**VERIZON SITE NUMBER: 278206** 

VERIZON SITE NAME: **WILLIAMSON NORTH** 

**FORT WHITE** 

PROJECT DESCRIPTION: RFDS 5G L-SUB6

**TOWER TYPE:** 250' SELF-SUPPORT

SITE ADDRESS: **1282 SOUTHWEST WATSON** 

> STREET, FORT WHITE, FL 32038 (COLUMBIA COUNTY)

JURISDICTION: **COLUMBIA COUNTY** 

**PRESENT TELECOMMUNICATIONS** 

OCCUPANCY TYPE: **FACILITY** 

**CURRENT ZONING:** A-3

PARCEL ID #: 27-5S-16-03723-003

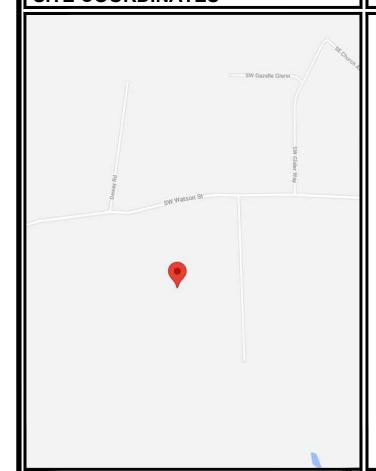
# PROJECT INFORMATION

LATITUDE: N 30° 01' 19.83" \* LONGITUDE: W 82° 41' 40.33" \*

GROUND ELEVATION: 548'± (AMSL) \*\*

\*INFORMATION PROVIDED BY RFDS \*\*INFORMATION PROVIDED BY GOOGLE EARTH

# SITE COORDINATES





# verizon /

**4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431** (561) 995-5539

**VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON NORTH FORT WHITE** 

# 1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038

NAME: **VERIZON WIRELESS** 4700 EXCHANGE COURT, SUITE 100 CITY, STATE, ZIP:
CONTACT:
PHONE:

#//ULCATION = 00011
BOCA RATON, FL 33431
JOHN SCANDURA
(561) 995-5539

#### TOWER OWNER:

NAME: VERIZON WIRELESS 4700 EXCHANGE COURT, SUITE 100 CITY, STATE, ZIP: BOCA RATON, FL 33431 CONTACT: JOHN SCANDURA PHONE: (561) 995-5539

## SURVEYOR:

NAME: ADDRESS: CITY, STATE, ZIP: CONTACT:

#### **CIVIL ENGINEER:**

TOWER ENGINEERING PROFESSIONALS 326 TRYON ROAD NAME: ADDRESS: CITY, STATE, ZIP: RALEIGH, NC 27603-3530
JERFMY K WOOSTER DE

JEREMY K. WOOSTER, P.E. (919) 661-6351

## **ELECTRICAL ENGINEER:**

TOWER ENGINEERING PROFESSIONALS 326 TRYON ROAD

CITY, STATE, ZIP: RALEIGH, NC 27603-3530
CONTACT: MARK S. QUAKENBUSH, P.E.

(919) 661-6351

#### PROPERTY OWNER:

NAME: GINA O. WILLIAMSON ADDRESS: 1282 SOUTHWEST WATSON STREET

CITY, STATE, ZIP: FORT WHITE, FL 32038 GINA O. WILLIAMSON UNKNOWN CONTACT:

# **CONTACT INFORMATION**

ALL WORK AND MATERIALS SHALL BE PERFORMED AND 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

**2020 FLORIDA BUILDING** CODE, 7TH EDITION LOCAL BUILDING CODE ANSI/TIA-222-H-2-2017

CITY/COUNTY ORDINANCES

# CODE COMPLIANCE

**ULTIMATE WIND SPEED: 120 MPH** SERVICE WIND SPEED: 60 MPH **EXPOSURE CATEGORY: C** 

INFORMATION PROVIDED BY PASSING STRUCTURAL ANALYSIS BY TOWER ENGINEERING PROFESSIONALS DATED 05/12/21

# **DESIGN CRITERIA**

UTILITIES:

POWER COMPANY: CLAY ELECTRIC COOP. CUSTOMER SERVICE (352) 473-8000 158 325 063 PHONE:

METER # NEAR SITE:

TELEPHONE COMPANY: AT&T

CUSTOMER SERVICE (888) 595-2102 PHONE # NEAR SITE:

PEDESTAL # NEAR SITE: UNKNOWN

THE PURPOSE OF THIS PROJECT IS AS FOLLOWS:

TOWER SCOPE OF WORK: • INSTALL (3) ERICSSON VZE01 ANTENNAS

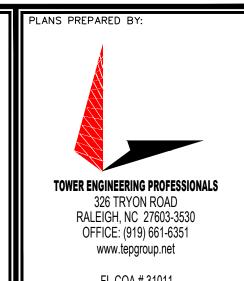
• INSTALL (3) ERICSSON RRUS 8843 RRUs • INSTALL (1) 1%" HYBRID CABLE • INSTALL (1) RAYCAP RHSDC-6627-PF-48

FOR MOUNT MODS: SEE MOUNT MODIFICATION DRAWINGS BY MASER DATED 02/16/21

# **SCOPE OF WORK**

SHEET	DESCRIPTION	REV
T-1	TITLE SHEET	1
N-1	PROJECT NOTES	1
C-1	SITE PLAN	1
C-1A	EXISTING EQUIPMENT PAD LAYOUT	1
C-1B	PROPOSED EQUIPMENT PAD LAYOUT	1
C-2	TOWER ELEVATION	1
C-3A	EXISTING ANTENNA LAYOUT	1
C-3B	PROPOSED ANTENNA LAYOUT	1
C-3C	EXISTING ANTENNA & COAX SCHEDULE	1
C-3D	PROPOSED ANTENNA & COAX SCHEDULE	1
C-4	EQUIPMENT CABINET DETAILS	1
E-1	ELECTRICAL NOTES	1
E-2	POWER PANEL SCHEDULE	1
E-3	ONE-LINE DIAGRAM	1
E-4	POWER ROUTING PLAN	1
E-5	CABINET POWER CALCULATIONS	1
G-1	GROUNDING DETAILS	1
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# INDEX OF SHEETS

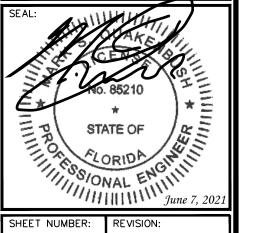


FL COA # 31011

_	06-07-21	CONSTRUCTION
0	05-27-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: HMB CHECKED BY: JHJ





1-1

TEP#: 252166.48554

**LOCATION MAP** 

# **PROJECT NOTES:**

- 1. ALL REFERENCES TO THE OWNER AND/OR LESSEE IN THESE DOCUMENTS SHALL BE CONSIDERED VERIZON OR ITS DESIGNATED REPRESENTATIVE.
- 2. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE, 7TH EDITION.
- 3. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
- 4. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
- 5. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATIONS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
- 6. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
- 8. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
- 9. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
- 10. IF APPLICABLE, ALL CONCRETE WORK SHALL COMPLY TO LOCAL CODES AND THE ACI 318-11, "BUILDING REQUIREMENTS FOR STRUCTURAL CONCRETE".
- 11. ALL TOWER DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.
- 12. ALL TOWER MODIFICATION WORK SHALL BE IN ACCORDANCE WITH TIA-1019-A STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

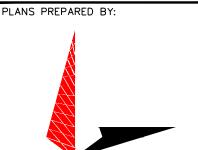


4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

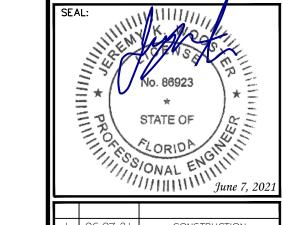
# VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON NORTH FORT WHITE

1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)



## **TOWER ENGINEERING PROFESSIONALS**

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1	06-07-21	CONSTRUCTION
0	05-27-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: HMB CHECKED BY: JHJ

