GENERAL CONSTRUCTION

HYBRID & COAX CABLES

POWER/GROUNDING

FIBER

ANTENNAS

RRH/BBU

PENETRATIONS

P:\2016\Projects\Verizon Wireless\SMR\CO1 Hayden\HAYDEN CDs\T100.DWG
PLOTTED Oct 25, 2016 AT 4:22pm

verizon

SITE NAME: **CO1 HAYDEN**

PROJECT: SMR PCS/AWS

SITE I.D.#: 803

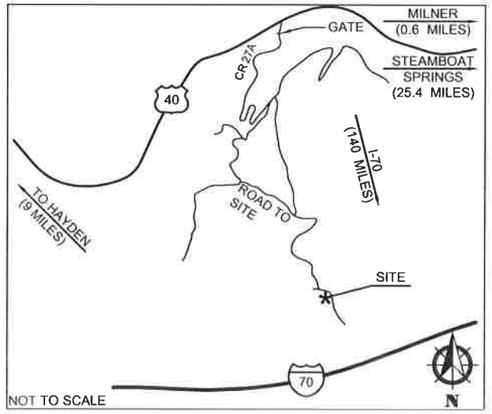
ADDRESS: N 40°27'47.4", W 107°6'41.7"
ROUTT COUNTY, CO

EXISTING CONDITIONS

PROJECT DESCRIPTION

- REMOVE (9) ANTENNAS AND REPLACE WITH (6) NEW ANTENNAS ON EXISTING TOWER
- ADD NEW EQUIPMENT AT ANTENNAS AND IN EXISTING EQUIPMENT SHELTER
- ADD (1) NEW AND (1) FUTURE HYBRID CABLES FROM EQUIPMENT SHELTER TO ANTENNAS
- NEW ITEMS TO COMPLY WITH IFC SECTION 608 RE: 3/G1.00

VICINITY MAP



DIRECTIONS

FROM DENVER,

- I-70 WEST (50 MILES)
- RIGHT ON EXIT 205 CO9 (37 MILES)
- LEFT ON US40 TO STEAMBOAT SPRINGS (68 MILES)
- LEFT ON CR27A
- THRU SECURED GATE (CODE REQUIRED)
- OVER BRIDGE
- PAST GREY STEEL BUILDING
- RIGHT WHEN ROAD GOES LEFT
- PAST OLD BUILDING RUINS
- LEFT AT SECOND ROAD
- FOLLOW RIDGE TO SITE

PROJECT DATA

JURISDICTION:	-	ROUTT COUNTY
APN:	-	938192001
ZONING DESIGNATION:	-	AG W/ RESIDENCE

EQUIPMENT SHELTER

OCCUPANCY GROUP:	-	S-2
CONSTRUCTION TYPE:	-	VB
FULLY SPRINKLERED:	-	NO
NO. OF STORIES:	-	1

GOVERNING CODES IF APPLICABLE:
2009 IBC, 2009 IMC, 2009 IFC, 2011 NEC

A.D.A. COMPLIANCE:
THIS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

DRAWING INDEX

ATTACHMENTS:

STRUCTURAL ANALYSIS
BY: OTEGUI STRUCTURAL SERVICES LLC
DATED: (PENDING)

PROJECT TEAM

OWNER
GHOST RANCH, LLC
JEAN P SAGOUSPE
259 I ST.
LOS BANOS, CA 93635
PHONE: 209.826.3891

CLIENT
VERIZON WIRELESS
CONSTRUCTION ENGINEER
JASON SHELLEDY
3131 S. VAUGHN WAY
SUITE 550
AURORA, CO 80014
CELL: 970.646.1283

SITE ACQUISITION
DAVE CLOSSER
CLOSSER CONSULTING LLC
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FAX: 303.554.2002

RF ENGINEER
VERIZON WIRELESS
RF ENGINEER
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AURORA, CO 80014
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ARCHITECT
CHARLES STECKLY, AIA
CSAi
5935 S. ZANG STREET
SUITE 280
LITTLETON, CO 80127
PHONE: 303.932.9974

verizon

VERIZON WIRELESS SERVICES
3131 S. VAUGHN WAY, SUITE 550
AURORA, CO 80014

PROJECT INFORMATION

SITE NAME

CO1 HAYDEN

SITE I.D.
803
N 40°27'47.4", W 107°6'41.7"
ROUTT COUNTY, CO

CONSULTANT

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B	09/15/16	CLIENT COMMENTS	DPL
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1st REVIEW RSS 2nd REVIEW SB

CHARLES STECKLY
ARCHITECTURE
5935 SOUTH ZANG STREET, SUITE 280
LITTLETON, COLORADO 80127
OFFICE: 303.932.9974

STATE OF COLORADO
CHARLES NELSON STECKLY
202302
OCT 25 2016
LICENSED ARCHITECT

TITLE SHEET

T1.00

GENERAL CONSTRUCTION
HYBRID & COAX CABLES
POWER/GROUNDING
FIBER
ANTENNAS
RRH/BBU
PENETRATIONS

ABBREVIATIONS

@	AT	HR.	HOUR
℄	CENTERLINE	HT.	HEIGHT
°	DEGREES	ILC	INTEGRATED LOAD CENTER
Ø	DIAMETER	INT.	INTERIOR
A/C	AIR CONDITIONER	L.F.	LINEAR FEET
APPROX.	APPROXIMATE	LTE	LIMIT TO EXTEND
ARCH.	ARCHITECTURAL		
A.F.F.	ABOVE FINISH FLOOR	MAX.	MAXIMUM
A.F.G.	ABOVE FINISH GRADE	MECH.	MECHANICAL
ALU	ALCATEL LUCENT	MFGR.	MANUFACTURER
ATS	AUTOMATIC TRANSFER SWITCH	MGB	MAIN GROUND BAR
AWS	ADVANCED WIRELESS SYSTEM	MIN.	MINIMUM
		MSDS	MATERIAL SAFETY DATA SHEET
BBU	BASE BAND UNIT	MTL.	METAL
BCEM	BASE CHANNEL ELEMENT MODULE	MTS	MANUAL TRANSFER SWITCH
BLDG.	BUILDING		
B.O.	BOTTOM OF	N.T.S.	NOT TO SCALE
CLG.	CEILING	O.C.	ON CENTER
COL.	COLUMN	O.D.	OUTSIDE DIAMETER
CONC.	CONCRETE	OVP	OVER VOLTAGE PROTECTION
DBL.	DOUBLE	PCS	PERSONAL COMMUNICATIONS SERVICE
DIA.	DIAMETER		
DIM.	DIMENSION		
DISC.	DISCONNECT	RAD.	RADIUS
DN.	DOWN	R.O.	ROUGH OPENING
DWG.	DRAWING	RRH	REMOTE RADIO HEAD
(E)	EXISTING	SHTG.	SHEATHING
EA.	EACH	SIM.	SIMILAR
ELEV.	ELEVATION	SPEC.	SPECIFICATION
ELEC.	ELECTRICAL	S.S.	STAINLESS STEEL
EQ.	EQUAL	STL.	STEEL
EXT.	EXTERIOR	STRUCT.	STRUCTURAL
F.E.	FIRE EXTINGUISHER	T.C.	TEMPERATURE CONTROL
FIN.	FINISH	TELCO	TELECOMMUNICATIONS
FLR.	FLOOR	T.O.	TOP OF
FUT.	FUTURE	TYP.	TYPICAL
GA.	GAUGE	U.G.	UNDERGROUND
GALV.	GALVANIZED	U.N.O.	UNLESS NOTED OTHERWISE
GEN.	GENERATOR		
GPS	GLOBAL POSITIONING SYSTEM	VERT.	VERTICAL
GWB.	GYPSUM WALLBOARD	V.I.F.	VERIFY IN FIELD
H.M.	HOLLOW METAL	W/	WITH
HORZ.	HORIZONTAL		

SYMBOLS LEGEND

- EASEMENT
- LEASE LINE
- PROPERTY LINE
- WOODEN FENCE
- X X CHAIN LINK FENCE
- OH (E) OVERHEAD UTILITY
- OHE (E) OVERHEAD ELEC.
- SS SS (E) SANITARY SEWER
- W W (E) WATER LINE
- T T (E) TELCO CABLE
- FIBER (E) FIBER CABLE
- E E (E) ELECTRICAL
- COAX (E) COAX CABLE

X / XX.XX — ENLARGED VIEW

ELEVATION MARKER

SPOT ELEVATION

X / XX.XX — SECTION CUT

X / XX.XX — EXTERIOR ELEVATION

X / XX.XX — INTERIOR ELEVATION

REVISION NUMBER

NEW WORK COLOR LEGEND

GENERAL CONSTRUCTION SOW
HYBRID & COAX CABLES
DC POWER
FIBER
ANTENNAS
RRH/BBU
PENETRATIONS

4 - ABBREVIATIONS, SYMBOLS AND LEGEND

EXISTING BATTERY SPECIFICATION:
(FIAMM 2SLA1500) EACH CELL HAS AN ELECTROLYTE CAPACITY OF 4.56 GALLONS EACH. (12) CELLS IN THIS OCCUPANCY, RESULTING IN AN AGGREGATE ELECTROLYTE VOLUME OF 54.72 GALLONS.
STATIONARY LEAD-ACID BATTERY SYSTEMS AND VALVE-REGULATED LEAD-ACID BATTERY SYSTEMS CONTAINING MORE THAN 50 GALLONS OF ELECTROLYTE SHALL COMPLY WITH IFC 608.

