher.strange



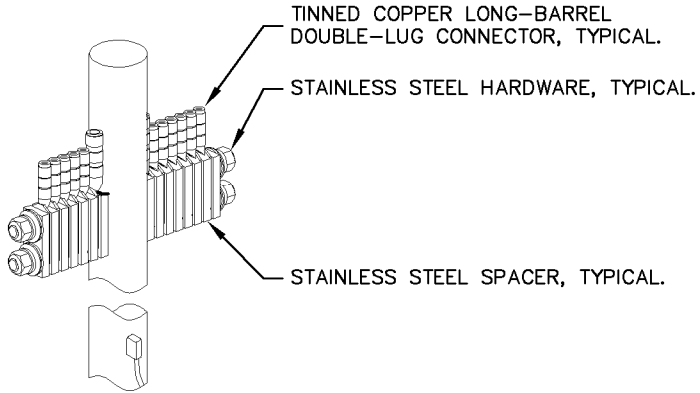
1 BAR NONE GROUNDED BEAM CLAMP (TDSGA-BC14)
E12 NOT TO SCALE



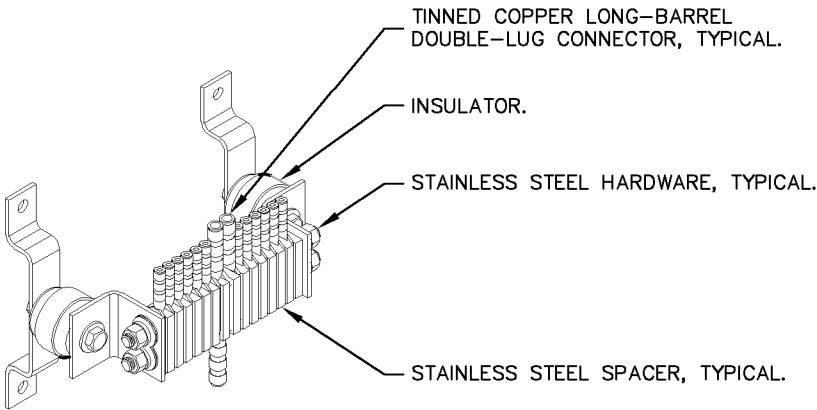
3 ANTENNA GROUND WIRE INSTALLATION DETAIL
E12 NOT TO SCALE

NOTES:

1. ALL CIGBE GROUND BARS ON TOWER ARE TO BE ERICO TDSGA. TYPICALLY USE TDSGA-WB17 ISOLATED FROM UNISTRUT BRACKET.
2. IF CIGBE CANNOT BE CONNECTED TO TOWER WITH #2 AWG GROUNDING CONDUCTOR, VIA CLAMP OR EXOTHERMIC WELD, THEN RUN #2 AWG BLACK GROUND LEAD FROM CIGBE DOWN TO NEXT LOWER CIGBE. SECURE GROUND LEAD WITH NON-METALIC TIES AT SAME SPACING AS COAX SUPPORTS.



2 BAR NONE POST MOUNTED (TDSGA-PA14)
E12 NOT TO SCALE



4 BAR NONE INSULATED (TDSGA-WB17)
E12 NOT TO SCALE



PROJECT INFORMATION:

SITE NAME:
HOLLY ST
SITE No.: 492708
PROJECT #: 20181792280
1504 MILLER ST
MONROE, NC 28110
UNION COUNTY

PLANS PREPARED BY:

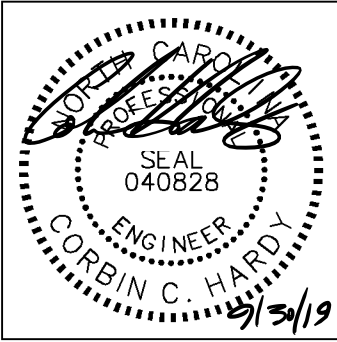
Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 800
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM
NC License F-0102

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1			
0	09/20/19	CONSTRUCTION	CCH

LICENSER:



KHA PROJECT NUMBER:

018985923

DRAWN BY: CHECKED BY:

TDM

KAB

SHEET TITLE:

**GROUNDING
DETAILS**

SHEET NUMBER:

E12

EXHIBIT B

ANALYSIS OF EXISTING STRUCTURES FOR CO-LOCATION

Verizon Wireless proposes to construct and operate a 180 foot tall monopole with a 4 foot lightning rod on top. This monopole will have features added to it so that it resembles a pine tree. This makes the pole a “stealth” type monopole.

We have attached an aerial view of the search ring. Through this aerial view we can evaluate whether there are buildings that are of adequate height to accommodate the antennas. A building 180 feet tall is more than 16 stories tall. As you can see there are no 16 story buildings, or even buildings of more than two stories within the search ring.

Therefore, it is technically and practically impossible to provide the desired level of service by co-locating the tower and antenna on an existing structure.

In addition to showing the possible co-location sites in the search ring, we have also done an evaluation of whether there are any existing towers that would be suitable for co-location.

The FAA has done ten (10) evaluations of Hazard Determinations for potential projects within 1.5 miles of the proposed site within the last twenty (20) years. Of those sites, only four actual towers have been constructed or will be constructed. Attached to this document is a map showing the four sites.

1. Site 1 – **Crown Castle** - On January 27, 2020 the FAA issued a No Hazard Determination for a 200 foot tall tower to be located at the location marked as #1 on the map. This tower will be 4,800 feet (west) from the proposed site.
2. Sites 2 and 3– **Towercom** obtained No Hazard Determinations from the FAA for the sites that are shown as items 2 and 3 on the map. These sites are 1.34 miles (northeast) and 1.45 (northwest) miles respectively from the proposed site.
3. Site 4 – **WKRE** – a No Hazard Determination was issued for a tower designed for transmission of AM radio signals. This tower is 1.66 miles southeast of the proposed tower.

In reviewing the Map of 4 towers constructed or to be constructed, the four towers are located on both the east side and the west side of the City of Monroe. As is shown in the individual maps of said towers, the distances of the towers to the east and west are 9/10 mile, 1.34 miles, 1.45 miles and 1.66 miles from the center of Monroe where the proposed tower will be located.

There are no existing towers in the center. The red dot in the middle of that map shows the proposed locate of this tower.

Please now review the Propagation maps submitted by the Radio Frequency Engineer. On the **second page** the map package includes a statement of the Site Candidate objective. There are two stated objectives. These are, in brief, to add a tower that will absorb some of the existing capacity, and also to enable higher “throughput” on the existing sites.

The first objective is a “capacity” objective. In a capacity type of tower placement, the location of the tower is not flexible. The new tower needs to be in a precise location to “...absorb some of the existing capacity on the surrounding sites which are highly utilized...”. With a capacity objective, the engineer calculates the location of the new tower to be most effective in absorbing some of the existing capacity of the highly utilized towers.

The **third page of** the Propagation Maps package shows the existing coverage. There are currently six active Verizon Wireless sites in the general Monroe area. Five of the sites form a circle around the proposed site. The sixth is further to the south east just north of Rt. 74 where it intersects with Rt. 601. The area immediately surrounding each of the existing towers is in green. The green area is the best coverage, with RSRP Level (DL) (dBm) greater or equal to -80.

As the distance from the tower increases, the coverage declines to be shown in yellow, or with RSRP Level (DL) (dBm) greater or equal to -90. The middle of the circle of the existing five sites is shown in yellow in the map of the existing coverage as prepared by the radio frequency engineer.

On this **third page** the radio frequency engineer placed red arrows identifying the three existing Verizon sites closest to the proposed site, Roosevelt (to the north west), Downtown Monroe (to the south east), and Morgan Mill (to the north east). These three towers are analyzed by the radio frequency engineer to be “Highly utilized sectors resulting in low user throughput”.

Low throughput is a slow rate of data transmission. In a low throughput situation Verizon customers who want to use the internet via their smart phones would take longer to load web pages and have slow to no streaming services. This level of service is not acceptable, and not in keeping with Verizon’s obligation to provide service pursuant to their licenses.

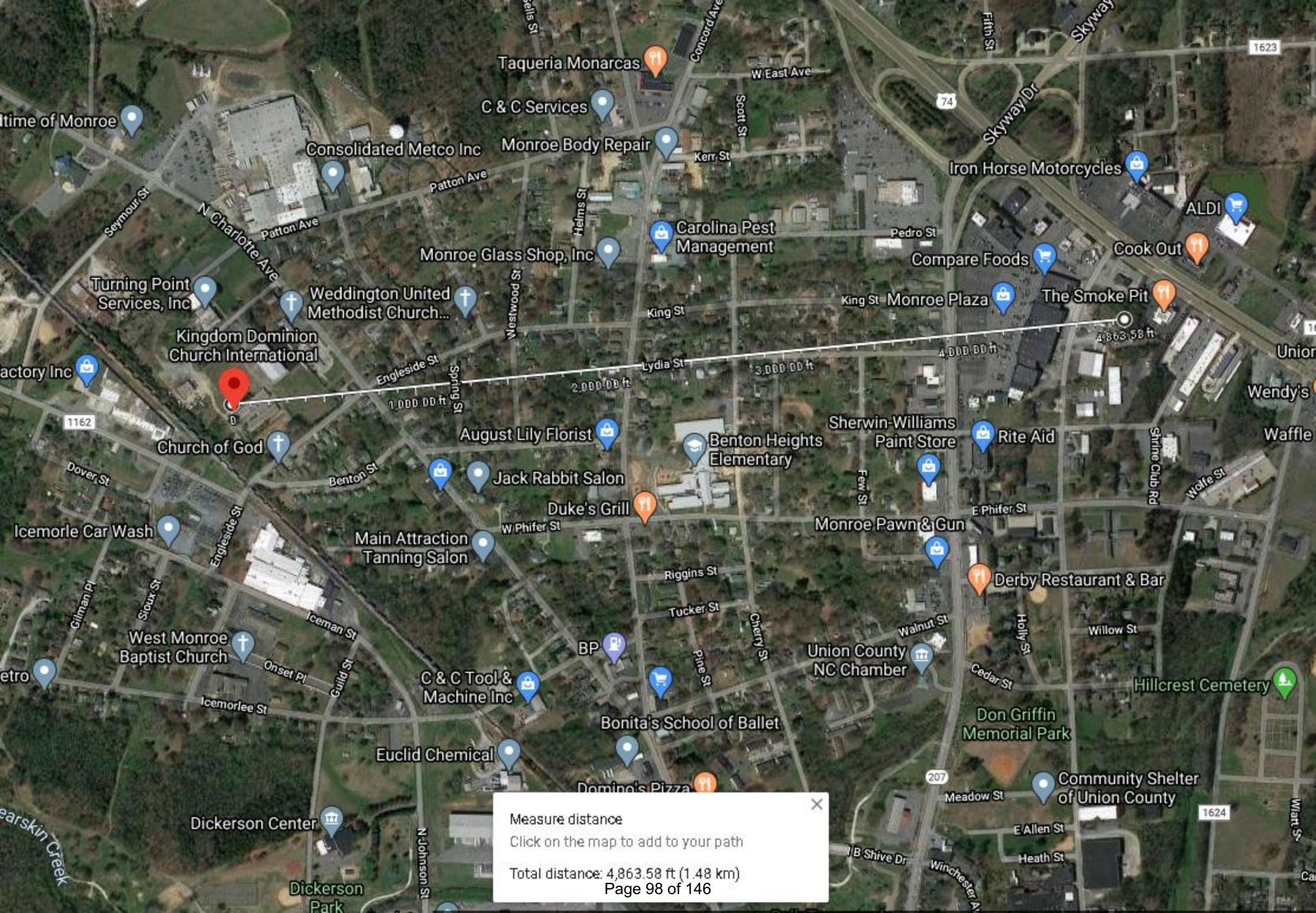
The coverage shown on the **fourth page** of the Propagation Maps package is the Existing and Proposed New Site Coverage. The addition of the proposed site, Holly Street, adds considerable area to the highest level service to the west of the Holly St. site. It is also located close enough to the Downtown Monroe, Roosevelt and Morgan Mill sites to take on some of the data needs of that region, thus providing relief from the “low throughput” condition that currently exists.

Summary

In Exhibit B the applicant has provided an analysis of the area of the proposed tower for potential buildings of 16 stories which is the height of the proposed tower. The applicant has also analyzed the region around Monroe to see what towers other companies have constructed that may have room for co-location.

