

SCOPE OF WORK

PROVIDE ONE NEW 12.5 TON ELECTRIC HEAT ROOFTOP UNIT. PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEM.

PROVIDE ONE NEW BATHROOM EXHAUST FANS AND ONE NEW EXHAUST FAN FOR THE MOP SINK.

COORDINATE WITH GC ANY ADDITIONAL REFRIGERATION WORK REQUIRED AND WITH GC AND PLUMBING CONTRACTOR PROVIDING CONDENSATE LINES FOR MECHANICAL EQUIPMENT.

GENERAL NOTES

- 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. PAY SPECIAL ATTENTION TO THE RESPONSIBILITY SCHEDULE. WORK DESIGNATED ON SCHEDULE SHALL BE CONSIDERED INCLUDED IN YOUR SCOPE OF WORK AND CONTRACT AMOUNT.
- 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.
- 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.
- 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 RISERS AND DRIPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- 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.
- 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.
- 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.
- 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.
- ALL A/C AND FRESH AIR ROUND EXPOSED DUCTS WILL BE SPIRAL GALVANIZED AND READY FOR PAINTING. ALL EXPOSED DUCT ARE INTERNALLY INSULATED AND ALL RECTANGULAR DUCTS OVER CEILINGS ARE EXTERNALLY INSULATED.
- G.C. SHALL CONTRACT LANDLORD-APPROVED ROOFING CONTRACTOR TO FLASH AND SEAL ALL ROOF PENETRATIONS TO MAINTAIN ROOFING WARRANTY.
- REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE AND PROVIDE COPY TO LL.
- OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.

MECHANICAL PLAN NOTES

- PROVIDE ONE NEW 12.5 TON ELECTRIC HEAT ROOFTOP UNIT. PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEM. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AIR DUCT CONNECTIONS. TRANSITION TO DUCT SIZES SHOWN. PROVIDE DUCTWORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. REFER TO RTU UNIT SCHEDULE FOR ADDITIONAL REQUIREMENTS.
- 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 A/C 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.
- ALL DUCTS SHALL BE MINIMUM 26 GAUGE SHEET METAL WITH EXTERNAL DUCT WRAP INSULATION FOR CONCEALED DUCTS AND ALL EXPOSED DUCTS WITH INTERNAL INSULATION. ALL DUCTS TO BE MANUFACTURED AND INSTALLED ACCORDING TO ASHRAE AND SMACNA METAL DUCT CONSTRUCTION STANDARD, LATEST EDITION. ALL MATERIALS WILL CONFORM TO NFPA 90A.
- 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 DEVICES.
- THERMOSTAT SHALL BE 7-DAY PROGRAMMABLE TYPE. MOUNT THERMOSTAT 48" A.F.F. COORDINATE LOCATION OF THERMOSTAT WITH ARCHITECT/ OWNER.
- ALL INTERIOR AIR DUCTS WITH INSULATION SHALL HAVE A MINIMUM OF THICKNESS OF 1.5", R-6 INSULATION, EXTERIOR AIR DUCTS TO HAVE R-8 INSULATION ACCORDING TO 2021-IECC.
- PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/BARRIERS/SLABS. COORDINATE WITH ARCHITECTURAL DRAWING FOR FIRE RATING OF THE WALLS.
- 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.
- ALL EVAPORATOR UNITS SHALL HAVE A FLOAT SWITCH TO CONTROL OVERFLOW THAT WILL AUTOMATICALLY SHUT DOWN THE RTU SYSTEM. THE DEVICE SHALL BE ATTACHED TO THE SECONDARY DRAIN OUTLET ON THE UNIT.
- ALL RTU CONDENSATE DRAINS WILL BE PVC FULL DIAMETER OF OUTLET AND WILL TERMINATE IN THE NEAREST APPROVED PLACE OF DISPOSAL.
- ALL EQUIPMENT AND MATERIALS WILL BE INSTALLED ACCORDING TO THE MANUFACTURERS INSTRUCTIONS AND ACCORDING TO THE BEST PRACTICE.
- TESTING AND BALANCING SHALL BE DONE IN ACCORDANCE WITH 2021 IECC - 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.
- 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.
- ALL HVAC CONTROLS AND CONTROL WIRING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.

PROSPER, TX BUILDING DEPARTMENT NOTES

- ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF 2021 IBC AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS. DATE:
- 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.
 - TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE 2021 IMC WITH HOUSTON AMENDMENTS:
 - VENTILATION SYSTEM- 2021 IMC 403.1
 - VENTILATION FOR ALL AREA SHALL COMPLY WITH 2021 IMC CHAPTER 4.
 - THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
 - STANDARDS OF HEATING - INTERNATIONAL MECHANICAL CODE 2021 - 309.1
 - DUCT CONSTRUCTION AND INSTALLATION - INTERNATIONAL MECHANICAL CODE 2021 - 603
 - AIR INTAKES, EXHAUSTS AND RELIEF - INTERNATIONAL MECHANICAL CODE 2021 - 401.5
 - AIR FILTERS - INTERNATIONAL MECHANICAL CODE 2021 - 605
 - MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROLS FOR AIR DISTRIBUTION SYSTEMS - 2021 INTERNATIONAL MECHANICAL CODE - 606
 - MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
 - 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 2021 IMC 403.3.
 - 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 EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
 - ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
 - SMOKE DETECTOR SHALL MEET UL268A.
 - 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. CONTRACTOR TO SUBMIT THE AIR - BALANCE REPORT TO INSPECTOR OF RESPECTIVE BUILDING DEPARTMENT PRIOR TO FINAL INSPECTION.

THERMOSTATIC CONTROLS

- C403.4.1 THERMOSTATIC CONTROLS

THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, NOT FEWER THAN ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM. EXCEPTION: INDEPENDENT PERIMETER SYSTEMS THAT ARE DESIGNED TO OFFSET ONLY BUILDING ENVELOPE HEAT LOSSES, GAINS OR BOTH SERVING ONE OR MORE PERIMETER ZONES ALSO SERVED BY AN INTERIOR SYSTEM PROVIDED THAT BOTH OF THE FOLLOWING CONDITIONS ARE MET:

 - THE PERIMETER SYSTEM INCLUDES NOT FEWER THAN ONE THERMOSTATIC CONTROL ZONE FOR EACH BUILDING EXPOSURE HAVING EXTERIOR WALLS FACING ONLY ONE ORIENTATION (WITHIN ± 45 DEGREES) (0.8 RAD) FOR MORE THAN 50 CONTIGUOUS FEET (15 240 MM).
 - THE PERIMETER SYSTEM HEATING AND COOLING SUPPLY IS CONTROLLED BY THERMOSTATS LOCATED WITHIN THE ZONES SERVED BY THE SYSTEM.
- C403.4.1.2 DEADBAND

WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5°F (2.8°C) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.

EXCEPTIONS:

 - THERMOSTATS REQUIRING MANUAL CHANGEOVER BETWEEN HEATING AND COOLING MODES.
 - OCCUPANCIES OR APPLICATIONS REQUIRING PRECISION IN INDOOR TEMPERATURE CONTROL AS APPROVED BY THE CODE OFFICIAL.
- C403.4.1.3 SETPOINT OVERLAP RESTRICTION

WHERE A ZONE HAS A SEPARATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, A LIMIT SWITCH, MECHANICAL STOP OR DIRECT DIGITAL CONTROL SYSTEM WITH SOFTWARE PROGRAMMING SHALL BE CONFIGURED TO PREVENT THE HEATING SETPOINT FROM EXCEEDING THE COOLING SETPOINT AND TO MAINTAIN A DEADBAND IN ACCORDANCE WITH SECTION C403.4.1.2.
- C403.4.2 OFF-HOUR CONTROLS

EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM.

EXCEPTIONS:

 - ZONES THAT WILL BE OPERATED CONTINUOUSLY.
 - ZONES WITH A FULL HVAC LOAD DEMAND NOT EXCEEDING 6,800 BTU/H (2 KW) AND HAVING A MANUAL SHUTOFF SWITCH LOCATED WITH READY ACCESS.
- C403.4.2.1 THERMOSTATIC SETBACK

THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).
- C403.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN

AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR NOT FEWER THAN 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CONFIGURED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.
- C403.4.2.3 AUTOMATIC START AND STOP

AUTOMATIC START AND STOP CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE AUTOMATIC START CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY. AUTOMATIC STOP CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM WITH DIRECT DIGITAL CONTROL OF INDIVIDUAL ZONES. THE AUTOMATIC STOP CONTROLS SHALL BE CONFIGURED TO REDUCE THE HVAC SYSTEM'S HEATING TEMPERATURE SETPOINT AND INCREASE THE COOLING TEMPERATURE SETPOINT BY NOT LESS THAN 2°F (1.11°C) BEFORE SCHEDULED UNOCCUPIED PERIODS BASED ON THE THERMAL LAG AND ACCEPTABLE DRIFT IN SPACE TEMPERATURE THAT IS WITHIN COMFORT LIMITS.
- C403.4.1.1 HEAT PUMP SUPPLEMENTARY HEAT

HEAT PUMPS HAVING SUPPLEMENTARY ELECTRIC RESISTANCE HEAT SHALL HAVE CONTROLS THAT LIMIT SUPPLEMENTAL HEAT OPERATION TO ONLY THOSE TIMES WHEN ONE OF THE FOLLOWING APPLIES:

 - THE VAPOR COMPRESSION CYCLE CANNOT PROVIDE THE NECESSARY HEATING ENERGY TO SATISFY THE THERMOSTAT SETTING.
 - THE HEAT PUMP IS OPERATING IN DEFROST MODE.
 - THE VAPOR COMPRESSION CYCLE MALFUNCTIONS.
 - THE THERMOSTAT MALFUNCTIONS.

ROOF TOP UNIT SCHEDULE	
TAG	RTU-1(N)
QUANTITY	1
UNIT	ELECTRIC HEAT
MANUFACTURER	TRANE (OR EQUIVALENT)
MODEL	TSJ150B4S0K (OR EQUIVALENT)
STATUS	NEW
MOUNTING	ROOF
NOMINAL CAPACITY	12.5 TON
TOTAL COOLING CAPACITY	143.9
SENSIBLE CAPACITY	110.0
EER/ IEER	11.0 / 14.2
ELECTRIC HEAT(KW)	27.0
SUPPLY CFM	5000
OUTDOOR AIR CFM	315
V/PH/HZ	460/3/60
MCA (A)	49.0
MCB (A)	50.0
WEIGHT (LBS)	1650

- NOTES FOR RTU-1(N)
- PROVIDE FULL PERIMETER 14" HIGH ROOF CURB.
 - PROVIDE DUCT MOUNTED SMOKE DETECTOR FOR RTUS IN RETURN SIDE IF SUPPLY AIR IS MORE THAN 2000 CFM.
 - PROVIDE 2" MERV-8 FILTERS.
 - PROVIDE HINGED PANELS FOR FILTER ACCESS, FAN MOTOR ACCESS, COMPRESSOR ACCESS AND CONTROL COMPARTMENT ACCESS.
 - CONTRACTOR TO PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT FOR RTU.
 - PROVIDE HAIL GUARD.
 - PROVIDE NON FUSED DISCONNECT SWITCH.
 - PROVIDE WITH TUBE & FIN COIL SYSTEM.
 - PROVIDE WITH DRAIN PAN OVERFLOW SWITCH.
 - PROVIDE WITH STANDARD CAP AND PHASE MONITOR SYSTEM.
 - PROVIDE MULTISTAGE AIR VOLUME.
 - PROVIDE WITH GFCI FLD WIRED.
 - UNIT TO BE PROVIDED WITH LOW AMBIENT OPERATION CAPABILITIES.
 - PROVIDE ULTRA LOW LEAK ENTHALPY ECONOMIZER WITH FDD AND BAROMETRIC RELIEF.
 - PROVIDE HOT GAS BYPASS.
- CONTRACTOR SHALL VERIFY EXACT ELECTRICAL CONNECTIONS, WIRE SIZES, BREAKERS, DISCONNECT ETC. PRIOR TO ORDERING AND BID.

FAN SCHEDULE		
DESIGNATION	EF-1(N)	EF-2(N)
STATUS	NEW	NEW
QUANTITY	1	1
MANUFACTURER	GREENHECK	GREENHECK
MODEL	SP-A110	SP-A110
CFM	70@0.3 IN. W.C ESP	70@0.3 IN. W.C ESP
FLA (AMPS)	0.19	0.19
FAN RPM	950	950
ACCESSORIES	BDD	BDD
WEIGHT (LBS)	30	30
V/PH/HZ	115/1/60	115/1/60

NOTES:

- PROVIDE DISCONNECT SWITCH.
- PROVIDE BACK DRAFT DAMPER.
- INTERLOCK EF-1(N) WITH RTU-1(N).
- INTERLOCK EF-2(N) WITH ROOM LIGHT.

