Northeast Site Solutions
Victoria Masse
420 Main St Unit 1 Box 2
Sturbridge, MA 01566
victoria@northeastsitesolutions.com

March 30, 2023

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

RE: Tower Share Application
82 North Eagleville Rd, Storrs (Mansfield), CT 06268
Latitude: 41.811540 N
Longitude: -72.253120 W
Site#: BOBDL00003B

Dear Ms. Bachman:

This letter and attachments are submitted on behalf of Dish Wireless LLC. Dish Wireless LLC plans to install antennas and related equipment to the tower site located at 82 North Eagleville Rd, Storrs (Mansfield), Connecticut.

Dish Wireless LLC proposes to install three (3) 600/1900/2100 5G MHz antenna and six (6) RRUs, at the 180-foot level of the existing 245-foot self support tower, one (1) Fiber cable will also be installed. Dish Wireless LLC equipment cabinets will be placed within 8x6 lease area. Included are plans by Centek, dated March, 27, 2023, Exhibit C. Also included is a structural analysis prepared by Centek, dated March 27, 2023, confirming that the existing tower is structurally capable of supporting the proposed equipment. Attached as Exhibit D. This facility was approved by the Connecticut Siting Council, Docket No. 179 on November 19, 1997. Please see attached Exhibit A.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of Dish Wireless LLC intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A., a copy of this letter is being sent to Mayor Antonia Moran, Jennifer Kaufman, Senior Planner/Inland Wetlands Agent as well as the property owner and the tower owner.

The planned modifications of the facility fall squarely within those activities explicitly provided for in R.C.S.A. 16-50j-89.

1. The proposed modifications will not result in an increase in the height of the existing structure. The top of the tower is 245-feet; Dish Wireless LLC proposed antennas will be located at a center line height of 180-feet.

2.The proposed modification will not result in the increase of the site boundary as depicted on the attached site plan.

3.The proposed modification will not increase the noise levels at the facility by six decibels or more, or to levels that exceed local and state criteria. The incremental effect of the proposed changes will be negligent.

4.The operation of the proposed antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. As indicated in the attached power density calculations, the combined site operations will result in a total density of 50.34% as evidenced by Exhibit F.

Connecticut General Statutes 16-50-aa indicates that the Council must approve the shared use of a telecommunications facility provided it finds the shared use is technically, legally, environmentally, and economically feasible and meets public safety concerns. As demonstrated in this letter, Dish Wireless LLC respectfully indicates that the shared use of this facility satisfies these criteria.

A. Technical Feasibility. The existing lattice tower has been deemed structurally capable of supporting Dish Wireless LLC proposed loading. The structural analysis is included in Exhibit D.

B. Legal Feasibility. As referenced above, C.G.S. 16-50aa has been authorized to issue orders approving the shared use of an existing tower such as this lattice tower in Storrs (Mansfield). Under the authority granted to the Council, an order of the Council approving the requested shared use would permit Dish Wireless LLC to obtain a building permit for the proposed installation. Further, a letter of Authorization is included as Exhibit G, authorizing Dish Wireless LLC to file this application for shared use.

C. Environmental Feasibility. The proposed shared use of this facility would have a minimal environmental impact. The installation of Dish Wireless LLC equipment at the 180-foot level of the existing 245-foot tower would have an insignificant visual impact on the area around the lattice tower. Dish Wireless LLC ground equipment would be installed within the existing facility compound. Dish Wireless LLC shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, as evidenced by Exhibit F, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.

D. Economic Feasibility. Dish Wireless LLC will be entering into an agreement with the owner of this facility to mutually agreeable terms. As previously mentioned, the Letter of Authorization has been provided by the owner to assist Dish Wireless LLC with this tower share application.

E. Public Safety Concerns. As discussed above, the tower is structurally capable of supporting Dish Wireless LLC proposed loading. Dish Wireless LLC is not aware of any public safety concerns relative to the proposed sharing of the existing tower. Dish Wireless LLC intentions of providing new and improved wireless service through the shared use of this facility is expected to enhance the safety and welfare of local residents and individuals traveling through Storrs (Mansfield).

Sincerely,

Victoria Masse
Mobile: 860-306-2326
Fax: 413-521-0558
Office: 420 Main Street, Unit 1 Box 2, Sturbridge, MA 01566
Email: victoria@northeastsitesolutions.com

Attachments
Cc:
Antonia Moran, Mayor
Audrey P. Beck Municipal Building
4 South Eagleville Road
Storrs Mansfield, CT 06268

Jennifer Kaufman, Senior Planner/Inland Wetlands Agent
4 S Eagleville Road
Audrey P. Beck Building
Storrs-Mansfield, CT 06268

University Of Connecticut, Property and Tower Owner
U BOX 3038 Facilities MGMT
Storrs, CT 06269

Exhibit A

Original Facility Approval

CSC logo

Connecticut Siting Council

• For any person seeking access to the Council's records, please email siting.council@ct.gov at least 24 hours in advance for an appointment.

DOCKET NO. 179 - An application of WHUS Radio for a Certificate of Environmental Compatibility and Public Need for the construction, operation, and maintenance of a telecommunications facility at the University of Connecticut Campus approximately 2,700 feet northwest of the intersection of North Eagleville Road and Storrs Road (Route 195), Storrs, Connecticut.

Connecticut Siting Council

November 19, 1997

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction of a telecommunications tower and associated equipment at the proposed site in Storrs, Connecticut, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental

Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to WHUS Radio for the construction of a telecommunications tower, associated equipment, and an equipment building at the proposed site, located at the University of Connecticut, north of North Eagleville Road, Storrs, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The height of the proposed tower shall not exceed a height of 327 feet above ground level (AGL).

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of construction and shall include specifications for the placement of all antennas to be attached to this tower; confirmation by a Professional Engineer that the tower design is adequate to hold all proposed antennas and meets all current applicable structural standards; plans for the new equipment building; and plans for water drainage and erosion and sedimentation controls consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. The Certificate Holder shall remove the existing 212-foot WHUS tower within 60 days of the completion of the new tower.

4. No construction activities shall be undertaken on the proposed site from March 1 to June 30, so that the two existing populations of species of special concern are not affected.

5. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies used at this facility, the facility granted herein shall be brought into compliance with such standards.

6. The Certificate Holder shall provide the Council a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels originally calculated and provided in the application.

7. The Certificate Holder shall permit public and/or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

8. If the facility does not provide, or permanently ceases to provide the proposed telecommunications services following completion of construction, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply to the Council for any proposed new use. If any associated equipment permanently ceases to provide the proposed telecommunications services, such equipment shall be removed within 60 days after such equipment ceases to provide the proposed telecommunications services.

9. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Hartford Courant and The Willimantic Chronicle.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

APPLICANT
WHUS Radio,

The University of Connecticut

ITS REPRESENTATIVE

Paul ShapiroAssistant Attorney General
University of ConnecticutBox U-177, 605 Gilbert Road
Storrs, CT 06269-1177(860) 486-4241

John Murphy
General Manager
WHUS Radio
The University of Connecticut
Box U-8R, 2110 Hillside Road
Storrs, CT 06269-3008(860) 486-2955

INTERVENOR

Bell Atlantic NYNEX Mobile

ITS REPRESENTATIVE

Jennifer Young Gaudet
Regulatory Manager
Bell Atlantic NYNEX Mobile
20 Alexander Drive, P.O. Box 5029
Wallingford, CT 06492(203) 949-2805

Exhibit B

Property Card

Property Location 82 NO EAGLEVILLE RD | Map ID 9/ 23/ UC159/ / | Bldg Name | State Use 902
Vision ID 6457 | Account # 9 23 UC159 | Bldg # 1 | Sec # 1 of 1 | Card # 1 of 1 | Print Date 11/9/2021 10:35:03 A

CURRENT OWNER

UNIVERSITY OF CONNECTICUT
NORTH CAMPUS RESIDENCES
U BOX 3252 FACILITIES MGMT

STORRS CT 06269

TOPO	UTILITIES	STRT / ROAD	LOCATION
1 Level	4 Public Water	1 Paved	
	5 Sewer		

SUPPLEMENTAL DATA

Alt Prcl ID
Census 8812
Devel. Lot

GIS ID 9.23.UC159
Assoc Pid#

CURRENT ASSESSMENT

Description	Code	Appraised	Assessed
Ex C Land	21	270,000	189,000
Ex C Bldg	22	7,846,200	5,492,300
Total		8,116,200	5,681,300

6078

MANSFIELD, CT

VISION

RECORD OF OWNERSHIP

RECORD OF OWNERSHIP	BK-VOL/PAGE		SALE DATE	Q/U	V/I	SALE PRICE	VC
UNIVERSITY OF CONNECTICUT	51	518	09-27-1919	U	V	0	00

PREVIOUS ASSESSMENTS (HISTORY)

Year	Code	Assessed	Year	Code	Assessed	Year	Code	Assessed
2020	21	189,000	2019	21	189,000	2019	21	189,000
	22	5,492,300		22	5,492,300		22	5,492,300
	Total	5,681,300		Total	5,681,300		Total	5,681,300

EXEMPTIONS

Year	Code	Description	Amount
		Total	0.00

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm Int

This signature acknowledges a visit by a Data Collector or Assessor

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	7,842,200
Appraised Xf (B) Value (Bldg)	4,000
Appraised Ob (B) Value (Bldg)	0
Appraised Land Value (Bldg)	270,000
Special Land Value	0
Total Appraised Parcel Value	8,116,200
Valuation Method	C
Total Appraised Parcel Value	8,116,200

ASSESSING NEIGHBORHOOD

Nbhd	Nbhd Name	B	Tracing	Batch
0001				

NOTES

ILAP -FLDDC: FIELD DATA COLLECTION
UCONN - NORTH CAMPUS RESIDENCES
M:9 B:23 L:15
HURLEY HALL (0157);BALDWIN HALL (0158):
MCCONAUGHY HALL (0159)
EXTERIOR: CONCRETE FOUNDATION, BRICK
WALLS, FLAT/BUILT-UP ROOF
INTERIOR: TILE FLOORS, PLASTER & GL TILE
WALLS, ACCOUSTIC CEILING, STEAM HEAT
THIS PARCEL IS FOR MCCONAUGHY HALL(0159)
OTHER DORMS VALUED ON SEP PARCELS-ILAP

BUILDING PERMIT RECORD

Permit Id	Issue Date	Type	Description	Amount	Insp Date	% Comp	Date Comp	Comments

VISIT / CHANGE HISTORY

Date	Id	Type	Is	Cd	Purpost/Result
05-28-2019	WG			35	Field Review
05-24-2005	WT			16	Appraiser Date
10-02-2000	IL			15	Collector Date

LAND LINE VALUATION SECTION

B	Use Code	Description	Zone	Land Type	Land Units		Unit Price	I. Factor	Site Index	Cond.	Nbhd.	Nhbd Adj	Notes	Location Adjustment		Adj Unit Pric	Land Value
1	902	State Com	I		1.000	AC	135,000	1.00000	5	1.00	C200	2.000			0	270,000	270,000
				Total Card Land Units	1.00	AC	Parcel Total Land Area:	1.00								Total Land Value	270,000

Property Location	82 NO EAGLEVILLE RD		Map ID	9/ 23/ UC159/ /		Bldg Name	State Use 902
Vision ID 6457		Account # 9 23 UC159		Bldg # 1	Sec # 1 of 1	Card # 1 of 1	Print Date 11/9/2021 10:35:04 A

CONSTRUCTION DETAIL

Element	Cd	Description
Style:	42	Dormitory
Model	94	Comm/Ind
Grade	07	C
Stories:	4	
Occupancy	1.00	
Exterior Wall 1	20	Brick
Exterior Wall 2		
Roof Structure	01	Flat
Roof Cover	02	Roll Roofing
Interior Wall 1	03	Plaster
Interior Wall 2		
Interior Floor 1	11	Ceram Clay Til
Interior Floor 2		
Heating Fuel	09	Typical
Heating Type	06	Steam
AC Type	01	None/partial
Bldg Use	902	State Com
Heat/AC	00	HEAT ONLY
Frame Type	03	MASONRY
Baths/Plumbing	02	AVERAGE
Ceiling/Wall	06	CEIL & WALLS
Rooms/Prtns	02	AVERAGE
Wall Height	12.00	
1st Floor Use:		

CONSTRUCTION DETAIL (CONTINUED)

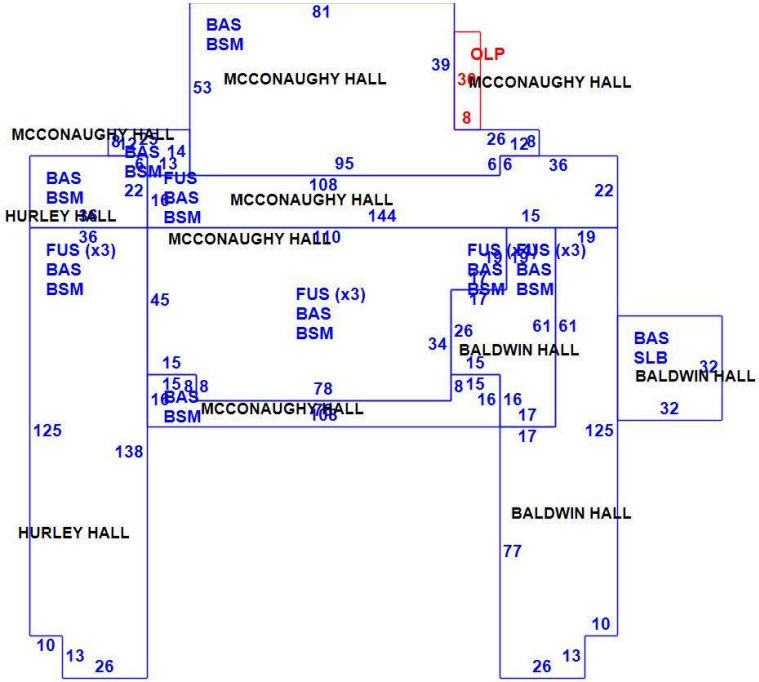
Element	Cd	Description

MIXED USE

Code	Description	Percentage
902	State Com	100
		0
		0

COST / MARKET VALUATION

RCN	
Year Built	1950
Effective Year Built	
Depreciation Code	A
Remodel Rating	
Year Remodeled	
Depreciation %	41
Functional Obsol	
Economic Obsol	
Trend Factor	1
Condition	
Condition %	
Percent Good	59
RCNLD	7,842,200
Dep % Ovr	
Dep Ovr Comment	
Misc Imp Ovr	
Misc Imp Ovr Comment	
Cost to Cure Ovr	
Cost to Cure Ovr Comment	



OB - OUTBUILDING & YARD ITEMS(L) / XF - BUILDING EXTRA FEATURES(B)

Code	Description	L/B	Units	Unit Price	Yr Blt	Cond. Cd	% Good	Grade	Grade Adj	Appr. Value
CLP	Covered Loadin	B	240	28.00	1976		59		0.00	4,000

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Floor Area	Eff Area	Unit Cost	Undeprec Value
BAS	First Floor	25,463	25,463		166.64	4,243,154
BSM	Basement	0	24,439		33.33	814,536
FUS	Finished Upper Story	49,389	49,389		166.64	8,230,183
OLP	Loading Platform	0	240		16.66	3,999
SLB	Slab	0	1,024		0.00	0
	Ttl Gross Liv / Lease Area	74,852	100,555			13,291,872

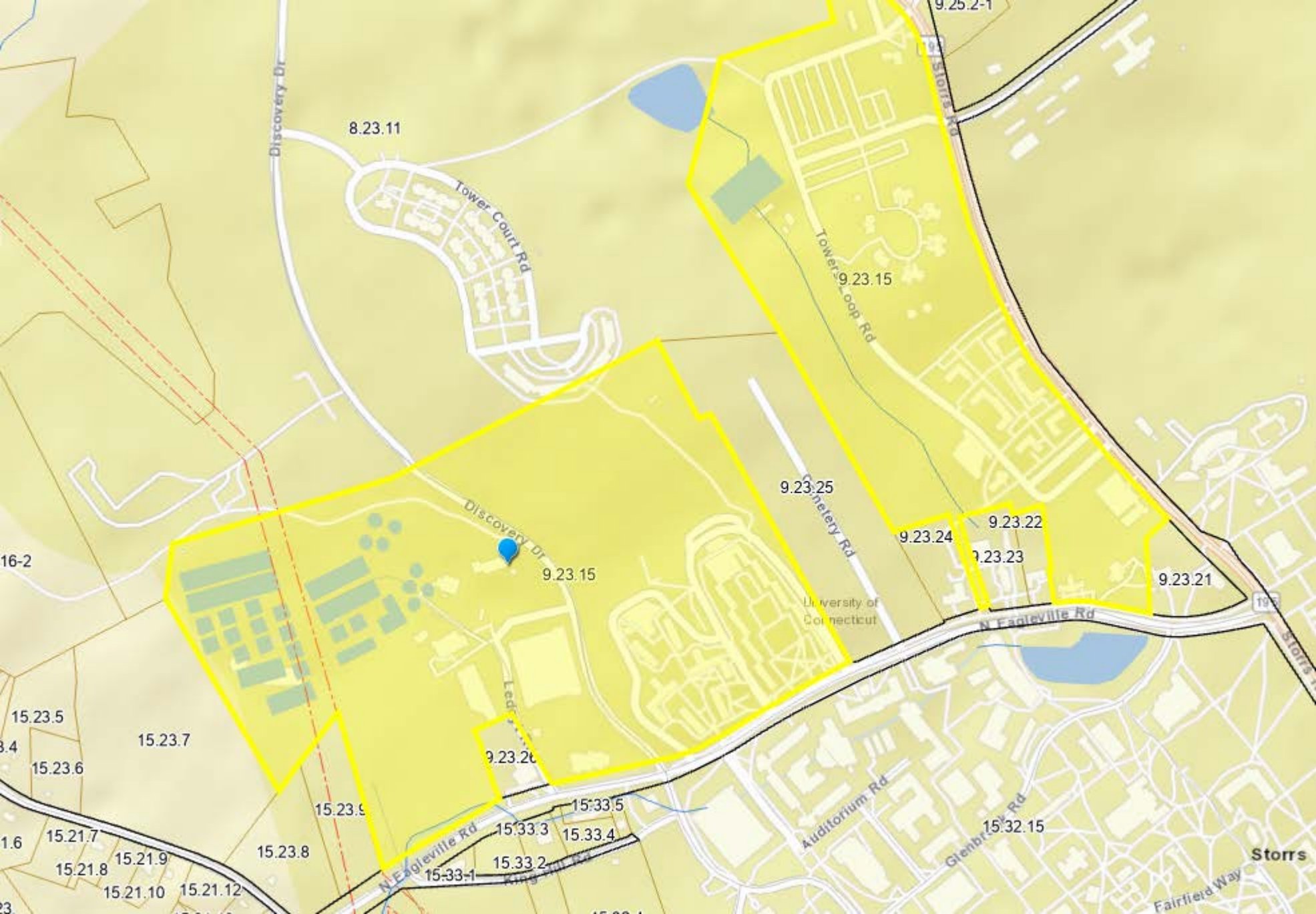

8.23.11
Discovery Dr
Tower Court Rd
9.23.15
Tower Loop Rd
9.23.25
Cemetery Rd
9.23.22
9.23.24
9.23.23
9.23.21
Discovery Dr
9.23.15
University of Connecticut
N Eagleville Rd
Storrs Rd
16-2
15.23.5
15.23.7
15.23.6
15.23.8
15.21.7
15.21.8
15.21.9
15.21.10
15.21.12
15-33-1
15.33.2
15.33.3
15.33.4
15.33.5
Auditorium Rd
15.32.15
Storrs
Fairfield Way

Exhibit C

Construction Drawings

DISH Wireless L.L.C. SITE ID:

BOBDL00003B

DISH Wireless L.L.C. SITE ADDRESS:

82 NORTH EAGLEVILLE ROAD
STORRS, CT 06268

CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING	2022 CT STATE BUILDING CODE/2021 IBC W/ CT AMENDMENTS
ELECTRICAL	2022 CT STATE BUILDING CODE/NEC W/ CT AMENDMENTS

