

**SECTION 009112  
ADDENDUM NUMBER 2**

**PARTICULARS**

**DATE: 04/24/2026**

**PROJECT: UCA CAMPUS DISTRICT LOOP & CHILLER PLANT**

**PROJECT NUMBER: 48879**

**OWNER: UNIVERSITY OF CENTRAL ARKANSAS**

**ARCHITECT: AMR ARCHITECTS**

**TO: PROSPECTIVE BIDDERS:**

**THIS ADDENDUM FORMS A PART OF THE CONTRACT DOCUMENTS AND MODIFIES THE ORIGINAL BID DOCUMENTS DATED 4/06/2026, WITH AMENDMENTS AND ADDITIONS NOTED BELOW.**

**ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED IN THE BID FORM. FAILURE TO DO SO WILL DISQUALIFY THE BIDDER.**

**THIS ADDENDUM CONSISTS OF:**

**CHANGES TO PROJECT MANUAL OR DRAWINGS LISTED IN THIS SECTION**

**5 PROJECT MANUAL PAGES**

**22 DRAWING SHEETS**

**CHANGES TO THE PROJECT MANUAL - INTRODUCTORY REQUIREMENTS, PROCUREMENT REQUIREMENTS AND CONTRACTING REQUIREMENTS:**

**ADD PREVIOUSLY ISSUED ADDENDUM #1 (09111) TO PROJECT MANUAL**

**ADD THIS ADDENDUM #2 (09112) TO PROJECT MANUAL**

**CHANGES TO THE PROJECT MANUAL - SPECIFICATIONS:**

**TABLE OF CONTENTS**

A. SEE UPDATED TABLE OF CONTENTS, ADDING SECTION 012100

**SECTION 012100 CASH ALLOWANCES**

A. SEE ADDED SECTION

**CHANGES TO DRAWINGS:**

**DRAWING G-000 - COVER SHEET - ATTACHED**

A. SEE TABLE OF CONTENTS FOR SHEETS CONTAINING REVISIONS IN ADDENDUM #2

**DRAWING C-103 - BUILDING SITE PLAN - ATTACHED**

A. SEE REVISION #2 DATED 04/23/26 FOR CHANGES

**DRAWING C-104 - BUILDING GRADING PLAN - ATTACHED**

A. SEE REVISION #2 DATED 04/23/26 FOR CHANGES

**DRAWING C-105 - UTILITY PLAN - BLDG UTILITIES - ATTACHED**

A. SEE REVISION #1 DATED 04/23/26 FOR CHANGES

**DRAWING C-106 - EROSION CONTROL PLAN - ATTACHED**

A. SEE REVISION #1 DATED 04/23/26 FOR CHANGES

**DRAWING C-201 - DISTRICT COOLING LINES - MAIN P&P - ATTACHED**

A. SEE REVISION #2 DATED 04/23/26 FOR CHANGES

**DRAWING C-202 - DISTRICT COOLING LINES - MAIN P&P - ATTACHED**

A. SEE REVISION #2 DATED 04/23/26 FOR CHANGES

**DRAWING C-203 - DISTRICT COOLING LINES - EAST RUN P&P - ATTACHED**

A. SEE REVISION #1 DATED 04/23/26 FOR CHANGES

**DRAWING C-204 - DISTRICT COOLING LINES - EAST RUN P&P - ATTACHED**

A. SEE REVISION #1 DATED 04/23/26 FOR CHANGES

**DRAWING C-501 - CONSTRUCTION DETAILS - COOLING TRENCHES - ATTACHED**

A. SEE REVISION #1 DATED 04/23/26 FOR CHANGES

**DRAWING S200 - FOUNDATION DETAILS - ATTACHED**

A. SEE REVISION #1 (ADDENDUM #2) DATED 04/24/2026 FOR CHANGES

**DRAWING S301 - FRAMING PLAN - ATTACHED**

A. SEE REVISION #1 (ADDENDUM #2) DATED 04/24/2026 FOR CHANGES

**DRAWING M001 - SOUTH PLANT FLOOR PLAN - DEMO - ATTACHED**

A. SEE REVISION #1 DATED 04/24/25 FOR CHANGES

**DRAWING M101 - NORTH PLANT LOWER PLAN - HVAC - ATTACHED**

A. SEE REVISION #2 DATED 04/24/25 FOR CHANGES

**DRAWING M103 - SOUTH PLANT FLOOR PP - HVAC - ATTACHED**

A. SEE REVISION #1 DATED 04/24/25 FOR CHANGES

**DRAWING M606-HVAC CONTROLS**

A. SEE REVISION #1 (ADDENDUM #2) DATED 04/24/2026 FOR CHANGES

**DRAWING E102- NORTH PLANT PLAN- POWER E103**

A. SEE REVISION #1 (ADDENDUM #2) DATED 04/24/2026 FOR CHANGES

**DRAWING E103- NORTH PLANT PLAN - SYSTEMS E301**

A. SEE REVISION #1 (ADDENDUM #2) DATED 04/24/2026 FOR CHANGES

**DRAWING E201- ELECTRICAL PANEL & RISER- NORTH PLANT E401**

A. SEE REVISION #1 (ADDENDUM #2) DATED 04/24/2026 FOR CHANGES

**DRAWING E301- ELECTRICAL PANELS- NORTH PLANT**

A. SEE REVISION #1 (ADDENDUM #2) DATED 04/24/2026 FOR CHANGES

**DRAWING E301- ELECTRICAL PANELS- NORTH PLANT**

A. SEE REVISION #1 (ADDENDUM #2) DATED 04/24/2026 FOR CHANGES

**DRAWING E401-SOUTHN PLANTT PLAN - ELECTRICAL**

A. SEE REVISION #1 (ADDENDUM #2) DATED 04/24/2026 FOR CHANGES

**END OF SECTION 009112**

**SECTION 000110  
TABLE OF CONTENTS**

**PROCUREMENT AND CONTRACTING REQUIREMENTS**

**DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS**

- 000103 - Project Directory
- 000107 - Seals Pages
- 000110 - Table of Contents
  
- 005213 - Agreement Form
- 006113 - Performance and Payment Bond Form
- 006519.16 - Release of Claims Form - Substitution Request Form - During Construction
- 006519.19 - Consent of Surety Form- Contracting Definitions
- 007213 - General Conditions
- 007216 - Contractor's Insurance Requirements

**SPECIFICATIONS**

**DIVISION 01 -- GENERAL REQUIREMENTS**

- 011000 - Summary
- 012000 - Price and Payment Procedures
- 012100 - Cash Allowances
- 012300 - Alternates
- 012500 - Substitution Procedures
- 013000 - Administrative Requirements
- 014000 - Quality Requirements
- 015000 - Temporary Facilities and Controls
- 016000 - Product Requirements
- 017000 - Execution and Closeout Requirements
- 017419 - Construction Waste Management and Disposal
- 017800 - Closeout Submittals

**DIVISION 02 -- EXISTING CONDITIONS (NOT USED)**

- For Site Preparation and Earthwork, see Division 31*
- For Pavements and Site Improvements, see Division 32*
- For Site Utilities, see Division 33*

**DIVISION 03 -- CONCRETE**

- 033000 - Cast-in-Place Concrete
- 033511 - Concrete Floor Finishes

**DIVISION 04 -- MASONRY**

**DIVISION 05 -- METALS**

**DIVISION 06 -- WOOD, PLASTICS, AND COMPOSITES**

- 061000 - Rough Carpentry

**DIVISION 07 -- THERMAL AND MOISTURE PROTECTION**

- 072100 - Thermal Insulation

- 072116 - Metal Building Blanket Insulation
- 076200 - Sheet Metal Flashing and Trim
- 077233 - Pipe Penetration Flashings
- 079200 - Joint Sealants
- 079513 - Expansion Joint Cover Assemblies

**DIVISION 08 -- OPENINGS**

- 081113 - Hollow Metal Doors and Frames
- 083323 - Upward Coiling Do
- 087100 - Door Hardware

**DIVISION 09 -- FINISHES**

- 095100 - Acoustical Ceilings
- 099000 - Painting and Coating

**DIVISION 10 -- SPECIALTIES**

- 102800 - Toilet, Bath, and Laundry Accessories
- 104400 - Fire Protection Specialties

**DIVISION 11 -- EQUIPMENT**

**DIVISION 12 -- FURNISHINGS**

**DIVISION 13 -- SPECIAL CONSTRUCTION**

- 133419 - Metal Building Systems

**DIVISION 22 -- PLUMBING**

REFER TO ATTACHED TABLE OF CONTENTS

**DIVISION 23 -- HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)**

REFER TO ATTACHED TABLE OF CONTENTS

**DIVISION 26 -- ELECTRICAL**

REFER TO ATTACHED TABLE OF CONTENTS

**DIVISION 31 -- EARTHWORK**

- 311000 - Site Preparation & Clearing
- 312000 - Site Grading
- 312300 - Earthwork
- 312500 - Storm Water Pollution Prevention Plan and Erosion Control
- 313116 - Termite Control

**DIVISION 32 -- EXTERIOR IMPROVEMENTS**

- 321116 - Aggregate Base Course
- 321313 - Portland Cement Concrete Paving
- 321600 - Walks & Curbs
- 323113 - Chain Link Fences and Gates
- 323113.16 - Gate Locks
- 329223 - Sodding

**DIVISION 33 -- UTILITIES**

UCA CAMPUS, CONWAY, AR

**PROJECT DIRECTORY**

**OWNER:**  
UNIVERSITY OF CENTRAL ARKANSAS  
PHYSICAL PLANT  
1201 DONAGHEY AVE.  
CONWAY, AR 72035  
T: 501-852-0131

**ARCHITECT:**  
AMR ARCHITECTS, INC.  
1424 S MAIN ST, SUITE 105  
LITTLE ROCK, AR 72202  
T: 501-375-0378  
CONTACT: KATE EAST  
kate@amr-architects.com

**STRUCTURAL ENGINEER:**  
ENGINEERING CONSULTANTS, INC.  
401 W. CAPITOL AVE, STE 305  
LITTLE ROCK, AR 72201  
T: 501-376-3752  
CONTACT: BRIAN MILLER  
brian.miller@ecilr.com

**MEP ENGINEER:**  
PETTIT & PETTIT CONSULTING  
ENGINEERS  
201 EAST MARKHAM, SUITE 400  
LITTLE ROCK, ARKANSAS 72201  
T: (501) 374-3731  
CONTACT: TERRY JACKS  
tjacks@pettitinc.com

**CIVIL ENGINEER:**  
CRAFTON TULL  
10825 FINANCIAL CENTRE PARKWAY,  
STE 300  
LITTLE ROCK, AR 72211-3554  
T: 501-664-3245  
CONTACT: GREGG LONG  
Gregg.Long@craftontull.com

**LANDSCAPE ARCHITECT:**  
PRISM DESIGN STUDIO  
901 N. 47th Street, Suite 400  
Rogers, AR 72756  
T: 479-636-4838  
CONTACT: JENNY BURBIDGE  
Jenny.Burbidge@prismds.com



**GENERAL**

G000	COVER PAGE	04.24.2026	ADD#2
G001	CODE INFO / LIFE SAFETY PLAN		

**CIVIL**

C-101	PROJECT CONTROL- EXISTING CONDITIONS		
C-102	DEMOLITION PLAN		
C-103	BUILDING SITE PLAN	04.24.2026	ADD#2
C-104	BUILDING GRADING PLAN	04.24.2026	ADD#2
C-105	UTILITY PLAN - BLDG UTILITIES	04.24.2026	ADD#2
C-106	EROSION CONTROL PLAN	04.24.2026	ADD#2
C-107	EROSION CONTROL DETAILS		
C-201	DISTRICT COOLING LINES - MAIN P&P	04.24.2026	ADD#2
C-202	DISTRICT COOLING LINES - MAIN P&P	04.24.2026	ADD#2
C-203	DISTRICT COOLING LINES - EAST RUN P&P	04.24.2026	ADD#2
C-204	DISTRICT COOLING LINES - EAST RUN P&P	04.24.2026	ADD#2
C-501	CONSTRUCTION DETAILS - COOLING TRENCHES	04.24.2026	ADD#2
C-502	CONSTRUCTION DETAILS - SITE		

**LANDSCAPE**

L101	PLANTING PLAN		
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**ARCHITECTURAL**

A001	ARCHITECTURAL GENERAL INFORMATION		
A002	PARTITION TYPES		
A101	FIRST FLOOR PLAN - REFERENCE	04.21.2026	ADD#1
A102	FIRST FLOOR PLAN - DIMENSIONS		
A103	RCP / BREWER HEGEMAN SCOPE	04.21.2026	ADD#1
A104	ROOF PLAN		
A201	EXTERIOR ELEVATIONS		
A202	EXTERIOR ELEVATIONS		
A203	BUILDING SECTIONS		
A301	WALL SECTIONS		
A501	SECTION DETAILS		
A601	DOOR & FRAME TYPES & SCHEDULES		

**STRUCTURAL**

S000	NOTES AND LEGENDS		
S101	FOUNDATION PLAN		
S102	COOLING TOWERS FOUNDATION & FRAMING		
S200	FOUNDATION DETAILS	04.24.2026	ADD#2
S201	FOUNDATION DETAILS		
S301	FRAMING PLAN	04.24.2026	ADD#2

**PLUMBING**

P000	PLUMBING GENERAL NOTES AND LEGENDS		
P101	FIRST FLOOR PLAN - PLUMBING		
P102	ROOF PLAN - PLUMBING		
P201	PLUMBING DETAILS		
P202	PLUMBING DETAILS		
P301	PLUMBING RISERS		
P401	PLUMBING SCHEDULES		

**MECHANICAL**

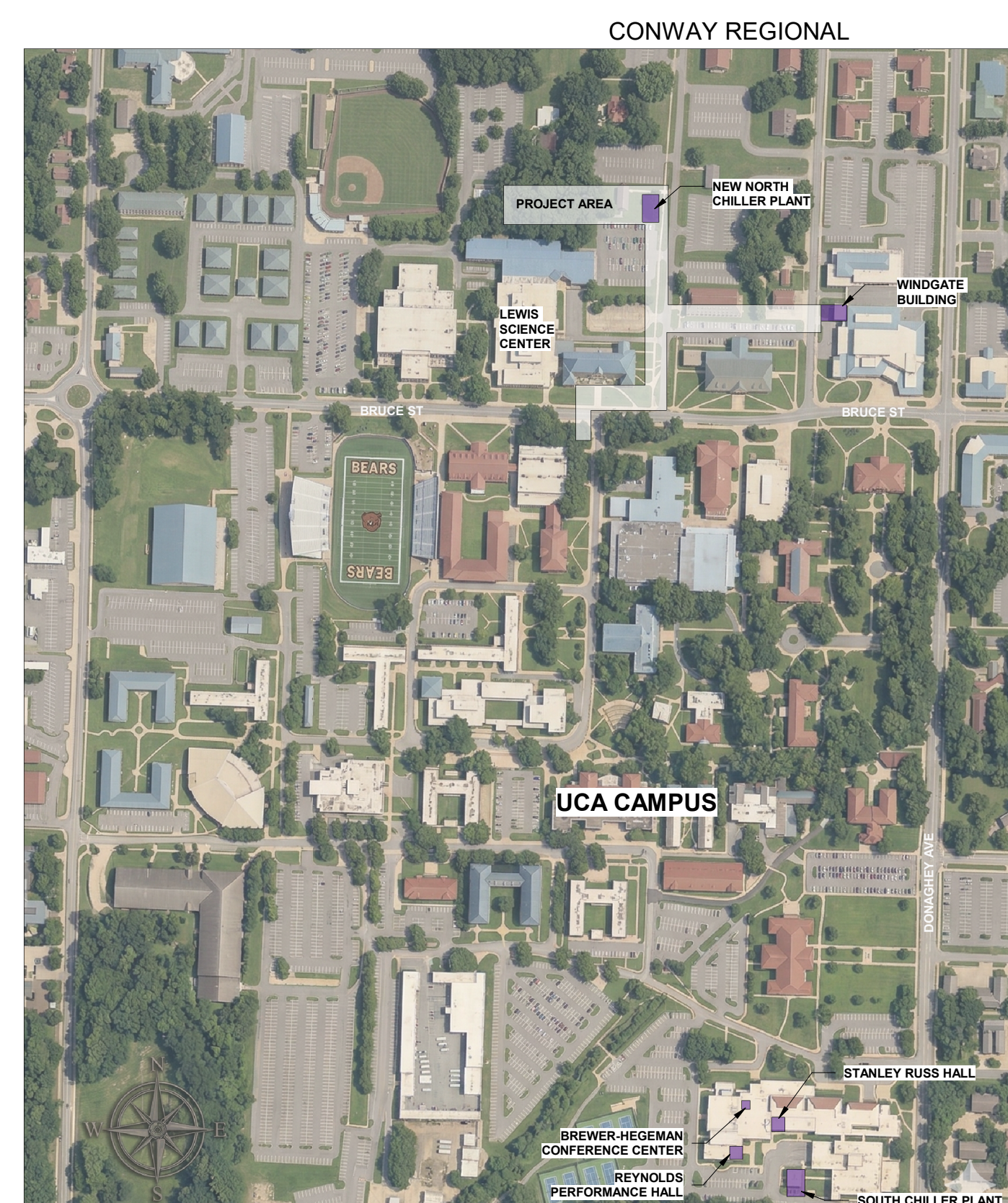
M001	SOUTH PLANT FLOOR PLAN - DEMO	04.24.2026	ADD#2
M002	WINDGATE FLOOR PLAN - HVAC DEMO		
M003	REYNOLDS FLOOR PLAN - HVAC DEMO		
M004	BREWER-HEGEMAN FLOOR PLAN - HVAC DEMO		
M005	STANLEY RUSS FLOOR PLAN - HVAC DEMO		
M101	NORTH PLANT LOWER PLAN - HVAC	04.24.2026	ADD#2
M102	NORTH PLANT ROOF PLAN - HVAC		
M103	SOUTH PLANT FLOOR PLAN - HVAC	04.24.2026	ADD#2
M104	WINDGATE FLOOR PLAN - HVAC		
M105	REYNOLDS FLOOR PLAN - HVAC	04.21.2026	ADD#1
M106	BREWER-HEGEMAN FLOOR PLAN - HVAC	04.21.2026	ADD#1
M107	STANLEY RUSS FLOOR PLAN - HVAC	04.21.2026	ADD#1
M201	HVAC SECTIONS		
M202	HVAC SECTIONS		
M301	HVAC SCHEDULES		
M302	HVAC SCHEDULES	04.21.2026	ADD#1
M401	HVAC DETAILS		
M402	HVAC DETAILS	04.21.2026	ADD#1
M403	HVAC DETAILS	04.21.2026	ADD#1
M501	HVAC PIPE SCHEMATIC - NORTH PLANT	04.21.2026	ADD#1
M502	HVAC PIPE SCHEMATIC - SOUTH PLANT	04.21.2026	ADD#1
M503	HVAC PIPE SCHEMATIC - WINDGATE HALL		
M601	HVAC CONTROLS		
M602	HVAC CONTROLS	04.21.2026	ADD#1
M603	HVAC CONTROLS		
M604	HVAC CONTROLS		
M605	HVAC CONTROLS		
M606	HVAC CONTROLS	04.24.2026	ADD#2

**ELECTRICAL**

E100	SITE PLAN - ELECTRICAL		
E101	NORTH PLANT PLAN - LIGHTING		
E102	NORTH PLANT PLAN - POWER	04.24.2026	ADD#2
E103	NORTH PLANT PLAN - SYSTEMS	04.24.2026	ADD#2
E201	ELECTRICAL PANEL & RISER - NORTH PLANT	04.24.2026	ADD#2
E301	ELECTRICAL PANELS - NORTH PLANT	04.24.2026	ADD#2
E302	ELECTRICAL PANELS - NORTH PLANT	04.24.2026	ADD#2
E401	SOUTH PLANT PLAN - ELECTRICAL	04.24.2026	ADD#2
E501	BOOSTER PUMP PLANS - ELECTRICAL		
E601	ELECTRICAL DETAILS		



**1 PROJECT EXTENTS**  
SCALE: 1" = 160'-0"



**2 VICINITY MAP**  
SCALE: 1" = 200'-0"

SECTION 01 21 00  
CASH ALLOWANCES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. The following allowances are stated for the purpose of stabilizing each bid and for establishing an amount of credit to purchase identified items. Each price stated shall include cost of materials, F.O.B. job site delivery and sales tax
- B. Contractor overhead and profit, markup installation, insurance, payroll taxes, and bonds are to be included in the bid and Contract.

1.2 ALLOWANCE CREDIT

- A. Any unused allowance money will be returned to the owner. Any unused material shall be retained by the owner as spare stock.
- B. Difference in actual cost and allowances will be adjusted by change order. Contractor shall provide invoices from the supplier showing actual quantity and cost of the materials used.

1.3 RELATED SECTIONS

- A. Section 01 11 00 Summary of Work.
- B. Section 01 25 00 Schedule of Values.
- C. Section 23 09 23 DDC Control System for HVAC

1.4 ALLOWANCE ITEMS

A. BAS INTEGRATION UNIT COST ALLOWANCE

- 1. BAS Integration Contractor: Northwest Controls  
Attn: Daryl Ponson – 501-500-6579.
- 2. Project Objective: Northwest Control Systems Inc. (NWC) will provide the necessary labor, software engineering, and specified hardware to integrate new Schneider controls into the existing Alerton Compass building management front-end. This scope covers both the retrofit of buildings with existing Alerton controls and the full integration of buildings new to the Alerton system.
- 3. Included Scope of Work:
  - A. Buildings with Existing Alerton Controls (Retrofit Integration) Where Schneider controls are replacing existing Alerton controls—specifically located at **Stanley Russ Hall, Windgate, South Plant, and Brewer-Hegeman**—our team will perform the following front-end and system modifications to ensure seamless operation:

- i. **Hardware Provision (Stanley Russ Hall):** For Stanley Russ Hall specifically, Northwest Control Systems Inc. will provide a new Alerton Global Controller to facilitate the Schneider integration.
  - ii. **Database & Meter Clean-up:** Remove existing, obsolete trendlogs, alarms, and existing Energy Meter logging associated with the replaced equipment. Set up new energy meter logging for the incoming system.
  - iii. **Programming Modifications:** Rework or completely remove existing Alerton global or local programming to accommodate the new Schneider sequences.
  - iv. **Controller Reprogramming:** Reprogram existing, remaining Alerton controllers as needed to interact correctly with the new Schneider system.
  - v. **Graphics Rework:** Modify and rework existing Compass graphics to accurately reflect the new Schneider equipment, points, and system layouts.
  - vi. **Data Re-establishment:** Map in new points, and re-add/configure trendlogs and alarms for the new Schneider devices.
  - vii. **Security Management:** Rework user security profiles and permissions within Compass to account for the new Schneider devices and ensure appropriate access levels.
- B. Buildings without Existing Alerton Controls (New Integration):** For buildings that do not currently utilize Alerton controls—specifically located at **Reynolds Performance Hall** and **North Plant**—our team will execute a full system integration into the Compass front-end:
- i. **Hardware Provision & Installation:** Provide and configure a new Alerton Global Controller for the building.
    - o *Purpose:* This controller will house the new alarms and trendlogs locally. It will also be utilized to coordinate any necessary global programming required to incorporate the building into the broader Alerton network, as well as integrate it into the UCA PD alarm system.
  - ii. **Full Front-End Integration:** Map all required points from the new Schneider controls into the Alerton Compass system.
  - iii. **System Setup:** Configure and establish all necessary alarms, trendlogs, and schedules for the new equipment.
  - iv. **Graphics Creation:** Create fully new, custom graphical interfaces for the building's equipment and floor plans within Compass.
  - v. **Security Setup:** Establish new user security profiles and access rights for the building's systems.

4. **Project Coordination & Commissioning:** To ensure proper alignment with all project stakeholders, Northwest Control Systems Inc. includes the following allowances:
  - A. **Coordination Meetings:** Northwest Control Systems Inc. will include up to five (5) days of project coordination meetings.
  - B. **System Commissioning:** Northwest Control Systems Inc. will include commissioning support at the end of the project, allocated as follows:
    - i. Up to five (5) days of commissioning support specifically for the **North Plant** project.
    - ii. Up to three (3) days of commissioning support specifically for the **South Plant** project.
    - iii. This time will be spent with the commissioning agent, mechanical engineer, Schneider controls vendor, and owner's representative to explicitly verify that Northwest Control Systems Inc. has displayed all graphical points correctly on the Compass front-end.
  
5. **Schneider Controls Vendor Requirements & Coordination:** To facilitate a successful integration, the Schneider controls vendor (provided by others) is required to meet the following parameters and coordination milestones:
  - A. **System Architecture:** The Schneider controls vendor must provide a 100% native BACnet system.
  - B. **Network & Device Coordination:** The Schneider controls vendor must coordinate their device instances and IP addressing directly with Northwest Control Systems Inc. (They are *not* to coordinate these parameters with the owner's IT department).
  - C. **Comprehensive Documentation:** The Schneider controls vendor must provide a complete documentation package to Northwest Control Systems Inc., including the specific building locations where the controllers are installed.
  - D. **Final BACnet Points Listing:** The Schneider controls vendor is to provide the final, comprehensive BACnet points list *after* commissioning is complete and the commissioning agent, mechanical engineer, and owner's representative have signed off on all programming. This list must explicitly define which points are read-only and which are read/write, accompanied by a detailed functional description of each point.
  - E. **Campus Standard Compliance:** The Schneider controls vendor must coordinate with Northwest Control Systems Inc. and the Owner to provide any additional BACnet points—even if not explicitly listed in the mechanical engineer's original sequence of operations—that are necessary to satisfy the owner's established campus standard programming and front-end requirements.

