



Northeast Site Solutions
Victoria Masse
5 Melrose Drive
Farmington, CT 06032
victoria@northeastsitesolutions.com

June 17, 2025

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification
24 Cooper Hill Road, Ridgefield CT
Latitude: 41.274167
Longitude: -73.465
T-Mobile Site#: CT11348A_L600 & Radio Upgrade

Dear Ms. Bachman:

T-Mobile currently maintains three (3) antennas at the 97-foot level of the existing 83.5-foot transmission tower at 24 Cooper Hill Road, Ridgefield, Connecticut. The tower is owned by Eversource Energy and the property is owned by CL&P. T-Mobile now intends to remove three (3) existing antenna and replace with three (3) new 600/700/1900/2100 MHz antenna. The new antennas would be installed at the 92.5-foot level of the transmission tower. This modification includes B2, B5 hardware that is both 4G (LTE), and 5G capable.

T-Mobile Planned Modifications:

Remove: None

Remove and Replace:

(3) EMA RR90-1702DP Antenna (Remove) – (3) FVV-65B-R3 600/700/1900/2100 MHz Antenna (Replace)

Install New:

(3) Smart Bias Tees

(18) Coax

Existing to Remain:

(6) Coax

5 Melrose Drive, Farmington CT 06032



This facility was initially approved by the CSC in Petition No. 458 dated June 6, 2000. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Rudy Marconi, First Selectperson, and Alice Dew, Director of Planning & Zoning, as well as the property owner and tower owner.

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, T-Mobile respectfully submits that the proposed modifications to the above referenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Victoria Masse

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Fax: 413-521-0558

Office: 5 Melrose Drive, Farmington, CT 06032

Email: victoria@northeastsitesolutions.com



Attachments

Cc:

Rudy Marconi, First Selectperson
Town of Ridgefield
400 Main Street
Ridgefield, CT 06877

Alice Dew, Director of Planning & Zoning
Town of Ridgefield
66 Prospect Street - Second Floor
Ridgefield, CT 06877

Eversource Energy aka CL&P, Tower Owner & Property Owner
PO Box 270
Hartford, CT 06141

Exhibit A

Original Facility Approval

Petition No. 458
Voicestream Wireless
Ridgefield, Connecticut
Staff Report
June 6, 2000

On May 4, 2000, Connecticut Siting Council (Council) member Gerald J. Heffernan, and Fred Cunliffe of Council staff met Voicestream Wireless (Voicestream) representatives J. Brendan Sharkey, Esq., Chetan CCCCCBGLtransmission line structure (no. 3292) located off Cooper Hill Road, Ridgefield. VoiceStream, with the agreement of CL&P, proposes to modify the transmission structure for telecommunications use and is petitioning the Council for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) is required for the modification.

A follow-up inspection was conducted on June 6, 2000, by Council Executive Director Joel M. Rinebold with the Town of Ridgefield's First Selectman Rudy Marconi, Jeff Borne of CL&P, and J. Brendan Sharkey to resolve issues about the project development adjacent to a proposed Rails-to-Trails linear park.

VoiceStream proposes to attach a 4.5-inch diameter pipe extending the existing monopole height of 82 feet by 17 feet for a total height of 99 feet. A structural analysis concludes no additional reinforcement is necessary. Voicestream proposes to install two low profile antenna cluster mounts with centers of radiation at 97 feet and 90 feet 4 inches on the pipe and placing associated equipment cabinets on a concrete foundation within a 10-foot 8-inch by 8-foot compound secured by a six-foot chain link fence. Utilities would be routed overhead from an existing distribution pole on Cooper Hill Road to a new pole on the edge of the right-of-way and placed 80 feet underground to the site.

The existing structure is situated on an old railroad bed approximately 36 feet south of Cooper Pond Brook. The Town of Ridgefield setback regulations specify that commercial structures be 25-feet from inland wetlands and watercourses. Staff recommends installation of erosion and sediment controls prior to construction.

The proposed site is within a CL&P easement within a residential area. Two homes on Cooper Hill Road are approximately 500 south and northwest of the proposed site. Also, the Town of Ridgefield plans to develop a Rails-to-Trails linear park which passes the proposed site. VoiceStream reaffirms no equipment would be within the trail area. Furthermore staff recommends vegetative landscaping, installation of electric and telco with two extra ducts before capping of the trail, security of equipment without fencing, and an emergency phone if requested by the Town.

The worst case power density for the telecommunications operations at the site has been calculated to be less than 4.5% of the applicable standard for uncontrolled environments.

Voicestream contends that the proposed installation will not cause a substantial adverse environmental effect, and for this reason would not require a Certificate.

Exhibit B

Property Card

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2022.



Information on the Property Records for the Municipality of Ridgefield was last updated on 4/7/2025.



Parcel Information

Location:	COOPER HILL RD	Property Use:	Vacant Land	Primary Use:	Residential
Unique ID:	G160062	Map Block Lot:	G16-0062	Acres:	4.6000
490 Acres:	0.00	Zone:	RAA	Volume / Page:	0113/0336
Developers Map / Lot:		Census:	2453		

Value Information

	Appraised Value	Assessed Value
Land	85,600	59,920
Buildings	0	0
Detached Outbuildings	0	0
Total	85,600	59,920

Owner's Information

Owner's Data

CONNECTICUT LIGHT AND POWER CO
P O BOX 270
HARTFORD, CT 06141

Information Published With Permission From The Assessor



Town of Ridgefield, CT

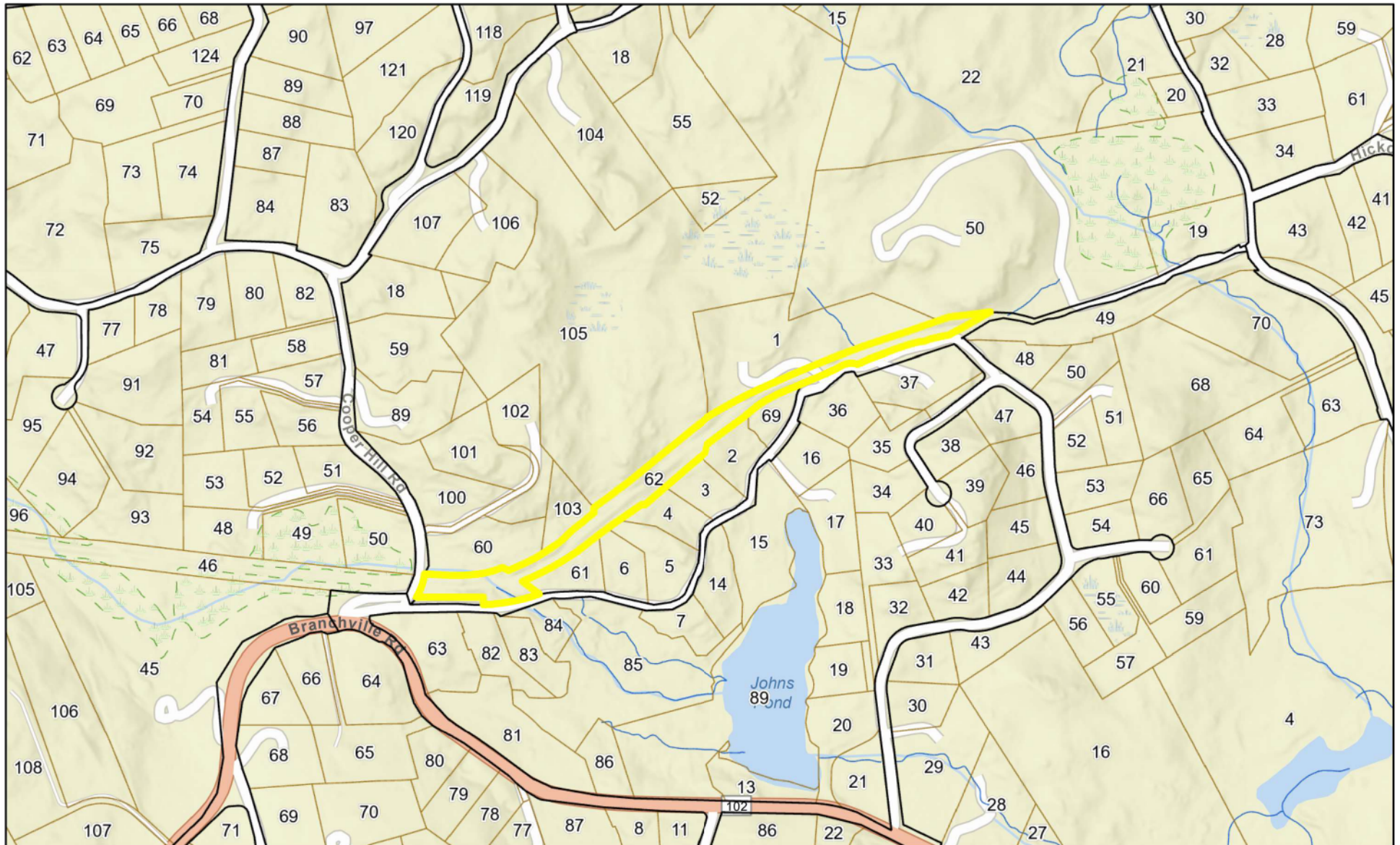
1 inch = 566 Feet



May 16, 2025

www.cai-tech.com

0 566 1132 1698



Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

Exhibit C

Construction Drawings

RIDGEFIELD, CT 06877

SITE CLASS: UTILITY POLE

27. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTOR SHALL VISIT THE SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER ON RECORD, PRIOR TO THE COMMENCEMENT OF ANY WORK.

NORTH

1. ANTENNA MAST REPLACEMENT AND MOUNT REPLACEMENT REQUIRED

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
N-1	NOTES, SPECIFICATIONS, AND ANTENNA SCHEDULE	1
N-2	MODIFICATION INSPECTIONS AND SPECIFICATIONS	1
C-1	COMPOUND PLAN, EQUIPMENT PLANS, AND ELEVATION	1
C-2	ANTENNA PLANS AND ELEVATIONS	1
RF-1	RF EQUIPMENT DETAILS	1
RF-2	RF EQUIPMENT DETAILS	1
E-1	ELECTRICAL RISER DIAGRAM	1
E-2	TYPICAL ELECTRICAL DETAILS	1
E-3	ELECTRICAL SPECIFICATIONS	1

SHEET NO. 1 OF 10

		TUL	TJR	CONSTRUCTION DRAWINGS – REVISED PER CLIENT COMMENTS
2	06/16/25		TJR	CONSTRUCTION DRAWINGS – REVISED PER CLIENT COMMENTS
1	06/05/25	SFG	TJR	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
	05/08/25	SFG	TJR	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
A	01/10/25	SFG	TJR	CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

DESIGN BASIS:

1. GOVERNING CODE: 2021 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2022 CONNECTICUT STATE BUILDING CODE.
2. TIA-222-H, ASCE MANUAL NO. 48-19 – "DESIGN OF STEEL TRANSMISSION POLE STRUCTURES SECOND EDITION", NESC C2-2023 AND THEREAFTER.
3. DESIGN CRITERIA
 - WIND LOAD: (ANTENNA MAST)
ULTIMATE DESIGN AND WIND SPEED (V) = 125 MPH (2022 CSBC: APPENDIX "P")
 - WIND LOAD: (UTILITY POLE & FOUNDATION)
BASIC WIND SPEED (V) = 110 MPH (3 SECOND GUST)
BASED ON NESC C2-2023, SECTION 25 RULE 250C.

1. THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
2. ACTIVE EXISTING UTILITIES, WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY, PRIOR TO PROCEEDING, SHOULD ANY UNCOVERED EXISTING UTILITY PRECLUDE COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. THE AREAS OF THE COMPOUND DISTURBED BY THE WORK SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.
4. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
5. IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL PROCEED WITH AFFECTED WORK AFTER CONFLICT IS SATISFACTORILY RESOLVED.


3. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2022 CONNECTICUT SUPPLEMENT, INCLUDING THE TA/EIA--222 REVISION "H" "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES," 2022 CONNECTICUT FIRE SAFETY CODE, NATIONAL ELECTRICAL CODE AND LOCAL CODES.
2. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. BEFORE BEGINNING THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR MAKING SUCH INVESTIGATIONS CONCERNING PHYSICAL CONDITIONS (SURFACE AND SUBSURFACE) AT OR CONTIGUOUS TO THE SITE, WHICH MAY AFFECT PERFORMANCE AND COST OF THE WORK.
5. ALL DIMENSIONS, ELEVATIONS, AND OTHER REFERENCES TO EXISTING STRUCTURES, SURFACE, AND SUBSURFACE CONDITIONS ARE APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS AND ANGLES WITH EXISTING CONDITIONS AND WITH ARCHITECTURAL AND SITE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
6. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONDITIONS WHICH ARE IN CONFLICT OR OTHERWISE NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS, AND SHALL NOT PROCEED WITH SUCH WORK UNTIL THE CONFLICT IS SATISFACTORILY RESOLVED.
7. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
8. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
9. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, PLUMBING, ELECTRICAL, AND HVAC. PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
10. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
11. LOCATION OF EQUIPMENT AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS, SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
12. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY.
13. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.

4. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
15. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
16. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
17. ANY AND ALL ERRORS, DISCREPANCIES, AND 'MISSED' ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE T-MOBILE CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO 'EXTRA' WILL BE ALLOWED FOR MISSED ITEMS.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
19. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
20. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
21. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUITS AND ALL ABOVE GROUND WIRING OR PROPER INSTALLATION OF ELECTRIC AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND CONFIRMED WITH THE PROJECT MANAGER AND OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK
22. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
23. THE CONTRACTOR SHALL CONTACT 'CALL BEFORE YOU DIG' AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.
24. CONTRACTOR SHALL COMPLY WITH THE OWNER'S ENVIRONMENTAL ENGINEER ON ALL METHODS AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES INCLUDING SOIL DISPOSAL. ALL BACKFILL MATERIALS TO BE PROVIDED BY THE CONTRACTOR.
25. THE COUNTY/CITY/TOWN MAY MAKE PERIODIC FIELD INSPECTIONS TO ENSURE COMPLIANCE WITH THE DESIGN PLANS, SPECIFICATIONS, AND CONTRACT DOCUMENTS.
26. THE COUNTY/CITY/TOWN MUST BE NOTIFIED (2) WORKING DAYS PRIOR TO CONCEALMENT/BURIAL OF ANY SYSTEM OR MATERIAL THAT MAY PREVENT THE DIRECT INSPECTION OF MATERIALS, METHODS OR WORKMANSHIP. EXAMPLES OF THESE PROCESSES ARE BACKFILLING A GROUND RING OR TOWER FOUNDATION, POURING TOWER FOUNDATIONS, BURYING GROUND RODS, PLATES OR GRIDS, ETC. THE CONTRACTOR MAY PROCEED WITH THE SCHEDULED PROCESS (2) WORKING DAYS AFTER PROVIDING NOTICE UNLESS NOTIFIED OTHERWISE BY THE COUNTY/CITY/TOWN.
27. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTOR SHALL VISIT THE SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER ON RECORD, PRIOR TO THE COMMENCEMENT OF ANY WORK.

1. ALL STRUCTURAL STEEL IS DESIGNED BY ALLOWABLE STRESS DESIGN (ASD)
 - A. STRUCTURAL STEEL (W SHAPES)---ASTM A992 (FY = 50 KSI)
 - B. STRUCTURAL STEEL (OTHER SHAPES)---ASTM A36 (FY = 36 KSI)
 - C. STRUCTURAL HSS (RECTANGULAR SHAPES)---ASTM A500 GRADE B, (FY = 46 KSI)
 - D. STRUCTURAL HSS (ROUND SHAPES)---ASTM A500 GRADE B, (FY = 42 KSI)
 - E. PIPE---ASTM A53 (FY = 35 KSI)
 - F. CONNECTION BOLTS---ASTM A325-N
 - G. U-BOLTS---ASTM A36
 - H. ANCHOR RODS---ASTM F 1554
 - I. WELDING ELECTRODE---ASTM E 70XX
2. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING: SECTION PROFILES, SIZES, CONNECTION ATTACHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS AND ACCESSORIES. INCLUDE ERECTION DRAWINGS, ELEVATIONS AND DETAILS.
3. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION.
4. PROVIDE ALL PLATES, CLIP ANGLES, CLOSURE PIECES, STRAP ANCHORS, MISCELLANEOUS PIECES AND HOLES REQUIRED TO COMPLETE THE STRUCTURE.
5. FIT AND SHOP ASSEMBLE FABRICATIONS IN THE LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE.
6. INSTALL FABRICATIONS PLUMB AND LEVEL, ACCURATELY FITTED, AND FREE FROM DISTORTIONS OR DEFECTS.
7. AFTER ERECTION OF STRUCTURES, TOUCHUP ALL WELDS, ABRASIONS AND NON-GALVANIZED SURFACES WITH A 95% ORGANIC ZINC RICH PAINT IN ACCORDANCE WITH ASTM 780.
8. ALL STEEL MATERIAL (EXPOSED TO WEATHER) SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT DIPPED GALVANIZED) COATINGS" ON IRONS AND STEEL PRODUCTS.
9. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE".
10. THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON CONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW.
11. CONNECTION ANGLES SHALL HAVE A MINIMUM THICKNESS OF 1/4 INCHES.
12. STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ALL BOLTS SHALL BE 3/4" DIAMETER MINIMUM AND SHALL HAVE A MINIMUM OF TWO BOLTS, UNLESS OTHERWISE ON THE DRAWINGS.
13. LOCK WASHER ARE NOT PERMITTED FOR A325 STEEL ASSEMBLIES.
14. SHOP CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED.
15. MILL BEARING ENDS OF COLUMNS, STIFFENERS, AND OTHER BEARING SURFACES TO TRANSFER LOAD OVER ENTIRE CROSS SECTION.
16. FABRICATE BEAMS WITH MILL CAMBER UP.
17. LEVEL AND PLUMB INDIVIDUAL MEMBERS OF THE STRUCTURE TO AN ACCURACY OF 1:500, BUT NOT TO EXCEED 1/4" IN THE FULL HEIGHT OF THE COLUMN.
18. COMMENCEMENT OF STRUCTURAL STEEL WORK WITHOUT NOTIFYING THE ENGINEER OF ANY DISCREPANCIES WILL BE CONSIDERED ACCEPTANCE OF PRECEDING WORK.
19. INSPECTION AND TESTING OF ALL WELDING AND HIGH STRENGTH BOLTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY.
20. FOUR COPIES OF ALL INSPECTION TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN TEN (10) WORKING DAYS OF THE DATE OF INSPECTION.

ANTENNA/APPURTENANCE SCHEDULE							
SECTOR	(E/P) ANTENNA (QTY)	SIZE (INCHES) (L x W x D)	ANTENNA HEIGHT	AZIMUTH	(E/P) RRU (QTY) AT GRADE	(E/P) MISC. (QTY) AT TOWER	(E/P) HYBRID/COAX (QTY)
A1	(P) FW-65B-R3 (1)	72 x 11.8 x 7.1	92'-6"	0°	(P) RADIO 4460 B25+B66 (1), (P) RADIO 4480 B71+B85 (1)	(P) BIAS-T (1)	(P) 6/24 HYBRID CABLE (2)
B1	(P) FW-65B-R3 (1)	72 x 11.8 x 7.1	92'-6"	120°	(P) RADIO 4460 B25+B66 (1), (P) RADIO 4480 B71+B85 (1)	(P) BIAS-T (1)	
C1	(P) FW-65B-R3 (1)	72 x 11.8 x 7.1	92'-6"	240°	(P) RADIO 4460 B25+B66 (1), (P) RADIO 4480 B71+B85 (1)	(P) BIAS-T (1)	(E) 7/8" COAX CABLE (6) (P) 7/8" COAX CABLE (18)

NOTE:
ALL HYBRID/COAX LENGTHS TO BE MEASURED
AND VERIFIED IN FIELD BEFORE ORDERING

<div>T-MOBILE NORTHEAST LLC</div> <div>SITE NAME: RIDGEFIELD / RT 102</div> <div>SITE ID: CTT1348A</div> <div>24 COOPER HILL RD - POLE #3292</div> <div>RIDGEFIELD, CT 06877</div>		<div><div>CENEX engineering</div><div>Certified in Solutions</div><div>(203) 488-0580</div><div>(203) 488-8587 Fax</div><div>632 North Branford Road</div><div>Branford, CT 06465</div><div>www.CenExEng.com</div></div>	<div><div>T-Mobile</div><div><div><div></div></div><div>NSS</div><div>NORTHEAST</div><div>Network Solutions</div></div></div>	<div><div>PROFESSIONAL ENGINEER: SP4L</div><div></div></div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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MODIFICATION INSPECTION REPORT REQUIREMENTS					
PRE-CONSTRUCTION		DURING CONSTRUCTION		POST-CONSTRUCTION	
SCHEDULED ITEM	REPORT ITEM	SCHEDULED ITEM	REPORT ITEM	SCHEDULED ITEM	REPORT ITEM
X	EOR MODIFICATION INSPECTION DRAWING	–	FOUNDATIONS	X	MODIFICATION INSPECTOR RECORD REDLINE DRAWING
X	EOR APPROVED STEEL SHOP DRAWINGS	–	EARTHWORK BACKFILL MATERIAL AND COMPACTION	–	POST–INSTALLED ANCHOR ROD PULL–OUT TEST
–	EOR APPROVED POST–INSTALLED ANCHOR MPIL	–	REBAR AND FORMWORK GEOMETRY VERIFICATION	X	PHOTOGRAPHS
–	EOR APPROVED FRP SHOP DRAWINGS	–	CONCRETE TESTING	–	STEEL INSPECTION
–	EOR APPROVED FRP CALCULATIONS	X	STEEL INSPECTION		
–	FABRICATION INSPECTION	–	POST INSTALLED ANCHOR ROD VERIFICATION		
–	FABRICATOR CERTIFIED WELDER INSPECTION	–	BASE PLATE GROUT VERIFICATION		
X	MATERIAL CERTIFICATIONS	X	CONTRACTOR’S CERTIFIED WELD INSPECTION		
		–	ON–SITE COLD GALVANIZED VERIFICATION		
		–	CONTRACTOR AS–BUILT REDLINE DRAWINGS		
		–	HOST BUILDING (BEARING WALL/PARAPET ETC..) INTEGRITY VERIFICATION PRIOR TO ANY INSTALLATIONS		
		–	HOST BUILDING (ROOF OPENING)		
		–	FRAMING VERIFICATION PRIOR TO ANY INSTALLATIONS		
NOTES	1. REFER TO MODIFICATION INSPECTION NOTES FOR ADDITIONAL REQUIREMENTS				
	2. (X) DENOTES DOCUMENT REQUIRED FOR INCLUSION IN MODIFICATION INSPECTION FINAL REPORT				
	3. (–) DENOTES DOCUMENT NOT REQUIRED FOR INCLUSION IN MODIFICATION INSPECTION FINAL REPORT				
	4. EOR – ENGINEER OF RECORD				
	5. MPIL – MANUFACTURER’S PRINTED INSTALLATION GUIDELINES				

MODIFICATION INSPECTION NOTES:

GENERAL

1. THE MODIFICATION INSPECTION IS A VISUAL INSPECTION OF STRUCTURAL MODIFICATIONS, TO INCLUDE A REVIEW AND COMPILATION OF SPECIFIED SUBMITTALS AND CONSTRUCTION INSPECTIONS, AS AN ASSURANCE OF COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS PREPARED UNDER THE DIRECTION OF THE ENGINEER OF RECORD (EOR).
2. THE MODIFICATION INSPECTION IS TO CONFIRM INSTALLATION CONFIGURATION AND GENERAL WORKMANSHIP AND IS NOT A REVIEW OF THE MODIFICATION DESIGN. OWNERSHIP OF THE MODIFICATION DESIGN EFFECTIVENESS AND INTENT RESIDES WITH THE ENGINEER OF RECORD.
3. TO ENSURE COMPLIANCE WITH THE MODIFICATION INSPECTION REQUIREMENTS THE GENERAL CONTRACTOR (GC) AND THE MODIFICATION INSPECTOR (MI) COMMENCE COMMUNICATION UPON AUTHORIZATION TO PROCEED BY THE CLIENT. EACH PARTY SHALL BE PROACTIVE IN CONTACTING THE OTHER. THE EOR SHALL BE CONTACTED IF SPECIFIC GC/MI CONTACT INFORMATION IS NOT MADE AVAILABLE.
4. THE GC SHALL PROVIDE THE MI WITH A MINIMUM OF 5 BUSINESS DAYS NOTICE OF PENDING INSPECTIONS.
5. WHEN POSSIBLE, THE GC AND MI SHALL BE ON SITE DURING THE MODIFICATION INSPECTION TO HAVE ANY NOTED DEFICIENCIES ADDRESSED DURING THE INITIAL MODIFICATION INSPECTION.

