HIGHLINE WATER DISTRICT KING COUNTY, WASHINGTON

RESOLUTION 19-11-20B

RESOLUTION AUTHORIZING AMENDMENT NO. 1 TO COMMUNICATIONS SITE USE AND LICENSE AGREEMENT WITH CLEAR WIRELESS, LLC ("LICENSEE") AT THE STAR LAKE TANK SITE – 2649 STAR LAKE ROAD, FEDERAL WAY, WA

WHEREAS, District and Licensee entered into a Communications Site Use and License Agreement effective April 26, 2016 (the "Agreement"), whereby District authorized Licensee to use for installation of Licensee's ground based communication equipment and cabling to Equipment on the License Area, as defined therein, certain Premises therein described (the "Premises") that are a portion of the Property located at 2649 Star Lake Road, Federal Way, King County, Washington ("Property"), which Property is legally described on Exhibit A attached hereto and incorporated herein by this reference; and

WHEREAS, in addition to the Premises, the Agreement permitted Licensee to install, maintain, operate and repair on a portion of the top surface (the "License Area") of the District's Star Lake Tank (the "Reservoir") not more than 4 panel antennas, I GPS antenna, and 4 microwave antenna, as depicted, configured and inventoried on Exhibit D to the Agreement (Licensee's "Equipment"); and

WHEREAS, Licensee desires to expand the use and/or the area of the License Area on the Reservoir as described and depicted on Exhibit B-1 attached hereto and incorporated herein by this reference (the "Expanded Use"), and District desires to consent to the Licensee's expansion or further use of the License Area, subject to Licensee's payment of additional Base Rent to the District for the expansion or further use of the License Area by the amendment of the Agreement; and

WHEREAS, Licensee now desires to obtain the District's consent to the amendment of Section 1.b of the Agreement to provide for the Expanded Use as described in Exhibit B-1; and

WHEREAS, the current Base Rent payable under the Agreement is Thirty-Three Thousand Two Hundred Sixty-One and 54/100 Dollars (\$33,261.54) per year; and

WHEREAS, District is willing to consent to the amendment of Section 1.b of the Agreement to provide for and allow the Expanded Use on the terms and conditions set forth below, on the condition that Section 2.b of the Agreement be amended to provide for the payment of adjusted Base Rent by the Licensee to the District for the Expanded Use.

HIGHLINE WATER DISTRICT KING COUNTY, WASHINGTON

RESOLUTION 19-11-20B

NOW, THEREFORE, BE IT RESOLVED:

- 1. The Board of Commissioners approves the Amendment #1 to the Lease Agreement between Highline Water District and Clear Wireless, LLC (Attachment-1 incorporated herein by this reference).
- 2. The General Manager or designee is authorized to execute Amendment No. 1.
- 3. The General Manager and/or the District's legal counsel are authorized to make minor changes to the Amendment if required.

ADOPTED BY THE BOARD OF COMMISSIONERS of Highline Water District, King County, Washington, at an open public meeting held this **20th** day of **November 2019.**

BOARD OF COM	MISSIONERS
Gather Dry Veryne	Vine Racebe
Kathleen Quong Vermeire, President	Vince Koester, Secretary
15/12	Yall In
Todd Fultz, Commissioner	Daniel Johnson, Commissioner
Core Lander	
George Landon, Commissioner	

AMENDMENT NO. 1 TO COMMUNICATIONS SITE USE AND LICENSE AGREEMENT

THIS AMENDMENT NO. 1 TO COMMUNICATIONS SITE USE AND LICENSE AGREEMENT ("Amendment No. 1" or "Amendment"), dated as of the latter of the signature dates below (the "Effective Date"), is by and between HIGHLINE WATER DISTRICT, a Washington municipal corporation, having its principal place of business at 23828 – 30th Ave. S, Kent, Washington 98032 (herein ("District" or "Licensor"), and CLEAR WIRELESS LLC, a Nevada limited liability company, having its principal place of business at 6220 Sprint Parkway, Overland Park, KS 66251-2650 ("Licensee") (individually a "Party" and collectively the "Parties").

WHEREAS, District and Licensee entered into a Communications Site Use and License Agreement effective April 26, 2016 (the "Agreement"), whereby District authorized Licensee to use for installation of Licensee's ground based communication equipment and cabling to Equipment on the License Area, as defined therein, certain Premises therein described (the "Premises") that are a portion of the Property located at 2649 Star Lake Road, Federal Way, King County, Washington ("Property"), which Property is legally described on Exhibit A attached hereto and incorporated herein by this reference; and

WHEREAS, in addition to the Premises, the Agreement permitted Licensee to install, maintain, operate and repair on a portion of the top surface (the "License Area") of the District's Star Lake Tank (the "Reservoir") not more than 4 panel antennas, 1 GPS antenna, and 4 microwave antenna, as depicted, configured and inventoried on Exhibit D to the Agreement (Licensee's "Equipment"); and

WHEREAS, Licensee desires to expand the use and/or the area of the License Area on the Reservoir as described and depicted on Exhibit B-1 attached hereto and incorporated herein by this reference (the "Expanded Use"), and District desires to consent to the Licensee's expansion or further use of the License Area, subject to Licensee's payment of additional Base Rent to the District for the expansion or further use of the License Area by the amendment of the Agreement; and

WHEREAS, Licensee now desires to obtain the District's consent to the amendment of Section 1.b of the Agreement to provide for the Expanded Use as described in Exhibit B-1; and

WHEREAS, the current Base Rent payable under the Agreement is Thirty-Three Thousand Two Hundred Sixty-One and 54/100 Dollars (\$33,261.54) per year; and

WHEREAS, District is willing to consent to the amendment of Section 1.b of the Agreement to provide for and allow the Expanded Use on the terms and conditions set forth below, on the condition that Section 2.b of the Agreement be amended to provide for the payment of adjusted Base Rent by the Licensee to the District for the Expanded Use.

NOW THEREFORE, in consideration of the terms and conditions set forth herein, the Parties agree that the recitals set forth above are incorporated herein as if set forth in their entirety and further agree as follows:

- License Area: Licensee's Equipment. Section 1.a and Section 1.b of the Agreement. and Exhibit C and Exhibit D to the Agreement, Licensee's Equipment, are hereby amended as set forth on Exhibit B-1 hereto. Exhibit B-1 supplements Section 1.a and Section 1.b, and Exhibit C and Exhibit D to the Agreement, and shall not be deemed to supersede or otherwise modify Sections 1.a or 1.b, or Exhibit C or Exhibit D or any part thereof except to the extent specifically set forth in Exhibit B-1
- 2. Base Rent. Section 2 of the Agreement relating to the current Base Rent payable by Licensee to the District is hereby amended to provide the annual Base Rent payable under the Agreement shall be increased from \$33,261.54 by the sum of Six Thousand Three Hundred Ninety-Three Dollars (\$6,393.00) to the amount of Thirty-Nine Thousand Six Hundred Fifty-Four and 54/100 Dollars (\$39,654.54) ("Adjusted Base Rent"), and Licensee shall pay to District, within thirty (30) days of the Effective Date of this Amendment, the difference in the Base Rent paid by Licensee prior to this Amendment and the Adjusted Base Rent, prorated on a daily basis at the rate of Seventeen and 52/100 Dollars (\$17.52) from the Effective date through March 31, 2020. Effective April 1, 2020, pursuant to Section 2.b of the Agreement, the Base Rent shall be adjusted to Forty-One Thousand Forty-Two and 45/100 Dollars (\$41,042.45). Thereafter, the Base Rent shall be annually adjusted during the term of and as provided in the Agreement.
- 3. Notices. Licensee confirms its address for notices, as set forth in Section 19 of the Agreement, is as follows:

Licensee: Clear Wireless LLC

> c/o Sprint Property Service Re: Cell Site #WA-TAC163 Sprint Site ID: SE52XC241 Mailstop KSOPHD0101-Z2650 6220 Sprint Parkway

Overland Park, KS 66251-2650

With a copy to: Sprint Law Department

> Attn: Real Estate Attorney Re: Cell Site # WA-TAC163 Sprint Site ID: SE52XC241 Mailstop KSOPHD01011-Z2020

6220 Sprint Parkway

Overland Park, KS 66251-2020

- Reaffirmation; Intention to be Bound. Except as expressly amended by this Amendment, each and every term, condition and agreement contained in the Agreement shall remain in full force and effect. The Parties reaffirm that the representations and warranties made by each Party in the Agreement are true and accurate as of the Effective Date. The Parties executing this Amendment on behalf of themselves, their assigns and successors, hereby acknowledge and reaffirm their intention to be bound by the terms and conditions of the Agreement.
- 5. Recitals; Capitalized Terms. The recitals set forth above are a part of this Amendment. Unless otherwise defined herein, capitalized terms used in this Amendment have the meanings assigned to them in the Agreement.

6. Amendment Fee. In consideration of the District's agreement to amend the Agreement as provided herein, at the time of the execution of this Amendment and as a condition to its effectiveness, Licensee shall pay and reimburse to the District its administrative and legal fees and costs in the amount of Two Thousand Five Hundred Dollars (\$2,500.00)

IN WITNESS WHEREOF, the Parties have caused their properly authorized representatives to execute this Amendment No. 1 on the dates set forth below.

DISTRICT:	LICENSEE:
HIGHLINE WATER DISTRICT, a Washington municipal corporation	CLEAR WIRELESS LLC, a Nevada limited liability company
Ву:	By: May murded
Name:	Name: mary morded
Title:	Title: <u>Mara</u> ex
Date:	Date:

STATE OF WASHINGTON)
COUNTY OF KING)ss.
oath stated that he was authorized to e Manager of HIGHLINE WATER DIS	re satisfactory evidence that is the said person acknowledged that he signed this instrument, on execute this instrument and acknowledged it as the General TRICT, a Washington municipal corporation, to be the free uses and purposes mentioned in the instrument.
DATED:	
	(Print name) NOTARY PUBLIC in and for the State of Washington, residing at
	My appointment expires:
person who appeared before me, and so oath stated that she was authorized to, of CL,)))ss. The satisfactory evidence that Mary Moral is the said person acknowledged that she signed this instrument, on execute this instrument and acknowledged it as the EAR WIRELESS LLC, a Nevada limited liability company, to arry for the uses and purposes mentioned in the instrument.
OF WASHINITINITINITINITINITINITINITINITINITINI	(Print name) NOTARY PUBLIC in and for the State of, residing at, residing at

EXHIBIT A

Amendment No. 1 to Communications Site Use and License Agreement

Legal Description

Star Lake Tank Legal Description

THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER AND OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 33, TOWNSHIP 22 NORTH, RANGE 4 EAST, W.M., KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE CENTER OF SAID SECTION 33:

THENCE N 26'28'20' W 300.0 FEET:

THENCE N 52'16'20" E 280.0 FEET:

THENCE S 26"28"20" E TO A POINT N 52"16"20" E FROM THE POINT OF BEGINNING:

THENCE'S 52°16'20' W 280.0 FEET TO THE POINT OF BEGINNING.

