



QUESTIONS?
Call or email us!

Town of Chapel Hill
Office of Planning and Sustainability
Development Services 919-969-5066
planning@townofchapelhill.org

Chapel Hill Historic District Certificate of Appropriateness Application Project Description: Place new 29' AGL (35' CL-3) Fibertech wood pole in ROW on E Franklin St. Please see attached drawings for further details.	Project:	SC-NC-0500 18-071
	Permit:	
	STAFF REVIEW	
	☒ Application complete and accepted	
	☐ Application not complete and returned with a notation of deficiencies	
BY:		Becky McDonnell
DATE:		9/20/18
Instructions: Submit one paper copy and a digital copy of all application materials collated in one file (pdf preferred)		
Deadlines: Applications are due by the close of business 30 calendar days prior to the scheduled meeting date.		
Note: Only complete applications may be accepted for Certificate of Appropriateness review. Applications that are not complete will be returned with a notation of deficiencies.		

A: Property Information					
Property Address:		220 E Franklin St		Parcel ID Number: 9788543697	
Property Owner(s):		University of N C		Email:	
Property Owner Address: Property Office UNC					
City:	Chapel Hill	State:	NC	Zip:	27599
				Phone:	
Historic District: ☐ Cameron-McCauley ☒ Franklin-Rosemary ☐ Gimghoul				Zoning District: OI-4	

B: Applicant Information			
Applicant: Fiber Technologies Networks, L.L.C.		Role (owner, architect, other):	
Address (if different from above): 300 Meridian Centre Blvd			
City:	Rochester	State:	NY
Zip:	14618		



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Email: Adrienne.Olson@crowncastle.com

Phone: 585-445-
5899

C. Application Type (check all boxes that apply)

☐ **Minor Work** Exterior works that do not involve any substantial alterations, and do not involve additions or removals that could impair the integrity of the property and/or the district as a whole. See [Design Guidelines](#) (p. 69) for a list of minor works.

☐ **Historic District Commission Review** Includes all exterior changes to structures and features other than minor works

☐ **Site-work only** (walkways, fencing, walls, etc.)

☐ **After-the-fact application** (for unauthorized work already performed).

☐ **Restoration or alteration**

☐ **Demolition or moving of a site feature.**

☒ **New construction or additions**

☐ **Request for review of new application after previous denial**

☐ **Sign**

D. Basic information about size, scale, and lot placement.

Provide measurements in feet and square feet where applicable. Where possible, please provide accurate measurements from a licensed surveyor, architect, engineer, etc. If exact measurements are not available, please provide estimated information. Current estimated information about lots and buildings can be found on the [Orange County Real Estate Data](#) website. Information about lot placement can be found on the [Chapel Hill](#) and [Orange County Interactive GIS](#) portals.

Zoning District:	Minimum setbacks			Maximum heights		Lot size	
	Street	Interior	Solar	Primary	Secondary		
Required by zoning	N/A	N/A	N/A	N/A	N/A		
Proposed	16'	N/A	N/A	32'	N/A		
	Existing	Change +/-	Total	Total Floor Area Ratio			
Floor Area (main structure)	N/A	N/A	N/A	Existing	Proposed	ISA/NLA ratio	
Floor Area (all other)	N/A	N/A	N/A	N/A	N/A	Existing	Proposed
Impervious Surface Area (ISA)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
New Land Disturbance			N/A				



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E: Applicable Design Guidelines

The Town's [Design Guidelines for the Chapel Hill Historic Districts](#) are integral to the application and review process. These guidelines supplement the required review criteria for Certificate of Appropriateness applications (provided in [Section 3.6.2\(e\)\(4\)](#) of the Land Use Management Ordinance) by providing detailed, practical considerations for how to make changes to properties while preserving the special character of their Historic District context. Please review the Design Guidelines and consider their applicability to your proposed project. (Attach additional sheets, as necessary.)

Section/Page	Topic	Brief description of the applicable aspect of your proposal
9/49	Utilities and Energy Retrofit	By installing a new wood pole that is similar to other wooden poles along E Franklin St, our proposed installation will blend in with the current surroundings and create minimal aesthetic disruption.



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F. Checklist of Application Materials

<i>Attach the required elements in the order indicated.</i>	ATTACHED? TO BE COMPLETED BY APPLICANT		TO BE COMPLETED BY TOWN STAFF		
	YES	N/A	YES	N/A	NO
1. Written description of physical changes proposed. Describe clearly and in detail the physical changes you are proposing to make. Identify the materials to be used (siding, windows, trim, roofing, pavements, decking, fencing, light fixtures, etc.), specify their dimensions, and provide names of manufacturers, model numbers, and specifications where applicable.	☐	☐	☐	☐	☐
2. History, context, and character information. Please include a summary of what information you have relied on to understand the relevant character and history of the district and subject property—and briefly summarize that information. At a minimum, include: ☐ Current property information for the lot and all structures, including Building Sketches and Building Details, from Orange County Real Estate Data. ☐ The entry of your property on the most recent inventory of historic resources in the relevant National Register for Historic Places filing, available via the NC State Historic Preservation Office website: for McCauley-Cameron see West Chapel Hill, for Franklin-Rosemary see Chapel Hill Historic District, for Gimghoul see Gimghoul. (If yours is one of the few properties in McCauley-Cameron or Franklin-Rosemary that has not yet been inventoried, please indicate that.)	☐	☐	☐	☐	☐
3. Justification of appropriateness. Attach an annotated statement explaining how the proposed change(s) meets the following standards of appropriateness that the Commission considers in making findings of fact indicating the extent to which the application is or is not congruous with the historic aspects of the historic district. If a standard is not applicable, type "not applicable". A. The height of the building in relation to the average height of the nearest adjacent and opposite buildings. B. The setback and placement on lot of the building in relation to the average setback and placement of the nearest adjacent and opposite buildings. C. Exterior construction materials, including texture and pattern. D. Architectural detailing, such as lintels, cornices, brick bond, and foundation materials. E. Roof shapes, forms, and materials. F. Proportion, shape, positioning and location, pattern, and size of any elements of fenestration. G. General form and proportions of buildings and structures. H. Appurtenant fixtures and other features such as lighting. I. Structural conditions and soundness.	☐		☐	☐	☐



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J. Architectural scale.					
4. Photographs of existing conditions are required. Minimum image size 4" x 6" as printed or the digital equivalent. Maximum 2 images per page.	☐	☐	☐	☐	☐
5. Site Plan Set showing existing and proposed conditions. (Min. scale: 1 in. = 20 ft.) ☐ Site plans must show the relationships between, and dimensions of, existing and proposed buildings, additions, sidewalks, walls, fences, driveways, and/or other structures on the property, as well as property lines and applicable zoning setbacks. ☐ Include both written and drawn scales and show accurate measurements. You may also use a copy of a survey with surveyor's seal deleted. Revise the copy as needed to show existing conditions and your proposed work. ☐ Indicate the area of all structural footprints (existing and proposed) in square feet; also, indicate lot size in square feet.	☐		☐	☐	☐
6. Elevation Drawings showing existing structural facades and proposed changes. Drawings should be submitted as 11" x 17" or 8-1/2" x 11" reductions of full-size drawings. All details should be reasonably legible. Photographs are okay for facades with no changes. ☐ Elevation drawings showing all proposed changes above current grade from front, back, and both sides. ☐ Include scale bar, written scale, and label major dimensions (including width of structures and heights from finished grade to fascia/eaves and heights to top of roofs). ☐ Label materials to be used (roofing, siding, windows, trim, light fixtures, etc.)	☐	☐	☐	☐	☐
7. Information about context (required for all construction of new structures, proposed impervious surfaces greater than 1500 SF, additions greater than 150 SF, and/or proposed land disturbance greater than 5000 SF.) Detailed information about lots and structures can be found on the Orange County Real Estate Data website; information about lot placement can be found on the Chapel Hill and Orange County GIS portals. For each of the nearest adjacent and opposite properties, provide: ☐ The height of each building (if an estimate, indicate that). ☐ The setbacks and lots placement of each building (an image from the Town GIS database, including scale, is sufficient). ☐ The size of each lot (net land area in square feet). ☐ The size of all buildings on the nearest adjacent and opposite properties, including building footprint areas, Floor Areas (in square feet), and Floor Area Ratios. Provide current figures from Orange County Real Estate Data ; indicate any corrections for accuracy you believe necessary and your basis for doing so.	☐	☐	☐	☐	☐
8. Demolition/Relocation Information (required only if demolition or relocation of a feature is proposed).	☐	☐	☐	☐	☐



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☐ Provide a written description of architectural features, additions, remodeling, and any alterations to the structure(s). Make note of any outbuildings on the site plan of the property.					
☐ Provide a history of the structure, giving the construction date and architect or carpenter, briefly noting any significant events, persons and/or families associated with the property. Provide current exterior photographs of the property (4" x 6" as printed or the digital equivalent). If information is unknown, please provide a summary of sources consulted.					
☐ If an argument about structural soundness is being made, attach a signed and sealed report from a professional engineer.					
☐ As necessary, attach a statement explaining how a delay in demolition would cause the property owner to suffer extreme hardship or be permanently deprived of all beneficial use or return from such property by virtue of the delay.					
☐ Provide any records about the structure to be demolished.					
9. Mailing notification fee per Planning & Sustainability Fee Schedule . For a list of addresses, please refer to the Town's Development Notification Tool .	☐		☐	☐	☐
10. Certificate of Appropriateness fee per Planning & Sustainability Fee Schedule	☐		☐	☐	☐



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Town of Chapel Hill
Office of Planning and Sustainability
Development Services 919-969-5066
planning@townofchapelhill.org

G: Applicant signature

I hereby certify that I am authorized to submit this application; that all information is correct to the best of my knowledge, and all work will comply with the State Building Code and all other applicable State and local laws, ordinances, and regulations.

I acknowledge and agree that the Historic District Commission members, Town employees, and Town agents may enter, solely in performance of their official duties and only at reasonable times, upon the applicant's property for examination or survey thereof pursuant to North Carolina General Statute 160A-400.8. However, no member, employee, or agent of the Historic District Commission may enter any private building or structure without the express consent of the owner or occupant thereof.

I understand and agree that an approved Certificate of Appropriateness is valid only for the particular application, plans, specifications and related project details presented to, and approved by, the Historic District Commission. If any of the data contained in this application, any plans or any specifications presented to the Commission are changed or altered for any reason, including, but not limited to, changes or alternations deemed practically necessary during construction, required due to subsequent Town reviews, or otherwise, a new hearing before the Historic District may be required. By signing below, the applicant agrees to notify the Development Services Center of any changes or alternations in the data contained in this application, the approved plans or the approved specifications related to the project that is the subject of this application.

