1. Agenda

Documents:

BOA AGENDA APRIL 2026.PDF

1.I. Staff Report

Documents:

260416-1 STAFF REPORT.PDF

1.I.i. Staff Report

Documents:

260416-2 STAFF REPORT.PDF

1.I.i.1. Addendum

Documents:

ADDENDUM.PDF

IREDELL COUNTY BOARD OF ADJUSTMENT

Tim Johnson	Trey Robertson	John Allen
Bill Brater	Jon Madison	Mac McCombs
Richard Coleman (Alt.)	John Gallina (Alt.)	Alex Walker

April 16, 2026

NC Cooperative Extension
444 Bristol Drive
Statesville, North Carolina
6:00 p.m.

A G E N D A

Call to Order

Roll Call

Invocation

Pledge of Allegiance

Approval of **March 19, 2026,** Meeting Minutes

Swearing In Witnesses

Quasi-Judicial Process

Hearing of Case(s)

Case No. 260416-1: requesting a Special Use Permit to operate a home business for auto sales.

Case No. 260416-2: requesting a Special Use Permit and Variance on tower setbacks for a radio tower.

Other Business

Adjourn

IREDELL COUNTY PLANNING & DEVELOPMENT

SPECIAL USE PERMIT STAFF REPORT
BOA CASE# 260416-1
STAFF PROJECT CONTACT: Rebecca Harper

EXPLANTION OF THE REQUEST

The applicant is requesting a Special Use Permit per Chapter 3, R17 of the Iredell County Land Development Code in order to operate a home business for auto sales.

OWNER/APPLICANT

Owner/Applicant: Kyle & Kathryn Reifers
135 Teague Drive
Mooresville, NC 28117

PROPERTY INFORMATION

LOCATION: 135 Teague Drive in Mooresville, NC; more specifically identified as PIN# 4636225027.

DIRECTIONS: Brawley School Road, left on Isle of Pines Road, right on Teague Drive, on the left .

SURROUNDING LAND USE: This property is surrounded by residential uses.

SIZE: The property is 4.942 acres.

EXISTING LAND USE: The property currently has a home, large garage, and smaller accessory building.

ZONING: The property is currently zoned RA (Residential Agricultural).

FINDINGS OF FACT

1. The request is for a Special Use Permit per Chapter 3, R17 of the Iredell County Land Development Code in order to operate a home business for auto sales.
2. The property is 4.942 acres located at 135 Teague Drive in Mooresville, NC; more specifically identified as PIN# 4636225027.
3. The property is currently zoned RA (Residential Agricultural).
4. The application was filed on 2/27/26.
5. The adjoining property owners were notified on 3/23/26.
6. The property was posted on 3/23/26.

STAFF COMMENTS

The Planning Staff has been working with Mr. Reifers concerning this project since October of 2024. The initial site plan was approved prior to the amendments to Chapter 3, R17. Since staff approved the site plan in October 2025 for this project prior to the amendment effective December 2, 2025, the applicant has the option to choose which set of regulations they want to develop their project under. The application complies with the previous regulations, and the applicant has chosen to comply with the current setback and outdoor storage square footage requirements as amended.

The information provided has been reviewed and meets the requirements in Chapter 3, R17 as well as the site plan requirements. They have shown the required setbacks, and other required notes on the site plan. The property is surrounded by residential uses. The 2045 Horizon Plan identifies the future land use for this area identified as Low-Density Residential.

EXHIBITS

Staff Exhibit 1.	Special Use Application
Staff Exhibit 2.	Site Plan
Staff Exhibit 3.	Chapter 3, R17
Staff Exhibit 4.	Zoning Map
Staff Exhibit 5.	2024 Aerial Map
Staff Exhibit 6.	Future Land Use Map

Staff Exhibit 1

IREDELL COUNTY
APPLICATION FOR A SPECIAL USE PERMIT

Special Use requested on property located at: 135 Teague Dr. Mooresville, NC 28117
Property Zoned: RA PIN #: 4636-22-5027 Lot Size: 4.942 Acres
Property Owner: Kyle Reifers
Applicant: Kyle Reifers
Date Existing Structure Erected: 8/25

TO THE IREDELL COUNTY ZONING BOARD OF ADJUSTMENT:

I Kyle Reifers hereby petition the Board of Adjustment for a SPECIAL USE from the literal provisions of the Iredell County Zoning Ordinance because, under the interpretation given to me by the Zoning Administrator, I am prohibited from using the parcel of land described above in a manner shown by the Plot Plan attached to this form. I request a special use from the following provisions of the Zoning Ordinance (cite Section numbers and Code requirements:

Chapter 3 R17

Describe the SPECIAL USE being requested on the above referenced property:

I am applying to get my auto dealers license using the back corner of our property. I have some classic cars and am planning on starting a business buying and selling.

FACTORS RELEVANT TO THE ISSUANCE OF A SPECIAL USE:

To hear and decide, in particular cases, and subject to appropriate conditions and safeguards, permits for Special Uses as authorized by Chapter 12 of the Iredell County Land Development Code. In granting a Special Use Permit the Board shall consider the following factors:

(A) Will the special use materially endanger the public health or safety if located where proposed and developed according to the proposed plan?

No, our property is secluded from our neighbors. I am also planning on buying and selling and storing a very small amount of cars.

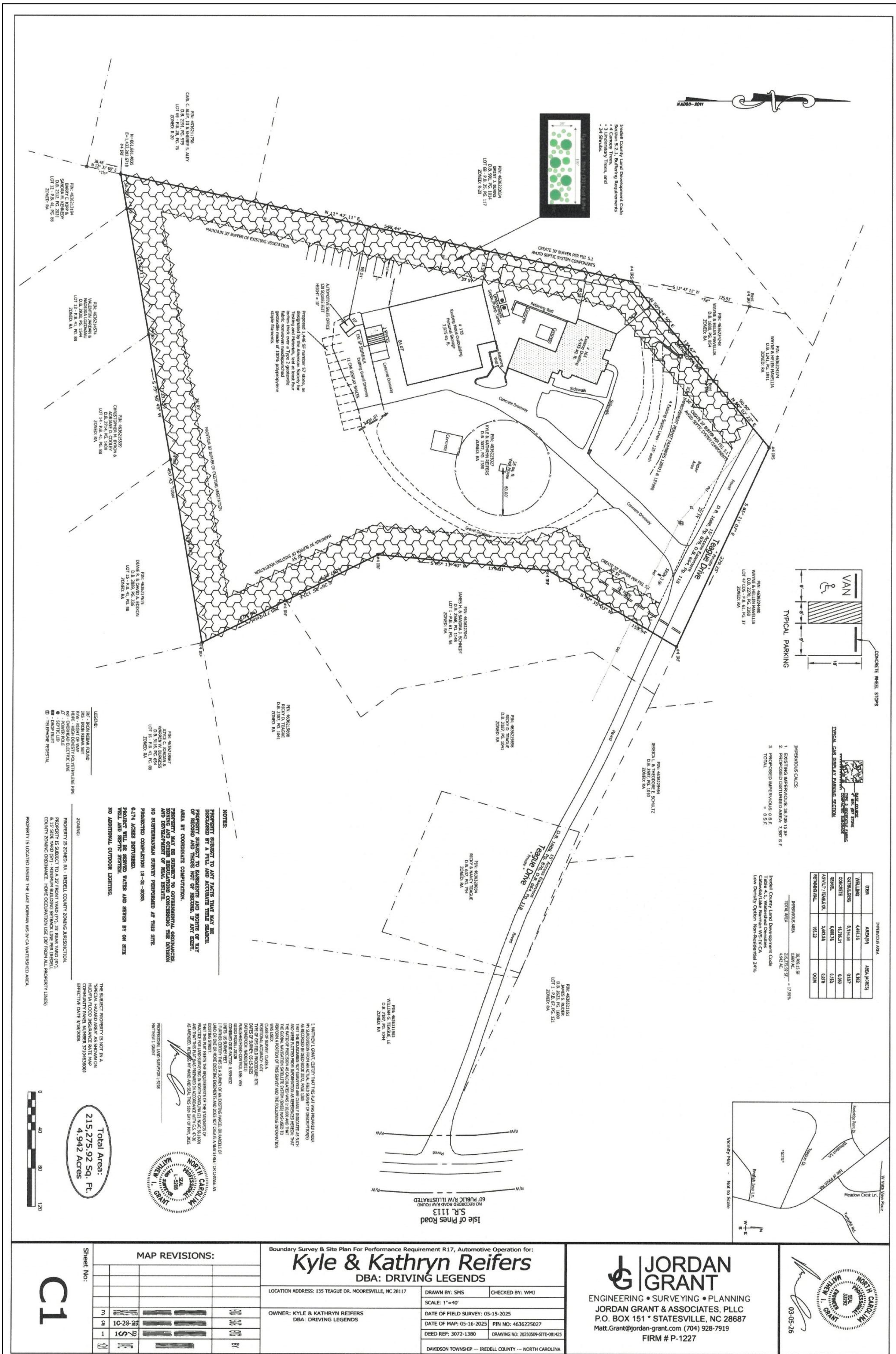
(B) Does the special use meet all required conditions and specifications of the Iredell County Land Development Code?

Yes, we have checked off all the boxes on the size of our property and the size of my office along with distance from our neighbors.

(C) Is the location and character of the special use in harmony with the area in which it is located and in general conformity with the Iredell County Land Use & Development Plan?

Yes, we built a specefic office that matchs our house and other buildings on our property. The office is small and not even really visible.

Staff Exhibit 2



Staff Exhibit 3

Chapter 3: Performance Requirements

R17 Home Occupations Grading, Contractors, and Automotive Operation

A. The minimum lot or parcel size shall be three (3) acres.

B. All related buildings and storage facilities, both open and enclosed, and all signs and other appurtenances shall

   1. Be setback a minimum of thirty (30) feet from any adjacent residentially zoned property and provide screening per Section 5.2; or

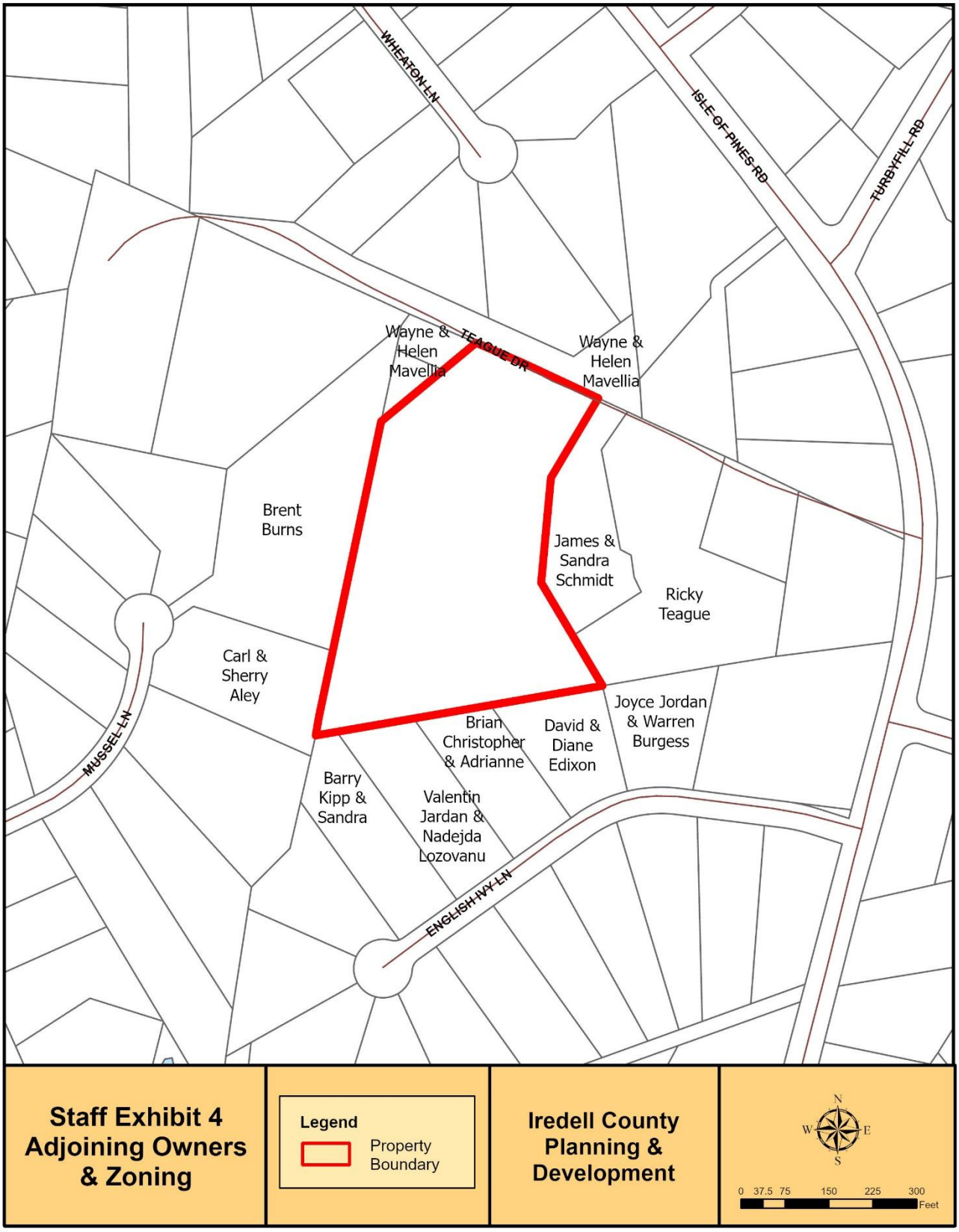
   2. Be setback a minimum of fifteen (15) feet from any adjacent property zoned commercially.

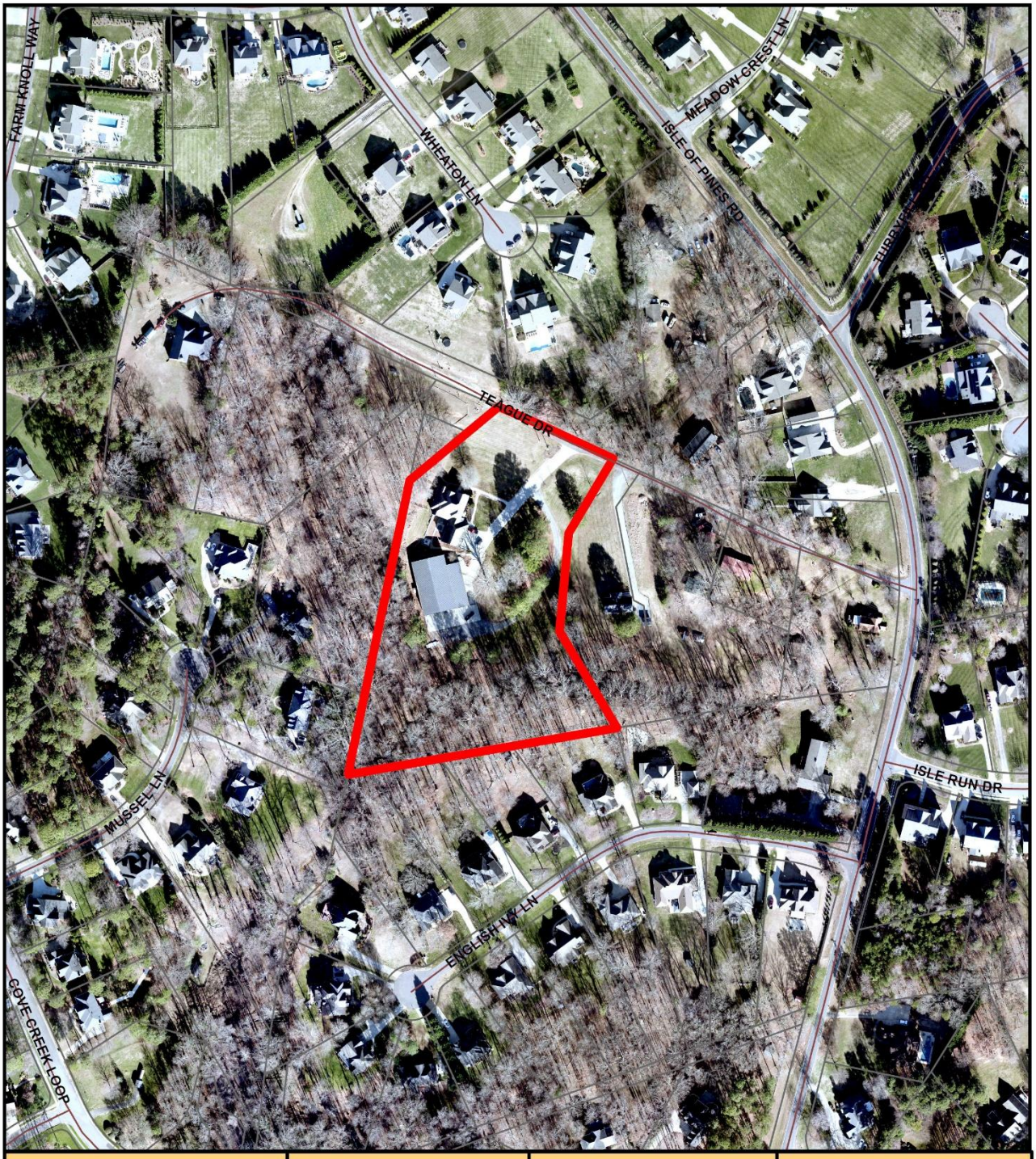
C. The operator of the home occupation must reside on the same parcel of land upon which the home occupation is located.

D. No more than three (3) people who do NOT reside on the premises may be employed by the home occupation on the premises.

E. Other than incidental use of the dwelling, buildings associated with the home occupation may NOT exceed 3,500 square feet.

F. See Section 6.6.1 for sign regulations specific for home occupations.


WHEATON LN
ISLE OF PINES RD
TURBYFILL RD
TEAGUE DR
Wayne & Helen Mavellia
Wayne & Helen Mavellia
Brent Burns
James & Sandra Schmidt
Ricky Teague
Carl & Sherry Aley
MUSSEL LN
Joyce Jordan & Warren Burgess
David & Diane Edixon
Brian Christopher & Adrianne
Barry Kipp & Sandra
Valentin Jardan & Nadejda Lozovanu
ENGLISH IVY LN
Staff Exhibit 4
Adjoining Owners & Zoning
Legend
Property Boundary
Iredell County Planning & Development
N
W
E
S
0 37.5 75 150 225 300
Feet



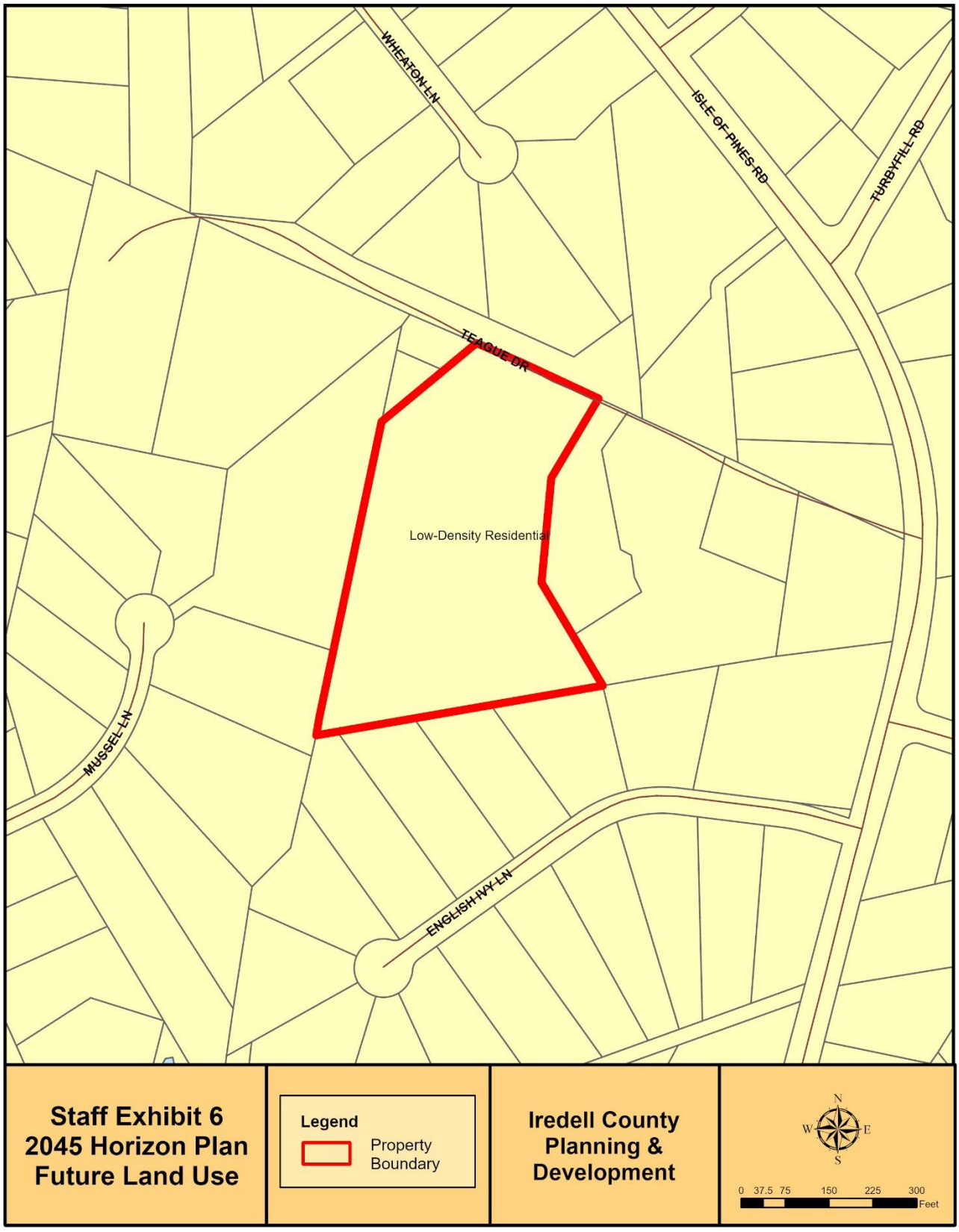
Staff Exhibit 5
2024 Aerial View

Legend
Property Boundary

Iredell County Planning & Development

N
W E
S

0 40 80 160 240 320
Feet



Staff Exhibit 6
2045 Horizon Plan
Future Land Use

Legend
Property Boundary

Iredell County Planning & Development

N W E S

0 37.5 75 150 225 300 Feet

Special Use Permit Worksheet

Finding	**Reasons/Evidence**
The Special Use will not materially endanger the public health or safety if located where proposed and developed according to the plan as proposed.	True: [If true, state the facts that make it true.]
	False: [If false, state the facts that make it false.]
The Special Use meets all required criteria and specifications of the Iredell County Land Development Code.	True: [If true, state the facts that make it true.]
	False: [If false, state the facts that make it false.]
The Special Use will not substantially injure the value of the adjoining or abutting property or it is a public necessity.	True: [If true, state the facts that make it true.]
	False: [If false, state the facts that make it false.]
The Special Use will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the county.	True: [If true, state the facts that make it true.]
	False: [If false, state the facts that make it false.]

