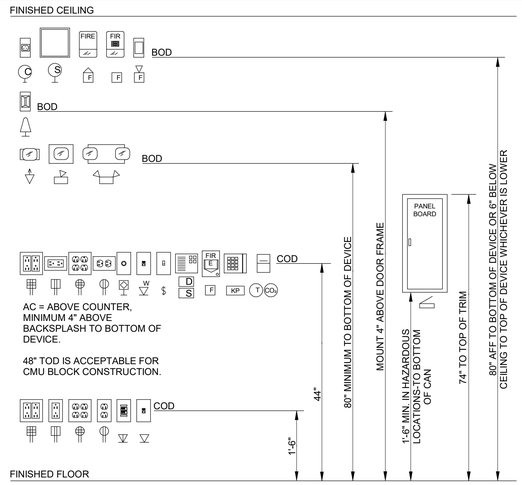
GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED PER 2020 NEC, AND ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE LATEST EDITION OF ALL LOCAL AMENDMENTS AND REGULATIONS AS ADOPTED BY THE CITY OF BURNET AND THE STATE OF TEXAS, AND THE PUBLICATIONS AND STANDARDS OF THE FOLLOWING AUTHORITIES, IN ADDITION TO THOSE SPECIFIED IN RELATED SUPPLEMENTARY CONDITIONS, WHICH ARE REFERENCED IN ELECTRICAL SPECIFICATIONS BY THE ABBREVIATIONS NOTED.
2. UNITED STATES OF AMERICA STANDARDS INSTITUTE - USASI INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS - IEEE NATIONAL ELECTRICAL CODE - NEC NATIONAL FIRE PROTECTION ASSOCIATION - NFPA UNDERWRITER'S LABORATORIES - UL NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION - NEMA AMERICAN SOCIETY OF TESTING MATERIALS - ASTM OCCUPATIONAL SAFETY AND HEALTH ACT - OSHA
3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, PLANS AND THE SPECIFICATIONS, AND SHALL BE PERFORMED WITH THE LATEST INDUSTRY ACCEPTED STANDARDS.
4. THE INTENT OF THIS CONSTRUCTION PACKAGE IS TO ILLUSTRATE ALL THE WORK TO BE ACCOMPLISHED TO PROVIDE AN ELECTRICAL INSTALLATION COMPLETE IN EVERY RESPECT. CARE HAS BEEN TAKEN TO INDICATE THE COMPLETE SCOPE OF WORK REQUIRED FOR THIS PROJECT, HOWEVER, IT IS NOT THE INTENT TO INDICATE EVERY CONFLICT WHICH MAY ARISE, AND PROVIDE FOR SUCH ON THESE DOCUMENTS. NO ASSURANCE IS GIVEN THAT THE PLANS COMPLETELY REFLECT ACTUAL JOB SITE CONDITIONS. IF IT IS DISCOVERED IN THE FIELD THAT ACTUAL LOCATIONS OR CONDITIONS DIFFER GREATLY FROM THOSE SHOWN, CONTRACTOR SHALL GET APPROVAL FROM OWNER PRIOR TO COMMENCING WORK.
5. CONTRACTOR SHALL VISIT THE SITE AND FIELD VERIFY THE PROPOSED INSTALLATION LOCATION AND ALL WORKING CONDITIONS SUCH AS STARTING TIME, NOISE LIMITATIONS, CONFINED SPACE LIMITATIONS, OFFSETS AND ROUTING ADJUSTMENTS THAT MAY BE REQUIRED, ETC., TO COMPLETE THE WORK. CONTRACTOR SHALL COORDINATE WITH THE OWNER REGARDING OBSTRUCTION OF ROADWAY OR DRIVEWAY AREAS, ON SITE MATERIALS AND EQUIPMENT STORAGE, AND BUILDING ACCESS. SITE INSPECTION SHALL DETERMINE CONDITION OF EXISTING ELEMENTS TO REMAIN AND BE PROTECTED.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, AND MISALIGNMENT ACCORDING TO APPLICABLE CODES, STANDARDS, AND GOOD CONSTRUCTION PRACTICES. CONTRACTOR SHALL TAKE PROPER PRECAUTIONS TO PROTECT ALL EXISTING OPERATIONS AND PROPERTY ADJACENT WITH WHICH WORK COMES IN CONTACT, OR OVER OR UNDER WHICH HE MAY TRANSPORT, HOIST, OR MOVE MATERIALS, EQUIPMENT, DEBRIS, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT IN KIND OF ALL INADVERTENT DAMAGE TO EXISTING SYSTEMS.
7. ALL NECESSARY PERMITS, LICENSES, CERTIFICATES, TESTS, ETC., SHALL BE PROCURED AND PAID FOR BY THE CONTRACTOR.
8. THE DRAWINGS SHALL NOT BE SCALED FOR CONSTRUCTION INSTALLATION DIMENSIONS. ALL CONDUIT ROUTING ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF CONDITIONS, AND SHALL PERFORM FIELD MEASUREMENTS PRIOR TO FABRICATION AND/OR PURCHASE OF ANY EQUIPMENT AND MATERIAL. REFERENCE ALL DETAILS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS. DETAILS MAY NOT BE REFERENCED ON THE DRAWING(S), BUT ARE INTENDED TO BE TYPICAL THROUGHOUT UNLESS OTHERWISE NOTED.
9. DO NOT BEGIN WORK IF ANY DISCREPANCIES OR CONFLICTS EXIST OR ARE DISCOVERED BETWEEN SYSTEMS, UTILITIES, UNTIL THE DISCREPANCIES HAVE BEEN RESOLVED. IMMEDIATELY CALL SUCH DISCREPANCIES OR CONFLICTS TO THE ATTENTION OF THE OWNER'S CONSTRUCTION REPRESENTATIVE AND/OR ENGINEER. SHOULD ANY CONFLICTS OR AMBIGUITIES EXIST IN THE DRAWINGS, NOTES, OR SPECIFICATIONS, BRING THESE TO THE ATTENTION OF THE ENGINEER IMMEDIATELY BEFORE PROCEEDING WITH WORK.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING FULL COORDINATION WITH ALLTRADES TO ACCOMPLISH THE WORK AS INDICATED AND NOTED IN CONTRACT DOCUMENTS. COORDINATE WITH OWNER'S REPRESENTATIVE, AND MAINTAIN A SET OF ALL CHANGES BETWEEN THE DRAWINGS AND THE ACTUAL CONSTRUCTION. CONFLICTS ARISING DUE TO LACK OF COORDINATION SHALL BE THE RESPONSIBILITY OF, AND AT THE EXPENSE OF, THE CONTRACTOR. FINAL AS-BUILT DRAWINGS ARE TO BE DELIVERED TO THE OWNER/ENGINEER AND THE FINAL INVOICE FOR THE CONTRACT WILL NOT BE PAID UNTIL THESE AS-BUILT DRAWINGS ARE RECEIVED.
11. WORK AREAS ARE TO BE KEPT FREE OF DEBRIS AT ALL TIMES AND ARE TO BE LEFT BROOM CLEAN AT THE END OF EACH WORKING DAY. THE CONTRACTOR SHALL DISPOSE OF OFF-SITE, ALL MATERIALS REMOVED WHICH ARE NOT BE REINSTALLED OR SALVAGED ON THE PROJECT, UNLESS DIRECTED OTHERWISE BY OWNER. DISPOSAL OF MATERIAL SHALL BE IN ACCORDANCE WITH ACCEPTABLE METHODS APPROVED BY OWNER AND COORDINATED THROUGH OWNER'S COORDINATOR.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE RATING OF ALL PENETRATIONS THROUGH FIRE AND SMOKE RATED SURFACES. THE CONTRACTOR SHALL COMPLY WITH UL LISTING INSTRUCTIONS FOR PENETRATIONS THROUGH RATED SURFACES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAINING OF HIS EMPLOYEES AND SUBCONTRACTORS IN THE RECOGNITION AND AVOIDANCE OF UNSAFE CONDITIONS, AND IN THE REGULATIONS AND HAZARDS WHICH APPLY TO THE AREA IN WHICH THE WORK WILL TAKE PLACE. ALL SAFETY EXPOSURES OR VIOLATIONS BROUGHT TO THE ATTENTION OF THE CONTRACTOR SHALL BE RECTIFIED IMMEDIATELY.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PROTECTION OF PERSONS AND PROPERTY, AND FOR PROVIDING SAFE WORKING CONDITIONS THROUGHOUT THE WORK PROCESS. CONTRACTOR SHALL PROVIDE TEMPORARY COVERINGS FOR OPENINGS THROUGH WALLS OR FLOORS, AND PROVIDE TEMPORARY BARRIERS, PARTITIONS AND OR DUST BARRIERS WHERE REQUIRED TO MAINTAIN OSHA AND THE OWNER'S SAFETY STANDARDS AND TO PREVENT DAMAGE TO PROPERTY. ALL AREAS ADJACENT TO THE CONSTRUCTION AREA OR AFFECTED BY THE CONSTRUCTION MUST BE PROTECTED FROM DAMAGE, CLEANED AND RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF THE PROJECT. WELDING BLANKETS SHALL BE UTILIZED FOR PROTECTION OF COMBUSTIBLE MATERIALS IN AREA WHERE WELDING OR CUTTING WITH A TORCH IS CONDUCTED.
15. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTIVE MATERIALS AND WORKMANSHIP FOR A PERIOD OF NO LESS THAN ONE (1) YEAR AFTER THE DATE OF SUBSTANTIAL COMPLETION OR ACCEPTANCE OF THE WORK. THE CONTRACTOR SHALL REPAIR OR REPLACE, AT HIS OWN EXPENSE WHEN ORDERED TO DO SO, ALL WORK THAT MAY DEVELOP DEFECTS IN MATERIAL OR WORKMANSHIP WITHIN SAID PERIOD OF TIME. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR SERVICE INTENDED. AS INTERPRETED BY THE ENGINEER, THE INSTALLATION OF ALL EQUIPMENT SHALL BE MADE BY EXPERIENCED CRAFTSMAN IN A NEAT, WORKMANLIKE MANNER. ALL MATERIALS, TOOLS, COSTS, AND SERVICES NECESSARY TO COMPLETELY INSTALL ALL ELECTRICAL WORK SHALL BE PROVIDED BY THE CONTRACTOR.
16. ALL PROPOSED EQUIPMENT INSTALLED ON THIS PROJECT SHALL BE NEW AND UNUSED UNLESS NOTED OTHERWISE. ALL EQUIPMENT SHALL BE LABELED AND LISTED FOR THE INTENDED USE. THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL LABELS, DIRT, PAINT SPOTS, GREASE AND STAINS FROM ALL ELECTRICAL EQUIPMENT AND SHALL CLEAN ALL EQUIPMENT AS NECESSARY. NO LOOSE PARTS OR SCRAPS OF EQUIPMENT SHALL BE LEFT ON THE PREMISES. EQUIPMENT LOCATION AND ROUTING IS APPROXIMATE AND SHALL BE PLACED TO PROVIDE PROPER ACCESS AND CLEARANCE FROM OTHER TRADES AND EQUIPMENT.
17. ALL WIRING SHALL BE THWN/THHN, 98% CONDUCTIVITY COPPER, STANDARD CONDUCTOR, 600V INSULATION. ALL WIRING SHALL BE INSTALLED IN RIGID CONDUIT AND CONTINUOUS (WITHOUT SPLICES).
18. A GREEN GROUNDING CONDUCTOR SHALL BE PROVIDED WITH ALL BRANCH AND FEEDER CIRCUITS. SIZE PER N.E.C. 250-122 UNLESS NOTED OTHERWISE. ALSO PROVIDE A SEPARATE DEDICATED INSULATED AND ISOLATED GROUNDING CONDUCTOR FOR ISOLATED GROUND CIRCUITS. UPON COMPLETION OF THE WORK, ALL PARTS OF THE ELECTRICAL INSTALLATION SHALL BE TESTED AND PROVED TO BE FREE OF UNWANTED GROUNDS AND OTHER DEFECTS.
19. ALL EXTERIOR CONDUIT SHALL BE RIGID GALVANIZED STEEL CONDUIT. FITTINGS SHALL BE STEEL THREADED TYPE. MOUNT THE CONDUIT AS HIGH AS POSSIBLE AND RUN PARALLEL AND PERPENDICULAR TO STRUCTURE. ALL OTHER CONDUIT SHALL BE EMT WITH STEEL COMPRESSION OR STEEL SET SCREW FITTINGS, 3/4" MIN., UNLESS NOTED OTHERWISE.
20. KEEP RACEWAYS AT LEAST SIX INCHES AWAY FROM PARALLEL RUNS OF FLUES AND STEAM OR HOT WATER PIPES. INSTALL HORIZONTAL RACEWAY RUNS ABOVE WATER AND STEAM PIPING.
21. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL PULL WIRES IN EMPTY RACEWAYS. USE NO. 14 AWG ZINC-COATED STEEL OR MONOFILAMENT PLASTIC LINE HAVING NOT LESS THAN 200-LB TENSILE STRENGTH.
22. CHANNEL AND ANGLE SUPPORT SYSTEMS, HANGERS, ANCHORS, SLEEVES, AND FASTENERS SHALL BE DESIGNED TO PROVIDE SECURE SUPPORT FROM THE BUILDING STRUCTURE FOR ELECTRICAL COMPONENTS. SUPPORTING DEVICES SHALL BE HOT DIPPED GALVANIZED STEEL. CONFORM TO MANUFACTURER'S RECOMMENDATIONS FOR SELECTING SUPPORTS. SUPPORT PARALLEL RUNS OF HORIZONTAL RACEWAYS TOGETHER ON TRAPEZE OR BRACKET TYPE HANGERS.
23. PULL BOXES SHALL BE GALVANIZED SHEET METAL WITH SCREW-ON COVERS AND WELDED SEAMS, STAINLESS STEEL NUTS, BOLTS, SCREWS AND WASHERS. BOXES SHALL BE SIZED IN ACCORDANCE WITH THE NEC.
24. UNLESS OTHERWISE NOTED ALL 120V SINGLE PHASE CIRCUITS WILL REQUIRE A INDIVIDUAL NEUTRAL CONDUCTOR - INCLUDING MULTI-CIRCUITS COMBINED IN SINGLE CONDUIT RUNS.

INTERIOR BOX MOUNTING HEIGHTS



ADDITIONAL MOUNTING HEIGHTS

CB	44" COD.
EPB	44" COD.
EPC	44" COD.
	44" COD.
	44" COD.

CONTROL EQUIPMENT SCHEDULE

UNIT	ITEMS BY OTHERS				ITEMS BY ELECTRICAL CONTRACTOR			CONTROL DEVICES	INST. BY	FURN. BY	NOTES
	DESCRIPTION	VOLTAGE	PHASE	FLA	DISCONNECT DESCRIPTION	DISCONNECT AMPS	DISCONNECT NEMA ENCLOSURE				
CU-1-1	CONDENSING UNIT	208 V	1	36A	NON-FUSED	60A	NEMA 3R	FCU-1-1	MC	MC	4
CU-2-1	CONDENSING UNIT	208 V	1	32A	NON-FUSED	60A	NEMA 3R	FCU-2-1	MC	MC	4
CU-IT-MAIN	CONDENSING UNIT	208 V	1	34.0	NON-FUSED	60A	NEMA 3R	FCU-IT-MAIN	MC	MC	1, 4
CU-LAB	CONDENSING UNIT	208 V	1	22.0	NON-FUSED	30A	NEMA 3R	FCU-LAB	MC	MC	1, 4
EF-1-1 thru EF-1-3	EXHAUST FAN	120 V	1	1A	MOTOR RATED	15A	NEMA 1	OCCUPANCY SENSOR	EC	EC	2, 4
EF-2-1 & EF-2-2	EXHAUST FAN	120 V	1	1A	MOTOR RATED	15A	NEMA 1	OCCUPANCY SENSOR	EC	EC	2, 4
EWH-1	ELECTRIC WATER HEATER	208 V	1	12A	MOTOR RATED	20A	NEMA 1	--	--	--	4
FCU-1-1	FAN COIL UNIT	208 V	1	25A	NON-FUSED	30A	NEMA 1	THERMOSTAT	MC	MC	3, 4
FCU-2-1	FAN COIL UNIT	208 V	1	25A	NON-FUSED	30A	NEMA 1	THERMOSTAT	MC	MC	3, 4

NOTES:
1. FCU POWERED BY CU. PROVIDE WIRE AND CONDUIT PER NEC.
2. INTERLOCK WITH OCCUPANCY SENSORS IN MEN'S AND WOMEN'S RESTROOMS.
3. UNIT PROVIDED WITH DUCT SMOKE DETECTOR, CONNECT TO FIRE ALARM SYSTEM.
4. ELECTRICAL CONTRACTOR TO MAKE FINAL CONNECTION AS NOTED IN PLANS.

ELECTRICAL LEGEND

LIGHTING

SYMBOL	DESCRIPTION
	LAY-IN OR RECESSED FIXTURE, SIZE ON PLANS
	WALL MOUNTED FIXTURE, SIZE ON PLANS
	SURFACE MOUNTED FIXTURE, SIZE ON PLANS
	PENDANT OR SURFACE MOUNTED FIXTURE, SIZE ON PLANS
	PENDANT MOUNTED FIXTURE, SIZE ON PLANS
	SHADED FIXTURE INDICATES FIXTURE IS UNSWITCHED AND ALSO INDICATES EMERGENCY POWER.
	RECESSED DOWNLIGHT FIXTURE
	SURFACE MOUNTED FIXTURE
	WALL MOUNTED FIXTURE
	WALL WASH OR DIRECTIONAL FIXTURE
	WALL SCONCE FIXTURE
	TRACK FIXTURE, SEE PLAN FOR SIZE AND HEADS
	CEILING FAN FIXTURE
	CEILING MOUNTED, WALL MOUNTED EXIT LIGHT (W/ DIRECTIONAL ARROWS)
	1 HEAD REMOTE EMERGENCY LIGHT
	2 HEAD EMERGENCY LIGHT BATTERY PACK
	1 HEAD REMOTE EMERGENCY LIGHT BATTERY PACK
	2 HEAD LIGHT WITH MOTION SENSOR
	SQUARE POLE MOUNTED FIXTURE, EXTERIOR
	ROUND POLE MOUNTED FIXTURE, EXTERIOR
	POST TOP FIXTURE, EXTERIOR
	BOLLARD FIXTURE, EXTERIOR
	DIRECTIONAL INGROUND FIXTURE, EXTERIOR

FIRE ALARM

SYMBOL	DESCRIPTION
F	STROBE (NUMBER INDICATES CANDELA RATING)
F	SPEAKER/STROBE (NUMBER INDICATES CANDELA RATING)
F	SPEAKER/STROBE (NUMBER INDICATES CANDELA RATING), CEILING MOUNTED
F	SPEAKER
F	MANUAL PULLSTATION IPS INDOOR PROTECTIVE SHIELD
M	MAGNETIC DOOR HOLDER, BY DIV 28
FSD	FIRE/SMOKE DAMPER
SD SD	SMOKE DETECTOR, SMOKE DETECTOR WALL MOUNTED
HD HD	HEAT DETECTOR, HEAT DETECTOR WALL MOUNTED
TS	CONNECTION TO TAMPER SWITCH, SWITCH BY OTHERS
FS	CONNECTION TO FLOW SWITCH, SWITCH BY OTHERS
PS	CONNECTION TO PRESSURE SWITCH, SWITCH BY OTHERS
BD	BEAM DETECTOR TRANSMITTER
BD	BEAM DETECTOR RECEIVER
SD	DUCT SMOKE DETECTOR
FARA	FIRE ALARM REMOTE ANNUNICATOR
FACP	FIRE ALARM CONTROL PANEL
FASP	FIRE ALARM SIGNAL EXTENDER PANEL

COMMUNICATIONS

SYMBOL	DESCRIPTION
	CATV JACK, WALL MOUNTED
CLG	CATV JACK CEILING MOUNTED
	MICROPHONE OUTLET
S S	SPEAKER, SPEAKER WALL MOUNTED
C	CLOCK HANGER RECEPTACLE
E	EXISTING VOICE/DATA OUTLET
3	VOICE/DATA OUTLET - SUBSCRIPT INDICATES NUMBER OF CABLES/JACKS - NO SUBSCRIPT INDICATES 2 CABLES/JACKS
3	VOICE/DATA OUTLET MOUNTED IN FLOORBOX - SUBSCRIPT INDICATES NUMBER OF CABLES/JACKS - NO SUBSCRIPT INDICATES 2 CABLES/JACKS
W	VOICE OUTLET - WALL MOUNTED
	DATA RACK
WAP WAP	WIRELESS ACCESS POINT, WIRELESS ACCESS POINT WALL MOUNTED - 2 CABLES/JACKS

ABBREVIATIONS AND MISCELLANEOUS

SYMBOL	DESCRIPTION
AC	ABOVE COUNTER, 4" BACK SPLASH
ATS	AUTOMATIC TRANSFER SWITCH
AFG	ABOVE FINISHED GRADE
AFF	ABOVE FINISHED FLOOR
BLG	BELOW GRADE
BOD	BOTTOM OF DEVICE
C	CONDUIT
CAS	CARD ACCESS SYSTEM
CCTV	CLOSED CIRCUIT TV
CLG	CEILING
COD	CENTER OF DEVICE
CU	COPPER
DVR	DIGITAL VIDEO RECORDER
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
GC	GENERAL CONTRACTOR
GND	GROUND
LSI	FIELD ADJUSTABLE LONG TIME, SHORT TIME AND INSTANTANEOUS
LSIG	FIELD ADJUSTABLE LONG TIME, SHORT TIME, INSTANTANEOUS AND GROUND FAULT
MC	MECHANICAL CONTRACTOR
(N)	NEW
NL	NIGHT LIGHT
PTZ	PAN-TILT-ZOOM
QTY	QUANTITY
(R)	RELOCATED
SF	SURFACE
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TC	TEMPERATURE CONTROL CONTRACTOR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUS BAR
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
W/	WITH
WM	WIRE MOLD
WP	WEATHER PROOF (WHILE IN USE)
XFMR	TRANSFORMER
a,b,c etc	SWITCH DESIGNATION
BN1L-2,4,6	CIRCUIT DESIGNATION, PANEL BN1L, CIRCUITS 2,4,6
1/E501	INDICATES DETAIL 1 ON SHEET E501
1	SHEET WORK NOTE
1	SHEET DEMO WORK NOTE
	HOME RUN TO PANEL
	CONDUIT CONCEALED IN CEILING OR WALL
	CONDUIT CONCEALED UNDER FLOOR
LV	LOW VOLTAGE CIRCUIT
	FIBER OPTIC CABLE
	CABLE TRAY
///	CIRCUIT, NUMBER OF HASH MARKS INDICATES NUMBER OF CONDUCTORS IN CABLE/RACEWAY. GROUND WIRE IS NOT SHOWN BUT SHALL BE INCLUDED. NO HASH MARKS INDICATES 2 CONDUCTORS PLUS GROUND.

SURVEILLANCE SYSTEM

SYMBOL	DESCRIPTION
	CAMERA, CEILING AND WALL MOUNTED DOME, PTZ
	CAMERA, CEILING AND WALL MOUNTED DOME, FIXED
	CAMERA, CEILING MOUNTED, 360 DEGREE
	CAMERA
DVR	DIGITAL VIDEO RECORDER
SPS	SURVEILLANCE POWER SUPPLY
M	MONITOR

SECURITY SYSTEM

SYMBOL	DESCRIPTION
CR	CARD READER
	SPEAKER SIGNAL DEVICE
DC	DOOR CONTROLLER
DS	DOOR SWITCH CONTACT
KP	KEYPAD
PT	POWER TRANSFER SWITCH
MRX	MOTION SENSOR REQUEST TO EXIT
REX	MANUAL REQUEST TO EXIT
PS	POWER SUPPLY W/BATTERY, BY DIV 8, INSTALLED AND CONNECTED BY DIV 27
LX	CONNECTION TO REQUEST TO EXIT & LATCH BOLT MONITORING
PRX	CONNECTION TO PANIC REQUEST TO EXIT
ML	CONNECTION TO MAGNETIC DOOR LOCK
DPS	CONNECTION TO MAGNETIC DOOR POSITION SWITCH
ES	CONNECTION TO ELECTRIC DOOR STRIKE
EL	CONNECTION TO ELECTRIC LATCH
AO	CONNECTION TO ELECTRIC AUTO OPENER
FA	CONNECTION TO FIRE ALARM CONTACT
1	INDICATES SECURITY DOOR 1
	PANEL SCP SECURITY CONTROL PANEL SDC SECURITY DOOR CONTROLLERS
	SECURITY CAMERA

DEVICES AND POWER

SYMBOL	DESCRIPTION
$	SWITCH - SPST 2 SINGLE POLE, DOUBLE THROW 3 THREEWAY 4 FOURWAY K KEY OPERATED P PILOT LIGHT WP WEATHERPROOF OS OCCUPANCY SENSOR (DUAL TECHNOLOGY) D DIMMER MC SPOT-MOMENTARY CONTACT LV LOW VOLTAGE T TIMER SWITCH TS TEST SWITCH VS VACANCY SENSOR (DUAL TECHNOLOGY) WITH DIMMING
OS	OCCUPANCY SENSOR SWITCH (CEILING) - SUBSCRIPT IS TYPE
	RECEPTACLE - SIMPLEX
CLG	RECEPTACLE - DUPLEX, MOUNTING IN CEILING
CLG	GFI RECEPTACLE - DUPLEX, MOUNTING IN CEILING
	RECEPTACLE - DUPLEX
	GFI RECEPTACLE - DUPLEX (GROUND FAULT INTERRUPT) D DEVICE RECEPT W/2 USB PORTS DC DROP CORD WP WEATHERPROOF COVER & WEATHER RESISTANT RECEPTACLE TR TAMPER RESISTANT S SURGE PROTECTED IG ISOLATED GROUND FILLED CENTER INDICATES HOSPITAL GRADE EMERGENCY RECEPTACLE
	RECEPTACLE - DOUBLE DUPLEX
	GFI RECEPTACLE - DOUBLE DUPLEX - SAME INDICATORS AS SHOWN FOR DUPLEX RECEPTACLE
	RECEPTACLE - 208V R RANGE - NEMA 14-50R D DRYER - NEMA 10-30R W WELDER - NEMA 14-50R * NEMA CONFIGURATION AS NOTED
	208V RECEPTACLE IN RECESSED FLOORBOX
	DUPLEX RECEPTACLE/GFI IN RECESSED FLOORBOX
	DOUBLE DUPLEX RECEPTACLE/GFI IN RECESSED FLOORBOX
J	J-BOX - BOX INDICATES FLOOR MOUNTING -4"X4"X2-1/8" DEEP UNLESS OTHERWISE NOTED
PP	POWER POLE
T	THERMOSTAT/TEMPERATURE SENSOR BY MC OR TC, J-BOX AND CONDUIT TO CEILING BY EC
CO	CARBON MONOXIDE DETECTOR BY MC, J-BOX & CONDUIT TO CEILING BY EC
M	MANUAL MOTOR DISCONNECT/STARTER SWITCH
	EMERGENCY PUSHBUTTON
R	RELAY
PC PC	PHOTOCELL, PHOTOCELL WALL MOUNTED
	SPECIAL PURPOSE CONNECTION - BOX INDICATES FLOOR MOUNTING - WORK AS NOTED
	ELECTRIC MOTOR CONNECTION
	COMBINATION STARTER/DISCONNECT SWITCH
	DISCONNECT SWITCH
	CONTACTOR
	CIRCUIT BREAKER
VFD	VARIABLE FREQUENCY DRIVE
	CONTROL PANEL LRP LIGHTING RELAY PANEL TCP TEMPERATURE CONTROL PANEL GAP GENERATOR ANNUNCIATOR PANEL PACP PA CONTROL PANEL MGA MED GAS ALARM PANEL
TC	TIME CLOCK
	EXISTING PANELBOARD, SURFACE MOUNTED
	EXISTING PANELBOARD, FLUSH MOUNTED
	PANELBOARD, SURFACE MOUNTED
	PANELBOARD, FLUSH MOUNTED
or	ELECTRIC METER, BUILDING MOUNTED
	TRANSFORMER, INTERIOR
	TRANSFORMER, EXTERIOR

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STATE OF TEXAS — BUCKLEY H. PARKS — 106223 — LICENSED PROFESSIONAL ENGINEER

08/21/2025

127 E. JACKSON ST., BURNET TX 78611

BURNET COUNTY ANNEX

#	DATE	ISSUE
1	08/21/2025	ADDENDUM 1

CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20031

Project Number: 33-1408

ELECTRICAL COVER SHEET

E001

DIVISION 26 - ELECTRICAL
SCOPE
THE PROVISIONS, TERMS AND REQUIREMENTS OF DIVISION 1 AND 2, THE APPLICABLE DRAWINGS AND TECHNICAL SPECIFICATIONS HEREIN SHALL APPLY TO WORK UNDER THIS DIVISION.

THIS WORK CONSISTS OF, BUT IS NOT NECESSARILY LIMITED TO, THE FURNISHING OF ALL LABOR, EQUIPMENT, APPLIANCES AND MATERIALS AND THE PERFORMANCE OF ALL OPERATIONS IN CONNECTION WITH THE INSTALLATION OF ALL ELECTRICAL WORK COMPLETED, IN STRICT ACCORDANCE WITH SPECIFICATIONS AND/OR DRAWINGS, APPLICABLE CODES, INCLUDING INCIDENTAL MATERIALS NECESSARY AND REQUIRED FOR THEIR COMPLETION.

"PROVIDE" = FURNISHED AND INSTALLED COMPLETE. "OR EQUAL" = OR EQUAL AS APPROVED TO QUOTE BY ENGINEER, 10 DAYS PRIOR TO BID.

260000 - COMMON WORK RESULTS

A. INTENT OF DRAWINGS: DRAWINGS ARE PARTLY DIAGRAMMATIC AND DO NOT SHOW EXACT LOCATION OF CONDUIT UNLESS SPECIFICALLY DIMENSIONED.
B. WORKMANSHIP:
1. WORK SHALL BE ACCOMPLISHED BY WORKMEN SKILLED IN PARTICULAR TRADE, IN CONFORMANCE WITH BEST PRACTICES AND ACCEPTED STANDARDS.
2. WORK SHALL CONTRIBUTE TO EFFICIENCY OF OPERATION, ACCESSIBILITY, MAINTENANCE AND APPEARANCE. NO PART OF INSTALLATION SHALL INTERFERE WITH OPERATION OF ANY OTHER SYSTEM OR PART OF BUILDING.
3. NON-SATISFACTORY WORK SHALL BE CORRECTED AT NO ADDITIONAL EXPENSE TO OWNER.

C. RESPONSIBILITY:

1. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF SATISFACTORY AND COMPLETE WORK IN ACCORDANCE WITH THE INTENT OF DRAWINGS AND SPECIFICATIONS. PROVIDE, AT NO EXTRA COST, INCIDENTAL ITEMS REQUIRED FOR COMPLETION OF WORK EVEN THOUGH NOT SPECIFICALLY MENTIONED OR INDICATED IN SPECIFICATIONS OR ON DRAWINGS.
2. IF, AT ANY TIME, AND IN ANY CASE, CHANGE IN LOCATION OF CONDUIT, OUTLETS, FIXTURES, SWITCHES, PANELS, ELECTRICAL EQUIPMENT OR ASSOCIATED COMPONENTS, ETC., BECOMES NECESSARY DUE TO OBSTACLES OR INSTALLATION OF OTHER TRADES, SUCH REQUIRED CHANGES SHALL BE MADE BY CONTRACTOR AT NO EXTRA COST.
3. CONFLICTS DISCOVERED DURING CONSTRUCTION SHALL BE IMMEDIATELY CALLED TO THE ATTENTION OF THE ENGINEER FOR DECISION. DO NOT PROCEED WITH INSTALLATION IN AREA OF QUESTION UNTIL CONFLICT HAS BEEN FULLY RESOLVED.
4. COORDINATE ALL ELECTRICAL WORK WITH OTHER TRADES TO PREVENT UNNECESSARY DELAYS IN THE CONSTRUCTION SCHEDULE.
5. PROVIDE TEMPORARY ELECTRICAL POWER AND LIGHTING FOR ALL TRADES THAT REQUIRE SERVICE DURING THE COURSE OF THIS PROJECT. PROVIDE TEMPORARY SERVICE AND DISTRIBUTION AS REQUIRED. COMPLY WITH THE NFPA 70 AND OSHA REQUIREMENTS. (ENERGY COSTS BY GENERAL CONTRACTOR.)

