To: **All Vendors Bidding on The College of New Jersey**
STEM MEP Modifications Project

From: **The College of New Jersey**

Date: **May 2, 2019**

ADDENDUM NO. 1 **ISSUE DATE: May 2, 2019**

REFERENCE: The College of New Jersey
STEM MEP Modifications Project
Bid No. AB190029

Date of Original Bidding Documents: April 12, 2019

INTENT: This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents and Prior Addenda if any, as identified above. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

CONTRACTOR'S QUESTIONS

1. Drawing M101D key note #9 doesn't match the clouded note #8 on the drawing. Also bulletin #28 page 1 notes don't match the drawing M101D. Please clarify.
   Answer: The clouded note on the drawing should read "9" in lieu of "8" to match note "9" in the Keynote Legend.

2. Drawing M401, can a plan view drawing be provided to show location and piping arrangement for SMPT 101 & 102?
   Answer: See attached sheet M200 for a plan view.

3. Bulletin #28 references drawing M401C but there is no drawing M401C in the bid package. Can a plan drawing be provided as requested in #2 above for SMPT 201 & 202?
   Answer: See attached sheet M401C for flow diagram and attached sheet M200E for plan view.

4. Drawing M503 detail #12 glycol feeder. Is the glycol feeder existing or is it to be provided? If it is to be provided provide make and model#. Also can a plan piping drawing be provided?
   Answer: The glycol feeder should have been provided in the original phase 1 under specification section 232500 Para 2.4. based on a list of manufacturers and performance requirements. Detail was

added to clarify piping connections. The glycol feeder GF 101 is indicated on piping schematic diagram on drawing M403. The glycol feeder shall be located on the STEM building penthouse. The glycol feeder was provided under submittal 01979 Dated 10/11/2016.

5. Drawing M701 calls for flow measuring stations, are they existing? If to be provided need make and model #.
   Answer: The flow measuring station should have been provided by the custom air handling unit manufacturer as per Specification Section 23 7323 – 2.7.E on flow measuring station. The BAS points were added per Bulletin #28.

6. M702 same comments as #5 above.
   Answer: See response to question #5.

7. Bulletin #28 refers to drawing M705. There is no drawing M705 in bid package?
   Answer: See attached sheet M705.

Attachments: Pre-bid sign-in sheet
Sheet M200
Sheet M200E
Sheet M401C
Sheet M705

END OF ADDENDUM NO. 1

The College of New Jersey
Sign-In Sheet

Meeting: Pre-Bid/Site Visit

Project: AB190029 - STEM MEP Modifications

Date: April 18, 2019 @ 10:00 am in ASB103

Company Name	Contact Person	Telephone #	Cell #	Email
PJM	BOB ANDERSON	609-921-1394	609.306.7642	BANDERSON@PJMEQUIPMENT.COM
SRJ Mechanical	Paul DeLitta	(908)635-1151	same	pdelitasrj@gmail.com
EYP	HARDEEP SINGH	202 471-5097	443-791-7934	HSINGH@EYPAE.COM
Honeywell	Brad Strauss	609-969-1568	same	brad.strauss@honeywell.com

EYP Architecture & Engineering of NJ, Inc.
225 Varick Street • 2nd Floor
New York, NY 10014
Telephone 917 661 6000
Fax 917 661 6100

