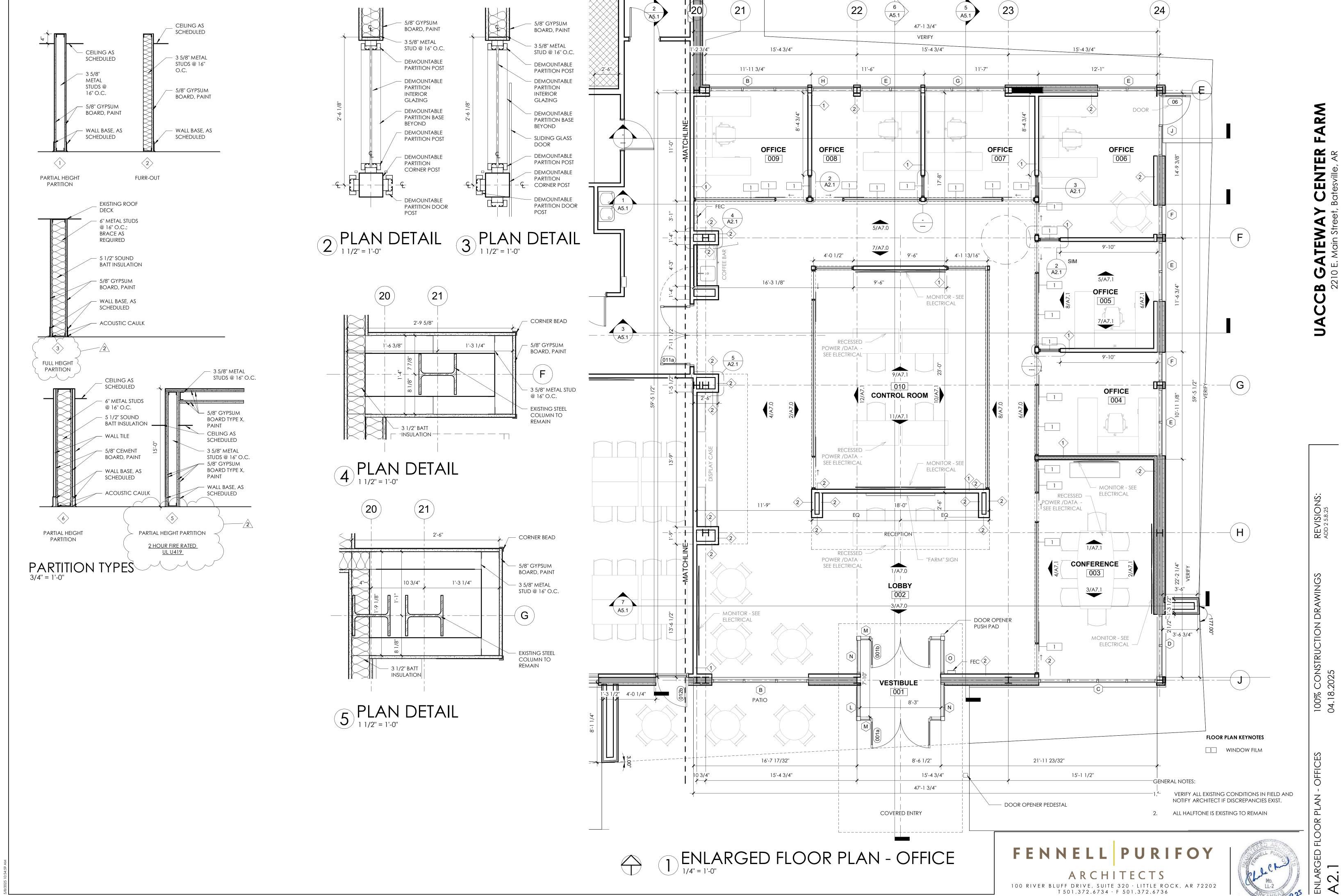
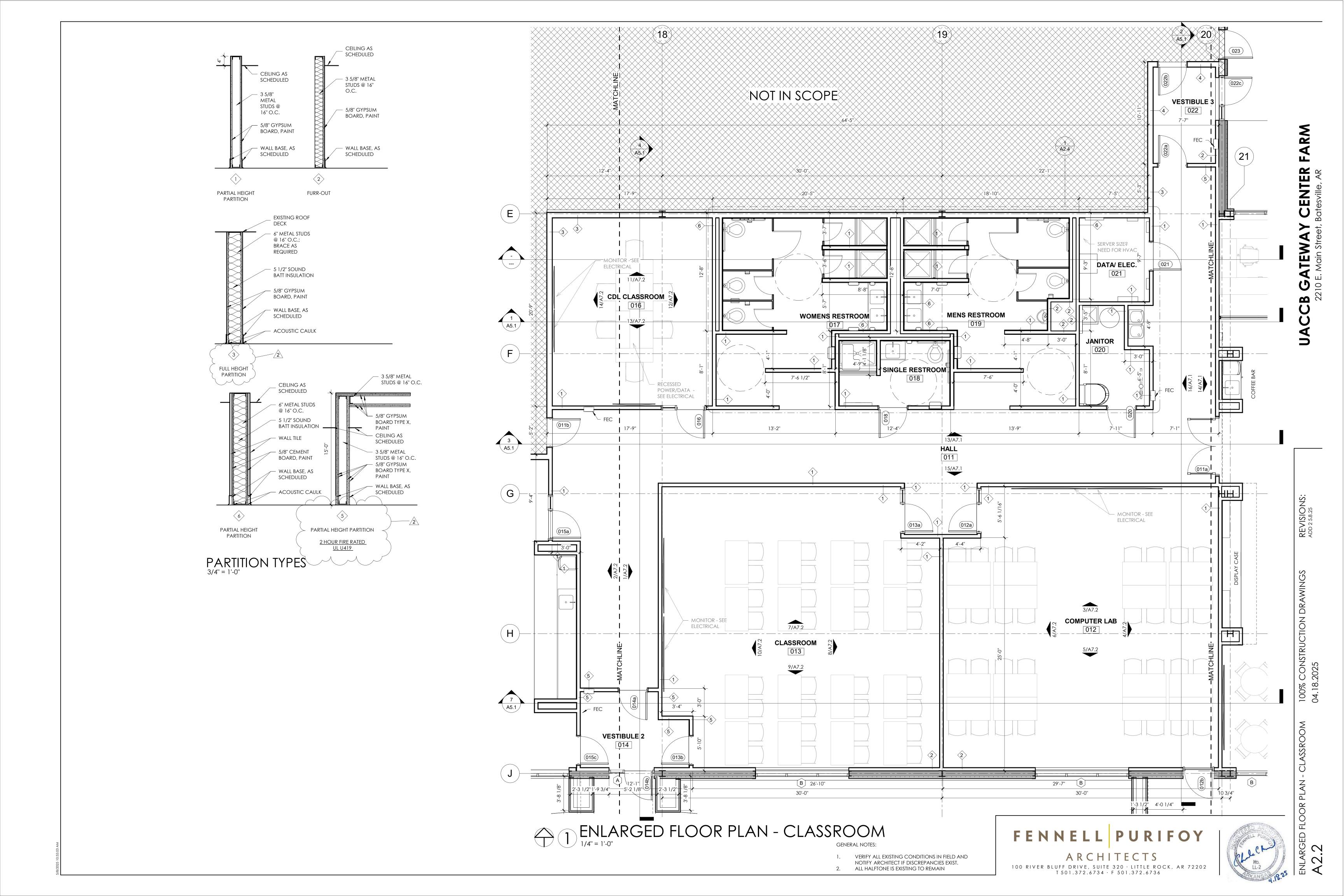