D. GUARANTEE-WARRANTY: THIS CONTRACTOR SHALL AND HEREBY DOES WARRANT AND GUARANTEE:

1. THAT ALL WORK EXECUTED UNDER THIS SECTION WILL BE FREE FROM DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THIS WORK.
2. THE CONTRACTOR AGREES TO, AT THE CONTRACTOR'S OWN EXPENSE, REPAIR AND REPLACE ALL SUCH DEFECTIVE MATERIALS AND WORK AND ALL OTHER WORK DAMAGED THEREBY WHICH BECOMES DEFECTIVE DURING THE TERM OF WARRANTY. AGREEMENT DOES NOT INCLUDE DAMAGES DONE BY OWNER.

E. PERMITS, TESTS, CODES AND STANDARDS:

1. ELECTRICAL CONTRACTOR TO PAY FOR ALL PERMITS AND FEES IN CONNECTION WITH THIS WORK.
2. WORK SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITIONS OF ADOPTED LOCAL, STATE AND NATIONAL CODES AND ORDINANCES, THE STATE FIRE MARSHAL, AND UTILITY COMPANY REGULATIONS.
3. ELECTRICAL WORK SHALL CONFORM TO NATIONAL ELECTRICAL CODES, LATEST EDITIONS, AS A MINIMUM REQUIREMENT.
4. ALL MATERIAL TO CONFORM WITH APPLICABLE STANDARDS.

F. DISCREPANCIES: PRIOR TO SUBMITTING BID, CONTRACTOR SHALL REFER ANY APPARENT DISCREPANCIES OR OMISSIONS TO ENGINEER FOR CLARIFICATION.

G. PRIOR APPROVALS: ALL PROPOSED SUBSTITUTIONS SHALL BE RECEIVED BY THE ENGINEER **10 DAYS PRIOR TO BID. PRIORS RECEIVED AFTER 3 P.M. OF THE 10TH DAY WILL BE REJECTED**. SUPPLY TECHNICAL DATA, PHOTOMETRICS AND DIMENSIONAL DRAWINGS SHOWING THAT SUBSTITUTES ARE EQUAL TO PRODUCT SPECIFIED. FAXED PRIOR APPROVALS WILL NOT BE ACCEPTED.

H. SHOP DRAWING SUBMITTALS:

1. IN ADDITION TO DISTRIBUTION REQUIREMENTS FOR SUBMITTALS SPECIFIED IN DIVISION 1 SECTION "SUBMITTALS," SUBMIT DRAWINGS FOR FINAL AND OFFICIAL APPROVERS THROUGH THE GENERAL CONTRACTOR AS LISTED BELOW. IF THE AUTHORITY HAVING JURISDICTION REQUIRES SHOP DRAWINGS TO HAVE A REGISTERED ENGINEER'S STAMP AFFIXED, THIS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ACQUIRE SUCH STAMP AT CONTRACTOR'S COST.
A. ENGINEER - **2 COPIES.**
B. GENERAL CONTRACTOR - **2 COPIES.**
C. SUBCONTRACTOR - **COPIES AS REQUIRED**.

ADDITIONAL COPIES MAY BE REQUIRED BY INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. COPIES OF PRICE LIST SHEETS ARE NOT ACCEPTABLE. MANUFACTURER'S NAME AND ADDRESS MUST APPEAR ON EACH SHEET. ALL COPIES SHALL BE COMPLETELY LEGIBLE. FAX COPIES ARE UNACCEPTABLE. ALL SHOP DRAWINGS NOT BOUND IN DUO-TANG, MEAD OR EQUIVALENT FOLDERS WILL BE REJECTED.
2. SHOP DRAWINGS SHALL INCLUDE A COMPLETED SPECIFICATION SHEET OF ALL EQUIPMENT ALONG WITH FABRICATION, INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INSTALLATION DRAWINGS FOR FIRE ALARM SHALL BE DONE WITH A COMPUTER CAD PROGRAM AND INCLUDE NO OTHER SYSTEM. A BASIC FLOOR PLAN IN ELECTRONIC FORMAT CAN BE OBTAINED FROM THE PROJECT ENGINEER.

I. PROJECT CLOSE-OUT RECORD DOCUMENTS:

1. PROVIDE THREE FULL SIZE SETS, UNLESS MORE ARE CALLED FOR UNDER DIVISION 1 (ONE FOR ENGINEER AND ONE FOR OWNER). IN ADDITION TO REQUIREMENTS CALLED FOR UNDER DIVISION 1, INDICATE THE FOLLOWING INSTALLED CONDITIONS:
A. ACTUAL LOCATION OF ALL ELECTRICAL SERVICE GEAR/FEEDERS, PANEL/MOTOR/SPECIAL EQUIPMENT FEEDERS, ALL MAJOR UNDERGROUND OR UNDERSLAB CONDUITS, ALL CONDUIT STUBS FOR FUTURE USE, ANY CHANGE IN BRANCH CIRCUITRY FROM DRAWINGS, KEY JUNCTION BOXES AND PULL BOXES NOT INDICATED ON DRAWINGS, ANY CONTROL LOCATIONS OR INDICATOR LIGHTS NOT SHOWN ON DRAWINGS.
B. ADDENDUM ITEMS, CHANGE ORDER ITEMS AND ALL CHANGES MADE TO DRAWINGS FROM BIDDING PHASE THROUGH TO PROJECT COMPLETION.
C. ACTUAL EQUIPMENT AND MATERIALS INSTALLED. WHERE MANUFACTURER AND CATALOG NUMBER ARE INDICATED ON DRAWINGS, GENERALLY OR IN FIXTURE OR EQUIPMENT SCHEDULES, CHANGE TO REFLECT ACTUAL PRODUCTS INSTALLED.
D. CHANGE SERVICE PANEL AND BRANCH PANEL BREAKER LOCATIONS AND SCHEDULES TO REFLECT ACTUAL INSTALLED CONDITIONS.

J. PROJECT CLOSE-OUT MAINTENANCE MANUALS:

1. PREPARE 3 COPIES, UNLESS MORE ARE CALLED FOR UNDER DIVISION 1 (ONE FOR ENGINEER, TWO FOR OWNER).IN ADDITION TO REQUIREMENTS UNDER DIVISION 1, PROVIDE HEAVY DUTY, DURABLE 3-RING VINYL COVERED LOOSE-LEAF BINDER FOR EACH MANUAL SIZED TO RECEIVE 8.5 INCH BY 11 INCH PAPER. PROVIDE IN CLEAR PLASTIC SLEEVE ON THE SPINE THREE LABEL HOLDERS AND POCKETS IN THE COVER TO RECEIVE FOLDED SHEETS. IN MANUAL, INCLUDE ALL SHOP DRAWINGS, INSTALLATION/OPERATION/MAINTENANCE DATA FURNISHED WITH ELECTRICAL EQUIPMENT, VOICE/DATA TEST REPORTS, AND LETTERS FROM MANUFACTURER'S REPRESENTATIVES THAT THE FIRE ALARM HAS BEEN COMPLETED AND TESTED TO SATISFY REQUIREMENTS/CODES. LIST PROJECT NAME, DATE, AND CONTRACTOR'S NAME, ADDRESS AND TELEPHONE NUMBER. INCLUDE INDEX SHEET FOR EACH SPECIFICATION SECTION INDICATING EQUIPMENT, WITH SUPPLIER AND SUPPLIER'S TELEPHONE NUMBER. PROVIDE TABBED DIVIDERS INDICATING MAJOR GROUPINGS OF EQUIPMENT.
2. TURN OVER TO OWNER ALL SPARE EQUIPMENT AND DEVICES SPECIFIED AND SHOWN.

K. SUPPORTING EQUIPMENT:

1. UNLESS OTHERWISE INDICATED, FASTEN ELECTRICAL ITEMS AND THEIR SUPPORTING HARDWARE SECURELY TO THE BUILDING STRUCTURE, INCLUDING CONDUITS, RACEWAYS, CABLES, CABLE TRAYS, BUSWAYS, CABINETS, PANELBOARDS, TRANSFORMERS, BOXES, DISCONNECT SWITCHES, AND CONTROL COMPONENTS. FASTEN BY MEANS OF WOOD SCREWS OR SCREW-TYPE NAILS ON WOOD, TOGGLE BOLTS ON HOLLOW MASONRY UNITS, CONCRETE INSERTS OR EXPANSION BOLTS ON CONCRETE OR SOLID MASONRY, AND MACHINE SCREWS, WELDED THREADED STUDS, OR SPRING-TENSION CLAMPS ON STEEL. THREADED STUDS DRIVEN BY A POWER CHARGE AND PROVIDED WITH LOCK WASHERS AND NUTS MAY BE USED INSTEAD OF EXPANSION BOLTS AND MACHINE OR WOOD SCREWS. DO NOT WELD CONDUIT, PIPE STRAPS, OR ITEMS OTHER THAN THREADED STUDS TO STEEL STRUCTURES. IN PARTITIONS OF LIGHT STEEL CONSTRUCTION, USE SHEET METAL SCREWS. ALL DEVICE BOXES IN SHEETROCK WALLS WILL BE TIGHT BEFORE, DURING AND AFTER INSTALLATION OF SHEETROCK.
2. PROVIDE SUPPORTS FOR ELECTRICAL ITEMS IN ACCORDANCE WITH NFPA 70 AND ALL OTHER APPLICABLE CODES.
3. CONTRACTOR RESPONSIBLE FOR PROVIDING WATERTIGHT CONDUIT PENETRATIONS AT ALL WATERTIGHT WALLS, FLOORS ROOFS AND MEMBRANES. CONTRACTOR ALSO RESPONSIBLE TO MAINTAIN FIRE RATING OF WALLS, FLOORS, ROOFS AND MEMBRANES PENETRATED.
4. WHEN APPLICABLE, CENTER WITHIN INSULATION ANY ELECTRICAL CONDUIT ROUTED IN ATTIC SPACE. PROVIDE SEALING AS PER NFPA 70 300-7 FOR ALL CONDUITS EXPOSED TO DIFFERENT TEMPERATURES.

L. ELECTRICAL IDENTIFICATION:

1. APPLY CIRCUIT/CONTROL/ITEM DESIGNATION LABELS OF ENGRAVED PLASTIC LAMINATE FOR DISCONNECT SWITCHES, BREAKERS, PUSHBUTTONS, PILOT LIGHTS, FA DUCT DETECTION, MOTOR STARTERS, PANELBOARDS AND MAIN CONTROL PANEL AND SIMILAR SYSTEMS.
2. IDENTIFY ALL 120 VAC AND 208 VAC POWER RECEPTACLE COVER PLATES WITH PANEL AND CIRCUIT NUMBER UTILIZING A CLEAR LABEL WITH BLACK DESIGNATIONS. DESIGNATION EXAMPLE: L1-38.

260519 - CONDUCTORS AND CABLES

A. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE "COMMON WORK RESULTS" SECTION.

B. ALL CONDUCTORS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH NFPA 70, NEMA, UL NETA ATS-1995, AND ALL OTHER APPLICABLE CODES. ALL CONDUCTORS SHALL BE COPPER. ALUMINUM CONDUCTORS SHALL NOT BE USED.

C. MINIMUM CONDUCTOR SIZE FOR LIGHT AND POWER SHALL BE #12 AWG COPPER. MINIMUM CONDUCTOR SIZE FOR CONTROL WIRING SHALL BE #14 AWG COPPER UNLESS NOTED OTHERWISE ON DRAWINGS. #10 AWG AND SMALLER SHALL BE SOLID WIRE AND #8 AWG AND LARGER SHALL BE STRANDED. PROVIDE MINIMUM #10 AWG FOR EXTERIOR LIGHTING CIRCUITS.

D. **MC CABLE ALLOWED, IN CONCEALED WALL AND CEILING SPACES**.

E. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALVES OR AS SPECIFIED IN UL CODES.

F. COLOR CODE SECONDARY SERVICE, FEEDER, AND BRANCH CIRCUIT CONDUCTORS WITH FACTORY APPLIED COLOR AS FOLLOWS:

208Y/120 VOLTS	PHASE	480Y/277 VOLTS
RED	A	BROWN
BLACK	B	YELLOW
BLUE	C	PURPLE
WHITE	NEUTRAL	GRAY
GREEN	GROUND	GREEN

260526 - GROUNDING AND BONDING

A. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE "COMMON WORK RESULTS" SECTION.

B. INSTALL SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTORS FOR FEEDER AND BRANCH CIRCUITS IN COMPLIANCE WITH NFPA 70 ARTICLE 250.

C. PROVIDE #6 AWG MINIMUM GREEN INSULATED COPPER CONDUCTOR IN RACEWAY FROM GROUNDING ELECTRODE SYSTEM TO EACH TELEPHONE, ALARM AND COMMUNICATIONS SYSTEM'S TERMINAL BOARD, CABINET OR EQUIPMENT LOCATION.

D. SYSTEM GROUND: PROPERLY BOND SYSTEM NEUTRAL TO SYSTEM GROUND IN THE MAIN SERVICE APPARATUS. ALL OTHER NEUTRAL BUSSES, BARS, ETC., MUST BE ISOLATED FROM GROUND. ESTABLISH THE SYSTEM GROUND AS THE GROUNDING BUS IN MAIN SERVICE APPARATUS BY PROVIDING THE PROPER GROUND BUS IN THE MAIN SERVICE APPARATUS AND BY PROVIDING THE PROPER GROUNDING CONDUCTOR, INSTALLED IN RIGID STEEL CONDUIT, BONDED TO THE GROUNDING BUS AND EXTENDED TO THE GROUNDING POINT WHERE THE BOND SHALL BE MADE WITH THE PROPER COMBINATION CONDUIT/CABLE GROUNDING CLAMP. UNLESS PROHIBITED BY LOCAL CODES, THE GROUNDING POINT SHALL BE ESTABLISHED ON THE INCOMING WATER MAIN, UFER GROUND AND STRUCTURAL STEEL. BUILDING METALLIC WATER PIPING SYSTEM MUST BE BONDED, AS REQUIRED BY CODES, TO THE GROUNDING BUS IN THE MAIN SERVICE APPARATUS. CAREFULLY CHECK THE DRAWINGS FOR ADDITIONAL GROUNDING REQUIREMENTS AND COMPLY WITH NFPA 70 AND ALL OTHER APPLICABLE CODES/STANDARDS.

E. **GROUNDING ELECTRODE:** UFER GROUND FABRICATED ACCORDING TO NFPA 70, PARAGRAPH 250-52(A)(3), USING A MINIMUM OF 20 FEET OF BARE COPPER CONDUCTOR NOT SMALLER THAN NO. 4 AWG. BOND GROUNDING CONDUCTOR BY CADWELD PROCESS TO REINFORCE STEEL IN AT LEAST 4 LOCATIONS AND TO ANCHOR BOLTS.

260533 - RACEWAYS AND BOXES

A. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE "COMMON WORK RESULTS" SECTION.

B. CONDUIT RACEWAY:

1. INDOORS, USE THE FOLLOWING, UNLESS OTHERWISE STATED:
A. CONCEALED: EMT OR MC CABLE.
B. EXPOSED: EMT, IMC OR RMC.
C. CONNECTION TO VIBRATING EQUIPMENT: FLEXIBLE METAL CONDUIT.
2. OUTDOORS, USE THE FOLLOWING, UNLESS OTHERWISE STATED:
A. CONCEALED: RMC OR IMC.
B. EXPOSED: RMC OR IMC.
C. UNDERGROUND: SCHEDULE 40 PVC WITH SCHEDULE 80 PVC FITTINGS.
D. CONNECTION TO VIBRATING EQUIPMENT: LIQUID TIGHT FLEXIBLE METAL CONDUIT.
3. **EMT IS NOT ALLOWED**.
4. CONCEAL CONDUIT AND CABLE, UNLESS OTHERWISE NOTED; CONDUIT IS PERMITTED TO BE EXPOSED IN EQUIPMENT ROOMS. ALL CONDUITS SHALL HAVE INSULATED GROUND WIRE INSTALLED. DO NOT INSTALL CONDUIT EMBEDDED IN SLABS. EMT FITTINGS SHALL BE STEEL, COMPRESSION OR SET SCREW TYPE. ALL RACEWAYS SHALL BE INSTALLED AND SUPPORTED IN ACCORDANCE WITH NFPA 70 AND APPLICABLE CODES.

C. OUTLET BOXES:

1. CONFORM TO UL 514A, "METALLIC BOXES, ELECTRICAL," AND UL 514B, "FITTINGS FOR CONDUIT AND OUTLET BOXES." OUTLET BOXES SHALL BE METALLIC AND INSTALLED FLUSH IN ALL AREAS, EXCEPT MECHANICAL ROOMS, ABOVE LAY-IN CEILINGS, OR AS OTHERWISE INDICATED. MINIMUM SIZE TO BE 4 INCHES SQUARE BY 2-1/8 INCHES DEEP. BOXES SHALL BE OF TYPE, SHAPE, SIZE AND DEPTH TO SUIT EACH LOCATION AND APPLICATION. ALL FITTINGS SHALL BE STEEL.

D. PULL AND JUNCTION BOXES:

1. COMPLY WITH UL 50, "ELECTRICAL CABINETS AND BOXES," FOR BOXES OVER 100 CUBIC INCHES VOLUME. BOXES SHALL HAVE SCREWED OR BOLT-ON COVERS, SHALL BE SUITABLE FOR THE INTENDED APPLICATION AND SHALL BE LABELED.

E. ALL MATERIALS SHALL BE UL LISTED, APPROPRIATE FOR INTENDED APPLICATION. ENTIRE RACEWAY SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 70, ANSI, NEMA, UL, AND ALL OTHER APPLICABLE CODES.

262416 - PANELBOARDS

A. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE "COMMON WORK RESULTS" SECTION.

B. MANUFACTURER: SIEMENS, SQUARE-D, GE OR CUTLER HAMMER.

C. LOAD CENTERS ARE NOT ACCEPTABLE UNLESS SPECIFICALLY NOTED.

D. PANELBOARDS SHALL HAVE ALUMINUM BUS INCLUDING NEUTRAL AND GROUND BARS. BREAKERS SHALL BE BOLT ON TYPE. ALL 3-POLE BREAKERS 30 AMP AND LARGER SHALL HAVE MINIMUM FEATURE OF A THERMAL MAGNETIC ADJUSTMENT FEATURE.

E. PROVIDE TYPED CIRCUIT SCHEDULES FOR EXISTING PANELBOARDS WHERE LOADS HAVE CHANGED AND FRAMED,TYPED CIRCUIT SCHEDULES FOR ALL NEW PANELBOARDS WITH IDENTIFICATION OF ITEMS CONTROLLED BY EACH INDIVIDUAL BREAKER. INDICATE ROOM NUMBERS OF ITEMS CONTROLLED OR ROOM NAME WHERE APPROPRIATE FOR OWNER'S CONVENIENCE.

262726 - WIRING DEVICES

A. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE "COMMON WORK RESULTS" SECTION.

B. ACCEPTABLE MANUFACTURERS: PASS & SEYMORE, BRYANT, GE, HUBBELL, LEVITON.

C. DEVICES:
1. GENERAL LIGHT SWITCHES SHALL BE 20 AMP, 120/277 VOLT AC RATED AND **INDUSTRIAL GRADE**.
2. GENERAL RECEPTACLES SHALL BE SELF GROUNDING 5-20R AND **INDUSTRIAL GRADE**. GFCI RECEPTACLES SHALL BE 20 AMP FEED THROUGH TYPE WITH TWO UTILIZATION POINTS. DO NOT CONNECT DOWNSTREAM DEVICES TO LOAD SIDE OF GFCI.
3. DIMMERS SHALL BE **LUTRON NOVA SERIES,** SIZED APPROPRIATELY FOR LOAD.
4. GENERAL DEVICE COLOR SHALL BE **WHITE**. EMERGENCY POWER DEVICE COLOR SHALL BE RED ONLY.

D. DEVICE PLATES:

1. DEVICE PLATES SHALL HAVE OPENING FOR DEVICE INTENDED AND SHALL BE **LEXAN**. GENERAL DEVICE COLOR SHALL BE **WHITE**.
2. ALL DEVICE PLATES SHALL HAVE A CLEAR LABEL WITH THE PANEL AND CIRCUIT NUMBER DESIGNATION IN BLACK.
3. WEATHERPROOF RECEPTACLE COVERS SHALL BE A CORROSION RESISTANT DIE CAST METAL, MINIMUM 3 INCH DEEP, FLIP COVER WITH LATCH AND WITH PAD LOCKING PROVISIONS.

262816 - CIRCUIT AND MOTOR DISCONNECTS

A. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE "COMMON WORK RESULTS FOR ELECTRICAL" SECTION.

B. MANUFACTURER: SAME AS PANELBOARD MANUFACTURER.

C. DISCONNECTS SHALL BE HEAVY DUTY TYPE WITH CLASS R REJECTION FEATURE WHEN REQUIRED TO BE FUSIBLE. VOLTAGE RATING SHALL BE AT OR GREATER THAN THE APPLICATION VOLTAGE. PROVIDE NEMA 3R ENCLOSURE FOR EXTERIOR LOCATIONS. SERVICE SWITCHES SHALL BE UL LISTED FOR USE AS SERVICE EQUIPMENT.

262913 - MOTOR CONTROLLERS

A. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE "COMMON WORK RESULTS" SECTION.

B. MANUFACTURER: SAME AS PANELBOARD MANUFACTURER.

C. UNLESS SCHEDULED OTHERWISE, 3/4 HORSEPOWER OR LESS SINGLE-PHASE MOTORS SHALL HAVE 1 HP RATED MANUAL TOGGLE STARTERS WITH THERMAL OVERLOAD PROTECTION SIZED FOR THE MOTOR IN ACCORDANCE WITH NFPA 70. PROVIDE PILOT LIGHT FOR MANUAL STARTERS NOT IN SIGHT FROM MOTOR. UNITS LOCATED AT THE EXTERIOR OF THE BUILDING SHALL BE NEMA 3R RATED.

D. STARTERS SHALL BE ACROSS-THE-LINE MAGNETIC TYPE, COMBINATION STARTER/DISCONNECT, FVNR, AND HP RATED, UNLESS OTHERWISE SCHEDULED. STARTER SHALL HAVE RESETABLE OVERLOAD PROTECTION ON ALL PHASES, CONSTRUCTED OF ONE-PIECE CLASS 20 CONSTRUCTION. PROVIDE 120 VOLT CONTROL H-O-A AND INTERLOCKS WHERE INDICATED ON SCHEDULES. PROVIDE TWO N/O AUXILIARY CONTACTS. UNITS LOCATED AT THE BUILDING EXTERIOR SHALL BE NEMA 3R RATED.

E. ALL MOTOR CONTROLLERS SHALL BE UL LISTED AND INSTALLED IN ACCORDANCE WITH NFPA 70, NEMA, AND MANUFACTURER'S RECOMMENDATIONS.

265100 - LIGHTING

A. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE "COMMON WORK RESULTS" SECTION.

B. MANUFACTURER, MODEL, STYLE, COLOR, SIZE, ETC., AS SCHEDULED. IF NO COLOR HAS BEEN SELECTED, PROVIDE FIXTURE WITH THE STANDARD FINISH AS PUBLISHED BY THE MANUFACTURER. ALL FIXTURES TO BE SUPPLIED AS COMPLETE, HOUSING, SOCKETS, LAMP HOLDERS, INTERNAL WORKING, WIRE GUARDS, LENS GUARDS, DIFFUSING MATERIALS OR LENSES, PENDANTS, HANGERS, CANOPIES, ALIGNERS, END CAPS, BALLASTS AND EMERGENCY BATTERY PACKS, PLASTER FRAMES, RECESSING BOXES, HOLD DOWN CLIPS, ANCHOR BOLTS, ETC. INSTALL PLUMB AND TRUE, FREE OF LIGHT LEAKS, WARPS, DENTS AND OTHER IRREGULARITIES.

C. SUPPORT FOR RECESSED AND SEMI-RECESSED GRID-TYPE FLUORESCENT FIXTURES:

1. ALL LIGHTING FIXTURES SHALL BE POSITIVELY ATTACHED TO THE SUSPENDED CEILING SYSTEM BY MECHANICAL MEANS AS SPECIFIED IN THE NATIONAL ELECTRIC CODE, SECTION 410-16 (C) UNLESS INDEPENDENTLY SUPPORTED. THE ATTACHMENT DEVICE, A MINIMUM OF TWO PER FIXTURE, SHALL HAVE A CAPACITY OF 100 PERCENT OF THE LIGHTING FIXTURE WEIGHT ACTING IN ANY DIRECTION.
2. PENDANT-HUNG LIGHTING FIXTURES SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE USING NO. 9-GAGE WIRE OR AN APPROVED ALTERNATE SUPPORT WITHOUT USING THE CEILING SUSPENSION SYSTEM FOR DIRECT SUPPORT.
3. LIGHTING FIXTURES WEIGHING LESS THAN 56 POUNDS SHALL HAVE, IN ADDITION TO THE REQUIREMENTS OUTLINED ABOVE, TWO NO. 12-GAGE HANGERS CONNECTED FROM OPPOSITE CORNERS OF THE FIXTURE HOUSING TO THE STRUCTURE ABOVE. THESE WIRES MAY BE SLACK.
4. LIGHTING FIXTURES WEIGHING 56 POUNDS OR MORE SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY APPROVED HANGERS.

D. SUPPORT FOR SUSPENDED FIXTURES: BRACE PENDANTS AND RODS OVER 48 INCHES LONG TO LIMIT SWINGING. SUPPORT STEM-MOUNTED, SINGLE-UNIT, SUSPENDED FLUORESCENT FIXTURES WITH TWIN-STEM HANGERS. FOR CONTINUOUS ROWS, USE TUBING OR STEM FOR WIRING AT ONE POINT AND TUBING OR ROD FOR SUSPENSION FOR EACH UNIT LENGTH OF CHASSIS, INCLUDING ONE AT EACH END.

E. SURFACE-MOUNTED LIGHT FIXTURES ATTACHED TO A CEILING GRID SHALL BE ATTACHED WITH POSITIVE CLAMPING DEVICES THAT COMPLETELY SURROUND THE SUPPORTING MEMBERS. SAFETY WIRES SHALL BE ATTACHED BETWEEN THE CLAMPING DEVICE AND THE ADJACENT CEILING HANGER OR TO THE STRUCTURE ABOVE.

DIVISION 27 - COMMUNICATIONS

270500 - TELE-DATA COMMUNICATIONS

A. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE "COMMON WORK RESULTS" SECTION.

B. MANUFACTURERS: SIEMON, ICC, LEVITON, ORTRONICS, AMP, HUBBELL OR UNIPRISE.

C. STANDARDS: MATERIALS SHALL HAVE NRTL LISTING IN COMPLIANCE WITH UL910. COMPLY WITH TIA/EIA-569-A AND NFPA 70 FOR PATHWAYS AND SPACES, NECA 1, BICSI TDMM AND NFPA 70 FOR EQUIPMENT ROOM INSTALLATIONS, NECA 1, BICSI ITSIM CHAPTER 6 AND TIA/EIA-568 FOR CABLE INSTALLATIONS, TIA/EIA 568 FOR COPPER CONNECTING HARDWARE, TIA/EIA-568 AND TIA/EIA-604 FOR FIBER CONNECTING HARDWARE, TIA/EIA-J-STD-607A, BICSI TDMM AND NFPA 70 FOR GROUNDING, TIA/EIA-568B AND TIA/EIA 526-14-A FOR TESTING, TIA/EIA-606-A CLASS 2 LEVEL, UL 969 AND NFPA 70 FOR LABELING.

D. TELEPHONE/DATA ROOMS: WHERE TERMINAL BOARDS ARE INDICATED ON THE CONSTRUCTION DOCUMENTS, PROVIDE 3/4-INCH THICK INTERIOR GRADE PLYWOOD FROM FLOOR TO CEILING WITH FIRE RETARDANT PAINT ON ALL SIDES. COORDINATE CONDUIT FROM THE TELEPHONE TERMINAL BOARD (TTB) TO EXTERIOR OF BUILDING, SIZE AND ROUTE AS DICTATED BY SERVING UTILITY COMPANY. PROVIDE TTB COMMUNICATION GROUNDING BUS AS REQUIRED BY SERVING UTILITY, MINIMUM #6 AWG IN PVC CONDUIT, EXTENDED, SHORTEST AND MOST DIRECT ROUTE TO GROUND BAR AT MAIN SWITCH. TERMINATE IN GROUND BAR INSTALLED ON TTB. PROVIDE MINIMUM OF TWO QUAD-PLEX POWER RECEPTACLE 6 INCHES ABOVE FINISHED FLOOR AND ADDITIONAL AS INDICATED ON DRAWINGS.

E. VOICE/DATA WORKSTATION ROUGH-INS: PROVIDE 4 INCH SQUARE, 2-1/8-INCH DEEP 1-GANG ROUGH-IN WITH 3/4-INCH CONDUIT STUBBED TO CEILING SPACE WITH A 90 DEGREE BEND AND INSULATED THROAT BUSHING, UNLESS OTHERWISE STATED.

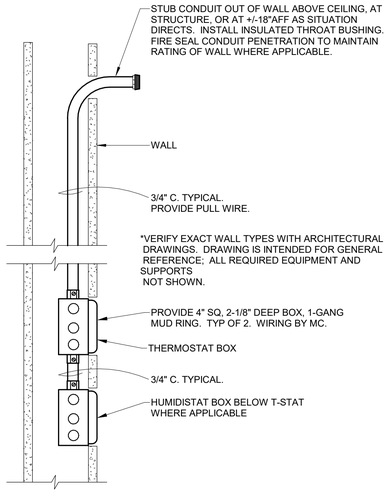
F. WORKSTATION OUTLET ASSEMBLIES: (MODULES SHALL BE COLOR CODED FOR SERVICE TYPE, FACEPLATE/JACK COLOR SAME AS SPECIFIED IN THE WIRING DEVICES SECTION).

1. WALL MOUNT TELEPHONE ASSEMBLY: STAINLESS STEEL WALL MOUNT PLATE WITH FLAT, CATEGORY 6, T568A/B, RJ45 MODULE.
2. VOICE ONLY WALL JACK ASSEMBLIES: (1) ANGLED **CATEGORY 6**, T568A/B, RJ45 MODULE AND (1) BLANK MODULE IN A MODULAR STYLE FACEPLATE. FACEPLATE SHALL HAVE CLEAR VIEW LABEL COVERS.
3. DATA ONLY WALL JACK ASSEMBLIES: (1) ANGLED **CATEGORY 6**, T568A/B, RJ45 MODULE AND (1) BLANK MODULE IN A MODULAR STYLE FACEPLATE. FACEPLATE SHALL HAVE CLEAR VIEW LABEL COVERS.
4. COMBINATION VOICE/DATA WALL JACK ASSEMBLIES: (3) ANGLED **CATEGORY 6**, T568A/B, RJ45 MODULES AND (3) BLANK MODULES IN A MODULAR STYLE FACEPLATE. FACEPLATE SHALL HAVE CLEAR VIEW LABEL COVERS.

