



# Town of Carthage

Board of Commissioners

Regular Meeting

January 20, 2026 at 6:30 p.m.

McDonald Building  
207 McReynolds Street  
Carthage, NC 28327

## AGENDA

### **CALL TO ORDER**

**INVOCATION** – Mayor Jimmy Chalflinch

**PLEDGE OF ALLEGIANCE** – Commissioner Al Barber

### **APPROVAL OF AGENDA**

Members of the board may remove, add, or rearrange items on the agenda before beginning the meeting. Motions/votes are not required to approve the agenda, but there must be unanimous consent before proceeding.

### **CONSENT AGENDA**

All items listed below are considered routine and will be enacted by one motion. No separate discussion will be held except at the request of a member of the Board of Commissioners to remove an item from the consent agenda and place it on the regular agenda.

- Minutes from Regular Meeting held on December 15, 2025 (pg. 1-7)
- Budget Amendment #13 – Sewer Taps & Connections (pg. 8)
- Budget Amendment #14 – PFAS Settlement (pg. 9)
- Budget Amendment #15 – Transferring Line Items Within Budget (pg. 10)
- Budget Amendment #16 – Street-Cut Repair Revenue (pg. 11)

### **PUBLIC COMMENT SESSION**

All public comments made during a public hearing should be withheld until the public hearing has begun and the floor is opened for public comments. No public comment will be made outside of this public comment session or a public hearing unless otherwise permitted by the Board of Commissioners. The mayor or presiding officer may place time limits on speakers before the start of the public comment session.

### **REPORTS**

- Manager's Report (pg. 12-17)
- Legislative Update: NCLM Legislative Action-Cities Halt Harmful Development Bills (pg. 18-19)
- Departmental Reports (pg. 20-30)

### **PUBLIC HEARINGS**

- a. PUBLIC HEARING – Request to Close a Portion of Kelly Street; Petitioner: Paul White (Kim Gibson, pg. 31-39)

- b. PUBLIC HEARING -- Rezoning Request for 4805 US 15-501, Parcel ID 857700704307; Petitioner: Duke Energy Progress (Chris Lawson, pg. 40-104)

#### **OLD BUSINESS**

- a. Cost Estimates for New Town Hall Construction (Emily Yopp, pg. 105-113)

#### **NEW BUSINESS**

- a. Resolution (RES.26.02) to Adopt the Carthage 2026-2029 Strategic Plan (Emily Yopp/Jamie Sandoval, pg. 114-118)
- b. Authorization for Private Sale of Surplus Real Property (RES.26.06) PIDs 00004984 & 00005160 (110 Old Glendon Rd) to Habitat for Humanity (Emily Yopp, pg. 119-122)
- c. Resolution (RES.26.01) of Adoption of Final Cape Fear Region Hazard Mitigation Plan, (Chris Lawson, pg. 123-125) ***(For a copy of the Plan, please contact the Town Clerk at 910-947-2331.)***
- d. Resolution (RES.26.03) of Support for Reduced Speed Limits on 15-501 (Emily Yopp/Chief Bart Davis, pg. 126-128)
- e. Water Capacity Planning and Resolution (RES.26.04) to Call for Public Hearing to Amend UDO (Emily Yopp/Allen Smith, pg. 129-136)
- f. Resolution (RES.26.05) to Call a Public Hearing for a Rezoning Request for Parcel ID 20170229; Petitioner: Gattis Construction Inc on behalf of Jeff Leenheer (Chris Lawson, pg. 137-138)

#### **FINAL COMMENTS**

The Board of Commissioners may take this opportunity to provide feedback, comments, commendations, and/or just general thoughts regarding various topics, issues, and ideas.

#### **CLOSED SESSION**

- a. As allowed by NC General Statute § 143-318.11(a)(5)  
**Establishing or instructing staff on the public body's negotiating position for the acquisition of real property.**
- b. As allowed by NC General Statute § 143-318.11(a)(6)  
**Discussion of personnel matters.**

#### **ADJOURNMENT**

# Town of Carthage

North Carolina

BOARD OF COMMISSIONERS



## MEETING AGENDA & BOARD MATERIALS

Regular Monthly Meeting

January 20, 2026

The McDonald Building  
207 McReynolds Street  
Carthage, NC 28327

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Town of Carthage,  
North Carolina

Board of Commissioners  
Regular Meeting  
December 15, 2025

McDonald Building  
207 McReynolds Street  
Carthage, NC 28327

Regular Public Meeting



# Town of Carthage

Board of Commissioners

Regular Meeting

December 15, 2025

6:30 p.m.

## ROLL CALL

Present and in person were Mayor Pro Tem John McDonald, Commissioners Al Barber, Dan Bonillo, and Brent Tanner. Excused were Mayor Jimmy Chalflinch and Commissioner Anton Sadovnikov.

## CALL TO ORDER

The meeting was called to order at 6:30 pm by Mayor Pro Tem John McDonald who would serve as chair for the evening.

## INVOCATION – Commissioner Brent Tanner

Commissioner Brent Tanner led the invocation.

## PLEDGE OF ALLEGIANCE – Commissioner Dan Bonillo

## APPROVAL OF AGENDA

The presiding officer noted that members of the board may remove, add, or rearrange items on the agenda before beginning the meeting. Motions/votes are not required to approve the agenda, but there must be unanimous consent before proceeding. The board members agreed to the agenda with no changes.

## CONSENT AGENDA

The presiding officer explained that all items listed under the consent agenda are considered routine and will be enacted by one motion with no separate discussion unless requested by a member of the Board of Commissioners.

***Commissioner Al Barber moved to approve the consent agenda with a second by Commissioner Bonillo. The motion was unanimously approved, 4-0.***

## PUBLIC COMMENT SESSION

Cheryl Degraffenreid thanked the Board for the dedication, from the beginning stages of ordering the sign through the years of work. She specifically thanked Town Manager Emily Yopp for the work done from the new

company to the old company. She stated that she wanted it reflected in the minutes that they were appreciative of all that had been done.

April Montgomery introduced herself as a candidate from Sanford in Lee County running for North Carolina State House in the 2026 election as an independent. She explained that she was introducing herself because residents might see her around the community collecting signatures for her petition, as independent candidates need 2,300 signatures to get on the ballot. She mentioned that Carthage, Cameron, and Vass are included in her district.

## SWEARING IN CEREMONY

District Court Judge Beth Tanner administered the oath of office for Mayor Pro Tem McDonald and Commissioner Brent Tanner for another 4 years each.

## REPORTS

### Manager's Report

Town Manager Emily Yopp provided project updates and administrative items:

She discussed several project updates:

***New Town Hall Design Updates:*** Town Manager Yopp reported that the design estimates received on December 19th were significantly higher than anticipated. She explained that the decision was made to request a more thorough breakdown from the estimator (MMI) to better understand the line-by-line costs. This would help determine which items are necessary versus those that could be delayed to balance costs. She stated that a meeting would be set in the next week or two to review the new estimates, after which she would have a better understanding of whether financing would be needed to complete the project.

***Strategic Plan:*** Town Manager Yopp informed the Board that they had received the final draft of the strategic plan they had been working on with the Central Pines Regional Council. She explained that Jamie Sandoval was spearheading this effort and that they would be meeting individually with all department directors to get their feedback. After gathering feedback and addressing concerns, they would bring the finalized plan to the Board in the New Year.

***Downtown Revitalization:*** Town Manager Yopp stated that she had a meeting scheduled with the design team (V3 and Bob Koontz) and Duke Energy to review plans for relocating electrical components including street lights, outlets, and underground facilities. She also mentioned they would be presenting Phase 1 plans to the County Board of Commissioners in January, since the majority of Phase 1 work would affect the county courthouse.

***Code Red Cybersecurity Incident:*** Town Manager Yopp informed the Board about a cybersecurity breach in their Code Red emergency alert system in November. The breach compromised users' names, addresses, email addresses, phone numbers, and passwords, though no financial information was affected. She explained that the old Code Red platform had been decommissioned and replaced with a new platform, but they had lost

their entire user database of approximately 2,500-3,500 users. She noted they were working to get residents to re-enroll in the system, with only about 20-30 people signed up so far. Flyers with QR codes were available for residents to sign up.

## Departmental Reports

The board acknowledged receipt of the departmental reports on pages 16 through 25 of the agenda packet. No additional comments were made by department representatives.

## OLD BUSINESS

None

## NEW BUSINESS

(Each item below summarizes staff presentation, main Board discussion points, Q&A, and actions taken. Packet page references are provided where relevant.)

- ***Approval of the Town Hall / BOC Meeting Calendar***

Jamie Sandoval, Management Analyst/Deputy Clerk presented the calendar showing all Board of Commissioner meetings for 2026. She explained that staff recommended adopting several additional holidays that align with the federal holiday calendar since it becomes challenging when the town is open but other facilities like banks and post offices are closed.

She pointed out that if the calendar was approved with the additional holidays, one Board of Commissioner meeting would need to be shifted. Town Clerk/HR Officer Kim Gibson clarified that for January 19th, the meeting would be held on January 20th instead, and if President's Day was added as a holiday, the February 16th meeting would move to February 17th.

There was a brief discussion about professional development days, with Town Manager Yopp explaining they use these days for various purposes including filing, cleaning, training, succession planning, ethics training, and catching up on work.

*Commissioner Dan Bonillo moved to approve the 2026 Board of Commissioners meeting schedule along with the proposed holiday dates as written and presented, with a second from another commissioner. The motion passed unanimously, 4-0.*

- ***Central Pines Regional Council Board of Delegates Delegate & Alternate Representatives Needed for the upcoming year***

Town Clerk/HR Officer Kim Gibson explained that the Central Pines Regional Council had requested reappointments for their board. She noted that Commissioner Bonillo was currently serving as the delegate and Commissioner Sadovnikov (who was absent) was serving as the alternate.

Commissioner Bonillo stated he was willing to continue serving but noted he would not be available for the January 28th meeting. Town Clerk Gibson indicated she would check with Commissioner Sadovnikov regarding his availability for that meeting and his interest in continuing as the alternate.

***Commissioner Tanner made a motion to appoint Dan Bonillo as the primary delegate with Anton Sadovnikov remaining as the alternate. Commissioner Barber seconded the motion which passed unanimously, 4-0.***

- ***Dedication and Acceptance of Magnolia Hill Apartments Lift Station***

Director Allen Smith from Public Works reported that the system had been inspected and was built to town specifications. He confirmed they had signed off and everything was as it should be for the town to take over maintenance of the lift station.

***Commissioner Dan Bonillo made a motion to accept the Magnolia Hill Apartments sewer lift station as part of the Town of Carthage utility infrastructure plan for maintenance, production, and repair. Commissioner Brent Tanner seconded. The motion passed unanimously, 4-0.***

Town Manager Emily Yopp noted that the Magnolia Hill project had been a conditional zoning project, with the Greenway Trail being a good example of conditions the board had applied to projects. She mentioned that Southern Pines was developing plans in Pinehurst and Aberdeen to connect trails through Moore County, and that someday the greenway around the Magnolia Hill apartments might connect to other trails, providing walking paths throughout the community.

- ***Call for a Public Hearing for a Zoning Map Amendment Application for 4805 US 15-501, Parcel ID 857700704307; Petitioner: Duke Energy Progress***

Town Clerk/HR Officer Kim Gibson explained this was a rezoning of a conditional zoning (a conditional rezone). She noted the original was done in 2024, and this amendment would allow for a telecommunication pole to reach 124 feet in height. She explained that Duke Energy Progress needed the pole to be tall enough to get the signal over a certain point, and while they already had permission for a certain height, they were requesting to go slightly higher.

***Commissioner Brent Tanner made a motion to call a public hearing to consider a conditional rezoning request for 4805 US 15-501 Hwy by Duke Energy to be held on Tuesday, January 20, 2026 at the McDonald Building located at 207 McReynolds Street. Commissioner Bonillo seconded the motion, which passed unanimously, 4-0.***

- ***Resolution of Intent and Call for a Public Hearing to close a portion of Kelly Street; Petitioner: Paul White***

Town Manager Emily Yopp explained that Paul White, a resident of Carthage, was petitioning for the closure of a portion of Kelly Street. She provided a map showing the specific section (highlighted in red) that was being petitioned for closure.

She explained that the entire street was not being proposed for closure because there was a rectangular property behind 507 Summit Street whose owner had neither agreed nor disagreed to the closure. By keeping a portion of the street open (highlighted in blue), that property would maintain access. She noted that the street in question was a "paper street" that had been proposed in the early 1900s but never built out, though the Town of Carthage had been receiving Powell Bill funding for it.

Town Manager Yopp mentioned that Mr. White had indicated he had received permission from all other landowners, but she did not have signed documentation showing that approval. She mentioned they would obtain the written proof before proceeding with the public hearing.

***Commissioner Dan Bonillo made a motion to approve the resolution of intent and call for a public hearing to consider the closing of a portion of Kelly Street at the regular meeting to be held on Tuesday, January 20, 2026 at 6:30 PM in the McDonald building located at 207 McReynolds Street. Commissioner Barber seconded the motion, which passed unanimously, 4-0.***

## FINAL COMMENTS

Commissioner Al Barber expressed appreciation for everything the town does and all the staff. He specifically thanked Progress Energy for not leaving them without power for too long during a recent cold night. He also thanked Elena for covering the ceremony on Saturday, noting that while she regularly covers meetings, that was an additional commitment.

The presiding officer commented that the parade had gone very well, though some members might need training on how to dispense candy. He thanked the staff for everything they do for the town and the people, acknowledging the challenging weather conditions they sometimes work in.

Commissioner Dan Bonillo shared that earlier in the day he had a scare when moving equipment with metal tracks and heard a loud pop, which turned out to be ice frozen to the tracks. This made him think about what the public works employees deal with, having to break ice off their equipment before use. He cautioned residents about the dropping temperatures, advising them to drip their water to prevent pipes from freezing.

Commissioner Bonillo congratulated John and Brent on being sworn in, expressing his pleasure at continuing to work with the team. He thanked the staff for their dedication, particularly noting how they had managed both a dedication and a parade on the same day. He mentioned that his wife ran the Girl Scout float for the parade and had seen town staff cleaning up candy before traffic was reopened.

Commissioner Bonillo shared that despite their efforts, they had lost the fight to keep the elementary school in Carthage, as the Board of Education had found another site they deemed more suitable. The presiding officer and Commissioner Barber expressed gratitude for Commissioner Bonillo's extensive work on this issue, offering alternative sites for consideration, though the school board had decided to go with the McDonald property.

Lastly, Commissioner Bonillo announced that the Carthage Town Hall would serve as the distribution point for all Girl Scout cookies in the county this year. He explained it would be a 24-hour process where cookies would be delivered in the morning and picked up by troop leaders throughout the day.

## ADJOURNMENT

***Commissioner Dan Bonillo moved to adjourn the meeting, with a second from another commissioner. The motion passed unanimously.***

***The meeting adjourned at 7:20 PM.***

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The foregoing minutes, having been submitted to a vote, received the following vote and was duly adopted and ordained this 20<sup>th</sup> day of January, 2026.

Ayes: \_\_\_\_\_

Nays: \_\_\_\_\_

Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalflinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



# Town of Carthage Board of Commissioners

## BUDGET AMENDMENTS #13 – SEWER TAPS & CONNECTIONS

Approved on the Consent Agenda for the January 20, 2026 Regular Meeting of the Board of Commissioners

### Budget Amendment #13

We received payment for sewer taps and connection fees for a new home on Maple Street. We were not aware of plans to build this house at budget preparation. This amendment is to receive and allocate this revenue.

					NUMBER 13
2025/2026 BUDGET AMENDMENT					
SEWER FUND					
JANUARY 2026					
Account Code			BUDGET	INCREASE (DECREASE)	NEW BUDGET
REVENUES:					
31-373-00	SEWER TAPS & CONNECTION		0	1,000	1,000
	FEES				0
EXPENDITURES:					
31-811-33	SUPPLIES		20,250	1,000	21,250
					0

Ayes: \_\_\_\_\_

Nays: \_\_\_\_\_

Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalfinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



# Town of Carthage Board of Commissioners

## BUDGET AMENDMENTS #14 – PFAS SETTLEMENT

Approved on the Consent Agenda for the January 20, 2026 Regular Meeting of the Board of Commissioners

### Budget Amendment #14

The Town of Carthage participated in a Class Action Lawsuit against 3M and DuPont, regarding PFAS substances and was able to recover under the settlements. This amendment is to receive and allocate money received as part of the settlement.

					NUMBER 14
2025/2026 BUDGET AMENDMENT					
WATER FUND					
JANUARY 2026					
Account Code			BUDGET	INCREASE (DECREASE)	NEW BUDGET
REVENUES:					
30-389-00	WATER MISC		9,400	160,000	169,400
	FEES				0
					0
EXPENDITURES:					
30-810-98	CONTINGENCY/RESERVE		9,400	160,000	169,400
					0

Ayes: \_\_\_\_\_

Nays: \_\_\_\_\_

Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalfinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



# Town of Carthage Board of Commissioners

## BUDGET AMENDMENTS #15 – LINE-ITEM TRANSFER WITHIN BUDGET

Approved on the Consent Agenda for the January 20, 2026 Regular Meeting of the Board of Commissioners

### Budget Amendment #15

To cover additional "fit for duty" exams for new applicants to fill two vacant Police Officer positions

					NUMBER 15
2025/2026 BUDGET AMENDMENT GENERAL FUND JANUARY 2026					
Account Code			<u>BUDGET</u>	<u>INCREASE (DECREASE)</u>	<u>NEW BUDGET</u>
REVENUES:					
			0	0	0
					0
EXPENDITURES:					
10-510-02	SALARIES		1,021,396	-2,000	1,019,396
10-510-34	HEALTH EXAMS		4000	2,000	6,000
					0

Ayes: \_\_\_\_\_

Nays: \_\_\_\_\_

Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalflinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



# Town of Carthage Board of Commissioners

## BUDGET AMENDMENTS #16 – STREET-CUT REPAIR REVENUE

Approved on the Consent Agenda for the January 20, 2026 Regular Meeting of the Board of Commissioners

### Budget Amendment #15

We have had some in-fill development in Town that needed street bores to provide access to Town utilities. This amendment is to receive and allocate payments from the builders for the street repairs.

					NUMBER 16
2025/2026 BUDGET AMENDMENT					
GENERAL FUND					
JANUARY 2026					
Account Code			BUDGET	INCREASE (DECREASE)	NEW BUDGET
<b>REVENUES:</b>					
10-385-00	STREET CUT REPAIRS		0	5,000	5,000
					0
<b>EXPENDITURES:</b>					
10-560-45	CONTRACTED SERVICES		34,400	5,000	39,400
					0

Ayes: \_\_\_\_\_

Nays: \_\_\_\_\_

Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalfinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



# MANAGER'S REPORT

Date: January 20, 2026  
To: Carthage Board of Commissioners  
From: Emily D. Yopp, Town Manager

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## 1. Town Manager Letter of Completion of the Civic Fellows Program

In December 2025, I completed the Leading for Results course at the UNC School of Government as part of the 2025 Civic Fellows Program. This statewide program is highly competitive, with more than 150 applicants, and selects emerging leaders in local government who demonstrate strong leadership potential. As a Civic Fellow, I participated in an intensive leadership curriculum focused on organizational leadership, practical management tools, and strategies for increasing effectiveness in public service. The program also included individualized coaching and opportunities to strengthen leadership competencies alongside an outstanding cohort of local government professionals from across North Carolina. I am grateful for the opportunity to bring these skills and insights back to the organization. Attached for your review is the Letter of Completion from the UNC School of Government.

## 2. Update on Cagle Lane Opening

Board and staff have received questions in recent weeks regarding when Cagle Lane, exiting from the Southbury subdivision onto Pinehurst Avenue, will be opening. Residents within the subdivision are eager to begin using the roadway for quicker access to downtown and to avoid the traffic on Hwy. 15-501. After speaking with the developer of the subdivision, he informed us that the underground power lines that were installed underneath the roadway by Duke Energy were not done to the specs of the construction plans he submitted to them. He stated that he has been in communication with Duke Energy for some time now on this matter and recently had a meeting with them to discuss Duke Energy moving the lines. The developer will keep us updated on the progress of the roadway, but at this time the matter is between the developer and Duke Energy.

## 3. Summary of Meeting Between Moore County Board of Commissioners and Carthage Staff Regarding Phase 1 of Downtown Revitalization Project

On Wednesday, January 14<sup>th</sup>, our design project manager, Trevor Hansen, and I met with the MCBOC during a work session to present to them Phase 1 of the downtown revitalization project and make three requests:

1. To authorize the Town to utilize its secured grant dollars to install rain gardens around the perimeter of the historic courthouse to manage runoff from the building to prevent ponding/splashing on the roadway as well as create an aesthetically pleasing barrier to guide pedestrians to use the crosswalks.
2. To authorize the Town to move the obelisk/cannons on the McReynolds St. side of the courthouse island and a planter bed on the Monroe St. side of the island, back approximately 10 feet to accommodate the crosswalk that will extend from the pedestrian refuge islands to the island. This would also require us to realign and pour new sidewalks in those sections.
3. Ask the MCBOC to consider contributing \$104,000 for plants, mulch, irrigation and other materials to complete the rain gardens as our grant dollars will not cover these costs.

Unfortunately, we were unable to secure these authorizations or commitment of funding from the MCBOC this week. They did express some concerns with our plan, they are:

**1. Carthage needs a bypass to get semi-trucks out of downtown.**

The Carthage Board has already directed staff to work with the Rural Planning Organization (RPO) to get the bypass project back on the STIP list. As a reminder, the bypass was proposed back in 2009 and met with significant opposition which led to the NCDOT removing the project indefinitely from their project list. Attached are two articles from The Pilot newspaper summarizing the events of that time and what led to the indefinite tabling of the bypass. It is important to recognize that, while both the Carthage BOC and MCBOC support the installation of a bypass around Carthage, there remains uncertainty on whether the bypass would receive support now or when it would get funded. A question we must all consider is whether we do nothing while waiting for a bypass that may never come.

**2. Semi-trucks will hit the curbs and refuge islands and make more noise/cause damage.**

As part of the Downtown Revitalization Phase 1 design, staff evaluated concerns about whether semi-trucks might strike the proposed pedestrian refuge island and create additional noise downtown. Our project and NCDOT engineers have conducted their analyses and ensured tractor-trailers can safely navigate the corridor. The refuge island's size and placement are intentional, meet established safety and design standards, and have already received NCDOT permit approval. In addition to improving pedestrian safety, this feature is expected to calm traffic which can reduce overall vehicle noise through the core of downtown. While no municipality can guarantee that a driver will never misjudge a turn or strike a curb, the design itself meets all applicable engineering and safety standards and is specifically built to accommodate the turning movements of large trucks and has been replicated in other towns around our State. Staff will continue to monitor traffic operations after installation and will make adjustments if needed to ensure the design functions effectively for both large vehicles and pedestrians.

I also want to address comments made during the meeting with the MCBOC that questioned the legitimacy of the engineering analyses supporting this project. One comparison suggested that using roadway modeling software is akin to using a flight simulator—implying that anyone could use it, but that does not make them an engineer. I want to be very clear: the Town of Carthage has invested significant time, expertise, and resources into this plan—three years of study and engineering, and more than \$200,000 of our own Fund Balance—to develop shovel-ready construction documents that position us not only for a successful Phase 1 but for securing future funding to complete the full nine-phase plan. We have engaged highly qualified engineers and designers, and we have worked closely with NCDOT from the beginning to ensure the concepts we advance are feasible, functional, and buildable. As your Town Manager, I want to assure the Board and the community that every design element has been thoroughly vetted and reflects the highest standards of engineering practice.

**3. The crosswalk connecting the island to the new courthouse should be moved to be in line with the ADA ramp on the historic courthouse and angled to lead people to the Register of Deeds since more people cross there than in front of the new courthouse.**

This is a decision that will need to be made by the NCDOT as they are responsible for the roadway. This will require us to go back through the NCDOT's permitting process to request a change which will take time. I also want to point out that there is approximately 50 feet between the current proposed location and the location being requested. Using GIS, I have measured approximate distance that an elderly or handicap individual would need to travel for each option.



This image shows approximate travel path from the ADA ramp at the historic courthouse using the proposed crosswalk and then ending at the Register of Deeds. Using the Moore County GIS measuring tool, the distance calculates to approximately 183 feet.



This image was done in the same fashion as the first and shows a travel path from the ADA ramp at the historic courthouse traveling across the MCBOC-preferred crosswalk location. The distance calculates to approximately 113 feet.

If the currently approved option is constructed this means individuals will have to walk **approximately 70 more feet** from where the crosswalk would land at the new courthouse walkway versus the corner closest to the Register of Deeds.

To put that distance in perspective, 70 feet is about the length of three standard parking spaces end-to-end.

**4. The rain gardens may limit access of delivery trucks who drive up onto the historic courthouse property.**

We are able to widen sidewalk paths and leave off curbing in key locations so that trucks like this may drive up onto the property to make deliveries without driving over the rain gardens. However, the County is considering major renovations to the historic courthouse and we understand their hesitation with putting the rain gardens in at this time. If the County is not prepared to commit to this project at this time, the Town remains open to partnership in the future.

**5. The plants in the rain garden may struggle or die without regular irrigation.**

The plants selected for the rain gardens are native and adaptive species chosen specifically because they can thrive without permanent irrigation. These species are well-suited to our climate and are designed to handle both wet periods and dry spells. While no landscaping can guarantee that every plant will survive every season, these gardens are intended to establish with short-term watering and then remain largely self-sustaining over time.

I will go over the Board’s options from this point during the designated agenda item.

## Environmental Issues Reviewed For N.C. 24-27 Carthage Bypass

Apr 29, 2009

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Environmental issues, not routing, were on the minds of officials who gathered last week for a field trip related to the proposed N.C. 24-27 bypass of Carthage.

However, about 30 people showed up for the outing that began in the morning near the Carthage quarters of the N.C. Department of Transportation (NCDOT).

O'Linda Williams Gillis was among those who came to the site but left without taking the field trip. Gillis has been lobbying to route the bypass south of town and away from the Needmore community, where she lives.

In addition to Needmore residents, property owners in the Priest Hill Road area showed up in the expectation that the bypass route would be discussed. They also oppose the northern route.

Tim Johnson, eighth division engineer for NCDOT, says the event was scheduled to collect information about stream locations and to determine certain environmental issues that must be ironed out in the permitting process. From a practical standpoint, NCDOT cannot begin designing a route until a series of permits, including environmental permits, is secured.

Johnson said the field trip was called to discuss such things as the need for bridges and culverts. In attendance were representatives of the Corps of Engineers and the Environmental Protection Agency as well as NCDOT.

The data collected Wednesday will be used for the preliminary stage in preparation for the bypass design.

Johnson said the route has not been decided. And once NCDOT settles on a route, he said it will be at least 2014 before the agency can begin work on right of way acquisition. The bypass has long been listed in the NCDOT Transportation Improvement Program, and its placement has been accelerated in recent years. It remains unfunded, and because of the economic slump, the state is short of funds for road-building purposes.

The purpose of the Wednesday event was not clear when the Moore County Board of Commissioners met the previous Monday night. Commissioner Tim Lea called attention to the notice and asked that people affected by the bypass be notified.

As a result, County Planning Director Joey Raczkowski was asked to make sure the information was available to interested residents. The planning office's equipment was used to dispatch electronic telephone messages to residents of the Needmore, Priest Hill and neighboring communities advising them of the Wednesday program. The electronic message advised that those participating should come prepared to walk in undisturbed areas and to bring a sandwich for lunch.

Three or four different bypass routes have been considered over a period of several years, and from time to time various routes have been discarded.

The Board of Commissioners last year issued a statement asking NCDOT to steer clear of the northern route. However, other interests have expressed opposition to the southern route.

Gillis said that she and other Needmore residents decided not to remain when they learned that the gathering was to focus on environmental needs, not routing.

"Let someone else walk through the poison ivy," she said of the uncertain terrain being traveled by highway and environmental professionals better accustomed to such activities.

Contact Florence Gilkeson at 947-4962 or by e-mail at [florence@thepilot.com](mailto:florence@thepilot.com).

## Carthage Bypass Dropped

Oct 14, 2009

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Responding to what it termed "a great deal of public response," the N.C. Department of Transportation is proposing to defer the controversial Carthage by-pass project indefinitely.

At its September meeting, the Town Board had directed Mayor Ronnie Fields to write the state agency saying that it did not like any of the three proposed N.C. 24/27 bypass routes.

One would pass north of the old downtown and another would drive through the water plant and new subdivisions such as Savannah's Gardens. A third threatened the oldest black church in Carthage as well as a large number of homes while splitting the old town from its growing southern edge.

A group of residents came to that meeting prepared to voice their objections. They held off when the board voted unanimously to disapprove of all three routes and directed the mayor to write the N.C. Department of Transportation (NCDOT) and say so.

A telephone call from NCDOT to Town Manager Carol Sparks last week was confirmed Monday in a letter faxed to her office from Division Engineer Tim Johnson. He wrote that NCDOT "evaluates all projects and programs periodically to determine if current projects and/or programs are relevant and provide a sufficient level of benefit to justify the corresponding cost to taxpayers."

NCDOT is ready to defer this project, taking it off the table indefinitely, meaning that it is dead.

Johnson cited three reasons for the decision to defer the project.

In the first place, NCDOT had encountered "significant public opposition" to both northern and southern alternatives that had been proposed, Johnson said. It found little support and widespread disapproval at its information workshop, at two meetings with town officials, and at neighborhood meetings with residents.

Neighborhood meetings had been held on several occasions, three of which Johnson noted from 2007 and 2008. Other meetings apart from those set by NCDOT took place in the past two months, and a groundswell of opposition to the bypass was taking form in letters and appeals asking the Town Board and the Moore County Board of Commissioners to oppose the project.

Another significant issue for the DOT is the cost, according to Johnson.

"The southern alternatives have significant environmental impacts that will have to be mitigated at a sizable cost if a southern route is chosen and pursued," he said.

Both southern routes would split Carthage between its historic center and its growing Little River area to the south. Neighbors in that area have recently organized to fight the southern plans, as neighbors on the north had done before them.

One abandoned northern route would have cut through the Needmore community. It was changed following opposition from residents there, but its replacement route also ran into opposition.

Another issue Johnson said concerned NCDOT was that projected traffic volume on either northern or southern bypass routes was not high enough. Its projections showed only 5,000 vehicles per day would be taking the northern route 20 years out, with some 10,000 using a southern route should that be chosen.

"These projections are fairly low for a projected freeway facility," Johnson said.

NCDOT had already revised its plans once. Its first maps displayed three 1,000-foot-wide swaths sweeping across north of the old downtown cutting through Needmore -- an historically black area that organized its own improvement association years ago. The town later annexed the community.

Public opposition forced NCDOT to make a change, moving its northern alternative farther out. The revision still threatened homes, as did a central swath cutting through a mile below the historic courthouse and across past the municipal building.

Even more would have been hit by the southernmost path, a wide curve crossing below and back around to meet U.S. 15-501 on the eastern side.

Out of those wide proposed areas, the department had planned to use eminent domain to obtain 200 foot rights of way. NCDOT had a tough time from the start.

In 2006, the commissioners vowed they would vigorously oppose any route that would isolate the town or destroy homes and communities. By 2007, when the state dropped its original two northern routes, Carthage was seeing considerable growth and development on its southern side.

Opponents from both north and south met at John Hall Presbyterian Church to voice their concerns. After that meeting, and their appeal to the Town Board, the town commissioners wrote NCDOT asking it to go back to the drawing board.

Now it appears DOT is ready to mothball that drawing board, if that is what the town board wants.

"If the Carthage Board of Commissioners concurs with the proposal to defer the project, please prepare an appropriate resolution stipulating your desires and request that the Triangle Area Rural Planning Organization do the same," Johnson said in his letter. "The resolutions may be sent to the Division 9 office in Aberdeen."

By Monday afternoon, Sparks had already begun preparing a proposed text for such a resolution. Commissioners are expected to pass it without objection at their regular Oct. 19 meeting.

Contact John Chappell at 783-5841 or by e-mail at [jchappell@thepilot.com](mailto:jchappell@thepilot.com).

# Legislative Action: Cities Halt Harmful Development Bills

Q4 2025 | Vol. 75, Issue 4

Local governments across the state, with their knowledge of regional context and tailored strategies for managed growth, are a vital part of North Carolina's residential quality.

A successful defense of that played out in the 2025 General Assembly. Citing challenges in the state's housing supply and affordability, some in the development industry this year pushed sweeping legislative proposals that, unfortunately, sought to upend common local government authorities and safeguards without addressing marketplace factors behind the costs.

These bills, representing continued pressure from the development industry, amounted to one-size-fits-all preemptions on local land-use and building regulations, despite the nuance that different cities and towns across the state consider with planning and development.

"As the front line of the state's housing challenges, municipalities are best equipped to develop policies that reflect the unique needs of their residents," the League's Government Affairs team noted over the summer as the proposals circulated in the legislature.

Fortunately, the League's response and that of municipal officials across the state, highlighting the harm posed to community growth, staved off the bills. But it all made for substantial work this year among proponents and detractors, with intense debate around proposals like House Bill 765, titled "Save the American Dream Act."

Filed in April, it sought to weaken or eliminate large portions of municipal planning and development authority, with provisions that included requirements for minimum residential densities, mandates to allow accessory dwelling units (commonly referred to as "ADUs," with examples including "tiny houses" added to developed lots) in all residential zones, prohibitions on parking minimums, and new state-imposed procedures that would override locally tailored development rules. The bill also included unprecedented conflict of interest provisions and potential legal penalties for local officials making routine land-use decisions, raising significant concerns about municipal liability.

That specific bill died in the House, but several of its components found new life in amendments to another proposal from across the hall: Senate Bill 205 (originally filed to clarify law with swimming pools). Although the amended proposal would have further constrained local flexibilities, as city officials continued to spotlight concerns, it did not move to the House floor.

The development industry and advocates, in putting these preemption bills forward, suggested they would help in the fight for a better and more affordable housing picture. But local government leaders and other opponents of the bills brought important context to the supply-and-cost conversation.

While the bills would have displaced carefully calibrated growth management strategies, they wouldn't have addressed primary cost drivers like construction prices, workforce shortages, and high interest rates.

Over the past several years, nationwide, just about every major type of building material has jumped in price, in some cases without signs of relief, adding to the costs people face when shopping for or hoping to build property, according to media outlets and trade groups. "In other words, these costs directly shape, in part, how, when and whether homes get built," Fox Business reported in September. The outlet cited the National Association of Homebuilders (NAHB) and Associated General Contractors of America in listing factors like tariffs on materials.



Another player is a shortage in the housing industry of skilled labor, according to a study released in June by the Home Builders Institute in collaboration with NAHB. They said it prevented the creation of thousands of homes each year and was a "multibilliondollar challenge."

In North Carolina, proponents of the bills to preempt local decision-making cited a statewide housing shortage of 765,000 units.

But the National Association of Realtors in a report this summer pointed to possible turnarounds, noting housing inventory was recovering, even rebounding,

across the country. "There is no doubt that this is very good news," the group said. "More inventory typically means more options, and more options can help ease price pressures."

The issue, with myriad contributors, remains complex; observers are closely following these affordability factors and the potential softening of other effective parts, like interest rates.

While none of the sweeping proposals against local decision-making this year passed, the issue is likely to resurface in future legislative sessions, and municipal officials will continue to share with lawmakers the consequences of local planning preemption: damage in the ability to attract residents and businesses, and potential damage to existing home values.

03 Dec 2025



About the author

**Ben Brown**

***Communications & Multimedia Strategist***

Supports the League's communication strategies as the in-house multimedia producer dedicated to improving awareness of membership services, advocacy campaigns, and organizational goals.