(ALSO KNOWN AS THE SOUTHWESTERLY 280,0 FEET OF TRACT 7 OF REDONDO HEIGHTS AN UNRECORDED PLAT);

TOGETHER WITH AN EASEMENT FOR INGRESS, EGRESS AND LITILITIES OVER A STRIP OF LAND 20 FEET IN WIDTH, THE SOUTHEASTERLY AND NORTHEASTERLY LINES OF WHICH ARE DESCRIBED AS FOLLOWS:

REGINNING AT THE MOST EASTERLY CORNER OF THE ABOVE DESCRIBED TRACT:

THENCE N 52"16"20" E TO THE SOUTHWESTERLY MARGIN OF PRIMARY STATE HIGHWAY NO. 1 AS CONVEYED TO THE STATE OF WASHINGTON BY DEED RECORDED UNDER AUDIT FILE NO. 4968797:

THENCE NORTHWESTERLY ALONG SAID SOUTHWESTERLY MARGIN TO A POINT OF THE NORTHWESTERLY MARGIN OF PRIMARY STATE HIGHWAY NO.1;

THENCE IN 53°13' E ALONG SAID NORTHWESTERLY MARGIN 20 FEET, MORE OR LESS TO THE SOUTHWESTERLY MARGIN OF STAR LAKE COUNTY ROAD AND THE TERMINUS OF SAID LINES.

RASIS OF BEARING

N 87'36'30" W ALONG THE NORTH LINE OF THE NORTHEAST QUARTER OF SEC. 22 BETWEEN MONUMENTS FOUND IN PLACE AS SHOWN, HORIZONTAL MERIDIAN IS K.C.A.S.

K.C.A.S. SECTION BREAKDOWN SHEET
PLAT - SCARBOROUGH DIV. 2 VOL. 132 OF PLATS, PGS 47-48
K.C.S.P. 879040 - REC. NO. 8003310984
RECORD OF SURVEY (ROS) BENNETT & FOX - VOL 4 OF SURV., PG 223
ROS: SEA INC - VOL, 16, PG 299, VOL. 18, PG 176 & VOL 19, PG 105
ROS: LUND & ASSOC. - VOL. 26, PG 76 & VOL. 26, PG 77
ROS: DAVID MEENTS - VOL. 38, PG 157
ROS: STEPHEN & ASSOC. - VOL. 47, PG 171
ROS: PAC-TECH - VOL. 48, PG 132
ROS: SADLER BERNARD - VOL. 52, PG 263
ROS: HCE - VOL. 65. PG 220

EXHIBIT B-1

Amendment No. 1 to Communications Site Use and License Agreement

Description of Expanded Use

LICENSEE'S EQUIPMENT - IMPROVEMENTS

The improvements authorized under the Communications Site Use and License Agreement are as depicted in the attached Construction Drawings as follows:

- Three (3) MIMO Antennas
- Three (3) 1900 MHz RRU's
- Three (3) 800 MHz RRU's
- One (1) MIMO Cable
- Increase of 41.25 SF Ground Space to a total of 90.25 SF

No additional equipment or modifications are authorized unless approved in accordance with Section 1h of the Communications Site Use and License Agreement.

Agenda Item No.: 5.2
Agenda Date: 11/20/19
Reviewed By:

Subject: Authorize Amendment No. 1 – Site Lease Agreement with Clear Wireless, LLC

Star Lake Tank Site

CATEGORY					
Executive					
Administrative	x				
Engineering/Operations	x				

FINANCIAL					
Expenditures?	Yes No N/A x				
Budgeted?	Yes No N/A x				
Estimated Amount: \$ Excludes sales tax					

ATTACHMENTS:

- 1. Resolution 19-11-20B
- 2. Attachment-1: Amendment No. 1 to Lease Agreement

COMMENTS:

Licensee desires to expand the use and/or the area of the License Area on the Reservoir as described and depicted on Exhibit B-1 attached hereto and incorporated herein by this reference (the "Expanded Use"), and District desires to consent to the Licensee's expansion or further use of the License Area, subject to Licensee's payment of additional Base Rent to the District for the expansion or further use of the License Area by the amendment of the Agreement.

Licensee now desires to obtain the District's consent to the amendment of Section 1.b of the Agreement to provide for the Expanded Use as described in Exhibit B-1.

The current Base Rent payable under the Agreement is Thirty-Three Thousand Two Hundred Sixty-One and 54/100 Dollars (\$33,261.54) per year.



UPGRADE:
MASSIVE MIMO
EQUIPMENT DEPLOYMENT

SITE NAME:

STAR LAKE WATER TANK

SPRINT CASCADE:

SE52XC241

SITE ADDRESS:

2649 S. STAR LAKE RD

FEDERAL WAY, WA 98003

Know what's below.

Call before you dig.

SITE TYPE:

WATER TANK

DRAWING DESCRIPTION: CONSTRUCTION DRAWINGS











PROJECT CONTACTS	PROJECT DESCRIPTION	PROJECT INFO	RMATION	DRIVING DIRECTIONS	SHEET INDEX	DRAWN BY: JL CHECKED BY: CL
APPLICANT: SPRINT 1000 124TH AVE NE, STE 201 BELLEVUE, WA 98005 PROPERTY OWNER: HIGHLINE WATER DIST. 23828 39TH AVE S KENT, WA 98032 ZONING/PERMITTING AGENT: MD7 KATHLEEN DOAN-HA 858-964-7430 10590 WEST OCEAN AIR DRIVE, SUITE 300 SAN DIEGO, CA 92130 KDOANHA@MD7.COM SITE ACQUISITION AGENT: MD7 ANTONETTE OCAMPO 858.964.7413 10590 WEST OCEAN AIR DRIVE, SUITE 300 SAN DIEGO, CA 92130 ANTONETTE OCAMPO 858.964.7413 10590 WEST OCEAN AIR DRIVE, SUITE 300 SAN DIEGO, CA 92130 AOCAMPO@MD7.COM PROJECT MANAGER: SPRINT 1000 124TH AVE NE, STE 201 BELLEVUE, WA 98005	SPRINT PROPOSES TO MODIFY AN EXISTING SITE AS FOLLOWS: REMOVE AND REPLACE (E) CONC. SLAB WITH (N) 9'-6" X 9'-6" CONC SLAB REMOVE AND REPLACE (1) (E) CABINET AND H-FRAME WITH (1) ECAB, (1) BCAB, (1) H-FRAME, & (1) WORK LIGHT REMOVE AND REPLACE (1) (E) GPS ANTENNA WITH (1) (N) GPS ANTENNA REMOVE AND REPLACE (3) (E) ANTENNAS WITH (3) (N) DUAL BAND ANTENNAS REMOVE (3) 2.5 RRUS REMOVED AND REPLACE (3) (E) HYBRID CABLES WITH (3) (N) HYBRID CABLES INSTALL (3) MASSIVE MIMO ANTENNAS INSTALL (3) (N) 1900 MHZ RRUS INSTALL (3) 800 MHZ RRUS INSTALL (1) (N) MIMO CABLE INSTALL DU IN EXISTING MMBS	PARCEL #: 720480-00 JURISDICTION: CITY OF F ZONING: RS9.6 COUNTY: KING LATITUDE: 47° 21' 03 LONGITUDE: -122° 18' 0 GROUND ELEVATION: 464.0' (AS	D41 EDERAL WAY 1.80" N (47.3511" N) 108.85" W (-122.3025" W) 1.ML) NNED COMMUNICATIONS FACILITY) LINK IS SET OF DOCUMENTS IS CLOSURE OTHER THAN THAT	FROM SPRINT OFFICE IN BELLEVUE, WA: GET ON 1-405 S FROM NE 8TH ST 5 MIN (1.7 MI) FOLLOW 1-405 S AND 1-5 S TO S 272ND ST IN KENT. TAKE EXIT 147 FROM 1-5 S 22 MIN (21.1 MI) DRIVE TO S STAR LAKE RD IN FEDERAL WAY 4 MIN (1.0 MI) TOTAL MILES: 23.8 MILES TOTAL TIME: 30 MIN	ROM SPRINT OFFICE IN BELLEVUE, WA: SET ON 1405 S FROM NE 8TH ST SP-1 SPRINT CONSTRUCTION SPECIFICATIONS SP-2 SPRINT CONSTRUCTION SPECIFICATIONS SP-2 SPRINT CONSTRUCTION SPECIFICATIONS AKE EXIT 147 FROM 1-5 S 2 MIN (21.1 MI) ARIVE TO S STAR LAKE RD IN FEDERAL WAY I MIN (1.0 MI) OTAL MILES: 23.8 MILES T1.0 TITLE SHEET SP-1 SPRINT CONSTRUCTION SPECIFICATIONS A1.0 OVERALL SITE PLAN A2.0 ENLARGED SITE PLAN & EQUIPMENT PLAN A3.0 ELEVATIONS A3.1 ELEVATIONS	PROJECT INFORMATION STAR LAKE WATER TANK SE52XC241 2649 S STAR LAKE RD, FEDERAL WAY, WA 98003
KEVIN FOY CONSTRUCTION MANAGER:	VICINITY A	MAP		OCALIZED MAP	2015 INTERNATIONAL FIRE CODE	SHEET TITLE
SPRINT 1000 124TH AVE NE, STE 201 BELLEVUE, WA 98005 MARK WEAVER	WOODMONT BEACH	And the state of t		The state of the s	2017 NFPA 70 NATIONAL ELECTRICAL CODE 2015 WASHINGTON STATE ENERGY CODE	TITLE SHEET
949.748.3482 MARK.2.WEAVER@SPRINT.COM ENGINEER OF RECORD: VECTOR STRUCTURAL ENGINEERING 651 W. GALENA PARK BLVD., SUITE 101	8 27 टेन्ड डा. ेब्रू डॉ.	STAR LAKE SITA	ಿ ಮುಗ್ಗಾರಗ	e de la companya de l	A.D.A. COMPLIANCE INSTALLATION IS UNMANNED / NOT FOR HUMAN HABITATION. HANDICAP ACCESS IS NOT REQUIRED PER A.D.A.	T1.0
DRAPER, UT 84020 WELLS L. HOLMES, SE PH: 801.990.1775	PROJECT AREA REPORTED REPORTED STREET STREET CAN	S2F6h St nelot Square 💝	Caramed	PROJECT AREA	811.	LIND HOLD TO THE STATE OF THE S

THESE OUTLINE SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

SECTION 01 100 - SCOPE OF WORK

THE WORK: SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF.

SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS. INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE.

