

ELECTRICAL SYMBOL LEGEND

BASIC MATERIALS

Table with columns SYMBOL and DESCRIPTION. Lists electrical symbols for receptacles, outlets, switches, motors, and lighting controls.

LIGHTING

Table with columns SYMBOL and DESCRIPTION. Lists lighting symbols for fixtures, wall mounts, and emergency lighting.

OCCUPANCY SENSORS

Table with columns SYMBOL and DESCRIPTION. Lists occupancy sensor symbols and their descriptions.

SERVICE AND DISTRIBUTION

Table with columns SYMBOL and DESCRIPTION. Lists symbols for electrical panels and equipment.

TELEPHONE/COMPUTER RACEWAY SYSTEM

Table with columns SYMBOL and DESCRIPTION. Lists symbols for telephone and computer raceway systems.

FIRE ALARM/DETECTION SYSTEM

Table with columns SYMBOL and DESCRIPTION. Lists fire alarm and detection system symbols.

NOTES

CONTRACTOR TO VERIFY MOUNTING HEIGHT OF ALL DEVICES WITH ARCHITECT PRIOR TO DEVICE INSTALLATION.

Small table for detail and sheet references.

SOME SYMBOLS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT.

GENERAL ELECTRICAL NOTES

- 1. THE ENTIRE INSTALLATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE W/FBC 2010, NEC 2008 AND OF ALL LOCAL CODES, RULES AND ORDINANCES HAVING JURISDICTION.

EXISTING CONDITIONS NOTES

- 1. PRIOR TO SUBMITTING BIDS, THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING ELECTRICAL EQUIPMENT CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK.

ELECTRICAL DRAWING INDEX

Table with columns DRAWING and DESCRIPTION. Lists drawing E0.1 and E1.1.

SCOPE OF WORK

SCOPE IS LIMITED TO THE SECOND FLOOR REMODELING. FIRST FLOOR IS EXISTING TO REMAIN.



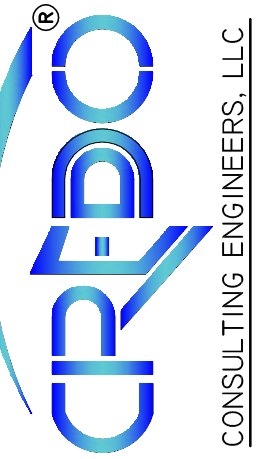
Certificate of Authorization No. 29348

CONSULTING ELECTRICAL ENGINEERS

3440 N.E. 12th AVENUE OAKLAND PARK, FL 33334

FLORIDA LICENSE NUMBER: 93047

DATE

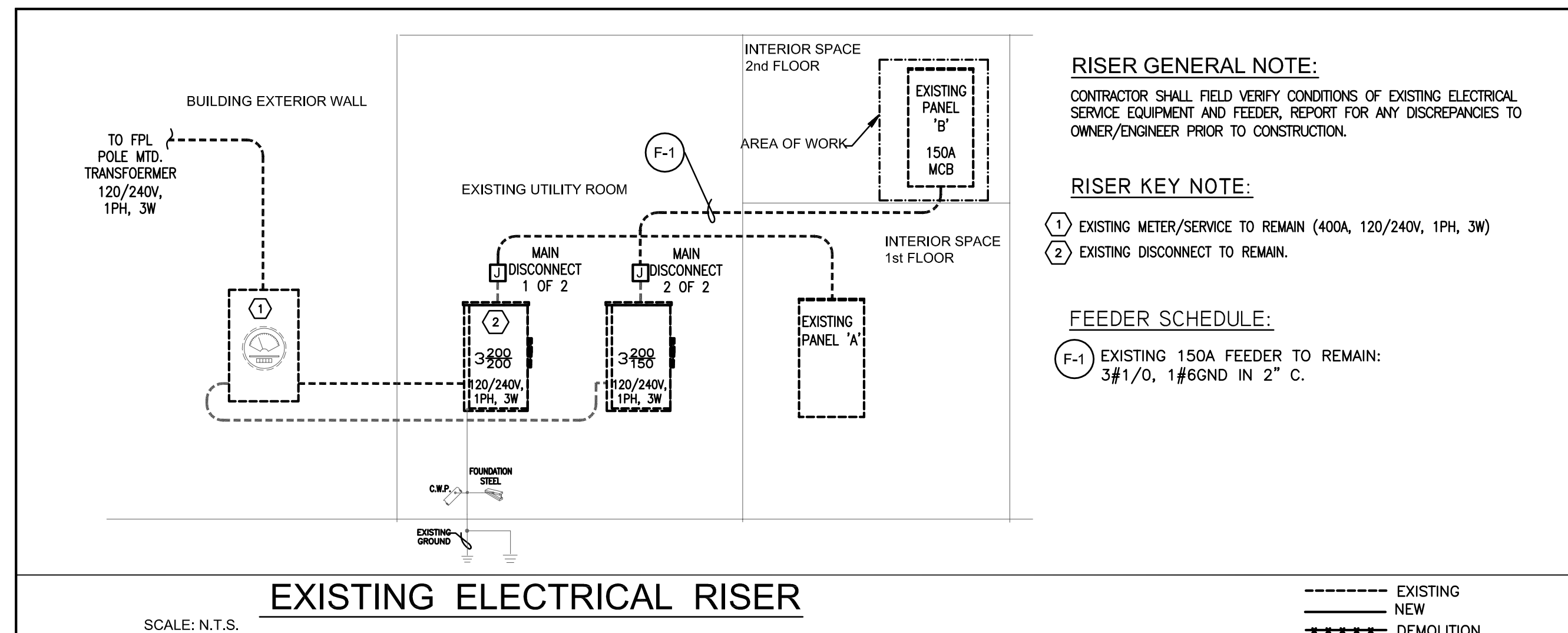


PROJECT MANAGER: IRINA GOLDBERG

2nd Floor Renovations 3440 NE 12th Avenue Oakland Park, Florida 33334

Panel Name: B table with columns IDENTIFICATION, CIRCUIT BREAKER, LOAD PHASE, and IDENTIFICATION. Includes notes and load summary.

EXISTING BUILDING LOAD SUMMARY (MA WIREWAY) table with columns SERVICE, LOAD (KVA), and LOAD (AMP).



RISER GENERAL NOTE:

CONTRACTOR SHALL FIELD VERIFY CONDITIONS OF EXISTING ELECTRICAL SERVICE EQUIPMENT AND FEEDER. REPORT FOR ANY DISCREPANCIES TO OWNER/ENGINEER PRIOR TO CONSTRUCTION.

RISER KEY NOTE:

- 1. EXISTING METER/SERVICE TO REMAIN (400A, 120/240V, 1PH, 3W)

FEEDER SCHEDULE:

- F-1 EXISTING 150A FEEDER TO REMAIN: 3#1/0, 1#6GND IN 2" C.

project: MUE12060701

date: 08-14-14

revision date

no.

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General Revisions

drawing I.G.

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2nd Floor Electrical General Notes, Symbols, Details and Risers

E0.1

sheet number

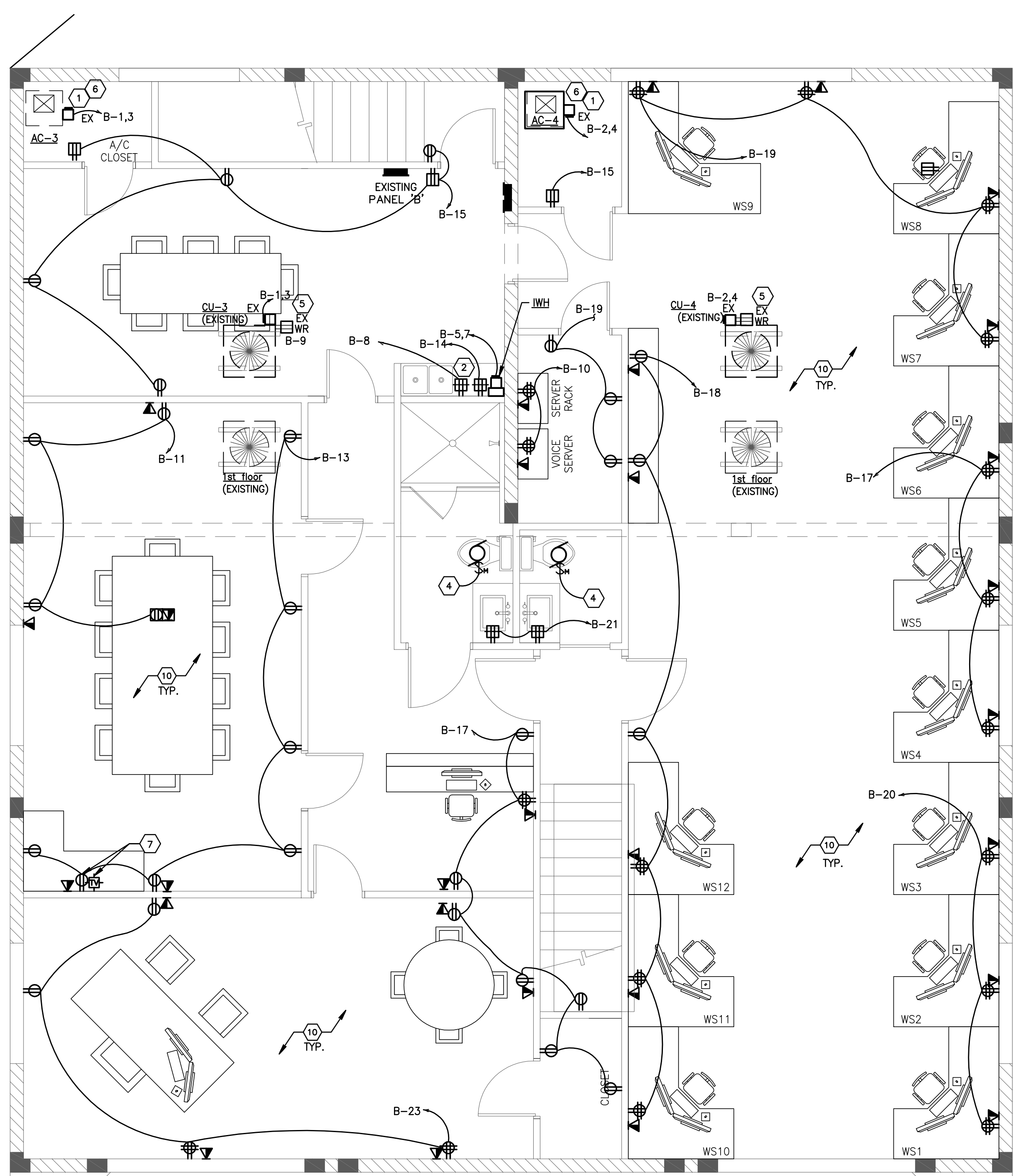
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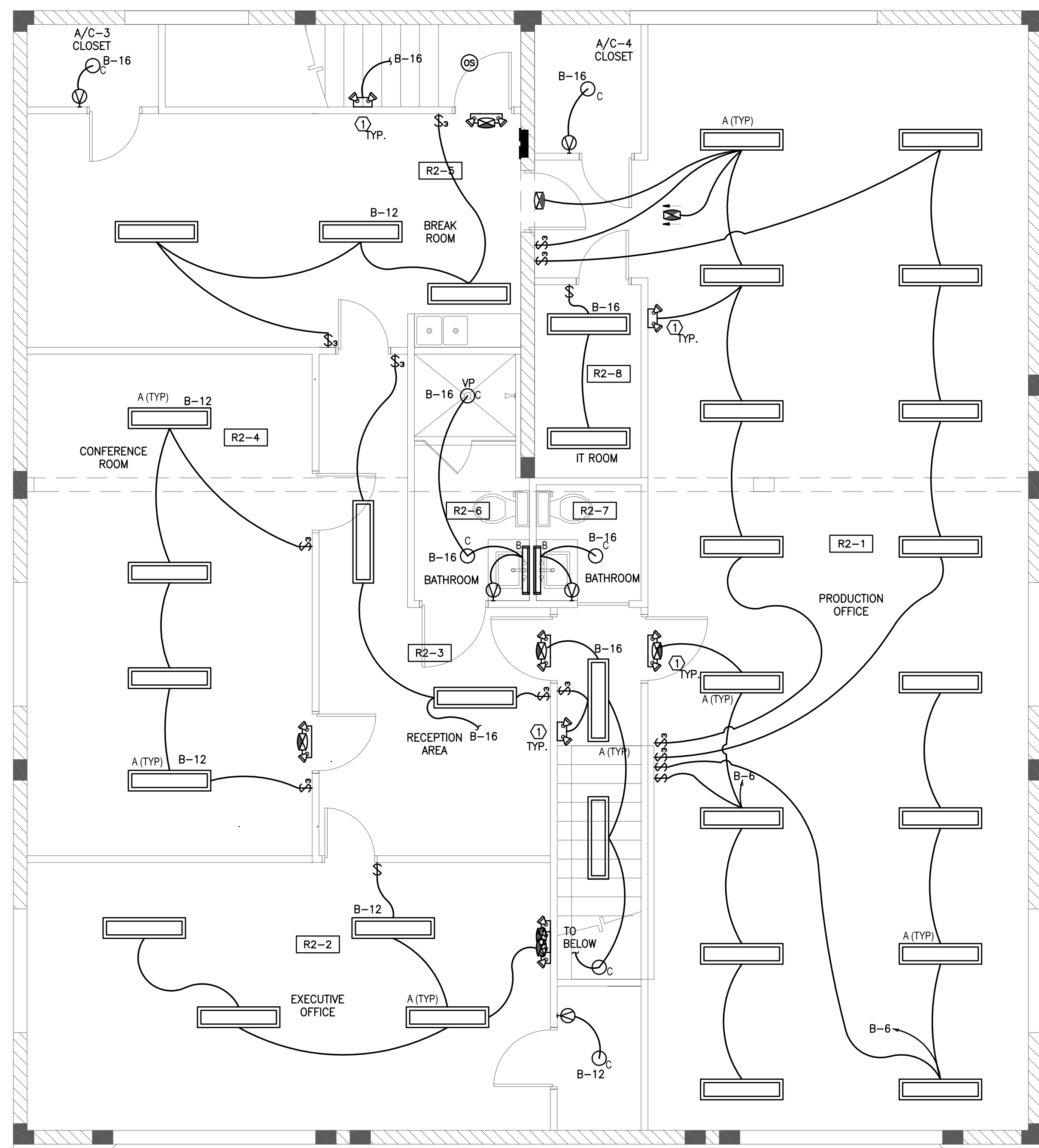
General Revisions