OCCUPANCY CALCULATION PER IMC 2021, TABLE 403.3.1.1			
LOBBY/ RECEPTION	280 SQ. FT. @30 PEOPLE/1000SQ.FT.	9 PEOPLE	
LAUNDRY / BREAKROOM / STORAGE	108 SQ. FT. @50 PEOPLE/1000SQ.FT.	6 PEOPLE	
P9 ROOM/ PRESTIGE/ COCOON POLY/ SWP ROOM/ SUN ANGEL/ PASSION/ REVIVE LAY DOWN/ BEAUTY ANGEL/ SERENITY ROOM/ TL1/ HYBRID STAND UP/ OPEN SUN/ HYDRO MASSAGE POD/ VERSA PRO	1255 SQ. FT. @5 PEOPLE/1000SQ.FT.	17 PEOPLE	
			TOTAL 32 PEOPLE

VENTILATION REQUIREMENTS PER IMC 2021, TABLE 403.3.1.1			
LOBBY/ RECEPTION	280 SQ. FT. X 0.06 CFM/SQ. FT. =	17 CFM	
	9 PEOPLE X 5.0 CFM/PEOPLE. =	45 CFM	
LAUNDRY / BREAKROOM / STORAGE	108 SQ. FT. X 0.06 CFM/SQ. FT. =	7 CFM	
	6 PEOPLE X 5 CFM/PEOPLE. =	30 CFM	
P9 ROOM/ PRESTIGE/ COCOON POLY/ SWP ROOM/ SUN ANGEL/ PASSION/ REVIVE LAY DOWN/ BEAUTY ANGEL/ SERENITY ROOM/ TL1/ HYBRID STAND UP/ OPEN SUN/ HYDRO MASSAGE POD/ VERSA PRO	1255 SQ. FT. X 0.06 CFM/SQ. FT. =	76 CFM	
	17 PEOPLE X 5 CFM/PEOPLE. =	85 CFM	
HALLWAY	522 SQ. FT. X 0.06 CFM/SQ. FT. =	32 CFM	
OUTSIDE AIR REQUIRED		292 CFM	
OUTSIDE AIR PROVIDED		315 CFM	
EXHAUST REQUIRED:			
RESTROOM	70 CFM PER FIXTURE. =	70 CFM	
MOP SINK		70 CFM	
EXHAUST AIR PROVIDED		140 CFM	
AIR BALANCE			
OUTSIDE AIR THROUGH RTU-1(N)		+315 CFM	
EF-1 (N)		-70 CFM	
EF-2 (N)		-70 CFM	
BUILDING PRESSURE (BAROMETRIC RELIEF)		+175 CFM	

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

DIFFUSER SCHEDULE					
MANUFACTURER	TITUS	TITUS	TITUS	TITUS	TITUS
DESIGNATION	A	B	C	R	R1
USE	SUPPLY	SUPPLY	SUPPLY	RETURN	RETURN
MODEL	OMNI-AA	OMNI-AA	R-OMNI	OMNI-AA	56FL
MOUNTING	SAT CEILING	HARD CEILING	DUCT	SAT CEILING	WALL
LOCATION	AS SHOWN	RESTROOM	AS SHOWN	AS SHOWN	AS SHOWN
FACE SIZE	24" X 24"	12" X 12"	AS SHOWN	24"X24"	AS SHOWN
NECK SIZE	REFER TABLE-A	REFER TABLE-A	-	-	-
FRAME TYPE	LAYIN	FLANGED	-	LAY IN	FLANGED
NOISE CRITERIA	<30	<30	<30	<30	<30
ACCESSORIES	VOLUME DAMPER				

NOTES:

- MOUNTING FRAME TYPE SHALL BE COORDINATED WITH CEILING/ WALL CONSTRUCTION.
- COORDINATE FINAL FINISH COLOR WITH ARCHITECT/OWNER.
- PROVIDE ROUND TO SQUARE NECK ADAPTOR.
- PROVIDE 4 WAY AIR THROW PATTERN UNLESS NOTES OR INDICATED.

MECHANICAL SYMBOLS

	EXHAUST FAN		EXHAUST FAN WITH LIGHT
	SUPPLY OR OUTSIDE AIR DUCT		OPPOSED BLADE DAMPER
	RETURN OR EXHAUST AIR DUCT		DUCT SMOKE DETECTOR
	INSULATED RIGID DUCTWORK		PROGRAMMABLE THERMOSTAT
	DUCT TRANSITION		REMOTE SENSOR
	MANUAL VOLUME DAMPER		TEMPERATURE SENSOR
	FLEXIBLE DUCTWORK R-6.0		ROUND DUCT DIAMETER
	ROOF MOUNTED EXHAUST FAN OUTLET		CUBIC FEET/ MINUTE
	ROOFTOP UNIT		SUPPLY AIR
	MOTORIZED DAMPER		RETURN AIR
	SUPPLY DIFFUSER		SUPPLY GRILLE
	RETURN DIFFUSER		CONDENSATE PIPING
	BACK DRAFT DAMPER		GENERAL CONTRACTOR

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

NY ENGINEERS

GLO TANNING

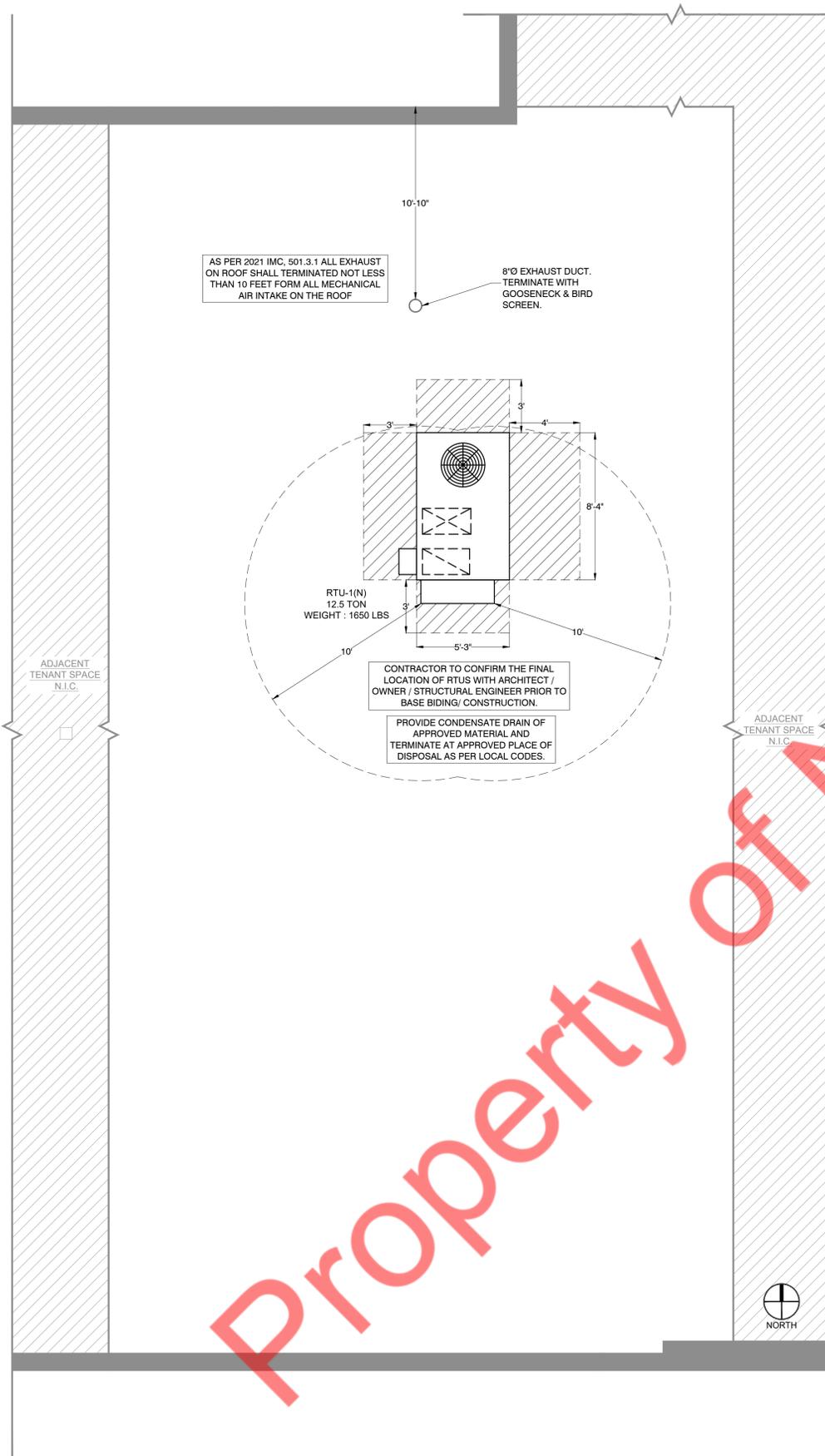
MECHANICAL NOTES & SCHEDULES

M-1

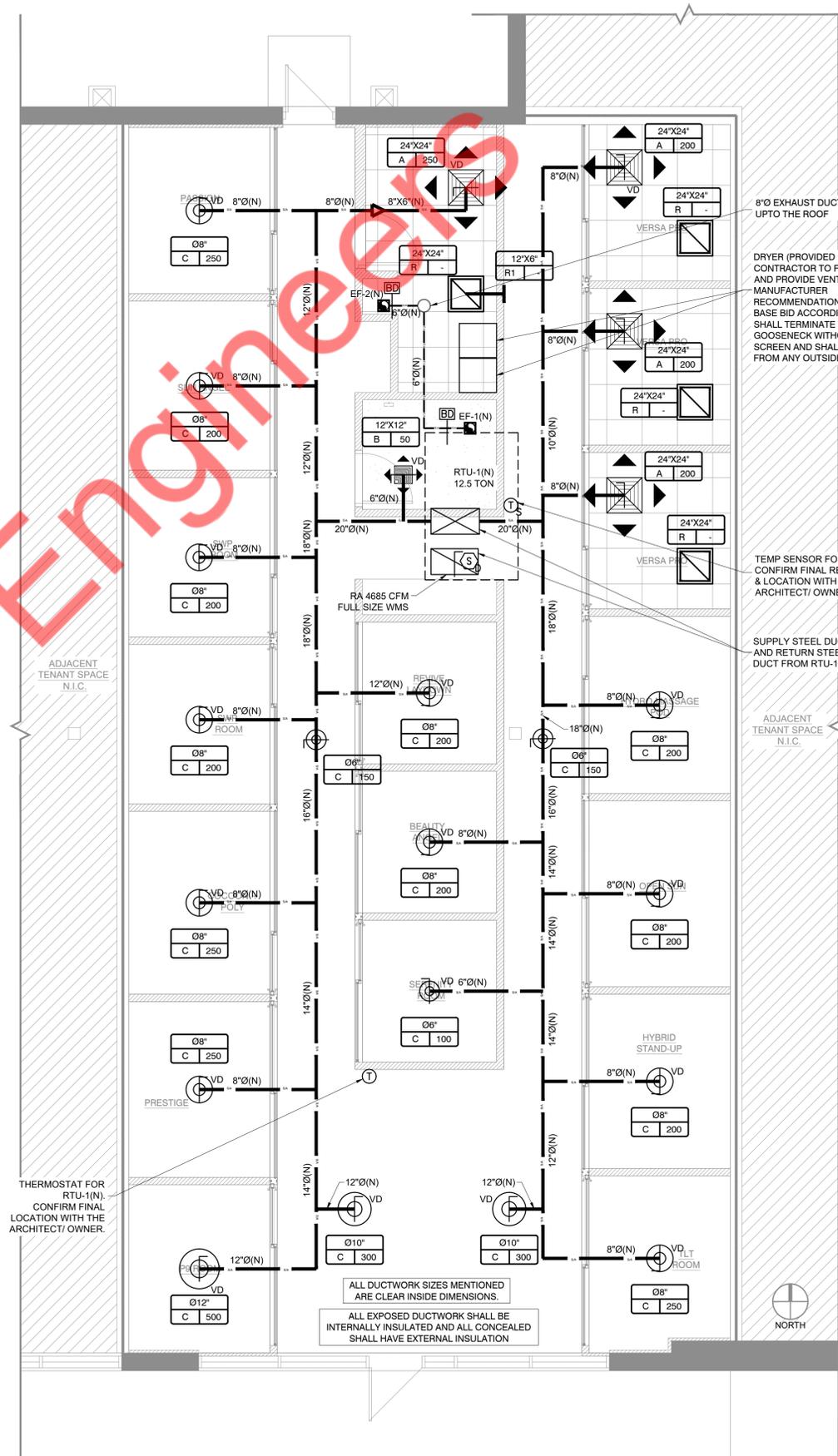
REVISIONS DATES:

SR. NO.	DETAIL	DATE

ISSUE DATE: 06.25.24
 PROJECT #:
 DRAWN BY: NYE
 CHECKED BY: NYE



HVAC ROOF PLAN SCALE 1/4" = 1'-0" **2**



HVAC FLOOR PLAN SCALE 1/4" = 1'-0" **1**

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PROJECT

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HVAC FLOOR & ROOF PLANS

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PROJECT

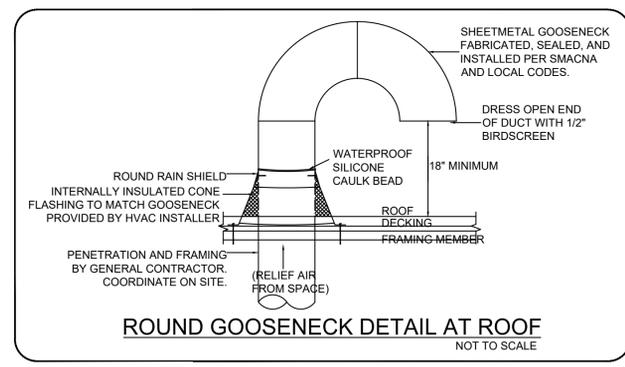
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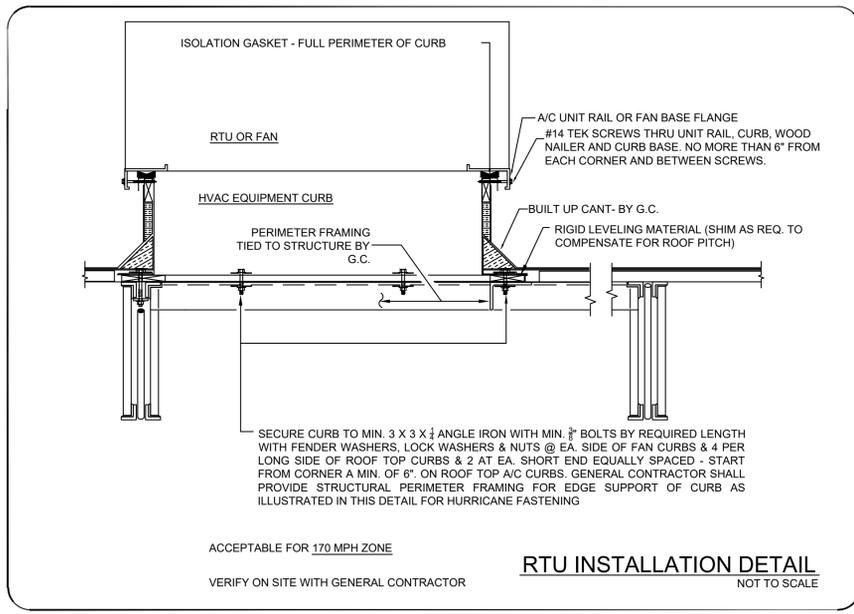
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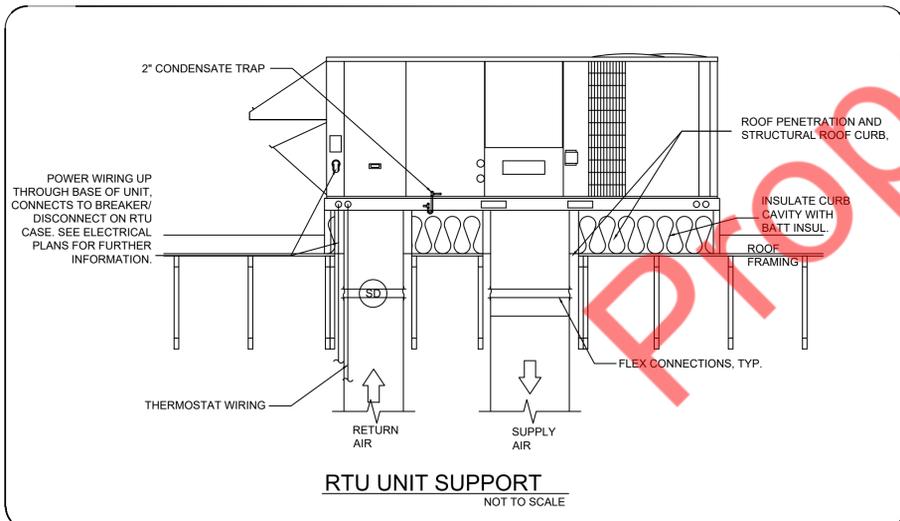
MECHANICAL DETAILS



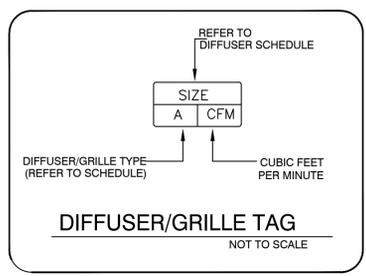
ROUND GOOSENECK DETAIL AT ROOF
NOT TO SCALE



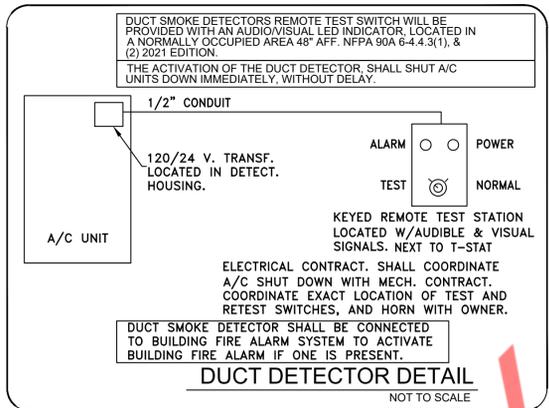
RTU INSTALLATION DETAIL
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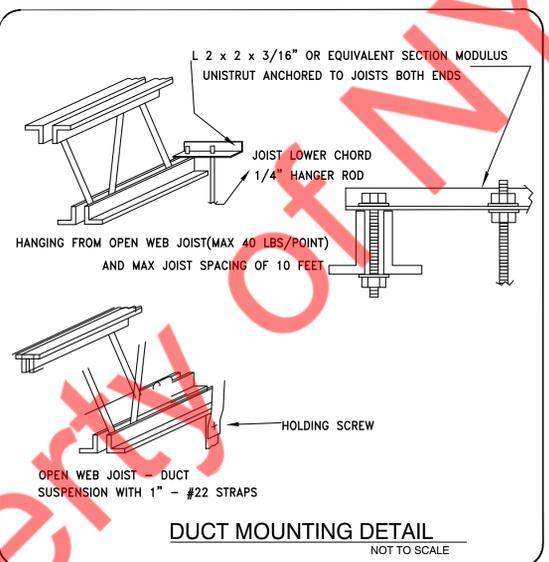
RTU UNIT SUPPORT
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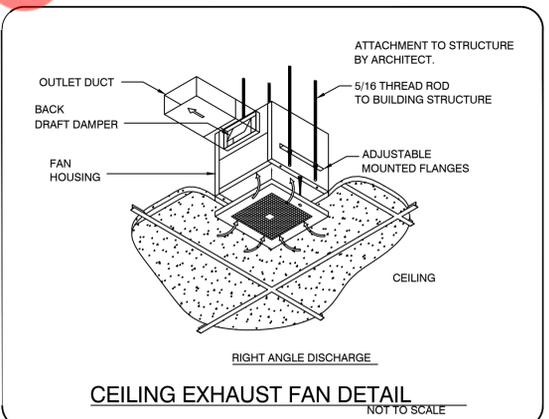
DIFFUSER/GRILLE TAG
NOT TO SCALE



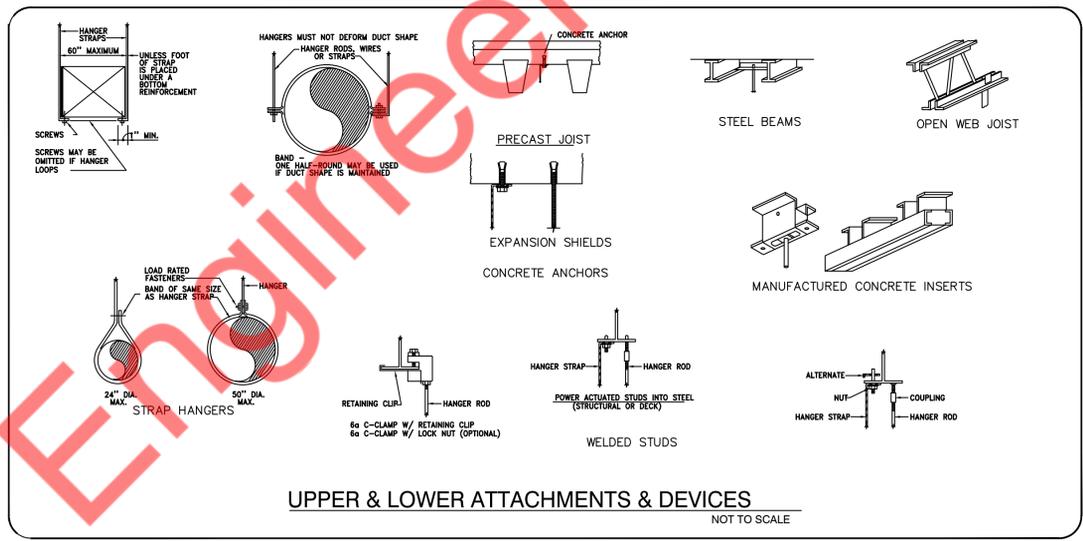
DUCT DETECTOR DETAIL
NOT TO SCALE



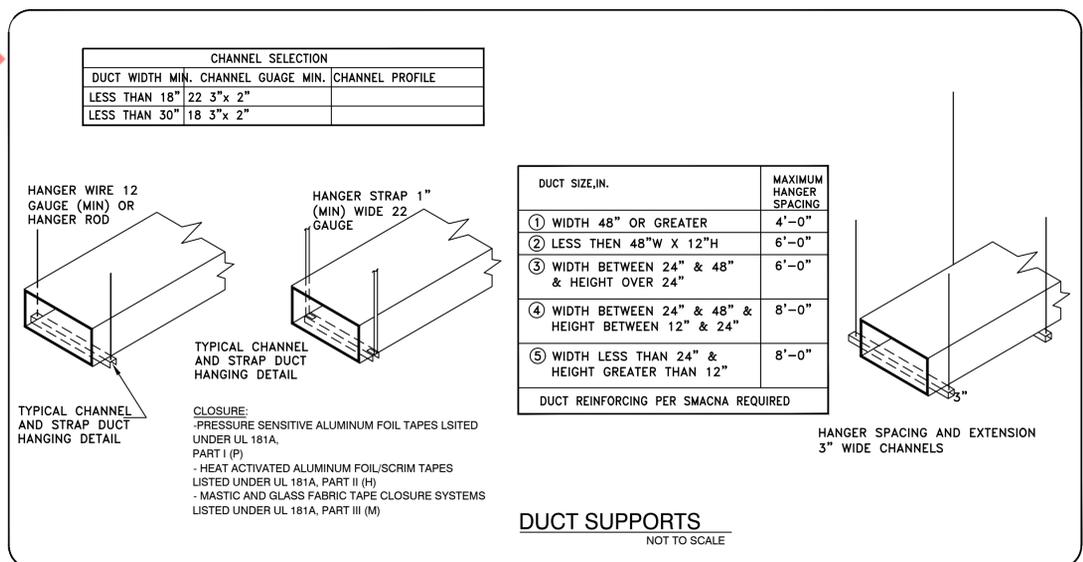
DUCT MOUNTING DETAIL
NOT TO SCALE



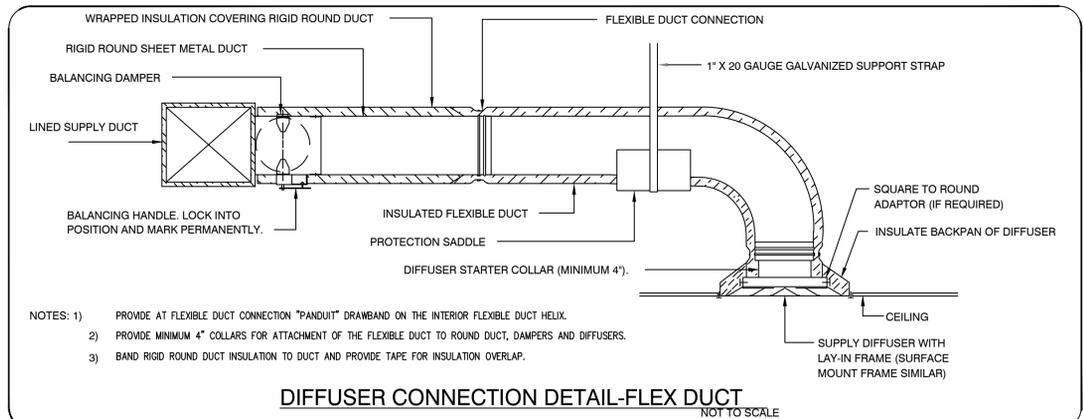
CEILING EXHAUST FAN DETAIL
NOT TO SCALE



UPPER & LOWER ATTACHMENTS & DEVICES
NOT TO SCALE



DUCT SUPPORTS
NOT TO SCALE



DIFFUSER CONNECTION DETAIL-FLEX DUCT
NOT TO SCALE

- NOTES: 1) PROVIDE AT FLEXIBLE DUCT CONNECTION "PANUIT" DRAWBAND ON THE INTERIOR FLEXIBLE DUCT HELIX.
 2) PROVIDE MINIMUM 4" COLLARS FOR ATTACHMENT OF THE FLEXIBLE DUCT TO ROUND DUCT, DAMPERS AND DIFFUSERS.
 3) BAND RIGID ROUND DUCT INSULATION TO DUCT AND PROVIDE TAPE FOR INSULATION OVERLAP.

SCOPE OF WORK

1. PROVIDE NEW 400A, 277/480V, 3-PHASE, 4-WIRE ELECTRICAL SERVICE FOR THE THE PROJECT SPACE.
2. PROVIDE NEW 400A, 277/480V, 3-PHASE, 4-WIRE ELECTRICAL METER, CT CABINET AND DISCONNECT SWITCH FOR THE THE PROJECT SPACE.
3. PROVIDE NEW 400A(M.C.B), 277/480V, 3-PHASE, 4-WIRE, ELECTRICAL PANEL "MDP".
4. PROVIDE NEW (1)112.5KVA AND (1)75KVA FLOOR MOUNTED TRANSFORMERS PRIMARY 277/480V, & SECONDARY 120/208V.
5. PROVIDE NEW 300A(M.C.B), 120/208V, 3-PHASE, 4-WIRE, ELECTRICAL PANEL "A".
6. PROVIDE NEW 200A(M.C.B), 120/208V, 3-PHASE, 4-WIRE, ELECTRICAL PANEL "B".
7. ALL NECESSARY EQUIPMENT, WIRING AND LIGHTING FOR THE PROPOSED SPACE INCLUDING WIRING FOR VENTILATION EQUIPMENT, COORDINATE WITH GC FOR LOW VOLTAGE WIRING.