<u>SITE FAMILIARITY:</u>
CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT
DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.

ON-SITE SUPERVISION:
THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE

DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE:
THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.

- A. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. PROVIDE ALL MATERIALS AND LABOR AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AND NOTIFY SPRINT CONSTRUCTION MANAGER AND ENGINEER OF RECORD OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE
- C. MARK THE FIELD SET OF DRAWINGS IN RED, DOCUMENTING ANY CHANGES FROM THE CONSTRUCTION

METHODS OF PROCEDURE (MOPS) FOR CONSTRUCTION:
CONTRACTOR SHALL PERFORM WORK AS DESCRIBED IN THE FOLLOWING INSTALLATION AND COMMISSIONING

- B. HOW TO INSTALL A NEW CABINET
- BASE BAND UNIT IN EXISTING UNIT INSTALLATION OF BATTERIES
- INSTALLATION OF HYBRID CABLE
- INSTALLATION OF RRU'S
- TS-0200 REV 4 ANTENNA LINE ACCEPTANCE STANDARDS
- SPRINT CELL SITE ENGINEERING NOTICE EN 2012-001, REV 1.
- COMMISSIONING MOPS

SECTION 01 200 - COMPANY FURNISHED MATERIAL AND EQUIPMENT

COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE

CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT TO ENSURE IT IS PROTECTED AND HANDLED PROPERLY THROUGHOUT THE CONSTRUCTION DURATION.

CONTRACTOR RESPONSIBLE FOR RECEIPT OF SPRINT FURNISHED EQUIPMENT AT CELL SITE OR CONTRACTORS LOCATION. CONTRACTOR TO COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.

SECTION 01 300 - CELL SITE CONSTRUCTION

NOTICE TO PROCEED: NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF WORK ORDER.

CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

SECTION 01 400 - SUBMITTALS & TESTS

ALTERNATES:
AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINTS CONSTRUCTION MANAGER FOR APPROVAL. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE

TESTS AND INSPECTIONS:

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.
- B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- 1. COAX SWEEPS AND FIBER TESTS PER TS-0200 REV 4 ANTENNA LINE ACCEPTANCE STANDARDS.
- 2. AGL, AZIMUTH AND DOWNTILT PROVIDE AN AUTOMATED REPORT UPLOADED TO SITERRA USING A COMMERCIAL MADE-FOR THE PURPOSE ELECTRONIC ANTENNA ALIGNMENT TOOL (AAT). INSTALLED AZIMUTH, CENTERLINE AND DOWNTILT MUST CONFORM WITH RF CONFIGURATION

- 3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF
- 4. ALL TESTING REQUIRED BY APPLICABLE INSTALLATION MOPS.
- C. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:
 - 1. AZIMUTH, DOWNTILT, AGL FROM SUNSIGHT INSTRUMENTS ANTENNALIGN ALIGNMENT TOOL (AAT)
 - 2. SWEEP AND FIBER TESTS
 - 3. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
 - 4. ALL AVAILABLE JURISDICTIONAL INFORMATION
 - 5. PDF SCAN OF REDLINES PRODUCED IN FIELD
 - 6. A PDF SCAN OF REDLINE MARK-UPS SUITABLE FOR USE IN ELECTRONIC AS-BUILT DRAWING PRODUCTION
 - 7. LIEN WAIVERS
 - 8. FINAL PAYMENT APPLICATION
 - 9 REQUIRED FINAL CONSTRUCTION PHOTOS
 - 10. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
 - 11. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).
 - 12. CLOSEOUT PHOTOGRAPHS:
- A PROVIDE PHOTOGRAPHS OF FINAL PROJECT PER THE FOLLOWING LIST. ADDITIONAL PHOTOGRAPHS MAY BE REQUIRED TO SUPPORT ACCEPTANCE PROCESSES
- MAIN HYBRID CABLE ROUTE (MINIMUM TWO PHOTOS)
- PHOTOS OF EACH ANTENNA AND RRU
- (iii) MANUFACTURERS NAME TAG FOR ALL SERIALIZED EQUIPMENT
- (iv) PULL AND DISTRIBUTION BOXES INTERMEDIATE BETWEEN RRU'S AND MMBS (DOOR OPEN)
- (v) MMBS CABINET WITH DOOR OPEN SHOWING MODIFICATIONS
- (vi) POWER CABINET, DOORS OPEN, BATTERIES INSTALLED
- (vii) BREAK OUT CYLINDERS
- (viii) ASR SIGNAGE FOR SPRINT OWNED TOWERS
- (ix) RADIATION EXPOSURE WARNING SIGNS
- (x) PHOTOGRAPH FROM EACH SECTOR FROM APPROXIMATELY RAD CENTER OF ANY NEW ANTENNA AT HORIZON.
- b LOAD PHOTOS TO SITERRA PROJECT LIBRARY IS. IN IS CREATE NEW CATEGORY; 2.5 DEPLOYMENT, AND SECTION; PERMANENT CONSTRUCTION, LABEL PHOTOS WITH SITE CASCADE AND VIEW BEING DEPICTED. CAMERAS USED TO TAKE PHOTOGRAPHS SHALL GPS ENABLED SUCH THAT THE GPS COORDINATES ARE INCLUDED IN THE PHOTO MEDIA-FILE INFORMATION.

<u>COMMISSIONING:</u>
PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPS

<u>INTEGRATION:</u>
PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPS

SECTION 07 500 - ROOF CUTTING, PATCHING AND REPAIR

SUMMARY:
THIS SECTION SPECIFIES CUTTING AND PATCHING EXISTING ROOFING SYSTEMS WHERE CONDUIT OR CARLES EXIT THE BUILDING ONTO THE ROOF OR BUILDING-MOUNTED ANTENNAS, AND AS REQUIRED. FOR WATERTIGHT PERFORMANCE, ROOFTOP ENTRY OPENINGS IN MEMBRANE ROOFTOPS SHALL BE CONSTRUCTED TO COMPLY WITH LANDLORD, ANY EXISTING WARRANTY, AND LOCAL JURISDICTIONAL

1.4 SUBMITTALS:

- A. PRE-CONSTRUCTION ROOF PHOTOS; COMPLETE A ROOF INSPECTION PRIOR TO THE INSTALLATION OF SPRINT EQUIPMENT ON ANY ROOFTOP BUILD. AT A MINIMUM INSPECT AND PHOTOGRAPH MINIMUM 3 EA.) ALL AREAS IMPACTED BY THE ADDITION OF THE SPRINT EQUIPMENT.
- B. PROVIDE SIMILAR PHOTOGRAPHS SHOWING ROOF CONDITIONS AFTER CONSTRUCTION (MINIMUM
- C. ROOF INSPECTION PHOTOGRAPHS SHOULD BE UPLOADED WITH CLOSEOUT PHOTOGRAPHS.

SECTION 09 900 - PAINTING

QUALITY ASSURANCE:

- A. COMPLY WITH GOVERNING CODES AND REGULATIONS, PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS, USE EXPERIENCED INSTALLERS, DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. COMPLY WITH ALL ENVIRONMENTAL REGULATIONS FOR VOLATILE ORGANIC COMPOUNDS.

MATERIALS:

A. MANUFACTURERS: BENJAMIN MOORE, ICI DEVOE COATINGS, PPG, SHERWIN WILLIAMS OR APPROVED EQUAL PROVIDE PREMIUM GRADE, PROFESSIONAL-QUALITY PRODUCTS FOR

PAINT SCHEDULE IF REQUIRED (FIELD VERIFY):

- A. EXTERIOR ANTENNAE AND ANTENNA MOUNTING HARDWARE: ONE COAT OF PRIMER AND TWO FINISH COATS. PAINT FOR ANTENNAE SHALL BE NON-METALLIC BASED AND CONTAIN NO METALLIC PARTICLES, PROVIDE COLORS AND PATTERNS AS REQUIRED TO MASK APPEARANCE OF ANTENNAE ON ADJACENT BUILDING SURFACES AND AS ACCEPTABLE TO THE OWNER, REFER TO ANTENNA MANUFACTURER'S INSTRUCTIONS WHENEVER POSSIBLE
- ROOF TOP CONSTRUCTION: TOUCH UP PREPARE SURFACES TO BE REPAIRED. FOLLOW INDUSTRY STANDARDS AND REQUIREMENTS OF OWNER TO MATCH EXISTING COATING AND

PAINTING APPLICATION:

- INSPECT SURFACES, REPORT UNSATISFACTORY CONDITIONS IN WRITING; BEGINNING WORK MEANS ACCEPTANCE OF SUBSTRATE,
- COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR PREPARATION, PRIMING AND COATING WORK, COORDINATE WITH WORK OF OTHER
- 3. MATCH APPROVED MOCK-UPS FOR COLOR, TEXTURE, AND PATTERN. RE-COAT OR REMOVE AND REPLACE WORK WHICH DOES NOT MATCH OR SHOWS LOSS OF ADHESION.
- 4. CLEAN UP, TOUCH UP AND PROTECT WORK.

TOUCHUP PAINTING:

- GALVANIZING DAMAGE AND ALL BOLTS AND NUTS SHALL BE TOUCHED UP AFTER TOWER ERECTION OR MOUNT INSTALLATION WITH "GALVANOX," "DRY GALV," OR "ZINC-IT."
- 2. FIELD TOUCHUP PAINT SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 3. ALL METAL COMPONENTS SHALL BE HANDLED WITH CARE TO PREVENT DAMAGE TO THE COMPONENTS, THEIR PRESERVATIVE TREATMENT, OR THEIR PROTECTIVE COATINGS.

SECTION 11 700 - ANTENNA ASSEMBLY, REMOTE RADIO UNITS AND CABLE INSTALLATION

THIS SECTION SPECIFIES INSTALLATION OF ANTENNAS, RRU'S, AND CABLE EQUIPMENT, INSTALLATION, AND TESTING OF COAXIAL FIBER CABLE.

ANTENNAS AND RRU'S: THE NUMBER AND TYPE OF ANTENNAS AND RRU'S TO BE INSTALLED IS DETAILED ON THE CONSTRUCTION DRAWINGS.

