



CROWN CASTLE ID #
LV005



CROWN CASTLE NG WEST LLC
2055 SOUTH STEARMAN DRIVE
CHANDLER, ARIZONA 85286

PROJECT INFORMATION:

CROWN CASTLE ID #
LV005

10480 OXFORD CROSS DRIVE
LAS VEGAS, NEVADA 89144

CURRENT ISSUE DATE:

09/04/19

ISSUED FOR:

PROPOSED WORK

REV.: DATE: DESCRIPTION: BY:

REV.	DATE	DESCRIPTION	BY
4	09/04/19	BP COMMENT	C.P.
3	07/23/19	POWER REVISION	J.Z.
2	02/04/19	POLE REVISION	R.S.
1	10/15/18	100% PERMITTING	C.P.
0	09/17/18	90% PERMITTING	R.C.

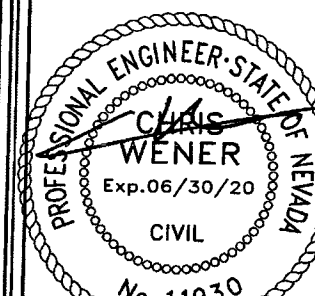
PLANS PREPARED BY:



DGS

CONSULTING ENGINEERING SERVICES LLC

LICENSURE:



SEP 04 2019

SHEET TITLE:

TITLE SHEET

SHEET NUMBER: REVISION:

C1 4

107V8012-FIB

2ND

6/10/19

419-01477

Redlined Construction Drawings

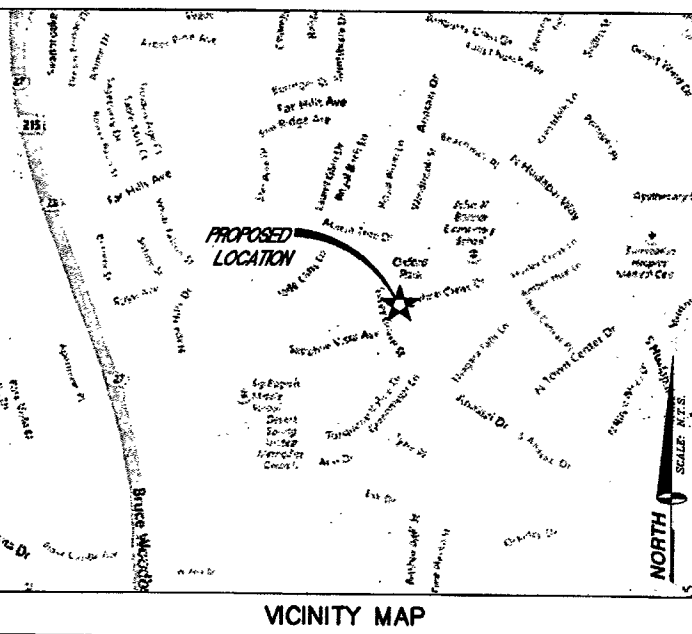
Theresa Sianez

Theresa Sianez Date
Spectrum Services 10/28/19

10480 OXFORD CROSS DRIVE
LAS VEGAS, NEVADA 89144

REPLACEMENT OF AN EXISTING CONCRETE LIGHT POLE WITH NEW POLE TOP ANTENNA AND RADIO

TOTAL ENCROACHMENT NOTE



APPLICANT/LESSEE
CROWN CASTLE NG WEST LLC
2055 SOUTH STEARMAN DRIVE
CHANDLER, ARIZONA 85286

CONTACT: MATT BOND
MOBILE: (480) 586-4306

PROPERTY INFORMATION
OWNER: N/A
OCCUPANCY TYPE: U
CONSTRUCTION TYPE: V-B
CURRENT ZONING: RESIDENTIAL PLANNED DEVELOPMENT DISTRICT (R-PD7)
JURISDICTION: CITY OF LAS VEGAS
APN: 137-25-397-003
LATITUDE: 36.179
LONGITUDE: -115.327
HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.

PROJECT SUMMARY

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

- INTERNATIONAL BUILDING CODE 2018 W/STATE AMENDMENTS
- INTERNATIONAL EXISTING BUILDING CODE 2018 W/STATE AMENDMENTS
- INTERNATIONAL ENERGY CONSERVATION CODE 2018
- UNIFORM MECHANICAL CODE 2018
- UNIFORM PLUMBING CODE 2018
- NATIONAL ELECTRIC CODE 2017
- INTERNATIONAL FIRE CODE 2018
- ANSI/EIA-222-G LIFE SAFETY CODE
- LOCAL BUILDING CODE(S)
- CITY AND/OR COUNTY ORDINANCES

CODE COMPLIANCE

SPECIAL INSPECTIONS ARE REQUIRED FOR THE TYPES OF WORK DESCRIBED BELOW:

- HIGH-STRENGTH BOLTS. (IF REQUIRED)
- WELDING: FIELD WELDING OF STRUCTURAL STEEL AND REINFORCING STEEL. (IF REQUIRED)
- STRUCTURAL STEEL. (IF REQUIRED)
- CONCRETE: REINFORCING STEEL AND PLACEMENT.
- CONCRETE WITH DESIGN GREATER THAN 2500 PSI.
- PILE, PIER OR CAISSON FOUNDATIONS.
- SOILS: SITE PREPARATION, FILL PLACEMENT, IN-PLACE DENSITY.

SPECIAL INSPECTIONS

CIVIL ENGINEER
SPECTRUM SERVICES, INC.
4550 WEST OQUENDO ROAD
LAS VEGAS, NEVADA 89118
CHRIS WENER
PHONE: (702) 367-7705
FAX: (702) 367-8733

ELECTRICAL ENGINEER
DGS CONSULTING ENGINEERING SERVICES LLC
9811 W. CHARLESTON BOULEVARD, SUITE 2539
LAS VEGAS, NEVADA 89117
DEREK G. STEFUREAC
PHONE: (702) 885-1552

PROJECT TEAM

SHEET	DESCRIPTION	REV.
C1	TITLE SHEET	4
C2	SITE PHOTO, GENERAL & CONSTRUCTION NOTES	4
C3	SITE PLAN	4
C4	EXISTING AND PROPOSED WEST ELEVATIONS	4
C5	CONSTRUCTION DETAILS	4
C6	CONCRETE FOUNDATION DETAILS	4
G1	GROUNDING LAYOUT, DETAILS & NOTES	4

FOUNDATION AMERON CONCRETE POLES - FOUNDATION DESIGN

AMERON DRAWING NO: 1811-033

ISSUED FOR:

SHEET INDEX	PERMIT
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CITY OF LAS VEGAS
APPROVED FOR CONSTRUCTION

THIS APPROVAL IS FOR WORK IN CITY OF LAS VEGAS EASEMENTS ONLY. OBTAINING PERMISSION OR EASEMENTS FOR WORK SHOWN ON PRIVATE PROPERTY IS THE RESPONSIBILITY OF THE UTILITY.