Hearings on Certificate of Appropriateness applications before the Commission are quasi-judicial proceedings. Therefore, Historic District Commission members are not permitted to discuss a pending application with the applicant or other party. By signing below, the applicant agrees to refrain from speaking with or contacting any member of the Historic District Commission about an application outside of the formal evidentiary hearing on the application.

Adrienne Olson

Fiber Technologies
Networks, L.L.C.

 8/31/18

Applicant (printed name)

Signature

Date

Property Owner

Signature

Date

(if different from above)



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Certificate of Appropriateness Supplemental Requirements

***In addition to [Residential](#) Zoning OR [Administrative](#) Zoning Compliance Permit Requirements**

Certificate of Appropriateness applications are subject to review and approval by the Historic District Commission as well as by Town staff. For assistance with this application, please contact the Chapel Hill Planning Department.

Please submit *all* materials listed on this sheet. The Historic District Commission meets on the second Tuesday of each month at 6:30 pm. For confirmation of a meeting date and the placement of your request on the agenda, please call the Planning Department. **Applications are due one month in advance of meeting.**

Application Process:

1. Historic District Commission Review of Certificate of Appropriateness (COA) Supplemental materials
2. Staff review of Residential / Administrative Zoning Compliance Permit (ZCP) materials

****COA (step 1) and ZCP (step 2) materials may be submitted simultaneously or separately.**

Required Application Materials

(In addition to [Residential](#) Zoning Compliance Permit or [Administrative](#) Zoning Compliance Permit Requirements)

An Electronic copy of each document is required in addition to paper copies.

Provide a single set of the following materials:

- | | |
|--|--|
| | 1. Application Form. Either Residential Zoning Compliance or Administrative Zoning Compliance. |
| | 2. Recorded plat or deed verifying property's current ownership |
| | 3. Recorded plat of easements, right-of-way, and dedications, if applicable |
| | 4. Mailing List of Property Owners , applicable within 100 feet of property boundaries
The Town will prepare a formal notice to be mailed to surrounding property owners about the application. You may find it helpful to discuss the proposed changes with your neighbors in person so you can address their concerns both in your planning and presentation. |
| | 5. Mailing notification fee. The fee per address can be found on the Planning Department's Fee Schedule . |
| | 6. Certificate of Appropriateness fee per Planning Department's Fee Schedule |
| | 7. Reduced Site Plan Set (reduced to 8.5" x 11") |
| | 8. Building Elevations (label building height from top of roof to finished grade line) |
| | 9. Floor Plan, only if accessory apartment, duplex, or commercial application. |

(Continued)



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☐ **10. Written Description**

Describe all proposed changes to the property, list all materials to be used, and address the criteria (listed below) that the Commission uses to determine appropriateness. Presenting your proposal with these criteria in mind will provide a clear basis for the Commission's deliberations.

- a) The height of the building in relation to the average height of the nearest adjacent and opposite buildings;
- b) The setback and placement of the building on the lot in relation to the average setback and placement of the nearest adjacent and opposite buildings;
- c) The exterior construction materials, including textures and patterns;
- d) The architectural detailing such as lintels, cornices, brick bond, and foundation materials;
- e) The roof shape, form, and materials;
- f) The proportion, shape, location, pattern, and size of any elements of fenestration (windows, doors);
- g) The general form and proportion of the buildings;
- h) The accessory fixture and other features (including lighting fixtures, hardware, awnings, etc.);
- i) The architectural scale in relation to existing structures and surrounding buildings; and
- j) Structural conditions and soundness.

Provide photographs of existing property and elevation drawings of the proposed changes. Depict changes in as much detail as possible, paying special attention to those features which the Commission uses to determine appropriateness. This section of the application allows the Commission to see the current state of the property, to visualize the proposed changes, and to assess the impact. The visual description must include dimensions. For new buildings and major additions, the visual description must include the interior floor plan.

☐ **11. Information Regarding Surrounding Properties**

For new construction or large projects, the applicant is required to provide information on:

- The height of the nearest adjacent and opposite buildings;
- The setback and placement of the nearest adjacent and opposite buildings;
- The scale of the nearest adjacent and opposite buildings, including percentage of lot coverage.

☐ **12. Demolition Information (if applicable)**

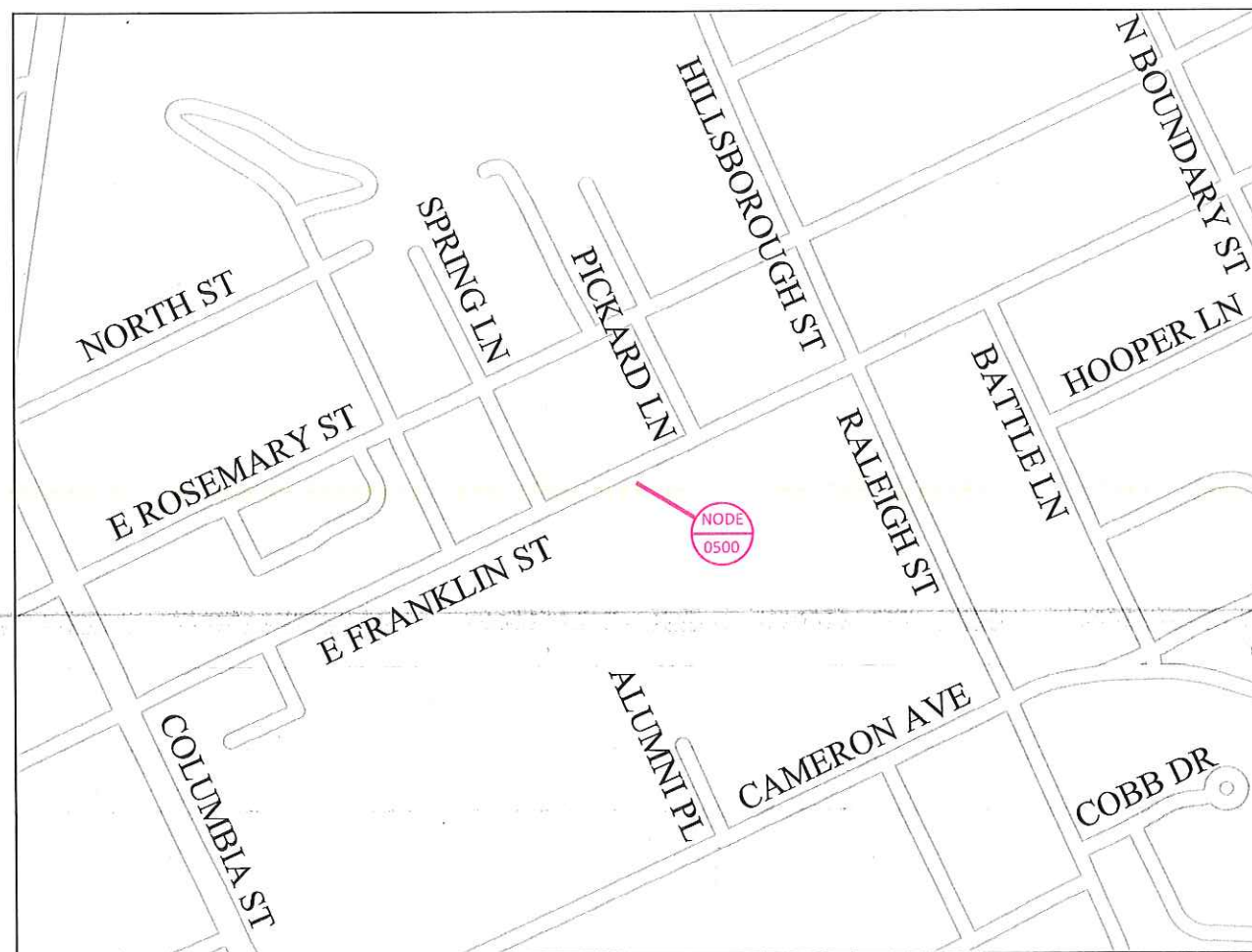
Provide a description of architectural features, additions, remodeling, and any alterations to the structure(s). Make note of any outbuildings on the site plan of the property. Provide a history of the structure, giving the construction date and architect or carpenter, briefly noting any significant events, persons, and/or families associate with the property.