**TOWN OF CARTHAGE  
CASH POSITION**

<b>FUND</b>		<b><u>DECEMBER 2025</u></b>	<b><u>NOVEMBER 2025</u></b>	<b><u>OCTOBER 2025</u></b>
#10	Cash on Hand			
	Petty Cash	\$300.00	\$300.00	\$300.00
	Crime Investigation	\$200.00	\$200.00	\$200.00
#10	General Fund			
	Central Depository (.05% Yield)	\$1,905,758.25	\$2,013,631.08	\$2,326,505.60
	CD Mature 03/20/2026 (0.02% Yield)	\$25,442.06	\$25,442.06	\$25,442.06
	NC Capital Trust (5.23% Yield)	\$1,007,437.26	\$1,004,242.01	\$1,001,026.78
#10	Firemens' Fraternal			
	Central Depository (.05% Yield)	\$10,368.00	\$12,368.00	\$14,368.00
#10	McConnell Marker			
	Central Depository (.05% Yield)	\$200.00	\$200.00	\$200.00
#10	Restricted Performance Bond			
	Central Depository (.05% Yield)	\$23,632.00	\$23,632.00	\$23,632.00
#10	Carriage Hills Surety			
	Central Depository (.05% Yield)	\$0.00	\$0.00	\$0.00
#10	Carriage Place Townhomes Surety			
	Central Depository (.05% Yield)	\$0.00	\$0.00	\$0.00
#10	Historical			
	Central Depository (.05% Yield)	\$1,685.14	\$1,685.14	\$1,685.14
#15	Powell Bill Fund			
	Central Depository (.05% Yield)	\$268,445.38	\$212,561.21	\$214,190.86
	NC Capital Trust (5.23% Yield)	\$99,943.87	\$99,626.88	\$99,307.91

		<u>DECEMBER 2025</u>	<u>NOVEMBER 2025</u>	<u>OCTOBER 2025</u>
#30	Water			
	Central Depository (.05% Yield)	\$414,301.32	\$378,706.65	\$385,475.06
	CD Mature 03/20/2026 (.02% Yield)	\$17,304.18	\$17,304.18	\$17,304.18
	NC Capital Trust (5.23% Yield)	\$110,168.78	\$109,819.36	\$109,467.75
#31	Sewer			
	Central Depository (.05% Yield)	\$641,359.93	\$604,025.02	\$568,872.33
	CD Mature 03/20/2026 (.20% Yield)	\$17,304.17	\$17,304.17	\$17,304.17
	NC Capital Trust (5.23% Yield)	\$104,494.96	\$104,163.54	\$103,830.04
#35	Capital Reserve Water & Sewer Improvements			
	Central Depository (.05% Yield)	\$1,610,267.06	\$1,610,267.06	\$1,610,267.06
#70	Cemetery			
	Central Depository (.05% Yield)	\$0.00	\$0.00	\$0.00
	NC Capital Trust (5.23% Yield)	\$31,158.22	\$31,059.40	\$30,959.96
<b>TOTALS</b>		<b>\$6,289,770.58</b>	<b>\$6,266,537.76</b>	<b>\$6,550,338.90</b>



## Monthly Call Report

INCIDENT ID	PSAP CALL DATE/TIME	INCIDENT TYPE SERIES NAME (NFIRS)	INCIDENT NUMBER	AID TYPE
30447913	2025-12-01 10:46:06	Good Intent	1095	Automatic aid given
30453728	2025-12-01 11:28:24	Rescue & EMS	1096	
30464865	2025-12-01 13:03:45	False Alarm & False Call	1097	
30472170	2025-12-01 14:03:19	Rescue & EMS	1098	
30565438	2025-12-02 03:47:34	Rescue & EMS	1099	
30582150	2025-12-02 06:57:41	Rescue & EMS	1100	
30630519	2025-12-02 15:09:14	Fire	1101	Mutual aid received
30643893	2025-12-01 03:32:34	Rescue & EMS	1102	
30738748	2025-12-03 12:55:23	Rescue & EMS	1103	
30754095	2025-12-03 16:00:52	Rescue & EMS	1104	
30792649	2025-12-04 00:12:59	Rescue & EMS	1105	
30848552	2025-12-04 11:43:02	Rescue & EMS	1106	
30849876	2025-12-04 13:00:08	Fire	1107	Automatic aid given
30923197	2025-12-05 15:44:30	Rescue & EMS	1108	
30926414	2025-12-05 16:24:36	False Alarm & False Call	1109	Automatic aid received
30988864	2025-12-06 05:30:22	Rescue & EMS	1110	Mutual aid given
31012873	2025-12-06 10:59:17	False Alarm & False Call	1111	
31025879	2025-12-06 13:43:30	Hazardous Condition	1112	
31041706	2025-12-06 17:04:21	Rescue & EMS	1113	
31076697	2025-12-07 00:42:32	Fire	1114	Automatic aid received
31136472	2025-12-07 14:56:39	Fire	1115	Mutual aid received
31197836	2025-12-08 05:52:59	Rescue & EMS	1116	
31236236	2025-12-08 14:59:47	Hazardous Condition	1117	
31238712	2025-12-08 15:31:32	Rescue & EMS	1118	
31245296	2025-12-08 17:03:00	Rescue & EMS	1119	
31437913	2025-12-09 17:54:17	Rescue & EMS	1120	Mutual aid received
31500682	2025-12-09 22:33:39	Fire	1121	Mutual aid given
31502486	2025-12-10 01:36:18	Fire	1123	Mutual aid received
31530149	2025-12-10 10:13:03	Rescue & EMS	1124	Mutual aid given
31533799	2025-12-10 11:03:57	Rescue & EMS	1125	Mutual aid received

# Monthly Call Report

Carthage Fire & Rescue

Address: 4396 US 15 501 Hwy, Carthage, NC, 28327



INCIDENT ID	PSAP CALL DATE/TIME	INCIDENT TYPE SERIES NAME (NFIRS)	INCIDENT NUMBER	AID TYPE
31548829	2025-12-10 11:47:39	Good Intent	1126	
31630855	2025-12-11 11:54:01	Rescue & EMS	1127	
31634455	2025-12-11 14:40:19	False Alarm & False Call	1128	Mutual aid received
31636638	2025-12-11 16:15:42	Rescue & EMS	1129	
31637448	2025-12-11 16:52:53	Good Intent	1130	Mutual aid given
31645222	2025-12-12 00:03:47	Rescue & EMS	1131	
31659624	2025-12-12 06:34:00	Rescue & EMS	1132	
31668978	2025-12-12 10:48:52	Fire	1133	Automatic aid received
31671563	2025-12-12 12:43:29	Rescue & EMS	1134	
31694465	2025-12-13 11:27:19	Service Call	1135	
31704520	2025-12-13 19:21:33	Rescue & EMS	1136	
31718538	2025-12-14 10:35:53	False Alarm & False Call	1137	
31723099	2025-12-14 14:17:59	Severe Weather & Natural Disaster	1138	
31723491	2025-12-14 14:37:46	Rescue & EMS	1139	
31723766	2025-12-14 14:51:30	Rescue & EMS	1140	
31730653	2025-12-14 20:38:39	Fire	1141	
31734607	2025-12-15 00:50:00	Fire	1142	Automatic aid given
31747948	2025-12-15 08:26:07	Rescue & EMS	1143	
31779940	2025-12-16 00:11:47	Rescue & EMS	1144	
31818487	2025-12-16 15:31:04	Service Call	1145	
31826502	2025-12-16 22:08:50	Rescue & EMS	1146	
31828096	2025-12-17 00:39:28	Rescue & EMS	1147	
31831194	2025-12-17 06:53:31	Rescue & EMS	1148	
31834027	2025-12-17 09:57:56	Rescue & EMS	1149	
31838830	2025-12-17 13:08:47	Rescue & EMS	1150	
31853856	2025-12-17 18:57:55	Rescue & EMS	1152	
31936754	2025-12-18 10:49:38	Rescue & EMS	1153	
31941160	2025-12-18 11:19:19	Fire	1154	Mutual aid given
31970589	2025-12-18 14:05:55	Fire	1155	Other aid given
31981346	2025-12-18 21:23:45	Rescue & EMS	1156	
31985098	2025-12-19 01:09:46	Rescue & EMS	1157	
31992682	2025-12-19 10:00:54	False Alarm & False Call	1158	

# Monthly Call Report

Carthage Fire & Rescue

Address: 4396 US 15 501 Hwy, Carthage, NC, 28327



INCIDENT ID	PSAP CALL DATE/TIME	INCIDENT TYPE SERIES NAME (NFIRS)	INCIDENT NUMBER	AID TYPE
31992821	2025-12-19 10:06:47	Hazardous Condition	1159	
32003563	2025-12-19 15:29:26	Rescue & EMS	1160	Mutual aid given
32009974	2025-12-19 18:56:24	False Alarm & False Call	1161	
32018799	2025-12-20 06:09:55	Rescue & EMS	1162	
32022465	2025-12-20 11:10:02	False Alarm & False Call	1163	
32028711	2025-12-20 15:40:30	Good Intent	1164	Mutual aid given
32031101	2025-12-20 17:36:48	Good Intent	1165	Mutual aid given
32033341	2025-12-20 19:27:27	Good Intent	1166	Mutual aid given
32035377	2025-12-20 21:16:56	Rescue & EMS	1167	
32035994	2025-12-20 21:47:52	Rescue & EMS	1168	
32058301	2025-12-21 19:49:27	Rescue & EMS	1169	Mutual aid given
32067414	2025-12-22 06:39:57	Rescue & EMS	1170	
32068189	2025-12-22 07:49:46	Rescue & EMS	1171	
32068204	2025-12-22 07:40:06	Good Intent	1172	Mutual aid given
32070950	2025-12-22 10:16:39	Service Call	1173	
32071217	2025-12-22 10:25:52	Fire	1174	Automatic aid received
32080139	2025-12-22 15:19:50	Rescue & EMS	1175	
32083520	2025-12-22 17:47:58	Rescue & EMS	1176	
32118637	2025-12-23 11:00:23	Good Intent	1177	Mutual aid given
32120100	2025-12-23 11:50:08	Fire	1178	
32142120	2025-12-23 17:32:48	Good Intent	1179	Automatic aid given
32160515	2025-12-23 21:39:45	Good Intent	1180	
32177637	2025-12-24 13:57:51	Rescue & EMS	1181	
32179800	2025-12-24 15:38:28	Hazardous Condition	1182	
32183445	2025-12-24 18:30:18	Rescue & EMS	1183	
32209133	2025-12-25 17:43:05	False Alarm & False Call	1184	
32210982	2025-12-25 18:29:51	Good Intent	1185	Automatic aid given
32224277	2025-12-26 11:34:22	Rescue & EMS	1186	
32243158	2025-12-27 05:43:37	Rescue & EMS	1187	
32273060	2025-12-28 14:17:36	Rescue & EMS	1188	
32276293	2025-12-28 17:03:59	Hazardous Condition	1189	Automatic aid received
32278355	2025-12-28 18:44:28	Rescue & EMS	1190	

# Monthly Call Report

Carthage Fire & Rescue

Address: 4396 US 15 501 Hwy, Carthage, NC, 28327



INCIDENT ID	PSAP CALL DATE/TIME	INCIDENT TYPE SERIES NAME (NFIRS)	INCIDENT NUMBER	AID TYPE
32282176	2025-12-28 21:59:20	Rescue & EMS	1191	
32283702	2025-12-28 23:55:29	Good Intent	1192	
32286416	2025-12-29 04:34:52	Rescue & EMS	1193	
32290783	2025-12-29 09:44:00	Rescue & EMS	1194	
32290836	2025-12-29 09:47:00	False Alarm & False Call	1195	
32315515	2025-12-29 19:10:49	Rescue & EMS	1196	
32324522	2025-12-30 07:27:32	Rescue & EMS	1197	
32332927	2025-12-30 13:34:26	Rescue & EMS	1198	
32336202	2025-12-30 16:10:07	Service Call	1199	
32340028	2025-12-30 19:03:27	Service Call	1200	
32341859	2025-12-30 20:35:46	Rescue & EMS	1201	
32341898	2025-12-30 20:35:01	Rescue & EMS	1202	
32346121	2025-12-31 01:34:37	Rescue & EMS	1203	
32348076	2025-12-31 05:57:18	Rescue & EMS	1204	
32363577	2025-12-31 17:59:06	Rescue & EMS	1205	
32366458	2025-12-31 20:09:31	Good Intent	1206	Automatic aid given

Criteria: PSAP Call Date/Time from 2025-12-01 00:00:00 to 2026-01-01 00:00:00

Carthage Police Department | Citation / Warning (NC)s: 18 Results | 2025-12-01 - 2025-12-31

Citation/Warning Type	Citation Date/Time	Agency Case Number	Race	Gender
Written Warning	2025-12-29 19:23	25-009191	W - White	M - Male
Written Warning	2025-12-28 20:42		B - Black or African American	M - Male
Written Warning	2025-12-25 14:40		W - White	M - Male
Written Warning	2025-12-24 16:35		W - White	M - Male
Written Warning	2025-12-25 17:14		W - White	F - Female
Written Warning	2025-12-27 10:53	25-009111	B - Black or African American	F - Female
Written Warning	2025-12-26 00:00	25-009097	W - White	F - Female
Written Warning	2025-12-21 12:11	25-008968	B - Black or African American	F - Female
Written Warning	2025-12-21 14:52	25-008970	W - White	M - Male
Written Warning	2025-12-20 16:21	25-008951	W - White	M - Male
Written Warning	2025-12-18 22:58	25-008903	W - White	M - Male
Written Warning	2025-12-17 19:11	25-008863	W - White	M - Male
Written Warning	2025-12-18 00:00	25-008885	B - Black or African American	F - Female
Written Warning	2025-12-14 17:59	25-008775	W - White	F - Female
Written Warning	2025-12-04 13:58	25-008536	W - White	M - Male
Written Warning	2025-12-04 12:21	25-008534	W - White	F - Female
Written Warning	2025-12-04 00:00	25-008552	W - White	F - Female
Written Warning	2025-12-03 00:00	25-008510	W - White	M - Male

Carthage Police Department | Incident (NC)s: 36 Results | 2025-12-01 - 2025-12-31

Incident Number	Reference #	Primary Offense
I20251231-08	25-009243	90Z - All Other Offenses : Harassment
I20251231-01	25-009230	13B - Simple Assault
I20251230-05	25-009205	90E - Drunkenness
I20251230-03	25-009204	90Z - All Other Offenses : Suspect harassing victim with texts
I20251229-22	25-009047	90Z-24 - Trespassing : Told to leave property, refused to do so.
20251228-0001	25-009141	23G - Theft of Motor Vehicle Parts or Accessories
I20251228-08	25-009149	90Z-43 - Suicide : Suicide Attempt (Voluntary Commitment)
I20251227-10	25-009130	90J - Trespass of Real Property
I20251226-10	25-009105	90Z - All Other Offenses : Emergency Commitment
I20251224-08	25-009055	90Z-02 - Unattended Death : Death
I20251223-09	25-009021	90Z - All Other Offenses : Warrant Service
I20251223-07	25-009018	90Z - All Other Offenses : Warrant Service
I20251222-21	25-008990	90Z - All Other Offenses : Structure Fire
I20251221-15	25-008974	90Z - All Other Offenses : FTA
I20251221-12	25-008977	290 - Destruction/Damage/Vandalism of Property
I20251221-01	25-008969	23H - All Other Larceny
I20251219-11	25-008928	90Z - All Other Offenses : Throwing food on car
I20251218-30	25-008888	290 - Destruction/Damage/Vandalism of Property
I20251217-11	25-008860	23H - All Other Larceny
I20251216-36	25-008835	35A - Drug/Narcotic Violations
I20251216-33	25-008833	35A - Drug/Narcotic Violations
I20251216-30	25-008829	26F - Identity Theft
I20251216-11	25-008821	90Z - All Other Offenses : Possible B&E
I20251215-28	25-008807	290 - Destruction/Damage/Vandalism of Property

Carthage Police Department | Incident (NC)s: 36 Results | 2025-12-01 - 2025-12-31

Incident Number	Reference #	Primary Offense
I20251214-08	25-008770	90Z-02 - Unattended Death : Natural Death

Carthage Police Department | Warrants: 7 Results | 2025-12-01 - 2025-12-31

Incident	Warrant Type	Arrest Date	U C R/N I B R S Offenses	Race	Gender	Obtained Location (F I P S)	Offense Date/Time
I20251230-05	Misdemeanor Warrant	2025-12-30T08:24:00.000Z	90E - Drunkenness	W - White	M - Male	125 - Moore	2025-12-30 02:45
I20251223-07	Capias Warrant	2025-12-23T20:48:00.000Z	90Z - All Other Offenses	W - White	F - Female	125 - Moore	2025-12-19 00:00
I20251221-15	Misdemeanor Warrant	2025-12-21T19:59:00.000Z	90Z - All Other Offenses	W - White	F - Female	125 - Moore	2025-12-08 00:00
I20251221-01	Misdemeanor Warrant	2025-12-21T18:01:00.000Z	23H - All Other Larceny	W - White	M - Male	125 - Moore	2025-12-21 12:30
I20251216-36	Citation Issued	2025-12-16T22:00:00.000Z	35A - Drug/ Narcotic Violations	I - American Indian or Alaska Native	M - Male	125 - Moore	2025-12-16 16:15
I20251216-33	Citation Issued	2025-12-16T22:00:00.000Z	35A - Drug/ Narcotic Violations	W - White	M - Male	125 - Moore	2025-12-16 16:00
I20251206-03	Misdemeanor Warrant	2025-12-02T22:24:00.000Z	90Z-09 - Resist Arrest	W - White	M - Male	125 - Moore	2025-12-02 00:00



# Town of Carthage Public Works Department

## MONTHLY REPORT DECEMBER 2025

### Water Service

Locates	Work Orders	Cut-Offs / Tags	Meters Installed	Water Main/ Service Repairs	Water Taps
262	32	43	0	4	0

### Sewer Service

Service Renewals	Lift Station Repairs	Force Main Repairs	Mowed Outfall Lines	Town Sewer Backups	Sewer Taps
0	1	0	0	2	0

### Building & Grounds

Leaf & Limb Total Rounds	Trash Runs	Complete Mowed Rounds	Building Repairs
2	0	0	0

### Streets

Cleaned Out Catch Basin	Cleaned Streets With Blower
1	1

### Construction Projects

- 1.
- 2.
- 3.

Additional Notes



## MEMORANDUM

Date: January 14, 2026  
To: The Board of Commissioners  
From: Kim Gibson, Town Clerk  
Subject: Request for partial closure of Kelly Street. Petitioner: Paul White

---

Mr. Paul White has requested that a portion of Kelly Street, which is undeveloped and has not been paved or used, be permanently closed. The portion that Mr. White wishes to close would be from Davis Street to the area located between PID#s 00001804 and 00004410.

All parties that would potentially be affected by the road closure have written notice that they are in favor, or not opposed, to the closure. It appears that no property owners would be placed in hardship were this closure proceed as requested.

### **SUGGESTED MOTION(S):**

#### **OPTION 1**

I make a motion to ORDER that the portion of Kelly Street beginning at the joined property line of Parcel ID 00001804 and 00004410 extending to Davis Street be closed in accordance with G.S. § 160A-299(a), and all right, title, and interest that may be vested in the public to said area for street purposes is hereby released and quitclaimed to the abutting property owners in accordance with the provisions of G.S. § 160A-299(c).

#### **OPTION 2**

I make a motion to deny the request to close a portion of Kelly Street for the following reason(s):

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---



# Town of Carthage

4396 Hwy 15/501 • Carthage, NC 28327

Phone: 910.947.2331 • Fax: 910.947.3079

www.TownofCarthage.org

Email Completed Form to: TownClerk@TownofCarthage.org

Updated 12/16/2023

RECEIVED

PAID NOV 03 2025  
NOV 13 2025

## Petition for Street Closure

Date: 11/3/2025

To the Board of Commissioners of the Town of Carthage:

We the undersigned respectfully request that the street described below be permanently closed to through-traffic.

### PETITIONER INFORMATION

Name: Paul M White

Phone: 910-783-7868

Address: PO Box 771, 230 Kim Lane  
Carthage, NC 28327

Email: paulmwhite@mindspring.com

Map of road location attached?  YES  NO

General location and name(s) of road(s) to be closed: Kelly Street  
"The Summit" Subdivision

Reason for road closure request: Road never opened or used. Not requesting complete  
closure only a certain section

### For Office Use Only

POLICE CHIEF Comments/Suggestions: CLOSURE WOULD NOT HAVE IMPACT ON POLICE SERVICES  
AS ROAD HAS NEVER BEEN ESTABLISHED. OPENING/ESTABLISHING ROAD WOULD HAVE  
MINIMAL TO NO IMPACT ON POLICE SERVICES. Initials: EDD

FIRE CHIEF Comments/Suggestions: Road closure is fine. We need access to Apartments on the corner.  
Initials: BT

PUBLIC SERVICES DIRECTOR Comments/Suggestions: [Signature]  
Initials: A.F.

Yes, I certify that the information given is accurate and the reasons presented for closing the above mentioned road(s) are valid to the best of my knowledge and research.

No, I do not certify this petition for road(s) closure for the following reasons: \_\_\_\_\_

Town Clerk Signature/Certification

Date

230 Kim Lane  
Post Office Box 771  
Carthage, NC 23827  
December 22, 2025

Dear Sir,

We are petitioning the town to close a portion of Kelly Street which is in Carthage, North Carolina. The road was never built but was designated on a survey for "The Summit" development from the 1900's. The section that we are requesting to be closed, would not harm any of the adjoining land owners and all of us agree that this would be the best solution in our situation. It is our understanding that the land designated for the road would be divided by the adjoining landowners.

Please contact us at 910-783-7868 should you have any questions on our request.

Sincerely,



Paul M. White



Carol M. White

511 Kelly St

Carthage, North Carolina 28327

December 16, 2025

Dear Sir or Ma'am

My wife and I have no objection to the closing of Kelly Street that adjoins my property in Carthage, North Carolina. It is my understanding that once the road has been designated as closed, that I will be deeded one-half of the road that adjoins my property.

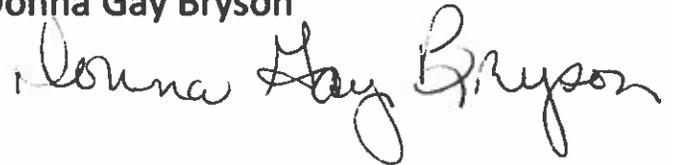
Please call me at 910-783-5227 should you need to speak with me.

Sincerely,

William Shad Bryson



Donna Gay Bryson



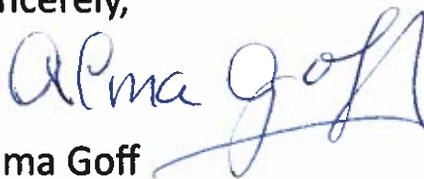
202 Martin Street  
Carthage, North Carolina 28327  
December 16, 2025

Dear Sir:

I have no objection to the closing of Kelly Street that adjoins my property at Davis Street in Carthage, North Carolina. It is my understanding that once the road has been designated as closed, that I will be deeded one-half of the designated road property that adjoins my property.

Please call me at 910-366-1298 should you need to speak with me.

Sincerely,

  
Alma Goff

## Paul White

---

**From:** Shad Bryson <wshadbryson@gmail.com>  
**Sent:** Wednesday, October 15, 2025 6:00 AM  
**To:** Paul White  
**Subject:** Fwd: Kelly St. Removal Letter

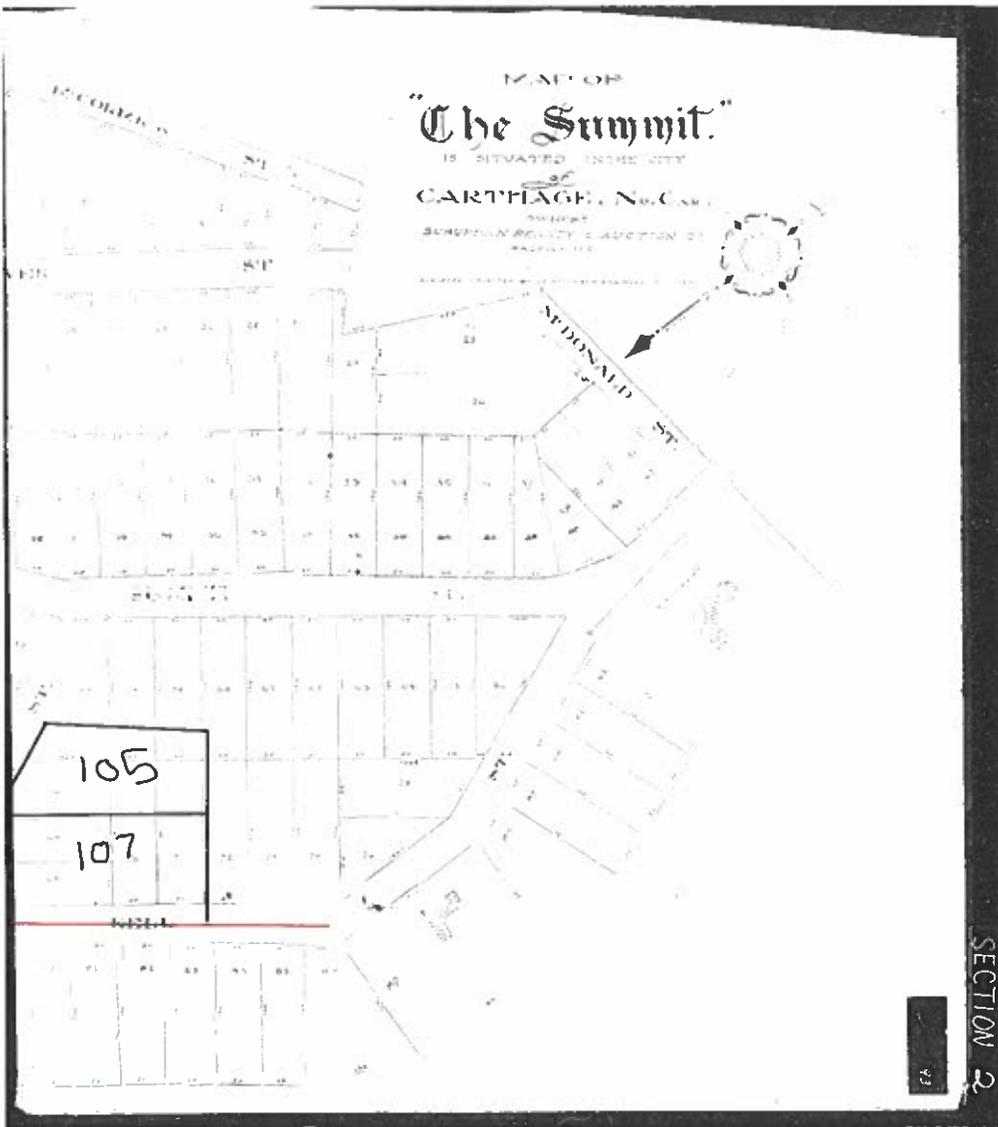
----- Forwarded message -----

**From:** **freefaller150mph** <[freefaller150mph@gmail.com](mailto:freefaller150mph@gmail.com)>  
**Date:** Tue, Oct 14, 2025, 8:42 PM  
**Subject:** Kelly St. Removal Letter  
**To:** Shad Bryson <[wshadbryson@gmail.com](mailto:wshadbryson@gmail.com)>

ATTN: Town of Carthage

Hello, my name is Adam Johnson. Myself and my wife are the owners of 107 Davis Street which is on the south side of the undeveloped road (Kelly Street) originally planned for the Summer Development in Carthage. Mr. Bryson and I have been in discussion for over a year regarding the removal of Kelly Street from the intersection of Davis St. and Kelly St to the corner marker of 514 Kelly St. I have recently sold 514 Kelly Street and Mr. Bryson asked for my written agreement on the matter. I am in favor of the removal and division of the road down the middle. The road is undeveloped and there are no longer any other parties with land accessed exclusively by Kelly St. other than those requesting the removal. It would benefit all adjoining parties to proceed with the 50/50 division and a subsequent replotting of the adjoining property line running down the middle of Kelly Street.

107 DAVIS ST FOR REFERENCE



Respectfully,  
Adam Johnson  
E: [freefaller150mph@gmail.com](mailto:freefaller150mph@gmail.com)  
C: 253-320-4021





## Town of Carthage

### An Order Closing a Portion of Kelly Street, the Town Road Between Kim Lane and Davis Street in The Town of Carthage, North Carolina

WHEREAS, on December 15, 2020 the Board of Commissioners for the Town of Carthage adopted a Resolution of Intent, which resolution indicates that the Board intends to consider closing a portion of Kelly Street between Kim Lane and Davis Street in the Town of Carthage;

WHEREAS, the Carthage Town Clerk has certified to the Board of Commissioners that notice procedures required by N.C. Gen. Stat. § 160A-299 have been complied with, including publishing the Resolution of Intent in The Pilot newspaper once a week for four successive weeks; mailing a copy of the Resolution of Intent to all persons owning property abutting the roadway that has been proposed to be closed; posting notice of the public hearing and proposed closure in at least two places along the roadway proposed to be closed; and mailing a copy of the Resolution of Intent to the North Carolina Department of Transportation; and

WHEREAS, after full and complete consideration of the matter, including conducting a public hearing on January 20, 2026 and;

NOW, THEREFORE, the Town of Carthage Board of Commissioners find as follows:

1. The closure of the portion of Kelly Street beginning at the joined property line of Parcel ID 00001804 and 00004410 extending to Davis Street is not contrary to the public interest; and
2. No individual owning property in the vicinity of the portion of the street to be closed will be deprived of a reasonable means of ingress and egress to their property.

Based on the foregoing findings, it is ORDERED that the portion of Kelly Street beginning at the joined property line of Parcel ID 00001804 and 00004410 extending to Davis Street is hereby closed in accordance with G.S. § 160A-299(a), and all right, title, and interest that may be vested in the public to said area for street purposes is hereby released and quitclaimed to the abutting property owners in accordance with the provisions of G.S. § 160A-299(c).

It is further ORDERED pursuant to G.S. § 160A-299(f) that the Town of Carthage reserves and retains all rights, title, and interest to a general-purpose utility easement that may be used for water, sewer, stormwater, and any and all other utilities, and all appurtenances thereto, now and in the future. The easement shall be twenty (20) feet wide, with the center line of the easement running over the location of the Town of Carthage's existing water line.

The Town Clerk is DIRECTED to mail a copy of this Order to the North Carolina Department of Transportation, but Kelly Street is a Town maintained road, so no changes are requested from the NCDOT.

The Town Clerk is DIRECTED to record a certified copy of this Order in the Office of the Register of Deeds of Moore County.

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The foregoing ORDER, having been submitted to a vote, received the following vote and was duly adopted and ordained this 20<sup>th</sup> day of January 2026.

Ayes: \_\_\_\_\_  
Nays: \_\_\_\_\_  
Absent/Excused: \_\_\_\_\_

---

Jimmy Chalfinch, Mayor

Attest:

---

Kimberly Gibson, Town Clerk



## MEMORANDUM

Date: January 20th, 2026  
To: Board of Commissioners  
From: Chris Lawson, Interim Town Planner  
Subject: R-01-26: Rezoning from RA-40-CZ (Conditional Residential Agricultural) to RA-40-CZ (Conditional Residential Agricultural) for PARID: 857700704307; Petitioner: TEP Group on behalf of Duke Energy Progress, LLC.

---

### I. SUMMARY OF APPLICATION REQUEST:

The applicant, TEP Group., is requesting a rezoning of PARID 20220740, approximately 25.87 acres located northeast of the intersection of S McNeil Street and US 15-501. The rezoning is on behalf of Duke Energy Progress, LLC and proposes only to amend the previously granted conditions. The proposed project is a part of “Duke’s electric reliability enhancement project” according to the submitted statement of need and the tower will “securely transmit data to and from substations.”

This property was previously rezoned in 2024 to permit the property electric substation to have modified fencing requirements. The rezoning that is currently requested proposes to amend the maximum allowed height of a telecommunications pole from 100’ to 124’ in height. The zoning district permits towers up to 195’ in height if the tower has a 1,000’ setback from all adjacent properties, but the parcel allows for only a 500’ setback. Thus, the request is generally in alignment with the zoning district’s requirements and well within a ‘fall zone’ from adjacent parcels. The request for additional height is due to the tower needing to be tall enough to “communicate in a direct line of site to other existing Duke tower structures” per the statement of need submitted by the applicant.

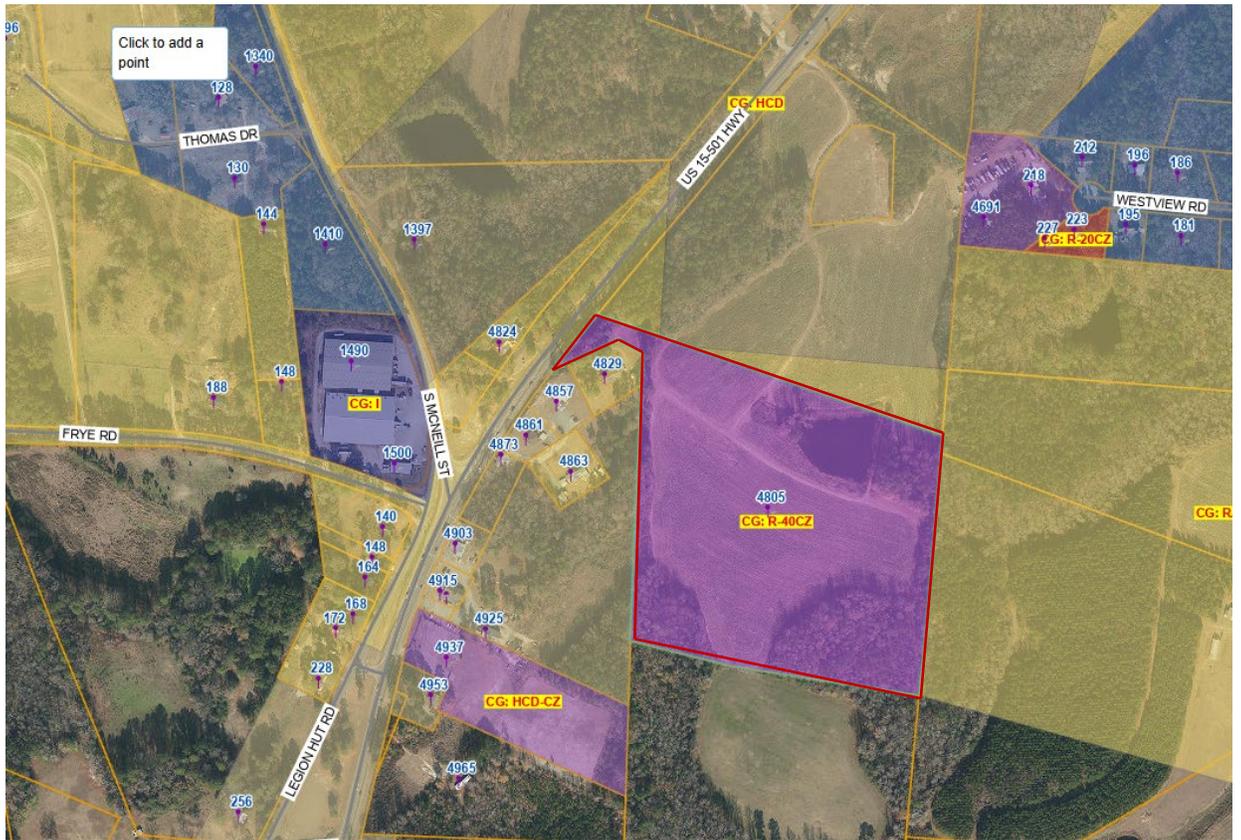
The rezoning application and statement of need is attached in this memo as **Attachment 1**. The adjacent properties are zoned (Carthage) HCD, RA-40, and (County) RA. The properties north, east, and south of the subject parcel are undeveloped/heavily wooded, while properties to the west are largely residential. There is not a spot zoning concern as several adjacent parcels are also zoned RA-40.

The Planning Board recommended approval of the rezoning at their meeting on January 6<sup>th</sup>.

### II. PROJECT INFORMATION:

1. PARID: 20220740      PIN: 857700704307
2. Applicant: TEP Group
3. Owner: Duke Energy Progress, LLC.
4. Long-Range Plan Designation:  
This future area of this land appears to be “**Commercial**” and “**Town Residential**”, per the adopted 2040 Land Use Plan.