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Electrical Plan
 2nd Floor
E1.1
 sheet number



SECOND FLOOR POWER & COMMUNICATION
 SCALE: 1/4" = 1'-0"



SECOND FLOOR LIGHTING
 SCALE: 1/4" = 1'-0"

- POWER KEY NOTES:**
1. VERIFY ELECTRICAL REQUIREMENTS WITH EQUIPMENT NAMEPLATE. REPORT TO ENGINEER FOR ANY DISCREPANCIES. REFER TO MECHANICAL PLAN FOR FAN CONTROL AND THERMOSTAT LOCATION.
 2. ALL 125V RECEPTACLES IN KITCHEN AREA SHALL BE GFCI PROTECTED (NEC2008 210.8(A)(6))
 3. COORDINATE EXACT LOCATION OF ALL OUTLETS WITH OWNER
 4. EXHAUST FAN IN CEILING TO BE INTERLOCKED WITH LOCAL LIGHTING SWITCH.
 5. CONTRACTOR TO VERIFY EXISTING WR/GFI SERVICE RECEPTACLE WITHIN 25FT. FOR MECHANICAL EQUIPMENT ON ROOF. PROVIDE NEW AS REQUIRED.
 6. CONTRACTOR SHALL ASSURE PROPER WORKING CLEARANCE FOR ELECTRICAL EQUIPMENT/DISCONNECTS. COORDINATE WITH MECHANICAL DRAWING PRIOR TO INSTALLATION.
 7. COORDINATE EXACT MOUNTING HEIGHT AND REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION.

NOTE TO CONTRACTOR
 ALL CONDUCTORS 1/2" OR 3/4" SHALL BE GALVANIZED RIGID STEEL (GRS) CONDUITS.

- LIGHTING KEY NOTES:**
1. CONNECT ALL EXIT SIGNS AND EMERGENCY LIGHTS TO LOCAL LIGHT CIRCUIT AHEAD OF ANY SWITCHING DEVICES USING 3#12AWG IN 1/2" EMT

LIGHTING FIXTURE SCHEDULE

TYPE	SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMP			TOTAL WATT	VOLT	MOUNTING	REMARKS
					NO.	TYPE	WATT				
A	[Symbol]	1' x 4' FLUORESCENT INDIRECT LIGHT W/ PERFORATED BASKET	BY OWNER	BY OWNER	2	T8	28	56	120	PENDANT	
B	[Symbol]		BY OWNER	BY OWNER							
C	[Symbol]	6# DOWNLIGHT	BY OWNER	BY OWNER						PENDANT	
	[Symbol]	TWO HEAD EMERGENCY LIGHT WITH 90 MIN. BATTERY	BY OWNER		2				120	WALL	
	[Symbol]	COMBO 2 HEAD EMERG. LIGHT WITH 90 MIN. BATTERY	BY OWNER		2				120	SURFACE	
	[Symbol]	EXIT SIGN DOUBLE SIDED OR ONE SIDE	BY OWNER		2				120		

NOTES:
 1. CONTRACTOR TO ENSURE THAT MOUNTING DEVICES AND ACCESSORIES ARE CORRECT FOR CEILING AND WALL IN WHICH THE FIXTURES ARE TO BE INSTALLED.
 2. REFER TO ARCHITECTURAL CEILING PLANS FOR EXACT LOCATION OF LIGHT FIXTURES
 3. ALL LIGHT FIXTURES SHALL BE REVIEWED AND APPROVED BY ARCHITECT / OWNER PRIOR TO FORWARDING TO ENGINEER FOR REVIEW.
 4. ALL LIGHT FIXTURES AND LAMPS WILL BE FURNISHED AND INSTALLED BY TENANT'S CONTRACTOR, UNLESS OTHERWISE NOTED. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ORDERING, RECEIVING, STORING, AND PROTECTING FROM THEFT, BREAKAGE, ETC. AFTER SIGNING FOR RECEIPT.
 5. ALL FLUORESCENT LIGHT FIXTURES THAT UTILIZE DOUBLE-ENDED LAMPS AND CONTAIN BALLASTS THAT CAN BE SERVICED IN PLACE SHALL BE EQUIPPED WITH DISCONNECTING MEANS AS PER NEC-2008 (410.130(G)).
 6. ALL LUMINAIRES SHALL BEAR THE UL LISTING NUMBER FROM NATIONAL RECOGNIZED TESTING LABORATORY.

GENERAL MECHANICAL NOTES

- ALL MECHANICAL SYSTEMS ARE TO BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE FLORIDA STATE BUILDING CODE, NOISE & HEIGHT ORDINANCES, PLANS AND SPECIFICATIONS.
- ALL MATERIALS SHALL BE NEW AND ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, PRODUCT APPROVAL, RULES AND ORDINANCES, ANY DAMAGED EQUIPMENT SHALL BE REPLACED OR RESTORED TO ORIGINAL CONDITION.
- THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, ACCESS PANELS, CONTROL SYSTEMS, DEVICES, PERMITS AND SERVICES NECESSARY FOR FURNISHING AND INSTALLING A COMPLETE OPERABLE MECHANICAL SYSTEM.
- ALL LOUVERS, GRILLES, PIPING, ETC. SHALL BE PAINTED TO MATCH SURROUNDING COLOR AND TEXTURES AS REQUIRED BY ARCHITECT. VERIFY COLOR AND TEXTURE WITH ARCHITECT. PAINT ALL EXPOSED MECHANICAL EQUIPMENT WITH BENJAMIN MOORE EPOXY ENAMEL 182.
- ALL CUTTING, PATCHING, STRUCTURAL STEEL, WEATHER PROOFING, PAINTING, AND WALL OPENINGS SHALL BE BY THE GENERAL CONTRACTOR.
- ALL OPENINGS IN BUILDING STRUCTURE, FOR DUCTWORK, PIPING, ETC. TO BE 1/2" LARGER (ON ALL SIDES) THEN THE OUTSIDE DIMENSIONS. FILL VOIDS WITH FIRE RETARDANT SILICONE FOAM (I.E. CHASE-FOAM CTC PR-855 BY CHASE TECHNOLOGY CORP.).
- BUILDING HVAC CALCULATIONS ARE BASED ON THE FOLLOWING:
A. INDOOR DESIGN: SUMMER 75 DB/50% RH, WINTER 72 DB.
B. OUTDOOR DESIGN: SUMMER 91 DB/75 DB, WINTER 45 DB.
- PROVIDE FLEXIBLE DUCT CONNECTORS, RATED AS REQUIRED, TO ALL FANS, A/C UNITS, OR MECHANICAL EQUIPMENT.
- PROVIDE MAINTENANCE AND OPERATION MANUAL ON ALL MECHANICAL EQUIPMENT OR SYSTEMS. PROVIDE 5 SETS OF SUBMITTALS ON ALL HVAC EQUIPMENT. SUBMITTALS SHALL HAVE A SUMMARY SHEET SHOWING ALL SCHEDULED INFORMATION.
- HVAC CONTRACTOR WILL WARRANTY ALL MECHANICAL SYSTEMS, DUCTWORK, THERMOSTATS, AND ALL OTHER EQUIPMENT, PARTS AND LABOR UNDER THESE DRAWINGS AND SPECIFICATIONS FOR A PERIOD OF ONE (1) YEAR AFTER C.O. OF BUILDING. ANY REPAIRS REQUIRING SYSTEM SHUT DOWN WILL BE DONE DURING NON-OPERATIONAL PERIODS. HVAC CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO BIDDING AND PURCHASING ANY EQUIPMENT.
- AIR QUALITY SHOULD BE TESTED BEFORE OCCUPANCY AND SHOULD BE INSTRUMENTED AND MONITORED THEREAFTER, OR AT LEAST AT REGULAR INTERVALS
- ELECTRICAL CONTROLS AND POWER WIRING: UNDER ELECTRICAL CONTRACT.
- EQUIPMENT SPECIFIED BY MANUFACTURER'S NUMBER SHALL INCLUDE ALL ACCESSORIES, CONTROLS, ETC., LISTED IN THE CATALOG AS STANDARD WITH THE EQUIPMENT. OPTIONAL OR ADDITIONAL ACCESSORIES SHALL BE FURNISHED AS SPECIFIED.
- MATERIALS:
A. REFRIGERANT PIPING: SHALL BE TYPE L SOFT DRAWN, COPPER TUBING, DEHYDRATED FOR REFRIGERANT USE. SIZED AS SHOWN ON DRAWINGS OR AS PER AIR CONDITIONING EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
B. INSULATION: REFRIGERANT SUCTION PIPING AND CONDENSATE PIPES SHALL BE INSULATED WITH 3/4" THICK FOAMED PLASTIC INSULATION, FIRE RETARDANT TYPE. INSULATION SHALL BE INSTALLED IN PIPING BEFORE ASSEMBLY. NO SPLIT INSULATION WILL BE ACCEPTABLE. SEAL JOINTS WITH MANUFACTURER'S APPROVED ADHESIVE AND GRAY TAPE.
- CONTROLS: AIR CONDITIONING UNITS SHALL BE STARTED AND STOPPED THRU INDIVIDUAL PROGRAMMABLE THERMOSTAT. INDIVIDUAL THERMOSTATS SHALL START/STOP FANS AND ACTIVATE COOLING/HEATING SYSTEMS AS SELECTED.
- TEST AND BALANCE: INDEPEND CONTRACTOR SHALL TEST AND BALANCE ALL VENTILATION AND AIR CONDITIONING SYSTEMS. SUBMIT FOUR COPIES OF TEST AND BALANCE REPORT, TO OWNER FOR APPROVAL.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID ANY INTERFERENCE THAT MAY DELAY PROGRESS OF CONSTRUCTION. CONTRACTOR SHALL INSTALL ALL NECESSARY OFFSETS, BENDS, AND TRANSITIONS REQUIRED TO PROVIDE A COMPLETE SYSTEM AT NO ADDITIONAL COST TO OWNER.