SHEET INDEX

SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

TOWER SCOPE OF WORK:
- INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
- INSTALL (3) PROPOSED ANTENNA MOUNTS (1 PER SECTOR)
- INSTALL PROPOSED JUMPERS
- INSTALL (6) PROPOSED RRUs (2 PER SECTOR)
- INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
- INSTALL (1) PROPOSED HYBRID CABLE

GROUND SCOPE OF WORK:
- INSTALL (1) PROPOSED METAL PLATFORM
- INSTALL (1) PROPOSED ICE BRIDGE
- INSTALL (1) PROPOSED PPC CABINET
- INSTALL (1) PROPOSED EQUIPMENT CABINET
- INSTALL (1) PROPOSED POWER CONDUIT
- INSTALL (1) PROPOSED TELCO CONDUIT
- INSTALL (1) PROPOSED TELCO-FIBER BOX
- INSTALL (1) PROPOSED GPS UNIT
- INSTALL (1) PROPOSED FIBER NID (IF REQUIRED)
- INSTALL (1) PROPOSED UTILITY METER WITH ASSOCIATED CIRCUIT BREAKER

SITE PHOTO

UNDERGROUND SERVICE ALERT
UTILITY NOTIFICATION CENTER OF (CT)
1-800-922-4455

CALL **2** WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

811

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE. NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE JOB SITE, AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

SITE INFORMATION

PROPERTY OWNER:	UNIVERSITY OF CONNECTICUT
ADDRESS:	82 NORTH EAGLEVILLE ROAD
	MANSFIELD, CT 06268
TOWER TYPE:	SST
TOWER CO SITE ID:	N/A
TOWER APP NUMBER:	N/A
COUNTY:	MANSFIELD
LATITUDE (NAD 83):	41° 48' 52.42" N
LONGITUDE (NAD 83):	72° 15' 35.36" W
ZONING JURISDICTION:	CITY OF MANFIELD
ZONING DISTRICT:	CSC
PARCEL NUMBER:	9-23-UC158
OCCUPANCY GROUP:	U
CONSTRUCTION TYPE:	V-B
POWER COMPANY:	EVERSOURCE
TELEPHONE COMPANY:	AT&T INTERNET SERVICES

PROJECT DIRECTORY

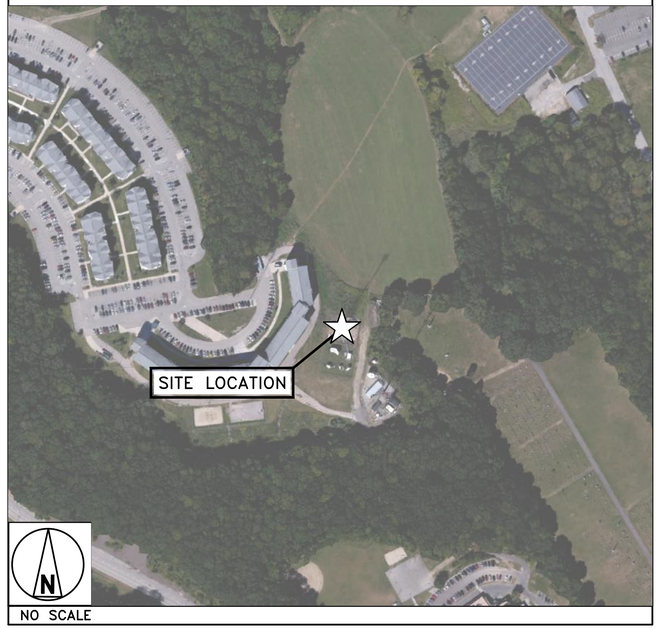
APPLICANT:	DISH Wireless L.L.C.
	5701 SOUTH SANTA FE DRIVE
	LITTLETON, CO 80120
TOWER OWNER:	UNIVERSITY OF CONNECTICUT
	U BOX 3038 FACILITIES MGMT
	STORRS, CT 06269
	PHONE # N/A
SITE DESIGNER:	CENTEK ENGINEERING, INC.
	63-2 NORTH BRANFORD ROAD
	BRANFORD, CT. 06405
	(203) 488-0580
SITE ACQUISITION:	DAVID GOODFELLOW
	(860) 573-2758
CONSTRUCTION MANAGER:	CHAD WILCOX
	CHAD.WILCOX@DISH.COM
RF ENGINEER:	BOSSENER CHARLES
	(917) 567-9837

DIRECTIONS

DIRECTIONS FROM DISH Wireless L.L.C. AIRPORT (BDL)

1. START OUT GOING WEST ON SCHOEPHOESTER RD
2. MAKE A U-TURN ONTO SCHOEPHOESTER RD
3. TURN RIGHT ONTO ELLA GRASSO TNPKE/CT-75
4. MERGE ONTO CT-20 E TOWERD HARTFORD/SPRINGFIELD/I-91
5. MERGE ONTO I-91 S TOWARD HARTFORD
6. MERGE ONTO I-291 E VIA EXIST 35A TOWARD MANCHESTER
7. MERGE ONTO I-84 E VIA THE EXIT ON THE LEFT TOWARD BOSTON
8. TAKE THE CT-195 EXIT, EXIT 68 TOWARDS MANFIELD/TOLLAND
9. TURN RIGHT ONTO MERROW RD/CT-195. CONTINUE TO FOLLOW CT-195
10. TURN RIGHT ONTO MIDDLE TNPKE/US-44 W
11. TURN LEFT ONTO DISCOVERY DR
12. TURN LEFT ONTO TOWER COURT RD
13. TURN LEFT TO STAY ON TOWER COURT RD
14. TURN RIGHT TO STAY ON TOWER COURT RD
15. 82 NORTH EAGLEVILLE ROAD IS ON THE RIGHT

VICINITY MAP



NO SCALE

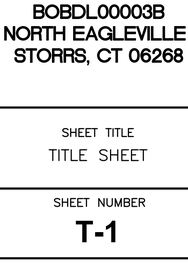
dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

CENTEK engineering
Centered on Solutions℠

(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405

www.CentekEng.com



DRAWN BY:	CHECKED BY:	APPROVED BY:
RTS	TJR	CLIENT

RFDS REV #: 5 – 02/21/2022

PRELIMINARY DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
B	01/05/23	REVISED PER CLIENT COMMENTS
0	02/08/23	ISSUED FOR CONSTRUCTION
1	03/27/23	REVISED PER CLIENT COMMENTS

CENTEK PROJECT NUMBER
22042.07

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00003B
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

NOTES AND SPECIFICATIONS:

SITE NOTES

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.

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2022 CONNECTICUT SUPPLEMENT, INCLUDING THE TIA/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.
14. 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 DISH Wireless L.L.C. 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 APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL 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 WILL 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.

STRUCTURAL STEEL

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. DRAWINGS 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.

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RTS	TJR	CLIENT

RFDS REV #: 5 – 02/21/2022

PRELIMINARY DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
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1	03/27/23	REVISED PER CLIENT COMMENTS

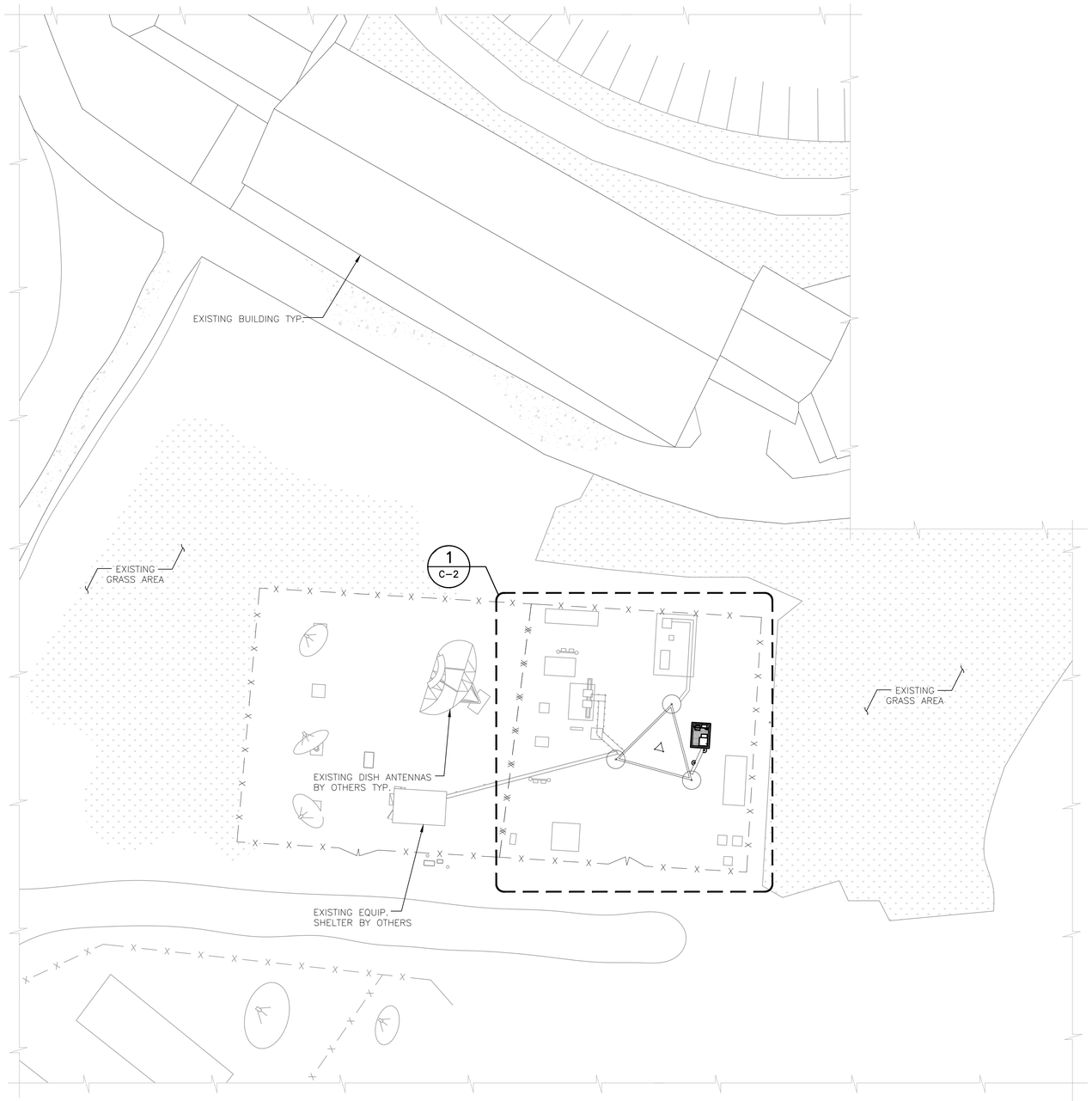
CENTEK PROJECT NUMBER
22042.07

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00003B
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

SHEET TITLE
SPECIFICATIONS AND NOTES

SHEET NUMBER
N-1



OVERALL SITE PLAN

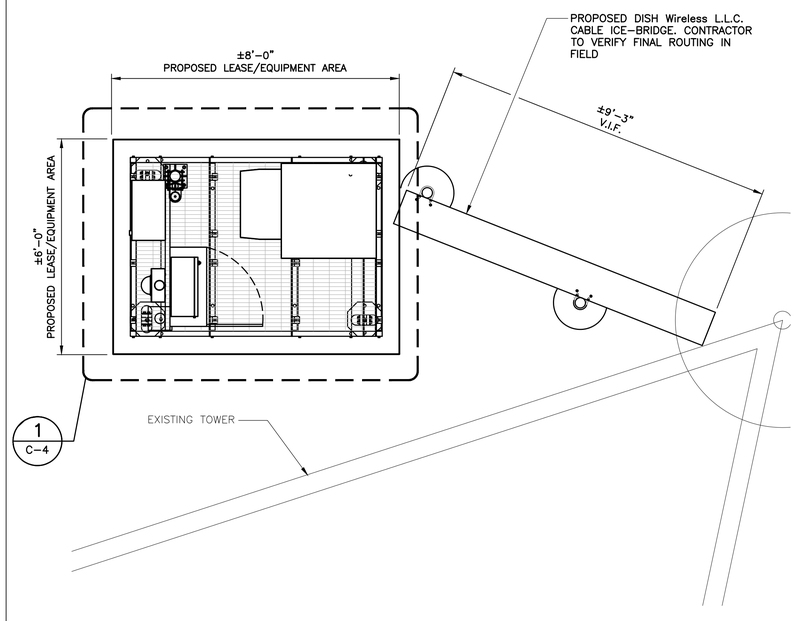
6' 4' 2' 0 5' 10'
1/16"=1'-0"

1

AERIAL VIEW PLAN

NO SCALE

2



ENLARGED SITE PLAN

12" 6" 0 1' 2' 3' 4' 5'
1/2"=1'-0"

3

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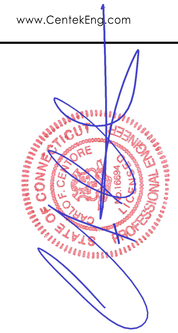

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DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00003B
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STORRS, CT 06268

SHEET TITLE
OVERALL AND ENLARGED SITE PLAN

SHEET NUMBER
C-1

STRUCTURAL COMPLIANCE

ANTENNA MOUNTS

A STRUCTURAL ANALYSIS OF THE ANTENNA MOUNTS WAS PERFORMED FOR THE PROPOSED EQUIPMENT INSTALLATION AND THEY WERE FOUND TO BE STRUCTURALLY SUFFICIENT TO ACCOMMODATE THE PROPOSED LOADING..

REFER TO THE ANTENNA MOUNT ANALYSIS REPORT PREPARED BY CENTEK ENGINEERING (PROJECT # 22042.07) DATED 03/27/23 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

TOWER AND TOWER FOUNDATION

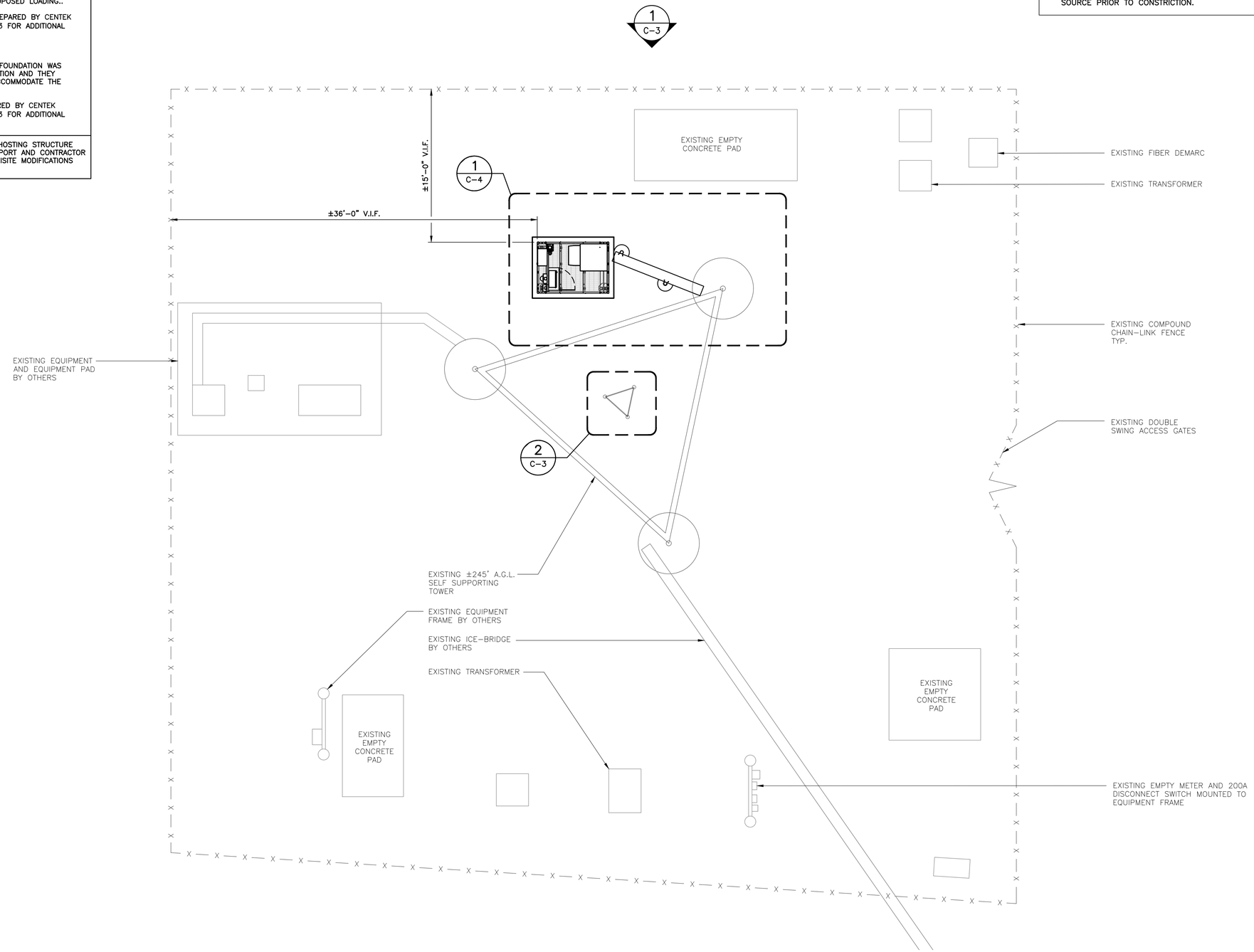
A STRUCTURAL ANALYSIS OF THE TOWER AND TOWER FOUNDATION WAS PERFORMED FOR THE PROPOSED EQUIPMENT INSTALLATION AND THEY WERE FOUND TO BE STRUCTURALLY SUFFICIENT TO ACCOMMODATE THE PROPOSED LOADING.

REFER TO THE STRUCTURAL ANALYSIS REPORT PREPARED BY CENTEK ENGINEERING (PROJECT # 22042.07) DATED 03/27/23 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

NOTE: NO EQUIPMENT SHALL BE INSTALLED ON THE HOSTING STRUCTURE WITHOUT A PASSING STRUCTURAL ANALYSIS REPORT AND CONTRACTOR PRIOR CONFIRMATION THAT ANY AND ALL REQUISITE MODIFICATIONS HAVE BEEN COMPLETED.

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.
3. CONTRACTOR TO VERIFY WITH DISH Wireless L.L.C. C.M. THE LOCATION OF THE POWER AND FIBER SOURCE PRIOR TO CONSTRICTION.