IREDELL COUNTY PLANNING & DEVELOPMENT

SPECIAL USE PERMIT & VARIANCE STAFF REPORT
BOA CASE# 260416-2
STAFF PROJECT CONTACT: Rebecca Harper

EXPLANTION OF THE REQUEST

The applicant is requesting a Special Use Permit in order to construct a 328-foot radio tower as well as a 19.9-foot Variance on the setbacks from a property line and a 137-foot Variance on the setbacks from an existing dwelling per Chapter 3, R61 of the Iredell County Land Development Code.

OWNER/APPLICANT

Owners: Iredell County
PO Box 788
Statesville, NC 28687

Applicant: Deanna Belk
Vice-President, WHIP Radio
151 E Iredell Avenue
Mooresville, NC 28115

PROPERTY INFORMATION

LOCATION: 129 South Tower in Mooresville, NC; more specifically identified as PIN# 4658613347.

DIRECTIONS: Hwy 115 south, right on Rinehardt Road, right on Red Dog Drive, right on South Tower Drive, at the end.

SURROUNDING LAND USE: This property is surrounded by residential uses.

SIZE: The property is 9.025 acres.

EXISTING LAND USE: The property currently has a cell tower and two small buildings on it.

ZONING: The property is currently zoned RA (Residential Agricultural).

FINDINGS OF FACT

1. The applicant is requesting a Special Use Permit in order to construct a 328-foot radio tower as well as a Variance on the setbacks from a property line and an existing dwelling per Chapter 3, R61 of the Iredell County Land Development Code.
2. The property is 9.025 acres located at 129 South Tower in Mooresville, NC; more specifically identified as PIN# 4658613347.
3. The property is currently zoned RA (Residential Agricultural).
4. The application was filed on 2/26/26.
5. The adjoining property owners were notified on 3/23/26.
6. The property was posted on 3/23/26.

STAFF COMMENTS

The applicant would like to construct a 328-foot radio tower in a location that previously had a 500-foot tower. The previous tower was non-conforming and was removed in 2024. Per Section 15.3 3.a, a nonconforming structure can be replaced provided permits are obtained and construction is started within 6 months of the removal. Because there were no permits and construction had not started on the proposed 328-foot tower within 6 months of the removal of the old tower, the new tower would have to comply with the regulations for radio towers in Chapter 3, R61.

The proposed tower is 172 feet shorter than the previous tower, but still cannot meet the setbacks from the southern property line and from the existing dwelling to the south. In order to place a new tower in the previous tower location the applicant would require a variance of 19.9 feet from the 180-foot setback from the property line and a variance of 137 feet from the 328-foot setback requirement.

The information provided has been reviewed and meets the requirements in Chapter 3, R61 as well as the site plan requirements, except for the setback requirements. The applicant has a notarized letter from the owner of the existing dwelling to the south stating that they have no objections to the proposed 328-foot tower in that location. The property is surrounded by residential uses. The 2045 Horizon Plan identifies the future land use for this area identified as Medium-Density Residential.

EXHIBITS

Staff Exhibit 1.	Special Use & Variance Application
Staff Exhibit 2.	Site Plan
Staff Exhibit 3.	Chapter 3, R61
Staff Exhibit 4.	Zoning Map
Staff Exhibit 5.	2024 Aerial Map
Staff Exhibit 6.	Future Land Use Map

Staff Exhibit 1

IREDELL COUNTY
APPLICATION FOR A SPECIAL USE PERMIT

Special Use requested on property located at: 129 South Tower Dr, Mooresville NC 28115
Property Zoned: RA PIN #: 4658613347.000 Lot Size: 9.025 acres
Property Owner: Iredell County
Applicant: Deanna Belk and Harrill Hamrick from WHIP Radio, LLC
Date Existing Structure Erected: _____

TO THE IREDELL COUNTY ZONING BOARD OF ADJUSTMENT:

I Deanna Belk hereby petition the Board of Adjustment for a SPECIAL USE from the literal provisions of the Iredell County Zoning Ordinance because, under the interpretation given to me by the Zoning Administrator, I am prohibited from using the parcel of land described above in a manner shown by the Plot Plan attached to this form. I request a special use from the following provisions of the Zoning Ordinance (cite Section numbers and Code requirements:

Iredell County Land Development Code. Chapter 3, Section R61

Item A. 2 - The minimum distance from the tower's base to any existing dwelling or dwelling under construction shall be one foot to each vertical foot of the tower's height.

Item E. Transmission towers with a height of 300 feet or greater shall be subject to Board of Adjustment approval as a Special Use

Describe the SPECIAL USE being requested on the above referenced property:

Mooresville Media, DBA WHIP Radio, LLC, is requesting to construction a 328 - foot tall transmission tower at 121 South Tower Drive, Mooresville. This is to continue operations of our radio station ~~that has been serving Mooresville since 1950 and family owned by the Hamrick family since 1976. We are relocating our property at 2432 Statesville Hwy in Mooresville. We are leasing 121 South Tower Drive from Iredell County with the intention to construct a tower at the site which was previously the home~~ to a 500 - foot tower.

FACTORS RELEVANT TO THE ISSUANCE OF A SPECIAL USE:

To hear and decide, in particular cases, and subject to appropriate conditions and safeguards, permits for Special Uses as authorized by Chapter 12 of the Iredell County Land Development Code. In granting a Special Use Permit the Board shall consider the following factors:

(A) Will the special use materially endanger the public health or safety if located where proposed and developed according to the proposed plan?

No. WHIP Radio, LLC has commissioned Kirkland Apppraisals to study any potential impact on the area. They provided us with a 27-page report that determined there is zero statistical evidence that small wireless communication facilities impact residential real estate evaluations. They concluded that the proposed use is consistent with the prior use as a radio tower site.

(B) Does the special use meet all required conditions and specifications of the Iredell County Land Development Code?

We are requesting a variance to the Iredell County code that states no residences should be within the fall zone of a tower. There is one home that does fall within that zone which is owned by Wanda R Blackwelder. I have attached a letter to the request stating that Ms. Blackwelder has no opposition to the construction of a new tower at her neighboring property. She understands that WHIP Radio, LLC will carry a $1,000,000 general liablity and $1,000,000 umbrella posity as per our lease agreement with Iredell County. The previous tower that was located on the property had 8 homes closer than the height of the tower. Our new tower is 328 feet vs the previous tower at 500 feet and will only have the one, above menetioned, home within that limit.

(C) Is the location and character of the special use in harmony with the area in which it is located and in general conformity with the Iredell County Land Use & Development Plan?

Yes, as the owners of Mooresville Media, DBA WHIP Radio, LLC and residents of Iredell County since 1976, it is our full intention of supporting the county and operating our business in harmony with the Iredell County Land Use and Development Plan. The project has been carefully planned and designed to fully comply with all applicable county rules and regulations. FCC approval has been received for the project. All necessary permits will be obtained before construction begins. By proactively retaining skilled engineers to ensure the project meets all regulatory requirements, the project demonstrates a strong commitment to safety, sustainability and responsible development within the county's established framework.

IREDELL COUNTY
APPLICATION FOR A VARIANCE

Variance requested on property located at: 129 South Tower Dr, Mooresville NC 28115

Property Zoned: RA PIN #: 4658613347.000 Lot Size: 9.025 acres

Property Owner: Iredell County

Applicant: Deanna Belk and Harrill Hamrick from WHIP Radio LLC

Date Existing Structure Erected: _____

TO THE IREDELL COUNTY ZONING BOARD OF ADJUSTMENT:

I Deanna Belk hereby petition the Board of Adjustment for a VARIANCE from the literal provisions of the Iredell County Zoning Ordinance because, under the interpretation given to me by the Zoning Administrator, I am prohibited from using the parcel of land described above in a manner shown by the Plot Plan attached to this form. I requested a variance from the following provisions of the Land Development Code (cite Section numbers and Code requirements):

Describe the VARIANCE being requested on the above referenced property:

We do not meet the setback requirement for a 328 foot tower. We are requesting the varience to be able to errect the tower as requested.

FACTORS RELEVANT TO THE ISSUANCE OF A VARIANCE:

The Board of Adjustment does not have unlimited discretion in deciding whether to grant a variance. The Board must make the findings required below, taking into account the nature of the proposed request, the existing use of land in the vicinity and the probable effect of the proposed request upon traffic conditions in the vicinity, if applicable.

A. Would unnecessary hardship result from the strict application of the regulation. *(It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property.)*

Yes. We are in need of a location to relocate our transmission tower in order to continue operation of our radio station that has been in operation in Mooresville for 75 years and owned by our family for 50 years. There are no other locations within a 2 mile radius of the current tower that are more suitable to move to. Remaining at our current location is ~~not the highest and best use for that property and the building is no longer habitable. We~~ have been paying Iredell County our full lease payment since April, 2025 while working to receive FCC approvals.

B. Does the hardship result from conditions that are peculiar to the property, such as location, size, or topography? *(Hardships resulting from personal circumstances, as well as hardships resulting from conditions that are common to the neighborhood or general public may not be the basis for granting a variance. A variance may be granted when necessary and appropriate to make a reasonable accommodation under the Federal Fair Housing Act for a person with a disability.)*

Yes, the site is uniquely suited for our proposed tower due to the fact that the county used the exact site for a tower for more than 40 years. The location and topography of this site would provide the necessary elevation and central positioning needed for effective transmission signal propagation. We have been unable to locate an alternative parcel with the necessary availability and elevation for our tower. Granting the variance would allow the property to be used in a manner consistent with the intended transmission infrastructure while maintaining public safety and minimizing impacts to surrounding properties.

C. Did the hardship result from actions taken by the applicant or the property owner? *(The act of purchasing property with knowledge that circumstances exist that may justify the granting of a variance shall not be regarded as a self-creating hardship.)*

No, we leased the property at 129 South Tower Drive from Iredell County for the sole purpose of constructing a transmission tower to continue the operation of our radio station. We had no idea that any special use permits or variance requests would be needed since the land was previously used for a tower higher than the one we need to construct.

D. Is the requested variance consistent with the spirit, purpose, and intent of the regulation, such that public safety is secured, and substantial justice is achieved?

Yes, our intent is to support Iredell County's efforts to ensure orderly development, protect public safety and maintain comptibility with the surrounding area. Granting this variance will not negatively affect public safety, create hazardous conditions, or interfere with the use and enjoyment of neighboring properties. We will have have general liability and umbrella coverage as per our lease agreement with Iredell County. As per our FCC license, we commit to serving the public interest as a public trustee and operate in the public convenience, interest, or necessity as a condition of using public airwaves.

February 25, 2026

Wanda R Blackwelder
130 South Tower Dr
Mooresville NC 28115

To: Iredell County – Special Use Permit Board

This letter is to confirm that I have been made aware that WHIP Radio/ Mooresville Media intends to construct a 328' transmissions tower on my neighboring property with the address of 121 South Tower Drive.

I understand that WHIP Radio/ Mooresville Media has used engineers in the planning of construction of the tower and will use a qualified, licensed company to erect this tower. I also understand that WHIP Radio/ Mooresville Media will maintain a General Liability and umbrella insurance policy as per their agreement with Iredell County who owns the leased property of 121 South Tower Drive.

I know that my home is located less than 328' from the base of the tower. I have no objections to WHIP Radio/ Mooresville Media constructing the transmission tower.

Sincerely,
Wanda Renee Blackwelder

Wanda R Blackwelder

PEARL S HUGHEY
NOTARY PUBLIC
IREDELL
NORTH CAROLINA
MY COMMISSION EXPIRES MARCH 04, 2027

Signed before me this 25 day of February, 2026.

Pearl S. Hughey Notary Public
Iredell County, North Carolina

My commission expires March 4, 2027

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

Aeronautical Study No.
2025-ASO-2083-OE

Issued Date: 03/06/2025

Mike Griffin
Mooresville Media, Inc.
P.O. Box 60
Mooresville, NC 28115

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

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

Structure:	Antenna Tower WHIP Radio Tower
Location:	Mooresville, NC
Latitude:	35-36-29.60N NAD 83
Longitude:	80-49-43.90W
Heights:	890 feet site elevation (SE)
	334 feet above ground level (AGL)
	1224 feet above mean sea level (AMSL)

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

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M Change 1, Obstruction Marking and Lighting, a med-dual system-Chapters 4,8(M-Dual),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

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

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

This determination expires on 09/06/2026 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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

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

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

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

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

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

If we can be of further assistance, please contact Robert Kiser, at (404) 305-6616, or Robert.K-CTR.Kiser@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2025-ASO-2083-OE.

Signature Control No: 645241451-649502154 (DNE)
Julie A. Morgan
Manager, Obstruction Evaluation Group

Attachment(s)
Frequency Data
Map(s)

cc: FCC

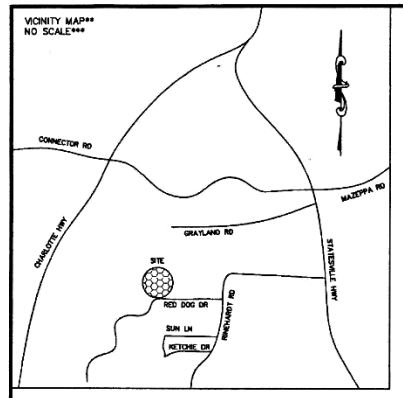
Frequency Data for ASN 2025-ASO-2083-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
1350	1350	kHz	1	kW

Sectional Map for ASN 2025-ASO-2083-OE

Staff Exhibit 2

VICINITY MAP***
NO SCALE***



LEGEND
E.I.P. = EXISTING IRON FOUND
I.P.S. = #4 REBAR SET
CP = COMPUTED POINT
R/W = RIGHT-OF-WAY
C.L.F. = CHAIN-LINK FENCE
= POWER POLE
= WELL
= MANHOLE RIM
= LIGHT POLE

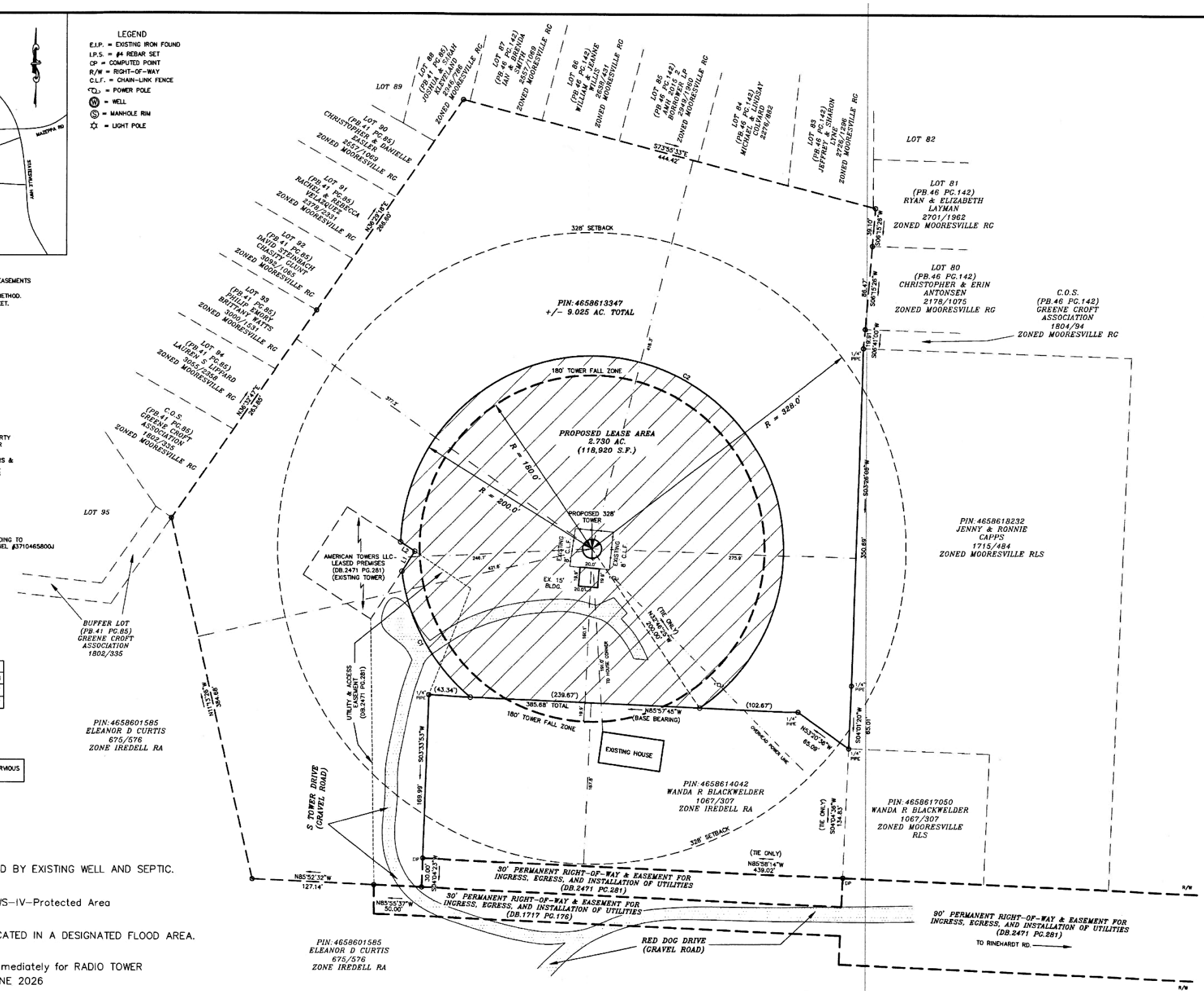
NOTES
1) THIS PROPERTY MAY BE SUBJECT TO ANY EASEMENTS AND/OR RIGHTS OF WAY OF RECORD.
2) ACREAGE COMPUTED BY THE COORDINATE METHOD.
3) NO GRID MONUMENT FOUND WITHIN 2000 FEET.
4) OVERHEAD POWER
5) PROPERTY INFORMATION:
TAX PARCEL: 4658613347
DEED REF: 759/731
ADDRESS: 129 SOUTH TOWER DR
6) PROPERTY ZONED: IREDELL "RA"
VERIFY SETBACKS PRIOR TO ANY CONSTRUCTION
7) CO-LOCATION OF TOWERS WILL BE PERMITTED FOR THIS SITE
8) NO OFFICES ARE PERMITTED
9) NO VEHICLES OR MATERIAL WILL BE STORED ON SITE.
10) THERE WILL BE NO FREE STANDING SIGN BE STORED ON SITE.
11) THERE WILL BE A MEDIUM INTENSITY WHITE LIGHT ON PROPOSED TOWER
12) THERE ARE 2 CELLULAR TOWERS ON PROPERTY NOT AFFILIATED WITH THE PROPOSED TOWER
13) 0.10 AC. TO BE DISTURBED
14) THE SMALL BUILDING WILL HOUSE COMPUTERS & RADIO TRANSMITTERS BUT NO HUMANS WILL BE WORKING ON SITE ON A REGULAR BASIS

FLOOD STATEMENT
THE SUBJECT PROPERTY IS LOCATED WITHIN SPECIAL FLOOD HAZARD AREA "ZONE X" ACCORDING TO FLOOD INSURANCE RATE MAP – COMMUNITY PANEL #3710465800J EFFECTIVE DATE: 03/18/2008

LINE TABLE		
LINE	BEARING	LENGTH
L1	N34°36'56"E	24.79'
L2	N55°21'04"W	17.85'

CURVE TABLE				
CURVE	BEARING	CHORD	RADIUS	LENGTH
C1	N27°18'58"W	148.78'	200.00'	152.44'
C2	S59°44'51"E	356.49'	200.00'	816.63'

EXISTING & PROPOSED TOTAL IMPERVIOUS CALCULATION = 9,134 SF.