MECHANICAL EQUIPMENT NOTES

- ALL MECHANICAL EQUIPMENT SHALL BE ARI & U.L. LISTED WHERE APPLICABLE AND RATED FOR THE REQUIRED SERVICE, PRESSURES, TEMPERATURES, AND SHALL BE PROVIDED WITH ALL NECESSARY TRANSFORMERS, SEALS, VALVES, CONNECTIONS, ETC. TO FUNCTION PROPERLY.
- PROVIDE SMOKE DETECTORS IN COMPLIANCE WITH NFPA 90A AND IMC (INTERNATIONAL MECHANICAL CODE). ALL SMOKE DETECTORS SHALL BE BY ONE MANUFACTURER; COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHALL SHUT DOWN ASSOCIATED AIR EQUIPMENT. PROVIDE ACCESS DOOR FOR ALL SMOKE DETECTORS.
- PROVIDE BACKDRAFT DAMPERS ON ALL EXHAUST FANS AND/OR INLINE FANS.
- PROVIDE VIBRATION ISOLATORS ON ALL MECHANICAL EQUIPMENT AS CALLED FOR IN THE SPECIFICATIONS. IF NOT SPECIFIED, AS RECOMMENDED BY MANUFACTURER FOR QUIET OPERATION (WITH 99% ISOLATION EFFICIENCY).
- PROVIDE A MIN. OF 10' CLEARANCE BETWEEN O/A INTAKES AND VTR OR ANY EXHAUST OPENING.
- INDEPENDENT CONTRACTOR SHALL TEST AND BALANCE ALL MECHANICAL EQUIPMENT AIR DEVICES, EXTRACTORS, DAMPERS, AHU'S & FAN RATES, ETC. TO PROVIDE THE DESIGN QUANTITIES AS SHOWN ON THE PLANS OR SCHEDULES. PROVIDE T & B REPORT IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS. PROVIDE FINAL BALANCING FOR ALL SYSTEMS TO SATISFACTION OF OWNER AND ENGINEER. T&B CONTRACTOR SHALL VISIT JOB SITE DURING CONSTRUCTION TO ENSURE THAT ALL DUCTS, DAMPERS, ETC. ARE INSTALLED FOR PROPER AND QUIET AIR DELIVERY.
- THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER AND ENGINEER BEFORE INSTALLATION.
- RUN INSULATED CONDENSATE DRAINS AS PER PLUMBING DRAWINGS.
- ALL PIPING AND DUCTWORK SHALL BE SLEEVED THRU WALLS, BEAMS, SLABS, ETC. AS REQUIRED AND COORDINATED WITH THE STRUCTURAL ENGINEER. REWORK BAR JOIST CROSS BRACING AND PROVIDE NECESSARY TRANSITIONS AS REQUIRED FOR DUCTWORK INSTALLATION.
- ALL INSULATION WILL HAVE FIRE/SMOKE RATING LESS THAN 25/50.
- PROVIDE MOTOR STARTERS AS FOLLOWS (UNLESS OTHERWISE RECOMMENDED BY MOTOR MANUFACTURER):
A: PROVIDE OVERLOAD PROTECTION - 1/3 HP AND ABOVE (ALL PHASES).
B: PROVIDE ACROSS THE LINE VOLTAGE STARTING BELOW 25 HP.
- ALL OUTDOOR EQUIPMENT SHALL COMPLY WITH LOCAL ZONING NOISE ORDINANCES. MIN. REQUIREMENT SHALL NOT EXCEED A NOISE LEVEL OF 65 DB AS MEASURED RADIALLY 30 FT FROM THE EQUIPMENT IN ALL DIRECTIONS.
- ALL KITCHEN FAN EQUIPMENT SHALL BE WEATHER PROOF RESISTANT & SEACOAST PROTECTED.
- PROVIDE ACCESS PANEL FOR FUTURE MAINTENANCE AND UNIT REPLACEMENT PROVIDE 3"-0" MIN. CLEARANCE IN FRONT OF UNIT REFER TO ARCH DWG. FOR PANEL INFORMATION.
- FILTERS SHALL BE IN PLACE DURING CONSTRUCTION. PROVIDE A NEW SET PRIOR TO TEST AND BALANCE AND A FINAL SET AT THE END OF ONE YEAR SERVICE PERIOD.

AIR DISTRIBUTION DUCTWORK NOTES

- REFER TO ARCHITECTURAL PLANS FOR CEILING TYPE.
- PROVIDE OFF WHITE FINISH (SUBJECT TO ARCHITECT'S APPROVAL).
- ALL DUCTWORK WHERE ALLOWED BY LOCAL CODES AND CEILING RATING SHALL BE 1" LOW PRESSURE DUCT, SEAL CLASS "C" AND AS FOLLOWS:
A. S/A & R/A - INSULATED G-90 SHEETMETAL (R-6 MIN.), FABRICATED AND INSTALLED AS PER LATEST SMACNA "FIBROGLASS MANUAL". 1-1/2" THICK R-6.0 MIN.
B. EXHAUST AIR - GALVANIZED SHEETMETAL, 26 GA. MIN.
C. FLEXIBLE DUCTWORK SHALL BE INSULATED WITH 1-3/8" THICK R-6.0 MIN. FIBERGLASS INSULATION.
- ALL DUCTWORK AND DIFFUSERS SHALL BE RATED FOR THE USE, PRESSURE AND TEMPERATURE SPECIFIED AND AS REQUIRED BY THE CEILING SYSTEM RATING.
- ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH "SMACNA" STANDARDS AND LOCAL BUILDING CODES.
- ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
- SEAL ALL DUCTS, JOINTS AND SEAMS IN AN APPROVED MANNER AND INSURE AGAINST LEAKAGE.
- PROVIDE ACCESS DOORS AS REQUIRED FOR ALL MECHANICAL EQUIPMENT TO SERVICE AND VISUALLY CHECK ROTATION OF FANS AND MOTORS, POSITION OF DAMPERS, REPLACE FIRE DAMPER LINKS, ADJUST OR REPLACE CONTROLS, ETC.
- PROVIDE VANED ELBOWS IN ALL CASES, SPLITTER DAMPERS WHERE INDICATED ON DRAWINGS AND VOLUME CONTROL DAMPERS IN ALL BRANCH DUCTS OR DIFFUSER CONNECTIONS.
- REFER TO DIFFUSER SCHEDULE FOR TERMINAL AIR DISTRIBUTION DEVICES

COORDINATION NOTES

- A/C CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS WORK FOR SIZE, LOCATION, CLEARANCE, ACCESS AND ELECTRICAL CHARACTERISTICS WITH ALL OTHER TRADES AND TO PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW BEFORE INSTALLATION OF DUCTWORK OR EQUIPMENT. SHOP DRAWING WILL INCLUDE BEAM OR STRUCTURE ELEVATION & REQUIRED EQUIPMENT ACCESS AREAS.
- ROOF, AND CEILING OPENINGS INDICATED ON CONTRACTOR DRAWINGS ARE NOMINAL DIMENSIONS ONLY AND ALL DUCT/PIPE OR EQUIPMENT PENETRATIONS SHALL BE SLEEVED AND FIRE RATED AS REQUIRED, ADJUST OPENINGS
- COORDINATE LOCATION OF CEILING DIFFUSERS, GRILLES AND REGISTERS IN THE FIELD WITH LIGHTS, SPRINKLERS AND ARCHITECTURAL ELEMENTS.
- COORDINATE LOCATION OF A/C UNITS, THERMOSTATS, FANS AND DUCTWORK WITH BUILDING STRUCTURE AND OTHER TRADES SO THAT NO INTERFERENCES OCCUR.
- IN GENERAL, DUCT OFFSETS HAVE NOT BEEN SHOWN. A/C CONTRACTOR TO COORDINATE THESE AS REQUIRED.
- MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCH. PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING, ORDERING, FABRICATION OR INSTALLATION OF MATERIALS OR EQUIPMENT.