PROPOSED COMPOUND PLAN

5' 2.5' 0 5' 10'
1"=5'-0"

1

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CENTEK PROJECT NUMBER
22042.07

DISH Wireless L.L.C.
PROJECT INFORMATION

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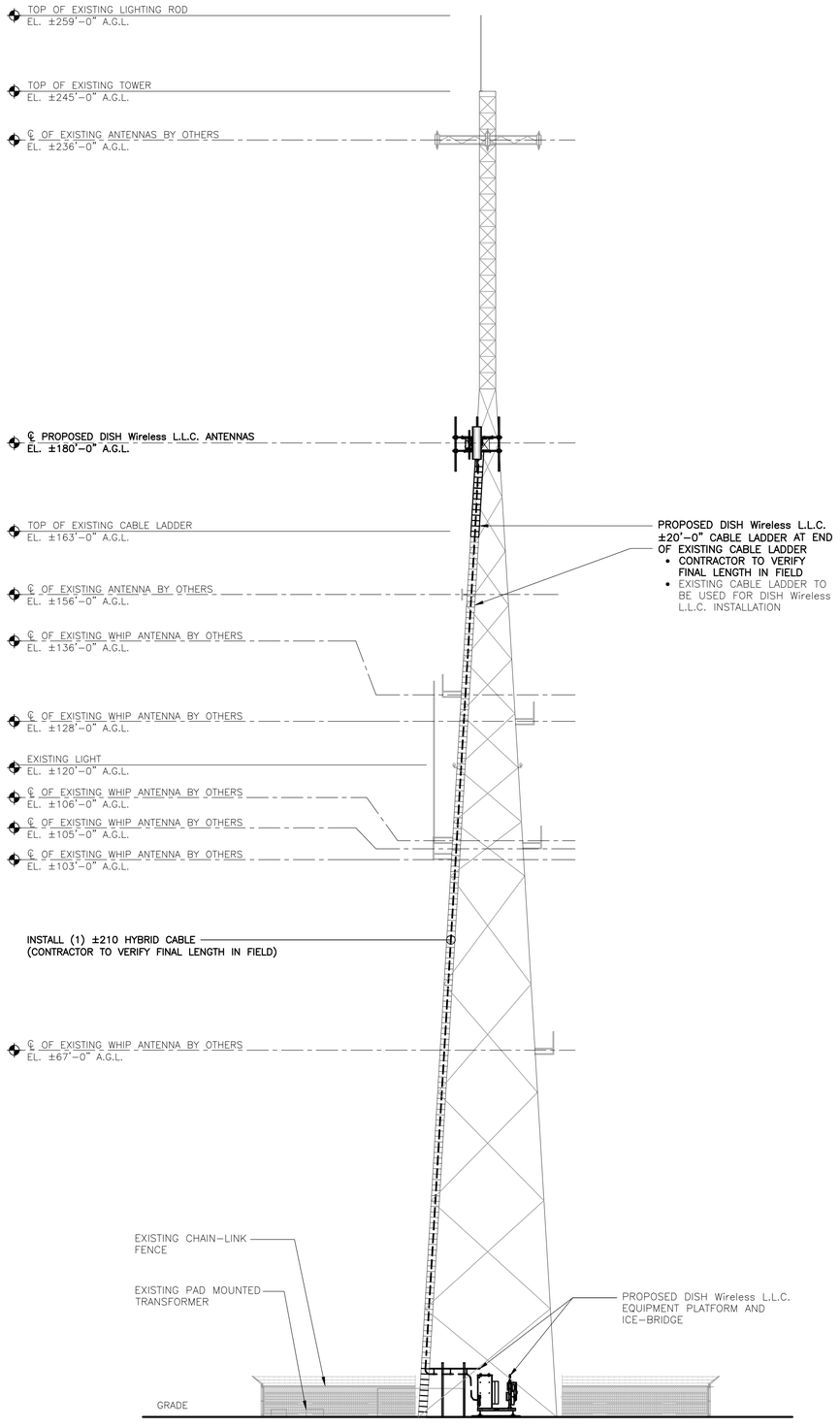
STORRS, CT 06268

SHEET TITLE
PROPOSED COMPOUND PLAN

SHEET NUMBER
C-2



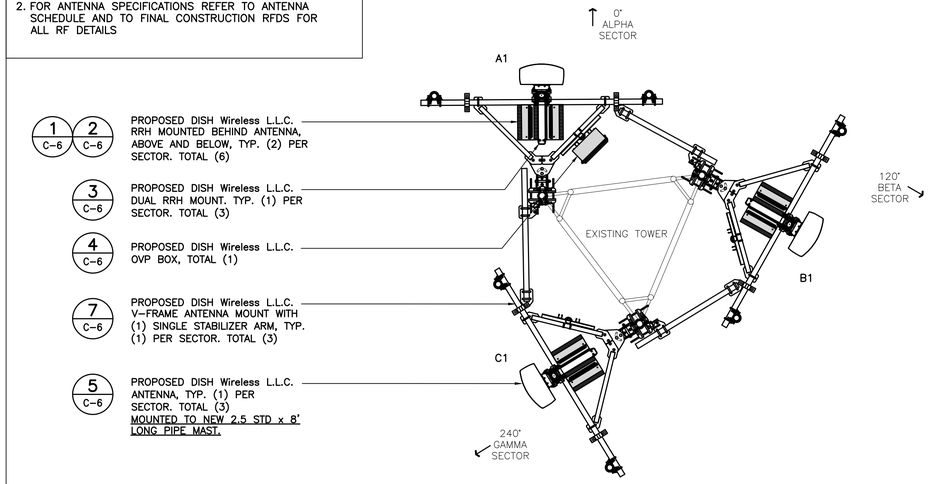
TOWER ELEVATION

4' 2' 0 4' 8' 12' 16' 20'
1"=8'-0"

1

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. FOR ANTENNA SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS



ALPHA/BETA/GAMMA SECTOR TYP.

PROPOSED ANTENNA ELEVATION

12" 6" 0 1' 2' 3' 4' 5'
1/2"=1'-0"

2

SECTOR POS.	ANTENNA					TRANSMISSION CABLE	RRH			OVP
	EXISTING OR PROPOSED	MANUFACTURER – MODEL NUMBER	TECH	AZIMUTH	RAD CENTER	FEED LINE TYPE AND LENGTH	MANUFACTURER – MODEL NUMBER	TECH	POS.	MANUFACTURER MODEL
A1	--	--	--	--	--	(1) HYBRID CABLE (210' LONG)	FUJITSU – TA0825-B605	n71	A2	RAYCAP RDIDC-9181-PF-48
A2	PROPOSED	JMA – MX08FRO665-21	5G	0°	180'		FUJITSU – TA0825-B604	n70/n66	A2	
A3	--	--	--	--	--		--	--	--	
B1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU – TA0825-B605	n71	B2	SHARED W/ALPHA
B2	PROPOSED	JMA – MX08FRO665-21	5G	120°	180'		FUJITSU – TA0825-B604	n70/n66	B2	
B3	--	--	--	--	--		--	--	--	
C1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU – TA0825-B605	n71	C2	SHARED W/ALPHA
C2	PROPOSED	JMA – MX08FRO665-21	5G	240°	180'		FUJITSU – TA0825-B604	n70/n66	C2	
C3	--	--	--	--	--		--	--	--	

NOTES

1. CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.
2. ANTENNA AND RRH MODELS MAY CHANGE DUE TO EQUIPMENT AVAILABILITY. ALL EQUIPMENT CHANGES MUST BE APPROVED AND REMAIN IN COMPLIANCE WITH THE PROPOSED DESIGN AND STRUCTURAL ANALYSES.

ANTENNA SCHEDULE

NO SCALE

3

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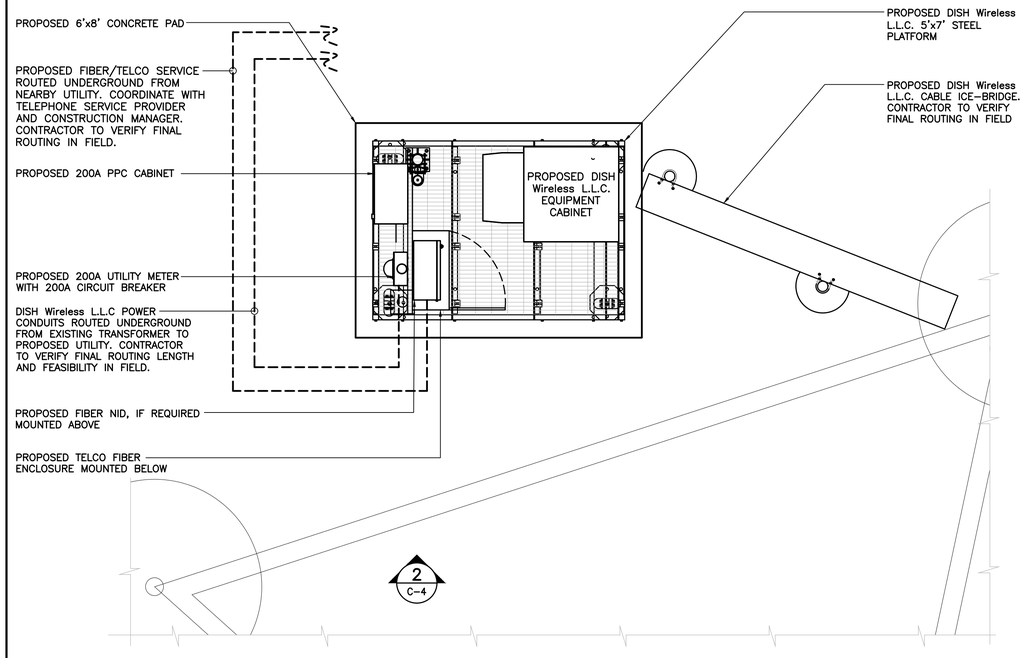
DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00003B
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

SHEET TITLE
ELEVATION, ANTENNA LAYOUT, AND SCHEDULE

SHEET NUMBER
C-3



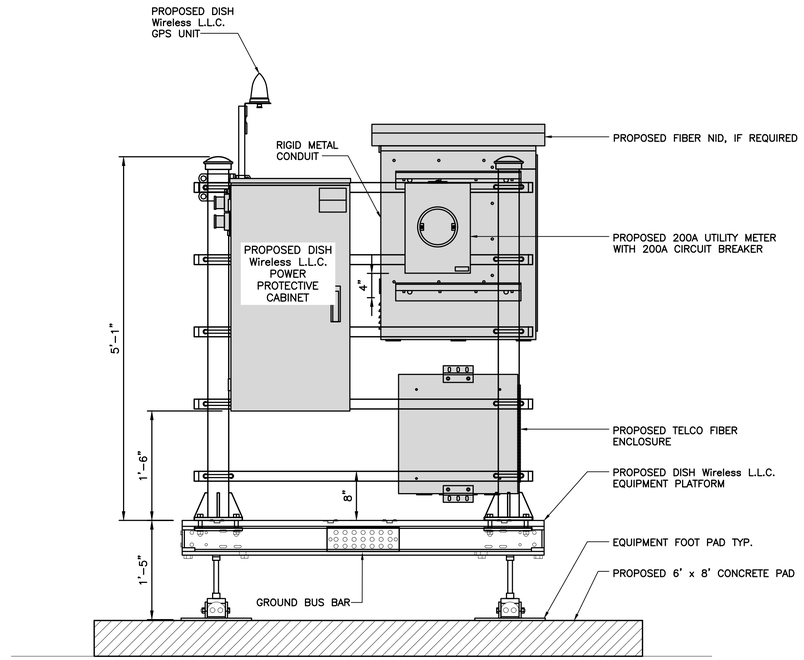
PROPOSED EQUIPMENT PLAN

12" 6" 0 1' 2' 3' 4' 5'
1/2"=1'-0"

1

NOTE

1. EQUIPMENT CABINET NOT SHOWN FOR CLARITY



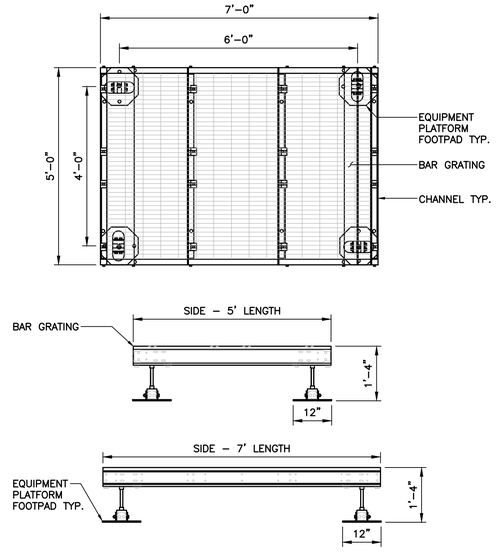
EQUIPMENT ELEVATION

12" 9" 6" 3" 0 1' 2'
1"=1'-0"

2

COMMSCOPE MTC4045LP 5X7 PLATFORM	
DIMENSIONS (HxWxL)	16"X84"X60"
WEIGHT/ VOLUME	423 LBS

NOTE:
GC TO PROVIDE EXTENDED THREAD FOR PLATFORM IF REQUIRED HEIGHT EXCEEDS 17"



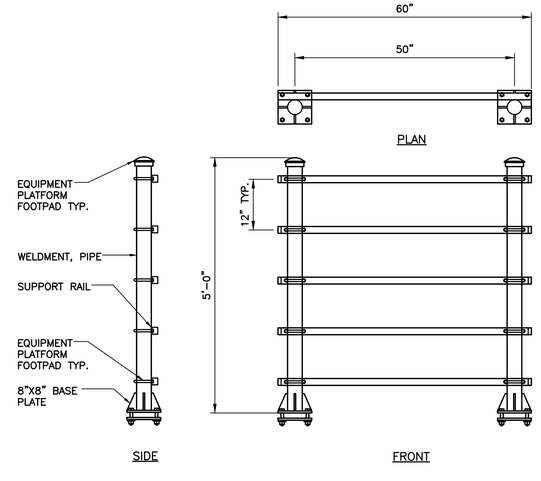
PLATFORM DETAIL

NO SCALE

3

COMMSCOPE MTC4045HFLD H-FRAME	
UNISTRUT/SUPPORT RAILS QTY	5
WEIGHT	59.74 LBS

NOTE:
OR DISH Wireless L.L.C. APPROVED EQUIVALENT



H-FRAME DETAIL

NO SCALE

4

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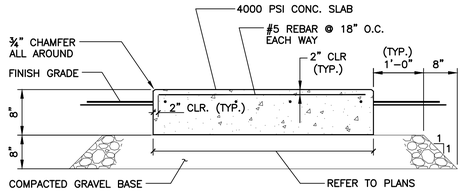
PROJECT INFORMATION

BOBDL00003B
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

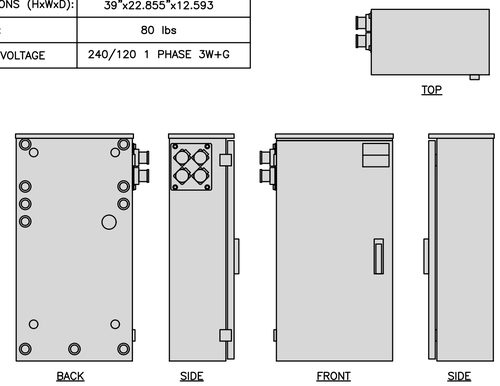
SHEET TITLE
EQUIPMENT PLATFORM AND H-FRAME DETAILS

SHEET NUMBER
C-4



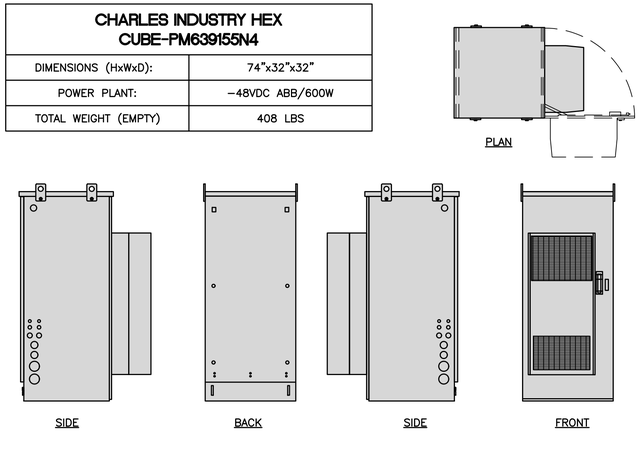
TYPICAL CONCRETE PAD DETAIL | NO SCALE | 1

RAYCAP PPC RDIAC-2465-P-240-MTS	
ENCLOSURE DIMENSIONS (HxWxD):	39"x22.855"x12.593
WEIGHT:	80 lbs
OPERATING AC VOLTAGE	240/120 1 PHASE 3W+G



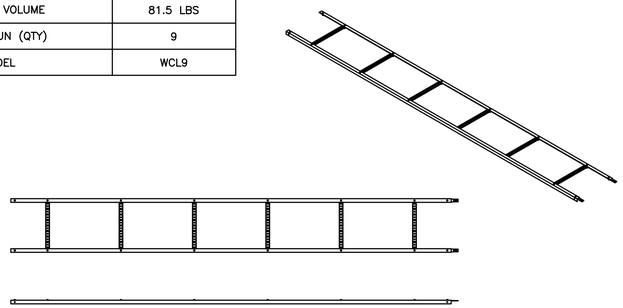
POWER PROTECTIVE CABINET DETAIL | NO SCALE | 2

CHARLES INDUSTRY HEX CUBE-PM639155N4	
DIMENSIONS (HxWxD):	74"x32"x32"
POWER PLANT:	−48VDC ABB/600W
TOTAL WEIGHT (EMPTY)	408 LBS



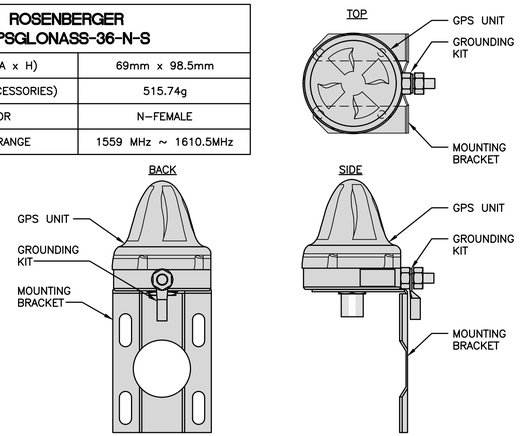
CABINET DETAIL | NO SCALE | 3

SITEPRO1: CABLE LADDER	
DIMENSIONS (LxW) (PER CABLE LADDER SECTION)	237.5"x 29.5"
WEIGHT/ VOLUME	81.5 LBS
CABLE RUN (QTY)	9
MODEL	WCL9

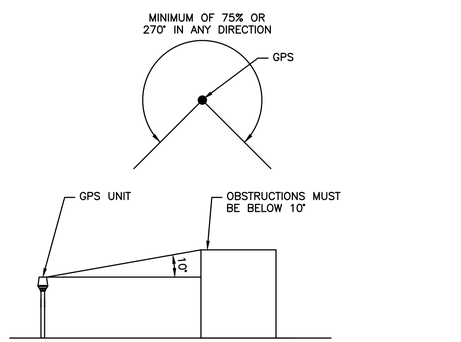


CABLE LADDER DETAIL | NO SCALE | 4

ROSENBERGER GPSGLONASS-36-N-S	
DIMENSION (DIA x H)	69mm x 98.5mm
WEIGHT (WITH ACCESSORIES)	515.74g
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1559 MHz ~ 1610.5MHz

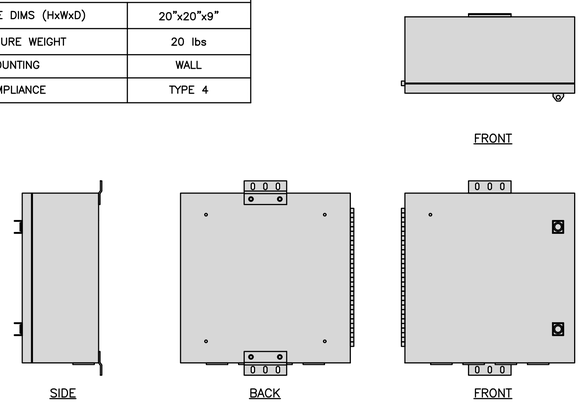


GPS DETAIL | NO SCALE | 5

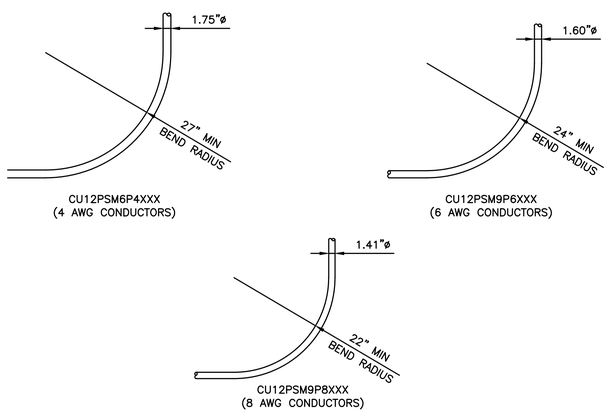


GPS MINIMUM SKY VIEW REQUIREMENTS | NO SCALE | 6

CHARLES CFIT-PF2020DSH1 FIBER TELCO ENCLOSURE	
ENCLOSURE DIMS (HxWxD)	20"x20"x9"
ENCLOSURE WEIGHT	20 lbs
MOUNTING	WALL
COMPLIANCE	TYPE 4

