SITE NAME: BLANCHARD

PROJECT: FIBER HUT

ADDRESS: 32622 STATE HIGHWAY 41,
BLANCHARD, ID 83804

SITE MAP:

SITE PHOTO:

SHEET LIST:

ATTACHMENTS:

NEW CIVIL SURVEY
SHELTER MANUFACTURER DRAWINGS
GENERATOR SPECIFICATIONS

SCOPE OF WORK:

INSTALLATION OF A NEW PRE-FABRICATED AN EQUIPMENT SHELTER (FIBER HUT) AND 150 KW DIESEL GENERATOR WITHIN A NEW COMPOUND. SCOPE INCLUDES A NEW 600A, SINGLE-PHASE ELECTRICAL SERVICE.

PROJECT INFORMATION:

COUNTY:	BONNER
JURISDICTION:	BONNER COUNTY
PARCEL ID:	RP021090000010A
PROPERTY OWNER:	YOUNT PROPERTIES LLC
ZONING DISTRICT:	COMMERCIAL
OCCUPANCY TYPE:	U - (UNMANNED FACILITY)
CONSTRUCTION TYPE:	VB
GOVERNING CODES:	IBC 2018, IMC 2018, IFC 2018, NEC 2017.
UTILITIES:	AVISTA CORPORATION | 208-929-0174
ONE-CALL IDAHO:	CONTRACTOR TO CALL BEFORE DIGGING!!! PHONE: 811 OR 866-242-5844

PROJECT TEAM:

PROJECT MANAGER:
DAYTON SAVAGE
ONTIVITY
281.703.4464
DAYTON.SAVAGE@ONTIVITY.COM

CONSTRUCTION MANAGER:
RYLIN JENSON
ONTIVITY - LEGACY DIVISION
406.926.9376
RYLIN.JENSON@ONTIVITY.COM

ENGINEER:
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IIG CONTACT:
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IIG CONTACT:
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JESSIE.HUENERGARDT@INTERMOUNTAINIG.COM

PROFESSIONAL ENGINEER LICENSED P-22614 STATE OF IDAHO DAYTON HUNTER SAVAGE

09/29/2025

Intermountain Infrastructure Group
533 AIRPORT BLVD SUITE 400
BURLINGAME, CA 94010

SITE NAME:
BLANCHARD

SITE ADDRESS:
32622 STATE HIGHWAY 41,
BLANCHARD, ID 83804

PROJECT:
FIBER HUT

SET ISSUE:

NO	DESC	DATE:
0	CDs	9/29/2025

TITLE SHEET

T1

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET

VICINITY MAP

1. Title Report/Title Commitment:
Old Republic National Title Insurance Company,
Alliance Title & Escrow, File No. 1012205
Effective Date of Commitment: July 18, 2025.

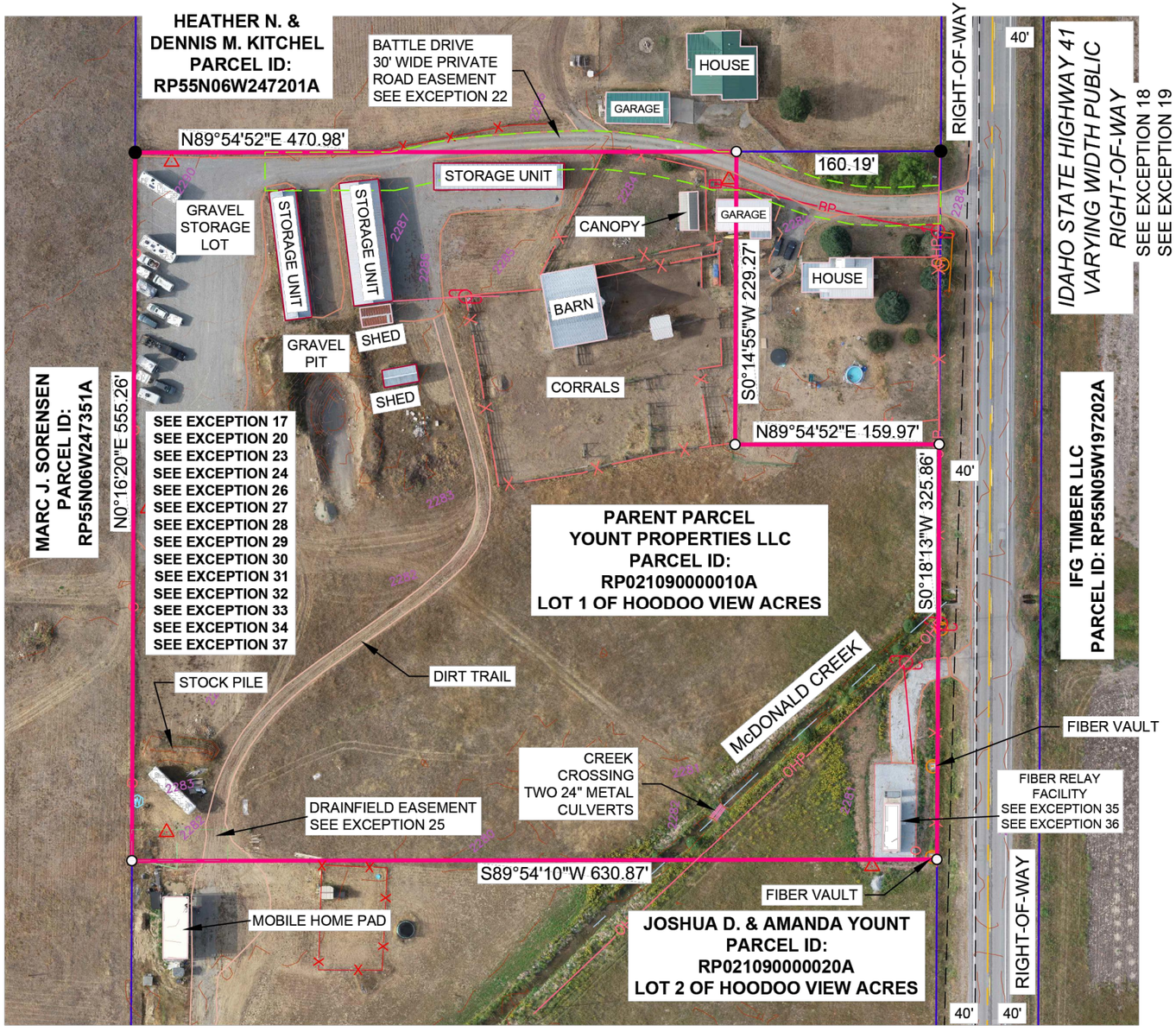
2. Basis of Bearings:
The bearings shown hereon are referenced to Geodetic North at Control Point #100.
Horizontal and Vertical Datum:
Coordinates are referenced to the Idaho Coordinate System 1983 (NAD83/2011), U.S. Survey Feet. Elevations are referenced to NAVD88, U.S. Survey Feet. Coordinates and elevations were determined by GPS observations performed on August 6, 2025, tied to the National Spatial Reference System by Trimble RTX Solutions.

3. Purpose of Survey:
This survey does not represent an ALTA/NSPS Land Title Survey nor is this survey an actual boundary survey of the parent parcels. Lines shown are determined by found survey monuments, record positions, highway and right-of-way drawings, and record legal descriptions. Utilities shown are based on above ground observations and are approximate.

4. FEMA Floodplain:
This project is located in 'Zone X - Area of Minimal Flood Hazard', pursuant to Community Panel No. 16017C1075E; Effective date: November 18, 2009.

5. Ownership Information:
Yount Properties LLC
68 Battle Drive
Blanchard, Idaho 83804

TEP



LEGEND

BOUNDARY LINE	CONTROL POINT
ADJOINER BOUNDARY	ELECTRIC METER/BOX
LEASED PREMISES	FIBER OPTIC VAULT
ROAD CENTERLINE	TRANSFORMER
PUBLIC RIGHT-OF-WAY	POWER POLE
PRIVATE ROAD EASEMENT	TELEPHONE PEDESTAL
EDGE OF ASPHALT	FROST FREE HYDRANT
EDGE OF GRAVEL	REBAR WITH PLASTIC CAP
CHAIN LINK FENCE	REBAR WITH ALUMINUM CAP
OHP OVERHEAD POWERLINE	

100 0 50 100
(IN FEET)

GEODETIC NORTH AT CONTROL POINT 100:
LATITUDE: N 42° 32' 27.89" (NAD83/2011)
LONGITUDE: W 113° 45' 01.48" (NAD83/2011)
GROUND ELEVATION: 4154 (AMSL)

COMMISSIONED BY:
ONTIVITY
LOCAL CONNECTIONS | NATIONAL SOLUTIONS

SITE IDENTIFICATION:
BLNCID02W00 - BLANCHARD ID
FIBER HUT
32622 Hwy. 41
BLANCHARD,
BONNER COUNTY, IDAHO

PREPARED BY:
Boers Land Surveying
and Mapping, Inc.
5291 West Cameron Bridge Road
Manhattan, Montana 59741
www.boerslandsurveying. com
(406) 600-3790

SURVEYOR'S CERTIFICATION:
I, Daniel J. Boers, Professional Land Surveyor License No. 13395LS, hereby certify that I performed this survey in August of 2025.

PRELIMINARY

Daniel J. Boers, PLS/RLS, CFedS
Boers Land Surveying and Mapping, Inc.

PROJECT LOCATION:
LOT 1 OF HOODOO VIEW ACRES
NE1/4SE1/4 OF SECTION 24
TOWNSHIP 55 NORTH
RANGE 6 WEST, B.M.,
BONNER COUNTY, IDAHO.

SHEET TITLE:
SURVEY

DATE: *8/11/2025* | PAGE: *1 of 2*

Old Republic National Title Insurance Company,
Alliance Title & Escrow, File No. 1012205
Effective Date of Commitment: July 18, 2025.

17. Easements, reservations, notes and/or dedications as shown on the official plat of Hoodoo View Acres.
This Exception refers to Hoodoo View Acres, a minor subdivision, which creates Lot 1, the Parent Parcel and identifies Battle Drive, a private road easement being 30 feet wide. Lot 1 was retraced and is shown hereon. Battle Drive was surveyed and is shown hereon. This Exception affects the Parent Parcel.

18. Negative easements, conditions, restrictions, and access rights contained in the deed to the State of Idaho. Recorded: June 21, 1941; Book: 64 of Deeds, Page: 221
This Exception refers to the right-of-way acquisition for State Highway 41. A portion of the highway right-of-way was retraced and shown hereon. This Exception affects the Parent Parcel.

19. Negative easements, conditions, restrictions, and access rights contained in the deed to the State of Idaho. Recorded: June 21, 1941; Book: 64 of Deeds, Page: 222
This Exception refers to the right-of-way acquisition for State Highway 41. A portion of the highway right-of-way was retraced and shown hereon. This Exception affects the Parent Parcel.

20. An easement for the purpose shown below and rights incidental thereto as set forth in document:
Granted To: The Washington Water Power company; Purpose: Public Utilities; Recorded: October 1, 1956
Book: 23 of Miscellaneous, Page: 212; The exact location and extent of said easement is not disclosed of record.
This Exception conveys a right-of-way easement for electrical lines with the right of inspect, maintain and remove brush. This Exception is blanket in nature. This Exception affects the Parent Parcel.

21. An easement for the purpose shown below and rights incidental thereto as set forth in a document:
Purpose: Road purposes for ingress and egress; Recorded: January 29, 1979; Instrument No.: 210333
This Exception cites easements for road purposes. This Exception is not located in the Parent Parcel.

22. An easement for the purpose shown below and rights incidental thereto as reserved in a document:
Purpose: Ingress, egress and utilities; Recorded: June 29, 1999; Instrument No.: 547424
This Exception refers to a private road easement being 30 feet wide, known as Battle Drive. Battle Drive was surveyed and is shown hereon. This Exception affects the Parent Parcel.

23. An easement for the purpose shown below and rights incidental thereto as disclosed in a document:
Purpose: Water line and access for maintenance and repair of a well; Recorded: June 29, 1999; Instrument No.: 547425
This Exception refers to an amended well and water line agreement and easement. This Exception does not contain sufficient information, without personal knowledge or testimony from the parties involved, to determine the water line location with certainty. This Exception is amended by Exception 24. This Exception affects the Parent Parcel.

24. Terms, provisions, covenants, conditions, definitions, options, obligations and restrictions, contained in a document; Purpose: Interest in well; Recorded: June 28, 1999; Instrument No.: 547425
The effect, if any, of a document: Recorded: August 7, 2003; Instrument No.: 630923
This Exception conveys interests in an amended well and water line agreement and easement via quit claim deed. This Exception affects the Parent Parcel.

25. An easement for the purpose shown below and rights incidental thereto as set forth in a document:
By and between: Yount Properties LLC; Purpose: Effluent line and septic system drain field; Recorded: September 30, 2022; Instrument No.: 1012236
This Exception grants an easement, 75 feet by 25 feet in the southwest corner of Lot 1 of Hoodoo View Subdivision. This Exception is shown hereon. This Exception affects the Parent Parcel.

26. A Deed of Trust to secure an indebtedness in the amount shown below. Amount: $325,000.00
Trustor/Grantor: Yount Properties LLC, an Idaho Limited Liability Company; Trustee: First American Title Insurance Company; Beneficiary: Columbia State Bank; Dated: August 18, 2021; Recorded: August 23, 2021; Instrument No.: 990146; Re-recorded: November 4, 2021; Instrument No.: 995019; Re-recorded: November 5, 2021; Instrument No.: 995073; Note: Includes this and other property.
This Exception refers to a mortgage and is not survey related. This Exception is blanket in nature. This Exception affects the Parent Parcel.

27. Assignment of Rents: Grantor: Yount Properties LLC, an Idaho Limited Liability Company; Lender: Columbia State Bank; Recorded: August 23, 2021; Instrument No.: 990147; Re-recorded: November 4, 2021; Instrument No.: 995018; Re-recorded: November 5, 2021; Instrument No.: 995074; Note: Includes this and other property.
This Exception refers to a mortgage and is not survey related. This Exception is blanket in nature. This Exception affects the Parent Parcel.

28. A Deed of Trust to secure an indebtedness in the amount shown below; Amount: $130,000.00; Trustor/Grantor: Yount Properties LLC, an Idaho Limited Liability Company; Trustee: First American Title Insurance Company; Beneficiary: Columbia State Bank; Dated: August 18, 2021; Recorded: August 23, 2021; Instrument No.: 990148; Re-recorded: November 4, 2021; Instrument No.: 995017; Re-recorded: November 5, 2021; Instrument No.: 995075; Note: Includes this and other property. A Reconveyance which purports to release the indebtedness secured under the Deed of Trust. Recorded: October 18, 2022; Instrument No.: 1013093; (The above referenced exception will be removed upon verification the lender has been paid in full.)
This Exception refers to a mortgage and is not survey related. This Exception is blanket in nature. This Exception affects the Parent Parcel.

29. Assignment of Rents: Grantor: Yount Properties LLC, an Idaho Limited Liability Company; Lender: Columbia State Bank; Recorded: August 23, 2021; Instrument No.: 990149; Re-recorded: November 4, 2021; Instrument No.: 995020; Re-recorded: November 5, 2021; Instrument No.: 995076; Note: Includes this and other property. A Release which purports to release the indebtedness secured under the Assignment of Rents. Recorded: October 18, 2022; Instrument No.: 1013094; (The above referenced exception will be removed upon verification the lender has been paid in full.)
This Exception refers to a mortgage and is not survey related. This Exception is blanket in nature. This Exception affects the Parent Parcel.

30. Possible encroachment of buildings over the Northerly and Easterly boundary lines as depicted on an aerial map.
This Exception speculates enroachments. Refer to survey data shown hereon for conclusive locations of structures and boundary lines. This Exception affects the Parent Parcel.

31. Resolution#2022-94 and the terms and conditions contained therein; Between: Bonner County
And: Yount Properties LLC; Purpose: Amendment to The Bonner County Comprehensive Plan Project Land Use Map; Recorded: November 9, 2022; Instrument No.: 1013993;
This Exception amends land use of the Parent Parcel. This Exception affects the Parent Parcel.

32. Bonner County Ordinance No. 687; Purpose: Rezoning; Recorded: January 30, 2023; Instrument No.: 1016439; Ordinance No. 689 Amending Ordinance No. 687; Recorded: February 2, 2023; Instrument No.: 1016528.
This Exception amends zoning of the Parent Parcel. This Exception affects the Parent Parcel.

33. A Deed of Trust, including the terms and provisions thereof, to secure the amount noted below and other amounts secured thereunder, if any: Amount: $160,000.00; Trustor/Grantor: Yount Properties LLC, an Idaho limited liability company; Trustee: First American Title Insurance Company; Beneficiary: Umpqua Bank; Dated: June 16, 2023; Recorded: July 12, 2023; Instrument No.: 1022457; Note: Includes this and other property
This Exception refers to a mortgage and is not survey related. This Exception is blanket in nature. This Exception affects the Parent Parcel.

34. Assignment of Rents: Grantor: Yount Properties LLC, an Idaho limited liability company; Lender: Umpqua Bank; Recorded: July 12, 2023; Instrument No.: 1022458; Note: Includes this and other property
This Exception refers to a mortgage and is not survey related. This Exception is blanket in nature. This Exception affects the Parent Parcel.

35. Conditional Use Permit and the terms and conditions contained therein Between: Bonner County Planning Department; And: Yount Properties; Recorded: May 10, 2024; Instrument No.: 1033205
This Exception refers to the fiber relay facility at the southeast corner of Lot 1 of Hoodoo View Subdivision and is shown hereon. This Exception cites the conditions required to be met for allowance of the utility. This Exception affects the Parent Parcel.

36. Lease and Easement Agreement and the terms and conditions contained therein Between: Yount Properties LLC; And: Intermountain Infrastructure Group, LLC, a Delaware limited liability company
Recorded: February 5, 2025; Instrument No.: 1043355
This Exception cites the lease and easements for the fiber relay facility at the southeast corner of Lot 1 of Hoodoo View Subdivision (document cites Lot 2) and is shown hereon. This Exception includes utility extensions. This Exception affects the Parent Parcel.

37. Unrecorded leaseholds, if any, and the rights of vendors and holders of security interest in personal property of tenants to remove said personal property at the expiration of the term.
This Exception is a standard exception and not the type to be depicted hereon. This Exception affects the Parent Parcel.

TEP

GEODETIC NORTH AT CONTROL POINT 100:
LATITUDE: N 42° 32' 27.89" (NAD83/2011)
LONGITUDE: W 113° 45' 01.48" (NAD83/2011)
GROUND ELEVATION: 4154 (AMSL)

COMMISSIONED BY:
ONTIVITY
LOCAL CONNECTIONS | NATIONAL SOLUTIONS

SITE IDENTIFICATION:
BLNCID02W00 - BLANCHARD ID
FIBER HUT
32622 Hwy. 41
BLANCHARD,
BONNER COUNTY, IDAHO

PREPARED BY:
Boers Land Surveying
and Mapping, Inc.
5291 West Cameron Bridge Road
Manhattan, Montana 59741
www.boerslandsurveying. com
(406) 600-3790

SURVEYOR'S CERTIFICATION:
I, Daniel J. Boers, Professional Land Surveyor License No. 13395LS, hereby certify that I performed this survey in August of 2025.

Daniel J. Boers, PLS/RLS, CFedS
Boers Land Surveying and Mapping, Inc.

PROJECT LOCATION:
LOT 1 OF HOODOO VIEW ACRES
NE1/4SE1/4 OF SECTION 24
TOWNSHIP 55 NORTH
RANGE 6 WEST, B.M.,
BONNER COUNTY, IDAHO.

SHEET TITLE:
TITLE INFORMATION

DATE: *8/11/2025* | PAGE: *2 of 2*

1. GENERAL

1.1. CONTRACTOR SHALL VISIT THE SITE AND REVIEW ALL DESIGN DOCUMENTS FIELD VERIFYING ALL EXISTING CONDITIONS AND ASSESSING ALL MODIFICATIONS REQUIRED TO COMPLETE THE INSTALLATION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER AND ARCHITECT / ENGINEER WITH ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND DESIGN DOCUMENTS AND OBTAIN WRITTEN CLARIFICATION PRIOR TO PROVIDING A QUOTE.

1.2. WHILE REVIEWING THE DESIGN DOCUMENTS, THE CONTRACTOR SHALL IDENTIFY ANY ITEMS WHERE THE DESIGN INTENT IS UNCLEAR AND OBTAIN WRITTEN CLARIFICATIONS PRIOR TO FURNISHING A BID.

1.3. CONTRACTOR SHALL OBTAIN WRITTEN AUTHORIZATION FROM THE CARRIER PRIOR TO PURCHASING ANY MATERIALS OR STARTING ANY WORK.

1.4. THESE DESIGN DOCUMENTS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO SHOW FINAL CONDITIONS. MULTIPLE PHASING STEPS MAYBE NEEDED TO MAINTAIN SITE OPERATION DURING CONSTRUCTION AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PLAN AND COORDINATE PHASING WITH CARRIER OPERATIONS.

1.5. CONTRACTOR SHALL, UNLESS OTHERWISE NOTED, INCLUDE IN THEIR SCOPE OF WORK ALL NECESSARY MATERIALS, LABOR AND EQUIPMENT TO COMPLETE THE INSTALLATION AS DESCRIBED IN DESIGN DOCUMENTS.

1.6. CONTRACTOR SHALL SUPERVISE AND DIRECT THE EXECUTION OF THE SHOWN PROJECT AND IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCING AND OBTAINING MATERIALS TO COMPLETE THE PROJECT. ANY REQUEST FOR ALTERATIONS TO THE DESIGN INTENT SHALL BE PROVIDED IN WRITING FOR REVIEW AND APPROVAL.

