

SECOND AMENDMENT TO SITE LEASE AGREEMENT

It is agreed between the Woodbury County Board of Supervisors, c/o Starcomm Public Safety Board, the City of Sioux City, Iowa ("Lessors") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 1025 Lenox Park Blvd NE, 3rd Floor, Atlanta, GA 30319-5309 ("Lessee") as follows:

WHEREAS, Lessor and Lessee (or their respective predecessors-in-interest) entered into a Site Lease Agreement between the parties signed on or about September 5th, 2006 and went into effect on September 29, 2006 when the building permit was issued, with respect to a cell tower located at 2290 Platte Road, Homer, NE; and

WHEREAS, the parties amended the Site Lease Agreement on October 21, 2014 (collectively, the "Agreement"); and

WHEREAS, Lessor and Lessee, in their mutual interest, wish to amend the Agreement for a second time as set forth below accordingly.

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Lessor and Lessee agree as follows:

- 1. Exhibit A- ("Site Plan") is modified and replaced as set forth in Exhibit A-2 of this Amendment
- 2. Section 6 of the Amendent to Site Lease agreement is hereby deleted in its entirety and replaced with the following:

Renewal Term Rent Lessee shall pay Woodbury County, Iowa, administrator of funds of Starcomm Public Safety Board, "Rent," for each month of the Five (5) years for Renewal Terms as listed below in this paragraph. Each monthly Rent payment shall be due to Woodbury County, Iowa on or before the first day of each month. In addition, Lessee shall be responsible for all utility service payments with the exception of telephone service used exclusively by Lessors.

- a. First Renewal Term (years 6 through 10) Rent shall be increased by 10% of the highest amount paid during the initial term.
- b. Second Renewal Term (years 11 through 15) Rent shall be increased by 10% of the highest amount paid during the First Renewal Term. On August 1, 2019, Rent shall be increased to two thousand nine hundred and seventy-seven dollars and fifty cents (\$2,977.50) per month for the remainder of the Second Renewal Term. It is understood by the Parties that this increase in monthly rent is in consideration for allowing Lessee to update their equipment on the tower as identified in Exhibit A-2.
- c. Third Renewal Term (years 16 through 20) Rent shall be increased by 10% of the highest amount paid during the Second Renewal Term.
- d. Fourth Renewal Term (years 21 through 25) Rent shall be increased by 10% of the highest amount paid during the Third Renewal Term.

3. Notices. Section 12 of the Agreement is hereby deleted in its entirety and replaced with the following:

NOTICES. All notices, requests, demands and communications hereunder will be given by first class certified or registered mail, return receipt requested, or by a nationally recognized overnight courier, postage prepaid, to be effective when properly sent and received, refused or returned undelivered. Notices will be addressed to the parties as follows.

If to Lessee: New Cingular Wireless PCS, LLC
 Attn: Network Real Estate Administration
 Re: Cell Site #:DESMNEU1754
 Cell Site Name: Homer-LLW-NESC
 FA No: 13169481
 1025 Lenox Park Blvd NE
 3rd Floor
 Atlanta, GA 30319-5309

With a copy to: New Cingular Wireless PCS, LLC
 Attn: Legal Department
 Re: Cell Site #:DESMNEU1754
 Cell Site Name: Homer-LLW-NESC
 FA No: 13169481
 208 S. Akard Street
 Dallas, TX 75202-4206

The copy sent to the Legal Department is an administrative step which alone does not constitute legal notice.

If to Lessors: Woodbury County, Iowa
 Board of Supervisors
 620 Douglas Street, Suite 104
 Sioux City, Iowa 51101

 Starcomm Public Safety Board
 P.O. Box 447
 Sioux City, Iowa 51102
 ATTN: Glenn Sedivy

In all other respects, the original Site Lease Agreement, Amendment to Site Lease Agreement dated September 5, 2006 Agreement and Amendment to Site Lease Agreement dated October 21, 2014 are unchanged.

Dated _____, 2019

LESSORS:

Attest:

Woodbury County, Iowa

By:


Patrick Gill
County Auditor

By:


Keith Radig
Chairman
Woodbury County Board of Supervisors

Date:

9-17-19

LESSEE:


Attest:

New Cingular Wireless PSC, LLC
By: AT&T Mobility Corporation
Its: Manager

By:

[Print Name]

By:



[Print Name]

Title:

[Print Title]

Title:

Name: Michelle Durand
Title: Manager of Real Estate & Construction
Date: 8/13/19

[Print Title]

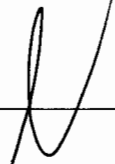
Date:

CONSENT TO SUBLEASE AMENDMENT

On this _____ day of _____, 2019, The City/County Law Enforcement Center of South Sioux City/Dakota County, State of Nebraska as Landlord and pursuant to Paragraph 9 of the Lease – Business Property dated April 14, 2009 hereby consents to the Sublease Amendment between Starcomm, Woodbury County, Iowa, and New Cingular Wireless PSC, LLC.

The City/County Law Enforcement Center
Of South Sioux City/Dakota County

By:



Print Name: Scott Love

Print Name:

Title:

Co Chair LEC

GENERAL NOTES:

- THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE AND IS NOT FOR HUMAN HABITAT. (NO HANDICAP ACCESS IS REQUIRED).
- OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY a&t TECHNICIANS.
- NO NOISE, SMOKE, DUST, ODOR OR VIBRATIONS WILL RESULT FROM THIS PROPOSAL.
- OUTDOOR STORAGE AND SOLID WASTE CONTAINERS ARE NOT PROPOSED.
- ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE a&t SYSTEM GROUNDING STANDARD DATED JUNE 2011 TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES, "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING", IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
- SUBCONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY THE CONSTRUCTION OPERATION.
- SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION.
- SUBCONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND DRAWINGS PROVIDED BY THE SITE OWNER. SUBCONTRACTOR SHALL NOTIFY a&t OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- NO WHITE STROBIC LIGHTS ARE PERMITTED. LIGHTING, IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.
- ALL SIGNS SHALL BE FURNISHED AND INSTALLED AT ALL a&t WIRELESS SERVICES SITES IN ACCORDANCE WITH SPECIFICATION a&t SYSTEM GROUNDING DATED JUNE 2011.
- NO ADDITIONAL PARKING TO BE PROPOSED. EXISTING ACCESS AND PARKING TO BE USED.
- NO LANDSCAPING IS PROPOSED AT THIS SITE.

TYPICAL MINIMUM BEND RADI		
COAX DIAMETER	ANDREW	COMSCOPE
1/2" SUPERFLEX	1.25"	1.25"
1/2"	5"	2"
7/8"	10"	5"
1 1/4"	15"	8"
1 5/8"	20"	15"

- ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS.

GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR - CONTRACTOR
SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
OWNER - a&t WIRELESS
- ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR AND SITE OWNER.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY & D) TRENCHING & EXCAVATION.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH OSHA REGULATIONS.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.


STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4") CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.
- ALL METAL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123. ALL SHOP WELDED MEMBERS SHALL BE GALVANIZED AFTER WELDING.

CONTRACTOR NOTES:

- GC MUST PROVIDE A 48-72 HOUR NOTICE AND RIGGING PLAN TO CROWN CASTLE CM PRIOR TO CONSTRUCTION.
- GC MUST TAKE AND SUBMIT PRE-CON PHOTOS TO CROWN CASTLE CM WITHIN 24HOURS OF CONSTRUCTION START.
- INSTALL MAY NOT BLOCK OR NEST BEACON.
- INSTALL MAY NOT TRAP, PINCH OR OTHERWISE DEFORM THE SAFETY CLIMB IF ONE IS PRESENT.
- GC IS RESPONSIBLE FOR A COP TO CROWN CASTLE NOT LATER THAN 7 DAYS AFTER CONSTRUCTION COMPLETE.
- ANCILLARY TME, SURGE ARRESTORS ETC. SHALL BE MOUNTED TO THE CARRIER SECTOR FRAMES, MOUNTS OR OTHER CARRIER OWNED EQUIPMENT. TME ATTACHED TO THE TOWER STEEL WILL BE MOVED AT GC CDST.
- A TAPE DROP WILL BE REQUIRED WHEN WORKING WITHIN THE TOP 10FT OF TOWER STEEL.
- A BEACON PHOTO IS REQUIRED ILLUSTRATING THAT THE INSTALL DID NOT NEST THE BEACON.
- A TAPE IS REQUIRED IF MOUNTING AN RRH, SURGE ARREST UNIT OR OTHER TME TO AN ADDITIONAL OR NEW POSITION ON THE SECTOR FRAME.

