



CROWN CASTLE ID #
LV004

Redlined Construction
Drawings

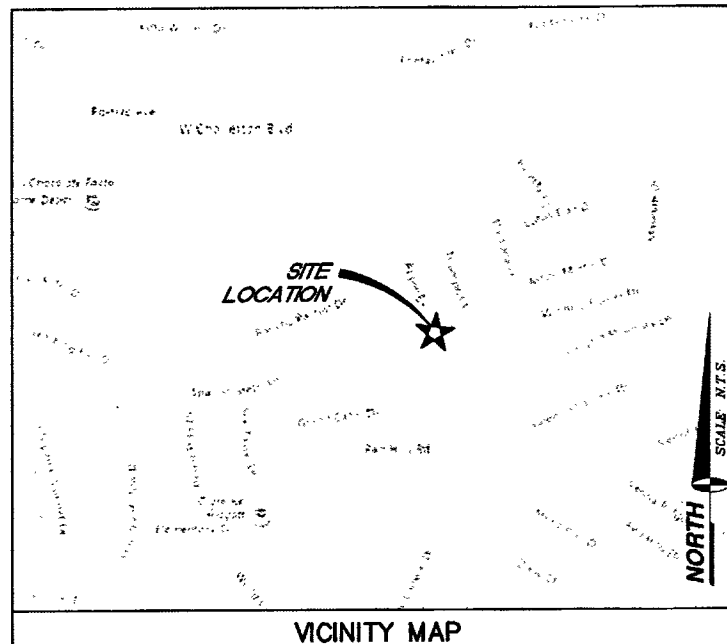
Theresa Sianez

Theresa Sianez
Spectrum Services
Date
11/22/19

9499 WINNING COLORS DRIVE
LAS VEGAS, NEVADA 89117

- REPLACEMENT OF AN EXISTING CONCRETE LIGHT POLE WITH A NEW RADIO AND ANTENNA AT THE TOP

TOTAL ENCROACHMENT NOTE



VICINITY MAP

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

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

PROPERTY INFORMATION

OWNER: PUBLIC RIGHT-OF-WAY
OCCUPANCY TYPE: U
CONSTRUCTION TYPE: V-B
CURRENT ZONING: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)
JURISDICTION: CITY OF LAS VEGAS
APN: 163-06-597-009
LATITUDE: 36.156194
LONGITUDE: -115.302278
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.

1. INTERNATIONAL BUILDING CODE 2018 W/STATE AMENDMENTS
2. INTERNATIONAL EXISTING BUILDING CODE 2018 W/STATE AMENDMENTS
3. INTERNATIONAL ENERGY CONSERVATION CODE 2018
4. UNIFORM MECHANICAL CODE 2018
5. UNIFORM PLUMBING CODE 2018
6. NATIONAL ELECTRIC CODE 2017
7. INTERNATIONAL FIRE CODE 2018
8. ANSI/EIA-222-G LIFE SAFETY CODE
9. LOCAL BUILDING CODE(S)
9. CITY AND/OR COUNTY ORDINANCES

CODE COMPLIANCE

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

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

SPECIAL INSPECTIONS

CIVIL ENGINEER
SPECTRUM SERVICES, INC.
4850 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
PHONE: (702) 885-1552

PROJECT TEAM

SHEET	DESCRIPTION	REV.
C1	TITLE SHEET	2
C2	SITE PHOTO, GENERAL & CONSTRUCTION NOTES	2
C3	SITE PLAN	2
C4	EXISTING AND PROPOSED NORTH ELEVATIONS	3
C5	CONSTRUCTION DETAILS	2
C6	CONCRETE FOUNDATION DETAILS	3
E1	GROUNDING LAYOUT, NOTES & DETAILS	2
ISSUED FOR:		
SHEET INDEX		PERMIT

CITY OF LAS VEGAS
APPROVED FOR CONSTRUCTION

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

APPROVAL

L19-00260

DATE

5 23 19

107V7724-FIB



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

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9499 WINNING COLORS DRIVE
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REV.: DATE: DESCRIPTION: BY:

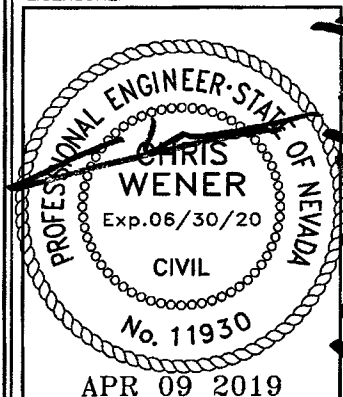
2	02/05/19	POLE REVISION	R.C.
1	10/15/18	100% PERMITTING	C.P.
0	09/17/18	90% PERMITTING	R.C.