5. Current Zoning:  
The current zoning is Conditional RA-40.
6. Site outlined in red below. (see next page)



### III. APPLICATION REVIEW:

When reviewing an application for rezoning, the Board of Commissioners shall consider and be guided by Article 3. Below is highlighted Section 100.24 abd Section 100.42 as set forth in UDO:

#### **Sec. 100.24 Board of Commissioners**

*Without limiting any authority granted to the Board of Commissioners by General Statutes or by other Ordinances of the Town, the Board of Commissioners shall have the following powers and duties with respect to this Ordinance:*

1. *To adopt, amend or repeal this Ordinance;*
2. **To adopt amendments to the Official Zoning Map;**
3. *To adopt design guidelines for the Historic Preservation Overlay Districts;*
4. *To approve or deny requests for approval of major preliminary and final subdivision plats, Special Use Permits, Conditional Zoning, Vested Rights, and major site plans;*
5. *To perform the powers and duties of a Board of Adjustment; and,*
6. *Such additional powers and duties as may be set forth in this Ordinance.*

**Section 100.42 Types of Amendments:**

*Amendments may be to the text of the ordinance or take the form of map amendments, often known as rezoning. The Town of Carthage recognizes three types of amendments.*

1. *Text Amendments. This type of amendment is used when a party chooses to modify the actual text of the ordinance. This is a legislative decision by the Board of Commissioners.*
2. *Map Amendments. This type of amendment is used when a party chooses to change a zoning district from one type to another. Often known as a general rezoning, it recognizes that the change in district allows for all uses allowed within a given zoning district. It cannot be conditioned in any way. This is a legislative decision by the Board of Commissioners.*
3. **Conditional Zoning. Conditional Zoning is an amendment process that is both a map amendment and a text amendment. It is a legislative decision by the Board of Commissioners, but it allows for the placement of conditions and/or limits on the approval.**

**A. Staff Comments:**

The RA-40 district is primarily designed to accommodate a compatible mixture of single family dwellings and agricultural uses at lower densities of approximately one unit or less per acre.

Staff have found that the application is generally consistent with the Land Use Plan. Although telecom towers are not mentioned in the land use plan, the area is still fairly rural and the parcel is 25 acres. The description of the “Commercial” and “Town Residential” land use categories is attached as **Attachment 2**.

**IV. BOARD ACTION:**

The Board of Commissioners shall evaluate all proposals for consistency with any adopted long-range plans and adopt a statement of consistency with said plans before voting to approve or deny of the request. All proposed Development Ordinance amendments must hold a Public Hearing to accept public in put.

The Board of Commissioners shall approve a brief statement describing whether its action is consistent or inconsistent with the adopted Land Use Plan and other long-range plans and then a statement of reasonableness of the proposed rezoning shall by approved by the board (**two motions required**). The statement of reasonableness may consider:

- (1) the size and physical conditions of the area to be rezoned.
- (2) the benefits and detriments to the landowners, neighbors, and surrounding community.
- (3) the relationship between the currently allowed development and that which would be permissible under the proposed zoning amendment.
- (4) why the rezoning is in the public interest; and,
- (5) any changed conditions warranting the zoning amendment.

N.C.G.S 160D-605(b)

**LUP CONSISTENCY MOTION** (1<sup>st</sup> Required Motion)

**I move to:**

**OPTION 1**

Approve the rezoning request and describe its consistency with the adopted Land Use Plan.

or

**OPTION 2**

Reject the rezoning request and describe its inconsistency with the adopted Land Use Plan.

**or**

**OPTION 3**

Approve the rezoning request and deem it a modification of the adopted Land Use Plan. The Board believes this action taken is reasonable and in the public interest because.....

---

---

**STATEMENT OF REASONABLENESS PETITION MOTION** (2<sup>ND</sup> Required Motion)

**And, therefore, I find the rezoning reasonable because <state one of the 5 reasons from above> and move to:**

**OPTION 1**

Approve R-01-26 as written and presented.

**or**

**OPTION 2**

Approve R-01-26 with the following conditions.....

---

---

***(Option 3 on next page)***

**OPTION 3**

Deny R-01-26 for the following reasons.....

---

---



# Town of Carthage

## Zoning & Subdivision Request Form

Updated: 1/15/2023

**CONDITIONAL ZONING** or  **REZONING** (Map Amendment)

### Applicant Information

FEE: \$ \_\_\_\_\_

Applicant's Name	Phone	Email
Applicant's Address		City, State, Zip

### Property Owner Information (if different)

Owner's Name	Phone	Email
Owner's Address		City, State, Zip

### Site Information (if applicable)

Site Address (if applicable)		LRK/Parcel ID#	Business Name
Lot Size	Current Zoning	Proposed Zoning	# Of Proposed Parcels
Proposed Use		Proposed Utilities <input type="checkbox"/> Public Water <input type="checkbox"/> Public Sewer <input type="checkbox"/> Private Well <input type="checkbox"/> Private Septic	

### Proposed Building

Square Footage	Height	# of Parking Spaces	Handicapped Spaces <input type="checkbox"/> Yes <input type="checkbox"/> No   #
Front Setback	Rear Setback	Side Setback	Corner Setback

### Existing Building

Square Footage	Height	# of Parking Spaces	Handicapped Spaces <input type="checkbox"/> Yes <input type="checkbox"/> No   #
Front Setback	Rear Setback	Side Setback	Corner Setback

Explanation of Request: (Please be as specific as possible)

The applicant agrees to comply with all of the applicable laws regulating the described work and operate or build according to the Town and state regulations in effect at the time of the issuance of the certificate or permit. Where applicable, a building permit or sign permit will be required.

**\*\*\* Upon consultation with the applicant, the applicant chooses to pursue \_\_\_\_\_ zoning designation.**

\_\_\_\_\_  
Applicant Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Property Owner Signature

\_\_\_\_\_  
Date

FOR OFFICE USE ONLY

Date Application/Materials Submitted: \_\_\_\_\_

Received By: \_\_\_\_\_

Approved:  Yes    No

Date Approved: \_\_\_\_\_

Approved By: \_\_\_\_\_

# Duke Energy Reliability Enhancement Project

## Hill Crest Cambium Pole Project



### Frequently Asked Questions

#### Background

As part of Duke Energy's commitment to help ensure a secure energy grid, we are installing a cambium pole at the Hill Crest Substation in Carthage, N.C. The wireless network device and utility pole will be installed at the substation as part of Duke Energy's communication network to securely transmit data to and from substations and to support smart technology improvements we have made to help increase reliability and quality of service to customers.

These important upgrades will help ensure our systems operate efficiently to meet customer needs now and in the future.

#### Where is this project located?

The project is located in Carthage, Moore County, N.C. The pole will be installed at the Hill Crest Substation located at 4805 US 15-501 Hwy.

#### Why does Duke Energy need to do this project?

This technology helps support a smarter grid and promotes more reliable, efficient operations to better serve customers. Additionally, it serves as a vital communication tool in the aftermath of major storms, providing a dependable platform to share important updates and information during the power restoration process. This method of communication not only helps keep employees safe but also supports operational excellence.

#### What are the safety considerations for this project?

The utility pole is rated TIA-222H Cat III for high wind areas.

#### How will the cambium pole project impact me?

Our goal is to minimize impacts to homes and businesses, as well as environmental and cultural resources. The cambium pole at the substation will be approximately 120 feet tall and will be located within our existing substation to collect data and control our transmission and distribution equipment.

#### Will there be any power outages planned during construction?

No. We do not anticipate any outages during this work.

#### Have Additional Questions?



[NCGridWork@duke-energy.com](mailto:NCGridWork@duke-energy.com)



800.365.8979

Reference: Hill Crest Cambium Pole Project



BUILDING A SMARTER ENERGY FUTURE®

**NOTES:**

1. SITE PLAN SHOWN ON THIS PLAN IS TAKEN FROM MOORE COUNTY GIS AND INFORMATION FROM DUKE ENERGY TRANSMISSION. ALL INFORMATION SHOWN ON THIS PLAN IS FOR REFERENCE ONLY. CONTRACTOR TO VERIFY THAT ALL EXISTING INFORMATION IS AS INDICATED ON SITE PLAN. CONTRACTOR TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.
2. TEP DID NOT SURVEY AND DOES NOT GUARANTEE, OR ENSURE THE PRECISION, ACCURACY, OR CORRECTNESS AND ASSUMES NO RESPONSIBILITY OR LIABILITY FOR DAMAGES, LOSS OF REVENUE OR INJURY THAT MIGHT OCCUR.
3. THE POLE IS LOCATED IN SHADED ZONE "X," AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #3710857700J, EFFECTIVE OCTOBER 17, 2006.

N/F  
JOHN R. TILLMAN, III & JANICE  
A. TILLMAN  
PIN#: 857704608900  
DB: 2264 PC: 14

N/F  
MARK R. LEMMOND & CAROLINE  
M. LEMMOND  
PIN#: 857704606749  
DB: 2430 PC: 552

N/F  
DAVID THOMAS FRYE  
PIN#: 857704606257  
DB: 4168 PC: 503

NEW 120' POLE FOR DUKE ENERGY. SEE  
SHEET C-3 FOR ELEVATION DETAILS.

NEW 20' ACCESS ROAD

NEW CHAIN-LINK FENCED DUKE  
ENERGY SUBSTATION

N/F  
DUKE ENERGY PROGRESS, LLC.  
PIN#: 857700704307  
DB: 5945 PC: 404  
ZONING: RA-40 & HCD

EXISTING TREELINE

N/F  
DAVID THOMAS FRYE  
PIN#: 857704606257  
DB: 4168 PC: 503

N/F  
GRACE CHURCH OF SOUTHERN  
PINES, INC.  
PIN#: 857602694755  
DB: 4542 PC: 4

N/F  
MARY D. MACDONALD  
PIN#: 857600781999  
DB: 3861 PC: 281

N/F  
RIDDLE GROUP, LLC.  
PIN#: 857700717140  
DB: 4364 PC: 500

N/F  
RIDDLE EQUIPMENT COMPANY, INC.  
PIN#: 857704818067  
DB: 1149 PC: 100

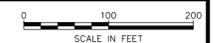
N/F  
IRENE B. RIDDLE  
PIN#: 857704807559  
DB: 1634 PC: 515

N/F  
RIDDLE EQUIPMENT COMPANY,  
INC.  
PIN#: 857704806150  
DB: 1634 PC: 513

**LEGEND**

- EXIST. PROPERTY LINE
- - - ADJ. PROPERTY LINE
- ⊙ EXIST. UTILITY POLE
- ⊙ EXIST. LIGHT POLE
- ⊙ EXIST. HYDRANT
- ⊙ EXIST. TELCO PEDESTAL
- PROPERTY CORNER
- LEASE/EASE. CORNER
- - -200- - - EXIST. CONTOUR LINE
- EDGE OF PAVEMENT
- - -OHW- - - OVERHEAD WIRE
- - -R/W- - - RIGHT-OF-WAY
- X - CHAIN LINK FENCE
- ~ ~ ~ EXISTING TREE LINE

**SITE PLAN**  
SCALE: 1" = 100'



PLANS PREPARED FOR:

**TEP OP&O, LLC**  
328 TRYON ROAD  
RALEIGH, NC 27605-3530  
OFFICE: (919) 661-6351  
FAX: (919) 661-6350  
N.C. LICENSE #P-1403

**DUKE ENERGY.**  
401 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601  
OFFICE: (800) 452-2777

PLANS PREPARED BY:

**TEP**

REV	DATE	ISSUED FOR:	CHECKED BY:
3	10-16-25	CONSTRUCTION	JBC
2	10-02-25	CONSTRUCTION	
1	05-30-25	PRELIMINARY CONSTRUCTION	
0	06-20-25	PRELIMINARY CONSTRUCTION	

DRAWN BY: KJV

PROJECT INFORMATION:

**SITE NAME:  
HILL CREST 230 SUB**

4805 US15-501 HWY  
CARTHAGE, NC 28327  
(MOORE COUNTY)

SEAL:

SHEET TITLE: **SITE PLAN**

SHEET NUMBER: **C-1**

REVISION: **3**

TEP # 347662



**DUKE ENERGY SITE NAME: HILL CREST 230 SUB  
DUKE ENERGY PROPOSED 120' MONOPOLE TOWER**

4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
(MOORE COUNTY)

# EXISTING VIEW: LOCATION 1



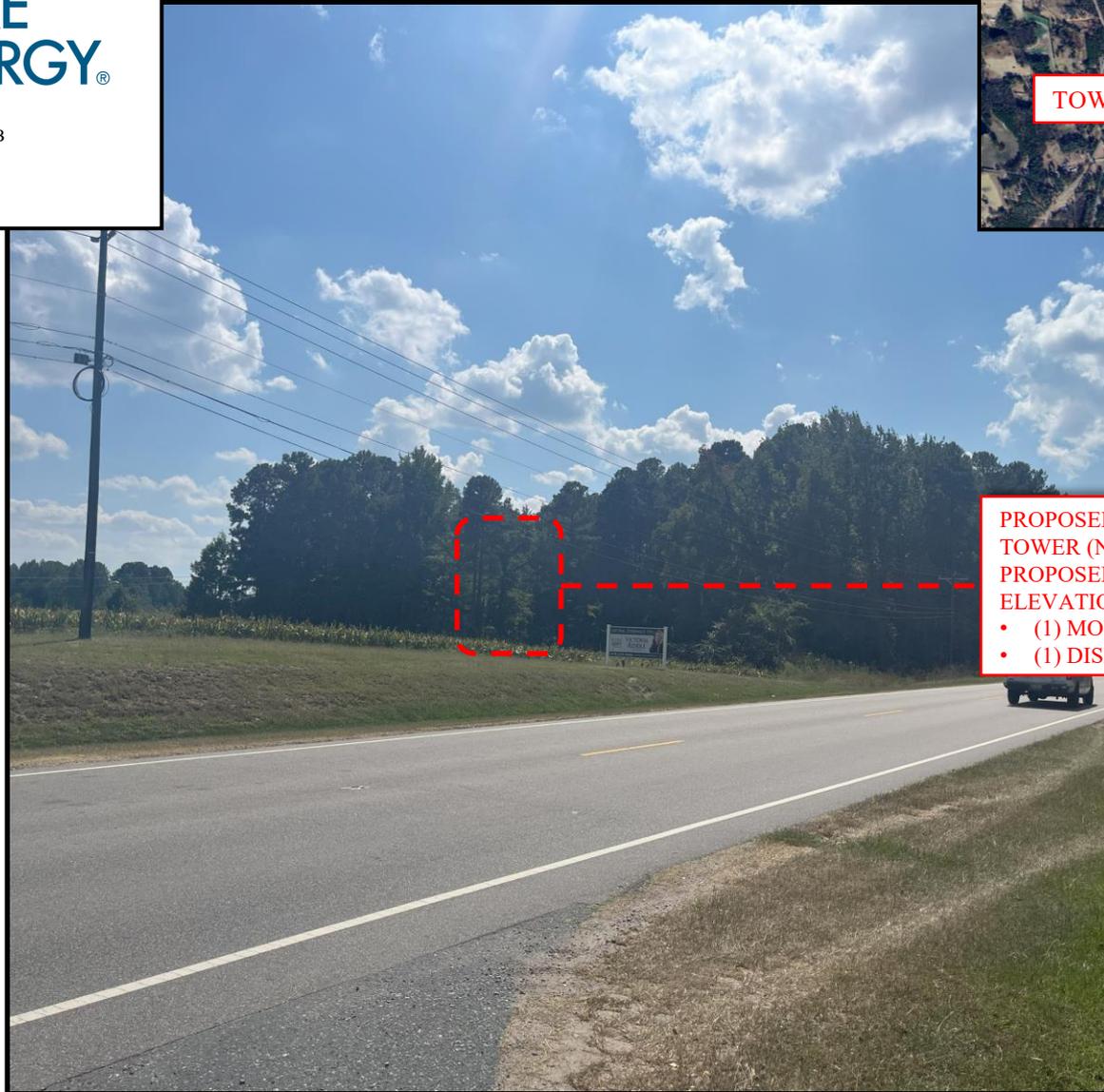
SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



# PROPOSED VIEW: LOCATION 1



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE

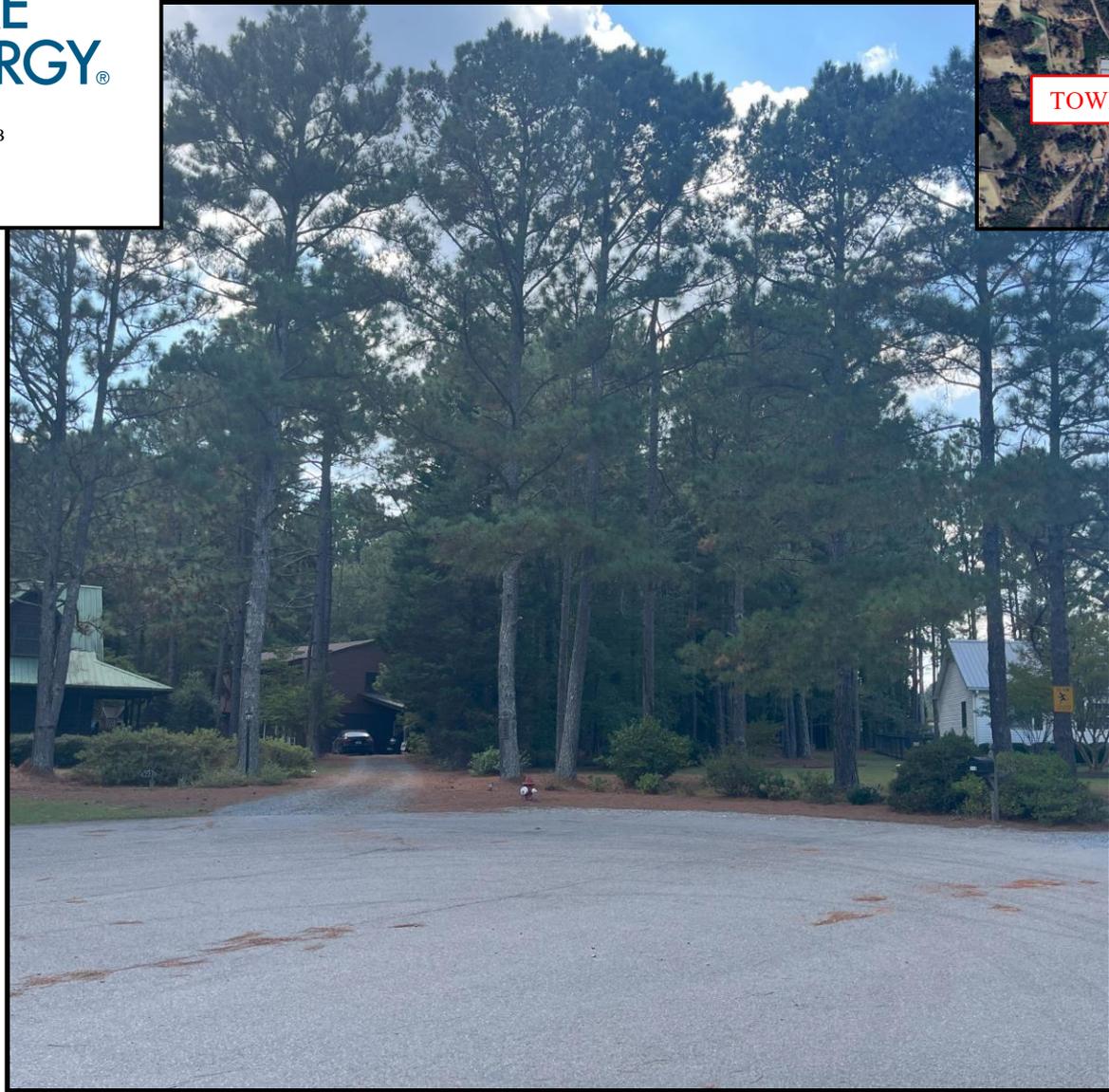


PROPOSED 120'-0" MONOPOLE  
TOWER (NOT VISIBLE)  
PROPOSED EQUIPMENT AT  
ELEVATION 118'-0" :  
• (1) MOUNT (NOT VISIBLE)  
• (1) DISH (NOT VISIBLE)

## EXISTING VIEW: LOCATION 2



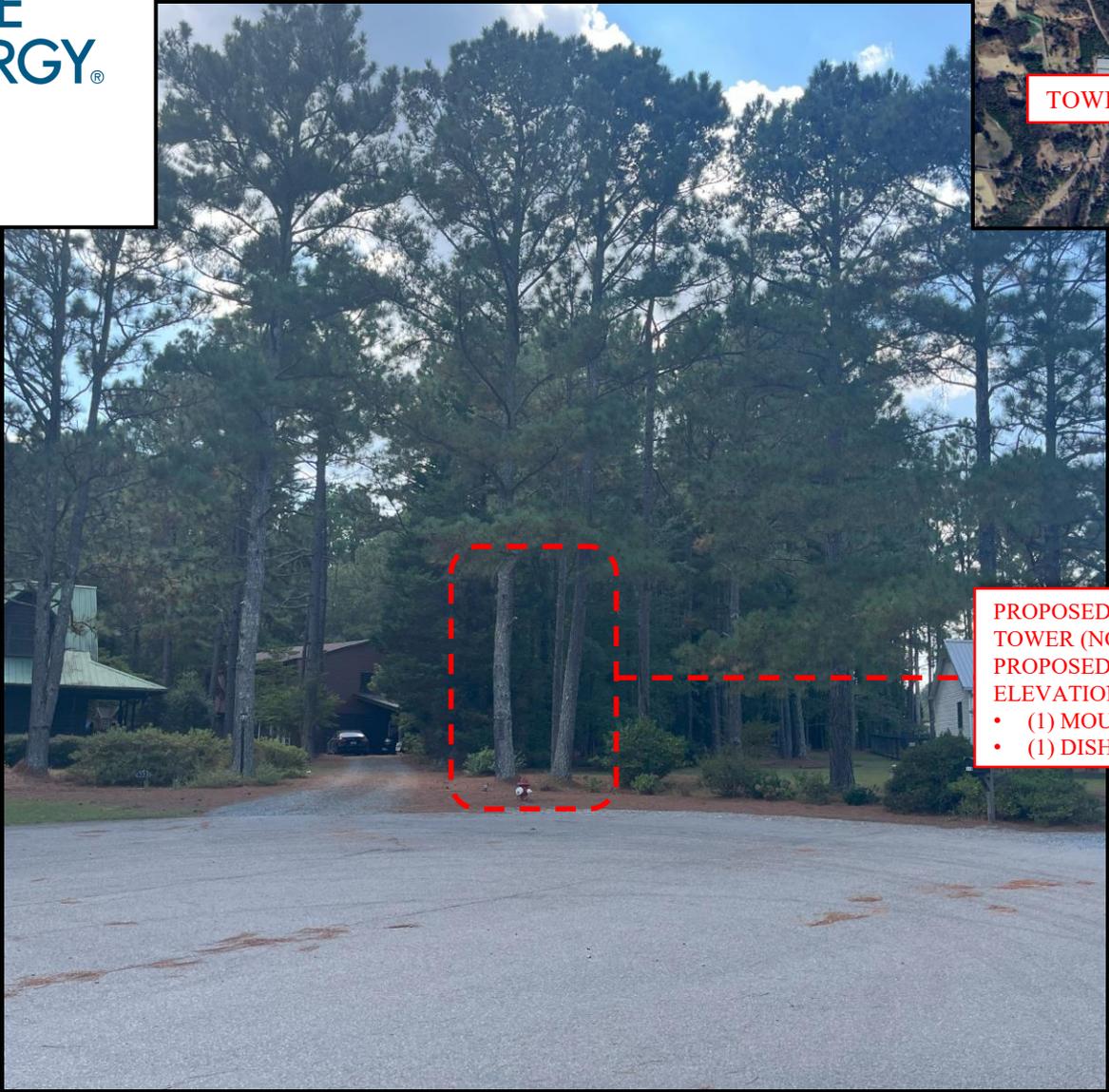
SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



# PROPOSED VIEW: LOCATION 2



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



PROPOSED 120'-0" MONOPOLE TOWER (NOT VISIBLE)  
PROPOSED EQUIPMENT AT ELEVATION 118'-0" :  
• (1) MOUNT (NOT VISIBLE)  
• (1) DISH (NOT VISIBLE)

# EXISTING VIEW: LOCATION 3



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



# PROPOSED VIEW: LOCATION 3



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



PROPOSED 120'-0" MONOPOLE TOWER (NOT VISIBLE)  
PROPOSED EQUIPMENT AT ELEVATION 118'-0" :  
• (1) MOUNT (NOT VISIBLE)  
• (1) DISH (NOT VISIBLE)

# EXISTING VIEW: LOCATION 4



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



# PROPOSED VIEW: LOCATION 4



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



PROPOSED 120'-0" MONOPOLE TOWER (NOT VISIBLE)  
PROPOSED EQUIPMENT AT ELEVATION 118'-0" :  
• (1) MOUNT (NOT VISIBLE)  
• (1) DISH (NOT VISIBLE)

# EXISTING VIEW: LOCATION 5



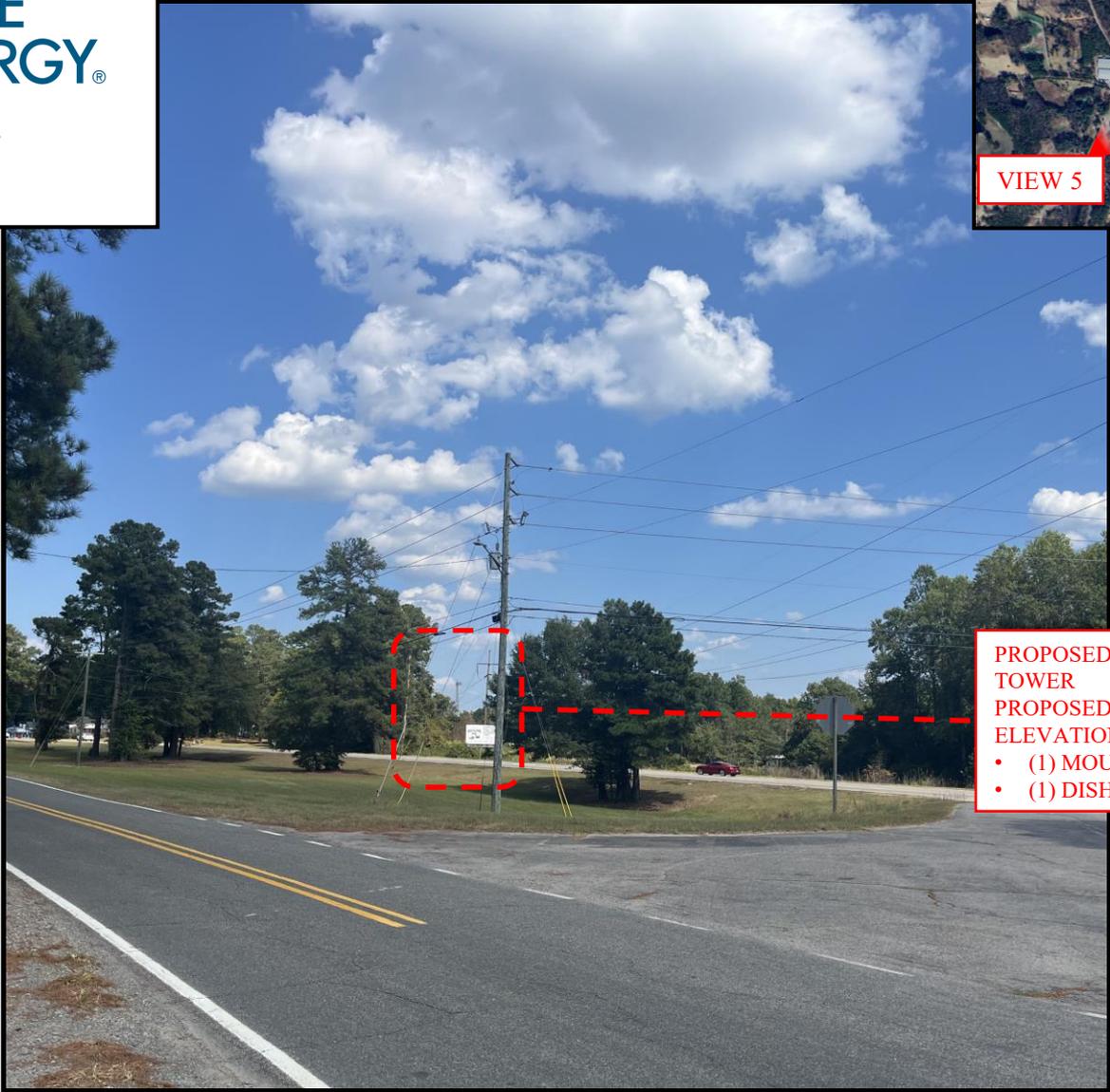
SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



# PROPOSED VIEW: LOCATION 5



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



PROPOSED 120'-0" MONOPOLE TOWER  
PROPOSED EQUIPMENT AT ELEVATION 118'-0" :  
• (1) MOUNT  
• (1) DISH

# EXISTING VIEW: LOCATION 6



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



# PROPOSED VIEW: LOCATION 6



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



PROPOSED 120'-0" MONOPOLE TOWER (NOT VISIBLE)  
PROPOSED EQUIPMENT AT ELEVATION 118'-0" :  
• (1) MOUNT (NOT VISIBLE)  
• (1) DISH (NOT VISIBLE)

# EXISTING VIEW: LOCATION 7



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



# PROPOSED VIEW: LOCATION 7



SITE #:  
SITE NAME: HILL CREST 230 SUB  
ADDRESS: 4805 US 15-501 HWY.  
CARTHAGE, NC 28327  
COUNTY: MOORE



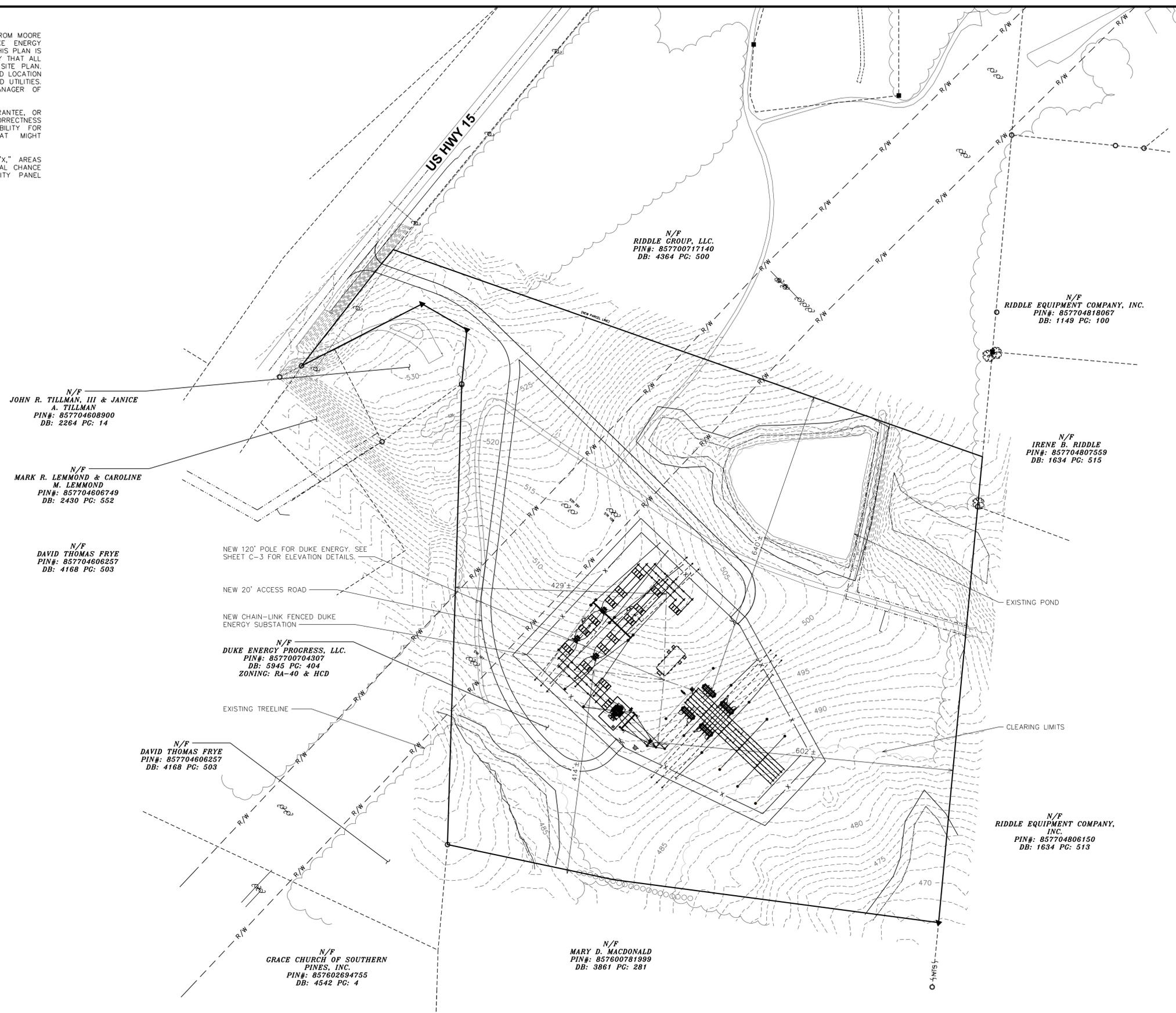
PROPOSED 120'-0" MONOPOLE TOWER (NOT VISIBLE)  
PROPOSED EQUIPMENT AT ELEVATION 118'-0" :  
• (1) MOUNT (NOT VISIBLE)  
• (1) DISH (NOT VISIBLE)





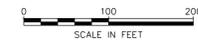
**NOTES:**

1. SITE PLAN SHOWN ON THIS PLAN IS TAKEN FROM MOORE COUNTY GIS AND INFORMATION FROM DUKE ENERGY TRANSMISSION. ALL INFORMATION SHOWN ON THIS PLAN IS FOR REFERENCE ONLY. CONTRACTOR TO VERIFY THAT ALL EXISTING INFORMATION IS AS INDICATED ON SITE PLAN. CONTRACTOR TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.
2. TEP DID NOT SURVEY AND DOES NOT GUARANTEE, OR ENSURE THE PRECISION, ACCURACY, OR CORRECTNESS AND ASSUMES NO RESPONSIBILITY OR LIABILITY FOR DAMAGES, LOSS OF REVENUE OR INJURY THAT MIGHT OCCUR.
3. THE POLE IS LOCATED IN SHADED ZONE "X," AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #3710857700J, EFFECTIVE OCTOBER 17, 2006.