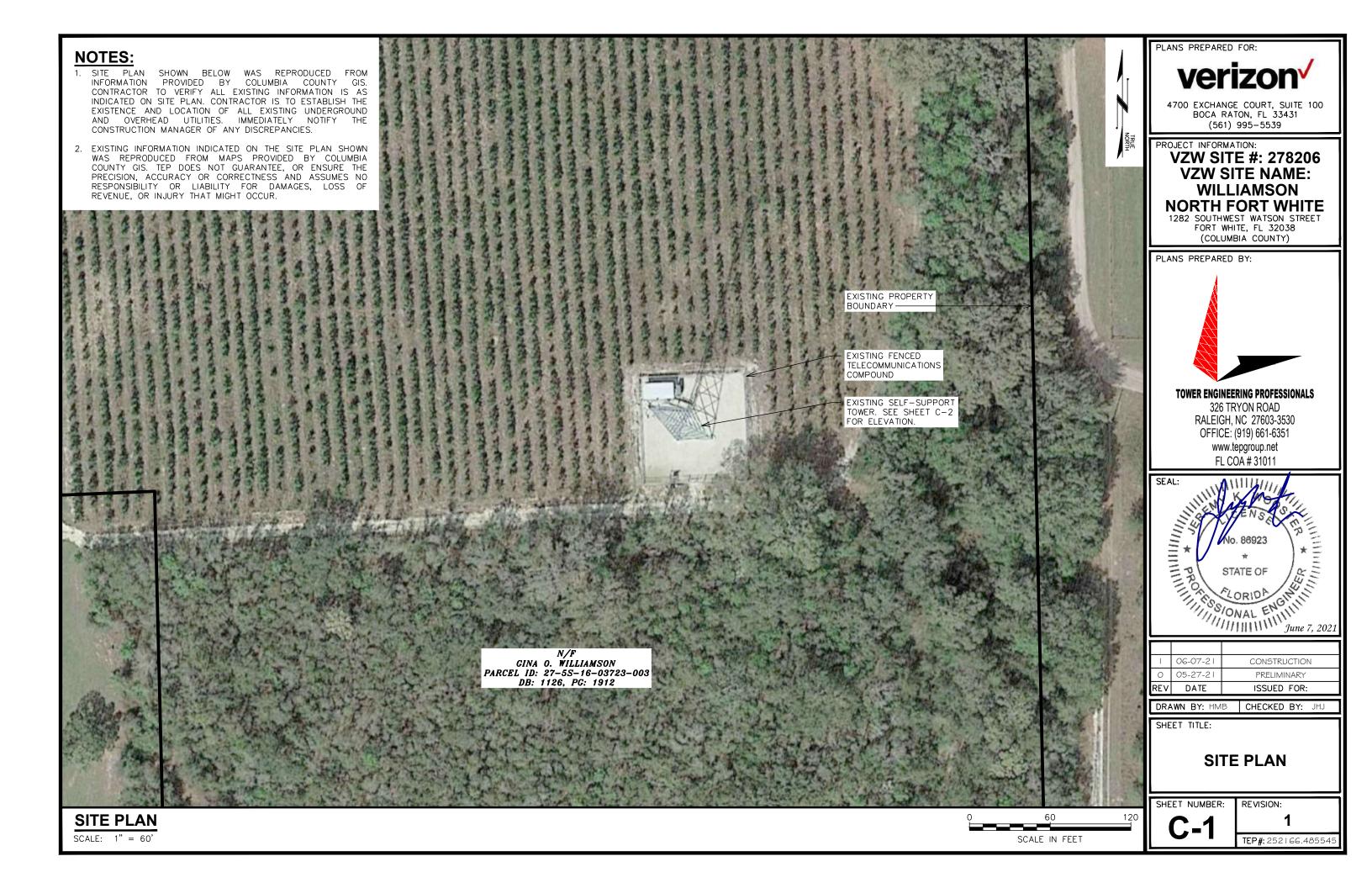
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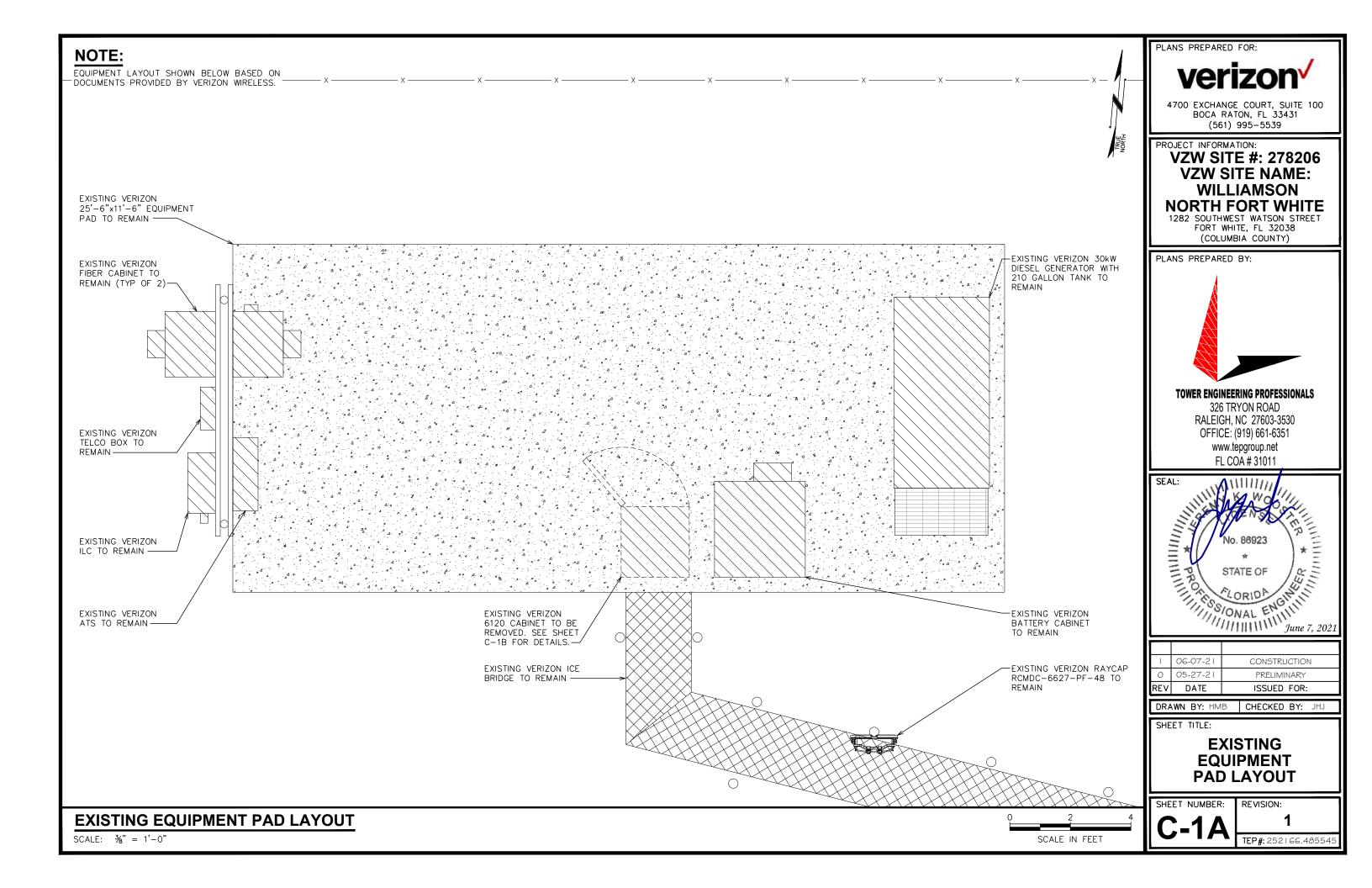
PROJECT NOTES

