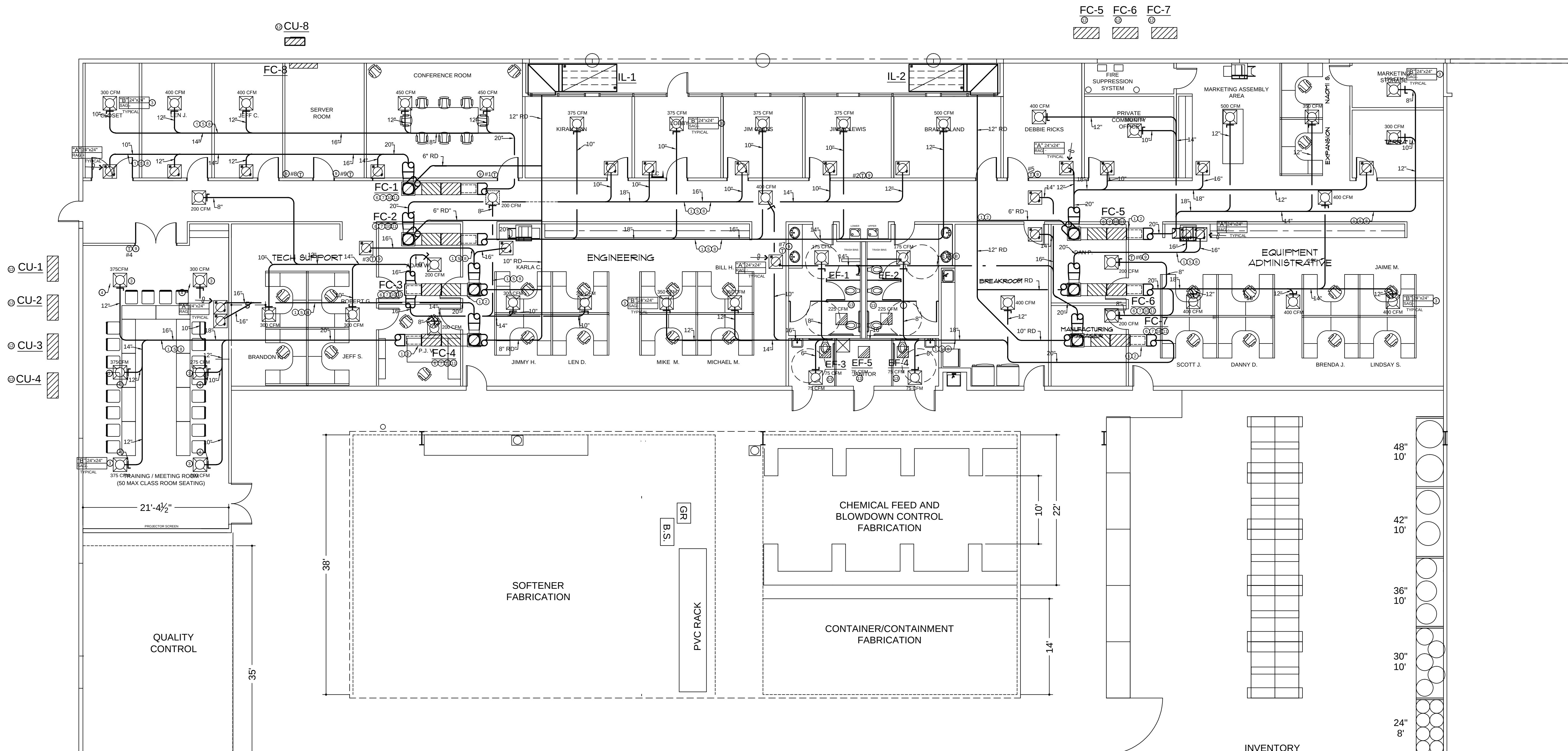
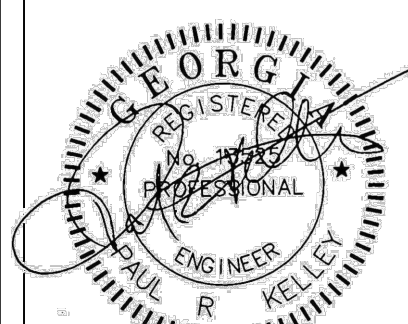