G. CABLES:

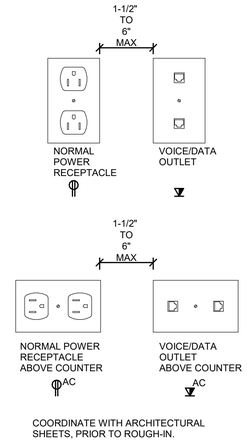
1. HORIZONTAL WORKSTATION CABLING: **CATEGORY 6** UNSHIELDED TWISTED PAIR (UTP) CABLE, 4 PAIR, COLOR CODED, THERMOPLASTIC-INSULATED CONDUCTORS IN POLYVINYL CHLORIDE (PVC) JACKET. USE PLENUM RATED CABLE IN SPACES USED FOR AIR HANDLING.
2. VERTICAL BACKBONE CABLING: **CATEGORY 6** UNSHIELDED TWISTED PAIR (UTP) CABLE, 25 PAIR FOR RUNS BETWEEN WIRING CLOSETS AND EQUIPMENT ROOMS.
3. FIBER OPTIC BACKBONE CABLING: FACTORY FABRICATED, JACKETED, LOW-LOSS, GLASS-TYPE, FIBER-OPTIC, MULTIMODE, GRADED INDEX, OPERATING AT 850 AND 1300 NANOMETERS. 12 STANDS PER CABLE, 62.5 MICRON CORE DIAMETER, 125 MICRON CLADDING, MAXIMUM ATTENUATION OF MINUS 3.75 DB/KM AT 850 NM AND 1.5 DB/KM AT 1300NM, MINIMUM MODAL BANDWIDTH OF 160 MHZ/KM AT 850 NM AND 500 MHZ/KM AT 1300 NM AND OPERATING TEMPERATURE RANGE OF MINUS 20 TO 70 DEG C.

H. WORKSTATION PATCH PANELS: WORKSTATION PATCH PANELS SHALL BE **CATEGORY 6** IN 24 OR 48 PORT SIZES WITH REAR WIRE MANAGEMENT AND S110 TERMINATION BLOCKS. TELEPHONE PATCH PANELS SHALL BE **CATEGORY 6** IN 24 OR 48 PORT SIZES WITH REAR WIRE MANAGEMENT AND S110 TERMINATION BLOCKS. ALL PATCH PANELS SHALL BE SERVICED IN RACKS BY PRUNING CABLE MANAGERS (1.75 INCH FOR 24 PORT AND 3.5 INCH FOR 48 PORT). PROVIDE 110 STYLE, HINGED PUNCHDOWN BLOCKS AND 4-PAIR, **CATEGORY 6** CABLES BETWEEN TELEPHONE PATCH PANEL AND 110 BLOCKS WHERE CROSS-CONNECTING BY TELEPHONE COMPANY. ALL EQUIPPED SHALL BE SELECTED AND SIZED TO ACCOMMODATE INCOMING WORKSTATION CABLES PLUS



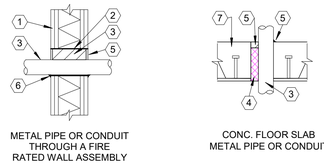
1 E003 T-STAT/H-STAT ROUGH-IN DETAIL

NOT TO SCALE



2 E003 RECEPTACLE SPACING DETAIL

NOT TO SCALE

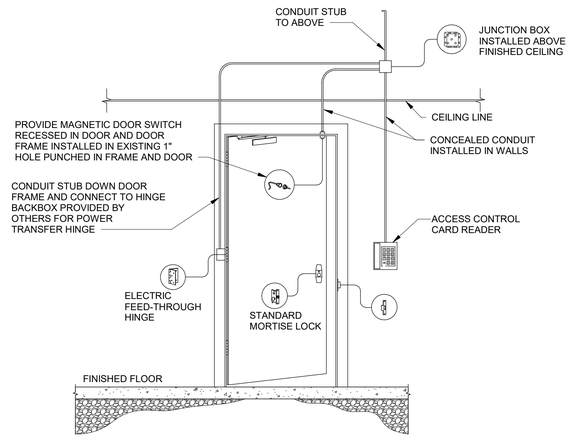


(#) NOTES:

1. WALL ASSEMBLY
2. SLEEVE
3. PENETRATING PIPE
4. FORMING MATERIAL TIGHTLY PACKED
5. INTUMESCENT FIRESTOP SEALANT
6. MINIMUM 1/2" BEAD INTUMSCENT FIRESTOP SEALANT AT POINT OF CONTACT
7. CONCRETE FLOOR - CEILING ASSEMBLY
8. PROVIDE PIPE STOPPING SYSTEMS IN SUBMITTALS

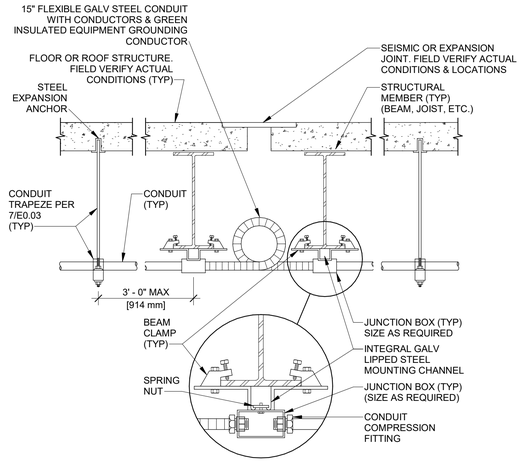
3 E003 FIRE STOPPING PENETRATION DETAILS

NOT TO SCALE



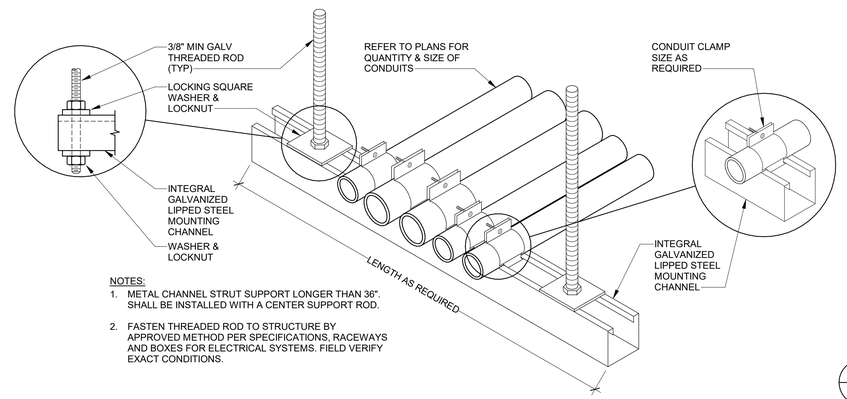
4 E003 TYPICAL ACCESS CONTROL DOOR DETAIL

NOT TO SCALE



5 E003 CONDUIT TRAPEZE MOUNTING DETAIL

NOT TO SCALE

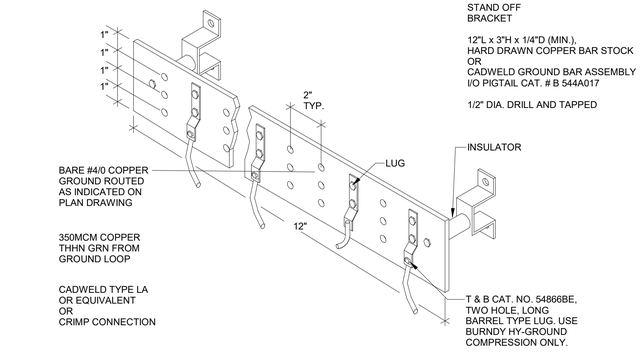


NOTES:

1. METAL CHANNEL STRUT SUPPORT LONGER THAN 36", SHALL BE INSTALLED WITH A CENTER SUPPORT ROD.
2. FASTEN THREADED ROD TO STRUCTURE BY APPROVED METHOD PER SPECIFICATIONS, RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS. FIELD VERIFY EXACT CONDITIONS.

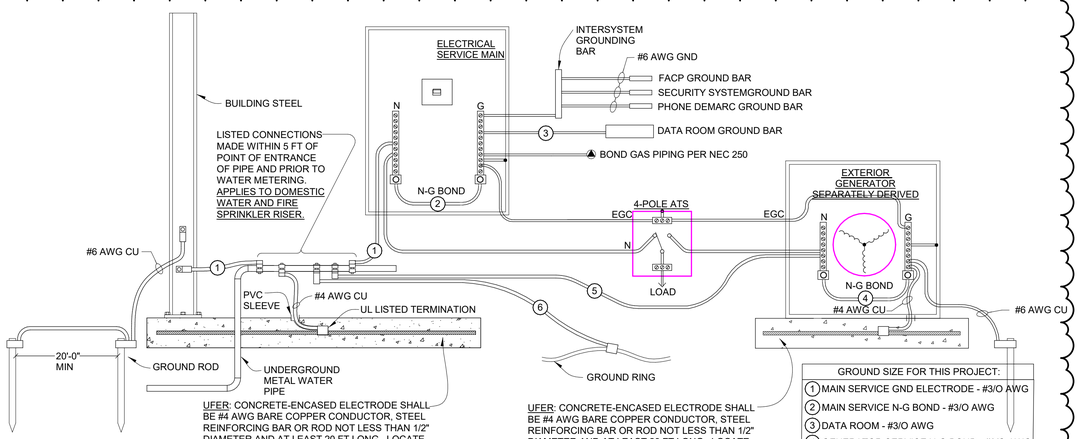
6 E003 CONDUIT JOINT CROSSING DETAIL

NOT TO SCALE



7 E003 GROUND BAR DETAIL

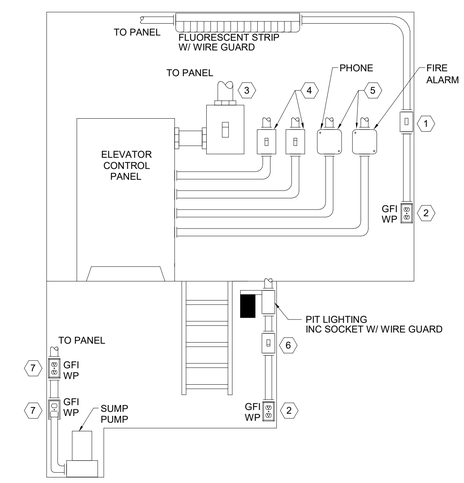
NOT TO SCALE



GROUND SIZE FOR THIS PROJECT:
(1) MAIN SERVICE GND ELECTRODE - #3/O AWG
(2) MAIN SERVICE N-G BOND - #3/O AWG
(3) DATA ROOM - #3/O AWG
(4) GENERATOR SERVICE N-G BOND - #3/O AWG
(5) GEN SERVICE GND ELECTRODE - #3/O AWG
(6) GROUND RING - #2/O AWG
NOTE: SEE POWER PLANS AND RISERS FOR EGC AND NEUTRAL SIZING.

8 E003 BUILDING GROUNDING ELECTRODE SYSTEM DETAIL

1/8" = 1'-0"



KEYED NOTES:

1. LIGHT FIXTURE SHALL BE ON CIRCUIT (P2-2) DEDICATED TO ELEVATOR MACHINERY ROOM. CIRCUIT SHALL SERVE ONLY ELEVATOR MACHINERY ROOM LIGHTING AND ELEVATOR MACHINERY ROOM GFI RECEPTACLE. CIRCUIT GFI RECEPTACLE ON THE LOAD SIDE OF THE LIGHT FIXTURE. PROVIDE LIGHT FIXTURE WITH WIRE GUARD AND LIGHT SWITCH AT MACHINERY ROOM ENTRANCE.
2. GFI RECEPTACLE IN ELEVATOR MACHINERY ROOM AND ELEVATOR PIT SHALL BE INSTALLED ON THE LOAD SIDE OF THE LIGHTING FIXTURES SERVING THESE SPACES.
3. ENCLOSED CIRCUIT BREAKER, MOUNTED IN ELEVATOR MACHINERY ROOM, SERVING ELEVATOR MACHINERY. PROVIDE CIRCUIT BREAKER WITH SHUNT TRIP MODULE WIRED TO OPERATE ON COMMAND FROM SPRINKLER WATER FLOW SWITCH IN HOISTWAY OR ELEVATOR MACHINERY ROOM.
4. PROVIDE TWO(2) ENCLOSED 20A/1P CIRCUIT BREAKERS, MOUNTED IN ELEVATOR MACHINERY ROOM, SERVING ELEVATOR CAB CONTROLS/LTG (P2-18) AND CAB HVAC (P2-20).
5. PROVIDE TWO(2) DATA/COMMUNICATION JUNCTION BOX (4" SQUARE) AND 1" CONDUIT BACK TO DATA/TELEPHONE BOARD AND FIRE ALARM FOR COMMUNICATIONS AND FA WIRING TO ELEVATOR. WIRING TO BE INSTALLED BY OTHERS. COORDINATE MOUNTING LOCATION WITH ELEVATOR INSTALLER.
6. LIGHT FIXTURE SHALL BE ON CIRCUIT (P1-32) DEDICATED TO ELEVATOR PIT. CIRCUIT SHALL SERVE ONLY ELEVATOR PIT LIGHTING AND ELEVATOR PIT GFI RECEPTACLE. CIRCUIT GFI RECEPTACLE ON THE LOAD SIDE OF THE LIGHT FIXTURE. PROVIDE LIGHT FIXTURE WITH WIRE GUARD AND LIGHT SWITCH AT PIT ENTRANCE ADJACENT TO THE LADDER LEADING INTO THE PIT.
7. TWO(2) DEDICATED GFI RECEPTACLES IN ELEVATOR PIT (P1-30). ONE FOR POWER CORD SERVING SUMP PUMP. ONE FOR ALARM PANEL. COORDINATE MOUTNING LOCATIONS WITH MECHANICAL CONTRACTOR.

9 E003 ELEVATOR MACHINE ROOM DETAIL

N.T.S.

LEVY DYKEMA
620 CONGRESS AVENUE
SUITE 150
AUSTIN, TX 78701
(512) 342-9177
WWW.LEVYDYKEMA.COM

STATE OF TEXAS
BUCKLEY H. PARKS
106223
LICENSED PROFESSIONAL ENGINEER
08/21/2025

127 E. JACKSON ST., BURNET TX 78611

BURNET COUNTY ANNEX

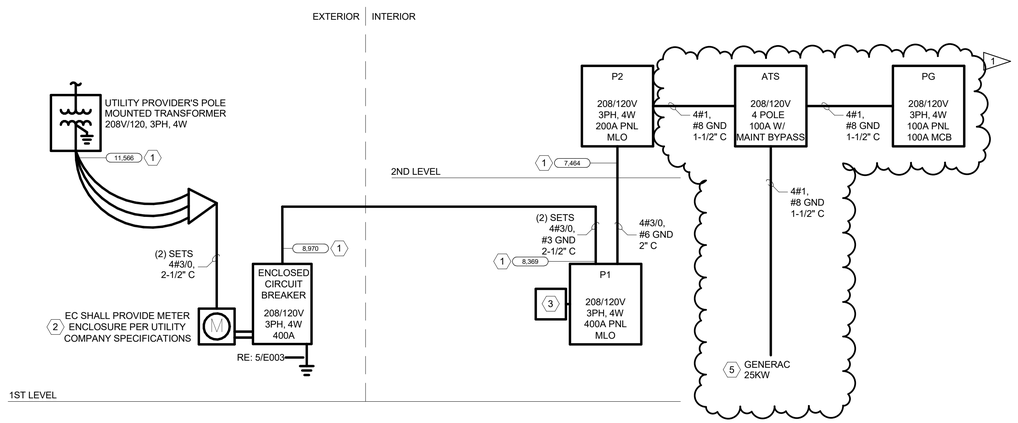
#	DATE	ISSUE
1	08/21/2025	ADDENDUM 1

Project Number: 33-1408

ELECTRICAL DETAILS

E003

CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20021



1 / E004 ELECTRICAL ONE-LINE DIAGRAM

NOT TO SCALE

LIGHTING FIXTURE SCHEDULE

NOTES:
1. UON, ALL LIGHT FIXTURE SPECIFICATIONS AND FINISHES SHALL BE SELECTED AND APPROVED BY THE ARCHITECT AND TENANT PRIOR TO PURCHASE AND INSTALLATION. SUBMITTALS SHALL INCLUDE
2. ACTUAL PAINT FINISH COLOR SAMPLE AND ARCHITECTURAL COLOR PAINT SELECTION BROCHURE FOR OPTIONS.
3. SEE ARCHITECTURAL SHEETS FOR MOUNTING HEIGHT AND DETAILS.
4. EMERGENCY FIXTURES SHALL HAVE 90-MINUTE BATTERY PACK/INVERTER PACK INSTALLED.
5. UON, VERIFY LAMP COLOR TEMPERATURE REQUIREMENTS (KELVIN) WITH THE OWNER AND ARCHITECT PRIOR TO PURCHASE.
6. UON, CONTROLS PRICING AND LIGHTING FIXTURE PRICING SHALL BE SEPERATE.
   UON, WHEN SUBSTITUTING FIXTURES, CONTRACTOR SHALL FURNISH BREAK-OUT PRICING OF BOTH THE SPECIFIED AND SUBSTITUTE FIXTURES FOR COMPARISO...

FIXTURE			MOUNTING	LAMP		FIXTURE VOLTAGE	FIXTURE WATTAGE	NOTES
TYPE	MFGR	CATALOG NUMBER	TYPE	LAMP	NO.			
L1	WILLIAMS	BAR-22-L30-835-DIM-UNV & BAR-22-L30-835-EM/10W-DIM-UNV	LAY IN	LED	1	120-277V	23	4
L1A	WILLIAMS	BAR-22-L20-835-DIM-UNV & BAR-22-L20-835-EM/10W-DIM-UNV	LAY IN	LED	1	120-277V	23	4
L2	COOPER	7SS-2-LL25-835-DRV-UNV	SURFACE	LED	1	120-277V	18	3
L3	TECH	SLF-2-L13-935-HIA-DIM-UNV	WALL	LED	1	120-277V	10	3
L4	WILLIAMS	BAR-24-L40-835-DIM-UNV & BAR-24-L40-835-EM/10W-DIM-UNV	LAY IN	LED	1	120-277V	31	4
L5	WILLIAMS	6DR-TL-L20-835-EM10W-DIM-UNV-OW-OF-CS (EM MODE)	RECESSED	LED	1	120-277V	10	
L6	WILLIAMS	LRX4-4-L8-835-BMA-DIM-UNV	WALL	LED	1	120-277V	27	3
L7E	BEGA-US	LGL-FCW-25-SV-30-N-XX-EM	SURFACE	LED	1	120-277V	25	5
X	COOPER	EU-X-7-X-R	-	LED	1	120-277V	5	

PANEL: P2

LOCATION: ELEV. MACH. RM.... **AMPS:** 200 A **AIC RATING:** SEE ONE-LINE DIAGRAM **NOTES (NT):**
MANUFACTURER: SEE... **VOLTS:** 208Y/120 **MOUNTING:** RECESSED
MODEL TYPE: PANELBOARD **PHASE:** 3 **ENCLOSURE:** TYPE 1
TYPE OF MAIN: MLO **WIRE:** 4 **FEATURES:**

LOAD NAME	NT	CB	P	WIRE SIZE H	GND	N	C SIZE (3/4" UON)	CKT NO	A	B	C	CKT NO	C SIZE (3/4" UON)	WIRE SIZE N	GND	H	P	CB	NT	LOAD NAME
2ND FLR LIGHTING		20	1	#10	#10	X		1	703 211			2		X	#12	#12	1	20		ELEVATOR ROOM LTG & GFCI
BREAKRM & RR'S GFCI		20	1	#12	#12	X		3		900 3307		4		X	#8	#8	2	35		CU-1-1
OFFICE RECEPTS		20	1	#12	#12	X		5			1620 3307	6	--	--	--	--	--	--	--	--
CORR & STORAGE RECEPTS		20	1	#12	#12	X		7	1080 2600			8		X	#10	#8	2	25		FCU-2-1
CONF. RM RECEPTS		20	1	#12	#12	X		9		1440 2600		10	--	--	--	--	--	--	--	--
OFFICE RECEPTS		20	1	#12	#12	X		11			1440 3754	12		X	#8	#6	2	40		CU-2-1
FRIDGE		20	1	#12	#12	X		13	1000 3754			14	--	--	--	--	--	--	--	--
SYSTEM FURNITURE		20	1	#12	#12	X		15		360 720		16		X	#12	#12	1	20		LAB QUAD
SYSTEM FURNITURE		20	1	#12	#12	X		17			360 1000	18		X	#12	#12	1	20		ELEVATOR CAB LTG
SYSTEM FURNITURE		20	1	#12	#12	X		19	360 1500			20		X	#12	#12	1	20		ELEVATOR CAB HVAC
SYSTEM FURNITURE		20	1	#12	#12	X		21		360 720		22		X	#12	#12	1	20		LAB QUAD
LAB QUAD		20	1	#12	#12	X		23			720 0	24	--	--	--	--	1	20	--	SPARE
LAB QUAD		20	1	#12	#12	X		25	720 0			26	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	27		0 0		28	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	29			0 0	30	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	31	0 0			32	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	33		0 0		34	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	35			0 240	36		X	#12	#12	1	20		EF-2-1 & 2-2
PANEL 'PG' VIA 'ATS'		100	3	#1	#4	X		37	7022 2000			38		X	#10	#10	3	40		ELEVATOR
--	--	--	--	--	--	--	--	39		14032 2000		40	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	41			125... 2000	42	--	--	--	--	--	--	--	--
									20951	26439	27004									
									175 A	227 A	232 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIPMENT	8500	100.00%	8500		
LIGHTING	797	100.00%	797	**TOTAL CONNECTED LOAD:**	74394
MOTORS	33707	100.00%	33707	**TOTAL CONNECTED AMPS:**	206 A
RECEPTACLES	31390	65.93%	20695		
				TOTAL ESTIMATED DEMAND:	63699
				TOTAL EST DEMAND AMPS	177 A

PANEL: P1

LOCATION: **AMPS:** 400 A **AIC RATING:** SEE ONE-LINE DIAGRAM **NOTES (NT):**
MANUFACTURER: SEE SPECIFICATIONS **VOLTS:** 208Y/120 **MOUNTING:** RECESSED
MODEL TYPE: PANELBOARD **PHASE:** 3 **ENCLOSURE:** TYPE 1
TYPE OF MAIN: MLO **WIRE:** 4 **FEATURES:**

REFER TO SHEET WORK NOTES, TYP.

LOAD NAME	NT	CB	P	WIRE SIZE H	GND	N	C SIZE (3/4" UON)	CKT NO	A	B	C	CKT NO	C SIZE (3/4" UON)	WIRE SIZE N	GND	H	P	CB	NT	LOAD NAME
LIGHTING CONTACTOR		20	1	#12	#12	X		1	500 360			2		X	#10	#10	1	30		PROTRUMS
1ST FLR LIGHTING		20	1	#10	#10	X		3		954 0		4	--	--	--	--	1	20	--	SPARE
EXTERIOR LIGHTING		20	1	#12	#12	X		5			50 0	6	--	--	--	--	1	20	--	SPARE
CONF. ROOM		20	1	#12	#12	X		7	1080 360			8		X	#12	#12	1	20		BRK RM COUNTER
HALL CORR. RECEPT.		20	1	#12	#12	X		9		900 1000		10		X	#12	#12	1	20		REFRIGERATOR
BRK RM CORR. RECEPT.		20	1	#12	#12	X		11			1260 1260	12		X	#12	#12	1	20		OFFICE 123
WORKSPACE WRKSTN		20	1	#12	#12	X		13	720 180			14		X	#12	#12	1	20		PRINTER
WORKSPACE WRKSTN		20	1	#12	#12	X		15		720 180		16		X	#12	#12	1	20		PRINTER
EF-1-1 thru EF-1-3		20	1	#12	#12	X		17			360 0	18	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	19	0 0			20	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	21		0 360		22	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	23			0 360	24		X	#12	#12	1	20		SYSTEM FURNITURE
SPARE	--	20	1	--	--	--	--	25	0 360			26		X	#12	#12	1	20		SYSTEM FURNITURE
SPARE	--	20	1	--	--	--	--	27		0 360		28		X	#12	#12	1	20		SYSTEM FURNITURE
SPARE	--	20	1	--	--	--	--	29			0 360	30		X	#12	#12	1	20		GFCI SUMP PUMP
SPARE	--	20	1	--	--	--	--	31	0 500			32		X	#12	#12	1	20		ELEVATOR PIT LIGHTING
SPARE	--	20	1	--	--	--	--	33		0 0		34	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	35			0 0	36	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	37	0 0			38	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	39		0 0		40	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	41			0 0	42	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	43	0 0			44	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	45		0 0		46	--	--	--	--	1	20	--	SPARE
1 EWH-1		20	2	#12	#12	X		47			1250 0	48	--	--	--	--	1	20	--	SPARE
--	--	--	--	--	--	--	--	49	1250 0			50	--	--	--	--	1	20	--	SPARE
FCU-1-1		25	2	#8	#10	X		51		2600 0		52	--	--	--	--	1	20	--	SPARE
--	--	--	--	--	--	--	--	53			2600 0	54	--	--	--	--	1	20	--	SPARE
PANEL 'PG'		200	3			X		55	209... 0			56	--	--	--	--	1	20	--	SPARE
--	--	--	--	--	--	--	--	57		26439 0		58	--	--	--	--	1	20	--	SPARE
--	--	--	--	--	--	--	--	59			270... 0	60	--	--	--	--	1	20	--	SPARE
									26261	33513	34504									
									219 A	289 A	297 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIPMENT	9000	100.00%	9000		
LIGHTING	2300	100.00%	2300	**TOTAL CONNECTED LOAD:**	94278
MOTORS	39627	100.00%	39627	**TOTAL CONNECTED AMPS:**	262 A
RECEPTACLES	40850	62.24%	25425		
CONTINUOUS	2500	125.00%	3125	**TOTAL ESTIMATED DEMAND:**	79478
				TOTAL EST DEMAND AMPS	221 A

PANEL: PG

LOCATION: ELEV. MACH. RM.... **AMPS:** 100 A **AIC RATING:** SEE ONE-LINE DIAGRAM **NOTES (NT):**
MANUFACTURER: SEE... **VOLTS:** 208Y/120 **MOUNTING:** RECESSED
MODEL TYPE: PANELBOARD **PHASE:** 3 **ENCLOSURE:** Type 1
TYPE OF MAIN: MCB **WIRE:** 4 **FEATURES:**

LOAD NAME	NT	CB	P	WIRE SIZE H	GND	N	C SIZE (3/4" UON)	CKT NO	A	B	C	CKT NO	C SIZE (3/4" UON)	WIRE SIZE N	GND	H	P	CB	NT	LOAD NAME
SERVER RM LIGHTING		20	1	#12	#12	X		1	62 2750			2		X	#10	#10	1	30		SERVER RM 5-30R
SERVER RM 5-30R		30	1	#10	#10	X		3		2750 2750		4		X	#10	#10	1	30		SERVER RM 5-30R
SERVER RM 5-30R		30	1	#10	#10	X		5			2750 1100	6		X	#12	#12	2	20		SERVER RM 6-20R
SERVER RM 5-30R		30	1	#10	#10	X		7	2750 1100			8	--	--	--	--	--	--	--	--
SERVER RM 6-20R		20	2	#12	#12	X		9		1100 180		10		X	#10	#12	1	30		SERVER RM 5-30R
--	--	--	--	--	--	--	--	11			1100 180	12		X	#10	#12	1	30		SERVER RM 5-30R
SERVER RM 5-30R		30	1	#12	#10	X		13	180 180			14		X	#10	#12	1	30		SERVER RM 5-30R
SERVER RM 5-30R		30	1	#12	#10	X		15		180 0		16	--	--	--	--	1	20	--	SPARE
SERVER RM QUAD		20	1	#12	#12	X		17			360 0	18	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	19	0 0			20	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	21		0 0		22	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	23			0 0	24	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	25	0 0			26	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	27		0 0		28	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	29			0 0	30	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	31	0 0			32	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	33		0 0		34	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	35			0 0	36	--	--	--	--	1	20	--	SPARE
SPARE	--	20	1	--	--	--	--	37	0 0			38	--	--	--	--	1	20	--	SPARE
FCU & CU-IT-MAIN		50	2	#6	#10	X		39		3536 3536		40		X	#10	#6	2	50		FCU & CUT-IT-BACKUP
--	--	--	--	--	--	--	--	41			3536 3536	42	--	--	--	--	--	--	--	--
									7022	14032	12562									
									59 A	124 A	112 A									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
LIGHTING	62	100.00%	62		
MOTORS	14144	100.00%	14144	**TOTAL CONNECTED LOAD:**	33616
RECEPTACLES	19410	75.76%	14705	**TOTAL CONNECTED AMPS:**	93 A
				TOTAL ESTIMATED DEMAND:	28911
				TOTAL EST DEMAND AMPS	80 A

GENERAL NOTES

A. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ELECTRICAL EQUIPMENT SHOWN AS NEW, UON.

B. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL COSTS ASSOCIATED WITH THE INSTALLATION OF THE NEW ELECTRICAL SERVICE WITH UTILITY AND INCLUDE IN BID.

C. PROVIDE ARC FLASH LABELING FOR ALL NEW EQUIPMENT AS REQUIRED PER NEC ARTICLE 110.16 AND NFPA-70E.

D. ALL CONDUCTORS SHALL BE COPPER TYPE THWN-2 (EXTERIOR).

E. ALL GROUNDING SHALL BE IN ACCORDANCE WITH NEC REQUIREMENTS.

F. REFER TO SPECIFICATIONS, SCHEDULES, DETAILS AND GENERAL NOTES SHEET FOR ADDITIONAL SITE REQUIREMENTS.

SHEET WORK NOTES

1. UNLESS SUPPLIED BY THE UTILITY COMPANY, THE FAULT CURRENT LEVEL SHALL BE DETERMINED FROM TABLE 1 "SHORT-CIRCUIT CURRENTS AVAILABLE FROM VARIOUS SIZE TRANSFORMERS" (BASED ON WORST CASE IMPEDANCE) IN BUSSMANN'S ELECTRICAL PROTECTION HANDBOOK.
2. NEW METER SOCKET PER UTILITY REQUIREMENTS. METER SHALL BE INSTALLED ADJACENT TO DISTRIBUTION ENCLOSURE AS SHOWN.
3. EXTERIOR LUMINAIRES SHALL BE SWITCHED BY A CONTACTOR CONTROLLED BY A 24 HOUR, 7 DAY ASTRONOMICAL TIME CLOCK WITH HOLIDAY SCHEDULING IN CONJUNCTION WITH A ROOF MOUNTED PHOTOCELL. CONTACTOR AND TIME CLOCK TO BE MOUNTED ADJACENT TO PANEL.
4. CIRCUIT ON LIGHTING CONTACTOR.
5. OWNER PROVIDED, OWNER INSTALLED GENERATOR. COORDINATE THE FOLLOWING WITH OWNER PRIOR TO ROUGH-IN:
   A. GENERATOR MOUNTING LOCATION.
   B. BLOCK HEATER CONDUIT AND CONDUCTORS, AS REQUIRED.
   C. REMOTE ANNUNCIATOR MOUNTING LOCATION AND CONDUIT REQUIREMENTS.
   D. CONDUIT REQUIREMENTS BETWEEN 'ATS', REMOTE ANNUNCIATOR AND EPO.
   E. 100A/208V/3PH/4W NON-FUSED SAFETY DISCONNECT SWITCH LOCATION WITHIN SIGHT OF GENERATOR.
   F. GENERATOR PAD, IF REQUIRED.