APPLICANT/OWNER:



7800 XERXES AVE. S
3RD FLOOR
BLOOMINGTON, MN 55431

PREPARED BY:



1701 AMERICAN BLVD EAST
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952-244-1188 (DANK)
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B	05/06/19	ISSUED FOR REVIEW	YS
C	05/20/19	ISSUED FOR CONSTRUCTION	YS
1	07/17/19	ISSUED FOR CONSTRUCTION	AJZ
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PROJECT LOCATION

**LTE 3C/4C/5C/6C
SITE NO. N6L0754**

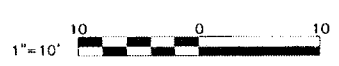
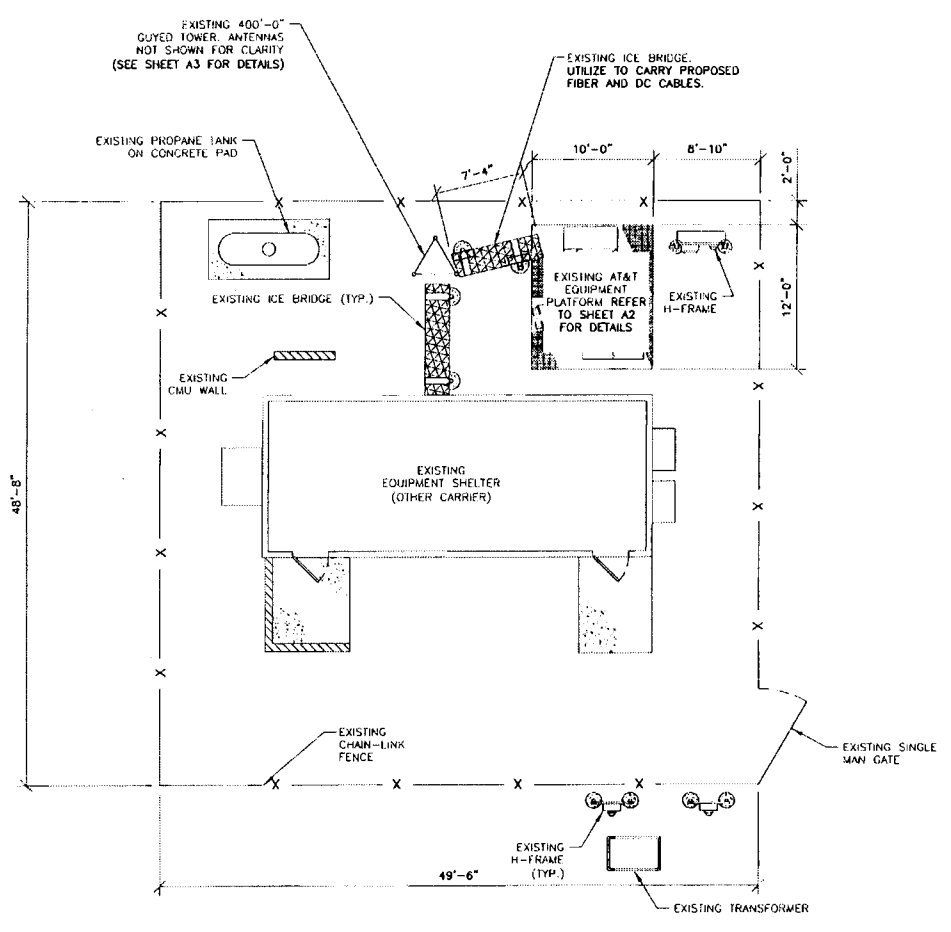
NESC HOMER
FA# 13189481
2290 PLATTE ROAD
HOMER, NE 68030

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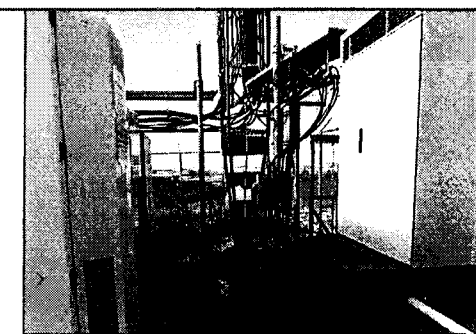
**NOTES &
SPECIFICATIONS**

DRAWING NUMBER:

SP1



COMPOUND PLAN
SCALE: 1"=10'



SITE PHOTO 1 1



SITE PHOTO 2 2

SYMBOLS AND MATERIALS

- DETAIL REFERENCE
- SECTIONS AND DETAILS
- CONCRETE
- EARTH
- GRAVEL/STONE

SITE LEGEND

- PROPERTY LINE
- FENCE LINE
- PDU POWER CABLE
- BIAS "T" CABLE
- PDU ALARM CABLE

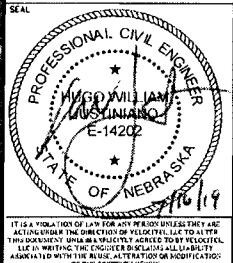
APPLICANT/OWNER:

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3RD FLOOR
BLOOMINGTON, MN 55431

PREPARED BY:

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B	05/06/18	ISSUED FOR REVIEW	YS
D	05/30/18	ISSUED FOR CONSTRUCTION	YS
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PROJECT LOCATION

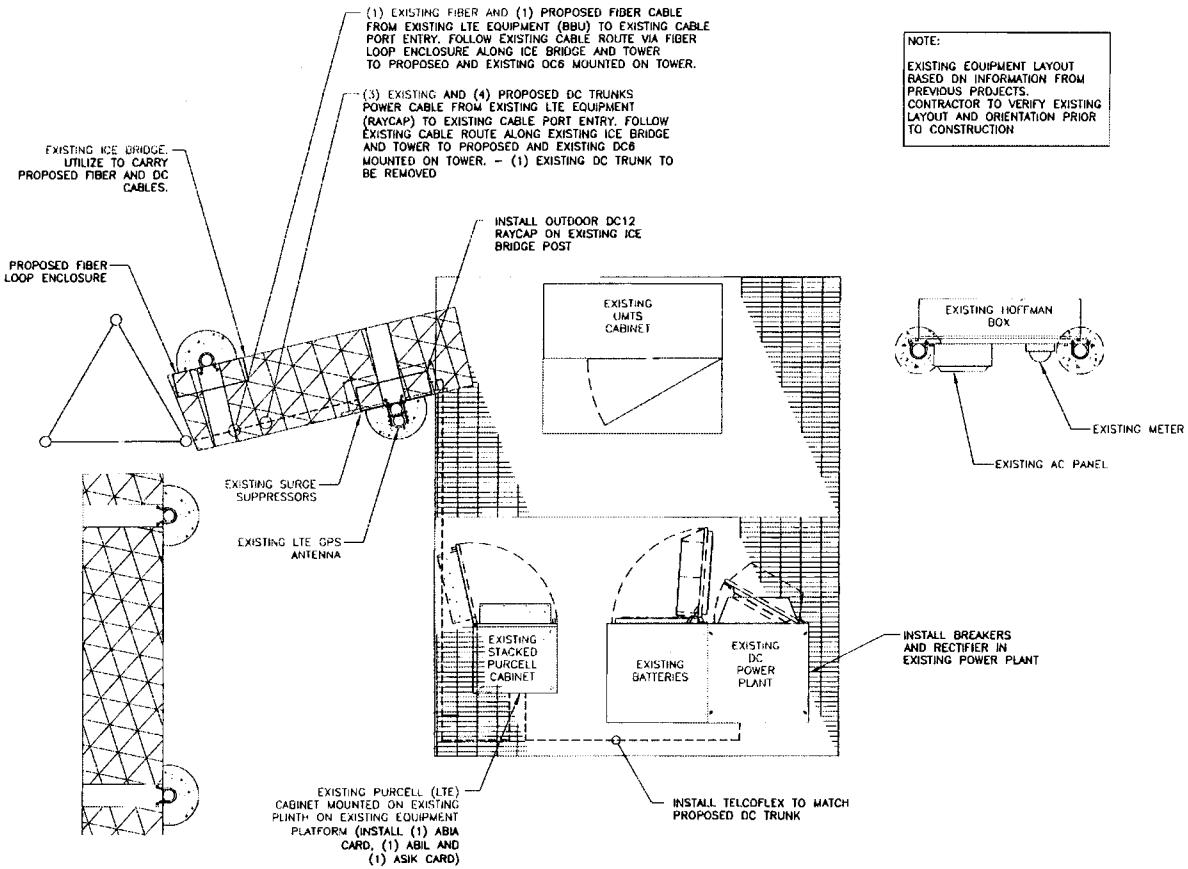
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SITE NO. NEL01754
NESC HOMER
FA# 13168481
2290 PLATTE ROAD
HOMER, NE 68030

DRAWING DESCRIPTION:

COMPOUND PLAN

DRAWING NUMBER:

A1



NOTE:
 EXISTING EQUIPMENT LAYOUT BASED ON INFORMATION FROM PREVIOUS PROJECTS. CONTRACTOR TO VERIFY EXISTING LAYOUT AND ORIENTATION PRIOR TO CONSTRUCTION



EQUIPMENT PLAN
 SCALE: 1"=3'

SYMBOLS AND MATERIALS

- DETAIL REFERENCE
- SECTIONS AND DETAILS
- CONCRETE
- EARTH
- GRAVEL/STONE

SITE LEGEND

- PROPERTY LINE
- FENCE LINE
- PDU POWER CABLE
- BIAS "T" CABLE
- PDU ALARM CABLE

APPLICANT/OWNER:

7000 XERXES AVE. S
 3RD FLOOR
 BLOOMINGTON, MN 55431

PREPARED BY:

complete wireless solutions

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 952-944-1808 (FAX)