PLANS PREPARED BY:



DGS
CONSULTING ENGINEERING SERVICES LLC

LICENSURE:



SHEET TITLE:

TITLE SHEET

SHEET NUMBER: REVISION:

C1 2

615116 09200-1917



- ### PROJECT GENERAL NOTES

- ### CONSTRUCTION NOTES



Redlined Construction
Drawings

Theresa Sianez

Theresa Sianez
Spectrum Services

Date

11/22/19

APN: 163-06-597-009
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

APN: 163-06-512-013
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

APN: 163-06-512-014
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

APN: 163-06-512-015
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

APN: 163-06-512-016
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

APN: 163-06-512-017
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

APN: 163-06-512-018
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

APN: 163-06-512-019
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

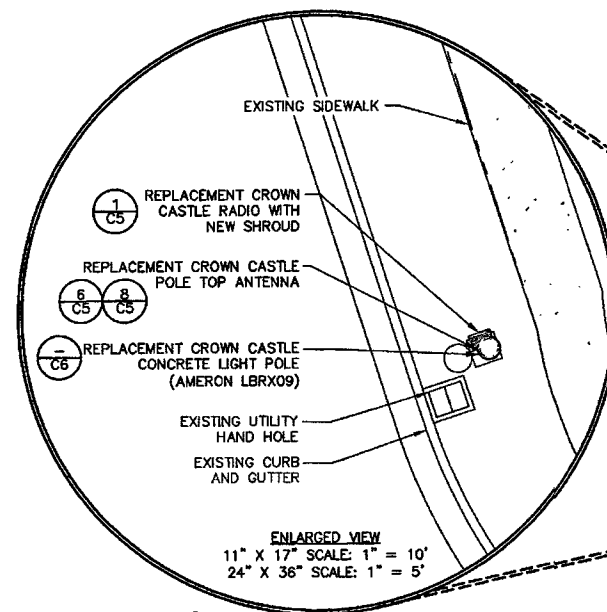
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ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

APN: 163-06-512-021
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

APN: 163-06-512-022
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

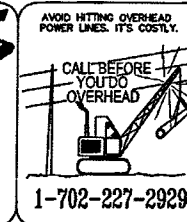
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ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)

APN: 163-06-512-024
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD7)



LEGEND

---	CENTERLINE
---	EASEMENT
---	RIGHT-OF-WAY
---	CURB AND CUTTER
---	EDGE OF SIDEWALK
---	UNDERGROUND FIBER ROUTE
⊗	FIRE HYDRANT
○	STREET LIGHT



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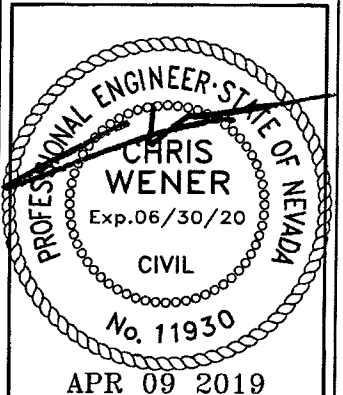
2	02/05/19	POLE REVISION	R.C.
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PLANS PREPARED BY:



SPECTRUM SERVICES, INC.
4850 WEST OQUENDO ROAD
LAS VEGAS, NEVADA 89118
PHONE: (702) 367-7705
FAX: (702) 367-8733

LICENSURE:



SHEET TITLE:

SITE PLAN

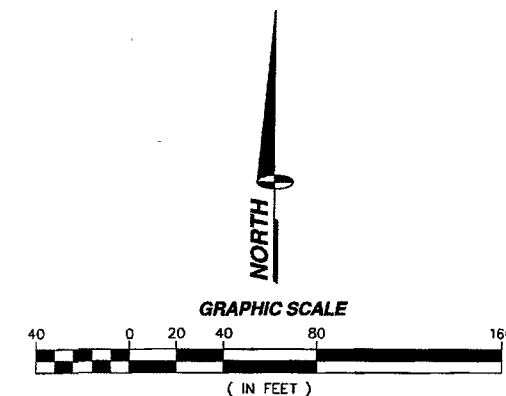
SHEET NUMBER: REVISION:

C3

2

SITE PLAN

11" X 17" SCALE: 1" = 10'
24" X 36" SCALE: 1" = 5'