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STATE OF TEXAS
BUCKLEY H. PARKS
106223
LICENSED PROFESSIONAL ENGINEER
08/21/2025

127 E. JACKSON ST., BURNET TX 78611

BURNET COUNTY ANNEX

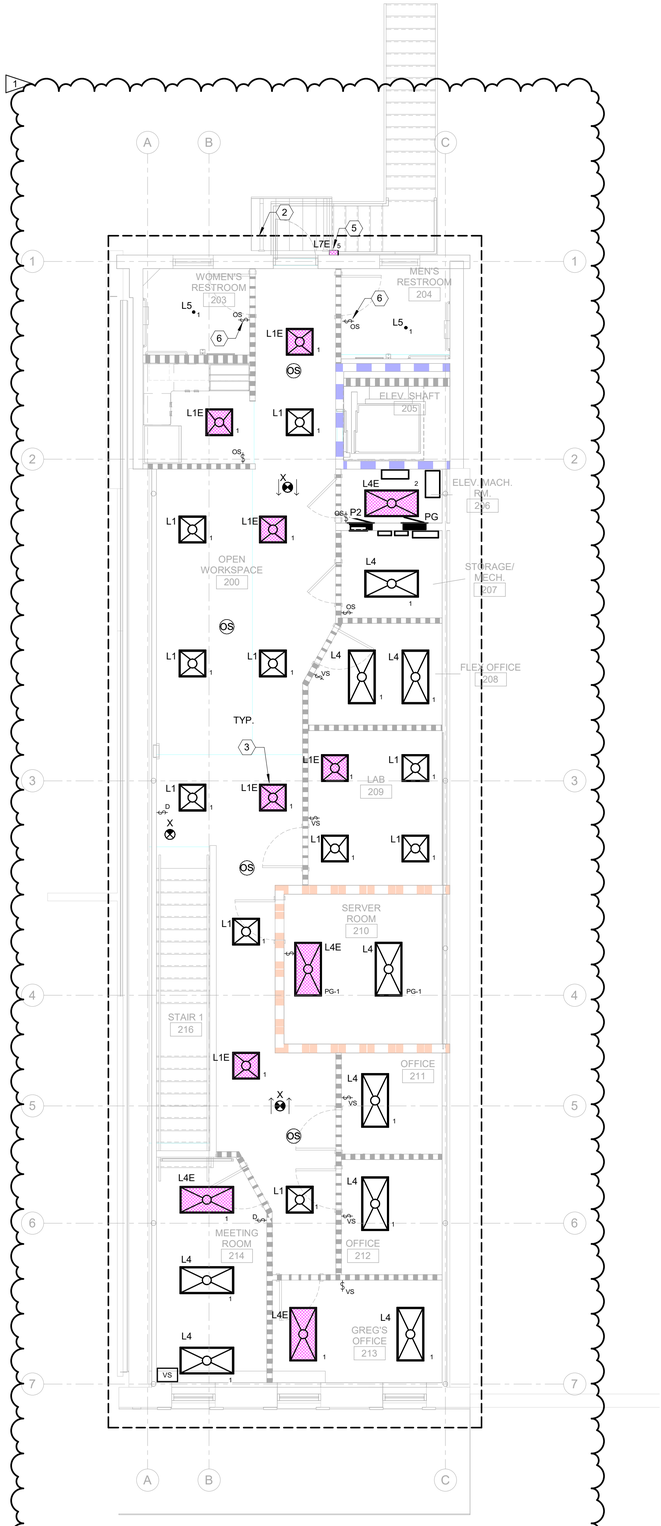
#	DATE	ISSUE
1	08/21/2025	ADDENDUM 1

CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20531

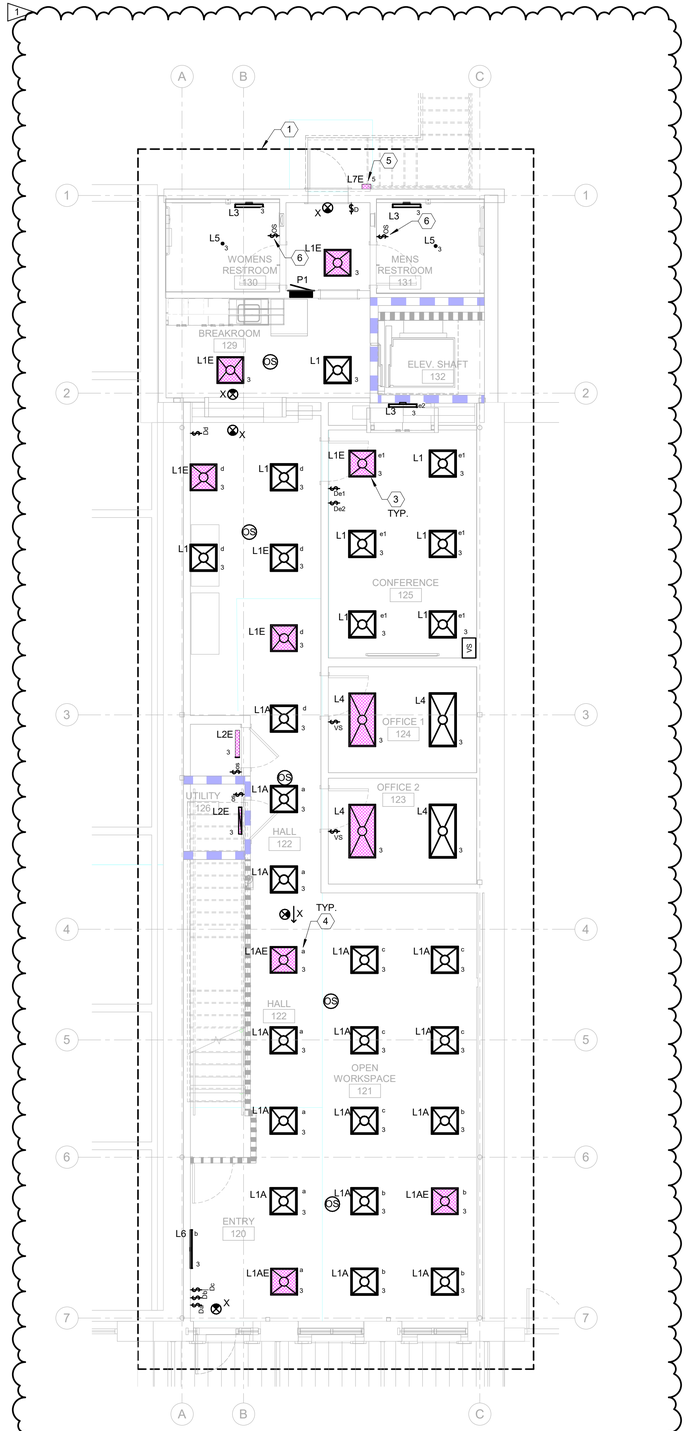
Project Number: 33-1408

ELECTRICAL ONE-LINES & SCHEDULES

E004



2 ELECTRICAL LIGHTING PLAN-SECOND FLOOR
E201 3/16" = 1'-0"



1 ELECTRICAL LIGHTING PLAN-FIRST FLOOR
E201 3/16" = 1'-0"

GENERAL NOTES

A. REFER TO SPECIFICATIONS, SCHEDULES, DETAILS AND GENERAL NOTES SHEET FOR ADDITIONAL LIGHTING INSTALLATION REQUIREMENTS.

B. CONTRACTOR SHALL COORDINATE LUMINAIRE LOCATIONS WITH THE ARCHITECTURAL ELEVATIONS AND RCP PRIOR TO INSTALLATION. VERIFY LOCATIONS AND MOUNTING METHODS AND MATERIALS THAT ARE UNCLEAR PRIOR TO ORDERING OR INSTALLING LUMINAIRES.

C. CIRCUIT NUMBER AND FIXTURE TAG SHOWN ADJACENT TO EACH LUMINAIRE.

D. CIRCUIT EXIT SIGNS (UNSWITCHED) WITH THE ADJACENT LIGHTING IN THE ROOM.

SHEET WORK NOTES

1. UON, CIRCUIT ALL LIGHTING IN THIS AREA TO PANEL 'P1'.
2. UON, CIRCUIT ALL LIGHTING IN THIS AREA TO PANEL 'P2'.
3. LUMINAIRES SHOWN HATCHED OR TAGGED 'xE" AND ALL EXIT SIGNS SHALL BE PROVIDED WITH INTEGRAL BATTERY PACKS FOR 90 MIN OF EMERGENCY OPERATION. PROVIDE WITH VISIBLE BATTERY STATUS INDICATOR. TYPICAL
4. LOWER CASE LETTER ADJACENT TO LUMINAIRE INDICATES SWITCH-LEG TO SERVE LUMINAIRE.
5. LUMINAIRES SHALL BE SWITCHED BY A CONTACTOR CONTROLLED BY A 24 HOUR, 7 DAY ASTRONOMICAL TIME CLOCK WITH HOLIDAY SCHEDULING. CONTACTOR AND TIME CLOCK TO BE MOUNTED ADJACENT TO PANEL
6. PROVIDE SWITCH MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR WITH INTEGRAL ON/OFF CONTROL SWITCH AND DUAL RELAYS FOR LIGHTING AND EXHAUST FAN. TYPICAL.

LIGHTING CONTROLS SYMBOLS LEGEND	
$OS	WALL MOUNTED OCCUPANCY SENSOR (DUAL TECH)
$VS	WALL MOUNTED VACANCY SENSOR WITH DIMMING
OS	CEILING MOUNTED OCCUPANCY SENSOR (DUAL TECH)
VS	CEILING MOUNTED VACANCY SENSOR WITH DIMMING
OS	CORNER MOUNTED OCCUPANCY SENSOR (DUAL TECH)
VS	CORNER MOUNTED VACANCY SENSOR WITH DIMMING

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08/21/2025

127 E. JACKSON ST., BURNET TX 78611

BURNET COUNTY ANNEX

#	DATE	ISSUE
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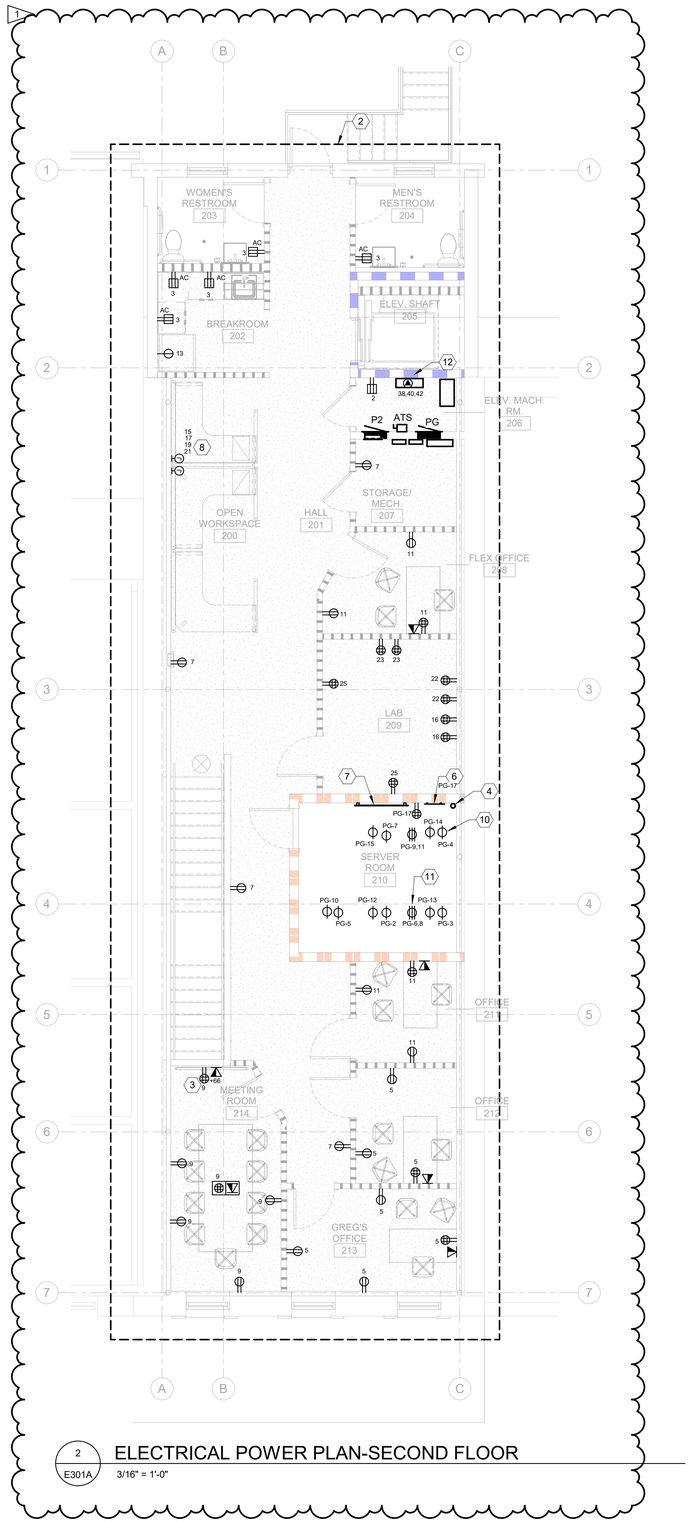
CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20321

Project Number: 33-1408

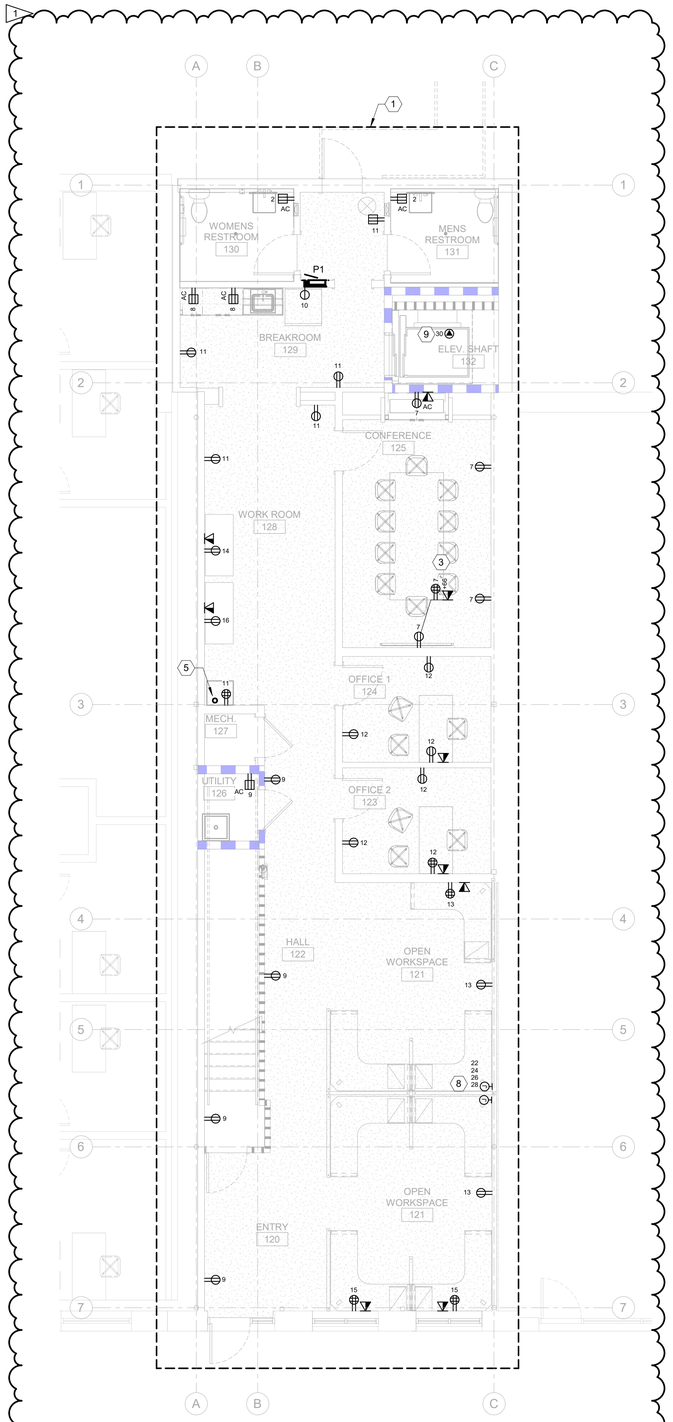
ELECTRICAL LIGHTING PLANS

E201



2 E301A ELECTRICAL POWER PLAN-SECOND FLOOR

3/16" = 1'-0"



1 E301A ELECTRICAL POWER PLAN-FIRST FLOOR

3/16" = 1'-0"

GENERAL NOTES

A. REFER TO SPECIFICATIONS, SCHEDULES, DETAILS AND GENERAL NOTES SHEET FOR ADDITIONAL ELECTRICAL EQUIPMENT AND SYSTEM INSTALLATION REQUIREMENTS.

B. CONTRACTOR SHALL PROVIDE POWER TO ALL ITEMS SHOWN FROM THE PANEL AND CIRCUIT NUMBERS THAT ARE SHOWN ADJACENT TO THE LOAD (RECEPTACLE, DISCONNECT, JBOX, EQUIPMENT CONNECTION POINT, ETC). SIZE CIRCUIT PER PANEL SCHEDULE. PROVIDE NEUTRAL AND GROUND, U.N.O.

C. EC'S SCOPE INCLUDES RACEWAY INFRASTRUCTURE FOR ALL ITEMS SHOWN ON THE SPECIAL SYSTEMS PLANS. RACEWAY REQUIREMENTS ARE DEFINED IN SPECIFICATION NOTES AND DETAILS, BUT SHALL BE FIELD VERIFIED BEFORE WORK.

D. ALL IT CABLING, JACKS, EQUIPMENT RACKS, A/V AND NETWORKING EQUIPMENT WILL BE PROVIDED AND INSTALLED BY OTHERS. EC RESPONSIBLE FOR ALL ROUGH IN WORK AND POWER CONNECTIONS.

E. COORDINATE TELECOMMUNICATIONS INFRASTRUCTURE REQUIREMENTS WITH OWNER'S IT REPRESENTATIVE PRIOR TO STARTING WORK.

SHEET WORK NOTES

1. UON, ALL CIRCUITS SHOWN IN THIS AREA WILL BE FED FROM PANEL 'P1'.
2. UON, ALL CIRCUITS SHOWN IN THIS AREA WILL BE FED FROM PANEL 'P2'.
3. TV MOUNTED ON WALL AT THIS LOCATION. PROVIDE (1) CHIEF PAC525 BOX BEHIND TELEVISION. (1) CHIEF BOX SHALL HAVE (1) QUAD AND (2) DATA DROPS WITH (2) 1-1/2" CONDUITS TO ABOVE ACCESSIBLE CEILING. COORDINATE ELEVATION WITH ARCHITECT AND INSTALLATION WITH TELEVISION BLOCKING AND MOUNTING EQUIPMENT. COORDINATE DETAILS WITH AV CONTRACTORS DRAWINGS PRIOR TO ROUGH-IN.
4. PROVIDE ONE 2" CONDUIT (WITH PULL STRING) FROM THIS LOCATION TO EXTERIOR COMMUNICATION JUNCTION BOX. REFER TO ARCHITECTURAL PLANS TO DETERMINE CONDUIT RUN LENGTHS AND ROUTING. COORDINATE EXACT TERMINATION POINT WITH COMMUNICATIONS CONTRACTORS.
5. PROVIDE ONE 1" CONDUIT (WITH PULL STRING) FROM THIS LOCATION TO SECOND FLOOR DATA CLOSET. REFER TO ARCHITECTURAL PLANS TO DETERMINE CONDUIT RUN LENGTHS AND ROUTING. COORDINATE EXACT TERMINATION POINT WITH COMMUNICATIONS CONTRACTORS.
6. PROVIDE A GROUND LUG AND TERMINAL STRIP WITH A #4 ISOLATED GROUND CONDUCTOR BONDED TO THE BUILDING GROUNDING ELECTRODE.
7. PROVIDE 3/4" FIRE RATED PLYWOOD BACKBOARD FOR MOUNTING COMMUNICATIONS EQUIPMENT ON ALL SERVER RM WALLS. WIDTH OF PANEL SHALL BE COORDINATED WITH INFORMATION TECHNOLOGIES CONTRACTOR. PAINT TO MATCH WALL TO WHICH BOARD IS ATTACHED.
8. PROVIDE ONE POWER AND ONE DATA JUNCTION BOX IN WALL AT THIS LOCATION FOR BRANCH CIRCUIT AND DATA/VOICE TO SERVE SYSTEM FURNITURE THAT IS PROVIDED WITH INTEGRAL RECEPTACLES. PROVIDE COVER PLATE WITH ANGLE CONNECTOR AND FLEXIBLE METAL CONDUIT (FMC) FROM EACH JUNCTION BOX IN WALL TO CONNECTION POINT ON FURNITURE, PROVIDE POWER CONDUCTORS, AND MAKE ALL ELECTRICAL TERMINATIONS. COORDINATE JUNCTION BOX LOCATION AND INSTALLATION OF CONDUCTORS WITH FURNITURE PROVIDER. COORDINATE CIRCUIT COUNT WITH FURNITURE PRIOR TO ROUGH-IN. PROVIDE (4) DEDICATED CIRCUITS ACROSS A MAXIMUM OF (8) WORKSTATIONS. PROVIDE DEDICATED NEUTRAL AND GROUND WITH EACH CIRCUIT. PROVIDE CREDIT TO TENANT IF CIRCUIT COUNT IS LESS THAN 4. PROVIDE 1-1/2" CONDUIT FOR DATA JUNCTION BOX.
9. PROVIDE DEDICATED GFI RECEPTACLE MOUNTED IN PIT ADJACENT TO SUMP PUMP FOR CONNECTION TO SUMP PUMP.
10. PROVIDE NEMA 5-30R. COORDINATE INSTALLATION WITH COMMUNICATIONS CONTRACTOR. RECEPTACLE SHALL BE MOUNTED TO OWNER FURNISHED, OWNER INSTALLED LADDER RACK ABOVE TELECOM RACK. TYPICAL OF 10.
11. PROVIDE NEMA 6-20R. COORDINATE INSTALLATION WITH COMMUNICATIONS CONTRACTOR. RECEPTACLE SHALL BE MOUNTED TO OWNER FURNISHED, OWNER INSTALLED LADDER RACK ABOVE TELECOM RACK. COORDINATE FINAL LOCATIONS WITH OWNER PRIOR TO ROUGH-IN. TYPICAL OF 2.
12. ENCLOSED CIRCUIT BREAKER WITH LOTO PROVISIONS, SERVING ELEVATOR POWER UNIT. CIRCUIT BREAKER WITH SHUNT TRIP MODULE WIRED TO OPERATE ON COMMAND FROM SPRINKLER WATER FLOW SWITCH IN HOISTWAY OR ELEVATOR MACHINERY ROOM.

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BURNET COUNTY ANNEX

127 E. JACKSON ST., BURNET TX 78611

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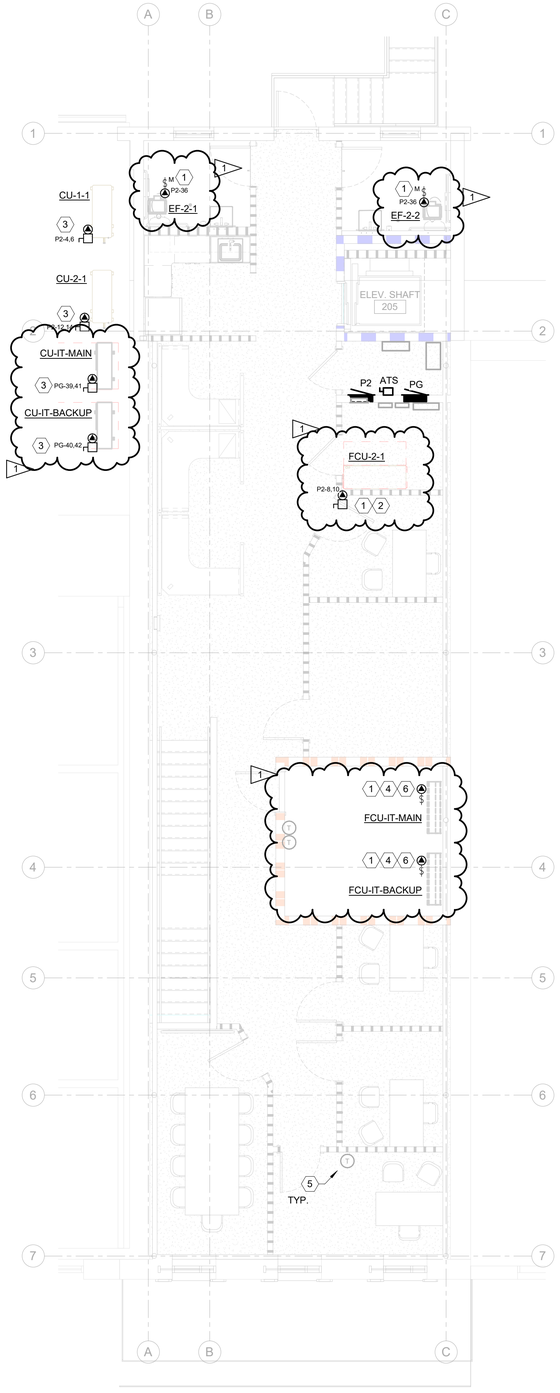
Project Number: 33-1408

ELECTRICAL POWER PLANS

E301A

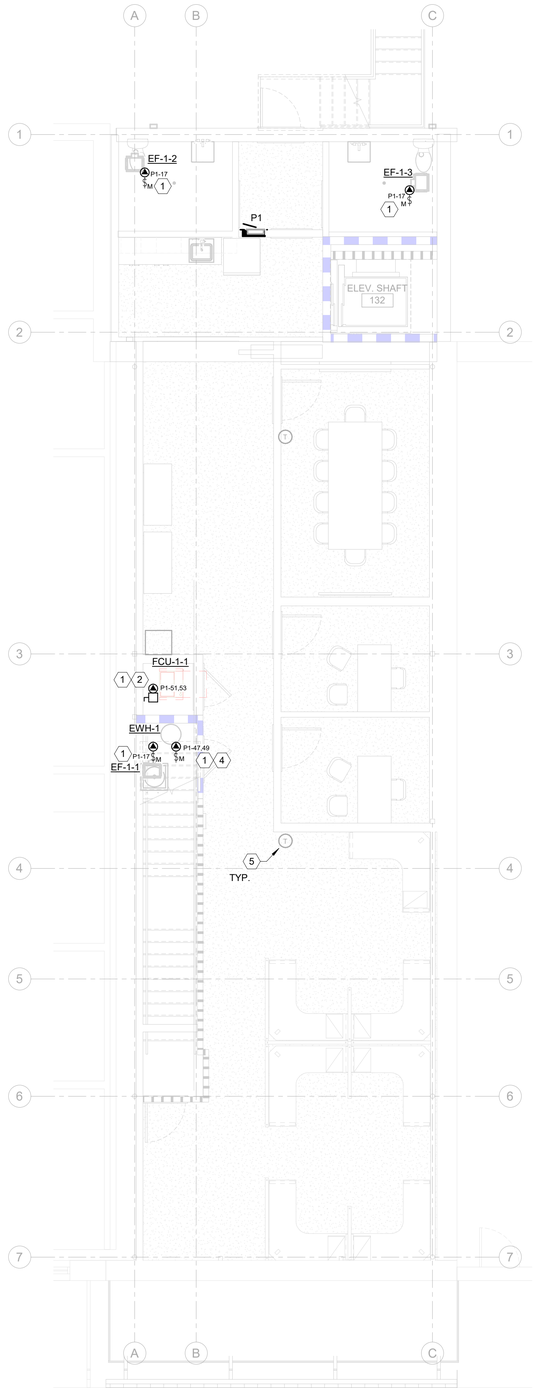
CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20021



2 E301B

ELECTRICAL HVAC POWER PLAN-SECOND FLOOR

3/16" = 1'-0"



1 E301B

ELECTRICAL HVAC POWER PLAN-FIRST FLOOR

3/16" = 1'-0"

GENERAL NOTES

A. REFER TO SPECIFICATIONS, SCHEDULES, DETAILS AND GENERAL NOTES SHEET FOR ADDITIONAL ELECTRICAL EQUIPMENT AND SYSTEM INSTALLATION REQUIREMENTS.

B. REFER TO ELECTRICAL EQUIPMENT SCHEDULE FOR DISCONNECT AND CONTROLS REQUIREMENTS.

C. CONTRACTOR SHALL PROVIDE POWER TO ALL ITEMS SHOWN FROM THE PANEL AND CIRCUIT NUMBERS THAT ARE SHOWN ADJACENT TO THE LOAD. SIZE CIRCUIT PER PANEL SCHEDULE. PROVIDE NEUTRAL AND GROUND, U.N.O.

(#) SHEET WORK NOTES

1. MOUNT EQUIPMENT TO STRUCTURE ABOVE CEILING ADJACENT TO LOAD TO BE SERVED, IN A VISIBLE AND ACCESSIBLE LOCATION, AND PROVIDED WITH WORKING SPACE. COORDINATE LOCATION WITH OTHER TRADES PRIOR TO ROUGH-IN. PROVIDE GFCI RECEPTACLE MOUNTED BELOW DISCONNECT. RECEPTACLE SHALL BE CIRCUITED TO NEAREST GENERAL PURPOSE CIRCUIT.

2. PROVIDE DUCT MOUNTED SMOKE DETECTOR IN AIR DUCT OF HVAC UNIT. DUCT DETECTOR TO BE WIRED TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. PROVIDE DUCT DETECTOR WITH LED ALARM INDICATOR REMOTE MOUNTED TO BOTTOM OF CEILING BELOW UNIT SERVED. PROVIDE CONTROL POWER FOR DUCT DETECTOR FROM UNIT SERVED. COORDINATE REQUIREMENTS AND INSTALLATION WITH MECHANICAL CONTRACTOR AND INTERFACE WITH FIRE ALARM SYSTEM WITH FIRE ALARM CONTRACTOR.

3. MOUNT EQUIPMENT ON WALL ADJACENT TO LOAD TO BE SERVED, IN A VISIBLE AND ACCESSIBLE SPACE, AND PROVIDED WITH NEC REQUIRED CLEARANCES. COORDINATE LOCATION WITH OTHER TRADES PRIOR TO ROUGH-IN. PROVIDE GFCI RECEPTACLE MOUNTED BELOW DISCONNECT. RECEPTACLE SHALL BE CIRCUITED TO NEAREST GENERAL PURPOSE CIRCUIT.

4. PROVIDE 120V CONNECTION AND MOTOR RATED SWITCH FOR IT CIRCULATION PUMP. CIRCUIT TO NEAREST GENERAL PURPOSE CIRCUIT.

5. COORDINATE WITH MECHANICAL DRAWINGS FOR NEW THERMOSTAT LOCATIONS.

6. INDOOR UNIT IS POWERED BY OUTDOOR UNIT. PROVIDE 3#12'S IN 3/4" C. FROM INDOOR UNIT TO OUTDOOR UNIT. COORDINATE CONDUIT ROUTING WITH REFRIGERANT PIPING.

