

EXISTING CONDITION NOTES

STOP AND READ THE CONTRACTOR AND SUB CONTRACTOR SHALL NOT INITIATE ANY WORK UNTIL EXISTING FIELD CONDITIONS ARE PROPERLY VERIFIED. WHEN DEMOLITION IS REQUIRED, THESE VERIFICATIONS SHALL INCLUDE BUT NOT LIMITED TO: DIMENSIONS BOTH HORIZONTAL AND VERTICAL, ELECTRICAL SERVICE/PANELS LOCATION AND VOLTS/PHASE, LOCATION/QTY. OF ROOF MOUNTED HVAC EQUIPMENT, CONFIRM THAT INTERIOR HVAC HUNG UNITS HAVE PROPER SUPPORT CONNECTIONS FOR EXISTING STRUCTURE, FIRE SPRINKLER MAIN RUNS, TOILET ROOM DIMENSIONS, DOOR SWING FOR DOORS TO REMAINED ETC. IF NOT VERIFIED AND DISCOVERED AT A LATER TIME, THE CONTRACTOR SHALL REIMBURSE THE ARCHITECT FOR THE REDESIGN FEE. THIS DOES NOT INCLUDE HIDDEN WORK I.E. PITCH OF SANITARY LINES, ACTUAL CONDITIONS OF EXISTING HVAC EQUIPMENT, STRUCTURAL COLUMNS/BEARING WALLS OR CONDITIONS OF GREASE INTERCEPTORS AND ETC.

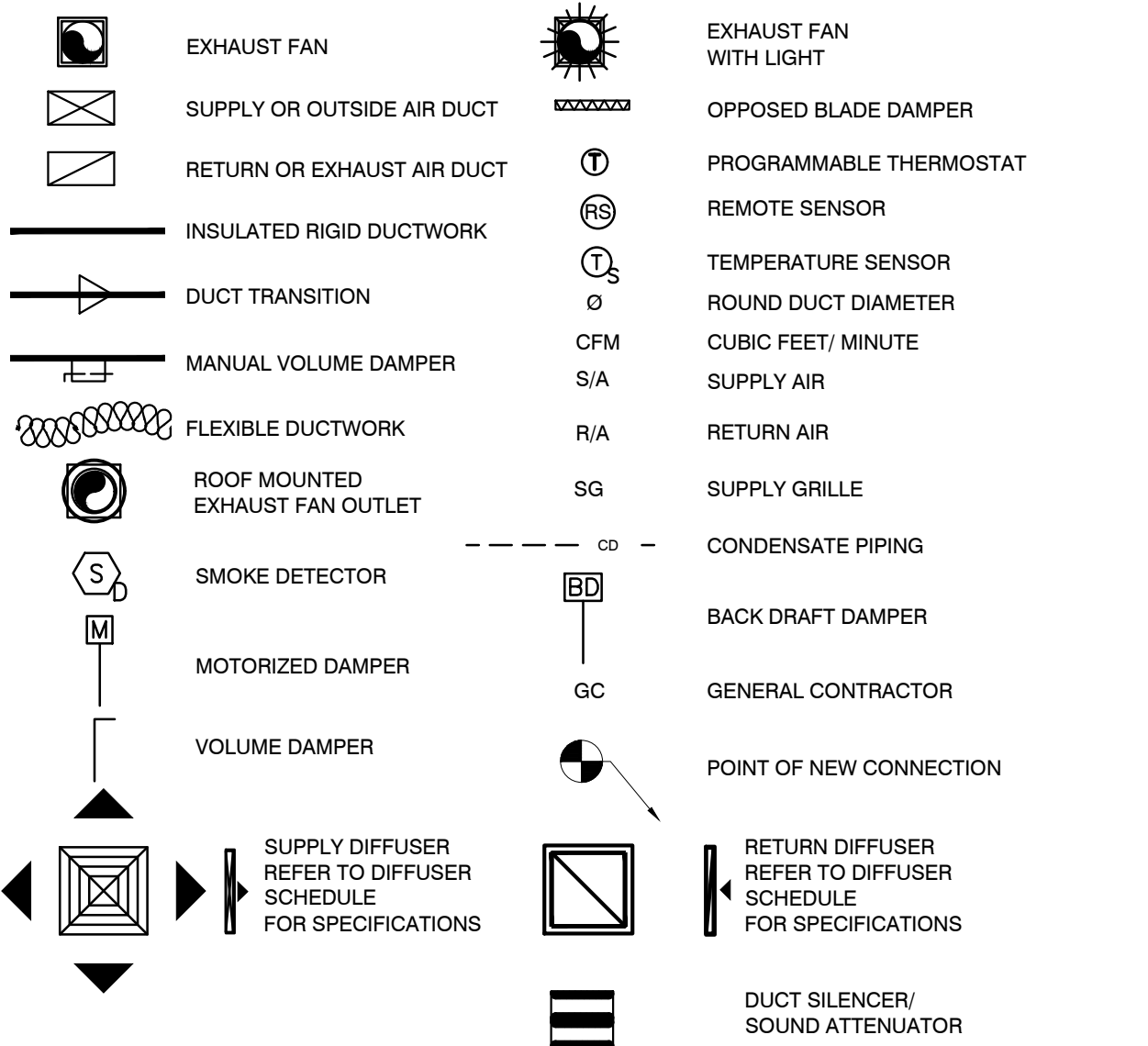
SCOPE OF WORK

REUSE EXISTING TWO 5.0 TON ROOF TOP UNITS WITH GAS HEAT. PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES AS SHOWN IN PLAN.
PROVIDE THREE NEW BATHROOM EXHAUST FANS AND ONE NEW EXHAUST FAN FOR MOP CLOSET.
COORDINATE WITH GC ANY ADDITIONAL REFRIGERATION WORK REQUIRED AND PLUMBING CONTRACTOR PROVIDING CONDENSATE LINES FOR MECHANICAL EQUIPMENT.

GENERAL NOTES

- A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES, IF DIFFERENT NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.
- C. DRAWINGS/DETAILS ARE TO BE CONSIDERED DIAGRAMMATIC, NOT NECESSARILY SHOWING IN DETAIL OR TO SCALE ALL MINOR ITEMS. UNLESS SPECIFIC DIMENSIONS ARE SHOWN, THE STRUCTURAL, ARCHITECTURAL AND SITE CONDITIONS SHALL GOVERN EXACT LOCATIONS. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK, AND CHECK/COORDINATE DRAWINGS OF ALL TRADES.
- D. COORDINATE WITH THE WORK OF OTHERS SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DRIPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- E. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- F. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- G. USE OF COMBUSTIBLE MATERIALS IS NOT ALLOWED IN THE RETURN AIR PLENUM. MATERIALS USED IN THE PLENUM SHALL HAVE FLAME SPREAD RATING NOT TO EXCEED 25, AND SMOKE DEVELOPED RATING NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL EXPOSED WIRING IN THE PLENUM SHALL BE PLENUM RATED.
- H. G.C TO VERIFY LOCATION OF PERMISSIBLE NEW STRUCTURAL ROOF PENETRATIONS AND ADAPT THE REQUIRED DUCTS ACCORDINGLY. THE OPENINGS MUST BE LOCATED USING A REBAR LOCATOR, TRYING TO LEAVE A TRANSVERSE BAR WITHIN 4" FROM THE OPENING. LOCATE OPENINGS AT MID-DISTANCE BETWEEN THE STEMS OF THE DOUBLE TEE AND LONGITUDINAL REINFORCEMENT SHALL NEVER BE CUT. CALL THE ARCHITECT'S OFFICE IN CASE OF UNEXPECTED DIFFICULTIES.
- I. ALL A/C ROUND EXPOSED DUCTS WILL BE SPIRAL GALVANIZED AND READY FOR PAINTING. ALL RECTANGULAR DUCTS OVER CEILINGS MAY BE SHEET METAL WITH EXTERNAL INSULATION AND ALL EXPOSED ROUND SHEET METAL DUCTS SHALL BE INTERNALLY INSULATED.
- J. G.C. SHALL COORDINATE WITH LANDLORD APPROVED ROOFING CONTRACTOR TO FLASH AND SEAL ALL ROOF PENETRATIONS TO MAINTAIN ROOFING WARRANTY.
- K. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 90 DAYS AFTER THE DATE OF ACCEPTANCE AND PROVIDE COPY TO LL.
- L. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.

MECHANICAL SYMBOLS



NOTE: THIS PROJECT MAY NOT USE EVERY SYMBOL OR DEVICE APPEARING ON THIS LEGEND.

MECHANICAL PLAN NOTES

- A. REUSE EXISTING TWO 5 TON ROOF TOP UNITS WITH GAS HEAT. PROVIDE NEW DUCTWORK WITH NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEM. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AIR DUCT CONNECTIONS. INSTALL FIRE DAMPERS IN ANY FIRE WALLS AND BETWEEN FLOORS. TRANSITION TO DUCT SIZES SHOWN. PROVIDE DUCTWORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. REFER TO A/C UNIT SCHEDULE FOR ADDITIONAL REQUIREMENTS.
- B. FOR SYSTEM OVER 2,000 CFM CHECK FOR DUCT MOUNTED AIR SMOKE DETECTORS AND THAT MEET THE REQUIREMENTS OF U.L. 268A, INTERLOCKED TO SHUTDOWN ROOF TOP UNIT UPON DETECTION OF SMOKE. IF NECESSARY PROVIDE SMOKE DETECTOR WITH AN ANNUNCIATOR, ALARM AND POWER L.E.D.S FOR VISIBLE AND AUDIBLE ALARM SIGNAL, AND VISIBLE TROUBLE SIGNAL. MOUNT ANNUNCIATOR ON ROOM SIDE OF CEILING.
- C. ALL DUCTS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA/ANSI-HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, LATEST EDITION, SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL LATEST EDITION, NAIMA FIBROUS GLASS DUCT CONSTRUCTION STANDARD AND 2006 INTERNATIONAL MECHANICAL CODE, SECTION 603. THE MORE STRINGENT REQUIREMENT OF ANY CODES SHALL APPLY.
- D. ALL RECTANGULAR OR ROUND SUPPLY AND RETURN DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181 AND INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTINGS. THE MANUFACTURER'S INSTRUCTION AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. FACTORY-MADE AIR DUCTS SHALL BE INSTALLED WITH NOT LESS THAN 4 INCHES OF SEPARATION FROM EARTH, EXCEPT WHERE INSTALLED AS A LINER INSIDE OF CONCRETE, TILE OR METAL PIPE AND SHALL BE PROTECTED FROM PHYSICAL DAMAGE. GYPSUM BOARD SHALL BE USED FOR RETURN AIR DUCTS ONLY.
- F. FACTORY-MADE FLEXIBLE AIR DUCTS AND CONNECTORS SHALL BE NOT MORE THAN 5 FEET IN LENGTH AND SHALL NOT BE USED IN LIEU OF RIGID ELBOW OR FITTINGS. FLEXIBLE AIR DUCTS SHALL BE PERMITTED TO BE USED AS AN ELBOW AT A TERMINAL DEVICE.
- G. THERMOSTATS AND HUMIDISTAT SHALL BE 7-DAY PROGRAMMABLE TYPE. MOUNT THERMOSTAT 48" A.F.F. COORDINATE LOCATION OF THERMOSTAT IF EXISTING THERMOSTAT AND REMOTE SENSOR ARE NOT REUSABLE THEN PROVIDE NEW THERMOSTAT WITH LOCKABLE COVER. COORDINATE LOCATION OF THERMOSTAT. PROVIDE REMOTE SENSOR LOCATED 72" ABOVE FINISHED FLOOR NEAR LOCATION INDICATED. SEAL WALL OPENING WITH CAULK. COORDINATE LOCATION ON SITE WITH GENERAL CONTRACTOR AND EQUIPMENT.
- H. ALL INTERIOR AIR DUCTS WITH INSULATION SHALL HAVE A MINIMUM OF THICKNESS OF 1.5", R-6 INSULATION AND EXTERIOR DUCTS SHALL HAVE R-12 INSULATION AS PER IECC 2015.
- I. ALL SEAMS, JOINTS, ETC WILL BE SEALED TO MAKE AIR DUCT AIRTIGHT. PRESSURE SENSITIVE MATERIALS AND OTHERS APPROVED BY LATEST SMACNA. SEALING MATERIALS WILL BE USED.
- J. CONDENSATE DRAIN LINES FROM EXISTING RTUS TO REMAIN AS IT IS. IF PIPING IS DAMAGED OR BLOCKED, REPAIR OR REPLACE AS/IF DAMAGED. USE SIMILAR MATERIAL OR APPROVED MATERIAL AS PER LOCAL CODE.
- K. ALL EQUIPMENT AND MATERIALS WILL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND ACCORDING TO THE BEST PRACTICE.
- L. TESTING AND BALANCING SHALL BE DONE IN ACCORDANCE AS PER IECC 2015, SECTION C408.2.2. BALANCING PROCEDURES SHALL BE IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (N.E.B.B.), THE ASSOCIATED AIR BALANCE COUNCIL (A.A.B.C) NATIONAL STANDARDS OR EQUIVALENT PROCEDURES.
- M. HANGER ATTACHMENTS TO THE STEEL STRUCTURE WILL BE RATED POWDER ACTUATED FASTENERS, "C" CLAMPS, WELDED STUDS, CLAMP HANGERS, JOIST CLAMPS OR OTHER METHODS RECOMMENDED BY SMACNA'S "METAL AND FLEXIBLE STANDARDS", CHAPTER 4, AND WILL HAVE A MINIMUM SAFETY MARGIN OF 4:1. SUSPENDED FROM TOP CHORD OF JOISTS, NOTHING FROM DECK OR CROSS BRACING.
- N. ALL HVAC CONTROLS AND CONTROL WIRING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.

VILLAGE OF LEMOUNT BUILDING DEPARTMENT NOTES

- ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF 2006 IBC AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.
- 1. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
- 2. VENTILATION FOR ALL AREA SHALL COMPLY WITH 2006 IMC CHAPTER 4.
- 3. THE LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS AND CONDUCTING SUCH TESTS WILL FILE DOCUMENTATION AND REPORTS OF TESTS THAT THE SYSTEM COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE LAWS.
- 4. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE 2006 IMC:
 - A. VENTILATION SYSTEM BALANCING 2006 IMC 403.3.4
 - 5. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
 - A. STANDARD OF HEATING- 2006 IMC 309.1
 - B. DUCT CONSTRUCTION AND INSTALLATION- 2006 IMC 603
 - C. AIR INTAKES, EXHAUSTS AND RELIEF - 2006 IMC 401.5
 - D. AIR FILTER- 2006 IMC 605
 - E. MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROL FOR AIR DISTRIBUTION SYSTEM 2006 IMC 606
 - F. GAS AND FIRE EQUIPMENT- 2006 INTERNATIONAL FUEL GAS CODE
 - 6. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON 68 DEG. FAHRENHEIT.
 - 7. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY 2006 IMC 403.3
 - 8. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
 - 9. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
 - 10. SMOKE DETECTOR SHALL MEET UL268A.
 - 11. VENTILATION SYSTEMS SHALL BE BALANCED TO MAINTAIN THE MINIMUM VENTILATION AIRFLOW RATE AS SHOWN IN VENTILATION REQUIREMENT TABLE. THIS SYSTEM SHALL BE BALANCED BY APPROVED METHOD - 2006 IMC 403.3.4. CONTRACTOR SHALL SUBMIT THE AIR BALANCE REPORT TO THE INSPECTOR.

OCCUPANCY CALCULATION PER 2006 IMC, TABLE 403.3

REHEARSAL ROOMS	502 SQ. FT.	CLASS SIZE LIMITS BY HOUSE RULES	8 PEOPLE
CONTROL/ LIVE/ DRUM CONTROL/ ROOKIES ROOMS/ M&S BOOTH/ STUDIO LOBBY/STUDENT LOUNGE	1911 SQ. FT.	CLASS SIZE LIMITS BY HOUSE RULES	41 PEOPLE
OFFICE	138 SQ. FT.	7 PEOPLE PER 1000 SQFT.	2 PEOPLE
LOBBY/RECEPTION	225 SQ. FT.	60 PEOPLE PER 1000 SQFT.	5 PEOPLE
			56 PEOPLE

VENTILATION REQUIREMENTS PER 2006 IMC, WITH OCC. TABLE 403.3

REHEARSAL / LESSON ROOMS	8 PEOPLE. X 15 CFM/PERSON =	120 CFM
CONTROL/ LIVE/ DRUM/ ROOKIES ROOMS/ M&S BOOTH/ STUDIO LOBBY	41 PEOPLE. X 15 CFM/PERSON =	615 CFM
OFFICE	2 PEOPLE. X 20 CFM/PERSON =	40 CFM
LOBBY/RECEPTION	5 PEOPLE. X 15 CFM/PERSON =	75 CFM
HALLWAY	243 SQFT. X 0.10 CFM/SQFT. =	24 CFM
STORAGE/CLOSET	110 SQFT.X 0.15 CFM/SQFT. =	17 CFM
OUTSIDE AIR REQUIRED		891 CFM
OUTSIDE AIR PROVIDED		900 CFM
MEN RESTROOM	75 CFM PER FIXTURE	75 CFM
WOMEN RESTROOM	75 CFM PER FIXTURE	75 CFM
UNISEX RESTROOM	75 CFM PER FIXTURE	75 CFM
MOP CLOSET	75 CFM PER FIXTURE	75 CFM
EXHAUST AIR REQUIRED		300 CFM
AIR BALANCE		
O/A PROVIDE THROUGH RTU-1 (E)		450 CFM
O/A PROVIDE THROUGH RTU-2 (E)		450 CFM
BEF-1 (N), BEF-2 (N) & BEF-3 (N)		225 CFM
EF-1		75 CFM
BUILDING PRESSURE (BAROMETRIC RELIEF)		600 CFM

FAN SCHEDULE

DESIGNATION	EF-1(N)	BEF-1(N)	BEF-2(N)	BEF-3(N)
STATUS	NEW	NEW	NEW	NEW
QUANTITY	1	1	1	1
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	GREENHECK
MODEL	SP-A90	SP-A90	SP-A90	SP-A90
CFM	75 CFM AT 0.3" W.G. ESP	75 CFM AT 0.3" W.G. ESP	75 CFM AT 0.3" W.G. ESP	75 CFM AT 0.3" W.G. ESP
FLA (AMPS)	0.19	0.19	0.19	0.19
ACCESSORIES	BDD	BDD	BDD	BDD
WEIGHT (LBS)	17	17	17	17
VOLT/PH/Hz	115/1/60	115/1/60	115/1/60	115/1/60
NOTES	1,2,5	1,2,3	1,2,4	1,2,4