The analysis of alternate sites of co-location has resulted in the fact that there are no suitable structures of 180 feet in height within the search ring, and, that the existing towers are too far from the problem area to aid in solving the current problems there.

The propagation maps and text in the propagation maps package as prepared by the Verizon Radio Frequency engineer identify the current problems that exist, where those problems are, and how an 180 foot tall tower at the proposed location would bring much improved coverage, capacity and higher throughput to the target area.



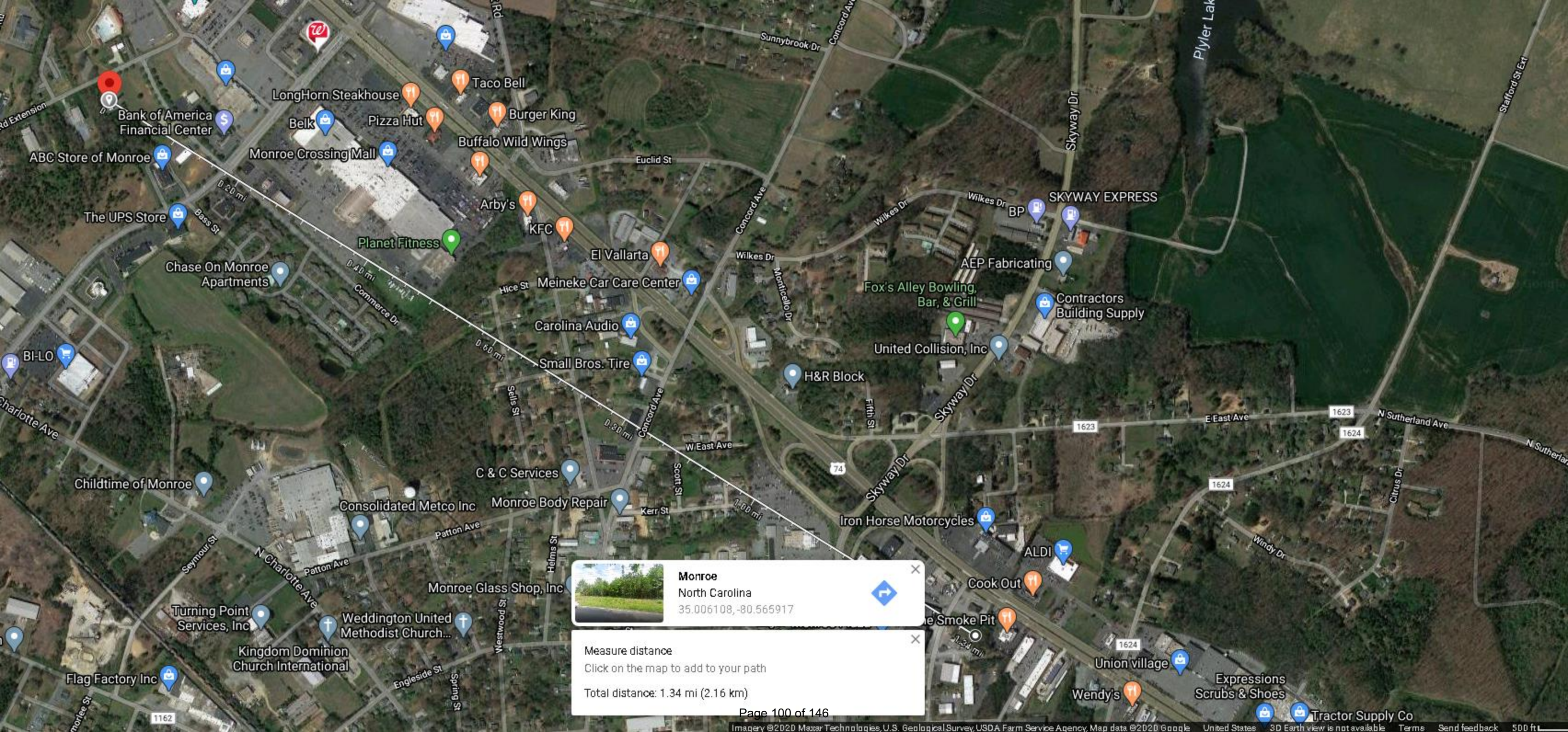
Measure distance

Click on the map to add to your path

Total distance: 4,863.58 ft (1.48 km)

Page 98 of 146





Bank of America
Financial Center

LongHorn Steakhouse

Taco Bell

Burger King

Pizza Hut

Monroe Crossing Mall

Buffalo Wild Wings

ABC Store of Monroe

The UPS Store

Chase On Monroe
Apartments

Planet Fitness

Arby's

KFC

El Vallarta

Meineke Car Care Center

Carolina Audio

Small Bros. Tire

H&R Block

SKYWAY EXPRESS

AEP Fabricating

Fox's Alley Bowling,
Bar, & Grill

Contractors
Building Supply

United Collision, Inc

Childtime of Monroe

C & C Services

Consolidated Metco Inc

Monroe Body Repair

Iron Horse Motorcycles

ALDI

Cook Out

Turning Point
Services, Inc

Weddington United
Methodist Church...