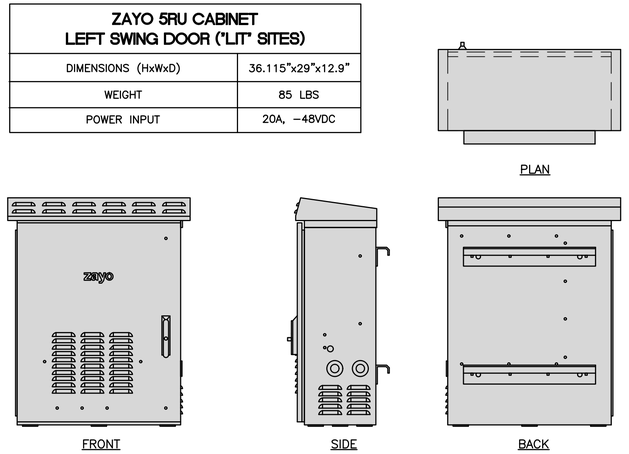


FIBER TELCO ENCLOSURE DETAIL | NO SCALE | 7



CABLES UNLIMITED HYBRID CABLE MINIMUM BEND RADIUSES | NO SCALE | 8

ZAYO 5RU CABINET LEFT SWING DOOR ("LIT" SITES)	
DIMENSIONS (HxWxD)	36.115"x29"x12.9"
WEIGHT	85 LBS
POWER INPUT	20A, −48VDC



FIBER NID ENCLOSURE DETAIL | NO SCALE | 9

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CENTEK PROJECT NUMBER
22042.07

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00003B
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

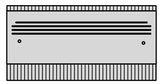
SHEET TITLE
TYPICAL EQUIPMENT DETAILS

SHEET NUMBER
C-5

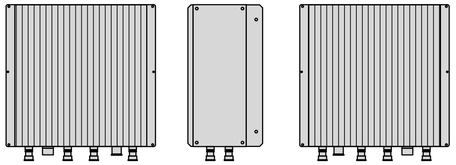
FUJITSU DUAL BAND TA08025-B604	
DIMENSIONS (HxWxD)	14.9"x15.7"x7.8"
WEIGHT	63.9 lbs
CONNECTOR TYPE	4.3–10 RF CONNECTOR
POWER SUPPLY	DC –58~–36V

NOTE:

ALL VISIBLE RRH'S SHALL BE WRAPPED IN CONCEALFAB MMW VINYL FILM WRAP (PART #900864–99 OR APPROVED EQUAL



PLAN



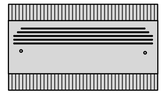
BACK SIDE FRONT

RRH DETAIL | NO SCALE | 1

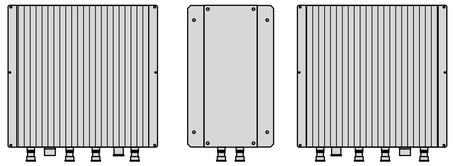
FUJITSU TRIPLE BAND TA08025-B605	
DIMENSIONS (HxWxD)	14.9"x15.7"x9"
WEIGHT	74.95 lbs
CONNECTOR TYPE	4.3–10 RF CONNECTOR
POWER SUPPLY	DC –58~–36V

NOTE:

ALL VISIBLE RRH'S SHALL BE WRAPPED IN CONCEALFAB MMW VINYL FILM WRAP (PART #900864–99 OR APPROVED EQUAL



PLAN

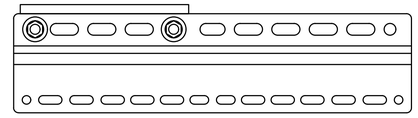


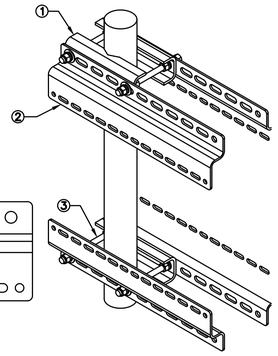
BACK SIDE FRONT

RRH DETAIL | NO SCALE | 2

SABRE DOUBLE Z-BRACKET C10123155	
DIMENSIONS (HxWxD) (1 BRACKET)	5"x20"x1–13/16"
WEIGHT (FULL ASSEMBLY)	35.79 lbs
PACKAGE QUANTITY	4

#	DESCRIPTION
1	PLATE, CHANNEL BRACKET
2	RRH Z BRACKET, 3/16"
3	THREADED ROD ASSEMBLY 1/2"x12"

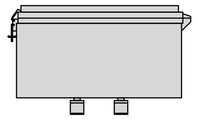




NOTE:
OR DISH Wireless L.L.C. APPROVED EQUIVALENT

RRH MOUNT DETAIL | NO SCALE | 3

RAYCAP RDIDC-3045-PF-48 SURGE PROTECTION DEVICE (OVP)	
DIMENSIONS (HxWxD)	18.97"x16.21"x9.64"
WEIGHT	21 lbs



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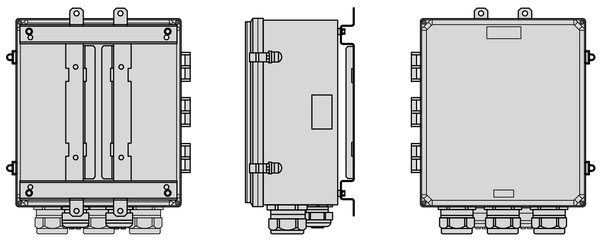
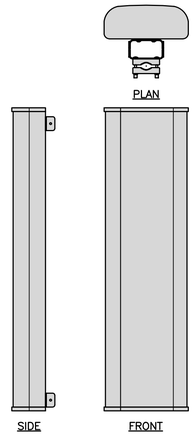


SURGE PROTECTION DEVICE DETAIL (OVP) | NO SCALE | 4

JMA MX08FRO665-21	
DIMENSIONS (HxWxD)	72"x20.0"x8.0"
RF PORTS, CONNECTOR TYPE	8 x 4.3–10 FEMALE
WEIGHT	64.5 lbs
WEIGHT WITH BRACKETS	82.5 lbs

NOTE:

ALL VISIBLE ANTENNAS SHALL BE WRAPPED IN CONCEALFAB MMW VINYL FILM WRAP (PART #900864–99 OR APPROVED EQUAL



PLAN SIDE FRONT

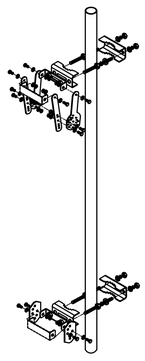
ANTENNA DETAIL | NO SCALE | 5

JMA ANTENNA MOUNT BRACKET #91900318	
TOTAL WEIGHT (WITH BRACKETS)	18 lbs (8.18 Kg)
POLE DIAMETER RANGE	2.5" TO 4.5"

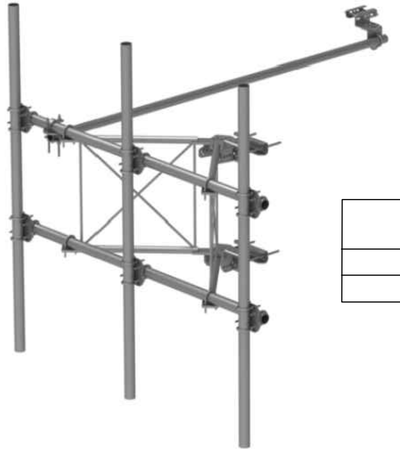
NOTE:
KIT #91900318: TOP AND BOTTOM BRACKETS FOR 4–,6–, AND 8–FOOT ANTENNAS

ANTENNA BRACKET NOT PART OF KIT

NOTE:
OR DISH Wireless L.L.C. APPROVED EQUIVALENT



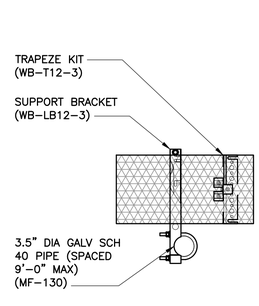
ANTENNA BRACKET DETAIL | NO SCALE | 6

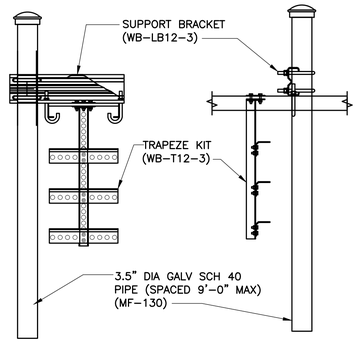


COMMSCOPE: MTC3975083 V-FRAME	
FACE SIZE	8'–0"
WEIGHT	352 LBS

ANTENNA FRAME DETAIL | NO SCALE | 7

COMMSCOPE: WB-K110-B WAVEGUIDE BRIDGE KIT		INCLUDED PRODUCTS:	WB–T12–3 TRAPEZE KIT, 3 RUNGS WB–LB12–3 SUPPORT BRACKET MF–130 DIRECT BURIAL PIPE COLUMN, 13'–4"
DIMENSIONS (HxL)	160"x10'		
WEIGHT/VOLUME	325 lbs		
CABLE RUN (QTY)	12		





ICE-BRIDGE DETAIL | NO SCALE | 8

NOT USED | NO SCALE | 9

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DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00003B
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

SHEET TITLE
TYPICAL EQUIPMENT DETAILS

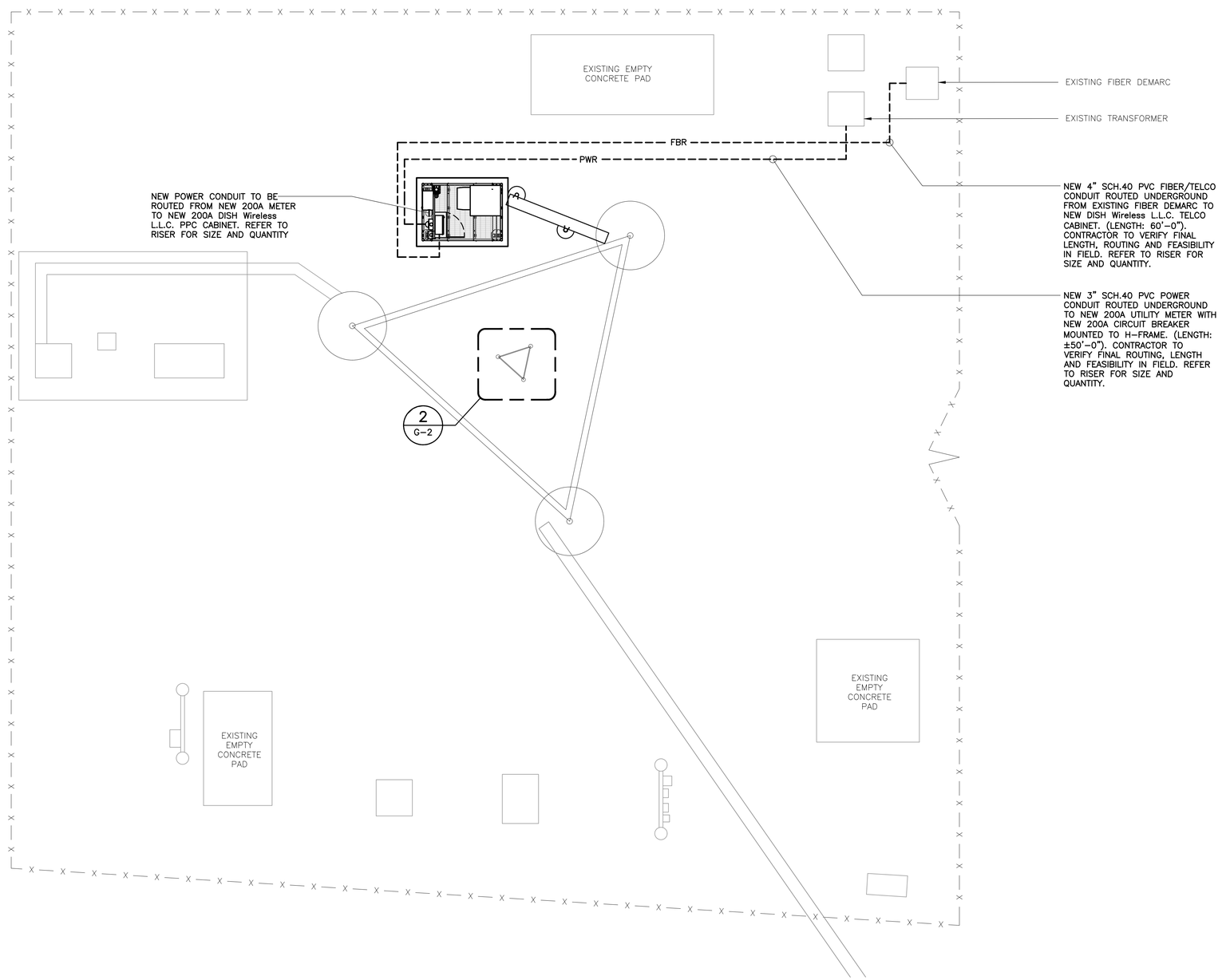
SHEET NUMBER
C-6

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTES.
2. ANTENNAS AND MOUNTS NOT SHOWN FOR CLARITY.
3. THE GROUND LEASE PROVIDES BROAD/BLANKET UTILITY RIGHTS. "PWR" AND "FBR" PATH DEPICTED ON C–2 AND E–1 ARE BASED ON BEST AVAILABLE INFORMATION INCLUDING BUT NOT LIMITED TO FIELD VERIFICATION, PRIOR PROJECT DOCUMENTATION AND OTHER REAL PROPERTY RIGHTS DOCUMENTS. WHEN INSTALLING THE UTILITIES PLEASE LOCATE AND FOLLOW EXISTING PATH. IF EXISTING PATH IS NOT AN OPTION, PLEASE NOTIFY TOWER OWNER AS FURTHER COORDINATION MAY BE NEEDED.

NOTE

CONTRACTOR IS RESPONSIBLE TO VERIFY FINAL COAX ROUTING, LENGTH OF RUN, AND FEASIBILITY.



UTILITY ROUTING PLAN

5' 2.5' 0 5' 10'
1"=5'–0"

1

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82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

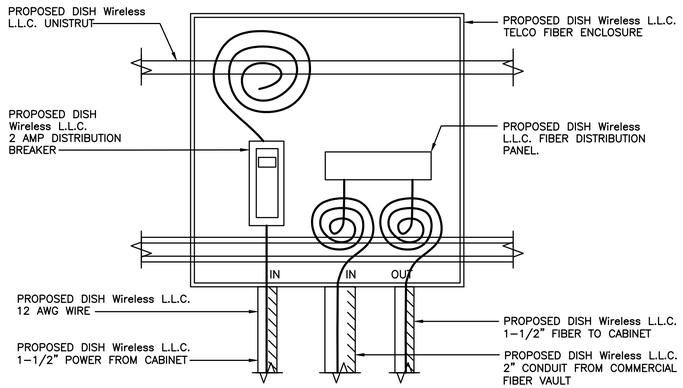
SHEET TITLE
UTILITY ROUTING PLAN

SHEET NUMBER
E-1

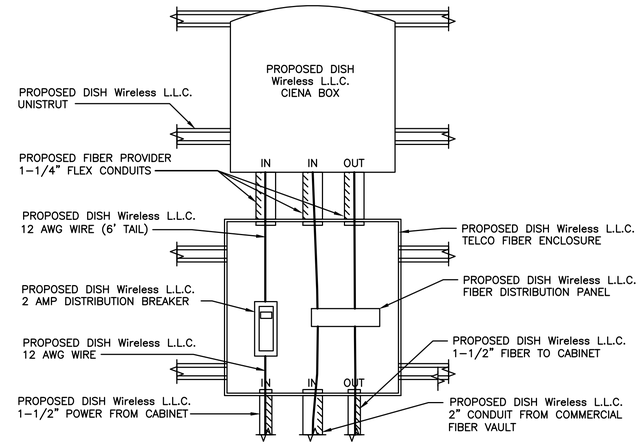
DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND −48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY −48V.

1. CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
2. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT NATIONAL ELECTRICAL CODES AND ALL STATE AND LOCAL CODES, LAWS, AND ORDINANCES. PROVIDE ALL COMPONENTS AND WIRING SIZES AS REQUIRED TO MEET NEC STANDARDS.
3. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO CONSTRUCTION.
4. CONDUIT ROUGH−IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION CONFLICTS. VERIFY WITH THE MECHANICAL EQUIPMENT CONTRACTOR AND COMPLY AS REQUIRED.
5. CONTRACTOR SHALL PROVIDE ALL BREAKERS, CONDUITS AND CIRCUITS AS REQUIRED FOR A COMPLETE SYSTEM.
6. CONTRACTOR SHALL PROVIDE PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NEC ARTICLE 314.
7. CONTRACTOR SHALL PROVIDE ALL STRAIN RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. ALL DISCONNECTS AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED PHENOLIC NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM.
9. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC 250. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, AND EQUIPMENT CABINETS.
10. ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
11. PANEL SCHEDULE LOADING AND CIRCUIT ARRANGEMENTS REFLECT POST−CONSTRUCTION EQUIPMENT.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR AS−BUILT PANEL SCHEDULE AND SITE DRAWINGS.

ELECTRICAL NOTES | NO SCALE | 1



DARK TELCO BOX - INTERIOR WIRING LAYOUT | NO SCALE | 2



LIT TELCO BOX - INTERIOR WIRING LAYOUT (OPTIONAL) | NO SCALE | 3

NOT USED | NO SCALE | 4

NOT USED | NO SCALE | 5

NOT USED | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

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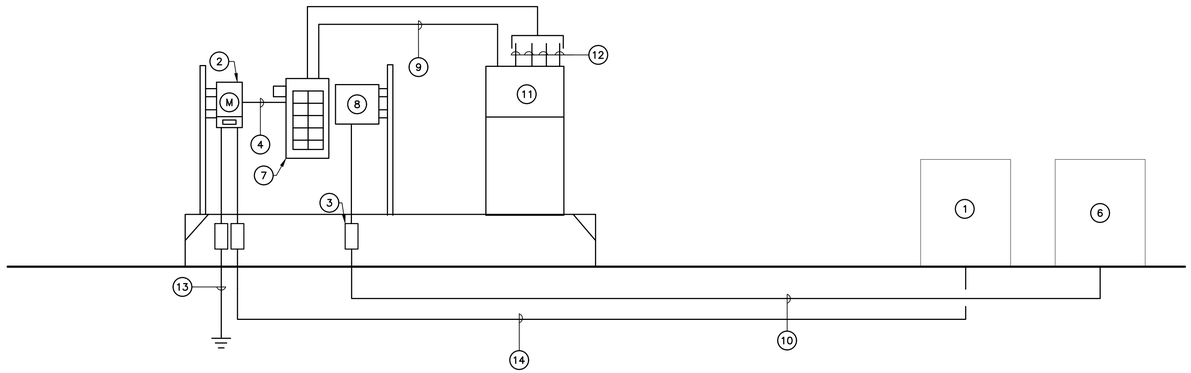
STORRS, CT 06268

SHEET TITLE
TELCO CABINET DETAILS

SHEET NUMBER
E-2



RISER NOTES

1. EXISTING TRANSFORMER TO BE UTILIZED.
2. NEW 200A, 240V, SINGLE PHASE, NEMA 3R METER SOCKET WITH 200A/2P CIRCUIT BREAKER AND 200A, SINGLE PHASE, 240V RATED UTILITY METER. ALL EQUIPMENT MUST BE UTILITY APPROVED. COORDINATE ENTIRE INSTALLATION WITH UTILITY COMPANY.
3. EXPANSION COUPLING TYP.
4. (3) 3/0 AWG, (1) #6 AWG GROUND, 2" CONDUIT.
5. NOT USED
6. EXISTING FIBER DEMARC. CONTRACTOR TO VERIFY LOCATION IN FIELD.
7. NEW 120/240V, 200A/2P, SINGLE PHASE PPC CABINET.
8. NEW DISH Wireless L.L.C. TELCO/FIBER CABINET.
9. (3) #12 AWG, (1) #10 AWG GROUND, 3/4" CONDUIT. FOR CONVENIENCE OUTLET
10. (1) 4" CONDUIT WITH PULL ROPES FOR TELEPHONE COMPANY CONDUCTORS. CONDUCTORS PROVIDED BY TELEPHONE COMPANY FROM EXISTING DEMARC TO EQUIPMENT PLATFORM. PROVIDE ALL COUPLINGS, ADAPTERS, SWEEPS, AND ASSOCIATED HARDWARE. MATERIAL SHALL BE PER TELEPHONE COMPANY SPECIFICATIONS.
11. NEW DISH Wireless L.L.C. EQUIPMENT CABINET.
12. 4 SETS OF (3) #10 AWG, (1) #10 AWG GROUND. 3/4" CONDUIT.
13. #4 AWG MAIN SERVICE GROUNDING CONDUCTOR IN A 3/4" PVC CONDUIT BONDED TO GROUND ROD IN NEW GROUND RING. GROUNDING SHALL BE BONDED TO COMPOUND GROUND RING WITH #4 AWG SOLID TINNED BARE COPPER WIRE.
14. (3) 3/0 AWG, 3" CONDUIT.