eypae.com

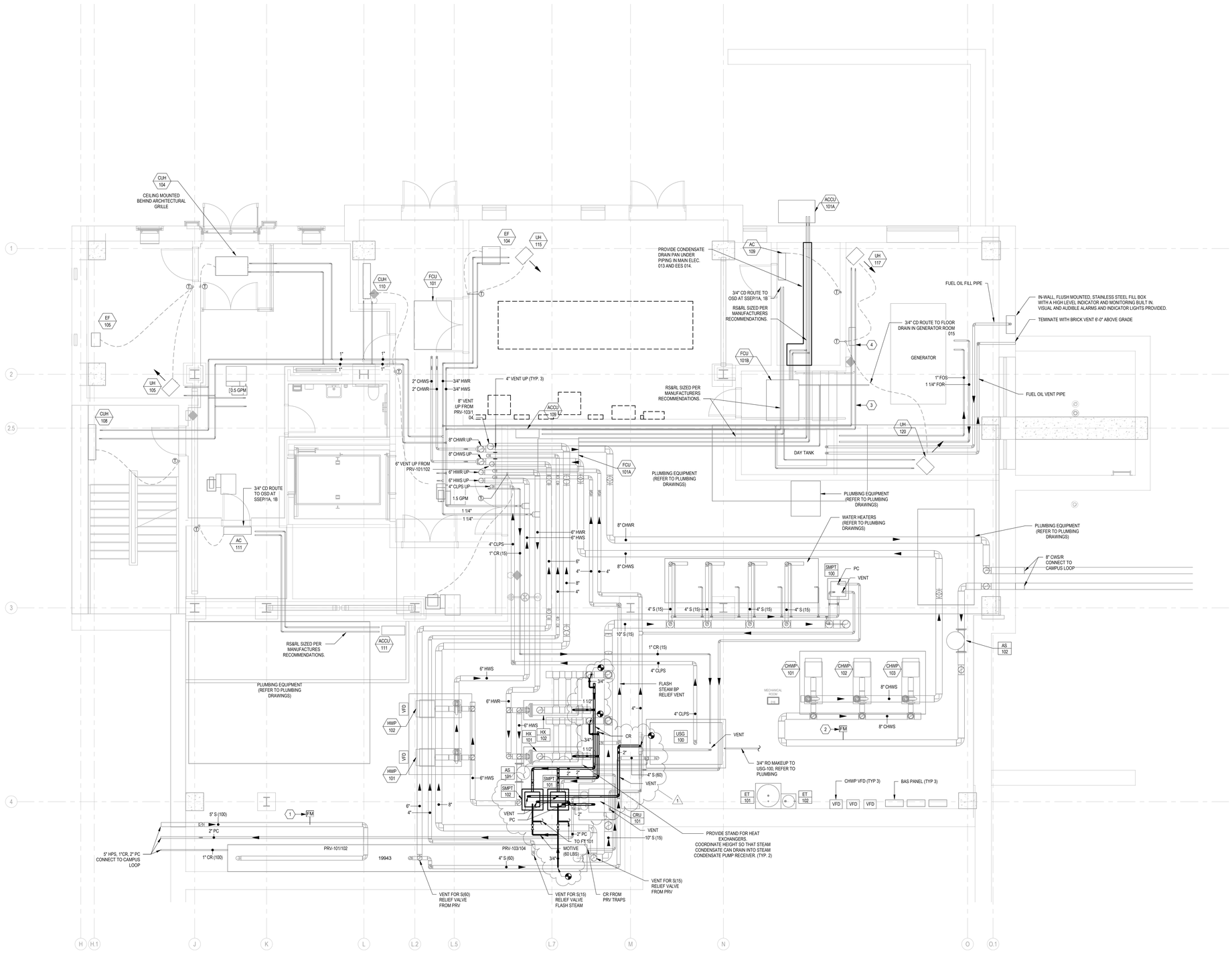
EYP/

GENERAL NOTES:

1. PROVIDE DRAINS AT ALL LOW POINTS AND AIR VENTS AT ALL HIGH POINTS OF HYDRONIC PIPING.
2. PIPING RUNOUTS TO EQUIPMENT SHALL BE 3/4" UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO FEILD VERIFY THE ACTUAL LOCATION OF EQUIPMENT AND PIPING ELEVATIONS.

KEYNOTE LEGEND

1 INSTALL STEAM INSERTION FLOW METER AS PER MANUFACTURER'S RECOMMENDATIONS FOR MINIMUM UPSTREAM AND DOWNSTREAM UNOBSTRUCTED PIPING RUN.
2 INSTALL CHILLED WATER ULTRASONIC FLOW METER AS PER MANUFACTURER'S RECOMMENDATIONS FOR MINIMUM UPSTREAM AND DOWNSTREAM UNOBSTRUCTED PIPING RUN.
3 HEAT TRACE ALL HWS/R PIPING, VALVES, AND ACCESSORIES WITHIN GENERATOR ROOM. REFER TO SECTION 23 0533.
4 LOCATE ELECTRONIC HEAT TRACE CONTROLLER IN AN ACCESSIBLE AREA FREE FROM OBSTRUCTIONS. COORDINATE BAS INTERFACE WITH SECTION 23 0993.