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PROJECT LOCATION

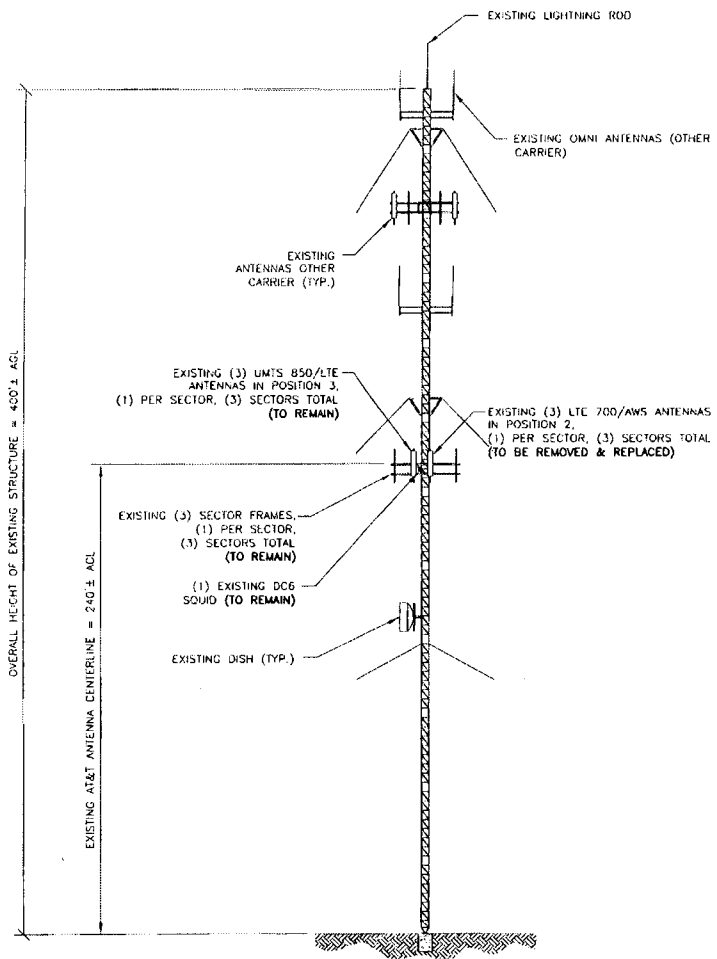
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SITE NO. NEL01754
 NESC HOMER
 FA# 13189481
 2290 PLATTE ROAD
 HOMER, NE 68030

DRAWING DESCRIPTION:

EQUIPMENT PLAN

DRAWING NUMBER:

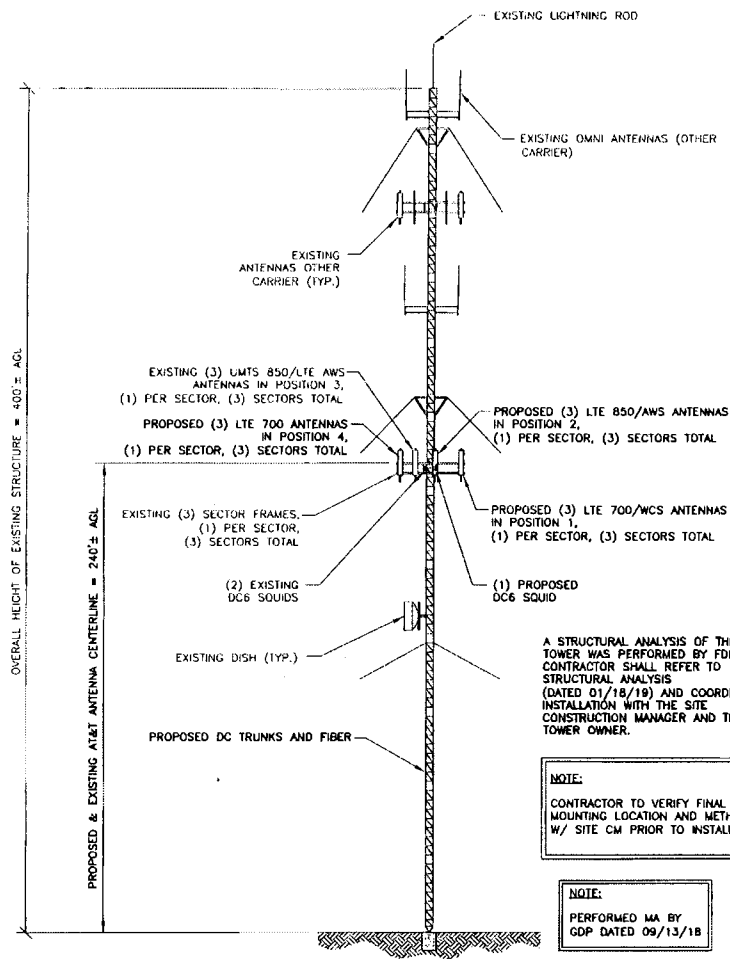
A2



APPROXIMATE
TRUE
NORTH

24"x36" SCALE: NTS
11"x17" SCALE: NTS

EXISTING TOWER ELEVATION 1



APPROXIMATE
TRUE
NORTH

24"x36" SCALE: NTS
11"x17" SCALE: NTS

PROPOSED TOWER ELEVATION 2

* CONTRACTOR TO REFER TO FINAL RF CONFIGURATION PRIOR TO CONSTRUCTION.

A STRUCTURAL ANALYSIS OF THIS TOWER WAS PERFORMED BY FDH. CONTRACTOR SHALL REFER TO STRUCTURAL ANALYSIS (DATED 01/18/19) AND COORDINATE INSTALLATION WITH THE SITE CONSTRUCTION MANAGER AND THE TOWER OWNER.

NOTE:
CONTRACTOR TO VERIFY FINAL MOUNTING LOCATION AND METHODS W/ SITE CM PRIOR TO INSTALLATION

NOTE:
PERFORMED MA BY GDP DATED 09/13/18

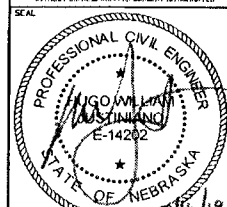
APPLICANT/OWNER:

7900 XERXES AVE. S
3RD FLOOR
BLOOMINGTON, MN 55431

PREPARED BY:

complete wireless solutions
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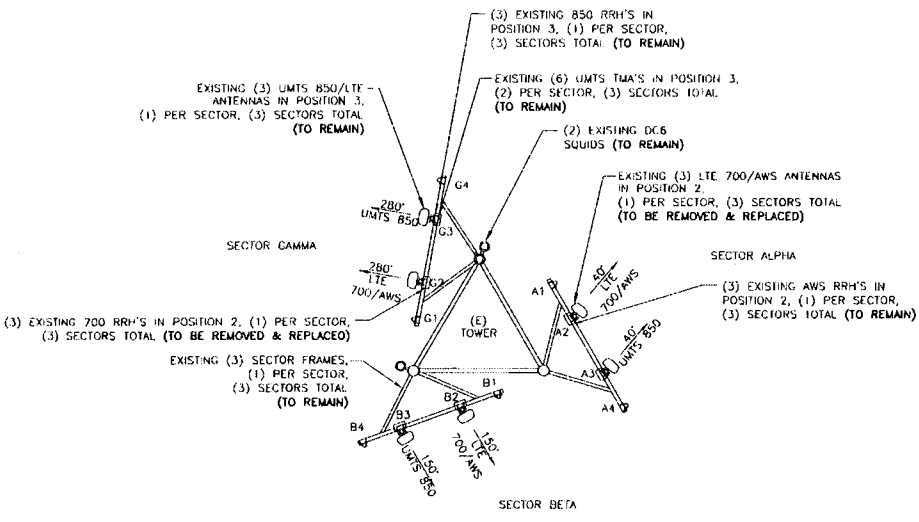
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PROJECT LOCATION
LTE 3C/4C/5C/6C
SITE NO. NEL01754
NESC HOMER
FA# 13169481
2290 PLATTE ROAD
HOMER, NE 68030

DRAWING DESCRIPTION:
**TOWER
ELEVATION**

DRAWING NUMBER:
A3



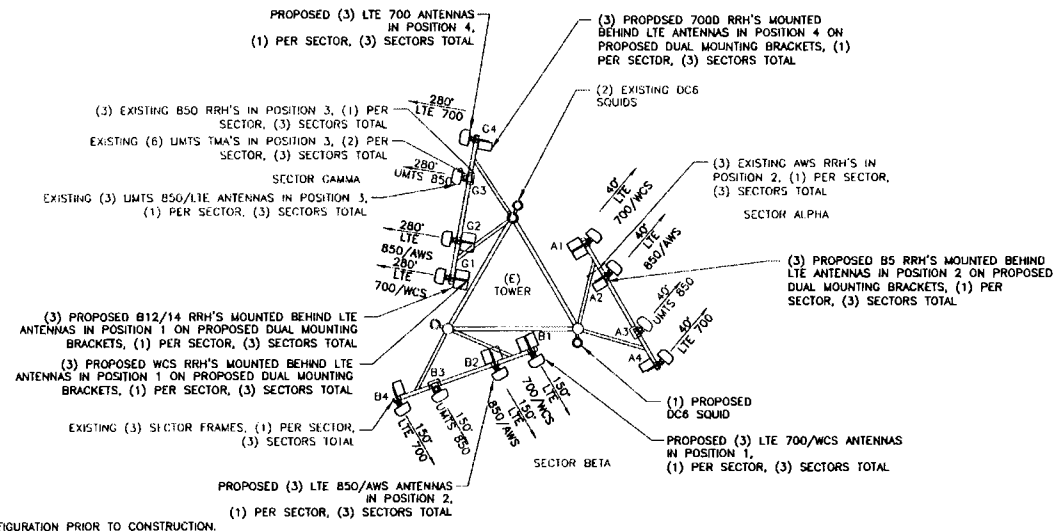
APPROXIMATE TRUE NORTH

24"=34" SCALE: NTS
11"=17" SCALE: NTS

EXISTING ANTENNA PLAN 2

NOTE:
CONTRACTOR TO VERIFY FINAL MOUNTING LOCATION AND METHODS W/ SITE CM PRIOR TO INSTALLATION

NOTE:
PERFORMED MA BY GDP DATED 09/13/18



APPROXIMATE TRUE NORTH

24"=34" SCALE: NTS
11"=17" SCALE: NTS

* CONTRACTOR TO REFER TO FINAL RF CONFIGURATION PRIOR TO CONSTRUCTION.