NECK SIZE TABLE - A

NECK SIZE DIA	CFM RANGE
Ø6"	0-100
Ø8"	101-200
Ø10"	201-400
Ø12"	401-600

ROOF TOP UNIT SCHEDULE

	RTU-1 (E)	RTU-2 (E)
QUANTITY	1	1
UNIT	GAS	GAS
MANUFACTURER	YORK	YORK
MODEL	S.A.E.	ZE060H12A2A1AAA1A1A
STATUS	EXISTING	EXISTING
MOUNTING	ROOF	ROOF
NOMINAL CAPACITY	5.0	5.0
TOTAL BTUHS	S.A.E.	SAE
SENSIBLE BTUHS	S.A.E.	SAE
EER/SEER	S.A.E.	SAE
HEATING MBH (IN)	125 (V.I.F.)	125 (V.I.F.)
HEATING MBH (OUT)	100 (V.I.F.)	100 (V.I.F.)
SUPPLY CFM	2000	2000
OUTDOOR AIR CFM	450	450
VOLTAGE/PHASE/Hz	208-230/3/60	208-230/3/60
MCA (A)	27.9 (V.I.F.)	32 (V.I.F.)
MOCP (A)	40 (V.I.F.)	40 (V.I.F.)
WEIGHT (LBS) (APPROX.)	SAE	SAE

- NOTES FOR EXISTING RTU-**
- EXISTING RTU WITH ALL ACCESSORIES TO REMAIN SAME AND TO BE REUSED.
 - S.A.E - SAME AS EXISTING.
 - V.I.F - VERIFY IN FIELD.
 - CONTRACTOR TO FIELD VERIFY IF RTU ARE WORKING AT THEIR 100% RATED CAPACITIES/LOADS. INFORM TO DESIGN ENGINEER IF ANY DISCREPANCIES ARE FOUND IN PERFORMANCE PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND CONFIGURATION OF UNIT ON SITE.
 - IF REQUIRED, PROVIDE NEW THERMOSTAT AND TEMPERATURE SENSOR COMPATIBLE WITH EXISTING RTU.
 - COORDINATE FINAL LOCATION/REQUIREMENT OF T-SENSOR WITH ARCHITECT/OWNER.
 - CONTRACTOR TO BALANCE OUTSIDE AIR & RETURN AIR DAMPERS ON EXISTING RTU TO MATCH VALUES MENTIONED IN ABOVE TABLE.
 - REPLACE FILTERS, IF REQUIRED.
- CONTRACTOR SHALL VERIFY EXACT ELECTRICAL CONNECTIONS, WIRE SIZES, BREAKERS, DISCONNECT ETC. PRIOR TO ORDERING AND BID.

DIFFUSER SCHEDULE

MANUFACTURER	TITUS	TITUS	TITUS	TITUS
DESIGNATION	A	A1	R	R1
USE	SUPPLY	SUPPLY	RETURN	RETURN
MODEL	TDC-AA	250-AA (2/3 WAY)	TDC-AA	TDC-AA
MOUNTING	SAT CEILING/HARD CEILING	SAT CEILING/HARD CEILING	SAT CEILING/HARD CEILING	SAT CEILING/HARD CEILING
LOCATION	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN
FACE SIZE	24"X24"	12"X12"	24"X24"	12"X12"
NECK SIZE	REFER TABLE A	REFER TABLE A	REFER TABLE A	REFER TABLE A
FRAME TYPE	LAY-IN / FLANGED	LAY-IN / FLANGED	LAY-IN / FLANGED	LAY-IN / FLANGED
FINISH	BLACK	BLACK	BLACK	BLACK
NOISE CRITERIA	<30	<30	<30	<30
ACCESSORIES	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER

- NOTES :**
- MAX. NC LEVEL 30 OR LESS.
 - PROVIDE SQUARE TO ROUND NECK ADAPTOR.
 - COORDINATE WITH ARCHITECT FOR FINAL MOUNTING, FRAME TYPE, PAINT AND FINISH.
 - PROVIDE 4-WAY AIR THROW PATTERN UNLESS NOTED OR INDICATED.
 - PROVIDE INSULATED BACKS ON ALL DIFFUSERS.

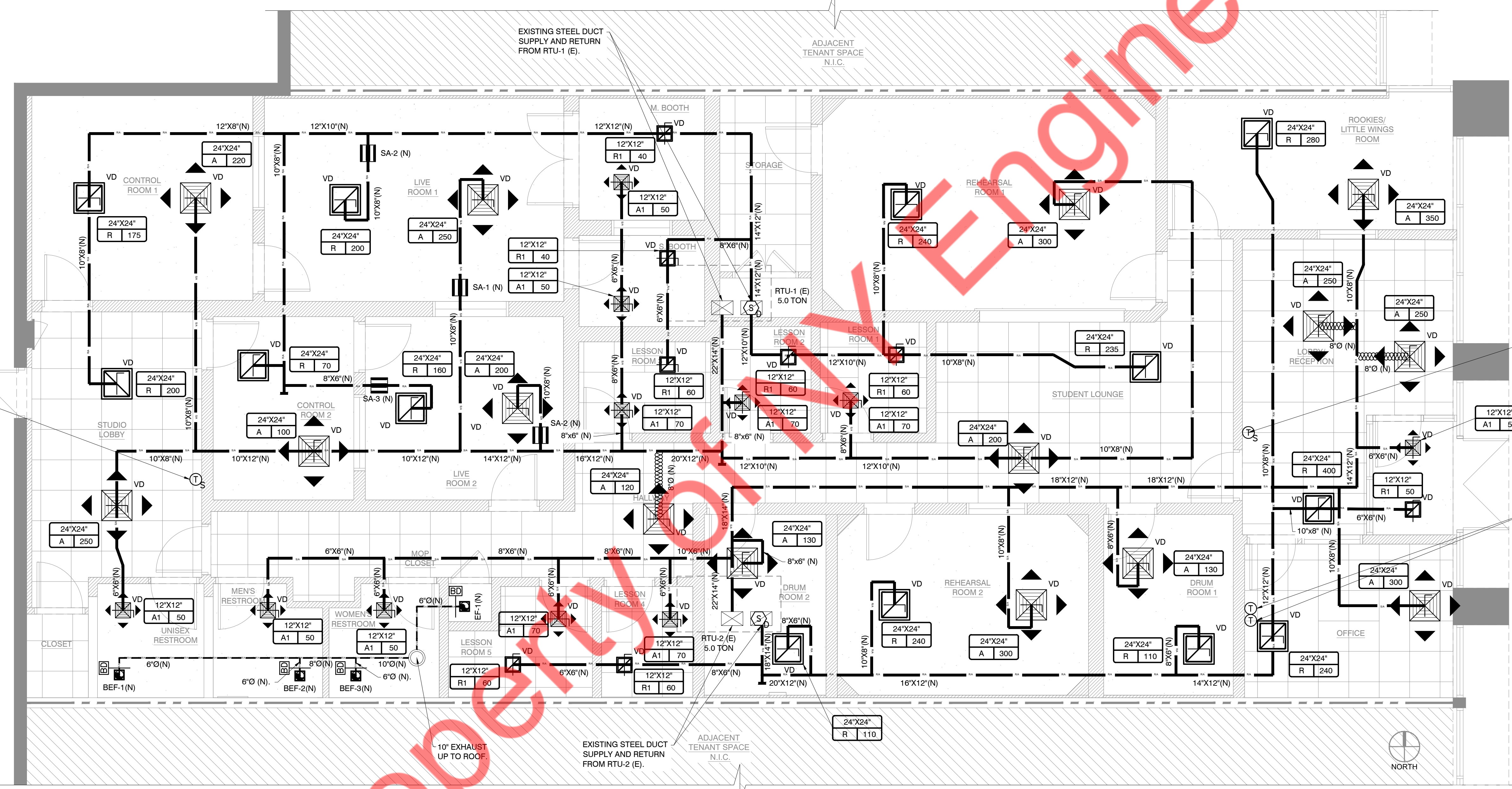
DUCT SILENCER/SOUND ATTENUATOR SCHEDULE

	SA-1 (N)	SA-2 (N)	SA-3 (N)
CFM	250	200	160
LOCATION	LIVE ROOM 1	LIVE ROOM 2	LIVE ROOM 2
NOISE LEVEL	<25 dBA	<25 dBA	<25 dBA
SIZE (WXH)	10"X8"	10"X8"	8"X6"

NOTES :

- LENGTH OF SA SHALL BE AS PER MANUFACTURERS RECOMMENDATION
- SOUND ATTENUATOR SHALL BE STRAIGHT TYPE
- MEDIA FIBER GLASS WOVEN GLASS FABRIC

Property Engineers



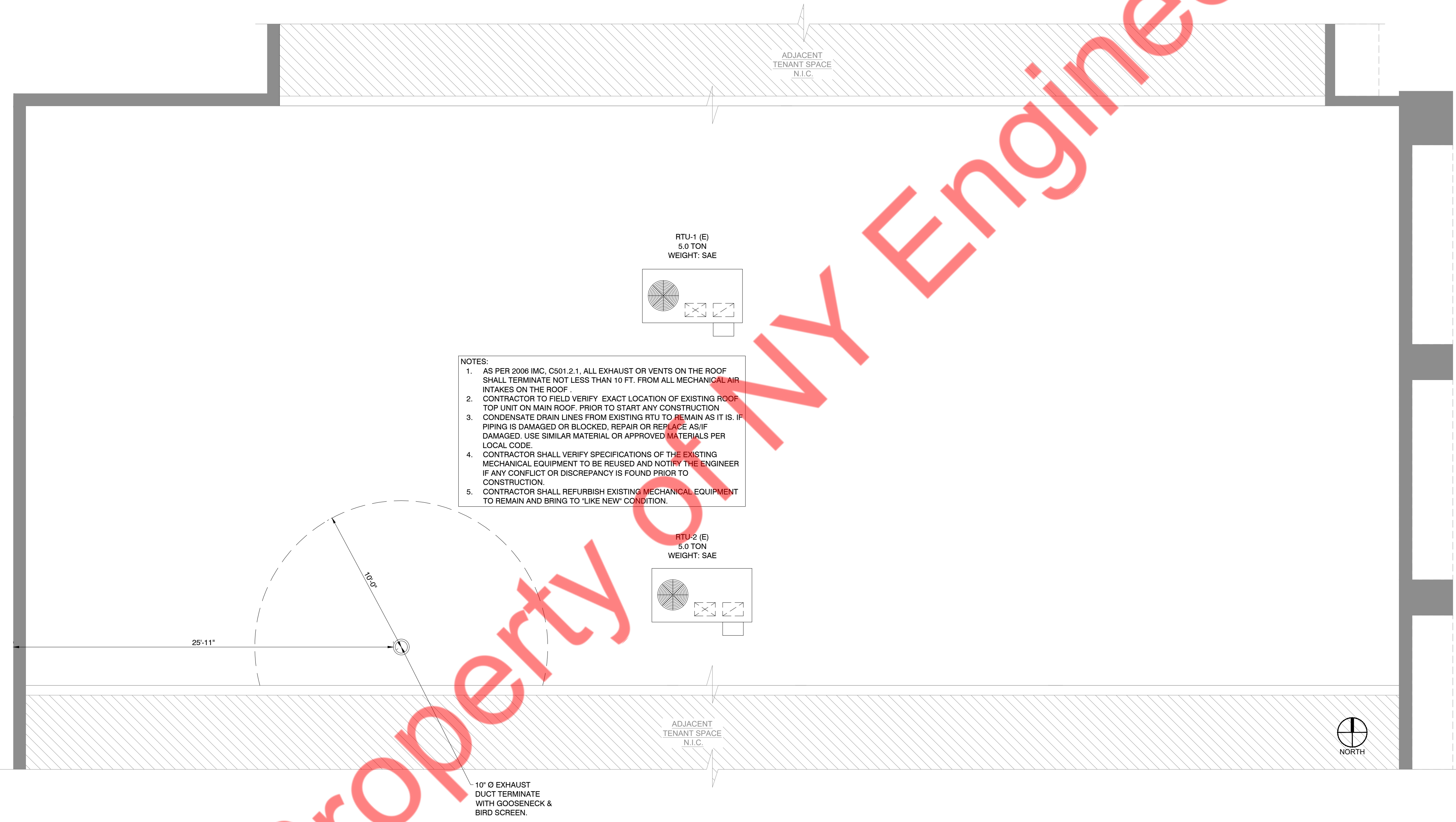
TEMPERATURE SENSOR FOR RTU-1(E).
CONFIRM FINAL LOCATION/REQUIREMENT WITH ARCHITECT/OWNER.