PART FLOOR PLAN - HEATING, VENTILATING, AND AIR CONDITIONING LAYOUT
SCALE: 1/8" = 1'-0"

HVAC NOTES BY SYMBOL "O":

- All duct to be low pressure sheetmetal duct. Fabricate according to latest SMACNA standards and in accordance with all applicable codes. All duct sizes shown are O.D. (OUTSIDE DIMENSION) unless otherwise noted.
- 1 1/2" liner in both supply and return duct for total length of rectangular duct. Rectangular duct dimensions are outside dimensions. All internal and external R-values for duct to be in accordance with International/Local codes and at least a minimum value of R-8. All rectangular duct fittings to have turning vanes. 2" liner in both supply and return duct for total length of all outdoor rectangular duct. Any outdoor duct to be sealed weather tight. Provide paint grip metal for all visible duct and paint to match architectural conditions. Typical of all systems unless otherwise noted.
- Coordinate all grille locations with architectural ceiling plan or floor plan, typical.
- Provide balancing dampers for all supply grilles, typical.
- All round duct to have 2" external wrap insulation with a minimum value of R-8 and paint all visible duct to match architectural conditions, typical.
- FC to have return air smoke detector. HVAC Contractor to provide smoke detectors and low voltage wiring, typical.
- Install 3/4" condensate line from FC to sink/lavatory (to tailpiece before P trap) or hub drain, or other approved location. Install a secondary condensate pan with a float switch to deenergize the system. Install a condensate pump as needed.
- All duct to require thorough coordination in regards to field routing, installation, and size. Coordinate duct installation with the structural plans and structural elements in the field. Install duct tight to deck and in between joists. Coordinate with other trades and Mechanical Engineer as required to ensure proper duct routing. Contractor has authority to adjust duct sizing/routing to ensure complete system. Coordinate/consult with the Mechanical Engineer for any adjusted duct sizing (if necessary). All bids are to include the time and material to coordinate and obtain the best installation possible.
- Install a programmable T-STAT for each system, typical.
- Coordinate the location of the FC with a Structural Engineer as needed to ensure the structural integrity of the installation. Field verify exact conditions before proceeding with unit installation to avoid any conflicts. Coordinate the installation with General Contractor.
- Electrical Contractor to install all disconnects, relays, and power wiring for all HVAC equipment. Electrical Contractor to coordinate exact requirements with the Mechanical Contractor prior to installation.
- Follow all Manufacturer's directions in regard to refrigerant line sizing and installation.
- Exhaust duct from exhaust fan up through roof. Provide collar and cap for thru roof or weatherproof /flashing. GC to provide flashing. See schedule for duct size.
- Plumbing Contractor to provide condensate drains at Fan Coils for condensate removal.



30 June 15
SHEET TITLE

REVISIONS	

JOB TITLE

NEW HEATING, VENTILATING, AND AIR CONDITIONING SYSTEM
FOR
AQUA-CHEM FACILITY
538 Joe Tamplin Blvd
Macon, GA 31217

Drawn PRK	Proj no. 0
Checked PRK	Date 06/29/15
Sheet Number	

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- GENERAL NOTES
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST CODES OR REGULATIONS OF FEDERAL, STATE, AND LOCAL AUTHORITIES.

2. ALL MOTOR DRIVEN EQUIPMENT SHALL BE SUPPORTED BY ALL-THREAD ROD WITH SPRING ISOLATORS (OR "RUBBER-IN-SHEAR HANGERS" OR "NEORRENE-IN-SHEAR HANGERS").

