

SALAS O'BRIEN
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 National Strength.
 Local Action.

This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination, the following approvals are:
'APPROVED FOR CONSTRUCTION'
 Michael Fisher
 Campus Deputy Building Official
 Humboldt State University
 The California State University
 Date: _____
 Permit #: _____
 (Other approvals as applicable)
 SFM Approval: _____
 DSA Access Approval: _____
 Science Peer Review: _____
 Mock Peer Review: _____

CALIFORNIA STATE FIRE MARSHAL APPROVED
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.
 Reviewed by: _____
 Date: _____



HUMBOLDT STATE UNIVERSITY

1 HARPST STREET
 ARCATA, CA 95521

STUDENT HEALTH CENTER EMERGENCY GENERATOR

MARK	DATE	DESCRIPTION
	05/19/20	PROGRESS SET
	08/05/20	100% CD

SOBE PROJECT NO:	2000589
DATE:	08/04/20
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	

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

G-0.0
 SHEET - OF -

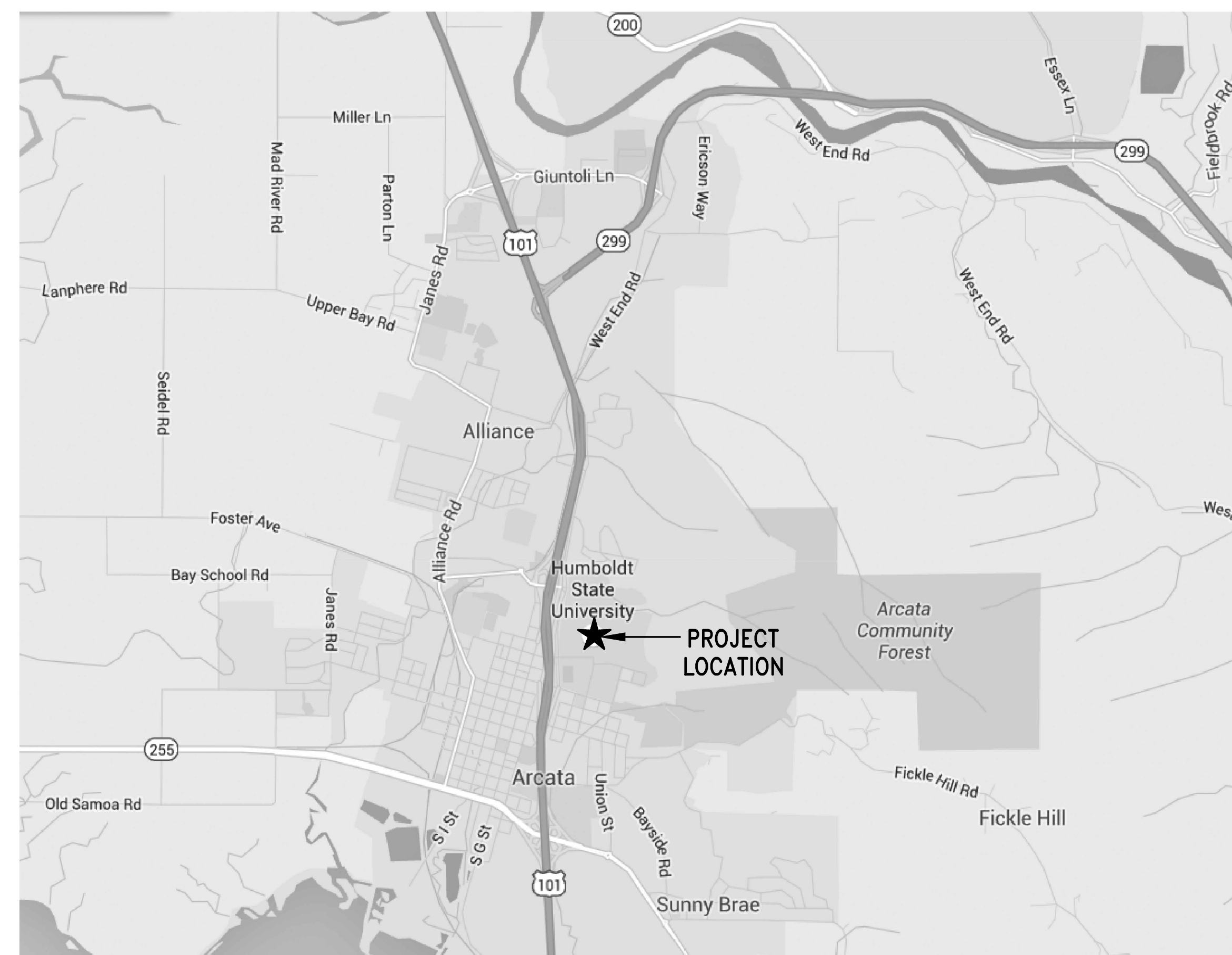
HUMBOLDT STATE UNIVERSITY

1 HARPST STREET
 ARCATA, CA 95521

STUDENT HEALTH CENTER EMERGENCY GENERATOR

VICINITY MAP

SCALE: N.T.S.



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:
- CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24): 2019
 - CALIFORNIA BUILDING CODE (PART 2, TITLE 24): 2018 IBC WITH 2019 CA AMENDMENTS
 - CALIFORNIA ELECTRICAL CODE (PART 3, TITLE 24): 2017 NEC WITH 2019 CA AMENDMENTS
 - CALIFORNIA MECHANICAL CODE (PART 4, TITLE 24): 2018 UMC WITH 2019 CA AMENDMENTS
 - CALIFORNIA PLUMBING CODE (PART 5, TITLE 24) 2018 UPC WITH 2019 CA AMENDMENTS
 - CALIFORNIA ENERGY CODE (PART 6, TITLE 24): 2019
 - CALIFORNIA HISTORICAL BUILDING CODE, (PART 8, TITLE 24): 2019
 - CALIFORNIA FIRE CODE (PART 9, TITLE 24): 2018 IFC WITH 2019 CA AMENDMENTS
 - CALIFORNIA EXISTING BUILDING CODE (PART 10, TITLE 24): (2018 INTERNATIONAL EXISTING BUILDING CODE WITH 2019 CA AMENDMENTS)
 - CALIFORNIA GREEN BUILDING STANDARDS CODE OR CAL GREEN (PART 11, TITLE 24): 2019
 - CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24): 2019
 - CALIFORNIA CODE OF REGULATIONS OF PUBLIC SAFETY (TITLE 19), STATE FIRE MARSHAL: CURRENT EDITION
 - NFPA 13 INSTALLATION OF SPRINKLER SYSTEMS: 2019 (CA AMENDED)
 - NFPA 14 INSTALLATION OF STANDPIPE, PRIVATE HYDRANT AND HOSE SYSTEMS: 2019 (CA AMENDED)
 - NFPA 17 DRY CHEMICAL EXTINGUISHING SYSTEM: 2017 EDITION
 - NFPA 17A TO A UL 300 FOR CLASS I HOOD FIRE SUPPRESSION SYSTEM. (WET CHEMICAL EXTINGUISHING SYSTEMS) 2017
 - NFPA 20 INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION: 2019 EDITION
 - NFPA 22 WATER TANKS FOR PRIVATE FIRE PROTECTION: 2018 EDITION
 - NFPA 24 INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES: 2019 EDITION (CA AMENDED)
 - NFPA 25 INSPECTION, TESTING, MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS: 2020 EDITION (CA EDITION)
 - NFPA 72 NATIONAL FIRE ALARM CODE, WITH CA AMENDMENTS: 2019 EDITION (CA AMENDED)
 - NFPA 80 FIRE DOORS AND OTHER OPENING PROTECTIVE: 2019 EDITION
 - NFPA 110 EMERGENCY AND STANDBY POWER SYSTEMS: 2019 EDITION
 - NFPA 170 STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS: 2018 EDITION
 - NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS 2018
 - ICC 300-12 STANDARD ON BLEACHERS, FOLDING AND TELESCOPIC SEATING AND GRANDSTANDS
 - SFM 12-10-1 POWER OPERATED EXIT DOORS
 - SFM 12-10-2 SINGLE POINT LATCHING OR LOCKING DEVICES
 - SFM 12-10-3 EMERGENCY EXIT & PANIC HARDWARE
 - ASTM STANDARD CHANGES (EXAMPLE: ASTM E648-04 STANDARD TEST METHOD FOR CRITICAL RADIANT FLUX OF FLOOR)
 - UL 38 MANUAL OPERATED SIGNAL BOXES, WITH REVISIONS, LATEST EDITION AS AMENDED
 - UL 268 SMOKE DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
 - UL 268A SMOKE DETECTORS DUCT APPLICATIONS
 - UL 300 FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS
 - UL 305 PANIC HARDWARE
 - UL 464 AUDIBLE SIGNAL APPLIANCES
 - UL 521 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
 - UL 864 CONTROL UNITS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
 - AMERICANS WITH DISABILITIES ACT (A.D.A.) FEDERAL ACCESSIBILITY STANDARDS
 - ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
 - AISC MANUAL OF STEEL CONSTRUCTION
 - ASCE/SEJ 7-16, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
 - NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION

SUMMARY OF WORK

- REPLACE EXISTING GENERATOR AT STUDENT HEALTH CENTER, HSU BLDG #42, CSFM #18-12-03-001-078.
- COORDINATE SHUTDOWNS WITH THE CAMPUS.
- PROVIDE TEMPORARY POWER DURING SHUTDOWNS.
- FURNISH AND INSTALL NEW POWER AND GAS CONNECTION FOR NEW GENERATOR.
- GENERATOR TO BE 20KW, 120/208V, 3-PHASE, NATURAL/PROPANE DUAL FUEL, WITH 100GAL (90MIN) REMOTE PROPANE TANK.

EQUIPMENT ANCHORAGE

M/E/P COMPONENT ANCHORAGE NOTE:
 ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON-THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTION 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY OR MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTION EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

- COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP MD PP E OPTION 1: DETAIL ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) # _____.

DRAWING INDEX

SHEET NO.	DESCRIPTION
G-0.0	COVER SHEET
G-1.1	OVERALL SITE PLAN
E-0.1	SYMBOLS & ABBREVIATIONS
E-0.2	GENERAL NOTES
ES-4.1	PARTIAL SITE PLAN
E-4.1	STUDENT HEALTH CENTER PARTIAL BASEMENT PLAN AND FIRST FLOOR PLAN
E-4.2	STUDENT HEALTH CENTER SECOND FLOOR PLAN AND PARTIAL ROOF PLAN
E-5.1	ELECTRICAL DETAILS
E-6.1	FEEDER AND EQUIPMENT SCHEDULES
E-7.1	STUDENT HEALTH CENTER SINGLE LINE DIAGRAM
MP-0.1	MECHANICAL & PLUMBING GENERAL NOTES, SYMBOLS & ABBREVIATIONS
MS-4.1	MECHANICAL SITE PLAN
MP-4.1	MECHANICAL & PLUMBING PARTIAL BASEMENT & ROOF PLAN
MP-5.1	MECHANICAL & PLUMBING DETAILS
S-3.0	STRUCTURAL SPECIFICATIONS, DETAILS AND FOUNDATION PLAN

BUILDING INFORMATION

STUDENT HEALTH CENTER
 HSU BLDG #042, CSFM #: 18-12-03-0001-078
 OCCUPANCY CLASSIFICATION & USE: B OFFICE & OUTPATIENT CLINIC
 CONSTRUCTION TYPE: TYPE VB
 YEAR CONSTRUCTED: APPROX. 1959; MAJOR ADDITION 1974
 NUMBER OF STORIES: 2 + BASEMENT
 BUILDING HEIGHT: ± 28 FT

PROJECT DATA

PROJECT ADDRESS: 1 HARPST STREET
 ARCATA, CA 95521

PROJECT OWNER: HUMBOLDT STATE UNIVERSITY
 1 HARPST STREET
 ARCATA, CA 95521

PROJECT MANAGER: MICHAEL FISHER
 DIRECTOR PLANNING, DESIGN & CONSTRUCTION
 FACILITIES, MANAGEMENT / PLANNING & DESIGN
 PHONE: 707-826-4444

M/E/P ENGINEER: SALAS O'BRIEN
 305 S. 11TH STREET
 SAN JOSE, CA 95112
 PHONE: 408-282-1500
 FAX: 408-297-2995

STRUCTURAL ENGINEER: MESITI-MILLER ENGR.
 224 WALNUT AVE, SUITE B
 SANTA CRUZ, CA 95060
 PHONE: 831-426-3186
 FAX: 831-426-6607

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

CLEARANCES: CODE INTERPRETATION

1. WORKING SPACE CLEARANCE PER CEC TABLE 110.26(a)(1) AND TABLE 110.34(A): THE WORKING SPACE CLEARANCE OF ANY ELECTRICAL EQUIPMENT OVER 600 VOLTS IS PER TABLE. THIS REQUIREMENT APPLIES TO EQUIPMENT THAT REQUIRES EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED.

HAZMAT ABATEMENT

HAZMAT ABATEMENT: NOTIFY UNIVERSITY IMMEDIATELY IF HAZARDOUS MATERIALS ARE FOUND DURING CONSTRUCTION. REFER TO SPECIFICATION SECTION 01 35 10 HAZARDOUS MATERIALS PROCEDURES.

DEMOLITION NOTES

- 1. REMOVE EXISTING EQUIPMENT (NOT INCLUDING FIRE ALARM EQUIPMENT OR FIRE ALARM CONDUIT) IN CONFLICT WITH NEW CONDITIONS. REMOVE ALL WIRE NOT IN SERVICE AND FROM ABANDONED RACEWAYS. PROTECT EXISTING CIRCUITING PASSING THROUGH DEMOLITION AREAS. EXTEND AND/OR RELOCATE AS NECESSARY.
2. ALL ABANDONED EQUIPMENTS INCLUDING LIGHT, RECEPTACLES, DATA, FIRE ALARM, ETC., SHALL BE COVERED WITH BLANK METAL PLATES AND PAINTED TO MATCH THE ADJACENT FINISH OF SURROUNDING WALLS OR CEILING TO THE SATISFACTION OF THE UNIVERSITY.
3. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AFFECTED BY THE PROJECT. THIS INCLUDES REROUTING OR THE EXTENSION OF EXISTING CONDUIT AND FEEDER WHERE NECESSARY TO MAINTAIN OPERATIONAL OF ANY EXISTING EQUIPMENT.
4. CIRCUIT NUMBERS AND CONDUIT HOMERUNS SHOWN ON THESE DRAWINGS WERE TAKEN FROM EXISTING RECORD DRAWINGS. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING CIRCUITING AND CONDUIT HOMERUNS. ADJUST CIRCUIT NUMBERS ACCORDING TO THE ACTUAL CONDITIONS.
5. WHERE EXISTING CONDUIT IS TO BE ABANDONED OR DEMOLISHED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED, IN A CRAWL SPACE OR IN AN ACCESSIBLE CEILING. ABANDONED OR DEMOLISHED CONDUIT FEEDS UP THROUGH THE FLOOR SHALL BE CUT OFF AND PLUGGED FLUSH WITH THE FLOOR.
6. ALL ELECTRICAL EQUIPMENT INCLUDING LIGHTS, RECEPTACLES, DATA, THAT ARE TO BE REMOVED, SHALL BE REMOVED COMPLETELY, INCLUDING CONDUIT AND WIRING BACK TO THE LAST DEVICE REMAINING IN SERVICE, OR SOURCE.
7. EXISTING CIRCUITS WHICH ARE REMOVED AND NOT REUSED SHALL BE IDENTIFIED ON THE PANEL SCHEDULE AS "SPARE".
8. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE UNIVERSITY PRIOR TO REMOVAL OF EXISTING ELECTRICAL EQUIPMENT AND TURN OVER REMOVED EQUIPMENT THAT THE UNIVERSITY REQUESTS IN AN "AS-FOUND" CONDITION.
9. ALL DEMOLITION WORK SHOWN, IF ANY, WAS PREPARED FOR THE CONVENIENCE OF THE CONTRACTOR. NO REPRESENTATION HAS BEEN MADE THAT ALL ITEMS THAT MAY REQUIRE DEMOLITION HAVE BEEN SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CAREFULLY EXAMINE THE SITE AND THE CONTRACT DOCUMENTS AND TO PERFORM ALL DEMOLITION AND RECONSTRUCTION WHICH MAY BE REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
10. WHEN CALLED FOR, OR SCOPE OF WORK REQUIRES ELECTRICAL EQUIPMENT TO BE REMOVED, ALL CONDUIT, WIRE, BOXES, HANGERS SHALL BE REMOVED COMPLETELY ALL OPENINGS SHALL BE REPAIRED AND FIRE CAULKED PER APPLICABLE LISTED FIRE RATED ASSEMBLY. SEAL AND PAINT TO MATCH THE ADJACENT FINISH.

ELECTRICAL SERVICE SHUTDOWN NOTES

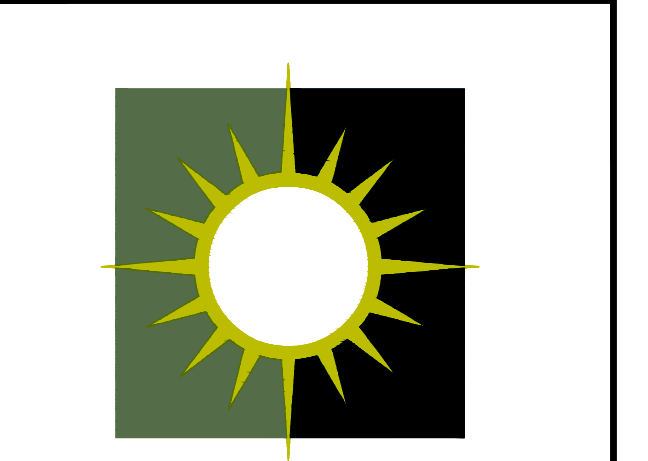
- 1. INTERRUPTION OF THE ELECTRICAL SERVICE WILL AFFECT ALL BUILDINGS. CONTRACTOR SHALL COORDINATE SHUTDOWN AND RECONNECTION WITH THE UNIVERSITY PRIOR TO BEGINNING WORK. ALL ELECTRICAL CONNECTIONS REQUIRING AN OUTAGE SHALL BE MADE DURING AN APPROVED TIME PERIOD, AT THE CONVENIENCE OF THE UNIVERSITY. REFER TO SPECIAL CONDITIONS. NOTIFY UNIVERSITY AT LEAST 10 DAYS IN ADVANCE OF ANY PROPOSED POWER SHUTDOWN.
2. CONDUCTORS FROM GENERATOR TO POINT OF CONNECTION SHALL BE RATED FOR OUTDOOR USE, 90°C TEMPERATURE RATING MINIMUM.
3. VERIFY ALL POINTS OF TEMPORARY GENERATOR CONNECTION & MAKE ALLOWANCES FOR TEMPORARY MODIFICATIONS.
4. PHASE ROTATION MAY BE REVERSED AT SOME LOCATIONS, VERIFY PHASE ROTATION AT POINT OF CONNECTION PRIOR TO SHUT DOWN OF NORMAL ELECTRICAL POWER IN ALL BUILDINGS IN THE SCOPE OF WORK.
5. CONTRACTOR SHALL FURNISH AND INSTALL 3/4" X 10' CU GROUND ROD AND BOND TO GENERATOR HOUSING WITH #2 BARE COPPER CONDUCTOR. BOND CONDUCTOR TO GROUND ROD. REMOVE GROUND ROD AND PATCH SURFACE AFTER POWER IS RESTORED. TYPICAL FOR ALL GENERATORS.
6. TURN ON ALL TEMPORARY GENERATORS PRIOR TO SHUTDOWN.
7. CONTRACTOR IS RESPONSIBLE TO IMPLEMENT UNIVERSITY AND OSHA SAFETY STANDARDS APPLICABLE TO THIS PROJECT.
8. PRIOR TO DISCONNECTION OF ELECTRICAL EQUIPMENT/CABLES, CONTRACTOR SHALL VERIFY OR TEST EQUIPMENT FOR FUNCTIONALITY. NOTIFY UNIVERSITY OF ABNORMALITIES.
9. ALL TERMINATIONS SHALL BE TIGHTENED AND TORQUED PER MANUFACTURER RECOMMENDATIONS.
10. TEMPORARY GENERATORS SHALL MEET HUMBOLDT COUNTY FUEL CONTAINMENT REQUIREMENTS.
11. CONTRACTOR IS RESPONSIBLE FOR REFUELING OF GENERATORS FOR ENTIRE SHUTDOWN DURATION.
12. ALLOW FOR MINIMUM 200 FEET LENGTH OF CABLE FOR TEMPORARY GENERATOR CONNECTION. CONTRACTOR SHALL COORDINATE GENERATOR LOCATIONS WITH UNIVERSITY.
13. CONTRACTOR SHALL PROVIDE FIRE WATCH FOR THE ENTIRE DURATION OF THE SHUTDOWN IN ACCORDANCE WITH SFM REQUIREMENTS.
14. TWO DAYS BEFORE THE SCHEDULED OUTAGE:
a. ALL RENTED TEMPORARY GENERATORS, CABLING, CONNECTION, SECONDARY CONTAINMENT, CABLE GUARDS AND RAMPS AND TEMPORARY FENCING ASSOCIATED WITH PORTABLE GENERATORS SHALL BE IN PLACE, FUELED AND TESTED. EQUIPMENT SHALL BE SECURED TO PREVENT THEFT. ALL TEMPORARY FENCING AND SECONDARY CONTAINMENT MUST MEET THE REQUIREMENTS OF THE STATE FIRE MARSHAL & HAZARDOUS MATERIALS PERMIT.
b. TEMPORARY GENERATOR CABLE PATHWAYS SHALL BE INSTALLED, IF REQUIRED.
c. LOCK-OUT/TAG-OUT DEVICES SHALL BE ON-HAND AND LOCATIONS IDENTIFIED (RETURN TO SERVICE & COORDINATE WITH UNIVERSITY TO RE-START SYSTEMS AFTER OUTAGE).
d. ALL HAZARDOUS MATERIALS PERMIT FOR ALL GENERATORS SHALL BE PAID FOR AND PROVIDED BY THE CONTRACTOR.
15. CONTRACTOR RESPONSIBLE FOR SUBMITTING AND PAYING FOR ALL AIR QUALITY PERMITS REQUIRED BY AHJ.