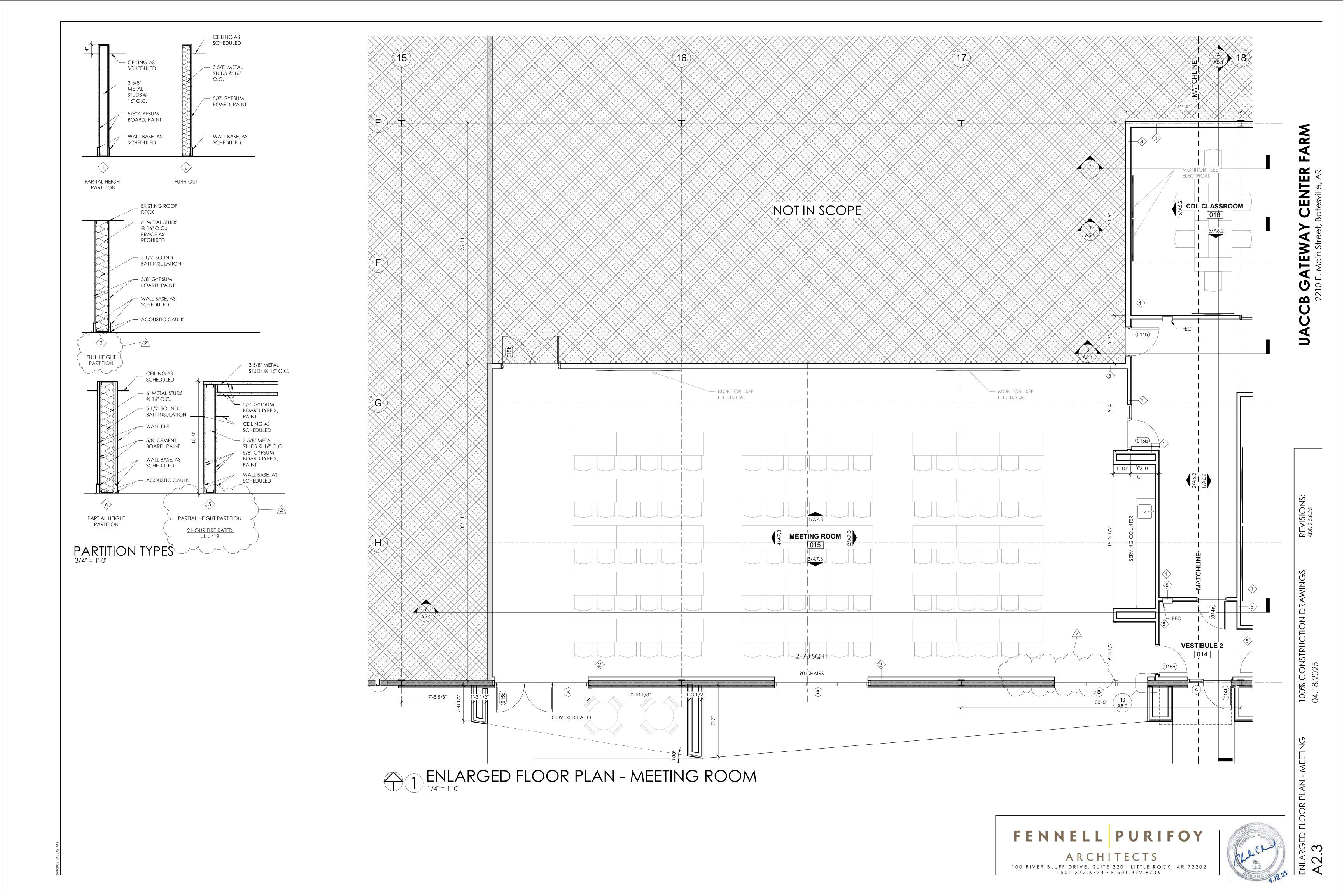