MODIFICATION INSPECTOR (MI)

1. THE MI SHALL CONTACT THE GC UPON AUTHORIZATION BY THE CLIENT TO:

– REVIEW THE MODIFICATION INSPECTION REPORT REQUIREMENTS.

– WORK WITH THE GC IN DEVELOPMENT OF A SCHEDULE FOR ON–SITE INSPECTIONS.

– DISCUSS CRITICAL INSPECTIONS AND PROJECT CONCERNS.
2. THE MI IS RESPONSIBLE FOR COLLECTION OF ALL INSPECTION AND TEST REPORTS, REVIEWING REPORTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING ON–SITE INSPECTIONS AND COMPILATION & SUBMISSION OF THE MODIFICATION INSPECTION REPORT TO THE CLIENT AND THE EOR.

GENERAL CONTRACTOR (GC)

1. THE GC IS REQUIRED TO CONTACT THE MI UPON AUTHORIZATION TO PROCEED WITH CONSTRUCTION BY THE CLIENT TO:

– REVIEW THE MODIFICATION INSPECTION REPORT REQUIREMENTS.

– WORK WITH THE MI IN DEVELOPMENT OF A SCHEDULE FOR ON–SITE INSPECTIONS.

– DISCUSS CRITICAL INSPECTIONS AND PROJECT CONCERNS.
2. THE GC IS RESPONSIBLE FOR COORDINATING AND SCHEDULING IN ADVANCE ALL REQUIRED INSPECTIONS AND TESTS WITH THE MI.

CORRECTION OF FAILING MODIFICATION INSPECTION

1. SHOULD THE STRUCTURAL MODIFICATION NOT COMPLY WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS, THE GC SHALL WORK WITH THE MODIFICATION INSPECTOR IN A VIABLE REMEDIATION PLAN AS FOLLOWS:

– CORRECT ALL DEFICIENCIES TO COMPLY WITH THE CONTRACT DOCUMENTS AND COORDINATE WITH THE MI FOR A FOLLOW UP INSPECTION.

– WITH CLIENT AUTHORIZATION, THE GC MAY WORK WITH THE EOR TO REANALYZE THE MODIFICATION USING THE AS–BUILT CONDITION.

REQUIRED PHOTOGRAPHS

1. THE GC AND MI SHALL AT MINIMUM PHOTO DOCUMENT THE FOLLOWING FOR INCLUSION IN THE MODIFICATION INSPECTION REPORT:

– PRE–CONSTRUCTION: GENERAL CONDITION OF THE SITE.

– DURING CONSTRUCTION: RAW MATERIALS, CRITICAL DETAILS, WELD PREPARATION, BOLT INSTALLATION & TORQUE, FINAL INSTALLED CONDITION & SURFACE COATING REPAIRS.

– POST–CONSTRUCTION: FINAL CONDITION OF THE SITE.

PROFESSIONAL ENGINEER SEAL

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CERK engineering
Centered on Solutions™

[203] 488-0580
[203] 488-8587 Fax
432 North Branford Road
Branford, CT 06405

www.CenterEng.com

T-MOBILE NORTHEAST LLC

SITE NAME: RIDGEFIELD / RT 102
SITE ID: CT11348A
24 COOPERHILL RD - POLE #3292
RIDGEFIELD, CT 06877

DATE: 01/10/25

SCALE: AS NOTED

JOB NO. 24066.09

MODIFICATION
INSPECTIONS AND
SPECIFICATIONS

N-2

SHEET NO. 3 OF 10

CONSTRUCTION DRAWINGS – REVISED PER CLIENT COMMENTS

CONSTRUCTION DRAWINGS – REVISED PER CLIENT COMMENTS

CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION

CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

TJR

TJR

TJR

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2 06/16/25

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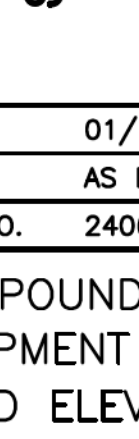
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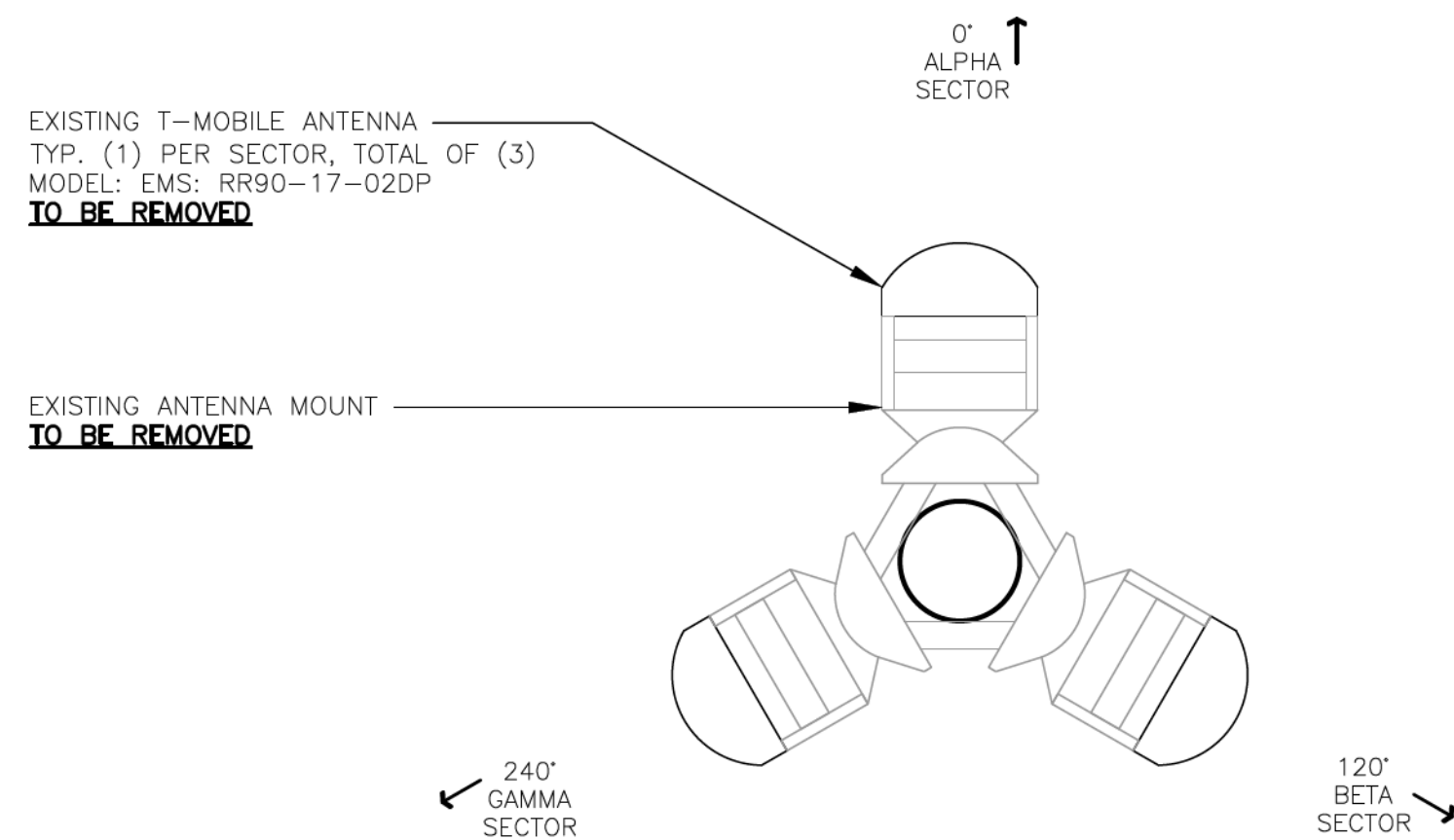
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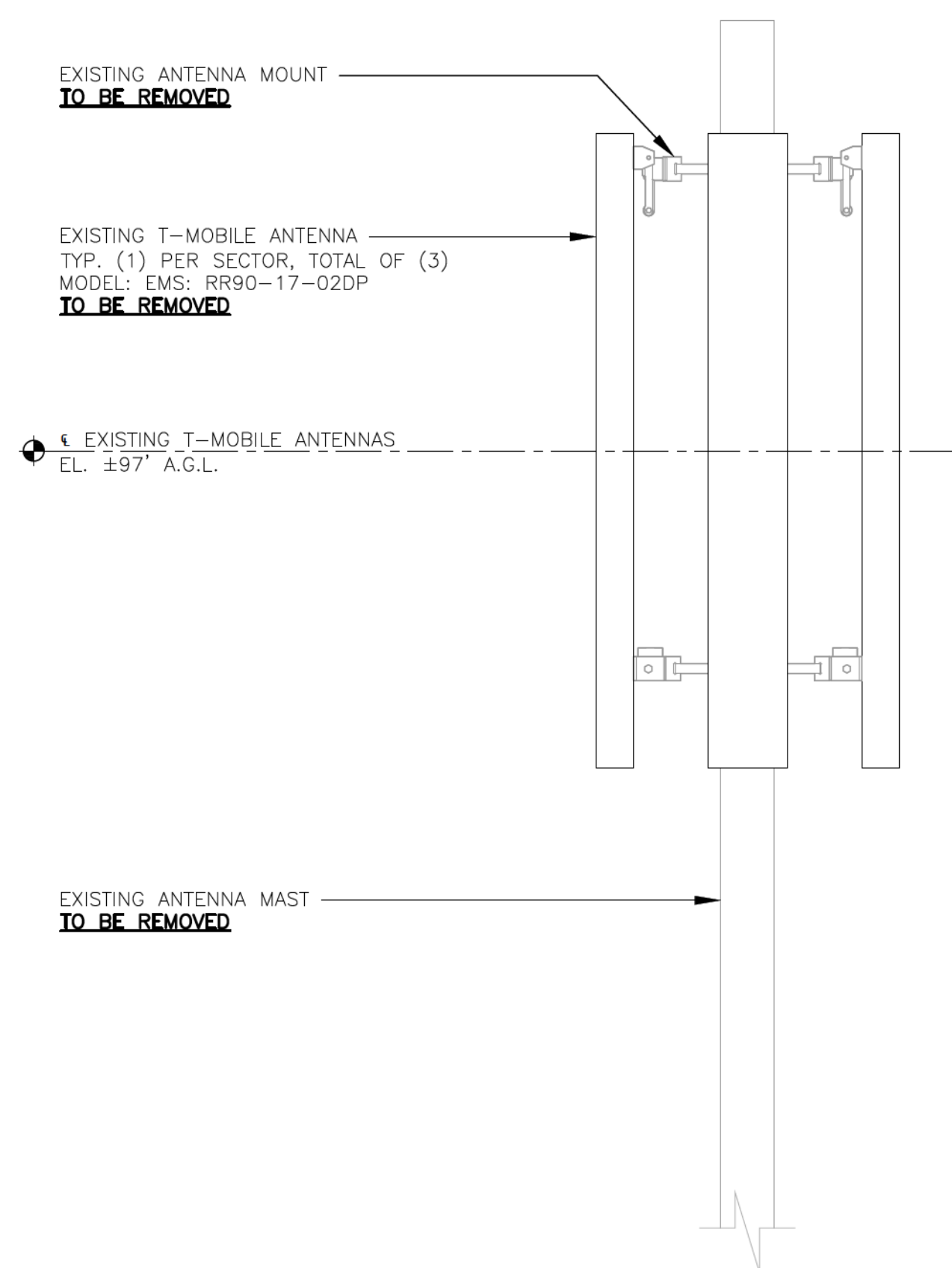
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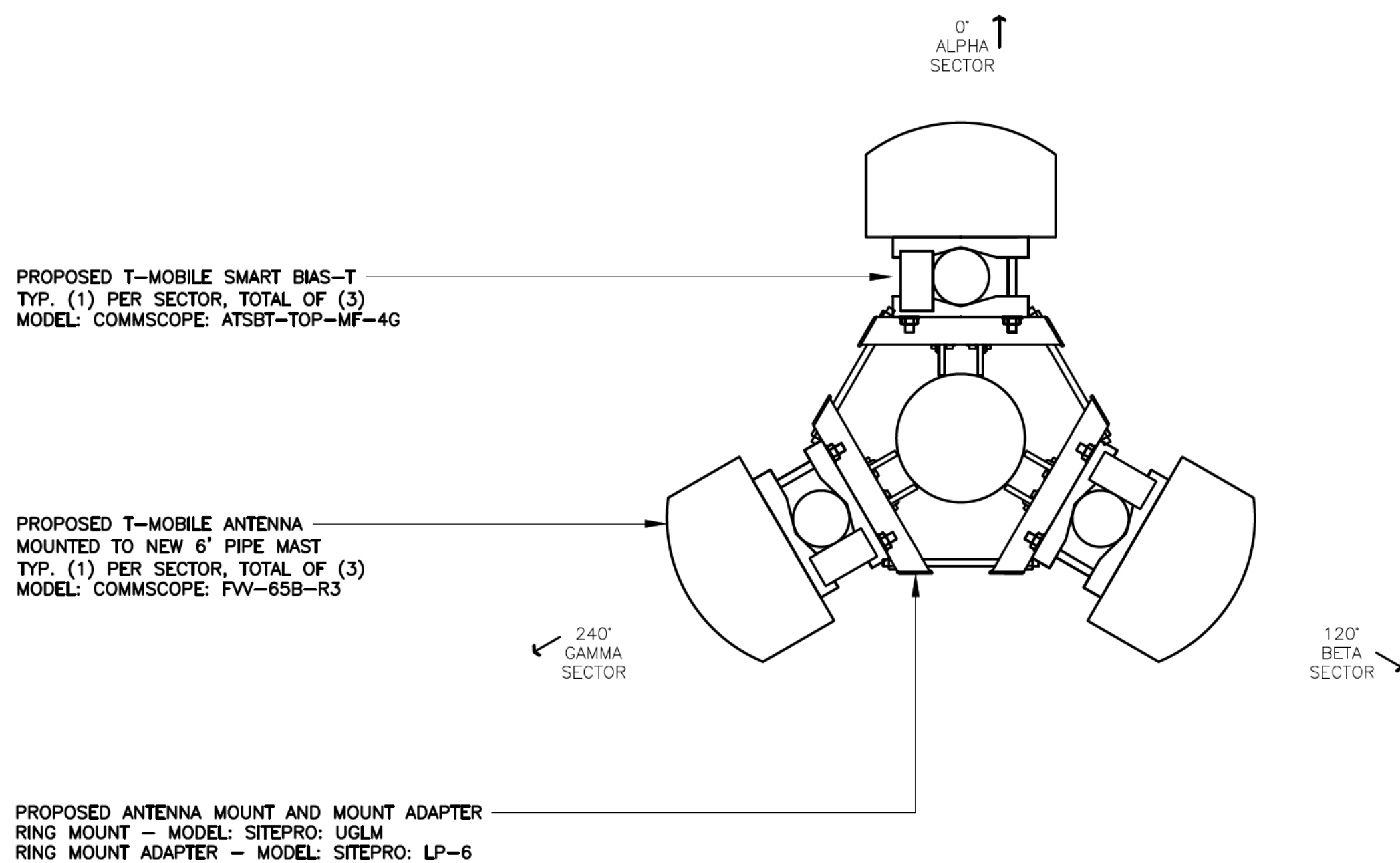
T-MOBILE NORTHEAST LLC SITE NAME: RIDGEFIELD / RT 102 SITE ID: CT1348A 24 COOPERHILL RD - POLE #3292 RIDGEFIELD, CT 06877		 CENEK engineering <i>Centered on Solutions™</i> (203) 869-6390 (203) 869-8397 Fax 63-2 North Branford Road Branford, CT 06405 www.CentekEng.com	  NSS NETWORK SUPPORT <small>Engineering</small>		PROFESSIONAL ENGINEER SEAL	<table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>DRAWN BY</th> <th>CHECKED BY</th> <th>CONSTRUCTION DRAWINGS</th> <th>ISSUED FOR CONSTRUCTION</th> <th>REVISD PER CLIENT COMMENTS</th> <th>REVISD PER CLIENT COMMENTS</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>06/16/25</td> <td>TJL</td> <td>TJR</td> <td>CONSTRUCTION DRAWINGS</td> <td>ISSUED FOR CONSTRUCTION</td> <td>REVISD PER CLIENT COMMENTS</td> <td>REVISD PER CLIENT COMMENTS</td> </tr> <tr> <td>1</td> <td>06/05/25</td> <td>SFG</td> <td>TJR</td> <td>CONSTRUCTION DRAWINGS</td> <td>ISSUED FOR CONSTRUCTION</td> <td>REVISD PER CLIENT COMMENTS</td> <td>REVISD PER CLIENT COMMENTS</td> </tr> <tr> <td>0</td> <td>05/08/25</td> <td>SFG</td> <td>TJR</td> <td>CONSTRUCTION DRAWINGS</td> <td>ISSUED FOR CONSTRUCTION</td> <td>REVISD PER CLIENT COMMENTS</td> <td>REVISD PER CLIENT COMMENTS</td> </tr> <tr> <td>A</td> <td>01/10/25</td> <td>SFG</td> <td>TJR</td> <td>CONSTRUCTION DRAWINGS</td> <td>ISSUED FOR CONSTRUCTION</td> <td>REVISD PER CLIENT COMMENTS</td> <td>REVISD PER CLIENT COMMENTS</td> </tr> </tbody> </table>	REV.	DATE	DRAWN BY	CHECKED BY	CONSTRUCTION DRAWINGS	ISSUED FOR CONSTRUCTION	REVISD PER CLIENT COMMENTS	REVISD PER CLIENT COMMENTS	2	06/16/25	TJL	TJR	CONSTRUCTION DRAWINGS	ISSUED FOR CONSTRUCTION	REVISD PER CLIENT COMMENTS	REVISD PER CLIENT COMMENTS	1	06/05/25	SFG	TJR	CONSTRUCTION DRAWINGS	ISSUED FOR CONSTRUCTION	REVISD PER CLIENT COMMENTS	REVISD PER CLIENT COMMENTS	0	05/08/25	SFG	TJR	CONSTRUCTION DRAWINGS	ISSUED FOR CONSTRUCTION	REVISD PER CLIENT COMMENTS	REVISD PER CLIENT COMMENTS	A	01/10/25	SFG	TJR	CONSTRUCTION DRAWINGS	ISSUED FOR CONSTRUCTION	REVISD PER CLIENT COMMENTS	REVISD PER CLIENT COMMENTS
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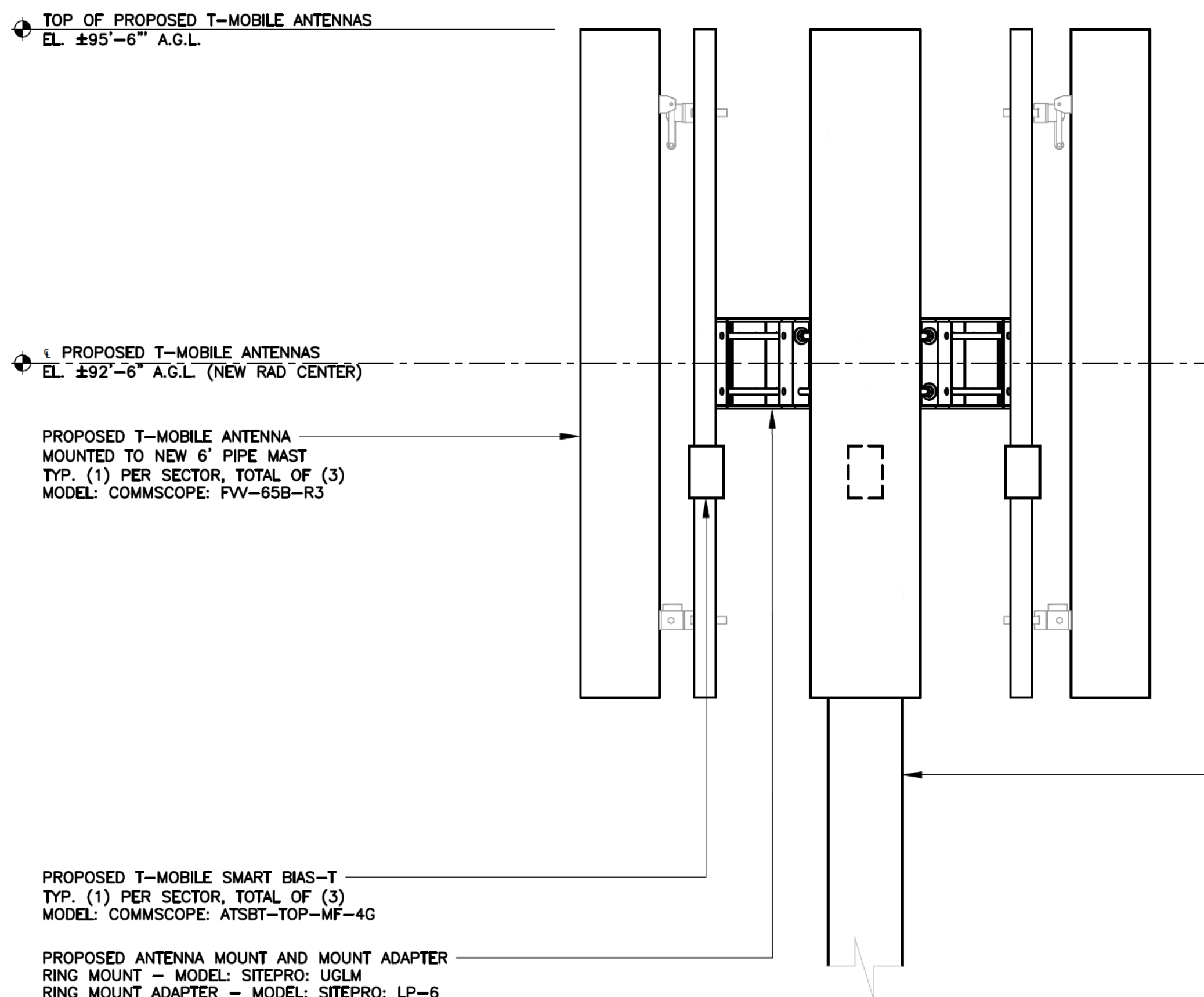
1 ANTENNA PLAN - EXISTING
C-2 SCALE: 1/2" = 1' TRUE NORTH