6. **Exclusions:** To ensure clear project boundaries, the following items are specifically excluded from the Northwest Control Systems Inc. scope of work:
- A. **Post-Commissioning Graphics Warranty:** There is no warranty for graphics creation if the internal programming of the Schneider controllers is changed *after* commissioning of the system has been signed off by the commissioning agent, mechanical engineer, and owner's representative. If programming changes occur after this sign-off, resulting points and graphics will be modified on a Time and Material (T&M) basis and billed in 1-hour increments.
  - B. **Troubleshooting:** Troubleshooting issues related to the physical installation, wiring, or internal programming of the Schneider controls.
  - C. Furnishing, mounting, or installing any Schneider controllers, sensors, actuators, or associated field devices.
  - D. Internal programming or configuration of the Schneider controllers (Schneider controls must be provided fully programmed, commissioned, and ready for third-party BACnet integration).
  - E. Any low-voltage control wiring, including network communication wiring between the Schneider controllers (unless explicitly noted for the Alerton Global Controller tie-in).
  - F. Provision of physical IT infrastructure, including network drops and switches (to be provided by the owner's IT department).
  - G. Repair, replacement, or maintenance of mechanical equipment.
  - H. Point-to-point checkout of the Schneider field devices.
7. **Pricing:** All pricing includes the addition or deletion of graphics, trend logs, alarms, and energy logs along with coordination and commissioning meetings.
- A. North Plant Project
    - i. Three buildings within this project scope will receive the same hardware package: an ACM (Alerton Global Controller), enclosure, transformers, and battery backups.
    - ii. *Exception:* At Brewer-Hegeman, NWC will utilize the existing ACM rather than providing new hardware.
  - B. South Plant Project
    - i. NWC will reuse the existing ACM at the South Plant location.
8. Allowance amount: **\$ 44,520** (Materials: \$15,600, Labor: \$28,920)

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

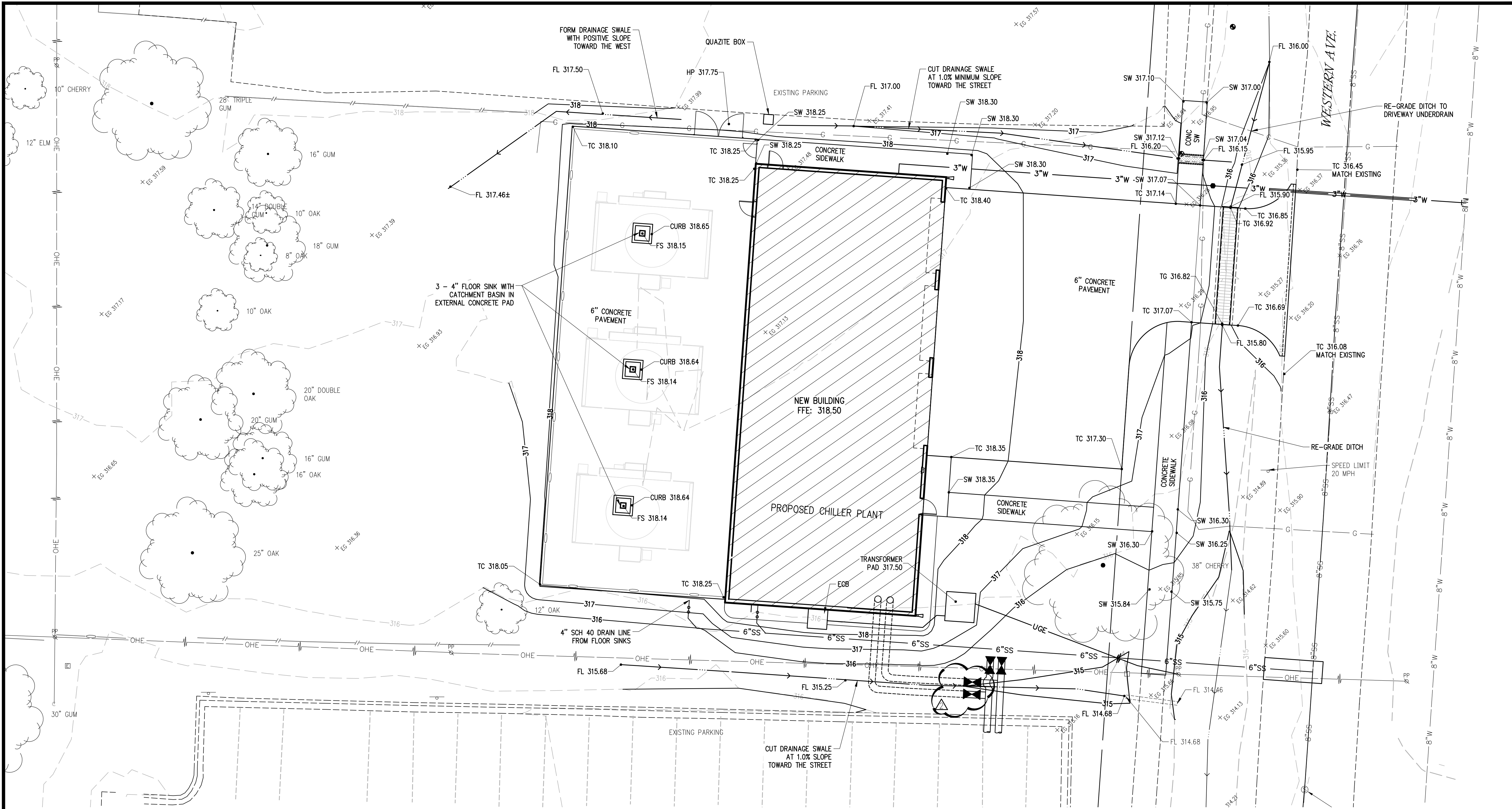
END OF SECTION

UCA Campus District Loop &  
Chiller Plant

01 21 00-4

Cash Allowances





**GRADING AND DRAINAGE NOTES**

1. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF EXISTING UTILITIES ON SITE OR IN RIGHT-OF-WAY. ALL UTILITIES MUST BE LOCATED PRIOR TO GRADING START.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OR GEOTECHNICAL REPORT
3. ALL CUT OR FILL SLOPES SHALL BE A MAX 3:1 SLOPE OR FLATTER UNLESS OTHERWISE NOTED.
4. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
5. ALL STORM SEWER PIPE CONNECTIONS TO STRUCTURES SHALL BE GROUTED TO ENSURE CONNECTION AT STRUCTURE IS WATERTIGHT. ALL STORM SEWER STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
6. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY WHEN IN PAVED AND TRAFFIC AREAS.
7. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH THE PAVEMENT AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 1" ABOVE FINISH GRADE. LIDS SHALL BE LABELED PER JURISDICTIONAL SPECIFICATIONS.
8. SITE GRADING SHALL NOT PROCEED UNTIL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED.
9. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL TO FINAL GRADE. REFER TO THE LANDSCAPE PLAN.
10. TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON PLANS, CONTACT ENGINEER IMMEDIATELY.
11. THE CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS THROUGHOUT ALL PHASES OF CONSTRUCTION.
12. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS.
13. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS, GEOTECHNICAL REPORT AND SPECIFICATIONS.
14. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
15. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ENSURE A SMOOTH FIT AND CONTINUOUS GRADE.
16. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
17. IF WET AREAS ARE ENCOUNTERED ON-SITE THE CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL ENGINEER FOR THE DESIGN AND PLACEMENT OF A FRENCH DRAIN SYSTEM.

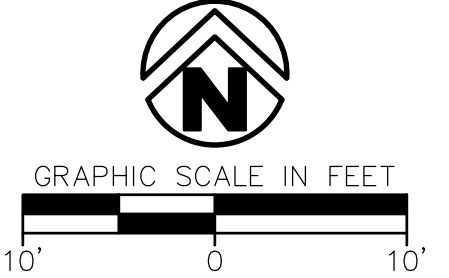
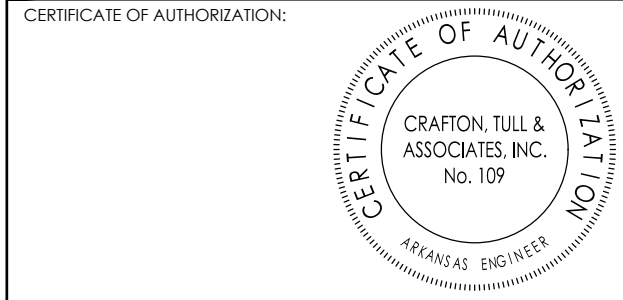
**TREE NOTE**

REMOVE TREE(S) ONLY IF ROOT SYSTEM BECOMES DAMAGED DURING GRADING PROCESS OR IF PREVENTING PROPER POSITIVE DRAINAGE ON SITE AS SHOWN ON THE PLAN.

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**UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT**

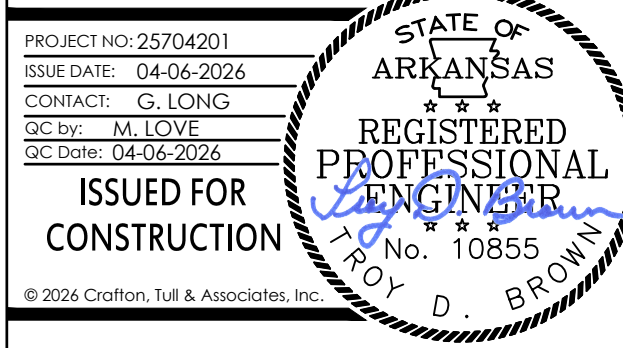
UNIVERSITY OF CENTRAL ARKANSAS  
CONWAY, ARKANSAS

Key Plan

GRADING PLAN SPOT ELEVATIONS		
SW	SIDEWALK	
TC	TOP CONCRETE	
TG	TOP GRATE	
FL	FLOW LINE	
FS	FLOOR SINK TOP	
ES	EXISTING GRADE	

No.	Description	Date
1	Addendum #1	04-21-2026
2	Addendum #2	04-23-2026

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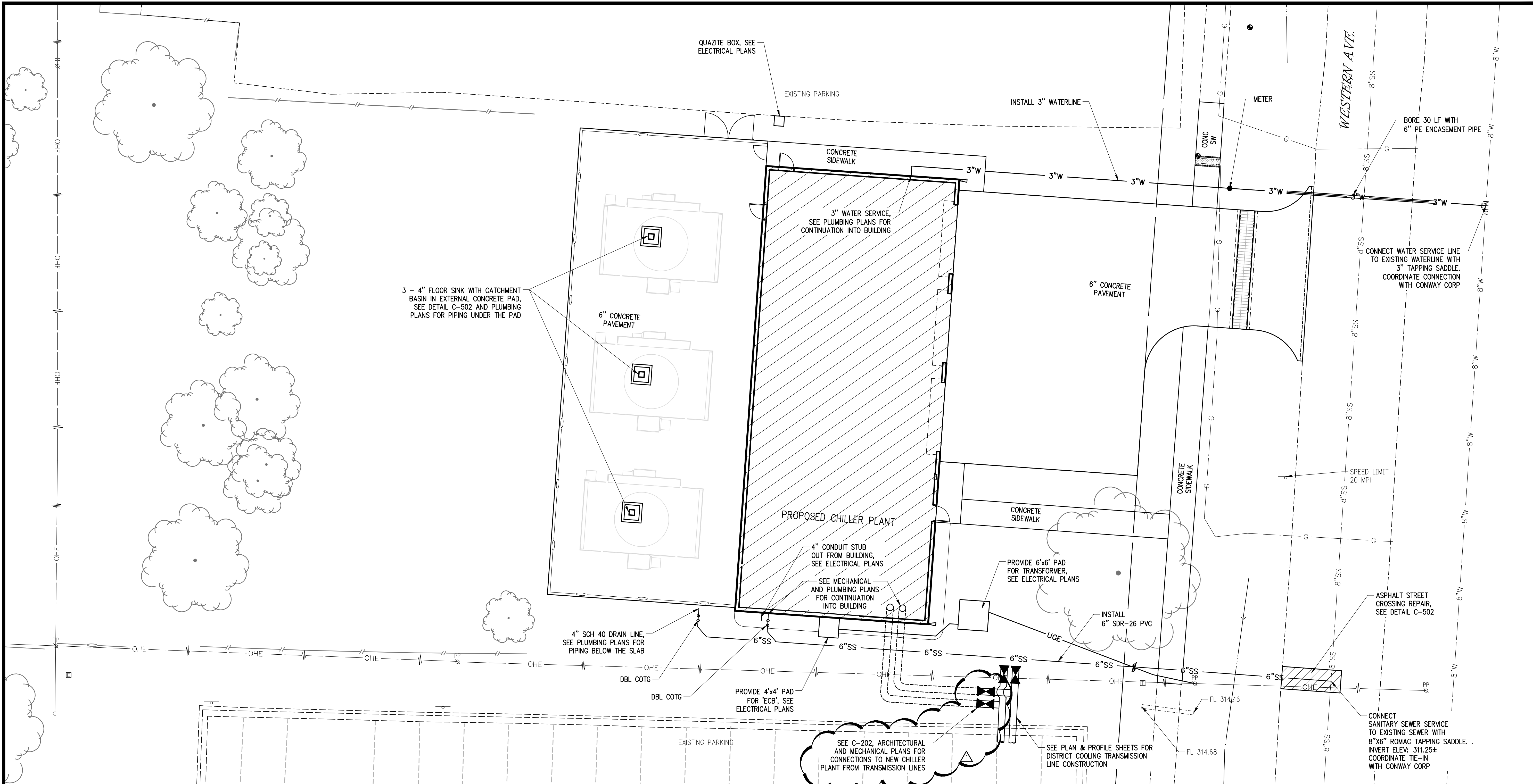


PROJECT NO: 25704201  
ISSUE DATE: 04-06-2026  
CONTACT: G. LONG  
D.C. BY: M. LOVE  
S.C. DATE: 04-06-2026  
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ISSUED FOR CONSTRUCTION

ROY D. BROWN  
04/23/2026

BUILDING GRADING PLAN

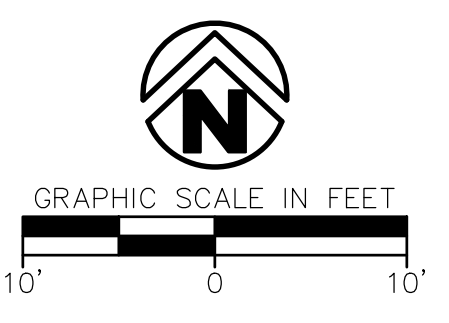
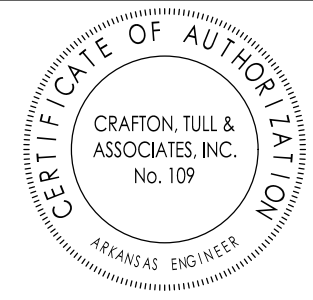


**MATERIAL SPECIFICATIONS**

1. ALL MATERIALS AND CONSTRUCTION METHODS FOR WATER, SANITARY SEWER AND ELECTRIC SERVICES SHALL BE IN ACCORDANCE WITH CONWAY CORPORATION STANDARD SPECIFICATIONS. IF A DISCREPANCY IS NOTED ON THESE PLANS, CONWAY CORPORATION STANDARDS SHALL GOVERN.
2. WATER SERVICE PIPE SHALL BE 3" SDR-21 (200 psi)
3. SANITARY SEWER SERVICE LINE SHALL BE 6" SDR-26 PIPE.

**UTILITY NOTES**

1. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF EXISTING UTILITIES WITHIN THE WORK ZONE. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES' INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING FACILITIES. CONTRACTOR SHALL COORDINATE AND SCHEDULE TIE-INS/CONNECTIONS WITH ALL UTILITY COMPANIES.
2. ALL UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO BACKFILLING.
3. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
4. GENERAL CONTRACTOR IS TO COORDINATE WITH APPROPRIATE UTILITY COMPANIES PRIOR TO CONSTRUCTION, ADJUSTMENT, OR RELOCATION OF EXISTING UTILITIES.
5. THRUST BLOCKING SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
6. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
7. MINIMUM HORIZONTAL SEPARATION BETWEEN THE OUTSIDE WALL OF THE WATERLINE AND THE OUTSIDE WALL OF THE SANITARY SEWER LINE OR SANITARY SEWER MANHOLE SHALL BE AT LEAST TEN FEET, WHERE WATERLINES CROSS SANITARY SEWERS THE WATERLINE SHALL BE PLACED ABOVE THE SEWER WITH A MINIMUM VERTICAL SEPARATION, OUTSIDE-TO-OUTSIDE, OF 18". IF IT IS NOT POSSIBLE TO CONFORM TO THESE DIMENSIONS OR DEFINED PLACEMENT, THE WATERLINE SHALL BE ENCASED IN WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING.
8. THE CONTRACTOR SHALL INCLUDE IN THE BID PRICE ALL MATERIAL AND LABOR ASSOCIATED WITH THE TESTING OF THE WATER AND SEWER LINES REQUIRED BY THE LOCAL AND/OR STATE AGENCIES.
9. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH FINISHED PAVEMENT ELEVATIONS, AND MANHOLES IN UNPAVED AREAS TO BE 6" ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS.
10. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL REGULATIONS.
11. REFER TO BUILDING PLANS FOR SITE LIGHTING AND ELECTRICAL PLAN.
12. ALL MATERIALS, CONSTRUCTION, AND INSPECTION FOR WATER AND SANITARY SEWER LINES SHALL BE PER THE SPECIFICATIONS OF CONWAY CORP.
13. DAMAGE TO ALL EXISTING FACILITIES DESIGNATED TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
14. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, AND EXACT UTILITY ENTRANCE LOCATIONS.
15. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED AS WELL AS COSTS OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
16. DAMAGE TO ALL EXISTING FACILITIES DESIGNATED TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
17. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, AND EXACT UTILITY ENTRANCE LOCATIONS.
18. GENERAL CONTRACTOR SHALL PROVIDE ALL CONDUITS AS SHOWN ON THE PLANS, VERIFY LOCATION OF UTILITY TIE-INS, AND PROVIDE NYLON PULL CORDS INSIDE THE CONDUIT.
19. THE CONTRACTOR SHALL INCLUDE IN BID PRICE THE DAILY RECORD KEEPING OF THE RECORD CONDITION OF ALL OF THE UNDERGROUND UTILITIES, CONSTRUCTION STAKE-OUT, PREPARATION OF THE NECESSARY/REQUIRED WATER AND SEWER RECORD DRAWINGS TO BE SUBMITTED, AND ALL OTHER INFORMATION REQUIRED FOR OBTAINING PERMITS AND RELEASE OF BONDS.
20. CONTRACTOR SHALL PROVIDE IN-DITCH AS-BUILT INFORMATION TO ENGINEER AS REQUIRED BY LOCAL UTILITY PROVIDERS.
20. **ENERGIZED ELECTRICAL LINE SAFETY, WARNINGS, AND ADVANCED NOTICES:** ALL OWNERS, GENERAL CONTRACTORS, AND SUBCONTRACTORS ASSOCIATED WITH THIS PROJECT SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH, COMPLYING WITH, AND THE ENFORCEMENT OF ARKANSAS CODES AR ST § 11-5-307 AND § AR ST 11-5-308 AND ANY OTHER CURRENT STATE CODES PERTAINING TO ADVANCE NOTICE REQUIREMENTS AND FOR SAFETY OF ALL PERSONNEL, INCLUDING THE GENERAL PUBLIC, PERTAINING TO ANY WORK, MOVEMENT, AND ACTIVITY IN CLOSE PROXIMITY TO ANY ENERGIZED ELECTRICAL LINE.



UNIVERSITY OF CENTRAL ARKANSAS  
DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS  
CONWAY, ARKANSAS

Key Plan

No.	Description	Date
1	Addendum #2	04-23-2026

No.	Description	Date
1	Addendum #2	04-23-2026

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PROJECT NO: 25704201  
ISSUE DATE: 04-06-2026  
CONTACT: G. LONG  
DESIGNER: M. LOVE  
CHECK DATE: 04-06-2026

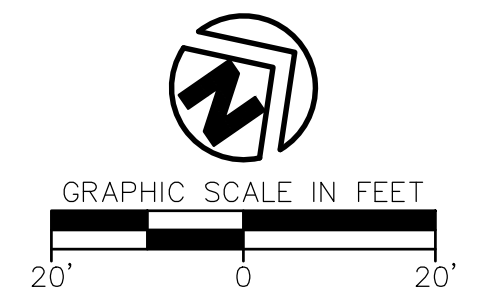
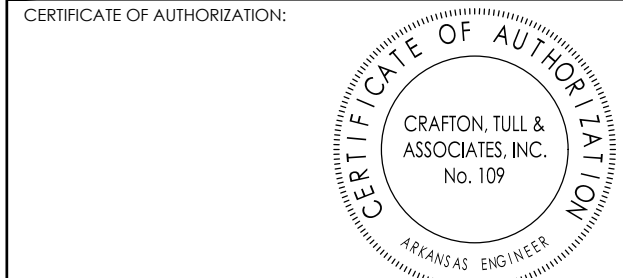
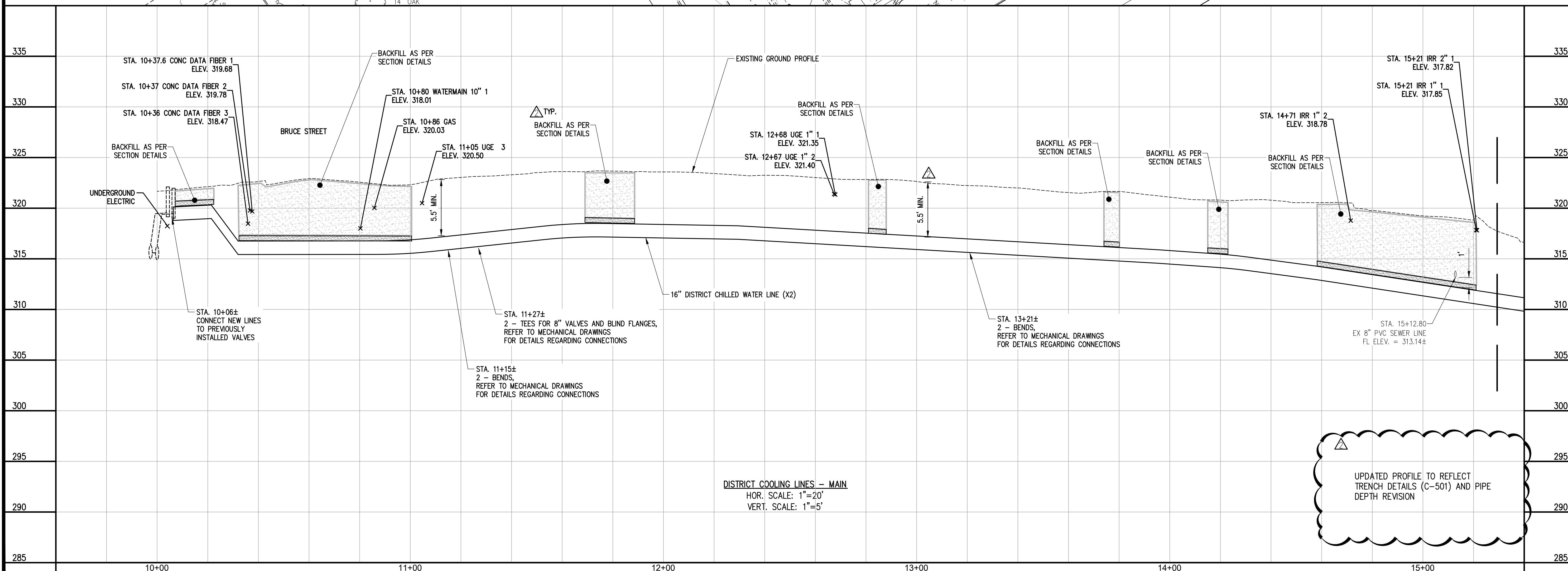
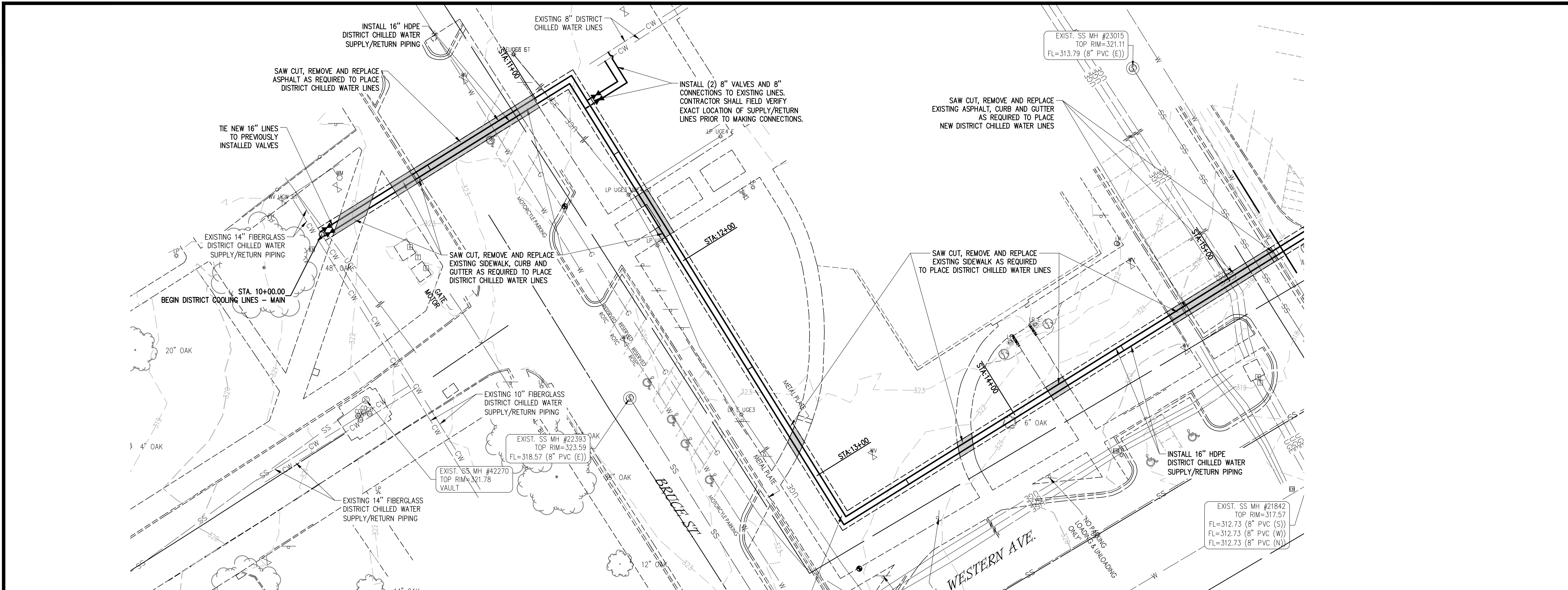
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STATE OF ARKANSAS  
REGISTERED PROFESSIONAL ENGINEER  
No. 10855  
ROY D. BROWN  
04/23/2026