ELECTRICAL RISER DIAGRAM

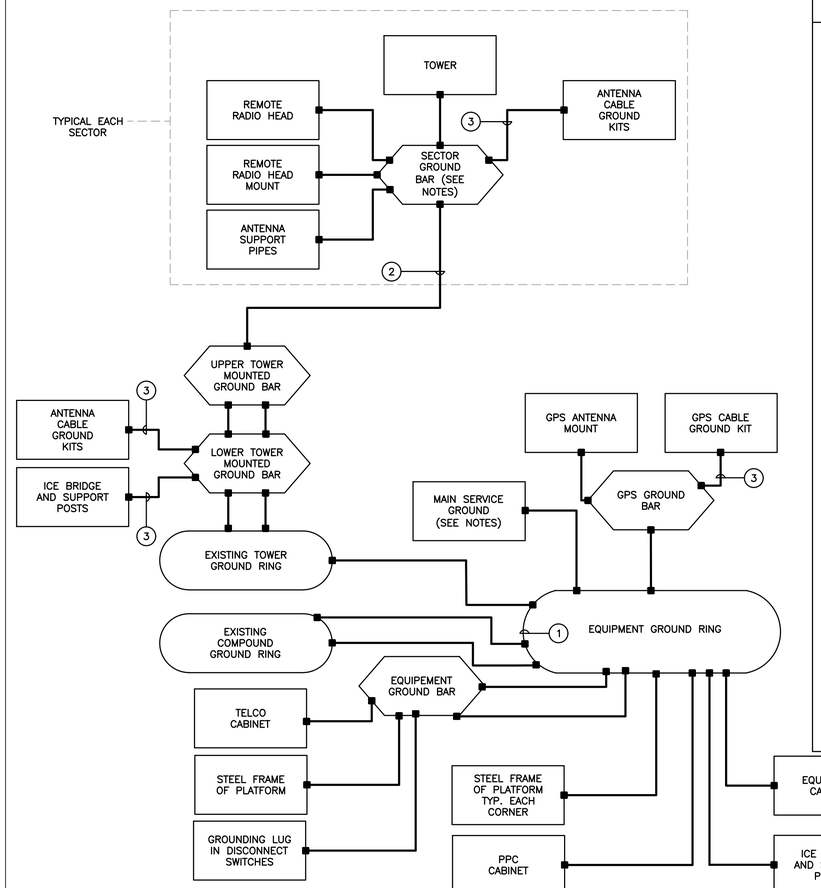
NO SCALE | 1

VOLTAGE:	120/240		PHASE:	1	WIRE:	3	PANEL NO.		MDP						
MAIN BUS:	200	AMPS					TOTAL WATTS, L1		11,700						
MAIN BREAKER:	200	A FRAME	200		A TRIP		TOTAL WATTS, L2		11,700	LOC:	EQUIPMENT FRAME				
MOUNTING:	SURFACE						TOTAL WATTS		23,400						
NOTES:	A) PPC SHALL BE 200A, 120/240V, SINGLE PHASE, 3W, 65 KAIC, 200A MCB, 24 POSITION, NEMA 3R ENCLOSURE, LAMINATED ENGRAVED BAKELITE NAMEPLATE, COPPER EQUIPMENT GROUND KIT, INSULATED COPPER SOLID NEUTRAL BAR.														
	B) BRANCH CIRCUIT BREAKER AND CONDUCTOR SIZE BASED ON SPECIFIC EQUIPMENT. CONFIRM ELECTRICAL REQUIREMENTS PRIOR TO INSTALLATION.														

		WATTS LOAD				L1 Y	L2 Y			WATTS LOAD				
DIRECTORY	WIRE & CONDUIT	L1	L2	CKT.	AMPS			AMPS	CKT.	L1	L2	WIRE & CONDUIT	DIRECTORY
RECTIFIER #1	3/4" C, 2 #10, #10GND	2,880		1	30/2P			20	2	180		3/4" C, 2 #12, #12GND	CONVENIECE GFCI OUTLET
			2,880	3				20	4		180	3/4" C, 2 #12, #12GND	PPC GFCI OUTLET
RECTIFIER #2	3/4" C, 2 #10, #10GND	2,880		5	30/2P				6			-	SPACE
			2,880	7					8			-	SPACE
RECTIFIER #3	3/4" C, 2 #10, #10GND	2,880		9	30/2P				10			-	SPACE
			2,880	11					12			-	SPACE
RECTIFIER #4	3/4" C, 2 #10, #10GND	2,880		13	30/2P				14			-	SPACE
			2,880	15					16			-	SPACE
SPACE	-			17					18			-	SPACE
SPACE	-			19					20			-	SPACE
SPACE	-			21					22			-	SPACE
SPACE	-			23					24			-	SPACE

ELECTRICAL PANEL SCHEDULE

NO SCALE | 2



ELECTRICAL SCHEMATIC DIAGRAM

NO SCALE | 3

GROUNDING SCHEMATIC NOTES

1. GROUND RING, #2 AWG BCW
2. #2/0 GREEN INSULATED
3. #6 AWG

GENERAL NOTES:

1. ALL SURGE SUPPRESSION EQUIPMENT SHALL BE BONDED TO GROUND PER MANUFACTURER'S SPECIFICATIONS
2. UNLESS OTHERWISE NOTED OR REQUIRED BY CODE, GROUND CONDUCTORS SHOWN SHALL BE #2 AWG (SOLID TINNED BCW – EXTERIOR; STRANDED GREEN INSULATED – INTERIOR).
3. BOND CABLE TRAY AND ICE BRIDGE SECTIONS TOGETHER WITH #6 AWG STRANDED GREEN INSULATED JUMPERS.
4. ALL SECTOR GROUND BARS SHALL BE BONDED TOGETHER WITH #2 AWG SOLID TINNED BCW.
5. BOND ALL EQUIPMENT CABINETS AND BATTERY CABINETS TO GROUND PER MANUFACTURER'S SPECIFICATIONS.
6. ALL BONDS TO TOWER SHALL BE MADE IN STRICT ACCORDANCE WITH SPECIFICATIONS OF TOWER MANUFACTURER OR STRUCTURAL ENGINEER.
7. REFER TO GROUNDING PLAN FOR LOCATION OF GROUNDING DEVICES.
8. REFER TO ALL ELECTRICAL AND GROUNDING DETAILS.
9. COORDINATE ALL TOWER MOUNTED EQUIPMENT WITH OWNER.
10. ALL TOWER MOUNTED AMPLIFIERS AND ASSOCIATED EQUIPMENT SHALL BE BONDED TO THE SECTOR GROUND BAR PER MANUFACTURER'S SPECIFICATIONS.
11. ALL GROUNDING SHALL BE IN ACCORDANCE WITH NEC AND OWNER'S REQUIREMENTS.
12. COORDINATE WITH TOWER OWNER BEFORE INSTALLING ANY GROUNDING ELEMENTS ON TOWER OR BONDING TO EXISTING TOWER GROUND RING.
13. REFER TO RISER DIAGRAM FOR SPECIFICATIONS OF SERVICE GROUND.

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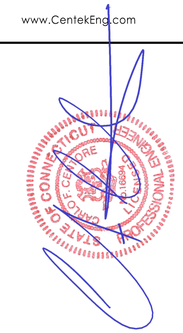

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CENTEK PROJECT NUMBER
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DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00003B
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

SHEET TITLE
ELECTRICAL RISER, PANEL SCHEDULE AND SCHEMATIC

SHEET NUMBER
E-3

ELECTRICAL SPECIFICATIONS

SECTION 16010

1.01. SCOPE OF WORK

A. WORK SHALL INCLUDE ALL LABOR, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE (MAKE READY FOR OPERATION) ALL THE ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

1. INSTALL 200A, 240/120V, 1P, 3 WIRE ELECTRIC SERVICE WITH REVENUE METER AND 200A MAIN CIRCUIT BREAKER FOR OWNER AND ASSOCIATED DISTRIBUTION EQUIPMENT. (AS REQUIRED BY UTILITY CO.)
2. NEW SITE TELEPHONE SERVICE AS SPECIFIED BY TELEPHONE COMPANY.
3. CELLULAR GROUNDING SYSTEMS, CONSISTING OF ANTENNA GROUNDING, INTERIOR GROUNDING RING, GROUND BARS, ETC.
4. FIELD MEASURE EXISTING ELECTRICAL SERVICES TO CONFIRM AVAILABLE EXISTING POWER.
5. COORDINATE ALL WORK SHOWN, ON THESE PLANS WITH LOCAL UTILITY COMPANIES.

B. LOCAL UTILITY COMPANIES SHALL PROVIDE THE FOLLOWING:

1. TELEPHONE CABLES.
2. SHUTDOWN OF SERVICE (COORDINATE WITH OWNER).

C. CONTRACTOR SHALL CONFER WITH LOCAL UTILITY COMPANIES TO ASCERTAIN THE LIMITS OF THEIR WORK AND SHALL INCLUDE IN BID ANY CHARGES OR FEES MADE BY THE UTILITY COMPANIES FOR THEIR PORTION OF THE WORK AND SHALL PROVIDE AND INSTALL ALL ITEMS REQUIRED, BUT NOT PROVIDED BY UTILITY COMPANY.

D. ELECTRICAL CONTRACTOR SHALL COORDINATE ELECTRICAL INSTALLATION WITH ELECTRIC UTILITY CO. PRIOR TO INSTALLATION.

E. CONTRACTOR SHALL COORDINATE WITH TELEPHONE UTILITY COMPANY FOR LOCATION OF TELEPHONE SERVICE AND TO DETERMINE ANY REQUIRED EQUIPMENT TO BE INSTALLED BY CONTRACTOR.

1.02. GENERAL REQUIREMENTS

A. 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 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH LOCAL TELEPHONE COMPANY THAT MAY BE REQUIRED FOR THE INSTALLATION OF TELEPHONE SERVICE TO THE PROPOSED CELLULAR SITE.

F. 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.

G. 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.

H. 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.

I. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THREE (3) COMPLETE SETS OF APPROVED 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.

J. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND WILL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

K. ALL EQUIPMENT AND MATERIALS TO BE INSTALLED SHALL BE NEW, UNLESS OTHERWISE NOTED.

L. 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.

M. PROVIDE TEMPORARY POWER AND LIGHTING IN WORK AREAS AS REQUIRED.

N. 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.

O. 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.

SECTION 16111

1.01. CONDUIT

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) [2,3]
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.

SECTION 16123

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:

	120/208/240V	277/480V
LINE	COLOR	COLOR
A	BLACK	BROWN
B	RED	ORANGE
C	BLUE	YELLOW
N	CONTINUOUS WHITE	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.

SECTION 16130

1.01. BOXES

A. FURNISH AND INSTALL OUTLET BOXES FOR ALL DEVICES, SWITCHES, RECEPTACLES, ETC.. BOXES TO BE ZINC COATED STEEL.

B. FURNISH AND INSTALL PULL BOXES IN MAIN FEEDERS RUNS WHERE REQUIRED. PULL BOXES SHALL BE GALVANIZED STEEL WITH SCREW REMOVABLE COVERS, SIZE AND QUANTITY AS REQUIRED. PROVIDE WEATHERPROOF CONSTRUCTION IN WET LOCATIONS.

SECTION 16140

1.01. WIRING DEVICES

A. THE FOLLOWING LIST IS PROVIDED TO CONVEY THE QUALITY AND RATING OF WIRING DEVICES WHICH ARE TO BE INSTALLED. A COMPLETE LIST OF ALL DEVICES MUST BE SUBMITTED BEFORE INSTALLATION FOR APPROVAL.

1. 15 MINUTE TIMER SWITCH – INTERMATIC #FF15M (INTERIOR LIGHTS)
2. DUPLEX RECEPTACLE – P&S #2095 (GFCI) SPECIFICATION GRADE
3. SINGLE POLE SWITCH – P&S #CSB20AC2 (20A-120V HARD USE) SPECIFICATION GRADE
4. DUPLEX RECEPTACLE – P&S #5362 (20A-120V HARD USE) SPECIFICATION GRADE

B. PLATES – ALL PLATES USED SHALL BE CORROSION RESISTANT TYPE 304 STAINLESS STEEL. PLATES SHALL BE FROM SAME MANUFACTURER AS SWITCHES AND RECEPTACLES. PROVIDE WEATHERPROOF HOUSING FOR DEVICES LOCATED IN WET LOCATIONS.

C. OTHER MANUFACTURERS OF THE SWITCHES, RECEPTACLES AND PLATES MAY BE SUBMITTED FOR APPROVAL BY THE ENGINEER.

SECTION 16170

1.01. DISCONNECT SWITCHES

A. FUSIBLE AND NON-FUSIBLE, 600V, HEAVY DUTY DISCONNECT SWITCHES SHALL BE AS MANUFACTURED BY SQUARE "D". PROVIDE FUSES AS CALLED FOR ON THE CONTRACT DRAWINGS. AMPERE RATING SHALL BE CONSISTENT WITH LOAD BEING SERVED. DISCONNECT SWITCH COVER SHALL BE MECHANICALLY INTERLOCKED TO PREVENT COVER FROM OPENING WHEN THE SWITCH IS IN THE "ON" POSITION. EXTERIOR APPLICATIONS SHALL BE NEMA 3R CONSTRUCTION WITH PADLOCK FEATURE.

SECTION 16190

1.01. SEISMIC RESTRAINT

A. ALL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH ZONE 2 SEISMIC REQUIREMENTS.

SECTION 16195

1.01. LABELING AND IDENTIFICATION NOMENCLATURE FOR ELECTRICAL EQUIPMENT

A. CONTRACTOR SHALL FURNISH AND INSTALL NON-METALLIC ENGRAVED BACK-LIT NAMEPLATES ON ALL PANELS AND MAJOR ITEMS OF ELECTRICAL EQUIPMENT.

B. LETTERS TO BE WHITE ON BLACK BACKGROUND WITH LETTERS 1-1/2 INCH HIGH WITH 1/4 INCH MARGIN.

C. IDENTIFICATION NOMENCLATURE SHALL BE IN ACCORDANCE WITH OWNER'S STANDARDS.

SECTION 16450

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 GROUNDED 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.
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 10 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. INTERIOR GROUND RING
3. EXTERIOR GROUNDING (WHERE REQUIRED DUE TO MEASURED AC RESISTANCE GREATER THAN SPECIFIED).
4. 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.

SECTION 16470

1.01. DISTRIBUTION EQUIPMENT

A. REFER TO CONTRACT DRAWINGS FOR DETAILS AND SCHEDULES.

SECTION 16477

1.01. FUSES

A. FUSES SHALL BE NONRENEWABLE TYPE AS MANUFACTURED BY "BUSSMAN" OR APPROVED EQUAL. FUSES RATED TO 1/10 AMPERE UP TO 600 AMPERES SHALL BE EQUIVALENT TO BUSSMAN TYPE LPN-RK (250V) UL CLASS RK1, LOW PEAK, DUAL ELEMENT, TIME-DELAY FUSES. FUSES SHALL HAVE SEPARATE SHORT CIRCUIT AND OVERLOAD ELEMENTS AND HAVE AN INTERRUPTING RATING OF 200 KAIC. UPON COMPLETION OF WORK, PROVIDE ONE SPARE SET OF FUSES FOR EACH TYPE INSTALLED.

SECTION 16960

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.

SECTION 16961

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 SO CONNECTED TO THE PANELBOARDS SUCH THAT THE NEW LOAD IS DISTRIBUTED AS EQUALLY AS POSSIBLE BETWEEN EACH LOAD AND NEUTRAL. 10% SHALL BE CONSIDERED AS A 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.

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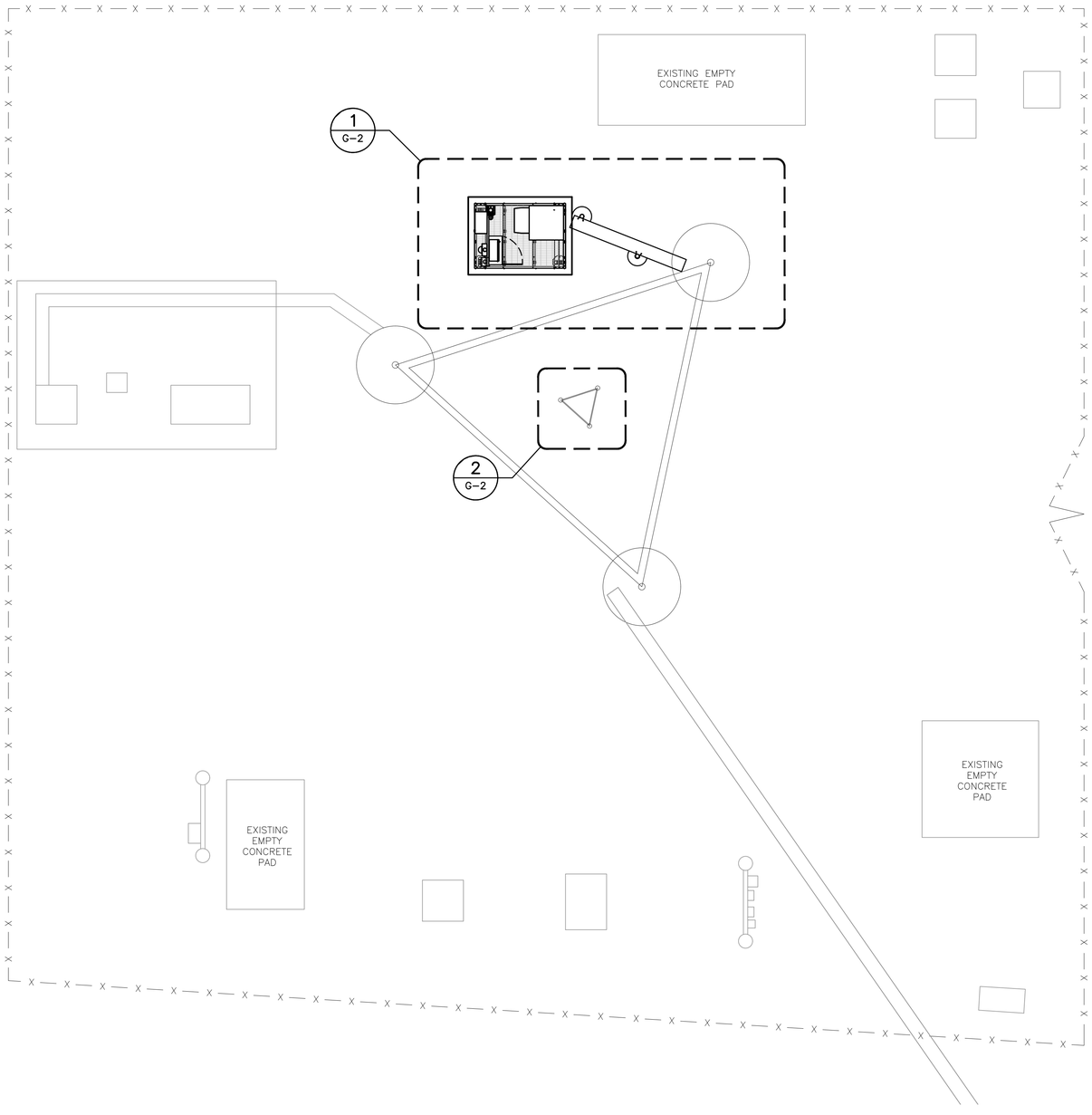
SHEET TITLE
ELECTRICAL SPECIFICATIONS

