



**SAND TRAP**  
**1257 N MARION AVENUE**  
**GEARHART, OR 97138**  
**PS LOCATION: 425550**  
**PROJECT ID: 16242666**

Structure type:  
Rooftop

**STRUCTURE TYPE: RAW LAND MONOPOLE**  
**PROJECT TYPE: 5G L-SUB 6 CARRIER ADD**



3245 158TH AVE SE, FLOOR 3  
 BELLEVUE, WA 98008



**BLACK ROCK**  
 BLACK ROCK CONSULTING LLC

SEC 33 TWP 28 NME DRYMPT 17N OF S1/2 N1/4 QM - CON AT W1/4 COR OF S3 SEC 33 AT A 1/4 WCH PCH WITH ROAD PLAS & H&L TH H&M&C SITE AS W LN OF S3 SEC 33 FOR H&L TO NLY R/W LN OF 140TH ST SWAS REDUCED AND FILE NO 1089238 VOL 47 PG 130 DATED 12-10-02 TH S&P&S EYE AS RLY R/W LN OF S3 140TH ST SW 1/400'X175 TH TH H&M&C SUB ELIMINATE H&M&C COORDINATE TH S&P&S SITE 1/400' X 175' HEREINAFTER REFER TO AS POINT "A" TH S20922 021 215.41FT TO N R/W LN OF 140TH ST SW TH H&M&C SITE AS RLY R/W LN OF 140TH ST SW 215FT FROM A LOT 5 OF SP 43 (3-86) W/ H&M&C 1/400'

**LEGAL DESCRIPTION**

**PROPERTY OWNER:** GEARHART PARTNERS LLC  
 1157 N MARION AVENUE  
 GEARHART, OR 97138  
 JASON BANGOLD  
 (503) 951-3342

**CONTACT:**

**PHONE:**

**APPLICANT:** VERIZON WIRELESS  
 3245 158TH AVE SE FLOOR 3  
 BELLEVUE, WA 98008

**ADDRESS:**

**PHONE:** (425)437-8369

**LATITUDE (NAD 83):** 46° 01'57.31" (48.03258811)  
**LONGITUDE (NAD 83):** -123° 08'28.36" (-123.9238809)

**CONSTRUCTION TYPE:**

**OCCUPANCY:** U

**APN #:** 10086100300100

**JURISDICTION:** CITY OF GEARHART

**ZONING:** C2-RESORT COMMERCIAL

**SITE INFORMATION**

**APPLICANT:** VERIZON WIRELESS  
 3245 158TH AVE SE, FLOOR 3  
 BELLEVUE, WA 98008

**PROJECT MANAGER:** BLACK ROCK CONSULTING LLC  
 CONTACT: BRANDON CLOVER  
 (503)-456-8022  
 BRANDON@BLK-ROCK.COM

**ENGINEER:** RUTLEDGE, LLC  
 LEE THO  
 CONTACT: LEE THO  
 PHONE: 503-499-0800  
 EMAIL: LEE.TH@RUTLEDGE.COM

**PROJECT TEAM**

Update address to:  
5430 NE 122nd Ave,  
Portland, OR 97230

Update name to:  
CAROLINE WARTH  
514-473-4308  
CAROLINE@BLK-ROCK.COM



**VICINITY MAP**

**AERIAL MAP**

**DIRECTIONS FROM VERIZON OFFICE:** VERIZON WIRELESS 3245 158TH AVE, SE FLOOR 3, BELLEVUE, WA 98008  
 HEAD EAST TOWARD 158TH AVE SE, TURN RIGHT ONTO 158TH AVE SE, TURN RIGHT ONTO SE EASTGATE WAY, TURN LEFT ONTO THE I-50 W RAMP TO SEATTLE, KEEP LEFT AND MERGE ONTO I-50 W, USE THE RIGHT 2 LANES TO TAKE EXIT 1D TO MERGE ONTO I-405 S TOWARD BENTON, KEEP RIGHT TO STAY ON I-405 S, TAKE THE EXIT ONTO I-5 S TOWARD PORTLAND, KEEP LEFT AT THE FORK TO STAY ON I-5 S, KEEP LEFT TO STAY ON I-5 S, TAKE EXIT 38 FOR WA-432, KEEP LEFT TO CONTINUE TOWARD WA-432 W, CONTINUE ONTO EXIT 36B (SIGNS FOR WA-432 W/DONGVIEW), MERGE ONTO WA-432 W, TAKE THE EXIT TOWARD 3RD AVE, FOLLOW US-30 W AND US-101 S TO YOUR DESTINATION IN CLATSOP COUNTY, TURN LEFT ONTO 3RD AVE, CONTINUE ONTO INDUSTRIAL WAY, USE THE LEFT 2 LANES TO TURN LEFT ONTO WA-433 S/DREXON WAY, TURN RIGHT TO MERGE ONTO US-30 W TOWARD CLATSKANIE/ASTORIA, SLIGHT RIGHT AFTER PAPA MURPHY'S | TAKE 'N' BAKE PIZZA (ON THE LEFT), AT THE TRAFFIC CIRCLE, TAKE THE 1ST EXIT ONTO US-101 S HEADING TO WARRENTON/SEASIDE/AIRPORT, TURN RIGHT ONTO GEARHART LN, CONTINUE ONTO GEARHART LOOP RD/N MARION AVE, TURN LEFT, TURN RIGHT.

**DRIVING DIRECTIONS**

SHEET NO:	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
A-1	SITE PLAN
A-2	ENLARGED SITE PLAN
A-3	EQUIPMENT PLAN
A-4	NEW AND EXISTING ANTENNA PLAN
A-5	ELEVATIONS
A-6	ELEVATIONS
A-7	DETAILS
A-8	DETAILS
A-9	RF PLUMBING CONFIGURATION
G-1	GROUNDING PLAN AND DETAILS

**DRAWING INDEX**

VERIZON WIRELESS PROPOSES TO MODIFY AN EXISTING WIRELESS INSTALLATION. THE SCOPE WILL CONSIST OF THE FOLLOWING:

- ANTENNA LEVEL:
  - INSTALL (2) NEW VERIZON WIRELESS PANEL ANTENNA
  - INSTALL (2) NEW FRP WALL EXTENSION
- EQUIPMENT LEVEL:

**PROJECT DESCRIPTION**

TITLE	SIGNATURE	DATE
CONSTRUCTION MANAGER		
RF ENGINEER		
REAL ESTATE		
SITE ACQUISITION		
PROPERTY OWNER		
TOWER OWNER		

**APPROVAL / SIGN OFF**

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**SAND TRAP**  
 1257 N MARION AVENUE  
 GEARHART, OR 97138  
 RAW LAND MONOPOLE

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T-1**

GENERAL NOTES	
1.	DRAWINGS ARE NOT TO BE SCALED. WRITTEN DIMENSIONS TAKE PRECEDENCE, AND THIS SET OF PLANS IS INTENDED TO BE USED FOR ENHANCED 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.
2.	PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS INVOLVED SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE NEW 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/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 SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
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.	ANTENNA SUPPORTING POLE IS UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION SUB-CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUB-CONTRACTOR 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 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 CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAYING, 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.
12.	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.
13.	THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND NATIONAL CODES, REGULATIONS AND SAFETY REGULATIONS, ALL OSHA REGULATIONS, ALL PUBLIC AND MUNICIPAL AUTHORITIES, AND ANY UTILITY COMPANIES' REGULATIONS AND DIRECTIVES.
14.	THE DRAWINGS AND SPECIFICATIONS ARE A GENERAL DIRECTIVE FOR THE SCOPE OF WORK. EXACT DIMENSIONS AND LOCATIONS MAY CHANGE IN THE FIELD. THE CONTRACTOR IS TO VERIFY THE DIMENSIONS AND LOCATIONS AND REPORT ANY AND ALL DISCREPANCIES TO REPRESENTATIVE. ANY MINOR ERRORS AND OMISSIONS IN THE DRAWINGS AND SPECIFICATIONS DOES NOT EXCUSE THE CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
15.	CONTRACTOR IS RESPONSIBLE FOR FIELD MEASUREMENTS TO CONFIRM LENGTHS OF CABLE TRAYS AND ELECTRICAL LINES AND ANTENNA MOUNTING.
16.	VERIFICATION THAT EXISTING TOWER/POLE/STRUCTURE CAN SUPPORT THE PROPOSED ANTENNA, COAX & ADDITIONAL EQUIPMENT LOADING IS TO BE DONE BY OTHERS.

CONTRACTOR NOTES	
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 ARCHITECT/ENGINEER OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE WORK COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED OTHERWISE.	