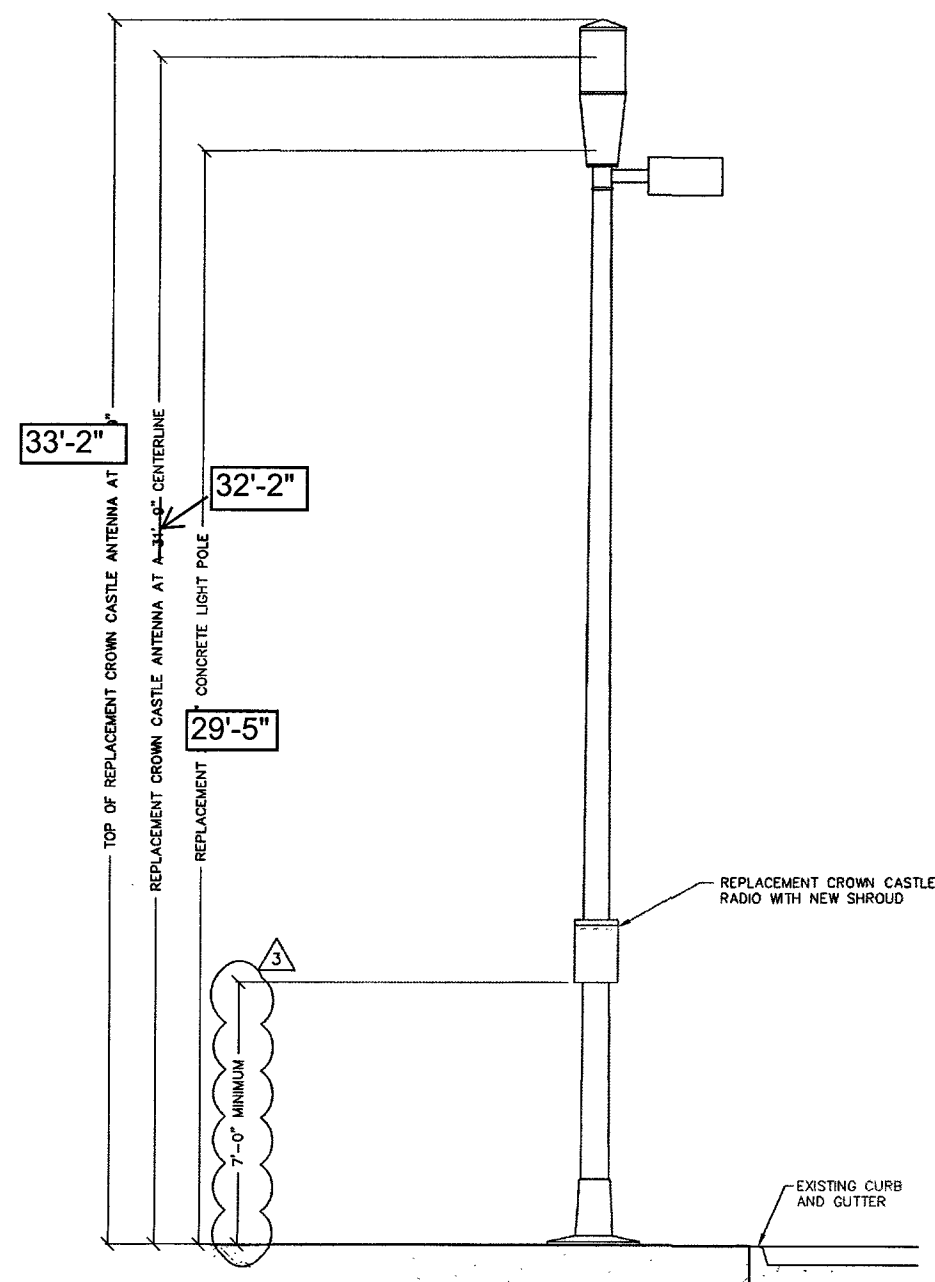
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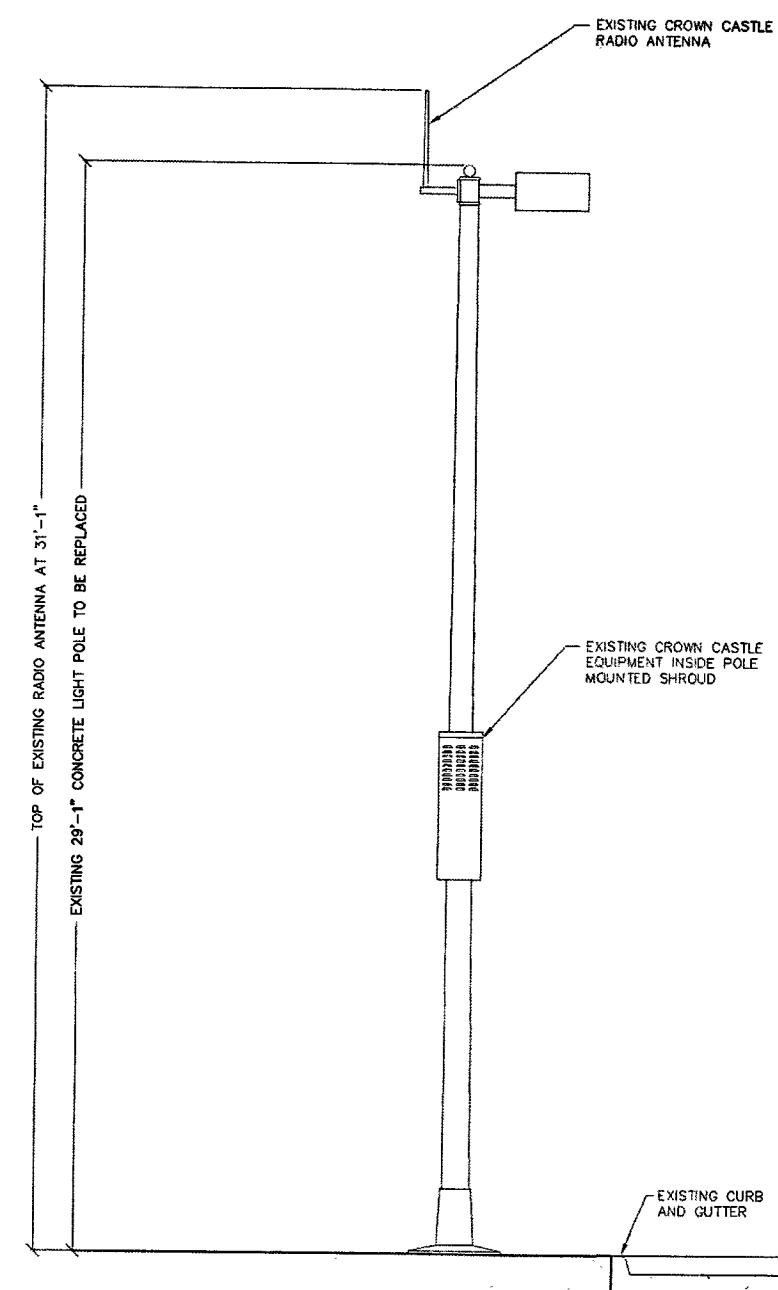