Kingdom Dominion
Church International

Flag Factory Inc

Monroe Glass Shop, Inc

Monroe

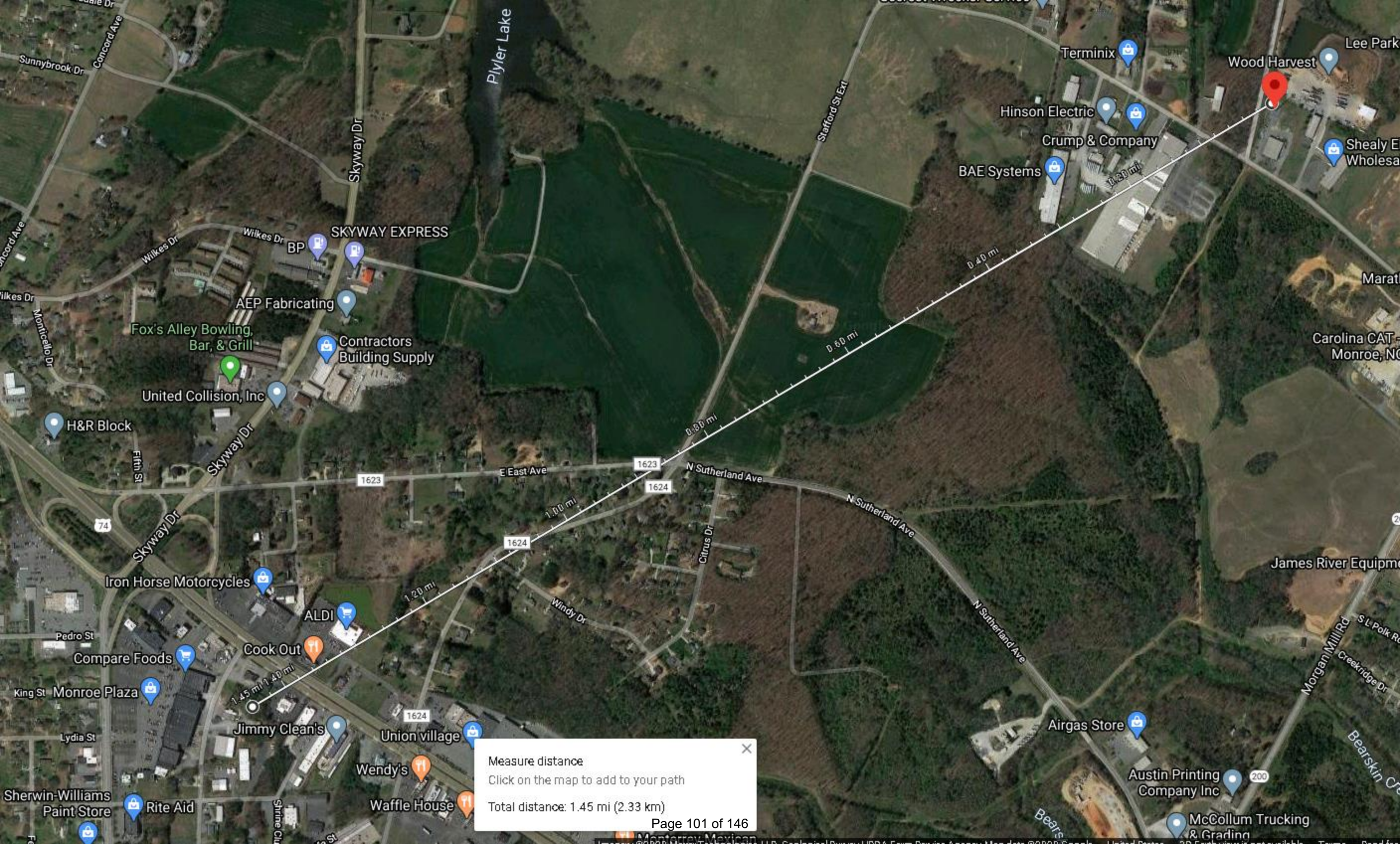
North Carolina

35.006108, -80.565917

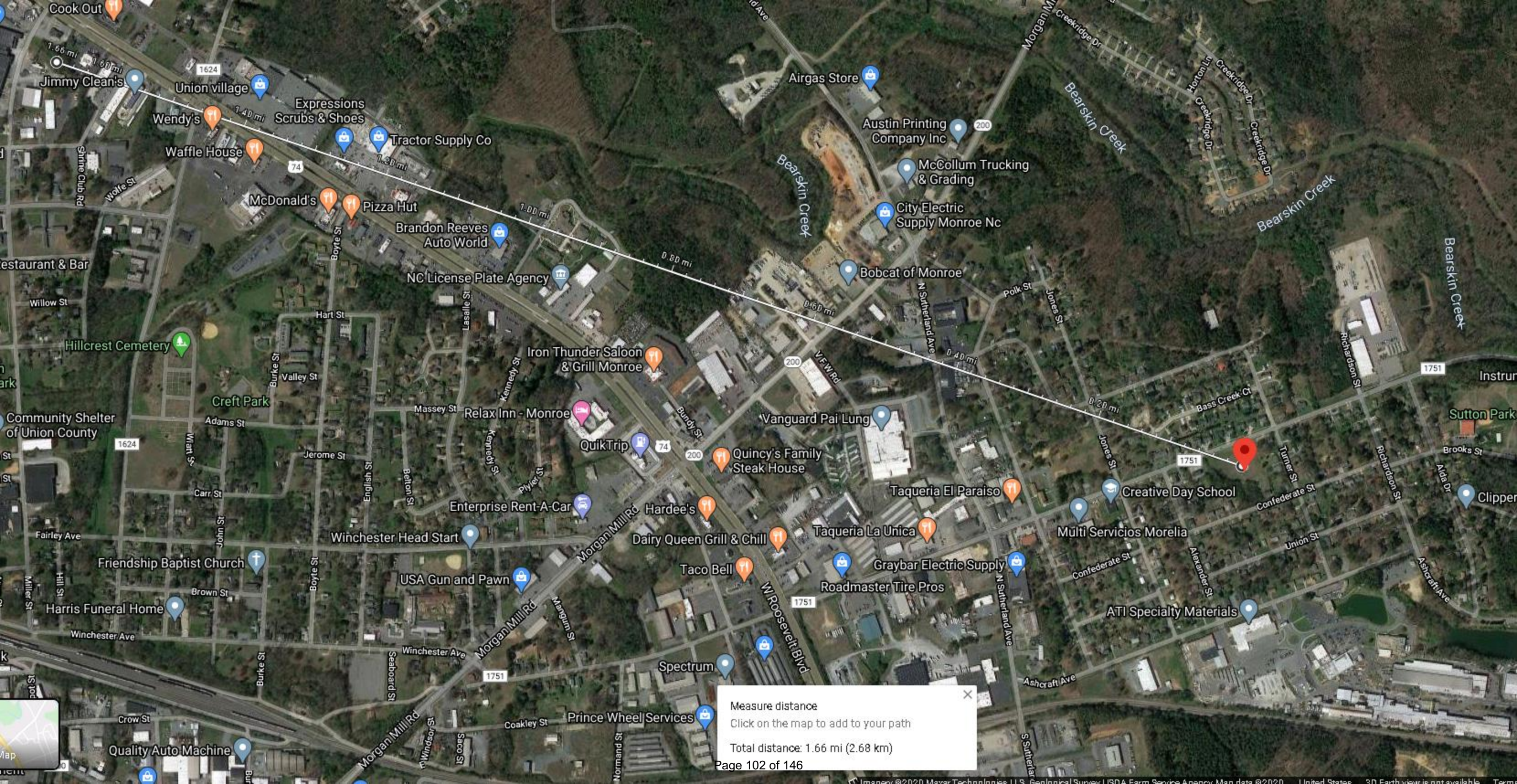
Measure distance

Click on the map to add to your path

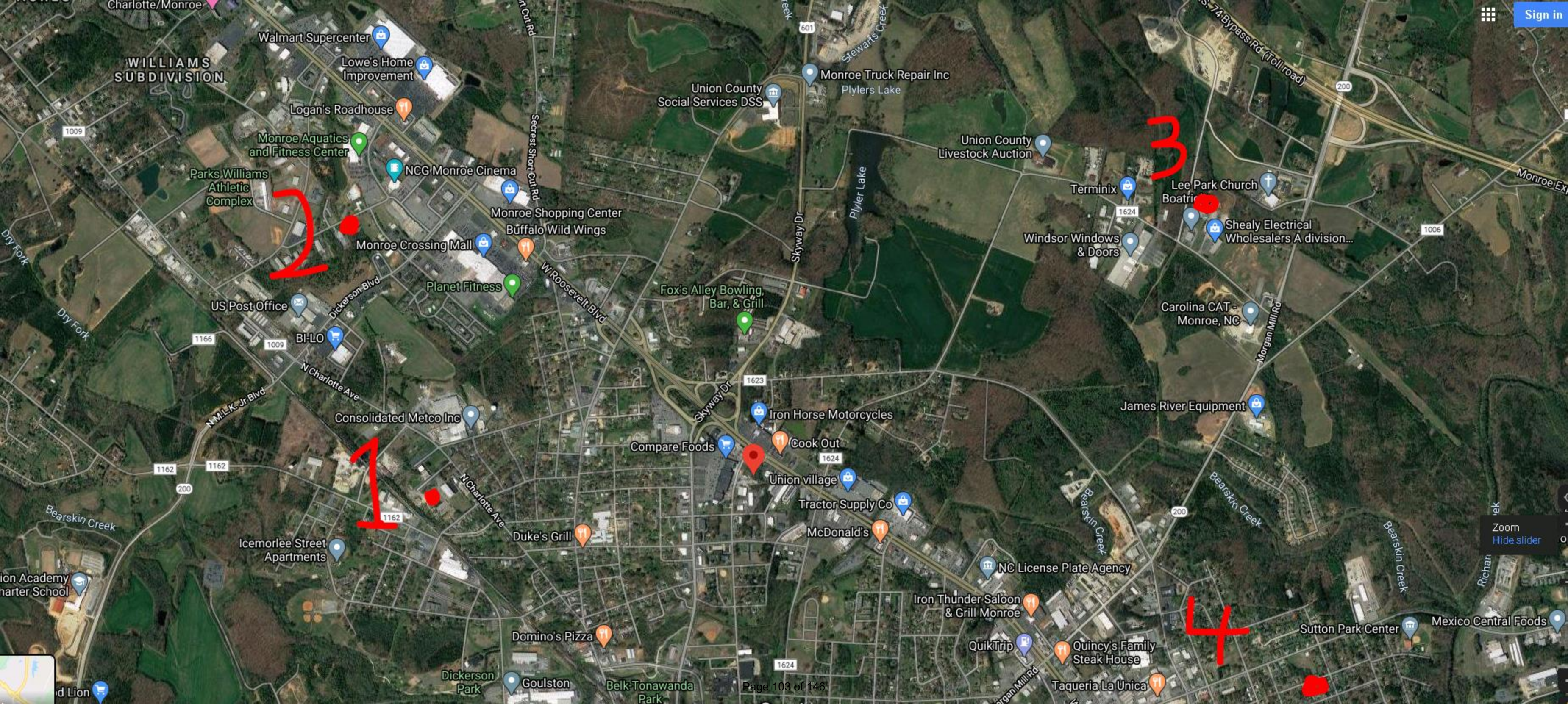
Total distance: 1.34 mi (2.16 km)



Measure distance
Click on the map to add to your path
Total distance: 1.45 mi (2.33 km)
Page 101 of 146



Measure distance
Click on the map to add to your path
Total distance: 1.66 mi (2.68 km)
Page 102 of 146



Ruler

Line Path Polygon Circle 3D path 3D polygon

Measure the circumference or area of a circle on the ground

Radius: 501.87 Feet

Area: 73,271.51 Square Meters

Circumference: 3,149.07 Feet

☒ Mouse Navigation

Save

Clear

34 59 44.66 N, 80 32 44.75 W

© 2018 Google

Google Earth

1993

Page 104 of 146

34°59'44.47" N 80°32'44.51" W elev 629 ft eye alt 2111 ft

9:41 AM

Network Operations



Verizon Wireless
8921 Research Drive
Charlotte, North Carolina 28262

Phone 704 510-8500

February 26, 2020

Keri Mendler
Planner
City of Monroe
300 W. Crowell Street
Monroe, N.C. 28112

Re: Proposed Verizon Wireless Telecommunications Tower at
1504 Miller Street, Monroe, NC 28110
Tax/Pin 09225037E/09225037D
Verizon Site Name: **Holly St.**

To whom it may concern:

I am providing this Letter to comply with Zoning Code Section 156.125 (D) (4) regarding co-location possibilities.

Verizon Wireless has designed the proposed tower to allow three additional carriers to co-locate (including combined antennas). Verizon will work with parties interested in co-locating at this site. We will negotiate in good faith at reasonable terms to other service providers. "Reasonable terms" includes charging the market rates.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Abhijit Apte".

Abhijit Apte
Sr Mgr - RE/Regulatory
CARTN (Macro and Microcell)

Sworn to before me this
27th Day of February, 2020

Notary Public

exp. 09/18/2021



November 14, 2019

Jim LaPann
Faulk & Foster

Ref: *Site Name –Holly St– (180' Proposed Monopine Tower)*
Verizon No: 492708
ACGI# 19-6884
Jurisdiction: City of Monroe, NC
Site Address: 1504 Miller St. Monroe, NC 28110, Union County
Latitude, Longitude: 34.99574°, -80.54576°
Scope of Work: Engineering Specification Letter
Applicable Code:
2018 North Carolina Building Code (IBC 2015) & ASCE 7-10, ANSI/TIA-222-G, Risk Category II,
Wind Speed: 115 mph ultimate wind speed equivalent to 89 mph nominal wind speed,
Exposure "C", Topographic Category "1".

This letter is provided in reference to the above mentioned site for the following specifications:

1. The purpose of this tower is to support telecommunication antenna equipment for cellular coverage of the affected area.
2. The applicant shall certify that the proposed tower meets all applicable Federal Communication Commission rules and will be operated in compliance with Federal Communication Commission rules and regulations.
3. Above reference tower is to be designed to meet or exceed industry standards defined by ANSI/TIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas" (ANSI/TIA-222-G Standard).
4. The total height of tower is 180' with highest appurtenance to 189'. All site location data to be re-verified by survey.
5. The tower must be designed and certified by an Engineer to be structurally sound and as a minimum in conformance with the adopted Building code. This tower to be designed using the following minimum wind speed as defined by ANSI/TIA-222-G for North Carolina:
 - i) 89 mph 3-second-gust nominal wind speed with no ice.
 - ii) 30 mph 3-second-gust wind speed with 0.75" ice.
 - iii) $S_s=0.27$ g & $S_1=0.111$ g, seismic loading as per TIA-222-G Code.

The "3-second-gust wind speed refers to a wind measured at 33 ft. above the ground. Equations in ANSI/TIA-222-G Standard take into account that the wind speed escalates with the increasing height of the tower.

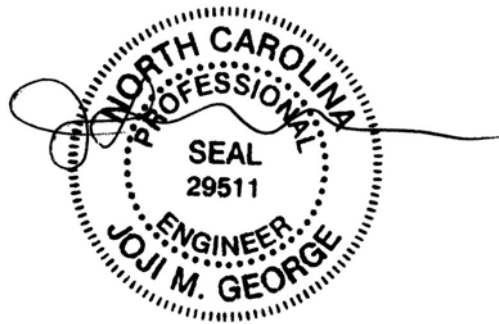
6. Construction of the tower must be in compliance with all the requirements of North Carolina State Building Codes and permitting process in addition to the requirements of this section.
7. All new towers exceeding 75 feet in height must be constructed to permit a minimum of three antennas to be co-located on the tower.

If you have any other questions or concerns regarding our recommendations, please contact us.

Sincerely,

Sanjeev Adhikari, EIT

11/14/2019



Approved By:
Joji M. George, P.E.
NC PE # 29511



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2019-ASO-30894-OE

Issued Date: 11/18/2019

Network Regulatory
Cellco Partnership
5055 North Point Pkwy
NP2NE Network Engineering
Alpharetta, GA 30022

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	HOLLY_ST - B-15492953 (Monopole)
Location:	Monroe, NC
Latitude:	34-59-44.66N NAD 83
Longitude:	80-32-44.75W
Heights:	593 feet site elevation (SE) 189 feet above ground level (AGL) 782 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

☐ At least 10 days prior to start of construction (7460-2, Part 1)
☒ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 05/18/2021 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (718) 553-2611, or angelique.eersteling@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-ASO-30894-OE.

Signature Control No: 419987520-423048220

(DNE)