METAL NOTES	
<p>PART 1 - GENERAL</p> <p>SECTION INCLUDES:</p> <ol style="list-style-type: none"> <li>STRUCTURAL STEEL FRAMING MEMBERS, BASE PLATE, PLATE, BUSH AND BRONZING UNDER BASE PLATE.</li> <li>FINISHES:</li> </ol> <p>SHOP DRAWINGS INDICATE SIZE, SPACING, AND LOCATIONS OF STRUCTURAL MEMBERS, OPENINGS, CONNECTIONS, CAMBRS, LOADS, AND WELDED SECTIONS.</p> <ol style="list-style-type: none"> <li>QUALITY ASSURANCE           <ol style="list-style-type: none"> <li>FABRICATE STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH ALSO SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.</li> <li>PERFORM DESIGN UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE.</li> </ol> </li> </ol>	
<p>PART 2 - PRODUCTS</p> <ol style="list-style-type: none"> <li>MATERIALS:           <ol style="list-style-type: none"> <li>STRUCTURAL STEEL MEMBERS: ASTM A372, GRADE 50</li> <li>STRUCTURAL TUBING: ASTM A372, GRADE 50</li> <li>RIP-C: ASTM A325, TYPE E OR S, GRADE B</li> <li>BOLTS, NUTS, AND WASHERS: ASTM A325</li> <li>ANCHOR BOLTS: ASTM A307</li> <li>WELDING MATERIALS: AWS D1.1, TYPE REQUIRED FOR MATERIALS BEING WELDED</li> <li>GRUVT: NON-SKIRM TYPE, PREHEATED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICIZING ADDITIVES, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 7000 psi AT 28 DAYS.</li> </ol> </li> <li>SHOP AND TOUCH-UP PRIMER: SSPC 15, TYPE 1, RED OXIDE</li> <li>TOUCH-UP PRIMER FOR GALV. SURFACES: ZINC RICH TYPE</li> </ol> <ol style="list-style-type: none"> <li>FABRICATION           <ol style="list-style-type: none"> <li>CONTINUOUSLY SEAL JOINTED MEMBERS BY CONTINUOUS WELDS. GRIND EXPOSED WELDS SMOOTH.</li> </ol> </li> <li>FINISH           <ol style="list-style-type: none"> <li>PREPARE STRUCTURAL COMPONENT SURFACES IN ACCORDANCE WITH SSPC SP-1 TO SP-10 PROCEDURES.</li> <li>STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED.</li> </ol> </li> </ol>	
<p>PART 3 - EXECUTION</p> <ol style="list-style-type: none"> <li>EXAMINATION AND PREPARATION:           <ol style="list-style-type: none"> <li>VERIFY THAT THE FIELD CONDITIONS ARE ACCEPTABLE.</li> </ol> </li> <li>ERECTION:           <ol style="list-style-type: none"> <li>ALLOW FOR ERECTION LOADS. PROVIDE TEMPORARY BRACING TO MAINTAIN FRAMING IN ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRIDGING AND BRACING.</li> <li>FIELD WELD COMPONENTS INDICATED ON SHOP DRAWINGS.</li> <li>DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER.</li> <li>AFTER ERECTION, TOUCH-UP WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED OR GALV. WITH TOUCH-UP PRIMERS AS SPECIFIED UNDER SECT. 05000-METALS, PART 2 - PRODUCTS, H &amp; I. SURFACES TO BE IN CONTACT WITH CONCRETE NOT INCLUDED.</li> </ol> </li> <li>FIELD QUALITY CONTROL:           <ol style="list-style-type: none"> <li>FIELD INSPECTION OF MEMBERS, CONNECTIONS, WELDS AND TROUING.</li> </ol> </li> </ol>	



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BLACK ROCK CONSULTING LLC

0	04/27/21	REV	DATE	DESCRIPTION	INT

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**SAND TRAP**  
1257 N MARION AVENUE  
GEARHART, OR 97138  
RAW LAND MONOPOLE

SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-1**

**TELECOMMUNICATIONS WIRING COMPONENTS  
(COAXIAL ANTENNA CABLE)**

1. GENERAL
  - A. ALL MATERIALS, PRODUCTS OR PROCEDURES INCORPORATED INTO WORK SHALL BE NEW AND OF STANDARD COMMERCIAL QUALITY.
  - B. CERTAIN MATERIALS AND PRODUCTS WILL BE SUPPLIED BY THE OWNER (REFER TO GENERAL CONDITIONS FOR THE LIST OF OWNER FURNISHED EQUIPMENT, MATERIALS AND SUPPLIES FOR THESE ITEMS). THE CONTRACTOR IS RESPONSIBLE FOR PICKUP AND DELIVERY OF ALL SUCH MATERIALS.
  - C. ALL OTHER MATERIALS AND PRODUCTS SPECIFIED IN THE CONTRACT DOCUMENTS SHALL BE SUPPLIED BY THE CONTRACTOR.
2. MATERIALS:
  - A. COAXIAL CABLE:
    1. INSTALL COAXIAL CABLE AND TERMINATIONS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS WITH COAXIAL CABLES SUPPORTED AT NO MORE THAN 3'-0" O.C. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF EQUIPMENT LOCATION UNLESS OTHERWISE STATED.
    2. ALL COAX RUN LENGTHS GREATER THAN 145 FEET SHALL BE 1-5/8" AND IN LENGTH LESS THAN OR EQUAL TO 145 FEET SHALL BE 7/8".
3. ANTENNA AND COAXIAL CABLE GROUNDING
  - A. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)
4. COAXIAL CABLE IDENTIFICATION
  - A. TO PROVIDE EASY IDENTIFICATION AND UNIFORM MARKING OF ANTENNA CABLEING, PLASTIC TAGS SHALL BE USED AT THE FOLLOWING LOCATIONS:
    1. FIRST LOCATION IS AT THE END OF THE COAX NEAREST THE ANTENNA (WHERE THE COAXIAL CABLE AND JUMPER ARE CONNECTED).
    2. SECOND LOCATION IS INSIDE THE EQUIPMENT SHELTER NEAR THE WAVEGUIDE ENTRY PORT.
  - B. USE ANDREW CABLE TIES (PT.# 27299) TO SECURE IDENTIFICATION TAGS.
5. TESTING
 

VERIZON WIRELESS SHALL PROVIDE AN INDEPENDENT TESTING AGENCY TO PERFORM THE COAXIAL SWEEP TEST & REPORT. THE CONTRACTOR IS TO PROVIDE OLDMEN / QUALIFIED PERSONNEL TO ASSIST IN ANY REPAIRS AND WEATHERPROOFING ONCE THE TEST IS COMPLETE. THE CONTRACTOR IS TO PROVIDE VERIZON WIRELESS A MINIMUM OF 48 HOURS NOTICE PRIOR TO THE TIME OF THE SWEEP TEST.

**ELECTRICAL NOTES**

INSTALLATION OF SECONDARY POWER AND CONNECTION TO METER SHALL BE COMPLETED IN COMPLIANCE WITH NATIONAL ELECTRIC CODE, NFPA 70, AND THE STATE LAWS, RULES AND REGULATIONS FOR INSTALLING ELECTRIC WIRES & EQUIPMENT, ALL LATEST EDITION, AND WITH SPECIFICATIONS PER A.S.I.T.A. § 231, § 400, I.C.E.A. §§91-401, I.C.E.A. §§1-570, & LOCAL PUD.

PROVIDE A METER BASE PER LOCAL UTILITY STANDARDS. MOUNT ON SIDE OF OWNER FURNISHED BACK BOARD.

UNDERGROUND CONDUIT SHALL BE RIGID POLYVINYL CHLORIDE CONDUIT: SCHEDULE 40, TYPE 1, CONFORMING TO UL ARTICLE R81 WESTERN PLASTICS OR CARLOW MANUFACTURER. COUPLINGS SHALL BE SLIP-ON, SOLVENT SEALED T PIPE, SOLVENT, WESTERN TYPE COMPATIBLE WITH PVC DUCT. ALL BENDS SHALL BE "WIDE SWEEP" TYPE WITH A 24" MINIMUM RADIUS. ALL CONDUIT UNDER ROADS SHALL BE RGS, (OR PVC ENCASED IN 8"x18" RED CONCRETE DUCTBANK).

CONDUIT USED INDOORS SHALL BE E.M.T., AND RIGID GALVANIZED STEEL FOR OUTDOORS. COUPLINGS SHALL BE RIGID STEEL AND COMPRESSION TYPE FOR E.M.T. SET SCREW FITTINGS ARE NOT PERMITTED. FOR ALL STUBS-UPS, USE RIGID GALVANIZED STEEL CONDUIT.

WIRE AND CABLE SHALL BE OF THE TYPE AND SIZE AS REQUIRED BY NEC. THERE WILL BE NO SPLICES ALLOWED. PROVIDE HOPE PULLING HAND HOLES AS NEEDED.

CONTRACTOR SHALL PROVIDE TEST OF THE GROUNDING SYSTEM BY CERTIFIED TESTING AGENT. PROVIDE INDEPENDENT TEST RESULTS TO THE PROJECT MANAGER FOR REVIEW. GROUNDING SYSTEM RESISTANCE TO GROUND SHALL NOT EXCEED 5 OHMS. ALL ABOVE GRADE INTERIOR GROUNDING CONNECTIONS SHALL BE DOUBLE-LID COMPRESSION TYPE. ALL BELOW GRADE AND EXPOSED EXTERIOR GROUNDING CONNECTIONS TO PERMANENT EQUIPMENT AND FIXED BUILDING ELEMENTS SHALL BE CARWELD TYPE. CARE SHALL BE TAKEN TO REVIEW CONNECTION LOCATIONS AND MATERIAL TYPES TO AVOID POSSIBLE GALVANIC CORROSION. ALL EXPOSED GROUNDING CONNECTIONS TO BE COATED WITH ANTI-CORROSION AGENT SUCH AS "MO-DRY", "TRONOLIT" OR "PRIMERITE". VERIFY PRODUCT WITH PROJECT MANAGER. ALL BOLTS, WASHERS AND NUTS USED ON GROUNDING CONNECTIONS SHALL BE STAINLESS STEEL.

ALL EXTERIOR GROUND BARS SHALL BE COATED WITH ANTI-CORROSION AGENT SUCH AS LPS-3 OR AS PER NOTE 8 ABOVE.

ALL JUNCTION AND OUTLET BOXES TO BE LABELED WITH KROY TAPE, OR EQUAL, DESIGNATING ALL CIRCUIT NUMBERS CONTAINED IN EACH BOX.

CONTRACTOR TO ENSURE ILC PROVIDED WITH (2) INTERNAL TYS.

CONTRACTOR SHALL COORDINATE WITH SITE SURVEY TO LOCATE EXISTING UNDERGROUND UTILITIES. WHEREVER POTENTIAL CONFLICTS / INTERFERENCES EXIST, HAND EXCAVATE TO AVOID DAMAGE. CONTACT ALL UTILITIES TO LOCATE UNDERGROUND PIPING IN PUBLIC ROW.