KEY PLAN:

NORTH

	DESCRIPTION	DATE
1	Bulletin #28 - BID RFI #4	05/01/2019

STEM BUILDING & CHEMISTRY ADDITION

The College of New Jersey
2000 Pennington Road
Ewing Township, NJ 08628-0718

RECORD DRAWINGS

Ryan D. Lee

DATE: **19 APRIL 2019**
SCALE: **As indicated**
EYP PROJECT NO.: **1013016.01**
CLIENT PROJECT NO.:
DESIGNED BY: **RDWL**
DRAWN BY: **RDWL**
CHECKED BY: **MD**

NJ PROFESSIONAL ENGINEER LICENSE NO. 24GE05177300

STEM BUILDING GROUND FLOOR PIPING PLAN

STEM BUILDING GROUND FLOOR PIPING PLAN
1/4" = 1'-0" 1

M200

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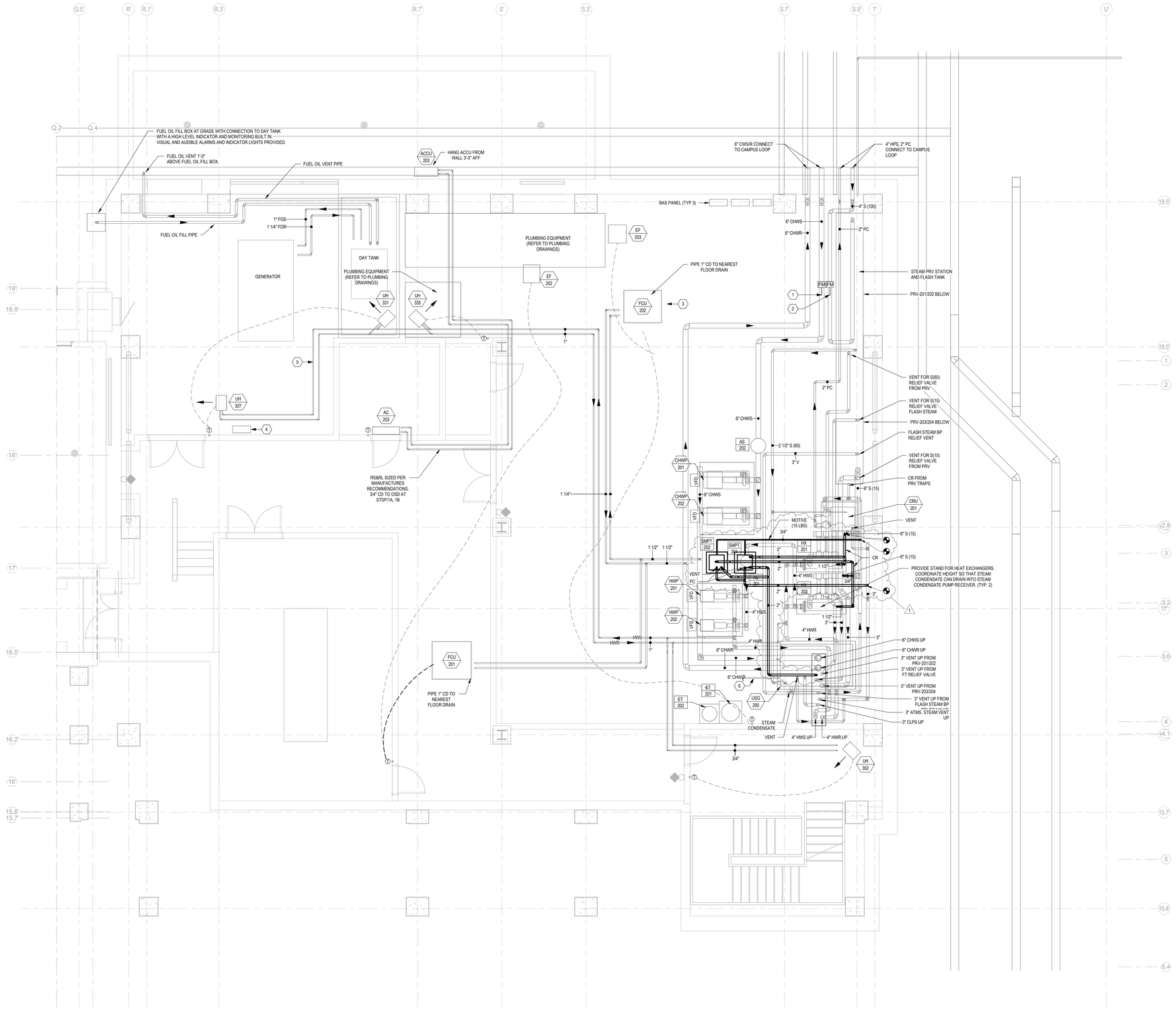

GENERAL NOTES:

1. PROVIDE DRAINS AT ALL LOW POINTS AND AIR VENTS AT ALL HIGH POINTS OF HYDRONIC PIPING.
2. PIPING RUNOUTS TO EQUIPMENT SHALL BE 3/4" UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO FEILD VERIFY THE ACTUAL LOCATION OF EQUIPMENT AND PIPING ELEVATIONS.