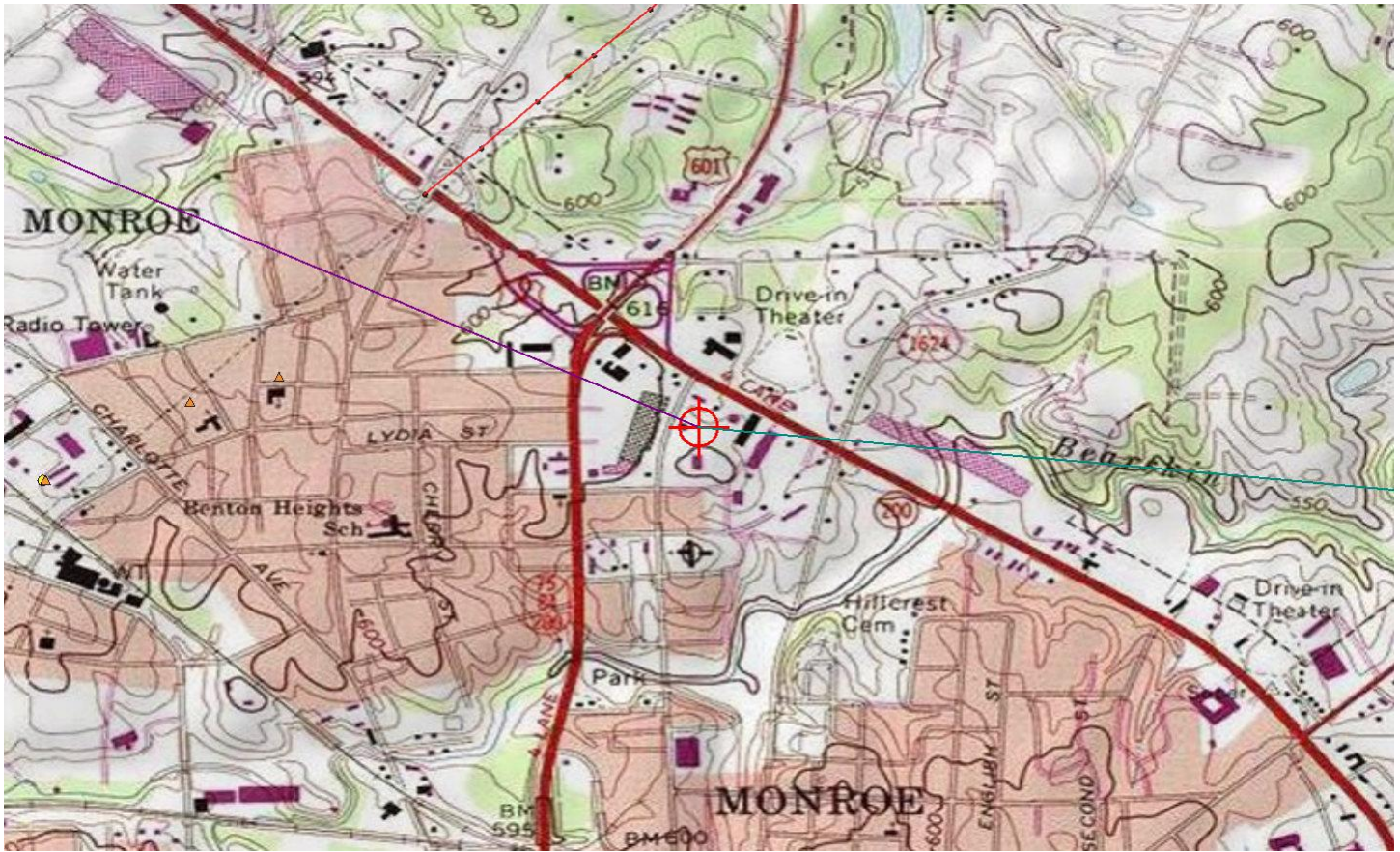
Angelique Eersteling
Technician

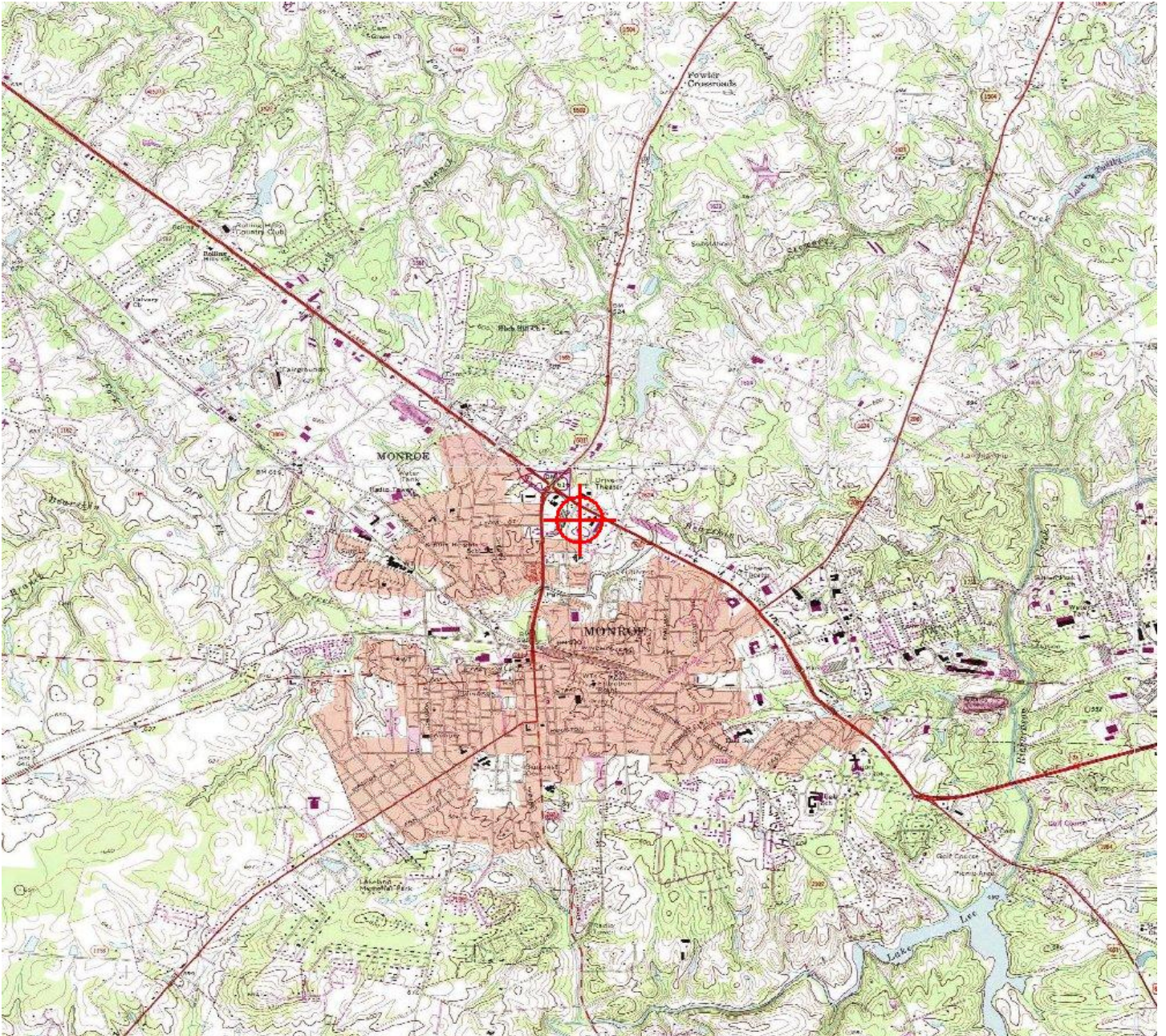
Attachment(s)
Frequency Data
Map(s)

cc: FCC

Frequency Data for ASN 2019-ASO-30894-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	2000	W
614	698	MHz	1000	W
698	806	MHz	1000	W
806	824	MHz	500	W
806	901	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1990	MHz	1640	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W
27500	28350	MHz	75	dBm
29100	29250	MHz	75	dBm
31000	31225	MHz	75	dBm
31225	31300	MHz	75	dBm
38600	40000	MHz	75	dBm





IMPACT STUDY

***Impact Study - Cell Tower
Miller Street
Monroe, Union County, North
Carolina 28110***

Type Report: Impact Study

***Effective Date
December 20, 2019***



January 7, 2020

James LaPann
Faulk & Foster
Zoning Specialist
584 Laurel Lane
Lancaster, PA 17601

RE: Impact Study for Proposed Telecommunications Facility located on an assemblage along Miller Street, Monroe, Union County, North Carolina.

Dear Mr. LaPann:

I have completed a study of the proposed tower. The scope of the assignment is to provide an analysis and conclusions addressing items within my field of expertise associated with the issuance of a special use permit for the proposed development. A special use permit includes five findings of fact, of which two are addressed in this analysis. Details of these items are contained within this report.

The impact study is intended to conform to the Uniform Standards of Professional Appraisal Practice (USPAP), the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute. The impact study is not an appraisal as it does not report a value of any property; however, the study employs appraisal methodology to reach our conclusions of the impact of the proposed development.

The proposed development is a wireless telecommunications facility to be located on an assemblage of three parcels owned by Poindexter Properties, LLC. The siting of the proposed tower is near the primary transportation corridor for Union County, US Highway 74 or Roosevelt Boulevard. The location substantially lowers the incremental impact of the proposed tower. The abutting land uses include commercial and industrial uses. The surrounding land uses are contributing factors in the development of conclusion regarding the potential impact of the facility.

The conclusions of this study are supported by the data and reasoning set forth in the attached narrative. Your attention is invited to the Assumptions and Limiting Conditions section of this report. The analysts certify that we have no present or contemplated future interest in the proposed development, and that our fee for this assignment is in no way contingent upon the conclusions of this study.

EXTRAORDINARY ASSUMPTIONS AND HYPOTHETICAL CONDITIONS:

It is an extraordinary assumption of this report that the proposed development will be constructed as detailed in the report. Further, it is an assumption of the study that the maintenance will occur through a non-exclusive right-of-way that we assume is a legal access.

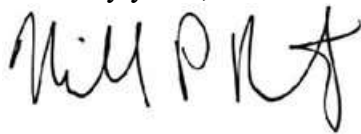
It is an extraordinary assumption of this report that the improvements as described within this report are compliant with the appropriate ordinance regarding items including but not necessarily limited to setbacks, landscaping, access and other items outside our field of expertise for this assignment. These items will be addressed as part of the application by others with expertise within the respective fields.

The content and conclusions of this report are intended for our client and for the specified intended uses only. They are also subject to the assumptions and limiting conditions as well as the specific extraordinary assumption set forth in this report.

It is our opinion that the proposed development will not substantially injure the values of adjacent or abutting properties and that the proposed development is in harmony with the area in which it is to be located.

Thank you for the opportunity to be of service. If you have any questions or comments, please contact our office.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Michael P. Berkowitz", written in a cursive style.

MICHAEL P. BERKOWITZ
MPB REAL ESTATE, LLC

TABLE OF CONTENTS

SCOPE OF THE ASSIGNMENT	6
PREMISES OF THE STUDY	7
Identification of Subject.....	7
Client, Purpose, and Intended Use and Intended Users	7
Analyst.....	7
Property Inspection.....	8
Extraordinary Assumptions of Report	8
Effective Date of Study.....	8
Date of Report.....	8
Type Report.....	8
Study Development and Reporting Process.....	8
PROPOSED FACILITY	9
Tower.....	9
Site Improvements	10
Access	10
Physical Considerations.....	11
SURROUNDING LAND USES.....	11
UNION COUNTY UNIFIED DEVELOPMENT ORDINANCE	12
MARKET RESEARCH	14
Conclusions	21
Subject Neighborhood	21
ADDENDA	25
Certifications	26
Qualifications of the Analyst.....	33

SCOPE OF THE ASSIGNMENT

In accordance with our agreement with the client, this impact study is specific to the needs of our client as part of an application for a special use permit to be considered by Union County officials. Our study and the reporting of our study is in agreement with our client as follows:

The proposed development requires a Special Use Permit. The report is intended to address items relevant to the issuance of a special use permit. The following excerpt from the Union County Unified Development Ordinance (UDO) shows five items for consideration in the approval or denial of a special use permit.

1. The proposed use and development comply with all regulations and standards generally applicable within the zoning district and specifically applicable to the particular type of special use.
2. The proposed development will not materially endanger the public health or safety. Considerations:
 - a. Traffic conditions in the vicinity, including the effect of additional traffic on streets and street intersections, sight lines at street intersections and curb cuts;
 - b. Provision of services and utilities, including sewer, water, electrical, garbage collections and fire protection;
 - c. Soil erosion and sedimentation; and
 - d. Protection of public, community, or private water supplies, including possible adverse effects on surface waters or groundwater.
3. The proposed development will not substantially injure the value of abutting property, or is a public necessity. Considerations:
 - a. The relationship of the proposed use and the character of development to surrounding uses and development, including possible conflicts between them and how these conflicts will be resolved; and
 - b. Whether the proposed development is so necessary to the public health, safety, and general welfare of the county as a whole as to justify it regardless of its impact on the value of abutting property.
4. The proposed development will be in harmony with the area in which it is located. Considerations:
 - a. The relationship of the proposed use and the character of development to surrounding uses and development, including possible conflicts between them and how these conflicts will be resolved or mitigated.
5. The proposed development will be in general conformity with the comprehensive plan.

The scope of the assignment includes research of existing towers in Union County and the surrounding area. The neighborhoods and their surrounding developments are researched to determine whether the proposed development, referred to as the “Holly Street Site”, is consistent with the location of other towers in the area and their impact, if any, on neighborhood development patterns and property values.

The impact study provides an analysis of the surrounding properties. The analysis includes existing improvements, zoning designations and likely development patterns. The existing uses as of the effective date of this report in concert with the market data provided are contributing factors to the conclusions of this study.

PREMISES OF THE STUDY

Identification of Subject

Holly Street Site

Miller Street
Monroe, NC 28110

Union County Tax Parcels: 09-225-036, 09-225-037D & E

Client, Purpose, and Intended Use and Intended Users

James LaPann
Faulk & Foster
Zoning Specialist
584 Laurel Lane
Lancaster, PA 17601

The client and intended user is Mr. James LaPann. The intended use is as an aid for Union County officials in rendering a decision regarding the issuance of a special use permit for the proposed development. The study is not intended for any other use or users.

Analyst

Michael P. Berkowitz

MPB Real Estate, LLC
1100 Sundance Drive
Concord, NC 28027

Property Inspection

Michael Berkowitz inspected the property and neighborhood surrounding the proposed development. Details of surrounding land uses and observations are provided throughout the report. I also performed off site visual inspections of several towers located in and around the Roosevelt Boulevard corridor. I consider my observations in the context of the market data. They are a contributing factor to my conclusions. Photographs of the property were taken during Mr. Berkowitz's inspection.