3. ALL THERMOSTATS ARE TO BE MOUNTED AT 48" A.F.F. UNLESS NOTED OTHERWISE.

4. DUCT SIZES SHOWN ARE OUTSIDE DIMENSIONS. SIZES INCLUDE ALLOWANCE FOR INTERNAL INSULATION, FOR RECTANGULAR DUCT ONLY.

5. ALL RECTANGULAR DUCT TO BE CONSTRUCTED PER CURRENT SMACNA STANDARDS USING THE VELOCITY AND PRESSURE CLASS FOR WHICH THE DUCT IS DESIGNED.

6. ALL MEDIUM PRESSURE ROUND DUCT TO BE GALVANIZED, SPIRAL-WOUND SHEET METAL.

7. ALL LOW-PRESSURE ROUND DUCTWORK, WHERE CONCEALED, TO BE STANDARD GAUGE SNAP-LOCK SHEET METAL.

8. ALL LOW-PRESSURE ROUND DUCTWORK, WHERE EXPOSED TO VIEW, TO BE GALVANIZED, SPIRAL-WOUND SHEET METAL.

9. ALL SHEET METAL DUCTWORK, WHERE EXPOSED TO VIEW, TO BE "PAINT-GRIP".

10. ALL RECTANGULAR SUPPLY AND RETURN AIR DUCTWORK, WHERE EXPOSED TO VIEW, TO BE INSULATED WITH 1 1/2" THICK, 1-1/2 LB/CU. FT. DENSITY LINER.

11. ALL RECTANGULAR SUPPLY AND RETURN AIR DUCTWORK, WHERE CONCEALED, TO BE INSULATED WITH 2" THICK, 3/4+ LB./CU. FT. DENSITY, FOIL--FACED DUCT WRAP INSULATION. (OR "WITH 1 1/2" THICK, 1-1/2 LB/CU. FT. DENSITY LINER".)

12. ALL ROUND SUPPLY AND RETURN AIR DUCTWORK, WHERE CONCEALED, TO BE INSULATED WITH 2" THICK, 3/4 LB./CU. FT. DENSITY, FOIL-FACED DUCT WRAP INSULATION.

13. ALL EXHAUST DUCTWORK TO BE UNINSULATED.

14. ALL SUPPLY, RETURN AND EXHAUST DUCTWORK TO BE SEALED USING A REINFORCED, FLEXIBLE, WATER-BASED SEALANT (UL 181).

15. FLEXIBLE DUCT RUNOUTS TO SUPPLY AIR DIFFUSERS TO BE SAME SIZE AS DIFFUSER NECK WITH A MAXIMUM LENGTH OF 5 FEET UNLESS NOTED OTHERWISE. FLEXIBLE DUCT TO HAVE FOIL BACKED FIBERGLASS INSULATION SUPPORTED BY GLASS FABRIC BONDED TO A COATED SPRING STEEL WIRE HELIX. MINIMUM R-6 INSULATION.

16. WHERE DUCT CONNECTIONS ARE MADE TO ROOFTOP UNITS (AND/OR "FAN-POWERED BOXES", "EXHAUST FANS", "AIR-HANDLING UNITS"), CANVAS CONNECTORS ARE TO BE UTILIZED.

17. SEE GRILLE SCHEDULE FOR SIZE AND TYPE TO BE USED. COORDINATE ALL GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN. PAINT ALL GRILLES TO ARCHITECTURAL REQUIREMENTS.

18. ALL DRAIN PIPE TO BE SCHEDULE 40 PVC WITH GLUE JOINT FITTINGS, SIZED IN ACCORDANCE WITH LOCAL CODES, AND INSTALLED WITH A MINIMUM SLOPE OF 1/8" PER LINEAL FOOT TOWARDS AN APPROVED DISPOSAL LOCATION.

