



HISTORIC PRESERVATION COMMISSION

Marc Elrich
County Executive

Robert K. Sutton
Chairman

Date: January 21, 2022

MEMORANDUM

TO: Mitra Pedoeem
Department of Permitting Services

FROM: Michael Kyne
Historic Preservation Section
Maryland-National Capital Park & Planning Commission

SUBJECT: Historic Area Work Permit # 978609: Installation of new telecommunications equipment

The Montgomery County Historic Preservation Commission (HPC) has reviewed the attached application for a Historic Area Work Permit (HAWP). This application was **Approved** at the January 19, 2022 HPC meeting.

The HPC staff has reviewed and stamped the attached construction drawings.

THE BUILDING PERMIT FOR THIS PROJECT SHALL BE ISSUED CONDITIONAL UPON ADHERENCE TO THE ABOVE APPROVED HAWP CONDITIONS AND MAY REQUIRE APPROVAL BY DPS OR ANOTHER LOCAL OFFICE BEFORE WORK CAN BEGIN.

Applicant: Tahicia Tucker, Cline LLC
Address: 15021 Dufief Mill Road, Gaithersburg

This HAWP approval is subject to the general condition that the applicant will obtain all other applicable Montgomery County or local government agency permits. After the issuance of these permits, the applicant must contact this Historic Preservation Office if any changes to the approved plan are made. Once work is complete the applicant will contact Michael Kyne at 301.563.3403 or michael.kyne@montgomeryplanning.org to schedule a follow-up site visit.





**APPLICATION FOR
HISTORIC AREA WORK PERMIT**
HISTORIC PRESERVATION COMMISSION
301.563.3400

FOR STAFF ONLY:

HAWP# _____

DATE ASSIGNED _____

APPLICANT:

Name: Tahicia Tucker

E-mail: ttucker@clinellc.com

Address: 750 W Center St Suite 301

City: West Bridgewater Zip: 02379

Daytime Phone: (410) 999-5093

Tax Account No.: _____

AGENT/CONTACT (if applicable):

Name: _____

E-mail: _____

Address: _____

City: _____ Zip: _____

Daytime Phone: _____

Contractor Registration No.: _____

LOCATION OF BUILDING/PREMISE: MIHP # of Historic Property _____

Is the Property Located within an Historic District? Yes/District
 No/Individual

Is there an Historic Preservation/Land Trust/Environmental Easement map and documentation from the Easement Holder

REVIEWED

By Michael Kyne at 4:45 pm, Jan 21, 2022

Are other Planning and/or Hearing Examiner Approvals / Reviews Required (Conditional Use, Variance, Record Plat, etc.?) If YES, include information supplemental information.

APPROVED
Montgomery County
Historic Preservation Commission



Building Number: 15021

Street: Dufief Mill Rd

Town/City: Gaithersburg

Nearest Cross Street: Darnestown Rd

Lot: P2

Block: V

Subdivision: _____ Parcel: _____

TYPE OF WORK PROPOSED: See the checklist on Page 4 to verify that all supporting items for proposed work are submitted with this application. Incomplete Applications will not be accepted for review. Check all that apply:

New Construction

Deck/Porch

Shed/Garage/Accessory Structure

Addition

Fence

Solar

Demolition

Hardscape/Landscape

Tree removal/planting

Grading/Excavation

Roof

Window/Door

Other: Install (3) new telecom antennas

I hereby certify that I have the authority to make the foregoing application, that the application is correct and accurate and that the construction will comply with plans reviewed and approved by all necessary agencies and hereby acknowledge and accept this to be a condition for the issuance of this permit.

Tahicia Tucker

12/28/2021

Signature of owner or authorized agent

Date

5

HAWP APPLICATION: MAILING ADDRESSES FOR NOTIFYING
[Owner, Owner's Agent, Adjacent and Confronting Property Owners]

Owner's mailing address

Chabad Lubavitch of Upper Montgomery County
11520 Darnestown RD
Gaithersburg MD 20878

Owner's Agent's mailing address

Adjacent and confronting Property Owners mailing addresses

15001 Dufief Mill Road
Gaithersburg, MD

10900 Citreon Court
Gaithersburg, MD 20878

10901 Citreon Court
Gaithersburg, MD 20878

Washington Woods HOA
C/O Property Management People
955 Russell Avenue STE A
Gaithersburg, MD 20879

REVIEWED

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Montgomery County

Historic Preservation Commission



Description of Property: Please describe the building and surrounding environment. Include information on significant structures, landscape features, or other significant features of the property:

This is a Silo.

Description of Work Proposed: Please give an overview of the work to be undertaken:

Install three new antennas, install three new RRUs, remove and replace three existing TMAs with three new TMAs, install two new 6x12 hybrid cables and remove all unused cables and equipment .

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By Michael Kyne at 4:45 pm, Jan 21, 2022

APPROVED

Montgomery County

Historic Preservation Commission



Robert H. Patton

Work Item 1: _____

Description of Current Condition:	Proposed Work:
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Work Item 2: _____

Description of Current Condition:	Proposed Work:
-----------------------------------	----------------

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By Michael Kyne at 4:45 pm, Jan 21, 2022

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Historic Preservation Commission

Work Item 3: _____

Description of Current Condition:	Proposed Work:
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**HISTORIC AREA WORK PERMIT
CHECKLIST OF
APPLICATION REQUIREMENTS**

	Required Attachments						
Proposed Work	I. Written Description	2. Site Plan	3. Plans/Elevations	4. Material Specifications	5. Photographs	6. Tree Survey	7. Property Owner Addresses
New Construction	*	*	*	*	*	*	*
Additions/Alterations	*	*	*	*	*	*	*
Demolition	*	*	*		*		*
Deck/Porch	*	*	*	*	*	*	*
Fence/Wall	*	*	*	*	*	*	*
Driveway/Parking Area	*	*		*	*	*	*
Grading/Excavation/Landscaping	*	*		*	*	*	*
Tree Removal	*	*		*	*	*	*
Siding/ Roof Changes	*	*	*	*	*		*
Window/ Door Changes	*	*	*	*	*		*
Masonry Repair/ Repoint	*	*	*	*	*		*
Signs	*	*	*	*	*		*

REVIEWED
By Michael Kyne at 4:45 pm, Jan 21, 2022

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Montgomery County
Historic Preservation Commission



PROJECT INFORMATION

SITE NAME: STEINBURG-GAITHERSBURG
 SITE NUMBER: 7WAN115D
 SITE ADDRESS: 15021 DUFIEF MILL RD. GAITHERSBURG, MD 20878
 COUNTY: MONTGOMERY
 MUNICIPALITY: GAITHERSBURG
 ZONING: R-200
 LATITUDE: 39.10277777
 LONGITUDE: -77.22333330
 TYPE OF SITE: SILO
 STRUCTURE HEIGHT: 61'-0" AGL
 ANTENNA CENTER: 53'-0" AGL
 GROUND ELEVATION: ± 377'-0" AMSL
 BUILDING OWNER NAME: CHABAD LUBAVITCH OF MONTGOMERY COUNTY
 BUILDING OWNER ADDRESS: 11520 DARNESTOWN RD. GAITHERSBURG MD 20878
 APPLICANT: T-MOBILE NORTHEAST, LLC. 12050 BALTIMORE AVENUE BELTSVILLE, MARYLAND 20705
 APPLICANT PHONE: (240) 264-8600
 APPLICANT FAX: (240) 264-8610
 BUILDING CODES: 2018 IBC W/2015 AMENDMENTS CHAPTER 8 MONTGOMERY COUNTY CODE 20158 NFPA 101 LIFE SAFETY CODE CHAPTER 35 IBC 2016 REFERENCED STANDARDS
 ELECTRICAL CODES: 2018 NATIONAL ELECTRICAL CODE MONTGOMERY COUNTY CODE CHAPTER 17 NFPA 70



DPS BATCH STAMPING

SITE NAME: STEINBURG-GAITHERSBURG
 SITE ID: 7WAN115D
 ADDRESS: 15021 DUFIEF MILL RD. GAITHERSBURG, MD 20853

TECHNOLOGY: 67D02C INDOOR
 MODIFICATION: L600_5G POPs

T-Mobile
 NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.
 22050 BALTIMORE AVENUE
 BELTSVILLE, MARYLAND 20705
 PHONE: (240) 264-8600
 FAX: (240) 264-8610



750 W CENTER ST. SUITE 301
 WEST BRIDGEWATER, MA 02379
 PHONE: 781.713.4725

T-Mobile NORTHEAST LLC



REVIEWED
 By Michael Kyne at 4:46 pm, Jan 21, 2022

VICINITY MAP
 N.T.S.