[Signature] 9/16/19
APPROVAL DATE

Redlined Construction Drawings

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Theresa Sianez Date
Spectrum Services 10/28/19



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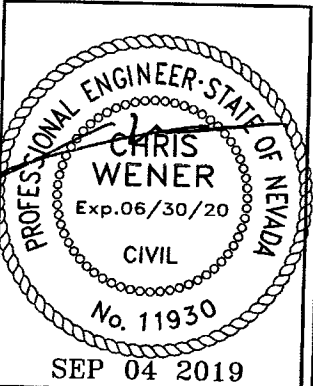
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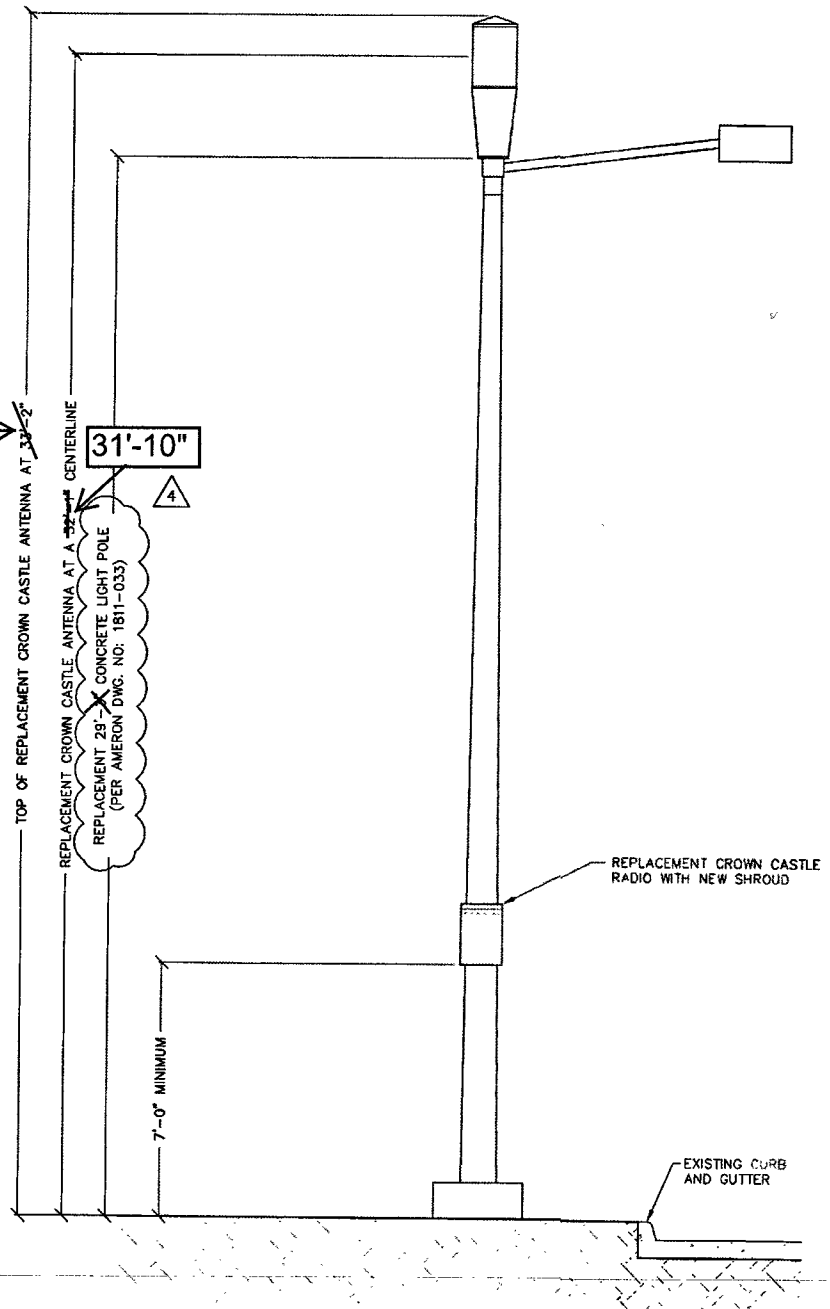


SHEET TITLE:

EXISTING AND PROPOSED
WEST ELEVATION

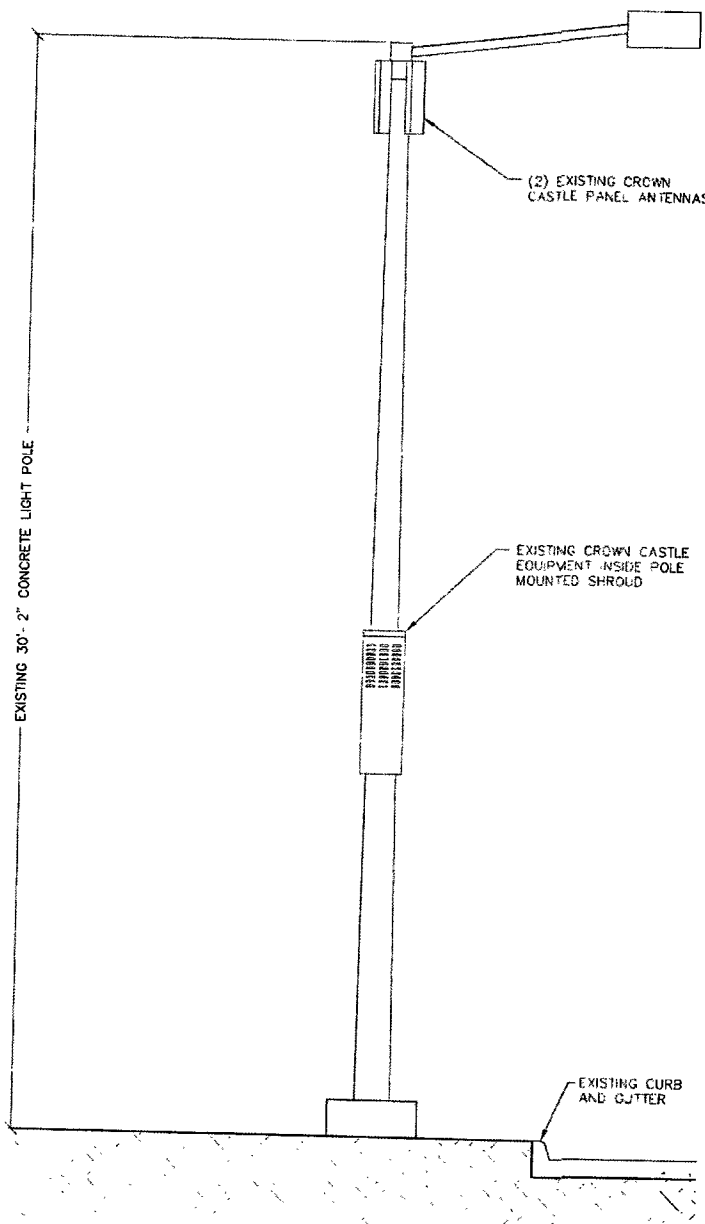
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C4 4



