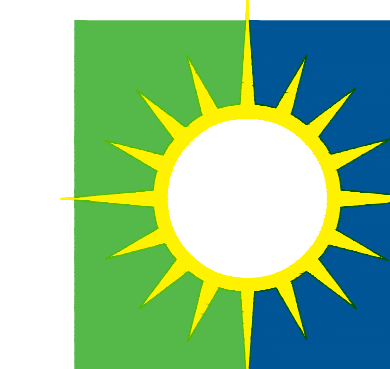


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MOUNTAIN PASS MICROWAVE SITE GENERATOR

Project Number #10.10.0998



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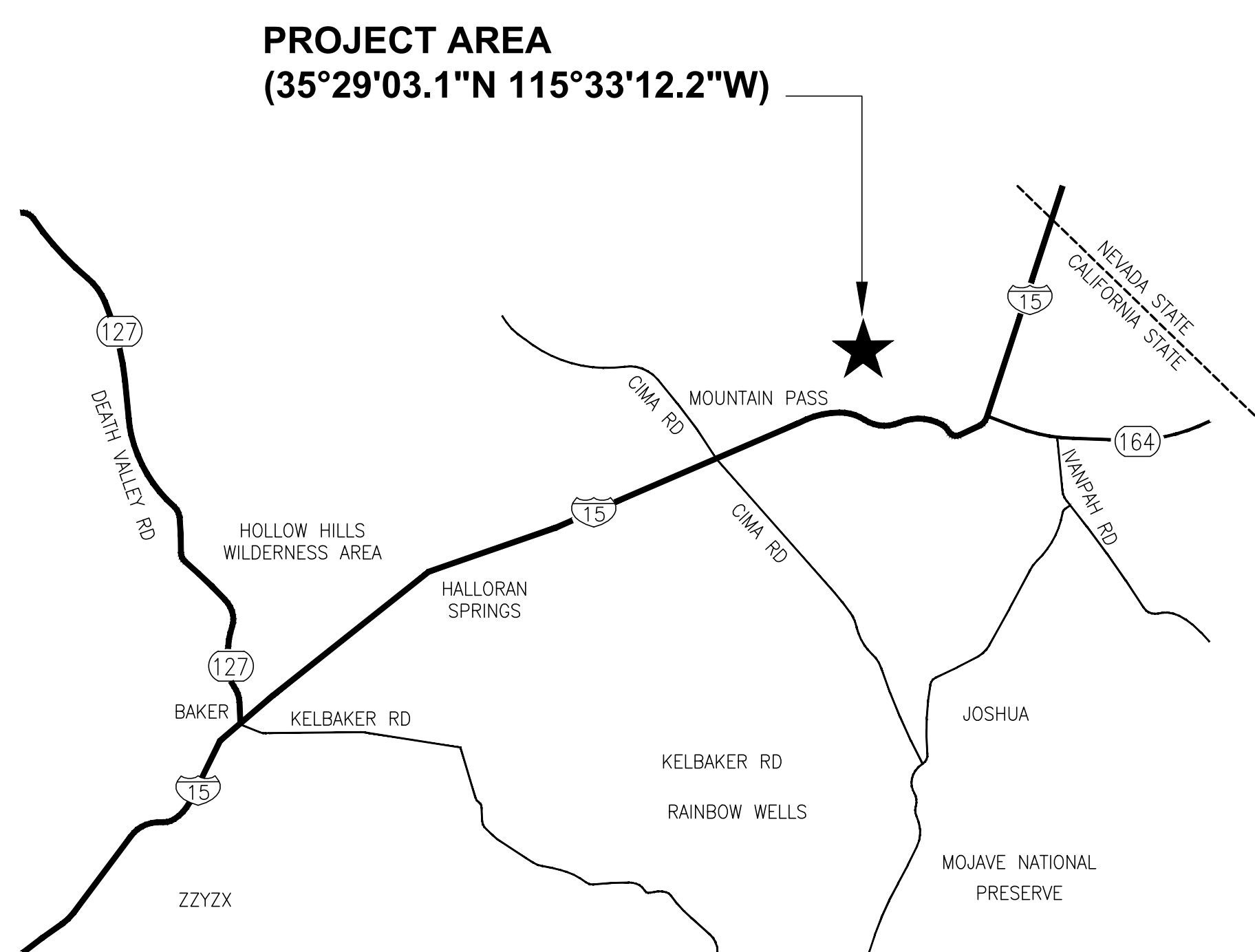
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VICINITY MAP

SCALE: N.T.S.



SITE MAP

SCALE: N.T.S.



GENERAL NOTES

1. ALL WORK, MATERIALS AND METHODS USED SHALL CONFORM TO MEP COMPONENT ANCHORAGE NOTE.
2. ALL WORK SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES.
3. PIPE HANGERS AND SUPPORTS SHALL BE SUPERSTRUT OR EQUAL INCLUDING CHANNEL, HANGERS, STRAPS, ISOLATORS, INSULATION, SHAW PIPE SHIELDS, INC., PORTABLE PIPE HANGERS, INC.
4. PATCH EXISTING AND NEW OPENINGS SO FINISH PROFILES, FIXTURES, ETC. MATCH ADJACENT UNDISTURBED WORK.
5. ALL DIMENSIONS ARE APPROXIMATE. THE DRAWINGS ARE DIAGRAMMATIC TO THE EXTENT THAT ALL FITTINGS, OFFSETS, ETC. ARE NOT SHOWN. THESE DRAWINGS ARE FOR THE GUIDANCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD FOR FABRICATION OF THE PIPING, PENETRATIONS, CONDUIT, WIRING, AND ALL COMPONENTS INTO A COMPLETE AND OPERABLE SYSTEM.
6. ALL WORK MUST BE SCHEDULED WITH THE PROJECT MANAGER TO MINIMIZE DISTURBANCE OF NORMAL ACTIVITIES. COORDINATE WORK WITH PROJECT MANAGER.
7. WHERE DISCREPANCIES OCCUR BETWEEN THE PLANS AND SPECIFICATIONS CONTRACTOR SHALL NOTIFY OWNER OF ANY DISCREPANCIES IN WRITING. ANY ADJUSTMENT OF THE CONTRACT DOCUMENTS WITHOUT A DETERMINATION BY THE OWNER SHALL BE AT THE CONTRACTOR'S OWN RISK AND EXPENSE. THE MOST STRINGENT REQUIREMENTS SHALL APPLY AS DETERMINED BY THE OWNER.
8. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
9. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED IN THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CONSTRUCTION CHANGE DOCUMENT, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER AND DSA BEFORE PROCEEDING WITH THE WORK.
10. PRIOR TO SUBMITTING PROPOSAL, BIDDER SHALL EXAMINE ALL GENERAL CONSTRUCTION DRAWINGS AND SHALL HAVE HAD VISITED THE CONSTRUCTION SITE. HE SHALL BE FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH HE WILL HAVE TO OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION IN BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS PART.
11. THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIR DUE TO THE INSTALLATION OF WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED.
12. ALL TEMPORARY AND REMODELING WORK SHALL BE CONSIDERED A PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.
13. EXAMINE MECHANICAL & STRUCTURAL DRAWINGS AND SPECIFICATIONS TO DETERMINE THE SEQUENCE OF CONSTRUCTION THROUGHOUT THE PROJECT, INCLUDING EXISTING, TEMPORARY, REMODELED AND NEW AREAS.
14. ALL DEVICES & EQUIPMENT ARE NEW, UNLESS OTHERWISE NOTED.
15. CONTRACTOR SHALL PROPERLY DISPOSE OF OR RECYCLE DEMOLISHED MATERIALS.
16. MAINTAIN FIRE RATING OF ALL ASSEMBLIES PENETRATED.
17. SEAL ALL EXTERIOR PENETRATIONS WATER-TIGHT.

SUMMARY OF WORK

1. FURNISH AND INSTALL ELECTRICAL PANELS, MTS, ATS, GENERATOR, GENERATOR ANNUNCIATOR, CAM-LOCK, EMS CONNECTION FROM EQUIPMENT/DEVICES TO EMS PANEL (COORDINATE WITH COUNTY OF SAN BERNARDINO FOR LOCATION AND REQUIREMENT), NEW WORK PER FLOOR PLAN.
2. FURNISH AND INSTALL DIESEL GENERATOR WITH DUAL WALL BELLY TANK AND LEAK SENSOR, CONCRETE CONTAINMENT PAD WITH DRAIN VALVE AND FULL TANK OF FUEL SHALL BE PROVIDED.
3. CONTRACTOR SHALL BE RESPONSIBLE TO APPLY AND OBTAIN APPROVAL FROM AQMD FOR THE NEW GENERATOR.
4. FURNISH AND INSTALL ALL ELECTRICAL CONNECTION, COMPONENTS, DEVICES AND EQUIPMENT PER FLOOR PLAN.
5. FURNISH AND INSTALL POWER CONNECTION TO HVAC UNITS.
6. ALL PERMIT FEES SHALL BE CONTRACTOR'S RESPONSIBILITY.

PROJECT TEAM

ARCHITECTURAL / MECHANICAL ELECTRICAL / PLUMBING	STRUCTURAL ENGINEER
SALAS O'BRIEN 3700 S. SUSAN STREET, STE 150 SANTA ANA, CALIFORNIA 92704 TEL (949) 517-4900 FAX (408) 297-2995	BRANDOW & JOHNSTON 700 S. FLOWER ST #1800 LOS ANGELES, CALIFORNIA 90017 TEL (213) 596-4500 FAX (213) 596-4599

APPLICABLE CODES

- UNLESS OTHERWISE INDICATED OR SPECIFIED, PERFORM THE WORK IN CONFORMANCE WITH THE LATEST EDITIONS OF ALL APPLICABLE REGULATORY REQUIREMENTS, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:
1. CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24): 2019
 2. CALIFORNIA BUILDING CODE (PART 2, TITLE 24): 2018 IBC WITH 2019 CA AMENDMENTS
 3. CALIFORNIA ELECTRICAL CODE (PART 3, TITLE 24): 2017 NEC WITH 2019 CA AMENDMENTS
 4. CALIFORNIA MECHANICAL CODE (PART 4, TITLE 24): 2018 UMC WITH 2019 CA AMENDMENTS
 5. CALIFORNIA PLUMBING CODE (PART 5, TITLE 24) 2018 UPC WITH 2019 CA AMENDMENTS
 6. CALIFORNIA ENERGY CODE (PART 6, TITLE 24): 2019
 7. CALIFORNIA HISTORICAL BUILDING CODE, (PART 8, TITLE 24): 2019
 8. CALIFORNIA FIRE CODE (PART 9, TITLE 24): 2018 IFC WITH CA AMENDMENTS
 9. CALIFORNIA EXISTING BUILDING CODE (PART 10, TITLE 24): 2019 (2018 INTERNATIONAL EXISTING BUILDING CODE WITH CA AMENDMENTS)
 10. CALIFORNIA GREEN BUILDING STANDARDS CODE OR CAL GREEN (PART 11, TITLE 24): 2019
 11. CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24): 2019
 12. PUBLIC SAFETY (CCR TITLE 19), STATE FIRE MARSHAL: CURRENT REVISION
 13. NFPA 72, NATIONAL FIRE ALARM CODE, 2019 EDITION

DRAWING INDEX

SHEET NO.	DESCRIPTION
G-0.0	COVER SHEET
E-0.1	ELECTRICAL GENERAL NOTES, SYMBOLS & ABBREVIATIONS
E-0.2	ELECTRICAL SPECIFICATIONS
ED-1.1	ELECTRICAL SITE PLAN - DEMO
E-1.1	ELECTRICAL SITE PLAN - NEW
E-5.1	ELECTRICAL DETAILS
E-7.1	ELECTRICAL SINGLE LINE DIAGRAM

ISSUE	MARK	DATE	DESCRIPTION
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		09/03/20	100%CD

SOBE PROJECT NO:	1901464
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DRAWN BY:	-
CHECKED BY:	-
APPROVED BY:	AC

SHEET TITLE
COVER SHEET

SCALE: AS NOTED AS NOTED
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G-0.0

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800MHZ GENERATOR PROJECTS – SITES LEASE THRU AMERICAN TOWERS

800MHZ SANDY - NEW GENERATOR (WBSE 10.10.0990)
 800MHZ PADUA - REPLACEMENT GENERATOR (WBSE 10.10.0992)
 800MHZ MOUNTAIN PASS - NEW GENERATOR (WBSE 10.10.0998)