KEYNOTE LEGEND

1. INSTALL CHILLED WATER ULTRASONIC FLOW METER AS PER MANUFACTURER'S RECOMMENDATIONS FOR MINIMUM UPSTREAM AND DOWNSTREAM UNOBSTRUCTED PIPING RUN.
2. INSTALL STEAM INSERTION FLOW METER AS PER MANUFACTURER'S RECOMMENDATIONS FOR MINIMUM UPSTREAM AND DOWNSTREAM UNOBSTRUCTED PIPING RUN.
3. COORDINATE LOCATION AND HANDING OF FCU WITH PLUMBING EQUIPMENT AND OTHER WORK TO ALLOW MAINTENANCE ACCESS.
4. LOCATE ELECTRONIC HEAT TRACE CONTROLLER IN AN ACCESSIBLE AREA FREE FROM OBSTRUCTIONS. COORDINATE BAS INTERFACE WITH SECTION 23 0993.
5. HEAT TRACE ALL HWS/R PIPING, VALVES, AND ACCESSORIES WITHIN GENERATOR ROOM. REFER TO SECTION 23 0533.
6. 3/4" RO MAKEUP TO USG-200, REFER TO PLUMBING.

CHEMISTRY ADDITION BASEMENT PIPING PLAN
1/4" = 1'-0"

1

EYP Architecture & Engineering of NJ, Inc.
225 Varick Street • 2nd Floor
New York, NY 10014
Telephone 917 661 6000
Fax 917 661 6100

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KEY PLAN:

NORTH

	DESCRIPTION	DATE
1	Bulletin #28 - BID RFI #4	05/01/2019

STEM BUILDING & CHEMISTRY ADDITION

The College of New Jersey
2000 Pennington Road
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Ryan D. Lee

DATE:	**19 APRIL 2019**
SCALE:	**As indicated**
EYP PROJECT NO.:	**1013016.01**
CLIENT PROJECT NO.:	
DESIGNED BY:	**RL**
DRAWN BY:	**RL**
CHECKED BY:	**AH**

NJ PROFESSIONAL ENGINEER LICENSE NO. 24GE05177300

CHEMISTRY ADDITION BASEMENT PIPING PLAN

M200E

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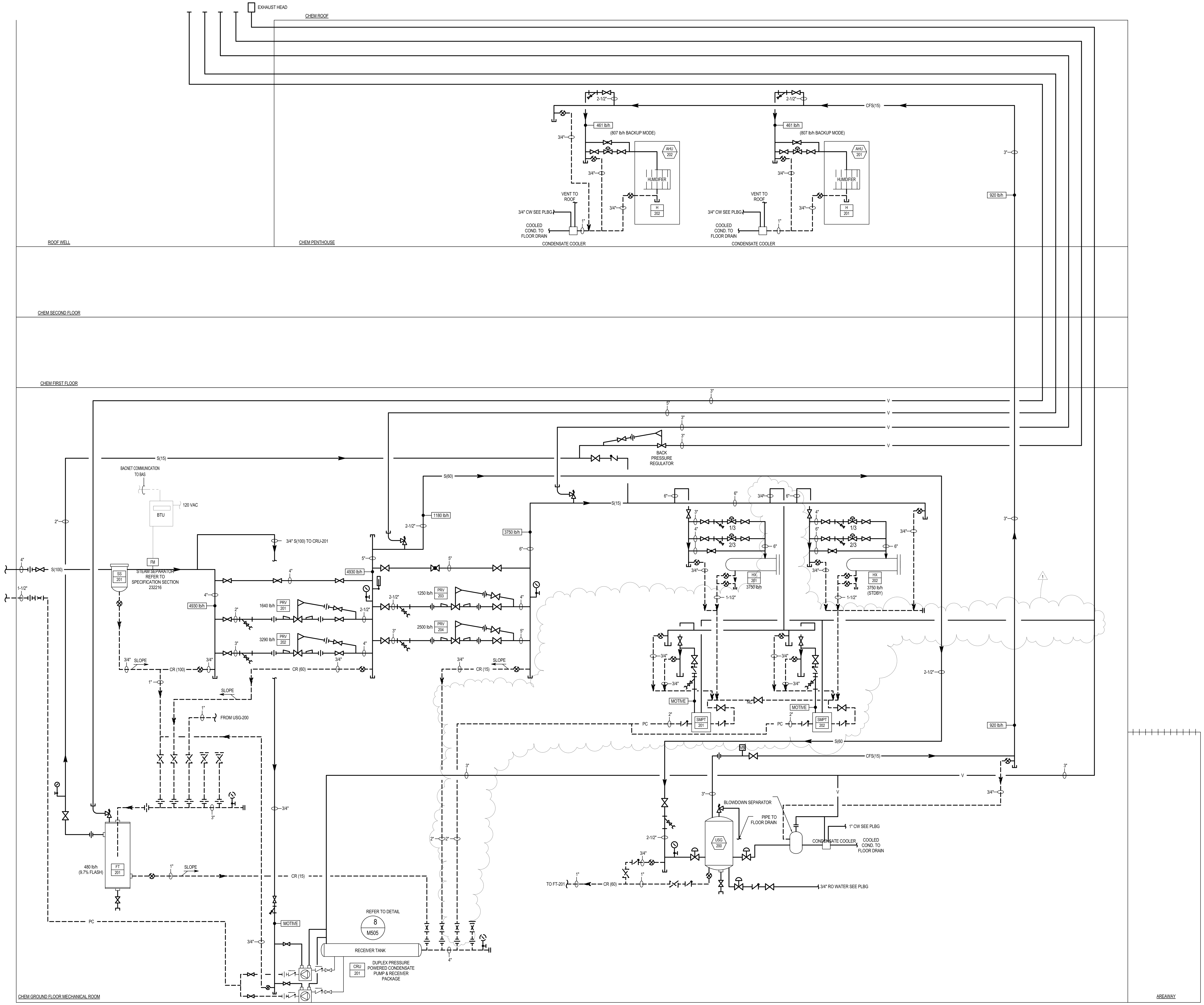