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ELECTRICAL HVAC POWER PLANS

E301B

MECHANICAL LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
D	DRAIN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
RS	REFRIGERANT SUCTION LINE
RL	REFRIGERANT LIQUID LINE
HG	REFRIGERANT HOT GAS LINE
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
FOV	FUEL OIL VENT
DFS	DRY FLUID SUPPLY
DFR	DRY FLUID RETURN
LPS	LOW PRESSURE STEAM SUPPLY
COND	STEAM CONDENSATE RETURN
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	GLOBE VALVE
	TRIPLE DUTY VALVE
	SWING CHECK VALVE
	STRAINER
	FLEX CONNECTOR
	HOSE END DRAIN VALVE
	PRESSURE REDUCING VALVE
	SAFETY RELIEF VALVE
	UNION
	MOTORIZED T.C. VALVE / 2-WAY
	MOTORIZED T.C. VALVE / 3-WAY
	ECCENTRIC PLUG BALANCING VALVE
	VALVE IN RISER
	TEE UP
	TEE DOWN
	ELBOW UP
	ELBOW DOWN
	PIPE SIZE CHANGE
	MANUAL FLOW BALANCING VALVE (CIRCUIT SETTER)
	AUTOMATIC FLOW BALANCING VALVE
	PIPE GUIDE
	PIPE ANCHOR
	PRESSURE / TEMP. TEST PLUG
T	DIAL THERMOMETER

SYMBOL	DESCRIPTION
T	THERMOSTAT/TEMPERATURE SENSOR
T_R	REVERSE ACTING THERMOSTAT
T	THERMOSTAT/TEMPERATURE SENSOR W/ GUARD
H	HUMIDISTAT
CO	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
NO2	NITROGEN DIOXIDE SENSOR
	ACOUSTICALLY LINED SHEET METAL DUCT
	MANUAL BALANCING DAMPER
	FLEX CONNECTOR
AD / AD	ACCESS DOORS
FD	FIRE DAMPER
F/SD	FIRE/SMOKE DAMPER
M	MOTORIZED DAMPER
	TURNING VANE ELBOW
	45° LOW-LOSS TAKE-OFF FITTING W/ DAMPER & FLEX DUCT
	45° LOW-LOSS TAKE-OFF FITTING W/ DAMPER & RIGID ROUND DUCT
	RECTANGULAR/ROUND DUCT WITH 45° HIGH EFFICIENCY TAKE-OFF
	SUPPLY DIFFUSER W/ FLEX DUCT, THROW PATTERN SHOWN ON PLANS
	LAY-IN SUPPLY DIFFUSER W/ FLEX DUCT, THROW PATTERN SHOWN ON PLANS
	RETURN GRILLE
	EXHAUST GRILLE
	CONNECT NEW WORK TO EXISTING
P	PRESSURE GAUGE W/ SNUBBER
C	COMMON
(E)	EXISTING

MECHANICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
ACFM	ACTUAL CFM
AHU	AIR HANDLING UNIT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AMP	AMPERE (AMP, AMPS)
APD	AIR PRESSURE DROP
APPROX	APPROXIMATE
BHP	BRAKE HORSEPOWER, BOILER HORSEPOWER
BTU	BRITISH THERMAL UNIT
BOD	BOTTOM OF DUCT
MBH	BTU PER HOUR (THOUSAND)
C	COMMON
CU FT	CUBIC FEET
CU IN	CUBIC INCH
CFM	CUBIC FEET PER MINUTE
COD	CENTER OF DUCT
SCFM	CFM, STANDARD CONDITIONS
DB	DECIBEL
DIA	DIAMETER
ID	DIAMETER, INSIDE
OD	DIAMETER, OUTER
DBT	DRY-BULB TEMPERATURE
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EDR	EQUIVALENT DIRECT RADIATION
EXP	EXPANSION
EWT	ENTERING WATER TEMPERATURE
F	FAHRENHEIT
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FOOT OR FEET
HZ	FREQUENCY
GA	GAGE OR GAUGE
GAL	GALLONS
G.C.	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPD	GALLONS PER DAY
HD	HEAD
HGT	HEIGHT
HP	HORSEPOWER
RH	HUMIDITY, RELATIVE
KW	KILOWATT
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
LF	LINEAR FEET
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MIN	MINIMUM
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO	NUMBER
OBD	OPPOSED BLADE DAMPER
OA	OUTSIDE AIR
%	PERCENT
PH	PHASE (ELECTRICAL)
LBS	POUNDS
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PD	PRESSURE DROP
PSIG	PSI GAUGE
R/O	RUN OUT
RA	RETURN AIR
RPM	REVOLUTIONS PER MINUTE
SH	SENSIBLE HEAT
SPEC	SPECIFICATION
SP VOL	SPECIFIC VOLUME
STD	STANDARD
SP	STATIC PRESSURE
SUCT	SUCTION
SA	SUPPLY AIR
TEMP	TEMPERATURE
TD	TEMPERATURE DIFFERENCE
T STAT	THERMOSTAT
TOD	TOP OF DUCT
TONS	TONS OF REFRIGERATION
TC	TEMPERATURE CONTROL
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
V	VOLT
VOL	VOLUME
VFD	VARIABLE FREQUENCY DRIVE
WPD	WATER PRESSURE DROP
W/	WITH

MECHANICAL DESIGN CRITERIA

MECHANICAL DESIGN CONDITIONS:

PROJECT LOCATION: BURNET, TEXAS
CLIMATE ZONE: 2A

SUMMER:
OUTDOOR DESIGN: 98°F DB / 74°F WB
INDOOR DESIGN: 75°F DB / 50% RH

WINTER:
OUTDOOR DESIGN: 25°F DB
INDOOR DESIGN: 72°F DB

BUILDING WALL & ROOF CONSTRUCTION INFORMATION:

ROOF: U-VALUE = 0.047
WALLS:U - VALUE = 0.064
FRONT GLASS:
U - VALUE: 0.75
SHADE COEFF: 0.29

INTERIOR LOADS BASED ON ACTUAL LIGHTING, OCCUPANT AND EQUIPMENT LOADS.

APPLICABLE CODES AND STANDARDS

1. BUILDING CODE - 2015 IBC WITH CITY OF BURNET AMENDMENTS
2. FIRE CODE - 2015 IFC WITH CITY OF BURNET AMENDMENTS
3. ELECTRICAL CODE - 2014 NEC WITH CITY OF BURNET AMENDMENTS.
4. MECHANICAL CODE - 2015 IMC WITH CITY OF BURNET AMENDMENTS
5. PLUMBING CODE - 2015 IPC WITH CITY OF BURNET AMENDMENTS
6. OTHER - 2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH CITY OF BURNET AMENDMENTS
7. OTHER - MOST CURRENT ADOPTED VERSION OF NFPA 101, LIFE SAFETY CODE
8. OTHER - FEDERAL DEPARTMENT OF JUSTICE AMERICANS WITH DISABILITIES ACT AND TEXAS ACCESSIBILITY STANDARDS.

2015 IECC ENERGY CODE COMPLIANCE

COMPLIANCE WITH 2015 IECC & CITY OF BURNET AMENDMENTS TO 2015 IECC.

EQUIPMENT SIZING AND PERFORMANCE:

1. LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH ASHRAE STANDARD 183 OR BY AN APPROVED COMPUTATIONAL PROCEDURE USING THE DESIGN PARAMETERS SPECIFIED IN CHAPTER 3 OF THE 2015 IECC.
2. EQUIPMENT HAS BEEN SELECTED PER 2015 IECC C403.2.2 EQUIPMENT SIZING.
3. VENTILATION AND THE ABILITY TO REDUCE OUTSIDE AIR TO IMC MINIMUMS SHALL BE PROVIDED PER 2015 IECC C403.2.6 VENTILATION.

HVAC SYSTEM CONTROLS & CRITERIA

4. TEMPERATURE CONTROL SYSTEM SHALL HAVE A MINIMUM DEAD BAND OF 5°F AS REQUIRED BY 2015 IECC SECTION C403.2.4.1.2 DEADBAND.
5. HVAC SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLS CAPABLE OF PROVIDING NIGHT SETBACK, SEVEN DIFFERENT DAILY SCHEDULES AND OPTIMUM START PER THE REQUIREMENTS OF 2015 IECC SECTION C403.2.2.4.2 OFF-HOUR CONTROLS.
6. OUTSIDE AIR DAMPERS, EXHAUST OUTLETS AND RELIEF OUTLETS SHALL BE PROVIDED WITH DAMPERS THAT COMPLY WITH 2015 IECC SECTION C403.2.4.3 SHUTOFF DAMPERS. DAMPER SHALL AUTOMATICALLY CLOSE WHEN SYSTEM OR SPACES SERVED ARE NOT IN USE OR DURING WARM-UP, COOL-DOWN AND SETBACK. DAMPER MAXIMUM LEAKAGE RATE SHALL NOT EXCEED 4.0 CFM/SF AT 1" WATER GAUGE.
7. ALL DUCTWORK SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH 2015 IECC SECTION C403.2.9 CONSTRUCTION OF HVAC SYSTEM ELEMENTS. DUCTWORK INSTALLED ON THIS PROJECT IS CLASSIFIED AS LOW PRESSURE (BELOW 2" WATER GAUGE).
8. DUCTWORK SHALL BE INSULATED TO THE APPROPRIATE R-VALUE AS LISTED IN THE SPECIFICATIONS ON THIS PROJECT. INSULATION SHALL COMPLY WITH 2015 IECC C403.2.9 DUCT AND PLENUM INSULATION AND SEALING.

TEST, ADJUST AND BALANCING REQUIREMENTS:

9. EACH SUPPLY AIR DEVICE AND ZONE TERMINAL DEVICE SHALL BE EQUIPPED WITH MEANS FOR AIR BALANCING IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 6 OF THE IMC. AIR SYSTEMS SHALL BE BALANCED IN A MANNER TO FIRST MINIMIZE THROTTLING LOSSES THEN, FOR FANS WITH SYSTEM POWER GREATER THAN 1 HP, FAN SPEED SHALL BE ADJUSTED TO MEET DESIGN FLOW CONDITIONS.

GENERAL NOTES

1. FURNISH AND INSTALL ALL ITEMS NECESSARY TO PROVIDE FULLY FUNCTIONING SYSTEMS AS INDICATED BY THE DESIGN AND THE EQUIPMENT SPECIFIED. ELEMENTS OF THE WORK SHALL INCLUDE, BUT ARE NOT LIMITED TO, MATERIALS, LABOR, SUPERVISION, SUPPLIES, EQUIPMENT, TRANSPORTATION, HOISTING/RIGGING, STORAGE, UTILITIES, AND ALL REQUIRED PERMITS AND LICENSES.
2. DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT REFLECT ALL WORK AND MATERIALS REQUIRED TO COMPLETE PROJECT. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT AS REQUIRED TO COMPLETE PROJECT WITHIN DESIGN. CONTRACTOR SHALL REQUEST ADDITIONAL INFORMATION AND DETAILS WHERE SCOPE IS UNCLEAR.
3. ALL WORK SHALL COMPLY WITH THE MOST RECENT ADOPTED VERSION OF ALL APPLICABLE LAWS, RULES, REGULATIONS AND ORDINANCES OF ALL FEDERAL, STATE AND LOCAL AUTHORITIES. IF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE LOCAL ENFORCING AUTHORITY EXISTS, THE LOCAL ENFORCING AUTHORITY SHALL APPLY. ANY MODIFICATIONS TO THE DESIGN SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR ARCHITECT/ENGINEER. THE CONTRACTOR SHALL REPORT TO THE ARCHITECT/ENGINEER AND SECURE HIS APPROVAL BEFORE PROCEEDING WITH ANY MODIFICATIONS.
4. WHERE THE REQUIREMENTS OF THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THE CODES, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE PROVIDED THAT THEY ARE NOT IN CONFLICT WITH THE CODES.
5. BEFORE SUBMITTING BIDS, EACH CONTRACTOR SHALL PERFORM A SITE VISIT AND UNDERSTAND THE CONDITIONS TO BE MET IN INSTALLING THE WORK, AND SHALL MAKE PROVISIONS FOR THE CONDITIONS IN HIS FINAL BID. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR THE OMISSION OR FAULTY INSTALLATION OF ANY WORK COVERED BY THE CONTRACT DOCUMENTS.
6. MISUNDERSTANDING OF THE SCOPE OR AMOUNT OF WORK TO BE PERFORMED SHALL BE THE RESPONSIBILITY OF THE CONTACTOR, AND SHALL NOT RESULT IN ANY ADDITIONAL COST TO THE OWNER. TENDER OF A PROPOSAL CONVEYS FULL CONTRACTOR AGREEMENT OF THE ITEMS AND CONDITIONS SPECIFIED AND/OR INDICATED, SCHEDULED, OR IMPLIED ON THE CONTRACT DOCUMENTS, AND/OR REQUIRED BY THE NATURE OF THIS WORK.
7. ALL WORK SHALL BE CARRIED OUT IN A NEAT, WELL ORGANIZED MANNER. ALL SERVICES SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO THE PRIMARY LINES OF THE BUILDING. LOCATE ALL EQUIPMENT TO PROVIDE ACCESS AND ARRANGE ALL WORK WITH ADEQUATE ACCESS FOR OPERATION AND MAINTENANCE, AND TO MAINTAIN PROPER CODE AND MANUFACTURER'S CLEARANCES.
8. ALL EQUIPMENT AND MATERIAL TO BE FURNISHED AND INSTALLED ON THIS PROJECT SHALL BE UL OR ETL LISTED, IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION, AND SUITABLE FOR ITS INTENDED USE ON THIS PROJECT.
9. THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL NEW EQUIPMENT, CONTROLS, AND FIXTURES TO BE PROVIDED AND INSTALLED.
10. THE FOLLOWING SUBMITTAL DATA SHALL BE FURNISHED AND SHALL INCLUDE BUT NOT BE LIMITED TO:
    A. EQUIPMENT AND MATERIALS SHOP DRAWINGS
    B. COORDINATION DRAWINGS
    C. RECORD DRAWINGS
    D. OPERATING AND MAINTENANCE MANUALS
    E. FIRE STOP MATERIALS AND DETAIL
11. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL COORDINATE THE INSTALLATION OF DUCTWORK, PIPING, CONDUIT, CABLE, ETC., WITH LIGHTING FIXTURES, SPECIAL CEILING CONSTRUCTION, AIR DISTRIBUTION EQUIPMENT, AND THE STRUCTURE. PROVIDE ADDITIONAL RISES AND OFFSETS AS REQUIRED. IF, AFTER INSTALLED, NEW DUCTWORK, PIPING, CONDUIT, CABLE, ETC., IS FOUND TO BE IN CONFLICT WITH THE ARCHITECTURE, STRUCTURE OR OTHER TRADE WORK, WHICH IS EITHER EXISTING OR SHOWN ON THE CONTRACT DOCUMENTS, THE DUCTWORK, PIPING, CONDUIT, CABLE, ETC., SHALL BE RELOCATED WITHOUT ADDITIONAL COST TO THE OWNER/TENANT. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
12. MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD CONDITION. THE COMMERCIALLY STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES INDICATED ARE INTENDED TO IDENTIFY STANDARDS OF QUALITY AND PERFORMANCE NECESSARY FOR THE PROPER FUNCTIONING OF THE WORK. MATERIALS AND EQUIPMENT, WHICH ARE FOUND TO HAVE FACTORY DEFECTS SHALL BE REPLACED OR REPAIRED IN A MANNER ACCEPTABLE TO THE OWNER/TENANT AND ENGINEER AT NO ADDITIONAL COST TO THE OWNER/TENANT.
13. DAMAGE CAUSED DURING CONSTRUCTION TO EXISTING MATERIALS/EQUIPMENT WILL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO OWNER. RE-SUPPORT ANY REMAINING PIPING OR DEVICES THAT WERE SUPPORTED BY WALLS BEING REMOVED.
14. THE WARRANTY PERIOD SHALL BE NO LESS THAN ONE (1) FULL YEAR, UNLESS SPECIFIED OTHERWISE AND SHALL INCLUDE AT LEAST ONE (1) FULL HEATING SEASON AND ONE (1) FULL COOLING SEASON. DURING THE WARRANTY PERIOD THE CONTRACTOR SHALL GUARANTEE THE FOLLOWING IN A FORM SATISFACTORY TO THE OWNER/TENANT:

    A. ALL WORK INSTALLED SHALL BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS.
    B. ALL APPARATUS WILL DEVELOP CAPACITIES AND PERFORMANCE CHARACTERISTICS SPECIFIED.
    C. THE SYSTEMS SHALL OPERATE WITHOUT MALFUNCTION.
15. THE START OF THE CONTRACTOR'S WARRANTY PERIOD SHALL COMMENCE ON THE DATE OF "SUBSTANTIAL COMPLETION" AS AGREED TO BY THE OWNER/TENANT.
16. AREAS OF THE EXISTING BUILDING WILL BE OCCUPIED DURING CONSTRUCTION OF THIS PROJECT. NOISY, DUSTY, AND/OR OTHER CONSTRUCTION OPERATIONS REQUIRED FOR WORK WHICH DISTURB OR CAUSE COMPLAINTS BY THE EXISTING BUILDING OCCUPANTS SHALL NOT BE ACCEPTABLE. ALL AFTER-HOUR OR OVERTIME WORK REQUIRED BY THE CONTRACTOR TO AVOID DISRUPTION OF EXISTING OCCUPANTS WILL BE PROVIDED AT NO COST TO THE OWNER/TENANT. THE CONTRACTOR SHALL USE CONSTRUCTION METHODS AND MATERIALS WHICH SHALL NOT ADVERSELY AFFECT THE INDOOR AIR QUALITY OF THE EXISTING OCCUPIED AREAS.
17. PORTIONS OF THE BUILDING WILL BE IN USE AND OCCUPIED DURING THE CONSTRUCTION PERIOD OF THIS PROJECT. ALL BUILDING SERVICES, UTILITIES, POWER, CHILLED WATER, FIRE PROTECTION, AND DOMESTIC COLD AND HOT WATER WHICH WILL BE REQUIRED FOR THIS PROJECT MAY NOT BE DISRUPTED FOR ANY REASON WITHOUT PRIOR COORDINATION WITH A REPRESENTATIVE OF BUILDING MANAGEMENT AND THE OWNER AND A WRITTEN AUTHORIZATION FROM THE BUILDING MANAGER AND OWNER DESIGNATING A DATE, TIME, AND DURATION THAT ARE APPROVED BY THE BUILDING MANAGER AND OWNER FOR SUCH DISRUPTION. AN ADDITIONAL ADVANCE NOTIFICATION OF SEVEN (7) DAYS SHALL BE GIVEN TO THE BUILDING MANAGER AND OWNER PRIOR TO EACH DISRUPTION.
18. THIS BUILDING MAY HAVE A STRUCTURAL SYSTEM UTILIZING POST-TENSIONED CABLES. THE CONTRACTOR SHALL DETERMINE THE EXISTING STRUCTURAL SYSTEM PRIOR TO CUTTING, DRILLING, OR CORING. THE CONTRACTOR SHALL X-RAY ALL PENETRATIONS PRIOR TO CUTTING THE FLOOR SLAB.
19. THIS CONTRACTOR SHALL SECURE ALL PERMITS, LICENSES AND INSPECTIONS REQUIRED FOR HIS WORK, AND SHALL PAY ALL FEES IN CONNECTION WITH SUCH PERMITS, LICENSES AND INSPECTIONS.
20. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL PROVIDE PRICING REFLECTING THE GREATEST COST. THE CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
21. PENETRATIONS THROUGH FLOORS OR FIRE-RATED CONSTRUCTION SHALL BE FIRE RATED TO COMPLY WITH ASTM E-814 (UL 1479), AND THE LOCAL AUTHORITY HAVING JURISDICTION.
22. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, A COMPLETE SET OF "AS BUILT" DRAWINGS PORTRAYING ACTUAL SITE CONDITIONS OF THE MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION WORK. SUBMISSION SHALL CONSIST OF ONE SET OF PAPER COPIES AND ONE SET OF CAD FILES IN AUTOCAD (CONTRACTOR SHALL UTILIZE OWNER'S LAYER STANDARDS IF EXISTING).
23. IN THE EVENT THAT MATERIALS, PRODUCTS, AND/OR PROCESSES BEING PROPOSED FOR THIS PROJECT CONTAIN, OR MAY EMIT, ANY VOLATILE ORGANIC COMPOUNDS (VOC), FORMALDEHYDE FORMULATIONS, OR HAZARDOUS OUT-GASSING, AS DETERMINED BY THE MANUFACTURER, A MATERIALS SAFETY DATA SHEET SHALL BE SUBMITTED AS PART OF THE SHOP DRAWING PROCESS FOR REVIEW BY THE ARCHITECT/ENGINEER/ OWNER.
24. THE CONTRACTOR SHALL TAKE NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND INDICATE THE APPROXIMATE LOCATIONS OF THE HVAC AND PLUMBING SYSTEMS. LOCATE ALL ITEMS IN THE FIELD. COORDINATE WITH OTHER TRADES TO ENSURE PROPER FIT AND ACCESS TO ALL ITEMS.
25. THE CONTRACTOR SHALL PROTECT THE WORK, EQUIPMENT, AND MATERIALS FROM DAMAGE BY HIS WORK OR HIS PERSONNEL, AND SHALL CORRECT ALL DAMAGE CAUSED WITHOUT ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS, AND EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE OWNER. PROTECT ALL WORK AGAINST THEFT, INJURY, OR DAMAGE. CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE WHICH IS NOT IMMEDIATELY INSTALLED. THE CONTRACTOR SHALL CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS OR PLUGS DURING CONSTRUCTION TO PREVENT THE ENTRY OF DUST, DIRT, AND OBSTRUCTING MATERIAL. .

MECHANICAL GENERAL NOTES

1. ALL EXISTING DUCTWORK AND PIPING SIZES AND LOCATIONS SHOWN ARE FROM EXISTING RECORDS, DOCUMENTS, AND SITE OBSERVATIONS. MECHANICAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND SHALL INCLUDE IN HIS BID THE COST OF REPLACEMENT, REPAIR, RELOCATION, OR REMOVAL OF EXISTING MEP ITEMS AS REQUIRED TO COMPLETE THE INSTALLATION OF ALL MECHANICAL SYSTEMS SHOWN ON THESE DRAWINGS PRIOR TO SUBMITTING A BID.
2. THE CONTRACTOR SHALL VERIFY THAT ALL EXISTING AND NEW TERMINAL UNITS ARE MOUNTED SO THAT ALL REQUIRED SERVICING AND MAINTENANCE CLEARANCES ARE MAINTAINED AT THE BOTTOM AND SIDES OF EACH UNIT. COORDINATE WITH ALL NEW ARCHITECTURAL WALLS TO STRUCTURE AND RELOCATE TERMINAL UNITS AS REQUIRED TO MAINTAIN PROPER CLEARANCES.
3. IT IS ACCEPTABLE TO REUSE EXISTING AIR DEVICES IF THEY MATCH THE SCHEDULED MANUFACTURER AND MODEL NUMBER, NECK SIZE AND PERFORMANCE INDICATED IN THIS DRAWING SET. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND TAKE INVENTORY OF EXISTING AIR DEVICES WITHIN THE SPACE PRIOR TO SUBMITTING A BID. ALL REUSED AIR DEVICES SHALL BE CLEANED AND REPAINTED AS REQUIRED TO RETURN TO "LIKE-NEW" CONDITIONS.
4. EXISTING TAKE-OFF CONNECTIONS MAY BE REUSED IF LOCATED WITHIN 3'-0" OF NEW CONNECTION SHOWN ON DRAWING. ALL TAKE-OFF CONNECTIONS NOT USED SHALL BE REMOVED AND DUCTWORK SHALL BE PATCHED WITH SHEET METAL, SEALED AND RE-INSULATED TO MATCH EXISTING.
5. NO FAN POWERED TERMINAL UNITS SHALL HAVE SPRINKLER PIPING BLOCKING BOTTOM-MOUNTED ACCESS PANELS. OFFSET NEW AND EXISTING SPRINKLER PIPING AS REQUIRED. EXISTING FAN POWERED TERMINAL BOXES MOUNTED ABOVE OR ADJACENT TO WALLS WHERE ACCESS IS OBSTRUCTED SHALL BE RELOCATED AS REQUIRED.
6. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER MEP TRADES TO MAINTAIN A MINIMUM OF 9" CLEAR SPACE FOR TENANT EQUIPMENT, CABLE TRAY, WIRING, ETC.
7. PROVIDE REMOTE DAMPER OPERATORS FOR ALL SPIN-IN DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS. OPERATORS SHALL BE ROTO-TWIST (OR APPROVED EQUAL) CABLE-TYPE OPERATORS, CONCEALED WITHIN DUCT RUN-OUT TO DEVICE, AND ACCESSIBLE FOR BALANCING FROM FACE OF AIR DEVICE. PROVIDE REQUIRED CABLE LENGTHS, MOUNTING CLIPS, AND ALL OTHER REQUIRED COMPONENTS FOR PROPER INSTALLATION AND OPERATION.
8. PRIMARY AND SECONDARY DUCTWORK SHALL HAVE EXTERNAL INSULATION INSTALLED ON TOP SIDE OF DUCTWORK PRIOR TO HANGING DUCTWORK TO ALLOW DUCT TO BE SUSPENDED WITH INSULATION TIGHT TO STRUCTURE. DO NOT COMPRESS INSULATION.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING TO THE ENGINEER'S ATTENTION ANY WALLS THAT EXTEND FROM THE FINISHED FLOOR TO STRUCTURE AND REQUIRE RETURN AIR PATHWAYS. RETURN AIR BOOTS SHALL BE INSTALLED TO PROVIDE CROSS SECTIONAL AREA EQUIVALENT TO 500 FPM OF AIRFLOW BASED ON THE SUPPLY CFM TO THE ROOM ENCLOSED BY THE FULL HEIGHT WALLS.
10. FINAL LOCATION OF ALL NEW EQUIPMENT SHALL BE APPROVED BY BUILDING OWNER OR PROJECT MECHANICAL ENGINEER PRIOR TO INSTALLATION.
11. ROOF PENETRATIONS SHALL BE PERFORMED TO MAINTAIN THE WARRANTY ON THE ROOF. COORDINATE PENETRATIONS WITH THE ROOF MEMBRANE MANUFACTURER.
12. MOUNT ALL TEMPERATURE CONTROL DEVICES 48" ABOVE FINISHED FLOOR TO THE CENTER OF THE DEVICE TO COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT ANSI A117.1.
13. DURING CONSTRUCTION, SEAL ALL OPEN DUCTS WITH PLASTIC TO PREVENT DUST/DIRT. CLEAN ALL INTERIOR DUCT SURFACES PRIOR TO DUCT INSTALLATION. ALL VAV TERMINAL UNIT FILTERS SHALL BE MAINTAINED DURING CONSTRUCTION AND REPLACED AT THE END OF CONSTRUCTION. PROVIDE CONSTRUCTION FILTERS OVER AIR HANDLING UNIT INTAKES AND MAINTAIN FILTER MEDIA DURING CONSTRUCTION. REPLACE ALL FILTERS AT END OF CONSTRUCTION. ALL RETURN AIR INTAKES TO MECHANICAL ROOM SHALL BE COVERED WITH FILTER MEDIA DURING CONSTRUCTION. REMOVE UPON COMPLETION.
14. SEAL ALL NEW AND EXISTING PIPE, CONDUIT, AND DUCT PENETRATIONS THRU FIRE RATED WALLS WITH FIRE CAULKING. FIRE CAULKING SHALL BE EQUAL TO 3M BRAND CP25WP FIRE CAULK. INSTALL CAULKING IN STRICT ACCORDANCE WITH ALL MANUFACTURER'S RECOMMENDATIONS AND WRITTEN INSTRUCTIONS AND IN ACCORDANCE WITH ALL APPLICABLE UL DETAILS.
15. CONTRACTOR SHALL MAINTAIN A SET OF CONSTRUCTION DOCUMENTS FOR THE SOLE PURPOSE OF INDICATING AS-BUILT CONDITIONS. SET SHALL NOT BE USED FOR ANY OTHER PURPOSE. AS-BUILT REVISIONS SHALL BE INDICATED USING RED PENCIL AND BE CLEARLY DRAWN AND LABELED TO BE LEGIBLE. ILLEGIBLE ENTRIES SHALL BE REVISED BY THE CONTRACTOR. PROVIDE AS-BUILT SET TO THE OWNER AT SUBSTANTIAL COMPLETION.
16. CONTRACTOR SHALL COMPLETE START-UP FORMS AND CHECK-OUT UTILIZING MANUFACTURER CERTIFIED START-UP TECHNICIANS. EQUIPMENT START-UP AND CHECK-OUT FORMS SHALL BE INCLUDED IN THE O&M MANUALS.
17. RADIUS ELBOWS 2 TIMES THE DUCT DIMENSION AND LARGER DO NOT REQUIRE SPLITTER VANES; PROVIDE SPLITTER VANES FOR ALL RADIUS ELBOWS 1.5 TIMES AND SMALLER. SPLITTER VANES SHALL BE LOCATED AND SECURED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."
18. RECTANGULAR ELBOWS SHALL INCORPORATE TURNING VANES. VANES SHALL BE SINGLE-THICKNESS GALVANIZED STEEL VANES SET IN GALVANIZED STEEL RUNNERS. VANES AND RUNNERS SHALL BE CONSTRUCTED AND SECURED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."