SPECIFICATIONS AND CONDITIONS

1. **IFC 608.5** SPILL CONTROL & NEUTRALIZATION
   A. SPILL CONTROL: IFC 608.5 EXCEPTION: VRLA, LITHIUM-ION, LITHIUM METAL POLYMER OR OTHER TYPES OF SEALED BATTERIES WITH IMMOBILIZED ELECTROLYTE SHALL NOT REQUIRE SPILL CONTROL
   B. **IFC 608.5.2**: RECOMBINANT BATTERY NEUTRALIZATION: FOR VRLA OR OTHER TYPES OF SEALED BATTERIES WITH IMMOBILIZED ELECTROLYTE, THE METHOD AND MATERIAL SHALL BE CAPABLE OF NEUTRALIZING A SPILL OF 3.0 PERCENT OF THE CAPACITY OF THE LARGEST BLOCK IN THE ROOM (SEE CHART) TO A PH BETWEEN 5.0 AND 9.0. **PROVIDE** ENER-SYS EMERGENCY SPILL KIT MODELS:853620-853615 (OR EQUAL)

TOTAL ACID GAL.	50	60	70	80	90	100	110	120
3%	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6

2. **IFC 608.3** PROVIDE UL LISTED THERMAL RUNAWAY DETECTION DEVICE: EAGLE EYE BTM SERIES THERMAL RUNAWAY MONITOR (OR EQ.) CONNECT TO ALARM BLOCK.

3. **IFC 608.6.1** ROOM VENTILATION
   FOR FLOODED LEAD-ACID, FLOODED Ni-CAD AND VRLA BATTERIES, THE VENTILATION SYSTEM SHALL BE DESIGNED TO LIMIT THE MAXIMUM CONCENTRATION TO 1.0 PERCENT OF THE TOTAL VOLUME OF THE ROOM.
   PER IEEE 1635 HYDROGEN GENERATION FOR VLRA BATTERIES IS DETERMINED AS:

$$H_{2\text{-RATE}}\ (CFM) = N_c \times C_8 \times 2.82 \times 10^{-7}$$

N_c = NUMBER OF BATTERY CELLS
C_8 = 8H AMPERE CELL RATING TO 1.75V @25°C

   HYDROGEN GENERATION RATE OF THIS INSTALLATION IS .004 CFM
   REQUIRED FAN SIZE TO KEEP HYDROGEN BELOW 1% = .004 / .01 = .4 CFM
   THE EXISTING FAN IS RATED AT 50 CFM WHICH MEETS THESE REQUIREMENTS.

4. **IFC 608.7**. DOORS INTO ROOMS AND BUILDINGS CONTAINING STORED EMERGENCY POWER SUPPLY SYSTEMS SHALL BE PROVIDED WITH APPROVED SIGNS. THE SIGNS SHALL STATE:
   A. THE ROOM CONTAINS ENERGIZED BATTERY SYSTEMS
   B. THE ROOM CONTAINS ENERGIZED ELECTRICAL CIRCUIT
   C. THE BATTERY ELECTROLYTE SOLUTIONS ARE CORROSIVE LIQUIDS.

5. **IFC 608.8** SEISMIC PROTECTION. BOLT DOWN / ANCHOR BATTERY BASE W/ (4) 5/8" MASONRY ANCHORS, MIN 4" EMBED INTO CONCRETE FLOOR. MODULAR STEEL SEISMIC FRAME PROVIDED WITH BATTERIES.

6. "NO SMOKING SIGNS SHALL BE PROVIDED ON DOORS LEADING INTO BATTERY ROOMS. PLACARDS SHALL BE PROVIDED ACCORDING TO NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 704. PLACARDS POSTED ON THE INTERIOR OF THE FACILITY SHALL BE A MINIMUM 10 INCHES EACH SIDE AND PLACARDS POSTED ON THE EXTERIOR SHALL BE A MINIMUM 15 INCHES EACH SIDE.

3 - HAZMAT REVIEW

GENERAL CONTRACTOR NOTES

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

THESE DRAWINGS ARE TO SCALE WHEN PLOTTED ON 11X17 SHEET.

CALL BEFORE YOU DIG - COLORADO LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE.

THESE DRAWINGS MAY NOT SHOW ALL UNDERGROUND PIPING AND UTILITIES. THE CONTRACTOR SHALL EXERCISE EXTREME CARE DURING ALL EXCAVATION AND OTHER CONSTRUCTION ACTIVITIES.

UTILITY NOTIFICATION CENTER OF COLORADO - 1-800-922-1987

THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY LOCATES AND UTILITY RELOCATIONS REQUIRED FOR THIS INSTALLATION. THE CONTRACTOR WILL SCHEDULE AND COORDINATE ALL WORK WITH THE OWNER TO ENSURE NO DISRUPTION TO OWNERS OPERATIONS.

SUBCONTRACTORS SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME

2 - GENERAL CONTRACTOR NOTES

1. DRAWINGS ARE NOT TO BE SCALED, WRITTEN DIMENSIONS TAKE PRECEDENCE, AND THIS SET OF PLANS IS INTENDED TO BE USED FOR DIAGRAMMATIC PURPOSES ONLY, UNLESS NOTED OTHERWISE. THE GENERAL CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, AND ANYTHING ELSE DEEMED NECESSARY TO COMPLETE INSTALLATIONS AS DESCRIBED HEREIN. REFER TO BID PACKAGE FOR MORE DATA.

2. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS INVOLVED SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT WITH THE CONSTRUCTION AND CONTRACT DOCUMENTS, FIELD CONDITIONS AND CONFIRM THAT THE PROJECT MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY ERRORS, OMISSIONS, OR DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/CONSTRUCTION ENGINEER IN WRITING.

3. THE GENERAL CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.

4. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

5. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S, VENDOR'S, & VERIZON WIRELESS SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE NOTIFY CONSTRUCTION ENGINEER.

6. ALL WORK PERFORMED ON PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK.

7. THE STRUCTURAL COMPONENTS OF THIS PROJECT SITE/FACILITY ARE NOT TO BE ALTERED BY THIS CONSTRUCTION PROJECT UNLESS NOTED OTHERWISE.

8. NEW TOWERS ARE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION SUBCONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF PERSONNEL AND PROPERTY FROM HAZARDOUS EXPOSURE TO OVERHEAD DANGERS.

9. GENERAL CONTRACTOR SHALL PROVIDE AT THE PROJECT SITE A FULL SET OF PERMITTED CONSTRUCTION DOCUMENTS UPDATED WITH THE LATEST REVISIONS AND ADDENDA OR CLARIFICATIONS FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.

10. DETAILS INCLUDED HEREIN ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS OR SITUATIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE SCOPE OF WORK.

11. THE FACILITY IS CELLULAR RADIO EQUIPMENT, ANTENNAS, & SUPPORTING UTILITIES.

12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION UPON COMPLETION OF WORK. CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.

13. CONTRACTOR SHALL ENSURE THE GENERAL WORK AREA IS KEPT CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY, PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.

14. THE ARCHITECTS/ENGINEERS HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. CONTRACTORS BIDDING THE JOB ARE NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS. THE BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE CONSTRUCTION ENGINEER OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL.

15. SPECIAL INSPECTION TESTING REQUIRING SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT SPECIAL INSPECTOR PER SECTION 1704 OF THE INTERNATIONAL BUILDING CODE (IBC) FOR ITEMS NOTED ON S1.00 IF INCLUDED IN CONSTRUCTION DOCUMENTS. THE INSPECTOR SHALL BE HIRED BY THE CONTRACTOR & COORDINATION SHALL BE ARRANGED BY THE CONTRACTOR FOR REQUIRED INSPECTIONS.

UNDERGROUND SERVICE ALERT
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
WWW.UNCC.ORG

