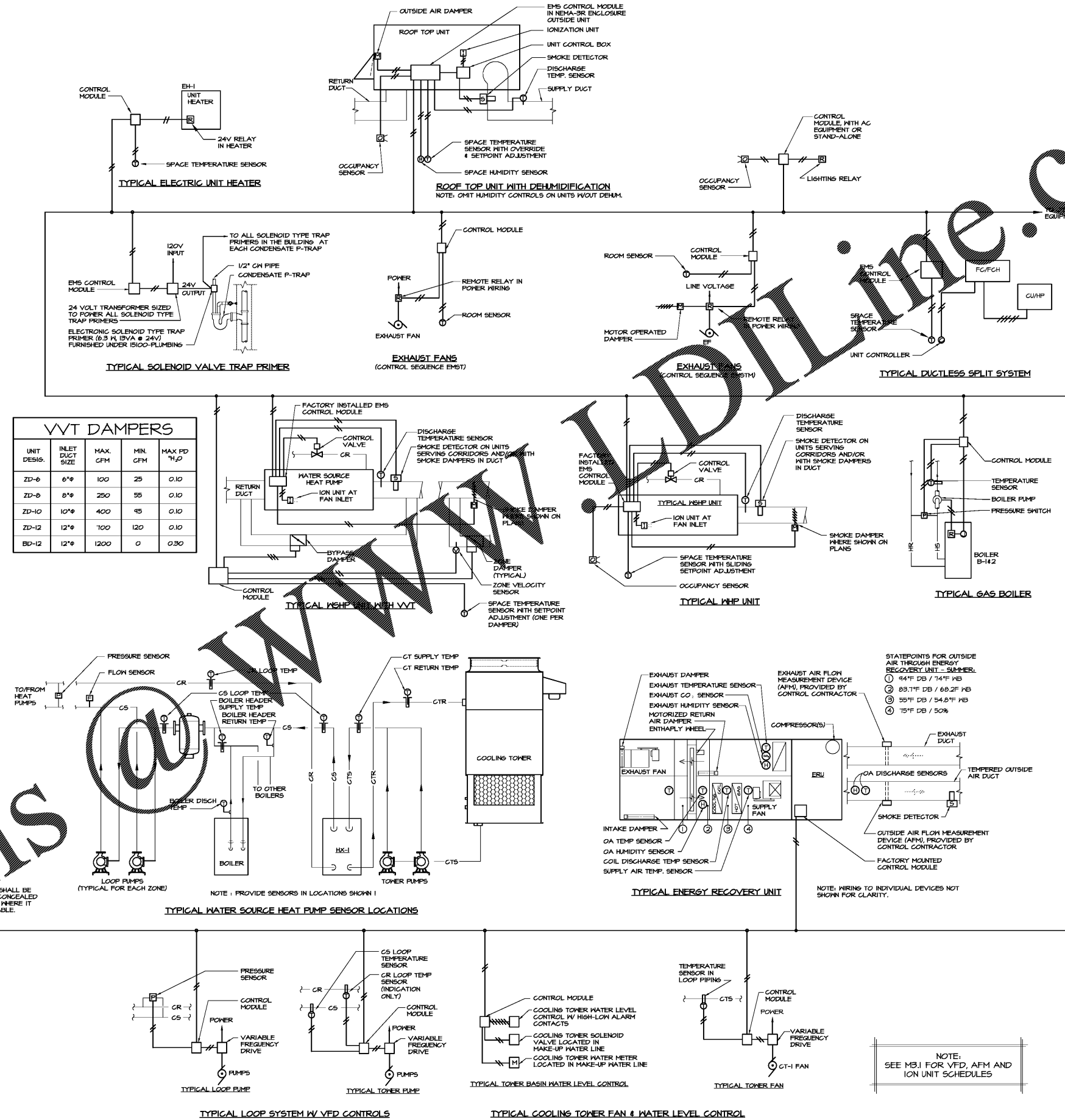


INPUT/OUTPUT SUMMARY	HARDWARE POINTS				MONITOR/CONTROL POINTS	HARDWARE POINTS			
	AI - ANALOG INPUT	AO - ANALOG OUTPUT	DI - DIGITAL INPUT	DO - DIGITAL OUTPUT		AI - ANALOG INPUT	AO - ANALOG OUTPUT	DI - DIGITAL INPUT	DO - DIGITAL OUTPUT
MONITOR/CONTROL POINTS	AI	AO	DI	DO	MONITOR/CONTROL POINTS	AI	AO	DI	DO
LOOP WATER					TYPICAL ROOF-TOP UNIT				
GT SUPPLY TEMP	X				ZONE TEMPERATURE	X			
GT RETURN TEMP	X				ZONE HUMIDITY	X			
CR LOOP TEMP	X				DISCHARGE AIR TEMPERATURE	X			
CS LOOP TEMP	X				SMOKE DETECTOR	X			
BOILER HEADER WATER TEMP	X				SUPPLY FAN START/STOP	X			
CS LOOP TEMP	X				FAN STATUS	X			
LOOP FLOW STATUS	X				COMPRESSOR START/STOP	X			
LOOP PRESSURE SENSOR	X				COMPRESSOR CURRENT XFMR	X			
TYPICAL LOOP PUMP					CONDENSER FAN CURRENT XFMR	X			
PUMP START/STOP	X				DEHUMIDIFICATION CYCLE	X			
PUMP STATUS	X				OUTSIDE AIR DAMPER	X			
PUMP VFD SIGNAL	X				OCCUPANCY SENSOR	X			
TYPICAL CT PUMP					IONIZATION UNIT STATUS	X			
PUMP START/STOP	X								
PUMP STATUS	X				TYP. VVT TERMINAL	X			
PUMP VFD SIGNAL	X				BYPASS DAMPER	X			
COOLING TOWER - 1 FAN					EACH ZONE DAMPER	X			
FAN START/STOP	X				EACH ZONE TEMPERATURE	X			
FAN STATUS	X				EACH ZONE VELOCITY	X			
FAN VFD SIGNAL	X				TYP. DUCTLESS SPLIT SYSTEM	X			
CT BASIN WATER LEVEL					ZONE TEMPERATURE	X			
MAKE-UP H2O SOLENOID VALVE	X								
BASIN H2O LOW LEVEL	X								
BASIN H2O HIGH LEVEL	X								
WATER METER INFORMATION	X								
TYPICAL GAS BOILER									
START/STOP	X								
BOILER STATUS	X								
BOILER PUMP START/STOP	X								
BOILER PUMP STATUS	X								
BOILER SUPPLY TEMPERATURE	X								
BAGNET CONNECTION	X								
TYP. WATER SOURCE HEAT PUMP									
ZONE TEMPERATURE	X								
DISCHARGE AIR TEMPERATURE	X								
SMOKE DETECTOR	X								
