UNIVERSITY OF CENTRAL ARKANSAS

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

CONSTRUCTION DOCUMENTS

APRIL 06, 2026

UCA CAMPUS, CONWAY, AR

AMR architects

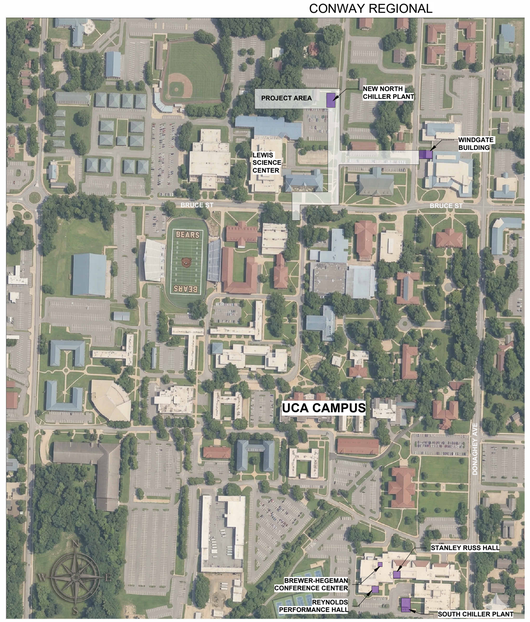
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

N

1 PROJECT EXTENTS

SCALE: 1" = 160'-0"

CONWAY REGIONAL



N

2 VICINITY MAP

SCALE: 1" = 200'-0"

GENERAL

G000	COVER PAGE		
G001	CODE INFO / LIFE SAFETY PLAN		

CIVIL

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

LANDSCAPE

L101	PLANTING PLAN		

ARCHITECTURAL

A001	ARCHITECTURAL GENERAL INFORMATION		
A002	PARTITION TYPES		
A101	FIRST FLOOR PLAN - REFERENCE		
A102	FIRST FLOOR PLAN - DIMENSIONS		
A103	REFLECTED CEILING PLAN		
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		
S201	FOUNDATION DETAILS		
S301	FRAMING PLAN		

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		
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		
M102	NORTH PLANT ROOF PLAN - HVAC		
M103	SOUTH PLANT FLOOR PLAN - HVAC		
M104	WINDGATE FLOOR PLAN - HVAC		
M105	REYNOLDS FLOOR PLAN - HVAC		
M106	BREWER-HEGEMAN FLOOR PLAN - HVAC		
M107	STANLEY RUSS FLOOR PLAN - HVAC		
M201	HVAC SECTIONS		
M202	HVAC SECTIONS		
M301	HVAC SCHEDULES		
M302	HVAC SCHEDULES		
M401	HVAC DETAILS		
M402	HVAC DETAILS		
M403	HVAC DETAILS		
M501	HVAC PIPE SCHEMATIC - NORTH PLANT		
M502	HVAC PIPE SCHEMATIC - SOUTH PLANT		
M503	HVAC PIPE SCHEMATIC - WINDGATE HALL		
M601	HVAC CONTROLS		
M602	HVAC CONTROLS		
M603	HVAC CONTROLS		
M604	HVAC CONTROLS		
M605	HVAC CONTROLS		
M606	HVAC CONTROLS		

ELECTRICAL

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

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

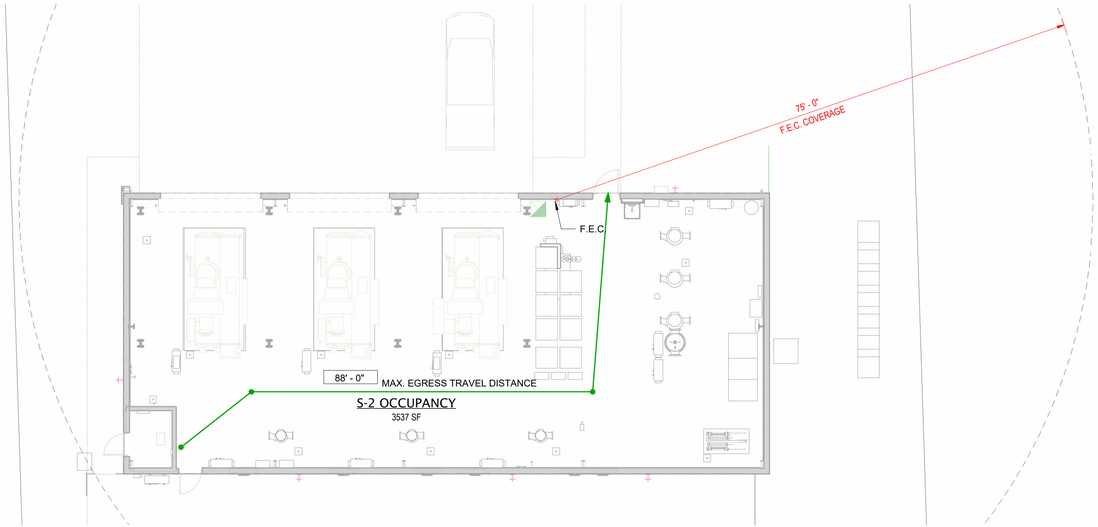
MEP ENGINEER:
PETTIT & PETTIT CONSULTING ENGINEERS
201 EAST MARKHAM, SUITE 400
LITTLE ROCK, ARKANSAS 72201
T: (501) 374-3731
CONTACT: TERRY JACKS
tjacks@pettitinc.com

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.co

REG ARCHITECT NO. C17 AMR ARCHITECTS, INC. ARKANSAS 04/06/2026

CONSTRUCTION DOCUMENTS



N 1 LIFE SAFETY PLAN
SCALE: 1" = 10'-0"

UCA NORTH CHILLER PLANT

CODE SUMMARY

CODE REFERENCES

Code	Description
AFPC Vol. 1	2021 Arkansas Fire Prevention Code Volume 1 (Fire Code)
AFPC Vol. 2	2021 Arkansas Fire Prevention Code Volume 2 (Building Code)
IECC	2009 International Energy Conservation Code (Arkansas Energy Code)
ICC A117.1	2017 Accessible and Usable Buildings and Facilities

BUILDING INFORMATION

Description	Data
Construction Type	Type V-B
Building Area	3,537 SF
Number of Stories	1 story
Building Height	22 feet
Fire Separation Distance	30 feet minimum (all sides)
Sprinkler System	Unsprinklered
Building System	Pre-engineered metal building

OCCUPANCY CLASSIFICATION (AFPC Vol. 2, Chapter 3)

Occupancy	Description	Area	Code Section
Group S-2	Storage - Low Hazard (Mechanical equipment)	3,537 SF	Section 311.3

OCCUPANT LOAD CALCULATION (AFPC Vol. 2, Table 1004.5):

Parameter	Value
Function	Accessory storage areas, mechanical equipment room
Occupant Load Factor	300 gross SF per occupant
Calculation	3,537 SF ÷ 300 SF/occupant = 11.79 occupants
Design Occupant Load	**12 occupants**

ALLOWABLE HEIGHTS AND AREAS (AFPC Vol. 2, Table 506.2)

Storage (S-2) Occupancy Analysis - Type V-B

Parameter	Base Allowable (NS)	Frontage Increase	Total Allowable	Actual	Complies
Building Area	13,500 SF	+75% (If=1.75)	23,625 SF	3,537 SF	YES
Building Height	2 stories / 55 feet	N/A	2 stories / 55 feet	1 story / 22 feet	YES

Notes:

- Type V-B unsprinklered S-2 base allowable: 13,500 SF per Table 506.2
- With 30' minimum fire separation distance on all sides, full frontage increase applied (Section 506.3)
- Frontage increase factor If = 1.75 (75% increase) per Table 506.3.3 for buildings with >30' open space on all sides
- Total allowable area: 13,500 SF × 1.75 = 23,625 SF
- Actual building area: 3,537 SF (15.0% of allowable)
- Building is single story at 22 feet, well within height limits

FIRE RESISTANCE REQUIREMENTS (AFPC Vol. 2, Table 601 - Type V-B)

Building Element	Required Rating
Primary Structural Frame	0 hours
Bearing Walls (Exterior)	0 hours
Bearing Walls (Interior)	0 hours
Non-bearing Walls (Exterior)	0 hours
Floor Construction	0 hours
Roof Construction	0 hours

EXTERIOR WALL FIRE RESISTANCE (AFPC Vol. 2, Table 602)

Fire Separation Distance	Required Fire-Resistance Rating	Openings Permitted
30 feet (all sides)	0 hours	Unlimited

FIRE PROTECTION SYSTEMS (AFPC Vol. 2, Chapter 9)

System Type	Required	Section
Automatic Sprinkler	NO	903.2.9
Manual Fire Alarm	NO	907.2
Portable Fire Extinguishers	YES	906.1
Emergency Lighting	YES	1008.3
Exit Signs	YES	1013

MEANS OF EGRESS (AFPC Vol. 2, Chapter 10)

Exit Requirements

Description	Requirement	Code Section
Exit Width (Doors)	0.2" per occupant (12 × 0.2" = 2.4") or 36" minimum	1005.3.2
Number of Exits	1 exit permitted (occupant load ≤ 29)	Table 1006.2.1
Exit Access Travel Distance	300' maximum (unsprinklered)	Table 1017.2
Common Path of Travel	100' maximum (unsprinklered)	Table 1006.2.1

Exit Discharge

Requirement	Code Reference	Notes
Exits must discharge directly to exterior or through exit passageway	Section 1028.1	Verify on plans
Minimum 50% of exits at grade level	Section 1006.2	Single-story building - complies

ACCESSIBILITY REQUIREMENTS (AFPC Vol. 2, Chapter 11)

Requirement	Applicable	Section
Accessible Route	YES	1104.1
Accessible Entrance	YES (minimum 1)	1105.1
Employee Work Area	YES	1104.3.1
Vertical Access to Rooftop Equipment	NO (exempt per 1109.13)	1109.13

PLUMBING FIXTURES

PLUMBING FIXTURES NOT REQUIRED

No plumbing fixtures are required in this building per the following code sections:

Toilet Facilities and Lavatories:

- Per **Arkansas Plumbing Code Section 403.3.3** - Location of Toilet Facilities in Occupancies Other Than Malls
- Building is accessory to Lewis Science Center (350 feet away)
- Travel distance within 500 feet maximum required by code
- Section 403.3.3 Exception for Group S occupancies allows approved travel distances

Service Sinks (Janitor/Mop Sinks):

- Per **Arkansas Plumbing Code Section 422.4** - Service Sinks
- Service sinks are not required in spaces with an occupant load of 25 or less
- Building occupant load: 12 occupants (less than 25)

Code References:

- Arkansas Plumbing Code Section 403.3.3 - Location of Toilet Facilities in Occupancies Other Than Malls
- Arkansas Plumbing Code Section 422.4 - Service Sinks

ENERGY CODE COMPLIANCE (2009 IECC - Climate Zone 3A)

PRE-ENGINEERED METAL BUILDING SYSTEM

The building thermal envelope shall comply with Table 502.2(1) of the 2009 IECC using the "All Other" column for non-Group R occupancies (Section 502.1.1). Assembly descriptions are per Table 502.2(2). Per Table 502.2(1) Footnote (a), a thermal spacer block is required when using the R-value compliance method.

Assembly	Prescriptive Requirement (Table 502.2(1), CZ 3, All Other)	Assembly Description (Table 502.2(2))
Roof	R-13 + R-13 with R-5 thermal spacer blocks	Standing seam roof: R-13 faced fiberglass draped over purlins (compressed); R-13 unfaced fiberglass installed in liner cavity between purlins (uncompressed); R-5 thermal spacer block at each purlin
Wall	R-19	Single layer: R-19 faced fiberglass batts installed vertically, compressed between metal wall panels and steel framing
Slab-on-Grade (unheated)	NR – No Requirement	—

Notes:

- Roof assembly requires a standing seam roof system; screw-down panels are not compatible with this assembly
- R-5 thermal spacer block is required at each purlin per Table 502.2(1)
- Slab-on-grade has no insulation requirement for unheated slabs in Climate Zone 3

FIRE APPARATUS ACCESS (AFPC Vol. 1, Chapter 5 & Appendix D)

Requirement	Standard	Section
Access Road Width	20' minimum (building height 22' < 30')	503.2.1 / D105.1
Vertical Clearance	13'-6" minimum	503.2.1
Access Road Location	Within 150' of all portions	503.1.1
Fire Hydrant	Within 600' of building	507.5.1

Note: Building height of 22 feet does not require 26' wide aerial apparatus access road (only required for buildings > 30' high)

SEISMIC DESIGN

Seismic Site Class: C (per geotechnical report dated March 27, 2026)

Code Reference: ASCE 7, Section 11.4 / AFPC Vol. 2, Section 1613

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17 AMR ARCHITECTS, INC. ARKANSAS DATE 04/06/2026

VERIFY SCALE
0 1"

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

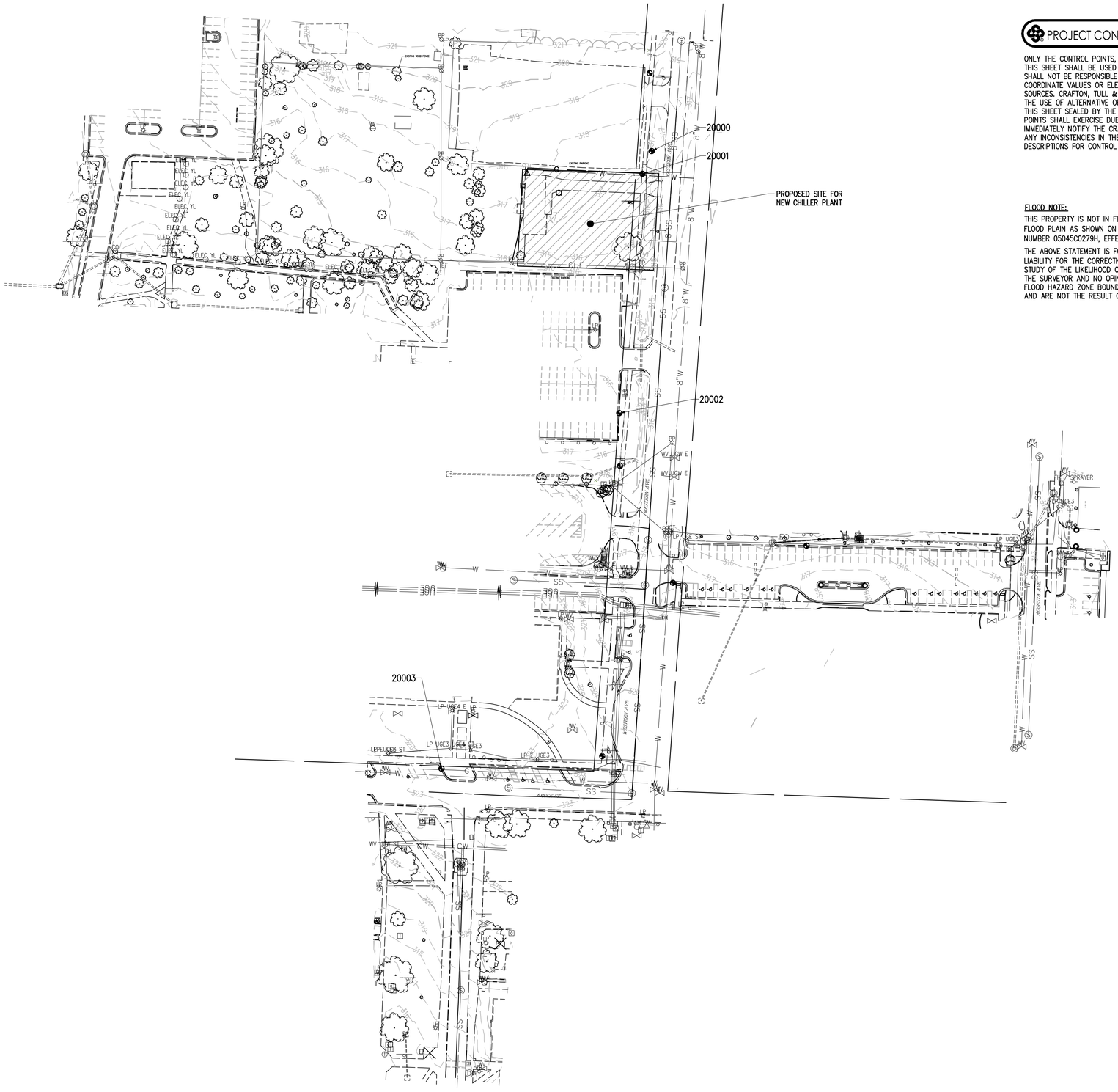
DATE DESCRIPTION
REVISIONS HISTORY

DATE: APRIL 06, 2026

TITLE: CODE INFO / LIFE SAFETY PLAN

CONSTRUCTION DOCUMENTS

G001



PROJECT CONTROL NOTE

ONLY THE CONTROL POINTS, COORDINATE VALUES, AND ELEVATIONS SHOWN ON THIS SHEET SHALL BE USED ON THIS PROJECT. CRAFTON, TULL & ASSOCIATES SHALL NOT BE RESPONSIBLE FOR ANY CONSEQUENCES OF USING CONTROL POINTS, COORDINATE VALUES OR ELEVATIONS ESTABLISHED OR DERIVED FROM OTHER SOURCES. CRAFTON, TULL & ASSOCIATES, AT ITS SOLE DISCRETION, MAY ALLOW THE USE OF ALTERNATIVE OR ADDITIONAL CONTROL, BY A WRITTEN AMENDMENT TO THIS SHEET SEALED BY THE RESPONSIBLE SURVEYOR. USERS OF THESE CONTROL POINTS SHALL EXERCISE DUE CARE AND GOOD SURVEYING PRACTICE AND IMMEDIATELY NOTIFY THE CRAFTON, TULL & ASSOCIATES PROJECT ENGINEER OF ANY INCONSISTENCIES IN THE OBSERVED COORDINATE VALUES, ELEVATIONS AND DESCRIPTIONS FOR CONTROL POINTS SHOWN ON THIS SHEET.

Project Control			
Point #	Northing	Easting	Elevation
20000	273229.43	1175612.37	316.87
20001	273203.42	1175601.86	316.80
20002	272929.77	1175575.29	316.62
20003	272523.21	1175371.93	322.85

FLOOD NOTE:

THIS PROPERTY IS NOT IN FLOOD ZONE "A" OR "AE", AND IS OUTSIDE THE 100-YEAR FLOOD PLAIN AS SHOWN ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FIRM PANEL NUMBER 05045C0279H, EFFECTIVE DATE 12/19/2006.

THE ABOVE STATEMENT IS FOR INFORMATION ONLY AND THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, NO INDEPENDENT STUDY OF THE LIKELIHOOD OF FLOODING OF THE SURVEYED PROPERTY HAS BEEN DONE BY THE SURVEYOR AND NO OPINION OF FLOOD HAZARDS IS INCLUDED IN THIS SURVEY. THE FLOOD HAZARD ZONE BOUNDARIES SHOWN HEREON WERE SCALED FROM THE MAPS CITED AND ARE NOT THE RESULT OF INDEPENDENT COMPUTATION OR ANALYSIS.

LEGEND (EXISTING SYMBOLS)

SYMBOLS	
	BENCHMARK
	FOUND IRON PIPE/REBAR
	PRIMARY CONTROL/SET MONUMENT
	FOUND MONUMENT/ROW
AC	AIR CONDITIONER
ARV	AIR RELEASE VALVE
	ELECTRIC BOX/PEDESTAL
EB	ELECTRIC JUNCTION BOX
E	ELECTRIC METER
	ELECTRIC TRANSFORMER
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
GM	GAS METER
GV	GAS VALVE
	GUARD POST
LP	LIGHT POLE
PP	POWER POLE
S	SANITARY MANHOLE
CO	SANITARY SEWER CLEANOUT
	SIGN
	SPRINKLER HEAD
T	TELEPHONE PEDESTAL
	TV PEDESTAL
	WATER FAUCET
WM	WATER METER
WV	WATER VALVE
	DOWN GUY
D	STORM SEWER MANHOLE
	STORM SEWER PIPE
	DROP/CURB INLET
	GRATED INLET
	TREE
	TREE TO BE REMOVED

LINEWORK	
	EASEMENT
	CURB
1206	INTERMEDIATE CONTOUR
1205	INDEX CONTOUR
SS	SANITARY SEWER LINE (SPECIFY SIZE & TYPE)
G	GAS LINE
W	WATER LINE (SPECIFY SIZE & TYPE)
UGT	UNDERGROUND TELEPHONE
UGE	UNDERGROUND ELECTRIC
OHE	OVERHEAD ELECTRIC
UGTV	UNDERGROUND TELEVISION
OHTV	OVERHEAD TELEVISION
	CHAIN LINK FENCE
	WOOD FENCE
X	BARBED WIRE FENCE
FO	FIBER OPTIC
	RIGHT OF WAY
	ROAD CENTERLINE

LEGEND (CONSTRUCT)

SYMBOLS	
	SANITARY SEWER CLEANOUT (COTG)
	WATER METER

LINEWORK	
	CONCRETE / SIDEWALK EDGE
SS	SANITARY SEWER LINE
W	WATER LINE
UGE	UNDERGROUND ELECTRIC
	DISTRICT COOLING LINE
	DISTRICT COOLING TRENCH LIMITS
1206	INTERMEDIATE CONTOUR
1205	INDEX CONTOUR

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION — CRAFTON, TULL & ASSOCIATES, INC. No. 109 — ARKANSAS ENGINEER

BASIS OF BEARING: ARKANSAS STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83 HORIZONTAL DATUM AND NAVD 88 VERTICAL DATUM.

GRAPHIC SCALE IN FEET
60' 0 60'

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER — STATE OF ARKANSAS No. 17461 — JEREMY A. LANSKA — SIGNATURE

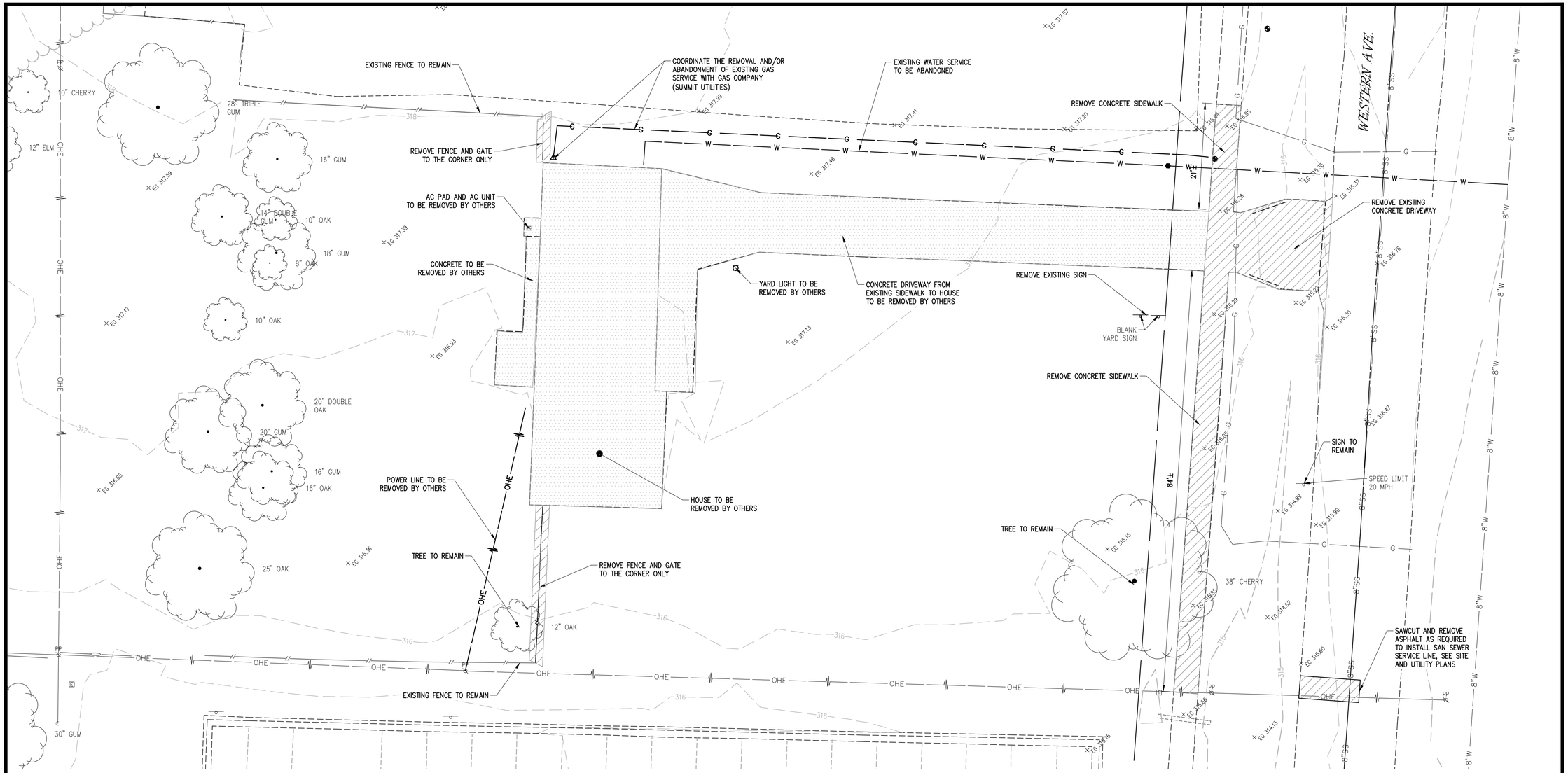
© 2026 Crafton, Tull & Associates, Inc.

04/06/2026

PROJECT CONTROL - EXISTING CONDITIONS

C-101

DRAWING C:\CUSTOMER_LOCAL\BELLEVOY_UARK\INFRASTRUCTURE_LOWD\PROJECT CONTROL-EXISTING CONDITIONS.DWG
LAST MODIFIED BY: CLAY BISHOP 4/2/2026 10:23:01 AM



DEMOLITION NOTES

1. CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE, AND LOCAL CODES FOR THE DEMOLITION AND DISPOSAL OF ALL MATERIALS.
2. CRAFTON TULL AND ASSOCIATES, INC. SHALL NOT BE LIABLE FOR ANY DEMOLITION PROCEDURES, SCHEDULING, AND DISPOSAL OF ANY MATERIALS.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE SURE THAT ADJACENT PROPERTY IS NOT DAMAGED AND IS ACCESSIBLE AT ALL TIMES, AND THAT CONSTRUCTION DOES NOT CREATE ANY HARDSHIP TO LAND OWNERS ADJACENT TO THE CONSTRUCTION SITE.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE, STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
5. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE DISCONNECTION, REMOVAL AND RELOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
6. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES.
7. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH WORK. UTILITIES DETERMINED TO BE ABANDONED AND LEFT IN PLACE SHALL BE GROUTED IF UNDER BUILDINGS.
8. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.
9. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC.
10. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED PRIOR TO DEMOLITION.
11. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
12. 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.
13. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE. REPAIRS SHALL RESTORE DAMAGED ITEMS TO EQUAL OR BETTER THAN, EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING ALL EXISTING DAMAGE AND NOTIFYING CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.
14. ALL TRENCHES AND/OR EXCAVATED AREAS SHALL BE FILLED/TESTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORT.
15. IF SEPTIC TANKS ARE FOUND PRESENT WITHIN THE LIMITS OF DISTURBANCE THEY SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.
16. IF THE CONTRACTOR FINDS ANY UNDERGROUND TANKS ON SITE THEY SHALL CONTACT THE ENGINEER IMMEDIATELY.
17. ALL WELLS SHALL BE CAPPED AND CLOSED IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL LAW.

DEMOLITION LIMITS

DEMOLITION (BY OTHERS)

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:

CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
10' 0 10'

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

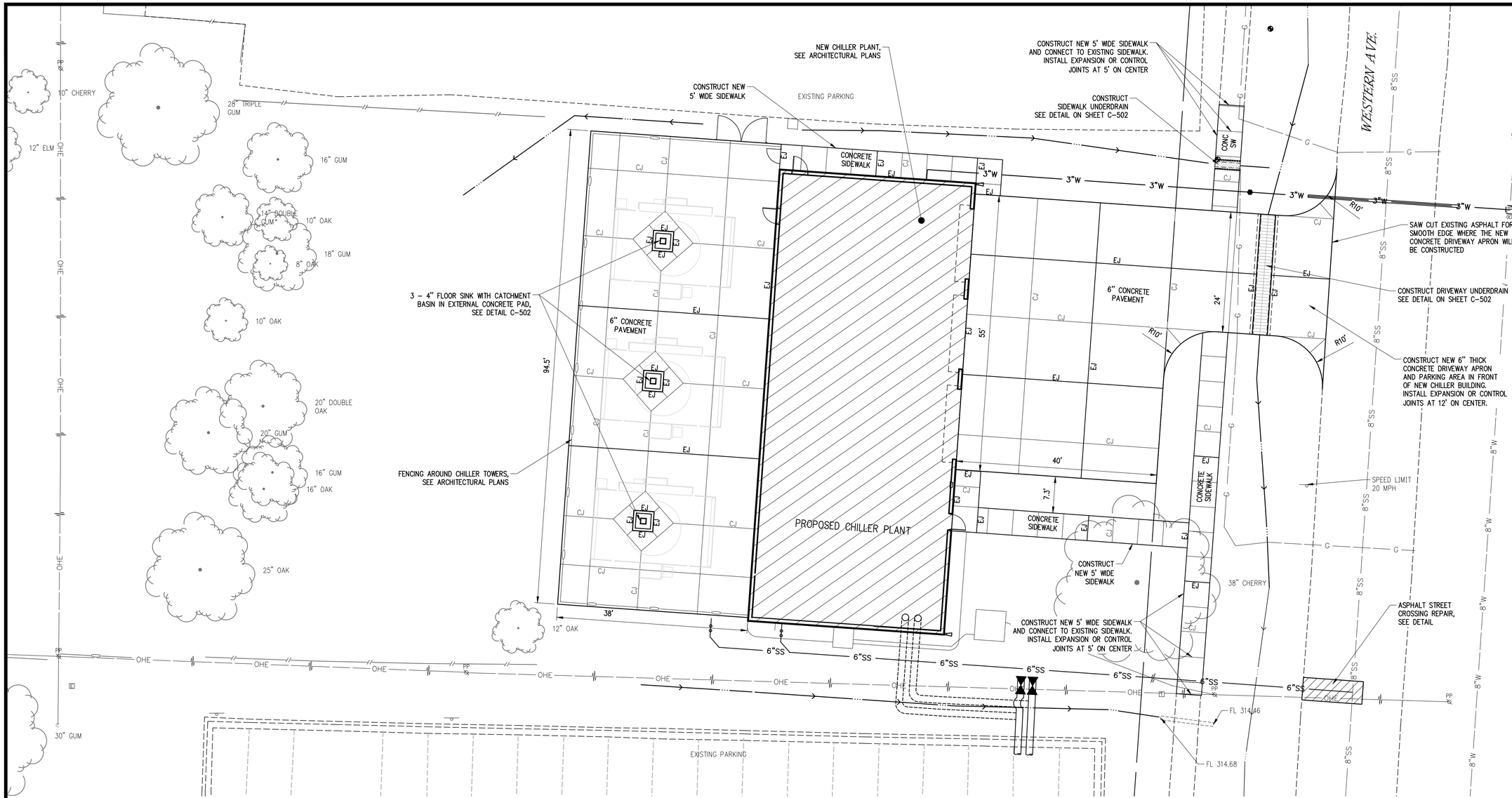
© 2026 Crafton, Tull & Associates, Inc.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10855
TROY D. BROWN
04/06/2026

DEMOLITION PLAN

C-102

DRAWING: G:\25704201_UCA CHILLER\CIVIL\SHEETS\CTUBE\PAVING\DEMOLITION PLAN.DWG
LAST REVISED BY: GLONG LAST PLOTTED BY: TDAY ENDSP: 4/2/2026 10:03:13 AM



MATERIAL SPECIFICATIONS

1. CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH SECTION 505 OF THE ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. REINFORCEMENT SHALL BE SIKA-300 FIBERMESH ADDITIVE (OR APPROVED EQUAL) APPLIED AT A RATIO OF 2.5lbs PER CUBIC YARD.
2. CONCRETE FOR SIDEWALKS SHALL BE IN ACCORDANCE WITH SECTION 633 OF THE ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. REINFORCEMENT SHALL BE SIKA-300 FIBERMESH ADDITIVE (OR APPROVED EQUAL) APPLIED AT A RATIO OF 1.5lbs PER CUBIC YARD.
3. AGGREGATE MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 303 AND TABLE 303-1 OF THE ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
4. SEE STRUCTURAL PLANS FOR DETAILS OF THE COOLING TOWER PAD.

ABBREVATIONS

CONTROL JOINT - CJ
EXPANSION JOINT - EJ

SITE NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY/STATE/FEDERAL REGULATIONS AND CODES AND OSHA STANDARDS.
2. 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.
3. ALL CURB DIMENSIONS AND RADII ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
4. ALL PAVEMENT MARKINGS DIMENSIONS BACK OF CURB UNLESS OTHERWISE NOTED.
5. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
6. ALL CURB/SIDEWALK/HANDICAP RAMP DESIGNS SHALL CONFORM TO ADA STANDARDS OR LOCAL RESTRICTIVE CODES, WHICHEVER IS MORE RESTRICTIVE.
7. CONTRACTOR SHALL ENSURE ALL NECESSARY PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION START.
8. CONTRACTOR SHALL MATCH NEW CURB AND GUTTER, CONCRETE, AND PAVEMENT TO EXISTING IN GRADE AND ALIGNMENT.
9. 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.
10. OWNER SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL NECESSARY WARNING AND LIFE SAFETY SIGNS AND DEVICES ASSOCIATED WITH THIS PROJECT.

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
10' 0 10'

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

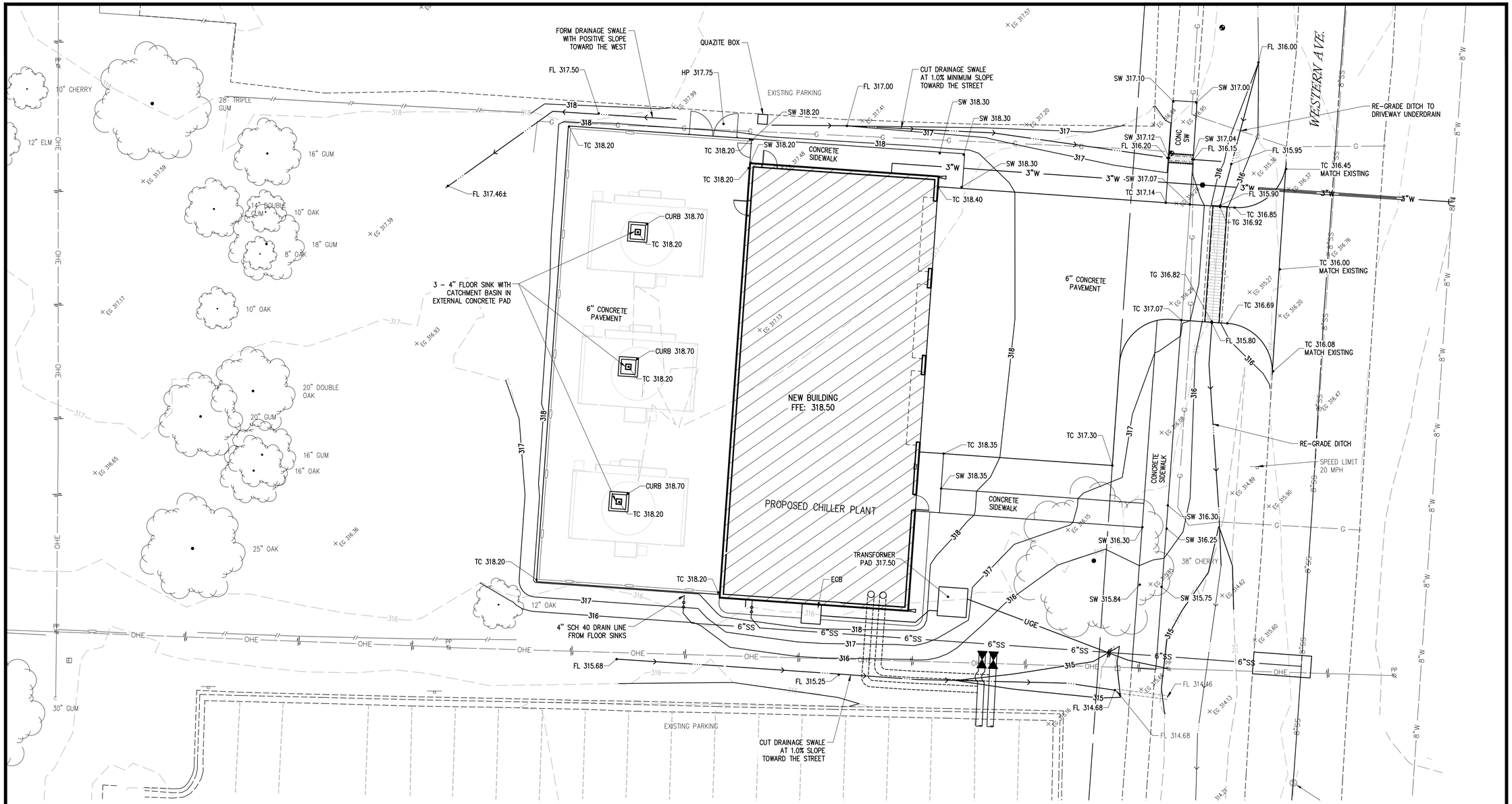
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10855
TROY D. BROWN
04/06/2026

© 2026 Crafton, Tull & Associates, Inc.

BUILDING SITE PLAN

C-103

DRAWING ID: S:\PROJECTS\2025\25704201 UNIVERSITY OF CENTRAL ARKANSAS\CAD\CIVIL\DWG\SITE PLAN.DWG
LAST PLOTTED BY: CLAY BISHOP ON 2026-04-06 AT 11:53 AM



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.

Arkansas One Call 811

Know what's **below**.
Call before you dig.

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.

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION — CRAFTON, TULL & ASSOCIATES, INC. No. 109 — ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
10' 0 10'

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
EG	EXISTING GRADE

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 10855 — TROY D. BROWN

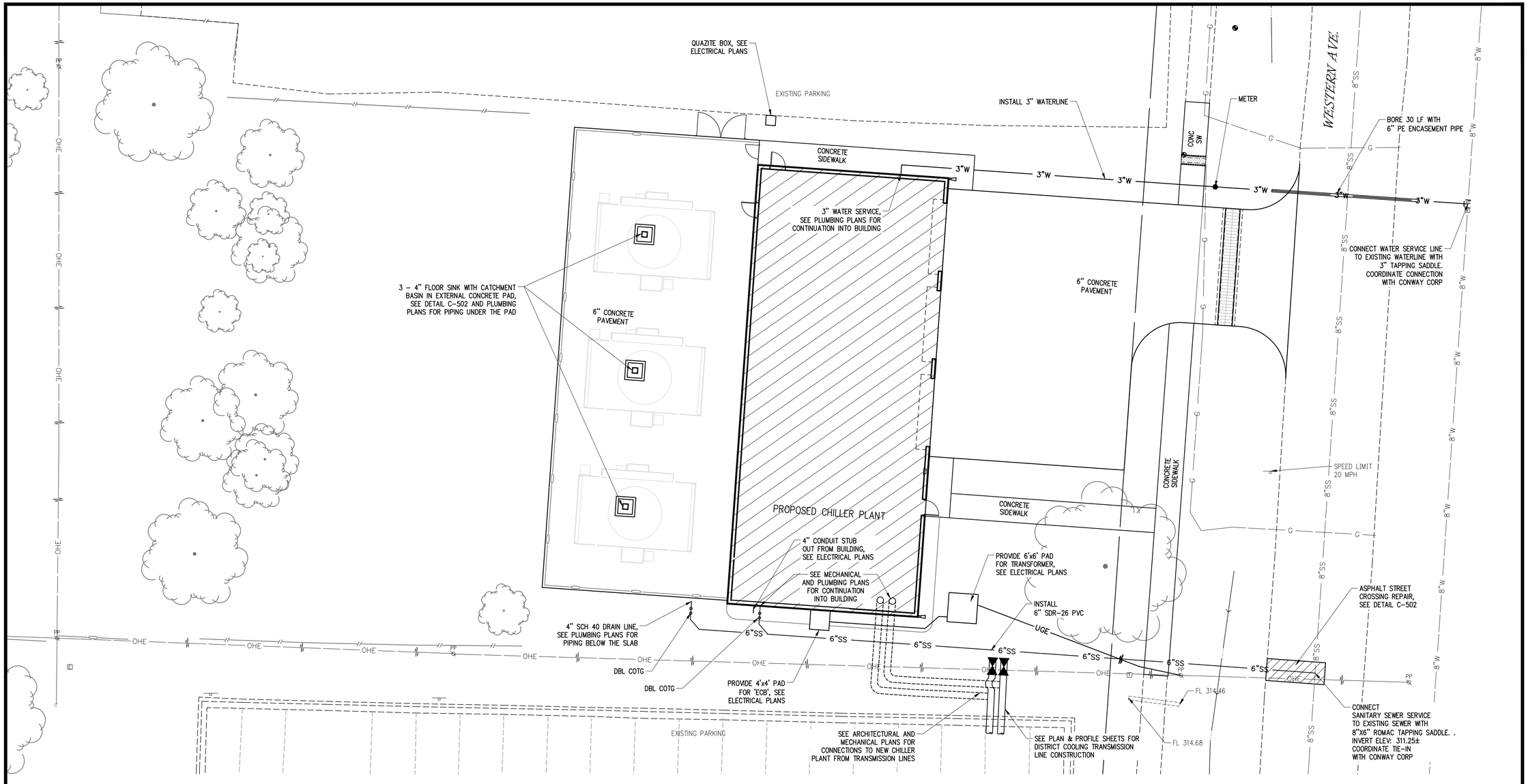
© 2026 Crafton, Tull & Associates, Inc.

04/06/2026

BUILDING GRADING PLAN

C-104

DRAWING: G:\25704201_UCA CHILLER\CD'S_WORKING FILES\25704201-GRADING PLAN.DWG
LAST REVISED BY: TROY BROWN 4/6/2026 1:43:43 PM
LAST PLOTTED BY: TROY BROWN 4/6/2026 1:43:43 PM



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 THESES 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.
2. 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.
3. ALL UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO BACKFILLING.
4. 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.
5. GENERAL CONTRACTOR IS TO COORDINATE WITH APPROPRIATE UTILITY COMPANIES PRIOR TO CONSTRUCTION, ADJUSTMENT, OR RELOCATION OF EXISTING UTILITIES.
6. THRUST BLOCKING SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
7. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
8. 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.
9. 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.
10. 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.
11. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL REGULATIONS.
12. REFER TO BUILDING PLANS FOR SITE LIGHTING AND ELECTRICAL PLAN.
13. ALL MATERIALS, CONSTRUCTION, AND INSPECTION FOR WATER AND SANITARY SEWER LINES SHALL BE PER THE SPECIFICATIONS OF CONWAY CORP.
14. DAMAGE TO ALL EXISTING FACILITIES DESIGNATED TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
15. 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.
16. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED AS WELL AS COSTS OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
17. 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.
18. 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.
19. CONTRACTOR SHALL PROVIDE IN-DITCH AS-BUILT INFORMATION TO ENGINEER AS REQUIRED BY LOCAL UTILITY PROVIDERS
20. <u>ENERGIZED ELECTRICAL LINE SAFETY, WARNINGS, AND ADVANCED NOTICES:</u> 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.

Arkansas One Call 811
Know what's **below**.
Call before you dig.

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
10' 0 10'

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

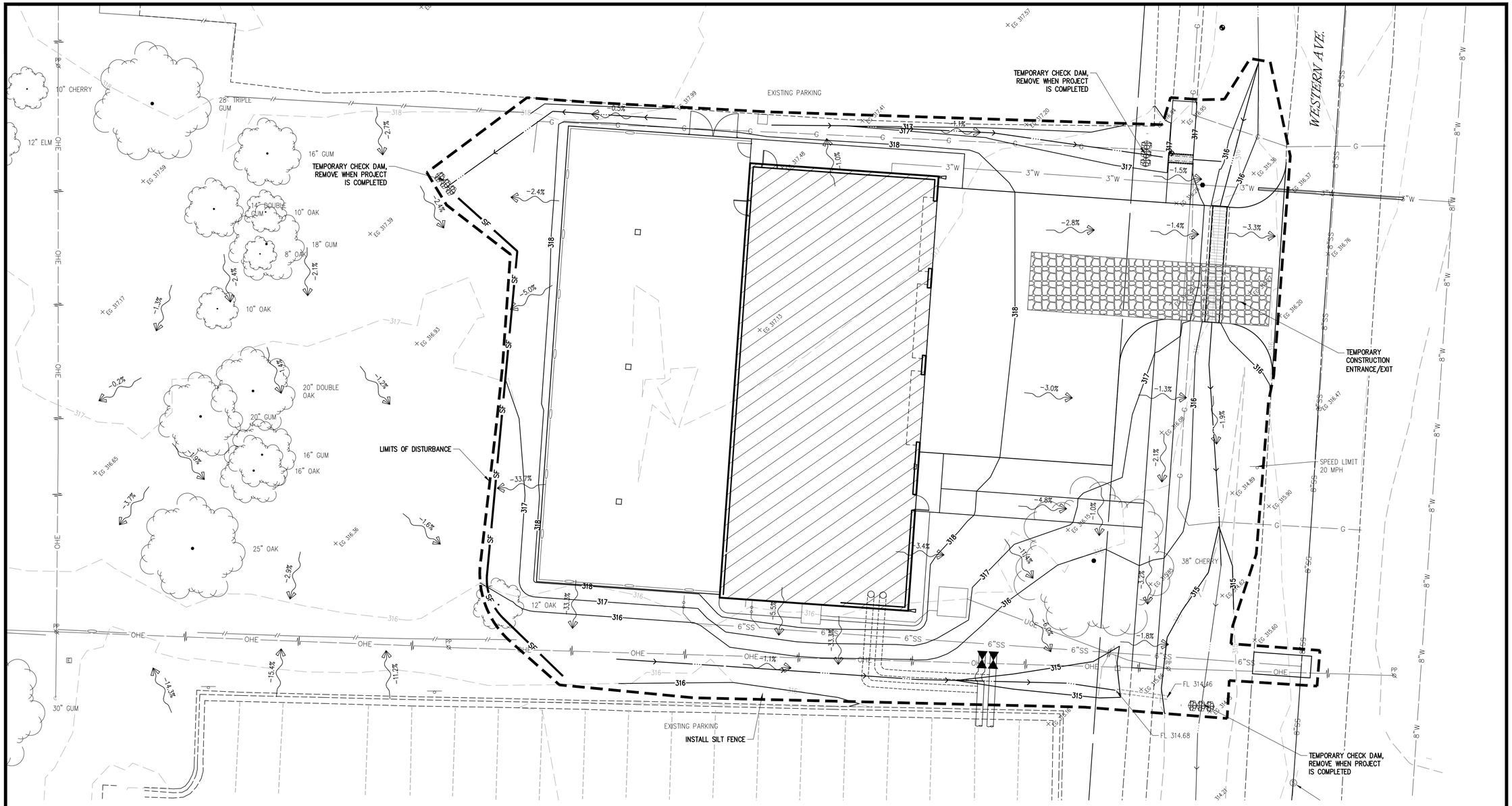
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10855
TROY D. BROWN
04/06/2026

© 2026 Crafton, Tull & Associates, Inc.

UTILITY PLAN - BLDG UTILITIES

C-105

DRAWING G:\25704201_UCA CHILLER\CIVIL\WRK\RSC\DIS\LOWG\UTILITY PLAN.DWG
LAST MODIFIED BY: CLAY BISHOP 4/1/2026 11:14:41 PM



EROSION CONTROL LEGEND

PS — PS	PERMANENT SEEDING	CD	ROCK CHECK DAM
TPS — TPS	TEMPORARY PARKING AND STORAGE	CE	STABILIZED CONSTRUCTION EXIT (ENTRANCE)
	BOUNDARY LINE	DD	CHANNELED DIVERSIONS
	RIGHT OF WAY LINE	DS	DEWATERING SYSTEM / STRUCTURE
	LIMITS OF DISTURBANCE	SF	SILT FENCE
	GRADE BREAK	ST — ST	SEDIMENT BASIN WITH STONE OUTLET
xxx	CONTOUR ELEVATIONS	IP1	BLOCK AND AGGREGATE INLET SEDIMENT DEVICE
	STORM DRAIN	IP2	CURB INLET FILTER SOCK
XX.X%	DIRECTION OF OVERLAND FLOW W/ GRADE	IP3	GRATED INLET GRAVEL SEDIMENT FILTER
	LIMITS OF DRAINAGE SUB-BASIN	IP4	SILT FENCE INLET PROTECTION
OP1	RIP RAP SLOPE PROTECTION (SEE SIZE THIS SHEET)		
ECL	PERMANENT EROSION CONTROL LINING		
SB — SB	TEMPORARY SEDIMENT BASIN		
FFT — FFT	FIBER FLOCCULENT TUBE		

NOTE: SEE C-101 FOR EXISTING LEGEND SYMBOLS

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
10' 0 10'

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10855
TROY D. BROWN

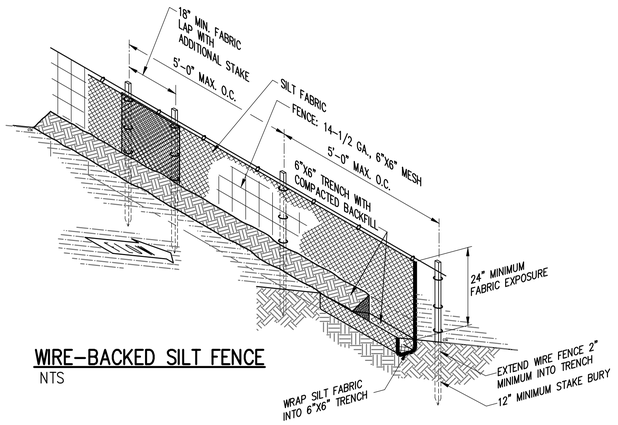
© 2026 Crafton, Tull & Associates, Inc.

04/06/2026

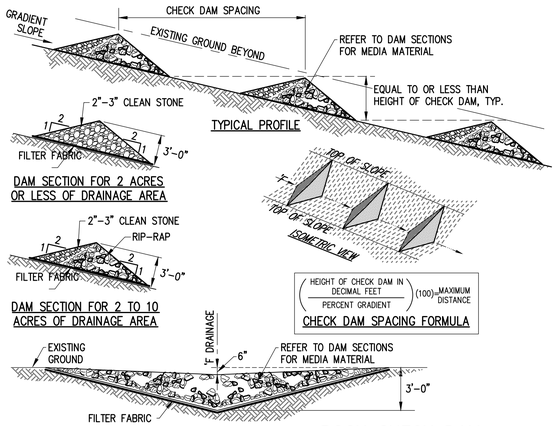
EROSION CONTROL PLAN

C-106

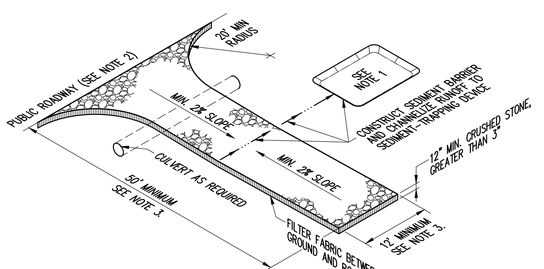
DRAWING: C:\25704201 UCA CHILLER\CIVIL\ARK\ENGCT\SHEETS\DWG\EROSION CONTROL PH1 & PH2.DWG
LAST SAVED BY: GLONG ON: 4/6/2026 11:43:57 PM
LAST PLOTTED BY: CLAY BISHOP ON: 4/6/2026 11:43:57 PM



WIRE-BACKED SILT FENCE
NTS



ROCK CHECK DAM
NTS



STABILIZED CONSTRUCTION EXIT (ENTRANCE)
NTS

1. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCE/EXIT IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES EXIT ONTO THE PUBLIC ROADS. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF SITE.

2. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

3. LENGTH AND WIDTH TO SUIT SITE, CONSTRUCTION TRAFFIC AND EFFECTIVENESS.

PHASE I

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES/EXITS.
2. PREPARE TEMPORARY PARKING AND STORAGE AREAS. UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASH-OUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., DENOTE THEM ON THE SITE MAPS IMMEDIATELY AND NOTE ANY CHANGES IN THE LOCATIONS AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. CONSTRUCT THE SEDIMENTATION AND SEDIMENT TRAP BASINS.
5. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEER CONSULTANT TO PERFORM INSPECTION OF BMPs. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
6. CLEAR AND GRUB THE SITE.
7. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
8. BEGIN GRADING THE SITE.

PHASE II

1. TEMPORARILY SEED DENUDED AREAS.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP-RAP AROUND OUT STRUCTURES.
4. INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES.
5. PREPARE SITE FOR PAVING.
6. PAVE SITE.
7. INSTALL INLET PROTECTION DEVICES.
8. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
9. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IF SITE IS STABILIZED.

GENERAL EROSION NOTES:

A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING (SITE MAP), THE STANDARD DETAILS, THE PLAN NARRATIVE, AND RELATED DOCUMENTS.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND THE STATE OF ARKANSAS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

D. BEST MANAGEMENT PRACTICES (BMP) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AND APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.

E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON THE SITE AT ALL TIMES.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

G. GENERAL CONTRACTOR SHALL DENOTE THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, AND AREA FOR PORTABLE FACILITIES, OFFICE TRAILERS AND TOILET FACILITIES.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE AND EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM-BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

K. RUBBISH, TRASH, GARBAGE, LITTER OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM BEING BLOWN OR WASHED OFF-SITE.

L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN AND SWPPP SHALL BE INITIATED AS SOON AS POSSIBLE.

M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS SHALL BE TEMPORARY SEEDED.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCE/EXIT IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES EXIT ONTO THE PUBLIC ROADS. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE.

P. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

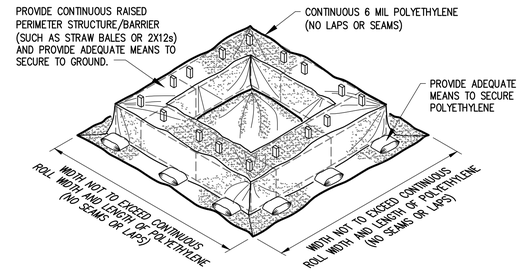
Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

R. ON-SITE AND OFF-SITE STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH THE GENERAL PERMIT.

S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.

U. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.



CONCRETE WASH-OUT BASIN
NTS

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
ROUGH GRADE / SEDIMENT CONTROL																		
TEMPORARY CONTROL MEASURES																		
STRIP & STOCKPILE TOPSOIL																		
STORM FACILITIES																		
TEMPORARY CONSTRUCTION ROADS																		
FOUNDATION / BUILDING CONSTRUCTION																		
SITE CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
FINISH GRADING																		
LANDSCAPING/SEED/FINAL STABILIZATION																		

ACREAGE SUMMARY

IMPERVIOUS AREA	0.25 AC
SEEDED AREA	0.19 AC
TOTAL DISTURBED	0.44 AC

DEVELOPER/OWNER:
UNIVERSITY OF CONWAY, ARKANSAS

SITE OPERATOR/GENERAL CONTRACTOR:
TBD

SUPERINTENDENT:
TBD

T.B.M.
ENTER BENCHMARK INFORMATION

USGS QUADRANGLE MAP
NTS

VICINITY MAP
NTS

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION — CRAFTON, TULL & ASSOCIATES, INC. No. 109 — ARKANSAS ENGINEER

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 10855 — JOY D. BROWN

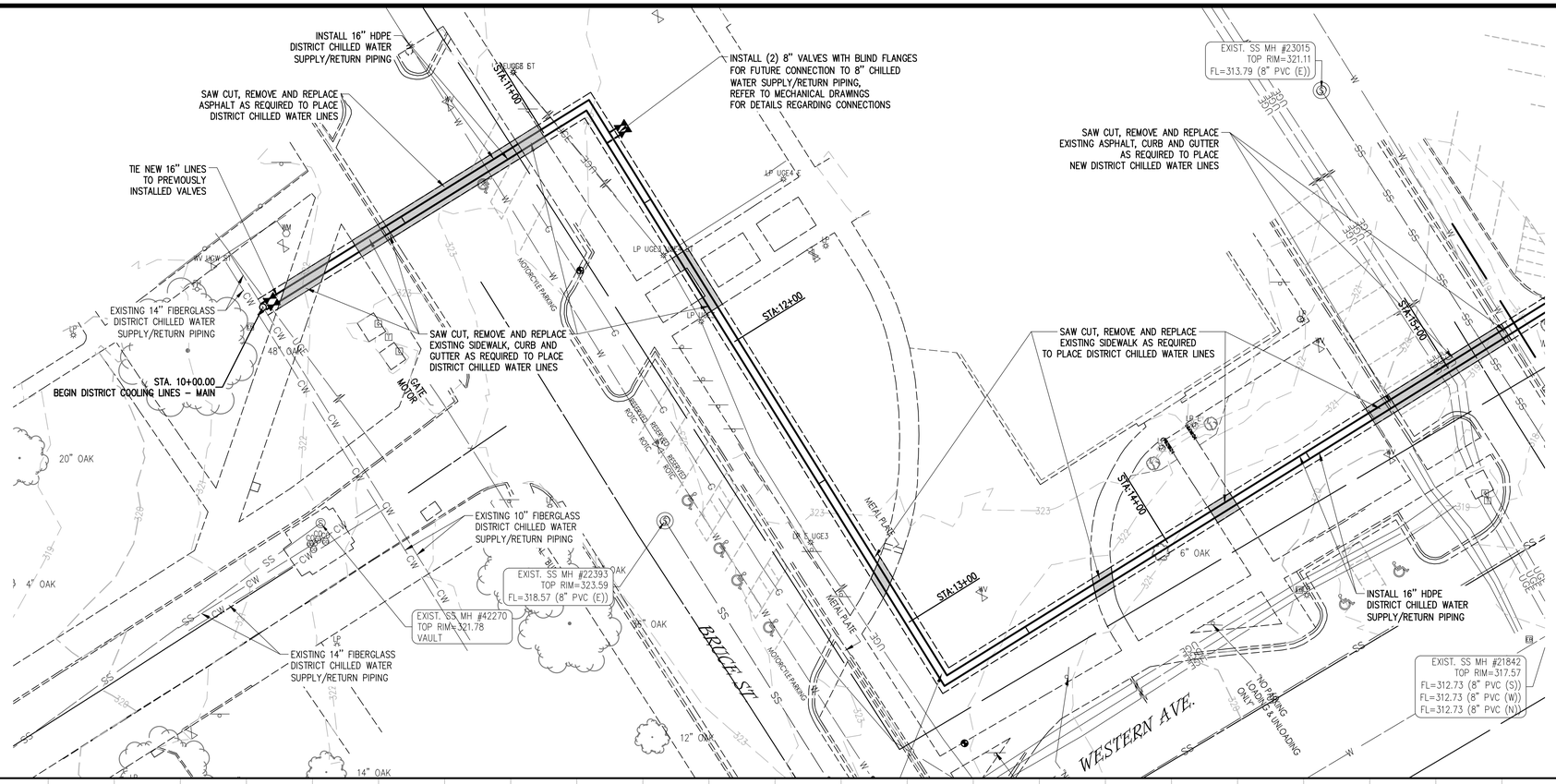
© 2026 Crafton, Tull & Associates, Inc.

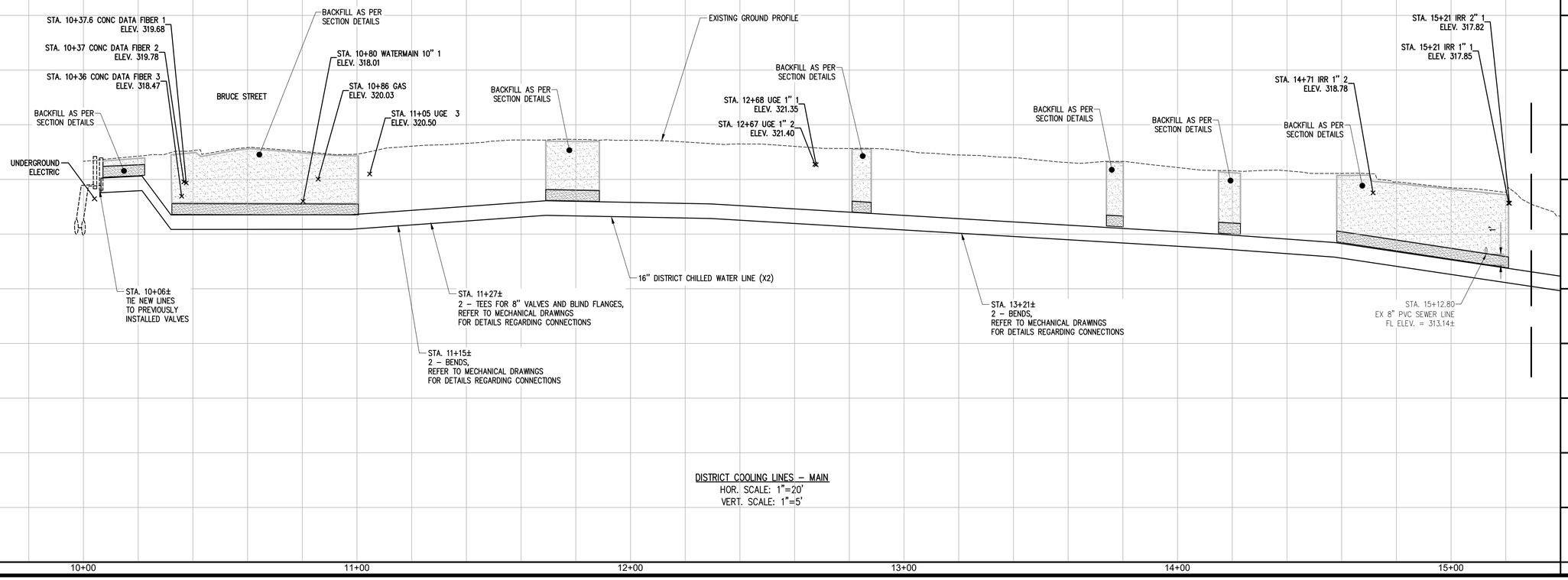
04/06/2026

EROSION CONTROL DETAILS

C-107

DRAWING: G:\25704201_UCA CHILLER\BIM\A_UNRESTRICTED_DWG\VERSION CONTROL PW1 & PW2.DWG
LAST MODIFIED BY: GLONG ON: 4/2/2026 10:24:03 AM
LAST PLOTTED BY: CLAY BISHOP 4/2/2026 10:24:03 AM





DISTRICT COOLING LINES – MAIN
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC. No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
20' 0 20'

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC By:
QC Date:

ISSUED FOR CONSTRUCTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10855
TROY D. BROWN

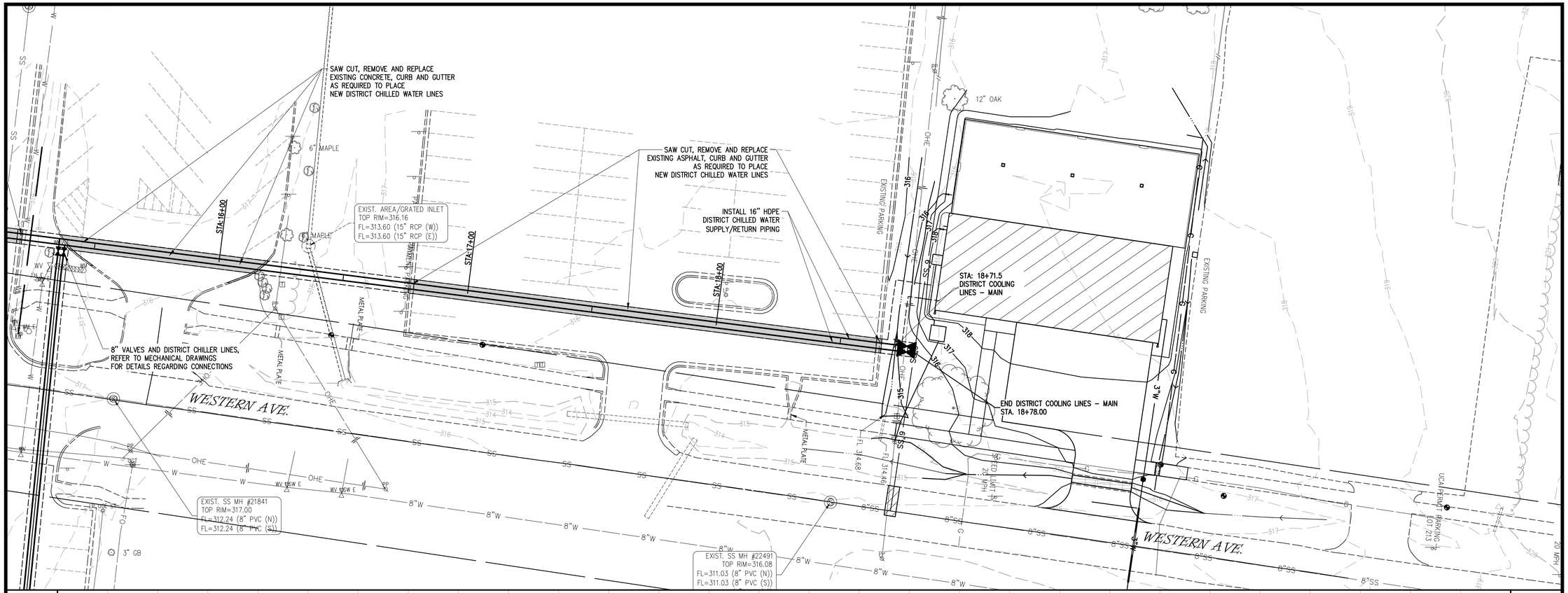
04/06/2026

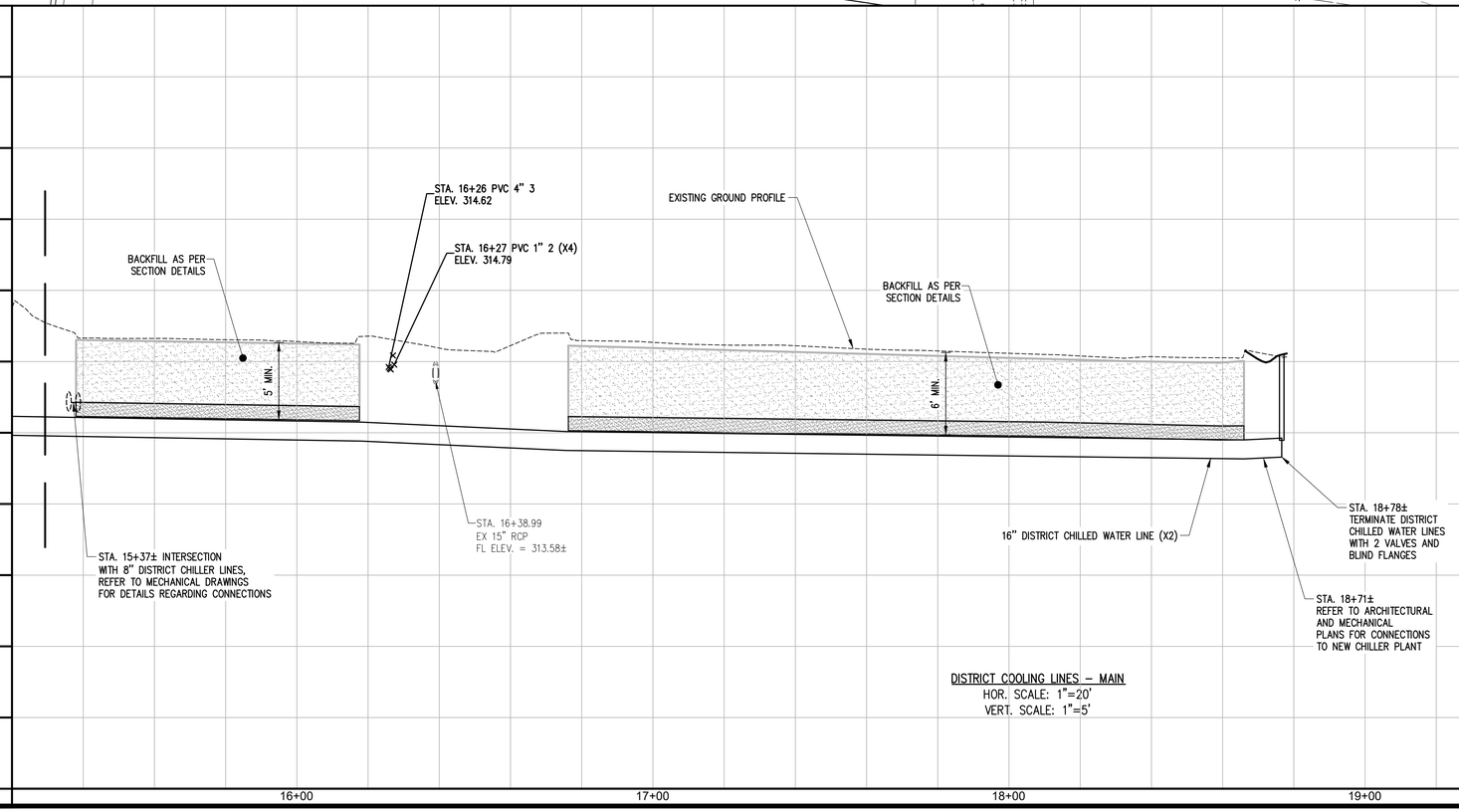
© 2026 Crafton, Tull & Associates, Inc.