PROPOSED NORTH ELEVATION

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

2

EXISTING NORTH ELEVATION



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

1

CROWN
CASTLE

CROWN CASTLE NG WEST LLC
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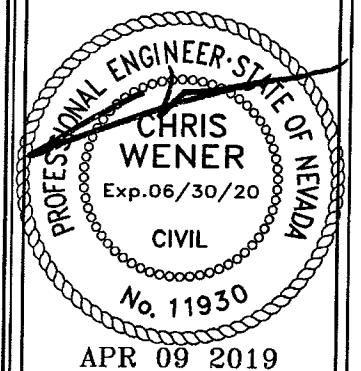
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3	04/09/19	LAND DEV. COMMENTS	R.S.
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0	09/17/18	90% PERMITTING	R.C.

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PHONE: (702) 367-7705
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LICENSURE:



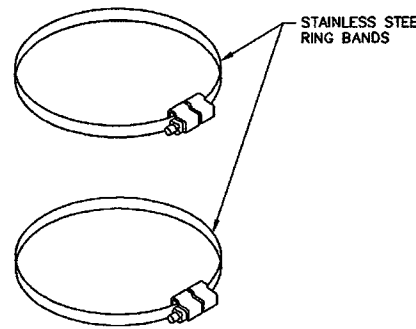
SHEET TITLE:

EXISTING AND PROPOSED
NORTH ELEVATION

SHEET NUMBER: REVISION:

C4

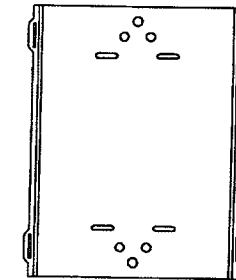
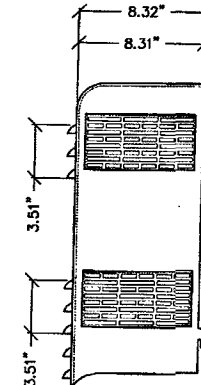
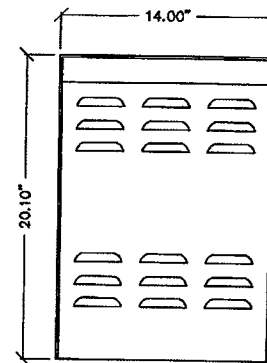
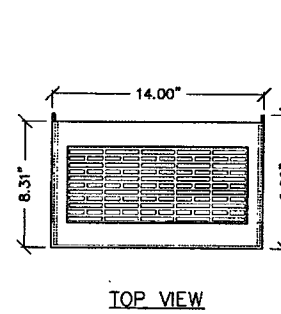
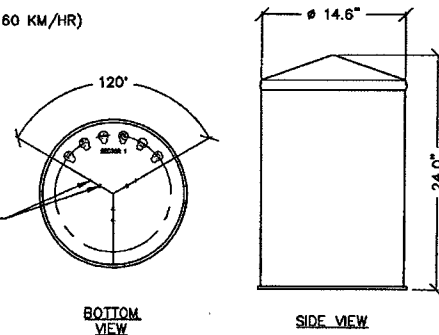
3



AMPHENOL 2C2U3MT360X06FY20 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

Ø4" & 6" Ø 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



STAINLESS STEEL RING BAND

SCALE: NONE

9

ANTENNA DETAIL

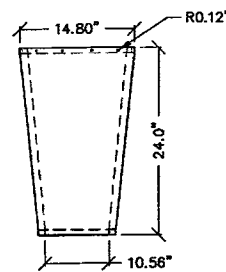
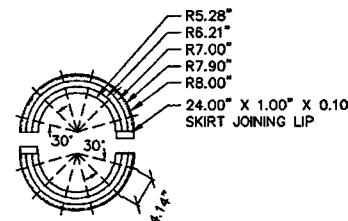
SCALE: NONE