VERIFY THAT A.I.C. OF THE UTILITY DOES NOT EXCEED THE A.I.C. RATING OF THE PROVIDED EQUIPMENT SHELTER PACKAGE. IF OVER 100AIC, PROVIDE FUSIBLE SERVICE ENTRANCE SWITCH AND CONFIRM LOWERING OF AIC TO ACCEPTABLE LEVELS.

UTILITY POINTS OF SERVICE AND WORK / MATERIALS SHOWN ARE BASED UPON PRELIMINARY INFORMATION PROVIDED BY THE UTILITY COMPANIES AND ARE FOR BID PURPOSES ONLY.

CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL AND EXACT WORK / MATERIALS REQUIREMENTS AND CONSTRUCT TO UTILITY COMPANY ENGINEERING PLANS AND SPECIFICATIONS ONLY. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, PULL ROPES, CABLES, PULL BOXES, CONCRETE ENCASEMENT OF CONDUIT (IF REQUIRED), TRANSFORMER PAD, BARRIERS, POLE RISERS, TRENCHING, BACKFILL, PAY ALL UTILITY COMPANY FEES AND INCLUDE ALL REQUIREMENTS IN SCOPE OF WORK.

**GROUNDING NOTES**

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE DESIGN AND CONSTRUCTION SPECIFICATIONS AND ALL APPLICABLE LOCAL CODES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
4. ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD).
5. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING TWO (2) HIGH PRESS CREAMS.
6. ALL EXOTHERMIC CONNECTIONS TO THE GROUND RODS SHALL START AT THE TOP & HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
7. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
8. ALL EXTERIOR GROUND CONDUCTORS SHALL BE #2 AWG T1M PLATED COPPER UNLESS OTHERWISE INDICATED.
9. GROUND RODS SHALL BE STAINLESS STEEL OR COPPER CLAD STEEL, 5/8"-10-FT. LONG (OR NOTED OTHERWISE ON PLANS), AND SHALL BE DRIVEN VERTICALLY WITH THEIR TOPS 18" BELOW FINAL GRADE OR 6" BELOW FROST LINE FOR MAXIMUM DEPTH.
10. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
11. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
12. GROUND RING SHALL BE LOCATED A MINIMUM OF 24" BELOW GRADE OR 8" MINIMUM BELOW THE FROST LINE.
13. INSTALL GROUND CONDUCTORS AND GROUND ROD MINIMUM OF 1'-0" FROM EQUIPMENT CONCRETE PAD, SPREAD FOOTING, OR FENCE.
14. EXOTHERMIC WELD GROUND CONNECTION TO FENCE POST: TREAT WITH A COLD GALVANIZED SPRAY.
15. OBSERVE N.E.C. AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.
16. GROUNDING ATTACHMENT TO TOWER SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (2 MINIMUM)
17. MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS.
18. CONTRACTOR TO VERIFY CURRENT GROUNDING STANDARDS PRIOR TO CONSTRUCTION.



REV	DATE	DESCRIPTION	BY
0	04/27/21	FOR CONSTRUCTION DRAWING	MB

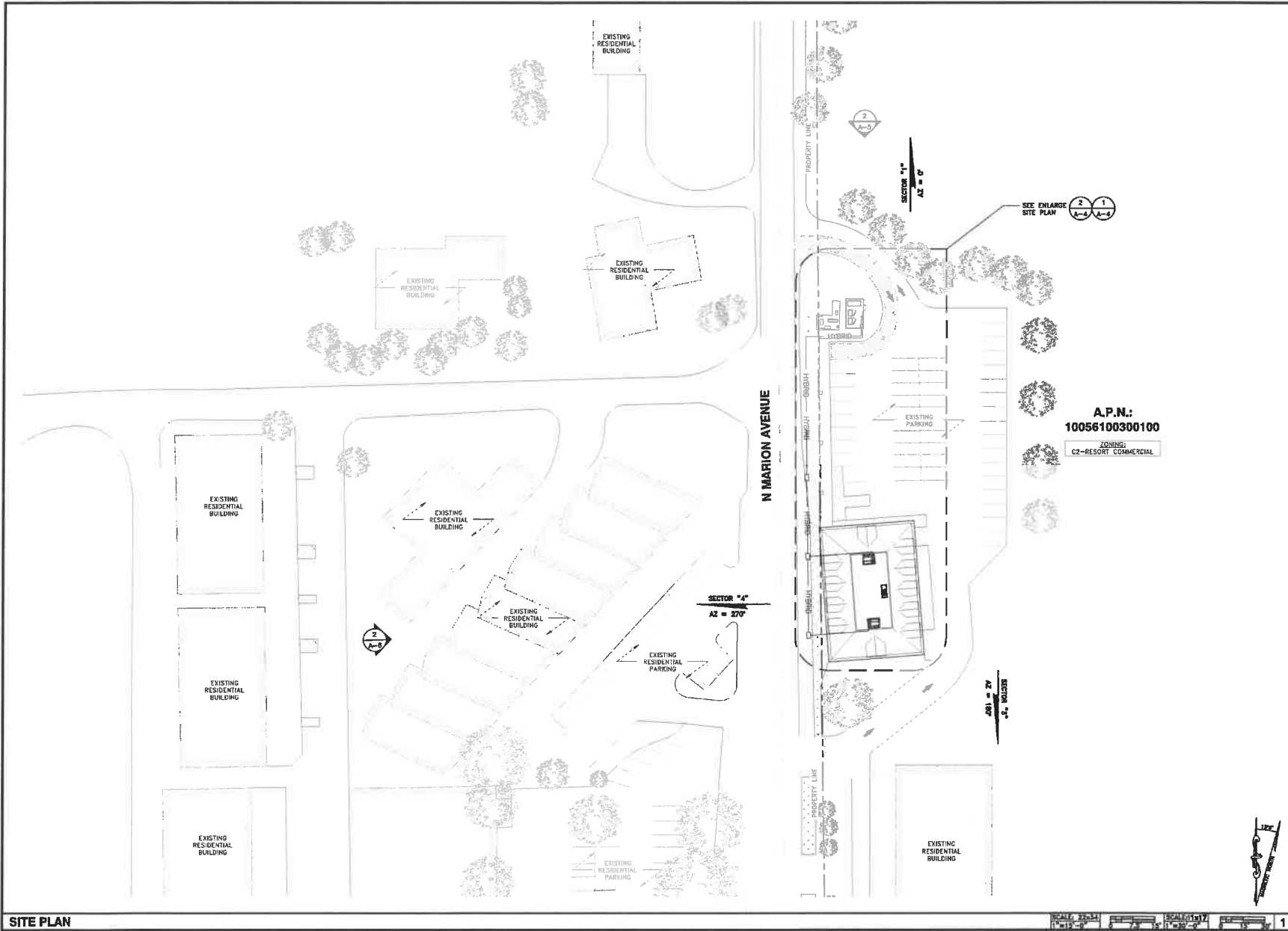
REV	DATE	DESCRIPTION	BY
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RAW LAND MONOPOLE

SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-2**



**verizon**  
 3245 158TH AVE SE, FLOOR 3  
 BELLEVUE, WA 98008




A.P.N.:  
**10056100300100**  
 ZONING:  
 C2-RESORT COMMERCIAL

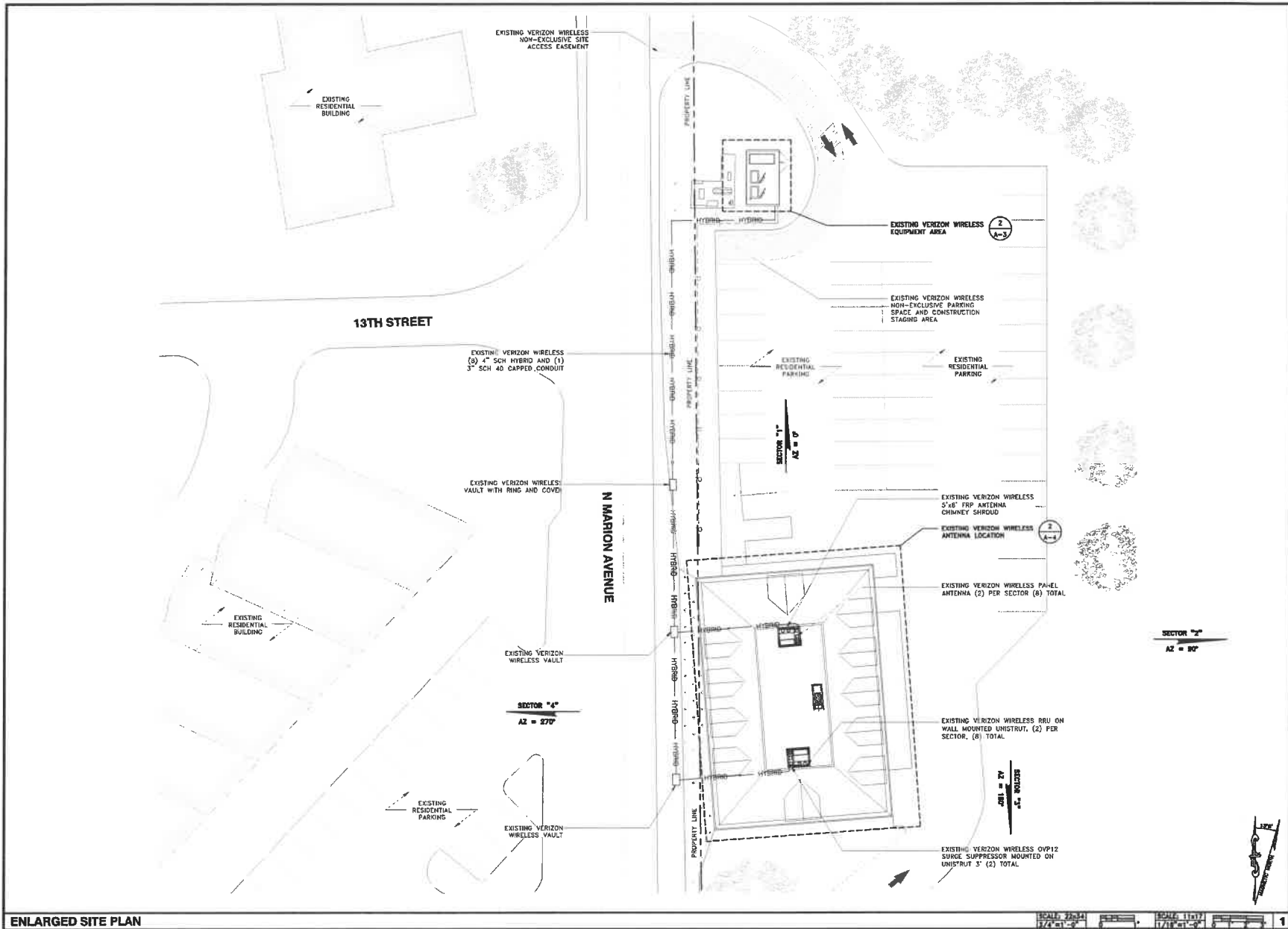
0	04/27/21	NOV CONSTRUCTION DRAWINGS	MB
REV	DATE	DESCRIPTION	DWT

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**SAND TRAP**  
 1257 N MARION AVENUE  
 GEARHART, OR 97138  
 RAW LAND MONOPOLE

SHEET TITLE  
**SITE PLAN**

SHEET NUMBER  
**A-1**



3245 158TH AVE SE, FLOOR 3  
BELLEVUE, WA 98008



**BLACK ROCK**  
BLACK ROCK CONSULTING LLC

D	04/27/21	20% CONSTRUCTION DRAWINGS	MB
REV	DATE	DESCRIPTION	DWT

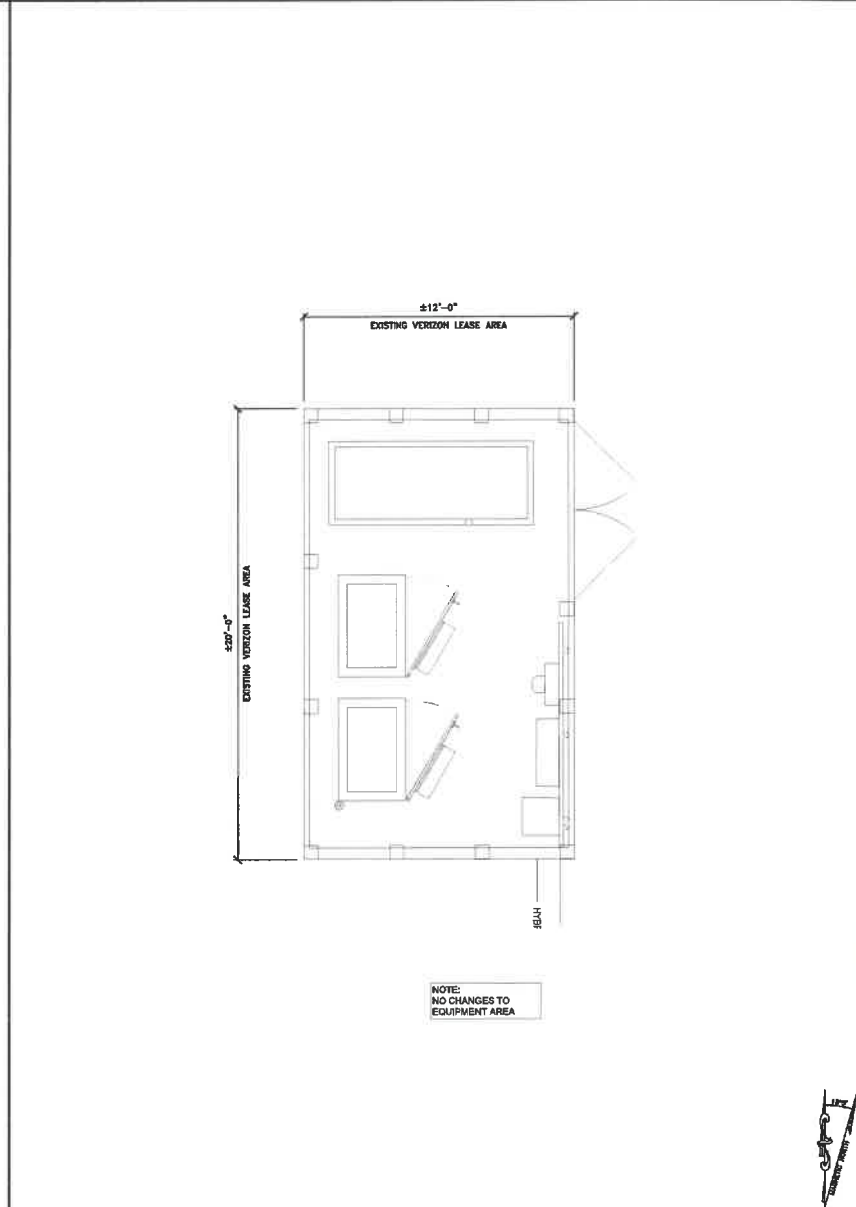
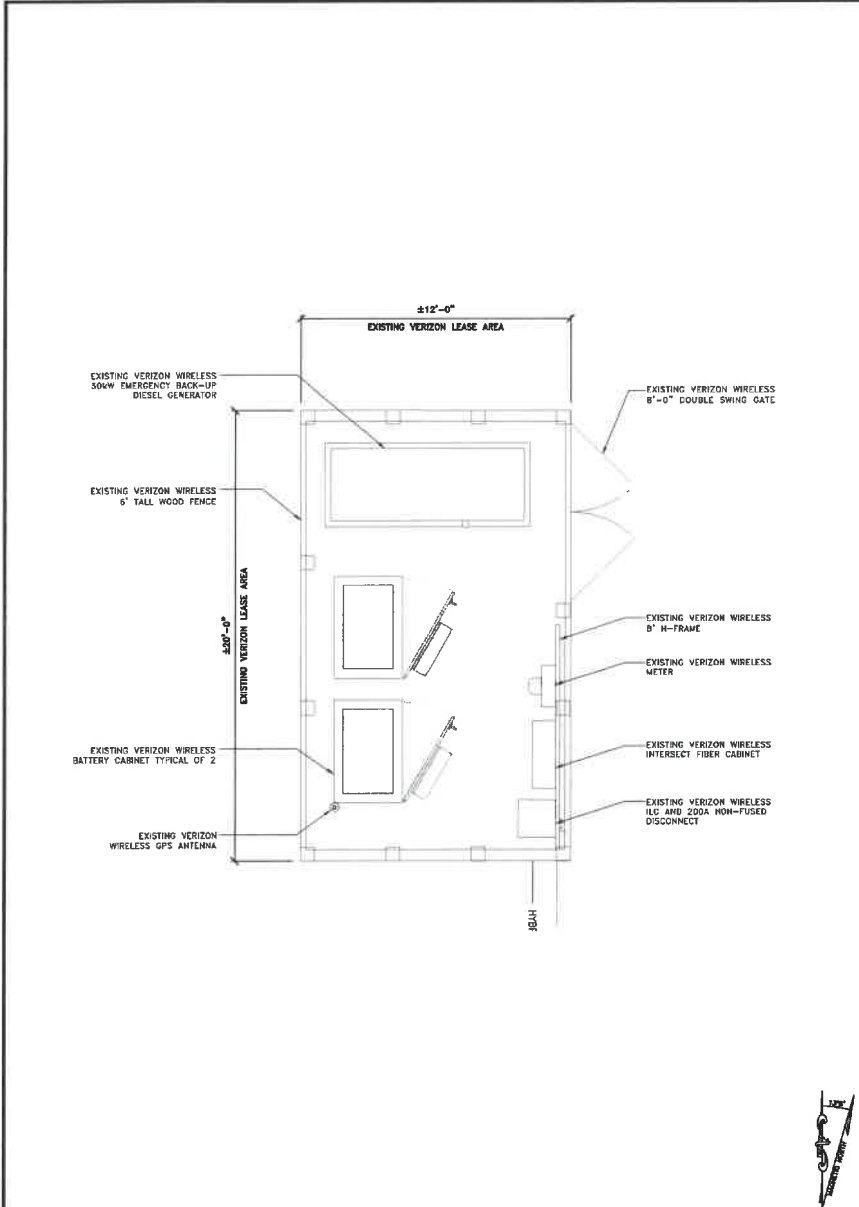
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**SAND TRAP**  
1257 N MARION AVENUE  
GEARHART, OR 97138  
RAW LAND MONOPOLE

SHEET TITLE  
**ENLARGED SITE PLAN**

SHEET NUMBER  
**A-2**

ENLARGED SITE PLAN



3245 158TH AVE SE., FLOOR 3  
BELLEVUE, WA 98008

BLACK ROCK CONSULTING LLC

REV	DATE	DESCRIPTION	INT
0	04/27/21	BOR CONSTRUCTION DRAWINGS	MB

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**SAND TRAP**  
1257 N MARION AVENUE  
GEARHART, OR 97138  
RAW LAND MONOPOLE