Certificate of Appropriateness Application: Pole Set at 220 E Franklin St

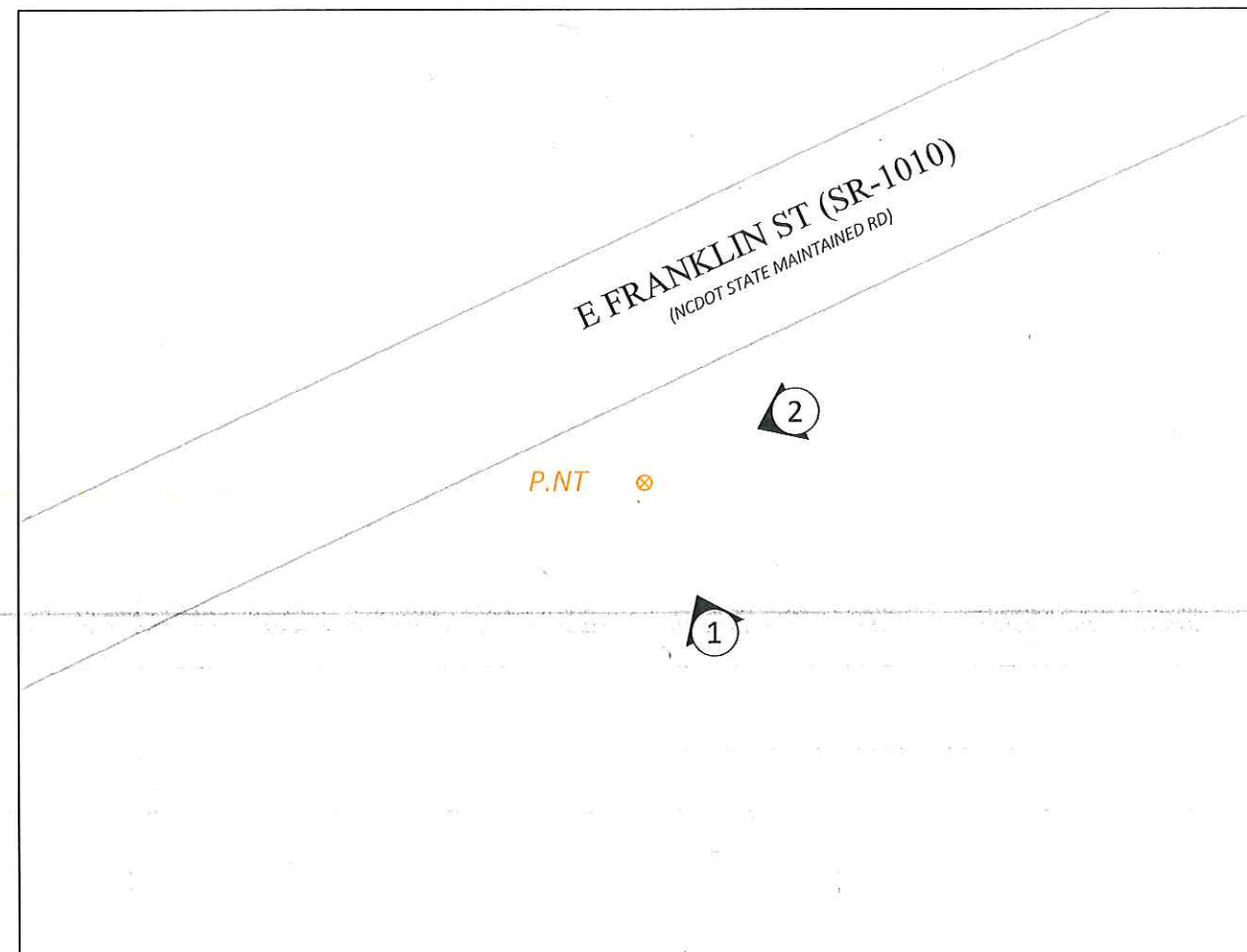
We are proposing to install a new 29' AGL Fibertech wood pole with wireless fiber optic infrastructure at 220 E Franklin St within NCDOT right-of-way, which has no historical context or history associated with it. The purpose of this installation is to improve wireless performance from both a capacity and coverage standpoint within the immediate surrounding area. Prior to developing these plans, significant fieldwork was done to ensure compliance with historic criteria/infrastructure.



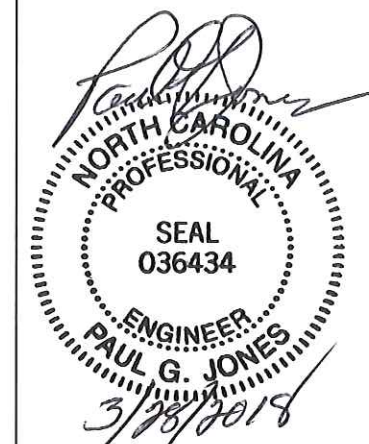
SMALL CELL
PROPOSED NODE SC-NC 0500 LOCATION
CHAPEL HILL, NC



LOCATION MAP
LAT: 35.914788° LONG: -79.051209°
1" = 500'



NODE PLACEMENT
1" = 50'



LOCATION:
CHAPEL HILL, NORTH CAROLINA
35.914788°, -79.051209°

POLE OWNER:
FIBERTECH

NOTES:

PREPARED FOR:



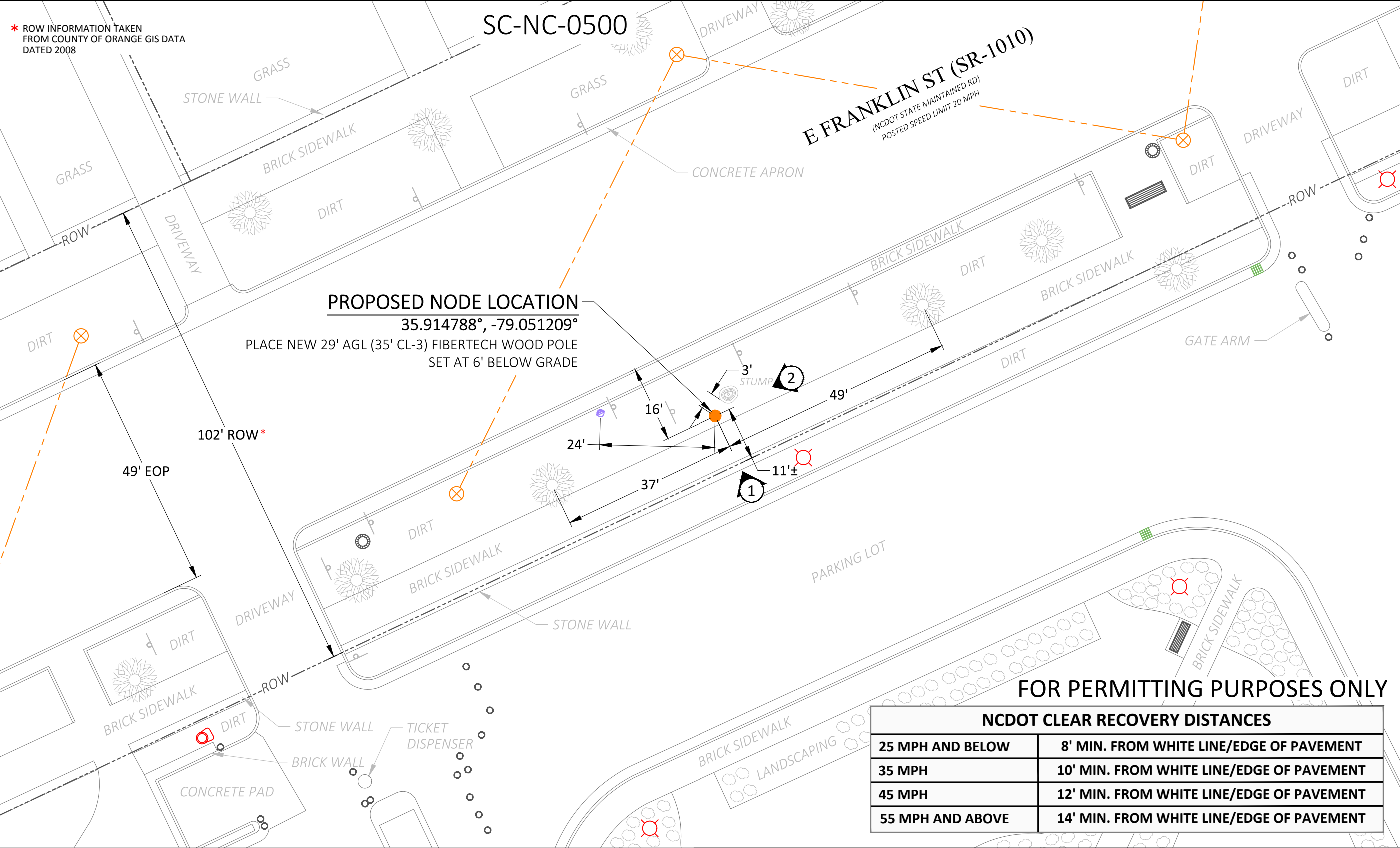
PREPARED BY:
UC SYNERGETIC
Innovative Thinking. Engineered Solutions.
21 OXFORD RD
MANSFIELD, MA 02048
www.ucseeng.com 1-508-337-7600

FIBERTECH SMALL CELL
LOCATION MAPS

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED NODE LOCATION	03/21/18

DRAFTER: DTB	1
SCALE: AS NOTED	
ISSUE DATE: 03/16/16	
INDEX NAME: SC-NC 0500	
SHEET #: 1 OF 10	

FOR PERMITTING PURPOSES ONLY





CALL BEFORE YOU DIG
REQUIRES 72 HOURS
BEFORE YOU EXCAVATE
811 OR 1-800-632-4949

LOCATION:
CHAPEL HILL, NORTH CAROLINA
35.914788°, -79.051209°

POLE OWNER:
FIBERTECH

NOTES:

PREPARED FOR:


PREPARED BY:

21 OXFORD RD
MANSFIELD, MA 02048
www.ucseng.com 1-508-337-7600

FIBERTECH SMALL CELL
SITE PLAN

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED NODE LOCATION	03/22/18

DRAFTER: BAJ

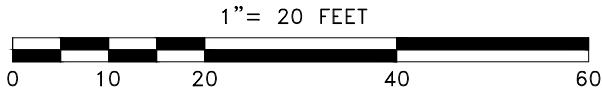
SCALE: SEE BAR SCALE

ISSUE DATE: 03/22/18

INDEX NAME: SC-NC 0500

SHEET #: 2 OF 10

2



LEGEND									
	PROPOSED NODE		CATV HH		SEWER MH		PARKING METER(S)		OVERHEAD LINES
	ELECTRIC POLE		COMM PEDESTAL		DRAIN MH		STEEL POST		TEL
	JOINT UTILITY POLE		IRRIGATION VALVE		TELEPHONE MH		SIGN POLE		ELECTRIC
	LAMP POST		WATER METER		ELECTRIC MH		CATCH BASIN		SEWER
	TRAFFIC LIGHT		SEWER GATE		CATV MH		ELECTRIC VAULT		STORM DRAIN
	STREET LIGHT		GAS GATE		WATER MH		TRAFFIC HH		WATER
	ELECTRIC HH		WATER GATE		MAIL BOX		FENCE		GAS
	TEL HH		HYDRANT		BUSH/SHRUB		RIGHT OF WAY		TRAFFIC

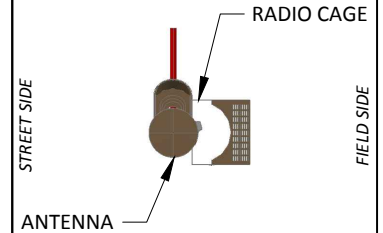
NOTE 1:
40" MIN. WORKER SAFETY ZONE
BETWEEN LOWEST ENERGIZED POWER
& HIGHEST COMMUNICATIONS CABLE
IN ACCORDANCE WITH NESC REGULATIONS

NOTE:
PLACE NEW 29' AGL (35' CL-3) FIBERTECH WOOD POLE

**ALL FIBERTECH EQUIPMENT TO BE PAINTED
BROWN TO MATCH POLE**

**ABSOLUTE MINIMUM DEPTH OF SET
MUST MEET OR EXCEED 10% OF
OVERALL HEIGHT ABOVE GROUND
(INCLUDING ATTACHMENTS), PLUS
2 FEET, ROUNDED UP TO THE NEXT
FULL FOOT.**