1.7. NO STRUCTURAL ALTERATIONS ARE TO BE MADE TO THE FACILITY UNLESS SPECIFICALLY NOTED.

1.8. CONTRACTOR SHALL MAKE PROVISIONS TO PROTECT EXISTING SITE FINISHES AS MUCH AS POSSIBLE. ANY IMPACT TO SITE AND SURROUNDINGS SHALL BE MITIGATED AND CONTRACTOR SHALL RETURN SITE TO PRE-CONSTRUCTION CONDITIONS.

1.9. ALL DEMOLISHED AND UNUSED MATERIALS SHALL BE REMOVED FROM SITE AND TRACKED ASSETS LOGGED AND RETURNED TO CARRIER FOR DISPOSAL OR RE-USE. CONTRACTOR TO KEEP THE SITE CLEAN, FREE OF HAZARDS AND TO PROPERLY DISPOSE OF ALL RUBBISH.

1.10. PLANS ARE NOT TO BE SCALED. UTILIZE DIMENSION CALL-OUTS FOR ESTIMATES. ALL CABLE LENGTHS ARE SHOWN FOR INFORMATIONAL PURPOSES AND IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL LENGTHS PRIOR TO ORDERING.

1.11. CONTRACTOR TO OBTAIN X-RAY OR GPR (IF APPLICABLE) OF ANY MASONRY STRUCTURES IDENTIFYING ALL EMBEDMENT PRIOR TO CUTTING, DRILLING OR OTHER ACTIVITY WHICH COULD CAUSE DAMAGE. AVOID ALL EMBEDMENT. OBTAIN APPROVAL FROM STRUCTURAL ENGINEER PRIOR TO IMPACTING ANY STRUCTURAL FACILITIES.

1.12. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE MOST RECENT DESIGN DOCUMENTS AND ENSURING THEY ARE DISTRIBUTED AND ARE FOLLOWED BY ALL PERSONAL INVOLVED IN THE PROJECT.

1.13. EVERY EFFORT HAS BEEN MADE BY THE ARCHITECT / ENGINEERS TO PROVIDE ACCURATE AND COMPLETE DESIGN DOCUMENTS THOUGH MINOR ERRORS AND OMISSIONS MAYBE CONTAINED WITHIN THE DOCUMENTS. THESE SHALL NOT EXCUSE THE CONTRACTOR FROM PROVIDING AN ACCURATE PROPOSAL AND COMPLETING THE PROJECT IN ACCORDANCE WITH THE INTENT OF THE DESIGN DOCUMENTS.

1.14. THE CONTRACTOR SHALL BEAR THE RESPONSIBILITY OF IDENTIFYING ANY ISSUES AND NOTIFYING THE CONSTRUCTION MANAGER AND ARCHITECT / ENGINEER IN WRITING PRIOR TO SUBMITTING PRICING. IN THE EVENT OF DISCREPANCIES OR CONFLICTING ITEMS, THE CONTRACTOR SHALL PRICE THE MOST COSTLY OR EXPANSIVE OPTION UNLESS DIRECTED IN WRITING OTHERWISE.

1.15. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ACCESS WITH VENUE MANAGEMENT FOR ALL NECESSARY WORK AND TO COMPLY WITH ANY REQUIREMENTS IMPOSED BY THE VENUE

1.16. CONTRACTOR TO PROVIDE CLOSE OUT PACKAGE WITH ALL TEST RESULTS, SETTING SCREEN SHOTS, RELEVANT CATALOGS / CUT SHEETS, INSTRUCTION SHEETS AND A SET OF RED-LINED AS-BUILT DRAWINGS PRIOR TO FINAL BILLING.

2. CODE COMPLIANCE

2.1. ALL WORK TO MEET OR EXCEED ALL APPLICABLE STANDARDS, CODES, ORDNANCES, RULES AND REGULATIONS. WHEN TWO OR MORE ARE IN CONFLICT, THE MOST STRINGENT SHALL BE FOLLOWED. WHERE LICENSING IS REQUIRED, CONTRACTOR SHALL OBTAIN ALL REQUIRED LICENSES PRIOR TO START OF WORK.

2.2. CONTRACTOR TO COORDINATE WITH LOCAL JURISDICTION FOR ANY CODE RELATED QUESTIONS. ALL JURISDICTION REQUIRED CHANGES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

2.3. EQUIPMENT ROOMS ARE NOT MANNED, ARE NOT HABITABLE, AND TO NOT REQUIRE POTABLE WATER, SEWER CONNECTION OR A.D.A. ACCESS ACCOMMODATIONS.

2.4. CONTRACTOR TO REMOVE TRASH AND REFUSE ON A DAILY BASIS AND NO SOLID WASTE RECEPTACLE WILL BE SITED.

3. SITE WORK:

3.3. ALL EFFORT HAS BEEN MADE TO IDENTIFY EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES SHOWN OR NOT AND PROTECT FROM DAMAGE. EXCAVATION CONTRACTOR TO OBTAIN REQUIRED LOCATED PRIOR TO STARTING WORK.

3.4. CONTRACTOR TO VERIFY STATE REQUIREMENTS FOR UTILITY LOCATION SERVICES AND EXCAVATION CONTRACTOR SHALL NOTIFY STATE OR LOCAL NOTIFICATION CENTER AS REQUIRED PRIOR TO ANY SITE DISTURBANCES.

3.5. CONTRACTOR SHALL PROTECT ALL SITE FINISHES AND IMPROVEMENTS AND RETURN ALL TO PRE WORK CONDITION. IF EXTERIOR SITE IMPROVEMENTS ARE REQUIRED, CONTRACTOR TO INSTALL AND MAINTAIN DRAINAGE / RUNOFF MITIGATION MEASURES THROUGH OUT THE PROJECT AND REVEGETATE AREA TO RETURN IT TO ORIGINAL CONDITIONS.

3.6. GRUB AND DISPOSE OF ALL ORGANIC MATERIAL PRIOR

3.7. NO FILL OR EARTHWORK TO OCCUR WITH ON OR WITH FROZEN MATERIAL

4. MATERIALS:

4.1. CONTRACTOR SHALL PROVIDE ALL NECESSARY MATERIALS AND SUPPLIES TO COMPLETE THE PROJECT NOT SPECIFICALLY PROVIDED BY CARRIER. CONTRACTOR TO CLARIFY PROVIDED MATERIALS PRIOR TO FURNISHING A BID.

4.2. ALL FURNISHED MATERIALS SHALL MEET CARRIER SPECIFICATIONS AND MINIMUM REQUIREMENTS FOR THE PROJECT. ANY SUBSTITUTIONS SHALL BE APPROVED IN WRITING BY CARRIER CONSTRUCTION MANAGER PRIOR TO PURCHASE AND INSTALLATION.

4.3. ALL OUTDOOR STEEL ITEMS SHALL BE HOT DIPPED GALVANIZED PER ASTM A123.

4.4. ALL BOLTS AND HARDWARE TO BE HOT DIPPED GALVANIZED UNLESS SPECIFICALLY REQUIRED TO BE OTHERWISE BY CODE OR CARRIER REQUIREMENT.

4.5. ANY DAMAGED GALVANIZING OR PAINT TO BE FIELD REPAIRED WITH 'COLD-GALV' OR APPROPRIATE PAINT UNDER CONDITIONS APPROVED BY PRODUCT MANUFACTURER.

5. GENERAL CABLING

5.1. ALL INSTALLED CABLES SHALL HAVE SHEATHS (RISER / PLENUM / OUTDOOR / UV RESISTANT) APPROPRIATE FOR THE MOST RESTRICTIVE ENVIRONMENT WHICH THEY WILL TRAVERSE.

5.2. ALL CABLING TO BE SUPPORTED AND LACED PER NEC, LOCAL REQUIREMENTS AND TO MEET CARRIER SPECIFICATIONS.

5.3. MAINTAIN REQUIRED SEPARATION BETWEEN CONDUCTORS AND OTHER CABLES AS PRESCRIBED BY CARRIER SPECIFICATIONS AND BEST PRACTICES.

5.4. ALL FIRE, SMOKE OR DRAFT BARRIERS SHALL BE REPAIRED SUCH THAT THEY MAINTAIN THEIR INTENDED / REQUIRED RATINGS.

5.5. ALL MEASUREMENTS SHOWN ON PLANS ARE TO ADD CONTRACTOR AND DO NOT INCLUDE ANY SLACK OR CABLE DRESSING LENGTH. ALL CABLE LENGTHS SHALL BE FIELD VERIFIED PRIOR TO ORDERING.

6. FIBER OPTICS:

6.1. VERIFY SINGLE-MODE OR MULTI-MODE AND CONNECTOR TYPE

6.2. ALL CABLES AND CONNECTORS TO BE PRE-APPROVED, OR AN EXCEPTION OBTAINED PRIOR TO PURCHASE AND INSTALLATION

6.3. ALL FIBER STRANDS SHALL BE FUSION SPLICED THOUGHT OUT THE LENGTH OF THE RUN AND BE TERMINATED AT EACH END OF TRUNK UNLESS SPECIFICALLY NOTED.

6.4. ALL TERMINATIONS TO BE LANDED IN A BULKHEAD OR COILED AND PROTECTED IN A SPLICE CASE IF BULKHEAD IS SPACE CONSTRAINED.

6.5. ALL SPLICES TO BE FUSION TYPE AND INDIVIDUAL SPLICES SHALL HAVE A LOSS OF LESS THAN 0.1 dB. ANY SPLICES WITH HIGHER LOSSES TO BE REMADE.

6.6. ALL FIBERS TO BE TESTED WITH OTDR AND POWER METER. OTDR AND OPTICAL LOSS REPORT PROVIDED IN CLOSEOUT PACKAGE.

6.7. ALL FIBER CABLING TO BE INSTALLED IN PROTECTIVE CABLE MANAGEMENT SYSTEMS, DUCT OR BE ARMORED CABLE WHERE TRAVERSING SHARED SPACE.

7. COAX AND ANTENNAS

7.1. ALL ANTENNA MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/TIA-222 AND APPLICABLE LOCAL CODES

7.2. ALL COAX TO BE INSTALLED PER CARRIER SPECIFICATIONS, SUPPORTED AT A MINIMUM OF EVERY 4'-0" IN PROPERLY SIZED BLOCKS OR OTHER COAX SUPPORTS U.N.O.

7.3. ALL COAX TRAVERSING EXTERIOR WALLS SHALL BE PROTECTED ON INTERIOR SIDE WITH LIGHTNING SURGE SUPPRESSOR GROUNDED TO BUILDING GROUNDING SYSTEM OR STEEL (NOT LIGHTNING PROTECTION SYSTEM). PROVIDE COAX GROUND KIT AT ANTENNA AND AS REQUIRED BY CARRIER.

7.4. ALL COAX TERMINATIONS SHALL BE LOW PIM AND APPROVED BY CARRIER.

7.5. MAINTAIN MINIMUM BEND RADIUS AND SUPPORT CABLE AS NEEDED TO PROTECT CABLES FROM SAGGING, KINKING OR BEING CAUGHT.

7.6. ALL COAX TO BE SWEEP (DTF & RETURN LOSS) AND PIM TESTED WITH PASSING REPORTS PROVIDED TO CARRIER.

7.7. PROVIDE 50 OHM LOAD ON ALL UNUSED PORTS.

7.8. WATERPROOF ALL EXTERIOR CONNECTIONS AND ANY OTHER CONNECTIONS EXPOSED TO MOISTURE OR CONDENSING ENVIRONMENTS WITH SELF AMALGAMATING BUYTAL TAPE WITH MINIMUM 1/2" OVERLAP.

7.9. TORQUE ALL CONNECTIONS TO MANUFACTURER SPECIFICATIONS WITH APPROPRIATE TORQUE WRENCH.

7.10. MOUNT GPS ANTENNA ON 1-1/4" SCH. 40 STEEL OR STAINLESS STEEL PIPE (MIN. 18"). GROUND PIPE WITH BURNDY GROUNDING CLAMP AND INSTALL WITHIN 2° OF VERTICAL.

ONTIVITY
LOCAL CONNECTIONS | NATIONAL SOLUTIONS

PROFESSIONAL ENGINEER
LICENSED
P-22614
STATE OF IDAHO
DAYTON HUNTER SAVAGE

09/29/2025

IIG Intermountain Infrastructure Group
533 AIRPORT BLVD SUITE 400
BURLINGAME, CA 94010

SITE NAME:
BLANCHARD

SITE ADDRESS:
32622 STATE HIGHWAY 41,
BLANCHARD, ID 83804

PROJECT:
FIBER HUT

SET ISSUE:

NO	DESC	DATE:
0	CDs	9/29/2025

GENERAL NOTES

GN1

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET

LINETYPE LEGEND:

COAXIAL

COAX — COAX — COAX	FEEDLINE / JUMPER: GENERIC
PTS1-50 — PTS1-50	FEEDLINE: PTS1-50 | 1/4" DIAMETER | HIGH POWER | 50 Ohm
LDF4-50 — LDF4-50	FEEDLINE: LDF4-50 | 1/2" DIAMETER | HIGH POWER | 50 Ohm
LDF1-50 — LDF1-50	FEEDLINE: LDF1-50 | 1/4" DIAMETER | HIGH POWER | 50 Ohm
HL4RPV — HL4RPV	FEEDLINE: HL4RPV-50 | 1/2" DIAMETER | HIGH POWER | 50 Ohm
FSJ4-50 — FSJ4-50	FEEDLINE: FSJ4-50 | 1/2" DIAMETER | HIGH POWER | 50 Ohm
FSJ1-50 — FSJ1-50	FEEDLINE: FSJ1-50 | 1/4" DIAMETER | HIGH POWER | 50 Ohm
AL4RPV — AL4RPV	FEEDLINE: AL4RPV-50 | 1/2" DIAMETER | HIGH POWER | 50 Ohm
AVA5-50 — AVA5-50	FEEDLINE: AVA5-50 | 7/8" DIAMETER | HIGH POWER | 50 Ohm
AVA7-50 — AVA7-50	FEEDLINE: AVA7-50 | 1-5/8" DIAMETER | HIGH POWER | 50 Ohm
TFT-402 — TFT-402	JUMPER: TFT-402 | 3/16" DIAMETER | LOW PIM | 50 Ohm
LMR-240 — LMR-240	JUMPER: LMR-240 | 1/4" DIAMETER | LOW PIM | 50 Ohm
	JUMPER: UPLINK
	JUMPER: DOWNLINK

COMPOSITE

FO/DC — FO/DC — FO/DC	COMPOSITE CABLE: INDOOR FIBER / DC POWER TRUNK
HYBRID — HYBRID	HYBRID CABLE: OUTDOOR FIBER / DC POWER TRUNK

CONDUIT

1in — 1in — 1in	CONDUIT: 1 INCH
1.25in — 1.25in — 1.25in	CONDUIT: 1-1/4 INCH
1.5in — 1.5in — 1.5in	CONDUIT: 1-1/2 INCH
2in — 2in — 2in	CONDUIT: 2 INCH
2.25in — 2.25in — 2.25in	CONDUIT: 2-1/4 INCH
2.5in — 2.5in — 2.5in	CONDUIT: 2-1/2 INCH
3in — 3in — 3in	CONDUIT: 3 INCH
3.5in — 3.5in — 3.5in	CONDUIT: 3-1/2 INCH
4in — 4in — 4in	CONDUIT: 4 INCH

DATA

ALM — ALM — ALM	ALARM CABLE
CAT5 — CAT5 — CAT5	COPPER CABLE: CAT5
CAT6 — CAT6 — CAT6	COPPER CABLE: CAT6
ETH — ETH — ETH	COPPER CABLE: GENERIC ETHERNET
HDMI — HDMI — HDMI	HDMI CABLE

FIBER

MMF — MMF — MMF	MULTI MODE FIBER OPTIC CABLE
SMF — SMF — SMF	SINGLE MODE FIBER OPTIC CABLE
UGF — UGF — UGF	UNDERGROUND FIBER OPTIC CABLE
OHF — OHF — OHF	OVERHEAD FIBER OPTIC CABLE
SM6 — SM6 — SM6	SINGLE MODE FIBER TRUNK: 6 STRANDS
SM12 — SM12 — SM12	SINGLE MODE FIBER TRUNK: 12 STRANDS
SM24 — SM24 — SM24	SINGLE MODE FIBER TRUNK: 24 STRANDS
SM48 — SM48 — SM48	SINGLE MODE FIBER TRUNK: 48 STRANDS
SM96 — SM96 — SM96	SINGLE MODE FIBER TRUNK: 96 STRANDS
SM144 — SM144	SINGLE MODE FIBER TRUNK: 144 STRANDS
SM288 — SM288	SINGLE MODE FIBER TRUNK: 288 STRANDS

POWER / GROUND

ACP — ACP — ACP	POWER: AC
DCP — DCP — DCP	POWER: DC
OHP — OHP — OHP	POWER: OVERHEAD
UGP — UGP — UGP	POWER: UNDERGROUND
750MCM — 750MCM — 750MCM	POWER CONDUCTOR: #750 MCM
500MCM — 500MCM — 500MCM	POWER CONDUCTOR: #500 MCM
250MCM — 250MCM — 250MCM	POWER CONDUCTOR: #250 MCM
4/0AWG — 4/0AWG — 4/0AWG	POWER CONDUCTOR: #4/0 GAUGE
3/0AWG — 3/0AWG — 3/0AWG	POWER CONDUCTOR: #3/0 GAUGE
2/0AWG — 2/0AWG — 2/0AWG	POWER CONDUCTOR: #2/0 GAUGE
1/0AWG — 1/0AWG — 1/0AWG	POWER CONDUCTOR: #1/0 GAUGE
2 AWG — 2 AWG — 2 AWG	POWER CONDUCTOR: #2 GAUGE
4 AWG — 4 AWG — 4 AWG	POWER CONDUCTOR: #4 GAUGE
6 AWG — 6 AWG — 6 AWG	POWER CONDUCTOR: #6 GAUGE
8 AWG — 8 AWG — 8 AWG	POWER CONDUCTOR: #8 GAUGE
10AWG — 10AWG — 10AWG	POWER CONDUCTOR: #10 GAUGE
12AWG — 12AWG — 12AWG	POWER CONDUCTOR: #12 GAUGE
GND — GND — GND	GROUND CONDUCTOR

OTHER

X — X — X — X	CHAIN-LINK FENCE
GAS — GAS — GAS	GAS LINE
T — T — T	TELEPHONE LINE
W — W — W	WATER LINE

**** DASHED LINE = EXISTING ****

SYMBOL KEY:

- GROUNDING BOND: EXOTHERMIC / WELD
- GROUNDING BOND: MECHANICAL
- GROUNDING BOND: COMPRESSION
- GROUND ROD
- GROUND ROD W/ INSPECTION WELL

ABBREVIATIONS:

A/C	AIR CONDITIONING
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AWS	ADVANCED WIRELESS SERVICE
BBU	BASE BAND UNIT
BRS	BROADBAND RADIO SERVICE
BTS	BASE TRANSMISSION STATION
C	CONDUIT
CC	CENTER TO CENTER
CONC	CONCRETE
D	DEPTH
DC	DIRECT CURRENT
°, DEG	DEGREE
Ø, DIA	DIAMETER
DIAG	DIAGONAL
DISC	DISCONNECT
EX	EXISTING
EA	EACH
EMT	ELECTRICAL METALLIC TUBE
EXT	EXTERIOR
FT	FOOT, FEET
FO	FIBER OPTIC
GA	GAUGE
GB	GROUND BAR
GC	GENERAL CONTRACTOR
GPS	GLOBAL POSITIONING SYSTEM
GRC	GALVANIZED RIGID CONDUIT
GRND	GROUND
GSM	GLOBAL SYSTEM MOBILE
HH	HANDHOLE
HORZ	HORIZONTAL
ID	INSIDE DIAMETER
INT	INTERIOR
L	LENGTH
LBS	POUNDS
LTE	LONG TERM EVOLUTION
MAX	MAXIMUM
MBO	MULTI-BAND OUTDOOR
MECH	MECHANICAL
MFR	MANUFACTURER
MIMO	MULTIPLE IN MULTIPLE OUT
MIN	MINIMUM
MISC	MISCELLANEOUS
MMF	MULTI MODE FIBER
N/A	NOT APPLICABLE
NTS	NOT TO SCALE
OC	ON CENTER
ONEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
PCS	PERSONAL COMMUNICATION SERVICE
PDU	POWER DISTRIBUTION UNIT
PVC	POLYVINYL CHLORIDE
RAN	RADIO ACCESS NETWORK
REQ	REQUIRED
RF	RADIO FREQUENCY
RFDS	RADIO FREQUENCY DATA SHEET
RRH	REMOTE RADIO HEAD
SBO	SINGLE-BAND OUTDOOR
SISO	SINGLE IN SINGLE OUT
SMF	SINGLE MODE FIBER
TYP	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATION SERVICE
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
WCS	WIRELESS COMMUNICATION SERVICE
XMFR	TRANSFORMER

ONTIVITY
LOCAL CONNECTIONS | NATIONAL SOLUTIONS

PROFESSIONAL ENGINEER
LICENSED
P-22614
STATE OF IDAHO
DAYTON HUNTER SAVAGE

09/29/2025

IIG Intermountain Infrastructure Group
533 AIRPORT BLVD SUITE 400
BURLINGAME, CA 94010

SITE NAME:
BLANCHARD

SITE ADDRESS:
32622 STATE HIGHWAY 41,
BLANCHARD, ID 83804

PROJECT:
FIBER HUT

SET ISSUE:

NO	DESC	DATE:
0	CDs	9/29/2025

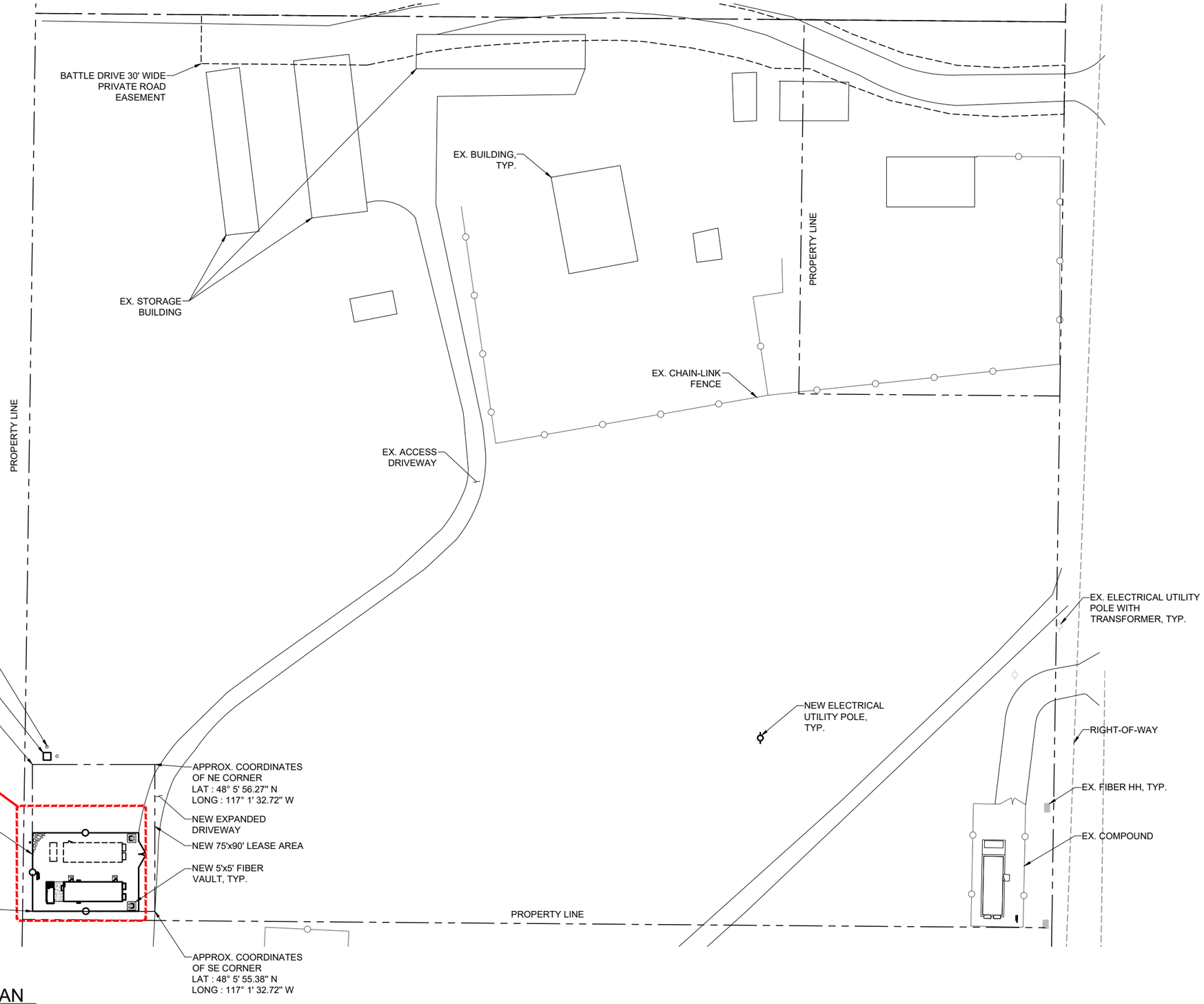
LEGEND & SYMBOL KEY

GN2

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET

NOTES:

1. PROPERTY LINES SHOWN ARE BASED ON AVAILABLE DATA AND ARE FOR REFERENCE ONLY. FINAL PROPERTY BOUNDARIES TO BE VERIFIED BY OWNER OR LAND SURVEYOR AS REQUIRED.



1 OVERALL SITE PLAN

SCALE: 1/32" = 1'-0"

0' 16' 32' 64'

Scale: 1/32" = 1'-0"

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PROFESSIONAL ENGINEER LICENSED P-22614 STATE OF IDAHO DAYTON HUNTER SAVAGE

09/29/2025

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0	CDs	9/29/2025

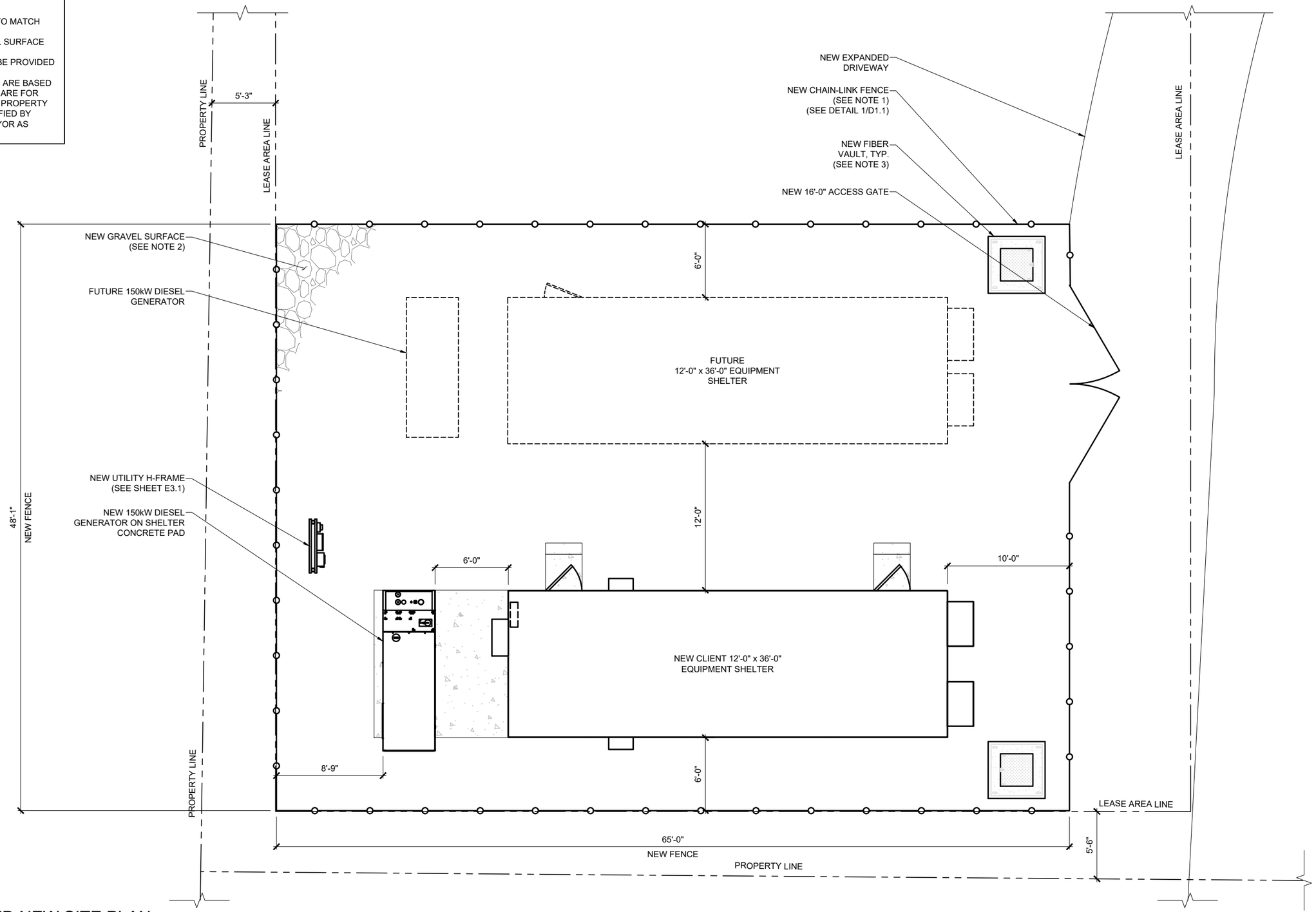
OVERALL SITE PLAN

A1.0

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET

NOTES:

1. NEW CHAIN-LINK FENCE TO MATCH EXISTING
2. NEW COMPOUND GRAVEL SURFACE TO MATCH EXISTING
3. NEW FIBER VAULT(S) TO BE PROVIDED & INSTALLED BY IIG
4. PROPERTY LINES SHOWN ARE BASED ON AVAILABLE DATA AND ARE FOR REFERENCE ONLY. FINAL PROPERTY BOUNDARIES TO BE VERIFIED BY OWNER OR LAND SURVEYOR AS REQUIRED.



N

1 DETAILED NEW SITE PLAN
SCALE: 1/4" = 1'-0"

0' 2' 4' 8'
Scale: 1/4" = 1'-0"

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PROFESSIONAL ENGINEER LICENSED P-22614 STATE OF IDAHO DAYTON HUNTER SAVAGE
09/29/2025

IIG Intermountain Infrastructure Group
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SITE NAME:
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32622 STATE HIGHWAY 41,
BLANCHARD, ID 83804

PROJECT:
FIBER HUT

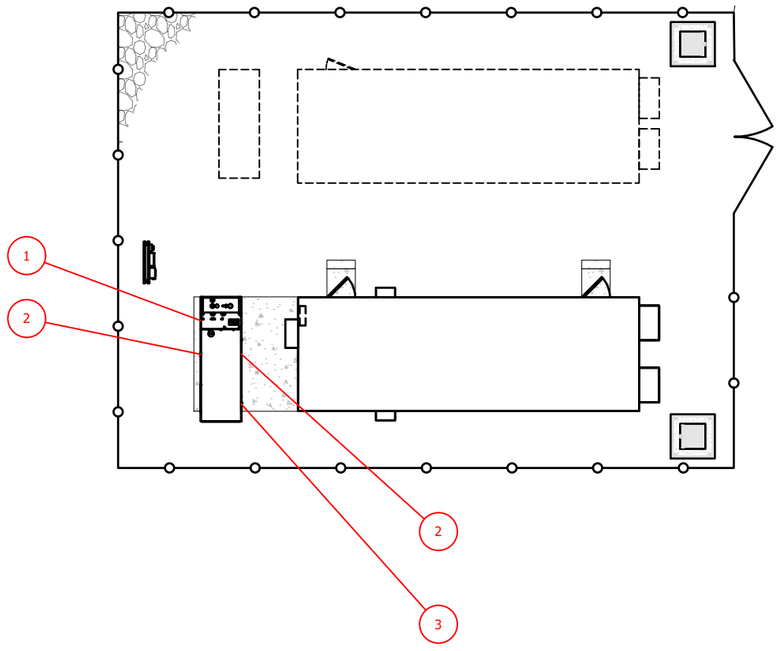
SET ISSUE:

NO	DESC	DATE:
0	CDs	9/29/2025

DETAILED NEW SITE PLAN

A2.1

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET



SIGNAGE KEY			
ID	DESCRIPTION	LOCATION	QTY
1	DANGER FLAMMABLE MATERIAL NO SMOKING	GENERATOR FUEL TANK	2
2	DANGER DIESEL FUEL	GENERATOR ACCESS DOOR	1
3 (1,2)	GENERATOR EMERGENCY SHUTOFF	ABOVE INTEGRATED GENERATOR SHUT-OFF SWITCH	2
	GENERATOR EMERGENCY SHUTOFF	TO LEFT OF FIBER HUT ACCESS DOOR (MIN 20' FROM GENERATOR)	

NOTES:

1. PROVIDE SECONDARY SHELTER MOUNTED GENERATOR SHUT OFF SWITCH IN BREAK GLASS TYPE WEATHERPROOF ENCLOSURE TO COMPLY WITH NFPA 110.
2. SECONDARY LOCATION TO BE MIN. 20' FROM GENERATOR ENCLOSURE.

1

2

3

N

1 SITE SIGNAGE PLAN
SCALE: 1/8" = 1'-0"

0' 4' 8' 16'
Scale: 1/8" = 1'-0"

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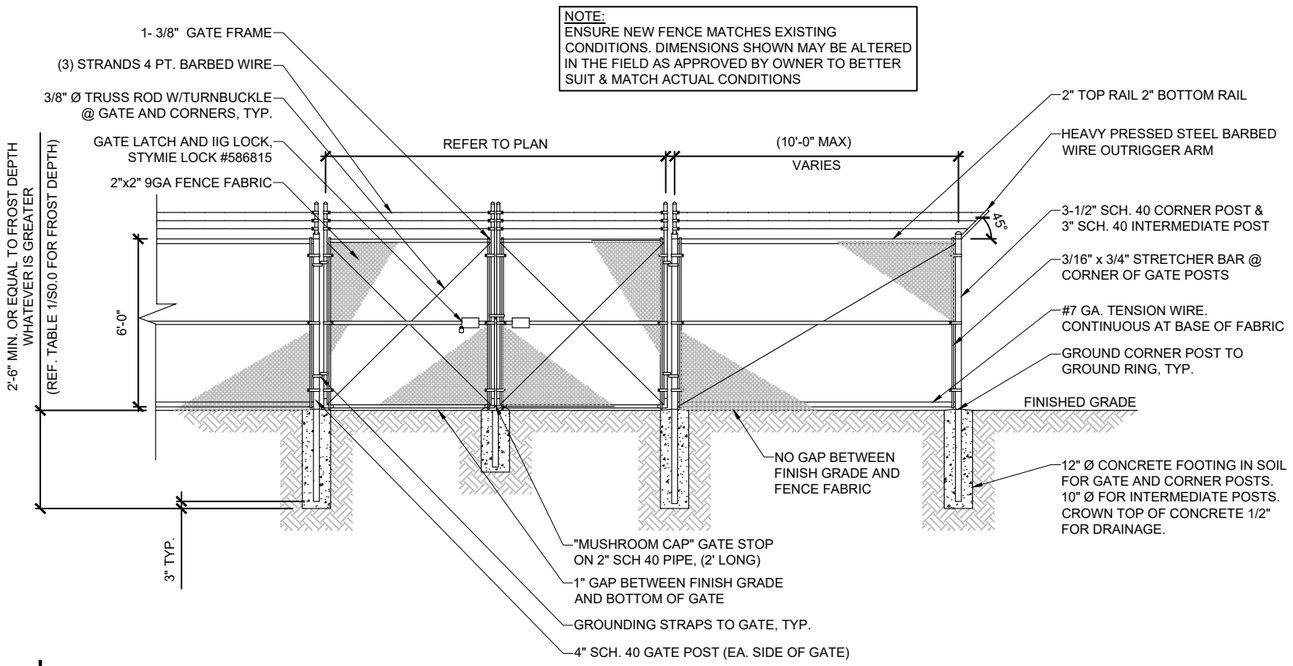
0	CDs	9/29/2025

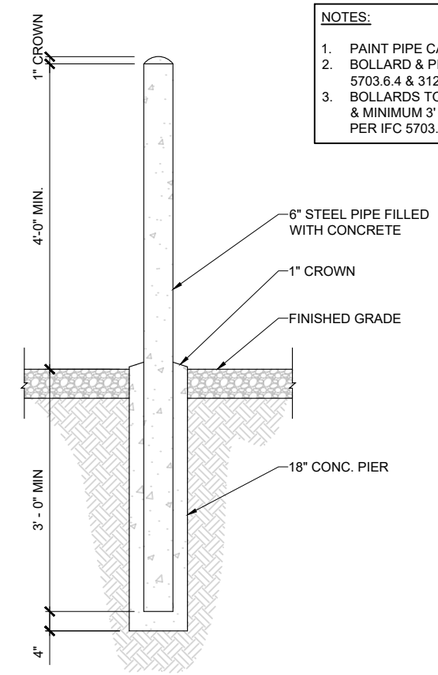
SITE SIGNAGE LAYOUT

A2.2

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET



1 CHAIN-LINK FENCE DETAIL
SCALE: N.T.S



2 BOLLARD DETAIL
SCALE: N.T.S

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0	CDs	9/29/2025

DETAILS

D1.1

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET

1. CODES

1.1. (IBC) INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS

2. GENERAL:

2.1. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE 48 HOURS IN ADVANCE OF THE TIME WHEN A SIGNIFICANT PORTION OF THE REINFORCING HAS BEEN TIED AND WHEN THE CONCRETE IS TO BE POURED FOR SCHEDULING SITE INSPECTIONS.

2.2. POSITIVE DRAINAGE SHALL BE PROVIDED ADJACENT TO ALL FOUNDATIONS SO PONDING OF RAINFALL NEAR THE FOUNDATIONS DOES NOT OCCUR.

2.3. DURING CONSTRUCTION, TEMPORARY GRADES SHALL BE ESTABLISHED TO PREVENT RUNOFF FROM ENTERING THE FOUNDATION AND ANCHORAGE EXCAVATIONS.

2.4. DRAINAGE PATTERNS APPROVED AT THE TIME OF FINISH GRADING SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE TOWER.

3. CONCRETE MIXTURE:

3.1. ALL DETAILING, FABRICATION AND PLACING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE ACI DETAILING MANUAL SP-68 (LATEST REVISION).

3.2. REINFORCING BARS SHALL BE GRADE 60 DEFORMED BARS CONFORMING TO ASTM SPECIFICATION A615, EXCEPT TIES WHICH MAY BE ASTM A615 (GRADE 40). USE CLASS 8 LAP SPLICES.

3.3. ALL REINFORCING BARS SHALL BE TIED WITH TIE WIRE AT ALL REINFORCING BAR INTERSECTIONS. THE CONTRACTOR SHALL SUPPORT THE REINFORCING BAR MAT WITH STEEL CHAIRS SPACED NO MORE THAN 4 FEET O.C.

3.4. ALL WATER SHALL BE REMOVED FROM THE BOTTOM OF THE EXCAVATION PRIOR TO COMPACTING FILL AND PLACING CONCRETE.

3.5. CONCRETE SHALL BE NORMAL WEIGHT (N.W.) AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.

3.6. ALL CONCRETE SHALL HAVE AIR ENTRAINMENT AS BELOW:

NOMINAL MAXIMUM AGGREGATE SIZE, in.	TARGET AIR CONTENT, PERCENT F1
3/8	6
1/2	5.5
3/4	5
1	4.5
1-1/2	4.5
2	4
3	3.5

3.7. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL WHERE POSSIBLE. FORMS, WHEN REQUIRED SHALL BE REMOVED PRIOR TO BACKFILLING. THE MAXIMUM WATER CEMENT RATIO SHALL BE 0.55.

3.8. PREPARE AND SUBMIT BATCH TICKETS FOR EACH TYPE AND STRENGTH OF CONCRETE. CEMENT SHALL CONFORM TO ASTM C150 TYPE-1.

3.9. FOR FIELD MIXING, PREPARE AND SUBMIT MIX DESIGNS FOR PRE-APPROVAL FOR EACH TYPE AND STRENGTH OF CONCRETE IN ACCORDANCE WITH ACI 211, "PROPORTIONING CONCRETE MIXTURES", AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE".

3.10. SLUMP TEST SHALL BE MADE IN ACCORDANCE WITH ASTM C143. THE ALLOWABLE CONCRETE SLUMP SHALL BE 3 INCHES (±1") UNLESS ADMIXTURES ARE USED. ADMIXTURE SHALL BE IN ACCORDANCE WITH ASTM C494 STANDARD TYPES A,B,C,D OR E. THE ENGINEER SHALL PRE-APPROVE SUPERPLASTICIZER USE. DO NOT USE CHLORIDE-CONTAINING ADMIXTURES. AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260.

3.11. FINE AGGREGATE SHALL CONFORM TO ASTM C33. COURSE AGGREGATE SHALL BE GRAVEL OF CRUSHED STONE CONFORMING TO ASTM C33. MAXIMUM AGGREGATE SIZE SHALL BE 3/4".

3.12. WATER SHALL BE CLEAN AND FREE FROM OILS, ACIDS, ALKALIES AND ORGANIC MATERIALS. NO ADDITIONAL WATER SHALL BE ADDED TO THE CONCRETE AT THE JOB SITE.

3.13. HOT WEATHER CONCRETE PLACEMENT SHALL COMPLY WITH ACI 305R. COLD WEATHER CONCRETE PLACEMENT SHALL COMPLY WITH ACI 306.1.

3.14. CONCRETE SHALL NOT BE POURED WHEN TEMPERATURES ARE LOWER THAN 32°F. ACCELERATORS SUCH AS CALCIUM CHLORIDE SHALL NOT BE USED.

3.15. CONCRETE SHALL NOT BE POURED DURING FREEZING OR NEAR-FREEZING TEMPERATURES. IF TEMPERATURE IS BELOW 40°F, ALL CONCRETE PLACED IN FORMS SHALL HAVE A TEMPERATURE OF 70° TO 80°F. DURING FREEZING OR NEAR-FREEZING WEATHER, CONCRETE MUST BE HEATED TO 70°F FOR 5 DAYS OR 50°F FOR 7 DAYS. A COVERING MUST BE MAINTAINED IN PLACE 2 HOURS AFTER HEATING HAS BEEN DISCONTINUED.

3.16. CONCRETE SHALL BE PLACED WITH 24 HOURS OF EXCAVATION INSPECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXPOSED EXCAVATIONS PRIOR TO CONCRETE PLACEMENT.

3.17. PLACE CONCRETE BY USING A CHUTE OR HOPPER DEVICE SUCH THAT CONCRETE SHALL NOT FREE FALL FROM A HEIGHT GREATER THAN 5 FEET. DEPOSIT CONCRETE WITHIN THE CENTER OF THE STEEL REINFORCING CAGE TO PREVENT SEGREGATION.

3.18. CONSOLIDATE PLACED CONCRETE WITH MECHANICAL VIBRATING EQUIPMENT IN ACCORDANCE WITH ACI 309R. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE.