SHOP DRAWING REQUIREMENTS

- SHOP DRAWINGS, SHALL BE SUBMITTED COMPLETE, TOGETHER AT ONE TIME AND MUST COME THROUGH THE ARCHITECT. ALL SUBMITTALS SHALL BE MADE WITHIN 30 DAYS OF NOTICE TO PROCEED.
- ALL SUBMITTALS MUST CLEARLY INDICATE EXACTLY WHICH ITEMS ARE BEING PROPOSED FOR USE. IF NOT, THE SUBMITTAL SHALL BE REJECTED.
- SUBSTITUTIONS SHALL BE LIMITED TO ONE OF THE ALTERNATES LISTED IN THE CONSTRUCTION DOCUMENTS. PRODUCTS CONSIDERED TO BE EQUAL SHALL BE REVIEWED AND ACCEPTED BY THE ENGINEER, ARCHITECT AND OWNER (10) DAYS PRIOR TO BID DATE.
- THE CONTRACTOR ASSUMES ALL DESIGN RESPONSIBILITY AND ALL FINANCIAL RISKS FOR PROCEEDING PRIOR TO SHOP DRAWINGS PROCESSING, AND ON ANY ITEM OR WORK THAT IS AT VARIANCE TO THE CONSTRUCTION DOCUMENTS.
- SHOP DRAWINGS AND SUBMITTALS FOR EACH ITEM SHALL BE REVIEWED NO MORE THAN TWICE. A THIRD SUBMITTAL ON AN ITEM MUST BE ACCOMPANIED BY A PURCHASE ORDER FROM THE CONTRACTOR OR IT SHALL BE REJECTED.
- CIRCUMSTANCES NECESSITATING A REVISION TO THE PERMITTED DOCUMENTS NOT PROCESSED PRIOR TO INSTALLATION MAY NOT BE ACCEPTED. IF ACCEPTED IT MUST BE LEGIBLE, ACCURATE AND ACCOMPANIED BY A PURCHASE ORDER FROM THE CONTRACTOR. THE REVISION SHALL BE CHARGED TO THE CONTRACTOR AND DELIVERED TO HIM ON A C.O.D. BASIS.
- SUBSTITUTIONS FROM THE BASE DESIGN OR VARIATIONS TO THE PERMITTED CONTRACT DOCUMENTS, WHETHER RESULTING FROM PROCESSED SHOP DRAWINGS OR NOT, THAT RESULT IN REQUIREMENTS IN LETTERS OF AUTHORIZATION AND/OR PERMIT CONTRACT DOCUMENT CHANGES MANDATED BY THE AUTHORITY HAVING JURISDICTION WILL NOT BE MADE BY THIS OFFICE UNLESS ACCOMPANIED BY A PURCHASE ORDER FROM THE CONTRACTOR, AND RELEASED ON A C.O.D. BASIS.
- CONTRACTOR SHALL SUBMIT 5 COPIES OF SHOP DRAWINGS.

HVAC ABBREVIATION LEGEND

AFF	ABOVE FINISH FLOOR	F/A	FRESH AIR
AHU	AIR HANDLING UNIT	GPM	GALLONS PER MINUTE
CD	CONDENSATE DRAIN	GR	GRILLE
CD	CEILING DIFFUSER	MCA	MINIMUM CIRCUIT AMPS (FOR WIRE SIZING)
CU	CONDENSING UNIT	MCCP	MAXIMUM OVERCURRENT PROTECTION DEVICE AMPS
EWT	ENTERING WATER TEMPERATURE	LWT	LEAVING WATER TEMPERATURE
EAG	EXHAUST AIR GRILLE	R/A	RETURN AIR
EF	EXHAUST FAN	REG	REGISTER
EXH	EXHAUST	SP	SAFE PAN
FSD	FIRE SMOKE DAMPER	VCD	VOLUME CONTROL DAMPER
AD	ACCESS DOOR	RAG	RETURN AIR GRILLE
FD	FIRE DAMPER	SAR	SUPPLY AIR REGISTER
U/G	UNDER GROUND	O/A	OUTSIDE AIR
		RAFD	RETURN AIR FIRE DAMPER

OUTSIDE AIR CALCULATIONS

(AS PER FBC-10' TABLE 403.3)

USE	APPLICATION	AREA SQ. FT.	PEOPLE/1000 SQFT	NO. OF PEOPLE	CFM/P	CFM/SQ. FT.	CFM REQUIRED	CFM PROVIDED	CFM PROVIDED BY
AHU-3	SECOND FL.	1322	5	20	5	0.06	179	200	AHU-3 (200 CFM)
AHU-4	SECOND FL.	1150	5	6	5	0.06	99	125	AHU-4 (125 CFM)

AIR DISTRIBUTION SCHEDULE

SYMBOL	USE	TYPE	ACCESSORIES	DESIGN MANUFACTURER & MODEL No.
(A)	SUPPLY AIR	WALL GRILLE	O.B.D.	TITUS 300-RL
(B)	RETURN AIR	WALL GRILLE	---	TITUS 300-FL

NOTES:

- ALL AIR DISTRIBUTION DEVICES SHALL BE ALL ALUMINUM CONSTRUCTION.
- COORDINATE COLOR FINISH WITH ARCHITECT, WHITE BAKED ENAMEL STANDARD.
- ARROWS INDICATE DIRECTION OF AIR DISTRIBUTION.

HVAC DESIGN REQUIREMENTS

	YES	NO
DUCT SMOKE DETECTOR	-	X
FIRE DAMPER(S)	-	X
SMOKE DAMPER(S)	-	X
FIRE RATED ENCLOSURE	-	X
FIRE RATED ROOF/FLOOR CEILING ASSEMBLY	-	X
FIRE STOPPING	-	X
SMOKE CONTROL	-	X

SYMBOL LEGEND

	NEW WORK
	EXISTING TO REMAIN
	EXISTING TO REMOVE
	CEILING DIFFUSER
	SUPPLY DIFFUSER
	RETURN GRILLE
	X: AIR DEVICE TYPE #: CFM AxB: NECK SIZE
	CONNECT TO EXISTING
	SUPPLY AIR (DIRECTION OF THROW)
	RETURN /INTAKE AIR
	EXHAUST FAN
	THERMOSTAT
	DUCT SMOKE DETECTOR
	FLEXIBLE DUCTWORK
RG	RETURN GRILLE
CD	CEILING DIFFUSER
FD	FIRE DAMPER
E	EXISTING
N	NEW
ER	REMOVED
	SUPPLY AIR DUCT
	RETURN AIR DUCT
	DUCT TRANSITION

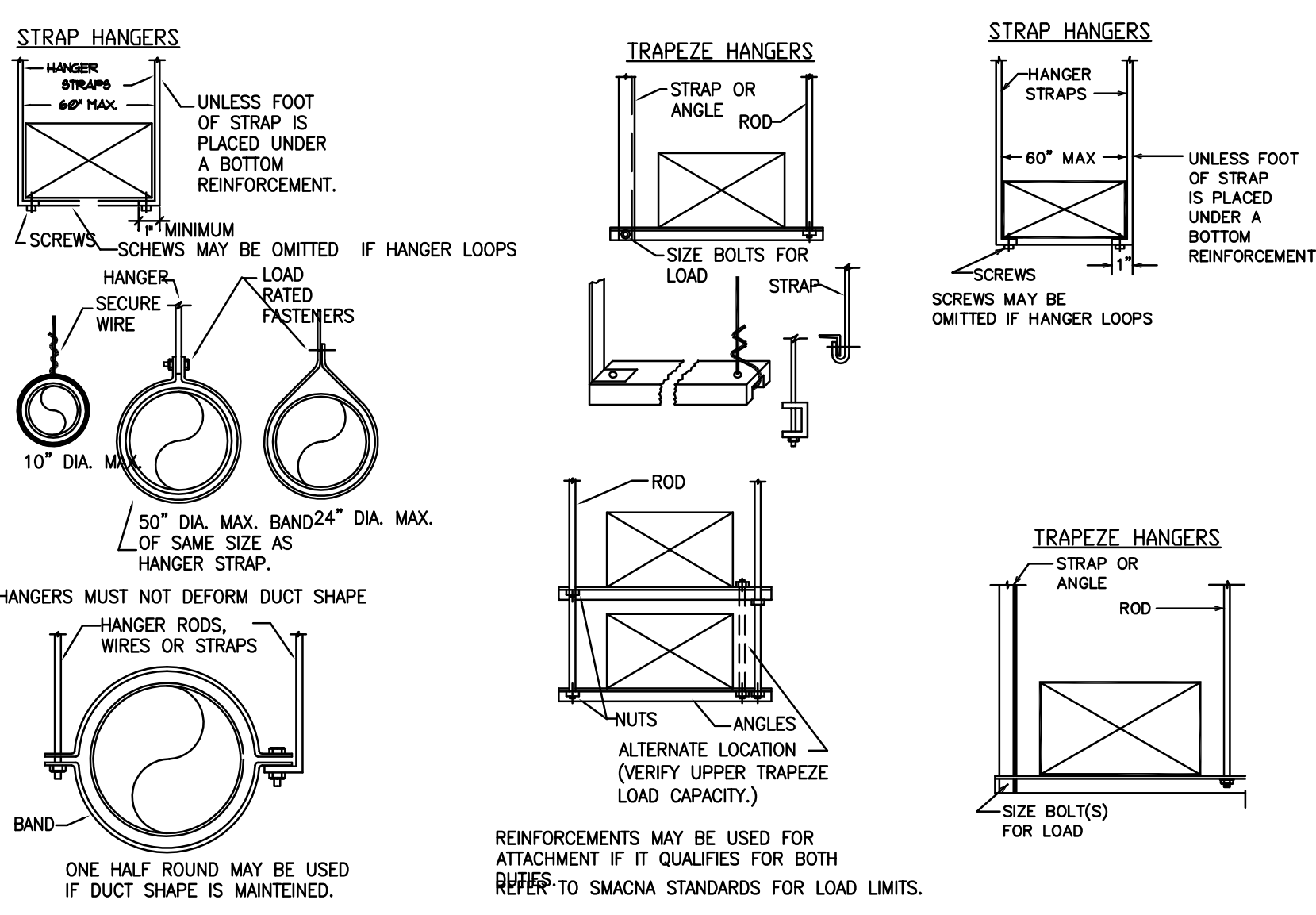
MECHANICAL INDEX

	DRAWING DESCRIPTION
1	M-0.1 B GENERAL MECHANICAL NOTES, SCHEDULES - HVAC
2	M-1.1 B SECOND FLOOR CEILING PLAN - HVAC & DETAILS

2nd Floor Renovations
 3440 NE 12th Avenue
 Oakland Park, Florida 33334

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 date: 08-14-14
 revision: date
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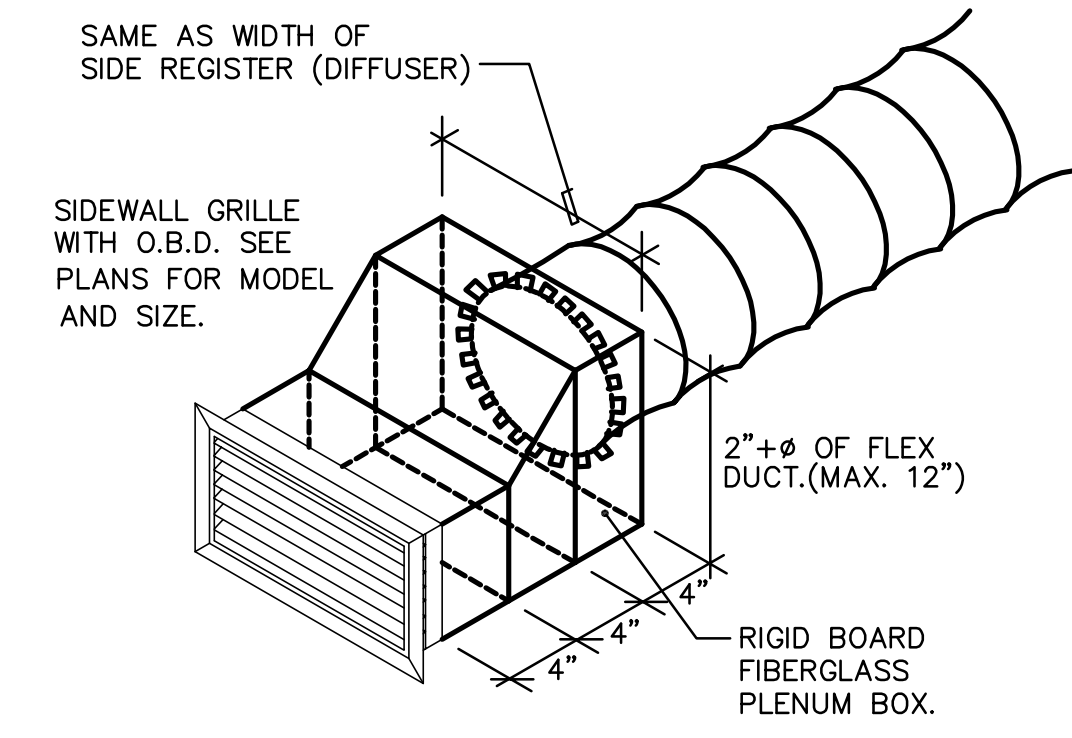