1 CHEMISTRY ADDITION STEAM & CONDENSATE FLOW DIAGRAM
M401C M401C
NO SCALE

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EYP Architecture & Engineering of NJ, Inc.
225 Varick Street - 2nd Floor
New York, NY 10014
Telephone 917 981 6000
Fax 917 981 6100

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#	DESCRIPTION	DATE
1	Bulletin #28 - BID RFI #4	04/30/2019

STEM BUILDING & CHEMISTRY ADDITION

The College of New Jersey
2000 Pennington Road
Ewing Township, NJ 08628-0718

RECORD DRAWINGS

Ryan D. Lee

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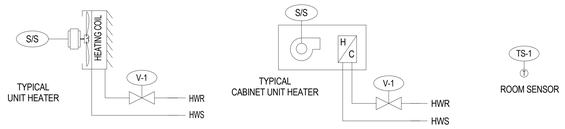
	MD

NJ PROFESSIONAL ENGINEER LICENSE NO. 24GE05177300

CHEMISTRY ADDITION STEAM & CONDENSATE FLOW DIAGRAM

M401C



REFER TO SPECIFICATION SECTION 230993 FOR SEQUENCE OF OPERATION AND ALARMS

DDC CONTROL PANEL INPUT/OUTPUT SUMMARY

SYSTEM POINT	POINT AI	AO	DI	DO	COMMENTS
START/STOP SUPPLY FAN				X	
TS-1 ROOM TEMPERATURE	X				
V-1 HEATING COIL VALVE				X	

6 Typical Unit Heater/Cabinet Unit Heater Control Diagram

M705 NO SCALE

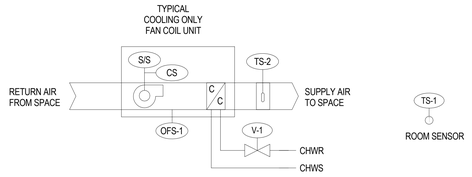
REFER TO SPECIFICATION SECTION 230993 FOR SEQUENCE OF OPERATION AND ALARMS

DDC CONTROL PANEL INPUT/OUTPUT SUMMARY

SYSTEM POINT	POINT AI	AO	DI	DO	COMMENTS
TS-1 ROOM TEMPERATURE	X				
V-1 RADIATION CONTROL VALVE				X	TYPICAL PER FINTUBE ZONE