LOCATION MAP
 N.T.S.

PROJECT DIRECTORY

ENGINEERING FIRM:
 CENTERLINE COMMUNICATIONS
 750 WEST CENTER ST., SUITE 301
 WEST BRIDGEWATER, MA 02379
 PHILIP BURTNER (610) 730-5430
 CARRIER:
 T-MOBILE NORTHEAST, LLC.
 12050 BALTIMORE AVENUE
 BELTSVILLE, MARYLAND 20705
 PHONE: (240) 264-8600
 FAX: (240) 264-8610



Know what's below.
 Call before you dig.

GENERAL NOTES

1. THIS DOCUMENT IS TO BE USED FOR PERMIT PURPOSES ONLY. ANY DUPLICATION OR USE BY OTHER THAN THE AUTHORIZED GOVERNMENT AGENCIES FOR THE FUNCTIONS IS SPECIFICALLY ALLOWED.


2. THE FACILITY IS TO BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND REQUIREMENTS. ONLY ACCESSIBLE BY TRAINED PERSONNEL FOR MAINTENANCE OF WATER OR SANITARY SEWER SERVICE. EQUIPMENTS.

3. CONTRACTOR SHALL NOTIFY THE HISTORIC PRESERVATION COMMISSION OF ANY WORK TO BE PERFORMED ON THE JOB SITE AND SHALL IMMEDIATELY WITH THE WORK OR BE RESPONSIBLE.

APPROVED

Montgomery County

Historic Preservation Commission



1. INSTALL
 2. INSTALL
 3. REMOVE
 4. INSTALL
 5. REMOVE
 6. REMOVE
 7. INSTALL

DRAWING INDEX

NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES, RF NOTES, CABLING NOTES
A-1	OVERALL SITE PLAN
A-2	EQUIPMENT LAYOUT PLANS
A-3	SOUTHEAST ELEVATION
A-4	ANTENNA PLANS & SCHEDULE
A-5	EQUIPMENT & MOUNTING DETAILS
E-1	GROUNDING DETAILS & ONE LINE DIAGRAM

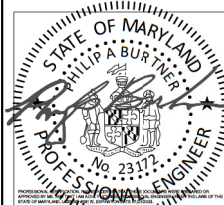
DRAWING SCALE NOTES:

THESE DRAWINGS ARE FORMATTED TO BE FULL SIZE AT 22"x34". CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

REVISIONS

REV	DATE	DESCRIPTION	BY
0	11/02/21	ISSUED FOR PERMIT	RC
D	11/02/21	ELECTRICAL UPGRADE	RC
C	09/20/21	REV. PER CLIENT COMMENTS	RC
B	09/02/21	ISSUED FOR REVIEW	RC
A	04/05/21	ISSUED FOR REVIEW	TRF

DESIGNED BY: TRF
 APPROVED BY: MK



DATE: 11/02/2021
 PHILIP A. BURTNER, P.E.
 MARYLAND PROFESSIONAL ENGINEER
 LICENSE #23172

IF A MODIFICATION OF LAW FOR ANY PROFESSIONAL ENGINEER THAT AFFECTS UNDER THE JURISDICTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THE DOCUMENT OR UNLESS OTHERWISE PERMITTED BY THE ENGINEER OR OWNER, THE ENGINEER OR OWNER SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY MODIFICATION OF THE CONTRACT HEREIN.

SITE NAME:
 STEINBURG-GAITHERSBURG

SITE ID:
 7WAN115D

SITE ADDRESS:
 15021 DUFIEF MILL RD.
 GAITHERSBURG, MD 20878

SHEET TITLE:
 TITLE SHEET

DRAWING:
 T-1

REVIEWED

By Michael Kyne at 4:46 pm, Jan 21, 2022

T-Mobile
NORTHEAST LLC

T-MOBILE NORTHEAST, LLC
2250 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705
PHONE: (240) 264-8600
FAX: (240) 264-8610

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Montgomery County
Historic Preservation Commission

BERLINE
COMMUNICATIONS

SUITE 301
MA 02379
8725

PERMIT	RC
GRADE	RC
COMMENTS	RC
VIEW	RC
VIEW	TRF
ITION	BY

DESIGNED BY: TJK APPROVED BY: MK

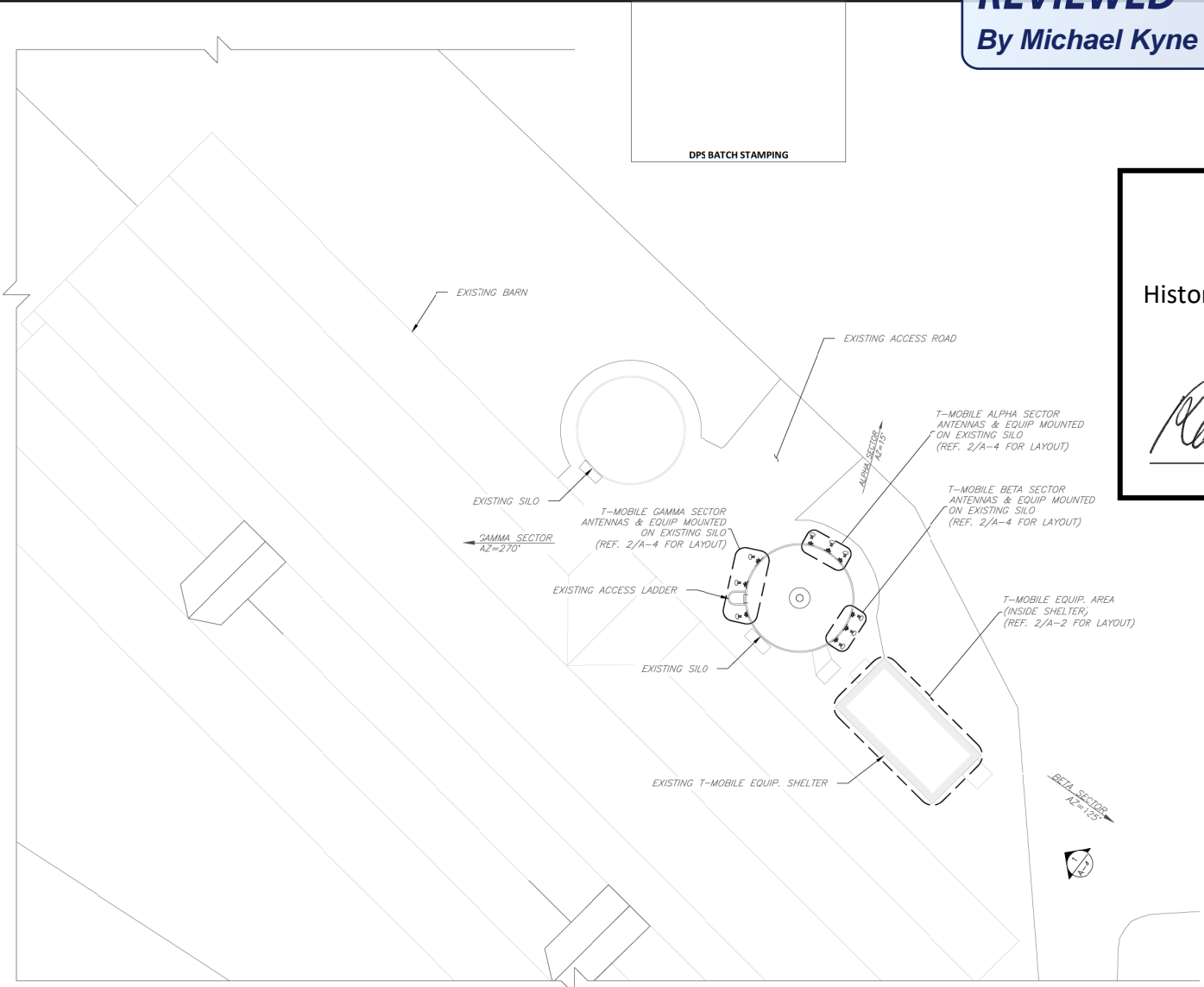


DATE: 11/02/2021
PHILIP A. BURTNER, P.E.
MARYLAND PROFESSIONAL ENGINEER
LICENSE #23172

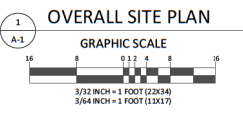
I, A MEMBER OF LAW FOR AM PROFESSIONAL ENGINEER, HEREBY CERTIFY UNDER THE
DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT
UNLESS SPECIFICALLY ADVISED BY THE ENGINEER IN WRITING. THE ENGINEER
CANNOT ASSUME LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR
MODIFICATION OF THE CONTENTS HEREIN.