3 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

1 - GENERAL NOTES

verizon
VERIZON WIRELESS SERVICES
3131 S. VAUGHN WAY, SUITE 550
AURORA, CO 80014

PROJECT INFORMATION

SITE NAME

CO1 HAYDEN

SITE I.D.
803
N 40°27'47.4", W 107°6'41.7"
ROUTT COUNTY, CO

CONSULTANT

A	08/29/16	CD REVIEW	DPL
B	09/15/16	CLIENT COMMENTS	DPL
0	10/25/16	CD ISSUE	DPL

1st REVIEW RSS 2nd REVIEW SB

CHARLES STECKLY
ARCHITECTURE
5935 SOUTH ZANG STREET, SUITE 280
LITTLETON, COLORADO 80127
OFFICE: 303.932.9974

STATE OF COLORADO
CHARLES NELSON STECKLY
202802
OCT 25 2016
LICENSED ARCHITECT

GENERAL NOTES

G1.00

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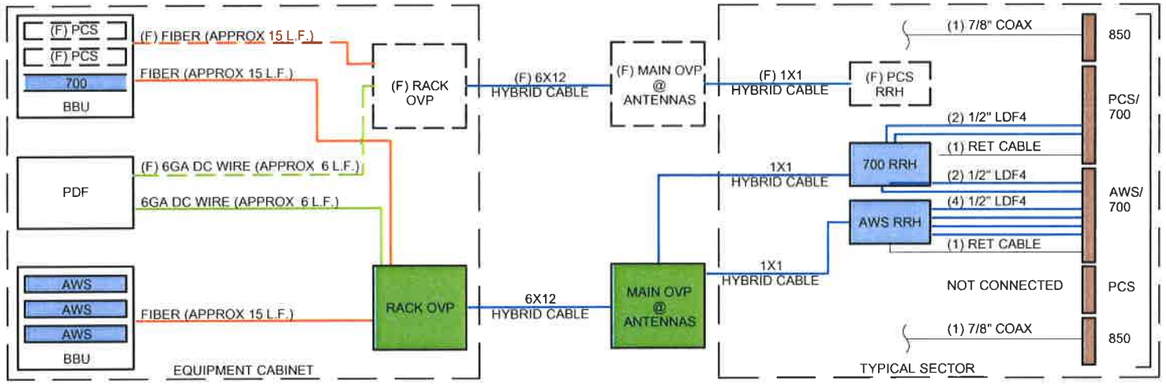
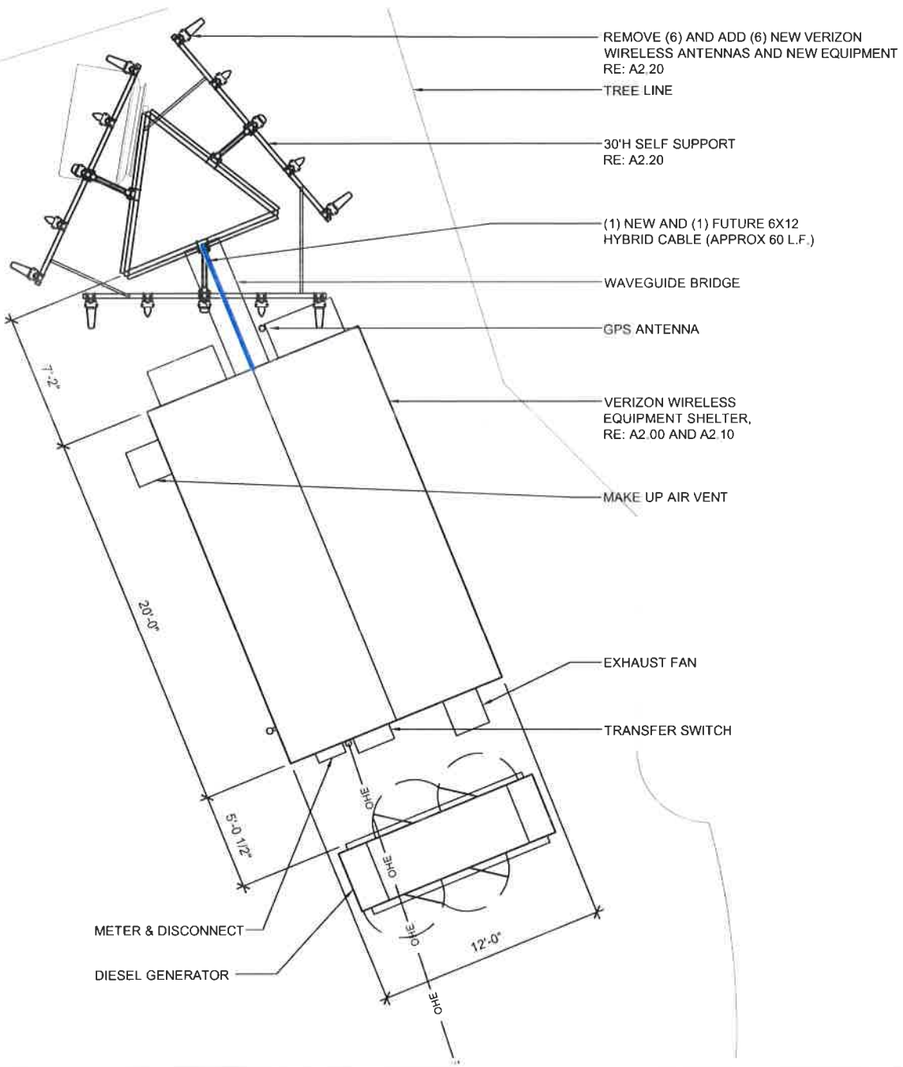
GENERAL CONSTRUCTION
HYBRID & COAX CABLES
POWER/GROUNDING
FIBER
ANTENNAS
RRH/BBU
PENETRATIONS



	RACK OVP @ CABINET TO MAIN OVP @ ANTENNAS					MAIN OVP TO RRH CONNECTION				
	RACK OVP	6X12 HYBRID CABLE			MAIN OVP @ ANTENNAS	1X1 HYBRID CABLE		PCS RRH	700 RRH	AWS RRH
SECTOR	QTY	LENGTH	QTY	TOTAL WEIGHT	QTY	LENGTH	QTY	QTY	QTY	QTY
X	(1) NEW (1) FUT.	60 L.F. EACH	(1)	175 LBS (1.44 LBS/LF)	(1)	14'-0"	(2) NEW (1) FUT.	(F)	(1)	(1)
Y						14'-0"	(2) NEW (1) FUT.	(F)	(1)	(1)
Z						14'-0"	(2) NEW (1) FUT.	(F)	(1)	(1)

NOTE:
RE: 1/A2.20 FOR ANTENNA CONFIGURATION AND MAIN OVP LOCATIONS

2 - HYBRID CABLE DIAGRAM



NOTES:
1. ALL ITEMS NOTED ARE (E) U.N.O.
2. COLORS ON DRAWING REPRESENT NEW WORK.

1 - ENLARGED SITE PLAN

1/8" = 1'-0"

verizon
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STATE OF COLORADO
CHARLES NELSON STECKLY
OCT 25 2016
LICENSED ARCHITECT

ENLARGED SITE PLAN & HYBRID CABLE CHART

A1.00

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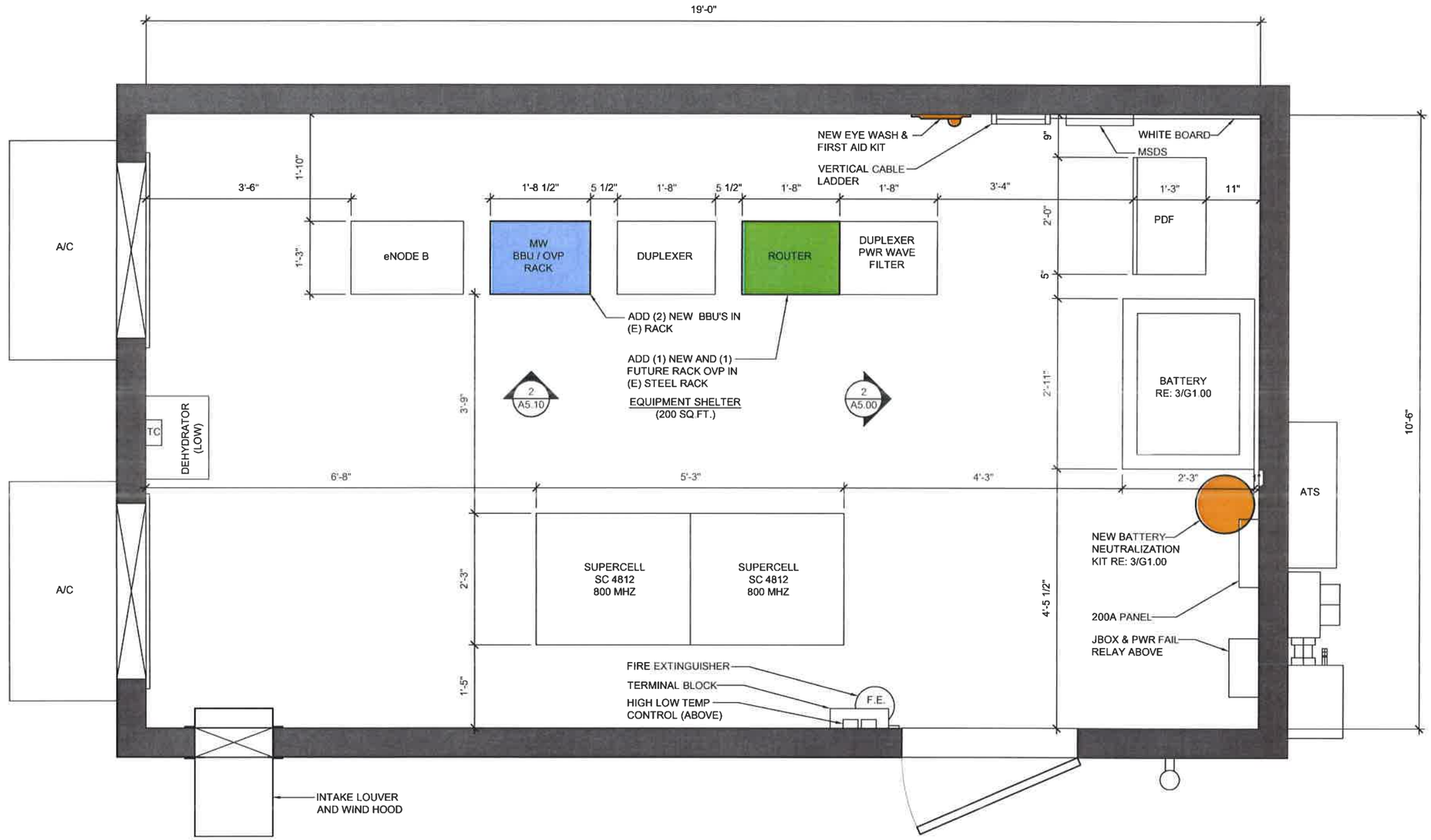

NOTES:
1. ALL ITEMS NOTED ARE EXISTING U.N.O.
2. CONTRACTOR TO PROVIDE ADDITIONAL ITEMS FOR COMPLIANCE W/ IFC SECTION 608 (BATTERY SYSTEMS) RE: G1.00
3. COLORS ON DRAWING REPRESENT NEW WORK.