SHEET TITLE  
**EQUIPMENT PLAN**

SHEET NUMBER  
**A-3**

**GENERAL NOTES**

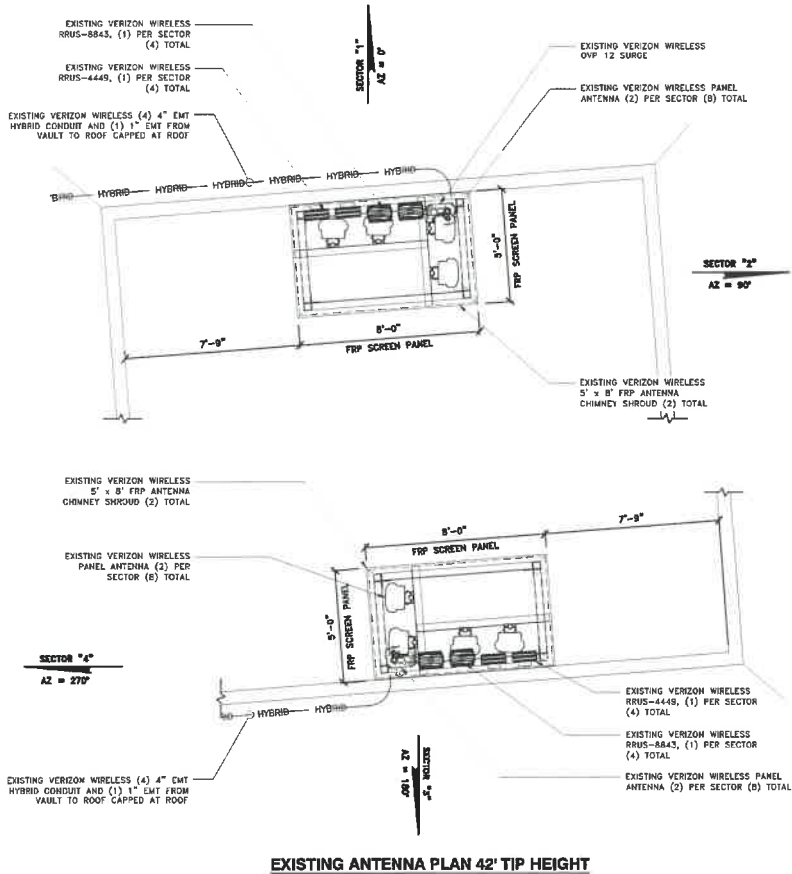
1. VERIFY EACH COAXIAL CABLE LENGTH, DIAMETER, ROUTING, AND ALL MOUNTING APPURTENANCES WITH OWNER PRIOR TO ORDER.
2. THE MAXIMUM COAXIAL CABLE LENGTH HAS BEEN ESTIMATED WITH CORRESPONDING CABLE DIAMETER ON THE TABLE ABOVE. THIS CABLE LENGTH IS APPROXIMATE AND IS TO BE USED FOR CONSTRUCTION. ACTUAL ANTENNA CABLE LENGTHS MAY VARY FROM ESTIMATED MAXIMUM LENGTH AND MUST BE VERIFIED.
3. TAG ALL MAIN CABLES AT TWO (2) LOCATIONS:  
A - AT ANTENNAS  
B - INSIDE EQUIPMENT SHELTER / CABINET NEAR THE WAVEGUIDE ENTRY PORT.
4. EACH COAX SHALL BE SUPPORTED WITH COLUMN GRIP (CHINESE FINGER GRIP) HUNG FROM A J-HOOK AT TOP OF TOWER.
5. EACH COAX SHALL BE GROUNDED AT (3) THREE LOCATIONS; ANTENNA PLATFORM, TOWER BASE AND EQUIPMENT CABINET.

**PANEL ANTENNA AND ANTENNA CABLE SCHEDULE**

SECTOR	ANTENNA QUANTITY	ANTENNA MODEL NUMBER / MANUFACTURER	ANTENNA SIZE	ANTENNA HEIGHT	AZIMUTH	DOWNTILT	RRUS AT GROUND LEVEL	G/P	NUMBER OF CABLE PIGS PER ANTENNA	ANTENNA CABLE SIZE
1	1	M206FIT245-02 / JMA	8'-0"	42'	0°	0°	2 EXIST - RRUS 4449 2 EXIST - RRUS 4449			
1	1	M206FIT245-02 / JMA	8'-0"	42'	0°	0°	2 EXIST - RRUS 4449 2 EXIST - RRUS 4449			
2	2	M206FIT245-02 / JMA	8'-0"	42'	190°	0°	2 EXIST - RRUS 4449 2 EXIST - RRUS 4449	2 EXISTING - 40.1' AT SECOND LEVEL	1 EXISTING HYBRID CABLE	HYBRID CABLE - 12 / 24
2	2	M206FIT245-02 / JMA	8'-0"	42'	190°	0°	2 EXIST - RRUS 4449 2 EXIST - RRUS 4449	2 EXISTING - 40.1' AT TOWER LEVEL		
4	4	M206FIT245-02 / JMA	8'-0"	42'	270°	0°	2 EXIST - RRUS 4449 2 EXIST - RRUS 4449			
4	4	M206FIT245-02 / JMA	8'-0"	42'	270°	0°	2 EXIST - RRUS 4449 2 EXIST - RRUS 4449			
TOTAL QUANTITY		10 - ANTENNAS					8 - RRUS			

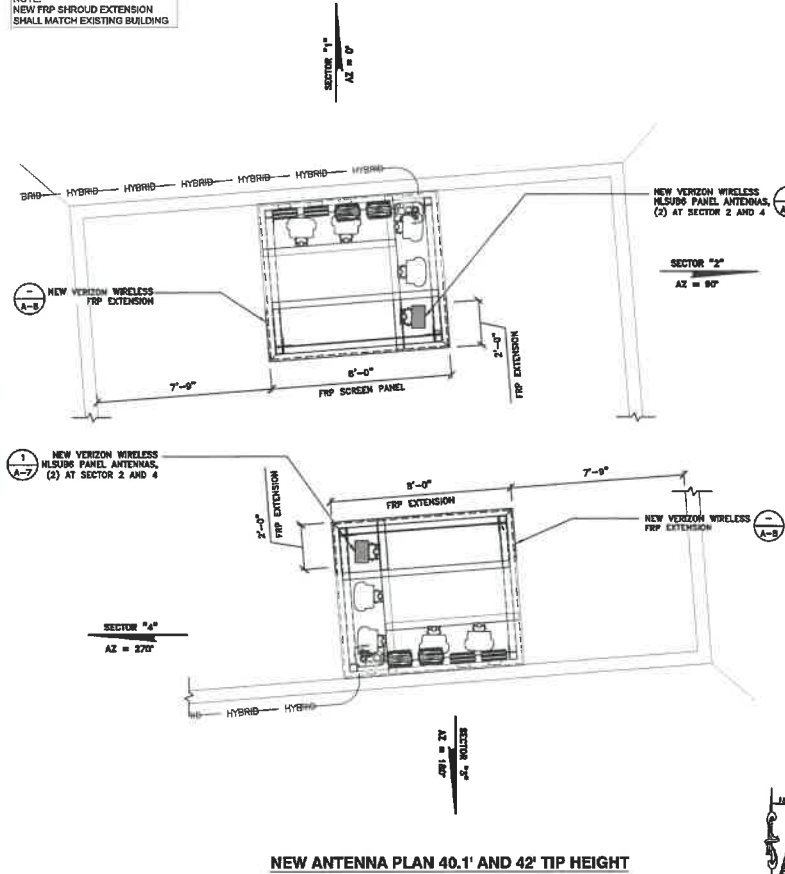
**ANTENNA AND RRU SCHEDULE**

1



**EXISTING ANTENNA PLAN 42' TIP HEIGHT**

NOTE:  
NEW FRP SHROUD EXTENSION  
SMALL MATCH EXISTING BUILDING



**NEW ANTENNA PLAN 40.1' AND 42' TIP HEIGHT**

**EXISTING ANTENNA PLAN**

SCALE: 1/4" = 1'-0" 2

**PROPOSE ANTENNA PLAN**

SCALE: 1/4" = 1'-0" 3



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1257 N MARION AVENUE  
GEARHART, OR 97138  
RAW LAND MONOPOLE

SHEET TITLE  
**NEW AND EXISTING  
ANTENNA PLAN**

SHEET NUMBER  
**A-4**



3245 158TH AVE SE., FLOOR 3  
BELLEVUE, WA 98008



**BLACK ROCK**  
BLACK ROCK CONSULTING LLC

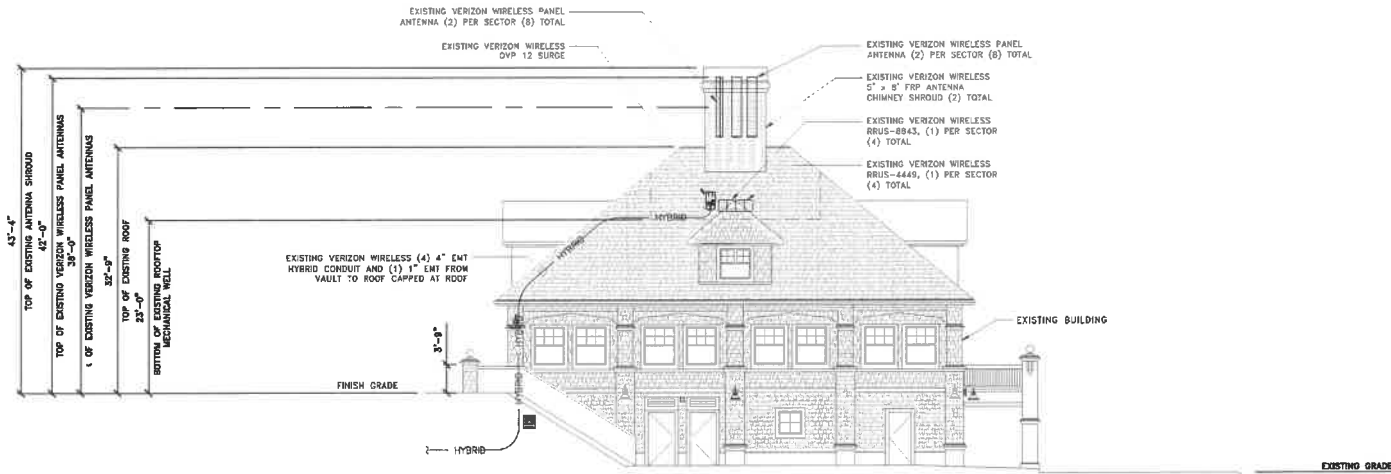
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1257 N MARION AVENUE  
GEARHART, OR 97138  
RAW LAND MONOPOLE