PROPOSED ANTENNA PLAN 1

APPLICANT/OWNER:

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PREPARED BY:

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PROJECT LOCATION


LTE 3C/4C/5C/6C
SITE NO. NEL01754
NESC HOMER
FA# 13189481
2290 PLATTE ROAD
HOMER, NE 68030

DRAWING DESCRIPTION:

ANTENNA PLAN

DRAWING NUMBER:

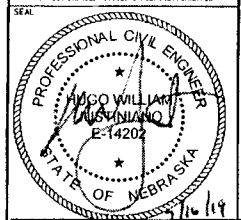
A4

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 BLOOMINGTON, MN 55431

PREPARED BY:

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 SUITE #10
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 852-944-1858 (MAIN)
 952-944-1508 (FAX)

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REVISIONS

REV	DATE	DESCRIPTION	BY
A	06/30/18	ISSUED FOR REVIEW	YS
B	05/06/19	ISSUED FOR REVIEW	YS
D	05/20/19	ISSUED FOR CONSTRUCTION	YS
1	07/17/19	ISSUED FOR CONSTRUCTION	MZ
2			
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PROJECT LOCATION
LTE 3C/4C/5C/6C
 SITE NO. NEL01754
 NESC HOMER
 FA# 13186481
 2290 PLATTE ROAD
 HOMER, NE 68030

DRAWING DESCRIPTION:
ANTENNA & CABLE CONFIGURATION

DRAWING NUMBER:
A5

PROPOSED ANTENNA CONFIGURATION AND CABLE SCHEDULE										
SUPPLIED BY AT&T WIRELESS, FROM RF CONFIG DATED 06/13/2018, BY JIM TIDMORE										
SECTOR	POS	TECH	ANTENNA	ANTENNA HEIGHT	AZIMUTH	TMA/RRU	DC SURGE AND DISTRIBUTION	CABLE TYPE	CABLE LENGTH	DOWNTILTS
A	1	LTE 700/WCS	EPBQ-654L8H8-L2 (N)	240' AGL	40'	(1) RRH4X25-WCS-4R (N) (1) RRH 4T4R B12/14 320W (N)	(2) DC6-48-60-18-8F (X)	(1) FIBER (0.40") (X)	280' (N) *	2',2'(E) 0'(M)
	2	LTE 850/AWS	EPBQ-654L8H8-L2 (N)		40'	(1) RRH 4T4R B5 160W (N) (1) B66-RRH4X45 (X)		(1) FIBER (0.40") (N)		2',2'(E) 0'(M)
	3	UMTS 850/LTE AWS	ET-X-UM-70-16-70-18-IR-AT (X)		40'	(1) RRH2X40-850 (X) (2) TMA (X)		(1) FIBER (0.40") (N)		2',2'(E) 0'(M)
	4	LTE 700	EPBQ-654L8H8-L2 (N)		40'	(1) RRH2X40-07L-DE (N)		(1) FIBER (0.40") (N)		2',2'(E) 0'(M)
B	1	LTE 700/WCS	EPBQ-654L8H8-L2 (N)	240' AGL	150'	(1) RRH4X25-WCS-4R (N) (1) RRH 4T4R B12/14 320W (N)	(1) DC6-48-60-18-EV (N)	(2) DC TRUNK (X)	260' (X)	2',2'(E) 0'(M)
	2	LTE 850/AWS	EPBQ-654L8H8-L2 (N)		150'	(1) RRH 4T4R B5 160W (N) (1) B66-RRH4X45 (X)		(2) DC TRUNK (X)		2',2'(E) 0'(M)
	3	UMTS 850/LTE AWS	ET-X-UM-70-16-70-18-IR-AT (X)		150'	(1) RRH2X40-850 (X) (2) TMA (X)		(2) DC TRUNK (X)		2',2'(E) 0'(M)
	4	LTE 700	EPBQ-654L8H8-L2 (N)		150'	(1) RRH2X40-07L-DE (N)		(2) DC TRUNK (X)		2',2'(E) 0'(M)
C	1	LTE 700/WCS	EPBQ-654L8H8-L2 (N)	240' AGL	280'	(1) RRH4X25-WCS-4R (N) (1) RRH 4T4R B12/14 320W (N)	(1) DC6-48-60-18-EV (N)	(4) DC TRUNK (N)	260' (X)	2',2'(E) 0'(M)
	2	LTE 850/AWS	EPBQ-654L8H8-L2 (N)		280'	(1) RRH 4T4R B5 160W (N) (1) B66-RRH4X45 (X)		(4) DC TRUNK (N)		2',2'(E) 0'(M)
	3	UMTS 850/LTE AWS	ET-X-UM-70-16-70-18-IR-AT (X)		280'	(1) RRH2X40-850 (X) (2) TMA (X)		(6) 1-5/8" COAX (X)		2',2'(E) 0'(M)
	4	LTE 700	EPBQ-654L8H8-L2 (N)		280'	(1) RRH2X40-07L-DE (N)		(6) 1-5/8" COAX (X)		2',2'(E) 0'(M)

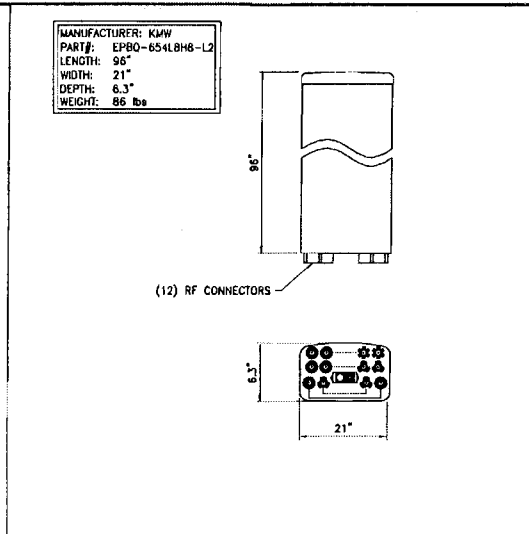
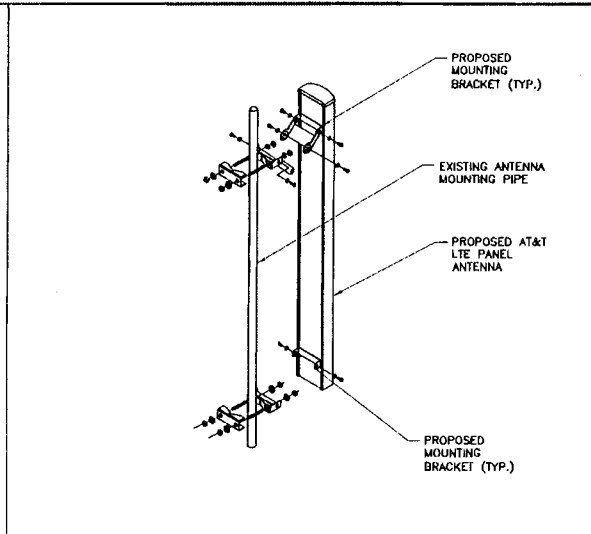
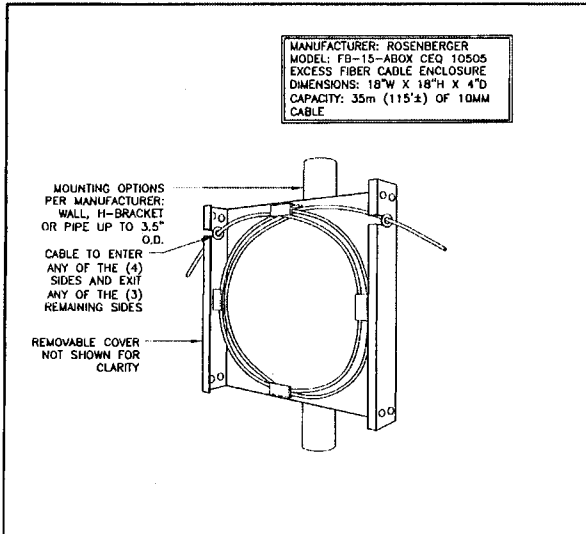
* INCLUDES SAFETY FACTOR OF 20 FT. (10 FT. AT BOTH ENDS OF CABLE RUN)

CONTRACTOR TO VERIFY RF DATA WITH AT&T WIRELESS CONSTRUCTION MANAGER AND/OR RF ENGINEER PRIOR TO INSTALLATION.