DISTRICT COOLING LINES - MAIN P&P

C-201

DRAWING: G:\25700\03_UCA\CHILLER\CIVIL\MAIN\SHEETS\DWG\CHILLER_MAIN P&P.DWG
LAST SAVED BY: GLONG ON: 4/6/2026 2:34:17 PM
LAST PLOTTED BY: GLONG ON: 4/6/2026 2:34:17 PM





DISTRICT COOLING LINES – MAIN
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
20' 0 20'

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC By:
QC Date:

ISSUED FOR CONSTRUCTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10855
TROY D. BROWN

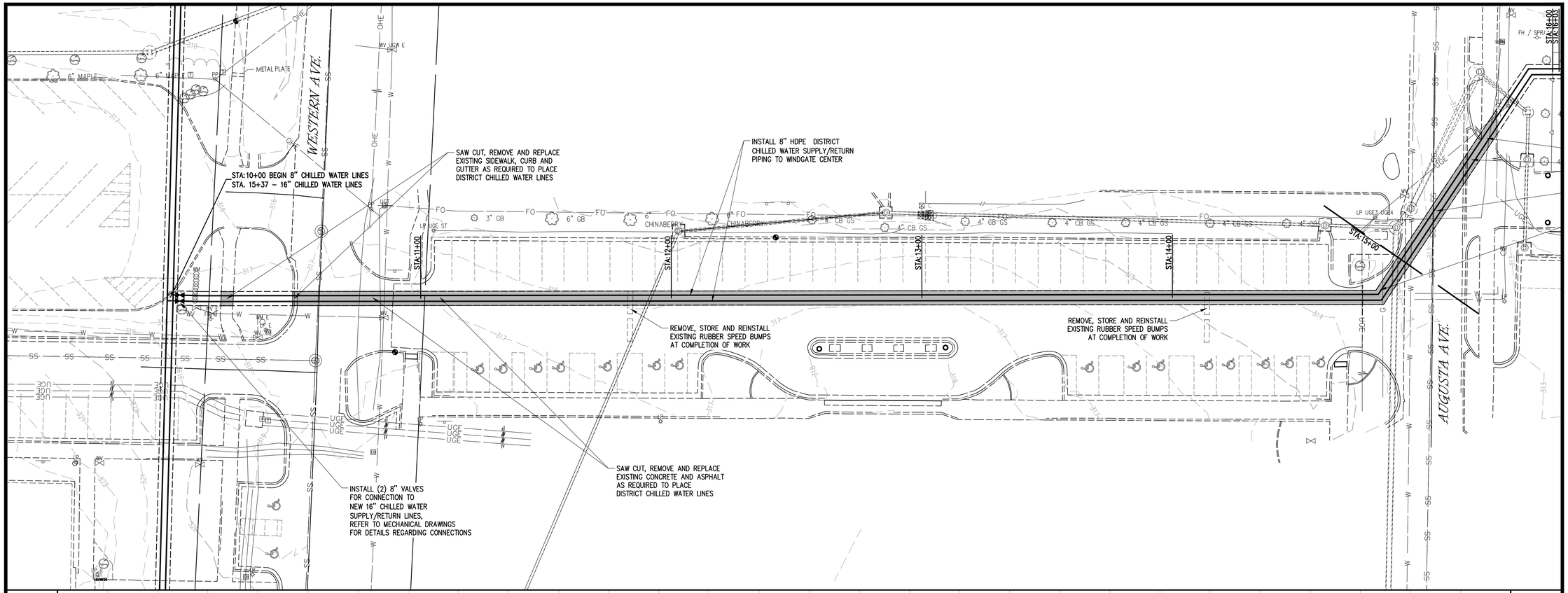
04/06/2026

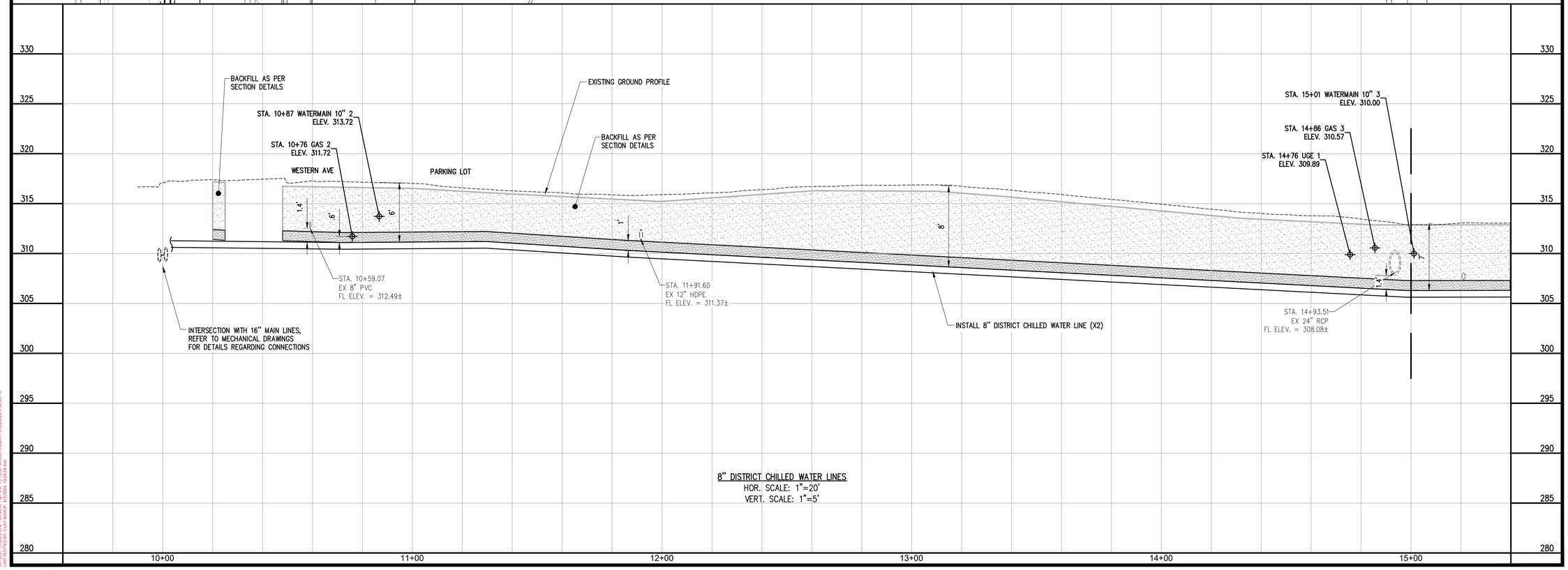
© 2026 Crafton, Tull & Associates, Inc.

DISTRICT COOLING LINES - MAIN P&P

C-202

DRAWING: G:\25700\03_UCA CHILLER\CIVIL\MAIN SHEETS\PLOTS\C-202 DISTRICT COOLING LINES - MAIN P&P.DWG
LAST PLOTTED BY: CRAFTON, TULL & ASSOCIATES, INC. LAST PLOTTED: 04/06/2026 10:42:20 AM





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

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
20' 0 20'

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC By:
QC Date:

ISSUED FOR CONSTRUCTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10855
TROY D. BROWN

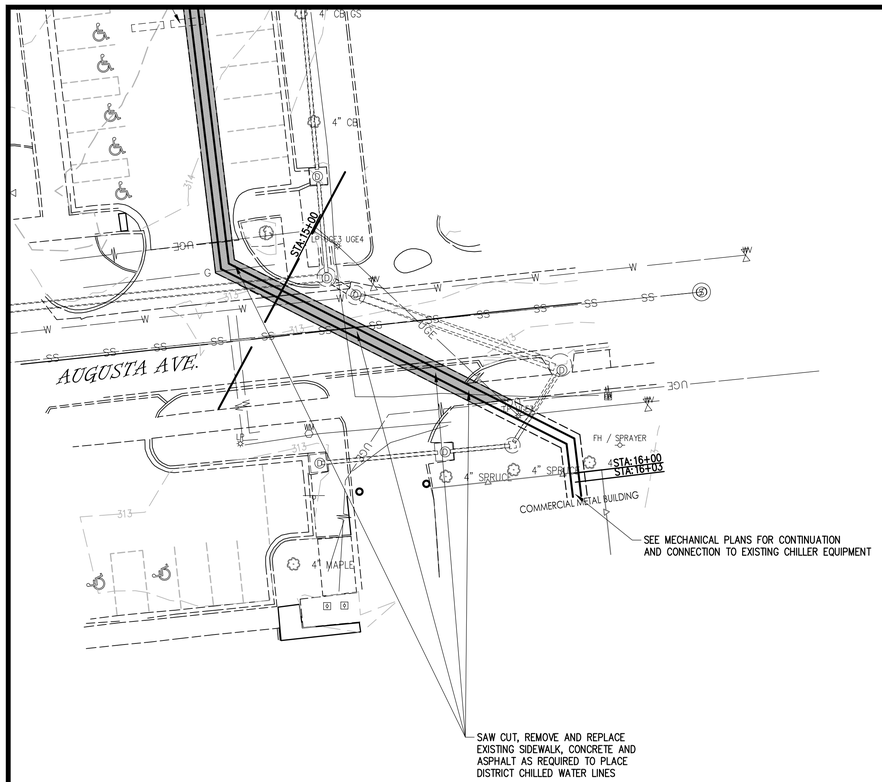
© 2026 Crafton, Tull & Associates, Inc.

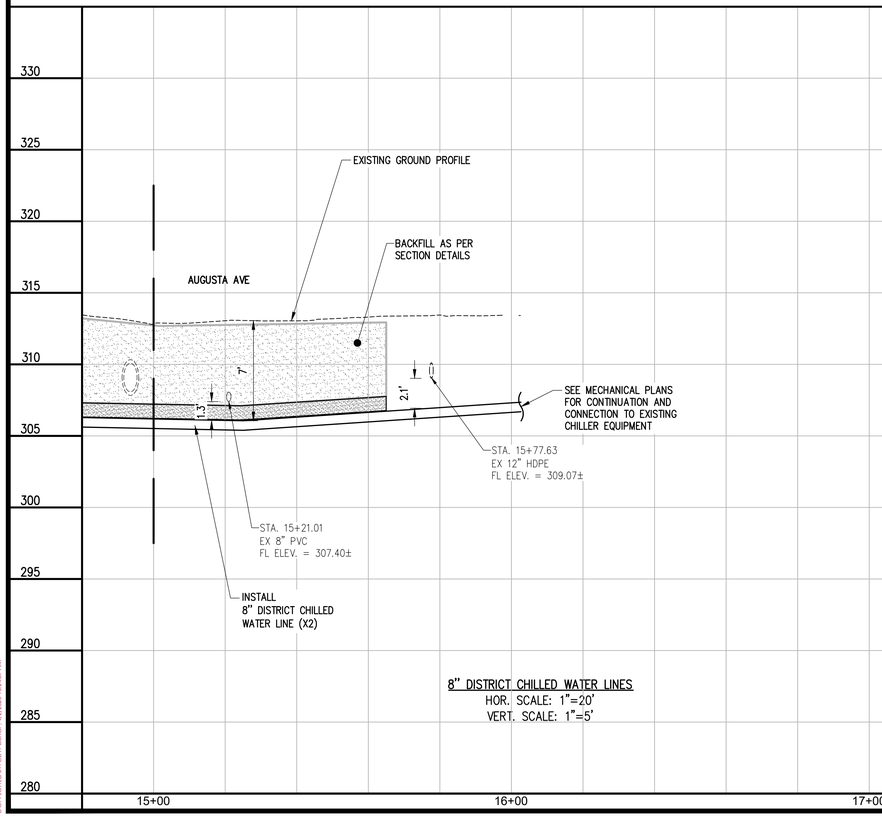
04/06/2026

DISTRICT COOLING LINES - EAST RUN P&P

C-203

DRAWING: G:\25704201_CENTRAL\ELECTRICAL\UNIVERSITY DWG\CIVIL\CELLS\E_LATERAL P&P.STDWG
LAST SAVED BY: GLONG ON: 4/2/2026 11:24:53 AM
LAST PLOTTED BY: GLONG ON: 4/2/2026 11:24:54 AM





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

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
20' 0 20'

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
TROY D. BROWN
No. 10855

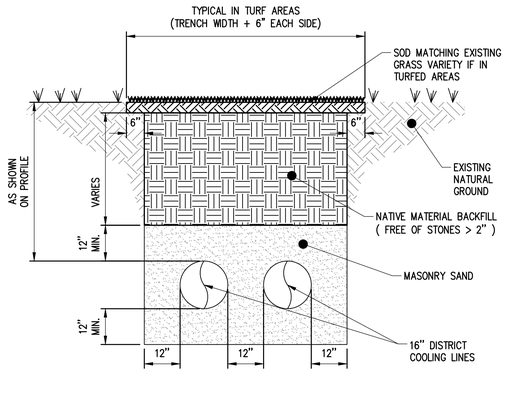
© 2026 Crafton, Tull & Associates, Inc.

04/06/2026

DISTRICT COOLING LINES - EAST RUN P&P

C-204

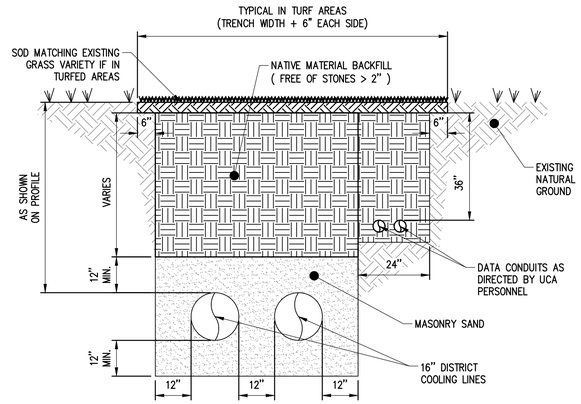
DRAWING G:\2570\4201_UCA CHILLER PLANT_INFRASTRUCTURE\DWG\CHILLER LINE - LATERAL P&P.DWG
LAST PLOTTED BY: CLAY BISHOP 4/2/2026 10:43:37 AM



UCA DISTRICT COOLING TRENCH SECTION – GRASS OR LANDSCAPED AREAS

1

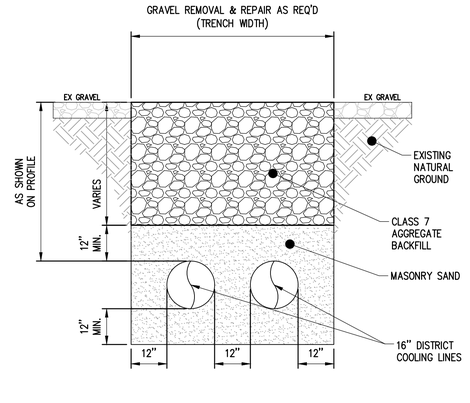
NTS



UCA DISTRICT COOLING TRENCH SECTION – GRASS OR LANDSCAPED AREAS WITH DATA CONDUITS

2

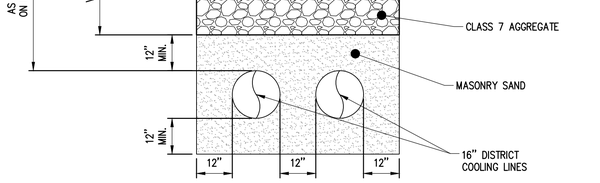
NTS



UCA DISTRICT COOLING TRENCH SECTION – GRAVEL PARKING AREAS

3

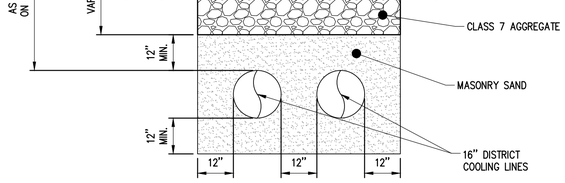
NTS



UCA DISTRICT COOLING TRENCH SECTION – SIDEWALK & CONCRETE AREAS

4

NTS



UCA DISTRICT COOLING TRENCH SECTION – ROADWAY & ASPHALT PARKING AREAS

5

NTS

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:

CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10855
TROY D. BROWN

© 2026 Crafton, Tull & Associates, Inc.

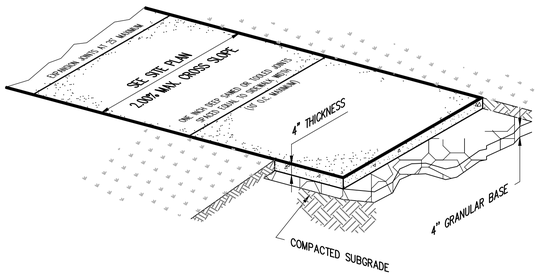
04/06/2026

CONSTRUCTION DETAILS - COOLING TRENCHES

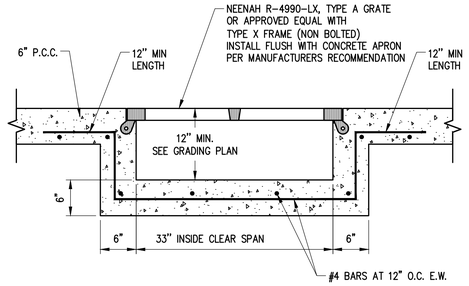
C-501

DRAWING: D:\257042\01_DATA\REVIT\ARKANSAS\STRUCTURE\DWG\CONSTRUCTION DETAILS.DWG
LAST SAVED BY: GLONG 4/6/2026 10:32:47 AM
LAST PLOTTED BY: CLAY BISHOP 4/6/2026 10:32:47 AM

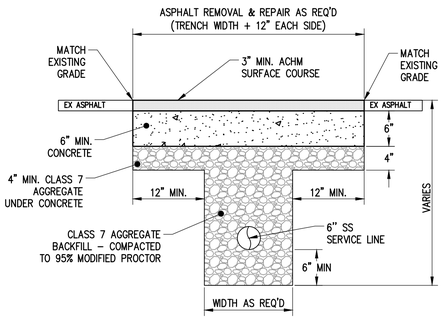
NOTES:
1. PROVIDE 1/2" EXPANSION JOINT BETWEEN SIDEWALK AND ALL FIXED OBJECTS.
2. PROVIDE 1/2" TOOLED RADIUS ON ALL EDGES.
3. CONCRETE TO BE MINIMUM 3500#, AE.



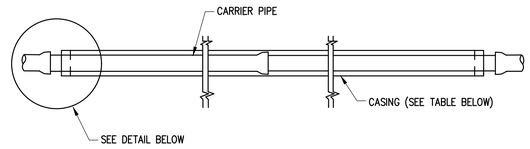
SIDEWALK
NTS

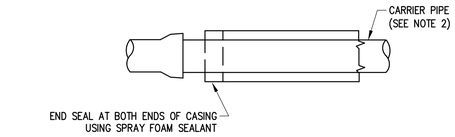


DRIVEWAY UNDERDRAIN
NTS



ASPHALT STREET CROSSING REPAIR – SANITARY SEWER SERVICE LINE TRENCH
NTS

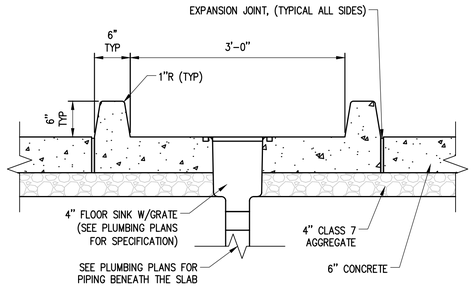




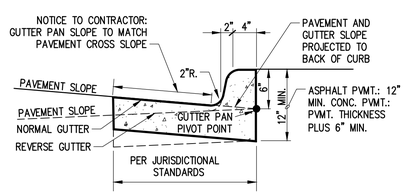
CARRIER PIPE	CASING PIPE
1 1/2" PVC SDR 17/21/26	4" PE IPS DR-17.0
2" PVC SDR 17/21/26	4" PE IPS DR-17.0
2 1/2" PVC SDR 17/21/26	6" PE IPS DR-17.0
3" PVC SDR 17/21/26	**6" PE IPS DR-17.0**
4" PVC SDR 17/21/26 & C900 DR 14/18	8" PE IPS DR-17.0
6" PVC SDR 17/21/26	10" PE IPS DR-17.0
6" PVC C900 DR 14/18	12" PE IPS DR-17.0
8" PVC SDR 26	12" PE IPS DR-17.0
8" PVC SDR 17/21	14" PE IPS DR-17.0
8" PVC C900 DR 14/18	16" PE IPS DR-17.0
10" PVC SDR 21/26	16" PE IPS DR-17.0
10" PVC SDR 17 & C900 DR 14/18	18" PE IPS DR-17.0
10" PVC SDR 26	18" PE IPS DR-17.0
10" PVC SDR 17/21 & C900 DR 14/18	20" PE IPS DR-17.0

NOTES:
1. FOR LENGTH OF CASING, SEE DRAWINGS.
2. CARRIER PIPE 1 1/2" IN DIA. AND SMALLER SHALL BE POLYETHYLENE SERVICE PIPE. ALL OTHER SHALL BE AS SHOWN ON PLANS.
3. FOR SIZE OF CARRIER PIPE, SEE DRAWINGS.

PE CASING & PVC SDR-17/21/26 OR DR-14/18 CARRIER PIPE
NTS

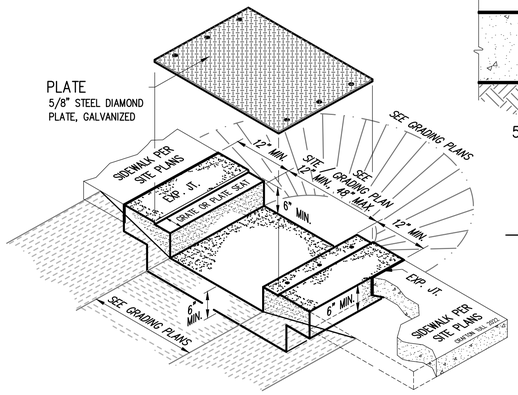


FLOOR SINK WITH CATCHMENT BASIN IN EXTERNAL CONCRETE PAD
NTS



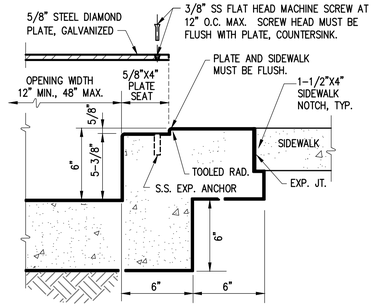
TYPICAL 6" BARRIER CURB AND GUTTER SECTION
NTS

NOTES:
1. PLATE/GRATE OPTION TO BE DETERMINED BY THE ENGINEER.
2. PLATE/GRATE MUST BE FLUSH ADJOINING SIDEWALK.
3. EXTEND #4 REBAR 12" INTO ADJACENT SIDEWALKS, TYP.

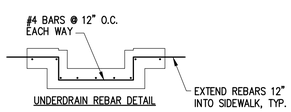


SIDEWALK UNDERDRAIN IN OPEN GREENSPACE AREA
NTS

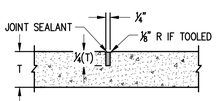
REVISED 8/08/23



5/8" PLATE OPTION DETAIL

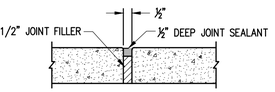


NOTES:
1. DEPTH OF CONTROL JOINTS ARE TO BE 1\4th THE THICKNESS OF CONCRETE AND CAN BE EITHER SAWED OR TOOLED.
2. JOINT SEALANT SHALL BE A COMMERCIAL GRADE SELF-LEVELING POLYURETHANE SEALER, GRAY IN COLOR.
3. PLACE CONTROL JOINTS EVERY X' OR AS SHOWN ON PLANS.



CONTROL JOINT (CJ)
NTS

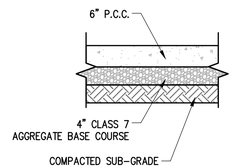
NOTES:
1. JOINT FILLER TO BE COMMERCIAL GRADE ASPHALT COATED FIBER MATERIAL.
2. JOINT SEALANT SHALL BE A COMMERCIAL GRADE SELF-LEVELING POLYURETHANE SEALER, GRAY IN COLOR.
3. PLACE EXPANSION JOINTS WHERE ABUTTING TO EXISTING CONCRETE AND EVERY 25' O.C. OR AS SHOWN ON PLANS.



EXPANSION JOINT DETAIL (EJ)
NTS

NOTES:
1. PROVIDE 1/2" EXPANSION JOINT BETWEEN SIDEWALK AND ALL STATIONARY OBJECTS.
2. CONCRETE MIXTURE TO BE PER CITY REQUIREMENTS OR AS SPECIFIED BY THE ENGINEER.
3. PROVIDE 1/2" TOOLED RADIUS ON ALL EXPOSED EDGES.
4. CONCRETE TO BE MINIMUM 4000 PSI, 4-7% AE, OR AS REQUIRED BY CITY.
5. CONTRACTION/EXPANSION JOINTS PER CITY REQUIREMENTS OR AS SPECIFIED BY THE ENGINEER. MINIMUM: 5'/25' FOR 5' WIDE SIDEWALK, 6'/24' FOR 6' WIDE SIDEWALK. EXPANSION JOINTS SHALL BE 1/2" X FULL DEPTH.

NOTES:
1. PORTLAND CEMENT CONCRETE SHALL HAVE A COMPRESSION STRENGTH OF 4,000 PSI AT 28 DAYS.
2. CONCRETE SHALL BE REINFORCED WITH FIBER MESH ADDITIVE AT A RATE OF 1.5lbs PER CUBIC YARD.



TYPICAL SECTION – CONCRETE DRIVEWAY
NTS

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10855
TROY D. BROWN

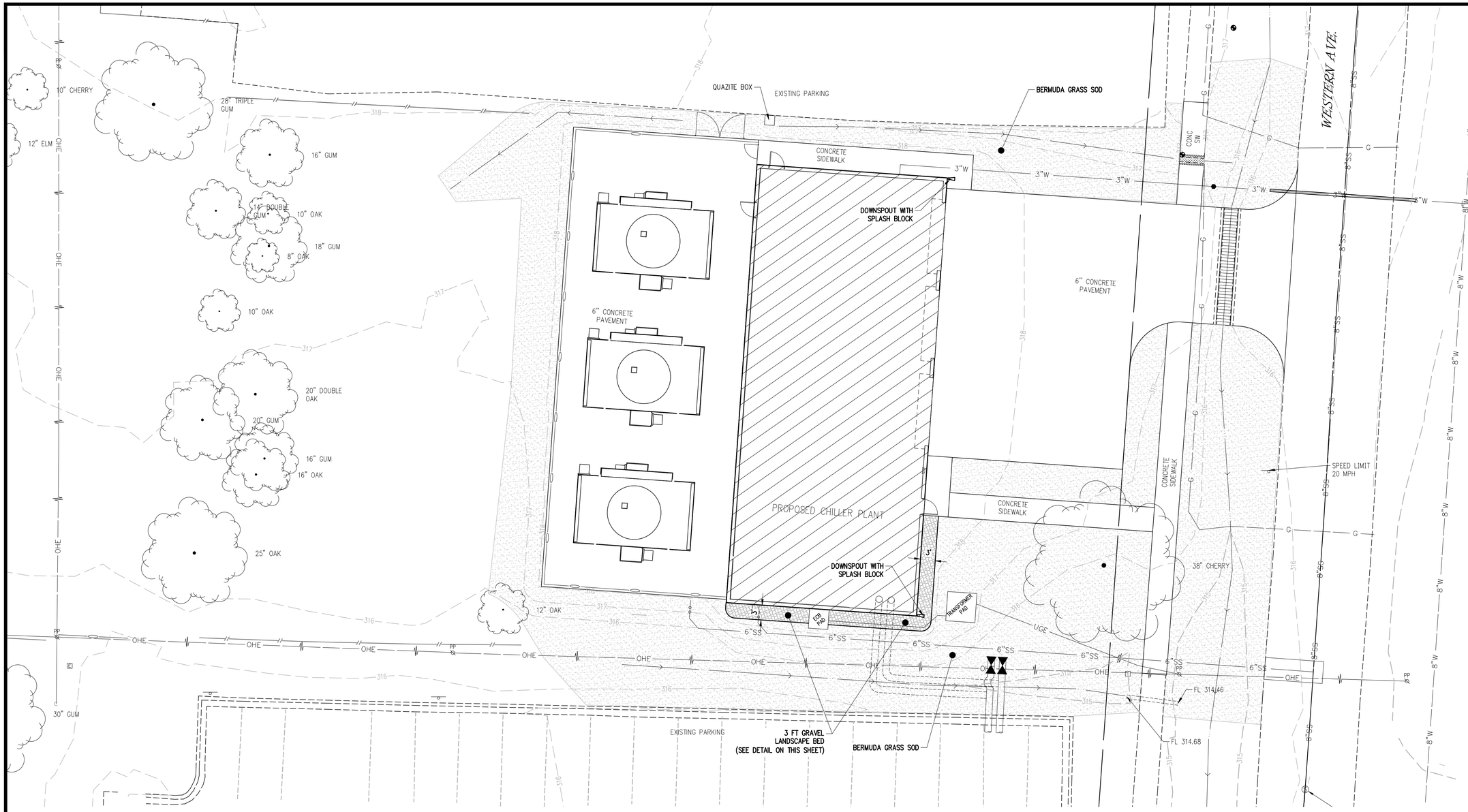
© 2026 Crafton, Tull & Associates, Inc.

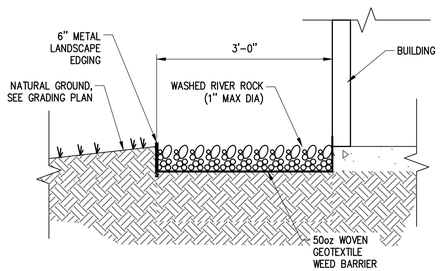
04/06/2026

CONSTRUCTION DETAILS - SITE

C-502

DRAWING CLOSTHERS_LEVACHILLER\CIVIL\MASTER\CHILLER\DWG\CONSTRUCTION DETAILS.DWG
LAST PLOTTED BY: CLAY BISHOP 4/7/2026 10:24:48 AM





GRAVEL LANDSCAPE BED
NTS

LANDSCAPE NOTES

1. CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES PRIOR TO STARTING ANY WORK. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ONE-CALL SYSTEM. ALL UTILITY LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON SURVEY INFORMATION, SITE DEVELOPMENT PLANS, UTILITY RECORDS, ETC.
2. NO CHANGES TO THE PLANT SCHEDULE ARE ALLOWED WITHOUT APPROVAL OF THE OWNER, LANDSCAPE ARCHITECT AND CITY. SUBSTITUTED PLANTS SHALL MEET THE SAME CRITERIA REGARDING TYPE, SIZE AND FUNCTION AS THOSE PLANTS SHOWN ON THE PLAN.
3. ALL LAWN AREAS ARE TO RECEIVE 4" OF TOPSOIL TO FINAL GRADE.
4. ALL DISTURBED AREAS SHALL BE SODDED.
5. AT A MINIMUM, SOD SHALL BE INSTALLED ON 3:1 SLOPES AND GREATER AND AN EIGHTEEN INCH (18") STRIP OF SOD SHALL BE INSTALLED BEHIND ALL CURBS AND ADJACENT TO ALL SIDEWALKS AND ENTRY WALKS.

COMMON BERMUDA GRASS SOLID SOD

WASHED RIVER ROCK BEDDING, 1" MAX. DIA.

65 Bradley Cove Rd.
Russellville, Arkansas 72812
Crafton Tull
479.968.1885 t 479.968.2981 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
10' 0 10'

UNIVERSITY OF CENTRAL ARKANSAS CAMPUS DISTRICT LOOP AND CHILLER PLANT

UNIVERSITY OF CENTRAL ARKANSAS
CONWAY, ARKANSAS

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 25704201
ISSUE DATE: 04-06-2026
CONTACT: G. LONG
QC by:
QC Date:

ISSUED FOR CONSTRUCTION

© 2026 Crafton, Tull & Associates, Inc.

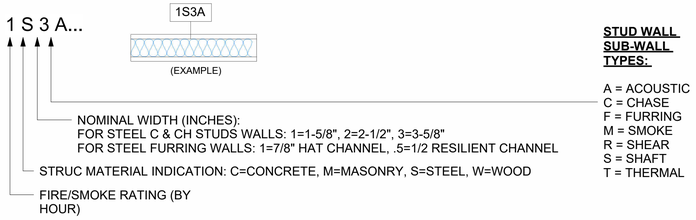
04/06/2026

PLANTING PLAN

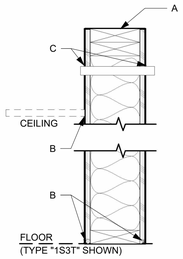
L-101

DRAWING G:\25\25704201_UCA CHILLER\CIVIL\INFRASTRUCTURE\LDP\LDP\PLANTING PLAN.DWG
LAST SAVED BY: CLAY BISHOP 4/6/2026 11:43:27 AM
LAST PLOTTED BY: CLAY BISHOP 4/6/2026 11:43:27 AM

PARTITION TAG LEGEND



NOTE:
- PARTITION TAGS WITHOUT A SUBWALL TYPE DENOTE NON-ACOUSTIC PARTITIONS, UNLESS OTHERWISE NOTED.
- NON-ACOUSTIC IS SIMILAR TO ACOUSTIC, BUT WITHOUT SOUND ATTENUATION LAYER. SEE DETAILS BELOW.
- A SMOKE PARTITION REFERS TO A 20 MIN FIRE RATED WALL.
- SEE ALSO STRUCTURAL DRAWINGS FOR LOCATIONS AND DETAILS OF SHEAR WALLS.



FIRE RATING		--
STC RATING		--
PARTITION THICKNESS		--
ASSEMBLY (LEFT TO RIGHT)		
ASSM #	COMPONENT	DESCRIPTION
1.	PLYWOOD	5/8"
2.	STUD MATERIAL/SIZE	WD 2X6 16" O.C. SPACING
3.	INSULATION	R-19 THERMAL BATT
4.	PLYWOOD	5/8" (OMIT AT EXTERIOR SIDE OF EXTERIOR WALL)

NOTE:
A. WALL TOP PLATE MIN. 12" ABOVE CEILING - BRACE TOP OF WALL TO STRUCTURE ABOVE
B. PROVIDE CONTINUOUS BEAD OF SEALANT BETWEEN CEILING GRID AND PLYWOOD OR FLOOR AND PLYWOOD
C. CUT GWB TIGHT TO ALL PENETRATIONS - SEAL PERIMETER OF ALL PENETRATIONS WITH FIRE RATED CAULK ON EA SIDE OF WALL.

TYPE - INTERIOR THERMAL STUD WALLS

PARTITION TYPE GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL ASSEMBLY INFORMATION WITH UNDERWRITERS LABORATORIES, GYPSUM ASSOCIATION, OR OTHER ORGANIZATIONS LISTED IN THE ASSEMBLIES ABOVE. TO ENSURE PROPER FIRE RATINGS ARE MAINTAINED.
2. WHERE STC (SOUND TRANSMISSION CLASS) RATINGS ARE INDICATED, SOUND-RATED WALL CONSTRUCTION SHALL INCLUDE THE FOLLOWING :
   A. CONTINUOUS FLEXIBLE ACOUSTICAL SEALANT AT THE BOTTOM EDGE OF WALLBOARD PANELS.
   B. CONTINUOUS FLEXIBLE ACOUSTICAL SEALANT OR JOINT TAPE AND MUD AT WALL INTERSECTIONS. C.) CONTINUOUS FLEXIBLE ACOUSTICAL SEALANT BETWEEN WALLBOARD AND DISSIMILAR MATERIALS, SUCH AS DOOR OR WINDOW FRAMES.
   C. CONTINUOUS FLEXIBLE ACOUSTICAL SEALANT OR FIRE-CAULK SEALANT (AS REQUIRED BY THE ASSEMBLY LISTING) AT THE TOP EDGE OF THE WALLBOARD WHERE THE JOINT IS CONCEALED, OR PROVIDE WALLBOARD TAPE AND MUD WHERE THE TOP JOINT IS EXPOSED TO VIEW.
   D. FLEXIBLE ACOUSTICAL SEALANT OR FIRE-CAULK (AS REQUIRED BY THE ASSEMBLY LISTING) AT ALL FULL OR PARTIAL WALL PENETRATIONS AND AROUND OPENINGS, FLUSH-MOUNTED ACCESSORIES, FIRE EXTINGUISHER CABINETS, ELECTRICAL BOXES, ETC. LINE ALL RECESSES FOR BUILT-IN DEVICES SUCH AS FIRE EXTINGUISHER CABINETS, TOILET ACCESSORIES, ETC. WITH WALLBOARD. SEAL ALL JOINTS.
   E. COVER ALL KNOCK-OUT PLUGS AND SCREW HOLES IN FLUSH-MOUNTED ELECTRICAL BOXES WITH A MINIMUM 1/16 INCH THICK LAYER OF ACOUSTICAL SEALANT. APPLY TAPE OVER MISSING KNOCK-OUT PLUGS AND COVER WITH MINIMUM 1/8 INCH THICK LAYER OF ACOUSTICAL SEALANT.
   F. SOUND-RATED WALLS SHALL BE SEALED AIRTIGHT AT THE PERIMETER AND AT ALL PARTIAL AND THROUGH-PENETRATIONS.
3. EXTEND SOUND-RATED WALLS THROUGH SUSPENDED CEILINGS AND SEAL THE JOINT AT THE STRUCTURE ABOVE. SEAL ALL PENETRATIONS ABOVE THE SUSPENDED CEILINGS.
4. GYPSUM WALLBOARD AND ACOUSTICAL INSULATION IN SOUND-RATED PARTITIONS SHOULD NOT BE INTERRUPTED AT THE INTERSECTIONS WITH NON-SOUND RATED PARTITIONS. FRAMING AND WALLBOARD OF NON-SOUND RATED CONSTRUCTION SHOULD ABUT THE CONTINUOUS WALLBOARD OF THE SOUND-RATED WALL.
5. REFER TO THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN MANUAL GA-600 - LATEST EDITION, SECTION III SOUND CONTROL AND TO FIGURE 12 FOR ADDITIONAL DETAILS. FOLLOW GYPSUM ASSOCIATION RECOMMENDATIONS FOR EFFECTIVE SOUND ISOLATION CONSTRUCTION.
6. WHERE FIRE-RESISTANT ASSEMBLIES ARE INDICATED, REFER TO THE REFERENCED FIRE-TESTED ASSEMBLY AND PROVIDE THE MATERIALS, BRAND NAMES, PRODUCTS, AND CONSTRUCTION METHODS SPECIFIED THEREIN.
7. AT ALL FIRE-RESISTIVE WALLS AND SMOKE BARRIER CONSTRUCTION WHERE A PORTION OF THE CONSTRUCTION IS CONCEALED ABOVE SUSPENDED CEILINGS, STENCIL A NOTE IN 2 INCH HIGH RED LETTERS (OR APPROVED EQUAL) FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS. NO POINT ALONG THE LENGTH OF THE RATED WALL SHOULD BE MORE THAN 8 FEET FROM A STENCILED NOTE. CONFIRM THE NOTE LANGUAGE AND SPACING REQUIREMENTS WITH THE AUTHORITY HAVING JURISDICTION BEFORE APPLICATION.
8. WHERE FLUSH-MOUNTED ELECTRICAL OUTLET BOXES (16 SQUARE INCHES OR LESS) ARE INDICATED LESS THAN 24 INCHES APART ON OPPOSITE SIDES OF FIRE-RESISTIVE CONSTRUCTION, PROVIDE AS NEEDED, FIRE-RETARDANT PUTTY PADS TO WRAP THE ELECTRICAL BOXES. PUTTY PADS WILL BE PROVIDED TO COMPLY WITH THE BUILDING CODE AND TO CONFORM WITH THE REQUIREMENTS OF THE FIRE-TESTED WALL ASSEMBLY, AND WILL BE UL CLASSIFIED "WALL OPENING PROTECTIVE MATERIAL".
9. WHERE RECESSED DEVICES ARE INDICATED IN FIRE-RESISTIVE GYPSUM WALLBOARD CONSTRUCTION, PROVIDE LAYERS OF GYPSUM WALLBOARD BETWEEN THE FRAMING, INSIDE THE RECESS - TOP, BOTTOM, BACK, AND SIDES, AS REQUIRED TO MAINTAIN THE FIRE RESISTANCE RATING INDICATED. EXAMPLES OF RECESSED DEVICES INCLUDED ARE TOILET ACCESSORIES, FIRE EXTINGUISHER CABINETS, FIRE HOSE CABINETS, BATH FANS, RECESSED LIGHTS, ETC.. UNLESS A RATED FIXTURE IS BEING PROVIDED TO MAINTAIN THE RATING OF THE ASSEMBLY.
10. EXTERIOR WALL CONSTRUCTION - ALL PENETRATIONS OF WALL MEMBRANE SHALL BE SEALED. PENETRATIONS THROUGH THE INTERIOR SIDE OF EXTERIOR WALLS SHALL BE SEALED AIR-TIGHT TO PREVENT AIR INFILTRATION. EXAMPLE - ELECTRICAL BOX FOR SWITCH OR OUTLET. PENETRATIONS THROUGH THE EXTERIOR SIDE OF EXTERIOR WALLS SHALL BE SEALED WATER-TIGHT. EXAMPLE - HOSE BIB, CONDUIT, OR PIPE.
11. PIPE AND VALVE PENETRATIONS OF WALLBOARD AT BATHTUBS AND SHOWERS SHALL BE SEALED USING SILICONE SEALANT WITH MILDEW-RESISTANT PROPERTIES, SUCH AS GENERAL ELECTRIC CO. "SCS 1701", OR DOW CORNING 786.
12. STUD SPACING TO BE 16" O.C. U.N.O. THE PROJECT MANDATORY MAXIMUM ALLOWABLE DEFLECTION DESIGN CRITERIA RATIO IS L/240 USING STUDS @ 16" O.C. WHERE "BRITTLE" FINISHES WILL BE APPLIED SUCH AS PLASTER OR CERAMIC TILE, MAX. ALLOWABLE DEFLECTION CRITERIA RATIO IS L/360.
13. WHEN EVER A FIRE RATED PARTITION IS INDICATED ALL ELEMENTS OF THE COMPLETE ASSEMBLY MUST BE CONSTRUCTION IN STRICT COMPLIANCE WITH THE UNDERWRITERS LABORATORY AND OTHER TESTING AGENCY REQUIREMENTS.
14. PARTITION TYPES SHOWN RATED SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LISTED TESTING AGENCY (UL = UNDERWRITERS LABORATORY, GA = GYPSUM ASSOCIATION). ALL OTHER PARTITIONS SHALL BE CONSTRUCTED PER THE SPECIFICATIONS OR GENERALLY ACCEPTED CONSTRUCTION PRACTICES.
15. PROVIDE CEMENT BACKER BOARD AS THE WALL SUBSTRATE FOR TILE IN WET CONDITIONS. IF THE BACKER BOARD IS BEING SUBSTITUTED FOR ONE OF THE GYPSUM BOARD LAYERS, IT MUST HAVE APPROVED FIRE RATING CERTIFICATION. SEE ALSO SPECIFICATIONS FOR "RED GUARD" TYPE WATERPROOFING COATINGS ON BACKER BOARD BEHIND TILE AT WET LOCATIONS.
16. THE STC RATINGS LISTED ARE TO SERVE AS A GENERAL INDICATOR FOR THE ACOUSTICAL PERFORMANCE OF THAT PARTITION, HOWEVER, SPECIFIC PROJECT CONDITIONS MAY NOT NECESSARILY YIELD THE LABORATORY TESTED RESULTS.
17. CONTRACTOR TO PROVIDE APPROPRIATE RATING OF ALL PENETRATIONS (PIPES, CONDUITS, DUCT WORK, ETC.) IN ACCORDANCE WITH UL APPROVED SYSTEMS.
18. PARTITION TYPES NOTED ON PLAN SHALL BE CONTINUOUS TO CORNER, EXTERIOR WALL OR INTERSECTING PARTITIONS UNLESS OTHERWISE NOTED.
19. WALLS AT WET LOCATIONS WHICH ARE NOT RECEIVING TILE SHALL HAVE MOISTURE RESISTANT GYP. BOARD FOR 4'-0" EACH SIDE AND ABOVE WET LOCATION.
20. LUMBER FOR LOAD BEARING STUDS MAY BE #2 SPRUCE PINE FIR REFER TO STRUCTURAL GENERAL NOTES.
21. FRAME ALL CEILING SOFFITS (FURR-DOWNS) PRIOR TO INSTALLING GYP. BOARD.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

ARCHITECT NO. C177 REG. AMR ARCHITECTS, INC. ARKANSAS
DATE: 04/06/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: APRIL 06, 2026
TITLE: PARTITION TYPES

CONSTRUCTION DOCUMENTS

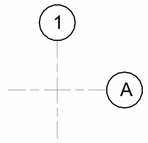
A002

ABBREVIATIONS

@	AT
℄	CENTERLINE
℄	PROPERTY LINE
Ø	DIAMETER
#	POUND OR NUMBER
(E)	EXISTING
(N)	NEW
ACC	ALLOY-COATED COPPER
ACCES	ACCESSIBLE
ACOUS	ACOUSTICAL
ALUM	ALUMINUM
AHU	AIR HANDLING UNIT
AP	ACOUSTIC PANELS
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
ASSM	ASSEMBLY
AUTO	AUTOMATIC
BD	BOARD
BIO	BIOLOGY
BITUM	BITUMINOUS
BL	BORROWED LIGHT
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BO	BOTTOM OF...
BOT	BOTTOM
BRCKT	BRACKET
BRCKTS	BRACKETS
BRG	BEARING
BRK	BRICK
BSMT	BASEMENT
BUR	BUILT-UP-ROOFING
C	CONDUIT
CAB	CABINET
CAT	CATALOG
CB	CATCH BASIN
CEM	CEMENT
CER	CERAMIC
CFCI	CONTR FURNISH, CONTR INSTALL
CFL	COMPACT FLOURESCENT
CHEM	CHEMISTRY
CI	CAST IRON
CIPC	CAST-IN-PLACE CONCRETE
CJ	CONTROL JOINT
CLG	CEILING
CLK	CAULKING
CLL	CONTRACT LIMIT LINE
CLOS,CLST	CLOSET
CLR	CLEAR(ANCE)
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CLEAN OUT
COL	COLUMN
COM	COMMUNICATIONS
CONC	CONCRETE
COND	CONDENS(ATE, ER, ING, ATION)
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINU(OUS, ATION)
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CPT	CARPET; CARPETED
CRS	COLD ROLLED STEEL
CT	CERAMIC TILE
CTR	CENTER
CUST	CUSTOM
CU FT	CUBIC FEET
CW	COLD WATER
CWR	CHILLED WATER RETURN
CYL	CYLINDER
DBL	DOUBLE
DEMO	DEMOLITION
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
DR	DOOR
DR OPNG	DOOR OPENING
DRWR	DRAWER
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DT	DRAIN TILE
DW	DISHWASHER
DWG	DRAWING
E	EAST
EA	EACH
EF	EXHAUST FAN
EHD	ELECTRIC HAND DRYER
EIFS	EXT INSUL & FIN SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR OR ELEVATION
ENCL	ENCLOS(E, SURE)
EP	ELEC PNL BD
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPX	EPOXY FLOORING
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE
ETR	EXIST TO REMAIN
ETRL	EXIST TO BE RELOCATED
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPAN (DED, SION)
EXP BT	EXPANSION BOLT
EXPO	EXPOSED
EXT	EXTERIOR
FA	FIRE ALARM
FAI	FRESH AIR INTAKE
FAB	FABRIC
FB	FOILBACKED
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN	FINISH(ED)
FLASH	FLASHING
FL,FLR	FLOOR; FLOORING
FLAM	FLAMMABLE
FLUOR	FLUORESCENT
FO	FIBER OPTIC
FOB	FACE OF BRICK
FOC	FACE OF CONCRETE
FOIC	FURNISHED BY OWNER - INSTALLED BY CONTRACTOR
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FP	FILLER PANEL, FIRE PROTECTION
FRT	FIRE RETARDANT
FS	FLOOR SINK\
FSACCP	FLAT SEAM ALLOY-COPPER COATED
FT	FOOT, FEET, FULL TIME
FTG	FOOTING
FURR	FURRING
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GL	GLASS
GLAM	GLUE-LAMINATED
GR	GRANITE
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
HB	HOSE BIBB
HC	HOLLOW CORE
HDR	HEADER
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HSS	HALLOW STEEL SECTION
HT	HEIGHT
HTR	HEATER
HVAC	HEATING/VENTILATING/AIR CONDITIONING
HW	HOT WATER
HDWD	HARD WOOD
HWR	HOT WATER RETURN
ID	INSIDE DIAMETER
I.E.	THAT IS
IN	INCH
INCAN	INCANDESCENT
INCL	INCLUDED
INSTR	INSTRUCTIONAL
INSUL	INSULAT(E, D, ION)
INT	INTERIOR
INV	INVERT
JB	JUNCTION BOX
JC	JANITOR'S CLST
JF	JOINT FILLER
JT	JOINT
JTS	JOINTS
KIT	KITCHEN
KO	KNOCKOUT
KS	KNEE SPACE, KICK SPACE
L	LENGTH, LONG (STUCT ANGLE REF STRUCT)
LAB	LABORATORY
LAM	LAMINATE(D)
LAV	LAVATORY
LBS	POUNDS
LF	LINEAR FOOT (FEET)
LH	LEFT HAND
LIN	LINEN
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LMF	LIGHT GAGE METAL FRAMING
LP	LOW POINT
LT	LIGHT
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MARKER BOARD, MACHINE BOLT
MC	MC CHENNEL (REF STRUC DRWG)
MC	MEDICINE CABINET
MDF	MEDIUM DENSITY FIBERBOARD
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MTD	MOUNTED
MTL	METAL
MUL	MULLION
N	NORTH
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
	OVERFLOW DRAIN
OFCI	OWNER FURNISHED, CONTRACTOR INSTALL
OFF	OFFICE
OFOI	OWNER FURNISHED, OWNER INSTALL
OH	OVERHEAD
OPG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
OZ	OUNCE
PB	PULLBOX
PCC	PRECAST CONCRETE
PD	PRESSURE DROP
PERF	PERFORATED
PERP	PERPENDICULAR
PH	PHASE
PIL	PILASTER
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLMB	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PNT	POINT
POLY	POLYISOCYANURATE
PR	PAIR
PRCST	PRECAST
PS	PROJECTION SCREEN
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PTD	PAINTED
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
QTY	QUANTITY
R	RISER, RADIUS
RA	RETURN AIR
RAD	RADIUS
RB	RUBBER BASE, RUBBER
RD	ROOF DRAIN
REF	REFERENCE
REFG	REFRIGERAT(OR, ANT, ATION)
REINF	REINFORCED
REQD	REQUIRED
RESIL	RESILIENT
REV	REVISION; REVISIONS; REVISED
RH	RIGHT HAND
RLE	RELOCATED EXISTING
RM	ROOM
RO	ROUGH OPENING
RTU	ROOF TOP UNIT
S	SOUTH
S&R	SHELF & ROD
SC	SPECIAL COATING, SOLID CORE
SCHED	SCHEDULE
SCI	SCIENCE
SD	SMOKE DETECTOR
SECT	SECTION
SF	SQUARE FEET
SG	SAFETY GLASS
SHT	SHEET
SHV	SHELF: SHELVING
SHR	SHOWER
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SLD	SEALED
SOG	(CONCRETE) SLAB ON GRADE
SP	SUMP PUMP
SPEC	SPECIFICATION
SQ	SQUARE
SST	STAINLESS STEEL
ST	STORM SEWER, STONE, STAIN
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SYS	SYSTEMS
T	TREAD
T/	TOP OF
T/C	TOP OF CURB
T/F	TOP OF FRAME
T&B	TOP & BOTTOM
T&G	TONGUE AND GROOVE
TB	TACK BOARD
TC	TRASH CARTON, TERNE COATED
TEL	TELEPHONE
TEMP	TEMPERATURE
TER	TERRAZZO
TG	TEMPERED GLASS\
THD	THREAD(ED)
THK	THICK(NESS)
THR	THRESHOLD
TLT	TOILET
TO	TOP OF...
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE; CURB
TOF	TOP OF FLOOR; FOOTING; FRAME
TOM	TOP OF MASONRY
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB; STEEL
TOW	TOP OF WALL
TSTAT	THERMOSTAT
TV	TELEVISION
TYP	TYPICAL
UC	UNDERCUT
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UNFIN	UNFINISHED
UNO	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE PWR SUPPLY
UTIL	UTILITY
VAR	VARIES
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VEN	VENEER
VERT	VERTICAL
VEST	VESTIBULE
VG	VERTICAL GRAIN
VIF	VERIFY IN FIELD
VIN	VINYL
VT	VAPOR TIGHT
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W/D	WAHSER/DRYER
W/	WITH
W/O	WITHOUT
W	WIDE, WIDTH, WEST, WATER,
WC	WATER CLOSET
WD	WOOD
WH	WALL HYDRANT
WL	WATER LINE
WLD	WELDED
WP	WATERPROO / WORKING PT
WPM	WATERPROOF MEMBRANE
WSCT	WAINSCOT
WT	WEIGHT
WTR	WATER
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

SYMBOLS LEGEND

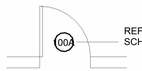
1. GRID LINE REFERENCE



2. FLR PLAN ROOM TAG

ROOM NAME
ROOM NUMBER
ROOM SF

3. DOOR TAG



REFERENCE DOOR SCHEDULE

4. WINDOW / SKYLIGHT REFERENCE

5. ELEVATION / DATUM REFERENCE

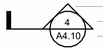
6. EXTERIOR ELEVATION

DIRECTION OF VIEW
DRAWING NUMBER
SHEET NUMBER

7. BUILDING SECTION

DIRECTION OF VIEW
DRAWING NUMBER
SHEET NUMBER

8. WALL SECTION

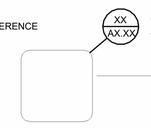


DIRECTION OF VIEW
DRAWING NUMBER
SHEET NUMBER

9. INTERIOR ELEVATION

DIRECTION OF VIEW
DRAWING NUMBER
SHEET NUMBER

10. DETAIL REFERENCE



DRAWING NUMBER
SHEET NUMBER
DRAWING AREA

11. ASSEMBLY REFERENCE

12. NORTH SYMBOL

13. REVISION REFERENCE

REFERENCE CONSTRUCTION MEMO ISSUING REVISION.
ONLY MOST RECENT REVISION SHOWN CLOUDED. REFERENCE FOR PREVIOUS REVISIONS REMAIN.
DATE OF REVISIONS INDICATED AT RIGHT MARGINS.

GENERAL NOTES

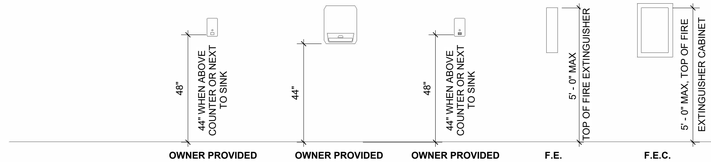
1. CODES: ALL WORK SHALL CONFORM APPLICABLE LAND USE AND BUILDING CODES AS AMENDED BY AUTHORITIES HAVING JURISDICTION.
2. DO NOT SCALE DIMENSIONS FROM DRAWINGS. USE CALCULATED DIMENSIONS ONLY. NOTIFY THE ARCHITECT IMMEDIATELY IF ANY CONFLICTS EXIST.
3. CONTRACTOR SHALL VERIFY ALL CONDITIONS PRIOR TO INITIATING THE WORK. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
4. VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT. PROVIDE ALL BUCK-OUT, BLOCKING, BACKING, AND JACKS REQUIRED FOR INSTALLATIONS.
5. WALL DIMENSIONS ARE TAKEN TO THE TOP OR RIGHT FACE OF STUD FOR NEW PARTITIONS & TO THE NEAREST FINISH FACE OF EXISTING PARTITIONS.

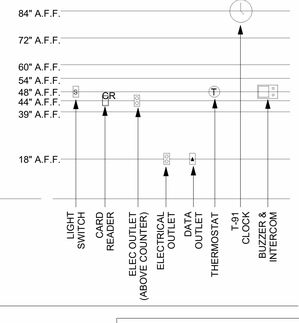
PROJECT NOTES FOR GENERAL AND SUB CONTRACTORS

1. CONSTRUCTION DOCUMENTS REFERENCE ALL DRAWINGS INCLUDED HEREIN AND SPECIFICATIONS. CONTRACTORS AND SUBCONTRACTORS MUST REVIEW ALL PORTIONS OF THE CONSTRUCTION DOCUMENTS IN PREPARING THEIR BIDS.
2. EACH CONTRACTOR AND/OR SUBCONTRACTOR SHALL COORDINATE HIS OWN WORK WITH OTHER TRADES. GENERAL CONTRACTOR IS RESPONSIBLE FOR OVERALL COORDINATION.
3. WHEN RECEIVING BIDS, THE GENERAL CONTRACTOR SHALL ENSURE THAT THEIR SUBCONTRACTORS ARE BIDDING A FULL SCOPE OF WORK. THE GENERAL CONTRACTOR SHALL SECURE WRITTEN QUALIFICATIONS AS MAY BE REQUIRED FOR EVIDENT AMBIGUITIES, DISCREPANCIES OR OMISSIONS WHERE A FUNCTIONAL AND COMPLETE SYSTEM CANNOT BE PROVIDED AS IS THE INTENT.
4. IF EVIDENT AMBIGUITIES OR DISCREPANCIES EXIST IN THE CONTRACT DOCUMENTS, THE GENERAL CONTRACTOR AND/OR SUBCONTRACTOR SHALL INCLUDE AND DOCUMENT IN THEIR BID THE MORE EXPENSIVE METHOD OF WORK, UNLESS CLARIFICATION IS ISSUED BY ADDENDA.
5. DISCREPANCIES AND OMISSIONS IN DRAWINGS AND SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT AND OWNER'S REPRESENTATIVE IN WRITING FOR CLARIFICATION.
6. MECHANICAL, PLUMBING, ELECTRICAL & FIRE PROTECTION DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE ENGINEERING DRAWINGS TO LOCATE WORK WITHOUT FIRST CONSULTING THE ARCHITECT. IT IS THE INTENT TO LOCATE VISIBLE WORK CENTERED, ALIGNED OR SPACED AS INDICATED - WHERE THE DRAWINGS DEPICT SUCH RELATIONSHIPS.
7. ALL WORK IS NEW UNLESS NOTED OTHERWISE. USE ONLY NEW MATERIAL AND EQUIPMENT WITHOUT DEFECTS.
8. SET ALL WORK STRAIGHT, PLUMB AND LEVEL OR WITH INDICATED SLOPE.
9. CONTRACTORS SHALL VERIFY THAT ALL FIELD CONDITIONS AND DIMENSIONS ARE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
10. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
11. ANY VARIATIONS FROM CONDITIONS SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT'S REPRESENTATIVE. AFFECTED WORK SHALL NOT PROCEED UNTIL CLARIFICATION HAS BEEN RECEIVED.
12. LARGE SCALE DETAILS HAVE PRECEDENCE, HOWEVER, WORK INDICATED IN SMALL SCALE DRAWINGS SHALL NOT BE OMITTED. SIMILARLY, NOTES TAKE PRECEDENCE OVER SCHEDULES, PIPING AND WIRE DIAGRAMS. HOWEVER, WORK SHOWN OR DESCRIBED BY OTHER METHODS SHALL NOT BE OMITTED. ALL CONFLICTS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION.
13. APPROVED SHOP DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
14. ALL WORK IS TO CONFORM TO ALL CODES HAVING JURISDICTION: THE MORE STRINGENT CODE SHALL TAKE PRECEDENCE.
15. ISSUES THAT CAN NOT BE RESOLVED WITHOUT CHANGING DIMENSIONS OF SPACES, CEILING HEIGHTS, ETC. SHALL BE REVIEWED WITH ARCHITECT FOR APPROVAL PRIOR TO PROCEEDING.
16. ALL CONTRACTORS AND/OR SUBCONTRACTORS ARE TO USE THE APPROVED STANDARDS: A.I.S.C., FEDERAL, US, ETC., STANDARDS OF THEIR TRADES. ALL CONSTRUCTION SHALL BE PERFORMED TO THESE STANDARDS.
17. ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.
18. ALL WOOD BLOCKING SHALL BE FIRE TREATED, PROVIDE PARTITION BLOCKING FOR ALL EQUIPMENT, CASEWORK AND ACCESSORIES, AS SHOWN ON DRAWINGS AND AS SPECIFIED.
19. THE GENERAL CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEBRIS AS PER CONTRACT SPECIFICATIONS.
20. CUTTING AND PATCHING TO BE PERFORMED BY EACH TRADE OR AS OTHERWISE NOTED.
21. ALL WALLS ARE PARALLEL OR PERPENDICULAR WITH PRINCIPAL GRIDS UNLESS OTHERWISE NOTED.
22. DOOR OPENINGS SHALL BE 6" OFF ADJACENT WALL UNLESS OTHERWISE NOTED.

MATERIALS LEGEND

WOOD BLOCKING SHIM	WOOD FRAMING (CONTINUOUS)
FINISHED WOOD	PLYWOOD
BATT INSULATION	RIGID INSULATION
MINERAL INSULATION	FOAMED IN PLACE INSULATION
GRAVEL	EARTH
STEEL	ALUMINUM
CMU	BRICK
STONE	CONCRETE





MOUNTING HEIGHT ACCESSORY/ADA LEGEND

SCALE: 3/8" = 1'-0"

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C177 AMR ARCHITECTS, INC. ARKANSAS
DATE 04/06/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: APRIL 06, 2026

TITLE: ARCHITECTURAL GENERAL INFORMATION

CONSTRUCTION DOCUMENTS

A001

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17
AMR ARCHITECTS, INC.
ARKANSAS
DATE 04/07/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

CONCRETE DRIVEWAY - SEE CIVIL
CONCRETE SIDEWALK - SEE CIVIL
2X6 WOOD STUD FURR OUT BEHIND SINK UP TO 9' GIRT
WRAP INTERIOR LINER PANELS AROUND WOOD STUD FURRING
PROVIDE SPLASH BLOCKS AND GRAVEL STABILIZATION AT DOWNSPOUTS - TYP.
FUTURE 7.5 TON BRIDGE CRANE COLUMNS
CHILLED WATER LOOP PIPES BELOW FOOTINGS - SEE STRUCTURAL
3'-0" WIDE GRAVEL MOW STRIP WITH STEEL EDGING
6" CONCRETE MECHANICAL PAD - SEE STRUCTURAL
5'-0" WIDE CONCRETE SIDEWALK - SEE CIVIL
CHAIN LINK SECURITY GATE WITH PANIC HARDWARE - SEE HARDWARE SET GT IN SECTION 087100 - DOOR HARDWARE OF THE PROJECT MANUAL
WOOD STUD PONY WALL AT PIPE PENETRATIONS - TYPICAL - SEE 4 / A501 FOR DETAILS
PROVIDE PREFABRICATED BOOT AT EACH PIPE PENETRATION - SEE MECHANICAL FOR LOCATIONS
PROVIDE GALVANIZED DROP ROD CANE BOLT WITH T-BAR HANDLE, SPRING-LOADED COLLAR, LOCKING PIN WITH SAFETY CABLE, AND FLUSH GROUND SOCKET SET IN CONCRETE AT EACH GATE LEAF. COORDINATE SOCKET LOCATIONS WITH PAVING FINISH GRADE PRIOR TO POUR.

PROVIDE HEAVY DUTY PADLOCK AT LOCKING PIN THAT RECEIVES A BEST REMOVABLE CORE THAT IS COMPATIBLE WITH UCA KEYING SYSTEM
COOLING TOWER FRAMES - GALVANIZED AND PAINT - SEE STRUCTURAL
COOLING TOWER YARD
4" CONCRETE MECHANICAL YARD FLOOR - SLOPE TO AREA DRAINS - SEE CIVIL
COOLING TOWER ON STEEL FRAME - SEE MECHANICAL AND STRUCTURAL
PROVIDE 8' TALL SECURITY FENCE AT PERIMETER OF COOLING TOWER YARD

CHILLER ROOM 100
IT 101
OH-1 OH-2 OH-3
D.S
EQ EQ 5' - 0 1/2"

N

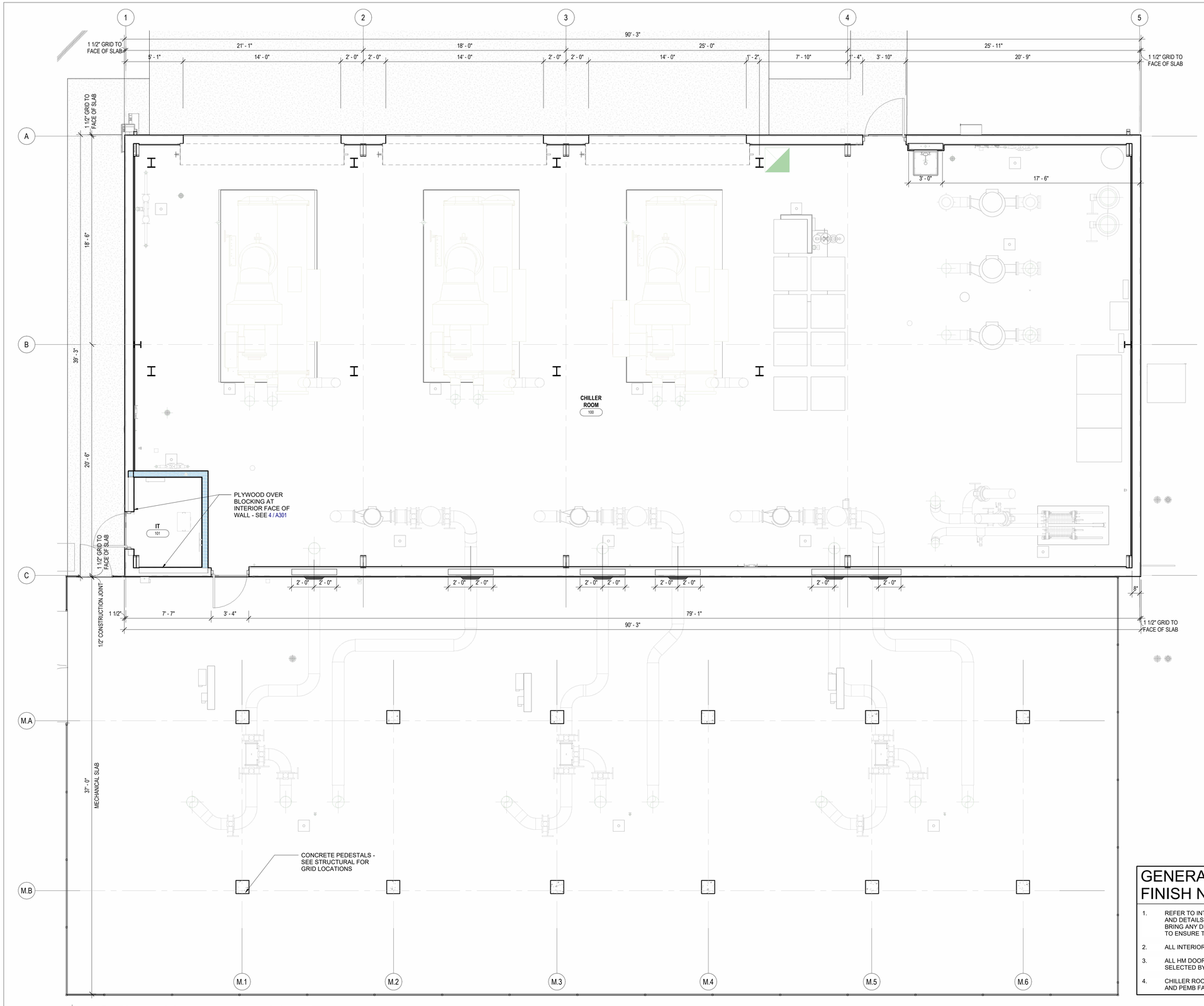
1 01 - FLOOR PLAN - REFERENCE
SCALE: 1/4" = 1'-0"

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: APRIL 06, 2026
TITLE: FIRST FLOOR PLAN - REFERENCE

CONSTRUCTION DOCUMENTS

A101



N

1 01 - FLOOR PLAN - DIMENSIONED

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

GENERAL INTERIOR FINISH NOTES

1. REFER TO INTERIOR ELEVATIONS, REFLECTED CEILING PLANS, AND DETAILS FOR ADDITIONAL INFORMATION. CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
2. ALL INTERIOR FLOORS TO BE SEALED CONCRETE
3. ALL HM DOORS AND FRAMES TO BE PAINTED - COLOR TO BE SELECTED BY ARCHITECT
4. CHILLER ROOM WALLS - PEMB LINER PANEL FROM FFE TO 9'-0" AND PEMB FABRIC LINED INSLATION FROM 9'-0" TO ROOF.