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STEINBURG-GAITHERSBURG
SITE ID:
7WAN115D
SITE ADDRESS:
15021 DUFIEF MILL RD.
GAITHERSBURG MD 20878

SHEET TITLE:
OVERALL SITE PLAN
DRAWING:
A-1



DPS BATCH STAMPING



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750 W CENTER ST. SUITE 301
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PHONE: 781.713.4725

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DESIGNED BY: TRP APPROVED BY: MK

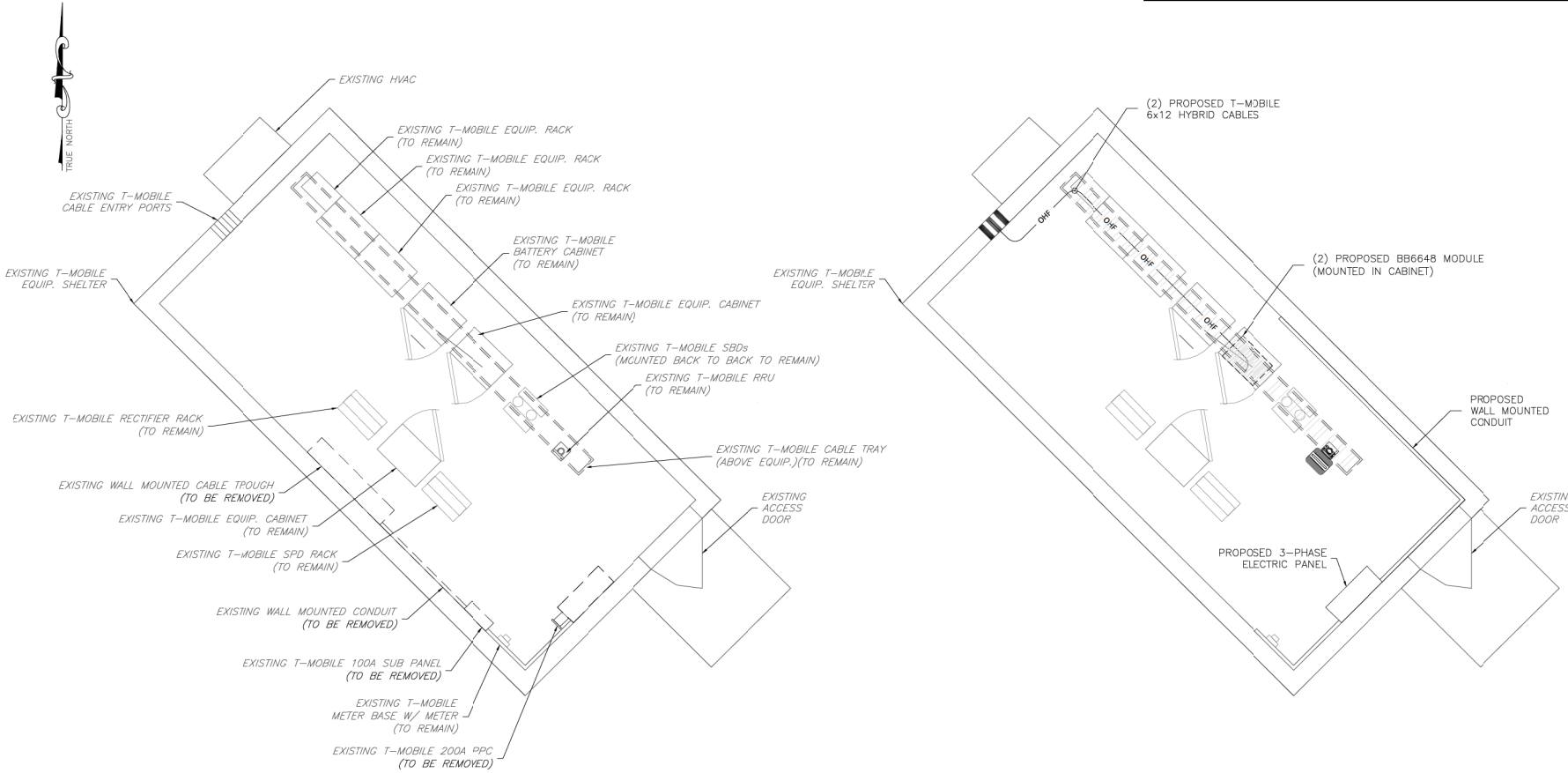


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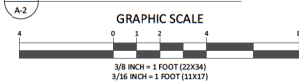
IT IS A VIOLATION OF LAW FOR ANY PERSON, FIRM, OR PROJECT TO ALTER THIS DOCUMENT OR ANY PART THEREOF WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. THE ENGINEER DISCLAIMS ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN.

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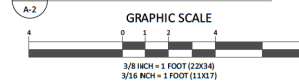
SHEET TITLE: EQUIPMENT LAYOUT PLANS
DRAWING: A-2



1 EXISTING EQUIP. LAYOUT



2 PROPOSED EQUIP. LAYOUT

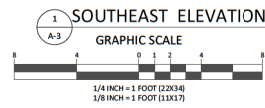
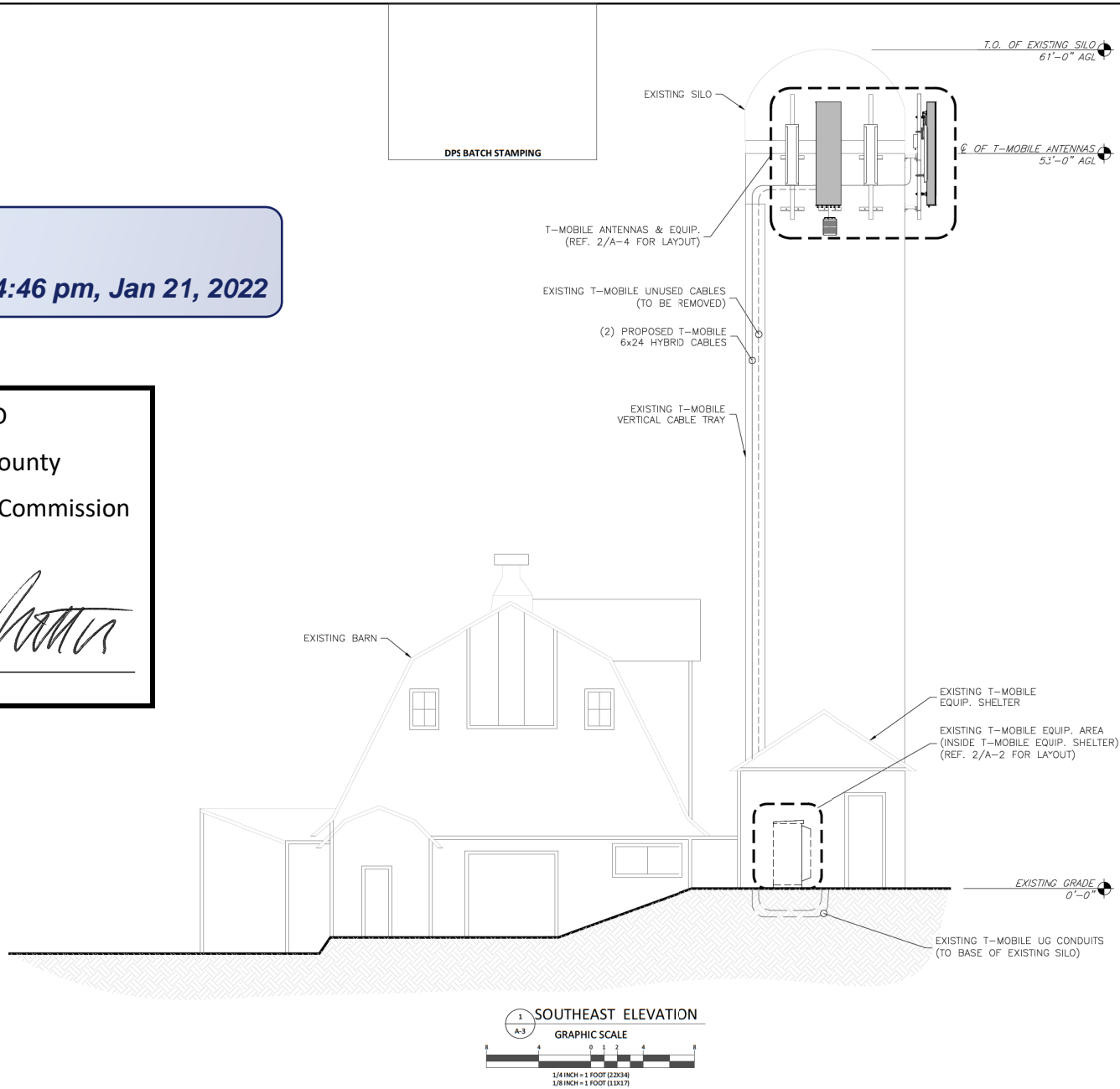