Extraordinary Assumptions of Report

It is an extraordinary assumption of this report that the improvements as described within this report are compliant with the appropriate ordinance regarding items including but not necessarily limited to setbacks, landscaping, access and other items outside our field of expertise for this assignment. These items will be addressed as part of the application by others with expertise within the respective fields.

Should the extraordinary assumptions not exist, we reserve the right to amend this study.

Effective Date of Study

December 20, 2019

Date of Report

January 7, 2020

Type Report

Impact Study Report

Study Development and Reporting Process

In preparing this study, the analyst:

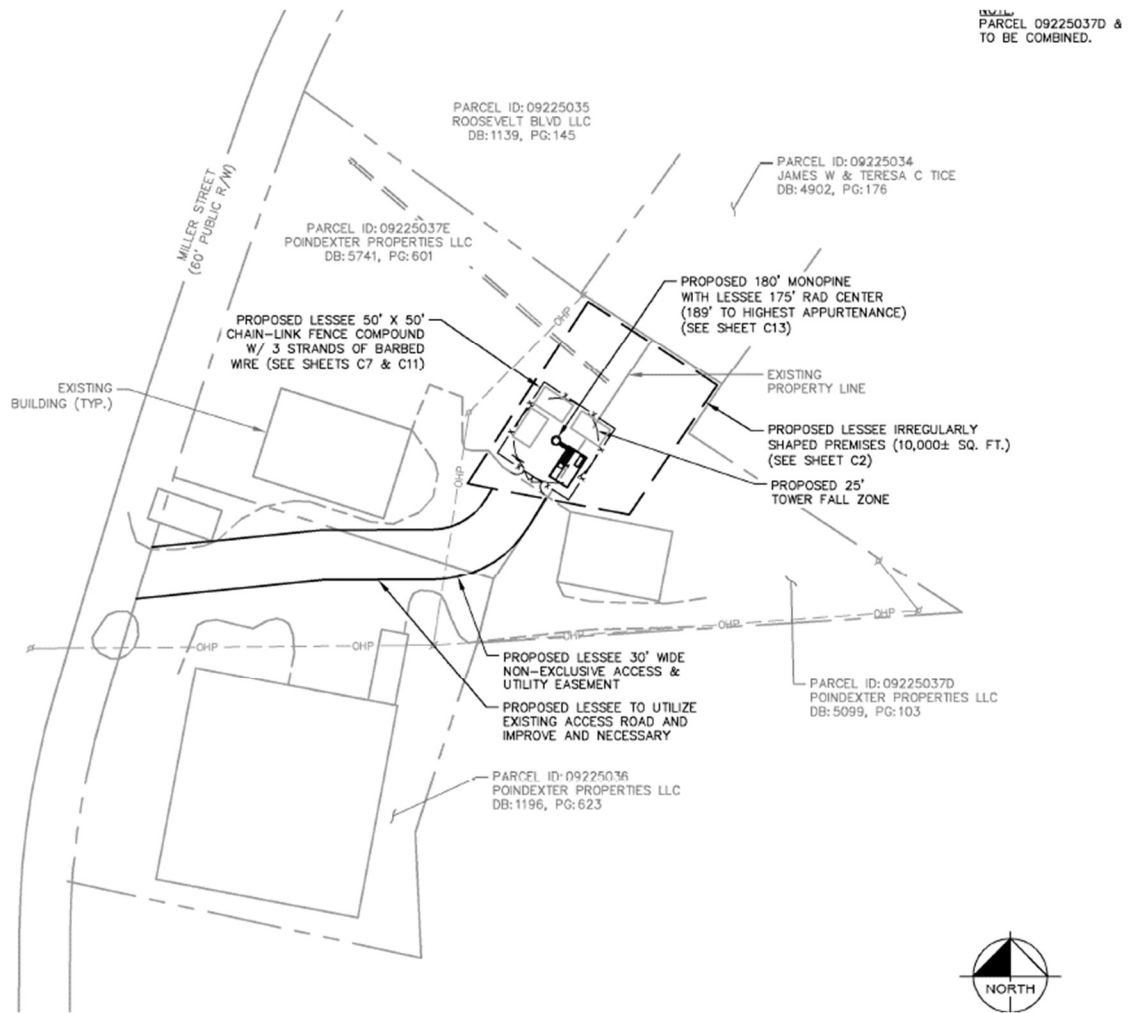
- Analyzes physical affects, if any, of the proposed construction on properties in the immediate area as well as the neighborhood;
- Reviews plans for the proposed development to determine whether it is in compliance with the Union County UDO with respect to items within my field of expertise;
- Reviews site plan provided by our client with respect to the physical characteristics of the proposed development;

- Researches market data around existing cell towers along the Roosevelt Boulevard corridor to determine whether the proposed development is in accordance with the other similar developments in the area.

PROPOSED FACILITY

Tower

Based on information provided to the analyst, the proposed tower will consist of a 180-foot “monopine” wireless communications tower. The survey appears to show that access to the proposed tower will be provided by the extension of the existing driveway rear portion of the site. The following site plan was provided for the assignment.



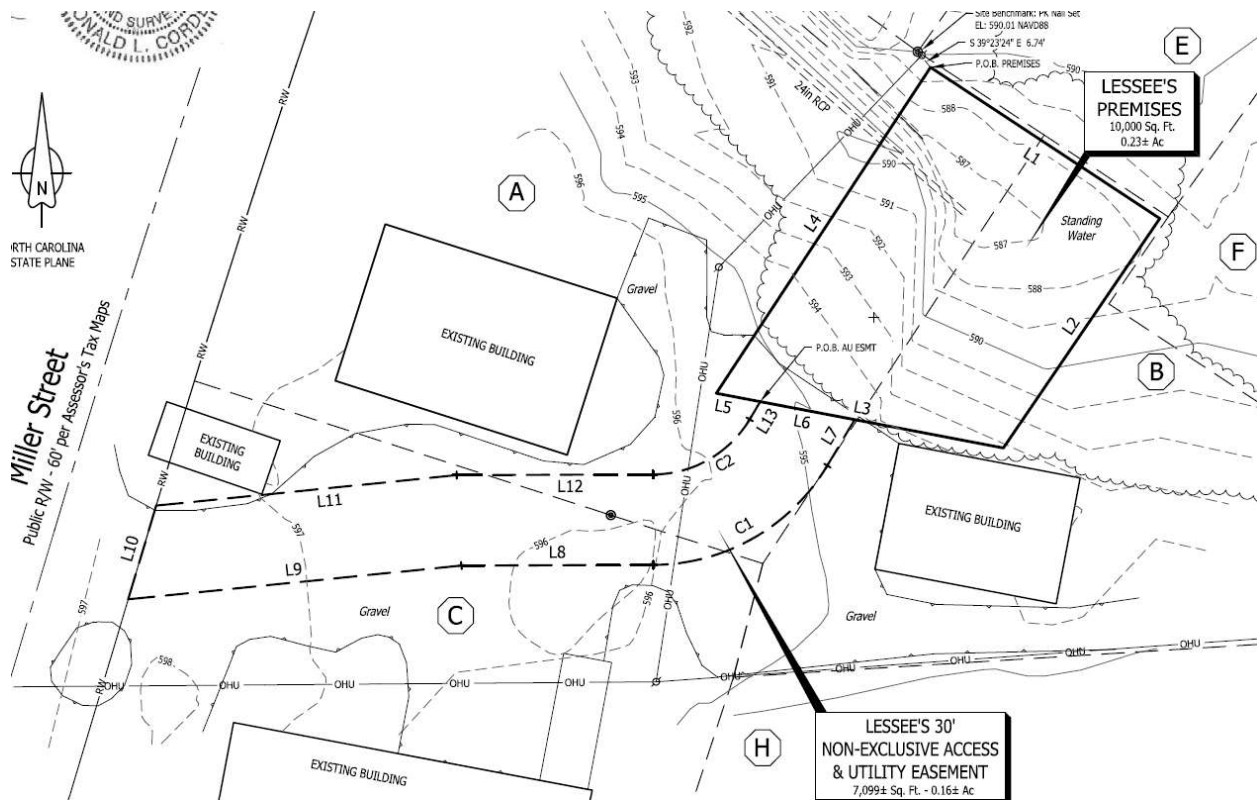
SITE PLAN

Site Improvements

The site improvements include an eight-foot chain link fence with three strands of barbed wire. As we will detail throughout this report, the siting of the proposed tower at the rear of an irregular assemblage as well as existing trees will minimize the visual impact of the proposed tower.

Access

According to the site plan, the access to the site will be via a 30-foot wide non-exclusive utility/access easement extending from existing access point for one of the parcels constituting the assemblage. The following exhibit was extracted from the site plan. Miller Street is a secondary road connecting to Roosevelt Boulevard, that is the primary transportation corridor for the neighborhood.





Physical Considerations

The proposed tower will be located within an existing cluster of trees in the rear portion of the site. While the majority of the site is used for industrial purposes, there are some areas that are wooded. The physical characteristics of the subject that contribute to the conclusions of the analysis include but are not necessarily limited to:

- The siting of the tower will maintain a tree line that will serve as a buffer for most if not all of the adjacent or abutting properties.
- The location of the proposed tower is influenced by the proximity of the Roosevelt Boulevard corridor, which poses a higher external influence on land uses and development patterns.

SURROUNDING LAND USES

The proposed development is located on an assemblage of three parcels consisting of a total of 2.66 acres. Each parcel is

improved with a storage/warehouse. While the current industrial use is consistent with the historical use of the property, developments in the area include a variety of uses that minimize the impact of the proposed tower. The following provides a summary of the adjacent and abutting properties as well as a general overview of the neighborhood.

Parcel Number	Owner	Acreage	Address	Use Description
09225037D	POINDEXTER PROPERTIES LLC	0.54	1506 MILLER ST	Storage Warehouse
09225037E	POINDEXTER PROPERTIES LLC	1.04	MYERS ST	Storage Warehouse
09225036	POINDEXTER PROPERTIES LLC	1.08	1512 MILLER ST	Storage Warehouse
09225037	HOWIE JOHN F	1.634	209 MYERS ST	Storage Warehouse
09225037C	WILBURN DONALD W & BETTY L	1.29	1402 MILLER ST	Storage Warehouse
09225034	TICE JAMES W & TERESA C	0.458	1509 W ROOSEVELT BLVD	Veterinary Hospital
09225035	ROOSEVELT BLVD LLC % LARRY LANEY	1	1515 W ROOSEVELT BLVD	Auto Service
09225032	BOULEVARD SPECIALTY SHOPPES LLC	1.194	1401 A-G ROOSEVELT BLVD	Neighborhood Shopping Center
09225033	GRAHAM & FAUST LLC	1.078	1507 W ROOSEVELT BLVD	Resturant

As shown on the previous chart, all of the adjacent and abutting properties are used for commercial or industrial uses. The abutting uses and general nature of the corridor are significant factors in the analysis and contribute to the conclusions of the potential impact of the tower.

There are six parcels that abut the site of the proposed tower. The parcels listed include any parcel that abuts any of the three parcels that are included in the proposed development. All of the properties have a commercial zoning designation, which is a factor in the analysis.

As we will discuss in the following section, the scope of the assignment is to determine whether the proposed development is in accordance with the Union County UDO regarding the issuance of a special use permit and the development of wireless telecommunications facilities. The items within our field of expertise are detailed in the following section.

UNION COUNTY UNIFIED DEVELOPMENT ORDINANCE

As part of the assignment, I reviewed Section 30.190 of the Union County UDO regarding the development of wireless telecommunication facilities. I also reviewed Chapter 360 regarding the issuance of a special use permit. The following

is an excerpt from the UDO regarding considerations in issuing a special use permit.

1. The proposed use and development comply with all regulations and standards generally applicable within the zoning district and specifically applicable to the particular type of special use.
2. The proposed development will not materially endanger the public health or safety. Considerations:
 - a. Traffic conditions in the vicinity, including the effect of additional traffic on streets and street intersections, sight lines at street intersections and curb cuts;
 - b. Provision of services and utilities, including sewer, water, electrical, garbage collections and fire protection;
 - c. Soil erosion and sedimentation; and
 - d. Protection of public, community, or private water supplies, including possible adverse effects on surface waters or groundwater.
3. The proposed development will not substantially injure the value of abutting property, or is a public necessity. Considerations:
 - a. The relationship of the proposed use and the character of development to surrounding uses and development, including possible conflicts between them and how these conflicts will be resolved; and
 - b. Whether the proposed development is so necessary to the public health, safety, and general welfare of the county as a whole as to justify it regardless of its impact on the value of abutting property.
4. The proposed development will be in harmony with the area in which it is located. Considerations:
 - a. The relationship of the proposed use and the character of development to surrounding uses and development, including possible conflicts between them and how these conflicts will be resolved or mitigated.
5. The proposed development will be in general conformity with the comprehensive plan.