19. ALL DRAIN PIPE, WHERE INSTALLED INDOORS, TO BE INSULATED WITH 3/8" THICK ARMAFLEX INSULATION.

20. ALL REFRIGERANT PIPING TO BE PRE CHARGED COPPER OR TYPE "ACR" COPPER, SIZED PER MANUFACTURER'S RECOMMENDATIONS.

21. ALL SUCTION LINES TO BE INSULATED WITH 3/8" THICK "ARMAFLEX" INSULATION.

22. ROOF-TOP EQUIPMENT SUPPORT FRAMES BY GENERAL CONTRACTOR.

23. ALL ROOFING IS BY OTHERS.

24. ALL CONCRETE CUTTING OR CORING IS BY OTHERS.

25. PROVIDE A SMOKE DETECTOR IN THE RETURN DUCT PER CODE AND INTERLOCK WITH RTU FOR SHUTDOWN.

26. ALL 24 VOLT CONTROL WIRING BY MECHANICAL CONTRACTOR.

27. THE TESTING AND BALANCING OF HVAC SYSTEMS TO BE PERFORMED BY MECHANICAL CONTRACTOR USING NEBB (OR "AABC") STANDARDS AND FORMS.

28. A/C UNITS ARE TO BE CONTROLLED FROM PROGRAMMABLE THERMOSTATS WITH WHERE SHOWN ON PLANS.

29. MECHANICAL CONTRACTOR TO PROVIDE ONE YEAR INSTALLATION/SERVICE WARRANTY FROM THE DATE OF ACCEPTANCE AND AN EXTENDED FIVE YEAR MANUFACTURER'S WARRANTY PROVIDED FOR THE COMPRESSORS.

30. MECHANICAL CONTRACTOR IS TO COORDINATE THE INSTALLATION OF THE HVAC WITH THE ELECTRICAL SYSTEM, SPRINKLER LINES, AND PLUMBING LINES IN THE FIELD.

31. ALL DUCT, PIPE, OR EQUIPMENT LOCATIONS, AS INDICATED ON THE DOCUMENT, DO NOT SHOW EVERY TRANSITION, OFFSET, OR EXACT LOCATION. ALL TRANSITIONS, OFFSET CLEARANCES, AND EXACT LOCATIONS SHALL BE ESTABLISHED BY ACTUAL FIELD MEASUREMENTS, COORDINATED WITH THE STRUCTURAL, ARCHITECTURAL, AND REFLECTED CEILING PLANS, AND SUBMITTED ON THE SHOP DRAWINGS FOR APPROVAL. ALL TRANSITIONS, OFFSETS, AND RELOCATIONS AS REQUIRED BY ACTUAL FIELD CONDITIONS SHALL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

32. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPERVISION, AND OVERHEAD FOR THE FURNISHING AND INSTALLING OF THE HEATING, VENTILATING, AIR CONDITIONING, AND RELATED WORK COMPLETE, IN ACCORDANCE WITH THE DRAWINGS, SCHEDULES, AND NOTES/SPECIFICATIONS. IF THERE IS A DISAGREEMENT BETWEEN THE DRAWINGS, SCHEDULES, AND/OR NOTES/SPECIFICATIONS ALWAYS USE THE MOST STRINGENT OR EXPENSIVE REQUIREMENT AND CONTACT THE ENGINEER IN REGARD TO THE DISCREPANCY.