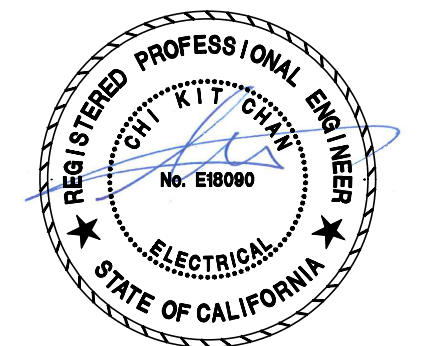
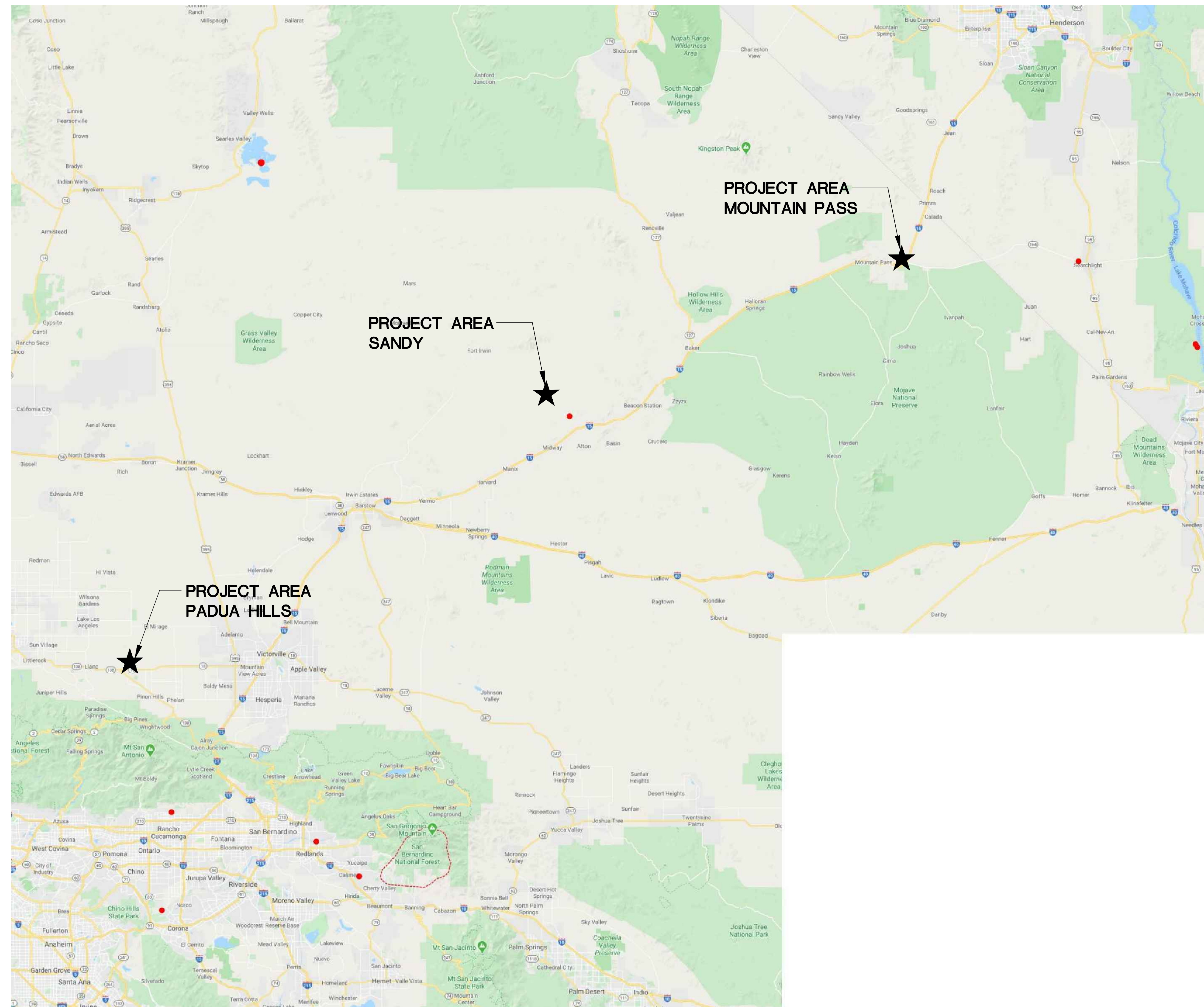
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**800MHZ GENERATOR
 PROJECTS – SITES LEASE
 THRU AMERICAN TOWERS**

SANDY (WBSE 10.10.0990)
 PADUA (WBSE 10.10.0992)
 MOUNTAIN PASS (WBSE 10.10.0998)

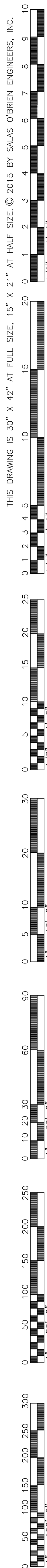
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 CHECKED BY: AC
 APPROVED BY: AC

SHEET TITLE
MASTER COVER SHEET

SCALE: AS NOTED AS NOTED
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ELECTRICAL SPECIFICATIONS



2.1. GENERAL
2.1.1. THE AUTOMATIC TRANSFER SWITCH SHALL BE FURNISHED BY THE MANUFACTURER OF THE ENGINE-GENERATOR SET SO AS TO MAINTAIN SYSTEM COMPATIBILITY AND LOCAL SERVICE RESPONSIBILITY FOR THE COMPLETE EMERGENCY POWER SYSTEM. IT SHALL BE LISTED BY UNDERWRITERS LABORATORY...

2.1.2. RATINGS & PERFORMANCE
2.1.3. CONSTRUCTION
2.1.4. CONTROLS
2.1.5. WARRANTY

3. ALTERNATOR
3.1. THE ALTERNATOR SHALL BE THE VOLTAGE AND PHASE CONFIGURATION AS SPECIFIED IN SECTION 1.1.1.
3.2. THE ALTERNATOR SHALL BE A 4 POLE, REVOLVING FIELD, STATIONARY ARMATURE, SYNCHRONOUS MACHINE...

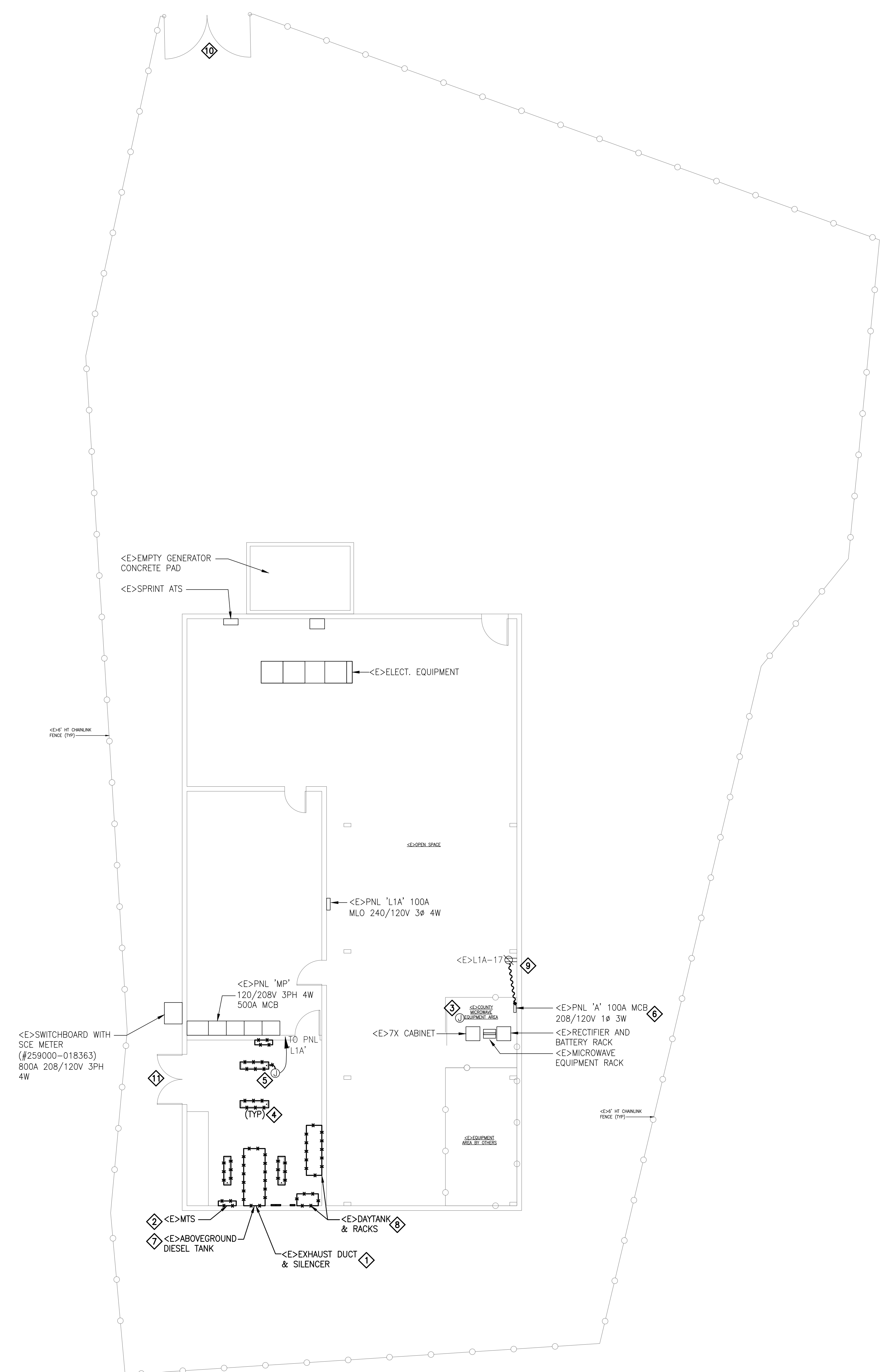
4. CONTROLS
4.1. THE GENERATOR CONTROL SYSTEM SHALL BE A FULLY INTEGRATED MICROPROCESSOR BASED CONTROL SYSTEM FOR STANDBY EMERGENCY ENGINE GENERATORS MEETING ALL REQUIREMENTS OF NFPA 110 LEVEL 1.
4.2. THE GENERATOR CONTROL SYSTEM SHALL BE A FULLY INTEGRATED CONTROL SYSTEM...

5. ENGINE GENERATOR SPECIFICATION (MOUNTAIN PASS)
5.1. GENERAL
5.1.1. PROVIDE A 30 KW STANDBY POWER SYSTEM TO SUPPLY ELECTRICAL POWER AT 120/208 VOLTS, 60 HERTZ, SINGLE PHASE. THE GENERATOR SHALL CONSIST OF A LIQUID COOLED DIESEL ENGINE, A SYNCHRONOUS AC ALTERNATOR, AND SYSTEM CONTROLS WITH ALL NECESSARY ACCESSORIES FOR A COMPLETE OPERATING SYSTEM...

6. LOSS ITEMS
6.1. SUPPLIER TO ITEMIZE LOOSE PARTS THAT REQUIRE SITE MOUNTING AND INSTALLATION. PREFERENCE WILL BE SHOWN FOR GENSETS THAT FACTORY MOUNT ITEMS LIKE MUFFLERS, BATTERY CHARGERS, ETC.
6.2. PAD TYPE VIBRATION ISOLATORS
7. ADDITIONAL PROJECT REQUIREMENTS
7.1. FACTORY TESTING
7.1.1. BEFORE SHIPMENT OF THE EQUIPMENT, THE ENGINE-GENERATOR SET SHALL BE TESTED UNDER RATED LOAD FOR PERFORMANCE AND PROPER FUNCTIONING OF CONTROL AND INTERLOCK CIRCUITS. TESTS SHALL INCLUDE:
7.1.1.1. VERIFY VOLTAGE & FREQUENCY STABILITY.
7.1.1.2. VERIFY TRANSIENT VOLTAGE & FREQUENCY DIP RESPONSE.
7.2. OWNER'S MANUALS
7.2.1. THREE (3) SETS OF OWNER'S MANUALS SPECIFIC TO THE PRODUCT SUPPLIED MUST ACCOMPANY DELIVERY OF EQUIPMENT...

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1 ELECTRICAL SITE PLAN - DEMO
SCALE: 1/4" = 1' - 0"

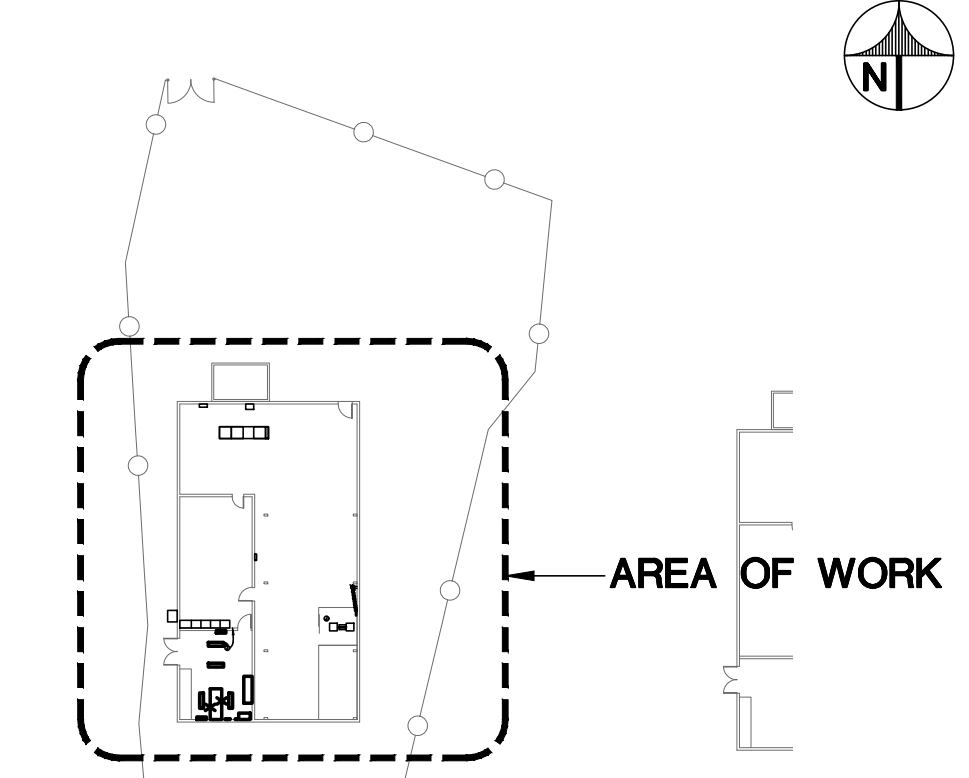
GENERAL SHEET NOTES

- A. COORDINATE WITH COUNTY OF SAN BERNARDINO FOR SEQUENCE OF REMOVAL OF EXISTING GENERATOR/ATS. MOP SHALL BE SUBMITTED AND APPROVED BY COUNTY OF SAN BERNARDINO PRIOR TO ANY DISCONNECTION/DEMOLITION. PROVIDE TEMPORARY GENERATOR, LIGHTING AND HVAC TO DATA ROOM AS REQUIRED BY COUNTY OF SAN BERNARDINO.
- B. ALL SPARE CIRCUIT BREAKERS SHALL BE TAG AND TURN TO 'OFF' POSITION.
- C. CONTRACTOR IS RESPONSIBLE FOR ALL OBTAINING PERMITS, DISPOSAL AND CLEAN UP DURING & AFTER REMOVAL OF GENERATOR, ABOVEGROUND TANK AND FUEL. COORDINATE WITH LOCAL ENVIRONMENT PROTECTION AGENCY FOR EXACT REQUIREMENT.
- D. COORDINATE WITH COUNTY FOR ANY GENERATOR/EQUIPMENT/DEVICES SALVAGE REQUIREMENT. SHIP THE SALVAGED GENERATOR/EQUIPMENT/DEVICES TO COUNTY STORAGE PER COUNTY.
- E. CONTRACTOR IS RESPONSIBLE FOR ALL OBTAINING PERMITS, FEES AND REMOVAL OF ALL DEBRIS/MATERIALS/SOILS PER LOCAL JURISDICTION REQUIREMENT.