SHEET NUMBER
E-4



COMPOUND GROUNDING LOCATION PLAN

NO SCALE | 1

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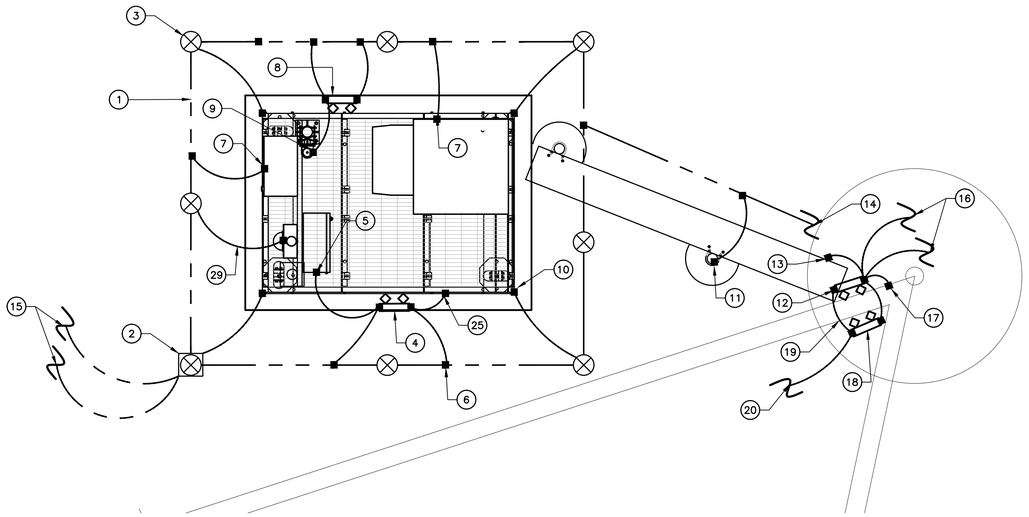
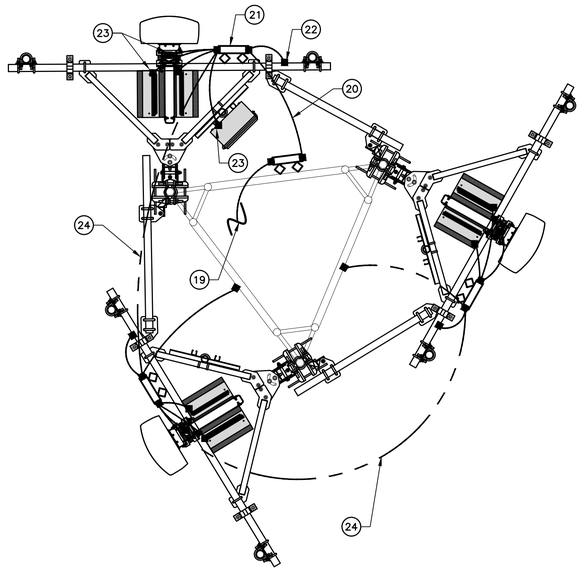
STORRS, CT 06268

SHEET TITLE
COMPOUND GROUNDING LOCATION PLAN

SHEET NUMBER
G-1



EQUIPMENT GROUNDING PLAN | NO SCALE | 1



ANTENNA GROUNDING PLAN TYP. | NO SCALE | 2

GROUNDING PLAN NOTES:

1. #2 SOLID TINNED BCW GROUND RING (2'-0" FROM OUTSIDE EDGE OF EQUIPMENT PLATFORM FOUNDATION WHEN ROUTED ALONG PLATFORM PERIMETER.) (TYP.).
2. GROUNDING ROD WITH ACCESS (TYP.).
3. GROUNDING ROD (TYP.).
4. MAIN EQUIPMENT GROUND BAR.
5. BOND EQUIPMENT TO GROUND BAR PER NEC AND MANUFACTURER REQUIREMENTS
6. BOND MAIN GROUND BAR TO GROUND RING.
7. BOND EQUIPMENT CABINETS TO GROUND RING PER NEC AND MANUFACTURER REQUIREMENTS
8. GPS GROUND BAR.
9. BOND GPS ANTENNA MOUNTING PIPES TO GPS GROUND BAR. TYP.
10. BOND EQUIPMENT PLATFORM TO GROUND RING TYP. EACH CORNER
11. ICE BRIDGE POST AND COVER. BOND EACH SECTION AND SUPPORT TO GROUND RING.
12. BOND LOWER TOWER MOUNTED GROUND BAR TO ICE-BRIDGE POST.
13. SECTOR GROUND BAR TYP.
14. ALL GROUND BARS SHALL BE BONDED TOGETHER WITH #2 AWG SOLID TINNED BCW.
15. BOND ANTENNA MOUNTING PIPES TO SECTOR GROUND BAR. TYP.
16. LOWER TOWER MOUNTED GROUND BAR.
17. BOND EQUIPMENT GROUND RING TO TOWER GROUND RING.
18. BOND EQUIPMENT GROUND RING TO EXISTING COMPOUND GROUND RING TYP. 2 LEADS.
19. CONNECT LOWER TOWER MOUNTED GROUND BAR TO TOWER GROUND RING TYP. 2 LEADS.
20. BOND LOWER TOWER MOUNTED GROUND BAR TO TOWER STEEL.
21. UPPER TOWER MOUNTED GROUND BAR.
22. BOND LOWER TOWER MOUNTED GROUND BAR TO UPPER TOWER MOUNTED GROUND BAR TYP. 2 LEADS.
23. CONNECT UPPER TOWER MOUNTED GROUND BAR TO SECTOR GROUND BAR TYP.
24. SECTOR GROUND BAR TYP.
25. BOND SECTOR GROUND BAR TO STEEL ANTENNA FRAME.
26. BOND ANTENNA AND ANTENNA APPURTENANCES MOUNTING PIPES TO SECTOR GROUND BAR. (TYPICAL).
27. ALL SECTOR GROUND BARS SHALL BE BONDED TOGETHER WITH #2 AWG SOLID TINNED BCW.
28. BOND TO PLATFORM STEEL
29. BOND SERVICE GROUND TO GROUND ROD IN NEW GROUND RING. GROUNDING SHALL BE BONDED TO GROUND RING WITH #4 AWG SOLID TINNED BARE COPPER WIRE.

ELECTRICAL GROUNDING NOTES | 3

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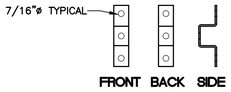
CENTEK PROJECT NUMBER
22042.07

DISH Wireless L.L.C.
PROJECT INFORMATION

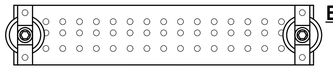
BOBDL00003B
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

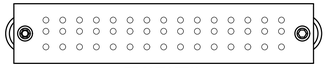
SHEET TITLE
ELECTRICAL GROUNDING PLAN AND NOTES

SHEET NUMBER
G-2

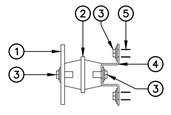


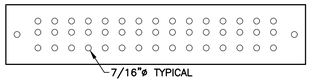
BRACKET FOR GROUND BAR-DIMENSIONS
N.T.S.





TYPICAL GROUND BAR ASSEMBLY
N.T.S.



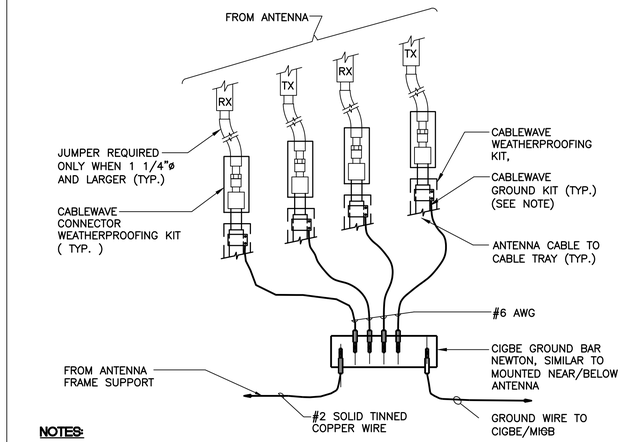


TYPICAL GROUND BAR - DIMENSIONS
N.T.S.

NOTES

1. HIGH CONDUCTIVITY TINNED COPPER BAR 1'-8"Lx4"Wx1/4"D.
2. RED COLORED STANDOFF INSULATOR PLASTIC #1872-1A.
3. STAINLESS STEEL TRUSS SPANNER MACHINE SCREWS, SPLIT LOCKWASHER AND FLAT WASHER.
4. 1"Wx1/8"T STAINLESS STEEL TYPE 304 BRACKET.
5. STAINLESS STEEL TYPE 304 HARDWARE - 3/8"ø EXPANSION BOLT FOR CONCRETE.

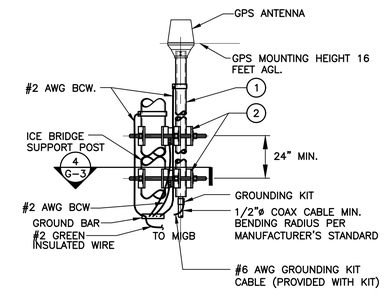
MASTER/EQUIPMENT GROUND BAR DETAIL | NO SCALE | 1



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

CONNECTION OF GROUND WIRES TO GROUND BAR | NO SCALE | 2

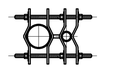


GPS ANTENNA MOUNTING BRACKET

BILL OF MATERIALS

ITEM	DESCRIPTION	QUANTITY
1	2-1/2"ø SCH. 40 x 8'-0" LG. MAX SS OR GALV. PIPE	1
2	UNIVERSAL CLAMP SET.	2

GPS GROUNDING/MOUNTING BRACKET DETAIL | NO SCALE | 3

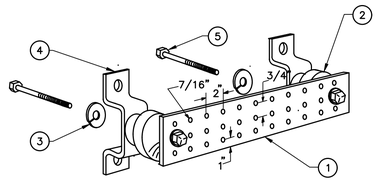


4 G-3 SECTION NOT TO SCALE

NOTES

1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
2. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 2-1/2" DIAMETER, SCHEDULE 40, GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 24 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.

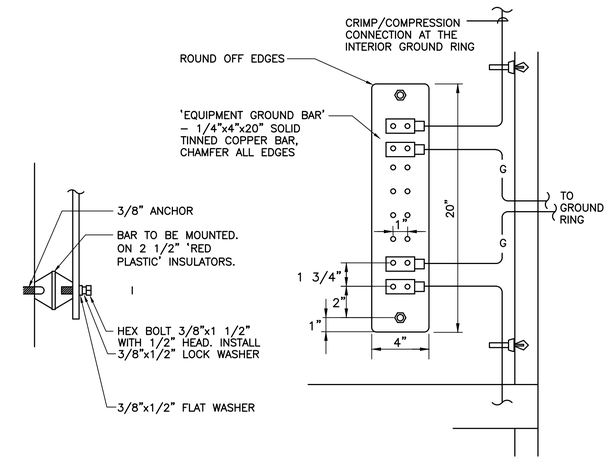
GPS GROUNDING/MOUNTING BRACKET DETAIL | NO SCALE | 4



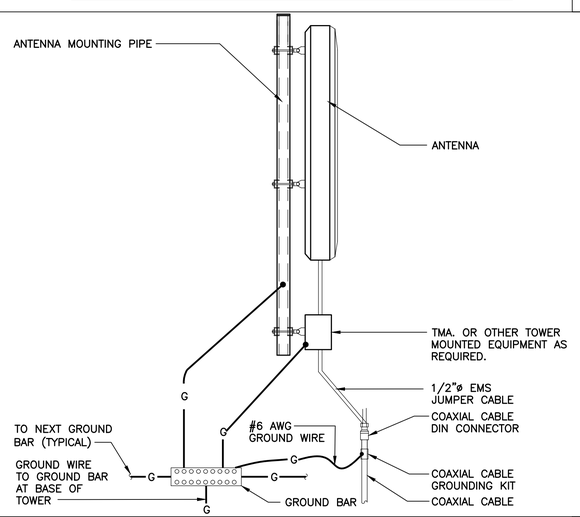
NOTES

1. TINNED COPPER GROUND BAR, 1/4" x 4" x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4.
3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056.
5. 5/8-11 x 1" STAINLESS STEEL TRUSS SPANNER MACHINE SCREWS.

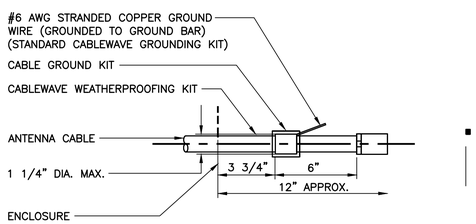
GROUND BAR DETAIL | NO SCALE | 5



EQUIPMENT GROUND BAR DETAIL | NO SCALE | 6



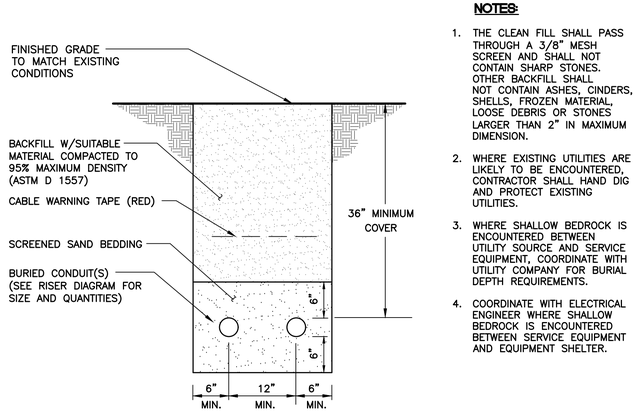
TYPICAL ANTENNA GROUNDING DETAIL | NO SCALE | 7



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

ANTENNA CABLE GROUNDING DETAIL | NO SCALE | 8



NOTES:

1. THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION.
2. WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.
3. WHERE SHALLOW BEDROCK IS ENCOUNTERED BETWEEN UTILITY SOURCE AND SERVICE EQUIPMENT, COORDINATE WITH UTILITY COMPANY FOR BURIAL DEPTH REQUIREMENTS.
4. COORDINATE WITH ELECTRICAL ENGINEER WHERE SHALLOW BEDROCK IS ENCOUNTERED BETWEEN SERVICE EQUIPMENT AND EQUIPMENT SHELTER.

TYPICAL ELECTRICAL TRENCH DETAIL | NO SCALE | 9

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22042.07

DISH Wireless L.L.C.
PROJECT INFORMATION

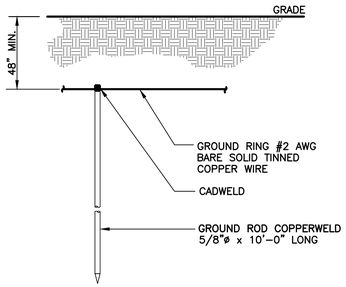
BOBDL00003B
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

SHEET TITLE
TYPICAL GROUNDING DETAILS

SHEET NUMBER
G-3

NOTES:

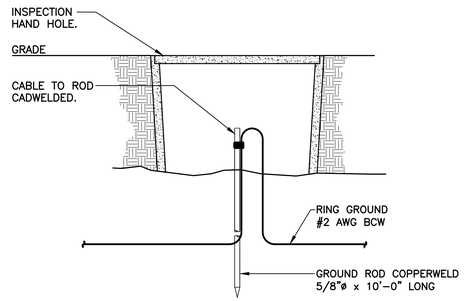
1. USE GROUND PLATE DETAIL IF 10 FT. GROUND ROD DEPTH CANNOT BE ACHIEVED DUE TO LEDGE CONDITION OR IF EXISTING TOWER FOUNDATION IS ENCOUNTERED.



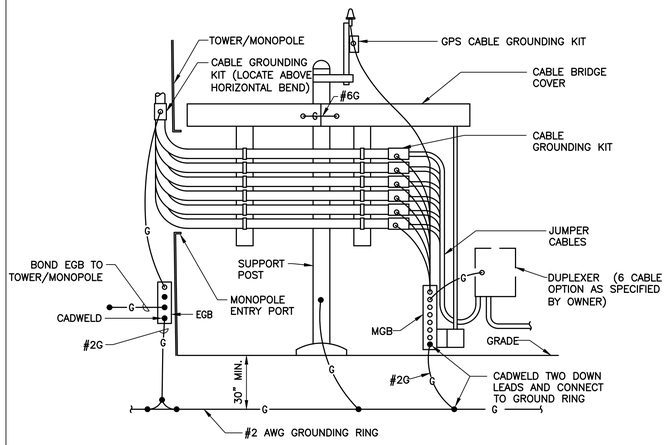
GROUND ROD DETAIL | NO SCALE | 1

NOTES:

1. INSPECTION HAND HOLE MAY BE CONCRETE OR PVC AND SHALL BE A MINIMUM OF 12" DIA x 18" DEEP.



GROUND ROD WITH ACCESS DETAIL | NO SCALE | 2



ICE-BRIDGE GROUNDING DETAIL | NO SCALE | 3

NOT USED | NO SCALE | 4

NOT USED | NO SCALE | 5

NOT USED | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 9

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DISH Wireless L.L.C.
PROJECT INFORMATION

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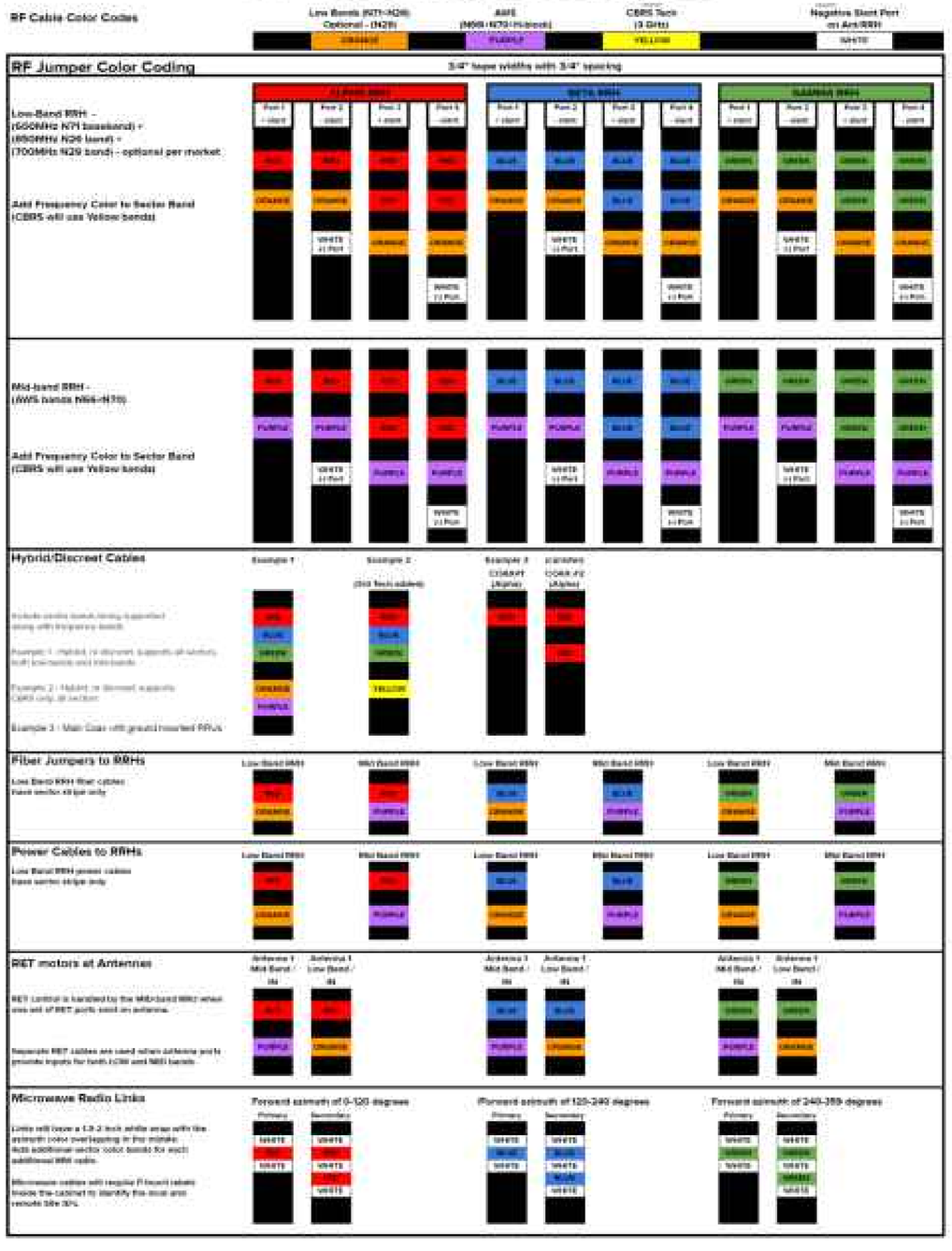
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

SHEET TITLE
TYPICAL GROUNDING DETAILS

SHEET NUMBER
G-4

RF COLOR CODING



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PROJECT INFORMATION

BOBDL00003B
82 NORTH EAGLEVILLE RD.
STORRS, CT 06268

SHEET TITLE
RF CABLE COLOR CODES

SHEET NUMBER
RF-1

Exhibit D

Structural Analysis Report

CENTEK engineering

Centered on Solutions℠

Structural Analysis Report

245' Existing Lattice Tower

Proposed DISH
Antenna Upgrade

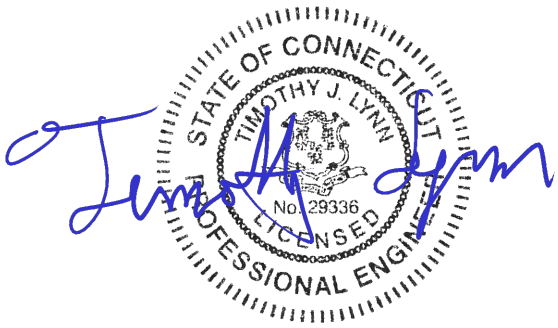
Site Ref: BOBDL00003B

82 North Eagleville Road.
Storrs, CT

Centek Project No. 22042.07

Date: March 27, 2023

Max Stress Ratio = 53.3%



Prepared for:
DISH Wireless L.L.C.,
5701 South Santa Fe Drive
Littleton, CO 80120

Table of Contents

Introduction

The purpose of this report is to summarize the results of the non-linear, P-Δ structural analysis of the antenna installation proposed by DISH on the existing lattice tower located in Storrs, Connecticut.