GENERAL NOTES

- 1. CONTRACTOR IS RESPONSIBLE TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS, ADDENDA, DRAWINGS, AND SPECIFICATIONS. PRIOR TO SUBMITTING PROPOSAL, CONTRACTOR SHALL EXAMINE ARCHITECTURAL, STRUCTURAL AND MECHANICAL CONSTRUCTION DRAWINGS AND SPECIFICATIONS AND SHALL HAVE VISITED THE CONSTRUCTION SITE. HE/SHE SHALL BE FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH HE/SHE 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/HER PART. DETERMINE THE SEQUENCE OF CONSTRUCTION THROUGHOUT THE PROJECT, INCLUDING TEMPORARY FACILITIES AND CONNECTIONS REQUIRED FOR THE DURATION OF THE PROJECT.
2. ALL TEMPORARY CONNECTIONS 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.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONS AND PROPERTY AND SHALL PROVIDE INSURANCE COVERAGE AS NECESSARY FOR LIABILITY, PERSONAL, AND PROPERTY DAMAGE, TO FULLY PROTECT THE UNIVERSITY FROM ANY AND ALL CLAIMS RESULTING FROM THIS WORK.
4. THE CONTRACTOR SHALL PROVIDE TO THE UNIVERSITY A CONSTRUCTION SCHEDULE OF ALL ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES.
5. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJECT SITE INDICATING ALL MODIFICATIONS TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL, AT THE CONCLUSION OF THE PROJECT, PROVIDE A SET OF REPRODUCIBLE (AUTOCAD AND PDF) "AS-BUILT" DRAWINGS AND SPECIFICATIONS TO BE REVIEWED FOR APPROVAL BY THE UNIVERSITY AND ENGINEER OF RECORD.
6. THESE DRAWINGS DO NOT REPRESENT THE EXACT LOCATIONS, SIZES OR EXTENT OF UTILITIES ON SITE. CONTRACTOR SHALL TAKE STANDARD PRECAUTIONS FOR WORK IN EXISTING FACILITIES.
7. EXISTING ELECTRICAL WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO OPERATING CONDITION AS REQUIRED AND/OR DIRECTED. WHERE REQUIRED, SHOWN AND/OR DIRECTED, OUTLETS AND CONDUIT RUNS SHALL BE RELOCATED. IN SOME CASES IT MAY BE NECESSARY TO EXTEND CONDUITS AND PULL IN NEW WIRING OR INSTALL JUNCTION BOXES AND SPLICE IN NEW WIRING OR REPLACE OLD WIRING WITH NEW.
8. CERTAIN REMODELING OF ELECTRICAL FACILITIES WILL BE REQUIRED IN THE EXISTING BUILDING. EXISTING CONDUIT RUNS ARE GENERALLY NOT SHOWN, ALTHOUGH A FULL ATTEMPT HAS BEEN MADE TO SHOW SOME EXISTING CONDITIONS, OF WHICH INFORMATION HAS BEEN TAKEN FROM EXISTING RECORD DRAWINGS AND/OR LIMITED FIELD INVESTIGATIONS. THE DRAWINGS SHOWING LOCATION OF EXISTING EQUIPMENT, OUTLETS, FIXTURES, ETC., ARE APPROXIMATE ONLY (CONTRACTOR TO FIELD VERIFY).
9. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY AND SHALL BE INSTALLED AS PER LISTING OR LABELING (IE. MAXIMUM FUSE SIZE MEANS FUSE PROTECTION IS REQUIRED), WHERE EXISTING ELEMENTS, NOT OTHERWISE SPECIFIED TO BE REPLACED, WOULD RESULT IN ANY NEWLY CONNECTED ELEMENTS BEING OUT OF COMPLIANCE WITH THE LISTING OR LABELING, THEN THOSE OFFENDING EXISTING ELEMENTS SHALL BE REPLACED IN ORDER TO SATISFY THE INSTALLATION REQUIREMENTS.
10. ALL ELECTRICAL EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:
a. AMERICAN STANDARD ASSOCIATION (ASA)
b. AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)
c. AMERICAN SOCIETY OF TESTING MATERIALS (ASTM)
d. CALIFORNIA CODE OF REGULATIONS TITLE 24 (CCR)
e. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
f. INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
g. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
h. NATIONAL FIRE PROTECTION AGENCY (NFPA)
i. STATE FIRE MARSHAL
11. CONTRACTOR SHALL COORDINATE WITH THE UNIVERSITY ON OBTAINING ALL PERMITS. CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELECTRICAL UTILITY SYSTEM SHUT-DOWNS AND START-UP. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION REQUIRED WITH OTHER AGENCIES AND UTILITY COMPANIES. ENSURE TO INCLUDE THE UNIVERSITY IN ALL COMMUNICATIONS WITH ANY AGENCIES OR UTILITY COMPANIES.
12. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CROSSINGS OF NEW UTILITIES WITH THOSE EXISTING ON SITE AND IN ADJACENT PROPERTIES. NOTIFY THE UNIVERSITY IMMEDIATELY OF ANY DEVIATIONS OR DISCREPANCIES FROM THIS PLAN.
13. CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH OTHER CONTRACTORS ON SITE. ANY COST TO PERFORM WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE DRAWINGS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE UNIVERSITY DURING BID TIME FOR CLARIFICATIONS. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE UNIVERSITY AT NO ADDITIONAL COST TO THE UNIVERSITY.
14. COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT. PROVIDE POWER AND CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON ELECTRICAL DRAWINGS AND DRAWINGS OF OTHER TRADES. CONTRACTOR SHALL REVIEW DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT. DISCONNECT SWITCHES, STARTERS, AND CONDUITS FOR CONTROL WIRING FOR MECHANICAL AND PLUMBING EQUIPMENT SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUITS TO THIS EQUIPMENT.
15. BEFORE ROUGH-IN, VERIFY AND OBTAIN APPROVAL OF ALL MOUNTING HEIGHTS AND EXACT LOCATIONS FOR ALL EQUIPMENT ELECTRICAL CONNECTIONS, STUD-UPS, RECEPTACLES, OUTLETS, CONDUIT RUNS, ETC. FROM THE UNIVERSITY. PLACE DEVICES LOCATED ABOVE COUNTERS, SHELVING, ETC. AND IN BATHROOMS SO AS NOT TO CONFLICT WITH EDGES OF WANSICOTTING, BACKSPLASH, SHELVING, ETC. REFER TO ELECTRICAL ELEVATIONS FOR EXACT LOCATIONS OF ELECTRICAL DEVICES.
16. MOUNTING HEIGHTS OF ALL CONTROL DEVICES TO BE USED BY OCCUPANT OF THE ROOM OR AREA SHALL BE MOUNTED AT THE FOLLOWING HEIGHTS:
RECEPTACLES OUTLETS : +18" (TO BOTTOM OF OUTLETS)
TELEPHONE/TV/DATA OUTLETS : +18" (TO BOTTOM OF OUTLETS)
LIGHT SWITCHES : +44" (TO HIGHEST OPERABLE PART)
OUTLETS ABOVE COUNTER : +12" ABOVE COUNTER (TO BOTTOM OF OUTLETS)
MOUNTING HEIGHTS OF ALL DEVICES AND EQUIPMENT ARE FROM FINISHED FLOOR TO LOCATION OF DEVICE AS NOTED. EQUIPMENT INSTALLED IN LOCATIONS NOT APPROVED BY THE UNIVERSITY SHALL BE RELOCATED AS DIRECTED BY THE UNIVERSITY AT NO ADDITIONAL COST TO THE UNIVERSITY.
17. COORDINATE ALL OUTLET BOX INSTALLATION WITH ARCHITECTURAL WALL FINISH SCHEDULES. SPACE BETWEEN FACEPLATE AND DEVICE BOX SHALL NOT EXCEED 1/8".
18. FOR RENOVATION WORK, THE CONTRACTOR SHALL CONCEAL ALL WORK WHERE POSSIBLE. ALL EXPOSED RACEWAY AND BOXES IN OCCUPIED AREAS OR ON EXTERIOR WALLS SHALL BE PAINTED TO MATCH ADJACENT FINISHES.
19. 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 ELECTRICAL WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED.
20. SEAL ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS. FURNISH AND INSTALL FIRE RATED BACKBOXES AS REQUIRED MAINTAINING FIRE RATING OF CEILING OR WALLS WHERE RECESSED ELECTRIC EQUIPMENT SUCH AS LIGHT FIXTURES, SWITCHES, RECEPTACLES, PANEL, ETC. ARE INSTALLED IN RATED WALL OR CEILING. PENETRATIONS OF FIRE RATED WALLS, CEILINGS, OR FLOORS SHALL COMPLY WITH UBC CHAPTER 7 REQUIREMENTS. CONDUIT PENETRATIONS THAT ARE NOT STUBBED-OUT INSIDE THE WALL SHALL MEET F AND T RATING. ALL FIRE PROOFING METHODS SHALL BE UL APPROVED.
21. ALL EXTERIOR EQUIPMENT SHALL BE NEMA 3R RATED. ALL WALL PENETRATIONS TO EXTERIOR WALLS SHALL BE SEALED WATERTIGHT.
22. PULLING TAPES: ALL RACEWAY WITHOUT CABLE OR WIRE SHALL BE INSTALLED WITH A MINIMUM 1100 LBS. STRENGTH TEST POLYESTER PULLING TAPE. PULLING TAPES SHALL BE DETECTABLE MULE-TAPE WITH SEQUENTIAL FOOTAGE MARKING.
23. RUN NO MORE THAN 3 CURRENT CARRYING CONDUCTORS IN ANY WIREWAY UNLESS DERATING IS APPROVED BY UNIVERSITY OR SHOWN ON DRAWINGS.
24. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER, #10 AWG MINIMUM, RATED FOR 600V, THHN/THWN, 75 DEGREE CELSIUS. ALL CONDUCTORS SHALL BE STRANDED, SOFT DRAWN ANNEALED COPPER WIRE 98% CONDUCTIVITY, BEARING THE UL LABEL. SYSTEM VOLTAGE SHALL BE IDENTIFIED AS TO VOLTAGE AND PHASE CONNECTIONS BY MEANS OF COLOR IMPREGNATED INSULATION OR APPROVED COLORED MARKING TAPE.
25. THERE SHALL BE NO MULTI-WIRE HOMERUNS.
26. REFER TO THE SINGLE LINE DIAGRAM FOR THE CONDUIT AND CONDUCTOR SIZES HOMERUN TO ELECTRICAL PANELS. CONDUIT RUNS MAY NOT BE SHOWN ON DRAWINGS, BUT ARE PART OF THIS CONTRACT.
27. ALL CONDUIT RUNS INCLUDING STRAIGHT FEEDER AND BRANCH CIRCUIT SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS. LOCATIONS SHALL BE DETERMINED IN THE FIELD OR AS INDICATED ON THE DRAWINGS.
28. FINAL CONNECTIONS TO ALL EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS, AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIAL AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.

GENERAL NOTES

- 29. DO NOT COMBINE DIFFERENT SYSTEM VOLTAGES IN SAME CONDUIT (EG., 120/208V WITH 277/480V), UNLESS IS APPROVED BY UNIVERSITY OR SHOWN ON DRAWINGS.
30. ELECTRICAL SYSTEMS SHALL BE INSTALLED FOR FINAL INSPECTIONS. PROVIDE NEUTRAL TEST AND PROOF OF TORQUE DURING FINAL INSPECTION FOR ALL UNITS. FINAL TERMINATIONS OF CONDUCTORS TO ELECTRICAL EQUIPMENT AND DEVICES SHALL BE TORQUE WRENCH TIGHTENED TO THE MANUFACTURER'S RECOMMENDED SPECIFICATION, NO EXCEPTION.
31. CIRCUIT BREAKER TERMINALS IN SWITCHBOARDS AND LOAD CENTER SHALL BE UL LISTED AND APPROVED FOR USE WITH COPPER 75 DEGREE CELSIUS CONDUCTORS.
32. SIZES OF BREAKERS, SWITCHES, FUSES AND FEEDERS ARE BASED ON DESIGNED EQUIPMENT SIZES. THESE SIZES SHALL BE ADJUSTED TO SATISFY REQUIREMENTS OF ACTUAL INSTALLED OR SUBSTITUTE EQUIPMENT. UP SIZING OR DOWNSIZING OF FEEDERS SHALL BE PROVIDED WITHOUT ADDITIONAL COST TO THE UNIVERSITY.
33. AS REQUIRED ALL OVERSIZED FEEDERS THAT WERE ADJUSTED IN SIZE TO COMPENSATE FOR VOLTAGE DROP SHALL BE PROVIDED WITH ADAPTER LUGS OR SPLICE BOX. ADAPTER LUGS SHALL BE PROVIDED IF SIZE IS AVAILABLE, OTHERWISE PROVIDE CABLE SPLICES IN THE SPLICE BOX TO REDUCE CABLES TO THE MAXIMUM SIZE THAT THE BREAKER LUGS CAN ACCOMMODATE.
34. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAW-CUTTING, TRENCHING, BACKFILLING, COMPACTION AND PATCHING OF CONCRETE AND ASPHALT AS REQUIRED TO COMPLETE WORK. USE EXTREME CAUTION WHEN TRENCHING NEAR EXISTING UNDERGROUND UTILITY LINE. CONTRACTOR SHALL PROVIDE ALL REQUIRED CUTTING, PATCHING, PAINTING, AND REPAIRS NECESSARY TO REPAIR ANY DAMAGED SURFACES TO EQUAL OR BETTER THAN ORIGINAL CONDITIONS EXISTING AT THE START OF WORK.
35. RIGID GALVANIZED STEEL CONDUIT SHALL BE USED FOR ALL EXTERIOR APPLICATIONS, ALL CONDUITS LARGER THAN 2" TRADE DIAMETER, AND ALL INDOOR CONDUITS BELOW EIGHT (8) FEET FROM FINISHED FLOOR.
36. ELECTRICAL METALLIC TUBING (EMT) IS ONLY ALLOWED IN INTERIOR LOCATION ABOVE EIGHT (8) FEET FROM FINISHED FLOOR AND WHEN ENTERING A PANEL FROM ABOVE.
37. CONNECTIONS TO VIBRATING EQUIPMENT (MOTOR, TRANSFORMER ENCLOSURE, ETC.) AND SEISMIC SEPARATIONS SHALL BE PROVIDED WITH LIQUID-TIGHT FLEXIBLE STEEL CONDUIT WITH WATER-TIGHT CONNECTORS. MAXIMUM LENGTH OF CONDUIT SHALL BE SIX FEET, UNLESS OTHERWISE NOTED.
38. POLYVINYL CHLORIDE (PVC) SCHEDULE 40 MAY BE INSTALLED BENEATH SLAB AND UNDERGROUND INSTALLATION. INSTALL PVC COATED RIGID STEEL CONDUIT FOR TRANSITION FROM UNDERGROUND TO ABOVE GRADE INSTALLATION.
39. CONTRACTOR SHALL PROVIDE TERMINATIONS FOR ALL DATA/VOICE CABLES INDICATED AT OUTLET LOCATIONS INDICATED ON DRAWINGS. WHERE DATA/VOICE SYSTEMS ARE ALTERED, COMPLY WITH CSU TELECOMMUNICATION INFRASTRUCTURE PLANNING STANDARDS (TIPS) FOURTH EDITION, EFFECTIVE FEBRUARY 2014.
40. CONTRACTOR SHALL PROVIDE AND INSTALL ACCESS PANELS IN NON-ACCESSIBLE CEILINGS WHERE REQUIRED TO ACCESS ELECTRICAL EQUIPMENT IN CEILING SPACE. ACCESS DOORS SHALL HAVE FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.
41. ALL FIRE LIFE SAFETY EQUIPMENT, SUCH AS FIRE ALARM CONTROL PANEL AND REMOTE POWER SUPPLIES SHALL BE PROVIDED WITH DEDICATED CIRCUITS. IDENTIFY CIRCUIT DESIGNATION AND PROVIDE PERMANENT LABELING, "FIRE ALARM CIRCUIT" ON ELECTRICAL PANEL. PROVIDE LOCKABLE CIRCUIT BREAKER. CIRCUIT BREAKER SHALL BE RED IN COLOR.
42. CONTROL CONDUIT FOR ENERGY/BUILDING MANAGEMENT SYSTEM (E/BMS) SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
43. ROUTE CONDUIT PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT PIPING. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.
44. WHEN A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, WIRE, EQUIPMENT, CIRCUIT BREAKERS, ETC., ARISES ON THE DRAWINGS OR SPECIFICATIONS, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL REQUIRED BY THE MOST STRINGENT CONDITIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS TO PROVIDE A COMPLETE AND OPERABLE SYSTEM, OR AS DIRECTED BY UNIVERSITY.
45. FOR SMALL AC MOTORS NOT HAVING BUILT-IN THERMAL OVERLOAD PROTECTION, PROVIDE MANUAL MOTOR STARTERS WITH OVERLOAD HEATER ELEMENTS SIZED TO PER MANUFACTURER'S RECOMMENDATION. FOR SMALL AC MOTORS WITH BUILT-IN THERMAL OVERLOAD PROTECTION, PROVIDE A HORSEPOWER RATED TOGGLE DISCONNECT SWITCH.
46. DISCONNECT SAFETY SWITCHES SHALL BE HEAVY DUTY AND BE RATED FOR THE NUMBER OF POLES, VOLTAGE, CURRENT AND HORSEPOWER RATING AS REQUIRED. PROVIDE FUSE PROTECTION BASED ON THE MOTOR NAMEPLATE RATINGS.
47. PROVIDE PERMANENT IDENTIFICATION (NAMEPLATES) FOR ALL ELECTRICAL PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, DISCONNECT SWITCHES, TRANSFORMERS, TERMINAL CABINETS, ETC.
48. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY TYPE OF CEILING SYSTEMS AND TO FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN SUBJECT CEILING. PROVIDE ALL NECESSARY MOUNTING KIT/HARDWARE TO PROVIDE A COMPLETE WORKING LIGHTING SYSTEM.
49. ALL FINAL ELECTRICAL CONNECTIONS TO UNIVERSITY FURNISHED EQUIPMENT SHALL BE MADE BY THE ELECTRICAL CONTRACTOR.
50. ALL SPLICES AND TERMINALS SHALL BE COMPRESSION TYPE, OF SEAMLESS PURE COPPER, TIN PLATED, LONG BARREL, INSPECTION WINDOW, TERMINALS WITH TWO-HOLE PAD (WITH NEMA DRILLING). CLEAN ALL SURFACES AND INSTALL WITH OXIDE INHIBITING COMPOUND BURNDY PENETROX-E OR EQUAL. APPLY COMPOUND BETWEEN BUS BAR AND LUG PAD AND BETWEEN CONDUCTOR AND LUG BARREL. INSTALL COMPRESSION CONNECTORS WITH A FULLY CIRCUMFERENTIAL COMPRESSION DIE BURNDY HYPRESS OR EQUAL.
51. LABEL ALL CONDUIT WHERE IT BEGINS, AND WHERE IT TERMINATES INTO A BOX, PANEL, DEVICE, LOAD, OR DISCONNECT. CONDUIT SHALL BE LABELED EVERY 30 FEET OR LESS. CONDUIT SHALL BE LABELED WHERE IT PENETRATES ANY WALL OR FLOOR. LABEL SHALL BE PERMANENT PRINTED LABELS (DESCRIBING SOURCE, CIRCUIT, AND LOAD) LEGIBLE FROM FLOOR WHERE POSSIBLE (STANDING POSITION).
52. CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT OR INSTALLATION METHODS.
53. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHILE TRENCHING FOR NEW UTILITIES. THESE DRAWINGS HAVE BEEN COMPILED FROM RECORD DOCUMENTS, FIELD SURVEYS AND OTHER AVAILABLE INFORMATION. NOT ALL UTILITIES AND/OR OBSTRUCTIONS ARE SHOWN. CONTRACTOR SHALL VERIFY THE LOCATIONS OF UTILITIES PRIOR TO EXCAVATION, EITHER BY HAND EXCAVATION OR WITH THE ASSISTANCE OF AN UNDERGROUND UTILITY LOCATION SERVICE. CONTRACTOR TO FOLLOW PROCEDURES PER USA NORTH'S CALIFORNIA EXCAVATION MANUAL, AND CALL 811 (HTTP://USANORTH811.ORG) PRIOR TO ANY DIGGING. CONTRACTOR SHALL HIRE A LOCATING SERVICE AND COORDINATE WORK WITH THE UNIVERSITY.
54. ASBESTOS-CEMENT PIPE (ACP): ACP MAY BE PRESENT THROUGHOUT THE SITE. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES WHEN ACP IS ENCOUNTERED TO AVOID DISTURBING EXISTING INSTALLATIONS.
55. ALL LANDSCAPING AND HARDSCAPING DAMAGED AS A RESULT OF UNDERGROUND WORK SHALL BE RESTORED TO AS-FOUND CONDITION. SAW CUTTING OF HARDSCAPE SHALL BE FROM SCOREMARK TO SCOREMARK. REPAIRS SHALL BE MADE WITH #4 DOWELS @ 12" O.C., 4-1/2" MIN. EMBED IN 6000 PSI EPOXY.
56. PROVIDE OCCUPANT AND PEDESTRIAN ACCESS & EGRESS AT ALL TIMES. PROVIDE BARRICADES, WARNING SIGNS, TEMPORARY BRIDGES AND TEMPORARY PATH OF TRAVEL TO PUBLIC RIGHT-OF-WAY & CONSTRUCTION SIGNS AS REQUIRED TO FULFILL THIS REQUIREMENT.
57. CONTRACTOR TO FOLLOW PROCEDURES PER USA NORTH'S CALIFORNIA EXCAVATION MANUAL, AND CALL 811 (HTTP://USANORTH811.ORG) PRIOR TO DIGGING. CONTRACTOR IS RESPONSIBLE TO PROVIDE PRIVATE SERVICE FOR LOCATION OF UNDERGROUND SERVICES. PROVIDE ACCESS REQUEST PRIOR TO DISRUPTION OF ANY SERVICE, OR ACCESS TO ANY SENSITIVE/OCCUPIED AREA.
58. CONTRACTOR SHALL POTHOLE A MINIMUM OF 10 FEET IN ADVANCE OF TRENCHING/EXCAVATING ACTIVITIES TO LOCATE AND PROTECT EXISTING UTILITIES AND TO ALLOW FOR ANY ALTERATION OF DIRECTION OR ELEVATION OF TRENCHING. POTHOLING ACTIVITIES SHALL BE CONSIDERED A PORTION OF THE ACTIVE HEADING LENGTH.
59. IRRIGATION LATERALS, PARKING LOT LIGHTING AND OTHER SYSTEMS NOT SHOWN. VERIFY CONNECTIONS PRIOR TO ANY EXCAVATION. REPAIR OR REPLACE IMMEDIATELY WHERE DAMAGED TO PROVIDE UNINTERRUPTED SERVICE. NOTIFY THE UNIVERSITY IMMEDIATELY OF ANY UTILITIES ENCOUNTERED THAT ARE NOT SHOWN ON THESE DRAWINGS. MAINTAIN ALL UTILITIES IN OPERATING CONDITION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CROSSINGS ON NEW UTILITIES WITH THAT OF EXISTING. NOTIFY THE UNIVERSITY IMMEDIATELY OF ANY DEVIATIONS OR DISCREPANCIES FROM THIS PLAN.
60. CONTRACTOR TO SEAL ALL UNDERGROUND CORE DRILL PENETRATIONS PER ELECTRICAL DETAIL.
61. FIRE ALARM SYSTEM DEVICES, CONDUITS, WIRES, AND JUNCTION BOXES TO BE INSTALLED OR REMOVED BY C-10 LICENSED CONTRACTOR ONLY.