**TABLE 4-1
 RECTANGULAR DUCT HANGERS MINIMUM SIZE**

MAXIMUM HALF OF DUCT PERIMETER	PAIR AT 10 FT SPACING		PAIR AT 8 FT SPACING		PAIR AT 5 FT SPACING		PAIR AT 4 FT SPACING	
	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP
D/2 = 30"	1"x22 GA.	10 GA. (.135")	1"x22 GA.	10 GA. (.135")	1"x22 GA.	12 GA. (.106")	1"x22 GA.	12 GA. (.106")
D/2 = 72"	1"x18 GA.	3/8"	1"x20 GA.	1/4"	1"x22 GA.	1/4"	1"x22 GA.	1/4"
D/2 = 96"	1"x16 GA.	3/8"	1"x18 GA.	3/8"	1"x20 GA.	3/8"	1"x20 GA.	1/4"
D/2 = 120"	1.5"x16 GA.	1/2"	1"x16 GA.	3/8"	1"x18 GA.	3/8"	1"x20 GA.	1/4"
D/2 = 168"	1.5"x16 GA.	1/2"	1.5"x16 GA.	1/2"	1"x16 GA.	1/2"	1"x18 GA.	3/8"
D/2 = 192"	-	1/2"	1.5"x16 GA.	1/2"	1"x16 GA.	1/2"	1"x16 GA.	3/8"
D/2 = 193" UP	SPECIAL ANALYSIS REQUIRED							

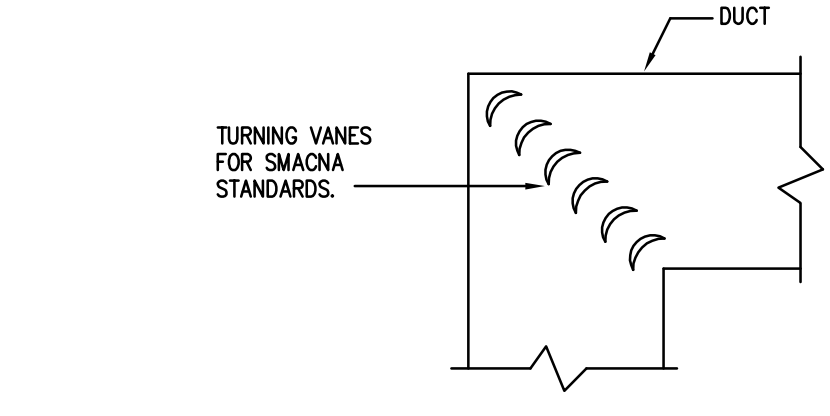
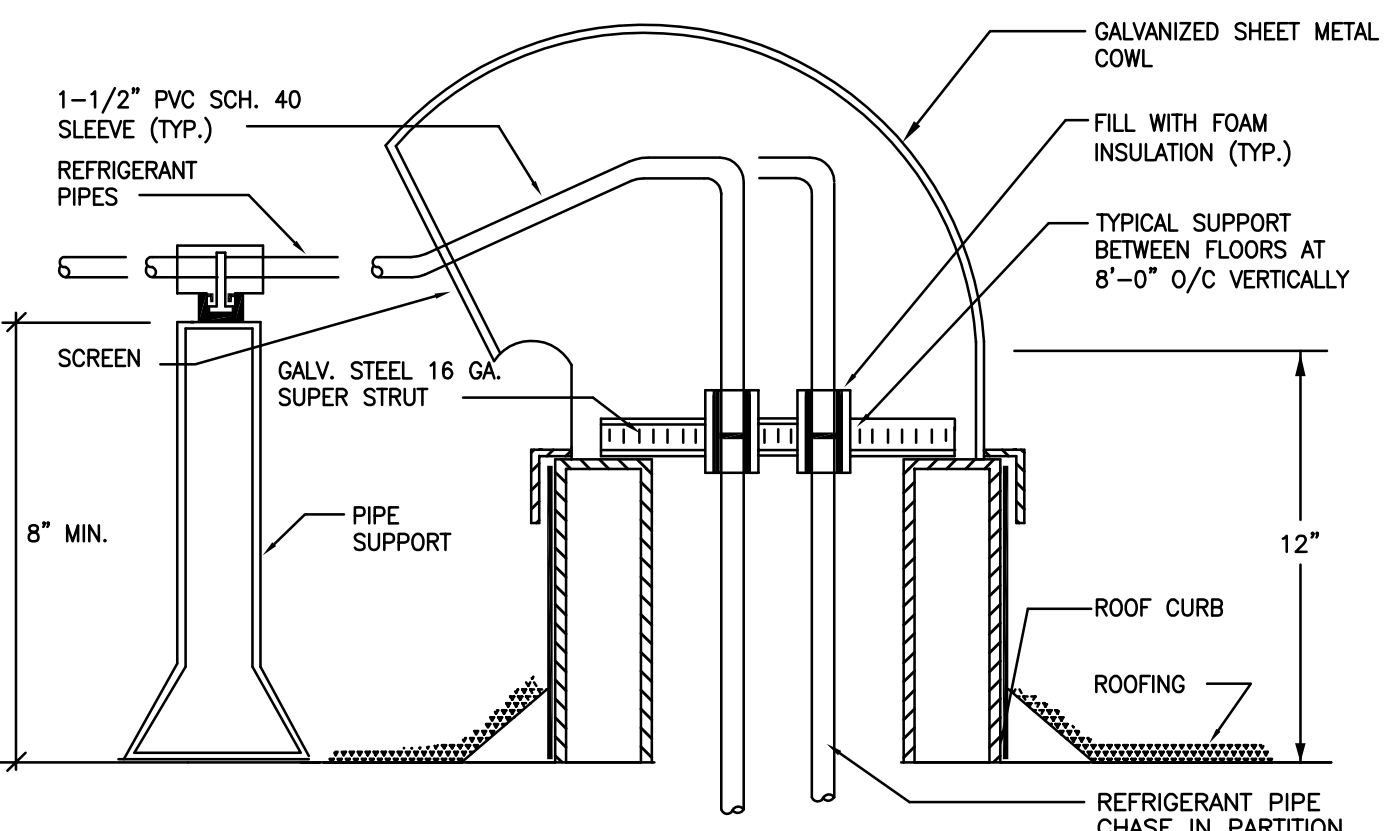
AS PER SMACNA TABLE 4-1 & FIG. 4-4

M1 METHODS OF HANGING DUCTS DETAIL
 NOT TO SCALE



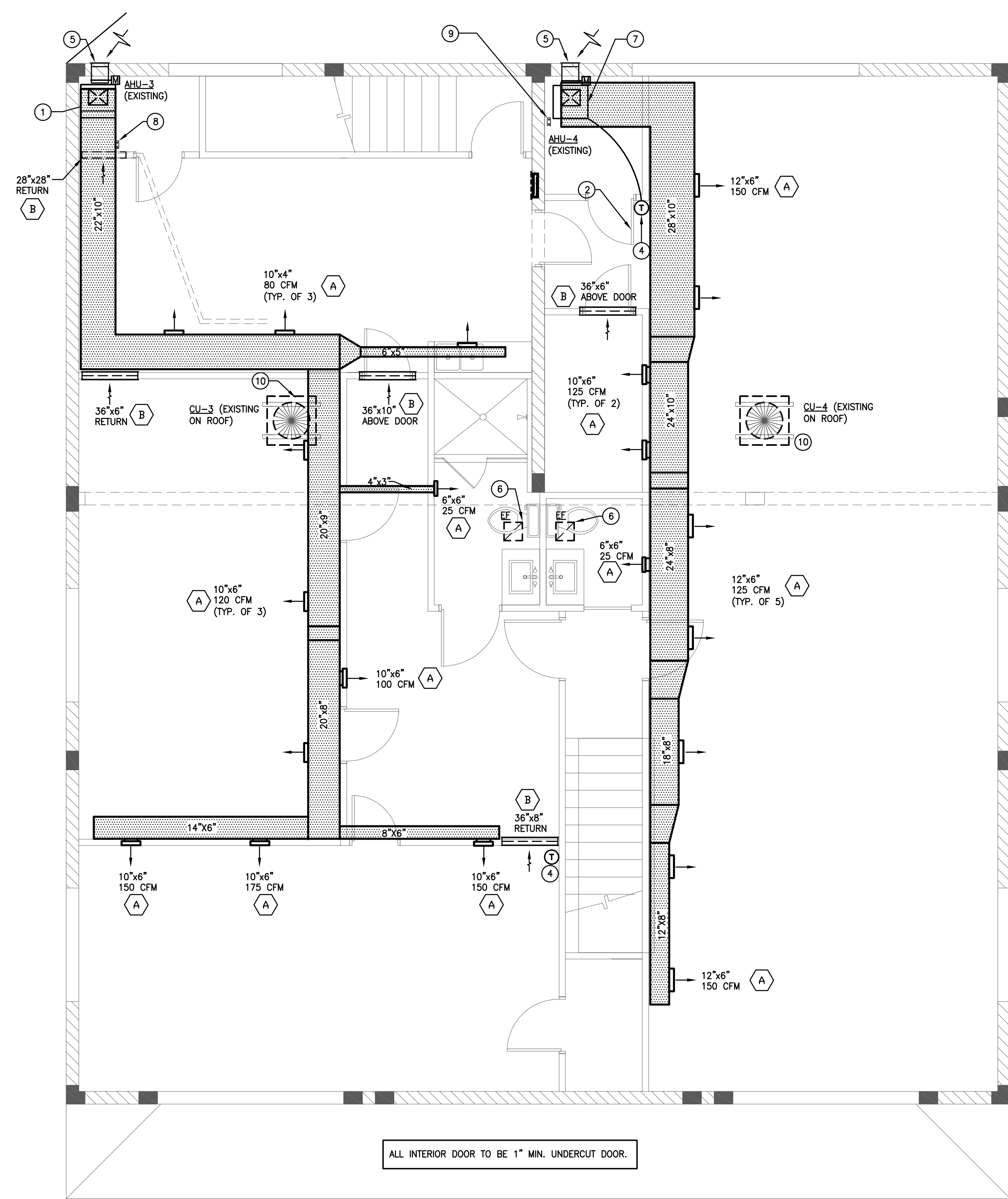
M2 SIDE WALL GRILLE DETAIL
 NOT TO SCALE