Item 1 – This item is outside my field of expertise and will be addressed by others.

Item 2 – While we do not address public safety issues, some of the items within this section are considered in the analysis to determine the potential impact of the proposed development.

Item 3 –. The majority of the study is dedicated to this item.

Item 4 – Harmony with the area is based on the details of the surrounding land uses.

Item 5 – This item will be addressed by others and is part of the review process from the planning department.

Based on our review of the ordinance, the remainder of the study focuses on abutting properties and potentially injurious effect of the special use on value. The land uses for the area include commercial and industrial uses. The following analysis is based on the potential visual impact of the proposed development on the respective abutting properties.

Again, we will discuss property values later in the report. We acknowledge that the proposed 180-foot tower will have a height in excess of any structure in the immediate area. The siting of the proposed tower minimizes the visual impact on adjacent properties. While the abutting properties will be in proximity to the tower, the utility of the respective properties will not be impacted by the proposed tower.

Summary

The items within our field of expertise focus on the potential impact of the proposed development on property values. The industrial and commercial developments around the subject coupled with the siting of the proposed tower amidst the trees on the site are contributing factors in the analysis.

MARKET RESEARCH

A potential issue associated with the impact of the proposed development is on property values in the immediate vicinity and the neighborhood. We researched towers in the surrounding area and identify the development patterns around these towers. After analyzing the market data, we compare this information to the proposed site and the physical characteristics and development patterns surrounding the proposed development.

Area Towers

During our research, we observed several towers in the area. Most of the towers found were located in established

commercial or industrial areas. Towers are classified as comparable for a variety of reasons including but not necessarily limited to:

- *Location* – The proposed location is on a commercially zoned tract of land currently used for industrial purposes. The existing trees and siting at the rear of the assemblage is a factor in the analysis. The location is along an established commercial corridor dominated by commercial and industrial uses.
- *Surrounding Developments* – The surrounding uses include commercial and industrial uses. The infrastructure in the area includes above ground power lines that impose a visual impact on surrounding properties.
- *Construction Type/Height* – The proposed tower is a monopine tower with a proposed height of 180 feet. The added expense of the monopine compared to a monopole is the intent to reduce the visual impact of the tower.

For the research of towers, we rely on information from antennasearch.com, which we consider a reliable source of information. Our search revealed 26 towers. Several of the towers were not visible during our tour of the area and are excluded from the analysis. We also excluded towers shorter than 100 feet as these are not considered comparable to the subject. We also excluded wireless facilities that were part of electrical transmission lines or other infrastructure. The following chart provides a summary of the towers that are visible and over 100 feet in height.

Tower Type	Year Built	Address/Location	Height (Feet)	Developments
Guyed	1983	2004 WALKUP AVE	230	Residential/Commercial
Lattice	1997	133 SACO ST	285	Industrial
Monopine	2016	Williams Road Extension	160	Industrial
Monopole	2017	2303 Stafford Street Extension	180	Industrial/Vacant Land
Monopole	2009	Dickerson Street	200	Industrial
Monopole	N/A	813 Charlotte Avenue	160	Commercial/Industrial
Lattice	2003	2519 Hayes Road	235	Industrial
Lattice	2007	3101 Matthews-Indian Trail Road	300	Commercial
Monopole	2002	2842 Gray Fox Road	184	Industrial
Guyed	1993	1092 Radio Drive	512	Rural
Monopole	1999	15200 Idlewild Road	188	Commercial/Industrial
Lattice	1996	NW Intersection 74 & Stallings Rd.	184	Industrial
Monopole	2009	Parkstone Drive Terminus	199	Rural/Residential
Monopole	2016	Waxhaw-Indian Trail Road	206	Rural
Monopole	2002	Matthews-Mint Hill & Independence Bv.	199	Commercial
Monopole	2008	Off Beverly Drive	166	Rural/Residential
Monopole	NA	209 Jim Parker Road	150	Rural/Residential
Monopole	2002	Independence Bv. Fullwood Shopping Center	199	Commercial

The initial research of market data was for those towers located in commercial areas. For those abutting properties that sold, the variances in physical characteristics of the site and the improvements were influential on the price paid. The isolation of the proximity of the tower did not lead to a credible conclusion given the more significant physical variances. Therefore, we considered information from other towers with residential abutting properties as the quality and quantity of data is adequate to develop a credible opinion. Further, the market for residential properties is more sensitive to external factors than commercial and industrial properties.

We were able to procure data for surrounding properties for two of the local towers. The following is the analysis and presentation of market data for the two towers considered in Union County with market data adequate in quality and quantity to develop a credible opinion as to whether the telecommunication tower impacts the value of the abutting properties.



The Vickery subdivision has a cell tower just north of the lots at the terminus of Vickery Drive. This tower has a comparable distance to adjacent improvements. The vegetative buffer is comparable to the proposed tower. The analysis for those properties closest to the tower are compared to those within the remainder of the subdivision. The following chart provides sales within the subdivision with the properties closest to the tower highlighted in yellow.

Parcel Number	Book & Page	Acreage	Address	Sale Amount	Size SFD (SF)	Price/SF	Sale Date	Assessed Value	% of Assessed Value	Year Built
7075300	6775 248	0.474	1209 VICKERY DR	\$ 474,000	4,032	\$ 117.56	9/21/2016	\$ 387,500	122%	2016
7075301	6775 389	0.584	1215 VICKERY DR	\$ 467,000	4,224	\$ 110.56	9/21/2016	\$ 398,200	117%	2016
7075299	6778 636	0.481	1205 VICKERY DR	\$ 447,000	3,453	\$ 129.45	9/26/2016	\$ 358,100	125%	2016
7075302	6781 324	0.472	1305 VICKERY DR	\$ 429,900	3,011	\$ 142.78	9/28/2016	\$ 366,300	117%	2016
7075308	6782 602	0.486	1416 VICKERY DR	\$ 404,000	3,427	\$ 117.89	9/29/2016	\$ 344,300	117%	2016
7075305	6785 056	0.46	1415 VICKERY DR	\$ 438,000	3,789	\$ 115.60	9/30/2016	\$ 380,200	115%	2016
7075304	6786 509	0.501	1407 VICKERY DR	\$ 390,000	2,922	\$ 133.47	10/4/2016	\$ 316,900	123%	2016
7075315	6800 627	0.608	1300 VICKERY DR	\$ 436,500	3,073	\$ 142.04	10/21/2016	\$ 340,200	128%	2016
7075310	6802 034	0.565	1408 VICKERY DR	\$ 495,500	4,032	\$ 122.89	10/24/2016	\$ 387,300	128%	2016
7075309	6807 378	0.53	1412 VICKERY DR	\$ 508,815	3,865	\$ 131.65	10/28/2016	\$ 406,700	125%	2016
7075303	6807 603	0.466	1401 VICKERY DR	\$ 435,000	3,571	\$ 121.81	10/31/2016	\$ 362,400	120%	2016
7075298	6835 577	0.514	1201 VICKERY DR	\$ 480,705	3,956	\$ 121.51	12/7/2016	\$ 388,200	124%	2016
7075314	6843 242	0.498	1304 VICKERY DR	\$ 464,900	3,850	\$ 120.75	12/16/2016	\$ 375,900	124%	2016
7075307	6843 367	0.466	1423 VICKERY DR	\$ 470,000	3,672	\$ 128.00	12/19/2016	\$ 362,500	130%	2016
7075326	6844 281	0.463	2023 DONOVAN DR	\$ 450,500	2,922	\$ 154.18	12/19/2016	\$ 324,100	139%	2016
7075330	6847 478	0.529	2028 DONOVAN DR	\$ 438,500	3,642	\$ 120.40	12/22/2016	\$ 355,500	123%	2016
7075335	6848 787	0.504	2011 CHALET LN	\$ 475,207	3,672	\$ 129.41	12/27/2016	\$ 363,700	131%	2016
7075331	6848 807	0.473	2024 DONOVAN DR	\$ 492,000	4,832	\$ 101.82	12/27/2016	\$ 420,500	117%	2016
7075332	6851 725	0.461	2018 DONOVAN DR	\$ 454,348	3,594	\$ 126.42	12/29/2016	\$ 358,800	127%	2016
7075312	6851 804	0.542	1402 VICKERY DR	\$ 417,000	3,037	\$ 137.31	12/29/2016	\$ 338,500	123%	2016
7075325	6859 111	0.463	2019 DONOVAN DR	\$ 462,500	3,037	\$ 152.29	1/13/2017	\$ 338,900	136%	2016
7075317	6862 313	0.496	1110 VICKERY DR	\$ 448,836	3,644	\$ 123.17	1/19/2017	\$ 376,500	119%	2016
7075313	6880 472	0.497	1308 VICKERY DR	\$ 476,853	4,102	\$ 116.25	2/22/2017	\$ 395,100	121%	2016
7075350	6882 808	0.483	1004 KARA CT	\$ 459,050	3,430	\$ 133.83	2/24/2017	\$ 344,000	133%	2016
7075311	6883 380	0.513	1406 VICKERY DR	\$ 499,900	4,240	\$ 117.90	2/27/2017	\$ 406,500	123%	2016
7075338	6886 457	0.537	3021 CHALET LN	\$ 506,000	3,803	\$ 133.05	3/2/2017	\$ 369,800	137%	2016
7075337	6891 603	0.531	3015 CHALET LN	\$ 442,890	3,036	\$ 145.88	3/10/2017	\$ 323,500	137%	2016
7075333	6892 523	0.473	2012 DONOVAN DR	\$ 494,990	3,777	\$ 131.05	3/13/2017	\$ 382,500	129%	2016
7075345	6894 492	0.534	3000 CHALET LN	\$ 432,000	3,109	\$ 138.95	3/16/2017	\$ 336,300	128%	2016
7075306	6896 071	0.462	1419 VICKERY DR	\$ 455,800	3,488	\$ 130.68	3/20/2017	\$ 366,600	124%	2016
7075334	6903 497	0.567	2002 DONOVAN DR	\$ 469,900	3,430	\$ 137.00	3/30/2017	\$ 359,100	131%	2016
7075336	6928 229	0.521	3003 CHALET LN	\$ 558,582	4,258	\$ 131.18	5/9/2017	\$ 403,700	138%	2017
7075343	6934 030	0.544	3012 CHALET LN	\$ 502,000	3,646	\$ 137.69	5/18/2017	\$ 366,500	137%	2017
7075348	6943 103	0.473	1016 KARA CT	\$ 498,677	3,609	\$ 138.18	5/31/2017	\$ 366,200	136%	2017
7075344	6948 415	0.56	3008 CHALET LN	\$ 512,900	4,059	\$ 126.36	6/8/2017	\$ 408,800	125%	2016
7075322	6954 471	0.516	2005 DONOVAN DR	\$ 512,000	3,910	\$ 130.95	6/16/2017	\$ 388,900	132%	2017
7075341	6955 571	0.53	3024 CHALET LN	\$ 499,900	4,085	\$ 122.37	6/19/2017	\$ 395,600	126%	2017
7075340	6957 267	0.482	3030 CHALET LN	\$ 465,335	3,462	\$ 134.41	6/21/2017	\$ 353,700	132%	2017
7075349	6961 836	0.492	1010 KARA CT	\$ 493,500	4,102	\$ 120.31	6/28/2017	\$ 395,100	125%	2017
7075297	6961 627	0.509	1109 VICKERY DR	\$ 470,049	3,413	\$ 137.72	6/28/2017	\$ 358,800	131%	2017
7075347	6962 872	0.579	1020 KARA CT	\$ 507,500	3,885	\$ 130.63	6/29/2017	\$ 371,900	136%	2017
7075351	6964 408	0.476	1002 KARA CT	\$ 440,000	3,528	\$ 124.72	6/30/2017	\$ 353,200	125%	2016
7075316	6965 130	0.568	1210 VICKERY DR	\$ 449,900	3,528	\$ 127.52	6/30/2017	\$ 353,400	127%	2016
7075346	6978 225	0.567	1005 KARA CT	\$ 528,250	3,913	\$ 135.00	7/21/2017	\$ 390,200	135%	2017
7075329	7020 463	0.541	2032 DONOVAN DR	\$ 457,400	3,000	\$ 152.47	9/22/2017	\$ 341,200	134%	2017
7075323	7029 563	0.505	2009 DONOVAN DR	\$ 469,500	3,074	\$ 152.73	10/6/2017	\$ 342,000	137%	2017
7075328	7043 656	0.613	2027 DONOVAN DR	\$ 513,500	3,963	\$ 129.57	10/30/2017	\$ 391,400	131%	2017
7075339	7043 673	0.548	3031 CHALET LN	\$ 443,000	3,074	\$ 144.11	10/30/2017	\$ 333,800	133%	2017
7075324	7064 691	0.512	2015 DONOVAN DR	\$ 471,085	3,609	\$ 130.53	12/4/2017	\$ 353,900	133%	2017
7075342	7072 416	0.525	3018 CHALET LN	\$ 495,000	3,777	\$ 131.06	12/15/2017	\$ 382,300	129%	2017
7075327	7133 380	0.467	2025 DONOVAN DR	\$ 509,000	3,735	\$ 136.28	4/9/2018	\$ 362,500	140%	2016