SURVEYORS CERTIFICATION

I, WILLIAM M. ALLEN CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION DEED DESCRIPTION RECORDED IN BOOK 759, PAGE 731; THAT THE RATIO OF PRECISION AS CALCULATED BY LATITUDES AND DEPARTURES IS 1:10000. (THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS BROKEN LINES PLOTTED FROM INFORMATION FOUND IN BOOK ____ PAGE ____; THAT THIS MAP WAS PREPARED IN ACCORDANCE WITH G.S. 47-30, AS AMENDED.

WITNESS MY HAND AND SEAL THIS 12TH DAY OF FEBRUARY, A.D. 2025.

NORTH CAROLINA PROFESSIONAL SEAL L-3499 LAND SURVEYOR WILLIAM M. ALLEN

PROFESSIONAL LAND SURVEYOR
L-3499
REGISTRATION NUMBER

WATER\SEWER
THIS SITE IS TO BE SERVED BY EXISTING WELL AND SEPTIC.

WATERSHED DATA
PROPERTY IS LOCATED IN WS-IV-Protected Area

FLOOD DATA
THE PROPERTY IS NOT LOCATED IN A DESIGNATED FLOOD AREA.

PROJECT SCHEDULE
Project planned to start immediately for RADIO TOWER and will be complete by JUNE 2026

DAS
DON ALLEN & ASSOCIATES P.A
"Since 1971"
Commercial * Residential * Mortgage Surveys * Multi-Family
Construction Staking * Subdivision Design * Topographical
127 Promenade Drive – Suite E * Mooresville, N.C. 28117
DASSurveying.com * (704) 664-7029 * info@donallensurvey.com

SITE PLAN
OF
PIN: 4658613347
CODDLE CREEK TWSP., IREDELL CO., NC
SCALE: 1" = 50' DATE: MARCH. 20, 2026

OWNER: IREDELL COUNTY
PO BOX 788
STATESVILLE, NC 28687

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

FILE NAME: SOUTH TOWER 129.DWG

Staff Exhibit 3

Chapter 3: Performance Requirements

R61 Radio, Television or Communication Transmission Towers

A. Transmission Towers shall comply with the following setbacks:

1. Towers shall be sited to contain all ice-fall or debris from tower failure within the setback area. The minimum distance from the tower's base to the property line shall be one foot for each vertical foot of the tower's height. However, a lesser setback shall be permitted upon certification by a NC Registered Professional Engineer which ensures that the fall area of the tower and any appurtenances will be within the setback area proposed.
2. The minimum distance from the tower's base to any existing dwelling or dwelling under construction shall be one foot to each vertical foot of the tower's height.

B. No vehicles or materials shall be stored on the premises; and no offices shall be permitted.

C. All buildings shall be setback at least twenty (20) feet from all property lines and shall be designed and landscaped with a buffer strip in such a way as to blend in with surrounding area.

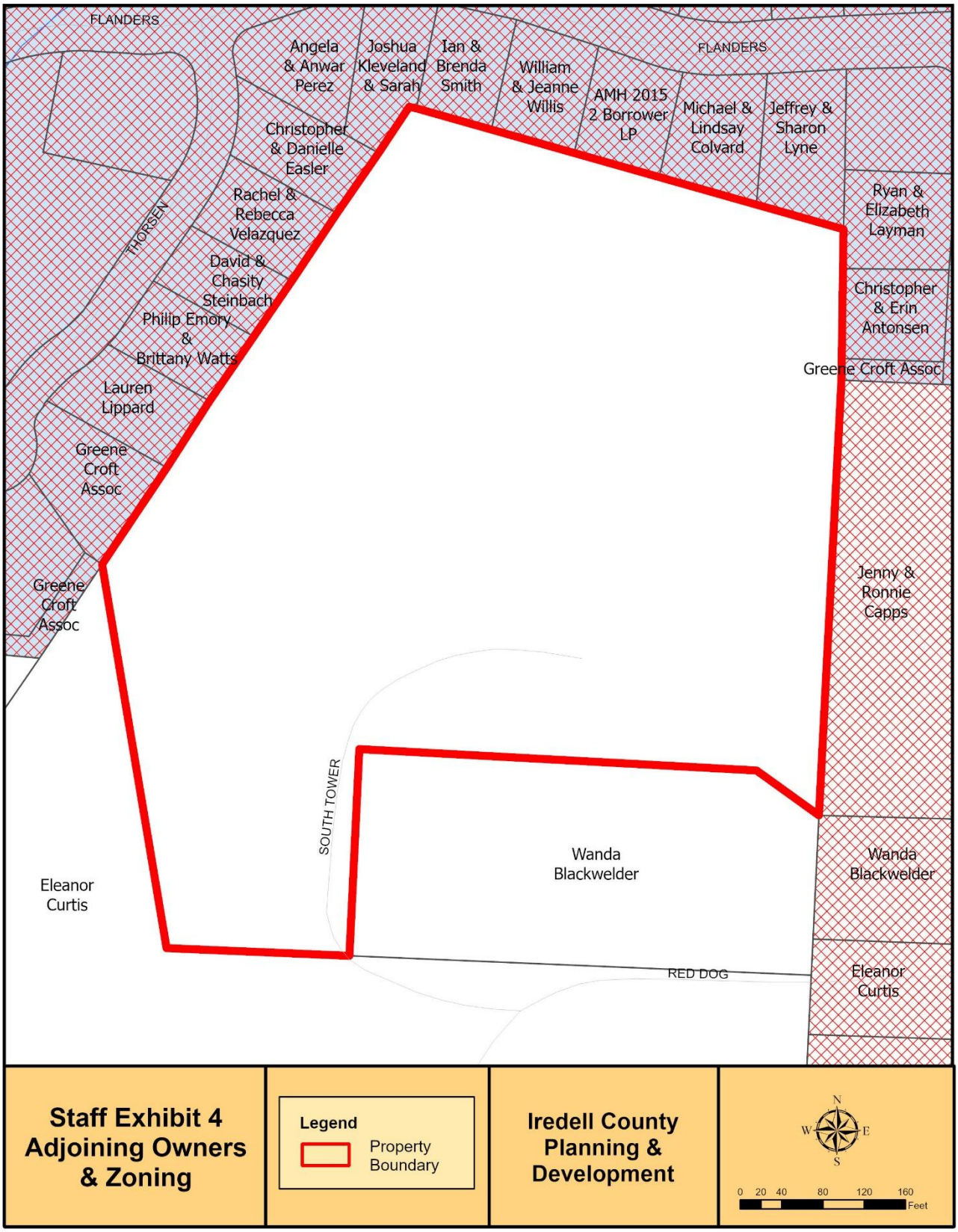
D. All structures shall be enclosed by a chain link fence at least eight (8) feet in height.

E. Transmission Towers with a height of 300 feet or greater shall be subject to Board of Adjustment approval as a Special Use.

F. Transmission Towers with a height of 100 feet or greater shall be designed and constructed to permit the capability for co-location of at least one additional wireless telecommunication use.

G. Transmission Towers shall NOT be located within 2,000 feet of any other existing transmissions tower, unless concealed within a church steeple, farm silo, or other architecturally designed encasement.

H. Transmission Towers shall provide a determination of "no hazard" from the Federal Aviation Administration (FAA).


FLANDERS
Angela & Anwar Perez
Joshua Kleveland & Sarah
Ian & Brenda Smith
William & Jeanne Willis
AMH 2015 2 Borrower LP
Michael & Lindsay Colvard
Jeffrey & Sharon Lyne
FLANDERS
Christopher & Danielle Easler
Rachel & Rebecca Velazquez
THORSEN
David & Chasity Steinbach
Philip Emory & Brittany Watts
Lauren Lippard
Greene Croft Assoc
Greene Croft Assoc
Greene Croft Assoc
Ryan & Elizabeth Layman
Christopher & Erin Antonsen
Greene Croft Assoc
Jenny & Ronnie Capps
SOUTH TOWER
Wanda Blackwelder
Wanda Blackwelder
Eleanor Curtis
RED DOG
Eleanor Curtis
Staff Exhibit 4
Adjoining Owners & Zoning
Legend
Property Boundary
Iredell County Planning & Development
N
W
E
S
0 20 40 80 120 160
Feet

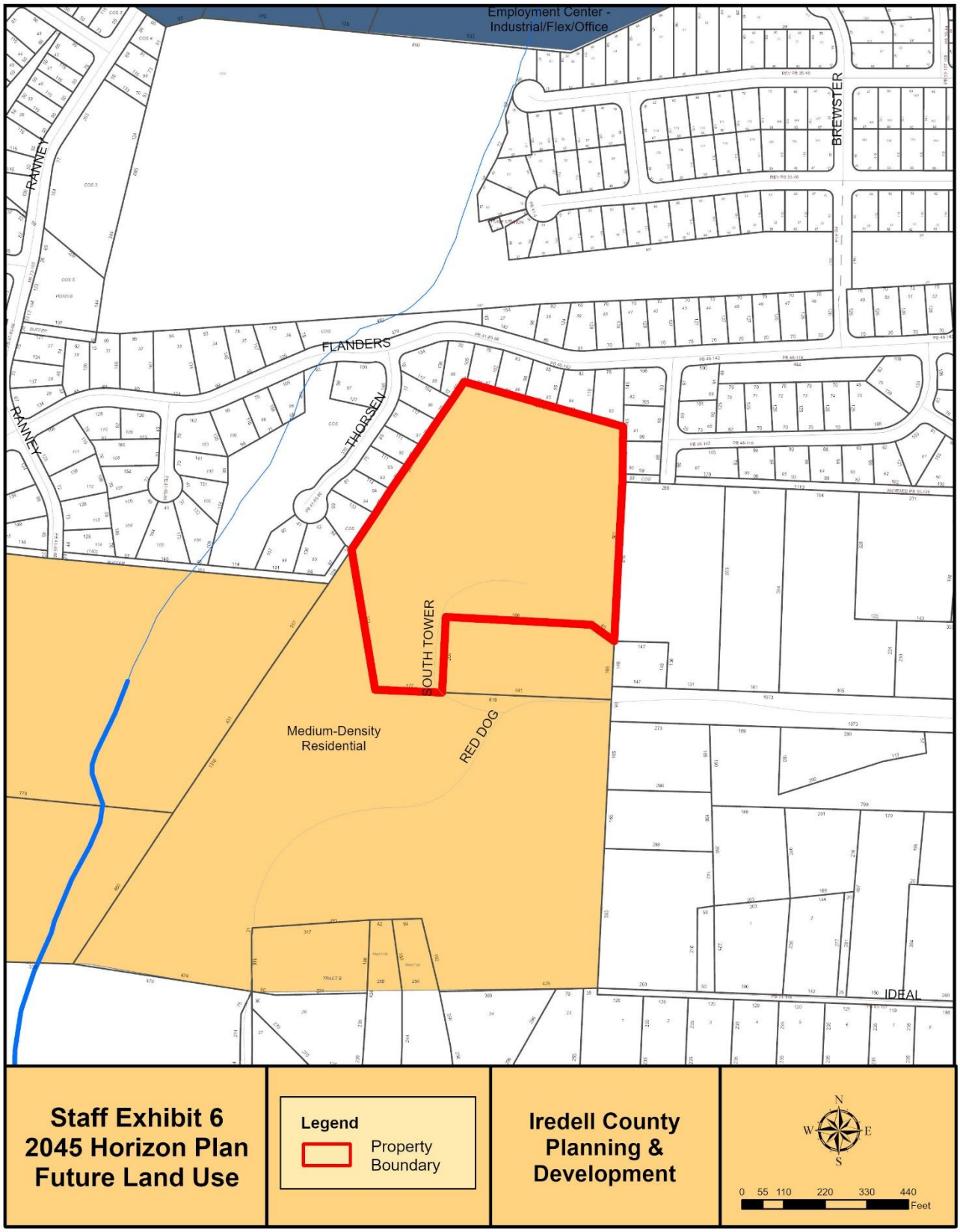
Staff Exhibit 5
2024 Aerial View

Legend
Property Boundary

Iredell County Planning & Development

N
W E
S

0 35 70 140 210 280
Feet



Staff Exhibit 6
2045 Horizon Plan
Future Land Use

Legend
Property Boundary

Iredell County Planning & Development

N
W E
S

0 55 110 220 330 440
Feet

Special Use Permit Worksheet

Finding	**Reasons/Evidence**
The Special Use will not materially endanger the public health or safety if located where proposed and developed according to the plan as proposed.	True: [If true, state the facts that make it true.]
	False: [If false, state the facts that make it false.]
The Special Use meets all required criteria and specifications of the Iredell County Land Development Code.	True: [If true, state the facts that make it true.]
	False: [If false, state the facts that make it false.]
The Special Use will not substantially injure the value of the adjoining or abutting property or it is a public necessity.	True: [If true, state the facts that make it true.]
	False: [If false, state the facts that make it false.]
The Special Use will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the county.	True: [If true, state the facts that make it true.]
	False: [If false, state the facts that make it false.]

Federal Communications Commission

AM BROADCAST STATION CONSTRUCTION PERMIT

Licensee/Permittee
MOORESVILLE MEDIA,
INC.
P. O. BOX 600
MOORESVILLE, NC, 28115

Call Sign	Facility ID
WHIP	43740

File Number	This Permit Modifies License File No.	
0000276618	BL-19920710AC	
Filing Date	**Grant Date**	**Expiration Date**
08/14/2025	02/05/2026	36 months after the grant date
Description Text		
Permit to change site , ND antenna system, and nighttime power level.		

Community of License	Frequency (KHz)	Station Class	Service Type
City: MOORESVILLE **State:** NC	1350	D	Main
Facility Type			
Commercial			
Hours of Operation			
Daytime Nighttime			
Station Antenna Modes/Antenna Types			
Daytime: Non-Directional Nighttime: Non-Directional			

Average Hours of Sunrise and Sunset
Local Standard Time (Non-Advanced)

Month	Sunrise	Sunset
January	7:30	17:30
February	7:15	18:00
March	6:30	18:30
April	5:45	19:00
May	5:15	19:15
June	5:00	19:45
July	5:15	19:45
August	5:45	19:15
September	6:00	18:30
October	6:30	17:45
November	7:00	17:15
December	7:30	17:15

Transmitter

Type Accepted. See Sections 73.1660, 73.1665, and 73.1670 of the Commission's Rules

Antenna Mode: Daytime

Antenna Type: Non-Directional

Antenna Coordinates (NAD 83)

Latitude
35° 36' 29.6" N

Longitude
80° 49' 43.9" W

Nominal Power (kW)
1.0

Antenna Structure Registration Number(s)

Tower No.	ASRN	Overall Height *(m)*
1	1230380	101.8

Radiator Height
101.5 *meters*
164.4 *degrees*

Theoretical Efficiency
306.0 *mV/m/kw at 1 km*

Theoretical Parameters

Tower No.	Field Ratio	Phasing *(deg.)*	Spacing *(deg.)*	Orientation *(deg.)*	Tower Ref. Switch*	Height *(deg.)*
1	1	0	0	0	0	164.4

** Tower Reference Switch*

0 = Spacing and orientation from reference tower
1 = Spacing and orientation from previous tower

Top-Loaded/Sectionalized Tower Parameters: (See 47 CFR 73.160)

Tower No.	Tower Type	A	B	C	D
1	Neither				

Antenna Mode: Nighttime

Antenna Type: Non-Directional

Antenna Coordinates (NAD 83)

Latitude
35° 36' 29.6" N

Longitude
80° 49' 43.9" W

Nominal Power (kW)
.070

Antenna Structure Registration Number(s)

Tower No.	ASRN	Overall Height *(m)*
1	1230380	101.8

Radiator Height
100.5 *meters*
164.4 *degrees*

Theoretical Efficiency
306 *mV/m/kw at 1 km*

Theoretical Parameters

Tower No.	Field Ratio	Phasing *(deg.)*	Spacing *(deg.)*	Orientation *(deg.)*	Tower Ref. Switch*	Height *(deg.)*
1	1	0	0	0	0	164.4

** Tower Reference Switch*

0 = Spacing and orientation from reference tower
1 = Spacing and orientation from previous tower

Top-Loaded/Sectionalized Tower Parameters: (See 47 CFR 73.160)

Tower No.	Tower Type	A	B	C	D
1	Neither				

Special operating conditions or restrictions

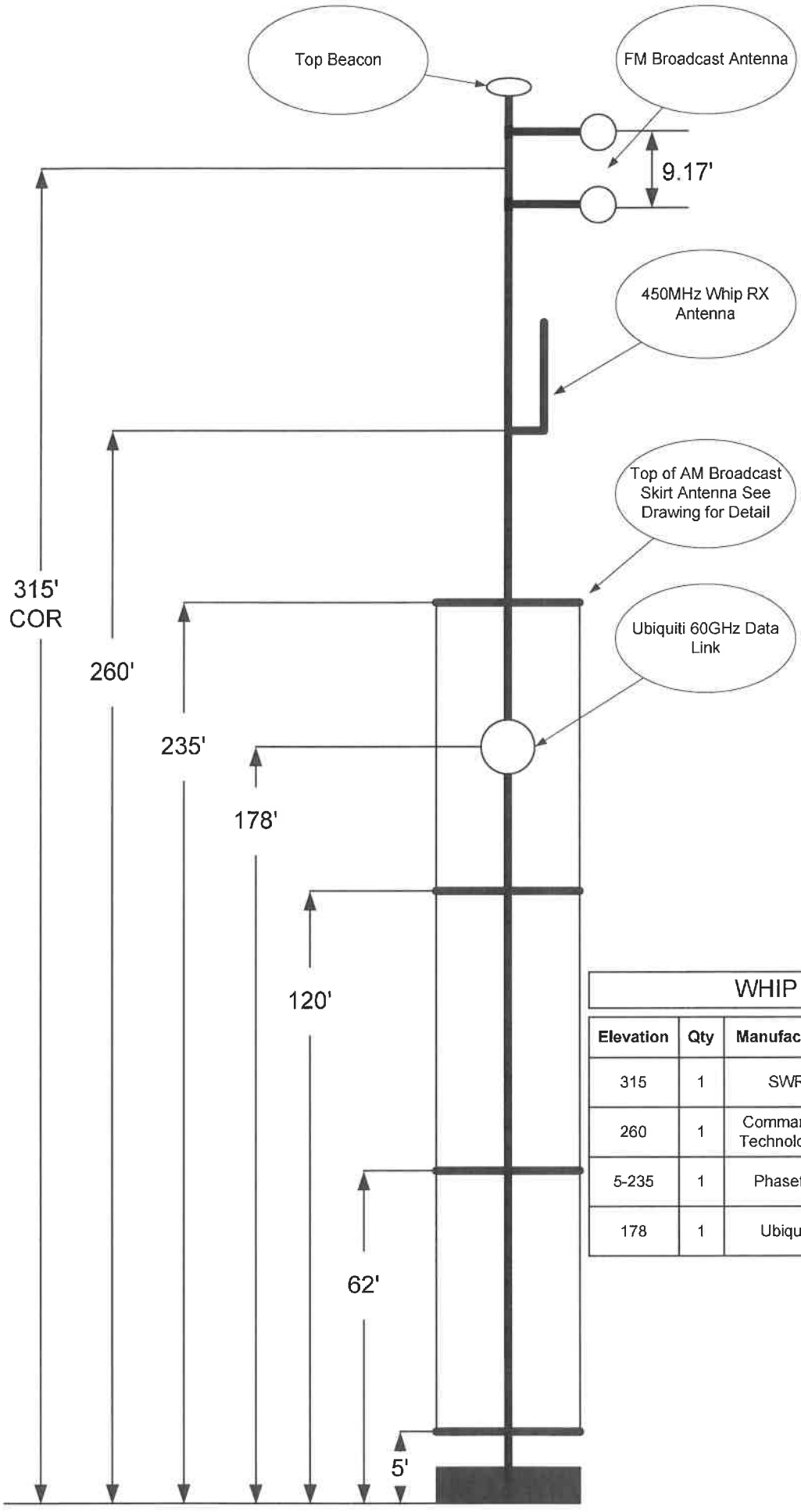
The permittee /licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

- Applicant must submit the information required pursuant to 47 CFR Section 73.99(e) if a Presunrise and/or Postsunset Authorization is desired via email to PSRPSS@fcc.gov as instructed in the public notice. DA 24-672, released on July 11, 2024.
- Licensee shall be responsible for satisfying all reasonable complaints of blanketing interference within the 1 V /m contour as required by Section 73.88 of the Commission's rules.
- Permittee shall install a type accepted transmitter, or submit application (FCC Form 301) along with data prescribed in Section 73.1660(b) should non-type accepted transmitter be proposed.
- The existing antenna has been excited with a symmetrical folded unipole feed, utilizing three folds, which is the minimum allowed. Slant wire is not permitted.
- Deficient ground system consists of 90 equally spaced, buried, copper radials about the base of the tower, averaging 18.3 meters in length.

Subject to the provisions of the Communications Act of 1934, as amended, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this permit, the permittee is hereby authorized to construct the radio transmitting apparatus herein described. Installation and adjustment of equipment not specifically set forth herein shall be in accordance with representations contained in the permittee's application for construction permit except for such modifications as are presently permitted, without application, by the Commission's Rules.