HYBRID CABLE:
HYBRID CABLE WILL BE DC/FIBER AND FURNISHED FOR INSTALLATION AT EACH SITE. CABLE SHALL
SHALL BE INSTALLED PER THE CONSTRUCTION DRAWINGS AND THE APPLICABLE MANUFACTURER'S

JUMPERS AND CONNECTORS: FURNISH AND INSTALL 1/2" COAX JUMPER CABLES BETWEEN THE RRU'S AND ANTENNAS. JUMPERS SHALL BE TYPE LDF 4, FLC 12-50, CR 540, OR FXL 540. SUPER-FLEX CABLES ARE NOT ACCEPTABLE. JUMPERS BETWEEN THE RRU'S AND ANTENNAS OR TOWER TOP AMPLIFIERS SHALL CONSIST OF 1/2 INCH FOAM DIELECTRIC, OUTDOOR RATED COAXIAL CABLE, DO NOT USE SUPERFLEX OUTDOORS. JUMPERS SHALL BE FACTORY FABRICATED IN APPROPRIATE LENGTHS WITH A MAXIMUM OF 4 FEET EXCESS PER JUMPER AND HAVE CONNECTORS AT EACH END, MANUFACTURED BY SUPPLIER, IF JUMPERS ARE FIELD FABRICATED, FOLLOW MANUFACTURER'S REQUIREMENTS FOR INSTALLATION OF

REMOTE ELECTRICAL TILT (RET) CABLES:

MISCELLANEOUS: INSTALL SPUTTERS, COMBINERS, FILTERS PER RF DATA SHEET, FURNISHED BY SPRINT.

ANTENNA INSTALLATION:
THE CONTRACTOR SHALL ASSEMBLE ALL ANTENNAS ONSITE IN ACCORDANCE WITH THE INSTRUCTIONS SUPPLIED BY THE MANUFACTURER, ANTENNA HEIGHT, AZIMUTH, AND FEED ORIENTATION INFORMATION SHALL BE A DESIGNATED ON THE CONSTRUCTION DRAWINGS.











DRAWN BY CHECKED BY: CI DRAWING VERSION

DESCRIPTION

1 5/2/19 FINAL CX DRAWINGS

VER. DATE

LICENSER

PROJECT INFORMATION

STAR LAKE WATER TANK SE52XC241

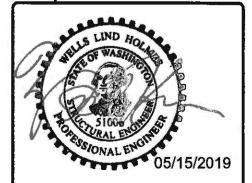
FEDERAL WAY, WA 98003 SHEET TILLE

2649 S STAR LAKE RD.

SPECIFICATIONS SHEET NO

SPRINT

SP-1



SECTION 11 800 - INSTALLATION OF MULTIMODAL BASE STATIONS (MMBS) AND RELATED EQUIPMENT

- A. THE CONTRACTOR SHALL POSITION THE ANTENNA ON TOWER PIPE MOUNTS SO THAT THE BOTTOM STRUT IS LEVEL. THE PIPE MOUNTS SHALL BE PLUMB TO WITHIN
- B. ANTENNA MOUNTING REQUIREMENTS: PROVIDE ANTENNA MOUNTING HARDWARE AS INDICATED ON THE DRAWINGS

HYBRID CABLES INSTALLATION:

- A. THE CONTRACTOR SHALL ROUTE, TEST, AND INSTALL ALL CABLES AS INDICATED ON THE CONSTRUCTION DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S
- B. THE INSTALLED RADIUS OF THE CABLES SHALL NOT BE LESS THAN THE MANUFACTURER'S SPECIFICATIONS FOR BENDING RADII.
- C. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE CABLES DURING HANDLING AND

COAX LADDER AT 4'-0" OC USING NON-MAGNETIC STAINLESS STEEL CLIPS.

- 1. FASTENING MAIN HYBRID CABLES: ALL CABLES SHALL BE PERMANENTLY FASTENED TO THE
- 2. FASTENING INDIVIDUAL FIBER AND DC CABLES ABOVE BREAKOUT ENCLOSURE (MEDUSA), WITHIN THE MMBS CABINET AND ANY INTERMEDIATE DISTRIBUTION BOXES
 - FIBER: SUPPORT FIBER BUNDLES USING ½" VELCRO STRAPS OF THE REQUIRED LENGTH @ 18" OC. STRAPS SHALL BE UV, OIL AND WATER RESISTANT AND SUITABLE FOR INDUSTRIAL INSTALLATIONS AS MANUFACTURED BY TEXTOL OR APPROVED EQUAL.
 - b. DC: SUPPORT DC BUNDLES WITH ZIP TIES OF THE ADEQUATE LENGTH, ZIP TIES TO BE UV STABILIZED, BLACK NYLON, WITH TENSILE STRENGTH AT 12,000 PSI AS MANUFACTURED BY NELCO PRODUCTS OR EQUAL.
- 3. FASTENING JUMPERS: SECURE JUMPERS TO THE SIDE ARMS OR HEAD FRAMES USING STAINLESS STEEL TIE WRAPS OR STAINLESS STEEL BUTTERFLY CLIPS.
- 4. CABLE INSTALLATION
 - a. INSPECT CABLE PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE CONSTRUCTION MANAGER
 - CABLE ROUTING: CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOP AS INDICATED ON THE DRAWINGS. AVOID TWISTING AND CROSSOVERS.
- c. HOIST CABLE USING PROPER HOISTING GRIPS. DO NOT EXCEED MANUFACTURES ECOMMENDED MAXIMUM BEND RADIUS.
- 5. GROUNDING OF TRANSMISSION LINES: ALL TRANSMISSION LINES SHALL BE GROUNDED AS INDICATED ON DRAWINGS.
- 6. HYBRID CABLE COLOR CODING: ALL COLOR CODING SHALL BE AS REQUIRED IN TS 0200 REV
- 7. HYBRID CABLE LABELING: INDIVIDUAL HYBRID AND DC BUNDLES SHALL BE LABELED ALPHA-NUMERICALLY ACCORDING TO SPRINT CELL SITE ENGINEERING NOTICE - EN 2012-001,

WEATHERPROOFING EXTERIOR CONNECTORS AND HYBRID CABLE GROUND KITS: D. ENSURE THAT THE LOAD APPLIED BY ANY FASTENER DOES NOT EXCEED 25 PERCENT OF THE

- ALL FIBER & COAX CONNECTORS AND GROUND KITS SHALL BE WEATHERPROOFED.
- WEATHERPROOFED USING ONE OF THE FOLLOWING METHODS, ALL INSTALLATIONS MUST BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INDUSTRY BEST
- COLD SHRINK: ENCOMPASS CONNECTOR IN COLD SHRINK TUBING AND PROVIDE A DOUBLE WRAP OF 2" ELECTRICAL TAPE EXTENDING 2" BEYOND TUBING, PROVIDE 3M COLD SHRINK CXS SERIES OR EQUAL.
- 2. SELF-AMALGAMATING TAPE: CLEAN SURFACES, APPLY A DOUBLE WRAP OF SELF-AMALGAMATING TAPE 2" BEYOND CONNECTOR, APPLY A SECOND WRAP OF SELF-AMALGAMATING TAPE IN OPPOSITE DIRECTION. APPLY DOUBLE WRAP OF 2" WIDE ELECTRICAL TAPE EXTENDING 2" BEYOND THE SELF-AMALGAMATING TAPE.
- 3. 3M SLIM LOCK CLOSURE 716: SUBSTITUTIONS WILL NOT BE ALLOWED.
- 4. OPEN FLAME ON JOB SITE IS NOT ACCEPTABLE

SECTION 11 800 - INSTALLATION OF MULTIMODAL BASE STATIONS (MMBS) AND RELATED EQUIPMENT

- THIS SECTION SPECIFIES MMBS CABINETS, POWER CABINETS, AND INTERNAL EQUIPMENT INCLUDING BY NOT LIMITED TO RECTIFIERS, POWER DISTRIBUTION UNITS, BASE BAND UNITS, SURGE ARRESTORS, BATTERIES, AND SIMILAR EQUIPMENT FURNISHED BY THE COMPANY FOR INSTALLATION BY THE CONTRACTOR (OFCI).
- B. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MISCELLANEOUS MATERIALS AND PROVIDE ALL LABOR REQUIRED FOR INSTALLATION EQUIPMENT IN EXISTING CABINET OR NEW CABINET AS SHOWN ON DRAWINGS AND AS REQUIRE BY THE APPLICABLE INSTALLATION MOPS.
- C. COMPLY WITH MANUFACTURERS INSTALLATION AND START-UP REQUIREMENTS

DC CIRCUIT BREAKER LABELING

A. LABEL CIRCUIT BREAKERS ACCORDING TO SPRINT CELL SITE ENGINEERING NOTICE - EN 2012-001, REV 1

SHIMMARY-

- A. THIS SECTION SPECIFIES MMBS CABINETS, POWER CABINETS, AND INTERNAL EQUIPMENT INCLUDING BY NOT LIMITED TO RECTIFIERS, POWER DISTRIBUTION UNITS, BASE BAND UNITS, SURGE ARRESTORS, BATTERIES, AND SIMILAR EQUIPMENT FURNISHED BY THE COMPANY FOR INSTALLATION BY THE CONTRACTOR (OFCI).
- B. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MISCELLANEOUS MATERIALS AND PROVIDE ALL LABOR REQUIRED FOR INSTALLATION EQUIPMENT IN EXISTING CABINET OR NEW CABINET AS SHOWN ON DRAWINGS AND AS REQUIRE BY THE APPLICABLE INSTALLATION MOPS.

C. COMPLY WITH MANUFACTURERS INSTALLATION AND START-UP REQUIREMENTS SUPPORTING DEVICES:

- A. MANUFACTURED STRUCTURAL SUPPORT MATERIALS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY THE FOLLOWING:
- 1. ALLIED TUBE AND CONDUIT
- 2. B-LINE SYSTEM
- 3. SUNISTRUT DIVERSIFIED PRODUCTS
- 4. THOMAS & BETTS
- B. FASTENERS: TYPES, MATERIALS, AND CONSTRUCTION FEATURES AS FOLLOWS:
 - EXPANSION ANCHORS: CARBON STEEL WEDGE OR SLEEVE TYPE.
- 2. POWER-DRIVEN THREADED STUDS: HEAT-TREATED STEEL, DESIGNED SPECIFICALLY FOR THE INTENDED SERVICE.
- 3. FASTEN BY MEANS OF WOOD SCREWS ON WOOD.
- 4. TOGGLE BOLTS ON HOLLOW MASONRY UNITS.
- 5. CONCRETE INSERTS OR EXPANSION BOLTS ON CONCRETE OR SOLID MASONRY.
- 6. MACHINE SCREWS, WELDED THREADED STUDS, OR SPRING-TENSION CLAMPS ON STEEL.
- 7. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE SHALL NOT BE PERMITTED.
- 8. DO NOT WELD CONDUIT, PIPE STRAPS, OR ITEMS OTHER THAN THREADED STUDS TO STEEL
- 9. IN PARTITIONS OF LIGHT STEEL CONSTRUCTION, USE SHEET METAL SCREWS.

SUPPORTING DEVICES:

STRUCTURES

- A. INSTALL SUPPORTING DEVICES TO FASTEN ELECTRICAL COMPONENTS SECURELY AND PERMANENTLY IN ACCORDANCE WITH NEC.
- B. COORDINATE WITH THE BUILDING STRUCTURAL SYSTEM AND WITH OTHER TRADES.
- C. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, FASTEN ELECTRICAL ITEMS AND THEIR SUPPORTING HARDWARE SECURELY TO THE STRUCTURE IN ACCORDANCE WITH THE FOLLOWING:
- E. USE VIBRATION AND SHOCK-RESISTANT FASTENERS FOR ATTACHMENTS TO CONCRETE SLABS.