For the analysis, we used several units of comparison. The price point for the properties closest to the tower are within the range of the rest of the subdivision. While one sale is on the lower end of the range another is on the upper end of the

range indicating that the proximity to the cell tower does not influence the price point. We also looked at the price per square foot. Again, the sales in proximity to the tower were consistent with nominal variances with other properties in the subdivision. We also compared the sales prices to the assessed values of the properties. Again, this comparison yielded the same results that the market and prices paid for properties in proximity to the tower were not impacted by the tower.

The second tower found is located southeast of the Prestwick subdivision. The following aerial shows the tower to the southeast of the subdivision.





The tower is a monopole tower with some trees between the tower and the residential properties within Prestwick. Again, the visual impact of this tower, if any, would be higher for a residential property than for a commercial or industrial property. The following chart provides a summary of sales within the subdivision with the properties highlighted in yellow having some level of visual influence from the tower.

Parcel Number	Book & Page	Acreage	Address	Sale Amount	Size SFD (SF)	Price/SF	Sale Date	Assessed Value	% of Assessed Value	Year Built
7135197	6730 543	0.16	5810 PARKSTONE DR	\$247,000	3,288	\$75.12	7/26/2016	\$246,000	100%	2006
7135211	7011 590	0.15	5807 PARKSTONE DR	\$260,000	2,844	\$91.42	9/8/2017	\$224,100	116%	2006
7135214	6918 096	0.14	5801 PARKSTONE DR	\$245,000	2,744	\$89.29	4/24/2017	\$217,400	113%	2006
7135218	6991 886	0.16	5717 PARKSTONE DR	\$271,000	2,732	\$99.19	8/10/2017	\$218,500	124%	2006
7135221	6636 021	0.17	5707 PARKSTONE DR	\$250,000	2,744	\$91.11	3/21/2016	\$220,300	113%	2006
7135228	6728 324	0.17	5706 PARKSTONE DR	\$242,000	2,652	\$91.25	7/25/2016	\$212,300	114%	2006
7135238	6756 020	0.18	3107 ROYAL TROON LN	\$260,000	2,744	\$94.75	8/29/2016	\$217,500	120%	2006
7135243	7228 074	0.14	3005 ROYAL TROON LN	\$235,000	1,956	\$120.14	8/31/2018	\$179,400	131%	2006
7135190	7192 422	0.14	5704 FALKIRK LN	\$274,000	2,856	\$95.94	7/10/2018	\$223,600	123%	2006
7135193	7228 475	0.15	5800 PARKSTONE DR	\$287,500	3,026	\$95.01	8/31/2018	\$233,600	123%	2006
7135196	7154 843	0.16	5808 PARKSTONE DR	\$256,000	2,744	\$93.29	5/11/2018	\$219,900	116%	2006
7135198	6903 572	0.16	5812 PARKSTONE DR	\$262,000	2,744	\$95.48	3/30/2017	\$217,500	120%	2006
7135213	7199 856	0.14	5803 PARKSTONE DR	\$277,000	2,732	\$101.39	7/20/2018	\$218,700	127%	2006
7135215	6985 085	0.14	5723 PARKSTONE DR	\$245,000	3,268	\$74.97	7/31/2017	\$244,300	100%	2006
7135232	6890 100	0.17	5714 PARKSTONE DR	\$238,000	1,794	\$132.66	3/8/2017	\$176,700	135%	2006
7135239	6820 854	0.18	3105 ROYAL TROON DR	\$260,000	2,732	\$95.17	11/16/2016	\$225,700	115%	2006
7135279	7257 886	0.14	5911 PARKSTONE DR	\$211,000	2,654	\$79.50	10/25/2018	\$213,200	99%	2007
7135284	7231 065	0.16	5901 PARKSTONE DR	\$278,000	2,983	\$93.19	9/6/2018	\$231,100	120%	2007
7135201	7002 308	0.18	5818 PARKSTONE DR	\$260,000	2,837	\$91.65	8/25/2017	\$224,700	116%	2007
7135256	6773 258	0.14	5708 FALKIRK LN	\$232,500	2,104	\$110.50	9/19/2016	\$192,700	121%	2007
7135273	7232 509	0.15	5910 PARKSTONE DR	\$273,000	3,075	\$88.78	9/10/2018	\$235,100	116%	2007
7135283	6943 153	0.16	5903 PARKSTONE DR	\$255,000	2,654	\$96.08	5/31/2017	\$212,500	120%	2007

Despite consideration of adjustments to the data set for a variety of physical and market variances, the single family dwelling with the highest level of visual impact from the tower lies within the range of the data set presented. This analysis indicates that the visual impact of this tower, which is higher than the proposed development, does not substantially impact property values.

Other Considerations

Other potential impacts to the surrounding area include noise, traffic and lighting. The operation of a cell tower is essentially

silent and would not influence the surrounding developments. The additional traffic caused by the proposed development includes two to three trips a month for routine maintenance. Any increases in traffic are considered nominal and does not impact the abutting properties.

Conclusions

The market activity around cell towers indicates that the visual impact of the proposed tower is not reflected in the prices paid. In other words, if I were to appraise any of the abutting properties of the proposed development, the market data does not support any adjustments for the visual impact of the tower. Therefore, I conclude that the proposed development of a wireless telecommunications facility will not substantially injure the value of abutting properties.

Subject Neighborhood

In addition to the market activity for existing towers, we also consider the surrounding developments for the subject. The question posed for this study is “would the development of the wireless facility warrant a downward adjustment to neighborhood properties?” The information from the previous analysis indicates that there is no empirical evidence to support a quantitative adjustment. The following analysis is intended to determine whether a qualitative adjustment is warranted.

When considering qualitative adjustments in an appraisal, the appraiser must consider all factors that could contribute to an adjustment. The aesthetics and location of the proposed development as well as the existing developments are a factor in developing our opinion. The factors considered in developing our opinion include but are not necessarily limited to:

- The market has not shown a detrimental impact on development patterns in areas with visual influence from a wireless facility.

- The existing infrastructure includes above ground infrastructure that pose an existing visual influence on adjacent and abutting properties.
- The proposed development is located within the existing tree line that will screen a significant portion of the tower in all directions and minimize the potential impact.
- Many of the abutting properties are accessed from other streets placing the proposed tower at the rear of the rear of the properties.
- Roosevelt Boulevard (US Highway 74) poses a more significant external influence on property values in the area.

All of these factors would contribute to the aesthetic appeal and a hypothetical valuation of properties in the neighborhood. Further, aesthetics for properties in the neighborhood have less importance than the utility of the site and improvements. The multitude of factors indicates that multicollinearity for aesthetics exists. Multicollinearity arises when multiple items correlate with each other. The multiple factors can cause a distortion of the impact of any of the factors individually without consideration for all of the factors that contribute to the common issue.

The following provides a summary of our conclusions regarding the items for a special use permit. We reiterate these items for reference purposes.

1. The proposed use and development comply with all regulations and standards generally applicable within the zoning district and specifically applicable to the particular type of special use.
2. The proposed development will not materially endanger the public health or safety. Considerations:
 - a. Traffic conditions in the vicinity, including the effect of additional traffic on streets and street intersections, sight lines at street intersections and curb cuts;
 - b. Provision of services and utilities, including sewer, water, electrical, garbage collections and fire protection;
 - c. Soil erosion and sedimentation; and
 - d. Protection of public, community, or private water supplies, including possible adverse effects on surface waters or groundwater.
3. The proposed development will not substantially injure the value of abutting property, or is a public necessity. Considerations:
 - a. The relationship of the proposed use and the character of development to surrounding uses and development, including possible conflicts between them and how these conflicts will be resolved; and
 - b. Whether the proposed development is so necessary to the public health, safety, and general welfare of the county as a whole as to justify it regardless of its impact on the value of abutting property.
4. The proposed development will be in harmony with the area in which it is located. Considerations:
 - a. The relationship of the proposed use and the character of development to surrounding uses and development, including possible conflicts between them and how these conflicts will be resolved or mitigated.
5. The proposed development will be in general conformity with the comprehensive plan.

Item 3

The relationship of the proposed use will not substantially injure the value of abutting property. The market data provided no evidence that the proposed tower will adversely impact property values. External factors, including but not necessarily limited to above ground infrastructure and Roosevelt Boulevard, pose a higher influence than the proposed development. The location minimizes to the greatest extent possible the visual impact of the tower from abutting properties. This analysis is applicable to Item 4 of the ordinance.

Therefore, it is our opinion that the proposed development in accordance with the proposed conditions will not substantially

injure the value of abutting properties. The proposed development has siting and existing buffers to minimize to the extent possible the visual impact of the proposed tower. It is my opinion that the proposed development will not substantially detract from the aesthetics or character of the neighborhood because of its location, size and existing external influences.

A handwritten signature in black ink, appearing to read "Michael P. Berkowitz". The signature is fluid and cursive, with the first name "Michael" being more legible than the last name "Berkowitz".

Michael P. Berkowitz

ADDENDA

Certifications

CERTIFICATION OF THE ANALYST

I, Michael P. Berkowitz, certify that, to the best of my knowledge and belief,

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
4. I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
5. I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
6. My engagement in this assignment was not contingent upon developing or reporting predetermined results.
7. My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this study.
8. The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice*.
9. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
10. I have made a personal inspection of the property that is the subject of this report.
11. No one provided significant real property appraisal assistance to the person(s) signing this certification other than those individuals having signed the attached report.



A handwritten signature in black ink, appearing to read "Michael P. Berkowitz".

Michael P. Berkowitz

(NC State Certified General Real Estate Appraiser #A6169)
(SC State Certified General Real Estate Appraiser #CG6277)

January 7, 2020

Date

(Rev: 06/18/12)

ASSUMPTIONS AND LIMITING CONDITIONS

ASSUMPTIONS AND LIMITING CONDITIONS

Limit of Liability

The liability of MPB REAL ESTATE, LLC and employees is limited to the client only and to the fee actually received by our firm. Further, there is no accountability, obligation, or liability to any third party. If this report is placed in the hands of anyone other than client, the client shall make such party aware of all limiting conditions and assumptions of the assignment and related discussions. Further, client will forever indemnify and hold MPB REAL ESTATE, LLC, its officers, and employees harmless from any claims by third parties related in any way to the appraisal or study which is the subject of the report. Third parties shall include limited partners of client if client is a partnership and stockholders of client if client is a corporation, and all lenders, tenants, past owners, successors, assigns, transferees, and spouses of client. MPB REAL ESTATE, LLC will not be responsible for any costs incurred to discover or correct any deficiencies of any type present in the property, physically, financially, and/or legally.

Copies, Distribution, Use of Report

Possession of this report or any copy of this report does not carry with it the right of publication, nor may it be used for other than its intended use; the physical report remains the property of MPB REAL ESTATE, LLC for the use of the client, the fee being for the analytical services only.