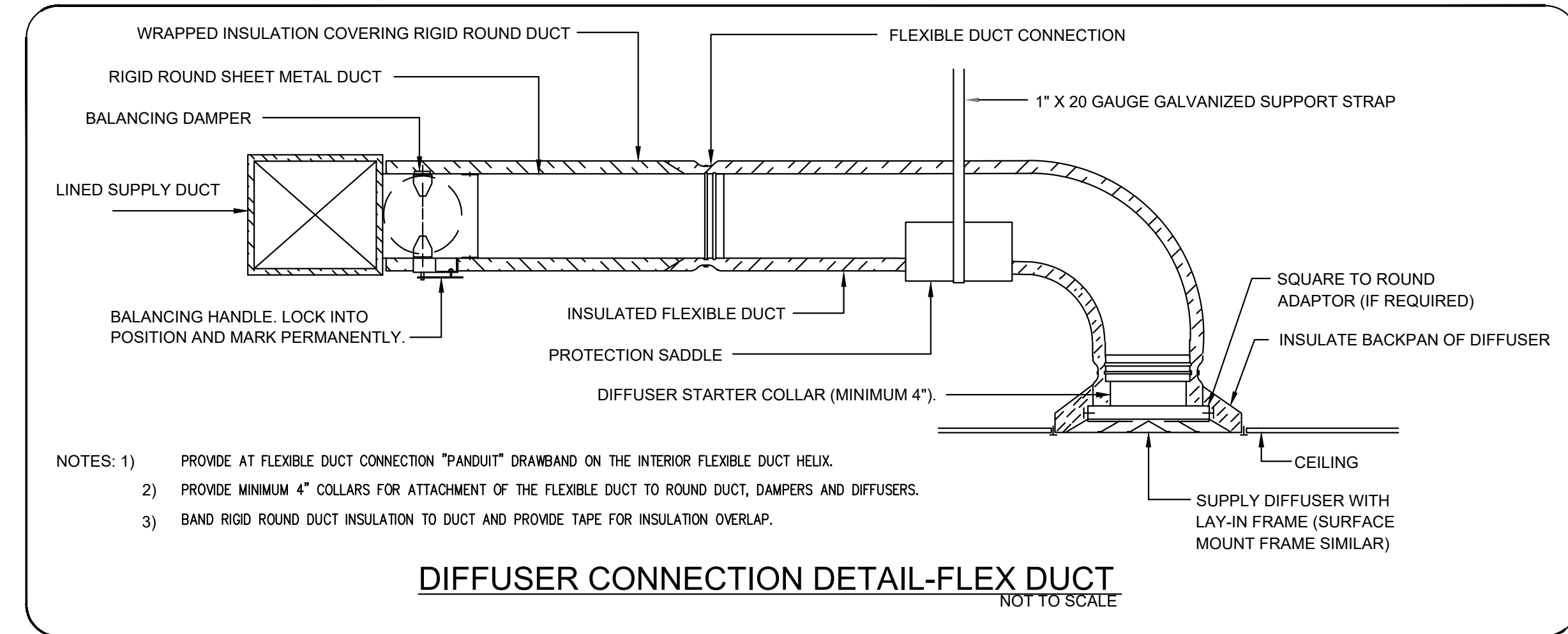
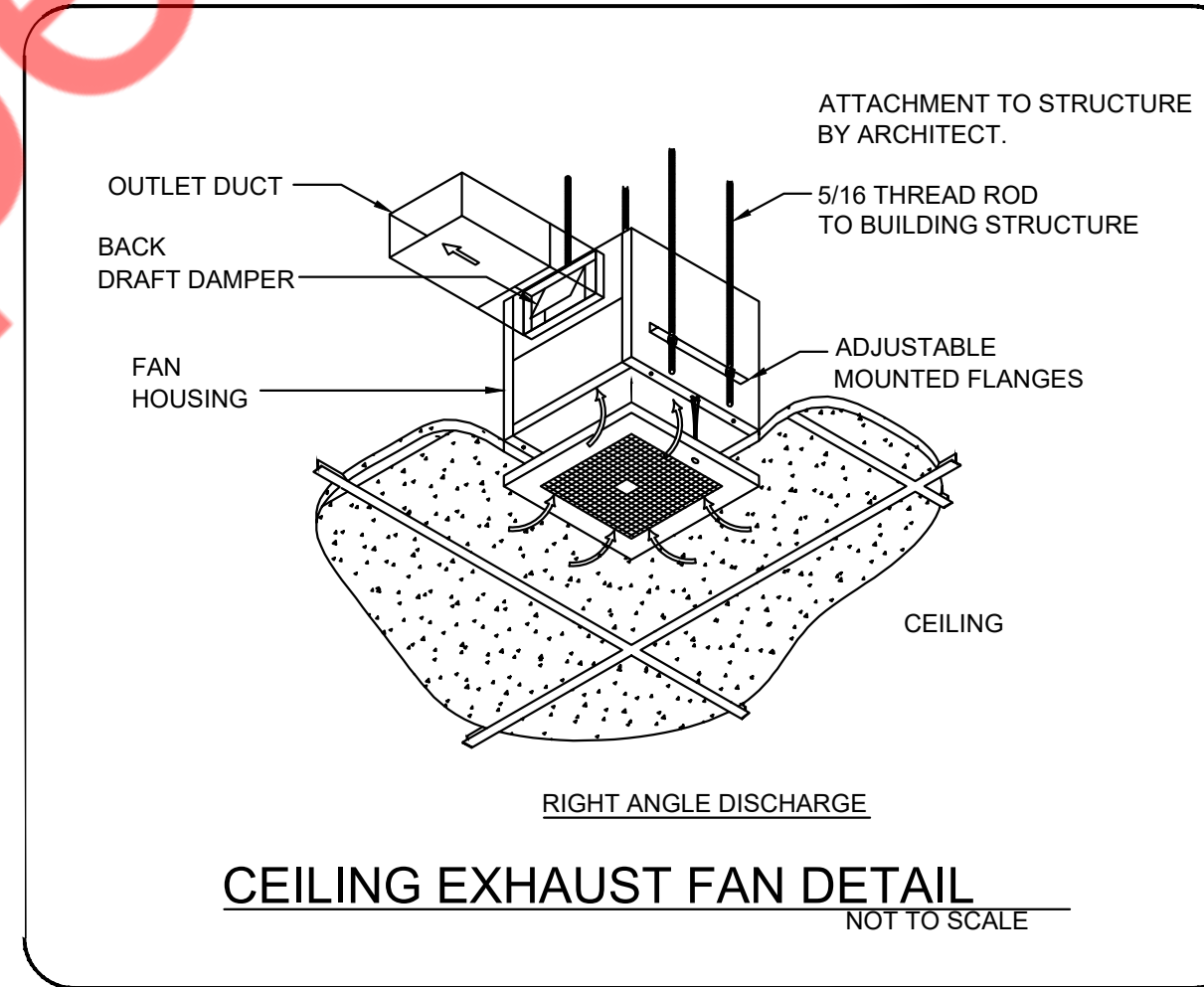
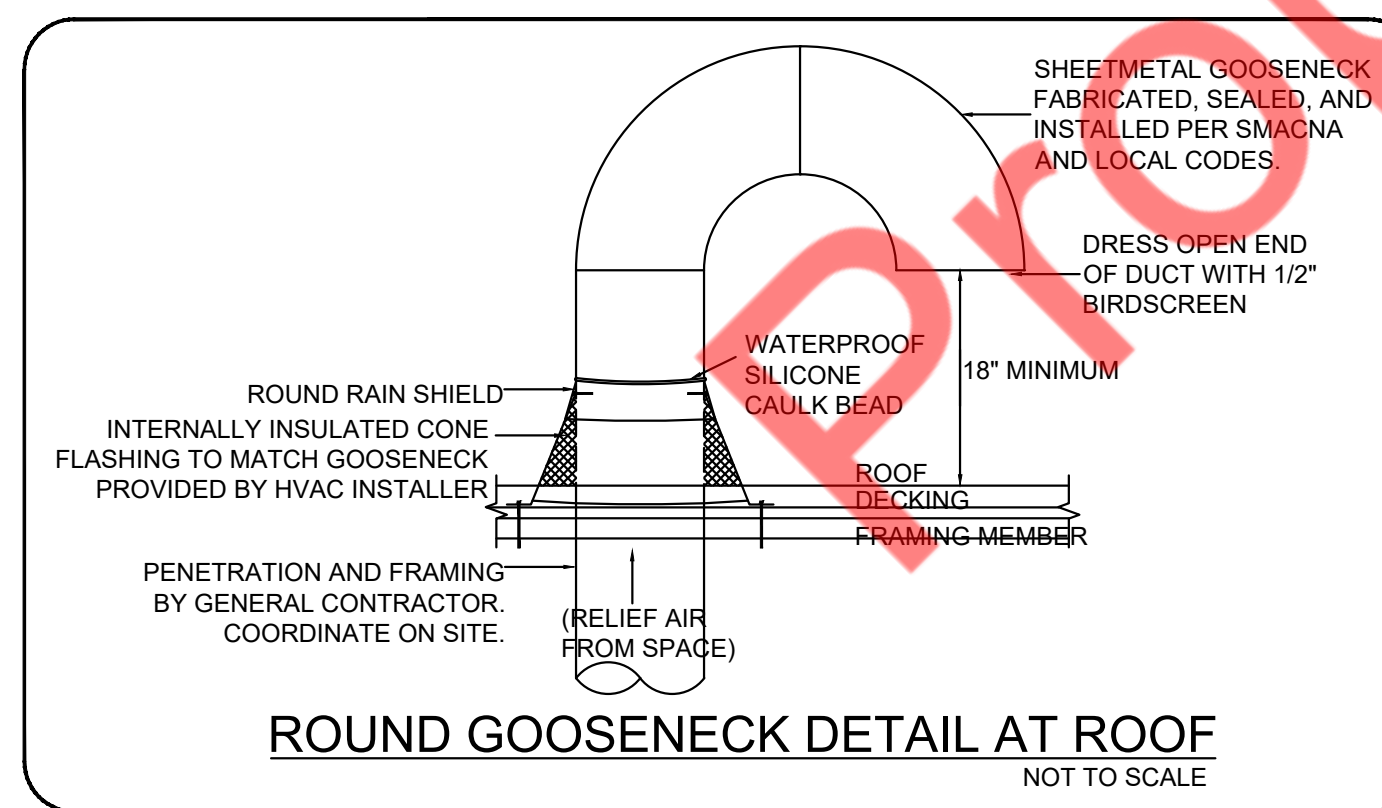
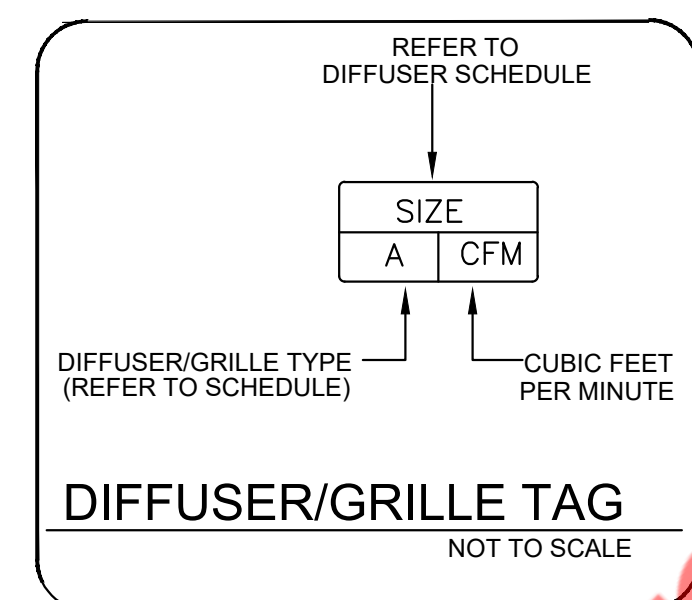
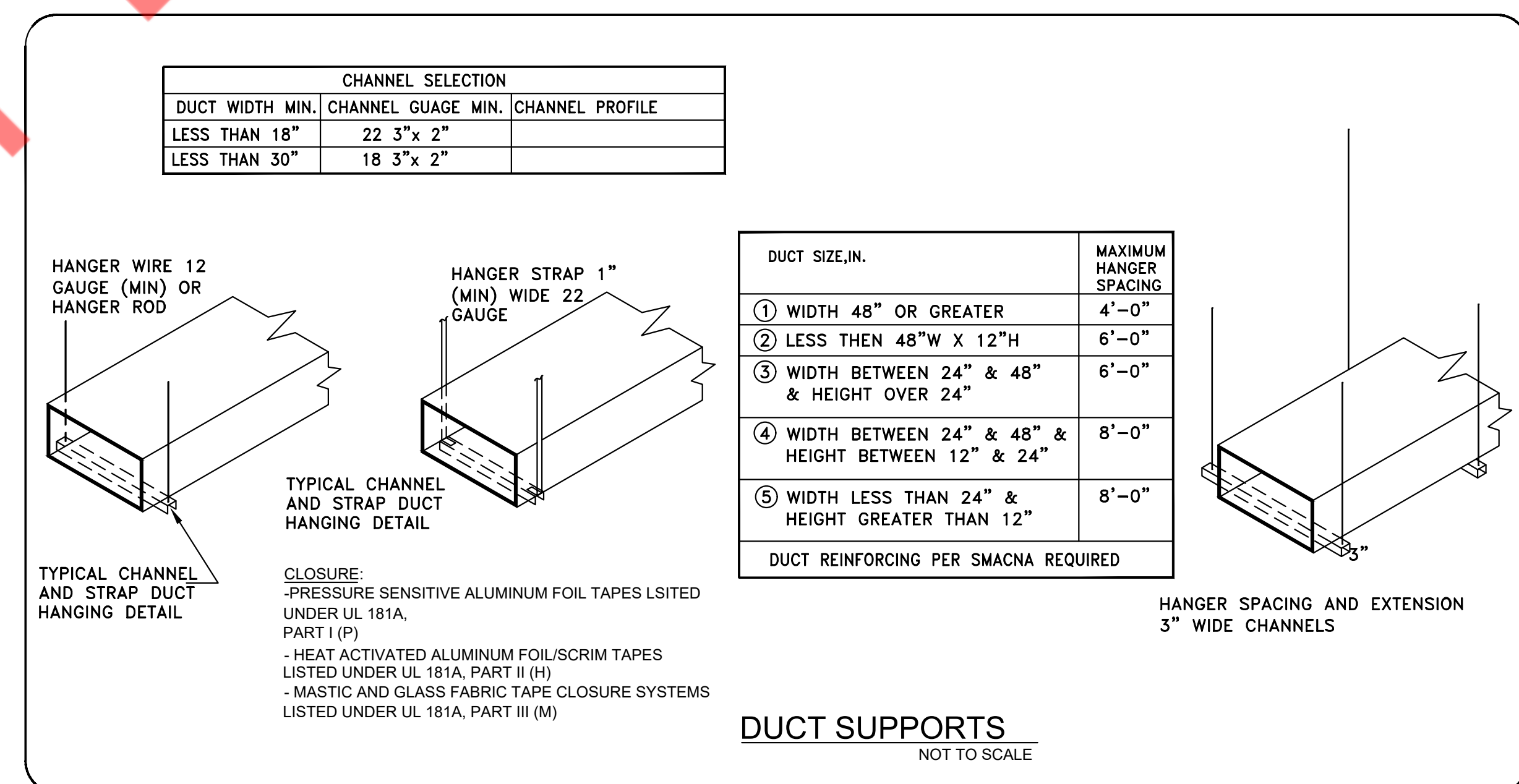
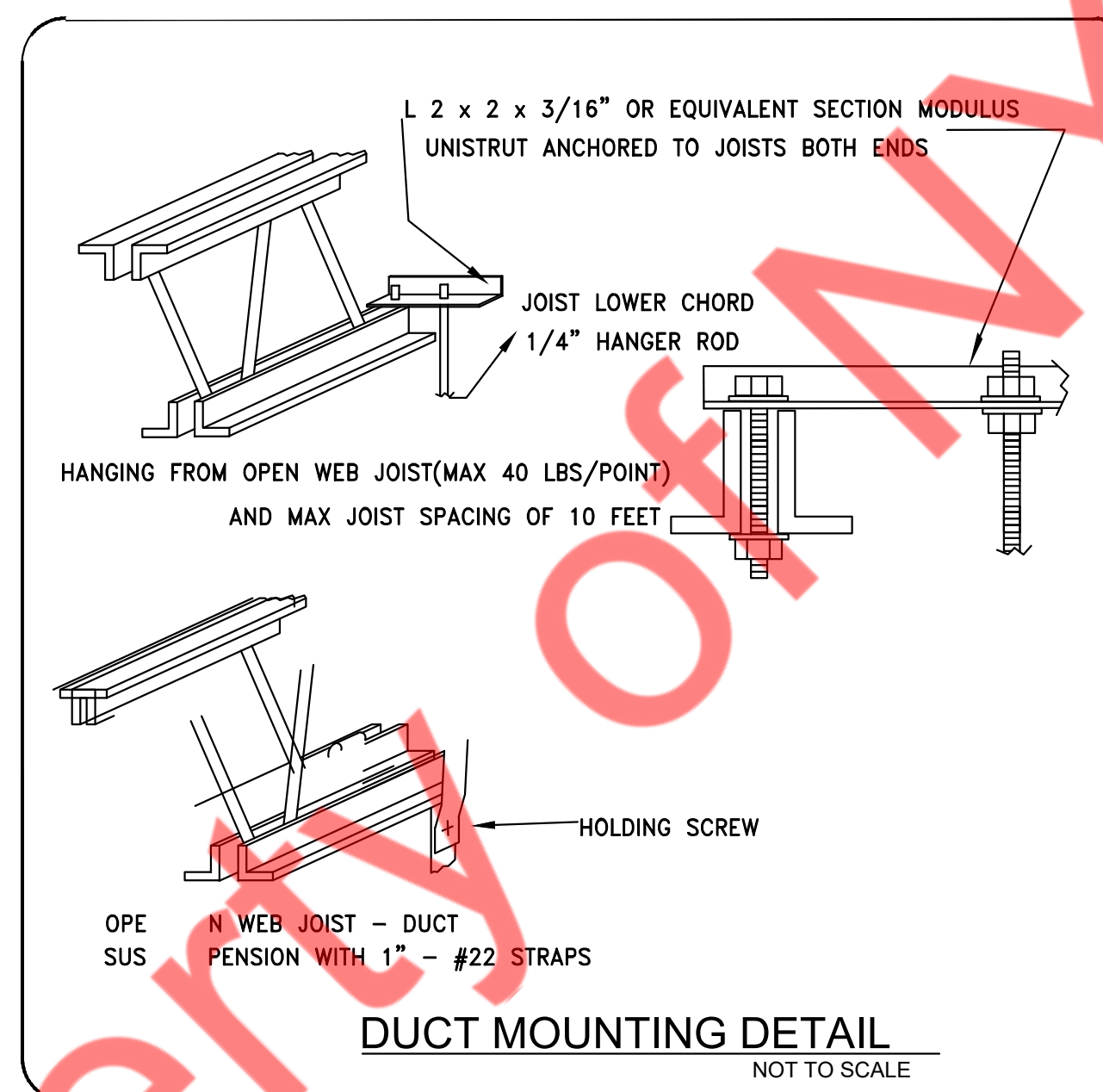
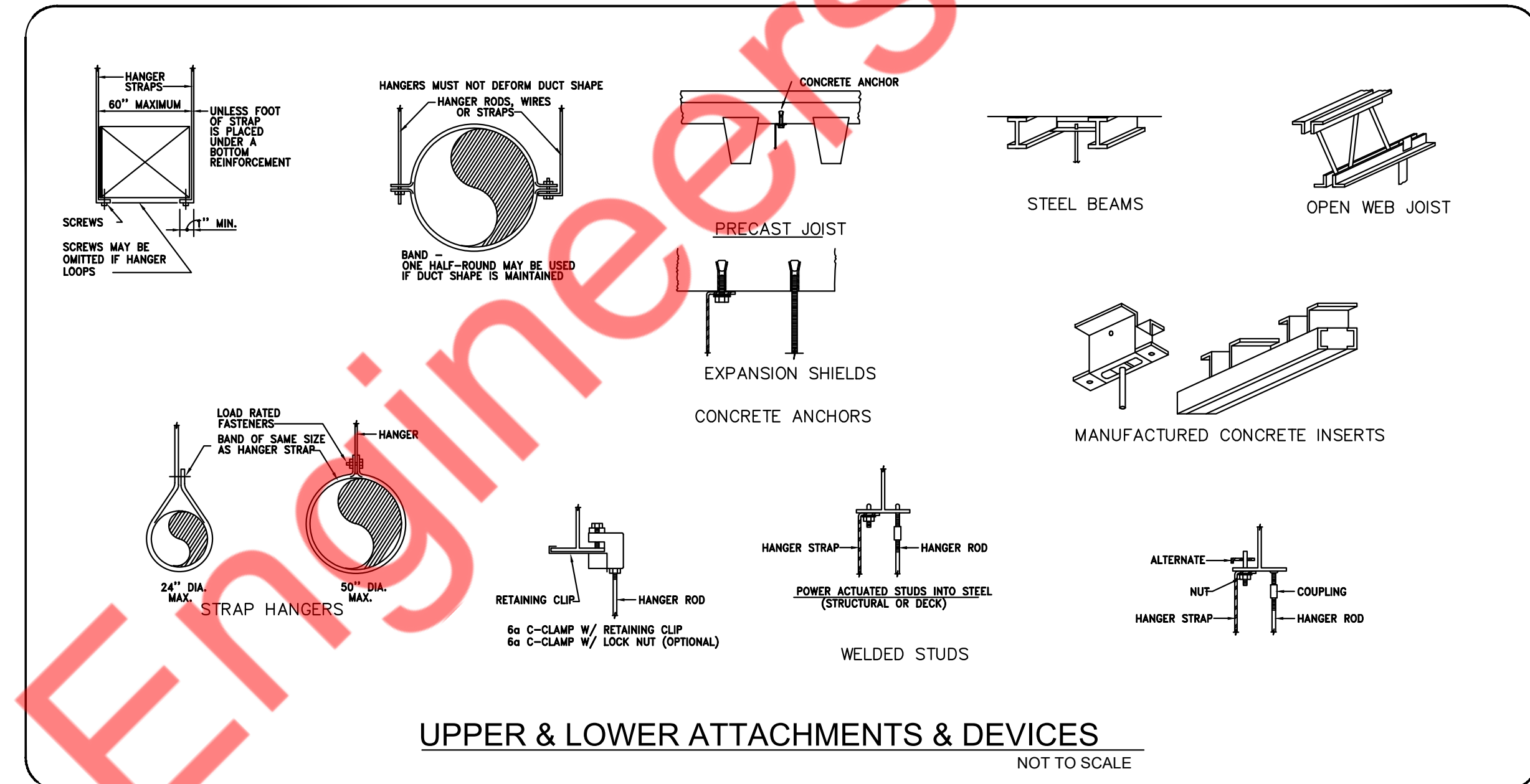
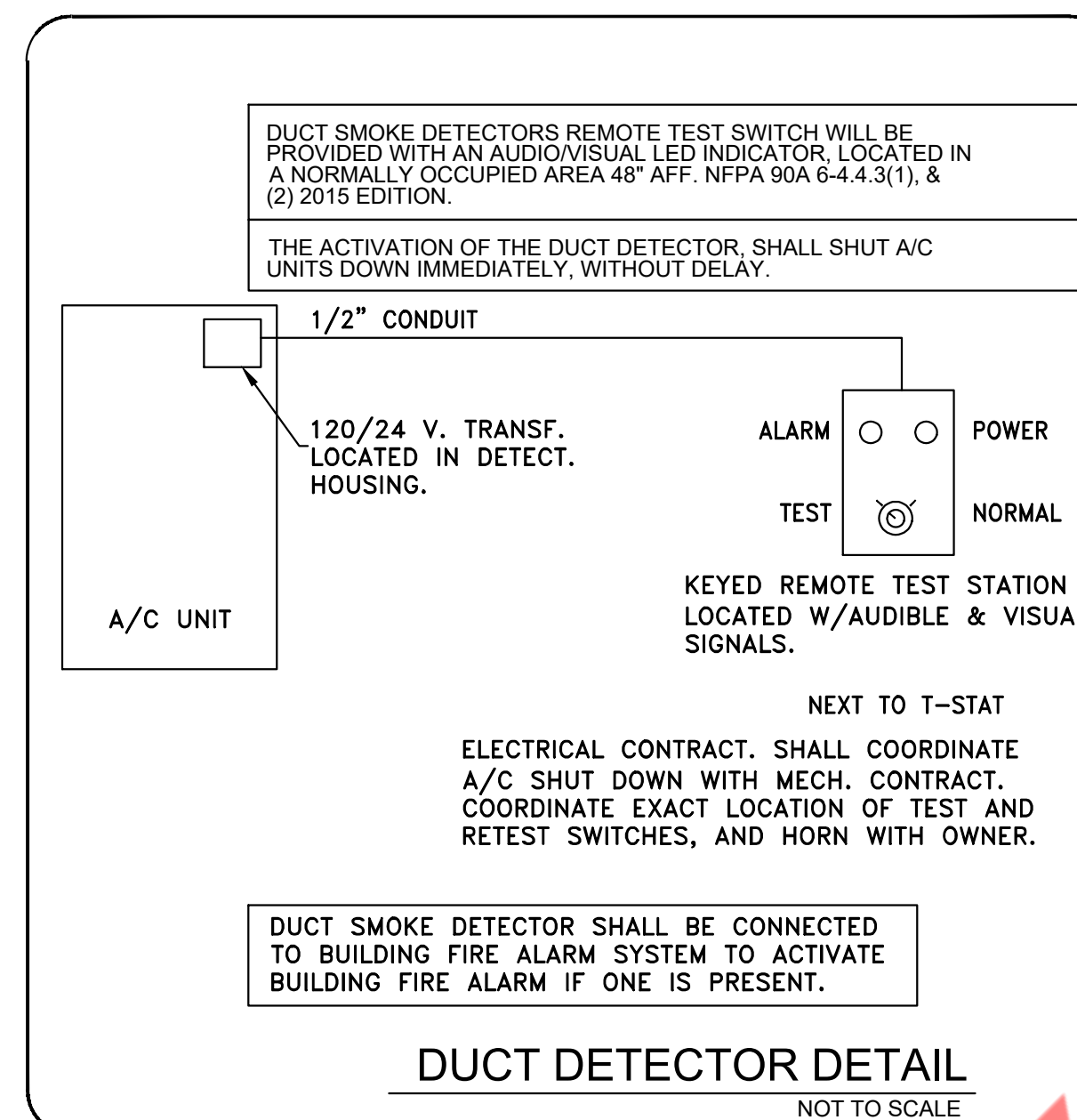
TEMPERATURE SENSOR FOR RTU-2(E).
CONFIRM FINAL LOCATION/REQUIREMENT WITH ARCHITECT/OWNER.