ELECTRICAL PLAN NOTES

1. ELECTRICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET.
2. 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.
3. 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.
4. 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.
5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2023 EDITION OF THE NATIONAL ELECTRIC CODE ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION.
6. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION FOR ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
7. ALL ELECTRICAL NOT BEING REUSED MUST BE REMOVED IN ITS ENTIRETY.
8. ALL CONDUIT IN OR UNDERGROUND OR IN CONCRETE MUST BE RIGID GALVANIZED STEEL.
9. CIRCUIT BREAKERS AND PANELS TO BE BOLT ON TYPE.
10. ALL EQUIPMENT SHALL BE APPROVED BY UL OR OTHER NATIONALLY RECOGNIZED TESTING COMPANY.
11. ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY NEC 250.146.
12. SUBMIT SERVICE ENTRANCE EQUIPMENT FOR SEPARATE APPROVAL.
13. ALL LOW VOLTAGE MUST BE IN CONDUIT TO ABOVE THE DROP CEILING. BRIDAL RINGS OR "J" HOOKS REQUIRED.
14. SEPARATE PERMITS ARE REQUIRED FOR ALL LOW VOLTAGE SUCH AS TELEPHONE, DATA, THERMOSTAT, MUSIC, ALARMS ETC.
15. SEPARATE PERMIT REQUIRED FOR SIGNAGE.
16. PRIOR TO ANY CONSTRUCTION WORK BEGINNING AN ON-SITE MEETING WITH GENERAL CONTRACTORS IS REQUIRED.
17. ELECTRICIAN MUST BE ON SITE FOR ALL INSPECTIONS.
18. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING. ALL CONDUCTORS SHALL BE COPPER AND UNLESS OTHERWISE NOTED THIN INSULATION.
19. 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.
20. 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.
21. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE N.E.C. OR LOCAL CODES.
22. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
23. 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.
24. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
25. 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.
26. 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.
27. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
28. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.
29. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES.
30. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
31. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE CIRCUIT BREAKERS.
32. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, DEVICES, ETC. FOR ALL OUTLETS AS INDICATED.
33. 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.
34. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.
35. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND FIRED CALKING REQUIRED OF HIS WORK.
36. ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/TYPED WRITTEN DIRECTORIES.
37. ALL ELECTRICAL AND COMMUNICATIONS OUTLETS TO BE AT 24" A.F.F. UNLESS NOTED OTHERWISE, AND VERTICALLY MOUNTED.
38. ALL LIGHT SWITCHES TO BE AT 42" A.F.F.
39. 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.
40. BREAKER AND PANELS - ALL CURRENT CARRYING BUSES 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.
41. DISCONNECT SWITCHES SHALL BE H.P. RATED, GENERAL DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.
42. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, WITH OVERLOAD RELAYS IN EACH HOT LEG.
43. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS INDICATES THE CONTRACT SHALL FURNISH AND INSTALL.
44. 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.
45. VOLTAGE DROP FOR ALL BRANCH CONDUCTORS SHALL NOT EXCEED 3%. WHERE VOLTAGE DROP EXCEEDS 3%, CONTRACTOR SHALL INCREASE SIZE OF CONDUCTORS.
46. CONTRACTOR SHALL PROVIDE GFI TYPE BREAKER FOR ALL EXTERIOR 120V CIRCUITS OR GFI PROTECTION - FOR THE WHOLE CIRCUIT.
47. GAS PIPING SHALL BE BONDED.
48. ALL OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.
49. 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.
50. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.
51. ABSOLUTELY NO FLEXIBLE CONDUIT IS PERMITTED IN DEMISING WALLS. FLEXIBLE CONDUIT IS PERMITTED FOR SHORT FINAL CONNECTIONS ONLY (6'-0" OR LESS).
52. 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.
53. CABLE TYPES AC AND NM CABLES ARE NOT ACCEPTABLE. TYPE MC CABLE, ELECTRIC METALLIC TUBING (EMT) AND RIGID GALVANIZED CONDUIT ARE PERMITTED.
54. ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.
55. ALL PANELS TO BE UL LABELED WITH BOLT-ON TYPE CIRCUIT BREAKERS.
56. 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.
57. 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. ANY ALL 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.
58. ALL ELECTRICAL PANELS TO BE MOUNTED ON PLYWOOD BACKER BOARD.
59. PANEL PHASE LOADS TO BE BALANCED WITHIN 10%.

GENERAL LIGHTING NOTES

- A. WHERE LIGHT FIXTURE IS FOLLOWED BY "NL", THIS FIXTURE IS DESIGNATED AS A NIGHT LIGHT AND SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.
- B. UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE AND LOWER CASE LETTER DENOTES SWITCHING SCHEME.
- C. ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
[Symbol]	EXHAUST FAN
[Symbol]	JUNCTION BOX
[Symbol]	BATTERY BACK UP EXIT LIGHT
[Symbol]	BATTERY BACK UP EMERGENCY LIGHT
[Symbol]	WALL SWITCH (SINGLE, DOUBLE,)
[Symbol]	WALL SWITCH (3 WAY, 4 WAY)
[Symbol]	WALL SWITCH (TIMER)
[Symbol]	OCCUPANCY SENSOR WALL SWITCH
[Symbol]	DUPLEX RECEPTACLE
[Symbol]	230 VOLT RECEPTACLE
[Symbol]	QUADRUPLX RECEPTACLE
[Symbol]	FLOOR MOUNTED, FLUSH DUPLEX RECEPTACLE
[Symbol]	FLOOR MOUNTED, FLUSH QUAD. RECEPTACLE
[Symbol]	FLOOR MOUNTED, FLUSH 230 VOLT RECEPTACLE
[Symbol]	CEILING MOUNTED DUPLEX RECEPTACLE
[Symbol]	ELECTRICAL PANEL
[Symbol]	DISCONNECT SWITCH
[Symbol]	TELEVISION OUTLET
[Symbol]	TELEPHONE OUTLET
[Symbol]	TELEPHONE/DATA OUTLET
[Symbol]	DATA OUTLET
[Symbol]	FLOOR MTD. FLUSH TELEPHONE/DATA OUTLET
[Symbol]	QUAD. DATA OUTLET RJ45
[Symbol]	DISCONNECT SWITCH

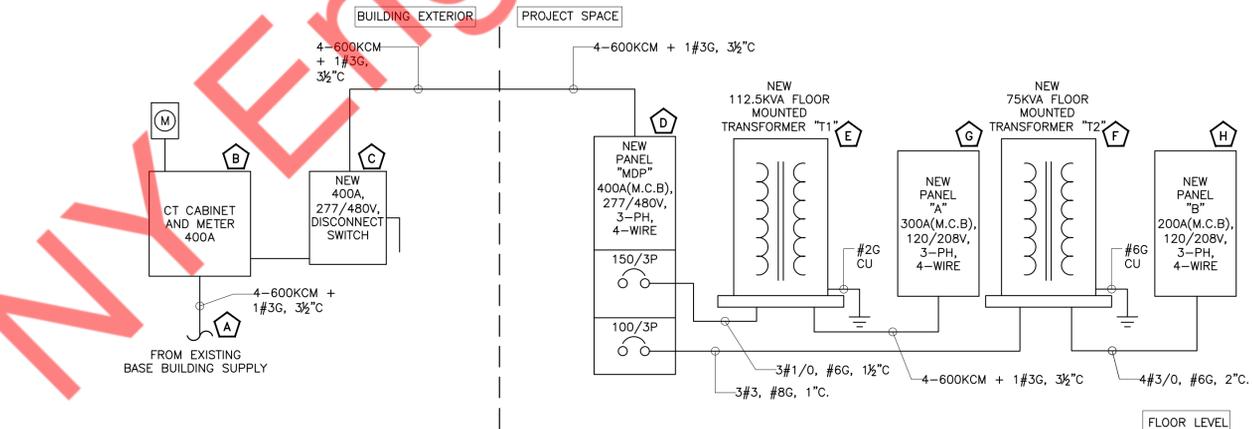
ABBREVIATIONS:
 ABOVE FINISH FLOOR= A.F.F.
 COUNTER TOP LEVEL= C
 GROUND FAULT INTERRUPTER= GFCI
 VERIFY PRIOR TO INSTALL= VH
 WEATHER PROOF= WP
 KITCHEN EXHAUST FAN = KEF
 WATER HEATER= WH
 RTU=ROOF TOP UNIT
 AUTHORITY HAVING JURISDICTION= A.H.J.
 BELOW COUNTER= BC
 PUSH BUTTON= PB
 UNDER CABINET= UC
 VAPOR PROOF= VP
 ELECTRICAL CONTRACTOR=E.C.
 BATHROOM EXHAUST FAN=BEF
 RECIRCULATION PUMP=RCP

LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP WATTAGE	MOUNTING
[Symbol]	A	6" LED RECESSED DOWN LIGHT	TBD	TBD	120	14 WATTS	RECESSED
[Symbol]	B	WALL SCONCE	EPINL	809T63G129	120	28 WATTS	WALL
[Symbol]	C	GLO TANNING HANGING LIGHT	AKEELIGHTING	809838599P	120	360 WATTS	HANGING
[Symbol]	X1	EXIT SIGN-EMERGENCY LIGHT COMBO	TBD	TBD	120	4.3 WATTS	CEILING/WALL
[Symbol]	X3	EXIT SIGN	TBD	TBD	120	4.3 WATTS	CEILING/WALL
[Symbol]	X4	EXIT SIGN	TBD	TBD	120	4.3 WATTS	CEILING/WALL
[Symbol]	EM1	EMERGENCY LIGHTS	TBD	TBD	120	2.1 WATTS	WALL
[Symbol]	T	TIMER WALL SWITCH	LEVITON	VPT24-1PZ	120	-	WALL
[Symbol]	OS	OCCUPANCY WALL SWITCH	LEVITON	ODS10	120	-	WALL
[Symbol]	OS	CEILING OCCUPANCY SENSOR	LEVITON	O2C10-UDW	120	-	CEILING
[Symbol]	(E)	EXISTING TO REMAIN	-	-	-	-	-

LIGHT FIXTURE SCHEDULE NOTES:
 REFER TO REFLECTED CEILING PLAN IN ARCHITECTURAL DRAWINGS FOR MORE INFORMATION ON COLORS AND TRIMS REQUIRED
 (*) EXISTING FIXTURES ARE ACCEPTABLE, IF THEY NEED TO BE REPLACED, REPLACE W/ EXACT MATCH OR MATCH SCHEDULE

- NOTE:**
1. E.C. SHALL COORDINATE WITH ARCHITECT FOR FINAL FIXTURE COUNT AND TYPE.
 2. COORDINATE EXACT CONTROL REQUIREMENTS WITH OWNER.
 3. E.C. SHALL PROVIDE REQUIRED POWER PACKS AND RELAYS SUITABLE FOR THE ABOVE LIGHT FIXTURES IN COORDINATION WITH THE LIGHTING VENDOR. BASE BID ACCORDINGLY.



ELECTRICAL RISER KEYED WORK NOTES:

- A. NEW 400A, 277/480V, 3-PHASE, 4-WIRE ELECTRICAL INCOMING SERVICE FOR THE PROJECT SPACE FROM BASE BUILDING DISTRIBUTION SYSTEM. E.C. SHALL COORDINATE WITH OWNER/BASE BUILDING/LANDLORD FOR EXACT DETAILS ABOUT THE PROVISION OF THE SERVICE.
- B. PROVIDE NEW 400A, 277/480V, 3-PHASE, 4-WIRE ELECTRICAL CT CABINET AND METER FOR THE SPACE. E.C. SHALL COORDINATE WITH OWNER/BASE BUILDING FOR THE EXACT LOCATION.
- C. NEW 400A, 277/480V, 3-PHASE, 4-WIRE DISCONNECT SWITCH FOR THE SPACE. E.C. SHALL COORDINATE WITH OWNER/BASE BUILDING FOR THE EXACT LOCATION.
- D. PROVIDE NEW 400A(M.C.B), 277/480V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "MDP". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
- E. NEW 112.5KVA FLOOR MOUNTED TRANSFORMER "T1" PRIMARY 277/480V, & SECONDARY 120/208V. E.C. SHALL COORDINATE EXACT LOCATION OF THE TRANSFORMER WITH ARCHITECT/OWNER IN FIELD. PROVIDE THE CLEARANCE AS PER NEC.
- F. NEW 75KVA FLOOR MOUNTED TRANSFORMER "T2" PRIMARY 277/480V, & SECONDARY 120/208V. E.C. SHALL COORDINATE EXACT LOCATION OF THE TRANSFORMER WITH ARCHITECT/OWNER IN FIELD. PROVIDE THE CLEARANCE AS PER NEC.
- G. PROVIDE NEW 300A(M.C.B), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
- H. PROVIDE NEW 200A(M.C.B), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

ELECTRICAL RISER DIAGRAM 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. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER/LANDLORD/BASE BUILDING FOR THE EXACT SCOPE OF WORK/LIABILITIES.