The host tower is a 245-ft, three-legged, lattice tower. The tower geometry, structure member sizes and foundation information were taken from a Structural Analysis Report prepared by Nexius, job no. BOBDL00003B, Rev 2., dated 02/28/2022 and a Structural Analysis Report prepared by EFI Global, job no. 2075011 – 049.00394, dated 09/17/2020.

design documents provided by DISH Wireless and from the Connecticut Siting Council Decisions database.

Existing antenna and appurtenance inventory was taken from design documents provided by DISH Wireless and from the Connecticut Siting Council Decisions database. Proposed antenna and appurtenance inventory for DISH was taken from an RF data sheet.

The tower consists of seventeen (17) vertical sections all conforming to ASTM A572 Gr. 50. Sections 17 through 8 consist of Pirod Truss Legs and sections 7 through 1 consist of solid round pipe legs. Lateral bracing consists of steel angles from section 17 through 8 conforming to ASTM A36 and steel solid round pipe conforming to ASTM A572 Gr. 50. The vertical tower verticals, from sections from 17 through 8, are connected by bolted flange plates with the diagonal and horizontal bracing to pipe legs consisting of bolted connections. The vertical tower verticals, from sections from 7 through 1, are connected by a sleeve DS connection with the diagonal and horizontal bracing to pipe legs consisting of bolted connections. The width of the tower face is 4-ft 0-in at the top and 22-ft 0-in at the bottom.

Antenna and Appurtenance Summary

The existing and proposed loads considered in the analysis consist of the following:

- T-MOBILE (Existing):
  Antennas: Three (3) Ericsson AIR32 KRD901146-1 B66A/B2A panel antennas, three (3) RFS APXVAARR24 43-U-NA20 panel antennas, three (3) Ericsson AIR3246 B66 panel antennas, three (3) Ericsson AIR6449 B41 panel antennas, three (3) Ericsson 4449 B71+B85 remote radio heads and three (3) Ericsson 4415 B25 remote radio heads mounted on three (3) Sector Mounts with a RAD center elevation of ±232-ft above grade level.
  Coax Cables: One (1) 9x18 and eight (8) 6x12 hybrid connector system cables running on a face of the existing tower as specified in Section 3 of this report.
- Appurtenances by Others (Existing):
  Antennas: One (1) Camera leg mounted at an elevation of ±161-ft above grade level with one (1) 1/2” cable, one (1) TMA leg mounted at an elevation of ±161-ft above grade level with one (1) 1/4” cable, two (2) 7’ Omni antennas mounted on standoffs at an elevation of ±135-ft above grade level with one (1) 1/2” cable each (total of 2), one (1) 8’ whip antenna mounted on a standoff at an elevation of ±134-ft above grade level with one (1) 7/8” cable, one (1) 20’ Omni antenna mounted on a standoff at an elevation of ±122-ft above grade level with one (1) 1-1/2” cable, one (1) 8’ Omni antenna mounted on a standoff at an elevation of ±112-ft above grade level with one (1) 7/8” cable, one (1) 7’ Omni antenna mounted on a standoff at an elevation of ±111-ft above grade level with one (1) 7/8” cable, one (1) 18’ Whip antenna mounted on a standoff at an elevation of ±72-ft above grade level with one (1) 7/8” cable, one (1) Camera leg mounted at an

elevation of ±71-ft above grade level with one (1) 1” cable, and one (1) GPS mounted on a standoff at an elevation of ±49-ft above grade level with one (1) 1/2” cable.

- **DISH (Proposed):**
  Antenna: Three (3) JMA MX08FR0665-21 panel antennas, three (3) Fujitsu TA08025-B605 remote radio heads, three (3) Fujitsu TA08025-B604 remote radio heads and one (1) main distribution box mounted on three (3) proposed CommScope 8-ft V-Frames (P/N: MTC3975083) with a RAD center elevation of ±180-ft above grade level.
  Coax Cable: One (1) High Cap. CU12PSM6P4XXX 4AWG cable on a leg/face of the existing tower as specified in Section 3 of this report.

Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All coax cables should be routed as specified in section 3 of this report.

Analysis

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower, and the model assumes that the tower members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed (3-second gust) with no ice and the applicable wind and ice combination to determine stresses in members as per guidelines of TIA-222-H entitled "Structural Standard for Antenna Support Structures and Antennas", the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Load and Resistance Factor Design (LRFD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix P of the CSBC[1] and the wind speed data available in the TIA-222-H Standard.

Tower Loading

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA-222-H, gravity loads of the tower structure and its components, and the application of 1.5" radial ice on the tower structure and its components.

Load Cases:	Load Case 1; 120 mph (Ultimate) wind speed w/ no ice plus gravity load – used in calculation of tower stresses and rotation.	*[Appendix P of the 2022 CT Building Code]*
	Load Case 2; 50 mph wind speed w/ 1.5" radial ice plus gravity load – used in calculation of tower stresses.	*[Annex B of TIA-222-H]*

[1] The 2021 International Building Code as amended by the 2022 Connecticut State Building Code (CSBC).

Tower Capacity

Calculated stresses were found to be within allowable limits.

Tower Section	Elevation	Stress Ratio (%of capacity)	Result
Horizontal (T4)	230'-0"-232'-7"	50.4%	**PASS**
Leg (T16)	20'-0"-40'-0"	53.3%	**PASS**

Foundation and Anchors

The existing foundation consists of three (3) 5'-6" ∅ x 31-ft long reinforced concrete caisson foundations. The sub grade conditions used in the foundation analysis were derived from the aforementioned design documents. The base of the tower is connected to the foundation by means of (6) 2" ∅, ASTM A687 anchor bolts per leg embedded into the concrete foundation structure.

- The tower reactions developed from the governing Load Case were used in the verification of the foundation and anchor bolts:

Load Effect	Proposed Tower Reactions
Leg Shear	28,695 lbs
Leg Compression	327,217 lbs
Leg Tension	275,368 lbs
Base Moment	5,798,000 ft-lbs
Base Shear	46,690 lbs

- The anchor bolts were found to be within allowable limits.

Tower Section	Component	Stress Ratio (percentage of capacity)	Result
Anchor Bolts	Tension	18.5%	**PASS**

- The foundation was found to be within allowable limits.

Foundation	Design Limit	TIA-222-H Required FS[1]	Proposed Loading (FS)[1]	Result
Reinforced Concrete Caisson	Uplift	1.0	2.16	**PASS**
	Compression	1.0	1.38	**PASS**

Note 1: FS denotes Factor of Safety

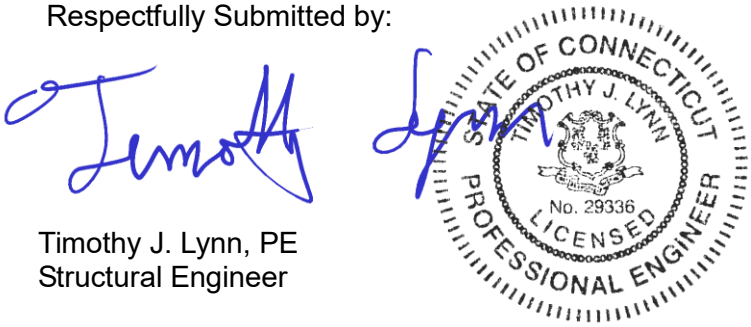
Conclusion

This analysis shows that the subject tower **is adequate** to support the proposed antenna configuration with the below recommendations.

The analysis is based, in part, on the information provided to this office by DISH. 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 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.

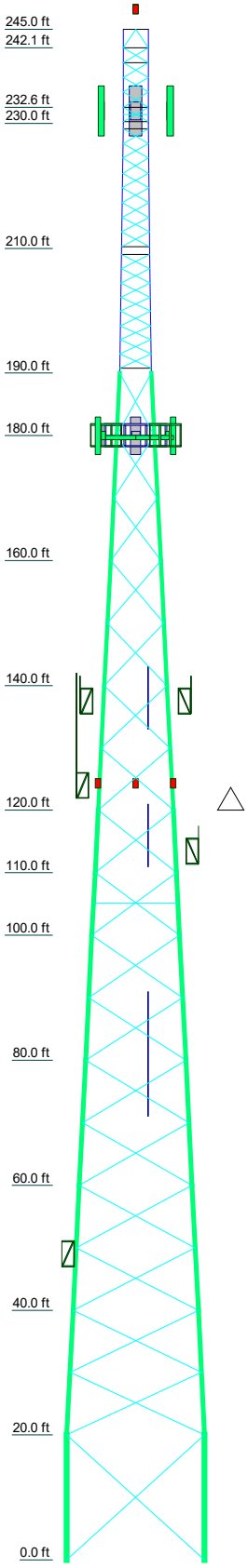
GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

tnxTower, is an integrated structural analysis and design software package for Designed specifically for the telecommunications industry, tnxTower, formerly RISA Tower, automates much of the tower analysis and design required by the TIA/EIA 222 Standard.

tnxTower Features:

- tnxTower can analyze and design 3- and 4-sided guyed towers, 3- and 4-sided self-supporting towers and either round or tapered ground mounted poles with or without guys.
- The program analyzes towers using the TIA-222-H standard or any of the previous TIA/EIA standards back to RS-222 (1959). Steel design is checked using the AISC ASD or the AISC LRFD specifications.
- Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated.
- Extensive graphics plots include material take-off, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots.
- tnxTower contains unique features such as True Cable behavior, hog rod take-up, foundation stiffness and much more.

Section		T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17
Legs				SR 1 1/2		SR 2	SR 2 1/2	A	Pirod 105217	Pirod 105218			Pirod 105219			Pirod 105220		Pirod 112738
Leg Grade											A572-50							
Diagonals				SR 3/4		SR 7/8	SR 1		L2 1/2x2 1/2x3/16		L3x3x3/16		L3x3x5/16			L3 1/2x3 1/2x5/16		B
Diagonal Grade						A572-50							A36					
Top Girts			D	N.A.									N.A.					
			C															
Bottom Girts			F	N.A.									N.A.					
			E															
Sec. Horizontals				N.A.	G				N.A.				L3x3x3/16			N.A.		
Face Width (ft)				4			4.5	5	6	8	10	12	13	14	16	18	20	22
# Panels @ (ft)				4 @ 2.38	I	8 @ 2.36198	9 @ 2.27604						17 @ 10					1 @ 20
Weight (lb)	47718.4	860.7	148.8	287.5	71.7	1247.4	1842.3	1237.7	2235.8	2690.6	2965.0	2242.0	2429.8	4638.4	5562.4	5718.9	6188.3	7951.4



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Flash Beacon Lighting	247.5	Commscope MTC3975083 V_Frame (DISH)	180
6' Lightning Rod	245	Valmont 15' T-Frame P/N 860109 (T-Mobile)	180
AIR32 (T-Mobile)	232	Valmont 15' T-Frame P/N 860109 (T-Mobile)	180
AIR32 (T-Mobile)	232	Valmont 15' T-Frame P/N 860109 (T-Mobile)	180
AIR32 (T-Mobile)	232	Security Camera	161.25
APXVAARR24_43-U-NA20 (T-Mobile)	232	11"x10"x6" TMA	161.25
APXVAARR24_43-U-NA20 (T-Mobile)	232	7' Omni	135
APXVAARR24_43-U-NA20 (T-Mobile)	232	7' Omni	135
AIR 3246 (T-Mobile)	232	Side Arm Mount	135
AIR 3246 (T-Mobile)	232	Side Arm Mount	135
AIR 3246 (T-Mobile)	232	8' Omni	134
AIR6449 (T-Mobile)	232	Side Arm Mount	134
AIR6449 (T-Mobile)	232	Flash Beacon Lighting	123.6
AIR6449 (T-Mobile)	232	Flash Beacon Lighting	123.6
4449 B71+B85 (T-Mobile)	232	Flash Beacon Lighting	123.6
4449 B71+B85 (T-Mobile)	232	1.5' - P1x0.133	123.6
4449 B71+B85 (T-Mobile)	232	1.5' - P1x0.133	123.6
4415 B25 (T-Mobile)	232	1.5' - P1x0.133	123.6
4415 B25 (T-Mobile)	232	20' Omni	122
4415 B25 (T-Mobile)	232	Side Arm Mount	122
MX08FRO665-21 (DISH)	180	8' Omni	112
MX08FRO665-21 (DISH)	180	Side Arm Mount	112
MX08FRO665-21 (DISH)	180	7' Omni	111
TA08025-B605 (DISH)	180	Side Arm Mount	111
TA08025-B605 (DISH)	180	Pipe Mount (PM 601-1)	104.25
TA08025-B605 (DISH)	180	Side Arm Mount	72
TA08025-B604 (DISH)	180	18'x2.5" Omni/Whip	72
TA08025-B604 (DISH)	180	Security Camera	70.75
TA08025-B604 (DISH)	180	Side Arm Mount	49
RD1DC-9181-PF-48 (DISH)	180	GPS	49
Commscope MTC3975083 V_Frame (DISH)	180		
Commscope MTC3975083 V_Frame (DISH)	180		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	Pirod 105245	F	SR 7/8
B	2L3 1/2x3 1/2x5/16x3/8	G	SR 3/4
C	6 x 3/4	H	1 @ 2.88
D	SR 1	I	1 @ 2.37083
E	N.A.		

MATERIAL STRENGTH

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

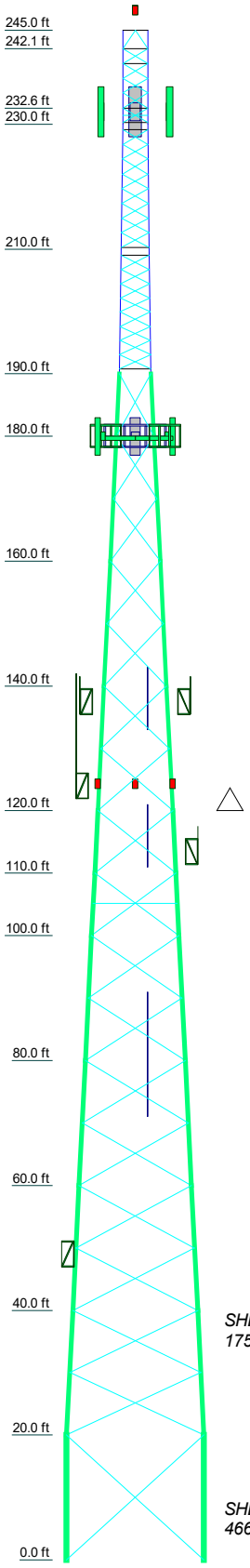
TOWER DESIGN NOTES

1. Tower designed for Exposure B to the TIA-222-H Standard.
2. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. Weld together tower sections have flange connections.
8. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
9. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
10. Welds are fabricated with ER-70S-6 electrodes.

Centek Engineering
63-2 North Branford Rd.
Branford, CT 06405
Phone: (203) 488-0580
FAX: (203) 488-8587

Job: ***Storrs BOBDL00003B***			
Project: ***22042.07***			
Client: DISH Wireless	Drawn by: PPG		App'd:
Code: TIA-222-H	Date: 01/05/23		Scale: NTS
Path: J:\Jobs\2204200.WI\07 BOBDL00003B\05 Structural\02 Design\CALCS\SAT\nxTower\22042.07 BOBDL00003B TOWER.eri			Dwg No. E-1

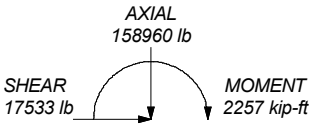
Section	T17	T16	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	Pirod 112738		Pirod 105220		Pirod 105219			Pirod 105218		Pirod 105217	A	SR 2 1/2	SR 2		SR 1 1/2		
Leg Grade								A572-50									
Diagonals	B	L4x4x5/16	L3 1/2x3 1/2x5/16		L3x3x5/16			L3x3x3/16		L2 1/2x2 1/2x3/16		SR 1	SR 7/8		SR 3/4		
Diagonal Grade					A36							A572-50					
Top Girts					N.A.							SR 1			N.A.	D	C
Bottom Girts					N.A.							SR 1		F	N.A.	F	E
Sec. Horizontals			N.A.			L3x3x3/16				N.A.				G	N.A.		
Face Width (ft)	22	20	18	16	14	13	12	10	8	6	5	4.5	4				
# Panels @ (ft)	1 @ 20					17 @ 10						9 @ 2.27604	8 @ 2.36198		4 @ 2.38	I	H
Weight (lb) 47718.4	7951.4	6188.3	5718.9	5562.4	4638.4	2429.8	2242.0	2865.0	2690.6	2235.8	1237.7	1842.3	1247.4	171.7	287.5	148.8	860.7



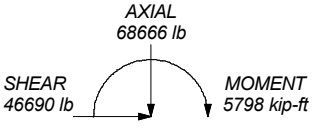
ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 327217 lb
SHEAR: 28695 lb

UPLIFT: -275368 lb
SHEAR: 25864 lb



TORQUE 21 kip-ft
50 mph WIND - 1.50 in ICE



TORQUE 30 kip-ft
REACTIONS - 120 mph WIND

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	Pirod 105245	F	SR 7/8
B	2L3 1/2x3 1/2x5/16x3/8	G	SR 3/4
C	6 x 3/4	H	1 @ 2.88
D	SR 1	I	1 @ 2.37083
E	N.A.		