ELECTRICAL IDENTIFICATION:

- A. UPDATE AND PROVIDE TYPED CIRCUIT BREAKER SCHEDULES IN THE MOUNTING BRACKET, INSIDE DOORS OF AC PANEL BOARDS WITH ANY CHANGES MADE TO THE AC SYSTEM.
- B. BRANCH CIRCUITS FEEDING AVIATION OBSTRUCTION LIGHTING EQUIPMENT SHALL BE CLEARLY IDENTIFIED AS SUCH AT THE BRANCH CIRCUIT PANELBOARD.

SECTION 26 200 - ELECTRICAL MATERIALS AND EQUIPMENT CONDUIT:

- A. RIGID GALVANIZED STEEL (RGS) CONDUIT SHALL BE USED FOR EXTERIOR LOCATIONS ABOVE GROUND AND IN UNFINISHED INTERIOR LOCATIONS AND FOR ENCASED RUNS IN CONCRETE. RIGID CONDUIT AND FITTINGS SHALL BE STEEL, COATED WITH ZINC EXTERIOR AND INTERIOR BY THE HOT DIP GALVANIZING PROCESS. CONDUIT SHALL BE PRODUCED TO ANSI SPECIFICATIONS CB0.1, FEDERAL SPECIFICATION WW-C-581 AND SHALL BE LISTED WITH THE UNDERWRITERS' LABORATORIES, FITTINGS SHALL BE THREADED - SET SCREW OR COMPRESSION FITTINGS WILL NOT BE ACCEPTABLE, RGS CONDUITS SHALL BE MANUFACTURED BY ALLIED, REPUBLIC OR
- B. UNDERGROUND CONDUIT IN CONCRETE SHALL BE POLYVINYLCHLORIDE (PVC) SUITABLE FOR DIRECT BURIAL AS APPLICABLE, JOINTS SHALL BE BELLED, AND FLUSH SOLVENT WELDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, CONDUIT SHALL BE CARLON ELECTRICAL
- C. TRANSITIONS BETWEEN PVC AND RIGID (RGS) SHALL BE MADE WITH PVC COATED METALLIC LONG SWEEP RADIUS ELBOWS.

- D. EMT OR RIGID GALVANIZED STEEL CONDUIT MAY BE USED IN FINISHED SPACES CONCEALED IN WALLS AND CEILINGS, EMT SHALL BE MILD STEEL, ELECTRICALLY WELDED, ELECTRO-GALVANIZED OR HOT-DIPPED GALVANIZED AND PRODUCED TO ANSI SPECIFICATION C80.3, FEDERAL SPECIFICATION WW-C-563, AND SHALL BE UL LISTED. EMT SHALL BE MANUFACTURED BY ALLIED, REPUBLIC OR WHEATLAND, OR APPROVED EQUAL, FITTINGS SHALL BE METALLIC COMPRESSION, SET SCREW CONNECTIONS SHALL NOT BE ACCEPTABLE.
- E. LIQUID TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR FINAL CONNECTION TO EQUIPMENT. FITTINGS SHALL BE METALLIC GLAND TYPE COMPRESSION FITTINGS. MAINTAINING THE INTEGRITY OF CONDUIT SYSTEM. SET SCREW CONNECTIONS SHALL NOT BE ACCEPTABLE. MAXIMUM LENGTH OF FLEXIBLE CONDUIT SHALL NOT EXCEED 6-FEET 1 FMC SHALL BE PROTECTED AND SUPPORTED AS REQUIRE BY NEC. MANUFACTURERS OF FLEXIBLE CONDUITS SHALL BE CAROL, ANACONDA METAL HOSE OR UNIVERSAL METAL HOSE, OR APPROVED EQUAL.
- F. MINIMUM SIZE CONDUIT SHALL BE 3/4 INCH (21MM).

HUBS AND BOXES:

- A. AT ENTRANCES TO CABINETS OR OTHER EQUIPMENT NOT HAVING INTEGRAL THREADED HUBS PROVIDE METALLIC THREADED HUBS OF THE SIZE AND CONFIGURATION REQUIRED. HUB SHALL INCLUDE LOCKNUT AND NEOPRENE O-RING SEAL PROVIDE IMPACT RESISTANT 105 DEGREE C PLASTIC BUSHINGS TO PROTECT CABLE INSULATION.
- B. CABLE TERMINATION FITTINGS FOR CONDUIT
- 1. CABLE TERMINATORS FOR RGS CONDUITS SHALL BE TYPE CRC BY O-Z/GEDNEY OR EQUAL.
- CABLE TERMINATORS FOR LFMC SHALL BE ETCO CL2075; OR MADE FOR THE PURPOSE PRODUCTS BY ROXTEC.
- C. EXTERIOR PULL BOXES AND PULL BOXES IN INTERIOR INDUSTRIAL AREAS SHALL BE PLATED CAST ALLOY, HEAVY DUTY, WEATHERPROOF, DUST PROOF, WITH GASKET, PLATED IRON ALLOY COVER AND STAINLESS STEEL COVER SCREWS, CROUSE-HINDS WAB SERIES OR EQUAL
- CONDUIT OUTLET BODIES SHALL BE PLATED CAST ALLOY WITH SIMILAR GASKETED COVERS. OUTLET BODIES SHALL BE OF THE CONFIGURATION AND SIZE SUITABLE FOR THE APPLICATION.
- MANUFACTURER FOR BOXES AND COVERS SHALL BE HOFFMAN, SQUARE "D", CROUSE-HINDS. COOPER, ADALET, APPLETON, O-Z GEDNEY, RACO, OR APPROVED EQUAL

SUPPLEMENTAL GROUNDING SYSTEM

- A. FURNISH AND INSTALL A SUPPLEMENTAL GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS. SUPPORT SYSTEM WITH NON-MAGNETIC STAINLESS STEEL CLIPS WITH RUBBER GROMMETS. GROUNDING CONNECTORS SHALL BE TINNED COPPER WIRE, SIZES AS INDICATED ON THE DRAWINGS, PROVIDE STRANDED OR SOLID BARE OR INSULATED CONDUCTORS AS INDICATED
- B. SUPPLEMENTAL GROUNDING SYSTEM: ALL CONNECTIONS TO BE MADE WITH CAD WELDS, EXCEPT AT EQUIPMENT USE LUGS OR OTHER AVAILABLE GROUNDING MEANS AS REQUIRED BY MANUFACTURER; AT GROUND BARS USE TWO HOLE SPADES WITH NO OX.
- C. STOLEN GROUND-BARS: IN THE EVENT OF STOLEN GROUND BARS, CONTACT SPRINT CM FOR REPLACEMENT INSTRUCTION USING THREADED ROD KITS.

EXISTING STRUCTURE:

EXISTING EXPOSED WIRING AND ALL EXPOSED OUTLETS, RECEPTACLES, SWITCHES, DEVICES, BOXES, AND OTHER EQUIPMENT THAT ARE NOT TO BE UTILIZED IN THE COMPLETED PROJECT SHALL BE REMOVED OR DE-ENERGIZED AND CAPPED IN THE WALL, CEILING, OR FLOOR SO THAT THEY ARE CONCEALED AND SAFE. WALL, CEILING, OR FLOOR SHALL BE PATCHED TO MATCH THE ADJACENT CONSTRUCTION.

CONDUIT AND CONDUCTOR INSTALLATION:

- CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS, EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED, CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES, CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES, ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
- CONDUCTORS SHALL BE PULLED IN ACCORDANCE WITH ACCEPTED GOOD PRACTICE.

SPRINT SUPPLIED MATERIALS:

BBUS, BATTERY CABINETS, MMBTS CABINETS, RRUS, RETS, ANTENNAS AND BRACKETS, HECS. BATTERIES, JUMPERS, OEM SPECIFIC EQUIPMENT (CARD, SHELF, OR CABINET) THAT NEEDS TO BE INSTALLED IN OR NEXT TO MMBTS

CONTRACTOR SUPPLIED MATERIALS:

- CONDUIT IN LENGTH LESS THAN OR EQUAL TO 5 FEET, WIRE, BREAKERS, GROUNDING CABLE, ANTENNA AND LINE INSTALLATION HARDWARE, CONDUIT CLAMPS, CONDUIT CONNECTORS, WATERPROOFING MATERIALS, GROUNDING KITS, HOISTING GRIPS, SNAP-IN HANGERS WITH GROMMETS, BUTTERFLY HANGER KITS, COAX BLOCKS AND HARDWARE, ANGLE ADAPTERS, U BOLTS, AND OTHER MISCELLANEOUS HARDWARE, CROSSOVER PLATES, RET CABLES PIPE MOUNTS, PIPE TO PIPE MOUNTS, ICE BRIDGES IN LENGTHS LESS THAN OR EQUAL TO 5
- LIQUID TIGHT, COMMON CONSUMABLES, INCLUDING BUT NOT LIMITED TO TAPES, SOLVENTS, ADHESIVES, LUGS, NUTS, BOLTS, WASHERS, ETC.
- SUCH OTHER MINOR MATERIALS NOT SPECIFICALLY MENTIONED IN THIS SECTION BUT WHICH ARE REASONABLE NECESSARY TO COMPLETE THE SERVICES.