Pursuant to Section 73.3598, this Construction Permit will be subject to automatic forfeiture unless construction is complete and application for license is filed prior to expiration.

Equipment and program tests shall be conducted only pursuant to Sections 73.1610 and 73.1620 of the Commission's Rules.



WHIP Mooresville, NC					
Elevation	**Qty**	**Manufacturer**	**Model**	**Feed Line**	**Mounting**
315	1	SWR	FM3/2	RFS 7/8" Foam	Custom Standoff
260	1	Commander Technologies	1151-3N	RFS 7/8" Foam	2' Standoff
5-235	1	Phasetek	AM Wire Antenna	N/A	(8) 30" Insulator
178	1	Ubiquiti	Wave Pro	Cat5 Carrier	1' Standoff

Federal Communications Commission

FM TRANSLATOR BROADCAST STATION CONSTRUCTION PERMIT

Permittee
MOORESVILLE MEDIA,
INC.
P. O. BOX 600
MOORESVILLE, NC, 28115

Call Sign	Facility ID
W297CV	200494

File Number	This Permit Modifies License File No.	
0000276617	BLFT-20190627AAD	
Filing Date	**Grant Date**	**Expiration Date**
08/14/2025	08/28/2025	08/27/2028

Community of License	Frequency (MHz)	Station Channel	Station Class
City: MOORESVILLE **State:** NC	107.3	297	D
Primary Station WHIP MOORESVILLE NC		**Via** Microwave	
Hours of Operation: Unlimited			

Transmitter	Transmitter Output Power
Certified for compliance per 74.1250 or verified for compliance per 73.1660 of the Commission's Rules.	As required to achieve authorized ERP.
Antenna Type Directional	**Antenna Coordinates (NAD 83)** **Latitude** 35-36-29.6 N **Longitude** 80-49-43.9 W
Major Lobe Directions 175	

	Horizontally Polarized Antenna	Vertically Polarized Antenna

Effective Radiated Power in the Horizontal Plane (kW)	0.25	0.25
Height of Radiation Center Above Ground (meters)	96	96
Height of Radiation Center Above Mean Sea Level (meters)	367.3	367.3
Height of Radiation Center Above Average Terrain (meters)		

Antenna Structure Registration Number	**Overall Height of Antenna Structure Above Ground (meters)**
1230380	See the registration for this antenna structure.

Obstruction Marking and Lighting Specifications for Antenna Structure

See the registration for this antenna structure.

Special Operating Conditions or Restrictions

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

- Prior to commencing program test operations, FM Translator or FM Booster permittee must have on file an Application for an FM Translator or FM Booster Station License, pursuant to 47 C.F.R. Section 74.14.
- Pursuant to Revitalization of the AM Radio Service, Notice of Proposed Rule Making, 28 FCC Rcd 15221, 15227, para. 14 (2013), and First Report and Order, 30 FCC Rcd 12145, 12154, para. 17 and n. 43 (2015), the permittee and any successor in interest (licensee, transferee, or assignee) shall be subject to the following restrictions: (1) this facility may only, in perpetuity, be used to rebroadcast the authorized facilities of the AM primary station set forth in this authorization, except that it may also originate nighttime programming if the AM primary station set forth in this authorization is not authorized regular nighttime service, and then only during periods of the broadcast day when the primary AM station is not regularly authorized to operate; (2) if the AM primary station is operating with reduced facilities, this cross-service FM translator facility may only operate if its coverage contour conforms to the limits set forth in 47 CFR Section 74.1201(g) as applied to the reduced facilities of the AM primary station; (3) the authorization for this facility may not be assigned or transferred except in conjunction with the primary AM station set forth in this authorization; and (4) if the authorization of the AM primary station set forth in this authorization is rescinded, revoked, surrendered, subject to special temporary authorization (STA) to remain silent, or is otherwise suspended from operation, the authorization of this cross-service FM translator station shall likewise be rescinded, revoked, surrendered, silent for the duration of the AM primary station's STA to remain silent, or suspended from operation. Minor modifications of this authorization are permitted, provided that the translator meets all of the preceding conditions. Grant of this authorization is conditioned on the common ownership, in perpetuity, of this facility and the specified AM primary station. Any violation of this condition shall result in the rescission of the grant of this authorization and the dismissal, with prejudice, of the associated application and, if applicable, cancellation of the associated construction permit.
- This construction permit authorizes the mounting of an antenna on the nondirectional tower of the AM station identified below. During the installation of the antenna, the AM station shall determine operating power by the indirect method (see Section 73.51 of the Commission's Rules). Upon completion of the antenna installation, antenna impedance measurements on the AM antenna shall be made. If the resistance of the AM antenna has changed by more than 2 percent from the licensed value (see Section 73.45(c)(1) of the Commission's Rules), an application for the AM station to return to direct power measurement, including a tower sketch of the installation, shall be filed with the Commission by the AM station licensee using form FCC 302-AM. (See Section 1.30003 of the Commission's Rules.) The permittee must submit confirmation of completion of the requirements of this condition in the application for license to cover this construction permit. Station WHIP, MOORESVILLE, NC, 1350 kHz

Subject to the provisions of the Communications Act of 1934, as amended, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this permit, the permittee is hereby authorized to construct the radio transmitting apparatus herein described. Installation and adjustment of equipment not specifically set forth herein shall be in accordance with representations contained in the permittee's application for construction permit except for such modifications as are presently permitted, without application, by the Commission's Rules(See Section 73.875).

Pursuant to Section 73.3598, this Construction Permit will be subject to automatic forfeiture unless construction is complete and application for license is filed prior to expiration.

Equipment and program tests shall be conducted only pursuant to Sections 73.1610 and 73.1620 of the Commission's Rules.

ASR Registration Search

Registration 1230380

Map Registration

Registration Detail

Reg Number	1230380	Status	Granted
File Number	A1326377	Constructed	04/01/1981
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type GTOWER - Guyed Structure Used for Communication Purposes

Location (in NAD83 Coordinates)

Lat/Long	35-36-29.6 N 080-49-43.9 W	Address	155 S. Tower Road
City, State	Mooresville , NC		
Zip	28115	County	IREDELL
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
271.3	101.8
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
373.1	101.8

Painting and Lighting Specifications

FAA Chapters 4, 6, 15
Paint and Light in Accordance with FAA Circular Number 70/7460-1M

FAA Notification

FAA Study	2025-ASO-14436-OE	FAA Issue Date	07/29/2025

Owner & Contact Information

FRN	0001912674	Owner Entity Type	Government Entity

Owner

Iredell County
Attention To: Jamie Barrier
404 Bristol Drive
P.O. Box 788
Statesville , NC 28677

P: (704)832-2193
F:
E: jamie.barrier@iredellcountync.gov

Contact

Barrier , Jamie
Attention To: Jamie Barrier
404 Bristol Drive
P.O. Box 788
Statesville , NC 28677

P: (704)832-2193
F:
E: jamie.barrier@iredellcountync.gov

Last Action Status

Status	Granted	Received	08/07/2025
Purpose	Modification	Entered	08/07/2025
Mode	Interactive		

Related Applications

08/07/2025	A1326377	- Modification (MD)
08/06/2025	A1326327	- Admin Update (AU)
11/06/2023	A1259424	- Admin Update (AU)

Related applications (6)

Comments

Comments

None

History

Date	Event
08/07/2025	Modification Received
08/06/2025	Administrative Update Received
11/06/2023	Administrative Update Received

All History (9)

Pleadings

Pleading Type	Filer Name	Description	Date Entered

None

Automated Letters

11/06/2002	Authorization, Reference 243050
10/28/2002	Construction Reminder, Reference 241964
10/25/2001	Authorization, Reference 164661

CLOSE WINDOW

TOWERKRAFT ENGINEERING, P.C.

DESIGN AND ANALYSIS OF COMMUNICATION STRUCTURES

October 31, 2025

Sean Gallagher
Western Towers
320 West 26th Street
San Angelo, TX 76903

Subject: Structural Analysis of 328' Guyed Tower at Mooresville, NC
Towerkraft Project No.: 10214

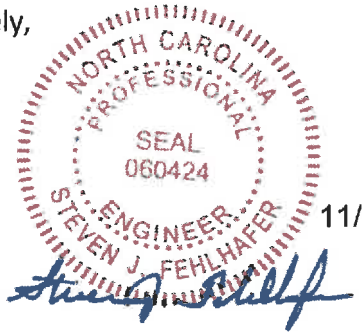
Sean,

As requested, Towerkraft Engineering has completed the analysis of the above-mentioned tower. The tower will meet the requirements of TIA-222-I.

Included with the report are the base and foundation drawings needed for the installation.

If you have any questions or concerns, please do not hesitate to contact me at the number below.

Sincerely,



11/3/25

Steven J Fehlhafer

Digitally signed by Steven J Fehlhafer
Date: 2025.11.03 10:31:15 -06'00'

Steven Fehlhafer, P.E.
Towerkraft Engineering, P.C.
402-646-0031

ENGINEERING EVALUATION
328' x 24" GT

Tower Site:
121 S Tower Dr
Mooresville, NC 28115

Prepared For:
Western Towers
320 West 26th Street
San Angelo, TX 76903

Prepared By:
Brady Fehlhafer
Towerkraft Engineering, P.C.

Reviewed By:
Steven Fehlhafer, P.E.
N.C. License No. 060424

11/3/25

October 31, 2025

Project No. 10214

SCOPE

As requested by Western Towers, Towerkraft Engineering has performed a structural stress analysis on the existing 328' x 24" World Towers guyed tower at Mooresville – Iredell County, NC. The purpose of this analysis is to determine if the tower will meet TIA-222-I with the loading shown on page two of this report.

The analysis was performed with the following parameters:

Item	Source or Value
ANSI/TIA Design Standard	TIA-222-I
Structural Analysis Software	TNX Tower Version 8.3.1.2 by Tower Numerics
Wind Load Data	ASCE 7-22
Wind speed with no ice (50 year MRI)	109 mph
Wind speed with 0.76" ice (50 year MRI)	36 mph
Service Wind Speed (50 year MRI)	60 mph
Risk Category	II
Exposure Category	C
Crest Height	0 ft

ANTENNAS

Elevation	Item	Feedline	Remarks
328'	Beacon	SO	Proposed
315'	SWR FM3/2 on Custom Standoff	RFS 7/8" Foam	Proposed
260'	Commander Technologies 1151-3N on 2' Standoff	RFS 7/8" Foam	Proposed
178'	Ubiquiti Wave Pro on 1 ft Standoff	Cat5 Carrier	Proposed
5'-235'	Phasetek AM Wire Antenna on (8) 30" Insulator	N/A	Proposed

RESULTS

Structural Members

Elevation	Maximum Leg Percent Usage	Maximum Bracing Percent Usage
328'-320'	2%	4%
320'-300'	18%	36%
300'-280'	32%	37%
280'-260'	41%	24%
260'-240'	34%	23%
240'-220'	42%	23%
220'-200'	40%	18%
200'-180'	42%	20%
180'-160'	37%	18%
160'-140'	48%	17%
140'-120'	44%	17%
120'-100'	45%	15%
100'-80'	49%	16%
80'-60'	51%	12%
60'-40'	53%	13%
40'-20'	54%	11%
20'-0'	55%	15%

Stress up to 105% are considered acceptable. The tower meets the requirements of TIA-222-I.

Guy Cables

Elevation	Cable Size	Maximum Guy Cable Usage
290'	1/2" EHS	53%
234'	3/8" EHS	44%
192'	3/8" EHS	40%
114'	3/8" EHS	36%
96'	3/8" EHS	32%
44'	3/8" EHS	30%

Stresses up to 105% are considered acceptable. The guy cables meet the requirements of TIA-222-I.

FOUNDATIONS

The foundations were designed for the factored foundation forces shown below:

Foundation Reactions

Location	Factored Reaction Force	
Base	Axial =	56.1 kips
	Shear =	0.2 kips
Inner Guy Anchor	Uplift =	16.6 kips
	Horizontal =	17.2 kips
	Resultant =	23.9 kips

COMMENTS

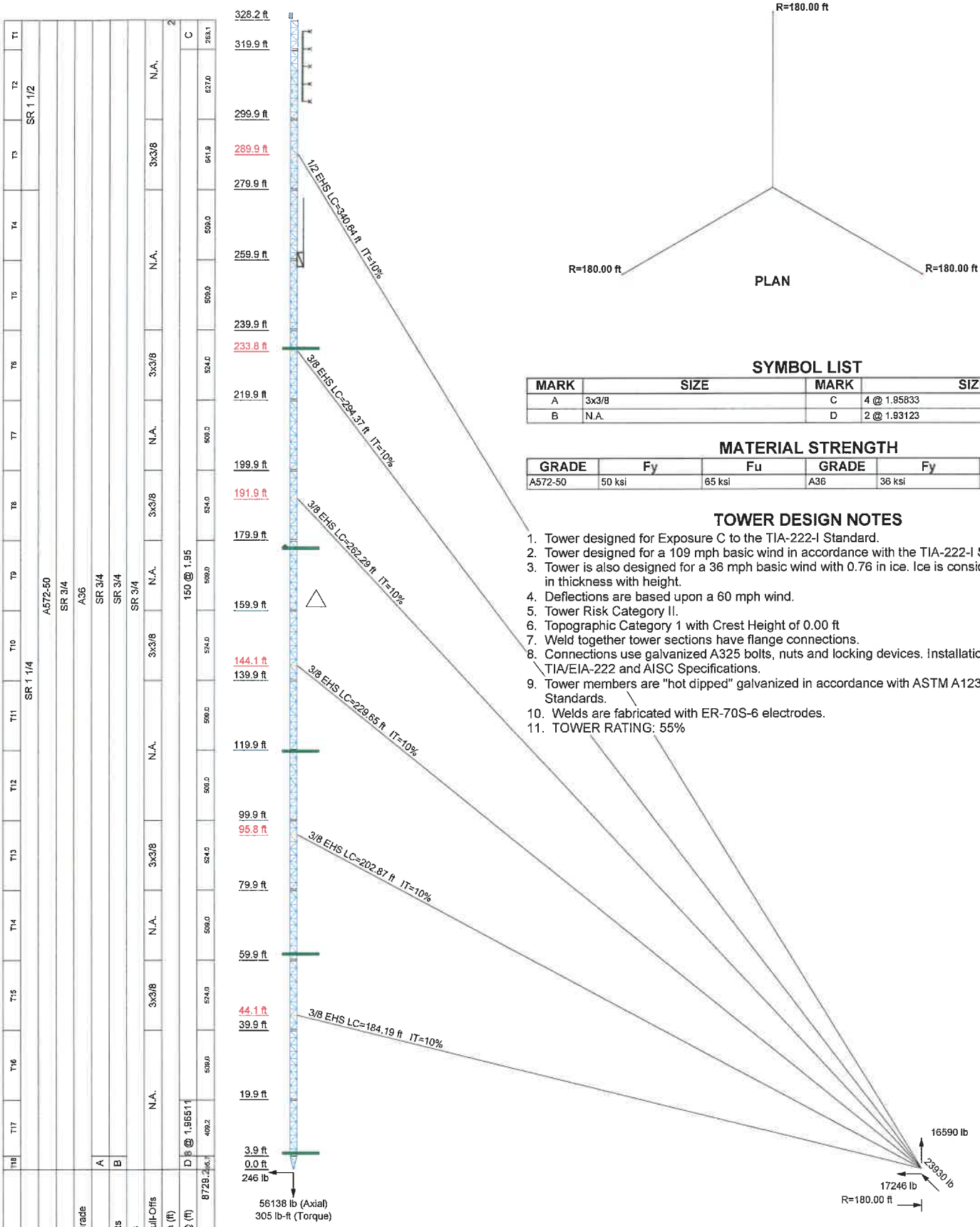
If any item on the existing tower varies from what is stated in this report or on the drawings, the certification by Towerkraft Engineering shall be considered invalid and Towerkraft Engineering shall be notified immediately for a revised analysis.

CONCLUSION

The existing tower **will meet** the requirements of TIA-222-I with the loading shown on page two of the report.

This report is based on the following:

a. ANSI/TIA-222-I.
b. Tower data obtained from Communication Support Specialists tower mapping.
c. Proposed loading obtained from Western Towers.
d. The tower, base foundation, and guy anchor shafts and foundations exist in a sound structural condition. No allowance is made for corrosion, missing, or bent members.
e. Antenna manufacturer's data, when possible.
f. Structural analysis and engineering by Towerkraft Engineering, P.C.



PLAN

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	3x3/8	C	4 @ 1.95833
B	N.A.	D	2 @ 1.93123

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-I Standard.
2. Tower designed for a 109 mph basic wind in accordance with the TIA-222-I Standard.
3. Tower is also designed for a 36 mph basic wind with 0.76 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. Weld together tower sections have flange connections.
8. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
9. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
10. Welds are fabricated with ER-70S-6 electrodes.
11. TOWER RATING: 55%

ALL REACTIONS ARE FACTORED

Towerkraft Engineering
4423 Alvo Road
Utica, NE
Phone: 4026460031
FAX: Web:www.towerkraft.com

Job:	*328' x 24" Guyed Tower at Mooresville N*
Project:	*PN10214*
Client: Western Towers	Drawn by: bf — App'd:
Code: TIA-222-I	Date: 11/03/25 — Scale: NTS
Path: C:\Users\bf\OneDrive\Towerkraft Engineering\TNX Tower Files\10214.eri	Dwg No. E-1

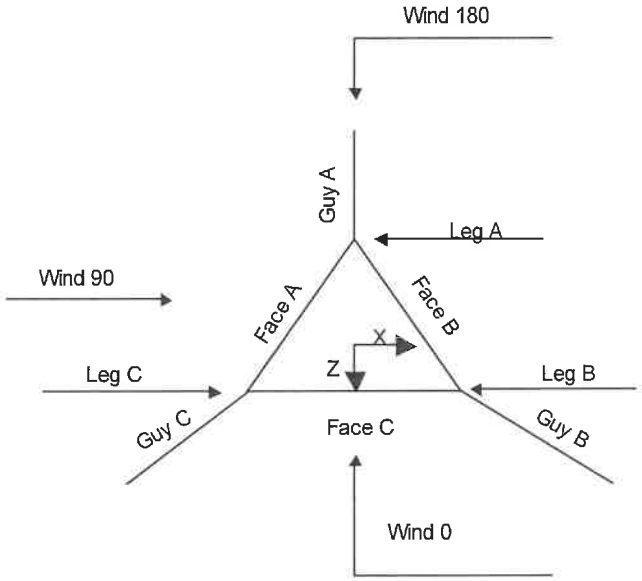
Tower Input Data

The main tower is a 3x guyed tower with an overall height of 328.25 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 2.00 ft at the top and tapered at the base.
This tower is designed using the TIA-222-I standard.
The following design criteria apply:

Tower base elevation above sea level: 893.00 ft.
Basic wind speed of 109 mph is used.
Risk Category II.
Exposure Category C.
Crest Height: 0.00 ft.
Nominal ice thickness of 0.7600 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
Wind speed of 36 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
Weld together tower sections have flange connections..
Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications..
Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..
Welds are fabricated with ER-70S-6 electrodes..
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Safety factor used in guy design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Assume Legs Pinned	√	Calculate Redundant Bracing Forces
	Consider Moments - Horizontals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Consider Moments - Diagonals	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
	Use Moment Magnification	√	Use Clear Spans For KL/r	√	All Leg Panels Have Same Allowable
√	Use Code Stress Ratios	√	Retension Guys To Initial Tension		Offset Girt At Foundation
√	Use Code Safety Factors - Guys		Bypass Mast Stability Checks		Consider Feed Line Torque
	Escalate Ice	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Always Use Max Kz	√	Project Wind Area of Appurtenances		Use TIA-222-H Bracing Resist. Exemption
	Kz In Exposure D Hurricane Region		Alternative Appurt. EPA Calculation		Use TIA-222-H Tension Splice Exemption
√	Include Bolts In Member Capacity	√	Autocalc Torque Arm Areas		Poles
√	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Include Shear-Torsion Interaction
	Secondary Horizontal Braces Leg		Sort Capacity Reports By Component		Always Use Sub-Critical Flow
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Use Top Mounted Sockets
√	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Pole Without Linear Attachments
√	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole With Shroud Or No Appurtenances
	Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules		Outside and Inside Corner Radii Are Known
	Use Special Wind Profile				Use Fatigue Analysis Exemption for Gh



Corner & Starmount Guyed Tower

Tower Section Geometry

Tower Section	*Tower Elevation*	*Assembly Database*	*Description*	*Section Width*	*Number of Sections*	*Section Length*
	ft			*ft*		*ft*
T1	328.25-319.92			2.00	1	8.33
T2	319.92-299.92			2.00	1	20.00
T3	299.92-279.92			2.00	1	20.00
T4	279.92-259.92			2.00	1	20.00
T5	259.92-239.92			2.00	1	20.00
T6	239.92-219.92			2.00	1	20.00
T7	219.92-199.92			2.00	1	20.00
T8	199.92-179.92			2.00	1	20.00
T9	179.92-159.92			2.00	1	20.00
T10	159.92-139.92			2.00	1	20.00
T11	139.92-119.92			2.00	1	20.00
T12	119.92-99.92			2.00	1	20.00
T13	99.92-79.92			2.00	1	20.00
T14	79.92-59.92			2.00	1	20.00
T15	59.92-39.92			2.00	1	20.00
T16	39.92-19.92			2.00	1	20.00
T17	19.92-3.95			2.00	1	15.97
T18	3.95-0.00			2.00	1	3.95