UTILITY PLAN - BLDG UTILITIES

DRAWING CONTROL: JAC/CHALLENGER/IMPASSE/STREIBER/CONWAY/UTILITY PLANNING  
LAST MODIFIED BY: CLAY HINDS/04/23/2026 10:42 AM





UNIVERSITY OF CENTRAL ARKANSAS  
CAMPUS  
DISTRICT LOOP AND  
CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS  
CONWAY, ARKANSAS

Key Plan

No.	Description	Date
1	Addendum #1	04-21-2026
2	Addendum #2 - Pipe Depth Adjusted Per Trench Detail Revision	04-23-2026

No.	Description	Date
1	Addendum #1	04-21-2026
2	Addendum #2 - Pipe Depth Adjusted Per Trench Detail Revision	04-23-2026

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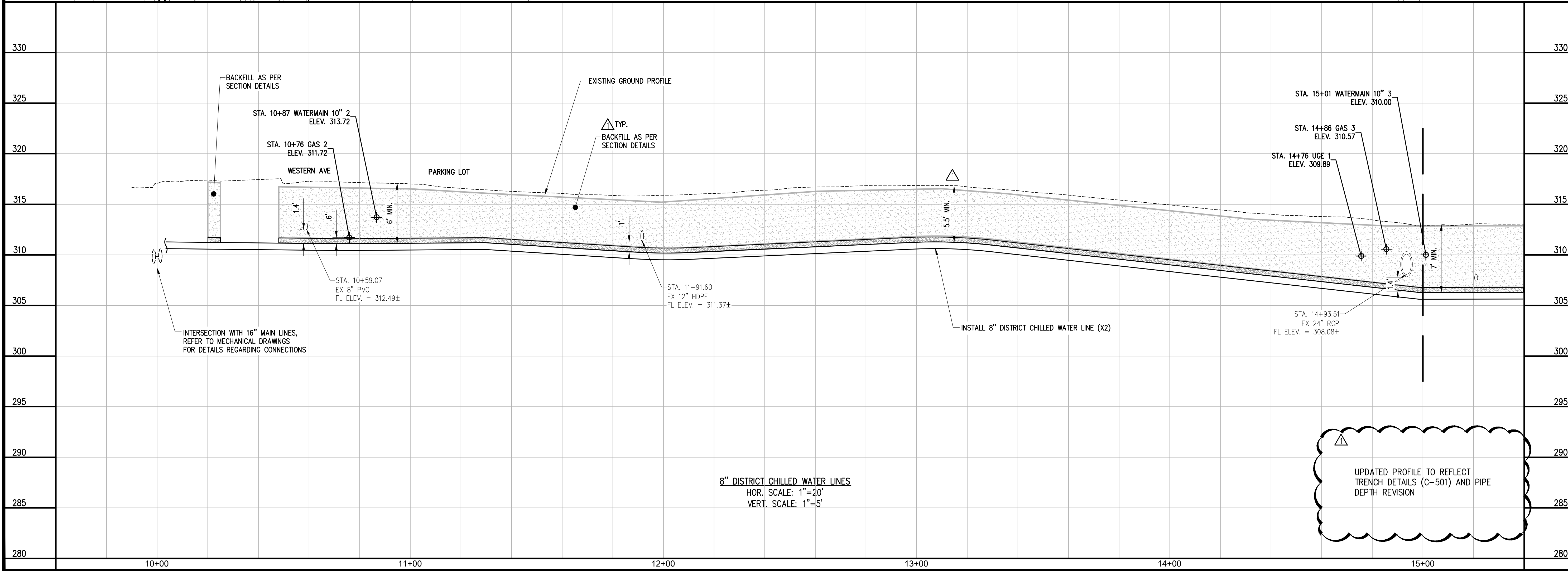
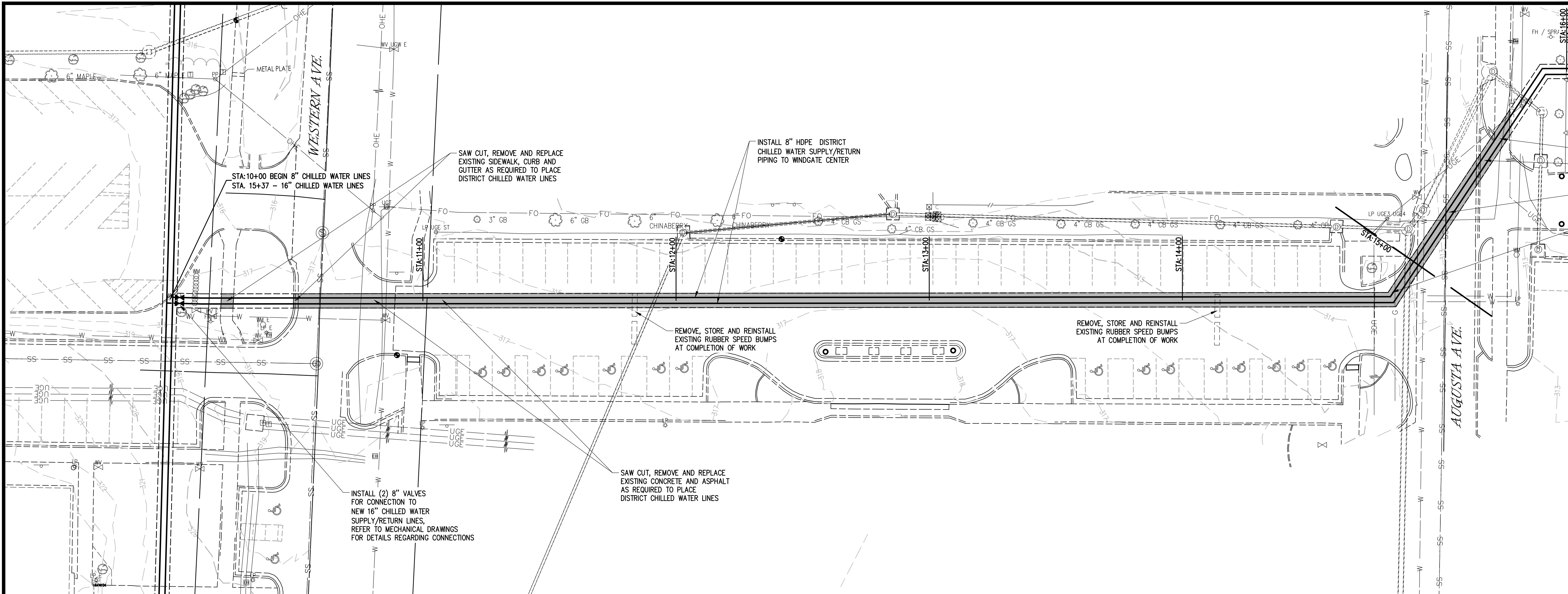
PROJECT NO: 25704201  
ISSUE DATE: 04-06-2026  
CONTACT: G. LONG  
D.C. BY: M. LOVE  
D.C. DATE: 04-06-2026

STATE OF ARKANSAS  
REGISTERED PROFESSIONAL ENGINEER  
No. 10855  
M. LOVE  
D. BROWN

ISSUED FOR CONSTRUCTION  
04/23/2026

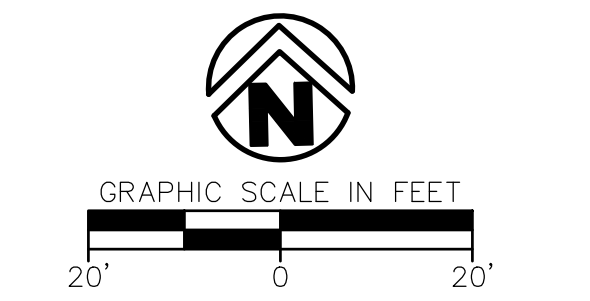
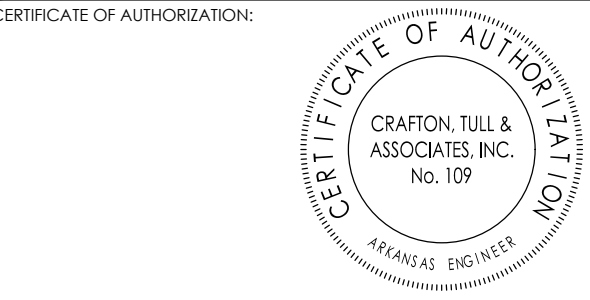
DISTRICT COOLING LINES - MAIN  
P&P





8" DISTRICT CHILLED WATER LINES  
 HOR. SCALE: 1"=20'  
 VERT. SCALE: 1"=5'

UPDATED PROFILE TO REFLECT TRENCH DETAILS (C-501) AND PIPE DEPTH REVISION



UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT  
 UNIVERSITY OF CENTRAL ARKANSAS CONWAY, ARKANSAS

Key Plan

No.	Description	Date
1	Addendum #2 - Pipe Depth Adjusted Per Trench Detail Revision	04-23-2026

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PROJECT NO: 25704201  
 ISSUE DATE: 04-06-2026  
 CONTACT: G. LONG  
 DESIGNED BY: M. LOVE  
 QC DATE: 04-06-2026

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10855  
 ROY D. BROWN  
 04/23/2026

DISTRICT COOLING LINES - EAST RUN P&P

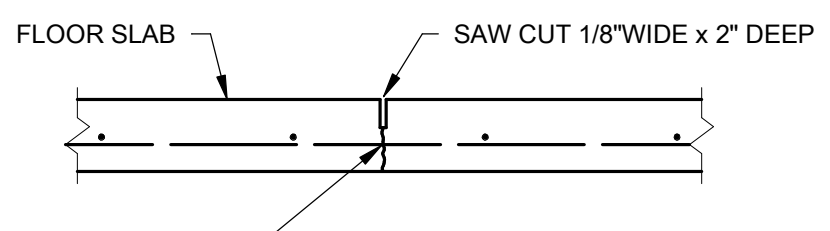
DRAWING IS CONTROLLED BY THE PROJECT MANAGER. ANY CHANGES TO THIS DRAWING MUST BE APPROVED BY THE PROJECT MANAGER. DATE: 04/23/2026 10:48 AM. UNIT: FOOTER BY: CHAT BROWN





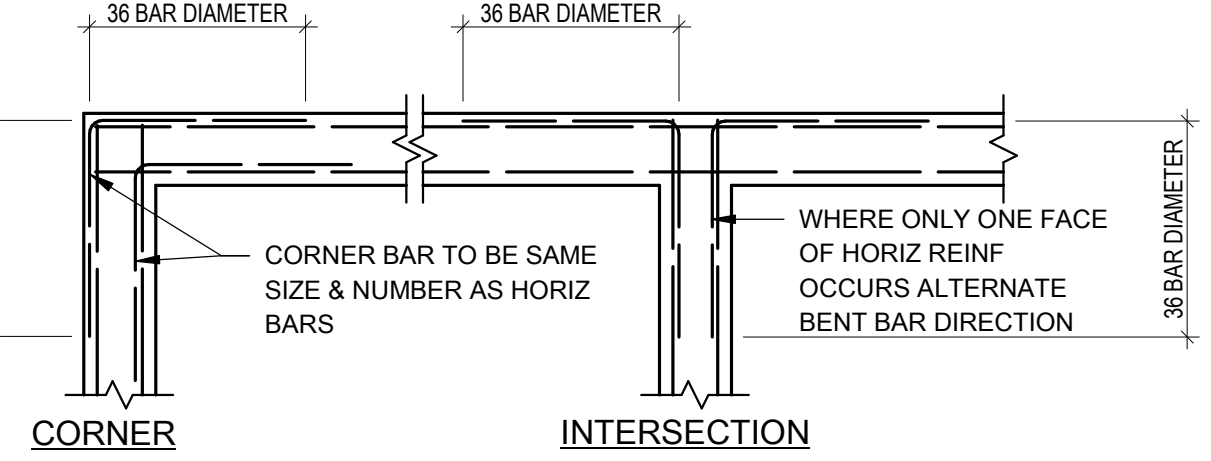


1/4" WIDE x 3/4" DEEP FINAL SAWCUT FOR JOINT FILLER (TYP)  
GRIND JOINT FILLER LEVEL WITH THE SLAB AFTER IT HAS CURED.  
1/4" INITIAL SAWCUT



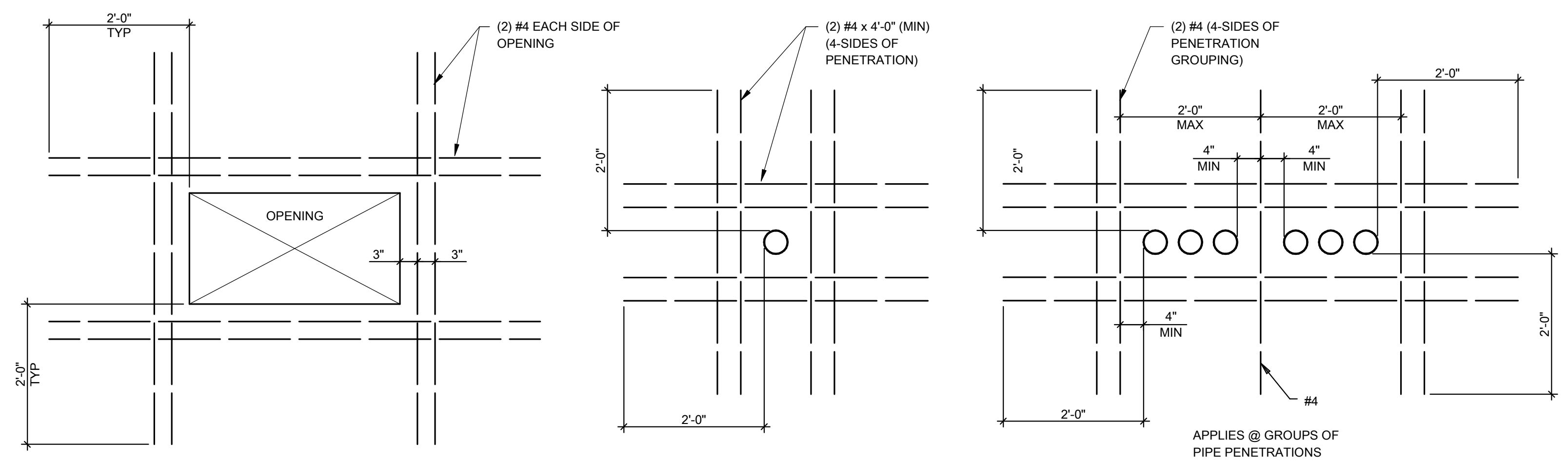
**NOTE:**  
SLAB JOINT FILLER MATERIAL SHALL BE SEMI-RIGID, SELF-LEVELING, LOW TENSILE, LOW ADHESION, NON-BRITTLE EPOXY (SHORE A80 HARDNESS). FILL JOINT FULL DEPTH WITH MULTIPLE PASSES. TOP OF FILLER SHALL BE FLUSH WITH TOP OF SLAB OR PREFERABLY SLIGHTLY CROWNED. ALLOW SLAB TO CURE AS LONG AS PRACTICAL BEFORE INSTALLING JOINT FILLER TO ALLOW FOR SLAB SHRINKAGE. INSTALL FILLER PER MANUFACTURER'S RECOMMENDATIONS.

**(A) CONTROL JOINT DETAIL**  
3/4" = 1'-0"



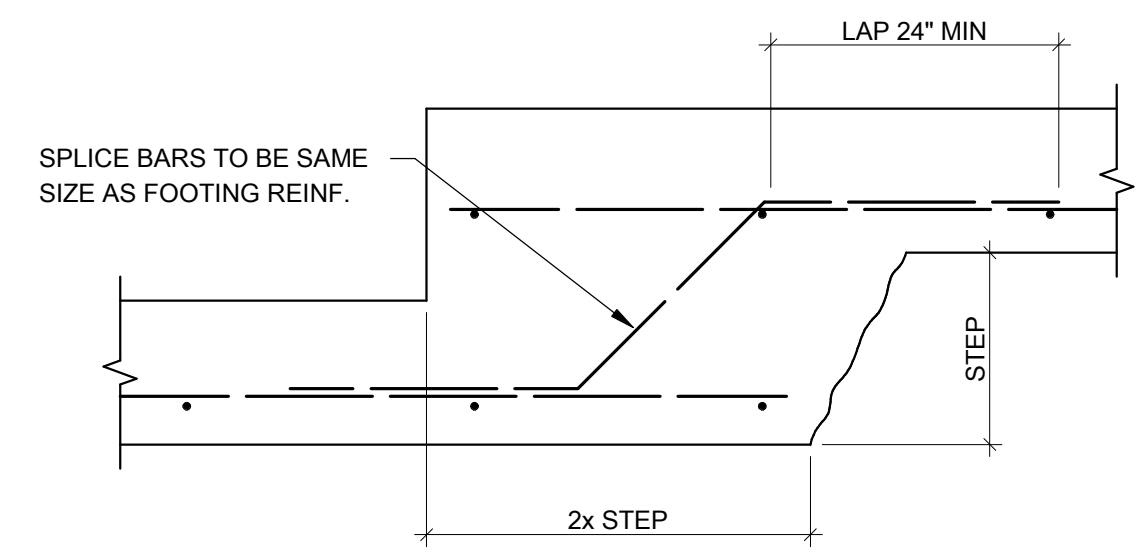
**TYPICAL FOR:**  
CONC WALLS  
CONC FOOTINGS  
THICKENED SLABS  
BOND BEAMS  
CONC TURNDOWNS

**(B) TYPICAL CORNER BAR DETAIL**  
NTS



TYP @ OPENINGS & PIPING LARGER THAN 6" DIA OR 6" SQ & GROUPS OF (2) PIPES  
APPLIES AT PLUMBING PENETRATIONS  
APPLIES @ GROUPS OF PIPE PENETRATIONS

**(C) TYP- REINF- @ SLAB OPENINGS & PIPE PENETRATIONS**  
NTS



**(D) CONT FOOTING STEP DETAIL**  
NTS

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT  
UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
4-24-2026	ADDENDUM #2	

ISSUE FOR REVIEW:

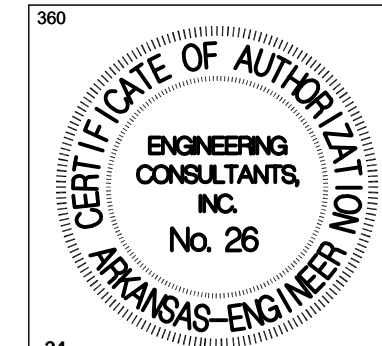
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ISSUE FOR CONSTRUCTION:

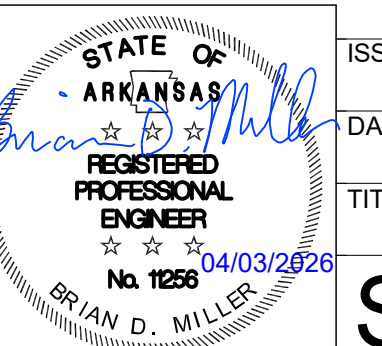
DATE: APRIL 6, 2026

TITLE: FOUNDATION DETAILS

**S200**



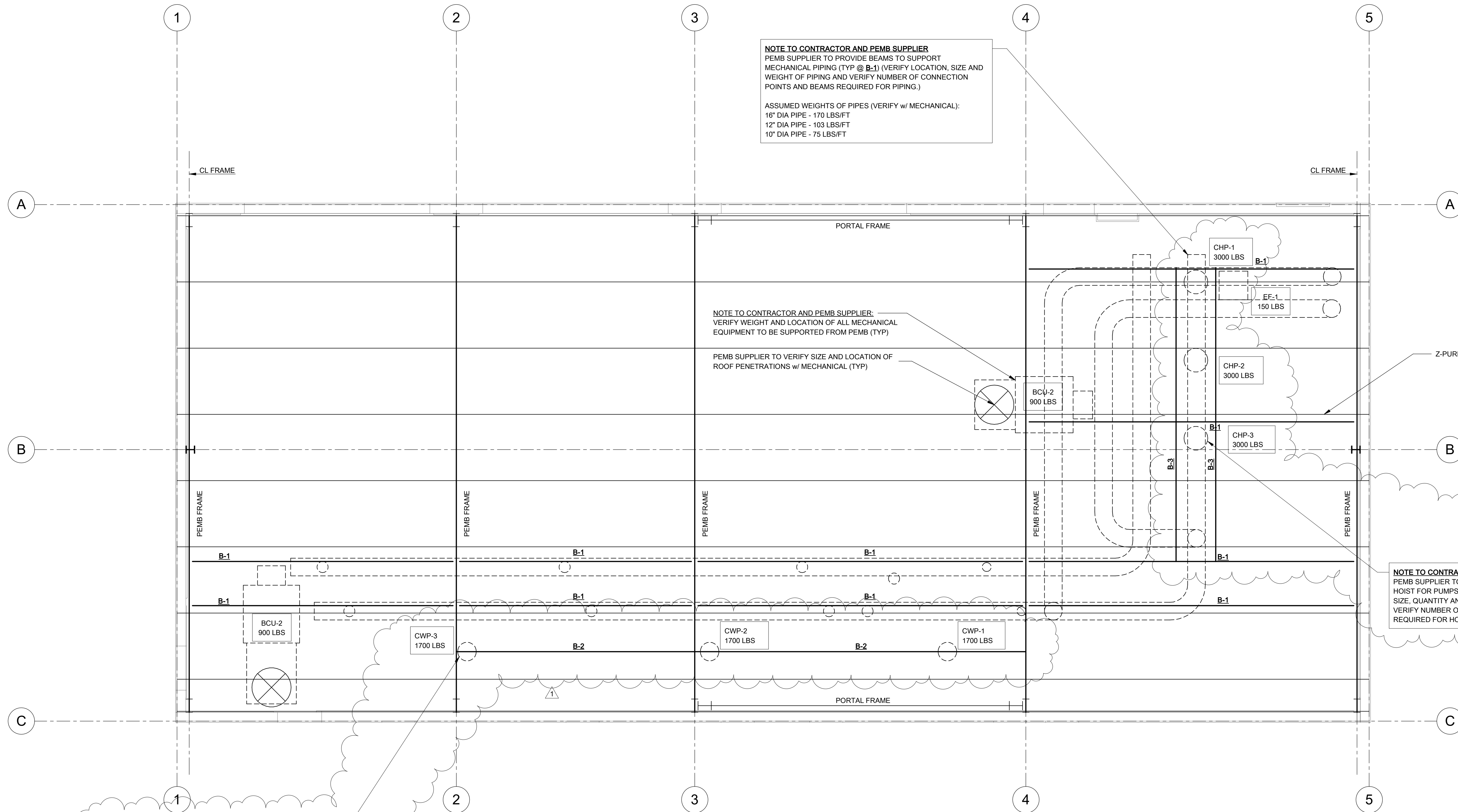
**Engineering Consultants, Inc.**  
Structural Engineers  
401 West Capitol Avenue, Suite 305  
Little Rock, Arkansas 72201-3401  
Phone No: (501) 376-3752



JOB# 25-280



VERIFY SCALE  
0 1"



**NOTE TO CONTRACTOR AND PEMB SUPPLIER**  
PEMB SUPPLIER TO PROVIDE BEAMS TO SUPPORT MECHANICAL PIPING (TYP @ B-1) (VERIFY LOCATION, SIZE AND WEIGHT OF PIPING AND VERIFY NUMBER OF CONNECTION POINTS AND BEAMS REQUIRED FOR PIPING.)  
  