CONSTRUCTION DOCUMENTS

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17 AMR ARCHITECTS, INC. ARKANSAS
DATE: 04/07/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

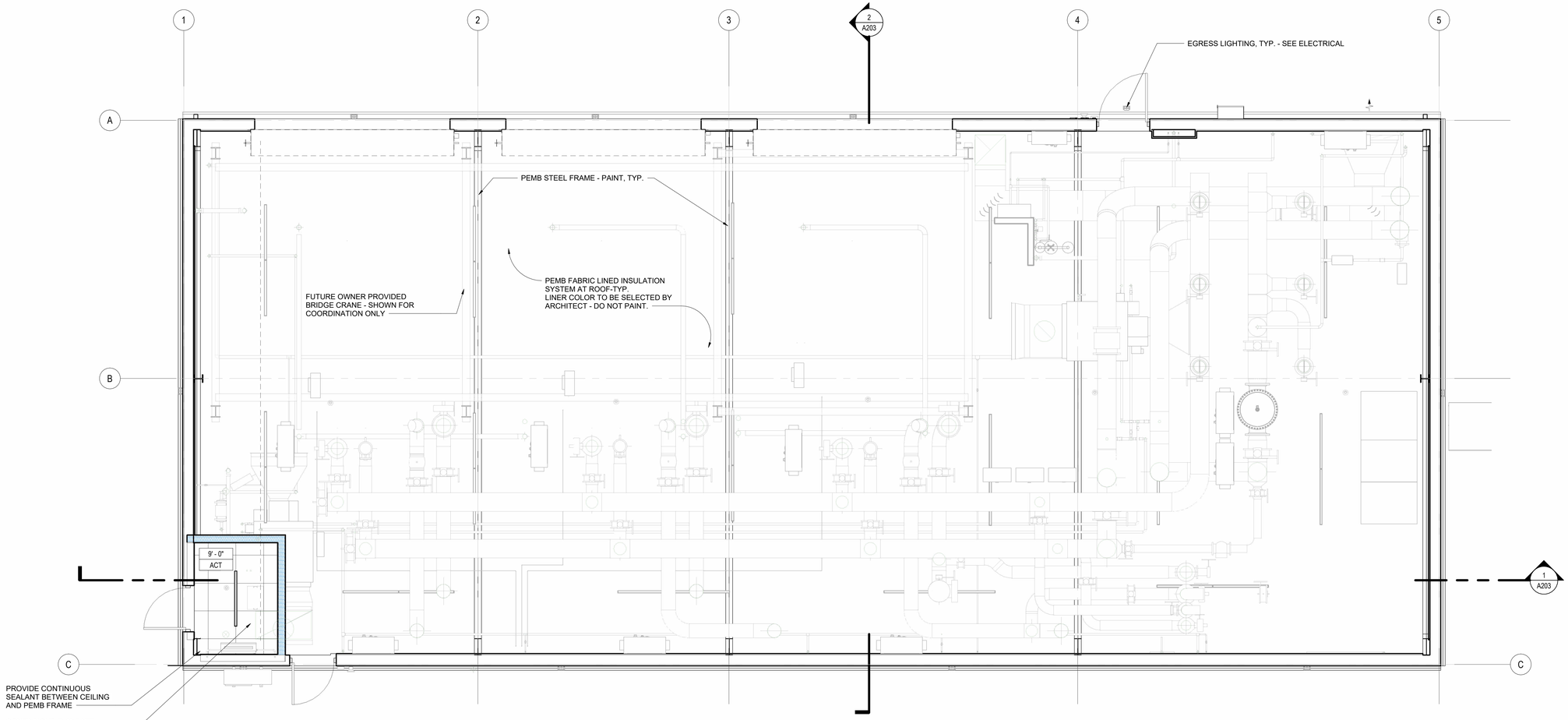
#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: APRIL 06, 2026

TITLE: FIRST FLOOR PLAN - DIMENSIONS

A102



N

1 REFLECTED CEILING PLAN

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

REFLECTED CEILING PLAN SYMBOL LEGEND			
SYMBOL	DESCRIPTION		
	2 X 2 TROFFER LIGHT - SEE ELECTRICAL		2 X 2 LAY-IN CEILING SYSTEM

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17
AMR ARCHITECTS, INC.
ARKANSAS
DATE 04/06/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

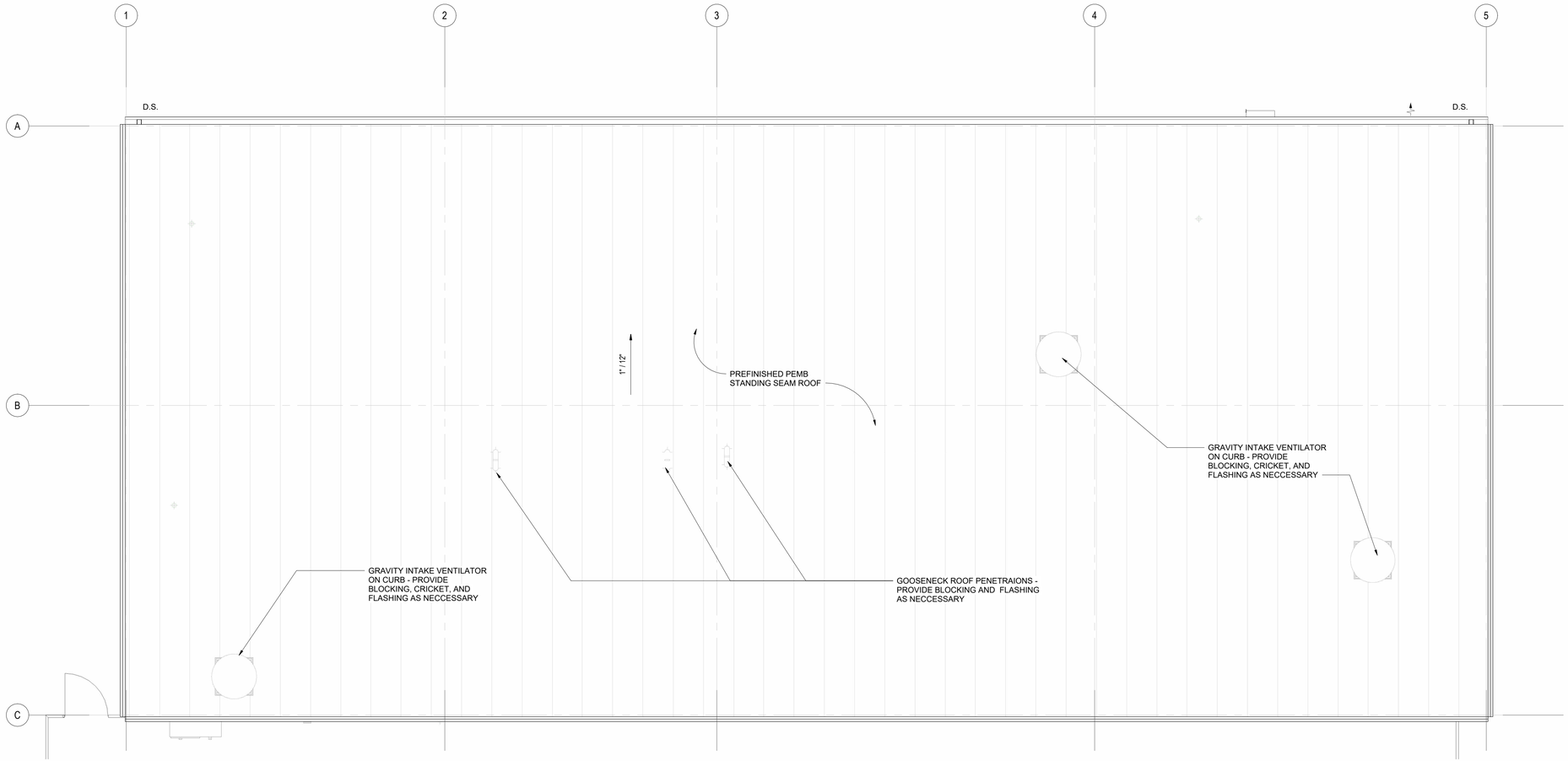
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: APRIL 06, 2026

TITLE: REFLECTED CEILING PLAN

CONSTRUCTION DOCUMENTS

A103



N

2 ROOF PLAN

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

GUTTER & DOWNSPOUT SIZING
Conway, AR (UCA Campus)
Arkansas Plumbing Code, Section 1106
Rainfall Intensity: 3.75 in/hr (100-year, 1-hour)

BUILDING DATA
Roof Area: 3,549 SF
Roof Type: Single-Slope Standing Seam Metal, 1:12 Slope
Gutter Type: PEMB Eave Gutter

FLOW CALCULATIONS
Total Flow: 3,549 SF × 3.75 in/hr ÷ 96.23 = 138 GPM

DOWNSPOUT SIZING
Flow Capacity per 4" Square Downspout: 130 GPM
Downspouts Required: 3,549 SF ÷ 2,040 SF/downspout = 1.74 → Use 2 minimum
Flow per Downspout: 138 ÷ 2 = 69 GPM < 130 GPM ✓

GUTTER SIZING
PEMB eave gutter capacity adequate for 138 GPM total flow
Slope: 1/16" to 1/8" per foot toward downspouts
Attachment per building manufacturer requirements

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17
AMR ARCHITECTS, INC.
ARKANSAS
DATE 04/06/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

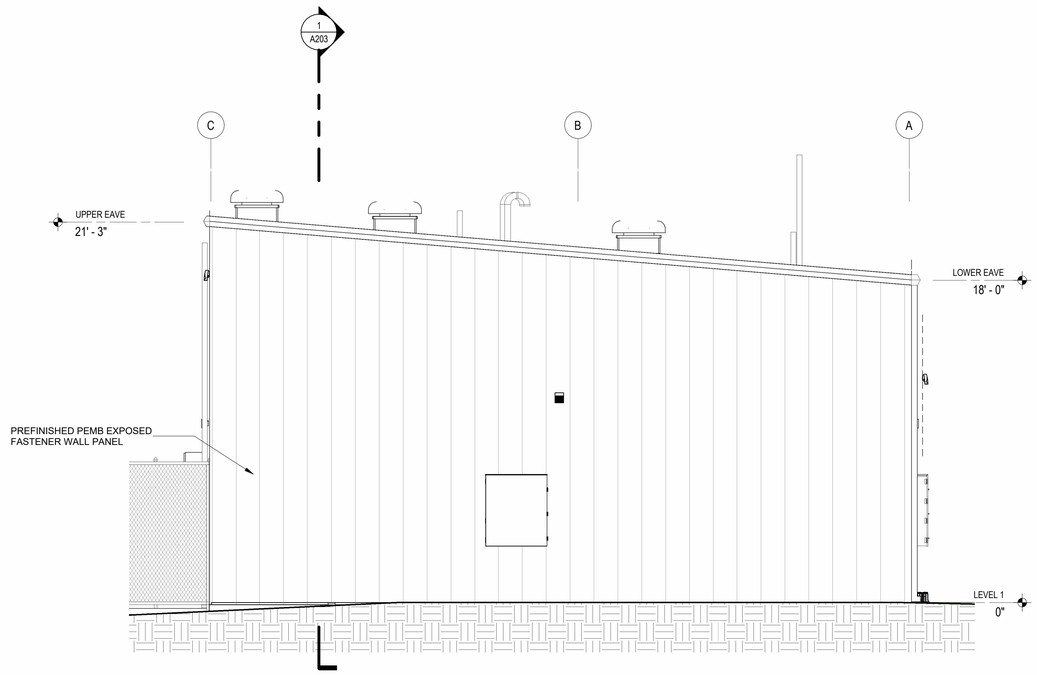
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: APRIL 06, 2026

TITLE: ROOF PLAN

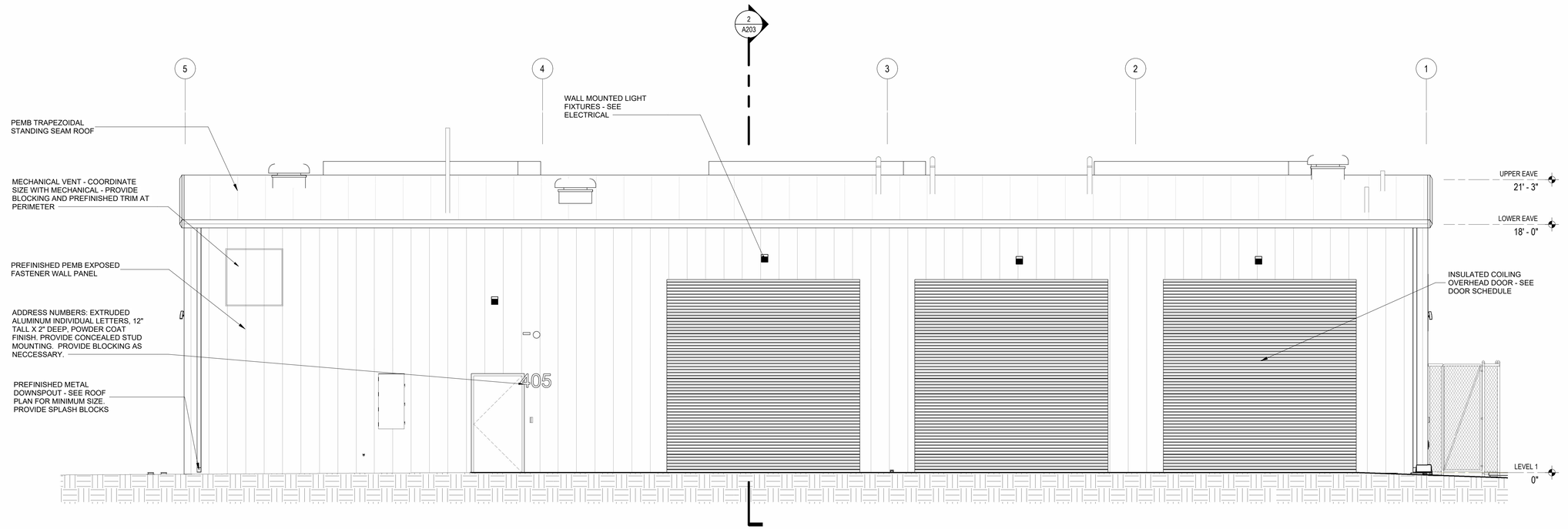
CONSTRUCTION DOCUMENTS

A104



2 SOUTH ELEVATION

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



1 EAST ELEVATION

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

VERIFY PRINT IN COLOR

AMR architects

www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17
AMR ARCHITECTS, INC.
ARKANSAS
DATE 04/06/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

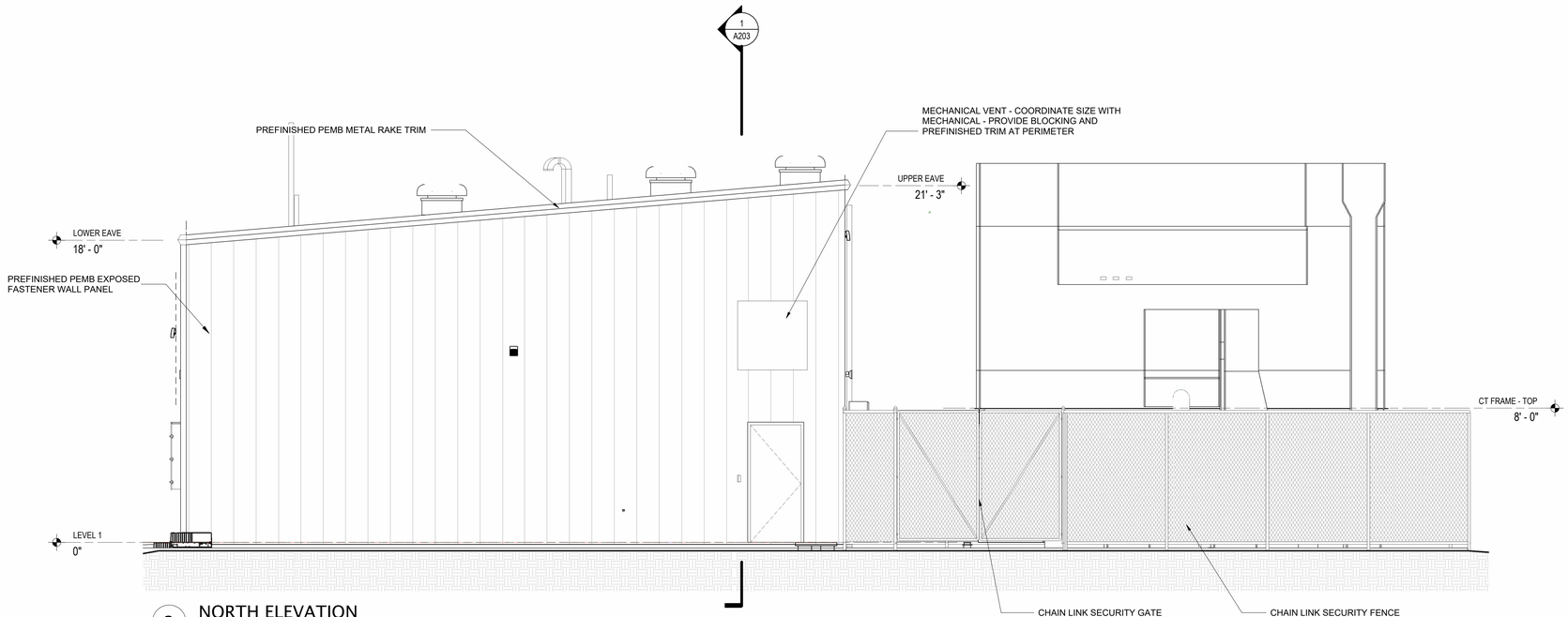
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: APRIL 06, 2026

TITLE: EXTERIOR ELEVATIONS

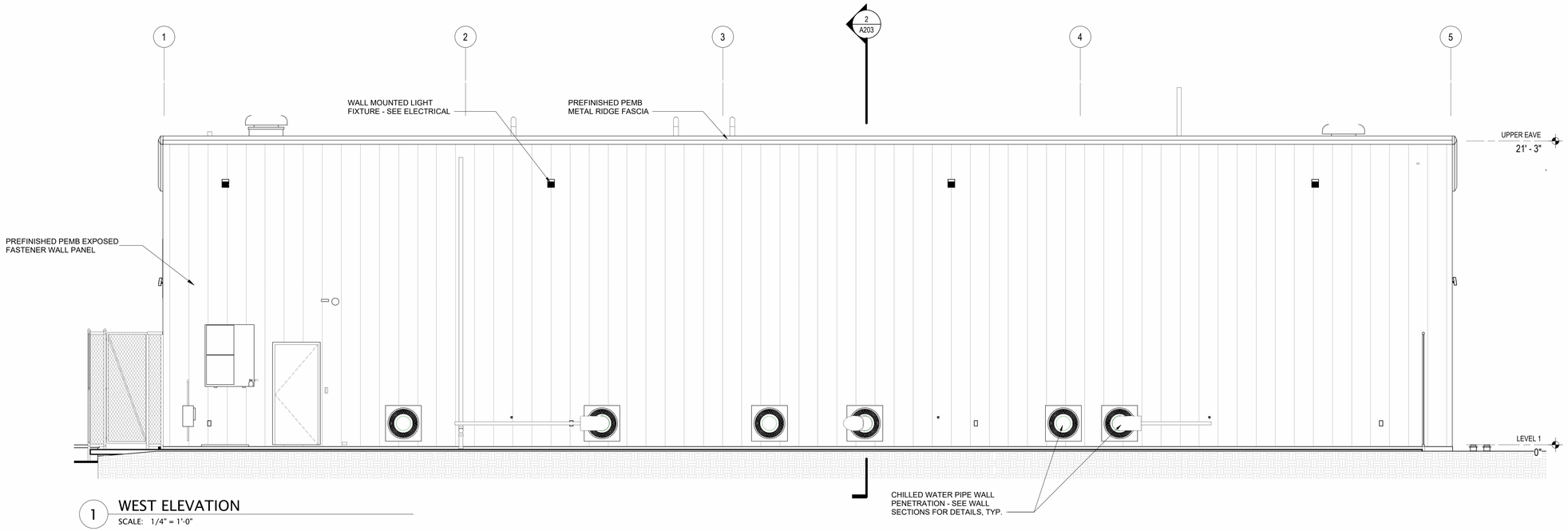
CONSTRUCTION DOCUMENTS

A201



2 NORTH ELEVATION

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



1 WEST ELEVATION

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

VERIFY PRINT IN COLOR

AMR architects

www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17
AMR ARCHITECTS, INC.
ARKANSAS
DATE 04/06/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

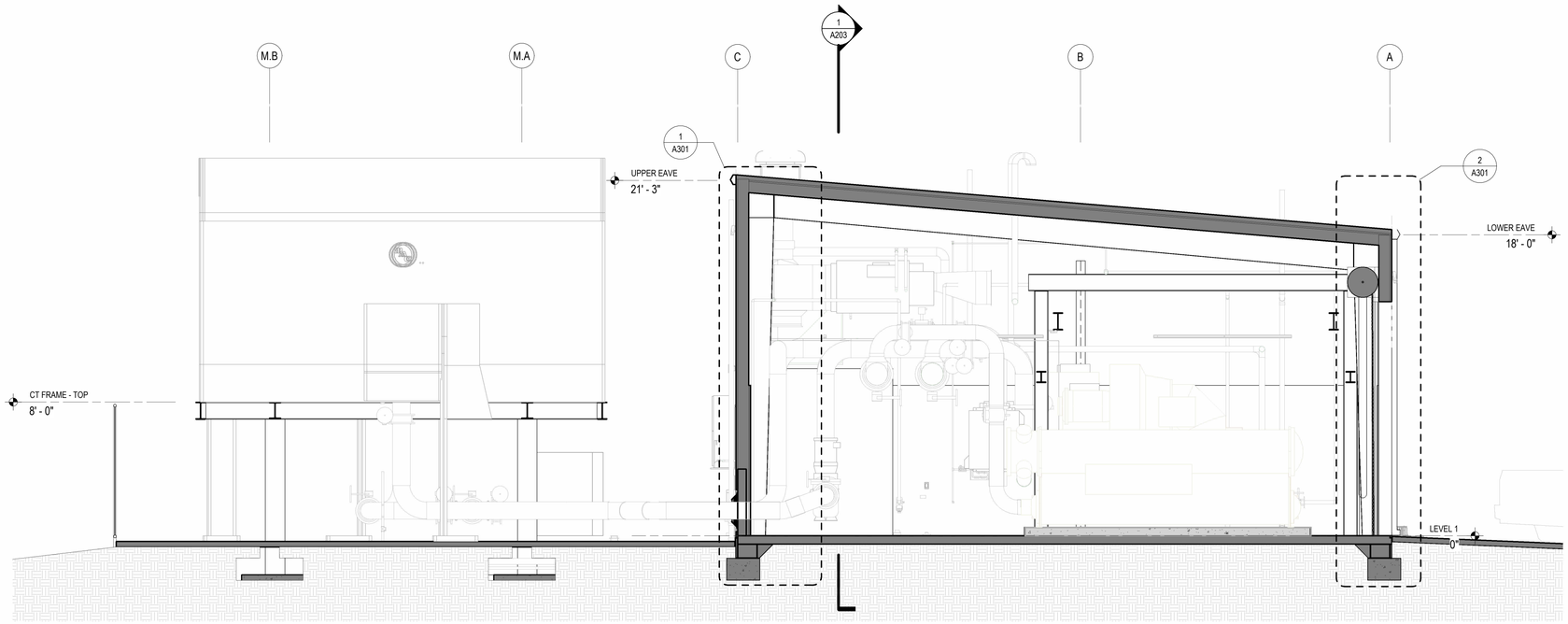
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: APRIL 06, 2026

TITLE: EXTERIOR ELEVATIONS

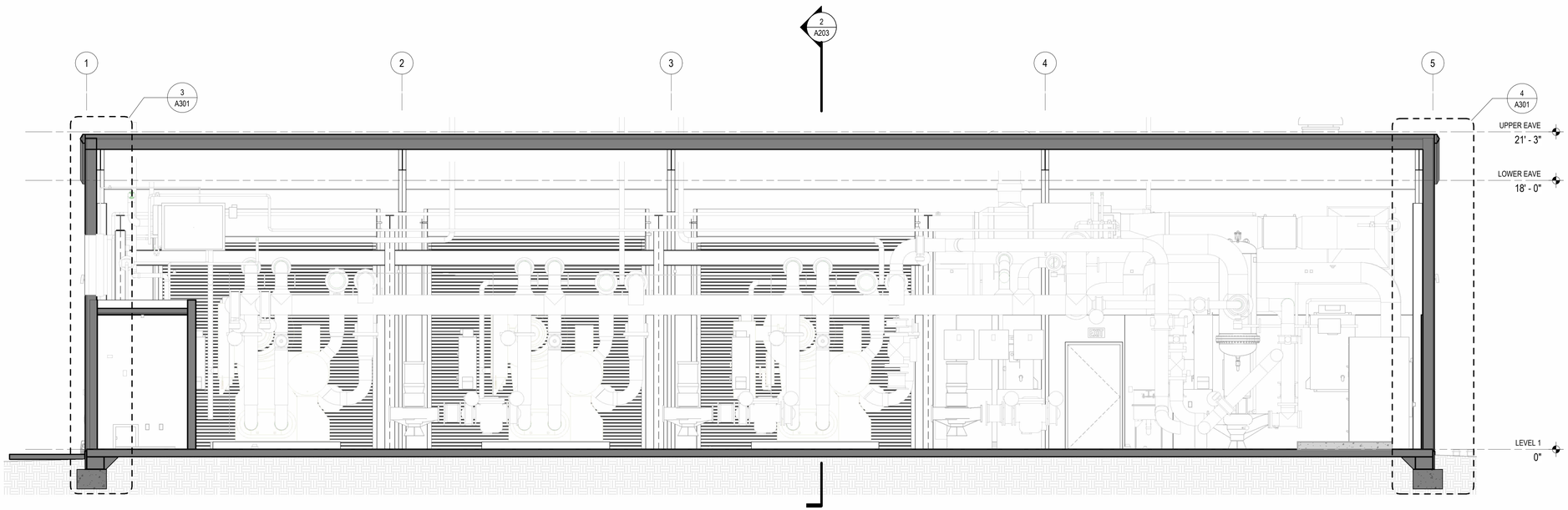
CONSTRUCTION DOCUMENTS

A202



2 BUILDING SECTION - SHORT DIRECTION

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



1 BUILDING SECTION - LONG DIRECTION

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

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17
AMR ARCHITECTS, INC.
ARKANSAS
DATE 04/07/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

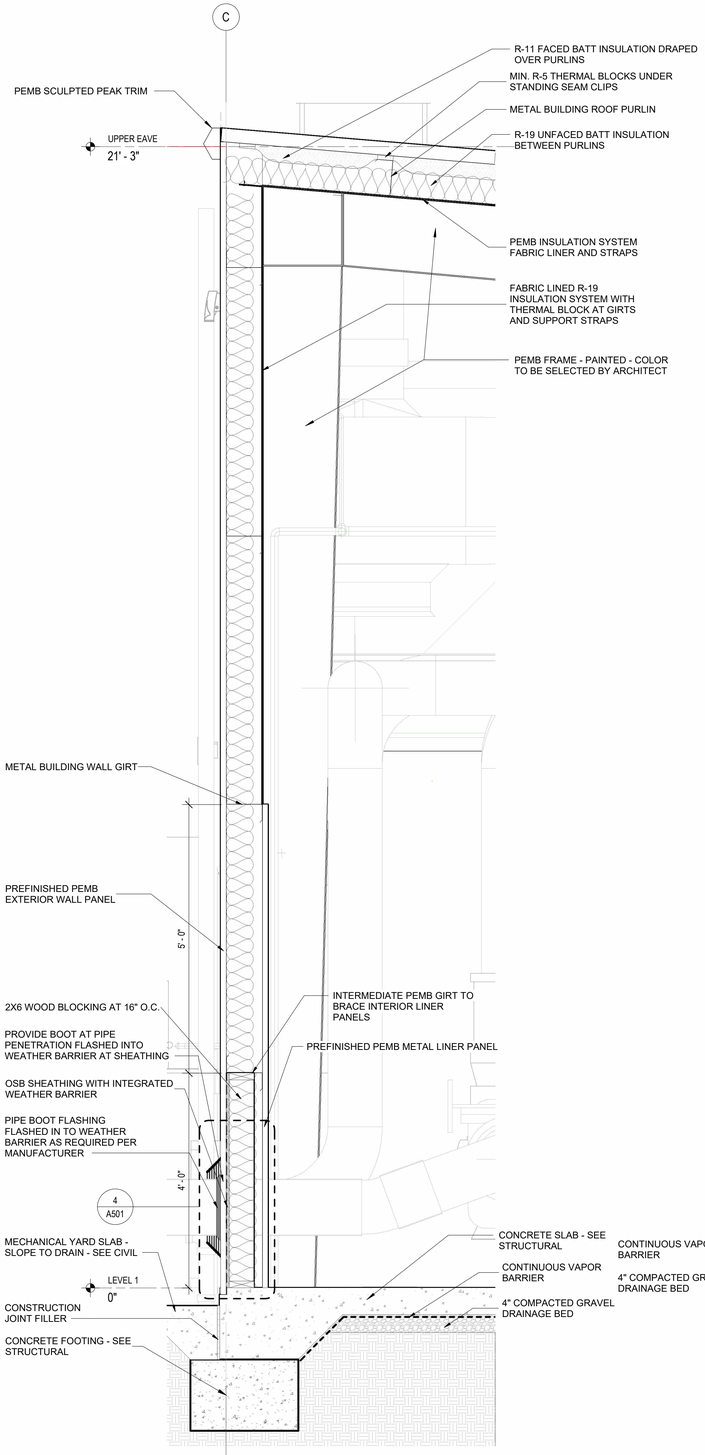
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: APRIL 06, 2026

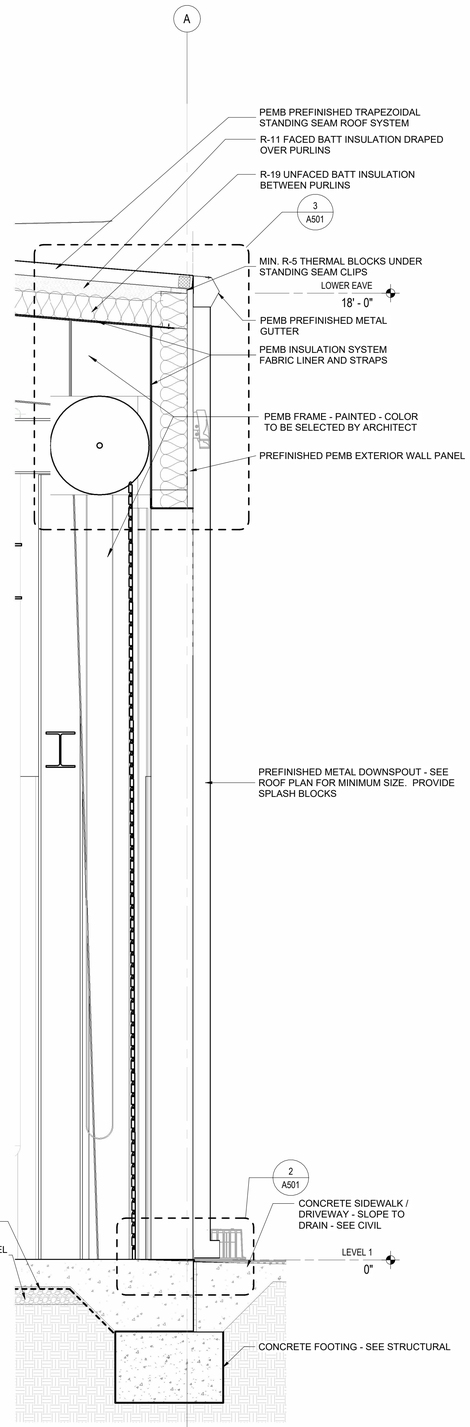
TITLE: BUILDING SECTIONS

CONSTRUCTION DOCUMENTS

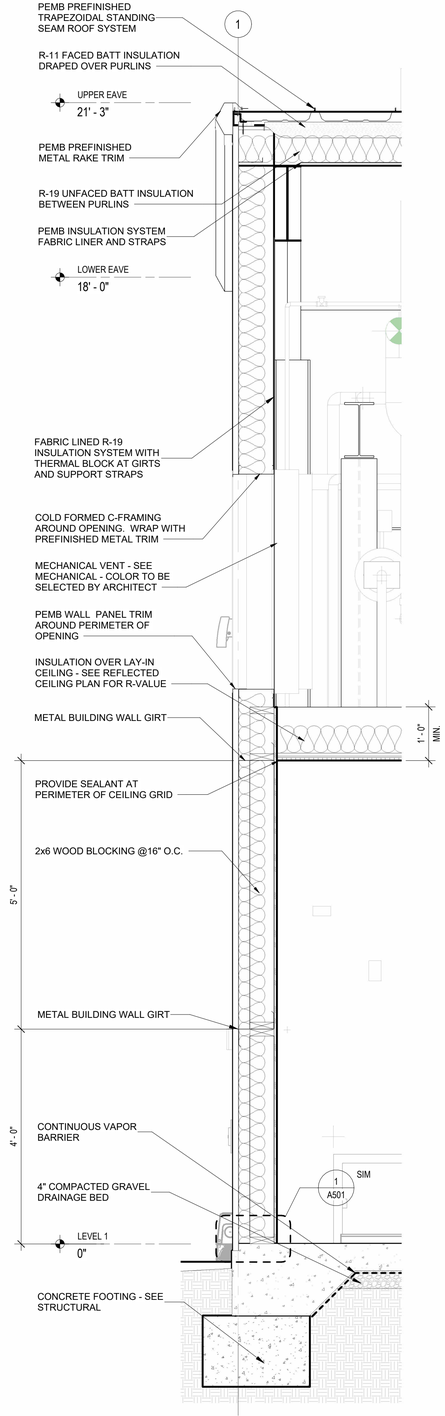
A203



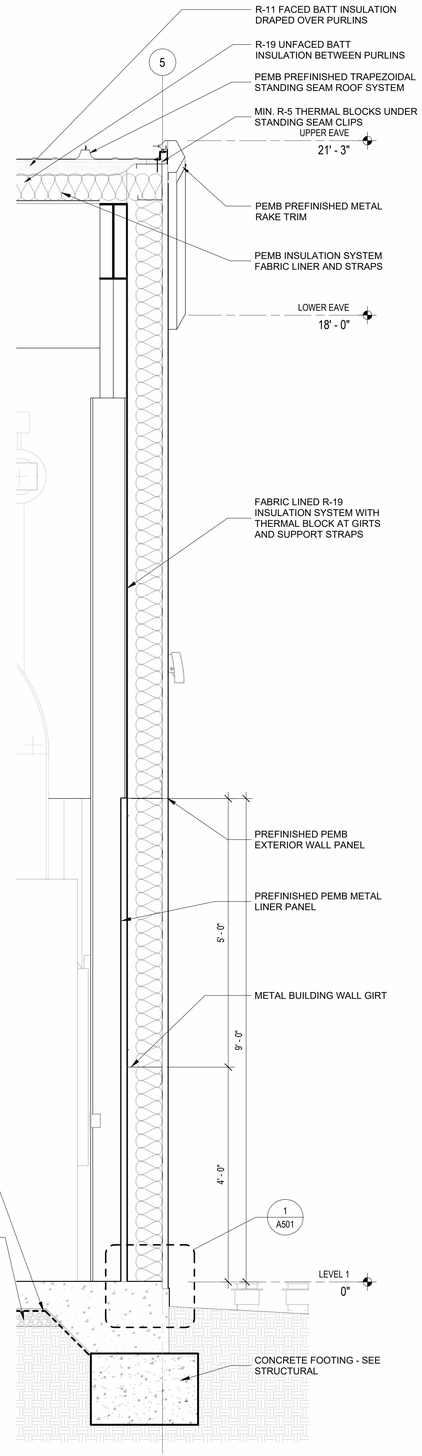
1 WALL SECTION - NORTH WALL @ MAN DOOR
SCALE: 3/4" = 1'-0"



2 WALL SECTION - SOUTH WALL
SCALE: 3/4" = 1'-0"



3 WALL SECTION - END WALL 2
SCALE: 3/4" = 1'-0"



4 WALL SECTION - END WALL 1
SCALE: 3/4" = 1'-0"

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17
AMR ARCHITECTS, INC.
ARKANSAS
DATE 04/06/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

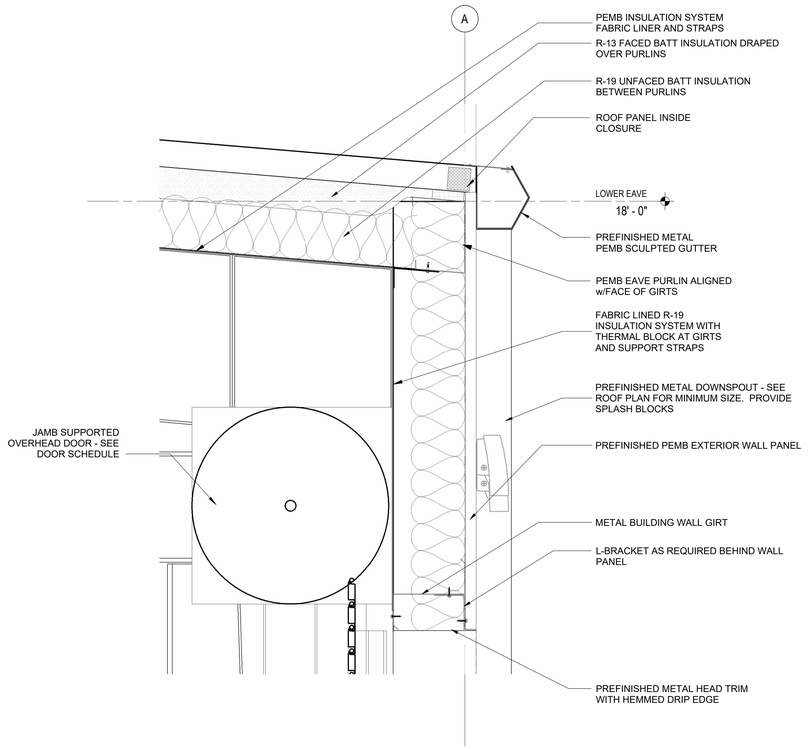
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: APRIL 06, 2026

TITLE: WALL SECTIONS

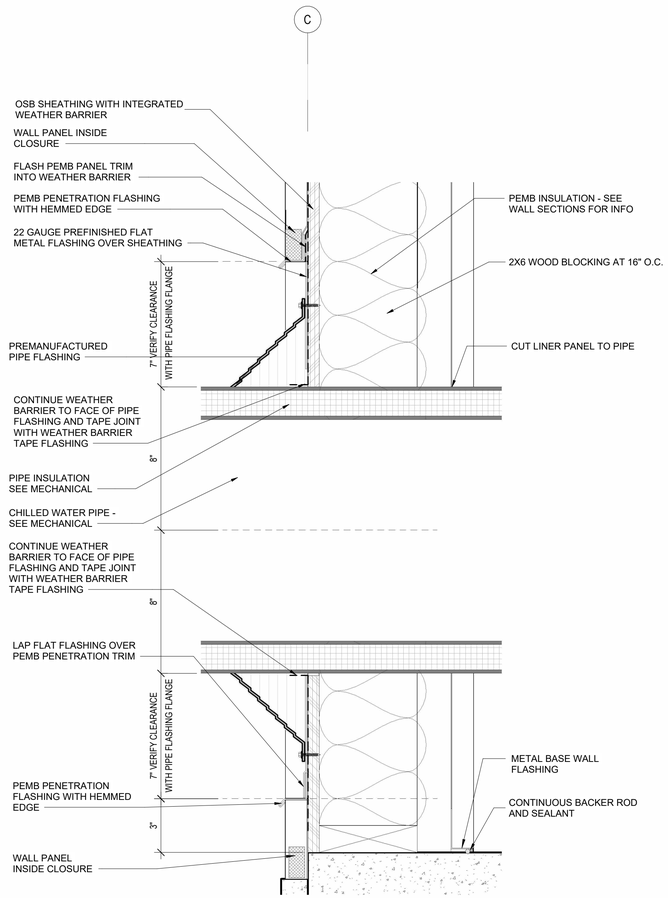
CONSTRUCTION DOCUMENTS

A301



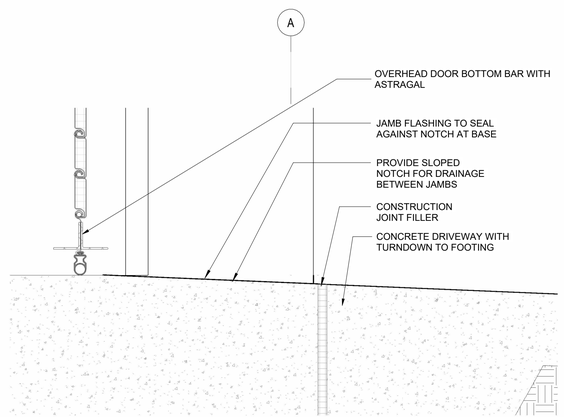
3 WALL DETAIL - EAVE/OH DOOR HEAD

SCALE: 1 1/2" = 1'-0"



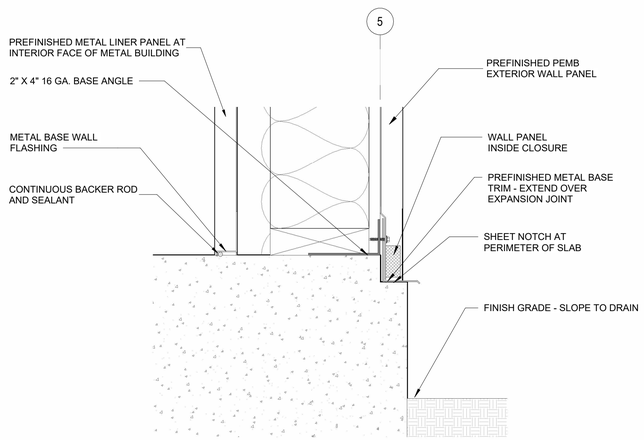
4 DETAIL SECTION - LARGE PIPE PENETRATION FLASHING

SCALE: 3" = 1'-0"



2 OH DOOR THRESHOLD

SCALE: 3" = 1'-0"



1 SECTION DETAIL - PEMB BASE WALL

SCALE: 3" = 1'-0"

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17 7
AMR ARCHITECTS, INC.
ARKANSAS
DATE 04/06/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: APRIL 06, 2026

TITLE: SECTION DETAILS

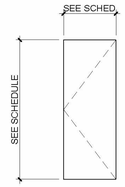
CONSTRUCTION DOCUMENTS

A501

DOOR PANEL TYPE LEGEND

1. TYPICAL DOOR TYPES:
   - AL = PREFIX FOR ALUMINUM DOOR PANEL
   - HM = PREFIX FOR HOLLOW METAL DOOR PANEL
   - WD = PREFIX FOR WOOD DOOR PANEL
2. TYPICAL DOOR CONFIGURATIONS:
   - F = FLUSH
   - FG = FULL GLASS
   - DV = DIVIDED GLASS

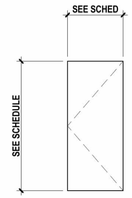
DOOR PANEL TYPES - EXTERIOR



HM-F-EXT

FLUSH PANEL
INSULATED HOLLOW
METAL DOOR

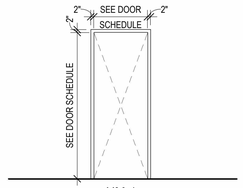
DOOR PANEL TYPES - INTERIOR



HM-F-INT

18 GA. FLUSH PANEL
HOLLOW METAL DOOR

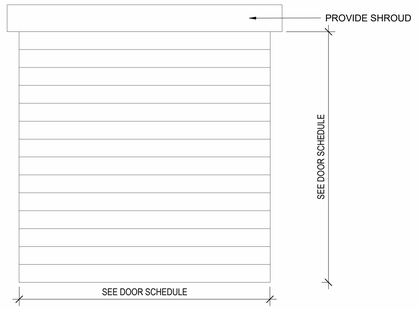
TYPICAL DOOR FRAME TYPE LEGEND



HM-1

WELDED HOLLOW
METAL FRAME -
PAINTED

OVERHEAD DOOR TYPE



OHD-1

COILING
INSULATED
OVERHEAD DOOR

GENERAL DOOR NOTES

1. SEE PROJECT MANUAL FOR DOOR HARDWARE SCHEDULE
2. DOOR FRAME OPENINGS ARE TO BE HELD 4" FROM FINISH WALL TYPICAL, UNLESS DIMENSIONED OR NOTED OTHERWISE
3. DOOR CLOSER TO BE MOUNTED ON INSIDE OF DOOR TYPICAL, UNLESS NOTED OTHERWISE. NO CLOSER TO BE VISIBLE FROM CORRIDOR SIDE OF DOOR.
4. WHERE DOOR SCHEDULE INDICATES A DOOR CLOSER THE BUTTS ARE TO BE OF THE BALL BEARING TYPE, TYPICAL.
5. ALL DOOR HARDWARE TO BE LEVER OR PUSH/PULL TYPE, NOT REQUIRING GRASPING OR TWISTING.
6. PROVIDE THREE (3) NEW, GRAY, DOOR SILENCERS FOR ALL NEW DOORS AS WELL AS EXISTING DOORS IF APPLICABLE.
6. ALL DOOR / FRAME ASSEMBLIES CONTAINED IN AN ACOUSTIC PARTITION TYPES TO HAVE PERIMETER GASKETING.
7. COORDINATE KEYING WITH OWNER
8. PROVIDE MASTER AND GRANDMASTER KEYS FOR OWNER AS REQUESTED
9. PROVIDE TEMPORARY CONSTRUCTION CORES AS NEEDED.
10. REFERENCE 08 33 23 UPWARD COILING DOORS FOR OH DOOR SPECIFICATIONS

DOOR SCHEDULE

	DOOR				FRAME		HARDWARE				
MARK	WIDTH	HEIGHT	TYPE	FINISH	TYPE	FINISH	HARDWARE SET	CLOSER	PANIC DEVICE	ACCESS CONTROL	REMARKS
100A	3' - 6"	7' - 0"	HM-F-EXT	PAINTED	HM-1	PAINTED	02	•	•	•	INSULATED DOOR - PROVIDE THERMAL GASKETING AT PERMETER - PROVIDE SWEEP
100B	3' - 0"	7' - 0"	HM-F-EXT	PAINTED	HM-1	PAINTED	01	•	•	•	INSULATED DOOR - PROVIDE THERMAL GASKETING AT PERMETER - PROVIDE SWEEP
101	3' - 0"	7' - 0"	HM-F-INT	PAINTED	HM-1	PAINTED	03	•		•	INSULATED DOOR - PROVIDE THERMAL GASKETING AT PERMETER - PROVIDE SWEEP
OH-1	14' - 0"	14' - 0"	OHD-1	PREFINISHED							PREFINISHED BRAKE METAL FLASHING AT PERIMETER - PROVIDE STELL ANGLES AT JAMBS AS REQUIRED TO SUPPORT DOOR
OH-2	14' - 0"	14' - 0"	OHD-1	PREFINISHED							PREFINISHED BRAKE METAL FLASHING AT PERIMETER - PROVIDE STELL ANGLES AT JAMBS AS REQUIRED TO SUPPORT DOOR
OH-3	14' - 0"	14' - 0"	OHD-1	PREFINISHED							PREFINISHED BRAKE METAL FLASHING AT PERIMETER - PROVIDE STELL ANGLES AT JAMBS AS REQUIRED TO SUPPORT DOOR

VERIFY PRINT IN COLOR

AMR architects

www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

REG. ARCHITECT NO. C17 17
AMR ARCHITECTS, INC.
ARKANSAS
DATE 04/06/2026

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: APRIL 06, 2026

TITLE: DOOR & FRAME TYPES & SCHEDULES

CONSTRUCTION DOCUMENTS

A601

ABBREVIATION LEGEND

A.R.	ANCHOR RODS
ADD'L	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
ARCH	ARCHITECTURAL
B PL	BASE PLATE
BF	BOTTOM OF FOOTING
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BP	BOTTOM OF PIER
BRG	BEARING
BTWN	BETWEEN
C	CHANNEL SHAPE (i.e. C8x11.5)
C	COLD FORMED C SHAPE
C.G.	CENTER OF GRAVITY
CJ	(KEYED) CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
DBL	DOUBLE
DEG	DEGREES
DIA	DIAMETER
DIM	DIMENSION
DLH	DEEP LONGSPAN JOIST (i.e. 60DLH12)
DSE	COLD-FORMED DOUBLE SLOPED EAVE STRUT
DTL	DETAIL
DWLS	DOWELS
EA	EACH
EBC	EXTENDED BOTTOM CHORD
EJ	EXPANSION JOINT
EL.	ELEVATION
ELEV	ELEVATION
EMBED	EMBEDMENT LENGTH
EOS	EDGE OF SLAB
ERECT	ERECTION
EWEF	EACH WAY, EACH FACE
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FD	FLOOR DRAIN
FF	FINISHED FLOOR
FV	FIELD VERIFY
FAS	FROM ADJACENT SPAN
FFE	FINISHED FLOOR ELEVATION
FIN FLR EL	FINISHED FLOOR ELEVATION
FS	FAR SIDE
FTG	FOOTING
Fy	STEEL YIELD STRENGTH
G	JOIST GIRDER (i.e. 24G8N7K)
GA	GAUGE
GB	GRADE BEAM
HORIZ	HORIZONTAL
HP	H-PILE SHAPE (i.e. HP8x36)
HS	HEADED STUD
HSS	HOLLOW STRUCTURAL SECTION (STEEL)
I/S	INSIDE
INFO	INFORMATION
INT	INTERIOR
JBE	JOIST BEARING ELEVATION
JT	JOINT
k	K-JOIST (i.e. 12k1 S.J.)
K	KIPS (KILO-POUNDS)
k/ft	KIPS PER FOOT
kcs	CONSTANT SHEAR JOIST (i.e. 12kcs2 S.J.)
KD	KILN-DRIED
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	ANGLE (i.e. L3x3x1/4)
LH	LONGSPAN JOIST (i.e. 32LH05)
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LW	LONG WAY
LWB	LAM. WOOD BEAM (i.e. LWB3x11)
M.B.	METAL BUILDING
MC	MOMENT CONNECTION
MAT'L	MATERIAL
MAX	MAXIMUM
MC	MISC. CHANNEL SHAPE (i.e. MC12x10.6)
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC.	MISCELLANEOUS
MPH	MILES PER HOUR
MTL	METAL
N	JOIST SPACES ON GIRDER
NO.	NUMBER
N.S.	NON-SHRINK
NS	NEAR SIDE
NTS	NOT TO SCALE
o.c.	ON CENTER
O/S	OUTSIDE
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP.	OPPOSITE
OSB	ORIENTED STRAND BOARD
P##	DRILLED PIER (##-DIA IN INCHES)
PF###	PAD FOOTING (###-SIZE IN FEET)
P/T	POST-TENSIONED
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
R	RADIUS
RE:	REFERENCE
REINF	REINFORCING
REQ'D	REQUIRED
RTU	ROOF TOP UNIT
S	STANDARD STEEL SHAPE (i.e. S10x35)
SCHED.	SCHEDULE
SECT	SECTION
SH	COLD-FORMED HAT SHAPE
SIM	SIMILAR
S.J.	STEEL JOIST (i.e. 12k1 S.J.)
SJ	(SAWN) CONTROL JOINT
SQ	SQUARE
SSE	COLD-FORMED SINGLE SLOPED EAVE STRUT
STIFF	STIFFENER
SW	SHORT WAY
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TEMP	TEMPERATURE
TF	TOP OF FOOTING
TOC	TOP OF COLUMN
TOC	TOP OF CONCRETE
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TP	TOP OF PIER
TYP	TYPICAL
UE	COLD-FORMED UNIVERSAL EAVE STRUT
UH	COLD-FORMED UNIVERSAL HAT SHAPE
UNO	UNLESS NOTED OTHERWISE
VER	VERIFY
VERT	VERTICAL
vs	VS JOIST (i.e. 2.5vs1)
W	WIDE FLANGE SHAPE (i.e. W8x10)
WP	WORK POINT
w/	WITH
w/o	WITHOUT
WT	T SHAPE (i.e. WT8x13)
WWR	WELDED WIRE REINFORCING (i.e. WIRE MESH)
Z	COLD FORMED Z SHAPE

STRUCTURAL NOTES

GENERAL NOTES

1. THE CONTRACTOR SHALL THOROUGHLY REVIEW ALL CONTRACT DOCUMENTS AND INFORM THE ARCHITECT OF CONFLICTS OR DISCREPANCIES PRIOR TO BIDDING, FABRICATION, AND CONSTRUCTION.
2. IN CASES OF DISCREPANCIES IN DIMENSIONS AND ELEVATIONS BETWEEN STRUCTURAL AND ARCHITECTURAL DRAWINGS, CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION.
3. THE CONTRACTOR SHALL COORDINATE THE FIELD VERIFICATION OF ALL EXISTING SITE CONDITIONS SUCH AS EXISTING FLOOR ELEVATIONS, EXISTING FOOTING ELEVATIONS, EXISTING UTILITIES, ETC, WHETHER NOTED OR NOT IN THE CONTRACT DOCUMENTS AND SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS, DISCREPANCIES OR UNKNOWN CONDITIONS PRIOR TO FABRICATION AND CONSTRUCTION.
4. REPRODUCTION OF CONTRACT DRAWINGS, IN ANY FORM, WILL NOT BE ACCEPTED AS SHOP DRAWINGS.
5. REVIEW OF SUBMITTALS AND/OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER-OF-RECORD DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTAL FOR REVIEW. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. CONTRACTOR ALSO SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES, AND PROCEDURES OF CONSTRUCTION.
6. CONTRACTOR SHALL PROVIDE TEMPORARY GUYS AND BRACING AS REQUIRED DURING CONSTRUCTION. STRUCTURE IS NOT STABLE UNTIL ALL STRUCTURAL MEMBERS, CONNECTIONS, AND DECKING IS IN PLACE.
7. ACI, AISC, AITC AND AWS SPECIFICATIONS SHALL GOVERN ALL PHASES OF FABRICATION AND CONSTRUCTION.

CONCRETE NOTES

CONCRETE REINFORCEMENT

1. CONCRETE REINFORCEMENT SUPPLIER SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW PRIOR TO CONSTRUCTION.
2. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
3. PROVIDE THE FOLLOWING PROTECTIVE COVERING FOR ALL REINFORCING BARS UNLESS DETAILED OR NOTED OTHERWISE:

SLAB-ON-GRADE BARS (BOTTOM)	3" CLEAR
BELOW GRADE (CAST AGAINST EARTH)	3" CLEAR
BELOW GRADE (FORMED EDGE)	2" CLEAR
WALLS	2" CLEAR
COLUMNS	1.5" CLEAR TO TIES

4. DO NOT CUT TIES OR CONTINUOUS BARS TO PROVIDE CLEARANCE FOR EMBEDDED ITEMS OR OTHER OBSTRUCTIONS. INDIVIDUAL BARS AND TIES MAY BE MOVED VERTICALLY UP TO 1.5" AS REQUIRED TO PROVIDE CLEARANCE FOR EMBEDS, HOOKS, ETC. DO NOT HEAT REINFORCING TO BEND IT.
5. IF DOWELS OR VERTICAL REINFORCING ARE CUT OR SEVERELY BENT, CONTRACTOR MAY BE REQUIRED TO REMOVE THE CONCRETE BACK TO THE PREVIOUS POUR JOINT AND REPLACE THE DAMAGED BARS AND CONCRETE AT THE CONTRACTOR'S EXPENSE.
6. REINFORCEMENT SHALL BE SPLICED ONLY AS SHOWN OR NOTED IN THE STRUCTURAL CONTRACT DOCUMENTS. SPLICES AT OTHER LOCATIONS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER-OF-RECORD PRIOR TO FABRICATION.
7. REINFORCING BARS MARKED AS CONTINUOUS SHALL BE SPLICED WITH CLASS "B" TENSION LAP SPLICES ONLY.
8. ALL TENSION LAP SPLICES SHALL BE CLASS "B" UNLESS NOTED OTHERWISE.
9. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A185. LAP REINFORCEMENT 8 INCHES ON SIDES AND ENDS. MAINTAIN WIRE 1 TO 2 INCHES BELOW TOP SURFACE OF SLAB-ON-GRADE, UNLESS NOTED OTHERWISE. WELDED WIRE REINFORCEMENT MUST BE PLACED ON CHAIRS OR BOLSTERS AS REQUIRED TO MAINTAIN POSITION IN THE SLAB.
10. ONCE SHOP DRAWINGS HAVE BEEN REVIEWED, DO NOT ADD REINFORCING OR INFORMATION TO PREVIOUSLY SUBMITTED SHEETS FOR SUBSEQUENT SUBMITTALS UNLESS SHOP DRAWINGS ARE BEING RESUBMITTED AFTER BEING RETURNED "NOT REVIEWED".
11. WHERE ANCHOR RODS ARE CAST INTO CONCRETE, PROVIDE SUPPLEMENTAL REINFORCING EACH WAY, TIED NEAR THE TOP AND BOTTOM OF ALL ANCHOR RODS TO THE ADJACENT REBAR TO SECURE RODS DURING CONCRETE PLACEMENT. (MINIMUM SIZE #4)

CAST-IN-PLACE CONCRETE

1. CONCRETE SUPPLIER SHALL SUBMIT CONCRETE MIX DESIGN DATA TO THE ARCHITECT FOR REVIEW PRIOR TO CONSTRUCTION.
2. CONCRETE SHALL HAVE AT LEAST THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS:

A. FOOTINGS	3000 PSI
B. SLABS-ON-GRADE & PEDESTALS	4000 PSI
C. COLUMNS	5000 PSI

3. **SEE CONCRETE MIX DESIGN TABLE**
4. PROPORTIONS OF CONCRETE MIX DESIGNS SHALL BE DETERMINED BY THE PROCEDURES ESTABLISHED IN SECTION 5.3 OF ACI 318-19.
5. MIX DESIGN MAY INCLUDE (TYPE C) FLYASH AS A REPLACEMENT FOR PORTLAND CEMENT UP TO A MAXIMUM OF 20% OF THE TOTAL CEMENTIOUS MATERIAL. DO NOT USE A FLYASH CONTAINING CONCRETE MIX WHEN THE TEMPERATURE DURING PLACEMENT OR CURING IS PROJECTED TO FALL BELOW 60 DEGREES FAHRENHEIT.
6. MIX DESIGN MAY INCLUDE WATER REDUCING ADMIXTURES CONFORMING TO ASTM C494, TYPE A, TO PROVIDE WORKABILITY AND SPECIFIED SLUMP WITHOUT EXCEEDING SPECIFIED WATER/CEMENT RATIOS. WATER SHALL NOT BE ADDED ON SITE WITHOUT PRIOR APPROVAL. ANY APPROVED WATER AMOUNTS ADDED ON SITE MUST BE RECORDED & REPORTED BY THE TESTING AGENCY.
7. ALL CONCRETE EXPOSED TO WEATHER SHALL CONTAIN 5.5% AIR ENTRAINMENT (±1.5%). DO NOT EXCEED 3% AIR CONTENT IN CONCRETE RECEIVING A STEEL TROWEL FINISH.

CAST-IN-PLACE CONCRETE MIX DESIGN TABLE

MIX DESIGN SHALL INCLUDE AT LEAST THE FOLLOWING AMOUNTS OF PORTLAND CEMENT MEETING ASTM C150 OR D595 PER CUBIC YARD OF CONCRETE

	NON-AIR ENTRAINED		AIR ENTRAINED		
28 DAY MIN. COMPRESSIVE STRENGTH	MIN. CEMENT CONTENT (LBS/YARD³)	MAXIMUM PERMISSIBLE W/C RATIO	MIN. CEMENT CONTENT (LBS/YARD³)	MAXIMUM PERMISSIBLE W/C RATIO	MAX. SLUMP W/ WRA
3000	470	0.53			6"
4000	564	0.44	611	0.40	6"
5000			658	0.35	6"

METALS NOTES

STRUCTURAL STEEL

1. STRUCTURAL STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
2. ALL STRUCTURAL STEEL SHAPES SHALL BE AS FOLLOWS:
   A. ALL WIDE FLANGE STRUCTURAL STEEL SHAPES (W) SHALL BE ASTM A992.
   B. SQUARE OR RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS) SHALL BE ASTM A500, GRADE C, Fy = 50 KSI
   C. ROUND HOLLOW STRUCTURAL SECTIONS (HSS) SHALL BE ASTM A500, GRADE C, Fy = 46 KSI
   D. ROUND STEEL PIPES (P, PX, PXX) SHALL BE ASTM A53, GRADE B, FY = 35 KSI.
   E. ALL OTHER STRUCTURAL STEEL (CHANNELS (C), ANGLES (L), PLATES (PL), ETC.) SHALL BE ASTM A36, UNLESS NOTED OTHERWISE.
3. ALL ANCHOR RODS SHALL BE ASTM F1554 GRADE 36.
4. STRUCTURAL BOLTS SHALL BE ASTM F3125 GRADE A325-N.
5. BOLTS THRU WOOD BLOCKING SHALL BE ASTM A307. ALL BOLTS IN CONTACT WITH TREATED WOOD SHALL BE STAINLESS STEEL (TYPE 316L), OR HOT DIPPED GALVANIZED WITH A MINIMUM COATING THICKNESS OF 0.2 OUNCES PER SQUARE FOOT (ASTM A153). USE STAINLESS BOLTS WITH STAINLESS STEEL CONNECTORS AND GALVANIZED BOLTS WITH GALVANIZED CONNECTORS IF ONLY ONE IS SPECIFIED.
6. POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE SHALL BE STANDARD ASTM A36 THREADED RODS (OR APPROVED EQUAL) WITH A MINIMUM STEEL YIELD STRENGTH OF Fy=36ksi OR ASTM F593 STAINLESS STEEL ANCHORS WITH A MINIMUM STEEL YIELD STRENGTH OF fy=45ksi, UNLESS SHOWN OTHERWISE ON THE DRAWINGS. ADHESIVE SHALL BE HILTI "HIT-RE 500-SD" SYSTEM (REF: ICC-ES ESR-3322), SIMPSON STRONG-TIE "SET-3G" SYSTEM (REF: ICC-ES ESR-4057), DEWALT "PURE 220+" SYSTEM (REF: ICC-ES ESR 5144), (OR APPROVED EQUAL). (SEE PRODUCT MANUALS FOR HOLE CLEANING, INSTALLATION AND INSTALLER TRAINING REQUIREMENTS.)
7. POST-INSTALLED EXPANSION ANCHORS IN CONCRETE SHALL BE HILTI "KWIK BOLT TZ2" (REF: ICC-ES AC 193), SIMPSON STRONG-TIE "STRONG BOLT 2" (REF: ICC-ES ESR-3037), DEWALT "POWER STUD+ SD1+" (REF: ICC-ES ESR-2818), (OR APPROVED EQUAL) CARBON STEEL ANCHORS UNLESS SHOWN OTHERWISE ON THE DRAWINGS. (SEE PRODUCT MANUALS FOR HOLE CLEANING, INSTALLATION AND INSTALLER TRAINING REQUIREMENTS.)
8. POST-INSTALLED SCREW ANCHORS SHALL BE HILTI "KWIK HUS EZ" (REF: ICC-ES ESR-3027), SIMPSON STRONG-TIE "TITEN HD" (REF: ICC-ES ESR-2713), DEWALT "SCREW BOLT+" (REF: ICC ESR-3889), (OR APPROVED EQUAL), UNLESS NOTED OTHERWISE. (SEE PRODUCT MANUALS FOR HOLE CLEANING, INSTALLATION AND INSTALLER TRAINING REQUIREMENTS.)
9. PROVIDE CONTINUOUS SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE MOST CURRENT ICC-ES REPORT FOR THE ANCHOR BEING INSTALLED (RE: IBC TABLE 1705.1.3).
10. THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL POST-INSTALLED ANCHORS TO BE USED, PRIOR TO COMMENCEMENT OF THE WORK. ONLY TRAINED INSTALLERS SHALL PERFORM POST INSTALLED ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON-SITE AND MADE AVAILABLE TO THE ARCHITECT AND/OR ENGINEER OF RECORD, UPON REQUEST.
11. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS (ACI 318-11 D.2.2 / ACI 318-14 17.1.2 / ACI 318-19 17.2.2).
12. THE REMOVAL AND RESETTING OF POST-INSTALLED ANCHORS IS PROHIBITED (ACI 318-19 17.1.3).
13. CONNECTIONS WITH HIGH STRENGTH BOLTS SHALL BE DESIGNED CONSIDERING BOLT THREADS INCLUDED IN THE SHEAR PLANE (A325-N). ALL BOLTING SHALL BE INSTALLED BY THE TURN-OF-THE-NUT METHOD, REMOVABLE LOAD INDICATOR BOLTS, OR CALIBRATED WRENCH. SNUG TIGHT BOLTING WILL NOT BE PERMITTED UNLESS SPECIFICALLY DETAILED ON CONTRACT DRAWINGS.
14. ALL WELDS SHALL BE E70XX, MINIMUM AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS, CERTIFIED WITHIN THE PREVIOUS TWELVE (12) MONTHS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THE BUILDING AND COMPONENTS DUE TO FIRE HAZARDS FROM WELDING.
15. DO NOT PRIME PAINT STEEL THAT RECEIVES SPRAYED FIREPROOFING.
16. ALL STEEL LINTELS AND SHELF ANGLES SHALL BE COATED WITH A ZINC RICH PRIMER.
17. ALL STRUCTURAL STEEL EXPOSED TO WEATHER (SUCH AS MECHANICAL FRAMES) SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

PRE-ENGINEERED METAL BUILDING SYSTEMS

1. METAL BUILDING MANUFACTURER SHALL PROVIDE CALCULATIONS AND SHOP DRAWINGS SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARKANSAS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
2. METAL BUILDING SHOP DRAWINGS WILL NOT BE REVIEWED IF THE LAYOUT DOES NOT FOLLOW THE LAYOUT PROPOSED IN THE CONTRACT DRAWINGS AND IF ANY DEVIATIONS FROM THE PROPOSED LAYOUT ARE NOT CLEARLY MARKED ON THE SHOP DRAWINGS OR APPROVED IN WRITING PRIOR TO SUBMITTAL.
3. METAL BUILDING FRAMING LAYOUT AND MEMBERS SHOWN ARE SUGGESTED ONLY. MANUFACTURER IS RESPONSIBLE FOR COORDINATING REQUIREMENTS WITH OWNER AND PROVIDING A COMPLETE STRUCTURAL FRAMING SYSTEM DESIGNED BY THE MANUFACTURER. METAL BUILDING MANUFACTURER SHALL COORDINATE ALL DIMENSIONS, BRACING, AND SIZES AND SHAPES OF MEMBERS WITH OWNER PRIOR TO FABRICATION AND CONSTRUCTION. ALL MEMBERS, CONNECTIONS AND DECKING NOT SPECIFICALLY SIZED ON DRAWINGS SHALL BE DESIGNED AND SUPPLIED BY THE METAL BUILDING MANUFACTURER.
4. METAL BUILDING VERTICAL BRACING SHALL CONSIST OF PORTAL FRAMES OR ROD BRACES AT THE LOCATIONS SHOWN ON THE PLANS. THE METAL BUILDING MANUFACTURER SHALL COORDINATE THE LOCATION OF ALL BRACES TO MINIMIZE INTERFERENCE WITH ARCHITECTURAL FEATURES. ROD OR CABLE BRACES MAY NOT BE SUBSTITUTED WHERE PORTAL FRAMES ARE SHOWN. WHERE X-BRACES ARE USED, THE METAL BUILDING MANUFACTURER SHALL CLEARLY IDENTIFY TO THE ARCHITECT ALL INTERFERENCES WITH ARCHITECTURAL FEATURES. WHERE ARCHITECTURAL FEATURES (COLUMN SURROUNDS, CEILINGS, FURR DOWNS, ETC) ARE PROVIDED TO COVER OR SURROUND THE METAL BUILDING COMPONENTS (COLUMNS, FRAMES, ETC.), THE METAL BUILDING COMPONENTS SHALL BE SIZED TO STAY WITHIN THE LIMITS OF THE ARCHITECTURAL FEATURES UNLESS THE ARCHITECT IS NOTIFIED IN WRITING PRIOR TO SUBMISSION OF THE APPROVAL DRAWINGS AND APPROVAL IS GIVEN FOR AN EXCEPTION.
5. MAXIMUM PURLIN LIVE LOAD DEFLECTION FOR PURLINS NOT SUPPORTING CEILINGS SHALL NOT EXCEED SPAN/180.
6. FRAME LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN/360 OR 1" MAX.
7. MAXIMUM GIRT LATERAL DEFLECTION FROM WIND OR SEISMIC LOADS SHALL NOT EXCEED SPAN/240 FOR GIRTS PROVIDING LATERAL SUPPORT FOR METAL SIDING ONLY. MAXIMUM GIRT LATERAL DEFLECTION FROM WIND OR SEISMIC LOADS SHALL NOT EXCEED SPAN/360 FOR GIRTS PROVIDING LATERAL SUPPORT FOR BRICK.
8. MAXIMUM BUILDING SIDESWAY (DRIFT) FROM WIND OR GRAVITY LOADS SHALL NOT EXCEED WALL HEIGHT/240. SEISMIC DRIFT SHALL BE WITHIN THE LIMITS PRESCRIBED IN ASCE 7, TABLE 12.12-1 WITH ACTUAL DRIFT DETERMINED PER SECTION 12.8.6.
9. THE GENERAL CONTRACTOR AND METAL BUILDING MANUFACTURER SHALL BE RESPONSIBLE FOR OVERALL BUILDING COORDINATION. ALL COORDINATION OF THE INTERFACE AND COMPATIBILITY BETWEEN THE METAL BUILDING AND THE ARCHITECTURAL FEATURES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE METAL BUILDING MANUFACTURER.
10. DESIGN OF THE METAL BUILDING USING DEAD, LIVE, SEISMIC, WIND AND SNOW LOADS IN THE CODE REQUIRED COMBINATIONS SHALL BE PERFORMED BY THE METAL BUILDING MANUFACTURER.

EARTHWORK & FOUNDATION NOTES

EXCAVATION & FILL

1. ALL UNDERCUTTING, SITE PREPARATION, FILL SELECTION, BACKFILLING AND COMPACTION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND SOILS ENGINEER'S RECOMMENDATIONS.
2. SELECT FILL BENEATH THE BUILDING SHALL BE PLACED IN LIFTS NOT EXCEEDING 8" LOOSE THICKNESS AND COMPACTED TO AT LEAST 98% OF STANDARD PROCTOR DRY DENSITY (ASTM D 698). THE IN-PLACE DENSITY AND MOISTURE CONTENT SHALL BE ESTABLISHED AND APPROVED FOR EACH LIFT PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS.

SPREAD FOOTINGS

1. BOTTOM OF FOOTING ELEVATIONS (BF) SHOWN ON THE PLANS ARE FOR ESTIMATING PURPOSES ONLY AND ARE NOT NECESSARILY TO BE USED FOR CONSTRUCTION. THE SOILS ENGINEER OR HIS REPRESENTATIVE SHALL BE ENGAGED TO INSPECT ALL FOOTING EXCAVATIONS TO VERIFY THAT THE REQUIRED ALLOWABLE BEARING CAPACITY IS ATTAINABLE. BOTTOM OF FOOTING ELEVATIONS SHALL BE ADJUSTED PER THE ON-SITE RECOMMENDATIONS OF THE SOILS ENGINEER OR HIS REPRESENTATIVE.
2. ALL SPREAD FOOTINGS SHALL BE FOUNDED IN PROPERLY COMPACTED SELECT FILL OR IN THE NATURAL SOILS WITH AN ALLOWABLE NET BEARING CAPACITY OF AT LEAST 2000 PSF. (REF: GEOTECHNICAL INVESTIGATION, JOB NO. 35255142.A1 DATED MARCH 27, 2026 BY TERRACON.)
3. MAINTAIN FINISHED GRADE (AND/OR BOTTOM OF FOOTING ELEVATIONS) TO PROVIDE AT LEAST 2'-0" COVER ABOVE THE BOTTOM OF ALL EXTERIOR FOOTINGS FOR FROST PROTECTION.

DESIGN LOADS:

DEAD LOADS:		WEIGHT OF THE STRUCTURE
ROOF LIVE LOAD:		20 PSF
GROUND SNOW LOAD	Pg:	10 PSF
WIND SPEED FOR RISK CATEGORY III & EXPOSURE C		Vult: 111 MPH Vasd: 86 MPH
BUILDING RISK CATEGORY		II
WIND EXPOSURE CATEGORY		C
INTERNAL PRESSURE COEFFICIENT	GCpi:	+/-0.18
COMP. & CLADDING WIND PRESSURE	Pnet30:	SEE ASCE 7-16, TABLE 30.6-2
MAPPED SPECTRAL RESPONSE ACCELERATIONS	Ss: S1:	0.470 0.157
SITE CLASS		C
SPECTRAL RESPONSE COEFFICIENTS	Sds: Sd1:	0.407 0.157
SEISMIC DESIGN CATEGORY		C
BASIC SEISMIC-FORCE-RESISTING SYSTEM(S) (PER ASCE 7-16, TABLE 12.2-1)	B. MOMENT RESISTING FRAME SYSTEM 4. STEEL ORDINARY MOMENT FRAMES	
DESIGN BASE SHEAR	V:	0.12W
SEISMIC RESPONSE COEFFICIENT	Cs:	0.132
RESPONSE MODIFICATION FACTOR	R:	3.50
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE METHOD (PER ASCE 7-16, TABLE 12.6-1 & SECT. 12.8)	

SEISMIC ZONE PER A.C.A. 12-80-101 ET. SEQ. ZONE: 1

CODES: 2021 ARKANSAS FIRE PREVENTION CODE
A.C.A. 12-80-101 ET. SEQ. (ARKANSAS STATE LAW)

THE FOUNDATIONS AND STRUCTURAL FRAMING HAVE BEEN DESIGNED TO RESIST THE LOADS AND FORCES STATED ABOVE IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2021 ARKANSAS FIRE PREVENTION CODE AND A.C.A. 12-80-101 ET. SEQ.