1A ANTENNA ELEVATION - EXISTING
C-2 SCALE: 1" = 1'



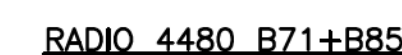
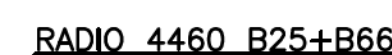
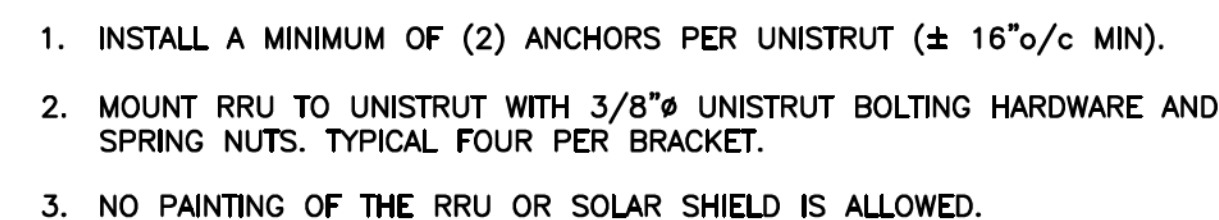
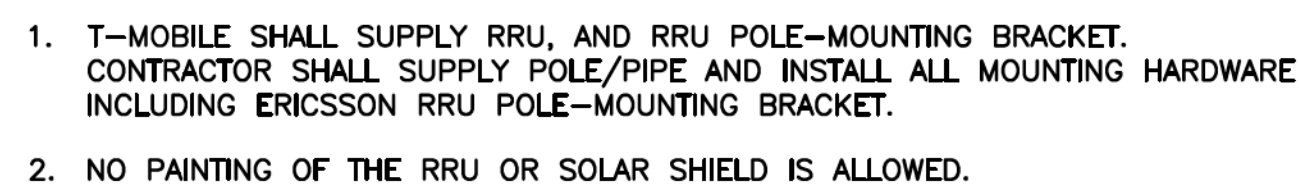
2 ANTENNA PLAN - PROPOSED
C-2 SCALE: 1/2" = 1' TRUE NORTH



2A ANTENNA ELEVATION - PROPOSED
C-2 SCALE: 1" = 1'

REFER TO THE STRUCTURAL ANALYSIS REPORT PREPARED BY
CENTEK ENGINEERING (PROJECT # 24066.09) DATED
01/14/25 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

T-MOBILE NORTHEAST LLC		SITE NAME: RIDGEFIELD / RT 102 SITE ID: CT11348A 24 COOPERHILL RD - POLE #0292 RIDGEFIELD, CT 06877	
DATE: 01/10/25		SHEET NO. 5 OF 10	
SCALE: AS NOTED		JOB NO. 24066.09	
ANTENNA PLANS AND ELEVATIONS		C-2	
CENTEK engineering Centered on Solutions™ [203] 488-0580 [203] 488-8587 Fax 632 North Branford Road Branford, CT 06405 www.CentekEng.com		<div> <div>PROFESSIONAL ENGINEER SEAL</div> </div> <div> </div>	
REV.	DATE	DRAWN BY	CHECKED BY
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1	06/05/25	SFG	TJR
0	05/08/25	SFG	TJR
A	01/10/25	SFG	TJR
CONSTRUCTION DRAWINGS - REVISED PER CLIENT COMMENTS		CONSTRUCTION DRAWINGS - REVISED PER CLIENT COMMENTS	
CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION		CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION	
CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW		CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW	

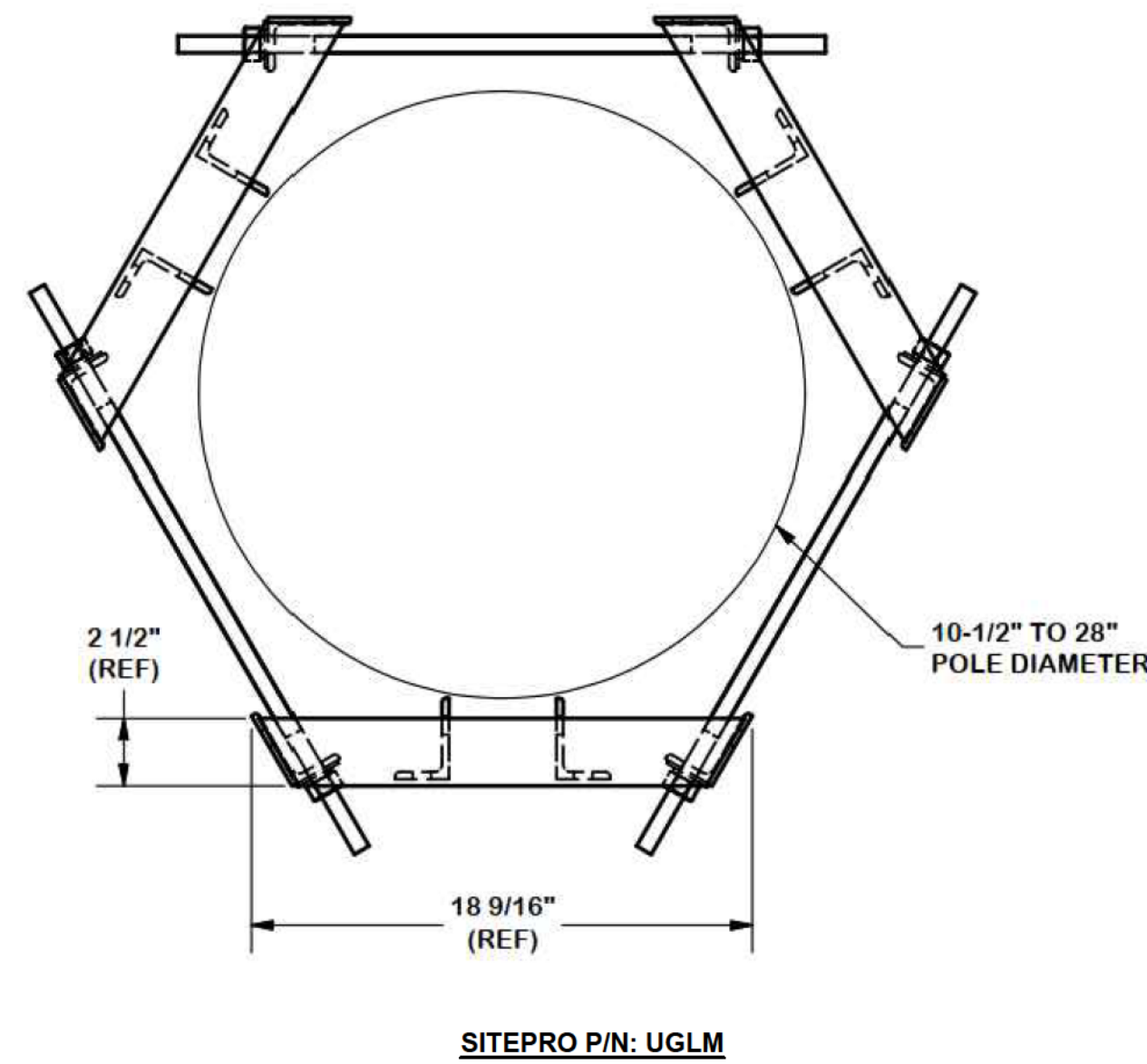


2 **PROPOSED RRU DETAIL**
RF-1 SCALE: NOT TO SCALE

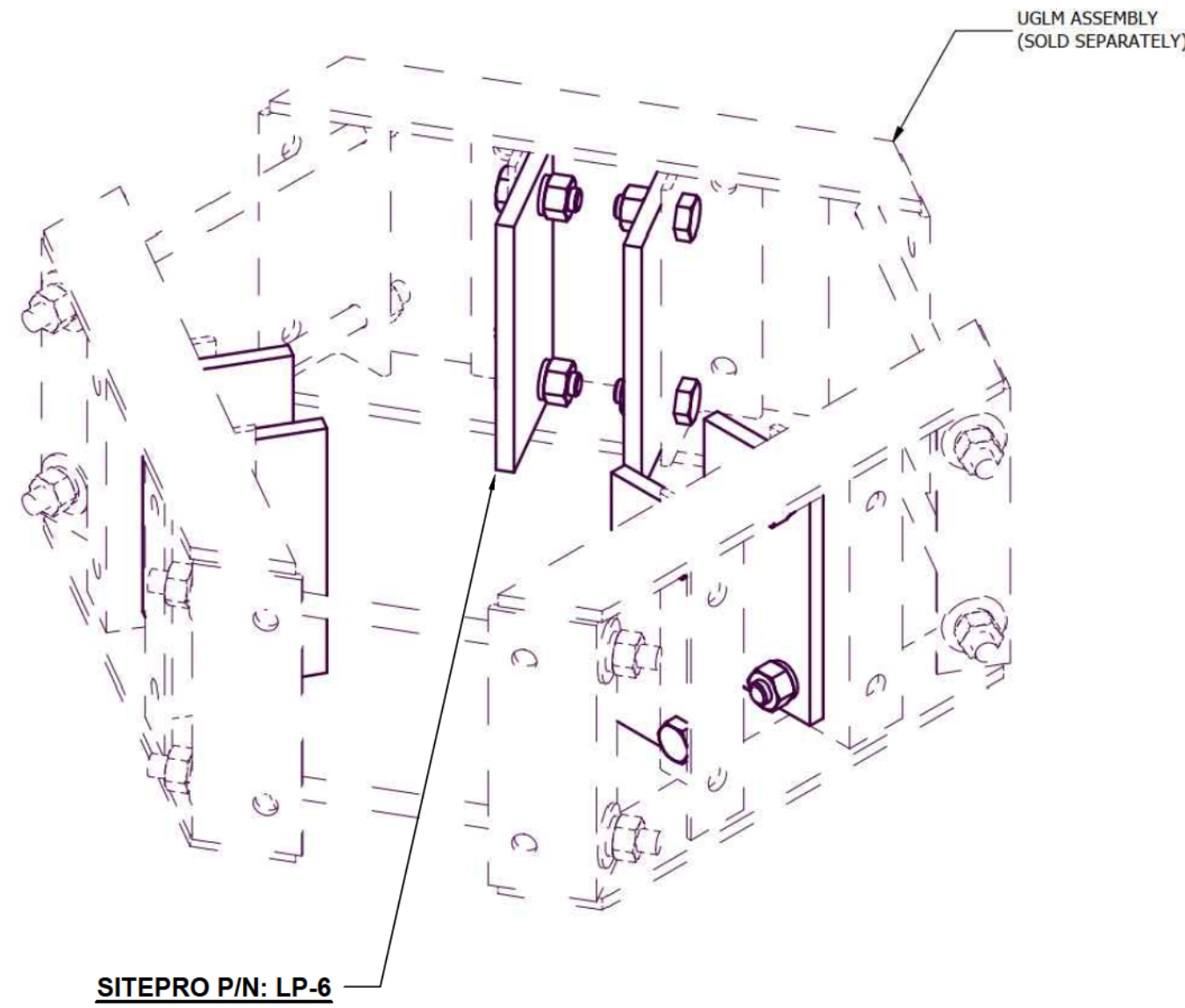


RF-1

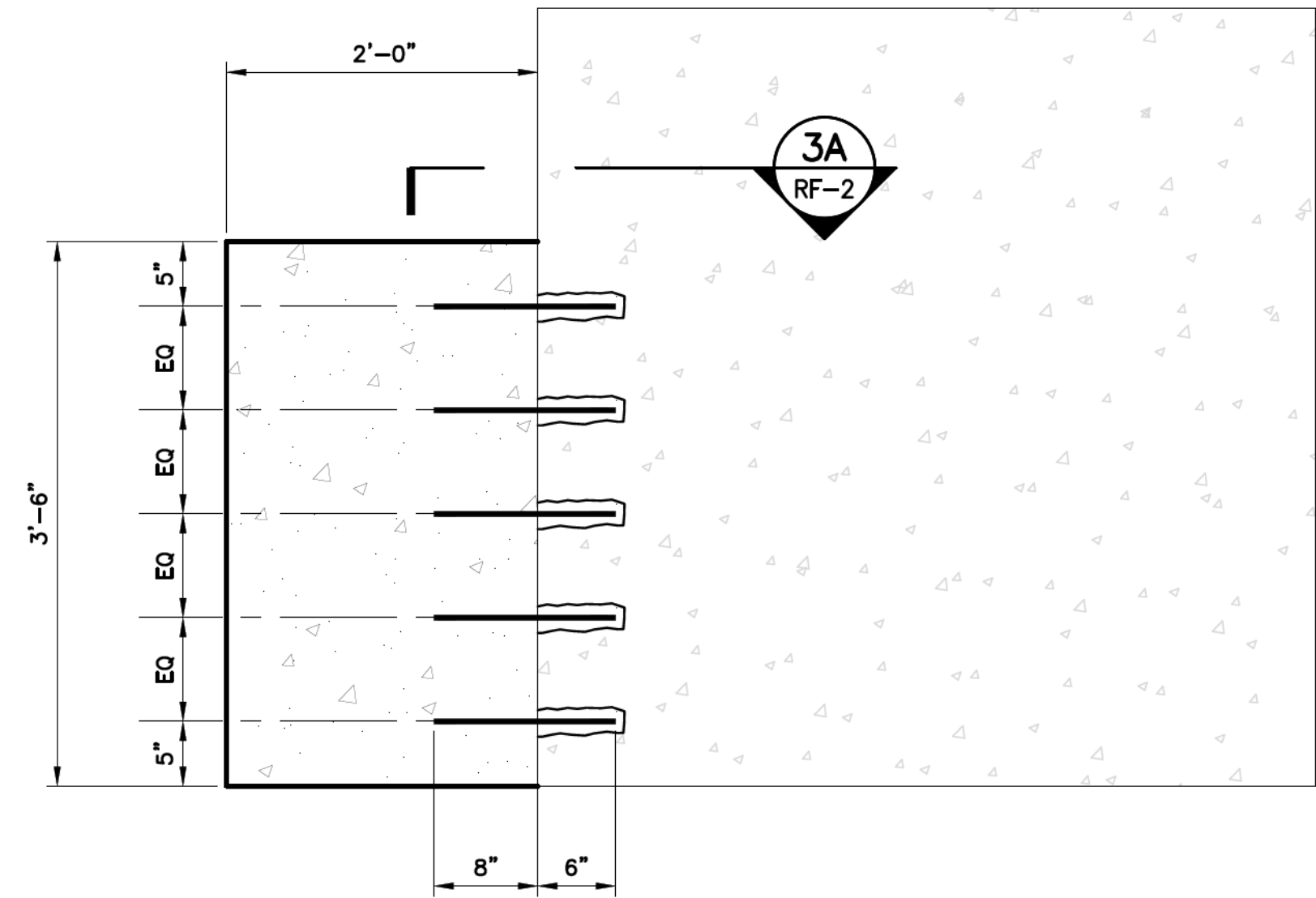
SHEET NO. 6 OF 10



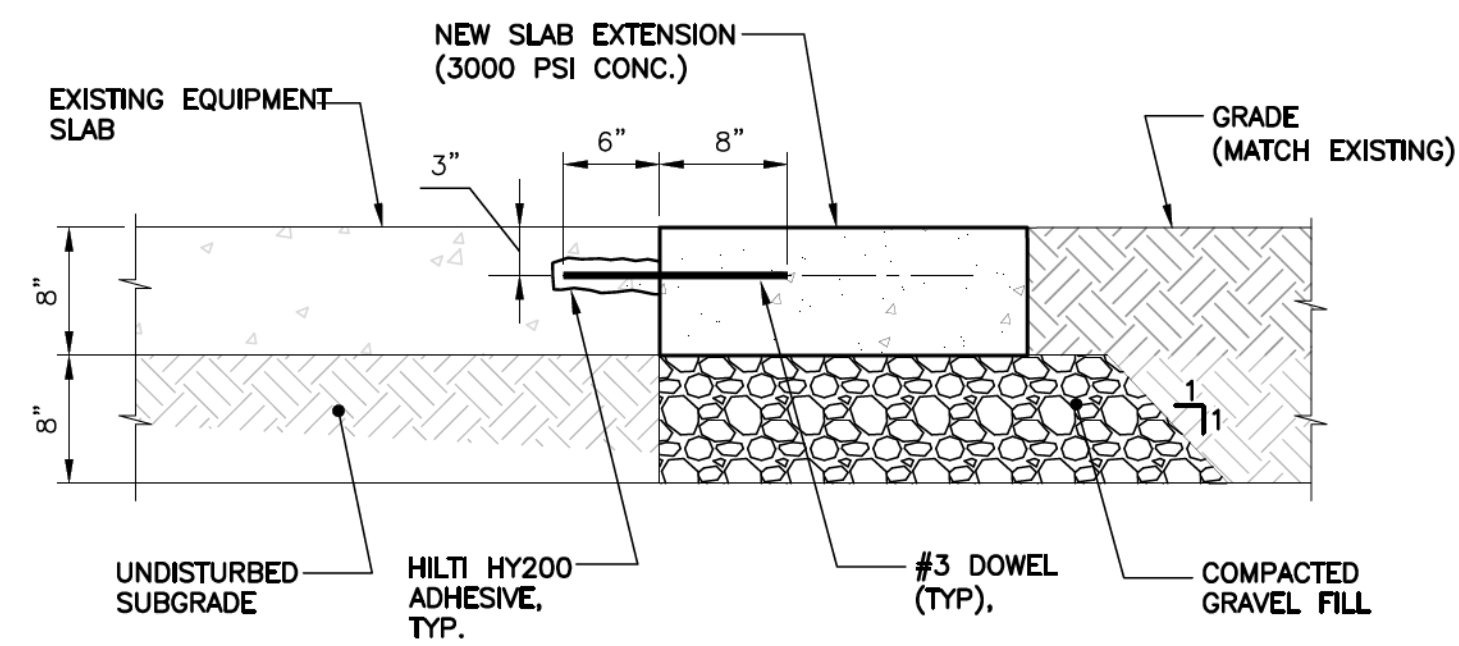
1 PROPOSED ANTENNA MOUNT DETAIL
 RF-2 SCALE: NOT TO SCALE




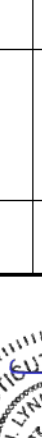
2 PROPOSED ANTENNA MOUNT ADAPTER DETAIL
 RF-2 SCALE: NOT TO SCALE



3 PROPOSED EQUIPMENT PAD EXTENSION DETAIL
 RF-2 SCALE: 1" = 1'



3A PROPOSED EQUIPMENT PAD EXTENSION SECTION DETAIL
 RF-2 SCALE: NOT TO SCALE

T-MOBILE NORTHEAST LLC		SITE NAME: RIDGEFIELD / RT 102		RF EQUIPMENT DETAILS	
DATE: 01/10/25		SITE ID: CT11348A		RF-2	
SCALE: AS NOTED		24 COOPER HILL RD - POLE #3292		SHEET NO. 7 OF 10	
JOB NO. 24066.09		RIDGEFIELD, CT 06877			
CERK engineering Centered on Solutions™		[203] 488-0580 [203] 488-8557 Fax 432 North Branford Road Branford, CT 06405 www.CentelEng.com		T-Mobile®  NORTH EAST NORTHEAST NOR-EAST NOR-EAST	
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GENERAL NOTES

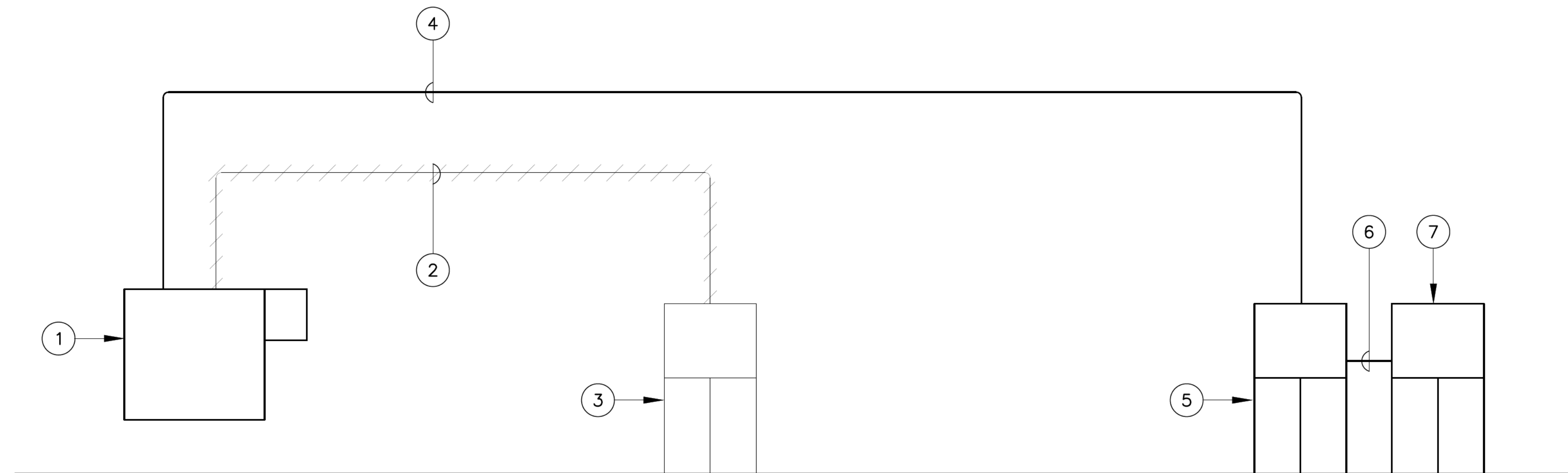
1. CONDUCTOR SIZES SHALL NOT BE REDUCED OR SUBSTITUTED WITHOUT ENGINEERS APPROVAL.
2. ALL CONDUCTORS AND CONDUCTOR TERMINATIONS SHALL BE RATED FOR 75° C OPERATION.