7

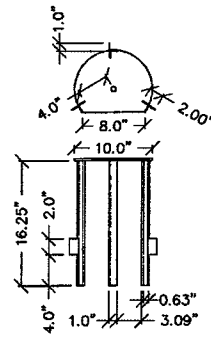
RADIO SHROUD

SCALE: NONE

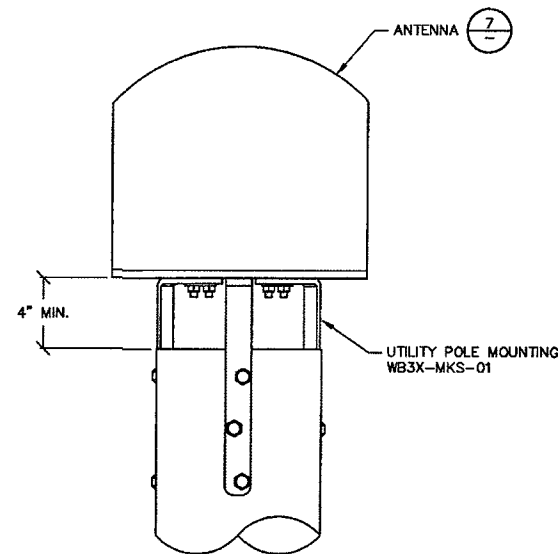
2



FOAM SKIRT



STREET LIGHT POLE INSERT



ANTENNA MOUNTING DETAIL

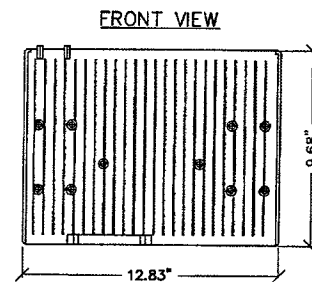
SCALE: NONE

6

NOKIA 20W RADIO

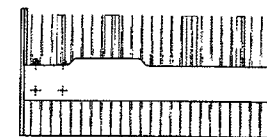
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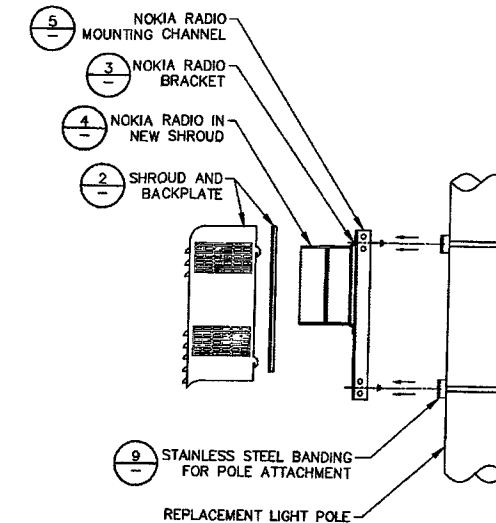


FRONT VIEW

SIDE VIEW



BOTTOM VIEW



Redlined Construction Drawings

Theresa Sianez

Theresa Sianez
Spectrum Services

Date
11/22/19

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

CROWN CASTLE

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1	10/15/18	100% PERMITTING	C.P.
0	09/17/18	90% PERMITTING	R.C.

PLANS PREPARED BY:

SPECTRUM
SPECTRUM SERVICES, INC.
4850 WEST OQUENDO ROAD
LAS VEGAS, NEVADA 89118
PHONE: (702) 367-7705
FAX: (702) 367-8733

LICENSURE:

PROFESSIONAL ENGINEER - STATE OF NEVADA
CHRIS WENER
Exp. 06/30/20
CIVIL
No. 11930
APR 09 2019

SHEET TITLE:

CONSTRUCTION DETAILS

SHEET NUMBER: REVISION:

C5 2

PROJECT INFORMATION:
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LAS VEGAS, NEVADA 89117

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1	10/15/18	100% PERMITTING	C.P.
0	09/17/18	90% PERMITTING	R.C.

PLANS PREPARED BY:
SPECTRUM
SPECTRUM SERVICES, INC.
4850 WEST OQUENDO ROAD
LAS VEGAS, NEVADA 89118
PHONE: (702) 367-7705
FAX: (702) 367-8733