PRE-ENGINEERED METAL BUILDING DESIGN LOADS:

ROOF DEAD LOAD: ACTUAL WEIGHT OF THE STRUCTURE

COLLATERAL LOAD: HANGING EQUIPMENT, LIGHTS, CEILINGS, ETC. (7 PSF MINIMUM COLLATERAL DEAD LOAD. INCLUDE ACTUAL WEIGHT OF SUSPENDED EQUIPMENT.)(SEE SHEET S301 FOR ADDITIONAL LOADS THAT ARE IN ADDITION TO THE COLLATERAL LOAD)

ROOF LIVE LOAD: 20 PSF (PURLINS & FRAMES). LIVE LOAD REDUCTIONS WILL NOT BE ALLOWED.

SNOW LOAD: (SEE DESIGN LOADS ABOVE)

WIND LOAD: (SEE DESIGN LOADS ABOVE)

SEISMIC LOAD: (SEE DESIGN LOADS ABOVE)

CODES: 2021 ARKANSAS FIRE PREVENTION CODE
MBMA METAL BUILDING SYSTEMS MANUAL (LATEST EDITION)
A.C.A. 12-80-101 ET. SEQ. (ARKANSAS STATE LAW)

SPECIAL INSPECTION NOTES

1. SPECIAL INSPECTIONS SHALL BE REQUIRED IN ACCORDANCE WITH CHAPTER 17 OF THE BUILDING CODE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INSPECTIONS WITH THE INSPECTION AGENTS.
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE TO PERFORM THE REQUIRED INSPECTION TO THE SATISFACTION OF THE BUILDING OFFICIAL.
3. THE SPECIAL INSPECTOR SHALL KEEP RECORDS OF INSPECTIONS. INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.
4. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.
5. A FINAL REPORT OF INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES SHALL BE SUBMITTED TO THE OWNER, BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AT THE COMPLETION OF THE STRUCTURAL PORTION OF THE WORK.

SOIL TESTING AND INSPECTIONS

1. A QUALIFIED TESTING LABORATORY SHALL TEST ALL CONTROLLED STRUCTURAL FILL. A MINIMUM OF TWO SOIL COMPACTION TESTS SHALL BE MADE FOR EACH LIFT.
2. AFTER FOOTING EXCAVATIONS HAVE BEEN MADE TO DESIGN ELEVATIONS, THE INDEPENDENT TESTING AGENCY SHALL INSPECT AND TEST THE BEARING SOIL TO VERIFY THAT IT MEETS THE REQUIRED DESIGN CAPACITY.

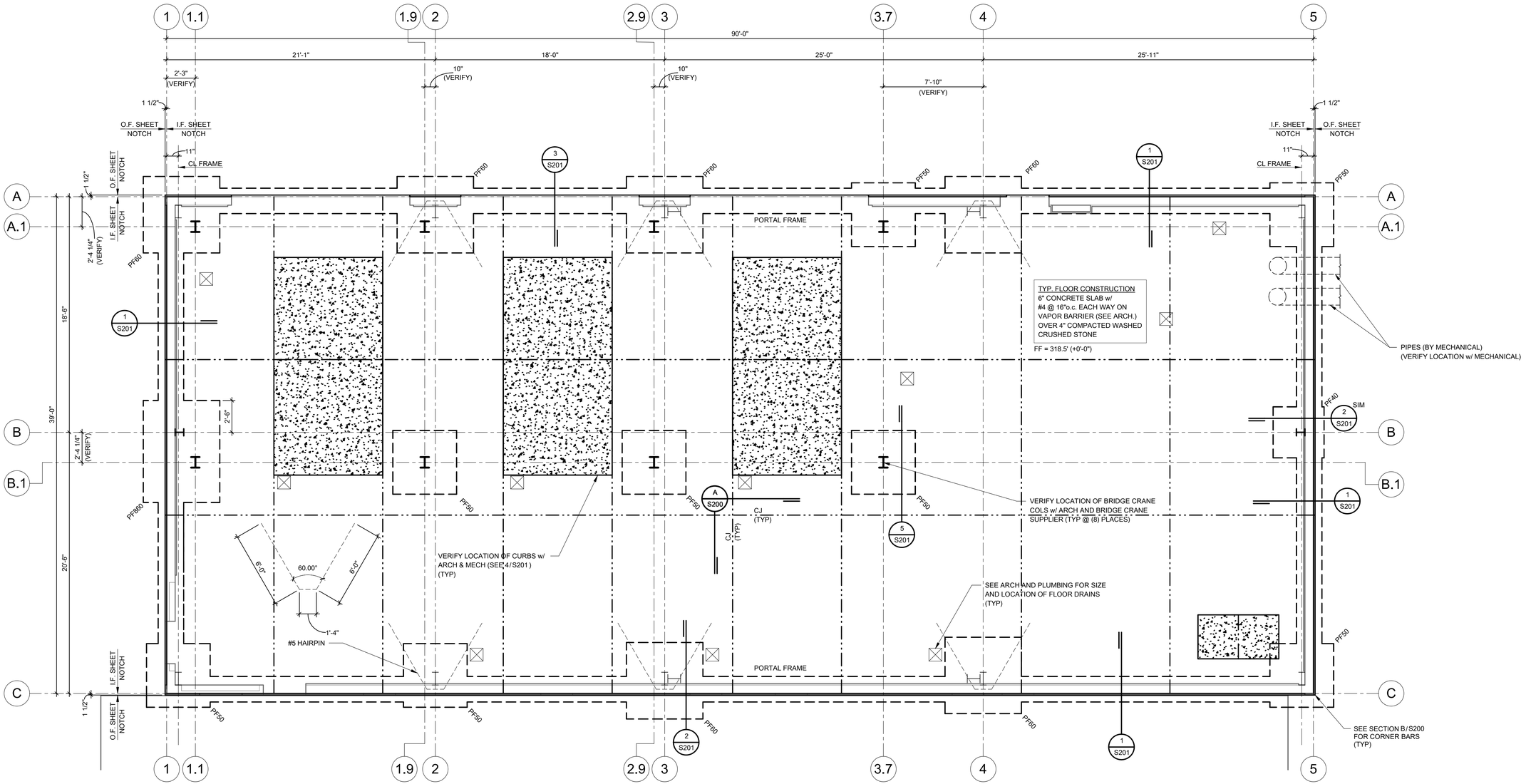
CONCRETE CONSTRUCTION INSPECTIONS

1. INSPECT REINFORCING STEEL PRIOR TO PLACING CONCRETE. CHECK REINFORCING SIZE, SPACING AND LOCATION.
2. VERIFY SIZE, TYPE, EMBEDMENT DEPTH, PROJECTION AND QUANTITY OF ANCHOR BOLTS.
3. CYLINDERS SHALL BE MADE FOR DETERMINING THE CONCRETE STRENGTH FROM EACH CLASS OF CONCRETE TO BE PLACED. SAMPLES SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5,000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS. (EACH SAMPLE SHALL CONSIST OF 4 CYLINDERS MADE, HANDLED AND TESTED PER THE SPECIFICATIONS.)
4. EACH TIME THE CYLINDERS ARE MADE THE SLUMP, AIR CONTENT AND TEMPERATURE OF THE CONCRETE SHALL ALSO BE CHECKED.
5. THE CONTRACTOR'S METHOD OF MAINTAINING THE MINIMUM CURING TEMPERATURE AND CURING TECHNIQUE SHALL BE REVIEWED.
6. PROVIDE CONTINUOUS INSPECTION OF POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE ELEMENTS TO VERIFY THE INSTALLATION IS IN ACCORDANCE WITH STRUCTURAL DRAWINGS, EVALUATION SERVICE REPORT, AND MANUFACTURER'S INSTRUCTIONS. VERIFY LOCATION, EDGE DISTANCES, SPACING, DRILL BIT SIZE, HOLE DEPTH, HOLE CLEANING PROCEDURES, ANCHOR MATERIAL, EMBEDMENT, INSTALLATION PROCEDURES, INCLUDING CHECKING EXPIRATION DATE, PROPER MIXING OF ADHESIVE, AND INSTALLER TRAINING REQUIREMENTS.

STEEL CONSTRUCTION INSPECTION

1. STEEL FABRICATOR SHALL BE REGISTERED AND APPROVED IN ACCORDANCE WITH THE ARKANSAS FIRE PREVENTION CODE SECTION 1704.2.5.2 AND SHALL SUBMIT A CERTIFICATE OF COMPLIANCE -- OR -- THE FABRICATOR SHALL MAKE PROVISIONS FOR SHOP INSPECTION OF FABRICATION PROCEDURES & QUALITY CONTROL IN ACCORDANCE WITH SECTION 1704.2.5.1 BY AN INDEPENDENT INSPECTION AGENCY APPROVED BY THE OWNER, WITH RELATED COSTS INCLUDED IN THE BID.
2. PERIODICALLY VERIFY THAT THE PROPER MATERIALS FOR HIGH-STRENGTH BOLTS, STRUCTURAL STEEL AND WELD FILLER MATERIALS ARE BEING USED.
3. PERIODICALLY CHECK TIGHTENING OF

PAD FOOTING SCHEDULE				
TYPE	WIDTH	LENGTH	THICKNESS	TYPE COMMENTS
PF40	4'-0"	4'-0"	1'-4"	(5) #5 EW TOP & BOT
PF50	5'-0"	5'-0"	1'-4"	(6) #6 EW TOP & BOT
PF60	6'-0"	6'-0"	1'-4"	(7) #6 EW TOP & BOT



FOUNDATION PLAN

1/4" = 1'-0"

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378
NORTHWEST ARKANSAS
T: 479.334.2901

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

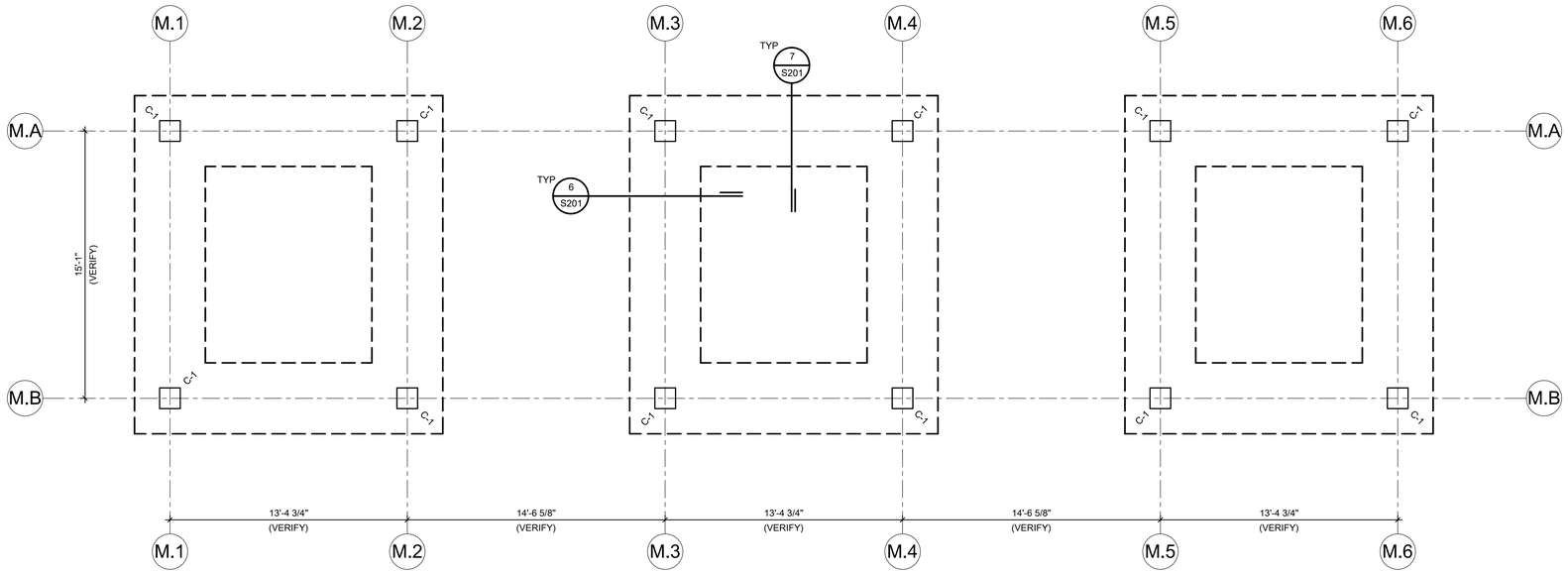
UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		
ISSUE FOR REVIEW:		
ISSUE FOR PRICING:		
ISSUE FOR CONSTRUCTION:		
DATE:		APRIL 6, 2026
TITLE:		FOUNDATION PLAN

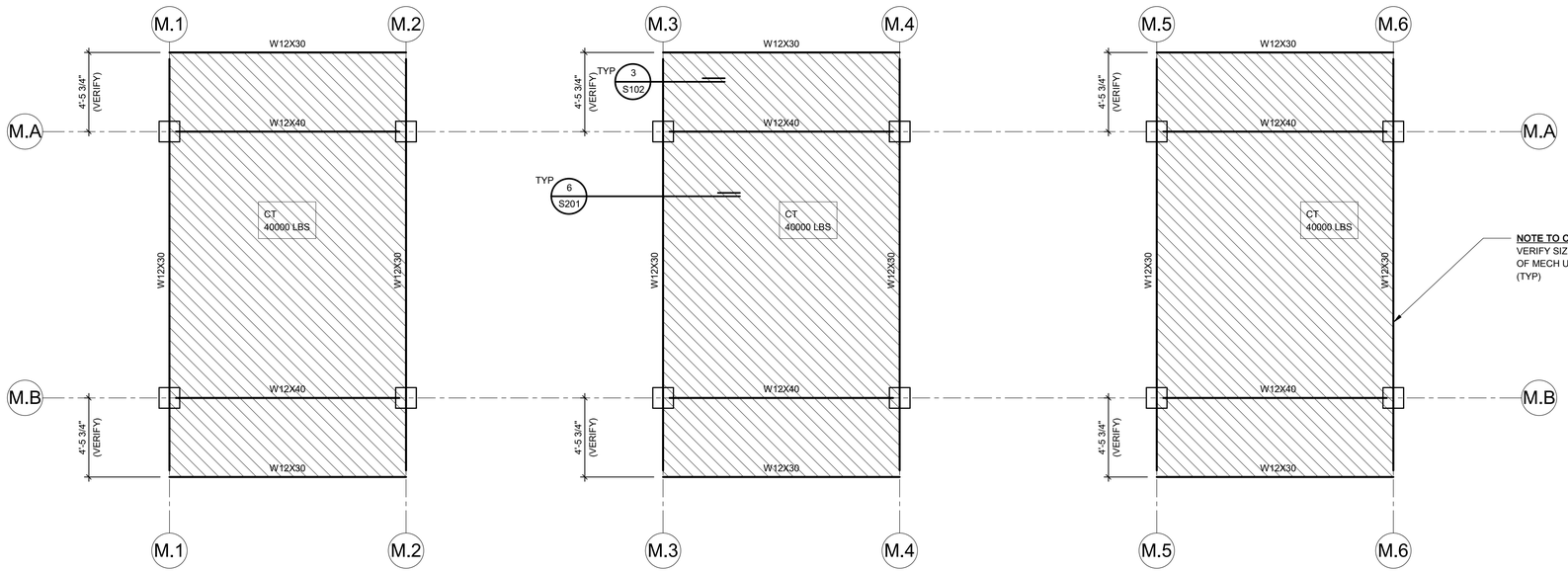
CERTIFICATE OF AUTHORIZATION ENGINEERING CONSULTANTS, INC. No. 26 ARKANSAS—ENGINEER
Engineering Consultants, Inc.
Structural Engineers
401 West Capitol Avenue, Suite 305
Little Rock, Arkansas 72201-3401
Phone No: (501) 376-3752
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12256 BRIAN D. MILLER 04/03/2026

JOB# 25-280

S101



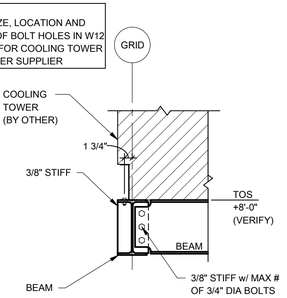
1 MECHANICAL FRAMES FOUNDATION PLAN
1/4" = 1'-0"



2 MECHANICAL FRAMES
1/4" = 1'-0"

NOTE TO CONTRACTOR:
ALL STEEL EXPOSED TO WEATHER TO BE HOT DIPPED GALVANIZED

NOTE:
VERIFY SIZE, LOCATION AND NUMBER OF BOLT HOLES IN W12 FLANGES FOR COOLING TOWER WITH TOWER SUPPLIER



3 SECTION
3/4" = 1'-0"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378
NORTHWEST ARKANSAS
T: 479.334.2901

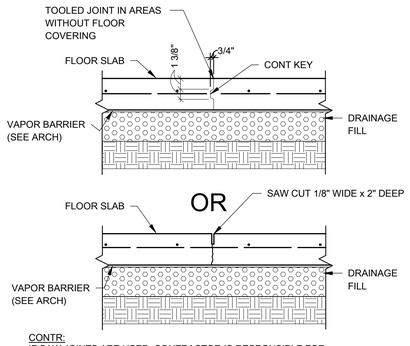
VERIFY SCALE
0 1"

#	DATE	DESCRIPTION
REVISIONS HISTORY		
ISSUE FOR REVIEW:		
ISSUE FOR PRICING:		
ISSUE FOR CONSTRUCTION:		
DATE:		APRIL 6, 2026
TITLE:		COOLING TOWERS FOUNDATION & FRAMING

CERTIFICATE OF AUTHORIZATION ENGINEERING CONSULTANTS, INC. No. 26 ARKANSAS ENGINEER
Engineering Consultants, Inc.
Structural Engineers
401 West Capitol Avenue, Suite 305
Little Rock, Arkansas 72201-3401
Phone No: (501) 376-3752
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12256 BRIAN D. MILLER
04/03/2026

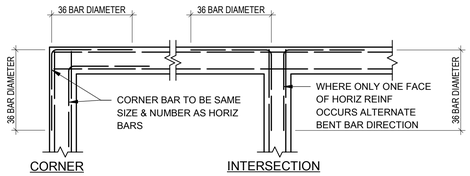
JOB# 25-280

S102



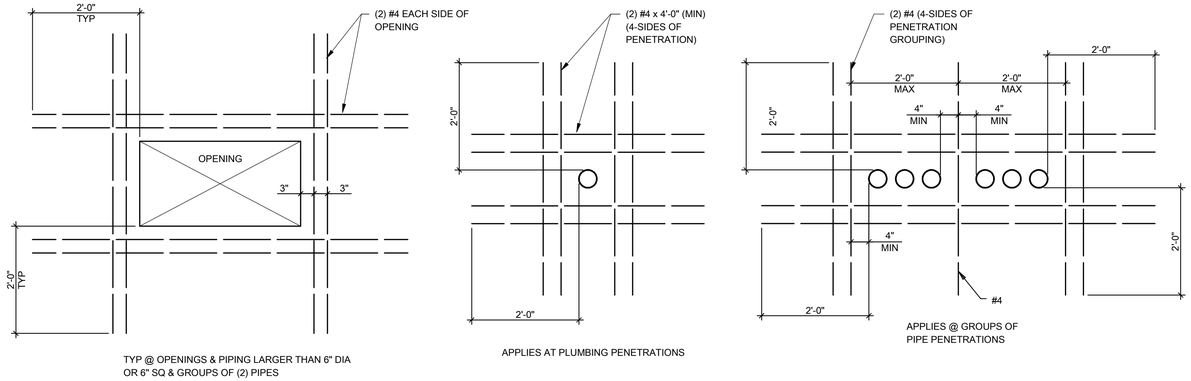
CONTR:
IF SAW JOINTS ARE USED, CONTRACTOR IS RESPONSIBLE FOR JOINTS CRACKING AS SHOWN ON PLAN AND DETAIL. SAWING JOINTS SHALL BEGIN AS SOON AS THE SURFACE IS FIRM ENOUGH SO THAT IT WILL NOT BE TORN OR DAMAGED BY THE BLADE. SLABS MUST BE SAWN ON SAME DAY SLAB IS POURED. DO NOT ALLOW SLAB TO CURE OVERNIGHT BEFORE SAWING.

A CONTROL JOINT DETAIL
NTS



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

B TYPICAL CORNER BAR DETAIL
NTS

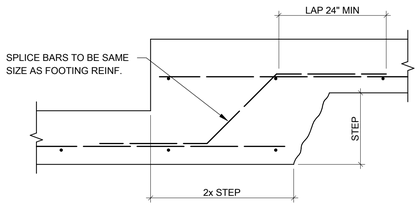


TYP @ OPENINGS & PIPING LARGER THAN 6" DIA OR 6" SQ & GROUPS OF (2) PIPES

APPLIES AT PLUMBING PENETRATIONS

APPLIES @ GROUPS OF PIPE PENETRATIONS

C TYP- REINF- @ SLAB OPENINGS & PIPE PENETRATIONS
NTS



D CONT FOOTING STEP DETAIL
NTS

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378
NORTHWEST ARKANSAS
T: 479.334.2901

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		
ISSUE FOR REVIEW:		
ISSUE FOR PRICING:		
ISSUE FOR CONSTRUCTION:		
DATE:		APRIL 6, 2026
TITLE:		FOUNDATION DETAILS

360

CERTIFICATE OF AUTHORIZATION ENGINEERING CONSULTANTS, INC. No. 26 ARKANSAS ENGINEER

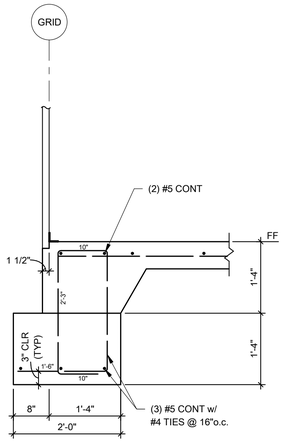
Engineering Consultants, Inc.
Structural Engineers
401 West Capitol Avenue, Suite 305
Little Rock, Arkansas 72201-3401
Phone No: (501) 376-3752

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 19256 BRIAN D. MILLER 04/03/2026

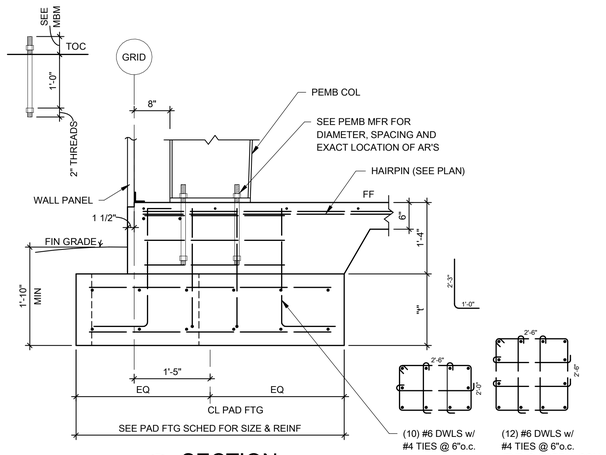
JOB# 25-280

S200

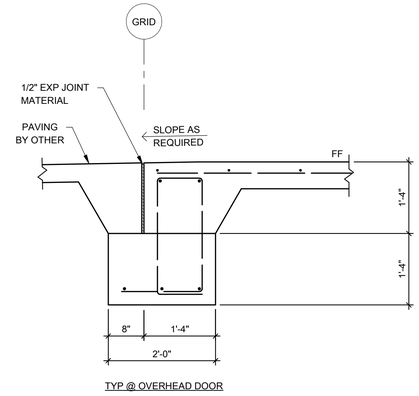
24



1 SECTION
3/4" = 1'-0"

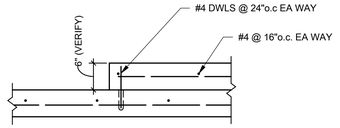


2 SECTION
3/4" = 1'-0"



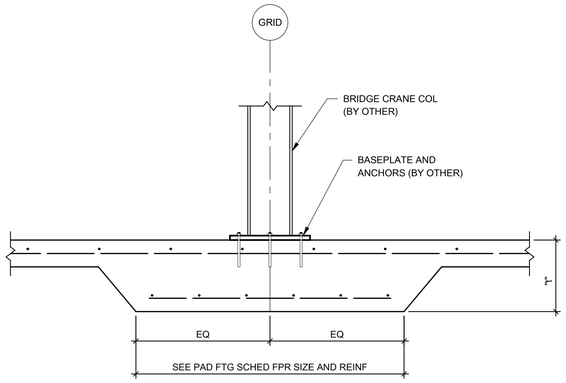
TYP @ OVERHEAD DOOR

3 SECTION
3/4" = 1'-0"



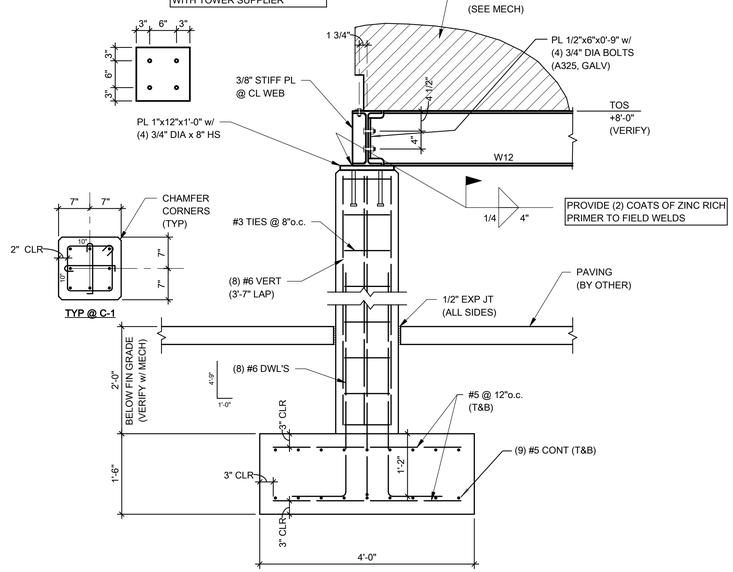
TYP @ INTERIOR CURB

4 SECTION
3/4" = 1'-0"



5 SECTION
3/4" = 1'-0"

NOTE:
VERIFY SIZE, LOCATION AND NUMBER OF BOLT HOLES IN W12 FLANGES FOR COOLING TOWER WITH TOWER SUPPLIER



TYP @ C-1

6 SECTION
3/4" = 1'-0"

7 SECTION
3/4" = 1'-0"

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378
NORTHWEST ARKANSAS
T: 479.334.2901

VERIFY SCALE
0 1"

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		
ISSUE FOR REVIEW:		
ISSUE FOR PRICING:		
ISSUE FOR CONSTRUCTION:		
DATE:		APRIL 6, 2026
TITLE:		FOUNDATION DETAILS

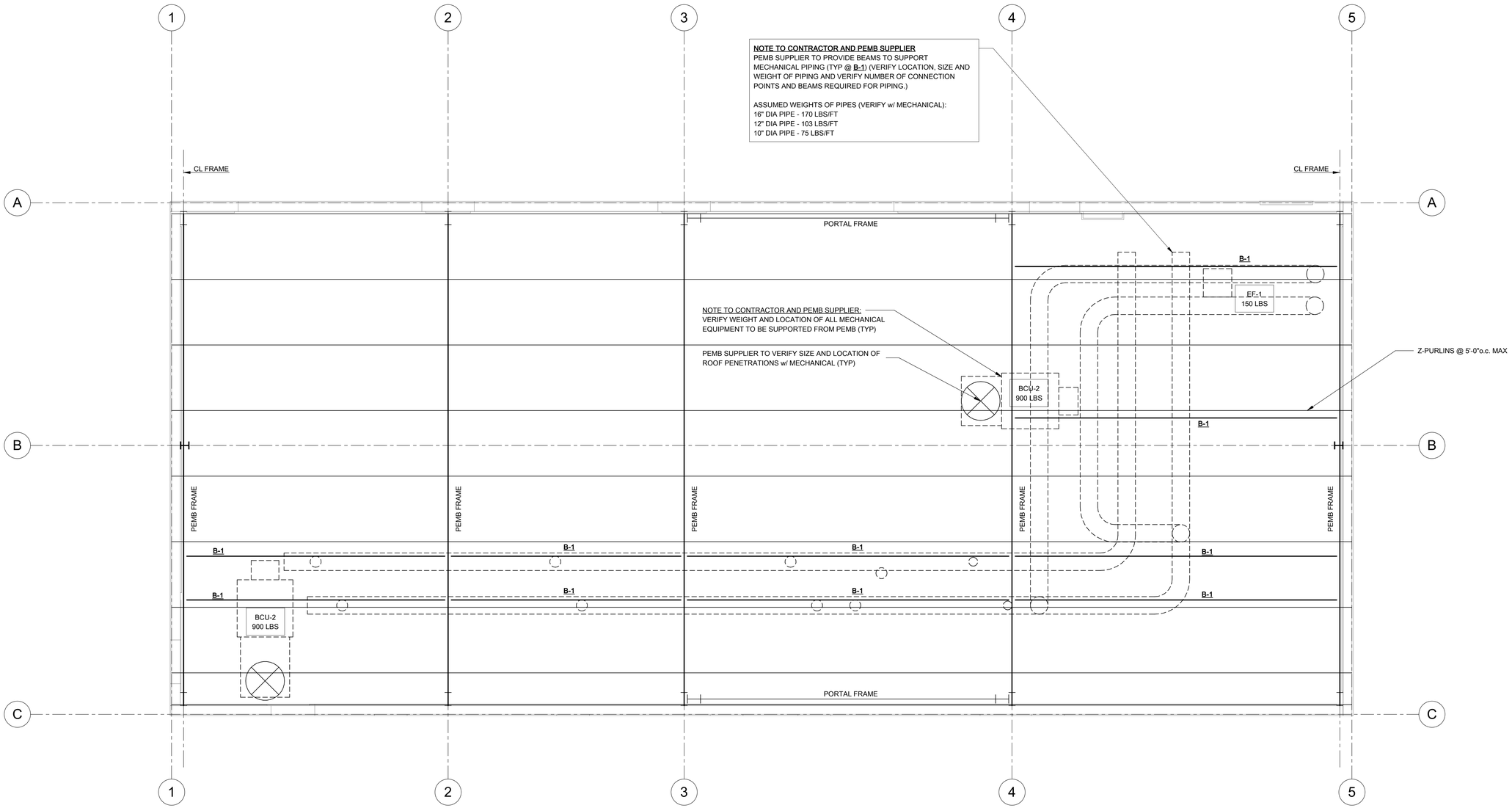
360
CERTIFICATE OF AUTHORIZATION
ENGINEERING CONSULTANTS, INC.
No. 26
ARKANSAS ENGINEER NO.
Engineering Consultants, Inc.
Structural Engineers
401 West Capitol Avenue, Suite 305
Little Rock, Arkansas 72201-3401
Phone No: (501) 376-3752
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15258
BRIAN D. MILLER
04/03/2026

JOB# 25-280

S201

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378
NORTHWEST ARKANSAS
T: 479.334.2901

VERIFY SCALE
0 1"



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

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

#	DATE	DESCRIPTION
REVISIONS HISTORY		
ISSUE FOR REVIEW:		
ISSUE FOR PRICING:		
ISSUE FOR CONSTRUCTION:		
DATE:		APRIL 6, 2026
TITLE:		FRAMING PLAN

360
CERTIFICATE OF AUTHORIZATION ENGINEERING CONSULTANTS, INC. No. 26 ARKANSAS ENGINEER NO
Engineering Consultants, Inc.
Structural Engineers
401 West Capitol Avenue, Suite 305
Little Rock, Arkansas 72201-3401
Phone No: (501) 376-3752
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12561 BRIAN D. MILLER
04/03/2026
24

JOB# 25-280

S301

PLUMBING GENERAL NOTES

1. THE CONTRACTOR SHALL, PRIOR TO THE START OF ANY WORK UNDER THIS CONTRACT, JOB SITE VERIFY SIZE, LOCATION, ETC. OF ANY EXISTING PIPING NOTED, SHOWN OR IMPLIED, TO WHICH NEW PIPING IS RELATED OR CONNECTED.

2. HOT AND COLD WATER SUPPLIES TO FIXTURES SHALL BE AS FOLLOWS, UNLESS SHOWN OR NOTED OTHER WISE.

WATER CLOSET	1-1/4"
URINAL	1"
LAVATORY	1/2"
SERVICE SINK	3/4"
ELECTRIC WATER COOLER	1/2"
SINK	1/2"
SHOWER	1/2"
FREEZE-PROOF WALL HYDRANT	3/4"
CLINICAL SINK	1-1/4" & 1/2"
ICE MACHINE	1/2"
SUPPLY AND DRAIN UNIT (WASHER BOX)	1/2"
HOSE BIBB	3/4"
EMERGENCY SHOWER EYEWASH	1 -1/4"

3. INSTALL WATER HAMMER ARRESTORS EQUAL TO ZURN "SHOKTROL" AT EACH QUICK CLOSING VALVE, AND AT EACH GROUP OF PLUMBING FIXTURES, AND AS NOTED ON DRAWINGS SIZED AS PER MANUFACTURERS RECOMMENDATIONS. (MUST BE ACCESSIBLE WHERE POSSIBLE, ABOVE CEILING IF NECESSARY)

4. ALL SUPPLIES TO FIXTURE SHALL BE PROVIDED WITH HIGH EAR COUPLING EQUAL TO MUELLER CO. No. C-100HE (1/2", 3/4" OR 1" SIZE) AT THE WALL (ANCHOR TO CROSS MEMBER SUPPORT) BEFORE PIPE ENTERS ROOM SPACE TO ASSURE NO PIPE MOVEMENT WITHIN WALL CAVITY.

5. ALL FLOOR DRAINS SHALL BE PROVIDED WITH DEEP SEAL TYPE TRAP WITH NOT LESS THAN FOUR INCH (4") WATER SEAL AND BE PROVIDED WITH TRAP PRIMER.

6. ALL VENTS THROUGH ROOF (V.T.R.) SHALL BE PROVIDED WITH 6# (24" X 24" SIZE) FLASHING. WHERE STANDING SEAM TYPE IS USED THE FLASHING SHALL BE IN ACCORDANCE WITH THE ROOFING MANUFACTURERS RECOMMENDATION AND AS DETAILED ON THE ARCHITECTURAL DRAWINGS. CLOSE COORDINATION WITH THE ROOFING CONTRACTOR SHALL BE MAINTAINED TO ASSURE THE VENT PENETRATION IS CENTERED WITHIN THE METAL ROOF PANELS. TYPICALLY FOR METAL OR OTHER SPECIAL MATERIAL, ROOFS - USE MANUFACTURED RUBBER BOOT WITH STAINLESS STEEL HARDWARE TYPE THAT IS ARCHITECT APPROVED AND MUST BE COMPATIBLE WITH ROOFING SYSTEM AND ROOF WARRANTY.

7. FLUSH VALVES SHALL BE MOUNTED SUCH THAT THE DIMENSION FROM FLUSH VALVE CENTERLINE TO FINISHED FLOOR SHALL BE 39". (DOES NOT APPLY TO ELECTRONIC FLUSH VALVES) WHERE HANDICAPPED GRAB BARS ARE INSTALLED ON BACK WALL AT CLOSET, FLUSH VALVE SHALL BE MOUNTED AT STANDARD HEIGHT. SEE SPECIFICATIONS AND WATER CLOSET DETAIL.

8. ○ WHERE THIS SYMBOL OCCURS ON THE DRAWINGS, REFERENCE SHOULD BE MADE TO THE KEYED NOTES ON THAT SAME SHEET AND THE CORRESPONDING NUMBER OF THAT NOTE.

9. WHERE PLUMBING FIXTURES ARE LOCATED ON EXTERIOR WALL, WATER PIPING SHALL BE INSTALLED ON THE THERMAL SIDE OF THE WALL INSULATION.

10. CLOSE COORDINATION AND COOPERATION SHALL BE MAINTAINED BETWEEN TRADES WITH REGARD TO PLUMBING, HVAC, FIRE PROTECTION AND ELECTRICAL PLANS.

11. PROVIDE CLEANOUT CLEARANCE IN ACCORDANCE WITH THE ARKANSAS STATE PLUMBING CODE, BUT DO NOT LOCATE IN FOOT TRAFFIC PATHWAYS. DO NOT LOCATE CLEANOUTS IN FLOORS WITH CARPET. (FIELD COORDINATE) LOCATE FLOOR CLEANOUT NEAR WALLS, IN JANITORS ROOM, STORAGE ROOM, ETC., DO NOT LOCATE NEAR DOORWAYS.

12. PROVIDE FIRE STOPPING OR FIRE STOP SLEEVE DEVICES AT ALL RATED ASSEMBLIES - SEE ARCHITECTURAL SPECIFICATIONS AND ARCHITECTURAL DRAWINGS FOR DETAILS.

13. TRAP PRIMERS- LOCATE TRAP PRIMERS REASONABLY CLOSE TO PLUMBING FIXTURE (10' TO 20')- DO NOT CONNECT TRAP PRIMER TO WATER LINE LARGER THAN 1 1/2" SIZE- TRY TO LOCATE TRAP PRIMER LOWER THAN PLUMBING FIXTURES. FIELD VERIFY EXACT TRAP PRIMER LOCATIONS AND WATER PIPE ROUTING. TRAP PRIMER SHALL TYPICALLY BE PRECISION PLUMBING PRODUCTS MODEL # P2-500. WHERE FLOOR DRAINS OCCUR NEAR WATER CLOSETS - USE VACUUM BREAKER TRAP PRIMER - SLOAN "TP" - MODEL VBF-72A - EXPOSED 3/8" TUBING SHALL BE VERY MINIMAL AND CHROME PLATED WITH CAST CHROME FLANGE TO WALL.

14. COORDINATE EXACT LOCATIONS OF ALL PLUMBING PIPING WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

15. VERIFY WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL "ADA" PLUMBING FIXTURES

16. ALL SANITARY SEWER RISERS SHALL HAVE CLEANOUT AT THE BASE (WALL CLEANOUT OR FLOOR CLEANOUT)

17. ALL STORM DRAIN PIPING SHALL HAVE CLEANOUT PLUGS AT EACH 90° TURN ABOVE CEILINGS AND HAVE A FLOOR OR WALL CLEANOUT AT THE BASE OF ALL RISERS.

18. INSTALL PIPING EXPANSION JOINTS IN ALL PIPING THAT CROSSES BUILDING EXPANSION JOINTS. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND PLUMBING ROOF PLAN FOR BUILDING EXPANSION JOINT LOCATIONS.

19. TWO-WAY CLEANOUTS SHALL BE INSTALLED AT THE JUNCTION OF THE BUILDING DRAIN AND THE BUILDING SEWER (TYP ALL AREAS) - MUST BE INSTALLED TO MEET PLUMBING CODES, EVEN IF NOT SHOWN ON DRAWING - VERIFY AND COORDINATE WITH CIVIL UTILITY DRAWINGS.

PLUMBING LEGEND

SYMBOL	DESCRIPTION		
———	SOIL, WASTE, OR SANITARY SEWER	——+——	UNION
——SS——	SANITARY SEWER (ON SITE)	FD	FLOOR DRAIN
- - - - - - - -	SANITARY VENT	RD	ROOF DRAIN
——CWV——	COMBINATION WASTE AND VENT	AD	ACCESS DOOR
——W——	WATER (ON SITE)	VTR	VENT THRU ROOF
——ICW——	INDUSTRIAL COLD WATER	HB	HOSE BIBB
—— - ——	COLD WATER	FPWH	FREEZE PROOF WALL HYDRANT
—— - - ——	HOT WATER	CO	CLEANOUT PLUG
—— - - - ——	HOT WATER RETURN	FCO	FLOOR CLEANOUT
——SD——	STORM DRAIN	AFCO	FLOOR CLEANOUT WITH ACID RESISTANT PIPING AND FITTINGS
——D——	INDIRECT DRAIN	WCO	WALL CLEANOUT
——G——	NATURAL GAS (LOW PRESSURE GAS)	ECO	EXTERIOR CLEANOUT
——►——	FLOW DIRECTION		
——⋈——	GATE VALVE	R / 1	DENOTES - SANITARY VENT STACK THRU ROOF
——⋈——	GLOBE VALVE	RISER DIAGRAM / LOCATION SHEET # / RISER DIAGRAM #	RISER DESIGNATION
——⋈——	CHECK VALVE		NEW CONNECTION TO EXISTING
——⋈——	BALL VALVE	——x——x——	EXISTING PIPING TO BE REMOVED OR ABANDONED
——⋈——	PLUG COCK - GAS COCK	———	EXISTING PIPING TO REMAIN
——⋈——	PRESSURE REDUCING VALVE	——x—[	CAP AND SEAL AIR OR WATER TIGHT
——⋈——	STRAINER	——x—x—▼	TERMINATION POINT OF DEMOLITION

FIXTURE LEGEND

SYMBOL	DESCRIPTION
	NEW FIXTURE
	ROUGH IN AND FINAL CONNECT ONLY
	EXISTING FIXTURE TO REMAIN
	EXISTING FIXTURE TO BE REMOVED
	EXISTING FIXTURE (RELOCATED, OR REPAIRED - SEE NOTES)

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 15166 — JAMES A. PETTIT — 03-06-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION — PETTIT & PETTIT CONSULTING ENGINEERS, INC. — No. 78 — ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

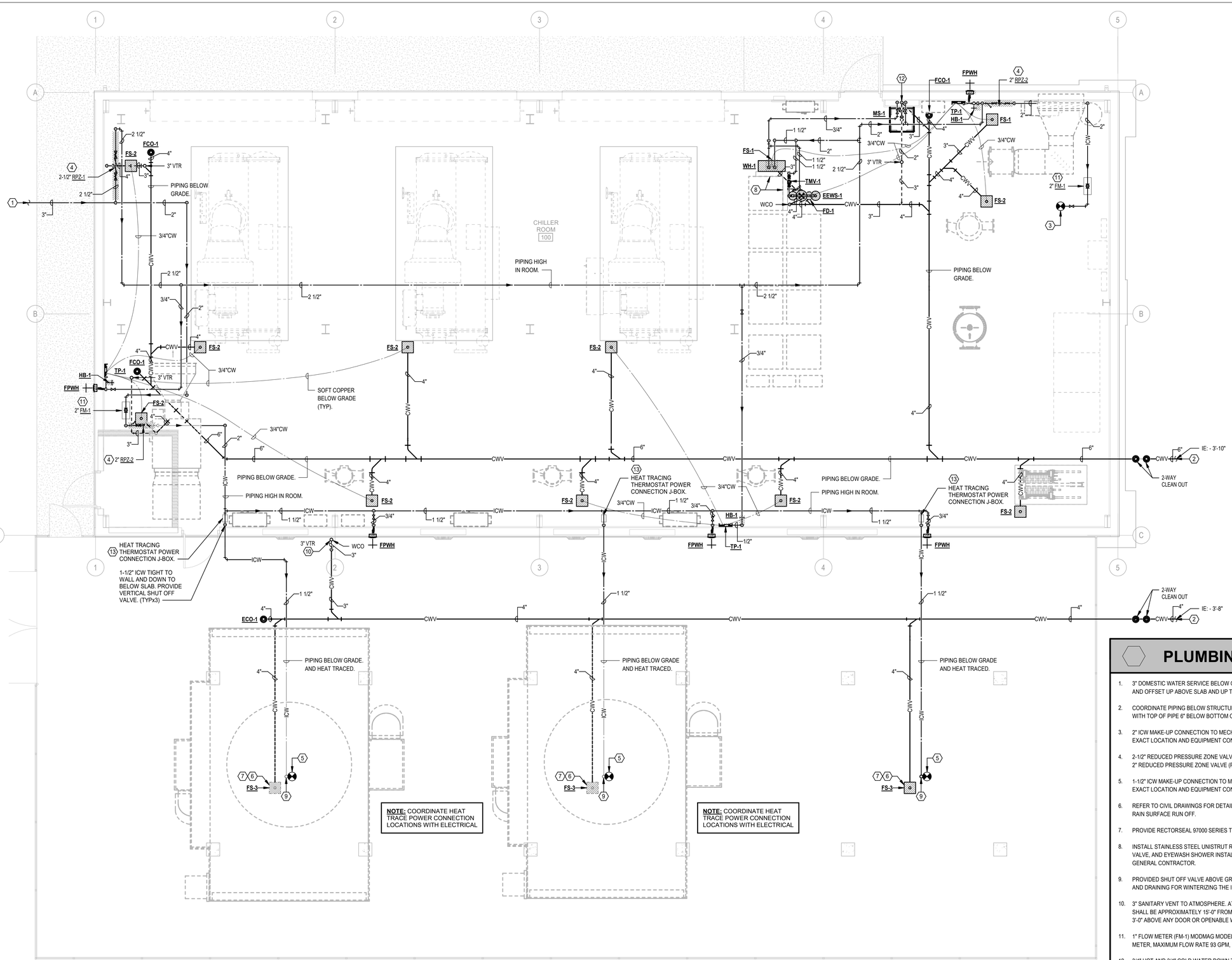
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: PLUMBING GENERAL NOTES AND LEGENDS

CONSTRUCTION DOCUMENTS

P000



1 FIRST FLOOR PLAN - PLUMBING

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

PLUMBING KEYED NOTES

1. 3" DOMESTIC WATER SERVICE BELOW GRADE AND ENTER BUILDING AT TOP OF FOOTING HEIGHT AND OFFSET UP ABOVE SLAB AND UP TO REDUCED PRESSURE ZONE ASSEMBLY (RPZ).
2. COORDINATE PIPING BELOW STRUCTURAL FOOTINGS. RUN AT A MINIMUM OF 3' BELOW GRADE, WITH TOP OF PIPE 6" BELOW BOTTOM OF FOOTING.
3. 2" ICW MAKE-UP CONNECTION TO MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS FOR EXACT LOCATION AND EQUIPMENT CONNECTION REQUIREMENTS.
4. 2-1/2" REDUCED PRESSURE ZONE VALVE (RPZ-1) - WATTS LF909.
   2" REDUCED PRESSURE ZONE VALVE (PRZ-2) - WATTS LF909M1.
5. 1-1/2" ICW MAKE-UP CONNECTION TO MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS FOR EXACT LOCATION AND EQUIPMENT CONNECTION REQUIREMENTS.
6. REFER TO CIVIL DRAWINGS FOR DETAILS REGARDING 6" CURB AROUND FLOOR SINK TO ELIMINATE RAIN SURFACE RUN OFF.
7. PROVIDE RECTORSEAL 97000 SERIES TRAP SEAL.
8. INSTALL STAINLESS STEEL UNISTRUT RACK FOR ELECTRIC WATER HEATER, THERMOSTATIC MIXING VALVE, AND EYEWASH SHOWER INSTALLATION. UNISTRUT MATERIALS AND INSTALLATION BY GENERAL CONTRACTOR.
9. PROVIDED SHUT OFF VALVE ABOVE GRADE, AND UNION AND DRAIN COCK PORT TO ALLOW ACCESS AND DRAINING FOR WINTERIZING THE INDUSTRIAL COLD WATER SYSTEM.
10. 3" SANITARY VENT TO ATMOSPHERE. ATTACHED TO EXTERIOR WALL AND DISCHARGE HEIGHT SHALL BE APPROXIMATELY 15'-0" FROM FINISH SLAB. VENT TERMINATION MUST BE AT LEASE THREE 3'-0" ABOVE ANY DOOR OR OPENABLE WINDOW.
11. 1" FLOW METER (FM-1) MODMAG MODEL M2000-010-A-R-AB-B-XX-G-F, ELECTROMAGNETIC FLOW METER, MAXIMUM FLOW RATE 93 GPM, IN-LINE WATER METER BACNET MS/IP, 110 V ELECTRIC.
12. 3/4" HOT AND 3/4" COLD WATER DOWN TO MOP SINK. WALL FURRING PROVIDED BY ARCHITECT.
13. INSTALL HEAT TRACING CHROMALOX UBC POWER CONNECTION KIT (277V), SRL 3-2CT HEAT TRACE WIRE, UES ABOVE INSULATION END SEAL, PS-3 PIPE STRAPS, CL-1 CAUTION LABELS, FT-3 FIBERGLASS TAPE.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS JAMES M. PETTIT REGISTERED PROFESSIONAL ENGINEER 15166 04-30-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

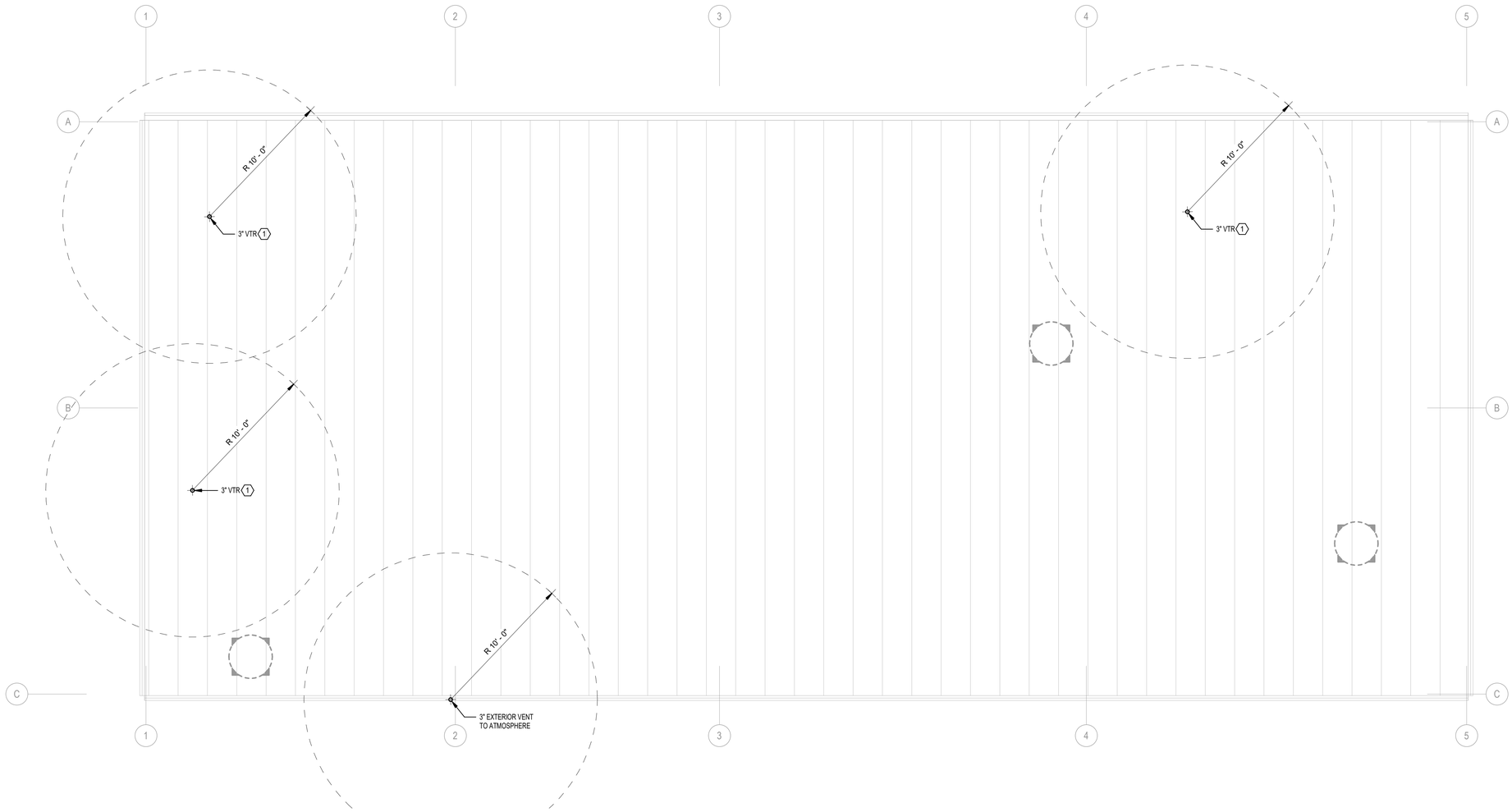
TITLE: FIRST FLOOR PLAN - PLUMBING

CONSTRUCTION DOCUMENTS

P101

PLUMBING KEYED NOTES

1. ALL VENTS THRU ROOF SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ANY BUILDING OPENING OR ANY HVAC AIR INTAKE – FIELD COORDINATE.



1 ROOF PLAN - PLUMBING

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

VERIFY PRINT IN COLOR

AMR architects

www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS
JAMES ALAN PETTIT
REGISTERED PROFESSIONAL ENGINEER
No. 15166
CHIEF MECHANICAL
05-06-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

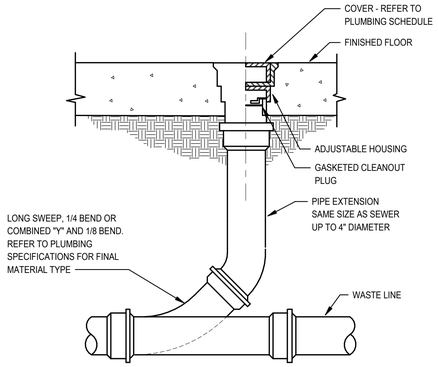
REVISIONS HISTORY

DATE: April 06, 2026

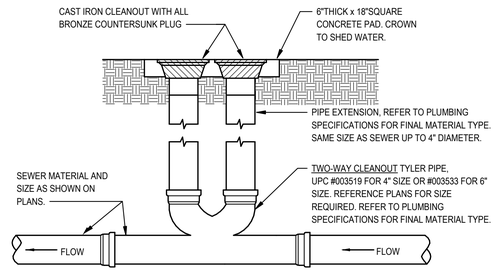
TITLE: ROOF PLAN - PLUMBING

CONSTRUCTION DOCUMENTS

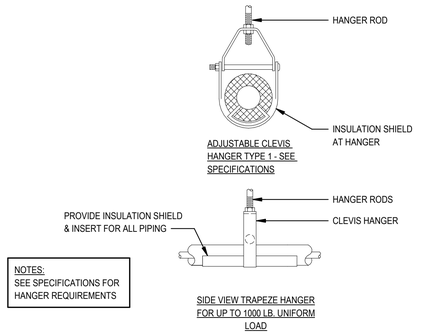
P102



1 FLOOR CLEANOUT DETAIL
SCALE: NONE



2 TWO-WAY CLEANOUT TO GRADE
SCALE: NONE



3 PIPING HANGER DETAIL
SCALE: NONE

4 EXTERIOR CLEANOUT DETAIL
SCALE: NONE

5 TRAP PRIMER DETAIL
SCALE: NONE

6 ELECTRIC WATER HEATER DETAIL
SCALE: NONE

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS CHARLES E. PETTIT REGISTERED PROFESSIONAL ENGINEER 5166 DATE 04-06-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

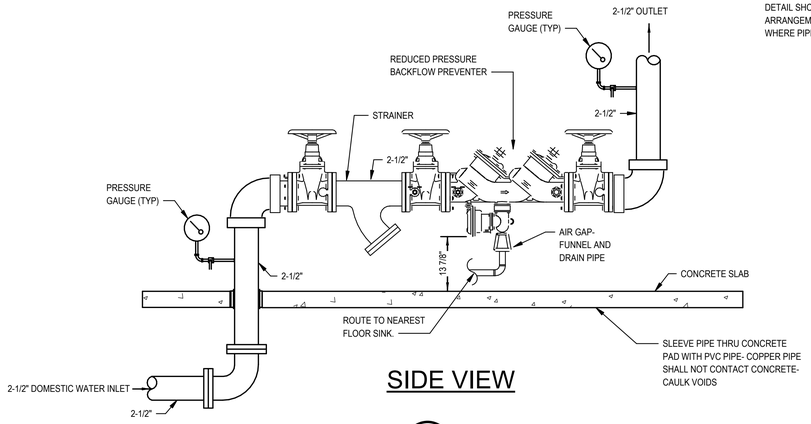
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: PLUMBING DETAILS

CONSTRUCTION DOCUMENTS

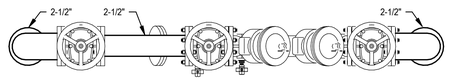
P201



SIDE VIEW

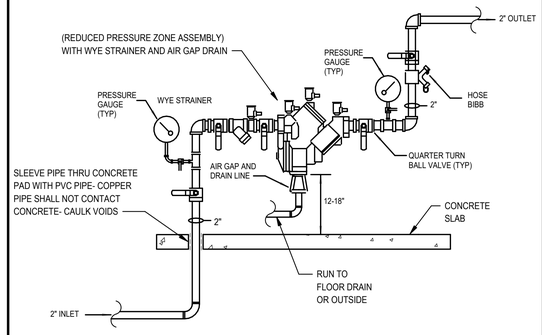
DETAIL SHOWS GENERAL PIPE ARRANGEMENT. SEE PLANS FOR LOCATIONS WHERE PIPING IS ABOVE/ BELOW SLAB.

SEE PLANS FOR ACTUAL SIZES.



TOP VIEW

1 DOMESTIC WATER BACKFLOW PREVENTER
SCALE: NONE



2 REDUCED PRESSURE ZONE ASSEMBLY
SCALE: NONE

3 EMERGENCY SHOWER/EYEWASH DETAIL
SCALE: NONE

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS JAMES PETTIT REGISTERED PROFESSIONAL ENGINEER No. 15166 04-30-26
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS
VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

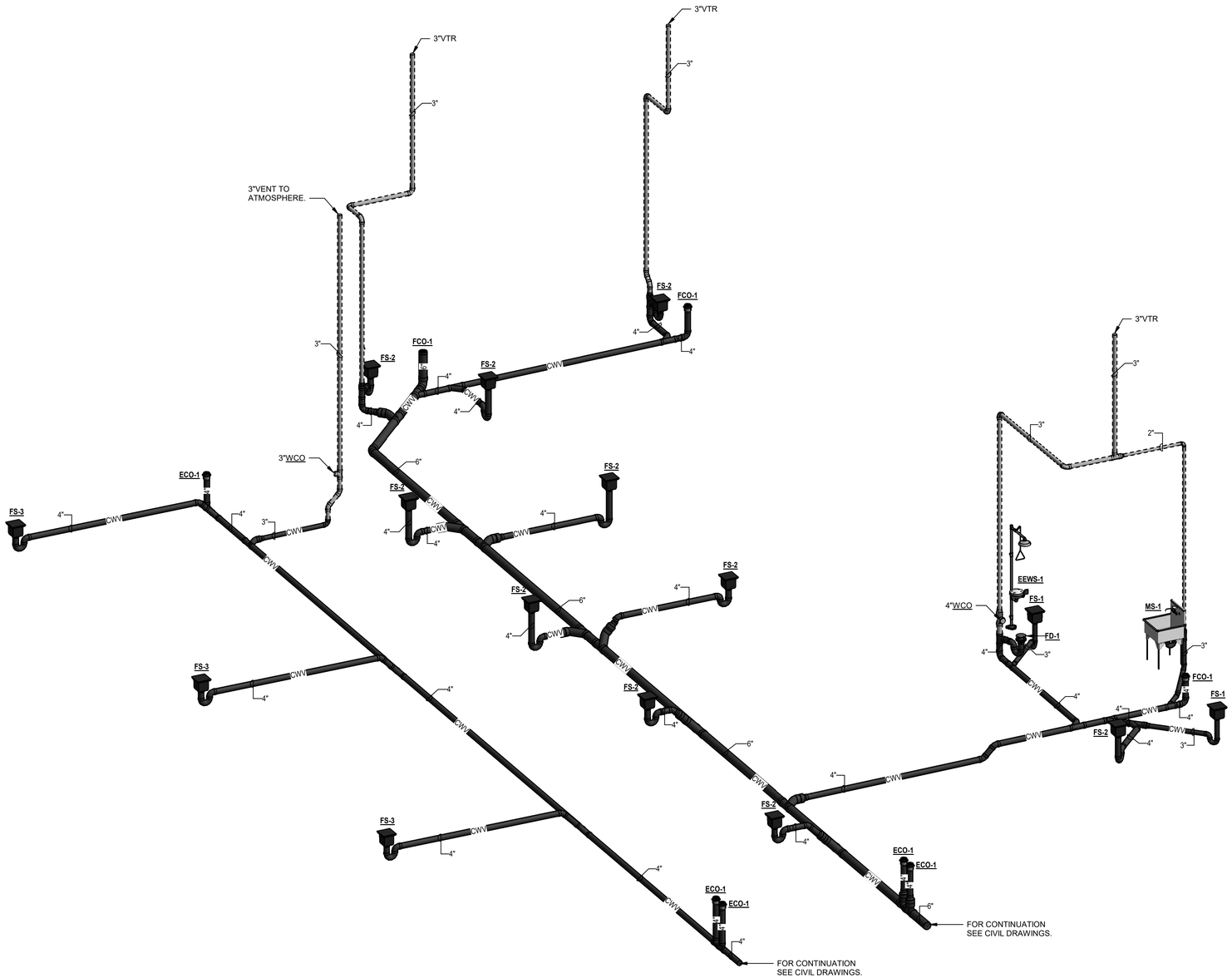
DATE: April 06, 2026

TITLE: PLUMBING DETAILS

CONSTRUCTION DOCUMENTS

P202

NOTE: ALL FLOOR DRAINS SHALL HAVE TRAP PRIMERS. LOCATE TRAP PRIMER DEVICES IN MECHANICAL ROOMS AND JANITORS CLOSETS WHERE PRACTICAL. IN FINISHED AREAS PROVIDE TRAP PRIMER IN WALL WITH ACCESS PANELS. FIELD VERIFY EXACT LOCATIONS AND WATER PIPE ROUTING. NOT ALL WATER TO TRAP PRIMER IS SHOWN.



PLUMBING WASTE AND VENT RISER DIAGRAM

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15166
JERRY JAMES JACKS

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY PRINT IN COLOR

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: PLUMBING RISERS

CONSTRUCTION DOCUMENTS

P301

PLUMBING FIXTURE SCHEDULE

TYPE MARK	- MANUFACTURER -	- MODEL -	- DESCRIPTION -	- ADA COMPLIANT -	- TRIM -	- SUPPLIES -	- TRAP -	- SUPPORT -	- REMARKS -	CW SUPPLY	HW SUPPLY	VENT	WASTE
EEWS-1	GUARDIAN	G1909BC	EYE/FACE WASH AND SHOWER SAFETY STATION, WIDE FLOOD AREA OF COVERATE, EYE/FACE WASH WITH STAINLESS STEEL COVER, FLAG HANDLE ACTIVATION, 20 GPM FLOW CONTROL, ANSI COMPLIANT IDENTIFICATION SIGN. GUARDIAN G6040 THERMOSTATIC MIXING VALVE, GUARDIAN AP275-200 WALL MOUNTED ELECTRIC FLASHING LIGHT AND ALARM HORN (ELECTRICAL 208-240VAC).	YES				FLOOR MOUNTED		1 1/4	1 1/4	2	2
MS-1	JUST	SB-124	ALL 14 GA STAINLESS STEEL TYPE 304, OVERALL SIZE 27 INCH BY 27 INCH 12 INCH DEEP, 12 INCH BACKSPLASH, 14GA 2 INCH STAINLESS STEEL LEGS, ADJUSTABLE FEET, HEIGHT OF ROLL RIM 36 INCHES A.F.F., WITH JUST JS-48-TA1 BACKSPLASH MOUNT FAUCET AND J-35-BLA-2" TWIST HANDLE DRAIN.		T&S B-0665-BSTP FAUCET, POLISHED CHROME FINISH, INTEGRAL STOPS, THREADED SPOUT, PAIL HOOK, WALL BRACE, LEVER HANDLES, VACUUM BREAKER, 8INCH CENTERS.	MCGUIRE H2167LK 1/2 INCH IPS HEAVY CAST BRASS ANGLE STOP, LOOSE KEY HANDLE, ANNEALED VERTICAL TUBE, CHROME PLATED CAST BRASS SET SCREW ESCUTCHEON, CHROME PLATED BRASS NIPPLE TO WALL.	CAST IRON 3 INCH SIZE, ABOVE FLOOR.	FREE STANDING		3/4	3/4	2	3

EQUIPMENT (BY OTHERS) - ROUGH IN AND MAKE FINAL CONNECTIONS FOR EQUIPMENT AS INDICATED ON PLANS. FURNISH MCGUIRE, ZURN, ENGINEERED BRASS CO, OR KOHLER STRAIGHT STOP, (1/2" IPS) OR FEMALE INLET AND OUTLET AND POLISHED CHROMIUM PLATED CAST BRASS, MCGUIRE HEAVY-DUTY (1 1/4" OR 1 1/2") P-TRAP WITH CLEANOUT AND OTHER TRIM AS INDICATED ON PLANS. ALL EXPOSED PIPING SHALL BE CHROME PLATED AND ESCUTCHEONS SHALL BE C.P. CAST BRASS SET SCREW TYPE.

PLUMBING SPECIALTIES

TYPE MARK	- MANUFACTURER -	- MODEL -	- DESCRIPTION -	- REMARKS -
ECO-1	ZURN	Z-1400-BP-VP	LEVEL-TROL, GASKETED HUB OUTLET, THREADED ADJUSTABLE HOUSING, BRONZE PLUG, DURA-COATED CAST IRON TOP, VANDAL PROOF SCREWS.	
FCO-1	ZURN	ZN-1400-BP-VP	LEVELTROL, CAST IRON, GASKETED HUB OUTLET, THREADED ADJUSTABLE HOUSING, BRONZE PLUG, NICKEL BRONZE SCORIATED TOP, VANDAL PROOF SCREWS.	
FD-1	ZURN	ZN-415B-P-VP	CAST IRON DRAIN, 8" POLISHED NICKEL BRONZE "TYPE B" STRAINER, ADJUSTABLE COLLAR WITH SEEPAGE SLOTS, 1/2" TRAP PRIMER CONNECTION.	VERIFY LOCATIONS WITH ARCHITECTURAL DRAWINGS. ALL FLOOR DRAINS SHALL BE ACCESSORIZED FOR VANDAL PROOF INSTALLATION AND SHALL HAVE TRAP PRIMERS.
FPWH	ZURN	Z-1300	ECOLOTROL' ANTI-SIPHON, NON-FREEZE, 3/4 INCH SIZE NICKEL BRONZE CASING AND ALL BRONZE INTERIOR PARTS AND NON TURNING OPERATING ROD WITH FREE FLOATING COMPRESSION CLOSURE VALVE, NICKEL BRONZE FACE, INTEGRAL BACKFLOW PREVENTER, UNION ELBOW INLET, WALL CLAMP AND KEY HANDLE. BOX FACE AND HINGED COVER SHALL BE NICKEL BRONZE COMPLETE WITH OPERATING KEY AND 'WATER' CAST ON COVER.	
FS-1	ZURN	ZN-1902-P-11-2-32	3" CAST IRON 12 INCH X 12 INCH X 12 INCH SQUARE FLOOR SINK WITH 10 INCH SUMP, DEEP CAST IRON BODY AND SQUARE, LIGHT DUTY GRATE A.R.E. INTERIOR, ALUMINUM DOME STRAINER, AND 1/2 NICKEL BRONZE HINGED TOP. 1/2" TRAP PRIMER, 1/2 GRATE.	ALL FLOOR SINKS SHALL BE ACCESSORIZED FOR VANDAL PROOF INSTALLATION AND SHALL HAVE TRAP PRIMERS. VERIFY FLOOR SINK LOCATIONS WITH MECHANICAL AND OTHER EQUIPMENT.
FS-2	ZURN	ZN-1902-P-11-2-32	4" CAST IRON 12 INCH X 12 INCH X 12 INCH SQUARE FLOOR SINK WITH 10 INCH SUMP, DEEP CAST IRON BODY AND SQUARE, LIGHT DUTY GRATE A.R.E. INTERIOR, ALUMINUM DOME STRAINER, AND 1/2 NICKEL BRONZE HINGED TOP. 1/2" TRAP PRIMER, 1/2 GRATE.	ALL FLOOR SINKS SHALL BE ACCESSORIZED FOR VANDAL PROOF INSTALLATION AND SHALL HAVE TRAP PRIMERS. VERIFY FLOOR SINK LOCATIONS WITH MECHANICAL AND OTHER EQUIPMENT.
FS-3	ZURN	ZN-1902-11-1-32	4" CAST IRON 12 INCH X 12 INCH X 12 INCH SQUARE FLOOR SINK WITH 10 INCH SUMP, DEEP CAST IRON BODY AND SQUARE, LIGHT DUTY GRATE A.R.E. INTERIOR, ALUMINUM DOME STRAINER. NO GRATE.	ALL FLOOR SINKS SHALL BE ACCESSORIZED FOR VANDAL PROOF INSTALLATION AND SHALL HAVE TRAP PRIMERS. VERIFY FLOOR SINK LOCATIONS WITH MECHANICAL AND OTHER EQUIPMENT.
HB-1	WOODFORD	79	WALL HYDRANT, BACKFLOW PROTECTED, MILD CLIMATE, AUTOMATIC DRAINING, LOOSE KEY, BRASS VALVE BODY.	
TMV-1	GUARDIAN	G6040	THERMOSTATIC MIXING VALVE, 1-1/2" TEPID WATER SUPPLY, 1-1/2" HOT WATER INLET AND 1-1/2" COLD WATER INLET, ASSE 1071 STANDARD.	
TP-1	PPP	MPB-500-115V	MINI-PRIME ELECTRONIC TRAP PRIMING MANIFOLD, DESIGNED FOR 1-4 FLOOR DRAINS, 115V ELECTRIC CONNECTION, NEMA TYPE 1 MANIFFOLD 12"X12"X4".	

