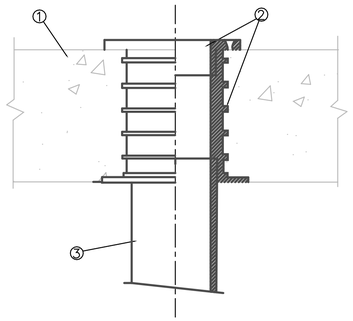


1. Floor Assembly – Min 4 in. thick reinforced lightweight or normal weight (100–150 pcf) concrete.

2. Firestop device* – Closet Stub – Cast in PVC coupling sized to accommodate nom 3 or 4 in. diam pipe with height equal to overall thickness of concrete floor. Deviice provided with closet flange to be cemented into top socket of cast–in coupling after concrete has cured. Device installed in accordance with accompanying installation instructions. When nom 4 in. diam closet stub is used, T Rating is 1–1/2 hr. When nom 3 in. diam closet is used, T Rating is 2 hr.

Proset Systems, Inc – Part No. P35448 or P45448

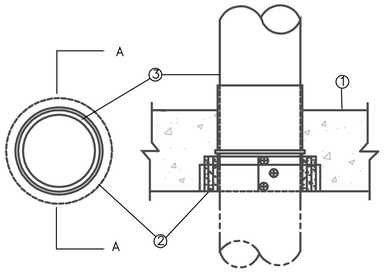
3. Drain Piping – Nom 3 in. or 4 in. diam Schedule 40 (or heavier) PVC drain piping. Drain poping cemented into bottom socket of cast–in coupling and rigidly supported.

4. Water Closet – (Not Shown) – Floor–mounted vitreous chine water closet.

*Bearing the UL Classification Marking

FIRE RATED CLOSET FLANGE PENETRATIONS

SCALE: NONE



1. Floor Assembly – Min 4–1/2 in. thick reinforced lightweight or normal weight (100–150 pcf) concrete.

2. Firestop Device* – Cast in place polyvinyl chloride (PVC) pipe coupling provided with an intumescent wrap mechanically–attached to the coupling with a steel restriction collar. Firestop device installed on removable concrete forms in accordance with accompanying installation instructions and permanently embedded during concrete placement.

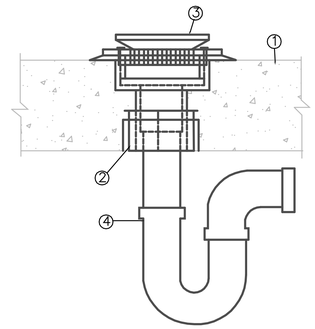
Specified Technologies Inc. – CPL125, CPL150, CPL200, CPL300, and CPL400 Firestop Coupling.

3. Nonmetallic Pipe – Nom 4 in. diam (or smaller) Schedule 40 polyvinyl chloride (PVC) for use in closed (process or supply) or vented (drain, waste or vent) piping systems. Pipe to be rigidly supported on both sides of floor assembly.

*Bearing the UL Classification Marking

FIRE RATED PIPING PENETRATIONS

SCALE: NONE



1. Floor Assembly – Min 4–1/2 in. thick reinforced lightweight or normal weight (100–150 pcf) concrete.

2. Firestop Device* – Coupling – Cast in place polyvinyl chloride (PVC) pipe coupling provided with an instumescent wrap mechanically–attached to the coupling with a steel restricting collar. Coupling sized to accommodate nom 2 in. diam pipe with height approx 3/4 in. less than overall thickness of concrete to accommodate height of shower/floor drain PVC body. The bottom coupling shall be installed flush with the bottom surface of the concrete floor in accordance with accompanying installation instructions. PVC body of shower/floor drain cemented to top of coupling after placement of concrete.
Specified Technologies Inc. – SD200 Firestop Shower Drain and FS200 Firestop Floor Drain

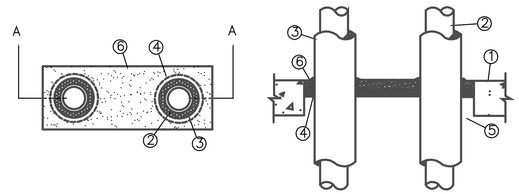
3. Shower/Floor Drain – Polyvinyl chlordie (PVC) body with polished brass or chromed steel shower drain or floor drain strainer. PVC body cemented to coupling (Item 2) after placement of concrete.

4. Drain Piping – Nom 2 in. diam Schedule 40 PVC drain piping. Drain piping cemented to bottom of firestop device (Item 2) and rigidly supported away from firestop device with suitable pipe hangers.

*Bearing the UL Classification Marking

FIRE RATED SHOWER AND FLOOR DRAIN PENETRATIONS

SCALE: NONE



1. Floor Assembly – Min 4–1/2 in. thick lightweight or normal weight (100–150 pcf) concrete. Max area of opening 192 sq in. with max length of 24 in. and max width of 8 in.

2. Pipe – Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing, Schedule 10 (or heavier) steel pipe, steel conduit or steel EMT to be installed with a min clearance of 1 in. and a max clearance of 2 in. from the sides of the through openings. A min seperation 1 in. shall be maintained between adjacent pipes. Pipes to be rigidly supported on both sides of floor assembly.

3. Pipe Covering – Nom 1/2 in. to 1 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on factory–applied self–sealing lap tape. Transverse joints secured with metal fasteners or with butt strip tape supplied with the product.
See Pipe and Equipment Covering – Materials (BRGU) category in Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

3A. Pipe Insulation – Plastics – As an alternate to Item 3, nom 3/4 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing with skin may be used on steel pipes.
See Plastics (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL94 Flammability Classification of 94–5VA may be used.

4. Fill, Void or Cavity Materials* – Wrap Strip – Nom 1/4 in. thick untumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. wide strips. Nom 2 in. wide strip tightly–wrapped around pipe insulation (Item 3 or 3A) with the foil side exposed and slid into through opening such that the top edge is flush with the top surface of the floor. The wrap strip layer shall be secured in place with min No. 18 gauge galv steel tie wire.
Minnesota Mining & Mfg Co. – Types FS–195+

5. Packing Material – Min 1 in. thick mineral–wool batt material insulation firmly packed into opening as a permanent form with its top surface recessed min 1 in. from top surface of floor.

6. Fill, Void or Cavity Materials* – Caulk – Applied to fill through opening to a min depth of 1 in., flush with top surface of floor, with a min 1/8 in. thickness of caulk applied over top edge of wrap strip layer (Item 4) on insulated pipe.
Minnesota Mining & Mfg. Co. – Types CP–25 WB+. (Note: L Ratings apply only when Type CP–25 WB+caulk is used.)

*Bearing the UL Classification Marking

FIRE RATED PIPE PENETRATIONS

SCALE: NONE

John R McDowell

Digitally signed by John R McDowell
Date: 2024.05.02 19:15:32 -05'00'

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JOHN ROGER MCDOWELL LICENSE No. 38727 STATE OF FLORIDA PROFESSIONAL ENGINEER

P8

PREPARED BY	REVIEWED BY	ISSUE DATE	SCALE
JM	JM	5/2/24	1/8"=1'

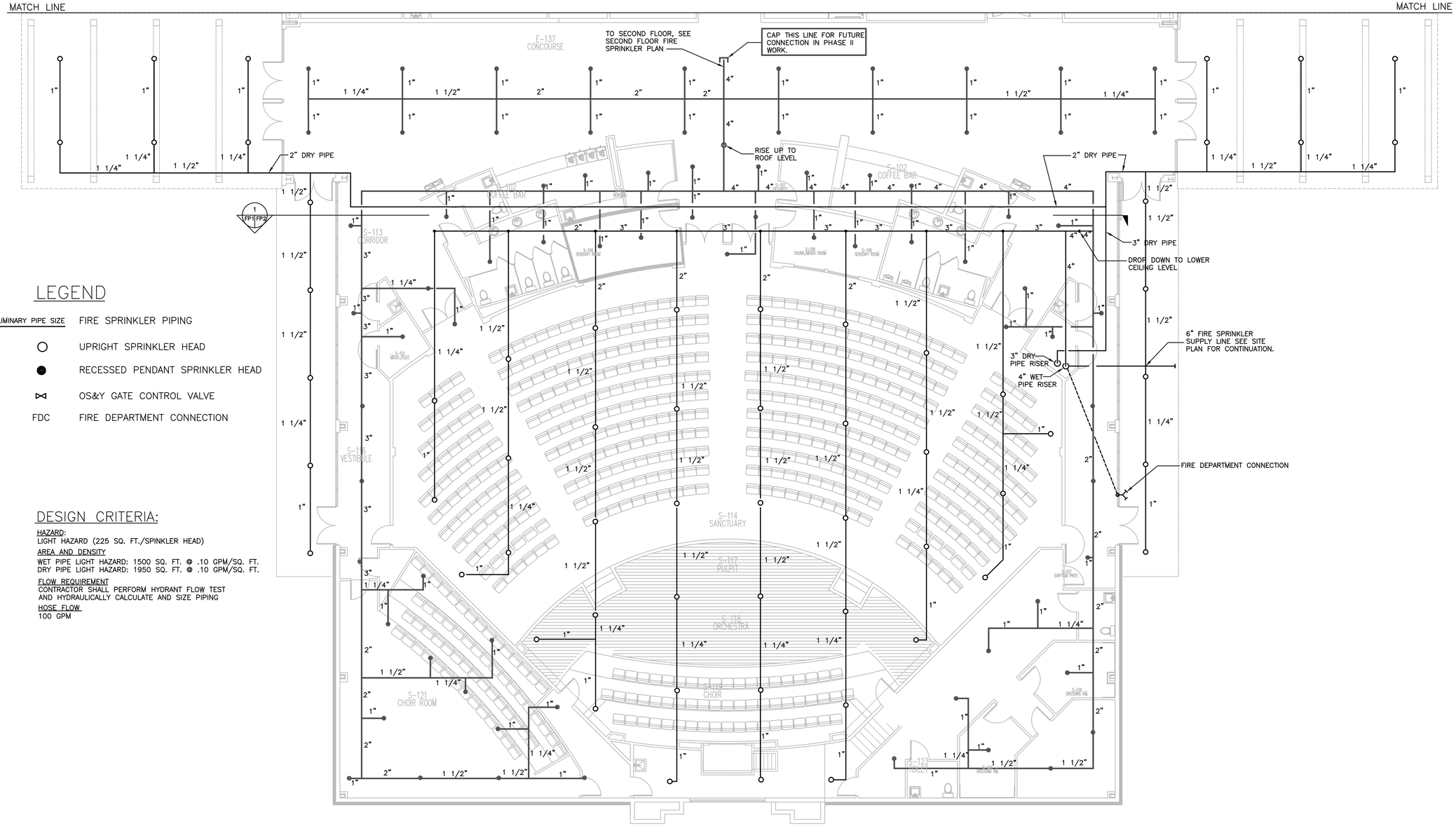
PROJECT NO. 22004

PLUMBING FIRE PENETRATIONS

CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

MARK MERCER & ASSOCIATES, INC.

MATCH LINE MATCH LINE



LEGEND

PRELIMINARY PIPE SIZE	FIRE SPRINKLER PIPING
○	UPRIGHT SPRINKLER HEAD
●	RECESSED PENDANT SPRINKLER HEAD
⋈	OS&Y GATE CONTROL VALVE
FDC	FIRE DEPARTMENT CONNECTION

DESIGN CRITERIA:

HAZARD:
LIGHT HAZARD (225 SQ. FT./SPINKLER HEAD)

AREA AND DENSITY
WET PIPE LIGHT HAZARD: 1500 SQ. FT. @ .10 GPM/SQ. FT.
DRY PIPE LIGHT HAZARD: 1950 SQ. FT. @ .10 GPM/SQ. FT.

FLOW REQUIREMENT
CONTRACTOR SHALL PERFORM HYDRANT FLOW TEST AND HYDRAULICALLY CALCULATE AND SIZE PIPING

HOSE FLOW
100 GPM

PARTIAL FIRST FLOOR FIRE SPRINKLER PLAN–PHASE I WORK

SCALE: 1/8"=1'

N

FP1

PREPARED BY	REVIEWED BY
JM	JM

ISSUE DATE	SCALE
5/2/24	1/8"=1'

PROJECT NO. 22004

FIRST FLOOR FIRE SPRINKLER PLAN

CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

John R McDowell
Digitally signed by John R McDowell
Date: 2024.05.02 19:06:47 -05'00'

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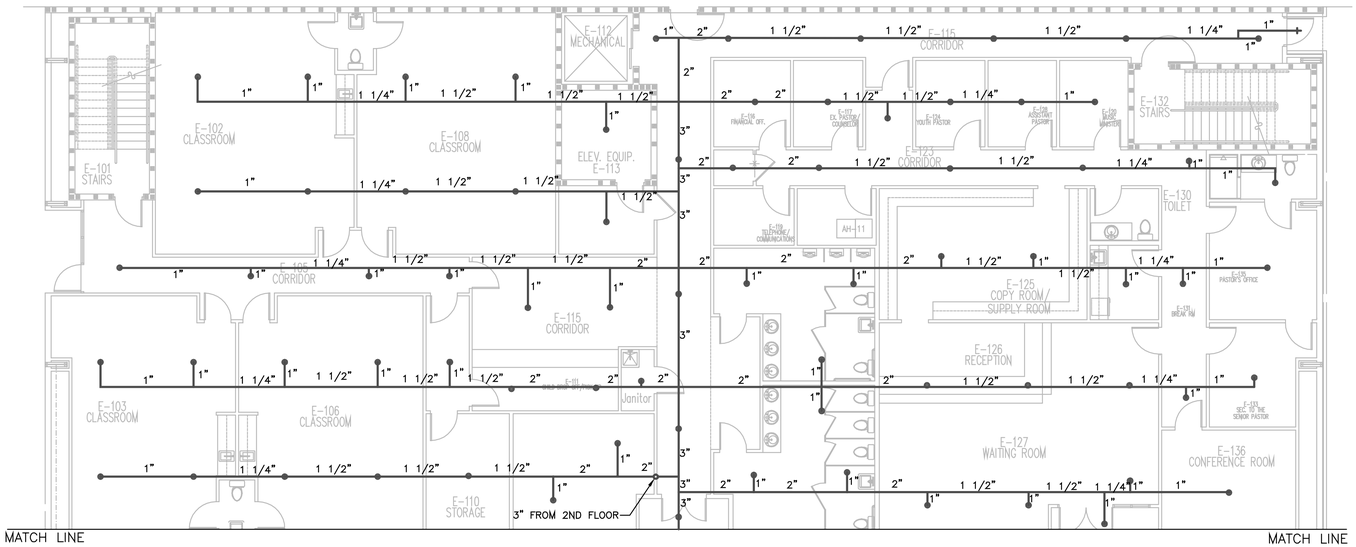
JOHN ROGER MCDOWELL LICENSE No. 38727 STATE OF FLORIDA PROFESSIONAL ENGINEER

MARK MERCER & ASSOCIATES, INC.



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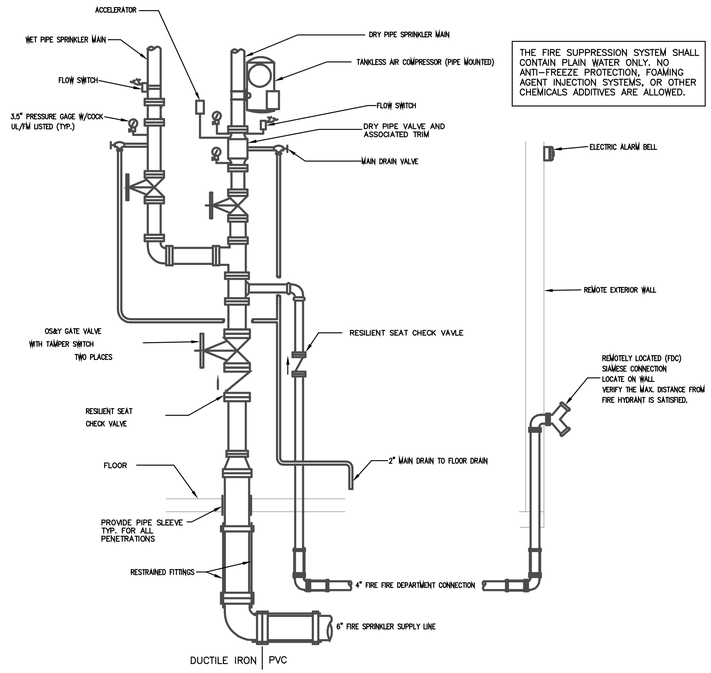
PARTIAL FIRST FLOOR FIRE SPRINKLER PLAN–PHASE II WORK

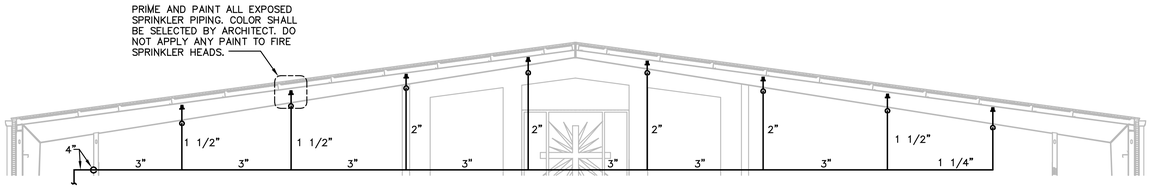
SCALE: 1/8"=1'



THE FIRE SUPPRESSION SYSTEM SHALL CONTAIN PLAIN WATER ONLY. NO ANTI-FREEZE PROTECTION, FOAMING AGENT INJECTION SYSTEMS, OR OTHER CHEMICALS ADDITIVES ARE ALLOWED.