FOR PERMITTING PURPOSES ONLY



PROPOSED TOP VIEW

NOTE:
CABLES & EXISTING POLE EQUIPMENT
NOT SHOWN FOR CLARITY

LOCATION: CHAPEL HILL, NC
35.914788°,-79.051209°

POLE OWNER:	FIBERTECH
-------------	-----------

NOTES:

CONSTRUCTION COMPANY
JDH CONSTRUCTION
812 BISCAYNE DRIVE
CONCORD, NC 28027

PREPARED FOR:



PREPARED BY:



FIBERTECH SMALL CELL
PROPOSED

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED NODE LOCATION & POLE TYPE	03/22/18

DRAFTER: DTB

 SCALE: 1" = 5'

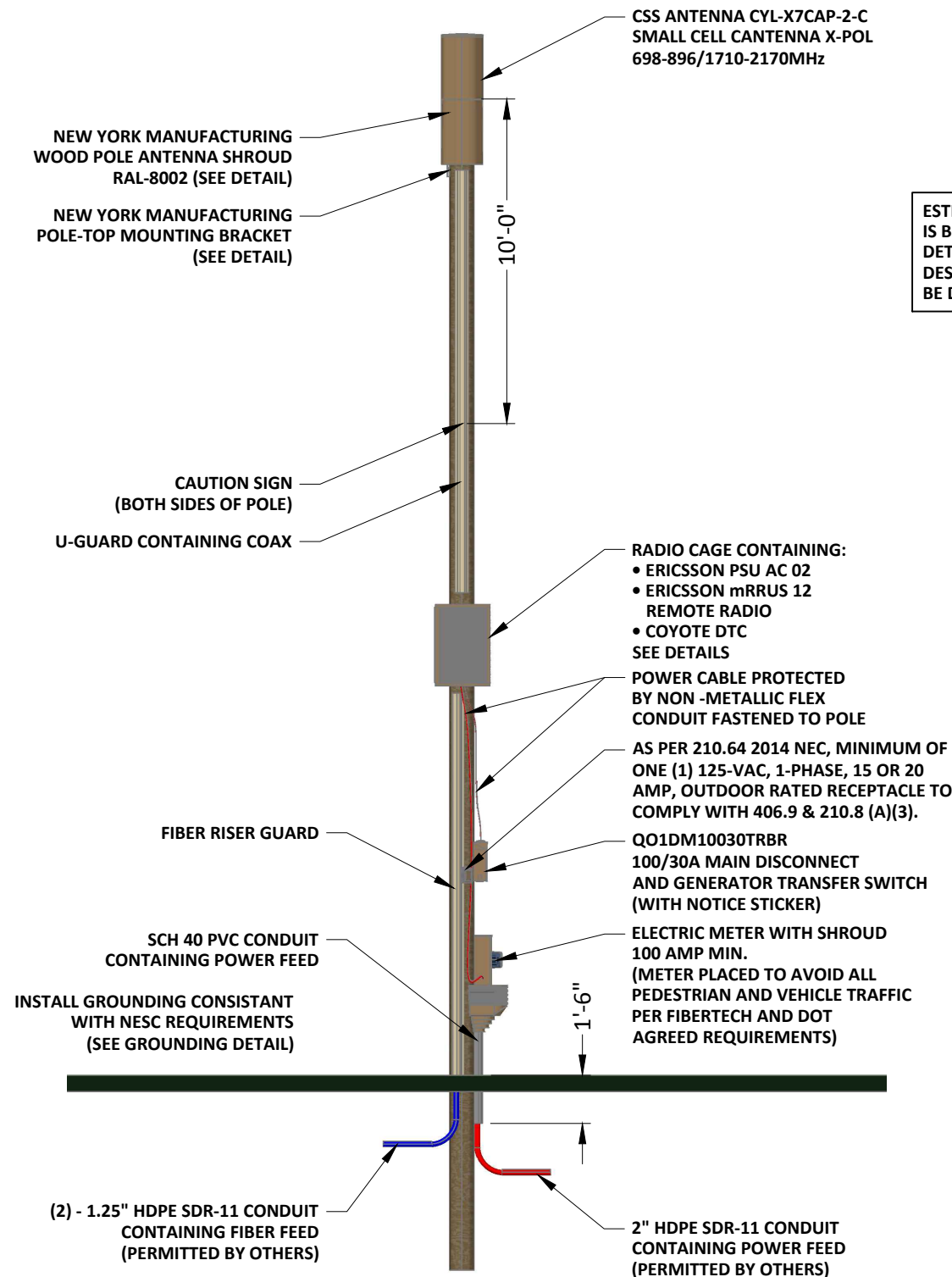
 ISSUE DATE: 03/16/16

 NODE NAME: SC-NC 0500

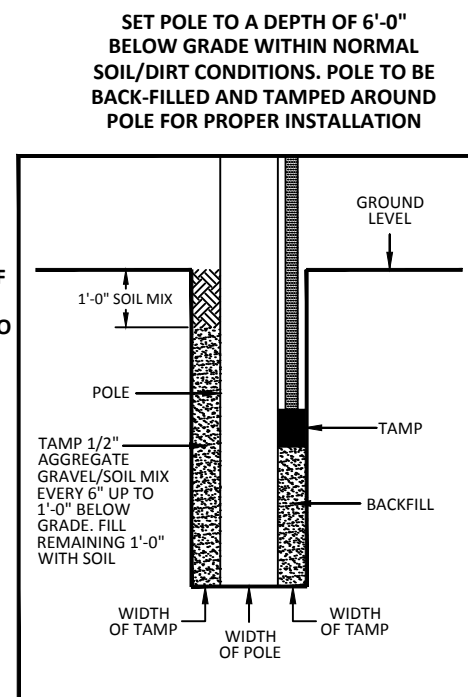
 SHEET #: 3 OF 10

3

3



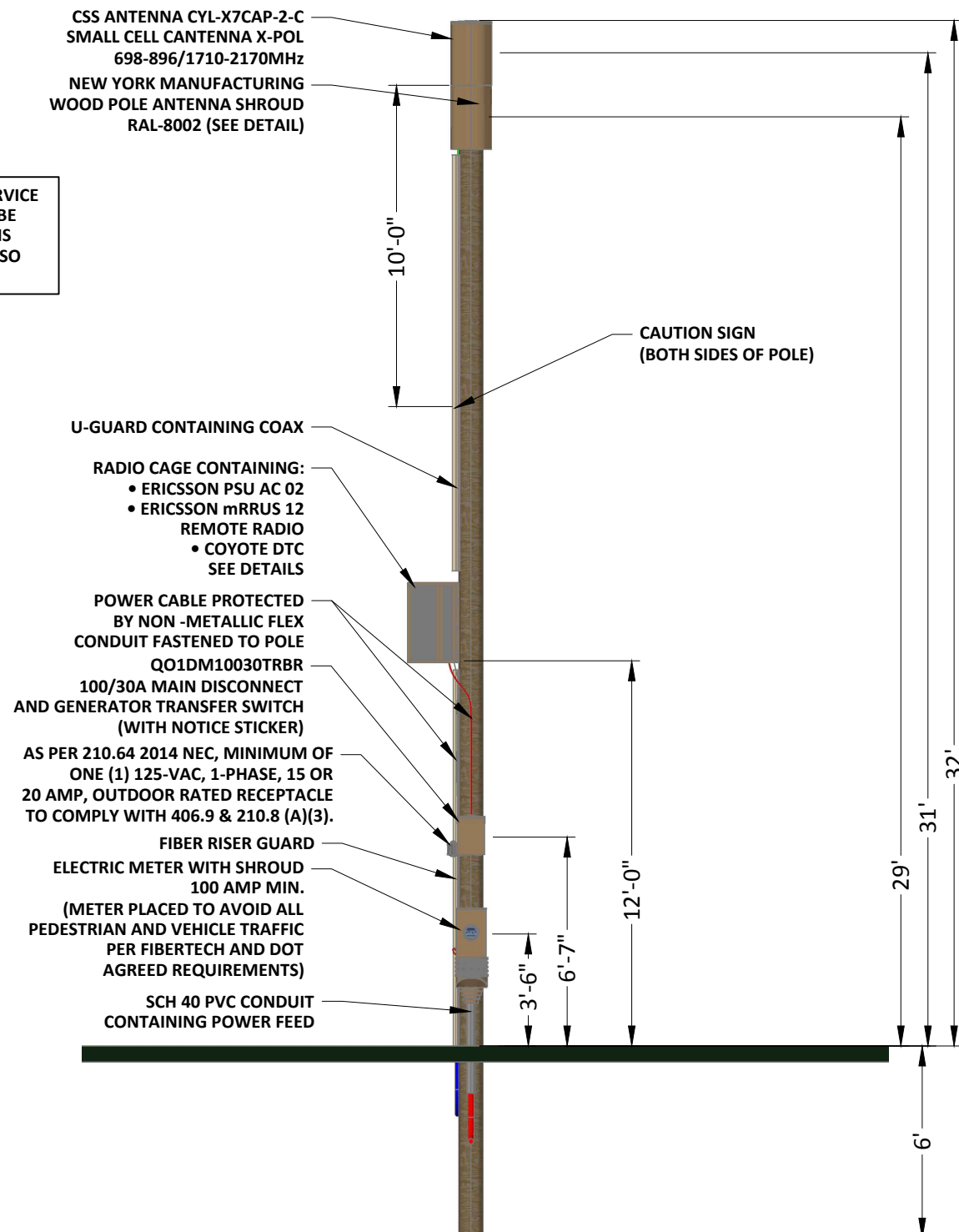
1 PROPOSED PROFILE - REAR VIEW



POLE SET DETAIL

N.T.S

SCALE IN FEET



2 PROPOSED PROFILE - SIDE VIEW
LOOKING SOUTHWEST ALONG E FRANKLIN ST



EXISTING PHOTOGRAPHIC VIEW



PROPOSED PHOTOGRAPHIC SIMULATION

FOR PERMITTING PURPOSES ONLY

LOCATION: CHAPEL HILL, NC
35.914788°, -79.051209°

POLE OWNER: FIBERTECH

NOTES:

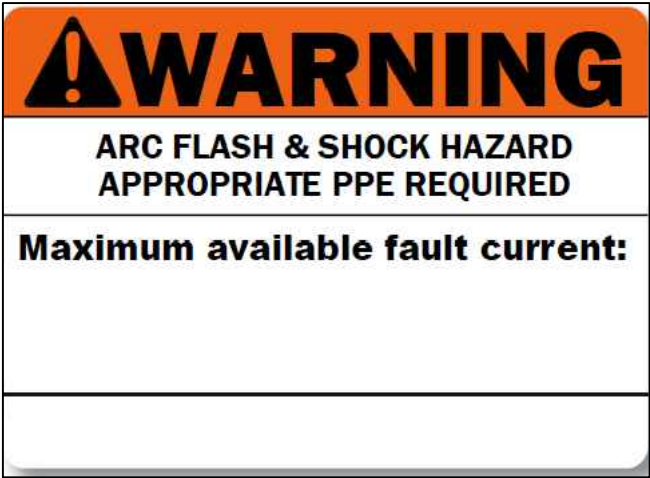
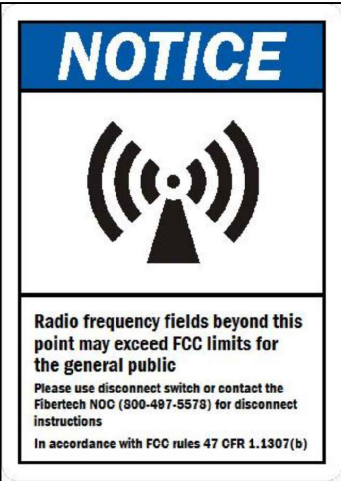
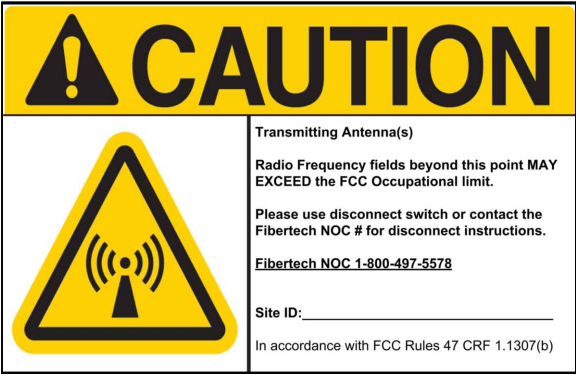
PREPARED FOR:
Fibertech
networks.

PREPARED BY:
UC SYNERGETIC
Innovative Thinking. Engineered Solutions.
21 OXFORD RD
MANSFIELD, MA 02048
www.ucseng.com 1-508-337-7600

FIBERTECH SMALL CELL
PHOTOSIM

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED NODE LOCATION & POLE TYPE	03/22/18

DRAFTER: DTB	4
SCALE: NTS	
ISSUE DATE: 03/16/16	
NODE NAME: SC-NC 0500	
SHEET #: 4 OF 10	



AFC STICKER WITH PLACARD NOTING MAX AVAILABLE FAULT CURRENT AND DATE

POLE SIGNAGE
NOT TO SCALE

Host (B1)				Remote (D1)		
Color	TX	RX	Technologies	Color	TX	RX
		SFP Label				SFP Label
Purple	1471	1491	1900 PCS LTE	Gray	1491	1471
Green	1511	1531	850 CDMA	Blue	1531	1511
Orange	1551	1571	700 LTE	Yellow	1571	1551
Brown	1591	1611	2100 AWS LTE	Red	1611	1591

SFP/CWDM
COLOR CODING REFERENCE

9.6.2 Connecting External Alarm Cable to External Equipment

Connect the external alarm cable to the external equipment, using the following cable data:

Alarm A

- Yellow conductor
- Green conductor

Alarm B

- Grey conductor
- Pink conductor

Alarm C

- Blue conductor
- Red conductor

Alarm D

- Black conductor
- Violet conductor

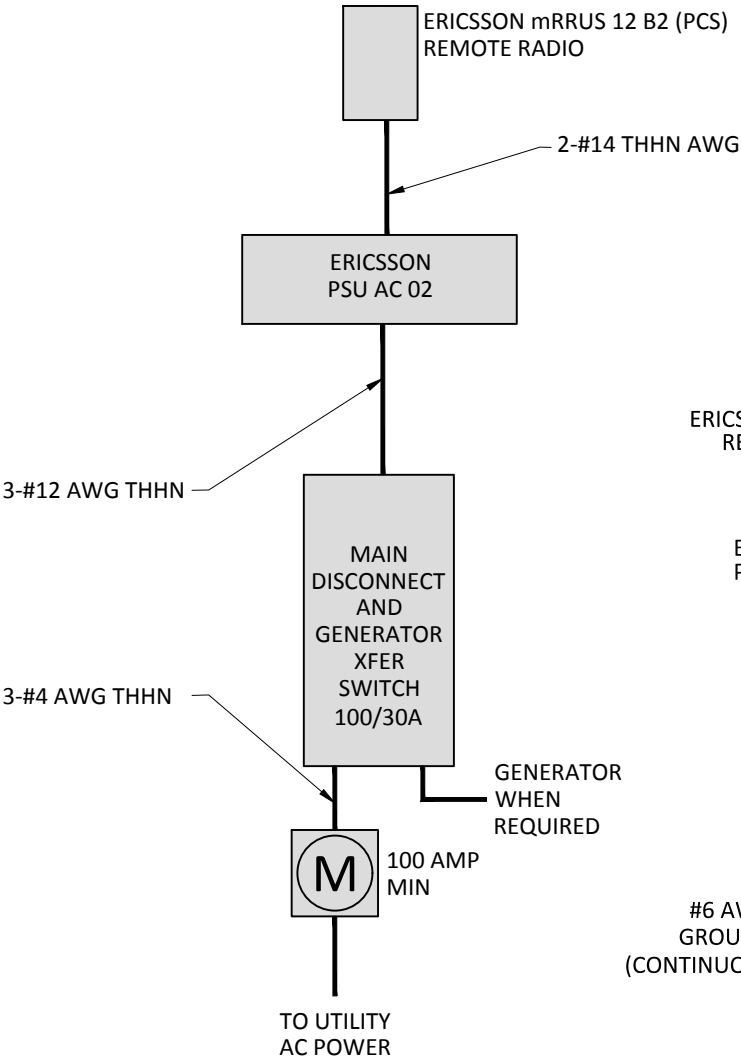
Alarm E

- Grey-pink conductor
- Red-blue conductor

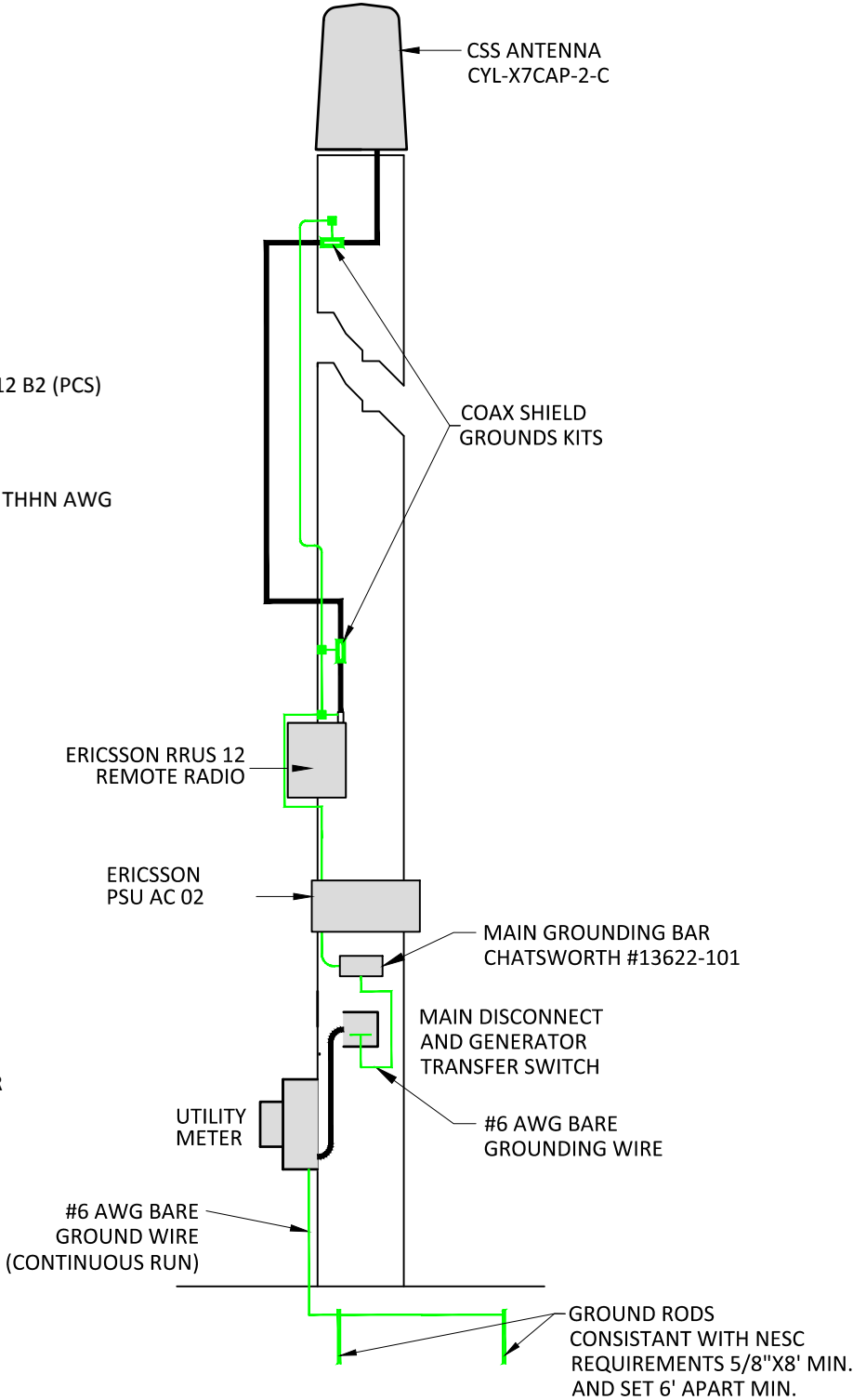
Alarm F

- Brown conductor
- White conductor

WIRING OPTION 1 - RRUS12 AWS
NOT TO SCALE



ELECTRICAL DIAGRAM
NOT TO SCALE



TYPICAL GROUNDING DIAGRAM
NOT TO SCALE

FOR PERMITTING PURPOSES ONLY

LOCATION: CHAPEL HILL, NC

NOTES:

PREPARED FOR:

Fibertech networks

PREPARED BY:

UC SYNERGETIC
Innovative Thinking. Engineered Solutions.
21 OXFORD RD
MANSFIELD, MA 02048
www.ucseng.com 1-508-337-7600