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By Michael Kyne at 4:46 pm, Jan 21, 2022

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Montgomery County
Historic Preservation Commission

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NORTHEAST LLC

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2250 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705
PHONE: (240) 264-8600
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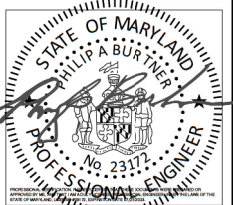


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DESIGNED BY: TRF APPROVED BY: MK



DATE: 11/02/2021
PHILIP A. BURTNER, P.E.
MARYLAND PROFESSIONAL ENGINEER
LICENSE #23172

IT IS A VIOLATION OF LAW FOR ANY PERSON (ALIAS) WHO HAS ACTED UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT UNLESS SOLELY AS DIRECTED BY THE ENGINEER WHEREBY, THE ENGINEER ASSUMES ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN.

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SITE ADDRESS:
15021 DUFIEF MILL RD.
GAITHERSBURG MD 20878

SHEET TITLE:
SOUTHEAST ELEVATION

DRAWING:
A-3

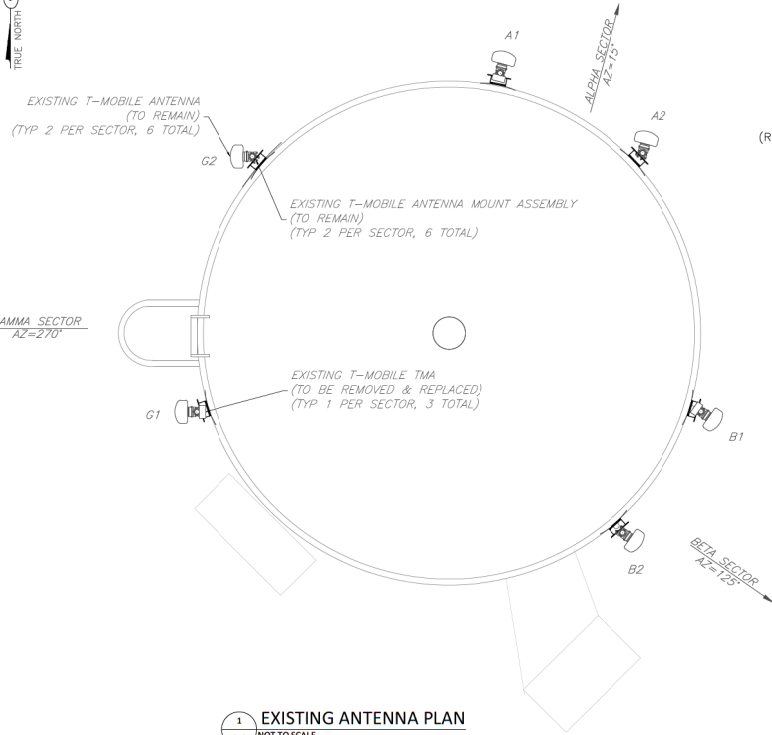
APPROVED
 Montgomery County
 Historic Preservation Commission

Philip A. Burtner

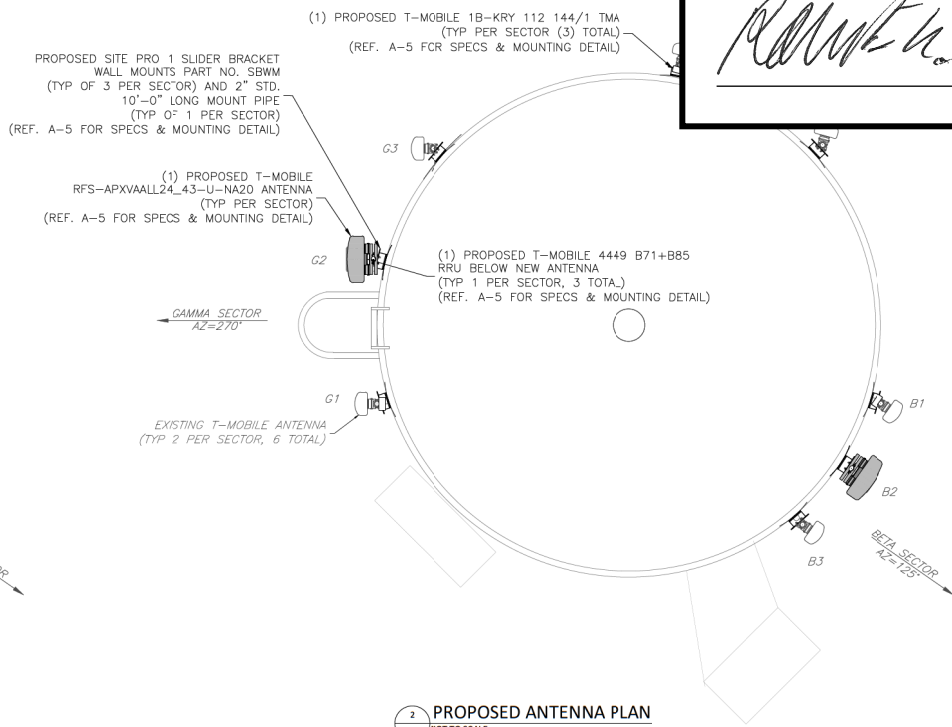
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- ANTENNA & CABLE NOTES:
1. REFERENCE STRUCTURAL ANALYSIS FOR FURTHER INFORMATION REGARDING THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THIS EQUIPMENT UPGRADE.
 2. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.
 3. REMOVE ALL UNUSED CABLE, RRU's AND TMA's.
 4. PAINT ANTENNAS, EQUIPMENT, & APPURTENANCES TO MATCH EXISTING.

DPS BATCH STAMPING



1 EXISTING ANTENNA PLAN
 A-4 NOT TO SCALE



2 PROPOSED ANTENNA PLAN
 A-4 NOT TO SCALE

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DESIGNED BY: TYP
 APPROVED BY: MK

DATE: 11/02/2021
 PHILIP A. BURTNER, P.E.
 MARYLAND PROFESSIONAL ENGINEER
 LICENSE #23172

I, A REGULATOR OF LAW FOR MY PROFESSIONAL SEAL THIS ARCHITECT UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT UNLESS SPECIFICALLY ADVISED BY THE ENGINEER IN WRITING. THE ENGINEER DISCLAIMS ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN.