HVAC GRILLE SCHEDULE				
DESIGNATION MARK	A	B	D	C
MANUFACTURER	TITUS	TITUS	NOT USED	NOT USED
MODEL	SOF	TMS	300RS (NOT USED)	355RL (NOT USED)
STYLE	LAY-IN	CEILING MOUNTED/LAY IN	CEILINGSIDEWALL (NOT USED)	SIDEWALL (NOT USED)
SIZE	SEE PLANS	SEE PLANS	SEE PLANS (NOT USED)	SEE PLANS (NOT USED)
COLOR	-	-	(NOT USED)	(NOT USED)
COMMENTS	FOR RETURN, TRANSFER, AND EXHAUST GRILLES: CEILING MOUNTED WITH SHEETROCK FRAME AS NEEDED. EXTRUDED ALUMINUM FRAME WITH FLANGE, 1" ALUMINUM EGGRATE CORE. COLOR SELECTED BY ARCHITECT/PAIN	LOUVER FACE, STEEL CONSTRUCTION. INSULATE TOP OF REGISTER. COLOR SELECTED BY ARCHITECT/PAIN TO ARCHITECTURAL REQUIREMENTS.	NOT USED: FOR SUPPLY AIR, STEEL CONSTRUCT WITH OPPOSED BLADE DAMPER. SEE PLAN FOR BLOW PATTERN. COLOR SELECTED BY ARCHITECT/PAIN TO ARCHITECTURAL REQUIREMENTS.	NOT USED: FOR RETURN, STEEL CONSTRUCT WITH FLANGE, 1/2" BLADE SPACING, 35 DEGREE FIXED DEFLECTION. COLOR SELECTED BY ARCHITECT/PAIN TO ARCHITECTURAL REQUIREMENTS. (NOT USED)

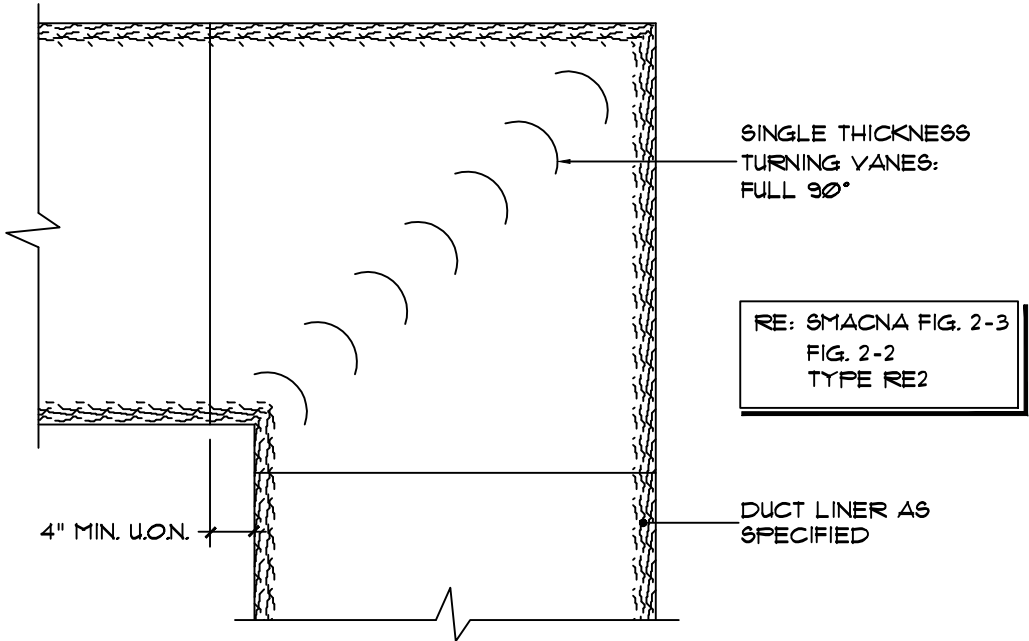
EXHAUST FAN SCHEDULE		
DESIGNATION	EF-1, 2	EF-3, 4, 5
MANUFACTURER	GREENHECK	GREENHECK
MODEL	-	-
TOTAL CFM	225 CFM	75 CFM
E.S.P.	0.5	0.25
H.P.	FRACTIONAL	FRACTIONAL
VOLTAGE	115-60-1	115-60-1
FULL LOAD AMPS	-	-
WEIGHT	-	-
AREA SERVED	SEE PLANS	SEE PLANS
REMARKS	NEW, DIRECT DRIVE, CEILING MOUNTED; EXHAUSTER WITH BACKDRAFT DAMPER, 6" EXHAUST DUCT UP THRU ROOF WITH FLASHING, COLLAR, AND CAP	NEW, DIRECT DRIVE, CEILING MOUNTED; EXHAUSTER WITH BACKDRAFT DAMPER, 6" EXHAUST DUCT UP THRU ROOF WITH FLASHING, COLLAR, AND CAP