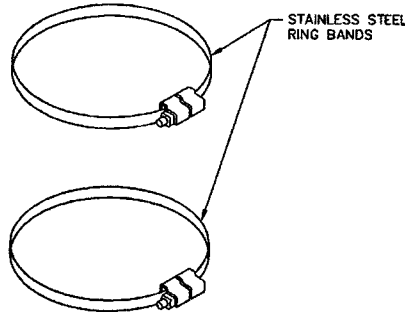
PROPOSED WEST ELEVATION

11" X 17" SCALE 24" X 36" SCALE
1" = 5' 1" = 2'-6" 2



EXISTING WEST ELEVATION

11" X 17" SCALE 24" X 36" SCALE
1" = 5' 1" = 2'-6" 1

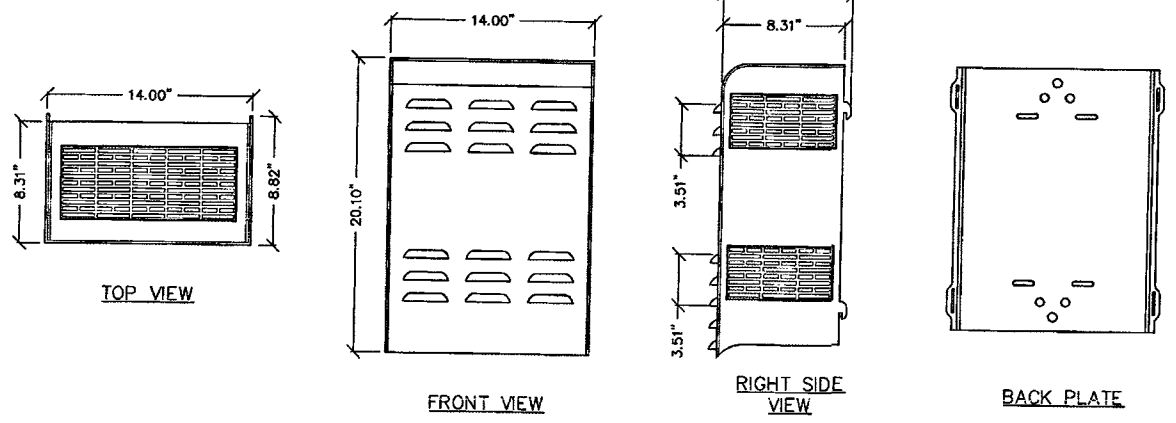
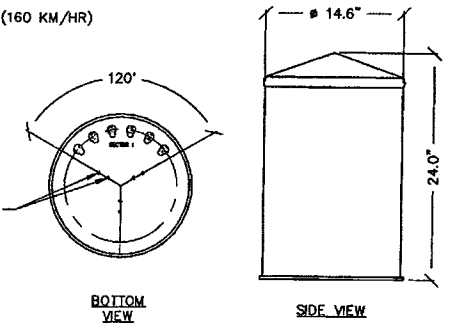


AMPHENOL 2C2U3MT360X06FY70 ANTENNA SPECIFICATIONS
 INPUT CONNECTOR (2X) 4.3/10 OR 7/16-DIN / FEMALE / BOTTOM
 DIMENSION (H x DIA.) 24.0 x 14.6 IN.
 ANTENNA WEIGHT 22.1 LBS
 LIGHTNING PROTECTION DIRECT GROUND