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 GAITHERSBURG, MD 20878

SHEET TITLE:
ANTENNA PLANS & SCHEDULE

DRAWING:
A-4

REVIEWED
 By Michael Kyne at 4:46 pm, Jan 21, 2022

ANTENNA & CABLE SCHEDULE												REF. MODEL SPACE FOR DELTA SECTOR BLOCK	
LOCATION	AZIMUTH	RAD CENTER	STATUS	TECHNOLOGY	ANTENNA MODEL	MECH. DOWN-TILT	ELEC. DOWN-TILT	CABLES	DIPLEXERS	TMA/RRU MODEL	CABLE SIZE	CABLE LENGTH	
ALPHA	A-1	15°	53'-0"	EXISTING	U1900 G1900	ERICSSON-AIR21 KRC118023_1_B2A_B4P	0°	2'2"	(2) 15' FIBER JUMPERS (2) 66' 7/8" COAX	-	TMA-1B-KRY 112 144/1	6x12 HYBRID	140'
	A-2	15°	53'-0"	PROPOSED	L700 L600 N600 L1900 G1900	RFS-APXVAALL24_43-U-NA20	0°	2'2"	(4) 10' COAX JUMPERS (4) 15 FIBER JUMPER	-	RRU-4449 B71+B85	SHARED	-
	A-3	15°	53'-0"	EXISTING	L2500 N2500	ERICSSON-AIR21 B4A/B12P	0°	2'0"	(2) 15' FIBER JUMPERS	-	-	SHARED	-
BETA	B-1	125°	53'-0"	EXISTING	U1900 G1900	ERICSSON-AIR21 KRC118023_1_B2A_B4P	0°	2'2"	(2) 15' FIBER JUMPERS (2) 66' 7/8" COAX	-	TMA-1B-KRY 112 144/1	6x12 HYBRID	140'
	B-2	125°	53'-0"	PROPOSED	L700 L600 N600 L1900 G1900	RFS-APXVAALL24_43-U-NA20	0°	2'2"	(4) 10' COAX JUMPERS (4) 15 FIBER JUMPER	-	RRU-4449 B71+B85	SHARED	-
	B-3	125°	53'-0"	EXISTING	L2500 N2500	ERICSSON-AIR21 B4A/B12P	0°	2'0"	(2) 15' FIBER JUMPERS	-	-	SHARED	-
GAMMA	G1	270°	53'-0"	EXISTING	U1900 G1900	ERICSSON-AIR21 KRC118023_1_B2A_B4P	0°	2'2"	(2) 15' FIBER JUMPERS (2) 66' 7/8" COAX	-	TMA-1B-KRY 112 144/1	SHARED	-
	G2	270°	53'-0"	PROPOSED	L700 L600 N600 L1900 G1900	RFS-APXVAALL24_43-U-NA20	0°	2'2"	(4) 10' COAX JUMPERS (4) 15 FIBER JUMPER	-	RRU-4449 B71+B85	SHARED	-
	G3	270°	53'-0"	EXISTING	L2500 N2500	ERICSSON-AIR21 B4A/B12P	0°	2'0"	(2) 15' FIBER JUMPERS	-	-	SHARED	-
NOTE: DARK TEXT IN TABLE ABOVE DENOTES PROPOSED EQUIPMENT											TOTAL 6x12 HYBRID CABLE	±280'	

REVIEWED

By Michael Kyne at 4:46 pm, Jan 21, 2022

DPS BATCH STAMPING

APPROVED
Montgomery County
Historic Preservation Commission

Robert G. Burtner

T-Mobile
NORTHEAST LLC

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2200 BALTIMORE AVENUE
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DESIGNED BY: TKF APPROVED BY: MK



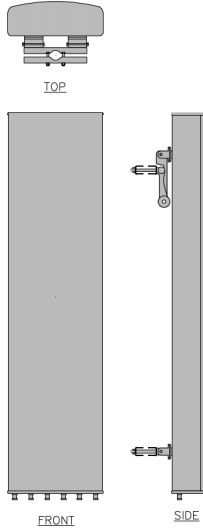
DATE: 11/02/2021
PHILIP A. BURTNER, P.E.
MARYLAND PROFESSIONAL ENGINEER
LICENSE #23172

I, A MEMBER OF LAW FOR HUMAN PROGRESS (LHP) AND ACTING UNDER THE
DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT
UNLESS SPECIFICALLY NOTED BY THE ENGINEER. IN WITNESS WHEREOF, THE ENGINEER
HEREBY SIGNATURES AND SEALS HIS NAME, ALTERATION OR
MODIFICATION OF THE CONTENTS HEREIN.

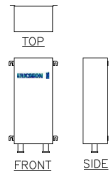
SITE NAME:
STEINBURG-GAITHERSBURG
SITE ID:
7WAN115D
SITE ADDRESS:
15021 DUFIEF MILL RD.
GAITHERSBURG MD 20878

SHEET TITLE:
EQUIPMENT & MOUNTING
DETAILS
DRAWING:
A-5

RFS APXVAALL24_43-U-NA20	
MODEL #	APXVAALL24_43-U-NA20 (OCTA)
MANUF.	RFS
HEIGHT	95.9"
WIDTH	24"
DEPTH	8.7"
WEIGHT	12B/153.3 LBS with Mounting Hardware

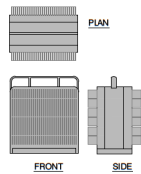


1 ANTENNA DETAIL
A-5 NOT TO SCALE



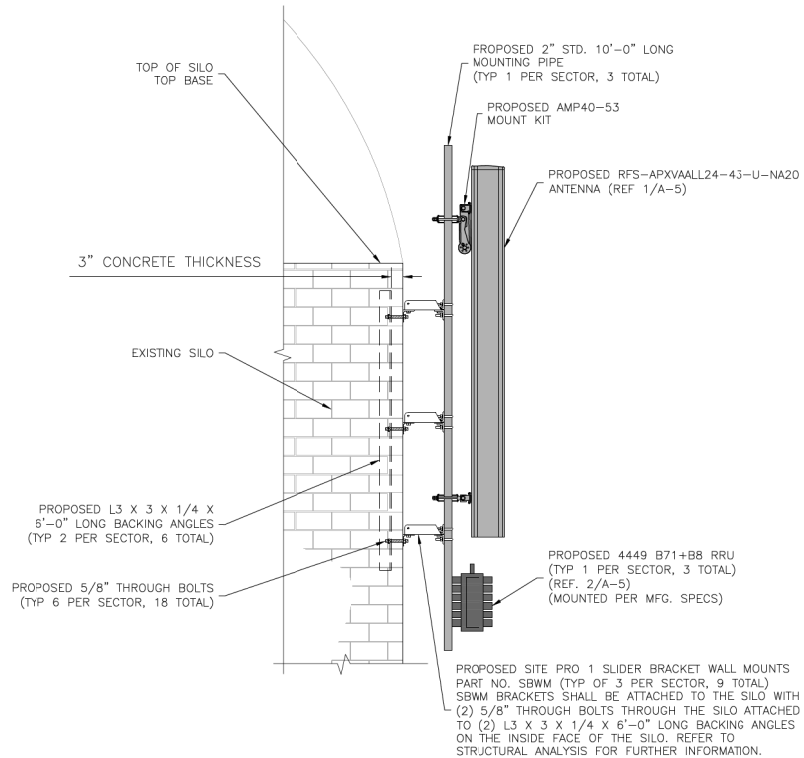
TMA TWIN STYLE 1A-KRY 112	
MFG.	ERICSSON
HEIGHT	12.5"
WIDTH	5.6"
DEPTH	3.7"
WEIGHT	13.2 lbs.