TANKLESS ELECTRIC WATER HEATER SCHEDULE

TYPE MARK	- MANUFACTURER -	- MODEL -	- DESCRIPTION -	- KW RATING -	- VOLTAGE -	- PHASE -	- AMPS -	- MAXIMUM (GPM) -	- WIDTH (IN) -	- HEIGHT (IN) -	- OPERATING WEIGHT (LBS) -
WH-1	HUBBELL	ETXA096	TANKLESS ELECTRIC WATER HEATER, TEPID WATER HEATER DESIGN FOR SAFELY SHOWER SYSTEM ANSI/ISEA Z358.1-2014, DIGITAL CONTROLLER TEMPERATURE SET TO 85°, NEMA 4X DISPLAY, LOW WATER CUT OFF, 12 ELEMENT, 0.5 GPM MINIMUM TO 40 GPM MAX, ASME CONSTRUCTED NEMA 4 ENCLOSURE, PANEL ENCLOSURE DRAIN.	96	480	3	116	40	11-3/8"	28-1/2"	175

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15166
JAMES PETTIT
04-06-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

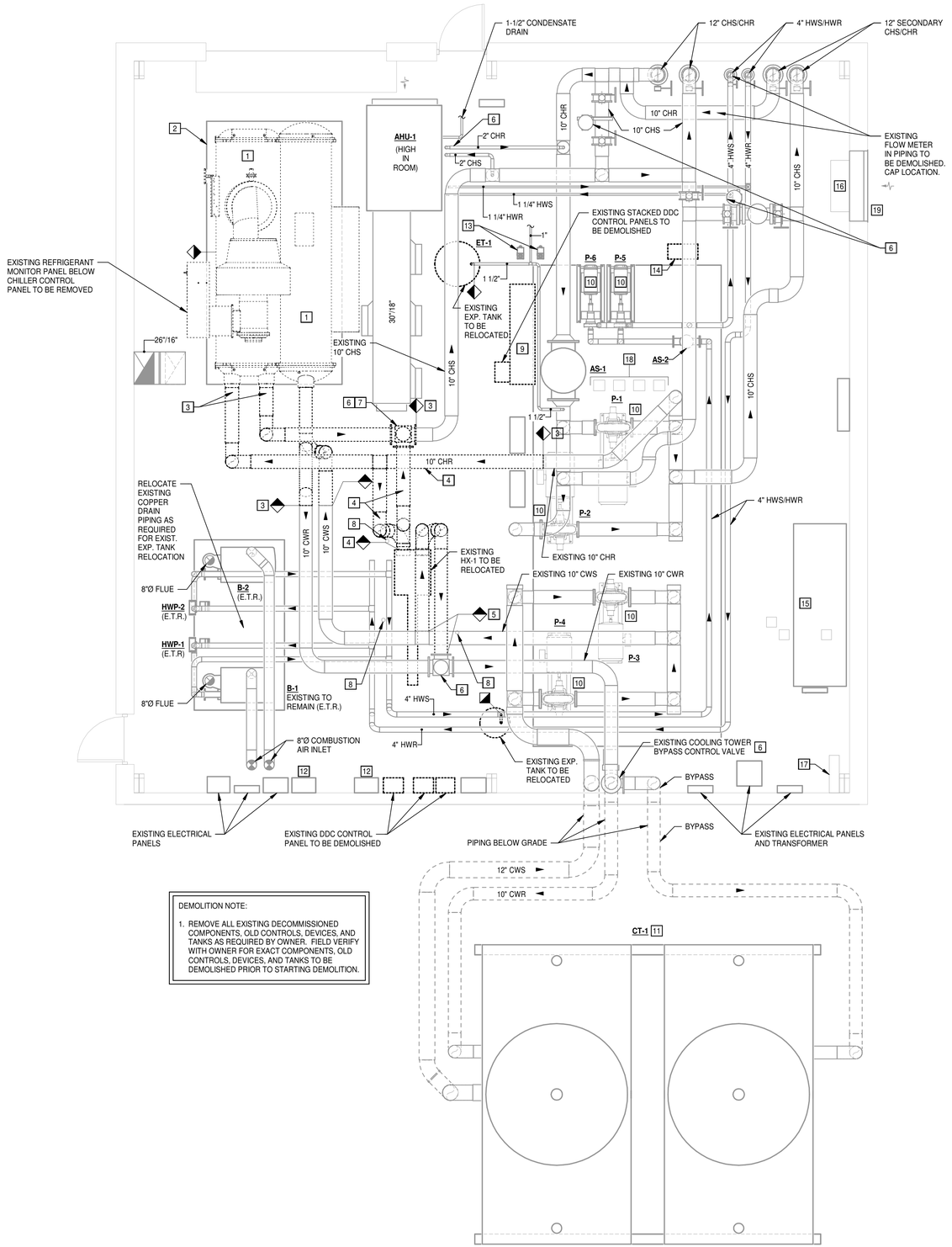
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: PLUMBING SCHEDULES

CONSTRUCTION DOCUMENTS

P401



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"

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 RELOCATED TO SOUTH WALL.
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.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMES T. PETTIT 15166 SCIENCE

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

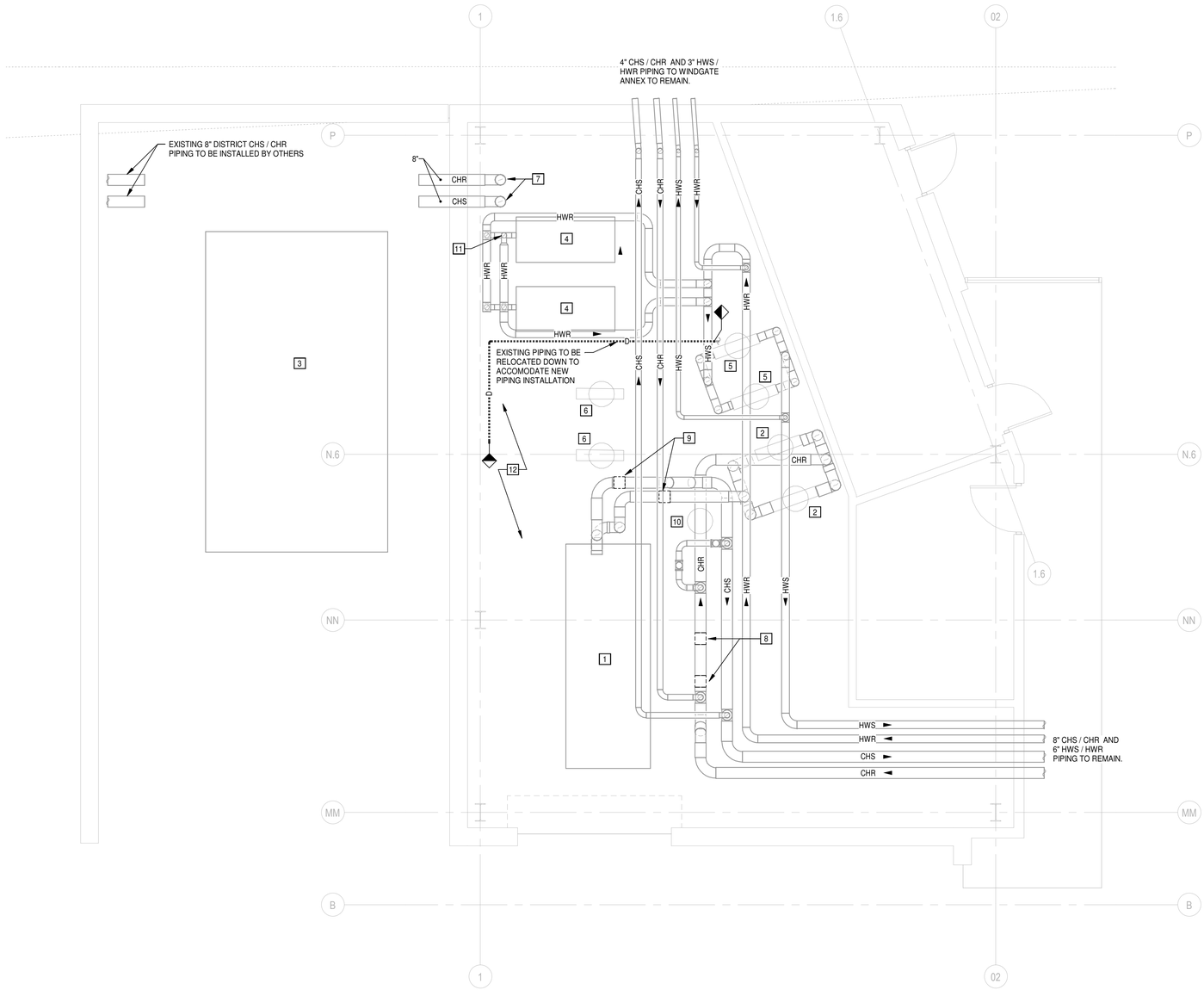
DATE: April 06, 2026

TITLE: SOUTH PLANT FLOOR PLAN - DEMO

CONSTRUCTION DOCUMENTS

M001

NOTE: CAREFULLY COORDINATE SHUT-DOWN WITH OWNER TO ADD 4 TEES WITH VALVES TO MINIMIZE CHILLER AND BUILDING DOWNTIME.



WINDGATE PLAN - HVAC DEMO

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

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. EXISTING 450T WATER-COOLED CHILLER TO REMAIN.
2. EXISTING CHILLED WATER PUMP TO REMAIN.
3. EXISTING COOLING TOWER TO REMAIN.
4. EXISTING BOILER TO REMAIN.
5. EXISTING HEATING WATER PUMP TO REMAIN.
6. EXISTING CONDENSER WATER PUMPS TO REMAIN.
7. EXISTING 8" DISTRICT CHS / CHR PIPING STUBBED INTO MECHANICAL ROOM TO REMAIN.
8. DEMO PIPING AS REQUIRED TO CONNECT NEW DISTRICT CHS / CHR PIPING. ADD TEES AND VALVES DURING SHUTDOWN FOR FUTURE CONNECTION. SEE SHEET M104 AND M503 FOR DETAILS.
9. CONNECT NEW 8" CHILLER BYPASS. ADD TEES AND VALVES DURING SHUTDOWN FOR FUTURE CONNECTION. SEE SHEET M104 AND M503 FOR DETAILS.
10. EXISTING AIR SEPERATOR TO REMAIN.
11. EXISTING HEATING HOT WATER PUMP IN RISER TO BE ROTATED / RELOCATED AS REQUIRED TO ACCOMODATE NEW DISTRICT CHILLED WATER PIPING INSTALLATION.
12. EXISTING SMALL DIAMETER WATER PIPING WITHIN THIS AREA TO BE RELOCATED OUT OF THE WAY AS REQUIRED TO ACCOMODATE NEW CHS / CHR PIPING INSTALLATION.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 25166 JAMES SACKS
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

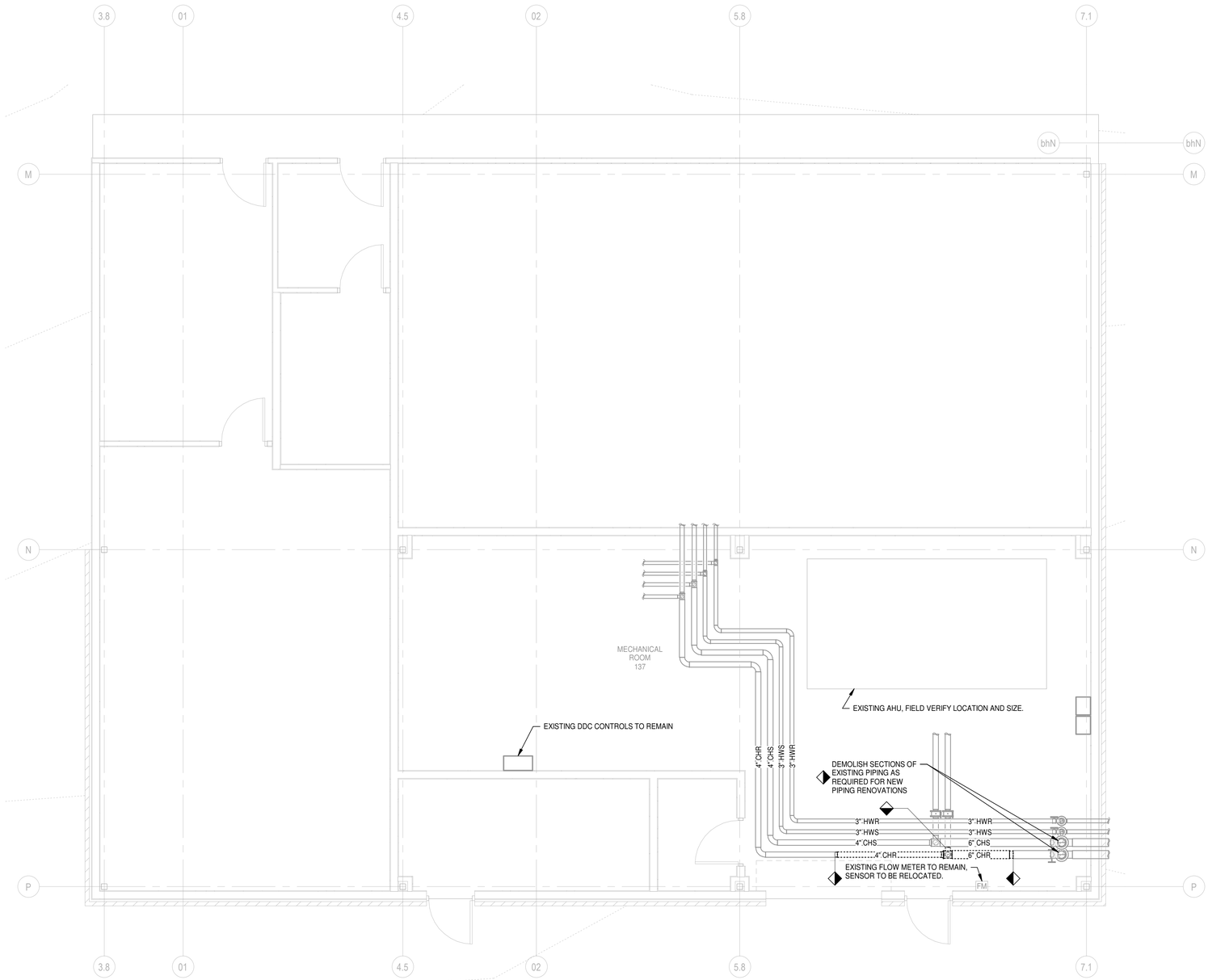
TITLE: WINDGATE FLOOR PLAN - HVAC DEMO

CONSTRUCTION DOCUMENTS

M002

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.



N 1 REYNOLDS PLAN - HVAC DEMO

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

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER 25166 JAMES PETTIT 07-28-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

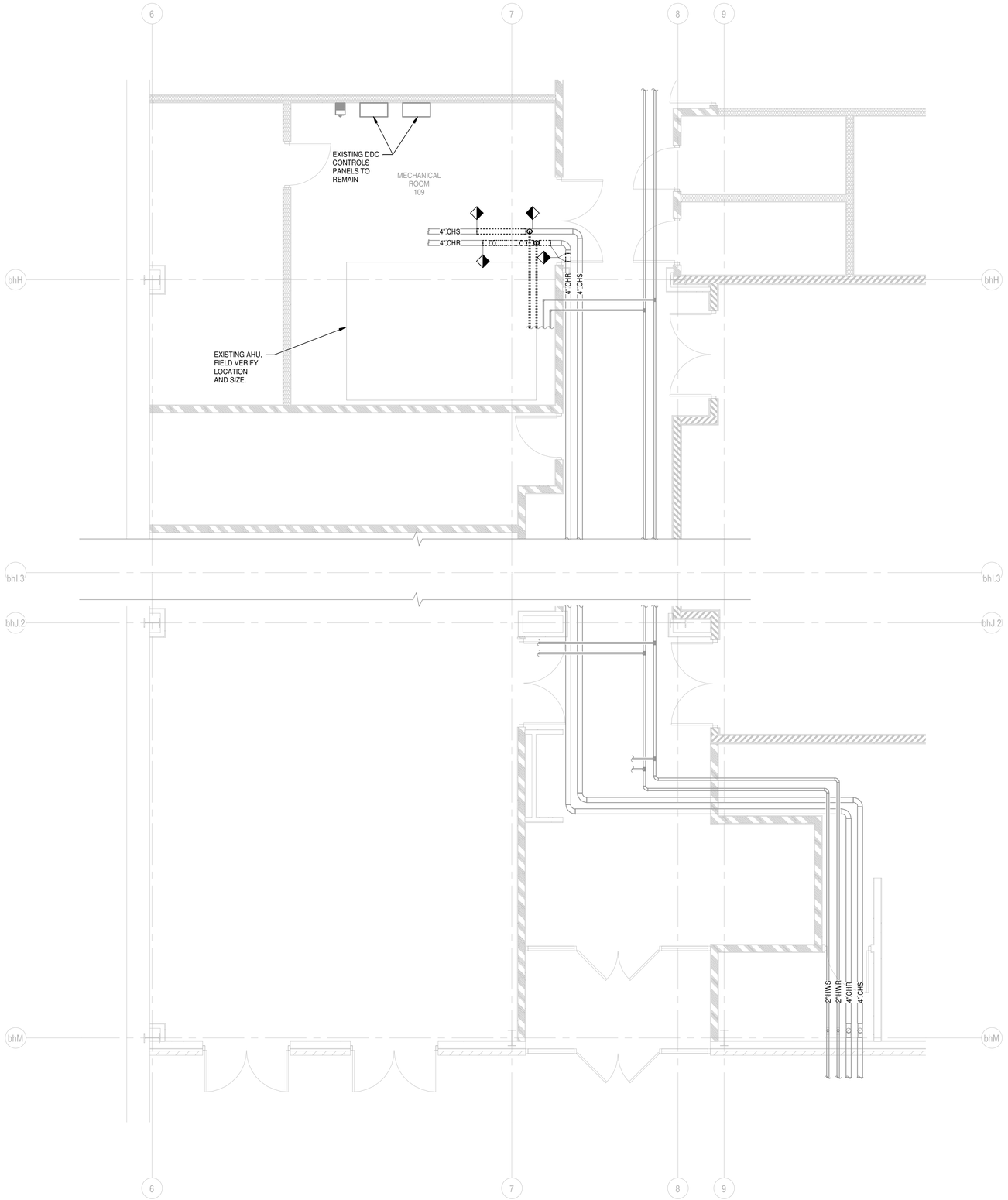
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: REYNOLDS FLOOR PLAN - HVAC DEMO

CONSTRUCTION DOCUMENTS

M003



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.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMES E. PETTIT No. 15166

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

1 BREWER-HEGEMAN FLOOR PLAN - HVAC DEMO

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

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

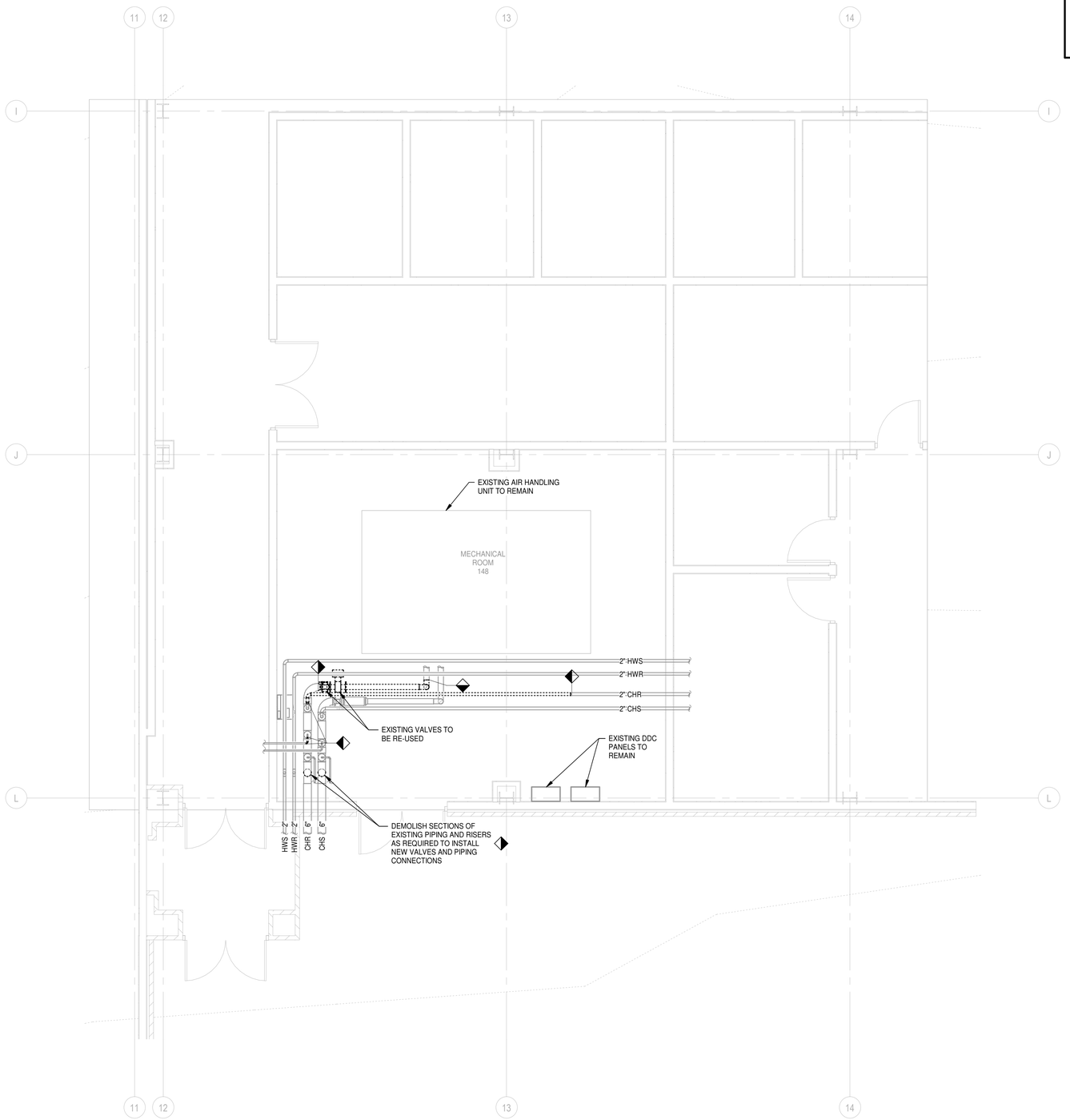
TITLE: BREWER-HEGEMAN FLOOR PLAN - HVAC DEMO

CONSTRUCTION DOCUMENTS

M004

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.



1 STANLEY RUSS FLOOR PLAN - HVAC DEMO

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

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 25166
MECHANICAL
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

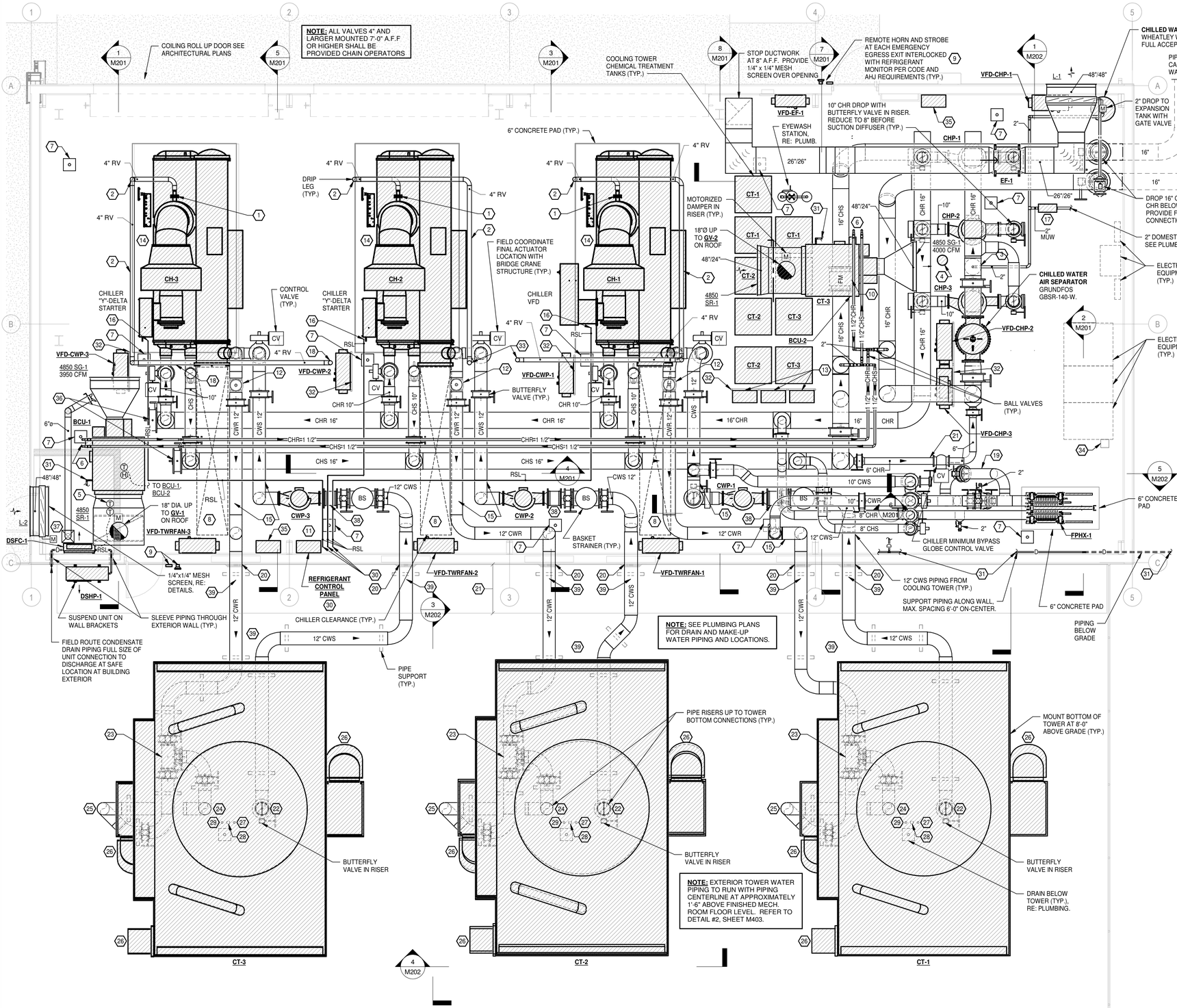
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: STANLEY RUSS FLOOR PLAN - HVAC DEMO

CONSTRUCTION DOCUMENTS

M005



1 CHILLER PLANT LOWER PLAN - HVAC

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

PIPING GENERAL NOTES

1. 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

2. ALL PIPING SHALL BE CLEARLY LABELED AND HAVE DIRECTION ARROWS, AS PER THE SPECIFICATIONS.
3. 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.
4. PROVIDE FRAMED VALVE TAG SCHEDULE PER SPECIFICATIONS.
5. WHERE POSSIBLE, INSTALL BUTTERFLY VALVES WHERE POSITION INDICATOR CAN BE SEEN FROM THE FLOOR.

HVAC KEYED NOTES

1. CHILLER RUPTURE DISC. SEE DETAIL #6, M401.
2. 4" REFRIGERANT VENT FROM CHILLER RUPTURE DISC. TEE WITH BOTTOM DRIP LEG. RISE PIPING TO RUN WITH CENTERLINE AT 11'-2" AFF.
3. TIE MAKE-UP WATER LINE TO BOTTOM OF 16" CHR WITH GATE VALVE.
4. CHEMICAL POT FEEDER. SEE PIPING SCHEMATIC DRAWING, M501.
5. HIGH SPACE TEMPERATURE ALARM SENSOR.
6. DROP 1-1/2" CHS/CHR AND CONNECT TO BLOWER COIL UNIT.
7. FLOOR DRAIN (TYP). SEE PLUMBING PLANS.
8. MAINTAIN CLEAR FLOOR SPACE AND HEIGHT FOR CHILLER, CONDENSER WATER TUBE MAINTENANCE.
9. REMOTE HORN AND STROBE INTERLOCKED WITH REFRIGERANT MONITOR.
10. 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.
11. REFRIGERANT MONITOR PANEL FOR CH-1, CH-2, AND CH-3.
12. PLUG TYPE BALANCING VALVE (TYP).
13. CHEMICAL FEED SYSTEM CONTROL PANEL.
14. MOUNT CHILLERS ON MANUFACTURER'S PROVIDED ISOLATION PADS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
15. 3/4" TAP IN PIPING WITH BALL VALVE FOR TOWER CHEMICAL TREATMENT SYSTEM.
16. DROP RSL PIPING TO 12" A.F.F.
17. MAKE-UP WATER (MUW) PRESSURE REDUCING STATION. SEE PIPING SCHEMATIC, SHEET M501.
18. 4" REFRIGERANT VENT TO RISE AND RUN WITH CENTERLINE AT 14'-0" AFF. AT END OF RUN RISE TO GOOSENECK ON ROOF.
19. 10" BYPASS PIPING FOR BACK FLUSHING. SEE DETAIL #6, SHEET M403.
20. 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.
21. REDUCE 16" CHS TO 6" CHILLER MINIMUM FLOW BYPASS.
22. TRANSITION FROM 10" TOWER CONNECTION TO 12" CWS. RUN 12" UNDER TOWER TO EXTERIOR WALL.
23. 3-WAY TOWER BYPASS CONTROL VALVE.
24. TRANSITION FROM 12" CWR TO 10" AND RUN PIPING UP THROUGH TOWER CHAMBER. CONNECT TO THE TOWER DISTRIBUTION HEADER.
25. 12" TOWER BYPASS. RISE AND EXTEND TO TOWER. TRANSITION TO 10" CWR AND CONNECT TO TOWER.
26. ACCESS PLATFORM AND LADDER.
27. 1 1/2" MAKE-UP WATER TO TOWER. TRANSITION TO 2" BOTTOM CONNECTION.
28. 3" OVERFLOW. BOTTOM CONNECTION.
29. 2" DRAIN. BOTTOM CONNECTION.
30. 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.
31. 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.
32. NEW STAINLESS STEEL UNI-STRUT SUPPORT FRAME.
33. 4" REFRIGERANT VENT UP TO GOOSENECK ON ROOF.
34. NEW ELECTRICAL CONSUMPTION INTERFACE MODULE PROVIDED WITH ELECTRICAL EQUIPMENT MSB. SEE ELECTRICAL DRAWINGS. PROVIDE INTERFACE WITH BUILDING CONTROL SYSTEM.
35. BUILDING CONTROL SYSTEM (BCS) PANEL.
36. PROVIDE VALVE WITH BLIND FLANGE.
37. 612 CD-1, 50 CFM.
38. FLEXIBLE CONNECTION.
39. INSTALL HEAT TRACING CHROMALOX UAS POWER CONNECTION KIT (277V), SRL 10-2CT HEAT TRACE WIRE, UES ABOVE INSULATION END SEAL, PS-20 PIPE STRAPS, CL-1 CAUTION LABELS, FT-3 FIBERGLASS TAPE.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER CHARLES E. PETIT No. 5166 SCIENCE 26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026 PETTIT & PETTIT CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: April 06, 2026

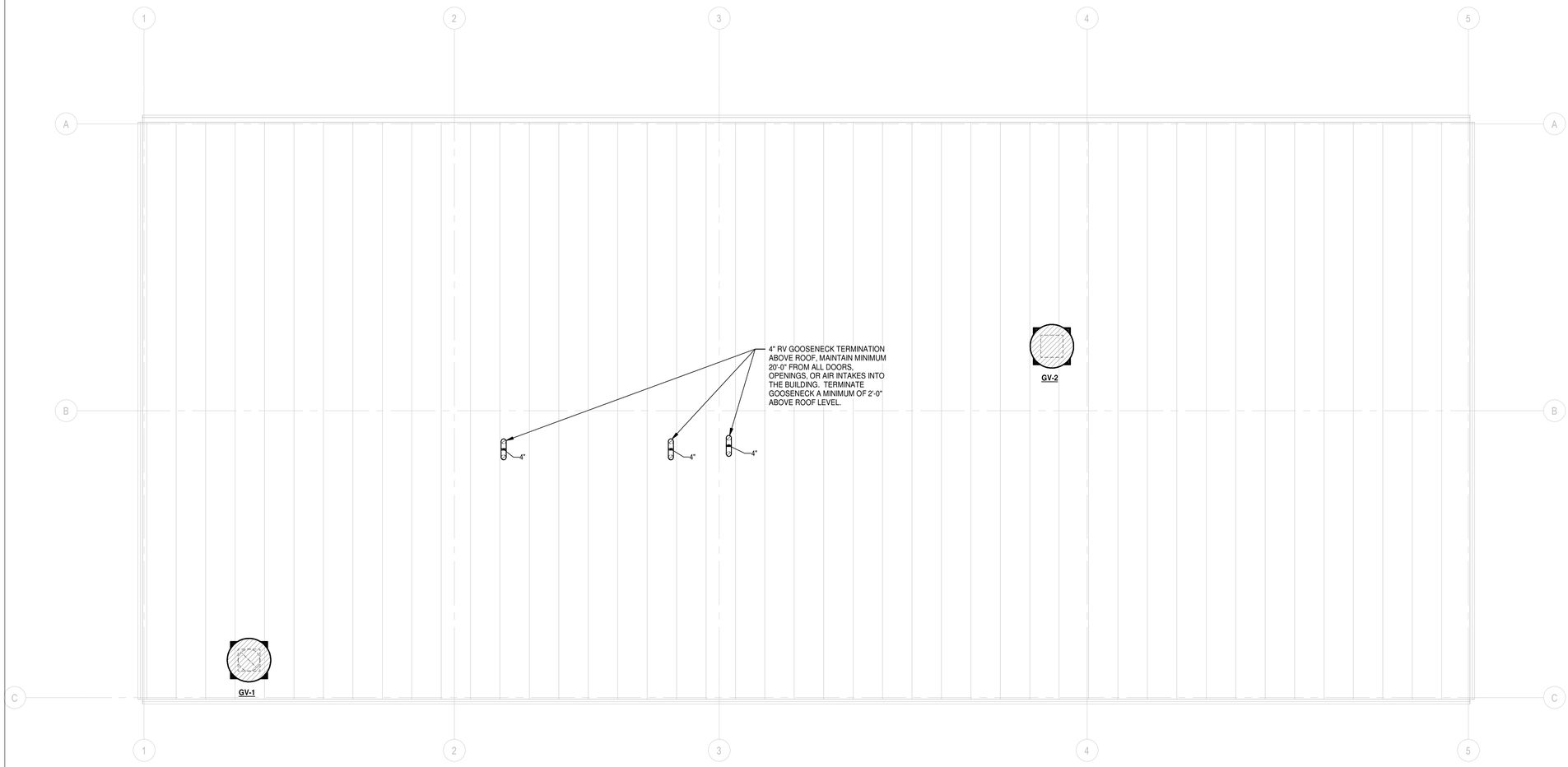
TITLE: NORTH PLANT LOWER PLAN - HVAC

CONSTRUCTION DOCUMENTS

M101

HVAC GENERAL NOTES

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



N 1 **ROOF PLAN - HVAC**
SCALE: 1/4" = 1'-0"

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER 25166 JAMES SACKS 02-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

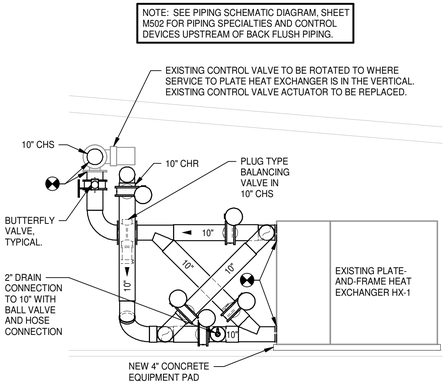
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: NORTH PLANT ROOF PLAN - HVAC

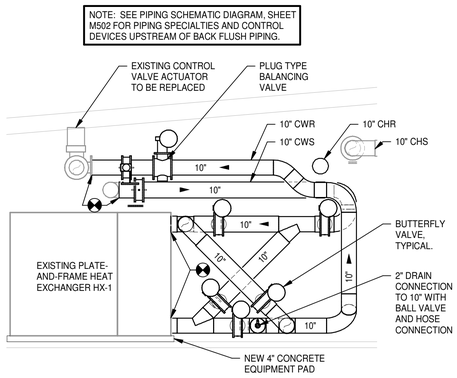
CONSTRUCTION DOCUMENTS

M102



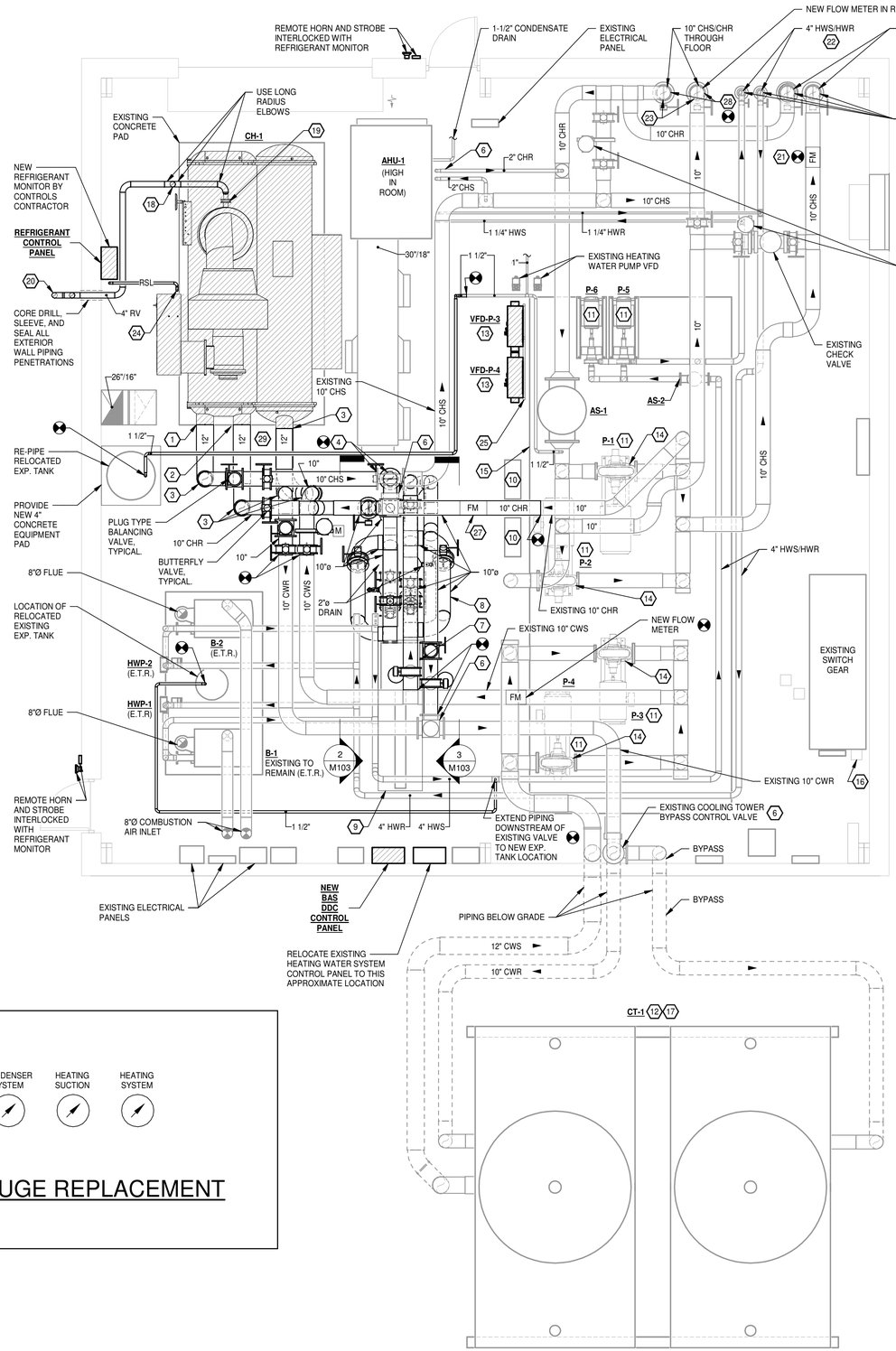
② SECTION AT HEAT EXCHANGER - CHILLED WATER SIDE

NOT TO SCALE



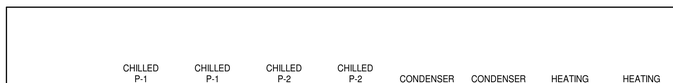
③ SECTION AT HEAT EXCHANGER - CONDENSER WATER SIDE

NOT TO SCALE



① SOUTH PLANT FLOOR PLAN - HVAC

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



④ PARTIAL PLAN - PUMP SKID GAUGE REPLACEMENT

N.T.S.

HVAC GENERAL NOTES

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

HVAC KEYED NOTES

1. NEW 12" CHS FROM CHILLER TO ELBOW AT BOTTOM OF RISER. TRANSITION TO 10" CHS AT BOTTOM OF RISER.
2. NEW 12" CHR FROM CHILLER TO ELBOW AT BOTTOM OF RISER. TRANSITION TO 10" CHR AT BOTTOM OF RISER.
3. TRANSITION 12" FROM NEW CHILLER TO 10" AT BOTTOM OF RISER.
4. CONNECT NEW 10" CHR TO EXISTING.
5. CONNECT NEW 10" CHS TO EXISTING.
6. NEW CONTROL VALVE ACTUATOR.
7. EXISTING PLATE-AND-FRAME HEAT EXCHANGER MOVED SOUTH TO ACCOMODATE NEW BACK-FLUSHING PIPING.
8. SEE SECTIONS FOR NEW PIPING SERVING EXISTING PLATE-AND-FRAME HEAT EXCHANGER WITH BACK-FLUSHING CAPABILITIES.
9. PROVIDE NEW 4" CONCRETE EQUIPMENT PAD (APPROXIMATELY 9'-4" x 2'-9") FOR EXISTING PLATE-AND-FRAME HEAT EXCHANGER.
10. EXISTING VARIABLE FREQUENCY DRIVE (VFD) FOR EXISTING CHILLED WATER PUMP.
11. EXISTING PUMP TO REMAIN.
12. EXISTING COOLING TOWER TO REMAIN.
19. NEW VFD'S FOR EXISTING CONDENSER WATER PUMPS.
14. REPLACE EXISTING PRESSURE GAUGE AT EXISTING PUMP. USE MINIMUM 5 1/2" DIAMETER GAUGES.
15. REPLACE EXISTING PRESSURE GAUGES ALONG BASE OF PUMP SKID. REPLACE EXISTING SIGNAGE TO MATCH EXISTING. SEE PARTIAL PLAN THIS SHEET.
16. NEW ELECTRICAL CONSUMPTION MODULE. PROVIDE NEW INTERFACE WITH BUILDING CONTROL SYSTEM.
17. TEST AND BALANCE CONTRACTOR TO RE-BALANCE FLOW THROUGH COOLING TOWER.
18. 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.
19. CHILLER RUPTURE DISC. SEE DETAIL #6, SHEET M401.
20. RISE AND DISCHARGE REFRIGERANT RELIEF PIPING HIGH ON WALL, MINIMUM 15'-0" AFG AND A MINIMUM OF 20'-0" FROM ANY ENTRANCE. SLEEVE PIPING THROUGH WALL AND SEAL VOIDS.
21. 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.
22. TO AETN, REYNOLDS PERFORMANCE CENTER, BREWER-HEGEMAN CONFERENCE CENTER, AND STANLEY RUSS HALL.
23. TO DISTRICT CHILLED WATER SYSTEM.
24. 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.
25. NEW STAINLESS STEEL UNI-STRUT SUPPORT FRAME TO BE INSTALLED ONTO EXISTING SKID.
26. MOVE NEW AHU-1 THERMOSTAT ON STAINLESS STEEL UNI-STRUT.
27. NEW FLOW METER. SEE KEYED NOTE #21.
28. NEW CONTROL VALVE IN RISER.
29. SEE PIPING SCHEMATIC DIAGRAMS, SHEET M502 FOR PIPING SPECIALTIES AND CONTROL DEVICES IN PIPING CONNECTIONS TO CHILLER.

PIPING GENERAL NOTES

1. 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
2. ALL PIPING SHALL BE CLEARLY LABELED AND HAVE DIRECTION ARROWS, AS PER THE SPECIFICATIONS.
3. PROVIDE FRAMED VALVE TAG SCHEDULE PER SPECIFICATIONS.
4. ALL VALVES 4" AND LARGER MOUNTED 7'-0" AFF OR HIGHER SHALL BE PROVIDED WITH CHAIN OPERATORS.
5. WHERE POSSIBLE, INSTALL BUTTERFLY VALVES WHERE POSITION INDICATOR CAN BE SEEN FROM BELOW.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMES W. PETTIT 13006166

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER
© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

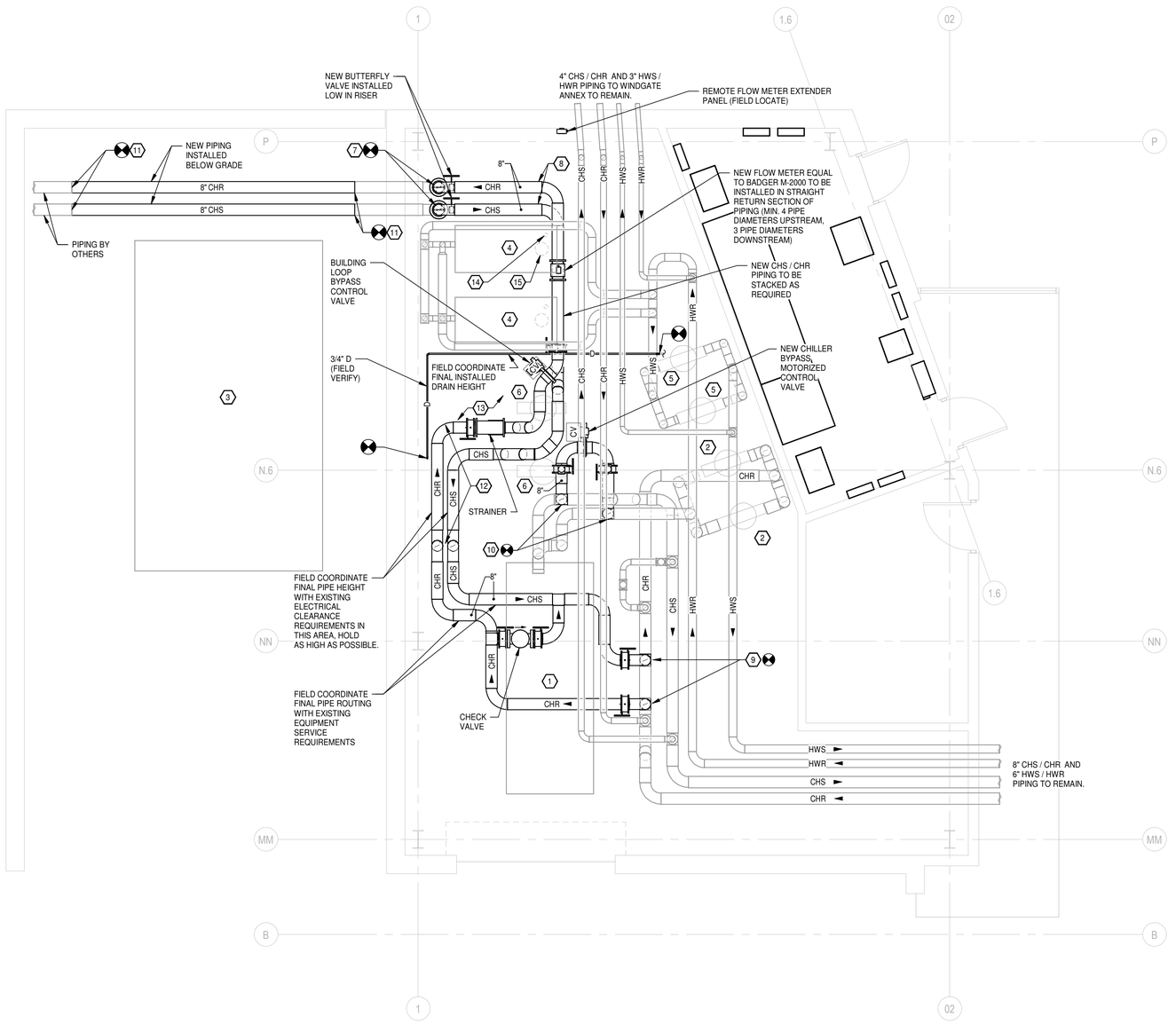
TITLE: SOUTH PLANT FLOOR PLAN - HVAC

CONSTRUCTION DOCUMENTS

M103

NOTE: CAREFULLY COORDINATE SHUT-DOWN WITH OWNER TO ADD 4 TEES WITH VALVES TO MINIMIZE CHILLER AND BUILDING DOWNTIME.

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



WINDGATE PLAN - HVAC

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

HVAC GENERAL NOTES

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

HVAC KEYED NOTES

1. EXISTING 450T WATER-COOLED CHILLER TO REMAIN.
2. EXISTING CHILLED WATER PUMP TO REMAIN.
3. EXISTING COOLING TOWER TO REMAIN.
4. EXISTING BOILER TO REMAIN.
5. EXISTING HEATING WATER PUMP TO REMAIN.
6. EXISTING CONDENSER WATER PUMPS TO REMAIN. MAINTAIN SERVICE CLEARANCES. FIELD COORDINATE WITH ELECTRICAL CONTRACTOR FOR RELOCATION OF EXISTING CONDENSER WATER PUMP ELECTRICAL CONDUIT AND CONDUCTORS AS REQUIRED TO ACCOMODATE NEW CHILLED WATER PIPING INSTALLATION.
7. EXISTING 8" DISTRICT CHS / CHR PIPING STUBBED INTO MECHANICAL ROOM TO REMAIN.
8. EXTEND EXISTING 8" DISTRICT CHS / CHR PIPING AS SHOWN.
9. CONNECT NEW 8" DISTRICT CHS / CHR PIPING TO EXISTING 8" BUILDING CHR PIPING AS SHOWN. ADD NEW TEES AND VALVES DURING SHUT-DOWN FOR FUTURE CONNECTION. SEE SHEET M104 AND M503 FOR DETAILS.
10. CONNECT NEW 8" CHILLER BYPASS PIPING. ADD TEES AND VALVES DURING SHUT-DOWN FOR FUTURE CONNECTION. SEE SHEET M104 AND M503 FOR DETAILS.
11. EXTEND EXISTING 8" DISTRICT CHS / CHR STUB-OUT PIPING FROM NEAR EDGE OF EXISTING BUILDING (FIELD LOCATE EXACT EXISTING PIPING STUB-OUT LOCATIONS / INSTALLED DEPTH) TO CONNECT TO 8" DISTRICT CHS / CHR PIPING BEING INSTALLED BY OTHERS AS SHOWN. INSULATE PIPING PER PROJECT SPECIFICATIONS. REFER TO DRAWING C-204 FOR ADDITIONAL INFORMATION.
12. RE-CONNECT EXISTING SMALL DIAMETER WATER PIPING THAT WAS REQUIRED TO BE RELOCATED WITHIN THIS AREA TO ACCOMODATE NEW CHILLED WATER PIPING INSTALLATION. RE-INSULATE RELOCATED PIPING TO MATCH EXISTING.
13. FIELD COORDINATE WITH ELECTRICAL CONTRACTOR AS REQUIRED FOR EXISTING LIGHT FIXTURE(S) REMOVAL / RE-INSTALLATION AS REQUIRED TO ACCOMODATE NEW CHILLED WATER PIPING ROUTING. EXISTING LIGHT FIXTURE TO BE RE-USED.
14. FIELD COORDINATE NEW CHILLED WATER PIPE ROUTING WITH EXISTING BOILER GAS PIPING RISER LOCATION (TYPICAL).
15. FIELD COORDINATE NEW CHILLED WATER PIPE ROUTING WITH EXISTING BOILER COMBUSTION AIR VENT RISER LOCATION (TYPICAL).

PIPING GENERAL NOTES

1. 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
2. ALL PIPING SHALL BE CLEARLY LABELED AND HAVE DIRECTION ARROWS, AS PER THE SPECIFICATIONS.
3. PROVIDE FRAMED VALVE TAG SCHEDULE PER SPECIFICATIONS.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 25166
JAMES WALKER
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

VERIFY SCALE
0 1"

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: April 06, 2026

TITLE: WINDGATE FLOOR PLAN - HVAC

CONSTRUCTION DOCUMENTS

M104

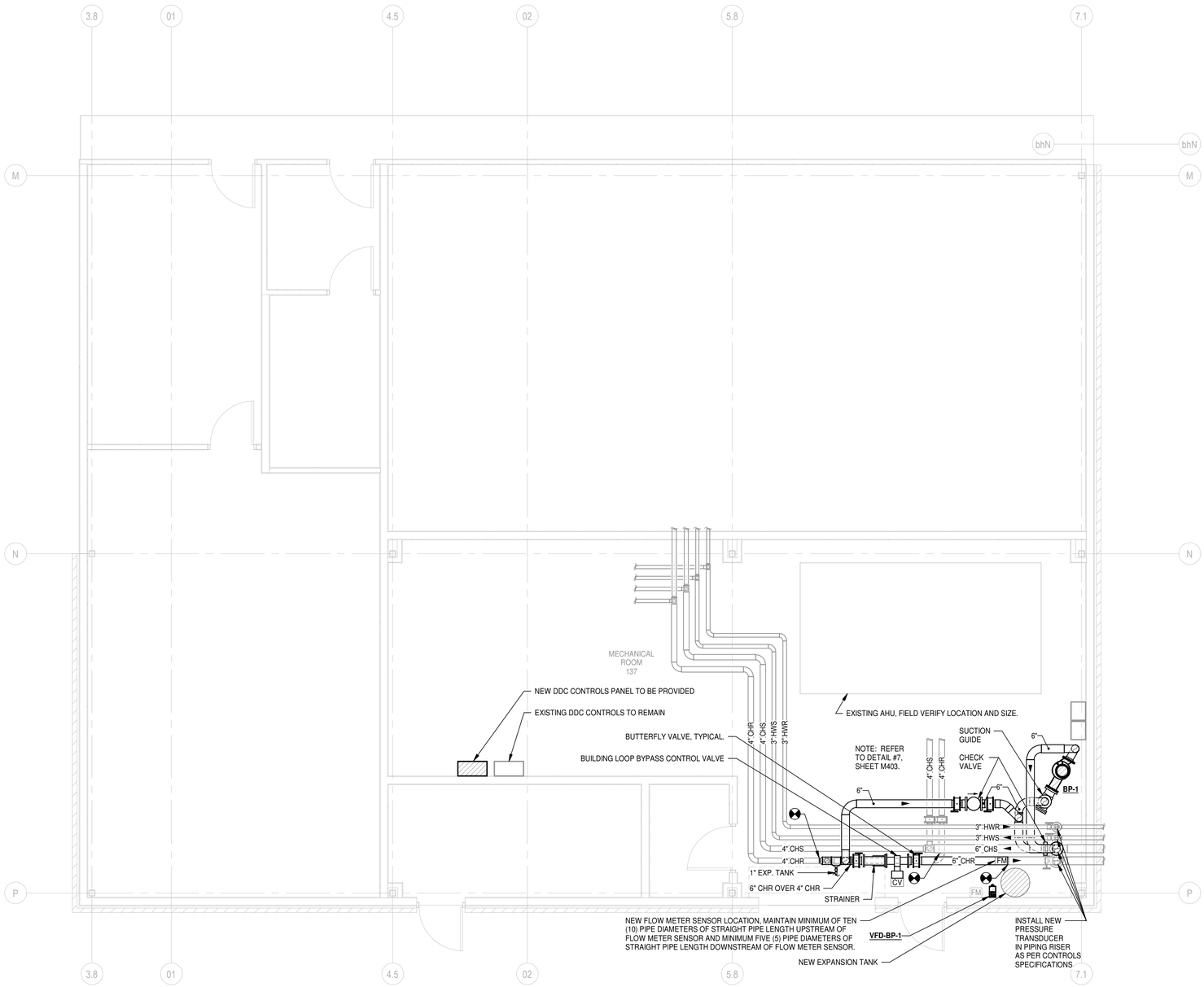
HVAC GENERAL NOTES

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

PIPING GENERAL NOTES

1. 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
2. ALL PIPING SHALL BE CLEARLY LABELED AND HAVE DIRECTION ARROWS, AS PER THE SPECIFICATIONS.
3. PROVIDE FRAMED VALVE TAG SCHEDULE PER SPECIFICATIONS.



N 1 **REYNOLDS PLAN - HVAC**
SCALE: 1/4" = 1'-0"

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS
JAMES PETTIT
REGISTERED PROFESSIONAL ENGINEER
No. 15166
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

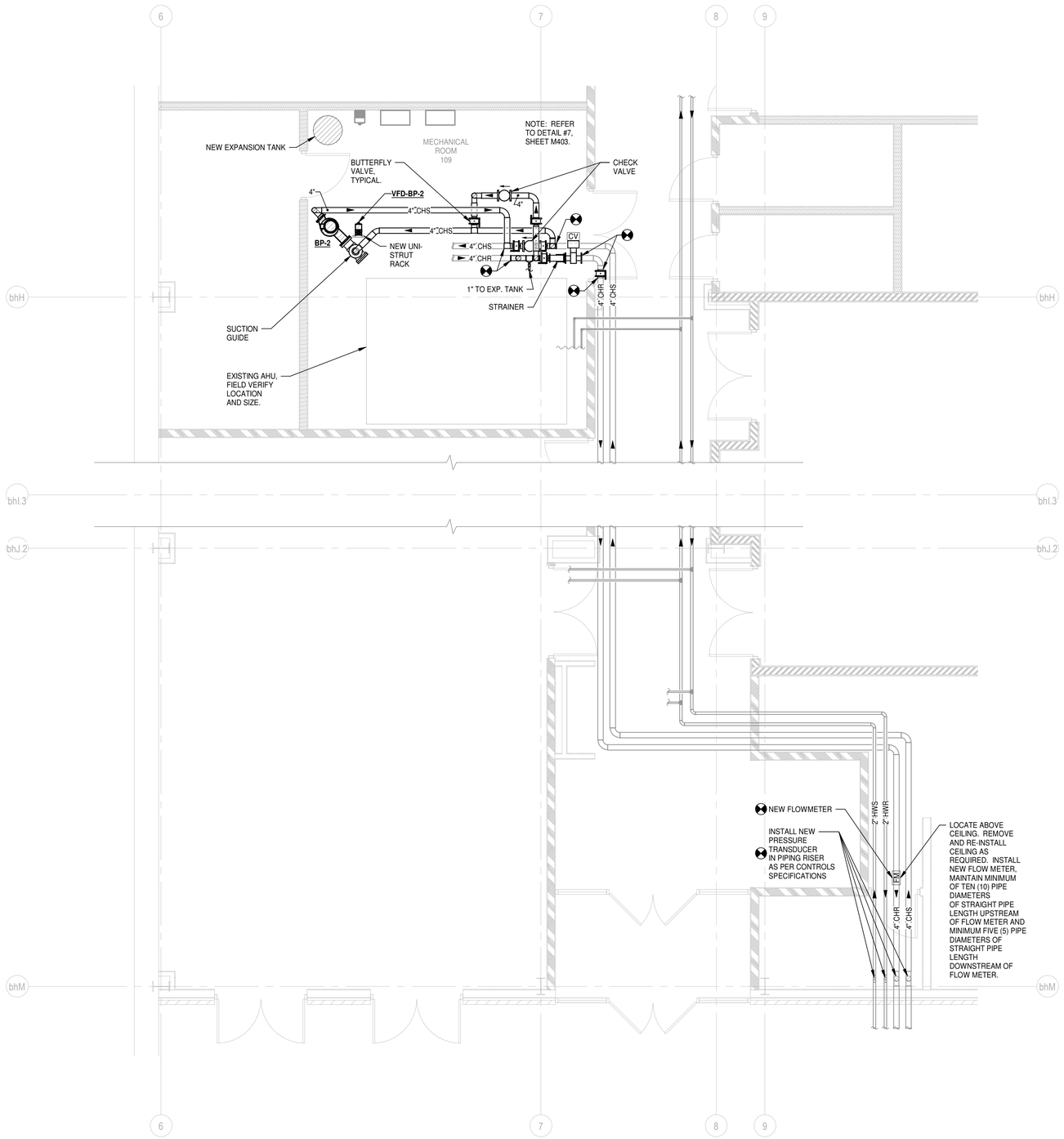
REVISIONS HISTORY

DATE: April 06, 2026

TITLE: REYNOLDS FLOOR PLAN - HVAC

CONSTRUCTION DOCUMENTS

M105



1 BREWER-HEGEMAN FLOOR PLAN - HVAC

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

HVAC GENERAL NOTES

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

PIPING GENERAL NOTES

1. 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

2. ALL PIPING SHALL BE CLEARLY LABELED AND HAVE DIRECTION ARROWS, AS PER THE SPECIFICATIONS.
3. PROVIDE FRAMED VALVE TAG SCHEDULE PER SPECIFICATIONS.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 25166
JAMES HICKS PETTIT
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER
© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: BREWER-HEGEMAN FLOOR PLAN - HVAC

CONSTRUCTION DOCUMENTS

M106

HVAC GENERAL NOTES

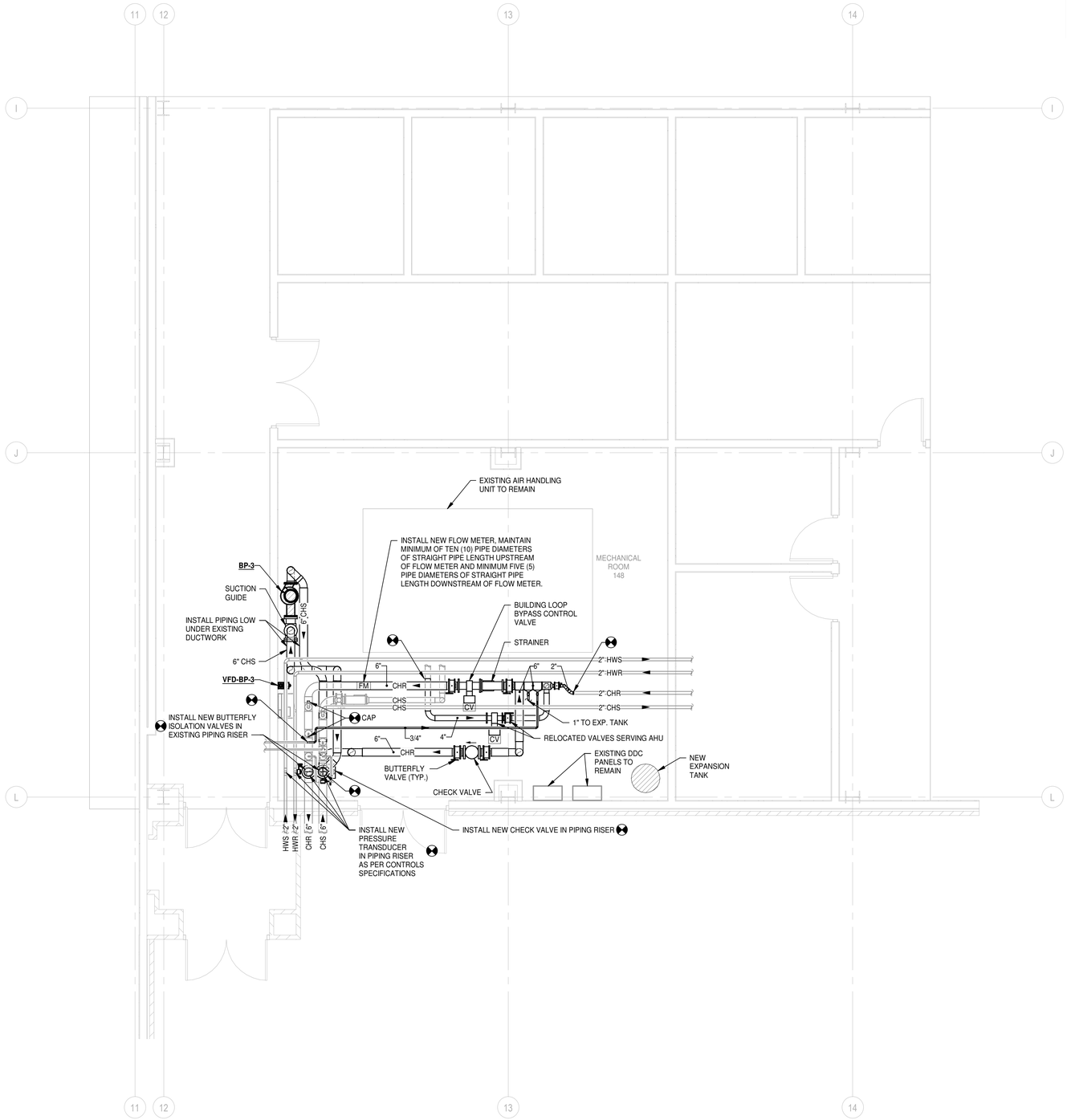
1. ALL LIGHTER SOLID LINES REPRESENT PIPING, DUCTWORK, EQUIPMENT, ETC. TO REMAIN.
2. ALL DARKER SOLID LINES REPRESENT NEW PIPING, DUCTWORK, EQUIPMENT, ETC.
3. FIELD VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING ITEMS SHOWN ON THIS PLAN THAT ARE TO BE CONNECTED TO.

PIPING GENERAL NOTES

1. 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

2. ALL PIPING SHALL BE CLEARLY LABELED AND HAVE DIRECTION ARROWS, AS PER THE SPECIFICATIONS.
3. PROVIDE FRAMED VALVE TAG SCHEDULE PER SPECIFICATIONS.



1 STANLEY RUSS FLOOR PLAN - HVAC

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

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 25166
JAMES MICHAEL PETTIT
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

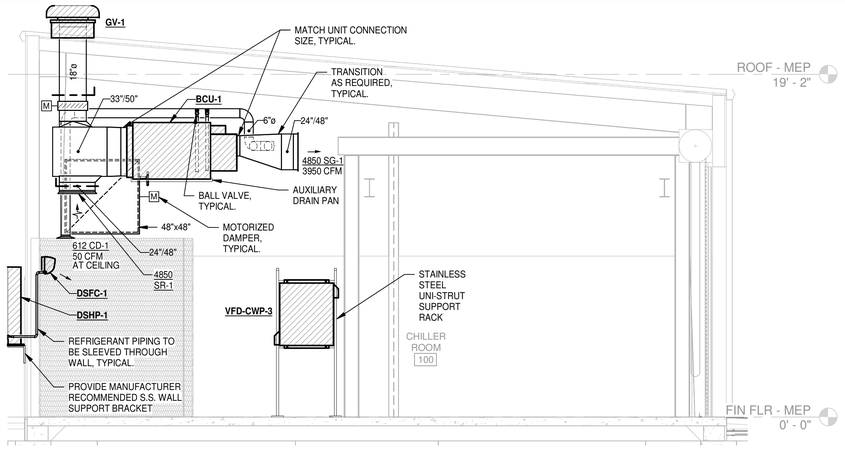
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

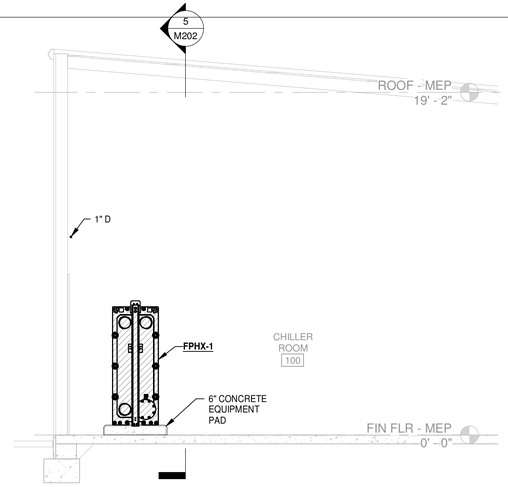
TITLE: STANLEY RUSS FLOOR PLAN - HVAC

CONSTRUCTION DOCUMENTS

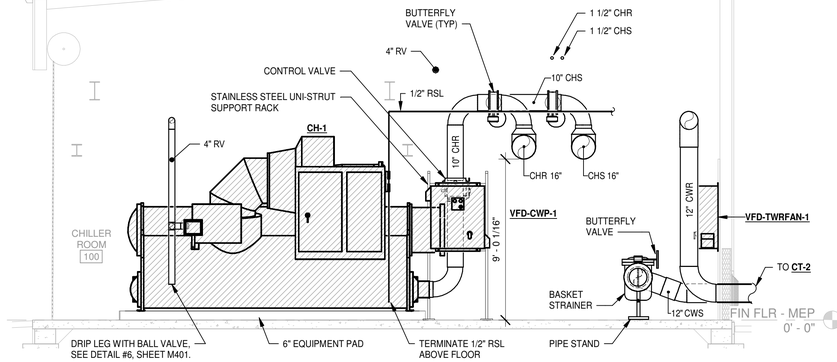
M107



1 SECTION @ BCU-1
SCALE: 1/4" = 1'-0"



2 SECTION @ BCU-2
SCALE: 1/4" = 1'-0"



3 SECTION @ CH-1
SCALE: 1/4" = 1'-0"

4 SECTION @ CH-2
SCALE: 1/4" = 1'-0"

5 SECTION @ CH-3
SCALE: 1/4" = 1'-0"

6 SECTION @ CWP-1
SCALE: 1/4" = 1'-0"

7 SECTION @ CAMPUS WATER LOOP CONNECTION
SCALE: 1/4" = 1'-0"

8 SECTION @ CHEMICAL TANKS
SCALE: 1/4" = 1'-0"

PIPING GENERAL NOTES

1. 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

2. ALL PIPING SHALL BE CLEARLY LABELED AND HAVE DIRECTION ARROWS, AS PER THE SPECIFICATIONS.

3. 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.

4. PROVIDE FRAMED VALVE TAG SCHEDULE PER SPECIFICATIONS.

5. WHERE POSSIBLE, INSTALL BUTTERFLY VALVES WHERE POSITION INDICATOR CAN BE SEEN FROM THE FLOOR.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMES T. PETTIT 05166 12-31-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

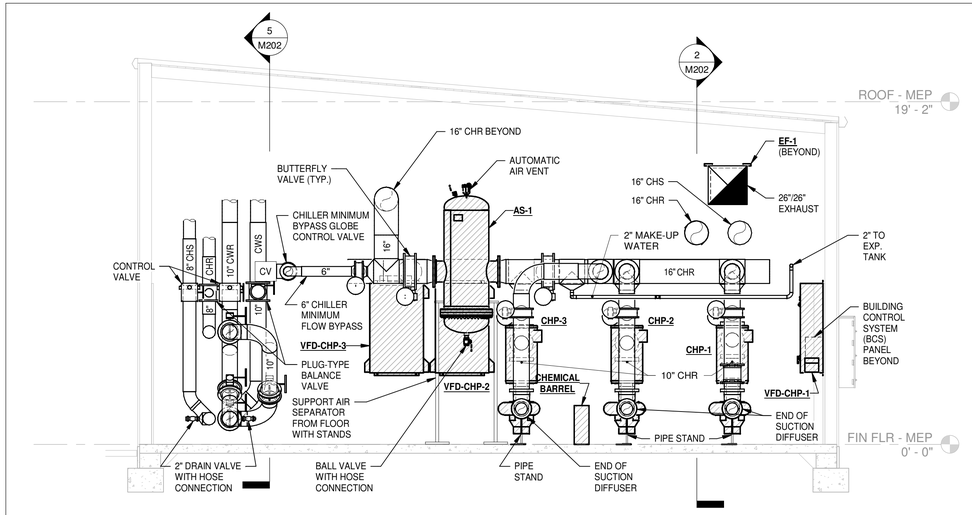
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

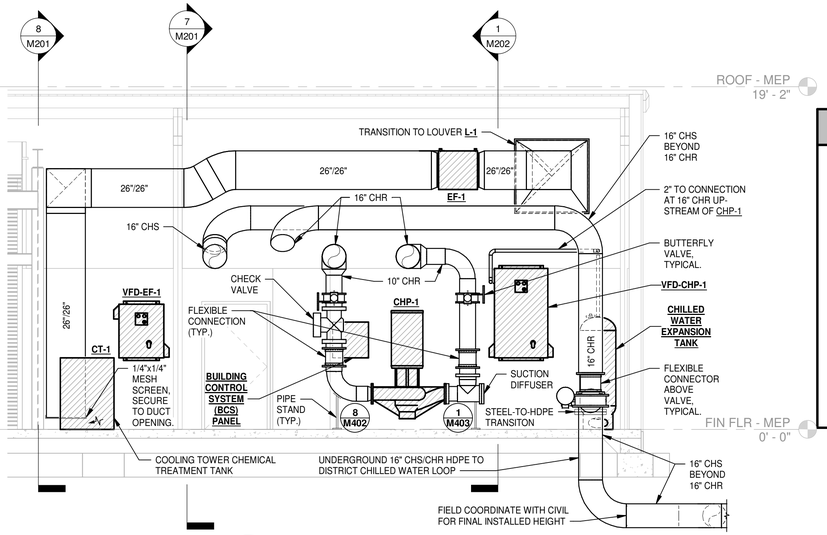
TITLE: HVAC SECTIONS

CONSTRUCTION DOCUMENTS

M201



1 SECTION @ CHP-1
SCALE: 1/4" = 1'-0"



2 SECTION @ CHP-2
SCALE: 1/4" = 1'-0"

PIPING GENERAL NOTES

1. 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

2. ALL PIPING SHALL BE CLEARLY LABELED AND HAVE DIRECTION ARROWS, AS PER THE SPECIFICATIONS.

3. 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.