(N) = NEW INSTALL
 (X) = EXISTING
 (XR) = EXISTING/RELOCATED
 (E) = ELECTRICAL
 (M) = MECHANICAL

24"=36" SCALE: NTS
 11"=17" SCALE: NTS

ANTENNA CABLE CONFIGURATION 1



APPLICANT/OWNER:

7800 XERXES AVE. S
 3RD FLOOR
 BLOOMINGTON, MN 55431

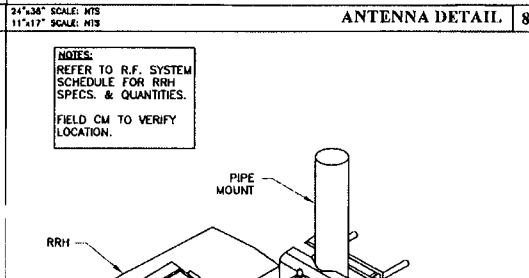
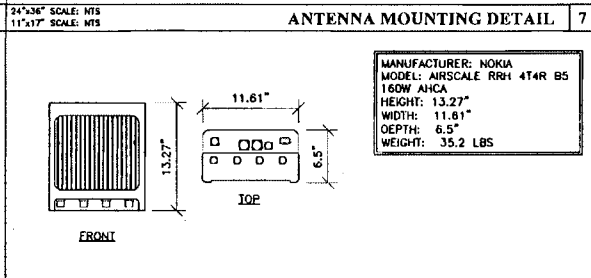
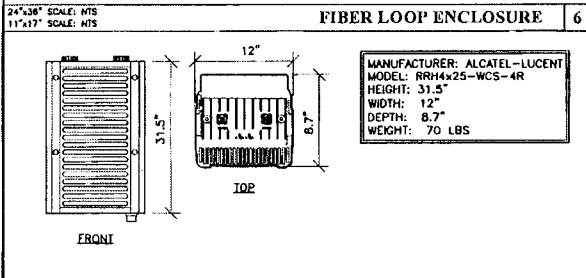
PREPARED BY:

1701 AMERICAN BLVD EAST
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 952-944-1050 (DAA) / 952-944-1506 (FAX)

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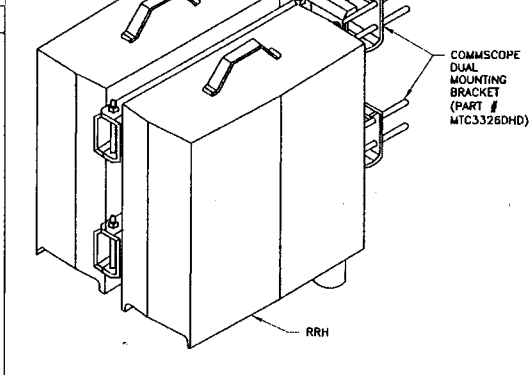
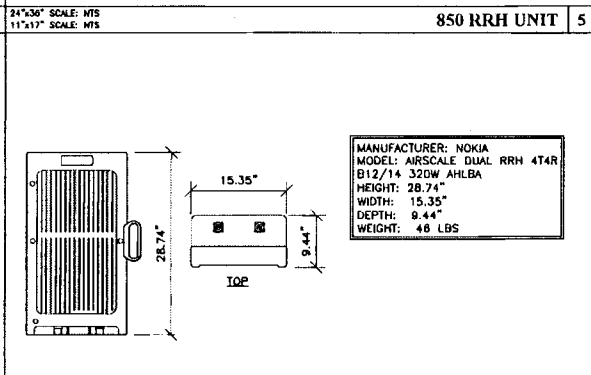
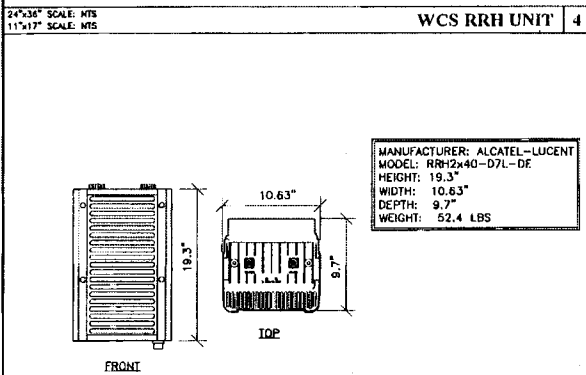
11/6/19



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PROJECT LOCATION

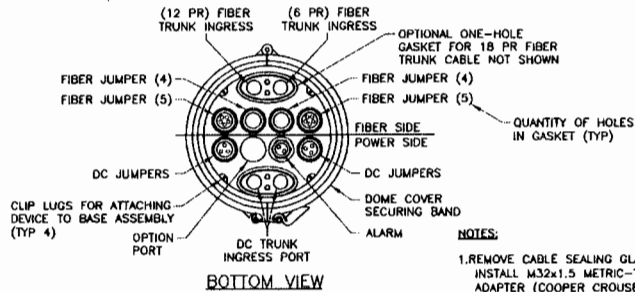
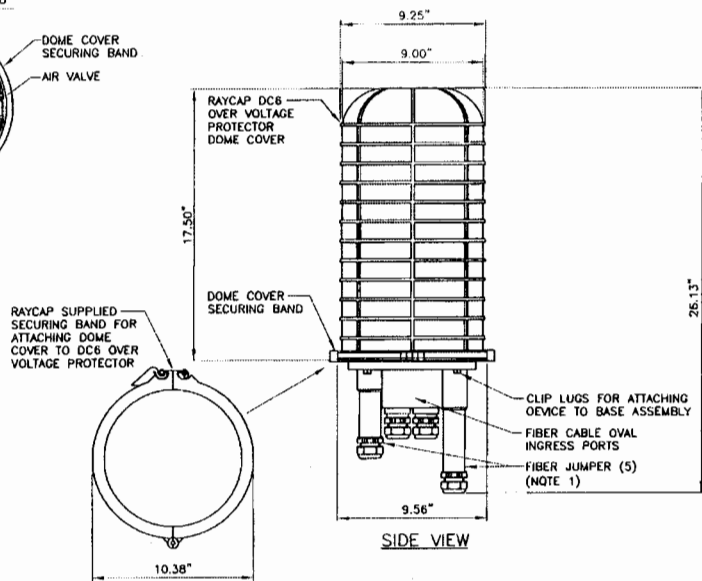
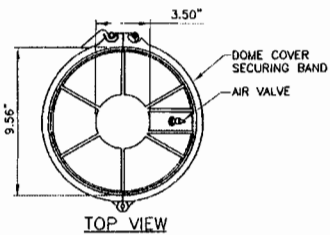
LTE 3C/4C/5C/6C
 SITE NO. NEL01754
 NESC HOMER
 FA# 13189481
 2280 PLATTE ROAD
 HOMER, NE 68030

DRAWING DESCRIPTION:

EQUIPMENT DETAILS

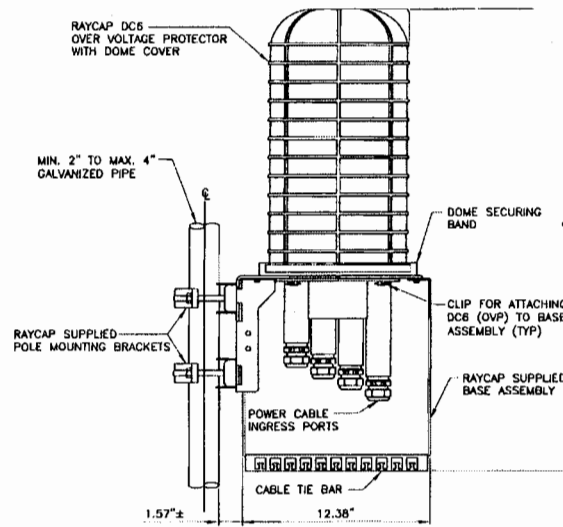
DRAWING NUMBER:

A6



RAYCAP DC6-48-60-18E
DC POWER OVER VOLTAGE PROTECTOR (OVP)

NOTES:
1. REMOVE CABLE SEALING GLAND AND INSTALL M32x1.5 METRIC-TO-1" NPT ADAPTER (COOPER CROUSE-HINES P/N CAP 740 994 OR EQUIVALENT MFR) WHEN CONNECTING CONDUIT TO OVP.



NOTES:
1. RAYCAP VIA AT&T SUPPLIES THE DC6 OVER VOLTAGE PROTECTOR AND PIPE MOUNTING BRACKETS. SUBCONTRACTOR SHALL SUPPLY THE PIPE.

RAYCAP DC6-48-60-18E
DC POWER OVER VOLTAGE PROTECTOR (OVP)
POLE MOUNT BASE ASSEMBLY

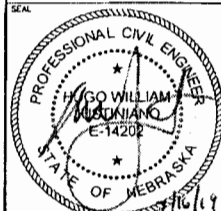
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3RD FLOOR
BLOOMINGTON, MN 55431

PREPARED BY:

complete wireless solutions
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REVISIONS

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B	05/04/18	ISSUED FOR RFLMW	YS
D	05/20/18	ISSUED FOR CONSTRUCTION	YS
1	07/17/19	ISSUED FOR CONSTRUCTION	NZ
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PROJECT LOCATION
LTE 3C/4C/5C/6C
SITE NO. NEL01754
NEBC HOMER
FA# 13189481
2290 PLATTE ROAD
HOMER, NE 68030

DRAWING DESCRIPTION:
EQUIPMENT
DETAILS

DRAWING NUMBER:
A6.1

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1. CONTRACTOR IS TO REFER TO AT&T'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION.
2. THE SIZE, HEIGHT AND DIRECTION OF THE ANTENNA SHALL BE ADJUSTED TO ACHIEVE THE AZIMUTHS SPECIFIED AND LIMIT SHADOWING AND TO MEET THE SYSTEM REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY THE HEIGHT OF THE ANTENNA WITH THE AT&T WIRELESS PROJECT MANAGER.
4. VERIFY TYPE AND SIZE OF TOWER LEG PRIOR TO ORDERING ANY ANTENNA MOUNT.
5. UNLESS NOTED OTHERWISE THE CONTRACTOR MUST PROVIDE ALL MATERIAL NECESSARY.
6. ANTENNA AZIMUTHS ARE DEGREES OFF THE TRUE NORTH, BEARING CLOCKWISE, IN WHICH ANTENNA FACE IS DIRECTED. ALL ANTENNAS (AND SUPPORTING STRUCTURES AS PRACTICAL) SHALL BE ACCURATELY ORIENTED IN THE SPECIFIED DIRECTION.
7. CONTRACTOR SHALL VERIFY ALL RF INFORMATION PRIOR TO CONSTRUCTION.
8. SWEEP TEST SHALL BE PERFORMED BY GENERAL CONTRACTOR AND SUBMITTED TO AT&T WIRELESS CONSTRUCTION SPECIALIST. TEST SHALL BE PERFORMED PER AT&T WIRELESS STANDARDS.
9. CABLE LENGTHS WERE DETERMINED BASED ON THE DESIGN DRAWING. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK.
10. CONTRACTOR TO USE ROSENBERGER FIBER LINE HANGER COMPONENTS (OR ENGINEER APPROVED EQUAL).