DRAWN BY CHECKED BY: Ci

DRAWING VERSION DATE DESCRIPTION 1 5/2/19 FINAL CX DRAWINGS

LICENSER

PROJECT INFORMATION

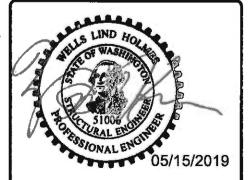
STAR LAKE WATER TANK SE52XC241

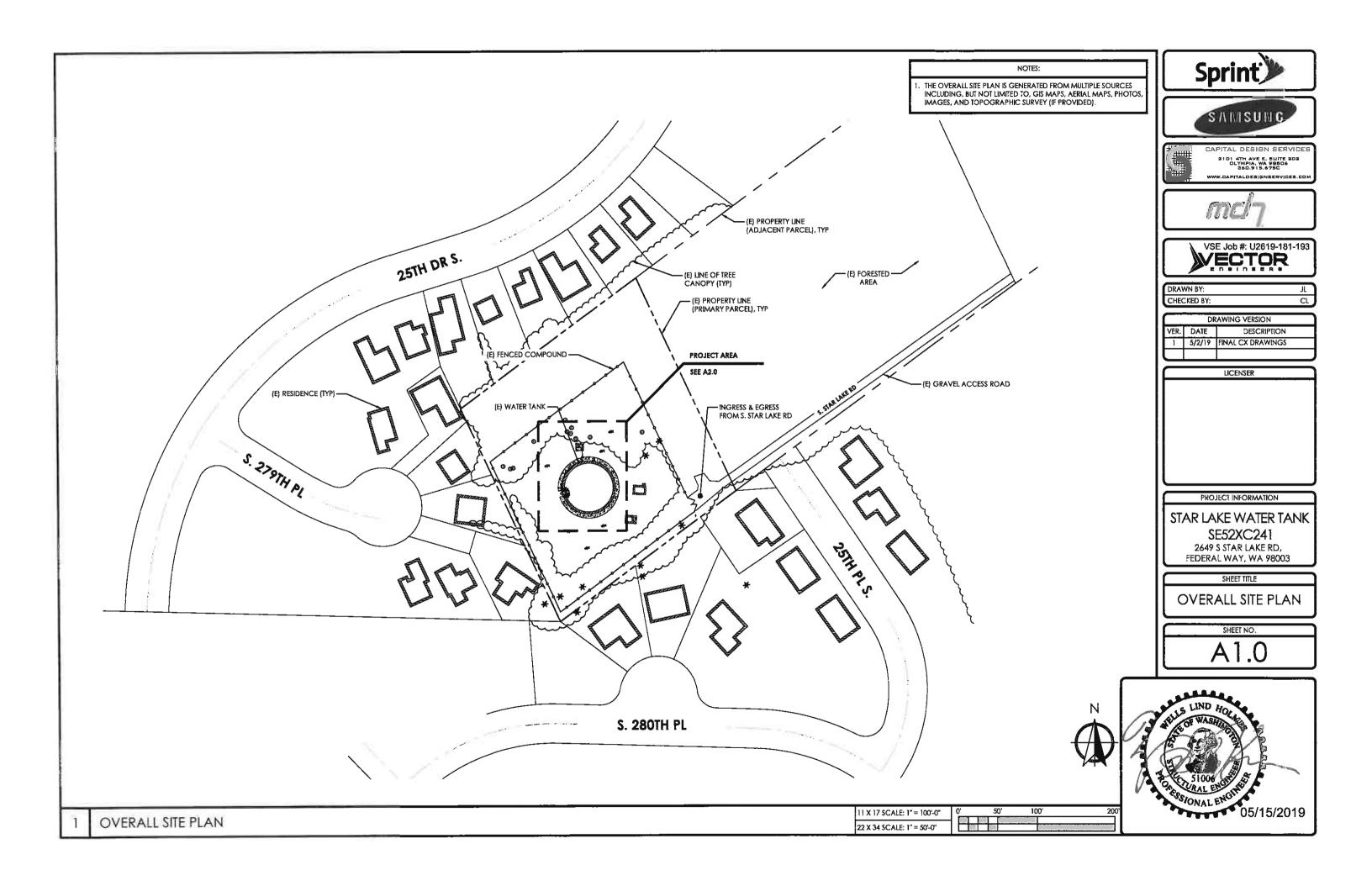
2649 S STAR LAKE RD.