ELECTRICAL RISER SYMBOLS

[Symbol]	NEW
[Symbol]	EXISTING ITEM/FEEDER TO REMAIN
[Symbol]	EXISTING ITEM/FEEDER TO BE DISCONNECTED & REMOVED

ELECTRICAL RISER SCALE N.T.S. **1**

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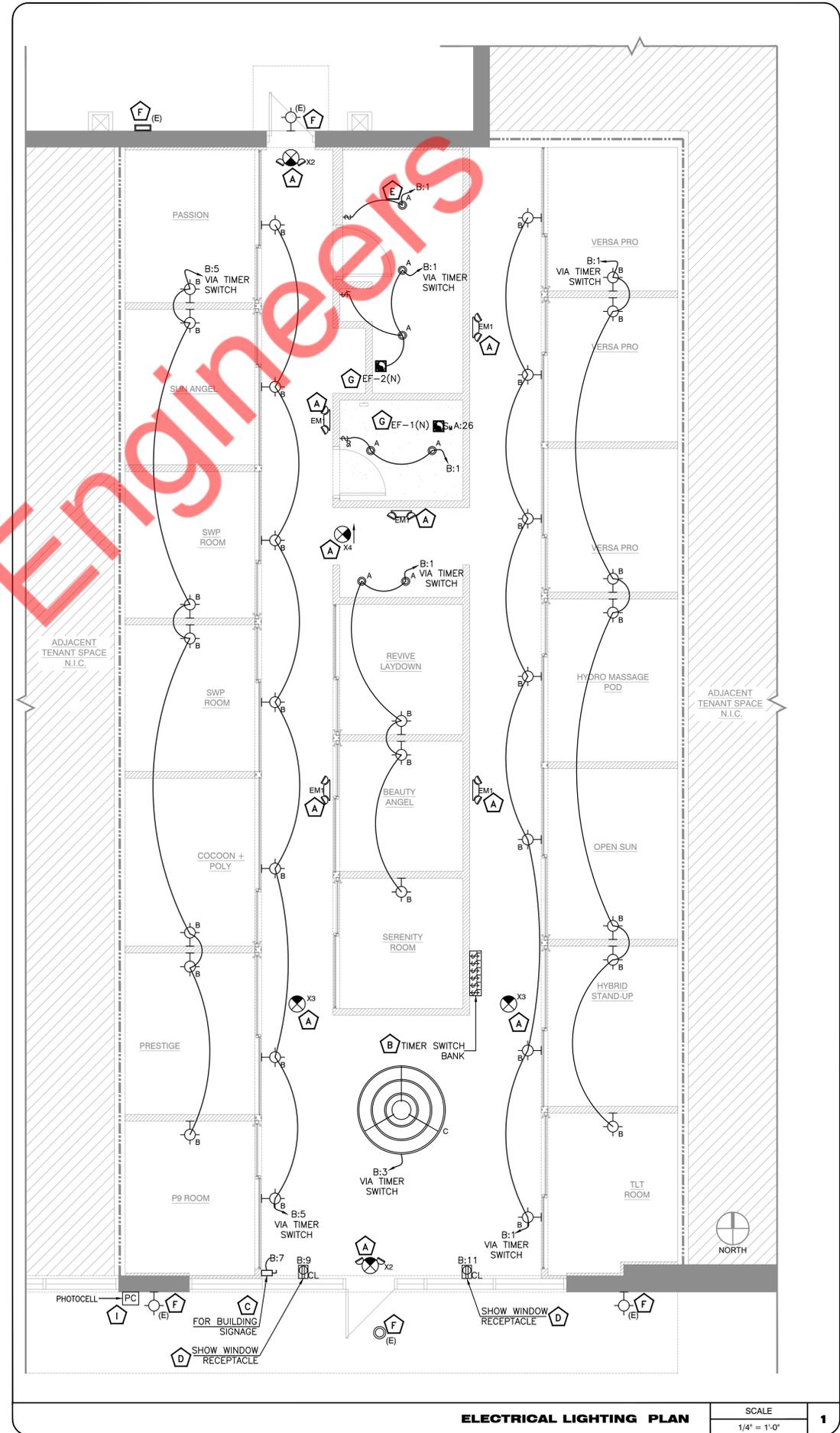
ELECTRICAL PLAN NOTES AND RISER DIAGRAM

ELECTRICAL LIGHTING PLAN KEYED WORK NOTES:

- A. CONNECT ALL EMERGENCY EGRESS LIGHTING FIXTURES TO THE NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS PER STATE AND LOCAL CODES.
- B. COORDINATE EXACT LOCATION OF TIMER SWITCH BANK WITH OWNER/ARCHITECT.
- C. EXTERIOR SIGNAGE, E.C. SHALL COORDINATE EXACT POWER REQUIREMENT, EXACT LOCATION & MOUNTING DETAILS WITH OWNER & SIGN VENDOR.
- D. PROVIDE CEILING MOUNTED RECEPTACLE FOR SHOW WINDOW AS PER NEC 210.62. VERIFY EXACT LOCATION WITH ARCHITECT.
- E. LIGHTING NEAR ELECTRICAL PANELS SHALL NOT BE CONTROLLED BY ANY AUTOMATIC MEANS AND SHALL BE COMPLIED AS PER NEC 110.26(D).
- F. EXISTING LIGHT FIXTURE IN THIS AREA DENOTED BY (E) SHALL REMAIN CONNECTED TO THE EXISTING ELECTRICAL HOUSE PANEL ALONG WITH THEIR CONTROLS. ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT CONTROLS IN FIELD AND SHALL CHECK ITS COMPLIANCE WITH IECC CODE/LIGHTING VENDOR REQUIREMENT BEFORE COMMENCING ANY WORK. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- G. EXHAUST FAN EF-1(N) SHALL BE INTERLOCKED WITH RTU-1(N). E.C. TO COORDINATE WITH MECHANICAL DRAWINGS. COORDINATE FINAL REQUIREMENT AND INTERCONNECTION WITH OWNER.
- H. EXHAUST FAN EF-2(N) SHALL BE INTERLOCKED WITH ROOM LIGHT. E.C. TO COORDINATE WITH MECHANICAL DRAWINGS. COORDINATE FINAL REQUIREMENT AND INTERCONNECTION WITH OWNER.
- I. ALL EXTERIOR SIGNAGE SHALL BE CONTROLLED WITH EXTERIOR MOUNTED PHOTOCELL. PHOTOCELL SHALL NOT BE MOUNTED 10' ABOVE GROUND. E.C. TO VERIFY EXACT LOCATION IN FIELD PRIOR TO ROUGH-IN.

ELECTRICAL LIGHTING PLAN GENERAL NOTES:

- 1. CONTRACTOR ADVISED TO UPDATE THE EMERGENCY LIGHT FIXTURES LOCATIONS/QUANTITY PER SITE REQUIREMENT UP ON FINAL INSPECTION OR PER LOCAL AHJ REQUIREMENT.



ELECTRICAL LIGHTING PLAN

SCALE
1/4" = 1'-0"

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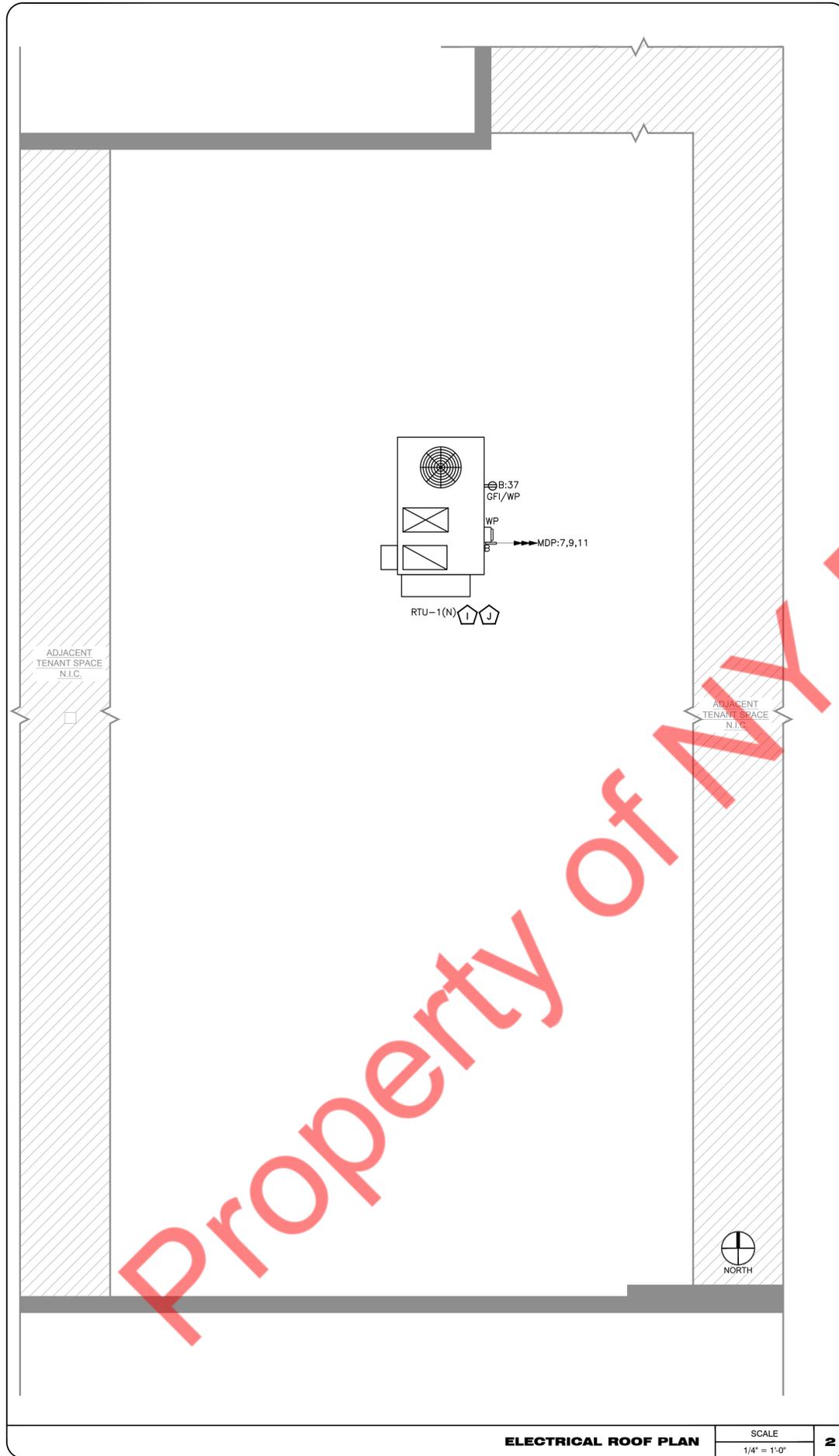
ELECTRICAL LIGHTING PLAN

POWER PLAN GENERAL NOTES:

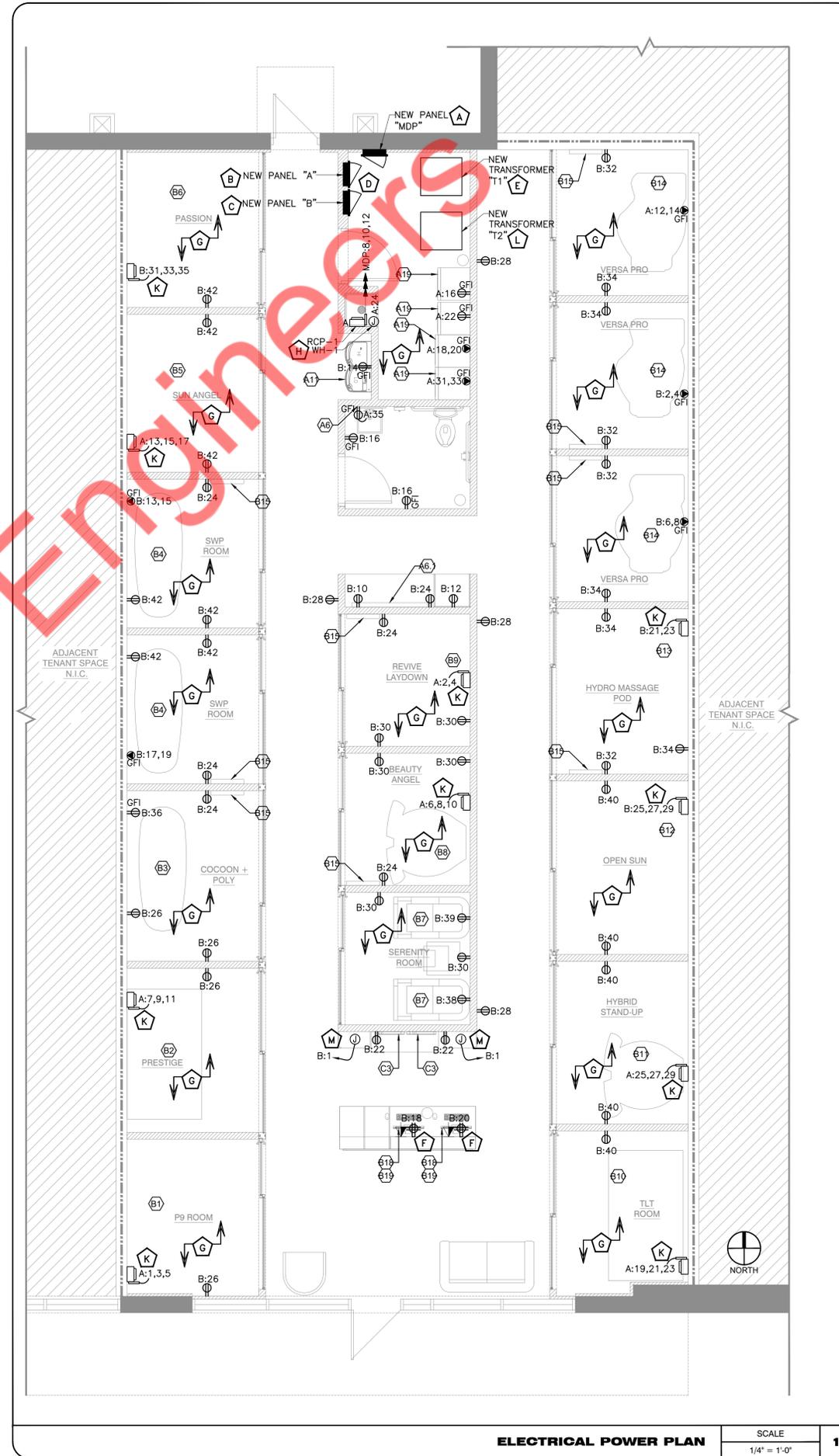
- ALL 125-VOLT THROUGH 250-VOLT RECEPTACLES SUPPLIED BY SINGLE-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 50 AMPERES OR LESS, AND ALL RECEPTACLES SUPPLIED BY THREE-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 100 AMPERES OR LESS, INSTALLED IN THE LOCATIONS SPECIFIED IN 210.8(B) SHALL HAVE GFCI PROTECTION. ALL THE KITCHEN EQUIPMENT SHALL HAVE GFI BREAKER IN PANELS.
- E.C. SHALL COORDINATE WITH THE EQUIPMENT VENDOR FOR EXACT RECEPTACLE REQUIREMENT AND WITH ARCHITECT/OWNER FOR EXACT LOCATION AND MOUNTING HEIGHT OF THE RECEPTACLES IN THE FIELD.