LICENSURE:
PROFESSIONAL ENGINEER-STATE OF NEVADA
CHRIS WEAVER
Exp. 06/30/20
CIVIL
No. 11930
APR 09 2019

SHEET TITLE:
CONCRETE FOUNDATION
DETAILS

SHEET NUMBER: C6
REVISION: 3

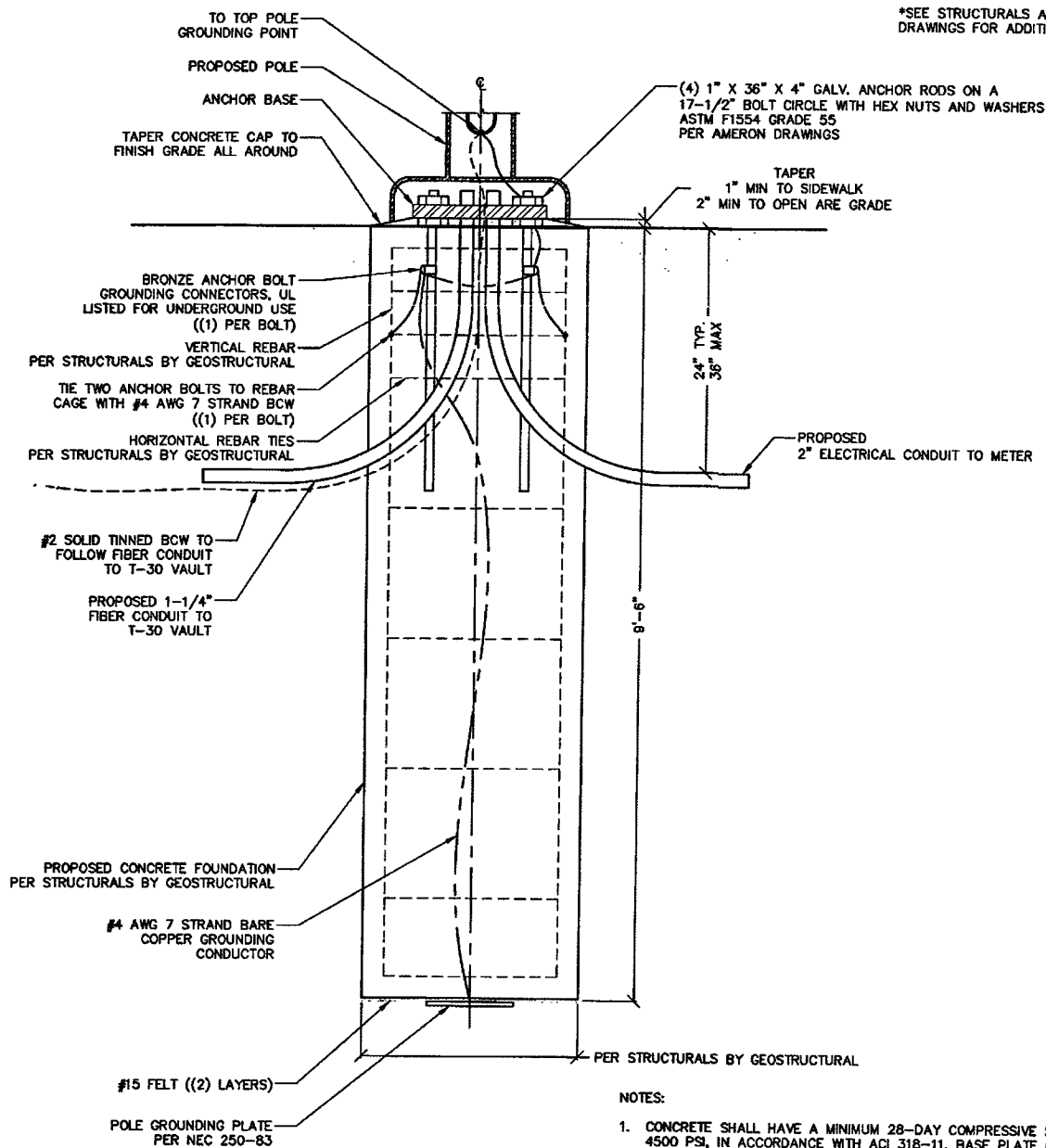
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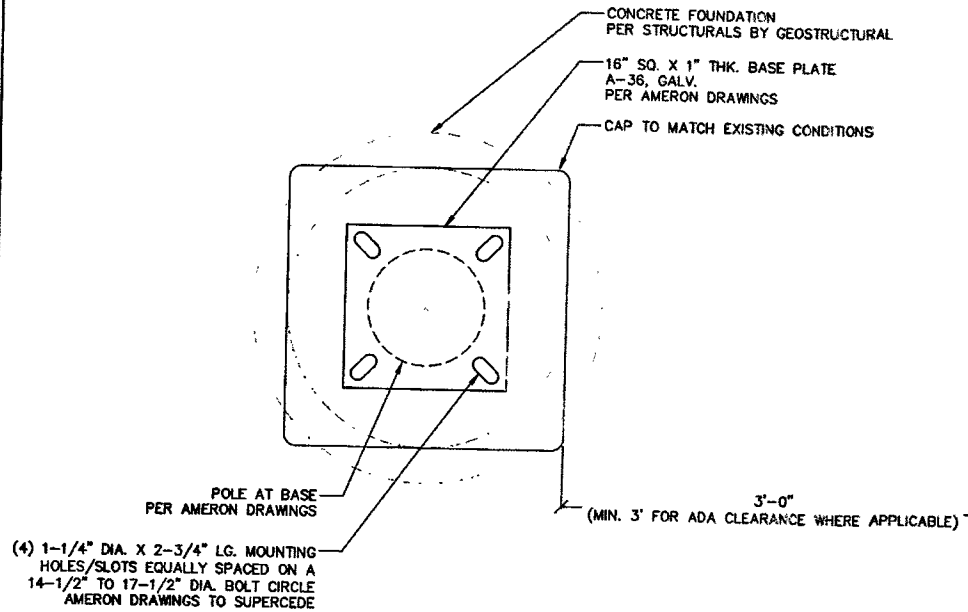
*SEE STRUCTURALS AND AMERON
DRAWINGS FOR ADDITIONAL INFORMATION