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	328.25-319.92	1.96	K Brace Left	No	Yes+Steps	3.0000	3.0000
T2	319.92-299.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T3	299.92-279.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T4	279.92-259.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T5	259.92-239.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T6	239.92-219.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T7	219.92-199.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T8	199.92-179.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T9	179.92-159.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T10	159.92-139.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T11	139.92-119.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T12	119.92-99.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T13	99.92-79.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T14	79.92-59.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T15	59.92-39.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T16	39.92-19.92	1.95	K Brace Left	No	Yes+Steps	3.0000	3.0000
T17	19.92-3.95	1.97	K Brace Left	No	Yes+Steps	3.0000	0.0000
T18	3.95-0.00	1.93	K Brace Left	No	Yes+Steps	1.0000	0.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 328.25-319.92	Solid Round	1 1/2	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T2 319.92-299.92	Solid Round	1 1/2	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T3 299.92-279.92	Solid Round	1 1/2	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T4 279.92-259.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T5 259.92-239.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T6 239.92-219.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T7 219.92-199.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T8 199.92-179.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T9 179.92-159.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T10 159.92-139.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T11 139.92-119.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T12 119.92-99.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T13 99.92-79.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T14 79.92-59.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T15 59.92-39.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T16 39.92-19.92	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T17 19.92-3.95	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T18 3.95-0.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 328.25-319.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T2 319.92-299.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T3 299.92-279.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T4 279.92-259.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T5 259.92-239.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T6 239.92-219.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T7 219.92-199.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T8 199.92-179.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T9 179.92-159.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T10 159.92-139.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T11 139.92-119.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T12 119.92-99.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T13 99.92-79.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T14 79.92-59.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T15 59.92-39.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T16 39.92-19.92	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T17 19.92-3.95	Solid Round	3/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T18 3.95-0.00	Flat Bar	3x3/8	A36 (36 ksi)	Flat Bar	3x3/8	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 328.25-319.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T2 319.92-299.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T3 299.92-279.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T4 279.92-259.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T5 259.92-239.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T6 239.92-219.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T7 219.92-199.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T8 199.92-179.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T9 179.92-159.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T10 159.92-139.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T11 139.92-119.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T12 119.92-99.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T13 99.92-79.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T14 79.92-59.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T15 59.92-39.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T16 39.92-19.92	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T17 19.92-3.95	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T18 3.95-0.00	None	Flat Bar		A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1 328.25-319.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T2 319.92-299.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T3 299.92-279.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T4 279.92-259.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T5 259.92-239.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T6 239.92-219.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T7 219.92-199.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T8 199.92-179.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T9 179.92-159.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T10 159.92-139.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T11 139.92-119.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T12 119.92-99.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T13 99.92-79.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T14 79.92-59.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T15 59.92-39.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T16 39.92-19.92	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T17 19.92-3.95	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000
T18 3.95-0.00	0.00	0.0000	A36 (36 ksi)	1	1	1.07	36.0000	36.0000	36.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1 328.25-319.92	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T2 319.92-299.92	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T3 299.92-279.92	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T4 279.92-259.92	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T5 259.92-239.92	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T6 239.92-219.92	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T7 219.92-199.92	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T8 199.92-179.92	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T9 179.92-159.92	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T10 159.92-139.92	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T11	Yes	Yes	1	1	1	1	1	1	1	1
139.92-119.92				1	1	1	1	1	1	1
T12	Yes	Yes	1	1	1	1	1	1	1	1
119.92-99.92				1	1	1	1	1	1	1
T13	Yes	Yes	1	1	1	1	1	1	1	1
99.92-79.92				1	1	1	1	1	1	1
T14	Yes	Yes	1	1	1	1	1	1	1	1
79.92-59.92				1	1	1	1	1	1	1
T15	Yes	Yes	1	1	1	1	1	1	1	1
59.92-39.92				1	1	1	1	1	1	1
T16	Yes	Yes	1	1	1	1	1	1	1	1
39.92-19.92				1	1	1	1	1	1	1
T17	Yes	Yes	1	1	1	1	1	1	1	1
19.92-3.95				1	1	1	1	1	1	1
T18 3.95-0.00	Yes	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1

[1]*Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.*

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Net Width Deduct in	U	Diagonal Net Width Deduct in	U	Top Girt Net Width Deduct in	U	Bottom Girt Net Width Deduct in	U	Mid Girt Net Width Deduct in	U	Long Horizontal Net Width Deduct in	U	Short Horizontal Net Width Deduct in	U
T1	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
328.25-319.92														
T2	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
319.92-299.92														
T3	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
299.92-279.92														
T4	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
279.92-259.92														
T5	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
259.92-239.92														
T6	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
239.92-219.92														
T7	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
219.92-199.92														
T8	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
199.92-179.92														
T9	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
179.92-159.92														
T10	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
159.92-139.92														
T11	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
139.92-119.92														
T12	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
119.92-99.92														
T13	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
99.92-79.92														

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T14 79.92-59.92	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T15 59.92-39.92	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T16 39.92-19.92	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T17 19.92-3.95	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T18 3.95-0.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 328.25-319.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T2 319.92-299.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T3 299.92-279.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T4 279.92-259.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T5 259.92-239.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T6 239.92-219.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T7 219.92-199.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T8 199.92-179.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T9 179.92-159.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T10 159.92-139.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T11 139.92-119.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T12 119.92-99.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T13 99.92-79.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T14 79.92-59.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T15 59.92-39.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T16 39.92-19.92	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T17 19.92-3.95	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T18 3.95-0.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)

	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)	

Tower Section Geometry *(cont'd)*

Tower Elevation *ft*	*Leg Connection Type*	*Leg*		*Diagonal*		*Top Girt*		*Bottom Girt*		*Mid Girt*		*Long Horizontal*		*Short Horizontal*	
		Bolt Size in	*No.*	*Bolt Size* in	*No.*	*Bolt Size* in	*No.*	*Bolt Size* in	*No.*	*Bolt Size* in	*No.*	*Bolt Size* in	*No.*	*Bolt Size* in	*No.*
T1	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
328.25-319.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T2	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
319.92-299.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T3	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
299.92-279.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T4	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
279.92-259.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T5	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
259.92-239.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T6	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
239.92-219.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T7	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
219.92-199.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T8	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
199.92-179.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T9	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
179.92-159.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T10	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
159.92-139.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T11	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
139.92-119.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T12	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
119.92-99.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T13	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
99.92-79.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T14	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
79.92-59.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T15	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
59.92-39.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T16	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
39.92-19.92		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T17 19.92-3.95	Flange	0.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T18 3.95-0.00	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	

Guy Data

Guy Elevation *ft*	*Guy Grade*		*Guy Size*	*Initial Tension* *lb*	*%*	*Guy Modulus* *ksi*	*Guy Weight* *plf*	L_u *ft*	*Anchor Radius* *ft*	*Anchor Azimuth Adj.* °	*Anchor Elevation* *ft*	*End Fitting Efficiency* *%*
289.917	EHS	A	1/2	2690.00	10%	21000	0.517	340.36	180.00	0.0000	0.00	100%
		B	1/2	2690.00	10%	21000	0.517	340.36	180.00	0.0000	0.00	100%
		C	1/2	2690.00	10%	21000	0.517	340.36	180.00	0.0000	0.00	100%

233.817	EHS	A	3/8	1540.00	10%	21000	0.273	294.11	180.00	0.0000	0.00	100%
		B	3/8	1540.00	10%	21000	0.273	294.11	180.00	0.0000	0.00	100%
		C	3/8	1540.00	10%	21000	0.273	294.11	180.00	0.0000	0.00	100%
191.867	EHS	A	3/8	1540.00	10%	21000	0.273	262.06	180.00	0.0000	0.00	100%
		B	3/8	1540.00	10%	21000	0.273	262.06	180.00	0.0000	0.00	100%
		C	3/8	1540.00	10%	21000	0.273	262.06	180.00	0.0000	0.00	100%
144.067	EHS	A	3/8	1540.00	10%	21000	0.273	229.45	180.00	0.0000	0.00	100%
		B	3/8	1540.00	10%	21000	0.273	229.45	180.00	0.0000	0.00	100%
		C	3/8	1540.00	10%	21000	0.273	229.45	180.00	0.0000	0.00	100%
95.7667	EHS	A	3/8	1540.00	10%	21000	0.273	202.69	180.00	0.0000	0.00	100%
		B	3/8	1540.00	10%	21000	0.273	202.69	180.00	0.0000	0.00	100%
		C	3/8	1540.00	10%	21000	0.273	202.69	180.00	0.0000	0.00	100%
44.0667	EHS	A	3/8	1540.00	10%	21000	0.273	184.03	180.00	0.0000	0.00	100%
		B	3/8	1540.00	10%	21000	0.273	184.03	180.00	0.0000	0.00	100%
		C	3/8	1540.00	10%	21000	0.273	184.03	180.00	0.0000	0.00	100%

Guy Data *(cont'd)*

Guy Elevation ft	*Mount Type*	*Torque-Arm Spread ft*	*Torque-Arm Leg Angle °*	*Torque-Arm Style*	*Torque-Arm Grade*	*Torque-Arm Type*	*Torque-Arm Size*
289.917	Corner						
233.817	Corner						
191.867	Corner						
144.067	Corner						
95.7667	Corner						
44.0667	Corner						

Guy Data *(cont'd)*

Guy Elevation ft	*Diagonal Grade*	*Diagonal Type*	*Upper Diagonal Size*	*Lower Diagonal Size*	*Is Strap.*	*Pull-Off Grade*	*Pull-Off Type*	*Pull-Off Size*
289.92	A572-50 (50 ksi)	Solid Round			No	A572-50 (50 ksi)	Flat Bar	3x3/8
233.82	A572-50 (50 ksi)	Solid Round			No	A572-50 (50 ksi)	Flat Bar	3x3/8
191.87	A572-50 (50 ksi)	Solid Round			No	A572-50 (50 ksi)	Flat Bar	3x3/8
144.07	A572-50 (50 ksi)	Solid Round			No	A572-50 (50 ksi)	Flat Bar	3x3/8
95.77	A572-50 (50 ksi)	Solid Round			No	A572-50 (50 ksi)	Flat Bar	3x3/8
44.07	A572-50 (50 ksi)	Solid Round			No	A572-50 (50 ksi)	Flat Bar	3x3/8

Guy Data *(cont'd)*

Guy Elevation ft	Cable Weight A lb	Cable Weight B lb	Cable Weight C lb	Cable Weight D lb	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
289.917	175.97	175.97	175.97		10.84 5.7 sec/pulse	10.84 5.7 sec/pulse	10.84 5.7 sec/pulse	
233.817	80.29	80.29	80.29		7.52 4.7 sec/pulse	7.52 4.7 sec/pulse	7.52 4.7 sec/pulse	
191.867	71.54	71.54	71.54		5.99 4.2 sec/pulse	5.99 4.2 sec/pulse	5.99 4.2 sec/pulse	
144.067	62.64	62.64	62.64		4.61 3.7 sec/pulse	4.61 3.7 sec/pulse	4.61 3.7 sec/pulse	
95.7667	55.33	55.33	55.33		3.61 3.3 sec/pulse	3.61 3.3 sec/pulse	3.61 3.3 sec/pulse	
44.0667	50.24	50.24	50.24		2.99 3.0 sec/pulse	2.99 3.0 sec/pulse	2.99 3.0 sec/pulse	

Guy Data *(cont'd)*

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm K_x	Torque Arm K_y	Pull Off K_x	Pull Off K_y	Diagonal K_x	Diagonal K_y
289.917	No	No			1	1	1	1
233.817	No	No			1	1	1	1
191.867	No	No			1	1	1	1
144.067	No	No			1	1	1	1
95.7667	No	No			1	1	1	1
44.0667	No	No			1	1	1	1

Guy Data *(cont'd)*

Guy Elevation ft	Torque-Arm Bolt Size in	Torque-Arm Number	Torque-Arm Net Width Deduct in	Torque-Arm U	Pull Off Bolt Size in	Pull Off Number	Pull Off Net Width Deduct in	Pull Off U	Diagonal Bolt Size in	Diagonal Number	Diagonal Net Width Deduct in	Diagonal U
289.917	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
233.817	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
191.867	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
144.067	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
95.7667	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
44.0667	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q_z psf	q_z Ice psf	Ice Thickness in
289.917	A	144.96	34	4	0.8812
	B	144.96	34	4	0.8812
	C	144.96	34	4	0.8812
233.817	A	116.91	32	4	0.8625
	B	116.91	32	4	0.8625
	C	116.91	32	4	0.8625
191.867	A	95.93	31	3	0.8456
	B	95.93	31	3	0.8456
	C	95.93	31	3	0.8456
144.067	A	72.03	29	3	0.8217
	B	72.03	29	3	0.8217
	C	72.03	29	3	0.8217
95.7667	A	47.88	27	3	0.7888
	B	47.88	27	3	0.7888
	C	47.88	27	3	0.7888
44.0667	A	22.03	23	3	0.7299
	B	22.03	23	3	0.7299
	C	22.03	23	3	0.7299

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
SO Cord (Beacon)	C	No	Yes	Ar (CaAa)	328.00 - 5.00	1	1	0.0000	0.6500		0.28
RFS 7/8" Foam (SWR: FM3/2)	C	No	Yes	Ar (CaAa)	315.00 - 5.00	1	1	0.0000	1.0940		0.26
RFS 7/8" Foam (Commander Technologies: 1151-3N)	C	No	Yes	Ar (CaAa)	260.00 - 5.00	1	1	0.0000	1.0940		0.26
Cat5 (Ubiquiti: Wave Pro)	C	No	Yes	Ar (CaAa)	178.00 - 5.00	1	1	0.0000	0.2400		0.03

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight lb
T1	328.25-319.92	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	0.525	0.000	2.23
T2	319.92-299.92	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	2.950	0.000	9.47
T3	299.92-279.92	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	3.488	0.000	10.76
T4	279.92-259.92	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	3.497	0.000	10.78
T5	259.92-239.92	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
		C	0.000	0.000	5.676	0.000	16.00
T6	239.92-219.92	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	5.676	0.000	16.00
T7	219.92-199.92	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	5.676	0.000	16.00
T8	199.92-179.92	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	5.676	0.000	16.00
T9	179.92-159.92	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	6.110	0.000	16.52
T10	159.92-139.92	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	6.156	0.000	16.58
T11	139.92-119.92	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	6.156	0.000	16.58
T12	119.92-99.92	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	6.156	0.000	16.58
T13	99.92-79.92	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	6.156	0.000	16.58
T14	79.92-59.92	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	6.156	0.000	16.58
T15	59.92-39.92	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	6.156	0.000	16.58
T16	39.92-19.92	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	6.156	0.000	16.58
T17	19.92-3.95	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	4.591	0.000	12.37
T18	3.95-0.00	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	0.000	0.000	0.00

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
T1	328.25-319.92	A	0.955	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	2.069	0.000	17.37
T2	319.92-299.92	A	0.951	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	9.622	0.000	82.49
T3	299.92-279.92	A	0.944	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	11.044	0.000	94.60
T4	279.92-259.92	A	0.938	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	11.015	0.000	93.91

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight lb
T5	259.92-239.92	A	0.931	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	16.843	0.000	144.01
T6	239.92-219.92	A	0.923	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	16.750	0.000	142.42
T7	219.92-199.92	A	0.914	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	16.650	0.000	140.71
T8	199.92-179.92	A	0.905	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	16.540	0.000	138.87
T9	179.92-159.92	A	0.895	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	20.092	0.000	159.83
T10	159.92-139.92	A	0.884	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	20.303	0.000	159.49
T11	139.92-119.92	A	0.872	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	20.102	0.000	156.39
T12	119.92-99.92	A	0.857	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	19.871	0.000	152.86
T13	99.92-79.92	A	0.840	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	19.598	0.000	148.75
T14	79.92-59.92	A	0.819	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	19.264	0.000	143.80
T15	59.92-39.92	A	0.792	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	18.830	0.000	137.48
T16	39.92-19.92	A	0.753	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	18.197	0.000	128.54
T17	19.92-3.95	A	0.686	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	12.783	0.000	85.23
T18	3.95-0.00	A	0.573	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	0.000	0.000	0.00

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	1	SO Cord	319.92 - 328.00	0.6000	0.5198
T2	1	SO Cord	299.92 - 319.92	0.6000	0.5252
T2	2	RFS 7/8" Foam	299.92 - 315.00	0.6000	0.5252
T3	1	SO Cord	279.92 - 299.92	0.6000	0.5193

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T3	2	RFS 7/8" Foam	279.92 - 299.92	0.6000	0.5193
T4	1	SO Cord	259.92 - 279.92	0.6000	0.5405
T4	2	RFS 7/8" Foam	259.92 - 279.92	0.6000	0.5405
T4	3	RFS 7/8" Foam	259.92 - 260.00	0.6000	0.5405
T5	1	SO Cord	239.92 - 259.92	0.6000	0.5426
T5	2	RFS 7/8" Foam	239.92 - 259.92	0.6000	0.5426
T5	3	RFS 7/8" Foam	239.92 - 259.92	0.6000	0.5426
T6	1	SO Cord	219.92 - 239.92	0.6000	0.5369
T6	2	RFS 7/8" Foam	219.92 - 239.92	0.6000	0.5369
T6	3	RFS 7/8" Foam	219.92 - 239.92	0.6000	0.5369
T7	1	SO Cord	199.92 - 219.92	0.6000	0.5472
T7	2	RFS 7/8" Foam	199.92 - 219.92	0.6000	0.5472
T7	3	RFS 7/8" Foam	199.92 - 219.92	0.6000	0.5472
T8	1	SO Cord	179.92 - 199.92	0.6000	0.5420
T8	2	RFS 7/8" Foam	179.92 - 199.92	0.6000	0.5420
T8	3	RFS 7/8" Foam	179.92 - 199.92	0.6000	0.5420
T9	1	SO Cord	159.92 - 179.92	0.6000	0.5527
T9	2	RFS 7/8" Foam	159.92 - 179.92	0.6000	0.5527
T9	3	RFS 7/8" Foam	159.92 - 179.92	0.6000	0.5527
T9	4	Cat5	159.92 - 178.00	0.6000	0.5527
T10	1	SO Cord	139.92 - 159.92	0.6000	0.5481
T10	2	RFS 7/8" Foam	139.92 - 159.92	0.6000	0.5481
T10	3	RFS 7/8" Foam	139.92 - 159.92	0.6000	0.5481
T10	4	Cat5	139.92 - 159.92	0.6000	0.5481
T11	1	SO Cord	119.92 - 139.92	0.6000	0.5596
T11	2	RFS 7/8" Foam	119.92 - 139.92	0.6000	0.5596
T11	3	RFS 7/8" Foam	119.92 - 139.92	0.6000	0.5596
T11	4	Cat5	119.92 - 139.92	0.6000	0.5596
T12	1	SO Cord	99.92 - 119.92	0.6000	0.5638
T12	2	RFS 7/8" Foam	99.92 - 119.92	0.6000	0.5638
T12	3	RFS 7/8" Foam	99.92 - 119.92	0.6000	0.5638
T12	4	Cat5	99.92 - 119.92	0.6000	0.5638
T13	1	SO Cord	79.92 - 99.92	0.6000	0.5609
T13	2	RFS 7/8" Foam	79.92 - 99.92	0.6000	0.5609