LOUVER SCHEDULE		
DESIGNATION	IL-1,2	NOT USED
MANUFACTURER	GREENHECK	
MODEL	-	
TOTAL CFM	-	
E.S.P.	-	
H.P.	-	
VOLTAGE	-	
WATTS	-	
WEIGHT	-	
AREA SERVED	SEE PLANS	
REMARKS	96"x48" EXTRUDED ALUMINUM INTAKE LOUVER WITH PEST SCREEN. MOUNTED IN SOFFIT. FRAMED OPENING BY GC.	

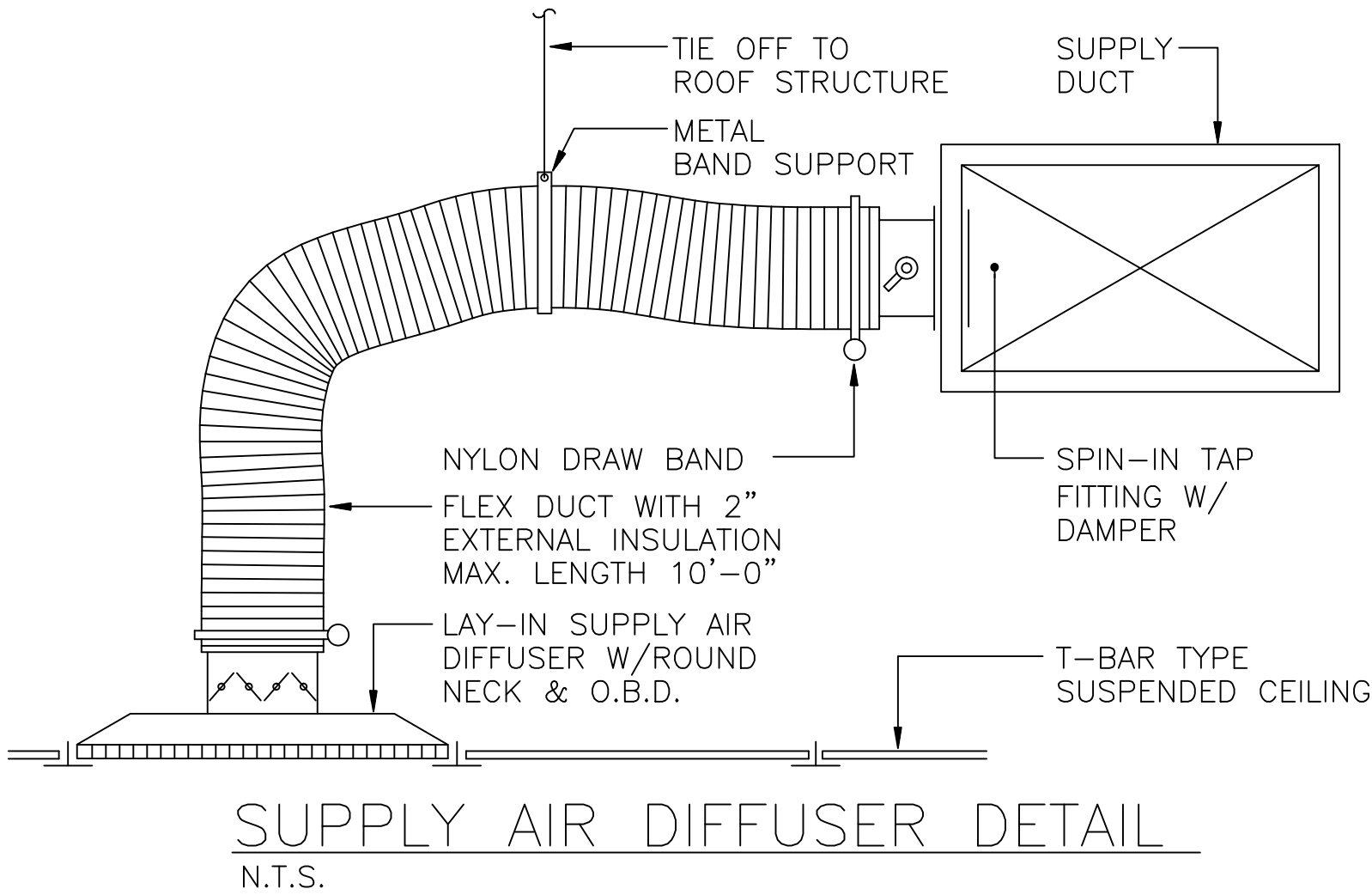
HVAC SYMBOL LEGEND		
*NOTE - ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS		
SINGLE LINE	DESCRIPTION	DOUBLE LINE
	90° ELBOW DOWN	
	90° ELBOW UP	
	ROUND RADIUS ELBOW	
	90° ELBOW	
	ROUND FLEXIBLE DUCT	
	90° ELBOW DOWN	
	90° ELBOW UP	
	RECTANGULAR RADIUS ELBOW	
	RECTANGULAR ELBOW WITH TURNING VANES	
	SPLIT BRANCH TAKE-OFF WITH VANES ELBOW & SPLITTER DAMPER	
	BRANCH TAKE-OFF WITH RADIUS HEEL & EXTRACTOR	
	SPIN-IN TAP W/DAMPER	
	SHOE TAP	
	TEE WITH SPLITTER DAMPER & VANES	
	REDUCER, ECCENTRIC	
	REDUCER, CONCENTRIC	
	EXISTING SUPPLY AIR GRILLE	
	EXISTING SUPPLY AIR GRILLE TO BE RELOCATED	
	NEW SUPPLY AIR DIFFUSER	
	EXISTING SLOT DIFFUSER TO REMAIN	
	EXISTING SLOT DIFFUSER TO BE RELOCATED	
	NEW SLOT DIFFUSER	
	LINED DUCTWORK	
	SIDEWALL DIFFUSER (WIDTH X DEPTH, DUCT CONN. SIZE)	
	SUPPLY DUCT	
	RETURN DUCT	
	EXHAUST DUCT	
	DIRECTION OF EXHAUST RELIEF	
	SUPPLY DIRECTION	
	SUPPLY RISER	
	RETURN RISER	
	STATIC PRESSURE SENSOR	
	CONICAL TAP W/DAMPER	
	ROUND DUCT SIZE	
	OVAl DUCT SIZE	
	FLEXIBLE DUCT RUNOUT	
	FLEXIBLE DUCT CONNECTION	
	MANUAL VOLUME DAMPER	
	FIRE DAMPER IN DUCT	
	FIRE/SMOKE DAMPER IN DUCT	
	MOTORIZED VOLUME DAMPER	
	BACKDRAFT DAMPER	
	THERMOSTAT, REMOTE SENSOR	