ASSUMED WEIGHTS OF PIPES (VERIFY w/ MECHANICAL):  
16" DIA PIPE - 170 LBS/FT  
12" DIA PIPE - 103 LBS/FT  
10" DIA PIPE - 75 LBS/FT

**NOTE TO CONTRACTOR AND PEMB SUPPLIER:**  
VERIFY WEIGHT AND LOCATION OF ALL MECHANICAL EQUIPMENT TO BE SUPPORTED FROM PEMB (TYP)

PEMB SUPPLIER TO VERIFY SIZE AND LOCATION OF ROOF PENETRATIONS w/ MECHANICAL (TYP)

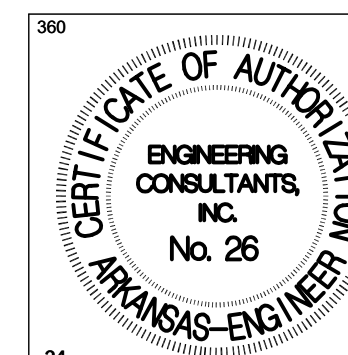
**NOTE TO CONTRACTOR AND PEMB SUPPLIER**  
PEMB SUPPLIER TO PROVIDE BEAMS (TYP @ B-3) TO SUPPORT HOIST FOR PUMPS (CHP @ (3) PLACES) (VERIFY LOCATION, SIZE, QUANTITY AND WEIGHT OF PUMPS w/ MECHANICAL AND VERIFY NUMBER OF CONNECTION POINTS AND BEAMS REQUIRED FOR HOIST w/ MECHANICAL AND OWNER)

**NOTE TO CONTRACTOR AND PEMB SUPPLIER**  
PEMB SUPPLIER TO PROVIDE BEAMS (TYP @ B-2) TO SUPPORT HOIST FOR PUMPS (CWP @ (3) PLACES) (VERIFY LOCATION, SIZE, QUANTITY AND WEIGHT OF PUMPS w/ MECHANICAL AND VERIFY NUMBER OF CONNECTION POINTS AND BEAMS REQUIRED FOR HOIST w/ MECHANICAL AND OWNER)

**ROOF FRAMING PLAN**  
1/4" = 1'-0"

**UCA CAMPUS DISTRICT LOOP & CHILLER PLANT**  
UCA CAMPUS, CONWAY, AR

4-24-2026	ADDENDUM #2
#	DATE DESCRIPTION
REVISIONS HISTORY	
ISSUE FOR REVIEW:	
ISSUE FOR PRICING:	
ISSUE FOR CONSTRUCTION:	
DATE:	APRIL 6, 2026
TITLE:	FRAMING PLAN



**Engineering Consultants, Inc.**  
Structural Engineers  
401 West Capitol Avenue, Suite 305  
Little Rock, Arkansas 72201-3401  
Phone No: (501) 376-3752



JOB# 25-280

**S301**



ADDENDUM NUMBER: TWO (2)

TO: PROJECT MANUAL AND DRAWINGS

FOR: UCA – Campus District Loop and Chiller Plant  
Conway, Arkansas  
Pettit & Pettit Project #25-048  
AMR Architects

DATE: April 24, 2026

BID DATE: April 28, 2026

This Addendum forms a part of the Contract Documents and modifies or interprets the Project Manual and Drawings, as noted below.

**ADDENDUM ITEMS - Drawings:**

**MECHANICAL:**

- A1. REFER TO SHEET M001 – DELETED THE MOVING OF THE EXISTING HEATING WATER CONTROL SYSTEM PANEL AS NOTED BY KEYED NOTE 14. THE EXISTING HEATING WATER CONTROL SYSTEM PANEL WILL REMAIN IN ITS CURRENT LOCATION. CHANGE KEYED NOTE 14 TO READ, “EXISTING HEATING WATER SYSTEM CONTROL PANEL TO REMIAN.”
- A2. REFER TO SHEET M101 – ADDED A NEW CONTROL SYSTEM GLOBAL CONTROLLER PANEL ADJACENT TO THE BUILDING CONTROL SYSTEM NOTED BY KEYED NOTE 35. CHANGED AIR SEPARATOR AS-1 TO SPIROTHERM MODEL 14 VDN.
- A3. REFER TO SHEET M103 – INDICATED THAT THE EXISTING HEATING WATER CONTROL SYSTEM PANEL SHALL REMAIN IN THE EXISTING LOCTION. DELETED RELOCATION OF EXISTING HEATING WATER CONTROL SYSTEM PANEL TO SOUTH WALL OF SOUTH PLANT.
- A4. REFER TO SHEET M606 – REVISED KEYED NOTES TO ADD A FLOW METER AND REVISED CONTROL DIAGRAM FOR CONTROL OF MAKE-UP WATER SYSTEM FLOW.

**PLUMBING:**

NO ADDENDA

## **ELECTRICAL:**

- A5.** REFER TO SHEET E102 – NORTH PLANT PLAN – POWER
  - a. ADDED DATA FOR GLOBAL CONTROLLER
- A6.** REFER TO SHEET E103 – NORTH PLANT PLAN - SYSTEMS
  - a. ADDED POWER FOR GLOBAL CONTROLLER.
- A7.** REFER TO SHEET E201 – ELECTRICAL PANEL & RISER - NORTH PLANT:
  - a. MODIFIED NOTE #1 ON DATA RISER DIAGRAM
  - b. MODIFIED NOTE #5 ON POWER SYSTEM RISER DIGARM – NORTH PLANT.
- A8.** REFER TO SHEET E301 – ELECTRICAL PANELS – NORTH PLANT
  - a. REVISED NOTES FOR POWER METER
  - b. REMOVED BREAKER SHOWN ON ELEVATION
- A9.** REER TO SHEET E302 – ELECTRICAL PANELS – NORTH PLANT:
  - a. ADDED BREAKER FOR GLOBAL CONTROLLER CIRCUIT (L-40)
- A10.** REFER TO SHEET E401 – SOUTH PLANT PLAN – ELECTRICAL
  - a. EXISTING NWC CONTROL PANEL WILL REMAIN IN SAME LOCATION; REMOVED KEYED NOTE ASSOCIATED WITH RELOCATED CONTROL PANEL. FOR REFERENCE, SHOWING EXISTING LOCATION.
  - b. REVISED KEYED NOTE #2.

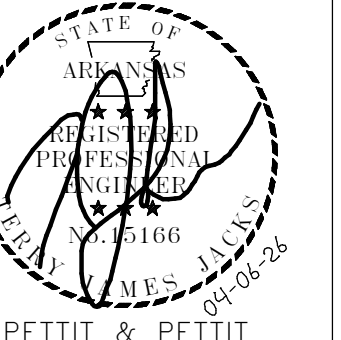
## **ADDENDUM ITEMS - Specifications:**

### **MECHANICAL**

NO SPECIFICATION ADDENDA

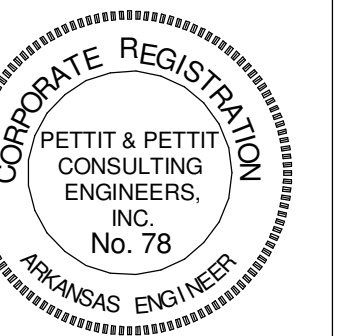


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LITTLE ROCK, ARKANSAS

VERIFY SCALE  
0 1"



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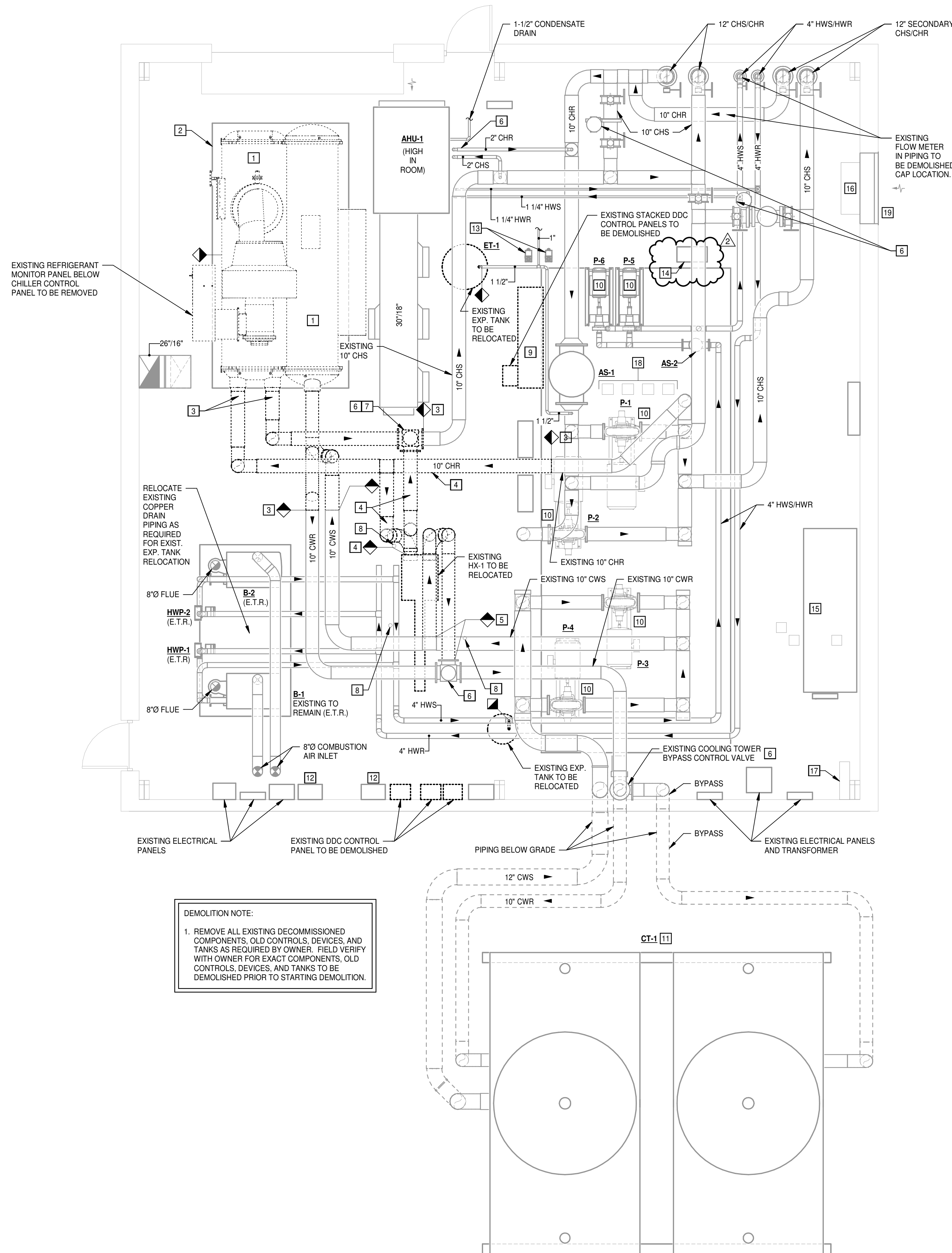
UCA CAMPUS DISTRICT LOOP &  
CHILLER PLANT  
UCA CAMPUS, CONWAY, AR

### HVAC GENERAL DEMOLITION NOTES

1. ALL LIGHTER SOLID LINES REPRESENT PIPING, DUCTWORK, EQUIPMENT, ETC. TO REMAIN.
2. ALL DARKER DASHED LINES REPRESENT PIPING, DUCTWORK, EQUIPMENT, ETC. TO BE REMOVED.
3. FIELD VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING ITEMS SHOWN ON THIS PLAN THAT ARE TO BE CONNECTED TO.
4. SEE ARCHITECTURAL PLANS FOR REMOVAL AND REPLACEMENT OF CEILINGS.

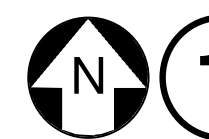
### HVAC DEMOLITION KEYED NOTES

- 1 REMOVE EXISTING CHILLER COMPLETE, INCLUDING ASSOCIATED PIPING, REFRIGERANT VENTING, AND CONTROLS.
- 2 EXISTING CONCRETE PAD TO REMAIN.
- 3 REMOVE EXISTING 10" CHS / CHR PIPING INCLUDING CONNECTION TO CHILLER AND EXISTING RISER.
- 4 REMOVE EXISTING CHS / CHR PIPING SERVING EXISTING PLATE-AND-FRAME HEAT EXCHANGER.
- 5 REMOVE EXISTING CWS / CWR PIPING SERVING EXISTING PLATE-AND-FRAME HEAT EXCHANGER.
- 6 EXISTING CONTROL VALVE ACTUATOR TO BE REPLACED.
- 7 EXISTING 3-WAY CONTROL VALVE TO BE ROTATED TO WHERE SERVICE TO THE PLATE-AND-FRAME HEAT EXCHANGER IS IN THE VERTICAL.
- 8 EXISTING 3" SUPPORT STANDS FROM FLOOR.
- 9 EXISTING MOTOR CONTROL CENTER TO BE REMOVED. SEE ELECTRICAL.
- 10 EXISTING HEATING WATER PUMP TO REMAIN.
- 11 EXISTING COOLING TOWER TO REMAIN.
- 12 EXISTING COOLING TOWER VARIABLE FREQUENCY DRIVES (VFD'S) TO REMAIN.
- 13 EXISTING HEATING WATER PUMP VFD'S TO REMAIN.
- 14 EXISTING HEATING WATER SYSTEM CONTROL PANEL TO BE REMAIN IN PLACE.
- 15 EXISTING ELECTRICAL SWITCH GEAR.
- 16 EXISTING CHILLED WATER SYSTEM CHEMICAL FEED SYSTEM TO REMAIN.
- 17 EXISTING CONDENSER WATER SYSTEM CHEMICAL FEED SYSTEM TO REMAIN.
- 18 EXISTING PUMP DIFFERENTIAL PRESSURE SENSORS TO BE REPLACED.
- 19 EXISTING INTAKE LOUVER L-1.



**DEMOLITION NOTE:**

1. REMOVE ALL EXISTING DECOMMISSIONED COMPONENTS, OLD CONTROLS, DEVICES, AND TANKS AS REQUIRED BY OWNER. FIELD VERIFY WITH OWNER FOR EXACT COMPONENTS, OLD CONTROLS, DEVICES, AND TANKS TO BE DEMOLISHED PRIOR TO STARTING DEMOLITION.



## 1 SOUTH PLANT FLOOR PLAN - HVAC DEMO

SCALE: 1/4" = 1'-0"

CONSTRUCTION DOCUMENTS

M001

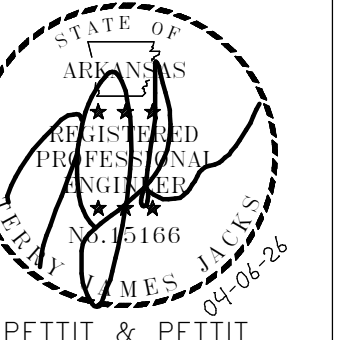
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4-24-2025	ADDENDUM #2	
REVISIONS HISTORY		

DATE: April 06, 2026

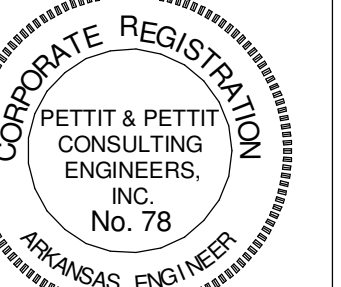
TITLE: SOUTH PLANT FLOOR PLAN - DEMO



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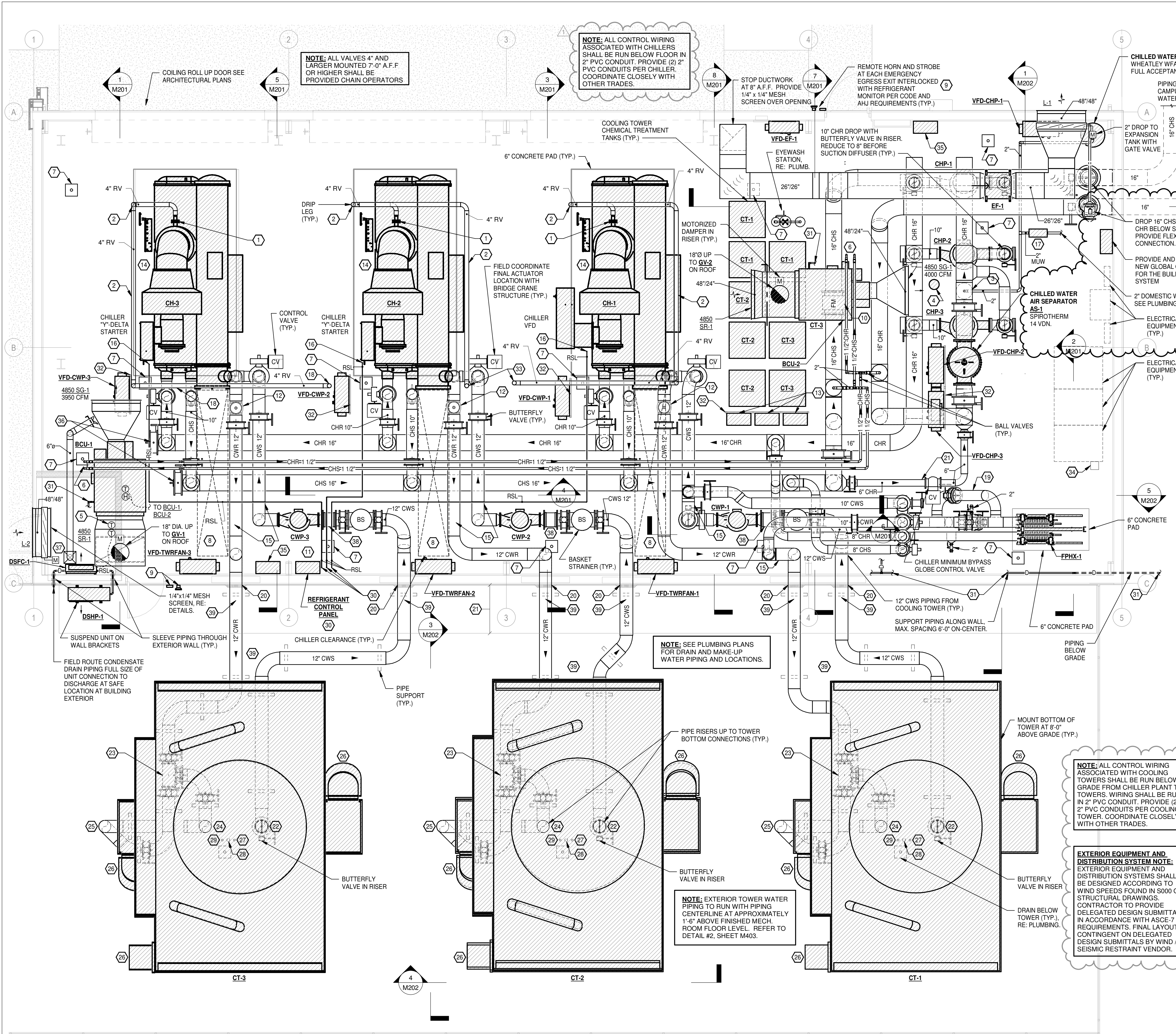
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### PIPING GENERAL NOTES

- ALL NEW EXPOSED PIPING INSIDE THE BUILDING SHALL BE WRAPPED IN A COLORED PVC FITTING COVER AND JACKETING SYSTEM EQUAL TO JOHNSON MANVILLE ZESTON 2000 SERIES. COLORS SHALL BE AS FOLLOWS:  
CHS = BLUE  
CHR = LIGHT BLUE  
DCHR = PURPLE  
DCHR = GRAY  
CWS = GREEN  
CWR = PEA GREEN
- ALL PIPING SHALL BE CLEARLY LABELED AND HAVE DIRECTION ARROWS, AS PER THE SPECIFICATIONS.
- ALL EXTERIOR EXPOSED PIPING SUSCEPTIBLE TO FREEZING, SUCH AS CONDENSATE PIPING, SHALL BE INSULATED WITH 1" FIBERGLASS PIPING INSULATION WITH 0.020" ALUMINUM JACKET AND HEAT TRACED AT 5 WATTS/FOOT. SEAL JACKET WATER-TIGHT.
- PROVIDE FRAMED VALVE TAG SCHEDULE PER SPECIFICATIONS.
- WHERE POSSIBLE, INSTALL BUTTERFLY VALVES WHERE POSITION INDICATOR CAN BE SEEN FROM THE FLOOR.

### HVAC KEYED NOTES

- CHILLER RUPTURE DISC. SEE DETAIL #6, M401.
- 4" REFRIGERANT VENT FROM CHILLER RUPTURE DISC. TEE WITH BOTTOM DRIP LEG. RISE PIPING TO RUN WITH CENTERLINE AT 11'-2" AFF.
- TIE MAKE-UP WATER LINE TO BOTTOM OF 16" CHR WITH GATE VALVE.
- CHEMICAL POT FEEDER. SEE PIPING SCHEMATIC DRAWING, M501.
- HIGH SPACE TEMPERATURE ALARM SENSOR.
- DROP 1-1/2" CHS/CHR AND CONNECT TO BLOWER COIL UNIT.
- FLOOR DRAIN (TYP.). SEE PLUMBING PLANS.
- MAINTAIN CLEAR FLOOR SPACE AND HEIGHT FOR CHILLER, CONDENSER WATER TUBE MAINTENANCE.
- REMOTE HORN AND STROBE INTERLOCKED WITH REFRIGERANT MONITOR.
- CHILLED WATER SYSTEM FLOW METER. PROVIDE A MINIMUM LENGTH OF FOUR (4) PIPE DIAMETERS UPSTREAM OF FLOW METER AND A MINIMUM LENGTH OF THREE (3) PIPE DIAMETERS DOWNSTREAM OF FLOW METER.
- REFRIGERANT MONITOR PANEL FOR CH-1, CH-2, AND CH-3.
- PLUG TYPE BALANCING VALVE (TYP.).
- CHEMICAL FEED SYSTEM CONTROL PANEL.
- MOUNT CHILLERS ON MANUFACTURER'S PROVIDED ISOLATION PADS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 3/4" TAP IN PIPING WITH BALL VALVE FOR TOWER CHEMICAL TREATMENT SYSTEM.
- DROP RSL PIPING TO 12" A.F.F.
- MAKE-UP WATER (MUW) PRESSURE REDUCING STATION. SEE PIPING SCHEMATIC, SHEET M501.
- 4" REFRIGERANT VENT TO RISE AND RUN WITH CENTERLINE AT 14'-0" AFF. AT END OF RUN RISE TO GOOSENECK ON ROOF.
- 10" BYPASS PIPING FOR BACK FLUSHING. SEE DETAIL #6, SHEET M403.
- PIPING PENETRATES EXTERIOR WALL AT 1'-6" AFF. PIPING IS 12" DIAMETER WITH 2" INSULATION FOR A TOTAL OF 16" DIAMETER. SEE DETAIL #6, SHEET M403 FOR PIPE SUPPORTS.
- REDUCE 16" CHS TO 6" CHILLER MINIMUM FLOW BYPASS.
- TRANSITION FROM 10" TOWER CONNECTION TO 12" CWS. RUN 12" UNDER TOWER TO EXTERIOR WALL.
- 3-WAY TOWER BYPASS CONTROL VALVE.
- TRANSITION FROM 12" CWR TO 10" AND RUN PIPING UP THROUGH TOWER CHAMBER. CONNECT TO THE TOWER DISTRIBUTION HEADER.
- 12" TOWER BYPASS. RISE AND EXTEND TO TOWER. TRANSITION TO 10" CWR AND CONNECT TO TOWER.
- ACCESS PLATFORM AND LADDER.
- 1 1/2" MAKE-UP WATER TO TOWER. TRANSITION TO 2" BOTTOM CONNECTION.
- 3" OVERFLOW. BOTTOM CONNECTION.
- 2" DRAIN. BOTTOM CONNECTION.
- 1/2" RIGID COPPER TUBING (TYP.). DROP NEAR CHILLER 12" AFF. PROVIDE WITH END OF LINE FILTER, AUDIBLE ALARM, AND HORN STROBE. INSTALL PER MONITOR MANUFACTURER'S INSTRUCTIONS. COORDINATE ALARM / HORN STROBE LOCATIONS WITH AHJ AND CODE REQUIREMENTS.
- FIELD ROUTE CONDENSATE DRAIN PIPING FULL SIZE OF UNIT CONNECTION (1" MINIMUM) TO SOUTH SIDE OF BUILDING. SLOPE PIPE AT 1/4"/FT. MINIMUM. TURN PIPING DOWN BELOW GRADE AND DISCHARGE PIPING INTO NEARBY SWALE. RE: CIVIL PLANS. PROVIDE DRAIN PIPING CLEANOUTS AT 20 FT. MAXIMUM SPACING.
- NEW STAINLESS STEEL UNI-STRUT SUPPORT FRAME.
- 4" REFRIGERANT VENT UP TO GOOSENECK ON ROOF.
- NEW ELECTRICAL CONSUMPTION INTERFACE MODULE PROVIDED WITH ELECTRICAL EQUIPMENT MSB. SEE ELECTRICAL DRAWINGS. PROVIDE INTERFACE WITH BUILDING CONTROL SYSTEM.
- BUILDING CONTROL SYSTEM (BCS) PANEL.
- PROVIDE VALVE WITH BLIND FLANGE.
- 612 CD-1, 50 CFM.
- FLEXIBLE CONNECTION.
- INSTALL HEAT TRACING CHROMALOX UAS POWER CONNECTION KIT (277V), SRL 10-2CT HEAT TRACE WIRE, USE ABOVE INSULATION END SEAL, PS-20 PIPE STRAPS, CL-1 CAUTION LABELS, FT-3 FIBERGLASS TAPE.



NOTE: ALL VALVES 4" AND LARGER MOUNTED 7'-0" A.F.F. OR HIGHER SHALL BE PROVIDED CHAIN OPERATORS

NOTE: ALL CONTROL WIRING ASSOCIATED WITH CHILLERS SHALL BE RUN BELOW FLOOR IN 2" PVC CONDUIT. PROVIDE (2) 2" PVC CONDUITS PER CHILLER. COORDINATE CLOSELY WITH OTHER TRADES.

STOP DUCTWORK AT 8" A.F.F. PROVIDE 14" X 14" MESH SCREEN OVER OPENING

CHILLED WATER EXPANSION TANK WHEATLEY WFA 450, 120 GALLONS, FULL ACCEPTANCE. SET AT 15 PSI.

NOTE: SEE PLUMBING PLANS FOR DRAIN AND MAKE-UP WATER PIPING AND LOCATIONS.

NOTE: ALL CONTROL WIRING ASSOCIATED WITH COOLING TOWERS SHALL BE RUN BELOW GRADE FROM CHILLER PLANT TO TOWERS. WIRING SHALL BE RUN IN 2" PVC CONDUIT. PROVIDE (2) 2" PVC CONDUITS PER COOLING TOWER. COORDINATE CLOSELY WITH OTHER TRADES.