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T13	3	RFS 7/8" Foam	79.92 - 99.92	0.6000	0.5609
T13	4	Cat5	79.92 - 99.92	0.6000	0.5609
T14	1	SO Cord	59.92 - 79.92	0.6000	0.5749
T14	2	RFS 7/8" Foam	59.92 - 79.92	0.6000	0.5749
T14	3	RFS 7/8" Foam	59.92 - 79.92	0.6000	0.5749
T14	4	Cat5	59.92 - 79.92	0.6000	0.5749
T15	1	SO Cord	39.92 - 59.92	0.6000	0.5749
T15	2	RFS 7/8" Foam	39.92 - 59.92	0.6000	0.5749
T15	3	RFS 7/8" Foam	39.92 - 59.92	0.6000	0.5749
T15	4	Cat5	39.92 - 59.92	0.6000	0.5749
T16	1	SO Cord	19.92 - 39.92	0.6000	0.5946
T16	2	RFS 7/8" Foam	19.92 - 39.92	0.6000	0.5946
T16	3	RFS 7/8" Foam	19.92 - 39.92	0.6000	0.5946
T16	4	Cat5	19.92 - 39.92	0.6000	0.5946
T17	1	SO Cord	5.00 - 19.92	0.6000	0.6000
T17	2	RFS 7/8" Foam	5.00 - 19.92	0.6000	0.6000
T17	3	RFS 7/8" Foam	5.00 - 19.92	0.6000	0.6000
T17	4	Cat5	5.00 - 19.92	0.6000	0.6000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Beacon	C	From Leg	0.00	0.0000	328.00	No Ice	1.66	0.76	36.00
(SO Cord)			0.00			1/2" Ice	1.85	0.90	50.00
			0.75			1" Ice	2.04	1.04	64.00
SWR: FM3/2	B	From Leg	3.00	0.0000	315.00	No Ice	12.00	12.00	162.00
(RFS 7/8" Foam)			0.00			1/2" Ice	14.00	14.00	262.00
			0.00			1" Ice	16.00	16.00	362.00
Custom Standoff Mount	B	From Leg	1.50	0.0000	315.00	No Ice	1.00	1.00	25.00
(SWR: FM3/2)			0.00			1/2" Ice	1.10	1.10	50.00
			0.00			1" Ice	1.20	1.20	75.00
Commander Technologies:	B	From Leg	2.00	0.0000	260.00	No Ice	3.04	3.04	16.00
1151-3N			0.00			1/2" Ice	4.59	4.59	40.00
(RFS 7/8" Foam)			7.60			1" Ice	6.14	6.14	64.00
2' Standoff Mount	B	From Leg	1.00	0.0000	260.00	No Ice	0.29	0.87	22.00
(Commander Technologies:			0.00			1/2" Ice	0.42	1.26	31.00
1151-3N)			0.00			1" Ice	0.55	1.65	40.00
Phasetek: AM Wire Antenna									
*Face A									
Support Arm: 2" x 2" x .188"	A	Stand-Off	1.25	0.0000	235.00	No Ice	1.50	0.01	10.98
SS Angle		Left	0.00			1/2" Ice	2.04	0.02	20.30
(Phasetek: AM Wire Antenna)			0.00			1" Ice	2.58	0.03	29.62
Support Insulator: 2" x 0.75"	A	Stand-Off	1.25	0.0000	178.00	No Ice	1.50	0.01	5.26
GPO-3		Left	0.00			1/2" Ice	2.04	0.03	12.64
(Phasetek: AM Wire Antenna)			0.00			1" Ice	2.58	0.05	20.02
Support Insulator: 2" x 0.75"	A	Stand-Off	1.25	0.0000	120.00	No Ice	1.50	0.01	5.26

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
GPO-3		Left	0.00			1/2" Ice	2.04	0.03	12.64
(Phasetek: AM Wire Antenna)			0.00			1" Ice	2.58	0.05	20.02
Support Insulator: 2" x 0.75"	A	Stand-Off	1.25	0.0000	62.00	No Ice	1.50	0.01	5.26
GPO-3		Left	0.00			1/2" Ice	2.04	0.03	12.64
(Phasetek: AM Wire Antenna)			0.00			1" Ice	2.58	0.05	20.02
Support Arm: 2" x 2" x .188"	A	Stand-Off	1.25	0.0000	5.00	No Ice	1.50	0.01	10.98
SS Angle		Left	0.00			1/2" Ice	2.04	0.02	20.30
(Phasetek: AM Wire Antenna)			0.00			1" Ice	2.58	0.03	29.62
1/4" Stainless Cable: 235'	A	Stand-Off	3.50	0.0000	235.00	No Ice	0.71	0.71	1000.00
(Phasetek: AM Wire		Left	0.00			1/2" Ice	3.56	3.56	1052.69
Antenna)			0.00			1" Ice	6.42	6.42	1105.38
1/4" Stainless Cable:178'	A	Stand-Off	3.50	0.0000	178.00	No Ice	1.44	1.44	0.00
(Phasetek: AM Wire		Left	0.00			1/2" Ice	7.19	7.19	0.00
Antenna)			0.00			1" Ice	12.94	12.94	0.00
1/4" Stainless Cable: 120'	A	Stand-Off	3.50	0.0000	120.00	No Ice	1.45	1.45	0.00
(Phasetek: AM Wire		Left	0.00			1/2" Ice	7.25	7.25	0.00
Antenna)			0.00			1" Ice	13.04	13.04	0.00
1/4" Stainless Cable: 62'	A	Stand-Off	3.50	0.0000	62.00	No Ice	1.44	1.44	0.00
(Phasetek: AM Wire		Left	0.00			1/2" Ice	7.19	7.19	0.00
Antenna)			0.00			1" Ice	12.94	12.94	0.00
1/4" Stainless Cable: 5'	A	Stand-Off	3.50	0.0000	5.00	No Ice	0.71	0.71	-1000.00
(Phasetek: AM Wire		Left	0.00			1/2" Ice	3.56	3.56	-947.31
Antenna)			0.00			1" Ice	6.42	6.42	-894.62
*Face B									
Support Arm: 2" x 2" x .188"	B	Stand-Off	1.25	0.0000	235.00	No Ice	1.50	0.01	10.98
SS Angle		Left	0.00			1/2" Ice	2.04	0.02	20.30
(Phasetek: AM Wire Antenna)			0.00			1" Ice	2.58	0.03	29.62
Support Insulator: 2" x 0.75"	B	Stand-Off	1.25	0.0000	178.00	No Ice	1.50	0.01	5.26
GPO-3		Left	0.00			1/2" Ice	2.04	0.03	12.64
(Phasetek: AM Wire Antenna)			0.00			1" Ice	2.58	0.05	20.02
Support Insulator: 2" x 0.75"	B	Stand-Off	1.25	0.0000	120.00	No Ice	1.50	0.01	5.26
GPO-3		Left	0.00			1/2" Ice	2.04	0.03	12.64
(Phasetek: AM Wire Antenna)			0.00			1" Ice	2.58	0.05	20.02
Support Insulator: 2" x 0.75"	B	Stand-Off	1.25	0.0000	62.00	No Ice	1.50	0.01	5.26
GPO-3		Left	0.00			1/2" Ice	2.04	0.03	12.64
(Phasetek: AM Wire Antenna)			0.00			1" Ice	2.58	0.05	20.02
Support Arm: 2" x 2" x .188"	B	Stand-Off	1.25	0.0000	5.00	No Ice	1.50	0.01	10.98
SS Angle		Left	0.00			1/2" Ice	2.04	0.02	20.30
(Phasetek: AM Wire Antenna)			0.00			1" Ice	2.58	0.03	29.62
1/4" Stainless Cable: 235'	B	Stand-Off	3.50	0.0000	235.00	No Ice	0.71	0.71	1000.00
(Phasetek: AM Wire		Left	0.00			1/2" Ice	3.56	3.56	1052.69
Antenna)			0.00			1" Ice	6.42	6.42	1105.38
1/4" Stainless Cable:178'	B	Stand-Off	3.50	0.0000	178.00	No Ice	1.44	1.44	0.00
(Phasetek: AM Wire		Left	0.00			1/2" Ice	7.19	7.19	0.00
Antenna)			0.00			1" Ice	12.94	12.94	0.00
1/4" Stainless Cable: 120'	B	Stand-Off	3.50	0.0000	120.00	No Ice	1.45	1.45	0.00
(Phasetek: AM Wire		Left	0.00			1/2" Ice	7.25	7.25	0.00
Antenna)			0.00			1" Ice	13.04	13.04	0.00
1/4" Stainless Cable: 62'	B	Stand-Off	3.50	0.0000	62.00	No Ice	1.44	1.44	0.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(Phasetek: AM Wire Antenna)		Left	0.00			1/2" Ice	7.19	7.19	0.00
			0.00			1" Ice	12.94	12.94	0.00
1/4" Stainless Cable: 5'	B	Stand-Off	3.50	0.0000	5.00	No Ice	0.71	0.71	-1000.00
(Phasetek: AM Wire Antenna) *Face C		Left	0.00			1/2" Ice	3.56	3.56	-947.31
			0.00			1" Ice	6.42	6.42	-894.62
Support Arm: 2" x 2" x .188" SS Angle	C	Stand-Off	1.25	0.0000	235.00	No Ice	1.50	0.01	10.98
(Phasetek: AM Wire Antenna)		Left	0.00			1/2" Ice	2.04	0.02	20.30
			0.00			1" Ice	2.58	0.03	29.62
Support Insulator: 2" x 0.75" GPO-3	C	Stand-Off	1.25	0.0000	178.00	No Ice	1.50	0.01	5.26
(Phasetek: AM Wire Antenna)		Left	0.00			1/2" Ice	2.04	0.03	12.64
			0.00			1" Ice	2.58	0.05	20.02
Support Insulator: 2" x 0.75" GPO-3	C	Stand-Off	1.25	0.0000	120.00	No Ice	1.50	0.01	5.26
(Phasetek: AM Wire Antenna)		Left	0.00			1/2" Ice	2.04	0.03	12.64
			0.00			1" Ice	2.58	0.05	20.02
Support Insulator: 2" x 0.75" GPO-3	C	Stand-Off	1.25	0.0000	62.00	No Ice	1.50	0.01	5.26
(Phasetek: AM Wire Antenna)		Left	0.00			1/2" Ice	2.04	0.03	12.64
			0.00			1" Ice	2.58	0.05	20.02
Support Arm: 2" x 2" x .188" SS Angle	C	Stand-Off	1.25	0.0000	5.00	No Ice	1.50	0.01	10.98
(Phasetek: AM Wire Antenna)		Left	0.00			1/2" Ice	2.04	0.02	20.30
			0.00			1" Ice	2.58	0.03	29.62
1/4" Stainless Cable: 235'	C	Stand-Off	3.50	0.0000	235.00	No Ice	0.71	0.71	1000.00
(Phasetek: AM Wire Antenna)		Left	0.00			1/2" Ice	3.56	3.56	1052.69
			0.00			1" Ice	6.42	6.42	1105.38
1/4" Stainless Cable:178'	C	Stand-Off	3.50	0.0000	178.00	No Ice	1.44	1.44	0.00
(Phasetek: AM Wire Antenna)		Left	0.00			1/2" Ice	7.19	7.19	0.00
			0.00			1" Ice	12.94	12.94	0.00
1/4" Stainless Cable: 120'	C	Stand-Off	3.50	0.0000	120.00	No Ice	1.45	1.45	0.00
(Phasetek: AM Wire Antenna)		Left	0.00			1/2" Ice	7.25	7.25	0.00
			0.00			1" Ice	13.04	13.04	0.00
1/4" Stainless Cable: 62'	C	Stand-Off	3.50	0.0000	62.00	No Ice	1.44	1.44	0.00
(Phasetek: AM Wire Antenna)		Left	0.00			1/2" Ice	7.19	7.19	0.00
			0.00			1" Ice	12.94	12.94	0.00
1/4" Stainless Cable: 5'	C	Stand-Off	3.50	0.0000	5.00	No Ice	0.71	0.71	-1000.00
(Phasetek: AM Wire Antenna) ***		Left	0.00			1/2" Ice	3.56	3.56	-947.31
			0.00			1" Ice	6.42	6.42	-894.62
1' Standoff Mount	C	From Leg	0.50	0.0000	178.00	No Ice	0.29	0.87	22.00
(Ubiquiti: Wave Pro)			0.00			1/2" Ice	0.42	1.26	31.00
			0.00			1" Ice	0.55	1.65	40.00

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft²	Weight lb
Ubiquiti: Wave Pro (Cat5)	C	Paraboloid w/Radome	From Leg	1.00 0.00 0.00	0.0000		178.00	1.39	No Ice 1/2" Ice 1" Ice	1.52 1.71 1.90	8.80 22.50 36.20

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	328.25	Leg	A325N	0.7500	3	0.29	30101.40	0.000 ✔	1	Bolt Tension
T2	319.917	Leg	A325N	0.7500	3	194.89	30101.40	0.006 ✔	1	Bolt Tension
T3	299.917	Leg	A325N	0.7500	3	3290.62	30101.40	0.109 ✔	1	Bolt Tension
T4	279.917	Leg	A325N	0.7500	3	1681.20	30101.40	0.056 ✔	1	Bolt Tension
T5	259.917	Leg	A325N	0.7500	3	1226.41	30101.40	0.041 ✔	1	Bolt Tension
T6	239.917	Leg	A325N	0.7500	3	1372.82	30101.40	0.046 ✔	1	Bolt Tension
T7	219.917	Leg	A325N	0.7500	3	1510.45	30101.40	0.050 ✔	1	Bolt Tension
T8	199.917	Leg	A325N	0.7500	3	1614.10	30101.40	0.054 ✔	1	Bolt Tension
T9	179.917	Leg	A325N	0.7500	3	1469.54	30101.40	0.049 ✔	1	Bolt Tension
T10	159.917	Leg	A325N	0.7500	3	1484.53	30101.40	0.049 ✔	1	Bolt Tension
T11	139.917	Leg	A325N	0.7500	3	1810.36	30101.40	0.060 ✔	1	Bolt Tension
T12	119.917	Leg	A325N	0.7500	3	1797.17	30101.40	0.060 ✔	1	Bolt Tension
T13	99.9167	Leg	A325N	0.7500	3	1833.86	30101.40	0.061 ✔	1	Bolt Tension
T14	79.9167	Leg	A325N	0.7500	3	1992.40	30101.40	0.066 ✔	1	Bolt Tension
T15	59.9167	Leg	A325N	0.7500	3	2093.33	30101.40	0.070 ✔	1	Bolt Tension
T16	39.9167	Leg	A325N	0.7500	3	2144.16	30101.40	0.071 ✔	1	Bolt Tension
T17	19.9167	Leg	A325N	0.7500	3	2209.35	30101.40	0.073 ✔	1	Bolt Tension

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension lb	Breaking Load lb	Actual T_u lb	Allowable ϕT_n lb	Required S.F.	Actual S.F.
T3	289.92 (A) (1089)	1/2 EHS	2690.00	26900.04	8566.12	16140.00	1.000	1.884 ✔
	289.92 (B) (1088)	1/2 EHS	2690.00	26900.04	8510.79	16140.00	1.000	1.896 ✔
	289.92 (C) (1087)	1/2 EHS	2690.00	26900.04	8624.20	16140.00	1.000	1.871 ✔
T6	233.82 (A) (1092)	3/8 EHS	1540.00	15399.96	4019.48	9240.00	1.000	2.299 ✔

Section No.	Elevation ft	Size	Initial Tension lb	Breaking Load lb	Actual T_u lb	Allowable ϕT_n lb	Required S.F.	Actual S.F.
	233.82 (B) (1091)	3/8 EHS	1540.00	15399.96	4031.35	9240.00	1.000	2.292 ✔
	233.82 (C) (1090)	3/8 EHS	1540.00	15399.96	4015.03	9240.00	1.000	2.301 ✔
T8	191.87 (A) (1095)	3/8 EHS	1540.00	15399.96	3670.15	9240.00	1.000	2.518 ✔
	191.87 (B) (1094)	3/8 EHS	1540.00	15399.96	3680.45	9240.00	1.000	2.511 ✔
	191.87 (C) (1093)	3/8 EHS	1540.00	15399.96	3667.96	9240.00	1.000	2.519 ✔
T10	144.07 (A) (1098)	3/8 EHS	1540.00	15399.96	3286.50	9240.00	1.000	2.812 ✔
	144.07 (B) (1097)	3/8 EHS	1540.00	15399.96	3287.16	9240.00	1.000	2.811 ✔
	144.07 (C) (1096)	3/8 EHS	1540.00	15399.96	3291.85	9240.00	1.000	2.807 ✔
T13	95.77 (A) (1101)	3/8 EHS	1540.00	15399.96	2939.30	9240.00	1.000	3.144 ✔
	95.77 (B) (1100)	3/8 EHS	1540.00	15399.96	2934.85	9240.00	1.000	3.148 ✔
	95.77 (C) (1099)	3/8 EHS	1540.00	15399.96	2940.24	9240.00	1.000	3.143 ✔
T15	44.07 (A) (1104)	3/8 EHS	1540.00	15399.96	2786.27	9240.00	1.000	3.316 ✔
	44.07 (B) (1103)	3/8 EHS	1540.00	15399.96	2785.33	9240.00	1.000	3.317 ✔
	44.07 (C) (1102)	3/8 EHS	1540.00	15399.96	2786.09	9240.00	1.000	3.316 ✔

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	Mast Stability Index	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	328.25 - 319.917	1 1/2	8.33	1.96	62.7 K=1.00	1.7672	1.00	-886.03	59673.70	0.015 [1] ✔
T2	319.917 - 299.917	1 1/2	20.00	1.95	62.4 K=1.00	1.7672	1.00	-10751.80	59819.20	0.180 [1] ✔
T3	299.917 - 279.917	1 1/2	20.00	1.95	62.4 K=1.00	1.7672	0.98	-18730.50	58803.00	0.319 [1] ✔
T4	279.917 - 259.917	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-15130.80	36650.10	0.413 [1] ✔
T5	259.917 - 239.917	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-12427.70	36650.10	0.339 [1] ✔
T6	239.917 - 219.917	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-15576.00	36650.10	0.425 [1] ✔
T7	219.917 - 199.917	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-14714.30	36650.10	0.401 [1] ✔
T8	199.917 -	1 1/4	20.00	1.95	74.9	1.2272	1.00	-16670.40	36650.10	0.455 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	Mast Stability Index	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
	179.917				K=1.00					✓
T9	179.917 - 159.917	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-13543.60	36650.10	0.370 [1] ✓
T10	159.917 - 139.917	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-17422.20	36650.10	0.475 [1] ✓
T11	139.917 - 119.917	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-16293.30	36650.10	0.445 [1] ✓
T12	119.917 - 99.9167	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-16502.90	36650.10	0.450 [1] ✓
T13	99.9167 - 79.9167	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-18083.10	36650.10	0.493 [1] ✓
T14	79.9167 - 59.9167	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-18844.30	36650.10	0.514 [1] ✓
T15	59.9167 - 39.9167	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-19325.40	36650.10	0.527 [1] ✓
T16	39.9167 - 19.9167	1 1/4	20.00	1.95	74.9 K=1.00	1.2272	1.00	-19882.40	36650.10	0.542 [1] ✓
T17	19.9167 - 3.9458	1 1/4	15.97	1.97	75.5 K=1.00	1.2272	1.00	-19885.40	36417.00	0.546 [1] ✓
T18	3.9458 - 0	1 1/4	4.11	2.01	77.3 K=1.00	1.2272	1.00	-19636.50	35688.60	0.550 [1] ✓

[1] P_u / ϕP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	328.25 - 319.917	3/4	2.80	2.62	117.6 K=0.70	0.4418	-263.02	6914.57	0.038 [1] ✓
T2	319.917 - 299.917	3/4	2.79	2.62	117.3 K=0.70	0.4418	-2486.31	6935.49	0.358 [1] ✓
T3	299.917 - 279.917	3/4	2.79	2.62	117.3 K=0.70	0.4418	-2572.05	6935.49	0.371 [1] ✓
T4	279.917 - 259.917	3/4	2.79	2.65	118.6 K=0.70	0.4418	-1621.64	6824.10	0.238 [1] ✓
T5	259.917 - 239.917	3/4	2.79	2.65	118.6 K=0.70	0.4418	-1562.03	6824.10	0.229 [1] ✓
T6	239.917 - 219.917	3/4	2.79	2.65	118.6 K=0.70	0.4418	-1584.17	6824.10	0.232 [1] ✓
T7	219.917 - 199.917	3/4	2.79	2.65	118.6 K=0.70	0.4418	-1233.09	6824.10	0.181 [1] ✓
T8	199.917 - 179.917	3/4	2.79	2.65	118.6 K=0.70	0.4418	-1358.40	6824.10	0.199 [1] ✓
T9	179.917 - 159.917	3/4	2.79	2.65	118.6 K=0.70	0.4418	-1262.51	6824.10	0.185 [1] ✓
T10	159.917 - 139.917	3/4	2.79	2.65	118.6 K=0.70	0.4418	-1185.18	6824.10	0.174 [1] ✓

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T11	139.917 - 119.917	3/4	2.79	2.65	118.6 K=0.70	0.4418	-1152.23	6824.10	0.169 [1] ✓
T12	119.917 - 99.9167	3/4	2.79	2.65	118.6 K=0.70	0.4418	-1017.46	6824.10	0.149 [1] ✓
T13	99.9167 - 79.9167	3/4	2.79	2.65	118.6 K=0.70	0.4418	-1128.08	6824.10	0.165 [1] ✓
T14	79.9167 - 59.9167	3/4	2.79	2.65	118.6 K=0.70	0.4418	-831.19	6824.10	0.122 [1] ✓
T15	59.9167 - 39.9167	3/4	2.79	2.65	118.6 K=0.70	0.4418	-881.33	6824.10	0.129 [1] ✓
T16	39.9167 - 19.9167	3/4	2.79	2.65	118.6 K=0.70	0.4418	-749.77	6824.10	0.110 [1] ✓
T17	19.9167 - 3.9458	3/4	2.80	2.66	119.1 K=0.70	0.4418	-699.85	6785.88	0.103 [1] ✓
T18	3.9458 - 0	3/4	2.44	2.27	101.8 K=0.70	0.4418	-534.54	8295.24	0.064 [1] ✓