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08/26/2025

BURNET COUNTY ANNEX

127 E JACKSON ST. BURNET TX 78611

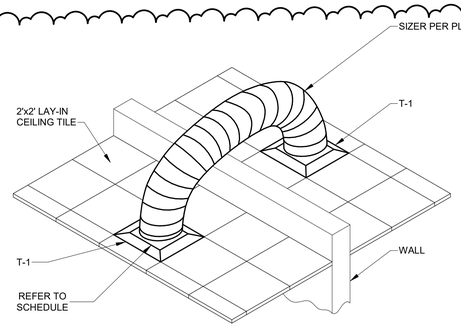
#	DATE	ISSUE
1	08/21/2025	Addendum 1

Project Number: 33-1408

MECHANICAL COVER SHEET

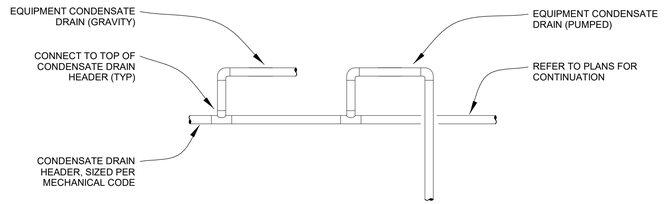
M001

CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20021



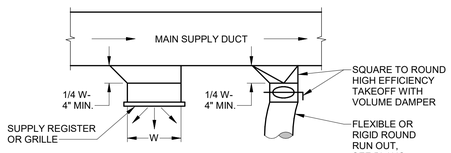
H M002 **TRANSFER DUCT DETAIL**

NOT TO SCALE

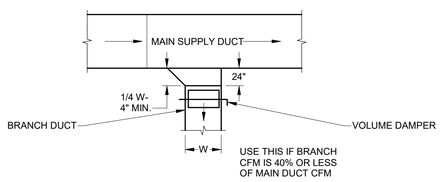


J M002 **DIFFUSER IN LAY-IN CEILING DETAIL**

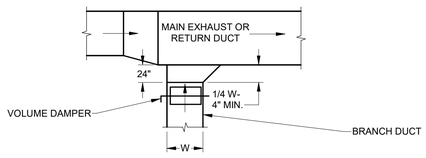
NOT TO SCALE



SUPPLY REGISTER & RUN OUT TAKEOFF



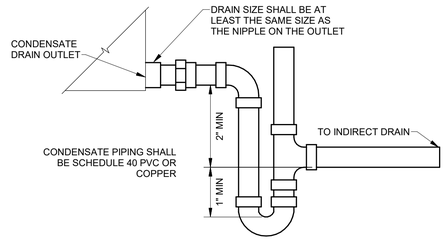
BRANCH DUCT TAKEOFF



EXHAUST AND/OR RETURN BRANCH DUCT

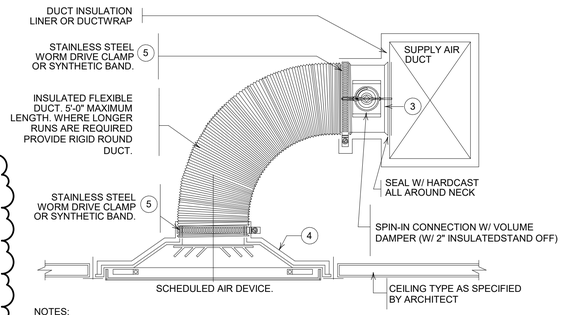
K M002 **LOW VELOCITY DUCT DETAILS**

NOT TO SCALE



D M002 **CONDENSATE TRAP**

NOT TO SCALE

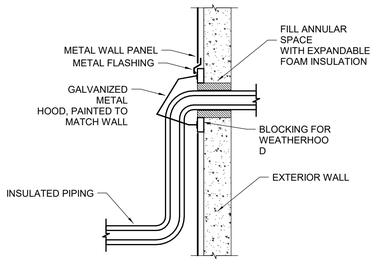


NOTES:

1. CEILING DIFFUSER SHALL BE INSTALLED SUCH THAT THE FACE OF DIFFUSER IS FLUSH WITH CEILING.
2. SUPPORT FLEXIBLE DUCT FROM STRUCTURE. FLEXIBLE DUCT SHALL NOT KINK, SAG OR REST ON LIGHT FIXTURE, CEILING SUPPORT "TEES" OR CEILING TILE.
3. PROVIDE SQUARE TO ROUND TAP WHERE FLEXIBLE DUCT SIZE EXCEEDS DIMENSION OF RECTANGULAR DUCT. (SEE DET. FOR ADDITIONAL INFORMATION.)
4. FOR UNCONDITIONED CEILING PLENUMS, INSULATE ENTIRE BACK OF CEILING DIFFUSER WITH 2" DUCT WRAP AND SEAL WITH VAPOR BARRIER TAPE.
5. EXTEND INSULATION AND OUTER JACKET OVER THE SECURE CLAMP/BAND AND TAPE DOWN TO SLEEVE/COLLAR TO MAINTAIN VAPOR BARRIER INTEGRITY. (TYPICAL)

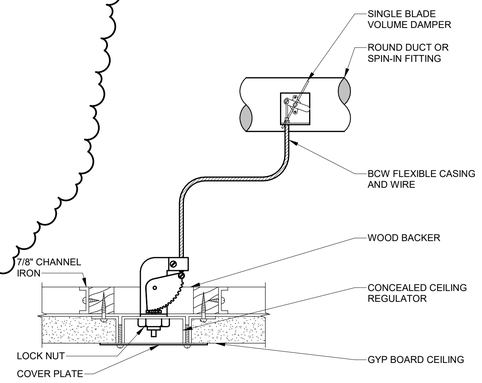
E M002 **DIFFUSER DETAIL**

NOT TO SCALE



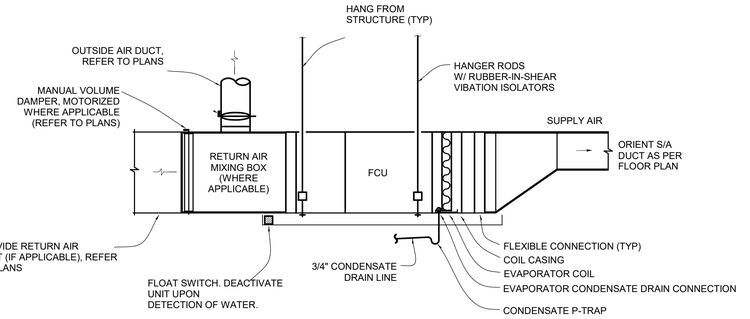
G M002 **EXHAUST FAN DETAIL**

NOT TO SCALE



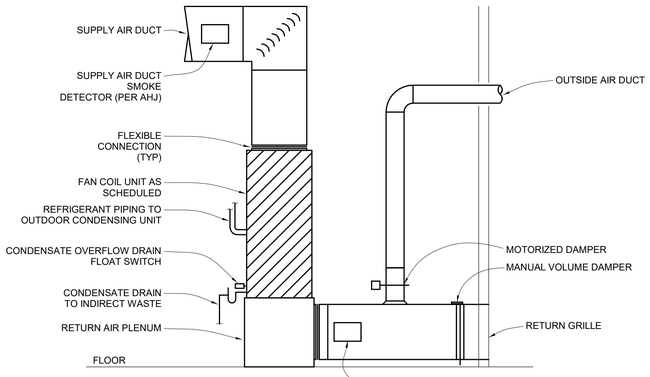
F M002 **REMOTE DAMPER DETAIL**

NOT TO SCALE



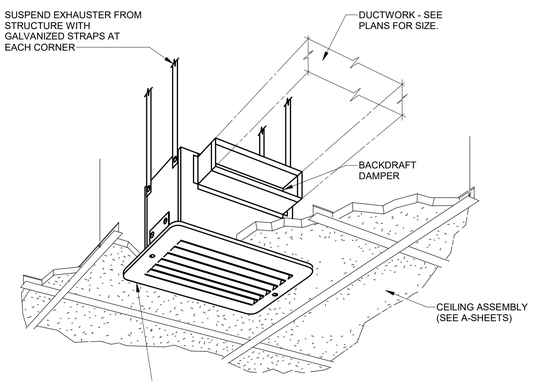
A M002 **FAN COIL UNIT - RETURN BOOT**

NOT TO SCALE



B M002 **VERTICAL FAN COIL UNIT DETAIL**

NOT TO SCALE



C M002 **CEILING MOUNTED EXHAUST FAN**

NOT TO SCALE

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BURNET COUNTY ANNEX

#	DATE	ISSUE
	08/21/2025	Addendum 1

Project Number: 33-1408

MECHANICAL DETAILS

M002

CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20551

Autodesk Docs://33-1408 Burnet County Annex/Burnet County_M&P_RV22.rvt

VENTILATION / PRESSURE CALCS - 1ST FLOOR

OUTSIDE AIR INTAKE		BUILDING EXHAUST		
TAG	AIR FLOW (CFM)	TAG	SERVICE	AIR FLOW (CFM)
FCU-1-1	210	EF-1-1	126 UTILITY	0
		EF-1-2	130 WOMEN'S RESTROOM	75
		EF-1-3	131 MEN'S RESTROOM	75
TOTAL OA (CFM)	210		TOTAL EXHAUST (CFM)	150

REQUIRED MIN. VENTILATION RATE (CFM)	207
TOTAL BUILDING PRESSURIZATION (CFM)	60
BUILDING PRESSURIZATION RATE (CFM/SF)	0.04

NOTES:
(1) TOTAL APPROXIMATE AREA **1,560 SQUARE FT**
(2) *INTERMITTENT USAGE, TWO FAN OPERATIONAL SIMULTANEOUSLY.

VENTILATION / PRESSURE CALCS - 2ND FLOOR

OUTSIDE AIR INTAKE		BUILDING EXHAUST		
TAG	AIR FLOW (CFM)	TAG	SERVICE	AIR FLOW (CFM)
FCU-2-1	220	EF-2-1	203 WOMEN'S RESTROOM	75
		EF-2-2	204 MEN'S RESTROOM	75
TOTAL OA (CFM)	220		TOTAL EXHAUST (CFM)	150

REQUIRED MIN. VENTILATION RATE (CFM)	219
TOTAL BUILDING PRESSURIZATION (CFM)	70
BUILDING PRESSURIZATION RATE (CFM/SF)	0.04

NOTES:
(1) TOTAL APPROXIMATE AREA **1,767 SQUARE FT**
(2) *INTERMITTENT USAGE, TWO FAN OPERATIONAL SIMULTANEOUSLY.

AIR DEVICE SCHEDULE

TAG	MANUFACTURER	MODEL	DUCT SIZE (IN)	NOM. FACE SIZE (IN)	MAX AIRFLOW (CFM)	THROW (@50 FPM)	NC AT MAX AIRFLOW	MATERIAL	FINISH	MOUNTING	NOTES
SUPPLY GRILLE											
S-1	TITUS	OMNI-AA	6"Ø	12x12	135	11	17	ALUMINUM	WHITE	SURFACE	1 - 6
S-2	TITUS	OMNI	6"Ø	12x12	135	11	17	STEEL	WHITE	SURFACE	1 - 6
S-3	TITUS	OMNI	6"Ø	24x24	135	6	NC < 10	STEEL	WHITE	LAY-IN	1 - 6
S-4	TITUS	OMNI	8"Ø	24x24	245	10	12	STEEL	WHITE	LAY-IN	1 - 6
S-5	TITUS	OMNI	10"Ø	24x24	435	14	20	STEEL	WHITE	LAY-IN	1 - 6
RETURN GRILLE											
R-1	TITUS	350RL	18x18	20x20	1450	-	28	STEEL	WHITE	WALL	1 - 4
R-2	TITUS	350RL	24x20	26x22	2180	-	30	STEEL	WHITE	WALL	1 - 4
TRANSFER GRILLE											
T-1	TITUS	PAR	22x10	24x12	765	-	-	STEEL	WHITE	LAY-IN	1 - 6

NOTES:
(1) COORDINATE WITH ARCHITECTURAL DRAWINGS FOR REQUIRED MOUNTING TYPES.
(2) COORDINATE WITH ARCHITECT AND GC FOR FINAL COLOR OF AIR DEVICE.
(3) AIR DEVICES FROM ALTERNATE MANUFACTURER EQUAL TO SCHEDULED MODELS ARE ACCEPTABLE (PRICE, METALAIRE, ETC.).
(4) AIR DEVICES LOCATED IN INACCESSIBLE CEILINGS TO BE PROVIDED WITH REMOTE OPERARABLE SINGLE BLADE AIR DAMPERS.
(5) PLAQUE AIR DEVICES TO BE PROVIDED WITH BACKPAN INSULATION.
(6) MECHANICAL CONTRACTOR TO SIZE BRANCH DUCTWORK TO MAINTAIN AT LEAST ≤ 800 FPM OR AS INDICATED ON PLANS.

EXHAUST FAN SCHEDULE

TAG	MANUFACTURER	MODEL	SERVICE	LOCATION	FAN TYPE	DRIVE TYPE	AIR VOLUME (CFM)	EXT. STATIC PRESSURE (IN WG)	ELEC		WEIGHT (LBS)	NOTES
									POWER	MOTOR SIZE		
EF-1-1, 2, & 3 EF-2-1 & 2	GREENHECK	SP-A50-90-VG	REFER TO PLANS	CEILING	CENTRIFUGAL	DIRECT	75	0.25	120/60/1	6 W	12	1 - 3

NOTES:
(1) FANS PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
(2) PROVIDE MANUFACTURER'S INTEGRAL BACKDRAFT DAMPER, VIBRATION ISOLATION KIT, AND DECORATIVE GRILLE.
(3) COORDINATE WITH ELECTRICAL CONTRACTOR FOR INSTALLATION AND WIRING OF DISCONNECTING MEANS. ELECTRICAL TO INTERLOCK WITH LIGHTS. PROVIDE LIGHT SWITCH WITH TIME-DELAY RELAY.
(4) ALTERNATE MANUFACTURERES: COOK, METALAIRE

ACCESSORIES:
(1) NEMA-3R DISCONNECT SWITCH PROVIDED WITH EQUIPMENT, WIRED BY EC

SPLIT SYSTEM SCHEDULE

	TAG	FCU-1-1	FCU-2-1	FCU-IT-MAIN & BACKUP
INDOOR UNIT	MANUFACTURER	TRANE	TRANE	MITSUBISHI
	MODEL	TEM8A0C48V41+TDR	TEM8A0D60V51+TDR	PKA-A36AKA8
	TYPE	DX SPLIT HEAT PUMP	DX SPLIT HEAT PUMP	DX SPLIT COOLING ONLY
	SIZE	4 TON	5 TON	3 TON
	ORIENTATION	MULTIPOSITION	MULTIPOSITION	WALL MOUNT
	WEIGHT (LBS)	174	174	46
	SUPPLY FAN SECTION			
	DESIGN AIRFLOW (CFM)	1530	2010	830
	DESIGN OUTSIDE AIRFLOW (CFM)	210	220	-
	DESIGN ESP (IN WTR)	0.5	0.5	N/A
	MOTOR RATING (HP)	3/4	3/4	74 WATTS
	FLA (AMPS)	5.7	5.7	0.6
	COOLING SECTION			
	AMBIENT (°F)	95	95	95
	MIXED AIR (EAT) DESIGN CONDITIONS DB/WB (°F)	80 / 67	80 / 67	80 / 67
	COOL CAPACITY (AHRI TOTAL MBH)	48.00	58.50	33.40
	HEAT PUMP HEATING			
	AMBIENT (°F)	17	17	N/A
	CAPACITY (MBH)	31.4	37.8	N/A
	HSPF2 (AHRI 210/240 - 2023)	9.00	8.70	N/A
	ELECTRICAL			
	VOLTAGE/PH	208-230/60/1	208-230/60/1	POWERED BY OUTDOOR UNIT
	AUX. HEATER CAPACITY (208/240)	3.60 / 4.80	3.60 / 4.80	-
	AMPS	17.3 / 20.0	17.3 / 20.0	-
	MCA (AMPS) (208/230)	25.0 / 29.0	25.0 / 29.0	-
	MOCP (AMPS) (208/230)	25 / 30	25 / 30	-
	NOTES / ACCESSORIES	(1 - 7)	(1 - 7)	(1 - 6, & 8)
OUTDOOR UNIT	TAG	CU-1-1	CU-2-1	CU-IT-MAIN & BACKUP
	MANUFACTURER	TRANE	TRANE	MITSUBISHI
	MODEL	4TWL9048A1	4TWL9060A1	PUY-AK36NL
	TYPE	HEAT PUMP	HEAT PUMP	COOLING ONLY HEAT PUMP
	SIZE	4.0 TON	5.0 TON	3.0 TON
	WEIGHT (LBS)	245	245	224
	COMPRESSOR INFORMATION			
	NO./TYPE	1 / SCROLL	1 / TWIN ROTARY	1 / TWIN ROTARY
	REFRIGERANT	R-410A	R-410A	R-454B
	STAGES	VARIABLE	VARIABLE	VARIABLE
	EFFICIENCY (AHRI 210/243)			
	AMBIENT DB	105.0	105.0	105.0
	EER2/SEER2 (AHRI 210/240 - 2023)	12.0 / 19.0	11.0 / 19.0	12.0 / 20.3
	ELECTRICAL			
	VOLTAGE/PH	208-230/60/1	208-230/60/1	208-230/60/1
	MCA	31.8	36.1	34.0
	MOCP	35	40	56
	NOTES / ACCESSORIES	(9 - 11)	(9 - 11)	(9 - 11)

NOTES / ACCESSORIES:
(1) NEMA 1 DISCONNECT PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR
(2) MANUFACTURER WIRED CONTROLS
(3) AUXILIARY DRAIN PAN WITH FLOAT SWITCH W/ AUTOMATIC SHUT DOWN UPON DETECTION OF WATER
(4) FILTER RACK AND FILTER
(5) MANUFACTURER'S 7-DAY PROGRAMMABLE THERMOSTAT
(6) COORDINATE DISCONNECT SIZE AND REQUIREMENTS WITH ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL.
(7) PROVIDE AND INSTALL LITTLE GIANT MODEL #553201, 1/18 HP MOTOR, 115V/1PH WITH CORDED PLUG. MINIMUM PERFORMANCE 1.7 GPM AT 20-FT OF HEAD.
(8) PROVIDE AND INSTALL MANUFACTURER'S PREFERRED CONDENSATE PUMP BLUEDIAMOND #MAXIBLUE
(9) PROVIDE LOCKING REFRIGERANT PORT CAPS
(10) HAIL GUARDS, ANTI-SHORT CYCLE TIMER, HIGH PRESSURE SWITCH
(11) DEFROST CONTROL

OA SCHEDULE

Outside air shall be provided in accordance with ASHRAE Standard 62.1-2022 as follows:

	Rp	Pz	Ra	Az
BREAK	5	25	0.12	1,000
CORRIDOR	-	-	0.06	1,000
EXHAUSTED	-	-	-	-
OFFICE SPACE	5	5	0.06	1,000
STORAGE	5	2	0.06	1,000

Vbz = RpPz + RaAz
Ez = 0.8
Voz = Vba / Ez

Room	Qty.	Rp (CFM/P)	Pz (People)	Ra (CFM/SF)	Az (SF)	Vbz (CFM)	Voz (CFM)
FCU-1-1							
120 ENTRY	1	5	2	0.06	261	25.7	32.1
121 OPEN WORKSPACE	1	5	5	0.06	340	45.4	56.8
122 HALL	1	0	0	0.06	71	4.3	5.3
123 OFFICE 2	1	5	1	0.06	87	10.2	12.8
124 OFFICE 1	1	5	1	0.06	87	10.2	12.8
125 CONFERENCE*	1	5	10	0.06	196	36.8	46.0
126 UTILITY	1	0	0	0.00	20	0.0	0.0
127 MECH	1	0	0	0.00	14	0.0	0.0
128 WORKROOM*	1	5	2	0.06	223	18.4	23.0
129 BREAKROOM	1	5	1	0.06	115	11.9	14.9
129 BREAKROOM (EXIT)	1	0	0	0.06	46	2.8	3.4
130 WOMENS RESTROOM	1	0	0	0.00	46	0.0	0.0
131 MENS RESTROOM	1	0	0	0.00	54	0.0	0.0
Total			22.0		1,560.0		207.0
						PROVIDED	**210.0**
FCU-2-1							
200 OPEN SPACE	1	5	3	0.06	152	24.1	30.2
201 HALL	1	0	0	0.06	653	39.2	49.0
202 BREAKROOM*	1	5	1	0.06	61	6.2	7.7
203 WOMENS RESTROOM	1	0	0	0.00	50	0.0	0.0
204 MENS RESTROOM	1	0	0	0.00	64	0.0	0.0
206 ELEV & MECH RM	1	0	0	0.00	41	0.0	0.0
207 STORAGE	1	0	0	0.06	38	2.3	2.8
208 FLEX OFFICE	1	5	1	0.06	70	9.2	11.5
209 LAB	1	10	1	0.18	140	35.2	44.0
211 OFFICE	1	5	1	0.06	57	8.4	10.5
212 OFFICE	1	5	1	0.06	64	8.8	11.1
213 GREGS OFFICE*	1	5	2	0.06	102	11.1	13.9
214 MEETING ROOM*	1	5	9	0.06	136	30.7	38.3
Total			19.0		1,628.0		219.0
						PROVIDED	**220.0**
*Intermittent occupancy reduced 50%						**TOTAL OA REQUIRED**	**425.9**
						TOTAL OA PROVIDED	**430.0**

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BURNET COUNTY ANNEX

#	DATE	ISSUE
	08/21/2025	Addendum 1

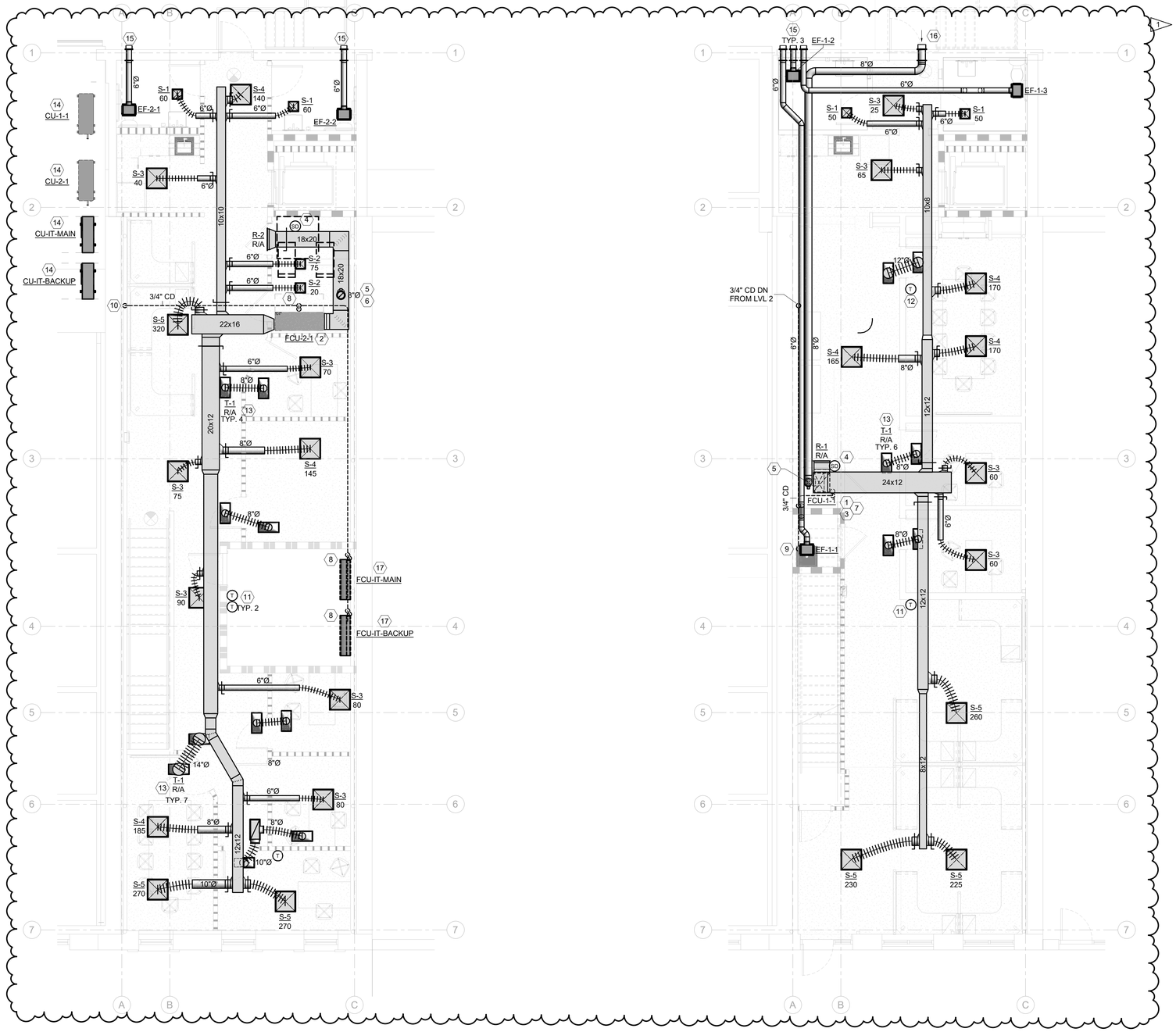
CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20551

Project Number: 33-1408

MECHANICAL SCHEDULES

M003

Autodesk Docs://33-1408 Burnet County Annex/Burnet County_M&P_RV22.rvt



2 M201 MECHANICAL HVAC PLAN-SECOND FLOOR

3/16" = 1'-0"

1 M201 MECHANICAL HVAC PLAN-FIRST FLOOR

3/16" = 1'-0"

1

FLEXIBLE DUCT SIZE TABLE

AIRFLOW (CFM)	FLEXIBLE DUCT SIZE
0 - 100	6" RND
101 - 225	8" RND
226 - 400	10" RND
401 - 650	12" RND
651 - 925	14" RND

NOTES:

FLEXIBLE DUCTWORK EQUIVALENT TO FLEXMASTER 6M

GENERAL NOTES

A. REFER TO MECHANICAL COVER SHEET DRAWING FOR SYMBOLS, ABBREVIATIONS, SPECIFICATIONS, AND ADDITIONAL INFORMATION.

B. DUE TO DRAWING SCALE, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL EXAMINE FIELD CONDITIONS AND FURNISH THE NECESSARY FITTINGS WHICH MAY BE REQUIRED TO COMPLETE THE INSTALLATION.

C. FINAL LOCATION OF ALL NEW EQUIPMENT, PRIOR TO EQUIPMENT INSTALLATION, SHALL BE APPROVED BY BUILDING OWNER AND PROJECT MECHANICAL ENGINEER IF LOCATION DIFFERS FROM CONSTRUCTION DOCUMENTS.

D. MAINTAIN CODE REQUIRED AND MANUFACTURER'S RECOMMENDED CLEARANCES FOR ALL NEW EQUIPMENT.

E. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL FINAL AIR DEVICE/LOUVER COLORS TO MATCH ARCHITECTURAL CEILING FINISHES.

F. COORDINATE INSTALLATION OF ALL EQUIPMENT, DUCTWORK, AIR DEVICES, AND ACCESSORIES WITH ALL OTHER TRADES SO AS TO AVOID INSTALLATION CONFLICTS.

G DUCTWORK SHALL BE KEPT TIGHT TO STRUCTURE. WHERE APPLICABLE, RUN BRANCH DUCTWORK WITHIN ROOF TRUSSES. COORDINATE WITH NEW PLUMBING, ELECTRICAL AND FIRE UTILITIES TO AVOID CONFLICTS.

1

SHEET WORK NOTES

1. PROVIDE AND INSTALL FAN COIL UNIT (FCU) VERTICALLY WITH RETURN AIR PLENUM/SUPPORT BELOW AIR HANDLER IN SECONDARY CONTAINMENT PAN. FIELD COORDINATE FINAL INSTALLATION LOCATION AND ORIENTATION WITH ALL OTHER TRADES. REFER TO VERTICAL AIR HANDLER UNIT DETAIL FOR ADDITIONAL INFORMATION.
2. PROVIDE AND INSTALL FAN COIL UNIT (FCU) HORIZONTALLY IN SECONDARY CONTAINMENT PAN. FIELD COORDINATE FINAL INSTALLATION LOCATION AND HEIGHT WITH OTHER TRADES. REFER TO HORIZONTAL AIR HANDLER UNIT DETAIL FOR ADDITIONAL INFORMATION.
3. PROVIDE P-TRAP AT EQUIPMENT CONNECTION PER DETAILS AND PROVIDE INTEGRAL FLOAT SWITCH IN CONDENSATE DRAIN PAN. INTEGRAL FLOAT SWITCH TO AUTOMATICALLY SHUT OFF FAN COIL UNIT (FCU) UPON DETECTION OF WATER.
4. PROVIDE AND INSTALL DEDICATED SMOKE DETECTOR AS REQUIRED BY CODE AND LOCAL AHJ, IN THE RETURN DUCT OF UNITS 2,000 CFM OR GREATER OR WHERE COMBINED CFM OF SHARED RETURN CFM EXCEEDS 2,000 CFM. DETECTORS SHALL BE CONNECTED TO THE ALARM SYSTEM TO GENERATE SUPERVISORY NOTIFICATION. UPON DETECTION, UNIT SHALL SHUT DOWN AUTOMATICALLY AND ALARM. COORDINATE WITH FIRE ALARM CONTRACTOR.
5. PROVIDE MOTORIZED BACKDRAFT DAMPER. UPON UNIT FAN, ENERGIZING, DAMPER SHALL OPEN AND PROVIDE CODE MINIMUM OA PER SCHEDULE. OUTSIDE AIR DUCT TO CONNET TO FAN COIL UNIT (FCU) RETURN AIR PLENUM, DOWNSTREAM OF RETURN AIR BALANCING DAMPER.
6. ROUTE 8"Ø OUTSIDE AIR DUCT UP TO ROOF. TERMINATE AT ROOF WITH ROOF CAP EQUAL TO LUXURY METAL #SJV826. COORDINATE WITH ROOFING CONTRACTOR FOR INSTALLATION AND FLASHING SO AS NOT TO VOID ROOF WARRANTY. TRANSITION AS REQUIRED TO DUCT CONNECTION SIZE AT OUTSIDE AIR INTAKE. REFER TO M301 FOR CONTINUATION.
7. ROUTE 3/4" CONDENSATE DRAIN PIPE FROM FAN COIL UNIT (FCU) TO MOP SINK AS SHOWN. REFER TO MANUFACTURER'S AHU INSTALLATION REQUIREMENTS. ALL PIPING SHALL BE INSULATED AND SLOPED AT MINIMUM 1/8"/FT. TERMINATE INSULATED CONDENSATE DRAIN PIPING WITH INDIRECT CONNECTION. COORDINATE WITH PLUMBING CONTRACTOR FOR FINAL TERMINATION.
8. ROUTE PUMPED CONDENSATE DRAIN PIPE FROM FAN COIL UNIT (FCU) DRAIN CONNECTION TIGHT TO STRUCTURE AND CONTINUE TO GRAVITY HEADER (REFER TO DETAILS). ROUTE CONDENSATE DRAIN AS HIGH AS POSSIBLE TO ACCOMMODATE FALL TO DISCHARGE LOCATION. REFER TO FCU MANUFACTURER'S INSTALLATION REQUIREMENTS. ALL PIPING SHALL BE INSULATED AND SLOPED AT MINIMUM 1/8"/FT.
9. 3/4" INSULATED CONDENSATE DRAIN SHALL TERMINATE AT MOP SINK RIM WITH 1" AIR GAP. COORDINATE WITH PLUMBING CONTRACTOR FOR FINAL TERMINATION.
10. ROUTE 3/4" INSULATED CONDENSATE DOWN FROM LEVEL 2 TO LEVEL 1, AND TIE INTO 3/4" INSULATED CONDENSATE FROM FCU-1-1
11. PROVIDE AND INSTALL THERMOSTAT WITH REMOTE SENSOR 54" A.F.F. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE EMPTY J-BOX AND CONDUIT FOR THERMOSTAT LOCATION. UTILIZE TEMPERATURE AVERAGING FOR FCU-1-1 UNIT CONTROL.
12. PROVIDE AND INSTALL THERMOSTAT WITH REMOTE SENSOR 54" A.F.F. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE EMPTY J-BOX AND CONDUIT FOR THERMOSTAT LOCATION.
13. PROVIDE AND INSTALL AIR TRANSFER DUCT/DEVICES PER SCHEDULES AND DETAILS. REFER TO DETAILS AND SCHEDULES FOR ADDITIONAL INFORMATION.
14. PROVIDE AND INSTALL CONDENSING UNIT ON WALL OF ANNEX, ACCESSIBLE FROM ADJACENT ROOF STRUCTURE. COORDINATE WITH MANUFACTURER TO PROVIDE WALL MOUNTING BRACE FOR CONDENSING UNITS. ROUTE REFRIGERANT PIPING THROUGH WATERTIGHT PENETRATION TO SERVE FAN COIL UNIT INDOORS. ALL INSULATED REFRIGERANT PIPING EXPOSED TO THE ELEMENTS SHALL BE PROVIDED WITH ALUMINUM METAL JACKET FOR PROTECTION.
15. TERMINATE EXHAUST AT EXTERIOR WALL WITH MANUFACTURER'S WALL CAP. MAINTAIN CODE REQUIRED MINIMUM 10-FT CLEARANCE TO ALL OUTSIDE AIR INTAKES. TYPICAL.
16. PROVIDE AND INSTALL 8"Ø OUTSIDE AIR INTAKE EQUAL TO BROAN 643FA WITH INSECT SCREEN ON INTAKE. ROUTE 8" ROUND OUTSIDE AIR DUCT TIGHT TO STRUCTURE TO RETURN OF FAN COIL UNIT.
17. INSTALL FAN COIL UNIT (FCU) ON WALL AT APPROX. 9'-0" A.F.F. PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

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BURNET COUNTY ANNEX

#	DATE	ISSUE
1	08/21/2025	Addendum 1

PROJECT NORTH

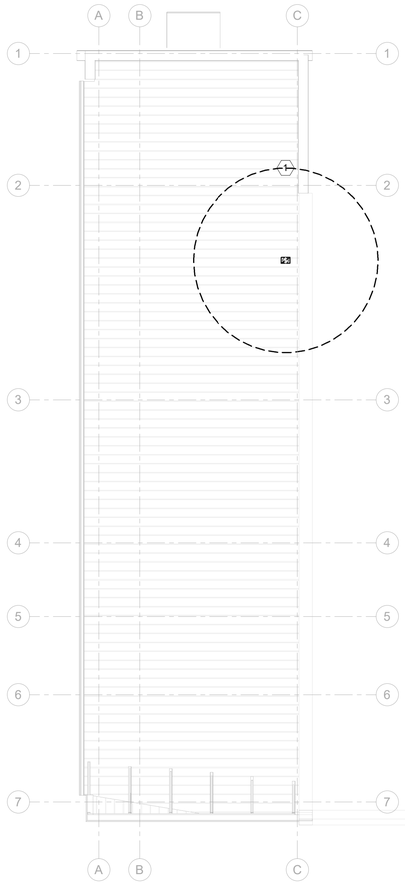
TRUE NORTH

Project Number: 33-1408

MECHANICAL HVAC PLAN

M201

CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20021



1 M301 MECHANICAL ROOF PLAN

1/8" = 1'-0"

GENERAL NOTES

A. REFER TO MECHANICAL COVER SHEET DRAWING FOR SYMBOLS, ABBREVIATIONS, SPECIFICATIONS, AND ADDITIONAL INFORMATION.

B. DUE TO DRAWING SCALE, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL EXAMINE FIELD CONDITIONS AND FURNISH THE NECESSARY FITTINGS WHICH MAY BE REQUIRED TO COMPLETE THE INSTALLATION.

C. FINAL LOCATION OF ALL NEW EQUIPMENT, PRIOR TO EQUIPMENT INSTALLATION, SHALL BE APPROVED BY BUILDING OWNER AND PROJECT MECHANICAL ENGINEER IF LOCATION DIFFERS FROM CONSTRUCTION DOCUMENTS.

D. MAINTAIN CODE REQUIRED AND MANUFACTURER'S RECOMMENDED CLEARANCES FOR ALL NEW EQUIPMENT.

E. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL FINAL AIR DEVICE/LOUVER COLORS TO MATCH ARCHITECTURAL CEILING FINISHES.

F. COORDINATE INSTALLATION OF ALL EQUIPMENT, DUCTWORK, AIR DEVICES, AND ACCESSORIES WITH ALL OTHER TRADES SO AS TO AVOID INSTALLATION CONFLICTS.