FIRE SPRINKLER RISER DETAIL

SCALE: NONE



PARTIAL FIRST FLOOR FIRE SPRINKLER PLAN

SCALE: 1/8"=1'

SPRINKLER HEAD SCHEDULE

HEAD TYPE	MANUFACTURER/MODEL	RESPONSE	DISCHARGE COEF.	TEMPERATURE RATING
UPRIGHT	VIKING/VK301	QUICK	5.6 GPM/PSI$^{1/2}$	155 °F
RECESSED PENDANT	VIKING/VK317	QUICK	5.6 GPM/PSI$^{1/2}$	155 °F

FP2

PROJECT NO. 22004

PREPARED BY	REVIEWED BY
JM	JM

ISSUE	DATE	SCALE
	5/2/24	1/8"=1'

FIRST FLOOR FIRE SPRINKLER PLAN

CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

John R McDowell
Digitally signed by John R McDowell
Date: 2024.05.02 19:07:18 -05'00'

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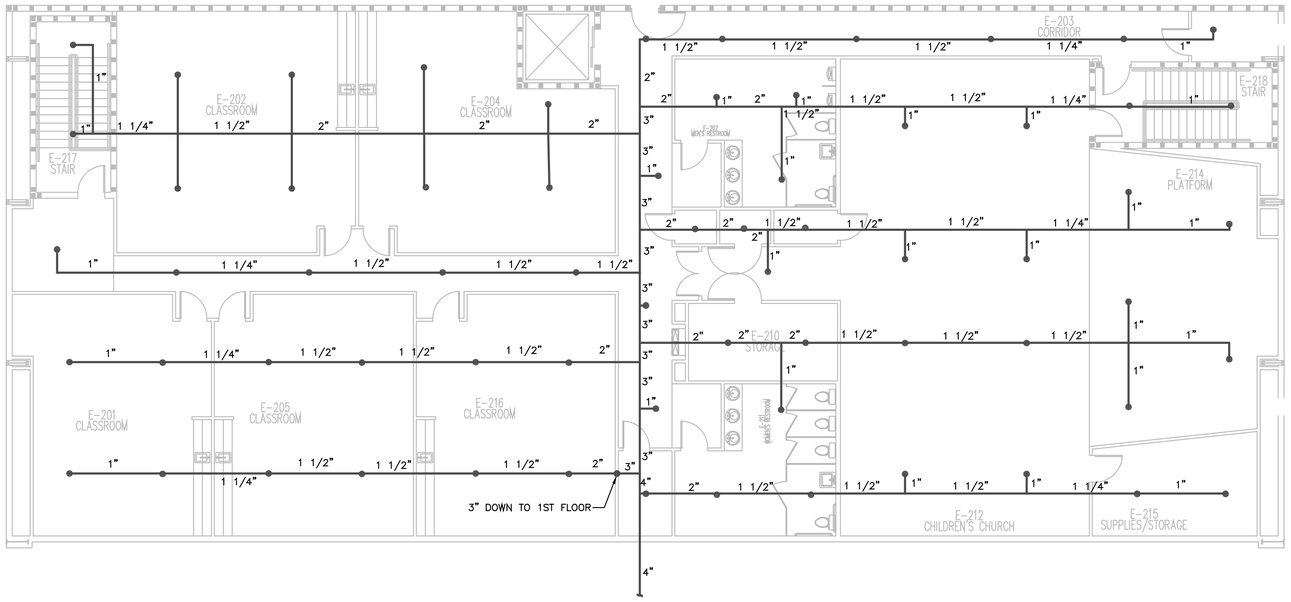
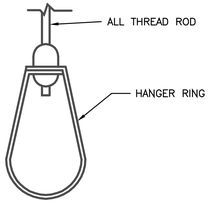


SECOND FLOOR FIRE SPRINKLER PLAN–PHASE II WORK

SCALE: 1/8"=1'



PIPE HANGER DETAIL

SCALE: NONE

FIRE SPRINKLER NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH NFPA 13, 2016 EDITION.

2. DRAWINGS ARE DIAGRAMMATIC, SUBMIT 24" BY 36" SHOP DRAWINGS IN ACCORDANCE WITH NFPA 13 INDICATING LOCATION OF FIRE SPRINKLER HEADS, PIPING AND PUMPS IN PLAN VIEW, DETAILS, ELEVATION AND SECTIONS. COORDINATE WITH BUILDING STRUCTURE, CEILING SUPPORTS, LIGHTS, DUCTWORK, DIFFUSERS AND THE BUILDING OBSTRUCTIONS. SUBMIT NEW HYDRAULIC CALCULATIONS BY FIRE PROTECTION DESIGNER. FIRE PROTECTION ENGINEER SHALL BE A FLORIDA REGISTERED ENGINEER. THE SYSTEM DESIGN SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION PRIOR TO STARTING SYSTEM INSTALLATION. AFTER PROJECT COMPLETION, SUBMIT A COMPLETE SET OF 24" BY 36" AS–BUILT DRAWINGS. THE SYSTEM SHALL BE INSPECTED AND TESTED BY THE AUTHORITY HAVING JURISDICTION AND ALL DISCREPANCIES CORRECTED BY THE CONTRACTOR PRIOR TO BUILDING OCCUPANCY.

3. ALL DEVICES AND EQUIPMENT SHALL BE FIRE PROTECTION EQUIPMENT LISTED OR FM P7825 APPROVED FOR USE IN FIRE SPRINKLER AND STANDPIPE SYSTEMS. AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECS.

4. PROVIDE ELECTRICAL SUPERVISORY TAMPER SWITCH FOR ALL CONTROL VALVES.

5. PROVIDE CHROME PLATED ESCUTCHEONS FOR ALL EXPOSED PIPING PASSING THRU WALLS, FLOORS OR CEILINGS.

6. SPRINKLER PIPING SHALL BE BLACK STEEL ASTM–A53 SCHEDULE 40. MAKE CHANGES IN PIPE SIZES THROUGH TAPERED REDUCING FITTINGS, DO NOT USE BUSHINGS. PITCH PIPE FOR PROPER DRAINAGE. FLUSH ALL PIPING IN ACCORDANCE WITH NFPA 13. PIPING LARGER THAN 2" MAY BE SCHEDULE 10 BLACK STEEL WITH GROOVED COUPLINGS AND GROOVED FITTINGS WITH WELDED OUTLETS.

7. O–RINGS WILL NOT BE PERMITTED IN SPRINKLER HEADS.

8. PROVIDE METAL CABINET WITH EXTRA SPRINKLER HEADS AS DICTATED BY NFPA 13. MOUNT CABINET IN MECHANICAL ROOM ADJACENT TO SPRINKLER RISER.

9. PRESSURE TEST THE SYSTEM TO 200 PSI FOR TWO HOURS.

10. A PLACKARD DETAILING HYDRAULIC INFORMATION, SHALL BE AFFIXED TO RISERS.

11. INSTALLING FIRE PROTECTION CONTRACTOR SHALL BE LICENSED IN THE INSTALLATION OF AUTOMATIC FIRE SPRINKLER SYSTEMS AND HAVE BEEN INSTALLING FIRE SPRINKLER SYSTEMS FOR FIVE YEARS.

12. PRIME AND PAINT EXPOSED STEEL PIPING AND HANGERS. OWNER SHALL SELECT COLOR.

13. TANKLESS AIR COMPRESSOR SHALL BE LISTED, OIL FREE WITH CORROSION RESISTANT INTERNAL COMPONENTS. AIR COMPRESSOR SHALL BE CAPABLE OF PUMPING A 600 GALLON CAPACITY TO 40 PSI IN 30 MINUTES. FLOW CAPACITY SHALL BE 5.9 CFM (1.0 HP) AT 40 PSI. EQUAL TO GAST MODEL 6LCF–46S–M616NEX.

14. PROVIDE PIPE SLEEVES WHERE PIPING PASSES THROUGH WALLS, FLOORS, ROOFS, AND PARTITIONS. SECURE SLEEVES IN PROPER POSITION AND LOCATION DURING CONSTRUCTION. PROVIDE SLEEVES OF SUFFICIENT LENGTH TO PASS THROUGH ENTIRE THICKNESS OF WALLS, ROOFS AND PARTITIONS. PROVIDE NOT LESS THAN .25 INCH SPACES BETWEEN EXTERIOR OF PIPING OR PIPE INSULATION AND INTERIOR OF SLEEVE. FIRMLY PACK SPACE WITH INSULATION AND CAULK AT BOTH ENDS OF THE SLEEVE WITH PLASTIC WATERPROOF CEMENT WITH WILL DRY TO A FIRM BUT PLIABLE MASS OR PROVIDE A SEGMENTED ELASTOMERIC SEAL.

15. MOUNT FIRE SPRINKLER PIPING TIGHT AGAINST BOTTOM OF ROOF TO AVOID CONFLICTS WITH OTHER TRADES.

16. DISINFECT PIPE IN ACCORDANCE WITH AWWA C651.

17. PROVIDE SUPPORT FOR PIPING IN ACCORDANCE WITH NFPA 13 BY FASTENING TO THE BUILDING STRUCTURE. HANGERS SHALL CONFORM TO MSS SP58 AND MSS SP69. MATERIAL FOR EXPOSED HANGERS SHALL BE GALVANIZED STEEL.

John R McDowell

Digitally signed by John R McDowell
Date: 2024.05.02 19:08:02 -05'00'

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JOHN ROGER MCDOWELL LICENSE No. 38727 STATE OF FLORIDA PROFESSIONAL ENGINEER

FP3

PROJECT NO. 22004

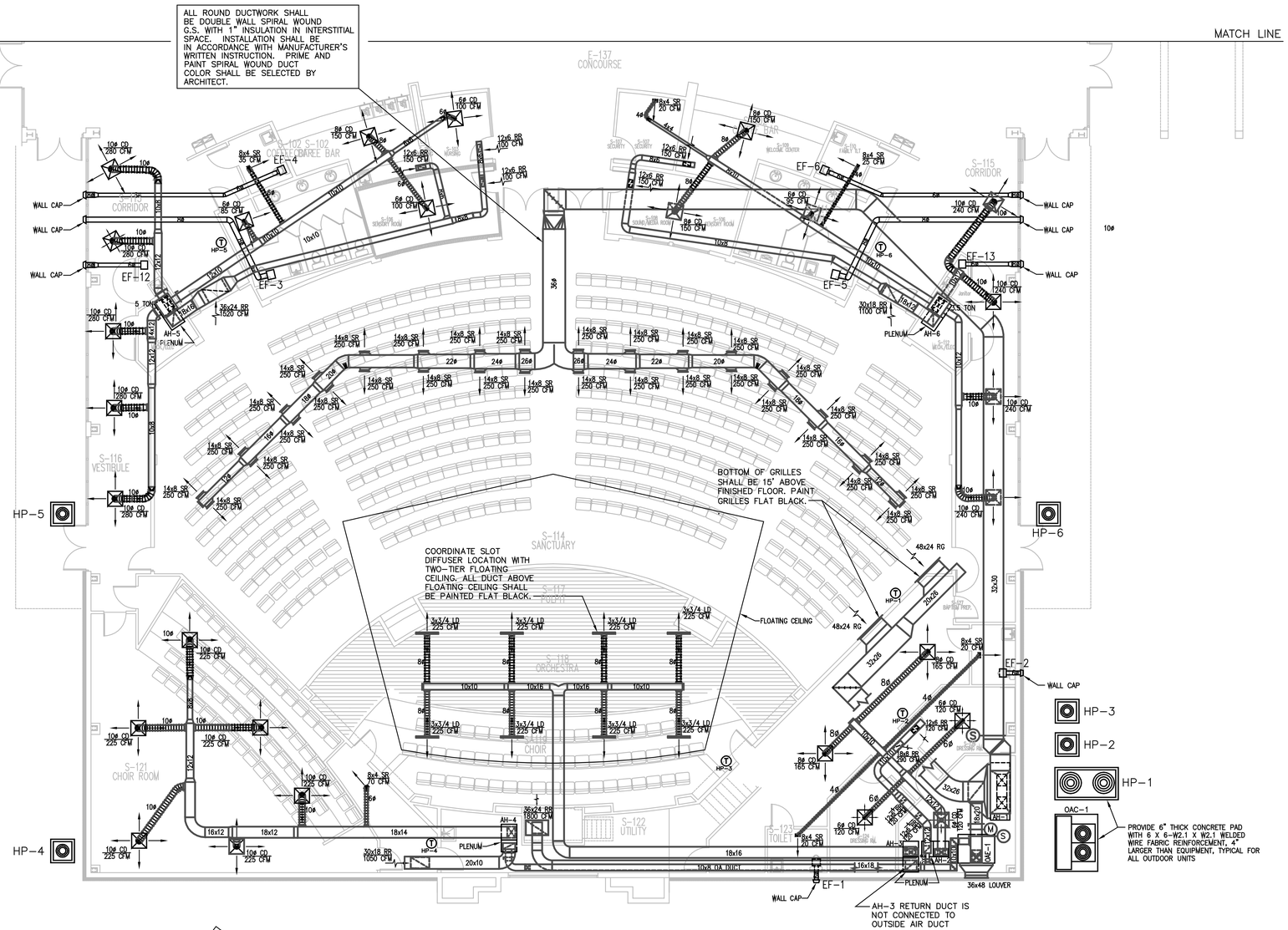
PREPARED BY	REVIEWED BY
JM	JM

ISSUE DATE	SCALE
5/2/24	1/8"=1'

SECOND FLOOR FIRE SPRINKLER PLAN

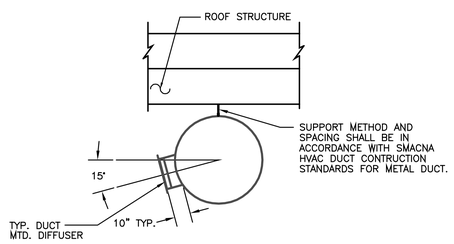
CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

MARK MERCER & ASSOCIATES, INC.