3.19. CONCRETE SHALL BE CURED IN ACCORDANCE WITH ACI 301. WHEN APPLICABLE, CURING COMPOUNDS SHALL BE WATER CLEAR, STYRENE ACRYLATE TYPE A MINIMUM SOLIDS CONTENT OF 30%. APPLICATION SHALL BE IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS.

3.20. ALL CONCRETE TESTING SHALL BE IN ACCORDANCE WITH ACI 318. A MINIMUM OF (2) 6" x 12" CONCRETE CYLINDERS PER ANCHOR BLOCK AND A MINIMUM OF (6) 6" x 12" CYLINDERS PER BATCH REQUIRED.

3.21. FOR THE LESSER OF 26 C.Y. OR ONE DAY'S PLACEMENT, A MINIMUM OF 4 CONCRETE CYLINDERS SHALL BE TAKEN. CONCRETE SHALL BE TESTED AS REQUIRED BY OWNER'S PROJECT MANAGER

4. CONCRETE REINFORCING STEEL:

4.1. REINFORCING STEEL SHALL BE DETAILED, FABRICATED, BENT AND PLACED IN ACCORDANCE WITH THE CRSI MANUAL OF STANDARD PRACTICE AND THE ACI 315 (LATEST EDITION).

4.2. WELDING OF REINFORCING AND EMBEDMENTS IS PROHIBITED.

4.3. SPACING DEVICES SHALL BE USED AS REQUIRED TO MAINTAIN THE SIDE AND BOTTOM CLEARANCE BETWEEN THE STEEL REINFORCEMENT AND EXCAVATION.

5. CONCRETE MISCELLANEOUS:

5.1. ALL GROUT FOR STEEL BEARING AND LEVELING SHALL BE NON-SHRINK AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI.

6. FOUNDATIONS BACKFILL

6.0.1. SELECT FILL

6.0.1.1. PRIOR TO PLACING REQUIRED FILL MATERIAL, REMOVE FROM THE SITE ALL COBBLES, BOULDERS, AND VEGETATION, AS WELL AS OTHER DELETERIOUS MATERIALS, INCLUDING ANY LOOSE OR EXCESSIVELY ORGANIC MATERIAL FROM THE EXISTING SUBGRADE. THIS MATERIAL SHOULD BE STRIPPED TO A MINIMUM DEPTH OF 6 INCHES AND REMOVED FROM THE SITE. ALL EXPOSED SURFACES SHALL THEN BE INSPECTED BY PROBING, AND TESTING.

6.0.1.2. THE EXPOSED SUBGRADE SHOULD NOT BE ALLOWED TO DRY OUT PRIOR TO PLACING SELECT STRUCTURAL FILL.

6.0.1.3. GRANULAR FILL PLACED BENEATH FOUNDATION COMPONENTS AND FLOOR SLABS SHALL CONSIST OF NON-EXPANSIVE, GRANULAR SOIL, FREE OF ORGANIC MATTER, UNSUITABLE MATERIALS, DEBRIS, AND COBBLES GREATER THAN 3 INCHES IN DIAMETER.

6.0.1.4. AFTER PROFILING AND REPLACING AND WEAK YIELDING ZONES, SCRAPING THE SUBGRADE TO A DEPTH OF 12 INCHES, MOISTURE CONDITION THE SOILS BETWEEN OPTIMUM AND +/- 2 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AND COMPLETE AT LEAST 95% OF THE MAXIMUM DENSITY. PER ASTM D698.

6.0.1.5. SELECT STRUCTURAL FILL MATERIAL SHALL MEET THE FOLLOWING GRADATION:

PERCENT PASSING 3" SIEVE: 100%
PERCENT PASSING 1/4" SIEVE: 25%-70%
PERCENT PASSING NO. 40 SIEVE: 0% - 30%
PERCENT PASSING NO. 200 SIEVE: 0% - 5%
MAXIMUM ALLOWABLE ORGANIC CONTENT: 3%
LIQUID LIMIT: < 40
PLASTICITY INDEX: 7 - 20

6.0.1.6. SELECT FILL SHALL BE PLACED IN LIFTS BETWEEN 6 INCHES AND 8 INCHES THICK, WATERED AS REQUIRED AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DEFINED IN ASTM TEST METHOD D698 AT A MOISTURE CONTENT WITHIN -2 TO +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT.

6.0.1.7. COMPACTION AND MOISTURE CONTENT OF SUBGRADE AND EACH LIFT OF SELECT FILL SHALL BE INSPECTED AND APPROVED BY A QUALIFIED ENGINEERING TECHNICIAN, SUPERVISED BY A GEOTECHNICAL ENGINEER.

7. MOISTURE MANAGEMENT

7.1. EVERY EFFORT SHALL BE MADE TO KEEP EXCAVATIONS DRY SHOULD GROUNDWATER BE ENCOUNTERED.

7.2. SEEPAGE CAN BE EFFECTIVELY HANDLED BY SIMPLE DEWATERING METHODS, SUCH AS PERIPHERY DITCHES AND SUMPS. A SUITABLE SUMP COULD CONSIST OF A LARGE DIAMETER PIPE SET VERTICALLY WITH A COARSE SAND AND GRAVEL MIXTURE PLACED IN THE BOTTOM TO ACT AS A FILTER.

7.3. CARE SHALL BE EXERCISED IN PUMPING DIRECTLY FROM THE EXCAVATION SINCE THIS MAY CAUSE DETERIORATION OF THE EXCAVATION BASE.

7.4. THE TRAFFIC OF HEAVY EQUIPMENT (INCLUDING HEAVY COMPACTION EQUIPMENT) MAY CREATE PUMPING AND GENERAL DETERIORATION OF THE SHALLOWER SOILS.

8. SLAB-ON-GRADE

8.1. SLAB-ON-GRADE FOUNDATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING DESIGN FOR SITE PREPARATION, DRAINAGE, AND MAINTENANCE.

8.2. WITHIN THE AREA OF THE PROPOSED SLAB-ON-GROUND, REMOVE AND DISPOSE OF ALL SURFACE VEGETATION, ANY DELETERIOUS MATERIALS WHICH MAY BE PRESENT, AND ALL SOIL REQUIRED TO PROVIDE FOUNDATION BACKFILL BELOW AND ADJACENT TO THE SLAB AS INDICATED IN THE DRAWINGS. IF SOFT, WEAK, OR UNSTABLE SOIL CONDITIONS ARE REVEALED, OVER EXCAVATE THE AREA AND BRING BACK TO GRADE WITH FOUNDATION BACKFILL.

8.3. PLACE A 15 MIL POLYETHYLENE, ASTM E 1745 (CLASS A), VAPOR BARRIER OVER COMPACTED SOIL PRIOR TO PLACING FOUNDATION SLAB.

8.4. REFER TO PLANS FOR STIFFENED SLAB-ON-GRADE DIMENSIONS, THICKNESS, AND REINFORCING.

8.5. THE TROWEL FINISHED CONCRETE SLAB-ON-GRADE FLOOR PROFILE SHALL COMPLY WITH THE FOLLOWING FLATNESS AND LEVELNESS VALUES AS DEFINED IN THE ASTM E 1155:

	SPECIFIED OVERALL	MINIMUM LOCAL
FLATNESS (FF)	25	17
LEVELNESS (FL)	20	15

9. ANCHOR BOLTS:

9.1. ANCHOR BOLTS SHALL CONFORM TO ASTM A307 WITH HEAVY HEXAGONAL NUTS.

10. BOLTS:

10.1. COMMON (MACHINE) BOLTS SHALL CONFORM TO ASTM A307 GRADE A AND NUTS TO ASTM A563. ONE COMMON BOLT ASSEMBLY SHALL CONSIST OF A BOLT. A HEAVY HEX NUT AND A HARDENED WASHER AND A LOCK WASHER.

10.2. HIGH-STRENGTH BOLTS SHALL CONFORM TO ASTM A325; ONE HIGH STRENGTH BOLT ASSEMBLY SHALL CONSIST OF A HEAVY HEX STRUCTURAL BOLT, A HEAVY HEX NUT, A HARDENED WASHER, AND A LOCK WASHER CONFORMING TO ASTM F436. THE HARDENED WASHER SHALL BE INSTALLED AGAINST THE ELEMENT TURNED IN TIGHTENING. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL CONNECTIONS SHALL BE BEARING TYPE CONNECTIONS.

SITE	LATITUDE	LONGITUDE	CITY	COUNTY	STATE	FROST DEPTH
Snohomish WA	47.90107	-122.85715	Snohomish	Snohomish county	WA	12"
Trinidad WA	47.23799	-119.85777	Trinidad	Grant	WA	24"
Soap Lake WA	47.3827167	-119.3459388	Soap Lake	Grant	WA	24"
Odessa WA	47.333	-118.6911472	Odessa	Lincoln	WA	24"
Harrington WA	47.836056	-118.2605917	Harrington	Lincoln	WA	30"
Espanola WA	47.6141306	-117.7371833	Medical Lake	Spokane	WA	30"
Chattaroy WA	47.8895444	-117.3430944	Chattory	Spokane	WA	30"
Blanchard ID	48.0988194	-117.0235611	Blanchard-Glengary, ID	Bonner County	ID	36"
Sandpoint ID	48.3240056	-116.4402778	Sandpoint	Bonner	ID	36"
Noxon MT	48.0726417	-115.9534417	Heron	Sanders	MT	42"
Thompson Falls MT	47.6194417	-115.3972611	Thompson Falls	Sanders	MT	42"
Paradise MT	47.3523194	-114.7742278	Plains	Sanders	MT	42"
Superior MT	47.1813333	-114.8628639	Superior	Mineral	MT	42"
Frenchtown MT	47.1262472	-447.2753278	Frenchtown	Missoula	MT	42"
Turah, MT	46.7985667	-113.765556	Clinton	Missoula	MT	42"
Drummond MT	46.6670722	-113.145075	Drummond	Granite	MT	48"
Deer Lodge MT	46.3370833	-112.7308806	Deer Lodge	Powell	MT	48"
Butte MT	45.9172222	-112.4907333	Butte	Silver Bow	MT	48"
Willow Creek, MT	45.8210056	-11.8331157	Whitehall	Jefferson	MT	48"
Bemis, WA	46.9088222	-118.3331611	Lind-Washtuncna	Adams	WA	24"
Pickard, WA	46.4355306	-118.4075139	Eureka Flat, WA	Walla walla	WA	24"
Touchet WA	46.0383611	-1187661	Touchet, WA	Walla walla	WA	24"

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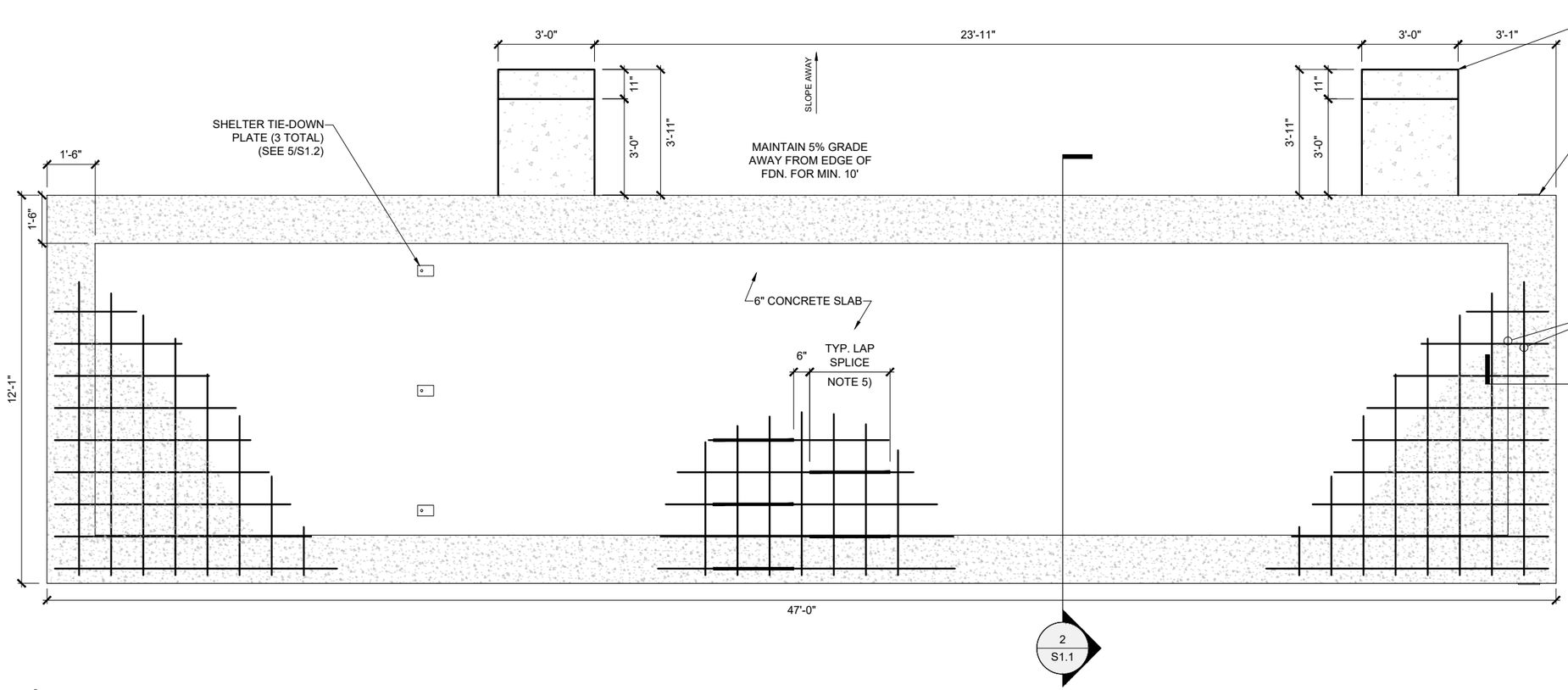
STRUCTURAL NOTES

S0.0

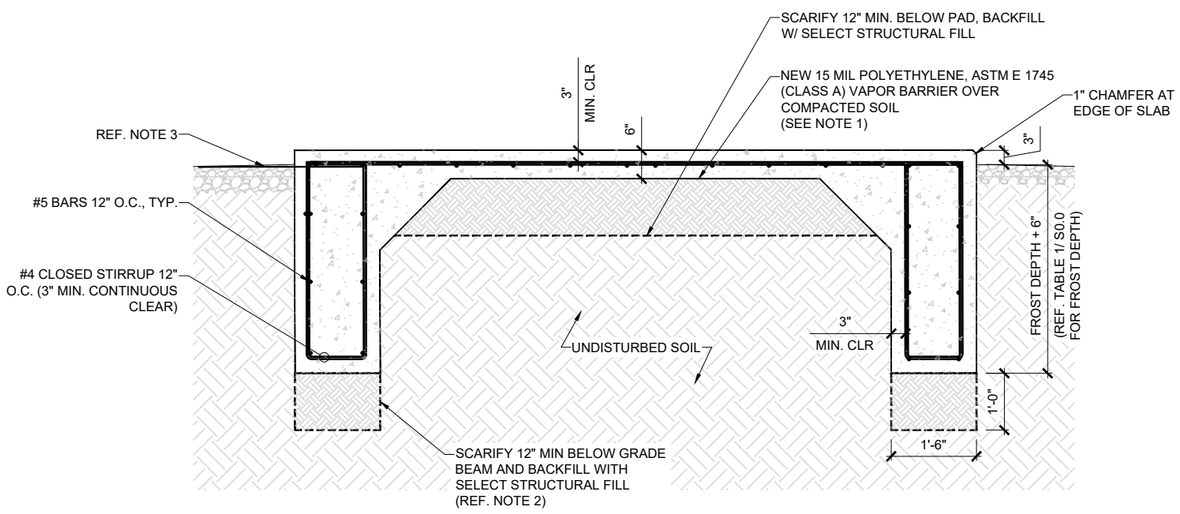
SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET



1 SHELTER & GENERATOR FOUNDATION PLAN
SCALE: 1/2" = 1'-0"

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

NOTES:
1. DIMENSIONS ARE APPROXIMATE, VERIFY SHELTER DIMENSIONS PRIOR TO SETTING FORMS. ADJUST AS NEEDED.
2. GRUB SITE AND ORGANIC MATTER.
3. REFER TO SHEET S0.1 FOR ALL STRUCTURAL NOTES.
4. REFER TO STATE APPROVED PRE-FABRICATED SHELTER DRAWINGS FOR FULL SHELTER TIE-DOWN ATTACHMENT SPECIFICATIONS.
5. A MINIMUM SPLICE LENGTH OF 30 INCHES SHALL BE MAINTAINED FOR ALL REINFORCING BARS WITHIN THE REBAR CAGE, UNLESS OTHERWISE DETAILED. ALL SPLICES SHALL CONFORM TO APPLICABLE CODES AND STANDARDS AND BE STAGGERED TO AVOID CONGESTION AND MAINTAIN STRUCTURAL INTEGRITY



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

0' 6" 1' 2' 3'
Scale: 3/4" = 1'-0"

NOTES:
1. THE MOISTURE RETARDER SHALL HAVE A PERMEANCE LESS THAN 0.01 US PERMS AS DETERMINED BY ASTM E96.
2. BASED ON THE ON FIELD TESTING, IF THE BEARING CAPACITY OF SOIL IS MORE THAN 5000 PSF, THE STRUCTURAL FILL UNDER THE GRADE BEAMS IS NOT REQUIRED. THE FIELD TEST DATA SHALL BE PROPERLY DOCUMENTED.
3. LEAVE DOWELS OUT TO CONNECT THE STOOP. REF. DETAIL 2/S1.2 FOR STOOP REINFORCEMENT.

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S1.1

SCALE SET FOR 24"x36" SHEET
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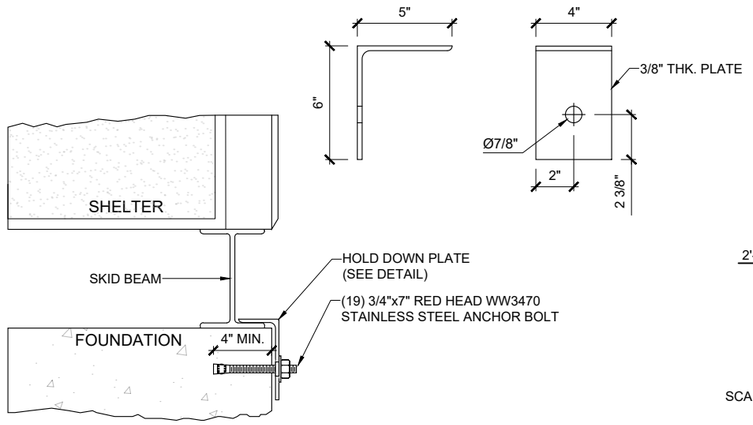
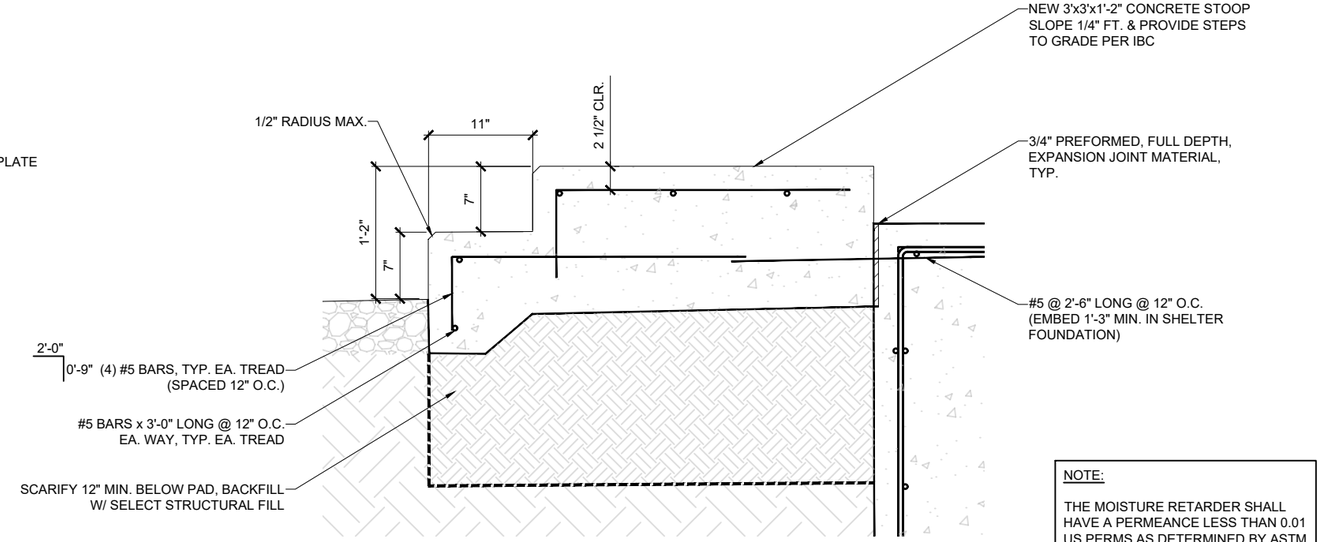
CONTRACTOR NOTE:

REFER TO GENERATOR MANUFACTURER'S RECOMMENDATIONS FOR ANCHORING TO SLAB. DETAILS NOT SHOWN IN THIS SET.



1 ANCHOR PLATE DETAIL - 1
SCALE: N.T.S.

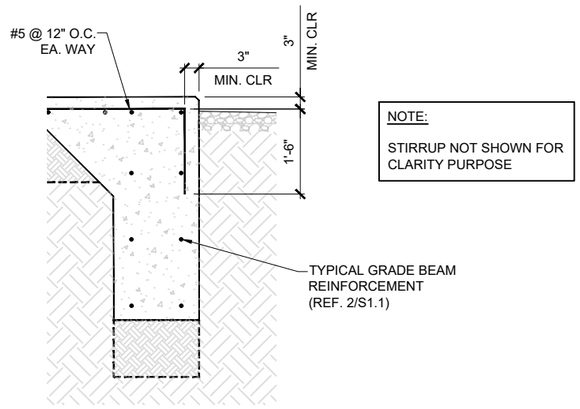


NOTE:

THE MOISTURE RETARDER SHALL HAVE A PERMEANCE LESS THAN 0.01 US PERMS AS DETERMINED BY ASTM E96.