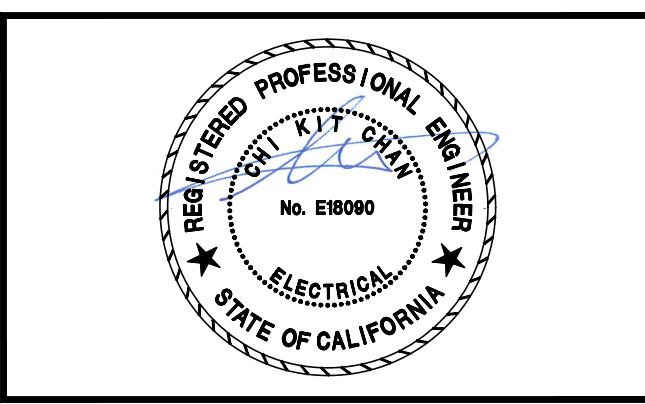
REFERENCE SHEET NOTES

- 1. REMOVE <E>GENERATOR EXHAUST DUCT & SILENCER. REPAIR GROUND FOR PREPARATION OF CONCRETE HOUSEKEEPING PAD.
- 2. REMOVE <E>MTS. REPAIR WALL AS REQUIRED.
- 3. <E>LIGHT FIXTURES AND LIGHT SWITCH TO REMAIN. RECIRCUIT PER NEW WORK PLAN.
- 4. REMOVE EXISTING LIGHT FIXTURES AND ASSOCIATED SUPPORTS/CONDUITS/JUNCTION BOXES.
- 5. KEEP EXISTING LIGHTING CIRCUITS IN PLACE AND REUSE FOR NEW LIGHT FIXTURES. SEE NEW WORK PLAN FOR DETAIL.
- 6. EXISTING ELECTRICAL PANEL TO REMAIN.
- 7. REMOVE <E>ABOVEGROUND DIESEL TANK AND ASSOCIATE STRUCTURAL SUPPORT AND DEVICES. REPAIR GROUND AS REQUIRED.
- 8. REMOVE <E>DAYTANK AND STRUCTURAL RACKS. REPAIR GROUND AS REQUIRED.
- 9. DISCONNECT <E>POWER CONNECTION TO <E>PNL 'A'.
- 10. <E>MAIN GATE ENTRY OF SITE. COORDINATE WITH COUNTY FOR ACCESS.
- 11. <E>DOUBLE DOOR TO GENERATOR ROOM. CONTRACTOR SHALL REMOVE SEAL AND WATERPROOFING FOR GENERATOR ACCESS. REPAIR DOOR AND REAPPLY WATERPROOFING AFTER INSTALLATION.

KEY PLAN SCALE: N.T.S.



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MOUNTAIN PASS MICROWAVE SITE GENERATOR

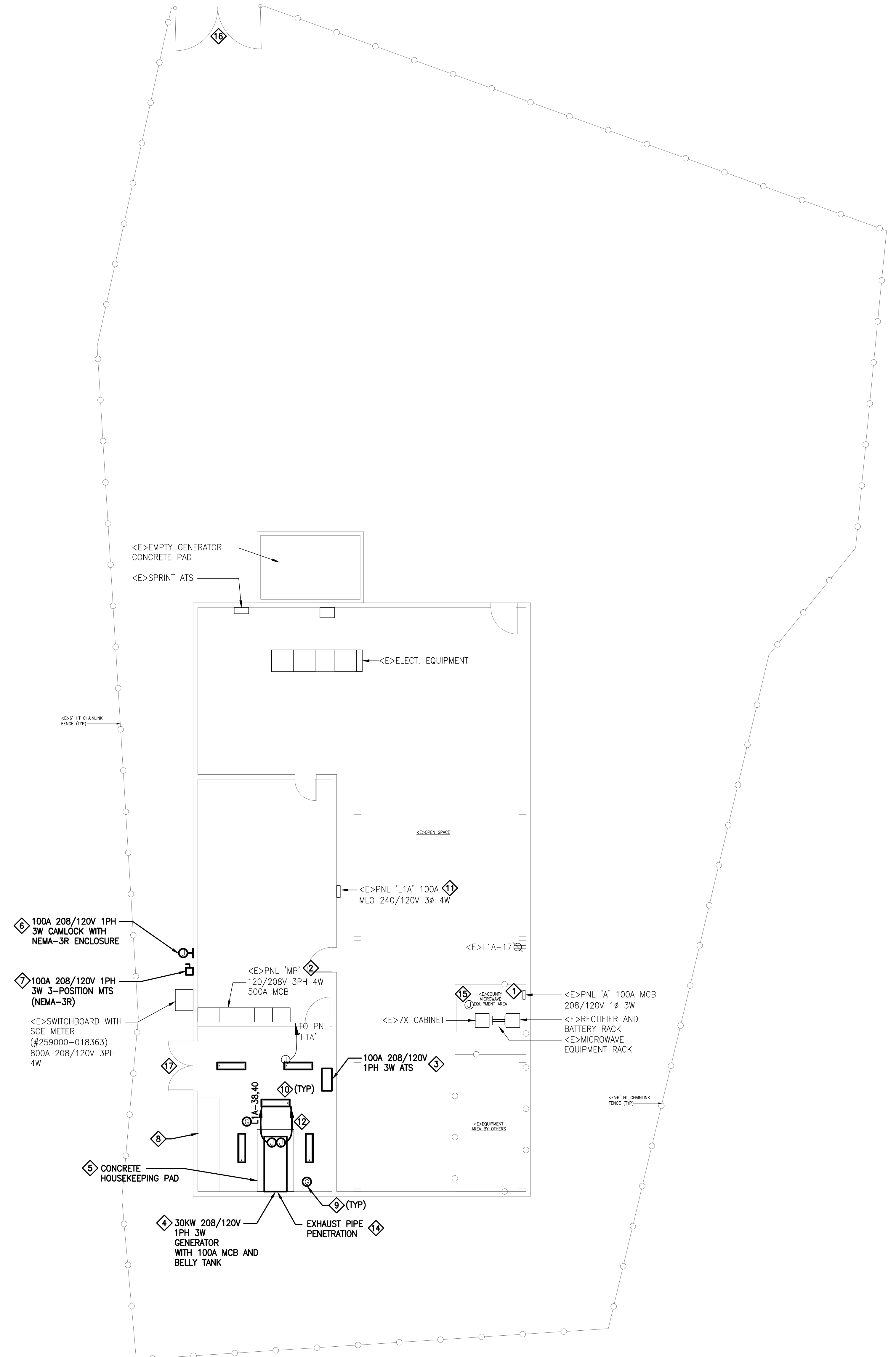
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	09/03/20	100%CD

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CHECKED BY:	-
APPROVED BY:	-

SHEET TITLE
ELECTRICAL SITE PLAN - DEMO
SCALE: AS NOTED
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ED-11

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

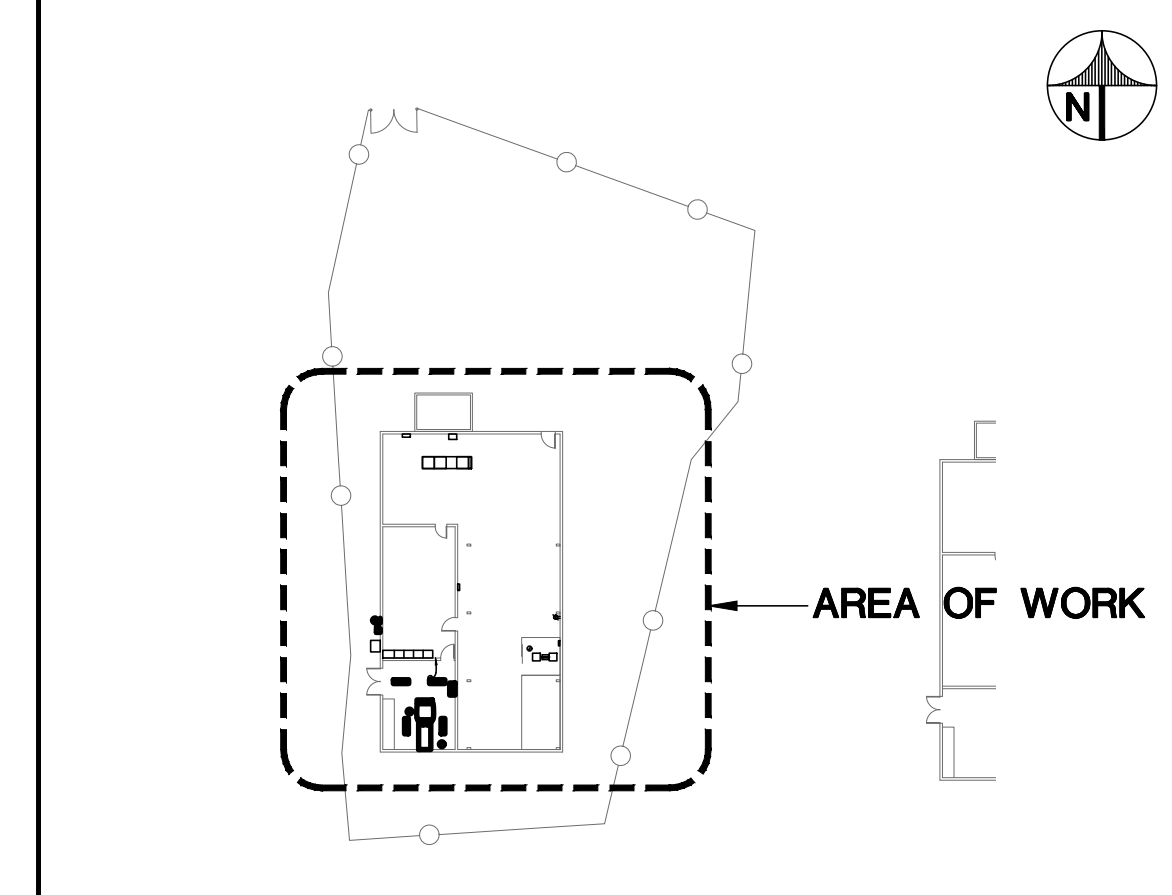
GENERAL SHEET NOTES

- A. NEW GROUND ROD AT GROUND WELL SHALL BE CONNECTED TO EXISTING SITE GROUNDING AND NEW GROUND LOOP UNDER CONCRETE PAD.
- B. CONTRACTOR SHALL PERFORM GROUNDING RESISTANCE TEST PRIOR TO THE CONSTRUCTION AS THE GROUNDING RESISTANCE BASE LINE. CONTRACTOR SHALL PERFORM SECOND GROUNDING RESISTANCE TEST AFTER GROUNDING SYSTEM IS INSTALLED TO CONFIRM THE RESISTANCE IS LESS THAN 5 OHMS. IF IT IS MORE THAN 5 OHMS, CONTRACTOR SHALL PERFORM ADDITIONAL GROUNDING MITIGATION PER BELOW.
- C. IF GROUNDING SYSTEM CANNOT REACH 5 OHMS WITH ADDITIONAL GROUNDING PLATES, FURNISH AND INSTALL LYCONITE II AS BACKFILL TO SURROUND THE XIT SYSTEMS DURING INSTALLATION. IT IS BASED ON NATURAL CLAY FORMED BY VOLCANIC ACTION, SPECIALLY PROCESSED TO BE VERY ELECTRICALLY CONDUCTIVE. LYCONITE II ENHANCES THE PERFORMANCE OF THE GROUNDING SYSTEM. IT IS MIXED WITH WATER (14 GALS/BAG) UNTIL A SLURRY IS FORMED (SIMILAR TO PANCAKE BATTER) AND PUMPED OR Poured AROUND THE ELECTRODE IN THE HOLE.
- D. CONTRACTOR SHALL BE RESPONSIBLE TO SCAN (OR POLE HOLE) UNDERGROUND UTILITIES AND REBAR LOCATION PRIOR TO ANY SAWCUTTING OR TRENCHING.
- E. COORDINATE WITH COUNTY OF SAN BERNARDINO FOR SEQUENCE OF REMOVAL OF EXISTING GENERATOR/ATS. MOP SHALL BE SUBMITTED AND APPROVED BY COUNTY OF SAN BERNARDINO PRIOR TO ANY DISCONNECTION/DEMOLITION. PROVIDE TEMPORARY GENERATOR, LIGHTING AND HVAC TO DATA ROOM AS REQUIRED BY COUNTY OF SAN BERNARDINO.
- F. ALL SPARE CIRCUIT BREAKERS SHALL BE TAG AND TURN TO 'OFF' POSITION.
- G. ALL CEILING HUNG CONDUITS SHALL BE SUPPORTED PER DETAIL AND CODE REQUIREMENT.
- H. CONTRACTOR IS RESPONSIBLE FOR ALL OBTAINING PERMITS, FEES AND REMOVAL OF ALL DEBRIS/MATERIALS/SOILS PER LOCAL JURISDICTION REQUIREMENT.