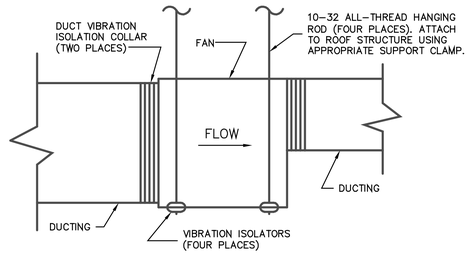
PARTIAL FIRST FLOOR MECHANICAL PLAN–PHASE I WORK

SCALE: 1/8"=1'



ROUND DUCT MOUNTING DETAIL

SCALE: NONE



CABINET FAN MOUNTING DETAIL

SCALE: NONE

MECHANICAL LEGEND

- CEILING DIFFUSER W/FLEX DUCT, NECK DIAMETER (INCHES) AND FLOW RATE INDICATED ARROWS INDICATED THROW PATTERN AND DIRECTION
- SUPPLY REGISTER W/FLEX DUCT, BOOT NECK DIAMETER (INCHES) AND FLOW RATE INDICATED ARROWS INDICATED THROW PATTERN AND DIRECTION
- 12 X 14 — RIGID DUCTING, WITH INSIDE CLEAR DIMENSIONS (INCHES) SHOWN. FIRST DIMENSION IS VIEWED.
- DUCT ELBOW
- MANUAL VOLUME DAMPER, OPPOSED BLADE TYPE
- DUCT TRANSITION
- SECTION OF DUCT UNDER POSITIVE PRESSURE
- SECTION OF DUCT UNDER NEGATIVE PRESSURE
- T HP–1 — THERMOSTAT W/ASSOCATED UNIT NUMBER
- TS HP–7 — THERMOSTAT SENSOR W/ASSOCATED UNIT NUMBER
- AH–1 — AIR HANDLER, SEE SCHEDULE
- HP–1 — HEAT PUMP, SEE SCHEDULE
- TG — TRANSFER GRILLE
- RG — RETURN GRILLE
- RR — RETURN REGISTER
- SR — SUPPLY REGISTER
- EF–1 — EXHAUST FAN
- 6ø — ROUND DUCT DIAMETER (INCHES)
- RECTANGULAR DUCT ELBOW WITH TURNING VANES
- DEU–1 — DUCTLESS SPIT A/C UNIT EVAPORATOR, SEE SCHEDULE
- DCU–1 — DUCTLESS SPIT A/C UNIT CONDENSER, SEE SCHEDULE
- M — MOTORIZED DAMPER
- SIDEWALL SUPPLY REGISTER
- F — FIRE DAMPER
- S — SMOKE DAMPER
- OAE–1 — OUTSIDE AIR UNIT EVAPORATOR, SEE SCHEDULE
- OAC–1 — OUTSIDE AIR UNIT CONDENSER, SEE SCHEDULE

MECHANICAL NOTES

1. MECHANICAL LAYOUTS ARE SCHEMATIC, PROVIDE ANY ADDITIONAL DROPS, RISERS, OFFSETS OR TRANSITIONS REQUIRED FOR COMPLETE INSTALLATION. COORDINDATE LOCATION OF CEILING MOUNTED WORK WITH LIGHTS, PLUMBING, CEILING JOISTS AND OTHER OBSTRUCTIONS. INSTALL EQUIPMENT AS RECOMMENDED BY EQUIPMENT MANUFACTURER.
2. CONTRACTOR SHALL INSTALL ALL EQUIPMENT, PIPING AND DUCTWORK SUCH THAT MANUFACTURER'S RECOMMENDED CLEARANCES ARE MET FOR ACCESS TO MOTORS, FANS, FILTERS, ETC.
3. RUN DUCTING CONCEALED IN MECHANICAL ROOMS AND ABOVE CEILING AREAS EXCEPT FOR AREAS INDICATED FOR EXPOSED DUCT IN OPEN CEILING AREAS.
4. PROVIDE FLEXIBLE ISOLATION COLLARS FOR ALL SUPPLY AND RETURN DUCT CONNECTIONS TO EQUIPMENT.
5. RUN REFRIGERANT LINES FROM SPLIT SYSTEM AIR HANDLER UNITS TO CORRESPONDING EXTERIOR UNITS. RUN REFRIGERANT LINES IN THE SHORTEST HIDDEN ROUTE POSSIBLE. RUN LINES ABOVE CEILING AND IN WALLS.
6. INSULATE REFRIGERANT SUCTION LINES WITH 1" FLEXIBLE UNICELLULAR INSULATION. ALL SEAMS SHALL BE GLUED WITH MANUFACTURER'S RECOMMEND GLUE TO MAKE ALL SEAMS WATER VAPOR PROOF. SIZE REFRIGERANT LINES PER MANUFACTURER'S REQUIREMENTS. DUCTLESS UNITS MAY REQUIRE SPECIAL INSULATING REQUIREMENTS, ADHERE TO MANUFACTURER'S INSTRUCTIONS. EXPOSED EXTERIOR LINES SHALL BE PROVIDED AN ALUMINUM JACKET, ASTM C921, TYPE II, METALLIC, TEMPER H14, 0.016–IN THICK, SMOOTH.
7. THERMOSTAT SHALL BE HONEYWELL VISIONPRO 8000 MODEL WITH REMOTE SENSORS. WHERE MULTIPLE SENSORS ARE INDICATED THE TEMPERATURE SHALL BE CONTROLLED BASED ON THE AVERAGE OF THE SENSORS.
8. PROVIDE SMOKE DETECTORS WHERE INDICATED. SMOKE DETECTORS SHALL STOP THE CORRESPONDING RTU WITH THE DETECTION OF SMOKE. SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE AND LISTED BY UL FOR DUCT INSTALLATION.
9. FIRE DAMPERS SHALL COMPY WITH THE REQUIREMENTS OF UL 555.

HP–3
HP–2
HP–1
OAC–1
PROVIDE 6" THICK CONCRETE PAD WITH 6 X 6–W2.1 X W2.1 WELDED WIRE FABRIC REINFORCEMENT, 4" LARGER THAN EQUIPMENT, TYPICAL FOR ALL OUTDOOR UNITS

John R McDowell
Digitally signed by John R McDowell
Date: 2024.05.02 19:08:39 -05'00'

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JOHN ROGER MCDOWELL LICENSE No. 38727 STATE OF FLORIDA PROFESSIONAL ENGINEER

M1

PROJECT NO. 22004

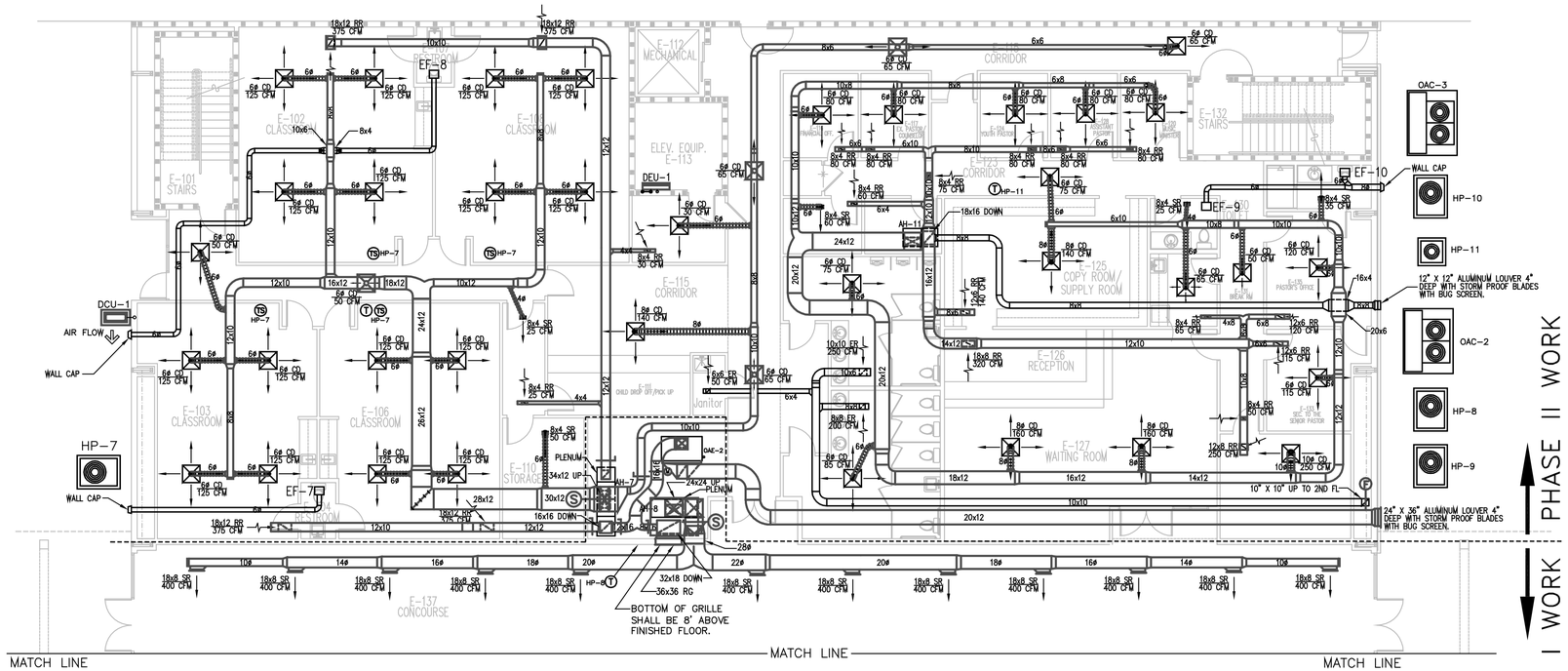
PREPARED BY	REVIEWED BY
JM	JM

ISSUE DATE	SCALE
5/2/24	1/8"=1'

PARTIAL FIRST FLOOR MECHANICAL

CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

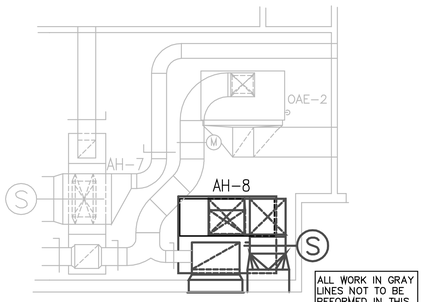
MARK MERCER & ASSOCIATES, INC.



PARTIAL FIRST FLOOR MECHANICAL PLAN–PHASE I/PHASE II WORK

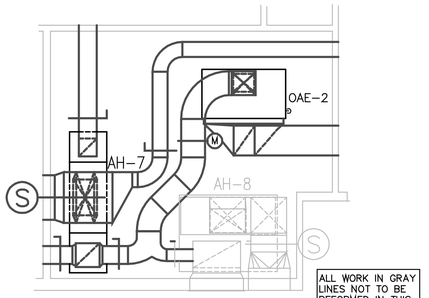
SCALE: 1/8"=1'

SEE ENLARGED MECHANICAL ROOM PLANS THIS SHEET FOR WORK IN PHASE I AND PHASE II IN MECHANICAL ROOM



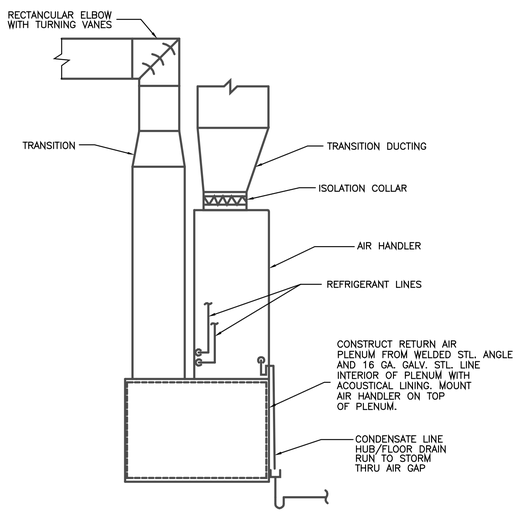
MECH. RM. PLAN–PHASE I

SCALE: 1/4"=1'



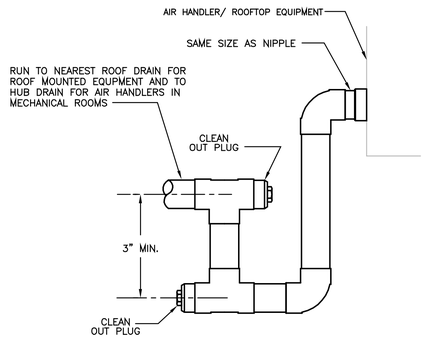
MECH. RM. PLAN–PHASE II

SCALE: 1/4"=1'



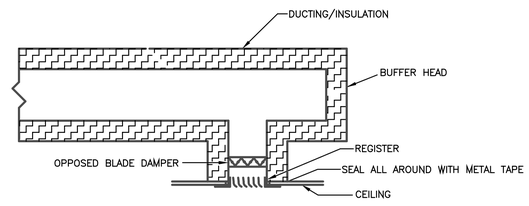
AIR HANDLER PLENUM DETAIL

SCALE: NONE



CONDENSATE DRAIN DETAIL

SCALE: NONE



RETURN REGISTER INSTALLATION DETAIL

SCALE: NONE

M2

PROJECT NO. 22004

PREPARED BY	REVIEWED BY	SCALE
JM	JM	1/8"=1'
ISSUE DATE		
5/2/24		

PARTIAL FIRST FLOOR MECHANICAL

CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

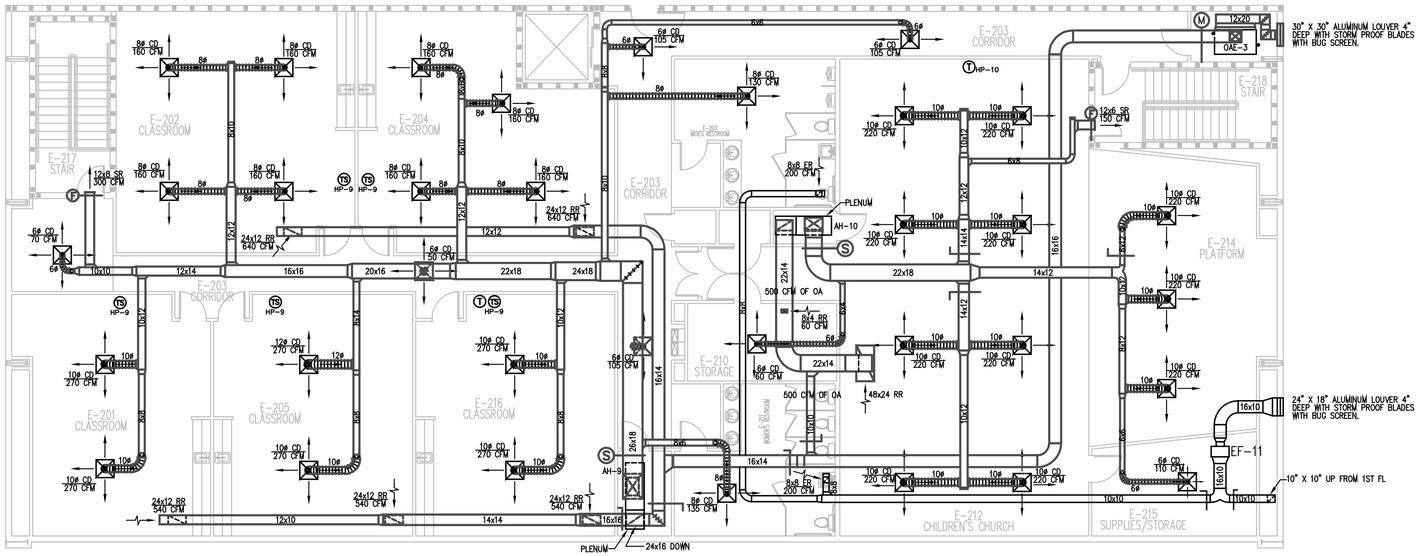
John R McDowell

Digitally signed by John R McDowell
Date: 2024.05.02 19:09:14 -05'00'

MCDOWELL ENGINEERING, INC.
1608 BECK AVENUE
PANAMA CITY, FLORIDA 32405
PHONE: (850) 872-0988
CA. LIC. NO. 9955

JOHN ROGER MCDOWELL LICENSE No. 38727 STATE OF FLORIDA PROFESSIONAL ENGINEER

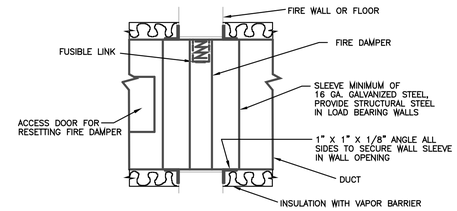
MARK MERCER & ASSOCIATES, INC.



N

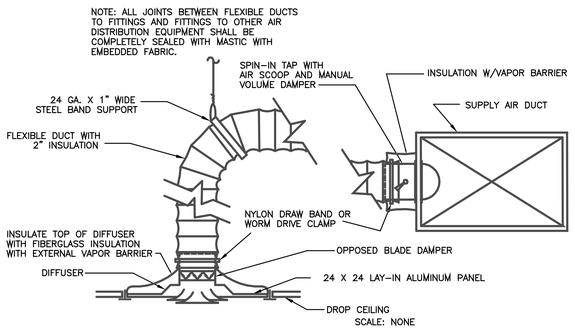
SECOND MECHANICAL FLOOR PLAN–PHASE II

SCALE: 1/8"=1'



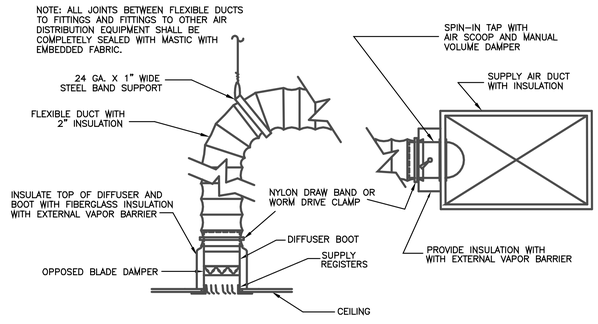
RECTANGULAR FIRE DAMPER DETAIL

SCALE: NONE



CEILING DIFFUSER INSTALLATION DETAIL

SCALE: NONE



SUPPLY REGISTER INSTALLATION DETAIL

SCALE: NONE

M3

PROJECT NO. 22004

PREPARED BY	REVIEWED BY
JM	JM

ISSUE DATE	SCALE
5/2/24	1/8"=1'

SECOND FLOOR MECHANICAL

CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

John R McDowell

Digitally signed by John R McDowell
Date: 2024.05.02 19:09:49 -05'00'

MCDOWELL ENGINEERING, INC.
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JOHN ROGER MCDOWELL LICENSE No. 38727 STATE OF FLORIDA PROFESSIONAL ENGINEER

MARK MERCER & ASSOCIATES, INC.