2 STOOP FOUNDATION SECTION
SCALE: 1-1/2" = 1'-0"

0' 3" 6" 1' 1'-6"
Scale: 1-1/2" = 1'-0"

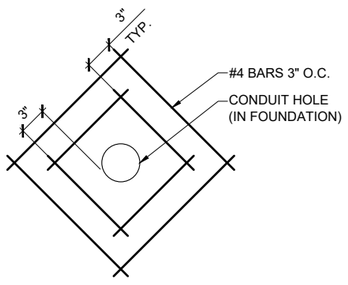


NOTE:

STIRRUP NOT SHOWN FOR CLARITY PURPOSE

3 SHELTER FOUNDATION SECTION
SCALE: 3/4" = 1'-0"

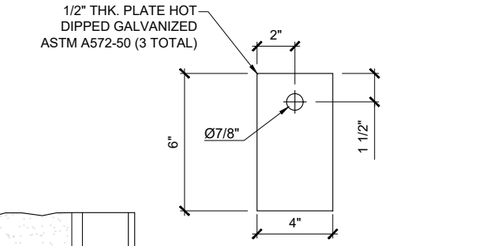
0' 6" 1' 2' 3'
Scale: 3/4" = 1'-0"

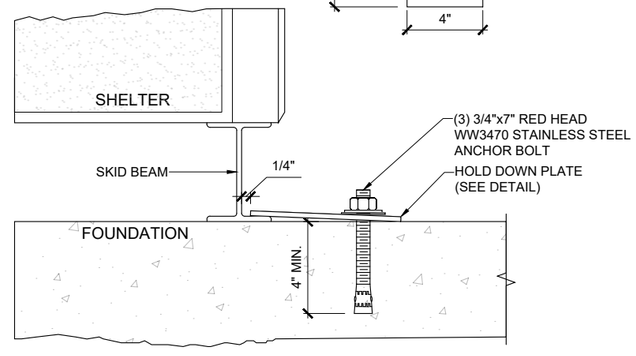


NOTE:

DIAMOND REINFORCEMENT RING NEEDED AT ALL CONDUIT LOCATIONS. (2) #4 BARS AROUND THE CONDUITS WITH 3" SPACING.

4 REBAR DETAIL AT CONDUIT HOLE
SCALE: N.T.S.





5 ANCHOR PLATE DETAIL - 2
SCALE: N.T.S.

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STRUCTURAL DETAILS

S1.2

SCALE SET FOR 24"x36" SHEET
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REINFORCEMENT STEEL SCHEDULE FOR SHELTER AND GENERATOR FOUNDATION

S.NO	TYPE	REBAR SIZE	REBAR SPACING	DIMENSIONS				QUANTITY
				a	b	c	d	
1	D	#5	1'-0"	46'-6" (NOTE 1)	1'-6"	0'-2 1/2"	-	13
2	A	#5	1'-0"	11'-7"	-	-	-	X (REF. TABLE 1)
3	B	#4	1'-0"	1'-0"	FROST D. + 3"	0'-3"	0'-2"	118
4	A	#5	1'-0"	46'-6" (NOTE 1)	-	-	-	Y (REF. TABLE 1)
5	A	#4	0'-3"	VARIABLE	-	-	-	NOTE 2

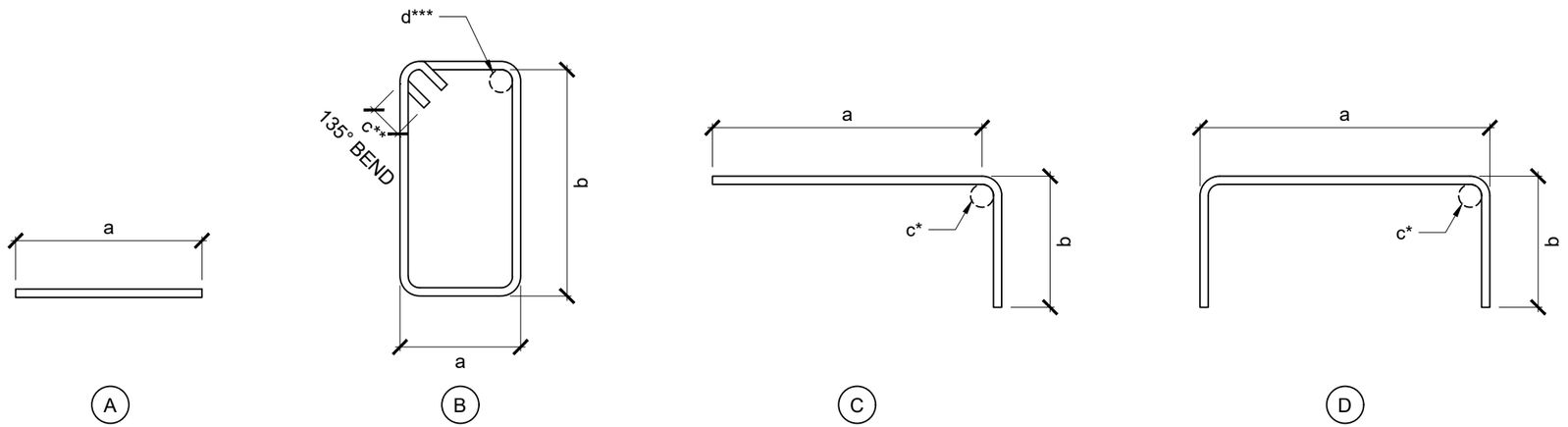
NOTE:
1. A MINIMUM SPLICE LENGTH OF 30 INCHES SHALL BE MAINTAINED FOR ALL REINFORCING BARS WITHIN THE REBAR CAGE, UNLESS OTHERWISE DETAILED. ALL SPLICES SHALL CONFORM TO APPLICABLE CODES AND STANDARDS AND BE STAGGERED TO AVOID CONGESTION AND MAINTAIN STRUCTURAL INTEGRITY (REFER 1/S1.1).
2. THE REBAR QUANTITY WILL VARY BASED ON THE NUMBER OF CONDUITS PASSING THROUGH THE PAD.

TABLE-1

FROST DEPTH	QUANTITY	
	X	Y
0" TO 18"	52	4
19" TO 30"	56	8
31" TO 42"	60	12
43" TO 54"	64	16

REINFORCEMENT STEEL SCHEDULE FOR EACH STOOP

S.NO	TYPE	REBAR SIZE	REBAR SPACING	DIMENSIONS				QUANTITY
				a	b	c	d	
1	A	#5	1'-0"	2'-6"	-	-	-	9
2	C	#5	1'-0"	2'-7"	0'-9"	0'-2 1/2"	-	8



A B C D

* - NUMBER OF BENDS

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STRUCTURAL DETAILS

S1.3

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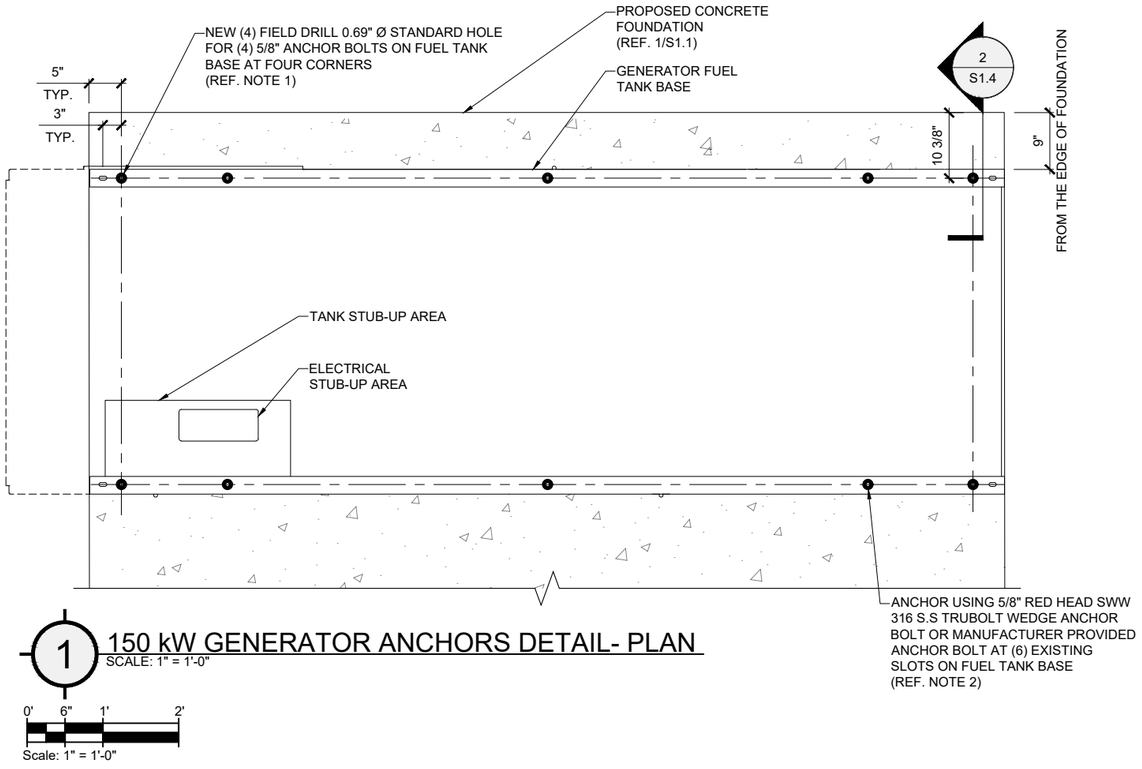


1 150 kW GENERATOR ANCHORS DETAIL- PLAN

SCALE: 1" = 1'-0"

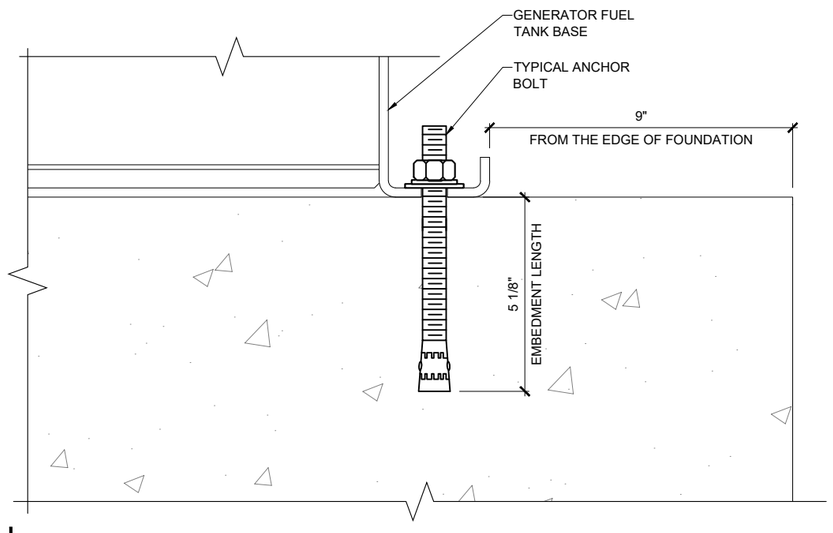
0' 6" 1' 2'

Scale: 1" = 1'-0"

NOTES:

1. FIELD CUTTING AND FIELD DRILLING MAY BE NECESSARY TO ACHIEVE THE REQUIRED DIMENSIONS. CUTTING, DRILLING, AND RUST LOCATIONS SHALL BE MECHANICALLY CLEANED WITH METAL BRISTLE BRUSH. APPLY TWO BRUSH-ON COATS OF ZINGA/ZRA (OR PPROVED EQUIVALENT).

2. MANUFACTURER PROVIDED SLOTS WITH SIZES AS APPROPRIATE.



2 GENERATOR ANCHOR BOLT DETAIL - ELEVATION

SCALE: 6" = 1'-0"

0' 3" 6"

Scale: 6" = 1'-0"

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ELECTRICAL

1. CODES

1.1. (NEC) NATIONAL ELECTRICAL CODE

2. GENERAL

2.1. CONTRACTOR SHALL PROVIDE ALL ITEMS OF LABOR AND MATERIALS TO MAKE A COMPLETE INSTALLATION OF ELECTRICAL WORK, AS SHOWN ON DRAWINGS, AS SPECIFIED, AND AS NECESSARY FOR COMPLETE SYSTEMS, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

- MAIN POWER BRANCH/FEEDERS AS REQUIRED.
- BRANCH FEEDER FOR POWER AND LIGHTING.
- ALL ELECTRICAL CONDUCTORS AND CONDUIT.
- ALL WIRING DEVICES, SAFETY SWITCHES.
- ALL LIGHTING FIXTURES AND LAMPS.
- ALL COMMUNICATION EMPTY CONDUIT SYSTEMS.
- LIGHTNING SURGE PROTECTION DEVICE.
- ANTENNA AND EQUIPMENT GROUNDING.

2.2. ALL INSTALLATIONS TO MAINTAIN REQUIRED CLEARANCES.
2.3. CONTRACTOR TO SIZE CONDUCTORS PER NEC AND CARRIER REQUIREMENTS AND UPSIZE AS REQUIRED TO MINIMIZE VOLTAGE DROP.
2.4. CONTRACTOR TO SIZE CONDUIT PER NEC.

3. REQUIREMENTS:

3.1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL AND NATIONAL ELECTRICAL CODES.
3.2. ALL WORK SHALL BE COMPLETED BY A CERTIFIED MASTER ELECTRICIAN.
3.3. ALL WORK SHALL CONFORM TO THE LATEST VERSION OF MOTOROLA R56 STANDARDS.
3.4. AFTER INSTALLATION TEST ALL CONDUCTORS FOR SHORTS AND GROUNDS BEFORE ENERGIZING.

4. GUARANTEE:

4.1. THE CONTRACTOR SHALL FURNISH A WRITTEN CERTIFICATE, GUARANTEEING ALL MATERIALS, EQUIPMENT AND LABOR FURNISHED BY CONTRACTOR TO BE FREE OF ALL DEFECTS FOR A PERIOD OF ONE YEAR FROM AND AFTER THE DATE OF FINAL ACCEPTANCE OF ELECTRICAL WORK. THE CONTRACTOR SHALL FURTHER GUARANTEE THAT IF ANY DEFECTS APPEAR WITHIN THE STIPULATED GUARANTEED PERIOD, SUCH WORK SHALL BE REPLACED WITHOUT COST TO THE OWNER.

5. FEEDERS, SWITCHES AND METERING EQUIPMENT:

5.1. MAKE ARRANGEMENTS WITH OWNERS AS NEEDED TO BRING IN BRANCH FEEDERS FOR ELECTRICAL SERVICE AS SHOWN ON DRAWINGS. PAY ALL CHARGES INVOLVED THEREWITH. FURNISH, INSTALL FEEDER WIRE TO OWNER DISTRIBUTION PANEL. PROVIDE METER AS SHOWN ON DRAWINGS

6. PANELBOARD CONSTRUCTION:

6.1. PANELBOARDS SHALL CONSIST OF A CAN, FRONT, INTERIOR AND CIRCUIT PROTECTIVE DEVICES AND SHALL BE MANUFACTURED IN ACCORDANCE WITH UNDERWRITER'S LABORATORIES. THE GAUGE OF METAL USED AND THE GUTTER SPACE SHALL BE IN ACCORDANCE WITH APPLICABLE UL STANDARDS. EACH PANEL SHALL HAVE A DOOR MOUNTED ON A SEMI-CONCEALED HINGES WITH A CYLINDER LOCK, INDEX CARD HOLDER PROPERLY FILLED IN AS TO CIRCUIT; ALL PANELS WITH MASTER KEY. ALL PANELS SHALL BE FINISHED WITH BAKED-ON GRAY ENAMEL, OVER RUST INHIBITOR COAT. PANEL BOARDS SHALL BE AS MANUFACTURED BY G.E., ITE, SQUARE "D" OR CUTLER HAMMER.

7. WIRING:

7.1. CONDUCTORS SHALL BE TYPE "THHN/THWN" OR "XHHW-2" INSULATION.
7.2. INSTALL CONDUCTORS IN CLEAN, DRY CONDUITS. USE UL APPROVED PULLING LUBRICANT WHERE REQUIRED.
7.3. USE #12 AS MINIMUM CONDUCTOR SIZE FOR POWER SYSTEMS. ALL CONTROL WIRES SHALL BE STRANDED AND TERMINATED WITH CRIMPED-ON LUGS.
7.4. MAKE CONNECTION, SPLICES AND TAPS ONLY IN APPROVED BOXES AND FITTINGS. FOR SMALL BRANCH CIRCUIT CONDUCTORS, FIRST TWIST CONDUCTORS TOGETHER, THEN INSTALL A "SCOTCHLOK" OR EQUAL SPRING CONNECTOR OF PROPER SIZE. FOR LARGE CONDUCTORS USE SPLIT-BOLT OR HYDRAULICALLY COMPRESSED CONNECTIONS, THEN APPLY ENOUGH LAYERS OF VINYL ELECTRICAL TAPE TO EQUAL THE INSULATION VALUE OF THE CONDUCTOR INSULATION.
7.5. WHERE FACTORY COLOR CODED CONDUCTORS ARE NOT AVAILABLE, INSTALL BANDS OF COLORED VINYL PLASTIC TAPE AT EACH END OF EACH CONDUCTOR.

8. CONDUIT:

8.1. PROVIDE A COMPLETE ASSEMBLY OF CONDUIT, TUBING OR DUCT WITH FITTINGS, INCLUDING, BUT NOT LIMITED TO, CONNECTORS, NIPPLES, COUPLINGS, LOCKNUTS, BUSHINGS, EXPANSION FITTINGS, OTHER COMPONENTS AND ACCESSORIES AS NEEDED. CONNECTIONS AND COUPLING MUST BE COMPRESSION TYPE TO MEET R56 FOR BONDING REQUIREMENTS.
8.2. FITTINGS SHALL BE DESIGNED AND APPROVED FOR THE SPECIFIC USE INTENDED. PROVIDE INSULATED THROATS OR BUSHINGS FOR ALL CONDUITS. GROUNDING BUSHINGS SHALL ALSO HAVE INSULATED THROATS.
8.3. MINIMUM CONDUIT SIZE IN ALL CASES SHALL BE 1/2" UNLESS MINIMUM SIZE IS SPECIFIED TO BE LARGER FOR SPECIFIC SYSTEMS SPECIFIED ELSEWHERE IN THE SPECIFICATIONS OR ON THE DRAWINGS.
8.4. RIGID STEEL CONDUIT SHALL BE HEAVY-WALL STEEL TUBE WITH METALLIC CORROSION-RESISTANT COATING ON INTERIOR AND EXTERIOR, HOT-DIPPED GALVANIZED, FREE FROM DEFECTS, MANUFACTURED IN ACCORDANCE TO ANSI STANDARDS, AND UL-LISTED. USE THREADED COUPLINGS. USE RIGID GALVANIZED STEEL CONDUIT IN ALL LOCATIONS UNLESS NOTED OTHERWISE.
8.5. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC (UNLESS NOTED OTHERWISE).
8.6. AS A MINIMUM, CONDUIT SIZES SHALL BE IN ACCORDANCE WITH NEC CONDUIT FILL REQUIREMENTS, REGARDLESS OF SIZE SCHEDULE OR INDICATED. IF LARGER SIZE IS SCHEDULED OR INDICATED, THE LARGER SIZE SHALL BE USED.

9. CONDUIT INSTALLATION:

9.1. ANCHOR CONDUIT WITH HANGERS, CONDUIT STRAPS OR OTHER DEVICES SPECIFICALLY DESIGNED FOR THE PURPOSE. WIRE TIES SHALL NOT BE PERMITTED. USE TRAPEZE HANGERS FOR MULTIPLE PARALLEL CONDUIT RUNS.
9.2. ALL CONCRETE INSERTS SHALL BE GALVANIZED OR CADMIUM PLATED; INDIVIDUAL HANGERS, TRAPEZE HANGERS AND RODS SHALL BE PRIME COATED.
9.3. INSTALL HORIZONTAL RUNS OF CONDUIT TO PROVIDE A NATURAL DRAIN TO PREVENT MOISTURE COLLECTING IN THE POCKETS OR TRAPS.
9.4. CAP CONDUIT ENDS UNTIL CONDUCTOR IS INSTALLED TO PREVENT FOREIGN OBJECTS FROM ENTERING CONDUIT.
9.5. FITTINGS AND CONDUITS SHALL BE APPROVED FOR GROUNDING PURPOSES OR SHALL BE JUMPERED WITH A COPPER GROUNDING CONDUCTOR OF PROPER AMPACITY. LEAVE TERMINATION OF SUCH JUMPERS EXPOSED.
9.6. INSTALL (2) 200 POUND NYLON PULL CORDS IN ROUGH-IN RACEWAYS.
9.7. INSTALL OFFSETS, PULL BOXES AND ELBOWS AS REQUIRED TO ACCOMPLISH A HARMONIOUS ROUTING OF THE SYSTEMS.
9.8. OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE RESISTANT RATED CONSTRUCTION SHALL BE FIRE-STOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANT RATING.