1. CONDUCTOR SIZES SHALL NOT BE REDUCED OR SUBSTITUTED WITHOUT ENGINEERS APPROVAL.
2. ALL CONDUCTORS AND CONDUCTOR TERMINATIONS SHALL BE RATED FOR 75° C OPERATION.

RISER NOTES

1	EXISTING 200A, 240V, SINGLE PHASE PPC TO REMAIN.
2	EXISTING CONDUITS AND CONDUCTORS TO BE REMOVED
3	EXISTING EQUIPMENT CABINET AND ALL ASSOCIATED ACCESSORIES AND WIRING TO BE REMOVED
4	(3) #1 AWG, (1) #6 AWG GROUND, 1-1/2" CONDUIT CONNECTED TO NEW 125A/2P CIRCUIT BREAKER IN EXISTING PPC
5	NEW EQUIPMENT CABINET
6	DC CONDUITS AND CONDUCTORS FOR BATTERY CABINET CONNECTION PER MANUFACTURERS REQUIREMENTS
7	NEW BATTERY CABINET

- ① EXISTING 200A, 240V, SINGLE PHASE PPC TO REMAIN
- ② EXISTING CONDUITS AND CONDUCTORS TO BE REMOVED
- ③ EXISTING EQUIPMENT CABINET AND ALL ASSOCIATED ACCESSORIES AND WIRING TO BE REMOVED
- ④ (3) #1 AWG, (1) #6 AWG GROUND, 1-1/2" CONDUIT CONNECTED TO NEW 125A/2P CIRCUIT BREAKER IN EXISTING PPC
- ⑤ NEW EQUIPMENT CABINET
- ⑥ DC CONDUITS AND CONDUCTORS FOR BATTERY CABINET CONNECTION PER MANUFACTURERS REQUIREMENTS
- ⑦ NEW BATTERY CABINET



1 ELECTRICAL RISER DIAGRAM
E-1 SCALE: NOT TO SCALE



T-MOBILE NORTHEAST LLC

SITE NAME: RIDGEFIELD / RT 102
SITE ID: CT11348A

24 COOPERHILL RD - POLE #3292
RIDGEFIELD, CT 06877

DATE: 01/10/25

SCALE:	AS NOTED
--------	----------

OB NO. 24066.09

ELECTRICAL RISER DIAGRAM

E-1

HEET NO. 8 OF 10



- 1 CONNECTION OF GROUND WIRES TO GROUND BAR
E-2 SCALE: NOT TO SCALE



- ## 2 GROUND BAR DETAIL

E-2 SCALE: NOT TO SCALE



- ### 3 ANTENNA CABLE GROUNDING DETAIL



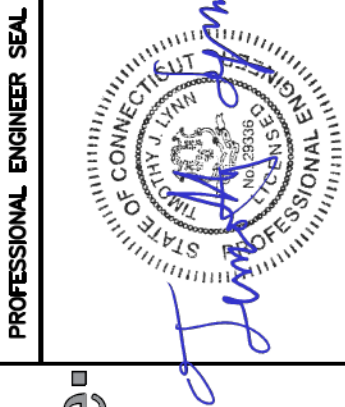
- # 7 ELECTRICAL SCHEMATIC DIAGRAM



5 RRH POLE MOUNT GROUNDING
F-2 SCALE: NOT TO SCALE



REV.	REV.	DATE	DRAWN BY	CHECKED BY	DESCRIPTION
2	06/16/25	TJL	TJR		CONSTRUCTION DRAWINGS – REVISED PER CLIENT COMMENTS
1	06/05/25	SFG	TJR		CONSTRUCTION DRAWINGS – REVISED PER CLIENT COMMENTS
0	05/08/25	SFG	TJR		CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
A	01/10/25	SFG	TJR		CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

CENK engineering
Centered on Solutions™

[203] 488-0580
[203] 488-8587 Fax
633-2 North Branford Road
Branford, CT 06405

T-MOBILE NORTHEAST LLC
SITE NAME: RIDGEFIELD / RT 102
SITE ID: CTT1348A
24 COOPER HILL RD - POLE #3292

DATE:	01/10/25
SCALE:	AS NOTED
JOB NO.	24066.09

TYPICAL ELECTRICAL DETAILS

E-2

SHEET NO. 9 OF 10

SECTION 16010

- B. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.
- B. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNERS REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES THAT MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR THE SCHEDULING OF ALL INSPECTIONS THAT MAY BE REQUIRED BY THE LOCAL AUTHORITY.
- D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
- E. NO MATERIAL OTHER THAN THAT CONTAINED IN THE "LATEST LIST OF ELECTRICAL FITTINGS" APPROVED BY THE UNDERWRITERS' LABORATORIES, SHALL BE USED IN ANY PART OF THE WORK. ALL MATERIAL FOR WHICH LABEL SERVICE HAS BEEN ESTABLISHED SHALL BEAR THE U.L. LABEL.
- F. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.
- G. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.
- H. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THREE (3) COMPLETE SETS OF PROVIDED DRAWINGS, ENGINEERING DATA SHEETS, MAINTENANCE AND OPERATING INSTRUCTION MANUALS FOR ALL SYSTEMS AND THEIR RESPECTIVE EQUIPMENT. THESE MANUALS SHALL BE INSERTED IN VINYL COVERED 3-RING BINDERS AND TURNED OVER TO OWNER'S REPRESENTATIVE ONE (1) WEEK PRIOR TO FINAL PUNCH LIST.
- I. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND WILL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
- J. ALL EQUIPMENT AND MATERIALS TO BE INSTALLED SHALL BE NEW, UNLESS OTHERWISE NOTED.
- K. BEFORE FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS (AS-BUILTS), LEGIBLY MARKED IN RED PENCIL TO SHOW ALL CHANGES FROM THE ORIGINAL PLANS.
- L. PROVIDE TEMPORARY POWER AND LIGHTING IN WORK AREAS AS REQUIRED.
- M. SHOP DRAWINGS:
 - 1. CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF SHOP DRAWINGS ON ALL EQUIPMENT AND MATERIALS PROPOSED FOR USE ON THIS PROJECT, GIVING ALL DETAILS, WHICH INCLUDE DIMENSIONS, CAPACITIES, ETC.
 - 2. CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF ALL TEST REPORTS CALLED FOR IN THE SPECIFICATIONS AND DRAWINGS.
- N. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH OWNER'S SPECIFICATIONS, AND REQUIREMENTS OF ALL LOCAL AUTHORITIES HAVING JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH APPROPRIATE INDIVIDUALS TO OBTAIN ALL SUCH SPECIFICATIONS AND REQUIREMENTS. NOTHING CONTAINED IN, OR OMITTED FROM, THESE DOCUMENTS SHALL RELIEVE CONTRACTOR FROM THIS OBLIGATION.

1.01. CONDUITS

- A. MINIMUM CONDUIT SIZE FOR BRANCH CIRCUITS, LOW VOLTAGE CONTROL AND ALARM CIRCUITS SHALL BE 3/4". CONDUITS SHALL BE PROPERLY FASTENED AS REQUIRED BY THE N.E.C.
- B. THE INTERIOR OF RACEWAYS/ENCLOSURES INSTALLED UNDERGROUND SHALL BE CONSIDERED TO BE WET LOCATION, INSULATED CONDUCTORS SHALL BE LISTED FOR USE IN WET LOCATIONS. PROVIDE WEATHERPROOF CONSTRUCTION IN WET LOCATIONS.
- C. CONDUIT INSTALLED UNDERGROUND SHALL BE INSTALLED TO MEET MINIMUM COVER REQUIREMENTS OF TABLE 300.5.
- D. PROVIDE RIGID GALVANIZED STEEL CONDUIT (RMC) FOR THE FIRST 10 FOOT SECTION WHEN LEAVING A BUILDING OR SECTIONS PASSING THROUGH FLOOR SLABS
- E. ONLY LISTED PVC CONDUIT AND FITTINGS ARE PERMITTED FOR THE INSTALLATION OF ELECTRICAL CONDUCTORS, SUITABLE FOR UNDERGROUND APPLICATIONS.

CONDUIT SCHEDULE SECTION 16111			
CONDUIT TYPE	NEC REFERENCE	APPLICATION	MIN. BURIAL DEPTH (PER NEC TABLE 300.5) ^{1,2}
EMT	ARTICLE 358	INTERIOR CIRCUITING, EQUIPMENT ROOMS, SHELTERS	N/A
RMC, RIGID GALV. STEEL	ARTICLE 344, 300.5, 300.50	ALL INTERIOR/ EXTERIOR CIRCUITING, ALL UNDERGROUND INSTALLATIONS.	6 INCHES
PVC, SCHEDULE 40	ARTICLE 352, 300.5, 300.50	INTERIOR/ EXTERIOR CIRCUITING AND GROUNDING SYSTEMS, UNDERGROUND INSTALLATIONS, WHERE NOT SUBJECT TO PHYSICAL DAMAGE. ¹	18 INCHES
PVC, SCHEDULE 80	ARTICLE 352, 300.5, 300.50	INTERIOR/ EXTERIOR CIRCUITING AND GROUNDING SYSTEMS, UNDERGROUND INSTALLATIONS, WHERE SUBJECT TO PHYSICAL DAMAGE. ¹	18 INCHES
LIQUID TIGHT FLEX. METAL	ARTICLE 350	SHORT LENGTHS (MAX. 3FT.) WIRING TO VIBRATING EQUIPMENT IN WET LOCATIONS.	N/A
FLEX. METAL	ARTICLE 348	SHORT LENGTHS (MAX. 3FT.) WIRING TO VIBRATING EQUIPMENT IN WET LOCATIONS.	N/A

¹ PHYSICAL DAMAGE IS SUBJECT TO THE AUTHORITY HAVING JURISDICTION.

² UNDERGROUND CONDUIT INSTALLED UNDER ROADS, HIGHWAYS, DRIVEWAYS, PARKING LOTS SHALL HAVE MINIMUM DEPTH OF 24".

³ WHERE SOLID ROCK PREVENTS COMPLIANCE WITH MINIMUM COVER DEPTHS, WIRING SHALL BE INSTALLED IN PERMITTED RACEWAY FOR DIRECT BURIAL. THE RACEWAY SHALL BE COVERED BY A MINIMUM OF 2" OF CONCRETE EXTENDING DOWN TO ROCK.

1.01. CONDUCTORS

- A. ALL CONDUCTORS SHALL BE TYPE THWN (INT. APPLICATION) AND XHHW (EXT. APPLICATION), 75 DEGREE C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER. #10 AWG AND SMALLER SHALL BE SPLICED USING ACCEPTABLE SOLDERLESS PRESSURE CONNECTORS. #8 AWG AND LARGER SHALL BE SPLICED USING COMPRESSION SPLIT-BOLT TYPE CONNECTORS. #12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZE(S). CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION:
- | LINE | COLOR | 220/208/240V | COLOR | 220/480V |
|------|------------------|--------------|--------------------------|----------|
| A | BLACK | | BROWN | |
| B | RED | | ORANGE | |
| C | BLUE | | YELLOW | |
| N | CONTINUOUS GREEN | | GREY | |
| G | CONTINUOUS GREEN | | GREEN WITH YELLOW STRIPE | |
- B. MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.

1.01. GROUNDING

- A. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
- B. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
- C. GROUNDING OF PANELBOARDS:
1. PANELBOARD SHALL BE GROUND BY TERMINATING THE PANELBOARD FEEDER'S EQUIPMENT GROUND CONDUCTOR TO THE EQUIPMENT GROUND BAR KIT(S) LUGGED TO THE CABINET. ENSURE THAT THE SURFACE BETWEEN THE KIT AND CABINET ARE BARE METAL TO BARE METAL. PRIME AND PAINT OVER TO PREVENT CORROSION.
 2. CONDUIT(S) TERMINATING INTO THE PANELBOARD SHALL HAVE GROUNDING TYPE BUSHINGS. THE BUSHINGS SHALL BE BONDED TOGETHER WITH BARE #10 AWG COPPER CONDUCTOR WHICH IN TURN IS TERMINATED INTO THE PANELBOARD'S EQUIPMENT GROUND BAR KIT(S).
- D. EQUIPMENT GROUNDING CONDUCTOR:
1. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122.
 2. THE MINIMUM SIZE OF EQUIPMENT GROUND CONDUCTOR SHALL BE #12 AWG COPPER.
 3. EACH FEEDER OR BRANCH CIRCUIT SHALL HAVE EQUIPMENT GROUND CONDUCTOR(S) INSTALLED IN THE SAME RACEWAY(S).
- E. CELLULAR GROUNDING SYSTEM:
- CONTRACTOR SHALL PROVIDE A CELLULAR GROUNDING SYSTEM WITH THE MAXIMUM AC RESISTANCE TO GROUND OF 0.1 OHM BETWEEN ANY POINT ON THE GROUNDING SYSTEM AS MEASURED BY 3-POINT GROUNDING TEST. (REFER TO SECTION 16960).
- PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS, INCLUDING, BUT NOT LIMITED TO:
1. GROUND BARS
 2. EXTERIOR GROUNDING (WHERE REQUIRED DUE TO MEASURED AC RESISTANCE GREATER THAN SPECIFIED).
 3. ANTENNA GROUND CONNECTIONS AND PLATES.
- F. CONTRACTOR, AFTER COMPLETION OF THE COMPLETE GROUNDING SYSTEM BUT PRIOR TO CONCEALMENT/BURIAL OF SAME, SHALL NOTIFY OWNER'S PROJECT ENGINEER WHO WILL HAVE A DESIGN ENGINEER VISIT SITE AND MAKE A VISUAL INSPECTION OF THE GROUNDING GRID AND CONNECTIONS OF THE SYSTEM.
- G. ALL EQUIPMENT SHALL BE BONDED TO GROUND AS REQUIRED BY N.E.C., MFG. SPECIFICATIONS, AND OWNER'S SPECIFICATIONS.

1.01. TESTS BY INDEPENDENT ELECTRICAL TESTING FIRM

- A. CONTRACTOR SHALL RETAIN THE SERVICES OF A LOCAL INDEPENDENT ELECTRICAL TESTING FIRM (WITH MINIMUM 5 YEARS COMMERCIAL EXPERIENCE IN THE ELECTRICAL TESTING INDUSTRY) AS SPECIFIED BY OWNER TO PERFORM:
- TEST 1: THERMAL OVERLOAD AND MAGNETIC TRIP TEST, AND CABLE INSULATION TEST FOR ALL CIRCUIT BREAKERS RATED 100 AMPS OR GREATER.
- TEST 2: RESISTANCE TO GROUND TEST ON THE CELLULAR GROUNDING SYSTEM.
- THE TESTING FIRM SHALL INCLUDE THE FOLLOWING INFORMATION WITH THE REPORT:
1. TESTING PROCEDURE INCLUDING THE MAKE AND MODEL OF TEST EQUIPMENT.
 2. CERTIFICATION OF TESTING EQUIPMENT CALIBRATION WITHIN SIX (6) MONTHS OF DATE OF TESTING. INCLUDE CERTIFICATION LAB ADDRESS AND TELEPHONE NUMBER.
 3. GRAPHICAL DESCRIPTION OF TESTING METHOD ACTUALLY IMPLEMENTED.
- B. THESE TESTS SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF OWNER'S CONSTRUCTION REPRESENTATIVE. TESTING DATA SHALL BE INITIALED AND DATED BY THE CONSTRUCTION REPRESENTATIVE AND INCLUDED WITH THE WRITTEN REPORT/ANALYSIS.
- C. THE CONTRACTOR SHALL FORWARD SIX (6) COPIES OF THE INDEPENDENT ELECTRICAL TESTING FIRM'S REPORT/ANALYSIS TO ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE JOB TURNOVER.
- D. CONTRACTOR TO PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE TO OWNER AND ENGINEER FOR ALL TESTS REQUIRING WITNESSING.

1.01. TESTS BY CONTRACTOR

- A. ALL TESTS AS REQUIRED UPON COMPLETION OF WORK, SHALL BE MADE BY THIS CONTRACTOR. THESE SHALL BE CONTINUITY AND INSULATION TESTS; TEST TO DETERMINE THE QUALITY OF MATERIALS, ETC. AND SHALL BE MADE IN ACCORDANCE WITH N.E.C. RECOMMENDATIONS. ALL FEEDERS AND BRANCH CIRCUIT WIRING (EXCEPT CLASS 2 SIGNAL CIRCUITS) MUST BE TESTED FREE FROM SHORT CIRCUIT AND GROUND FAULT CONDITIONS AT 500V IN A REASONABLY DRY AMBIENT OF APPROXIMATELY 70 DEGREES F.
- B. CONTRACTOR SHALL PERFORM LOAD PHASE BALANCING TESTS. CIRCUITS SHALL BE CONNECTED TO THE PANELBOARDS SO THAT THE NEW LOAD IS DISTRIBUTED AS EQUALLY AS POSSIBLE BETWEEN EACH LOAD AND NEUTRAL. LOAD SHALL BE CONSIDERED REASONABLE AND ACCEPTABLE ALLOWANCE. BRANCH CIRCUITS SHALL BE BALANCED ON THEIR OWN PANELBOARDS; FEEDER LOADS SHALL, IN TURN, BE BALANCED ON THE SERVICE EQUIPMENT. REASONABLE LOAD TEST SHALL BE ARRANGED TO VERIFY LOAD BALANCE IF REQUESTED BY THE ENGINEER.
- C. ALL TESTS, UPON REQUEST, SHALL BE REPEATED IN THE PRESENCE OF OWNER'S REPRESENTATIVE. ALL TESTS SHALL BE DOCUMENTED AND TURNED OVER TO OWNER. OWNER SHALL HAVE THE AUTHORITY TO STOP ANY OF THE WORK NOT BEING PROPERLY INSTALLED, ALL SUCH DETECTED WORK SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER AND THE TESTS SHALL BE REPEATED.

[illegible]

Exhibit D

Structural Analysis Report

**Structural Analysis of
Antenna Mast and Pole**

T-Mobile Site Ref: CT11348A

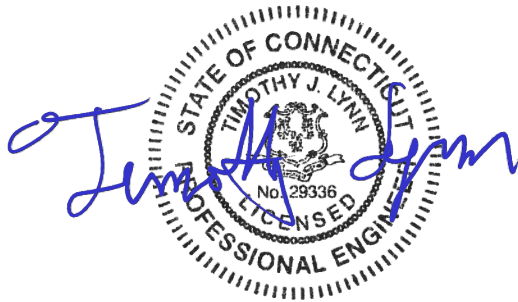
*Eversource Structure No. 3292
83.5' (AGL) Electric Transmission Pole*

*24 Cooperhill Road
Ridgefield, CT*

CEN TEK Project No. 24066.09

*~~Date: January 14, 2025~~
Rev 1: February 25, 2025*

Max Stress Ratio = 99%



Prepared for:
T-Mobile USA
35 Griffin Road
Bloomfield, CT 06002

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Introduction

The purpose of this report is to design the replacement antenna mast and analyze 83.5' (AGL) utility pole located at 24 Cooperhill Road in Ridgefield, CT for the proposed antenna and equipment upgrade by T-Mobile.

The existing/proposed loads consist of the following:

- **T-MOBILE (Existing to Remain):**
Mast: Six (6) 7/8" Ø coax cables mounted to the exterior of the pole/mast
- **T-MOBILE (Existing to be Removed):**
Antennas: Three (3) EMS RR90-1702DP panel antennas flush mounted with a RAD center elevation of 97-ft above grade.
Mast: 4" Sch. 40 Pipe.
- **T-MOBILE (Proposed):**
Antennas: Three (3) Commscope FVV-65B-R3 panel antennas and three (3) Andrew ATSBT-TOP-MF-4G Smart Bias Tees flush mounted with a RAD center elevation of 92.5-ft above grade.
Coax Cables: Eighteen (18) 7/8" Ø coax cables mounted to the exterior of the pole/mast.
Mast: 8" Sch. 80 Pipe.

Primary assumptions used in the analysis

- Design steel stresses are defined by AISC-LRFD 15th edition for design of the antenna Mast and antenna supporting elements.
- ASCE Manual No. 48-19, "Design of Steel Transmission Pole Structures", defines steel stresses for evaluation of the utility pole.
- All utility tower members are adequately protected to prevent corrosion of steel members.
- All proposed antenna mounts are modeled as listed above.
- All coaxial cable will be installed within the antenna mast unless specified otherwise.
- Antenna mast will be properly installed and maintained.
- No residual stresses exist due to incorrect pole erection.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds conform to the requirements of AWS D1.1.
- Antenna mast and utility pole will be in plumb condition.
- Utility pole was properly installed and maintained and all members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
- Any deviation from the analyzed loading will require a new analysis for verification of structural adequacy.

Analysis

The proposed replacement mast consisting of a 8-in x 21.0-ft long SCH. 80 pipe (O.D. = 8.625") connected at two points to the existing tower was analyzed for its ability to resist loads prescribed by the TIA-222-H standard. Section 5 of this report details these gravity and lateral wind loads. NESC prescribed loads were also applied to the mast in order to obtain reactions needed for analyzing the utility pole structure. These loads are developed in Section 7 of this report. Load cases and combinations used in RISA-3D for TIA-222-H loading and for NESC/EVERSOURCE loading are listed in report Sections 6 and 8, respectively.

Design Basis

Our analysis was performed in accordance with the 2021 International Building Code as modified by the 2022 CT State Building Code; ASCE 48-19, "Design of Steel Transmission Pole Structures", NESC C2-2023 and Eversource Design Criteria.

▪ UTILITY POLE ANALYSIS

The purpose of this analysis is to determine the adequacy of the existing utility structure to support the proposed antenna loads. The loading and design requirements were analyzed in accordance with the EVERSOURCE Design Criteria Table, NESC C2-2023 ~ Construction Grade B, and ASCE Manual No. 48-19, "Design Of Steel Transmission Pole Structures".