EXTERIOR EQUIPMENT AND DISTRIBUTION SYSTEM NOTE: EXTERIOR EQUIPMENT AND DISTRIBUTION SYSTEMS SHALL BE DESIGNED ACCORDING TO WIND SPEEDS FOUND IN 5000 OF STRUCTURAL DRAWINGS. CONTRACTOR TO PROVIDE DELEGATED DESIGN SUBMITTAL IN ACCORDANCE WITH ASCE-7 REQUIREMENTS. FINAL LAYOUT CONTINGENT ON DELEGATED DESIGN SUBMITTALS BY WIND / SEISMIC RESTRAINT VENDOR.

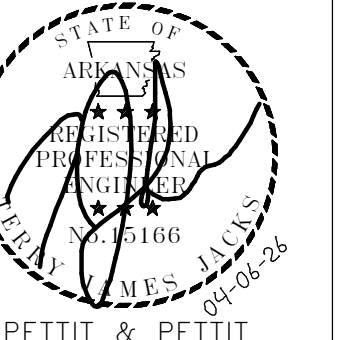
NOTE: EXTERIOR TOWER WATER PIPING TO RUN WITH PIPING CENTERLINE AT APPROXIMATELY 1'-6" ABOVE FINISHED MECH. ROOM FLOOR LEVEL. REFER TO DETAIL #2, SHEET M403.

**1 CHILLER PLANT LOWER PLAN - HVAC**  
SCALE: 1/4" = 1'-0"

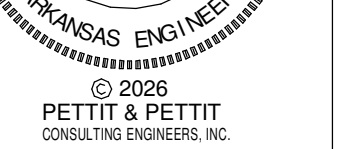
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1	4-21-2025	ADDENDUM #1
#		REVISIONS HISTORY



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### HVAC GENERAL NOTES

- ALL LIGHTER SOLID LINES REPRESENT PIPING, DUCTWORK, EQUIPMENT, ETC. TO REMAIN.
- ALL DARKER SOLID LINES REPRESENT NEW PIPING, DUCTWORK, EQUIPMENT, ETC.
- FIELD VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING ITEMS SHOWN ON THIS PLAN THAT ARE TO BE CONNECTED TO.

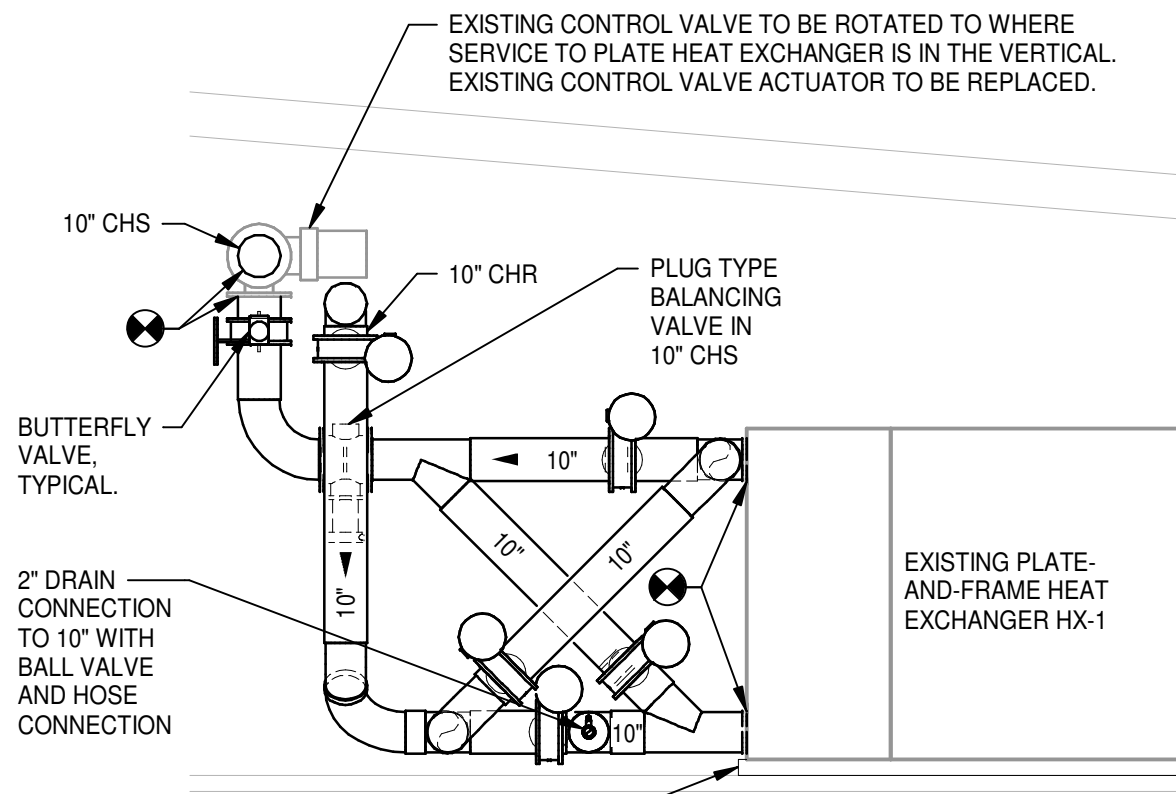
### HVAC KEYED NOTES

- NEW 12" CHS FROM CHILLER TO ELBOW AT BOTTOM OF RISER. TRANSITION TO 10" CHS AT BOTTOM OF RISER.
- NEW 12" CHR FROM CHILLER TO ELBOW AT BOTTOM OF RISER. TRANSITION TO 10" CHR AT BOTTOM OF RISER.
- TRANSITION 12" FROM NEW CHILLER TO 10" AT BOTTOM OF RISER.
- CONNECT NEW 10" CHR TO EXISTING.
- CONNECT NEW 10" CHS TO EXISTING.
- NEW CONTROL VALVE ACTUATOR.
- EXISTING PLATE-AND-FRAME HEAT EXCHANGER MOVED SOUTH TO ACCOMMODATE NEW BACK-FLUSHING PIPING.
- SEE SECTIONS FOR NEW PIPING SERVING EXISTING PLATE-AND-FRAME HEAT EXCHANGER WITH BACK-FLUSHING CAPABILITIES.
- PROVIDE NEW 4" CONCRETE EQUIPMENT PAD (APPROXIMATELY 9'-4" x 2'-9") FOR EXISTING PLATE-AND-FRAME HEAT EXCHANGER.
- EXISTING VARIABLE FREQUENCY DRIVE (VFD) FOR EXISTING CHILLED WATER PUMP.
- EXISTING PUMP TO REMAIN.
- EXISTING COOLING TOWER TO REMAIN.
- NEW VFD'S FOR EXISTING CONDENSER WATER PUMPS.
- REPLACE EXISTING PRESSURE GAUGE AT EXISTING PUMP. USE MINIMUM 5/16" DIAMETER GAUGES.
- REPLACE EXISTING PRESSURE GAUGES ALONG BASE OF PUMP SKID. REPLACE EXISTING SIGNAGE TO MATCH EXISTING. SEE PARTIAL PLAN THIS SHEET.
- NEW ELECTRICAL CONSUMPTION MODULE. PROVIDE NEW INTERFACE WITH BUILDING CONTROL SYSTEM.
- TEST AND BALANCE CONTRACTOR TO RE-BALANCE FLOW THROUGH COOLING TOWER.
- 4" REFRIGERANT VENT TO RISE UP AND RUN TO EXTERIOR WALL PENETRATION. RUN WITH BOTTOM OF PIPING AT MINIMUM 10'-0" AFF. PROVIDE DRIP LEG AT BOTTOM OF RISER.
- CHILLER RUPTURE DISC. SEE DETAIL #6, SHEET M401.
- RISE AND DISCHARGE REFRIGERANT RELIEF PIPING HIGH ON WALL, MINIMUM 15'-0" AFF AND A MINIMUM OF 20'-0" FROM ANY ENTRANCE. SLEEVE PIPING THROUGH WALL AND SEAL VOIDS.
- PROVIDE A MINIMUM LENGTH OF FOUR (4) PIPE DIAMETERS UPSTREAM OF FLOW METER AND A MINIMUM LENGTH OF THREE (3) PIPE DIAMETERS DOWNSTREAM OF FLOW METER.
- TO AETN, REYNOLDS PERFORMANCE CENTER, BREWER-HEGEMAN CONFERENCE CENTER, AND STANLEY RUSS HALL.
- TO DISTRICT CHILLED WATER SYSTEM.
- 1 1/2" RIGID COPPER TUBING. DROP NEAR CHILLER 12" AFF. PROVIDE WITH END OF LINE FILTER, AUDIBLE ALARM, AND HORN STROBE. INSTALL PER MONITOR MANUFACTURER'S INSTRUCTIONS. COORDINATE ALARM / HORN STROBE LOCATIONS WITH AHJ AND CODE REQUIREMENTS.
- NEW STAINLESS STEEL UNI-STRUT SUPPORT FRAME TO BE INSTALLED ONTO EXISTING SKID.
- MOVE NEW AHU-1 THERMOSTAT ON STAINLESS STEEL UNI-STRUT.
- NEW FLOW METER. SEE KEYED NOTE #21.
- NEW CONTROL VALVE IN RISER.
- SEE PIPING SCHEMATIC DIAGRAMS, SHEET M502 FOR PIPING SPECIALTIES AND CONTROL DEVICES IN PIPING CONNECTIONS TO CHILLER.

### PIPING GENERAL NOTES

- ALL NEW EXPOSED PIPING INSIDE THE BUILDING SHALL BE WRAPPED IN A COLORED PVC FITTING COVER AND JACKETING SYSTEM EQUAL TO JOHNSON MANVILLE ZESTON 2000 SERIES. COLORS SHALL BE AS FOLLOWED:  
  
CHS = BLUE  
CHR = LIGHT BLUE  
DCHS = PURPLE  
DCHR = GRAY  
CWS = GREEN  
CWR = PEA GREEN
- ALL PIPING SHALL BE CLEARLY LABELED AND HAVE DIRECTION ARROWS, AS PER THE SPECIFICATIONS.
- PROVIDE FRAMED VALVE TAG SCHEDULE PER SPECIFICATIONS.
- ALL VALVES 4" AND LARGER MOUNTED 7'-0" AFF OR HIGHER SHALL BE PROVIDED WITH CHAIN OPERATORS.
- WHERE POSSIBLE, INSTALL BUTTERFLY VALVES WHERE POSITION INDICATOR CAN BE SEEN FROM BELOW.

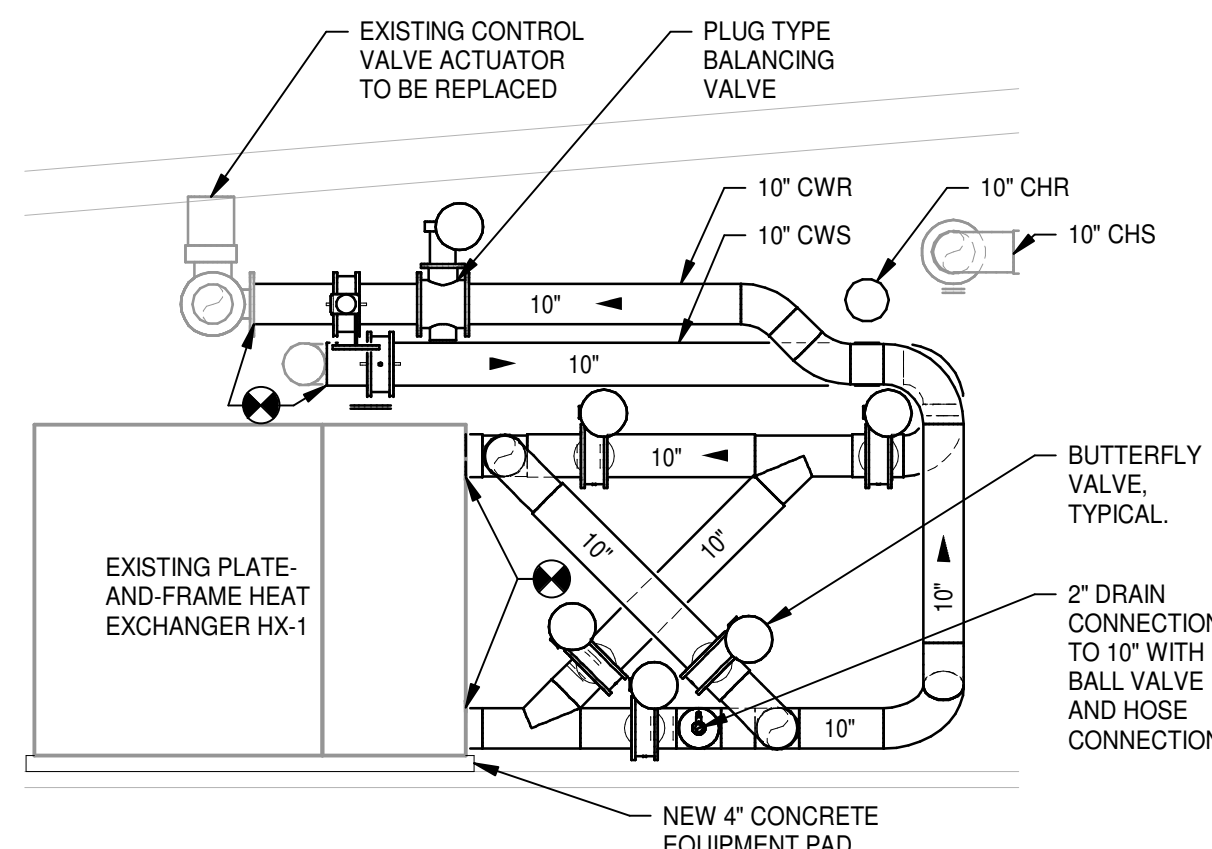
NOTE: SEE PIPING SCHEMATIC DIAGRAM, SHEET M502 FOR PIPING SPECIALTIES AND CONTROL DEVICES UPSTREAM OF BACK FLUSH PIPING.



### 2 SECTION AT HEAT EXCHANGER - CHILLED WATER SIDE

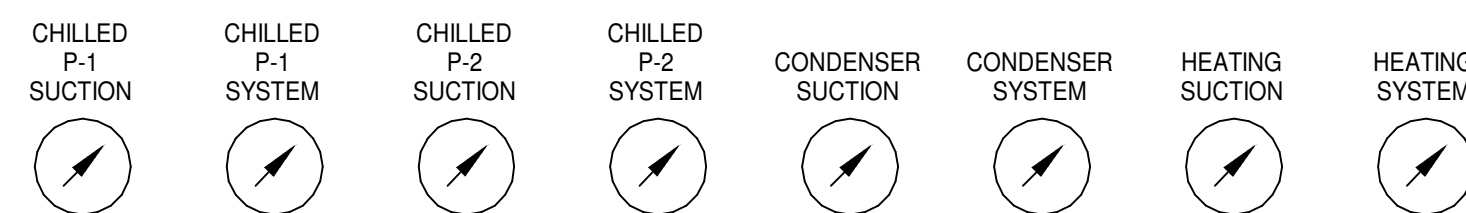
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NOTE: SEE PIPING SCHEMATIC DIAGRAM, SHEET M502 FOR PIPING SPECIALTIES AND CONTROL DEVICES UPSTREAM OF BACK FLUSH PIPING.



### 3 SECTION AT HEAT EXCHANGER - CONDENSER WATER SIDE

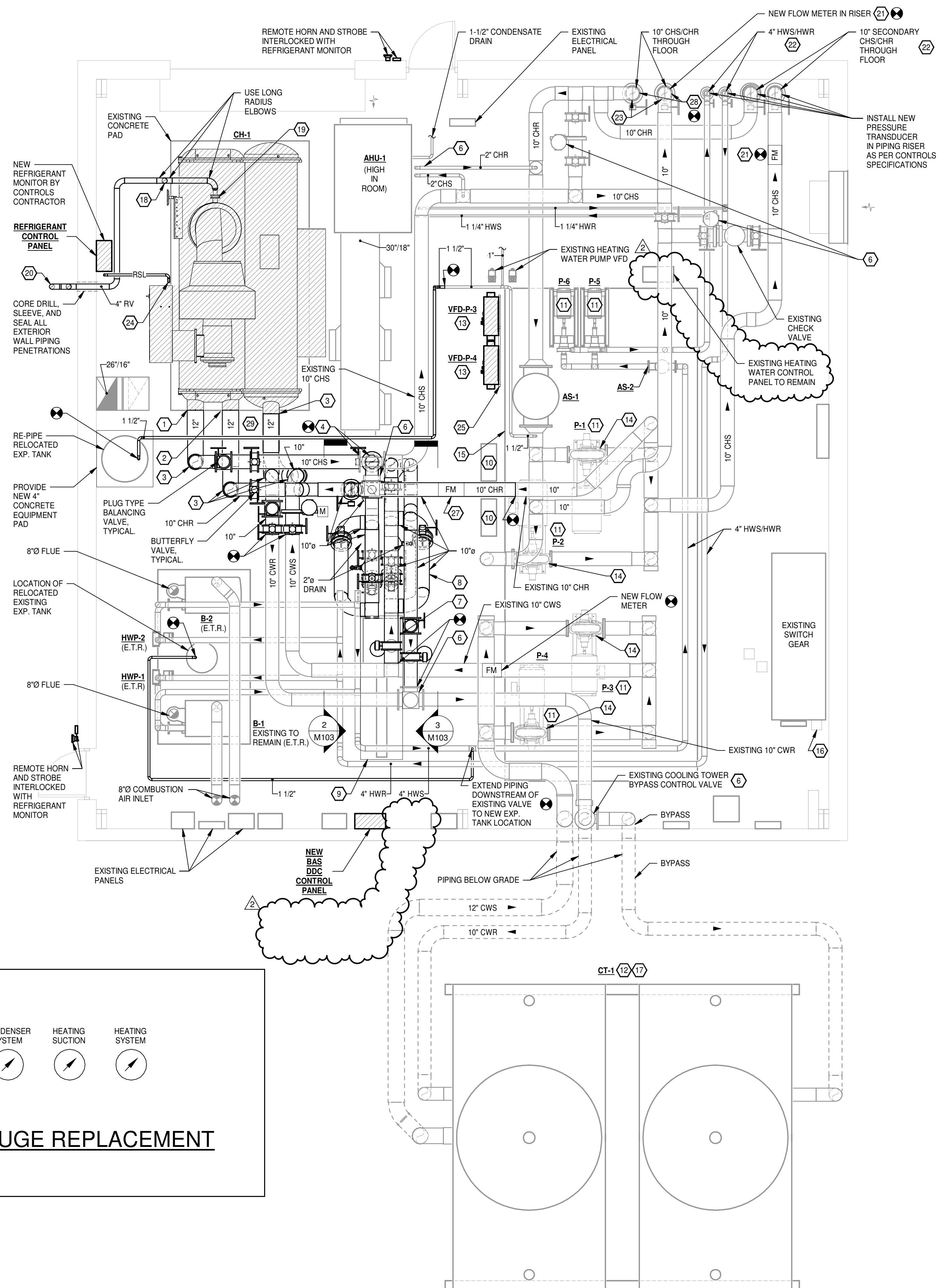
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SEE KEYED NOTE 15

### 4 PARTIAL PLAN - PUMP SKID GAUGE REPLACEMENT

N.T.S.



## 1 SOUTH PLANT FLOOR PLAN - HVAC

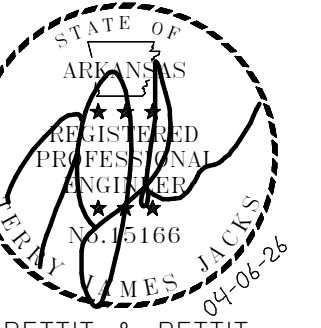
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#	DATE	DESCRIPTION
4-24-2025	ADDENDUM #2	

DATE: April 06, 2026  
TITLE: SOUTH PLANT FLOOR PLAN - HVAC



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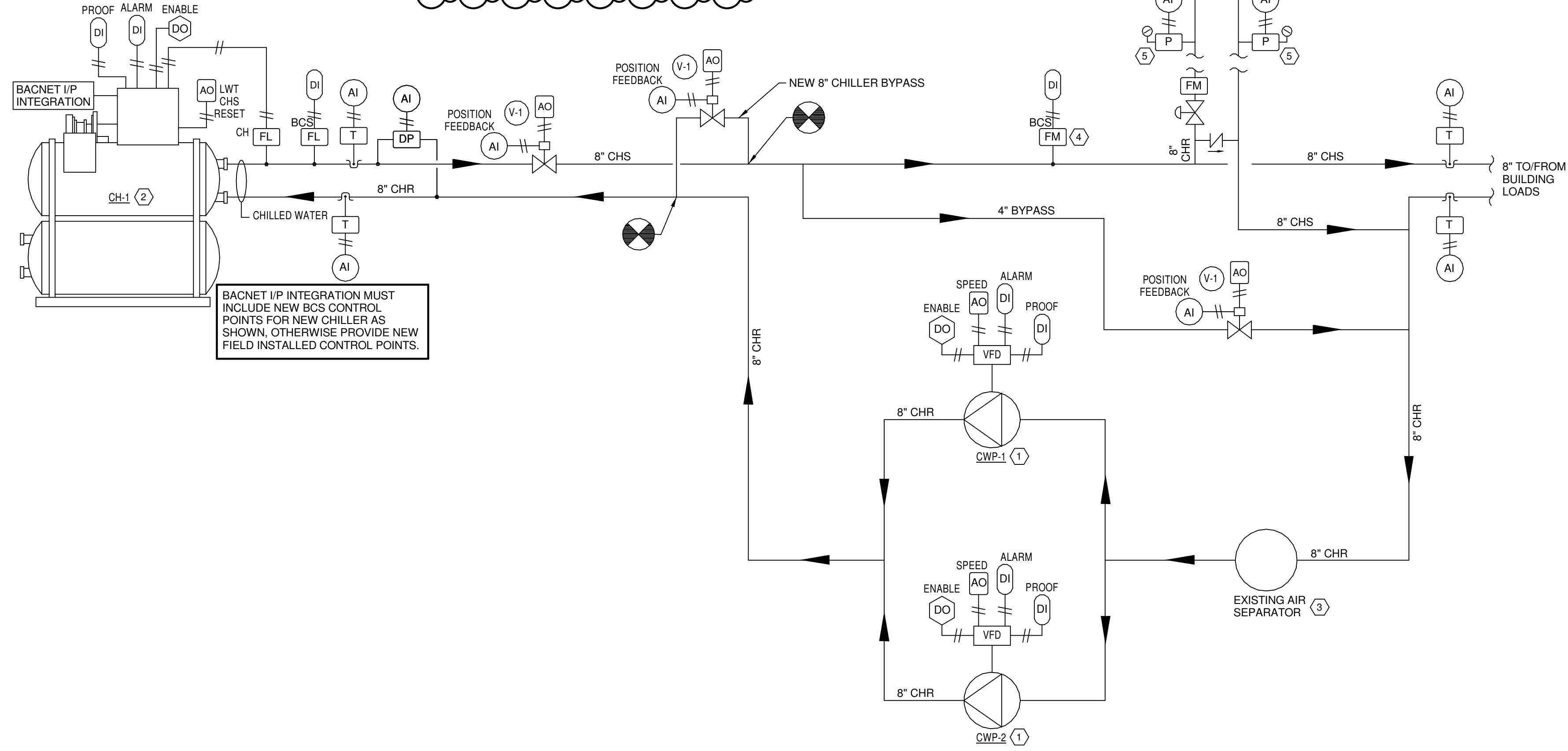
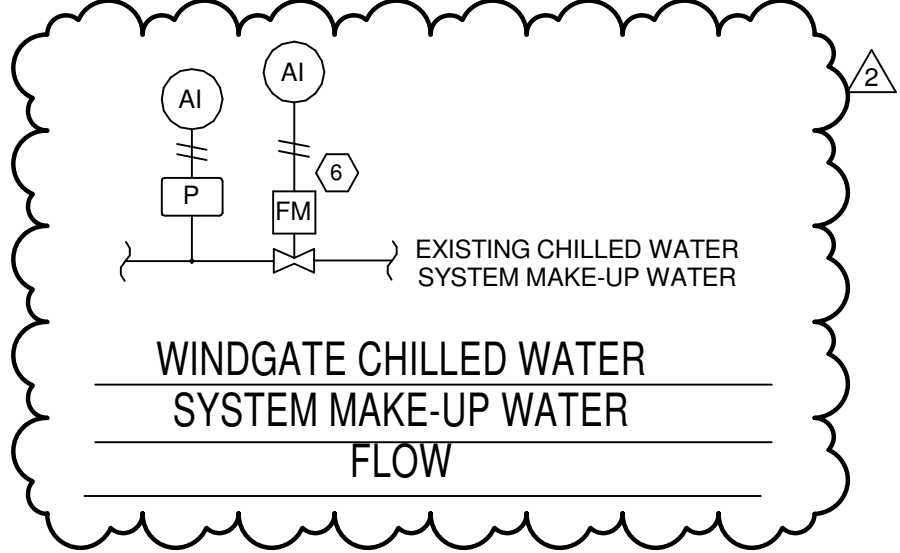


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ALL LOW-VOLTAGE CABLING SHALL BE ROUTED IN CONDUIT. BCS CONDUIT SHALL BE BLUE. REFER TO SECTION 23 09 23 AND DIVISION 16 FOR ALL CONDUIT REQUIREMENTS.

**KEYED NOTES**

- ① EXISTING PUMP AND ASSOCIATED VFD TO REMAIN.
- ② REPLACE CHILLER TO REMAIN.
- ③ EXISTING AIR SEPARATOR TO REMAIN.
- ④ RELOCATE EXISTING DIFFERENTIAL FLOW METER AS REQUIRED FOR NEW DISTRICT TIE-IN.
- ⑤ NEW COMBINATION PRESSURE SENSORS WITH PRESSURE GAUGES.
- ⑥ NEW FLOW METER.

- NOTES:
- 1. PROVIDE PHYSICAL HARDWARE POINT FOR POSITION FEEDBACK AT ALL CONTROL VALVES.
  - 2. PROVIDE BACNET INTEGRATION INTO ALL VFD'S.