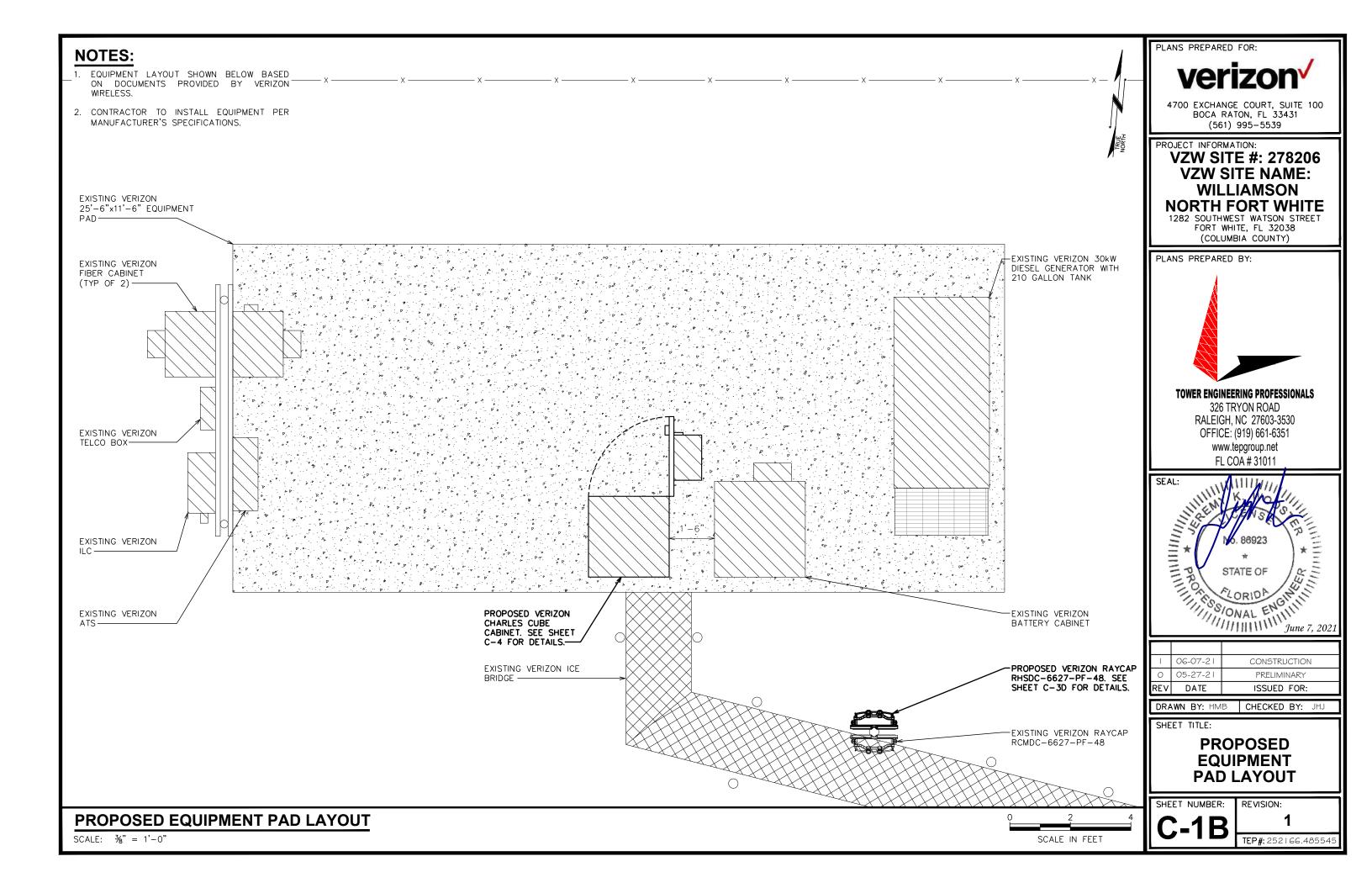
SHEET NUMBER:

**N-**′

REVISION:

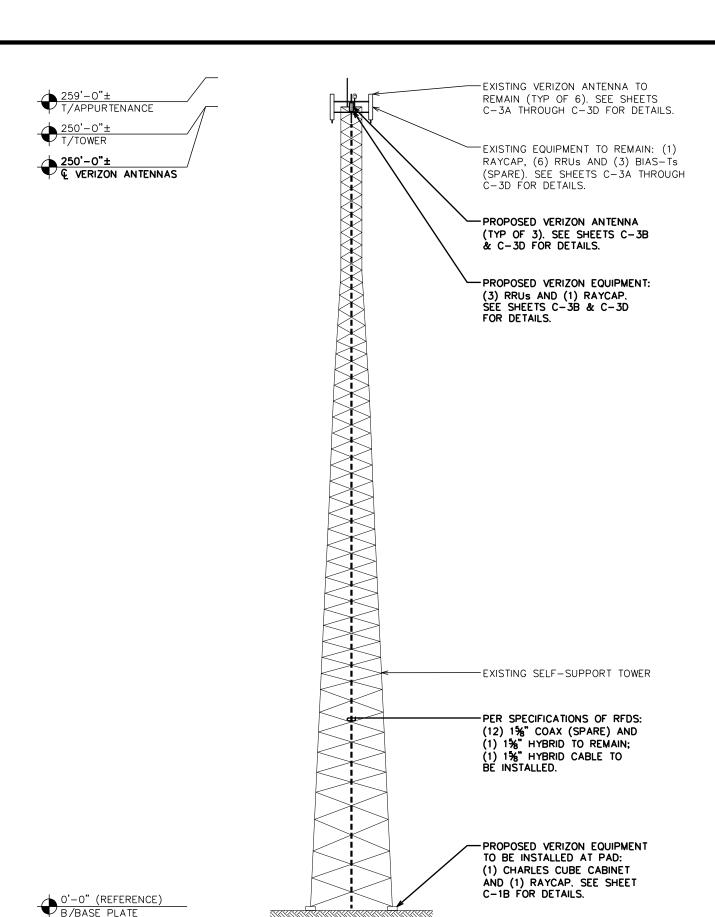






# **NOTES:**

- EXISTING TOWER HAS SUFFICIENT CAPACITY TO HOLD PROPOSED LOADING. SEE THE STRUCTURAL ANALYSIS REPORT BY TEP DATED MAY 12, 2021 FOR DETAILS.
- 2. CONTRACTOR TO INSTALL ALL EQUIPMENT PER MANUFACTURER'S SPECIFICATIONS.
- 3. THE DRAWING IS ONLY A GRAPHIC REPRESENTATION OF THE STRUCTURE. CONDITIONS IN THE FIELD MAY VARY.
- 4. FAA APPROVED OVERALL HEIGHT = 260'-0".



PLANS PREPARED FOR:

4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

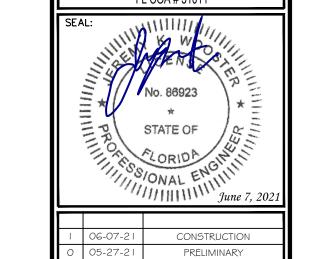
# **VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON** NORTH FORT WHITE

1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)



# **TOWER ENGINEERING PROFESSIONALS**

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DRAWN BY: HMB CHECKED BY: JHJ

SHEET TITLE:

**TOWER ELEVATION** 

SHEET NUMBER:

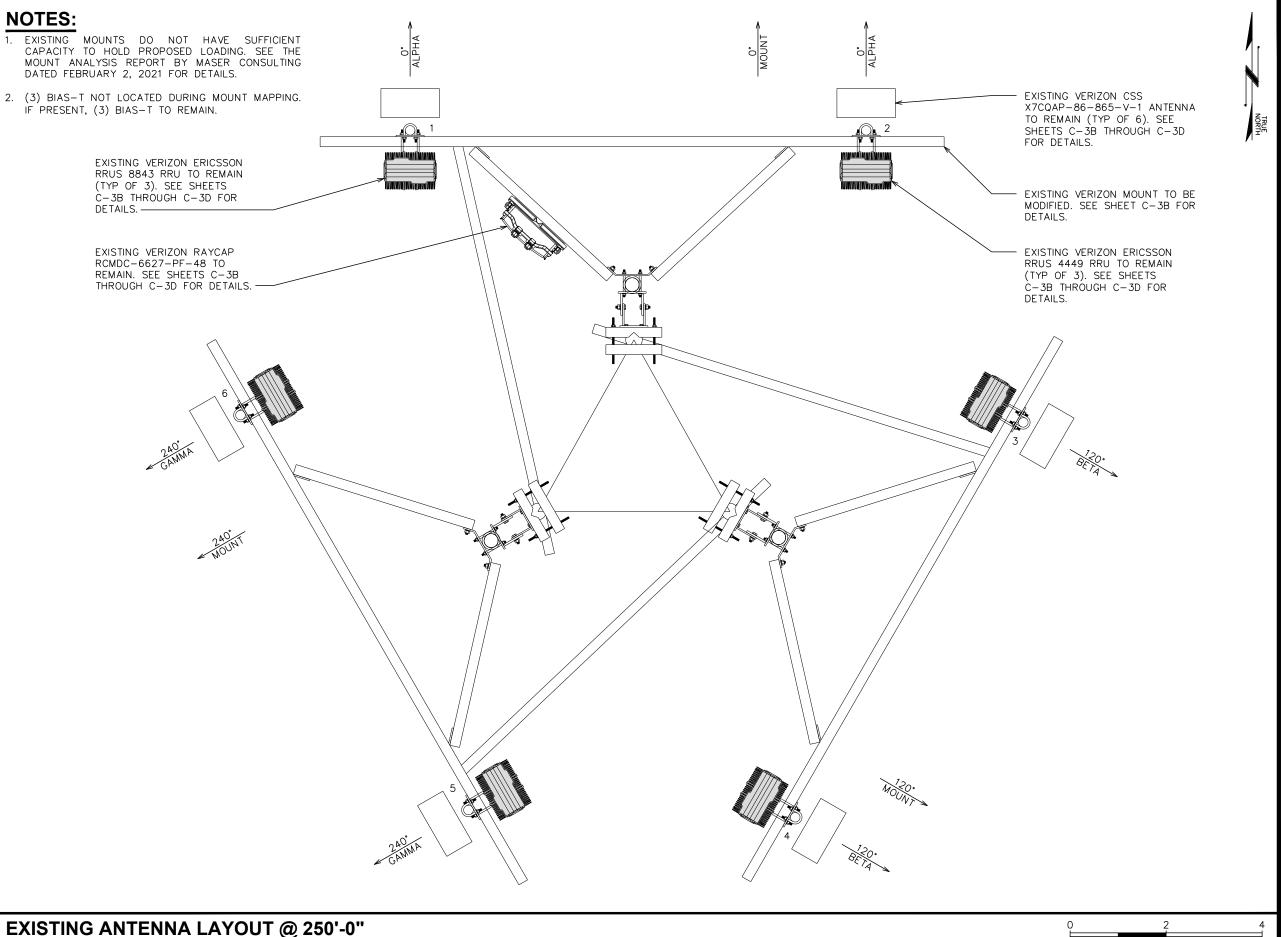
REVISION:

TEP#: 252166.48554

PROPOSED TOWER ELEVATION

SCALE: 1" = 30'

30 60 SCALE IN FEET



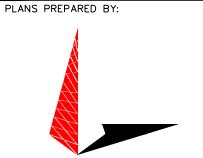
PLANS PREPARED FOR: verizon

> 4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

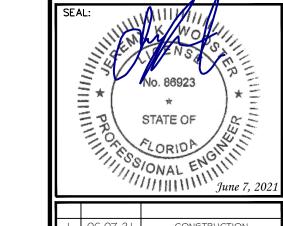
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1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)



## **TOWER ENGINEERING PROFESSIONALS**

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SHEET TITLE:

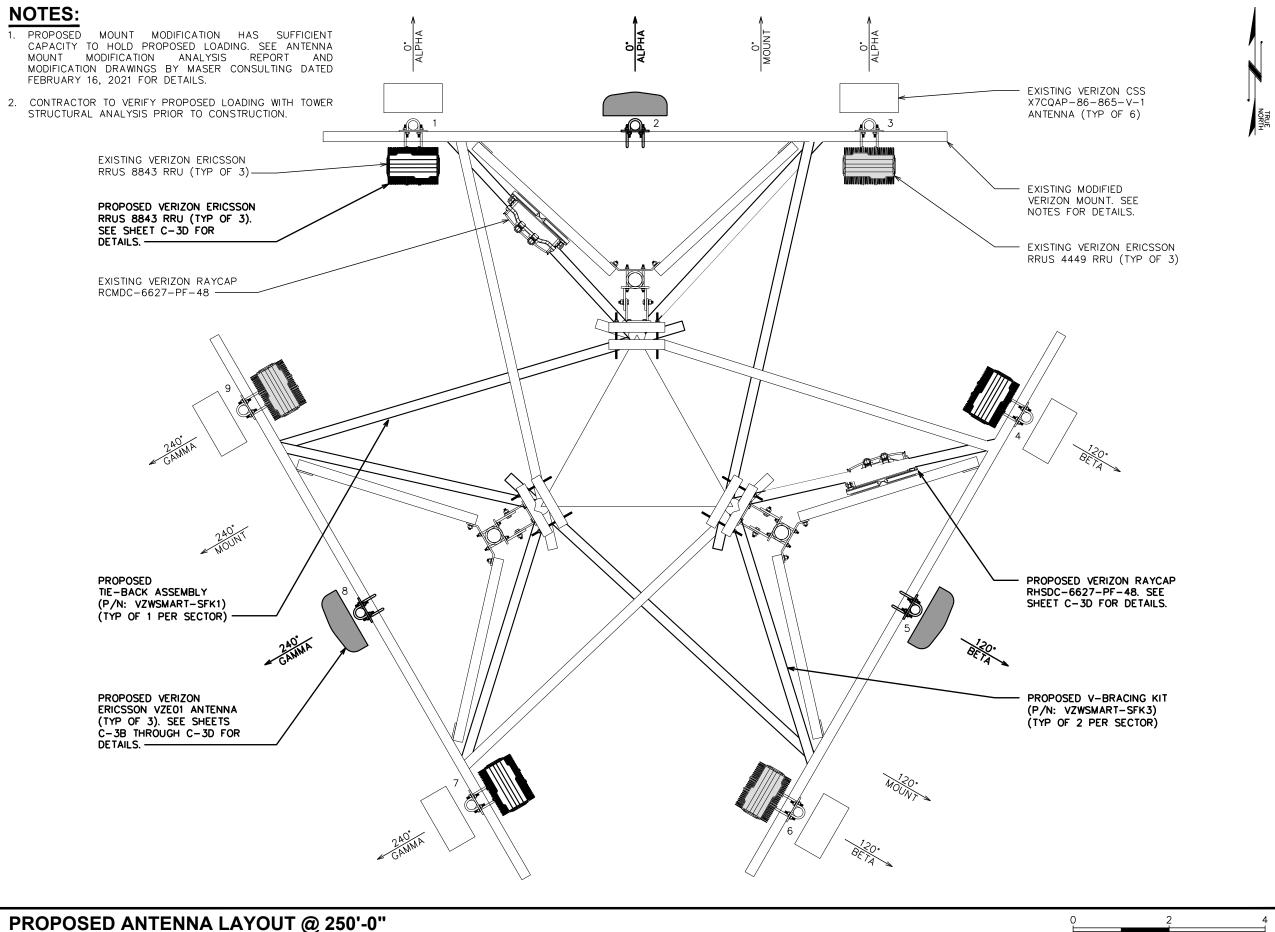
**EXISTING ANTENNA LAYOUT** 

SHEET NUMBER:

REVISION:

TEP#: 252166.48554

SCALE IN FEET



PLANS PREPARED FOR: verizon

> 4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

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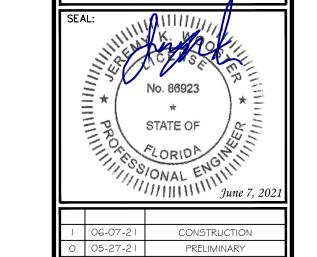
1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)

PLANS PREPARED BY:



## **TOWER ENGINEERING PROFESSIONALS**

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- 1	06-07-21	CONSTRUCTION
0	05-27-21	PRELIMINARY
REV	DATE	ISSUED FOR:

CHECKED BY: JHJ DRAWN BY: HMB

SHEET TITLE:

**PROPOSED ANTENNA LAYOUT** 

SHEET NUMBER:

REVISION:

TEP#: 252166.48554

SCALE IN FEET

SCALE:  $\frac{1}{2}$ " = 1'-0"

	EXISTING ANTENNA & COAX SCHEDULE										
POS.	SECTOR	USE	MANUFACTURER (MODEL #)	RAD CENTER	CABLE SIZE	AZIMUTH (TN)	CABLE LENGTH	MECH. D-TILT	1	EQUIPMENT [MODEL #]	J-BOX (TOWER)
1	ALPHA	AWS3 LTE 700 LTE	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±		0.		1°	1°	(1) ERICSSON RRU [4449 RRU]	
2	ALPHA	1900 LTE 2100 LTE	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±	(40) 45(1)	0.		1°	1°	(1) ERICSSON RRU [8843 RRU]	
3	BETA	AWS3 LTE 700 LTE	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±	(12) 1%"ø COAX (SPARE)	120°	200'.	1°	1°	(1) ERICSSON RRU [4449 RRU]	(1) RAYCAP [RCMDC-6627-PF-48]
4	BETA	1900 LTE 2100 LTE	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±	(1) 15%"ø HYBRID	120°	290'±	1°	1°	(1) ERICSSON RRU [8843 RRU]	*(1) RAYCAP [RCMDC-6627-PF-48]
5	GAMMA	AWS3 LTE 700 LTE	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±	חואמוח	240°		0,	1°	(1) ERICSSON RRU [4449 RRU]	
6	GAMMA	1900 LTE 2100 LTE	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±		240°		0,	1°	(1) ERICSSON RRU [8843 RRU]	

<sup>\*</sup>NOTE-EQUIPMENT LOCATED AT GROUND LEVEL.