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower designed for Exposure B to the TIA-222-H Standard.
2. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. Weld together tower sections have flange connections.
8. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
9. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
10. Welds are fabricated with ER-70S-6 electrodes.
11. TOWER RATING: 53.3%

Centek Engineering
63-2 North Branford Rd.
Branford, CT 06405
Phone: (203) 488-0580
FAX: (203) 488-8587

Job: ***Storrs BOBDL00003B***			
Project: ***22042.07***			
Client: DISH Wireless	Drawn by: PPG		App'd:
Code: TIA-222-H	Date: 01/05/23		Scale: NTS
Path: J:\Jobs\2204200.WI\07 BOBDL00003B\05 Structural\02 Design\CALCS\SAT\nxTower\22042.07 BOBDL00003B TOWER.eri			Dwg No. E-1

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 245.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 4.00 ft at the top and 22.00 ft at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower base elevation above sea level: 0.00 ft.
Basic wind speed of 120 mph.
Risk Category II.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.00 ft.
Nominal ice thickness of 1.50 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
Weld together tower sections have flange connections..
Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications..
Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..
Welds are fabricated with ER-70S-6 electrodes..
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

Exhibit E

Mount Analysis

CENTEK engineering

Centered on Solutions℠

Structural Analysis Report

Antenna Mount Analysis

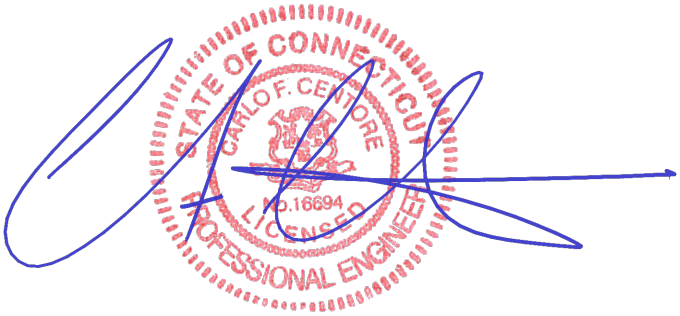
Proposed T-Mobile Antenna Upgrade

Site Ref: BOBDL0003B

82 North Eagleville Road,
Storrs, CT

CENTEK Project No. 22042.07

Date: March 27, 2023



Prepared for:

DISH Wireless, LLC
5701 South Santa Fe Drive
Littleton, CO 80120

63-2 North Branford Road, Branford, CT 06405 203.488.0580 Fax 203.488.8587 www.CentekEng.com

T a b l e o f C o n t e n t s

Introduction

This structural analysis report (SR) as prepared to address the structural viability of installing Dish's proposed antenna configuration on the proposed V-Frame assembly attached to the the existing 245-ft host self-supported lattice to er located at 82 North Eagleville Rd, Storrs, Connecticut.

The proposed pipe masts are to be supported at the top and bottom by the hori ontal pipes of the proposed CommScope 8-ft V-Frames (PN MTC3 5083) The V-Frame ssemblies are attached to the truss legs of the existing lattice to er at an elevation of 80-ft. This structural analysis report variffies the adequacy of aforementioned antenna mount assembly only. For structural adequacy of the host lattice to er, reference the Structural nalysis Report prepared by Cente Engineering, dated 03-2-2023, revision , pro ect no. 22024.0.

The antenna mount assembly geometry and member information obtained from SitePro design dra ings. Proposed existing antenna and appurtenance information as ta en from an RF data sheet dated 03232022 provided by Dish.

Primary Assumptions Used in the Analysis

- The host structure's theoretical capacity not including any assessment of the condition of the host structure.
- The existing elevated steel antenna frames carry the hori ontal and vertical loads due to the eight of equipment, and ind and transfers into host structure.
- Structure is in plumb condition.
- Loading for equipment and enclosure as listed in this report.
- ll bolts are appropriately tightened providing the necessary connection continuity.
- ll members are assumed to be as observed during roof framing mapping.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM 53 Standards.
- ll member protective coatings are in good condition.

A n t e n n a a n d E q u i p m e n t S u m m a r y

□□□□ti□n	□ppurten□n□e□□Equipment□	R□d□□enter□ E□e□□ti□n□ □□ □ □□□	M□unt□T□pe□
Per Sector*	□□□□M□□M□□□□R□□□□□□□□□ntenn□□ □□□□u□it□u□T□□□□□□□□□□□R□di□□ □□□□u□it□u□T□□□□□□□□□□□R□di□□	□80-ft	Proposed V-Frame Mount
To□er	□□□R□□□□p□RDID□□3□□□□P□□□□□□□□P□		

***Equipment** – Indicates proposed equipment to be installed for a total of three (3) sectors.

A n a l y s i s

The antenna frames □ere analy□ed using a comprehensive computer program titled Risa3D. The program examines the antenna mounts considering the □orst-case code prescribed loading condition. The structures □ere considered to be loaded by concentric forces, and the model assumes that the members are sub□ected to bending, axial, and shear forces.

D e s i g n L o a d i n g

Loading □as determined per the requirements of the 20□□ □NSI□TI□-222-H, 202□ International Building Code amended by the 2022 Connecticut State Building Code and □SCE □-□□ “Minimum Design Loads for Buildings and Other Structures”.

Basic □ ind Speed□	V_{ult} □ □20 mph	*Appendix P – 2022 CSBC*
Basic □ ind Speed □□Ice□	V_i □ 50 mph	*Annex B of TIA-222-H*
Ris□ Category□	II	*2021 IBC; Table 1604.05*
Exposure Category□	Surface Roughness B	*ASCE 7-16; Section 26.7.2*
Dead Load	Equipment and framing self-□eight	*Identified within SAR design calculations*

R e f e r e n c e S t a n d a r d s

20□5 International Building Code□

□. □ISC 3□0-□0, *Specification for Structural Steel Buildings.*

R e s u l t s

Member stresses and design reactions □ere calculated utili□ing the structural analysis soft□are RIS□ 3D.

The antenna mounting assembly and impacted host building components □ere found to be structurally acceptable as presented in the follo□ing table□

□e□t□r	□□mp□nent□	□tre□□R□ti□□ □per□ent□□e□ □□□□p□□it□□□	Re□u□t□
□ll Sectors	Pipe 2.0 STD (Proposed V-Frame Member)	□□□	**P**□□□□
	Pipe 2.5 STD (Proposed V-Frame Hori□ontal)	□2□	**P**□□□□
	Pipe 2.5 STD (Proposed Pipe Mast)	□□	**P**□□□□
	5□8" ∅ S□E □42□ GR-2 Threaded Rod (Clamp Connection to Host Lattice To□er Leg)	33□	**P**□□□□

C o n c l u s i o n

This analysis sho□s that the proposed sub□ect antenna mount assembly is **□TR□□T□R□□□□□ □DEQ□ETE** to support the proposed Dish antenna configuration.

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

Please feel free to call □ith any questions or comments.

Respectfully Submitted by□

Carlo F. Centore, PE
Principle □ Structural Engineer

Prepared by□

Pablo Pere□-Gome□
Engineer

Standard Conditions for Furnishing of Professional Engineering Services on Existing Structures

□ll 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 dra□ings in the possession of Cente□ 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 Cente□ Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, □e assume that all structures □ere constructed in accordance □ith the dra□ings 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.
- □ll services □ill be performed to the codes specified by the client, and □e do not imply to meet any other codes or requirements unless explicitly agreed in □riting. If □ind 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 □or□ □ill be performed in accordance □ith the latest revision of □NSI□□SCE□0 □ □NSI□EI□-222
- □ll services performed, results obtained, and recommendations made are in accordance □ith generally accepted engineering principles and practices. Cente□ Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information □e supply.

Exhibit F

Power Density/RF Emissions Report

EBI Consulting

environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

Dish Existing Facility

Site ID: BOBDL00003B

BOBDL00003B
82 North Eagleville Road
Storrs Mansfield, Connecticut 06268

October 19, 2022

EBI Project Number: 6222005172

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**50.34%**

21 B Street, Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

October 19, 2022

Dish

Emissions Analysis for Site: BOBDL00003B - BOBDL00003B

EBI Consulting was directed to analyze the proposed Dish facility located at **82 North eagleville Road** in **Storrs Mansfield, Connecticut** for the purpose of determining whether the emissions from the Proposed Dish 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 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ 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 persons 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 persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons 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 done for the proposed Dish Wireless antenna facility located at 82 North Eagleville Road in Storrs Mansfield, Connecticut using the equipment information listed below. Modeling of the antennas and associated equipment was completed using RoofMaster™ software, which is a widely-used predictive modeling program that has been developed to predict RF power density values for rooftop and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. Using the computational methods set forth in Federal Communications (FCC) Office of Engineering & Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields" (OET-65), RoofMaster™ calculates predicted power density in a scalable grid based on the contributions of all RF sources characterized in the study scenario. At each grid location, the cumulative power density is expressed as a percentage of the FCC limits. Manufacturer antenna pattern data is utilized in these calculations. RoofMaster™ models consist of the Far Field model as specified in OET-65 and an implementation of the OET-65 Cylindrical Model (Sula9). The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

Since Dish is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, telecommunications equipment was modeled using the following assumptions:

1) 4 n71 channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 4 n70 channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

3) 4 n66 channels (AWS Band - 2190 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

5) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

6) The antennas used in this modeling are the JMA MX08FRO665-21 08DT 600 for the 600 MHz / 600 MHz / 1900 MHz channel(s) in Sector A, the JMA MX08FRO665-21 08DT 600 for the 600 MHz / 1900 MHz / 2100 MHz channel(s) in Sector B, the JMA MX08FRO665-21 08DT 600 for the 600 MHz / 1900 MHz / 2100 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

7) The antenna mounting height centerline of the proposed antennas is 180 feet above ground level (AGL).

8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database or documents available on the Connecticut Siting Council website

(https://portal.ct.gov/CSC). Values in the database are provided by the individual carriers themselves.

9) All calculations were done with respect to uncontrolled / general population threshold limits.

Dish Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	JMA MX08FRO665-21 08DT 600	Make / Model:	JMA MX08FRO665-21 08DT 600	Make / Model:	JMA MX08FRO665-21 08DT 600
Frequency Bands:	600 MHz / 600 MHz / 1900 MHz	Frequency Bands:	600 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 1900 MHz / 2100 MHz
Gain:	11.25 dBd / 15.95 dBd / 16.75 dBd	Gain:	11.25 dBd / 15.95 dBd / 16.75 dBd	Gain:	11.25 dBd / 15.95 dBd / 16.75 dBd
Height (AGL):	180 feet	Height (AGL):	180 feet	Height (AGL):	180 feet
Channel Count:	12	Channel Count:	12	Channel Count:	12
Total TX Power (W):	440.00 Watts	Total TX Power (W):	440.00 Watts	Total TX Power (W):	440.00 Watts
ERP (W):	13,785.38	ERP (W):	13,785.38	ERP (W):	13,785.38
Antenna A1 MPE %:	**1.89%**	Antenna B1 MPE %:	**1.89%**	Antenna C1 MPE %:	**1.89%**

Site Composite MPE %	
Carrier	**MPE %**
Dish (Combined Sectors):	0.01%
UCONN Police	0.1216%
Existing	14.12%
AT&T	3.8879%
Nextel	0.1%
Metro PCS	0.14%
Verizon	31.96%
Site Total MPE % :	50.34%

Dish MPE % Per Sector	
Dish Sector A Total:	0.01%
Dish Sector B Total:	0.01%
Dish Sector C Total:	0.01%
Dish Total MPE % :	0.01%

Dish Maximum MPE Power Values (Sector A)

Dish Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
Dish 600 MHz n71	4	356.5506682	180	1.693554944	600 MHz n71	400.0	0.42%
Dish 1900 MHz n70	4	1403.007496	180	6.664046634	1900 MHz n70	1000.0	0.67%
Dish 2100 MHz n66	4	1686.786014	180	8.011946259	2100 MHz n66	1000.0	0.80%
						Dish Total:	**0.01%**

• NOTE: Total Dish MPE values reflect all Dish antennas as reported by RoofMaster™ combined modeling.
• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

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 Dish facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

Dish Sector	Power Density Value (%)
Sector A:	0.01%
Sector B:	0.01%
Sector C:	0.01%
Dish Maximum MPE % (Sector A):	0.01%
Dish Combined Sectors MPE %:	0.01%
Site Total:	50.34%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **50.34%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions or documents available on the Connecticut Siting Council website.

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 values calculated were well within the allowable 100% threshold standard per the federal government.

Exhibit G

Letter of Authorization

UCONN
UNIVERSITY OF CONNECTICUT

Via E-mail Only

March 22, 2023

Chuck Regulbuto
Director of Operations
Northeast Site Solutions
420 Main Street
Sturbridge, CT 01566

RE: Dish Network Project BOBDL00003B
82 North Eagleville Road, Storrs, CT
Authorization for Connecticut Siting Council Filings

Dear Mr. Regulbuto:

The University of Connecticut, owner of the tower facility at the above-referenced address, authorizes Dish Wireless and/or its agents to use this letter for the sole purpose of filing and satisfying any permit application as may be required by the Connecticut Siting Council for the above-referenced project.

Please confirm that you received this notice by e-mail reply to Mike Williams at mike.williams@uconn.edu. If you have any questions, please feel free to contact me.

Sincerely,

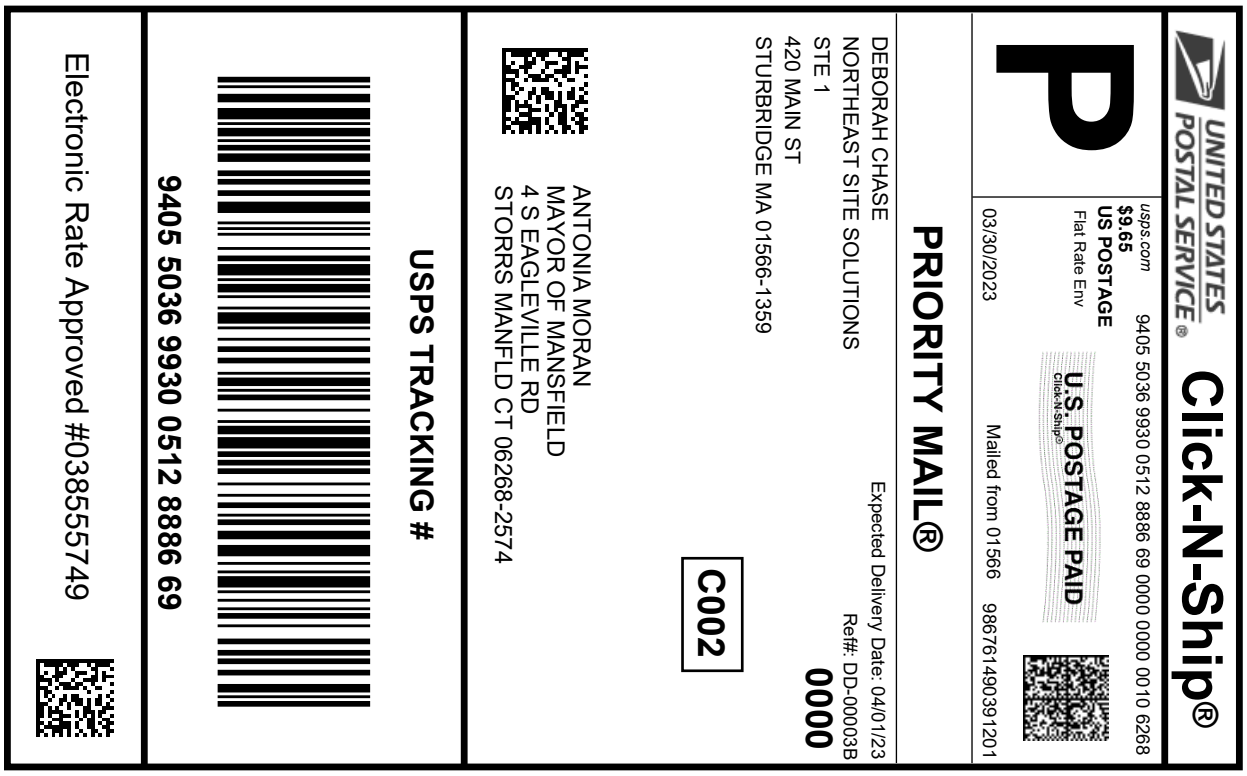
Laura Cruickshank, AIA
Associate Vice President, Master Planner and Chief Architect

CC: Michael Williams – UConn ITS

Office of University Planning, Design & Construction
3 Discovery Drive, UNIT 6038
STORRS, CT 06269-3038
PHONE 860.486.7149
www.updc.uconn.edu

Exhibit H

Recipient Mailings



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Priority Mail® Postage:	**$9.65**
Total:	**$9.65**

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
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420 MAIN ST
STURBRIDGE MA 01566-1359

Ref#: DD-00003B

To: ANTONIA MORAN
MAYOR OF MANSFIELD
4 S EAGLEVILLE RD
STORRS MANFLD CT 06268-2574

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DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
STE 1
420 MAIN ST
STURBRIDGE MA 01566-1359

Ref#: DD-00003B

0000

C002

JENNIFER KAUFMAN
SENIOR PLANNER-INLAND WETLANDS AGENT
TOWN PLANNING OFFICE
4 S EAGLEVILLE RD
STORRS CT 06268-2574

USPS TRACKING #

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Electronic Rate Approved #038555749

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Trans. #:	585588937
Print Date:	03/30/2023
Ship Date:	03/30/2023
Expected Delivery Date:	04/01/2023

Priority Mail® Postage:	**$9.65**
Total:	**$9.65**

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
STE 1
420 MAIN ST
STURBRIDGE MA 01566-1359

Ref#: DD-00003B

To: JENNIFER KAUFMAN
SENIOR PLANNER-INLAND WETLANDS AGENT
TOWN PLANNING OFFICE
4 S EAGLEVILLE RD
STORRS CT 06268-2574

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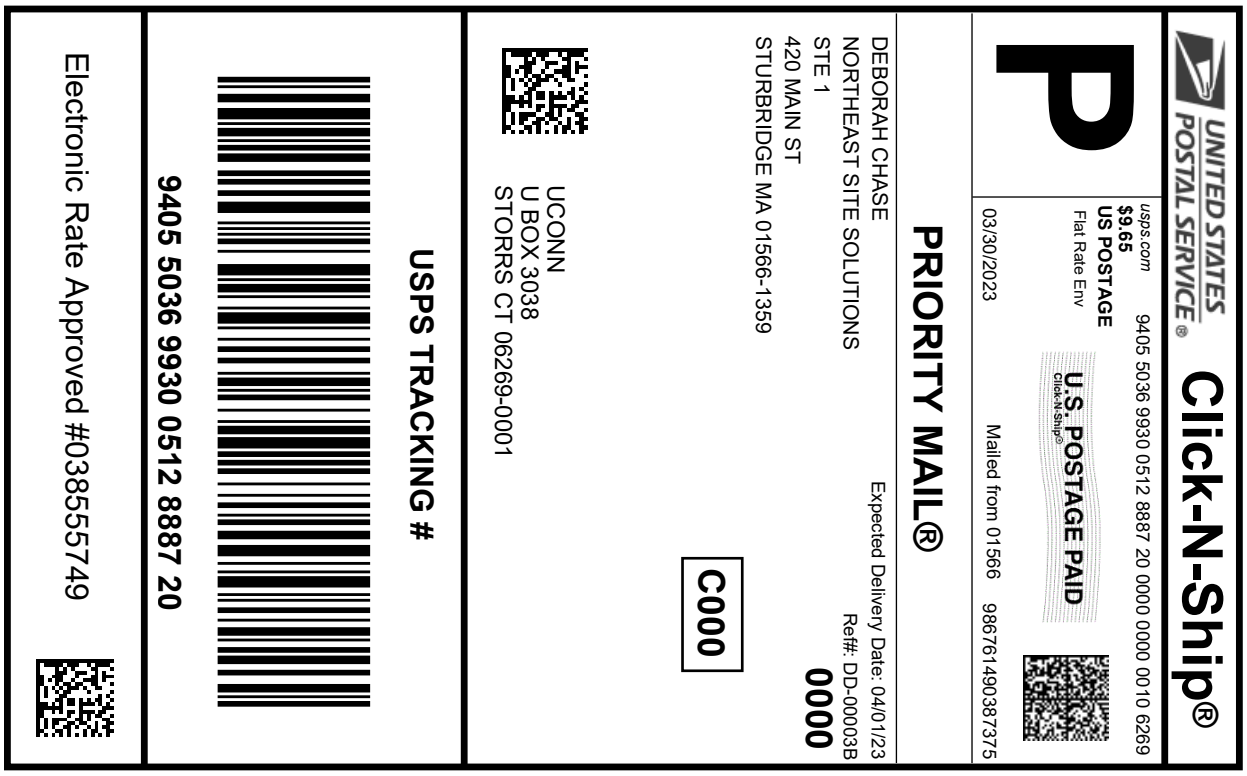

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Click-N-Ship® Label Record

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9405 5036 9930 0512 8887 20

Trans. #:	585588937
Print Date:	03/30/2023
Ship Date:	03/30/2023
Expected Delivery Date:	04/01/2023

Priority Mail® Postage:	**$9.65**
Total:	**$9.65**

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
STE 1
420 MAIN ST
STURBRIDGE MA 01566-1359

Ref#: DD-00003B

To: UCONN
U BOX 3038
STORRS CT 06269-0001

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