G. DUCTWORK SHALL BE KEPT TIGHT TO STRUCTURE. WHERE APPLICABLE, RUN BRANCH DUCTWORK WITHIN ROOF TRUSSES. COORDINATE WITH NEW PLUMBING, ELECTRICAL AND FIRE UTILITIES TO AVOID CONFLICTS.

(#) SHEET WORK NOTES

1. PROVIDE AND INSTALL ROOF CAP EQUAL TO LUXURY METAL #SJV826. COORDINATE WITH ROOFING CONTRACTOR FOR INSTALLATION AND FLASHING SO AS NOT TO VOID ROOF WARRANTY. ROOF CAP TO BE LOCATED 10'-0" OR GREATER FROM ANY EXHAUST OUTLET AND PLUMBING VENT.

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BURNET COUNTY ANNEX

#	DATE	ISSUE
	08/21/2025	Addendum 1

CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM
TX FIRM # 20531

PROJECT NORTH

TRUE NORTH

Project Number: 33-1408

MECHANICAL ROOF PLAN

1

M301

PLUMBING LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HWC	DOMESTIC HOT WATER RECIRC.
SCW	SOFT COLD WATER
W	WASTE
AW	ACID WASTE
V	VENT
AV	ACID VENT
CO/WCO	CLEANOUT/ WALL CLEANOUT
FCO	FLOOR CLEANOUT
GCO	GRADE CLEANOUT
CD	CONDENSATE DRAIN
D	DRAIN
F	FIRE SERVICE
FND	FOUNDATION DRAINAGE
RWL	RAIN WATER LEADER
OFL	OVERFLOW RAIN LEADER
PCR	PUMPER CONDENSATE RETURN
CR	CONDENSATE RETURN
S=.XXX	SLOPE DOWN IN DIRECTION OF FLOW
NG	NATURAL GAS
O	OXYGEN - MEDICAL
MA	AIR - MEDICAL
MV	VACUUM - MEDICAL
EVAC	EVACUATION - ANESTHESIA
N	NITROGEN - MEDICAL
DA	AIR - DENTAL
DV	VACUUM - DENTAL
	MEDICAL GAS OUTLET
	MEDICAL GAS CONSOLE
M	MASTER MEDICAL GAS ALARM PANEL
A	AREA MEDICAL GAS ALARM PANEL
	MEDICAL GAS EMERGENCY SHUTOFF VALVE BOX

SYMBOL	DESCRIPTION
	SHUTOFF VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
G	GLOBE VALVE
	GAS SHUT-OFF COCK
	SWING CHECK VALVE
	SPRING CHECK VALVE
	STRAINER
	WATER OUTLET (TYPE INDICATED)
	BACKFLOW PREVENTER (TYPE INDICATED)
	SLEEVE (PIPE) THRU WALL OR FLOOR
	FLEX CONNECTOR (TYPE INDICATED)
	HOSE END DRAIN VALVE
	PRESSURE REDUCING VALVE
	TEMPERATURE & PRESSURE RELIEF VALVE
	AUTOMATIC AIR VENT
DE	DIELECTRIC UNION
	UNION
A	AUTOMATIC FLOW BALANCING VALVE
T	DIAL THERMOMETER
P	PRESSURE GAUGE - PROVIDE WITH PIGTAIL FOR STEAM
X	PIPE ANCHOR
	SOLENOID VALVE
	L.P. VALVE
	ECCENTRIC PLUG BALANCING VALVE
	VALVE IN RISER
	TEE UP
	TEE DOWN
	ELBOW UP
	ELBOW DOWN
	PIPE CAP
	PIPE DRAIN & CAP
	CONNECT TO EXISTING
	NEW PIPING
	EXISTING PIPING
	PIPING TO BE REMOVED

PLUMBING ABBREVIATIONS

AB.C.	ABOVE CEILING
AFF	ABOVE FINISHED FLOOR
AV	ACID VENT
AW	ACID WASTE
BFF	BELOW FINISHED FLOOR
BG	BELOW GRADE
CA	COMPRESSED AIR
CD	CONDENSATE DRAIN
C.I.N.H.	CAST IRON NO HUB
CO	CLEANOUT
CKV	CHECK VALVE
CW	COLD WATER
CX	CONNECT TO EXISTING
(A)	PIPE DROP
DN	PIPE DROP TO NEXT LEVEL
DTL	DETAIL
(E)	EXISTING
F	FIRE SERVICE
FCO	FLOOR CLEANOUT
FND	FOUNDATION DRAIN
GCO	GRADE CLEANOUT
HW	HOT WATER
HWC	HOT WATER CIRCULATION
IDW	INDIRECT WASTE
I.E.	INVERT ELEVATION
IRR	IRRIGATION
LPG	LIQUEFIED PETROLEUM GAS
LWCO	LOW WATER CUTOFF
MAX	MAXIMUM
MIN	MINIMUM
NG	NATURAL GAS
(N)	NEW
NO	NORMALLY OPEN (VALVE)
NC	NORMALLY CLOSED (VALVE)
OH	OVER HEAD
OFL	OVERFLOW RAIN LEADER
(R)	PIPE RISE
RIO	ROUGH-IN ONLY
RWL	RAIN WATER LEADER
SHT	SHEET
SCW	SOFT COLD WATER
SOC	SHUT OFF COCK (GAS)
SOV	SHUT OFF VALVE
TPL	TRAP PRIMER LINE
UG	UNDERGROUND
UP	PIPE RISE TO NEXT LEVEL
US	UNDER SLAB
UTR	UP THRU ROOF
V	VENT
VA	VALVE
VTR	VENT THRU ROOF
W	WALL CLEANOUT
WCO	WASTE

PLUMBING DESIGN CRITERIA

GENERAL GUIDELINES:

ALL PLUMBING WORK AND MATERIALS SHALL COMPLY WITH THE 2015 IPC WITH CITY OF BURNET AMENDMENTS.

SANITARY DRAINAGE AND VENT PIPING

SIZED PER TABLE 710.1(1) OF THE 2015 IPC.
DRAIN PIPE SHALL SLOPE PER 2015 IPC SECTION 704.1.

DRAINAGE FIXTURE UNITS

SIZED PER TABLE 709.1 OF THE 2015 IPC.

WATER SUPPLY FIXTURE UNITS

SIZED PER TABLE E103.3(2) OF THE 2015 IPC.

WATER SUPPLY PIPE SIZING

SIZED PER TABLE E103.3(5) OF THE 2015 IPC.

GENERAL NOTES

1. FURNISH AND INSTALL ALL ITEMS NECESSARY TO PROVIDE FULLY FUNCTIONING SYSTEMS AS INDICATED BY THE DESIGN AND THE EQUIPMENT SPECIFIED. ELEMENTS OF THE WORK SHALL INCLUDE, BUT ARE NOT LIMITED TO, MATERIALS, LABOR, SUPERVISION, SUPPLIES, EQUIPMENT, TRANSPORTATION, HOISTING/RIGGING, STORAGE, UTILITIES, AND ALL REQUIRED PERMITS AND LICENSES.
2. DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT REFLECT ALL WORK AND MATERIALS REQUIRED TO COMPLETE PROJECT. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT AS REQUIRED TO COMPLETE PROJECT WITHIN DESIGN. CONTRACTOR SHALL REQUEST ADDITIONAL INFORMATION AND DETAILS WHERE SCOPE IS UNCLEAR.
3. ALL WORK SHALL COMPLY WITH THE MOST RECENT ADOPTED VERSION OF ALL APPLICABLE LAWS, RULES, REGULATIONS AND ORDINANCES OF ALL FEDERAL, STATE AND LOCAL AUTHORITIES. IF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE LOCAL ENFORCING AUTHORITY EXISTS, THE LOCAL ENFORCING AUTHORITY SHALL APPLY. ANY MODIFICATIONS TO THE DESIGN SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR ARCHITECT/ENGINEER. THE CONTRACTOR SHALL REPORT TO THE ARCHITECT/ENGINEER AND SECURE HIS APPROVAL BEFORE PROCEEDING WITH ANY MODIFICATIONS.
4. WHERE THE REQUIREMENTS OF THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THE CODES, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE PROVIDED THAT THEY ARE NOT IN CONFLICT WITH THE CODES.
5. BEFORE SUBMITTING BIDS, EACH CONTRACTOR SHALL PERFORM A SITE VISIT AND UNDERSTAND THE CONDITIONS TO BE MET IN INSTALLING THE WORK, AND SHALL MAKE PROVISIONS FOR THE CONDITIONS IN HIS FINAL BID. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR THE OMISSION OR FAULTY INSTALLATION OF ANY WORK COVERED BY THE CONTRACT DOCUMENTS.
6. MISUNDERSTANDING OF THE SCOPE OR AMOUNT OF WORK TO BE PERFORMED SHALL BE THE RESPONSIBILITY OF THE CONTACTOR, AND SHALL NOT RESULT IN ANY ADDITIONAL COST TO THE OWNER. TENDER OF A PROPOSAL CONVEYS FULL CONTRACTOR AGREEMENT OF THE ITEMS AND CONDITIONS SPECIFIED AND/OR INDICATED, SCHEDULED, OR IMPLIED ON THE CONTRACT DOCUMENTS, AND/OR REQUIRED BY THE NATURE OF THIS WORK.
7. ALL WORK SHALL BE CARRIED OUT IN A NEAT, WELL ORGANIZED MANNER. ALL SERVICES SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO THE PRIMARY LINES OF THE BUILDING. LOCATE ALL EQUIPMENT TO PROVIDE ACCESS AND ARRANGE ALL WORK WITH ADEQUATE ACCESS FOR OPERATION AND MAINTENANCE, AND TO MAINTAIN PROPER CODE AND MANUFACTURER'S CLEARANCES.
8. ALL EQUIPMENT AND MATERIAL TO BE FURNISHED AND INSTALLED ON THIS PROJECT SHALL BE UL OR ETL LISTED, IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION, AND SUITABLE FOR ITS INTENDED USE ON THIS PROJECT.
9. THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL NEW EQUIPMENT, CONTROLS, AND FIXTURES TO BE PROVIDED AND INSTALLED.
10. THE FOLLOWING SUBMITTAL DATA SHALL BE FURNISHED AND SHALL INCLUDE BUT NOT BE LIMITED TO:
    A. EQUIPMENT AND MATERIALS SHOP DRAWINGS
    B. COORDINATION DRAWINGS
    C. RECORD DRAWINGS
    D. OPERATING AND MAINTENANCE MANUALS
    E. FIRE STOP MATERIALS AND DETAILS
11. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL COORDINATE THE INSTALLATION OF DUCTWORK, PIPING, CONDUIT, CABLE, ETC., WITH LIGHTING FIXTURES, SPECIAL CEILING CONSTRUCTION, AIR DISTRIBUTION EQUIPMENT, AND THE STRUCTURE. PROVIDE ADDITIONAL RISES AND OFFSETS AS REQUIRED. IF, AFTER INSTALLED, NEW DUCTWORK, PIPING, CONDUIT, CABLE, ETC., IS FOUND TO BE IN CONFLICT WITH THE ARCHITECTURE, STRUCTURE OR OTHER TRADE WORK, WHICH IS EITHER EXISTING OR SHOWN ON THE CONTRACT DOCUMENTS, THE DUCTWORK, PIPING, CONDUIT, CABLE, ETC., SHALL BE RELOCATED WITHOUT ADDITIONAL COST TO THE OWNER/TENANT. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
12. MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD CONDITION. THE COMMERCIALLY STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES INDICATED ARE INTENDED TO IDENTIFY STANDARDS OF QUALITY AND PERFORMANCE NECESSARY FOR THE PROPER FUNCTIONING OF THE WORK. MATERIALS AND EQUIPMENT WHICH ARE FOUND TO HAVE FACTORY DEFECTS SHALL BE REPLACED OR REPAIRED IN A MANNER ACCEPTABLE TO THE OWNER/TENANT AND ENGINEER AT NO ADDITIONAL COST TO THE OWNER/TENANT.
13. DAMAGE CAUSED DURING CONSTRUCTION TO EXISTING MATERIALS/EQUIPMENT WILL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO OWNER. RE-SUPPORT ANY REMAINING PIPING OR DEVICES THAT WERE SUPPORTED BY WALLS BEING REMOVED.
14. THE WARRANTY PERIOD SHALL BE NO LESS THAN ONE (1) FULL YEAR, UNLESS SPECIFIED OTHERWISE AND SHALL INCLUDE AT LEAST ONE (1) FULL HEATING SEASON AND ONE (1) FULL COOLING SEASON. DURING THE WARRANTY PERIOD THE CONTRACTOR SHALL GUARANTEE THE FOLLOWING IN A FORM SATISFACTORY TO THE OWNER/TENANT:

    A. ALL WORK INSTALLED SHALL BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS.
    B. ALL APPARATUS WILL DEVELOP CAPACITIES AND PERFORMANCE CHARACTERISTICS SPECIFIED.
    C. THE SYSTEMS SHALL OPERATE WITHOUT MALFUNCTION.
15. THE START OF THE CONTRACTOR'S WARRANTY PERIOD SHALL COMMENCE ON THE DATE OF "SUBSTANTIAL COMPLETION" AS AGREED TO BY THE OWNER/TENANT.
16. THIS BUILDING MAY HAVE A STRUCTURAL SYSTEM UTILIZING POST-TENSIONED CABLES. THE CONTRACTOR SHALL DETERMINE THE EXISTING STRUCTURAL SYSTEM PRIOR TO CUTTING, DRILLING, OR CORING. THE CONTRACTOR SHALL X-RAY ALL PENETRATIONS PRIOR TO CUTTING THE FLOOR SLAB.
17. THIS CONTRACTOR SHALL SECURE ALL PERMITS, LICENSES AND INSPECTIONS REQUIRED FOR HIS WORK, AND SHALL PAY ALL FEES IN CONNECTION WITH SUCH PERMITS, LICENSES AND INSPECTIONS.
18. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL PROVIDE PRICING REFLECTING THE GREATEST COST. THE CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
19. PENETRATIONS THROUGH FLOORS OR FIRE-RATED CONSTRUCTION SHALL BE FIRE RATED TO COMPLY WITH ASTM E-814 (UL 1479), AND THE LOCAL AUTHORITY HAVING JURISDICTION.
20. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, A COMPLETE SET OF "AS BUILT" DRAWINGS PORTRAYING ACTUAL SITE CONDITIONS OF THE MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION WORK. SUBMISSION SHALL CONSIST OF ONE SET OF PAPER COPIES AND ONE SET OF CAD FILES IN AUTOCAD (CONTRACTOR SHALL UTILIZE OWNER'S LAYER STANDARDS IF EXISTING).
21. IN THE EVENT THAT MATERIALS, PRODUCTS, AND/OR PROCESSES BEING PROPOSED FOR THIS PROJECT CONTAIN, OR MAY EMIT, ANY VOLATILE ORGANIC COMPOUNDS (VOC), FORMALDEHYDE FORMULATIONS, OR HAZARDOUS OUT-GASSING, AS DETERMINED BY THE MANUFACTURER, A MATERIALS SAFETY DATA SHEET SHALL BE SUBMITTED AS PART OF THE SHOP DRAWING PROCESS FOR REVIEW BY THE ARCHITECT/ENGINEER/OWNER.
22. VERIFY LOCATIONS OF EXISTING VALVES LOCATED WITHIN SCOPE OF WORK. MODIFY EXISTING OR PROVIDE NEW MEANS OF ACCESS WHERE REQUIRED BECAUSE OF NEW CONSTRUCTION.
23. PLUMBING EQUIPMENT SHALL BE IDENTIFIED BY MEANS OF NAMEPLATES PERMANENTLY ATTACHED TO THE EQUIPMENT. NAMEPLATES SHALL BE BLACK SURFACE, WHITE CORE LAMINATED WITH ENGRAVED LETTERS. PLATES SHALL BE A MINIMUM OF 3" LONG BY 1" WIDE WITH WHITE LETTERS 1/4" HIGH.
24. THE CONTRACTOR SHALL TAKE NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND INDICATE THE APPROXIMATE LOCATIONS OF THE HVAC AND PLUMBING SYSTEMS. LOCATE ALL ITEMS IN THE FIELD. COORDINATE WITH OTHER TRADES TO ENSURE PROPER FIT AND ACCESS TO ALL ITEMS.
25. AFTER COMPLETION OF INSTALLATION, BUT PRIOR TO SUBSTANTIAL COMPLETION, CONTRACTOR SHALL CERTIFY IN WRITING THAT PRODUCTS AND MATERIALS INSTALLED AND PROCESSES USED DO NOT CONTAIN ASBESTOS OR POLYCHLORINATED BIPHENYL (PCB).
26. THE CONTRACTOR SHALL PROTECT THE WORK, EQUIPMENT, AND MATERIALS FROM DAMAGE BY HIS WORK OR HIS PERSONNEL, AND SHALL CORRECT ALL DAMAGE THUS CAUSED WITHOUT ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS, AND EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE OWNER. PROTECT ALL WORK AGAINST THEFT, INJURY, OR DAMAGE AND CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE WHICH IS NOT IMMEDIATELY INSTALLED. THE CONTRACTOR SHALL CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS OR PLUGS DURING CONSTRUCTION TO PREVENT THE ENTRY OF DUST, DIRT, AND OBSTRUCTING MATERIAL. THE CONTRACTOR SHALL PROTECT ALL EQUIPMENT AND MATERIALS FROM DAMAGE DUE TO WATER, SPRAY-ON FIREPROOFING, CONSTRUCTION DEBRIS, ETC. IN A MANNER ACCEPTABLE TO THE ENGINEER AND/OR OWNER.

PLUMBING GENERAL NOTES

1. REFER TO THE ARCHITECTURAL PLANS AND DETAILS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES.
2. REFER TO THE ARCHITECTURAL PLANS AND DETAILS FOR EXACT LOCATIONS OF ALL FLOOR DRAINS.
3. ALL SANITARY AND VENT PIPING SHALL BE ROUTED AT A SLOPE OF NOT LESS THAN 1/4" PER FOOT, UNLESS OTHERWISE NOTED.
4. THE PLUMBING CONTRACTOR SHALL COORDINATE EXACT ROUTING OF ALL PIPING WITH THE WORK OF ALL OTHER TRADES. PROVIDE OFFSETS IN PIPING WHERE REQUIRED BY COORDINATION OF TRADES.
5. INSTALL ALL FLOOR DRAINS AND FLOOR SINKS SUCH THAT GRATING IS FLUSH WITH ADJACENT FLOORING SURFACE. FLOOR SHALL SLOPE TO DRAIN. COORDINATE ALL REQUIREMENTS WITH ARCHITECT AND GENERAL CONTRACTOR PRIOR TO INSTALLATION.
6. THE PLUMBING CONTRACTOR SHALL CLEAN, FLUSH, AND DISINFECT ALL COLD WATER AND HOT WATER PIPING AND ALL FIXTURES PRIOR TO COMPLETION OF WORK.
7. VENTS THROUGH ROOF TO BE LOCATED A MINIMUM OF 15'-0" HORIZONTALLY AWAY FROM OUTSIDE AIR INTAKES.
8. FLOOR DRAINS NOT RECEIVING REGULAR-USE DRAINAGE ARE TO BE TRAP PRIMED.
9. PROVIDE BACKFLOW PREVENTION AS REQUIRED BY THE LOCAL CROSS CONNECTION CONTROL DEPT. STANDARDS WHERE NOT PROVIDED OR INADEQUATELY PROVIDED BY EQUIPMENT MANUFACTURER.
10. INSTALL PIPING AS HIGH AS POSSIBLE UNLESS OTHERWISE NOTED.
11. VERIFY DIMENSIONS FROM ARCHITECTURAL DRAWINGS AND FROM ACTUAL MEASUREMENTS AT JOBSITE.
12. PROVIDE SADDLES AND SHIELDS FOR SUPPORT OF INSULATED PIPING TO PREVENT CRUSHING.
13. PIPING PENETRATIONS THROUGH PERIMETER BEAMS, FOUNDATION ON GRADE, AND STRUCTURAL FLOORS SHALL BE SLEEVED. COORDINATE SLEEVE LOCATIONS AND SIZES WITH STRUCTURAL PRIOR TO POUR.
14. PROVIDE DIELECTRIC UNIONS AT DISSIMILAR MATERIALS.
15. PROVIDE ESCUTCHEONS AT ALL FINISHED WALL AND CEILING PIPING PENETRATIONS.
16. ALL PIPING SHALL BE IDENTIFIED AS TO TYPE OF USE, SERVICE, AND DIRECTION OF FLOW. LOCATE MARKERS AT EACH VALVE, AT ENTRIES TO WALLS, AND ON 20' CENTERS ON STRAIGHT RUNS OF PIPE. PROVIDE A FLOW ARROW AT EACH IDENTIFICATION MARKER. PIPE MARKERS SHALL BE SETON "SETMARK" OR EQUAL.
17. COORDINATE WORK COMPLETELY WITH ALL OTHER TRADES.
18. INSTALL PIPING FREE OF SAGS AND BENDS. PROVIDE NON-METALLIC COATED HANGERS WHERE IN DIRECT CONTACT WITH COPPER PIPING.
19. PROVIDE ENGINEERED WATER HAMMER ARRESTERS SIZED AND PLACED IN ACCORDANCE WITH STANDARD PDI-WH 201. AIR CHAMBERS SHALL NOT BE ALLOWED.
20. PROVIDE FLEXIBLE EXPANSION FITTINGS SUITABLE FOR SANITARY (DWV) AND RAINWATER PIPING WHERE PIPING ENTERS EXPANSIVE SOILS TO ALLOW FOR 4" OF DIFFERENTIAL MOVEMENT.
21. ALL FLOOR PENETRATIONS MUST BE SEALED WITH FIRE CAULK.
22. MAKE ALL NECESSARY EXCAVATIONS, CUTTING OF PAVING, CONCRETE, ETC., REMOVAL OF UNUSABLE SPOIL MATERIAL, ALL BACKFILLING WITH STABILIZED FILL, AND PERFORM TEMPORARY PATCH PAVING REPAIRS NECESSARY FOR PROPER EXECUTION OF THE WORK. BACKFILL SHALL BE MECHANICALLY COMPACTED TO A DENSITY OF 95% OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST.
23. PROVIDE MINIMUM 1" AIR GAP AT DRAIN DISCHARGE FOR ALL INDIRECT WASTE PIPING.
24. DISCHARGE PIPING FROM A DISHWASHER SHALL BE LOOPED UP AND SECURELY FASTENED TO THE UNDERSIDE OF THE COUNTER OR AN APPROVED DISHWASHER AIR-GAP FITTING IS REQUIRED.
25. COMPRESSION TANKS SUPPLIED AT EACH WATER HEATER SHALL BE SECURED TO A WALL WITH (2) 1" x 14 GA. GALVANIZED STRAPS. PROVIDE LAG BOLTS AND BLOCKING AS REQUIRED.
26. AN ATMOSPHERIC VACUUM BREAKER OR OTHER APPROVED BACKFLOW PREVENTION DEVICE MUST BE INSTALLED ON ALL THREADED HOSE BIBB, WALL HYDRANT, OR FAUCET CONNECTIONS LOCATED INSIDE OR OUTSIDE THE BUILDING.

2015 IECC ENERGY CODE COMPLIANCE

REQUIREMENTS SPECIFIC TO WATER HEATING:

1. HEAT TRAPS SHALL BE PROVIDED ON NONCIRCULATING WATER HEATING SYSTEMS ON BOTH INLET AND OUTLET CONNECTIONS. HEAT TRAPS MAY BE PRE-FABRICATED OR FIELD-FABRICATED BY CREATING A LOOP OR INVERTED U-SHAPED ARRANGEMENT ON THE INLET AND OUTLET PIPES. REFER TO WATER HEATER DETAIL.
2. PIPE INSULATION FOR THE SPECIFIED NONCIRCULATING SERVICE HOT WATER SYSTEM IS REQUIRED FOR ALL PIPING IN THE FOLLOWING CATEGORIES:
    a) THE FIRST 8' OF OUTLET PIPING FROM ANY CONSTANT-TEMPERATURE, NONCIRCULATING STORAGE SYSTEM.
    b) THE INLET PIPING BETWEEN THE STORAGE TANK AND A HEAT TRAP IN A NONCIRCULATING STORAGE SYSTEM.
3. INSULATION SHALL COMPLY WITH PIPE INSULATION SPECIFICATIONS AS INDICATED ON THIS DRAWING PER TABLE C403.2.10 MINIMUM PIPE INSULATION THICKNESS.

GENERIC PLUMBING REQUIREMENTS:

1. SERVICE WATER HEATING EQUIPMENT SHALL MEET MINIMUM FEDERAL EFFICIENCY REQUIREMENTS INCLUDED IN THE NATIONAL APPLIANCE ENERGY CONSERVATION ACT AND THE ENERGY POLICY ACT OF 1992, WHICH MEET OR EXCEED 2015 IECC AND ASHRAE 90.1 FOR ENERGY EFFICIENCY AND STANDBY LOSS.
2. WATER-HEATING EQUIPMENT SHALL BE PROVIDED WITH CONTROLS THAT ALLOW THE USER TO SET THE WATER TEMPERATURE TO 140°F.

PLUMBING PIPING & MATERIALS

DOMESTIC WATER PIPING

ABOVE GRADE:
ASTM B88, TYPE L HARD DRAWN COPPER TUBING, WITH SOLDERED JOINTS,
ASME B16.22, WROUGHT COPPER AND BRONZE FITTINGS,
OR PRESSURE SEALED FITTINGS AND JOINTS COMPLYING WITH ASTM B584

BELOW GRADE:
ASTM D1785, SCHEDULE 80 PVC, WITH SOLVENT WELDS.

TO CARBONATORS:
ASTM A312, TYPE 304 SCHEDULE 40 STAINLESS STEEL, WITH
THREADED FITTINGS.

VENT PIPING ABOVE CEILINGS:

ALL VENT PIPING ABOVE CEILINGS SHALL BE SERVICE WEIGHT, NO-HUB CAST IRON PIPE AND DRAINAGE FITTINGS WITH HEAVY DUTY COUPLINGS.

WHEN CEILING CAVITY IS A RETURN AIR PLENUM, PROVIDE TRANSITION TO PVC WASTE AND VENT PIPING AS REQUIRED, PRIOR TO ENTERING PLENUM (IF APPLICABLE). PVC SHALL NOT BE EXPOSED IN A RETURN AIR PLENUM.

WASTE & VENT PIPING

ABOVE GRADE:
ASTM A74, HUBLESS CAST IRON, WITH CISPI 301 SPIGOT BEAD ENDS FOR COUPLING ASSEMBLY,
ASTM D2665, SCHEDULE 40 PVC JOINED WITH SOLVENT WELDS.

BELOW GRADE:
ASTM A74, CAST IRON, HUB AND SPIGOT TYPE, JOINED WITH ASTM C564 NEOPRENE COMPRESSION GASKETS.
ASTM D2665, SCHEDULE 40 PVC JOINED WITH SOLVENT WELDS.

SOFTDRING TUBING CONDUIT:

BELOW GRADE:
ASTM D2665, SCHEDULE 40 PVC JOINED WITH SOLVENT WELDS. PROVIDE LONG RADIUS FITTINGS AND PULL STRING.

DOMESTIC WATER VALVES:

DOMESTIC WATER: BALL VALVES, 2" AND SMALLER, ASTM B 584, BRONZE BODY AND BONNET, 2-PIECE CONSTRUCTION, CHROME-PLATED BRASS BALL, FULL PORT, BLOWOUT PROOF, BRASS OR BRONZE STEM, TEFLON SEAT AND SEALS, STEM EXTENSION FOR VALVES INSTALLED IN INSULATED PIPING, AND THREADED ENDS.

SHEET LIST

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(512) 342-9177
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STATE OF TEXAS
BRIAN D. HOCKMAN
108645
LICENSED
PROFESSIONAL ENGINEER
08/26/2025

127 E JACKSON ST. BURNET TX 78611

BURNET COUNTY ANNEX

#	DATE	ISSUE

CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20021

Project Number: 33-1408

PLUMBING COVER SHEET

P001

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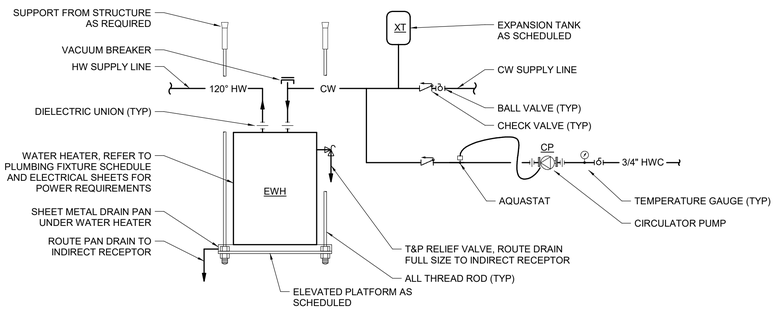
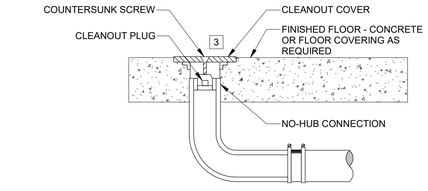
08/26/2025

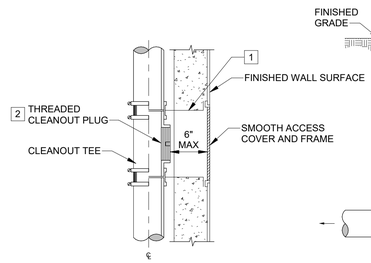


D P002 WATER HEATER DETAIL

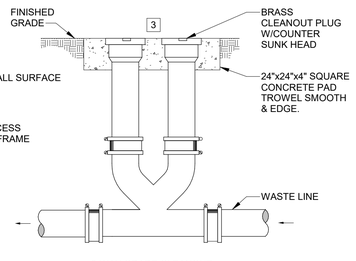
NOT TO SCALE



INTERIOR FLOOR CLEANOUT



WALL CLEANOUT NO-HUB WITH ACCESS COVER



2-WAY GRADE CLEANOUT

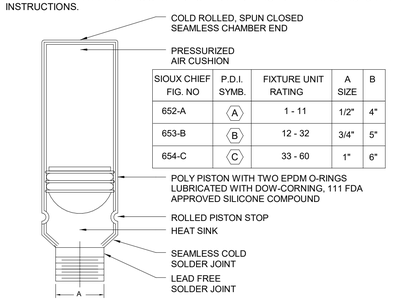
NOTES:

1. WHERE WCO OCCURS IS SOLID CONCRETE OR GROUTED CMU WALL, USE SLEEVE BETWEEN PIPE AND COVER PLATE TO KEEP ACCESS TO PLUG OPEN.
2. USE EXTENSIONS BETWEEN TEE AND ACCESS COVER AS NEEDED.
3. WHERE A CLEANOUT SHALL BE CLEARLY IDENTIFIED WITH A LABEL STATING "BACKWATER VALVE DOWNSTREAM"

A P002 CLEANOUT DETAIL

NOT TO SCALE

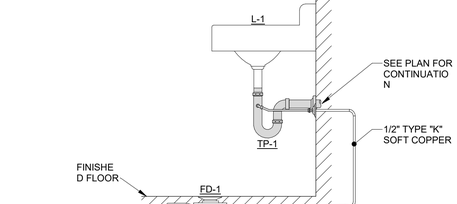
NOTE:
WATER HAMMER ARRESTOR BY SIOUX CHIEF 650 - 660 SERIES HYDRA-RESTER. REQUIRED IN PIPING SYSTEMS. WATER HAMMER ARRESTERS SHALL HAVE SUFFICIENT VOLUME OF AIR TO DISSIPATE THE CALCULATED KINETIC ENERGY GENERATED IN THE PIPING SYSTEM. ARRESTERS SHALL BE EFFECTIVE WHEN INSTALLED AT ANY ANGLE. ARRESTERS SHALL BE APPROVED FOR INSTALLATION WITH NO ACCESS PANEL REQUIRED. WATER HAMMER ARRESTERS SHALL BE SIZED AND PLACED PER MANUFACTURER'S INSTRUCTIONS.