# **GROUND WORK:**

CONTRACTOR TO REMOVE: (1) 6120 CABINET.



4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

# **VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON** NORTH FORT WHITE

1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)



FL COA # 31011 STATE OF

STATE

www.tepgroup.net

Œ	RΕV	DATE	ISSUED FOR:
	0	05-27-21	PRELIMINARY
	_	06-07-21	CONSTRUCTION
L			

DRAWN BY: HMB CHECKED BY: JHJ

SHEET TITLE:

**EXISTING ANTENNA** & COAX SCHEDULE

SHEET NUMBER:

#### PROPOSED EQUIPMENT IN BOLD

	PROPOSED ANTENNA & COAX SCHEDULE										
POS.	SECTOR	USE	MANUFACTURER (MODEL #)	RAD CENTER	CABLE SIZE	AZIMUTH (TN)	CABLE LENGTH	MECH. D-TILT	1 1	EQUIPMENT [MODEL #]	J-BOX (TOWER)
1	ALPHA	AWS3 LTE 700 LTE	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±		0,		••	**	(1) ERICSSON RRU [4449 RRU]	
2	ALPHA	1900 LTE 2100 LTE <b>850 LTE</b>	ERICSSON VZE01	€ © 250'-0"±		0,		••	**	(1) ERICSSON RRU [8843 RRU]	
3	ALPHA	850 5GNR NL-SUB6	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±	(12) 1%"ø	0,		**	**	(1) ERICSSON RRU [RRUS 8843]	(1) RAYCAP [RCMDC-6627-PF-48]
4	ВЕТА	AWS3 LTE 700 LTE	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±	ĆOAX (SPARE)	120°		••	••	(1) ERICSSON RRU [4449 RRU]	***(1) RAYCAP [RCMDC-6627-PF-48]
5	ВЕТА	1900 LTE 2100 LTE <b>850 LTE</b>	ERICSSON VZE01	€ @ 250'-0"±	(1) 1%"ø HYBRID	120°	*290'±	**	**	(1) ERICSSON RRU [8843 RRU]	(1) RAYCAP
6	ВЕТА	850 5GNR NL-SUB6	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±	(1) 1%"ø HYBRID	120°		••	••	(1) ERICSSON RRU [RRUS 8843]	[RHSDC-6627-PF-48]
7	GAMMA	AWS3 LTE 700 LTE	CSS X7CQAP-86-865-V-1	€ @ 250'-0"±	TTBIND	240°		**	**	(1) ERICSSON RRU [4449 RRU]	[RHSDC-6627-PF-48]
8	GAMMA	1900 LTE 2100 LTE <b>850 LTE</b>	ERICSSON VZE01	€ @ 250'-0"±		240°		••	**	(1) ERICSSON RRU [8843 RRU]	
9	850 5CNR	850 5GNR	CSS X7CQAP-86-865-V-1	Ç @ 250'−0"±		240°	-	••	**	(1) ERICSSON RRU [RRUS 8843]	

\*NOTE-CONTRACTOR TO VERIFY COAX/CABLE LENGTHS PRIOR TO CONSTRUCTION. CONTRACTOR TO REFERENCE VERIZON ISSUED RFDS PRIOR TO CONSTRUCTION

\*\*NOTE-CONTRACTOR TO REFERENCE VERIZON ISSUED RFDS FOR MECH./ELEC. D-TILTS

\*\*\*NOTE-EQUIPMENT LOCATED AT GROUND LEVEL
\*\*\*\*NOTE-EQUIPMENT TO BE MOUNTED AT GROUND LEVEL

# **GROUND WORK:**

CONTRACTOR TO INSTALL: (1) CHARLES CUBE CABINET.



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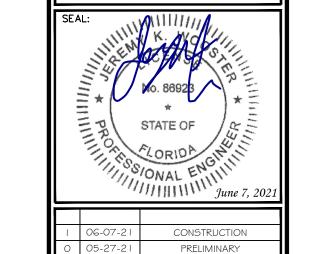
PROJECT INFORMATION:

# **VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON** NORTH FORT WHITE

1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)



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Œ	RΕV	DATE	ISSUED FOR:
	0	05-27-21	PRELIMINARY
	_	06-07-21	CONSTRUCTION
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DRAWN BY: HMB CHECKED BY: JHJ

SHEET TITLE:

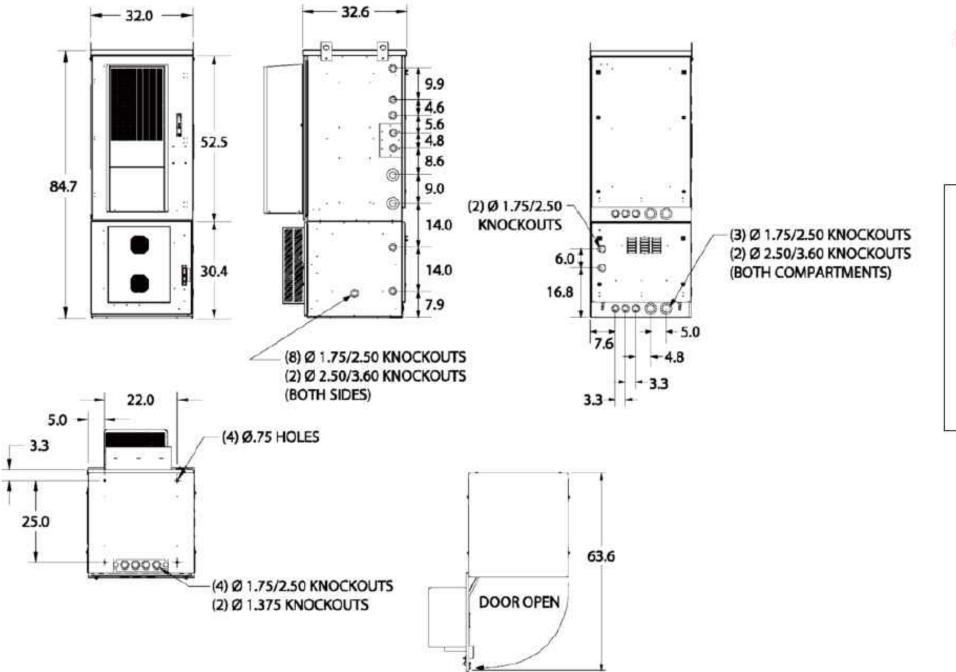
**PROPOSED ANTENNA** & COAX SCHEDULE

SHEET NUMBER:

TEP#: 252166.48554

PROPOSED ANTENNA & COAX SCHEDULE @ 250'-0"

# **CUBE SS Series Large Site Support Cabinets**



# CUBE-SS4x228xxx **Dimensions**

## FACTORY INSTALLED **OPTIONS**

96-000003-A Retractable Overhang

97-002230-A 8" Top Hat Cable Entry Compartment

96-002162-A Factory Installed 6" Plinth

MADE IN THE

All units in inches

OG-OSP052-A20

INNOVATIVE ENCLOSED SOLUTIONS™

Charles Industries, LLC An Amphenol Company

(847) 806-6300 Phone: Fax: (847) 806-6231 Web:

www.charlesindustries.com



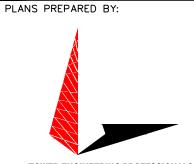
4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431

PROJECT INFORMATION:

# **VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON** NORTH FORT WHITE

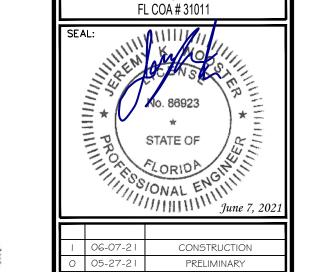
(561) 995-5539

1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)