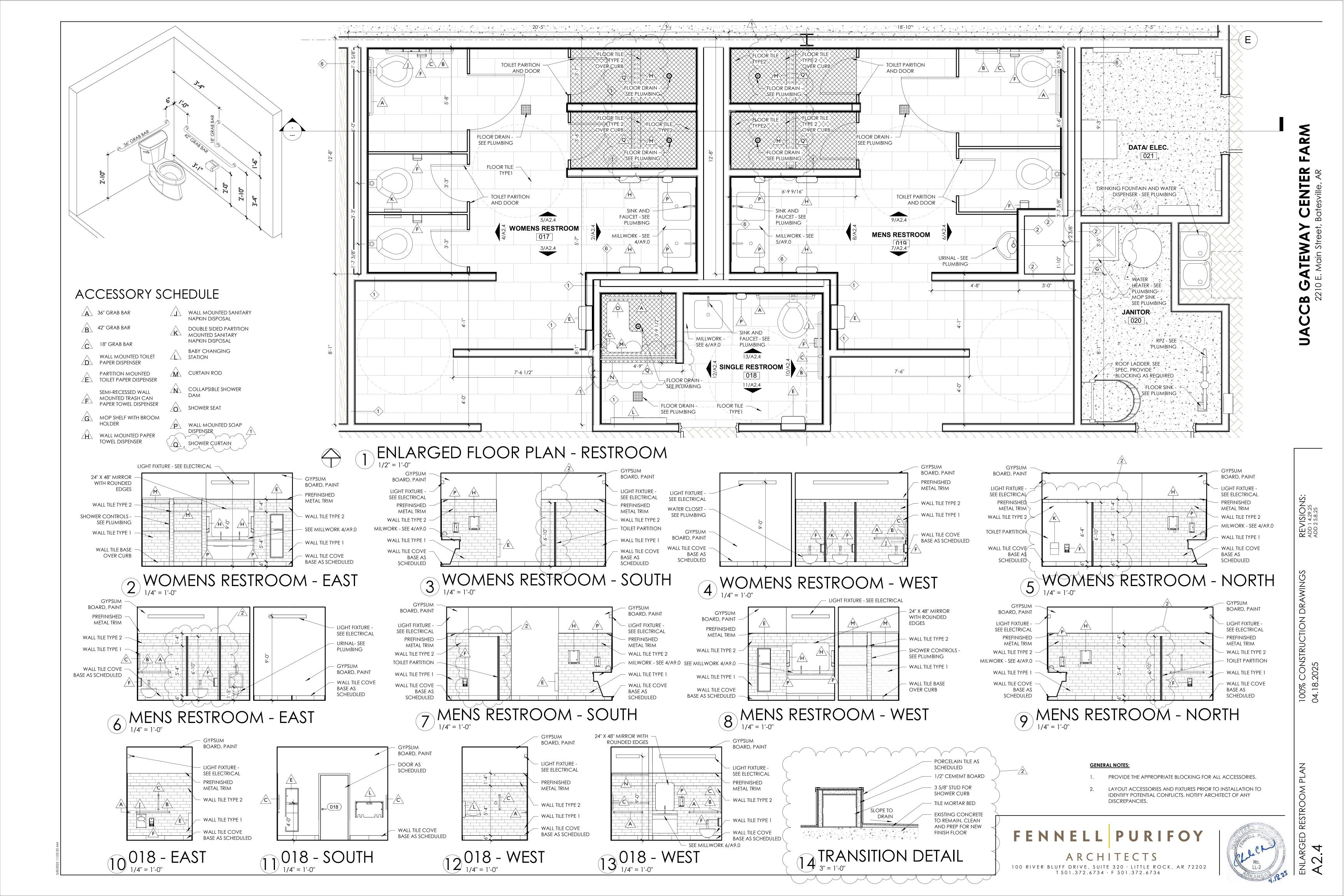
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