- PROVIDE THE FOLLOWING OPERATING, STATUS, AND ALARM POINTS TO THE BCS:
- CHILLER ENTERING AND LEAVING CHILLED WATER TEMPERATURES
  - CHILLER CHILLED WATER FLOW RATE
  - CHILLER ENTERING CHILLED WATER CONTROL VALVE STATUS
  - CHILLER CHILLED WATER PROOF OF FLOW
  - CHILLER ENABLE
  - CHILLER STATUS
  - CHILLER ALARM
  - LEAVING CHILLED WATER TEMPERATURE RESET
  - CHILLED WATER MINIMUM BYPASS VALVE POSITION
  - CHILLED WATER PUMPS - PROOF OF OPERATION
  - CHILLED WATER PUMPS - FLOW
  - CHILLED WATER PUMPS - ENABLE
  - CHILLED WATER PUMPS - ALARM
  - REMOTE CAMPUS DIFFERENTIAL PRESSURES

**CHILLED WATER SYSTEM SEQUENCE OF OPERATION**

**GENERAL:**

THE CHILLER PLANT PUMPING SYSTEM IS DESIGNED FOR N+1 REDUNDANCY. CHILLED WATER PUMPS AND TOWER WATER PUMPS SHALL AUTOMATICALLY ALTERNATE THE LEAD PUMP AND THE STANDBY PUMP TO EQUALIZE RUN TIME. THE OWNER SHALL BE ABLE TO SELECT ROTATION AND FREQUENCY FROM THE EMS BY SELECTING DAILY, WEEKLY, MONTHLY, OR CUSTOM ROTATION. IN THE EVENT THE LEAD PUMP OR STANDBY PUMP FAILS TO ENABLE, THE LEAD PUMP OR STANDBY PUMP WHICH HAS FAILED TO ENABLE SHALL BE LOCKED OUT. AN ALARM SHALL BE GENERATED AT THE EMS WORKSTATION, AND THE ROTATION SEQUENCE SHALL BE INDEXED FOR THE AVAILABLE STANDBY PUMP TO ENABLE AND OPERATE AS THE LEAD CHILLED WATER PUMP.

**CHILLED WATER LOAD CALCULATIONS:**

THE INSTANTANEOUS WATER CHILLER CH-1 CHILLED WATER PRODUCTION SHALL BE EQUAL TO THE CH-1 CHILLED WATER FLOW (VIA CHILLER DIFFERENTIAL PRESSURE SENSOR) MULTIPLIED BY THE DIFFERENCE BETWEEN THE CH-1 ENTERING AND LEAVING CHILLED WATER TEMPERATURES DIVIDED BY 24. WHEN THE CH-1 CHILLED WATER CONTROL VALVE IS CLOSED, THE CH-1 CHILLED WATER FLOW SHALL BE EQUAL TO ZERO. THE AVERAGE CH-1 CHILLED WATER PRODUCTION SHALL BE EQUAL TO THE 15 MINUTE ROLLING AVERAGE OF THE INSTANTANEOUS CH-1 CHILLED WATER PRODUCTION.

**WATER CHILLER ENABLE:**

WATER CHILLER PROGRAM SHALL BE ENABLED AND DISABLED BY THE OPERATOR OR AUTOMATICALLY ENABLE WHEN THE OUTSIDE AIR WET BULB TEMPERATURE INCREASES ABOVE THE WATER CHILLER ENABLE SETPOINT OF 40 DEG. F (ADJUSTABLE) FOR 30 MINUTES, THE WATER CHILLER SHALL BE ENABLED.

**CHILLED WATER PUMPS:**

CHILLED WATER PUMPS SHALL BE SEQUENCED IN A LEAD - STANDBY MANNER. THE LEAD - STANDBY CHILLED WATER PUMPS SHALL BE SELECTED BY THE EMS.

IF THE WATER CHILLER SYSTEM IS ENABLED, THE LEAD CHILLED WATER PUMPS SHALL BE STARTED AND OPERATED. IF THE WATER CHILLER SYSTEM HAS NOT BEEN ENABLED FOR MORE THAN 5 MINUTES (ADJUSTABLE), THE LEAD CHILLED WATER PUMPS SHALL BE STOPPED. THE LEAD CHILLED WATER PUMP SHALL TYPICALLY BE ENABLED AT ALL TIMES.

**WATER CHILLER:**

WHEN THE WATER CHILLER IS ENABLED, THE WATER CHILLER CHILLED WATER AND TOWER WATER CONDENSER FLOW CONTROL VALVES SHALL OPEN AND MODULATE AS SENSED BY THE EVAPORATOR AND CONDENSER DIFFERENTIAL PRESSURE SENSORS. THE CHILLED WATER AND TOWER CONDENSER WATER CONTROL VALVES SHALL MODULATE TO MAXIMUM FLOW RATE AS SCHEDULED.

THE EMS SHALL RESET THE CHILLED WATER TEMPERATURE SETPOINT BASED ON OUTSIDE AIR TEMPERATURE. AT 80 DEG. F OUTSIDE AIR TEMPERATURE AND ABOVE, THE CHILLED WATER SUPPLY TEMPERATURE SETPOINT SHALL BE 42 DEG. F. AT 50 DEG. F OUTSIDE AIR TEMPERATURE AND BELOW, THE CHILLED WATER SUPPLY TEMPERATURE SETPOINT SHALL BE 50 DEG. F. BETWEEN AN OUTSIDE AIR TEMPERATURE OF 50 DEG. F AND 80 DEG. F THE CHILLED WATER SUPPLY TEMPERATURE SETPOINT SHALL BE LINEAR FROM 42 DEG. F TO 50 DEG. F. ALL TEMPERATURE IN THE RESET SCHEDULE SHALL BE ADJUSTABLE.

**CHILLED WATER BYPASS CONTROL VALVE:**

THE CHILLED WATER SYSTEM DIFFERENTIAL PRESSURE SETPOINT SHALL BE DETERMINED BY TAB CONTRACTOR WHEN ALL CHILLED WATER CONTROL VALVES ARE OPEN AT FULL DESIGN FLOW EXCEPT FOR THE CHILLED WATER BYPASS CONTROL VALVE WHICH SHALL REMAIN CLOSED.

THE LEAD CHILLED WATER PUMP SHALL ENABLE AND OPERATE TO MAINTAIN CHILLER DIFFERENTIAL PRESSURE AT MAXIMUM DESIGN FLOW.

THE CHILLED WATER BYPASS CONTROL VALVE SHALL OPEN AT CHILLER START UP AND SHALL MODULATE AS REQUIRED TO MAINTAIN THE REMOTE CHILLED WATER SYSTEM DIFFERENTIAL PRESSURE SYSTEM SETPOINT (WORST CASE OF TWO SENSORS) WHEN ENABLED.

IF THE BUILDING REMOTE PRESSURE DIFFERENTIAL PRESSURE INCREASES TO 5 PSIG ABOVE SETPOINT, THE BYPASS CONTROL VALVE SHALL MODULATE OPEN TO MAINTAIN THE REMOTE PRESSURE SETPOINT. WHEN THE BUILDING REMOTE PRESSURE SETPOINT DROPS TO 2 PSIG BELOW SETPOINT, THE MINIMUM FLOW BYPASS CONTROL VALVE SHALL MODULATE CLOSED.

**COOLING TOWER WATER SUPPLY TEMPERATURE SETPOINT:**

WHEN WATER CHILLER OPERATION IS ENABLED, THE TOWER WATER SUPPLY TEMPERATURE SETPOINT SHALL BE AUTOMATICALLY RESET FROM A MINIMUM OF 85 DEG. F (ADJUSTABLE) AT AN OUTSIDE AIR WET BULB TEMPERATURE OF 55 DEG. F (ADJUSTABLE) AND LOWER UP TO A MAXIMUM OF 85 DEG. F (ADJUSTABLE) AT AN OUTSIDE AIR WET BULB TEMPERATURE OF 80 DEG. F (ADJUSTABLE) AND HIGHER.

**COOLING TOWER ENABLE:**

THE COOLING TOWER SHALL BE ENABLED AND DISABLED BASED UPON THE STATUS OF THE WATER CHILLER.

**COOLING TOWER:**

WHEN THE TOWER WATER SUPPLY TEMPERATURE INCREASES MORE THEN 2 DEG. F (ADJUSTABLE) ABOVE THE TOWER WATER SUPPLY TEMPERATURE SETPOINT, THE TOWER FAN SHALL BE STARTED AND OPERATED. THE SPEED OF THE COOLING TOWER FAN SHALL BE MODULATED FROM A MINIMUM OF 15% (ADJUSTABLE) OR AS RECOMMENDED BY TOWER MANUFACTURER UP TO A MAXIMUM OF 100% (ADJUSTABLE) AS REQUIRED TO MAINTAIN THE TOWER WATER SUPPLY TEMPERATURE AT SETPOINT. IF THE TOWER WATER SUPPLY TEMPERATURE IS MORE THAN 2 DEG. F (ADJUSTABLE) BELOW THE TOWER WATER SUPPLY TEMPERATURE SETPOINT FOR MORE THAN 5 MINUTES (ADJUSTABLE), THE TOWER FAN SHALL BE STOPPED. WHEN THE LEAD COOLING TOWER IS DISABLED, ITS FAN SHALL BE IMMEDIATELY STOPPED.

**TOWER WATER PUMPS:**

THE TOWER WATER PUMPS SHALL BE SEQUENCED IN A LEAD - STANDBY MANNER. THE LEAD - STANDBY TOWER WATER PUMPS SHALL BE SELECTED BY THE EMS.

IF THE WATER CHILLER SYSTEM IS ENABLED, THE LEAD TOWER WATER PUMP SHALL BE STARTED AND OPERATED. IF THE WATER CHILLER SYSTEM HAS NOT BEEN ENABLED FOR MORE THAN 5 MINUTES (ADJUSTABLE), THE LEAD TOWER WATER PUMP SHALL BE STOPPED. THE LEAD TOWER WATER PUMPS SHALL TYPICALLY BE ENABLED AT ALL TIMES.

THE OPERATING TOWER WATER PUMPS SHALL BE CONSTANT FLOW AS MEASURED BY THE CHILLER CONDENSER DIFFERENTIAL PRESSURE SENSOR.

**COOLING TOWER BYPASS:**

WHEN THE WATER CHILLER IS ENABLED AND CONDENSER WATER IS BELOW SETPOINT, THE TOWER BYPASS VALVE TO THE COOLING TOWER SHALL CLOSE. THE TOWER BYPASS VALVE TO THE BYPASS SHALL MODULATE OPEN, AND THE CHILLER CONDENSER SHALL HEAT THE TOWER WATER. THE BYPASS VALVES SHALL MODULATE UNTIL COOLING TOWER SUPPLY WATER MINIMUM TEMPERATURE SETPOINT IS SATISFIED.

**CHILLER PLANT LOAD LIMIT CONTROL:**

UPON DETECTION OF A CLOSED CONTACT LOCATED IN THE NORMAL POWER SWITCHBOARD AS MONITORED BY THE EMS, THE CHILLER PLANT CAPACITY SHALL BE REDUCED TO ZERO OPERATION, UNTIL THE CONTACT OPENS INDICATING ELECTRICAL LOAD TRANSFER, WHEREBY THE CHILLER, CHILLED WATER PUMPS, TOWER WATER PUMPS, AND COOLING TOWERS SHALL RETURN TO NORMAL CONTROL MODE OF OPERATION.

**CHILLER PLANT EFFICIENCY MONITORING:**

THE INSTANTANEOUS CHILLER PLANT ELECTRICAL POWER SHALL BE EQUAL TO THE SUM OF THE INSTANTANEOUS POWER CONSUMPTION (KW) FROM ALL ENABLED CHILLERS, PUMP VFD'S, AND COOLING TOWER VFD'S. THE AVERAGE CHILLER PLANT ELECTRICAL POWER SHALL BE THE 15 MINUTE ROLLING AVERAGE OF THIS VALUE.

THE CHILLER PLANT EFFICIENCY (KW/TON) SHALL BE EQUAL TO THE AVERAGE CHILLER PLANT ELECTRICAL POWER (KW) DIVIDED BY THE AVERAGE CHILLED WATER LOAD (TONS).

**ALARM MONITORING:**

AN ALARM SHALL BE GENERATED AT THE EMS WORKSTATION IF ANY OF THE FOLLOWING OCCUR:

- 1. CHILLER FAILURE.
- 2. CHILLED WATER PUMP FAILURE.
- 3. TOWER WATER PUMP FAILURE.
- 4. HIGH CHILLED WATER SUPPLY TEMPERATURE (ABOVE 53 DEG. F).
- 5. LOW CONDENSER WATER TEMPERATURE (BELOW 55 DEG. F).
- 6. HIGH CONDENSER WATER SUPPLY TEMPERATURE (ABOVE 88 DEG. F).
- 7. LOW SYSTEM PRESSURE.
- 8. REFRIGERANT LEAK.
- 9. COOLING TOWER FAN FAILURE.
- 10. HIGH SYSTEM DIFFERENTIAL PRESSURE (5 PSIG ABOVE SETPOINT FOR 10 MINUTES).
- 11. LOW SYSTEM DIFFERENTIAL PRESSURE (5 PSIG BELOW SETPOINT FOR 10 MINUTES).
- 12. LOW CHILLER REFRIGERANT LIFT.
- 13. LOW SYSTEM PRESSURE (20% BELOW SETPOINT FOR 10 MINUTES).

**DISTRICT LOOP COOLING OPERATION:**

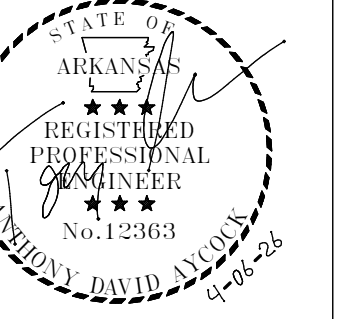
DISTRICT LOOP COOLING OPERATION SHALL BE ENABLED OR DISABLED AT THE EMS WORKSTATION. CONTROLS CONTRACTOR SHALL CLOSELY COORDINATE WITH OWNER AND ENGINEER REGARDING CHANGE-OVER FROM STAND-ALONE OPERATION TO DISTRICT LOOP COOLING OPERATION. CONTROL LOGIC SHALL BE INCLUDED FOR AUTOMATIC CHANGE-OVER.

UPON ENABLING OF THE DISTRICT COOLING OPERATION, THE WATER CHILLER OPERATION SHALL BE STOPPED, THE COOLING TOWER OPERATION SHALL BE STOPPED, THE CHILLED WATER PUMPS SHALL BE STOPPED, THE COOLING TOWER WATER PUMPS SHALL BE STOPPED, THE CHILLED WATER FLOW CONTROL VALVE SHALL BE CLOSED, AND THE COOLING TOWER WATER FLOW CONTROL VALVE SHALL BE CLOSED. THE CHILLER BYPASS PIPING CONTROL VALVE SHALL BE FULLY OPENED, THE DISTRICT COOLING WATER CONTROL VALVE SHALL OPEN, AND THE LEAD CHILLED WATER PUMP SHALL BE ENABLED AND ITS SPEED MODULATED TO MAINTAIN BUILDING CHILLED WATER SYSTEM PRESSURE. THE MAKE-UP WATER FLOW CONTROL VALVE SHALL BE CLOSED, AND THE OPERATION OF THE ALARM FROM THE AUTOMATIC TOWER WATER CHEMICAL FEED SYSTEM TO THE EMS WORKSTATION SHALL BE DISABLED. THE BUILDING LOOP BYPASS CONTROL VALVE SHALL BE ENABLED UPON OWNER DEFINED SETPOINTS (ADJUSTABLE) AND / OR OPERATOR COMMAND (PROVIDE RADIO BUTTON IN THE CONTROL GRAPHICS FOR BYPASS MODE ACTIVATION / DEACTIVATION) FROM THE BAS. ONCE ENABLED, THE BUILDING LOOP BYPASS CONTROL VALVE SHALL MODULATE CLOSED AS REQUIRED TO MODULATE THE CAMPUS LOOP CHILLED WATER SUPPLY FLOW THROUGH THE BUILDING. ONCE OWNER DEFINED SETPOINTS HAVE BEEN MET AND / OR BAS OPERATOR COMMAND HAS RESTORED THE BUILDING LOOP BYPASS CONTROL VALVE TO NORMAL OPERATION, THE CAMPUS LOOP CHILLED WATER SYSTEM SHALL BE FULLY UTILIZED TO SERVICE THE BUILDING AIR HANDLING UNITS. THE CHILLED WATER LOOP SUPPLY AND RETURN TEMPERATURES SHALL BE MONITORED AT THE BAS WORKSTATION. UPON DISABLING OF THE DISTRICT COOLING OPERATION, THE CHILLED WATER PUMPS SHALL BE STOPPED, THE BUILDING LOOP BYPASS CONTROL VALVE SHALL BE CLOSED, THE DISTRICT COOLING WATER CONTROL VALVE SHALL BE CLOSED, THE CHILLER BYPASS PIPING CONTROL VALVE SHALL BE CLOSED, THE CHILLED WATER FLOW CONTROL VALVE SHALL BE OPENED, THE COOLING TOWER WATER FLOW CONTROL VALVE SHALL BE OPENED, THE MAKE-UP WATER FLOW CONTROL VALVE SHALL BE OPENED, THE OPERATION OF THE ALARM FROM THE AUTOMATIC TOWER WATER CHEMICAL FEED SYSTEM TO THE EMS WORKSTATION SHALL BE ENABLED, THE CHILLED WATER PUMPS SHALL BE ENABLED (AFTER THE CHILLER'S CHILLED WATER FLOW CONTROL VALVE HAS BEEN OPENED), THE COOLING TOWER WATER PUMPS SHALL BE ENABLED (AFTER THE CHILLER'S TOWER WATER FLOW CONTROL VALVE HAS BEEN OPENED), AND THE CHILLER OPERATION SHALL BE ENABLED.

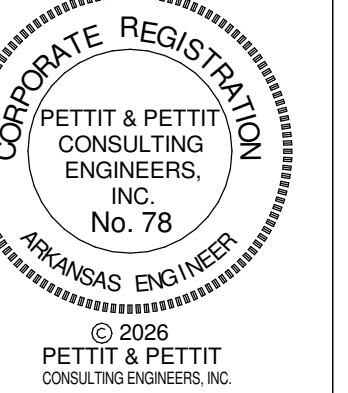
**WINDGATE CHILLED WATER SYSTEM**

#	DATE	DESCRIPTION
4	4-24-2025	ADDENDUM #2

DATE:	DESCRIPTION:
April 06, 2026	HVAC CONTROLS



VERIFY SCALE  
0 1"

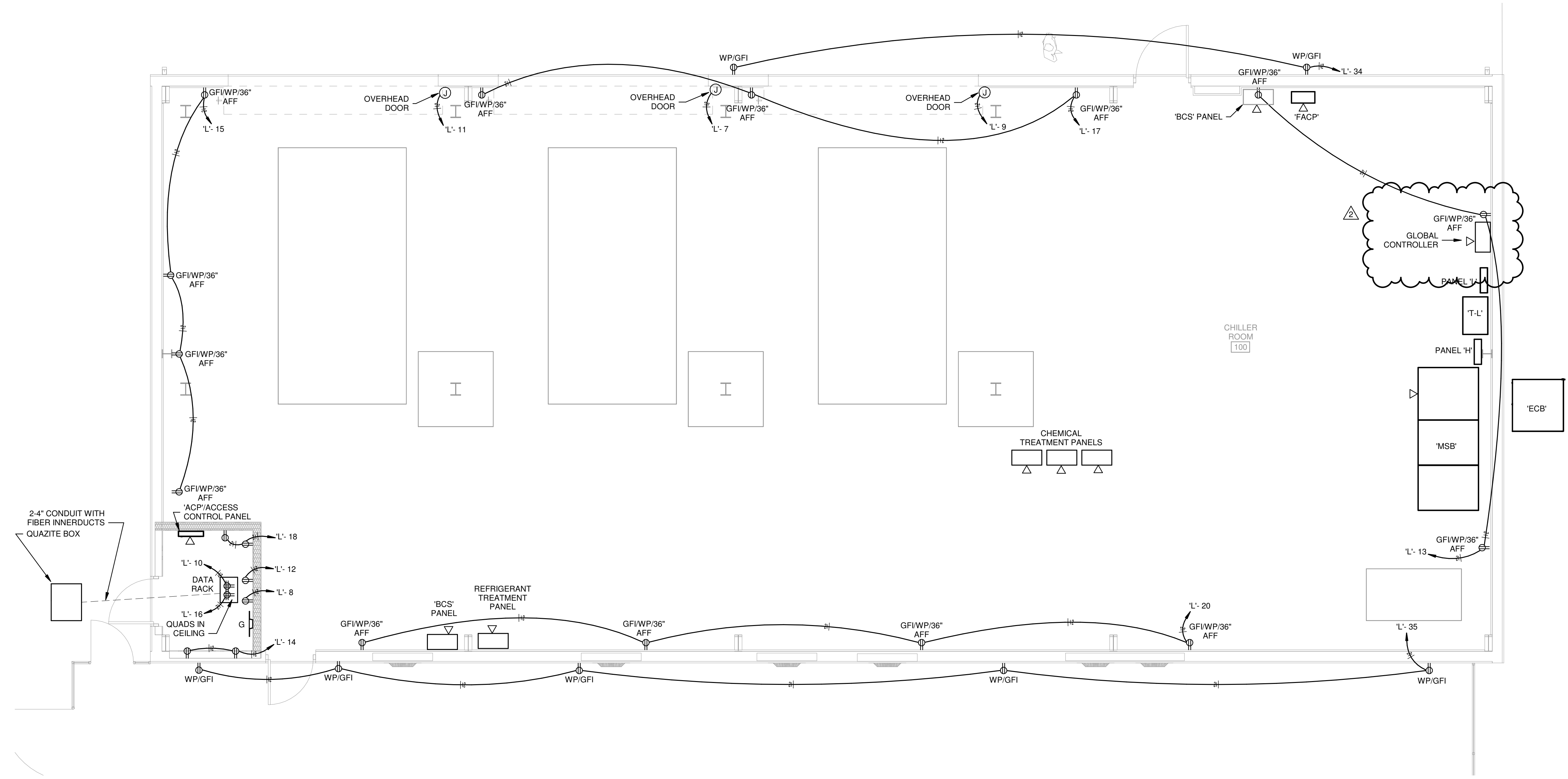


**CONDUIT PROJECT NOTES**

ALL WIRING SHALL BE INSTALLED IN CONDUIT COMPLETELY.  
 ALL DATA DEVICES ARE SHOWN AS BOXES, CONDUIT, AND PULL STRING.  
 ALL ACCESS CONTROL ARE SHOWN AS BOXES, CONDUIT, AND PULL STRING.  
 ALL FIRE ALARM DEVICES SHALL BE INSTALLED COMPLETELY IN CONDUIT.  
 ALL EMPTY CONDUITS MUST HAVE PULL STRING.

CONDUIT COLORS AS FOLLOWS:  
 DATA - BLUE  
 FIRE ALARM - RED  
 CONTROLS - YELLOW  
 ACCESS CONTROLS - PURPLE

REFER TO RISERS FOR MORE INFORMATION.



**1 FIRST FLOOR PLAN - POWER**  
 SCALE: 1/4" = 1'-0"

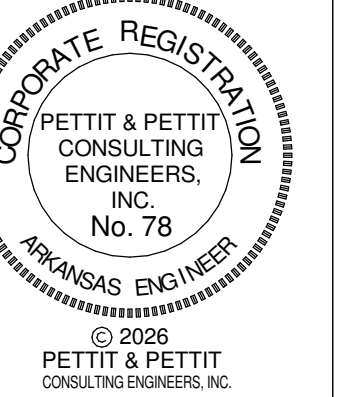
**UCA CAMPUS DISTRICT LOOP & CHILLER PLANT**  
 UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
2	4-24-2025	ADDENDUM #2

DATE: April 06, 2026  
 TITLE: NORTH PLANT PLAN - POWER



VERIFY SCALE  
0 1"



UCA CAMPUS DISTRICT LOOP & CHILLER PLANT  
UCA CAMPUS, CONWAY, AR

### SYSTEMS KEYED NOTES

- ① DISCONNECT BY DIVISION 23/HVAC.
- ② CONDUIT MUST BE RUN UNDERGROUND TO AVOID HOIST STRUCTURE.