3 TMA DETAIL
A-5 NOT TO SCALE



RADIO DIMENSIONS	
MODEL #	RADIO 4449 B71+B85
MANUF.	ERICSSON
HEIGHT	15.0"
WIDTH	13.2"
DEPTH	10.4"
WEIGHT	75 LBS

2 RADIO DETAIL
A-5 NOT TO SCALE



4 ANTENNA & RRU MOUNTING DETAIL
A-5 NOT TO SCALE

REVIEWED

By Michael Kyne at 4:46 pm, Jan 21, 2022

DPS BATCH STAMPING

APPROVED
Montgomery County
Historic Preservation Commission

Philip A. Burtner

T-Mobile
NORTHEAST LLC

T-MOBILE NORTHEAST, LLC
2200 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705
PHONE: (240) 264-8600
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CENTERLINE
COMMUNICATIONS

750 W CENTER ST. SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS

REV	DATE	DESCRIPTION	BY
D	11/02/21	ISSUED FOR PERMIT	RC
D	11/02/21	ELECTRICAL UPGRADE	RC
C	09/20/21	REV. PER CLIENT COMMENTS	RC
B	09/02/21	ISSUED FOR REVIEW	RC
A	04/05/21	ISSUED FOR REVIEW	TRF

DESIGNED BY: TJK APPROVED BY: MK

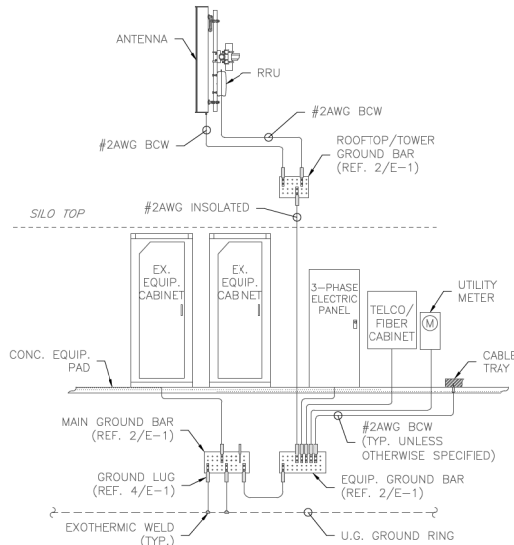


DATE: 11/02/2021
PHILIP A. BURTNER, P.E.
MARYLAND PROFESSIONAL ENGINEER
LICENSE #23172

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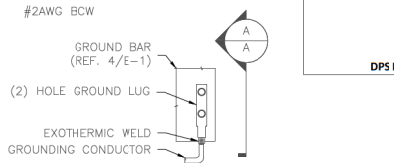
SITE NAME:
STEINBURG-GAITHERSBURG
SITE ID:
7WAN115D
SITE ADDRESS:
**15021 DUFIEF MILL RD.
GAITHERSBURG, MD 20878**

SHEET TITLE:
GROUNDING DETAILS
DRAWING:
E-1

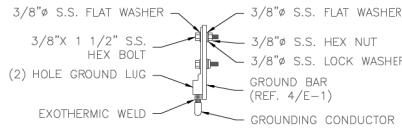


GROUNDING RISER NOTE:
UNLESS OTHERWISE SPECIFIED ALL GROUNDING CONDUCTORS ARE TO BE #2AWG BCW

1 GROUNDING RISER DIAGRAM
E-1 NOT TO SCALE



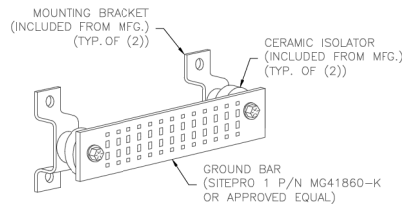
SECTION "A-A"



GROUNDING LUG NOTES:

- DO NOT DOUBLE UP OR STACK LUGS.
- OXIDE INHIBITING COMPOUND TO BE APPLIED TO ALL LUGS.
- ALL LUGS ARE TO BE EXOTHERMIC WELDED TO GROUNDING CONDUCTORS.
- FOR INSULATED GROUNDING CONDUCTORS, EXPOSED BARE COPPER TO BE KEPT TO ABSOLUTE MINIMUM.
- NO INSULATION IS ALLOWED WITHIN THE BARREL OF THE COMPRESSION TERMINAL.

2 GROUND LUG DETAIL
E-1 NOT TO SCALE



4 GROUND BAR DETAIL
E-1 NOT TO SCALE

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

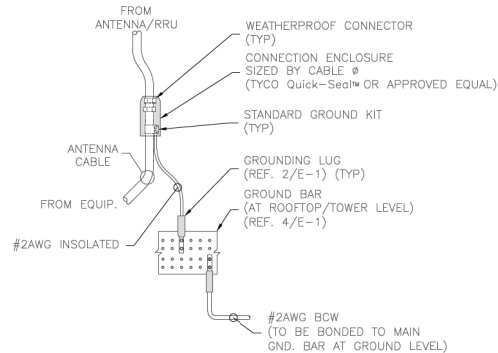
SECTION "P" - SURGE PRODUCERS

- CABLE ENTRY PORTS (HATCH PLATES) (#2)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
- +24V POWER SUPPLY RETURN BAR (#2)
- 48V POWER SUPPLY RETURN BAR (#2)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

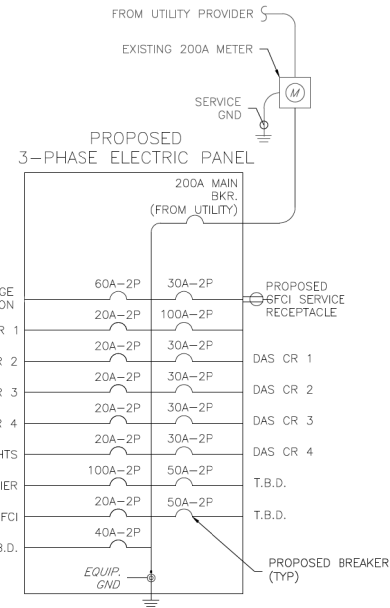
- INTERIOR GROUND RING (#2)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
- BUILDING STEEL (IF AVAILABLE) (#2)

5 GROUND WIRE SCHEDULE
E-1 NOT TO SCALE



- NOTES:
- DO NOT INSTALL CABLE GROUND KIT AT BEND IN CABLE.
 - GROUND CABLES DIRECTLY TO CIGIE
 - JUMPER REQUIRED ONLY WHEN CABLE IS 1 1/4" OR LARGER

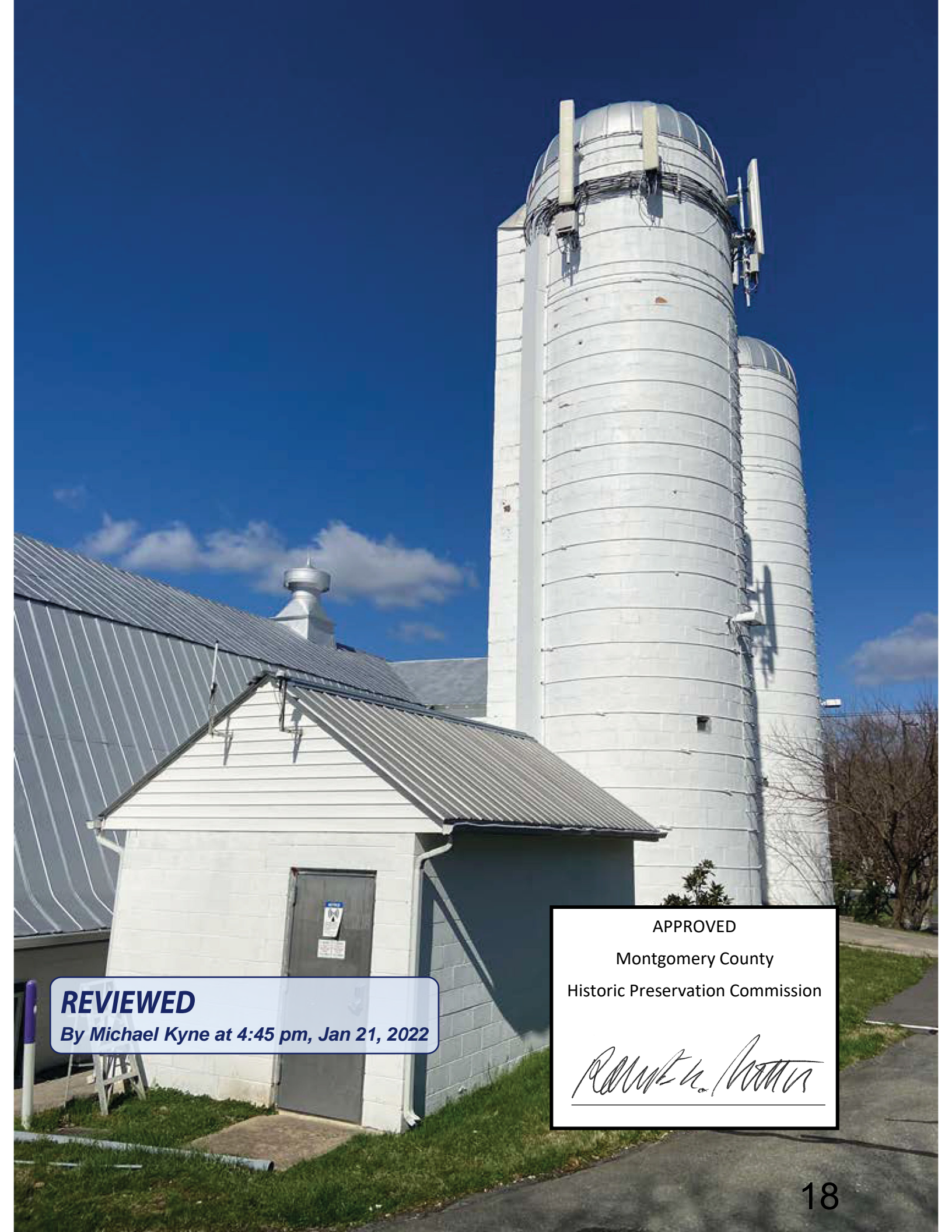
3 ANTENNA/RRU GROUNDING DETAIL
E-1 NOT TO SCALE