SUPPLY FAN START/STOP	X								
COMPRESSOR START/STOP	X								
COMPRESSOR CURRENT XFMR	X								
REVERSING VALVE OPEN/CLOSE	X								
CONTROL VALVE OPEN/CLOSE	X								
OCCUPANCY SENSOR	X								
IONIZATION UNIT STATUS	X								
DUCT PRESSURE SENSOR (VVT)	X								
TYPICAL ERU									
EXHAUST TEMPERATURE	X								
EXHAUST HUMIDITY	X								
EXHAUST CO ₂ SENSOR	X								
OUTSIDE AIR TEMP	X								
OUTSIDE AIR HUMIDITY	X								
COIL DISCHARGE TEMP	X								
HOT GAS DISCHARGE TEMP	X								
SUPPLY AIR TEMPERATURE	X								
SUPPLY AIR HUMIDITY	X								
SUPPLY AIR FLOW (AFM)	X								
EXHAUST AIR FLOW (AFM)	X								
EXHAUST FAN START/STOP	X								
EXHAUST FAN STATUS	X								
SUPPLY FAN START/STOP	X								
SUPPLY FAN STATUS	X								
ENTHALPY WHEEL START/STOP	X								
ENTHALPY WHEEL STATUS	X								
COMPRESSOR START/STOP	X								
HOT GAS REHEAT SOL VALVE	X								
RA, OA, EA DAMPERS	X								
GAS HEAT START/STOP	X								

GENERAL NOTES:
 A. PROVIDE MULTIPLE STAGES OF CONTROL FOR UNITS WITH MULTIPLE STEPS OF CAPACITY.
 B. WIRE THRU SMOKE DETECTORS FOR UNITS WITH OVER 2000 CFM THAT SERVE CORRIDORS, AND/OR THAT HAVE ASSOCIATED SMOKE DAMPERS TO SHUT DOWN THE UNIT AND CLOSE THE SMOKE DAMPERS WHEN SMOKE IS PRESENT.



Order Plans

1 ENERGY MANAGEMENT SYSTEM AND AUTOMATIC TEMPERATURE CONTROLS DIAGRAM
 M4.1 NO SCALE

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GEORGIA REGISTERED PROFESSIONAL ENGINEER

NO. 2154
 JAMES W. SPURLOCK

DATE	NO.	DESCRIPTION
10/11/18		ISSUE FOR BD
10/28/18		ISSUE FOR BD

FIVE FORKS MIDDLE SCHOOL HVAC & ROOFING RENOVATIONS

FACILITY NO. 667-0279
 3250 River Drive, Lawrenceville, GA 30044
 GWINNETT COUNTY SCHOOL DISTRICT

ENERGY MANAGEMENT SYSTEM

PROJECT NO. 18007.02
 DATE: OCTOBER 11, 2018
 DRAWN BY: M.W.D.
 CHECKED BY: M.W.D.

M4.1