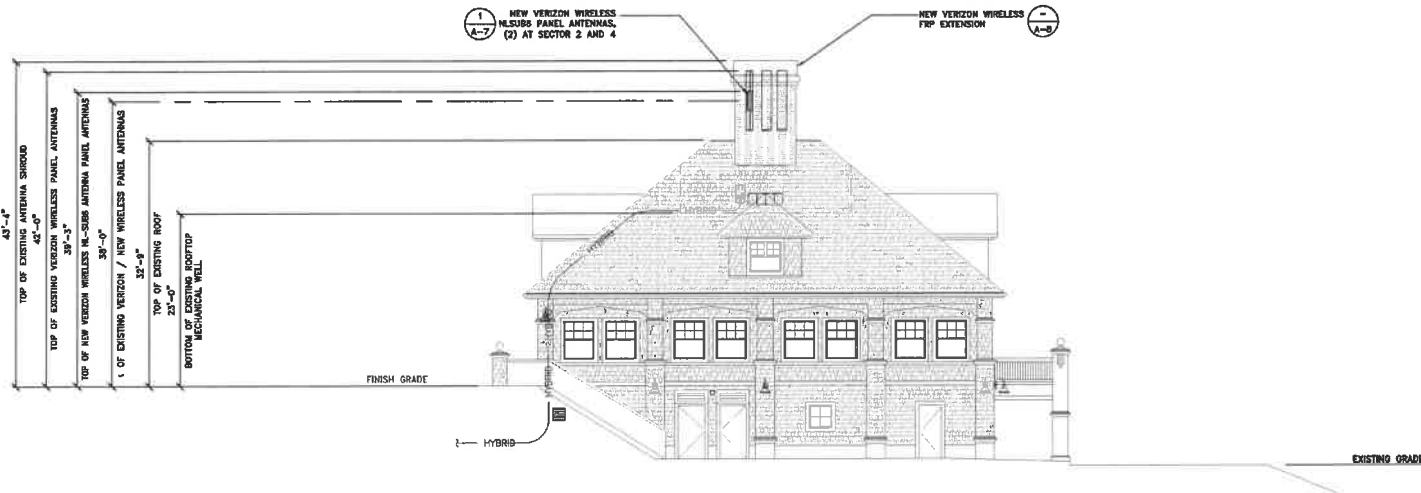
SHEET TITLE  
ELEVATIONS

SHEET NUMBER  
**A-5**



EXISTING SOUTH ELEVATION

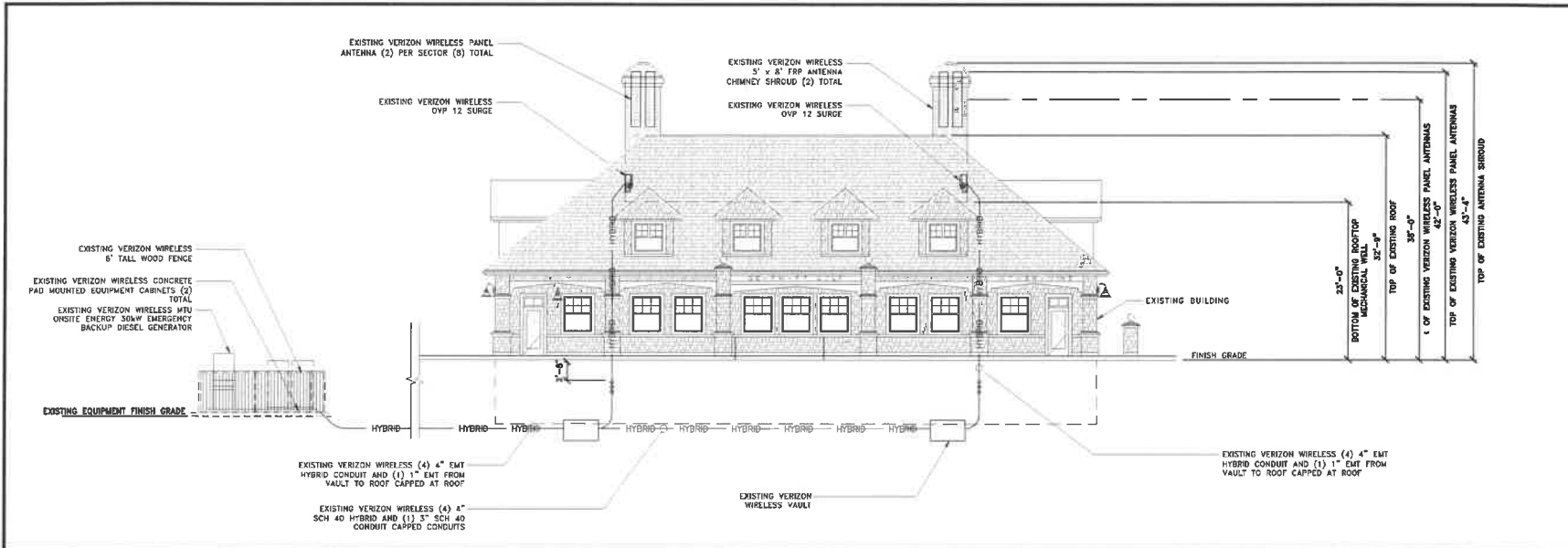
SCALE: 3/4"=1'-0"  
SCALE: 1/8"=1'-0"  
1



PROPOSE SOUTH ELEVATION

SCALE: 3/4"=1'-0"  
SCALE: 1/8"=1'-0"  
2

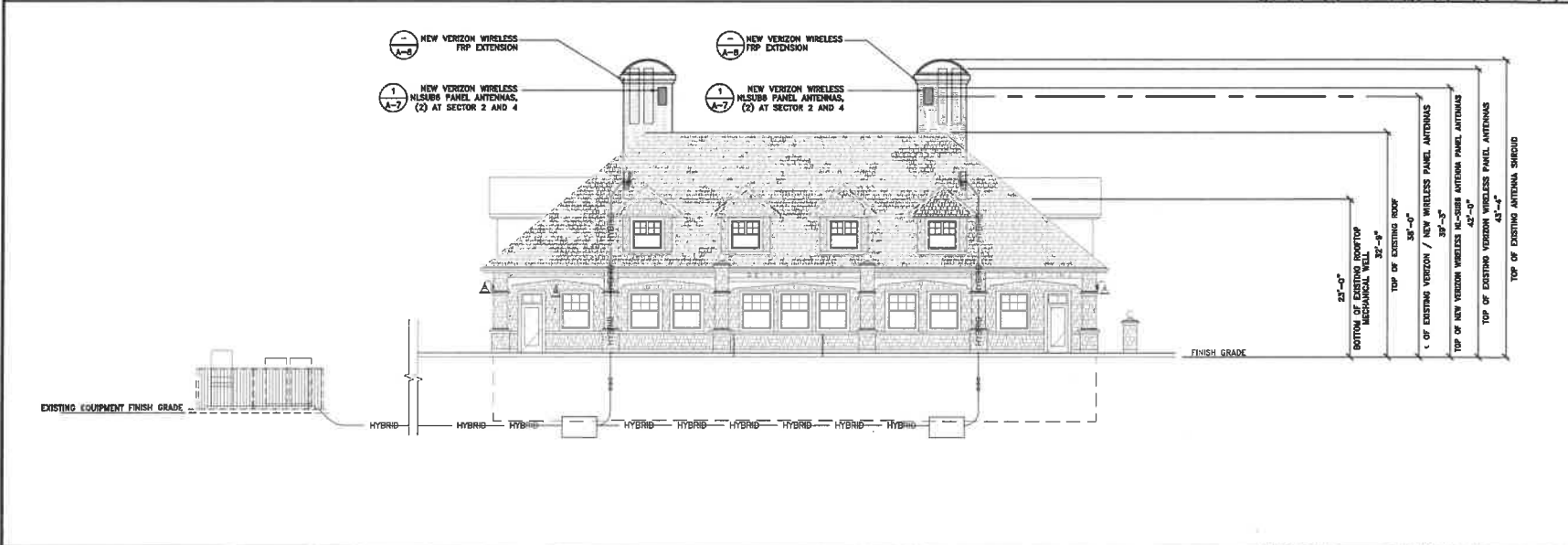




EXISTING EAST ELEVATION

SCALE: 3/8"=1'-0" SCALE: 1/8"=1'-0"

1



PROPOSE EAST ELEVATION

SCALE: 3/8"=1'-0" SCALE: 1/8"=1'-0"

2

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BELLEVUE, WA 98008

BLACK ROCK  
BLACK ROCK CONSULTING LLC

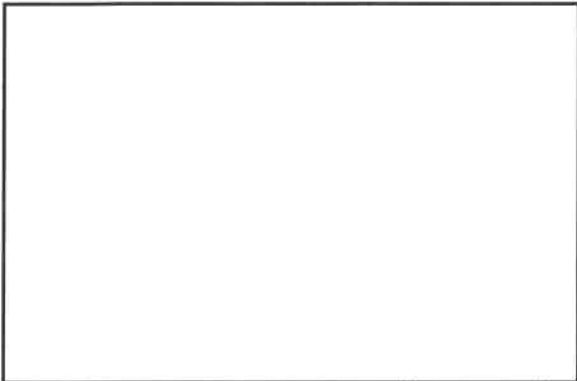
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0	04/27/11	ISSUE CONSTRUCTION DRAWINGS	MB