SPLIT SYSTEM HEAT PUMP SCHEDULE

MARK	EVAPORATOR SECTION						CONDENSER SECTION						ARI COOLING DATA		ARI HEATING DATA		AUXILIARY ELECTRIC HEATER		EQUAL TO MANUFACTURER HEATPUMP/AIR HANDLER MODEL
	CFM	CFM OF OUTSIDE AIR	EXT. STATIC PRESSURE (IN. WATER)	FAN MOTOR HP	ELECTRICAL V/ø/Hz	FILTER TYPE	COMPRESSOR DATA		CONDENSER FAN		STEPS OF CAPACITY	ELECTRICAL V/ø/Hz	MINIMUM CAPACITY BTU/HR	MINIMUM EER (SEER)	MINIMUM HIGH TEMPERATURE RATING (BTU/HR)	COP (HSPF)	NUMBER OF STEPS	KW PER STEP @ 208V	
							QUANTITY	R. L. AMPS	QUANTITY	F. L. AMPS									
AH-1/HP-1	8000	2400 (OAE-1)	.80	5.0	208/3/60	THROW AWAY	2	33.8 (EA.)	2	5.0	100%-50%-0%	208/3/60	246,000	12.2	236,000	3.2	2	11.2 (EA.)	TRANE TWA240E3/TWE240E3
AH-2/HP-2	730	80 (OAE-1)	.60	0.33	208/1/60	THROW AWAY	1	10.9	1	1.1	100%-0%	208/1/60	23,400	(14.0)	23,600	(8.2)	1	4.5	GOODMAN GSZ140241K/ASPT24B14
AH-3/HP-3	1800	--	.70	0.33	208/1/60	THROW AWAY	1	26.4	1	1.5	100%-0%	208/1/60	56,500	(14.0)	59,000	(8.5)	1	6.0	GOODMAN GSZ140601K/ASPT61D14
AH-4/HP-4	1420	300 (OAE-1)	.70	1.0	208/1/60	THROW AWAY	1	18.5	1	1.5	100%-0%	208/1/60	45,000	(14.5)	44,500	(8.5)	1	6.0	GOODMAN GSZ140481K/ASPT48D14
AH-5/HP-5	1870	--	.70	0.33	208/1/60	THROW AWAY	1	26.4	1	1.5	100%-0%	208/1/60	56,500	(14.0)	59,000	(8.5)	1	6.0	GOODMAN GSZ140601K/ASPT61D14
AH-6/HP-6	1400	--	.70	0.75	208/1/60	THROW AWAY	1	16.7	1	1.5	100%-0%	208/1/60	39,500	(14.0)	39,000	(8.5)	1	6.0	GOODMAN GSZ140421K/ASPT42D14
AH-7/HP-7	2605	1050 (OAE-2)	.80	2.0	208/3/60	THROW AWAY	1	26.5	1	3.1	100%-0%	208/3/60	90,000	10.1	85,000	3.3	2	9.4 (EA.)	TRANE TWA090D3/TWE090D3
AH-8/HP-8	4800	450 (OAE-2)	.80	3.0	208/3/60	THROW AWAY	1	33.0	1	5.0	100%-0%	208/3/60	124,000	12.7	105,000	3.3	1	11.2	TRANE TWA120D3/TWA120D3
AH-9/HP-9	3900	1100 (OAE-3)	.80	3.0	208/3/60	THROW AWAY	1	33.0	1	5.0	100%-0%	208/3/60	124,000	12.7	105,000	3.3	2	9.4 (EA.)	TRANE TWA120D3/TWA120D3
AH-10/HP-10	2740	500 (OAE-3)	.80	2.0	208/3/60	THROW AWAY	1	26.5	1	3.1	100%-0%	208/3/60	90,000	10.1	85,000	3.3	1	11.2	TRANE TWA090D3/TWE090D3
AH-11/HP-11	1815	200	.70	0.33	208/1/60	THROW AWAY	1	26.4	1	1.5	100%-0%	208/1/60	56,500	(14.0)	59,000	(8.5)	1	6.0	GOODMAN GSZ140601K/ASPT61D14

NOTES:
1. PROVIDE SINGLE POINT ELECTRICAL CONNECTION FOR AIR HANDLER AND AUXILIARY HEATER.
2. PROVIDE FLOAT SWITCH IN DRAIN PAN TO DISABLE UNIT IF PAN FILLS WITH WATER.
3. PROVIDE FOR EACH HEAT PUMP A LOCKOUT THERMOSTAT THAT SHALL PREVENT OPERATION OF THE AUXILIARY HEAT STRIPS WHEN THE OUTSIDE AIR TEMPERATURE IS ABOVE A PRESELECTED TEMPERATURE.
4. PROVIDE ALL ANCILLARY EQUIPMENT AS REQUIRED FOR A COMPLETE OPERATIONAL SYSTEM.
5. VALUES ARE APPROX. PROVIDE PROPER PULLEY SHEAVE TO PROVIDE THE INDICATED FLOW RATES TO MATCH INSTALLED CONDITIONS.

100% OUTSIDE-AIR AIR CONDITIONERS

MARK	AIR FLOW				HEAT REJECTION				COOLING DATA			ELECTRICAL	ELECTRIC HEATER		MANUFACTURER CONDENSER/EVAPORATOR MODEL
	CFM OF OUTSIDE AIR	EXT. STATIC PRESSURE (IN. WATER)	FAN MOTOR HP	FILTER TYPE	COMPRESSOR DATA		CONDENSER FAN		TOTAL CAPACITY BTU/HR (SEE NOTE 1)	LATENT CAPACITY BTU/HR (SEE NOTE 1)	MINIMUM EER	V/ø/Hz	NUMBER OF STEPS	KW PER STEP	
					QUANTITY	R. L. AMPS	QUANTITY	FLA							
OAC-1/OAE-1	2780	.3	5.0	2" 30% PLEATED	2	33.3 EA	2	3.7 EA	264,500	125,800	12.4	208/3/60	--	--	ADDISON MCOA/MAOA-240
OAC-2/OAE-2	1500	.3	2.4	2" 30% PLEATED	2	17.9 EA	2	3.7 EA	137,500	71,500	15.5	208/3/60	--	--	ADDISON MCOA/MAOA-120
OAC-3/OAE-3	1600	.3	2.4	2" 30% PLEATED	2	17.9 EA	2	3.7 EA	137,500	71,500	15.5	208/3/60	--	--	ADDISON MCOA/MAOA-120

NOTES
1. RATINGS ARE BASED ON 95°F D.B. AND 80°F W.B. AIR CONDITIONS ENTERING EVAPORATOR AND CONDENSER.
2. AMBIENT LOCKOUT THERMOSTAT SHALL ALLOW COMPRESSOR OPERATION DOWN TO AN AMBIENT TEMPERATURE OF 58° F.
3. PROVIDE HOT GAS REHEAT COILS. CONTROL THE HOT GAS REHEAT TO MAINTAIN THE AIR TEMPERATURE LEAVING THE OUTSIDE AIR UNIT AT 65°F.
4. PROVIDE INDEPENDENT REFRIGERANT CIRCUITS ON 9TONS AND HIGHER.
5. PROVIDE DIRECT DRIVE ODP PLENUM FAN OR ECM DRIVEN MOTORIZED IMPELLER.
6. PROVIDE A DIGITAL SCROLL COMPRESSOR IN LEAD AND LAG CIRCUIT.
7. PROVIDE 2" FOAM INJECTED DOUBLE WALL CONSTRUCTION W/ HINGED ACCESS DOORS WITH AN R-VALUE OF 13 WHICH HAS A TRUE THERMAL BREAK.
8. PROVIDE MODULATING HEAD PRESSURE CONTROL TO 35°F AMBIENT.
9. PROVIDE VOLTAGE MONITOR ON THE UNIT TO PROTECT COMPRESSOR AND ELECTRICAL SYSTEMS
10. PROVIDE SWITCHABLE LIQUID SUBCOOLING IN BOTH REFRIGERANT CIRCUITS TO ENHANCE THE DEHUMIDIFICATION CYCLE.
11. PROVIDE MODULATING HOT GAS REHEAT IN THE LEAD CIRCUIT AS A SECONDARY TRIM SOURCE OF REHEAT
12. PROVIDE LEAVING AIR DEWPOINT OF 54.2°F AT THE SPECIFIED CONDITIONS

FAN SCHEDULE

MARK	TYPE	DRIVE	CFM	STATIC PRESSURE (INCHES OF WATER)	POWER (WATTS)	RPM	VOLTS/PH.	SONES	MODEL NO.	NOTES
EF-1	CEILING MOUNTED EXHAUST	DIRECT	70	.25	27	1000	120v/1ø	1.0	GREENHECK SP-A90	1,3,4
EF-2	CEILING MOUNTED EXHAUST	DIRECT	70	.25	27	1000	120v/1ø	1.0	GREENHECK SP-A90	1,3,4
EF-3	CEILING MOUNTED EXHAUST	DIRECT	200	.25	56	900	120v/1ø	2.5	GREENHECK SP-A200	1,3,4
EF-4	CEILING MOUNTED EXHAUST	DIRECT	70	.25	27	1000	120v/1ø	1.0	GREENHECK SP-A90	1,3,4
EF-5	CEILING MOUNTED EXHAUST	DIRECT	200	.25	56	900	120v/1ø	2.5	GREENHECK SP-A200	1,3,4
EF-6	CEILING MOUNTED EXHAUST	DIRECT	70	.25	27	1000	120v/1ø	1.0	GREENHECK SP-A90	1,3,4
EF-7	CEILING MOUNTED EXHAUST	DIRECT	70	.25	27	1000	120v/1ø	1.0	GREENHECK SP-A90	1,3,4
EF-8	CEILING MOUNTED EXHAUST	DIRECT	70	.25	27	1000	120v/1ø	1.0	GREENHECK SP-A90	1,3,4
EF-9	CEILING MOUNTED EXHAUST	DIRECT	70	.25	27	1000	120v/1ø	1.0	GREENHECK SP-A90	1,3,4
EF-10	CEILING MOUNTED EXHAUST	DIRECT	70	.25	27	1000	120v/1ø	1.0	GREENHECK SP-A90	1,3,4
EF-11	INLINE CABINET	DIRECT	900	.375	425	1095	120v/1ø	2.5	GREENHECK MODEL CSP-A1050	1,2,3
EF-12	CEILING MOUNTED EXHAUST	DIRECT	70	.25	27	1000	120v/1ø	1.0	GREENHECK SP-A90	1,3,4
EF-13	CEILING MOUNTED EXHAUST	DIRECT	70	.25	27	1000	120v/1ø	1.0	GREENHECK SP-A90	1,3,4

NOTES
1. PROVIDE BACKDRAFT DAMPER.
2. INTERLOCK WITH CORRESPONDING OUTSIDE-AIR AIR CONDITIONER UNIT.
3. PROVIDE SOLID STATE SPEED CONTROLLER.
4. SWITCH WITH BATHROOM LIGHTS.

WALL MOUNTED DUCTLESS SPLIT SYSTEM AIR CONDITIONING SCHEDULE

MARK	EVAPORATOR		ELECTRICAL DATA			COOLING DATA		EQUAL TO MANUFACTURER INDOOR/OUTDOOR UNIT MODEL
	CFM	FILTER TYPE	INDOOR MCA	OUTDOOR MOCP	V/ø/Hz	MINIMUM CAPACITY BTU/HR	MINIMUM SEER	
DCU-1/DEU-1	232	REUSABLE	10	15	208/1/60	12,000	15	CARRIER 40MFC012-3/38MFC012-3

John R McDowell

Digitally signed by John R McDowell
Date: 2024.05.02 19:10:21 -05'00'

MCDOWELL ENGINEERING, INC.
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PHONE: (850) 872-0988
CA. LIC. NO. 9955

JOHN ROGER MCDOWELL LICENSE No. 38727 STATE OF FLORIDA PROFESSIONAL ENGINEER

M4

PROJECT NO. 22004

PREPARED BY JM | REVIEWED BY JM | ISSUE DATE 5/2/24 | SCALE 1/8"=1'

EQUIPMENT SCHEDULES

CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

MARK MERCER & ASSOCIATES, INC.

GENERAL MECHANICAL NOTES

1. ALL HVAC WORK SHALL CONFORM WITH THE 2020 FLORIDA MECHANICAL CODE..

2. DUCTING SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL CONFORMING WITH ASTM–A653, COATING DESIGNATION G90. CONSTRUCTION, METAL GAUGE, HANGERS, AND SUPPORTS, AND REINFORCEMENTS SHALL CONFORM WITH SMACNA HVAC DUCT CONSTRUCTION STANDARD. COAT ALL DUCT SEAMS WITH MASTIC BEFORE APPLICATION OF INSULATION.

3. PROVIDE EXTERNAL MINERAL FIBER FLEXIBLE BLANKET INSULATION WITH A MAXIMUM THERMAL CONDUCTIVITY OF .31 BTU–IN/HR–SQ FT FOR DUCTING, 1 1/ 2" THICK FOR DUCT IN BETWEEN 1ST AND 2ND FLOORS AND 2" THICK FOR ALL OTHER DUCTWORK INCLUDING EXHAUST AND AND OUTSIDE AIR DUCTS. SECURE INSULATION TO DUCTING WITH ADHESIVE IN 6" WIDE STRIPS 12" ON CENTER. PROVIDE PINS, WASHERS AND CLIPS AT 18" ON CENTER AND NOT MORE THAN 4" FROM DUCT EDGE. INSTALL SPEED WASHERS WITH PINS. TRIM PIN TO WASHER. COAT WASHER WITH VAPOR BARRIER COATING MATERIAL. VAPOR SEAL ALL JOINTS WITH OPEN WEAVE GLASS MEMBRANE PROVIDE AN ALL PURPOSE JACKET WITH INTEGRAL VAPOR BARRIER AROUND INSULATED DUCTWORK. INSULATION SHALL MEET THE REQUIREMENTS OF NFPA 90A AND NFPA90B. VAPOR SEAL ALL JOINTS WITH OPEN WEAVE GLASS MEMBRANE COATED WITH VAPOR BARRIER COATING COMPOUND. COATED WITH VAPOR BARRIER COATING COMPOUND.

4. ALL ACOUSTICALLY LINED PLENUMS SHALL BE INTERNALLY LINED. LINING SHALL MEET THE REQUIREMENTS OF ASTM C1071, NFPA 90A AND NFPA 90B. DUCT LINER SHALL BE MANUFACTURED FROM GLASS FIBER BONDED WITH THERMOSETTING RESIN. INSULATION SHALL BE RESISTANT TO MICROBIAL GROWTH USING A "NO GROWTH CRITERIA" WHEN TESTED IN ACCORDANCE WITH ASTM C1338 AND ASTM G21. SURFACE EXPOSED TO AIR STREAM SHALL BE BE PROVIDED A BLACK MATT FACING. INSULATION SHALL BE SUPPORTED AGAINST DUCT SURFACE BY STUD WELDED PINS AND SPEED CLIPS 10" ON CENTER AND BY SHEET METAL ANGLES AT THE DUCT CORNERS. ADJACENT JOINT SECTIONS OF INSULATION BUTTED TOGETHER SHALL BE COVERED WITH SHEET METAL COVER STRIPS WITH EDGES TURNED DOWN AND PINNED TO CORNER ANGLES. LINING SHALL BE 1 1/2" THICK.

5. CEILING DIFFUSERS SHALL BE TITUS MODEL TMSA–AA, 24" X 24" LAY–IN CEILING MODULE FOR LAY–IN CEILINGS. SUPPLY REGISTERS SHALL BE EQUAL TO TITUS MODEL 250–AA, SURFACE MOUNT TYPE. SIDEWALL REGISTERS SHALL BE EQUAL TO TITUS AEROBLADE MODEL 272FS. EXHAUST AND RETURN GRILLES/REGISTERS SHALL BE EQUAL TO TITUS MODEL 55FL. PROVIDE OPPOSED BLADE DAMPER WITH SCREWDRIVER ADJUSTMENT ACCESSIBLE THOUGH FACE FOR ALL REGISTERS AND DIFFUSERS. SELECT EQUIPMENT TO OPERATE WITH A SOUND PRESSURE LEVEL OF NC 30 OR LESS.

6. TEST AND BALANCE AIR SYSTEMS TO ACHIEVE COMPLIANCE WITH DRAWINGS. TEST AND BALANCE IN ACCORDANCE WITH SMACNA "HVAC SYSTEMS – TESTING, ADJUSTING AND BALANCING." TEST AND BALANCE SHALL BE PERFORMED BY AN INDEPENDANT THIRD PARTY CERTIFIED TEST AND BALANCE CONTRACTOR. QUALIFICATIONS SHALL BE SUBMITTED BEFORE THE PERFORMANCE OF WORK. TEST AND BALANCE CONTRACTOR SHALL BE A SUBCONTRACTOR TO THE GENERAL CONTRACTOR. TEST AND BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

7. PROVIDE 1" PLEATED 65% EFFICIENT THROW–AWAY FILTERS FOR AIR HANDLING UNITS. PROVIDE DISPOSABLE FILTERS FOR HEAT PUMP AIR HANDLERS AND REUSABLE FILTERS FOR OUTSIDE AIR EVAPORATOR UNITS. PROVIDE FILTER HOUSING AND AS REQUIRED TO HOLD FILTERS.