M3 VERTICAL AHU MOUNTING DETAIL
 NOT TO SCALE



M4 REFRIGERANT PIPING COWL DETAIL
 NOT TO SCALE

M5 TYPICAL 90-DEGREE VANED ELBOW DETAIL
 NOT TO SCALE



CEILING PLAN - HVAC
 SCALE: 1/4" = 1'-0"

- KEY NOTES - HVAC:**
- EXISTING UNIT 3.0 TON NOMINAL CAPACITY UNIT RHEEM MANUFACTURER, MODEL REQAB-1410BHS, 1200 CFM, 208/230-1PH-60Hz, 1/3 HP MOTOR FAN, 7.2 KW HEATER TO REMAIN. CONTRACTOR TO VAPOR CLEAN COIL, REPLACE FILTERS, CHECK REFRIGERANT CHARGE AND REPLACE ANY DAMAGED PART TO GUARANTY UNIT PROPER OPERATION. A/C CLOSET IS A RETURN AIR PLENUM. NO COMBUSTIBLES MATERIALS ALLOWED.
 - FULLY LOWERED DOOR.
 - EXISTING 24"x24" WALL MOUNTED RETURN AIR GRILLE TO REMAIN.
 - PROGRAMMABLE THERMOSTAT IN A PLASTIC TAMPER COVER.
 - 10"x8" INTAKE AIR HURRICANE RESISTANT LOWER, PROVIDE ANTI-CORROSIVE MATERIAL BIRD SCREEN, SEPARATE 10'-0" MIN. FROM ANY EXHAUST VENT OPENING. LOUVER POTTORFF MANUFACTURER NOA No 11-0429.03 (OR EQUAL). PROVIDE MOTORIZED DAMPER, NORMALLY CLOSED, INTERLOCKED WITH UNIT OPERATION, TURN TO OPEN WHEN UNIT START.
 - EXISTING TOILET EXHAUST FAN AND ASSOCIATED EXHAUST DUCTWORK TO REMAIN.
 - EXISTING 3 TON NOMINAL CAPACITY INTERNATIONAL COMFORT PRODUCT CORP. MANUFACTURER, MODEL NF3P3600CI, 1,200 CFM, 208/230V-1PH-60HZ, 1/3 HP MOTOR FAN, 7.2 KW HEATER, MCA/MOCP: 40/60 TO REMAIN. CONTRACTOR TO VAPOR CLEAN COIL, REPLACE FILTERS, CHECK REFRIGERANT CHARGE AND REPLACE ANY DAMAGED PART TO GUARANTY UNIT PROPER OPERATION. CONTRACTOR TO RELOCATE EXISTING AHU TO NEW A/C CLOSET.
 - REFRIGERANT PIPE THROUGH EXISTING ROOF PENETRATION. CONTRACTOR TO REPAIR EXISTING ROOF PENETRATION AND REPLACE REFRIGERANT PIPE WITH EXISTING SIZES. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF PENETRATION AND REPORT ANY DISCREPANCY TO ENGINEER PRIOR TO CONSTRUCTION.
 - REFRIGERANT PIPE THROUGH NEW ROOF PENETRATION. CONTRACTOR TO REPLACE REFRIGERANT PIPE WITH EXISTING SIZES. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF PENETRATION.
 - EXISTING CONDENSING UNIT TO REMAIN. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF EXISTING CONDENSING UNITS ON ROOF. CONTRACTOR TO RECONDITION EXISTING CONDENSING UNIT, CHECK REFRIGERANT CHARGE, CLEAN COIL, REPLACE ANY DAMAGED PART OF REQUIRED TO ENSURE PROPER OPERATION.

GENERAL PLUMBING NOTES

- THE ENTIRE INSTALLATION, INCLUDING BUT NOT LIMITED TO WORKMANSHIP & MATERIAL, SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA BUILDING CODE (2010) & FLORIDA PLUMBING CODE (2010), AND THE LATEST EDITIONS OF ALL LOCAL CODES, RULES, & AUTHORITIES HAVING JURISDICTION.
- CONTRACTOR SHALL PROVIDE WRITTEN GUARANTEE OF ALL MATERIALS & WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE BY OWNER. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE & SHALL INCLUDE REPLACEMENT OR REPAIR PARTS OR EQUIPMENT.
- CONTRACTOR SHALL VISIT THE JOB SITE & THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS PRIOR TO BIDDING/BEGINNING ANY WORK & SHALL ADVISE ARCHITECT/ENGINEER OF ANY CONDITIONS WHICH MODIFY THE SCOPE OF WORK AS SHOWN ON THE DOCUMENTS. SUBMISSION OF A BID PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE & LATER CLAIMS FOR MOBILIZATION, LABOR, EQUIPMENT, AND/OR MATERIALS REQ'D BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
- ALL MATERIALS SHALL BE NEW & BEAR UNDERWRITER'S LABEL (UL) WHERE APPLICABLE.
- ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE & ACCEPTANCE BY THE ARCHITECT/ENGINEER MUST BE A CONDITION OF THIS CONTRACT.
- ALL EXCAVATION & BACKFILL AS REQ'D FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
- REQUIRED INSURANCE SHALL BE PROVIDED BY THE CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY & PROPERTY DAMAGE FOR THE DURATION OF WORK.
- CONTRACTOR SHALL SECURE & PAY FOR ALL PERMITS, FEES, SERVICE REQUESTS, INSPECTIONS, & TESTS.
- CONTRACTOR SHALL INCLUDE BID FOR GROUND PENETRATING RADAR (GPR) OR X-RAY TO SLAB IN ORDER TO LOCATE EXISTING UTILITIES IN REINFORCED CONCRETE (POST TENSION CABLES, ELECTRIC CABLES, PLUMBING, FIBER OPTICS). IN CONCRETE REBAR, VOIDS, SLABS THICKNESS, CONDUITS EMBEDDED IN CONCRETE (SLABS, WALLS, BALCONIES, AND COLUMNS).
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. ADVISE ARCHITECT OF DISCREPANCIES PRIOR TO BEGINNING CONSTRUCTION.
- VERIFY LOCATION, SIZE, & INVERTS OF ALL EXISTING UTILITIES PRIOR TO BIDDING/BEGINNING CONSTRUCTION. ADVISE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- PIPING MATERIALS:
 - WATER: TYPE "L" COPPER FOR 2" AND UNDER (ALL LEAD-FREE SOLDER) TYPE "K" COPPER FOR 2-1/2" AND ABOVE ALL UNDERGROUND WATER PIPING SHALL BE TYPE "K" COPPER SLEEVED IN PVC
 - DRAIN, WASTE, & VENT: SCHEDULE 40 DWV PVC,
 - CONDENSATE: SCHEDULE 40 DWV PVC.
 - VALVES: BRONZE RATED AT 125 PSI.
- ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD (HAIR FELT LINING).
- DI-ELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING & EQUIPMENT CONNECTIONS.
- ALL METALLIC PIPING, FITTINGS, & HANGERS EXPOSED TO CORROSIVE CONDITIONS SHALL HAVE A PROTECTIVE COATING THAT APPROPRIATELY RESISTS CORROSION.
- FURNISH & INSTALL APPROVED WATER HAMMER ARRESTORS WHERE QUICK-CLOSING VALVES ARE UTILIZED, UNLESS OTHERWISE APPROVED. WATER HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010 & SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS & APPROPRIATELY MARKED ACCESS PANELS. COORDINATE LOCATIONS WITH GC PRIOR TO INSTALLATION.
- PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES.
- CLEANOUTS SHALL BE OF SAME MATERIALS AS PIPING. WALL CLEANOUTS SHALL BE PLACED AT THE BOTTOM OF EACH STACK. FLOOR CLEANOUTS SHALL BE PLACED AT EVERY 90° CHANGE. PROVIDE HEAVY DUTY BRONZE COVER CLEANOUTS IN TRAFFIC AREAS & EVERY 100 FEET. PROVIDE PVC PLUG IN LANDSCAPE AREAS.
- ALL PIPING SHALL BE SECURED USING METHODS OF STRAPPING & HANGING APPROVED BY CODE.
- ALL PIPING THROUGH FOUNDATION WALLS SHALL BE ENCASED IN PROTECTIVE SLEEVES.
- ALL PIPING THROUGH FIRE RATED FLOORS & WALLS SHALL BE FIRE STOPPED USING UL LISTED METHOD ACHIEVING EQUAL RATING AS PENETRATED FLOOR OR WALL.
- ALL INSTALLATIONS SHALL MEET THE STANDARDS OF THE LOCAL AHJ & HEALTH DEPARTMENT.
- NO COMBUSTIBLE MATERIAL SHALL BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
- CONTRACTOR SHALL KEEP & MAINTAIN AS-BUILT DRAWINGS ON JOB SITE AT ALL TIMES & DELIVER A SET OF UP TO DATE AS-BUILTS TO THE ENGINEER & OWNER AT THE COMPLETION OF THE PROJECT.
- SAW OR CUT CORE DRILL SLAB AS REQUIRED TO INSTALL NEW PLUMBING WORK. PATCH SLAB TO MATCH EXISTING.

NOTICE TO CONTRACTORS:

ALL CONTRACTORS PRIOR TO BID SUBMISSION PROCESS SHALL VISIT PROPOSED WORK SITE AND FIELD VERIFY ALL EXISTING CONDITIONS. ANY CONDITIONS THAT DIFFERS FROM THAT SHOWN ON THIS PLAN, SHALL BE REPORTED TO ARCHITECT/ENGINEER SO THAT NEW AND REVISED BID DRAWINGS OR INFORMATION MAY BE ISSUED. MODIFICATIONS TO SCOPE OF WORK WHICH RESULTS FROM CONTRACTORS NEGLECT TO VISIT THE SITE PRIOR TO SUBMITTING BID, SHALL BE CONTRACTORS SOLE RESPONSIBILITY.

PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—	SANITARY LINE	FCO	FLUSH CLEAN OUT
- - - -	VENT LINE	FD	FLOOR DRAIN
—▶—	SAFEWASTE LINE	FS	FLOOR SINK
— CD —	CONDENSATE LINE	CO	CLEAN OUT
— C —	COLD WATER LINE	WCO	WALL CLEANOUT
— H —	HOT WATER LINE	COOG	CLEANOUT ON GRADE
— —	GATE VALVE	— —	WATER HAMMER ARRESTOR
— —	FLOOR PENETRATION	VTR	VENT THRU ROOF
— —	AIR ADMITTANCE VALVE	— —	HOSE BIBB W/VB

- CONTRACTOR TO VERIFY MOUNTING HEIGHT OF ALL FIXTURES WITH INTERIOR DESIGNER & ARCHITECT PRIOR TO DEVICE INSTALLATION. REFER TO FLOOR PLAN FOR ADDITIONAL SPECIFICATIONS.
- SOME SYMBOLS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT.