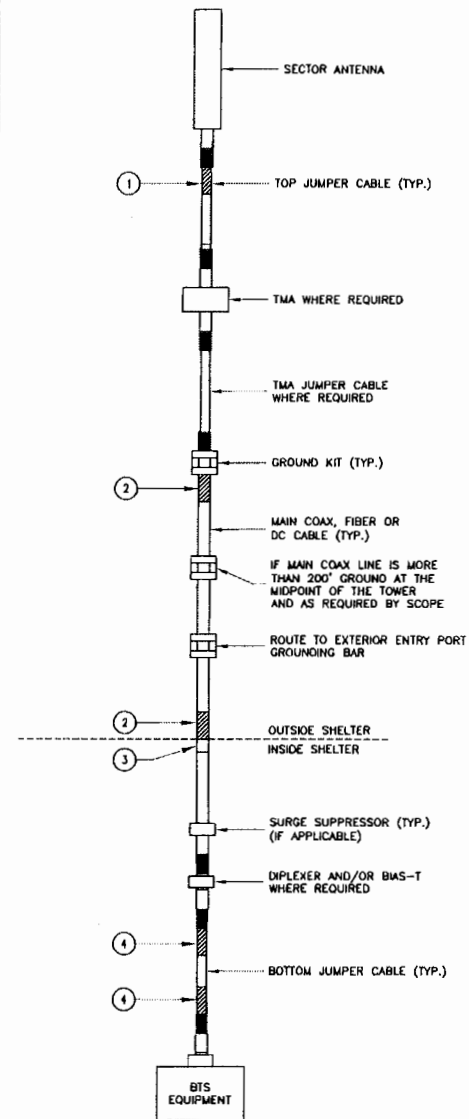
24"x36" SCALE: NTS 11"x17" SCALE: NTS **ANTENNA & CABLING NOTES** 4

RF, DC & COAX CABLE MARKING LOCATION TABLE	
NO.	LOCATIONS
①	EACH TOP-JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
②	EACH MAIN COAX SHALL BE COLOR CODED WITH 1) SET OF 3" WIDE BANDS NEAR THE TOP-JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTING BUILDING.
③	CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER.
④	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.

24"x36" SCALE: NTS 11"x17" SCALE: NTS **CABLE MARKING DIAGRAM** 3

1. THE ANTENNA SYSTEM COAX SHALL BE LABELED WITH VINYL TAPE.
2. THE STANDARD IS BASED ON EIGHT COLORED TAPS-RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE AND VIOLET. THESE TAPES MUST BE 3/4" WIDE & UV RESISTANT SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE AND SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR CONTRACTOR ON SITE.
3. USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLE BY SECTOR AND CABLE NUMBER AS SHOWN ON "CABLE COLOR CHART".
4. WHEN AN EXISTING COAXIAL LINE THAT IS INTENDED TO BE A SHARED LINE BETWEEN TECHNOLOGIES IS ENCOUNTERED, THE CONTRACTOR SHALL REMOVE THE EXISTING COLOR CODING SCHEME AND REPLACE IT WITH THE COLOR CODING STANDARD. IN THE ABSENCE OF AN EXISTING COLOR CODING AND TAGGING SCHEME OR WHEN INSTALLING PROPOSED COAXIAL CABLES, THIS GUIDELINE SHALL BE IMPLEMENTED AT THAT SITE REGARDLESS OF TECHNOLOGY.
5. ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) THREE WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
6. ALL COLOR BANDS INSTALLED AT THE TOP OF THE TOWER SHALL BE A MINIMUM OF 3" WIDE AND SHALL HAVE A MINIMUM OF 3/4" SPACE BETWEEN EACH COLOR.
7. ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE TO SIDE.
8. IF EXISTING CABLES AT THE SITE ALREADY HAVE COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED WITH THE NEW TECHNOLOGY, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.

24"x36" SCALE: NTS 11"x17" SCALE: NTS **CABLE MARKING NOTES** 2



24"x36" SCALE: NTS 11"x17" SCALE: NTS **CABLE COLOR CODING DIAGRAM** 1

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PROJECT LOCATION

LTE 3C/4C/5C/6C
SITE NO. NEL01754
NESC HOMER
FA# 13160481
2280 PLATTE ROAD
HOMER, NE 68030

DRAWING DESCRIPTION:

CABLE NOTES & COLOR CODING DETAILS

DRAWING NUMBER:

A7

24"x36" SCALE: NTS 11"x17" SCALE: NTS **NOT USED** 6

24"x36" SCALE: NTS 11"x17" SCALE: NTS **NOT USED** 5

GENERAL NOTES

1. INSPECTIONS

- A. GENERAL: DURING AND UPON COMPLETION OF THE WORK, ARRANGE AND PAY ALL ASSOCIATED INSPECTIONS OF ALL ELECTRICAL WORK INSTALLED UNDER THIS CONTRACT IN ACCORDANCE WITH THE CONDITIONS OF THE CONTRACT. INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND ORDINANCES, UTILITY COMPANY REQUIREMENTS, AND THE LATEST EDITION OF NEC, NFC, NEMA, OSHA, SBC, AND UL.
- B. INSPECTIONS REQUIRED: AS PER THE LAWS AND REGULATIONS OF THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
- C. INSPECTION AGENCY: APPROVED BY THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
- D. CERTIFICATES: SUBMIT ALL REQUIRED INSPECTION CERTIFICATES.

2. HANGERS AND SUPPORTS

- A. MATERIALS: ALL HANGERS, SUPPORTS, FASTENERS AND HARDWARE SHALL BE STAINLESS STEEL OR OF EQUIVALENT CORROSION RESISTANCE BY TREATMENT OR INHERENT PROPERTY, AND SHALL BE MANUFACTURED PRODUCTS DESIGNED FOR THE APPLICATION. PRODUCTS FOR OUTDOOR USE SHALL BE HOT DIP GALVANIZED.
- B. TYPES: HANGERS, STRAPS, RISER SUPPORTS, CLAMPS, U-CHANNEL, THREADED RODS, ETC. AS INDICATED OR REQUIRED.
- C. INSTALLATION: RIGIDLY SUPPORT AND SECURE ALL MATERIALS, RACEWAY AND EQUIPMENT TO BUILDING STRUCTURE USING HANGERS, SUPPORTS AND FASTENERS SUITABLE FOR THE USE, MATERIALS AND LOADS ENCOUNTERED. PROVIDE ALL NECESSARY HARDWARE. PROVIDE CONDUIT SUPPORTS AT MAXIMUM 5 FT. O.C.
- D. STRUCTURAL MEMBERS: DO NOT CUT, DRILL, OR WELD ANY STRUCTURAL MEMBER EXCEPT AS SPECIFICALLY APPROVED BY THE ENGINEER.
- E. MISCELLANEOUS SUPPORTS: PROVIDE ANY ADDITIONAL STRUCTURAL SUPPORT STEEL BRACKETS, ANGLES, FASTENERS AND HARDWARE AS REQUIRED TO ADEQUATELY SUPPORT ALL ELECTRICAL MATERIALS AND EQUIPMENT.
- F. ONE HOLE STRAPS SHALL NOT BE USED FOR CONDUITS LARGER THAN 3/4 INCH.

3. ENCLOSURES

- A. NEMA JR

4. HOLES, SLEEVES AND OPENINGS

- A. GENERAL: PROVIDE ALL HOLES, SLEEVES, AND OPENINGS REQUIRED FOR THE COMPLETION OF WORK AND RESTORE ALL SURFACES DAMAGED TO MATCH SURROUNDING SURFACES.

5. CUTTING AND PATCHING

- A. GENERAL: PROVIDE ALL CUTTING, DRILLING, FITTING AND PATCHING NECESSARY FOR ACCOMPLISHING THE WORK. THIS INCLUDES ANY AND ALL WORK NECESSARY TO UNCOVER WORK TO PROVIDE FOR THE INSTALLATION OF ILL TIMED WORK, REMOVE AND REPLACE DEFECTIVE WORK AND WORK NOT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- B. REPAIRS: REPAIR ANY AND ALL DAMAGE TO WORK OF OTHER TRADES CAUSED BY CUTTING AND PATCHING OPERATIONS, USING SKILLED MECHANICS OF THE TRADES INVOLVED.

6. RACEWAY SYSTEMS

- A. ALL ABOVE GRADE CONDUIT AND ALL CONDUIT ELBOWS SHALL BE RIGID GALVANIZED STEEL UNLESS NOTED OTHERWISE.

7. CONDUCTORS

- A. USE 98% CONDUCTIVITY COPPER WITH TYPE XHHW-2 INSULATION, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG, STRANDED CONDUCTORS FOR WIRE LARGER THAN NO. 8. USE PRESSURE-TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER, SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.