T-STAT FOR RTU-1(E) & RTU-2(E).
CONFIRM FINAL LOCATION WITH ARCHITECT/OWNER.

SUPPLY AND RETURN DUCTWORK IN THE MUSIC ROOMS SHALL HAVE PRE-LINED DUCTWORK (ACOUSTICAL LINER).

Property ONLY Engineers





LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	No. LAMPS	LAMP TYPE	TOTAL WATTS	MOUNTING
A	2x4 LED	NORA LIGHTING	NPOBL-E24_334W	120	9	45 WATTS LED	405	RECESSED
B	6" LED WAFER	NORA LIGHTING	NFLIN-R610-30-WW	120	9	16 WATTS LED	144	RECESSED
C	LED TRACK WITH HEADS	NORA LIGHTING	NTE-860L-930-M-10B	120	66	9.4 W PER HEAD	620	TRACK
E	LED DRUM PENDANT LIGHT	NORA LIGHTING	NRLM-16C25-30	120	14	31 WATTS LED	434	PENDANT
F	LED WALL SCONCE, LIGHT MATTE NICKEL	NORA LIGHTING	TBD BY OWNER	120	22	TBD	1650	WALL SCONCE
X	CEILING/WALL MOUNTED EXIT SIGN	NORA LIGHTING	NX-815-LED-R-A	120	1	5 WATTS LED	5	CEILING
XC	CEILING/WALL MOUNTED EXIT SIGN	NORA LIGHTING	NX-815-LED-R-A	120	1	5 WATTS LED	5	CEILING
XB	EMERGENCY LIGHT	NORA NSPEC	NE-602LEDRC-B	120	6	2 WATTS LED	12	WALL MOUNTED
DS	DIMMER WALL SWITCH	LUTRON	DVSTV-453PH-WH (DVA DVELV-300P FOR TRACK LIGHT "C")	120	-	-	-	WALL
T	TIMER WALL SWITCH	LEVITON	6124	120	-	-	-	WALL
OS	OCCUPANCY WALL SWITCH	LUTRON	MS-OPS6M2-DV-BL	120	-	-	-	WALL
(E)	EXISTING LIGHTING FIXTURE TO REMAIN	-	-	-	-	-	-	-

GENERAL NOTES:

- REFER TO SHEET A-2 - REFLECTED CEILING PLAN IN ARCHITECTURAL DRAWINGS FOR MORE INFORMATION ON COLORS AND TRIMS REQUIRED
- E.C. SHALL RECEIVE APPROVAL FROM ARCHITECTURE FOR LIGHTING FIXTURE SELECTION BEFORE PURCHASE AND INSTALLATION.

ELECTRICAL PLAN NOTES

- ELECTRICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET.
- CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT, NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.
- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY THE OWNER OR HIS REPRESENTATIVE AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL OWNER HAS DIRECTED CORRECTIVE ACTION TO BE TAKEN.
- ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC. THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2005 EDITION OF THE NATIONAL ELECTRIC CODE AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION.
- DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION FOR ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
- ALL ELECTRICAL NOT BEING REUSED MUST BE REMOVED IN ITS ENTIRETY.
- ALL CONDUIT IN OR UNDERGROUND OR IN CONCRETE MUST BE RIGID GALVANIZED STEEL.
- CIRCUIT BREAKERS AND PANELS TO BE BOLT ON TYPE
- ALL EQUIPMENT SHALL BE APPROVED BY UL OR OTHER NATIONALLY RECOGNIZED TESTING COMPANY.
- ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY NEC 250.146
- SUBMIT SERVICE ENTRANCE EQUIPMENT FOR SEPARATE APPROVAL.
- ALL LOW VOLTAGE MUST BE IN CONDUIT TO ABOVE THE DROP CEILING. BRIDAL RINGS OR "J" HOOKS REQUIRED.
- SEPARATE PERMITS ARE REQUIRED FOR ALL LOW VOLTAGE SUCH AS TELEPHONE, DATA, THERMOSTAT, MUSIC, ALARMS ETC.
- SEPARATE PERMIT REQUIRED FOR SIGNAGE.
- PRIOR TO ANY CONSTRUCTION WORK BEGINNING AN ON-SITE MEETING WITH GENERAL CONTRACTORS IS REQUIRED.
- ELECTRICIAN MUST BE ON SITE FOR ALL INSPECTIONS.
- MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING. ALL CONDUCTORS SHALL BE COPPER AND UNLESS OTHERWISE NOTED THIN INSULATION.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, PLASTIC AND CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS, AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE N.E.C. OR LOCAL CODES.
- ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE THAT CERTIFICATE OF OCCUPANCY IS ISSUED. WARRANTY SHALL BE PROVIDED IN WRITING. PROVIDE COPY TO LL.
- CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.
- THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES.
- CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
- ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE CIRCUIT BREAKERS.
- PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, DEVICES, ETC. FOR ALL OUTLETS AS INDICATED.
- MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF N.E.C., NEMA, AND IEC.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND FIRED CAULKING REQUIRED OF HIS WORK.
- ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/TYPE WRITTEN DIRECTORIES.
- ALL ELECTRICAL OUTLETS SHALL BE AT 18" A.F.F. EXCEPT IN THE REHEARSAL AND MULTI-PURPOSE ROOM SHALL BE AT 24" UNLESS OTHERWISE NOTED.
- ALL LIGHT SWITCHES TO BE AT 42" A.F.F.
- ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL ELECTRICAL WIRING FOR HVAC SYSTEM INCLUDING CONTROLS, THERMOSTATS, POWER, ETC. SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- BREAKER AND PANELS - ALL CURRENT CARRYING BUSSES SHALL BE COPPER. ALL GROUND BUS BARS SHALL BE COPPER. PANEL BOARD ENCLOSURES SHALL BE FURNISHED WITHOUT PRE-PUNCHED CONCENTRIC HOLES. A.I.C. RATINGS SHALL BE AS INDICATED ON PANEL BOARD SCHEDULES.
- DISCONNECT SWITCHES SHALL BE H.P. RATED, GENERAL DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.
- MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, WITH OVERLOAD RELAYS IN EACH HOT LEG.
- THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS INDICATES THE CONTRACT SHALL FURNISH AND INSTALL.
- CONTRACTOR SHALL CONFIRM WITH ANY AND ALL REQUIREMENTS SUCH AS: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, TRANSFORMER SIZE, SCHEDULED DOWN TIME FOR OWNERS CONFIRMATION, ETC. ANY CONFLICTS SHALL BE BROUGHT TO ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.
- VOLTAGE DROP FOR ALL BRANCH CONDUCTORS SHALL NOT EXCEED 3%. WHERE VOLTAGE DROP EXCEEDS 3%, CONTRACTOR SHALL INCREASE SIZE OF CONDUCTORS.
- CONTRACTOR SHALL PROVIDE GFI TYPE BREAKER FOR ALL EXTERIOR 120V CIRCUITS OR GFI PROTECTION - FOR THE WHOLE CIRCUIT.
- GAS PIPING SHALL BE BONDED.
- ELECTRICAL CONTRACTOR SHALL COORDINATE SERVICE ENTRY WITH SERVICE PROVIDER PRIOR TO DETERMINING EXACT LOCATION OF THE METER BOX IN ORDER TO AVOID DISCREPANCIES BETWEEN DRAWINGS AND JOB CONDITIONS.
- ALL OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.
- CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
- OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.
- ABSOLUTELY NO FLEXIBLE CONDUIT IS PERMITTED IN DEMISING WALLS. FLEXIBLE CONDUIT IS PERMITTED FOR SHORT FINAL CONNECTIONS ONLY (6'-0" OR LESS).
- EXPOSED CONDUIT SHALL BE INSTALLED IN STRAIGHT LINES, PARALLEL OR IN RIGHT ANGLES TO THE BUILDING STRUCTURE. DO NOT LOOP EXCESS FLEXIBLE CONDUIT IN CEILING SPACE OR WALL CAVITY. NO CONDUIT TO BE SUPPORTED FROM THE ROOF DECK.
- CABLE TYPES AC AND NM CABLES ARE NOT ACCEPTABLE. TYPE MC CABLE, ELECTRIC METALLIC TUBING (EMT) AND RIGID GALVANIZED CONDUIT ARE PERMITTED.
- ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.
- ALL PANELS TO BE UL LABELED WITH BOLT-ON TYPE CIRCUIT BREAKERS.
- 7-DAY 24-HOUR TIME CLOCK IS REQUIRED TO CONTROL STOREFRONT ENTRY LIGHTS, SHOW WINDOW LIGHTS, SHOW WINDOW RECEPTACLES AND STOREFRONT SIGNAGE. ILLUMINATED STOREFRONT SIGNS MUST REMAIN LIT DURING ALL MALL BUSINESS HOURS.
- TENANT IS REQUIRED TO MAKE A FIELD SURVEY OF THE EXISTING ELECTRICAL SERVICE TO ENSURE THAT THE TOTAL CONNECTED LOAD DOES NOT EXCEED THE ELECTRIC SERVICE. ANYALL MODIFICATIONS OR UPGRADES NEEDED ARE SUBJECT TO LANDLORD'S PRIOR APPROVAL AND WILL BE COMPLETED BY TENANT/TENANT'S GC AT TENANT'S SOLE EXPENSE.
- ALL ELECTRICAL PANELS TO BE MOUNTED ON PLYWOOD BACKER BOARD.
- PANEL PHASE LOADS TO BE BALANCED WITHIN 10%.
- ALL THE ELECTRICAL BOXES SHALL BE SEALED.

SCOPE OF WORK

REUSE EXISTING 200A, 120/208V, 3-PHASE ELECTRICAL SERVICE PROVISIONS AT BASE BUILDING FOR THE TENANT SPACE. REUSE EXISTING 200A, 120/208V, 3-PHASE ELECTRICAL METER AND DISCONNECT SWITCH. REUSE EXISTING (1) 225A(M.L.O.), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A". PROVIDE NEW (1) 100A(M.L.O.), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B". PROVIDE ALL NECESSARY EQUIPMENT, ALL WIRING AND LIGHTING FOR THE PROJECT SPACE. COORDINATE WITH G.C. FOR LOW VOLTAGE WIRING

GENERAL LIGHTING NOTES

- UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE.
- ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR

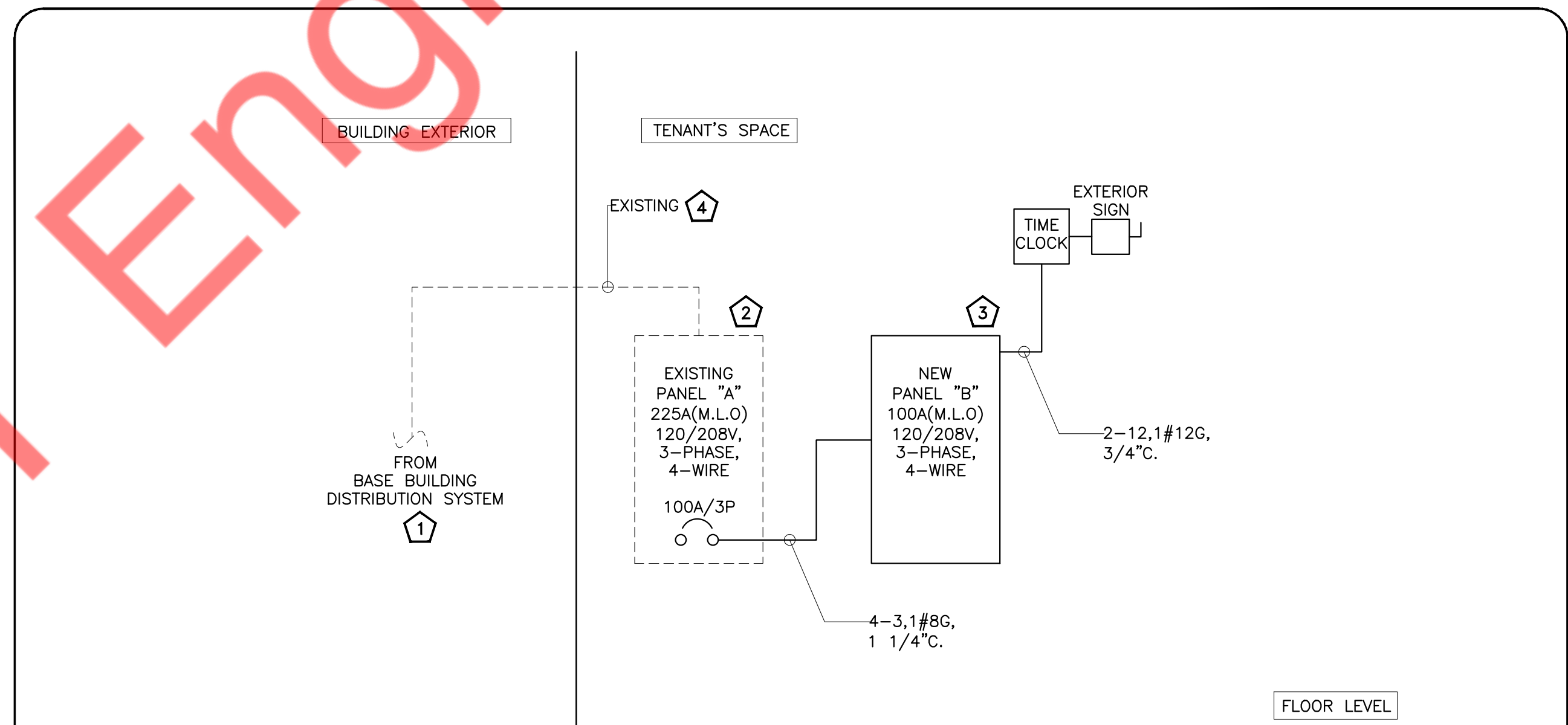
ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	EXHAUST FAN
	JUNCTION BOX
	BATTERY BACK UP EXIT LIGHT
	BATTERY BACK UP EMERGENCY LIGHT
	WALL SWITCH (SINGLE, DOUBLE,)
	WALL SWITCH (3 WAY, 4 WAY)
	WALL SWITCH (TIMER)
	DIMMER WALL SWITCH
	OCCUPANCY SENSOR WALL SWITCH
	SIMPLEX RECEPTACLE, +18" AFF OR AS NOTED. SUFFIX DENOTES FOLLOWING: A - NEMA 5-15R B - NEMA 6-15R C - NEMA 14-30R D - NEMA 14-50R E - NEMA L6-30R
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, 46" TO AFF AT KITCHEN, BATHS AND TOPS
	HALF SWITCHED DUPLEX RECEPTACLE
	230 VOLT RECEPTACLE
	QUADRUPEX RECEPTACLE
	FLOOR MOUNTED, FLUSH DUPLEX RECEPTACLE
	FLOOR MOUNTED, FLUSH QUAD, RECEPTACLE
	FLOOR MOUNTED, FLUSH 230 VOLT RECEPTACLE
	USB CHARGER RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	ELECTRICAL PANEL
	DISCONNECT SWITCH
	TELEVISION OUTLET
	TELEPHONE OUTLET
	TELEPHONE/DATA OUTLET
	DATA OUTLET
	FLOOR MTD. FLUSH TELEPHONE/DATA OUTLET
	QUAD. DATA OUTLET RJ45
	NON FUSED DISCONNECT SWITCH AMPERAGE AND NUMBER OF POLES AS NOTED
	30A/240V NON FUSED DISCONNECT SWITCH
	60A/240V NON FUSED DISCONNECT SWITCH