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This project has demonstrated conformance with applicable codes and standards established by state and University policy. Based on this determination, the project is deemed to be in compliance with applicable laws and regulations. APPROVED FOR CONSTRUCTION Michael Fisher Campus Deputy Building Official Humboldt State University The California State University Date: Permit #: Other approvals as applicable SFM Approval: DSA Access Approval: Science Peer Review: Mod & Peer Review:

CALIFORNIA STATE FIRE MARSHAL APPROVED Approval of this plan does not authorize or approve any provision or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times. Reviewed by: Date:



HUMBOLDT STATE UNIVERSITY

1 HARPST STREET ARCATA, CA 95521

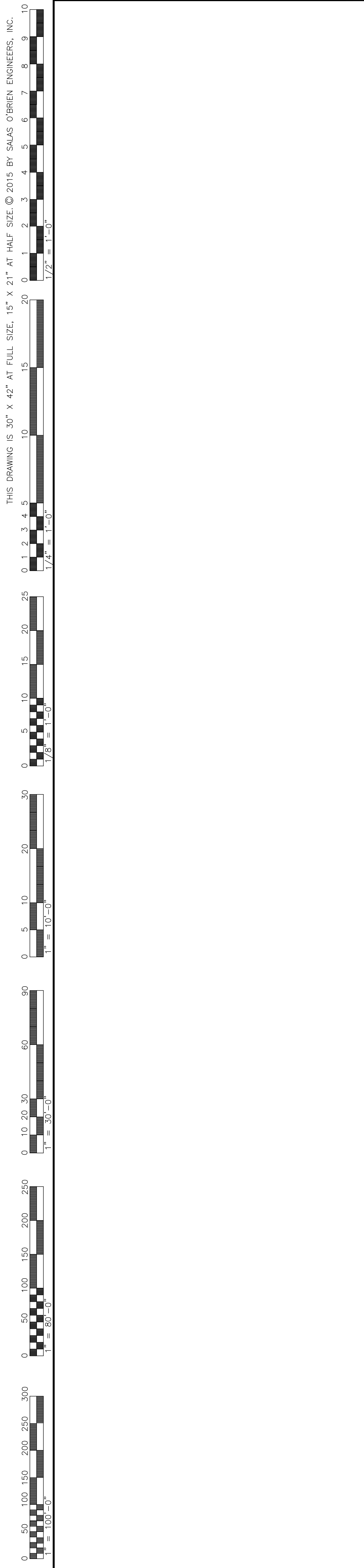
STUDENT HEALTH CENTER EMERGENCY GENERATOR

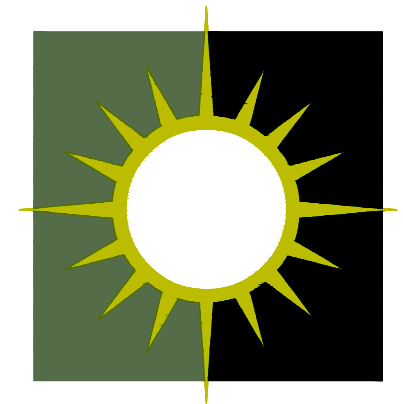
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SOBE PROJECT NO: 2000589 DATE: 08/04/20 DRAWN BY: CHECKED BY: APPROVED BY:

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

E-0.2 SHEET OF





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This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination, the following are:
'APPROVED FOR CONSTRUCTION'
 Michael Fisher
 Campus Deputy Building Official
 Humboldt State University
 The California State University
 Date: _____
 Permit #: _____
 (When applicable, as applicable)
 SFM Approval: _____
 DSA Approval: _____
 Science Peer Review: _____
 Mock Peer Review: _____
CALIFORNIA STATE FIRE MARSHAL APPROVED
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.
 Reviewed by: _____
 Date: _____



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**STUDENT HEALTH CENTER
 EMERGENCY GENERATOR**

ISSUE	MARK	DATE	DESCRIPTION
		05/19/20	PROGRESS SET
		08/05/20	100% CD

SOBE PROJECT NO: 2000589
 DATE: 08/04/20
 DRAWN BY:
 CHECKED BY:
 APPROVED BY:

SHEET TITLE
**STUDENT HEALTH CENTER
 PARTIAL BASEMENT PLAN
 AND FIRST FLOOR PLAN**

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

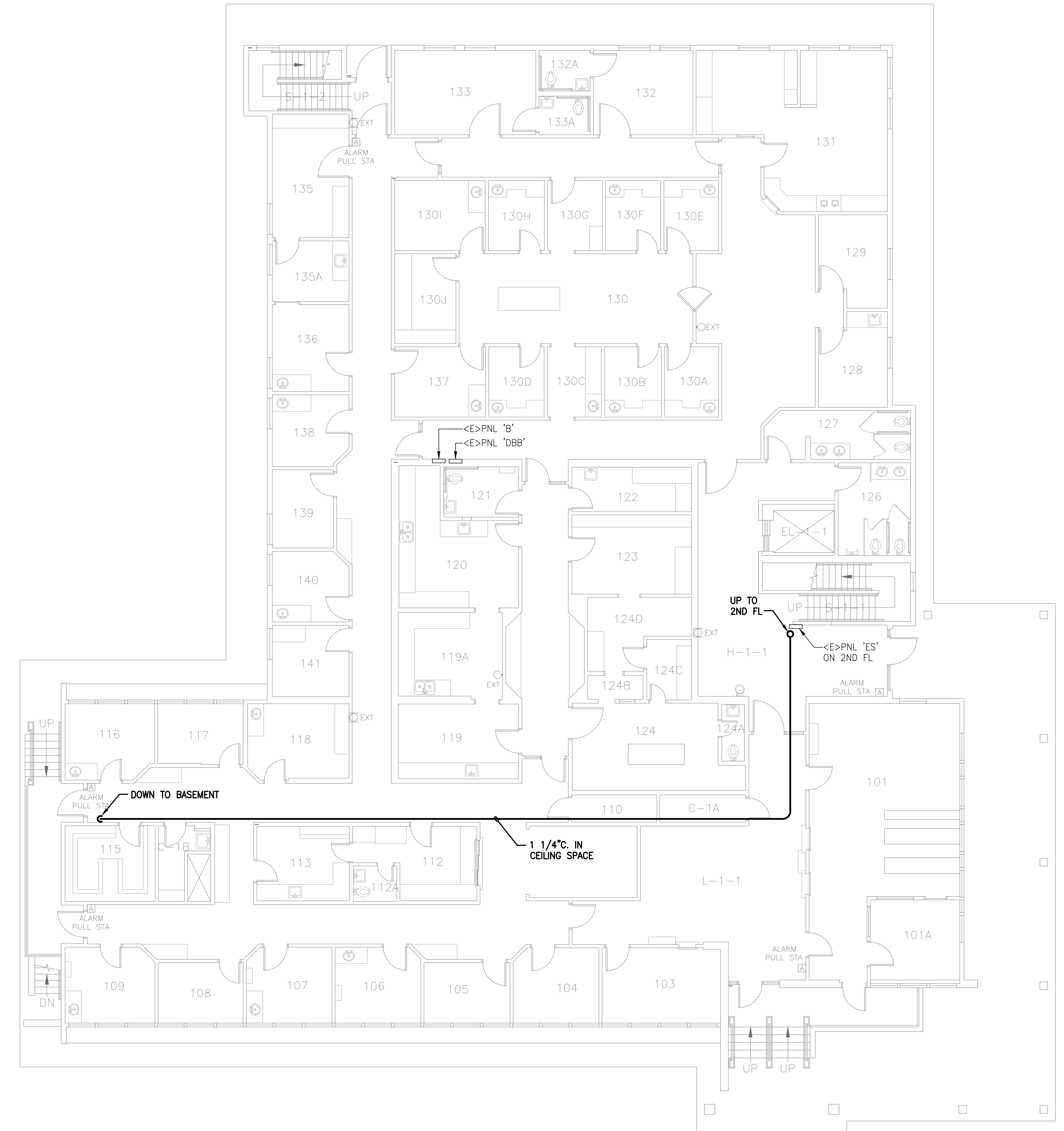
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GENERAL SHEET NOTES

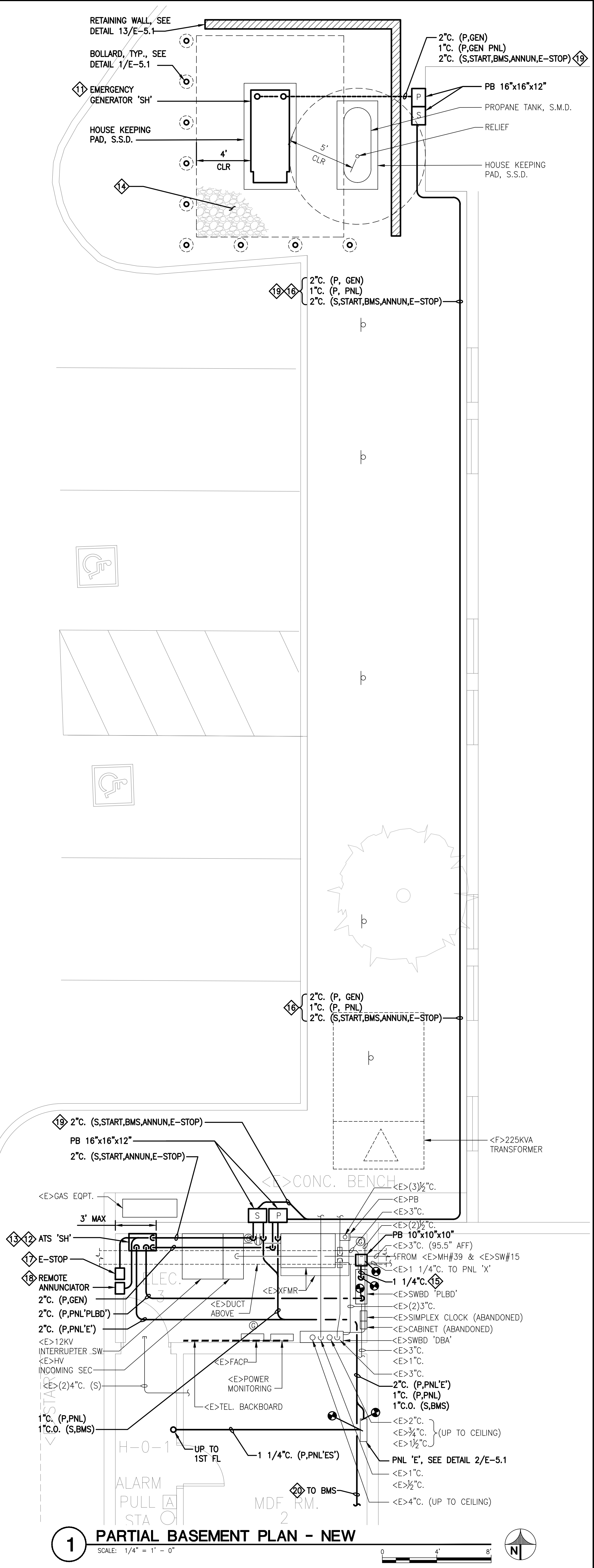
- PREPARE A SPECIAL METHOD OF PROCEDURE AND COORDINATE THE SHUTDOWN OF ANY DEVICE WITH FACILITIES ENGINEERS. SHUTDOWN MUST BE SCHEDULED. PROVIDE TEMPORARY POWER AS NEEDED.
- BEFORE RUNNING ANY FEEDERS TO PANELS BEING RE-CIRCUITED CONFIRM FEEDER SIZE AND ARRANGEMENT (1PHASE, 3 PHASE, 3W, 4W). REPORT DISCREPANCIES TO ENGINEER PRIOR TO CHANGING FEEDERS CALLED FOR ON DRAWINGS.
- DEVICE SHOWN AS EXISTING SHALL REMAIN CONNECTED UNLESS OTHERWISE NOTED. WIRING DEVICES THAT MAY BE AFFECTED BY DEMOLITION AND NEW WORK SHALL BE RECONNECTED.
- PATCH WALL, ROOF PENETRATION, CEILING AND ANY OTHER OPENINGS LEFT BY DEMO EQUIPMENT/CONDUITS, ETC. MATCH ADJACENT CONSTRUCTION AND FINISH.
- FIRE SEAL ALL RATED PENETRATIONS.
- DISCONNECT TEMPORARY POWER AND EQUIPMENT AFTER ALL WORK IS DONE.
- CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND ESTIMATING THE WORK INVOLVED IN THE EQUIPMENT INSTALLATION PRIOR TO BIDDING. CAREFULLY INVESTIGATE AREA TO DETERMINE IF SPECIAL INSTALLATION PROVISIONS WILL BE NEEDED SUCH AS DISASSEMBLING OF EQUIPMENT, USE OF CRANES, ETC.
- CONTRACTOR SHALL HIRE THIRD PARTY LOCATING SERVICE TO LOCATE ALL EXISTING UTILITIES IN AREAS OF WORK PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHILE TRENCHING FOR NEW UTILITIES. THESE DRAWINGS HAVE BEEN COMPILED FROM RECORD DOCUMENTS, FIELD SURVEYS AND OTHER AVAILABLE INFORMATION. NOT ALL UTILITIES AND/OR OBSTRUCTIONS ARE SHOWN. CONTRACTOR SHALL VERIFY THE LOCATIONS OF UTILITIES PRIOR TO EXCAVATION, EITHER BY HAND EXCAVATION OR WITH THE ASSISTANCE OF A CERTIFIED UNDERGROUND UTILITY LOCATION SERVICE.
- REFER TO SINGLE LINE DIAGRAM FOR CONDUIT SIZES, UON.
- RELOCATE ANY IRRIGATION LINES AS REQUIRED.

REFERENCE SHEET NOTES

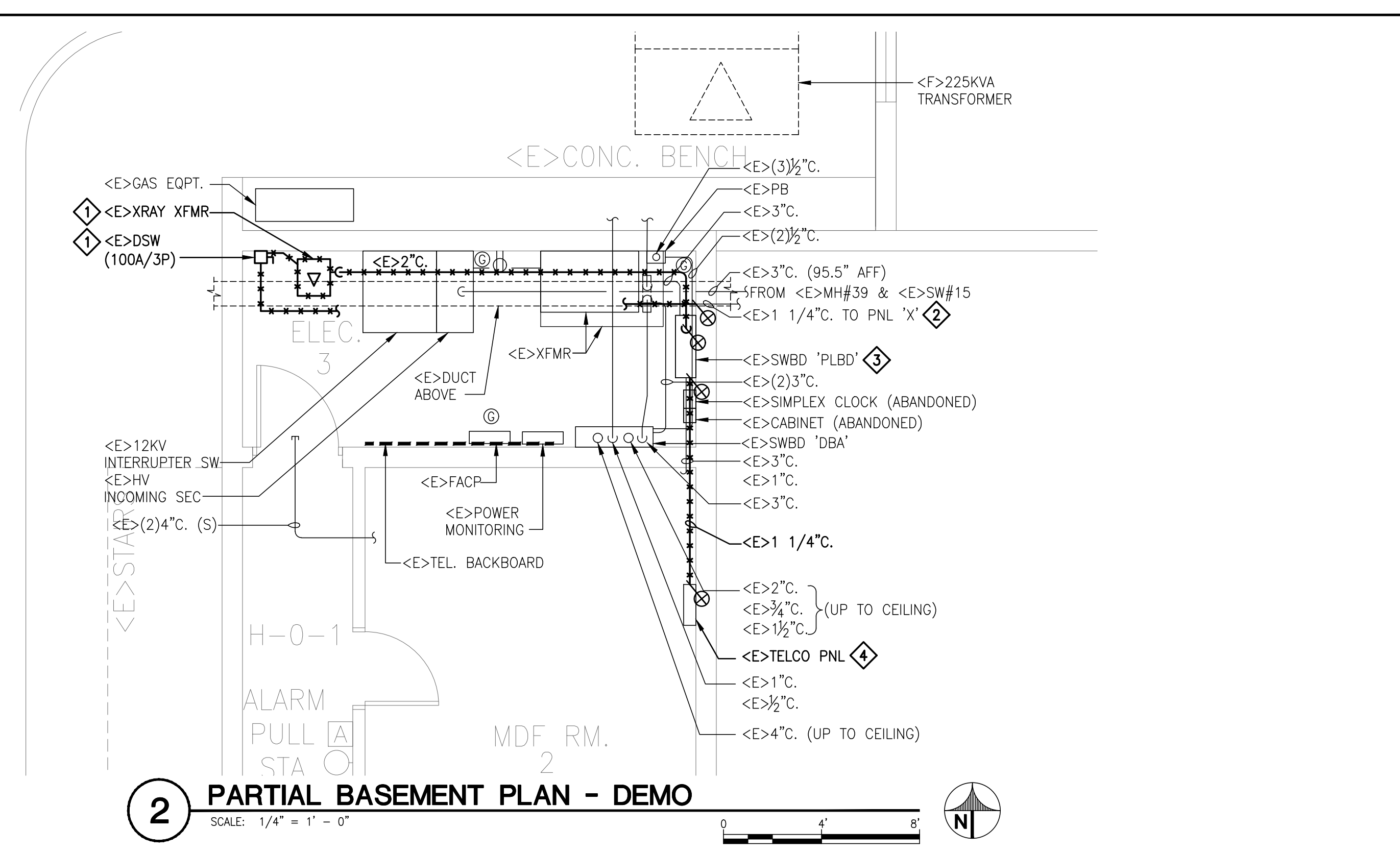
- DEMCO:**
- DEMOLISH EXISTING EQUIPMENT.
 - EXISTING CONDUIT AND WIRES TO BE REUSED.
 - EXISTING PANEL TO BE MODIFIED. REFER TO SINGLE LINE DIAGRAM.
 - RENAME EXISTING PANEL, REFER TO NEW WORK.
- NEW:**
- FURNISH AND INSTALL 20 KW, 208/120V, 3-PHASE, DUAL FUEL (NATURAL GAS AND PROPANE) GENERATOR. GENERATOR SHALL BE NFPA 110 LEVEL 1 TYPE 10 AND AT THE TIME OF INSTALLATION, THE CONTRACTOR SHALL TEST THE GENERATOR TO ENSURE COMPLIANCE. THE GENERATOR SHALL BE INSTALLED WITH ALL OF THE LEVEL 1 REQUIREMENTS INCLUDING ALL VISUAL AND AUDIBLE INDICATORS, 24HRS BATT, RECHARGE TIME, ETC. GENERATOR DESIGN BASED ON CUMMINS #C20N6. REFER TO SITE PLAN FOR ADDITIONAL REQUIREMENTS.
 - ROUTE START LOOP TO NEW GENERATOR.
 - INSTALL ATS AT MAXIMUM 3'-0" FROM WALL TO LEAVE SPACE FOR FUTURE SWITCHBOARD.
 - EXISTING GROUND SURFACE AREA AROUND EQUIPMENT CLEARANCE TO BE TO BE LEVELLED. REMOVE ALL VEGETATION AND ROOTS AND RECOMPACT SUBGRADE TO 95%. PROVIDE 2" OF GRAVEL OVER SURFACE AND AROUND EQUIPMENT PADS.
 - INTERCEPT AND EXTEND CONDUIT AND WIRES. MATCH EXISTING.
 - ROUTE CONDUITS ON WALL AT BETWEEN 12 TO 24 INCHES ABOVE GROUND.
 - PROVIDE AND INSTALL REMOTE E-STOP. IDENTIFY AND LABEL PER NFPA 110 REQUIREMENTS.
 - PROVIDE AND INSTALL REMOTE ANNUNCIATOR. ANNUNCIATOR SHALL HAVE ALL OF THE REQUIRED VISUAL AND AUDIBLE INDICATORS AND SHUTDOWNS PER NFPA 110 TABLE 5.6.5.2.
 - ROUTE (2) #12 FOR START LOOP, (2) #12 FOR REMOTE ANNUNCIATOR, (2) #12 FOR E-STOP, AND PULL ROPE ONLY FOR BMS CONNECTION (WIRING TO BE INSTALLED BY CONTROLS CONTRACTOR).
 - VERIFY IN FIELD EXACT LOCATION OF BMS CONTROLLER.