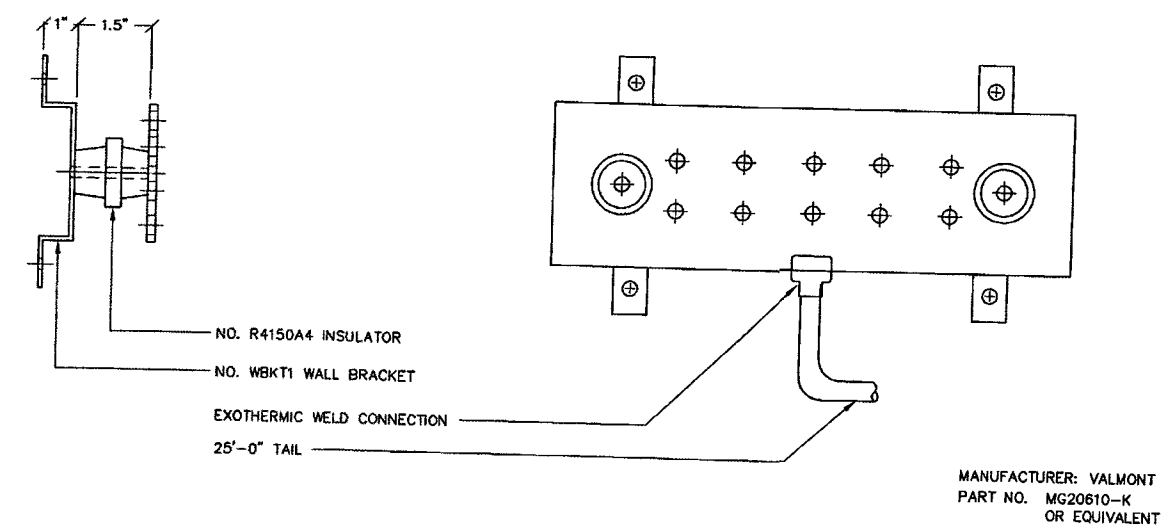
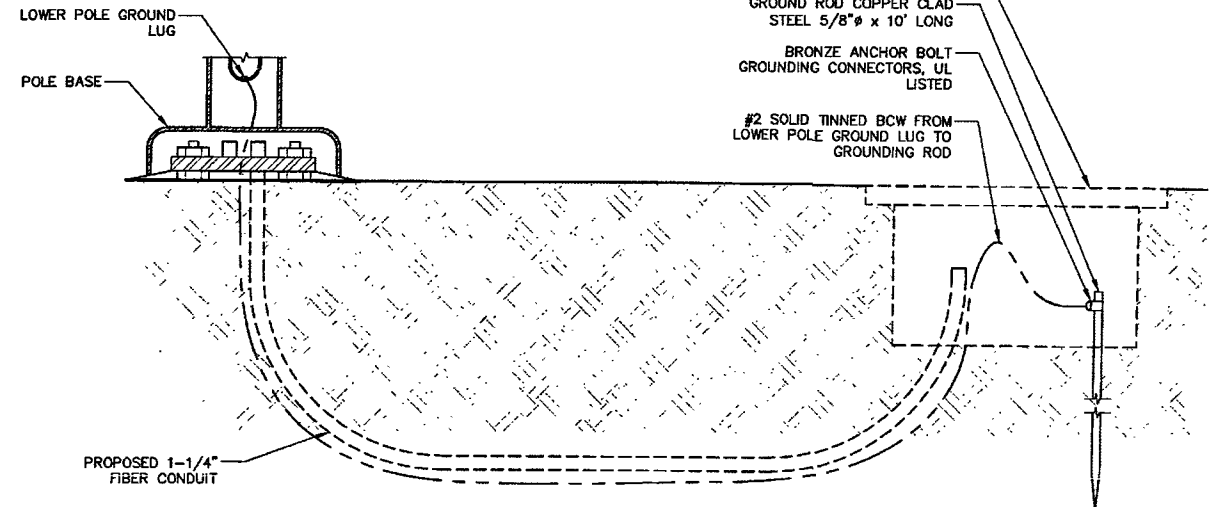
*SEE STRUCTURALS AND AMERON
DRAWINGS FOR ADDITIONAL INFORMATION



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. ANCHOR RODS ARE TO BE (4) 1" DIAMETER ASTM F1554 GRADE 55 ON A 17"-1/2" DIAMETER BOLT CIRCLE. MINIMUM LENGTH OF ANCHOR RODS IS 36", WITH A MAXIMUM PROJECTION OF 5" ABOVE CONCRETE. AMERON DRAWINGS TO SUPERCEDE THIS NOTE.