ABBREVIATIONS:

ABOVE FINISH FLOOR= A.F.F.
COUNTER TOP LEVEL= C
GROUND FAULT INTERRUPTER= GFCI
VERIFY PRIOR TO INSTALL= VH
WEATHER PROOF= WP
RECIRCULATION PUMP= RCP
BATHROOM EXHAUST FAN= BEF
AUTHORITY HAVING JURISDICTION= AHJ

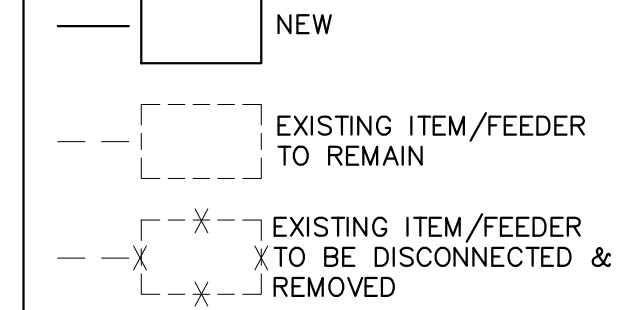
BELOW COUNTER= BC
PUSH BUTTON= PB
UNDER CABINET= UC
VAPOR PROOF= VP
WATER HEATER= WH
EXHAUST FAN= EF
ROOF TOP UNIT= RTU
ELECTRICAL CONTRACTOR= EC



ELECTRICAL RISER KEYED NOTES:

- EXISTING 200A, 120/208V, 3-PHASE ELECTRICAL SERVICE FROM THE ELECTRICAL METER AND DISCONNECT SWITCH FROM THE BASE BUILDING DISTRIBUTION SYSTEM TO REMAIN. E.C. SHALL COORDINATE WITH THE BASE BUILDING/LANDLORD/OWNER FOR EXACT POWER DISTRIBUTION. REPORT TO ENGINEER ON RECORD FOR ANY DISCREPANCIES.
- EXISTING 225A(M.L.O.), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" AND ITS INCOMING FEEDER TO REMAIN. E.C. TO FIELD VERIFY EXACT SIZE, LOCATION & OPERABLE CONDITION OF THE PANEL. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- NEW 100A(M.L.O.), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
- EXISTING INCOMING FEEDERS TO REMAIN. E.C. TO VERIFY OPERABLE CONDITION OF THE FEEDERS IN FIELD AND PROVIDE NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

ELECTRICAL RISER SYMBOLS



ELECTRICAL RISER GENERAL NOTES:

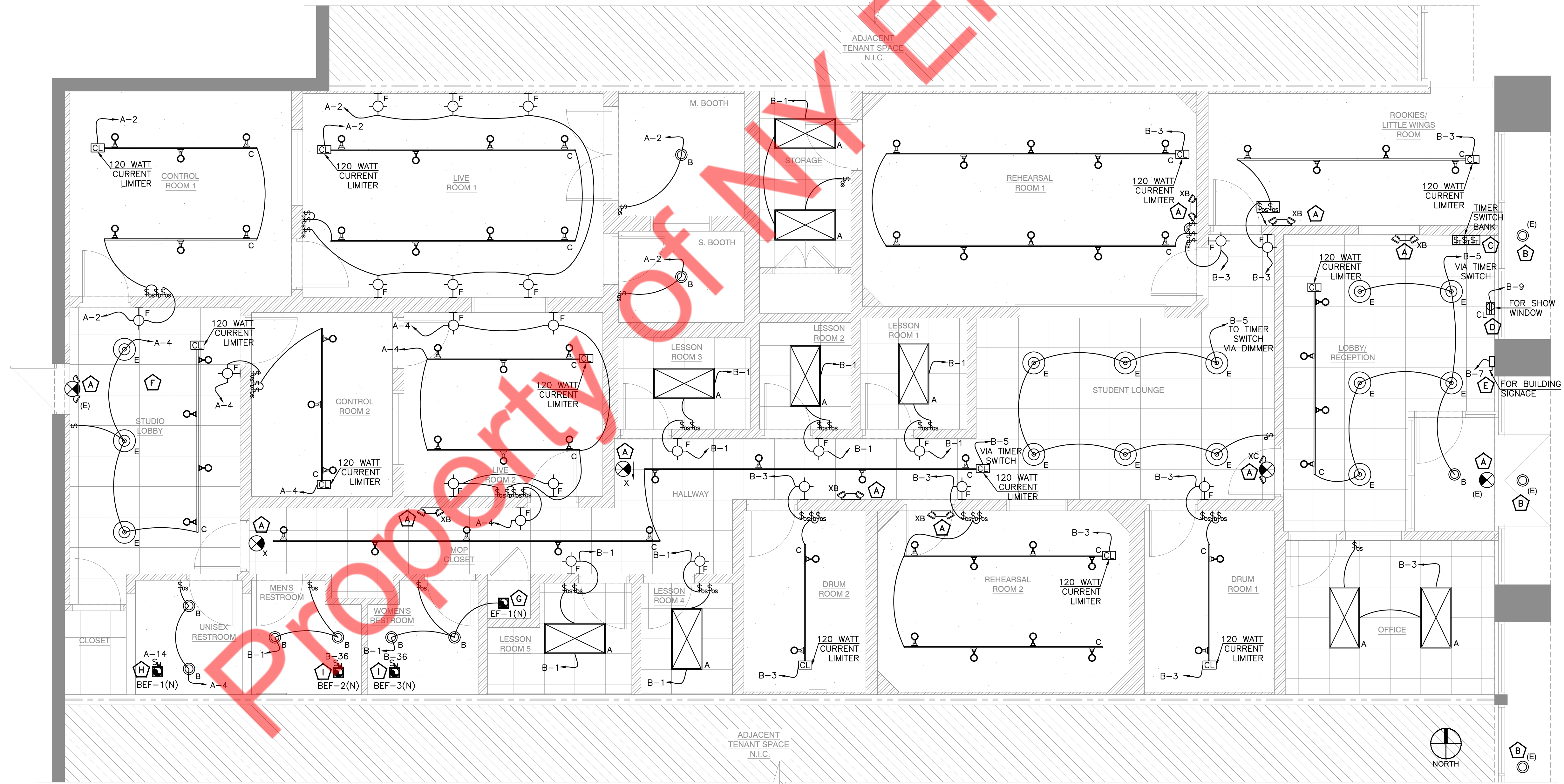
- ABOVE RISER DIAGRAM IS FOR REFERENCE PURPOSES ONLY. E.C. SHALL VERIFY EXACT POWER DISTRIBUTION IN FIELD AND INFORM ENGINEER ON RECORD FOR ANY DISCREPANCY.
- E.C. SHALL VERIFY INCOMING SERVICE AMPERAGE, WIRE SIZING AND DISTRIBUTION.
- ELECTRICAL CONTRACTOR TO COORDINATE FAULT CURRENT (Isc) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO COMMENCING ANY WORK.
- E.C. TO VERIFY OPERABLE CONDITIONS OF EXISTING DEVICES IN FIELD. REPLACE/RECTIFY IF FOUND IN OPERABLE. BASE BID ACCORDINGLY.
- EXISTING ELECTRICAL DISTRIBUTION TO BE MAINTAINED AND UTILIZED TO SERVE PROJECT SPACE. POWER RISER DIAGRAM INDICATED FOR REFERENCE PURPOSES ONLY.

ELECTRICAL LIGHTING PLAN KEYED WORK NOTES:

- A CONNECT ALL EMERGENCY EGRESS FIXTURE AND EXIT SIGNS TO THE NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS AS PER STATE AND LOCAL CODES.
- B EXISTING LIGHT FIXTURE IN THIS AREA DENOTED BY (E) SHALL REMAIN CONNECTED TO THE RESPECTIVE EXISTING ELECTRICAL HOUSE PANEL ALONG WITH THEIR CONTROLS. E.C. SHALL VERIFY THE CONTROLS IN THE FIELD AND REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- C COORDINATE EXACT LOCATION OF TIMER SWITCH BANK WITH OWNER/ARCHITECT.
- D PROVIDE SHOW WINDOW RECEPTACLE AS PER NEC 210.62. VERIFY EXACT LOCATION WITH ARCHITECT.
- E E.C. TO COORDINATE THE BUILDING SIGNAGE REQUIREMENTS WITH SIGN VENDOR. BASE BID ACCORDINGLY.
- F LIGHTING CONTROL IN THE ROOM SHALL NOT BE WITH AUTOMATIC MEANS AS PER NEC 110.26(D).
- G INTERCONNECT EF-1(N) WITH LIGHTS IN THE RESTROOM. E.C. TO COORDINATE WITH MECHANICAL DRAWINGS.
- H INTERCONNECT EXHAUST FAN BEF-1(N) WITH RTU-1(E). E.C. TO COORDINATE WITH MECHANICAL DRAWINGS.
- I INTERCONNECT EXHAUST FAN BEF-2(N) & BEF-3(N) WITH RTU-2(E). E.C. TO COORDINATE WITH MECHANICAL DRAWINGS.

ELECTRICAL LIGHTING PLAN GENERAL NOTES:

- A. ALL SWITCHES SHALL BE BLACK. SWITCHES IN THE REHEARSAL ROOM/DRUM ROOM/ROOKIES ROOM EXCEPT LESSON ROOMS SHALL BE SURFACE MOUNTED. E.C. SHALL COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN.
- B. COORDINATE FINAL FIXTURE MAKE & MODEL WITH ARCHITECT/OWNER.
- C. ALL LIGHT FIXTURES CONSIDERED TO BE AS 120 VOLT FIXTURE. E.C. SHALL INFORM ENGINEER ON RECORD OTHERWISE.
- D. UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE.
- E. ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.

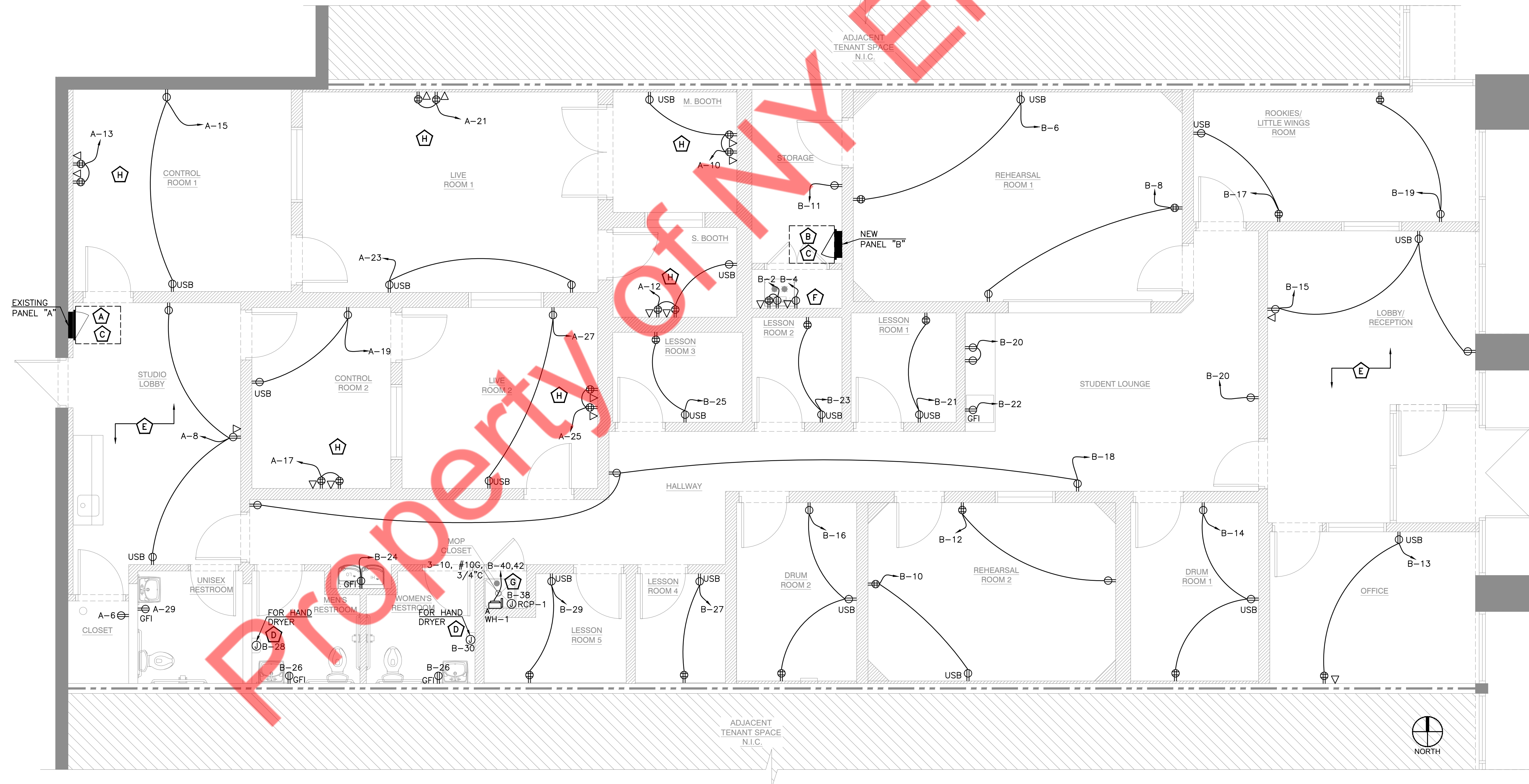


ELECTRICAL POWER PLAN KEYED WORK NOTES:

- A. EXISTING 225A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" TO REMAIN. E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
- B. NEW 100A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
- C. E.C. SHALL VERIFY/PERFORM THE INSTALLATION OF ELECTRICAL PANELS IN COMPLIANCE WITH NEC ARTICLE 110.26(A) AND (B). E.C. SHALL FIELD VERIFY THAT THE PANELS ARE UNOBSTRUCTED AND THE AREA WHERE THE PANELS ARE PLACED SHALL NOT BE USED AS A STORAGE SPACE.
- D. JUNCTION BOX FOR THE RESTROOM HAND DRYER. E.C. SHALL COORDINATE WITH OWNER FOR THE EXACT LOCATION AND MANUFACTURER FOR THE EXACT POWER REQUIREMENTS PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY.
- E. ALL 15/20A, 125V AND 250V NON LOCKING TYPE RECEPTACLES IN LOBBY/RECEPTION & STUDIO LOBBY SHALL BE LISTED TAMPER RESISTANCE AS PER NEC 406.12.
- F. E.C. SHALL COORDINATE WITH LOW VOLTAGE VENDOR FOR EXACT QUANTITY AND POWER REQUIREMENTS FOR LOW VOLTAGE EQUIPMENTS PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY.
- G. E.C. SHALL COORDINATE WITH THE WATER HEATER MANUFACTURER FOR THE EXACT POWER REQUIREMENTS PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY.
- H. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT QUANTITY AND POWER REQUIREMENTS OF ELECTRICAL OUTLETS IN BOOTHS, LIVE ROOM AND CONTROL ROOMS.

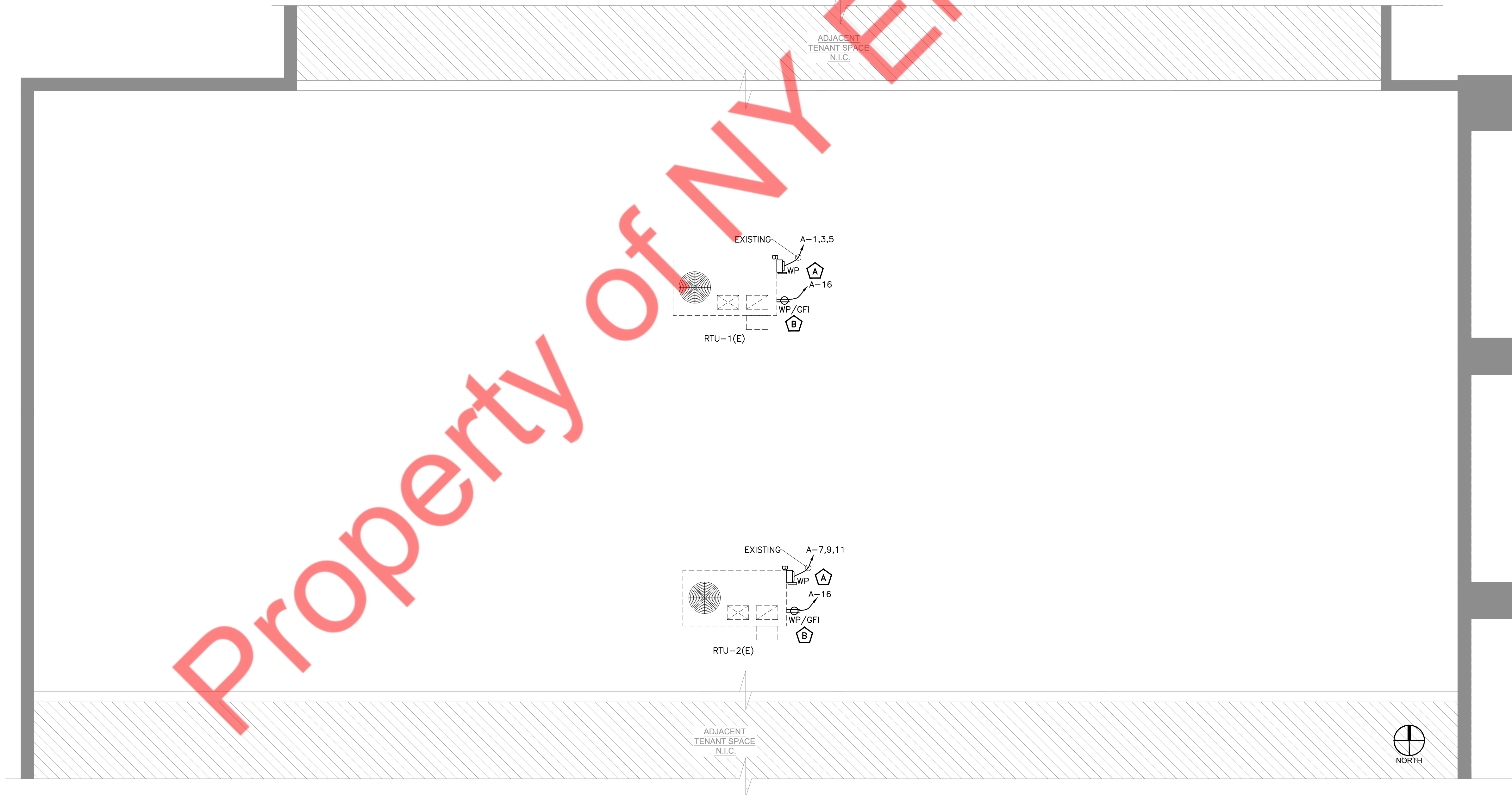
ELECTRICAL POWER PLAN GENERAL NOTES:

- A. ALL RECEPTACLES AND SWITCHES SHALL BE BLACK. RECEPTACLES AND SWITCHES IN THE REHEARSAL ROOM/DRUM ROOM/ROOKIES ROOM EXCEPT LESSON ROOMS SHALL BE SURFACE MOUNTED. E.C. SHALL COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN.
- B. ALL RECEPTACLES SHALL BE MOUNTED AT 18" AFF EVERYWHERE EXCEPT 24" AFF IN THE REHEARSAL ROOMS.
- C. FOR CCTV CAMERA REQUIREMENTS E.C. SHALL COORDINATE WITH SECURITY DRAWINGS/SPECIALIST FOR EXACT REQUIREMENTS AS PER THE EXISTING SITE CONDITIONS.
- D. E.C. SHALL COORDINATE WITH LOW VOLTAGE VENDOR FOR EXACT QUANTITY AND POWER REQUIREMENTS FOR LOW VOLTAGE EQUIPMENTS PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY.
- E. E.C. TO PLACE RECEPTACLES BOXES AT LEAST TWO FEET APART TO GUARANTEE AT LEAST ONE STUD BETWEEN OUTLETS.