3 FIRST FLOOR PLAN
 SCALE: 1/8" = 1' - 0"



1 PARTIAL BASEMENT PLAN - NEW
 SCALE: 1/4" = 1' - 0"



2 PARTIAL BASEMENT PLAN - DEMO
 SCALE: 1/4" = 1' - 0"

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



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'APPROVED FOR CONSTRUCTION'

Michael Fisher
Campus Deputy Building Official
Humboldt State University
The California State University

Date: _____
Permit #: _____
(Other approvals as applicable)
SFM Approval: _____
DSD Access Approval: _____
Science Peer Review: _____
Mock Pipe Review: _____

CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.

Reviewed by: _____
Date: _____



HUMBOLDT STATE UNIVERSITY

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STUDENT HEALTH CENTER EMERGENCY GENERATOR

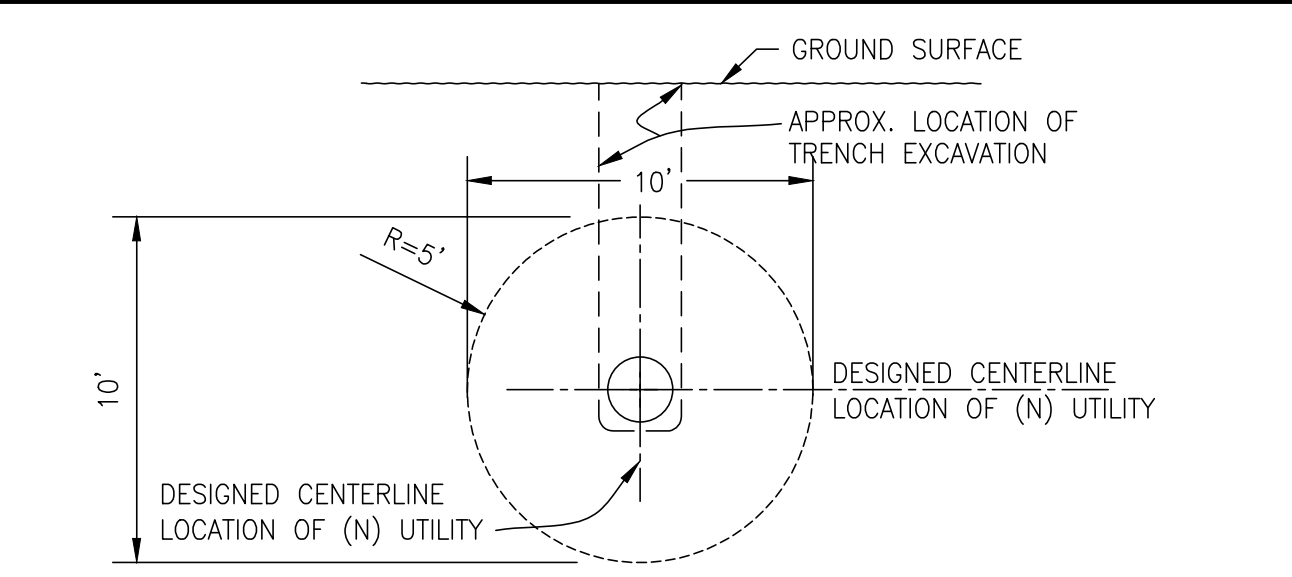
ISSUE	MARK	DATE	DESCRIPTION
		05/19/20	PROGRESS SET
		08/05/20	100% CD

SOBE PROJECT NO: 2000589
DATE: 08/04/20
DRAWN BY:
CHECKED BY:
APPROVED BY:

SHEET TITLE
ELECTRICAL DETAILS

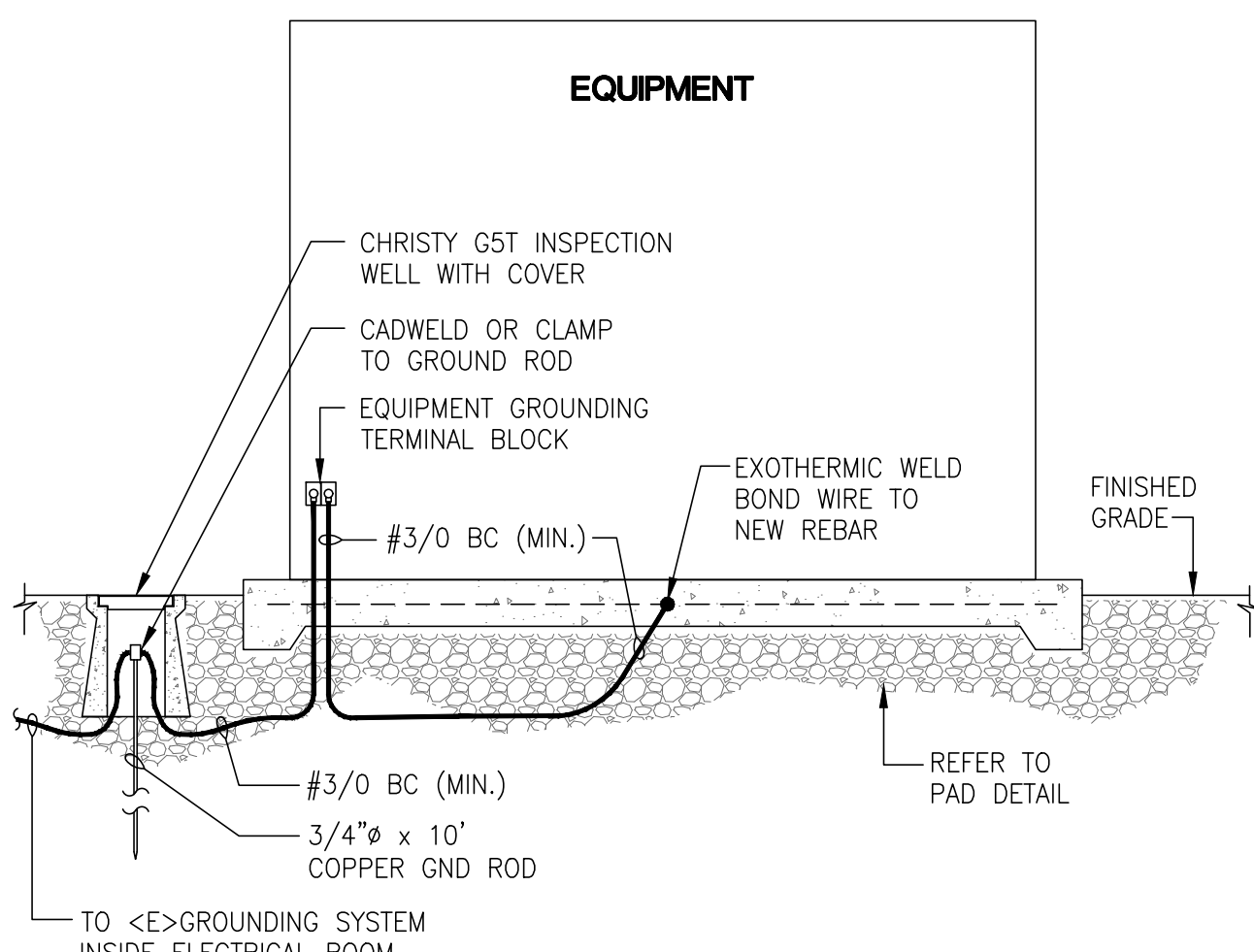
SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

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SHEET - OF -

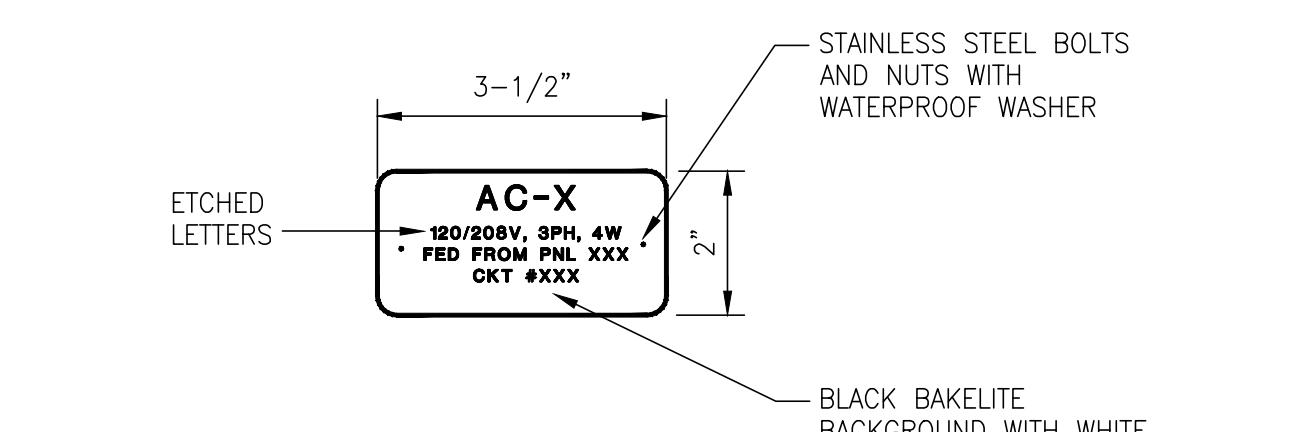


4 UTILITY ADJUSTMENT CRITERIA
SCALE: N.T.S.

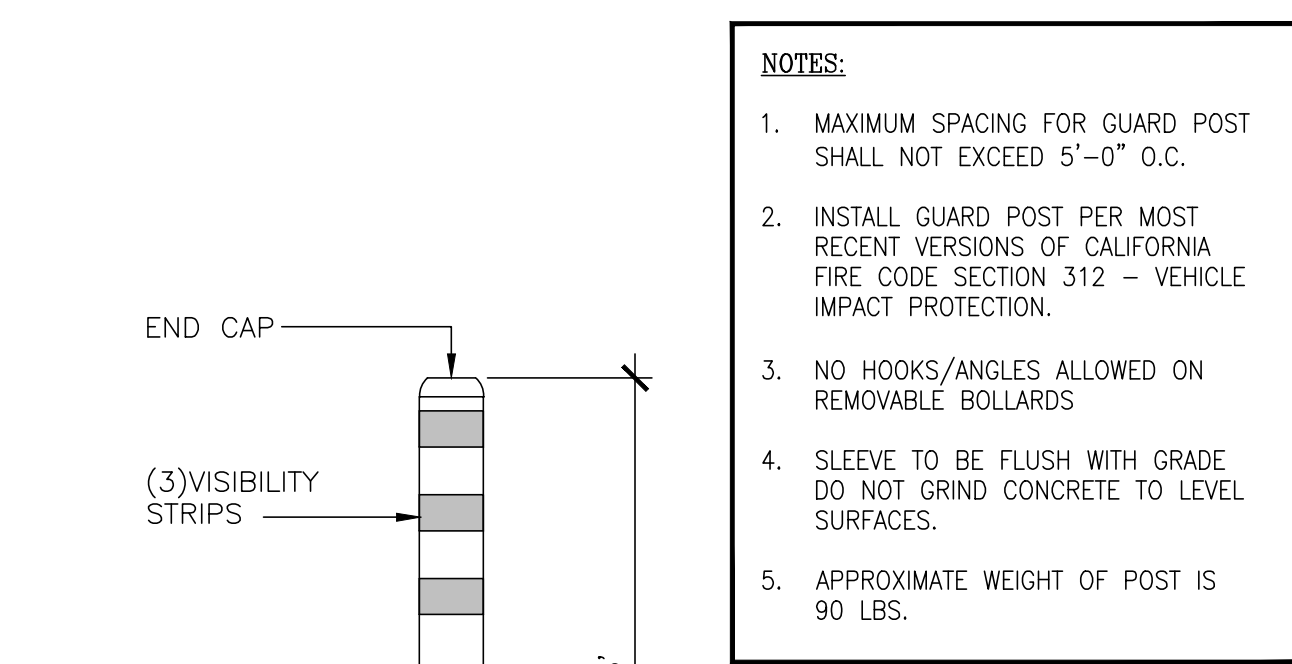
NOTES:
1. ANY FIELD ADJUSTMENTS TO THE PROPOSED LOCATION OF (N) UTILITIES WITHIN A 5 FOOT RADIUS OF THE DESIGN CENTERLINE LOCATION SHALL BE DONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL PROPOSED ADJUSTMENTS SHALL BE SUBJECT TO PRIOR APPROVAL OF THE OWNER. SHOULD THE OWNER AGREE THAT IT IS NECESSARY TO ADJUST THE DESIGN LOCATION OF THE (N) UTILITY TO A POSITION OUTSIDE THE ABOVE 5 FOOT RADIUS, SUCH ADJUSTMENT SHALL BE SUBJECT TO REVIEW AS AN ITEM OF EXTRA EXPENSE OR CREDIT.
2. IF IT IS NECESSARY TO RELOCATE (E) UTILITIES IN ORDER TO ALLOW THE (N) UTILITY TO BE INSTALLED WITHIN A 5 FOOT RADIUS OF ITS DESIGNED CENTERLINE, THEN SUCH RELOCATION OF (E) UTILITIES SHALL BE PAID FOR AS AN ITEM OF EXTRA EXPENSE BY THE CONTRACTOR. ANY SUCH RELOCATION SHALL BE SUBJECT TO PRIOR APPROVAL OF THE OWNER.
3. IN AREAS WHERE SHORING IS NOT REQUIRED AS PER SPECIFICATIONS, THE MAXIMUM DEPTH OF TRENCHING TO AVOID OBSTACLES WITHOUT ADDITIONAL COST SHALL BE 5' BELOW GRADE. IN AREAS WHERE SHORING IS REQUIRED TO MEET DESIGN GRADE, THE LINE MAY BE ADJUSTED AN ADDITIONAL 5' BELOW THAT SHOWN WITH NO INCREASE IN COST.



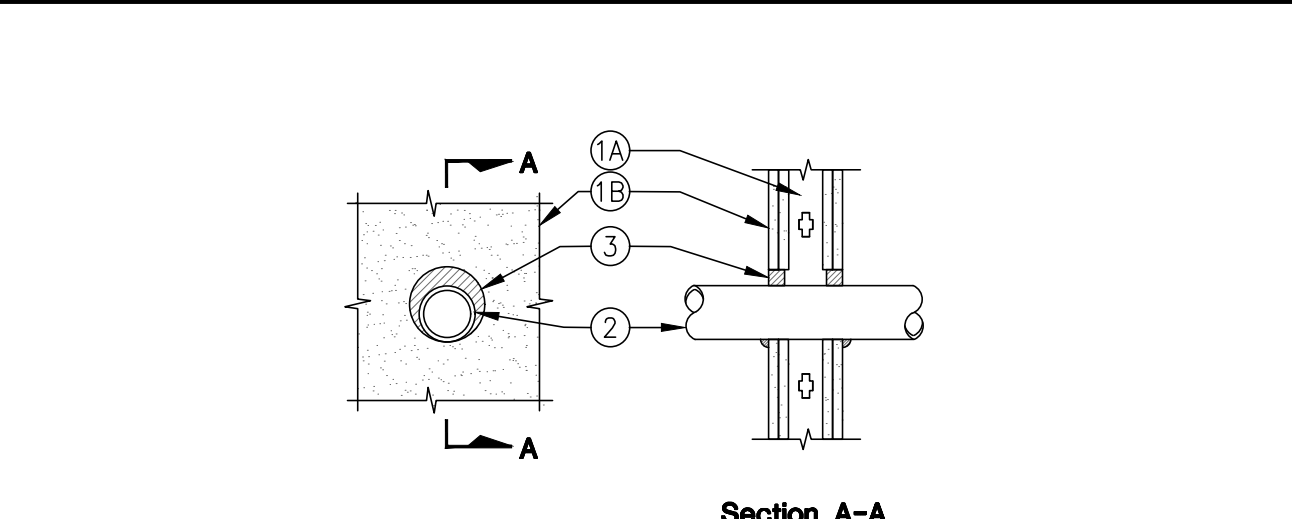
3 EQUIPMENT GROUNDING SECTION ON NEW PAD
SCALE: N.T.S.



2 ELECTRICAL EQUIPMENT LABELING
SCALE: N.T.S.



1 REMOVABLE BOLLARD AT ELECTRICAL PAD
SCALE: N.T.S.



System No. W-L-1098
F Rating - 1, 2, 3 & 4 Hr (See Item 1)
T Rating - 0 & 1/4 Hr (See Item 2)

① Wall Assembly - The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
B. Wallboard, Gypsum* - Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 25-3/8 in.
The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

② Through Penetrants - One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min 0 (point contact) in. to max 1-3/8 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

- A. Steel Pipe - The following types and sizes of steel pipes may be used:
1. Nom 4 in. diam (or smaller) Schedule 7 (or heavier) steel pipe.
2. Nom 8 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
3. Nom 10 in. diam (or smaller) Schedule 20 (or heavier) steel pipe.
4. Nom 24 in. diam (or smaller) Schedule 40 (or heavier) steel pipe.

B. Iron Pipe - Nom 24 in. diam (or smaller) cast or ductile iron pipe. When iron pipe is used T Rating is 1/4 hr.
When steel or iron pipe is used T Rating is 1/4 hr for nom 4 in. diam (or smaller) and 0 hr for steel or iron pipes greater than nom 4 in. diam.

C. Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing (EMT). When EMT is used T Rating is 1/4 hr.

D. Conduit - Nom 6 in. diam (or smaller) steel conduit. When steel conduit is used T Rating is 1/4 hr.

E. Copper Tubing - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing. When copper tube is used T Rating is 0 hr.

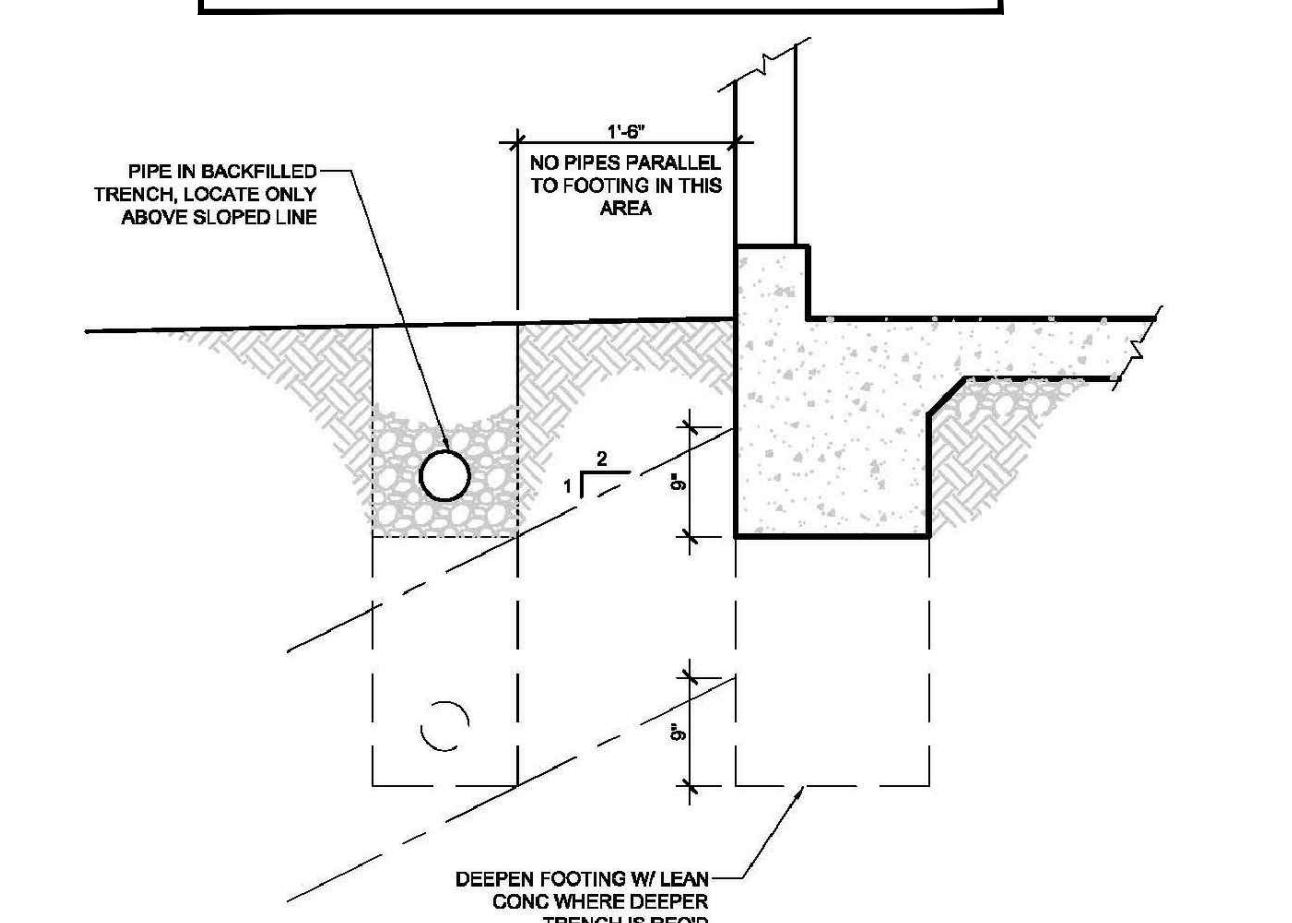
F. Copper Pipe - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe. When copper pipe is used T Rating is 0 hr.