LEGEND	
	EXIST. PROPERTY LINE
	ADJ. PROPERTY LINE
	EXIST. UTILITY POLE
	EXIST. LIGHT POLE
	EXIST. HYDRANT
	EXIST. TELCO PEDESTAL
	PROPERTY CORNER
	LEASE/EASE. CORNER
	EXIST. CONTOUR LINE
	EDGE OF PAVEMENT
	OVERHEAD WIRE
	RIGHT-OF-WAY
	CHAIN LINK FENCE
	EXISTING TREE LINE

**SITE PLAN**  
SCALE: 1" = 100'



PLANS PREPARED FOR:

401 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601  
OFFICE: (800) 452-2777

PLANS PREPARED BY:

**TEP**

TEP OPCO, LLC  
328 TRYON ROAD  
RALEIGH, NC 27605-3530  
OFFICE: (919) 661-6351  
FAX: (919) 661-6350  
N.C. LICENSE #P-1403

REV	DATE	ISSUED FOR:	CHECKED BY:
3	10-16-25	CONSTRUCTION	JBC
2	10-02-25	CONSTRUCTION	
1	05-30-25	PRELIMINARY CONSTRUCTION	
0	06-20-25	PRELIMINARY CONSTRUCTION	

PROJECT INFORMATION:

**SITE NAME:**  
**HILL CREST 230 SUB**

4805 US15-501 HWY  
CARTHAGE, NC 28327  
(MOORE COUNTY)

SEAL:

SHEET TITLE: **SITE PLAN**

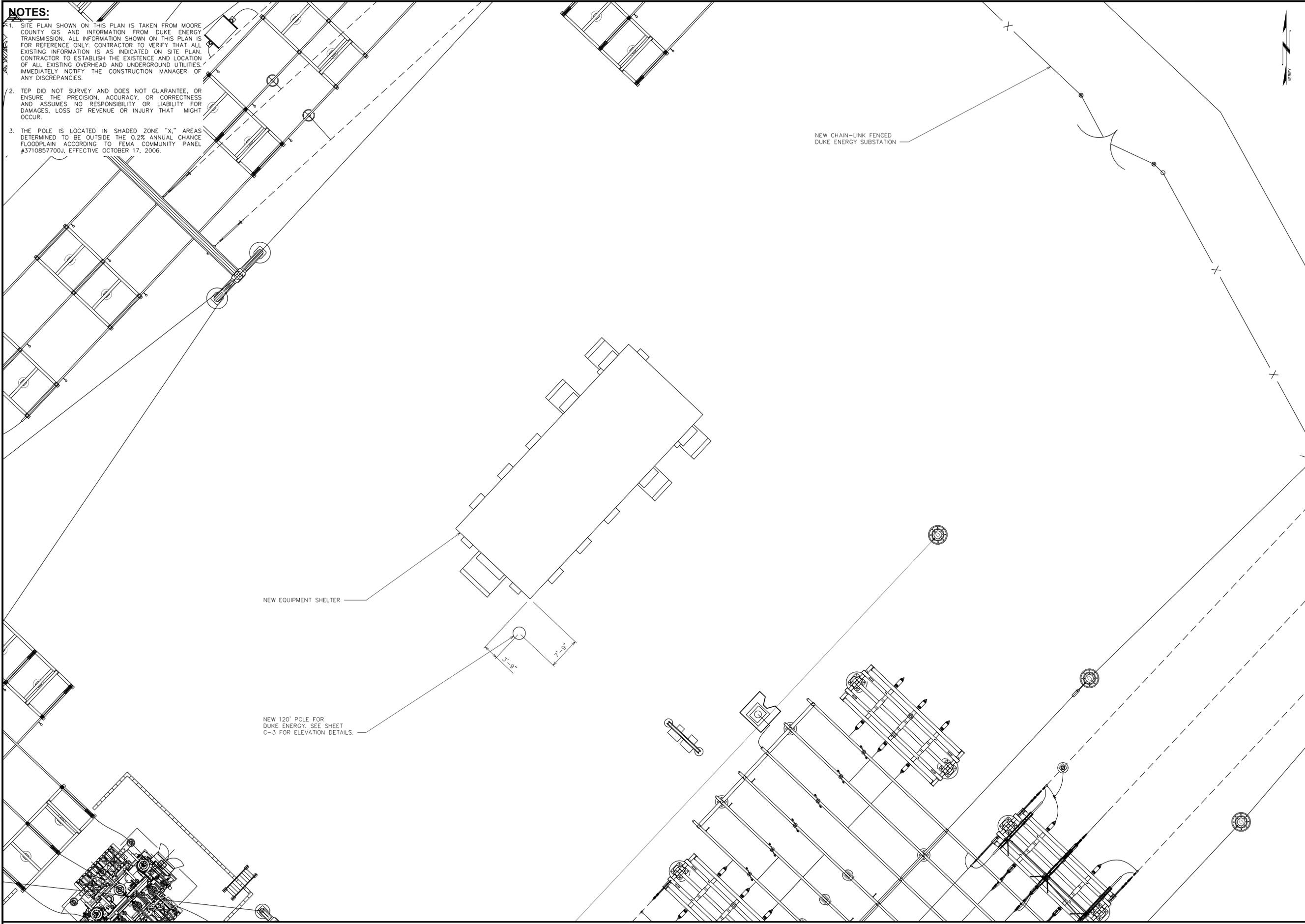
SHEET NUMBER: **C-1**

REVISION: **3**

TEP # 347662

**NOTES:**

1. SITE PLAN SHOWN ON THIS PLAN IS TAKEN FROM MOORE COUNTY GIS AND INFORMATION FROM DUKE ENERGY TRANSMISSION. ALL INFORMATION SHOWN ON THIS PLAN IS FOR REFERENCE ONLY. CONTRACTOR TO VERIFY THAT ALL EXISTING INFORMATION IS AS INDICATED ON SITE PLAN. CONTRACTOR TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.
2. TEP DID NOT SURVEY AND DOES NOT GUARANTEE, OR ENSURE THE PRECISION, ACCURACY, OR CORRECTNESS AND ASSUMES NO RESPONSIBILITY OR LIABILITY FOR DAMAGES, LOSS OF REVENUE OR INJURY THAT MIGHT OCCUR.
3. THE POLE IS LOCATED IN SHADED ZONE "X," AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #3710857700J, EFFECTIVE OCTOBER 17, 2006.



NEW CHAIN-LINK FENCED  
DUKE ENERGY SUBSTATION

NEW EQUIPMENT SHELTER

NEW 120' POLE FOR  
DUKE ENERGY. SEE SHEET  
C-3 FOR ELEVATION DETAILS.

**COMPOUND DETAIL**  
SCALE: 1" = 10'



PLANS PREPARED FOR:



DUKE ENERGY.  
401 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601  
OFFICE: (800) 452-2777

PLANS PREPARED BY:

**TEP OP&O, LLC**  
328 TRYON ROAD  
RALEIGH, NC 27605-3530  
OFFICE: (919) 661-6351  
FAX: (919) 661-6350  
N.C. LICENSE #P-1403



REV	DATE	ISSUED FOR:	CHECKED BY:
0	06-20-25	PRELIMINARY CONSTRUCTION	JBG
1	05-30-25	PRELIMINARY CONSTRUCTION	
2	10-02-25	CONSTRUCTION	
3	10-16-25	CONSTRUCTION	

DRAWN BY: KJW

PROJECT INFORMATION:

**SITE NAME:  
HILL CREST 230 SUB**

4805 US15-501 HWY  
CARTHAGE, NC 28327  
(MOORE COUNTY)

SEAL:



SHEET TITLE:  
**COMPOUND DETAIL**

SHEET NUMBER:  
**C-2**

REVISION:  
**3**

TEP #:  
347662

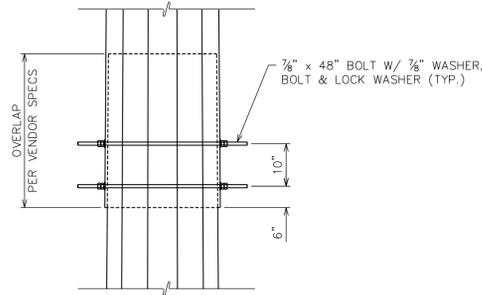
**NOTES:**

- POLE TO REMAIN A GALVANIZED COLOR.
- POLE WILL NOT BE LIT. THE FEDERAL AVIATION ADMINISTRATION TYPICALLY DOES NOT REQUIRE LIGHTING FOR TOWERS UNDER 200 FEET (AGL).

- 124'-0"± (AGL)  
T/LIGHTNING ROD
- 120'-0"± (AGL)  
T/POLE
- 118'-0"± (AGL)  
C/DISH

**DETAIL NOTE:**

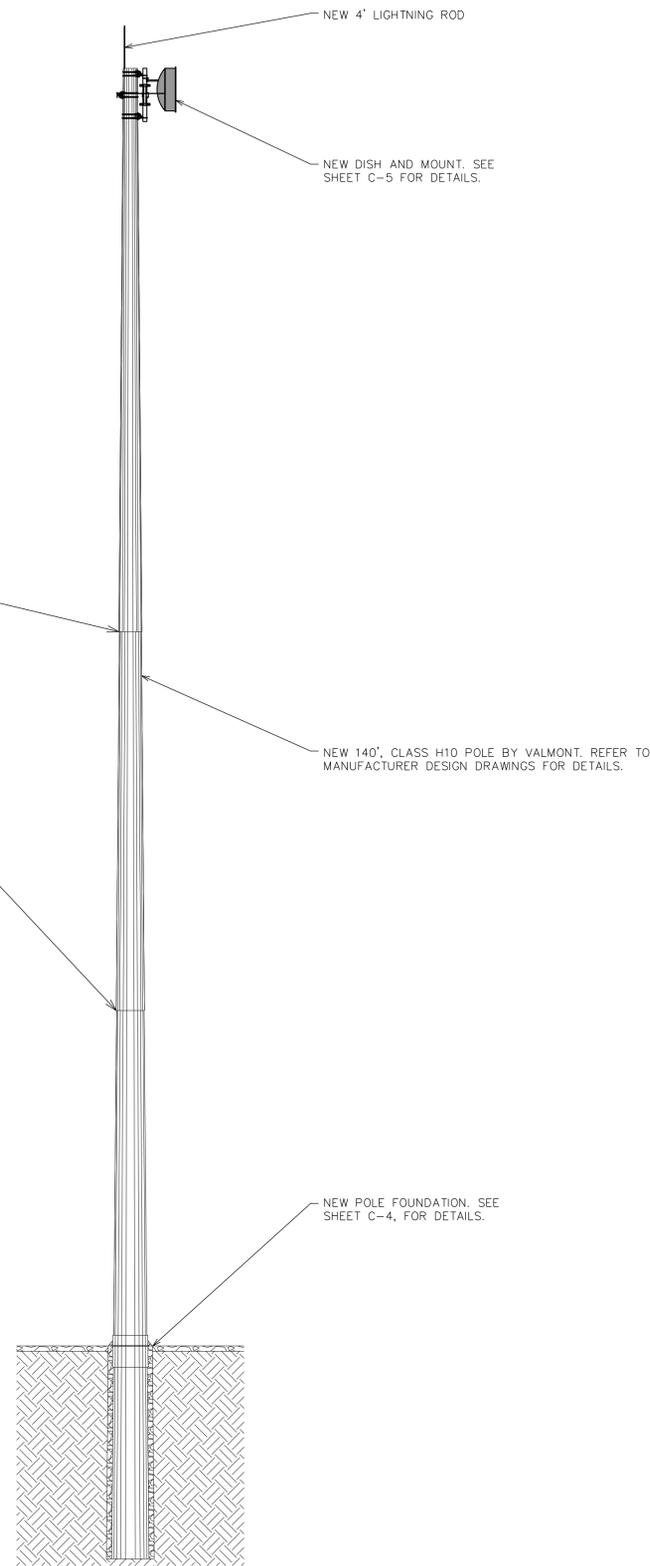
IF POLE SECTIONS ARE JACKED TOGETHER PRIOR TO LIFTING AND SETTING THE POLE IN THE HOLE, THE POLE SECTIONS SHALL BE BOLTED AT THE SLIP JOINTS.



**POLE SLIP JOIN DETAIL**

SCALE: N.T.S.

- 0'-0"± (REF)  
T/GRADE



**POLE ELEVATION**

SCALE: 1/8" = 1'-0"



PLANS PREPARED FOR:

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RALEIGH, NC 27601  
OFFICE: (800) 452-2777

PLANS PREPARED BY:

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328 TRYON ROAD  
RALEIGH, NC 27605-3530  
OFFICE: (919) 661-6351  
FAX: (919) 661-6350  
N.C. LICENSE #P-1403

REV	DATE	ISSUED FOR:	CHECKED BY:
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1	05-30-25	PRELIMINARY CONSTRUCTION	
2	10-02-25	CONSTRUCTION	
3	10-16-25	CONSTRUCTION	

PROJECT INFORMATION:

**SITE NAME:**  
**HILL CREST 230 SUB**

4805 US15-501 HWY  
CARTHAGE, NC 28327  
(MOORE COUNTY)

SEAL:

SHEET TITLE:  
**POLE ELEVATION**

SHEET NUMBER:  
**C-3**

REVISION:  
**3**

TEP #: 347662

REFERENCED DOCUMENTS		
DOCUMENT	REMARKS	DATE
GEOTECHNICAL REPORT	S&ME PROJECT NO.: 23050359	10-13-23
POLE DESIGN DRAWINGS	VALMONT INDUSTRIES	01-19-21
STRUCTURAL ANALYSIS	TEP PROJECT NO.: 347662.1082773	06-11-25

CONTRACTOR SHALL FIELD VERIFY ALL: DIMENSIONS, QUANTITIES, PART NUMBERS AND COAX/ANTENNA PLACEMENTS PRIOR TO: BIDDING ORDERING MATERIALS, AND CONSTRUCTION.

APPLIED LOADS	
AXIAL	17,758 KIPS
MOMENT	1432.048 KIP-FT
SHEAR	18.253 KIPS

DESIGN REACTIONS TAKEN FROM THE STRUCTURAL ANALYSIS LISTED IN THE REFERENCED DOCUMENTS CHART ABOVE.

**DESIGN NOTE:**

REFER TO VALMONT INDUSTRIES DRAWINGS FOR FINAL POLE AND FOUNDATION CONSTRUCTION, AND ASSEMBLY DETAILS. ANY INFORMATION SHOWN IN THIS DRAWING SHALL BE SUPERSEDED BY MANUFACTURER DESIGN DOCUMENTS.

**FOUNDATION CONSTRUCTION:**

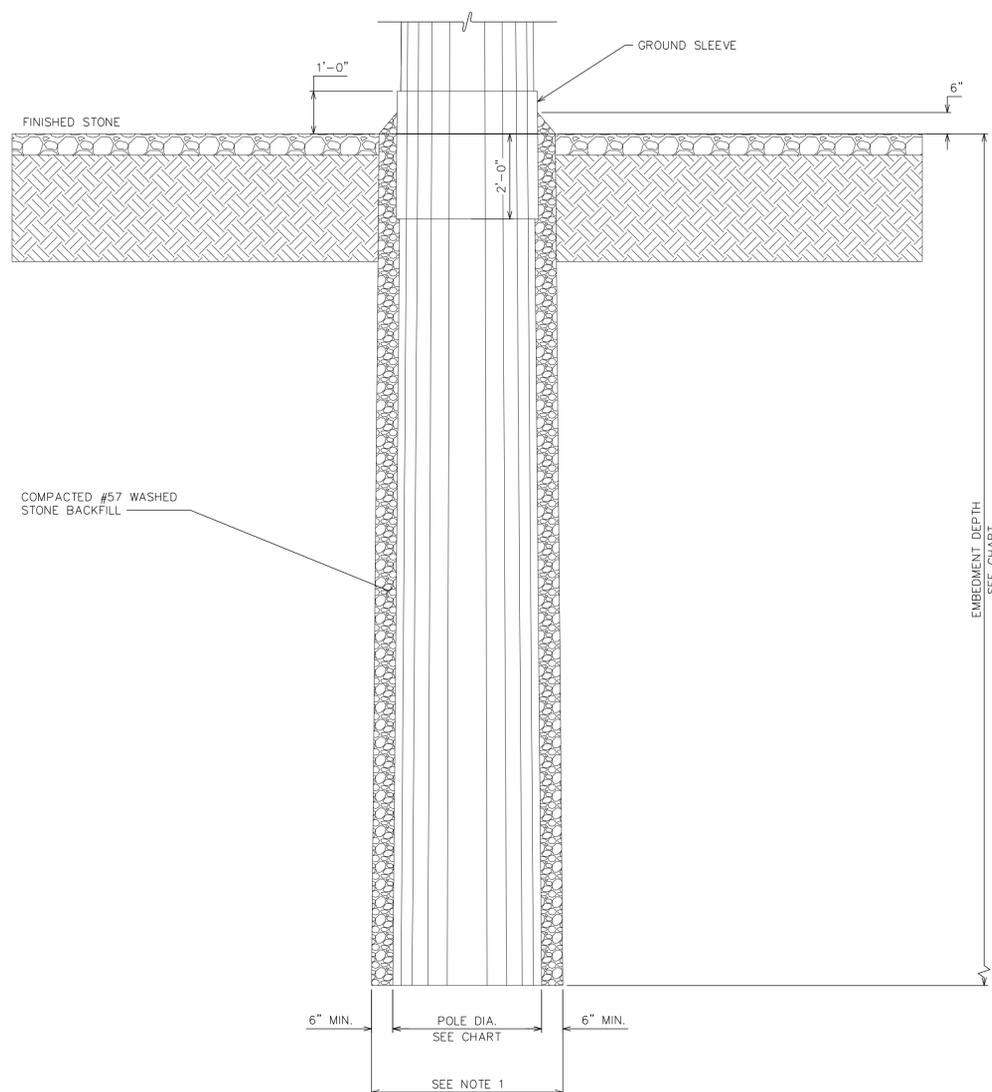
THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT REFERENCED ABOVE. CONTRACTOR SHALL CONSULT THE GEOTECHNICAL REPORT PRIOR TO BIDDING AND CONSTRUCTION.

FOUNDATION DESIGN			
TOP OD	BASE OD	EMBEDMENT DEPTH	OVERALL POLE LENGTH
37.27"	41.00"	20'	140.00'

**NOTE:**  
BEARING PLATE DETAILS ARE SPECIFIED IN THE POLE MFG'S DRAWINGS. VERIFY PRIOR TO CONSTRUCTION.

**BACKFILL NOTES:**

- HOLE SHALL BE EXCAVATED BY AN AUGER OF SUFFICIENT SIZE TO ALLOW A MINIMUM OF 6" BETWEEN THE SIDES OF THE HOLE AND THE POLE SO THAT PROPER TAMPING/RODDING OF THE GRAVEL BACKFILL CAN BE PERFORMED FROM THE BOTTOM OF THE HOLD TO THE GROUND SURFACE.
- IF THE HOLE IS DRILLED DEEPER THAN REQUIRED, THE EXTRA DEPTH IS TO BE BACKFILLED WITH #57 STONE AND TAMPED BEFORE THE POLE IS SET. IF THE BOTTOM OF THE HOLE IS SOFT OR IF WATER IS IN THE HOLE, #57 STONE SHALL BE USED TO FILL THE OVER-EXCAVATION.
- THE #57 STONE BACKFILL SHALL BE PLACED IN EVEN LIFTS WITH A MAXIMUM DEPTH OF 6" PER LIFT. THE STONE BACKFILL SHALL BE COMPACTED BY MECHANICALLY OR MANUALLY RODDING EACH LIFT AFTER PLACEMENT IN THE HOLE. THE MAXIMUM UNIFORM DENSITY FROM THE BOTTOM OF THE HOLE TO THE NATURAL GROUND SURFACE SHALL BE ATTAINED.
- AFTER COMPLETION OF BACKFILLING, THE BACKFILL SHALL BE BANKED AROUND THE POLE TO AN ELEVATION OF 6" ABOVE THE EXISTING GRADE.



**POLE FOUNDATION DETAIL**  
SCALE: N.T.S.

PLANS PREPARED FOR:

401 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601  
OFFICE: (800) 452-2777

PLANS PREPARED BY:

TEP OP&O, LLC  
326 TRYON ROAD  
RALEIGH, NC 27605-3530  
OFFICE: (919) 661-6351  
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N.C. LICENSE #P-1403

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2	10-02-25	CONSTRUCTION	JBC
3	10-16-25	CONSTRUCTION	JBC

DRAWN BY: KJV

PROJECT INFORMATION:

**SITE NAME:**  
**HILL CREST 230 SUB**

4805 US15-501 HWY  
CARTHAGE, NC 28327  
(MOORE COUNTY)

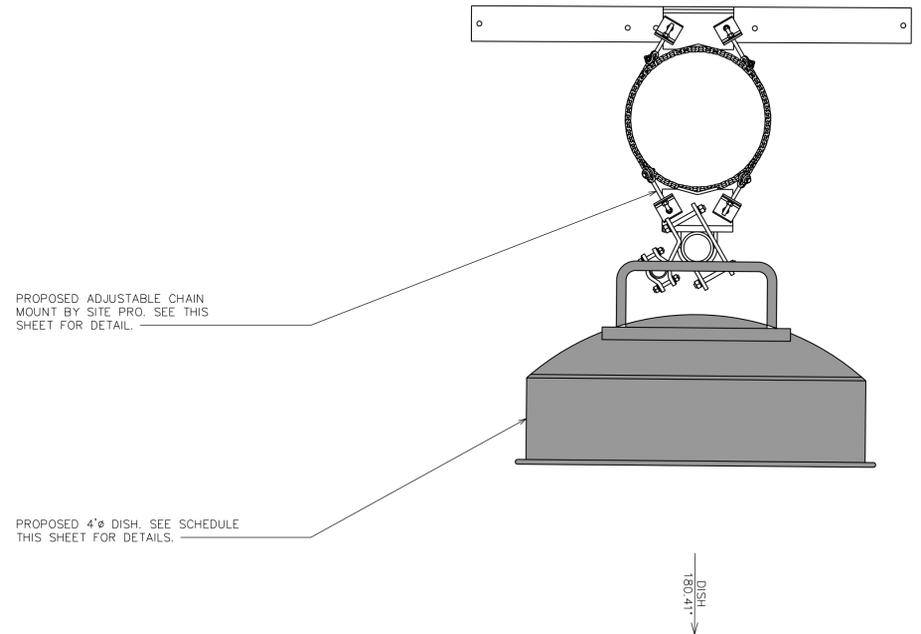
SEAL:

SHEET TITLE:  
**POLE FOUNDATION DETAIL & NOTES**

SHEET NUMBER:  
**C-4**

REVISION:  
3

TEP #:  
347662



PROPOSED ADJUSTABLE CHAIN MOUNT BY SITE PRO. SEE THIS SHEET FOR DETAILS.

PROPOSED 4'Ø DISH. SEE SCHEDULE THIS SHEET FOR DETAILS.

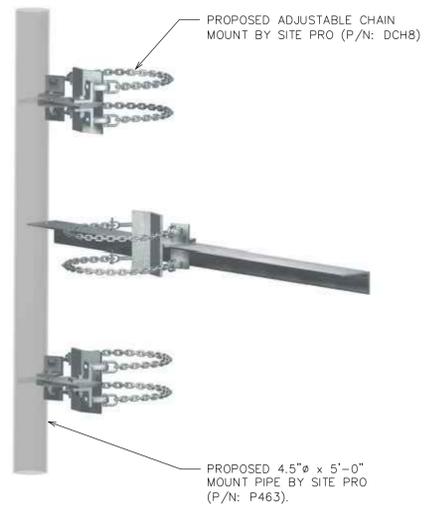
DISH  
180.41'

**PROPOSED DISH @ 118'-0"**

SCALE: 3/4" = 1'-0"



**NOTE:**  
POLE DIAMETER AT 118': REFER TO POLE MANUFACTURER DRAWINGS

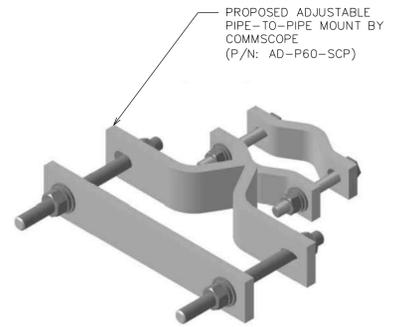


PROPOSED ADJUSTABLE CHAIN MOUNT BY SITE PRO (P/N: DCH8)

PROPOSED 4.5"Ø x 5'-0" MOUNT PIPE BY SITE PRO (P/N: P463).

**PROPOSED PIPE MOUNT**

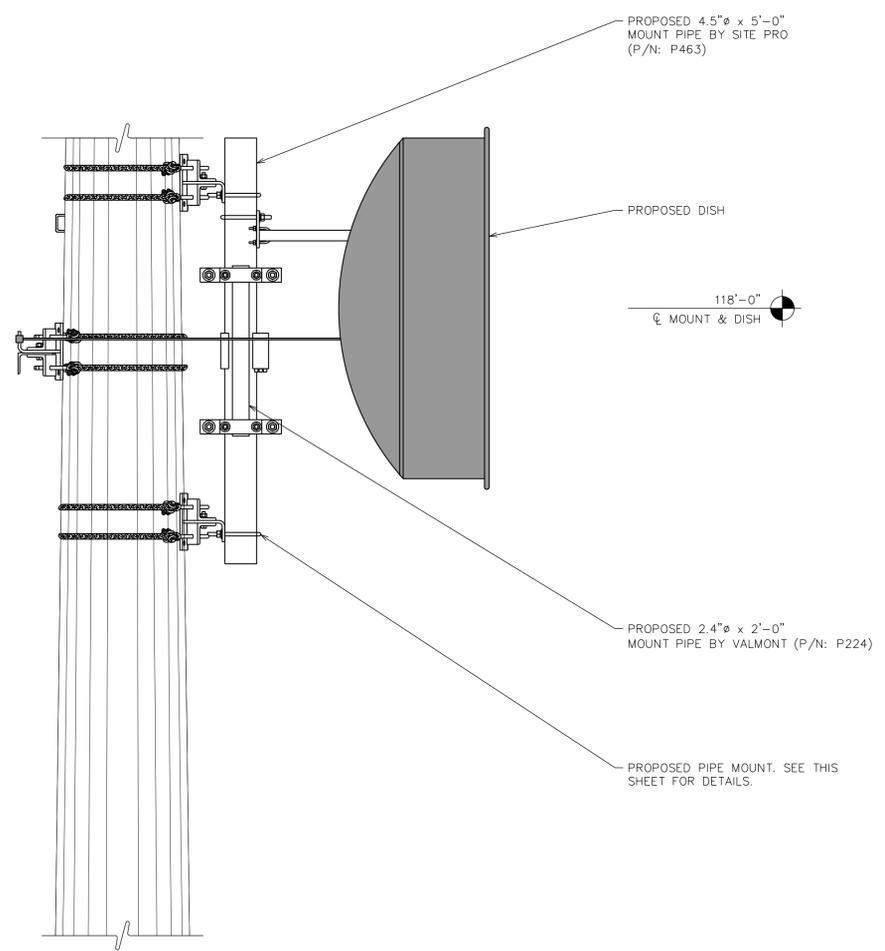
SCALE: N.T.S.



PROPOSED ADJUSTABLE PIPE-TO-PIPE MOUNT BY COMMSCOPE (P/N: AD-P60-SCP)

**PROP. PIPE-TO-PIPE MOUNT**

SCALE: N.T.S.



PROPOSED 4.5"Ø x 5'-0" MOUNT PIPE BY SITE PRO (P/N: P463)

PROPOSED DISH

118'-0" Ø MOUNT & DISH

PROPOSED 2.4"Ø x 2'-0" MOUNT PIPE BY VALMONT (P/N: P224)

PROPOSED PIPE MOUNT. SEE THIS SHEET FOR DETAILS.

**PROPOSED PIPE MOUNT PROFILE**

SCALE: N.T.S.

PROPOSED ANTENNA/COAX SCHEDULE					
TECHNOLOGY	MANUFACTURER (MODEL #)	MOUNTING HEIGHT	AZIMUTH	CABLE SIZE	CABLE LENGTH
DISH	RADIOWAVES (HPD4-5.2)	Ø @ 118'-0"	180.41'	(1) CAT5e	*230'±
-	CAMBIUM NETWORKS (PTP670)				

\*CONTRACTOR SHALL FIELD VERIFY COAX LENGTH PRIOR TO CONSTRUCTION.

**PROPOSED ANTENNA/COAX SCHEDULE**

SCALE: N.T.S.

PLANS PREPARED FOR:

401 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601  
OFFICE: (800) 452-2777

PLANS PREPARED BY:

TEP OP&O, LLC  
328 TRYON ROAD  
RALEIGH, NC 27605-3530  
OFFICE: (919) 661-6351  
FAX: (919) 661-6350

N.C. LICENSE #P-1403

REV	DATE	ISSUED FOR:	CHECKED BY:
3	10-16-25	CONSTRUCTION	JBG
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0	06-20-25	PRELIMINARY CONSTRUCTION	

PROJECT INFORMATION:

**SITE NAME:**  
**HILL CREST 230 SUB**

4805 US15-501 HWY  
CARTHAGE, NC 28327  
(MOORE COUNTY)

SHEET TITLE:  
**ANTENNA MOUNTING DETAILS**

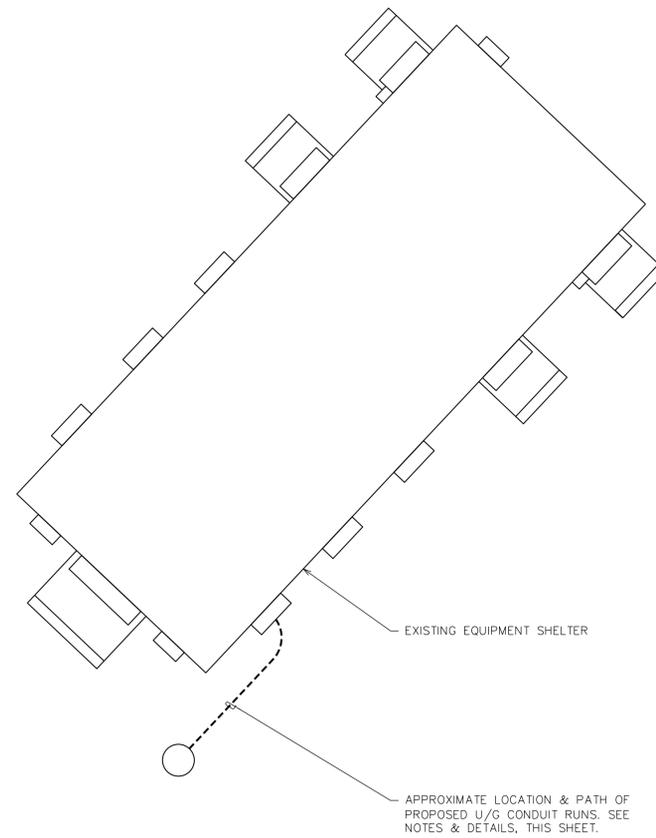
SHEET NUMBER:  
**C-5**

REVISION:  
3

TEP #:  
347662

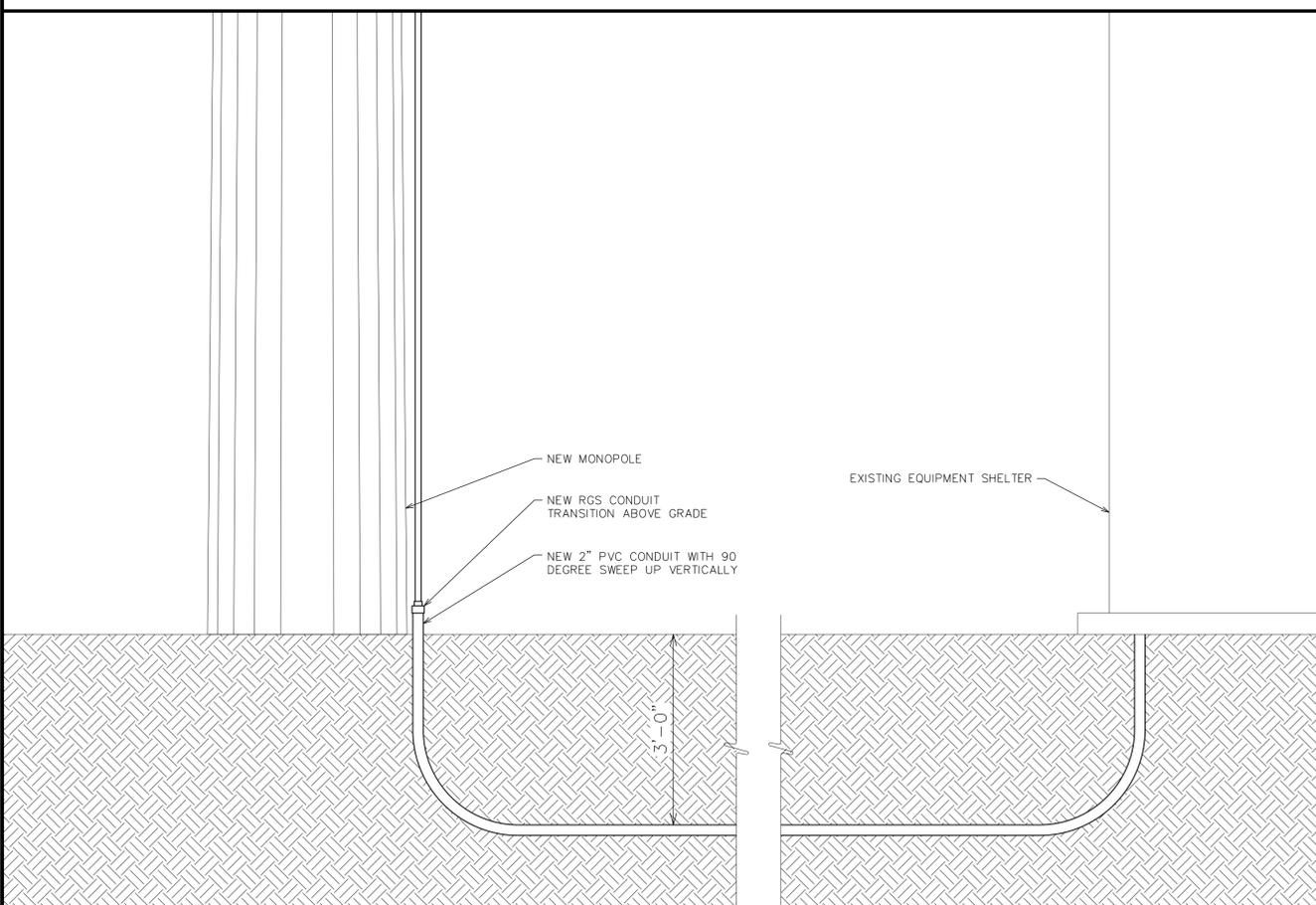
**NOTES:**

1. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING U/G CONDUITS.
2. CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANY FOR ROUTING.



**CONDUIT ROUTING PLAN**

SCALE: 1/8" = 1'-0"

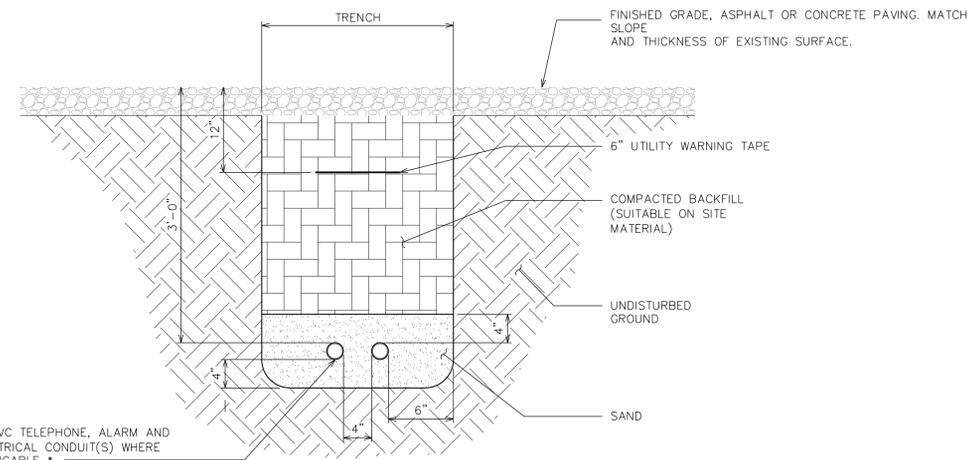


**CONDUIT ROUTING DETAIL**

SCALE: N.T.S.

**NOTES:**

1. ACTUAL SEPARATION OF CONDUITS TO BE DETERMINED BY SITE SPECIFIC REQUIREMENTS.
2. PROVIDE PVC CONDUIT BELOW GRADE.
3. PROVIDE RGS CONDUIT AND ELBOWS AT STUB UP LOCATIONS (I.E. SERVICE POLES, EQUIPMENT, ETC.)
4. PROVIDE RGS CONDUIT FOR INSTALLATIONS BELOW PARKING LOTS AND ROADWAYS.



\* SEPARATION DIMENSIONS TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.

**UNDERGROUND CONDUIT(S) TRENCH DETAIL**

SCALE: N.T.S.