WIND SURVIVAL SPEED 241 KM/HR - 150 MPH
 WIND LOAD @ 100 MPH (160 KM/HR) 191 N - 43 LBF

#4" & 6" @ BCD FOR 3/8"-16 UNC MOUNTING STUDS (X6) AT 120° APART THEY EXTEND 1 1/4" BELOW PLATE FOR MOUNTING

NOTES:
 1. CONNECTOR HOLES ARE 2" FROM CENTER TO CENTER APART IN EACH SECTOR



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 SEP 04 2019

SHEET TITLE:
 CONSTRUCTION DETAILS

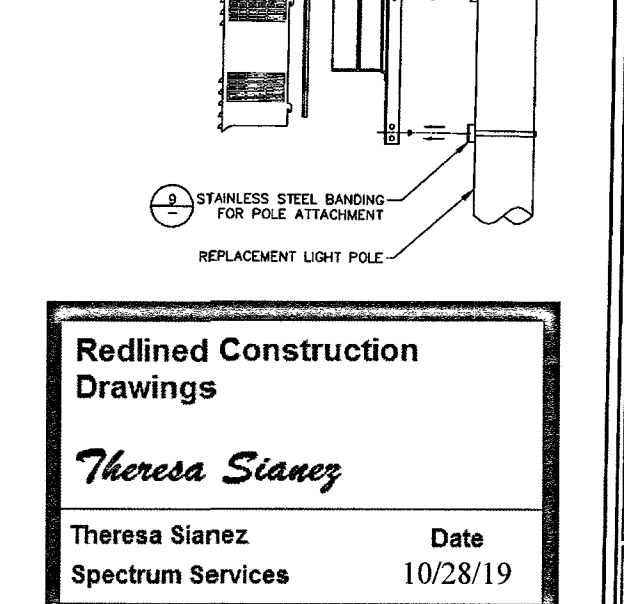
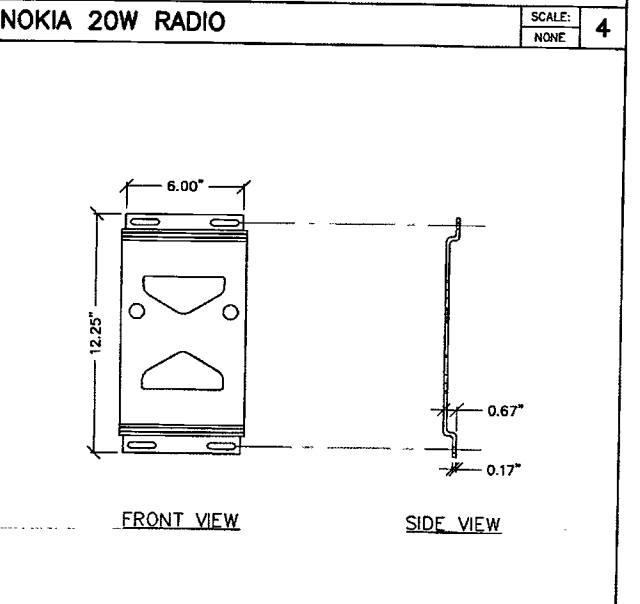
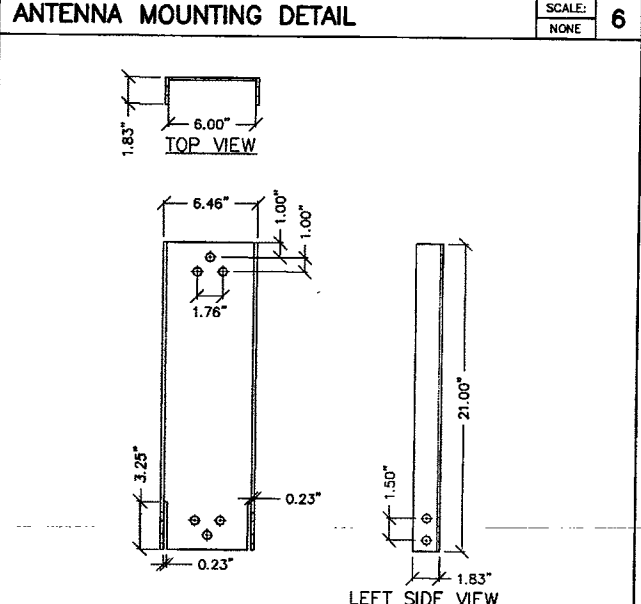
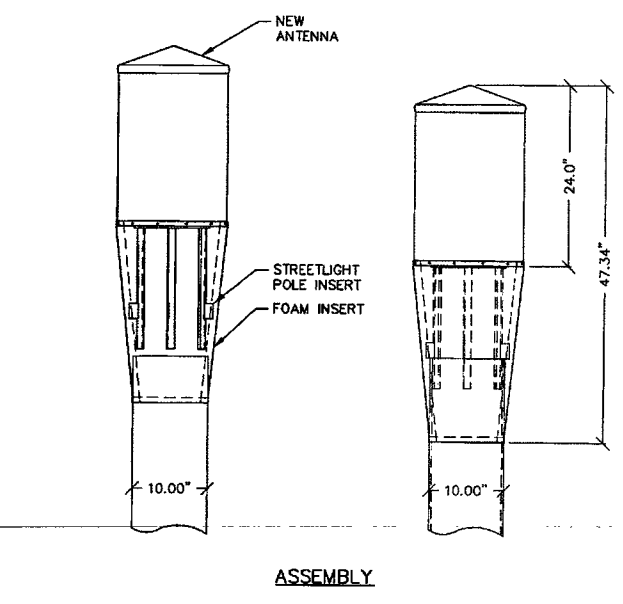
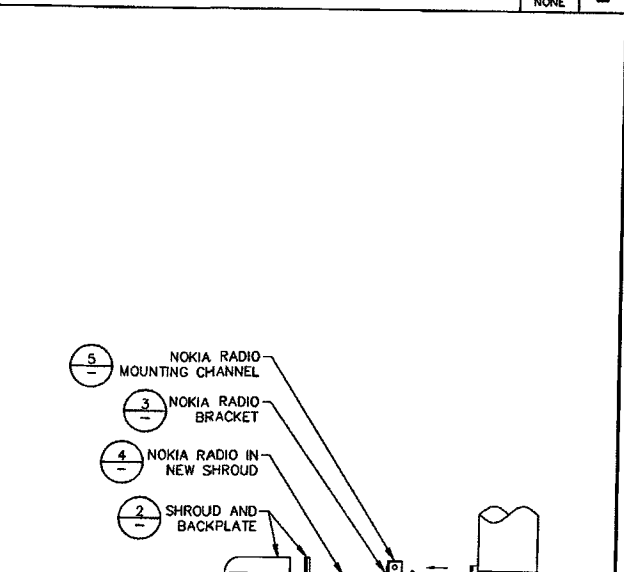
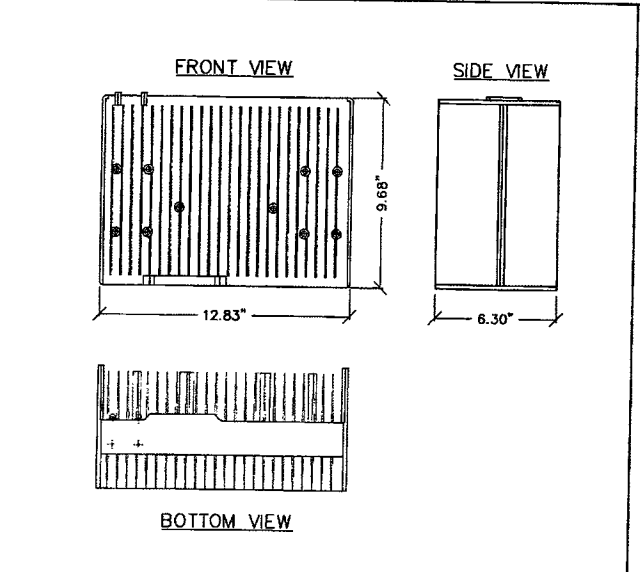
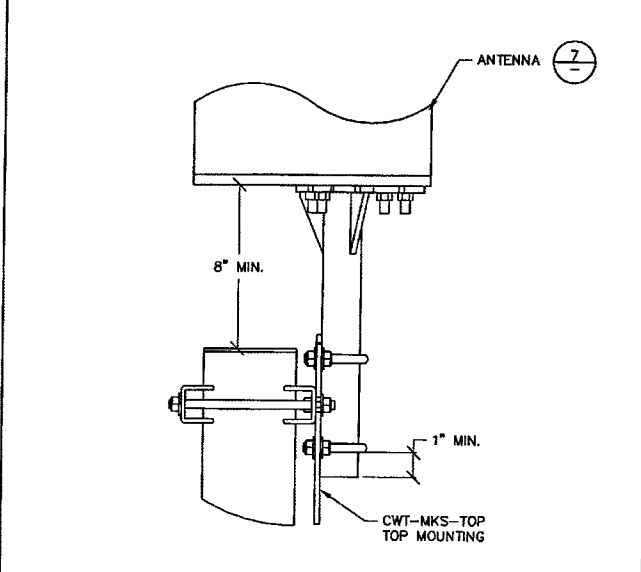
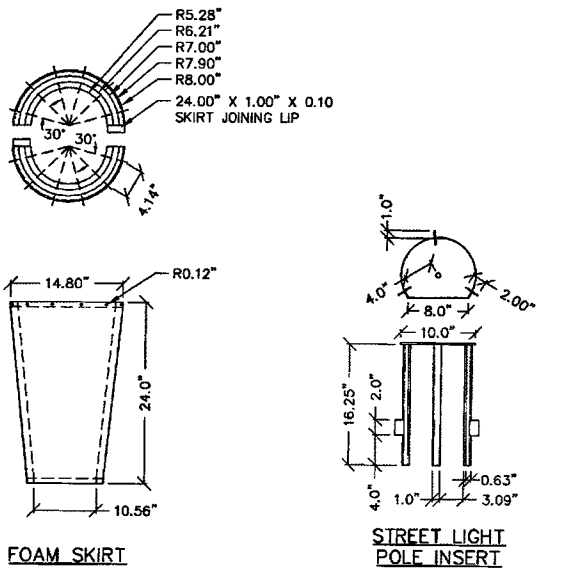
SHEET NUMBER: REVISION:

C5 4

STAINLESS STEEL RING BAND SCALE: NONE 9

ANTENNA DETAIL SCALE: NONE 7

RADIO SHROUD SCALE: NONE 2



Redlined Construction Drawings
Theresa Sianez
 Theresa Sianez Date 10/28/19
 Spectrum Services

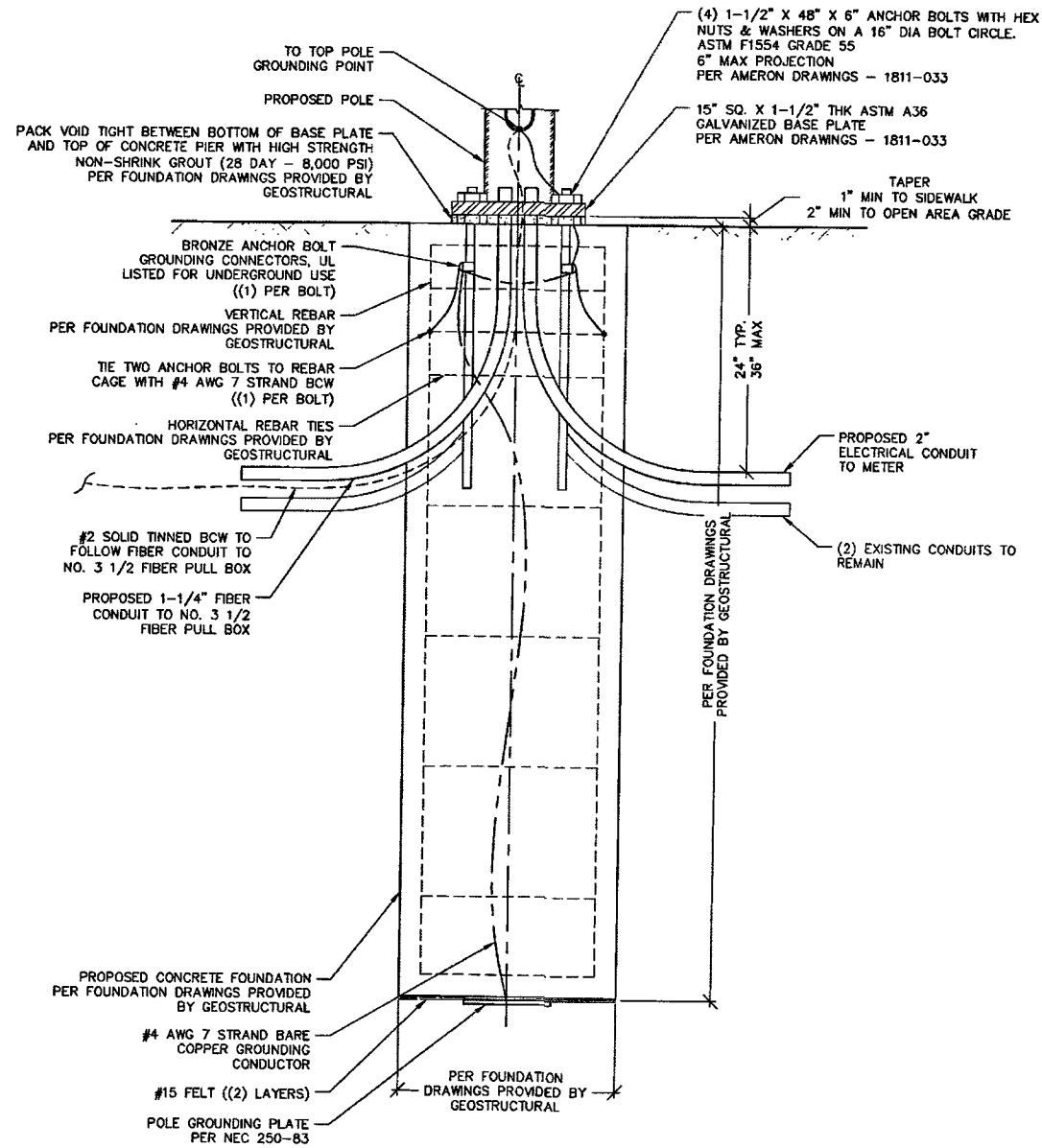
ANTENNA SHROUD SCALE: NONE 8

NOKIA 20W RADIO MOUNTING CHANNEL SCALE: NONE 5

NOKIA 20W RADIO BRACKET SCALE: NONE 3

SHROUD ASSEMBLY SCALE: NONE 1

*SEE STRUCTURALS FOR ADDITIONAL INFORMATION



PACK VOID TIGHT BETWEEN BOTTOM OF BASE PLATE AND TOP OF CONCRETE PIER WITH HIGH STRENGTH NON-SHRINK GROUT (28 DAY - 8,000 PSI) PER FOUNDATION DRAWNGS PROVIDED BY GEOSTRUCTURAL

(4) 1-1/2" X 48" X 6" ANCHOR BOLTS WITH HEX NUTS & WASHERS ON A 16" DIA BOLT CIRCLE. ASTM F1554 GRADE 55 6" MAX PROJECTION PER AMERON DRAWNGS - 1811-033