POWER PLAN KEYED NOTES:

- NEW 400A(M.C.B), 277/480V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "MDP" FOR THE PROJECT SPACE. E.C SHALL VERIFY EXACT LOCATION OF PANEL WITH LANDLORD/ ARCHITECT/ OWNER IN FIELD.
- NEW 300A(M.C.B), 120/280V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" FOR THE PROJECT SPACE. E.C SHALL VERIFY EXACT LOCATION OF PANEL WITH LANDLORD/ ARCHITECT/ OWNER IN FIELD.
- NEW 300A(M.C.B), 120/280V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B" FOR THE PROJECT SPACE. E.C SHALL VERIFY EXACT LOCATION OF PANEL WITH LANDLORD/ ARCHITECT/ OWNER IN FIELD.
- E.C SHALL VERIFY THE INSTALLATION OF ELECTRICAL EQUIPMENTS ARE IN COMPLIANCE WITH N.E.C. 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.
- NEW 112.5KVA FLOOR MOUNTED TRANSFORMER "T1" PRIMARY 277/480V, & SECONDARY 120/208V. E.C. SHALL COORDINATE EXACT LOCATION OF THE TRANSFORMER WITH ARCHITECT/OWNER IN FIELD. PROVIDE THE CLEARANCE AS PER NEC.
- PROVIDE (2) CAT 6 HOME RUN TO EACH POS STATION AND ONE (1) QUAD 20 AMPERS RECEPTACLE FOR POS. COORDINATE WITH OWNER PRIOR TO ROUGH-IN FOR EXACT HEIGHT.
- E.C TO COORDINATE WITH EQUIPMENT VENDOR/ MANUFACTURER FOR EXACT POWER REQUIREMENTS, EXACT MOUNTING HEIGHT, LOCATION OF ELECTRICAL OUTLET BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE PLUMBING CONTRACTOR FOR EXACT LOCATION AND POWER REQUIREMENT OF THE PLUMBING UNITS IN THE FIELD. PROVIDE CIRCUIT AND CONTROL AS REQUIRED.
- ELECTRICAL CONTRACTOR SHALL COORDINATE FOR EXACT LOCATION OF MECHANICAL EQUIPMENTS WITH MECHANICAL DRAWINGS.
- ELECTRICAL CONTRACTOR SHALL COORDINATE DISCONNECT AND FUSE REQUIREMENT FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.
- ELECTRICAL CONTRACTOR SHALL PROVIDE 10' ELECTRICAL WHIP TO CONNECT THE EQUIPMENT TO THE DISCONNECT SWITCH. E.C TO COORDINATE WITH EQUIPMENT VENDOR/ MANUFACTURER FOR EXACT REQUIREMENTS.BASE BID ACCORDINGLY
- NEW 75KVA FLOOR MOUNTED TRANSFORMER "T2" PRIMARY 277/480V, & SECONDARY 120/208V. E.C. SHALL COORDINATE EXACT LOCATION OF THE TRANSFORMER WITH ARCHITECT/OWNER IN FIELD. PROVIDE THE CLEARANCE AS PER NEC.
- PROVIDE JUNCTION BOX FOR THE CABINET LIGHTING. E.C SHALL VERIFY EXACT LOCATION OF JUNCTION BOX WITH ARCHITECT/ OWNER IN FIELD.



ELECTRICAL ROOF PLAN SCALE 1/4" = 1'-0" **2**



ELECTRICAL POWER PLAN SCALE 1/4" = 1'-0" **1**

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**ELECTRICAL
 POWER
 & ELECTRICAL
 ROOF PLAN**

PANEL SCHEDULE:

PANEL: MDP(N)		MOUNTING: RECESSED												
480Y/277		VOLTS, 3 PHASE,			4 WIRE			PANEL LOCATION: BREAK ROOM						
MAIN CB: 400A		MLO: NA			BUS: 400A			MIN, FED FROM: NEW METER/DISCONNECT						
"NOTE: L: LIGHTING, R: RECEPTACLES, K: KITCHEN/EQUIPMENTS, C: REFRIGERATION, H: HVAC, M: MOTOR, O: OTHER/MISCELLANEOUS"														
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			O	22.12		54.89				32.77	O	112.5KVA TRANSFORMER T1	150/3P	2
3	100/3P	75 KVA TRANSFORMER T2	O	22.12	3#3, #8G, 1" C		54.89			32.77	O			4
5			O	22.12				54.89		32.77	O			6
7			H	13.01		17.01				4.00	O			8
9	50/3P	RTU-1	H	13.01	3#8, #10G, 3/4" C	17.01				4.00	O	WH-1	20/3P	10
11			H	13.01				17.01		4.00	O			12
13	20	SPARE				0.00						SPARE	20	14
15	20	SPARE					0.00					SPARE	20	16
17	20	SPARE						0.00				SPARE	20	18
19		SPACE				0.00						SPACE	20	20
21		SPACE				0.00						SPACE	20	22
23		SPACE						0.00				SPACE	20	24
25		SPACE				0.00						SPACE	20	26
27		SPACE						0.00				SPACE	20	28
29		SPACE						0.00				SPACE	20	30
31		SPACE				0.00						SPACE	20	32
33		SPACE						0.00				SPACE	20	34
35		SPACE						0.00				SPACE	20	36
37		SPACE				0.00						SPACE	20	38
39		SPACE						0.00				SPACE	20	40
41		SPACE								0.00		SPACE	20	42
TOTAL LOAD (KVA)						71.90	71.90	71.90						

PANEL: B(N)		MOUNTING: RECESSED												
208Y/120		VOLTS, 3 PHASE,			4 WIRE			PANEL LOCATION: BREAK ROOM						
MAIN CB: 200A		MLO: NA			BUS: 225A			MIN, FED FROM: TRANSFORMER T2						
"NOTE: L: LIGHTING, R: RECEPTACLES, K: KITCHEN/EQUIPMENTS, C: REFRIGERATION, H: HVAC, M: MOTOR, O: OTHER/MISCELLANEOUS"														
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, EF-2	L	0.50	2#12, #12G, 3/4" C	2.69				2.18	O	VERSASPA PRO_(#VERSA PRO ROOM-2)	30/2P	2
3	20	LIGHTING LOBBY/RECEPTION CHANDELER	L	0.50	2#12, #12G, 3/4" C		2.68			2.18	O			4
5	20	LIGHTING	L	0.50	2#12, #12G, 3/4" C			2.69		2.18	O	VERSASPA PRO_(#VERSA PRO ROOM-3)	30/2P	6
7	20	EXTERIOR SIGNAGE	L	1.20	2#12, #12G, 3/4" C	3.38				2.18	O			8
9	20	SHOW WINDOW	R	1.60	2#12, #12G, 3/4" C			2.10		0.50	R	RECEPTACLE MAKE UP BAR	20	10
11	20	SHOW WINDOW	R	1.00	2#12, #12G, 3/4" C			1.50		0.50	R	RECEPTACLE MAKE UP BAR	20	12
13			O	1.56	2#12, #12G, 3/4" C	2.31				0.75	E	RECEPTACLE DRINKING FOUNTAIN	20	14
15	20/2P	COCOON AQUA IR_(#SWP ROOM-1)	O	1.56	2#12, #12G, 3/4" C		1.92			0.36	R	RECEPTACLE RESTROOM	20	16
17	20/2P	COCOON AQUA IR_(#SWP ROOM-1)	O	1.56	2#12, #12G, 3/4" C			1.74		0.18	R	RECEPTACLE POS	20	18
19			O	1.56	2#12, #12G, 3/4" C	1.74				0.18	R	RECEPTACLE POS	20	20
21			O	1.50	2#12, #12G, 3/4" C			1.86		0.36	R	RECEPTACLE RECEPTION	20	22
23	20/2P	WELLSYSTEM WAVE_(#HYDRO MASSAGE POD ROOM)	O	1.50	2#12, #12G, 3/4" C			2.10		0.60	L	RECEPTACLE MIRROR LIGHT	20	24
25			O	7.17		8.07				0.90	R	RECEPTACLE GENERAL PURPOSE	20	26
27	70/3P	ERGOLINE OPEN SUN 1050_(#OPEN SUN ROOM)	O	7.17	3#4, #8G, 1" C			7.89		0.72	R	RECEPTACLE HALL WAY	20	28
29			O	7.17				8.25		1.08	R	RECEPTACLE GENERAL PURPOSE	20	30
31			O	3.00		3.40				0.40	L	RECEPTACLE MIRROR LIGHT	20	32
33	40/3P	ERGOLINE PASSION 40/3_(#PASSION ROOM)	O	3.00	3#8, #10G, 3/4" C			3.90		0.90	R	RECEPTACLE GENERAL PURPOSE	20	34
35			O	3.00				4.84		1.84	O	COCOON FITNESS POD_(#COCOON + POLY ROOM)	20	36
37	20	RECEPTACLE ROOF	R	0.18	2#12, #12G, 3/4" C	0.33				0.15	O	FUJIMI MESSAGE CHAIR_(#SERENITY ROOM)	20	38
39	20	FUJIMI MESSAGE CHAIR_(#SERENITY ROOM)	O	0.15	2#12, #12G, 3/4" C			1.05		0.90	R	RECEPTACLE GENERAL PURPOSE	20	40
41	20	SPARE						1.26		1.26	R	RECEPTACLE GENERAL PURPOSE	20	42
TOTAL LOAD (KVA)						21.92	21.40	22.37						

PANEL: A(N)		MOUNTING: RECESSED												
208Y/120		VOLTS, 3 PHASE,			4 WIRE			PANEL LOCATION: BREAK ROOM						
MAIN CB: 300A		MLO: NA			BUS: 300A			MIN, FED FROM: TRANSFORMER T1						
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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			O	4.83		5.68				0.85	O	REVIVE PRO-IR LAYDOWN_(#REVIVE LAY DOWN ROOM)	20/2P	2
3	50/3P	P9 HYBRIDSUN_(#P9 ROOM)	O	4.83	4#6, #10G, 3/4" C		5.68			0.85	O			4
5			O	4.83				6.87		2.03	O			6
7			O	5.87		7.90				2.03	O	BEAUTY ANGEL 7200_(#BEAUTY ANGEL ROOM)	30/3P	8
9	70/3P	ERGOLINE PRESTIGE 1600_(#PRESTIGE ROOM)	O	5.87	3#4, #8G, 1" C		7.90			2.03	O			10
11			O	5.87				8.05		2.18	O	VERSASPA PRO_(#VERSA PRO ROOM-1)	30/2P	12
13			O	6.17		8.35				2.18	O			14
15	70/3P	SUN ANGEL DUO 1400_(#SUN ANGEL ROOM)	O	6.17	3#4, #8G, 1" C		7.61			1.44	E	WASHER	20	16
17			O	6.17				8.67		2.50	E			18
19			O	4.87		7.37				2.50	E	DRYER	30/2P*	20
21	60/3P	ERGOLINE VITALITY TOTAL LIGHT 3_(#TLT ROOM)	O	4.87	3#6, #10G, 3/4" C		6.31			1.44	E	WASHER	20	22
23			O	4.87				5.72		0.85	O	RCP	20	24
25			O	3.53		4.03				0.50	M	EF-1	20	26
27	40/3P	ERGOLINE SUNRISE 7200 HYBRID LIGHT_(#HYBRID STAND-UP ROOM)	O	3.53	3#8, #10G, 3/4" C		3.53					SPARE	20	28
29			O	3.53				3.53				SPARE	20	30
31			E	2.50		2.50						SPARE	20	32
33	30/2P*	DRYER	E	2.50	2#10, #10G, 3/4" C		2.50					SPARE	20	34
35	20	MIRROR LIGHT	L	0.50	2#12, #12G, 3/4" C			0.50				SPARE	20	36
37	20	SPARE				0.00						SPARE	20	38
39	20	SPARE						0.00				SPARE	20	40
41	20	SPARE								0.00		SPARE	20	42
TOTAL LOAD (KVA)						35.83	33.53	33.33						

A. * DENOTES GFCI BREAKER

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PROJECT

GLO TANNING

REVISIONS DATES:		
SR. NO.	DETAIL	DATE

ISSUE DATE: 06.25.24
 PROJECT #: _____
 DRAWN BY: NYE
 CHECKED BY: NYE

PANEL SCHEDULES

PLUMBING NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, RULES AND ORDINANCES.
2. 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.
3. ALL EQUIPMENT WHICH IS TO REMAIN MUST BE REFURBISHED TO A LIKE NEW CONDITION.
4. PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
5. ALL MATERIALS SHALL BE NEW.
6. 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.
7. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
8. 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.
9. DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
10. 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.
11. VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
12. 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/ISO STANDARD 61.
13. SOIL, WASTE, VENT AND RAINWATER PIPING SHALL BE PVC BUT MAY NOT RUN THRU RATED ASSEMBLIES OR IN PLENUMS.
14. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
15. FURNISH AND INSTALL APPROVED AIR CHAMBERS AT EACH PLUMBING FIXTURE GROUP AS PER CODE AND WITH GOOD ENGINEERING PRACTICE.
16. DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS; EXCEPT AT WATER HEATER AS PER CODE.
17. ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD.
18. 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.
19. 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. PROVIDE COPY TO LL.
20. STUDOR MINIMAXI AIR ADMITTANCE VALVES MAY NOT BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF.
21. PROVIDE CHROME PLATED COMBINATION COVER PLATE AND CLEAN OUT PLUG OR ACCESS PANEL FOR ALL CLEANOUTS.
22. NO COMBUSTIBLE MATERIAL TO BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
23. NO WATER, SANITARY OR DRAINAGE PIPING PERMITTED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
24. 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.
25. CONDENSATE DRAIN LINES TO BE RUN UNDER SLAB IN PVC SCH 40 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.
26. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
27. NO JOINTS UNDERGROUND FOR COPPER.
28. PLUMBING FIXTURES SHALL COMPLY WITH 2021 INTERNATIONAL PLUMBING CODE.
29. WATER HAMMER ARRESTORS AS PER 2021 INTERNATIONAL PLUMBING CODE.
30. PLUMBING CONTRACTOR TO PROVIDE ANTI-SCALDING VALVE FOR TUBS AND SHOWERS.
31. PLUMBING CONTRACTOR SHALL REVIEW ALL BID DOCUMENTATION.
32. PLUMBING CONTRACTOR SHALL REVIEW WALL FINISHES @ LOCATION REQUIRING BARRIER-FREE COMPLIANCE (EXAMPLE: CENTER LINE TO TOILET).
33. 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.
34. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER. PROVIDE A COPY TO LL.