1 - EQUIPMENT SHELTER FLOOR PLAN

3/8" = 1'-0"

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202802
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EQUIPMENT SHELTER FLOOR PLAN

A2.00

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GENERAL CONSTRUCTION

HYBRID & COAX CABLES

POWER/GROUNDING

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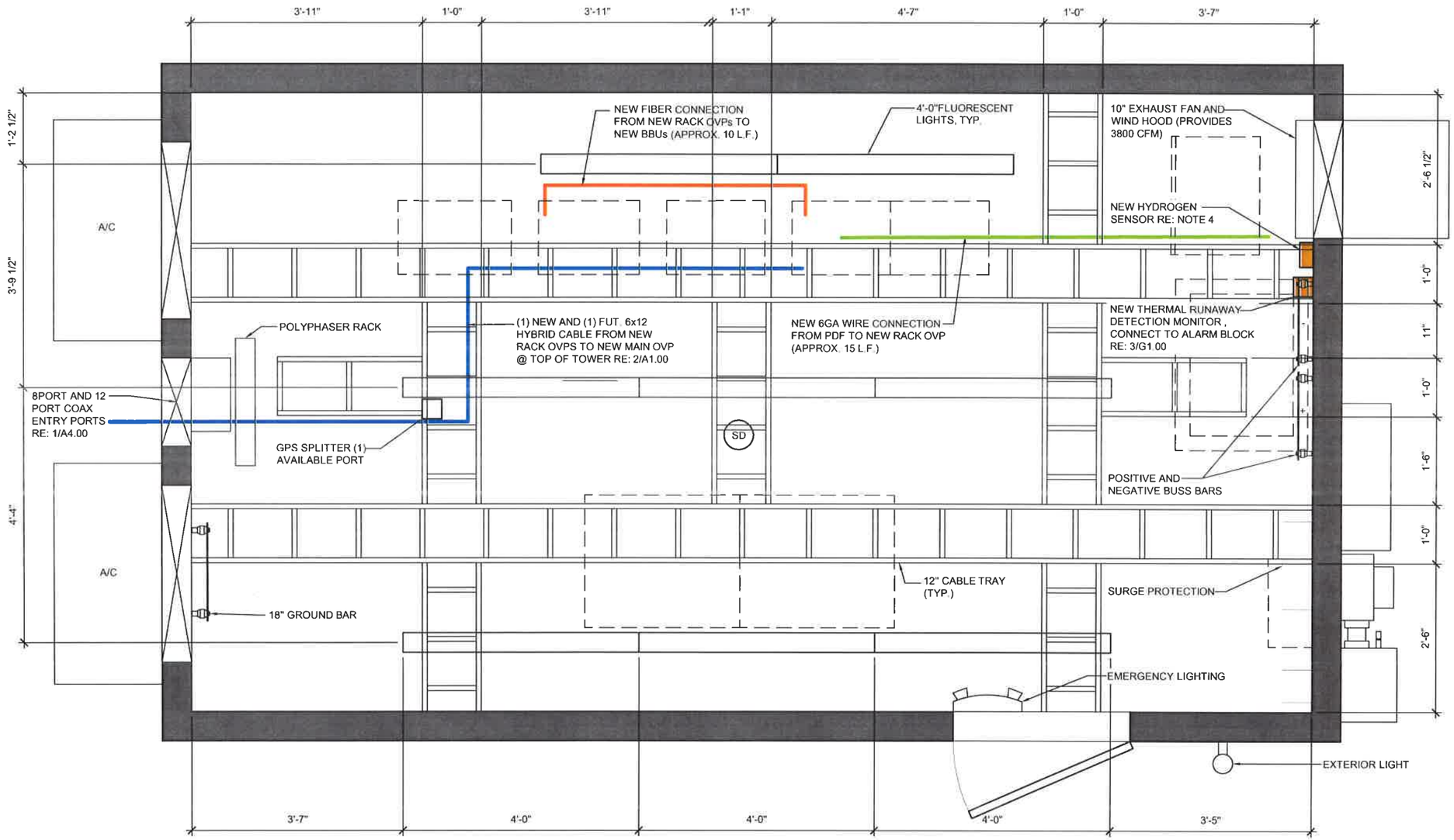

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2. CONTRACTOR TO PROVIDE ADDITIONAL ITEMS FOR COMPLIANCE W/ IFC SECTION 608 (BATTERY SYSTEMS) RE: G1.00
3. COLORS ON DRAWING REPRESENT NEW WORK.
4. INSTALL NEW UL LISTED HYDROGEN SENSOR AND CONNECT TO ALARM BLOCK: MODEL #: MACURCO GD-6 GAS DETECTOR (OR EQ.)

1 - EQUIPMENT SHELTER REFLECTED CEILING PLAN

3/8" = 1'-0"

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PLOTTED Oct 25, 2016 AT 4:22pm

verizon

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OCT 25 2016
LICENSED ARCHITECT

EQUIPMENT SHELTER RCP

A2.10

GENERAL CONSTRUCTION
HYBRID & COAX CABLES
POWER/GROUNDING
FIBER
ANTENNAS
RRH/BBU
PENETRATIONS

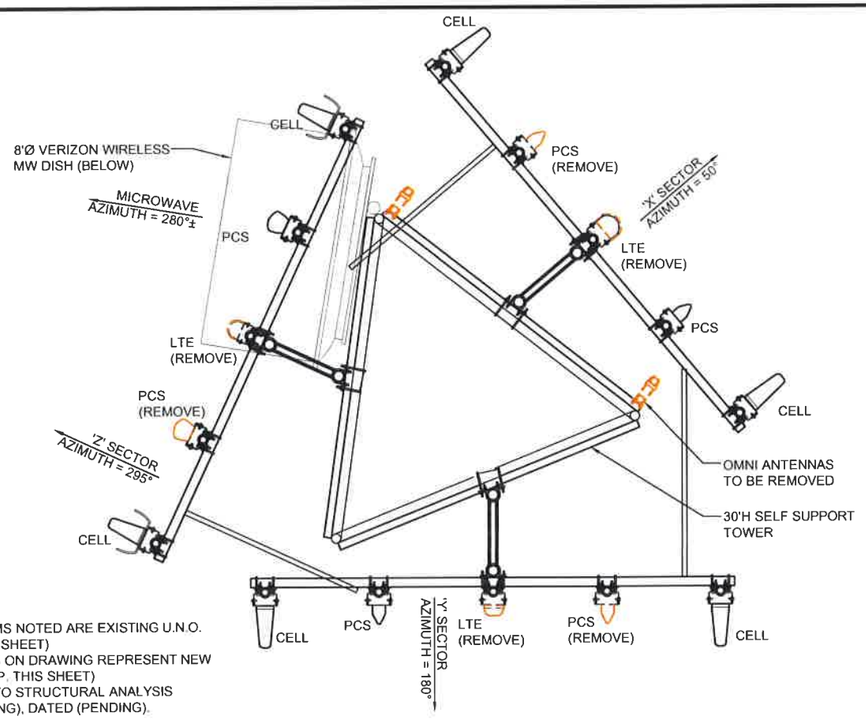
4 - PHOTO OF ANTENNAS

1. GENERAL: PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR RECEIVING, INSTALLING, TESTING AND ADJUSTING ANTENNA CABLES FROM THE ANTENNA TO THE CONNECTORS AT THE BASE TRANSMISSION SYSTEM (BTS). THIS SHALL INCLUDE ALL EQUIPMENT SHOWN OR REQUIRED FOR A COMPLETE OPERATING SYSTEM. ANTENNA, ANTENNA CABLES, CONNECTORS, AND FITTINGS SHALL BE THIRD PARTY FURNISHED COMPONENTS AS SHOWN ON THE BILL OF MATERIALS.
2. MATERIALS
   - A. RE: 2/A1.00 FOR HYBRID CABLE DIAGRAM AND INFORMATION
   - B. CABLE HANGERS: INSTALLED AT MAXIMUM 4' SPACING
   - C. GROUND EQUIPMENT PER VERIZON WIRELESS SPECS RE: A6.00
3. INSTALLATION
   - A. ANTENNA CABLE LENGTHS SHALL BE FIELD MEASURED PRIOR TO PURCHASE OF CABLE. INSTALLER SHALL NOTIFY VERIZON WIRELESS OF THE OVERALL LENGTH REQUIRED.
   - B. CABLES SHALL BE LABELED IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS.
   - C. ALL OUTSIDE CABLE CONNECTIONS SHALL BE COVERED WITH WEATHER PROOFING TAPE.
   - D. THE MINIMUM BENDING RADIUS FOR ALL ANTENNA CABLES SHALL BE SHOWN AS BELOW OR AS PER THE MANUFACTURER, WHICHEVER IS MORE CONSERVATIVE:

CABLE	IN AIR / CABLE TRAY	IN CONDUIT
1/2"	5"	10"
7/8"	10"	18"
1 5/8"	20"	28"
1X1 HYBRID	5"	10"
6X12 HYBRID	12"	16"

   - E. CABLES SHALL BE INSTALLED WITH THE MINIMUM NUMBER OF BENDS, CABLES SHALL NOT BE LEFT UNTERMINATED IN THE FIELD
   - F. GROUNDING KITS - AFTER INSTALLATION OF GROUND STRAPS, THE CONNECTION SHALL BE MADE WEATHER TIGHT USING WEATHERPROOFING KITS AS IDENTIFIED ABOVE. GROUND PIGTAILS SHALL BE BROUGHT OUT IN THE DOWNWARD DIRECTION FROM THE CONNECTIONS TO THE ANTENNA CABLE WITHOUT ANY SHARP BENDS (MINIMUM BEND RADIUS 10") AND CONNECTION SHALL BE MADE TO GROUNDING SYSTEM.

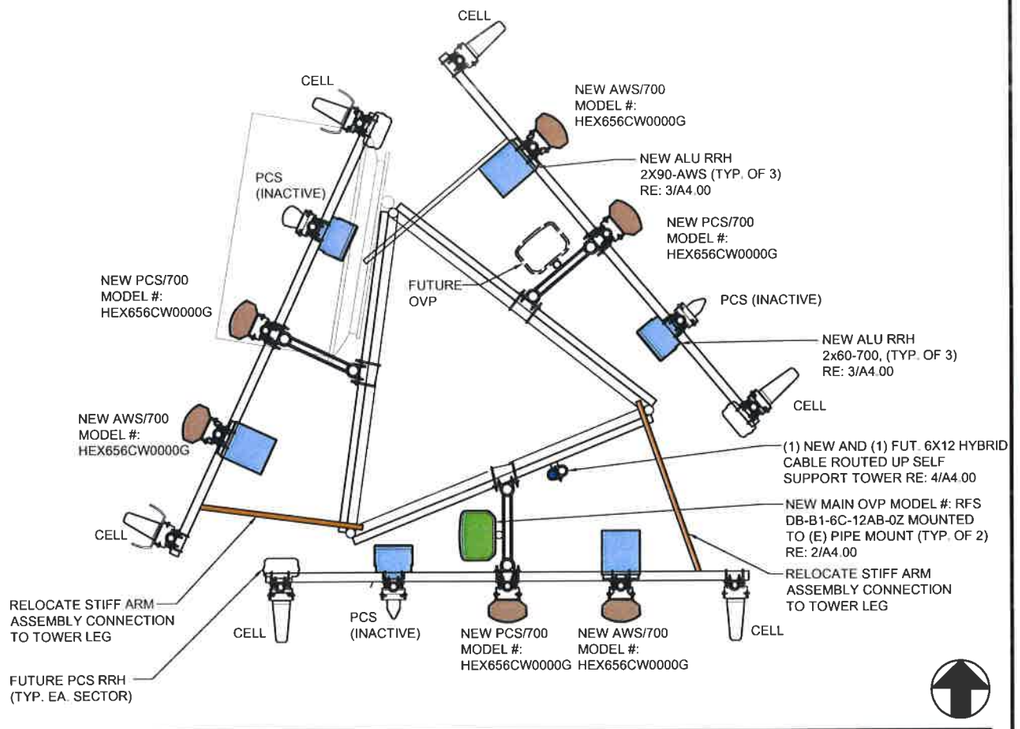
3 - ANTENNA NOTES



NOTES:
1. ALL ITEMS NOTED ARE EXISTING U.N.O. (TYP. THIS SHEET)
2. COLORS ON DRAWING REPRESENT NEW WORK (TYP. THIS SHEET)
3. REFER TO STRUCTURAL ANALYSIS BY (PENDING), DATED (PENDING).