8. GROUNDING SYSTEM

- A. INSTALLATION: INSTALL AS REQUIRED PER SPECIFICATION. CONTRACTOR REPRESENTATIVE WILL INSPECT EXOTHERMIC WELDS AND CONDUCT MEGGER TEST PRIOR TO BURIAL. MAXIMUM 5 OHMS RESISTANCE IS REQUIRED, WHEN MORE THAN (4) ADDITIONAL GROUNDS ARE REQUIRED, VERIFY OHM LEVEL PRIOR TO CONSTRUCTION. USE CLEAN SAND AND CLAY BACKFILL FOR BURIED GROUND CONDUCTORS.


9. CHECKOUT, TESTING AND ADJUSTING

- A. CORRECTION/REPLACEMENT: AFTER TESTING BY CONTRACTOR, OWNER OR ENGINEER, CORRECT ANY DEFICIENCIES AND REPLACE MATERIALS AND EQUIPMENT SHOWN TO BE DEFECTIVE OR UNABLE TO PERFORM AT DESIGN OR RATED CAPACITY.
- B. POWER CONDUCTORS: CONTRACTOR SHALL CONDUCT A CONTINUITY & INSULATION TEST ON CONDUCTORS BETWEEN SERVICE DISCONNECT SWITCH & POWER CABINET.
- C. WHEN SITE POWER IS DERIVED FROM 3 PHASE SOURCE, LOAD READINGS WILL BE TAKEN AND RECORDED TO MAINTAIN A BALANCED LOAD AT THE PRIMARY SOURCE. RECORDS SHALL BE TURNED IN TO THE OWNER'S REPRESENTATIVE.

RF NOTES:

1. ACTUAL LENGTHS SHALL BE DETERMINED PER SITE CONDITION BY SUBCONTRACTOR.
2. THE DESIGN IS BASED ON RF DATA SHEETS, SIGNED AND APPROVED.
3. RADIO SIGNAL CABLE AND RACEWAY SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC, NFPA 70), CHAPTER 8.
4. ALL SPECIFIED MATERIAL FOR EACH LOCATION (E.G. OUTDOORS—OCCUPIED, INDOORS—UNOCCUPIED, PLENUMS, RISER SHAFTS, ETC.) SHALL BE APPROVED, LISTED, OR LABELED AS REQUIRED BY THE NEC.
5. RADIO SIGNAL CABLE SHALL BE SUPPORTED AT MINIMUM OF EVERY THREE (3) FEET EXCEPT INSIDE MONOPOLES OR LATTICE TOWERS WHERE CABLE AND CONNECTOR MANUFACTURER'S SUPPORT RECOMMENDATIONS SHALL BE FOLLOWED. RF JUMPERS SHALL BE SUPPORTED AT A MAXIMUM OF TWO (2) FEET, AND WITHIN 18" OF CONNECTOR. MANUFACTURER RECOMMENDED CABLE SUPPORT ACCESSORIES SHALL BE USED.
6. THE OUTDOOR CABLE SUPPORT SYSTEM SHALL BE PROVIDED WITH AN ICE SHIELD TO SUPPORT AND PROTECT ANTENNA CABLE RUNS.
7. DRIP LOOPS SHALL BE REQUIRED ON ALL OUTSIDE CABLES. CABLES SHALL BE SLOPED AWAY FROM BUILDING OR OUTDOOR BITS CABINETS TO PREVENT WATER FROM ENTERING THROUGH THE COAXIAL CABLE PORT.
8. ALL FEEDER LINE AND JUMPER CONNECTORS SHALL BE 7/16 DIN CABLE CONNECTORS THAT MEET IP68 STANDARDS.
9. 7/16 DIN CONNECTORS REQUIRE NO ADDITIONAL WEATHER PROOFING IN INDOOR APPLICATIONS IF INSTALLED AND TORQUED PROPERLY. IN OUTDOOR APPLICATIONS, WEATHER PROOFING IS REQUIRED AND THE FOLLOWING PROCEDURE SHOULD BE FOLLOWED.
10. USING WEATHERPROOFING KIT APPROVED BY CABLE MANUFACTURER AND CONTRACTOR. START TAPE APPROXIMATELY 5 INCHES FROM THE CONNECTOR AND WRAP 2 INCHES TOWARD THE CONNECTOR, THEN REVERSE THE TAPE SO THAT THE STICKY SIDE IS UP. TAPE OVER THE CONNECTOR OR SURGE ARRESTOR UNTIL THREE (3) TO FOUR (4) INCHES BEYOND THE CONNECTOR AND REVERSE AGAIN WITH THE STICKY SIDE DOWN FOR ANOTHER INCH OR TWO. ADD THE BUTYL RUBBER AND FINISH WITH A FINAL LAYER OF TAPE.
11. ANTENNAS AND COAX SHALL BE PAINTED, WHEN REQUIRED, BY THE LANDLORD OR AUTHORITY HAVING JURISDICTION IN ACCORDANCE WITH ANTENNA MANUFACTURERS' SURFACES' PREPARATION AND PAINTING REQUIREMENTS.
12. CABLE SHIELDS, AND TOWER CONDUITS SHALL BE GROUNDED AT THE TOP OF THE TOWER, WITHIN 10 FEET OF THEIR CONNECTORS, AND AT THE BOTTOM OF THE TOWER ABOUT 6 INCHES BEFORE THEY TURN TOWARD THE FACILITY. THEY SHALL BE GROUNDED AT THE MIDPOINT OF THE TOWERS THAT ARE BETWEEN 100 FEET AND 200 FEET HIGH, AND AT INTERVALS OF 100 FEET OR LESS ON TOWERS THAT ARE HIGHER THAN 200 FEET.
13. APPROVED GROUNDING KITS, WHICH INCLUDE GROUNDING STRAPS, SHALL BE USED TO GROUND THE COAXIAL CABLE SHIELDS, AND CONDUITS. THE GROUND CONDUCTORS FOR THE KITS AT THE TOP OF THE TOWER, AND IN THE MIDDLE SECTION OF THE TOWER, ARE BONDED DIRECTLY TO GROUND BAR USING EXOTHERMIC OR COMPRESSION CONNECTIONS.
14. ALL RADIO SIGNAL CABLE SHALL BE LABELED PER MARKET REQUIREMENTS.
15. ANTENNA FEED LINE SYSTEM SWEEP TESTING SHALL BE PERFORMED AND REPORTED IN ACCORDANCE WITH CARRIER REQUIREMENTS. CONTRACTOR WILL NOT ACCEPT A RADIO SIGNAL CABLE INSTALLATION WITH UNSATISFACTORY SWEEP TEST RESULTS. THERE SHALL ALSO BE A HARD COPY OF SWEEPS LEFT AT SITE UPON COMPLETION OF SWEEP TEST.

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MINGO WILLIAMS
E-14207
STATE OF NEBRASKA

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A	08/26/18	ISSUED FOR REVIEW	YS
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D	05/20/19	ISSUED FOR CONSTRUCTION	YS
1	07/17/19	ISSUED FOR CONSTRUCTION	AJZ
2			
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PROJECT LOCATION

LTE 3G/4G/5G/6G
SITE NO. NEL01754
NESC HOMER
FA# 13169481
2250 PLATTE ROAD
HOMER, NE 68030

DRAWING DESCRIPTION:

GROUNDING & RF NOTES

DRAWING NUMBER:

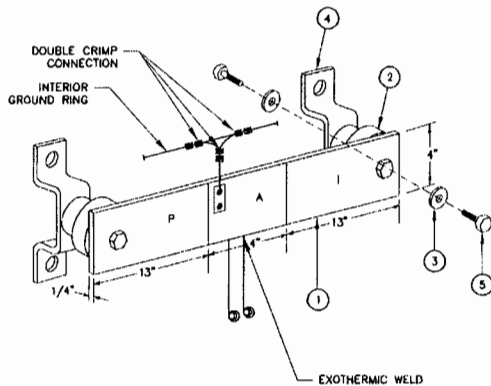
E1

NOTES:

P-SECTION:
THE PRODUCERS, OR "P" SECTION IS FOR CONNECTING SURGE PRODUCERS. ALL DC POWER EQUIPMENT, SURGE ARRESTORS, AND NON-COMMUNICATIONS CABINETS AND FRAMES ARE GROUNDED TO THE "P" SECTION. AN EXCEPTION IS BATTERY STANDS, LIKE THOSE USED FOR THE LARGE TWO-VOLT BATTERY ARRAYS, SUCH AS ABSOLUTE BATTERIES. THE DC POWER PLANT RETURN BUSS MASTER GROUND AND THE CABLE ENTRY PORT (MATCH PLATE) INSIDE GROUND ARE ALSO CONNECTED TO THIS SECTION.

A-SECTION:
THE ABSORBERS, OR "A" SECTION ACTS LIKE A SUMP TO CARRY OFF THE SURGE CURRENT FROM THE "P" SECTION AND TO ISOLATE THESE SURGES FROM THE "I" SECTION, WHERE THE ISOLATED COMMUNICATIONS EQUIPMENT IS CONNECTED. THE HALO INTERCONNECTION AND THE TWO HOME RUNS TO THE GBR ARE CONNECTED TO THIS SECTION.

I-SECTION:
"I" STANDS FOR ISOLATED EQUIPMENT. THIS IS FOR GROUNDING THE ISOLATED BONDING NETWORK WHERE ALL COMMUNICATIONS PATH EQUIPMENTS CONNECTED.