CONDENSING UNIT SCHEDULE								
MARK	NOMINAL SIZE - TONS	MANUFACTURER	MODEL NUMBER	COOLING CAP BTUH	VOLTAGE	PHASE	HERTZ	REMARKS
CU-1	5	CARRIER	24ABB360A006	60,000	460	3	60	WITH MODEL CAPMP6024ALA DX COOLING COIL. AIR COOLED CONDENSING UNIT
CU-2	5	CARRIER	24ABB360A006	60,000	460	3	60	WITH MODEL CAPMP6024ALA DX COOLING COIL. AIR COOLED CONDENSING UNIT
CU-3	5	CARRIER	24ABB360A006	60,000	460	3	60	WITH MODEL CAPMP6024ALA DX COOLING COIL. AIR COOLED CONDENSING UNIT
CU-4	5	CARRIER	24ABB360A006	60,000	460	3	60	WITH MODEL CAPMP6024ALA DX COOLING COIL. AIR COOLED CONDENSING UNIT
CU-5	5	CARRIER	24ABB360A006	60,000	460	3	60	WITH MODEL CAPMP6024ALA DX COOLING COIL. AIR COOLED CONDENSING UNIT
CU-6	5	CARRIER	24ABB360A006	60,000	460	3	60	WITH MODEL CAPMP6024ALA DX COOLING COIL. AIR COOLED CONDENSING UNIT
CU-7	5	CARRIER	24ABB360A006	60,000	460	3	60	WITH MODEL CAPMP6024ALA DX COOLING COIL. AIR COOLED CONDENSING UNIT
CU-8	2	CARRIER	38MVQ024-3-01	22,500	208	1	60	MINI SPLIT HEAT PUMP AIR COOLED CONDENSING UNIT