2 - ANTENNA DEMO PLAN

1/4" = 1'-0"



1 - NEW ANTENNA PLAN

1/4" = 1'-0"

verizon
VERIZON WIRELESS SERVICES
3131 S. VAUGHN WAY, SUITE 550
AURORA, CO 80014

PROJECT INFORMATION

SITE NAME

CO1 HAYDEN

SITE I.D.

803

N 40°27'47.4", W 107°6'41.7"
ROUTT COUNTY, CO

CONSULTANT

A	08/29/16	CD REVIEW	DPL
B	09/15/16	CLIENT COMMENTS	DPL
0	10/25/16	CD ISSUE	DPL

1st REVIEW RSS 2nd REVIEW SB

CHARLES STECKLY
ARCHITECTURE
5935 SOUTH ZANG STREET, SUITE 280
LITTLETON, COLORADO 80127
OFFICE: 303.932.9974

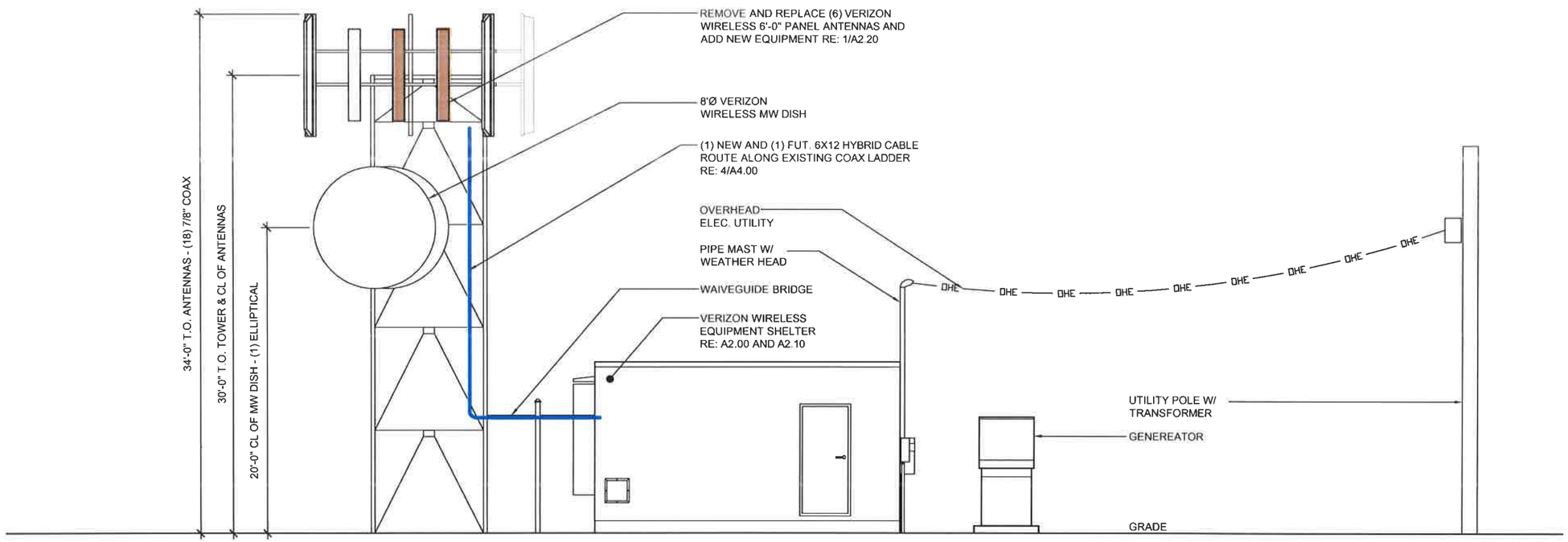
STATE OF COLORADO
CHARLES NELSON STECKLY
292002
OCT 25 2016
LICENSED ARCHITECT

ANTENNA PLANS & NOTES

A2.20

P:\2016\Projects\Verizon Wireless\SMR\CO1 Hayden\HAYDEN CDs\A220.dwg
PLOTTED Oct 26, 2016 AT 10:04am

GENERAL CONSTRUCTION
HYBRID & COAX CABLES
POWER/GROUNDING
FIBER
ANTENNAS
RRH/BBU
PENETRATIONS



NOTES:
1. ALL ITEMS NOTED ARE (E) U.N.O.
2. COLORS ON DRAWING REPRESENT NEW WORK.
3. REFER TO STRUCTURAL BY (PENDING) DATED: (PENDING)

1 - SOUTH ELEVATION 1/8" = 1'-0"

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PLOTTED Oct 25, 2016 AT 4:22pm

verizon

VERIZON WIRELESS SERVICES
3131 S. VAUGHN WAY, SUITE 550
AURORA, CO 80014

PROJECT INFORMATION

SITE NAME

CO1 HAYDEN

SITE I.D.
803
N 40°27'47.4", W 107°6'41.7"
ROUTT COUNTY, CO

CONSULTANT

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B	09/15/16	CLIENT COMMENTS	DPL
0	10/25/16	CD ISSUE	DPL

1st REVIEW RSS 2nd REVIEW SB

CHARLES STECKLY ARCHITECTURE
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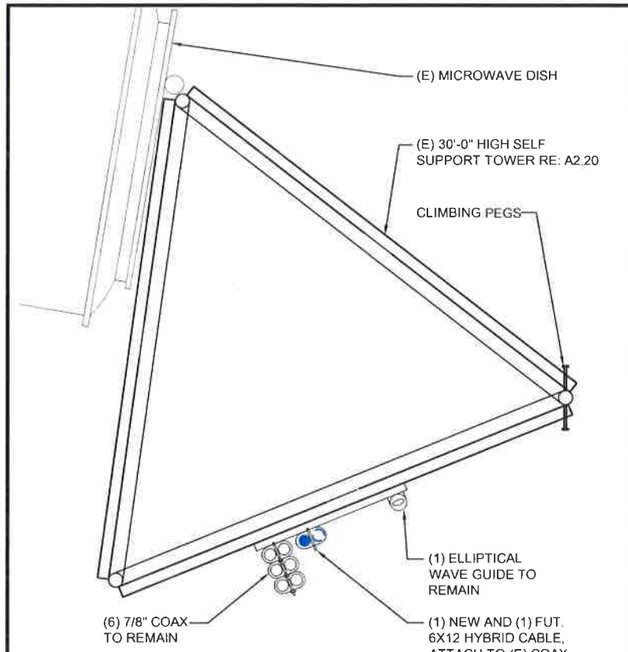
STATE OF COLORADO
CHARLES NELSON STECKLY
202802
OCT 25 2016
LICENSED ARCHITECT

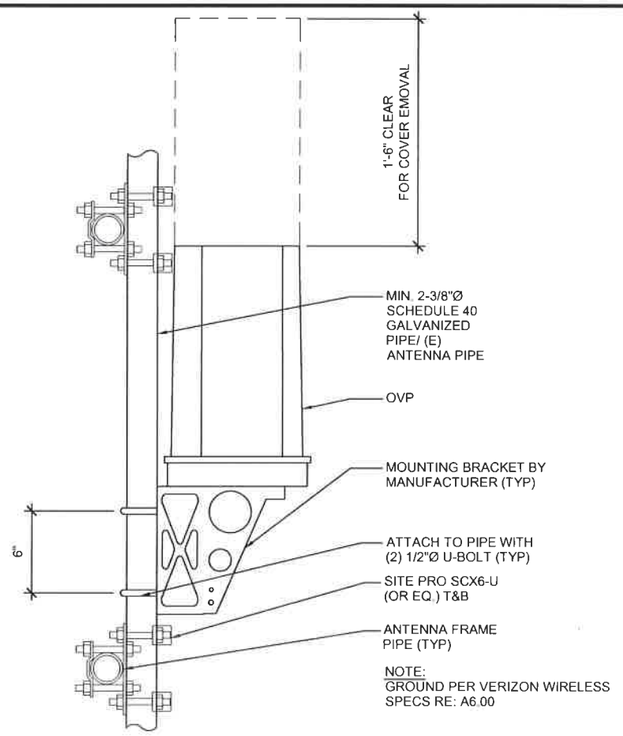
SOUTH ELEVATION

A3.00

GENERAL CONSTRUCTION
HYBRID & COAX CABLES
POWER/GROUNDING
FIBER
ANTENNAS
RRH/BBU
PENETRATIONS

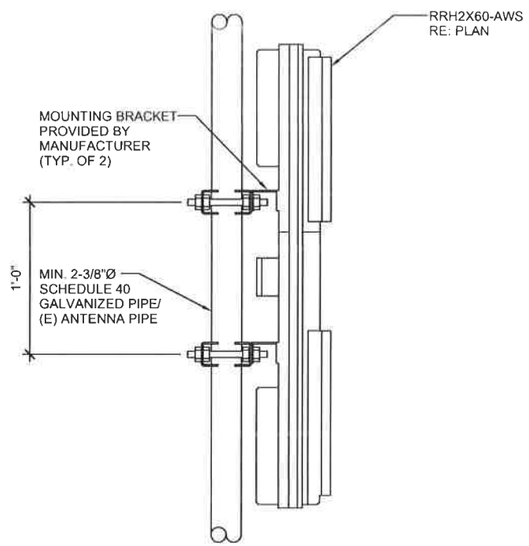


5 - COAX ROUTING PLAN N.T.S.