REFERENCE SHEET NOTES

- 1. <E>PANEL 'A' TO REMAIN. RECONNECT FROM PANEL 'MP' VIA GENERATOR/ATS. SEE SINGLE LINE DIAGRAM FOR DETAIL.
- 2. EXISTING SWITCHBOARD 'MP'. INSTALL CIRCUIT BREAKER PER SINGLE LINE DIAGRAM AND INTERCONNECT WITH ATS. MATCH EXISTING CIRCUIT BREAKER FOR RATING.
- 3. ATS 208/120V 1PH 3W ATS WALL MOUNTED. PROVIDE CONNECTION PER SINGLE LINE DIAGRAM. PROVIDE CONTROL WIRING IN CONDUITS TO GENERATOR FOR ENGINE-START, GENERATOR ANNUNCIATOR AND <E>BMS PANEL. COORDINATE WITH COUNTY OF SAN BERNARDINO.
- 4. 208/120V 1PH 3W DIESEL GENERATOR WITH INTEGRATED CIRCUIT BREAKER AND 300GAL DOUBLE WALL BASE TANK. EXHAUST DUCT SHALL BE INSTALLED PER MECHANICAL DRAWINGS. DUCT PENETRATION SHALL SEE STRUCTURAL PLAN.
- 5. CONCRETE HOUSEKEEPING PAD PER STRUCTURAL DRAWINGS. COORDINATE WITH MANUFACTURER FOR ANCHORAGE LOCATION AND BOLT REQUIREMENT.
- 6. FURNISH AND INSTALL NEMA-3R 100A 208/120V 1PH 3W CAMLOCK WITH WHILE-IN-USE COVER. (MALE: LOAD, FEMALE: NEUTRAL+GROUND) VERIFY WITH COUNTY OF SAN BERNARDINO FOR EXACT LOCATION.
- 7. FURNISH AND INSTALL NEMA-3R MANUAL TRANSFER SWITCH (SOURCE 1 - OFF - SOURCE 2). VERIFY WITH COUNTY OF SAN BERNARDINO FOR EXACT LOCATION.
- 8. CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE FILTERS AT <E>INTAKE. CONTRACTOR SHALL CLEAN THE INTAKE SPACE AND REPAIR/REPLACE INTAKE DOOR. COORDINATE WITH COUNTY OF SAN BERNARDINO FOR ADDITIONAL REQUIREMENT.
- 9. 10'x3/4" COPPER CLAD GROUND ROD FOR GENERATOR. PROVIDE #2/0 BARE COPPER EMBEDDED IN THE CONCRETE AND TIE TO REBAR AT THE ENTIRE PERIMETER OF THE PAD AND BOND TO EXISTING BUILDING UFER GROUND.
- 10. REPLACE ALL LIGHT FIXTURES WITHIN THIS ROOM WITH LED LIGHT FIXTURES (COOPER LIGHTING #4ILED-LD5-7-W-WG-LNV-L840-CD-P11WG-MMS). LIGHT FIXTURES SHALL HAVE INTEGRATED OCCUPANCY SENSOR AND RELAY. CONNECT TO ROOM DIMMER SWITCH. SEE DETAIL ON SHEET ES.1 FOR MOUNTING DETAIL.
- 11. PROVIDE 120V (EACH) POWER SUPPLY TO GENERATOR BATTERY CHARGER AND BLOCK HEATER WITH 3/4" - 3#12 + 1#12 GND. WIRING.
- 12. 3/4" CONDUIT WITH COMMUNICATION WIRING TO ATS FOR ENGINE START. 3/4" CONTACT/RELAY TO COUNTY ISD BMS SYSTEM FOR MONITORING AND REMOTE GENERATOR START. COORDINATE WITH MANUFACTURER FOR EXACT REQUIREMENT.
- 13. NOT USED.
- 14. ENGINE EXHAUST PIPE PENETRATION. MUFFLER SHALL BE MOUNTED AT EXTERIOR OF BUILDING. COORDINATE WITH MANUFACTURER FOR EXACT REQUIREMENT. SEE STRUCTURAL FOR DETAIL. FIELD VERIFY FOR EXACT LOCATION.
- 15. RECONNECT <E>LIGHT FIXTURES TO PANEL 'A'. FURNISH AND INSTALL CONDUITS AND WIRING AS REQUIRED.
- 16. <E>MAIN GATE ENTRY OF SITE. COORDINATE WITH COUNTY FOR ACCESS.
- 17. <E>DOUBLE DOOR TO GENERATOR ROOM. CONTRACTOR SHALL REPAIR DOOR AND REAPPLY WATERPROOFING AFTER INSTALLATION.

KEY PLAN




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MOUNTAIN PASS MICROWAVE SITE GENERATOR

ISSUE	MARK	DATE	DESCRIPTION
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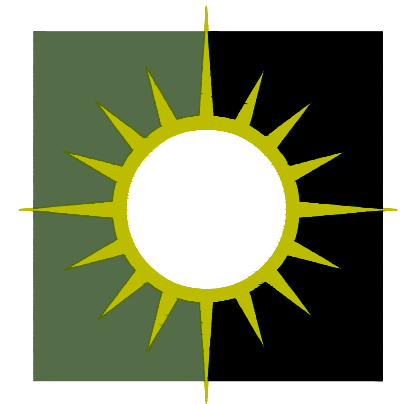
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SHEET TITLE
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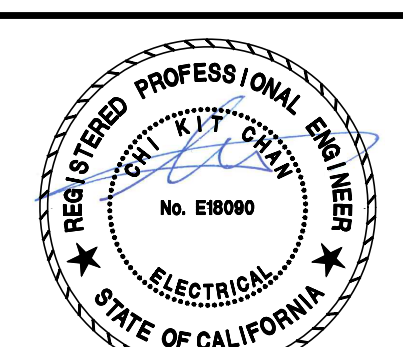
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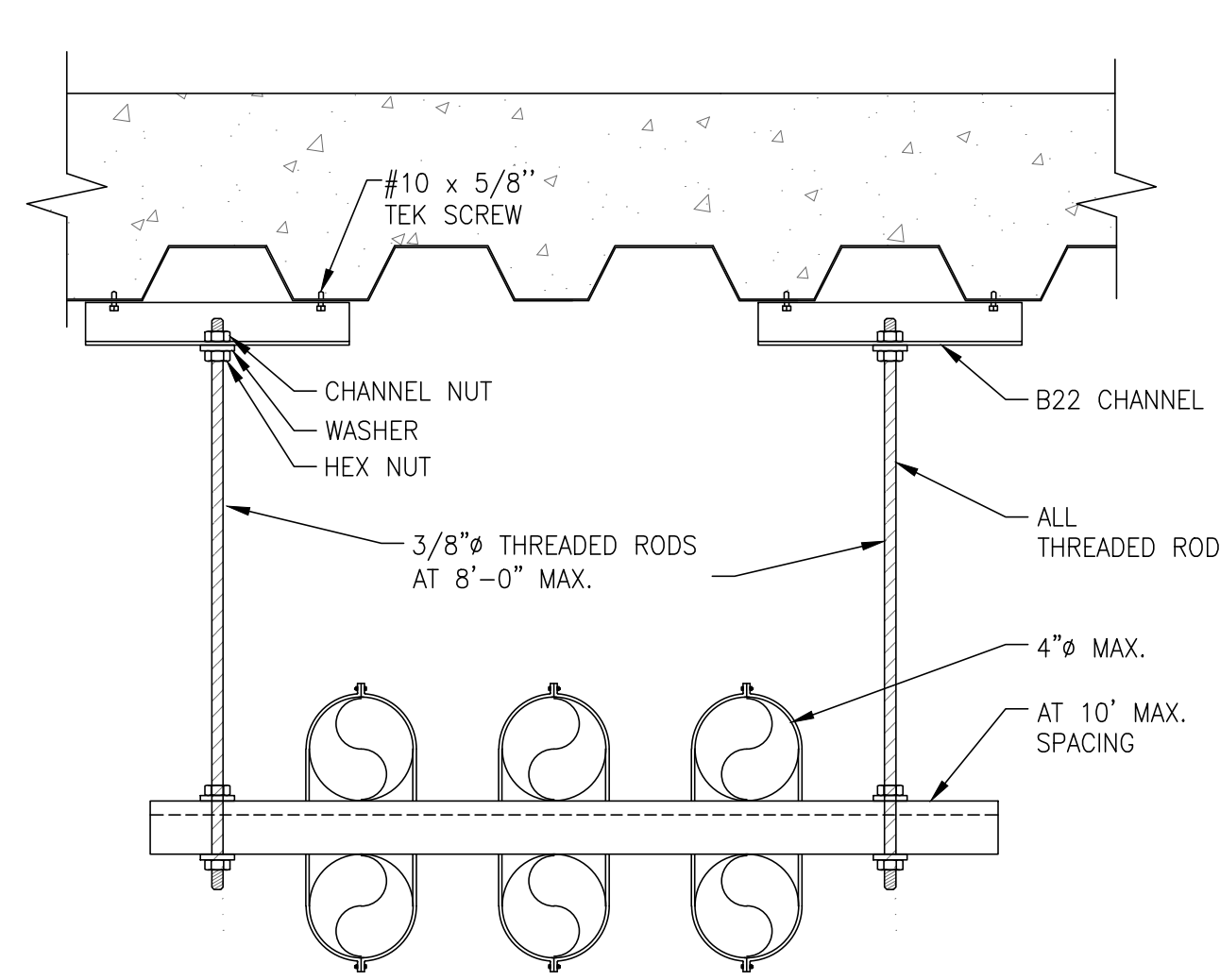
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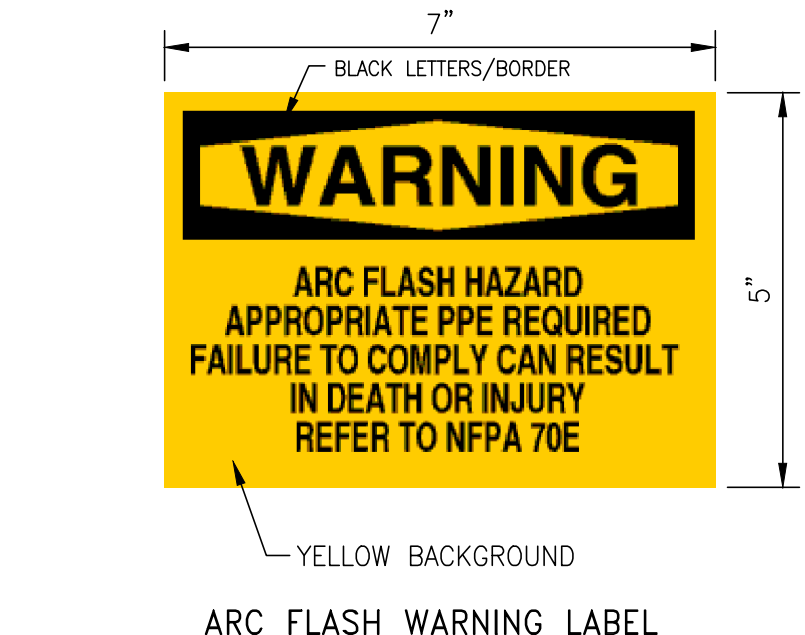
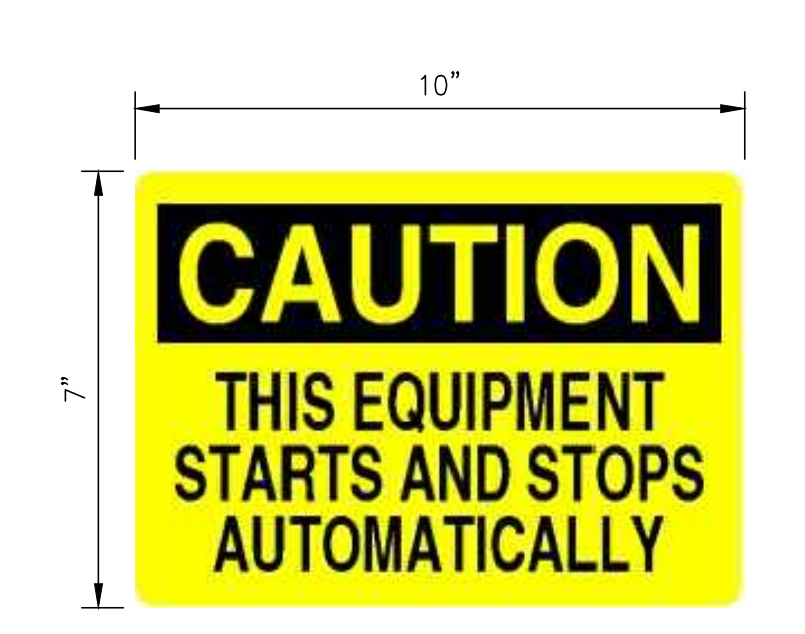
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SHEET TITLE
ELECTRICAL DETAILS
 SCALE: AS NOTED
 THIS DRAWING IS 30" X 42" AT FULL SIZE

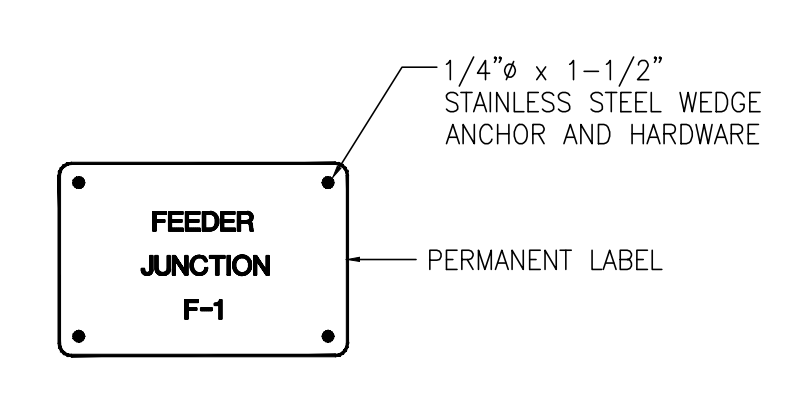
4 NOT USED
 SCALE: N.T.S.