10. JUNCTION AND PULL BOXES:

10.1. USE GALVANIZED PULL AND JUNCTION BOXES THAT COMPLY WITH NEC AS TO SIZE AND CONSTRUCTION.
10.2. FOR JUNCTION AND PULL BOXES, USE BOXES NOT LESS THAN 4" SQUARE AND 1 1/2" DEEP WITH REMOVABLE COVERS.
10.3. IN WET AREAS OR OUTDOORS, USE CAST ALUMINUM OR CAST IRON BOXES WITH THREADED HUBS AND GASKET COVERS.
10.4. INSTALL JUNCTION AND PULL BOXES IN ACCESSIBLE LOCATIONS. POSITION BOXES SO COVERS CAN BE REMOVED.
10.5. INSTALL BOXES ON CONCEALED CONDUITS WITH COVERS FLUSH WITH FINISH.

GROUNDING

1. GENERAL:

1.1. GROUNDING SHALL BE INSTALLED PER MOTOROLA R56 STANDARDS AND GUIDELINES FOR COMMUNICATIONS SITES.
1.2. CONTRACTOR TO BOND METALLIC ITEMS TO GROUNDING SYSTEM WITHIN SITE PER CARRIER REQUIREMENTS.

2. CONNECTIONS:

2.1. ALL EXTERNAL GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC PROCESS, BY IRREVERSIBLE HIGH COMPRESSION, AND/OR BY 2-HOLE LONG BARREL LUGS. NO SINGLE-HOLE, CRIMP-ON, OR SOLDER CONNECTIONS SHALL BE USED. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE SPLICE. ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES.
2.2. ALL INTERIOR GROUNDING AND BONDING CONDUCTORS SHALL BE CONNECTED BY TWO HOLE-TYPE (COMPRESSION) CONNECTIONS. MECHANICAL CONNECTIONS, FITTINGS OR CONNECTIONS THAT DEPEND SOLELY ON SOLDER SHALL NOT BE USED.

3. GROUND RODS:

3.1. ALL GROUND RODS SHALL BE COPPER-CLAD STEEL 5/8" DIAMETER X 10'-0" LONG AND OF THE NUMBER AND AT LOCATIONS INDICATED. GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICALLY IN UNDISTURBED EARTH.
3.2. GROUND RODS SHALL BE LOCATED SO AS TO AVOID THE TOWER FOUNDATION.
3.3. IF ROCK IS ENCOUNTERED, GROUND RODS MAY BE DRIVEN AT AN OBLIQUE ANGLE OF NOT GREATER THAN 45 DEGREES FROM VERTICAL OR MAY BE BURIED HORIZONTALLY AND PERPENDICULAR TO THE BUILDING, IN A TRENCH AT LEAST 36" DEEP.
3.4. GROUND RODS SHALL BE BURIED TO A MINIMUM DEPTH OF 30 INCHES BELOW FINISHED GRADE, WHERE POSSIBLE, OR BURIED BELOW THE FREEZE LINE, WHICHEVER DEPTH IS GREATER.
3.5. GROUND RODS SHALL NOT BE INSTALLED MORE THAN 20 FEET APART (OR TWICE THE LENGTH OF THE ROD) AND NOT LESS THAN 6 FEET (PER NFPA 70, ARTICLE 250-56).

4. GROUND BARS:

4.1. ALL GROUND BARS SHALL BE 1/4" THICK BARE COPPER PLATES (U.N.O.) AND OF SUFFICIENT SIZE TO GROUND ATTACHMENTS INDICATED IN THE DRAWINGS (MIN. 2"x12"). HOLES SHALL BE 7/16" DIAMETER ON 3/4" CENTERS TO PERMIT THE CONVENIENT USE OF TWO-HOLE LUGS.
4.2. THE METHOD OF ATTACHMENT OF THE GROUNDING ELECTRODE CONDUCTOR TO GROUND BARS SHALL BE EXOTHERMIC OR IRREVERSIBLE HIGH COMPRESSION.

5. CABLES:

5.1. ALL EXTERIOR GROUNDING CABLES SHALL BE #2 STRANDED GREEN JACKETED COPPER WIRE UNLESS INDICATED OTHERWISE ON DRAWINGS.
5.2. WHEN THE DIRECTION OF THE CONDUCTOR MUST CHANGE, IT SHALL BE DONE GRADUALLY. ALL BENDS SHALL BE MADE WITH THE GREATEST PRACTICAL RADIUS AND SHALL NOT BE LESS THAN 8".
5.3. ALL CONDUITS SHALL BE MECHANICALLY SUPPORTED.
5.4. ALL METALLIC CONDUIT SHALL USE GROUND-BUSHING CONNECTIONS.
5.5. ALL CONDUITS USED AS RACEWAYS FOR GROUNDING CONDUCTORS SHALL BE BONDED AT BOTH ENDS IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).
5.6. PROVIDE WIRE PROTECTION PIPES AT ALL GROUND WIRES AT GRADE LEVEL PER GROUND WIRE PROTECTION DETAIL.

6. DISSIMILAR MATERIALS:

6.1. BONDING OF TWO DISSIMILAR METALS MAY RESULT IN GALVANIC CORROSION, A REACTION THAT OCCURS AT THE JUNCTION OF DISSIMILAR METALS WHEN THEY ARE EXPOSED TO MOISTURE. THE DEGREE AND RATE OF CORROSION DEPENDS ON THE RELATIVE POSITION OF THE METALS IN THE ELECTROCHEMICAL SERIES. TO DETERMINE THE LIKELIHOOD OF TWO METALS REACTING REFERENCE SECTION 6.5.2 IN THE R56 SPECIFICATIONS.
6.2. THE SAME METAL SHALL BE USED THROUGHOUT THE SYSTEM WHEN POSSIBLE.
6.3. EXOTHERMICALLY WELD CONNECTIONS OF DIFFERENT METALS WHEN WELD MATERIAL IS AVAILABLE FOR THE METALS BEING BONDED.
6.4. COPPER CONDUCTORS SHALL NOT BE INSTALLED ON ALUMINUM ROOFING OR SIDING.
6.5. ALUMINUM AND COPPER SHALL NOT BE DIRECTLY CONNECTED TO EACH OTHER UNLESS USING EXOTHERMIC WELDING MATERIALS SPECIFICALLY INTENDED FOR THESE TWO METALS TO MAKE THE CONNECTION. ALUMINUM AND COPPER MAY BE JOINED WITH THE USE OF A LISTED BIMETALLIC TRANSITION CONNECTOR OF STAINLESS STEEL. THESE CONNECTORS SHALL BE LISTED FOR THE SIZE AND NUMBER OF CONDUCTORS AND MARKED WITH AL/CU. THESE CONNECTIONS SHALL BE LIBERALLY COATED WITH A CONDUCTIVE ANTIOXIDANT AT THE POINT OF INSERTION INTO THE CONNECTOR.
6.6. COPPER SHALL NOT COME IN CONTACT WITH GALVANIZED STEEL.
6.7. TINNED COPPER SHALL BE USED WHEN CONNECTING TO A GALVANIZED STEEL STRUCTURE.

7. ANTI-OXIDANT:

7.1. ANTI-OXIDANT COMPOUND SHALL BE USED BETWEEN ALL EXTERNAL MECHANICAL CONNECTIONS. CARE SHALL BE TAKEN TO USE THE APPROPRIATE ANTI-OXIDANT TYPE. ZINC ANTI-OXIDANT (GRAY COLOR) SHALL BE USED WHEN CONNECTING TO GALVANIZED AND ALUMINUM OBJECTS AND COPPER ANTI-OXIDANT (COPPER COLOR) SHALL BE USED WHEN CONNECTING TO COPPER OBJECTS.

8. TEST PROCEDURE:

8.1. THE GROUND SYSTEM RESISTANCE SHALL NOT EXCEED 10 OHMS. A DESIGN GOAL OF 5 OHMS IS RECOMMENDED. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARD RESISTANCE TESTING.
8.2. GROUND TEST MUST BE PERFORMED PRIOR TO UTILITY CONNECTION AND GROUND CONNECTION TO ANY EXISTING SITE COMMON GROUNDING ELECTRODE SYSTEM.

9. GROUNDING RING:

9.1. THE GROUND RING ENCIRCLING THE BUILDING SHALL BE A MINIMUM SIZE OF NO. 2 AWG SOLID TINNED COPPER CONDUCTOR IN DIRECT CONTACT WITH THE EARTH AT A MINIMUM DEPTH OF 36 INCHES. CONDUCTOR BENDS SHALL HAVE A MINIMUM RADIUS OF 8 INCHES.
9.2. ALL EXTERNAL GROUND RINGS ARE TO BE JOINED TOGETHER AND ALL CONNECTIONS SHALL BE EXOTHERMIC OR IRREVERSIBLE HIGH COMPRESSION. NO LUGS OR CLAMPS WILL BE ACCEPTED.

10. FENCE / GATE:

10.1. GROUND ALL SECTIONS OF FENCE AND GATE AS INDICATED ON DRAWINGS. GROUND EACH GATE POST AND CORNER POST. ALL CONNECTIONS FOR THE FENCE GROUND SYSTEM SHALL BE EXOTHERMIC WELD AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES.

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IIG Intermountain Infrastructure Group
533 AIRPORT BLVD SUITE 400
BURLINGAME, CA 94010

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SITE ADDRESS:
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ELECTRICAL & GROUNDING NOTES

E0.0

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET

NOTES:

1. GENERATOR

1.1. CLEARANCES

1.1.1. LOCATION OF EXTERIOR TANKS (IFC 5704.2.9.6.1.1. & NFPA TABLE 22.4.1.1A) GENERATOR TANKS WITH A CAPACITY LESS THAN 275 GALLONS MUST BE A MINIMUM OF 5' FROM A PROPERTY LINE, ROW OR STRUCTURE WITH COMBUSTIBLE WALLS. TANKS WITH A CAPACITY OF 276-750 MUST BE 10' FROM PROPERTY LINE.

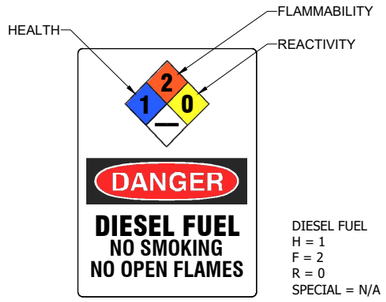
1.2. SIGNAGE

1.2.1. NO SMOKING OR OPEN FLAMES (IFC 5704.2.3.1) THE FOLLOWING SIGNS MADE OF DURABLE MATERIAL ARE REQUIRED ON THE GENERATOR ROOM DOOR. (SEE BELOW)

1.2.2. NFPA HAZMAT PLACARD (IFC 5003.5 & NFPA 704) VISIBLE HAZARD IDENTIFICATION SIGNS AS SPECIFIED BY NFPA 704 SHALL BE PLACED ON GENERATOR ROOM DOOR REFLECTING HIGHEST HAZARD WITHIN THE COMPOUND (SEE BELOW).

1.2.3. FILLING INSTRUCTIONS (IFC 5704.2.9.7.6.1) A PERMANENT SIGN SHALL BE PROVIDED AT THE FILL POINT FOR THE TANK, DOCUMENTING THE FILLING PROCEDURE AND TANK CALIBRATION CHART.

1.2.4. EMERGENCY SHUT DOWN PROCEDURES (NFPA 37.10.2.1) PROVIDE CLEAR EMERGENCY SHUTDOWN PROCEDURES, FOR SAFELY DISABLING THE GENERATOR



DIESEL FUEL
H = 1
F = 2
R = 0
SPECIAL = N/A

1.3. TANK VENTILATION (IFC 5704.2.9.7.2 & IFC 5704.2.7.3. & NFPA 30) STORAGE TANKS MUST BE EQUIPPED WITH NORMAL **AND** EMERGENCY VENTING. NORMAL TANK VENT PIPES MUST EXIT STRUCTURE & SHALL BE NO SHORTER THAN 12 FEET ABOVE FINISHED GROUND. VAPORS SHALL BE DISCHARGED AWAY FROM EAVES OR OBSTRUCTIONS. EMERGENCY VENT PIPES MUST EXIT STRUCTURE & SHALL COMPLY WITH NFPA 30/22.7. & IMC 1305.7.

1.4. HAZARDOUS MATERIALS INVENTORY STATEMENT (IFC APPENDIX H) ALL HAZARDOUS CHEMICALS MUST BE REPORTED TO LOCAL COUNTY FIRE DEPARTMENT PRIOR TO INSPECTION.

1.5. INSPECTIONS: CONTRACTOR SHALL VERIFY WITH LOCAL FIRE DEPARTMENT INSPECTION REQUIREMENTS INCLUDING:

1.5.1. INSPECTION TEAM WITNESS FILLING OF THE DIESEL TANK.

1.5.2. INSPECTION TEAM WITNESS DEMONSTRATION OF FLOAT SWITCH SET POINTS OF 90% & 40%

1.6. DIESEL SUB BASE TANK CONSTRUCTION (U.L. 142)

1.6.1. FUEL CONTAINMENT BASIN: SUB BASE TANK SHALL INCLUDE WELDED STEEL CONTAINMENT BASIN SIZED AT A MINIMUM OF 125% OF THE TANK CAPACITY TO PREVENT ESCAPE OF FUEL IN THE EVENT OF A TANK RUPTURE

1.6.2. LEAK DETECTION SYSTEM: A FUEL CONTAINMENT BASIN LEAK DETECTOR SHALL BE SUPPLIED AND WIRED FOR ALARM CONDITION VISIBLE FROM GENERATOR CONTROL PANEL.

1.6.3. SUB BASE TANK VENTING: NORMAL EMERGENCY VENTING SHALL BE SIZED PER U.L. 142 SPECIFICATION FOR WETTED SURFACE AREA OF TANK.

1.6.4. ENGINE ENVIRONMENTAL SPILL PROTECTION: TOP OF FUEL TANK BASE SHALL INCLUDE SPILL CONTAINMENT TO CATCH ANY EXCESS SPILL OR LEAKS FROM ENGINE AND COOLING SYSTEM. THIS SHALL BE SIZED FOR 125% OF ENGINE FLUIDS AND FUEL SPILL CONTAINMENT.

1.7. **REMOTE MANUAL STOP** (NFPA 110 5.6.5.6 & 5.6.5.6.1)

1.7.1. ALL INSTALLATIONS SHALL BE PROVIDED WITH AT LEAST ONE REMOTE EMERGENCY STOP SWITCH FOR EACH PRIME MOVER.

1.7.2. THE REMOTE EMERGENCY STOP SWITCH SHALL BE LOCATED OUTSIDE THE ROOM HOUSING THE PRIME MOVER OR EXTERIOR ENCLOSURE A MINIMUM OF 20' FROM THE FUEL SOURCE AND SHALL BE PERMITTED TO BE MOUNTED ON THE EXTERIOR OF THE ENCLOSURE.

1.8. VEHICLE PROTECTION

1.8.1. IMPACT PROTECTION IS REQUIRED FOR ETXERIOR GENERATORS WHERE SUBJECT TO VEHICLE IMPACTS WHERE 4" CONCRETE FILLED BOLLARDS ARE USED , THEY SHALL BE SET AT A MINIMUM OF 3 FEET FROM THE GENERATOR . (DFC 312)

1.9. EMERGENCY GENERATOR STATUS PANEL CONTRACTOR IS TO COORDINATE WITH LOCAL FIRE DEPARTMENT WITH GETTING FIELD APPROVAL OF FINAL LOCATION PRIOR TO INSTALLATION.
ALL GENERATORS SHALL BE PROVIDED WITH A REMOTE STATUS PANEL THAT SHOWS THE FOLLOWING:

1.9.1 OPERATING STATUS (ON-OFF) AND MALFUNCTION INDICATION PANEL AS REQUIRED BY NFPA 110

1.9.2 INDICATION OF TRANSFER SWITCH POSITION (NORMAL-EMERGENCY)

1.9.3 INDICATION THAT GENERATOR IS IN AUTOMATIC MODE

1.9.4 MAIN FUEL OIL STORAGE TANK LOW FUEL LEVEL ALARM. THE LOW FUEL SENSING SWITCH SHALL INDICATE WHEN LESS THAN THE MINIMUM FUEL NECESSARY FOR FULL LOAD RUNNING AS PER NFPA 110 SECTION 5.5.2 OR A MINIMUM OF 75% OF THE TANK SIZE

1.10. LOAD DURATION CALCULATIONS

1.10.1 FUEL TANK SIZE (357.9) GALLONS.

1.10.2 FUEL FILL ALARM @ 90% = 322.11 GALLONS

1.10.3 FUEL CONSUMPTION = 10 GAL/HR @ 100% LOAD W/ FAN PER MANUFACTURE CUT SHEET

1.10.4 (10 GAL/HR X 2HRs X 133% = 26.6 GALLONS) TANK PROVIDED 357.9 GALLON / 10 GPH = 35.79 HR RUNTIME

1.11. FUEL OIL PIPING AND STORAGE

THE GENERATOR TANK MAXIMUM STATIC HEAD PRESSURE AT 5'-0" FUEL FILL IS 2.2 PSI. THE GENERATOR TANK MAXIMUM STATIC HEAD PRESSURE CALCULATION AT 12'-0" VENT PIPE IS 5.2 PSI. (2.31 FT OF HEAD EQUALS 1 PSI (POUND PER SQUARE INCH) OF PRESSURE).

5'-0" HEAD AT FUEL FILL (5/2.31 2.2PSI)

12'-0" HEAD AT VENT PIPE (12/2.31 = 5.2PSI)

THE CURRENT DESIGN DOES NOT EXCEED THE MAXIMUM 10PSI PER IMC. 1305.7

1.12. LOCATION OF EXHAUST OUTLETS

THE TERMINATION POINT OF EXHAUST OUTLETS AND DUCTS DISCHARGING TO THE OUTDOORS SHALL BE LOCATED WITH THE FOLLOWING MINIMUM DISTANCES:

1.12.1 FOR DUCTS CONVEYING EXPLOSIVE OR FLAMMABLE VAPORS, FUMES OR DUSTS: 30 FEET (9144 MM) FROM PROPERTY LINES; 10 FEET (3048 MM) FROM OPERABLE OPENINGS INTO BUILDINGS; 6 FEET (1829 MM) FROM EXTERIOR WALLS AND ROOFS; 30 FEET (9144 MM) FROM COMBUSTIBLE WALLS AND OPERABLE OPENINGS INTO BUILDINGS WHICH ARE IN THE DIRECTION OF EXHAUST DISCHARGE; 10 FEET (3048 MM) ABOVE ADJOINING GRADE.

1.12.2 FOR OTHER PRODUCT-CONVEYING OUTLETS: 10 FEET (3048 MM) FROM THE PROPERTY LINES; 3 FEET (914 MM) FROM EXTERIOR WALLS AND ROOFS; 10 FEET (3048 MM) FROM OPERABLE OPENINGS INTO BUILDINGS; 10 FEET (3048 MM) ABOVE ADJOINING GRADE.

1.12.3 FOR ALL ENVIRONMENTAL AIR EXHAUST: 3 FEET (914 MM) FROM PROPERTY LINES; 3 FEET (914 MM) FROM OPERABLE OPENINGS INTO BUILDINGS FOR ALL OCCUPANCIES OTHER THAN GROUP U, AND 10 FEET (3048 MM) FROM MECHANICAL AIR INTAKES. SUCH EXHAUST SHALL NOT BE CONSIDERED HAZARDOUS OR NOXIOUS.

1.12.4 EXHAUST OUTLETS SERVING STRUCTURES IN FLOOD HAZARD AREAS SHALL BE INSTALLED AT OR ABOVE THE ELEVATION REQUIRED BY SECTION 1612 OF THE INTERNATIONAL BUILDING CODE FOR UTILITIES AND ATTENDANT EQUIPMENT.

1.13. PERMIT & INSPECTION NOTES

1.13.1 CONTRACTOR SHALL PROVIDE ANY INSPECTIONS REQUIRED BY LOCAL JURISDICTION PRIOR TO FUELING THE GENERATOR.

1.13.2 LEGALLY REQUIRED EMERGENCY OR STANDBY GENERATORS SHALL BE ACCEPTANCE TESTED IN ACCORDANCE WITH NFPA 110. DOCUMENTATION SHALL BE PROVIDED BY CONTRACTOR TO THE LOCAL JURISDICTION OUTLINING THE NFPA 110 ACCEPTANCE TEST CONDUCTED AND RESULTS SHOWING CONFORMITY WITH NFPA 110 ACCEPTANCE TESTING REQUIREMENTS.

1.13.3 CONTRACTOR SHALL INQUIRE WITH LOCAL JURISDICTION FOR ANY ADDITIONAL ANNUAL PERMITS RELATING TO GENERATORS OR COMBUSTIBLE STORAGE.