15" SQ. X 1-1/2" THK ASTM A36 GALVANIZED BASE PLATE PER AMERON DRAWNGS - 1811-033

TAPER 1" MIN TO SIDEWALK 2" MIN TO OPEN AREA GRADE

BRONZE ANCHOR BOLT GROUNDING CONNECTORS, UL LISTED FOR UNDERGROUND USE ((1) PER BOLT) PER FOUNDATION DRAWNGS PROVIDED BY GEOSTRUCTURAL

VERTICAL REBAR PER FOUNDATION DRAWNGS PROVIDED BY GEOSTRUCTURAL

TIE TWO ANCHOR BOLTS TO REBAR CAGE WITH #4 AWG 7 STRAND BCW ((1) PER BOLT)

HORIZONTAL REBAR TIES PER FOUNDATION DRAWNGS PROVIDED BY GEOSTRUCTURAL

#2 SOLID TINNED BCW TO FOLLOW FIBER CONDUIT TO NO. 3 1/2 FIBER PULL BOX

PROPOSED 1-1/4" FIBER CONDUIT TO NO. 3 1/2 FIBER PULL BOX

PROPOSED 2" ELECTRICAL CONDUIT TO METER

(2) EXISTING CONDUITS TO REMAIN

PER FOUNDATION DRAWNGS PROVIDED BY GEOSTRUCTURAL

PROPOSED CONCRETE FOUNDATION PER FOUNDATION DRAWNGS PROVIDED BY GEOSTRUCTURAL

#4 AWG 7 STRAND BARE COPPER GROUNDING CONDUCTOR

#15 FELT ((2) LAYERS)

POLE GROUNDING PLATE PER NEC 250-83

PER FOUNDATION DRAWNGS PROVIDED BY GEOSTRUCTURAL

NOTES:

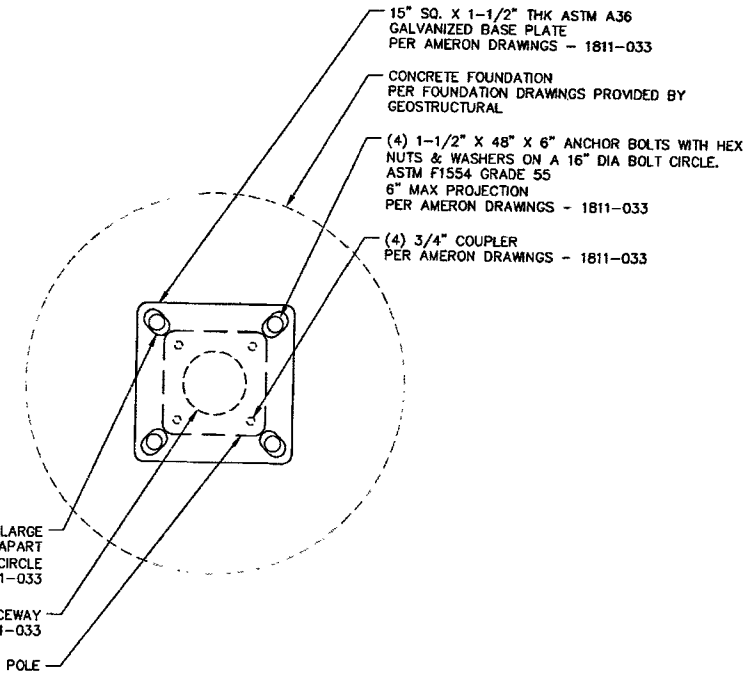
1. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI, IN ACCORDANCE WITH ACI 318-11. BASE PLATE GROUT STRENGTH AT 8000 PSI.
2. USE TYPE V PORTLAND CEMENT AND A MAXIMUM WATER-CEMENT RATIO OF 0.45.
3. REBAR TO CONFORM TO ASTM SPECIFICATION A615 GRADE 60.
4. ALL REBAR TO HAVE A MINIMUM OF 3" CONCRETE COVER.
5. ALL EXPOSED CONCRETE CORNERS TO BE CHAMFERED 3/4".
6. SEE THE GEOTECHNICAL REPORT FOR DRILLED PIER INSTALLATION REQUIREMENTS, IF SPECIFIED.
7. SEE USD NO. 320, 320.1, 313 AMD 321 FOR REFERENCE
8. ANCHOR RODS ARE TO BE (4) 1-1/2" DIAMETER ASTM F1554 GRADE 55 ON A 16" DIAMETER BOLT CIRCLE. MINIMUM LENGTH OF ANCHOR RODS IS 48", WITH A MAXIMUM PROJECTION OF 6" ABOVE CONCRETE.
9. FOR ADDITIONAL GROUNDING FOR CROWN EQUIPMENT, SEE SHEET G1

Redlined Construction Drawings

Theresa Sianez

Theresa Sianez Date
Spectrum Services 10/28/19

NOTE: BOLT HOLES IN BASE PLATE MUST BE AT LEAST 4" EDGE DISTANCE FROM SIDE OF FOUNDATION



15" SQ. X 1-1/2" THK ASTM A36 GALVANIZED BASE PLATE PER AMERON DRAWNGS - 1811-033

CONCRETE FOUNDATION PER FOUNDATION DRAWNGS PROVIDED BY GEOSTRUCTURAL

(4) 1-1/2" X 48" X 6" ANCHOR BOLTS WITH HEX NUTS & WASHERS ON A 16" DIA BOLT CIRCLE. ASTM F1554 GRADE 55 6" MAX PROJECTION PER AMERON DRAWNGS - 1811-033

(4) 3/4" COUPLER PER AMERON DRAWNGS - 1811-033

(4) 1-3/4" DIA. X 2-3/4" LARGE SLOTS EQUALLY SPACED @ 90° APART ON A 15" TO 17" DIA. BOLT CIRCLE PER AMERON DRAWNGS - 1811-033