[1] P_u / ϕP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	328.25 - 319.917	3/4	2.00	1.88	84.0 K=0.70	0.4418	-37.31	9872.67	0.004 [1] ✓
T2	319.917 - 299.917	3/4	2.00	1.88	84.0 K=0.70	0.4418	-450.45	9872.67	0.046 [1] ✓
T3	299.917 - 279.917	3/4	2.00	1.88	84.0 K=0.70	0.4418	-333.07	9872.67	0.034 [1] ✓
T4	279.917 - 259.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-305.40	9791.06	0.031 [1] ✓
T5	259.917 - 239.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-250.84	9791.06	0.026 [1] ✓
T6	239.917 - 219.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-314.39	9791.06	0.032 [1] ✓
T7	219.917 - 199.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-297.00	9791.06	0.030 [1] ✓
T8	199.917 - 179.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-336.48	9791.06	0.034 [1] ✓
T9	179.917 - 159.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-273.37	9791.06	0.028 [1] ✓
T10	159.917 - 139.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-351.65	9791.06	0.036 [1] ✓
T11	139.917 - 119.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-328.87	9791.06	0.034 [1] ✓
T12	119.917 - 99.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-333.10	9791.06	0.034 [1] ✓
T13	99.9167 - 79.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-364.99	9791.06	0.037 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T14	79.9167 - 59.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-380.36	9791.06	0.039 [1]
T15	59.9167 - 39.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-390.07	9791.06	0.040 [1]
T16	39.9167 - 19.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-401.31	9791.06	0.041 [1]
T17	19.9167 - 3.9458	3/4	2.00	1.90	84.9 K=0.70	0.4418	-403.59	9791.06	0.041 [1]
T18	3.9458 - 0	3/4	0.98	0.87	56.0 K=1.00	0.4418	-417.93	12136.80	0.034 [1]

[1] $P_u / \phi P_n$ controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	328.25 - 319.917	3/4	2.00	1.88	84.0 K=0.70	0.4418	-32.74	9872.67	0.003 [1]
T2	319.917 - 299.917	3/4	2.00	1.88	84.0 K=0.70	0.4418	-191.19	9872.67	0.019 [1]
T3	299.917 - 279.917	3/4	2.00	1.88	84.0 K=0.70	0.4418	-940.01	9872.67	0.095 [1]
T4	279.917 - 259.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-535.32	9791.06	0.055 [1]
T5	259.917 - 239.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-483.95	9791.06	0.049 [1]
T6	239.917 - 219.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-563.30	9791.06	0.058 [1]
T7	219.917 - 199.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-366.51	9791.06	0.037 [1]
T8	199.917 - 179.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-424.72	9791.06	0.043 [1]
T9	179.917 - 159.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-368.57	9791.06	0.038 [1]
T10	159.917 - 139.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-351.65	9791.06	0.036 [1]
T11	139.917 - 119.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-328.87	9791.06	0.034 [1]
T12	119.917 - 99.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-333.10	9791.06	0.034 [1]
T13	99.9167 - 79.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-364.99	9791.06	0.037 [1]
T14	79.9167 - 59.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-380.36	9791.06	0.039 [1]
T15	59.9167 - 39.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-390.07	9791.06	0.040 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T16	39.9167 - 19.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-401.31	9791.06	0.041 [1] ✔
T17	19.9167 - 3.9458	3/4	2.00	1.90	84.9 K=0.70	0.4418	-403.59	9791.06	0.041 [1] ✔
T18	3.9458 - 0	3x3/8	1.96	1.85	205.5 K=1.00	1.1250	-417.93	6019.80	0.069 [1] ✔
		KL/R > 200 (C) - 1078							

[1] P_u / ϕP_n controls

Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	328.25 - 319.917	3/4	2.00	1.88	84.0 K=0.70	0.4418	-85.03	9872.67	0.009 [1] ✔
T2	319.917 - 299.917	3/4	2.00	1.88	84.0 K=0.70	0.4418	-921.96	9872.67	0.093 [1] ✔
T3	299.917 - 279.917	3/4	2.00	1.88	84.0 K=0.70	0.4418	-561.57	9872.67	0.057 [1] ✔
T4	279.917 - 259.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-413.97	9791.06	0.042 [1] ✔
T5	259.917 - 239.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-524.41	9791.06	0.054 [1] ✔
T6	239.917 - 219.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-383.47	9791.06	0.039 [1] ✔
T7	219.917 - 199.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-415.77	9791.06	0.042 [1] ✔
T8	199.917 - 179.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-415.68	9791.06	0.042 [1] ✔
T9	179.917 - 159.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-330.48	9791.06	0.034 [1] ✔
T10	159.917 - 139.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-358.54	9791.06	0.037 [1] ✔
T11	139.917 - 119.917	3/4	2.00	1.90	84.9 K=0.70	0.4418	-328.87	9791.06	0.034 [1] ✔
T12	119.917 - 99.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-355.05	9791.06	0.036 [1] ✔
T13	99.9167 - 79.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-364.99	9791.06	0.037 [1] ✔
T14	79.9167 - 59.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-380.36	9791.06	0.039 [1] ✔
T15	59.9167 - 39.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-390.07	9791.06	0.040 [1] ✔
T16	39.9167 - 19.9167	3/4	2.00	1.90	84.9 K=0.70	0.4418	-401.31	9791.06	0.041 [1] ✔
T17	19.9167 - 3.9458	3/4	2.00	1.90	84.9 K=0.70	0.4418	-417.93	9791.06	0.043 [1] ✔

[1] P_u / ϕP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	328.25 - 319.917	1 1/2	8.33	1.96	62.7	1.7672	586.58	79521.60	0.007 [1] ✔
T2	319.917 - 299.917	1 1/2	20.00	1.95	62.4	1.7672	9873.77	79521.60	0.124 [1] ✔
T3	299.917 - 279.917	1 1/2	20.00	1.95	62.4	1.7672	17219.90	79521.60	0.217 [1] ✔
T4	279.917 - 259.917	1 1/4	20.00	1.95	74.9	1.2272	4793.30	55223.30	0.087 [1] ✔
T6	239.917 - 219.917	1 1/4	20.00	1.95	74.9	1.2272	514.04	55223.30	0.009 [1] ✔

[1] P_u / ϕP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	328.25 - 319.917	3/4	2.80	2.62	167.9	0.4418	260.76	14313.90	0.018 [1] ✔
T2	319.917 - 299.917	3/4	2.79	2.62	167.6	0.4418	2550.50	14313.90	0.178 [1] ✔
T3	299.917 - 279.917	3/4	2.79	2.62	167.6	0.4418	2534.64	14313.90	0.177 [1] ✔
T4	279.917 - 259.917	3/4	2.79	2.65	169.5	0.4418	1547.62	14313.90	0.108 [1] ✔
T5	259.917 - 239.917	3/4	2.79	2.65	169.5	0.4418	1468.32	14313.90	0.103 [1] ✔
T6	239.917 - 219.917	3/4	2.79	2.65	169.5	0.4418	1485.57	14313.90	0.104 [1] ✔
T7	219.917 - 199.917	3/4	2.79	2.65	169.5	0.4418	1096.52	14313.90	0.077 [1] ✔
T8	199.917 - 179.917	3/4	2.79	2.65	169.5	0.4418	1187.30	14313.90	0.083 [1] ✔
T9	179.917 - 159.917	3/4	2.79	2.65	169.5	0.4418	1097.06	14313.90	0.077 [1] ✔
T10	159.917 - 139.917	3/4	2.79	2.65	169.5	0.4418	1019.10	14313.90	0.071 [1] ✔
T11	139.917 -	3/4	2.79	2.65	169.5	0.4418	974.96	14313.90	0.068 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
	119.917								✓
T12	119.917 - 99.9167	3/4	2.79	2.65	169.5	0.4418	920.25	14313.90	0.064 [1] ✓
T13	99.9167 - 79.9167	3/4	2.79	2.65	169.5	0.4418	867.57	14313.90	0.061 [1] ✓
T14	79.9167 - 59.9167	3/4	2.79	2.65	169.5	0.4418	629.57	14313.90	0.044 [1] ✓
T15	59.9167 - 39.9167	3/4	2.79	2.65	169.5	0.4418	636.82	14313.90	0.044 [1] ✓
T16	39.9167 - 19.9167	3/4	2.79	2.65	169.5	0.4418	534.27	14313.90	0.037 [1] ✓
T17	19.9167 - 3.9458	3/4	2.80	2.66	170.1	0.4418	489.60	14313.90	0.034 [1] ✓
T18	3.9458 - 0	3/4	2.44	2.27	145.4	0.4418	209.01	14313.90	0.015 [1] ✓

[1] $P_u / \phi P_n$ controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	328.25 - 319.917	3/4	2.00	1.88	120.0	0.4418	38.18	14313.90	0.003 [1] ✓
T2	319.917 - 299.917	3/4	2.00	1.88	120.0	0.4418	509.30	14313.90	0.036 [1] ✓
T3	299.917 - 279.917	3/4	2.00	1.88	120.0	0.4418	333.07	14313.90	0.023 [1] ✓
T4	279.917 - 259.917	3/4	2.00	1.90	121.3	0.4418	305.40	14313.90	0.021 [1] ✓
T5	259.917 - 239.917	3/4	2.00	1.90	121.3	0.4418	250.84	14313.90	0.018 [1] ✓
T6	239.917 - 219.917	3/4	2.00	1.90	121.3	0.4418	314.39	14313.90	0.022 [1] ✓
T7	219.917 - 199.917	3/4	2.00	1.90	121.3	0.4418	297.00	14313.90	0.021 [1] ✓
T8	199.917 - 179.917	3/4	2.00	1.90	121.3	0.4418	336.48	14313.90	0.024 [1] ✓
T9	179.917 - 159.917	3/4	2.00	1.90	121.3	0.4418	273.37	14313.90	0.019 [1] ✓
T10	159.917 - 139.917	3/4	2.00	1.90	121.3	0.4418	351.65	14313.90	0.025 [1] ✓
T11	139.917 - 119.917	3/4	2.00	1.90	121.3	0.4418	328.87	14313.90	0.023 [1] ✓
T12	119.917 - 99.9167	3/4	2.00	1.90	121.3	0.4418	333.10	14313.90	0.023 [1] ✓
T13	99.9167 - 79.9167	3/4	2.00	1.90	121.3	0.4418	364.99	14313.90	0.025 [1] ✓

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T14	79.9167 - 59.9167	3/4	2.00	1.90	121.3	0.4418	380.36	14313.90	0.027 [1] ✓
T15	59.9167 - 39.9167	3/4	2.00	1.90	121.3	0.4418	390.07	14313.90	0.027 [1] ✓
T16	39.9167 - 19.9167	3/4	2.00	1.90	121.3	0.4418	401.31	14313.90	0.028 [1] ✓
T17	19.9167 - 3.9458	3/4	2.00	1.90	121.3	0.4418	403.59	14313.90	0.028 [1] ✓
T18	3.9458 - 0	3/4	0.98	0.87	56.0	0.4418	417.93	14313.90	0.029 [1] ✓

[1] P_u / ϕP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	328.25 - 319.917	3/4	2.00	1.88	120.0	0.4418	34.20	14313.90	0.002 [1] ✓
T2	319.917 - 299.917	3/4	2.00	1.88	120.0	0.4418	191.19	14313.90	0.013 [1] ✓
T3	299.917 - 279.917	3/4	2.00	1.88	120.0	0.4418	929.54	14313.90	0.065 [1] ✓
T4	279.917 - 259.917	3/4	2.00	1.90	121.3	0.4418	533.80	14313.90	0.037 [1] ✓
T5	259.917 - 239.917	3/4	2.00	1.90	121.3	0.4418	502.39	14313.90	0.035 [1] ✓
T6	239.917 - 219.917	3/4	2.00	1.90	121.3	0.4418	564.47	14313.90	0.039 [1] ✓
T7	219.917 - 199.917	3/4	2.00	1.90	121.3	0.4418	415.92	14313.90	0.029 [1] ✓
T8	199.917 - 179.917	3/4	2.00	1.90	121.3	0.4418	474.04	14313.90	0.033 [1] ✓
T9	179.917 - 159.917	3/4	2.00	1.90	121.3	0.4418	436.17	14313.90	0.030 [1] ✓
T10	159.917 - 139.917	3/4	2.00	1.90	121.3	0.4418	404.98	14313.90	0.028 [1] ✓
T11	139.917 - 119.917	3/4	2.00	1.90	121.3	0.4418	406.32	14313.90	0.028 [1] ✓
T12	119.917 - 99.9167	3/4	2.00	1.90	121.3	0.4418	333.10	14313.90	0.023 [1] ✓
T13	99.9167 - 79.9167	3/4	2.00	1.90	121.3	0.4418	431.80	14313.90	0.030 [1] ✓
T14	79.9167 - 59.9167	3/4	2.00	1.90	121.3	0.4418	380.36	14313.90	0.027 [1] ✓
T15	59.9167 - 39.9167	3/4	2.00	1.90	121.3	0.4418	390.07	14313.90	0.027 [1] ✓
T16	39.9167 - 19.9167	3/4	2.00	1.90	121.3	0.4418	401.31	14313.90	0.028 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T17	19.9167 - 3.9458	3/4	2.00	1.90	121.3	0.4418	403.59	14313.90	0.028 [1]
T18	3.9458 - 0	3x3/8	1.96	1.85	205.5	1.1250	1163.87	36450.00	0.032 [1]

[1] P_u / ϕP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	328.25 - 319.917	3/4	2.00	1.88	120.0	0.4418	85.49	14313.90	0.006 [1]
T2	319.917 - 299.917	3/4	2.00	1.88	120.0	0.4418	923.06	14313.90	0.064 [1]
T3	299.917 - 279.917	3/4	2.00	1.88	120.0	0.4418	622.12	14313.90	0.043 [1]
T4	279.917 - 259.917	3/4	2.00	1.90	121.3	0.4418	471.91	14313.90	0.033 [1]
T5	259.917 - 239.917	3/4	2.00	1.90	121.3	0.4418	580.11	14313.90	0.041 [1]
T6	239.917 - 219.917	3/4	2.00	1.90	121.3	0.4418	428.24	14313.90	0.030 [1]
T7	219.917 - 199.917	3/4	2.00	1.90	121.3	0.4418	460.14	14313.90	0.032 [1]
T8	199.917 - 179.917	3/4	2.00	1.90	121.3	0.4418	455.95	14313.90	0.032 [1]
T9	179.917 - 159.917	3/4	2.00	1.90	121.3	0.4418	353.71	14313.90	0.025 [1]
T10	159.917 - 139.917	3/4	2.00	1.90	121.3	0.4418	398.80	14313.90	0.028 [1]
T11	139.917 - 119.917	3/4	2.00	1.90	121.3	0.4418	328.87	14313.90	0.023 [1]
T12	119.917 - 99.9167	3/4	2.00	1.90	121.3	0.4418	396.79	14313.90	0.028 [1]
T13	99.9167 - 79.9167	3/4	2.00	1.90	121.3	0.4418	364.99	14313.90	0.025 [1]
T14	79.9167 - 59.9167	3/4	2.00	1.90	121.3	0.4418	380.36	14313.90	0.027 [1]
T15	59.9167 - 39.9167	3/4	2.00	1.90	121.3	0.4418	390.07	14313.90	0.027 [1]
T16	39.9167 - 19.9167	3/4	2.00	1.90	121.3	0.4418	401.31	14313.90	0.028 [1]
T17	19.9167 - 3.9458	3/4	2.00	1.90	121.3	0.4418	2111.29	14313.90	0.147 [1]

[1] P_u / ϕP_n controls

Top Guy Pull-Off Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T3	299.917 - 279.917	3x3/8	2.00	1.88	207.8	0.8438	2809.36	41132.80	0.068 [1] ✔
T6	239.917 - 219.917	3x3/8	2.00	1.90	210.2	0.8438	1535.66	41132.80	0.037 [1] ✔
T8	199.917 - 179.917	3x3/8	2.00	1.90	210.2	0.8438	1528.63	41132.80	0.037 [1] ✔
T10	159.917 - 139.917	3x3/8	2.00	1.90	210.2	0.8438	1571.79	41132.80	0.038 [1] ✔
T13	99.9167 - 79.9167	3x3/8	2.00	1.90	210.2	0.8438	1575.80	41132.80	0.038 [1] ✔
T15	59.9167 - 39.9167	3x3/8	2.00	1.90	210.2	0.8438	1660.59	41132.80	0.040 [1] ✔

[1] P_u / ϕP_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T1	328.25 - 319.917	Leg	1 1/2	1	-886.03	59673.70	1.5	Pass
		Diagonal	3/4	12	-263.02	6914.57	3.8	Pass
		Horizontal	3/4	15	-37.31	9872.67	0.4	Pass
		Top Girt	3/4	6	-32.74	9872.67	0.3	Pass
		Bottom Girt	3/4	9	-85.03	9872.67	0.9	Pass
T2	319.917 - 299.917	Leg	1 1/2	32	-10751.80	59819.20	18.0	Pass
		Diagonal	3/4	40	-2486.31	6935.49	35.8	Pass
		Horizontal	3/4	85	-450.45	9872.67	4.6	Pass
		Top Girt	3/4	34	-191.19	9872.67	1.9	Pass
		Bottom Girt	3/4	37	-921.96	9872.67	9.3	Pass
T3	299.917 - 279.917	Leg	1 1/2	98	-18730.50	58803.00	31.9	Pass
		Diagonal	3/4	160	-2572.05	6935.49	37.1	Pass
		Horizontal	3/4	115	-333.07	9872.67	3.4	Pass
		Top Girt	3/4	100	-940.01	9872.67	9.5	Pass
		Bottom Girt	3/4	105	-561.57	9872.67	5.7	Pass
		Guy A@289.917	1/2	1089	8566.12	16140.00	53.1	Pass
		Guy B@289.917	1/2	1088	8510.79	16140.00	52.7	Pass
		Guy C@289.917	1/2	1087	8624.20	16140.00	53.4	Pass
		Top Guy Pull-Off@289.917	3x3/8	133	2809.36	41132.80	6.8	Pass
T4	279.917 - 259.917	Leg	1 1/4	164	-15130.80	36650.10	41.3	Pass
		Diagonal	3/4	228	-1621.64	6824.10	23.8	Pass
		Horizontal	3/4	175	-305.40	9791.06	3.1	Pass
		Top Girt	3/4	168	-535.32	9791.06	5.5	Pass
		Bottom Girt	3/4	171	-413.97	9791.06	4.2	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T5	259.917 - 239.917	Leg	1 1/4	231	-12427.70	36650.10	33.9	Pass
		Diagonal	3/4	238	-1562.03	6824.10	22.9	Pass
		Horizontal	3/4	243	-250.84	9791.06	2.6	Pass
		Top Girt	3/4	234	-483.95	9791.06	4.9	Pass
		Bottom Girt	3/4	235	-524.41	9791.06	5.4	Pass
T6	239.917 - 219.917	Leg	1 1/4	297	-15576.00	36650.10	42.5	Pass
		Diagonal	3/4	359	-1584.17	6824.10	23.2	Pass
		Horizontal	3/4	308	-314.39	9791.06	3.2	Pass
		Top Girt	3/4	298	-563.30	9791.06	5.8	Pass
		Bottom Girt	3/4	303	-383.47	9791.06	3.9	Pass
		Guy A@233.817	3/8	1092	4019.48	9240.00	43.5	Pass
		Guy B@233.817	3/8	1091	4031.35	9240.00	43.6	Pass
		Guy C@233.817	3/8	1090	4015.03	9240.00	43.5	Pass
		Top Guy Pull-Off@233.817	3x3/8	343	1535.66	41132.80	3.7	Pass
T7	219.917 - 199.917	Leg	1 1/4	363	-14714.30	36650.10	40.1	Pass
		Diagonal	3/4	371	-1233.09	6824.10	18.1	Pass
		Horizontal	3/4	380	-297.00	9791.06	3.0	Pass
		Top Girt	3/4	366	-366.51	9791.06	3.7	Pass
		Bottom Girt	3/4	367	-415.77	9791.06	4.2	Pass
T8	199.917 - 179.917	Leg	1 1/4	427	-16670.40	36650.10	45.5	Pass
		Diagonal	3/4	468	-1358.40	6824.10	19.9	Pass
		Horizontal	3/4	445	-336.48	9791.06	3.4	Pass
		Top Girt	3/4	430	-424.72	9791.06	4.3	Pass
		Bottom Girt	3/4	435	-415.68	9791.06	4.2	Pass
		Guy A@191.867	3/8	1095	3670.15	9240.00	39.7	Pass
		Guy B@191.867	3/8	1094	3680.45	9240.00	39.8	Pass
		Guy C@191.867	3/8	1093	3667.96	9240.00	39.7	Pass
		Top Guy Pull-Off@191.867	3x3/8	470	1528.63	41132.80	3.7	Pass
T9	179.917 - 159.917	Leg	1 1/4	493	-13543.60	36650.10	37.0	Pass
		Diagonal	3/4	558	-1262.51	6824.10	18.5	Pass
		Horizontal	3/4	511	-273.37	9791.06	2.8	Pass
		Top Girt	3/4	498	-368.57	9791.06	3.8	Pass
		Bottom Girt	3/4	499	-330.48	9791.06	3.4	Pass
T10	159.917 - 139.917	Leg	1 1/4	559	-17422.20	36650.10	47.5	Pass
		Diagonal	3/4	570	-1185.18	6824.10	17.4	Pass
		Horizontal	3/4	583	-351.65	9791.06	3.6	Pass
		Top Girt	3/4	564	-351.65	9791.06	3.6	Pass
		Bottom Girt	3/4	567	-358.54	9791.06	3.7	Pass
		Guy A@144.067	3/8	1098	3286.50	9240.00	35.6	Pass
		Guy B@144.067	3/8	1097	3287.16	9240.00	35.6	Pass
		Guy C@144.067	3/8	1096	3291.85	9240.00	35.6	Pass
		Top Guy Pull-Off@144.067	3x3/8	578	1571.79	41132.80	3.8	Pass
T11	139.917 - 119.917	Leg	1 1/4	627	-16293.30	36650.10	44.5	Pass
		Diagonal	3/4	690	-1152.23	6824.10	16.9	Pass
		Horizontal	3/4	644	-328.87	9791.06	3.4	Pass
		Top Girt	3/4	629	-328.87	9791.06	3.4	Pass
		Bottom Girt	3/4	632	-328.87	9791.06	3.4	Pass
T12	119.917 - 99.9167	Leg	1 1/4	693	-16502.90	36650.10	45.0	Pass
		Diagonal	3/4	700	-1017.46	6824.10	14.9	Pass
		Horizontal	3/4	710	-333.10	9791.06	3.4	Pass