4. PROVIDE FRAMED VALVE TAG SCHEDULE PER SPECIFICATIONS.

5. WHERE POSSIBLE, INSTALL BUTTERFLY VALVES WHERE POSITION INDICATOR CAN BE SEEN FROM THE FLOOR.

3 SECTION AT CT-2 (E-W)
SCALE: 1/4" = 1'-0" (TYPICAL FOR ALL TOWERS)

4 SECTION AT CT-2 (N-S)
SCALE: 1/4" = 1'-0" (TYPICAL FOR ALL TOWERS)

5 SECTION @ FPHX-1 - CONDENSER WATER
SCALE: 1/4" = 1'-0"

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 25166 — JAMES W. PETTIT

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION — PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 — ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: April 06, 2026

TITLE: HVAC SECTIONS

CONSTRUCTION DOCUMENTS

M202

MINI-SPLIT INDOOR HEAT PUMP UNIT SCHEDULE

DESIG.	MFR/MDL	TYPE	LOCATION	CFM	ESP	DIMENSIONS	WEIGHT	COOLING			HEATING			REFRIGERANT PIPE SIZE		ELECTRICAL DATA			REMARKS
								CAPACITY	INDOOR	OUTDOOR	CAPACITY	INDOOR	OUTDOOR	GAS	LIQUID	MCA	MOCP	VOLT/PHASE	
DSFC-1	MITSUBISHI / PKA-A24KA7	WALL-MOUNT EXPOSED CABINET	NORTH PLANT I.T. ROOM	705 - LOW 920 - HIGH	0.00"	14 3/8"H x 46 1/16"W x 11 5/8"D	46 LBS.	24,000 BTU/H	80° d.b. 67° w.b.	95° d.b.	26,000 BTU/H	70° d.b.	47° d.b.	5/8"	3/8"	1.0	---	208-230V / 1Ø	PROVIDE WITH 208V HIGH LIFT CONDENSATE PUMP. PAR-40MAAU DELUXE WIRED MA REMOTE CONTROLLER, PAC-UKPRC001-CN-1 BACNET INTERFACE, AND WALL MOUNTING BRACKET. PROVIDE UNIT WITH CONDENSATE OVERFLOW SAFETY CUT-OFF SWITCH. INDOOR UNIT POWERED FROM OUTDOOR UNIT, FIELD COORDINATE ALL DISCONNECTS AND CONDUIT REQUIRED BETWEEN INDOOR UNIT AND OUTDOOR UNIT WITH ELECTRICAL CONTRACTOR.

MINI-SPLIT OUTDOOR HEAT PUMP UNIT SCHEDULE

DESIG.	MFR/MDL	TYPE	SERVES	DIMENSIONS	WEIGHT	COOLING			HEATING			FAN DATA			COMPRESSOR DATA			ELECTRICAL DATA			REMARKS
						CAPACITY	INDOOR	OUTDOOR	CAPACITY	INDOOR	OUTDOOR	TYPE / QUANTITY	CFM	W	TYPE	MOTOR KW	HEATER KW	MCA	MOCP	VOLT/PHASE	
DSHP-1	MITSUBISHI / PUZ-A24NHA7-BS	AIR-COOLED	DSFC-1	37 7/8"H x 37 13/16"W x 13"D	153 LBS.	24,000	80° d.b. 67° w.b.	95° d.b.	26,000	70° d.b.	47° d.b.	PROP / 1	1,940	86	INVERTER - TWIN ROTARY	---	---	19	26	208-230V / 1Ø	PROVIDE WITH MANUFACTURER RECOMMENDED S.S. WALL MOUNTING BRACKET AND LOW AMBIENT KIT INCLUDING WIND BAFFLES FOR USE DOWN TO 0 DEG. F. INDOOR AND OUTDOOR UNIT POWERED THRU OUTDOOR UNIT. VERIFY ALL REQUIREMENTS WITH MANUFACTURER'S INSTRUCTIONS.

BLOWER COIL UNIT SCHEDULE

UNIT	MFR/MDL	TYPE	LOCAT.	CFM	ESP	CHILLED WATER COIL									ELECTRIC RE-HEAT COIL				MOTOR				REMARKS
						EAT	EWT	LWT	ROWS	GPM	PD	TH(MBH)	SH(MBH)	PIPE SIZE	KW	TH(MBH)	EAT	LAT	H.P.	VOLT/PHASE	MCA	MOCP	
BCU-1	TRANE/ UCCAG08	HORIZONTAL SUSPENDED	NORTH PLANT	4000	0.40"	80° db 67° wb	42 F	56 F	6 (9 FPI)	24	5.1'	163.7	114.2	1 1/2"	32	109.2	65	90.2	5	460V / 3Ø	60.9	70	REFER TO SPECIFICATIONS - PROVIDE DISCONNECT, MODULATING ELECTRIC RE-HEAT COIL, CONDENSATE OVERFLOW SWITCH, PREMIUM EFFICIENCY MOTOR, VARIABLE FREQUENCY DRIVE (VFD), AUXILIARY FILTER RACK, 4" MERV 8 FILTERS, AND REMOTE WALL-MOUNTED AUTO-CHANGEOVER THERMOSTAT. APPROXIMATELY 755 LBS. INSTALLED WEIGHT. (1)
BCU-2	TRANE/ UCCAG08	HORIZONTAL SUSPENDED	NORTH PLANT	4000	0.40"	80° db 67° wb	42 F	56 F	6 (9 FPI)	24	5.1'	163.7	114.2	1 1/2"	32	109.2	65	90.2	5	460V / 3Ø	60.9	70	REFER TO SPECIFICATIONS - PROVIDE DISCONNECT, MODULATING ELECTRIC RE-HEAT COIL, CONDENSATE OVERFLOW SWITCH, PREMIUM EFFICIENCY MOTOR, VARIABLE FREQUENCY DRIVE (VFD), AUXILIARY FILTER RACK, 4" MERV 8 FILTERS, AND REMOTE WALL-MOUNTED AUTO-CHANGEOVER THERMOSTAT. APPROXIMATELY 755 LBS. INSTALLED WEIGHT. (2)

(1) INTERLOCK OPERATION WITH GRAVITY VENTILATOR GV-1.
(2) INTERLOCK OPERATION WITH GRAVITY VENTILATOR GV-2.

FAN SCHEDULE

DESIG.	MFR/MDL	SERVES	LOCAT.	TYPE	WEIGHT	FAN DATA							MOTOR DATA				REMARKS
						CFM	S.P.	RPM	DRIVE	TYPE	DIA.	SONES	RPM	BHP	HP	VOLT/PH	
EF-1	GREENHECK / SQ-160	NORTH CHILLER PLANT VENTILATION	SUSPENDED	IN-LINE	125 LB.	4125 (SEE NOTES)	.375"	1570	DIRECT	CENTRIFUGAL	--	20	1725	1.34	2	480V / 3Ø	PROVIDE WITH PREMIUM EFFICIENCY VFD RATED BALL BEARING MOTOR, ALUMINUM WHEEL, BOLTED ACCESS PANELS, FLANGED INLET / OUTLET CONNECTIONS, MOTORIZED BACKDRAFT DAMPER, SPRING ISOLATORS, AND DISCONNECT. TAB TO "LOW" MULTI-SPEED OPERATION - 1,950 CFM, "HIGH" MULTI-SPEED OPERATION - 4,125 CFM. SEE NOTES (1) (2)

(1) INTERLOCK MULTI-SPEED OPERATION WITH REFRIGERANT MONITOR SYSTEM(S).
(2) INTERLOCK FAN OPERATION WITH LOUVER L-1.

ROOF MOUNTED VENTILATOR SCHEDULE

DESIG.	MFR./MDL.	TYPE	SERVES	CFM	S.P.	THROAT SIZE	THROAT VELOCITY FPM	REMARKS
GV-1	GREENHECK / GRSI	HOODED ALUMINUM GRAVITY INTAKE	BCU-1	975	0.05"	18"Ø	285.1	PROVIDE WITH ROOF CURB, BIRD SCREEN, AND MOTORIZED BACKDRAFT DAMPER. COLOR PER ARCHITECT. INTERLOCK DAMPER OPERATION WITH BCU-1.
GV-2	GREENHECK / GRSI	HOODED ALUMINUM GRAVITY INTAKE	BCU-2	975	0.05"	18"Ø	285.1	PROVIDE WITH ROOF CURB, BIRD SCREEN, AND MOTORIZED BACKDRAFT DAMPER. COLOR PER ARCHITECT. INTERLOCK DAMPER OPERATION WITH BCU-2.

LOUVER SCHEDULE

DESIG.	MFR./MDL.	TYPE	SERVES	CFM	S.P.	SIZE	VELOCITY FPM	FINISH	REMARKS
L-1	RUSKIN / ELC6375DAX	6" DEEP 35° FIXED COMBINATION DRAINABLE BLADE	NORTH CHILLER PLANT	4125	0.06"	48"W x 48"H	552	KYNAR	PROVIDE WITH INSECT SCREEN AND MOTORIZED DAMPER ACTUATOR. COLOR BY ARCHITECT. (2)
L-2	RUSKIN / ELC6375DAX	6" DEEP 35° FIXED COMBINATION DRAINABLE BLADE	NORTH CHILLER PLANT	4125	0.06"	48"W x 48"H	552	KYNAR	PROVIDE WITH INSECT SCREEN AND MOTORIZED DAMPER ACTUATOR. COLOR BY ARCHITECT. (1)

(1) INTERLOCK DAMPER OPERATION WITH REFRIGERANT MONITOR ALARM / "HIGH" MULTI-SPEED FAN OPERATION, SEE FAN SCHEDULE NOTES.
(2) INTERLOCK DAMPER OPERATION WITH WITH EXHAUST FAN EF-1.

AIR DEVICE SCHEDULE

DESIG.	MFR./MDL.	TYPE	FACE SIZE	FINISH	FREE AREA	ACCESS.	REMARKS
CD-1	TITUS / PAS	PERFORATED SUPPLY	12" / 12"	WHITE (FIELD VERIFY)	---	OBD VOLUME CONTROL	6"ø NECK, 3/16"ø HOLES ON 1/4" STAGGERED CENTERS FOR PERFORATED FACE. PROVIDE WITH SURFACE MOUNTING FRAME.
SG-1	TITUS / 300RS	SIDEWALL SUPPLY	50" / 26"	WHITE (FIELD VERIFY)	---	OBD VOLUME CONTROL	48" / 24" NECK. PROVIDE WITH BLADES SPACED ON 3/4" CENTERS AT 45° DOUBLE DEFLECTION.
SR-1	TITUS / 30RL	SIDEWALL RETURN	50" / 26"	WHITE (FIELD VERIFY)	---	---	48" / 24" NECK. PROVIDE WITH BLADES SPACED ON 1/2" CENTERS AT 0° DEFLECTION.

HVAC GENERAL NOTES

1. ALL LIGHTER SOLID LINES REPRESENT PIPING, DUCTWORK, EQUIPMENT, ETC. TO REMAIN.
2. ALL DARKER SOLID LINES REPRESENT NEW PIPING, DUCTWORK, EQUIPMENT, ETC.
3. FIELD VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING ITEMS SHOWN ON THESE PLANS WHERE CONNECTS ARE TO BE MADE.
4. DUE TO THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES WHICH MAY BE REQUIRED. CONTRACTOR SHALL INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND COORDINATE AND ARRANGE HIS WORK ACCORDINGLY.
5. ALL EXTERIOR PIPING SUSCEPTIBLE TO FREEZING, INCLUDING BUT NOT LIMITED TO TOWER MAKE-UP WATER, TOWER DRAIN PIPING, AND CONDENSATE PIPING, SHALL BE HEAT TRACED AT 5 WATTS/FOOT. REFRIGERANT PIPING SHALL BE INSULATED WITH 1" FIBERGLASS PIPING INSULATION WITH 0.020" ALUMINUM JACKET. PROVIDE U.V. RESISTANT PROTECTIVE ARMAFLEX COATING.
6. SCREEN OFF ALL AREAS WHERE CONSTRUCTION IS TO TAKE PLACE FROM ADJACENT INHABITED AREAS. ADJACENT INHABITIED AREAS SHALL REMAIN DUST AND DEBRIS FREE DURING CONSTRUCTION. CLEAN ANY AREAS OUTSIDE DESIGNATED CONSTRUCTION AREA WHICH HAVE BECOME SOILED DUE TO CONSTRUCTION.
7. PROVIDE SLEEVES THROUGH WALLS AND FLOORS. SEAL EXCESS OPENING WITH WATER-PROOF SEALANT. COORDINATE LOCATIONS AND SIZES OF SLEEVES WITH GENERAL CONTRACTOR. SLEEVES SHALL PROVIDE A MINIMUM OF 1" CLEARANCE BETWEEN PIPE AND SLEEVE. SEAL PENETRATION IN FIRE/SMOKE RATED WALLS AND FLOOR WITH AN APPROVED FIRE/SMOKE BLOCK SEALANT.
8. MOUNT THERMOSTATS AT 48" A.F.F. OR MATCH LIGHT SWITCH HEIGHT.
9. ARRANGE PIPING TO ALLOW FOR PROPER SERVICE AND ACCESS TO EQUIPMENT. INSTALL UNIONS AND ISOLATION VLAVES TO ALLOW FOR MAINTENANCE AND REMOVAL OF EQUIPMENT WITHOUT DISTURBING MAINS.
10. REFER TO SEQUENCE OF OPERATIONS FOR ALL EQUIPMENT OPERATION CYCLES.
11. WHERE CONFLICTS OCCUR BETWEEN PLANS AND SPECIFICATIONS, VERIFY WITH ARCHITECT/ENGINEER FOR CLARIFICATIONS.
12. USE LONG RADIUS ELEBOWS WHERE POSSIBLE.
13. CORE DRILL ALL PENETRATIONS OF CONCRETE FLOORS, WALLS, AND ROOFS.

PIPING LEGEND

CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
D	DRAIN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS/RL	REFRIGERANT SUCTION/ REFRIGERANT LIQUID
DWC	DOMESTIC COLD WATER
RV	REFRIGERANT VENT
RSL	REFRIGERANT SENSING LINE

LEGEND

- AIR VENT (AUTO/HAND)
- BUTTERLFLY VALVE
- BALL VALVE
- ELECTRIC/ELECTRONIC AUTOMATIC CONTROL VALVE (3-WAY)
- ELECTRIC/ELECTRONIC AUTOMATIC CONTROL VALVE
- CHECK VALVE
- FLEXIBLE CONNECTOR, BRAIDED
- GATE VALVE
- GLOBE VALVE (STRAIGHT)
- PRESSURE REDUCING VALVE
- PLUG TYPE BALANCING VALVE
- PRESSURE GAUGE (W/COCK)
- PRESSURE RELIEF VALVE
- PRESSURE AND TEMPERATURE TAP
- GAUGE COCK
- REDUCER (CONCENTRIC)
- REDUCER (ECCENTRIC)
- STRAINER (Y-TYPE WITH GATE VALVE AND HOSE CONNECTION)
- THERMOMETER WITH GAUGE WELL
- TO FLOOR DRAIN
- PIPE FLANGE
- PIPING SCREWED UNION
- PIPE CAP
- DIRECTION OF FLOW
- VALVE IN RISER
- PIPE ELBOW DOWN
- PIPE ELBOW UP
- PIPE TEE
- PIPE 90° ELBOW
- PIPE 45° ELBOW

CONSTRUCTION DOCUMENTS

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMES T. PETTIT 10-06-26 No. 15166

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: April 06, 2026

TITLE: HVAC SCHEDULES

M301

CHILLER SCHEDULE - NORTH PLANT

DESIG.	MFR/MDL	CAPACITY	EVAPORATOR					CONDENSER					KW	ELECTRICAL				EFF. KW/TON	NPLV	OPERATING WEIGHT	REMARKS
			GPM	MINIMUM GPM	WPD	EWT	LWT	GPM	MINIMUM GPM	WPD	EWT	LWT		VOLT/PH	LRA	MCA	MOP				
CH-1	TRANE CVHF 760	670.0 TONS	1,143	345.9	8.99 FT DESIGN FLOW 0.58 FT MIN FLOW	56.0 DEG. F	42.0 DEG. F	1,876	579.9	29.8 FT DESIGN FLOW	85.0 DEG. F	95.0 DEG. F	416.3	460 / 3Ø	3,687	687	1200	0.6214	0.4004	27,127 LBS	PROVIDE WITH FACTORY VFD, DISCONNECT, CHILLED WATER AND CONDENSER WATER FLOW SWITCHES, AND VIBRATION ISOLATORS. SEE SPECIFICATIONS.
CH-2	TRANE CVHF 760	670.0 TONS	1,143	294.7	12.2 FT DESIGN FLOW 0.57 FT MIN FLOW	56.0 DEG. F	42.0 DEG. F	1,876	579.9	29.8 FT DESIGN FLOW	85.0 DEG. F	95.0 DEG. F	413.2	460 / 3Ø	3,687	762	1200	0.6167	0.5001	25,348 LBS	PROVIDE WITH FACTORY WYE DELTA STARTER, DISCONNECT, CHILLED WATER AND CONDENSER WATER FLOW SWITCHES, AND VIBRATION ISOLATORS. SEE SPECIFICATIONS.
CH-3	TRANE CVHF 760	670.0 TONS	1,143	294.7	12.2 FT DESIGN FLOW 0.570 FT MIN FLOW	56.0 DEG. F	42.0 DEG. F	1,876	579.9	29.8 FT DESIGN FLOW	85.0 DEG. F	95.0 DEG. F	413.2	460 / 3Ø	3,687	762	1200	0.6167	0.5001	25,348 LBS	PROVIDE WITH FACTORY WYE DELTA STARTER, DISCONNECT, CHILLED WATER AND CONDENSER WATER FLOW SWITCHES, AND VIBRATION ISOLATORS. SEE SPECIFICATIONS.

NOTE:

THE FOLLOWING CHILLERS ARE ACCEPTABLE ALTERNATES:

CH-1, CH-2, CH-3: DAIKIN WSC100MBBHA, 0.6255 KW/TON EFF., 0.4136 NPLV, WITH FACTORY VFD.

CH-1, CH-2, CH-3: YORK YKKCKLH9-ETHS, 0.5504 KW/TON EFF., 0.3650 NPLV, WITH FACTORY VFD.

CHILLER SCHEDULE - SOUTH PLANT

DESIG.	MFR/MDL	CAPACITY	EVAPORATOR					CONDENSER					KW	ELECTRICAL				EFF. KW/TON	NPLV	OPERATING WEIGHT	REMARKS
			GPM	MINIMUM GPM	WPD	EWT	LWT	GPM	MINIMUM GPM	WPD	EWT	LWT		VOLT/PH	LRA	MCA	MOP				
CH-1	TRANE CVHF 760	703.5 TONS	2,100	772.3	18.3 FT DESIGN FLOW 2.7 FT. MIN FLOW	50.0 DEG. F	42.0 DEG. F	1,400	923.9	10.3 FT DESIGN FLOW	85.0 DEG. F	99.21 DEG. F	407.3	460 / 3Ø	3687.0	682.0	1200	0.5789	0.3699	37,450 LBS	PROVIDE WITH FACTORY VFD, DISCONNECT, CHILLED WATER AND CONDENSER WATER FLOW SWITCHES, AND VIBRATION ISOLATORS. SEE SPECIFICATIONS.

COOLING TOWER SCHEDULE - NORTH PLANT

DESIG.	MFR/MDL	LOCAT.	TYPE	GPM	STATIC LIFT	EWT	LWT	AMBIENT WET BULB TEMP.	FAN DATA				OPERATING WEIGHT	REMARKS
									NO.	HP	RPM	VOLT/PH		
CT-1	BALTIMORE AIRCOIL S3E-1424-07R	NORTH PLANT	INDUCED DRAFT CROSSFLOW	1,876	4.93 PSI	95.0 DEG. F	85.0 DEG. F	80.0 DEG. F	1	60	1,800	460 / 3Ø	36,290 LBS	SEE NOTES AND SPECIFICATIONS. PROVIDE WITH MOTOR GROUND RINGSE.
CT-2	BALTIMORE AIRCOIL S3E-1424-07R	NORTH PLANT	INDUCED DRAFT CROSSFLOW	1,876	4.93 PSI	95.0 DEG. F	85.0 DEG. F	80.0 DEG. F	1	60	1,800	460 / 3Ø	36,290 LBS	SEE NOTES AND SPECIFICATIONS. PROVIDE WITH MOTOR GROUND RINGSE.
CT-3	BALTIMORE AIRCOIL S3E-1424-07R	NORTH PLANT	INDUCED DRAFT CROSSFLOW	1,876	4.93 PSI	95.0 DEG. F	85.0 DEG. F	80.0 DEG. F	1	60	1,800	460 / 3Ø	36,290 LBS	SEE NOTES AND SPECIFICATIONS. PROVIDE WITH MOTOR GROUND RINGSE.

(1) FAN VFD FURNISHED BY THE CONTROLS CONTRACTOR, VFD INSTALLED AND WIRED BY DIV. 26. WIRING FROM VFD TO MOTOR BY DIV. 26.
(2) WITH TWO 460V/3PH 14 KW BASIN HEATERS AND FACTORY CONTROL PANEL. DISCONNECT, HEATING ELEMENT INSTALLATION, AND HEATING ELEMENT WIRING FROM THE CONTROL PANEL BY DIV. 26.
(3) SEPARATE 120V1PH SERVICE WITH DISCONNECT FOR FAN HEAT BY DIV. 26
(4) WITH ACCESS PLATFORM, LADDER, AND GUARD RAILS.
(5) PROVIDE WITH STAINLESS STEEL HOT AND COLD BASINS
(6) PROVIDE WITH STAINLESS STEEL INTERNAL INTERNAL WALKWAY.
(7) WITH MANUAL RESET, MECHANICAL VIBRATION CUT-OUT SWITCH.

PLATE HEAT EXCHANGER SCHEDULE

DESIG.	MFR/MDL	LOCAT.	# OF PLATES	HEAT EXCHANGED	CHILLED WATER					CONDENSER WATER					REMARKS
					EWT	LWT	GPM	WPD	PASSES	EWT	LWT	GPM	WPD	PASSES	
FPHX-1	ALFA LAVAL T21-BFG	NORTH PLANT	361	8440.7 MBH	56.0 DEG. F	42.0 DEG. F	1,200	12.2 FT	1	40.0 DEG. F	50.0 DEG. F	1,675.4	22.9 FT	1	PROVIDE WITH INSULATED SHROUD.

PUMP SCHEDULE

DESIG.	MFR/MDL	SERVES	LOCAT.	TYPE	GPM	HEAD	EFF.	NPSH	MOTOR DATA				REMARKS
									BHP	HP	RPM	VOLT/PH	
CHP-1	TACO KS8016	CHILLED WATER	NORTH PLANT	VERTICAL SPLIT COUPLED	1,715	150 FT	83.0%	16.0 FT	78.29	100	1,760	460/3Ø	INVERTER DUTY, WITH SUCTION DIFFUSER. PROVIDE MOTOR GROUNDING RING.
CHP-2	TACO KS8016	CHILLED WATER	NORTH PLANT	VERTICAL SPLIT COUPLED	1,715	150 FT	83.0%	16.0 FT	78.29	100	1,760	460/3Ø	INVERTER DUTY, WITH SUCTION DIFFUSER. PROVIDE MOTOR GROUNDING RING.
CHP-3	TACO KS8016	CHILLED WATER	NORTH PLANT	VERTICAL SPLIT COUPLED	1,715	150 FT	83.0%	16.0 FT	78.29	100	1,760	460/3Ø	INVERTER DUTY, WITH SUCTION DIFFUSER. PROVIDE MOTOR GROUNDING RING.
CWP-1	TACO KS1013	CONDENSER WATER	NORTH PLANT	VERTICAL SPLIT COUPLED	1,876	75 FT	80.0%	16.0 FT	44.27	50	1,760	460/3Ø	INVERTER DUTY, WITH SUCTION DIFFUSER. PROVIDE MOTOR GROUNDING RING.
CWP-2	TACO KS1013	CONDENSER WATER	NORTH PLANT	VERTICAL SPLIT COUPLED	1,876	75 FT	80.0%	16.0 FT	44.27	50	1,760	460/3Ø	INVERTER DUTY, WITH SUCTION DIFFUSER. PROVIDE MOTOR GROUNDING RING.
CWP-3	TACO KS1013	CONDENSER WATER	NORTH PLANT	VERTICAL SPLIT COUPLED	1,876	75 FT	80.0%	16.0 FT	44.29	50	1,760	460/3Ø	INVERTER DUTY, WITH SUCTION DIFFUSER. PROVIDE MOTOR GROUNDING RING.
P-1	PACO 6015	CHILLED WATER	SOUTH PLANT (EXISTING)	HORIZONTAL SPLIT CASE	2,100	128 FT	87%	---	78	100	1,780	460/3Ø	EXISTING PUMP, INFORMATION PROVIDED FOR REFERENCE ONLY.
P-2	PACO 6015	CHILLED WATER	SOUTH PLANT (EXISTING)	HORIZONTAL SPLIT CASE	2,100	128 FT	87%	---	78	100	1,780	460/3Ø	EXISTING PUMP, INFORMATION PROVIDED FOR REFERENCE ONLY.
P-3	PACO 6012	CONDENSER WATER	SOUTH PLANT (EXISTING)	HORIZONTAL SPLIT CASE	1,400	59 FT	81%	---	---	25	1,780	460/3Ø	EXISTING PUMP, INFORMATION PROVIDED FOR REFERENCE ONLY.
P-4	PACO 6012	CONDENSER WATER	SOUTH PLANT (EXISTING)	HORIZONTAL SPLIT CASE	1,400	59 FT	81%	---	---	25	1,780	460/3Ø	EXISTING PUMP, INFORMATION PROVIDED FOR REFERENCE ONLY.
BP-1	ARMSTRONG 4380 3x3x6	CHILLED WATER BOOSTER	REYNOLDS PERF. HALL	VERTICAL SPLIT COUPLED	350	45 FT	65.3%	20.2 FT	6.1	7.5	3,400	460/3Ø	PROVIDE PUMP WITH PREMIUM EFFICIENCY INVERTER DUTY MOTOR, SUCTION GUIDE WITH PERMANENT AND START-UP STRAINERS, AND SPARE SEAL.
BP-2	ARMSTRONG 4380 2x2x8	CHILLED WATER BOOSTER	BREWER-HEGEMAN CENTER	VERTICAL SPLIT COUPLED	191	45 FT	57.5%	14.3 FT	3.8	5	1,760	460/3Ø	PROVIDE PUMP WITH PREMIUM EFFICIENCY INVERTER DUTY MOTOR, SUCTION GUIDE WITH PERMANENT AND START-UP STRAINERS, AND SPARE SEAL.
BP-3	ARMSTRONG 4380 3x3x5L	CHILLED WATER BOOSTER	STANLEY RUSS CENTER	VERTICAL SPLIT COUPLED	225	45 FT	73.6%	10.6 FT	3.5	5	1,760	460/3Ø	PROVIDE PUMP WITH PREMIUM EFFICIENCY INVERTER DUTY MOTOR, SUCTION GUIDE WITH PERMANENT AND START-UP STRAINERS, AND SPARE SEAL.

VARIABLE FREQUENCY DRIVE SCHEDULE (BY CONTROL CONTRACTOR - INSTALLED BY DIV 26)

DESIG.	MFR/MDL	SERVES	TYPE	APPLICATION	RATED HORSEPOWER	VOLTAGE	PHASE	MINIMUM EFFICIENCY	REMARKS
VFD-EF-1	HONEYWELL HVF03B-3-C-0020	EXHAUST FAN EF-1 (NORTH PLANT)	WALL-MOUNTED	VARIABLE TORQUE PWM	2	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE. TAB CONTRACTOR TO COORDINATE FAN SPEED SETPOINT(S) WITH FAN SCHEDULE NOTES (1) AND (2) FOR MULTI-SPEED OPERATION.
VFD-TWR FAN-1	HONEYWELL HVF03B-3-C-0600	COOLING TOWER CT-1 FAN (NORTH PLANT)	WALL-MOUNTED	VARIABLE TORQUE PWM	60	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-TWR FAN-2	HONEYWELL HVF03B-3-C-0600	COOLING TOWER CT-2 FAN (NORTH PLANT)	WALL-MOUNTED	VARIABLE TORQUE PWM	60	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-TWR FAN-3	HONEYWELL HVF03B-3-C-0600	COOLING TOWER CT-3 FAN (NORTH PLANT)	WALL-MOUNTED	VARIABLE TORQUE PWM	60	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-CHP-1	HONEYWELL HVF03B-3-C-1000	CHILLED WATER CHP-1 (NORTH PLANT)	WALL-MOUNTED	VARIABLE TORQUE PWM	100	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-CHP-2	HONEYWELL HVF03B-3-C-1000	CHILLED WATER CHP-2 (NORTH PLANT)	RACK-MOUNTED (UNI-STRUT)	VARIABLE TORQUE PWM	100	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-CHP-3	HONEYWELL HVF03B-3-C-1000	CHILLED WATER CHP-3 (NORTH PLANT)	RACK-MOUNTED (UNI-STRUT)	VARIABLE TORQUE PWM	100	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-CWP-1	HONEYWELL HVF03B-3-C-0500	CONDENSER WATER CWP-1 (NORTH PLANT)	RACK-MOUNTED (UNI-STRUT)	VARIABLE TORQUE PWM	50	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-CWP-2	HONEYWELL HVF03B-3-C-0500	CONDENSER WATER CWP-2 (NORTH PLANT)	RACK-MOUNTED (UNI-STRUT)	VARIABLE TORQUE PWM	50	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-CWP-3	HONEYWELL HVF03B-3-C-0500	CONDENSER WATER CWP-3 (NORTH PLANT)	RACK-MOUNTED (UNI-STRUT)	VARIABLE TORQUE PWM	50	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-P-3	HONEYWELL HVF03B-3-C-0250	CONDENSER WATER P-3 (SOUTH PLANT)	RACK-MOUNTED (UNI-STRUT)	VARIABLE TORQUE PWM	25	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-P-4	HONEYWELL HVF03B-3-C-0250	CONDENSER WATER P-4 (SOUTH PLANT)	RACK-MOUNTED (UNI-STRUT)	VARIABLE TORQUE PWM	25	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-BP-1	HONEYWELL HVF03B-3-C-0075	CHILLED WATER BOOSTER PUMP BP-1	WALL-MOUNTED	VARIABLE TORQUE PWM	7.5	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-BP-2	HONEYWELL HVF03B-3-C-0050	CHILLED WATER BOOSTER PUMP BP-2	RACK-MOUNTED (UNI-STRUT)	VARIABLE TORQUE PWM	5	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.
VFD-BP-3	HONEYWELL HVF03B-3-C-0050	CHILLED WATER BOOSTER PUMP BP-3	WALL-MOUNTED	VARIABLE TORQUE PWM	5	460V	3Ø	96%	FURNISH WITH MANUAL SOFT START BYPASS, INPUT DISCONNECT SWITCH, INPUT LINE REACTORS, NEMA 1 ENCLOSURE, AND BACNET IP INTERFACE.

(1) INTERLOCK "HIGH" MULTI-SPEED OPERATION WITH REFRIGERANT MONITOR SYSTEM(S) ALARM CONTACTS.
(2) INTERLOCK "HIGH" MULTI-SPEED OPERATION WITH LOUVER L-2.

CONSTRUCTION DOCUMENTS

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 25166 JAMES A. LACY

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026 PETTIT & PETTIT CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

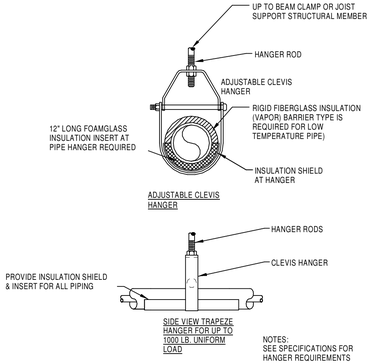
UCA CAMPUS, CONWAY, AR

DATE DESCRIPTION
REVISIONS HISTORY

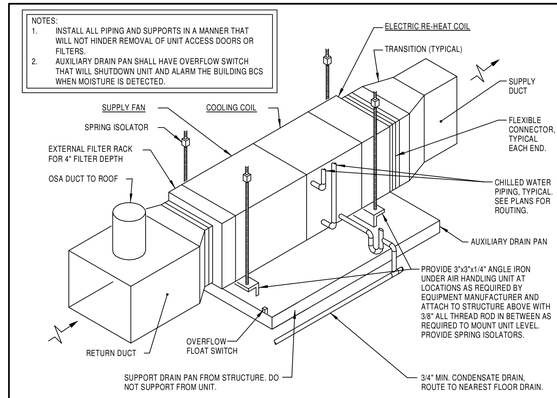
DATE: April 06, 2026

TITLE: HVAC SCHEDULES

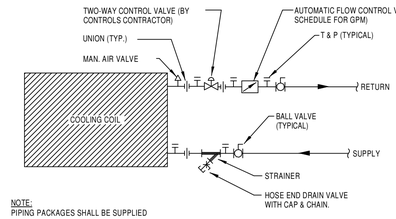
M302



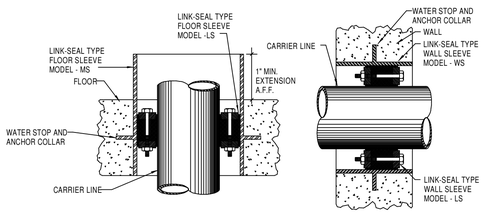
1 PIPE HANGER DETAIL
N.T.S.



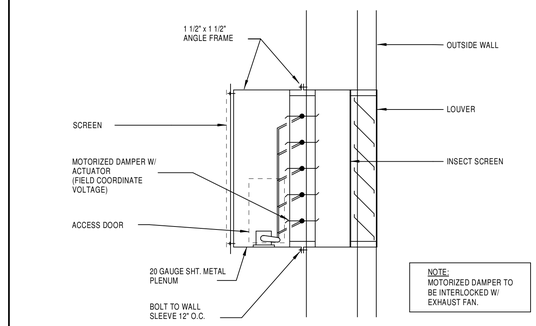
2 HORIZONTAL BLOWER COIL UNIT BCU-X INSTALLATION DETAIL
N.T.S.



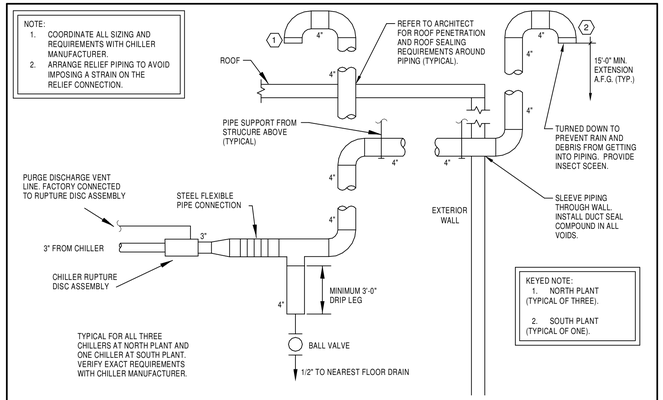
3 BLOWER COIL UNIT PIPING DETAIL
N.T.S.



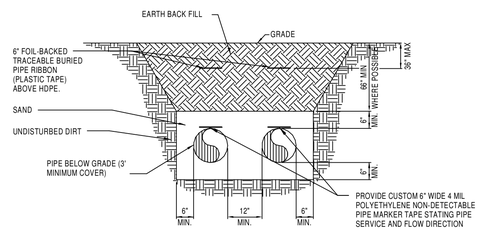
4 WATERPROOF SLEEVE DETAIL
N.T.S.
(TYPICAL FOR ALL PIPE PENETRATIONS THROUGH GROUND FLOOR SLABS AND WALLS THAT ARE BELOW GRADE)



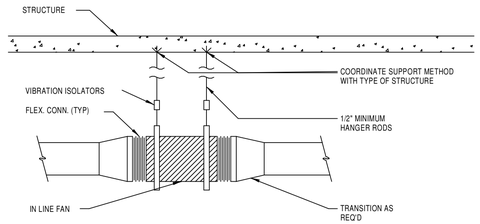
5 INTAKE LOUVER DETAIL
N.T.S.



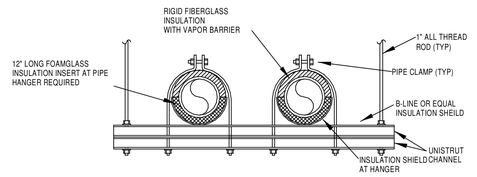
6 REFRIGERANT RELIEF PIPING DETAIL
N.T.S.



7 UNDERGROUND PIPING DETAIL
N.T.S.
(HDPE PIPING)



8 INLINE EXHAUST FAN DETAIL
N.T.S.



9 PIPE TRAPEZE HANGER
N.T.S.

CONSTRUCTION DOCUMENTS

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 25166 JAMES S. PETTIT 03/31/26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

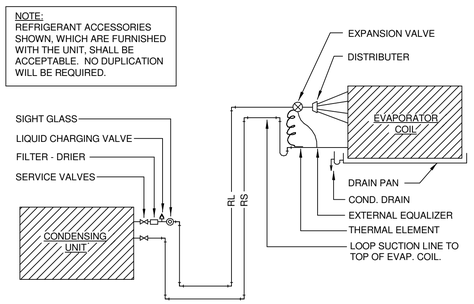
#	DATE	DESCRIPTION

REVISIONS HISTORY

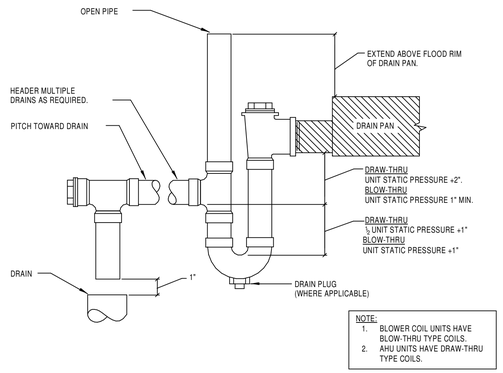
DATE: April 06, 2026

TITLE: HVAC DETAILS

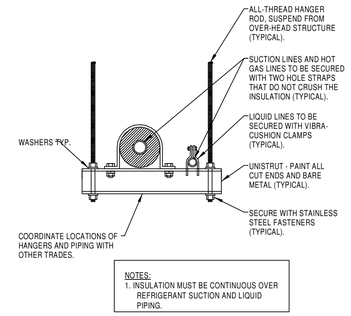
M401



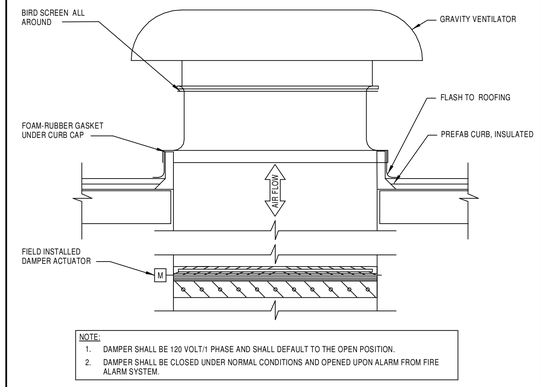
1 REFRIGERANT PIPING DIAGRAM
N.T.S.



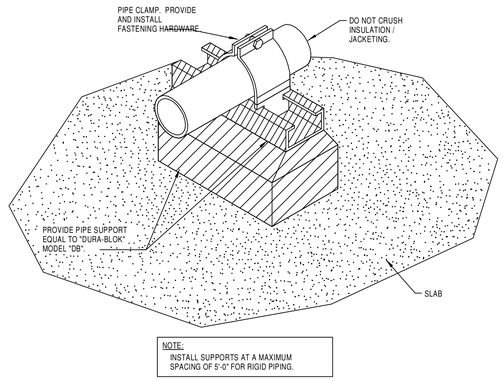
2 CONDENSATE TRAP DETAIL
N.T.S.



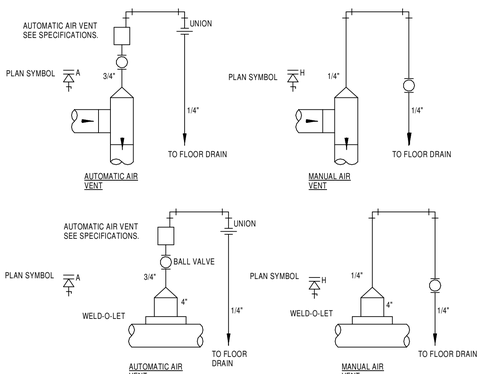
3 REFRIGERANT PIPING SUPPORT DETAIL
N.T.S.



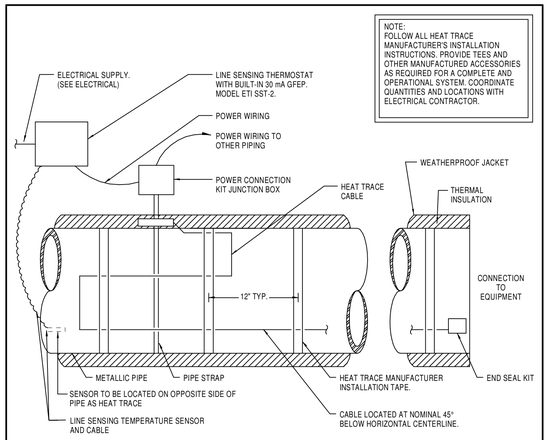
4 GRAVITY VENTILATOR DETAIL
N.T.S.



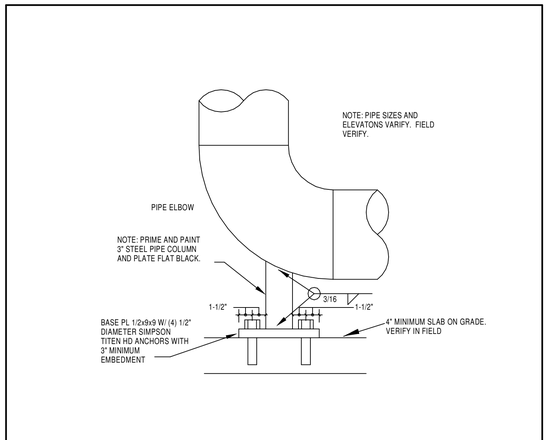
5 PIPE SUPPORT DETAIL
N.T.S.



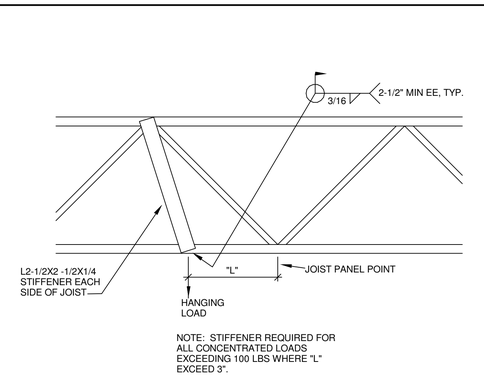
6 PIPE AIR VENT DETAILS
N.T.S.



7 HEAT TRACE INSTALLATION DETAIL
N.T.S.



8 PIPE ELBOW SUPPORT DETAIL
N.T.S.



9 TYPICAL JOIST CHORD SUPPORT DETAIL
N.T.S.

VERIFY PRINT IN COLOR
AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMES W. PETTIT No. 5166
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS
VERIFY SCALE
0 1"
CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER
© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

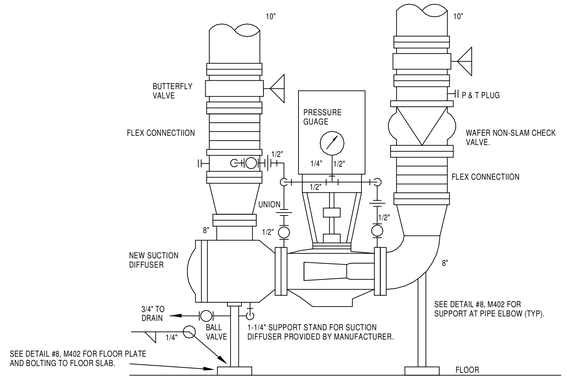
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: HVAC DETAILS

CONSTRUCTION DOCUMENTS

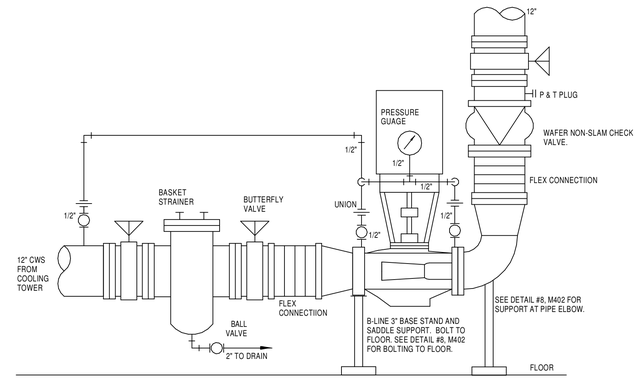
M402



1 NEW CHILLED WATER PUMP PIPING DETAIL NORTH PLANT

(CHP-1, CHP-2, AND CHP-3)

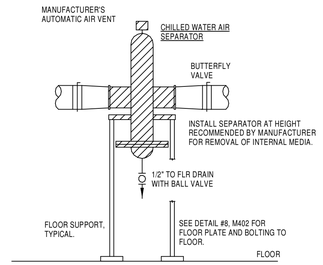
N.T.S.



2 NEW CONDENSER WATER PUMP PIPING DETAIL NORTH PLANT

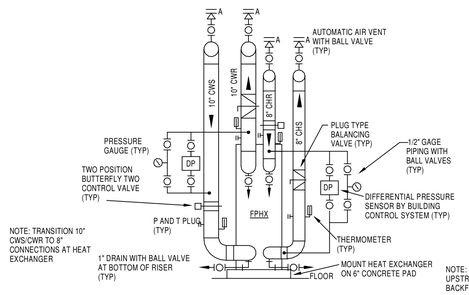
(CWP-1, CWP-2, AND CWP-3)

N.T.S.



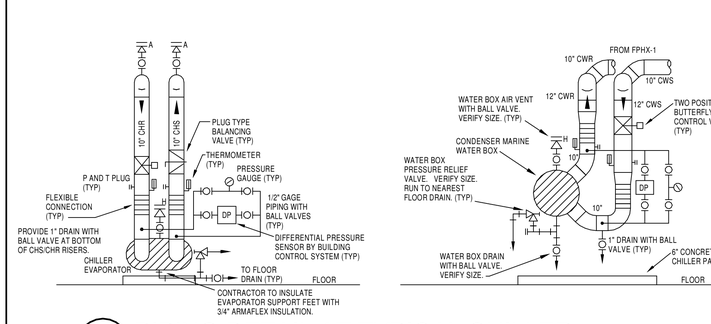
3 PIPING DETAIL AT AIR SEPARATOR NORTH PLANT

SCALE: N.T.S.



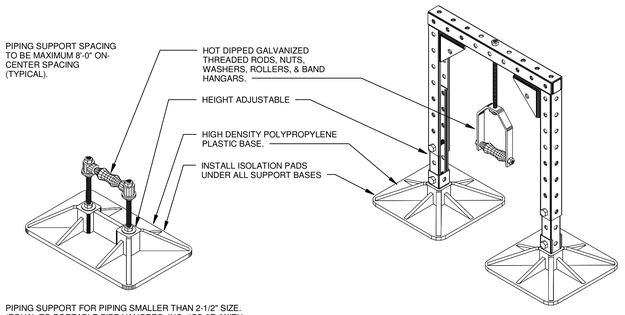
4 PIPING DETAIL AT HEAT EXCHANGER NORTH PLANT

N.T.S.

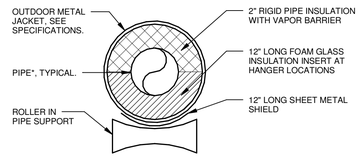


5 PIPING DETAIL AT TYPICAL CHILLER NORTH PLANT

N.T.S.



PIPING SUPPORT FOR PIPING SMALLER THAN 2-1/2" SIZE. (EQUAL TO PORTABLE PIPE HANGERS, INC. #SS-8R (WITH ROLLER) - FOR PIPING UP TO 3-1/2" SIZE USE #PP-10 WITH ROLLER, FOR 4" PIPE SIZES USE #RB-18 WITH ROLLER. ALL SUPPORTS SHALL HAVE GALVANIZED HALF RISER CLAMP.



PIPING SUPPORT FOR PIPING 6" & LARGER SIZE. (EQUAL TO PORTABLE PIPE HANGERS, INC. #PS-1-2)

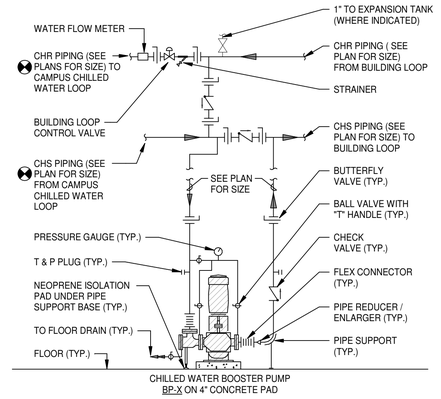
6 PIPING SUPPORT DETAIL - NORTH PLANT OUTDOOR COOLING TOWER PIPING

SCALE: NONE

*FURNISH ISOLATION PADS UNDER ALL BASES, SET CENTERLINE OF PIPE 1'-6" ABOVE MECHANICAL ROOM FLOOR LEVEL.

NOTES:

1. PROVIDE OSHA COUPLING GUARDS ON ALL PUMP SHAFTS AND EXPOSED DRIVE SYSTEMS.
2. ALL GAUGE PIPING TO BE 1/2" MINIMUM.
3. COORDINATE WITH CONTROLS CONTRACTOR FOR TEMPERATURE WELL LOCATIONS.
4. PROVIDE FLOW METER WITH A MINIMUM OF TEN (10) PIPE DIAMETER LENGTH OF STRAIGHT PIPE UPSTREAM OF FLOW METER AND A MINIMUM OF FIVE (5) PIPE DIAMETER LENGTH OF STRAIGHT PIPE DOWNSTREAM OF FLOW METER UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS.



CHILLED WATER BOOSTER PUMP BP-X ON 4" CONCRETE PAD

7 CHILLED WATER FLOW DIAGRAM

N.T.S.

(BP-1, BP-2, AND BP-3)

CONSTRUCTION DOCUMENTS

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 15166 JAMES PETTIT 12-31-26
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE 0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026 PETTIT & PETTIT CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: April 06, 2026

TITLE: HVAC DETAILS

M403

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER 15166 JAMES VANN PETTIT 03-26-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

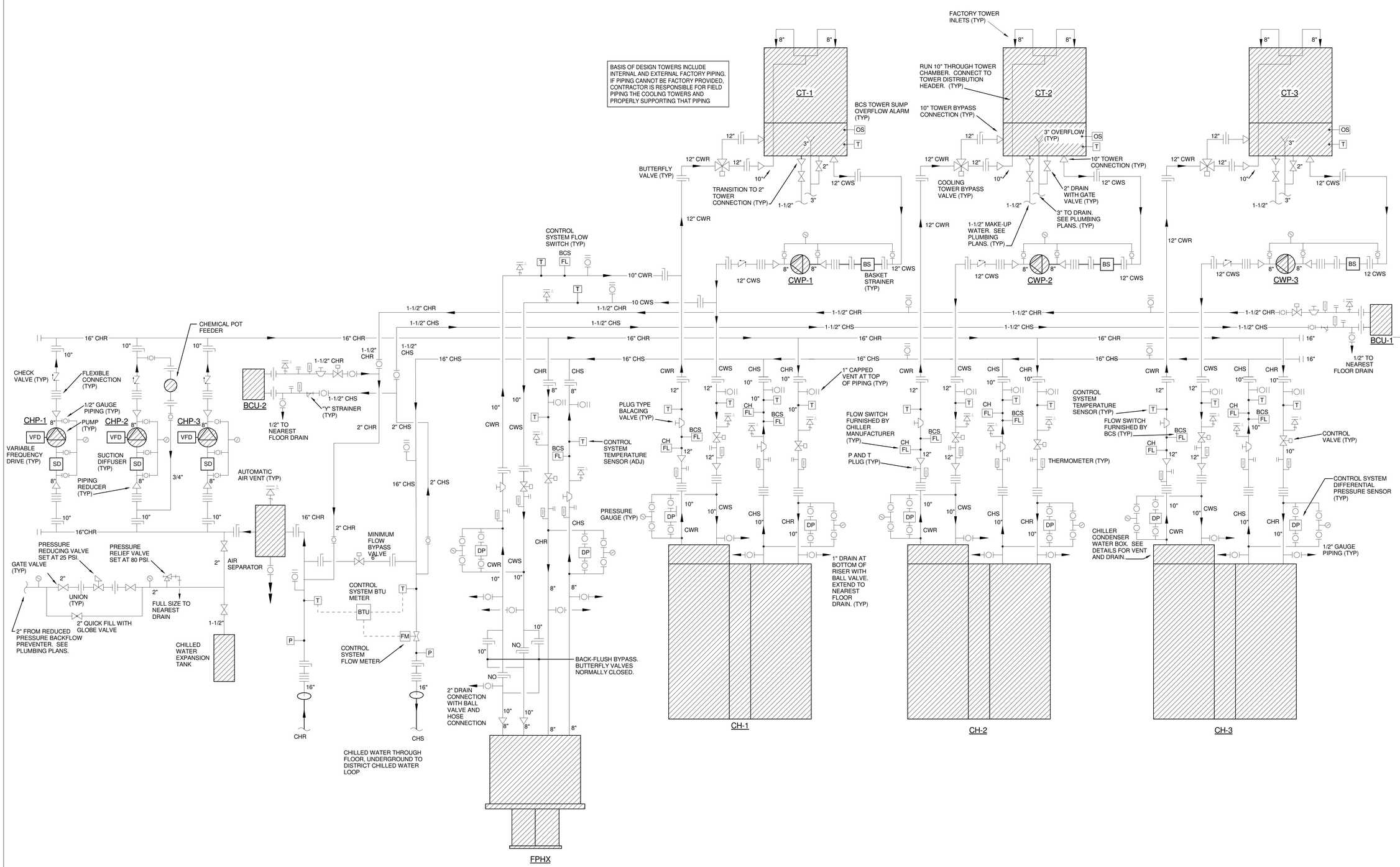
CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

BASIS OF DESIGN TOWERS INCLUDE INTERNAL AND EXTERNAL FACTORY PIPING. IF PIPING CANNOT BE FACTORY PROVIDED, CONTRACTOR IS RESPONSIBLE FOR FIELD PIPING THE COOLING TOWERS AND PROPERLY SUPPORTING THAT PIPING



1 NORTH PLANT - CHILLED WATER AND CONDENSER WATER PIPING SCHEMATIC

N.T.S.

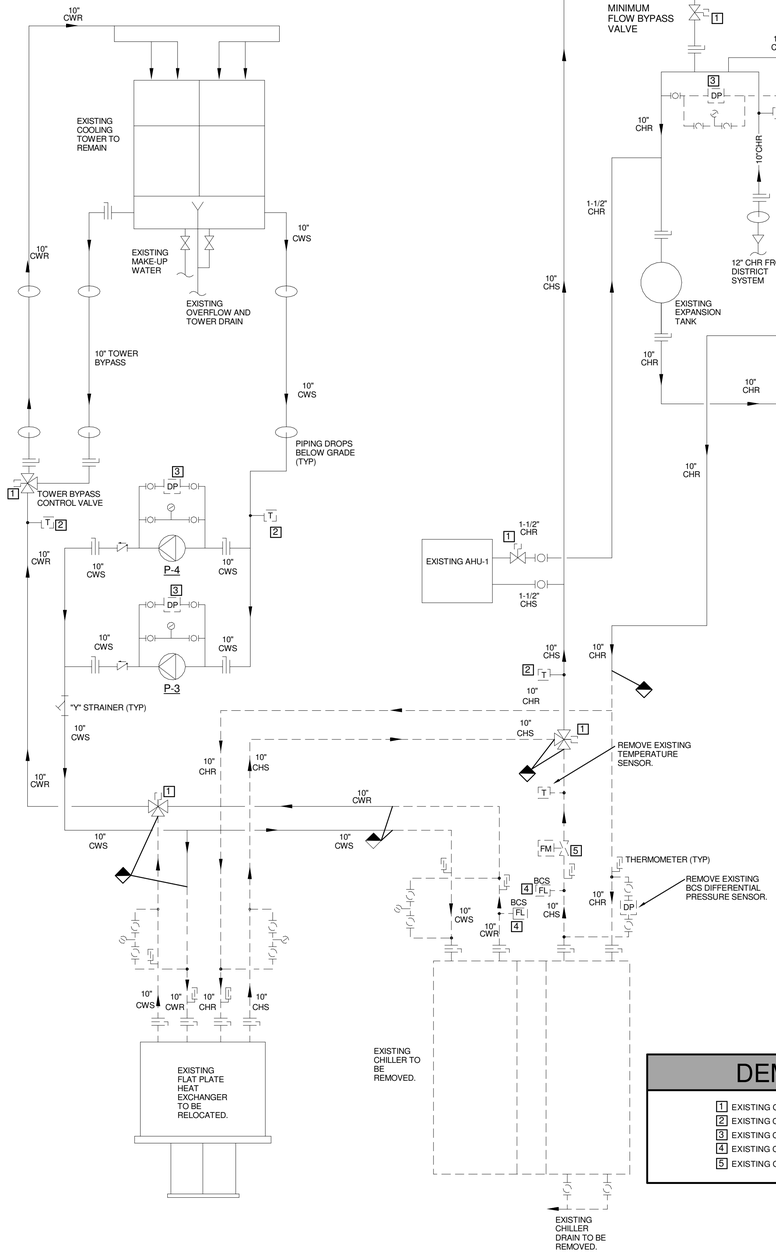
#	DATE	DESCRIPTION
REVISIONS HISTORY		

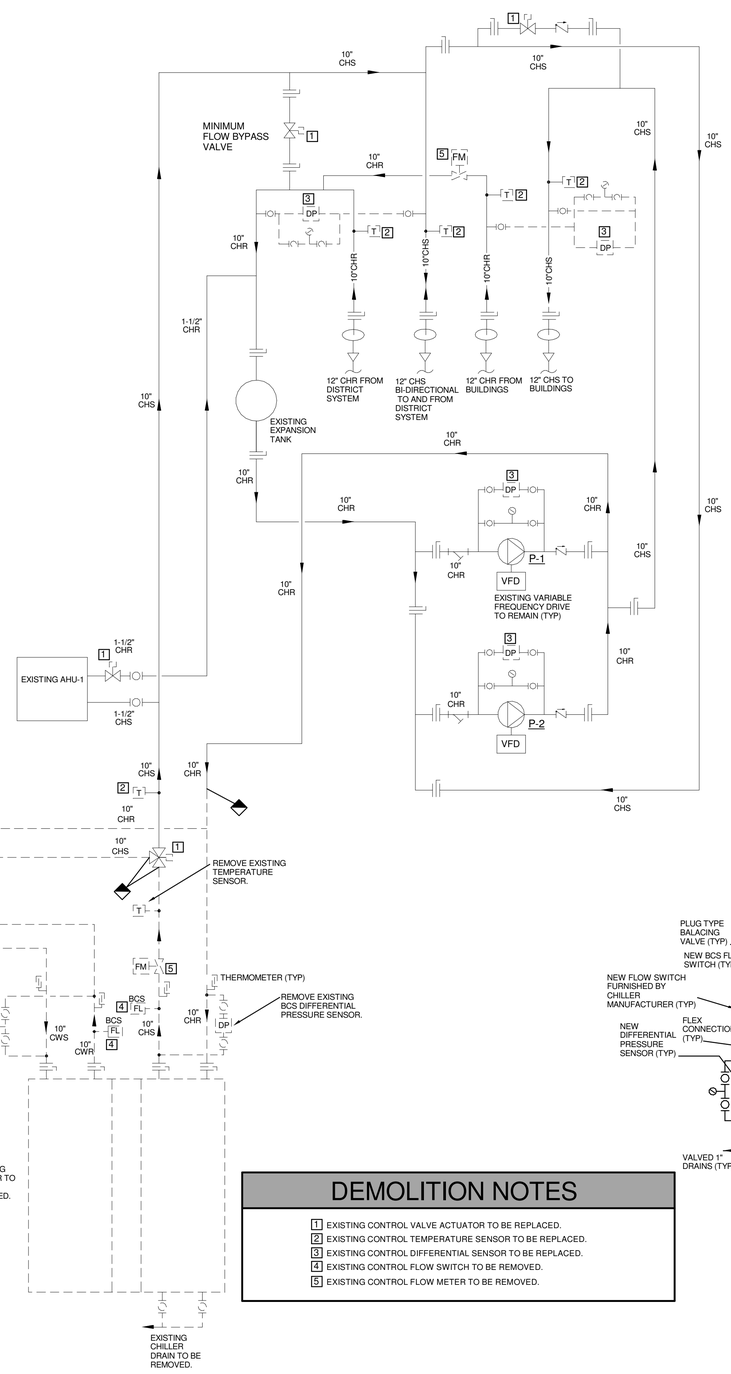
DATE: April 06, 2026

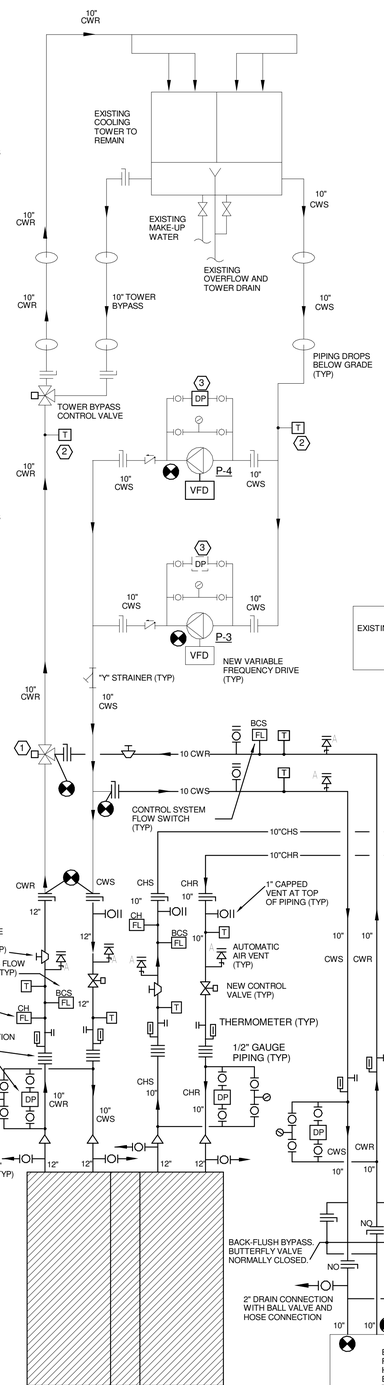
TITLE: HVAC PIPE SCHEMATIC - NORTH PLANT

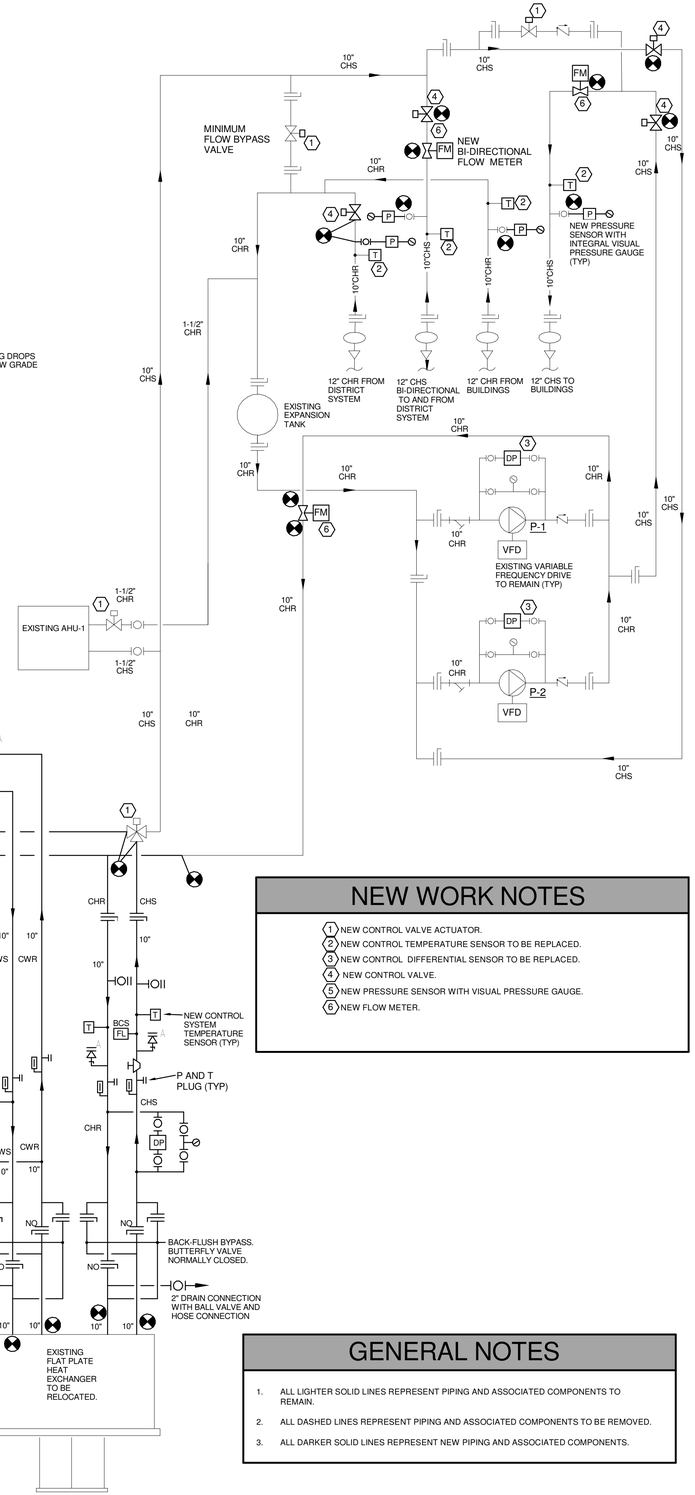
CONSTRUCTION DOCUMENTS

M501









DEMOLITION NOTES

1. EXISTING CONTROL VALVE ACTUATOR TO BE REPLACED.
2. EXISTING CONTROL TEMPERATURE SENSOR TO BE REPLACED.
3. EXISTING CONTROL DIFFERENTIAL SENSOR TO BE REPLACED.
4. EXISTING CONTROL FLOW SWITCH TO BE REMOVED.
5. EXISTING CONTROL FLOW METER TO BE REMOVED.

NEW WORK NOTES

1. NEW CONTROL VALVE ACTUATOR.
2. NEW CONTROL TEMPERATURE SENSOR TO BE REPLACED.
3. NEW CONTROL DIFFERENTIAL SENSOR TO BE REPLACED.
4. NEW CONTROL VALVE.
5. NEW PRESSURE SENSOR WITH VISUAL PRESSURE GAUGE.
6. NEW FLOW METER.

GENERAL NOTES

1. ALL LIGHTER SOLID LINES REPRESENT PIPING AND ASSOCIATED COMPONENTS TO REMAIN.
2. ALL DASHED LINES REPRESENT PIPING AND ASSOCIATED COMPONENTS TO BE REMOVED.
3. ALL DARKER SOLID LINES REPRESENT NEW PIPING AND ASSOCIATED COMPONENTS.