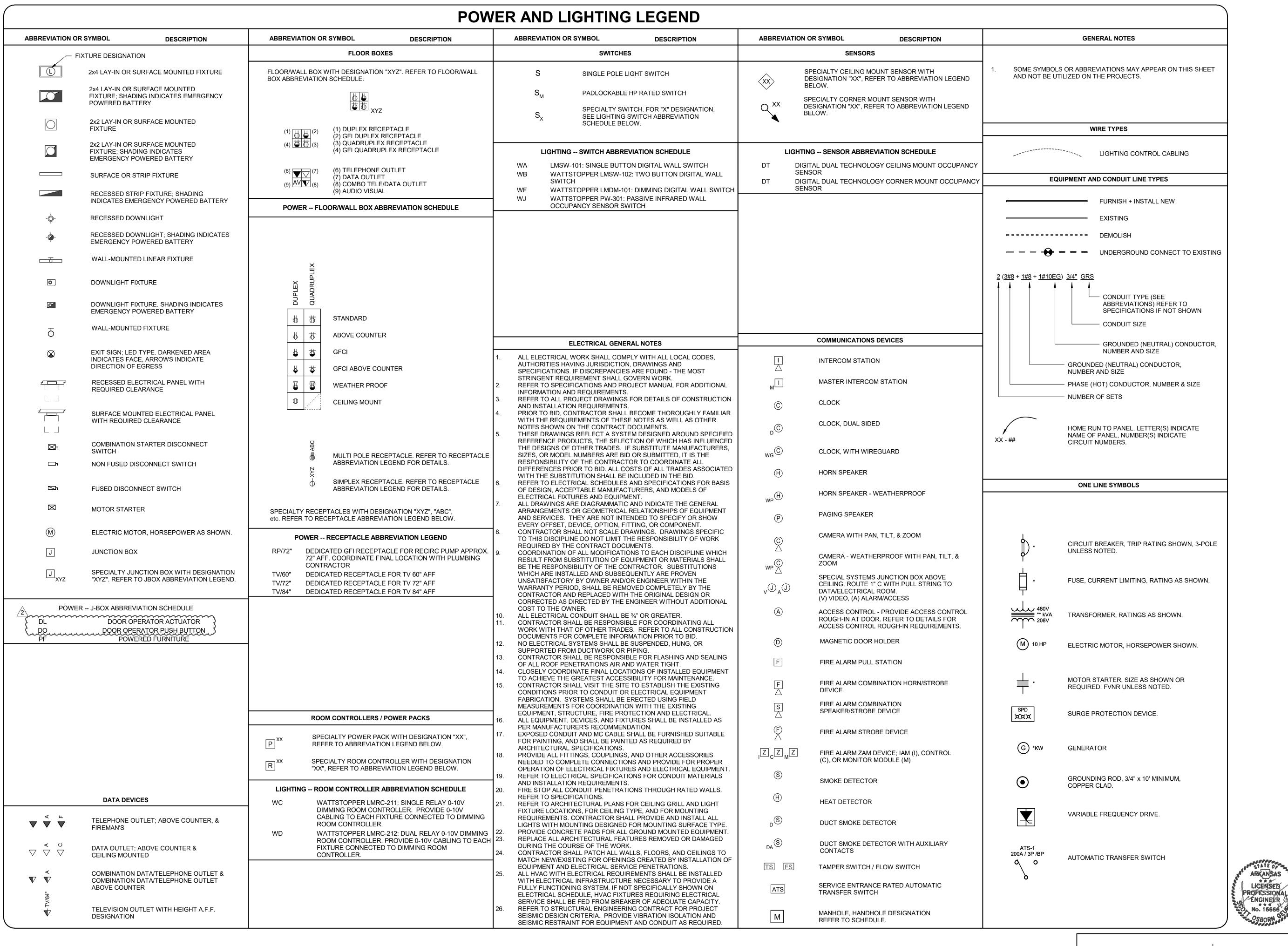