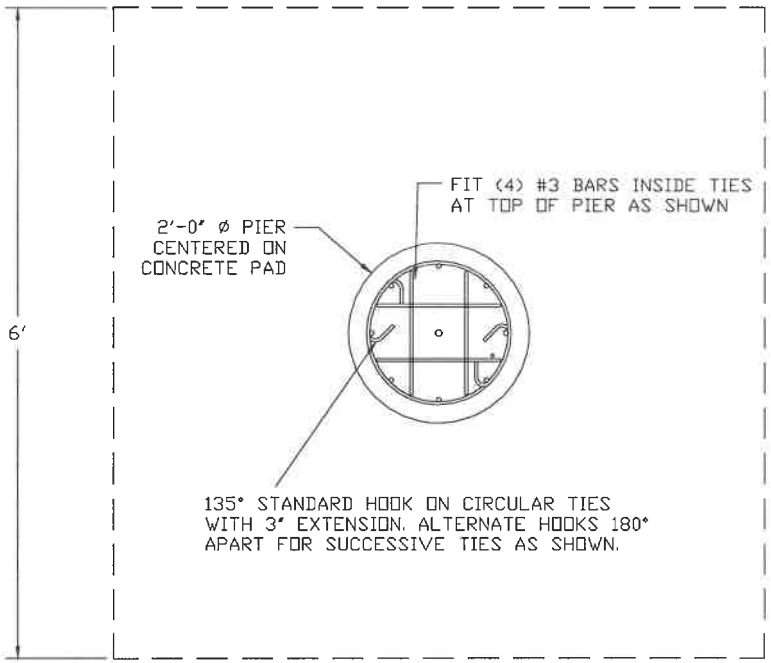
Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Top Girt	3/4	695	-333.10	9791.06	3.4	Pass
		Bottom Girt	3/4	697	-355.05	9791.06	3.6	Pass
T13	99.9167 - 79.9167	Leg	1 1/4	757	-18083.10	36650.10	49.3	Pass
		Diagonal	3/4	820	-1128.08	6824.10	16.5	Pass
		Horizontal	3/4	769	-364.99	9791.06	3.7	Pass
		Top Girt	3/4	760	-364.99	9791.06	3.7	Pass
		Bottom Girt	3/4	763	-364.99	9791.06	3.7	Pass
		Guy A@95.7667	3/8	1101	2939.30	9240.00	31.8	Pass
		Guy B@95.7667	3/8	1100	2934.85	9240.00	31.8	Pass
		Guy C@95.7667	3/8	1099	2940.24	9240.00	31.8	Pass
		Top Guy Pull-Off@95.7667	3x3/8	812	1575.80	41132.80	3.8	Pass
T14	79.9167 - 59.9167	Leg	1 1/4	823	-18844.30	36650.10	51.4	Pass
		Diagonal	3/4	888	-831.19	6824.10	12.2	Pass
		Horizontal	3/4	835	-380.36	9791.06	3.9	Pass
		Top Girt	3/4	826	-380.36	9791.06	3.9	Pass
		Bottom Girt	3/4	829	-380.36	9791.06	3.9	Pass
T15	59.9167 - 39.9167	Leg	1 1/4	890	-19325.40	36650.10	52.7	Pass
		Diagonal	3/4	910	-881.33	6824.10	12.9	Pass
		Horizontal	3/4	913	-390.07	9791.06	4.0	Pass
		Top Girt	3/4	892	-390.07	9791.06	4.0	Pass
		Bottom Girt	3/4	895	-390.07	9791.06	4.0	Pass
		Guy A@44.0667	3/8	1104	2786.27	9240.00	30.2	Pass
		Guy B@44.0667	3/8	1103	2785.33	9240.00	30.1	Pass
		Guy C@44.0667	3/8	1102	2786.09	9240.00	30.2	Pass
		Top Guy Pull-Off@44.0667	3x3/8	908	1660.59	41132.80	4.0	Pass
T16	39.9167 - 19.9167	Leg	1 1/4	956	-19882.40	36650.10	54.2	Pass
		Diagonal	3/4	1020	-749.77	6824.10	11.0	Pass
		Horizontal	3/4	973	-401.31	9791.06	4.1	Pass
		Top Girt	3/4	958	-401.31	9791.06	4.1	Pass
		Bottom Girt	3/4	961	-401.31	9791.06	4.1	Pass
T17	19.9167 - 3.9458	Leg	1 1/4	1021	-19885.40	36417.00	54.6	Pass
		Diagonal	3/4	1030	-699.85	6785.88	10.3	Pass
		Horizontal	3/4	1033	-403.59	9791.06	4.1	Pass
		Top Girt	3/4	1024	-403.59	9791.06	4.1	Pass
		Bottom Girt	3/4	1028	2111.29	14313.90	14.7	Pass
T18	3.9458 - 0	Leg	1 1/4	1076	-19636.50	35688.60	55.0	Pass
		Diagonal	3/4	1086	-534.54	8295.24	6.4	Pass
		Horizontal	3/4	1081	-417.93	12136.80	3.4	Pass
		Top Girt	3x3/8	1078	-417.93	6019.80	6.9	Pass

Summary

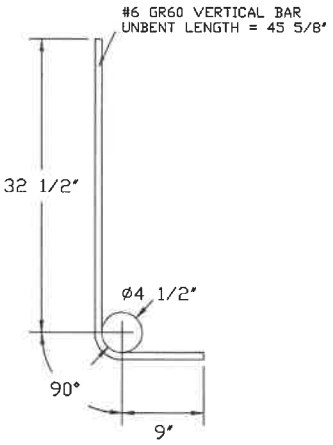
Leg (T18)	55.0	Pass
Diagonal (T3)	37.1	Pass
Horizontal (T2)	4.6	Pass
Top Girt (T3)	9.5	Pass
Bottom Girt (T17)	14.7	Pass
Guy A (T3)	53.1	Pass
Guy B (T3)	52.7	Pass
Guy C (T3)	53.4	Pass
Top Guy Pull-Off (T3)	6.8	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
						Bolt Checks	10.9	Pass
						RATING =	**55.0**	**Pass**

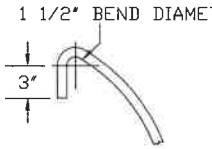
USE FOR CONSTRUCTION



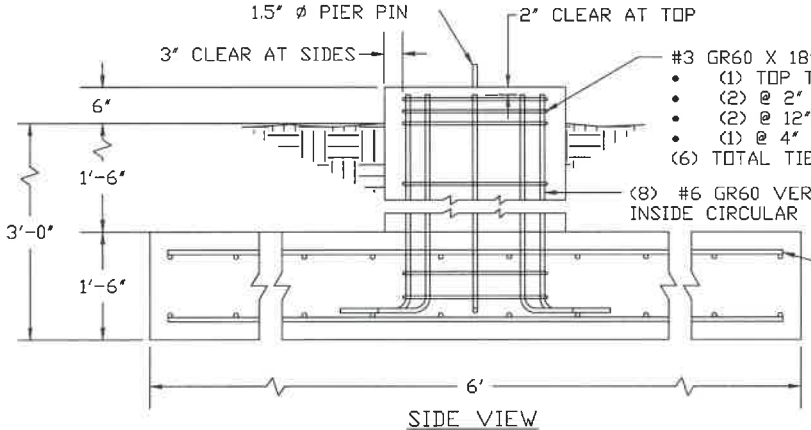
TOP VIEW



90° HOOK DETAIL



135° HOOK DETAIL



SIDE VIEW

#3 GR60 X 18" O.D. CIRCULAR TIES:
- (1) TOP TIE
- (2) @ 2" C-C SPACING
- (2) @ 12" C-C SPACING
- (1) @ 4" C-C SPACING

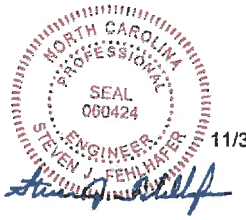
(6) TOTAL TIES

(8) #6 GR60 VERTICAL BARS EQUALLY SPACED INSIDE CIRCULAR TIES. (BEND WITH 90° STANDARD HOOK)

(6) #6 GR60 X 5'-6" HORIZONTAL REBAR EQUALLY SPACED EACH DIRECTION TOP AND BOTTOM OF PAD. (24 TOTAL REQUIRED)

NOTES:

1. CONCRETE SHALL OBTAIN MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
2. REBAR SHALL CONFORM TO THE ASTM A615 GRADE SPECIFIED.
3. ALL REBAR SHALL HAVE A 3" CONCRETE COVER UNLESS SPECIFIED.
4. BASE OF EXCAVATION SHALL BE CLEAN AND FREE OF LOOSE SOIL AND DEBRIS
5. 2.2 C.Y. CONCRETE REQUIRED THIS BASE FOUNDATION.
6. DESIGN BASED ON PRESUMPTIVE CLAY SOIL. SOIL. WATER NOT CONSIDERED IN DEPTH OF EXCAVATION.
7. NOTIFY ENGINEER IMMEDIATELY IF WATER IS EXPERIENCED WITHIN DEPTH OF EXCAVATION.



SITE: MOORESVILLE, IREDELL CO, NC
35° 36' 29.2"N, 80° 49' 44.0"W

WESTERN TOWERS
320 W. 26TH ST.
SAN ANGELO, TX 76903

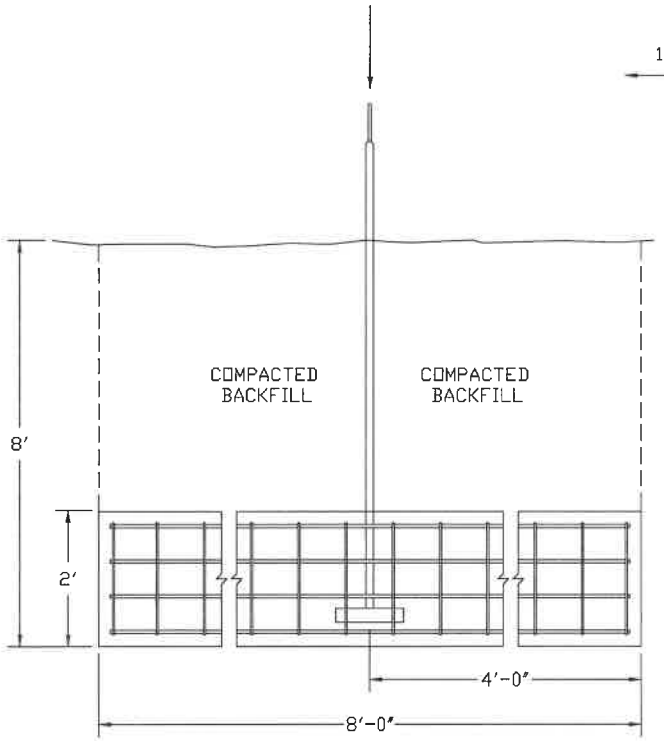
WESTERN TOWERS

TOWERKRAFT PROJECT NO. 10214	
TITLE: TOWER BASE	
TOWERKRAFT ENGINEERING 4423 ALVO ROAD UTICA, NE 68456 (402) 646-0031	BY: bf
	DATE: 10/31/25
DWG. NO. 10214-FND	PAGE 1 OF 2

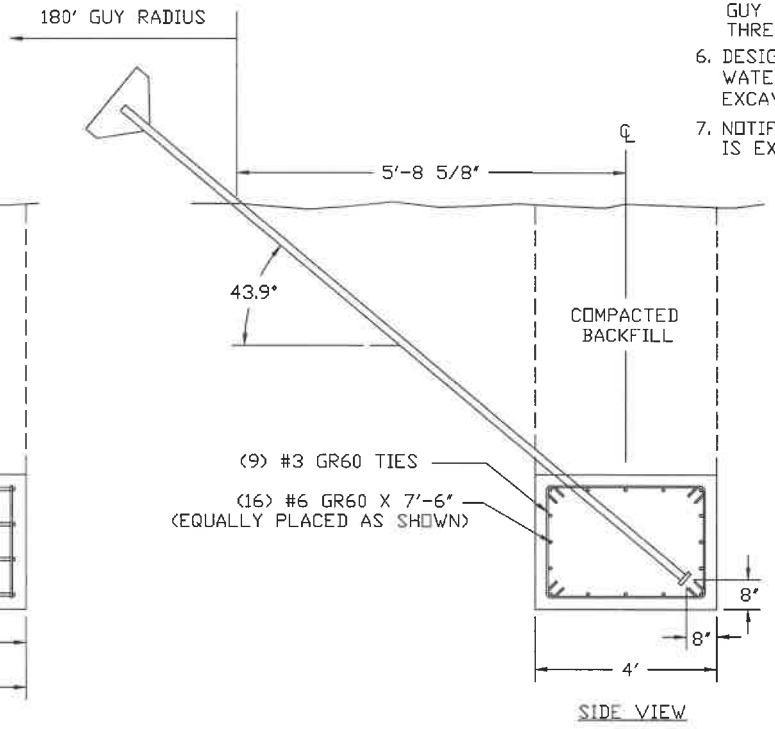
USE FOR CONSTRUCTION

TYPICAL 180' GUY RADIUS ANCHOR

1 1/2"ø S.R. X 12'-0" GALVANIZED ANCHOR SHAFT BY WESTERN TOWERS
(ASTM A572 50KSI MINIMUM YIELD STRENGTH)



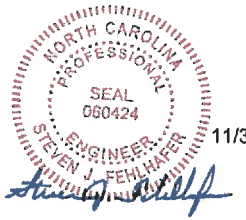
END VIEW



SIDE VIEW

NOTES:

1. CONCRETE SHALL OBTAIN MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
2. REBAR SHALL CONFORM TO THE ASTM A615 GRADE SPECIFIED.
3. ALL REBAR SHALL HAVE A 3" CONCRETE COVER.
4. BASE OF EXCAVATION SHALL BE CLEAN AND FREE OF LOOSE SOIL AND DEBRIS.
5. 2.4 C.Y. CONCRETE REQUIRED THIS GUY ANCHOR. 7.1 C.Y. TOTAL REQUIRED FOR THREE NEW ANCHORS (NO WASTE).
6. DESIGN BASED ON PRESUMPTIVE CLAY SOIL. WATER NOT CONSIDERED IN DEPTH OF EXCAVATION.
7. NOTIFY ENGINEER IMMEDIATELY IF WATER IS EXPERIENCED WITHIN DEPTH OF EXCAVATION.



11/3/25

SITE: MOORESVILLE, IREDELL CO, NC
35° 36' 29.2"N, 80° 49' 44.0"W

WESTERN TOWERS
320 W. 26TH ST.
SAN ANGELO, TX 76903

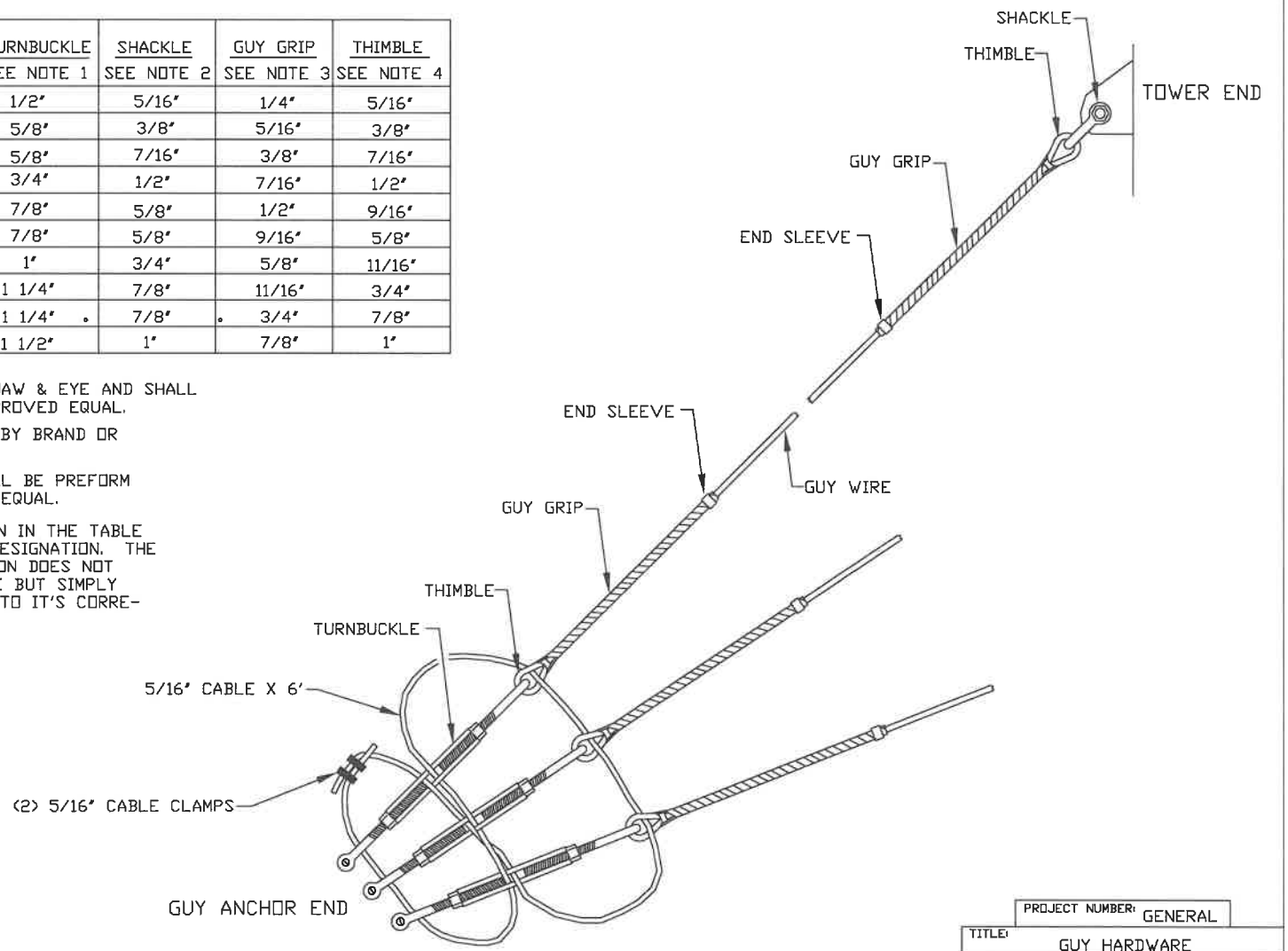
WESTERN TOWERS

TOWERKRAFT PROJECT NO. 10214	
TITLE: 180' DEADMAN ANCHOR	
TOWERKRAFT ENGINEERING 4423 ALVO ROAD UTICA, NE 68456 (402) 646-0031	BY: bf
	DATE: 10/31/25
DWG. NO. 10214-END	PAGE 2 OF 2

GUY SIZE	BREAKING STRENGTH	TURNBUCKLE SEE NOTE 1	SHACKLE SEE NOTE 2	GUY GRIP SEE NOTE 3	THIMBLE SEE NOTE 4
1/4"ø EHS	6650#	1/2"	5/16"	1/4"	5/16"
5/16"ø EHS	11200#	5/8"	3/8"	5/16"	3/8"
3/8"ø EHS	15400#	5/8"	7/16"	3/8"	7/16"
7/16"ø EHS	20800#	3/4"	1/2"	7/16"	1/2"
1/2"ø EHS	26900#	7/8"	5/8"	1/2"	9/16"
9/16"ø EHS	35000#	7/8"	5/8"	9/16"	5/8"
5/8"ø EHS	42400#	1"	3/4"	5/8"	11/16"
11/16"ø EHS	49500#	1 1/4"	7/8"	11/16"	3/4"
3/4"ø EHS	58300#	1 1/4"	7/8"	3/4"	7/8"
7/8"ø EHS	79700#	1 1/2"	1"	7/8"	1"

NOTES:

1. TURNBUCKLES SHALL BE JAW & EYE AND SHALL BE CROSBY BRAND OR APPROVED EQUAL.
2. SHACKLES SHALL BE CROSBY BRAND OR APPROVED EQUAL.
3. GUY WIRE DEADENDS SHALL BE PREFORM "BIG GRIP" OR APPROVED EQUAL.
4. THE THIMBLE SIZES SHOWN IN THE TABLE ARE THE OLDER CROSBY DESIGNATION. THE NEWER CROSBY DESIGNATION DOES NOT CALL OUT A THIMBLE SIZE BUT SIMPLY MATCHES A PART NUMBER TO IT'S CORRESPONDING CABLE SIZE.



PROJECT NUMBER: GENERAL

TITLE: GUY HARDWARE

TOWERKRAFT ENGINEERING
323 NIOBRARA STREET
ALLIANCE, NE 69301
(308) 762-5002

BY: AAK

DATE: 7-23-92

DWG. NO. GUYHDWR

PAGE 1 OF 1