③ Fill, Void or Cavity Material* - Sealant - Min 5/8 in. thickness of fill material for 1 hr rated wall assemblies and 1 in. thickness of fill material for 2, 3 or 4 hr rated wall assemblies, applied within the annulus, flush with both surfaces of wall. At point contact location between penetrant and periphery of opening, a min 1/2 in. diam bead of fill material shall be installed at the wallboard/penetrant interface on both surfaces of wall. Passive Fire Protection Partners** - 4800DW

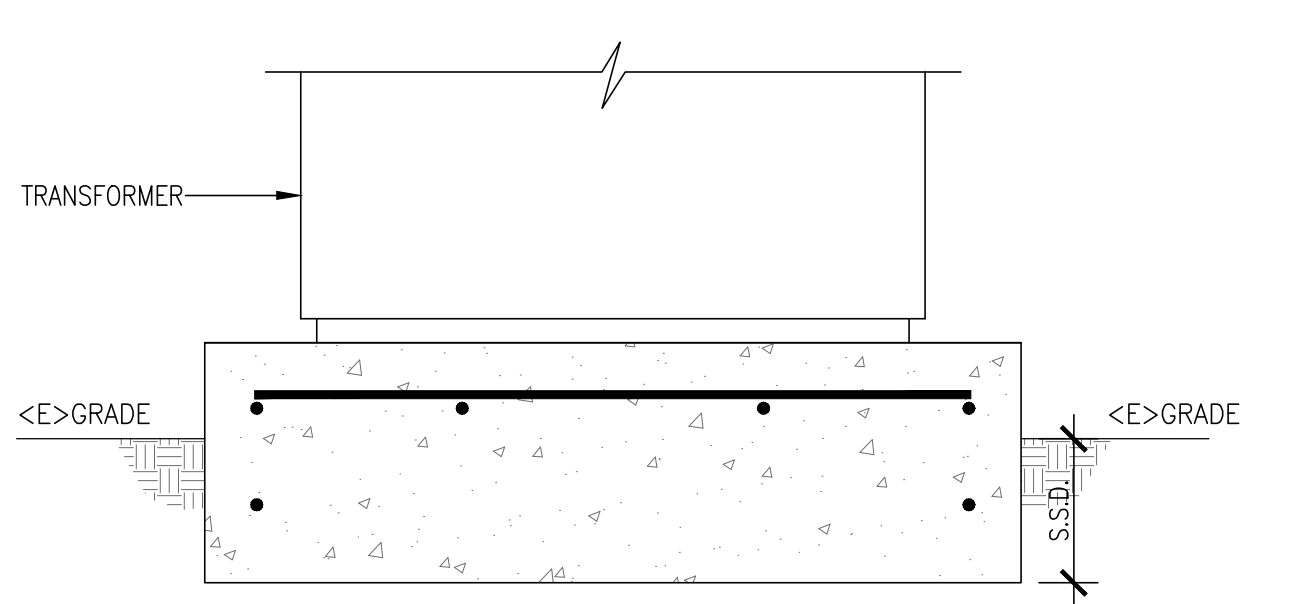
*Bearing the UL Classification Marking
** Formerly Firestop Systems Inc.

7 CONDUIT PENETRATION THROUGH WALL
SCALE: N.T.S.

NOTE:
PIPE TRENCHING IS SHOWN DIAGRAMMATICALLY. REFER TO TRENCH DETAIL FOR ALL REQUIREMENTS INCLUDING TRACEABLE TAPE.

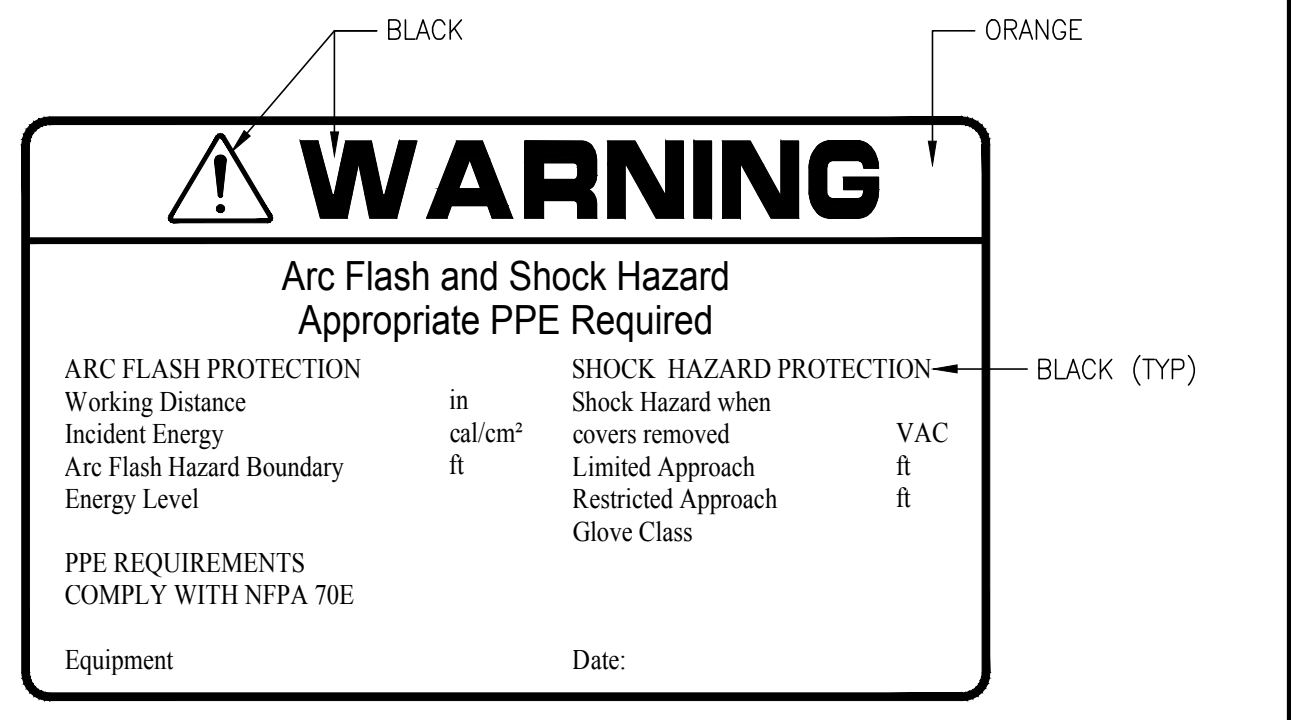


6 TRENCH ADJACENT TO FOOTING
SCALE: N.T.S.

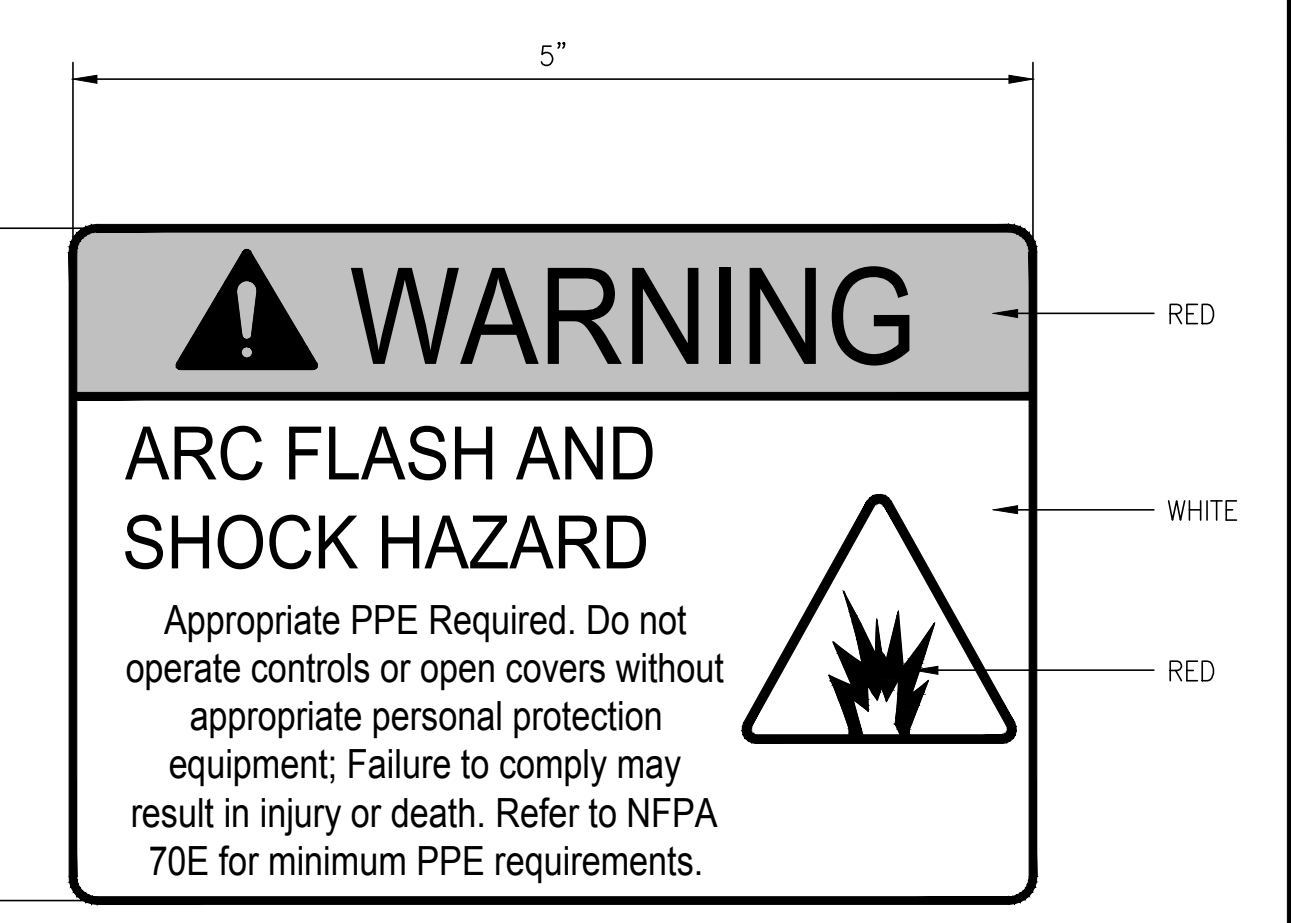


5 HOUSEKEEPING PAD ON EXISTING GRADE
SCALE: N.T.S.

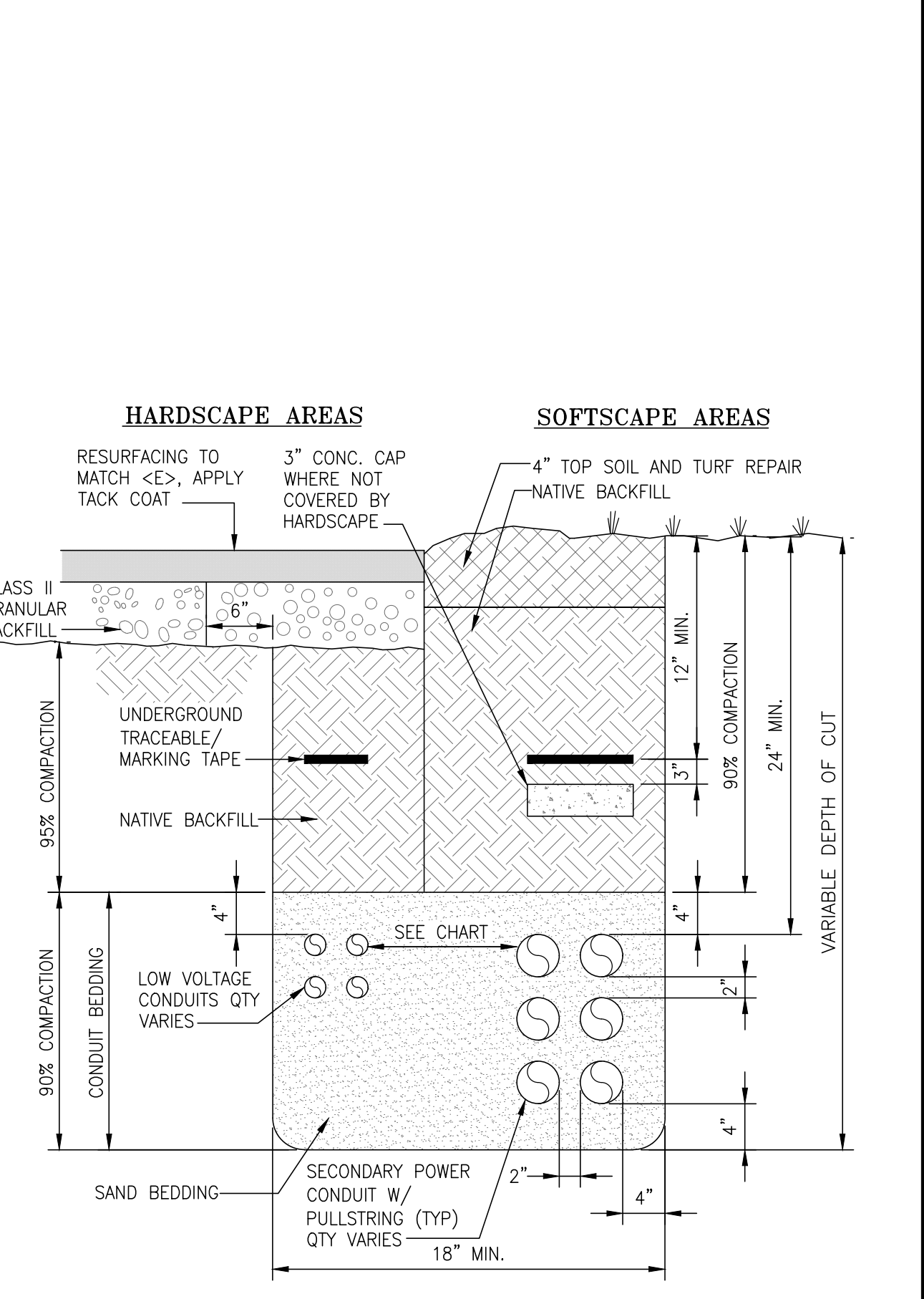
NOTES:
1. SEE STRUCTURAL DRAWINGS FOR ANCHORAGE REBAR, BACKFILL AND ADDITIONAL REQUIREMENTS.
2. CONTRACTOR SHALL ADJUST PAD DIMENSIONS AND CLEARANCES OF THE EQUIPMENT WITH RESPECT TO ACTUAL EQUIPMENT SUPPLIED.



10 ARC FLASH WARNING LABEL
SCALE: N.T.S.



9 SHOCK HAZARD WARNING LABEL
SCALE: N.T.S.



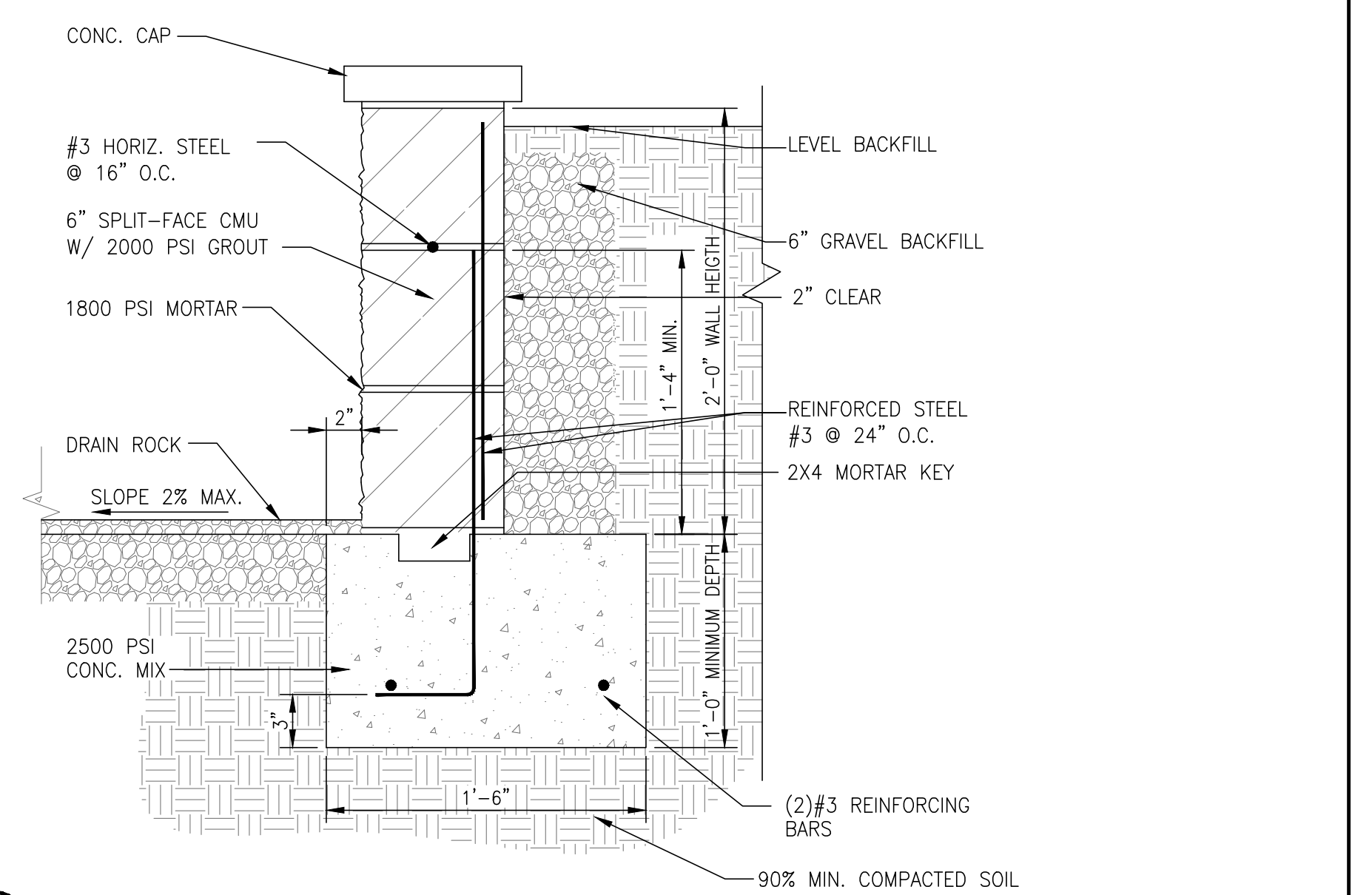
8 CONDUIT TRENCHING DETAIL BELOW 600V
SCALE: N.T.S.

MINIMUM CLEARANCE REQUIREMENTS (INCHES)

	PC	SC	G	TEL	TV	LV	W
PRIMARY CONDUIT (60V-22kV) (PC)	6	6	6	36	36	36	36
SECONDARY POWER CONDUIT (0-600V) (SC)	6	6	6	12	12	12	36
GAS (G)	36	12	12	12	12	12	36
TELEPHONE (TEL)	36	12	12	2	2	2	36
COATV (TV)	36	12	12	2	2	2	36
OTHER LOW VOLTAGE (LV)	36	12	12	2	2	2	36
WET UTILITIES (W)	36	36	36	36	36	36	36

TABLE ONLY APPLIES TO CONDUITS AFTER THE UTILITY POINT OF CONNECTION.

NOTES:
1. UTILITY OWNED AND END-USER CONDUITS AND TRENCH SHALL NOT BE COMBINED.
2. PROVIDE 12" SEPARATION WHEN CROSSING "WET" UTILITIES.
3. ALL DIMENSIONS ARE MINIMUM.



13 2 FT. HIGH RETAINING WALL
SCALE: N.T.S.