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SAND TRAP  
1257 N MARION AVENUE  
GEARHART, OR 97138  
RAW LAND MONOPOLE

SHEET TITLE

SHEET NUMBER  
**A-6**



NOT USED

NO SCALE

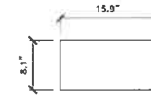
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NOT USED

NO SCALE

4



PLAN VIEW



FRONT VIEW

DIMENSIONS (HxWxD):	30.4" x 15.9" x 8.1"
WEIGHT (LB):	81.6 LBS
INPUT POWER/PDRT:	48VDC 1DC INPUT
POWER CONSUMPTION:	1130 W
OPTICAL INTERFACE:	4X25G +CPRI



SIDE VIEW

nL-Sub @ W/ VZE01 ANTENNA SPECIFICATIONS

NO SCALE

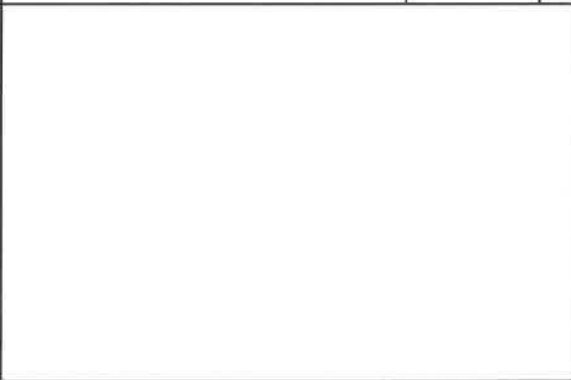
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NO SCALE

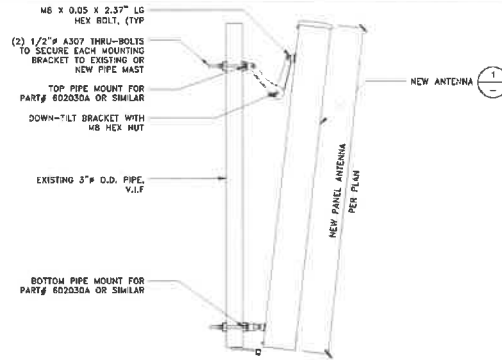
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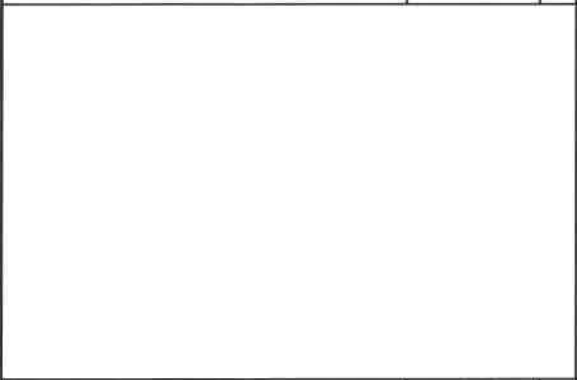
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ANTENNA MOUNTING DETAIL

NO SCALE

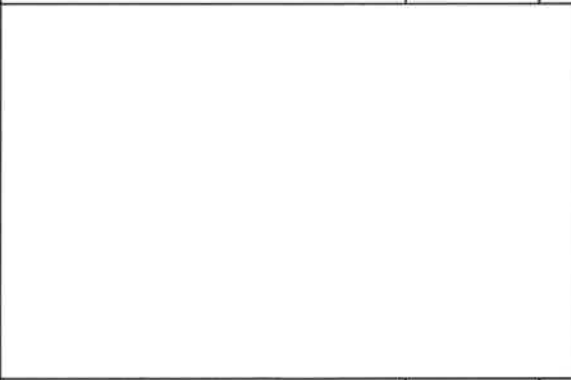
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NO SCALE

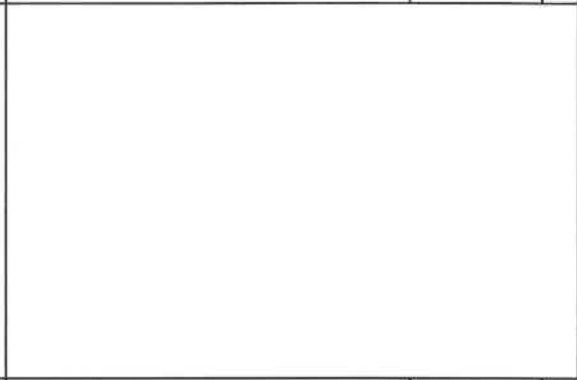
9



NOT USED

NO SCALE

6



NOT USED

NO SCALE

3



3245 158TH AVE SE., FLOOR 3  
BELLEVUE, WA 98008



BLACK ROCK  
BLACK ROCK CONSULTING LLC


0	04/27/21	NEW CONSTRUCTION DRAWINGS	MB
REV	DATE	DESCRIPTION	INT

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SAND TRAP  
1257 N MARION AVENUE  
GEARHART, OR 97138  
RAW LAND MONOPOLE

SHEET TITLE  
DETAILS

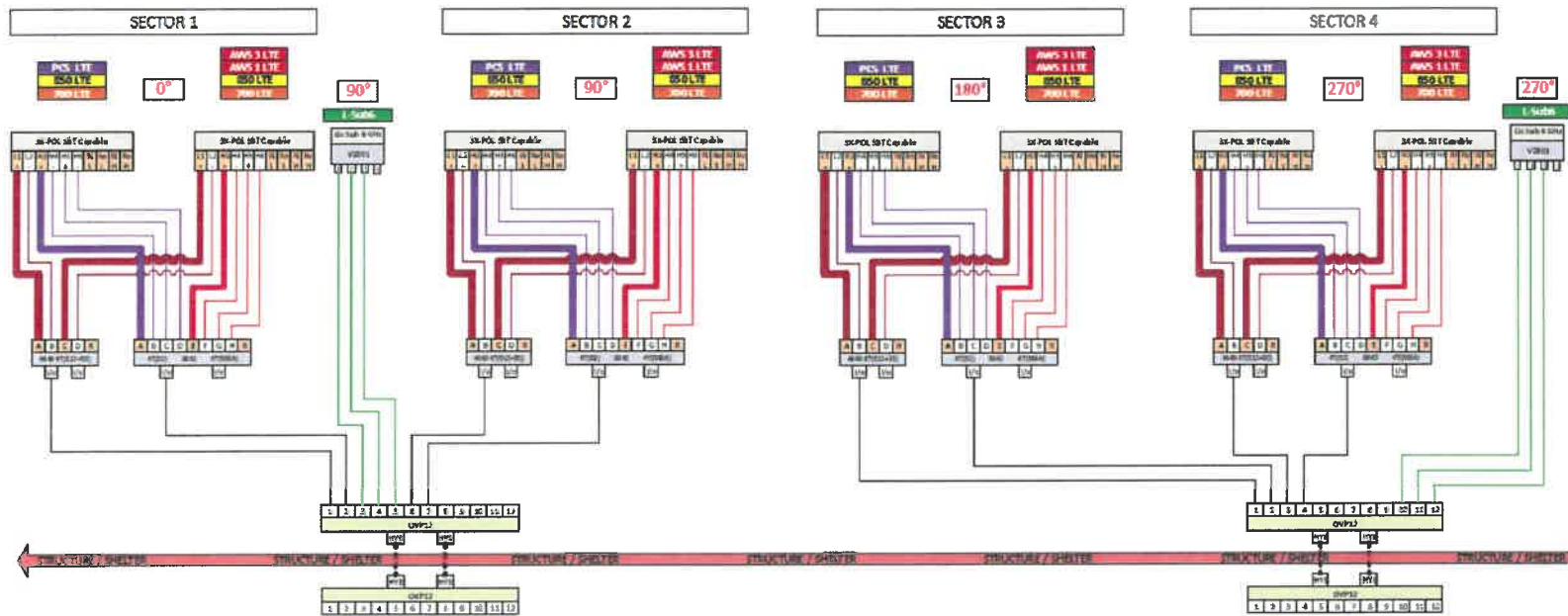
SHEET NUMBER  
A-7



3245 158TH AVE SE, FLOOR 3  
BELLEVUE, WA 98008



(005751, 605751) POR SAND TRAP LSub6 Upgrade [ 2 Sector 5G LSub6 ]