Load cases considered:

Load Case 1: NESC Heavy

Wind Pressure.....	4.0 psf
Radial Ice Thickness.....	0.5"
Vertical Overload Capacity Factor.....	1.50
Wind Overload Capacity Factor.....	2.50
Wire Tension Overload Capacity Factor.....	1.65

Load Case 2: NESC Extreme

Wind Speed.....	110 mph ⁽¹⁾
Radial Ice Thickness.....	0"

Note 1: NESC C2-2023, Section 25, Rule 250C: Extreme Wind Loading, 1.25 x Gust Response Factor (wind speed: 3-second gust)

▪ MAST ASSEMBLY ANALYSIS

Mast, appurtenances and connections to the utility tower were analyzed and designed in accordance with TIA-222-H and AISC standards.

Load cases considered:

Load Case 1:

Wind Speed.....	125 mph (2022 CSBC Appendix-P)
Radial Ice Thickness.....	0"

Load Case 2:

Wind Pressure.....	50 mph wind pressure
Radial Ice Thickness.....	1.0"

Results

▪ MAST ASSEMBLY

The proposed pipe mast was determined to be structurally **adequate**.

Component	Stress Ratio (percentage of capacity)	Result
8" Sch. 80	19.1%	PASS
Connection to Tower	17.1%	PASS

▪ UTILITY POLE

This analysis finds that the subject utility pole is adequate to support the antenna mast and related appurtenances. The pole stresses meet the requirements set forth by the ASCE 48-19, "Design of Steel Transmission Pole Structures" for the applied NESC Heavy and Extreme load cases. The detailed analysis results are provided in Section 9 of this report. The analysis results are summarized as follows:

A maximum usage of **99.19** occurs in the utility pole under the **NESC Extreme** loading condition.

POLE SECTION:

The utility pole was found to be structurally **adequate**.

Tower Section	Elevation	Stress Ratio (% of capacity)	Result
Tube Number 2	43.50' -63.50' (AGL)	99.19%	PASS

BASE REACTIONS:

From PLS-Pole analysis based on NESC/EVERSOURCE prescribed loads.

Load Case	Shear	Axial	Moment
NESC Heavy Wind	8.97 kips	30.65 kips	638.72 ft-kips
NESC Extreme Wind	13.23 kips	14.97 kips	836.44 ft-kips

Note 1 – 10% increase will be applied to tower base reactions for foundation verification per OTRM 051

POLE DIRECT EMBEDMENT:

The existing utility pole is directly embedded 11.5-ft into the ground within a 52" diameter steel canister.

Type	Embedment Required	Embedment Provided	Result
Direct Embedment	11.1-ft	11.5-ft	PASS

| Note 1: 10% increase to PLS base reactions used in embedment analysis per OTRM 051.

C o n c l u s i o n

This analysis shows that the subject utility pole **and proposed replacement antenna mast are adequate** to support the proposed equipment upgrade.

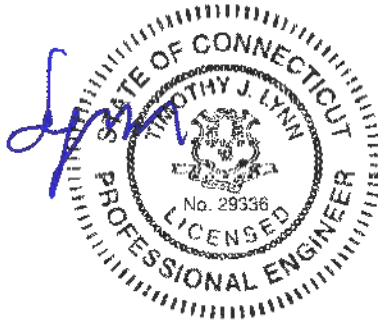
The analysis is based, in part on the information provided to this office by Eversource and T-Mobile. If the existing conditions are different than the information in this report, CENTEK engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:



Timothy J. Lynn, PE
Structural Engineer



STANDARD CONDITIONS FOR FURNISHING OF
PROFESSIONAL ENGINEERING SERVICES ON
EXISTING STRUCTURES

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of CENTEK engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to CENTEK engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the “as new” condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222.
- All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. CENTEK engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM ~ RISA - 3 D

RISA-3D Structural Analysis Program is an integrated structural analysis and design software package for buildings, bridges, tower structures, etc.

Modeling Features

- Comprehensive CAD-like drawing/editing environment: draw, generate, modify and load elements as well as snap, move, rotate, copy, mirror, scale, split, merge, mesh, delete, apply, trim, extend, etc.
- Versatile drawing grids (orthogonal, radial, skewed, DXF underlay)
- Universal snaps and object snaps allow drawing without grids
- Powerful graphic select/unselect tools including box, line, polygon, invert, criteria, spreadsheet based, save/recall selections with locking
- True spreadsheet editing with cut, paste, fill, math, sort, find, etc.
- Dynamic synchronization between spreadsheets and graphics
- Open multiple spreadsheets simultaneously
- Constant in-stream error checking and data validation
- Unlimited undo/redraw capability, automatic timed backup
- Generation templates for grids, disks, cylinders, cones, arcs, trusses, tanks, hydrostatic loads, geodesic domes, etc.
- Support for all units systems & conversions at any time
- Automatic interaction with RISASection custom shape libraries
- Steel Shapes: AISC, Historic, Australian, British, Canadian, Chilean, Chinese, European, Indian, Mexican
- Light Gage Shapes: AISI, SSMA, Dale/Incor, Dietrich, Marino\WARE
- Import DXF, RISA-2D, STAAD and CIS/2 files
- Export DXF, SDNF and CIS/2 files
- Robust two-way link with Revit Structure 2019
- Link with Tekla Structures 2018

Analysis Features

- Analysis of 1D members (beams, columns, braces, etc.) using Finite Element Method
- Analysis of 2D elements (plates, walls) using Finite Element Method
- Analysis of 3D elements (solids) using Finite Element Method
- Partial fixity member end releases using rotational spring constants
- Time History Analysis
- Accelerated true sparse solver for static analysis
- Flexible modeling of P-Delta effects
- Accelerated Sparse Lanczos dynamics solver, very fast and robust
- Multiple simultaneous dynamic and response spectra analysis using Gupta, CQC or SRSS with automatic calc of scaling factors
- Automatic inclusion of mass offset (5% or user defined) for dynamics when integrated with RISAFloor
- Ritz vector dynamic solver
- True physical member modeling (members are aware of interior joints)
- Plate/shell elements with plane stress only option
- 8 node solid elements
- High end mesh generation — draw a polygon with any number of sides to create a mesh of well formed quadrilateral (NO triangular) elements
- Automatic rigid diaphragm modeling with detachable joints

- Area loads with one-way or two-way distributions with optional “blow through” distribution for loading open structures
- Plate thermal loads
- Simultaneous moving loads, AASHTO/custom for bridges, cranes...
- Torsional warping calculations for stiffness, stress and design of hot rolled steel
- Member end releases, rigid end offsets, analysis offsets
- Enforced joint displacements
- One Way members, for tension only bracing, slipping, etc.
- One Way springs, for modeling soils and other effects
- Euler members: Compression up to buckling load, then disable
- Stress calculations on any arbitrary shape
- Inactivate members, plates, solids and diaphragms without deleting them
- Story drift calculations provide relative drift and ratio to height
- Automatic self-weight calculations for members, plates and solids

Graphics Features

- Unlimited simultaneous model view windows
- “True to scale” rendering with translucency, even when drawing
- High-speed redraw algorithm for instant refreshing
- Dynamically zoom, pan, rotate, scroll, snap views
- Font and color control
- Saved views to quickly restore frequent or desired views
- Rendered or wire-frame animations of deflected model and mode shapes
- Animation of moving loads with speed control
- Distance tool for measuring between points
- Force/moment summation about any arbitrary cut line
- High quality customizable graphics printing

Design Codes

- Steel Design Codes: AISC 360-16/10/05: ASD & LRFD, AISC 2nd & 3rd: LRFD, AISC 9th: ASD, CSA S16-14/09/05/01/CSA-S16.1-94, BS 5950-1: 2000, EN 1993-1-1:2014/2005, ENV 1993-1-1:1992, IS 800: 2007/1998, AS 4100-1998, NZS 3404: 1997
- Seismic design per AISC 341-10/05, including 358 prequalified connections
- Concrete Design Codes: ACI 318-14/11/08/05/02/99, CSA A23.3-14/04/94, NTC-DF 2004, BS 8110-1: 1997, BS EN 1992-1-1: 2004+A1: 2014/2004, EN 1992-1-1:1992, IS 456: 2000, AS 3600-2001, NZS 3101: 1995, SBC 304-2007
- Cold Formed Steel Design Codes: AISI S100-16/12/10/07: ASD & LRFD, AISI NAS-04/01: ASD & LRFD, AISI 1999: ASD & LRFD, CSA S136-16/12/10/07/04/01: LSD, CANACERO 16: ASD, CANACERO 12/10/07/04/01: ASD & LRFD
- Aluminum Design Codes: AA ADM1-15/10: ASD & LRFD, AA ADM1-05: ASD
- Wood Design Codes: AWC NDS-18/15/12: ASD, AF&PA NDS-08/05/01/97/91: ASD, CSA 086-14/09 Ultimate, Structural Composite Lumber, multi-ply, full sawn, Glulam, shear walls
- Masonry Design Codes: TMS 402-16: ASD & Strength, ACI 530-13/11/08/05/02: ASD & Strength, ACI 530-99: ASD, UBC 1997: ASD & Strength
- Stainless Steel Design Code: AISC 360-10: ASD & LRFD
- Wind loads are generated automatically (ASCE 7-16/10/05/02/98/95, NBC 15/10/05, NTC 2004, & IS 875: 1987) for building-type structures, including partial wind cases
- Seismic loads are generated automatically (ASCE 7-16/10/05/02, CBC 2001, IBC 2000, UBC 1997, NBC 15/10/05, NTC 2004, & IS 1893: 2002) for building-type structures, including accidental torsion

Design Features

- Designs/optimizes concrete, hot rolled & cold formed steel, masonry, wood and aluminum
- Program selected or user-defined rebar layouts for flexure and shear
- Concrete beam detailing (Rectangular, T and L).
- Concrete column interaction diagrams
- Concrete wall design including in-plane, out-of-plane & bearing loads
- Automatic spectra generation for ASCE 7, NBC, IS 1893, NTC
- Extensive user controlled generation of load combinations
- Intelligent unbraced length calculations for physical members
- Tapered wide flange design per AISC Design Guide 25
- Masonry wall design for in-plane and out-of-plane
- Wood Shapes: Complete NDS species/grade and Glulam database
- Complete wood wall design for bearing & shear walls: Segmented, Perforated & Force Transfer Around Openings design methods
- Strap and Hold Down design for Wood Shear Walls
- Seismic design of concrete walls using ACI 318-14 Chapter 18
- Concrete seismic coupling beams for multi-story walls with diaphragms

Results Features

- Graphic presentation of color-coded results and plotted designs
- Color contours on plates, solid stresses/forces with smoothing and animation
- Spreadsheet results with sorting and filtering of: deflections, forces, stresses, optimized sizes for strength or deflection, code designs, concrete reinforcing, material takeoffs, etc.
- Standard and user-defined reports
- Graphic member detail reports with force/stress/deflection diagrams and detailed design calculations and expanded diagrams

Integrated Building Design

RISA-3D, RISAFloor, RISAFoundation and RISACONNECTION are so tightly integrated that they operate as one program on the same building model. Optimize the gravity system in RISAFloor, the lateral system in RISA-3D, the connection design in RISACONNECTION and the foundation system in RISAFoundation, with a complete flow of information both ways.

General Features

- Compatible with Windows 7/8.1/10 (64-bit Windows)
- Program technical support provided by Professional Engineers

GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM ~ PLS - POLE

PLS-POLE provides all of the capabilities a structural engineer requires to design transmission, substation or communications structures. It does so using a simple easy to use graphical interface that rests upon our time tested finite element engine. Regardless of whether you want to model a simple wood pole or a guyed steel X-Frame; PLS-POLE can handle the job simply, reliably and efficiently.

Modeling Features:

- Structures are made of standard reusable components that are available in libraries. You can easily create your own libraries or get them from a manufacturer
- Structure models are built interactively using interactive menus and graphical commands
- Automatic generation of underlying finite element model of structure
- Steel poles can have circular, 4, 6, 8, 12, 16, or 18-sided, regular, elliptical or user input cross sections (flat-to-flat or tip-to-tip orientations)
- Steel and concrete poles can be selected from standard sizes available from manufacturers
- Automatic pole class selection
- Cross brace position optimizer
- Capability to specify pole ground line rotations
- Capability to model foundation displacements
- Can optionally model foundation stiffness
- Guys are easily handled (modeled as exact cable elements in nonlinear analysis)
- Powerful graphics module (members color-coded by stress usage)
- Graphical selection of joints and components allows graphical editing and checking
- Poles can be shown as lines, wire frames or can be rendered as 3-d polygon surfaces

Analysis Features:

- Automatic distribution of loads in 2-part suspension insulators (v-strings, horizontal vees, etc.)
- Design checks for ASCE, AS/NZS 7000 or other requirements
- Automatic calculation of dead and wind loads
- Automated loading on structure (wind, ice and drag coefficients) according to:
 - ASCE 74-1991, 2009
 - NESC 2002, 2007, 2012, 2017
 - IEC 60826:2003
 - IS 802 : 1995, 2015
 - EN50341-1:2001 and 2012 (CENELEC)
 - EN50341-3-2:2001 (Belgium NNA)
 - EN50341-3-9:2001, EN50341-2-9:2015, 2017 (UK NNA)
 - EN50341-3-17:2001 (Portugal NNA)
 - AS/NZS 7000:2010
 - ESAA C(b)1-2003 (Australia)
 - TPNZ (New Zealand)
 - REE (Spain)
 - Russian 7th
 - ISEC-NCR-83
- Automated microwave antenna loading as per ANSI/TIA 222-H
- Detects buckling by nonlinear analysis

Results Features:

- Detects buckling by nonlinear analysis
- Easy to interpret text, spreadsheet and graphics design summaries
- Automatic determination of allowable wind and weight spans
- Automatic determination of interaction diagrams between allowable wind and weight spans
- Automatic tracking of part numbers and costs

Criteria for Design of PCS Facilities On or
Extending Above Metal Electric Transmission
Towers & Analysis of Transmission Towers
Supporting PCS Masts ⁽¹⁾

Introduction

This criteria is the result from an evaluation of the methods and loadings specified by the separate standards, which are used in designing telecommunications towers and electric transmission towers. That evaluation is detailed elsewhere, but in summary; the methods and loadings are significantly different. This criteria specifies the manner in which the appropriate standard is used to design PCS facilities including masts and brackets (hereafter referred to as “masts”), and to evaluate the electric transmission towers to support PCS masts. The intent is to achieve an equivalent level of safety and security under the extreme design conditions expected in Connecticut and Massachusetts.

ANSI Standard TIA-222-H covering the design of telecommunications structures specifies LRFD design approach. This approach applies the loads from extreme weather loading condition and designs the structure so that it does not exceed code defined percentage of failure strength.

ANSI Standard C2-2023 (National Electrical Safety Code) covering the design of electric transmission metal structures is based upon an ultimate strength/yield stress design approach. This approach applies a multiplier (overload capacity factor) to the loads possible from extreme weather loading conditions and designs the structure so that it does not exceed its ultimate strength (yield stress).

Each standard defines the details of how loads are to be calculated differently. Most of the Eversource effort in “unifying” both codes was to establish what level of strength each approach would provide, and then increasing the appropriate elements of each to achieve a similar level of security under extreme weather loadings.

Two extreme weather conditions are considered. The first is an extreme wind condition (hurricane) based upon a 1700-year recurrence for TIA-222-H risk category III and a 100-year recurrence for NESC Grade B. The second is a winter condition combining wind and ice loadings.

The following sections describe the design criteria for any PCS mast extending above the top of an electric transmission tower, and the analysis criteria for evaluating the loads on the transmission tower from such a mast from the lower portions of such a mast, and loads on the pre-existing electric lower portions of such a mast, and loads on the pre-existing electric transmission tower and the conductors it supports.

| Note 1: Prepared from documentation provide from Eversource.

P C S M a s t

The PCS facility (mast, external cable/trays, including the initial and any planned future support platforms, antennas, etc. extending the full height above the top level of the electric transmission structure) shall be designed in accordance with the provisions of TIA 222-H:

E L E C T R I C T R A N S M I S S I O N T O W E R

The electric transmission tower shall be analyzed using yield stress theory in accordance with the attached table titled “Eversource Design Criteria”. This specifies uniform loadings (different from the TIA loadings) on the each of the following components of the installed facility:

- PCS mast for its total height above ground level, including the initial and planned future support platforms, antennas, etc. above the top of an electric transmission structure.
- Conductors are related devices and hardware.
- Electric transmission structure. The loads from the PCS facility and from the electric conductors shall be applied to the structure at conductor and PCS mast attachment points, where those load transfer to the tower.

The uniform loadings and factors specified for the above components in the table are based upon the National Electrical Safety Code 2023 Edition Extreme Wind (Rule 250C), Combined Ice and Wind (Rule 250B-Heavy) and Combined Extreme Ice and Wind (Rule 250D – as appropriate) Loadings These provide equivalent loadings compared to TIA and its loads and factors with the exceptions noted above. (Note that the NESC does not require the projected wind surfaces of structures and equipment to be increased by the ice covering.)

In the event that the electric transmission tower is not sufficient to support the additional loadings of the PCS mast, reinforcement will be necessary to upgrade the strength of the overstressed members.

Overhead Transmission Standards

Attachment A Eversource Design Criteria

		Attachment A ES Design Criteria	Basic Wind Speed	Pressure	Height Factor	Gust Factor	Load or Stress Factor	Force Coef. - Shape Factor	
			V (MPH)	Q (PSF)	Kz	Gh			
Ice Condition	TIA/EIA	Antenna Mount	TIA	TIA (0.75Wi)	TIA	TIA	TIA, Section 3.1.1.1 disallowed for connection design	TIA	
	NESC Heavy	Tower/Pole Analysis with antennas extending above top of Tower/Pole (Yield Stress)	-----	4	1	1	2.5	1.6 Flat Surfaces 1.3 Round Surfaces	
		Tower/Pole Analysis with antennas below top of Tower/Pole (on two faces)	-----	4	1	1	2.5	1.6 Flat Surfaces 1.3 Round Surfaces	
		Conductors:		Conductor Loads Provided by ES					
High Wind Condition	TIA/EIA	Antenna Mount	85	TIA	TIA	TIA	TIA, Section 3.1.1.1 disallowed for connection design	TIA	
	NESC Extreme Wind	Tower/Pole Analysis with antennas extending above top of Tower/Pole	For wind speed use OTRM 060 Map 1, Rule 250C: Extreme Wind Loading Apply a 1.25 x Gust Response Factor to all telecommunication equipment projected above top of tower/pole and apply a 1.0 x Gust Response Factor to the tower/pole structure					1.6 Flat Surfaces 1.3 Round Surfaces	
		Tower/Pole Analysis with antennas below top of Tower/Pole	For wind speed use OTRM 060 Map 1, Rule 250C: Extreme Wind Loading Height above ground is based on overall height to top of tower/pole					1.6 Flat Surfaces 1.3 Round Surfaces	
		Conductors:		Conductor Loads Provided by ES					
NESC Extreme Ice with Wind Condition*		Tower/Pole Analysis with antennas extending above top of Tower/Pole	For wind speed use OTRM 060 Map 1, Rule 250D: Extreme Ice with Wind Loading 4 PSF Wind Load 1.25 x Gust Response Factor Apply a 1.25 x Gust Response Factor to all telecommunication equipment projected above top of tower/pole and apply a 1.0 x Gust Response Factor to the tower/pole structure					1.6 Flat Surfaces 1.3 Round Surfaces	
		Tower/Pole Analysis with antennas below top of Tower/Pole	For wind speed use OTRM 060 Map 1, Rule 250D: Extreme Ice with Wind Loading 4 PSF Wind Load Height above ground is based on overall height to top of tower/pole					1.6 Flat Surfaces 1.3 Round Surfaces	
		Conductors:		Conductor Loads Provided by ES					
		*Only for structures installed after 2007							

Communication Antennas on Transmission Structures

Eversource

Approved by: CPS (CT/WMA) JCC
(NH/EMA)

Design

OTRM 059

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Rev. 1

11/19/2018

Overhead Transmission Standards

determined from NESC applied loading conditions (not TIA Loads) on the structure and mount as specified below, and shall include the wireless communication mast and antenna loads per NESC criteria)

The strength reduction factor obtained from the field investigation shall be applied to the members or connections that are showing signs of deterioration from their original condition. With the written approval of Eversource Transmission Line Engineering on a case by case the existing structures may be analyzed initially using the current NESC code, then it is permitted to use the original design code with the original conductor load should the existing tower fail the current NESC code.

The structure shall be analyzed using yield stress theory in accordance with Attachment A, "Eversource Design Criteria." This specifies uniform loadings (different from the TIA loadings) on each of the following components of the installed facility:

- a) Wireless communication mast for its total height above ground level, including the initial and any planned future equipment (Support Platforms, Antennas, TMA's etc.) above the top of an electric transmission structure.
- b) Conductors and related devices and hardware (wire loads will be provided by Eversource).
- c) Electric Transmission Structure

- i) The loads from the wireless communication equipment components based on NESC and Eversource Criteria in Attachment A, and from the electric conductors shall be applied to the structure at conductor and wireless communication mast attachment points, where those loads transfer to the tower. ii)
- ii) Shape Factor Multiplier:

NESC Structure Shape	Cd
Polyround (for polygonal steel poles)	1.3
Flat	1.6
Open Lattice	3.2
Pole with Coaxial Cable	See Below Table

- iii) When Coaxial Cables are mounted alongside the pole structure, the shape multiplier shall be:

Mount Type	Cable Cd	Pole Cd
Coaxial Cables on outside periphery (One layer)	1.45	1.45
Coaxial Cables mounted on stand offs	1.6	1.6

- d) The uniform loadings and factors specified for the above components in Attachment A, "Eversource Design Criteria" are based upon the National Electric Safety Code 2007 Edition Extreme Wind (Rule 250C) and Combined Ice and Wind (Rule 250B-Heavy) Loadings. These provide equivalent loadings compared to the TIA and its loads and factors with the exceptions noted above.

Communication Antennas on Transmission Structures			
Eversource Approved by: CPS (CT/WMA) JCC (NH/EMA)	Design	OTRM 059	Rev. 1 11/19/2018
		Page 3 of 10	

Project: 1470/1565 Lines, Structure 3292

Date: 7/17/19

Engineer: JS

Purpose: Recalculate wire loads for geotechnical calculations.

Shield Wires:

1470: 7#8 Alumoweld, sagged in PLS-CADD

1565: 7#8 Alumoweld, sagged in PLS-CADD

Conductors:

1272 ACSR, tensioned to 6000# @ NESC 250B Final

NESC 250B

	Vertical	Transverse	Longitudinal
Alumoweld	880	-497	0
Conductor	2268	-820	0

High Wind Case (23 PSF)

	Vertical	Transverse	Longitudinal
Alumoweld	319	-273	0
Conductor	1053	-1056	0



NORTH

SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
N-1	DESIGN BASIS & GENERAL NOTES	1
N-2	STRUCTURAL STEEL NOTES	1
MI-1	MODIFICATION INSPECTION REQUIREMENTS	1
S-1	TOWER ELEVATION & FEEDLINE PLAN	1
S-2	TOP CONNECTION DETAILS	1
S-3	BOTTOM CONNECTION DETAILS	1
S-4	POLE DIMENSIONS	1

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PROFESSIONAL ENGINEER SEAL

CENTEK engineering

(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

PROPOSED ANTENNA UPGRADE
CT11348A
STRUCTURE 3292

DATE:	1/14/24
SCALE:	AS SHOWN
JOB NO.	24066.09

TITLE SHEET

SHEET NO.