SLOPE OF HORIZONTAL DRAINAGE PIPE

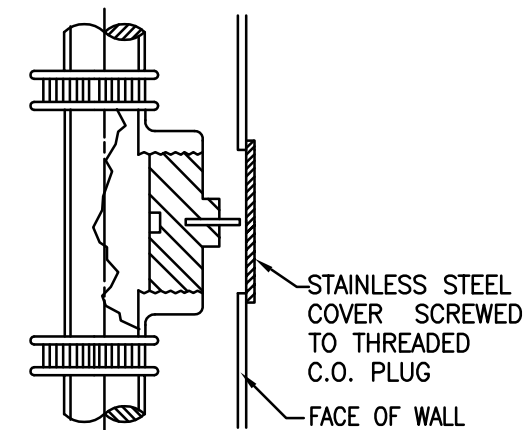
SIZE (inches)	MINIMUM SLOPE (inch per foot)
2-1/2 or less	1/4
3 to 6	1/8
8 or larger	1/16

TABLE 704.1 OF THE FLORIDA PLUMBING CODE 2010

WATER HAMMER ARRESTOR SCHEDULE

P.D.I. DESIGNATION	MAKE/MODEL	FIXTURE UNITS	CONNECTION
A	SIoux CHIEF 652-A	1-11	1/2"
B	SIoux CHIEF 653-B	12-32	3/4"
C	SIoux CHIEF 654-C	33-60	1"

SIoux CHIEF SHOCK ARRESTORS ARE APPROVED FOR INSTALLATION WITH NO ACCESS DOOR REQUIRED. CONFORMS TO ANSI/ASSE 1010 STANDARDS.



WALL-TYPE CLEAN-OUT

TYPICAL CLEAN-OUT DETAILS

SCALE: N.T.S.

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	WASTE	COLD WATER	HOT WATER	FLOW RATES	REMARKS
WC	ADA WATER CLOSET TANK TYPE	3"	1/2"	---	0.28 GPM	BY OWNER
LAV	ADA LAVATORY WALL HUNG	1-1/4"	1/2"	1/2	0.5 GPM	BY OWNER
SK	SINK	1-1/2"	1/2"	1/2	1.5 GPM	BY OWNER
SH	SHOWER	2"	1/2"	1/2	1.5 GPM	BY OWNER

NOTES:

- ALL FIXTURES SHALL COMPLY WITH FPC WATER CONSERVATION REGULATION TABLE 604.4
- ALL SHOWER VALVES SHALL BE ANTI-SCALD/ PRESSURE BALANCING.
- ALL WALL HUNG PLUMBING FIXTURES SHALL COMPLY WITH FBC 2318.15 OR 2510.5.1.1

PLUMBING INDEX

DRAWING DESCRIPTION		
1	P-0.1	PLUMBING NOTES, LEGEND, SCHEDULES & DETAILS
2	P-1.1	PLUMBING FLOOR PLAN AND ISOMETRICS
3		
4		

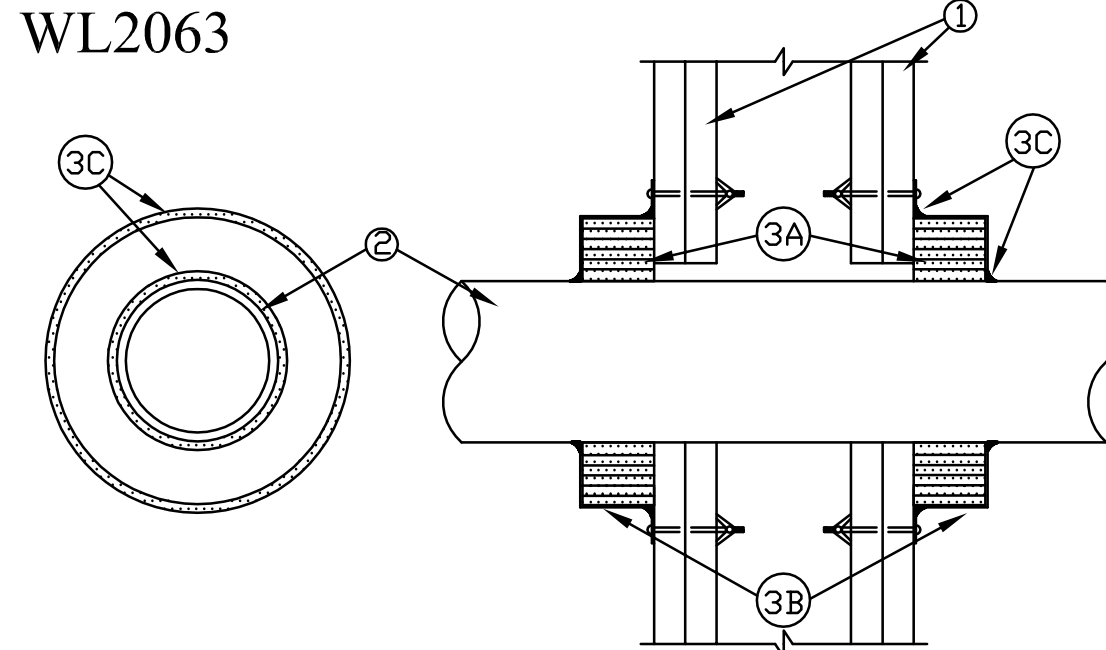
Classified
UL System
WL2063

2 Hour Fire Rated Through Penetration Firestop for Plastic Pipe through Gypsum Walls using intumescent devices

SYSTEM NO. WL-2063
DECEMBER 09, 2006
F RATINGS - 1 AND 2 HR (SEE ITEM I)
T RATINGS - 0, 1 AND 1-3/4 HR (SEE ITEM 2)

TREMCO
3735 Green Rd.
Beachwood, OH, 44122

Drawing not to scale



- 2-Hour Fire Rated gypsum wallboard/stud assembly.
- Plastic Pipe - 4" dia. (or smaller) sch. 40 PVC pipe for use in closed or vented piping systems, with a nom. annular space of 1/8".
- A) TREMstop WS - wrap strips, tightly wrapped 6 times around pipe.
B) TREMstop MCR - steel restricting collar.
C) FYRE-SIL - Min. 1/4" thick sealant applied to wall/collar and collar/pipe interfaces.

The products used in the above assembly have been tested in accordance with the following: ASTM E814 (UL1479) Standard Test Method for Through Penetration Firestopping.

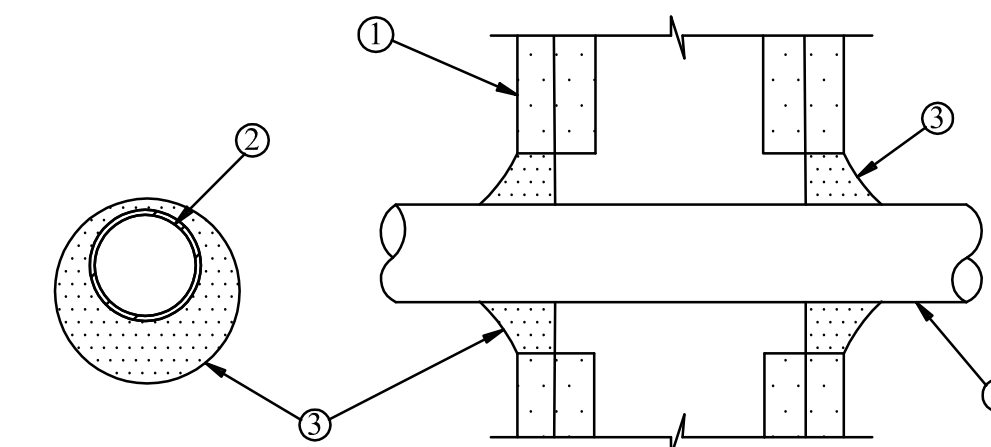
PENETRATION FIRESTOP FOR NON-METALLIC PIPE THROUGH GYPSUM WALL ASSEMBLIES USING TREMSTOP-WS, TREMSTOP-D, TREMSTOP ACRYLIC, TREMSTOP INTUMESCENT ACRYLIC OR FYRE-SIL

Classified
UL System
WL113

1 or 2 Hour Fire Rated Through Penetration Firestop for Single Metallic Pipe through Gypsum Walls using TREMstop IA.

3735 Green Rd.
Beachwood, OH, 44122

Drawing not to scale



- Pre-Rated Gypsum Wallboard/Stud Wall Assembly
- Metallic Pipe:
 - A) Steel Pipe - 4" diam. (or smaller) Sch. 40 (or heavier) steel pipe.
 - B) Iron Pipe - 4" diam. (or smaller) cast or ductile iron pipe.
 - C) Conduit - 4" diam. (or smaller) EMT or rigid steel conduit.
 - D) Copper Tubing - 4" diam. (or smaller) Type L (or heavier) copper tubing.
 - E) Copper Pipe - 4" diam. (or smaller) Regular (or heavier) copper pipe. The annular space shall be min. 1/4" to max. 5/8" within the firestop system.
- TREMstop IA - Min. 1/2" thickness of sealant applied within opening. Additional sealant to be installed such that a min. 1/4" crown is formed around the penetrating item.

The products used in the above assembly have been tested in accordance with the following: ASTM E814 (UL1479) Standard Test Method for Through Penetration Firestopping.

PENETRATION FIRESTOP FOR NON-METALLIC PIPE THROUGH GYPSUM WALL ASSEMBLIES USING TREMSTOP-WS, TREMSTOP-D, TREMSTOP ACRYLIC, TREMSTOP INTUMESCENT ACRYLIC OR FYRE-SIL

project: MUE12060701

date: 08-14-14

revision date

no.