REV	DATE	DESCRIPTION	INT
0	04/27/21	000 CONSTRUCTION DRAWINGS	MB

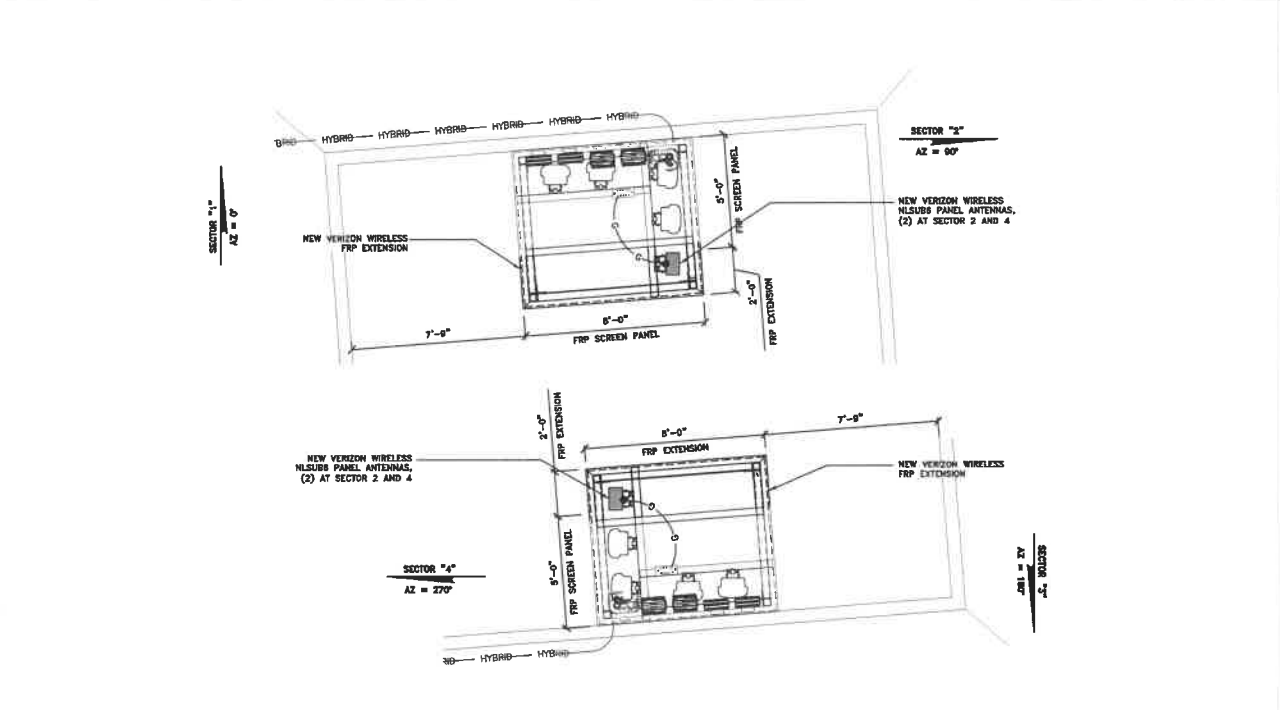
IF IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DRAWING.

**SAND TRAP**  
1257 N MARION AVENUE  
GEARHART, OR 97138  
RAW LAND MONOPOLE

SHEET TITLE  
**RF PLUMBING  
CONFIGURATION**

SHEET NUMBER  
**A-9**

- THIS FACILITY IS EXEMPT FROM HANDICAP REQUIREMENTS PER 2010 CBC SECTION 1105B.3.4 EXCEPTION #1. THIS FACILITY IS NON-OCCUPABLE SPACE AND ENTERED ONLY BY SERVICE PERSONNEL. THIS SPACE IS NOT FOR HUMAN OCCUPANCY.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCIES, CONFLICTS OR OMISSIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO SUBMITTING BIDS AND PROCEEDING WITH ANY WORK.
- THE CONTRACTOR SHALL NOTIFY ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS, SPECIFICATIONS, & NOTES PRIOR TO STARTING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERRORS, OMISSIONS, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE SITUATION. THE METHOD OF CORRECTION SHALL BE APPROVED BY THE ARCHITECT OR THE ENGINEER RESPONSIBLE FOR THE PROJECT.
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR HAS THE RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR OR SUBCONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGE TO THE UTILITIES CAUSED DURING THE EXECUTION OF THE WORK. CONTACT USA DIG ALERT @ 800-227-2600.
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO PROPOSED OR EXISTING SURFACES, STRUCTURES OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGED AREAS.
- A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILT CHANGES, REVISIONS, ADDENDUM, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS-BUILT/REVISED DRAWINGS TO THE ARCHITECT OR THE ENGINEER RESPONSIBLE FOR THE PROJECT AT THE CONCLUSION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE WORK IS IN PROGRESS UNTIL THE JOB IS COMPLETE.
- THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER, AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.
- ALL CONSTRUCTION THROUGHOUT THE PROJECT SHALL CONFORM TO THE LATEST C.B.C. AND ALL OTHER GOVERNING CODES, INCLUDING THE CALIFORNIA ADMINISTRATIVE CODES TITLE 8, 19, AND 24. THE MOST RESTRICTIVE CODE SHALL GOVERN.
- THE CONTRACTOR AND SUBCONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS INCLUDING ALL OSHA REQUIREMENTS.
- WHEN REQUIRED STORAGE OF MATERIALS OCCURS, THEY SHALL BE EVENLY DISTRIBUTED OVER THE FLOOR OR ROOF SO AS NOT TO EXCEED THE DESIGN LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT.
- THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING HIS PROFESSIONAL KNOWLEDGE AND SKILLS. HE IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS WITH RESPECT TO THE WORK TO COMPLETE THE PROJECT. BUILDING PERMIT APPLICATIONS SHALL BE FILED BY THE OWNER OR AUTHORIZED AGENT. CONTRACTOR SHALL OBTAIN THE PERMIT AND MAKE FINAL PAYMENT OF SAID DOCUMENT.
- ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE. DRAWINGS ARE NOT TO BE SCALED UNDER ANY CIRCUMSTANCES.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING, FRAMING, HANDRAILS OR SUPPORTS FOR INSTALLATION OF ITEMS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL PROVIDE THE FIRE MARSHALL WITH U.L. APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.
- PROPOSED CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.
- THE CONTRACTOR IS TO PROVIDE PORTABLE FIRE EXTINGUISHERS HAVING A MINIMUM 2A10-B:C RATING WITHIN 75FT. OF TRAVEL TO ALL PORTIONS OF THE CONSTRUCTION AREA. (2019 CBC SECTION 908.1-1.1 & 7 AND SECTION 908.1.1)
- MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR APPROVING THE RESULTS.
- ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
- ALL DEBRIS AND REFUSE IS TO BE REMOVED FROM THE PROJECT. TRUCKS SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.
- BUILDING INSPECTORS AND/OR OTHER BUILDING OFFICIALS ARE TO BE NOTIFIED PRIOR TO ANY GRADING AND CONSTRUCTION EFFORT AS MANDATED BY THE GOVERNING AGENCY.
- ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A QUESTION REGARDING THEIR EXACT MEANING, THE ARCHITECT OR THE ENGINEER RESPONSIBLE FOR THE PROJECT SHALL BE NOTIFIED FOR CLARIFICATIONS.
- SITE CONTRACTOR TO CALL DIG ALERT (1-800-227-2600) TO LOCATE ANY AND ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.
- ALL FACILITIES TO BE INSTALLED ARE UNMANNED. NO EXISTING PARKING SPACES WILL BE USED OR REMOVED BY THIS PROJECT.



- #### GROUNDING SYMBOLS
- MECHANICAL CONNECTION
  - COMPRESSION TYPE CONNECTION
  - #2 AWG INSULATED COPPER GROUND WIRE
  - EXOTHERMIC WELD (C/WELD/THERMOWELD)

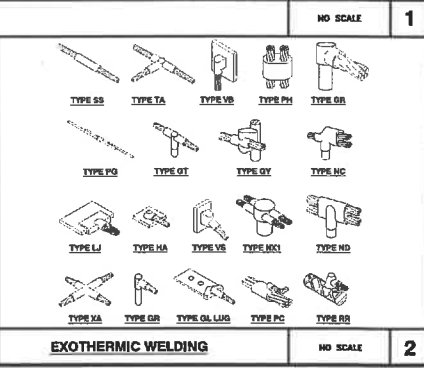
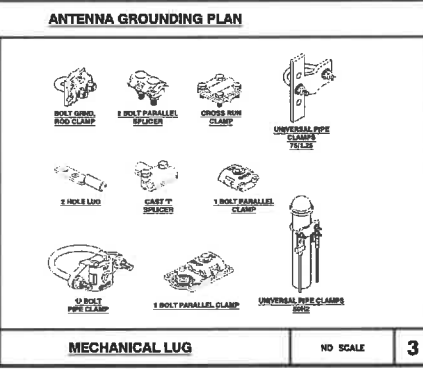
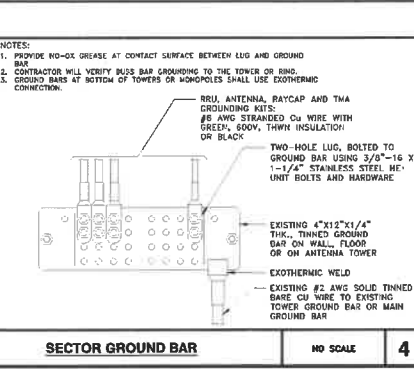
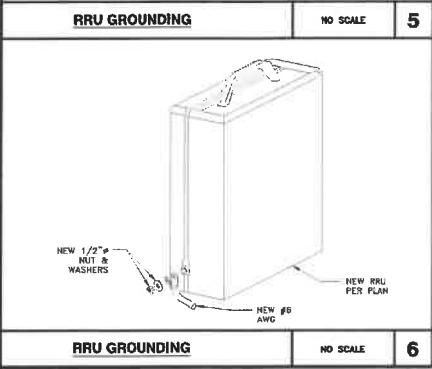
NEW ANTENNA PLAN 40, 1' AND 42' TIP HEIGHT

**3245 168TH AVE SE, FLOOR 3  
BELLEVUE, WA 98008**

**BLACK ROCK**  
BLACK ROCK CONSULTING LLC

REV	DATE	DESCRIPTION	INT

0 04/27/21 906 CONSTRUCTION DRAWINGS MB



- NOTES:
- PROVIDE NO-OX GREASE AT CONTACT SURFACE BETWEEN LUG AND GROUND BAR.
  - CONTRACTOR WILL VERIFY BUSS BAR GROUNDING TO THE TOWER OR RING.
  - GROUND BARS AT BOTTOM OF TOWERS OR MONOPOLES SHALL USE EXOTHERMIC CONNECTION.

ANTENNA GROUNDING PLAN

NO SCALE 1

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1257 N MARION AVENUE  
GEARHART, OR 97138  
RAW LAND MONOPOLE

SHEET TITLE  
**GROUNDING PLAN AND DETAILS**

SHEET NUMBER  
**G-1**