1 SOUTH PLANT - CHILLED WATER AND CONDENSER WATER PIPING SCHEMATIC - DEMOLITION
N.T.S.

2 SOUTH PLANT - CHILLED WATER AND CONDENSER WATER PIPING SCHEMATIC - NEW
N.T.S.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMES VANCE PETTIT 15166 03-26-26
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

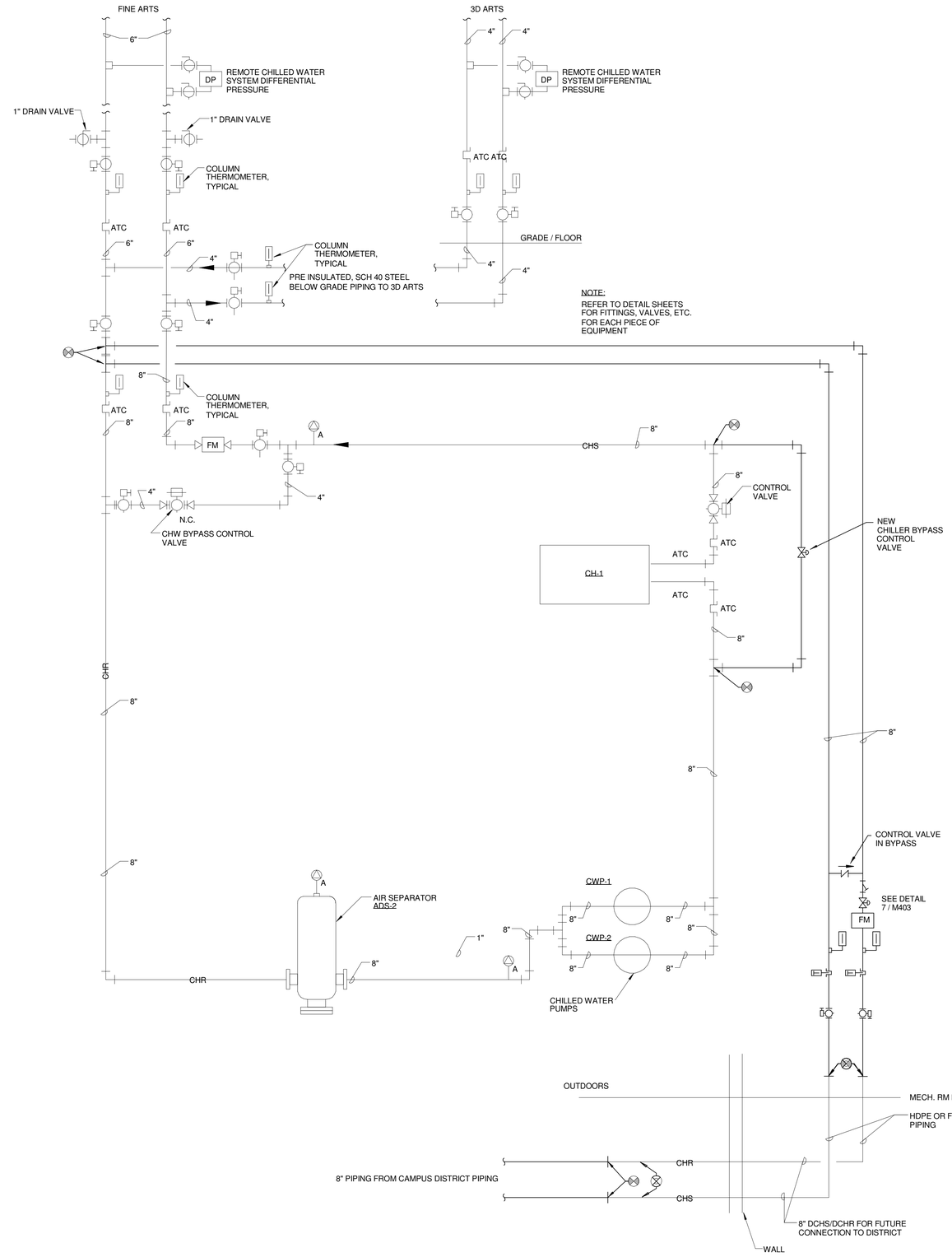
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: HVAC PIPE SCHEMATIC - SOUTH PLANT

CONSTRUCTION DOCUMENTS

M502



1 WINDGATE CEP CHILLED WATER SYSTEM PIPING DIAGRAM
NOT TO SCALE

CONSTRUCTION DOCUMENTS

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMES SACKS 25166

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

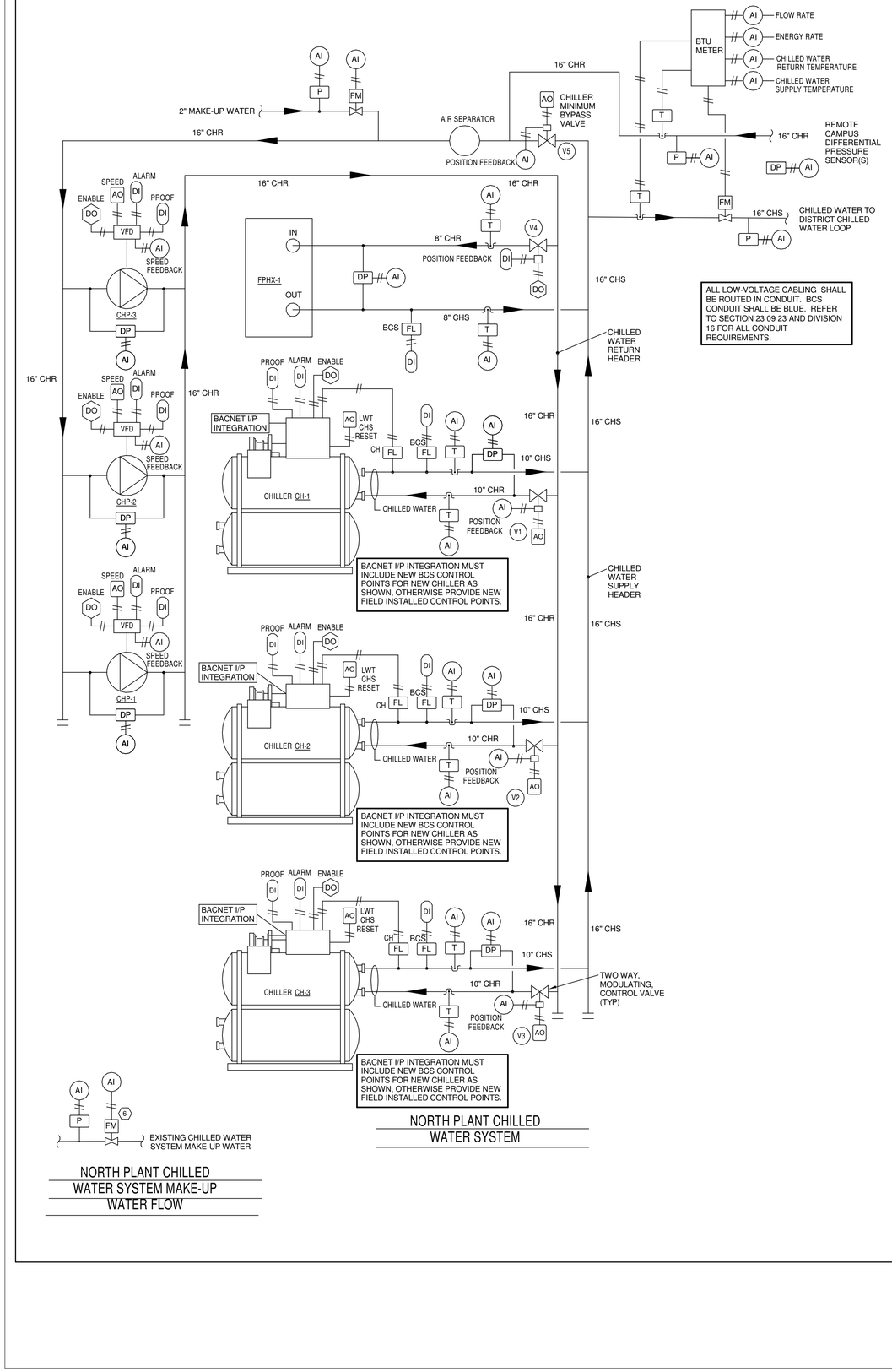
#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: April 06, 2026

TITLE: HVAC PIPE SCHEMATIC - WINDGATE HALL

M503



NORTH PLANT CHILLED WATER SYSTEM

NORTH PLANT CHILLED WATER SYSTEM MAKE-UP WATER FLOW

CHILLED WATER SYSTEM

CHILLED WATER SEQUENCE OF OPERATION

GENERAL NOTES

UPGRADE AND MODIFY THE EXISTING CAMPUS BUILDING CONTROL SYSTEM (BCS) AS REQUIRED TO PROVIDE FOR THE NEW CHILLED WATER PLANT CHILLED WATER SYSTEM. THE UPGRADES AND MODIFICATIONS TO THE BCS SHALL FACILITATE THE SEQUENCE OF OPERATION INDICATED AND PROVIDE FOR SYSTEM OPERATING, MONITORING, AND ALARM POINTS. NEW CHILLED WATER SYSTEM SHALL OPERATE CONTINUOUSLY UPON COMMAND BY OPERATING PERSONNEL.

CONTROL COORDINATION NOTES

REPESENTATIVES FROM THE CHILLER MANUFACTURER AND THE BCS CONTRACTOR SHALL COORDINATE CLOSELY IN SETTING UP STABLE CHILLER OPERATION DURING TIMES WHEN A CHILLER IS ENABLED TO RUN WITH THE CHILLER(S) ALREADY IN OPERATION; OR WHEN A CHILLER IS DISABLED, LEAVING THE OTHER CHILLER(S) TO CONTINUE RUNNING.

CHILLER OPERATION OVERVIEW

CHILLER FACTORY CONTROL PANELS SHALL MONITOR AND CONTROL CHILLER OPERATION.
THE BCS SHALL ENABLE CHILLER OPERATION AND MONITOR CHILLED WATER SYSTEM STATUS AND PHYSICAL POINTS SHOWN ON THE PLANS THROUGH BACNET I/P INTEGRATION OR NEW FIELD HARDWARE AS REQUIRED.

CHILLERS CH-2 AND CH-3 ARE OPTIMIZED FOR FULL LOAD OPERATION AND SHALL RUN AS LEAD CHILLERS DURING PERIODS OF HIGH CHILLED WATER DEMAND. CH-1 SHALL RUN AS LAG CHILLER AS NEEDED.

CHILLER CH-1 IS OPTIMIZED FOR PART LOAD OPERATION AND SHALL BE LEAD CHILLER DURING PERIODS OF LOW CHILLED WATER DEMAND. CHILLER CH-2 OR CH-3 SHALL RUN AS LAG CHILLER AS NEEDED.

MINIMUM FLOW FOR CHILLER CH-1 IS 480.6 GPM CORRESPONDING TO 2.73 FT OF WATER. MINIMUM FLOW FOR CHILLER CH-2 AND CH-3 IS 294.7 GPM CORRESPONDING TO 0.74 FT OF WATER.

VARIABLE SPEED CHILLED WATER PUMPING

CHILLED WATER PUMPS CHP-1, CHP-2, AND CHP-3 SHALL BE STARTED BY THE BCS THROUGH EACH PUMP'S VARIABLE FREQUENCY DRIVE. THE PUMPS SHALL OPERATE AS DUTY PUMP, LAG PUMP, AND STANDBY PUMP. THE BCS SHALL ALTERNATE DUTY PUMP, LAG PUMP, AND STANDBY PUMP STATUS. DUTY PUMP AND LAG PUMP SHALL OPERATE TO MAINTAIN DEMAND CHILLED WATER FLOW AS DETERMINED BY REMOTE SYSTEM DIFFERENTIAL SENSOR(S). WHEN THE CHILLED WATER SYSTEM HAS BEEN ENABLED, THE LEAD PUMP SHALL START AND OPERATE UNITL IT REACHES 90% (ADJ) OF RQUIRED FLOW FOR A PERIOD OF 10 MINUTES (ADJ). LAG PUMP SHALL THEN START. LEAD PUMP SHALL RAMP DOWN AND LAG PUMP SHALL RAMP UP UNTIL BOTH PUMPS REACH THE SAME SPEED. BOTH PUMPS SHALL CONTINUE TO RAMP UP TOGETHER, MAINTAINING THE SAME SPEED, AS REQUIRED TO MEET THE DEMAND FLOW. IN THE EVENT OF A FAILURE OF EITHER PUMP, AN ALARM SHALL BE SENT TO THE BCS. THE STANDBY PUMP SHALL OPERATE IN THE PLACE OF THE FAILED PUMP.

CHILLER SEQUENCE OF OPERATION

THE CHILLED WATER SYSTEM SHALL BE ENABLED ON A SCHEDULE DEFINED BY OPERATING PERSONNEL.
ONCE ENABLED, THE CONDENSER WATER SYSTEM SHALL ALSO BE ENABLED. THE LEAD CHILLER'S CHILLED WATER AND CONDENSER WATER CONTROL VALVES SHALL OPEN. ONCE OPENED, THE BCS SHALL START THE LEAD CHILLED WATER PUMP. AFTER PROOF OF FLOW FROM THE CHILLED WATER AND CONDENSER WATER BCS FLOW SWITCHES, AND CHILLED WATER FLOW THROUGH THE CHILLER AS SENSED BY THE CHILLER'S DIFFERENTIAL PRESSURE SENSOR EXCEEDS MINIMUM ALLOWABLE FLOW, LEAD CHILLER SHALL START. ONCE STARTED, CHILLER SHALL OPERATE THROUGH ITS FACTORY CONTROLS TO MAINTAIN THE CHILLER LEAVING WATER TEMPERATURE SETPOINT OF 42 DEG. F (ADJ). THE BCS SHALL PROVIDE, THROUGH CHILLER CONTROLS, RESET OF CHILLER LEAVING WATER TEMPERATURE BASED ON AN AMBIENT DRY BULB TEMPERATURE SCHEDULE DEFINED BY OPERATING PERSONNEL.
WHEN A CHILLER IS NOT OPERATING, ITS CORRESPONDING CONTROL VALVE SHALL BE CLOSED.
CHILLER ENETERING WATER CONTROL VALVES SHALL MODULATE TO PROVIDE DESIRED CHILLER FLOW.

CHILLERS SHALL BE STAGED AS FOLLOWS:

CHILLED WATER DEMAND FLOW RATE (GPM):	CHILLER ENABLED:
< 1143	CH-1
1143 - 1715	CH-1 PLUS EITHER CH-2 OR CH-3
1715 - 2286	CH-2 AND CH-3
2286 - 3429	CH-2, CH-3, AND CH-1
1715 - 2286	CH-2 AND CH-3
1143 - 1715	CH-1 PLUS EITHER CH-2 OR CH-3
< 1143	CH-1

DURING PERIODS OF LOW CHILLED WATER DEMAND, WHEN ONLY ONE CHILLER IS RUNNING, AND THE CHILLED WATER FLOW DROPS BELOW THE CHILLER'S MINIMUM ALLOWABLE FLOW RATE; MINIMUM CHILLER FLOW AS SENSED BY THE CHILLER'S DIFFERENTIAL PRESSURE SENSOR SHALL BE MAINTAINED BY MODULATING THE CHILLER MINIMUM BYPASS VALVE (V5).

BTU METER SHALL SENSE THE DISTRICT LOOP CHILLED WATER SUPPLY AND RETURN WATER TEMPERATURES; AND THE RETURN CHILLED WATER FLOW. THE METER SHALL PROVIDE THE FOLLOWING POINTS TO THE BCS:

- RETURN WATER FLOW RATE
- ENERGY RATE
- RETURN WATER TEMPERATURE
- SUPPLY WATER TEMPERATURE

REFER TO THE CONDENSER WATER SYSTEM SEQUENCE OF FOR THE OPERATION OF THE FLAT PLATE HEAT EXCHANGER. WHEN THE FLATE PLATE HEAT EXCHANGER IS NOT IN OPERATION CONTROL VALVE (V4) SHALL BE CLOSED.

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

VALVE SCHEDULE:

V1 - CHILLER CH-1 INLET WATER VALVE - NEW
V2 - CHILLER CH-2 INLET WATER VALVE - NEW
V3 - CHILLER CH-3 INLET WATER VALVE - NEW
V4 - FLAT PLATE HEAT EXCHANGER CHR INLET VALVE - NEW
V5 - CHILLER MINIMUM FLOW BYPASS VALVE - NEW

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
- CONTROL VALVE POSITION FEEDBACK
- CONTROL VALVE POSITION FEEDBACK FAILURE ALARM
- CHILLER PROVIDED CHILLED WATER PROOF OF FLOW
- BCS PROVIDED CHILLED WATER PROOF OF FLOW
- CHILLER ENABLE
- CHILLER STATUS
- CHILLER ALARM
- LEAVING CHILLED WATER TEMPERATURE RESET
- FPHX-1 ENTERING AND LEAVING CHILLED WATER TEMPERATURES
- FPHX-1 ENTERING CHILLED WATER CONTROL VALVE STATUS
- FPHX-1 CHILLED WATER FLOW
- CHILLED WATER MINIMUM BYPASS VALVE POSITION
- CHILLED WATER PUMPS - VFD PROOF OF OPERATION
- CHILLED WATER PUMPS - VFD SPEED
- CHILLED WATER PUMPS - VFD ENABLE
- CHILLED WATER PUMPS - VFD ALARM
- CHILLED WATER PUMPS - VFD SPEED FEEDBACK
- CHILLED WATER PUMPS - VFD SPEED FEEDBACK FAILURE ALARM
- REMOTE CAMPUS DIFFERENTIAL PRESSURES

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — JAMES W. PETTIT — NO. 15166

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION — PETTIT & PETTIT CONSULTING ENGINEERS, INC. — No. 78 — ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

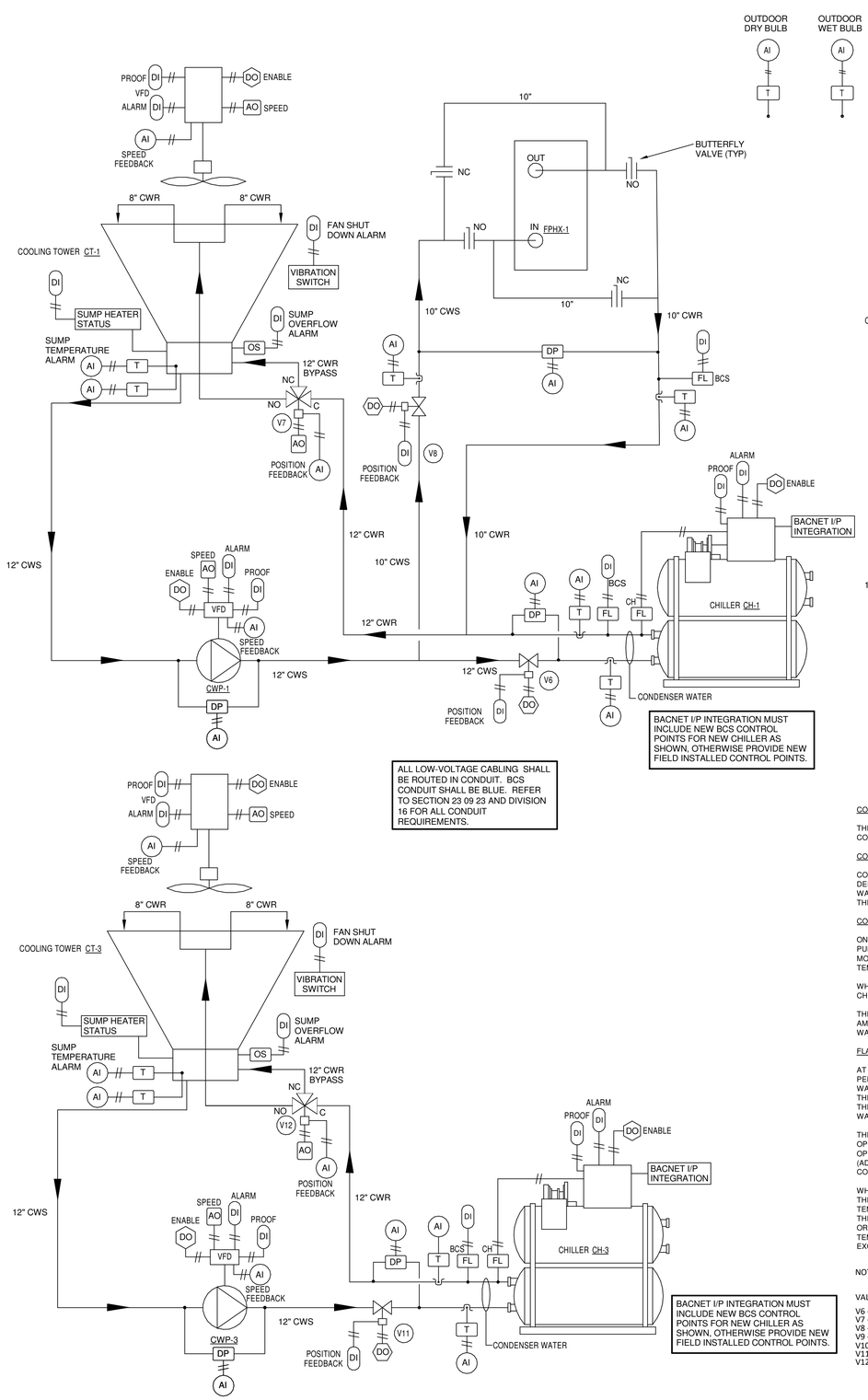
REVISIONS HISTORY

DATE: April 06, 2026

TITLE: HVAC CONTROLS

CONSTRUCTION DOCUMENTS

M601



CONDENSER WATER SYSTEM SEQUENCE OF OPERATION

THE CHILLED WATER SYSTEM SHALL OPERATE CONTINUOUSLY UPON COMMAND FROM OPERATING PERSONNEL. ONCE ENABLED, THE CONDENSER WATER SYSTEM SHALL OPERATE.

CONDENSER WATER PUMPS:

CONDENSER WATER PUMPS CWP-1 , CWP-2 , AND CWP-3 ARE VARIABLE SPEED PUMPS. CWP-1 IS DEDICATED TO CHILLER CH-1. CWP-2 IS DEDICATED TO CHILLER CH-2 AND CWP-3 IS DEDICATED TO CHILLER CH-3. ON A CALL FOR A CHILLER TO RUN, ITS RESPECTIVE CONDENSER WATER PUMP IS ENABLED. CHILLER AND FLAT PLATE HEAT EXCHANGER DIFFERENTIAL PRESSURE SENSORS SHALL BE USED TO MODULATE THE PUMPS TO MAINTAIN REQUIRED CONDENSER WATER FLOW RATES.

COOLING TOWER SEQUENCE OF OPERATION

ONCE A CHILLER IS ENABLED, ITS CORRESPONDING CONDENSER WATER CONTROL VALVE SHALL OPEN. THE ASSOCIATED CONDENSER WATER PUMP SHALL START. PROOF OF FLOW SHALL BE ESTABLISHED BY THE BCS FLOW SWITCH. THE COOLING TOWER FAN SHALL START AND MODULATE IN SEQUENCE WITH THE TWO POSITION, THREE-WAY TOWER BYPASS VALVE, TO MAINTAIN A CONDENSER WATER SUPPLY TEMPERATURE OF OUTDOOR WET BULB TEMPERATURE PLUS 5 DEG. F, WITH A MINIMUM OF 65 DEG. F AND A MAXIMUM OF 85 DEG.

WHEN A CHILLER IS DISABLED TO RUN, THE ASSOCIATED COOLING TOWER FAN AND CONDENSER WATER PUMP SHALL STOP. THE CHILLER'S CHILLED WATER AND CONDENSER WATER CONTROL VALVES SHALL CLOSE.

THE BASIN HEATERS IN EACH COOLING TOWER, THROUGH FACTORY CONTROLS, SHALL KEEP BASIN TEMPERATURES AT 40 DEG. F WHEN AMBIENT TEMPERATURE FALLS BELOW 36 DEG. F (ADJ). A TOWER BASIN TEMPERATURE ALARM SHALL BE SENT TO THE BCS WHEN THE BASIN WATER TEMPERATURE FALLS BELOW 34 DEG.F.

FLAT PLATE HEAT EXCHANGER SEQUENCE OF OPERATION:

AT CHILLER CH-1 AND COOLING TOWER CT-1, WHEN THE OUTDOOR AMBIENT WET BULB TEMPERATURE DROPS BELOW 40 DEG. F (ADJ) FOR A PERIOD OF MORE THAN 15 MINUTES (ADJ), THE FLAT PLATE HEAT EXCHANGER SEQUENCE OF OPERATION SHALL BE ENABLED. CONDENSER WATER PUMP CWP-1 SHALL CONTINUE TO RUN. ALL CHILLERS SHALL STOP. CHILLER CONTROL VALVES (V2), (V3), (V9), AND (V11) SHALL CLOSE. THE FLAT PLATE HEAT EXCHANGER CONTROL VALVE (V8) SHALL OPEN. WHEN FULLY OPEN AND FLOW IS PROVEN BY THE BCS FLOW SWITCH AT THE HEAT EXCHANGER, THE CHILLER'S CHILLED WATER AND CONDENSER WATER CONTROL VALVES (V1) AND (V6) SHALL CLOSE. LEAD CHILLED WATER PUMP SHALL CONTINUE TO OPERATE.

THE BCS SHALL RESET THE CONDENSER WATER SUPPLY TEMPERATURE TO 40 DEG. F (ADJ). THE COOLING TOWER FAN SHALL MODULATE AND OPERATE IN SEQUENCE WITH THE TWO POSITION, THREE WAY VALVE (V7) , EITHER BEING FULLY OPEN TO THE HOT WATER BASIN OR FULLY OPEN TO THE COLD WATER BASIN, BYPASSING THE TOWER, TO REDUCE THE CONDENSER WATER SUPPLY WATER TEMPERATURE TO 40 DEG. F (ADJ). THE COOLING TOWER FAN AND TWO POSITION, THREE WAY VALVE (V7) SHALL CONTINUE TO OPERATE IN SEQUENCE TO MAINTAIN THE CONDENSER WATER SUPPLY TEMPERATURE SET POINT OF 40 DEG. F (ADJ).

WHEN THE OUTDOOR AMBIENT WET BULB TEMPERATURE RISES TO 44 DEG. F (ADJ) OR HIGHER FOR A PERIOD OF MORE THAN 15 MINUTES (ADJ), THE PLATE HEAT EXCHANGER SEQUENCE OF OPERATION SHALL BE DISABLED. THE COOLING TOWER LEAVING CONDENSER WATER TEMPERATURE SHALL RETURN TO ITS NORMAL RANGE OF A MAXIMUM OF 85 DEG. F AND A MINIMUM TEMPERATURE OF 65 DEG. F (ADJ). DURING THIS TRANSITION, THE COOLING TOWER FANS SHALL BE DISABLED, AND TOWER VALVE (V7) SHALL BE OPEN TO THE COLD WATER BASIN IN ORDER TO RAISE THE CONDENSER WATER SUPPLY BACK TO THE MINIMUM TEMPERATURE OF 65 DEG.F. ONCE CONDENSER WATER SUPPLY TEMPERATURE REACHES 65 DEG. F, CHILLER CH-1 CHILLED WATER AND CONDENSER WATER CONTROL VALVES SHALL OPEN. FLAT PLATE HEAT EXCHANGER ISOLATION VALVES (V4) AND (V8) SHALL THEN CLOSE. THE CHILLER SEQUENCE OF OPERATION SHALL BE ENABLED AND CHILLER CH-1 SHALL START.

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

VALVE SCHEDULE:

V6 - CHILLER CH-1 ENTERING CONDENSER WATER VALVE - NEW
V7 - COOLING TOWER CT-1 BYPASS VALVE - NEW
V8 - FLAT PLATE HEAT EXCHANGER CONDENSER WATER VALVE - NEW
V9 - CHILLER CH-2 ENTERING CONDENSING WATER VALVE - NEW
V10 - COOLING TOWER CT-2 BYPASS VALVE - NEW
V11 - CHILLER CH-3 ENTERING CONDENSER WATER VALVE - NEW
V12 - COOLING TOWER CT-3 BYPASS VALVE - NEW

PROVIDE THE FOLLOWING OPERATING, STATUS, AND ALARM POINTS TO THE BCS:

CHILLER ENTERING AND LEAVING CONDENSER WATER TEMPERATURES
CHILLER CONDENSER WATER SUPPLY FLOW RATE
CHILLER ENTERING CONDENSER WATER CONTROL
CONTROL VALVE POSITION FEEDBACK AT ALL CHILLERS
CONTROL VALVE POSITION FEEDBACK FAILURE ALARM AT ALL CHILLERS
CHILLER CONDENSER WATER PROOF OF FLOW
BCS CONDENSER WATER PROOF OF FLOW
COOLING TOWER FANS - VFD ENABLE
COOLING TOWER FANS - VFD PROOF OF OPERATION
COOLING TOWER FANS - VFD ALARM
COOLING TOWER FANS - VFD SPEED
COOLING TOWER FANS - VFD SPEED FEEDBACK
COOLING TOWER FANS - VFD SPEED FEEDBACK FAILURE ALARM
COOLING TOWER BASIN HEATER STATUS
COOLING TOWER SUMP TEMPERATURE ALARM
COOLING TOWER OVERFLOW ALARM
COOLING TOWER VIBRATION SWITCH ALARM
COOLING TOWER TWO POSITION, THREE WAY CONTROL VALVE POSITION FEEDBACK
COOLING TOWER TWO POSITION, THREE WAY CONTROL VALVE POSITION FEEDBACK FAILURE ALARM
FPHX-1 ENTERING AND LEAVING CONDENSER WATER TEMPERATURES
FPHX-1 ENTERING CONTROL VALVE POSITION FEEDBACK
FPHX-1 ENTERING CONTROL VALVE POSITION FEEDBACK FAILURE ALARM
FPHX-1 CONDENSER WATER PROOF OF FLOW
FPHX-1 CONDENSER WATER FLOW
CONDENSER WATER PUMPS - VFD PROOF OF OPERATION
CONDENSER WATER PUMPS - VFD ENABLE
CONDENSER WATER PUMPS - VFD ALARM
CONDENSER WATER PUMPS - VFD SPEED
CONDENSER WATER PUMPS - SPEED FEEDBACK
CONDENSER WATER PUMPS - SPEED FEEDBACK FAILURE ALARM

CONSTRUCTION DOCUMENTS

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 15166 JAMES S. PETTIT 05-26-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

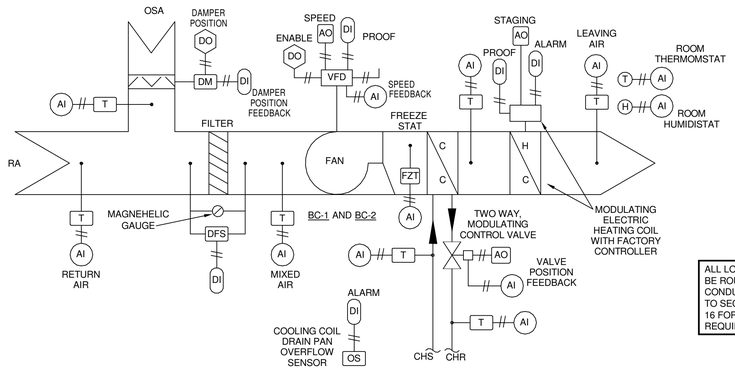
#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: April 06, 2026

TITLE: HVAC CONTROLS

M602



NORTH PLANT CHILLED WATER BLOWER COIL UNITS BC-1 AND BC-2

SEQUENCE OF OPERATION

ON A CALL FROM THE SPACE THERMOSTAT FOR HEATING OR COOLING, OR A CALL FROM THE SPACE HUMIDISTAT FOR DE-HUMIDIFACTION; SUPPLY FAN SHALL START THROUGH IT'S VARIABLE FREQUENCY DRIVE AND RUN AT SCHEDULED AIRFLOW RATE. THE OUTSIDE AIR DAMPER SHALL OPEN TO A MINIMUM POSITION OF 975 CFM. DIRTY FILTER ALARM SHALL MONITOR PRESSURE DROP ACROSS FILTER.

IN COOLING MODE, ELECTRIC HEAT SHALL BE OFF. CHILLED WATER COIL VALVE SHALL MODULATE THROUGH SPACE THERMOSTAT TO PROVIDE SPACE TEMPERATURE SETPOINT OF 75 DEG.F (ADJ)

IN HEATING MODE, CHILLED WATER VALVE SHALL BE CLOSED. ELECTRIC HEATING COIL SHALL MODULATE THROUGH SPACE THERMOSTAT TO PROVIDE SPACE TEMPERATURE SETPOINT OF 75 DEG. F (ADJ). WHEN FREEZE STAT TEMPERATURE FALLS BELOW 36 DEG. F (ADJ), THE OUTSIDE DAMPER SHALL CLOSE AND THE CHILLED WATER COIL SHALL OPEN TO 100% TO PREVENT COIL FREEZING.

WHEN THE UNIT IS OFF, THE OUTSIDE AIR DAMPER SHALL CLOSE.

IN DE-HUMIDIFICATION MODE, CHILLED WATER COIL VALVE SHALL MODULATE IN SEQUENCE WITH MODULATING HEATING COIL TO MAINTAIN SPACE TEMPERATURE SETPOINT AND SPACE RELATIVE HUMIDITY SETPOINT OF 50% RH. (ADJ) AS SENSED AT ROOM HUMIDISTAT.

OUTSIDE AIR DAMPER SHALL CLOSE WHEN FAN STOPS.

DRAIN PAN OVERFLOW SENSOR SHALL STOP UNIT OPERATION AND SEND AN ALARM TO THE BCS WHEN IT SENSES DRAIN PAN CONDENSATE.

PROVIDE THE FOLLOWING OPERATING, STATUS, AND ALARM POINTS TO THE BCS:

OUTSIDE AIR TEMPERATURE

OSA DAMPER POSITION

OSA DAMPER FAILURE

DIRTY FILTER ALARM

MIXED AIR TEMPERATURE

FAN START/STOP

FAN STATUS

FAN SPEED

FAN ALARM

COIL DRAIN PAN ALARM

COOLING COIL ENTERING TEMPERATURE

COOLING COIL LEAVING TEMPERATURE

COOLING COIL VALVE POSITION FEEDBACK

COOING COIL VALVE FAILURE

HEATING COIL ENTERING TEMPERTURE

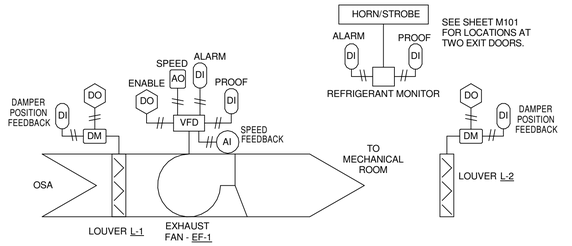
HEATING COIL LEAVING TEMPERATURE

HEATING COIL STATUS

HEATING COIL ALARM

ROOM TEMPERATURE

ROOM RELATIVE HUMIDTY



NORTH PLANT EF-1 AND CHILLED WATER REFRIGERANT MONITORING SYSTEM

EXHAUST FAN EF-1 SHALL OPEARTE AS A TWO STAGE FAN. FAN SHALL BE ENABLED TO RUN BY THE BCS. ONCE ENABLED LOUVER L-1 SHALL OPEN AND LOUVER L-2 SHALL REMAIN CLOSED. ONCE LOUVER L-1 IS OPEN, FAN SHALL START AND PROVIDE NORMAL MECHANICAL ROOM VENTILATION AT 1,680 CFM.

REFRIGERANT MONITORING SYSTEM FURNISHED BY THE CONTROLS CONTRACTOR SHALL BE INTEGRATED INTO THE BCS THROUGH BACNET IP INTERFACE.

UPON SENSING REFRIGERANT, AN ALARM SHALL BE SENT TO THE BCS AND LOCAL HORNS AND STROBES SHALL BE ACTIVATED. LOUVER L-1 SHALL REMAIN OPEN AND LOUVER L-2 SHALL OPEN. WHEN FULLY OPEN, EXHAUST FAN EF-1 SHALL OPERATE AT HIGH SPEED MODE TO PROVIDE 2,830 CFM FOR REFRIGERANT REMOVAL.

IF BC-1 OR BC-2 ARE RUNNING, THEY SHALL STOP. OUTSIDE AIR AND RETURN AIR DAMPERS SHALL CLOSE.

WHEN THE ALARM SITUATION HAS BEEN RECTIFIED AND THE MONITOR SYSTEM IS BACK TO NORMAL OPERATION, EXHAUST FAN, EF-1 SHALL RETURN TO NORMAL VENTILATION DUTY WITH LOUVER L-1 OPEN AND LOUVER L-2 CLOSED. BLOWER COIL UNITS BC-1 AND BC-2 SHALL START IF REQUIRED TO RUN. THE ASSOCIATED OUTSIDE AIR DAMPERS SHALL CLOSE TO MINUMUM POSITIONS.

PROVIDE THE FOLLOWING OPERATING, STATUS, AND ALARM POINTS TO THE BCS:

MONITOR OPERATING PROOF

REFRIGERANT ALARM

FAN - VFD ENABLE

FAN - VFD PROOF OF OPERATION

FAN - VFD SPEED

FAN - VFD SPEED FEEDBACK

FAN - VFD SPEED FEEDBACK FAILURE ALARM

FAN - VFD ALARM

DAMPER POSITION FEEDBACKS

DAMPER POSITION FEEDBACK FAILURES

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.

MINI-SPLIT SYSTEM

SEQUENCE OF OPERATION

WALL MOUNTED INDOOR UNIT AND ASSOCIATED ROOF MOUNTED OUTDOOR UNIT SHALL OPERATE THROUGH I.T.ROOM SPACE THERMOSTAT TO PROVIDE SPACE TEMPERATURE SETPOINT OF 75 DEG. F (ADJ). PROVIDE HIGH TEMPERATURE ALARM SENSOR NEXT TO ROOM THERMOSTAT, SENSOR SHALL SEND A HIGH TEMPERATURE ALARM TO THE BCS WHEN SPACE TEMPERATURE EXCEEDS 80 DEG.F (ADJ). PROVIDE THROUGH SYSTEM BACNET INTERFACE THE FOLLOWING OPERATING, STATUS, AND ALARM POINTS TO THE BCS:

INDOOR UNIT STATUS

OUTDOOR UNIT STATUS

SYSTEM IN COOLING MODE

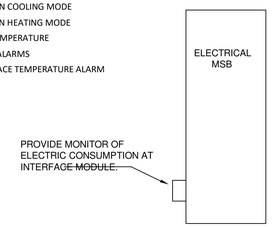
SYSTEM IN HEATING MODE

SPACE TEMPERATURE

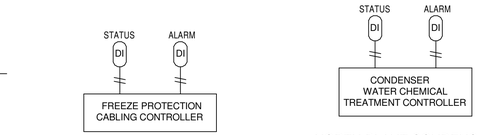
SYSTEM ALARMS

HIGH SPACE TEMPERATURE ALARM

NORTH PLANT FREEZE PROTECTION CABLING CONTROLLER



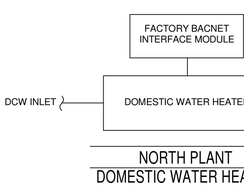
NORTH PLANT ELECTRICAL CONSUMPTION MONITOR



NORTH PLANT CONDENSER WATER CHEMICAL TREATMENT CONTROLLER CT-1

NORTH PLANT CONDENSER WATER CHEMICAL TREATMENT CONTROLLER CT-2

NORTH PLANT CONDENSER WATER CHEMICAL TREATMENT CONTROLLER CT-3



NORTH PLANT DOMESTIC WATER HEATER

PROVIDE THE FOLLOWING OPERATING, STATUS, AND ALARM POINTS FROM THE UNIT INTERFACE MODULE:

TEMPERATURE SETPOINT

POWER SETTING

INLET TEMPERATURE

OUTLET TEMPERATURE

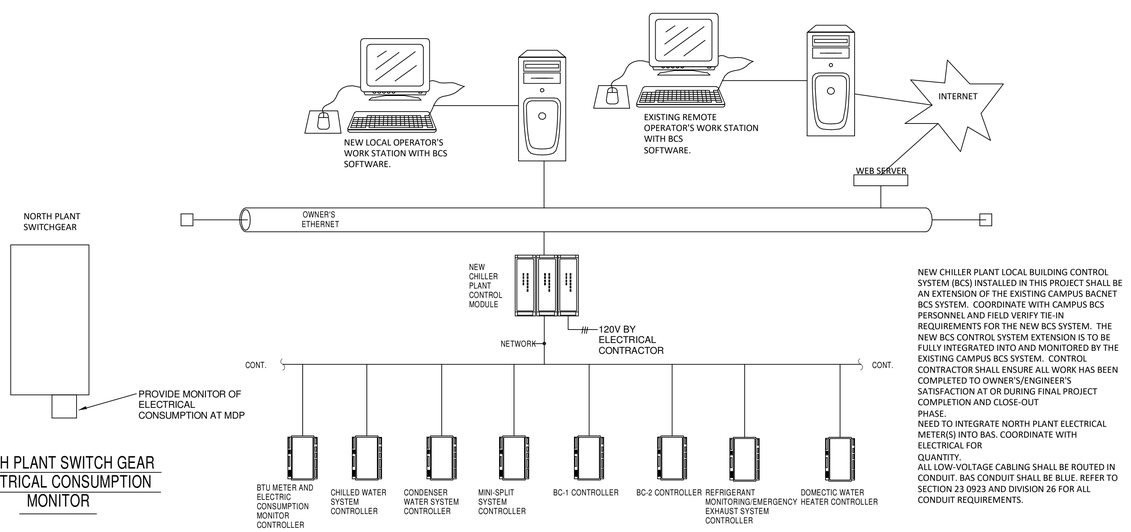
FLOW RATE

FLOW METER ALARM

LEAK DETECTION ALARM

UNIT FAILURE ALARM

PROVIDE LEAVING TEMPERATURE THROUGH BCS TEMPERATURE SENSOR.



NEW CHILLER PLANT LOCAL BUILDING CONTROL SYSTEM (BCS) INSTALLED IN THIS PROJECT SHALL BE AN EXTENSION OF THE EXISTING CAMPUS BACNET BCS SYSTEM. COORDINATE WITH CAMPUS BCS PERSONNEL AND FIELD VERIFY TIE-IN REQUIREMENTS FOR THE NEW BCS SYSTEM. THE NEW BCS CONTROL SYSTEM EXTENSION IS TO BE FULLY INTEGRATED INTO AND MONITORED BY THE EXISTING CAMPUS BCS SYSTEM. CONTROL CONTRACTOR SHALL ENSURE ALL WORK HAS BEEN COMPLETED TO OWNER'S/ENGINEER'S SATISFACTION AT OR DURING FINAL PROJECT COMPLETION AND CLOSE-OUT PHASE.
NEED TO INTEGRATE NORTH PLANT ELECTRICAL METER(S) INTO BAS. COORDINATE WITH ELECTRICAL FOR QUANTITY.
ALL LOW-VOLTAGE CABLING SHALL BE ROUTED IN CONDUIT. BAS CONDUIT SHALL BE BLUE. REFER TO SECTION 23 0923 AND DIVISION 26 FOR ALL CONDUIT REQUIREMENTS.

NORTH PLANT SWITCH GEAR ELECTRICAL CONSUMPTION MONITOR

NORTH PLANT CHILLED WATER BUILDING CONTROL SYSTEM (BCS) RISER DIAGRAM

CONTROL SYSTEM LEGEND

T	TEMPERATURE SENSOR
CH FL	PROOF OF FLOW SENSOR (SWITCH) FURNISHED BY CHILLER MANUFACTURER, INSTALLED BY CONTRACTOR
BCS FL	PROOF OF FLOW SENSOR (SWITCH) PROVIDED BY THE CONTROL CONTRACTOR
FM	FLOW METER (GPM)
DP	DIFFERENTIAL PRESSURE SENSOR
DM	ELECTRIC DAMPER MOTOR
DFS	DIRTY FILTER SENSOR
OS	OVERFLOW SENSOR
P	PRESSURE SENSOR WITH VISUAL PRESSURE GAUGE
FZT	FREEZESTAT
BCS	BUILDING CONTROL SYSTEM
	PIPING TEMPERATURE SENSOR WELL
VFD	VARIABLE FREQUENCY DRIVE
	TWO WAY, MODULATING, CONTROL VALVE
	THREE WAY, TWO POSITION, CONTROL VALVE
DO	DIGITAL OUTPUT SIGNAL FROM THE BCS
DI	DIGITAL INPUT SIGNAL TO THE BCS
AO	ANALOG OUTPUT SIGNAL FROM THE BCS
AI	ANALOG INPUT SIGNAL TO THE BCS
V-XX	CONTROL VALVE NUMBER

CONSTRUCTION DOCUMENTS

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS JAMES W. PETTIT REGISTERED PROFESSIONAL ENGINEER No. 5166 SURVEYOR
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026 PETTIT & PETTIT CONSULTING ENGINEERS, INC

DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

UCA CAMPUS DISTRICT CHILLER PLANT

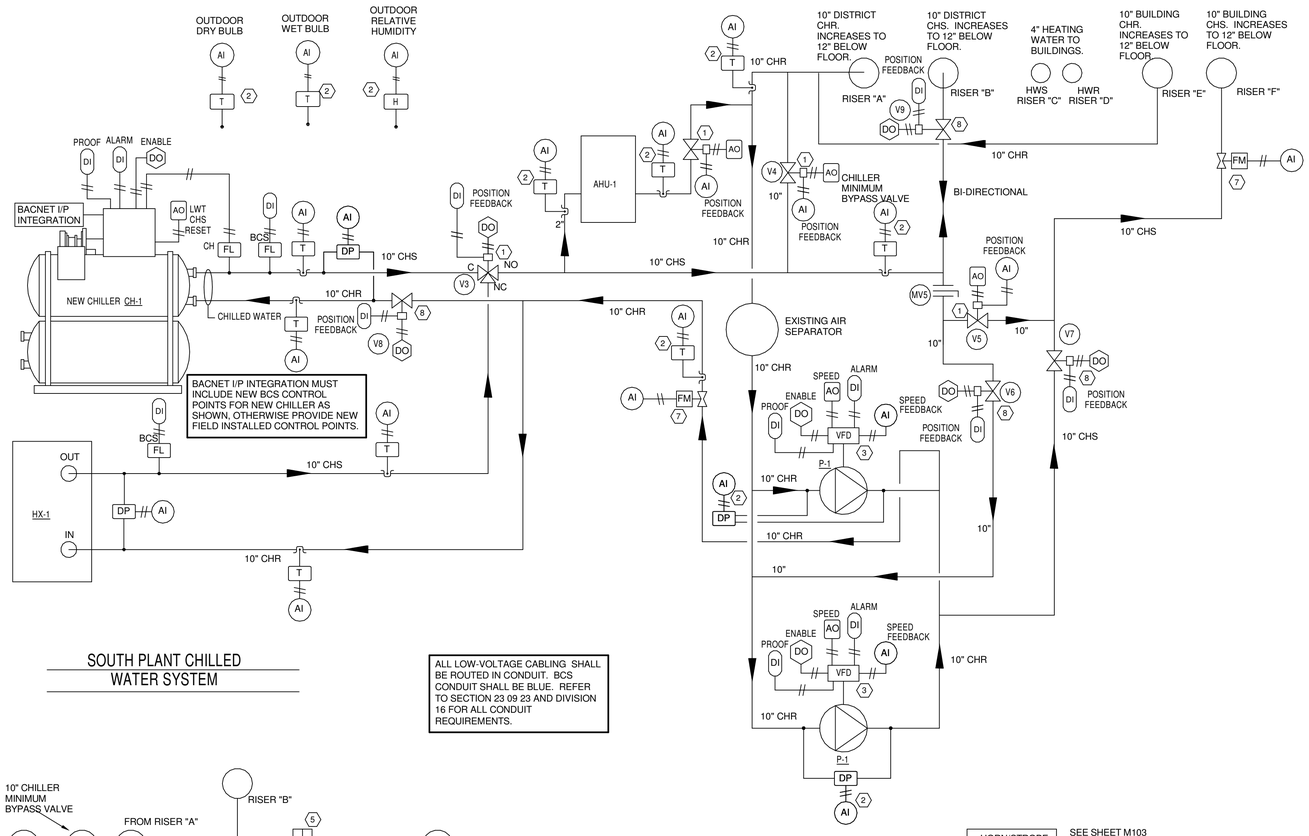
#	DATE	DESCRIPTION

REVISIONS HISTORY

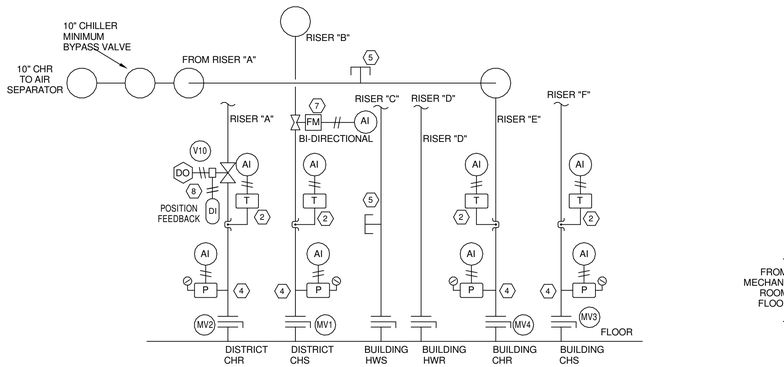
DATE: April 06, 2026

TITLE: HVAC CONTROLS

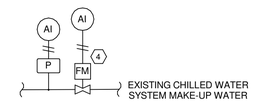
M603



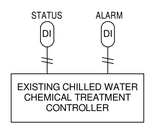
SOUTH PLANT CHILLED WATER SYSTEM



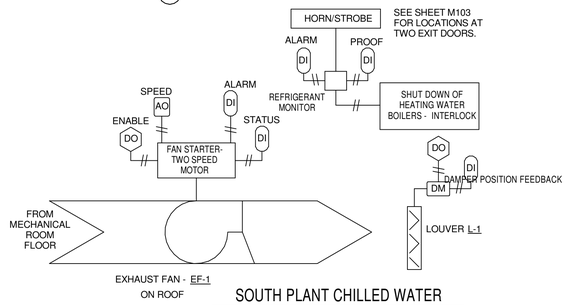
CHILLED WATER PIPING SECTION AT NORTHEAST WALL



SOUTH PLANT CHILLED WATER SYSTEM MAKE-UP WATER FLOW



SOUTH PLANT CHILLED WATER CHEMICAL TREATMENT CONTROLLER



SOUTH PLANT CHILLED WATER REFRIGERANT MONITORING SYSTEM

SEQUENCE OF OPERATION

UNDER NORMAL OPERATION, EXHAUST FAN EF-1 SHALL RUN AT LOWER FAN SPEED IN CONJUNCTION WITH WITH INTAKE LOUVER L-1 AT MINIMUM POSITION TO PROVIDE SPACE VENTILATION WHEN THE MECHANICAL ROOM IS OCCUPIED.

REFRIGERANT MONITORING SYSTEM FURNISHED BY THE CONTROLS CONTRACTOR SHALL BE INTEGRATED INTO THE BCS THROUGH BACNET IP INTERFACE.

UPON SENSING REFRIGERANT, AN ALARM SHALL BE SENT TO THE BCS AND LOCAL HORNS AND STROBES SHALL BE ACTIVATED.

EXISTING EXHAUST FAN EF-1 SHALL START, IF NOT ALREADY RUNNING, AND SEQUENCE TO ITS HIGH AIRFLOW SETTING. LOUVER L-1 SHALL OPEN TO MAXIMUM POSITION.

HEATING WATER BOILERS SHALL BE LOCKED OUT FROM OPERATION WITH GAS VALVES CLOSED.

WHEN THE ALARM SITUATION HAS BEEN RECTIFIED AND THE MONITOR SYSTEM IS BACK TO NORMAL OPERATION, EXHAUST FAN EF-1 AND LOUVER L-1 SHALL SEQUENCE BACK NORMAL OPERATION.

HEATING WATER BOILERS SHALL BE ENABLED TO RUN.

PROVIDE THE FOLLOWING OPERATING, STATUS, AND ALARM POINTS TO THE BCS:

MONITOR OPERATING PROOF

REFRIGERANT ALARM

FAN - STARTER ENABLE

FAN - STARTER STATUS

FAN - STARTER SPEED

FAN - STARTER SPEED FEEDBACK

FAN - STARTER SPEED FEEDBACK FAILURE ALARM

FAN ALARM

LOCK OUT STATUS FOR EACH HOT WATER BOILER

BOILER GAS VALVES - POSITION

NEW CHILLER PLANT LOCAL BUILDING CONTROL SYSTEM (BCS) INSTALLED IN THIS PROJECT SHALL BE AN EXTENSION OF THE EXISTING CAMPUS BACNET BCS SYSTEM. COORDINATE WITH CAMPUS BCS PERSONNEL AND FIELD VERIFY TIE-IN REQUIREMENTS FOR THE NEW BCS SYSTEM. THE NEW BCS CONTROL SYSTEM EXTENSION IS TO BE FULLY INTEGRATED INTO AND MONITORED BY THE EXISTING CAMPUS BCS SYSTEM. CONTROL CONTRACTOR SHALL ENSURE ALL WORK HAS BEEN COMPLETED TO OWNER'S/ENGINEER'S SATISFACTION AT OR DURING FINAL PROJECT COMPLETION AND CLOSE-OUT PHASE.

CHILLED WATER SEQUENCE OF OPERATION

GENERAL NOTES

UPGRADE AND MODIFY THE EXISTING CAMPUS BUILDING CONTROL SYSTEM (BCS) AS REQUIRED TO PROVIDE FOR THE CHILLED WATER PLANT SYSTEM. THE UPGRADES AND MODIFICATIONS TO THE BCS SHALL FACILITATE THE SEQUENCE OF OPERATION INDICATED AND PROVIDE FOR SYSTEM OPERATING, MONITORING, AND ALARM POINTS. NEW CHILLED WATER SYSTEM SHALL OPERATE CONTINUOUSLY UPON COMMAND BY OPERATING PERSONNEL.

CHILLER OPERATION OVERVIEW

CHILLER FACTORY CONTROL PANEL SHALL MONITOR AND CONTROL CHILLER OPERATION. THE BCS SHALL ENABLE CHILLER OPERATION AND MONITOR CHILLED WATER SYSTEM STATUS AND PHYSICAL POINTS SHOWN ON THE PLANS THROUGH BACNET I/P INTEGRATION OR NEW FIELD HARDWARE AS REQUIRED.

MINIMUM FLOW FOR CHILLER CH-1 IS 772.3 GPM CORRESPONDING TO 2.70 FT OF WATER.

VARIABLE SPEED CHILLED WATER PUMPING

CHILLED WATER PUMPS CHP-1 AND CHP-2 SHALL BE STARTED BY THE BCS THROUGH EACH PUMP'S VARIABLE FREQUENCY DRIVE. THE TWO PUMPS SHALL OPERATE IN A DUTY /STANDBY MODE. THE BCS SHALL ALTERNATE DUTY/STANDBY STATUS. DUTY PUMP SHALL OPERATE TO MAINTAIN DEMAND CHILLED WATER FLOW AS DETERMINED BY REMOTE SYSTEM DIFFERENTIAL SENSOR(S). UPON FAILURE OF THE DUTY PUMP, AN ALARM SHALL BE GENERATED AND THE STANDBY PUMP SHALL BE ENABLED. BOTH PUMPS MAY OPERATE SIMUTANEOUSLY AT THE SAME SPEED TO MEET FLOW REQUIREMENTS IN BOOST MODE. FAILURE OF EITHER PUMP SHALL GENERATE AN ALARM.

CHILLER SEQUENCE OF OPERATION

THE CHILLED WATER SYSTEM SHALL BE ENABLED ON A SCHUDULE DEFINED BY OPERATING PERSONNEL. ONCE ENABLED, THE CONDENSER WATER SYSTEM SHALL ALSO BE ENABLED. THE CHILLER CHILLED WATER ISOLATION VALVE (V8) SHALL OPEN. ONCE OPENED, THE BCS SHALL START THE DUTY CHILLED WATER PUMP. AFTER PROOF OF FLOW FLOW FROM THE CHILLED WATER AND CONDENSER WATER BCS FLOW SWITCHES, AND CHILLED WATER FLOW THROUGH THE CHILLER AS SENSED BY THE CHILLER'S DIFFERENTIAL PRESSURE SENSOR EXCEEDS MINIMUM ALLOWABLE FLOW, CHILLER SHALL START. ONCE STARTED, CHILLER SHALL OPERATE THROUGH ITS FACTORY CONTROLS TO MAINTAIN THE CHILLER LEAVING WATER TEMPERATURE SETPOINT OF 42 DEG. F (ADJ). WHEN THE CHILLER IS NOT OPERATING, ITS CORRESPONDING CONTROL VALVE (V8) SHALL BE CLOSED. DURING PERIODS OF LOW CHILLED WATER DEMAND, CHILLER CHS BYPASS VALVE (V4) SHALL MODULATE TO PROVIDE MINIMUM FLOW OF 772.3 GPM.

REFER TO THE CONDENSER WATER SYSTEM SEQUENCE OF OPERTION FOR THE OPERATION OF THE FLAT PLATE HEAT EXCHANGER. WHEN THE FLAT PLAT HEAT EXCHANGER IS NOT IN OPERATION, CONTROL VALVE (V3) SHALL BE CLOSED TO THE HEAT EXCHANGER.

ALL CONTROL VALVES SHALL HAVE A PHYSICAL HARDWARE POINT FOR POSITION FEEDBACK.

PROVIDE BACNET INTEGRATION AT ALL VFD'S.

PROVIDE MAKE-UP WATER PRESSURE AND FLOW MONITORING.

SOUTH CHILLER PLANT MODES OF OPERATION:

1. NORMAL MODE - CHILLER PLANT SHALL OPERATE TO MAINTAIN CHILLED WATER SUPPLY FLOW AND TEMPERATURE TO DISTRICT COOLING LOOP AND/OR BUILDINGS COOLING LOOP. DUTY CHILLED WATER PUMP SHALL MODULATE TO MAINTAIN THE BUILDINGS DIFFERENTIAL PRESSURE SETPOINT SUBJECT TO MAXIMUM CH-1 EVAPORATOR CHILLED WATER FLOW SETPOINT OF 2,100 GPM.
2. MAINTENANCE/SERVICE MODE -IN THE EVENT OF EITHER COOLING TOWER, CHILLER, OR PUMPS BEING DISABLED FOR SERVICE OR REPAIR, DISTRICT COOLING LOOP SHALL PROVIDE CHILLED WATER SUPPLY TO THE BUILDINGS BY CLOSING CHILLER CHILLED WATER ISOLATION VALVE (V8), AND VALVES (6) AND (V7); AND BY OPENING VALVES (5), (9), AND (10).
3. BOOST MODE - WHEN SOUTH CHILLER PLANT IS OFFLINE FOR ANY REASON OTHER THAN FAILURE OF BOTH CHILLED WATER PUMPS; IN ORDER TO MAINTAIN THE REQUIRED BUILDING DIFFERENTIAL PRESSURE SETPOINT, DUTY CHILLED WATER PUMPS MAY BE ENABLED FOR BOOSTING CHILLED WATER FLOW TO BUILDINGS BY CLOSING CHILLER ISOLATION VALVE (V8), CLOSING BOOST MODE ISOLATION VALVE (V5), OPENING DISTRICT CHILLED WATER SUPPLY VALVE (V6), AND OPENING BUILDING CHILLED WATER SUPPLY VALVE (V7) TO OPERATE THE DUTY CHILLED WATER PUMP TO MAINTAIN BUILDING CHILLED WATER DIFFERENTIAL PRESSURE SETPOINT.

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 POSITION FEEDBACK

VALVE POSITION FEEDBACK FAILURE ALARM

CHILLER PROVIDED CHILLED WATER PROOF OF FLOW

BCS PROVIDED CHILLED WATER PROOF OF FLOW

CHILLER ENABLE

CHILLER STATUS

CHILLER ALARM

LEAVING CHILLED WATER TEMPERATURE RESET

HX-1 ENTERING AND LEAVING CHILLED WATER TEMPERATURES

HX-1 ENTERING CHILLED WATER CONTROL VALVE POSITION FEEDBACK

HX-1 ENTERING CHILLED WATER CONTROL VALVE POSITION FEEDBACK FAILURE ALARM

HX-1 CHILLED WATER FLOW

CHILLED WATER MINIMUM BYPASS VALVE POSITION FEEDBACK

CHILLED WATER MINIMUM BYPASS VALVE POSITION FEEDBACK FAILURE ALARM

CHILLED WATER PUMPS - VFD PROOF OF OPERATION

CHILLED WATER PUMPS - VFD SPEED

CHILLED WATER PUMPS - VFD ENABLE

CHILLED WATER PUMPS - VFD ALARM

CHILLED WATER PUMPS - VFD SPEED FEEDBACK

CHILLED WATER PUMPS - VFD SPEED FEEDBACK FAILURE ALARMS

REMOTE CAMPUS DIFFERENTIAL PRESSURES

VALVE SCHEDULE:

MV1 - MANUAL DISTRICT CHS ISOLATION VALVE - EXISTING
MV2 - MANUAL DISTRICT CHR ISOLATION VALVE - EXISTING
MV3 - MANUAL BUILDING CHS ISOLATION VALVE - EXISTING
MV4 - MANUAL BUILDING CHR ISOLATION VALVE - EXISTING
MV5 - CHILLED WATER SUPPLY TO BUILDINGS- EXISTING

V3 - FREE COOLING CHS SWITCHOVER VALVE - EXISTING
V4 - CHILLER MINIMUM FLOW BYPASS VALVE - EXISTING
V5 - NORMALLY OPEN BOOST MODE ISOLATION VALVE - CLOSES WHEN DISTRICT SERVES BUILDINGS THROUGH PUMPS AND - EXISTING
V6 - NORMALLY CLOSED BOOST MODE DISTRICT CHS VALVE - NEW
V7 - NORMALLY CLOSED BOOST MODE BUILDING CHS VALVE - NEW
V8 - CHILLED WATER ISOLATION VALVE - NEW
V8 - CHILLED WATER ISOLATION VALVE - NEW
V9 - DISTRICT CHS ISOLATION VALVE -NEW
V10 - DISTRICT CHR ISOLATION VALVE - NEW

KEYED NOTES

1. REPLACE EXISTING CONTROL VALVE OPERATOR.
2. REPLACE EXISTING CONTROLS DEVICE.
3. EXISTING VFD TO REMAIN. INTERFACE EXISTING POINTS INTO NEW BCS.
4. REMOVE EXISTING DIFFERENTIAL FLOW METER, PIPING, AND PRESSURE GAUGE. INSTALL NEW PRESSURE SENSORS WITH PRESSURE GAUGES.
5. REMOVE EXISTING FLOW METER AND CAP CONNECTION TO PIPING.
6. INTEGRATE EXISTING FLOW METER.
7. NEW FLOW METER.
8. NEW CONTROL VALVE.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER 25166 JAMES W. PETTIT

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

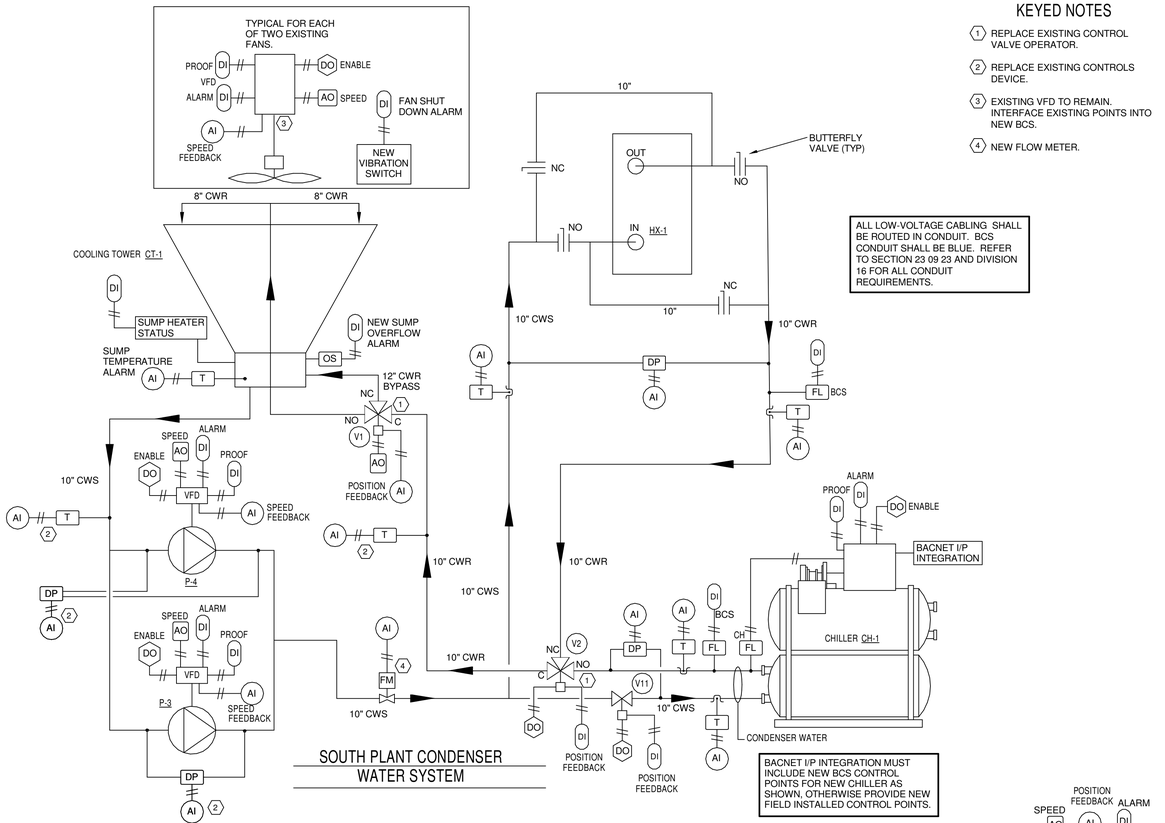
REVISIONS HISTORY

DATE: April 06, 2026

TITLE: HVAC CONTROLS

CONSTRUCTION DOCUMENTS

M604

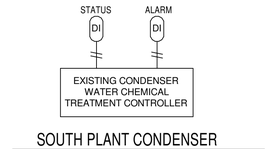


SOUTH PLANT CONDENSER WATER SYSTEM

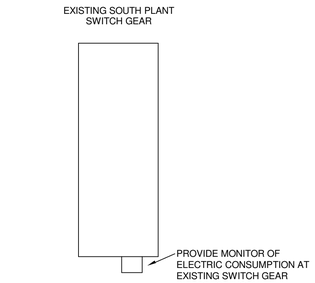
KEYED NOTES

1. REPLACE EXISTING CONTROL VALVE OPERATOR.
2. REPLACE EXISTING CONTROLS DEVICE.
3. EXISTING VFD TO REMAIN. INTERFACE EXISTING POINTS INTO NEW BCS.
4. NEW FLOW METER.

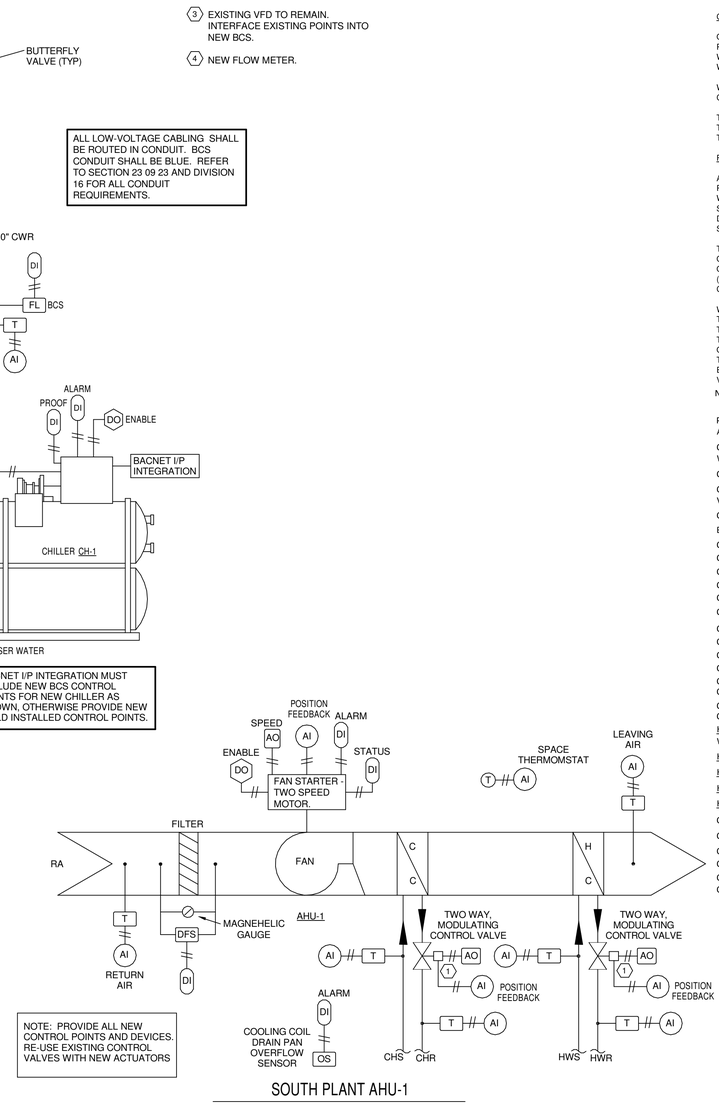
SOUTH PLANT CONDENSER WATER SYSTEM MAKE-UP WATER FLOW



SOUTH PLANT CONDENSER WATER CHEMICAL TREATMENT CONTROLLER



SOUTH PLANT SWITCH GEAR ELECTRICAL CONSUMPTION MONITOR



SOUTH PLANT AHU-1

SEQUENCE OF OPERATION

THE SEQUENCE OF OPERATION FOR THE AIR HANDLING UNIT EXISTS. MODIFY AND UPGRADE AS REQUIRED AND INDICATED. UPON A CALL FOR COOLING OR HEATING, FAN SHALL START. DIRTY FILTER ALARM SHALL MONITOR PRESSURE DROP ACROSS FILTER.

IN COOLING MODE, HEATING COIL VALVE SHALL BE CLOSED. CHILLED WATER COIL VALVE SHALL MODULATE THROUGH SPACE THERMOSTAT TO PROVIDE SPACE TEMPERATURE SETPOINT OF 75 DEG.F (ADJ)

IN HEATING MODE, CHILLED WATER VALVE SHALL BE CLOSED. HEATING COIL VALVE SHALL MODULATE THROUGH SPACE THERMOSTAT TO PROVIDE SPACE TEMPERATURE SETPOINT OF 75 DEG. F (ADJ).

DRAIN PAN OVERFLOW SENSOR SHALL STOP UNIT OPERATION AND SEND AN ALARM TO THE BCS WHEN IT SENSES DRAIN PAN CONDENSATE.

PROVIDE THE FOLLOWING OPERATING, STATUS, AND ALARM POINTS TO THE BCS:

- DIRTY FILTER ALARM
- RETURN AIR TEMPERATURE
- FAN - STARTER ENABLE
- FAN - STATUS
- FAN - STARTER SPEED
- FAN - STARTER SPEED FEEDBACK
- FAN - STARTER SPEED FEEDBACK FAILURE ALARM
- FAN - STARTER ALARM
- COIL DRAIN PAN ALARM
- COOLING COIL ENTERING TEMPERATURE
- COOLING COIL LEAVING TEMPERATURE
- COOLING COIL VALVE POSITION FEEDBACK
- COOING COIL VALVE POSITION FEEDBACK FAILURE ALARM
- HEATING COIL ENTERING TEMPERTURE
- HEATING COIL LEAVING TEMPERATURE
- HEATING COIL VALVE POSITION FEEDBACK
- HEATING COIL VALVE POSITION FEEDBACK FAILURE ALARM
- UNIT LEAVING AIR TEMPERATURE
- ROOM TEMPERATURE

CONDENSER WATER SYSTEM SEQUENCE OF OPERATION

ONCE CHILLED WATER SYSTEM HAS BEEN ENABLED, THE CONDENSER WATER SYSTEM SHALL OPERATE.

CONDENSER WATER PUMPS:

CONDENSER WATER PUMPS P-3 AND P-4 ARE VARIABLE SPEED PUMPS. P-3 AND P-4 SHALL BE DUTY/STANDBY. THE BCS SHALL ALTERNATE LEAD/LAG STATUS. ON A CALL FOR THE CHILLER TO RUN, THE DUTY PUMP IS ENABLED. CHILLER AND FLATE PLATE HEAT EXCHANGER DIFFERENTIAL PRESSURE SENSORS SHALL BE USED TO MODULATE DUTY PUMP TO MAINTAIN FLOW THROUGH THE CHILLER CONDENSER AT 1,400 GPM OR THE FLAT PLATE HEAT EXCHANGER AT1,945 GPM.