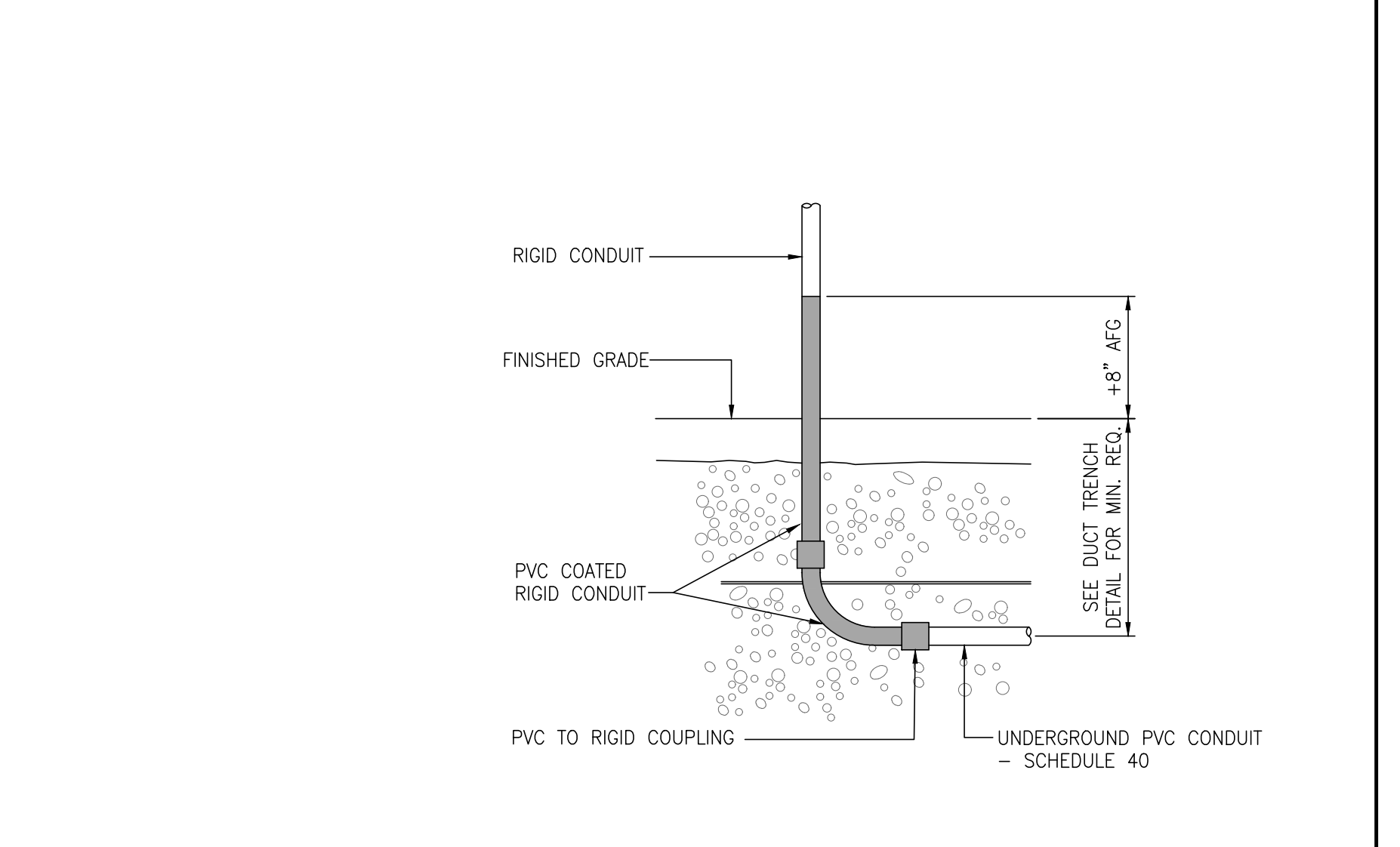
② Through Penetrants - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
A. Steel Pipe - Nom 12 in. diam (or smaller) Schedule ST 40 (or heavier) steel pipe.
B. Iron Pipe - Nom 12 in. diam (or smaller) cast or ductile iron pipe.
C. Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing.
D. Conduit - Nom 6 in. diam (or smaller) steel conduit.
E. Copper Tubing - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
F. Copper Pipe - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
When penetrants larger than 6 in. are used, wall assembly shall not be more than 2 hour fire rated.

③ Pipe Covering* - Max 2 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with built tape supplied with the product. The annular space between the insulated pipe and the edge of the through opening shall be min 0 in. (point contact) to max 1 in.

④ Fill, Void or Cavity Material* - Sealant - Min 5/8 in. thickness of fill material for 1 hr rated wall assemblies and 1 in. thickness of fill material for 2, 3 or 4 hr rated wall assemblies, respectively, applied within the annulus, flush with both surfaces of wall. At the point contact location between pipe covering and wall, a min 1/2 in. diam bead of fill material shall be applied at the concrete/pipe covering interface on both surfaces of wall. Passive Fire Protection Partners** - 4800DW

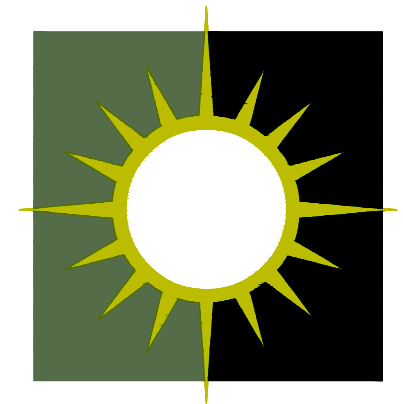
*Bearing the UL Classification Marking
** Formerly Firestop Systems Inc.

12 CONDUIT PENETRATION THROUGH WALL
SCALE: N.T.S.



11 CONDUIT TRANSITION DETAIL
SCALE: N.T.S.

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



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 San Jose, California 95112-2218
 877.725.2755 | 877.925.1477 (f)
 WWW.SALASOBRIEN.COM
 National Strength.
 Local Action.

This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination, the following approvals are:
'APPROVED FOR CONSTRUCTION'
 Michael Fisher
 Campus Deputy Building Official
 Humboldt State University
 The California State University
 Date: _____
 Permit #: _____
 (Other approvals as applicable:
 SFM Approval: _____
 DSH Access Approval: _____
 Science Peer Review: _____
 Mod/Peer Review: _____

CALIFORNIA STATE FIRE MARSHAL APPROVED
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.
 Reviewed by: _____
 Date: _____



HUMBOLDT STATE UNIVERSITY

1 HARPST STREET
 ARCATA, CA 95521

STUDENT HEALTH CENTER
 EMERGENCY GENERATOR

MARK	DATE	DESCRIPTION
	05/19/20	PROGRESS SET
	08/05/20	100% CD

SOBE PROJECT NO: 2000589
 DATE: 08/04/20
 DRAWN BY:
 CHECKED BY:
 APPROVED BY:

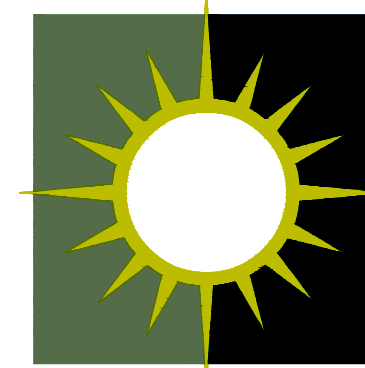
SHEET TITLE
FEEDER AND EQUIPMENT SCHEDULES

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

E-6.1
 SHEET OF

LOW VOLTAGE (800V) FEEDER SCHEDULE							
3-PHASE, 3-WIRE				3-PHASE, 4-WIRE			
SYMBOL	CONDUIT	CONDUCTORS	GROUND	SYMBOL	CONDUIT	CONDUCTORS	GROUND
20G	3/4"C	(3) #12	#12	20NG	3/4"C	(4) #12	#12
30G	3/4"C	(3) #10	#10	30NG	3/4"C	(4) #10	#10
40G	1"C	(3) #8	#10	40NG	1"C	(4) #8	#10
50G	1"C	(3) #6	#10	50NG	1"C	(4) #6	#10
60G	1-1/4"C	(3) #4	#10	60NG	1-1/4"C	(4) #4	#10
70G	1-1/4"C	(3) #4	#8	70NG	1-1/4"C	(4) #4	#8
80G	1-1/2"C	(3) #2	#8	80NG	1-1/2"C	(4) #2	#8
90G	1-1/2"C	(3) #2	#8	90NG	1-1/2"C	(4) #2	#8
100G	2"C	(3) #1	#8	100NG	2"C	(4) #1	#8
125G	2"C	(3) #1	#6	125NG	2"C	(4) #1	#6
150G	2"C	(3) #1/0	#6	150NG	2"C	(4) #1/0	#6
175G	2"C	(3) #2/0	#6	175NG	2"C	(4) #2/0	#6
200G	2-1/2"C	(3) #3/0	#6	200NG	2-1/2"C	(4) #3/0	#6
225G	2-1/2"C	(3) #4/0	#4	225NG	2-1/2"C	(4) #4/0	#4
250G	3"C	(3) #250 Kcmil	#4	250NG	3"C	(4) #250 Kcmil	#4
300G	3"C	(3) #350 Kcmil	#4	300NG	3"C	(4) #350 Kcmil	#4
350G	3-1/2"C	(3) #500 Kcmil	#3	350NG	4"C	(4) #500 Kcmil	#3
400G	4"C	(3) #600 Kcmil	#3	400NG	4"C	(4) #600 Kcmil	#3
450G	(2) 2-1/2"C	2 SETS: (3) #4/0	(2) #2	450NG	(2) 2-1/2"C	2 SETS: (4) #4/0	(2) #2
500G	(2) 3"C	2 SETS: (3) #250 Kcmil	(2) #2	500NG	(2) 3"C	2 SETS: (4) #250 Kcmil	(2) #2
600G	(2) 3"C	2 SETS: (3) #350 Kcmil	(2) #1	600NG	(2) 3"C	2 SETS: (4) #350 Kcmil	(2) #1
700G	(2) 3-1/2"C	2 SETS: (3) #500 Kcmil	(2) #1/0	700NG	(2) 4"C	2 SETS: (4) #500 Kcmil	(2) #1/0
800G	(3) 3"C	3 SETS: (3) #300 Kcmil	(3) #1/0	800NG	(3) 3"C	3 SETS: (4) #300 Kcmil	(3) #1/0
1000G	(3) 3"C	3 SETS: (3) #400 Kcmil	(3) #2/0	1000NG	(3) 3-1/2"C	3 SETS: (4) #400 Kcmil	(3) #2/0
1200G	(4) 3"C	4 SETS: (3) #350 Kcmil	(4) #3/0	1200NG	(4) 3"C	4 SETS: (4) #350 Kcmil	(4) #3/0
1600G	(5) 3"C	5 SETS: (3) #400 Kcmil	(5) #4/0	1600NG	(5) 3-1/2"C	5 SETS: (4) #400 Kcmil	(5) #4/0
2000G	(5) 4"C	5 SETS: (3) #600 Kcmil	(5) #250 Kcmil	2000NG	(5) 4"C	5 SETS: (4) #600 Kcmil	(5) #250 Kcmil
2500G	(6) 4"C	6 SETS: (3) #600 Kcmil	(6) #350 Kcmil	2500NG	(6) 4"C	6 SETS: (4) #600 Kcmil	(6) #350 Kcmil
3000G	(8) 4"C	8 SETS: (3) #600 Kcmil	(8) #400 Kcmil	3000NG	(8) 4"C	8 SETS: (4) #600 Kcmil	(8) #400 Kcmil
4000G	(10) 4"C	10 SETS: (3) #600 Kcmil	(10) #500 Kcmil	4000NG	(10) 4"C	10 SETS: (4) #600 Kcmil	(10) #500 Kcmil

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



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National Strength. Local Action.

This project has demonstrated conformance with applicable codes and standards established by state and University policy. Based on this determination, the project is APPROVED FOR CONSTRUCTION.

CALIFORNIA STATE FIRE MARSHAL APPROVED. Approval of this plan does not authorize or approve any addition or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.



HUMBOLDT STATE UNIVERSITY

1 HARPST STREET ARCATA, CA 95521

STUDENT HEALTH CENTER EMERGENCY GENERATOR

ISSUE

Table with columns: MARK, DATE, DESCRIPTION. Row 1: 05/19/20, PROGRESS SET. Row 2: 08/05/20, 100% CD.

SOBE PROJECT NO: 2000589

DATE: 08/04/20

DRAWN BY:

CHECKED BY:

APPROVED BY: CM

SHEET TITLE

MECHANICAL & PLUMBING GENERAL NOTES, SYMBOLS & ABBREVIATIONS

SCALE: AS NOTED

THIS DRAWING IS 30" X 42" AT FULL SIZE

MP-0.1 SHEET OF

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 2019 CA AMENDMENTS
9. CALIFORNIA EXISTING BUILDING CODE (PART 10, TITLE 24): 2018 INTERNATIONAL EXISTING BUILDING CODE WITH 2019 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. CALIFORNIA CODE OF REGULATIONS PUBLIC SAFETY (TITLE 19), STATE FIRE MARSHAL: CURRENT EDITION
13. NFPA 13 INSTALLATION OF SPRINKLER SYSTEMS: 2019 (CA AMENDED)
14. NFPA 14 (AMENDED) INSTALLATION OF STANDPIPE, PRIVATE HYDRANT AND HOSE SYSTEMS: 2019 (CA AMENDED)
15. NFPA 17 DRY CHEMICAL EXTINGUISHING SYSTEM: 2017 EDITION
16. NFPA 17A TO A UL 300 FOR CLASS I HOOD FIRE SUPPRESSION SYSTEM. (WET CHEMICAL EXTINGUISHING SYSTEMS) 2017
17. NFPA 20 INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION: 2019 EDITION
18. NFPA 22 WATER TANKS FOR PRIVATE FIRE PROTECTION: 2018 EDITION
19. NFPA 24 INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES: 2019 EDITION (CA AMENDED)
20. NFPA 25 INSPECTION, TESTING, MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS: 2020 EDITION (CA EDITION)
21. NFPA 72 NATIONAL FIRE ALARM CODE, WITH CA AMENDMENTS: 2019 EDITION (CA AMENDED)
22. NFPA 80 FIRE DOORS AND OTHER OPENING PROTECTIVE: 2019 EDITION
23. NFPA 110 EMERGENCY AND STAND-BY POWER SYSTEMS: 2019 EDITION
24. NFPA 170 STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS: 2018 EDITION
25. NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS 2018
26. ICC 300-12 STANDARD ON BLEACHERS, FOLDING AND TELESCOPIC SEATING AND GRANDSTANDS
27. SFM 12-10-1 POWER OPERATED EXIT DOORS
28. SFM 12-10-2 SINGLE POINT LATCHING OR LOCKING DEVICES
29. SFM 12-10-3 EMERGENCY EXIT & PANIC HARDWARE
30. ASTM STANDARD CHANGES (EXAMPLE: ASTM E648-04 STANDARD TEST METHOD FOR CRITICAL RADIANT FLUX OF FLOOR)
31. UL 38 AMENDED MANUAL OPERATED SIGNAL BOXES, WITH REVISIONS, LATEST EDITION AS AMENDED
32. UL 268 SMOKE DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
33. UL 288A SMOKE DETECTORS DUCT APPLICATIONS
34. UL 300 FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS
35. UL 305 PANIC HARDWARE
36. UL 464 AUDIBLE SIGNAL APPLIANCES
37. UL 521 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
38. UL 864 CONTROL UNITS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
AMERICANS WITH DISABILITIES ACT (A.D.A.) FEDERAL ACCESSIBILITY STANDARDS
ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AISC MANUAL OF STEEL CONSTRUCTION
ASCE/SEJ 7-16, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION

GENERAL NOTES

- 1. PRIOR TO SUBMITTING PROPOSAL, BIDDER SHALL EXAMINE CONSTRUCTION DRAWINGS AND SPECIFICATIONS AND SHALL HAVE VISITED THE CONSTRUCTION SITE. HE SHALL BE FAMILIAR WITH THE 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. DETERMINE THE SEQUENCE OF CONSTRUCTION THROUGHOUT THE PROJECT.
2. THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER WORK DUE TO THE INSTALLATION OF WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED.
3. ALL TEMPORARY 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.
4. SEAL ALL PENETRATIONS THROUGH FIRE WALLS. FURNISH AND INSTALL FIRE RATED BACKBOXES AS REQUIRED TO MAINTAIN FIRE RATINGS OF CEILING OR WALLS WHERE RECESSED ELECTRIC EQUIPMENT SUCH AS LIGHT FIXTURES, SWITCHES, RECEPTACLES, PANEL, ETC. ARE INSTALLED IN RATED WALL OR CEILINGS.
5. ALL DIMENSIONS ARE APPROXIMATE. THE DRAWINGS ARE DIAGRAMMATIC TO THE EXTENT THAT ALL FITTINGS, OFFSETS, ETC. MAY NOT BE SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE GUIDANCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD FOR FABRICATION OF THE PIPING, MECHANICAL, AND ELECTRICAL COMPONENTS INTO A COMPLETE AND OPERABLE SYSTEM. ALL EXISTING PIPES, CONDUITS, DUCTS AND WIRING FOUND TO INTERFERE WITH NEW CONSTRUCTION SHALL BE REROUTED AS REQUIRED TO ACCOMMODATE NEW WORK.
6. THE PLANS AND SPECIFICATIONS DO NOT UNDERTAKE TO SHOW OR LIST EVERY ITEM TO BE PROVIDED, BUT RATHER TO DEFINE THE REQUIREMENTS FOR A FULL AND WORKING SYSTEM FROM THE STANDPOINT OF THE END USER. FOR THIS REASON, WHEN AN ITEM NOT SHOWN OR LISTED IS CLEARLY NECESSARY FOR PROPER CONTROL/ OPERATION OF EQUIPMENT WHICH IS SHOWN OR LISTED, PROVIDE AN ITEM WHICH WILL ALLOW THE SYSTEM TO FUNCTION PROPERLY AT NO INCREASE IN PRICE.
7. ALL WORK SHALL CONFORM TO CALIFORNIA TRADE STANDARDS WHICH GOVERN EACH PHASE OF THE PROJECT.
8. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE LATEST ADOPTED CAMPUS STANDARDS.
9. ALL MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED AND SEISMICALLY BRACED PER CODE.
10. THIS DRAWINGS SET SHALL BE USED IN CONJUNCTION WITH THE CSI FORMAT SPECIFICATIONS PUBLISHED IN BOOK FORM, COMBINED, THEY ARE THE "CONTRACT DOCUMENTS".
11. DIMENSIONS ON WORKING DRAWINGS GOVERN. DO NOT SCALE DRAWINGS.
12. ALL TYPICAL DETAILS SHALL APPLY UNLESS OTHERWISE NOTED.
13. ALL CONTRACTORS SHALL REMOVE TRASH AND DEBRIS STEMMING FROM THEIR WORK ON A DAILY BASIS. PROJECT SITE SHALL BE MAINTAINED IN A CLEAN AND ORDERLY CONDITION.
14. THE DETAILS REFLECT THE DESIGN INTENT FOR TYPICAL CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND SHALL INCLUDE, IN HIS SCOPE, THE COST FOR COMPLETE FINISHED INSTALLATIONS, INCLUDING ANNUALS, OF ALL TRADES.
15. PRIOR TO BIDDING, CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY CONDITIONS WHICH ARE NOT COVERED IN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL NOTIFY ARCHITECT AND SEEK CLARIFICATION IF ANY DISCREPANCIES ARE FOUND. CONTRACTOR SHALL BE RESPONSIBLE FOR REMEDIAL WORK IF RELATED WORK IS CONTINUED AFTER A DISCREPANCY IS IDENTIFIED.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT MATERIALS, LABOR, INSTALLATION, ETC., CONFORMS TO ALL CODES AND REQUIREMENTS OF LOCAL GOVERNING AGENCIES.
17. NO WORK SHALL COMMENCE WITH UNAPPROVED MATERIALS. ANY WORK DONE WITH UNAPPROVED MATERIALS AND EQUIPMENT IS AT THE CONTRACTOR'S RISK. SEE SPECIFICATIONS FOR SUBMITTAL AND SUBSTITUTION REQUIREMENTS.
18. CONSTRUCTION MATERIALS STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED SO AS TO PREVENT DAMAGE OR DETERIORATION UNTIL USED. FAILURE IN THIS REGARD MAY BE CAUSE FOR REJECTION OF MATERIAL AND/OR WORK.
19. ALL FINISHES AND CONSTRUCTION SHALL BE PROTECTED BY THE CONTRACTOR FROM POTENTIAL DAMAGE CAUSED BY CONSTRUCTION ACTIVITY. DAMAGE TO FINISHES OR CONSTRUCTION SHALL BE REPAIRED OR REPLACED (OWNER'S DECISION) BY THE CONTRACTOR WITH IDENTICAL MATERIAL AND/OR FINISHES. CONTRACTOR SHALL MAKE AND MAINTAIN A PHOTOGRAPHIC RECORD NOTEBOOK WITH DATED/INDEX PHOTOGRAPHS.
20. ALL EQUIPMENT SHALL BE FABRICATED FROM FIELD VERIFIED DIMENSIONS AND APPROVED SHOP DRAWINGS. COORDINATE MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT & INSTALLATION.

UNDERGROUND WORK

- 1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHILE TRENCHING FOR NEW UTILITIES. THESE DRAWINGS HAVE BEEN COMPILED FROM RECORD DOCUMENTS, FIELD SURVEYS AND OTHER AVAILABLE INFORMATION. NOT ALL UTILITIES AND/OR OBSTRUCTIONS ARE SHOWN. CONTRACTOR SHALL VERIFY THE LOCATIONS OF UTILITIES PRIOR TO EXCAVATION, EITHER BY HAND EXCAVATION OR WITH THE ASSISTANCE OF AN UNDERGROUND UTILITY LOCATION SERVICE (USA WILL NOT LOCATE UTILITIES ON THE CAMPUS).
2. PROVIDE FOR PEDESTRIAN ACCESS AT ALL TIMES. PROVIDE BARRICADES, WARNING SIGNS, TEMPORARY BRIDGES, ETC. AS REQUIRED TO FULFILL THIS REQUIREMENT.
3. NORMAL UNDERGROUND UTILITY LOCATION PROVISIONS (i.e. USA LOCATOR SERVICE) ARE NOT AVAILABLE ON CAMPUSES AS A RULE. CONTRACTOR IS RESPONSIBLE TO PROVIDE PRIVATE SERVICE FOR LOCATION OF UNDERGROUND SERVICES. PROVIDE ACCESS REQUEST PRIOR TO DISRUPTION OF ANY SERVICE, OR ACCESS TO ANY SENSITIVE/OCCUPIED AREA.

SPRINKLER / IRRIGATION REPAIR:

- 1. INCLUDE NECESSARY MATERIALS & LABOR TO REPAIR IRRIGATION/SPRINKLER LINES UP TO 2" FOR THE QUANTITY LISTED BELOW:
2. REPAIR 1 SPRINKLER/IRRIGATION LINE FOR EVERY 10 FEET OF TRENCH.
3. NO INCREASE IN PRICE SHALL RESULT FROM SPRINKLER/IRRIGATION REPAIR WITHOUT SUBSTANTIATING DOCUMENTATION SHOWING REPAIRS HAVE EXCEEDED THE QUANTITY SPECIFIED.