FIBERTECH SMALL CELL
POLE SIGNAGE
& WIRING DIAGRAMS

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED NODE LOCATION & POLE TYPE	03/22/18

DRAFTER: DTB

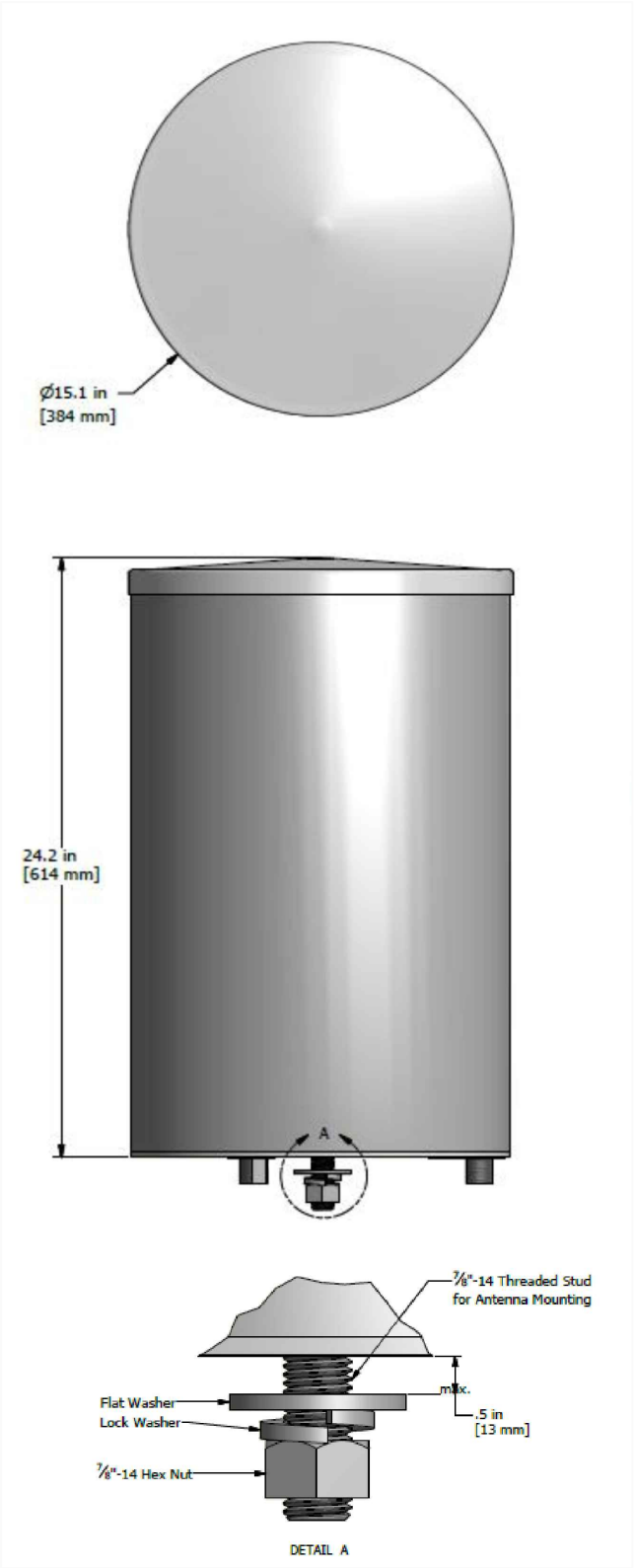
SCALE: NTS

ISSUE DATE: 03/16/16

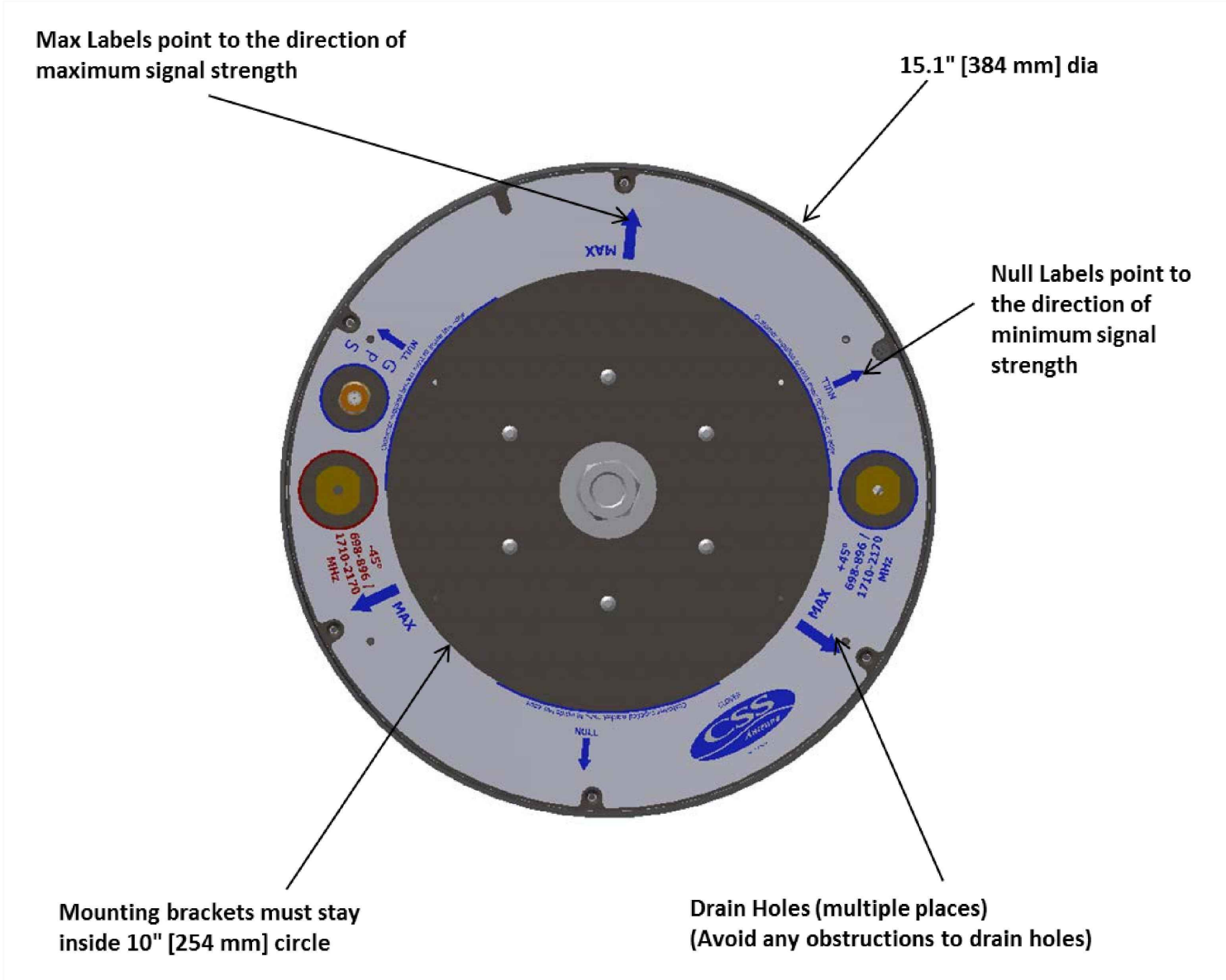
NODE NAME: SC-NC 0500

SHEET #: 5 OF 10

5



CSS ANTENNA CYL-X7CAP-2-C SMALL CELL CANTENNA X-POL
698-896/1710-2170MHz
SIDE VIEW
(FOR ANTENNA COLOR SEE PROPOSED PAGE)



CSS ANTENNA CYL-X7CAP-2-C SMALL CELL CANTENNA X-POL
698-896/1710-2170MHz
BOTTOM VIEW

FOR PERMITTING PURPOSES ONLY

LOCATION: CHAPEL HILL, NC

NOTES:

PREPARED FOR:

PREPARED BY:

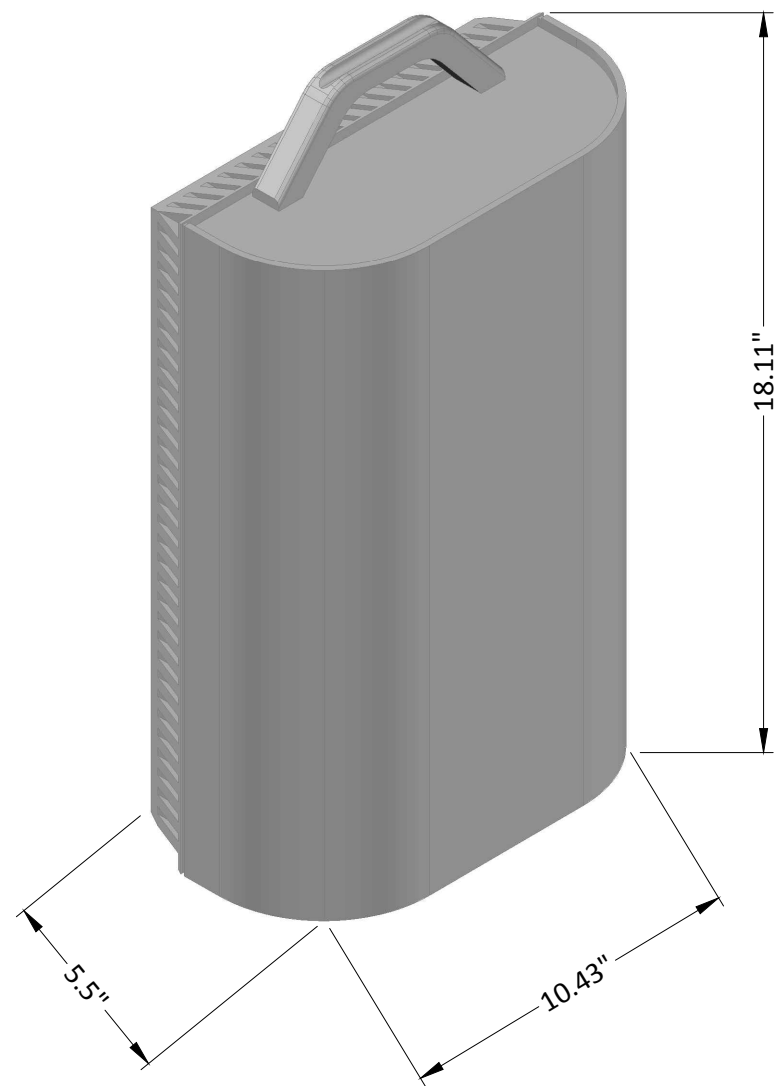
Innovative Thinking. Engineered Solutions.
21 OXFORD RD
MANSFIELD, MA 02048
www.ucseeng.com 1-508-337-7600