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SPECTRUM

DGS
CONSULTING ENGINEERING SERVICES LLC

LICENSURE:
DEREK G. STEFUREAC
Exp. 06-30-20
ELECTRICAL
No. 17805
APR 09 2019

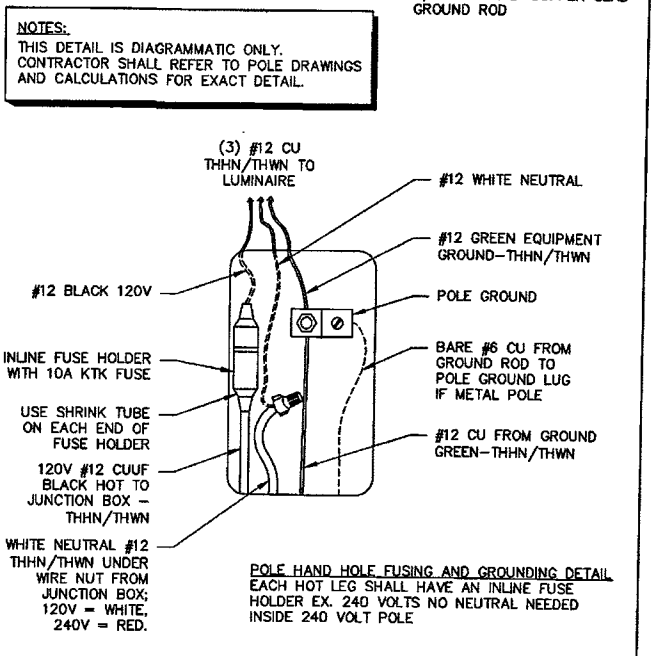
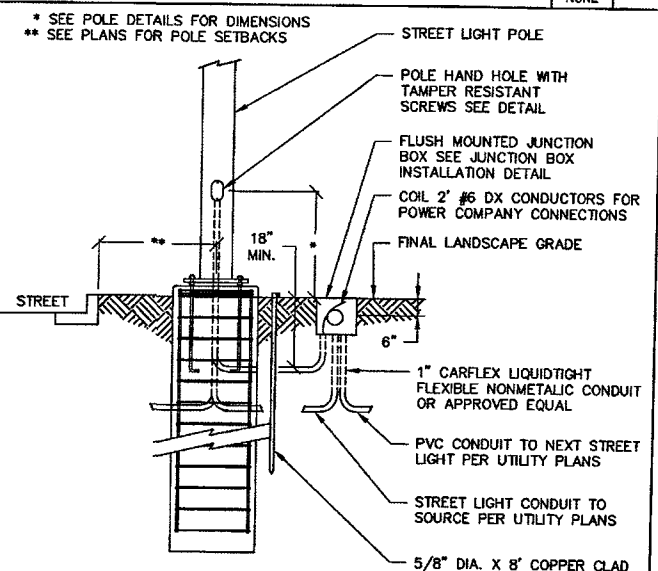
SHEET TITLE:
GROUNDING LAYOUT, NOTES & DETAILS

SHEET NUMBER: **E1** REVISION: **2**

GROUND ROD

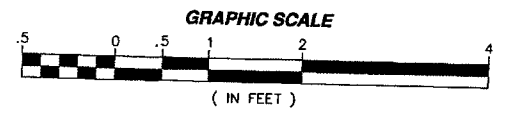
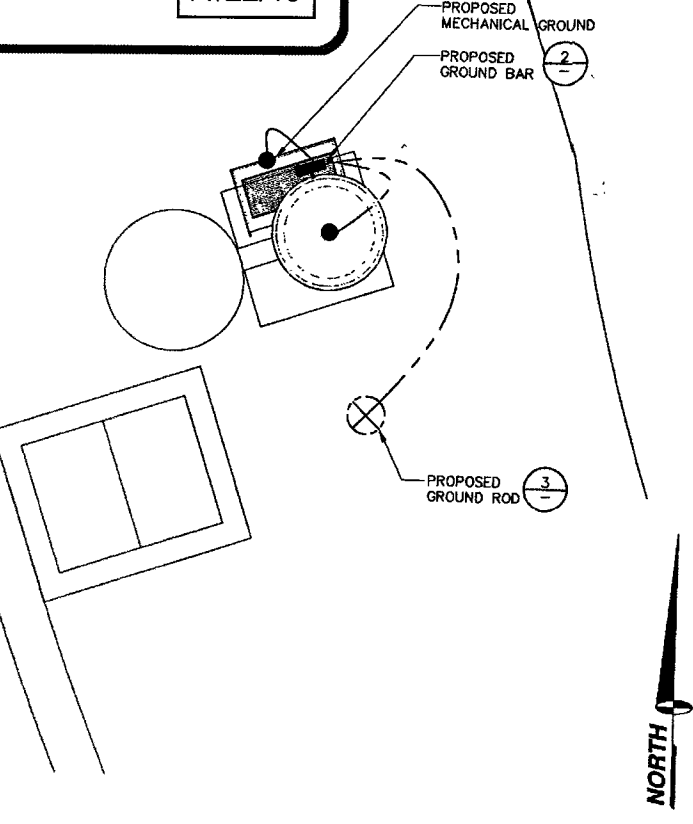
GROUND BAR

- 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 CADWELDED 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.



Redlined Construction Drawings
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Spectrum Services
Date **11/22/19**

- NOTE:
- ALL GROUNDING TO BE INSTALLED IN ACCORDANCE WITH VERIZON WIRELESS STANDARD NSTD 46
 - CONTRACTOR TO MODIFY OR ADD NECESSARY GROUNDING TO PROVIDE A MAX. RESISTANCE OF 5 OHMS



GROUNDING NOTES

STREET LIGHT WIRING AND GROUNDING

GROUNDING LAYOUT

11" X 17" SCALE / 24" X 36" SCALE
1" = 2' 1" = 1'