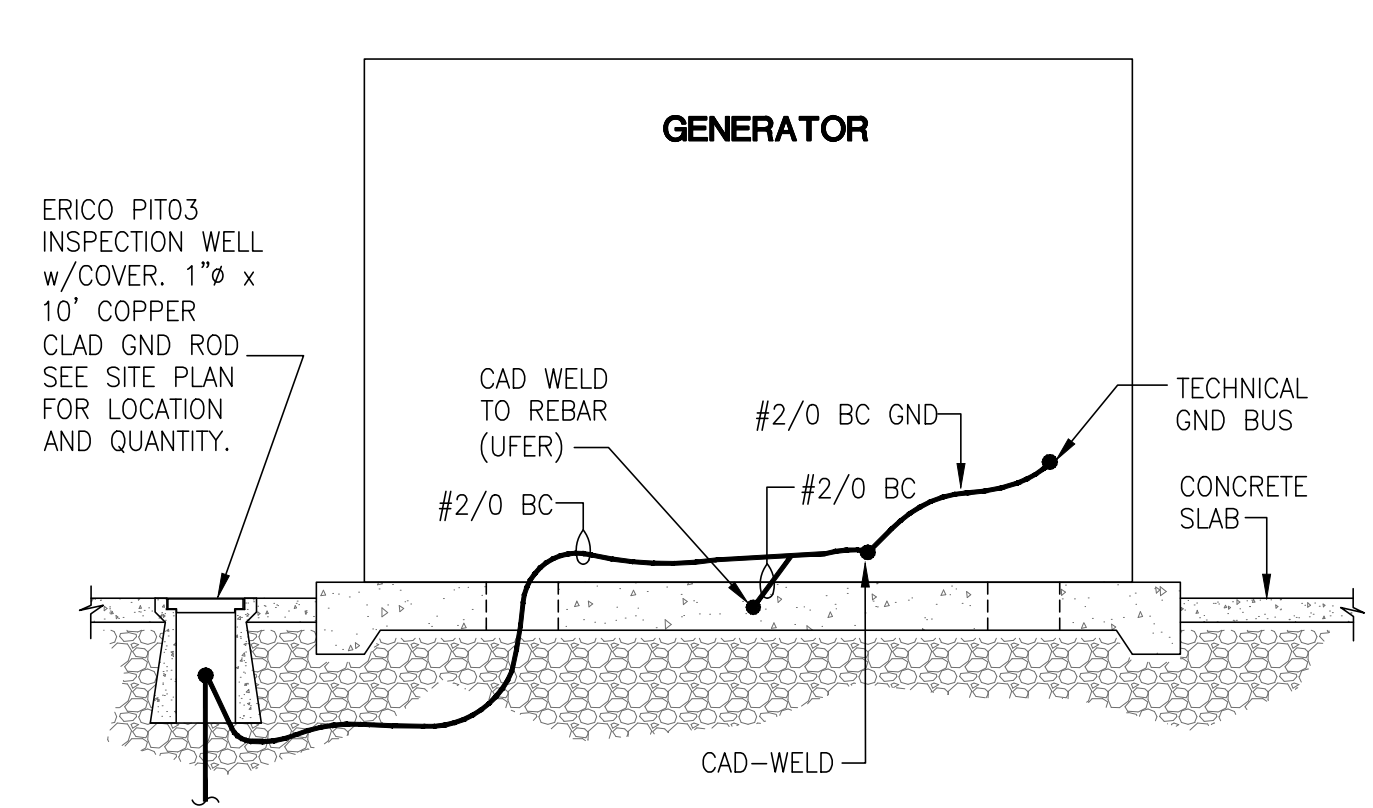
7 SUSPENDED CONDUIT MOUNTING
 SCALE: N.T.S.



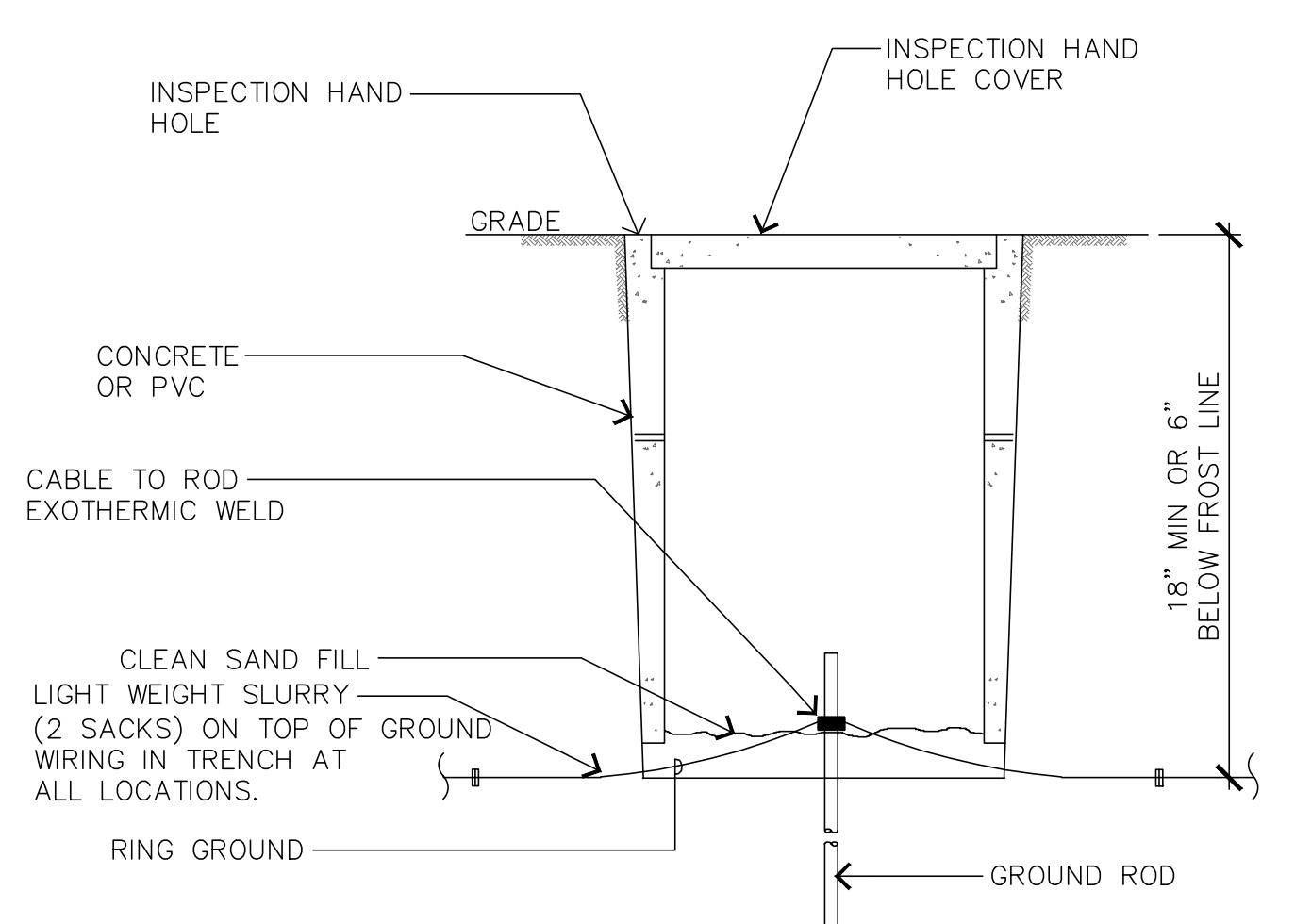
6 SIGNAGE
 SCALE: N.T.S.