T-1

Sheet No. 1 of 8

DESIGN BASIS

1. GOVERNING CODE: 2021 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2022 CT STATE BUILDING CODE.
2. TIA-222-H, ASCE MANUAL NO. 48-19 – "DESIGN OF STEEL TRANSMISSION POLE STRUCTURES SECOND EDITION", NESC C2-2023 AND EVERSOURCE DESIGN CRITERIA.
3. DESIGN CRITERIA

WIND LOAD: (ANTENNA MAST)

ULTIMATE DESIGN WIND SPEED (V) = 125 MPH (2022 CSBC: APPENDIX 'P')

WIND LOAD: (UTILITY POLE & FOUNDATION)

BASIC WIND SPEED (V) = 110 MPH (3-SECOND GUST)
BASED ON NESC C2-2023, SECTION 25 RULE 250C.

GENERAL NOTES

1. REFER TO STRUCTURAL ANALYSIS AND MAST DESIGN PREPARED BY CENTEK ENGINEERING, INC., FOR T-MOBILE, DATED 2/25/25.
2. TOWER GEOMETRY AND STRUCTURE MEMBER SIZES WERE OBTAINED FROM THE TOWER DESIGN DRAWINGS PREPARED BY MEYER INDUSTRIES INC.; JOB NO. T-4011-RR DATED FEBRUARY 26, 1973.
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GOVERNING BUILDING CODE.
4. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS SCOPE OF WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
5. BEFORE BEGINNING THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR MAKING SUCH INVESTIGATIONS CONCERNING PHYSICAL CONDITIONS (SURFACE AND SUBSURFACE) AT OR CONTIGUOUS TO THE SITE WHICH MAY AFFECT PERFORMANCE AND COST OF THE WORK. THIS INCLUDES VERIFYING ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA. CONTRACTOR SHALL TAKE FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF ALL FINISHED WORK.
6. PCS MAST INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF TRANSMISSION STRUCTURES. ALL SAFETY PROCEDURES, RIGGING AND ERECTION METHODS SHALL BE STANDARD TO THE INDUSTRY AND IN COMPLIANCE WITH OSHA.
7. IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL PROCEED WITH AFFECTED WORK AFTER CONFLICT IS SATISFACTORILY RESOLVED.
8. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
9. NO DRILLING WELDING OR TAPING IS PERMITTED ON EVERSOURCE OWNED EQUIPMENT.

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T-MOBILE
PROPOSED ANTENNA UPGRADE
CT11348A
STRUCTURE 3292
24 COOPER HILL ROAD
RIDGEBELD, CT 06877

DATE:	1/14/24
SCALE:	AS SHOWN
JOB NO.	24066.09

DESIGN BASIS AND GENERAL NOTES

SHEET NO.
N-1
Sheet No. 2 of 8

MODIFICATION INSPECTION REPORT REQUIREMENTS					
PRE-CONSTRUCTION		DURING CONSTRUCTION		POST-CONSTRUCTION	
SCHEDULED ITEM	REPORT ITEM	SCHEDULED ITEM	REPORT ITEM	SCHEDULED ITEM	REPORT ITEM
X	EOR MODIFICATION INSPECTION DRAWING	—	FOUNDATIONS	X	MODIFICATION INSPECTOR RECORD REDLINE DRAWING
X	EOR APPROVED SHOP DRAWINGS	—	EARTHWORK: BACKFILL MATERIAL & COMPACTION	—	POST-INSTALLED ANCHOR ROD PULL-OUT TEST
—	EOR APPROVED POST-INSTALLED ANCHOR MP11	—	REBAR & FORMWORK GEOMETRY VERIFICATION	X	PHOTOGRAPHS
—	FABRICATION INSPECTION	—	CONCRETE TESTING		
—	FABRICATOR CERTIFIED WELDER INSPECTION	X	STEEL INSPECTION		
X	MATERIAL CERTIFICATIONS	—	POST INSTALLED ANCHOR ROD VERIFICATION		
		—	BASE PLATE GROUT VERIFICATION		
		—	CONTRACTOR'S CERTIFIED WELD INSPECTION		
		X	ON-SITE COLD GALVANIZING VERIFICATION		
		X	CONTRACTOR AS-BUILT REDLINE DRAWINGS		
<div>NOTES:</div> <div><div>1. REFER TO MODIFICATION INSPECTION NOTES FOR ADDITIONAL REQUIREMENTS</div><div>2. "X" DENOTES DOCUMENT REQUIRED FOR INCLUSION IN MODIFICATION INSPECTION FINAL REPORT.</div><div>3. "—" DENOTES DOCUMENT NOT REQUIRED FOR INCLUSION IN MODIFICATION INSPECTION FINAL REPORT.</div><div>4. EOR — ENGINEER OF RECORD</div><div>4. MP11 — "MANUFACTURER'S PRINTED INSTALLATION GUIDELINES"</div></div>					

1. THE MODIFICATION INSPECTION IS A VISUAL INSPECTION OF STRUCTURAL MODIFICATIONS, TO INCLUDE A REVIEW AND COMPILATION OF SPECIFIED SUBMITTALS AND CONSTRUCTION INSPECTIONS, AS AN ASSURANCE OF COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS PREPARED UNDER THE DIRECTION OF THE ENGINEER OF RECORD (EOR).
2. THE MODIFICATION INSPECTION IS TO CONFIRM INSTALLATION CONFIGURATION AND GENERAL WORKMANSHIP AND IS NOT A REVIEW OF THE MODIFICATION DESIGN. OWNERSHIP OF THE MODIFICATION DESIGN EFFECTIVENESS AND INTENT RESIDES WITH THE ENGINEER OF RECORD.
3. TO ENSURE COMPLIANCE WITH THE MODIFICATION INSPECTION REQUIREMENTS THE GENERAL CONTRACTOR (GC) AND THE MODIFICATION INSPECTOR (MI) COMMENCE COMMUNICATION UPON AUTHORIZATION TO PROCEED BY THE CLIENT. EACH PARTY SHALL BE PROACTIVE IN CONTACTING THE OTHER. THE EOR SHALL BE CONTACTED IF SPECIFIC GC/MI CONTACT INFORMATION IS NOT MADE AVAILABLE.
4. THE GC SHALL PROVIDE THE MI WITH A MINIMUM OF 5 BUSINESS DAYS NOTICE OF IMPENDING INSPECTIONS.
5. WHEN POSSIBLE, THE GC AND MI SHALL BE ON SITE DURING THE MODIFICATION INSPECTION TO HAVE ANY NOTED DEFICIENCIES ADDRESSED DURING THE INITIAL MODIFICATION INSPECTION.

1. THE MI SHALL CONTACT THE GC UPON AUTHORIZATION BY THE CLIENT TO:
 - REVIEW THE MODIFICATION INSPECTION REPORT REQUIREMENTS.
 - WORK WITH THE GC IN DEVELOPMENT OF A SCHEDULE FOR ON-SITE INSPECTIONS.
 - DISCUSS CRITICAL INSPECTIONS AND PROJECT CONCERNS.
2. THE MI IS RESPONSIBLE FOR COLLECTION OF ALL INSPECTION AND TEST REPORTS, REVIEWING REPORTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING ON-SITE INSPECTIONS AND COMPILATION & SUBMISSION OF THE MODIFICATION INSPECTION REPORT TO THE CLIENT AND THE EOR.

1. THE GC IS REQUIRED TO CONTACT THE GC UPON AUTHORIZATION TO PROCEED WITH CONSTRUCTION BY THE CLIENT TO:
 - REVIEW THE MODIFICATION INSPECTION REPORT REQUIREMENTS.
 - WORK WITH THE MI IN DEVELOPMENT OF A SCHEDULE FOR ON-SITE INSPECTIONS.
 - DISCUSS CRITICAL INSPECTIONS AND PROJECT CONCERNS.
2. THE GC IS RESPONSIBLE FOR COORDINATING AND SCHEDULING IN ADVANCE ALL REQUIRED INSPECTIONS AND TESTS WITH THE MI.

1. SHOULD THE STRUCTURAL MODIFICATION NOT COMPLY WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS, THE GC SHALL WORK WITH THE MODIFICATION INSPECTOR IN A VIABLE REMEDIATION PLAN AS FOLLOWS:
 - CORRECT ALL DEFICIENCIES TO COMPLY WITH THE CONTRACT DOCUMENTS AND COORDINATE WITH THE MI FOR A FOLLOW UP INSPECTION.
 - WITH CLIENT AUTHORIZATION, THE GC MAY WORK WITH THE EOR TO REANALYZE THE MODIFICATION USING THE AS-BUILT CONDITION.

1. THE GC AND MI SHALL AT MINIMUM PHOTO DOCUMENT THE FOLLOWING FOR INCLUSION IN THE MODIFICATION INSPECTION REPORT:
 - PRE—CONSTRUCTION: GENERAL CONDITION OF THE SITE.
 - DURING CONSTRUCTION: RAW MATERIALS, CRITICAL DETAILS, WELD PREPARATION, BOLT INSTALLATION & TORQUE, FINAL INSTALLED CONDITION & SURFACE COATING REPAIRS.
 - POST—CONSTRUCTION: FINAL CONDITION OF THE SITE

[illegible]

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STRUCTURE 3292
94 COOPER ST | BOSTON

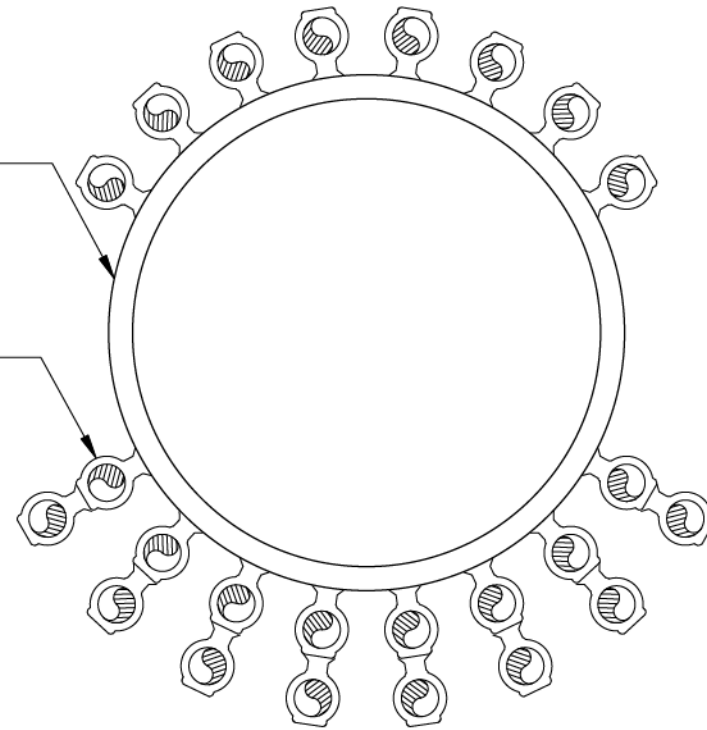
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JOB NO.	24066.09

MODIFICATION INSPECTION REQUIREMENTS

SHEET NO.
MI-1
Sheet No. 4 of 8

PROPOSED 8" SCH. 80
X 21' LONG PIPE MAST

T-MOBILE EXISTING SIX (6)
AND PROPOSED EIGHTEEN (18)
7/8" DIA. COAX CABLES
BAND TO PROPOSED MAST
@ 4' O.C.



2

COAX CABLE PLAN (MAST)

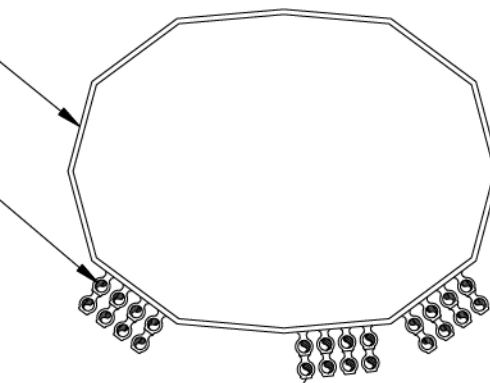
S-1

SCALE: 3" = 1'-0"

EXISTING 83.5' TALL (AGL)
STEEL TRANSMISSION
STRUCTURE NO. 3292

T-MOBILE EXISTING SIX
(6) 7/8" ϕ COAX
CABLES ATTACHED TO
POLE @ 4' O.C.

T-MOBILE PROPOSED
EIGHTEEN (18) 7/8" ϕ COAX
CABLES STACKED ON EXISTING



3

COAX CABLE PLAN (0'-75'-6" ATB)

S-1

SCALE: 1/2" = 1'-0"

CL T-MOBILE ANTENNAS
EL. $\pm 92'-6"$ AGL

CL TOP CONNECTION
EL. $\pm 82'-0"$ ATB

CL BOTTOM CONNECTION
EL. $\pm 75'-6"$ ATB

T-MOBILE (EXISTING TO REMOVE):
THREE (3) RMS RR90-17-02DP PANEL
ANTENNAS FLUSH MOUNTED.
T-MOBILE (PROPOSED):
THREE (3) COMMSCOPE FFW-65B-R3
PANEL ANTENNAS AND THREE (3)
COMMSCOPE ATSBT-TOP-MF-4G BIAS
TEES

PROPOSED 8" SCH. 80 X
21' LONG PIPE MAST TO
REPLACE EXISTING MAST

T-MOBILE PROPOSED
PROPOSED (18) 7/8"
DIA. COAX CABLES

T-MOBILE EXISTING
SIX (6) 7/8" DIA.
COAX CABLES

EXISTING 83.5' TALL (AGL)
STEEL TRANSMISSION
STRUCTURE NO. 3292

APPROX. GRADE

1

TOWER AND MAST ELEVATION

S-1

SCALE: NTS

REV.	DATE	DRAWN BY	CHECKED BY	ISSUED FOR REVIEW
1	2/25/25	TJL	CFC	ISSUED FOR REVIEW
0	1/14/25	TJL	CFC	ISSUED FOR REVIEW

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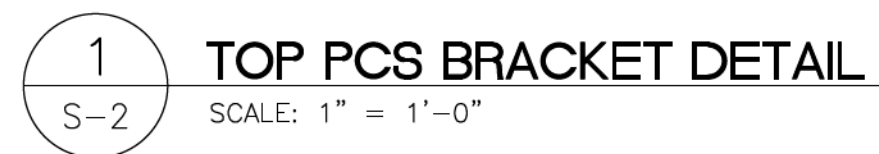
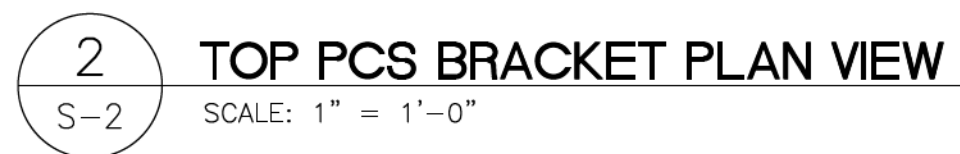
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T-MOBILE
PROPOSED ANTENNA UPGRADE
CT11348A
STRUCTURE 3292
24 COOPER HILL ROAD
ROCKFELLD, CT 06477

DATE: 1/14/24
SCALE: AS SHOWN
JOB NO. 24066.09

TOWER
ELEVATION AND
FEEDLINE PLAN

SHEET NO.
S-1
Sheet No. 5 of 8



1. POLE TAPER = 0.25"/FT (V.I.F.)
2. REFER TO SHEET S-4 FOR ADDITIONAL POLE DIMENSIONS

[illegible][illegible]

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T-MOBILE
PROPOSED ANTENNA UPGRADE
CT11348A
STRUCTURE 3299
24 COOPER HILL ROAD
BRIDGEVILLE, PA 15005

DATE:	1/14/24
SCALE:	AS SHOWN
JOB NO.	24066.09

TOP
CONNECTION
DETAILS

SHEET NO.
S-2
Sheet No. 6 of 8

NOTE:

- POLE TAPER = 0.25"/FT (V.I.F.)
- REFER TO SHEET S-4 FOR ADDITIONAL POLE DIMENSIONS

CL PROPOSED 8"
SCH. 80 PIPE MAST
AND POLE

1/2" THICK
BENT PL (TYP.)

3/4" Ø A36 THREADED
ROD. PROVIDE VERTICAL
AISC LONG SLOTTED
HOLE. TIGHTEN NUTS
TO FINGER TIGHT ONLY
AND PROVIDE COTTER
PIN EACH END OF ROD.

CL PROPOSED
8" SCH. 80
PIPE MAST

CL EXISTING
POLE

1/2" THICK
PL (TYP.)

6"X 1/2"
THICK PL (TYP.)

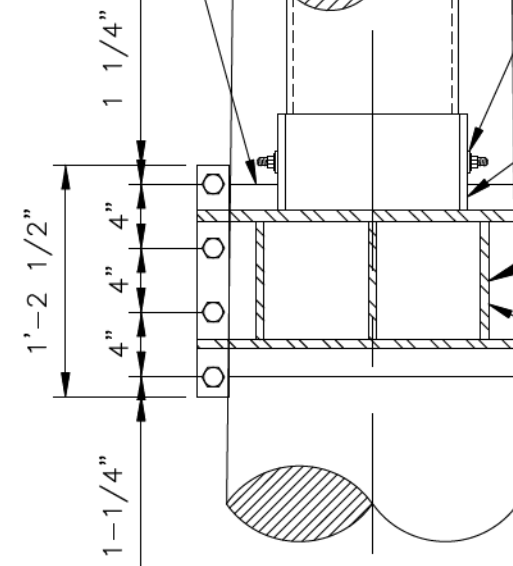
3/4" THICK PL

1/4" TYP. WELD
@ GUSSETS

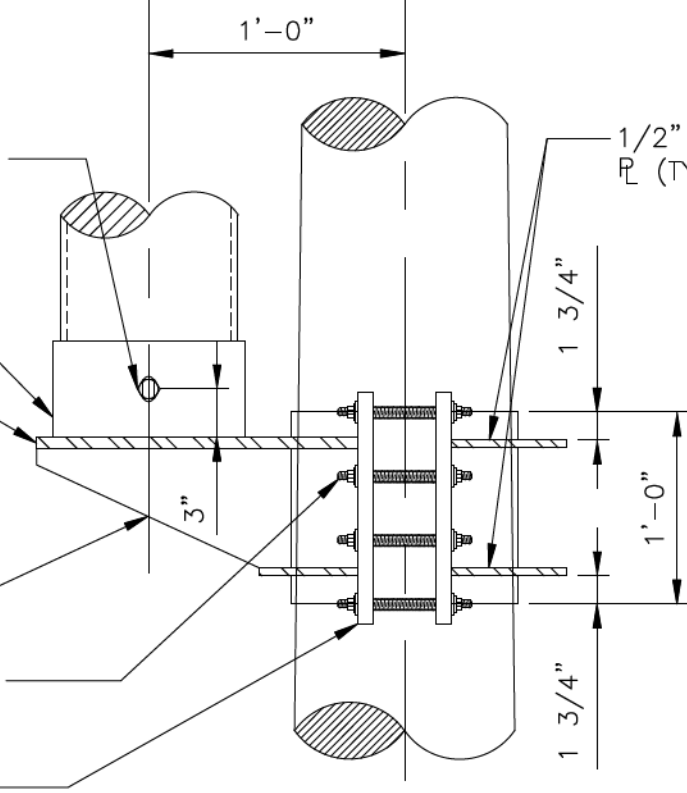
1/2" THICK GUSSET
PL (TYP. OF 3)

FOUR (4) 3/4" Ø ASTM
A307 THREADED RODS
(TYP.)

PL 2" x 1" x 1'-2
1/2" AND SHIM PACK
AS REQ'D (TYP.)



FRONT VIEW



SIDE VIEW

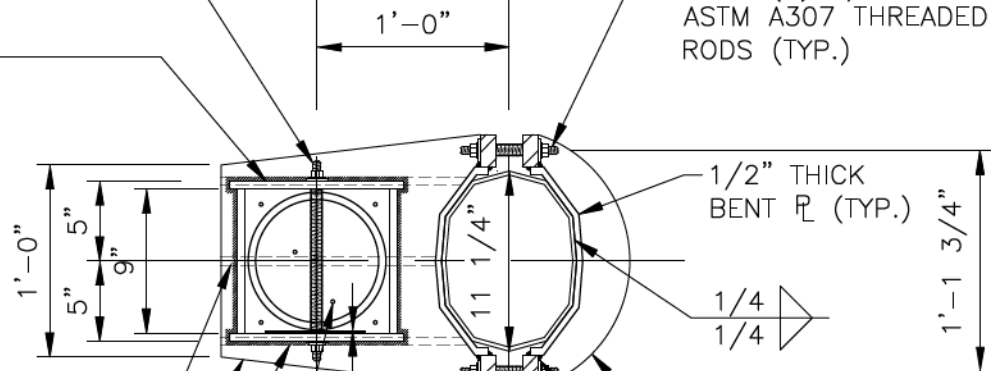
3/4" Ø A36 THREADED
ROD. PROVIDE VERTICAL
AISC LONG SLOTTED
HOLE. TIGHTEN NUTS
TO FINGER TIGHT ONLY
AND PROVIDE COTTER
PIN EACH END OF ROD.

CL PROPOSED
8" SCH. 80
PIPE MAST

CL EXISTING
POLE

FOUR (4) 3/4" Ø
ASTM A307 THREADED
RODS (TYP.)

6"X 1/2" THICK PL
(TYP.)



1/2" THICK GUSSET
PL (TYP. OF 3)

3/4" THICK SEAT PL

1/4"

DRAINAGE
HOLE (TYP.)

PROVIDE 1/8" GAP BETWEEN MAST
AND PLATE (TYP. ALL SIDES)

1/2" THICK
PL (TYP.)

1/4" TYP. WELD
@ GUSSETS

PL 2" x 1" x 1'-2 1/2" AND
SHIM PACK AS REQ'D (TYP.)