3 - OVP MOUNTING DETAIL N.T.S.

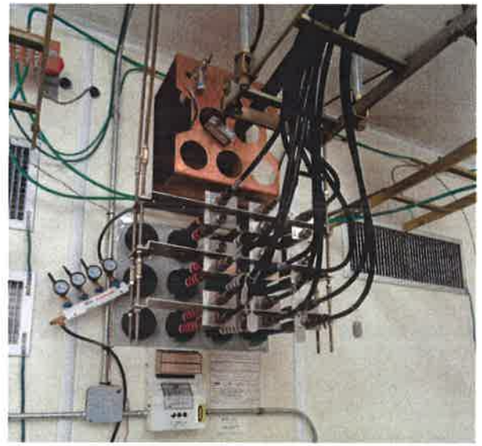
4 - COAX DEMO PLAN N.T.S.



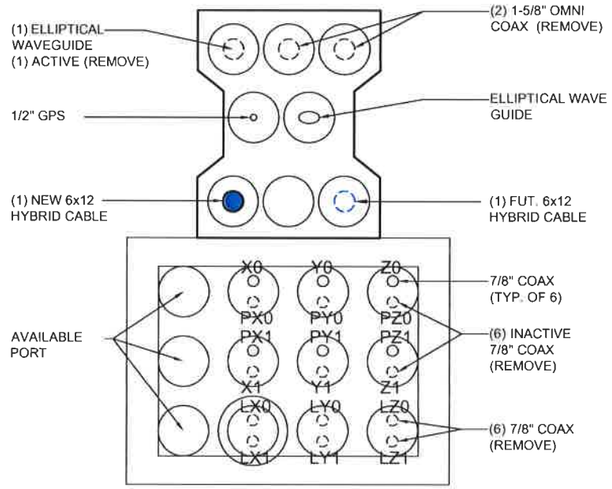
NOTES:
1. GROUND RRH PER VERIZON WIRELESS SPECIFICATIONS RE: A6.00
2. OTHER RRH MOUNTING SIMILAR.

2 - RRH MOUNTING DETAIL N.T.S.

EXTERIOR VIEW



INTERIOR VIEW



1 - COAX PORT DETAIL N.T.S.

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VERIZON WIRELESS SERVICES
3131 S. VAUGHN WAY, SUITE 550
AURORA, CO 80014

PROJECT INFORMATION

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1st REVIEW RSS 2nd REVIEW SB

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STATE OF COLORADO
CHARLES NELSON STECKLY
202802
OCT 25 2016
LICENSED ARCHITECT

DETAILS

A4.00

P:\2016\Projects\Verizon Wireless\SMR\CO1 Hayden\HAYDEN CDs\A400.dwg
PLOTTED Oct 25, 2016 AT 4:22pm

GENERAL CONSTRUCTION

HYBRID & COAX CABLES

POWER/GROUNDING

FIBER

ANTENNAS

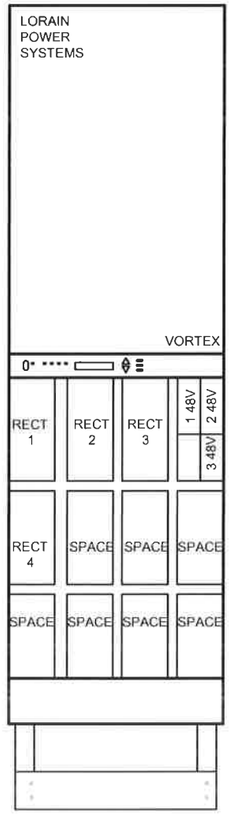
RRH/BBU

PENETRATIONS

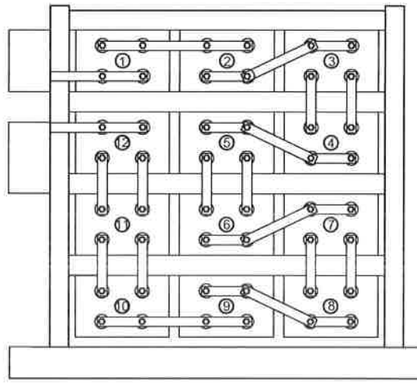
P:\2016\Projects\Verizon Wireless\SMR\CO1 Hayden\HAYDEN CDs\A500.dwg
PLOTTED Oct 25, 2016 AT 4:23pm

PDF RACK

LORAINE POWER SYSTEMS
VORTEX RECTIFIERS
(4) 24 VDC RECTIFIERS IN USE
SYSTEM LOAD 24VDC 212A
(3) -48 VDC RECTIFIERS IN USE
PCU LOAD 214A



BATTERY RACK
2SLA1500
(12) CELLS
WARRANTEE DATE: 09/21/24
SHIP DATE: 09/21/12



NOTES:
1. ALL OTHER EQUIPMENT NOT SHOWN FOR CLARITY
2. ALL ITEMS ARE EXISTING U.N.O.
3. COLOR ON DRAWING REPRESENTS NEW WORK

2 - HAZMAT RACK ELEVATION

3/4" = 1'-0"

1 - HAZMAT RACK PHOTOS

verizon

VERIZON WIRELESS SERVICES
3131 S. VAUGHN WAY, SUITE 550
AURORA, CO 80014

PROJECT INFORMATION

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ROUTT COUNTY, CO

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0	10/25/16	CD ISSUE	DPL

1st REVIEW RSS 2nd REVIEW SB

CHARLES STECKLY ARCHITECTURE
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STATE OF COLORADO
CHARLES NELSON STECKLY
202802
OCT 25 2016
LICENSED ARCHITECT