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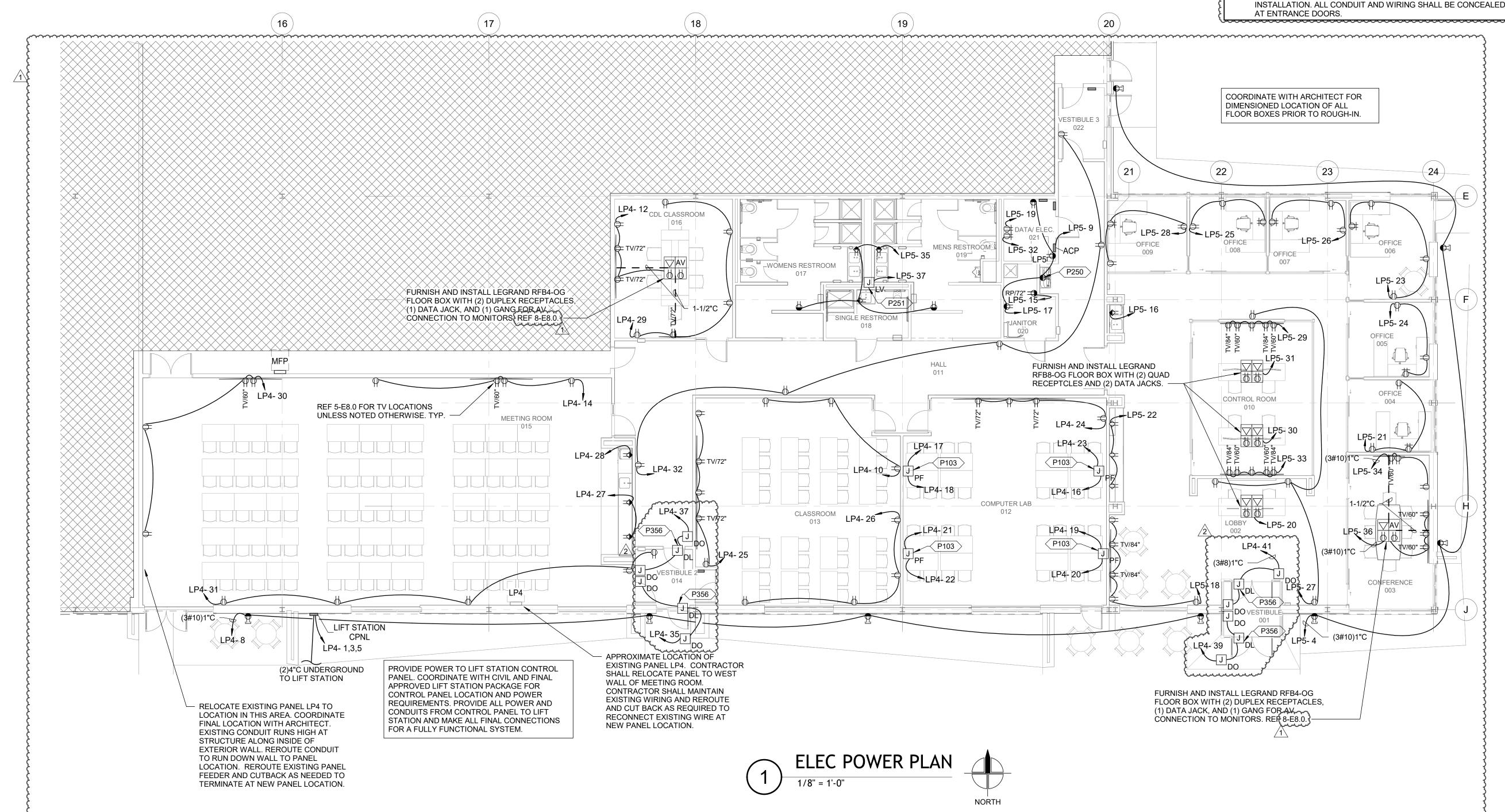