ELECTRICAL ROOF POWER PLAN KEYED WORK NOTES:

- A** EXISTING MECHANICAL EQUIPMENT WITH ITS ELECTRICAL CONNECTION AND ELECTRICAL FIXTURE TO REMAIN. E.C. SHALL VERIFY OPERABLE CONDITION OF ELECTRICAL CONNECTION AND ELECTRICAL FIXTURE ON FIELD. REPLACE IF INOPERABLE. BASE BID ACCORDINGLY. E.C. SHALL COORDINATE WITH LANDLORD FOR THE EXACT LOCATION OF RTU AND ITS ELECTRICAL CONNECTIONS ON FIELD.
- B** EXISTING ROOF OUTLETS SHALL REMAIN WITH ITS BRANCH CIRCUITS. E.C. SHALL COORDINATE IN FIELD THE OPERABLE CONDITIONS OF THE SAME AND PROVIDE NEW IF FOUND INOPERABLE AS SHOWN ON THE DRAWINGS. BASE BID ACCORDINGLY.



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PANEL SCHEDULE:-

PANEL: A(E)										MOUNTING: RECESSED				
208Y/120	VOLTS,	3	PHASE,	4	WIRE									
MAIN CB	NA	MLO	225A	BUS	EXISTING	MIN,								
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
						A	B	C						
1	20	RTU-1(E)	H	3.35	EXISTING	4.05			2#12, #12G, 3/4"C	0.70	L	LIGHTING-CONTROL ROOM 1, LIVE ROOM 1, M. BOOTH & S. BOOTH	20	2
3	40/3P	RTU-1(E)	H	3.35	EXISTING		4.05		2#12, #12G, 3/4"C	0.70	L	LIGHTING-UNISEX RR, CONTROL ROOM 2, LIVE ROOM 2, STUDIO LOBBY	20	4
5			H	3.35				3.53	2#12, #12G, 3/4"C	0.18	R	RECEPTACLE-CLOSET	20	6
7			H	3.84		4.02			2#12, #12G, 3/4"C	0.18	R	RECEPTACLE-STUDIO LOBBY	20	8
9	40/3P	RTU-2(E)	H	3.84	EXISTING		4.74		2#12, #12G, 3/4"C	0.90	R	RECEPTACLE-M. BOOTH	20	10
11			H	3.84				4.74	2#12, #12G, 3/4"C	0.90	R	RECEPTACLE-S. BOOTH	20	12
13	20	RECEPTACLE-CONTROL ROOM 1	R	0.72	2#12, #12G, 3/4"C	0.74			2#12, #12G, 3/4"C	0.02	M	BEF-1(N)	20	14
15	20	RECEPTACLE-CONTROL ROOM 1	R	0.36	2#12, #12G, 3/4"C		0.72		2#12, #12G, 3/4"C	0.36	R	RECEPTACLE-ROOF	20	16
17	20	RECEPTACLE-CONTROL ROOM 2	R	0.72	2#12, #12G, 3/4"C			0.72				SPARE	20	18
19	20	RECEPTACLE-CONTROL ROOM 2	R	0.36	2#12, #12G, 3/4"C	0.36						SPARE	20	20
21	20	RECEPTACLE-LIVE ROOM 1	R	0.72	2#12, #12G, 3/4"C		0.72					SPARE	20	22
23	20	RECEPTACLE-LIVE ROOM 1	R	0.36	2#12, #12G, 3/4"C			0.36				SPARE	20	24
25	20	RECEPTACLE-LIVE ROOM 2	R	0.72	2#12, #12G, 3/4"C	0.72						SPARE	20	26
27	20	RECEPTACLE-LIVE ROOM 2	R	0.36	2#12, #12G, 3/4"C		0.36					SPARE	20	28
29	20	RECEPTACLE-UNISEX RESTROOM	R	0.18	2#12, #12G, 3/4"C			0.18				SPARE	20	30
31						0.00						SPARE	40/2P	32
33	30/2P	SPARE					0.00					SPARE	40/2P	34
35	20	SPARE						0.00				SPARE	40/2P	36
37			O	9.13		9.13						SPARE	40/2P	38
39	100/3P	PANEL "B"(N)	O	9.13	4#3, #8G, 1 1/4"C		9.13					SPARE	40/2P	40
41			O	9.13				9.13				SPARE	40/2P	42
TOTAL LOAD (KVA)						19.02	19.72	18.66						

PANEL: B(N)										MOUNTING: SURFACE				
208Y/120	VOLTS,	3	PHASE,	4	WIRE									
MAIN CB	NA	MLO	100A	BUS	125A	MIN,								
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
						A	B	C						
1	20	LIGHTING-LESSON ROOMS 1 TO 5, STORAGE, WEMEN'S RR, MEN'S RR, EF-1(N)	L	0.75	2#12, #12G, 3/4"C	1.75			2#12, #12G, 3/4"C	1.00	R	IT RACK	20	2
3	20	LIGHTING-DRUM ROOM 1 & 2, REHEARSAL ROOM 1 & 2, OFFICE, ROOKIES/LITTLE WINGS ROOM	L	0.75	2#12, #12G, 3/4"C		1.29		2#12, #12G, 3/4"C	0.54	R	IT CLOSET	20	4
5	20	LIGHTING-HALLWAY, STUDENT LOUNGE, LOBBY/RECEPTION	L	0.50	2#12, #12G, 3/4"C			1.04	2#12, #12G, 3/4"C	0.54	R	RECEPTACLE -REHEARSAL ROOM 1	20	6
7	20	BUILDING SIGNAGE/TIMECLOCK	L	1.20	2#12, #12G, 3/4"C	1.74			2#12, #12G, 3/4"C	0.54	R	RECEPTACLE -REHEARSAL ROOM 1	20	8
9	20	RECEPTACLE-SHOW WINDOW	L	1.80	2#12, #12G, 3/4"C		2.34		2#12, #12G, 3/4"C	0.54	R	RECEPTACLE -REHEARSAL ROOM 2	20	10
11	20	RECEPTACLE-STORAGE	R	0.18	2#12, #12G, 3/4"C			0.72	2#12, #12G, 3/4"C	0.54	R	RECEPTACLE -REHEARSAL ROOM 2	20	12
13	20	RECEPTACLE-OFFICE	R	0.54	2#12, #12G, 3/4"C	1.26			2#12, #12G, 3/4"C	0.72	R	RECEPTACLE -DRUM ROOM 1	20	14
15	20	RECEPTACLE-LOBBY/RECEPTION	R	0.54	2#12, #12G, 3/4"C		1.26		2#12, #12G, 3/4"C	0.72	R	RECEPTACLE -DRUM ROOM 2	20	16
17	20	RECEPTACLE-ROOKIES/LITTLE WINGS	R	0.54	2#12, #12G, 3/4"C			1.08	2#12, #12G, 3/4"C	0.54	R	RECEPTACLE -HALLWAY	20	18
19	20	RECEPTACLE-ROOKIES/LITTLE WINGS	R	0.54	2#12, #12G, 3/4"C	1.08			2#12, #12G, 3/4"C	0.54	R	RECEPTACLE -STUDENT LOUNGE	20	20
21	20	RECEPTACLE-LESSON ROOM 1	R	0.54	2#12, #12G, 3/4"C		1.74		2#12, #12G, 3/4"C	1.20	R	REFRIGERATOR -STUDENT LOUNGE	20	22
23	20	RECEPTACLE-LESSON ROOM 2	R	0.54	2#12, #12G, 3/4"C			0.72	2#12, #12G, 3/4"C	0.18	R	RECEPTACLE -DRINKING FOUNTAIN	20	24
25	20	RECEPTACLE-LESSON ROOM 3	R	0.54	2#12, #12G, 3/4"C	0.90			2#12, #12G, 3/4"C	0.36	R	RECEPTACLE -WOMEN'S AND MEN'S RESTROOM	20	26
27	20	RECEPTACLE-LESSON ROOM 4	R	0.54	2#12, #12G, 3/4"C		1.54		2#12, #12G, 3/4"C	1.00	R	J.B. - MEN'S RESTROOM HAND DRYER	20	28
29	20	RECEPTACLE-LESSON ROOM 5	R	0.54	2#12, #12G, 3/4"C			1.54	2#12, #12G, 3/4"C	1.00	R	J.B. - WOMEN'S RESTROOM HAND DRYER	20	30
31	20	SPARE				0.00						SPARE	20	32
33	20	SPARE					0.00					SPARE	20	34
35	20	SPARE						0.04	2#12, #12G, 3/4"C	0.04	M	BEF-2(N) & BEF-3(N)	20	36
37	20	SPARE				0.09			2#12, #12G, 3/4"C	0.09	M	RECIRCULATION PUMP(RCP-1)	20	38
39	20	SPARE					3.00			3.00	O	WH-1(N)	40/2P	40
41	20	SPARE						3.00	2#8, #10G, 3/4"C	3.00	O		40/2P	42
TOTAL LOAD (KVA)						6.82	11.17	8.14						

PANEL SCHEDULE GENERAL NOTES:

1. ABOVE RISER DIAGRAM IS FOR REFERENCE PURPOSES ONLY. E.C. SHALL VERIFY EXACT POWER DISTRIBUTION IN FIELD AND INFORM ENGINEER ON RECORD FOR ANY DISCREPANCY.
2. E.C. SHALL VERIFY INCOMING SERVICE AMPERAGE, WIRE SIZING AND DISTRIBUTION.
3. ELECTRICAL CONTRACTOR TO COORDINATE FAULT CURRENT (Isc) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO COMMENCING ANY WORK.
4. E.C. TO VERIFY OPERABLE CONDITIONS OF EXISTING DEVICES IN FIELD. REPLACE/RECTIFY IF FOUND IN OPERABLE. BASE BID ACCORDINGLY.
5. EXISTING ELECTRICAL DISTRIBUTION TO BE MAINTAINED AND UTILIZED TO SERVE PROJECT SPACE. POWER RISER DIAGRAM INDICATED FOR REFERENCE PURPOSES ONLY.

EXISTING CONTIDITONS NOTES

STOP AND READ

THE CONTRACTOR AND SUB-CONTRACTORS SHALL NOT INITIATE ANY WORK UNTIL EXISTING FIELD CONDITIONS ARE PROPERLY VERIFIED. THIS SHALL HOLD TRUE FOR FIRST GENERATION AND 2ND GENERATION SPACES. WHEN DEMOLITION IS REQUIRED, THAT WILL BE PERMITTED TO EXPOSE CONDITIONS. THESE VERIFICATIONS SHALL INCLUDE BUT NOT LIMITED TO: DIMENSIONS BOTH HORIZONTALLY AND VERTICAL, ELECTRICAL SERVICE /PANELS LOCATION AND VOLTS/PHASE, LOCATION/ITY OF ROOF MOUNTED HVAC EQUIPMENT, CONFIRM THAT INTERIOR HVAC HUNG UNITS HAVE PROPER SUPPORT CONNECTIONS FOR EXISTING STRUCTURE, FIRE SPRINKLER MAIN RUNS, TOILET ROOM DIMENSIONS, DOOR SWING FOR DOORS TO REMAIN AND ETC. IF NOT VERIFIED AND DISCOVERED AT A LATER TIME, THE CONTRACTOR SHALL REIMBURSE THE ARCHITECT FOR THE REDESIGN FEE. THIS DOES NOT INCLUDE HIDDEN WORK I.E. PITCH OF SANITARY LINES, ACTUAL CONDITIONS OF EXISTING HVAC EQUIPMENT, STRUCTURAL COLUMNS/BEARING WALLS OR CONDITIONS OF GREASE INTERCEPTORS AND ETC.

SCOPE OF WORK

PROVIDE ALL PLUMBING FOR SKILL DEVELOPMENT FACILITY INCLUDING ALL WATER & SANITARY LINES AND CONNECT TO EXISTING UTILITIES. PROVIDE NEW ELECTRIC STORAGE WATER HEATER.

COORDINATE WITH GC AND MECH CONTRACTOR FOR ANY REQUIRED CONDENSING WATER LINES.

FIXTURE BRANCH SCHEDULES

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
LAVATORY	1/2"	1/2"	2"	1-1/2"
WATER CLOSET	1/2"	-	4"	2"
MOP SINK	1/2"	1/2"	2"	2"
DRINKING FOUNTAIN	1/2"	-	2"	1-1/2"
SINK	1/2"	1/2"	2"	1-1/2"

PLUMBING NOTES

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, RULES AND ORDINANCES.
- PLUMBING CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING OR PRECEDING WITH WORK.
- ALL EQUIPMENT WHICH IS TO REMAIN MUST BE REFURBISHED TO A LIKE NEW CONDITION.
- PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
- ALL MATERIALS SHALL BE NEW.
- ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
- REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTION AND TESTS. PLUMBING CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
- DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ENGINEER/ARCHITECT PRIOR TO BEGINNING CONSTRUCTION.
- VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
- EXPOSED WATER PIPING SHALL BE TYPE "L" COPPER FOR 2" AND UNDER. WATER PIPING IN WALLS AND UNDERGROUND MAY BE "PEX" TYPE PIPING THAT MEETS ANS/ANSI STANDARD 61.
- SOIL, WASTE, VENT AND RAINWATER PIPING SHALL BE PVC BUT MAY NOT RUN THRU RATED ASSEMBLIES OR IN PLENUMS.
- ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
- FURNISH AND INSTALL APPROVED AIR CHAMBERS AT EACH PLUMBING FIXTURE GROUP AS PER CODE AND WITH GOOD ENGINEERING PRACTICE.
- DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS; EXCEPT AT WATER HEATER AS PER CODE.
- ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD.
- ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES WITH FIRE RATED FOAM, TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS AS PART OF THE PLUMBER'S WORK.
- PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE WITHIN 72 HOURS OF NOTIFICATION AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
- STUD OR MINI/MAXI AIR ADMITTANCE VALVES MAY NOT BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF.
- PROVIDE CHROME PLATED COMBINATION COVER PLATE AND CLEAN OUT PLUG OR ACCESS PANEL FOR ALL CLEANOUTS.
- NO COMBUSTIBLE MATERIAL TO BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
- NO WATER, SANITARY OR DRAINAGE PIPING PERMITTED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
- WATER PIPING INSULATION SHALL BE 1" THICK ARMAFLEX INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR ALL HOT WATER PIPING. WHERE DOMESTIC WATER TEMPERATURES CAN CAUSE SWEATING, ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX INSULATION.
- CONDENSATE DRAIN LINES TO BE RUN UNDER SLAB IN PVC SCH40 PIPE AND STUBBED OUT OF WALL TO UNIT. TIE-IN OF A/C TO BE BY OTHERS. PVC PIPING WITH 1/2" THICK ARMAFLEX INSULATION MAY BE USED IN LOCATIONS WHERE ALLOWED BY LOCAL CODES. SEE PLUMBING DRAWINGS FOR SIZE AND LOCATION OF PIPING. PVC WILL BE MIN. SCHEDULE 40 FOR SIZE AND LOCATION OF PIPING. PVC WILL BE MIN. SCHEDULE 40.
- PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
- NO JOINTS UNDERGROUND FOR COPPER.
- PLUMBING FIXTURES SHALL COMPLY WITH 2014 ILLINOIS PLUMBING CODE.
- WATER HAMMER ARRESTORS AS PER 2014 ILLINOIS PLUMBING CODE.
- PLUMBING CONTRACTOR SHALL REVIEW ALL BID DOCUMENTATION.
- PLUMBING CONTRACTOR SHALL REVIEW WALL FINISHES @ LOCATION REQUIRING BARRIER-FREE COMPLIANCE (EXAMPLE: CENTER LINE TO TOILET).
- CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE COPY TO LL.
- OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER. PROVIDE A COPY TO LL.