PLANS PREPARED FOR:



401 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601  
OFFICE: (800) 452-2777

TEP OP&O, LLC

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OFFICE: (919) 661-6351  
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N.C. LICENSE #P-1403

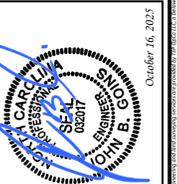
PLANS PREPARED BY:

REV	DATE	ISSUED FOR:	CHECKED BY:
3	10-16-25	CONSTRUCTION	JBG
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0	06-20-25	PRELIMINARY CONSTRUCTION	

**SITE NAME:**  
**HILL CREST 230 SUB**

4805 US15-501 HWY  
CARTHAGE, NC 28327  
(MOORE COUNTY)

PROJECT INFORMATION:



SEAL:

**SHEET TITLE:**  
**UNDERGROUND CONDUIT DETAILS**

**SHEET NUMBER:**  
**C-6**

**REVISION:**  
**3**

**TEP #:**  
34762

**ELECTRICAL NOTES:**

**SCOPE:**

1. PROVIDE LABOR, MATERIALS, INSPECTION, AND TESTING TO PROVIDE CODE COMPLIANCE FOR ELECTRIC, TELEPHONE, AND GROUNDING/LIGHTNING SYSTEMS.

**CODES:**

1. THE INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND CODES. THESE INCLUDE BUT ARE NOT LIMITED TO THE LATEST ADOPTED EDITIONS OF:
  - A. THE NATIONAL ELECTRICAL SAFETY CODE
  - B. THE NATIONAL ELECTRIC CODE – NFPA-70
  - C. REGULATIONS OF THE SERVING UTILITY COMPANY
  - D. LOCAL AND STATE AMENDMENTS
  - E. THE INTERNATIONAL ELECTRIC CODE – IEC (WHERE APPLICABLE)
2. PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR.
3. AFTER COMPLETION AND FINAL INSPECTION OF THE WORK, THE OWNER SHALL BE FURNISHED A CERTIFICATE OF COMPLETION AND APPROVAL.

**TESTING:**

1. UPON COMPLETION OF THE INSTALLATION, OPERATE AND ADJUST THE EQUIPMENT AND SYSTEMS TO MEET SPECIFIED PERFORMANCE REQUIREMENTS. THE TESTING SHALL BE DONE BY QUALIFIED PERSONNEL.

**GUARANTEE:**

1. IN ADDITION TO THE GUARANTEE OF THE EQUIPMENT BY THE MANUFACTURER, EACH PIECE OF EQUIPMENT SPECIFIED HEREIN SHALL ALSO BE GUARANTEED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE OWNER AND WITHOUT EXPENSE TO THE OWNER.
2. THE WARRANTY CERTIFICATES & GUARANTEES FURNISHED BY THE MANUFACTURERS SHALL BE TURNED OVER TO THE OWNER.

**UTILITY CO-ORDINATION:**

1. CONTRACTOR SHALL COORDINATE WORK WITH THE POWER AND TELEPHONE COMPANIES AND SHALL COMPLY WITH THE SERVICE REQUIREMENTS OF EACH UTILITY COMPANY.

**EXAMINATION OF SITE:**

1. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE JOB AND SHALL FAMILIARIZE HIMSELF WITH THE CONDITIONS AFFECTING THE PROPOSED ELECTRICAL INSTALLATION AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. FAILURE TO COMPLY WITH THE INTENT OF THIS SECTION WILL IN NO WAY RELIEVE THE CONTRACTOR OF PERFORMING THE WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM OR SYSTEMS.

**CUTTING, PATCHING AND EXCAVATION:**

1. COORDINATION OF SLEEVES, CHASES, ETC., BETWEEN SUBCONTRACTORS WILL BE REQUIRED PRIOR TO THE CONSTRUCTION OF ANY PORTION OF THE WORK. CUTTING AND PATCHING OF WALLS, PARTITIONS, FLOORS, AND CHASES IN CONCRETE, WOOD, STEEL OR MASONRY SHALL BE DONE AS PROVIDED ON THE DRAWINGS.
2. NECESSARY EXCAVATIONS AND BACKFILLING INCIDENTAL TO THE ELECTRICAL WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWING.
3. SEAL PENETRATIONS THROUGH RATED WALLS, FLOORS, ETC., WITH APPROVED METHOD AS LISTED BY UL.

**RACEWAYS / CONDUITS GENERAL:**

1. CONDUITORS SHALL BE INSTALLED IN LISTED RACEWAYS. CONDUIT SHALL BE RIGID STEEL, EMT, SCH40 PVC, OR SCH80PVC AS INDICATED ON THE DRAWINGS. THE RACEWAY SYSTEM SHALL BE COMPLETE BEFORE INSTALLING CONDUITORS.
2. EXTERIOR RACEWAYS AND GROUNDING SLEEVES SHALL BE SEALED AT POINTS OF ENTRANCE AND EXIT. THE RACEWAY SYSTEM SHALL BE BONDED PER NEC.

**EXTERIOR CONDUIT:**

1. EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.
2. THE CONDUIT SHALL BE RIGID STEEL AT GRADE TRANSITIONS OR WHERE EXPOSED TO DAMAGE.
3. UNDERGROUND CONDUITS SHALL BE RIGID STEEL, SCH40 PVC, OR SCH80 PVC AS INDICATED ON THE DRAWINGS.
4. BURIAL DEPTH OF CONDUITS SHALL BE AS REQUIRED BY CODE FOR EACH SPECIFIC CONDUIT TYPE AND APPLICATION, BUT SHALL NOT BE LESS THAN THE FROST DEPTH AT THE SITE.
5. CONDUIT ROUTES ARE SCHEMATIC. CONTRACTOR SHALL FIELD VERIFY ROUTES BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND/OR BUILDING OWNER.

**INTERIOR CONDUIT:**

1. CONCEALED CONDUIT IN WALLS OR INTERIOR SPACES ABOVE GRADE MAY BE EMT OR PVC.
2. CONDUIT RUNS SHALL USE APPROVED COUPLINGS AND CONNECTORS. PROVIDE INSULATED BUSHING FOR ALL CONDUIT TERMINATIONS. CONDUIT RUNS IN A WET LOCATION SHALL HAVE WATERPROOF FITTINGS.
3. PROVIDE SUPPORTS FOR CONDUITS IN ACCORDANCE WITH NEC REQUIREMENTS. CONDUITS SHALL BE SIZED AS REQUIRED BY NEC.

**EQUIPMENT:**

1. DISCONNECT SWITCHES SHALL BE SERVICE ENTRANCE RATED, HEAVY DUTY TYPE.
2. CONTRACTOR SHALL VERIFY MAXIMUM AVAILABLE FAULT CURRENT AND COORDINATE INSTALLATION WITH THE LOCAL UTILITY BEFORE STARTING WORK. CONTRACTOR WILL VERIFY THAT EXISTING CIRCUIT BREAKERS ARE RATED FOR MORE THAN AVAILABLE FAULT CURRENT AND REPLACE AS NECESSARY.
3. NEW CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AS DETERMINED BY THE LOCAL UTILITY.

**CONDUCTORS:**

1. FURNISH AND INSTALL CONDUCTORS SPECIFIED IN THE DRAWINGS. CONDUCTORS SHALL BE COPPER AND SHALL HAVE TYPE THWN (MIN) (75° C) INSULATION, RATED FOR 600 VOLTS.
2. THE USE OF ALUMINUM CONDUCTORS SHALL BE LIMITED TO THE SERVICE FEEDERS INSTALLED BY THE UTILITY.
3. CONDUCTORS SHALL BE PROVIDED AND INSTALLED AS FOLLOWS:
  - A. MINIMUM WIRE SIZE SHALL BE #12 AWG.
  - B. CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS SIZED #10 AND #12 MAY BE SOLID OR STRANDED.
  - C. CONNECTION FOR #10 AWG #12 AWG SHALL BE BY TWISTING TIGHT AND INSTALLING INSULATED PRESSURE OR WIRE NUT CONNECTIONS.
  - D. CONNECTION FOR #8 AWG AND LARGER SHALL BE BY USE OF STEEL CRIMP-ON SLEEVES WITH NYLON INSULATOR.
3. CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC STANDARDS.

**UL COMPLIANCE:**

1. ELECTRICAL MATERIALS, DEVICES, CONDUCTORS, APPLIANCES, AND EQUIPMENT SHALL BE LABELED/LISTED BY UL OR ACCEPTED BY JURISDICTION (I.E., LOCAL COUNTY OR STATE) APPROVED THIRD PARTY TESTING AGENCY.

**GROUNDING:**

1. ELECTRICAL NEUTRALS, RACEWAYS AND NON-CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT AND ASSOCIATED ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. THIS SHALL INCLUDE NEUTRAL CONDUCTORS, CONDUITS, SUPPORTS, CABINETS, BOXES, GROUND BUSES, ETC. THE NEUTRAL CONDUCTOR FOR EACH SYSTEM SHALL BE GROUNDED AT A SINGLE POINT.
2. PROVIDE GROUND CONDUCTOR IN RACEWAYS PER NEC.
3. PROVIDE BONDING AND GROUND TO MEET NFPA 780 – "LIGHTNING PROTECTION" AS A MINIMUM.
4. PROVIDE GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS, AS REQUIRED BY THE NATIONAL ELECTRIC CODE, RADIO EQUIPMENT MANUFACTURERS, AND MOTOROLA R56 (AS APPLICABLE).

**ABBREVIATIONS AND LEGEND**

A	- AMPERE	PNLBD	- PANELBOARD
AFG	- ABOVE FINISHED GRADE	PVC	- RIGID NON-METALLIC CONDUIT
ATS	- AUTOMATIC TRANSFER SWITCH	RGS	- RIGID GALVANIZED STEEL CONDUIT
AWG	- AMERICAN WIRE GAUGE	SW	- SWITCH
BCW	- BARE COPPER WIRE	TGB	- TOWER GROUND BAR
BFG	- BELOW FINISHED GRADE	UL	- UNDERWRITERS LABORATORIES
BKR	- BREAKER	V	- VOLTAGE
C	- CONDUIT	W	- WATTS
CKT	- CIRCUIT	XFMR	- TRANSFORMER
DISC	- DISCONNECT	XMTR	- TRANSMITTER
EGR	- EXTERNAL GROUND RING		
EMT	- ELECTRIC METALLIC TUBING		
FSC	- FLEXIBLE STEEL CONDUIT		
GEN	- GENERATOR		
GPS	- GLOBAL POSITIONING SYSTEM		
GRD	- GROUND		
IGB	- ISOLATED GROUND BAR		
IGR	- INTERIOR GROUND RING (HALO)		
KW	- KILOWATTS		
NEC	- NATIONAL ELECTRIC CODE		
PCS	- PERSONAL COMMUNICATION SYSTEM		
PH	- PHASE		
PNL	- PANEL		

	UNDERGROUND ELECTRICAL CONDUIT
	UNDERGROUND TELEPHONE CONDUIT
	KILOWATT-HOUR METER
	UNDERGROUND BONDING AND GROUNDING CONDUCTOR
	GROUND ROD
	CADWELD
	GROUND ROD WITH INSPECTION WELL



PLANS PREPARED FOR:  
401 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601  
OFFICE: (800) 452-2777

TEP OPCO, LLC  
326 TRYON ROAD  
RALEIGH, NC 27605-3530  
OFFICE: (919) 661-6351  
FAX: (919) 661-6350  
N.C. LICENSE #P-1403

3	10-16-25	CONSTRUCTION							
2	10-02-25	CONSTRUCTION							
1	05-30-25	PRELIMINARY CONSTRUCTION							
0	06-20-25	PRELIMINARY CONSTRUCTION							
REV	DATE	ISSUED FOR:							
		DRAWN BY: KJV							
		CHECKED BY: JBC							

PROJECT INFORMATION:  
**SITE NAME:**  
**HILL CREST 230 SUB**  
4805 US15--501 HWY  
CARTHAGE, NC 28327  
(MOORE COUNTY)



SHEET TITLE:  
**ELECTRICAL NOTES**

SHEET NUMBER:  
**E-1**

REVISION:  
**3**

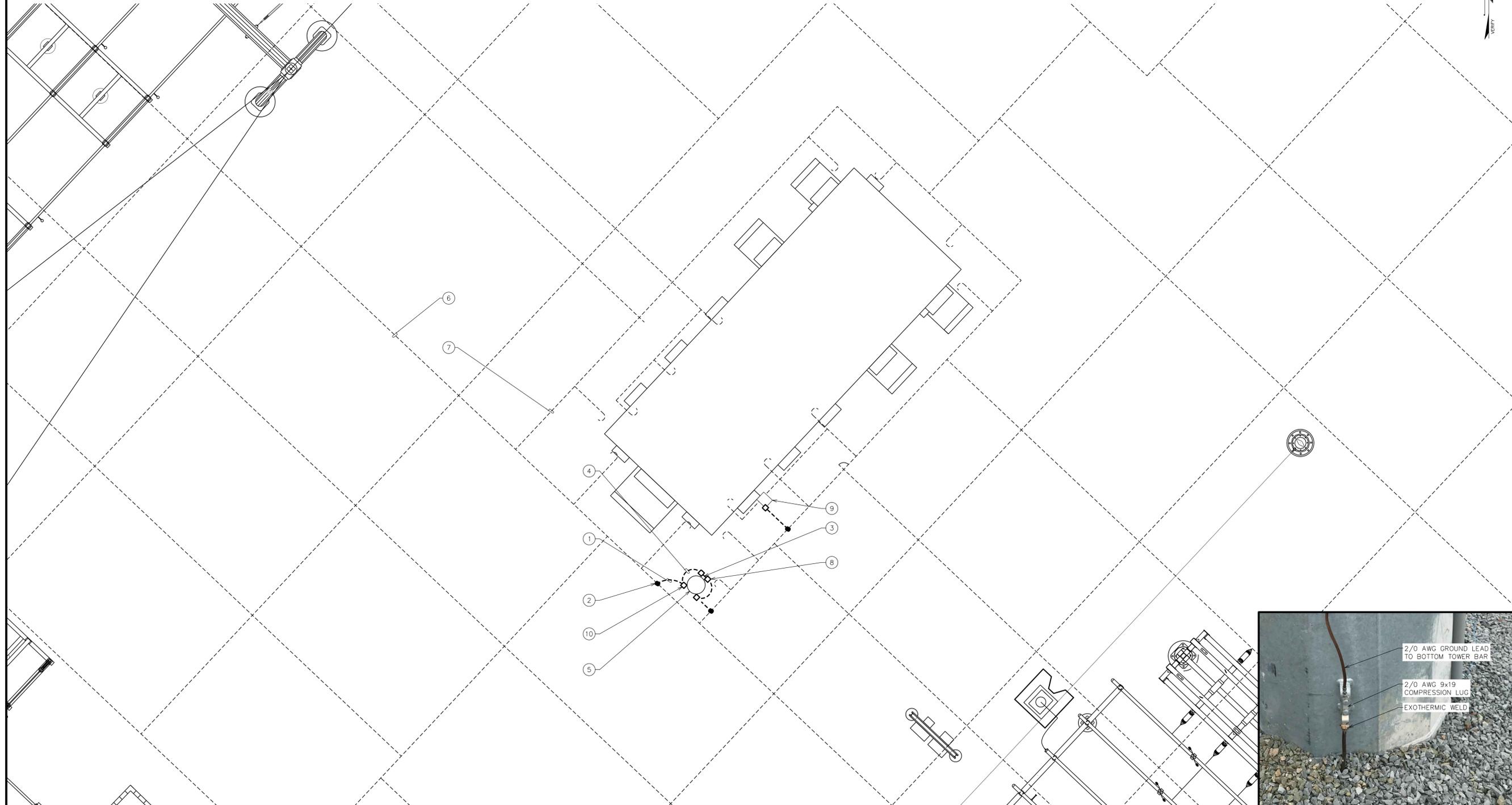
TEP #:  
**347662**

**DRAWING NOTES:**

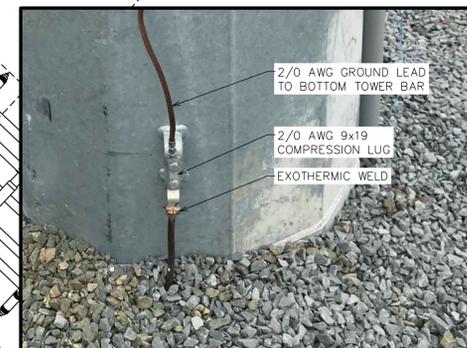
- 1 EXOTHERMIC WELD FROM EXISTING GROUND SYSTEM (CONTRACTOR TO VERIFY LOCATION) TO GROUND BRACKET (TYP OF 2) ON POLE. SEE THIS SHEET FOR DETAILS.
- 2 EXOTHERMIC WELD (TYP)
- 3 POLE BOTTOM BUSS BAR
- 4 POLE BUSS BAR BONDING CONDUCTOR (TYP OF 2) TO EXISTING POLE GROUNDING BRACKETS
- 5 PROPOSED POLE
- 6 EXISTING SUBSTATION GROUND SYSTEM
- 7 SHELTER GROUND RING
- 8 MECHANICAL GROUND LUG (TYP)
- 9 LPU (LIGHTNING PROTECTION UNIT), LOCATED AT EQUIPMENT LOCATION
- 10 GROUNDING BRACKET AT BOTTOM OF POLE (TYP OF 2). SEE DETAIL THIS SHEET.

**GROUNDING NOTES**

1. CONTRACTOR SHALL VERIFY THAT GROUNDING ELECTRODES SHALL BE CONNECTED IN A RING USING 2/0 AWG OR 4/0 AWG (CONTRACTOR TO VERIFY EXISTING GROUND MAT SIZING) BARE TINNED COPPER WIRE, THE TOP OF THE GROUND RODS AND THE RING CONDUCTOR SHALL BE 30" BELOW FINISHED GRADE. GROUNDING ELECTRODES SHALL BE DRIVEN ON 10'-0" CENTERS. (MINIMUM; 15'-0" MAX, PROVIDE AND INSTALL AS REQUIRED PER PLAN BELOW).
2. GROUND RING CONNECTION CONDUCTORS SHALL BE OF EQUAL LENGTH, MATERIAL, AND BONDING TECHNIQUE.
3. PROVIDE AND INSTALL GROUNDING CONNECTIONS SHOWN BELOW AS NEEDED PER EXISTING SITE GROUNDING SYSTEM. CONTRACTOR SHALL VERIFY ALL EXISTING SITE GROUNDING CONDITIONS BEFORE STARTING WORK OR PURCHASING EQUIPMENT.
4. BOND POLE GROUND BAR TO EXTERNAL GROUND RING WITH 2 RUNS OF 2/0 OR 4/0 AWG (CONTRACTOR TO VERIFY EXISTING GROUND MAT SIZING) BARE, TINNED, SOLID COPPER CONDUCTOR IN PVC. CONNECT BAR END WITH 2 HOLE LUG, AND EXOTHERMICALLY WELD THE OTHER END TO THE EXTERNAL GROUND ROD.
5. BONDING CONDUCTORS SHALL BE ROUTED THROUGH A 3/4" PVC CONDUIT SLEEVE RUN UNDER THE FOUNDATION. REFER TO THE GROUNDING PLAN BELOW.
6. ALL CONDUIT, GROUND GRID CONDUCTOR AND UNDERGROUND FEEDER CIRCUIT LOCATIONS ARE APPROXIMATE. HAND DIG TO A MINIMUM OF 36" PRIOR TO MACHINERY EXCAVATIONS WHERE THERE IS A POTENTIAL FOR IMPACTING EXISTING UNDERGROUND COMPONENTS.



**TOWER GROUNDING PLAN**  
SCALE: 1/8" = 1'-0"



**GROUND BRACKET DETAIL**  
SCALE: N.T.S.

PLANS PREPARED FOR:

401 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601  
OFFICE: (800) 452-2777

PLANS PREPARED BY:

**TEP**

TEP OP&O, LLC  
326 TRYON ROAD  
RALEIGH, NC 27605-3530  
OFFICE: (919) 661-6351  
FAX: (919) 661-6350  
N.C. LICENSE #P-1403

REV	DATE	ISSUED FOR:	CHECKED BY:
3	10-16-25	CONSTRUCTION	JBG
2	10-02-25	CONSTRUCTION	
1	05-30-25	PRELIMINARY CONSTRUCTION	
0	06-20-25	PRELIMINARY CONSTRUCTION	

PROJECT INFORMATION:

**SITE NAME:**  
**HILL CREST 230 SUB**

4805 US15-501 HWY  
CARTHAGE, NC 28327  
(MOORE COUNTY)

SHEET TITLE:  
**TOWER GROUNDING AND ROUTING PLAN**

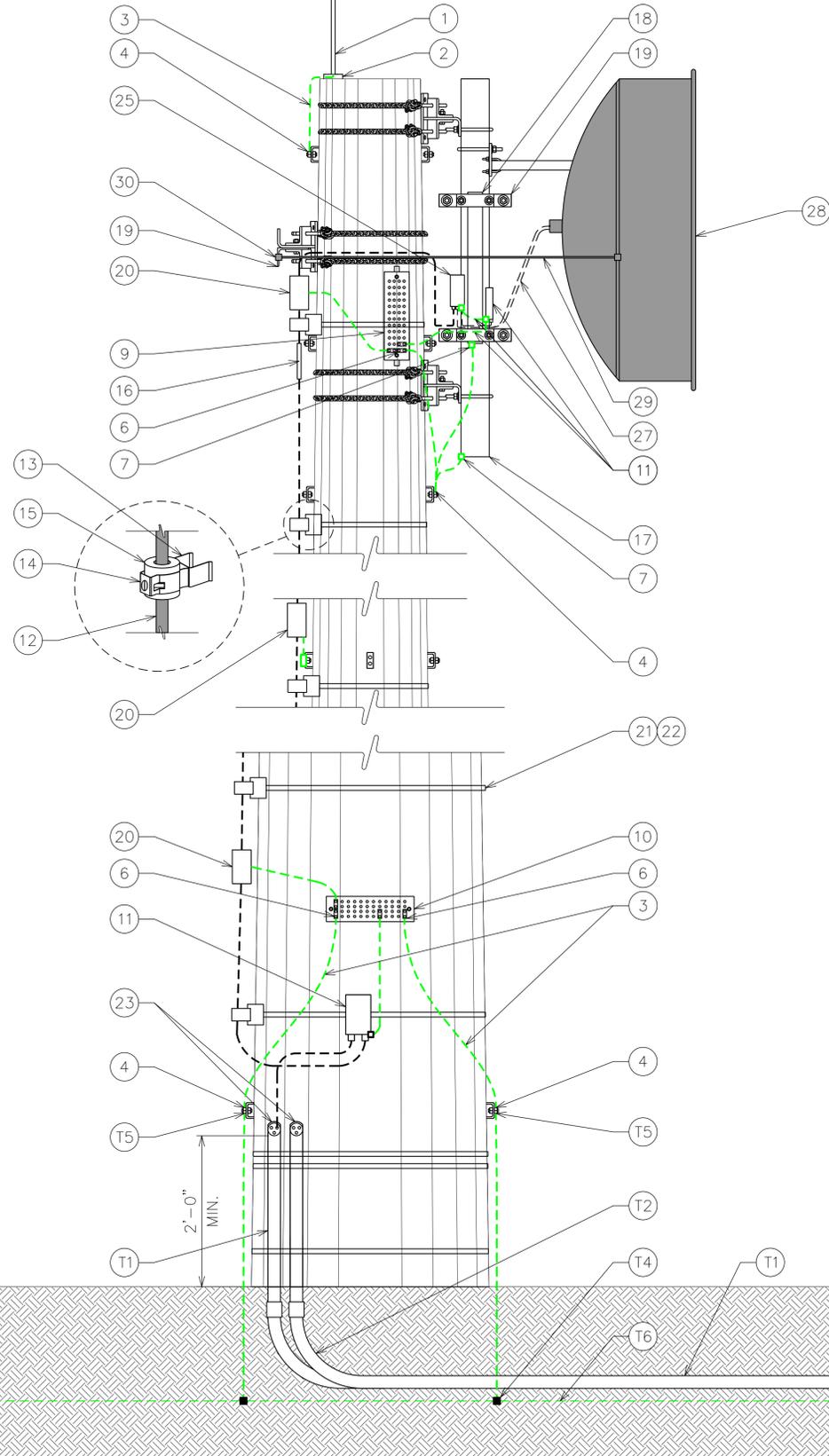
SHEET NUMBER:  
**E-2**

REVISION:  
**3**

TEP #:  
347662







**MONOPOLE ELEVATION (FRONT VIEW)**

SCALE: N.T.S.

**BILL OF MATERIALS - TELECOMMUNICATIONS**

ITEM	QTY	UNIT	MAXIMO PART NUMBER	DESCRIPTION
1	1	EA	1505632	AIR TERMINAL, COPPER CLAD AIR BASE, 1/2" DIA. X 48"
2	1	EA	1479387	TERMINAL, BRONZE AIR BASE, 1/2" DIA. INTERNALLY THREADED HUB
3	1	RO	1502506	WIRE/CABLE, 2/0 AWG, CU, SOFT DRAWN, 19 STR, BARE CU, CLASS B, PACKAGED IN 25' HAND COILS
4	6	EA	1503888	TERMINAL, LUG, 2/0 AWG CONDUCTOR, (2) 1/2" HOLE BLACK, 1-3/4" CTR
5	1	EA	1612775	TERMINAL, LUG, 2/0 AWG CONDUCTOR, (2) 1/2" HOLE, 1" CTR, BLACK, LONG
6	3	EA	1504572	TERMINAL, LUG, 2/0 AWG, COMP, CU, (2) 3/8" HOLE, 1" CTR
7	2	EA	1505554	TERMINAL, LUG, 2/0 AWG CONDUCTOR, SGL HOLE 3/8" POST F/
8	3	EA	LOOSE	TERMINAL, LUG, # 6 AWG, (2) 1/2" HOLE, 1 3/4" SPACE BLUE, LONG
9	1	EA	1525371	BAR, GROUND, 2" WD X 12" LG X 1/4" THK, W/ INSULATORS & BRACKETS, (18) PRE-DRILLED 7/16" HOLE
10	1	EA	1505048	BAR, GROUND, BUSS, 4" WD X 14" LG X 1/4" THK, TINNED, W/ HARWARE
11	1	KT	1539777	LPU KIT, GROUNDING, LIGHTNING PROTECTION UNIT, ETHERNET CABLE, PREFITTED CABLE GLAND,
12	1	SP	1539773	WIRE/CABLE,ELECTRICAL, CAT5, 4 PAIR, 24 AWG, CU, SHIELDED INSULATION
13	4	PK	1473338	BRACKET, UNIVERSAL STANDOFF MOUNTING, NO ADAPTER
14	4	PK	1505037	HANGER, CABLE, SNAP-IN STACKABLE, F/ 1-5/8" CABLE
15	4	PK	1564840	CUSHION, BARREL, 1-5/8", UNIVERSAL, 14-36MM, SNAP-IN, 10 PER BOX
16	1	EA	1554484	GRIP,CABLE, HOISTING, 3/8" CABLE, SS, PRE-LACED
17	1	EA	1503531	PIPE, 5' LG, ALUM, 4-1/2" OD, F/ ANTENNA MOUNT
18	1	EA	1479381	PIPE, 2-3/8", 2' LG, PLAIN ENDS, STL, F/ ANTENNA MOUNT
19	1	EA	1501289	BRACKET, MOUNTING, HOT DIP GALV STL, BOOM GATE CLAMP SET, 4-1/2" TO 12", 60 DEG ANGLE LEGS
20	3	EA	1539778	KIT, SHIELD GROUNDING, GROUND STRIPS, MASTIC TAPE, ELECTRICAL TAPE, GROUND BOLT & NUT, RETAINING ZIP TIES, F/
21	4	RO	1490605	BAND,STRAPPING, 3/4" WD, 100' LG, 0.03" THK, 316 SS, 1800 LB
22	100	EA	1490606	BUCKLE, BANDING, 3/4" WD, SS
23	2	EA	904105	HEAD,SERVICE ENTRANCE,RIGID,2",SLIP-ON,PVC,WEATHER HD,STD PKG/5
24	1	EA	1545989	BRACKET, MOUNTING, CAMBIUM TILT BRACKET ASSY
25	1	EA	1546830	MODULE, WIRELESS ACCESS POINT, CAMBIUM 5X GHZ PUMP 670 CONNECTORIZED SUBSCRIBER MODULE
26	1	EA	1588737	CHAIN MOUNT, FLUSH ANTENNA, CHAIN MOUNT, TIE BACK ARMS, U-BOLTS, F/ DISH ANTENNA W/ SIDE SUPPORT BRACKETS, F/ 4-1/2" DIA -
27	2	EA	1570020	JUMPER, COAX, 3' LG, N MALE TO N MALE, LMR-400, W/ WEATHER BOOTS
28	1	EA	1564958	ANTENNA, PARABOLIC DISH, 5.25-5.85GHZ, N-FEMALE CONNECTOR, 4' HPDP, 34.1 DBI GAIN
29	1	EA	1501100	BRACKET, MOUNTING, STABILIZER BARS-STIFF ARM, F/ 4' & 6' DISH ANTENNA SERIES SP
30	1	EA	NONE	STIFF ARM SUPPORT BRACKET FOR 2-3/8 IN OD PIPE

**BILL OF MATERIALS - TRANSMISSION**

ITEM	QTY	UNIT	MAXIMO PART NUMBER	DESCRIPTION
T1	4	EA	61354	CONDUIT, RIGID, HEAVY WALL, 2", 10' LG, SCH 40, PVC, LG BELLED ONE END, RATED F/ 90 DEG C
T2	2	EA	79433	ELBOW,CONDUIT, RIGID, 2", GRAY PVC, 90 DEG, 9-1/2" RADIUS, PLAIN END, F/ 2" CONDUIT; PACKAGING: 15 PER PACK
T3	16	FT	4177461	WIRE/CABLE, ELECTRICAL, BARE, GROUND, 19 STR SOL SD, 9 AWG, DEAD SOFT ANNEALED COPPERCLAD
T4	1	BX	50130218	POWDER, WELDING, EXO., #300PLUS20, LIGHT GREEN
T5	2	EA	67295	TERMINAL, TIN PLTD CU CONDUCTOR, WELDED CONDUCTOR CONNECTION, (2) 1/2" HOLE 1-3/4" CTR
T6	T5		N/A	EXISTING SUBSTATION GROUND MAT

REV	DATE	ISSUED FOR:	CHECKED BY:
3	10-16-25	CONSTRUCTION	JSC
2	10-02-25	CONSTRUCTION	
1	05-30-25	PRELIMINARY CONSTRUCTION	
0	06-20-25	PRELIMINARY CONSTRUCTION	

PROJECT INFORMATION:  
**SITE NAME:**  
**HILL CREST 230 SUB**  
 4805 US15-501 HWY  
 CARTHAGE, NC 28327  
 (MOORE COUNTY)



SHEET TITLE:  
**BILL OF MATERIALS**

SHEET NUMBER:  
**E-5**

REVISION:  
**3**

TEP #:  
 347662



Jul. 30, 2025

Jennifer Locklear  
Town of Carthage Town Planner  
4396 HWY 15-501  
Carthage, NC 28327

Subject: Site Name: Hill Crest 230 kV Substation – Monopole  
Proposed Duke Energy Monopole  
4805 US 15-501 Hwy, Carthage, North Carolina, 28327  
Pole Abandonment Letter

Dear Ms. Jennifer Locklear:

Duke Energy is proposing to install a monopole on their new substation at 4805 US 15-501 Hwy, Carthage, NC. We are installing a wireless network device and utility pole as part of Duke Energy's communication network to securely transmit data to and from substations, and to support smart technology improvements we have made at these locations to increase reliability and quality of service to customers.

This upgrade is important to ensure our systems operate efficiently to meet customer needs.

Per the Town of Carthage UDO, towers must be removed when abandoned for a period of 180 Days or greater. Duke Energy agrees to remove their pole in the event Duke Energy abandons the pole. In the event the pole is abandoned, Duke Energy will remove the pole within 180 days of notice requiring approval per the jurisdiction's requirements. If a shorter period is requested for the removal of the pole, Duke Energy will work with the jurisdiction's officials at the time to work out a timeline that works for both parties.

If you have any questions, feel free to contact me at my direct number (919) 306-5367 or correspond at the email address shown below.

Sincerely,

*ES Trujillo*

Eric Shawn Trujillo  
Telecommunications Engineer | MRTP | Data Engineering  
Cell: 919-306-5367  
Email: rick.trujillo@Duke-Energy.com

Jul. 30, 2025

Town of Carthage Planning Services  
4396 HWY 15-501  
Carthage, NC 28327

Subject: Town of Carthage Planning Communication Pole

Dear Town of Carthage Planning Department:

The following is a signed statement that the radio frequency emissions will comply with FCC standards part 15 for unlicensed radios.

Duke Energy's proposed construction to its existing substation

- 1) Shall at all times and without exception, be maintained in a safe manner, and in compliance with all conditions of all permits and authorizations.
- 2) Shall at all times be operated and maintained in compliance with all Federal, State, and local laws, codes, ordinances, rules, and regulations, including but not limited to those related to electrical power limits and RF emissions.

Duke Energy will expeditiously remedy any physical or RF interference with other telecommunications or wireless devices or services.

Sincerely,

*ES Trujillo*

Eric Shawn Trujillo  
Telecommunications Engineer | MRTP | Data Engineering  
Cell: 919-306-5367  
Email: rick.trujillo@Duke-Energy.com



**Subject: Site Name: Hillcrest 230kV Sub - Monopole  
Proposed Duke Energy Monopole  
4805 US15-1501, Carthage, NC, 28327  
Statement of Need Letter**

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**Statement of Need:**

In 2024, the Town of Carthage approved a conditional zoning request to rezone Property from RA-40 to RA-40-CZ to allow for a slight modification to the fencing requirements for the electric substation being constructed on the Property – the substation is an allowed use under the RA-40 zoning district. In order to permit a 124’ telecommunications pole, an amendment to the previously approved Conditional Zoning request is required.

This request to install the proposed wireless communication tower within the proposed substation on the Property is a part of Duke’s electric reliability enhancement project. The proposed tower is an important part of Duke’s day-to-day operations and is required to support Duke’s SmartGrid, the new generation of energy grid supported by digital technology. This upgrade will provide additional security for Duke assets, as the tower will securely transmit data to and from substations and support the smart technology improvements made to increase reliability and quality of service to customers. The tower also provides an essential communication function following major storms using Duke’s Land Mobile Radio system—a tool that Duke’s first responders use to help make repairs to its critical infrastructure when restoring service to customers.

To accomplish these goals, the tower must be tall enough to communicate in a direct line of site to other existing Duke tower structures that connect across the State. To securely collect data and control Duke equipment, Duke does not co-locate its equipment on non-Duke communications towers and, except in rare circumstances, Duke does not allow co-location on Duke communication towers.

The requested rezoning is consistent with the Town’s Comprehensive Land Use Plan, as the proposed tower and related zoning conditions will enhance Duke’s ability to supply power efficiently and safely throughout the region and improve outage recovery times during storms with new smart technology. These uses help support a smarter grid and will enhance the public health and safety.



**Zoning Conditions:**

Duke Energy hereby offers, consents to, and agrees to abide, if the above-referenced rezoning request is approved, the **additional** conditions written below:

- The telecommunications pole, as proposed and constructed in accordance with the approved site plan submitted with the rezoning application, shall be allowed as a permitted use associated with electrical substation and as part of the Conditional Zoning approval, without the need for a separate Special Use Permit application or approval. No-colocations by third-parties shall be required on the pole.

---

If you have any questions, feel free to contact me at my direct number: (919) 943-0397 or correspond at the email address shown below.