8. PROVIDE PIPE SLEEVES FOR ALL PIPING PENETRATING WALLS. PIPE SLEEVES SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE, PROVIDE A MINIMUM OF .25" CLEARANCE BETWEEN INSIDE DIAMETER OF SLEEVE AND OUTSIDE SURFACE OF PENETRATING PIPING. FIRMLY PACK WITH FIRE PROOF INSULATION AND CAULK WITH PLASTIC WATERPROOF CEMENT.

9. PROVIDE ACCESS DOORS IN DUCTWORK AT ALL DAMPERS.

10. PROVIDE MOTOR STARTERS THAT CONFORM TO NEMA ICS–1, NEMA ICS–2 AND UL 508.

11. AT THE CLOSE OF THE JOB, TWO BOUND COPIES OF EQUIPMENT WARRANTIES, CONTRACTOR'S WARRANTY, PARTS LIST AND MANUALS FOR ALL EQUIPMENT, BALANCE AND TEST READINGS, OPERATING INSTRUCTIONS (IN WRITING) AND WRITTEN INSTRUCTIONS ON MAINTENANCE AND CARE OF THE SYSTEM SHALL BE SUBMITTED TO THE OWNER.

12. ALL EQUIPMENT SHALL BE INSTALLED IN SUCH A WAY THAT ALL COMPONENTS REQUIRING ACCESS ARE SO LOCATED AND INSTALLED THAT THEY MAY BE SERVICED BY SERVICE PEOPLE WITH NORMAL SERVICE TOOLS AND EQUIPMENT. IF ANY EQUIPMENT OR COMPONENTS ARE SHOWN IN SUCH A POSITION THAT THIS CONTRACTOR CANNOT COMPLY WITH THE ABOVE, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND ATTEMPT TO RESOLVE THE PROBLEM OF ACCESS. IF THIS CONSULTATION IS NOT SUCCESSFUL, THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED IN WRITING AND A DECISION REQUESTED.

13. INSTALL VIBRATION ISOLATORS, FLEXIBLE CONNECTORS, EXPANSION JOINTS, AND OTHER SAFETY MEASURES TO PREVENT NOISE AND VIBRATION FROM BEING TRANSMITTED TO OCCUPIED AREAS. EQUIPMENT SHALL BE SELECTED TO OPERATE WITHIN THE NOISE LEVEL RECOMMENDED FOR THE PARTICULAR TYPE INSTALLATION IN RELATION TO ITS LOCATION. FOLLOWING INSTALLATION, MAKE PROPER ADJUSTMENTS TO ELIMINATE EXCESSIVE NOISE AND VIBRATION.

14. FLEXIBLE DUCT CONNECTING MAIN DUCTS TO REGISTERS SHALL BE UL 181, CLASS I UL LISTED, INTERLOCKING SPIRAL TYPE WITH STEEL WIRE HELIX PERMANENTLY BONDED TO A SMOOTH INNER LINING, WITH INSULATION HAVING A MAXIMUM THERMAL CONDUCTANCE OF .125 BTU/HR–DEG F–SQ FT (2" THICK) AND SHEATHED WITH A VAPOR BARRIER. FLEXIBLE DUCT SIZE SHALL BE AS INDICATED.

15. PROVIDE SINGLE THICKNESS TURNING VANES IN RECTANGULAR ELBOWS AND TEES.

16. PROVIDE DUCT SLEEVES FOR ALL WALL PENETRATIONS. FABRICATE FROM 20 GAUGE GALVANIZED STEEL FOR NON–BEARING WALLS, AND STRUCTURAL STEEL FOR LOAD BEARING WALLS. PACK CLEARANCE BETWEEN SLEEVE AND DUCT INSULATION WITH FIRE STOP MATERIAL.

17. EXHAUST FAN WALL CAPS SHALL BE CONSTRUCTED OF ALUMINUM SUITABLE FOR INTENDED USE AND SHALL HAVE INTEGRAL BIRD SCREEN, DO NOT PROVIDE SCREEN IN DRYER DUCTS. CAPS AND JACKS SHALL BE AESTHETICALLY COMPATIBLE WITH STRUCTURE. ANCHOR CAPS TO RESIST WIND PRESSURE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE.

18. CONDENSATE LINES SHALL BE SCHEDULE 40 PVC.

SEQUENCE OF OPERATION

1. THERMOSTATS SHALL BE HONEYWELL VISIONPRO 8000. PROVIDE AVERAGING SENSORS AND CAPABILITY FOR HEAT PUMPS UNITS 7 AND 9.

2. THERMOSTATS SHALL BE SET TO OPERATE AS FOLLOWS: DURING OCCUPIED TIMES AIR HANDLERS SHALL BE SET TO RUN CONTINOUSLY. IN THE COOLING MODE THE HEAT PUMP COMPESSOR SHALL BE CYCLED AS REQUIRED TO SATISFY TEMPERATURE. UPON SATISFYING THE TEMPERATURE THE COMPRESSOR SHALL BE COMMANDED TO CONTINUE TO OPERATE IF THE HUMIDITY IN THE SPACE IS ABOVE THE HUMIDITY SETPOINT. CONTINUOUS OPERATION OF THE COMPRESSORS SHALL OCCUR IF THE HUMIDITY IS NOT SATISFIED UNTIL A TEMPERATURE OF 3°F BELOW THE TEMPERATURE SET POINT IS REACHED AT WHICH TIME THE COMPRESSORS SHALL BE COMMANDED OFF. UPON SATISFACTION OF THE SPACE HUMIDITY THE COMPRESSORS SHALL BE CYCLED OFF. IN THE UNOCCUPIED PERIODS ALL AIR HANDLERS SHALL CYCLE WITH THE COMPRESSORS. SETBACK TEMPERATURES AND HUMIDITIES IN THE UNOCCUPIED TIMES SHALL BE MAINTAINED IN ACCORDANCE WITH ABOVE.

3. PROVIDE ALL ELECTRICAL/ELECTRONIC EQUIPMENT NECESSARY TO PERFORM THE FOLLOWING: IN THE OCCUPIED MODE THE OUTSIDE AIR UNITS AND CORRESPONDING INTERLOCKED EXHAUST FANS SHALL BE ACTIVATED TO OPERATE CONTINUOUSLY. THE MOTORIZED DAMPERS IN THE OUTSIDE AIR DUCTS SHALL BE COMMANDED OPEN. THE OUTSIDE AIR UNITS SHALL CONDITION THE OUTSIDE AIR. THE CORRESPONDING HEATPUMP THERMOSTATS SHALL CYCLE THE COMPRESSORS OR ELECTRIC HEAT AS REQUIRED TO MAINTAIN THE OCCUPIED TEMPERATURE SETPOINT. IN THE UNOCCUPIED MODE THE OUTSIDE AIR UNITS SHALL BE DEACTIVATED AND THE OUTSIDE AIR MOTORIZED DAMPERS COMMANDED CLOSED.

M5

PROJECT NO. 22004

PREPARED BY	REVIEWED BY
JM	JM

ISSUE	DATE	SCALE
	5/2/24	1/8"=1'

MECHANICAL NOTES

CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

John R McDowell

Digitally signed by John R McDowell
Date: 2024.05.02 19:10:56 -05'00'

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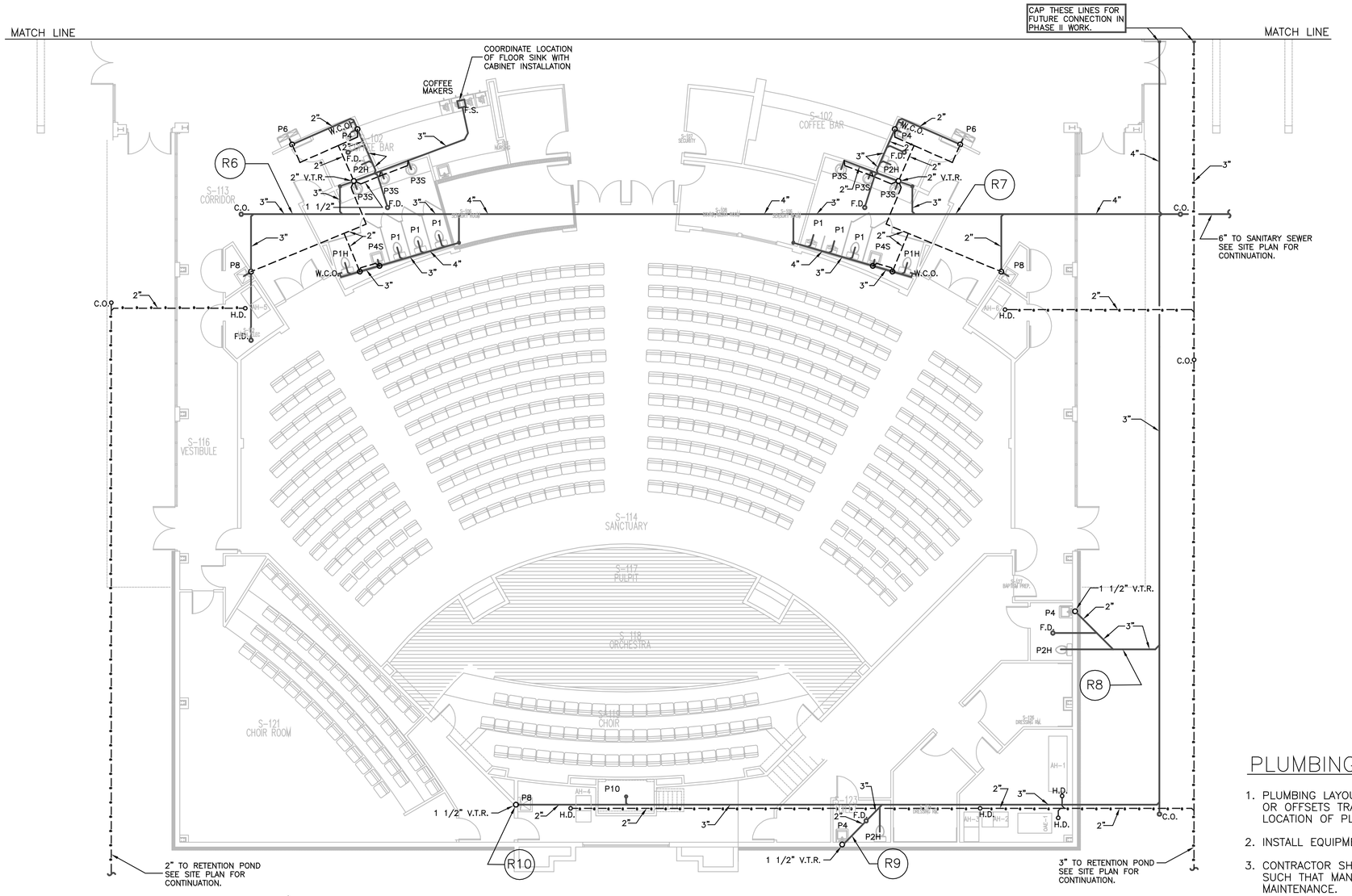
JOHN ROGER MCDOWELL LICENSE No. 38727 STATE OF FLORIDA PROFESSIONAL ENGINEER

MARK MERCER & ASSOCIATES, INC.



PARTIAL FIRST FLOOR WASTE AND VENT PLAN–PHASE I WORK

SCALE: 1/8"=1'

N

PLUMBING LEGEND

	COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER PIPING RECIRCULATION LINE
	WASTE PIPING
	VENT PIPING
	CONDENSATE LINE
C.O.	CLEANOUT
W.C.O.	WALL CLEANOUT
F.D.	FLOOR DRAIN
P1	PLUMBING FIXTURE (SEE SCHEDULE)
V.T.R.	VENT THRU ROOF
	BALL VALVE
	ELBOW TURNED DOWN
	TEE TURNED UP
	TEE TURNED DOWN
W.H.	WALL HYDRANT
V.	VENT RISER
W.	WASTE RISER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
H.D.	3" HUB DRAIN
IWH	INSTANTANEOUS WATER HEATER
F.S.	FLOOR SINK

PLUMBING NOTES

1. PLUMBING LAYOUTS ARE SCHEMATIC, PROVIDE ANY ADDITIONAL DROPS, RISERS, OR OFFSETS TRANSITIONS REQUIRED FOR COMPLETE INSTALLATION. COORDINATE LOCATION OF PLUMBING WITH OTHER DISCIPLINES.
2. INSTALL EQUIPMENT AS RECOMMENDED BY EQUIPMENT MANUFACTURER.
3. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND PIPING SUCH THAT MANUFACTURER'S RECOMMENDED CLEARANCES ARE MET FOR MAINTENANCE.
4. INSULATE ROOF DRAINS LINES WITH 1/2" FLEXIBLE UNICELLULAR INSULATION. ALL SEAMS SHALL BE GLUED WITH MANUAFACTURER'S RECOMMEND GLUE TO MAKE ALL SEAMS WATER VAPOR PROOF.
5. PROVIDE A WATER HAMMER ARRESTOR AT EACH FIXTURE 'SIZE A' ON BOTH HOT AND COLD WATER SUPPLY.
6. PIPING INSULATION FROM WH TO COMPLY WITH C403.2.10 OF THE FLORIDA ENERGY CODE.

John R McDowell

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Date: 2024.05.02 19:11:28 -05'00'

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JOHN ROGER MCDOWELL LICENSE No. 38727 STATE OF FLORIDA PROFESSIONAL ENGINEER

P1

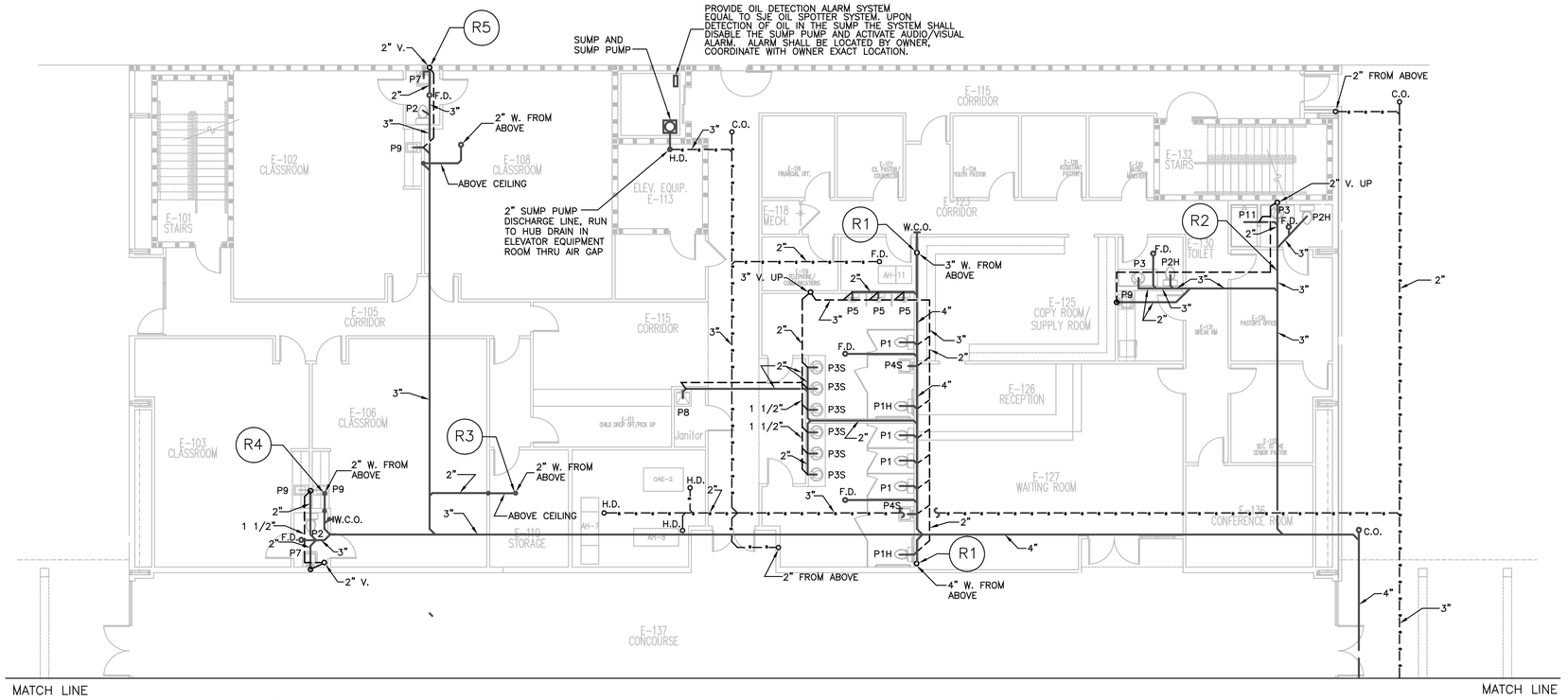
PROJECT NO. 22004

PREPARED BY	REVIEWED BY	
JM	JM	
ISSUE DATE	SCALE	
5/2/24	1/8"=1'	

FIRST FLOOR WASTE AND VENT PLAN

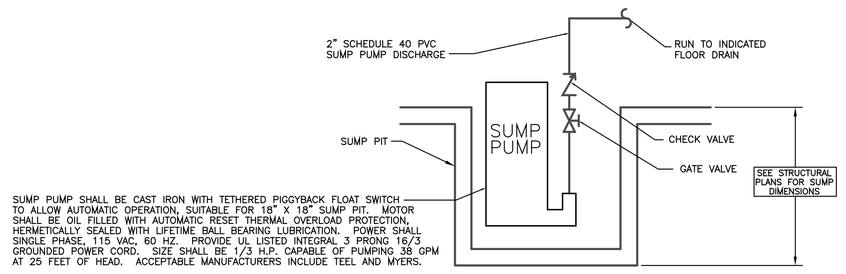
CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

MARK MERCER & ASSOCIATES, INC.