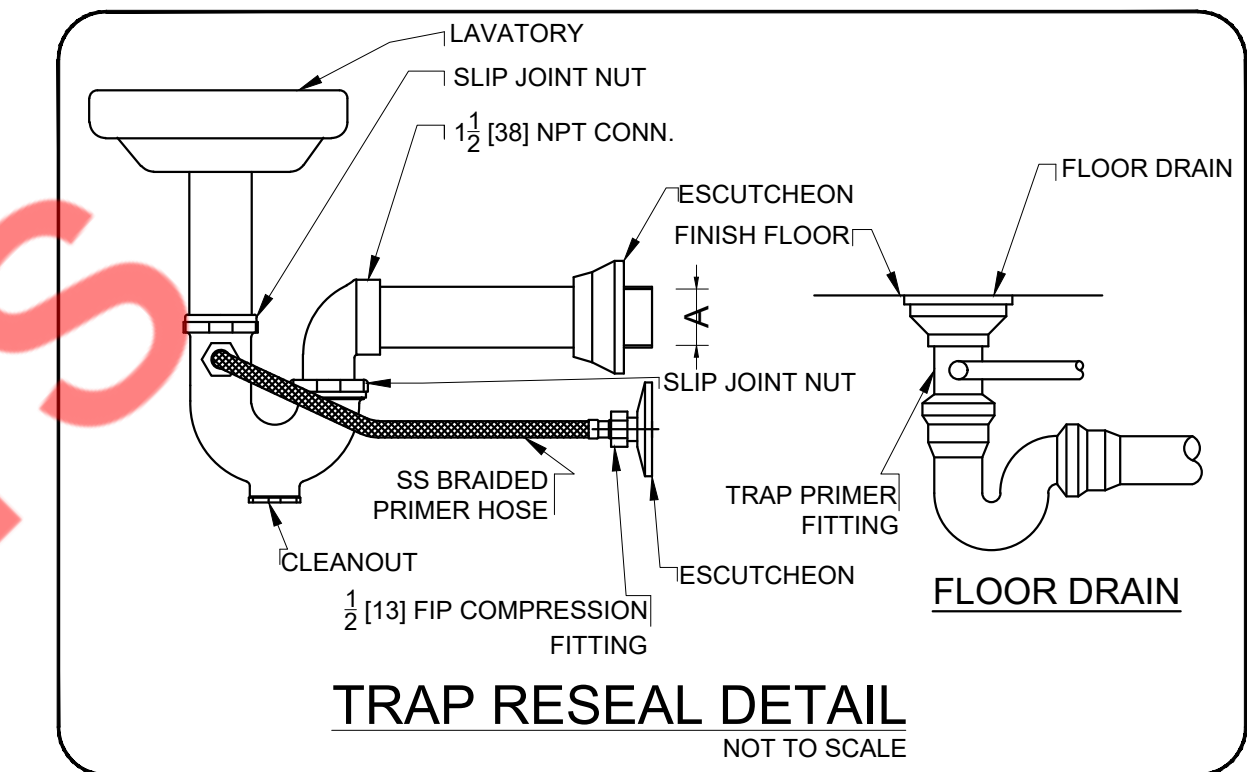
PLUMBING LEGEND

	SANITARY SEWER PIPING
	VENT PIPING
	DOMESTIC COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
	EXISTING COLD WATER PIPING
	EXISTING HOT WATER PIPING
	PIPE UP
	PIPE DOWN
	BALANCING VALVE
	WALL CLEAN OUT
	FLOOR CLEAN OUT
	P-TRAP
	SHUT-OFF VALVE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	EXISTING
	ISOLATION VALVE
	CHECK VALVE
	FLOOR DRAIN
	POINT OF CONNECTION
	THERMOSTATIC MIXING VALVE

PLUMBING FIXTURE SCHEDULE

Item No.	Qty.	Description	MANUFACTURER	MODEL	WATER		WASTE	Usage	Spec
					Hot	Cold			
A	3	LAVATORY	AMERICAN STANDARD	LUCERNE 0356.421			2"		
B	2	*LAVATORY FAUCET	AMERICAN STANDARD	KOHLER K-R22797-4D	1/2"	1/2"		1.2	GPM
B1	1	WATER CLOSET	AMERICAN STANDARD	2386.010			4"	1.6	GPF
C	1	MOP SINK	MUSTEE OR EQUIVALENT	63M			3"		
D	1	MOP SINK FAUCET	MUSTEE OR EQUIVALENT	63.600	1/2"	1/2"		6	GPM
E	1	DRINKING FOUNTAIN	ELKAY	LZSTL8WSLK			2"		
WH-1	1	SINK	-	-			2"		
FD	3	NEW WATER HEATER	SEE SCHEDULE	SEE SCHEDULE					
		FLOOR DRAIN	-	-			3"		

*LAVATORY FAUCET MAXIMUM HOT WATER TEMPERATURE MUST BE REGULATED TO NOT EXCEED 110°F BY A DEVICE COMPLYING WITH ASSE 1070.



ENERGY CONSERVATION NOTES

1. AS PER 2015 INTERNATIONAL ENERGY CONSERVATION CODE C404.4, PIPING FROM A WATER HEATER TO THE TERMINATION OF HEATED WATER FIXTURE SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE C403.2.10 OF MINIMUM PIPE INSULATION THICKNESS.

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	MINIMUM PIPE INSULATION THICKNESS		NOMINAL PIPE OR TUBE SIZE (INCHES)		
	INSULATION CONDUCTIVITY	MEAN RATING TEMPERATURE, °F	<1	1 to < 1 1/2	1 1/2 to < 4
	CONDUCTIVITY BTU-IN/ (H·FT ² ·°F)				
141-200	0.25-0.29	125	1.5	1.5	2.0
105-140	0.21-0.28	100	1.0	1.0	1.5
40-60	0.21-0.27	75	0.5	0.5	1.0

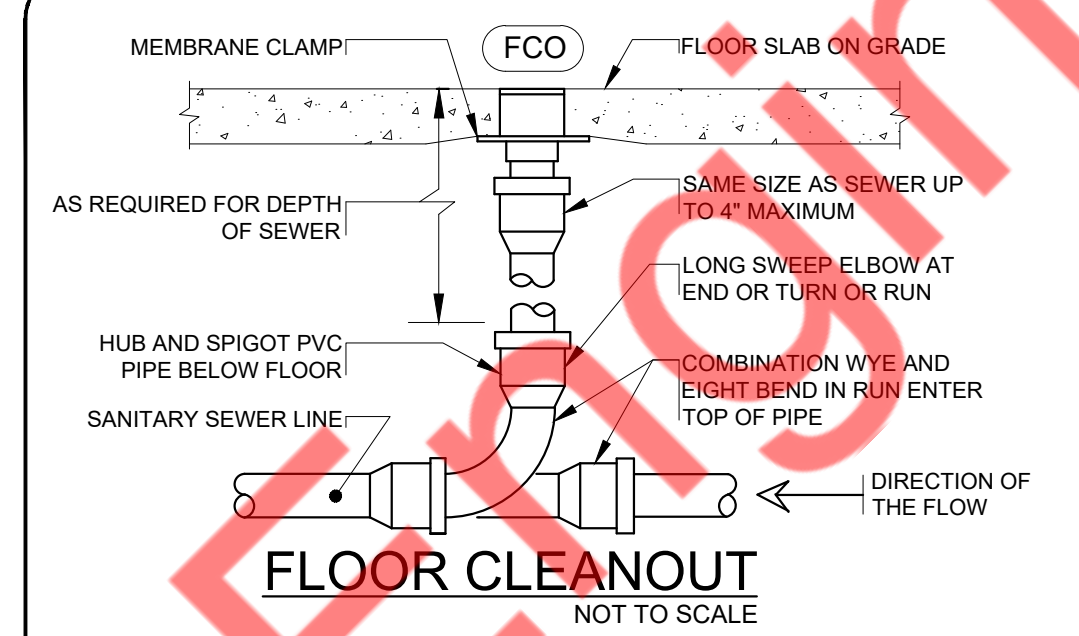
2. AS PER 2015 INTERNATIONAL ENERGY CONSERVATION CODE C404.5.1, HOT WATER SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD. THE HOT WATER VOLUME FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER MAXIMUM PIPING LENGTH TABLE.

NOMINAL PIPE SIZE (INCHES)	MIXIMUM PIPING LENGTH (FEET)	
	PUBLIC LAV	OTHER FIXTURES
3/8"	3'	50'
1/2"	2'	43'
3/4"	0.5'	21'
1"	0.5'	13'
1 1/4"	0.5'	8'
1 1/2"	0.5'	6'
2" OR LARGER	0.5'	4'

3. AS PER 2015 INTERNATIONAL ENERGY CONSERVATION CODE C404.6.1, AUTOMATIC CONTROLS SHALL BE INSTALLED THAT LIMITS THE OPERATION OF A RECIRCULATING PUMP AND THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE.

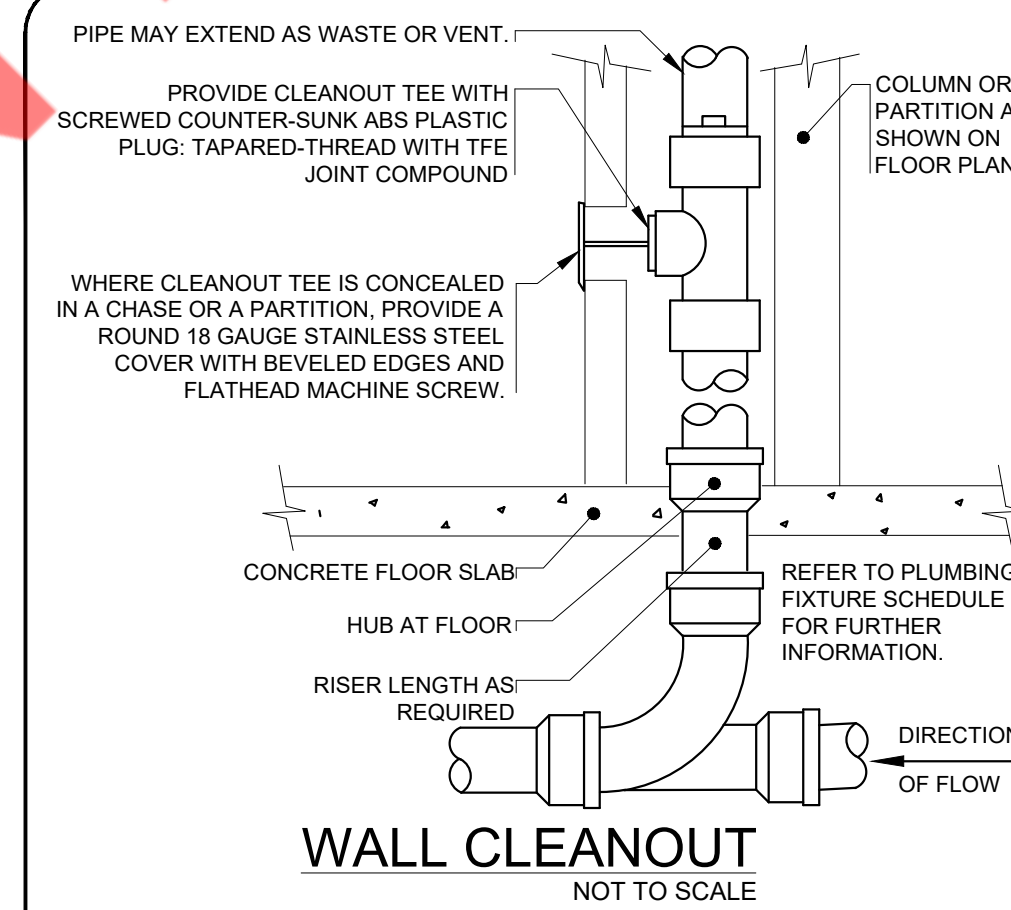
4. AS PER 2015 INTERNATIONAL ENERGY CONSERVATION CODE C404.7, PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING:

- THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE.
- THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO 104°F (40°C).



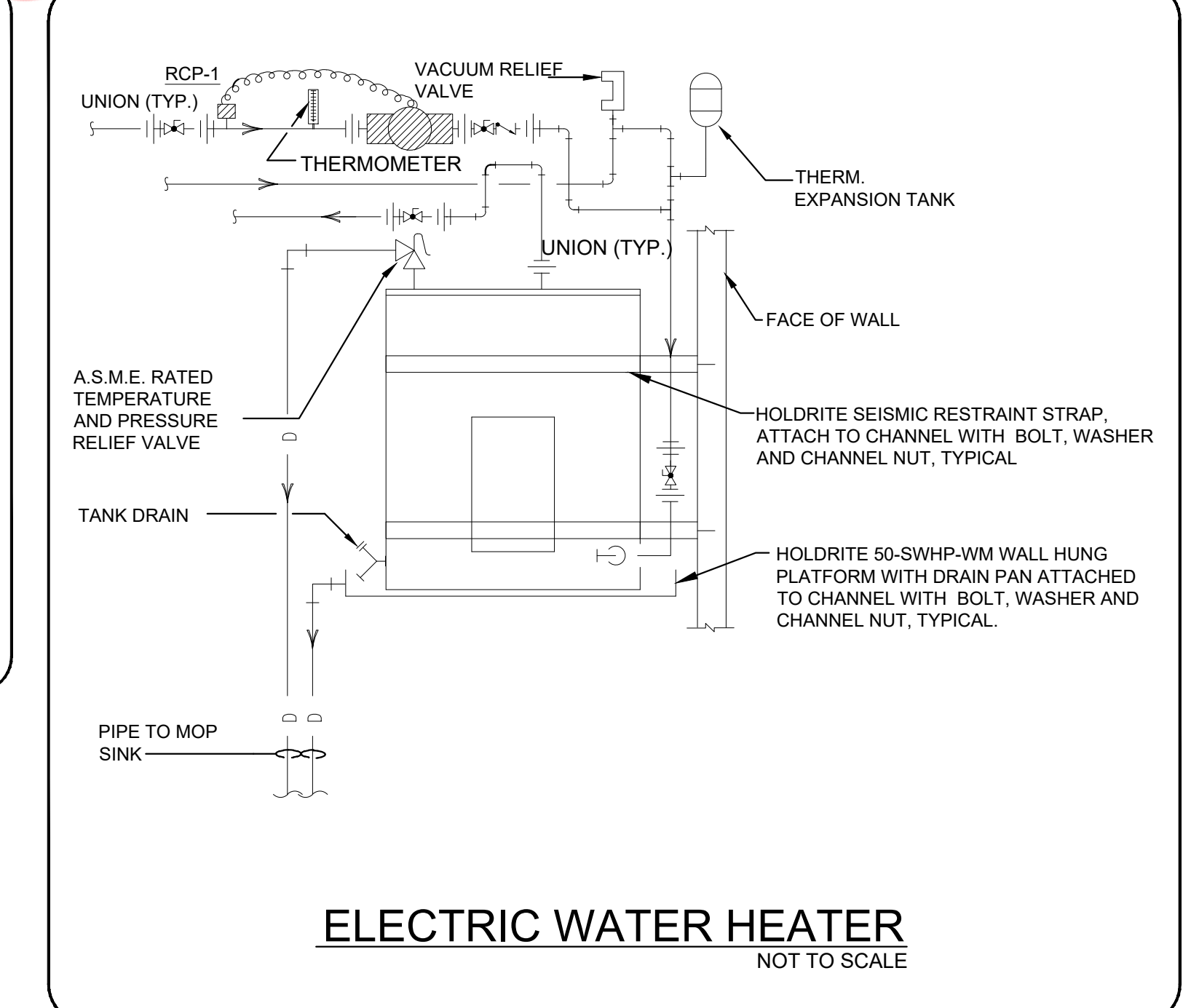
FLOOR CLEANOUT DETAIL NOTES

- LOCATE CLEANOUT AT THIS LOCATIONS:
 - BUILDING EXIT
 - AT TURNS OF PIPES GREATER THAN 45 DEGREES
 - AT 90° INTERVALS ON STRAIGHT RUNS
 - WHERE IS SHOWN ON PLANS
 - WHERE IS 18" CLEAR AROUND



WALL CLEANOUT DETAIL NOTES

- PROVIDE WCO WHERE SHOWN ON PLANE, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT
- LOCATE ABOVE FIXTURE FLOOR RIM WITHIN 4" OF FLOOR.
- CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.
- LONG SWEEP AT END OF LINE OR COMBINATION WYE AND EIGHT BEND IN RUN OF LINE
- CLEAN OUT FACE SHALL BE WITHIN 4" OF WALL SURFACE. PROVIDE A PIPE EXTENSION IF REQUIRED