Sincerely,  
Ryan Woods  
Project Manager – Government Projects  
TEP

June 11, 2025

Robert Jackson  
Duke Energy  
Sr Telecom Analyst  
(910) 523-8708



NC LIC# P-1403

326 Tryon Road  
Raleigh, NC 27603  
(919) 661-6351  
[Structures@tepgroup.net](mailto:Structures@tepgroup.net)

**Subject: Structural Analysis Report**

**Carrier Designation:** **Duke Energy Cambium Pole Project**  
**Carrier Site Number:** N/A  
**Carrier Site Name:** Hill Crest 230KV Substation

**Engineering Firm Designation:** **TEP Project Number:** 347662.1082773

**Site Data:** **4805 US 15-501 Hwy, Carthage, Moore County, NC 28327**  
**Latitude 35° 18' 58.40", Longitude -79° 24' 40.33"**  
**140-ft Valmont H10 (120-ft AGL) Monopole – Directly Embedded**

Dear Robert Jackson,

TEP is pleased to submit this “**Structural Analysis Report**” to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the stress level for the tower and foundation structure, under the following load case, to be:

LC1: Existing + Proposed + Reserved Loading

**Sufficient Capacity**

Note: See Table 1 for the existing, proposed, and reserved loading

Structure Capacity	Foundation Capacity
94.6%	84.9%

The analysis has been performed in accordance with the ANSI/TIA-222-H Structural Standard for Antenna Supporting Structures, Antennas, and Small Wind Turbine Support Structures and the 2024 North Carolina State Building Code.

All modifications and equipment proposed in this report shall be installed in accordance with the appurtenances listed in Table 1 for the determined available structural capacity to be effective.

We at TEP appreciate the opportunity of providing our continuing professional services to you and Duke Energy. If you have any questions or need further assistance on this or any other projects please give us a call.

TEP Engineering, PLLC

P-1403

Respectfully submitted by:

Aaron T. Rucker, P.E.



06/11/2025

TEP is a family of companies licensed to provide different services in different jurisdictions. Depending on the jurisdiction, professional engineering and land surveying services are provided by TEP OpCo LLC, a Delaware limited liability company, TEP Engineering, PLLC, a North Carolina professional limited liability company, or M&H Engineering, PLLC, a New York professional limited liability company. General contractor services are provided by TEPDB OpCo LLC, a Delaware limited liability company. We acquire the requisite licenses in each state. Additional information can be obtained from the company.

## TABLE OF CONTENTS

### 1) INTRODUCTION

### 2) ANALYSIS CRITERIA

Table 1 - Existing, Proposed, and Reserved Antenna and Cable Information

### 3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

3.1) Analysis Method

3.2) Assumptions

### 4) ANALYSIS RESULTS

Table 3 - Section Capacity (Summary)

Table 4 - Tower Component Stresses vs. Capacity

Table 5 - Dish Twist/Sway Results for 60 mph Service Wind Speed

4.1) Recommendations

### 5) APPENDIX A

tnxTower Output

### 6) APPENDIX B

Additional Calculations

### 1) INTRODUCTION

The tower is a 140-foot monopole (120-ft AGL) directly embedded 20 feet below grade designed by Valmont. All information provided to TEP was assumed to be accurate and complete

### 2) ANALYSIS CRITERIA

<b>TIA-222 Revision:</b>	ANSI/TIA-222-H
<b>Type of Analysis:</b>	Rigorous
<b>Risk Category:</b>	III
<b>Wind Speed:</b>	125 mph (Ultimate)
<b>Exposure Category:</b>	C
<b>Topographic Procedure:</b>	Method 1 (Kzt = 1.0)
<b>Ice Thickness:</b>	1.50 in
<b>Wind Speed with Ice:</b>	30 mph
<b>Seismic Design Category:</b>	B
<b>Seismic Ss:</b>	0.155
<b>Seismic S1:</b>	0.072
<b>Service Wind Speed:</b>	60 mph

**Table 1 - Existing, Proposed, and Reserved Antenna and Cable Information**

Existing/ Proposed/ Reserved	Mount Level (ft)	Ant CL (ft)	Qty	Antenna Model	Mount Type	Qty Coax	Coax Size	Coax Location	Owner/ Tenant
<i>Proposed</i>	118.0	118.0	1	<i>Radiowaves HPD4 - 5.2</i>	<i>4.5"Ø x 5-ft Dish Mount</i>	1	Cat5e	<i>Outside</i>	<i>Duke Energy</i>
			1	<i>Cambium Networks PTP670</i>					
<i>Future</i>	99.0	99.0	9	<i>Commscope SBNHH-1D65C</i>	<i>Perfect Vision PV- LPPGS- 12M-HR2- AP19-AT Platform Mount</i>	1	Hybrid	<i>Inside</i>	<i>Duke Energy</i>
			3	<i>Raycap DC6-48-60-18-8C</i>					
		9	<i>Ericsson RRUS 11</i>						

### 3) ANALYSIS PROCEDURE

**Table 2 - Documents Provided**

Document	Remarks	Source
Tower and Foundation Design	Valmont, dated January 19, 2021 Dwg. No. 307137Z	Duke Energy
Geotechnical Report	S&ME, Inc., dated October 13, 2023 Project No. 23050359	Duke Energy
Preliminary Construction Drawings	TEP, dated May 30, 2025 TEP No. 347662.1082768	TEP
Correspondence	Correspondence in reference to the existing, proposed, and reserved loading.	Duke Energy

### 3.1) Analysis Method

tnxTower (version 8.3.1.2), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

### 3.2) Analysis Assumptions

- 1) The tower and foundation were built and maintained in accordance with the manufacturer's specification.
- 2) Unless specified by the client or tower mapping, the location of the existing and proposed coax is assumed by TEP and listed in Table 1.
- 3) All tower components are in sufficient condition to carry their full design capacity.
- 4) Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance.
- 5) All antenna mounts and mounting hardware are structurally sufficient to carry the full design capacity requirements of appurtenance wind area and weight as provided by the original manufacturer specifications. It is the carrier's responsibility to ensure compliance to the structural limitations of the existing and/or proposed antenna mounts. TEP did not analyze antennas supporting mounts as part of this structural analysis report.

This analysis may be affected if any assumptions are not valid or have been made in error. TEP should be notified to determine the effect on the structural integrity of the tower.

## 4) ANALYSIS RESULTS

**Table 3 - Section Capacity (Summary)**

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (lb)	øP <sub>allow</sub> (lb)	% Capacity	Pass / Fail
L1	120 - 67.083	Pole	TP26.08x16.51x0.219	1	-7686.90	1035760.00	58.5	Pass
L2	67.083 - 31.67	Pole	TP32.05x24.8884x0.25	2	-11750.60	1456390.00	84.0	Pass
L3	31.67 - 0	Pole	TP37.272x30.6761x0.281	3	-17739.70	1958010.00	94.6	Pass
							Summary	
						Pole (L3)	94.6	Pass
						<b>RATING =</b>	<b>94.6</b>	<b>Pass</b>

**Table 4 - Tower Component Stresses vs. Capacity**

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Direct Embed Soil Interaction	-	34.1	Pass
1,2	Direct Embed Structural	-	84.9	Pass

<b>Structure Rating (max from all components) =</b>	<b>94.6%</b>
---	--------------

Notes:

- 1) Rating per TIA-222-H, Section 15.5
- 2) See additional documentation in "Appendix B - Additional Calculations" for calculations supporting the % capacity listed.

**Table 5 - Dish Twist/Sway Results for 60 mph Service Wind Speed**

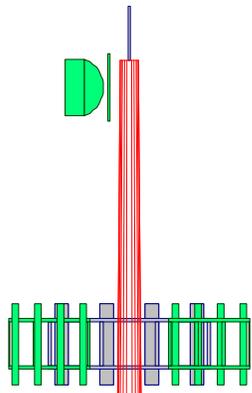
Elevation (ft)	Dish Model	Beam Deflection		
		Deflection (in)	Tilt (deg)	Twist (deg)
118.0	<i>Radiowaves HPD4 - 5.2</i>	19.246	1.2723	0.0129

**4.1) Recommendations**

- 1) If the load differs from that described in Table 1 of this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
- 2) The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.
- 3) Tower is to be directly embedded to a depth of 20-ft below grade.

**APPENDIX A**  
**TNX TOWER OUTPUT**

120.0 ft



**DESIGNED APPURTENANCE LOADING**

TYPE	ELEVATION	TYPE	ELEVATION
5/8" x 4' Lightning Rod	120	DC6-48-60-18-8C	99
4.5" dia x 5'	118	DC6-48-60-18-8C	99
L4 x 4 x 1/4 x 63" (Face Mounted)	118	DC6-48-60-18-8C	99
PTP 670	118	Perfect Vision	99
HPD4-5.2	118	PV-LPPGS-12M-TKB3-AP4	
(3) SBNHH-1D65C w/ Mount Pipe	99	(3) RRUS 11	98
(3) SBNHH-1D65C w/ Mount Pipe	99	(3) RRUS 11	98
(3) SBNHH-1D65C w/ Mount Pipe	99	(3) RRUS 11	98

**MATERIAL STRENGTH**

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

**TOWER DESIGN NOTES**

1. Tower is located in Moore County, North Carolina.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 125 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 30 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category III.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 94.6%

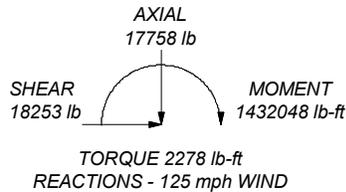
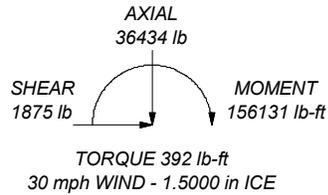
67.1 ft

31.7 ft

0.0 ft



ALL REACTIONS ARE FACTORED



Section	1	2	3
Length (ft)	52.92	39.58	36.50
Number of Sides	12	12	12
Thickness (in)	0.2190	0.2500	0.2810
Socket Length (ft)	4.17	4.83	
Top Dia (in)	16.5100	24.8884	30.6761
Bot Dia (in)	26.0800	32.0500	37.2720
Grade		A572-65	
Weight (lb)	2810.0	3212.5	3975.8
			9998.3

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	<p>Project: <b>TEP No. 347662.1082773</b></p>		
	<p>Client: Duke Energy</p>	<p>Drawn by: PRW</p>	<p>App'd:</p>
	<p>Code: TIA-222-H</p>	<p>Date: 06/11/25</p>	<p>Scale: NTS</p>
			<p>Path:</p>
			<p>Dwg No. E-1</p>

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	<b>Project</b>	TEP No. 347662.1082773	<b>Date</b>	09:23:26 06/11/25
	<b>Client</b>	Duke Energy	<b>Designed by</b>	PRW

<b>tnxTower</b>  <b>TEP</b> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: -	<b>Job</b>	Hill Crest 230KV Substation	<b>Page</b>	2 of 9
	<b>Project</b>	TEP No. 347662.1082773	<b>Date</b>	09:23:26 06/11/25
	<b>Client</b>	Duke Energy	<b>Designed by</b>	PRW

### Tower Input Data

The tower is a monopole.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower is located in Moore County, North Carolina.

Tower base elevation above sea level: 502.58 ft.

Basic wind speed of 125 mph.

Risk Category III.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.5000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 30 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

Non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

Tower analysis based on target reliabilities in accordance with Annex S.

Load Modification Factors used:  $K_{cs}(F_w) = 1.0$ ,  $K_{cs}(t) = 1.0$ .

Maximum demand-capacity ratio is: 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Section	Elevation	Section Length	Splice Length	Number of Sides	Top Diameter	Bottom Diameter	Wall Thickness	Bend Radius	Pole Grade
	ft	ft	ft		in	in	in	in	
L1	120.00-67.08	52.92	4.1670	12	16.5100	26.0800	0.2190	0.8760	A572-65 (65 ksi)
L2	67.08-31.67	39.58	4.8300	12	24.8884	32.0500	0.2500	1.0000	A572-65 (65 ksi)
L3	31.67-0.00	36.50		12	30.6761	37.2720	0.2810	1.1240	A572-65 (65 ksi)

### Tapered Pole Properties

Section	Tip Dia.	Area	I	r	C	I/C	J	I/Q	w	w/t
	in	in <sup>2</sup>	in <sup>4</sup>	in	in	in <sup>3</sup>	in <sup>4</sup>	in <sup>2</sup>	in	
L1	17.0152	11.4881	389.1609	5.8322	8.5522	45.5043	788.5454	5.6541	3.8378	17.524
	26.9227	18.2367	1556.7608	9.2582	13.5094	115.2350	3154.4194	8.9755	6.4025	29.235
L2	26.4588	19.8339	1536.8072	8.8205	12.8922	119.2045	3113.9880	9.7616	6.0001	24
	33.0924	25.5990	3304.1761	11.3844	16.6019	199.0240	6695.1567	12.5990	7.9194	31.678
L3	32.5627	27.5021	3243.0765	10.8814	15.8902	204.0929	6571.3523	13.5357	7.4681	26.577
	38.4877	33.4702	5845.6978	13.2428	19.3069	302.7777	11844.9685	16.4730	9.2358	32.868

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor $A_f$	Adjust. Factor $A_s$	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft <sup>2</sup>	in					in	in	in
L1 120.00-67.08				1	1	1.05			
L2 67.08-31.67				1	1	1.05			
L3 31.67-0.00				1	1	1.05			

### Options

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>Consider Moments - Legs</li> <li>Consider Moments - Horizontals</li> <li>Consider Moments - Diagonals</li> <li>Use Moment Magnification</li> <li>Use Code Stress Ratios</li> <li>√ Use Code Safety Factors - Guys</li> <li>Escalate Ice</li> <li>Always Use Max Kz</li> <li>Kz In Exposure D Hurricane Region</li> <li>Include Bolts In Member Capacity</li> <li>Leg Bolts Are At Top Of Section</li> <li>Secondary Horizontal Braces Leg</li> <li>Use Diamond Inner Bracing (4 Sided)</li> <li>SR Members Have Cut Ends</li> <li>SR Members Are Concentric</li> <li>Distribute Leg Loads As Uniform</li> <li>Use Special Wind Profile</li> </ul> | <ul style="list-style-type: none"> <li>Assume Legs Pinned</li> <li>√ Assume Rigid Index Plate</li> <li>√ Use Clear Spans For Wind Area</li> <li>Use Clear Spans For KL/r</li> <li>Retention Guys To Initial Tension</li> <li>√ Bypass Mast Stability Checks</li> <li>√ Use Azimuth Dish Coefficients</li> <li>√ Project Wind Area of Appurtenances</li> <li>√ Alternative Appurt. EPA Calculation</li> <li>Autocalc Torque Arm Areas</li> <li>Add IBC .6D+W Combination</li> <li>√ Sort Capacity Reports By Component</li> <li>Triangulate Diamond Inner Bracing</li> <li>Treat Feed Line Bundles As Cylinder</li> <li>Ignore KL/ry For 60 Deg. Angle Legs</li> <li>Use ASCE 10 X-Brace Ly Rules</li> </ul> | <ul style="list-style-type: none"> <li>Calculate Redundant Bracing Forces</li> <li>Ignore Redundant Members in FEA</li> <li>SR Leg Bolts Resist Compression</li> <li>All Leg Panels Have Same Allowable</li> <li>Offset Girt At Foundation</li> <li>√ Consider Feed Line Torque</li> <li>Include Angle Block Shear Check</li> <li>Use TIA-222-H Bracing Resist. Exemption</li> <li>Use TIA-222-H Tension Splice Exemption</li> <li style="text-align: center;">Poles</li> <li>√ Include Shear-Torsion Interaction</li> <li>Always Use Sub-Critical Flow</li> <li>Use Top Mounted Sockets</li> <li>√ Pole Without Linear Attachments</li> <li>Pole With Shroud Or No Appurtenances</li> <li>Outside and Inside Corner Radii Are Known</li> </ul> |
|--|---|---|

### Tapered Pole Section Geometry

### Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement	Total Number	Number Per Row	Start/End Position	Width or Diameter	Perimeter	Weight
				ft				in	in	plf
***118***										
CAT5e(1/4")	C	No	Surface Ar (CaAa)	118.00 - 0.00	1	1	0.000 - 0.000	0.2600		0.04
****										

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement	Total Number		C <sub>r</sub> A <sub>t</sub>	Weight
					ft			ft <sup>2</sup> /ft	plf
***Misc***									
Safety Line 3/8	C	No	No	CaAa (Out Of Face)	120.00 - 10.00	1	No Ice 1/2" Ice 1" Ice	0.04 0.14 0.24	0.22 0.75 1.28

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	<b>Project</b>	TEP No. 347662.1082773	<b>Date</b>	09:23:26 06/11/25
	<b>Client</b>	Duke Energy	<b>Designed by</b>	PRW

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	<b>Project</b>	TEP No. 347662.1082773	<b>Date</b>	09:23:26 06/11/25
	<b>Client</b>	Duke Energy	<b>Designed by</b>	PRW

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement	Total Number	$C_p A_A$	Weight
					ft		$ft^2/ft$	plf
Step Pegs (5/8" SR) 7-in. w/30" step	C	No	No	CaAa (Out Of Face)	120.00 - 10.00	1	2" Ice	2.34
							No Ice	0.49
							1/2" Ice	1.01
							1" Ice	2.07
							2" Ice	6.09
***** 1 5/8" Hybrid	C	No	No	Inside Pole	99.00 - 0.00	1	No Ice	0.75
							1/2" Ice	0.75
							1" Ice	0.75
							2" Ice	0.75
							*****	

Section	Elevation	$CP_x$	$CP_z$	$CP_x$ Ice	$CP_z$ Ice
	ft	in	in	in	in
L1	120.00-67.08	-0.4043	0.3978	-2.0262	2.2906
L2	67.08-31.67	-0.4102	0.4082	-2.2817	2.6140
L3	31.67-0.00	-0.2777	0.3342	-1.6352	2.3347

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

### Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation	Face	$A_R$	$A_F$	$C_p A_A$ In Face	$C_p A_A$ Out Face	Weight
	ft		$ft^2$	$ft^2$	$ft^2$	$ft^2$	lb
L1	120.00-67.08	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	1.324	3.836	63.44
L2	67.08-31.67	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.921	2.567	53.05
L3	31.67-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.823	1.571	40.37

### Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation	Face or Leg	Ice Thickness	$A_R$	$A_F$	$C_p A_A$ In Face	$C_p A_A$ Out Face	Weight
	ft		in	$ft^2$	$ft^2$	$ft^2$	$ft^2$	lb
L1	120.00-67.08	A	1.911	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00	
		C	0.000	0.000	20.786	44.289	706.20	
L2	67.08-31.67	A	1.795	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00	
		C	0.000	0.000	14.457	29.639	489.98	
L3	31.67-0.00	A	1.602	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00	
		C	0.000	0.000	12.191	17.128	327.76	

### Feed Line Center of Pressure

Section	Elevation	$CP_x$	$CP_z$	$CP_x$ Ice	$CP_z$ Ice
	ft	in	in	in	in

### Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	$K_a$ No Ice	$K_a$ Ice
L1	5	CAT5e(1/4")	67.08 - 118.00	1.0000	1.0000
L2	5	CAT5e(1/4")	31.67 - 67.08	1.0000	1.0000
L3	5	CAT5e(1/4")	0.00 - 31.67	1.0000	1.0000

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	$C_p A_A$ Front	$C_p A_A$ Side	Weight	
			ft	°	ft	$ft^2$	$ft^2$	lb	
5/8" x 4' Lightning Rod	A	From Leg	0.00	0.0000	120.00	No Ice	0.25	0.25	4.00
			0.00			1/2" Ice	0.66	0.66	6.82
			0.00			1" Ice	0.97	0.97	12.29
			2.00			2" Ice	1.49	1.49	31.83
***118*** 4.5" dia x 5'	C	From Leg	1.00	0.0000	118.00	No Ice	1.44	1.44	54.00
			0.00			1/2" Ice	2.08	2.08	70.04
			0.00			1" Ice	2.40	2.40	89.75
			0.00			2" Ice	3.07	3.07	140.77
L4 x 4 x 1/4 x 63" (Face Mounted)	C	From Leg	0.50	0.0000	118.00	No Ice	2.10	0.13	34.61
			0.00			1/2" Ice	2.48	0.18	53.80
			0.00			1" Ice	2.86	0.24	77.78
			0.00			2" Ice	3.65	0.37	140.91
PTP 670	C	From Leg	1.50	0.0000	118.00	No Ice	1.35	0.38	8.95
			0.00			1/2" Ice	1.50	0.48	17.81
			0.00			1" Ice	1.65	0.58	28.72
			0.00			2" Ice	1.98	0.80	57.48
***** Perfect Vision PV-LPPGS-12M-TKB3-AP4	C	None	0.0000	99.00	No Ice	27.70	27.70	3180.00	
					1/2" Ice	37.30	37.30	4134.00	
					1" Ice	46.90	46.90	5088.00	
					2" Ice	66.10	66.10	6996.00	
(3) SBNHH-1D65C w/ Mount Pipe	A	From Centroid-Lc	4.00	0.0000	99.00	No Ice	11.70	9.85	82.45
			0.00			1/2" Ice	12.42	11.38	173.13

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	<b>Project</b>	TEP No. 347662.1082773	<b>Date</b>	09:23:26 06/11/25
	<b>Client</b>	Duke Energy	<b>Designed by</b>	PRW

<b>tnxTower</b>  <b>TEP</b> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: -	<b>Job</b>	Hill Crest 230KV Substation	<b>Page</b>	6 of 9
	<b>Project</b>	TEP No. 347662.1082773	<b>Date</b>	09:23:26 06/11/25
	<b>Client</b>	Duke Energy	<b>Designed by</b>	PRW

Description	Face or Leg	Offset Type	Offsets: Horiz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C <sub>1</sub> A <sub>1</sub> Front ft <sup>2</sup>	C <sub>2</sub> A <sub>2</sub> Side ft <sup>2</sup>	Weight lb	
(3) SBNHH-1D65C w/ Mount Pipe	B	From Centroid-Lc g	0.00	0.0000	99.00	1" Ice	13.14	12.92	271.95
			2" Ice			14.52	15.27	505.43	
			No Ice			11.70	9.85	82.45	
			1/2" Ice			12.42	11.38	173.13	
			1" Ice			13.14	12.92	271.95	
(3) SBNHH-1D65C w/ Mount Pipe	C	From Centroid-Lc g	0.00	0.0000	99.00	1" Ice	11.70	9.85	82.45
			2" Ice			14.52	15.27	505.43	
			No Ice			11.70	9.85	82.45	
			1/2" Ice			12.42	11.38	173.13	
			1" Ice			13.14	12.92	271.95	
DC6-48-60-18-8C	A	From Centroid-Lc g	0.00	0.0000	99.00	1" Ice	1.14	1.14	26.20
			2" Ice			1.79	1.79	46.59	
			No Ice			2.00	2.00	69.77	
			1" Ice			2.00	2.00	69.77	
			2" Ice			2.45	2.45	125.13	
DC6-48-60-18-8C	B	From Centroid-Lc g	0.00	0.0000	99.00	1" Ice	1.14	1.14	26.20
			2" Ice			1.79	1.79	46.59	
			No Ice			2.00	2.00	69.77	
			1" Ice			2.00	2.00	69.77	
			2" Ice			2.45	2.45	125.13	
DC6-48-60-18-8C	C	From Centroid-Lc g	0.00	0.0000	99.00	1" Ice	1.14	1.14	26.20
			2" Ice			1.79	1.79	46.59	
			No Ice			2.00	2.00	69.77	
			1" Ice			2.00	2.00	69.77	
			2" Ice			2.45	2.45	125.13	
(3) RRUS 11	A	From Centroid-Lc g	0.00	0.0000	98.00	1" Ice	2.79	1.19	50.70
			2" Ice			3.00	1.34	71.57	
			No Ice			3.21	1.50	95.48	
			1" Ice			3.21	1.50	95.48	
			2" Ice			3.67	1.84	153.20	
(3) RRUS 11	B	From Centroid-Lc g	0.00	0.0000	98.00	1" Ice	2.79	1.19	50.70
			2" Ice			3.00	1.34	71.57	
			No Ice			3.21	1.50	95.48	
			1" Ice			3.21	1.50	95.48	
			2" Ice			3.67	1.84	153.20	
(3) RRUS 11	C	From Centroid-Lc g	0.00	0.0000	98.00	1" Ice	2.79	1.19	50.70
			2" Ice			3.00	1.34	71.57	
			No Ice			3.21	1.50	95.48	
			1" Ice			3.21	1.50	95.48	
			2" Ice			3.67	1.84	153.20	

\*\*\*\*\*

### Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horiz Lateral Vert ft ft ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft <sup>2</sup>	Weight lb
*****118***** HPD4-5.2	C	Paraboloid w/Shroud (HP)	From Leg	1.50 0.00 0.00	-59.5900		118.00	4.21	No Ice 1/2" Ice 1" Ice 2" Ice	85.00 159.26 233.52 382.04

\*\*\*\*\*

### Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

### Maximum Tower Deflections - Service Wind

<b>tnxTower</b>  <b>TEP</b> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: -	<b>Job</b>	Hill Crest 230KV Substation	<b>Page</b>	7 of 9
	<b>Project</b>	TEP No. 347662.1082773	<b>Date</b>	09:23:26 06/11/25
	<b>Client</b>	Duke Energy	<b>Designed by</b>	PRW

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
L1	120 - 67.083	19.788	40	1.2795	0.0125
L2	71.25 - 31.67	7.562	40	0.9854	0.0037
L3	36.5 - 0	2.016	40	0.4999	0.0013

### Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
120.00	5/8" x 4' Lightning Rod	40	19.788	1.2795	0.0133	47014
118.00	HPD4-5.2	40	19.246	1.2723	0.0129	47014
99.00	Perfect Vision	40	14.176	1.1947	0.0086	11193
98.00	PV-LPPGS-12M-TKB3-AP4 (3) RRUS 11	40	13.917	1.1897	0.0084	10684

### Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
L1	120 - 67.083	96.245	4	6.2435	0.0558
L2	71.25 - 31.67	36.795	4	4.8012	0.0167
L3	36.5 - 0	9.810	4	2.4340	0.0061

### Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
120.00	5/8" x 4' Lightning Rod	4	96.245	6.2435	0.0680	9847
118.00	HPD4-5.2	4	93.610	6.2082	0.0656	9847
99.00	Perfect Vision	4	68.957	5.8267	0.0436	2341
98.00	PV-LPPGS-12M-TKB3-AP4 (3) RRUS 11	4	67.697	5.8021	0.0425	2234

### Compression Checks

### Pole Design Data

Section No.	Elevation	Size	L	L <sub>a</sub>	Kl/r	A	P <sub>a</sub>	φP <sub>a</sub>	Ratio P <sub>a</sub> /φP <sub>a</sub>
	ft		ft	ft		in <sup>2</sup>	lb	lb	

<b>tnxTower</b>  <b>TEP</b> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: -	<b>Job</b>	Hill Crest 230KV Substation	<b>Page</b>	8 of 9
	<b>Project</b>	TEP No. 347662.1082773	<b>Date</b>	09:23:26 06/11/25
	<b>Client</b>	Duke Energy	<b>Designed by</b>	PRW

Section No.	Elevation	Size	L	L <sub>a</sub>	Kl/r	A	P <sub>a</sub>	φP <sub>a</sub>	Ratio P <sub>a</sub> /φP <sub>a</sub>
	ft		ft	ft		in <sup>2</sup>	lb	lb	
L1	120 - 67.083 (1)	TP26.08x16.51x0.219	52.92	0.00	0.0	17.7052	-7686.90	1035760.00	0.007
L2	67.083 - 31.67 (2)	TP32.05x24.8884x0.25	39.58	0.00	0.0	24.8955	-11750.60	1456390.00	0.008
L3	31.67 - 0 (3)	TP37.272x30.6761x0.281	36.50	0.00	0.0	33.4702	-17739.70	1958010.00	0.009

### Pole Bending Design Data

Section No.	Elevation	Size	M <sub>ax</sub>	φM <sub>ax</sub>	Ratio M <sub>ax</sub> /φM <sub>ax</sub>	M <sub>xy</sub>	φM <sub>xy</sub>	Ratio M <sub>xy</sub> /φM <sub>xy</sub>
	ft		lb-ft	lb-ft		lb-ft	lb-ft	
L1	120 - 67.083 (1)	TP26.08x16.51x0.219	339475.00	589426.67	0.576	0.00	589426.67	0.000
L2	67.083 - 31.67 (2)	TP32.05x24.8884x0.25	817033.33	984150.00	0.830	0.00	984150.00	0.000
L3	31.67 - 0 (3)	TP37.272x30.6761x0.281	1432050.00	1530683.33	0.936	0.00	1530683.33	0.000

### Pole Shear Design Data

Section No.	Elevation	Size	Actual V <sub>v</sub>	φV <sub>v</sub>	Ratio V <sub>v</sub> /φV <sub>v</sub>	Actual T <sub>v</sub>	φT <sub>v</sub>	Ratio T <sub>v</sub> /φT <sub>v</sub>
	ft		lb	lb		lb-ft	lb-ft	
L1	120 - 67.083 (1)	TP26.08x16.51x0.219	12140.10	310727.00	0.039	1862.04	686246.67	0.003
L2	67.083 - 31.67 (2)	TP32.05x24.8884x0.25	15319.40	436916.00	0.035	1920.27	1188566.67	0.002
L3	31.67 - 0 (3)	TP37.272x30.6761x0.281	18270.80	587402.00	0.031	1966.06	1911308.33	0.001

### Pole Interaction Design Data

Section No.	Elevation	Ratio P <sub>a</sub>	Ratio M <sub>ax</sub>	Ratio V <sub>v</sub>	Ratio T <sub>v</sub>	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	ft	φP <sub>a</sub>	φM <sub>ax</sub>	φV <sub>v</sub>	φT <sub>v</sub>			
L1	120 - 67.083 (1)	0.007	0.576	0.000	0.039	0.003	0.585	1.000
L2	67.083 - 31.67 (2)	0.008	0.830	0.000	0.035	0.002	0.840	1.000
L3	31.67 - 0 (3)	0.009	0.936	0.000	0.031	0.001	0.946	1.000

### Section Capacity Table

<b>tnxTower</b>  <b>TEP</b> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: -	<b>Job</b>	Hill Crest 230KV Substation	<b>Page</b>	9 of 9
	<b>Project</b>	TEP No. 347662.1082773	<b>Date</b>	09:23:26 06/11/25
	<b>Client</b>	Duke Energy	<b>Designed by</b>	PRW

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$\sigma P_{allow}$ lb	% Capacity	Pass Fail	
L1	120 - 67.083	Pole	TP26.08x16.51x0.219	1	-7686.90	1035760.00	58.5	Pass	
L2	67.083 - 31.67	Pole	TP32.05x24.8884x0.25	2	-11750.60	1456390.00	84.0	Pass	
L3	31.67 - 0	Pole	TP37.272x30.6761x0.281	3	-17739.70	1958010.00	94.6	Pass	
							Summary		
							Pole (L3)	94.6	Pass
							<b>RATING =</b>	<b>94.6</b>	<b>Pass</b>

Program Version 8.3.1.2

**APPENDIX B**  
**ADDITIONAL CALCULATIONS**

## Embedded Pole Foundation

Site #:	N/A
Site Name:	Hill Crest 230KV Substation
TEP No.:	347662.1082773
TIA-222 Revison:	H
Tower Type:	Monopole

Applied Loads		
	Comp.	Uplift
Moment (kip-ft)	1432.048	
Axial Force (kips)	17.758	
Shear Force (kips)	18.253	

Material Properties		
Concrete Strength, f <sub>c</sub> :		ksi

Pier Design Data		
Depth	20	ft
Ext. Above Grade	0	ft
Pier Section 1		
<i>From 0' below grade to 20' below grade</i>		
Pier Diameter	3.257	ft

Rebar & Pier Options

Embedded Pole Inputs

Belled Pier Inputs

Analysis Results		
Soil Lateral Check	Compression	Uplift
D <sub>v=0</sub> (ft from TOC)	4.10	-
Soil Safety Factor	5.40	-
Max Moment (kip-ft)	1490.87	-
Rating*	23.5%	-

Soil Vertical Check	Compression	Uplift
Skin Friction (kips)	20.72	-
End Bearing (kips)	24.99	-
Weight of Concrete (kips)	-1.38	-
Total Capacity (kips)	45.71	-
Axial (kips)	16.38	-
Rating*	34.1%	-

Embedded Pole Interaction	Compression	Uplift
Critical Depth (ft from TOC)	4.00	-
Critical Moment (kip-ft)	1490.67	-
Critical Moment Capacity	5670.48	-
Rating*	84.9%	-

Critical Depth (ft from TOC)		
Critical Shear (kip)		
Critical Shear Capacity		
Rating		

<b>Structural Foundation Rating*</b>	<b>84.9%</b>
<b>Soil Interaction Rating*</b>	<b>34.1%</b>

\*Rating per TIA-222-H Section 15.5

Soil Profile		
Groundwater Depth	10.5	
# of Layers	8	

Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γ <sub>soil</sub> (pcf)	γ <sub>concrete</sub> (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	2	2	105	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	2	4	2	105	150	1.5		0.825	0.825	0.15	0.15			Cohesive
3	4	6	2	125	150	7.625		3.431	3.431	0.15	0.15			Cohesive
4	6	8	2	125	150	10		4.500	4.500	0.15	0.15			Cohesive
5	8	10.5	2.5	125	150	6.625		2.981	2.981	0.15	0.15			Cohesive
6	10.5	12	1.5	62.57	87.6	6.625		2.981	2.981	0.15	0.15			Cohesive
7	12	17	5	57.57	87.6	4.5		2.19	2.19	0.15	0.15			Cohesive
8	17	20	3	47.57	87.6	2		1.10	1.10	0.15	0.15	4		Cohesive

Check Limitation	
Apply TIA-222-H Section 15.5:	<input checked="" type="checkbox"/>
N/A	<input type="checkbox"/>
Design Options	
Input Effective Depths (else Actual):	<input type="checkbox"/>
Consider non-tapered moment capacity:	<input type="checkbox"/>
N/A	<input checked="" type="checkbox"/>
N/A	<input type="checkbox"/>
N/A	<input type="checkbox"/>

[Go to Soil Calculations](#)

**BU # :** N/A  
**Site Name:** Hill Crest 230KV Substation  
**Order Number:** 347662.1082773

**Embedded Pole Properties**

Encased in Concrete: No  
 Number of Sides: 12  
 Yield Strength (ksi): 65  
 Thickness (in): 0.281  
 Bend Radius (in): 0.4215  
 Taper Factor (in/ft): 0.0660

**Maximum Axial Rating**

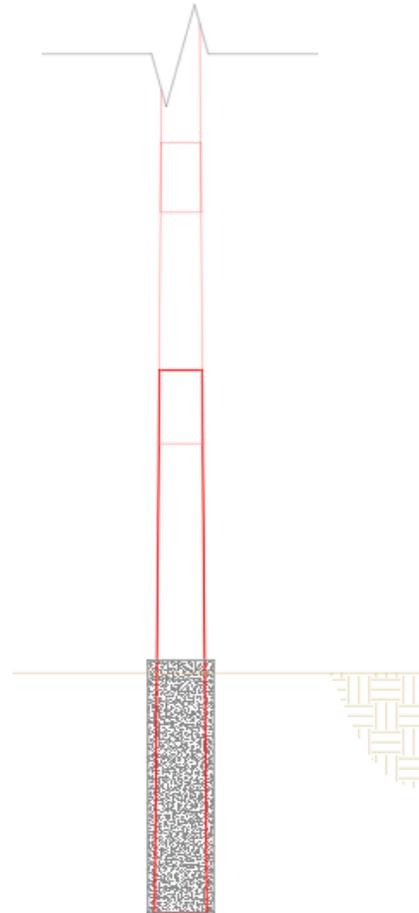
Depth from Grade (ft): 0.00  
 Diameter (in): 39.68  
 Axial Demand (kip): 17.76  
 Axial Capacity (kip): 2082.29  
 Rating\*: **0.8%**

**Maximum Flexural Rating**

Depth from Grade (ft): 4.01  
 Diameter (in): 39.94  
 Flexural Demand (kip-ft): 1490.71  
 Flexural Capacity (kip-ft): 1688.12  
 Rating\*: **84.1%**

**Maximum Interaction Rating**

Depth from Grade (ft): 4.00  
 Diameter (in): 39.94  
 Axial Demand (kip): 16.79  
 Axial Capacity (kip): 2087.38  
 Flexural Demand (kip-ft): 1490.67  
 Flexural Capacity (kip-ft): 1688.08  
 Rating\*: **84.9%**



<b>Structural Rating:</b>	<b>84.9%</b>
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# Project DEP 04-04-23\_png - NEW, Link Southern Pines MW to Hill Crest 230