HAZMAT RACK ELEVATION

A5.00

GENERAL CONSTRUCTION

HYBRID & COAX CABLES

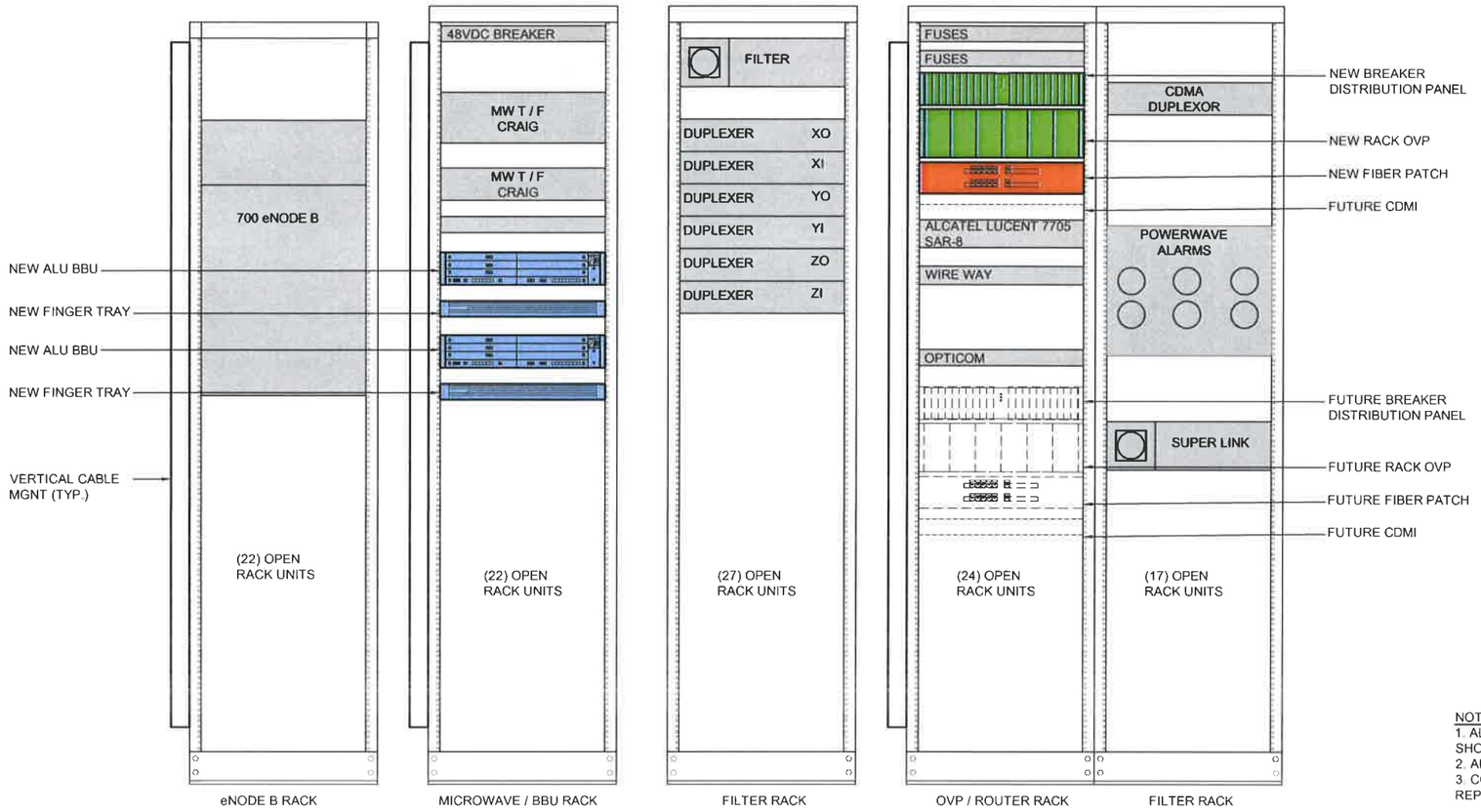
POWER/GROUNDING

FIBER

ANTENNAS

RRH/BBU

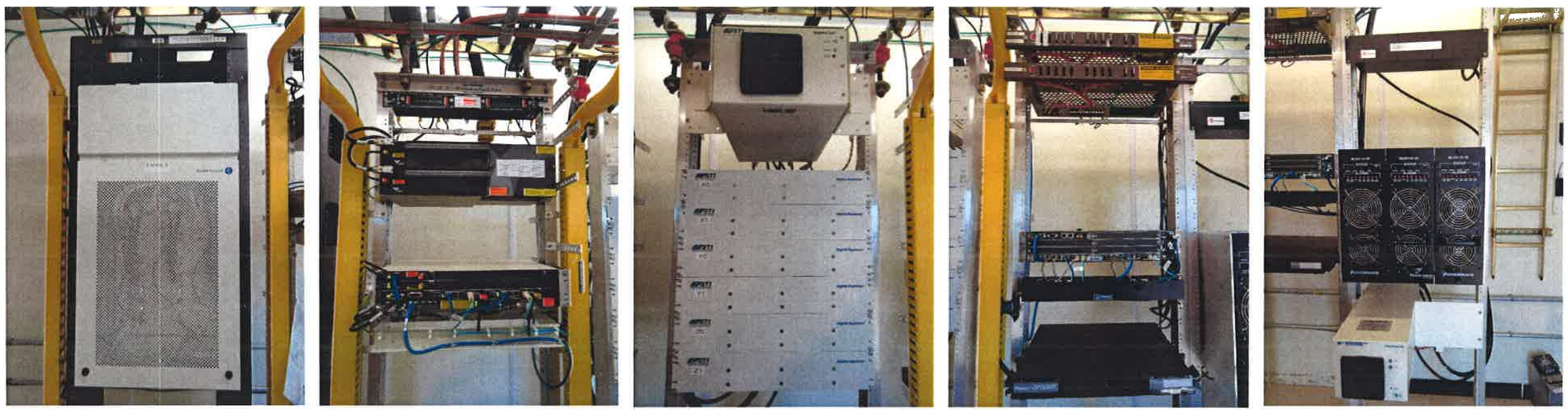
PENETRATIONS



NOTES:
1. ALL OTHER EQUIPMENT NOT SHOWN FOR CLARITY
2. ALL ITEMS ARE EXISTING U.N.O.
3. COLOR ON DRAWING REPRESENTS NEW WORK.

2 - RACK ELEVATION

1/2" = 1'-0"



1 - RACK PHOTOS

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PLOTTED Oct 25, 2016 AT 4:23pm

verizon

VERIZON WIRELESS SERVICES
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CHARLES STECKLY ARCHITECTURE

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OFFICE: 303.932.9974

STATE OF COLORADO
CHARLES NELSON STECKLY
202302
OCT 25 2016
LICENSED ARCHITECT

RACK ELEVATION

A5.10

GENERAL CONSTRUCTION
HYBRID & COAX CABLES
POWER/GROUNDING
FIBER
ANTENNAS
RRH/BBU
PENETRATIONS

GROUNDING NOTES

1. REFER TO VERIZON WIRELESS GROUNDING SPECIFICATIONS FOR ALL GROUNDING REQUIREMENTS.
2. BOND AND GROUND ANY PROPOSED STRUCTURAL STEEL, CONCRETE REINFORCING AND OTHER METALLIC BUILDING ELEMENTS, REFER TO VERIZON WIRELESS SPECIFICATIONS FOR EXACT REQUIREMENTS.
3. THE ELECTRICAL CONTRACTOR SHALL PERFORM ALL BONDING AND GROUNDING TO THE SITE'S OUTER GROUNDING SYSTEM DURING THE CONSTRUCTION PHASE OF THE BUILDING.
4. CONTRACTOR IS TO CONDUCT FREQUENT INSPECTIONS DURING THE CONSTRUCTION PHASE TO ENSURE THAT ALL GROUNDING ARRANGEMENTS ARE MADE ACCORDING TO THE GROUNDING DESIGN SPECIFICATIONS.
5. DO NOT RETROFIT (OR UPGRADE) ESTABLISHED SITES THAT DO NOT MEET ALL THE REQUIREMENTS OF VERIZON WIRELESS GROUNDING STANDARD UNLESS THERE ARE DOCUMENTED OCCURRENCES OF EQUIPMENT DAMAGES AND/OR SERVICE AFFECTING CONDITIONS.
6. USE ONLY VERIZON WIRELESS-APPROVED MATERIALS SUCH AS COPPER FOR MOST ELECTRICAL WORK AND ALUMINUM FOR CERTAIN APPLICATIONS FOR SITE GROUNDING SYSTEM, ELECTRICAL PROTECTION COMPONENTS AND AC WIRING.
7. USE THE SAME METAL THROUGHOUT THE GROUND SYSTEM WHEN POSSIBLE
8. IF DIFFERENT METALS MUST BE CONNECTED, BOND THEM BY EXOTHERMICALLY WELDING THEM TOGETHER.
9. USE TINNED COPPER WHEN CONNECTING TO GALVANIZED STEEL.
10. DO NOT BOND COPPER AND ALUMINUM TOGETHER UNLESS USING SPECIFICALLY DESIGNED EXOTHERMIC MATERIALS DESIGNED FOR THIS APPLICATION ARE USED OR A BIMETALLIC TRANSITIONAL CONNECTION IS UTILIZED.
11. MAKE ALL BONDING ATTACHMENTS TO CLEAN, UNPAINTED METAL SURFACES OR USE APPROVED PAINT PIERCING WASHERS.
12. PAINTED SURFACES MUST BE SCRAPED, CLEANED, AND LIGHTLY COATED WITH THE APPLICABLE COMPOUND.
13. ALL INDOOR OR OUTDOOR POWER OR GROUNDING CONNECTIONS SHALL BE PROTECTED AGAINST CORROSION BY USE OF A THIN COATING OF ANTI-OXIDATION COMPOUND. A COPPER COSMOLINE GREASE BASED COMPOUND (NO OX-ID) SHALL BE USED ON ALL COPPER TO COPPER CONNECTIONS. A ZINC BASED (GREY COLORED) COMPOUND SHALL BE USED ON ALL COPPER TO STEEL CONNECTIONS. WHERE OTHER COMPOUNDS SUCH AS KOPPER-SHIELD ETC EXIST, THEY MAY BE 'GRANDFATHERED' IN PLACE. PENTROX GREASE OR AN APPROVED EQUAL SHALL BE USED ON ALUMINUM CONNECTIONS.
14. DO NOT WELD GROUNDING CONDUCTORS TO THE STRUCTURAL MEMBERS OF TOWERS, INCLUDING DOWN GUYS AND ANCHOR RODS.
15. BOND ALL METALLIC OBJECTS (SUCH AS WATER PIPES, CONDUITS, METAL FUEL TANKS WITHOUT CATHODIC PROTECTION, METAL FENCES, HVAC, ETC.) THAT ARE WITHIN 6 FEET (1.8 M) OF THE GROUND RING, OR FROM ANY OTHER GROUNDED CONDUCTOR, TO GROUND RING OR TO THE GROUNDED CONDUCTOR. HARDWARE
16. ALL OUTDOOR HARDWARE (BOLTS, SCREWS, NUTS, WASHERS) SHALL BE 18-8 STAINLESS STEEL TYPE GRADE. INDOORS, GRADE 5 STEEL HARDWARE MAY BE USED. CHOOSE BOLT LENGTH TO ALLOW THE EXPOSURE OF AT LEAST TWO THREADS.
17. WHEN BONDING TO A METALLIC OBJECT WHERE ACCESS IS LIMITED TO ONLY ONE SURFACE, USE DRILLING & TAPPING OR SELF DRILLING SCREWS. DO NOT USE SHEET METAL SCREWS.
18. ALL GROUNDING CONDUCTORS SHOULD PRESERVE A DOWNWARD TO HORIZONTAL COURSE AND BE AS STRAIGHT AS POSSIBLE AND AVOID SHARP TURNS.
19. DO NOT USE U-SHAPED GROUNDING CONDUCTOR RUNS (U-TURNS IN THE WIRING) OR BONDING LAYOUTS TO REDUCE ARC-OVERS
20. ALL GROUNDING CONDUCTS MUST BE RUN IN NONMETALLIC CONDUIT. ROUTE ALL CONDUCTORS THROUGH NONMETALLIC SLEEVES WHEN PENETRATING FLOORS, CEILINGS, AND WALLS.
21. IF THE USE OF METALLIC CONDUIT CANNOT BE AVOIDED, BOND BOTH ENDS OF THE CONDUIT TO THE GROUNDING CONDUCTOR BEING ROUTED THROUGH THE CONDUIT
22. KEEP LENGTHS OF CONDUCTORS TO A MINIMUM
23. USE MULTIPLE CONDUCTING PATHS. PARALLEL PATHS ARE ONLY DESIRABLE WHEN SENSITIVE ELECTRONIC EQUIPMENT IS NOT PART OF THE CONDUCTOR PATH
24. KEEP BENDS IN CONDUCTORS TO A MINIMUM.
25. THE MINIMUM INSIDE BENDING RADIUS IS:

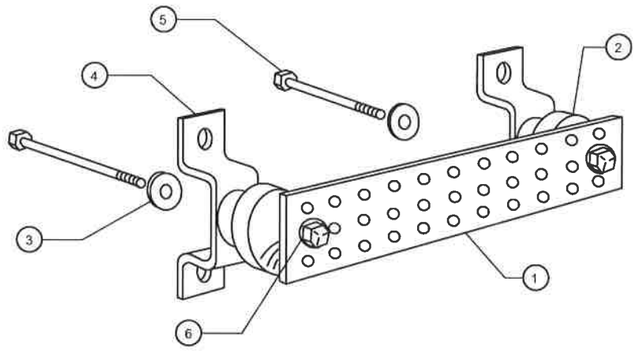
A. 6 INCHES (0.15M) FOR CONDUCTORS UP TO #6 GAUGE.
B. 12 INCHES (0.3M) FOR CONDUCTORS #6 TO #4/0 GAUGE.
C. 24 INCHES (0.6M) FOR CONDUCTORS #4/0 GAUGE AND LARGER

26. GROUND CONDUCTORS MUST NEVER BE ENCIRCLED WITH FERROUS METAL CLAMPS, PLACED THROUGH METAL WALLS, METAL PLATES, OR SHORT SECTIONS OF METAL CONDUIT, AND MUST NEVER BE PLACE IN THE SAME CABLE RACK AS DC POWER CABLES, HIGH FREQUENCY CABLES, ETC.
27. WHEN ATTACHING PVC CONDUITS TO ANY SURFACE UTILIZE NONCONDUCTIVE FASTENERS OR NONFERROUS FASTENERS ONLY.
28. IF CONNECTIONS BETWEEN ALUMINUM CONDUCTORS AND STEEL OBJECTS MUST BE MADE, TINNED LUGS AND PENTROX SHALL BE USED. WHERE THERE ARE CONCERNS THAT THE PENTROX MAY NOT PROVIDE ADEQUATE INTERFACING, THEN A BIMETAL SPLICE BETWEEN THE ALUMINUM CONDUCTOR AND A SHORT LENGTH OF COPPER CONDUCTOR MAY BE USED.
29. ALL OF THE BONDING AND GROUNDING CONDUCTORS SPECIFIED FOR ROOFTOP CELL AND MICROWAVE SYSTEMS IS BARE WIRE. INSULATED WIRE SHALL NOT BE SPECIFIED OR SUBSTITUTED FOR THE BONDING AND GROUNDING CONDUCTORS OF ROOFTOP INSTALLATIONS.

4 - GROUNDING NOTES

KEY NOTES:
1) COPPER GROUND BAR OR APPROVED EQUAL, 1/4" x 4" X 12" HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2) SPACERS AS REQUIRED
3) 5/8" LOCKWASHERS
4) WALL MOUNTING BRACKET
5) 5/8" -11 H.H.C.S. BOLTS (VERIFY LENGTH)
6) USE TAMPER RESISTANT MOUNTING HARDWARE

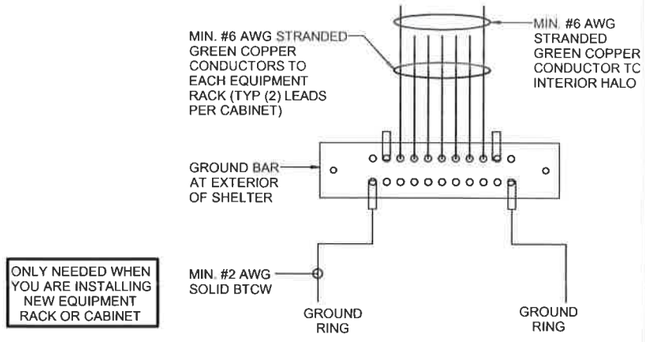
ONLY NEEDED WHEN YOU ARE INSTALLING NEW GROUND BAR



NOTES:
1. THE DISTANCE BETWEEN COAXIAL CABLE SHIELD CIGBE BARS SHALL NOT EXCEED 100'. THIS MAY REQUIRE BONDING AT THE TOP, BOTTOM AND TWO LOCATIONS IN THE MIDDLE OF THE TOWER FOR TALLER TOWERS. EACH RF CABLE SHIELD SHALL BE BONDED AT A MINIMUM OF TWO (2) POINTS ON THE TOWER (TOP AND BOTTOM).

3 - GROUND BAR DETAIL

N.T.S.

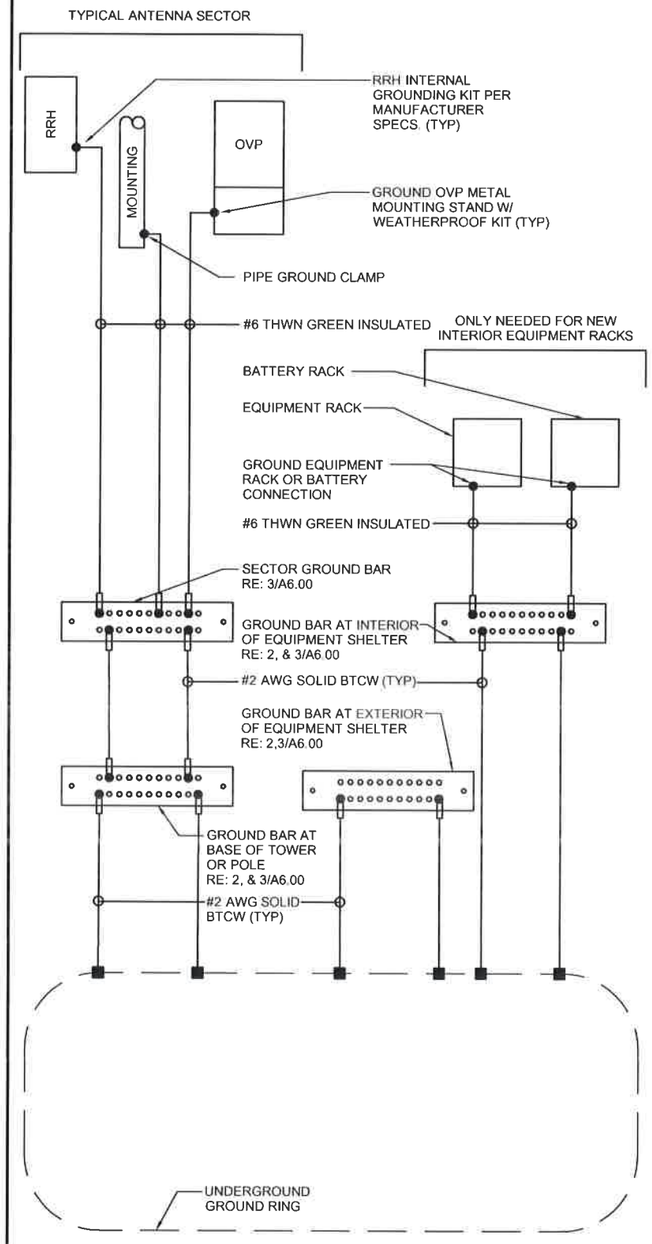


NOTES:
1. VERIFY EXISTING INTERIOR GROUNDING IS SUFFICIENT FOR NEW EQUIPMENT INSTALLATION AND GROUND ALL NEW INSTALLED EQUIPMENT AS REQUIRED BY VERIZON WIRELESS STANDARDS
2. CONNECT THE EQUIPMENT FRAMES TO THE MGB/FGB, USING A MINIMUM OF #6 AWG STRANDED COPPER, GREEN-INSULATED CONDUCTOR. TO ASSURE A GOOD CONNECTION AT THE FRAME, CLEAN THE CONNECTION POINT ON THE FRAME TO BARE METAL, APPLY AN ANTI-OXIDATION COMPOUND, AND CONNECT USING A TWO-HOLE, LONG-BARREL COMPRESSION LUG. SOME EXISTING SITES MAY BE USING SINGLE HOLE LUGS FOR THESE PURPOSES. THESE CONNECTIONS SHOULD NOT BE REPLACED "IF" THE RUNS ARE TO SHORT AND THERE IS NO LIKELIHOOD OF MECHANICAL STRESS ON THE CABLE THAT WOULD LOOSEN THESE CONNECTIONS.
3. DC DISTRIBUTION PANELS, CHASSIS, BATTERY RACKS, FRAMES AND CHASSIS OF RECTIFIERS AND RECTIFIERS SHOULD BE BONDED DIRECTLY TO THE MGB/FGB. WHEN UTILIZING AN INTEGRATED DC/DC CONVERTER SYSTEM, THE 48-VOLT RETURN DISTRIBUTION BAR SHALL BE BONDED TO THE 24-VOLT RETURN DISTRIBUTION BAR WITH A MINIMUM CONDUCTOR SIZE OF A #2, STRANDED COPPER CONDUCTOR, IN A WIRELESS SHELTER WITH A DEDICATED 48-VOLT PLANT, THE 48-VOLT RETURN DISTRIBUTION BAR SHALL BE BONDED TO THE MGB. ALL BATTERY FRAMES SHALL BE BONDED TO THE MGB WITH A #6 GREEN THWN INSULATED CONDUCTOR. (ONLY APPLICABLE WHEN MODIFICATIONS ARE REQUIRED TO THE BATTERY OR POWER PLANT.)
4. VERIFY (E) SYSTEM IS PER ATTACHED NOTES AND DETAILS AND IF NOT NOTIFY P.M. FOR REQUIRED UPGRADES.

2 - INTERIOR GROUNDING

N.T.S.

TYPICAL ANTENNA SECTION



● COMPRESSION TYPE CONNECTION

■ EXOTHERMIC WELD

NOTE:
GROUNDING SCHEMATIC IS DIAGRAMMATIC AND DOES NOT REFLECT ACTUAL EQUIPMENT LAYOUT ORIENTATION. REFER TO PLANS FOR DIRECTION.

1 - GROUNDING SCHEMATIC

N.T.S.

verizon
VERIZON WIRELESS SERVICES
3131 S. VAUGHN WAY, SUITE 550
AURORA, CO 80014

PROJECT INFORMATION

SITE NAME

CO1 HAYDEN

SITE I.D.
803
N 40°27'47.4", W 107°6'41.7"
ROUTT COUNTY, CO

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CHARLES NELSON STECKLY
29280Z
OCT 25 2016
LICENSED ARCHITECT

GROUNDING SCHEMATIC

A6.00