### CONDUIT PROJECT NOTES

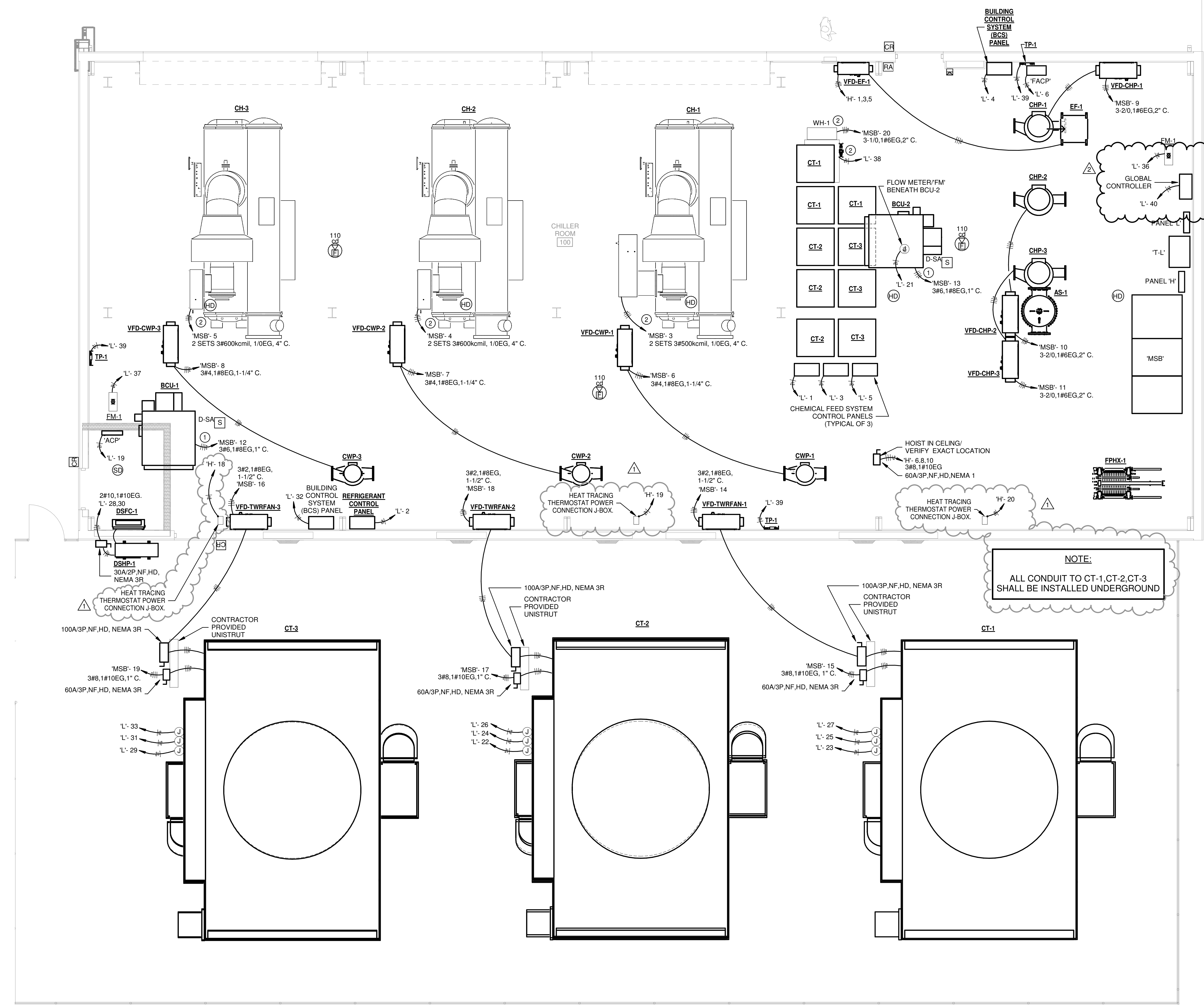
ALL WIRING SHALL BE INSTALLED IN CONDUIT COMPLETELY.  
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ALL FIRE ALARM DEVICES SHALL BE INSTALLED COMPLETELY IN CONDUIT.  
ALL EMPTY CONDUITS MUST HAVE PULL STRING.

CONDUIT COLORS AS FOLLOWS:

- DATA - BLUE
- FIRE ALARM - RED
- CONTROLS - YELLOW
- ACCESS CONTROLS - PURPLE

REFER TO RISERS FOR MORE INFORMATION.

**NOTE:**  
ALL CONDUIT TO CT-1, CT-2, CT-3  
SHALL BE INSTALLED UNDERGROUND



**1 FIRST FLOOR PLAN - SYSTEMS**  
SCALE: 1/4" = 1'-0"

#	DATE	DESCRIPTION
2	4-24-2025	ADDENDUM #2
1	4-21-2025	ADDENDUM #1
#		REVISIONS HISTORY

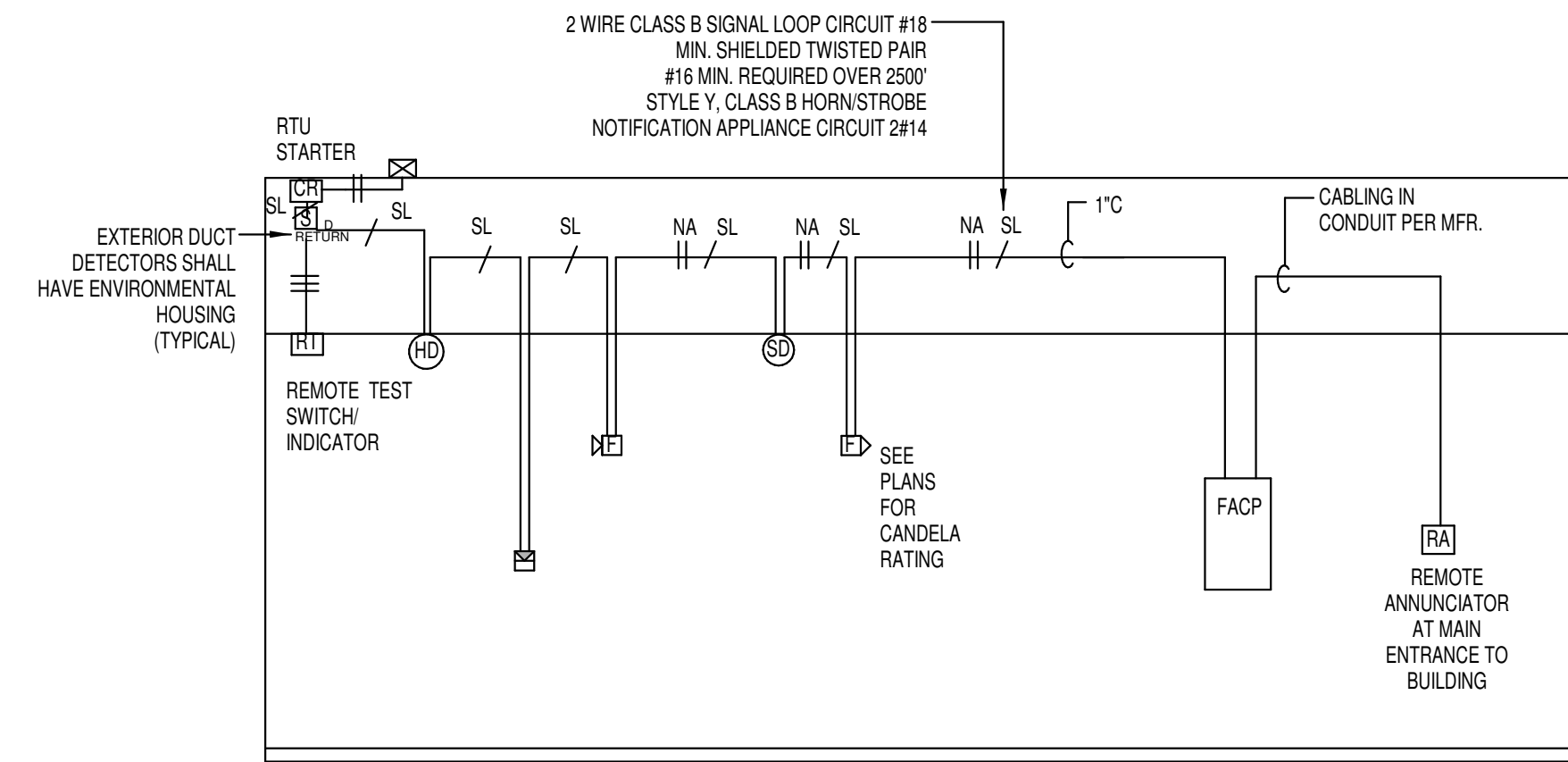
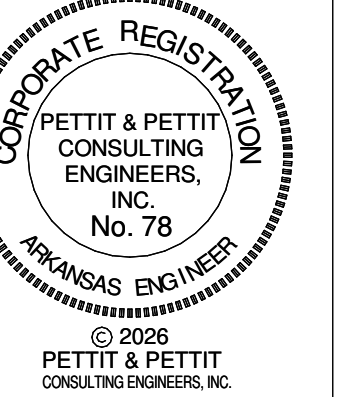
DATE: April 06, 2026  
TITLE: NORTH PLANT PLAN - SYSTEMS



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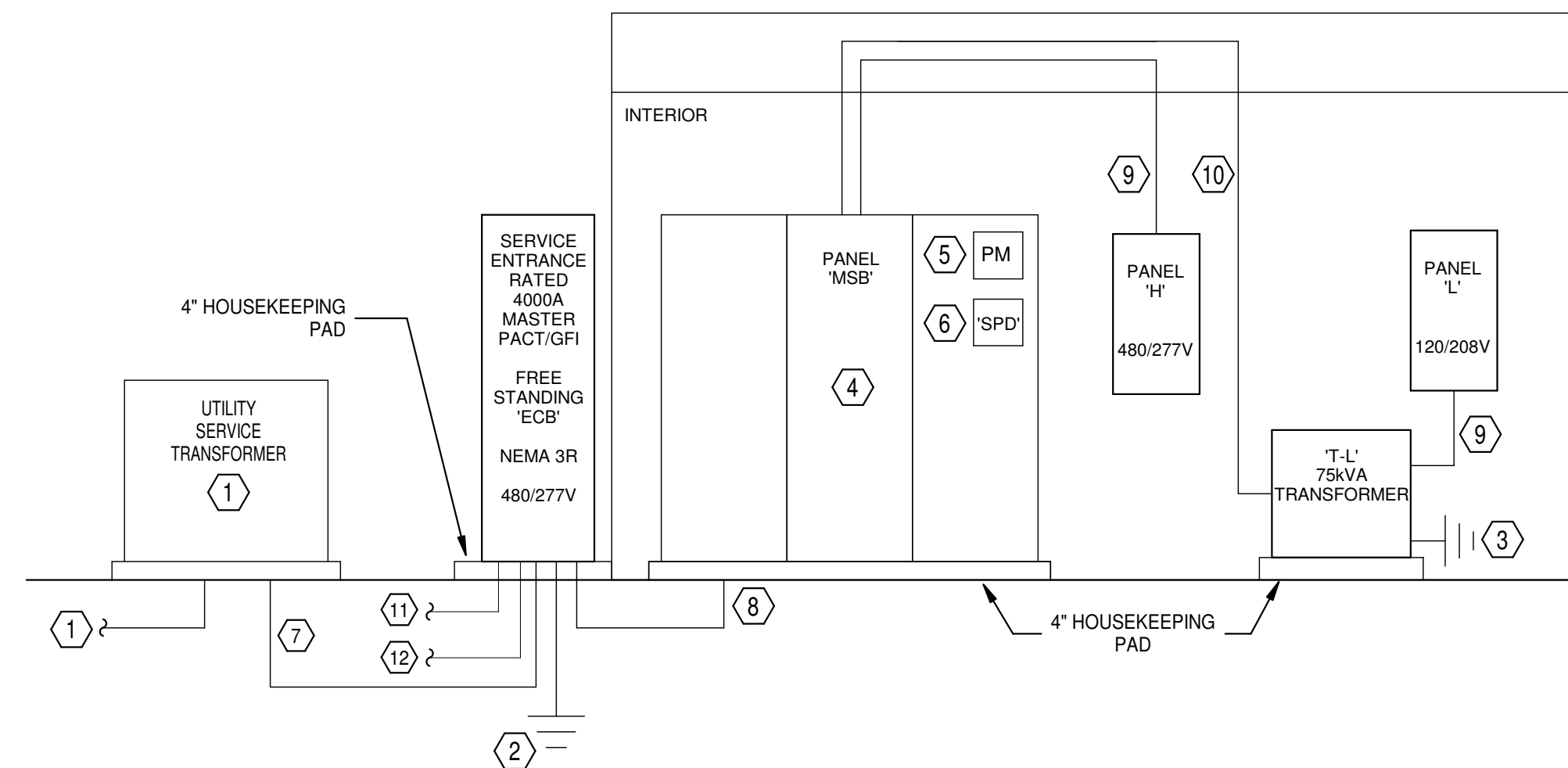


VERIFY SCALE  
0 1"



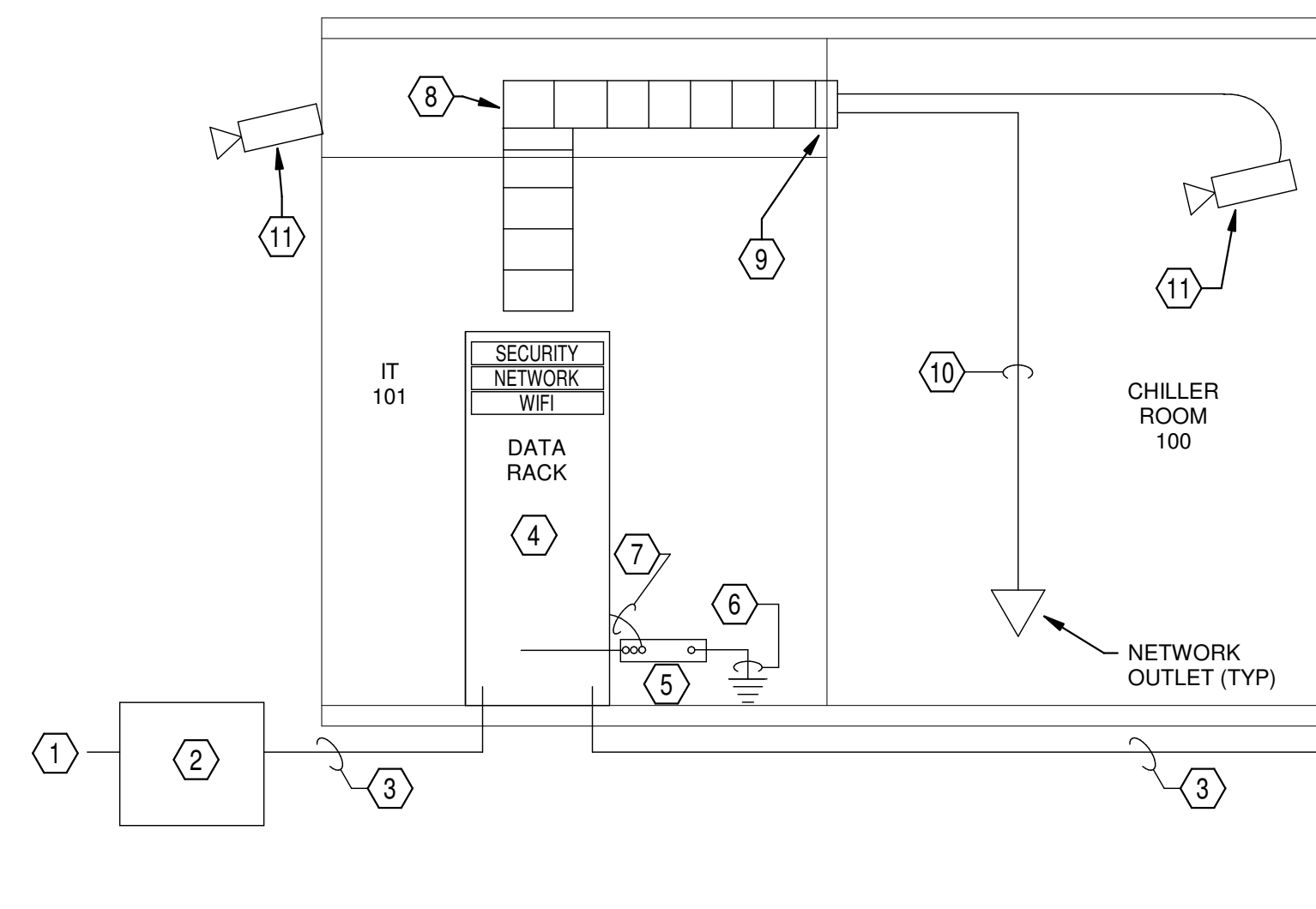
- FIRE ALARM SYSTEM NOTES:**
1. SEE FLOOR PLANS FOR TOTAL NUMBER OF DEVICES REQUIRED. VERIFY EXACT WIRING REQUIREMENTS AND NOTIFICATION POWER SUPPLY PANELS WITH FIRE ALARM SYSTEM INSTALLER. ALL NOTIFICATION POWER SUPPLIES SHALL BE CONNECTED TO DEDICATED 20A/120V BRANCH CIRCUITS FROM POWER PANELS. FIRE ALARM SYSTEM CONTRACTOR SHALL INCLUDE COSTS FOR BRANCH CIRCUITS REQUIRED FOR NOTIFICATION POWER SUPPLY PANELS IN BID. PANELS SHALL BE INSTALLED IN AVAILABLE SPACE IN ELECTRICAL ROOMS ONLY.
  2. FIRE ALARM SYSTEM TO BE INSTALLED PER APPROVED SHOP DRAWINGS FURNISHED BY THE FIRE ALARM VENDOR. CONTRACTOR TO PROVIDE A COMPLETE SCHEDULE OF DEVICE ADDRESSES WITH SHOP DRAWINGS FOR REVIEW AND APPROVAL.
  3. CONTRACTOR TO PROVIDE COMPLETE SCHEDULE FOR EACH DEVICE ADDRESS WITH SHOP DRAWINGS FOR REVIEW AND APPROVAL. SEE FLOOR PLANS FOR TOTAL NUMBER OF DEVICES REQUIRED. ALL CABLING INSTALLED IN CONDUIT. VERIFY EXACT WIRING REQUIREMENTS WITH EQUIPMENT SUPPLIER.
  4. PROVIDE AND INSTALL A FIBER DIGITAL COMMUNICATION PER UCA REQUIREMENTS.
  5. CONTRACTOR TO PROVIDE COMPLETE SCHEDULE FOR EACH DEVICE ADDRESS WITH SHOP DRAWINGS FOR REVIEW AND APPROVAL. SEE FLOOR PLANS FOR TOTAL NUMBER OF DEVICES REQUIRED. ALL CABLING INSTALLED IN CONDUIT. VERIFY EXACT WIRING REQUIREMENTS WITH EQUIPMENT SUPPLIER.
  6. ALL WIRING IN CONDUIT. THE CONDUIT **MUST BE RED** IN COLOR.

**3 FIRE ALARM SYSTEM RISER DIAGRAM**  
NOT TO SCALE



- POWER RISER KEYED NOTES:**
1. NEW UTILITY TRANSFORMER, METER BASED, TRANSFORMER PAD, PRIMARY CONDUIT, AND GROUNDING BY CONTRACTOR. CONTRACTOR TO PAY ALL FEES AND VERIFY INSTALLATION REQUIREMENTS PRIOR TO BID.
  2. SEE SERVICE GROUNDING DETAIL.
  3. SEE TRANSFORMER GROUNDING DETAIL.
  4. INSTALL 'MSB' ON 4" HOUSEKEEPING PAD. INSTALL SIGN ON 'MSB' STATING 'BUILDING MAIN DISCONNECT'. INSTALL A SIGN ON EXTERIOR DOOR STATING 'BUILDING MAIN DISCONNECT LOCATED INSIDE'.
  5. POWER METER EQUAL TO PM5560 WITH NATIVE BACnet/IP. METER SHALL BE MOUNTED ON FACE OF EACH SWITCHBOARD.
  6. SPD - SQUARE D 240KA INTERNALLY.
  7. 4000 FEEDER: 11 SETS 4-500kcmil, 3-1/2" C.
  8. 4000 FEEDER: 11 SETS 4-500kcmil, 1-250EG, 3-1/2" C.
  9. 225A FEEDER: 4-4/0, 1#4EG, 2-1/2" C.
  10. 125A FEEDER: 4#4, 1#6EG, 1-1/4" C.
  11. 11 SETS OF 3-1/2" C. STUBBED OUT FOR FUTURE.
  12. 2-1" CONDUITS FOR STUBBED OUT FOR FUTURE CONTROLS.

**2 POWER SYSTEM RISER DIAGRAM - NORTH PLANT**  
NOT TO SCALE



- DATA RISER KEYED NOTES:**
1. TWO 4" CONDUITS. SEE CIVIL DRAWINGS FOR MORE DRAWINGS.
  2. 36"X54" QUARTZITE HANDHOLE FOR TELECOMMUNICATIONS ENTRANCE.
  3. 2-4" CONDUIT WITH FIBER INNERDUCTS
  4. NEW OPEN FRAME TWO POST DATA RACK WITH VERTICAL CABLE MANAGEMENT
  5. 18"X14"X4" COPPER GROUNDING BUS BAR WITH STANDOFF BRACKET.
  6. BOND TO BUILDING STRUCTURE AND TO ELECTRICAL SERVICE ENTRANCE GROUND PER BICSI STANDARDS.
  7. #6 AWG BONDING JUMPER TO DATA RACKS.
  8. 18" LADDER RACK SHALL RUN VERTICAL AND DROP TO AT TOP OF DATA RACK.
  9. UL LISTED, FIRE RATED CABLE PENETRATION EQUAL TO WIREMOLD FLAMESTOPPER AT ALL FIRE RATED PARTITIONS.
  10. DATA DROP SHALL BE BOX AND CONDUIT ONLY WITH PULL STRING. 1" MIN. BLUE EMT CONDUIT.
  11. TYPICAL CAMERA LOCATIONS SHALL BE BOX AND CONDUIT ONLY WITH PULL STRING. 3/4" MIN. BLUE EMT CONDUIT
- NOTE:  
ALL WIRING IN CONDUIT. THE CONDUIT **MUST BE BLUE** IN COLOR.

**1 DATA RISER DIAGRAM**  
NOT TO SCALE

#	DATE	DESCRIPTION
2	4-24-2025	ADDENDUM #2
REVISIONS HISTORY		

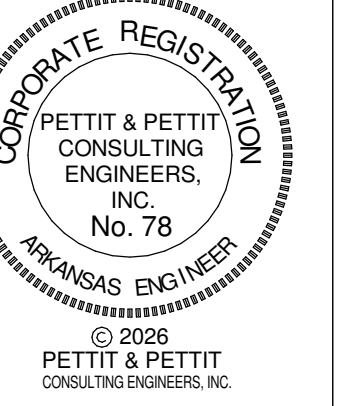
DATE: April 06, 2026  
TITLE: ELECTRICAL PANEL & RISER - NORTH PLANT



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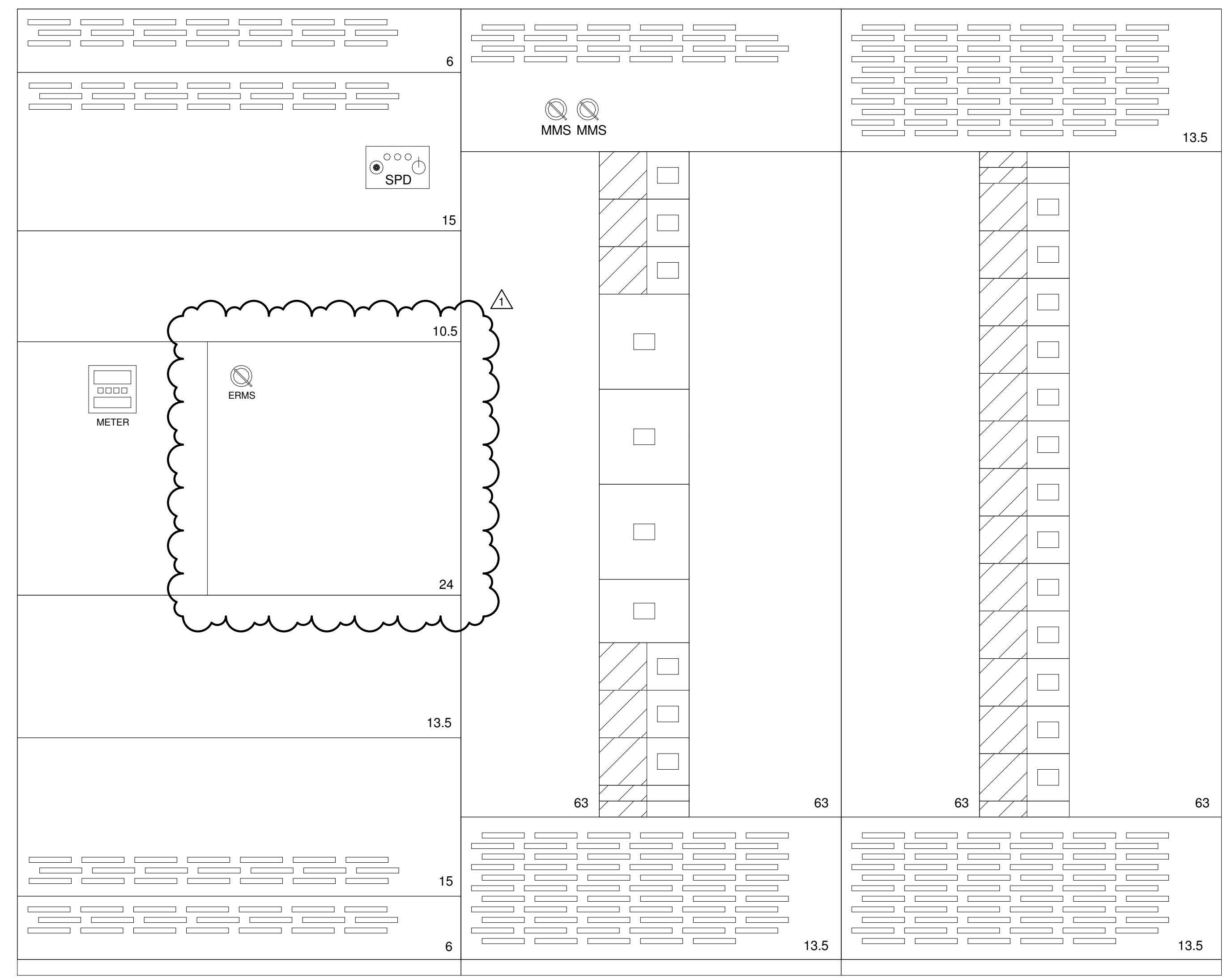


VERIFY SCALE 1"