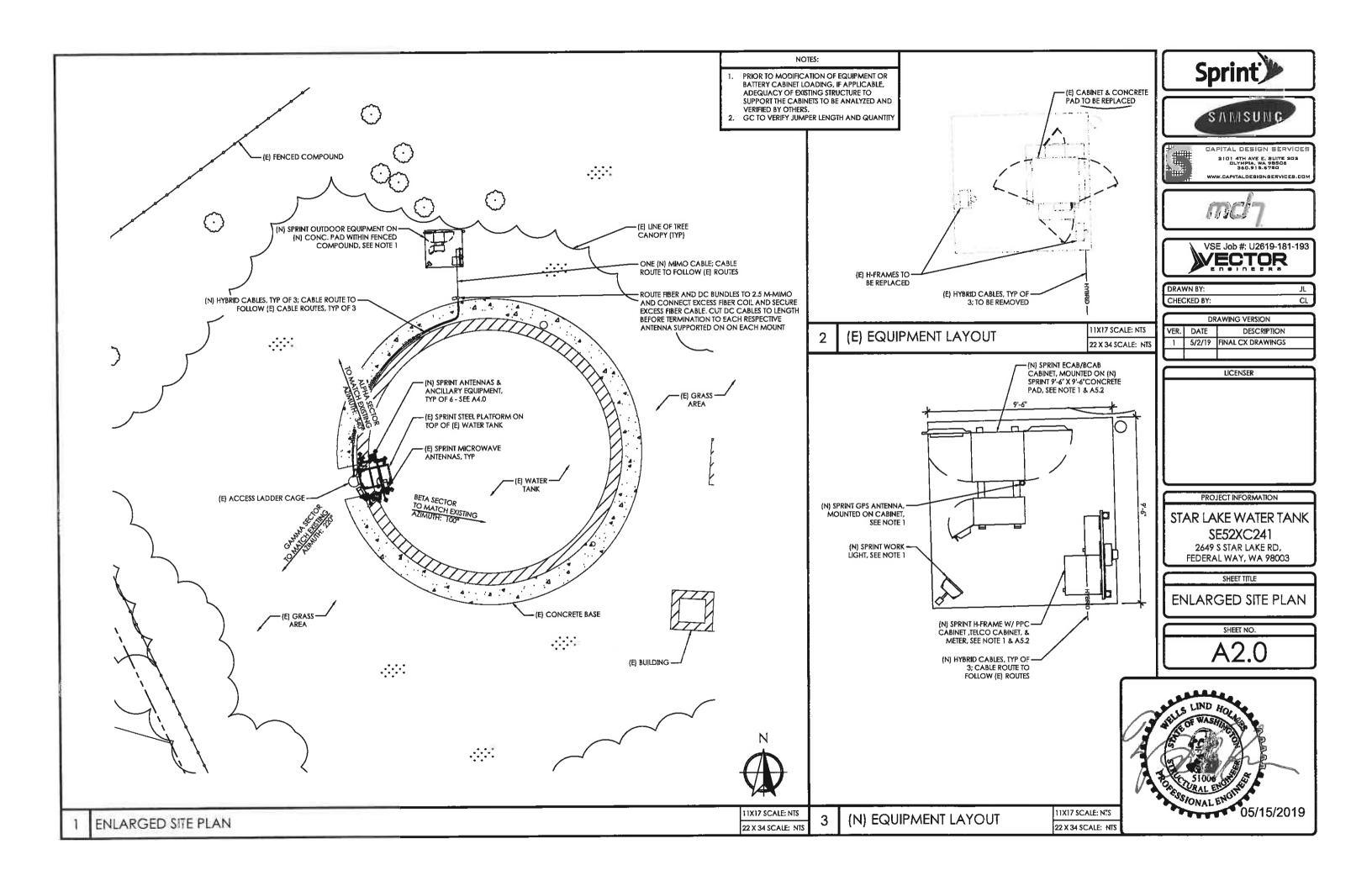
FEDERAL WAY, WA 98003

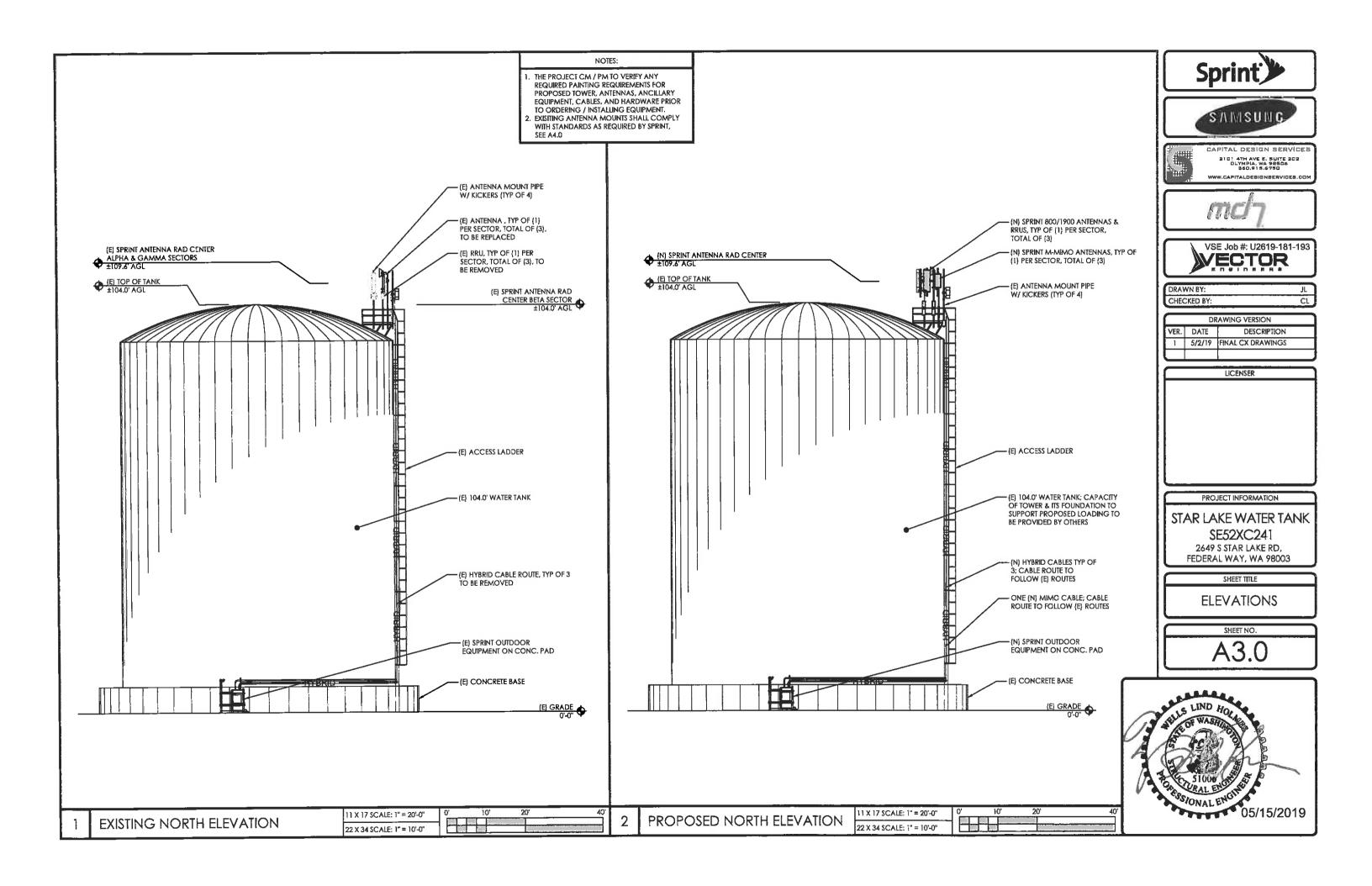
SHEET TITLE SPRINT **SPECIFICATIONS**

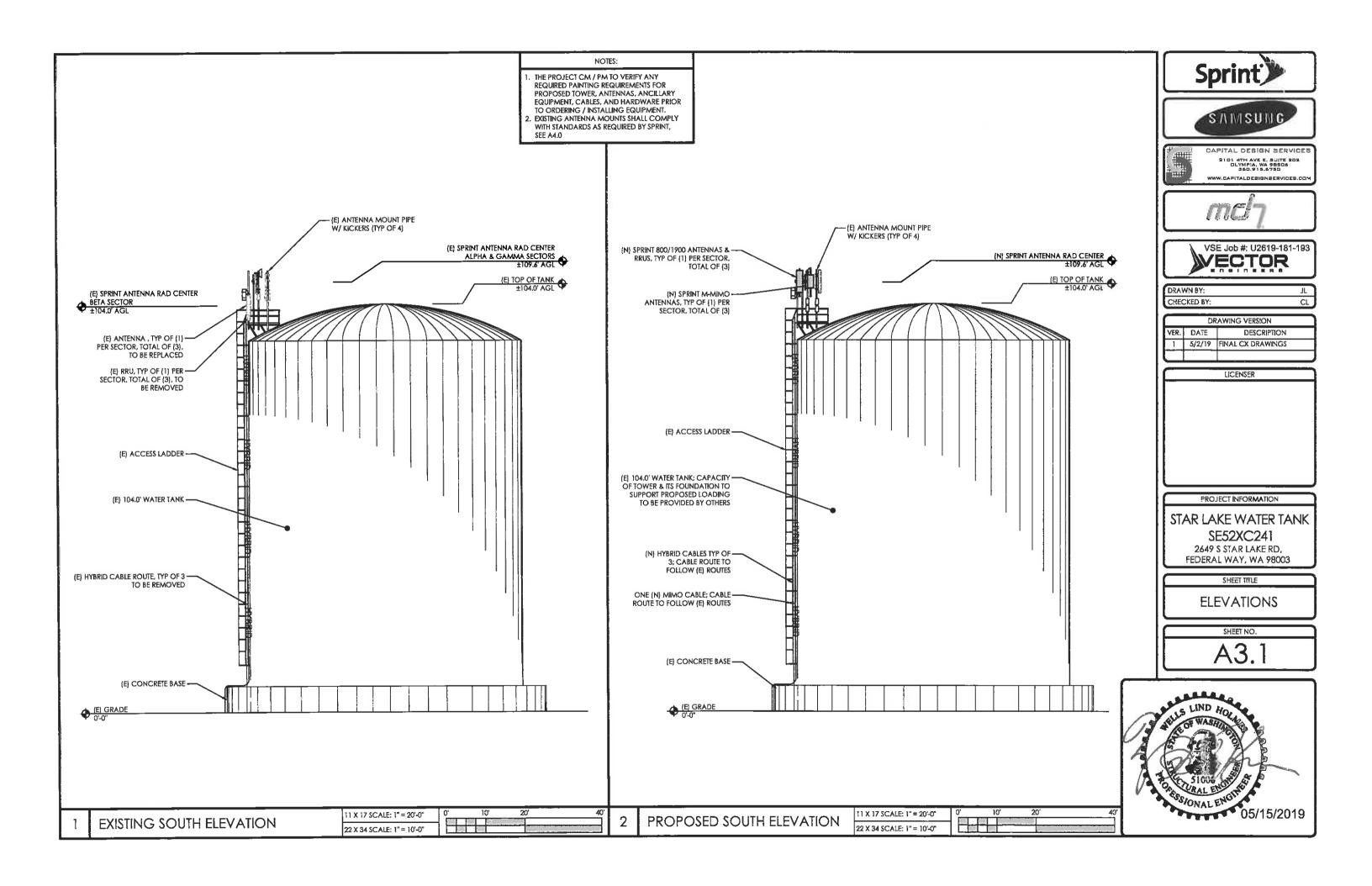
> SHEET NO SP-2

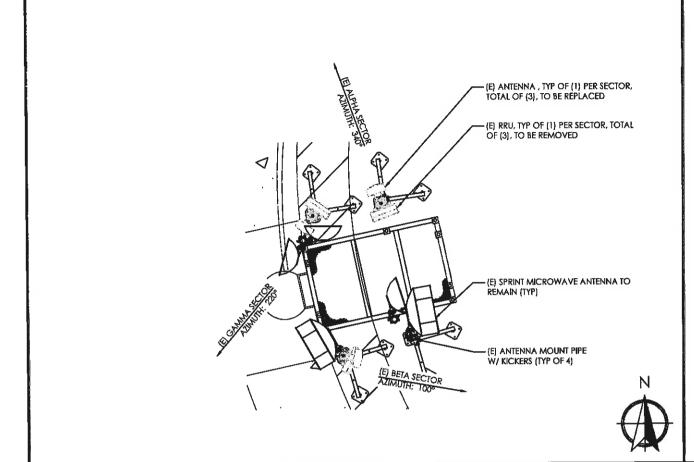


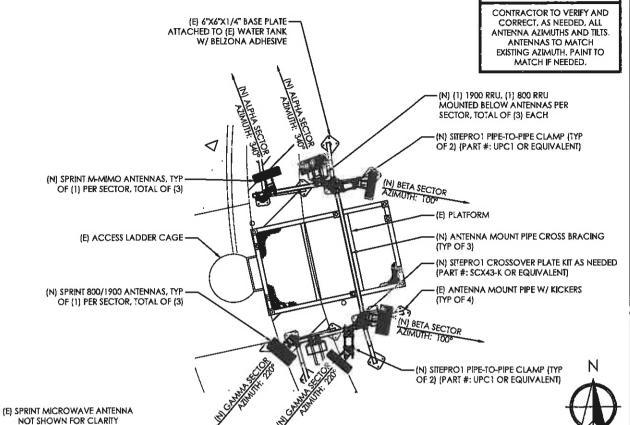




















DRAWN BY: CHECKED BY:

l		DR	AWING VERSION	
	VER.	DATE	DESCRIPTION	
H	1	5/2/19	FINAL CX DRAWINGS	
Н				

LICENSER

EXISTING ANTENNA PLAN

11X17 SCALE: NTS 22 X 34 SCALE: NTS

NEW ANTENNA PLAN

11X17 SCALE: NTS 22 X 34 SCALE: NTS

NOTE:

PROJECT INFORMATION

STAR LAKE WATER TANK SE52XC241

2649 S STAR LAKE RD, FEDERAL WAY, WA 98003

SHEET TITLE

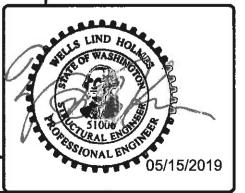
ANTENNA PLANS AND **SCHEDULE**

(N) SPRINT ANTENNA W/ MOUNTING — BRACKET, TYP, ATTACH TO PIPE PER -(E) 3" SCH. 80 ANTENNA MOUNT PIPE W/ MFR RECOMMENDATIONS KICKERS (TYP OF 4), VERIFY; (E) 5/8" DIA. A307 BOLTS AT EA END ATTACHING TO (E) GUSSET PLATES W/ WELD TO BASE PLATE (N) ANTENNA PIPE MOUNT (TO BE A MIN. – OF 2" SCH. 40 (A53 GR B, GALVANIZED) -(N) SITEPRO1 CROSSOVER PLATE KIT AS NEEDED (N) ANTENNA MOUNT PIPE CROSS BRACING 2" SCH. 40 (A53 GR B, GALVANIZED), TYP OF 3 (N) SPRINT RRU TYP W/ MOUNTING -BRACKET, TYP, ATTACH TO PIPE PER MFR RECOMMENDATIONS (E) WATER TANK -- (NSTALL THREE (N) HYBRID CABLES; SECURE EXCESS CABLES W/ COAX BLOCKS & GROMMETS (E) PLATFORM NOT

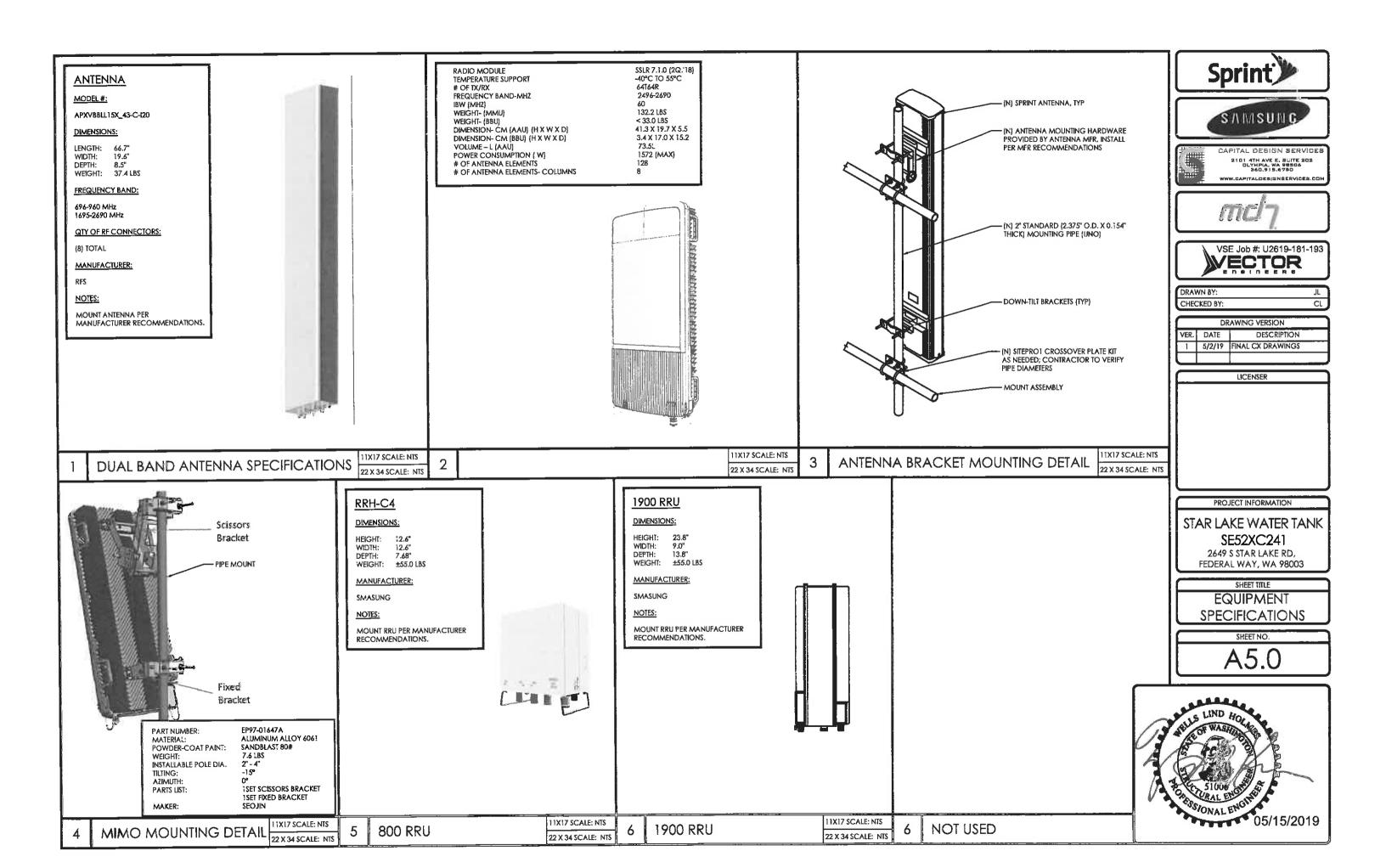
PROPOSED ANTENNA SCHEDULE										
SECTOR	NEW / EXISTING	QTY	TECHNOLOGY	RAD CENTER	AZIMUTH	MFR	EQUIPMENT MODEL	DIMENSIONS (L x W x D)	HYBRID LENGTH	WEIGHT (LBS)
ALPHA 1	NEW	1	800/1900	109.6'	340°	RFS	APXVBBLL15X_43-C-I20	66.7" X 19.6" X 8.5"	±164 LF	75.0
ALPHA 2	NEW	1	mMIMO/2.5	109.6'	340°	SAMSUNG	64T64R MIMO	41.3" x 19.7" x 5.5"	±164 LF	132.2
BETA 1	NEW	1	800/1900	109.6'	100°	RFS	APXVBBLL15X_43-C-I20	66.7" X 19.6" X 8.5"	±164 LF	75.0
BETA 2	NEW	1	mMIMO/2.5	109.6'	100°	SAMSUNG	64T64R MIMO	41.3" x 19.7" x 5.5"	ł	132.2
GAMMA 1	NEW	1	800/1900	109.6	220°	RFS	APXVBBLL15X_43-C-l20	66.7" X 19.6" X 8.5"	±164 LF	75.0
GAMMA 2	NEW	1	mMIMO/2.5	109.6	220°	SAMSUNG	64T64R MIMO	41.3" x 19.7" x 5.5"	_	132.2