2

S-3

BOTTOM PCS BRACKET PLAN VIEW

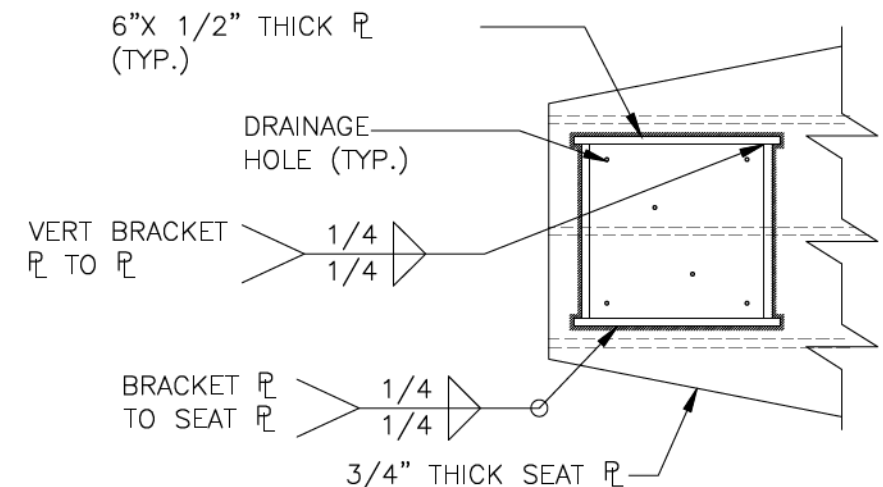
SCALE: 1" = 1'-0"

1

S-3

BOTTOM PCS BRACKET DETAIL

SCALE: 1" = 1'-0"



6"X 1/2" THICK PL
(TYP.)

DRAINAGE
HOLE (TYP.)

VERT BRACKET
PL TO PL

BRACKET PL
TO SEAT PL

3/4" THICK SEAT PL

3

S-3

BRACKET ASSEMBLY DETAIL

SCALE: 1" = 1'-0"

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T-MOBILE
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CT11348A
STRUCTURE 3292

24 COOPER HILL ROAD
ROCKFORD, CT 06467

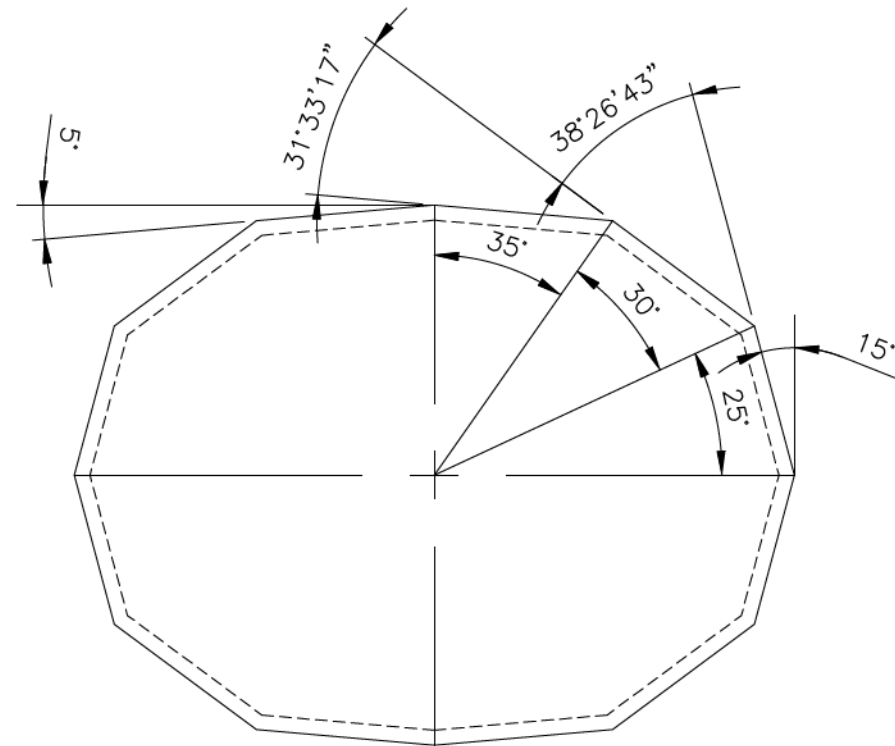
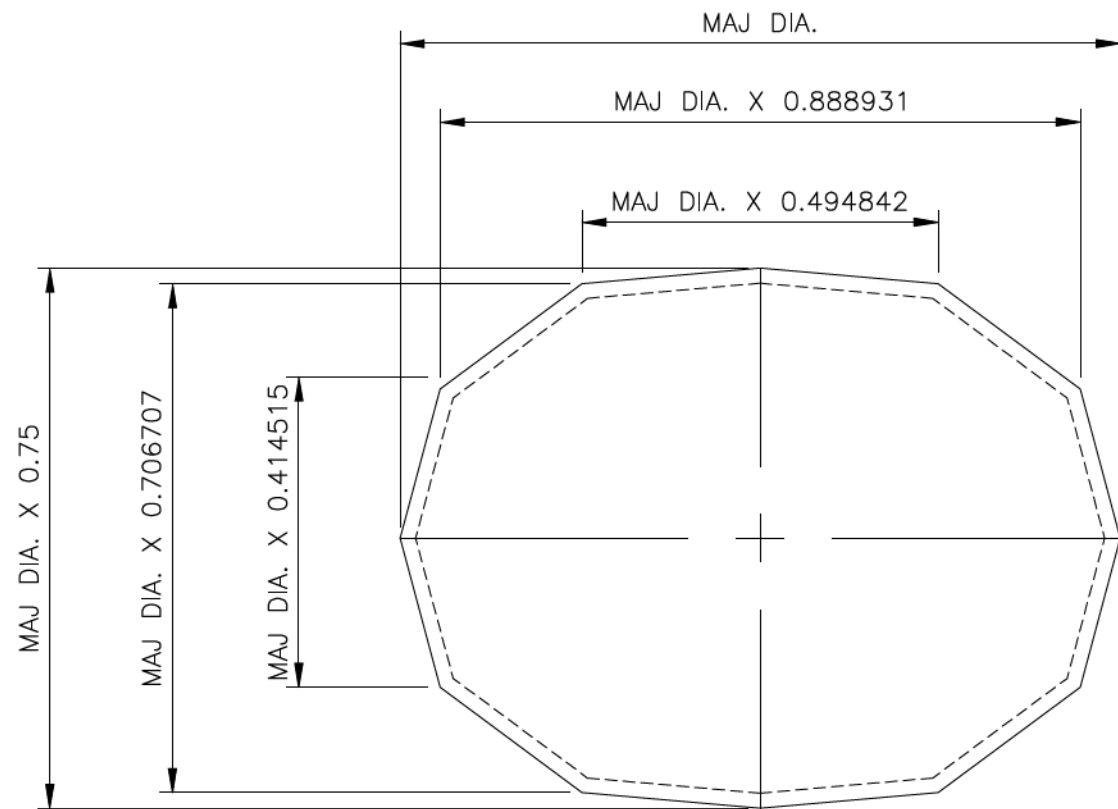
DATE: 1/14/24
SCALE: AS SHOWN
JOB NO. 24066.09

**BOTTOM
CONNECTION
DETAILS**

SHEET NO.

S-3

Sheet No. 7 of 8



NOTE CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO FABRICATION

1 POLE DIMENSIONS
S-4 SCALE: 3" = 1'-0"

REV.	DATE	BY	CHK'D	DESCRIPTION
1	2/25/25	T.J.L	CFC	ISSUED FOR REVIEW
0	1/14/25	T.J.L	CFC	ISSUED FOR REVIEW

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T-MOBILE
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CT11348A
STRUCTURE 3292
24 COOPER HILL ROAD
ROCKFELLD, CT 06877

DATE: 1/14/24
SCALE: AS SHOWN
JOB NO. 24066.09

CL&P POLE
DIMENSIONS

SHEET NO.
S-4
Sheet No. 8 of 8

Section 1 - Site Information

Site ID: CT11348A

Purpose: Scoping

Status: Draft

Version: 4

Project Type: L600

Last Modified: 02/25/2025 9:56:26 AM

Last Modified By: Jorge.Labayo2@T-Mobile.com

Site Name: Ridgefield / Rt 102

Site Class: Utility Pole

Site Type: Structure Non Building

Plan Year: 2024

Market: CONNECTICUT CT

Vendor: Ericsson

Landlord: Northeast Utilities

Latitude: 41.275

Longitude: -73.465556

Address: 24 Cooperhill Rd CL& P Pole #3294 Line #1470

City, State: Ridgefield, CT

Region: NORTHEAST

RAN Template: 67G998G 6160		AL Template: 67G998G_1HP		
Sector Count: 3	Antenna Count: 3	Coax Line Count: 18	TMA Count: 3	RRU Count: 6

Section 2 - Existing Template Images

----- This section is intentionally blank. -----

Section 3 - Proposed Template Images

----- This section is intentionally blank. -----

Section 4 - Siteplan Images

----- This section is intentionally blank. -----

RAN Template: 67G998G 6160	A&L Template: 67G998G_1HP
-------------------------------	------------------------------

Project IDs with associated PORs:

CT11348A-0002445431
Radio Upgrade_4460
CT11348A-0002446795
L600_L600 Coverage

CT11348A_L600_4_Scoping_Draft

Section 5 - RAN Equipment

Existing RAN Equipment

Template: 4B Outdoor

Enclosure	1			
Enclosure Type	RBS 6102			
Radio	RUS01 B2 (x3) G1900	RUS01 B2 (x3) U1900 (DECOMMISSIONED)	RUS01 B4 (x3) U2100 (DECOMMISSIONED)	RUS01 B4 (x3) L2100
Baseband	BB 6630 L2100	DUG20 G1900	DUW30 U1900 (DECOMMISSIONED)	DUW30 U2100 (DECOMMISSIONED)

Proposed RAN Equipment

Template: 67G998G 6160

Enclosure	1	2
Enclosure Type	Enclosure 6160_v2 AC	B160
Baseband	BB 6630 N1900 L1900 L2100 G1900 (DECOMMISSIONED)	RP 6651 N600 L600 (RESTRICTED) L700
Transport System	CSR IXRe V2 (Gen2)	
Hybrid Cable System	Hybrid Trunk 6/24 4AWG 10m (x2)	

RAN Scope of Work:

2/25/2025:
From NSS team email, RAD center is changed from 97ft to 92.5ft.
Email Subject: Re: CT11348A - Antenna Options - RF direction needed - L600 and Radio Upgrade

This one still needs a couple revisions. Eversource is questioning it since it was submitted with the review package. Can you revise the below and send back so we can get this back to them today?

- Coax says 20 on here and should only be 18
- Rad center needs to be changed to 92.5 ft. This is confirmed with Eversource and A/E running the SA.

Dan Reid
Project Manager
Mobile: 203-592-8291
Email: dreid@northeastsitesolutions.com

2/18/2025:
Due to structural issue, as requested by the NSS team, changed antenna with smaller dimension. Changed from octo 840590966 to hex FVV-65B-R3.
Email request shown below.

Subject: Re: CT11348A - Antenna Options - RF direction needed - L600 and Radio Upgrade
"As discussed, the tower is not structurally adequate to accommodate the proposed equipment configuration of three (3) Ericsson 840590966 antennas, three (3) bias Tees and (24) 7/8" coax at rad center of 97". Tower would be at approximately 40% overstressed and Eversource will not allow reinforcement to the pole structure.

I ran through some different scenarios and believe I may be able to get the tower to pass if RF can provide an antenna with dimensions of 72"x12"x5". The rad center would also need to be 92". This is the lowest that would still meet the Eversource required clearance above tower. If the cable quantity could be reduced that would also help some. This tower is directly embedded in the ground and even with these changes we may still need to do something to address that (concrete collar around the tower base).

RF NOTES:
11/1/2024 - There is an unconfirmed NLOS microwave on top of the TMO antenna. Dev will verify the equipment on top with Eversource, and the TMO antenna will be designed to avoid interference with the structure above.

Section 6 - A&L Equipment

Existing Template: 4B_2DP
Proposed Template: 67G998G_1HP

Sector 1 (Existing) view from behind	
Coverage Type	A - Outdoor Macro
Antenna	1
Antenna Model	RR90-17-02DP (Dual)
Azimuth	0
M. Tilt	0
RAD Center (ft.)	92
Ports	P1
Active Tech	L2100 G1900
Dark Tech	
Restricted Tech	
Decomm. Tech	U2100 U1900
E. Tilt	2
Cables	7/8" Coax - 104 ft.(At Antenna) (x2)
TMA's	Generic Twin Style 1A - PCS (At Antenna)
Diplexer / Combiners	Generic AWS/PCS Diplexer (At Antenna)
Radio	
Sector Equipment	
Unconnected Equipment:	
Scope of Work:	

Sector 1 (Proposed) view from behind			
Coverage Type	A - Outdoor Macro		
Antenna	1		
Antenna Model	FVV-65B-R3 (Hex)		
Azimuth	0		
M. Tilt	0		
RAD Center (ft.)	92		
Ports	P1	P2	P3
Active Tech	L700 N600	N1900 L1900 L2100	N1900 L1900 L2100
Dark Tech			
Restricted Tech	L600		
Decomm. Tech		G1900	G1900
E. Tilt			
Cables	7/8" Coax - 104 ft. (x2) Coax Jumper (x2)	7/8" Coax - 104 ft. (x2) Coax Jumper (x2)	7/8" Coax - 104 ft. (x2) Coax Jumper (x2)
TMA's		Commscope - Smart BiasT - ATSBT-TOP-MF-4G (At Antenna)	
Diplexer / Combiners			
Radio	Radio 4480 B71+B85 (At Cabinet)	Radio 4460 B25+B66 (At Cabinet)	Radio 4460 B25+B66 (At Cabinet)
Sector Equipment			
Unconnected Equipment:			
Scope of Work:			
Radio 4480 shared between Sector 1 and Sector 2 as 2x MIMO each sector.			
*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.			

Sector 2 (Existing) view from behind	
Coverage Type	A - Outdoor Macro
Antenna	1
Antenna Model	RR90-17-02DP (Dual)
Azimuth	120
M. Tilt	0
RAD Center (ft.)	92
Ports	P1
Active Tech	L2100 G1900
Dark Tech	
Restricted Tech	
Decomm. Tech	U2100 U1900
E. Tilt	2
Cables	7/8" Coax - 104 ft.(At Antenna) (x2)
TMA's	Generic Twin Style 1A - PCS (At Antenna)
Diplexer / Combiners	Generic AWS/PCS Diplexer (At Antenna)
Radio	
Sector Equipment	
Unconnected Equipment:	
Scope of Work:	

Sector 2 (Proposed) view from behind			
Coverage Type	A - Outdoor Macro		
Antenna	1		
Antenna Model	FVV-65B-R3 (Hex)		
Azimuth	120		
M. Tilt	0		
RAD Center (ft.)	92		
Ports	P1	P2	P3
Active Tech	L700 N600	L2100 N1900 L1900	L2100 L1900 N1900
Dark Tech			
Restricted Tech	L600		
Decomm. Tech		G1900	G1900
E. Tilt			
Cables	7/8" Coax - 104 ft. (x2) Coax Jumper (x2)	7/8" Coax - 104 ft. (x2) Coax Jumper (x2)	7/8" Coax - 104 ft. (x2) Coax Jumper (x2)
TMA's		Commscope - Smart BiasT - ATSBT-TOP-MF-4G (At Antenna)	
Diplexer / Combiners			
Radio	Radio 4480 B71+B85 (At Cabinet)	Radio 4460 B25+B66 (At Cabinet)	Radio 4460 B25+B66 (At Cabinet)
Sector Equipment			
Unconnected Equipment:			
Scope of Work:			
Radio 4480 shared between Sector 1 and Sector 2 as 2x MIMO each sector.			
*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.			

Sector 3 (Existing) view from behind	
Coverage Type	A - Outdoor Macro
Antenna	1
Antenna Model	RR90-17-02DP (Dual)
Azimuth	240
M. Tilt	0
RAD Center (ft.)	92
Ports	P1
Active Tech	L2100 G1900
Dark Tech	
Restricted Tech	
Decomm. Tech	U2100 U1900
E. Tilt	2
Cables	7/8" Coax - 104 ft.(At Antenna) (x2)
TMA's	Generic Twin Style 1A - PCS (At Antenna)
Diplexer / Combiners	Generic AWS/PCS Diplexer (At Antenna)
Radio	
Sector Equipment	
Unconnected Equipment:	
Scope of Work:	

Sector 3 (Proposed) view from behind			
Coverage Type	A - Outdoor Macro		
Antenna	1		
Antenna Model	FVV-65B-R3 (Hex)		
Azimuth	240		
M. Tilt	0		
RAD Center (ft.)	92		
Ports	P1	P2	P3
Active Tech	N600 L700	N1900 L1900 L2100	L2100 L1900 N1900
Dark Tech			
Restricted Tech	L600		
Decomm. Tech		G1900	G1900
E. Tilt			
Cables	7/8" Coax - 104 ft. (x2) Coax Jumper (x2)	7/8" Coax - 104 ft. (x2) Coax Jumper (x2)	7/8" Coax - 104 ft. (x2) Coax Jumper (x2)
TMA's		Commscope - Smart BiasT - ATSBT-TOP-MF-4G (At Antenna)	
Diplexer / Combiners			
Radio	Radio 4480 B71+B85 (At Cabinet)	Radio 4460 B25+B66 (At Cabinet)	Radio 4460 B25+B66 (At Cabinet)
Sector Equipment			
Unconnected Equipment:			
Scope of Work:			
Radio 4480 shared between Sector 1 and Sector 2 as 2x MIMO each sector.			
*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.			

FVV-65B-R3



6-port sector antenna, 2x 617-894 and 4x 1695–2690 MHz, 65° HPBW, 3x RET, 600 MHz-Ready Antenna Technology

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light Gray (RAL 7035)
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	6

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	1 female 1 male
Input Voltage	10–30 Vdc
Internal RET	High band (2) Low band (1)
Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0

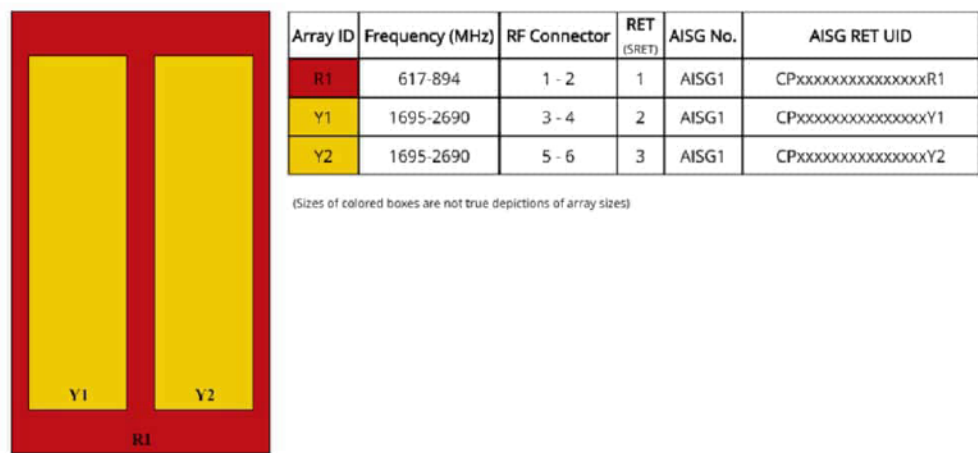
Dimensions

Width	300 mm 11.811 in
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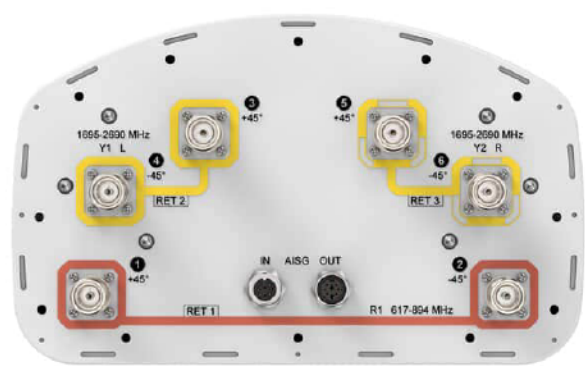
FVV-65B-R3

Depth	181 mm 7.126 in
Length	1828 mm 71.969 in
Net Weight, antenna only	19.6 kg 43.211 lb

Array Layout



Port Configuration



Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz 617 – 894 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

ATSBT-TOP-MF-4G



Top Smart Bias Tee

- Reduces cable and site lease costs by eliminating the need for AISG home run cables
- AISG 1.1 and 2.0 compliant
- Operates at 10-30 Vdc
- Weatherproof AISG connectors
- Intuitive schematics simplify and ensure proper installation
- Enhanced lightning protection plus grounding stud for additional surge protection
- 7-16 DIN female connector (ANT)
- 7-16 DIN male connector (BTS)

Product Classification

Product Type RET bias tee

General Specifications

AISG Input Connector	8-pin DIN Female
Antenna Interface	7-16 DIN Female
Antenna Interface Signal	RF dc Blocked
BTS Interface	7-16 DIN Male
BTS Interface Signal	AISG data RF dc
Color	Silver
EU Certification	CE
Grounding Lug Thread Size	M8
Smart Bias Tee Type	10–30 V Top

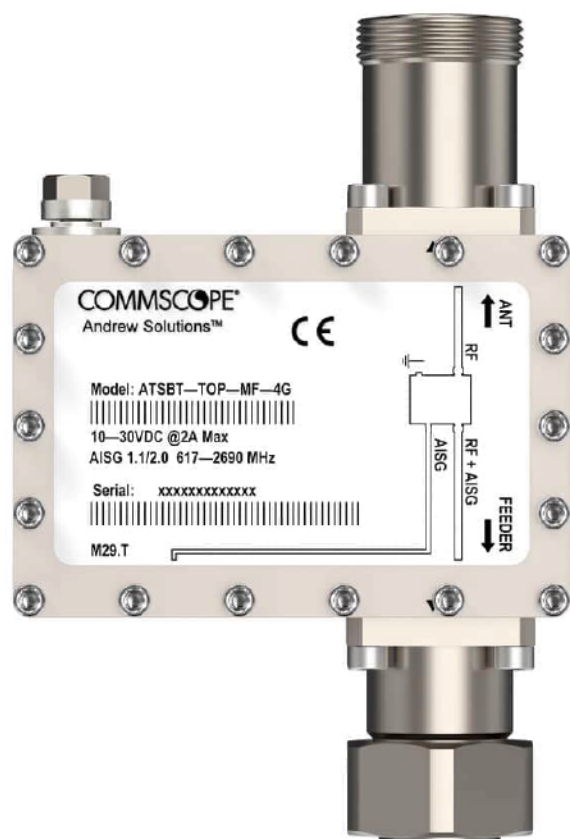
Dimensions

Height	143 mm 5.63 in
Width	94 mm 3.701 in
Depth	50 mm 1.969 in

Electrical Specifications

3rd Order IMD	-158 dBc
3rd Order IMD Test Method	Two +43 dBm carriers
Insertion Loss, typical	0.1 dB
Electromagnetic Compatibility (EMC)	CFR 47 Part 15, Subpart B, Class B EN 55022, Class B ICES-003 Issue 4 CAN

ATSBT-TOP-MF-4G



Material Specifications

Material Type Aluminum

Environmental Specifications

Operating Temperature -40 °C to +70 °C (-40 °F to +158 °F)

Ingress Protection Test Method IEC 60529:2001, IP66

Packaging and Weights

Weight, net 0.8 kg | 1.764 lb

Regulatory Compliance/Certifications

Agency	Classification
--------	----------------

Exhibit E

Mount Analysis

Project

Structural Analysis Report Antenna Mounts Proposed T-Mobile Equipment Upgrade Site Ref: CT11348A 24 Cooperhill Road Ridgefield, CT 06877

Centek Project No.: 24066.09

Date Issued: February 18, 2025 - Rev. 0

Prepared For

T-Mobile
35 Griffin Road
Bloomfield, CT 06002

Prepared By

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1.00 REPORT

1.01 INTRODUCTION

This Mount Analysis Report was prepared to address the structural viability of installing T-Mobile's proposed antenna configurations on the Transmission Tower located on Cooperhill Road in Ridgefield, Connecticut.