# **TOWER ENGINEERING PROFESSIONALS**

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1	06-07-21	CONSTRUCTION
- 1	06-07-21	CONSTRUCTION
0	05-27-21	PRELIMINARY
REV	DATE	ISSUED FOR:

CHECKED BY: JHJ DRAWN BY: HMB

SHEET TITLE:

**EQUIPMENT CABINET DETAILS** 

SHEET NUMBER:

REVISION:

TEP#: 252166.48554

**CHARLES CUBE SS4B228LX1** 

# **ELECTRICAL NOTES:**

#### SCOPE:

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

#### CODES:

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

#### **TESTING**

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

#### **GUARANTEE:**

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

#### **UTILITY CO-ORDINATION:**

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

#### **EXAMINATION OF SITE:**

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

#### **CUTTING, PATCHING AND EXCAVATION:**

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

#### **RACEWAYS / CONDUITS GENERAL:**

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

#### **EXTERIOR CONDUIT:**

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

#### INTERIOR CONDUIT:

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

#### **EQUIPMENT:**

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

#### **CONDUCTORS:**

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

#### **UL COMPLIANCE:**

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

#### GROUNDING:

GRD

IGB

IGR

ΚW

NEC

PCS

РΗ

PNL

GROUND

KILOWATTS

PHASE

PANEL

ISOLATED GROUND BAR

NATIONAL ELECTRIC CODE

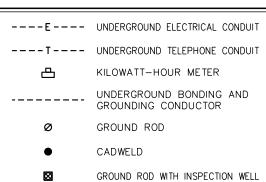
INTERIOR GROUND RING (HALO)

PERSONAL COMMUNICATION SYSTEM

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

# **ABBREVIATIONS AND LEGEND**

Ľ						
	A	_	AMPERE	PNLBD	_	PANELBOARD
I	AFG	_	ABOVE FINISHED GRADE	PVC	_	RIGID NON-METALLIC CONDUIT
I	ATS	_	AUTOMATIC TRANSFER SWITCH	RGS	_	RIGID GALVANIZED STEEL CONDUIT
I	AWG	_	AMERICAN WIRE GAUGE	SW	_	SWITCH
I	BCW	-	BARE COPPER WIRE	TGB	_	TOWER GROUND BAR
I	BFG	-	BELOW FINISHED GRADE	UL	_	UNDERWRITERS LABORATORIES
I	BKR	_	BREAKER	V	_	VOLTAGE
	С	-	CONDUIT	W	_	WATTS
	CKT	-	CIRCUIT	XFMR	_	TRANSFORMER
	DISC	-	DISCONNECT	XMTR	_	TRANSMITTER
	EGR	_	EXTERNAL GROUND RING			
	EMT	_	ELECTRIC METALLIC TUBING		E	UNDERGROUND ELECTRICAL CONDUIT
	FSC	-	FLEXIBLE STEEL CONDUIT		_	
I	GEN	-	GENERATOR		T	UNDERGROUND TELEPHONE CONDUIT
II	GPS	_	GLOBAL POSITIONING SYSTEM		_	IVII OWATT LIQUID METER



PLANS PREPARED FOR:

Verizon

4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

# VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON NORTH FORT WHITE

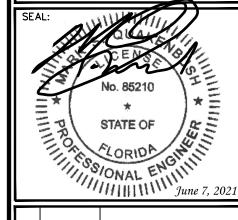
1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)





## **TOWER ENGINEERING PROFESSIONALS**

326 TRYON ROAD RALEIGH, NC 27603-3530 OFFICE: (919) 661-6351 www.tepgroup.net FL COA # 31011



0	06-07-21	CONSTRUCTION PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: HMB | CHECKED BY: JHJ

SHEET TITLE:

ELECTRICAL NOTES

SHEET NUMBER:

REVISION:

# **NOTES:**

- 1. ALL CONDUCTORS ARE TYPE THWN (75°C) COPPER.
- 2. MAXIMUM LENGTH OF RUN FOR RECTIFIER CIRCUITS IS 50-FT.
- 3. INTERSECT/GENERAC INTEGRATED LOAD CENTER INCLUDES 200A MAIN DISCONNECT AND TRANSFER SWITCH FOR PORTABLE OR PERMANENT GENERATOR.
- 4. RECTIFIER LOADS ARE CONSIDERED TO BE NON-CONTINUOUS.
- 5. IF ADDITIONAL FUTURE LOADS ARE ADDED WHICH CAUSE TOTAL DEMAND TO EXCEED GENERATOR BREAKER SIZE, BACKUP POWER SYSTEM SHALL BE EVALUATED AND UPGRADED AS NECESSARY.
- 6. EXISTING LOADING ON THE PANEL IS TAKEN FROM

PROPOSED BREAKER/LOAD SHOWN IN BOLD

PANEL SCHEDULE - ILC WITH 200A MCB 120/240V												
LOAD SERVED		MPERES TTS) L2	TRIP	CKT #	Р	HAS	E	CKT #	TRIP	VOLT A (WA L1	MPERES TTS) L2	LOAD SERVED
TVSS	100	100	30A	3	$\bigwedge$	A B	$\bigwedge$	2	100A	0	0	SPARE (OFF)
FIBER CUBE	1440		15A	5	$] \land ]$	Α	$\wedge$	6	20A	1920		EBRE
VERIZON CUBE		1440	15A	7	ho	В	$\perp$	8	20A		1920	EDICE
LIGHTING CONTACTOR	100		20A	9	$] \triangle  $	Α	$\sim$	10	20A	500		LIGHTS
RECTIFIER #1	*1090	*1090	30A	11	$\bigwedge$	B A	$ \uparrow $	12 14	20A 20A	**1200	180	GFCI RECEPTACLE  GEN CHARGER
RECTIFIER #3	*1090	*1090	30A	15 17	$\bigwedge$	B A	$\uparrow$	16 18	30A	*1090	*1090	RECTIFIER #2
RECTIFIER #5	*1090	*1090	30A	19 21	$\uparrow$	B A	$\bigwedge$	20 22	30A	*1090	*1090	RECTIFIER #4
_		-	_	23	$] \triangle  $	В	$\wedge$	24	30A		*1090	RECTIFIER #6
-	_		_	25	ackslash	Α	$\perp$	26	304	•1090		NEOTH IEN #O
-		_	_	27	$\Box$	В	$\sim$	28	_		_	
-	_		_	29	lacksquare	Α	$\sim$	30	_	_		-
-		-	_	31	igwdow	В	$\sim$	32	_		_	-
-	_		_	33		Α	ackslash	34	_	-		-
-		-	_	35	lacksquare	В	$\sim$	36	_		-	-
-	-		-	37	abla	Α	lacksquare	38	_	-		_
-		-	_	39	abla	В	lacksquare	40	_		-	_
-	-		_	41	لے <b>ر</b>	Α	$L_{L}$	42	-	-		_
VOLT AMPS	4910	4810								6890	5370	VOLT AMPS
	L1 VOLT AMPERES L1 AMPS				11800 10180 98.3 84.8 98.3			L2 VOLT AMPERES L2 AMPS MAX AMPS				
1 OADING BASED ON VALU	122.9 MAX AMPS x125%											

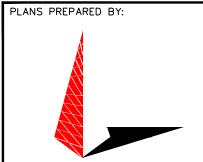
PLANS PREPARED FOR:

4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

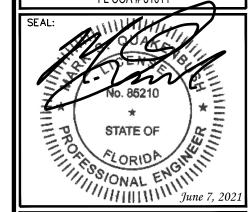
# **VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON** NORTH FORT WHITE

1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)



## **TOWER ENGINEERING PROFESSIONALS**

326 TRYON ROAD RALEIGH, NC 27603-3530 OFFICE: (919) 661-6351 www.tepgroup.net FL COA # 31011



1	06-07-21	CONSTRUCTION
0	05-27-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: HMB | CHECKED BY: JHJ

SHEET TITLE:

**POWER PANEL** SCHEDULE

SHEET NUMBER:

REVISION:

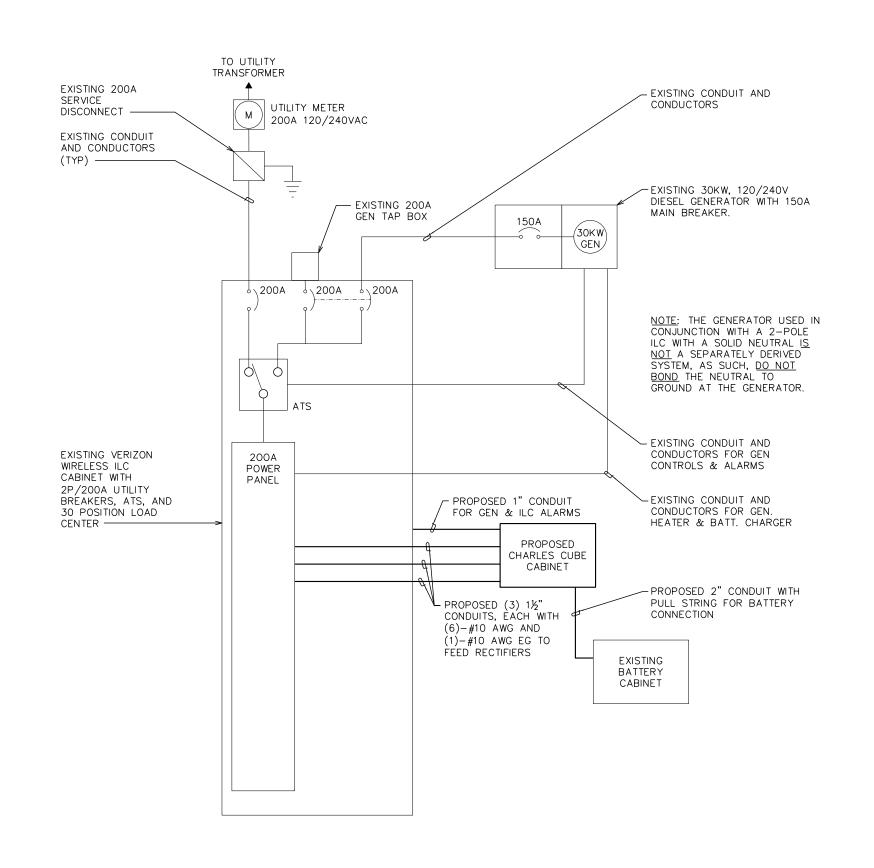
<sup>\*</sup>LOADING BASED ON VALUES FROM OTHR3000 CALCULATOR
\*\*GENERATOR BATTERY CHARGER LOAD IS 0 VA DURING GENERATOR OPERATION

# **NOTES:**

- FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO VENDOR PRINTS PROVIDED BY EQUIPMENT MANUFACTURER.
- 2. WHEN UTILITY COMPANY REQUIRES A SERVICE DISCONNECT OTHER THAN THE MAIN BREAKER IN POWER PANEL OF THE UTILITY CABINET, REMOVE BONDING JUMPER IN EQUIPMENT CABINETS AND BOND SERVICE DISCONNECT PER NEC REQUIREMENTS.
- 3. CONTRACTOR SHALL REVIEW AND COMPLY WITH MANUFACTURERS EQUIPMENT DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SHOWN.
- 4. CONTRACTOR SHALL OBTAIN THE MAXIMUM AVAILABLE FAULT CURRENT AT THE UTILITY SERVICE POINT FROM THE ELECTRIC COMPANY IN WRITING PRIOR TO ORDERING MATERIALS AND ENSURE THE EQUIPMENT WILL HAVE HIGHER RATING WITH A MIN VALUE OF 10,000A.
- 5. THE GROUNDED SERVICE CONDUCTOR SHALL BE GROUNDED AT THE SERVICE DISCONNECT ONLY.
- 6. DO NOT BOND THE NEUTRAL TO GROUND AT THE GENERATOR.
- 7. SIGNAGE MUST BE DISPLAYED ON DISCONNECT "OPENING THE EQUIPMENT DISCONNECT WILL CAUSE THE EMERGENCY GENERATOR TO START. TO REMOVE POWER ENTIRELY FROM EQUIPMENT, THE GENERATOR MUST BE TURNED OFF USING THE GENERATOR STOP SWITCH."

# **ONE-LINE DIAGRAM NOTES:**

- 1. ELECTRICAL SERVICE SHALL BE 200A, 240/120V, 1ø, 3W.
- 2. COMPLY WITH MANUFACTURER SPECIFICATIONS REGARDING WIRING REQUIREMENTS.
- CONDUCTOR SIZES BASED ON TYPICAL CONFIGURATIONS. CONTRACTOR WILL VERIFY WITH MANUFACTURER SPECIFICATIONS BEFORE ORDERING OR INSTALLING PARTS.
- 4. WIRE COUNT IS BASED ON EQUIPMENT SPECIFICATIONS PROVIDED BY VERIZON WIRELESS.
- NEUTRAL CONDUCTORS TO THE RECTIFIERS WERE LEFT OFF AT THE ADVICE OF VERIZON WIRELESS EQUIPMENT ENGINEER. CONTRACTOR TO VERIFY WIRING REQUIREMENTS WITH RECTIFIER MANUFACTURER SPECIFICATIONS.
- 6. EXISTING GROUNDING ELECTRODE CONDUCTOR & MAIN BONDING JUMPER. CONTRACTOR TO VERIFY EXISTENCE AND LOCATION.
- 7. CONDUCTOR SIZED BASED ON A MAXIMUM GENERATOR BREAKER RATING OF 200A.



PLANS PREPARED FOR:

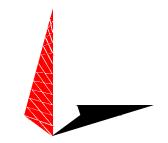
4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

# VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON NORTH FORT WHITE

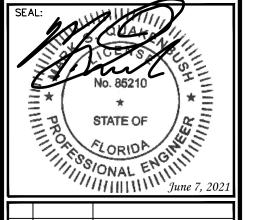
1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)

PLANS PREPARED BY:



## TOWER ENGINEERING PROFESSIONALS

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ı			
	1	06-07-21	CONSTRUCTION
	0	05-27-21	PRELIMINARY
ı	REV	DATE	ISSUED FOR:

DRAWN BY: HMB | CHECKED BY: JHJ

SHEET TITLE:

ONE-LINE DIAGRAM

SHEET NUMBER:

REVISION:

TEP#: 252166.485545

**ELECTRICAL ONE-LINE DIAGRAM** 

SCALE: N.T.S.

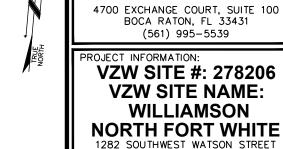
# **LABEL LIST:**

- (3)-1½" CONDUITS FROM ILC TO CHARLES CUBE CABINET FOR RECTIFIERS
- (1)-1" CONDUIT FROM ILC TO CHARLES CUBE CABINET FOR GENERATOR AND ILC ALARMS

# NOTES:

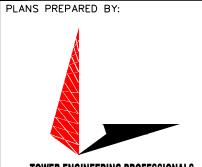
- 1. POWER AND TELCO CONDUITS RECEIVING CONDUCTORS BY OTHERS TO HAVE PULL ROPES.
- 2. ALL TELCO CONDUITS ARE TO BE STUBBED IN D-MARC LOCATION.
- 3. ALL POWER CONDUITS ARE TO BE TERMINATED AT THE METER CENTER
- 4. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO TRENCHING. ANY DAMAGE CAUSED TO THE EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 5. ALL CONDUITS SHALL BE INSTALLED PRIOR TO FINISH GRADING, GEOFABRIC, AND STONE INSTALLATION.
- 6. CONTRACTOR SHALL INSTALL SWEEPS AT ALL CONDUIT DIRECTION CHANGES UNLESS NOTED OTHERWISE.
- 7. RUN CONDUITS FROM ILC TO GENERATOR UNDERGROUND AND STUB UP CONDUITS MINIMUM 6" HIGH INSIDE GENERATOR BASE AND TERMINATE WITH MALE ADAPTER AND THREADED BUSHING.