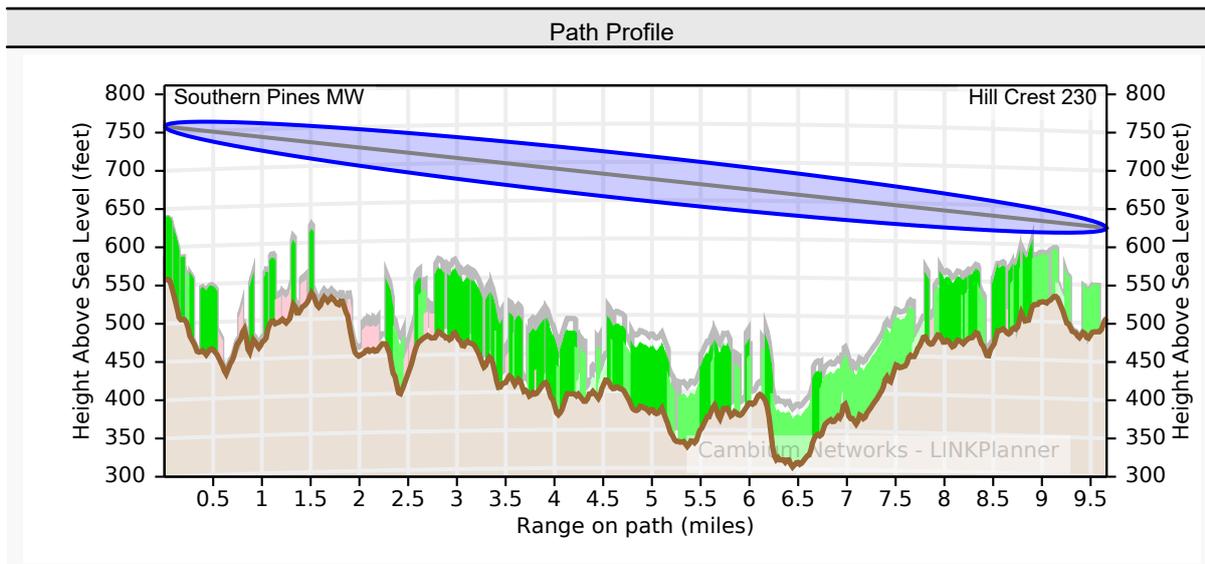
## LINKPlanner Installation Report

05 June 2025

Robert Jackson  
Organization: Duke Energy  
Phone: 910-523-8708  
Email: Robert.Jackson3@duke-energy.com



Summary	
Link Name	Southern Pines MW to Hill Crest 230
Customer Company Name	Duke Energy
Profile Type	Line-of-Sight
Equipment Type	PTP670
Fresnel Zone Clearance	21.2 feet
Link Distance	9.664 miles
Free Space Path Loss	130.60 dB
Excess Path Loss	0.00 dB
User IP Throughput Expectation Aggregate	Aggregate 148.45 Mbps assuming PTP-670 Series running the 670-03-60 software
RF Frequency Band	5.1 GHz (5150 to 5250 MHz)
RF Channel Bandwidth	15 MHz



Link Configuration	
Precise Network Timing	Disabled
Bandwidth	15 MHz
E1/T1	None
Optimization	IP
Sync	Disabled
Symmetry	Adaptive
Dual Payload	Enabled
Highest Mod Mode	256QAM 0.81
Lowest Ethernet Mode	BPSK 0.63 Sngl
Master	Southern Pines MW
Slave	Hill Crest 230

Bill of Materials		
Part Number	Qty	Description
01010419001	11	Coaxial Cable Grounding Kits for 1/4" and 3/8" Cable
AR-E4PT6XX-WW	2	PTP 670 All Risks Advance Replacement, 4 additional years (per END)
C000065L007	2	LPU and Grounding Kit (1 kit per ODU)
C050067H002	2	PTP 670 Connectorized END with AC+DC Enhanced Supply (FCC). Kit includes ODU, power supply, mounting bracket and US line cord
RDH4509C	1	High Performance 4.9-6 GHz, 3-FT (0.9M), DUAL-POL antenna with 2 x N-type Connector
RDH4510C	1	High Performance 4.9-6 GHz, 4-FT (1.2M), DUAL-POL antenna with 2 x N-type Connector
WB3176	2	328 ft (100 m) Reel Outdoor Copper Clad CAT5E (Recommended for PTP)

Physical Installation Notes for Southern Pines MW	
Link Name	Southern Pines MW to Hill Crest 230
Latitude	35.17651N
Longitude	079.41304W
Site Elevation	758 feet AMSL
Equipment Type	PTP670
Platform Variant	Connectorized
Antenna Type	Cambium Networks 3ft High Performance Dual-Polar Parabolic RDH4509C
Antenna Beamwidth	4.2°
Antenna Gain	31.94 dBi
Antenna Height	200.0 feet AGL
Antenna Tilt Angle	-0.2° (downtilt)
Bearing to Hill Crest 230	0.41° from True North 9.29° from Magnetic North
Magnetic Declination	8.88° W ±0.34° changing by 0.04° W per year
Cable Loss	1.0 dB

Physical Installation Notes for Hill Crest 230	
Link Name	Southern Pines MW to Hill Crest 230
Latitude	35.31669N
Longitude	079.41182W
Site Elevation	625 feet AMSL
Equipment Type	PTP670
Platform Variant	Connectorized
Antenna Type	Cambium Networks 4ft High Performance Dual-Polar Parabolic RDH4510C
Antenna Beamwidth	3.0°
Antenna Gain	34.29 dBi
Antenna Height	118.0 feet AGL
Antenna Tilt Angle	0.1° (uptilt)
Bearing to Southern Pines MW	180.41° from True North 189.30° from Magnetic North
Magnetic Declination	8.90° W ±0.34° changing by 0.03° W per year
Cable Loss	1.0 dB

Radio Commissioning Notes for Southern Pines MW (Primary)	
Link Name	Southern Pines MW to Hill Crest 230
Site Name	Southern Pines MW
Latitude	35.17651N
Longitude	079.41304W
Altitude	758 feet
TDM Interface	None
Wireless Topology	Point to Point
Master Slave Mode	Master
Protection Mode	Disabled

Radio Commissioning Notes for Southern Pines MW (Primary) (continued)	
Dual Payload	Enabled
Max Receive Modulation Mode	256QAM 0.81 Dual
Lowest Data Modulation Mode	BPSK 0.63 Sngl
Link Mode Optimization	IP Traffic
TDD Synchronization Mode	Disabled
Regulatory Band	92 - 5.1 GHz
Connectorized Antenna Type	Directional, 3ft parabolic
Channel Bandwidth	15 MHz
Link Symmetry	Adaptive
Antenna Gain	31.94 dBi
Cable Loss	1.0 dB
Maximum Transmit Power	15 dBm
Ranging Mode	Auto 0 to 25 miles
Predicted Receive Power	-55 dBm ± 5 dB
Predicted Link Loss	130.74 dB ± 5.00 dB

Radio Commissioning Notes for Hill Crest 230 (Primary)	
Link Name	Southern Pines MW to Hill Crest 230
Site Name	Hill Crest 230
Latitude	35.31669N
Longitude	079.41182W
Altitude	625 feet
TDM Interface	None
Wireless Topology	Point to Point
Master Slave Mode	Slave
Protection Mode	Disabled
Dual Payload	Enabled
Max Receive Modulation Mode	256QAM 0.81 Dual
Lowest Data Modulation Mode	BPSK 0.63 Sngl
Link Mode Optimization	IP Traffic
TDD Synchronization Mode	Disabled
Regulatory Band	92 - 5.1 GHz
Connectorized Antenna Type	Directional, 4ft parabolic
Channel Bandwidth	15 MHz
Antenna Gain	34.29 dBi
Cable Loss	1.0 dB
Maximum Transmit Power	12 dBm
Ranging Mode	Auto 0 to 25 miles
Predicted Receive Power	-52 dBm ± 5 dB
Predicted Link Loss	130.74 dB ± 5.00 dB

Regulatory Conditions	
Country	United States (Parabolic)

Regulatory Conditions (continued)	
Band	5.1 GHz
Region Code	92
Max EIRP	45.9 dBm
Output Power	15.0 dBm

Installation Instruction

Perform the following checks during the installation (Check the deployment guide and the User Guide.)

1. Check with a GPS that you are installing at the correct location.
2. Check carefully the direction to the other end of the link. Either use a corrected compass or use the GPS waypoint feature about 300 meters from the installation location.
3. When aligning antennas, it is important to find the centre of the main beam. This is done by adjusting the antenna at each end of the link in turn and monitoring the receive level until the peak is found. Once the peak level is found, it should be checked against the predicted receive power to ensure that the antennas have not been aligned on a side lobe.
4. An hour after disarm check that the mean value for the link loss is as predicted (130.74 dB ± 5.00 dB). Also check that the received power is not greater than -35dBm.

Southern Pines MW Performance *	
Mean IP Throughput Predicted	74.22 Mbps
Mean IP Throughput Required	50.00 Mbps
Minimum IP Throughput Required	10.00 Mbps
Minimum IP Throughput Availability Predicted	99.9968% (unavailable for 16.8 mins/year)
Interference Expected	-92.24 dBm/ 15 MHz

Hill Crest 230 Performance *	
Mean IP Throughput Predicted	74.24 Mbps
Mean IP Throughput Required	50.00 Mbps
Minimum IP Throughput Required	10.00 Mbps
Minimum IP Throughput Availability Predicted	99.9984% (unavailable for 8.4 mins/year)
Interference Expected	-92.24 dBm/ 15 MHz

\* Multipath availability calculated using VB with ITU rain P.530-17

Mode	Max Aggregate User IP Throughput (Mbps)	Southern Pines MW				Hill Crest 230			
		Max User IP Throughput (Mbps)	Fade Margin (dB)	IP Throughput Availability (%) *	Receive time in Mode (%)	Max User IP Throughput (Mbps)	Fade Margin (dB)	IP Throughput Availability (%) *	Receive time in Mode (%)
256QAM 0.81 Dual	148.52	74.26	5.60	99.7966	99.7966	74.26	8.60	99.8978	99.8978
64QAM 0.92 Dual	125.13	62.56	9.03	99.9073	0.1106	62.56	12.03	99.9533	0.0555

(continued)

Mode	Max Aggregate User IP Throughput (Mbps)	Southern Pines MW				Hill Crest 230			
		Max User IP Throughput (Mbps)	Fade Margin (dB)	IP Throughput Availability (%) *	Receive time in Mode (%)	Max User IP Throughput (Mbps)	Fade Margin (dB)	IP Throughput Availability (%) *	Receive time in Mode (%)
64QAM 0.75 Dual	102.25	51.13	13.00	99.9626	0.0553	51.13	16.00	99.9810	0.0277
16QAM 0.87 Dual	79.55	39.78	16.08	99.9814	0.0187	39.78	19.08	99.9904	0.0094
16QAM 0.63 Dual	57.19	28.59	19.68	99.9916	0.0102	28.59	22.68	99.9956	0.0051
256QAM 0.81 Sngl	74.26	37.13	9.08	0.0005	0.0005	37.13	12.08	0.0005	0.0005
64QAM 0.92 Sngl	62.56	31.28	12.25	0.0005	0.0000	31.28	15.25	0.0005	0.0000
64QAM 0.75 Sngl	51.13	25.56	16.10	0.0005	0.0000	25.56	19.10	0.0005	0.0000
16QAM 0.87 Sngl	39.77	19.89	19.13	0.0005	0.0000	19.89	22.13	0.0005	0.0000
16QAM 0.63 Sngl	28.59	14.30	23.62	99.9968	0.0047	14.30	26.62	99.9984	0.0024
QPSK 0.87 Sngl	19.89	9.94	25.94	99.9981	0.0013	9.94	28.94	99.9991	0.0007
QPSK 0.63 Sngl	14.30	7.15	29.96	99.9993	0.0011	7.15	32.96	99.9996	0.0006
BPSK 0.63 Sngl	7.15	3.57	33.06	99.9996	0.0004	3.57	36.06	99.9998	0.0002

\* Multipath availability calculated using VB with ITU rain P.530-17

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# Town of Carthage

## Land Use Plan Consistency Statement

FOR PROPOSED CONDITIONAL REZONING OF PARCEL ID #85770704307 TO RA-40-CZ TO RA-40-CZ; PETITIONER: DUKE ENERGY PROGRESS, LLC

WHEREAS, amendments to the Town of Carthage Unified Development Ordinance have been proposed, which amendments are identified as follows:

Conditional Rezoning from RA-40-CZ to RA-40-CZ for PARID: 857700704307

NOW THEREFORE, the Board of Commissioners of the Town of Carthage resolves as follows:

**Section 1.** The Board of Commissioners concludes that the above-described amendment(s) are/are not consistent with the Town of Carthage 2040 Land Use Plan, as amended based on the following:

- Goal 1: Preserve and celebrated small-town community roots.
- Goal 2: Coordinated, intentional, and well-planned growth and development.
- Goal 3: Protection of open space and critical natural features.
- Goal 4: Ample employment opportunities and support for business development.
- Goal 5: Vibrant commercial areas that provide a variety of goods, services, entertainment options, and amenities.
- Goal 6: A well-connected multi-modal transportation system.
- Goal 7: High-quality parks and recreational facilities that are accessible to all.
- Goal 8: Protected and preserve historic and cultural resources.
- Goal 9: Adequate supply and high quality of housing.
- Goal 10: Informed, engaged, and active residents that represent a variety of neighborhoods and citizen groups.
- Goal 11: Regulations that are consistent with the Town's vision.
- Goal 12: Cultural, educational, recreational, and other amenities that contribute to the quality of life of Carthage's citizens.

The applicant, TEP Group., is requesting a rezoning of PARID 20220740, approximately 25.87 acres located northeast of the intersection of S McNeil Street and US 15-501. The rezoning is on behalf of Duke Energy Progress, LLC and proposes only to amend the previously granted conditions. The proposed project is a part of "Duke's electric reliability enhancement project" according to the submitted statement of need and the tower will "securely transmit data to and from substations." The rezoning that is currently requested proposes to amend the maximum allowed height of a telecommunications pole from 100' to 124' in height. The zoning district permits towers up to 195' in height if the tower has a 1,000' setback from all adjacent properties, but the parcel allows for only a 500' setback.

Section 2. Please state the Board of Commissioners' reasonings/findings for the approval or disapproval of this consistency statement based on the above selected goals.

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Section 2. The Board of Commissioners concludes that the above-described amendment(s) are/are not reasonable and in the public interest as they do/do not fulfill a direct objective of the Land Use Plan.

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The foregoing Land Use Plan Consistency Statement, having been submitted to a vote, received the following vote and was duly adopted and ordained this 20<sup>th</sup> day of January 2026.

Ayes: \_\_\_\_\_  
Nays: \_\_\_\_\_  
Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalflinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



# Town of Carthage

## Ordinance No. ORD.26.01

### AN ORDINANCE AMENDING THE OFFICIAL ZONING MAP OF THE TOWN OF CARTHAGE TO MODIFY CONDITIONS ASSOCIATED WITH THE RA-40-CZ DISTRICT FOR PARID 857700704307 (R-01-26)

WHEREAS, the Town of Carthage has received a petition (R-01-26) from TEP Group on behalf of Duke Energy Progress, LLC, requesting an amendment to the previously approved Conditional Zoning District (RA-40-CZ) for the property located at 4805 US 15-501 Hwy, further identified as PARID 857700704307, consisting of approximately 25.87 acres; and

WHEREAS, the purpose of the requested amendment is to allow modification to the approved conditions to increase the maximum height of an internal telecommunications monopole from 100 feet to 124 feet, to support Duke Energy's SmartGrid communications and electric reliability enhancement infrastructure; and

WHEREAS, the property was previously rezoned in 2024 to RA-40-CZ to accommodate the construction of an electrical substation with modified fencing requirements; and

WHEREAS, the proposed amendment remains consistent with the purpose of the existing RA-40 zoning district and lies within an area designated Commercial and Town Residential in the adopted 2040 Land Use Plan; and

WHEREAS, the applicant has submitted a site plan and a Statement of Need describing the functional necessity of the enhanced tower height for reliable communication with other Duke Energy utility towers across the state, the SmartGrid system, and emergency storm-response operations; and

WHEREAS, the Planning Board reviewed the request at its meeting on January 6, 2026, and recommended approval; and

WHEREAS, the Board of Commissioners has conducted a duly advertised public hearing in accordance with N.C.G.S. Chapter 160D and the Town of Carthage Unified Development Ordinance; and

WHEREAS, the Board of Commissioners has considered the size of the area, the surrounding land uses, the adopted Land Use Plan, public health and safety, and the reasonable and expected impacts of the proposed amendment.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN OF CARTHAGE BOARD OF COMMISSIONERS THAT:

#### ***SECTION 1. Approval of Conditional Rezoning Amendment***

The Official Zoning Map of the Town of Carthage is hereby amended for the property identified as PARID 857700704307, retaining the district classification RA-40-CZ, but modifying the approved conditions as described in Section 2 of this ordinance.

**SECTION 2. Approved Conditions**

The following conditions, mutually agreed upon by the petitioner and the Town of Carthage, are hereby adopted and shall apply to the property:

- **Telecommunications Pole Height**

The telecommunications monopole located within the existing Duke Energy electrical substation shall be permitted to a maximum height of 124 feet, as depicted on the submitted site plan.

- **Use Authorization**

The telecommunications pole shall be considered a permitted accessory use to the Duke Energy electrical substation within the RA-40-CZ district and shall not require a Special Use Permit or additional quasijudicial review.

- **Co-location**

The applicant shall not be required to allow co-location by third-party providers on the pole.

- **Site Plan Binding**

Development shall conform to the site plan and supporting documentation submitted with the application, which shall serve as part of the conditional zoning approval.

- **Compliance with Ordinances**

All uses, structures, and operations on the property shall comply with applicable provisions of the Town of Carthage Unified Development Ordinance except where specifically modified by this approval.

**SECTION 3. Statement of Consistency**

The Board of Commissioners finds that the amendment is consistent with the Town of Carthage 2040 Land Use Plan because the installation of upgraded utility infrastructure supports the plan's goals for maintaining public services, enhancing system reliability, and supporting rural and transitional land uses.

**SECTION 4. Statement of Reasonableness**

The Board of Commissioners finds this amendment reasonable and in the public interest because:

- The property is large (25.87 acres) and rural in character;
- The enhanced tower height is necessary for Duke Energy's statewide line-of-sight communications network;
- The use improves electric reliability and storm-response capability for the region;
- Adjacent parcels are largely undeveloped and zoning is compatible;
- The request imposes no unreasonable burden upon neighboring properties.

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The foregoing ordinance, having been submitted to a vote, received the following vote and was duly adopted and ordained this 20<sup>th</sup> day of January 2026.

Ayes: \_\_\_\_\_  
Nays: \_\_\_\_\_  
Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalflinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



## MEMORANDUM

Date: January 20, 2026

To: The Board of Commissioners

From: Emily D. Yopp, Town Manager

Subject: Town Hall Layout, Proposed Renovation Scope, Cost Estimate, and Funding

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### Background

As part of the Town's effort to renovate and repurpose the historic Town Hall building, staff engaged **Midwest Maintenance Inc.** to provide a professional cost estimate for the proposed work. Midwest Maintenance is a well-established firm specializing in historic building restoration and municipal facility renovations. Their experience with similar projects and reputation for accuracy in pre-construction budgeting made them an excellent choice for this task. They have worked extensively with public entities and understand the unique requirements of preserving historic integrity while meeting modern standards for accessibility and functionality.

### Proposed Layout

The new Town Hall layout is designed to maximize functionality and community engagement while preserving the building's historic character. Key features include:

- **First Floor:**
  - Utility Billing and Visitor's Center
  - Gallery for local artists and historical displays
  - Conference Room
  - Accounting/HR Office
  - New ADA-compliant restroom
  - Reopened back/kitchen porch
- **Second Floor:**
  - Multiple offices
  - Conference Room with drawing racks and printer/plotter station
  - Balcony overlooking the main level

*(See attached layout plans for full details.)*

## Scope of Work

Based on the attached spreadsheet, the proposed work includes:

- **Exterior Repairs:** Wood trim, porch flooring, porch rails, beadboard ceiling, wood columns, and painting
- **Interior Improvements:** Kitchen counters/cabinets, wood flooring refinishing, plaster, and interior painting
- **Structural Repairs:** Wood and metal railings, guardrails, and structural wood repair
- **Systems Upgrades:** Electrical and plumbing updates
- **Roofing:** Complete roof replacement
- **Other:** Landscaping, concrete flatwork, and demolition allowances

*(See attached budget estimate for itemized details.)*

## Cost Estimate

The total estimated cost for the renovation is **\$1,261,031**. This figure is **only an estimate** and serves several important purposes:

- **Financial Planning:** Helps gauge potential financing needs.
- **Bid Comparison:** Provides a benchmark to evaluate contractor bid packages.
- **Decision Support:** Assists the Board in understanding the scale of investment required.
- **Risk Management:** Identifies major cost drivers early in the process.

**PLEASE NOTE:** Actual bids could come in below this estimate.

## Grant Funding

The Town currently has approximately **\$255,000 remaining in grant funds** designated for construction. This amount will offset a portion of the total cost, but the Board should anticipate that additional financing will be required to complete the project. The estimate will help us determine the gap between available funding and projected costs.

Lindsay Whitson and I have discussed other grant funding sources to assist in offsetting some of the remaining costs. We have spoken with a representative for the USDA Rural Development grant/loan program that provides funding for renovation of public facilities such as Town Hall. Grant eligibility from USDA is based on the median household income (MHI) for our town compared with the State Median Household Income (SMHI). Grant assistance is only available to those with an MHI below 90% of the SMHI. Carthage's MHI based on 2020 data is \$52,339, which equals 93% of the SMHI of \$56,252. Therefore, the Town of Carthage is not eligible for USDA grant funding. The representative also stated that, regardless of our eligibility based on the MHI/SMHI, they currently have very limited federal funding for this program and grant opportunities are extremely limited for everyone right now.

Lindsay and I will continue to reach out research grant options to see what other opportunities exist, but staff recommends that the Board proceed with their considerations based on no additional grant funding being provided.

## **Board Action Requested**

Staff requests the Board to:

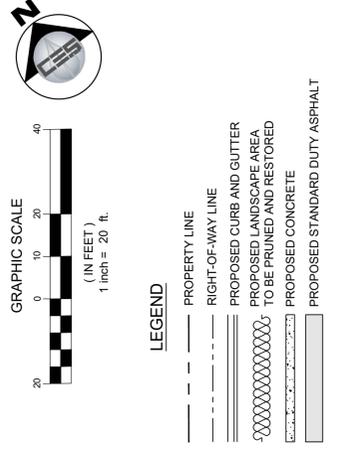
1. Confirm whether the Board is comfortable financing the remaining cost beyond the \$255,000 in grant funds if no additional grant funding is secured. (No motion required).
2. Authorize staff to prepare bid documents and solicit proposals for the Town Hall renovation project.

## **SUGGESTED MOTION(S):**

I move to authorize the Town Manager to proceed with finalizing the bid documents for this project and soliciting for proposals for this project.

3D Conceptual Renderings (For Example Only)





**SITE DATA TABLE**

PARCEL #: 00004511

208 MONROE STREET, CARTHAGE, NC 28327

**ZONING:** CBD - CENTRAL BUSINESS DISTRICT

EXISTING USE	PROPOSED USE
OFFICE BUILDING	GOVERNMENT OFFICES

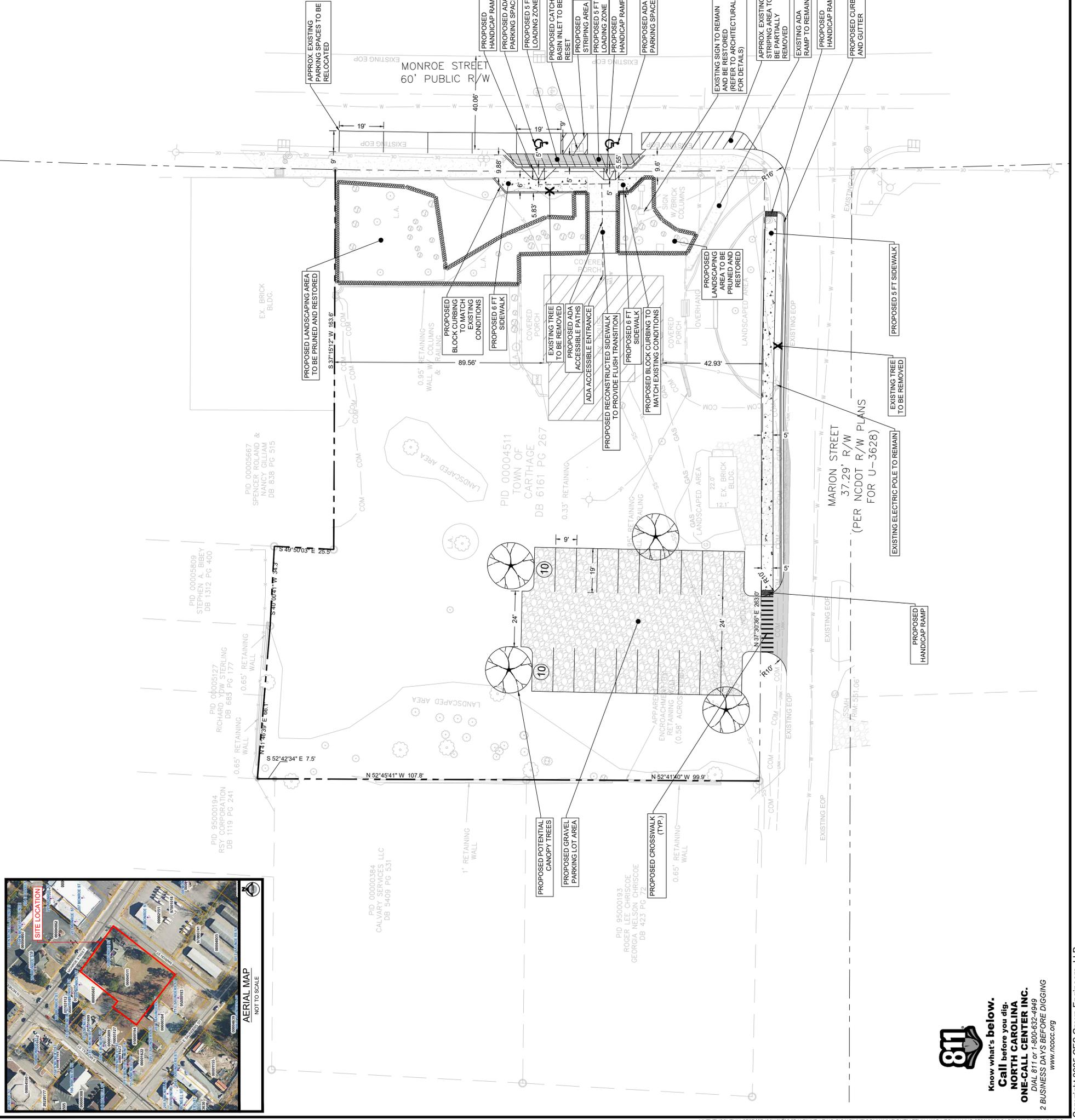
  

ZONING REQUIREMENT	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT SIZE	N/A	±50,864 SF	NO CHANGE
MINIMUM FRONT YARD SETBACK	N/A	±42.93 FT	NO CHANGE
MINIMUM SIDE YARD SETBACK	N/A	±89.56 FT	NO CHANGE
MINIMUM CORNER LOT SIDE YARD SETBACK	N/A	±89.56 FT	NO CHANGE
MINIMUM REAR YARD SETBACK	10 FT	N/A	N/A
MAXIMUM HEIGHT	35 FT	< 35 FT	NO CHANGE
MAXIMUM BUILDING COVERAGE	N/A	5.76%	NO CHANGE

**OFF STREET PARKING REQUIREMENTS**

CODE SECTION	REQUIRED	PROPOSED
100.58	REQUIRED PARKING: - GOVERNMENT OFFICES: 1 PER 150 SF OF PUBLIC SERVICE AREA PLUS 1 PER EMPLOYEE ON LARGEST SHIFT 44,450 SF / 150 SF = 29.67 = 30 SPACES PLUS 1 X 10 = 40 SPACES	20 SPACES ON-SITE 6 SPACES ON-STREET (INCLUDING 4 EXISTING SPACES)
100.58	TOTAL REQUIRED SPACES: 40 SPACES (INCLUDING 2 ADA SPACES)	TOTAL = 26 SPACES (INCLUDING 2 ADA SPACE)
100.58	PARKING SPACE DIMENSIONS: MINIMUM WIDTH: 9 FT MINIMUM LENGTH: 19 FT	9 FT X 19 FT
100.58	MINIMUM DRIVE AISLE WIDTH: ANGLE: 90° TWO-WAY: 24 FT	ANGLE: 90° TWO-WAY: 24 FT

- GENERAL NOTES:**
- THIS DEVELOPMENT IS LOCATED IN THE TOWN OF CARTHAGE, MOORE COUNTY, NC, PARCEL ID #00004511.
  - THIS PLAN IS PRELIMINARY AND FOR PLANNING DISCUSSION PURPOSES ONLY AND IS NOT FOR CONSTRUCTION.
  - BOUNDARIES SHOWN ARE BASED ON SURVEY BY CES GROUP ENGINEERS, LLP. THE OWNERS ASSUME RESPONSIBILITY TO VERIFY THE LOCATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CES GROUP ENGINEERS, LLP CANNOT ASSUME RESPONSIBILITY FOR MISIDENTIFICATION OR OMISSION OF UNDERGROUND UTILITIES.
  - NO SCGS OR USGS MONUMENTS LOCATED WITHIN 2000' OF SUBJECT PARCEL.
  - RIGHT OF WAY BASED ON NCDOT RW PLANS FOR U-3628.
- SURVEYOR NOTES:**
- THIS PROPERTY MAY BE SUBJECT TO ANY EASEMENTS, RESTRICTIVE COVENANTS AND/OR BOUNDARY INFORMATION BASED ON DEED BOOK 6161 PAGE 267 AS RECORDED IN THE MOORE COUNTY REGISTER OF DEEDS.
  - AREA BY COORDINATE METHOD. ALL DISTANCES SHOWN ARE HORIZONTAL AND INTERNATIONAL FEET.
  - POINTS NOT LABELED "FOUND" OR "SET" ARE COMPUTED POINTS ONLY. ALL CORNERS ARE FLUSH WITH THE GROUND UNLESS OTHERWISE NOTED.
  - THIS PROPERTY IS LOCATED WITHIN ZONE "X" ACCORDING TO THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 3710856800, DATED OCTOBER 17, 2006.
  - THE LOCATION OF UTILITIES AS SHOWN HEREON, WHETHER PUBLIC OR PRIVATE, ARE BASED ON THE PLAN INFORMATION PROVIDED BY THE OWNER. CES GROUP ENGINEERS, LLP DOES NOT GUARANTEE THE ACCURACY OF THESE UTILITIES. THE USER OF THIS PLAN SHALL VERIFY THE LOCATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CES GROUP ENGINEERS, LLP CANNOT ASSUME RESPONSIBILITY FOR MISIDENTIFICATION OR OMISSION OF UNDERGROUND UTILITIES.



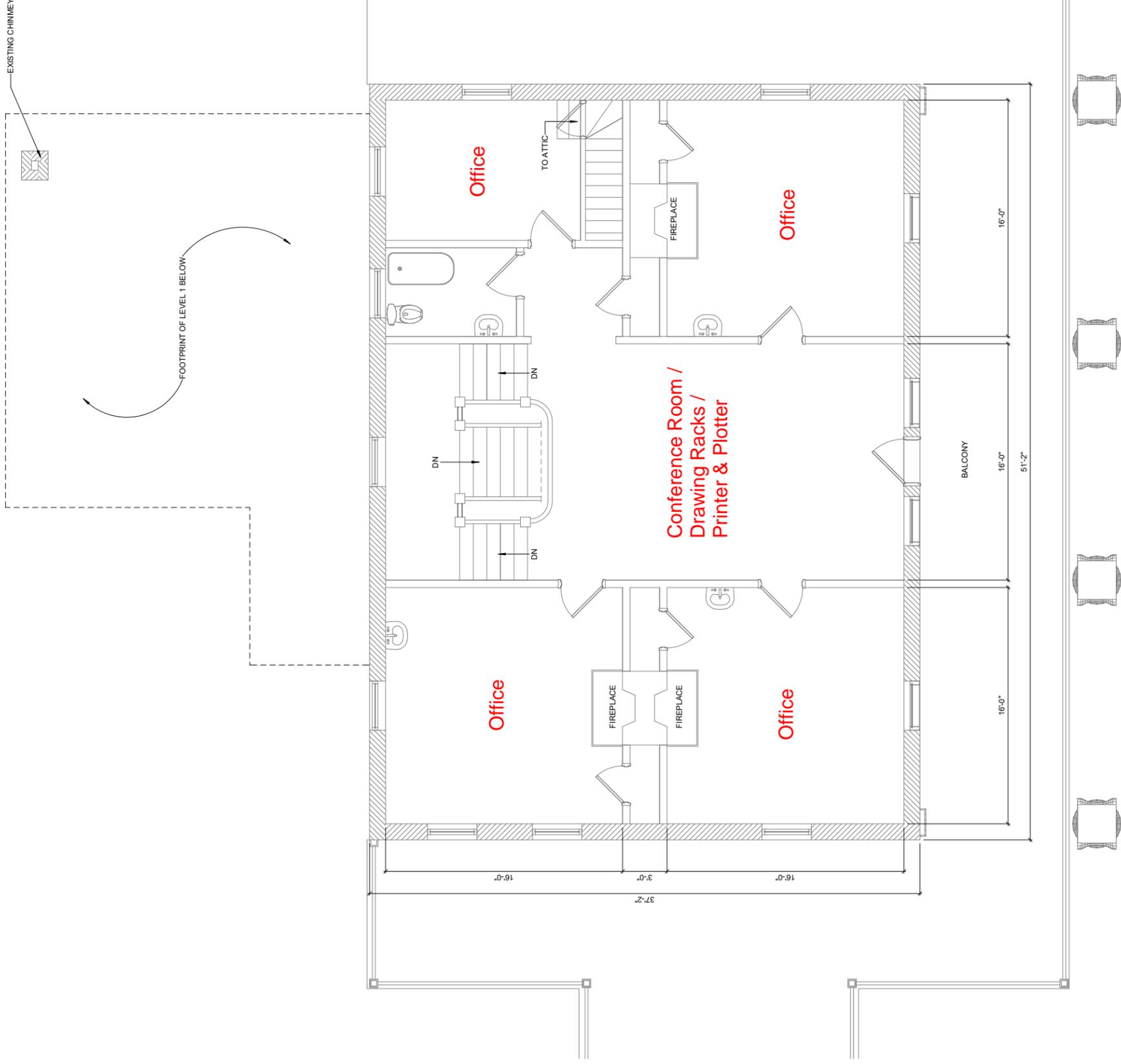


# WRA 22940 CARTHAGE TOWN HALL RENOVATION

2025.10.06

SCALE: 2" = 16' - 0"

111



# Carthage Town Hall Budget Estimate

<u>Item</u>
General Conditions
Landscaping
Concrete Flatwork
Demolition
Garage Repair Allowance
<b>Interior Wood Repair</b>
Utility Counter
Kitchen Counters/Cabinets
GWB Ceilings
New Guardrail
Wood Flooring Refinish & Repair
New Floor
<b>Exterior Wood Repair</b>
Beadboard Ceiling
Wood Column Repair
Exterior Wood Stairs
Wood Porch Rails
Porch Ceiling Work
Wood Trim Repair
Porch Flooring Repair
New Back Porch Railing
New Back Porch Flooring
Wood Window & Door Repair
Structural Wood Repair
Metal Railings & Fencing
Finishes
Plaster
Interior Painting - first floor only
Exterior Painting
Roofing
Electrical
Plumbing

**Total**

<b><u>Cost</u></b>	
	\$32,815.00
	\$63,449.00
	\$33,343.00
	\$0.00
	\$42,191.00
	\$30,756.00
	\$39,312.00
	\$30,472.00
	\$20,785.00
	\$27,713.00
	\$50,210.00
	\$56,345.00
	\$40,202.00
	\$41,354.00
	\$43,489.00
	\$67,498.00
	\$94,356.00
	\$72,792.00
	\$212,731.00
	\$202,495.00
	\$58,723.00

**\$1,261,031.00**



## MEMORANDUM

Date: January 20, 2026  
To: The Board of Commissioners  
From: Jamie Sandoval, Management Analyst  
Subject: 2026-2029 STRATEGIC PLAN ADOPTION

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The Town of Carthage Administrative staff, in collaboration with Central Pines, developed the draft Strategic Plan presented for consideration. The strategic planning process began with the Board of Commissioners establishing the Town of Carthage's Mission and Vision statements. Following the adoption of these statements, Town staff identified goals aligned with achieving the Town's mission and vision.