INTERRUPTIONS TO EXISTING SYSTEMS:

- 1. THE CONTRACT REQUIRES THAT ALL ELECTRICAL CONNECTIONS REQUIRING AN OUTAGE SHALL OCCUR ON A WEEKEND OR BETWEEN THE HOURS OF 10PM AND 7AM, MONDAY THROUGH FRIDAY. OUTAGES SHALL BE SCHEDULED AND APPROVED IN ADVANCE AND IN WRITING AT LEAST 10 DAYS PRIOR TO THE OUTAGE. WORK SHALL BE SCHEDULED SUCH THAT AT NO TIME WILL ANY EMERGENCY FEEDER, CIRCUIT OR FIRE ALARM ZONE BE OUT OF SERVICE. THIS MEANS THAT CONTRACTOR, SHALL INCLUDE ALL PROVISIONS FOR TEMPORARY FEEDERS IN ORDER TO ACCOMPLISH THIS REQUIREMENT.

INTENT:

"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 CONDITION SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CCD OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE DIVISION OF STATE ARCHITECT BEFORE PROCEEDING WITH THE WORK."

HARDSCAPING/LANDSCAPING RESTORATION:

- 1. ALL LANDSCAPING AND HARDSCAPING DAMAGED AS A RESULT OF UNDERGROUND WORK SHALL BE RESTORED TO AS-FOUND CONDITION. SAWCUTTING OF HARDSCAPE SHALL BE FROM SCOREMARK TO SCOREMARK. REPAIRS SHALL BE MADE WITH #4 DOWELS @ 12" O.C., 4-1/2" MIN. EMBED IN 6000 PSI EPOXY.
2. THE INTENT OF THIS PROJECT IS TO INSTALL UNDERGROUND UTILITIES THROUGHOUT THE CAMPUS AND TO RESTORE ALL DISTURBED FEATURES OF SURFACE IMPROVEMENTS. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES ARE TO BE RESTORED TO "AS-FOUND" OR BETTER CONDITION.
3. ALL SURFACE REPAIRS SHALL MATCH ADJACENT SURFACE FEATURES IN CONSTRUCTION, COLOR AND FINISH. ALL TURF AREAS DISTURBED ARE TO BE REPAIRED TO ORIGINAL CONDITION WITH THE USE OF TOP SOIL, CONDITIONERS AND SOD. MATCH GRASS TYPES BY AREA TO PROVIDE SAME TURF CHARACTERISTICS AS ADJACENT TURF.
4. CONCRETE SIDEWALK REPAIRS: ALL CONCRETE SIDEWALKS ARE TO BE CONSIDERED AS TRAFFIC RATED AND SHALL BE REPLACED/REPAIRED WITH MINIMUM 6" OF 3000 PSI CONCRETE WITH #4'S AT 12" O.C.E.W. PLACED ON TOP OF 6" CLASS II AGGREGATE.
5. ASPHALT ROADWAY REPAIRS: ALL ASPHALT DRIVEWAYS ARE TRAFFIC RATED. ALL ASPHALT REPAIRS SHALL BE REPAIRED TO MATCH ADJACENT BASE COURSE, BINDER COURSE AND WEARING COURSES. RESTORE ANY/ALL STRIPING TO AS FOUND CONDITION.

UNDERGROUND UTILITY NOTE:

THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. A REASONABLE EFFORT HAS BEEN MADE TO FIELD LOCATE AND DELINEATE ALL KNOWN UTILITIES BUT SINCE ONLY ACTUAL EXCAVATION CAN REVEAL THE TRUE LOCATION AND PHYSICAL CHARACTERISTICS OF ALL UNDERGROUND UTILITIES OR OTHER BURIED OBJECTS, THE SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THEIR DELINEATION AS SHOWN ON THIS PLAN.

CONTRACTOR NOTE:

CONTRACTOR TO POTHOLE & LOCATE ALL EXISTING UTILITIES SHOWN CROSSING NEW WORK BEFORE DIGGING. SOME UTILITIES HAVE BEEN FOUND AS SHALLOW AS 6".

LAYING OUT THE WORK:

ACCURATELY LAYOUT INSTALLATION OF EQUIPMENT PRIOR TO BEGINNING WORK. LAYOUT WORK SHALL INCLUDE PROVISIONS FOR CONNECTIONS TO <E>SERVICES, NECESSARY TURN & CHANGES IN ELEVATION, BYPASSING OBSTRUCTIONS, AND ANY OTHER IMPEDIMENT ASSOCIATED WITH THE BELOW GRADE PIPING INSTALLATIONS.

ABBREVIATIONS

Table listing abbreviations and their meanings: AAV AUTOMATIC AIR VENT, AFF ABOVE FINISHED FLOOR, AS AIR SEPARATOR, ASJ AIR SERVICE JACKET, B BOILER, BFP BACKFLOW PREVENTER, BOP BOTTOM OF PIPE, etc.

PIPING SPECIALTIES

Table listing piping specialties and their symbols: AUTOMATIC AIR VENT, MANUAL AIR VENT, AIR SEPARATOR, GATE, ALIGNMENT GUIDE, ANCHOR, BACK FLOW PREVENTER, BALL JOINT, etc.

VALVES

Table listing valves and their symbols: BALL, BUTTERFLY, GATE, GATE, ANGLE, GLOBE, GLOBE, ANGLE, THREE WAY.

ACTUATORS

Table listing actuators and their symbols: MOTOR, PNEUMATIC, SOLENOID.

VALVES, SPECIAL DUTY

Table listing valves, special duty and their symbols: CHECK, SWING GATE, CIRCUIT SETTER, NEEDLE, PRESSURE REDUCING (NUMBER & SPECIFY), PRESSURE REGULATOR, RELIEF (R) OR SAFETY (S), SEISMIC VALVE, MAKE UP WATER ASSEMBLY, BACK PRESSURE, PLUG VALVE, TRIPLE DUTY VALVE (STOP CHECK & BALANCE W/PRESSURE TAPS), REDUCED PRESSURE BACKFLOW PREVENTER, FLOW CONTROL.

SYMBOLS

Table listing symbols and their meanings: EXTENT OF DEMOLITION, NEW TO EXISTING CONNECTION, REVISION NUMBER, WORK ITEM (MECHANICAL), WORK ITEM (PLUMBING), DETAIL DESIGNATION, EQUIPMENT DESIGNATION, SECTION DESIGNATION, TO BE DEMOLISHED, TO BE DEMOLISHED, RELOCATED EQUIPMENT.

PIPING

Table listing piping symbols and their meanings: ARROW INDICATES DIRECTION OF FLOW, EXISTING PIPING (ABOVE GRADE OR FLOOR), EXISTING PIPING (BELOW GRADE OR FLOOR), NEW PIPING (ABOVE GRADE OR FLOOR), NEW PIPING (BELOW GRADE OR FLOOR), PIPE TO BE REMOVED (ABOVE GRADE OR FLOOR), PIPE TO BE REMOVED (BELOW GRADE OR FLOOR).

HEATING

Table listing heating symbols and their meanings: BBD BOILER BLOW DOWN, CR CONDENSATE RETURN, CW CITY WATER, FO(R)(S) FUEL OIL (RETURN)(SUPPLY), FOV FUEL OIL TANK VENT, (P)(S)HHW(R)(S) (PRIMARY)(SECONDARY) HEATING HOT WATER (RETURN)(SUPPLY), HTW(R)(S) HIGH-TEMPERATURE HOT WATER (RETURN)(SUPPLY), IW INDUSTRIAL WATER, (L)(M)(H)PS (LOW)(MEDIUM)(HIGH) PRESSURE STEAM, (L)(M)(H)PCR (LOW)(MEDIUM)(HIGH) PRESSURE CONDENSATE RETURN, MU MAKEUP WATER, PCR PUMPED CONDENSATE RETURN, VR VACUUM CONDENSATE RETURN.

CONTROLS SUMMARY OF WORK

- 1. INTERCEPT <E> MODBUS BACKBONE IN MECHANICAL ROOM AND EXTEND RS485 WIRING AND CONDUIT TO NEW GENERATOR. GENERATOR HAS INTEGRAL CONTROL CARD. SEE ELECTRICAL DRAWINGS FOR CONDUIT PATHWAY AND NEW GENERATOR LOCATION. SEE MECHANICAL SITE PLAN FOR APPROXIMATE LOCATION OF MECHANICAL ROOM.
2. ALL CONTROLS CONDUIT SHALL SHARE SAME TRENCH AS ELECTRICAL WHERE POSSIBLE.
3. PROVIDE CONNECTION TO NEW GENERATOR CONTROL CARD.
4. PROVIDE PROGRAMMING OF NEW GRAPHICS.
5. PROGRAM REQUESTED POINTS, PER POINTS LIST, TO <E> BMS. SET UP TRENDS PER DISTRICT'S DIRECTION.
6. COORDINATE WITH DISTRICT ON FINAL POINTS AND TRENDS TO BE PROGRAMMED INTO <E> BMS.

POINTS LIST

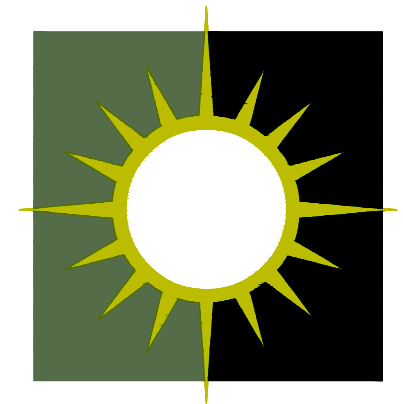
Table with columns: EQUIPMENT LOCATION, POINT ID, CONTROL DEVICE, CONTROL DESCRIPTION, CONTROL DEVICE LOCATION, NOTES. Includes subtotals: 13 TOTAL VIRTUAL POINTS.

SCHEDULE

Table with columns: MARK, SERVICE, MAKE & MODEL, MIN CAPACITY (SCFH), INLET PIPE SIZE (IN), INLET PRESSURE (PSI), OUTLET PRESSURE RANGE, NOTES. Includes notes about pressure regulator valve schedule.

GRAPHICS

- 1. CONTROLS CONTRACTOR SHALL PROGRAM A UNIQUE "GENERATOR" PAGE, AS PART OF A SUB-PAGE OF THE MAIN "STUDENT HEALTH" BUILDING BMS PAGE. GENERATOR SHALL BE SELECTABLE FROM THE MAIN BUILDING PAGE.
2. PROGRAM GENERATOR GRAPHICS DISPLAYING REAL TIME VALUES OF ALL THE POINTS PROVIDED ON THE POINTS LIST.
3. SAMPLE GRAPHIC SHALL BE SUBMITTED TO DISTRICT FOR FINAL APPROVAL.
4. TRENDS SHALL BE SETUP FOR ALL REQUESTED CONTROL POINTS. TRENDED DATA SHALL BE STORED FOR A MINIMUM OF 90 DAYS, AT 15 MINUTE INTERVALS.



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 Local Action.

GENERAL SHEET NOTES

- A. REFER TO ELECTRICAL SHEETS FOR GENERATOR EQUIPMENT DEMOLITION.
- B. ALL GAS PIPING DISCONNECTED FROM DEMOLISHED GENERATOR SHALL BE CAPPED AND SEALED AIR TIGHT, U.O.N.
- C. ALL ROOF PENETRATIONS FOR PIPING SHALL BE PROTECTED IN PLACE.
- D. IN LOCATIONS WHERE GAS PIPING IS DEMOLISHED, DEMOLISH <E> PIPE SUPPORTS THAT ONLY SUPPORTED GAS PIPING.
- E. ALL HARDSCAPING AND LANDSCAPING DISTURBED FOR DEMOLITION OF <E> PIPING OR INSTALLATION OF NEW PIPING SHALL BE RESTORED TO ITS ORIGINAL CONDITION. MATCH ADJACENT SURFACES.
- F. CONTRACTOR SHALL VERIFY GAS PRESSURE OF <E> GAS PIPING CONNECTED TO AND REPORT VALUE TO ENGINEER.
- G. ALL EXPOSED NUTS, BOLTS, FASTENERS, ANCHORS, UNISTRUT SUPPORT, STRAPS, ETC. SHALL BE HOT-DIPPED GALVANIZED, U.O.N.

REFERENCE SHEET NOTES

- DEMO:**
1. PROTECT IN PLACE, EXISTING UNDERGROUND POLYETHYLENE GAS PIPING.
 2. <E> GAS METER, PROTECT IN PLACE.
 3. <E> GAS RISER, DEMOLISH PORTION OF GAS RISER, ABOVE GROUND, REQUIRED TO INSTALL NEW FITTING FOR GENERATOR GAS CONNECTION AND SHUT OFF VALVE FOR <E> BUILDING GAS.
 4. <E> GAS SHUTOFF VALVE IN VAULT. PROTECT IN PLACE.
- NEW:**
21. NEW GAS CONNECTION FOR GENERATOR. <E> GAS PIPE IS WELDED. INTERCEPT AND CUT <E> GAS PIPE AND THREAD FOR CONNECTION OF NEW PIPE.
 22. INSTALL SHUT OFF VALVE ON EXTERIOR BUILDING GAS RISER.
 23. INSTALL NEW SIGN, AT SHUT OFF VALVE LOCATION, STATING "STUDENT HEALTH CENTER GAS SHUTOFF".

This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination, the following approvals are:

'APPROVED FOR CONSTRUCTION'

Michael Fisher
 Campus Deputy Building Official
 Humboldt State University
 The California State University

Date: _____
 Permit #: _____
 (Other approvals, as applicable:
 SFM Approval: _____
 DSH Access Approval: _____
 Science Peer Review: _____
 Mock Pipe Review: _____)

CALIFORNIA STATE FIRE MARSHAL APPROVED
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.

Reviewed by: _____
 Date: _____



HUMBOLDT STATE UNIVERSITY

1 HARPST STREET
 ARCATA, CA 95521

**STUDENT HEALTH CENTER
 EMERGENCY GENERATOR**

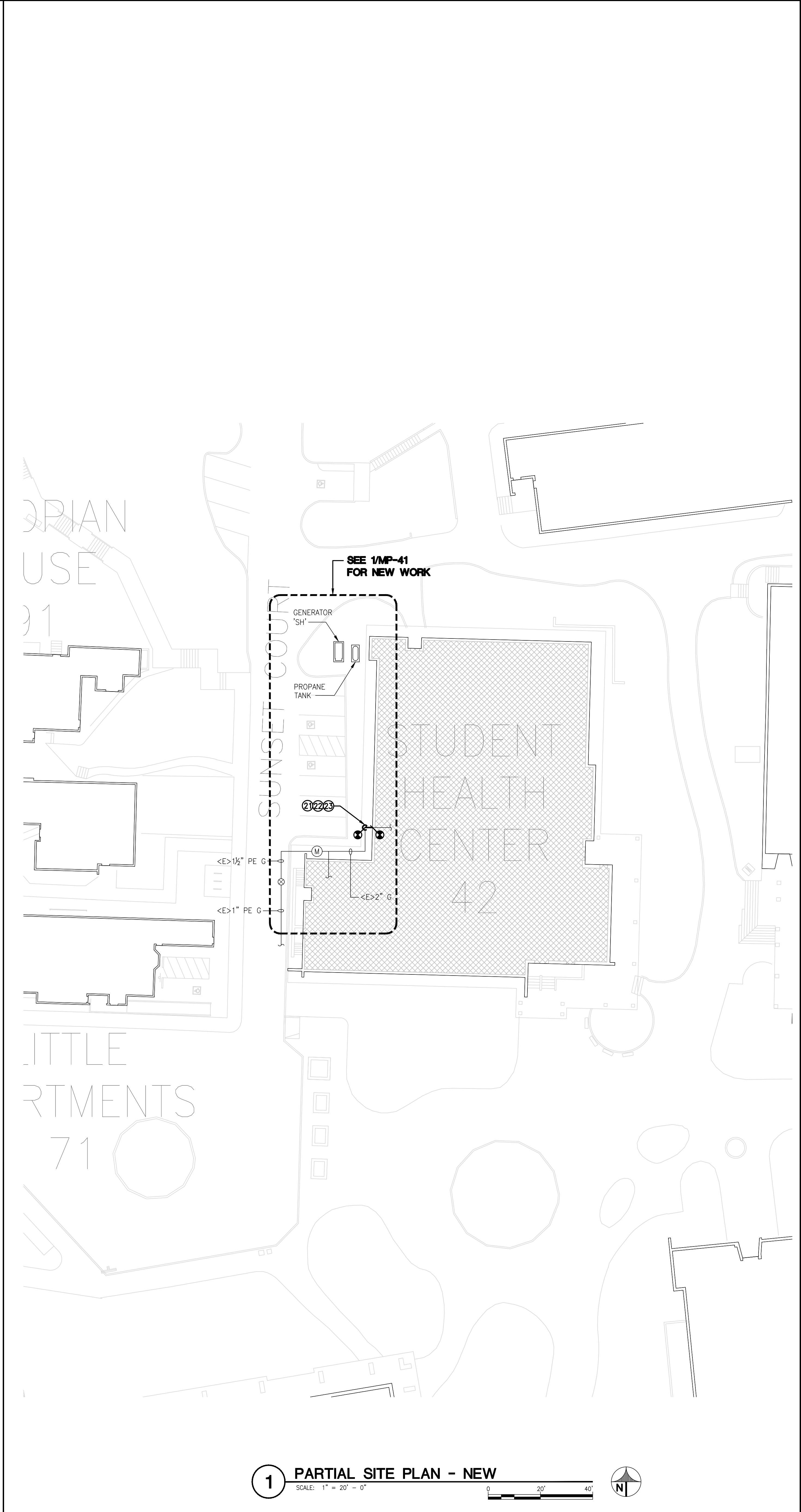
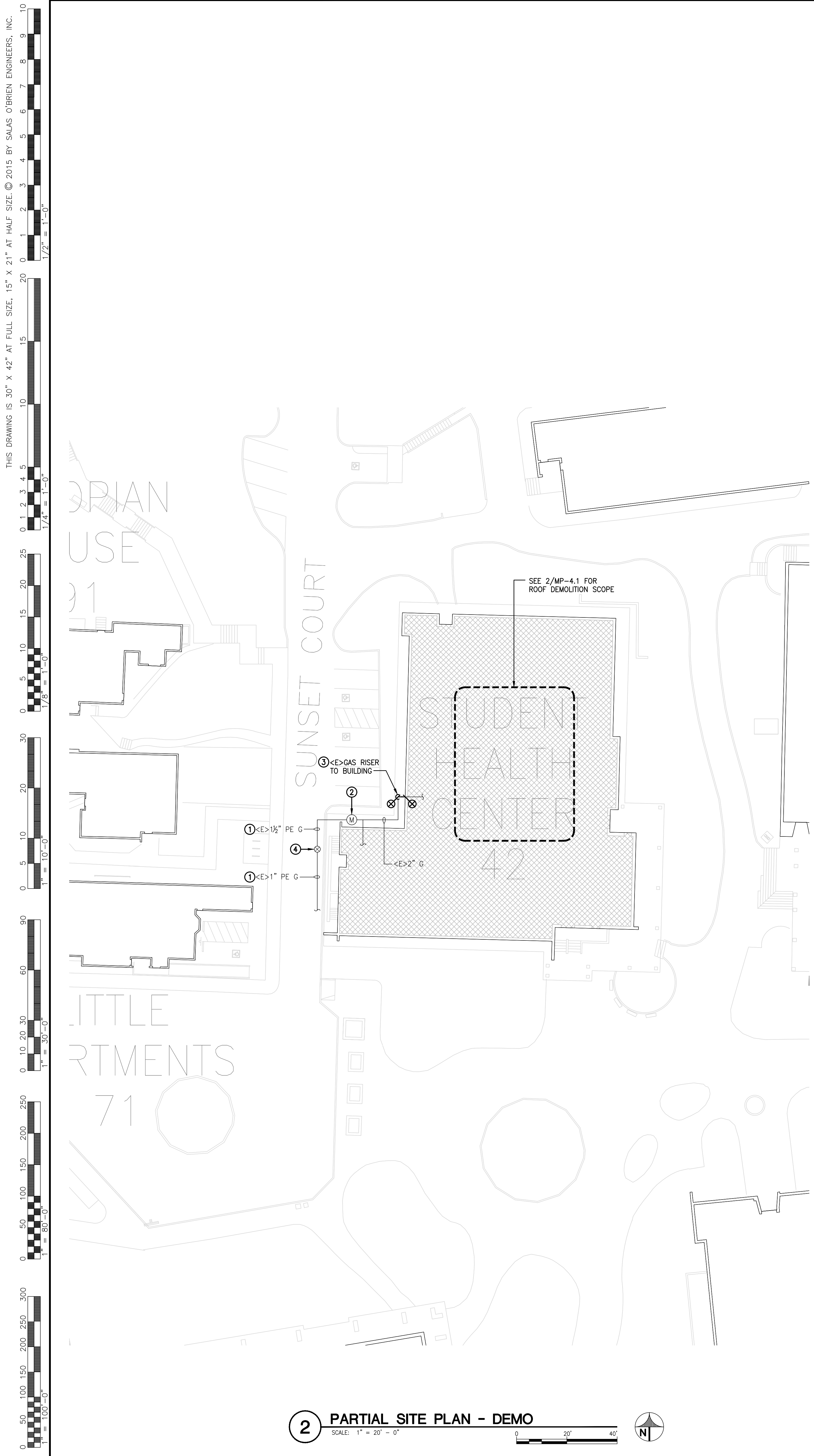
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	08/05/20	100% CD

SOBE PROJECT NO: 2000589
 DATE: 08/04/20
 DRAWN BY:
 CHECKED BY:
 APPROVED BY:

PARTIAL SITE PLAN

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

MS-4.1
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THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.
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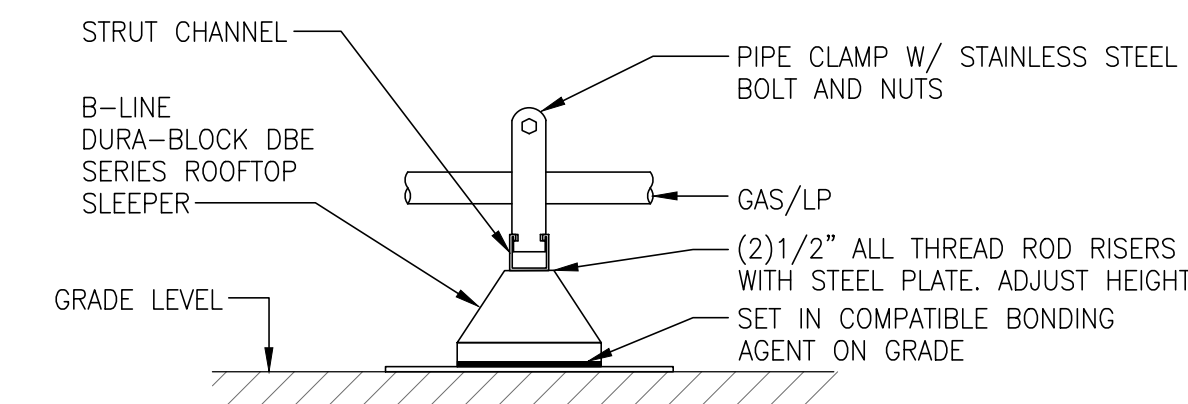
THIS DRAWING IS 30" X 42" AT FULL SIZE. 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.