5 Fin Tube Radiation Control Diagram

M705 NO SCALE



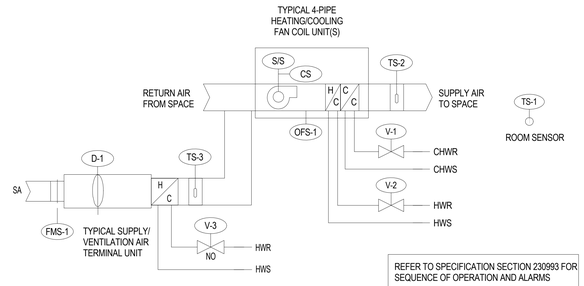
REFER TO SPECIFICATION SECTION 230993 FOR SEQUENCE OF OPERATION AND ALARMS

DDC CONTROL PANEL INPUT/OUTPUT SUMMARY

SYSTEM POINT	POINT AI	AO	DI	DO	COMMENTS
START/STOP SUPPLY FAN				X	
FAN STATUS	X				VIA CURRENT SENSOR
OFS-1 CONDENSATE OVERFLOW SWITCH			X		
TS-1 ROOM TEMPERATURE	X				
TS-2 SUPPLY AIR TEMPERATURE	X				
V-1 FCU COOLING COIL VALVE		X			

4 Cooling Only Fan Coil Unit Control Diagram

M705 NO SCALE



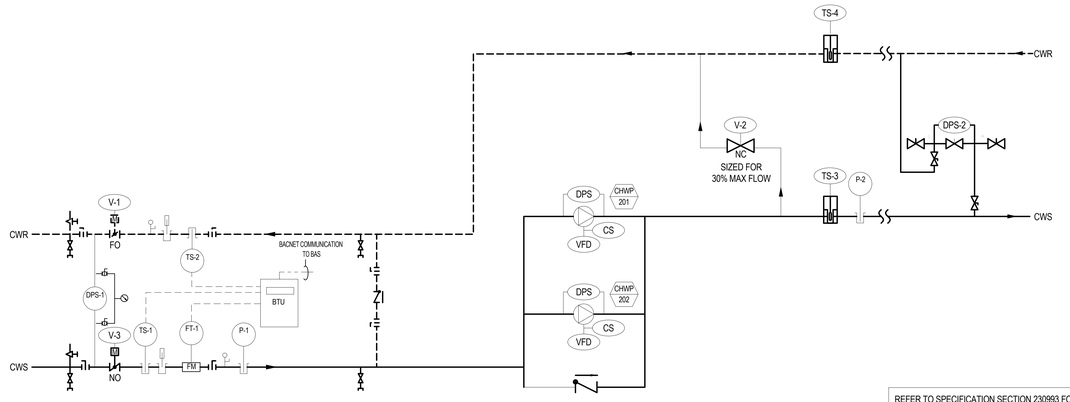
REFER TO SPECIFICATION SECTION 230993 FOR SEQUENCE OF OPERATION AND ALARMS

DDC CONTROL PANEL INPUT/OUTPUT SUMMARY

SYSTEM POINT	POINT AI	AO	DI	DO	COMMENTS
START/STOP SUPPLY FAN				X	
FAN STATUS	X				VIA CURRENT SENSOR
OFS-1 CONDENSATE OVERFLOW SWITCH			X		
CONDENSATE PUMP ALARM (IF APPLICABLE)			X		
TS-1 ROOM TEMPERATURE	X				
TS-2 SUPPLY AIR TEMPERATURE	X				
TS-3 VENTILATION AIR TEMPERATURE	X				DUCTED VENTILATION UNITS ONLY
V-1 FCU COOLING COIL VALVE		X			
V-2 FCU HEATING COIL VALVE		X			
V-3 REHEAT CONTROL VALVE		X			DUCTED VENTILATION UNITS ONLY
D-1 SUPPLY AIR DAMPER		X			DUCTED VENTILATION UNITS ONLY
FMS-1 SUPPLY AIR CFM	X				DUCTED VENTILATION UNITS ONLY

