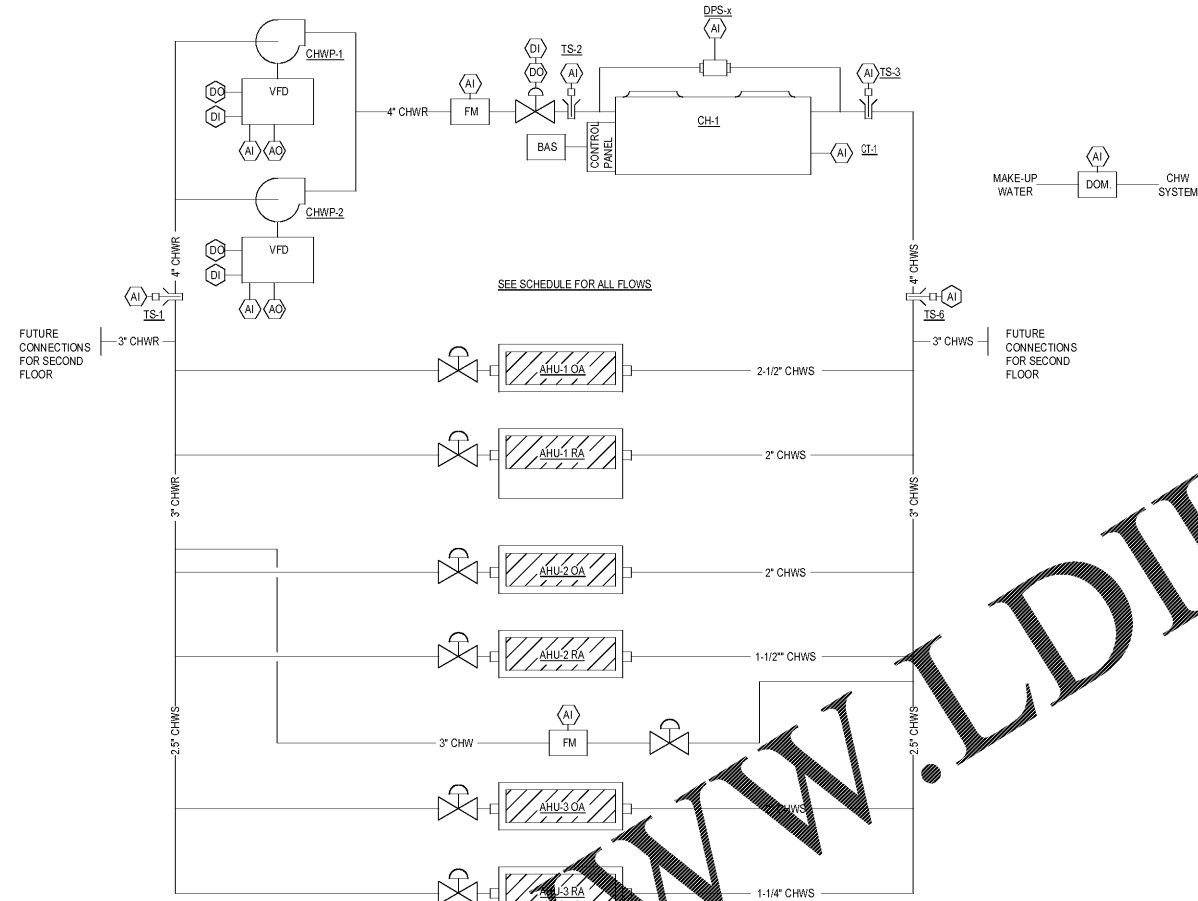


Order Plans @ [www.LDILine.com](http://www.LDILine.com)



SEE SCHEDULE FOR ALL FLOWS

POINTS LIST			
TAG	POINT TYPE	DESCRIPTION	SETPOINT (ALL SETPOINTS ADJ.)
TS-1	AI	CHILLED WATER RETURN TEMP	-
-	DI	CHWP-1 STATUS	-
-	DI	CHWP-1 VFD FAULT	-
-	DI	CHWP-1 VFD CONTROL	-
-	DI	CHWP-1 VFD FEEDBACK	-
-	DO	CH-1 CHW ISO VALVE	-
-	DI	CH-1 CHW ISO VALVE STATUS	-
-	AI	CH-1 CHWR TEMP	-
TS-3	AI	CH-1 CHWS TEMP	42°F
-	DI	CH-1 STATUS	-
-	DO	CH-1 ENABLE	-
TS-6	AI	CHWS TEMP	-
FM	AI	CHW FLOW	-
DOM	AIDI	MAKE-UP WATER PULSE INPUT	-

**CHILLER PLANT CONTROL**

**CHILLED WATER SYSTEM CONTROL:**

THE CHILLED WATER SYSTEM CONSISTS OF A SINGLE AIR-COOLED CHILLER WITH VARIABLE FLOW PRIMARY PUMPS SERVING THE CHILLED WATER SYSTEM. CHILLED WATER PUMPS ARE IN PARALLEL CONFIGURATION WITH LEAD/LAG OPERATION THROUGH AUTOMATIC PUMP SWITCHOVER.