FAN COIL UNIT SCHEDULE									
MARK	NOMINAL SIZE - TONS	MANUFACTURER	MODEL NUMBER	HEATING CAPACITY BTUH	COOLING CAP BTUH	CFM	CFM OA	EFF %	REMARKS
FC-1	5	CARRIER	58CVA110-1-20	110,000	60,000	2,000	150	80	HORIZONTAL FLOW GAS FIRED FURNACE WITH VARIABLE SPEED BLOWER AND 5 TON DX COOLING COIL MODEL CAPMP6024ALA
FC-2	5	CARRIER	58CVA110-1-20	110,000	60,000	2,000	150	80	HORIZONTAL FLOW GAS FIRED FURNACE WITH VARIABLE SPEED BLOWER AND 5 TON DX COOLING COIL MODEL CAPMP6024ALA
FC-3	5	CARRIER	58STA110-1-22	110,000	60,000	2,000	250	80	HORIZONTAL FLOW GAS FIRED FURNACE WITH CONSTANT SPEED BLOWER AND 5 TON DX COOLING COIL MODEL CAPMP6024ALA
FC-4	5	CARRIER	58CVA110-1-20	110,000	60,000	2,000	300	80	HORIZONTAL FLOW GAS FIRED FURNACE WITH VARIABLE SPEED BLOWER AND 5 TON DX COOLING COIL MODEL CAPMP6024ALA
FC-5	5	CARRIER	58STA110-1-22	110,000	60,000	2,000	150	80	HORIZONTAL FLOW GAS FIRED FURNACE WITH CONSTANT SPEED BLOWER AND 5 TON DX COOLING COIL MODEL CAPMP6024ALA
FC-6	5	CARRIER	58STA110-1-22	110,000	60,000	2,000	200	80	HORIZONTAL FLOW GAS FIRED FURNACE WITH CONSTANT SPEED BLOWER AND 5 TON DX COOLING COIL MODEL CAPMP6024ALA
FC-7	5	CARRIER	58STA110-1-22	110,000	60,000	2,000	400	80	HORIZONTAL FLOW GAS FIRED FURNACE WITH CONSTANT SPEED BLOWER AND 5 TON DX COOLING COIL MODEL CAPMP6024ALA
FC-8	2	CARRIER	40MVQ021-3-01	22,500	21,500	750	0	13 SEER	MINI SPLIT HEAT PUMP WALL HUNG UNIT

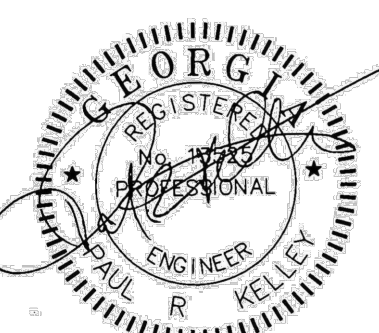


TYP. RECT. ELBOW DETAIL
SCALE: NOT TO SCALE



PRK Services

1245 Rainey Road
Macon, Georgia 31220



30 June 15

SHEET TITLE

REVISIONS

JOB TITLE

NEW HEATING, VENTILATING, AND AIR CONDITIONING SYSTEM
FOR
AQUA-CHEM FACILITY

538 Joe Tamplin Blvd
Macon, GA 31217

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