3 4-Pipe Heating/Cooling Fan Coil Unit Control Diagram

M705 NO SCALE



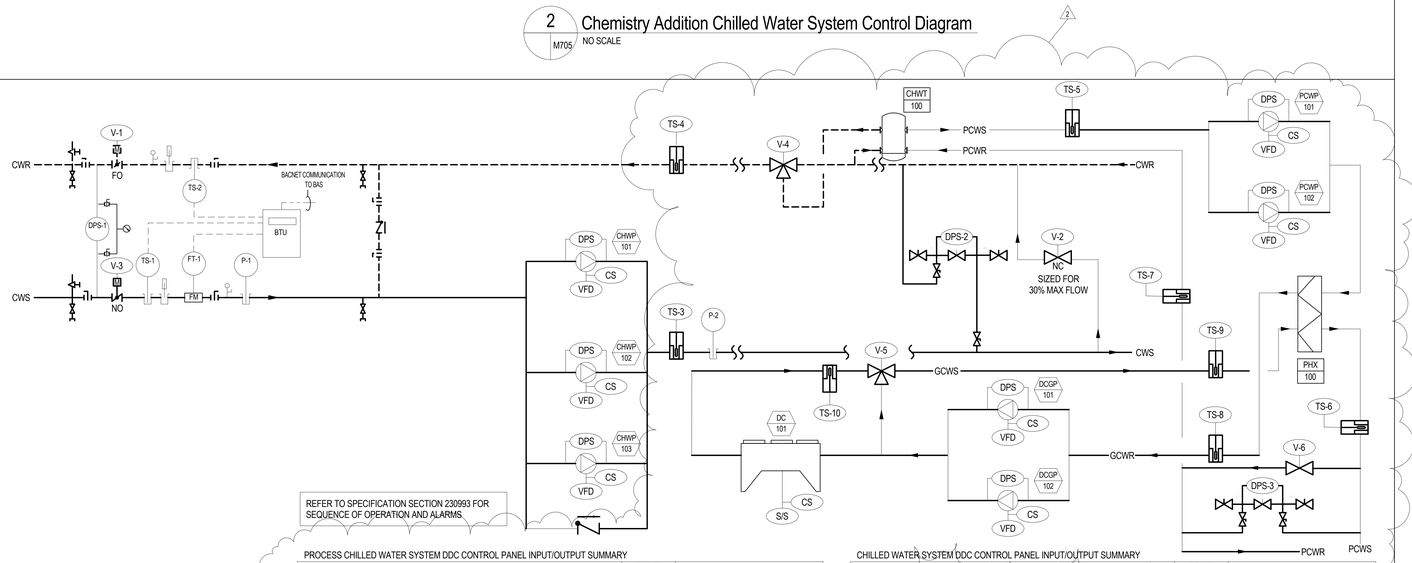
REFER TO SPECIFICATION SECTION 230993 FOR SEQUENCE OF OPERATION AND ALARMS

CHILLED WATER SYSTEM DDC CONTROL PANEL INPUT/OUTPUT SUMMARY

SYSTEM POINT	POINT AI	AO	DI	DO	COMMENTS
DPS-1 CAMPUS LOOP CONNECTION CHILLED WATER DIFFERENTIAL PRESSURE	X				
DPS-2 SYSTEM CHILLED WATER DIFFERENTIAL PRESSURE	X				
FT-1 CHEMISTRY ADDITION CAMPUS CHILLED WATER FLOW	X				
TS-1 CAMPUS CHILLED WATER SUPPLY TEMPERATURE	X				
TS-2 CAMPUS CHILLED WATER RETURN TEMPERATURE	X				
TS-3 SYSTEM CHILLED WATER SUPPLY TEMPERATURE	X				
TS-4 SYSTEM CHILLED WATER RETURN TEMPERATURE	X				
V-1 SYSTEM CHILLED WATER TEMP VALVE (DENY VALVE)		X			SHUTOFF SERVICE
V-2 SYSTEM CHILLED WATER DP BYPASS VALVE		X			
V-3 CAMPUS LOOP CONNECTION AUTOMATIC ISOLATION VALVE		X			SHUTOFF SERVICE
P-1 CAMPUS CHILLED WATER SUPPLY PRESSURE	X				
P-2 SYSTEM CHILLED WATER SUPPLY PRESSURE	X				
CHILLED WATER PUMP VFD START/STOP				2	
CHILLED WATER PUMP STATUS	2				VIA CURRENT SENSOR
CHILLED WATER PUMP VFD SPEED		2			
CHILLED WATER PUMP VFD MOTOR AMPS	2				
CHILLED WATER PUMP VFD FAULT			2		