**CHILLER START/STOP CONTROL:**

UPON A CALL FOR CHILLED WATER BY THE BAS, THE CHILLER SHALL INITIATE ITS START SEQUENCE.

THE CHILLER START SEQUENCE SHALL OPEN THE CHILLER ISOLATION VALVE AND ENABLE THE LEAD CHILLED WATER PUMP. THE PUMP SHALL RAMP ITS SPEED TO MAINTAIN THE SCHEDULED CHILLER FLOW OR AS ADJUSTED BY TAB. THE VFD FOR THE LEAD PUMP SHALL BE CONTROLLED BY THE BAS TO MAINTAIN THE MINIMUM SYSTEM DIFFERENTIAL PRESSURE OF 7 PSI (OR AS SET BY TAB) AS SENSED BY THE DIFFERENTIAL PRESSURE TRANSMITTER LOCATED IN THE BUILDING LOOP.

THE CHILLER SHALL BE ENABLED UPON VERIFICATION OF FLOW FROM THE LEAD CHILLED WATER PUMP AND ITS HARDWIRED FLOW SWITCH.

THE CHILLER SHALL STAGE ON TO MAINTAIN THE CHILLED WATER SUPPLY TEMPERATURE SETPOINT.

THE CHILLER SHALL STOP WHEN THERE IS NO CALL FOR CHILLED WATER BY THE BAS. THE CHILLER SHALL ALSO STOP THROUGH THE ACTION OF ITS OWN SAFETIES.

**CHILLED WATER PUMP START/STOP:**

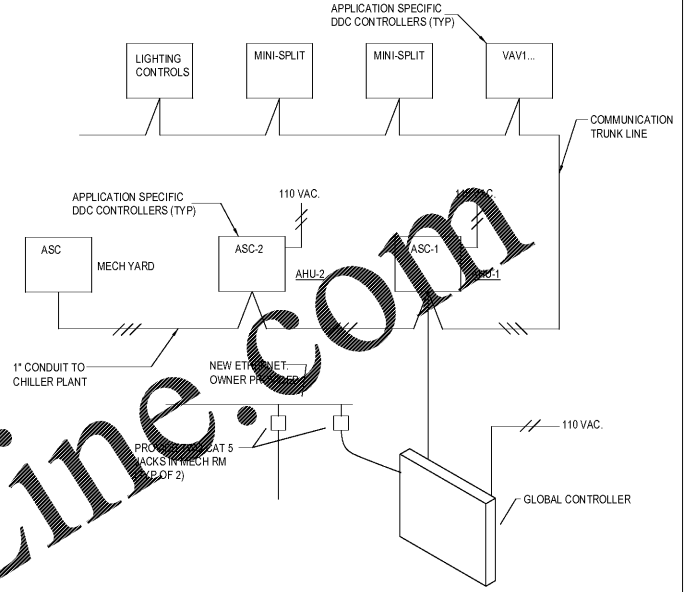
UPON LOSS OF FLOW VERIFICATION OR IF LEAD PUMP FAILS TO START, THE LAG PUMP SHALL START. VISUAL AND AUDIBLE ALARMS SHALL BE INITIATED.

**GENERAL NOTES:**

THE BAS SHALL UTILIZE OPTIMIZATION STRATEGIES TO IMPLEMENT THE DIFFERENT SEQUENCES FOR OPTIMAL ENERGY SAVINGS.

HIGH AND LOW TEMPERATURE ALARMS SHALL BE INDICATED AT THE BAS FRONT END.

LEAD/LAG ASSIGNMENTS SHALL SWITCH ON A TWO WEEK BASIS (ADJ.).



- NOTES:**
- APPLICATION SPECIFIC CONTROLLERS (ASC) SHALL BE PROVIDED WITH A GATEWAY INTERFACE CARD CAPABLE OF INTERFACING WITH THE BUILDING LEVEL CONTROLS. THE BUILDING LEVEL CONTROL SYSTEM SHALL BE CAPABLE OF MONITORING INPUTS AND OUTPUTS OF THE ASC CONTROLLER AND REMOTE SETPOINT ADJUSTMENT INCLUDING ALL MINI-SPLIT UNITS AND LIGHTING CONTROLS.
  - 110VAC TO CONTROLLERS SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR. CONTROL CONTRACTOR TO PROVIDE SURGE SUPPRESSORS TO INCOMING LINE VOLTAGE.
  - THE OWNER AND THE CONTRACTOR MUST COORDINATE TO OBTAIN ALL THE PROPER INTERNET PROTOCOLS NECESSARY FOR DATA OUTLETS TO BE LIVE (DNX RECORDS, MAC ADDRESS, IP ADDRESS ETC.).
  - PROVIDE LIGHTING CONTROLS PROGRAMMING AS REQUIRED. COORDINATE WITH OWNER'S PROJECT MANAGER.

DDC COMMUNICATION RISER A

CHILLER PLANT CONTROL / SCHEMATIC B

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**PERMIT SET**

05/06/2020

FGA PROJECT NUMBER  
19048

ISSUE DATE  
04-15-2020

NO.	DATE	NOTES

SHEET NAME  
CONTROLS - HVAC

SHEET NUMBER  
M7.3