3 FEEDER NAMEPLATE
 SCALE: N.T.S.

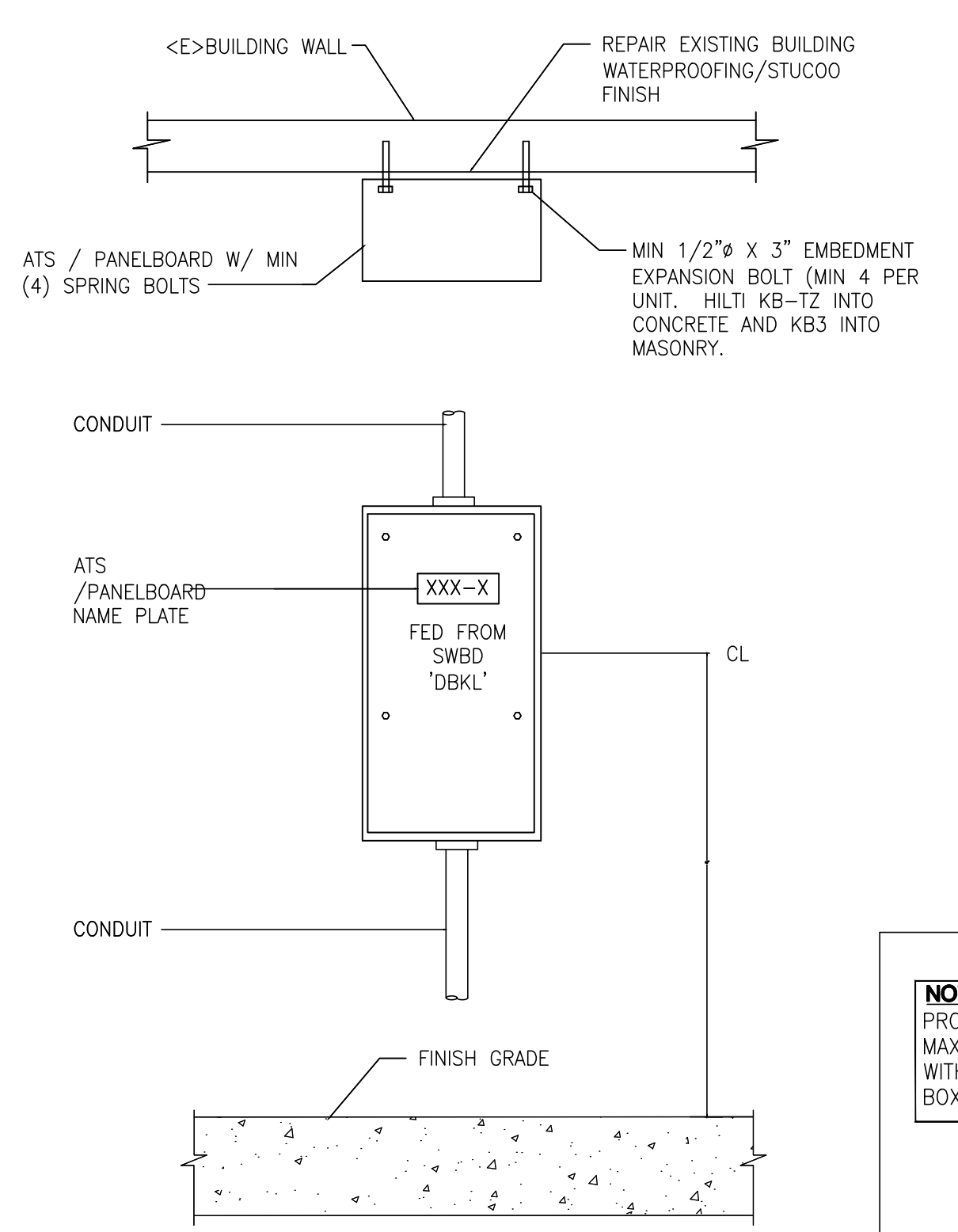


2 ELECTRICAL EQUIPMENT GROUNDING SECTION
 SCALE: N.T.S.

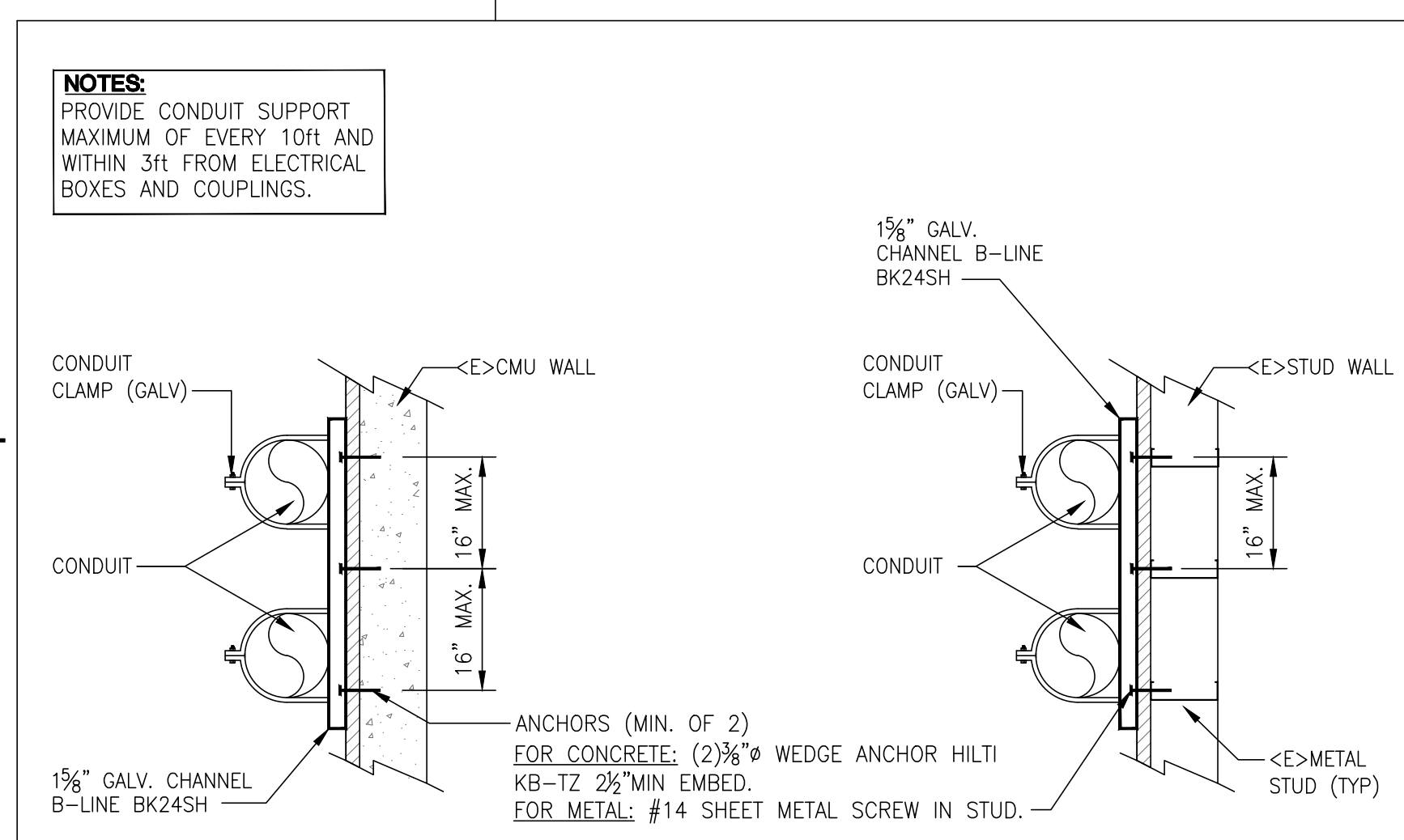


NOTE: INSPECTION HAND HOLE MAY BE CONCRETE OR PVC AND SHALL BE A MINIMUM OF 6" IN WIDTH/DIAMETER

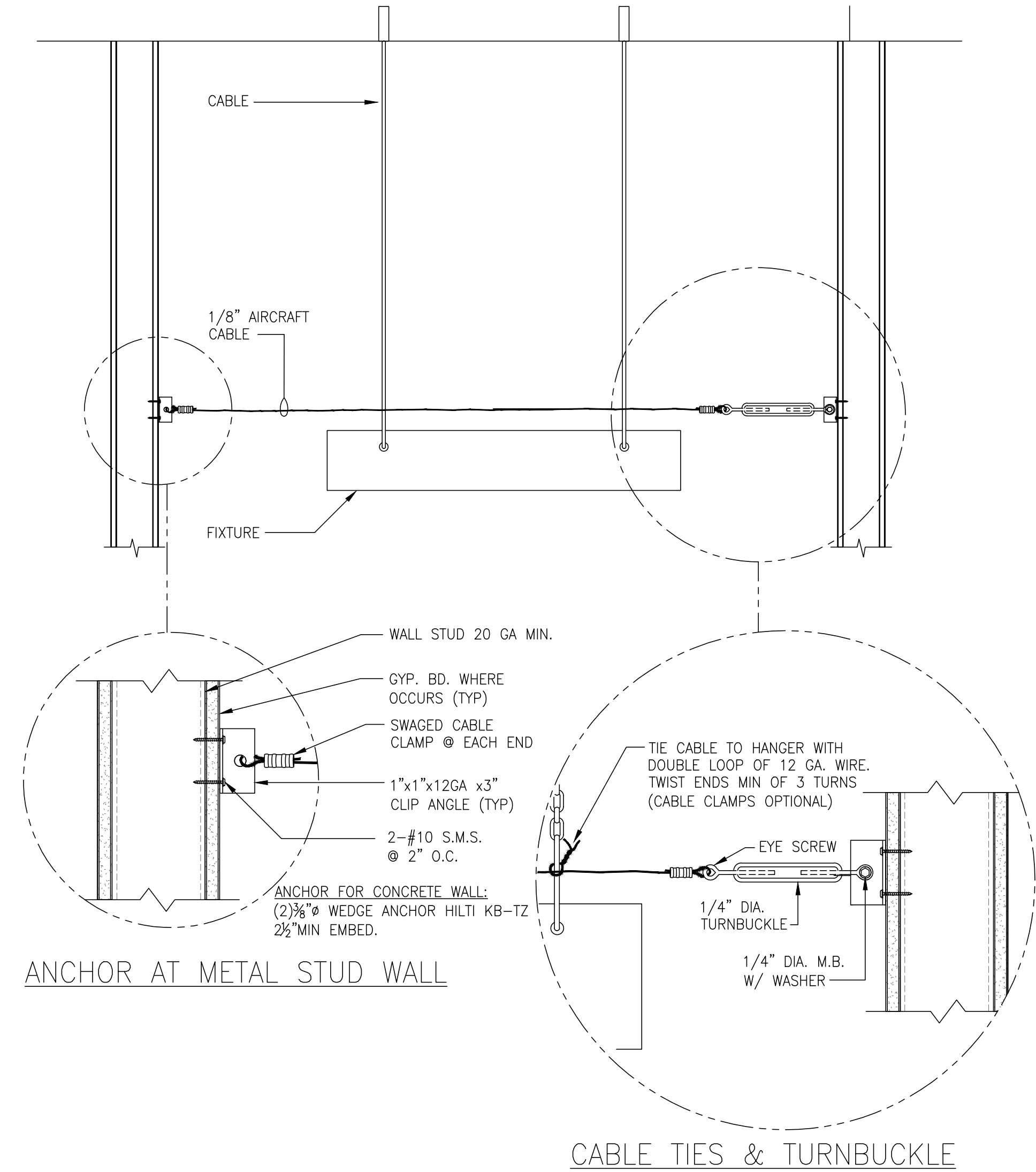
1 GROUND ROD WITH ACCESS
 SCALE: N.T.S.



8 ATS/PANEL MOUNTING DETAIL
 SCALE: N.T.S.



5 CONDUIT SUPPORT
 SCALE: N.T.S.

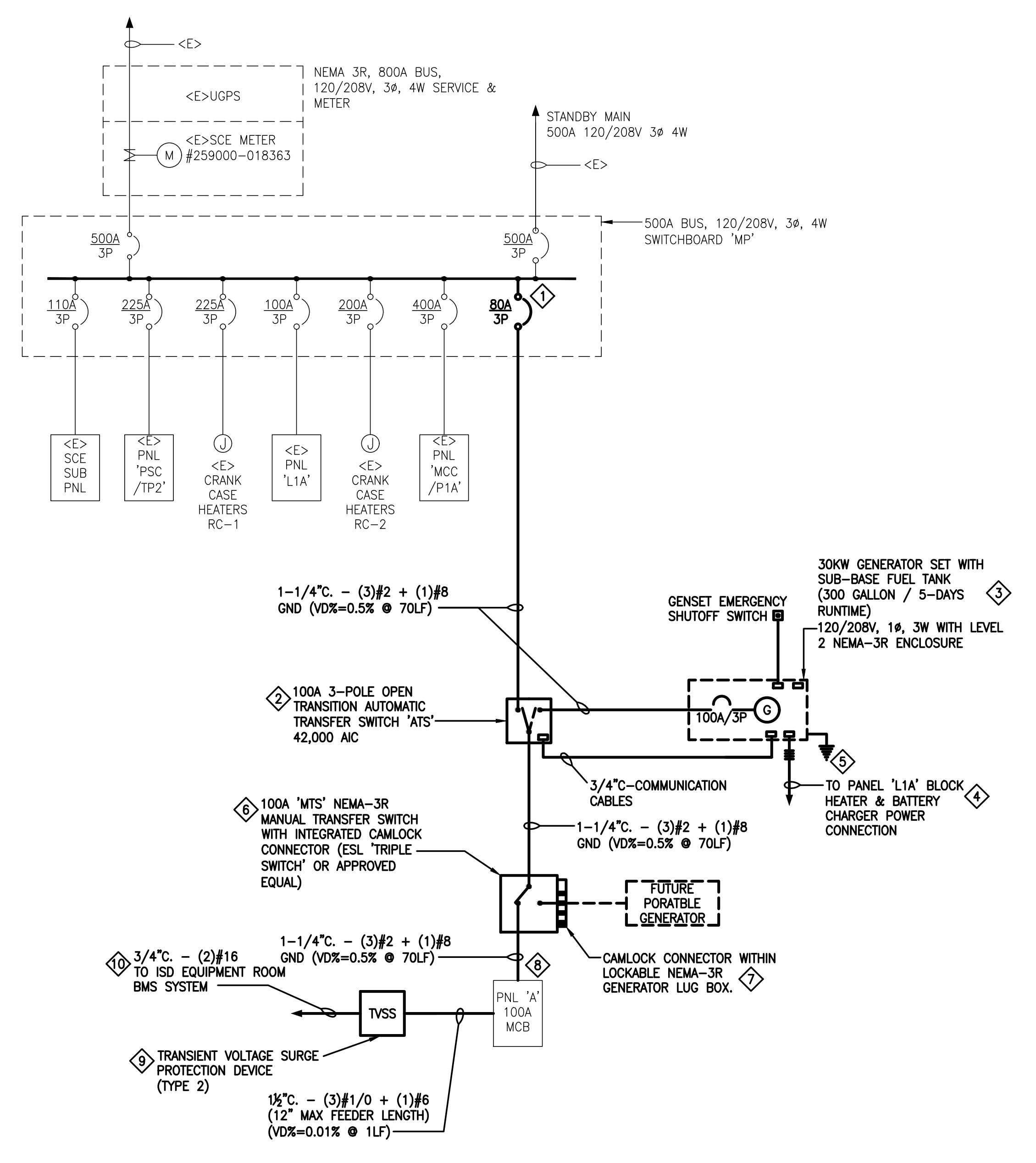


9 PENDANT LIGHT FIXTURE BRACING DETAIL
 SCALE: N.T.S.

ANCHOR AT METAL STUD WALL

CABLE TIES & TURNBUCKLE

THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.



2 ELECTRICAL SINGLE LINE DIAGRAM
SCHEMATIC

<E> PANEL 'A'		VOLTAGE 120/208 V	
LOCATION	ELECTRICAL RM #XX	TYPE	HOMC21UC
AIC RATING		PHASE	WIRE
DESCRIPTION	BRKR	P	T
1 SPACE	-	-	-
3 EXISTING LOAD	1 20	0.0	0.0
6 EXISTING LOAD	2 30	0.0	0.0
7 -	-	-	-
9 SPACE	-	-	-
11 SPACE	-	-	-
13 SPACE	-	-	-
15 SPACE	-	-	-
17 SPACE	-	-	-
19 EXISTING LOAD	1 20	0.0	0.0
SUBTOTAL		0.0	0.0
MCB OR MLO	MCB	TOTAL LOAD PHASE A	
MAIN CIRCUIT BREAKER RATING	100 AMPS	4 KVA	
BUS RATING	100 AMPS	TOTAL LCL (NEC/IEC 215.2 A.1)	
MOUNTING	SURFACE	0 KVA	
ENCLOSURE	NEMA 1	TOTAL PANEL LOAD (KVA)	
		26 AMPS	

<E> PANEL 'L1A'		VOLTAGE 120/240 V	
LOCATION		TYPE	FED FROM
AIC RATING		PHASE	WIRE
DESCRIPTION	BRKR	P	T
1 LIGHTS	1 20	0.1	0.5
3 LIGHTS OVER PNL LPI	1 20	0.1	0.5
5 SPARE	1 20	0.0	0.5
7 LIGHTS	1 20	0.1	0.5
9 LIGHTS - RM 101 OUTSIDE	1 20	0.1	0.5
11 LIGHTS - RM 102 & 103	1 20	0.1	0.5
13 RECEPTACLES - RM 101	1 20	0.0	0.5
15 RECEPTACLES - RM 101, 103	1 20	0.0	0.5
17 RECEPTACLES - RM 101, 102	1 20	0.0	0.5
19 AC CONTROL - RM 102	1 20	0.0	0.5
21 RECEPTACLES	1 20	0.0	0.5
23 EXISTING LOAD	1 20	0.0	0.5
25 EXISTING LOAD	1 20	0.0	0.5
27 EX-1 RM 102	1 20	0.0	0.5
29 RECEPTACLES	1 20	0.0	0.5
31 OVERHEAD TWISTLOCK RECEPT	1 20	0.0	0.5
33 MOTOROLA MDS	1 20	0.0	0.5
35 OVERHEAD TWISTLOCK RECEPT	1 20	0.0	0.5
37 OVERHEAD TWISTLOCK RECEPT	1 20	0.0	0.5
39 EXISTING LOAD	1 20	0.0	0.5
41 GENERATOR BATTERY CHARGER	1 20	0.0	1.0
43 GENERATOR BLOCK HEATER	1 20	0.0	1.0
SUBTOTAL		0.6	4.4
MCB OR MLO	MLO	TOTAL LOAD PHASE A	
MAIN CIRCUIT BREAKER RATING	100 AMPS	7 KVA	
BUS RATING	100 AMPS	TOTAL LOAD PHASE B	
MOUNTING	SURFACE	7 KVA	
ENCLOSURE	NEMA 1	TOTAL LCL (NEC/IEC 215.2 A.1)	
		3 KVA	
		TOTAL PANEL LOAD (KVA)	
		23 KVA	
		TOTAL PANEL LOAD (AMPS)	
		55 AMPS	

1 PANEL SCHEDULE
SCHEMATIC

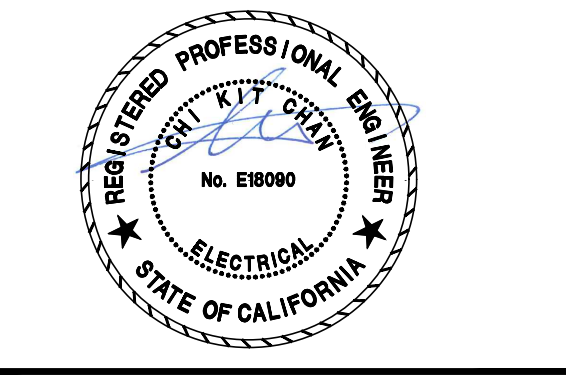
GENERAL SHEET NOTES

- ALL EQUIPMENT SHALL HAVE COPPER BUSSING AND WIRING. ALL TRANSFORMERS SHALL HAVE COPPER WINDING.
- PROVIDE NEW PRINTED PANEL SCHEDULE AT PANEL DOOR FOR ALL AFFECTED PANEL OR SWITCHBOARD.
- POWER SHUTDOWN OR CUTOVER SHALL BE APPROVED BY COUNTY OF SAN BERNARDINO PRIOR TO ANY WORK. COORDINATE WITH COUNTY OF SAN BERNARDINO FOR SEQUENCE OF REMOVAL OF EXISTING GENERATOR/ATS. MOP SHALL BE SUBMITTED AND APPROVED BY COUNTY OF SAN BERNARDINO PRIOR TO ANY DISCONNECTION/DEMOLITION. PROVIDE TEMPORARY GENERATOR, LIGHTING AND HVAC TO DATA ROOM AS REQUIRED BY COUNTY OF SAN BERNARDINO.
- CONTRACTOR IS RESPONSIBLE TO MATCH NEW EQUIPMENT WITH EXISTING EQUIPMENT RATING.

SLD NOTES

- FURNISH AND INSTALL CIRCUIT BREAKER AT SPACE. MATCH EXISTING FOR RATING.
- REPLACE ATS WITH NEW PER SPECIFICATION AND FLOOR PLAN. COORDINATE WITH MANUFACTURER FOR EXACT REQUIREMENT.
- REPLACE GENERATOR WITH NEW PER SPECIFICATION AND FLOOR PLAN. COORDINATE WITH MANUFACTURER FOR EXACT REQUIREMENT.
- CONTRACTOR SHALL FIELD VERIFY AVAILABLE SPARE/UNUSED CIRCUIT BREAKERS AT PANEL 'L1A'. CONTRACTOR SHALL TAG ALL UNUSED CIRCUIT BREAKERS AS 'SPARE' WITH PERMANENT NAMEPLATE. PROVIDE (2) 120V CIRCUITS TO GENERATOR FOR BLOCK HEATER AND BATTERY CHARGER. VERIFY WITH GENERATOR MANUFACTURER FOR EXACT REQUIREMENT.
- GROUNDING WITHIN GROUND WELL PER FLOOR PLAN AND DETAIL.
- FURNISH AND INSTALL MANUAL TRANSFER SWITCH. VERIFY WITH COUNTY OF SAN BERNARDINO FLEET MANAGEMENT FOR EXACT REQUIREMENT.
- FURNISH AND INSTALL CAMLOCK CONNECTOR FOR FUTURE PORTABLE GENERATOR. VERIFY WITH COUNTY OF SAN BERNARDINO FLEET MANAGEMENT FOR EXACT REQUIREMENT.
- RECONNECT EXISTING ISD PANEL 'A'. PROVIDE CONDUITS/JUNCTION BOXES/CONDUCTORS AS REQUIRED.
- FURNISH AND INSTALL AC TRANSIENT VOLTAGE SURGE SUPPRESSOR (ACDATA SOLUTION #BB2XRR). INSTALL SUPPRESSOR BELOW EXISTING PANEL. VERIFY WITH MANUFACTURER FOR EXACT REQUIREMENT.
- FURNISH AND INSTALL ALARM CONNECTION TO <E>BMS. COORDINATE WITH SBC ISD FOR <E>BMS TERMINATION. VERIFY WITH MANUFACTURER FOR EXACT REQUIREMENT.