LICENSED

PROPESSIONAL



- P103 RECEPTACLES FURNISHED WITH FURNITURE WILL HAVE PRE-MANUFACTURED FLEXIBLE METAL CONDUITS TO JUNCTION BOX. CONTRACTOR SHALL ROUTE POWER FROM PANEL AS INDICATED TO JUNCTION BOX AT WALL AND MAKE CONNECTIONS TO FURNITURE WHIP FOR A COMPLETE INSTALLATION. COORDINATE WITH EQUIPMENT VENDOR FOR JUNCTION BOX INSTALLATION LOCATION.
- P250 ELECTRIC WATER COOLER RECEPTACLE: CONCEAL WITHIN CABINET PER MANUFACTURER'S REQUIREMENTS. PROVIDE 120V CONNECTION TO POWER CONVERTER FOR HARDWIRED AUTOMATIC SENSOR-CONTROLLED PLUMBING FIXTURES IN RESTROOMS. HARDWIRE POWER FROM CONVERTER TO URINAL, WATER CLOSETS, AND LAVATORIES.
- MAKE ALL FINAL CONNECTIONS.
 P356 AUTOMATIC DOOR OPERATOR: VERIFY LOCATION WITH MANUFACTURER'S RECOMMENDATIONS PRIOR TO

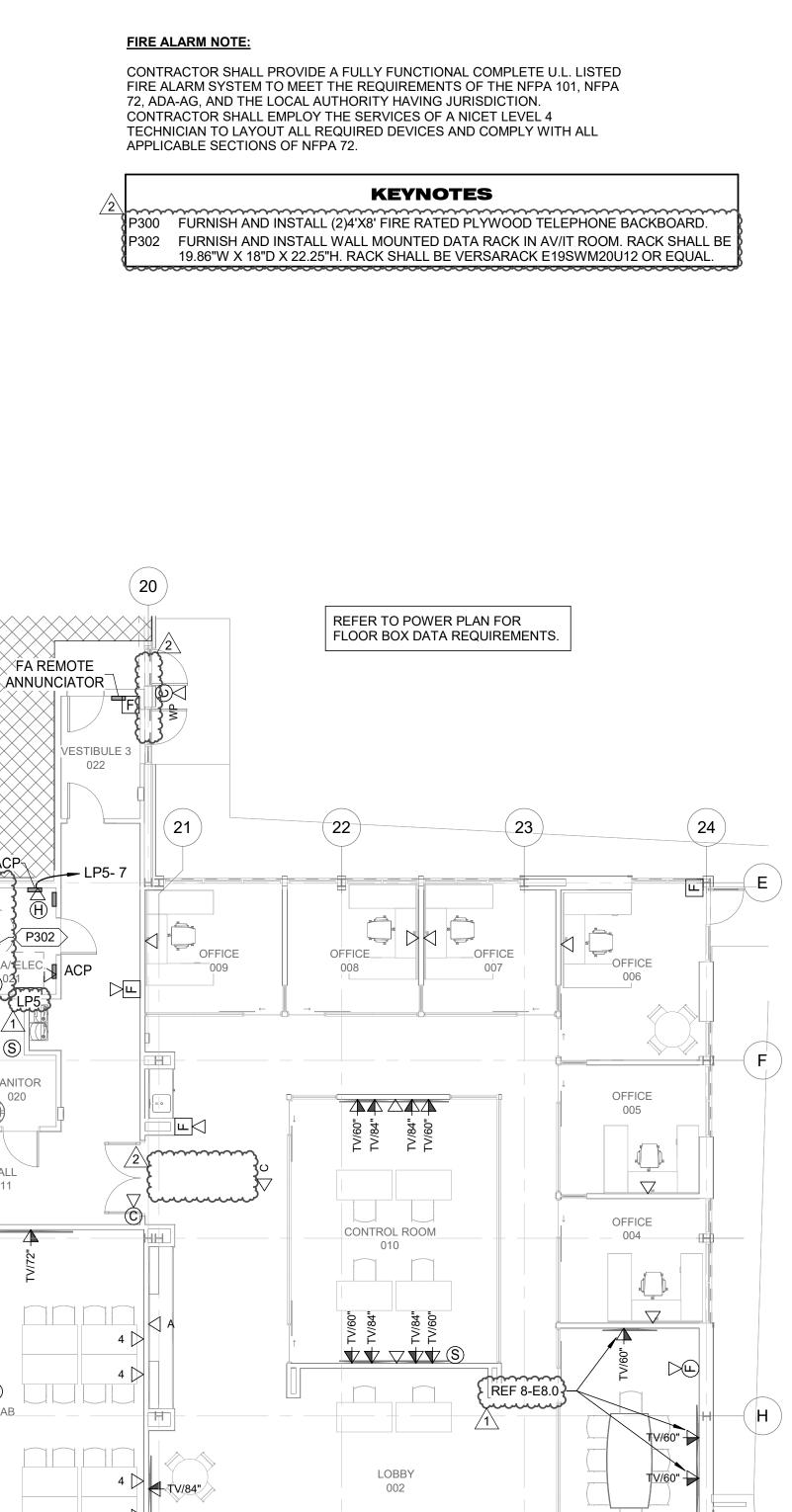


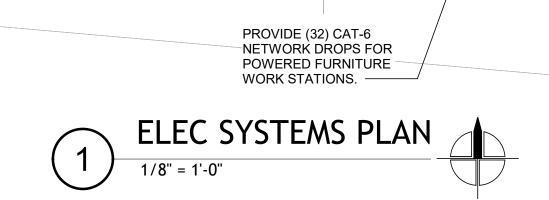




ARCHITECTS

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CONFERENCE

PROVIDE ROUGH-IN PER ACCESS CONTROL DETAILS. TYPICAL EACH EXTERIOR DOOR.