PARTIAL FIRST FLOOR WASTE AND VENT PLAN–PHASE II WORK

SCALE: 1/8"=1'



SUMP PUMP SHALL BE CAST IRON WITH TETHERED PIGGYBACK FLOAT SWITCH TO ALLOW AUTOMATIC OPERATION, SUITABLE FOR 18" X 18" SUMP PIT. MOTOR SHALL BE OIL FILLED WITH AUTOMATIC RESET THERMAL OVERLOAD PROTECTION, HERMETICALLY SEALED WITH LIFETIME BALL BEARING LUBRICATION. POWER SHALL SINGLE PHASE, 115 VAC, 60 HZ. PROVIDE UL LISTED INTEGRAL 3 PRONG 16/3 GROUNDED POWER CORD. SIZE SHALL BE 1/3 H.P. CAPABLE OF PUMPING 38 GPM AT 25 FEET OF HEAD. ACCEPTABLE MANUFACTURERS INCLUDE TEEL AND MYERS.

SUMP PUMP DETAIL

SCALE: NONE

John R McDowell

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Date: 2024.05.02 19:12:10 -05'00'

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P2

PROJECT NO. 22004

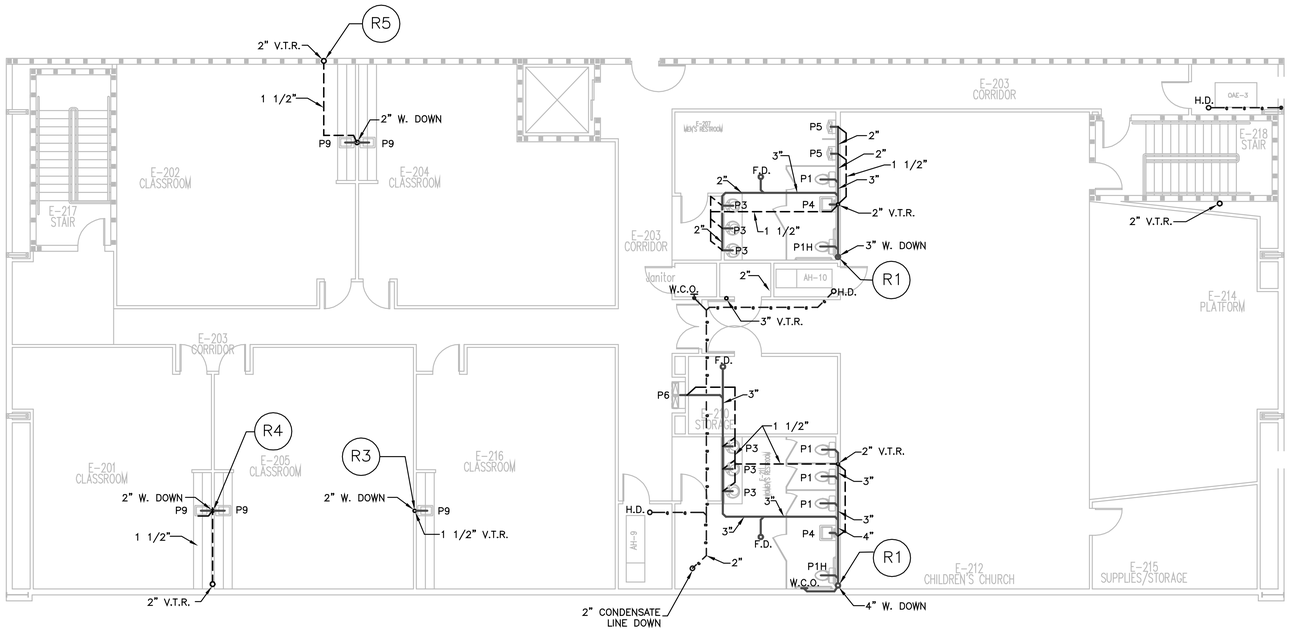
PREPARED BY	REVIEWED BY
JM	JM

ISSUE	DATE	SCALE
	5/2/24	1/8"=1'

FIRST FLOOR WASTE AND VENT PLAN

CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

MARK MERCER & ASSOCIATES, INC.



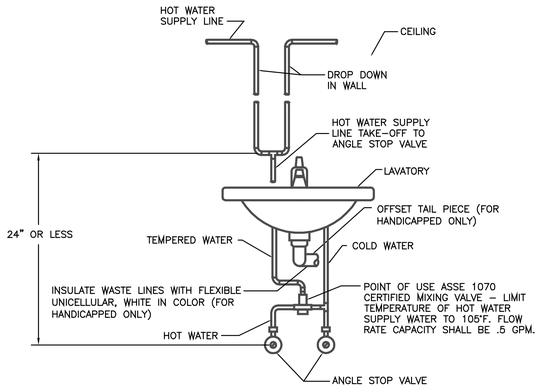
N

SECOND FLOOR WASTE AND VENT PLAN–PHASE II WORK

SCALE: 1/8"=1'

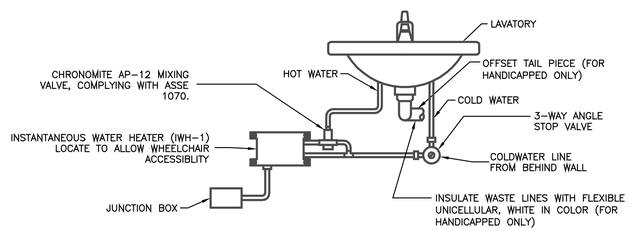
ELECTRIC WATER HEATER SCHEDULE					
MARK	EQUAL TO MANUF./MODEL	VOLUME GALLONS	POWER KW	DIMENSIONS HEIGHT X DIA.	ELECTRICAL V/ø/Hz
EWH–1	STATE ELD52	50	5.5	57" X 22"	208/1/60
EWH–2	STATE ELD52	50	5.5	57" X 22"	208/1/60
EWH–3	STATE ELD52	50	5.5	57" X 22"	208/1/60

INSTANTANEOUS WATER HEATER SCHEDULE					
MARK	FLOW (GPM)	POWER	VOLTS/PH.	AMPS	MANUFACTURER/ MODEL
IWH–1	1.0	3600 WATTS	120v/1ø	30	CHRONOMITE/SR–30L
IWH–2	2.0	6240 WATTS	208v/1ø	30	CHRONOMITE/SR–30



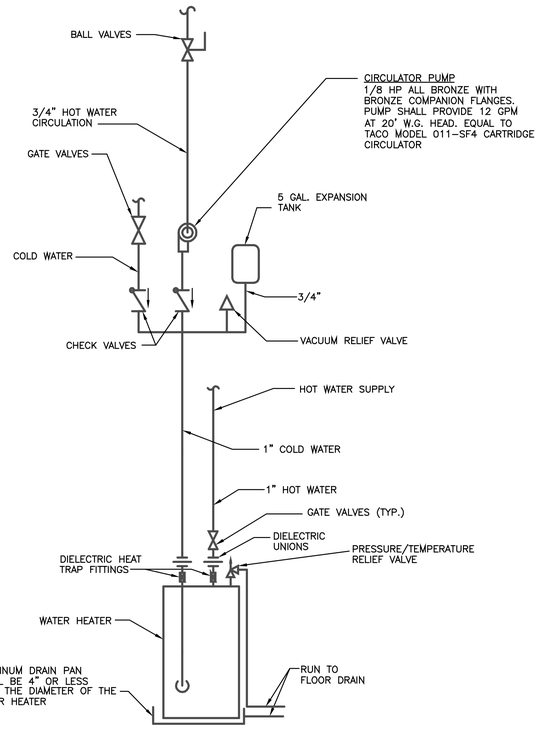
LAVATORY INSTALLATION ON RECIRC SYSTEM

SCALE: NONE



LAVATORY INSTALLATION WITH IWH

SCALE: NONE



WATER HEATER DETAIL

SCALE: NONE

John R McDowell

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P3

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5/2/24	1/8"=1'

PROJECT NO. 22004

SECOND FLOOR WASTE AND VENT PLAN

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REBUILD
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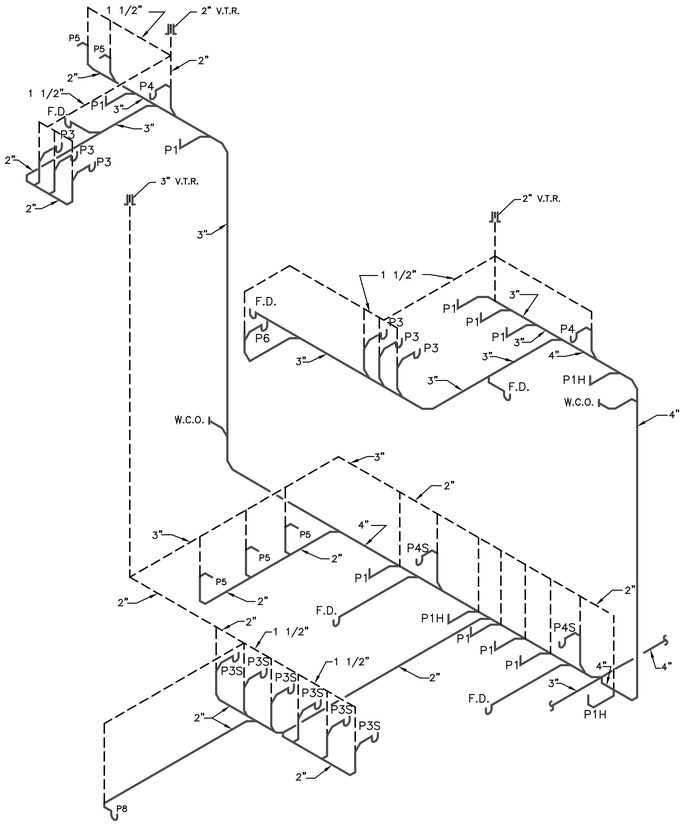
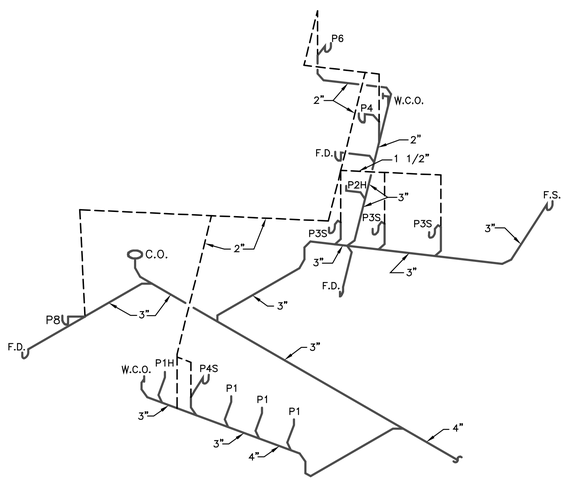
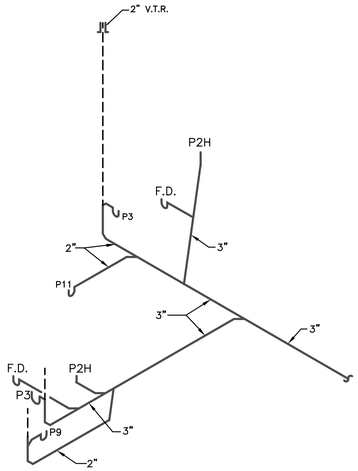


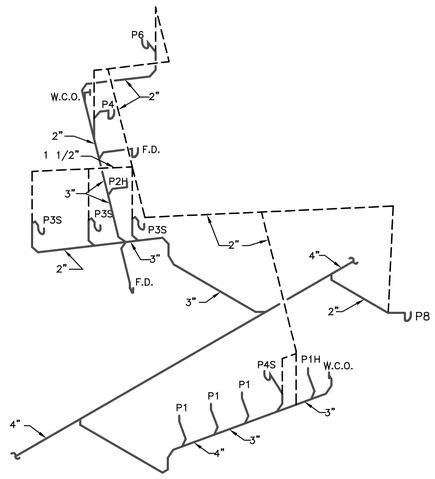
R1 WASTE AND VENT RISER
SCALE: NONE



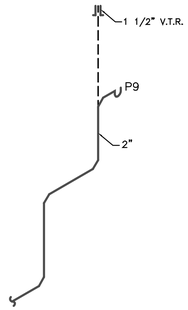
R6 WASTE AND VENT RISER
SCALE: NONE



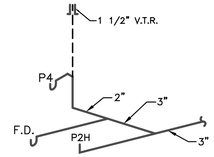
R2 WASTE AND VENT RISER
SCALE: NONE



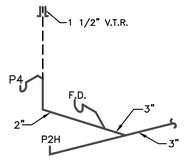
R7 WASTE AND VENT RISER
SCALE: NONE



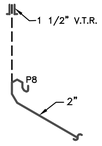
R3 WASTE AND VENT RISER
SCALE: NONE



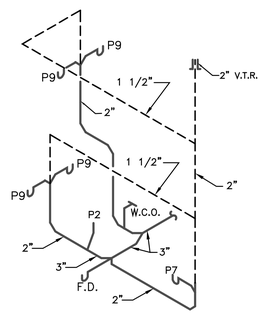
R8 WASTE AND VENT RISER
SCALE: NONE



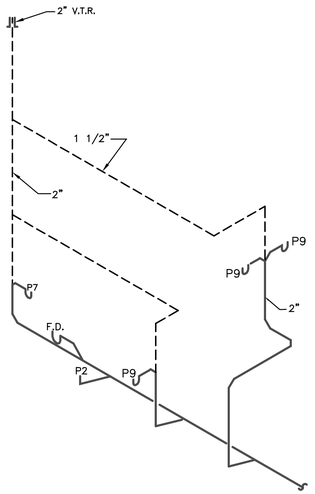
R9 WASTE AND VENT RISER
SCALE: NONE



R10 WASTE AND VENT RISER
SCALE: NONE



R4 WASTE AND VENT RISER
SCALE: NONE



R5 WASTE AND VENT RISER
SCALE: NONE

P4

PROJECT NO. 22004

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JM	JM
ISSUE DATE	SCALE
5/2/24	1/8"=1'

PLUMBING RISERS

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MARK MERCER & ASSOCIATES, INC.