PLUMBING LEGEND

	SANITARY SEWER PIPING
	VENT PIPING
	COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
	PIPE RISE
	PIPE DROP
	FLOOR CLEAN OUT
	P-TRAP
	VENT THRU ROOF
	COLD WATER
	HOT WATER
	HOT WATER RETURN
	GATE VALVE
	FLOOR DRAIN
	BALANCING VALVE
	POINT OF CONNECTION
	THERMOSTATIC MIXING VALVE

SCOPE OF WORK

PROVIDE ALL PLUMBING FOR NEW SALON INCLUDING ALL WATER, VENT & SANITARY LINES AND CONNECT TO EXISTING UTILITIES. PROVIDE NEW ELECTRIC STORAGE WATER HEATER. COORDINATE WITH GC AND MECHANICAL CONTRACTOR FOR ANY REQUIRED CONDENSATE LINES.

FIXTURE BRANCH SCHEDULES

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET (TANK)	3/4"	--	4"	2"
LAVATORY	1/2"	1/2"	2"	1-1/2"
MOP SINK	1/2"	1/2"	3"	2"
FLOOR DRAIN	--	--	3"	2"
WASHER/DRYER	3/4"	3/4"	2"	1-1/2"
VERSA PRO	3/4"	3/4"	2"	1-1/2"
DRINKING FOUNTAIN	1/2"	--	2"	1-1/2"

ENERGY CONSERVATION NOTES

1. AS PER 2021 INTERNATIONAL ENERGY CONSERVATION CODE SECTION C404.4, PIPING FROM A WATER HEATER TO THE TERMINATION OF HEATED WATER FIXTURE SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE OF MINIMUM PIPE INSULATION THICKNESS TABLE C403.11.3.

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)		
	CONDUCTIVITY (BTU x IN. / (H x FT² x °F))	MEAN RATING TEMPERATURE, °F	<1	1 to < 1½	1½ to < 4
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. HOT WATER SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER 2021 INTERNATIONAL ENERGY CONSERVATION CODE SECTION C404.5.1. 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)	MAXIMUM 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 2021 INTERNATIONAL ENERGY CONSERVATION CODE SECTION 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 2021 INTERNATIONAL ENERGY CONSERVATION CODE SECTION C404.7, DEMAND CIRCULATION WATER SYSTEMS HAVE CONTROLS THAT START THE PUMP ON RECEIVING THE SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE AND LIMITS THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO 104°F.

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 1ST 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/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 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 AND ETC.

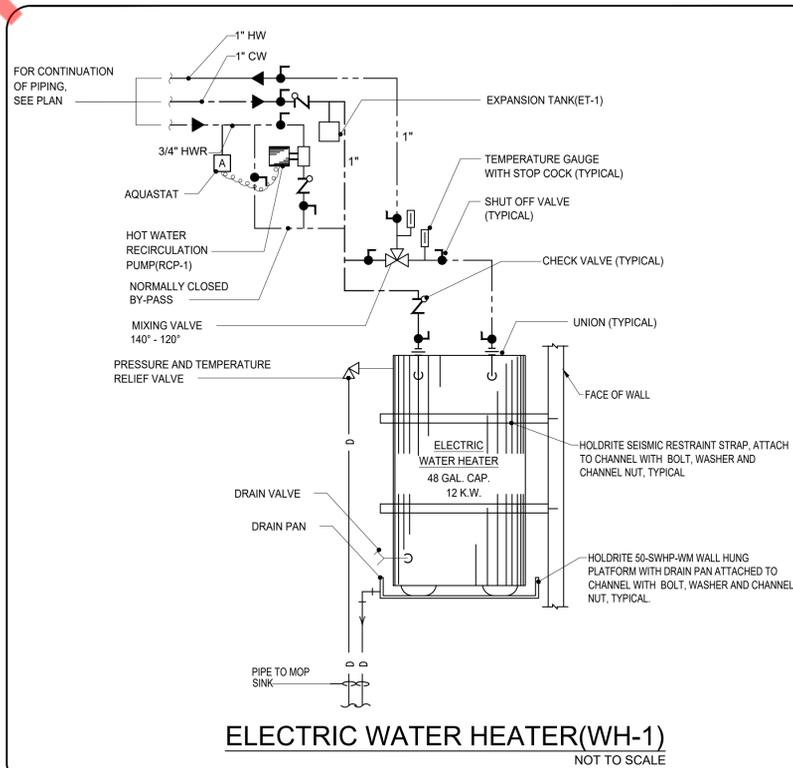
RESTROOM FIXTURE SCHEDULE

Item No.	Qty.	Description	Manufacturer	Model	WATER		WASTE		Usage	Spec
					Hot	Cold	Waste	Usage		
A1	1	WATER CLOSET	SIGNATURE HARDWARE	945956		3/4"	4"			
	1	ELONGATED SEAT	-	-						
A2	1	LAVATORY	WS BATH COLLECTION	UNLIMITED 46			2"			
	1	LAVATORY FAUCET***	LOCAL SOURCE	-	1/2"	1/2"				

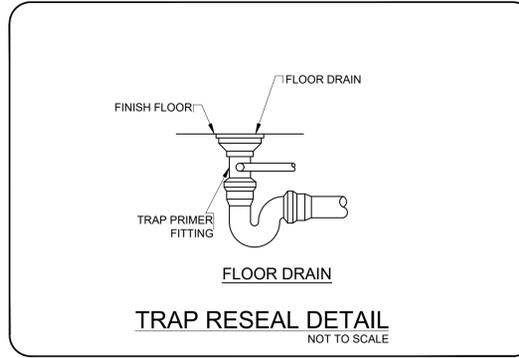
PLUMBING FIXTURE SCHEDULE

Item No.	Qty.	Description	Manufacturer	Model	WATER		WASTE		Usage	Spec
					Hot	Cold	Waste	Usage		
A11	1	DOUBLE DRINKING FOUNTAIN	-	-		1/2"	2"			
A15	1	MOP SINK	-	-			3"			
	1	MOP SINK FAUCET***	-	-	1/2"	1/2"				
A19	2	WASHER/DRYER***	ECOWASHER	-	3/4"	3/4"	2"			
B14	3	VERSA SPA PRO***	SUNLESS INC	VERSASPA PRO	3/4"	3/4"	2"			
FD	1	FLOOR DRAIN	ZURN	ZS415 W/ TYPE BS STRAINER			3"			
	7	THERMAL MIXING VALVES	WATTS	LFMMV	1/2"	1/2"				

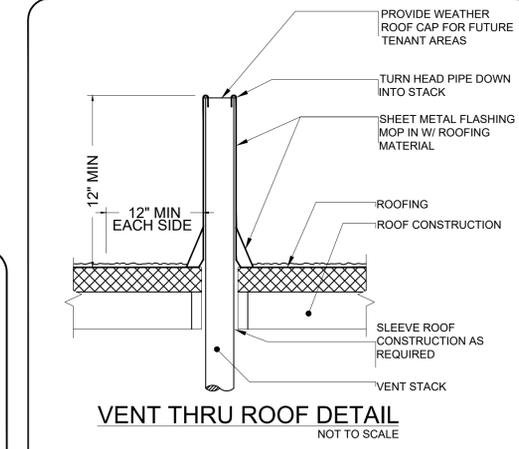
***MIXING VALVE REQUIRED.



ELECTRIC WATER HEATER(WH-1)
NOT TO SCALE

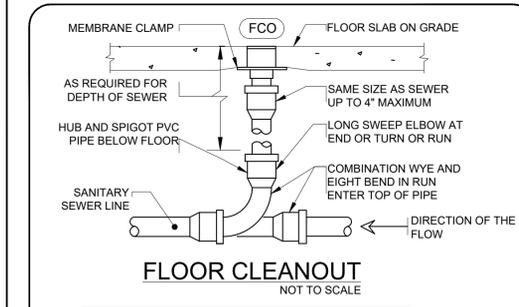


TRAP RESEAL DETAIL
NOT TO SCALE



VENT THRU ROOF DETAIL
NOT TO SCALE

VENT THRU ROOF DETAIL NOTE
ANY VENT WITHIN 10'-0" OF ANY DOOR, WINDOW, OR EXHAUST OPENING SHALL EXTEND NOT LESS THAN 3'-0" ABOVE SUCH OPENING



FLOOR CLEANOUT
NOT TO SCALE

FLOOR CLEANOUT DETAIL NOTES
1) LOCATE CLEANOUT AT THIS LOCATIONS:
A) BUILDING EXIT
B) AT TURNS OF PIPES GREATER THAN 45 DEGREES
C) AT 90' INTERVALS ON STRAIGHT RUNS
D) WHERE IS SHOWN ON PLANS
E) WHERE IS 18" CLEAR AROUND

NY ENGINEERS

GLO TANNING

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PROJECT

SR. NO.	DETAIL	DATE

REVISIONS DATES:

ISSUE DATE: 06.25.24
PROJECT #: _____
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PLUMBING NOTES & DETAILS

P-1

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PROJECT

GLO TANNING

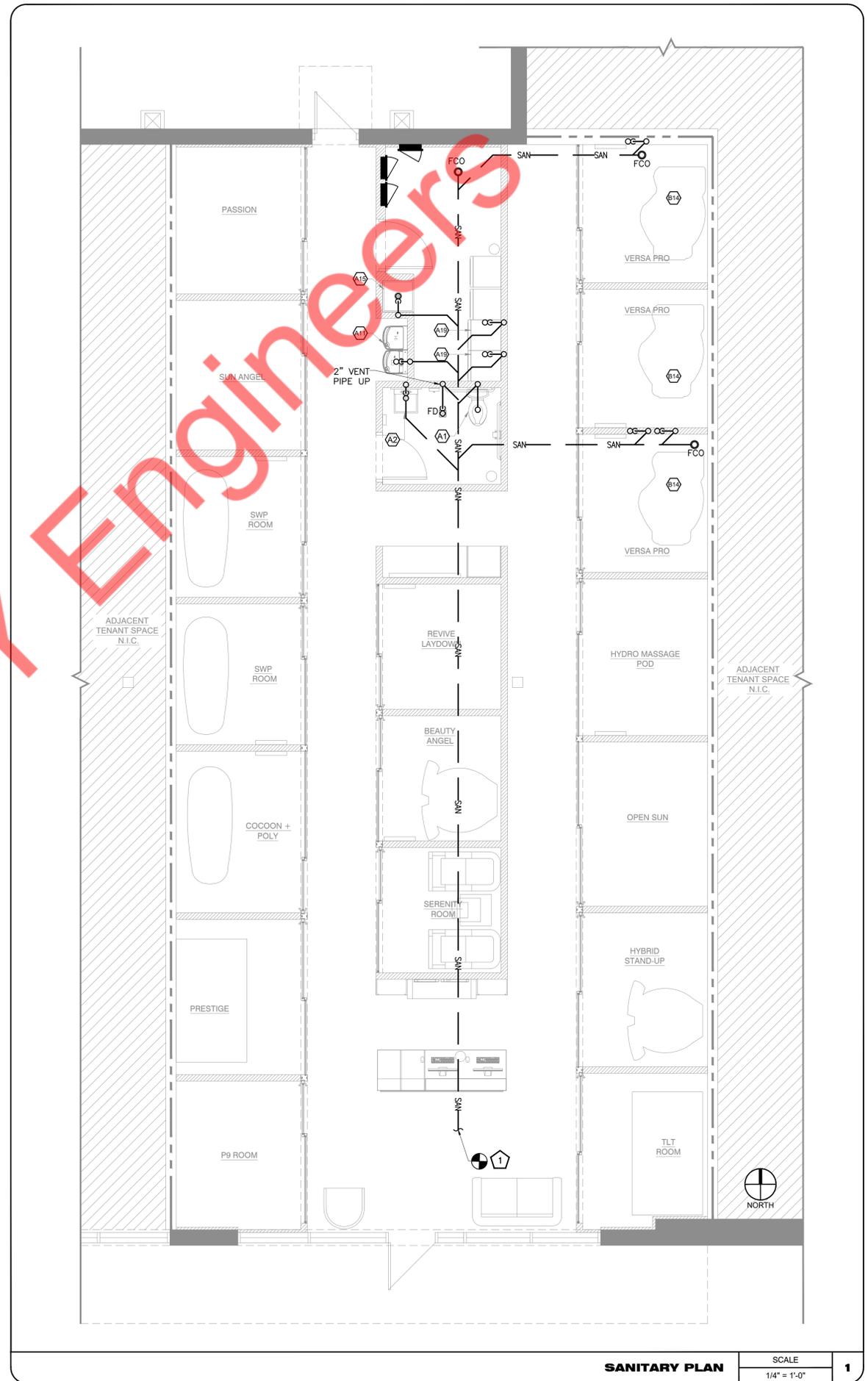
REVISIONS DATES:

SR. NO.	DETAIL	DATE

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SANITARY PLAN & RISER

P-2

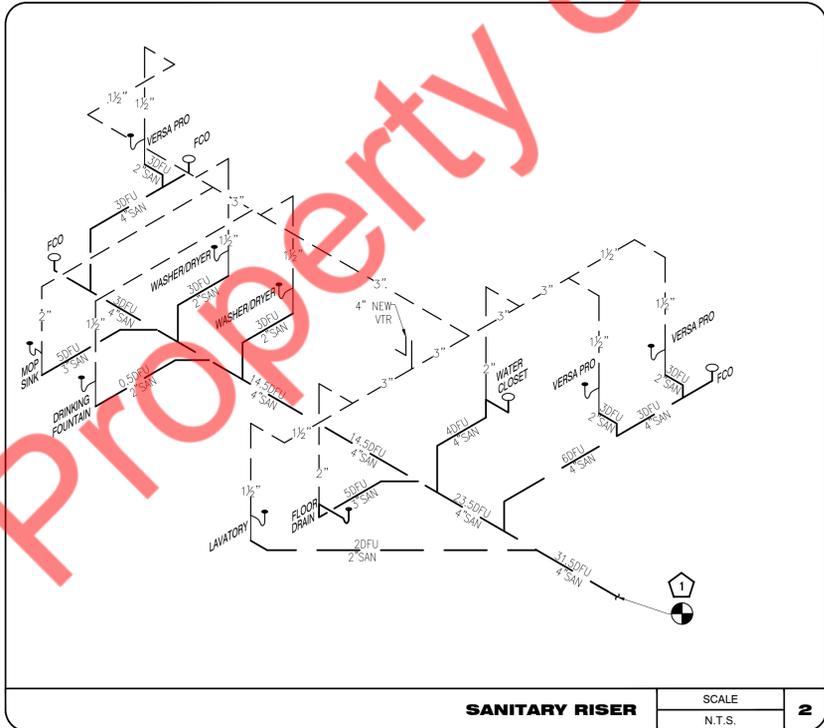


SANITARY KEYED NOTES

1. CONNECT NEW 4" SANITARY WASTE PIPING TO EXISTING SANITARY WASTE LINE OF ADEQUATE SIZE IN / NEARBY SPACE. CONTRACTOR TO FIELD VERIFY SIZE, LOCATION AND INVERT OF EXISTING SANITARY WASTE LINE AND MAKE NECESSARY CHANGES IF REQUIRED.

GENERAL NOTES

1. SLOPE OF DRAINAGE PIPING SHALL BE 1/8" PER FOOT OF RUN FOR PIPE 3" TO 6" AND 1/4" PER FOOT OF RUN FOR PIPE 2-1/2" AND SMALLER. VENT PIPING SHALL BE PITCHED TO DRAIN.
2. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
3. ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
4. PROVIDE ACCESS PANELS FOR CLEANOUTS AS REQUIRED.
5. REFER SANITARY RISER DIAGRAM FOR ALL PIPE SIZES.



RECIRCULATION PUMP SCHEDULE	
MANUFACTURER & MODEL	GRUNDFOS UP-15-18 B5
EQUIPMENT TAG	RCP-1
STATUS	NEW
GPM	2
WATER TEMP.(°F)	140
PUMP TYPE	INLINE
MHP	85 WATTS
V/PHHZ	115/1/60
RPM	2280
SERVICE FACTOR	1.0

NOTE:
PROVIDE AQUA STAT WITH AUTOMATIC TIMER KIT FOR THE TEMPERATURE CONTROL OF HOT WATER SYSTEM. COORDINATE ELECTRICAL REQUIREMENTS FOR TIMER WITH ELECTRICAL CONTRACTOR.

NEW STORAGE WATER HEATER SCHEDULE	
MANUFACTURER	AO SMITH
MODEL	DEL-50
EQUIPMENT TAG	WH-1
STATUS	NEW
CAPACITY	48 GALLONS
QUANTITY	1
KW	12
FLOW RATE	61 GPH*
ENERGY FACTOR	0.92
VOLTAGE	480/3/60
AMPERAGE	14.43
WEIGHT	172 LBS

- * SIMULTANEOUS ELEMENT OPERATION @ 80° F TEMPERATURE RISE.
- INSTALL NEW EXPANSION TANK (ET-1) AMTROL MODEL THERM-X-TROL ST-SC-DD, 2.0 GAL PER LOCAL CODE REQUIREMENTS.

WATER KEED NOTES

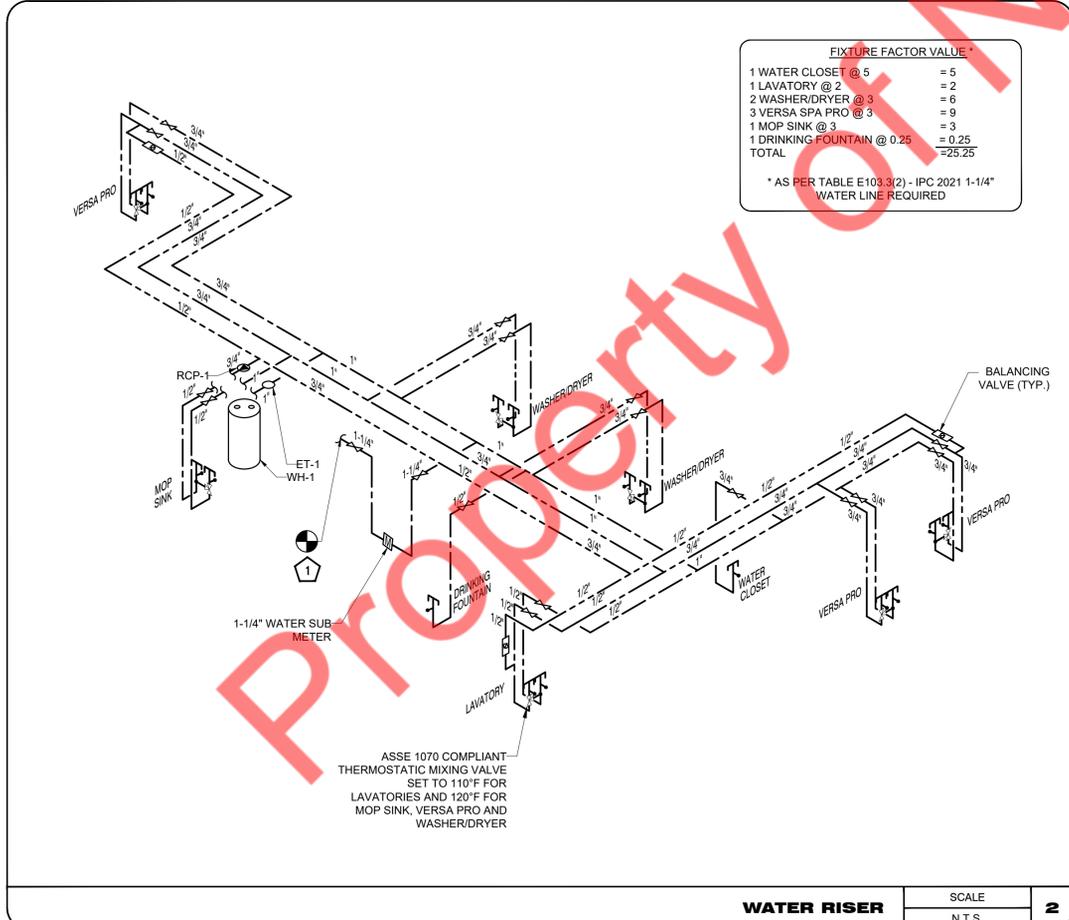
- CONNECT NEW 1-1/4" CW LINE TO EXISTING COLD WATER MAIN LINE WITH NEW WATER SUB METER. PROVIDE NEW SHUTOFF VALVE AFTER AND BEFORE METER AS SHOWN IN PLAN. CONTRACTOR TO FIELD VERIFY THE SIZE AND LOCATION OF THE EXISTING WATER LINE AND MAKE NECESSARY CHANGES IF REQUIRED.

GENERAL NOTES

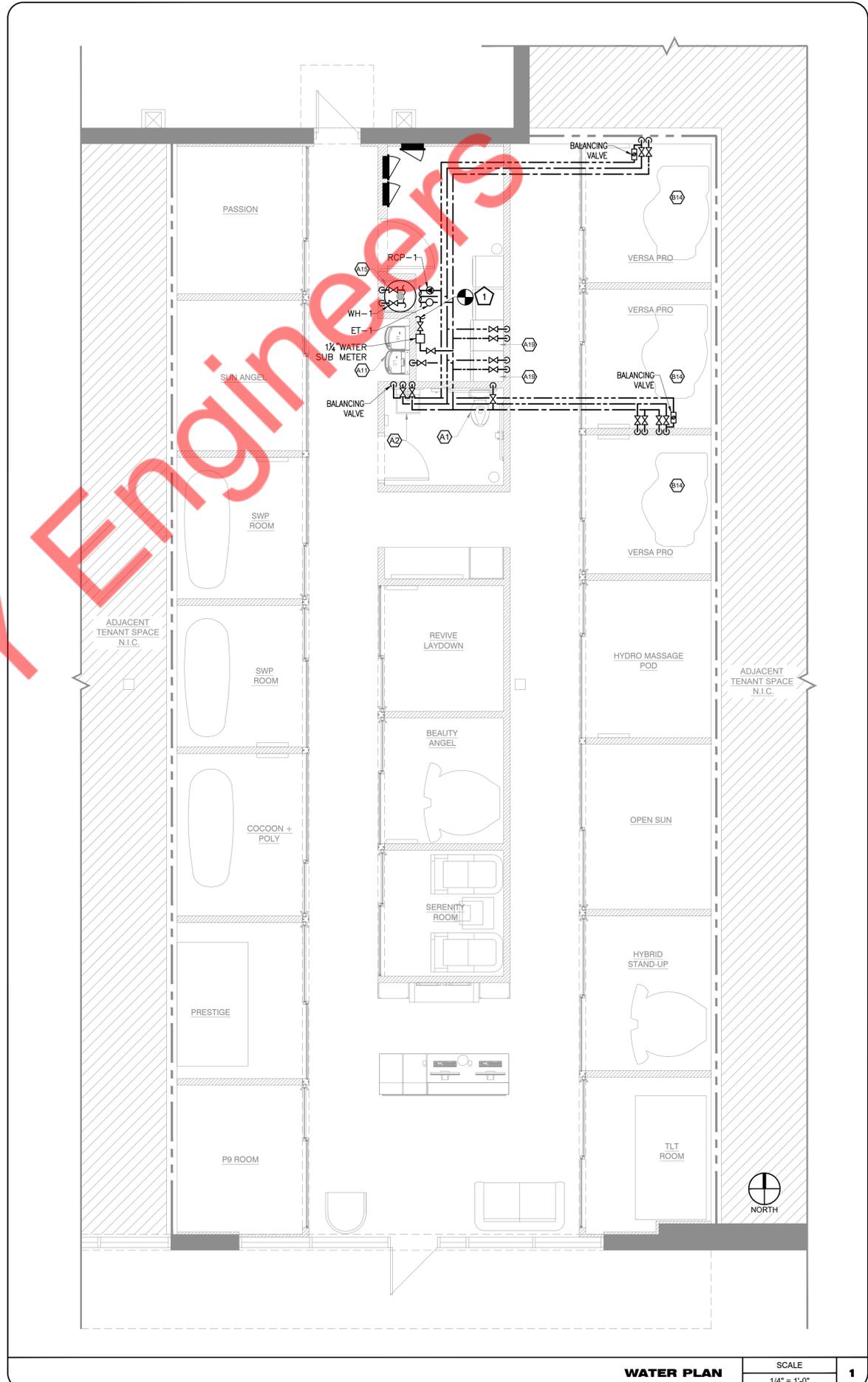
- CW/HW/HWR PIPING TO BE PROVIDED WITH INSULATION AS PER 2021 INTERNATIONAL ENERGY CODE.
- PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
- PROVIDE ACCESS PANELS FOR SHUT-OFF VALVES AS REQUIRED.
- REFER WATER RISER DIAGRAM FOR ALL PIPE SIZES ON SHEET.
- CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
- WATER HEATER DRAIN SPILLS TO THE MOP SINK.

FIXTURE FACTOR VALUE *	
1 WATER CLOSET @ 5	= 5
1 LAVATORY @ 2	= 2
2 WASHER/DRYER @ 3	= 6
3 VERSA SPA PRO @ 3	= 9
1 MOP SINK @ 3	= 3
1 DRINKING FOUNTAIN @ 0.25	= 0.25
TOTAL	= 25.25

* AS PER TABLE E103.3(2) - IPC 2021 1-1/4" WATER LINE REQUIRED



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



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

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PROJECT

GLO TANNING

REVISIONS DATES:

SR. NO.	DETAIL	DATE

ISSUE DATE: 06.25.24
PROJECT #:
DRAWN BY: NYE
CHECKED BY: NYE

WATER PLAN & RISER