(17)

ACCESS CONTROL TYPE 1 - DOUBLE DOOR

3/4" CONDUIT TO ACCESSIBLE LOCATION - IF REQUIRED, COORDINATE INTERNAL "PUSH TO EXIT" BOX LOCATION AND SIZE WITH FINAL APPROVED EQUIPMENT IF REQUIRED, COORDINATE EXTERNAL ACCESS BOX LOCATION AND SIZE WITH FINAL APPROVED **EQUIPMENT**

REF 5-E8.0 FOR TV LOCATIONS UNLESS NOTED OTHERWISE. TYP.

- 3/4" CONDUIT - IF REQUIRED, COORDINATE INTERNAL "PUSH TO EXIT" BOX LOCATION AND SIZE WITH FINAL APPROVED EQUIPMENT IF REQUIRED, COORDINATE EXTERNAL ACCESS BOX LOCATION AND SIZE WITH FINAL APPROVED **EQUIPMENT**

(FURNISH AND INSTALL EATON SBTMG820, imesOR EQUAL, GROUNDING BAR ASSEMBLY< \check{A} AND ALL ASSOCIATED HARDWARE ON \check{A} $^{ imes}$ TELEPHONE BACKBOARD. PROVIDE #2 $^{ imes}$ \searrow COPPER GROUND CONDUCTOR AND \searrow