FIBERTECH SMALL CELL
CSS CYL-X7CAP-2-C
ANTENNA DETAIL

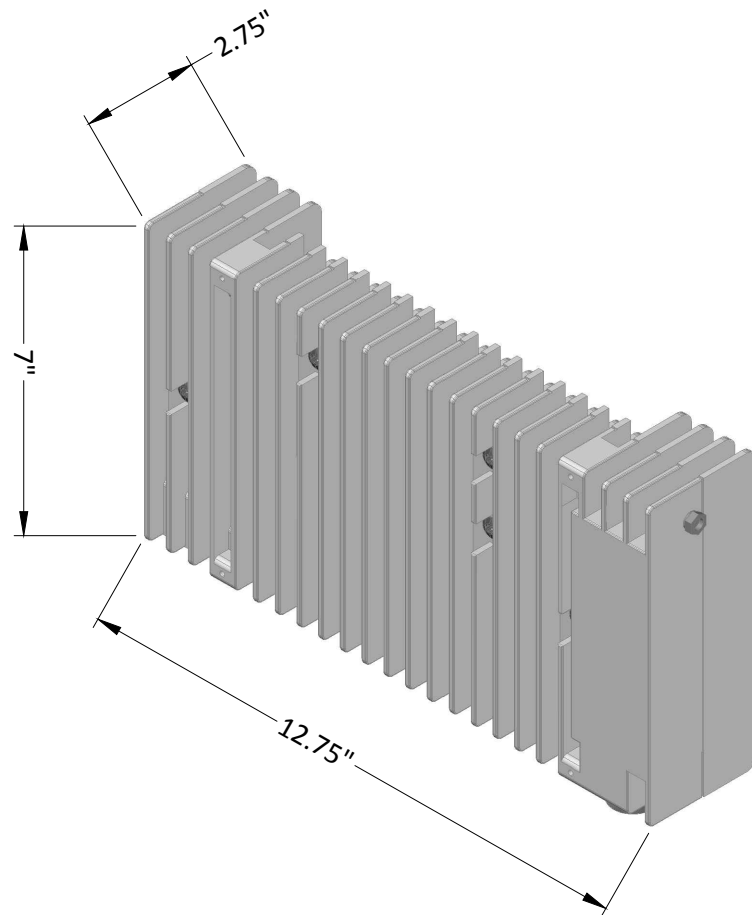
REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED NODE LOCATION & POLE TYPE	03/22/18

DRAFTER: DTB
SCALE: NTS
ISSUE DATE: 03/16/16
NODE NAME: SC-NC 0500
SHEET #: 6 OF 10

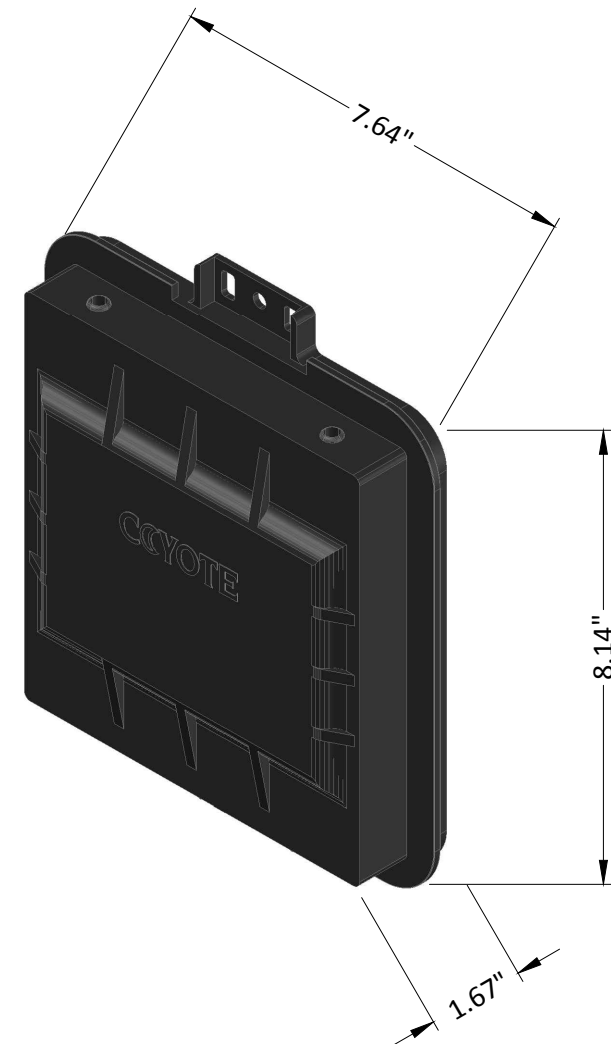
6



ERICSSON mRRUS 12 REMOTE RADIO
ISOMETRIC VIEW



ERICSSON RECTIFIER PSU AC 02
ISOMETRIC VIEW



COYOTE - DTC
ISOMETRIC VIEW

FOR PERMITTING PURPOSES ONLY

LOCATION: CHAPEL HILL, NC

NOTES:

PREPARED FOR:



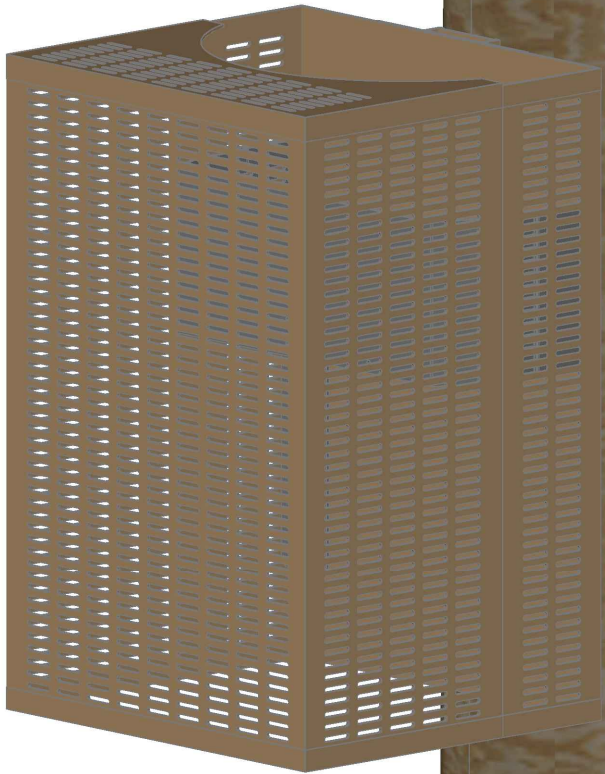
PREPARED BY:



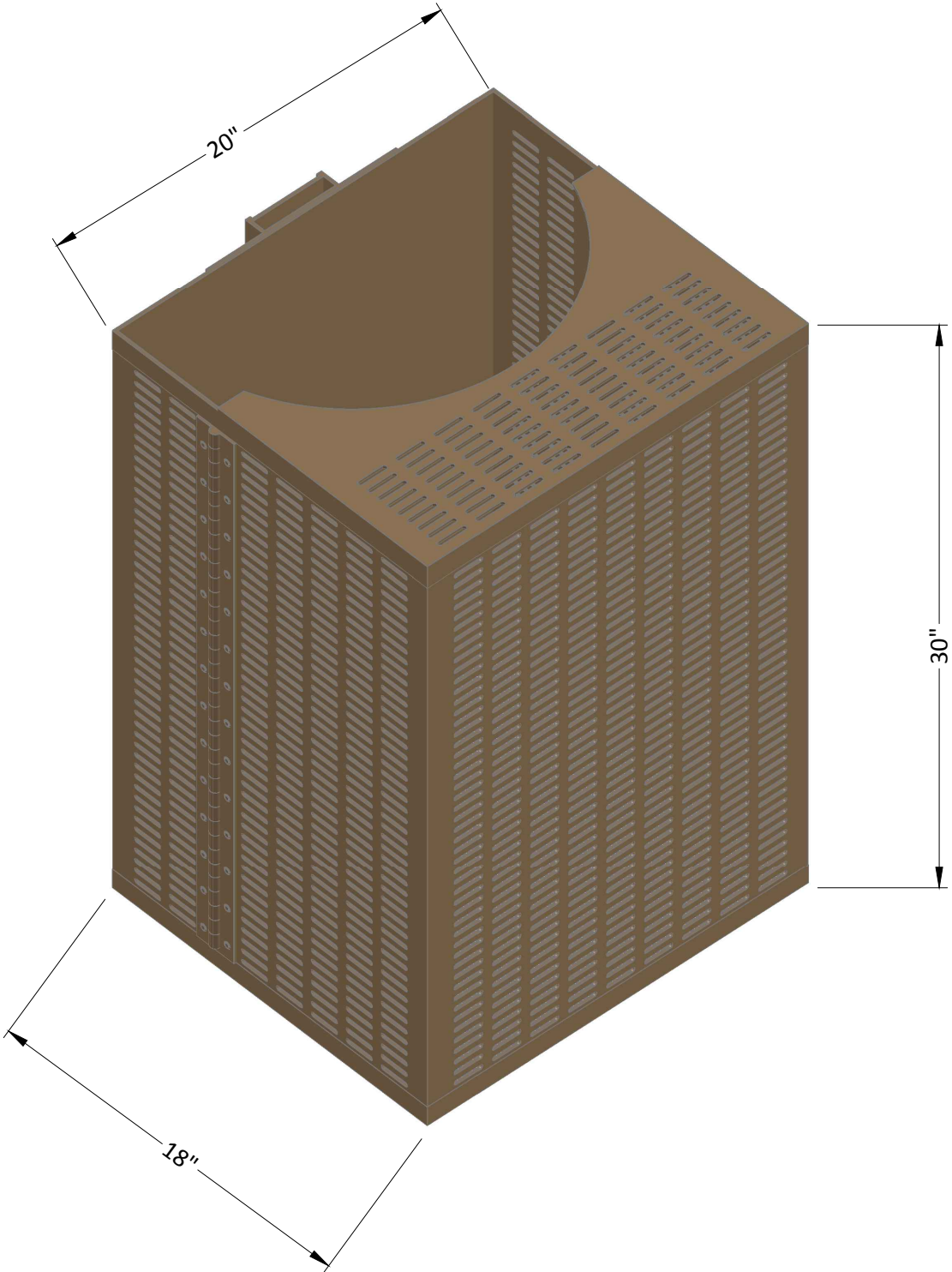
FIBERTECH SMALL CELL
ERICSSON mRRUS12,
RECITIFIER, & COYOTE

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED NODE LOCATION & POLE TYPE	03/22/18