2 Chemistry Addition Chilled Water System Control Diagram

M705 NO SCALE



REFER TO SPECIFICATION SECTION 230993 FOR SEQUENCE OF OPERATION AND ALARMS

PROCESS CHILLED WATER SYSTEM DDC CONTROL PANEL INPUT/OUTPUT SUMMARY

SYSTEM POINT	POINT AI	AO	DI	DO	COMMENTS
V-4 CHWT-100 TANK CHILLED WATER RETURN 3-WAY VALVE		X			
V-5 PHX-100 3-WAY VALVE		X			
V-6 PROCESS CHILLED WATER MINIMUM FLOW VALVE		X			
DPS-3 PROCESS CHILLED WATER DIFFERENTIAL PRESSURE	X				
TS-5 PROCESS CHILLED WATER CHWT-100 TANK SUPPLY TEMPERATURE	X				
TS-6 PROCESS CHILLED WATER PHX-100 SUPPLY TEMPERATURE	X				
TS-7 PROCESS CHILLED WATER RETURN TEMPERATURE	X				
TS-8 GLYCOL RETURN TEMPERATURE	X				
TS-9 GLYCOL SUPPLY TEMPERATURE	X				
TS-10 GLYCOL DC-101 SUPPLY TEMPERATURE	X				
DRY COOLER DC-101 ENABLE START/STOP				X	
DRY COOLER DC-101 STATUS	X				VIA CURRENT SENSOR
PROCESS CHILLED WATER PUMP VFD START/STOP				2	
PROCESS CHILLED WATER PUMP STATUS	2				VIA CURRENT SENSOR
PROCESS CHILLED WATER PUMP VFD SPEED		2			
PROCESS CHILLED WATER PUMP VFD MOTOR AMPS	2				
PROCESS CHILLED WATER PUMP VFD FAULT			2		
DRY COOLER GLYCOL PUMP START/STOP				2	
DRY COOLER GLYCOL PUMP STATUS	2				VIA CURRENT SENSOR
DRY COOLER GLYCOL PUMP FAULT			2		USING PUMP DPS

CHILLED WATER SYSTEM DDC CONTROL PANEL INPUT/OUTPUT SUMMARY

SYSTEM POINT	POINT AI	AO	DI	DO	COMMENTS
DPS-1 CAMPUS LOOP CONNECTION CHILLED WATER DIFFERENTIAL PRESSURE	X				
DPS-2 SYSTEM CHILLED WATER DIFFERENTIAL PRESSURE	X				
FT-1 STEM BUILDING CAMPUS CHILLED WATER FLOW	X				
TS-1 CAMPUS CHILLED WATER SUPPLY TEMPERATURE	X				
TS-2 CAMPUS CHILLED WATER RETURN TEMPERATURE	X				
TS-3 SYSTEM CHILLED WATER SUPPLY TEMPERATURE	X				
TS-4 SYSTEM CHILLED WATER RETURN TEMPERATURE	X				
V-1 SYSTEM CHILLED WATER TEMP VALVE (DENY VALVE)		X			SHUTOFF SERVICE
V-2 SYSTEM CHILLED WATER DP BYPASS VALVE		X			
V-3 CAMPUS LOOP CONNECTION AUTOMATIC ISOLATION VALVE		X			SHUTOFF SERVICE
P-1 CAMPUS CHILLED WATER SUPPLY PRESSURE	X				
P-2 SYSTEM CHILLED WATER SUPPLY PRESSURE	X				
CHILLED WATER PUMP VFD START/STOP				3	
CHILLED WATER PUMP STATUS	3				VIA CURRENT SENSOR
CHILLED WATER PUMP VFD SPEED		3			
CHILLED WATER PUMP VFD MOTOR AMPS	3				
CHILLED WATER PUMP VFD FAULT			3		

GENERAL NOTE:

ALL FACTORY INSTALLED DEVICES, BOTH HARDWARE AND SOFTWARE, SHALL BE ACCESSIBLE (READ/WRITE) FROM THE EXISTING HONEYWELL ENTERPRISE BUILDING INTEGRATOR (EBI) SYSTEM. THE CONTROLS VENDOR SHALL PROVIDE ALL NECESSARY SOFTWARE AND HARDWARE, INCLUDING BACnet/IP ROUTERS AND ALL REQUIRED PROGRAMMING TO ALLOW COMMUNICATION BETWEEN THE BUILDING SYSTEM CONTROLLERS AND THE CAMPUS WIDE EBI SYSTEM. TYPICAL ALL EQUIPMENT.

1 STEM Building Chilled Water System Control Diagram

M705 NO SCALE

EYP Architecture & Engineering of NJ, Inc.
225 Varick Street • 2nd Floor
New York, NY 10014
T 917 661 5600 F 917 661 5000
Fax 917 661 6100

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1	Bulletin #28	03/21/2019
2	Bulletin #28 - BID RFI #4	05/01/2019

	DESCRIPTION	DATE

STEM BUILDING & CHEMISTRY ADDITION

The College of New Jersey
2000 Pennington Road
Ewing Township, NJ 08628-0718

RECORD DRAWINGS

Ryan D. Lee

DATE: 19 APRIL 2019
SCALE: 12" = 1'-0"
EYP PROJECT NO.: 1013016.01
CLIENT PROJECT NO.:
DESIGNED BY: RL
DRAWN BY: RL
CHECKED BY: AH

NJ PROFESSIONAL ENGINEER LICENSE NO. 24GE05177300

MECHANICAL CONTROL DIAGRAMS SHEET 5

M705

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