The bylaws and regulations of the Appraisal Institute require each member and candidate to control the use and distribution of each report signed by such member or candidate; except, however, the client may distribute copies of this report in its entirety to such third parties as he may select; however, selected portions of this report shall not be given to third parties without the prior written consent of the signatories of this report. Neither all nor any part of this report shall be disseminated to the general public by the use of advertising media, public relations, news, sales or other media for public communication without the prior written consent of MPB REAL ESTATE, LLC.

Confidentiality

This report is to be used only in its entirety and no part is to be used without the whole report. All conclusions and opinions concerning the analysis as set forth in the report were prepared by MPB REAL ESTATE, LLC whose signatures appear on the report. No change of any item in the report shall be made by anyone other than MPB REAL ESTATE, LLC. MPB REAL ESTATE, LLC shall have no responsibility if any such unauthorized change is made.

MPB REAL ESTATE, LLC may not divulge the material contents of the report, analytical findings or conclusions, or give a copy of the report to anyone other than the client or his designee as specified in writing except as may be required by the Appraisal Institute as they may request in confidence for ethics enforcement, or by a court of law or body with the power of subpoena.

Trade Secrets

This report was obtained from MPB REAL ESTATE, LLC and consists of "trade secrets and commercial or financial information" which is privileged and confidential and exempted from disclosure under 5 U.S.C. 552 (b) (4) of the Uniform Commercial Code. MPB REAL ESTATE, LLC shall be notified of any request to reproduce this report in whole or in part.

Information Used

No responsibility is assumed for accuracy of information furnished by or work of others, the client, his designee, or public records. We are not liable for such information or the work of subcontractors. The comparable data relied upon in this report has been confirmed with one or more parties familiar with the transaction or from affidavit or other sources thought reasonable; all are considered appropriate for inclusion to the best of our factual judgment and knowledge. An impractical and uneconomic expenditure of time would be required in attempting to furnish unimpeachable verification in all instances, particularly as to engineering and market-related information. It is suggested that the client consider independent verification as a prerequisite to any transaction involving sale, lease, or other significant commitment of funds for the subject property.

Testimony, Consultation, Completion of Contract for Report Services

The contract for report, consultation, or analytical service is fulfilled and the total fee payable upon completion of the report, unless otherwise specified. MPB REAL ESTATE, LLC or those assisting in preparation of the report will not be asked or required to give testimony in court or hearing because of having made the report, in full or in part, nor engage in post report consultation with client or third parties except under separate and special arrangement and at an additional fee. If testimony or deposition is required because of any subpoena, the client shall be responsible for any additional time, fees, and charges, regardless of issuing party.

Exhibits

The illustrations and maps in this report are included to assist the reader in visualizing the property and are not necessarily to scale. Various photographs, if any, are included for the same purpose as of the date of the photographs. Site plans are not surveys unless so designated.

Legal, Engineering, Financial, Structural or Mechanical Nature, Hidden Components, Soil

No responsibility is assumed for matters legal in character or nature, nor matters of survey, nor of any architectural, structural, mechanical, or engineering nature. No opinion is rendered as to the title, which is presumed to be good and marketable. The properties are analyzed as if free and clear, unless otherwise stated in particular parts of the report. The legal description is assumed to be correct as used in this report as furnished by the client, his designee, or as derived by MPB REAL ESTATE, LLC.

MPB REAL ESTATE, LLC has inspected as far as possible, by observation, the land and the improvements; however, it was not possible to personally observe conditions beneath the soil, or hidden structural, mechanical or other components, and MPB REAL ESTATE, LLC shall not be responsible for defects in the property which may be related.

The report is based on there being no hidden, unapparent, or apparent conditions of the property site, subsoil or structures or toxic materials which would render it more or less valuable. No responsibility is assumed for any such conditions or for any expertise or engineering to discover them. All mechanical components are assumed to be in operable condition and status standard for properties of the subject type. Conditions of heating, cooling, ventilation, electrical, and plumbing equipment are considered to be commensurate with the condition of the balance of the improvements unless otherwise stated. We are not experts in this area, and it is recommended, if appropriate, the client obtain an inspection of this equipment by a qualified professional.

If MPB REAL ESTATE, LLC has not been supplied with a termite inspection, survey or occupancy permit, no responsibility or representation is assumed or made for any costs associated with obtaining same or for any deficiencies discovered before or after they are obtained. No representation or warranties are made concerning obtaining the above mentioned items.

MPB REAL ESTATE, LLC assumes no responsibility for any costs or consequences arising due to the need, or the lack of need, for flood hazard insurance. An agent for The Federal Flood Insurance Program should be contacted to determine the actual need for Flood Hazard Insurance.

Legality of Use

The report is based on the premise that there is full compliance with all applicable federal, state and local environmental regulations and laws unless otherwise stated in the report; further, that all applicable zoning, building and use regulations, and restrictions of all types have been complied with unless otherwise stated in the report. Further, it is assumed that all required licenses, consents, permits, or other legislative or administrative authority, local, state, federal and/or private entity or organization have been or may be obtained or renewed for any use considered in the value estimate.

Auxiliary and Related Studies

No environmental or impact studies, special market study or analysis, highest and best use analysis, study or feasibility study has been required or made unless otherwise specified in an agreement for services or in the report.

Management of the Property

It is assumed that the property which is the subject of this report will be under prudent and competent ownership and management.

Hazardous Materials

Unless otherwise stated in this report, the existence of hazardous substances, including without limitation, asbestos, polychlorinated biphenyls, petroleum leakage, or agricultural chemicals, which may or may not be present on the property, or other environmental conditions, were not called to the attention of nor did MPB REAL ESTATE, LLC become aware of such during their inspection. MPB REAL ESTATE, LLC had no knowledge of the existence of such materials on or in the property unless otherwise stated. MPB REAL ESTATE, LLC, however, is not qualified to test such substances or conditions. If the presence of such substances such as asbestos, urea formaldehyde foam insulation, or other hazardous substances or environmental conditions, may affect the value of the property, the value estimate is predicated on the assumption that there is no such condition on or in the property or in the proximity that it would cause a loss in value. No responsibility is assumed for any such conditions, nor for any expertise or engineering knowledge required to discover them.

Soil and Subsoil Conditions

Unless otherwise stated in this report, MPB REAL ESTATE, LLC does not warrant the soil or subsoil conditions for toxic or hazardous waste materials. Where any suspected materials might be present, we have indicated in the report; however, MPB REAL ESTATE, LLC are not experts in this field and recommend appropriate engineering studies to monitor the presence or absence of these materials.

Americans with Disabilities Act (ADA)

“MPB REAL ESTATE, LLC has not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the Americans with Disabilities Act (ADA), which became effective January 26, 1992. It is possible that a compliance survey of the property together with a detailed analysis of the requirements of the ADA could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this fact could have a negative effect upon the value of the property. Since MPB REAL ESTATE, LLC has no direct evidence relating to this issue, we did not consider possible non-compliance with the requirements of ADA in estimating the value of the property.”

Qualifications of the Analyst

QUALIFICATIONS OF THE ANALYST

Michael P. Berkowitz
 MPB Real Estate, LLC, Inc.
 1100 Sundance Drive
 Concord, North Carolina 28027
 (704) 605-0595

EDUCATION AND CREDENTIALS

- **Duke University**
 Major: Economics 1985-1989
- **Central Piedmont Community College**
 - R-1 - Introduction to Real Estate Appraisal, 2002
 - R-2 - Valuation Principles and Procedures, 2002
 - R-3 - Applied Residential Property Valuation, 2002
 - G-1 - Introduction to Income Property Appraisal, 2003
- **Bob Ipock and Associates**
 - G-2 - Advanced Income Capitalization Procedures, 2003
 - G-3 - Applied Property Income Valuation 2004
- **Appraisal Institute**
 - 520 Highest and Best Use and Market Analysis, 2004
 - Seminar Rates, Multipliers and Ratios 2005
 - 530 Advanced Sales Comparison and Cost Approaches 2006
 - Seminar Apartment Appraisal, Concepts & Applications 2009
 - Seminar Appraising Distresses Commercial Real Estate 2009
 - Seminar Appraising Convenience Stores 2011
 - Seminar Analyzing Operating Expenses 2011

AFFILIATIONS AND ACTIVITIES

- **Association Memberships**
 North Carolina State Certified General Real Estate Appraiser, October 2006, Certificate No. A6169

RELATED EXPERIENCE

- Provided real estate consulting services for a variety of clients including real estate brokers, property owners and financial planners
- Performed financial feasibility studies for multiple property types including golf communities, and renovation projects.
- Developed plan for self-contained communities.
- Race Track expertise

APPRAISAL EXPERIENCE

A partial list of types of properties appraised include:
Retail Properties, Single and Multi-Tenant, Proposed and Existing
Office Single and Multi-Tenant Proposed and Existing
Mixed-Use Properties, Proposed and Existing
Industrial Properties, Warehouse, Flex and Manufacturing
Vacant Land
Condemnation
C-Stores
Race Tracks

CLIENTELE

Bank of America
Transylvania County
Cabarrus County
Mecklenburg County
City of Statesville
NC Department of Transportation
Henry County, GA
Town of Loudon, NH
First Citizens Bank
City of Charlotte
City of Concord
Union County
BB & T
Aegon USA Realty Advisors
Sun Trust Bank
First Charter Bank
Regions Bank
Charlotte Housing Authority
Alliance Bank and Trust
Broadway Bank
Duke Energy Corporation
Jim R. Funderburk, PLLC
Hamilton, Fay, Moon, Stephens, Steele & Martin
Senator Marshall A. Rauch
Perry, Bundy, Plyler & Long, LLP
Robinson, Bradshaw & Hinson
CSX Real Property
Baucom, Clayton, Burton, Morgan & Wood, PA
City of Mount Holly
Our Towns Habitat for Humanity
Parker, Poe, Adams & Bernstein, LLP
Central Carolina Bank
Southern Community Bank and Trust

ACCTNO	OWNERNAME1	OWNERADDRE	OWNERCITY	OWNERSTATE	OWNERZIP
09225039	SOUTH CENTRAL OIL CO	2121 WEST MAIN ST	ALBEMARLE	NC	28001
09226125	PACIFIC GROUP INVESTMENTS LLC	227 CHURCHILL AVE	PALO ALTO	CA	94301
09225031A	BOULEVARD SPECIALTY SHOPPES LLC	% MARY JANE COLLINS	MONROE	NC	28110
09225034	TICE JAMES W & TERESA C	1509 W ROOSEVELT BLVD	MONROE	NC	28110
09225039	SOUTH CENTRAL OIL CO	2121 WEST MAIN ST	ALBEMARLE	NC	28001
09225031A	BOULEVARD SPECIALTY SHOPPES LLC	% MARY JANE COLLINS	MONROE	NC	28110
09225037A	BOULEVARD SPECIALTY SHOPPES LLC	% MARY JANE COLLINS	MONROE	NC	28110
09225038	UNION EXTERMINATING COMPANY	1403 MILLER ST	MONROE	NC	28110
09225035	ROOSEVELT BLVD LLC	233 MEDEARIS DR	CHARLOTTE	NC	28211
09225037	HOWIE JOHN F	2585 W ROOSEVELT BLVD	MONROE	NC	28110-0418
09225037C	WILBURN DONALD W	1319 GARDEN VISTA DR	STALLINGS	NC	28104
09225033	GRAHAM & FAUST LLC	4324 BARRINGER DR SUITE 101	CHARLOTTE	NC	28217
09226125	PACIFIC GROUP INVESTMENTS LLC	227 CHURCHILL AVE	PALO ALTO	CA	94301
09225032	BOULEVARD SPECIALTY SHOPPES LLC	% MARY JANE COLLINS	MONROE	NC	28110
09225037D	POINDEXTER PROPERTIES LLC	1504 MILLER ST	MONROE	NC	28110
09225035	ROOSEVELT BLVD LLC	233 MEDEARIS DR	CHARLOTTE	NC	28211
09225037E	POINDEXTER PROPERTIES LLC	1504 MILLER ST	MONROE	NC	28110
09226125	PACIFIC GROUP INVESTMENTS LLC	227 CHURCHILL AVE	PALO ALTO	CA	94301
09225036	POINDEXTER PROPERTIES LLC	1504 MILLER ST	MONROE	NC	28110