DRAFTER: DTB	7
SCALE: NTS	
ISSUE DATE: 03/16/16	
NODE NAME: SC-NC 0500	
SHEET #: 7 OF 10	



UNIVERSAL RADIO CAGE
CONCEPTUAL VIEW



UNIVERSAL RADIO CAGE
ISOMETRIC VIEW

FOR PERMITTING PURPOSES ONLY

LOCATION:

NOTES:

PREPARED FOR:



PREPARED BY:



FIBERTECH SMALL CELL
RADIO CAGE

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED NODE LOCATION & POLE TYPE	03/22/18

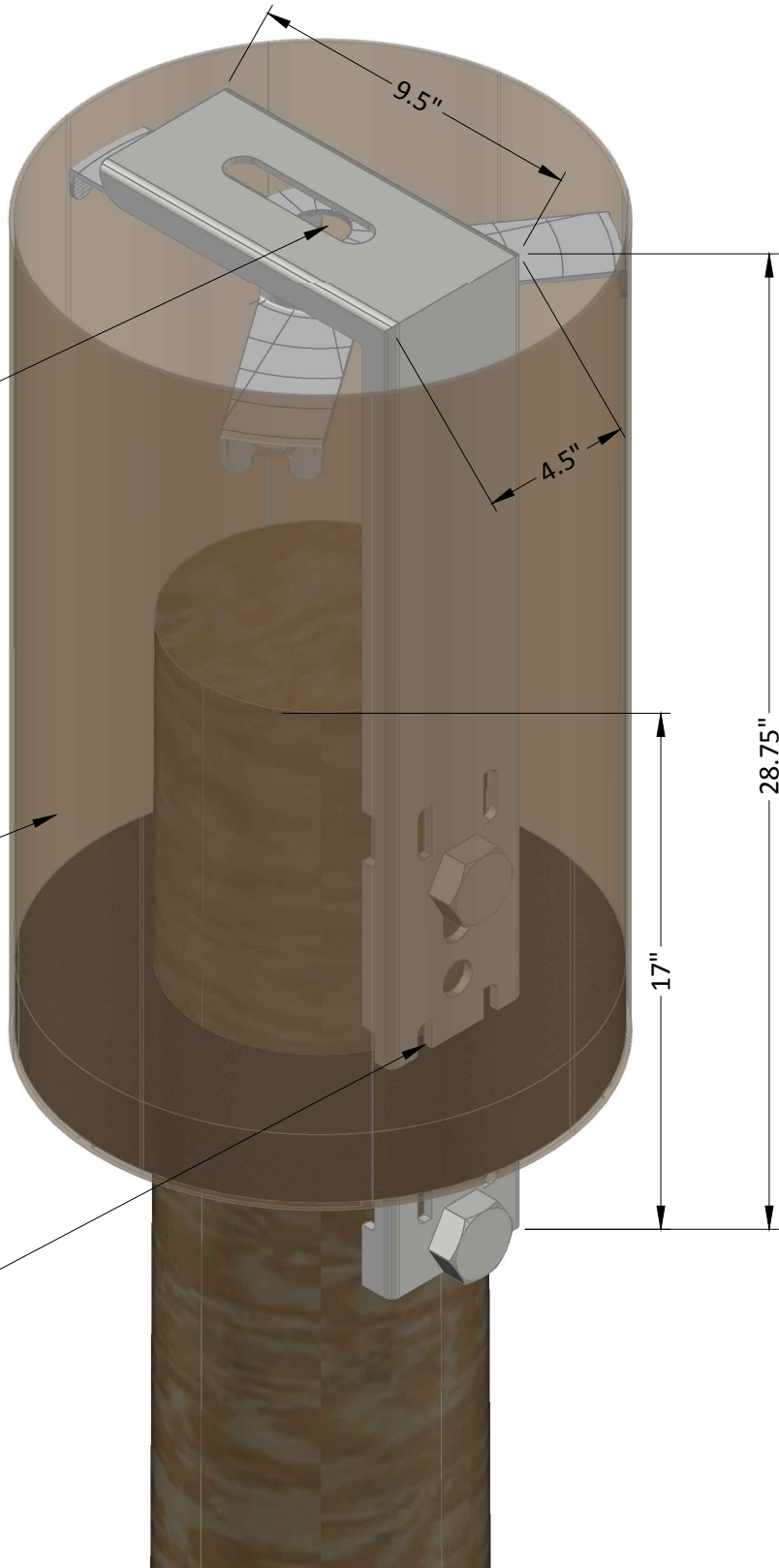
DRAFTER: DTB	8
SCALE: NTS	
ISSUE DATE: 03/16/16	
NODE NAME: SC-NC 0500	
SHEET #: 8 OF 10	

NEW YORK MANUFACTURING
WOOD POLE ANTENNA SHROUD
RAL-8002

3.75" X 1" SLOT
FOR CSS ANTENNA

(6) 1.5" SLOTS
FOR STRAPS

NEW YORK MANUFACTURING POLE TOP BRACKET
FOR CSS ANTENNA WITH SHROUD
CONCEPTUAL VIEW



FOR PERMITTING PURPOSES ONLY

LOCATION: CHAPEL HILL, NC

NOTES:

PREPARED FOR:



PREPARED BY:

UC

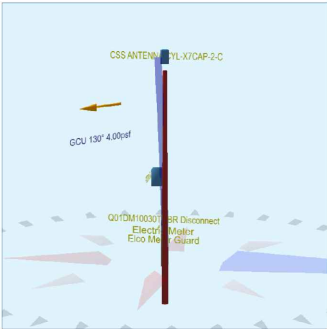
SYNERGETIC
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21 OXFORD RD
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www.ucseng.com 1-508-337-7600

MOUNTING BRACKET
DETAILS

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED NODE LOCATION & POLE TYPE	03/22/18

DRAFTER: DTB	
SCALE: NTS	
ISSUE DATE: 03/16/16	
NODE NAME: SC-NC 0500	
SHEET #: 9 OF 10	

Pole Num:	NT	Pole Length / Class:	35 / 3	Code:	NESC	Structure Type:	Unguyed Tangent
Aux Data 1	SC-NC 0500	Species:	SOUTHERN PINE	NESC Rule:	Rule 250B	Status	Unguyed
Aux Data 2	Unset	Setting Depth (ft):	6.00	Construction Grade:	C	Pole Strength Factor:	0.85
Aux Data 3	Unset	G/L Circumference (in):	34.00	Loading District:	Medium	Transverse Wind LF:	1.75
Aux Data 4	Unset	G/L Fiber Stress (psi):	8,000	Ice Thickness (in):	0.25	Wire Tension LF:	1.00
Aux Data 5	Unset	Allowable Stress (psi):	6,800	Wind Speed (mph):	39.53	Vertical LF:	1.90
Aux Data 6	Unset	Fiber Stress Ht. Reduc:	No	Wind Pressure (psf):	4.00		
Latitude:	0.000000 Deg	Longitude:	0.000000 Deg	Elevation:	0 Feet		



Pole Capacity Utilization (%)	Height (ft)	Wind Angle (deg)
Maximum	6.0	0.0
Groundline	6.0	130.0
Vertical	2.3	130.0

Pole Moments (ft-lb)	Load Angle (deg)	Wind Angle (deg)
Max Cap Util	4,006	130.8
Groundline	4,006	130.8
GL Allowable	70,520	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 130.8°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
GenericEquipments	90	35.2	1,446	36.1	2.1	132	169	2	134	2.0
Pole	154	59.9	2,467	61.6	3.5	225	1,502	16	241	3.5
Risers	13	4.9	93	2.3	0.1	9	28	0	9	0.1
Pole Load	256	100.0	4,006	100.0	5.7	365	1,699	18	383	5.6
Pole Reserve Capacity			66,514		94.3	6,435			6,417	94.4

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 130.8°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Fibertech	81	31.5	1,419	35.4	2.0	129	162	2	131	1.9
Elco	22	8.6	120	3.0	0.2	11	34	0	11	0.2
Pole	154	59.9	2,467	61.6	3.5	225	1,502	16	241	3.5
Totals:	256	100.0	4,006	100.0	5.7	365	1,699	18	383	5.6

Detailed Load Components:

Generic Equipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Cylinder	CSS ANTENNA CYL-X7CAP-2-C	Fibertech	31.00	0.92	90.0	0.0	22.00	24.20	--	15.08	--	-2	550	547
Box	RADIO CAGE	Fibertech	13.25	13.61	180.0	0.0	40.00	30.00	18.00	--	20.00	56	582	639
Box	Q01DM10030TRBR Disconnect	Fibertech	7.17	7.48	90.0	0.0	12.00	14.00	5.00	--	10.00	11	62	72
Box	Electric Meter	Elco	5.50	8.08	90.0	0.0	10.00	12.00	6.00	--	10.00	10	43	52
Box	Elco Meter Guard	Elco	4.17	7.41	90.0	0.0	5.00	19.00	8.50	--	8.00	4	51	55
Totals:												79	1,287	1,366

Riser		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
E Riser 2" 90.0"	E Riser 2"	Elco	3.00	5.53	90.0	90.0	3.00	36.00	2.00	2.00	36.00	1	4	6
Fibertech Riser 2" 180.0"	Fibertech Riser 2"	Fibertech	11.50	5.53	180.0	180.0	11.50	138.00	2.00	2.00	138.00	3	79	82
Totals:												4	83	88

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
2.00	13.23	32.21	10.31	8.32	7.32	10.83	1.60e+6	60.00	57.00	29.00	73,772	738.71	43.48

Notes		
Date	Author	Description
1/13/2017	UCS	URC Note
UNIVERSAL RADIO CAGE CONTAINS: ERICSSON PSU AC02; ERICSSON mRRUS 12 RR; COYOTE DTC.		
EQUIPMENT WEIGHTS (10lbs ea.) INCLUDED IN TOTAL WEIGHT OF RADIO CAGE.		

FOR PERMITTING PURPOSES ONLY

LOCATION: CHAPEL HILL, NC

NOTES:

PREPARED FOR:



PREPARED BY:



O-CALC

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED NODE LOCATION & POLE TYPE	03/22/18
DRAFTER:	DTB	10
SCALE:	NTS	
ISSUE DATE:	03/16/16	
NODE NAME:	SC-NC 0500	
SHEET #:	10 OF 10	