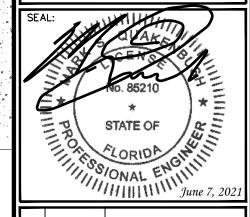
PLANS PREPARED FOR:

1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)



# **TOWER ENGINEERING PROFESSIONALS**

326 TRYON ROAD RALEIGH, NC 27603-3530 OFFICE: (919) 661-6351 www.tepgroup.net FL COA # 31011



-	06-07-21	CONSTRUCTION
0	05-27-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: HMB CHECKED BY: JHJ

SHEET TITLE:

POWER ROUTING PLAN

POWER ROUTING PLAN

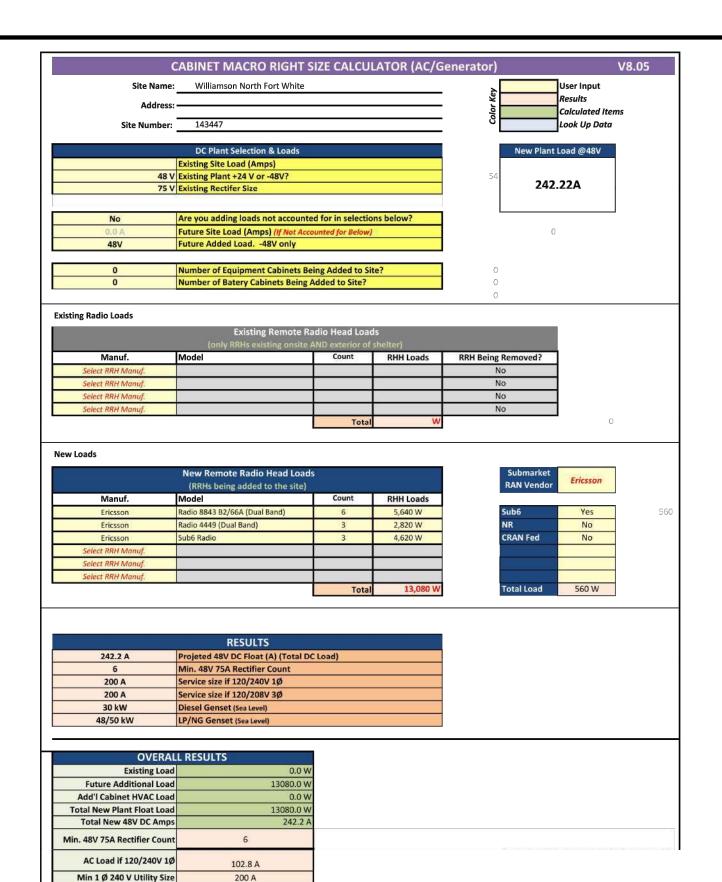
SCALE:  $\frac{3}{8}$ " = 1'-0"

SCALE IN FEET

0 2 4

SHEET NUMBER:

REVISION:



PLANS PREPARED FOR:

VERIZON

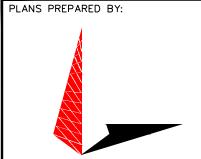
4700 EXCHANGE COURT, SUITE 100
BOCA RATON, FL 33431

PROJECT INFORMATION:

# VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON NORTH FORT WHITE

(561) 995-5539

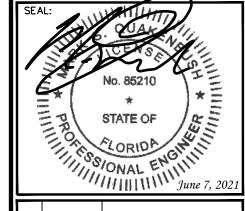
1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)



#### **TOWER ENGINEERING PROFESSIONALS**

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FL COA # 31011



	REV	DATE	ISSUED FOR:
	0	05-27-21	PRELIMINARY
	_	06-07-21	CONSTRUCTION
L			

DRAWN BY: HMB | CHECKED BY: JHJ

SHEET TITLE:

CABINET POWER CALCULATIONS

SHEET NUMBER:

REVISION:

TEP#: 252166.48554

AC Load if 120/208V 3Ø

Min 3 Ø 208 V Utility Size

**Generator Peak Loads** 

Generator (Diesel Size)

Generator (LP/NG)

68.6 A

200 A

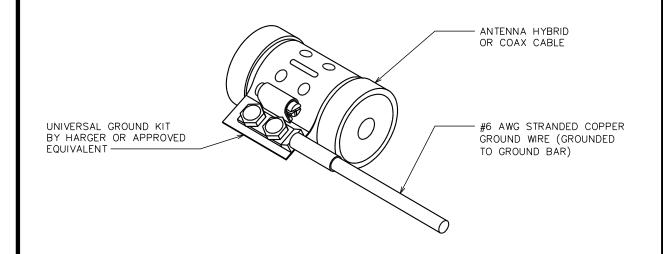
24.7 kW

30 kW

48/50 kW



- . DO NOT INSTALL COAX GROUND KIT AT A BEND.
- 2. CONTRACTOR TO WEATHERPROOF COAX GROUND.



# NOTE: DRAWING SHOWN BELOW FOR SCHEMATIC PURPOSES ONLY. (1) GROUND BAR PER SECTOR. SEE THIS SHEET FOR DETAILS. EACH SECTOR GROUND BAR BONDED TO MOUNT WITH #2 STC AND APPROVED CLAMP 2-HOLE MECHANICAL LUG CONNECTION (TYP) **EXISTING** -EQUIPMENT, HYBRIDS, AND COAX GROUNDED FEEDLINE (TYP)— TO SECTOR GROUND **EXISTING** MOUNT

# VZW SITE #: 278206 VZW SITE NAME: WILLIAMSON NORTH FORT WHITE

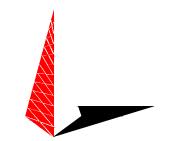
4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431

(561) 995-5539

1282 SOUTHWEST WATSON STREET FORT WHITE, FL 32038 (COLUMBIA COUNTY)

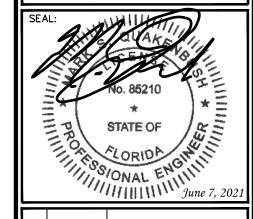
PLANS PREPARED BY:

PLANS PREPARED FOR:



# TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net
FL COA # 31011



REV	DATE	ISSUED FOR:
0	05-27-21	PRELIMINARY
1	06-07-21	CONSTRUCTION

DRAWN BY: HMB CHECKED BY: JHJ

SHEET TITLE:

GROUNDING DETAILS

SHEET NUMBER:

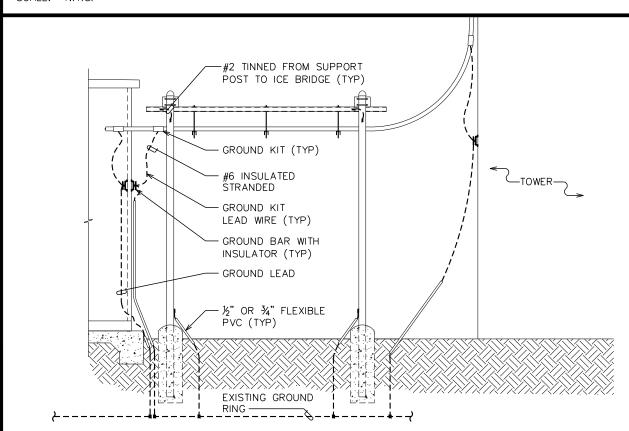
**(**5-'

REVISION:

TEP#: 252166.48554

# **GROUNDING DETAILS**

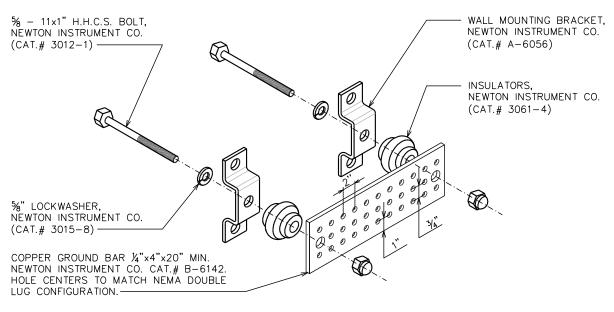
SCALE: N.T.S.



# ANTENNA & EQUIPMENT GROUNDING DETAIL

ANTENNA

SCALE: N.T.S.



# NOTES:

- 1. GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED AS WELL AS PROVIDE 50% SPARE CAPACITY.
- 2. ALL RACKS AND EQUIPMENT CABINETS ARE TO HAVE TWO GROUNDING LEADS. ALL EQUIPMENT INSTALLED IN RACKS MUST HAVE A CHASSIS GROUND ATTACHED TO A COMMON BUS BAR ON THE RACK. COMMON BUS BAR MUST BE GROUNDED TO MAIN GROUND BAR.

# ICE BRIDGE/HYBRID/COAX/GROUNDING BAR ELEVATION

SCALE: N.T.S

# STANDARD GROUND BAR DETAILS

CALE: N.T.S.