COOLING TOWER SEQUENCE OF OPERATION

ONCE THE CHILLER IS ENABLED, CHILLER CONDENSER WATER VALVE (V9) SHALL OPEN. THE CONDENSER WATER DUTY PUMP SHALL START. PROOF OF FLOW SHALL BE ESTABLISHED BY THE BCS FLOW SWITCH. THE COOLING TOWER FAN SHALL START AND MODULATE IN SEQUENCE WITH THE TWO POSITION, THREE-WAY TOWER BYPASS VALVE (V1) TO MAINTAIN A CONDENSER WATER SUPPLY TEMPERATURE OF OUTDOOR WET BULB TEMPERATURE PLUS 5 DEG. F, WITH A MINIMUM OF 65 DEG. F AND A MAXIMUM OF 85 DEG. F.

WHEN THE CHILLER IS DISABLED TO RUN, THE ASSOCIATED COOLING TOWER FANS AND CONDENSER WATER PUMP SHALL STOP. THE CHILLER'S CHILLED WATER AND CONDENSER WATER CONTROL VALVES SHALL CLOSE.

THE BASIN HEATERS IN THE COOLING TOWER, THROUGH EXISTING CONTROLS, SHALL KEEP BASIN TEMPERATURES AT 40 DEG. F WHEN AMBIENT TEMPERATURE FALLS BELOW 36 DEG. F (ADJ). A TOWER BASIN TEMPERATURE ALARM SHALL BE SENT TO THE BCS WHEN THE BASIN WATER TEMPERATURE FALLS BELOW 34 DEG.F.

FLAT PLATE HEAT EXCHANGER SEQUENCE OF OPERATION:

AT CHILLER CH-1 AND COOLING TOWER CT-1, WHEN THE OUTDOOR AMBIENT WET BULB TEMPERATURE DROPS BELOW 40 DEG. F (ADJ) FOR A PERIOD OF MORE THAN 15 MINUTES (ADJ), THE FLAT PLATE HEAT EXCHANGER SEQUENCE OF OPERATION SHALL BE ENABLED. CONDENSER WATER DUTY PUMP SHALL CONTINUE TO RUN. THE CHILLER SHALL STOP. THE FLAT PLATE HEAT EXCHANGER CONTROL VALVES (V2) AND (V3) SHALL OPEN TO THE FLAT PLATE HEAT EXCHANGER. THE CHILLER CONDENSER WATER AND CHILLED WATER CONTROL VALVES SHALL CLOSE. DUTY CONDENSER WATER PUMP SHALL RAMP UP TO THE FLAT PLATE HEAT EXCHANGER REQUIRED FLOW RATE. DUTY CHILLED WATER PUMP SHALL CONTINUE TO OPERATE.

THE BCS SHALL RESET THE CONDENSER WATER SUPPLY TEMPERATURE TO 40 DEG. F (ADJ). THE COOLING TOWER FAN SHALL MODULATE AND OPERATE IN SEQUENCE WITH THE TWO POSITION, THREE WAY VALVE (V1), EITHER BEING FULLY OPEN TO THE HOT WATER BASIN OR FULLY OPEN TO THE COLD WATER BASIN, BYPASSING THE TOWER, TO REDUCE THE CONDENSER WATER SUPPLY WATER TEMPERATURE TO 40 DEG. F (ADJ). THE COOLING TOWER FAN AND TWO POSITION, THREE WAY VALVE (V1) SHALL CONTINUE TO OPERATE IN SEQUENCE TO MAINTAIN THE CONDENSER WATER SUPPLY TEMPERATURE SET POINT OF 40 DEG. F (ADJ).

WHEN THE OUTDOOR AMBIENT WET BULB TEMPERATURE RISES TO 44 DEG. F (ADJ) OR HIGHER FOR A PERIOD OF MORE THAN 15 MINUTES (ADJ), THE PLATE HEAT EXCHANGER SEQUENCE OF OPERATION SHALL BE DISABLED. THE COOLING TOWER LEAVING CONDENSER WATER TEMPERATURE SHALL RETURN TO ITS NORMAL RANGE OF A MAXIMUM OF 85 DEG. F AND A MINIMUM TEMPERATURE OF 65 DEG. F.(ADJ). DURING THIS TRANSITION, THE COOLING TOWER FANS SHALL BE DISABLED, AND TOWER VALVE (V1) SHALL BE OPEN TO THE COLD WATER BASIN IN ORDER TO RAISE THE CONDENSER WATER SUPPLY TEMPERATURE BACK TO THE MINIMUM TEMPERATURE OF 65 DEG.F. DUTY PUMP SHALL THEN RAMP DOWN TO THE CHILLER REQUIRED FLOW RATE. THE CHILLER CONDENSER WATER VALVE SHALL OPEN. FLAT PLATE HEAT EXCHANGER VALVE (V2) SHALL THEN CLOSE TO THE FLAT PLATE HEAT EXCHANGER. CHILLER CONDENSER WATER AND CHILLED WATER VALVES SHALL OPEN. THE CHILLER SEQUENCE OF OPERATION SHALL BE ENABLED AND CHILLER CH-1 SHALL START.

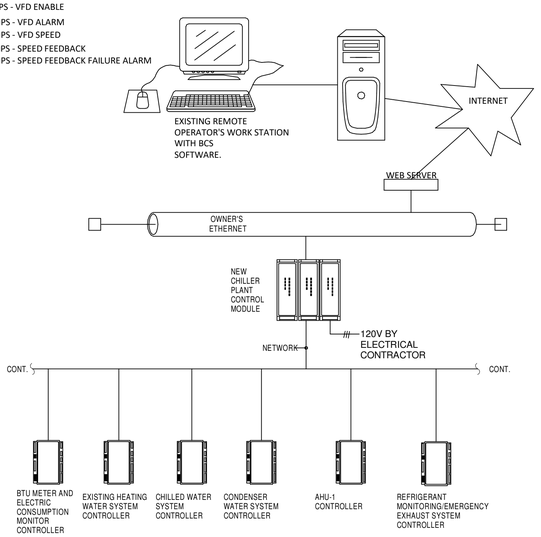
NOTES:
1. PROVIDE PHYSICAL HARDWARE POINT FOR POSITION FEEDBACK AT ALL CONTROL VALVES.
2. PROVIDE BACNET INTEGRATION AT ALL VFD'S.

PROVIDE THE FOLLOWING OPERATING, STATUS, AND ALARM POINTS TO THE BCS:

- CHILLER ENTERING AND LEAVING CONDENSER WATER TEMPERATURES
- CHILLER CONDENSER WATER SUPPLY FLOW RATE
- CHILLER ENTERING CONDENSER WATER CONTROL VALVE STATUS AT CHILLER
- CHILLER CONDENSER WATER PROOF OF FLOW
- BCS CONDENSER WATER PROOF OF FLOW
- COOLING TOWER FANS - VFD ENABLE
- COOLING TOWER FANS - VFD PROOF OF OPERATION
- COOLING TOWER FANS - VFD ALARM
- COOLING TOWER FANS - VFD SPEED
- COOLING TOWER FANS - VFD SPEED FEEDBACK
- COOLING TOWER FANS - VFD SPEED FEEDBACK FAILURE ALARM
- COOLING TOWER BASIN HEATER STATUS
- COOLING TOWER SUMP TEMPERATURE ALARM
- COOLING TOWER OVERFLOW ALARM
- COOLING TOWER VIBRATION SWITCH ALARM
- COOLING TOWER TWO POSITION, THREE WAY CONTROL VALVE POSITION FEEDBACK
- COOLING TOWER TWO POSITION, THREE WAY CONTROL VALVE POSITION FEEDBACK FAILURE ALARM
- HX-1 ENTERING AND LEAVING CONDENSER WATER TEMPERATURES
- HX-1 ENTERING CONTROL VALVE POSITION FEEDBACK
- HX-1 ENTERING CONTROL VALVE POSITION FEEDBACK FAILURE ALARM
- HX-1 CONDENSER WATER PROOF OF FLOW
- HX-1 CONDENSER WATER FLOW
- CONDENSER WATER PUMPS - VFD PROOF OF OPERATION
- CONDENSER WATER PUMPS - VFD ENABLE
- CONDENSER WATER PUMPS - VFD ALARM
- CONDENSER WATER PUMPS - VFD SPEED
- CONDENSER WATER PUMPS - SPEED FEEDBACK
- CONDENSER WATER PUMPS - SPEED FEEDBACK FAILURE ALARM

VALVE SCHEDULE:

V1 - COOLING TOWER BYPASS VALVE - EXISTING
V2 - FREE COOLING SWITCHOVER VALVE - EXISTING
V11 - CHILLER CONDENSER WATER VALVE - NEW



SOUTH PLANT CHILLED WATER BUILDING CONTROL SYSTEM (BCS) RISER DIAGRAM

CONSTRUCTION DOCUMENTS

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS JAMES T. PETTIT REGISTERED PROFESSIONAL ENGINEER No. 05166 09-26

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

DISTRICT LOOP & CHILLER PLANT

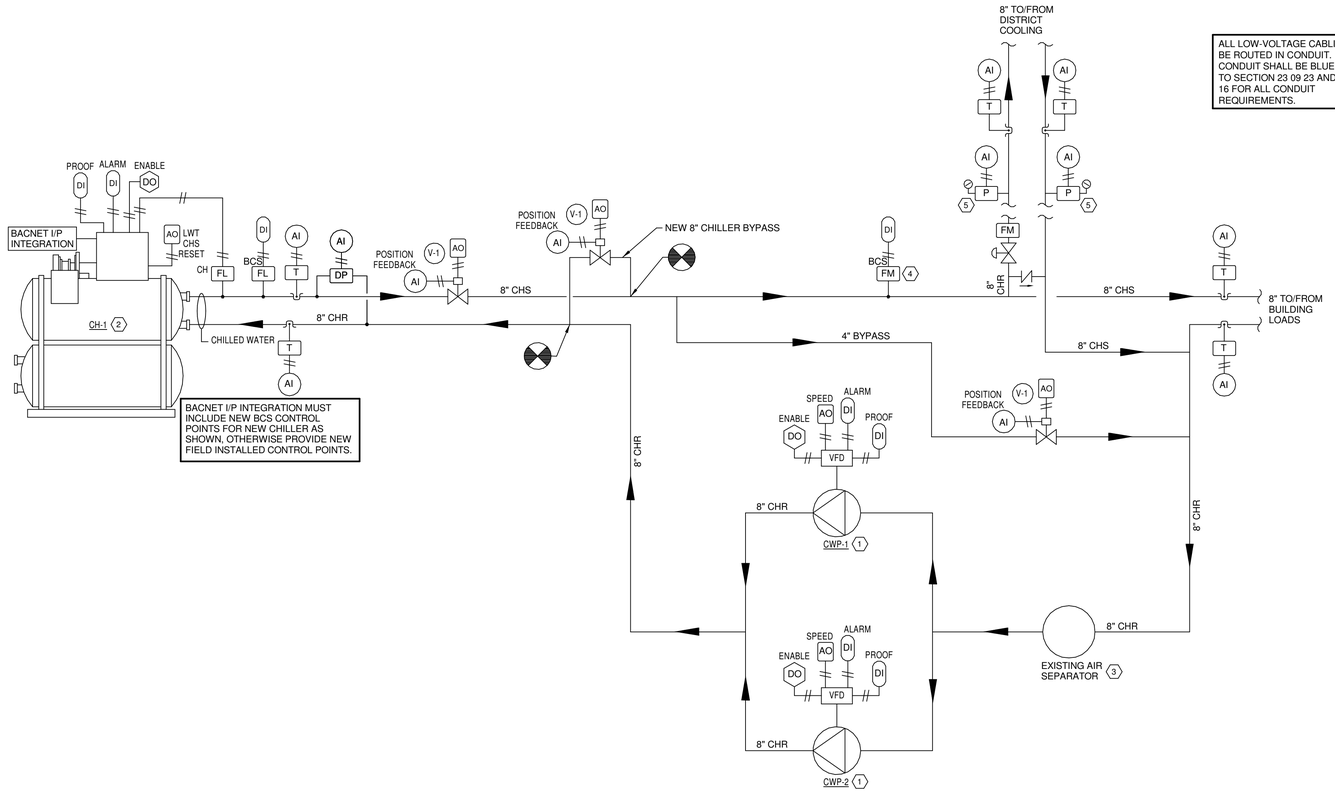
UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: HVAC CONTROLS

M605



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.

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 OUTSID 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 65 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

CONSTRUCTION DOCUMENTS

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMES W. PETTIT No. 5166

PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

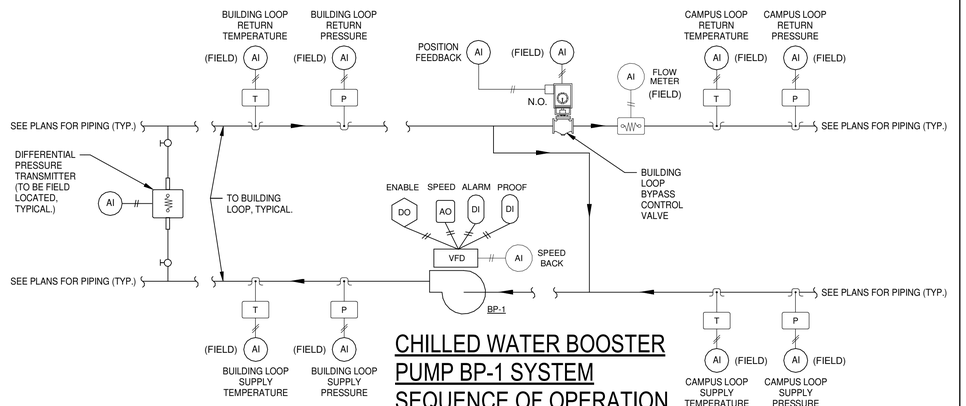
#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: April 06, 2026

TITLE: HVAC CONTROLS

M606



CHILLED WATER BOOSTER PUMP BP-1 SYSTEM SEQUENCE OF OPERATION

VARIABLE SPEED PUMPING SEQUENCE OF OPERATION

THE BAS SHALL MONITOR THE WATER DIFFERENTIAL PRESSURE SENSOR(S) FOR THE SYSTEMS SERVED. THE WATER PUMP SHALL BE ENABLED BY THE BAS CONTROLLER. WHEN ENABLED, THE WATER PUMP SHALL START AND SHALL RUN CONTINUOUSLY TO MAINTAIN THE BUILDING DIFFERENTIAL PRESSURE SETPOINT. WHILE RUNNING, THE WATER PUMP VARIABLE FREQUENCY DRIVE SHALL MODULATE PUMP SPEED AS REQUIRED TO MAINTAIN THE BUILDING WATER MINIMUM DIFFERENTIAL PRESSURE SETPOINT OF 15 PSI (ADJUSTABLE). IF, FOR ANY REASON, THE WATER PUMP FAILS TO START OR THE PUMP STATUS DOES NOT MATCH ITS COMMANDED VALUE, AN ALARM FOR THE FAILED PUMP SHALL BE GENERATED AT THE BAS WORKSTATION.

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 ACTIVATION OF A FREEZE STAT IN ANY AIR HANDLING UNIT SERVING THIS BUILDING, THE BUILDING LOOP BYPASS CONTROL VALVE SHALL BE CLOSED AND PUMP BP-1 SHALL BE ENABLED AND SHALL RUN AT FULL FLOW WITH ALL OF THE AIR HANDLING UNIT CHILLED WATER CONTROL VALVES FULLY OPENED. UPON RESET OF THE ACTIVATED FREEZE STAT, THE SYSTEM SHALL RETURN TO NORMAL OPERATION.

CHILLED WATER BOOSTER PUMP BP-1 SYSTEM CONTROL DIAGRAM

(BP-2 AND BP-3 SIMILAR)

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 25166 JAMES SACKS 03-26-26
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.
LITTLE ROCK, ARKANSAS

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

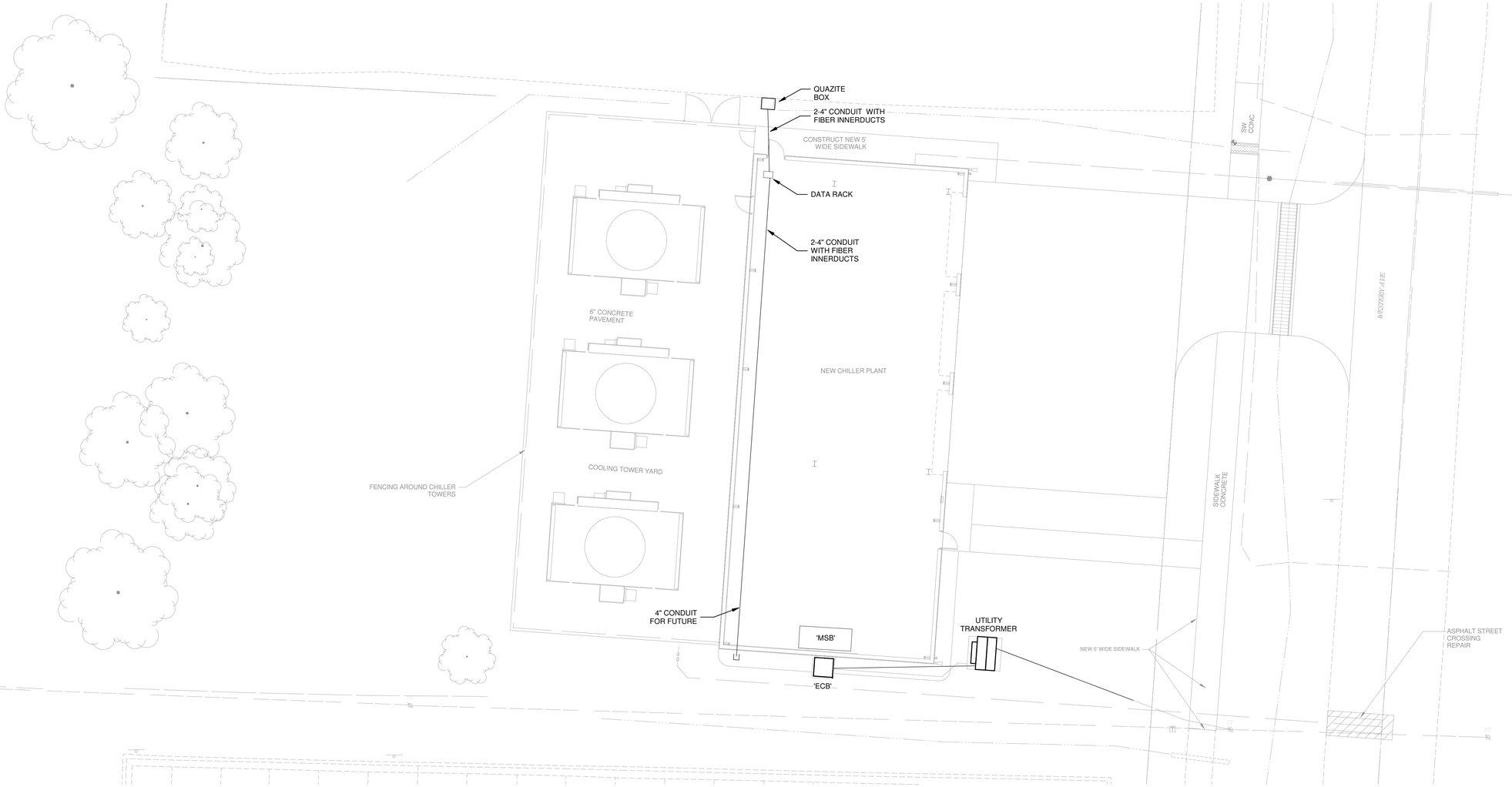
REVISIONS HISTORY

DATE: April 06, 2026

TITLE: HVAC CONTROLS

CONSTRUCTION DOCUMENTS

M607



1 SITE PLAN - ELECTRICAL

SCALE: 1" = 10'-0"

CALL BEFORE YOU DIG! ARKANSAS ONE CALL 1-800-482-8998

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12363 — 4-06-26

VERIFY SCALE 0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026 PETTIT & PETTIT CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: April 06, 2026

TITLE: SITE PLAN - ELECTRICAL

CONSTRUCTION DOCUMENTS

E100

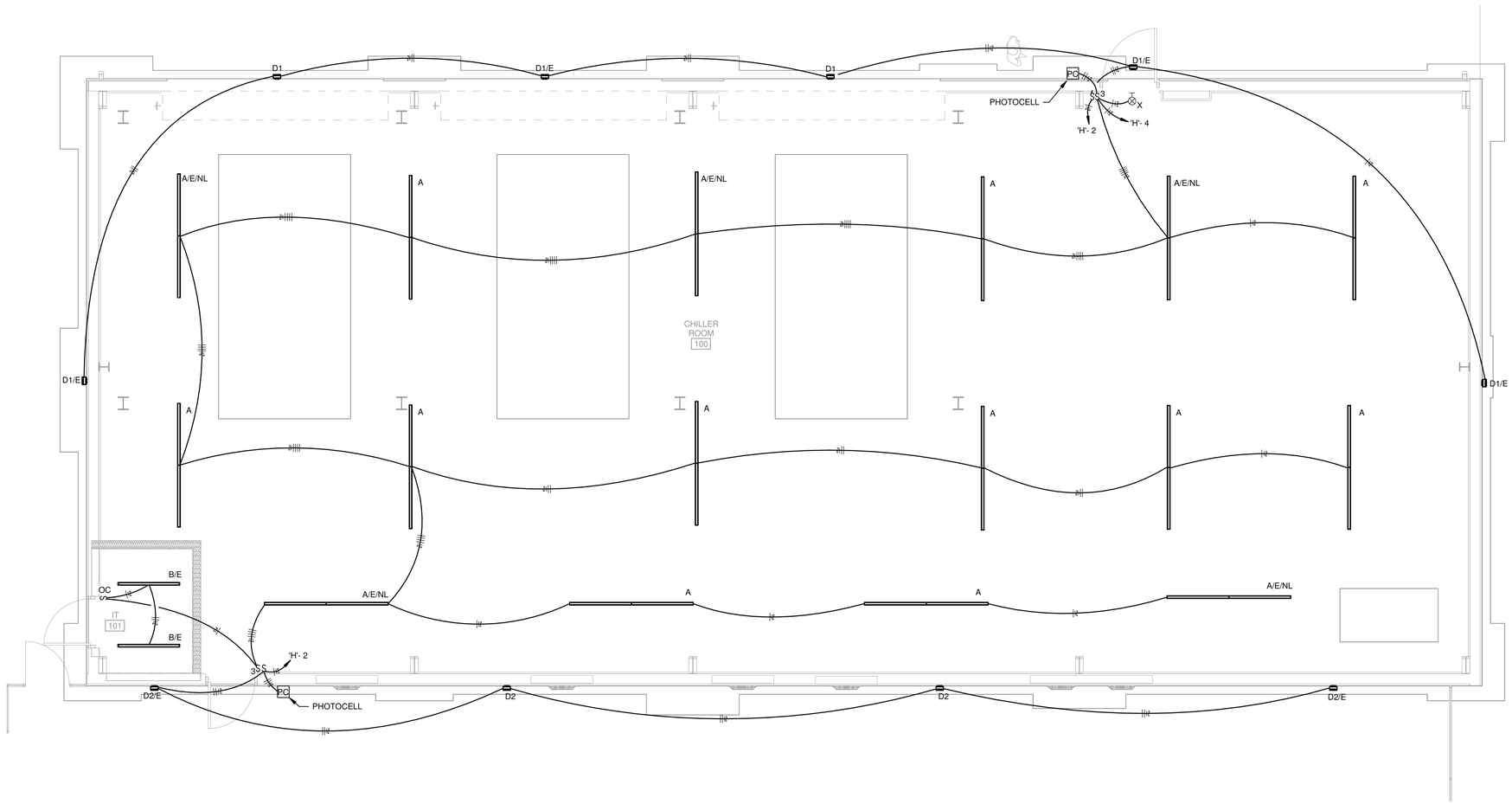
LIGHTING PROJECT NOTES

CONTRACTOR SHALL COORDINATE LIGHT FIXTURE INSTALLATION WITH MECHANICAL/HVAC AND PLUMBING EQUIPMENT.

FIXTURES CAN NOT BE HUNG BELOW HOIST STRUCTURE.

LIGHT FIXTURE SCHEDULE

TYPE MARK	MANUFACTURER	MODEL	ELECTRICAL DATA	DESCRIPTION
A	COOPER	8TMB-20HL-RND-UNV-CC83-CD-2-XX	277 V/1-145 VA	8' LED STRIPLIGHT. MOUNTED TO STEEL STRUCTURE.
A/E/NL	COOPER	8TMB-20HL-RND-UNV-CC83-CD-2-EL14W-XX	277 V/1-145 VA	8' EMERGENCY LED STRIPLIGHT, NON-SWITCHED/ALWAYS ON. MOUNTED TO STEEL STRUCTURE.
B/E	COOPER	4SNX-57SL-LW-UNV-CC83-CD-1-EL10W	277 V/1-40 VA	4' LED EMERGENCY STRIPLIGHT
D1	COOPER	WLZ4-4-4K-XX	277 V/1-40 VA	LED WALL PACK. COORDINATE FINISH WITH ARCHITECT.
D1/E	COOPER	WLZ4-4-4K-XX-BB	277 V/1-40 VA	LED EMERGENCY WALL PACK. COORDINATE FINISH WITH ARCHITECT.
D2	COOPER	WLZ10-4-4K-XX	277 V/1-100 VA	LED WALL PACK. COORDINATE FINISH WITH ARCHITECT.
D2/E	COOPER	WLZ10-4-4K-XX-BB	277 V/1-100 VA	LED WALL PACK. COORDINATE FINISH WITH ARCHITECT.
X	BARRON	CLED-U-XX-G2	277 V/1-6 VA	COMBINATION EXIT LIGHT



1 FIRST FLOOR PLAN - LIGHTING

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

VERIFY PRINT IN COLOR

AMR architects

www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12063 ANTHONY MILLER 04-06-26

VERIFY SCALE
0 1"

CORPORATE REGISTRATION PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: NORTH PLANT PLAN - LIGHTING

CONSTRUCTION DOCUMENTS

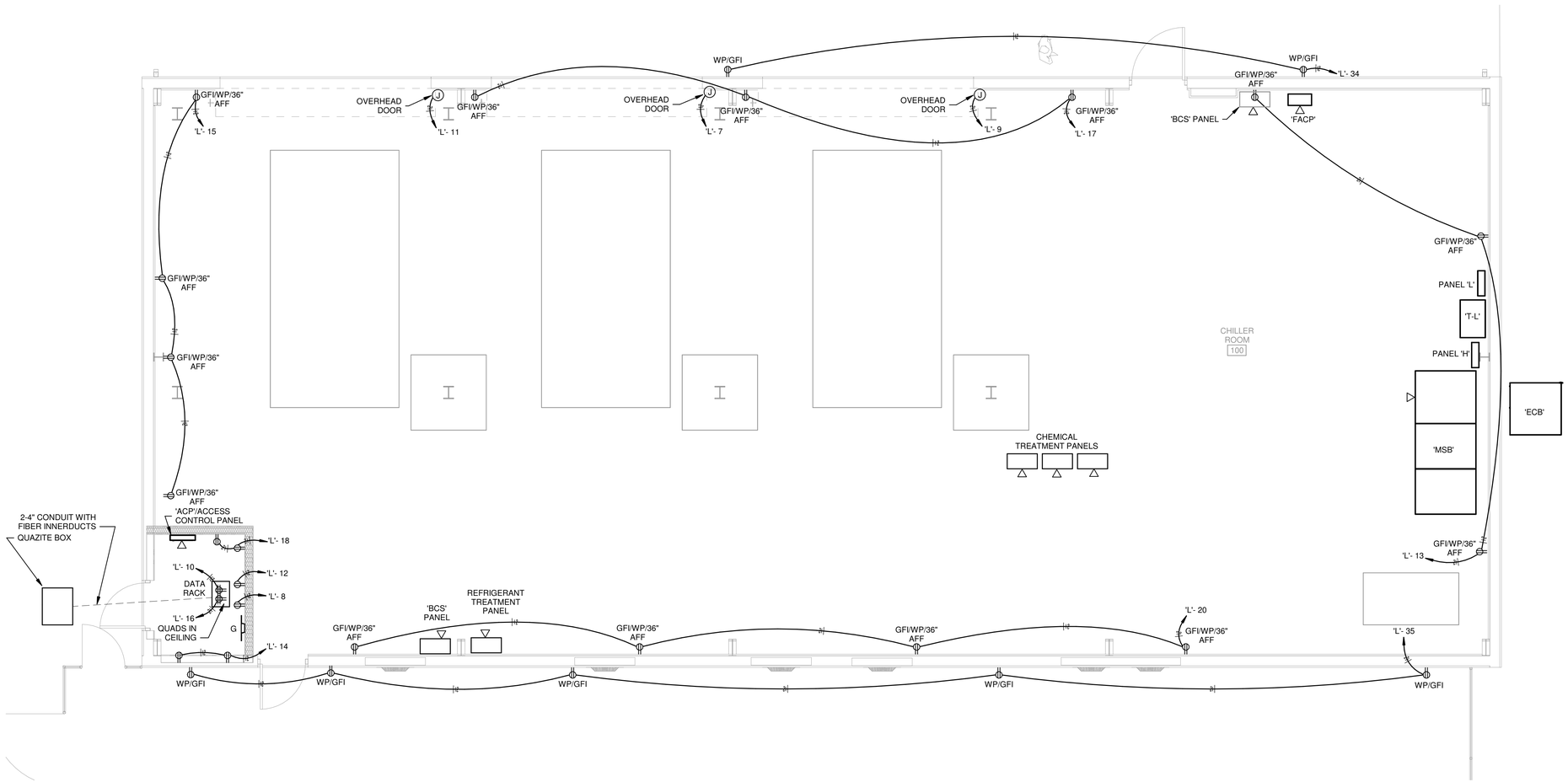
E101

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"

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12363
JOSHUA D. LEWIS
04-06-26

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: NORTH PLANT PLAN - POWER

CONSTRUCTION DOCUMENTS

E102

SYSTEMS KEYED NOTES

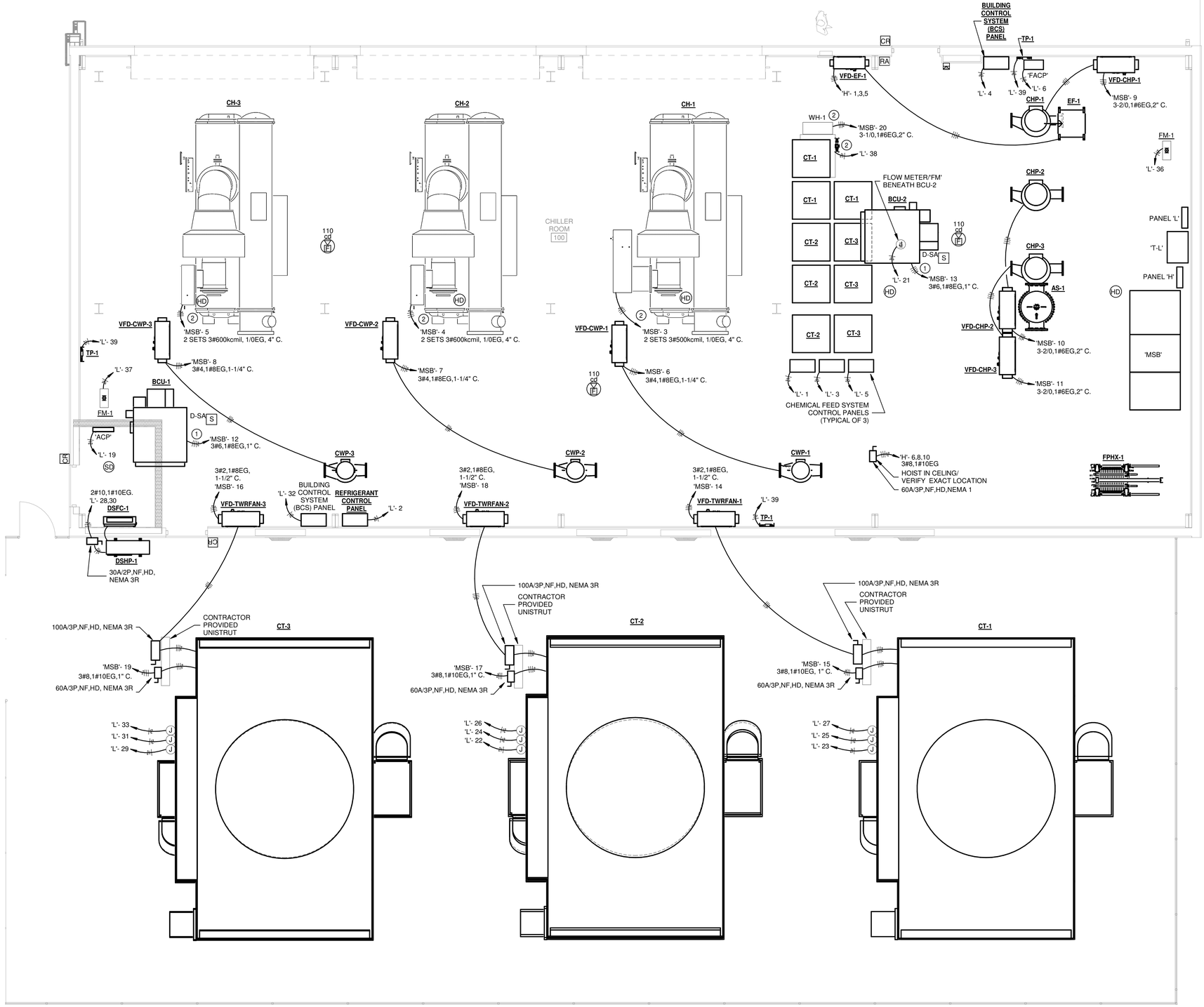
1. DISCONNECT BY DIVISION 23/HVAC.
2. CONDUIT MUST BE RUN UNDERGROUND TO AVOID HOIST STRUCTURE.

CONDUIT PROJECT NOTES

ALL WIRING SHALL BE INSTALLED IN CONDUIT COMPLETELY.
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.



FIRST FLOOR PLAN - SYSTEMS

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

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12363 — 04-06-26

VERIFY SCALE
0 1"

CORPORATE REGISTRATION — PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 — ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

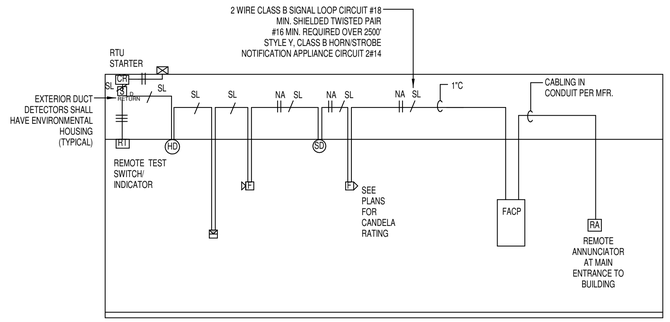
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: NORTH PLANT PLAN - SYSTEMS

CONSTRUCTION DOCUMENTS

E103



3 FIRE ALARM SYSTEM RISER DIAGRAM
NOT TO SCALE

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.

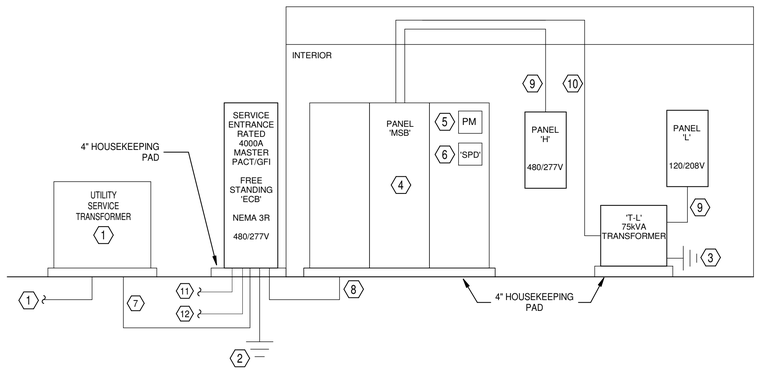
2. FIRE ALARM SYSTEM TO BE INSTALLED PER APPROVED SHOP DRAWINGS FURNISHED BY THE FIRE ALARM VENDOR. CONTRACTOR TO PROVIDE A COMPLETE SCHEDULE OF DEVICE ADDRESSES WITH SHOP DRAWINGS FOR REVIEW ANDAPPROVAL.

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.

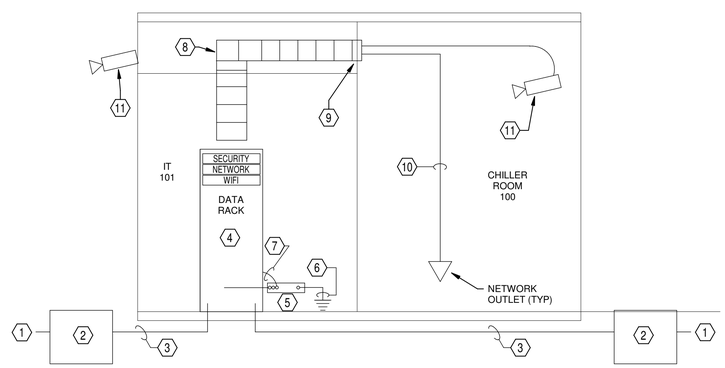
6. ALL WIRING IN CONDUIT. THE CONDUIT MUST BE RED IN COLOR.



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 - DENT POWERSCOUT BAC3HD WITH ENCLOSURE PS3HD-C-D-N AND RoCoil FLEXIBLE CT'S. METER SHALL BE MOUNTED ON FACE OF EACH SWITCHBOARD. THIS WILL BE FIELD INSTALLED BY THE ELECTRICIAN.
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. ONE 4" CONDUIT STUB OUT FOR TELEPHONE AND NETWORK SERVICE. TELEPHONE AND NETWORK STUB OUT SHALL EXTEND TO THE PROPERTY LINE. COORDINATE EXACT STUB OUT LOCATION WITH THE UNIVERSITY.
2. 36"X54" QUAZITE 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"X1/4"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

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12063 — 4-06-26

VERIFY SCALE
0 1"

CORPORATE REGISTRATION — PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 — ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

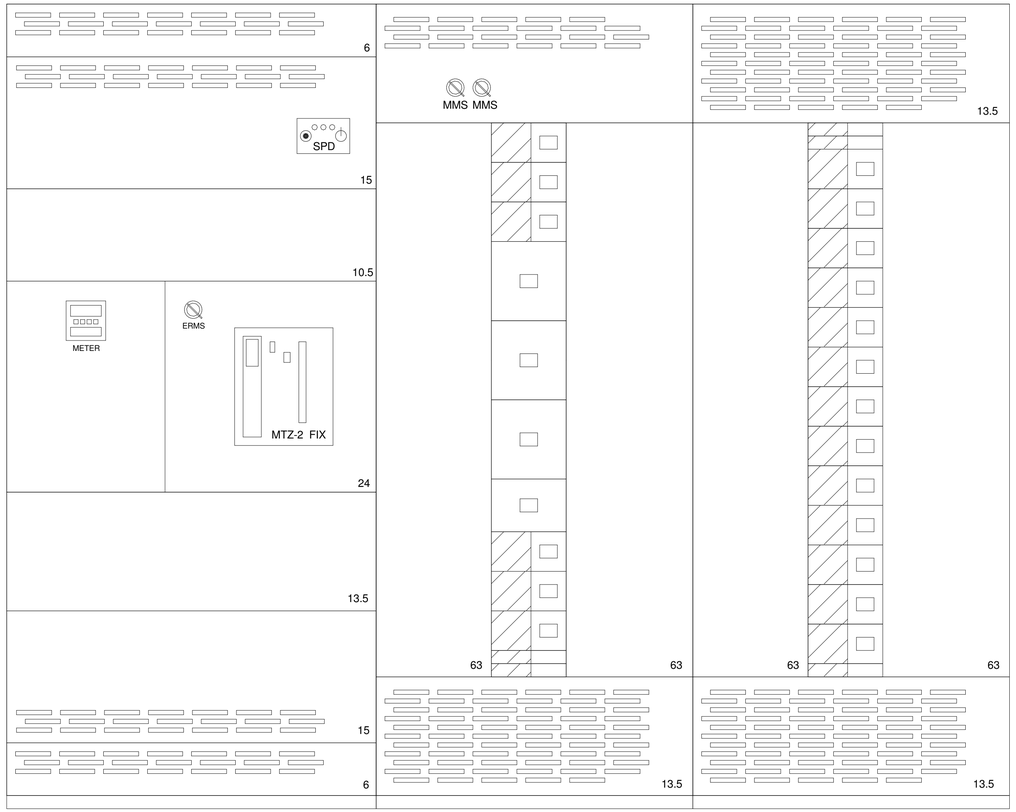
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: ELECTRICAL PANEL & RISER - NORTH PLANT

CONSTRUCTION DOCUMENTS

E201



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

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 3R	**MFR. AND TYPE**	SQUARE D QED	**SUBFEED LUGS:**		**NEUTRAL RATING:**	100.00%

Circuit Number	Load Name	Circuit Breaker	A	B	C
1	PANEL 'H'	225A/3P	3940 VA	5705 VA	3300 VA
2	'T-L'/75kVA	125A/3P	7360 VA	8456 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					
	Total Load:	890829 VA	893691 VA	891285 VA	
	Total Amps:	3216 A	3227 A	3218 A	

Load Classification	Connected Load	Demand Factor	Esitmated Demand	Panel Totals	
Lighting	3045 VA	125.00%	3807 VA	**Total Connected Load:**	2675805 VA
Receptacles	5580 VA	100.00%	5580 VA	**Total Estimated Demand:**	2676567 VA
HVAC	0 VA	0.00%	0 VA	**Total Connect Current:**	3218 A
Other	10240 VA	100.00%	10240 VA	**Total Est. Demand Current:**	3219 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 556 POWER METER WITH BacNET IP AND MSTP CONVERSION.
SWITCHBOARD SECTIONS SHALL HAVE FULL BUS.
DENOTES GFI BREKAER

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12663
4-06-26

VERIFY SCALE
0 1"

CORPORATE REGISTRATION
PETTIT & PETTIT CONSULTING ENGINEERS, INC.
No. 78
ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION

REVISIONS HISTORY

DATE: April 06, 2026

TITLE: ELECTRICAL PANELS - NORTH PLANT

CONSTRUCTION DOCUMENTS

E301

Panelboard: 'H'

LOCATION:	CHILLER ROOM 100	**VOLTAGE:**	480/277 Wye	**COPPER BUS RATING:**	250 A	**MAINS TYPE:**	MLO
MOUNTING:	SUFACE	**PHASE:**	3	**GROUND BUS:**		**MCB RATING:**	
ENCLOSURE:	TYPE 1	**WIRES:**	4	**MINIMUM A.I.C. RATING:**	TBD	**FED FROM:**	'MSB'
		MFR. AND TYPE:	SQUARE D NF	**SUBFEED LUGS:**		**NEUTRAL RATING:**	

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	60A/3P	HOIST (VERIFY BREAKER AND WIRE SIZE)	6
7	-		0	2357							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				18
19											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
Total Load:			3940 VA		5705 VA		3300 VA				
Total Amps:			15 A		21 A		12 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	3045 VA	125.00%	3807 VA	**Total Connected Load:**	12944 VA
Receptacles	0 VA	0.00%	0 VA	**Total Estimated Demand:**	13706 VA
HVAC	0 VA	0.00%	0 VA	**Total Connected Current:**	16 A
Power	9899 VA	100.00%	9899 VA	**Total Est. Demand Current:**	16 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:

Panelboard: 'L'

LOCATION:	CHILLER ROOM 100	**VOLTAGE:**	120/208 Wye	**COPPER BUS RATING:**	225 A	**MAINS TYPE:**	MCB
MOUNTING:	SUFACE	**PHASE:**	3	**GROUND BUS:**	Yes	**MCB RATING:**	225A
ENCLOSURE:	TYPE 1	**WIRES:**	4	**MINIMUM A.I.C. RATING:**	TBD	**FED FROM:**	'T-L'
		MFR. AND TYPE:	SQUARE D NQ	**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			30A/2P	DSCU-1	28
29	CT-3 CONTROLS	20A/1P					500	1976			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 ALARM	38
39	TP-1/TRAP PRIMER	20A/1P			180						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
Total Load:			7360 VA		8456 VA		8456 VA				
Total Amps:			61 A		72 A		72 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	0 VA	0.00%	0 VA	**Total Connected Load:**	24272 VA
Receptacles	5580 VA	100.00%	5580 VA	**Total Estimated Demand:**	24272 VA
HVAC	0 VA	0.00%	0 VA	**Total Connected Current:**	67 A
Power	8452 VA	100.00%	8452 VA	**Total Est. Demand Current:**	67 A
Other	10240 VA	100.00%	10240 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*

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12063 — 4-06-26

VERIFY SCALE
0 1"

CORPORATE REGISTRATION — PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 — ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: ELECTRICAL PANELS - NORTH PLANT

CONSTRUCTION DOCUMENTS

E302

EXISTING:

	'MP	**VOLTAGE:**	480/277 Wye	**COPPER BUS RATING:**	1200A	**MAINS TYPE:**	MLO
LOCATION:		**PHASE:**	3	**GROUND BUS:**	YES	**MCB RATING:**	N/A
MOUNTING:	Wall Mounted	**WIRES:**	4	**MINIMUM A.I.C. RATING:**		**FED FROM:**	
ENCLOSURE:	NEMA 1	**MFR. AND TYPE**	SQUARE D QED	**SUBFEED LUGS:**		**NEUTRAL RATING:**	100% UNLESS OTHERWISE

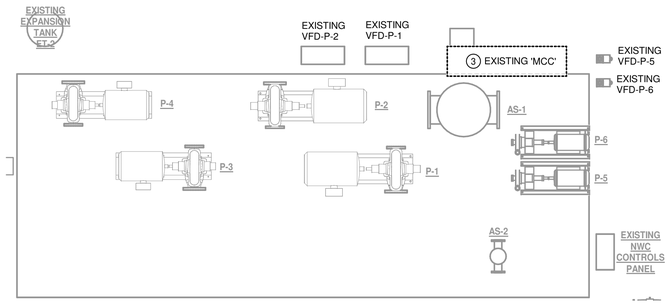
Circuit Number	Load Name	Circuit Breaker	A	B	C
1	EXSTING LOAD	60A/3P	0 VA		
2	EXISTING LOAD	400A/3P	0 VA		
3	EXISTING LOAD	100A/3P	0 VA		
4	EXISTING LOAD	150A/3P	0 VA		
5	EXISTING LOAD	100A/3P	0 VA		
6	EXISTING LOAD	100A/3P	0 VA		
7	EXISTING LOAD	60A/3P	0 VA		
8	EXISTING LOAD	50A/3P	0 VA		
9	EXISTING 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					
	Total Load:		107827 VA	107827 VA	107827 VA
	Total Amps:		389 A	389 A	389 A

Load Classification	Connected Load	Demand Factor	Esitmated Demand	Panel Totals	
Lighting	0 VA	0.00%	0 VA	**Total Connected Load:**	323482 VA
Receptacles	0 VA	0.00%	0 VA	**Total Estimated Demand:**	323482 VA
HVAC	0 VA	0.00%	0 VA	**Total Connect Current:**	389 A
Other	0 VA	0.00%	0 VA	**Total Est. Demand Current:**	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		

Notes:
NEW BREAKERS
VERIFY ALL INSTALLATION REQUIRED PRIOR TO BID
MATCH ALL EXISTING AIC RATINGS

ELECTRICAL PROJECT NOTES

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

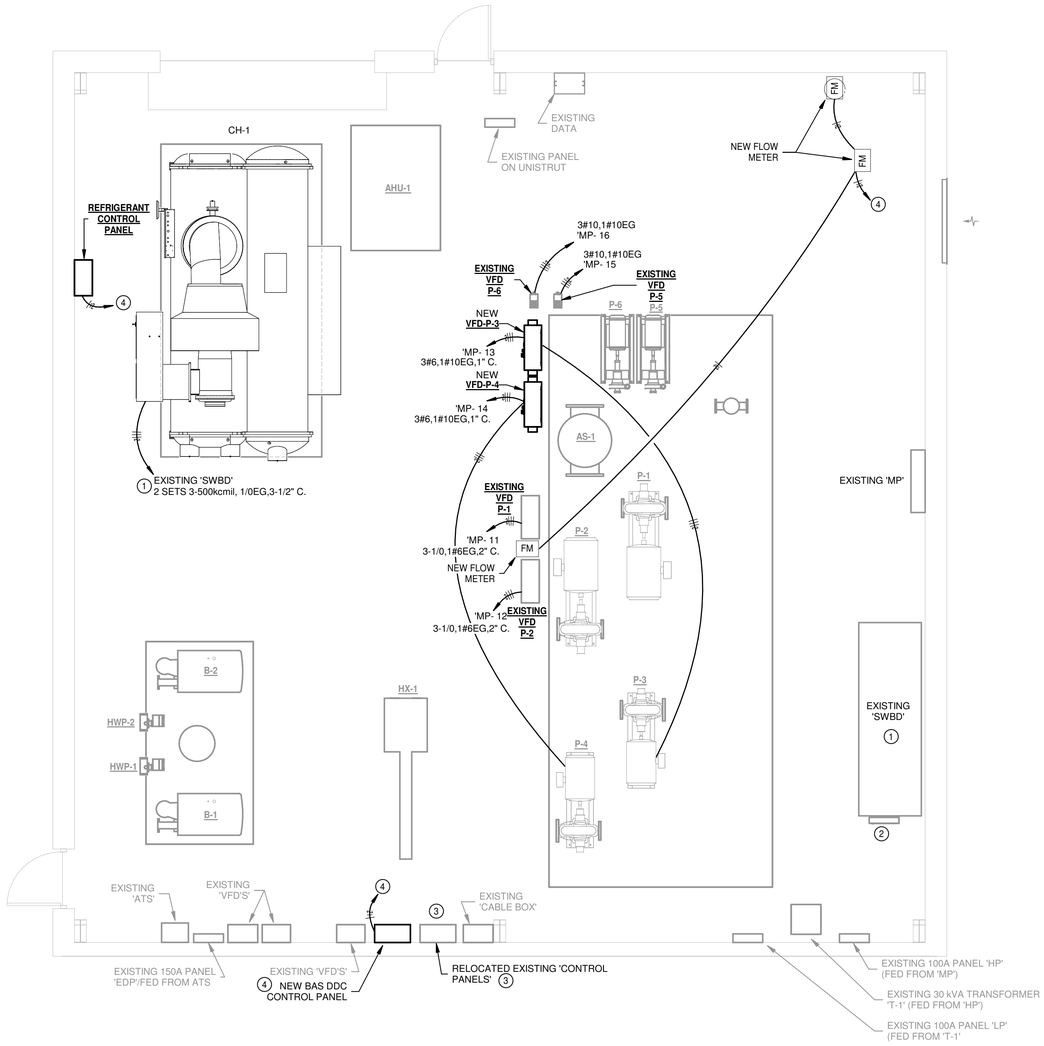


ELECTRICAL KEYED NOTES

1. 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.
2. PROVIDE AND INSTALL A NEW BACNET IP CONTROL CARD TO MONITOR THE EXISTING ELECTRICAL METERS.
3. 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.
4. RELOCATE EXISTING HEATING WATER SYSTEM CONTROL PANEL. EXTEND WIRE AND CONDUIT AS NEEDED.
5. PROVIDE AND INSTALL A NEW 20A/1P BREAKER IN PANEL 'LP'. LABEL CIRCUIT IN PANEL.

GENERAL DEMOLITION NOTES

1. THE ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO VISIT THE SITE TO FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS PRIOR TO BID.
2. 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.
3. ALL EXISTING BRANCH CIRCUITS NOT USED SHALL BE REMOVED BACK TO SERVING PANELBOARD. THE CIRCUIT BREAKERS SHALL BE LABELED AS SPARE.
4. DASHED LINES INDICATE EXISTING FIXTURES, EQUIPMENT, DEVICES, ETC., TO BE DEMOLISHED UNLESS OTHERWISE NOTED.
5. HALF TONE LINES INDICATE EXISTING FIXTURES, EQUIPMENT, DEVICES, ETC., TO REMAIN UNLESS OTHERWISE NOTED.



1 PARTIAL SOUTH PLANT DEMOLITION PLAN - ELECTRICAL

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

2 SOUTH PLANT FLOOR PLAN - ELECTRICAL

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

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12363 — 4-06-26

VERIFY SCALE
0 1"

CORPORATE REGISTRATION — PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 — ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

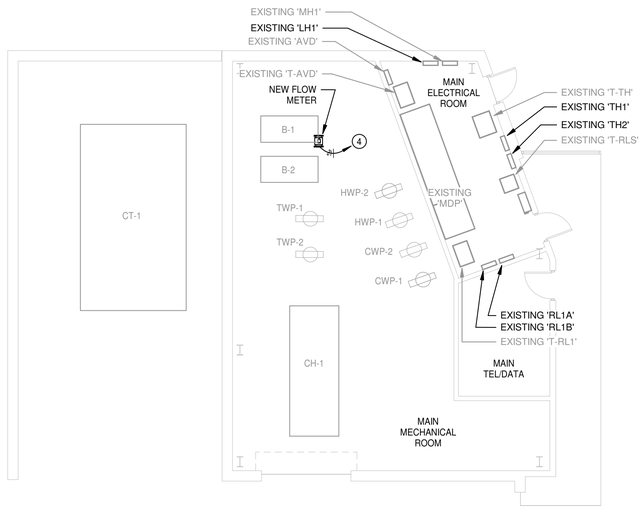
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: SOUTH PLANT PLAN - ELECTRICAL

CONSTRUCTION DOCUMENTS

E401



4 WINDGATE PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"

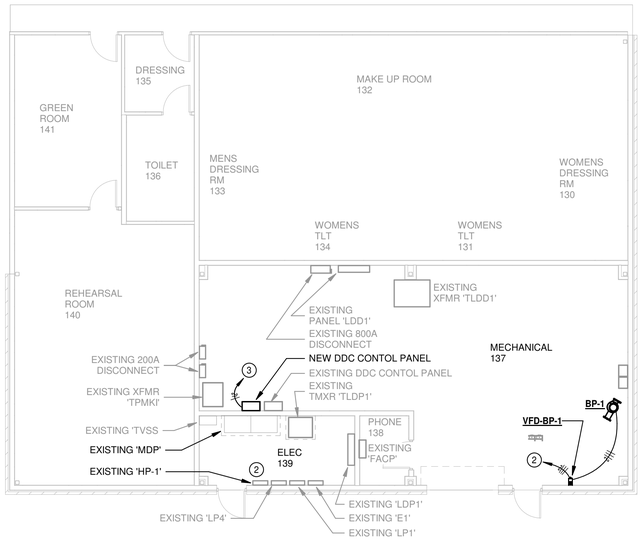
ELECTRICAL KEYED NOTES

1. STANLEY RUSS HALL:
PROVIDE AND INSTALL 480V 20A/3P BREAKER IN EXISTING PANEL 'HP-1'. VFD WILL BE PROVIDED BY THE MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL ON UNISTRUT STAND.

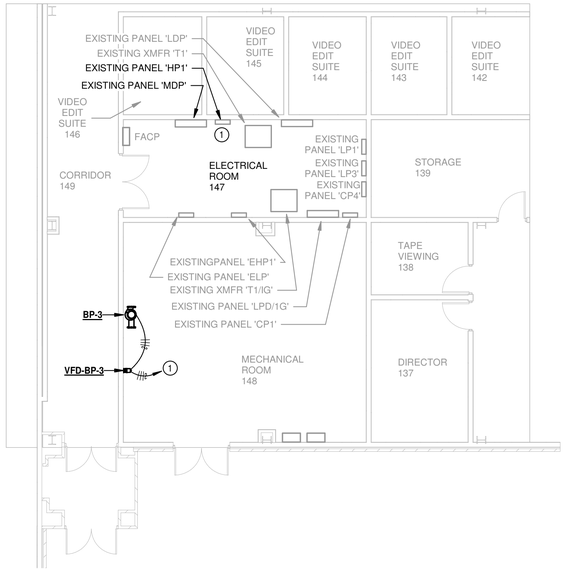
2. REYNOLDS HALL:
PROVIDE AND INSTALL 480V 25A/3P BREAKER IN EXISTING PANEL 'HP-1', WIRES SHALL BE 3#10, 1#10EG. VFD WILL BE PROVIDED BY THE MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL ON UNISTRUT STAND.

3. CONNECT TO NEAREST 120V 20A/1P CIRCUIT. PROVIDE BREAKER AS NEEDED.

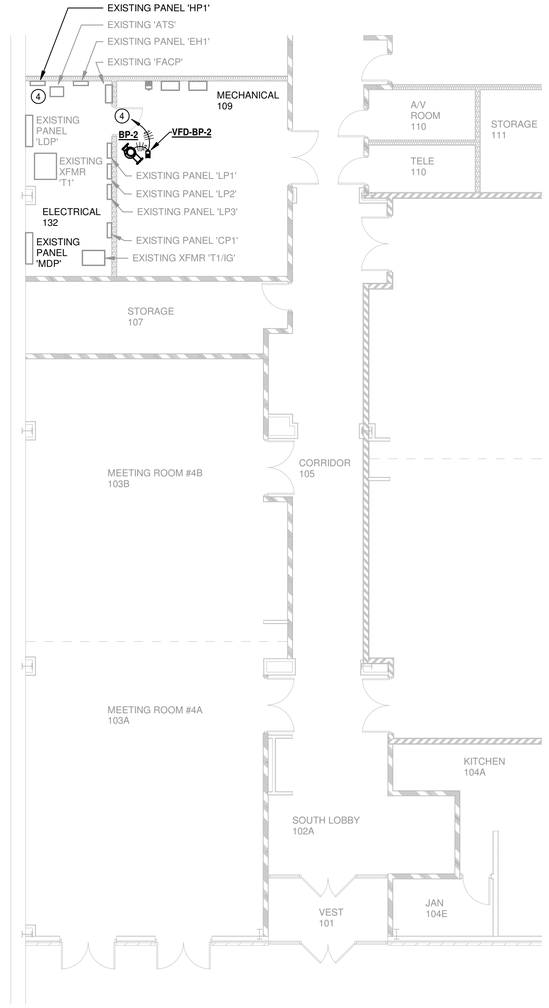
4. BREWER-HEGEMAN CONFERENCE CENTER:
PROVIDE AND INSTALL 480V 20A/3P BREAKER IN EXISTING PANEL 'HP-1'. VFD WILL BE PROVIDED BY THE MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL ON UNISTRUT STAND.



1 REYNOLDS PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"



2 STANLEY RUSS HALL PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"



3 BREWER-HAGEMAN CONFERENCE CENTER PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12363 — 4-06-26

VERIFY SCALE
0 1"

CORPORATE REGISTRATION — PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 — ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

UCA CAMPUS DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

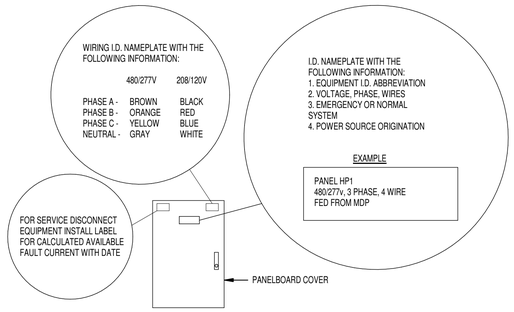
#	DATE	DESCRIPTION
REVISIONS HISTORY		

DATE: April 06, 2026

TITLE: BOOSTER PUMP PLANS - ELECTRICAL

CONSTRUCTION DOCUMENTS

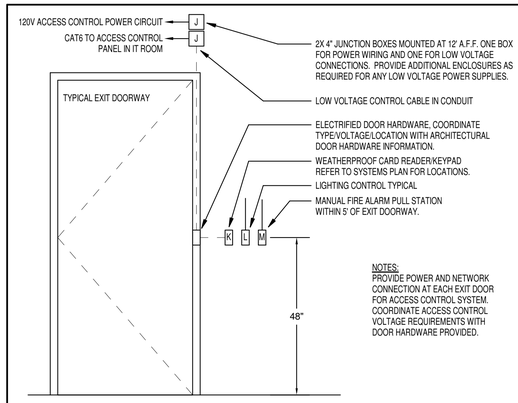
E501



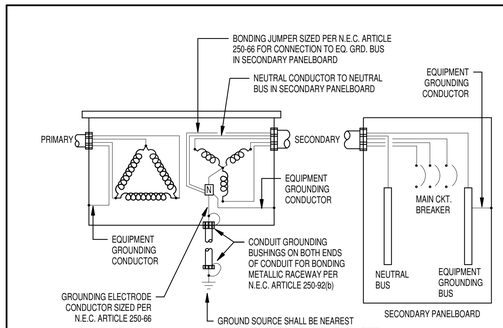
PANEL IDENTIFICATION NOTES:

1. SIMILAR FOR DISCONNECTS, MOTOR CONTROLLERS, TRANSFORMERS, LIGHTING CONTROL PANEL, AUTOMATIC TRANSFER SWITCHES, ETC.
2. PROVIDE PANEL IDENTIFICATION FOR ALL NEW PANELS AND FOR ALL EXISTING REWORKED PANELS THAT DO NOT CURRENTLY HAVE IDENTIFICATION TAGS IN PLACE.

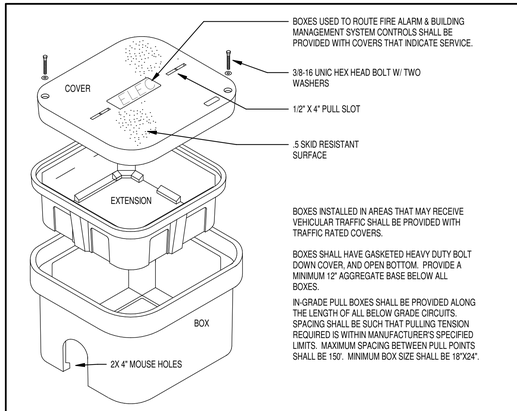
1 PANEL & SERVICE ID DETAIL
NOT TO SCALE



2 ACCESS CONTROL DETAIL
NOT TO SCALE



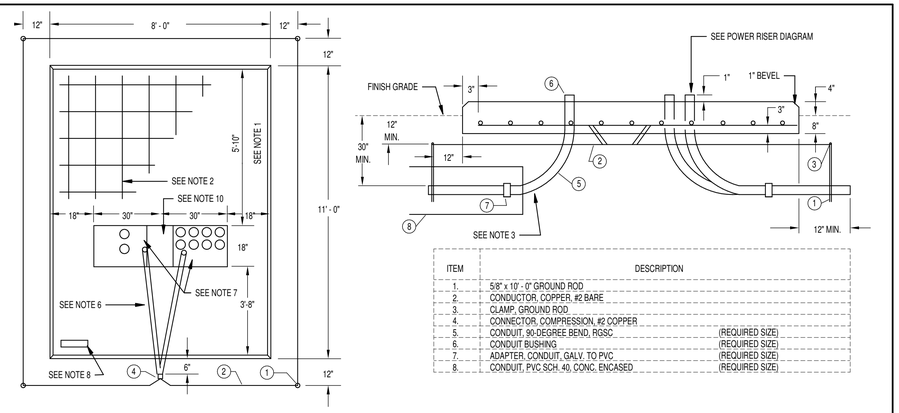
3 TRANSFORMER CONNECTION DETAIL
NOT TO SCALE



4 IN-GRADE PULL BOX DETAIL
NOT TO SCALE

NOTE:

1. WHERE POSSIBLE, DO NOT PLACE CONDUIT UNDER THIS SECTION OF FOUNDATION.
2. REINFORCING: #4 BARS 12" C. BOTH WAYS.
3. WHEN INSTALLING CONDUIT, DISTURB GROUND IN FOUNDATION AREA AS LITTLE AS POSSIBLE. EXTEND CONDUIT 1" ABOVE FOUNDATION.
4. TOP OF FOUNDATION TO BE SMOOTH AND LEVEL. FINAL GRADE SHALL SLOPE AWAY FROM PAD.
5. CONCRETE SHALL BE 3500 PSI AT 28 DAYS AND 1:2:4 MIXTURWE WITH 6 GAL. MAX. WATER CONTENT PER SACK OF CEMENT.
6. 1" CONDUIT UNDER PAD FOR GROUND WIRE.
7. LOCATE CONDUITS UNDER PRIMARY AND SECONDARY BUSHINGS.
8. TRANSFORMER LOCATION TAG SHALL BE ATTACHED TO PAD WITH CONCRETE NAILS OR SHEET METAL SCREWS.
9. TRANSFORMER PAD REQUIRES 3' CLEARANCE ON BACK AND SIDES AND 15' IN FRONT.
10. 18" MINIMUM BETWEEN PRIMARY AND SECONDARY CONDUITS.



ITEM	DESCRIPTION	
1.	5/8" x 10'- 0" GROUND ROD	
2.	CONDUCTOR, COPPER, #2 BARE	
3.	CLAMP, GROUND ROD	
4.	CONNECTOR, COMPRESSION, #2 COPPER	
5.	CONDUIT, 90-DEGREE BEND, RGSC	(REQUIRED SIZE)
6.	CONDUIT BUSHING	(REQUIRED SIZE)
7.	ADAPTER, CONDUIT, GALV. TO PVC	(REQUIRED SIZE)
8.	CONDUIT, PVC SCH. 40, CONC. ENCASED	(REQUIRED SIZE)

5 UTILITY TRANSFORMER PAD DETAIL
NOT TO SCALE

SYMBOL LEGEND

	DUPLEX RECEPTACLE AT 18" A.F.F. GFI - GROUND FAULT CIRCUIT INTERRUPTER AC - MOUNTED ABOVE COUNTER BC - MOUNTED BELOW COUNTER WP - PROVIDED WITH WEATHERPROOF IN-USE TYPE COVER
	QUADRUPLEX RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE NEMA CONFIGURATION SHOWN ON PLAN
	DATA OUTLET - BOX AND BLUE CONDUIT ONLY WITH PULL STRING
WAP	WIRELESS ACCESS POINT
J	JUNCTION BOX
$	SINGLE POLE TOGGLE SWITCH AT 48" A.F.F. TYPICAL WP - WEATHERPROOF COVER DT - DIGITAL TIMER SWITCH
	BRANCH CIRCUIT HOMERUN HOT-NEUTRAL-GROUND PANEL AND CIRCUIT NUMBER INDICATED ON PLAN
	PANELBOARD
	DISCONNECT SWITCH
T	DRY-TYPE TRANSFORMER
REX	REQUEST FOR EXIT PUSH BUTTON
	VIDEO SURVEILLANCE CAMERA - BOX AND BLUE CONDUIT ONLY WITH PULL STRING
G	GROUND BAR'G'
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL PULL STATION
S D - SA	AIR SAMPLING SUPPLY
S D - RA	AIR SAMPLING RETURN
FA cd	PENDANT MOUNTED FIRE ALARM AUDIO/VISUAL APPLIANCE CANDELA RATING AS SHOWN ON PLANS
'NL'	EMERGENCY LIGHT FIXTURES IN CHILLER ROOM 100 SHALL BE NON-SWITCHED. ALWAYS ON.

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
2. CIRCUITS OF DIFFERENT PHASES MAY SHARE EQUIPMENT GROUND. EQUIPMENT GROUND CONDUCTOR SIZE SHALL NOT BE LESS THAN #12 AWG OR AS INDICATED ON THE DRAWINGS.
3. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID COPPER THW, THHN, THWN, AND ALL CONDUCTORS #8 AND LARGER SHALL BE STRANDED COPPER USING BOLTED LUGS AT TERMINALS.
4. MINIMUM WIRE SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED.
5. PULL ALL THE CONDUCTORS THROUGH RACEWAY AT THE SAME TIME.
6. MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS OTHERWISE NOTED. SEE SPECS FOR CONDUIT REQUIREMENTS. ALL CONDUIT SHALL BE CONCEALED UNLESS OTHERWISE NOTED.
7. 6'-0" MAXIMUM LENGTH ON FLEXIBLE CONDUIT.
8. USE COMPRESSION FITTINGS ON CONDUIT, SET SCREW FITTINGS ARE NOT ALLOWED.
9. PROVIDE PULL STRING AND PROTECTIVE BUSHINGS IN ALL SPARE CONDUITS.
10. LABEL ALL CIRCUITS ON PANEL SCHEDULES.
11. TURN ALL UNUSED CIRCUIT BREAKERS TO OFF POSITION.
12. FIRE PROOF ALL PENETRATIONS MADE THROUGH FIRE RATED WALLS.
13. ALL DEVICES SHALL BE RATED 20 AMP MINIMUM, VERIFY COLOR WITH ARCHITECT.
14. CONNECT DEVICES BY WRAPPING WIRE AROUND SCREW TERMINAL IN A CLOCKWISE DIRECTION AND TIGHTEN SCREW, BACK-CONNECTED SPRING DEVICES ARE NOT ALLOWED.
15. ALL BOXES SHALL BE INDEPENDANTLY SUPPORTED TO THE BUILDINGS STRUCTURE.
16. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL ELEVATIONS AND MILLWORK DETAILS FOR EXACT LOCATIONS OF ALL WIRING DEVICES AND LIGHT FIXTURES.
17. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LAY-IN LIGHT FIXTURES.
18. THE SPECIFICATIONS ARE AS BINDING ON THE CONTRACTOR AS THE DRAWINGS. THE CONTRACTOR SHALL READ THE SPECIFICATIONS AND SHALL INCLUDE ALL ITEMS REQUIRED BY THE SPECIFICATIONS BEFORE SUBMITTING A BID.
19. ELECTRICAL CONTRACTOR SHALL CLOSELY COORDINATE WITH MECHANICAL AND PLUMBING CONTRACTORS FOR EXACT LOCATION OF HVAC AND PLUMBING EQUIPMENT.
20. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SIZING OF ALL MOTOR OVERLOAD DEVICES (HEATERS) IN STARTERS BASED ON ACTUAL NAMEPLATE RATINGS ON THE MOTOR BEING INSTALLED.
21. PROVIDE TAMPER RESISTANT DEVICES AS REQUIRED BY CODE.
22. NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANELS SHALL MATCH EXISTING PANEL MANUFACTURER AND AIC RATING. UPDATE PANELBOARD CIRCUIT DIRECTORIES TO REFLECT CHANGES.
23. VFD'S WILL BE PROVIDED BY THE MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR, ON UNISTRUT STAND, OR AS SHOWN.

VERIFY PRINT IN COLOR

AMR architects
www.amr-architects.com
amr@amr-architects.com
CENTRAL ARKANSAS
T: 501.375.0378

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12363 — 4-06-26

VERIFY SCALE
0 1"

CORPORATE REGISTRATION — PETTIT & PETTIT CONSULTING ENGINEERS, INC. No. 78 — ARKANSAS ENGINEER

© 2026
PETTIT & PETTIT
CONSULTING ENGINEERS, INC.

DISTRICT LOOP & CHILLER PLANT

UCA CAMPUS, CONWAY, AR

REVISIONS HISTORY

#	DATE	DESCRIPTION

DATE: April 06, 2026

TITLE: ELECTRICAL DETAILS

CONSTRUCTION DOCUMENTS

E601