UCA CAMPUS DISTRICT LOOP & CHILLER PLANT  
UCA CAMPUS, CONWAY, AR

Switchboard:		'MSB'	VOLTAGE:	480/277 Wye	COPPER BUS RATING:	4000 A	MAINS TYPE:	MLO
LOCATION:		CHILLER ROOM 100	PHASE:	3	GROUND BUS:	Yes	MCB RATING:	4000 A
MOUNTING:		CONTRACTOR SUPPLIED CONCRETE PAD	WIRES:	4	MINIMUM A.I.C. RATING:	65k	FED FROM:	'ECB'
ENCLOSURE:	TYPE 1	MFR. AND TYPE	SQUARE D OED	SUBFEED LUGS:		NEUTRAL RATING:	100.00%	
Circuit Number	Load Name	Circuit Breaker	A	B	C			
1	PANEL 'H'	225A/3P	5940 VA	5705 VA	4300 VA			
2	T-L/75KVA	125A/3P	7360 VA	8956 VA	8456 VA			
3	CH-1 WIRE: 2 SETS #500kcmil, 1#1/0EC, 4" C.	1200A/3P	182454 VA	182454 VA	182454 VA			
4	CH-2 WIRE: 2 SETS #600kcmil, 1#1/0EC, 4" C.	1200A/3P	202373 VA	202373 VA	202373 VA			
5	CH-3 WIRE: 2 SETS #600kcmil, 1#1/0EC, 4" C.	1200A/3P	202373 VA	202373 VA	202373 VA			
6	CWP-1	125A/3P	13279 VA	13279 VA	13279 VA			
7	CWP-2	125A/3P	13279 VA	13279 VA	13279 VA			
8	CWP-3	125A/3P	13279 VA	13279 VA	13279 VA			
9	VFD-CHP-1	250A/3P	32932 VA	32932 VA	32932 VA			
10	VFD-CHP-2	250A/3P	32932 VA	32932 VA	32932 VA			
11	VFD-CHP-3	250A/3P	32932 VA	32932 VA	32932 VA			
12	BCU-1	70A/3P	16174 VA	16174 VA	16174 VA			
13	BCU-2	70A/3P	16174 VA	16174 VA	16174 VA			
14	CT-1	150A/3P	20450 VA	20450 VA	20450 VA			
15	CT-1 - BASIN HEATER #1	50A/3P	4667 VA	4667 VA	4667 VA			
16	CT-2	150A/3P	20450 VA	20450 VA	20450 VA			
17	CT-2 - BASIN HEATER	50A/3P	11667 VA	11667 VA	11667 VA			
18	CT-3	150A/3P	20450 VA	20450 VA	20450 VA			
19	CT-3 - BASIN HEATER	50A/3P	11667 VA	11667 VA	11667 VA			
20	*WH-1*	150A/3P	32000 VA	32000 VA	32000 VA			
21	*SPD* - SURGE PROTECTION DEVICE	100A/3P	0 VA					
22								
23								
24								
25								
26								
27	225A SPACE WITH BUS		--					
28	225A SPACE WITH BUS		--					
29	225A SPACE WITH BUS		--					
30	225A SPACE WITH BUS		--					
31	400A SPACE WITH BUS		--					
32	400A SPACE WITH BUS		--					
33								
<b>Total Load:</b>		892829 VA	894191 VA	892285 VA				
<b>Total Amps:</b>		3224 A	3228 A	3221 A				
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals				
Lighting	3045 VA	125.00%	3807 VA	<b>Total Connected Load:</b>		2679305 VA		
Receptacles	5580 VA	100.00%	5580 VA	<b>Total Estimated Demand:</b>		2680067 VA		
HVAC	0 VA	0.00%	0 VA	<b>Total Connect Current:</b>		3223 A		
Other	10740 VA	100.00%	10740 VA	<b>Total Est. Demand Current:</b>		3224 A		
Motor	0 VA	0.00%	0 VA					
Heating	0 VA	0.00%	0 VA					
Existing Load	0 VA	0.00%	0 VA					
Notes:		POWERED METER SQUARE D MODEL PM5560 POWER METER WITH BacNET IP AND MSTP CONVERSION. SWITCHBOARD SECTIONS SHALL HAVE FULL BUS. *DENOTES GFI BREAKER*						



**1 'MSB' ELEVATION**  
NOT TO SCALE

1 4-21-2025 ADDENDUM #1  
# DATE DESCRIPTION  
REVISIONS HISTORY

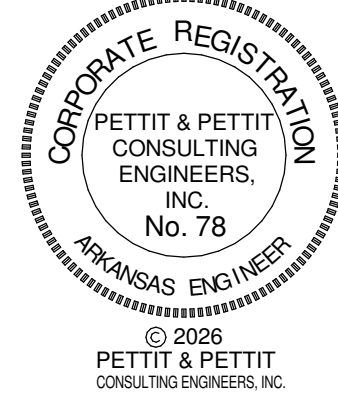
DATE: April 06, 2026  
TITLE: ELECTRICAL PANELS - NORTH PLANT



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VERIFY SCALE 1" = 0'



UCA CAMPUS DISTRICT LOOP & CHILLER PLANT  
UCA CAMPUS, CONWAY, AR

<b>Panelboard:</b>		'H'		VOLTAGE: 480/277 Wye		COPPER BUS RATING: 250 A		MAINS TYPE: MLO			
LOCATION: CHILLER ROOM 100		PHASE: 3		GROUND BUS:		MCB RATING:					
MOUNTING: SUFACE		WIRES: 4		MINIMUM A.I.C. RATING: TBD		FED FROM: 'MSB'					
ENCLOSURE: TYPE 1		MFR. AND TYPE:		SQUARE D NO		SUBFEED LUGS:		NEUTRAL RATING: 100.00%			
Circuit Number	Load Name	BRKR	A	B	C	BRKR	Load Name	Circuit Number			
1	EF-1	15A/3P	942	640			20A/1P	LIGHTING - EXTERIOR WALL PCK	2		
3					942	2405		20A/1P	LIGHTING - INTERIOR	4	
5							942	2357		6	
7				0	2357				60A/3P	HOIST (VERIFY BREAKER AND WIRE SIZE)	8
9			SPARE/FUTURE BOOSTER PUMP	20A/3P		0	2357				10
11					0	0			12		
13			0	0			20A/3P	SPARE/FUTURE BOOSTER PUMP	14		
15	SPARE/FUTURE BOOSTER PUMP	20A/3P		0	0				16		
17					0	1000	20A/1P	HEAT TRACE	18		
19	HEAT TRACE	20A/1P	1000	1000			20A/1P	HEAT TRACE	20		
21									22		
23									24		
25									26		
27									28		
29									30		
31									32		
33									34		
35									36		
37									38		
39	SPARE	20A/1P			0				40		
41	SPARE	20A/1P				0	0	20A/1P	SPARE	42	
<b>Total Load:</b>			5940 VA	5705 VA	4300 VA						
<b>Total Amps:</b>			22 A	21 A	16 A						
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals							
Lighting	3045 VA	125.00%	3807 VA	Total Connected Load:		15944 VA					
Receptacles	0 VA	0.00%	0 VA	Total Estimated Demand:		16706 VA					
HVAC	0 VA	0.00%	0 VA	Total Connected Current:		19 A					
Power	12899 VA	100.00%	12899 VA	Total Est. Demand Current:		20 A					
Other	0 VA	0.00%	0 VA								
Motor	0 VA	0.00%	0 VA								
Heating	0 VA	0.00%	0 VA								
Existing Load	0 VA	0.00%	0 VA								
Notes:											

<b>Panelboard:</b>		'L'		VOLTAGE: 120/208 Wye		COPPER BUS RATING: 225 A		MAINS TYPE: MCB		
LOCATION: CHILLER ROOM 100		PHASE: 3		GROUND BUS: Yes		MCB RATING: 225A				
MOUNTING: SUFACE		WIRES: 4		MINIMUM A.I.C. RATING: TBD		FED FROM: 'L'				
ENCLOSURE: TYPE 1		MFR. AND TYPE:		SQUARE D NO		SUBFEED LUGS:		NEUTRAL RATING: 100.00%		
Circuit Number	Load Name	BRKR	A	B	C	BRKR	Load Name	Circuit Number		
1	CHEMICAL TREATMENT...	20A/1P	500	500			20A/1P	REGRIGERANT CONTROL PANEL	2	
3	CHEMICAL TREATMENT...	20A/1P		500	500		20A/1P	BCS PANEL	4	
5	CHEMICAL TREATMENT...	20A/1P			500	500	60A/2P	FACP	6	
7	OVERHEAD DOOR	20A/1P	1500	180			20A/1P	RECEPT. - DATA	8	
9	OVERHEAD DOOR	20A/1P		1500	360		20A/1P	RECEPT. - DATA	10	
11	OVERHEAD DOOR	20A/1P			1500	180	20A/1P	RECEPT. - DATA	12	
13	RECEPT. - CONVENIENCE	20A/1P	540	360			20A/1P	RECEPT. - DATA	14	
15	RECEPT. - CONVENIENCE	20A/1P		720	360		20A/1P	RECEPT. - DATA	16	
17	RECEPT. - CONVENIENCE	20A/1P			540	360	20A/1P	RECEPT. - DATA	18	
19	ACCESS CONTROL PANEL	20A/1P	500	720			20A/1P	RECEPT. - CONVENIENCE	20	
21	FLOW METER	20A/1P		500	500		20A/1P	CT-2 CONTROLS	22	
23	CT-1 VIBRATION	20A/1P			500	500	20A/1P	CT-2 CONTROLS	24	
25	CT-1 CONTROLS	20A/1P	500	500			20A/1P	CT-2 VIBRATION	26	
27	CT-1 CONTROLS	20A/1P		500	1976				28	
29	CT-3 CONTROLS	20A/1P			500	1976	30A/2P	DSCU-1	30	
31	CT-3 VIBRATION	20A/1P	500	500			20A/1P	BCS PANEL	32	
33	CT-3 CONTROLS	20A/1P		500	360		20A/1P	RECEPT. - EXTERIOR	34	
35	RECEPT. - EXTERIOR	20A/1P			900	500	20A/1P	FM-1/FLOW METER	36	
37	FM-1/FLOW METER	20A/1P	500	60			20A/1P	EYE WASH/CAN	38	
39	TP-1/TRAP PRIMER	20A/1P		180	500		20A/1P	GLOBAL CONTROLLER	40	
41									42	
43									44	
45									46	
47									48	
49									50	
51									52	
53									54	
55									56	
57									58	
59									60	
61									62	
63									64	
65									66	
67									68	
69	SPARE	20A/1P		0	0		20A/1P	SPARE	70	
71	SPARE	20A/1P				0	0	20A/1P	SPARE	72
73	SPARE	20A/1P	0	0				20A/1P	SPARE	74
75	SPARE	20A/1P		0	0			20A/1P	SPARE	76
77	SPARE	20A/1P				0	0	20A/1P	SPARE	78
79	SPARE	20A/1P	0	0				20A/1P	SPARE	80
81	SPARE	20A/1P		0	0			20A/1P	SPARE	82
83	SPARE	20A/1P				0	0	20A/1P	SPARE	84
<b>Total Load:</b>			7360 VA	8956 VA	8456 VA					
<b>Total Amps:</b>			61 A	76 A	72 A					
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals						
Lighting	0 VA	0.00%	0 VA	Total Connected Load:		24772 VA				
Receptacles	5580 VA	100.00%	5580 VA	Total Estimated Demand:		24772 VA				
HVAC	0 VA	0.00%	0 VA	Total Connected Current:		69 A				
Power	8452 VA	100.00%	8452 VA	Total Est. Demand Current:		69 A				
Other	10740 VA	100.00%	10740 VA							
Motor	0 VA	0.00%	0 VA							
Heating	0 VA	0.00%	0 VA							
Existing Load	0 VA	0.00%	0 VA							
Notes: *DENOTES LOCK OUT/TAG OUT*										

2	4-24-2025	ADDENDUM #2
1	4-21-2025	ADDENDUM #1
#	DATE	DESCRIPTION
REVISIONS HISTORY		

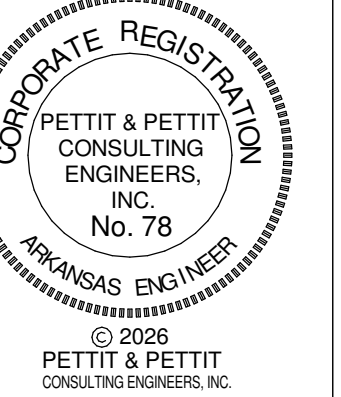
DATE: April 06, 2026  
TITLE: ELECTRICAL PANELS - NORTH PLANT



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CENTRAL ARKANSAS  
1-501.375.0378



VERIFY SCALE 1" = 1'

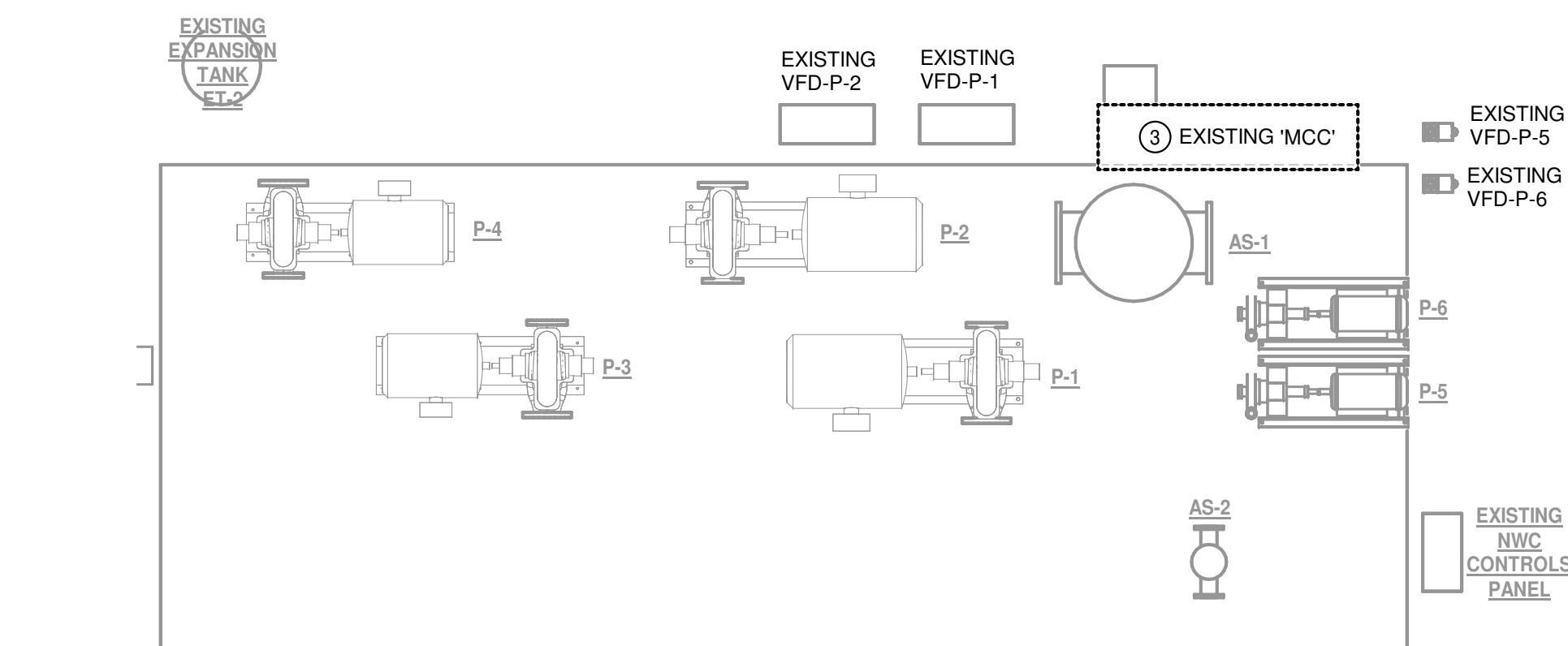


UCA CAMPUS DISTRICT LOOP & CHILLER PLANT  
UCA CAMPUS, CONWAY, AR

EXISTING:		MP	VOLTAGE:	480/277 Wye	COPPER BUS RATING:	1200A	MAINS TYPE:	MLO
LOCATION:			PHASE:	3 <th>GROUND BUS:</th> <td>YES <th>MCB RATING:</th> <td>N/A</td> </td>	GROUND BUS:	YES <th>MCB RATING:</th> <td>N/A</td>	MCB RATING:	N/A
MOUNTING:		Wall Mounted	WIRES:	4 <th>MINIMUM A.I.C. RATING:</th> <td></td> <th>FED FROM:</th> <td></td>	MINIMUM A.I.C. RATING:		FED FROM:	
ENCLOSURE:		NEMA 1	MFR. AND TYPE	SQUARE D I-LINE	SUBFEED LUGS:		NEUTRAL RATING:	100% UNLESS OTHERWISE
Circuit Number	Load Name	Circuit Breaker	A	B	C			
1	EXISTING LOAD	60A/3P	0 VA					
2	EXISTING LOAD	400A/3P	0 VA					
3	EXISTING LOAD	100A/3P	0 VA					
4	EXISTING LOAD	150A/3P	0 VA					
5	EXISTING LOAD	100A/3P	0 VA					
6	EXISTING LOAD	100A/3P	0 VA					
7	EXISTING LOAD	60A/3P	0 VA					
8	EXISTING LOAD	50A/3P	0 VA					
9	EXISTING LOAD	20A/3P	0 VA					
10	EXISTING LOAD	20A/3P	0 VA					
11	*NEW/VFD-P1	225A/3P	32932 VA	32932 VA	32932 VA			
12	*NEW/VFD-P2	225A/3P	32932 VA	32932 VA	32932 VA			
13	*NEW/VFD-P3	70A/3P	17263 VA	17263 VA	17263 VA			
14	*NEW/VFD-P4	70A/3P	17263 VA	17263 VA	17263 VA			
15	*NEW/VFD-P5	30A/3P	3718 VA	3718 VA	3718 VA			
16	*NEW/VFD-P6	30A/3P	3718 VA	3718 VA	3718 VA			
17								
18								
19								
20								
21								
<b>Total Load:</b>			107827 VA	107827 VA	107827 VA			
<b>Total Amps:</b>			389 A	389 A	389 A			
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals				
Lighting	0 VA	0.00%	0 VA	<b>Total Connected Load:</b>	323482 VA			
Receptacles	0 VA	0.00%	0 VA	<b>Total Estimated Demand:</b>	323482 VA			
HVAC	0 VA	0.00%	0 VA	<b>Total Connect Current:</b>	389 A			
Other	0 VA	0.00%	0 VA	<b>Total Est. Demand Current:</b>	389 A			
Motor	0 VA	0.00%	0 VA					
Largest Motor Load	0 VA	0.00%	0 VA					
Kitchen Non Residential	0 VA	0.00%	0 VA					
Existing Load	0 VA	0.00%	0 VA					
<b>Notes:</b> *NEW BREAKERS* VERIFY ALL INSTALLATION REQUIRED PRIOR TO BID MATCH ALL EXISTING AIC RATINGS								

### ELECTRICAL PROJECT NOTES

- THE CONTRACTOR MUST DEMOLISH ALL CONDUIT AND WIRE COMPLETELY FROM ALL EQUIPMENT THAT IS REMOVED.
- THE CONTRACTOR SHALL VERIFY ALL PANEL CIRCUITING AND PROVIDE NEW PANEL SCHEDULES FOR ALL SUB-FEED PANELS.



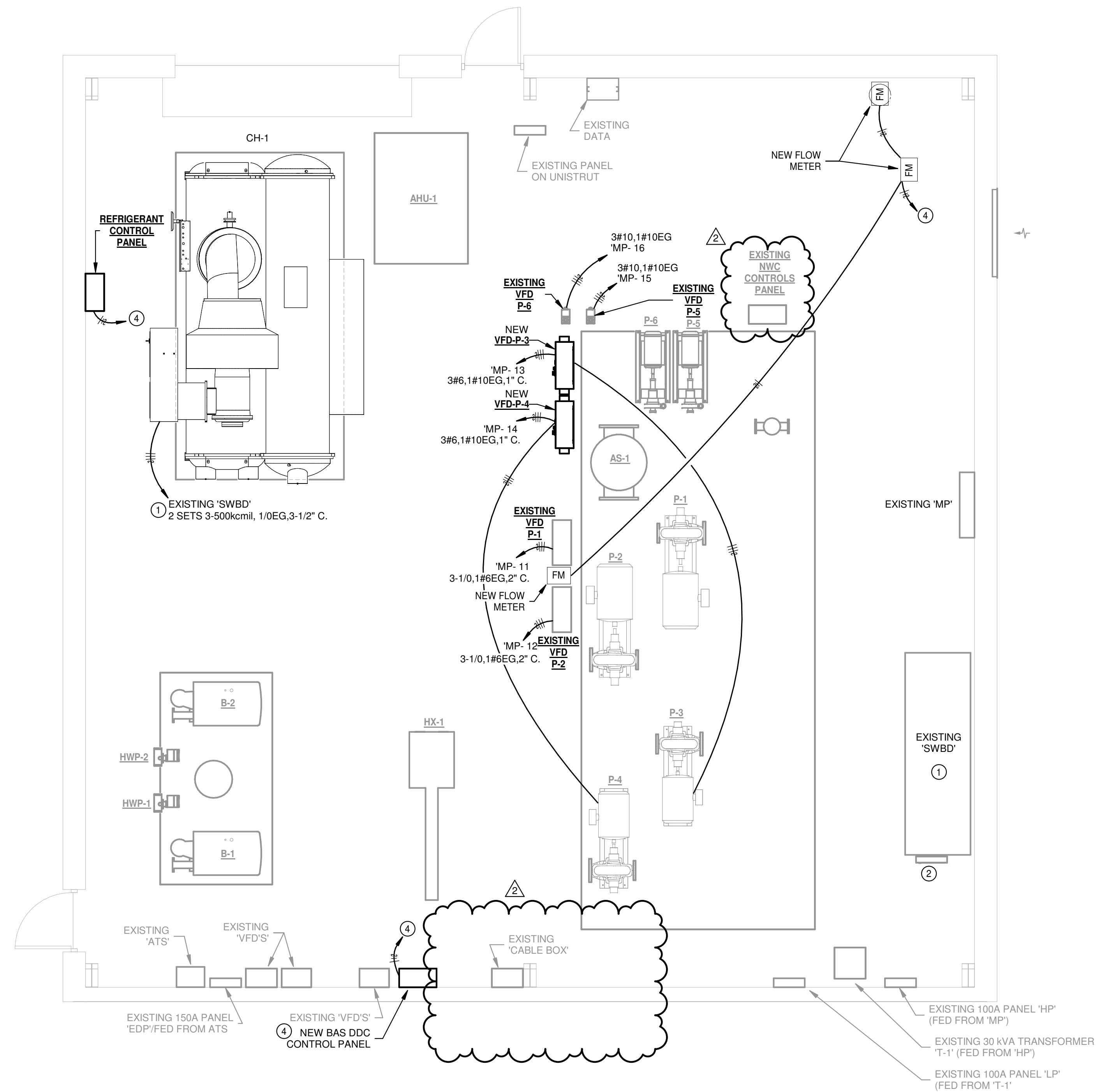
**1 PARTIAL SOUTH PLANT DEMOLITION PLAN - ELECTRICAL**  
SCALE: 1/4" = 1'-0"

### ELECTRICAL KEYED NOTES

- THE EXISTING CH-1 CHILLER IS BEING DEMOLISHED AND REPLACED. REMOVE ALL ASSOCIATED ELECTRICAL COMPONENTS IN THEIR ENTIRETY BACK TO PANEL. PROVIDE AND INSTALL A NEW 1200A/3P BREAKER IN EXISTING 'SWBD'. VERIFY ALL INSTALLATION REQUIREMENTS PRIOR TO BID. MATCH AIC RATING. CONNECT WITH 2 SETS 3-500kcmil, 1/0EG, 3-1/2" C.
- PROVIDE AND INSTALL (3) NEW PM 5560 POWER METERS WITH BACnet/IP CONTROLS TO REPLACE THE EXISTING METERS. METERS SHALL BE INSTALLED IN A CABINET.
- EXISTING 'MCC' THE EXISTING 'MCC' SHALL BE DEMOLISHED. REMOVE ALL WIRE, AND CONDUIT COMPLETELY FROM EXISTING PANEL 'MP', EXISTING 'VFD'S', AND PUMPS. LABEL BREAKER IN EXISTING 'MP' AS SPARE.
- PROVIDE AND INSTALL A NEW 20A/1P BREAKER IN PANEL 'LP' LABEL CIRCUIT IN 'P-1'.

### GENERAL DEMOLITION NOTES

- THE ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO VISIT THE SITE TO FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS PRIOR TO BID.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL DEMOLITION INDICATED ON THESE DRAWINGS. ALL WIRING DEVICES, LIGHT FIXTURES, WIRE, & CONDUIT THAT IS TO BE REMOVED SHALL BE STORED AS DIRECTED BY THE OWNER OR RELOCATED AS SHOWN ON THE NEW FLOOR PLAN. APPROPRIATE MEASURES SHALL BE TAKEN TO ASSURE CONTINUITY OF EXISTING CIRCUITS WHERE REQUIRED, AND ALL OUTAGES WHICH MAY RESULT SHALL BE COORDINATED WITH THE OWNER PRIOR TO THE WORK.
- ALL EXISTING BRANCH CIRCUITS NOT USED SHALL BE REMOVED BACK TO SERVING PANELBOARD. THE CIRCUIT BREAKERS SHALL BE LABELED AS SPARE.
- DASHED LINES INDICATE EXISTING FIXTURES, EQUIPMENT, DEVICES, ETC., TO BE DEMOLISHED UNLESS OTHERWISE NOTED.
- HALF TONE LINES INDICATE EXISTING FIXTURES, EQUIPMENT, DEVICES, ETC., TO REMAIN UNLESS OTHERWISE NOTED.



**2 SOUTH PLANT FLOOR PLAN - ELECTRICAL**  
SCALE: 1/4" = 1'-0"

#	DATE	DESCRIPTION
2	4-24-2025	ADDENDUM #2

DATE: April 06, 2026  
TITLE: SOUTH PLANT PLAN - ELECTRICAL