The Town Manager and Management Analyst met with each department head to review the draft Strategic Plan and evaluate the feasibility of the proposed goals. Staff consistently expressed that a Strategic Plan has been needed for some time and emphasized its importance in guiding the Town's long-term priorities and initiatives. Department heads also noted that additional staffing may be necessary to accomplish all identified goals within the Plan and highlighted the importance of aligning the Strategic Plan with the Town's annual budget.

Attached for consideration is the proposed Strategic Plan, along with a resolution for its formal adoption. The Board of Commissioners is encouraged to adopt the Strategic Plan in recognition of Town staff's efforts and to provide clear direction for achieving the goals outlined in the Plan.

### SUGGESTED MOTION(S)

#### OPTION 1

I move to approve and formally adopt the 2026-2029 Town of Carthage Strategic Plan to create a plan for the Town of Carthage's continued excellence and resilience as written and presented.

#### OPTION 2

I move to approve the 2026-2029 Town of Carthage Strategic Plan with the following change(s):

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#### OPTION 3

I move to deny the 2026-2029 Town of Carthage Strategic Plan for the following reason(s):

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The Town of Carthage’s Strategic Plan outlines the organization’s strategy for the next three years and provides actionable, Board-supported goals to guide staff in their work.

The 2026-2028 Strategic Plan has been crafted over several months by the combined efforts of the town's staff and Board of Commissioners, with facilitation support from Central Pines Regional Council. This document serves to clarify the organization's purpose and goals and be used for prioritization of Town funding and resources and accountability of the Board and staff.

The information included in this plan is built on data acquired through in-depth staff observation and the analysis of crucial town documents and plans and was designed and enhanced during two Board Retreats, a Staff Retreat, and collaboration with the Town Manager. It includes:

- A Mission Statement
- A Vision Statement
- Goals & Strategies

The plan is intended to be a dynamic document, indicating that strategies should be monitored for completion, evaluated annually, and adjusted to enable staff to advance the Board’s goals.

## **Mission**

The Town delivers exceptional services to our citizens by prioritizing public safety, quality of life, and community well-being—guided by high standards of efficiency, excellence, and organizational effectiveness.

## **Vision**

The Town is a model of financial excellence and community resilience, an incubator for business and industry, and a community that attracts new residents and fosters homegrown talent.

## **Goals**

### **Organizational Excellence**

*Consistently deliver high-quality results, achieve its mission, and adapt to changing conditions in the community.*

- Develop and deliver annual training for Board and staff on new and existing state and local regulations to ensure consistent and compliant decision-making and operational alignment.
- Inventory organizational policies and identify policies that cause the most significant day-to-day confusion due to outdated language or gaps for modification and improvement.
- Implement creative solutions to address departmental staffing needs –workforce pipelines, shared roles across municipalities - while ensuring staffing levels are consistent with community growth year-over-year and in-line with peer communities.
- Invest in employee skills and professional development, prioritizing leadership development and technology proficiency to support organizational adaptability.

- Increase structured processes for interdepartmental communication and coordination (such as content-heavy, routine leadership team meetings) to respond to the organization functioning across multiple locations.
- Leverage emerging technology systems (e.g., work order systems, digital permitting, GIS dashboards) to increase transparency, efficiency, and service delivery.

## **Connectivity & Safety**

*Residents can move, interact, and live securely while fostering strong social and physical connections*

- Update the 2018 Bicycle and Pedestrian Connectivity Plan to identify most critical investments and prepare projects for state and federal funding.
- Conduct a lighting audit in areas immediately surrounding downtown and identify areas to focus on improvements.
- Develop a suite of simple, accessible communication methods used by the Town to reach residents across language, age, and disabilities for emergencies (Code Red) and non-urgent communications.
- Establish a clear process to track and respond to resident-reported safety issues (e.g., sidewalk gaps, lighting outages, dangerous intersections).

## **Infrastructure for Growth**

*The Town has foundational systems and assets needed to support current and future development.*

- Evaluate local and regional options for water service delivery and develop a plan that addresses long-term water supply needs.
- Creativity around land use planning to ensure development aligns with community needs and investments, such as treating ordinance as a living document, approving conditional rezonings, development forms to assess development to plans, etc.
- Prioritize high-quality development that aligns with the Land Use Plan and reflects the Town's desired character by putting in place clear processes to evaluate projects against the community vision and strengthening coordination between the Board and the Planning Board.
- Formalize communication with Moore County leadership, such as through the Mayor and Mayor Pro Tem setting up a quarterly meeting with Moore County Chair/Vice-Chair and managers to strengthen coordination on investments.
- Develop a multi-year pavement maintenance and funding strategy that targets high-need, high-traffic areas and consistently allocate to future maintenance needs.
- Prepare to establish a voluntary property partnership/acquisition program to engage property owners interested in town-led projects, land banking, or public-private development opportunities.

## **Financial Sustainability**

*Strategic and responsible management of and planning for operational needs.*

- Streamline and strengthen processes to enhance long-term financial performance. Assess and update outdated financial and budgetary policies to align with best practices.
- Conduct water and sewer rate and system development fee studies to ensure long-term sustainability and cost recovery for enterprise funds.
- Develop and follow a multi-year Capital Improvement Plan (CIP) governed by formal policies tied to strategic priority areas.
- Develop a formal annexation policy that aligns with infrastructure capacity and cost recovery, shepherding development in locations that ensure the town can provide adequate and reliable services.
- Establish a Capital Reserve Fund with clear policies for use, tied to strategic priorities and approved by ordinance.
- Identify and pilot at least three non-development revenue options (example: vendor fees at events) to design.
- Proactively pursue state and federal grants aligned with infrastructure and financial sustainability priorities.

### **Vibrant Downtown and Places**

*Downtown Carthage offers a unique sense of place for businesses, visitors, government and community members to live and convene*

- Advance the next phases of the Downtown Plan with an emphasis on walkability and pedestrian safety, storefront activation, and public space improvements.
- Reevaluate the “boundaries” of Downtown and conduct an inventory of potential infill and expansion opportunities or “opportunity sites” for town-led, private-sector, or public-private projects.
- Ensure development standards of the Unified Development Ordinance, such as setbacks, building height, parking, and building design, align with the vision for downtown Carthage.
- Complete renovation of the new Town Hall and relocate administration staff from current offices, positioning the building as a civic anchor that increases daily downtown activity.
- Develop Board and staff relationships with local and regional economic development organizations, such as Chamber of Commerce and Moore County Economic Development Partnership, to recruit businesses that are uniquely local.



# Town of Carthage

## Resolution

### The Town of Carthage 2026-2029 Strategic Plan

**WHEREAS**, The Town of Carthage Board of Commissioners acknowledges the need for a Strategic Plan.

**WHEREAS**, the Town of Carthage Board of Commissioners determined the Mission of the organization as, “The Town delivers exceptional services to our citizens by prioritizing public safety, quality of life, and community well-being – guided by high standards of efficiency, excellence, and organizational effectiveness”.

**WHEREAS**, the Town of Carthage Board of Commissioners determined the Vision of the organization as, “The Town is a model of financial excellence and community resilience, an incubator for business and industry, and a community that attracts new residents and fosters homegrown talent”.

**WHEREAS**, the Town Manager and the Management Analyst will oversee implementation of the Strategic Plan in collaboration with Department Directors.

**WHEREAS**, Town staff will create a Strategic Plan Task Force comprised of the Town Manager, Management Analyst, and each Department Director and will meet regularly to ensure the Strategic Plan is implemented organization wide.

**WHEREAS**, the Management Analyst will provide quarterly reports to the Board of Commissioners on the progress of the Strategic Plan.

**NOW, THEREFORE, BE IT RESOLVED** by the Town of Carthage Board of Commissioners that they do hereby declare a Resolution of adoption of the 2026-2029 Strategic Plan.

The foregoing resolution, having been submitted to a vote, received the following vote and was duly adopted and ordained this 20<sup>th</sup> day of January 2026.

Ayes: \_\_\_\_\_  
Nays: \_\_\_\_\_  
Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalfinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



## MEMORANDUM

Date: January 20, 2026  
To: The Board of Commissioners  
From: Emily Yopp, Town Manager  
Subject: Resolution Authorizing Private Sale of Surplus Property to Habitat for Humanity

---

### Background

The Town previously acquired two parcels by condemnation for the purpose of developing a community garden and park on Old Glendon Road. Parcel IDs are 00004984 and 00005160 also known by address 110 Old Glendon Road. After further evaluation, staff recommends declaring these parcels surplus and authorizing their sale to Habitat for Humanity for residential development.

---

### Reason for Recommendation

Several factors make these parcels unsuitable for a community garden and park:

1. **Location and Safety Concerns**

The parcels are adjacent to a well-traveled, NCDOT-owned roadway, raising safety issues for pedestrians and families accessing the site. Additional infrastructure would be required to mitigate these risks.

2. **Impact on Adjacent Residences**

The parcels sit between two existing homes. A community garden and park, as well as associated parking and structures, would introduce increased traffic and activity directly between these residences, creating privacy concerns and potential nuisance concerns.

3. **Past Experience and Financial Risk**

A previous community garden at this location, funded through grant dollars, was not successful and fell into disuse. Establishing a new garden would require significant investment of Town funds and/or additional grants, with no guarantee of sustained community interest, making this a high-risk investment of public funds.

---

## Alignment with 2040 Land Use Plan

### Building a garden at this location would conflict with:

- **Goal 2.1 – Discourage development that would disrupt the integrity and cohesiveness of existing neighborhoods.**

A garden/park and vehicle parking between two homes could negatively impact neighborhood character and the adjacent homeowners' right to the quiet enjoyment of the of their properties that would be directly affected by the garden/park.

- **Goal 2.4 – Provide a sufficient buffer between residential land uses and incompatible nonresidential uses.**

A public garden introduces a nonresidential use in a residential setting. A buffer would need to be installed, taking away space to install the garden/park and provide parking without.

- **Goal 12.4 – Ensure Town services meet citizen needs in a way that balances citizen satisfaction and fiscal efficiency.**

Investing in a garden/park in this specific location with uncertain public demand or support does not represent efficient use of resources.

### Selling to Habitat for Humanity supports:

- **Goal 9.1 – Encourage residential development in areas identified as suitable for that use on the Future Land Use Map.**

These parcels are appropriate for residential infill.

- **Goal 9.4 – Encourage the development of a mixture of housing types.**

Habitat homes contribute to housing diversity.

- **Goal 9.8 – Explore partnerships with nongovernmental organizations working to advance affordable housing initiatives.**

Habitat for Humanity aligns directly with this objective.

- **Goal 2.5 – Encourage future development to occur within the existing town limits and promote infill development.**

This sale supports smart growth principles.

---

## Public Purpose and Benefit

Selling the property to Habitat for Humanity will support affordable housing development, strengthen neighborhood stability, and align with the Town's adopted land use goals.

---

## Community Engagement

The Town recognizes that some residents expressed interest in a community garden-park at this location. While this site is not suitable for that purpose, the Town remains committed to expanding recreational opportunities and will continue to explore alternative locations for future gardens and

parks that better align with safety, accessibility, and neighborhood compatibility. Public input will be sought as part of any future parks and recreation planning efforts.

---

### **Recommendation**

Staff recommends adoption of the attached resolution declaring the property surplus and authorizing its sale by private negotiation to Habitat for Humanity in accordance with G.S. 40A-10 and G.S. 160A-267.

### **MOTION(S) FOR CONSIDERATION:**

#### **OPTION 1**

I move to adopt the resolution declaring the property located on Old Glendon Road (Parcel IDs 00004984 and 00005160) surplus and authorizing the Town Manager to negotiate and execute a private sale to Habitat for Humanity in accordance with G.S. 40A-10 and G.S. 160A-267 and subject to compliance with statutory notice and waiting period requirements.

#### **OPTION 2**

I move to deny the resolution to declare the Old Glendon Road properties (Parcel IDs 00004984 and 00005160) surplus, thereby retaining the property under Town ownership.



# Town of Carthage

## Resolution

### A Resolution Authorizing Private Sale of Surplus Real Property

WHEREAS, the Town of Carthage previously acquired by condemnation certain real property identified as PID 00004984 and 00005160, located adjacent to Old Glendon Road, with an address of 110 Old Glendon Road, for the purpose of developing a community garden and park; and

WHEREAS, the Town has determined that the property is no longer needed for the purpose for which it was condemned and hereby declares the property surplus pursuant to G.S. 40A-10; and

WHEREAS, the Town desires to dispose of the property by private sale in accordance with G.S. 160A-267; NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Town of Carthage that:

- 1) The property described as:
  - a) Parcel Identification Number 00005160 (110 Old Glendon Road) is declared surplus.
  - b) Parcel Identification Number 00004984 (no physical address) is declared surplus.
- 2) The Town Manager is authorized to negotiate and execute a private sale of the property to Habitat for Humanity at a price to be determined through negotiation, subject to compliance with statutory notice and waiting period requirements.
- 3) A notice summarizing this resolution shall be published once in accordance with G.S. 160A-267, and the sale shall not be consummated until at least ten (10) days after publication.

Adopted this 20th day of January, 2026.

The foregoing resolution, having been submitted to a vote, received the following vote and was duly adopted and ordained this 20<sup>th</sup> day of January, 2026.

\_\_\_\_\_  
Jimmy Chalflinch, Mayor

Attest:

Ayes: \_\_\_\_\_

Nays: \_\_\_\_\_

Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



## MEMORANDUM

Date: January 14, 2026  
To: The Board of Commissioners  
From: Kim Gibson, Town Clerk  
Subject: Adoption of Cape Fear Hazard Mitigation Plan

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Moore County Public Safety has been working with AECOM to help develop a regional Hazard Mitigation Plan. Together with representatives from all municipalities, they have developed a final plan for the Cape Fear Region. (Please refer to the link sent with your email).

Each municipality is requested to review and formally adopt the mitigation plan.

### **SUGGESTED MOTION(S):**

#### **OPTION 1**

I make a motion to adopt the Cape Fear Hazard Mitigation Plan as written and presented.

#### **OPTION 2**

I make a motion to deny the adoption of the Cape Fear Hazard Mitigation Plan for the following reason(s):

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# Town of Carthage

## Resolution

### ADOPTING THE CAPE FEAR REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Town of Carthage are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to drought, extreme heat, hailstorm, hurricane and tropical storm, lightning, thunderstorm wind/high wind, tornado, winter storm and freeze, flood, hazardous material incident, and wildfire; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Article 5, Section 160D-501 of Chapter 160D of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has enacted General Statute Section 166A-19.41 (*State emergency assistance funds*) which provides that for a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000, as amended, states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS the (local government) has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations and at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management, and that the plans have been updated in accordance with federal laws including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; the National Dam Safety Program Act, as amended; as required under regulations at 44 CFR Part 201, and according to guidance issued by the

Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Board of Commissioners of Carthage to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, THEREFORE, be it resolved that the Board of Commissioners of Carthage hereby:

1. Adopts the Cape Fear Regional Hazard Mitigation Plan.
2. Vests Moore County Emergency Management with the responsibility, authority, and the means to:
  - (a) Inform all concerned parties of this action.
  - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints Moore County Emergency Management to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Moore County Board of Commissioners for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

The foregoing resolution, having been submitted to a vote, received the following vote and was duly adopted and ordained this 20<sup>th</sup> day of January 2026.

Ayes: \_\_\_\_\_  
 Nays: \_\_\_\_\_  
 Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalflinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



## MEMORANDUM

Date: January 14, 2026  
To: The Board of Commissioners  
From: Kim Gibson, Town Clerk  
Subject: RESOLUTION OF SUPPORT—REQUEST TO REDUCE SPEED LIMITS ON US 15-501 HWY

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Town Manager, Emily Yopp and Police Chief, Bart Davis had the opportunity to meet with NC Department of Transportation staff to discuss several topics of concern and interest for both the Town and the State. One of those topics was the inconsistency and public safety concerns of the speed limits on US 15-501 Hwy traveling through the Town.

Chief Davis and Mrs. Yopp are asking for Board support of their resolution of a request of the NC DOT to obtain a more consistent and safe speed zone through that area.

### SUGGESTED MOTION(S):

#### OPTION 1

I make a motion to approve the resolution of support for the request of the NC DOT to revise the current speed limits on US 15-501 Hwy through the Town of Carthage as written and presented.

#### OPTION 2

I make a motion to approve the resolution of support for the request of the NC DOT to revise the current speed limits on US 15-501 Hwy through the Town of Carthage with the following change(s):

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#### OPTION 3

I make a motion to deny the resolution of support for the request of the NC DOT to revise the current speed limits on US 15-501 Hwy through the Town of Carthage the following reason(s):

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# Town of Carthage

## *Resolution*

### Resolution of Support Requesting Speed Limit Modifications On U.S. Highway 15-501 Within the Town Limits

WHEREAS, the Town of Carthage Board of Commissioners is committed to promoting public safety, reducing driver confusion, and ensuring consistent and reasonable traffic regulations along major transportation corridors within the Town; and

WHEREAS, U.S. Highway 15-501 is a primary thoroughfare through the Town of Carthage and serves as a major connector for residents, visitors, and commercial traffic traveling throughout Moore County; and

WHEREAS, the current posted speed limits along U.S. Highway 15-501 within the Town limits vary significantly between northbound and southbound directions, creating inconsistent traffic patterns and potential safety concerns; and

WHEREAS, when traveling northbound on U.S. Highway 15-501, the speed limit decreases from 55 mph to 45 mph near the intersection of NC Highway 22, then increases back to 55 mph just past the Carolina Power (Duke Energy) site, and continues at that speed until it decreases back to 45 mph in front of Pizza Hut for approximately 300 feet before dropping back down to 35 mph at the highway divide near the Carriage Oaks entrance; and

WHEREAS, when traveling southbound on U.S. Highway 15-501, the speed limit increases from 35 mph to 45 mph at the highway divide near the Carriage Oaks entrance and continues for approximately 300 feet where it then changes to 55 mph in front of Pizza Hut and continues at 55 mph until just before the Carolina Power (Duke Energy) site, then decreases to 45 mph, and remains at 45 mph until increasing again to 55 mph at the intersection of NC Highway 22; and

WHEREAS, the Carthage Police Department has identified these inconsistencies as a source of driver confusion and unnecessary risk, particularly in an area experiencing rapid growth and increased traffic volume; and

WHEREAS, this stretch of U.S. Highway 15-501 includes multiple high-traffic destinations and public service facilities, including restaurants, an industrial entrance, countywide public service offices, Town Hall, and several large residential communities such as Southbury, Savannah Garden, Carriage Place, and a new residential development currently under construction—an area with only one ingress and egress serving hundreds of homes; and

WHEREAS, the Carthage Police Department has formally requested that the North Carolina Department of Transportation (NCDOT) modify the posted speed limits to create a consistent and safer traffic pattern in both directions; and

WHEREAS, the Carthage Police Department will continue to enforce all posted speed limits within the Town limits, as it currently does; and

WHEREAS, the Board of Commissioners finds that the requested changes will improve public safety, reduce confusion, and better support the needs of a growing community.

NOW, THEREFORE, BE IT RESOLVED that the Town of Carthage Board of Commissioners respectfully requests that the North Carolina Department of Transportation (NCDOT) revise the posted speed limits along U.S. Highway 15-501 within the Town limits as follows:

- Establish a 35 mph speed limit beginning at the current southbound transition from 55 mph at the entrance of the town limits from the Lee County side and continuing southbound to the area in front of Pizza Hut. This same area would be 35 mph on the northbound side.
- Establish a 45 mph speed limit continuing northbound and southbound simultaneously from the NC Highway 22 intersection to the area in front of Pizza Hut.
- Ensure that these revised speed limits apply equally in both directions along this stretch of U.S. Highway 15-501.

BE IT FURTHER RESOLVED that the Town of Carthage Board of Commissioners supports this request in the interest of public safety, traffic consistency, and responsible community planning.

The foregoing resolution, having been submitted to a vote, received the following vote and was duly adopted and ordained this 20<sup>th</sup> day of January 2026.

Ayes: \_\_\_\_\_  
 Nays: \_\_\_\_\_  
 Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalflinch, Mayor

Attest:  
\_\_\_\_\_  
Kimberly Gibson, Town Clerk



## MEMORANDUM

Date: January 20, 2026

To: The Board of Commissioners

From: Emily D. Yopp, Town Manager

Subject: Request to Call a Public Hearing – UDO Text Amendment to Establish Water & Sewer Allocation Policy

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### A. Current Water Capacity Status

Carthage’s water treatment plant currently operates under a permitted capacity of 750,000 gallons per day (GPD). Peak-day usage now regularly reaches approximately 550,000 GPD, or 73–75% of the Town’s allowable operational limits. Reaching 75% of permitted capacity signals the Town to begin planning, implementing, and communicating capacity-management measures to ensure continued service reliability.

### B. Why This Matters

Based on engineering analysis and projected growth, continued development—particularly new residential subdivisions and higher-demand commercial or institutional projects—could push Carthage beyond permitted limits within just a few years. Remaining capacity must be managed proactively to:

- Protect existing customers’ access to reliable water service.
- Ensure the Town remains in compliance with NCDEQ expectations.
- Manage growth responsibly.
- Prioritize emergency, institutional, and high public-benefit projects when capacity is scarce.

### C. Draft Allocation Policy

Staff have prepared a draft Utilities Allocation Policy to be incorporated into the UDO. Key provisions include:

- **Capacity Threshold:** Policy goes into effect once the system reaches **75% of actual capacity** (a threshold we have now reached).
- **Reserve Requirement:** The Town must maintain a **20% reserve** of remaining available capacity for emergency and high-priority institutional needs (schools, medical facilities, public safety, etc.).
- **Board Allocation Approval:** After the policy is activated, all major subdivisions, developments with 5+ dwelling units, and major site-planned developments will require Board approval.
- **Priority System:** The policy establishes a ranking for allocation decisions—from emergency uses to institutional projects to residential and mixed-use development types.
- **Exceptions:** Includes protections for projects with vested rights, previously approved plats, or special use permits already deemed complete.
- **Annual Review:** The reserve amount and capacity status must be reviewed annually and adjusted as needed.

The proposed UDO text amendment incorporates the above provisions into a regulatory structure that is enforceable, transparent, and consistent with state law.

#### **D. PROPOSED ACTION**

Staff request that the Board adopt the following motion:

*“To call a public hearing for the **Tuesday, February 17, 2026**, regular meeting to consider a text amendment to the Unified Development Ordinance establishing a Water and Sewer Allocation Policy, as drafted and presented by staff.”*

Upon calling the public hearing, staff will:

- Transmit the draft amendment to the Planning Board for review and recommendation.
- Prepare a final ordinance for Board consideration in February.
- Make all public notices as required by General Statute.

#### **E. WATER CAPACITY EXECUTIVE SUMMARY DOCUMENT ATTACHED**

Attached to this memo is a public summary document compiled by town staff that provides additional detail on Carthage’s current water capacity status, projected demand, and the implications of reaching the 75% capacity threshold. This summary is written in plain language to help residents, development applicants, and other stakeholders understand why capacity management is now necessary, how peak-day usage affects available capacity, and what the Town must do to ensure long-term service reliability.

The document is intended to support transparent communication as the Board considers adopting a formal water and sewer allocation policy. While the memo provides the statutory and policy framework needed for Board action, the attached public summary offers an accessible explanation of the underlying conditions driving this UDO amendment. This ensures both the Board and the public have a clear, consistent understanding of the Town’s water system challenges and the importance of planning for future growth.

# Carthage's Water Capacity

*A Public Executive Summary*

*How Our Water System Works,  
What's Changing, and Why Planning Matters*



*Town of Carthage, North Carolina*

*January 2026*

# Town of Carthage Water System Capacity Executive Summary

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## What is Water Capacity?

Water capacity is like the size of a pitcher. It tells us how much clean water our town can treat and deliver to homes and businesses each day. Carthage’s water treatment plant can safely handle **750,000 gallons per day** — that’s our **current permitted operational limit**.



In 2023, we received a grant for \$8,489,500 from the NC Department of Environmental Quality to begin upgrading our water treatment plant to **support up to 1 million gallons per day**. This means Carthage has already been proactive in thinking about its future water capacity needs. But it is important to remember that while our water plant may be able to produce 1 million many gallons per day after the upgrades, this future capacity depends on both infrastructure improvements and securing 1 million GPD of raw water.

## How Much Are We Using?

This can be a tricky question to answer because the number can change almost daily. When we talk about how much water a town uses, we must think about it in averages - not exact numbers.



Right now, Carthage uses about **550,000 gallons per day on the busiest days** and serves approximately **1,700 customers**. These peak days typically occur during summer when utility customers water their lawns, fill pools, and increase their water consumption overall to combat heat and drought conditions.

That means, on a busy water day, we’re using **approximately 73% of our maximum operational capacity** - we’re getting closer to the top of the pitcher. It’s time to start planning for the future!

## What Happens If We Keep Growing?

It can be difficult to measure growth precisely, but let’s assume Carthage continues to add 50 new homes per year. Based on engineering estimates, each home could use up to **330 gallons per day during peak conditions** - like hot summer days when water use spikes.

*How We Got the 330 GPD Number:*

This number comes from a maximum day demand analysis conducted by our utility engineering firm, LKC Engineering, in August 2025. Here's how it breaks down:

- **Average daily use per household:** Approx. 210 gallons
- **Peak day use per household:** Approx. 300–330 gallons

We are using the **330 GPD** figure for planning because it reflects the **highest expected demand** - not just the average. This is a standard practice in water infrastructure planning to ensure the system can handle growth even on the busiest water days.

**THINK OF IT LIKE PLANNING FOR TRAFFIC: YOU DON'T DESIGN ROADS FOR THE AVERAGE TUESDAY - YOU PLAN FOR THE FRIDAY BEFORE A HOLIDAY WEEKEND. THAT'S WHAT 330 GPD REPRESENTS: THE BUSIEST WATER DAY OF THE YEAR.**

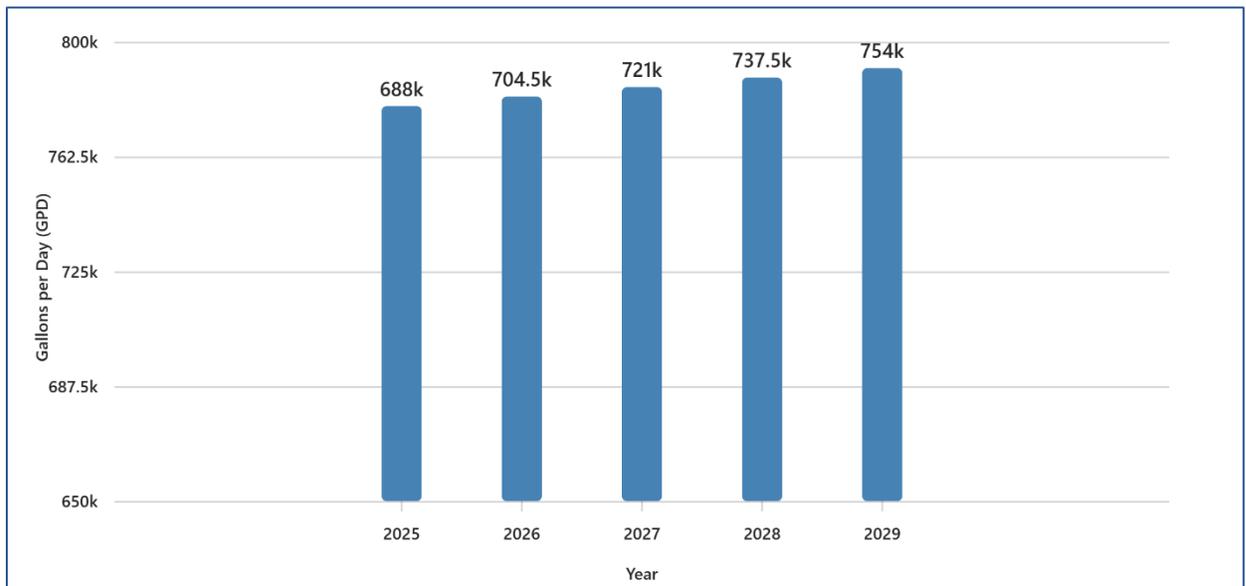
**Growth Scenario**

Let's use an example growth rate of 50 new homes per year. If we were to grow at this pace, we *could* exceed our water system's permitted capacity in just four (4) years. Here's what that could look like:

Year	Total Daily Demand (in GPD)	Notes
<b>2025</b>	688,000	<i>Already nearing the top</i>
<b>2026</b>	704,500	+50 homes
<b>2027</b>	721,000	+50 homes
<b>2028</b>	737,500	+50 homes
<b>2029</b>	754,000	<b>Over the limit</b>

*\*These projections focus on residential growth only. Commercial or industrial development, if added, can affect capacity depending on type of use.*

The bar graph below shows a more visual representation of this data.



### Why Is This Important?

Exceeding our permitted capacity does not mean Carthage will suddenly run out of water, but it does mean the Town must pause and reassess how remaining capacity is allocated. Once the system reaches 75% of its permitted limit, as it has now, state guidelines and responsible planning practices require the Town to actively manage growth and ensure adequate reserves for emergency and essential public needs. Approaching the top of our capacity limits reduces our ability to support new homes, businesses, and community amenities, and it increases the likelihood of regulatory restrictions from state agencies. This is why it is critical to take action now—before capacity becomes a barrier to the Town’s future.

### What Is the Town Doing About It?

Carthage’s staff and elected officials have been preparing for this moment for several years. The Town has secured more than \$13 million in grant funding to strengthen our water and sewer infrastructure and support long-term improvements, including planned treatment plant upgrades. At the same time, we are taking steps to ensure that remaining water capacity is allocated responsibly and transparently. This includes proposing an amendment to the Unified Development Ordinance (UDO) to establish a formal Water and Sewer Allocation Policy.

This policy will guide how the Town allocates water capacity now that the 75% threshold has been reached. It sets aside a portion of remaining capacity for emergency and institutional needs, outlines a priority system for development approvals, and ensures that major projects receive Board review before capacity can be reserved. These steps help us balance growth with the need to protect essential services for current residents and businesses.

### Why Planning Matters

Planning ahead is not about limiting growth—it is about managing growth wisely. Carthage is a thriving, desirable community, and thoughtful planning ensures that it remains that way. By implementing a clear water allocation framework, we can protect existing customers, support responsible development, and reduce the risk of unexpected costs or state-imposed limitations. This proactive approach allows the Town to grow steadily while safeguarding the health, safety, and quality of life of everyone who lives, works, or invests here.

Responsible water management is not a crisis response; it is good governance. With community understanding and support, Carthage can continue to grow in a way that strengthens our local economy, protects our natural resources, and ensures dependable water service for years to come.

**CARTHAGE’S WATER SYSTEM IS ONE OF OUR MOST IMPORTANT PUBLIC ASSETS, AND PROTECTING ITS CAPACITY IS ESSENTIAL TO THE TOWN’S LONG-TERM SUCCESS. THE STEPS WE TAKE NOW—PLANNING, COMMUNICATING, AND ADOPTING CLEAR POLICIES—POSITION CARTHAGE TO NAVIGATE GROWTH CONFIDENTLY AND RESPONSIBLY.**



# Town of Carthage

## *Resolution*

### A RESOLUTION CALLING FOR A PUBLIC HEARING ON A PROPOSED AMENDMENT TO THE UNIFIED DEVELOPMENT ORDINANCE TO ESTABLISH A WATER AND SEWER ALLOCATION POLICY

**WHEREAS**, the Town of Carthage owns and operates a public water system with a permitted treatment capacity of 750,000 gallons per day; and

**WHEREAS**, the Town's documented peak-day water usage has reached approximately 73–75% of its permitted capacity, triggering the need for formal capacity management planning and compliance with best practices for responsible utility allocation; and

**WHEREAS**, continued residential and commercial growth will require the Town to ensure that remaining water capacity is allocated in a manner that protects existing customers, prioritizes emergency and essential institutional needs, and maintains regulatory compliance; and

**WHEREAS**, Town staff have prepared a proposed amendment to the Unified Development Ordinance (UDO) to establish a Water and Sewer Allocation Policy, which includes procedures for reserving capacity, a prioritization system for development approvals, and requirements for Board review of major allocation requests once the 75% capacity threshold is reached; and

**WHEREAS**, the Board of Commissioners finds it necessary and in the public interest to receive public comment on the proposed UDO text amendment before taking formal action.

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Commissioners of the Town of Carthage that:

1. A public hearing on the proposed amendment to the Unified Development Ordinance to establish a Water and Sewer Allocation Policy is hereby called for the Board's regular meeting on **February 17, 2026**, at 6:30 p.m., at the McDonald Building located at 207 McReynolds Street, Carthage, NC.

2. The Town Clerk is hereby directed to publish all required notices in accordance with N.C. General Statutes and to transmit the proposed amendment to the Planning Board for review and recommendation prior to the public hearing.
3. This Resolution shall become effective upon its adoption.

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The foregoing resolution, having been submitted to a vote, received the following vote and was duly adopted and ordained this 20th day of January 2026.

Ayes: \_\_\_\_\_  
Nays: \_\_\_\_\_  
Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalfinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk



## MEMORANDUM

Date: January 14, 2026  
To: The Board of Commissioners  
From: Chris Lawson, Interim Planner  
Subject: Call for a Public Hearing for a Rezoning Request for Parcel ID 20170229; Petitioner: Gattis Construction Inc on behalf of Jeff Leenheer

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This parcel is next to 3760 15-501 and is currently split zoned – half is TBD, half is I. They want to build self-storage here and it is not allowed in the TBD, so they want the entire site to be zoned as Industrial. This is a call for Public Hearing only.

### SUGGESTED MOTION(S):

#### OPTION 1

I make a motion to call a public hearing to consider the rezoning request for PID#20170229 to be heard at the next regular meeting scheduled for TUESDAY, February 17, 2026 at 6:30 pm at the McDonald Building located at 207 McReynolds Street.

#### OPTION 2

I make a motion to deny the call for public hearing to consider the rezoning request for PID#20170229 for the following reason(s):

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# Town of Carthage

## Resolution

Call for a Public Hearing for a Zoning Map Amendment application for Parcel ID 20170229; Petitioner: Gattis Construction Inc on behalf of Jeff Leenheer

WHEREAS, Gattis Construction Inc, on behalf of Jeff Leenheer, submitted a zoning map amendment request for Parcel ID 20170229 to be rezoned from TBD to I; and

WHEREAS, a Public Hearing is required by the General Statutes prior to the Town acting on a zoning map amendment application.

NOW, THEREFORE, BE IT RESOLVED, that the Town of Carthage Board of Commissioners adopt this resolution and call for a public hearing to be held on February 16, 2026, at 6:30 p.m. inside the McDonald Building located at 207 McReynolds Street and that the Town Clerk make all public notices as required.

The foregoing resolution, having been submitted to a vote, received the following vote and was duly adopted and ordained this 20<sup>th</sup> day of January 2026.

Ayes: \_\_\_\_\_  
Nays: \_\_\_\_\_  
Absent/Excused: \_\_\_\_\_

\_\_\_\_\_  
Jimmy Chalfinch, Mayor

Attest:

\_\_\_\_\_  
Kimberly Gibson, Town Clerk