6" ± 1/2" I.D. CONDUIT RACEWAY PER AMERON DRAWNGS - 1811-033

PROPOSED POLE



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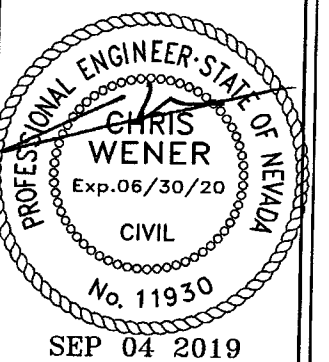
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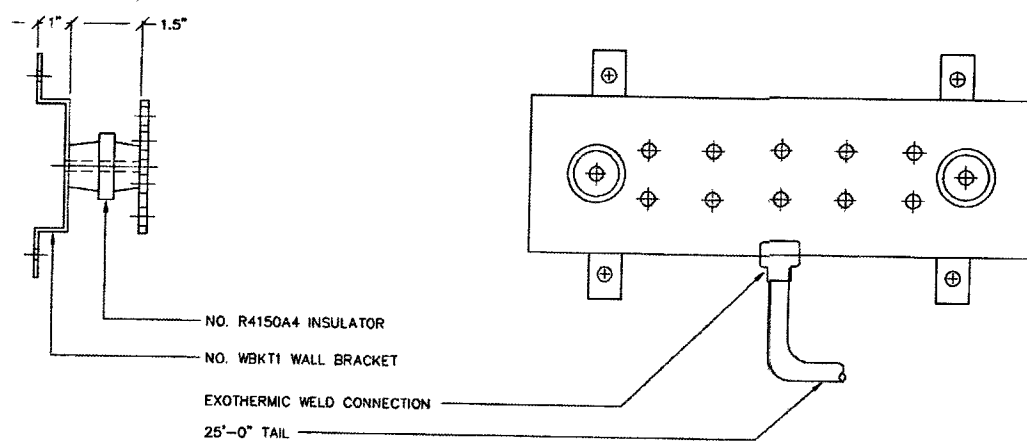
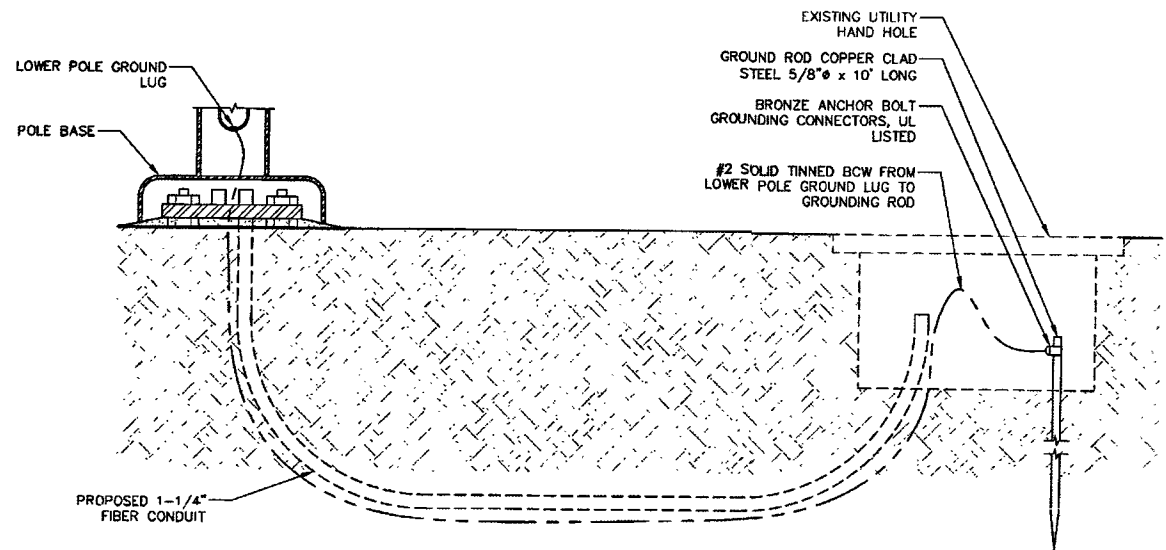


SHEET TITLE:

CONCRETE FOUNDATION
DETAILS

SHEET NUMBER: REVISION:

C6 4



MANUFACTURER: VALMONT
PART NO. MG20610-K
OR EQUIVALENT

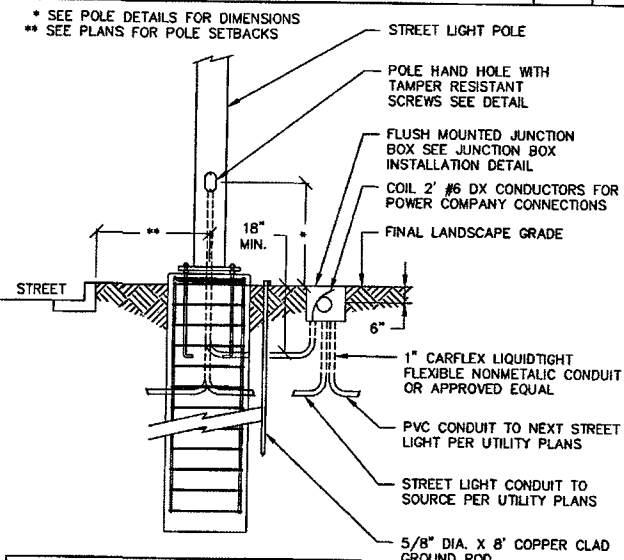
GROUND ROD

SCALE: NONE 4

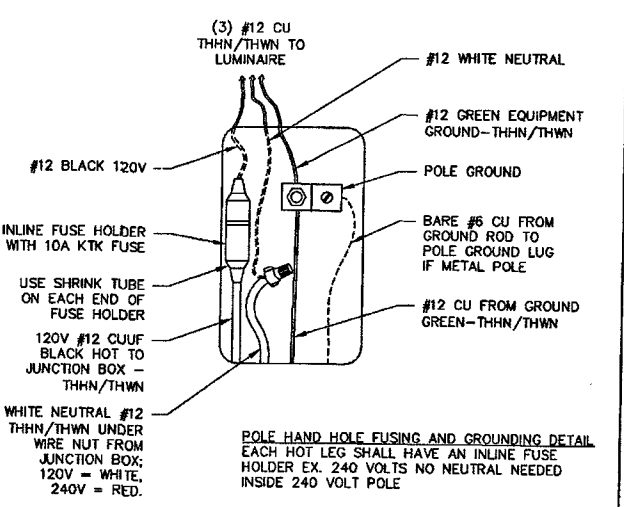
GROUND BAR

SCALE: NONE 2

- ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION REQUIREMENTS AND CONSTRUCTION ACCORDING TO SITE CONDITIONS AND CARRIER GROUNDING STANDARD, LATEST REVISION.
- ALL GROUNDING CONDUCTORS: #2 AWG SOLID BARE TINNED COPPER WIRE UNLESS OTHERWISE NOTED.
- GROUND RING TO GROUND BAR CONNECTIONS SHALL BE CADWELED QTY. (2) #2 AWG SOLID BARE TINNED COPPER WIRE UNLESS OTHERWISE NOTED.
- GROUND BAR TO EQUIPMENT AND CABLES SHALL BE #2 AWG BTCW W/ DOUBLE LUG CONNECTIONS.
- GROUND BAR LOCATED IN BASE OF EQUIPMENT WILL BE PROVIDED, FURNISHED AND INSTALLED BY THE VENDOR.
- GROUND BAR LOCATED BELOW WAVEGUIDE ENTRY PORT. CABLES SHALL BE #2 AWG BTCW/DOUBLE LUG CONNECTIONS. TWO PATHS TO GROUND RING.
- ALL BELOW GRADE CONNECTIONS: EXOTHERMIC WELD TYPE, ABOVE GRADE CONNECTIONS: EXOTHERMIC WELD TYPE.
- EXTERIOR GROUNDING CONDUCTORS: BURIED TO A MINIMUM DEPTH OF 1'-6" BELOW FINISHED GRADE TO ALLOW FOR FUTURE CONSTRUCTION.
- INSTALL GROUND CONDUCTORS AND GROUND ROD MINIMUM OF 1'-0" FROM EQUIPMENT CONCRETE SLAB, SPREAD FOOTING, OR FENCE.
- EXOTHERMIC WELD GROUND CONNECTION TO FENCE POST: TREAT WITH A COLD GALVANIZED SPRAY.
- GROUND BARS:
EQUIPMENT GROUND BUSS BAR (EGB) LOCATED AT BOTTOM OF ANTENNA POLE/MAST FOR MAKING GROUNDING JUMPER CONNECTIONS TO COAX FEEDER CABLES SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. JUMPERS (FURNISHED BY OWNERS) SHALL BE INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR.
MAIN GROUND BUSS BAR (MGB) LOCATED NEAR THE BASE OF THE RADIO EQUIPMENT CABINET(S) SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- ALL GROUNDING INSTALLATIONS AND CONNECTIONS SHALL BE MADE BY ELECTRICAL CONTRACTOR.
- ALL BOLTED TORQUE CONNECTORS SHALL BE LONG-BARRELED TYPES AND HAVE TWO HOLES FOR CONNECTION TO SURFACE AND NON-OXIDIZING AGENT APPLIED TO INHIBIT CORROSION.

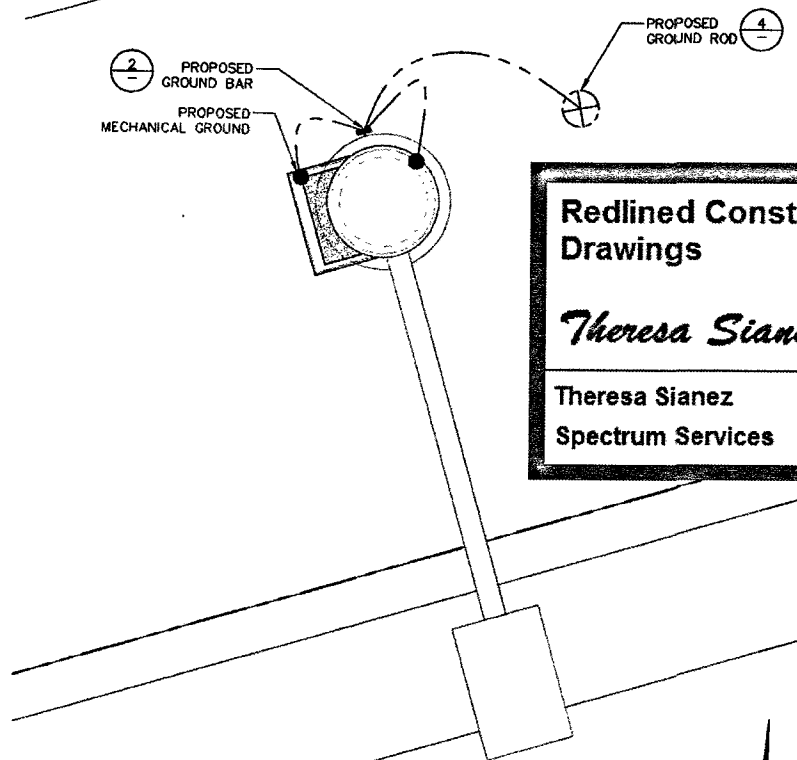


NOTES:
THIS DETAIL IS DIAGRAMMATIC ONLY.
CONTRACTOR SHALL REFER TO POLE DRAWINGS AND CALCULATIONS FOR EXACT DETAIL.



POLE HAND HOLE FUSING AND GROUNDING DETAIL
EACH HOT LEG SHALL HAVE AN INLINE FUSE HOLDER EX. 240 VOLTS NO NEUTRAL NEEDED INSIDE 240 VOLT POLE

- NOTE:
- ALL GROUNDING TO BE INSTALLED IN ACCORDANCE WITH CROWN CASTLE STANDARD.
 - CONTRACTOR TO MODIFY OR ADD NECESSARY GROUNDING TO PROVIDE A MAX. RESISTANCE OF 5 OHMS

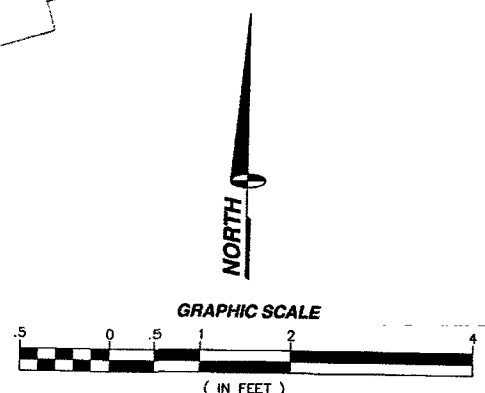


Redlined Construction Drawings

Theresa Sianez

Theresa Sianez
Spectrum Services

Date
10/28/19



GROUNDING NOTES

SCALE: NONE 5

STREET LIGHT WIRING AND GROUNDING

SCALE: NONE 3

GROUNDING LAYOUT

11" x 17" SCALE 24" x 36" SCALE
1" = 2' 1" = 1'



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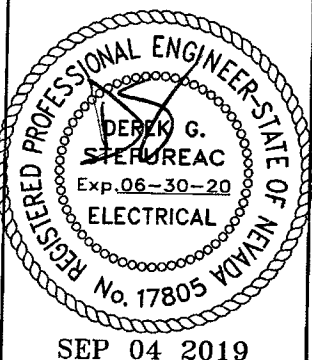
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GROUNDING LAYOUT,
DETAILS & NOTES

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G1 4