Issued for Permit - 08.28.14

General Revisions

drawing

EP

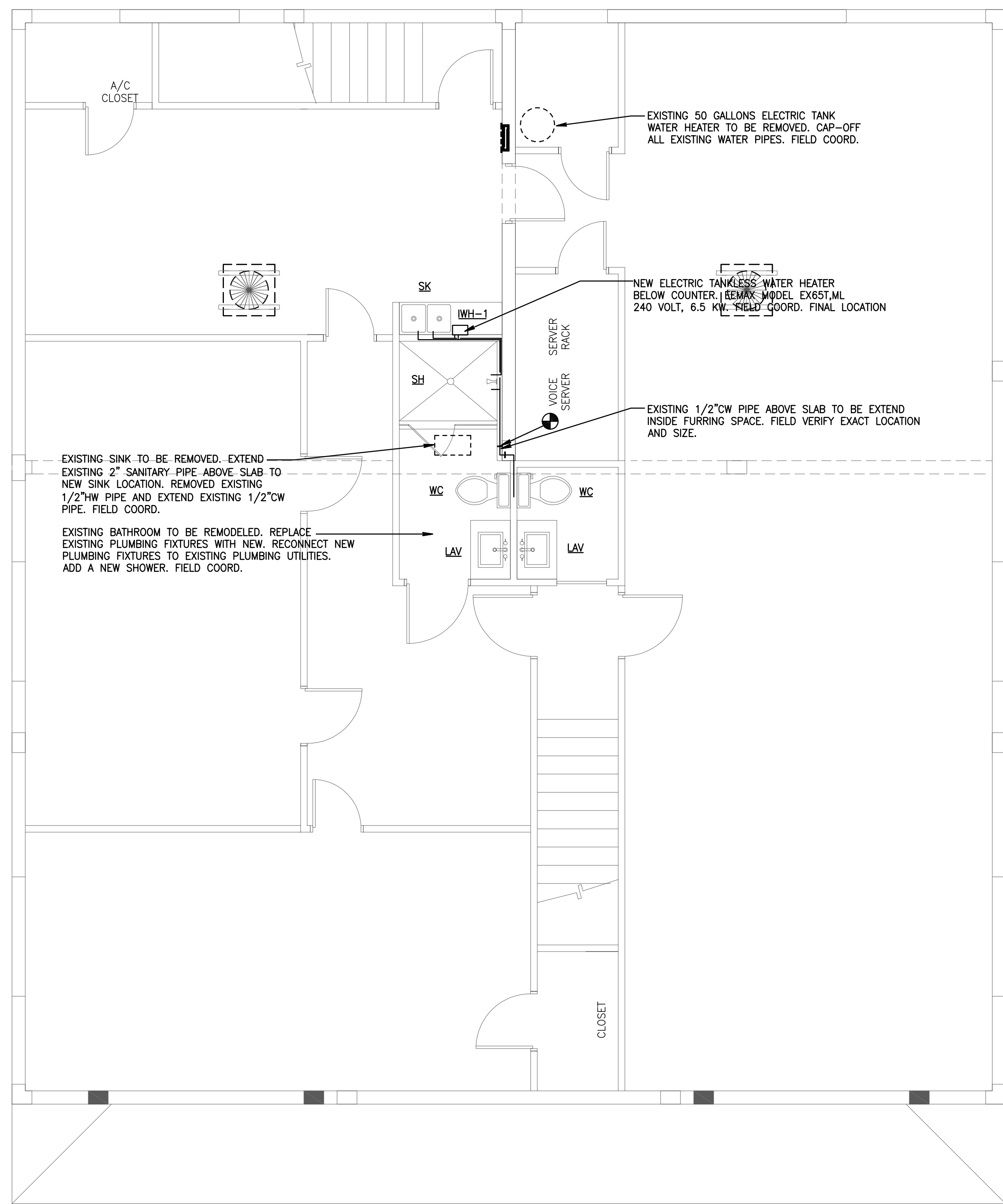
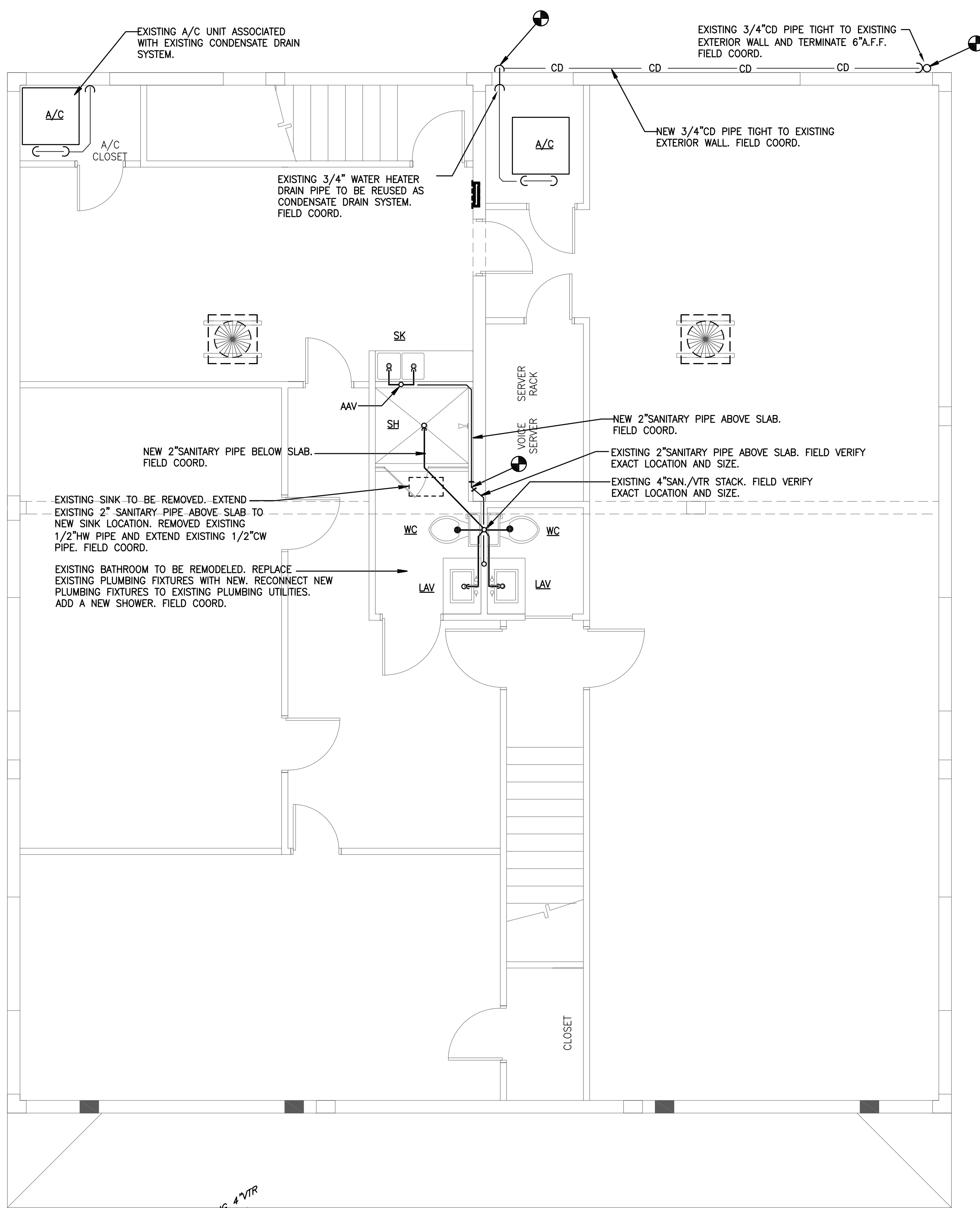
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Plumbing Plan & Notes

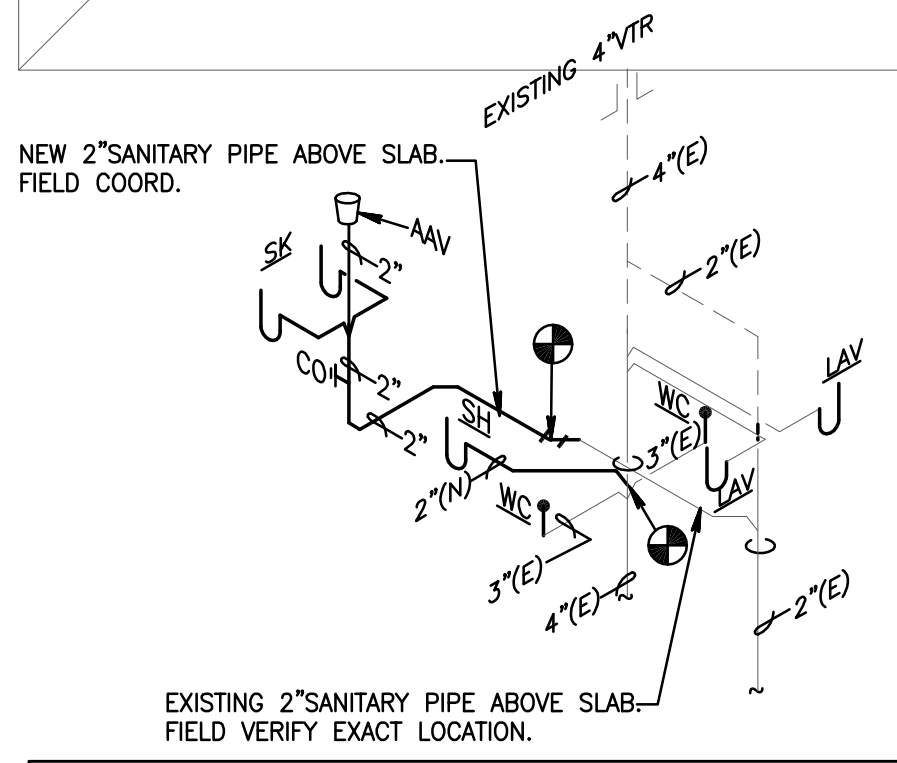
P0.1

sheet number

2nd Floor Renovations
 3440 NE 12th Avenue
 Oakland Park, Florida 33334



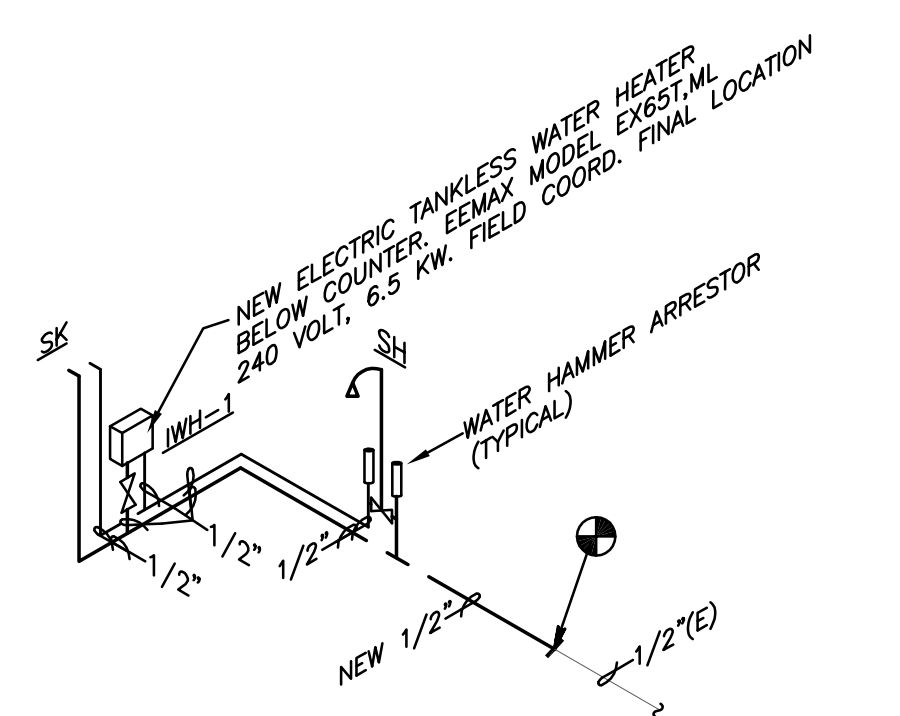
PLUMBING PLAN (SANITARY)
 SCALE: 1/4" = 1'-0"



NOTES:
 1- ALL HORIZONTAL SANITARY PIPING 3" AND LARGER SHALL SLOPE AT 1/8" INCH PER FOOT MINIMUM, UNLESS NOTED OTHERWISE. ALL PIPING 2" AND SMALLER SHALL SLOPE AT 1/4" INCH PER FOOT MINIMUM, UNLESS NOTED OTHERWISE.

SANITARY PIPING ISOMETRIC
 NTS

PLUMBING PLAN (WATER)
 SCALE: 1/4" = 1'-0"



WATER PIPING ISOMETRIC
 NTS

project: MUE12060701
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 revision: date
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General Revisions

drawing: EP
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