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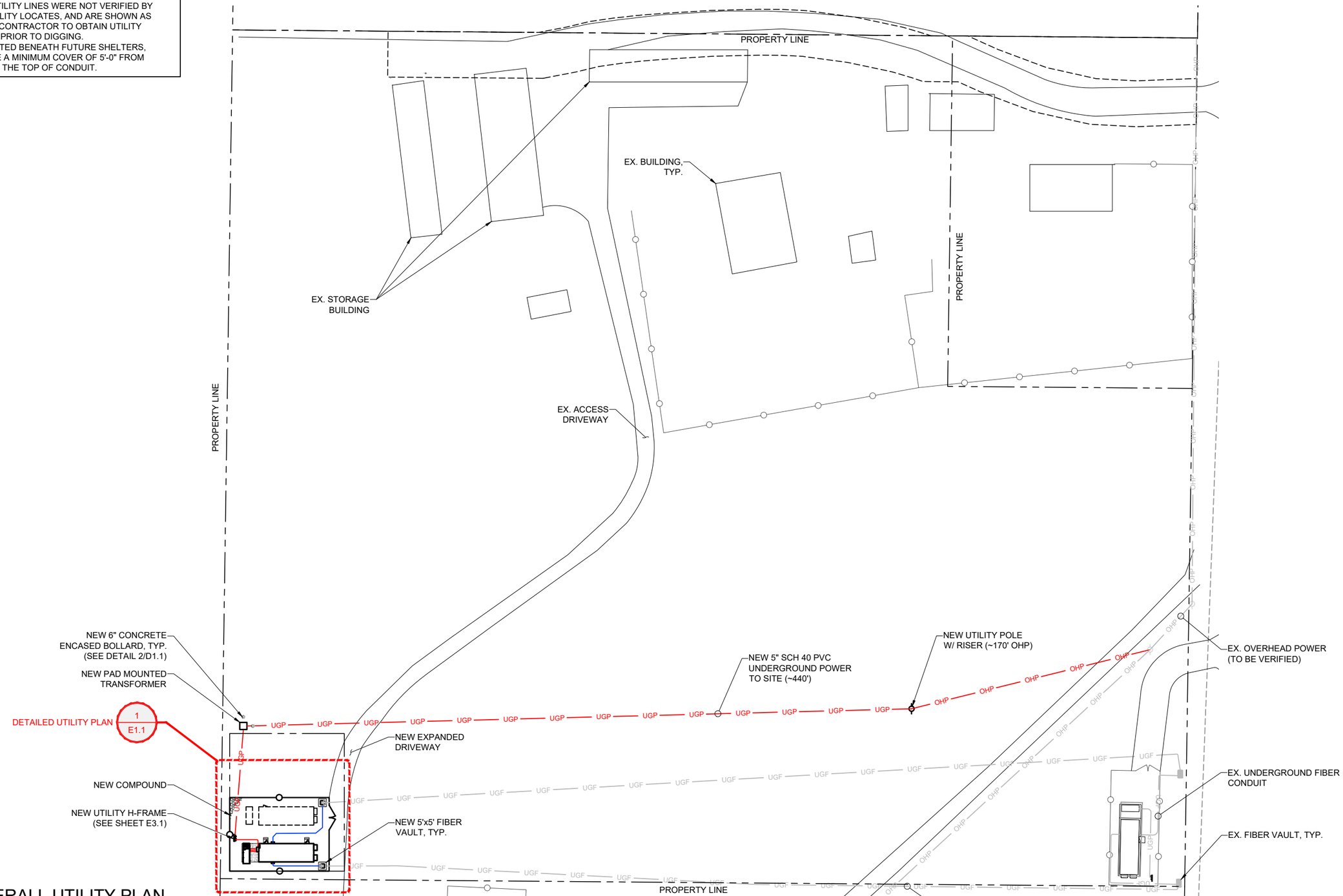
GENERATOR NOTES

EO.1

SCALE SET FOR 24"X36" SHEET
USE 1/2 SCALE FOR 11"X17" SHEET

NOTES:

1. ALL NEW UNDERGROUND CONDUIT TO BE SCHEDULE 40 PVC.
2. EXISTING BURIED UTILITY LINES WERE NOT VERIFIED BY MEANS OF GPR / UTILITY LOCATES, AND ARE SHOWN AS ASSUMED ROUTES. CONTRACTOR TO OBTAIN UTILITY LOCATES / CALL 811 PRIOR TO DIGGING.
3. FOR CONDUITS ROUTED BENEATH FUTURE SHELTERS, TRENCH TO ENSURE A MINIMUM COVER OF 5'-0" FROM FINISHED GRADE TO THE TOP OF CONDUIT.



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1 OVERALL UTILITY PLAN
SCALE: 1/32" = 1'-0"

0' 16' 32' 64'
Scale: 1/32" = 1'-0"

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OVERALL UTILITY PLAN

E1.0

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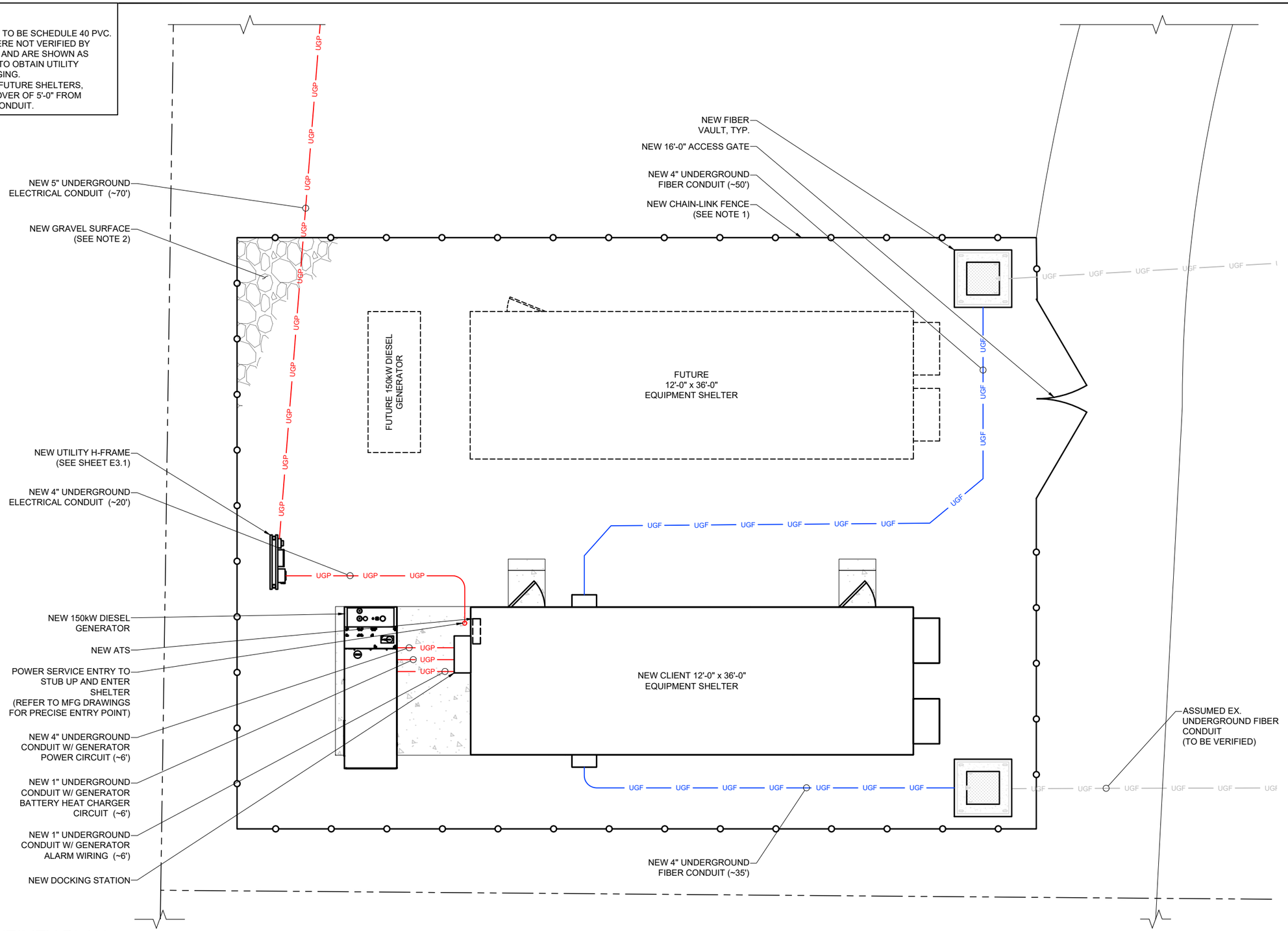

1 DETAILED UTILITY PLAN

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

0' 2' 4' 8'

Scale: 1/4" = 1'-0"

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DETAILED UTILITY PLAN

E1.1

SCALE SET FOR 24"x36" SHEET
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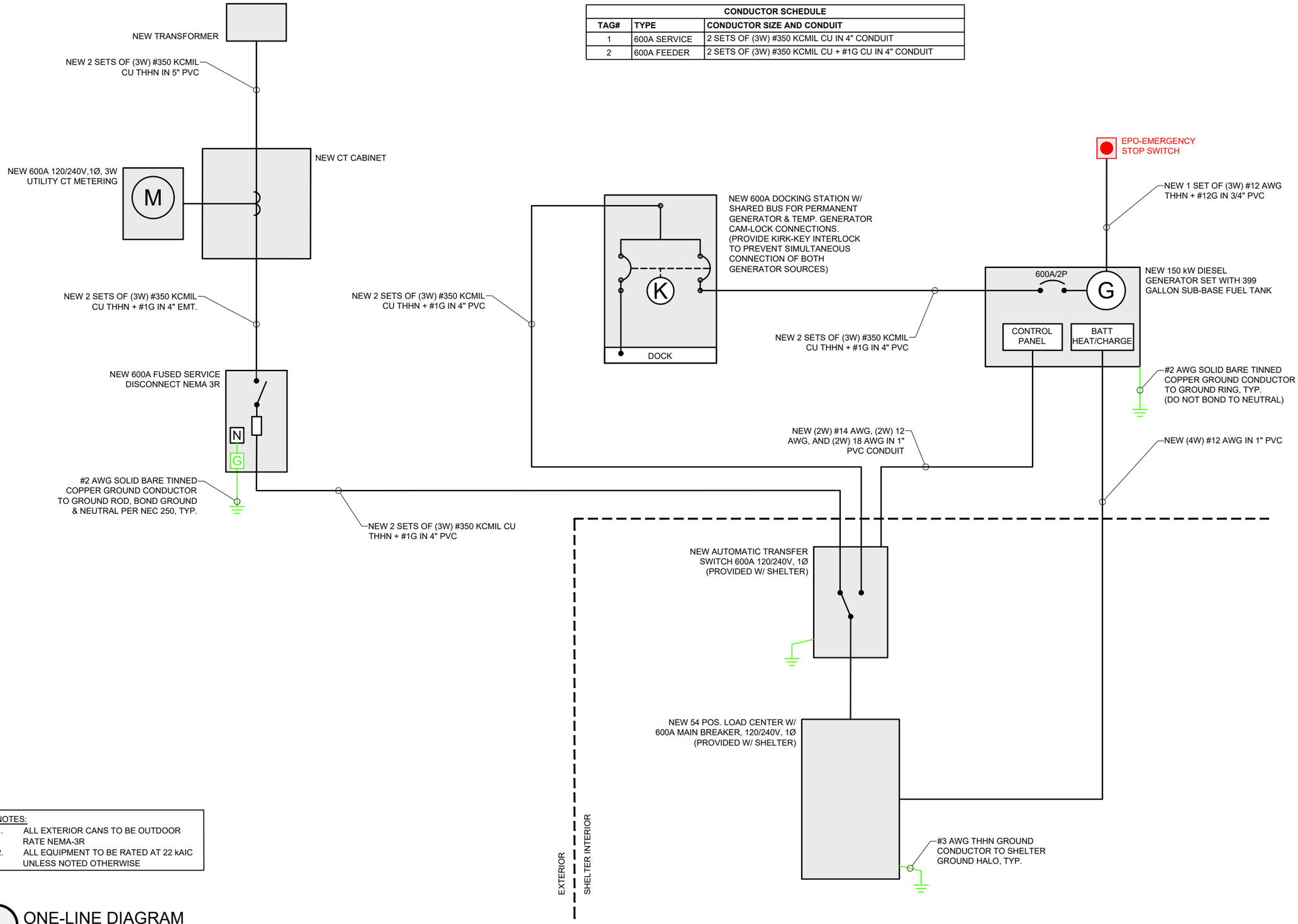
CONDUCTOR SCHEDULE		
TAG#	TYPE	CONDUCTOR SIZE AND CONDUIT
1	600A SERVICE	2 SETS OF (3W) #350 KCMIL CU IN 4" CONDUIT
2	600A FEEDER	2 SETS OF (3W) #350 KCMIL CU + #1G CU IN 4" CONDUIT



NOTES:
1. ALL EXTERIOR CANS TO BE OUTDOOR RATE NEMA-3R
2. ALL EQUIPMENT TO BE RATED AT 22 kAIC UNLESS NOTED OTHERWISE

1 ONE-LINE DIAGRAM
SCALE: N.T.S

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ELECTRICAL ONE-LINE DIAGRAM

E2.1

SCALE SET FOR 24"x36" SHEET
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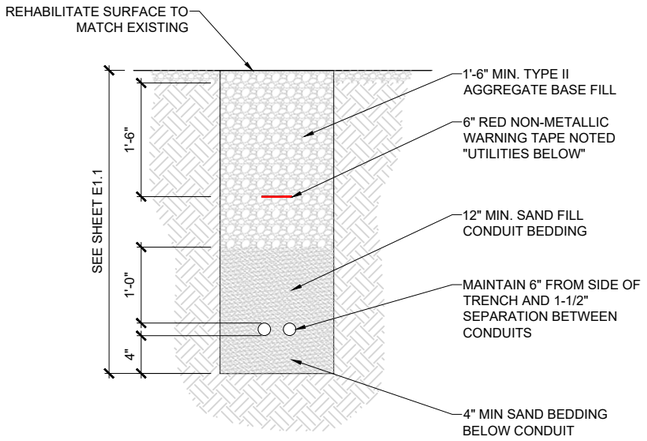
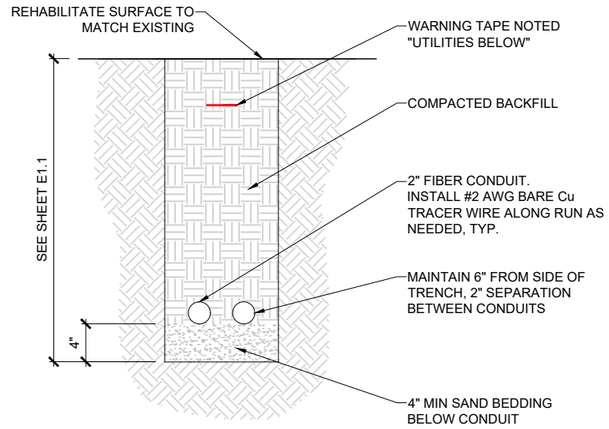


ELECTRIC TRENCH NOTES:

1. COMPACT TYPE II TO 95% STANDARD PROCTOR @ 2% MOISTURE.
2. COMPACT SAND TO 90% STANDARD PROCTOR @ 2% MOISTURE.
3. COORDINATE TRENCH INSPECTIONS WITH UTILITY REPRESENTATIVES AND JURISDICTIONAL INSPECTORS.
4. VERIFY JOINT TRENCH USE RESTRICTIONS AND REQUIREMENTS PRIOR TO PLACING UTILITY. MAINTAIN 12" RADIAL SEPARATION FROM WATER AND TELECOM.
5. VERIFY MOST RECENT STANDARDS AND SPECIFICATIONS WITH UTILITY PROVIDER.
6. FOR CONDUITS ROUTED BENEATH FUTURE SHELTERS, TRENCH TO ENSURE A MINIMUM COVER OF 5'-0" FROM FINISHED GRADE TO THE TOP OF CONDUIT.

1 ELECTRICAL SERVICE TRENCH

SCALE: N.T.S



TRENCH NOTES:

1. COMPACT TYPE II TO 95% STANDARD PROCTOR @ 2% MOISTURE.
2. COMPACT SAND TO 90% STANDARD PROCTOR @ 2% MOISTURE.
3. COORDINATE TRENCH INSPECTIONS WITH UTILITY REPRESENTATIVES AND JURISDICTIONAL INSPECTORS.
4. VERIFY JOINT TRENCH USE RESTRICTIONS AND REQUIREMENTS PRIOR TO PLACING UTILITY. MAINTAIN 12" RADIAL SEPARATION FROM WATER AND TELECOM.
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2 FIBER SERVICE TRENCH

SCALE: N.T.S

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ELECTRICAL DETAILS

E3.2

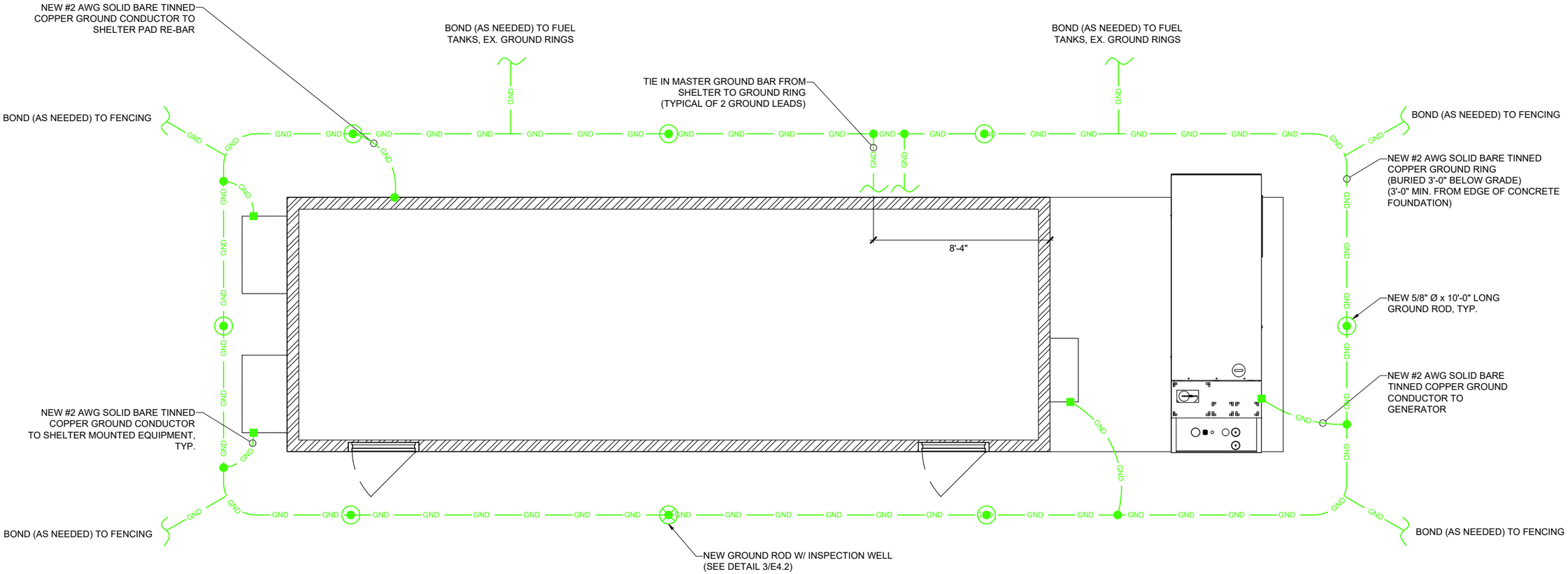
SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET

NOTES:

1. GROUND RODS SHALL BE COPPER-CLAD STEEL, MINIMUM 5/8" DIAMETER BY 10'-0" LENGTH, INSTALLED VERTICALLY UNLESS SITE-SPECIFIC CONSTRAINTS DICTATE OTHERWISE.
2. GROUND RODS SHALL BE SPACED NO MORE THAN 20 FEET APART, AND SHALL BE BONDED TO THE GROUND RING USING EXOTHERMIC WELDS OR LISTED IRREVERSIBLE COMPRESSION CONNECTORS.
3. THE PERIMETER GROUND RING SHALL BE INSTALLED AT A MINIMUM DEPTH OF 36 INCHES BELOW FINISHED GRADE AND AT LEAST 36 INCHES AWAY FROM THE BUILDING FOUNDATION.
4. BOND ALL METALLIC STRUCTURAL AND NON-STRUCTURAL COMPONENTS INCLUDING HVAC UNITS, JUNCTION BOXES, ENTRY PORTS, AND METALLIC CONDUIT SLEEVES DIRECTLY TO THE PERIMETER GROUND RING.
5. PROVIDE 2X MIN. BONDS TO EXTERNAL SYSTEMS SUCH AS FUEL TANKS, GENERATORS, PERIMETER FENCING, AND EXISTING GROUND RINGS IN ACCORDANCE WITH THEIR RESPECTIVE R56 GROUNDING DETAILS.
6. AT LEAST ONE GROUND ROD SHALL BE EQUIPPED WITH A TEST WELL FOR INSPECTION AND GROUND RESISTANCE TESTING PURPOSES.
7. TEST ELECTRODE SYSTEM RESISTANCE TO ENSURE ≤ 5 OHMS.
8. NEW FENCE POST(S) TO BE GROUNDED PER DETAILS 1 & 2/E4.4

GROUNDING SYMBOLS:

- EXOTHERMIC
- MECHANICAL
- COMPRESSION
- GROUND ROD W/ INSPECTION WELL
- GROUND ROD



1 TYPICAL SHELTER GROUNDING DETAIL
SCALE: N.T.S.

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GROUNDING PLAN

E4.1

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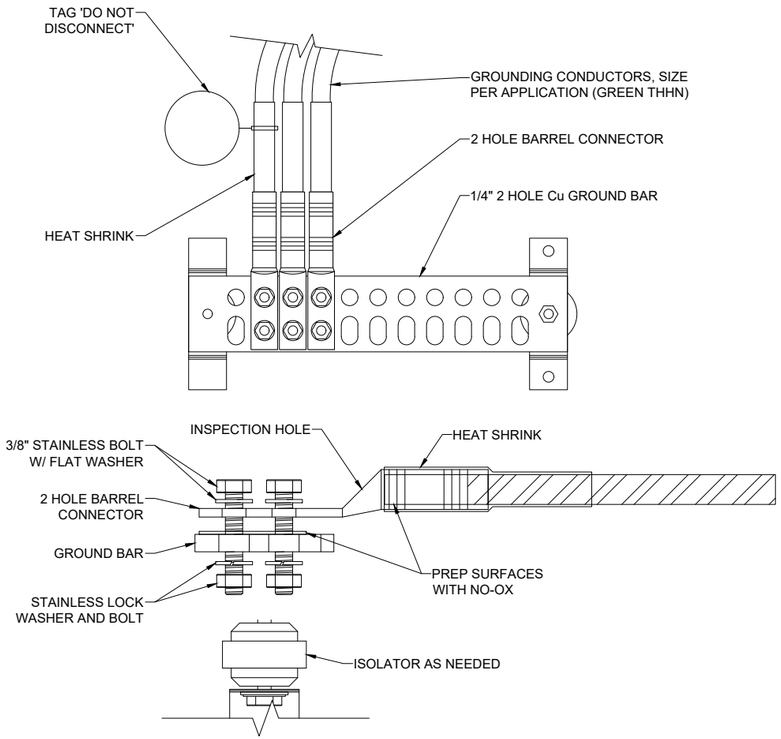
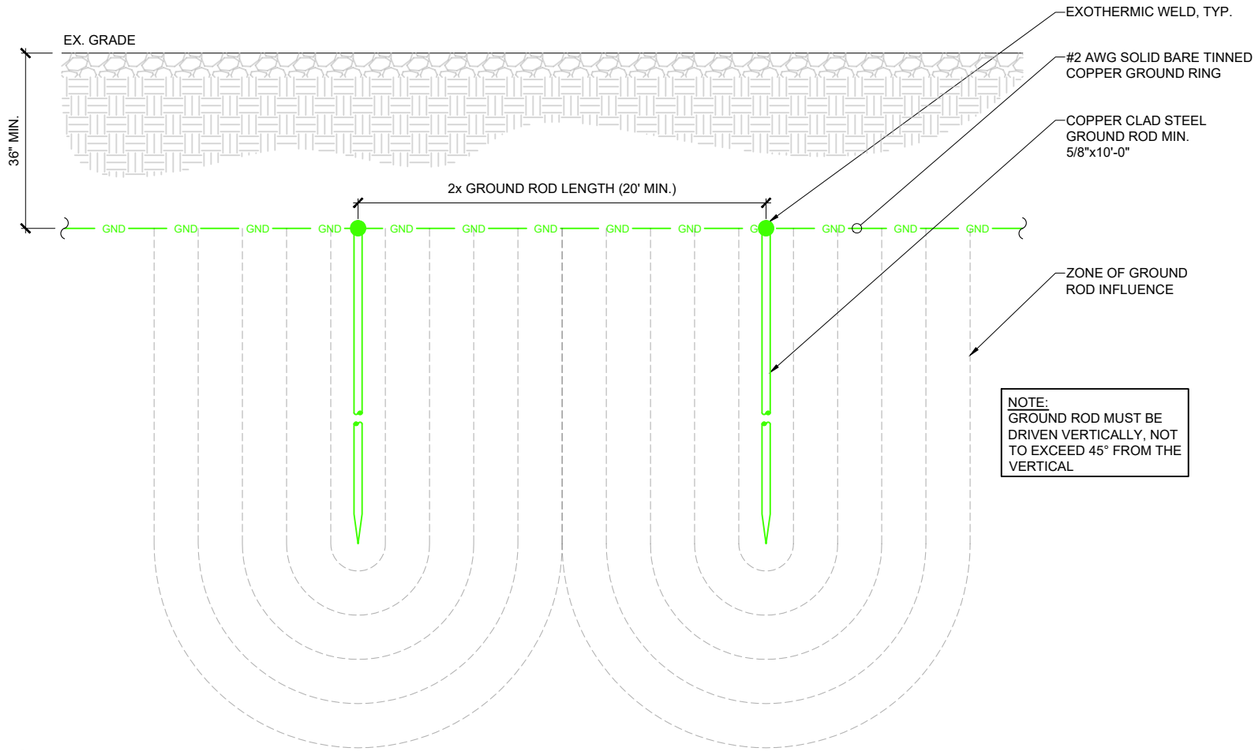
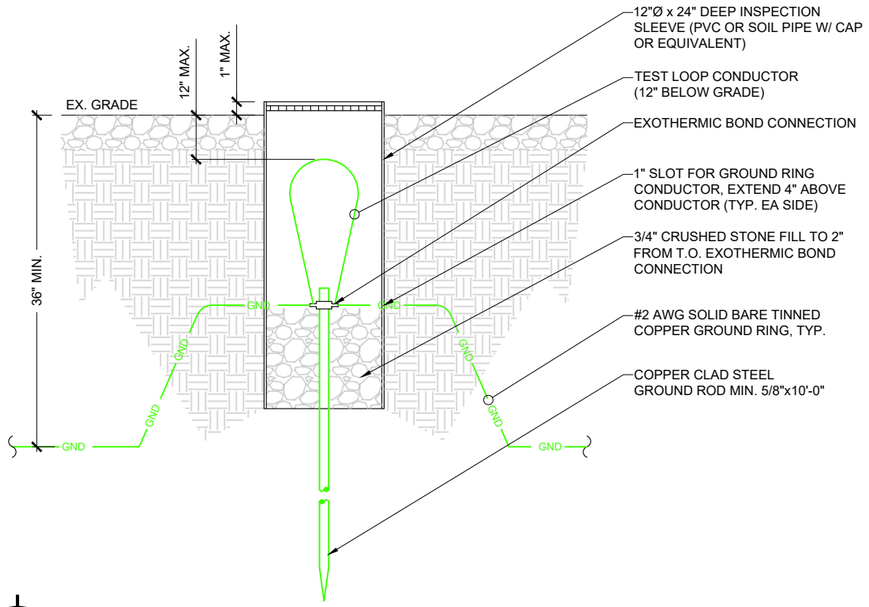


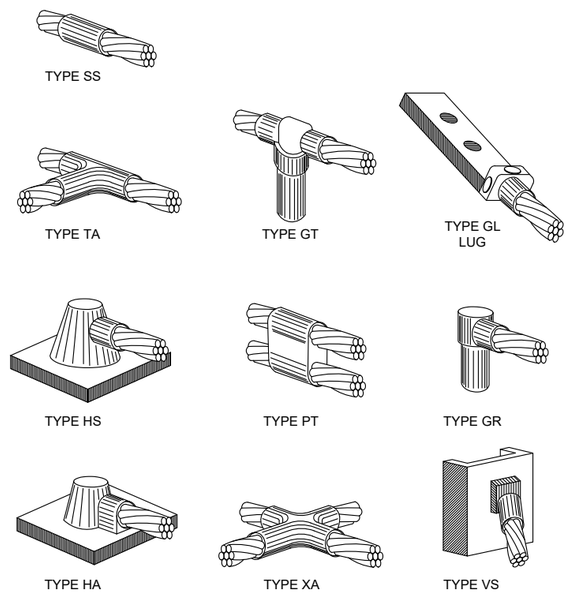
1 2 HOLE GROUND BAR
SCALE: N.T.S



2 GROUND ROD DETAIL
SCALE: N.T.S



3 TEST GROUND ROD WITH INSPECTION SLEEVE
SCALE: N.T.S



4 CADWELD DETAILS
SCALE: N.T.S

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FIBER HUT

SET ISSUE:

NO	DESC	DATE:
0	CDs	9/29/2025

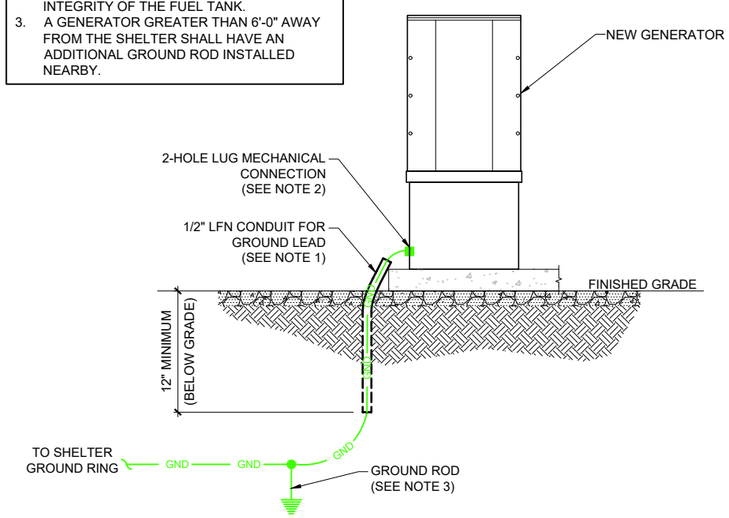
GROUNDING DETAILS

E4.2

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET

NOTES:

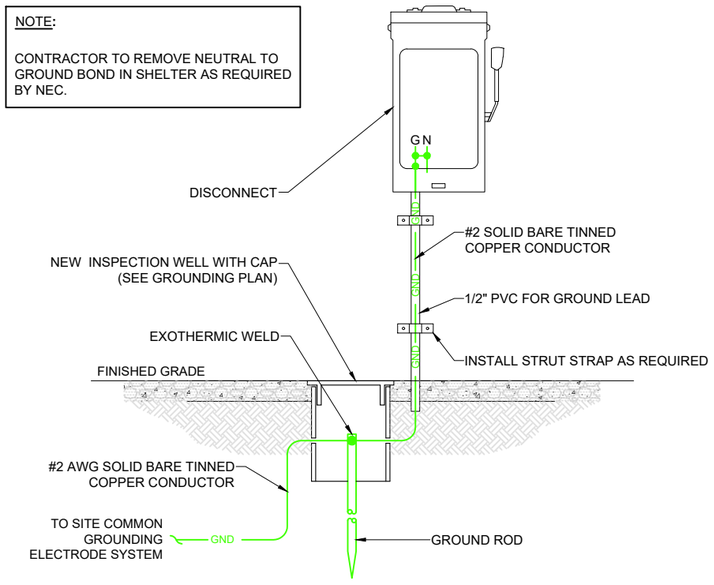
1. LFN CONDUIT SHALL BE PROPERLY CAPPED AND SEALED AT ENDS
2. CONTRACTOR SHALL NOT DAMAGE THE INTEGRITY OF THE FUEL TANK.
3. A GENERATOR GREATER THAN 6'-0" AWAY FROM THE SHELTER SHALL HAVE AN ADDITIONAL GROUND ROD INSTALLED NEARBY.



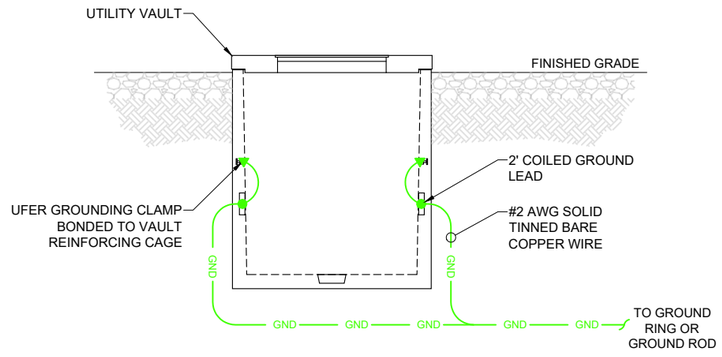
1 GENERATOR GROUNDING DETAIL
SCALE: N.T.S

NOTE:

CONTRACTOR TO REMOVE NEUTRAL TO GROUND BOND IN SHELTER AS REQUIRED BY NEC.



2 SERVICE GROUND DETAIL
SCALE: N.T.S



3 UTILITY VAULT GROUNDING
SCALE: N.T.S

ONTIVITY
LOCAL CONNECTIONS | NATIONAL SOLUTIONS

PROFESSIONAL ENGINEER LICENSED P-22614 STATE OF IDAHO DAYTON HUNTER SAVAGE

09/29/2025

IIG Intermountain Infrastructure Group
533 AIRPORT BLVD SUITE 400
BURLINGAME, CA 94010

SITE NAME:
BLANCHARD

SITE ADDRESS:
32622 STATE HIGHWAY 41,
BLANCHARD, ID 83804

PROJECT:
FIBER HUT

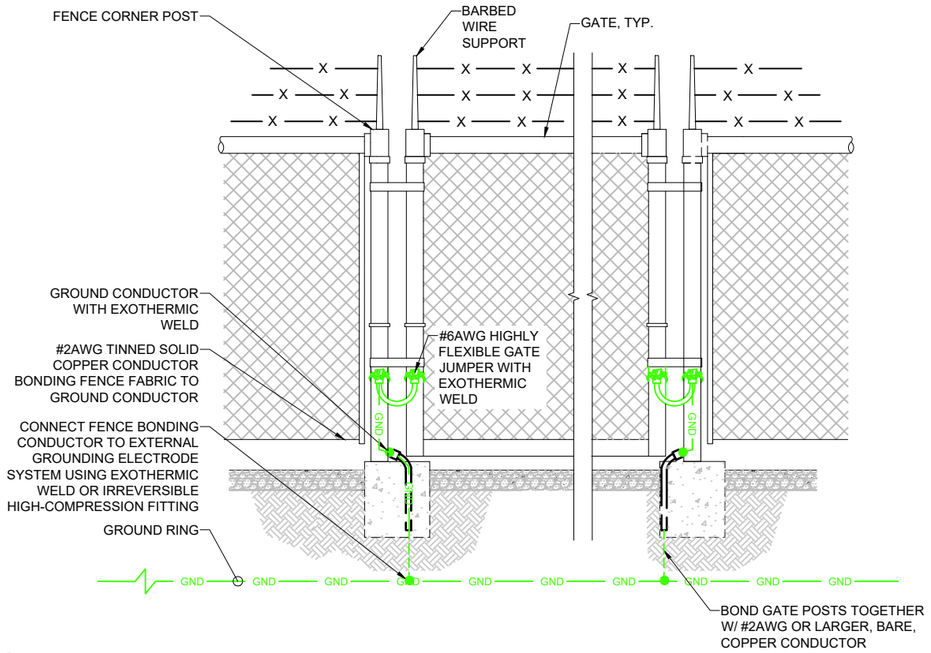
SET ISSUE:

NO	DESC	DATE:
0	CDs	9/29/2025

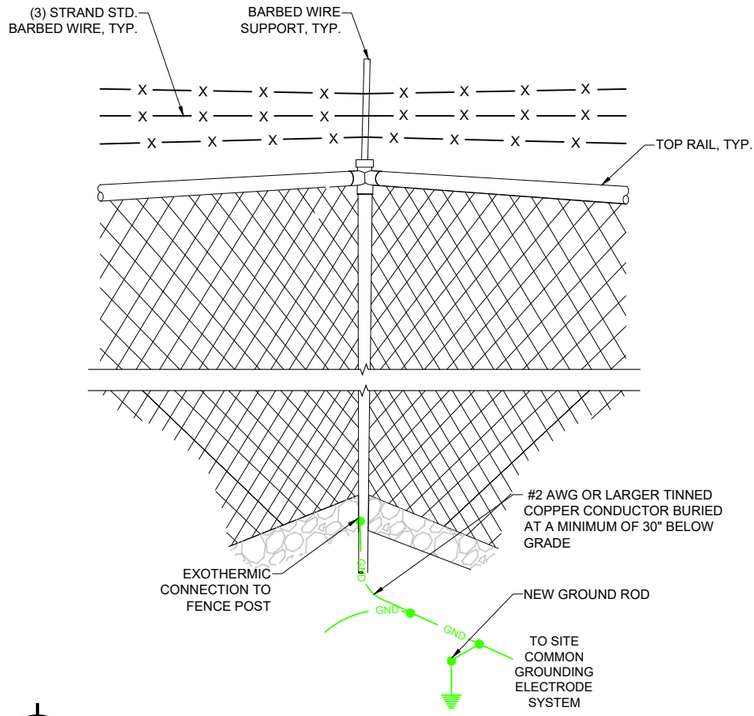
GROUNDING DETAILS

E4.3

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET



1 FENCE & GATE STANDARD GROUNDING DETAIL
SCALE: N.T.S



2 GROUNDING DETAIL AT CORNER POST
SCALE: N.T.S

ONTIVITY
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PROFESSIONAL ENGINEER LICENSED P-22614 STATE OF IDAHO DAYTON HUNTER SAVAGE
09/29/2025

IIG Intermountain Infrastructure Group
533 AIRPORT BLVD SUITE 400
BURLINGAME, CA 94010

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32622 STATE HIGHWAY 41,
BLANCHARD, ID 83804

PROJECT:
FIBER HUT

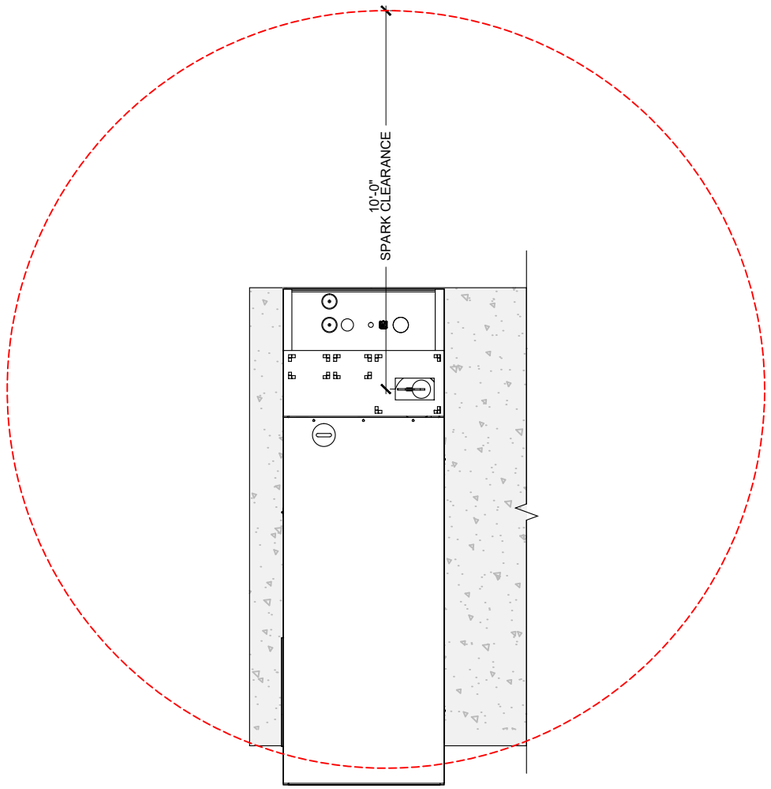
SET ISSUE:

NO	DESC	DATE:
0	CDs	9/29/2025

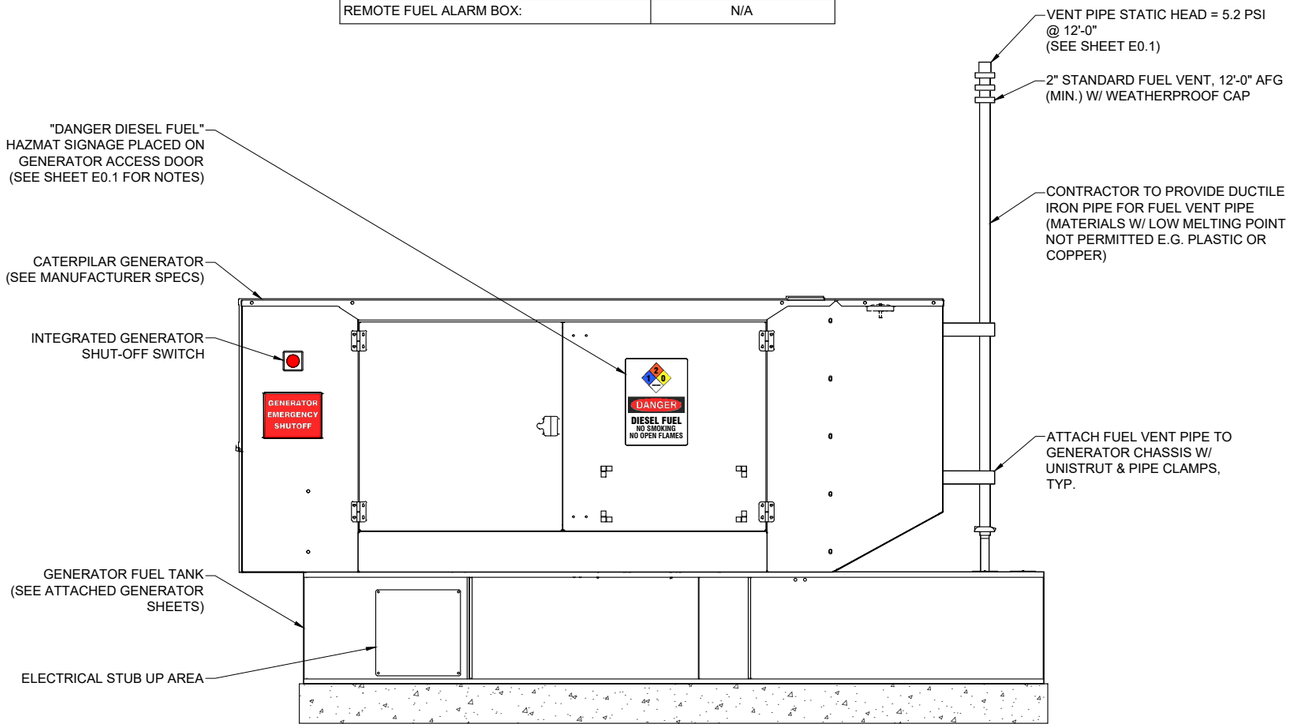
GROUNDING DETAILS

E4.4

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET



MANUFACTURER:	CATERPILLER
MODEL NUMBER:	D150 GC
TYPE:	150kW DIESEL
POWER RATING:	187.5 kVA
BREAKER SIZE:	600A/2P
UL 142 BASE TANK SIZE (USABLE):	357.9 GAL.
REMOTE EMERGENCY STOP SWITCH	YES (SEE MFR. SPEC.)
REMOTE FUEL ALARM BOX:	N/A



1 GENERATOR CLEARANCE PLAN
SCALE: N.T.S

2 GENERATOR ELEVATION
SCALE: N.T.S

ONTIVITY
LOCAL CONNECTIONS | NATIONAL SOLUTIONS

PROFESSIONAL ENGINEER
LICENSED
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STATE OF IDAHO
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GENERATOR DETAILS

E5.1

SCALE SET FOR 24"x36" SHEET
USE 1/2 SCALE FOR 11"x17" SHEET