John R McDowell

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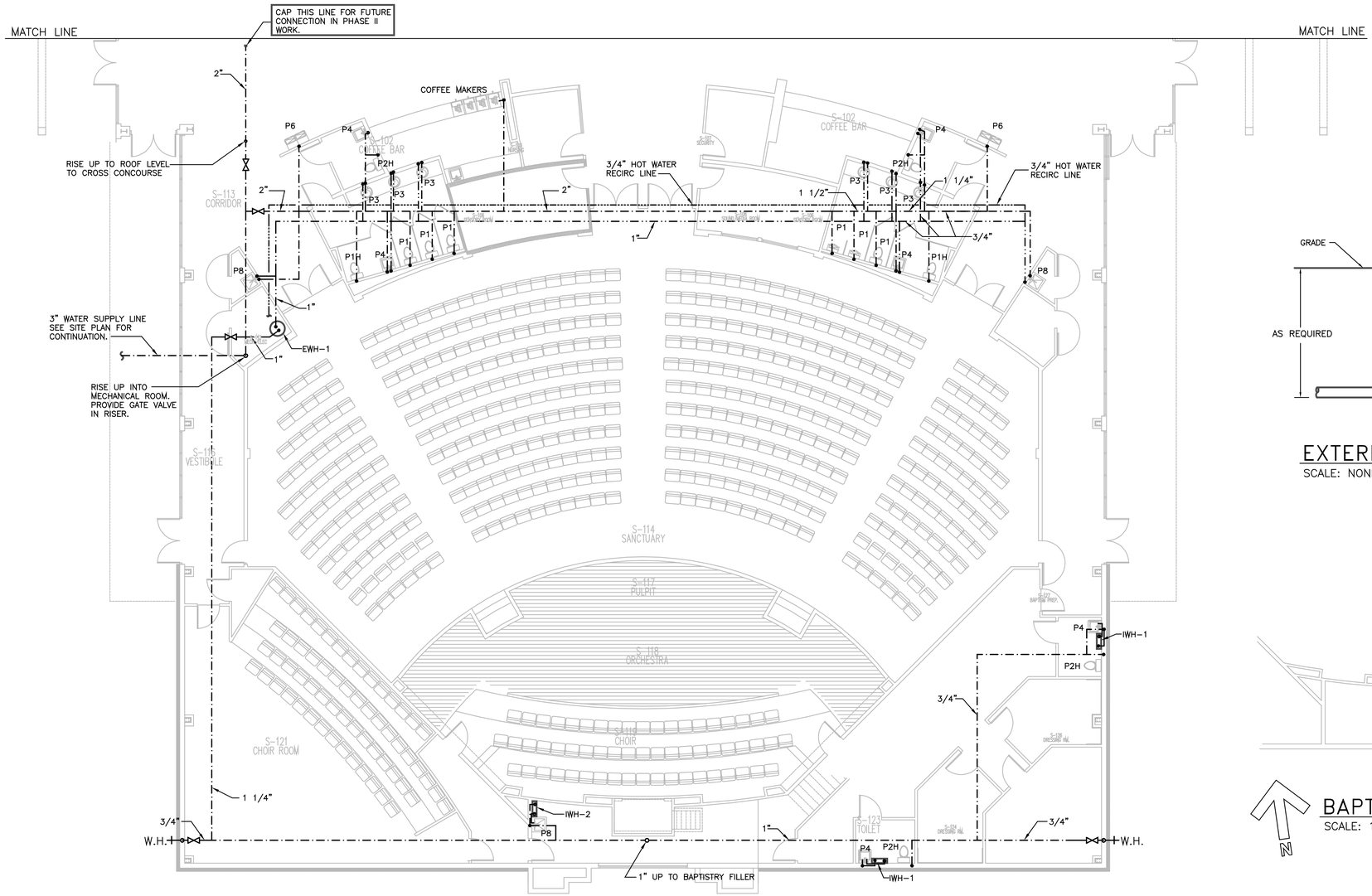
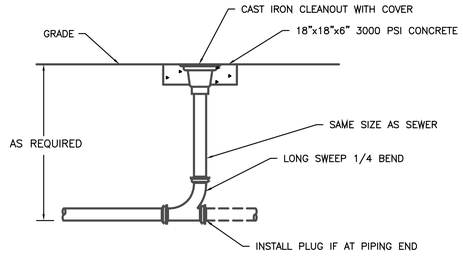


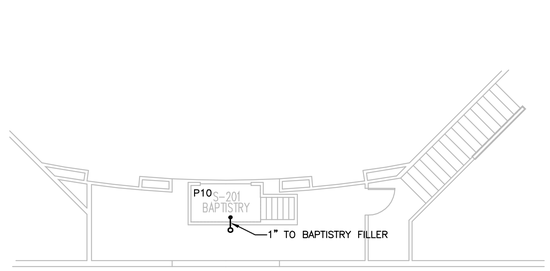
PARTIAL FIRST FLOOR HOT AND COLD WATER SUPPLY PLAN–PHASE I WORK

SCALE: 1/8"=1'



EXTERIOR CLEANOUT DETAIL

SCALE: NONE



BAPTISTRY WATER SUPPLY

SCALE: 1/8"=1'

P5

PROJECT NO. 22004

PREPARED BY	REVIEWED BY
JM	JM

ISSUE DATE	SCALE
5/2/24	1/8"=1'

FIRST FLOOR H&C WATER SUPPLY PLAN

CARLISLE BAPTIST CHURCH
REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

John R McDowell

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Date: 2024.05.02 19:13:52 -05'00'

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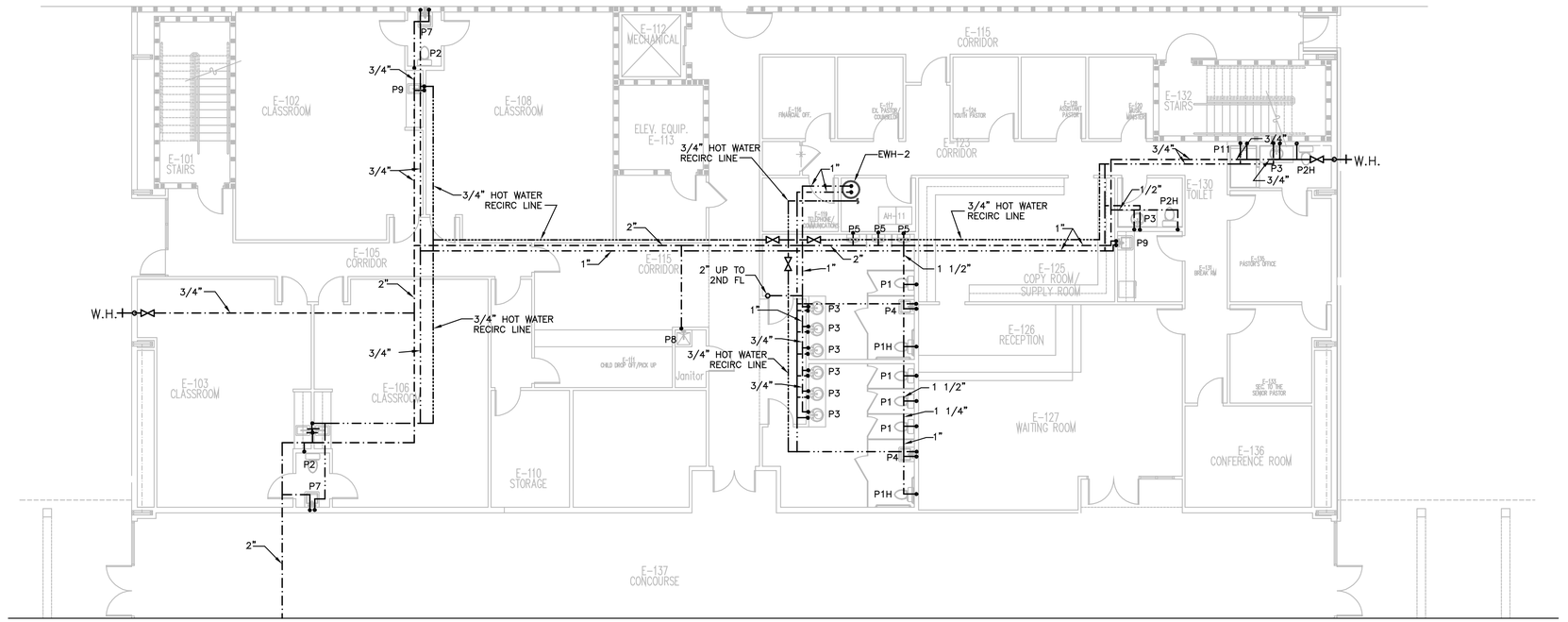

N

PARTIAL FIRST FLOOR HOT AND COLD WATER SUPPLY PLAN–PHASE II WORK

SCALE: 1/8"=1'

PLUMBING GENERAL NOTES

1. ALL PLUMBING WORK SHALL CONFORM WITH THE 2020 FLORIDA PLUMBING CODE. RUN ALL PLUMBING ABOVE CEILING, CONCEALED IN WALLS AND BELOW GRADE.

2. WATER PIPING 2" AND SMALLER INSIDE THE BUILDING AND TO A POINT 5' OUTSIDE THE BUILDING SHALL BE COPPER TUBING, ASTM B 88, TYPE K FOR UNDERGROUND AND TYPE L FOR ABOVEGROUND, WITH ANSI B16.22 SOLDER JOINT FITTINGS USING ASTM B 32, 95–5 TIN ANTIMONY OR GRADE Sn96 TIN SILVER SOLDER, AND FLUX CONTAINING NOT MORE THAN .2% LEAD.

3. NOT USED.

4. DRAIN, WASTE, CONDENSATE AND VENT (DWV) PIPING SHALL BE POLYVINYL CHLORIDE (PVC) SYSTEM, ASTM D 2665. PLASTIC PIPE, FITTINGS AND COMPONENTS SHALL CONFORM TO AND BE IDENTIFIED WITH THE MARK INDICATING CONFORMANCE TO NSF 14.

5. GATE VALVES SHALL BE MSS SP–80, CLASS 125. BALL VALVES, COPPER ALLOY FULL PORT DESIGN MAY BE USED IN LIEW OF GATE VALVES.

6. PROVIDE 1/4 TURN CONTROL–STOP VALVES IN EACH SUPPLY TO EACH FIXTURE. THE FINISH OF FITTINGS, ACCESSORIES AND SUPPLIES EXPOSED TO VIEW SHALL BE CHROMIUM PLATED PER ANSI A122.18.1M.

7. PROVIDE CHROMIUM PLATED ESCUTCHEON PLATES FOR PIPING PASSING THROUGH WALLS EXPOSED TO VIEW.

8. COMBINATION PRESSURE/TEMPERATURE RELIEF VALVE SHALL BE BRONZE BODY, BRASS TRIM, STAINLESS STEEL SPRING AND SILICONE SEAT DISC WITH TEST LEVER. VALVES SHALL BE ASME LISTED AND RATED.

9. ALL HOT WATER LINES SHALL BE INSULATED WITH 1", AND COLD WATER LINES WITH 1/2" FLEXIBLE UNICELLULAR INSULATION, ASTM C 534.

10. FLOOR CLEANOUTS SHALL BE ANSI A112.36.2M, CAST–IRON OR DUCTILE–IRON CLEANOUT WITH FLANGE, ADJUSTABLE HEIGHT POLISHED BRONZE, NICKEL BRONZE, STAINLESS STEEL, OR CHROMIUM–PLATED COPPER ALLOY RIM AND SCORIATED FLOOR PLATE WITH "CO" CAST IN THE PLATE, AND COUNTERSUNK SCREWS FOR INSTALLING FLOOR PLATE FLUSH WITH FINISHED FLOOR. PROVIDE THREADED BRONZE OR THERMOPLASTIC OR PVC PLASTIC CLEANOUT PLUGS. FOR WALL CLEANOUTS PROVIDE POLISHED STAINLESS OR CHROMIUM–PLATED COPPER ALLOY COVER PLATE AND SECURE TO CLEANOUT PLUG WITH COUNTERSUNK STAINLESS STEEL SCREW.

11. WATER HAMMER ARRESTORS SHALL BE PDI WH201.

12. PROVIDE ADEQUATE SUPPORT FOR PIPING BY FASTENING TO THE BUILDING STRUCTURE. PROVIDE INSULATION PROTECTION SHIELDS FOR INSULATED PIPING. HANGERS SHALL CONFORM TO MSS SP58 AND MSS SP69. VERTICAL METAL PIPING SHALL BE SUPPORTED AT EACH FLOOR BUT NOT MORE THAN 10 FOOT INTERVALS. SUPPORT VERTICAL PLASTIC PIPING AT EACH FLOOR AND AT MIDPOINT BETWEEN FLOORS, BUT AT NO MORE THAN 5–FOOT INTERVALS. HORIZONTAL PLASTIC PIPE SHALL BE SUPPORTED AT 4 FOOT INTERVALS AND AT EACH CHANGE IN DIRECTION. SUPPORT COPPER AND STEEL PIPING AT 6 FOOT INTERVALS FOR 1 1/4" AND LESS AND AT 8 FOOT INTERVALS FOR 1 1/2" AND 2" PIPING.

13. WATER PIPING ROUTED ABOVE CELINGS AND IN EXTERIOR WALLS SHALL BE ROUTED ON HEATED SIDE (UNDERSIDE) OF CEILING INSULATION AND HEATED SIDE (INSIDE) OF WALL INSULATION.

14. PROVIDE PIPE SLEEVES WHERE PIPING PASSES THROUGH WALLS, FLOORS, ROOFS, AND PARTITIONS. SECURE SLEEVES IN PROPER POSITION AND LOCATION DURING CONSTRUCTION. PROVIDE SLEEVES OF SUFFICIENT LENGTH TO PASS THROUGH ENTIRE THICKNESS OF WALLS, FLOORS, ROOFS AND PARTITIONS. PROVIDE NOT LESS THAN .25 INCH SPACES BETWEEN EXTERIOR OF PIPING OR PIPE INSULATION AND INTERIOR OF SLEEVE. FIRMLY PACK SPACE WITH INSULATION AND CALK AT BOTH ENDS OF THE SLEEVE WITH PLASTIC WATERPROOF CEMENT WITH WILL DRY TO A FIRM BUT PLIABLE MASS OR PROVIDE A SEGMENTED ELASTOMERIC SEAL. SEAL BOTH ENDS OF PENETRATIONS THROUGH FIRE WALLS AND FIRE FLOORS TO MAINTAIN FIRE RESISTIVE INTEGRITY WITH UL LISTED FILL, VOID OR CAVITY MATERIAL. EXTEND SLEEVES IN FLOOR SLABS 3 INCHES ABOVE FINISHED FLOOR, EXCEPT SLEEVES ARE NOT REQUIRED WHERE DWV PASSES THROUGH CONCRETE FLOOR SLABS LOCATED ON GRADE.

15. FLOOR DRAINS FOR CONCRETE ON GRADE SHALL HAVE CLAMPING RINGS FOR USE WITH MEMBRANE WATERPROOPING WITH DOUBLE DRAINAGE FLANGE. OTHER FLOOR DRAINS SHALL BE SUITABLE WITH FLOORING MATERIAL. FLOOR DRAINS SHALL BE 5" ROUND NICKEL BRONZE STAINER, ADJUSTABLE COLLAR AND P–TRAP. FLOOR DRAINS SHALL HAVE RUBBER TRAP GUARD INSTALLED TO PROTECT TRAP SEAL AND PREVENT SEWER GASSES FROM ENTERING THE SPACE. DRAINS SHALL BE FOR PVC PIPE CONNECTION. UNLESS OTHERWISE INDICATED, FLOOR DRAINS SHALL BE 3" FOR SANITARY AND 2" FOR CONDENSATE. PIPE SIZE. TRAP GUARD SHALL BE EQUAL TO PROVENT TRAP GUARD SYSTEM.

16. WALL HYDRANTS SHALL BE WATTS HY–330 ENCASED SELF DRAINING RECESSED IN WALL, NARROW WALL HYDRANT WITH ANTI–SIPHON VANDAL RESISTANT VACUUM BREAKER. PROVIDE OPERATING KEY. PROVIDE A GATE VALVE AT AN ACCESSIBLE LOCATION FOR EACH WALL HYDRANT TO ALLOW SERVICING. MOUNT 24" ABOVE GRADE.

17. ICE MAKER BOXES SHALL BE SPECIFICALLY MADE FOR ICE MAKERS, WASHER BOXES NOT ALLOWED.

18. DISINFECT NEW WATER PIPING IN ACCORDANCE WITH FLORIDA PLUMBING CODE.

19. IN LIEU OF COPPER. WATER PIPING INSIDE THE BUILDING AND TO A POINT 5' OUTSIDE THE BUILDING MAY BE CPVC, ASTM D 2846, CPVC SHALL HAVE A FLAME AND SMOKE RATING LESS THAN 25/50 RESPECTIVELY WHEN TESTED TO UL ASTM E84 (TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS) PROVIDE TRANSITION UNION CONNECTORS OR THREADED GATE VALVE BETWEEN COPPER TUBING AND CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPING PROVIDE MALE THREADED ADAPTERS WITH PTFE (POLYTETRAFLUOROETHYLENE) PIPE THREAD PASTE FOR THREADED CONNECTIONS TO VALVES AND EQUIPMENT.

John R McDowell

Digitally signed by John R McDowell
Date: 2024.05.02 19:14:23 -05'00'

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REBUILD
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PANAMA CITY FLORIDA

PREPARED BY	REVIEWED BY
JM	JM

ISSUE	DATE	SCALE
	5/2/24	1/8"=1'

PROJECT NO. 22004

FIRST FLOOR H&C WATER SUPPLY PLAN

P6

PLUMBING FIXTURES

(P1H) WHEEL CHAIR FLUSH VALVE TYPE CLOSETS, ASME A112.19.2M, FLOOR MOUNTED WHITE VITREOUS CHINA, SIPHON JET, WHITE ELONGATED OPEN–FRONT SEAT AND ASME A112.19.5 TRIM. PROVIDE LARGE DIAPHRAGM (NOT LESS THAN 2.625 INCHES UPPER CHAMBER INSIDE DIAMETER AT THE POINT WHERE THE DIAPHRAGM IS SEALED BETWEEN THE UPPER AND LOWER CHAMBERS) NONHOLD–OPEN FLUSH VALVE OF CHROME PLATED CAST BRASS, INCLUDING VACUUM BREAKER AND ANGLE (CONTROL–STOP) VALVE WITH BACK CHECK, MOUNTED APPROX. 39 TO 44 INCHES ABOVE FLOOR. THE WATER FLUSHING VOLUME OF THE FLUSH VALVE AND WATER CLOSET COMBINATION SHALL NOT EXCEED 1.6 GALLONS PER FLUSH. HEIGHT TO TOP OF SEAT SHALL BE 17 TO 19 INCHES ABOVE FLOOR. FLUSH VALVE SHALL BE ACTIVATED WITH INFRARED HANDS OFF SENSING, HARD WIRED WITH BATTERY BACKUP.