GAS EQUIPMENT LOADS/SIZING					
STUDENT HEALTH BUILDING					
Tag #	Item	Qty	Rating (BTUH)	CFH	LATERAL SIZE & CAPACITY PER CPC
GEN	Generator	1	260,000	260	1"
TOTAL CFH =			260		
LONGEST DISTANCE FROM REGULATOR TO LAST FIXTURE=			15'		
BUILDING GAS PRESSURE =			1" PSI		
PRESSURE DROP =			0.5" W.C.		
BUILDING GAS SUPPLY SIZE PER CPC TABLE 1215.2(1) =			1"		

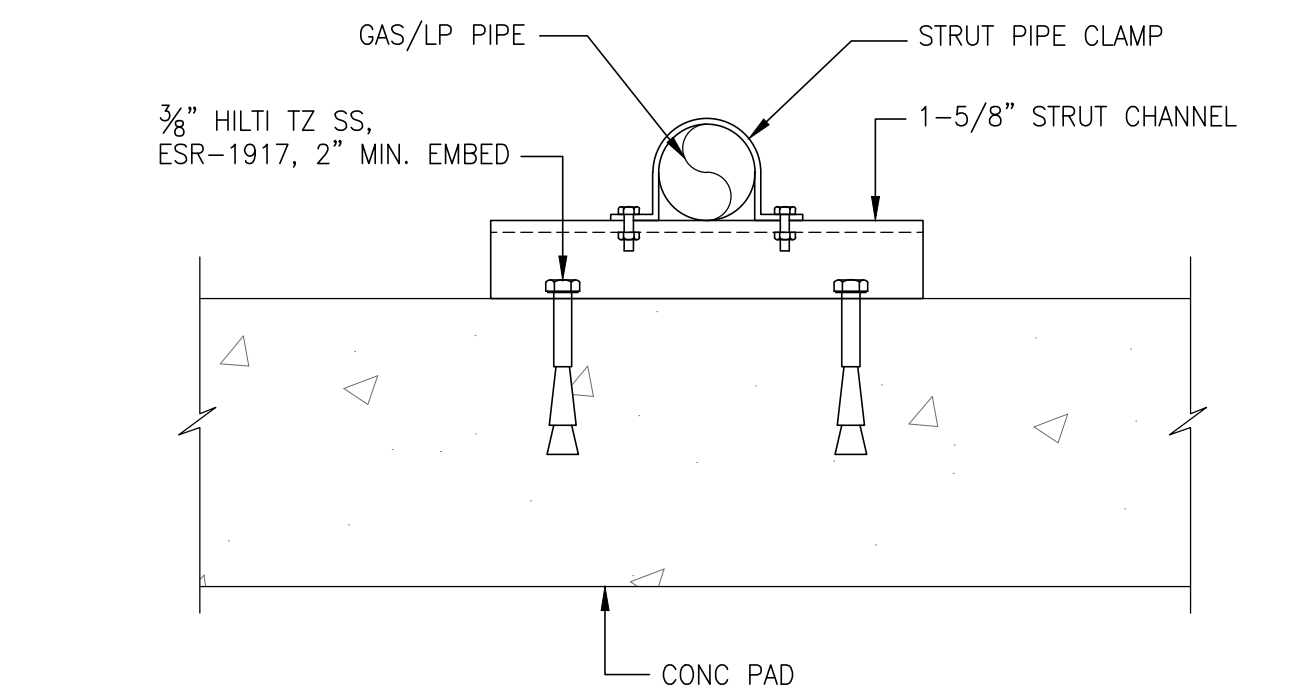
BUILDING LOAD SUMMARY			
STUDENT HEALTH BUILDING			
GAS LOAD REMOVED			
(1) GAS GENERATOR	UNKNOWN	MBH	
GAS LOAD ADDED			
(1) GAS, 20 KW GENERATOR	260	MBH	
NEW BUILDING LOAD:		260	MBH

7 GAS LOAD CALCULATION
SCALE: N.T.S.

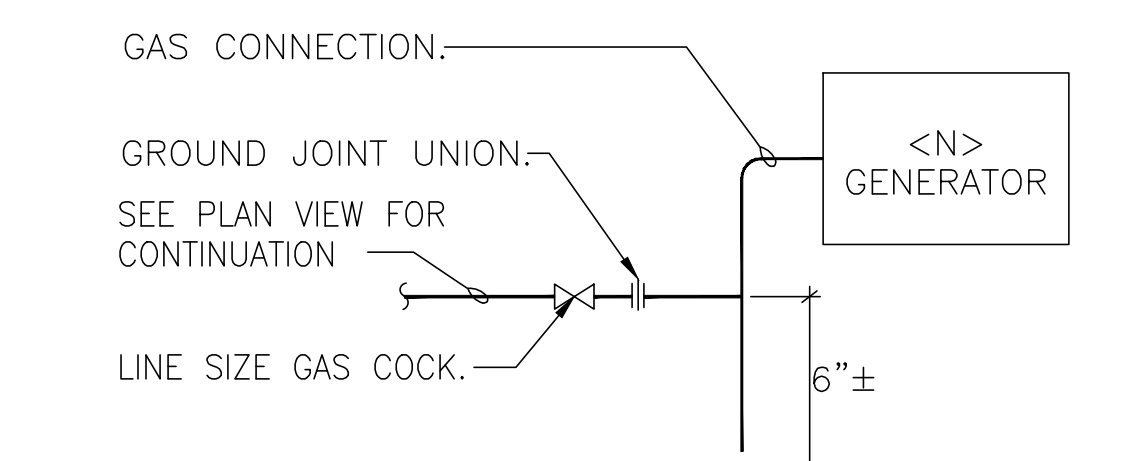
NOTE:
MAX SPACING SHALL BE 4' O.C. PROVIDE SUPPORTS ON BOTH SIDES OF ELBOWS.



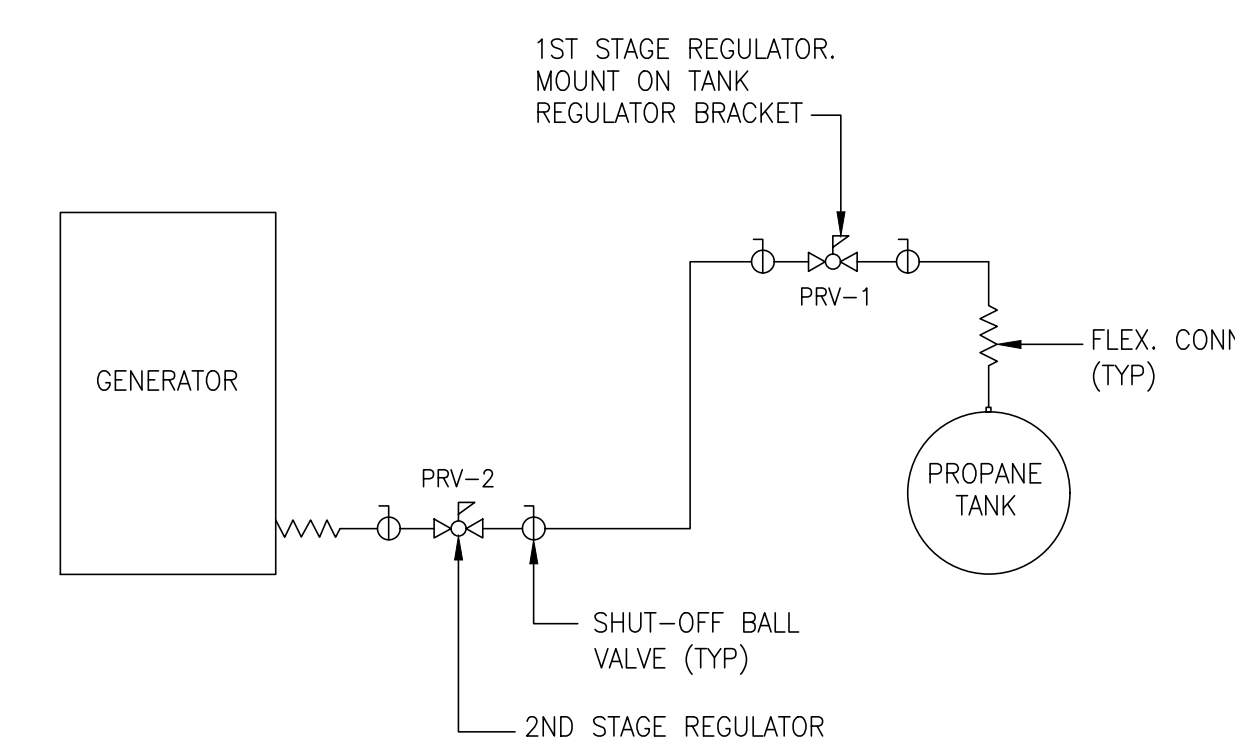
6 GAS/LP PIPE SUPPORT ON GRADE
SCALE: N.T.S.



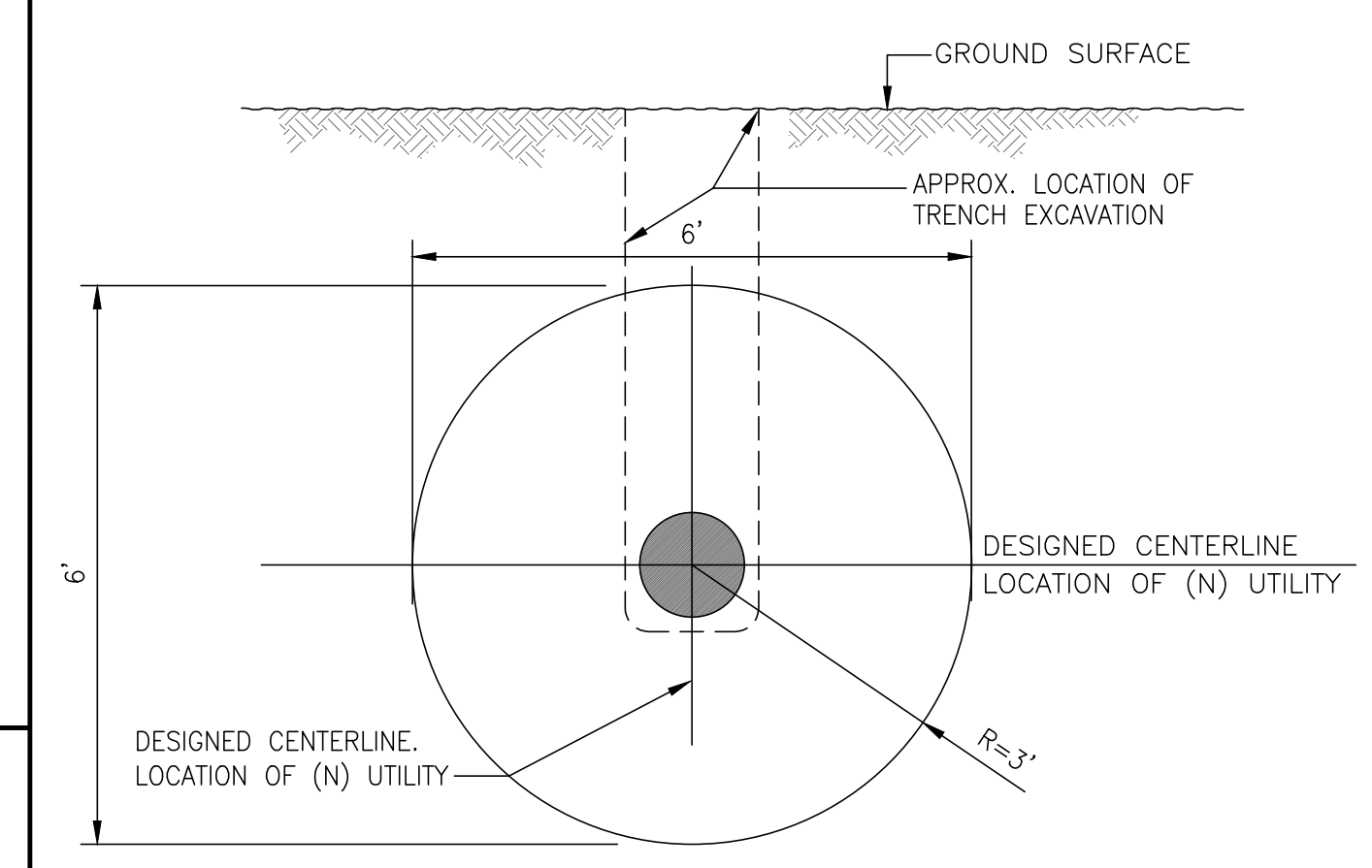
3 GAS/LP PIPE ANCHORAGE AT CONCRETE PAD
SCALE: N.T.S.



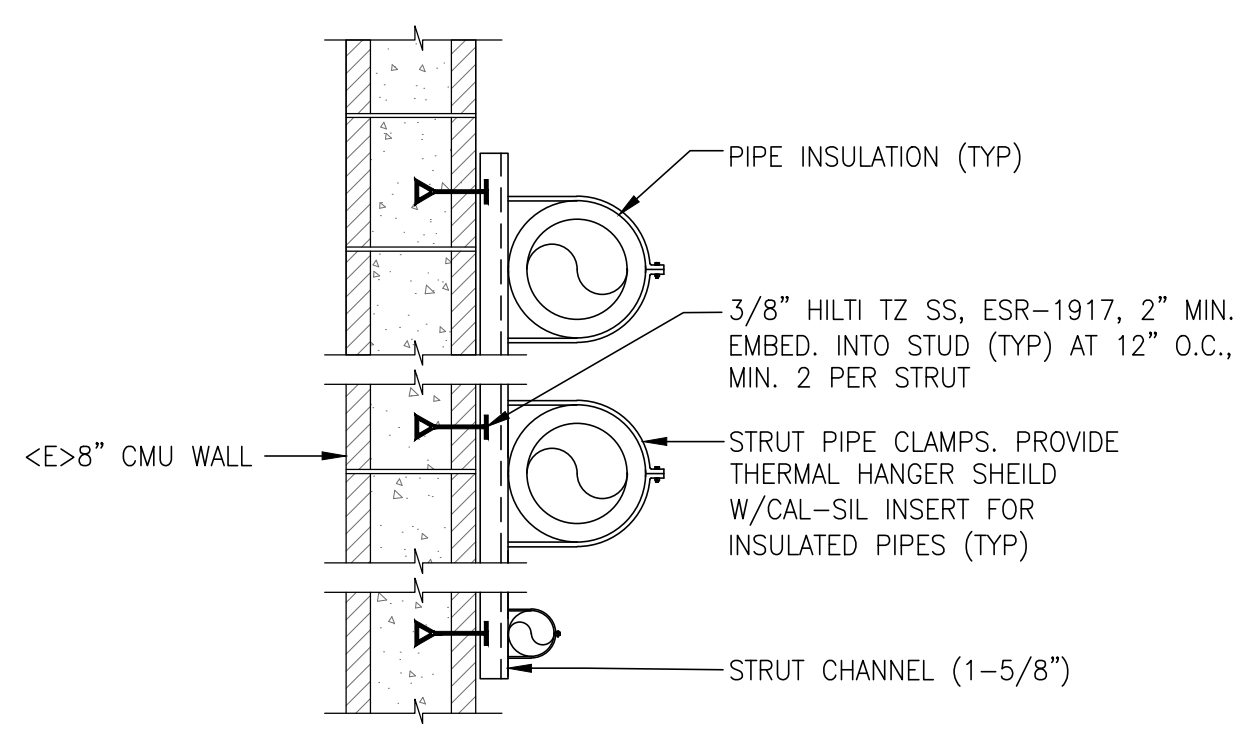
2 GENERATOR GAS CONNECTION
SCALE: N.T.S.



5 PROPANE PIPE SCHEMATIC
SCALE: N.T.S.

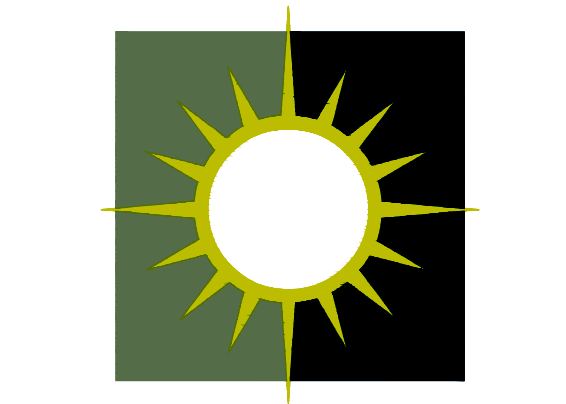


- NOTES:**
- ANY FIELD ADJUSTMENTS TO THE PROPOSED LOCATION OF (N) UTILITIES WITHIN A 3 FOOT RADIUS OF THE DESIGN CENTERLINE LOCATION SHALL BE DONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL PROPOSED ADJUSTMENTS SHALL BE SUBJECT TO PRIOR APPROVAL OF THE OWNER. SHOULD THE OWNER AGREE THAT IT IS NECESSARY TO ADJUST THE DESIGN LOCATION OF THE (N) UTILITY TO A POSITION OUTSIDE THE ABOVE 3 FOOT RADIUS, SUCH ADJUSTMENT SHALL BE SUBJECT TO REVIEW AS AN ITEM OF EXTRA EXPENSE.
 - IF IT IS NECESSARY TO RELOCATE (E) UTILITIES IN ORDER TO ALLOW THE (N) UTILITY TO BE INSTALLED WITHIN A 3 FOOT RADIUS OF ITS DESIGNED CENTERLINE, THEN SUCH RELOCATION OF (E) UTILITIES SHALL BE PAID FOR AS AN ITEM OF EXTRA EXPENSE. ANY SUCH RELOCATION SHALL BE SUBJECT TO PRIOR APPROVAL OF THE OWNER.
 - IN AREAS WHERE SHORING IS NOT REQUIRED AS PER THE LINE PROFILE DRAWINGS, THE MAXIMUM DEPTH OF TRENCHING TO AVOID OBSTACLES WITHOUT ADDITIONAL COST SHALL BE 5' BELOW GRADE. IN AREAS WHERE SHORING IS REQUIRED TO MEET DESIGN GRADE, THE LINE MAY BE ADJUSTED AN ADDITIONAL 3' BELOW THAT SHOWN WITH NO INCREASE IN COST.



4 GAS PIPE ANCHORAGE TO CMU WALL
SCALE: N.T.S.

1 TYPICAL UTILITY ADJUSTMENT CRITERIA
SCALE: N.T.S.



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This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination, the following approvals are:

'APPROVED FOR CONSTRUCTION'

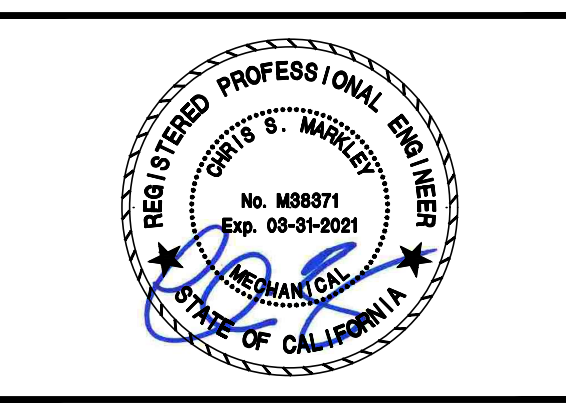
Michael Fisher
Campus Deputy Building Official
Humboldt State University
The California State University

Date: _____
Permit #: _____
(Other approvals, as applicable)
SFM Approval: _____
DSE Access Approval: _____
Seismic Peer Review: _____
Mock Pipe Review: _____

CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.

Reviewed by: _____
Date: _____



HUMBOLDT STATE UNIVERSITY

1 HARPST STREET
ARCATA, CA 95521

**STUDENT HEALTH CENTER
EMERGENCY GENERATOR**

MARK	DATE	DESCRIPTION
	05/19/20	PROGRESS SET
	08/05/20	100% CD

SOBE PROJECT NO: 2000589
DATE: 08/04/20
DRAWN BY:
CHECKED BY:
APPROVED BY:

SHEET TITLE
**MECHANICAL & PLUMBING
DETAILS**

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

MP-5.1
SHEET - OF -