LEGEND

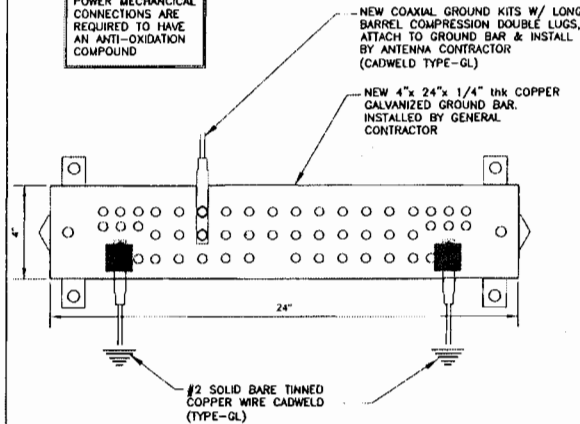
- 1 - COPPER GROUND BAR, 1/4" x 13" x 4" x 13"
- 2 - INSULATORS (NO INSULATORS ON TOWER)
- 3 - 5/8" LOCK WASHERS
- 4 - MOUNTING BRACKET (MOUNT HORIZONTAL ON VERTICAL CABLE LADDER)
- 5 - 5/8-11 X 1" H.H.C.S.BOLTS

24"x36" SCALE: NTS
11"x17" SCALE: NTS

GROUND BAR DETAIL 1

NOTE: ALL GROUNDING AND POWER MECHANICAL CONNECTIONS ARE REQUIRED TO HAVE AN ANTI-OXIDATION COMPOUND

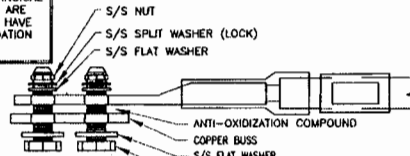
NOTE: NO OVERLAPPING WASHERS ALLOWED ON ALL MECHANICAL CONNECTIONS.



24"x36" SCALE: NTS
11"x17" SCALE: NTS

EQUIPMENT GROUND CONNECTION 4

NOTE: ALL GROUNDING AND POWER MECHANICAL CONNECTIONS ARE REQUIRED TO HAVE AN ANTI-OXIDATION COMPOUND



NOTES:

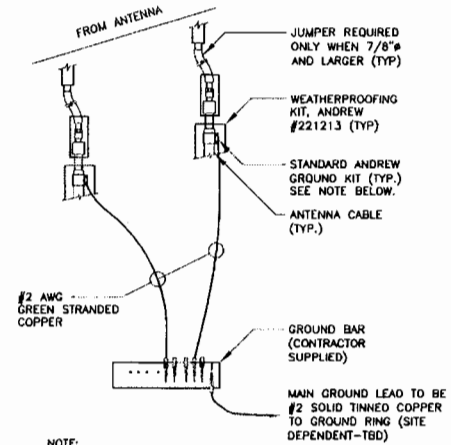
1. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH ANTI-OXIDIZATION COMPOUND BEFORE MATING. (ALL BOLTS ARE TO BE INSTALLED UP AND OUT)
2. YOU MAY UTILIZE THE SAME HARDWARE TO CONNECT TWO LUGS TO THE SAME POSITION BUT THEY MUST SANDWICH THE GROUND BAR BETWEEN THEM AND NOT STACK THEM ON TOP OF EACH OTHER ON THE SAME SIDE OF BUS BAR
3. FLAT WASHERS MUST BE THE CORRECT DIAMETER TO PREVENT OVERLAP (TYPICALLY SAME OD AS THE SPLIT WASHER)
4. CONNECTIONS MUST BE TIGHT. ENSURE THE SPLIT WASHER IS FULLY COMPRESSED.

NOTE:
INDOOR LUGS REQUIRE INSPECTION WINDOWS. OUTDOOR LUGS DO NOT REQUIRE INSPECTION WINDOWS.

24"x36" SCALE: NTS
11"x17" SCALE: NTS

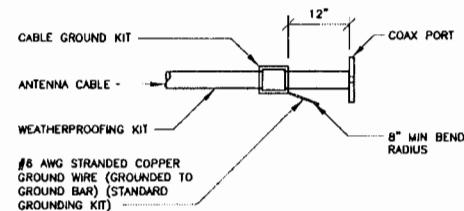
GROUND LUG DETAIL 2

NOTE: NO OVERLAPPING WASHERS ALLOWED ON ALL MECHANICAL CONNECTIONS.



24"x36" SCALE: NTS
11"x17" SCALE: NTS

CONNECTION OF GROUND WIRES TO GROUNDING BARS (TOWER/ROOFTOP) 5



24"x36" SCALE: NTS
11"x17" SCALE: NTS

CABLE GROUNDING KIT CONNECTION TO ANTENNA CABLE 3

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PROJECT LOCATION

**LTE 3C/4C/5C/6C
SITE NO. NEL01754**

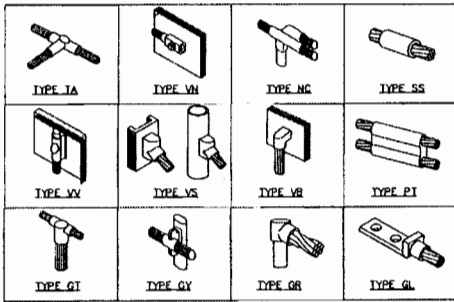
NESC HOMER
FA# 13169481
2290 PLATTE ROAD
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DRAWING DESCRIPTION:

GROUNDING DETAILS

DRAWING NUMBER:

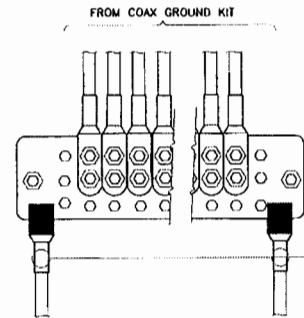
E2



NOTE: CADWELD "TYPES" SHOWN ABOVE ARE EXAMPLES - CONSULT WITH PROJECT MANAGER FOR SPECIFIC TYPES OF CADWELDS TO BE USED FOR THIS PROJECT.

24"x36" SCALE: NTS
11"x17" SCALE: NTS

CADWELD DETAILS 3



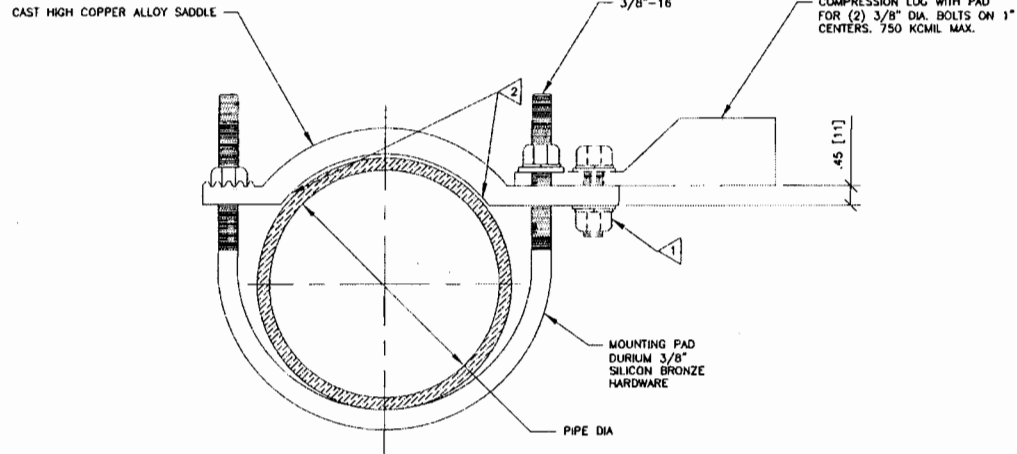
NOTE: NO OVERLAPPING WASHERS ALLOWED ON ALL MECHANICAL CONNECTIONS.

(2) #2 AWG SOLID TINNED COPPER GROUND LEADS EXOTHERMICALLY WELDED TO GROUND BAR AND ROUTED DOWN TO EQUIPMENT/SHELTER GROUND RING IN LIQUIDTITE NON-METALLIC CONDUIT

NOTES:
1. MAIN GROUND BUSS BAR IS LOCATED BELOW COAX ENTRY PORT OR BELOW COAX AT END OF ICE BRIDGE FOR OUTDOOR EQUIPMENT.

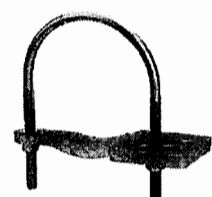
24"x36" SCALE: NTS
11"x17" SCALE: NTS

MAIN GROUND BUSS BAR DETAIL 1



1 DURILUM (SILICON BRONZE) HARDWARE KIT (CAT # TMH 289). (ORDER SEPARATELY) INCL: (1) 3Bx125 HEB, (1) 3BC HEN, (1) 3B SW, (1) 3B FW

2 PREPARE PIPE SURFACE TO VIRGIN METAL SHINE UNDER BRASS SADDLE CONTACT AREA, APPLY CLAMP SADDLE TO SHINING METAL SURFACE TIGHTENING TORQUE 240 IN*LB. [27.1Nm] SEAL SADDLE PERIMETER BY APPLYING OXIDE INHIBITING COMPOUND, BURNDY PEN-E OR EQUIVALENT.



BURNDY TYPE CAR-TC CLAMP DETAIL 2

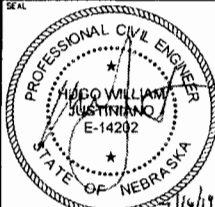
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FA# 13168481
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DRAWING DESCRIPTION:
**GROUNDING
DETAILS**

DRAWING NUMBER:
E3