ELECTRICAL NOTES:

- CONTRACTOR IS TO REMOVE EXISTING 200A PPC AND EXISTING 100A SUB PANEL.
- CONTRACTOR IS TO INSTALL PROPOSED 3-PHASE ELECTRIC PANEL.
- CONTRACTOR IS TO REVIEW/EXAMINE ALL EXISTING BREAKERS AND REMOVE ALL UNUSED BEFORE INSTALLING IN NEW PANEL.
- THERE ARE (3) EXISTING 3/0 AWG AND (1) #6 GND FEEDING THE EXISTING SINGLE PHASE PANEL. CONTRACTOR TO INSTALL ADDITIONAL 3/0 AWG CABLE FROM METER DISCONNECT AS REQUIRED TO UPGRADE TO A 3-PHASE PANEL.

6 ONE LINE DIAGRAM
E-1 NOT TO SCALE



REVIEWED

By Michael Kyne at 4:45 pm, Jan 21, 2022

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Historic Preservation Commission
Robert A. [Signature]



REVIEWED
By Michael Kyne at 4:45 pm, Jan 21, 2022

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Montgomery County
Historic Preservation Commission
Robert G. [Signature]



REVIEWED
By Michael Kyne at 4:46 pm, Jan 21, 2022

APPROVED
Montgomery County
Historic Preservation Commission

Ronald A. ...



REVIEWED
By Michael Kyne at 4:46 pm, Jan 21, 2022

APPROVED
Montgomery County
Historic Preservation Commission

Ronald A. ...



Dual Slant Polarized Hex Band (12 Port) Antenna, 2x617-894 / 4x1695-2690MHz, 65deg, 16.0/15.7/19.8/19.4/19.4/20.0 dBi, 2.4m (8ft), VET, RET, 2-12°

FEATURES / BENEFITS

This antenna provides a 12 Port multi-band flexible platform for advanced use for flexible use in deployment scenarios for encompassing 600, 700, 800, AWS, PCS & BRS applications.

- 24 Inch Width For Easier Zoning
- Field Replaceable (Integrated) AISG RET platform for reduced environmental exposure
- Superior elevation pattern performance across the entire electrical down tilt range
- Includes three AISG RET motors
- Low band arrays driven by a single RET motor
- HBL & HBLC arrays driven by a single RET & HBR & HBRC arrays driven by a single RET
- Includes 1m AISG jumper for optional daisy chain of two high band RET motors for one single AISG point of high band tilt control.



Technical Features

LOW BAND LEFT ARRAY (617-894 MHZ)

Frequency Band	MHz	617-698	698-806	806-894
Gain Typical	dBi	15.7	16.0	16.0
Gain Over All Tilts	dBi	15.3+/--.4	15.5+/--.5	15.6+/--.4
Horizontal Beamwidth @3dB	Deg	70+/-3	68+/-3	65+/-3
Vertical Beamwidth @3dB	Deg	9.9+/--.7	8.6+/--.7	7.6+/--.3
Electrical Downtilt Range	Deg	2 to 12		
Upper Side Lobe Suppression Peak to +20	dB	15	15	16
Front-to-Back, at +/-30°, Copolar	dB	28	26	28
Cross Polar Discrimination (XPD) @ Boresight	dB	23	23	22
Cross Polar Discrimination (XPD) @ +/-60	dB	11	7	4
3rd Order PIM 2 x 43dBm	dBc	/	-153	-153
VSWR	-	1.5:1		
Cross Polar Isolation	dB	25		
Maximum Effective Power per Port	Watt	400		

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Historic Preservation Commission



Dual Slant Polarized Hex Band (12 Port) Antenna, 2x617-894 / 4x1695-2690MHz, 65deg, 16.0/15.7/19.8/19.4/19.4/20.0 dBi, 2.4m (8ft), VET, RET, 2-12°

LOW BAND RIGHT ARRAY (617-894 MHZ)

Frequency Band	MHz	617-698	698-806	806-894
Gain Typical	dBi	15.3	15.5	15.7
Gain Over All Tilts	dBi	15+/-3	15+/-5	15.2+/-5
Horizontal Beamwidth @3dB	Deg	70+/-3	69+/-3	66+/-4
Vertical Beamwidth @3dB	Deg	9.9+/-6	8.6+/-7	7.6+/-3
Electrical Downtilt Range	Deg	2 to 12		
Upper Side Lobe Suppression Peak to +20	dB	15	15	16
Front-to-Back, at +/-30°, Copolar	dB	27	25	26
Cross Polar Discrimination (XPD) @ Boresight	dB	21	20	22
Cross Polar Discrimination (XPD) @ +/-60	dB	10	7	5
3rd Order PIM 2 x 43dBm	dBc	/	-153	-153
VSWR	-	1.5:1		
Cross Polar Isolation	dB	25		
Maximum Effective Power per Port	Watt	400		

HIGH BAND LEFT ARRAY (1695-2690 MHZ)

Frequency Band	MHz	1695-1880	1850-1990	1920-2200	2200-2500	2500-2690
Gain Typical	dBi	17.8	18.6	19.8	18.9	17.5
Gain Over All Tilts	dBi	16.9+/-9	17.9+/-7	18.8+/-1	17.8+/-1.1	17.1+/-4
Horizontal Beamwidth @3dB	Deg	65+/-3	62+/-4	57+/-5	60+/-7	63+/-5
Vertical Beamwidth @3dB	Deg	5.6+/-5	5.1+/-4	4.6+/-6	4.4+/-3	4.5+/-3
Electrical Downtilt Range	Deg	2 to 12				
Upper Side Lobe Suppression Peak to +20	dB	13	13	13	12	9
Front-to-Back, at +/-30°, Copolar	dB	28	29	28	25	25
Cross Polar Discrimination (XPD) @ Boresight	dB	24	20	18	21	19
Cross Polar Discrimination (XPD) @ +/-60	dB	5	3	4	1	1
3rd Order PIM 2 x 43dBm	dBc	-153				
VSWR	-	1.5:1				
Cross Polar Isolation	dB	25				
Maximum Effective Power per Port	Watt	250				

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Dual Slant Polarized Hex Band (12 Port) Antenna, 2x617-894 / 4x1695-2690MHz, 65deg, 16.0/15.7/19.8/19.4/19.4/20.0 dBi, 2.4m (8ft), VET, RET, 2-12°

HIGH BAND LEFT CENTER ARRAY (1695-2690 MHZ)

Frequency Band	MHz	1695-1880	1850-1990	1920-2200	2200-2500	2500-2690
Gain Typical	dBi	17.7	18.3	19.4	19.2	19.2
Gain Over All Tilts	dBi	17.1+/-0.6	17.7+/-0.6	18.5+/-0.8	18.7+/-0.5	18.6+/-0.6
Horizontal Beamwidth @3dB	Deg	69+/-6	69+/-5	66+/-6	59+/-6	53+/-5
Vertical Beamwidth @3dB	Deg	5.6+/-0.3	5.3+/-0.4	4.8+/-0.6	4.3+/-0.3	4.3+/-0.3
Electrical Downtilt Range	Deg	2 to 12				
Upper Side Lobe Suppression Peak to +20	dB	14	14	14	14	13
Front-to-Back, at +/-30°, Copolar	dB	29	29	30	29	27
Cross Polar Discrimination (XPD) @ Boresight	dB	24	24	23	22	21
Cross Polar Discrimination (XPD) @ +/-60	dB	4	8	8	2	1
3rd Order PIM 2 x 43dBm	dBc	-153				
VSWR	-	1.5:1				
Cross Polar Isolation	dB	25				
Maximum Effective Power per Port	Watt	300				