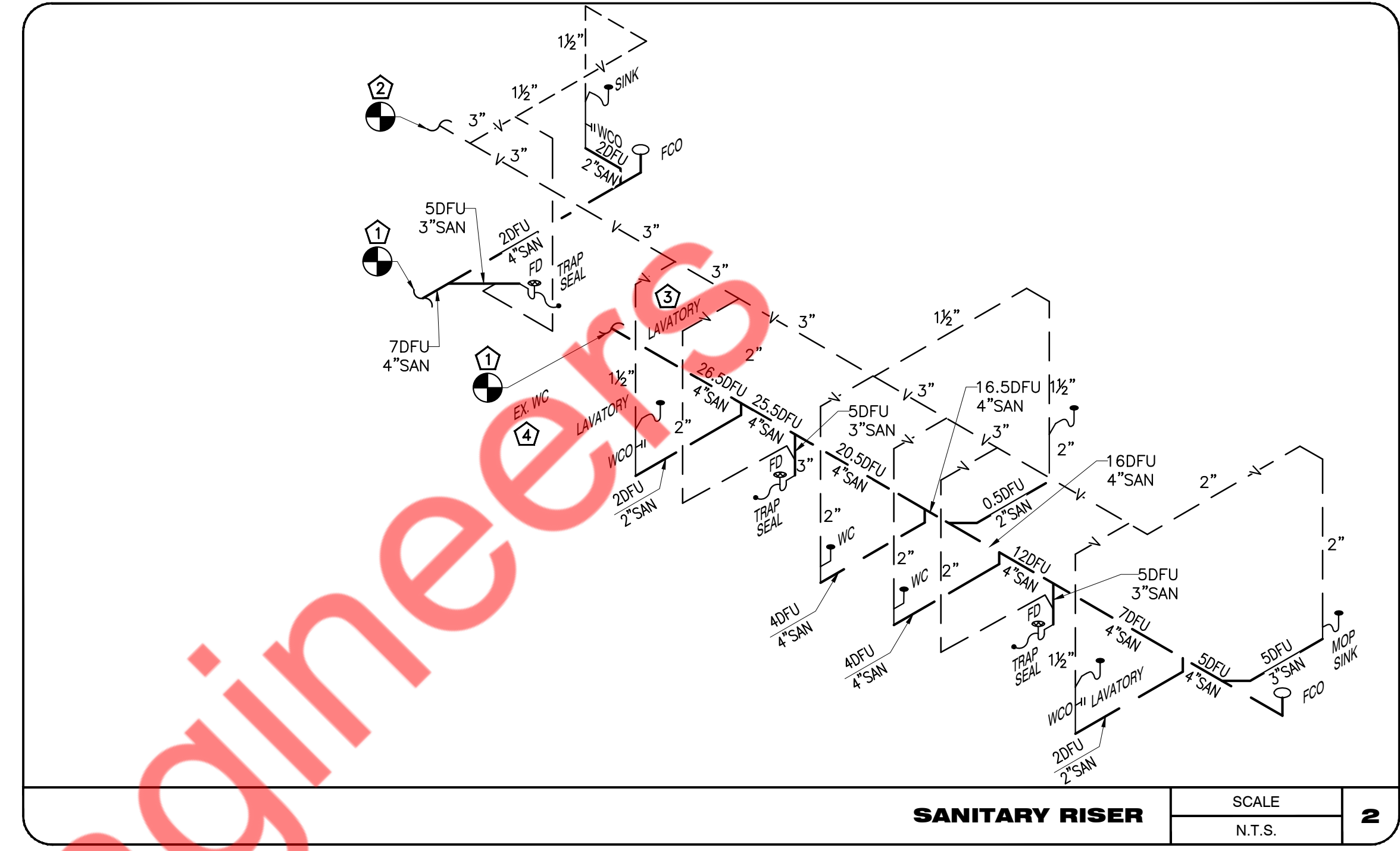


GENERAL NOTES

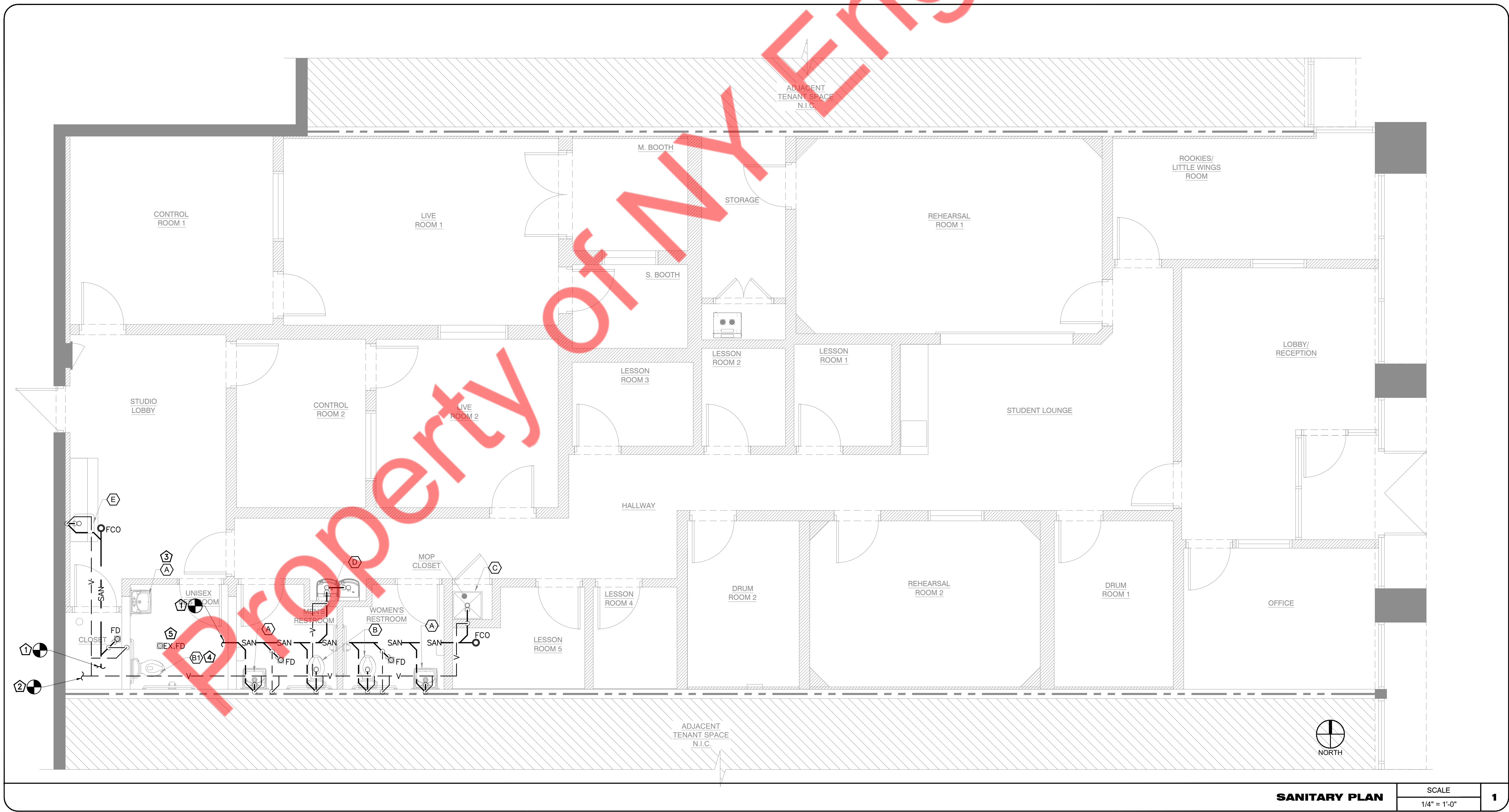
- UNLESS OTHERWISE NOTED, SLOPE OF DRAINAGE SYSTEM TO BE 1/8" PER FOOT OF RUN FOR PIPE LARGER THEN 3" AND 1/4" PER FOOT FOR PIPE 3" OR LESS.
- CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
- ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
- PROVIDE ACCESS PANELS FOR CLEANOUTS AS REQUIRED.
- REFER SANITARY RISER DIAGRAM FOR ALL PIPE SIZES.
- CONTRACTOR TO VERIFY THE EXISTING SANITARY AND VENT LOCATION AND ROUTING. MAKE NECESSARY CHANGES TO NEW PIPING AS PER THE EXISTING SITE CONDITION.
- EXISTING SANITARY/VENT PIPES FROM EXISTING DEMOLISHED FIXTURE/ EQUIPMENT TO BE CAPPED AT CEILING NEAR THE FIXTURE/ EQUIPMENT.

SANITARY KEY NOTE

- CONNECT NEW 4" SANITARY WASTE PIPING TO EXISTING SANITARY WASTE LINE. CONTRACTOR TO FIELD VERIFY EXACT SIZE, LOCATION AND INVERT OF EXISTING LINE ON SITE.
- CONNECT NEW 3" VENT PIPING TO EXISTING VENT LINE. CONTRACTOR TO FIELD VERIFY EXACT SIZE, LOCATION OF EXISTING LINE ON SITE.
- EXISTING LAVATORY TO REPLACE WITH NEW AND CONNECT WITH EXISTING PLUMBING CONNECTION. CONTRACTOR TO FIELD VERIFY CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
- EXISTING WATER CLOSET TO REMAIN WITH SANITARY AND VENT CONNECTION, ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
- EXISTING FLOOR DRAIN TO REMAIN WITH SANITARY AND VENT CONNECTION, ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.



SANITARY RISER SCALE N.T.S. **2**



SANITARY PLAN SCALE 1/4" = 1'-0" **1**

RECIRCULATION PUMP SCHEDULE	
MANUFACTURER & MODEL	GRUNDFOS UP-15-18 BS
EQUIPMENT TAG	RCP-1
STATUS	NEW
GPM	2
WATER TEMP. (°F)	140
PUMP TYPE	INLINE
MHP	86 WATTS
V/PH/Hz	115/1/60
RPM	2280
SERVICE FACTOR	1.0

NEW STORAGE WATER HEATER SCHEDULE	
MANUFACTURER	AO SMITH
MODEL	DEN-50
EQUIPMENT TAG	WH-1
STATUS	NEW
CAPACITY	48 GALLONS
QUANTITY	1
KW	6
FLOW RATE	27 GPH*
VOLTAGE	208/3/60
AMPERAGE	28.84
WEIGHT	172 LBS

*NON SIMULTANEOUS OPERATION @ 90° F TEMPERATURE RISE
 INSTALL NEW EXPANSION TANK (ET-1) AMTROL MODEL THERM-X-TROL ST-5.2.0 GAL PER LOCAL CODE REQUIREMENTS

GENERAL NOTES

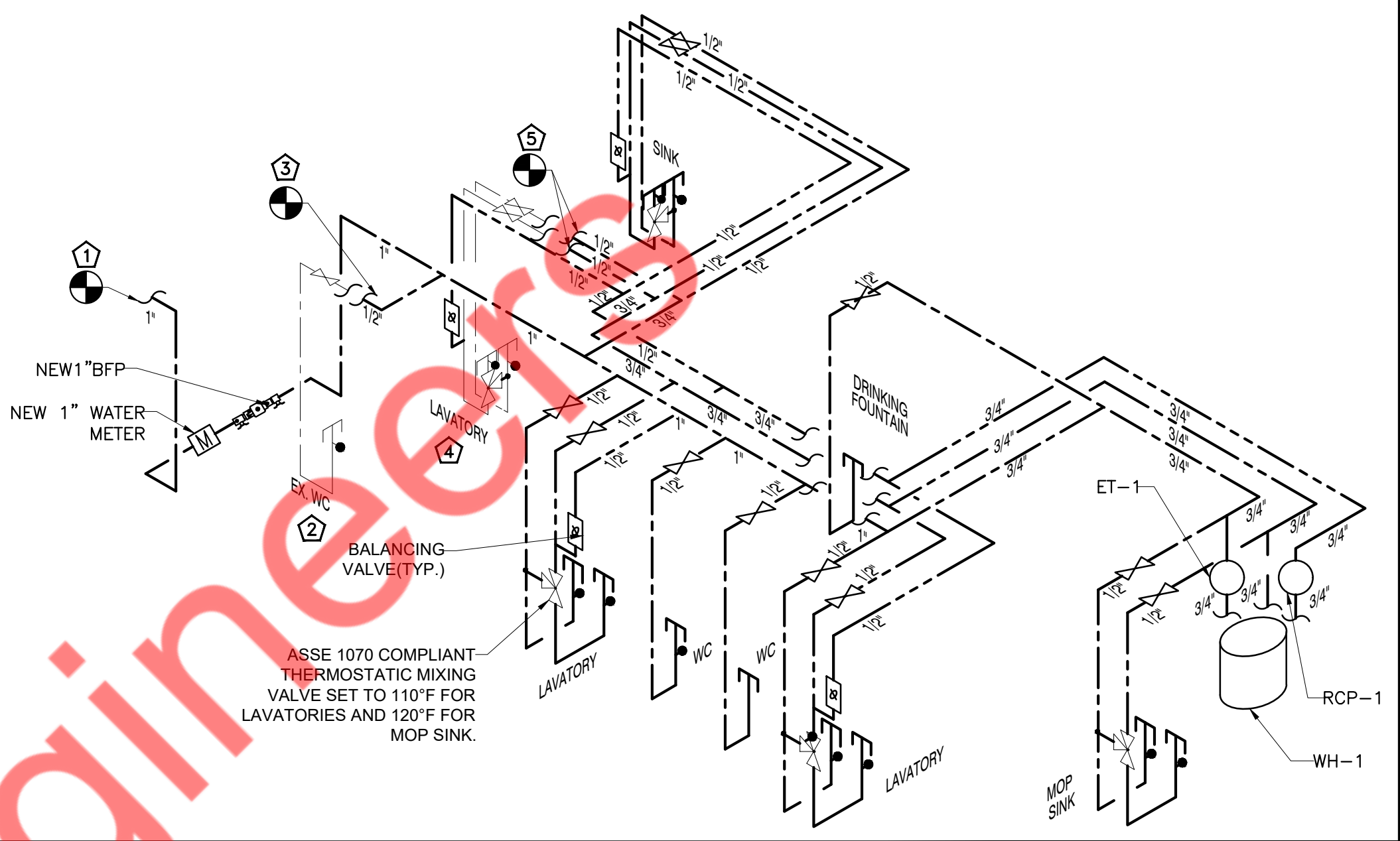
1. CW/HW/HWR PIPING TO BE PROVIDED WITH INSULATION AS PER 2015 INTERNATIONAL ENERGY CONSERVATION CODE.
2. PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
3. PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTOR & SHUT-OFF VALVES AS REQUIRED.
4. REFER WATER RISER DIAGRAM FOR ALL PIPE SIZES.
5. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
6. NEW WATER HEATER (WH-1) DRAIN SPILLS TO THE MOP SINK.
7. EXISTING GAS/WATER PIPES FROM EXISTING DEMOLISHED FIXTURE/ EQUIPMENT TO BE CAPPED AT CEILING NEAR THE FIXTURE/ EQUIPMENT.
8. EXISTING WATER HEATER WITH EXISTING ACCESSORIES TO BE DEMOLISHED.

WATER & GAS KEY NOTES

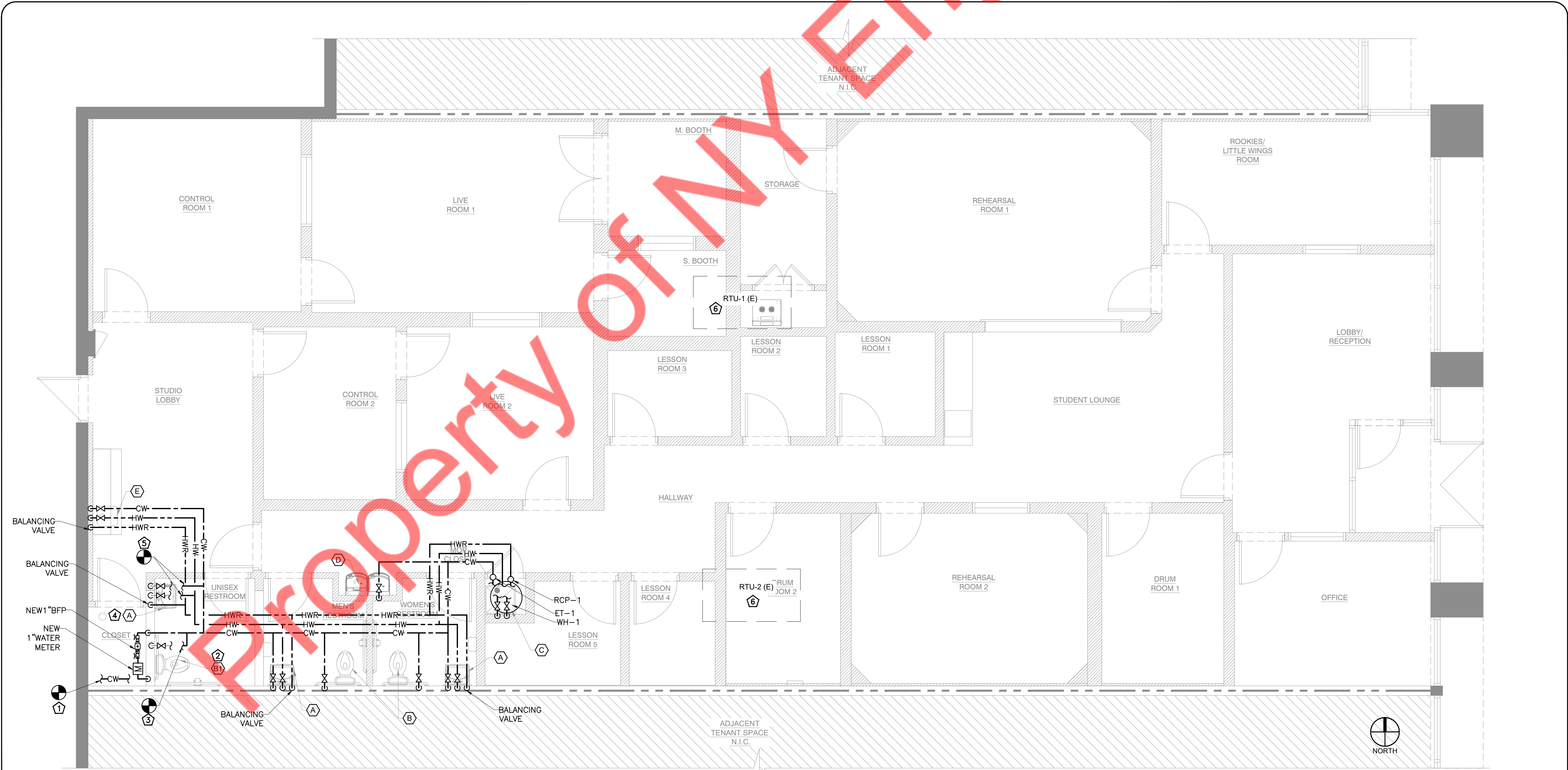
1. CONNECT NEW 1" CW LINE TO EXISTING WATER MAIN LINE. PROVIDE NEW WATER METER AND BFP. CONTRACTOR TO FIELD VERIFY SIZE AND LOCATION OF EXISTING WATER LINE AND UPGRADE IF REQUIRED.
2. EXISTING WATER CLOSET TO REMAIN WITH EXISTING CW PIPING. CONTRACTOR TO VERIFY THE CONDITION OF EXISTING WATER CLOSET AND PIPING. REPLACE IF REQUIRED.
3. EXTEND AND CONNECT NEW 1/2" CW PIPING TO THE EXISTING WATER CLOSET PIPING. CONTRACTOR TO FIELD VERIFY CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
4. EXISTING LAVATORY TO REPLACE WITH NEW. AND CONNECT WITH EXISTING CW/HW CONNECTION. CONTRACTOR TO FIELD VERIFY CONDITION OF CW EXISTING PIPING AND REPLACE IF REQUIRED.
5. EXTEND AND CONNECT NEW 1/2" HW/CW PIPING TO THE EXISTING LAVATORY PIPING AND CONNECT NEW HW RETURN PIPING TO THE EXISTING HW PIPING AS SHOWN.
6. EXISTING RTU-1(E) AND RTU-2(E) TO REMAIN WITH EXISTING GAS SUPPLY LINE. CONTRACTOR TO FIELD VERIFY THE EXACT SIZE, PRESSURE, AND LOCATION OF THE EXISTING GAS PIPING AND REPLACE IF REQUIRED.

FIXTURE FACTOR VALUE *	
2 WATER CLOSET(TANK) @ 3	= 6
1 EX. WATER CLOSET(TANK) @ 3	= 3
3 LAVATORY @ 2	= 6
1 MOP SINK @ 3	= 3
1 DRINKING FOUNTAIN @ 0.25	= 0.25
1 KITCHEN SINK @ 2	= 2
TOTAL	= 20.25

AS PER 2014 ILLINOIS PLUMBING CODE, *APPENDIX A TABLE N
 1" WATER LINE IS REQUIRED.



WATER RISER SCALE **2**
N.T.S.



WATER & GAS PLAN SCALE **1**
1/4" = 1'-0"