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MOUNTAIN PASS MICROWAVE SITE GENERATOR

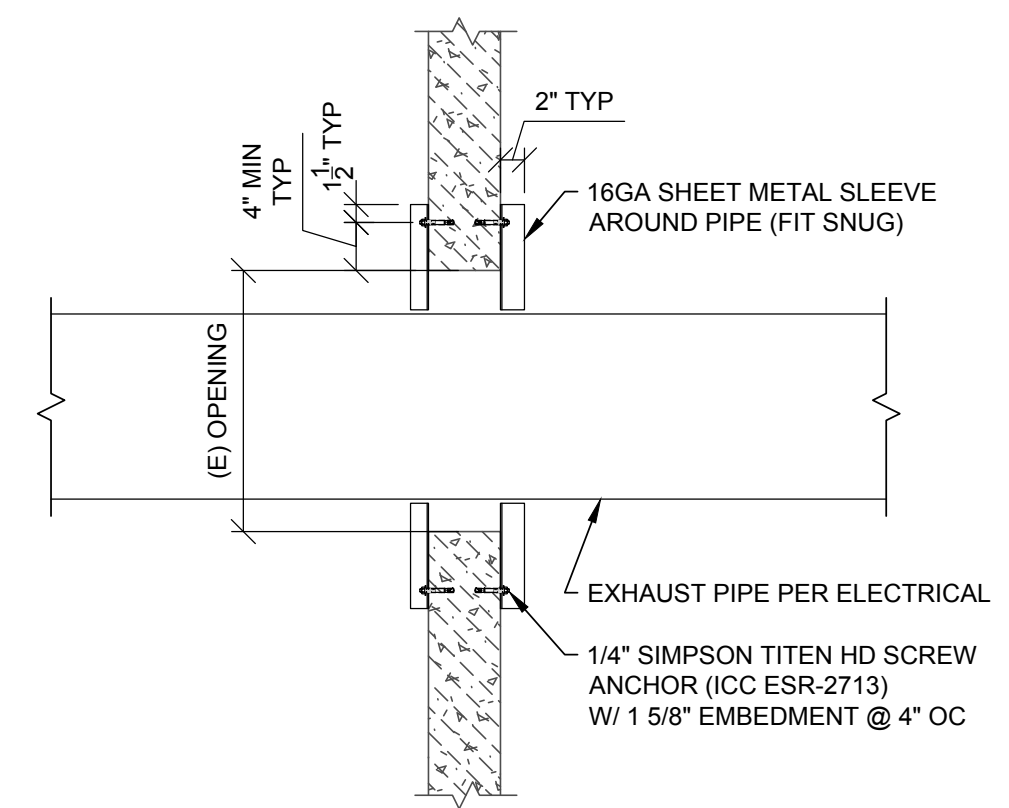
MARK	DATE	DESCRIPTION
	08/11/20	95%CD
	09/03/20	100%CD

SOBE PROJECT NO: 1901464
DATE: 03/18/20
DRAWN BY: -
CHECKED BY: -
APPROVED BY: -

SHEET TITLE
ELECTRICAL SINGLE LINE DIAGRAM

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

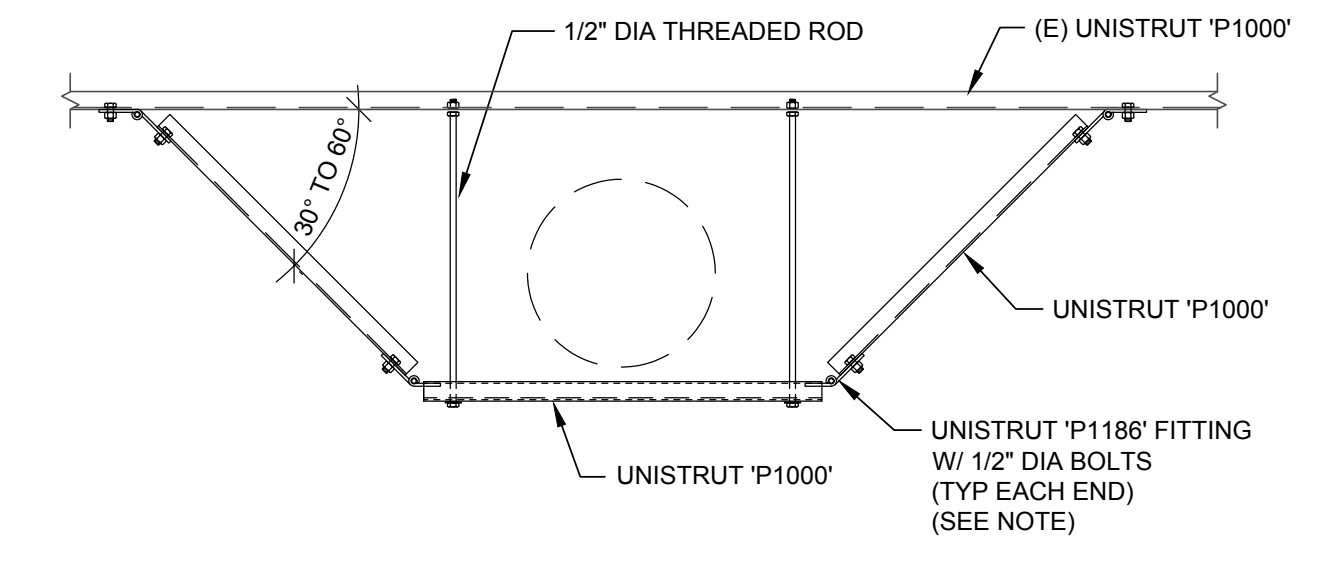
THIS DRAWING IS 30" X 42" AT FULL SIZE. 1/8" = 1'-0"



NOTES:
 1. FIELD VERIFY SIZE OF (E) OPENING PRIOR TO CONSTRUCTION.
 NOTIFY SEOR IF OPENING NEEDS TO BE ENLARGED PRIOR TO CUTTING.
 PROVIDE SKETCHES SHOWING EXISTING OPENING WITH DIMENSIONS AS WELL AS DIMENSIONS OF ANY OTHER NEARBY OPENINGS IN THE WALL.

EXHAUST PIPE WALL PENETRATION

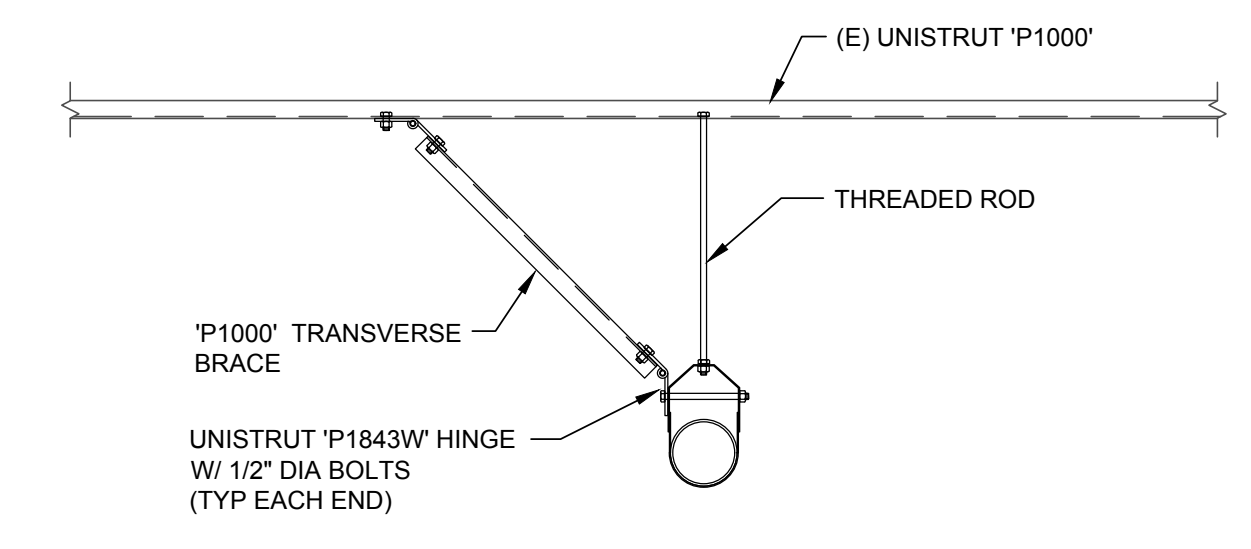
5



NOTES:
 1. WHERE NO (E) UNISTRUT FRAMING OCCURS, ATTACH BRACE TO CONCRETE ROOF SLAB W/ 1/2" DIA HILTI KB-TZ (ICC ESR-1917) W/ 2" EMBEDMENT (MIN 4" THICK CONC SLAB).
 2. PROVIDE VIBRATION ISOLATORS FOR SILENCER AS REQUIRED BY MANUFACTURER.

EXHAUST PIPE SILENCER SUPPORT

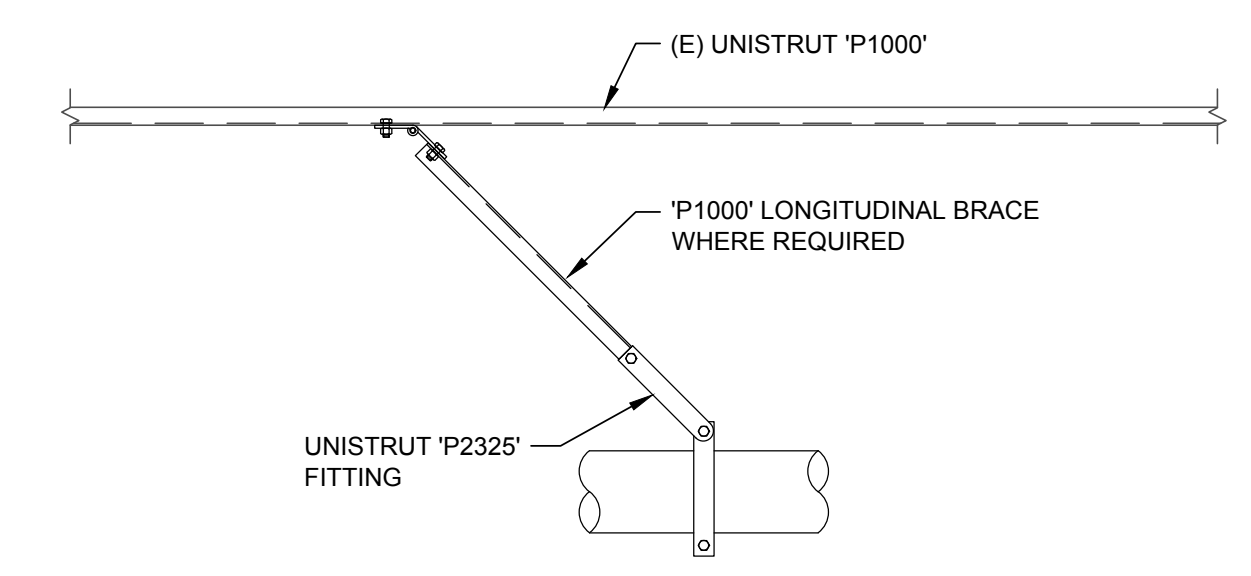
1



NOTES:
 1. WHERE NO (E) UNISTRUT FRAMING OCCURS, ATTACH BRACE TO CONCRETE ROOF SLAB W/ 1/2" DIA HILTI KB-TZ (ICC ESR-1917) W/ 2" EMBEDMENT (MIN 4" THICK CONC SLAB).
 2. PROVIDE VIBRATION ISOLATORS FOR SILENCER AS REQUIRED BY MANUFACTURER.