(P1) FLUSH VALVE TYPE CLOSETS, ASME A112.19.2M, FLOOR MOUNTED WHITE VITREOUS CHINE, SIPHON JET, WHITE ELONGATED OPEN–FRONT SEAT AND ASME A112.19.5 TRIM. PROVIDE LARGE DIAPHRAGM (NOT LESS THAN 2.625 INCHES UPPER CHAMBER INSIDE DIAMETER AT THE POINT WHERE THE DIAPHRAGM IS SEALED BETWEEN THE UPPER AND LOWER CHAMBERS) NOHOLD–OPEN FLUSH VALVE OF CHROME PLATED CAST BRASS, INCLUDING VACUUM BREAKER AND ANGLE (CONTROL–STOP) VALVE WITH BACK CHECK, MOUNTED APPROX. 39 TO 44 INCHES ABOVE FLOOR. THE WATER FLUSHING COLUMN OF THE FLUSH VALVE AND WATER CLOSET COMBINATION SHALL NOT EXCEED 1.6 GALLONS PER FLUSH. FLUSH VALVE SHALL BE ACTIVATED WITH INFRARED HANDS OFF SENSING, HARD WIRED WITH BATTERY BACKUP.

(P2) TANK TYPE WATER CLOSETS SHALL BE ASME A112.19.2M, CLOSE COUPLED, VITREOUS CHINA, WASTER CONSERVATION TYPE, FLOOR–MOUNTED, WALL OUTLET, SIPHON JET ELONGATED BOWL SOLID PLASTIC ELONGATED CLOSED FRONT SEAT WITH COVER, AND ANSI A112.19.5 TRIM. NON–FLOAT SWING TYPE FLUSH VALVES ARE NOT ACCEPTABLE. WATER FLUSHING VOLUME SHALL NOT EXCEED 1.6 GALLONS PER FLUSH.

(P2H) TANK TYPE WATER CLOSETS SHALL BE ASME A112.19.2M, CLOSE COUPLED, VITREOUS CHINA, WASTER CONSERVATION TYPE, FLOOR–MOUNTED, WALL OUTLET, SIPHON JET ELONGATED BOWL SOLID PLASTIC ELONGATED CLOSED FRONT SEAT WITH COVER, AND ANSI A112.19.5 TRIM. NON–FLOAT SWING TYPE FLUSH VALVES ARE NOT ACCEPTABLE. WATER FLUSHING VOLUME SHALL NOT EXCEED 1.6 GALLONS PER FLUSH. HEIGHT TO TOP OF SEAT SHALL BE 17 TO 19 INCHES ABOVE FLOOR.

(P3S) LAVATORY SHALL BE COUNTERTOP, ASME/ANSI A112.19.1M, WHITE VITREOUS CHINA, MINIMUM DIMENSIONS OF 19 INCHES WIDE BY 16 INCHES FRONT TO REAR, AND SELF RIMMING TYPE. PROVIDE SINGLE LEVER FAUCET, PERFORATED GRID STRAINERS, ADJUSTABLE P–TRAP, FURNISH TEMPLATE AND MOUNTING BY LAV MANUFACTURER. FAUCET VALVE SHALL BE ACTIVATED WITH INFRARED HANDS OFF SENSING, HARD WIRED WITH BATTERY BACKUP.

(P3) LAVATORY SHALL BE COUNTERTOP, ASME/ANSI A112.19.1M, WHITE VITREOUS CHINA, MINIMUM DIMENSIONS OF 19 INCHES WIDE BY 16 INCHES FRONT TO REAR, AND SELF RIMMING TYPE. PROVIDE SINGLE LEVER FAUCET, PERFORATED GRID STRAINERS, ADJUSTABLE P–TRAP, FURNISH TEMPLATE AND MOUNTING BY LAV MANUFACTURER.

(P4S) HANDICAPPED WALL HUNG LAVATORY – SHALL BE ASME/ANSI A112.19.2M LAVATORY WHITE VITREOUS CHINA WITH ASME A112.6.1M CONCEALED ARM CARRIER SUPPORT, STRAIGHT BACK TYPE, MINIMUM DIMENSIONS OF 20 INCHES WIDE BY 18 INCHES FRONT TO REAR, 29 INCHES MINIMUM CLEARANCE FROM BOTTOM OF FRONT RIM TO FLOOR, 34 INCHES FRONT TIM HEIGHT ABOVE FLOOR. PROVIDE ASME A112.18.1M COPPER ALLOY CENTER SET FAUCETS, GOOSENECK SPOUT WITH AERATOR 5 INCHES ABOVE RIM, 4–INCH WRIST ACTION HANDLES, PERFORATED GRID STRAINERS WITH OFFSET TAILPIECE, AND 1.25–INCH ADJUSTABLE P–TRAP. FAUCETS WITH WRIST ACTION HANDLES SHALL OPEN WITHIN ON–QUARTER TURN IN OPPOSITE DIRECTIONS. INSULATE EXPOSED WASTE LINES AND SUPPLY LINES BELOW LAVATORY. FAUCET VALVE SHALL BE ACTIVATED WITH INFRARED HANDS OFF SENSING, HARD WIRED WITH BATTERY BACKUP.

(P4) HANDICAPPED WALL HUNG LAVATORY – SHALL BE ASME/ANSI A112.19.2M LAVATORY WHITE VITREOUS CHINA WITH ASME A112.6.1M CONCEALED ARM CARRIER SUPPORT, STRAIGHT BACK TYPE, MINIMUM DIMENSIONS OF 20 INCHES WIDE BY 18 INCHES FRONT TO REAR, 29 INCHES MINIMUM CLEARANCE FROM BOTTOM OF FRONT RIM TO FLOOR, 34 INCHES FRONT TIM HEIGHT ABOVE FLOOR. PROVIDE ASME A112.18.1M COPPER ALLOY CENTER SET FAUCETS, GOOSENECK SPOUT WITH AERATOR 5 INCHES ABOVE RIM, 4–INCH WRIST ACTION HANDLES, PERFORATED GRID STRAINERS WITH OFFSET TAILPIECE, AND 1.25–INCH ADJUSTABLE P–TRAP. FAUCETS WITH WRIST ACTION HANDLES SHALL OPEN WITHIN ON–QUARTER TURN IN OPPOSITE DIRECTIONS. INSULATE EXPOSED WASTE LINES AND SUPPLY LINES BELOW LAVATORY.

(P5) FLUSH VALVE TYPE URINALS SHALL BE ASME A112.19.2M, WHITE VITREOUS CHINA, WALL MOUNTED, WALL OUTLET, SIPHON JET, INTEGRAL TRAP, EXTENDED SIDE SHIELDS, AND ASME A112.19.5 TRIM. PROVIDE LARGE DIAPHRAGM (NOT LESS THAN 2.625 INCHES UPPER CHAMBER INSIDE DIAMETER AT THE POINT WHERE THE DIAPHRAGM IS SEALED BETWEEN THE UPPER AND LOWER CHAMBERS), NONHOLD–OPEN FLUSH VALVE OF CHROME PLATED CAST BRASS, INCLUDING VACUUM BREAKER AND ANGLE (CONTROL–STOP) VALVE WITH BACK CHECK. WATER FLUSHING VOLUME OF THE FLUSH VALVE AND URINAL COMBINATION SHALL NOT EXCEED 1.0 GALLONS PER FLUSH FROM 10 TO 90 PSI. PROVIDE ASME A112.6.1M CONCEALED WALL HANGERS WITH THRU–BOLTS AND BACK PLATES FOR MOUNTING. AMERICAN STANDARD WASH BROOK URINAL. IN BATHROOMS WHERE THERE ARE MULTIPLE URINALS MOUNT ONE END URINAL AT HANDICAPPED HEIGHT STANDARDS. FLUSH VALVE SHALL BE ACTIVATED WITH INFRARED HANDS OFF SENSING, HARD WIRED WITH BATTERY BACKUP.

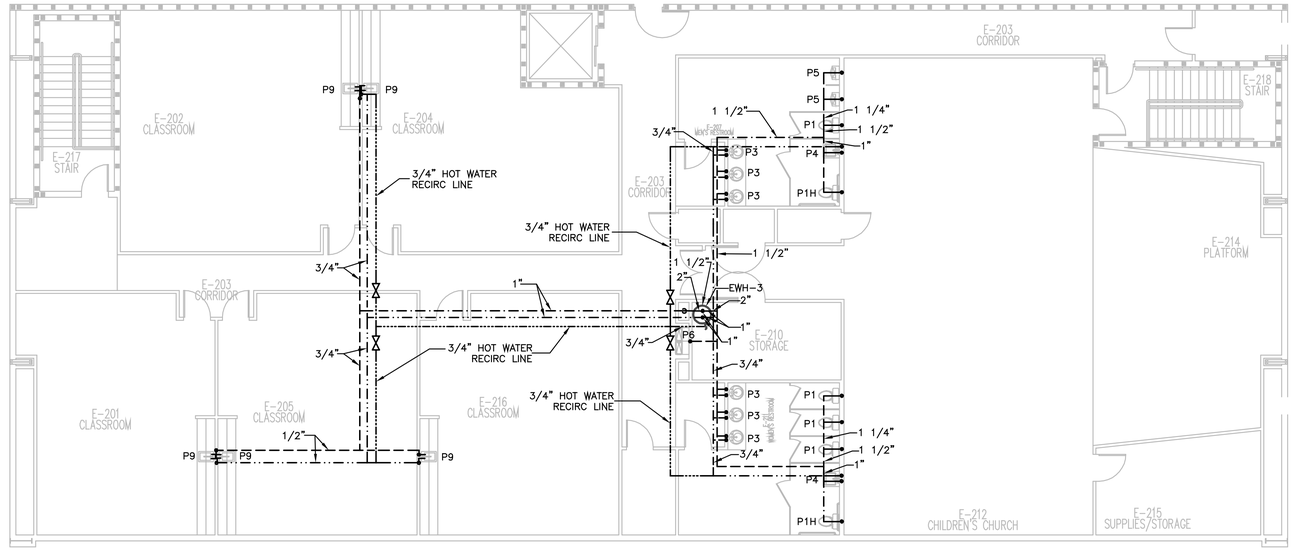
(P6) TWO LEVEL WATER COOLER ARI 1010, TWO LEVEL WALL–MOUNTED BUBBLER STYLE AIR–COOLED CONDENSING UNIT, 8.0 GPH MINIMUM CAPACITY, STAINLESS STEEL SPLASH RECEPTOR, AND ALL STAINLESS STEEL CABINET, WITH 27" MIN. KNEE CLEARANCE FROM FRONT BOTTOM OF UNIT TO FLOOR AND 36 INCH MAX. SPOUT HEIGHT ABOVE FLOOR FOR LOWER BUBBLER. BUBBLERS SHALL ALSO BE CONTROLLED BY PUSH LEVERS, BY PUSH BARS OR TOUCH PADS. EQUAL TO OASIS TO OASIS MODEL PACSL, PROVIDE APRON ACCESSORY FOR UPPER UNIT.

(P7) HANDICAPPED WALL HUNG LAVATORY – SHALL BE ASME/ANSI A112.19.2M LAVATORY WHITE VITREOUS CHINA WITH ASME A112.6.1M CONCEALED ARM CARRIER SUPPORT, STRAIGHT BACK TYPE, MINIMUM DIMENSIONS OF 20 INCHES WIDE BY 18 INCHES FRONT TO REAR, 29 INCHES MINIMUM CLEARANCE FROM BOTTOM OF FRONT RIM TO FLOOR, 34 INCHES FRONT TIM HEIGHT ABOVE FLOOR. PROVIDE ASME A112.18.1M COPPER ALLOY CENTER SET FAUCETS, GOOSENECK SPOUT WITH AERATOR 5 INCHES ABOVE RIM, 4–INCH WRIST ACTION HANDLES, PERFORATED GRID STRAINERS WITH OFFSET TAILPIECE, AND 1.25–INCH ADJUSTABLE P–TRAP. FAUCETS WITH WRIST ACTION HANDLES SHALL OPEN WITHIN ON–QUARTER TURN IN OPPOSITE DIRECTIONS. INSULATE EXPOSED WASTE LINES AND SUPPLY LINES BELOW LAVATORY.

(P8) MOP SINK PRE CAST TERRAZZO: TERRAZZO SHALL BE MADE OF MARBLE CHIPS CAST IN WHITE PORTLAND CEMENT. PROVIDE BRASS BODY DRAINS WITH NICKEL BRONZE STRAINERS CAST INTEGRAL WITH TERRAZZO. DIMENSIONS 24" X 24" X 10". EQUAL TO MUST DURASTONE MODEL 63M. PROVIDE ANSI A112.18.1M COPPER ALLOY BACK–MOUNTED COMBINATION FAUCETS WITH VACUUM BREAKER AND 0.75–INCH HOSE THREADS.

(P9) STAINLESS STEEL HAND SINK SHALL BE 20–GAUGE STAINLESS STEEL APPROX. 17"x 15" WITH 14"x 10" BOWL, 5" DEEP, WITH NO–DRIP COUNTERTOP EDGE. PROVIDE CHROME PLATED BRASS GOOSENECK FAUCET MOUNTED ON THE SPLASH BACK. PROVIDE 3 1/2" BASKET DRAIN AND WALL MOUNTING BRACKET.

(P11) SHOWER FITTINGS, ASME A112.18.1M, BALL JOINT, SELF CLEANING, ADJUSTABLE SPRAY PATTERN SHOWER HEAD WITH 2.5 GPM FLOW CONTROL DEVICE, CONNECTED TO CONCEALED PIPE CONNECTED TO COPPER ALLOY ANTI–SCALD PRESSURE BALANCED SINGLE CONTROL TYPE MIXING VALVES WITH FRONT ACCESS INTEGRAL SCREWDRIVER STOPS. ANCHOR THE MIXING VALVES AND PIPE TO SHOWER HEAD IN WALL TO PREVENT MOVEMENT. PROVIDE BRASS BODY DRAIN WITH NICKEL BRONZE STRAINER.



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SECOND FLOOR HOT AND COLD WATER SUPPLY PLAN–PHASE II WORK

SCALE: 1/8"=1'

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	ROUGH–IN SIZE (INCHES) HW	CW	WASTE	VENT	REMARKS
P1H	WATER CLOSET	––	1	3	2	HANDICAPPED, FLOOR MOUNTED, FLUSH VALVE, TOUCHLESS
P1	WATER CLOSET	––	1	3	2	FLOOR MOUNTED, FLUSH VALVE, TOUCHLESS
P2H	WATER CLOSET	––	1/2	3	2	HANDICAPPED, FLOOR MOUNTED, TANK TYPE
P2	WATER CLOSET	––	1/2	3	2	FLOOR MOUNTED, TANK TYPE
P3S	LAVATORY	1/2	1/2	1 1/4	1 1/4	COUNTERTOP, TOUCHLESS
P3	LAVATORY	1/2	1/2	1 1/4	1 1/4	COUNTERTOP
P4S	LAVATORY	1/2	1/2	1 1/4	1 1/4	WALL HUNG HANDICAPPED ACCESSIBLE, TOUCHLESS
P4	LAVATORY	1/2	1/2	1 1/4	1 1/4	WALL HUNG HANDICAPPED ACCESSIBLE
P5	URINAL	––	3/4	2	1 1/2	WALL MOUNTED FLUSH VALVE
P6	WATER COOLER	––	1/2	1 1/4	1 1/4	TWO LEVEL WATER COOLER (HANDICAPPED ACCESSIBLE)
P7	LAVATORY	1/2	1/2	1 1/4	1 1/4	WALL HUNG
P8	MOP SINK	1/2	1/2	2	1 1/2	FLOOR MOUNTED
P9	SINK	1/2	1/2	1 1/2	1 1/2	SINGLE COMPARTMENT STAINLESS STEEL SINK
P10	BAPTISTRY	==	1	2	––	OFCI
P11	SHOWER	1/2	1/2	2	1 1/2	
	COFFEE MAKER	––	1/2	3/4	NOTE 1	
F.D.	FLOOR DRAIN	––	––	3	––	

NOTES:
1. INDIRECT WASTE, RUN FIXTURE WASTE LINE TO NEAREST FLOOR SINK.
2. USE STAINLESS STEEL BRAIDED SUPPLY LINES TO ALL FIXTURES.
3. ALL FIXTURES SHALL BE APPROVED BY OWNER.

John R McDowell

Digitally signed by John R McDowell
Date: 2024.05.02 19:14:59 -05'00'

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P7

PROJECT NO. 2210024

PREPARED BY SKM | REVIEWED BY JM | ISSUE DATE 5/28/23 | SCALE 1/8"=1'

SECOND FLOOR H&C WATER SUPPLY PLAN

CARLISLE BAPTIST CHURCH REBUILD
835 BERTHA AVENUE
PANAMA CITY FLORIDA

MARK MERCER & ASSOCIATES, INC.