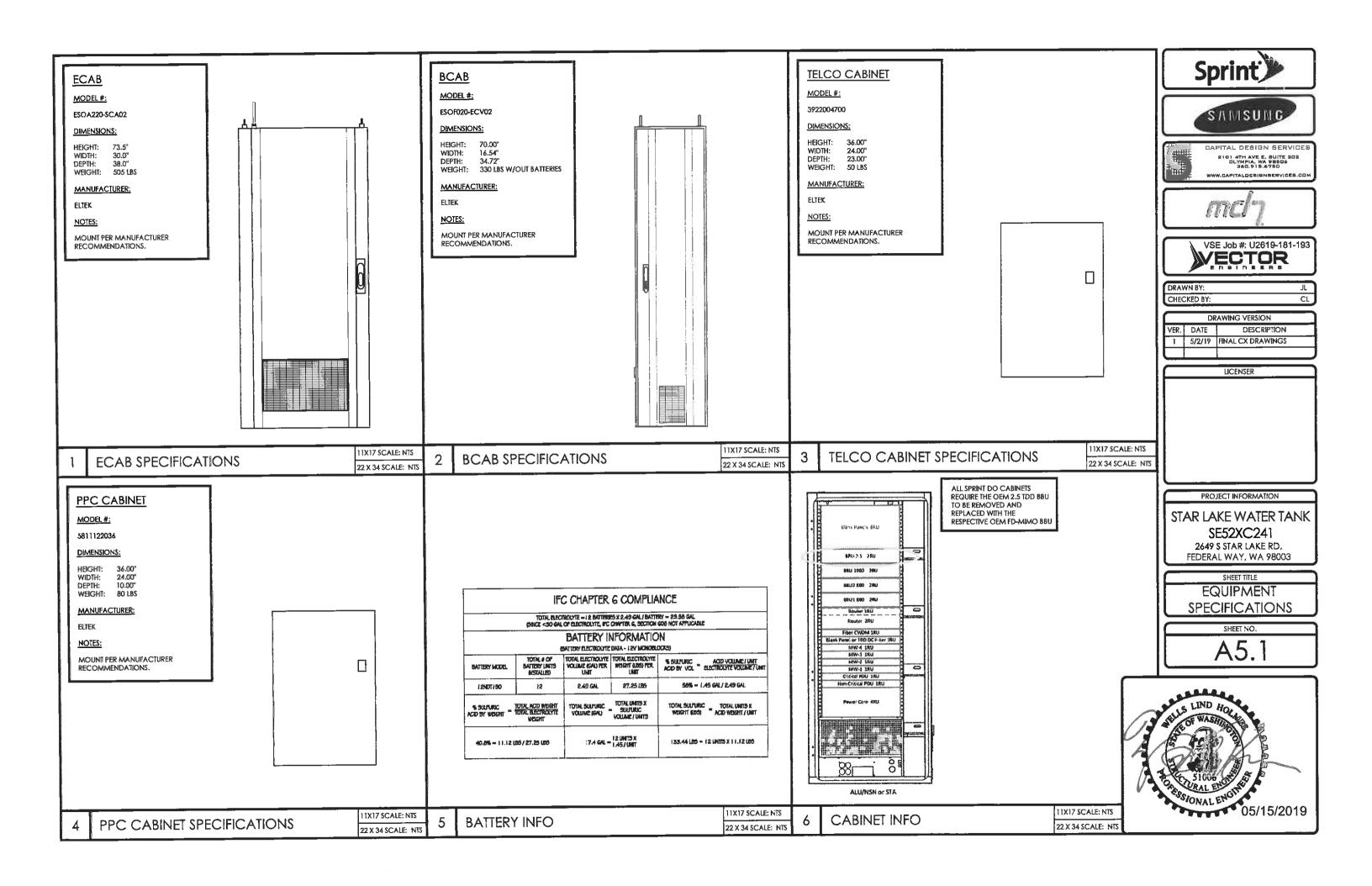
NOTE:

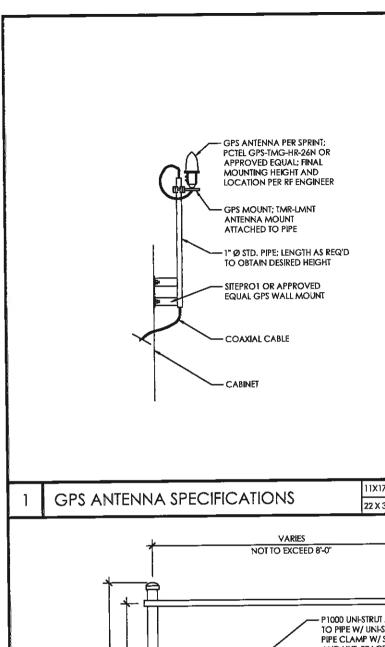
ALL ANTENNA AZIMUTHS TO MATCH EXISTING ANTENNA AZIMUTHS CONTRACTOR TO VERIFY ALL JUMPERS AND LENGTH QUANTITY



SCHEDULE

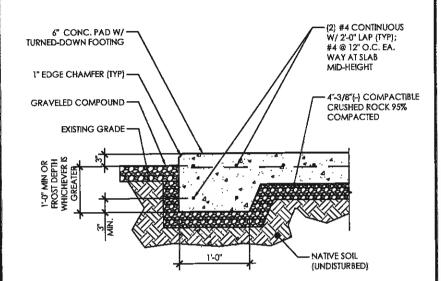


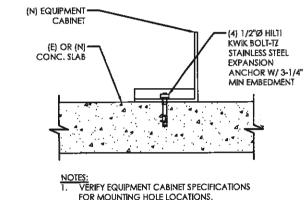




NOTES:

- 1. SLOPE CONCRETE 1/4" PER FOOT MININUM.
- 2. VERIFY EQUIPMENT CABINET SPECIFICATIONS FOR MOUNTING HOLE LOCATIONS.
- MINIMUM OF 2" COVER AT TOP OF SLAB, AND 3" WHERE CONCRETE IS IN CONTACT W/ SOIL.
- SOIL SHALL BE PREPARED WITH A FLAT SURFACE, FREE AND CLEAR OF STANDING WATER AND LOOSE DEBRIS. SOIL SHOULD BE WELL COMPACTED TO 90% OF IT MAXIMUM DENSITY AT OPTIMUM MOISTURE
- 5. TOP SURFACE OF SLAB SHALL BE A LIGHT BROOM FINISH AND TAPERED TO ALLOW WATER TO SHED





11X17 SCALE: NTS 22 X 34 SCALE: NTS

EQUIP PAD SECTION

11X17 SCALE: NTS 22 X 34 SCALE: NTS

CABINET MOUNTING DETAIL

11X17 SCALE: NTS 22 X 34 SCALE: NTS









DRAWN BY: CHECKED BY:

DRAWING VERSION					
VER.	DATE	DESCRIPTION			
1	5/2/19	FINAL CX DRAWINGS			

LICENSER

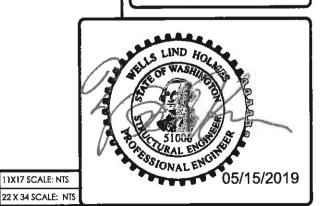
PROJECT INFORMATION

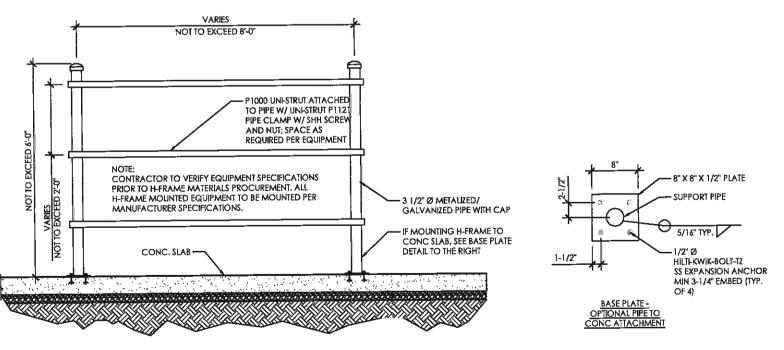
STAR LAKE WATER TANK SE52XC241

2649 S STAR LAKE RD, FEDERAL WAY, WA 98003

EQUIPMENT SPECIFICATIONS

SHEET NO.





H-FRAME

11X17 SCALE: NTS 22 X 34 SCALE: NTS

NOT USED