ALTERNATE EXHAUST PIPE SILENCER SUPPORT

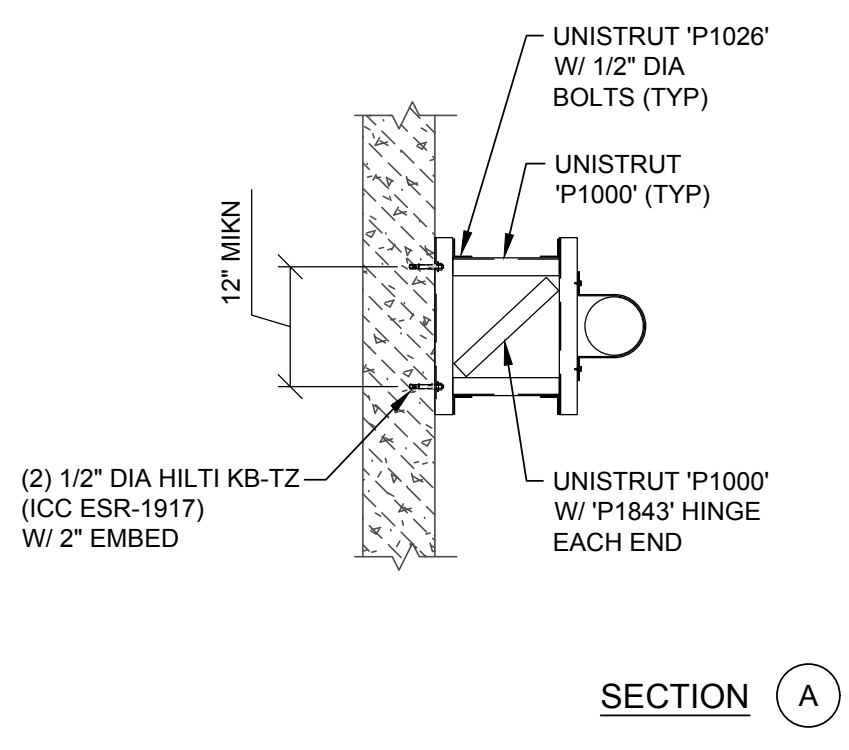
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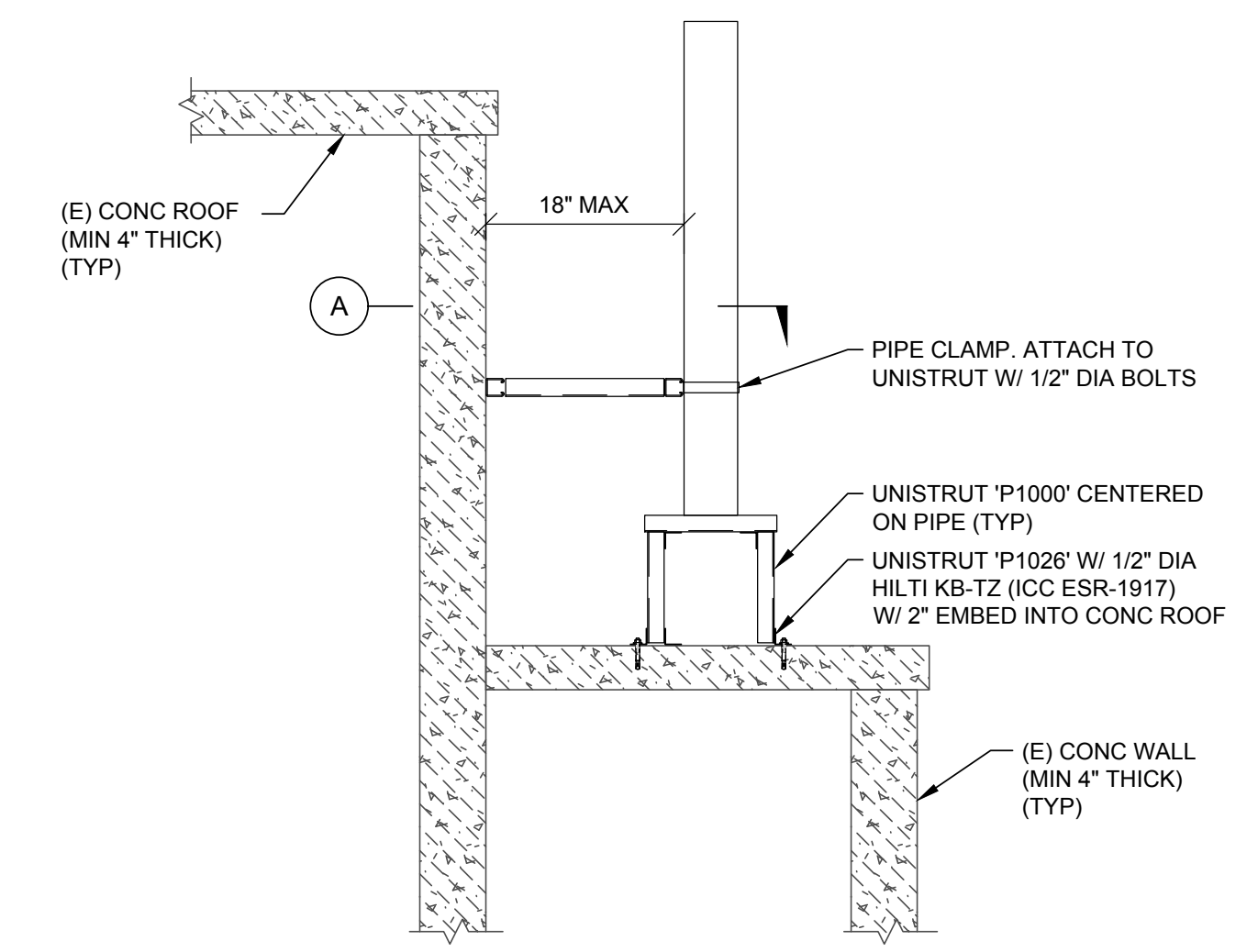
NOTES:
 1. WHERE NO (E) UNISTRUT FRAMING OCCURS, ATTACH BRACE TO CONCRETE ROOF SLAB W/ 1/2" DIA HILTI KB-TZ (ICC ESR-1917) W/ 2" EMBEDMENT (MIN 4" THICK CONC SLAB).

LONGITUDINAL EXHAUST PIPE BRACING

3



SECTION A



EXHAUST PIPE SUPPORT AT EXTERIOR

4

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 FOR BRANDON & JOHNSTON
BRANDON & JOHNSTON
 STRUCTURAL-ENGINEERS (S.E., P.E., M.C.E.)
 700 S FLOWER ST #1800, LOS ANGELES, CA 90017
 T: (213) 996-8800 WWW.BJSE.COM
 EST. 1948 S&J PROJECT # S20-0119

SAN BERNARDINO COUNTY
 MOUNTAIN PASS
 MICROWAVE SITE
 GENERATOR

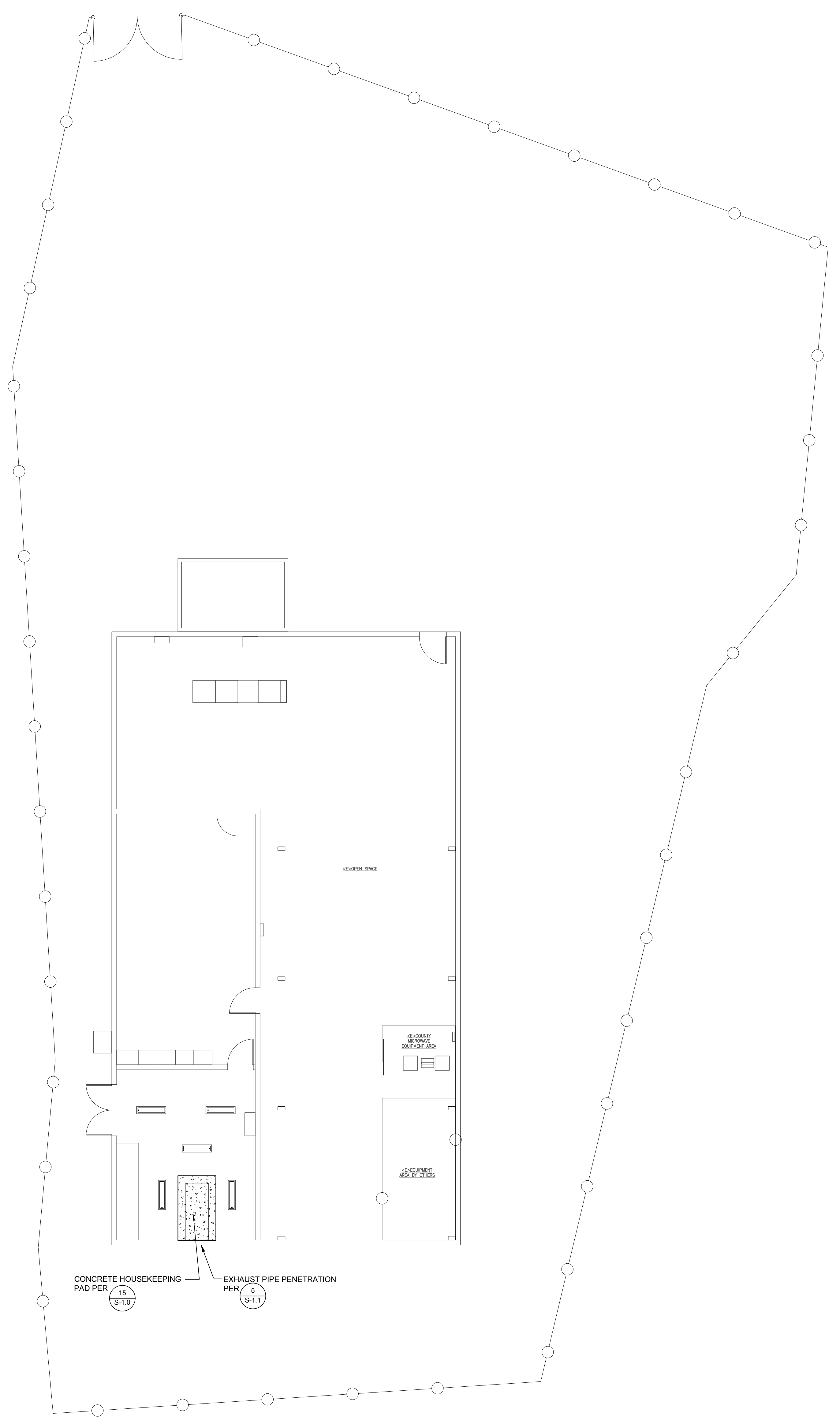
MARK	DATE	DESCRIPTION
	09/04/20	100% CONSTRUCTION DOCUMENTS

ISSUE
 SOBE PROJECT NO: 1901464
 DATE: 03/18/20
 DRAWN BY:
 CHECKED BY:
 APPROVED BY:

SHEET TITLE
TYPICAL DETAILS
 SCALE: AS NOTED
 THIS DRAWING IS 30" X 42" AT FULL SIZE

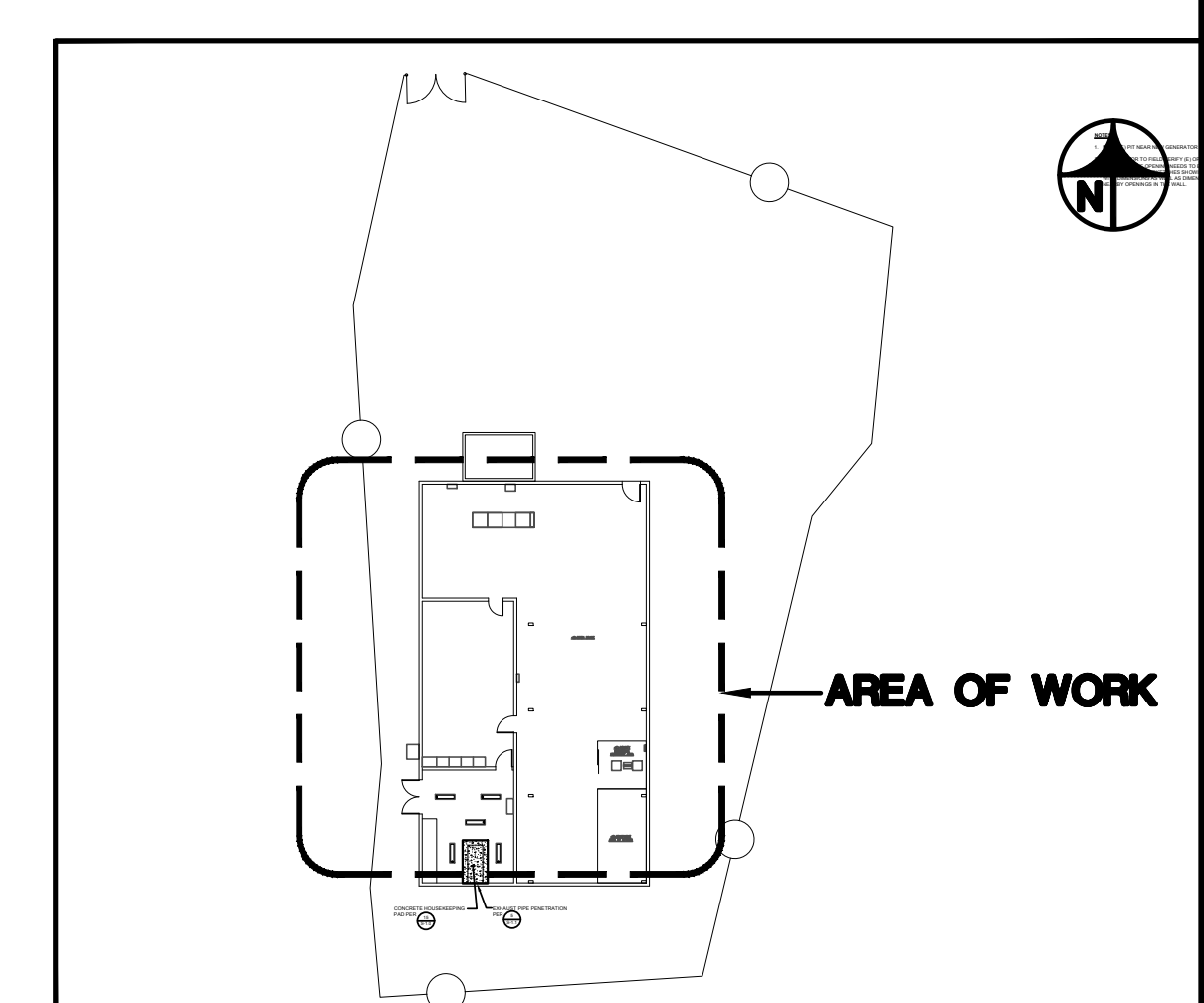
S-11

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 1/2" = 1'-0"
 1/8" = 1'-0"
 1" = 10'-0"
 1" = 30'-0"
 1" = 80'-0"
 1" = 100'-0"



SITE PLAN
 1/8"=1'-0"

- NOTES:**
- INFILL (E) PIT NEAR NEW GENERATOR PER 12 S-1.0
 - CONTRACTOR TO FIELD VERIFY (E) OPENING FOR EXHAUST. NOTIFY SEOR IF OPENING NEEDS TO BE ENLARGED PRIOR TO CUTTING. PROVIDE SKETCHES SHOWING EXISTING OPENING WITH DIMENSIONS AS WELL AS DIMENSIONS OF ANY OTHER NEARBY OPENINGS IN THE WALL.



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DATE: FOR BRANDON & JOHNSTON
BRANDON & JOHNSTON
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 EST. 1948 S&J PROJECT # 820-019



**MOUNTAIN PASS
 MICROWAVE SITE
 GENERATOR**

MARK	DATE	DESCRIPTION
	09/04/20	100% CONSTRUCTION DOCUMENTS

SOBE PROJECT NO: 1901464
 DATE: 03/18/20
 DRAWN BY:
 CHECKED BY:
 APPROVED BY:

SHEET TITLE
SITE PLAN

SCALE: AS NOTED
 THIS DRAWING IS 30" X 42" AT FULL SIZE