HIGH BAND RIGHT CENTER ARRAY (1695-2690 MHZ)

Frequency Band	MHz	1695-1880	1850-1990	1920-2200	2200-2500	2500-2690
Gain Typical	dBi	17.8	18.3	19.4	19.1	19.2
Gain Over All Tilts	dBi	17.1+/-0.7	17.7+/-0.6	18.5+/-0.9	18.6+/-0.5	18.6+/-0.6
Horizontal Beamwidth @3dB	Deg	69+/-6	69+/-6	66+/-6	59+/-7	55+/-5
Vertical Beamwidth @3dB	Deg	5.6+/-0.3	5.4+/-0.4	4.8+/-0.6	4.4+/-0.3	4.3+/-0.2
Electrical Downtilt Range	Deg	2 to 12				
Upper Side Lobe Suppression Peak to +20	dB	14	14	13	14	14
Front-to-Back, at +/-30°, Copolar	dB	29	29	30	29	28
Cross Polar Discrimination (XPD) @ Boresight	dB	25	24	22	19	19
Cross Polar Discrimination (XPD) @ +/-60	dB	5	7	7	4	1
3rd Order PIM 2 x 43dBm	dBc	-153				
VSWR	-	1.5:1				
Cross Polar Isolation	dB	25				
Maximum Effective Power per Port	Watt	300				

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Dual Slant Polarized Hex Band (12 Port) Antenna, 2x617-894 / 4x1695-2690MHz, 65deg, 16.0/15.7/19.8/19.4/19.4/20.0 dBi, 2.4m (8ft), VET, RET, 2-12°

HIGH BAND RIGHT ARRAY (1695-2690 MHZ)

Frequency Band	MHz	1695-1880	1850-1990	1920-2200	2200-2500	2500-2690
Gain Typical	dBi	17.8	18.6	20	19	17.8
Gain Over All Tilts	dBi	16.9+/-0.9	18+/-0.6	19+/-1	17.9+/-1.1	17.3+/-0.5
Horizontal Beamwidth @3dB	Deg	64+/-4	61+/-5	56+/-6	58+/-6	63+/-8
Vertical Beamwidth @3dB	Deg	5.7+/-0.4	5.3+/-0.4	4.8+/-0.6	4.5+/-0.4	4.5+/-0.5
Electrical Downtilt Range	Deg	2 to 12				
Upper Side Lobe Suppression Peak to +20	dB	15	16	13	10	9
Front-to-Back, at +/-30, Copolar	dB	29	29	28	25	24
Cross Polar Discrimination (XPD) @ Boresight	dB	22	17	17	18	18
Cross Polar Discrimination (XPD) @ +/-60	dB	6	5	5	1	1
3rd Order PIM 2 x 43dBm	dBc	-153				
VSWR		1.5:1				
Cross Polar Isolation	dB	25				
Maximum Effective Power per Port	Watt	250				

ELECTRICAL SPECIFICATIONS

Impedance	Ohm	50.0
Polarization	Deg	±45°

MECHANICAL SPECIFICATIONS

Dimensions - H x W x D	mm (in)	2436 x 609 x 215 (95.9 x 24 x 8.5)
Weight (Antenna Only)	kg (lb)	65 (143.3)
Weight (Mounting Hardware only)	kg (lb)	11.5 (25.3)
Packing size- HxWxD	mm (in)	2565 x 735 x 390 (101 x 29 x 15.4)
Shipping Weight	kg (lb)	86.7 (191.1)
Connector type		12 x 4.3-10 female at bottom + 6 AISG connectors (3 male, 3 female)
Adjustment mechanism		Integrated RET solution AISG compliant (Field Replaceable) + Manual Override + External Tilt Indicator
Radome Material / Color		Fiber Glass / Light Grey RAL7035

TESTING AND ENVIRONMENTAL

Temperature Range	°C (°F)	-40 to 60 (-40 to 140)
Lightning protection		Direct Ground
Survival/Rated Wind Velocity	km/h	240 (150)
Wind Load @Rated Wind Front	N	1428.0
Wind Load @Rated Wind Side	N	434.0
Wind Load @Rated Wind Rear	N	154.0

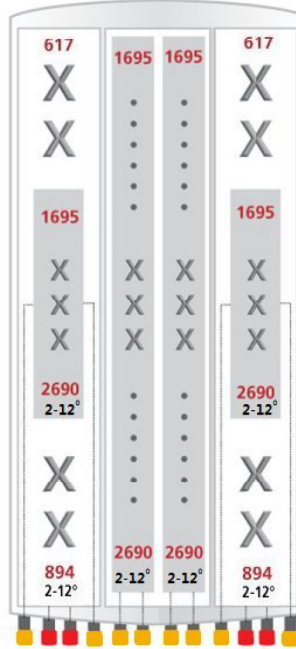
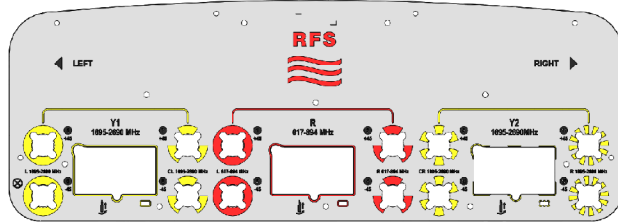
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Montgomery County
Historic Preservation Commission



Dual Slant Polarized Hex Band (12 Port) Antenna, 2x617-894 / 4x1695-2690MHz, 65deg, 16.0/15.7/19.8/19.4/19.4/20.0 dBi, 2.4m (8ft), VET, RET, 2-12°



ORDERING INFORMATION

Order No.	Configuration	Mounting Hardware	Mounting pipe Diameter	Shipping Weight
APXVAA4L24_43-U-NA20	Field Replace RET included (3)	APM40-5E Beam tilt kit (included)	60-120mm	86.7 Kg

External Document Links

- CAxxx-7 Series
- APM40_Series_Installation_Instructions
- Manual Overdrive Instructions
- Global RFS Website

Notes

- All electrical parameters are compliant with BASTA NGMN 10.0 requirements.
- A one-meter AISG cable CA010-7 comes in the box, and for additional cable information please click "External Document Links".
- For additional mounting information please click "External Document Links".

External Link Reference

Global RFS Website | <http://www.rfsworld.com>

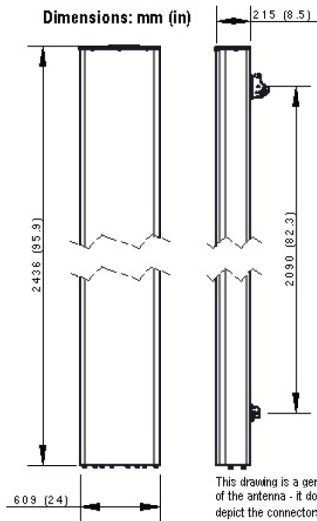
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Dual Slant Polarized Hex Band (12 Port) Antenna, 2x617-894 / 4x1695-2690MHz, 65deg, 16.0/15.7/19.8/19.4/19.4/20.0 dBi, 2.4m (8ft), VET, RET, 2-12°



REVIEWED
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Historic Preservation Commission



Exhibit 01: ID Label

**KRC 161 749/1: Product ID / Authorization
Radio 4449 B5 B13 – NGR G2 (Multi-Standard)**

FCC ID: TA8AKRC161749-1

Date: 16 November 2017
Author: Ericsson Canada
File: Radio 4449 B5 B13 Legal Overlay



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Product ID Label:



FCC ID: TA8AKRC161749-1

Label: Product ID / Authorization - Radio 4449 B5 B13

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By Michael Kyne at 4:45 pm, Jan 21, 2022

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Montgomery County
Historic Preservation Commission
Ronald G. Hunter