SIOUX CHIEF FIG. NO	P.D.I. SYMB.	FIXTURE UNIT RATING	A SIZE	B
652-A	A	1 - 11	1/2"	4"
653-B	B	12 - 32	3/4"	5"
654-C	C	33 - 60	1"	6"

H P002 Sioux Chief WHA

NOT TO SCALE



E P002 Lavatory TMV

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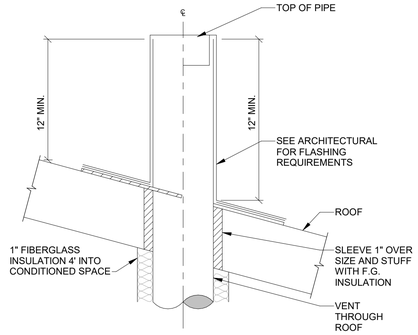

F P002 VENT THROUGH ROOF DETAIL 2

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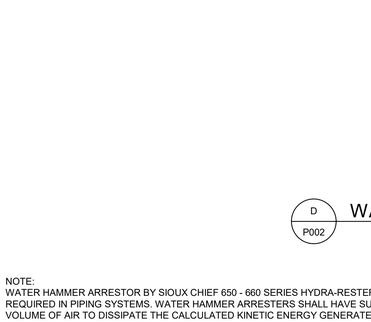


NOTES:

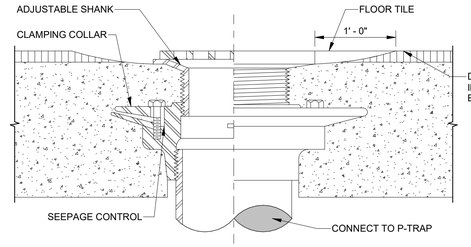
1. MEGA-LUG THRUST RESTRAINT SYSTEM UNDER BUILDING SLAB.
2. SLEEVE AND SEAL WATER TIGHT THRU FLOOR.
3. 1" BALL VALVE WITH 3/4" MALE HOSE THREAD.
4. 3 1/2"Ø PRESSURE GAUGE READS 0-100 PSI.

I P002 WATER ENTERANCE DETAIL

NOT TO SCALE

G P002 TRAP PRIMER DETAIL

NOT TO SCALE



B P002 FLOOR DRAIN DETAIL

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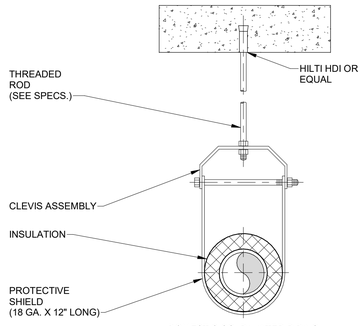

DOMESTIC COLD WATER PIPING

MAXIMUM PIPE/TUBING SUPPORT SPACING, FEET										
NOM. SIZE	THRU 3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"
COPPER	5	6	7	8	8	9	10	12	14	16

C P002 PIPE HANGER DETAIL

NOT TO SCALE

CAPITAL CONSULTING ENGINEERS
CAPCONSULTINGENG.COM TX FIRM # 20531

BURNET COUNTY ANNEX

127 E JACKSON ST. BURNET TX 78611

#	DATE	ISSUE

Project Number: 33-1408

PLUMBING DETAILS

P002

Autodesk Docs://33-1408 Burnet County Annex/Burnet County_M&P_R22.rvt

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER - MODEL	TRIM & ACCESSORIES	CONNECTIONS (INCHES)				DESCRIPTION AND NOTES
				HW	CW	W	V	
CP-1	CIRCULATION PUMP	TACO #003B	PROVIDE WITH TACO #265-3 DIGITAL TIMER AND AQUASTAT FOR PUMP CONTROL	3/4	-	-	-	1/40 HP, 120/1/60, 0.5 GPM @ 4 FT HEAD, BRONZE CONSTRUCTION. COORDINATE OPERATING TIMES WITH OWNER
EWH-1	ELECTRIC WATER HEATER	A.O. SMITH DEL-10S-2.5	CONTAINMENT PAN W/ DRAIN, WALL MOUNT (HOLDRITE 30-SWHP-WM OR EQUAL), CP-1 AND XT-1 AS SCHEDULED	3/4	3/4	-	-	10 GALLON ELECTRIC STORAGE WATER HEATER, 2.5 KW, 10 GPH AT 100 DEG F RISE, T&P RELIEF ASSEMBLY, SET AT 120 DEG F DISCHARGE, PROVIDE XT-1 EXPANSION TANK, 208V1PH, 25 FLA
FCO	FLOOR CLEANOUT	JAY R. SMITH #4020	FLANGE W/ FLASHING CLAMP	-	-	-	-	CAST IRON BODY, ABS CLEANOUT PLUG WITH GASKET, NICKEL BRONZE COVER, ADJUSTABLE HOUSING FOR FLUSH INSTALLATION, REFER TO PLANS FOR PIPE SIZE
L-1	LAVATORY (ADA)	KOHLER SOHO #K-2053-N	FAUCET: KOHLER #K-23484-4N-CP, TRAP, S.S. BRAIDED HOSES, 1/4 TURN ANGLE STOPS, WALL ESCUTCHEONS, TRUEBRO PIPE GUARDS	1/2	1/2	2	2	WHITE VITREOUS CHINA WALL MOUNT SINK, 0.5 GPM THREEE HOLE COUNTER MOUNT FAUCET IN CHROME, BASKET STRAINER, CHROME TAILPIECE AND P-TRAP. ADA COMPLIANT
MS-1	MOP SINK	FIAT #MSB2424	FAUCET: FIAT #830-AA, MOP HANGER	1/2	1/2	3	2	24"x24"x12" MOLDED STONE MOP SINK, CHROME PLATED SERVICE FAUCET WITH VACUUM BREAKER, WALL BRACE, PAIL HOOK, AND HOSE THREAD
SA-1	SHOCK ARRESTOR	SIOUX CHIEF HYDRARESTER 650 SERIES	-	-	*	-	-	FACTORY PRECHARGED WATER HAMMER ARRESTOR, *REFER TO MANUFACTURER LITERATURE FOR SIZING CRITERIA AND MODEL SELECTION
SK-1	BREAK ROOM SINK	ELKAY LUSTERTONE #LRAD221965	FAUCET: KOHLER #K-7505-CP, TRAP, S.S. BRAIDED HOSES, 1/4 TURN ANGLE STOPS, WALL ESCUTCHEONS	1/2	1/2	2	2	18 GA STAINLESS STEEL SINGLE BOWL COUNTERMOUNT SINK, 6" DEEP, 1.5 GPM SINGLE HOLE COUNTER MOUNT FAUCET IN CHROME, BASKET STRAINER, CHROME TAILPIECE AND P-TRAP.
SP-1	ELEVATOR SUMP PUMP	BELL & GOSSETT #ELKT2EC0311L	HIGH WATER FLOAT ALARM SWITCH	-	-	2	-	AUTOMATIC OPERATION ELEVATOR SUMP PUMP, 1/3 HP, 120V/1PH, 50 GPM AT 17 FT HEAD. PROVIDE HIGH ALARM FLOAT. COORDINATE INSTALLATION OF ALARM PANEL WITH ARCH.
TMV-1	TEMPERATURE MIXING VALVE	WATTS #LFUSG-B	-	1/2	1/2	-	-	THERMOSTATIC MIXING VALVE, LEAD FREE BRASS BODY, 0.35 GPM, INTEGRAL CHECK VALVES, SET AT 110°F OUTLET TEMPERATURE, INSTALL AT ALL LAV-1 FIXTURES
TP-1	TRAP PRIMER	PRECISION PLUMBING PRODUCTS #LTP-1500	-	-	1/2	-	-	BRASS CONSTRUCTION, FULLY AUTOMATIC TRAP PRIMER. PROVIDE WITH SHUTOFF VALVE FOR MAINTENANCE.
WCO	WALL CLEANOUT	JAY R. SMITH #4402C	-	-	-	-	-	STAINLESS STEEL COVER, REFER TO PLANS FOR SIZE
WB-1	REFRIGERATOR WALL BOX	IPS WATER TITE	-	-	1/2	-	-	WALL BOX WITH 1/4 TURN ANGLE STOP, WALL FLANGE, AND INTEGRAL WATER HAMMER ARRESTOR
WC-1	WATER CLOSET (ADA)	KOHLER KINGSTON #K-25087	-	-	1/2	4	2	VITREOUS CHINA, TWO PIECE FLOOR MOUNTED WITH ELONGATED BOWL, GRAVITY SIPHON JET, 1.28 GPF, MATCHING SEAT WITH STAINLESS STEEL POSTS, ADA COMPLIANT HEIGHT
WH-1	WALL HYDRANT	WOODFORD #B65	-	-	3/4	-	-	ANTI-SIPHON FREEZELESS WALL HYDRANT, CHROME WITH ANTI-SIPHON VACUUM BREAKER HOSE THREAD, STAINLESS STEEL STEM WITH KEY OPERATOR, CONCEALED RECTANGULAR BOX
XT-1	EXPANSION TANK	AMTROL #ST-5-C	-	-	3/4	-	-	2 GALLON EXPANSION TANK, 0.45 ACCEPTANCE FACTOR, CERTIFIED FOR POTABLE WATER USAGE

WATER CALCULATIONS (2015 IPC) - SERVICE SIZE

1

		PSI
	AVAILABLE WATER PRESSURE	60.0
	PRESSURE LOSS AT METER	15.0
	MIN. PRESSURE REQUIRED (FLUSH TANK)	8.0
ELEVATION OF HIGHEST FIXTURE (FEET) 14		
	STATIC PRESSURE LOSS (ELEV)	6.0
	TOTAL AVAILABLE PRESSURE	31.0
	DISTANCE TO LAST FIXTURE (IN FT.)	60
	TOTAL DEVELOPED LENGTH (IN FT.)	72
	PEAK FLOW (IN GPM)	24
	ALLOWABLE FRICTION LOSS/100 FT	43.0

FIXTURE	QTY	WSFU EA.	TOTAL WSFU
WATER CLOSET (FLUSH TANK)	4.0	5.00	20.0
LAVATORY	4.0	1.50	6.0
BREAK SINK	2.0	2.00	4.0
MOP SINK	1.0	3.00	3.0
TOTAL WSFU			33.0
EQUIVALENT GPM			24.3

METER SIZE: **3/4"**
BUILDING SUPPLY SIZE: **1"**

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BURNET COUNTY ANNEX

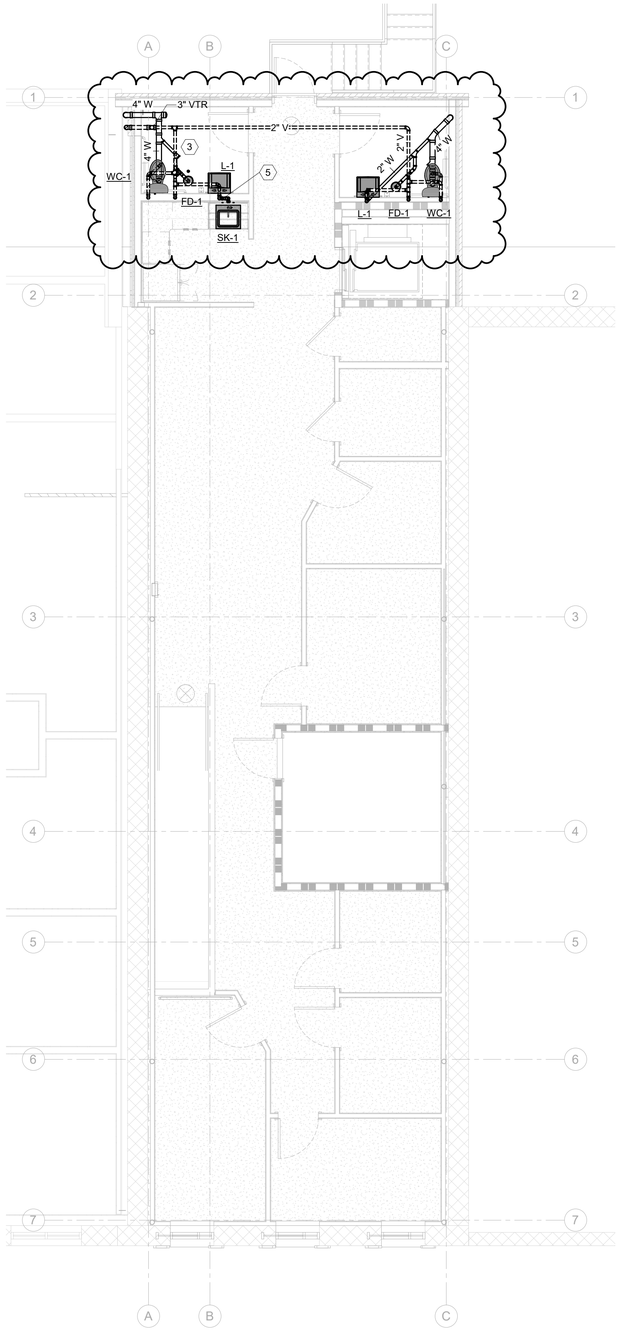
#	DATE	ISSUE
2	08/21/2025	Addendum 1

Project Number: 33-1408

PLUMBING SCHEDULES

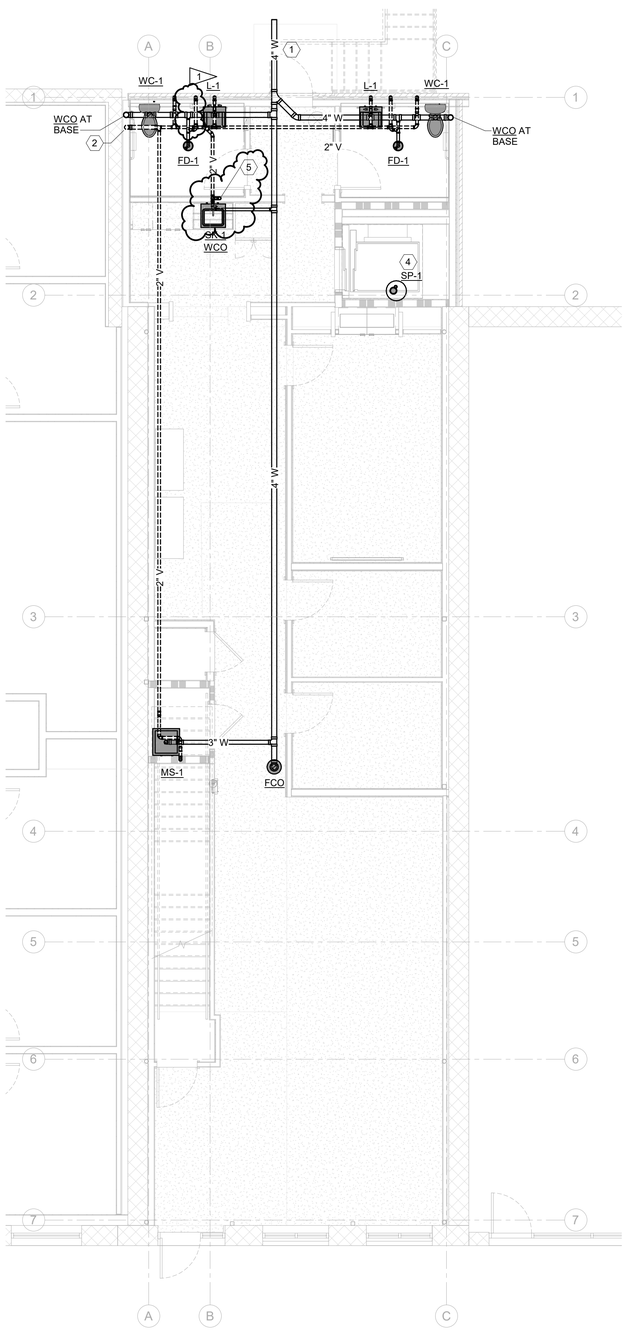
P003

Autodesk Docs://33-1408 Burnet County Annex/Burnet County_M&P_RV22.rvt



2 PLUMBING DWV PLAN-SECOND FLOOR

P101 — 3/16" = 1'-0"



1 PLUMBING DWV PLAN-FIRST FLOOR

P101 — 3/16" = 1'-0"

GENERAL NOTES

A. REFER TO PLUMBING COVER SHEET DRAWING FOR SYMBOLS, ABBREVIATIONS, SPECIFICATIONS, AND ADDITIONAL INFORMATION.

B. DUE TO DRAWING SCALE IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED.

C. THE CONTRACTOR SHALL EXAMINE FIELD CONDITIONS AND FURNISH THE NECESSARY FITTINGS WHICH MAY BE REQUIRED TO COMPLETE THE INSTALLATION.

D. FINAL LOCATION OF ALL NEW EQUIPMENT PRIOR TO EQUIPMENT INSTALLATION SHALL BE APPROVED BY BUILDING OWNER OR PROJECT MECHANICAL ENGINEER.

E. MAINTAIN CODE REQUIRED AND MANUFACTURER'S RECOMMENDED CLEARANCES FOR ALL NEW EQUIPMENT.

F. PLUMBING CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS IN THE FIELD. ROUTE NEW SANITARY WASTE AND DOMESTIC WATER PIPING TO EXISTING.

(#) SHEET WORK NOTES

1. 4" SANITARY WASTE TO SITE. CONNECT TO EXISTING SANITARY WASTE MAIN IN ALLEY. CONTRACTOR SHALL VERIFY IN THE FIELD THE EXACT LOCATION AND DEPTH OF LINE PRIOR TO INSTALLATION OF NEW PLUMBING. CONFIRM ADEQUATE DEPTH AND PIPE SIZE.
2. 3" VENT UP TO LEVEL 2.
3. 3" VENT TO ROOF. COORDINATE WITH ROOFING CONTRACTOR FOR FINAL TERMINATION AND FLASHING.
4. PROVIDE AND INSTALL SUMP PUMP IN ELEVATOR PIT. ROUTE 2" SUMP PUMP DISCHARGE PIPING TO APPROVED DISCHARGE LOCATION. COORDINATE ROUTING OF PIPING WITH ARCHITECTURAL AND IN THE FIELD.
5. 2" SANITARY WASTE FROM LAVATORY AND BREAK SINK ON LVL 2 DOWN IN WALL. CONNECT TO 2" SANITARY WASTE PIPING FOR BREAK SINK ON LVL 1.

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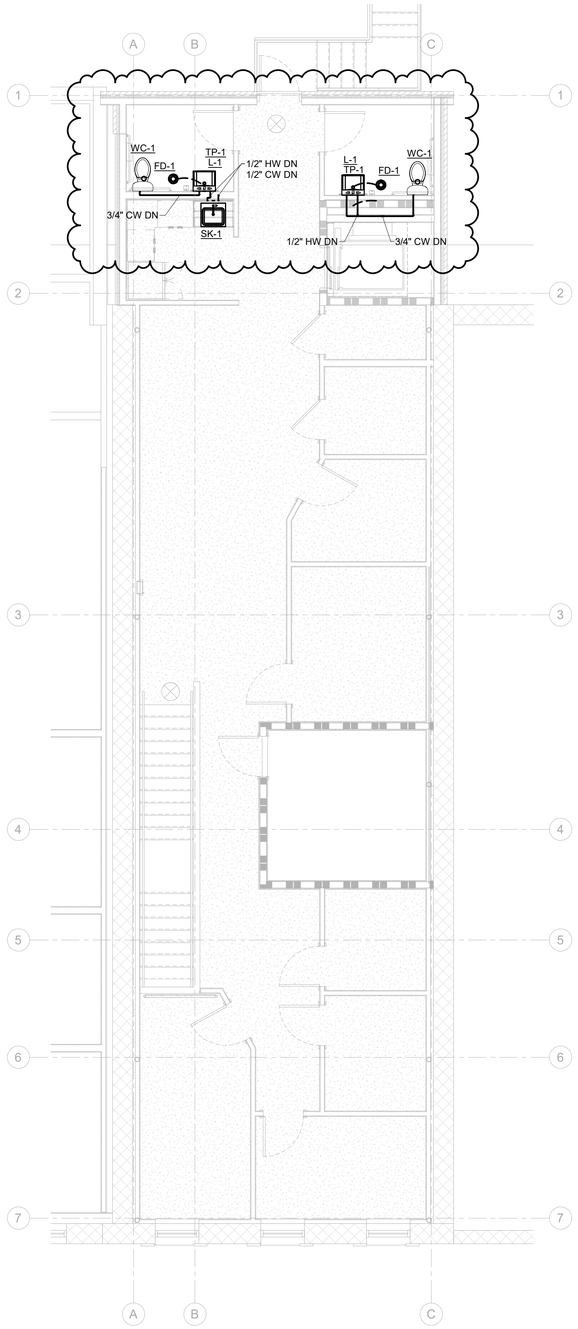
PROJECT NORTH

TRUE NORTH

Project Number: 33-1408

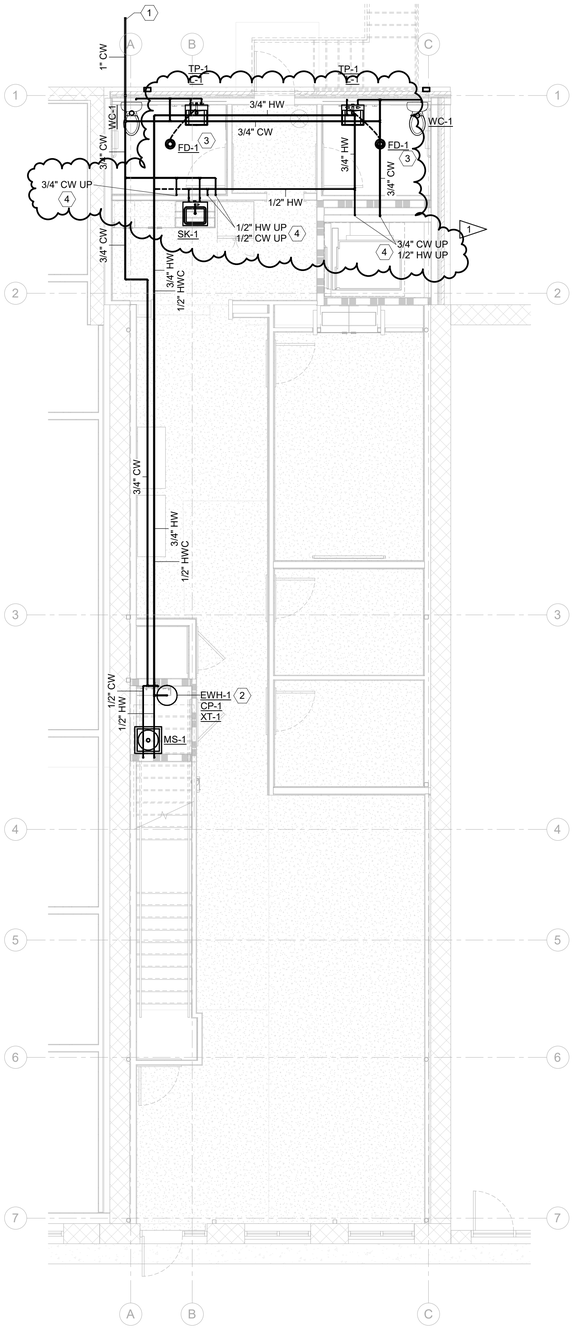
PLUMBING DWV PLANS

P101



2 P201 PLUMBING DOMESTIC W&G PLAN-SECOND FLOOR

3/16" = 1'-0"



1 P201 PLUMBING DOMESTIC W&G PLAN-FIRST FLOOR

3/16" = 1'-0"

GENERAL NOTES

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C. THE CONTRACTOR SHALL EXAMINE FIELD CONDITIONS AND FURNISH THE NECESSARY FITTINGS WHICH MAY BE REQUIRED TO COMPLETE THE INSTALLATION.

D. FINAL LOCATION OF ALL NEW EQUIPMENT PRIOR TO EQUIPMENT INSTALLATION SHALL BE APPROVED BY BUILDING OWNER OR PROJECT MECHANICAL ENGINEER.

E. MAINTAIN CODE REQUIRED AND MANUFACTURER'S RECOMMENDED CLEARANCES FOR ALL NEW EQUIPMENT.

F. PLUMBING CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS IN THE FIELD. ROUTE NEW SANITARY WASTE AND DOMESTIC WATER PIPING TO EXISTING.

(#) SHEET WORK NOTES

1. PLUMBING CONTRACTOR SHALL COORDINATE WITH WATER UTILITY PROVIDER TO RELOCATE EXISTING WATER METER TO NEW LOCATION OUTSIDE OF NEW BUILDING FOOTPRINT. PROVIDE AND INSTALL METER AND 1" LINE SIZE AS REQUIRED PER WATER CALCULATION ON SHEET P003.
2. WATER HEATER MOUNTED TIGHT TO STRUCTURE ABOVE CUSTODIAN CLOSET DOOR. COORDINATE WITH GENERAL CONTRACTOR FOR INSTALLTION OF WALL SUPPORT.
3. ROUTE 1/2" TRAP PRIMER LINE FROM LAVATORY SINK TAILPIECE, BELOW SLAB, TO FLOOR DRAIN TRAP PRIMER CONNECTION.
4. COLD WATER AND HW UP TO LEVEL 2 BATHROOMS. COORDINATE EXACT ROUTING IN THE FIELD.

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PLUMBING DOMESTIC WATER PLANS

P201

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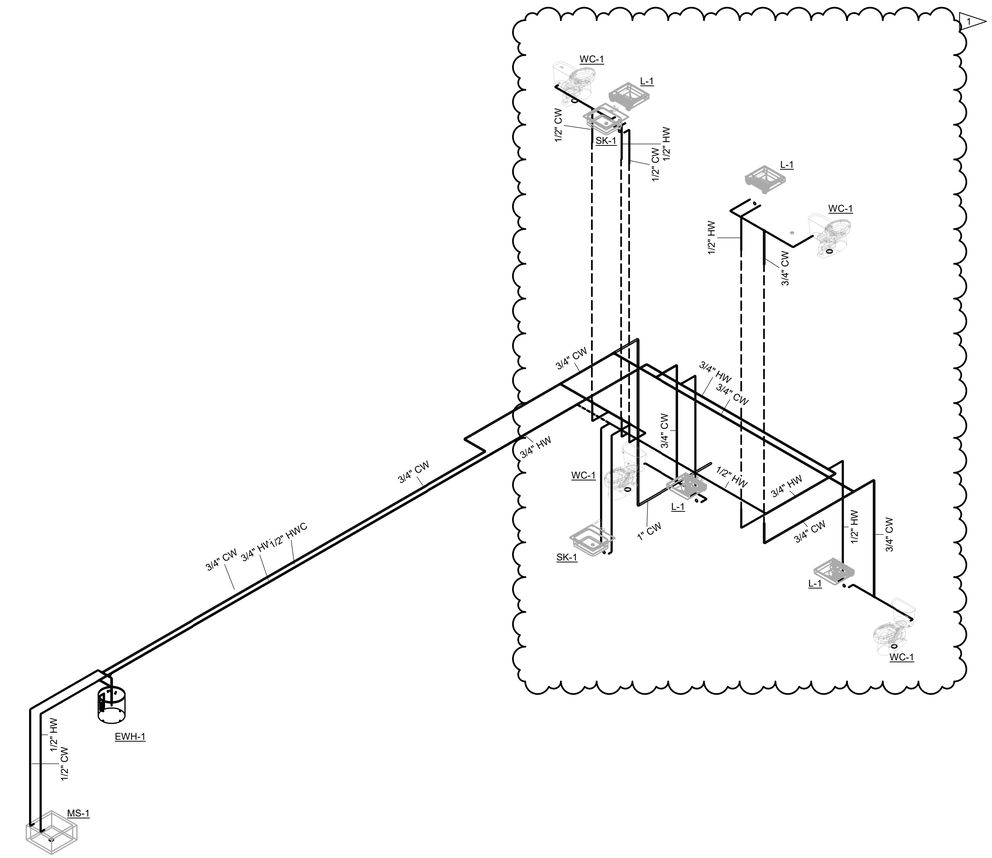
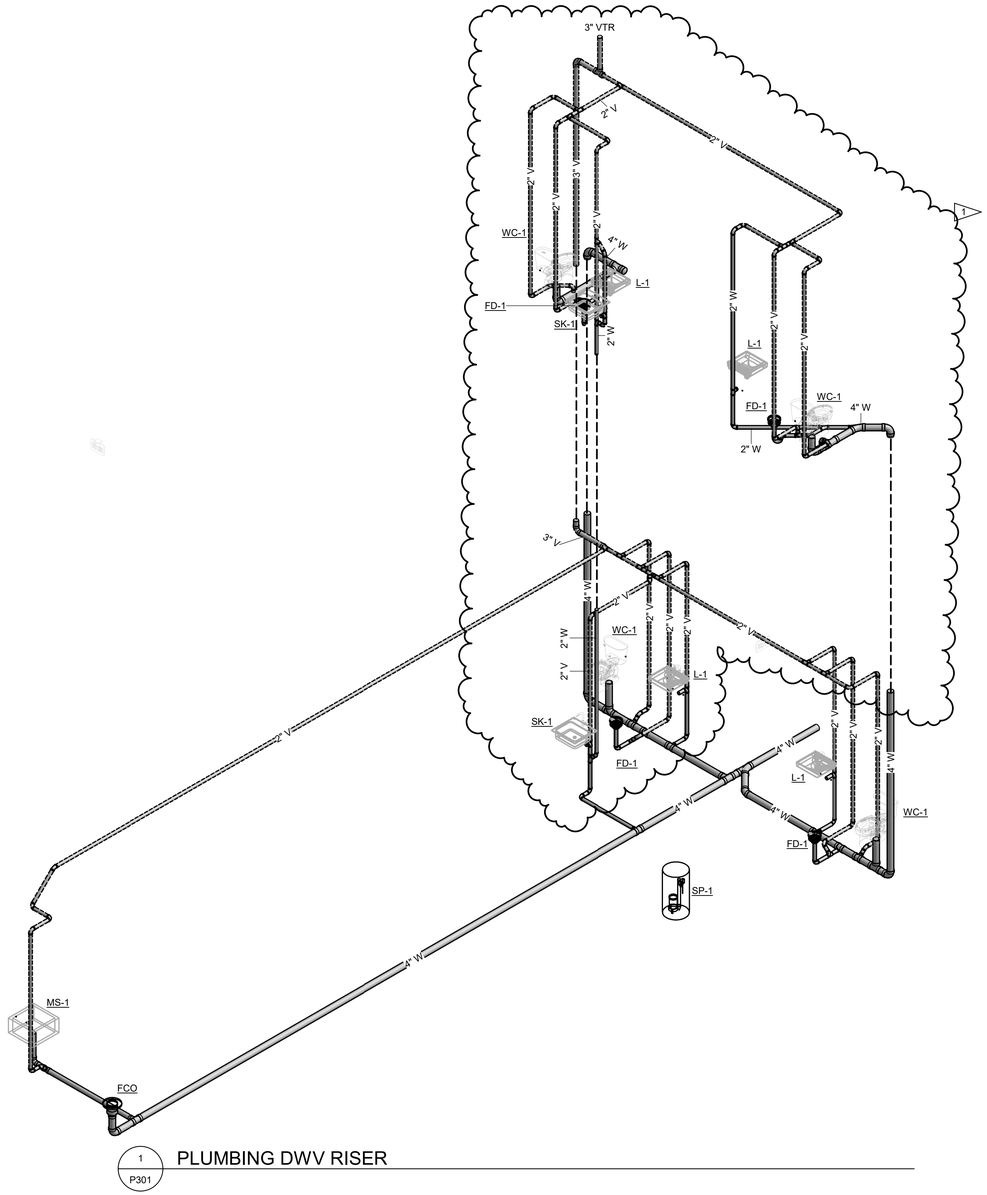


2 P301 PLUMBING DOMESTIC WATER RISER



1 P301 PLUMBING DWV RISER

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PLUMBING RISER DIAGRAMS

P301

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