The proposed antenna configurations are to be supported by the existing tower mounts consisting of three (3) pipe masts flush mounted. For further details on the configuration of the proposed antenna mounts and equipment, refer to the Construction Drawings prepared by Centek Engineering, job no. 24066.09.

The host's structure geometry and member size information were obtained through a site visit to investigate the current conditions, performed by Centek Engineering personnel on 12/3/2024 and structural analysis prepared by Centek Engineering, job number 24066.09.

1.02 PRIMARY ASSUMPTIONS USED IN THE ANALYSIS

- The host structure's theoretical capacity does not include any assessment of the condition of the host structure.
- The proposed antenna frames carry horizontal and vertical loads due to the weight of equipment, and wind and transfers into the host structure.
- The structure is in a plumb condition.
- Loading for equipment is as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All members are assumed to be as observed during mapping.
- All members are "hot dipped" galvanized in accordance with ASTM A123 ASTM A153 Standards.
- All members' protective coatings are in good condition.

1.03 ANTENNA AND EQUIPMENT SUMMARY

Appurtenance / Equipment	Rad Center Elevation (AGL)	Mount Type
(3) Commscope FVV-65B-R3 Panel Antenna (3) Commscope ATSBT-TOP-MF-4G Bias Tee	±92.5-ft	Tower Mount

Equipment – Indicates equipment to be installed.

1.04 ANALYSIS

The tower mounts were analyzed using a comprehensive computer program titled Risa3D. The program analyzes the mounts and masts using the worst-case code prescribed loading condition. The structures were considered to be loaded by concentric forces, and the model assumes that the members are subjected to bending, axial, and shear forces.

1.05 DESIGN LOADING

Loading was determined per the requirements of the 2021 International Building Code amended by the 2022 Connecticut State Building Code and ASCE 7 – 16 “Minimum Design Loads for Buildings and Other Structures”.

Wind Speed:	$V_{ult} = 125$ mph	<i>Appendix P of the 2022 CSBC.</i>
Wind Speed w/Ice:	$V_{ice} = 50$ mph	<i>TIA-222-H Annex B.</i>
Wind Speed w/Maintenance:	$V_m = 30$ mph	<i>TIA-222-H Section 16.3.</i>
Risk Category:	III	<i>2021 IBC; Table 1604.05</i>
Exposure Category:	Surface Roughness C	<i>ASCE 7-16; Section 26.7.2</i>
Dead Load:	Equipment and framing self-weight	<i>Identified within SAR design calculations</i>

1.06 REFERENCE STANDARDS

2021 International Building Code

- AISC 360 – 16: Specification for Structural Steel Buildings
- ASCE/SEI 7 – 16: Minimum Design Loads and Associated Criteria for Building and Other Structures

1.07 RESULTS

Member stresses and design reactions were calculated utilizing the structural analysis software RISA 3D. The mounts and masts were found to be structurally acceptable as presented in the following table:

Sector	Component	Stress Ratio (percentage of capacity)	Result
All Sectors	Pipe 2.0 STD. (Pipe Mast)	8%	PASS

1.08 CONCLUSION

This analysis finds the existing mounts and masts to **HAVE SUFFICIENT CAPACITY** to accommodate the structural loading of the proposed antenna and equipment configuration.

The analysis is based, in part, on the information provided to this office by T-Mobile. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:



Timothy J. Lynn, PE
Structural Engineer

2.00 CONDITIONS AND SOFTWARE

2.01 STANDARD ENGINEERING CONDITIONS

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, and other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the “as new” condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

2.02 GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

RISA-3D Structural Analysis Program is an integrated structural analysis and design software package for buildings, bridges, tower structures, etc.

Modeling Features:

- Comprehensive CAD-like graphic drawing/editing capabilities that let you draw, modify and load elements as well as snap, move, rotate, copy, mirror, scale, split, merge, mesh, delete, apply, etc.
- Versatile drawing grids (orthogonal, radial, skewed)
- Universal snaps and object snaps allow drawing without grids.
- Versatile general truss generator
- Powerful graphics select/unselect tools including box, line, polygon, invert, criteria, spreadsheet selection, with locking.
- Saved selections to quickly recall desired selections.
- Modification tools that modify single items or entire selections
- Real spreadsheets with cut, paste, fill, math, sort, find, etc.
- Dynamic synchronization between spreadsheets and views so you can edit or view any data in the plotted views or in the spreadsheets.
- Simultaneous view of multiple spreadsheets
- Constant in-stream error checking and data validation
- Unlimited undo/redo capability

- Generation templates for grids, disks, cylinders, cones, arcs, trusses, tanks, hydrostatic loads, etc.
- Support for all units' systems & conversions at any time.
- Automatic interaction with RISASection libraries
- Import DXF, RISA-2D, STAAD and ProSteel 3D files.
- Export DXF, SDNF and ProSteel 3D files.

Analysis Features:

- Static analysis and P-Delta effects
- Multiple simultaneous dynamic and response spectra analysis using Gupta, CQC or SRSS mode combinations.
- Automatic inclusion of mass offset (5% or user defined) for dynamic analysis.
- Physical member modeling that does not require members to be broken up at intermediate joints.
- State of the art 3 or 4 node plate/shell elements
- High-end automatic mesh generation — draw a polygon with any number of sides to create a mesh of well-formed quadrilateral (NOT triangular) elements.
- Accurate analysis of tapered wide flanges - web, top and bottom flanges may all taper independently.
- Automatic rigid diaphragm modeling
- Area loads with one-way or two-way distributions
- Multiple simultaneous moving loads with standard AASHTO loads and custom moving loads for bridges, cranes, etc.
- Torsional warping calculations for stiffness, stress, and design
- Automatic Top of Member offset modeling.
- Member end releases & rigid end offsets
- Joint master-slave assignments
- Joints detachable from diaphragms
- Enforced joint displacements.
- 1-Way members, for tension only bracing, slipping, etc.
- 1-Way springs, for modeling soils and other effects
- Euler members that take compression up to their buckling load, then turn off.
- Stress calculations on any arbitrary shape.
- Inactive members, plates, and diaphragms allow you to quickly remove parts of structures from consideration.
- Story drift calculations provide relative drift and ratio to height.
- Automatic self-weight calculations for members and plates
- Automatic subgrade soil spring generator

Graphics Features:

- Unlimited simultaneous model view windows
- Extraordinary “true to scale” rendering, even when drawing
- High-speed redraw algorithm for instant refreshing.
- Dynamic scrolling stops right where you want.
- Plot & print virtually everything with color coding & labeling.
- Rotate, zoom, pan, scroll and snap views.
- Saved views to quickly restore frequent or desired views.
- Full render or wire-frame animations of deflected model and dynamic mode shapes with frame and speed control
- Animation of moving loads with speed control
- High quality customizable graphics printing

Design Features:

- Designs concrete hot rolled steel, cold formed steel, and wood.
- ACI 1999/2002, BS 8110-97, CSA A23.3-94, IS456:2000, EC 2-1992 with consistent bar sizes through adjacent spans
- Exact integration of concrete stress distributions using parabolic or rectangular stress blocks
- Concrete beam detailing (Rectangular, T and L)
- Concrete column interaction diagrams
- Steel Design Codes: AISC ASD 9th, LRFD 2nd & 3rd, HSS Specification, CAN/CSA-S16.1-1994 & 2004, BS 5950-1-2000, IS 800-1984, Euro 3-1993 including local shape databases.
- AISI 1999 cold formed steel design
- NDS 1991/1997/2001 wood design, including Structural Composite Lumber, multi-ply, full sawn.
- Automatic spectra generation for UBC 1997, IBC 2000/2003
- Generation of load combinations: ASCE, UBC, IBC, BOCA, SBC, ACI
- Unbraced lengths for physical members that recognize connecting elements and full lengths of members.
- Automatic approximation of K factors
- Tapered wide flange design with either ASD or LRFD codes.
- Optimization of member sizes for all materials and all design codes, controlled by standard or user-defined lists of available sizes and criteria such as maximum depths.
- Automatic calculation of custom shape properties
- Steel Shapes: AISC, HSS, CAN, ARBED, British, Euro, Indian, Chilean
- Light Gage Shapes: AISI, SSMA, Dale / Incor, Dietrich, Marino\WARE
- Wood Shapes: Complete NDS species/grade database
- Full seamless integration with RISAFoot (Ver 2 or better) for advanced footing design and detailing
- Plate force summation tool.

Results Features:

- Graphic presentation of color-coded results and plotted designs
- Color contours of plate stresses and forces with quadratic smoothing, the contours may also be animated.
- Spreadsheet results with sorting and filtering of: reactions, member & joint deflections, beam & plate forces/stresses, optimized sizes, code designs, concrete reinforcing, material takeoffs, frequencies and mode shapes
- Standard and user-defined reports
- Graphic member detail reports with force/stress/deflection diagrams and detailed design calculations and expanded diagrams that display magnitudes at any dialed location.
- Saved solutions quickly restore analysis and design results.

Exhibit F

Power Density/RF Emissions Report



FOX HILL TELECOM

Radio Frequency Emissions Analysis Report



Site ID: CT11348A

Ridgefield / Rt 102

24 Copperhill Road / CL&P Pole 3294 Line #1470

Ridgefield, CT 06877

April 30, 2025

Fox Hill Telecom Project Number: 250238

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	0.31 %



April 30, 2025

T-MOBILE
Attn: RF Manager
35 Griffin Road South
Bloomfield, CT 06009

Emissions Analysis for Site: **CT11348A – Ridgefield / Rt 102**

Fox Hill Telecom, Inc ("Fox Hill") was directed to analyze the proposed upgrades to the T-MOBILE installation at the existing utility pole facility located at **24 Copperhill Road / CL&P Pole 3294 Line #1470, Ridgefield, CT**, for the purpose of determining whether the emissions from the Proposed T-MOBILE Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which people who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes people in a nearby residential area.

General population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 600 MHz & 700 MHz bands are approximately $400 \mu\text{W}/\text{cm}^2$ and $467 \mu\text{W}/\text{cm}^2$ respectively. The general population exposure limit for the 1900 MHz (PCS) and 2100 MHz (AWS) bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report the percentage of MPE rather than power density.



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Occupational/controlled exposure limits apply to situations in which people are exposed as a consequence of their employment and in which those people who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.



CALCULATIONS

Calculations were performed for the proposed upgrades to the T-MOBILE antenna facility located at **24 Copperhill Road / CL&P Pole 3294 Line #1470, Ridgefield, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65 for far field modeling calculations.

In OET-65, power density values in the Far Field of an antenna are calculated by considering the transmit power in each band specified and multiplied by the antenna gain values per the antenna manufacturer specifications.

Since the radiation pattern of an antenna has developed in the **Far Field** region, the power gain in specific directions needs to be considered in exposure predictions to yield an Effective Radiated Power (ERP) in each specific direction from the antenna. Also, since the vertical radiation pattern of the antenna is considered, the exposure calculations would most likely be reduced at ground level, when compared to an isotropic model, resulting in a more realistic estimate of the actual exposure levels.

A worst-case **Far Field** prediction is described in OET-65 where field strength may double due to 100% reflection of the incoming radiation. Considering an EPA recommendation that a multiplier of 1.6 is a more realistically representation of this effect is rewritten as follows:

$$S_{FF} = \frac{33.4 \cdot P_{in} \cdot G_{dBd}}{R^2} \quad (\mu W/cm^2)$$

- S_{FF} = Power Density (in $\mu W/cm^2$)
- P_{in} is Watts
- R is meters to study point
- G is gain to study point as specified in manufacturer horizontal and vertical patterns

This model calculates the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0 to 6 feet) must be conducted. Seven power density values, between 0 and 6 feet above the specified study plane at each point, were calculated and a linear spatial average of these values was used to create the spatially averaged result for that point on the plane.



FOX HILL TELECOM

For each T-Mobile sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
5G NR	600 MHz	4	40
LTE	700 MHz	2	20
LTE / 5G NR	1900 MHz (PCS)	4	40
LTE	2100 MHz (AWS)	4	40

Table 1: Channel Data Table



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The following T-Mobile antennas listed in *Table 2* were used in the modeling for transmission in the 600 MHz, 700 MHz, 1900 MHz (PCS) and 2100 MHz (AWS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Commscope FVV-65B-R3	92.5
B	1	Commscope FVV-65B-R3	92.5
C	1	Commscope FVV-65B-R3	92.5

Table 2: Antenna Data

All calculations were made with respect to uncontrolled / general population threshold limits.



RESULTS

Per the calculations completed for the proposed T-MOBILE configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Commscope FVV-65B-R3	600 MHz / 700 MHz / 1900 MHz (PCS) / 2100 MHz (AWS)	12.15 / 12.55 / 15.95 / 16.25	14	520	16,388.44	0.31
Sector A Composite MPE%							0.31
Antenna B1	Commscope FVV-65B-R3	600 MHz / 700 MHz / 1900 MHz (PCS) / 2100 MHz (AWS) / Frequency Band / Frequency Band	12.15 / 12.55 / 15.95 / 16.25 / 0 / 0	14	520	16,388.44	0.31
Sector B Composite MPE%							0.31
Antenna C1	Commscope FVV-65B-R3	600 MHz / 700 MHz / 1900 MHz (PCS) / 2100 MHz (AWS) / Frequency Band /	12.15 / 12.55 / 15.95 / 16.25 / 0 / 0	14	520	16,388.44	0.31
Sector C Composite MPE%							0.31

Table 3: T-MOBILE Emissions Levels



The Following table (*table 4*) shows all additional identified carriers on site and their emissions contribution estimates, along with the newly calculated maximum T-MOBILE MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three T-Mobile sectors have the same configuration, yielding the same results for all three sectors. *Table 5* below shows a summary for each T-MOBILE Sector as well as the composite estimated MPE value for the site.

Site Composite MPE%	
Carrier	MPE%
T-MOBILE – Max Per Sector Value	0.31 %
No Additional Carriers on Site	NA
Site Total MPE %:	0.31 %

Table 4: All Carrier MPE Contributions

T-MOBILE Sector A Total:	0.31 %
T-MOBILE Sector B Total:	0.31 %
T-MOBILE Sector C Total:	0.31 %
Site Total:	0.31 %

Table 5: Site MPE Summary



Table 6 below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated T-MOBILE sector(s). For this site, all three T-Mobile sectors have the same configuration, yielding the same results for all three sectors.

T-MOBILE _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile 600 MHz LTE / 5G NR	4	656.24	92.5	0.64	600 MHz	400	0.16%
T-Mobile 700 MHz LTE	2	359.77	92.5	0.19	700 MHz	467	0.04%
T-Mobile 1900 MHz (PCS) LTE / 5G NR	4	1,574.20	92.5	0.60	1900 MHz (PCS)	1000	0.06%
T-Mobile 2100 MHz (AWS) LTE	4	1,686.79	92.5	0.50	2100 MHz (AWS)	1000	0.05%
						Total:	0.31 %

Table 6: T-MOBILE Maximum Sector MPE Power Values



Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-MOBILE facility as well as the site composite emissions estimates value with regard to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-MOBILE Sector	Power Density Value (%)
Sector A:	0.31 %
Sector B:	0.31 %
Sector C:	0.31 %
T-MOBILE Maximum Total (per sector):	0.31 %
Site Total:	0.31 %
Site Compliance Status:	COMPLIANT

The estimated composite MPE value for this site assuming all carriers present is **0.31 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon the far field calculations performed for all carriers identified in this report.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite estimated values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
Principal RF Engineer
Fox Hill Telecom, Inc
Worcester, MA 01609
(978)660-3998

Exhibit G

Letter of Authorization



56 Prospect Street,
Hartford, CT 06103

P.O. Box 270
Hartford, CT 06141-0270
(860) 665-5000

June 16, 2025

Mr. Dan Reid
Northeast Site Solutions
420 Main St,
Sturbridge, MA 01566

RE: T-Mobile Antenna Site CT11348A, Cooper Hill Rd, Ridgefield, CT, Eversource Structure 3292

Mr. Reid:

Based on our reviews of the site drawings, the structural analysis and foundation review provided by Centek Engineering, along with a third-party review performed by Paul J. Ford and Company, we accept the proposed modification.

Please work with Haleluya Haile of Eversource Real Estate to process the site lease amendment. Please do not hesitate to contact us with questions or concerns. Haleluya can be contacted at (860) 665-6176, and I can be contacted at (860) 728-4862.

Sincerely,

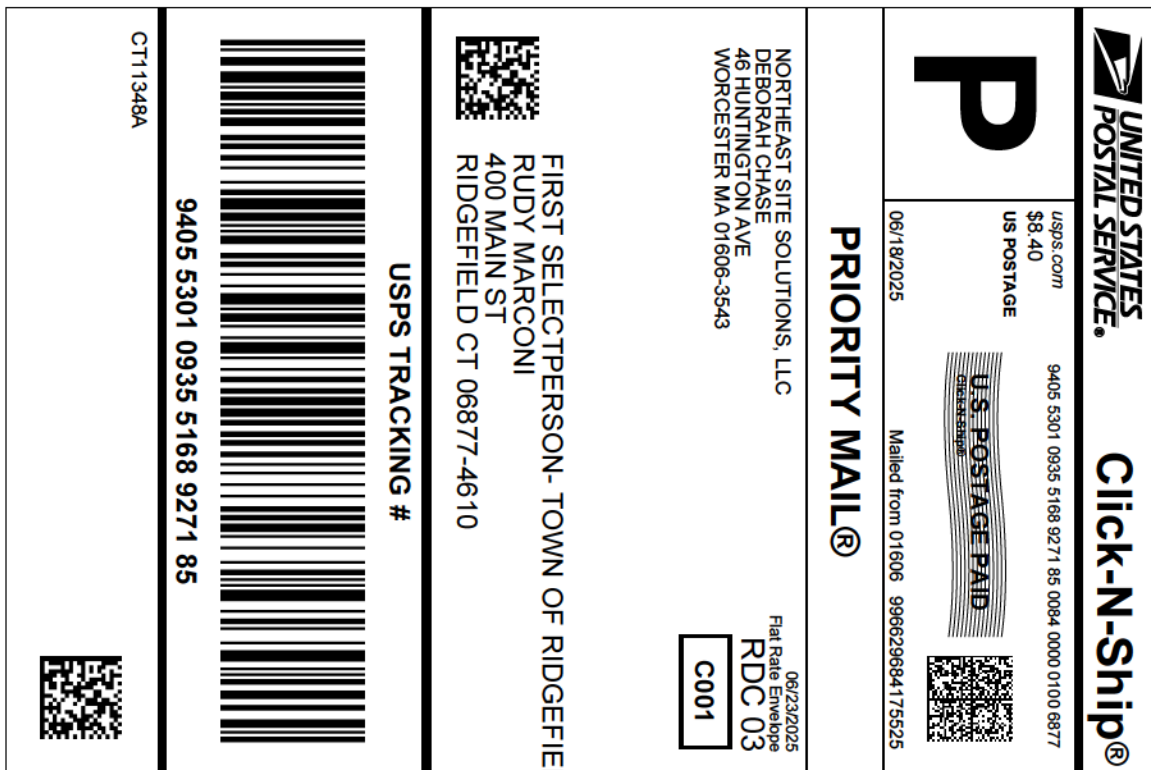
Richard Badon

Richard Badon
Transmission Line Engineering





Ref: 2025-0225 - C11348A - Structural Analysis Rev1 (24066.09)
2025_0218 CT11348A Mount Analysis (24066.09)
2025-0616_24066.09 CT11348A - Rev2 CDs (S&S) (1)


Exhibit H

Recipient Mailings



Instructions

 UNITED STATES POSTAL SERVICE®		Click-N-Ship®	
P		U.S. POSTAGE PAID <small>City of Washington</small>	
usps.com \$8.40 US POSTAGE		9405 5301 0935 5168 9271 78 0094 0000 0100 6877	
06/18/2025		Mailed from 01606 735408712352456	
PRIORITY MAIL®			
06/23/2025 Flat Rate Envelope RDC 03			
C018			
NORTHEAST SITE SOLUTIONS, LLC DEBORAH CHASE 46 HUNTINGTON AVE WORCESTER MA 01606-3543			
			
DIRECTOR OF PLANNING & ZONING- TOWN C ALICE DEW #2 66 PROSPECT ST RIDGEFIELD CT 06877-4621			
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9405 5301 0935 5168 9271 78			
CT11348A			
			

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WORCESTER MA 01606-3543

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CONNECTICUT LIGHT & POWER-EVERSOURCE
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HARTFORD CT 06141-0270

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TRACKING NUMBERS

9405 5301 0935 5168 9271 78
9405 5301 0935 5168 9271 85
9405 5301 0935 5168 9271 61

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(UP TO 25 ITEMS)



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Standard message and data rates may apply

TRACK STATUS ONLINE

Visit <https://www.usps.com/tracking>
Text and e-mail alerts available

PURCHASE DETAILS

Product	Qty	Unit Price	Price
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Prepaid Mail	1		\$0.00
Ridgefield, CT 06877			
Weight: 0 lb 14.80 oz			
Acceptance Date:			
Wed 06/18/2025			
Tracking #:			
9405 5301 0935 5168 9271 78			

Prepaid Mail	1		\$0.00
Ridgefield, CT 06877			
Weight: 0 lb 14.80 oz			
Acceptance Date:			
Wed 06/18/2025			
Tracking #:			
9405 5301 0935 5168 9271 85			

Prepaid Mail	1		\$0.00
Hartford, CT 06141			
Weight: 0 lb 14.80 oz			
Acceptance Date:			
Wed 06/18/2025			
Tracking #:			
9405 5301 0935 5168 9271 61			

Grand Total:			\$0.00
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