CDL CLASSROOM

MEETING ROOM

ACCESS CONTROL TYPE 2 - SINGLE DOOR

CONNECT GROUNDING BAR ASSEMBLY TO BUILDING GROUNDING SYSTEM. PROVIDE >#6 COPPER GROUND CONDUCTOR TO imes

> MENS RESTROOM 019

> > _COMPUTER LAB_

012

PROVIDE DATA AT CEILING FOR WIRELESS ACCESS POINT. PROVIDE MODULAR RJ45 CONNECTOR

ABOVE CEILING WITH 10' SERVICE LOOP. TYPICAL. —

Vinnemunimunimunimunit

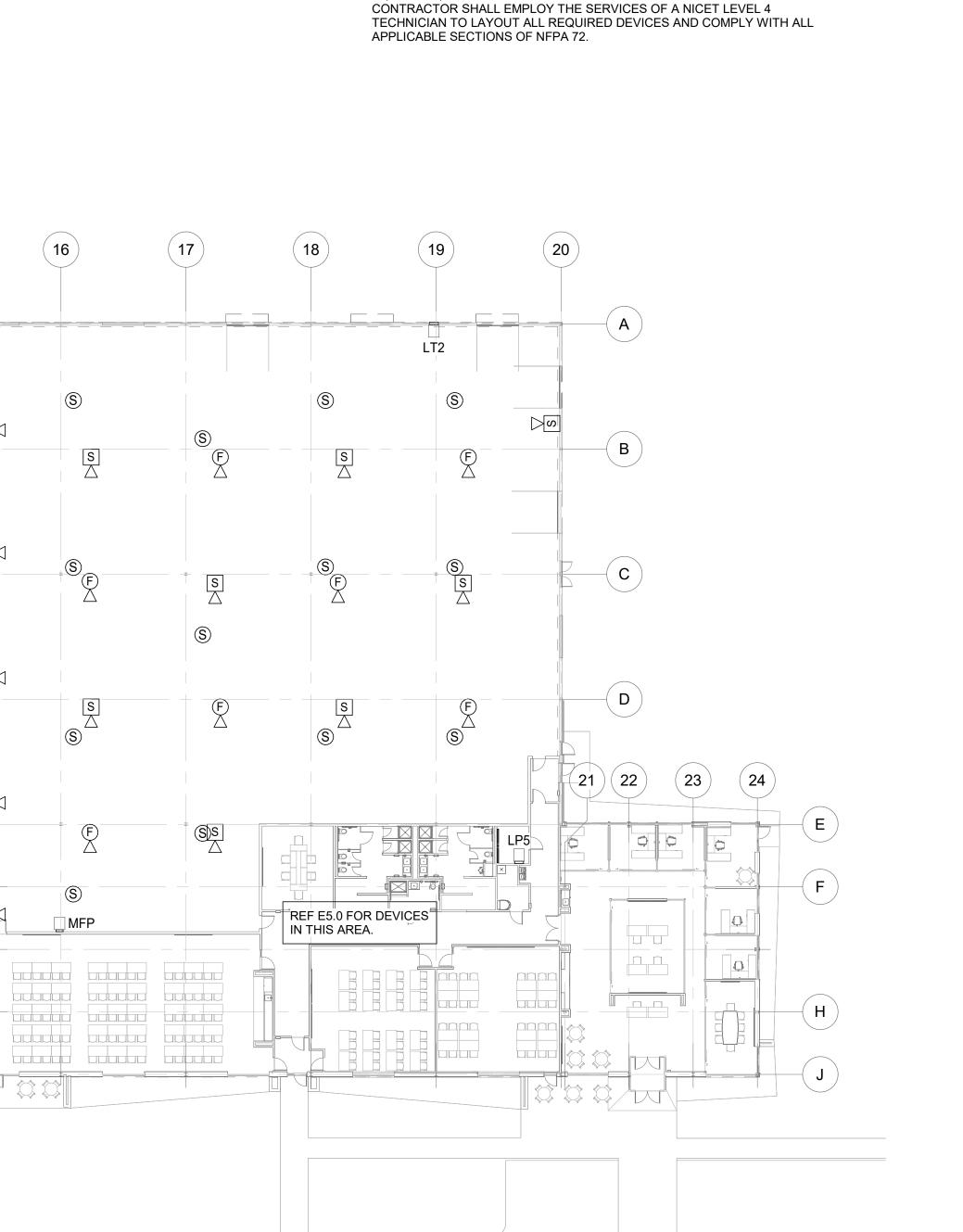
013

TV/72"

VESTIBULE 2

FA REMOTE **ANNUNCIATOR**

3/4" CONDUIT TO ACCESSIBLE LOCATION



CONTRACTOR SHALL PROVIDE A FULLY FUNCTIONAL COMPLETE U.L. LISTED FIRE ALARM SYSTEM TO MEET THE REQUIREMENTS OF THE NFPA 101, NFPA

72, ADA-AG, AND THE LOCAL AUTHORITY HAVING JURISDICTION.

FIRE ALARM NOTE:

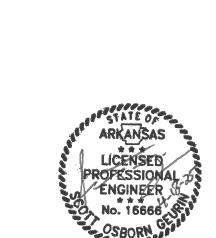
2

13

PROVIDE ONE SMOKE DETECTOR IN EACH ROOM BENEATH MEZZANINE.

FIRE ALARM PLAN

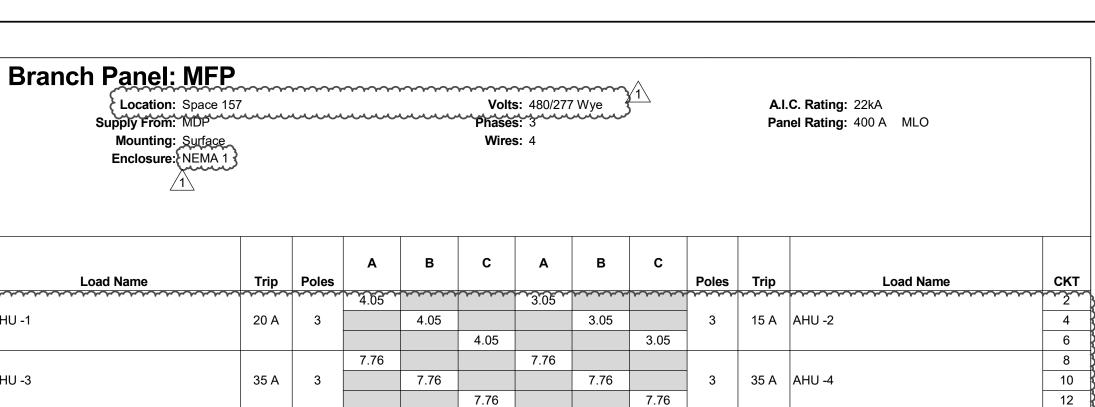
FIRE ALARM SHALL BE IN CONDUIT.







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PANELBOARD NOTES

FOR MAINTENANCE)

FOR CRITICAL LOAD).

PROTECTION (5 mA).

RATED SYSTEM.

U.L. RATINGS.

WIRE SIZES.

INSTALL LOCKING DEVICE (LOCK-OFF

INSTALL LOCKING DEVICE (LOCK-ON

REFER TO SITE LIGHTING PLAN FOR

PROVIDE GFI CIRCUIT BREAKER OR

PROVIDE GFI CIRCUIT BREAKER OR

PROVIDE U.L. LISTED OVERCURRENT

INLINE GFI FOR PERSONNEL

INLINE GFI FOR EQUIPMENT PROTECTION (30 mA).

DEVICE TO COORDINATE AND MAINTAIN MANUFACTURER'S SERIES

EXISTING CIRCUIT TO REMAIN.

EXISTING CIRCUIT BREAKER TO

REMAIN. VERIFY CONDITION OF

CIRCUIT BREAKER TO ENSURE THAT IT IS OPERATIONAL AND MEETS ALL

TRACE EXISTING CIRCUIT, IDENTIFY LOAD AND PROVIDE TYPEWRITTEN

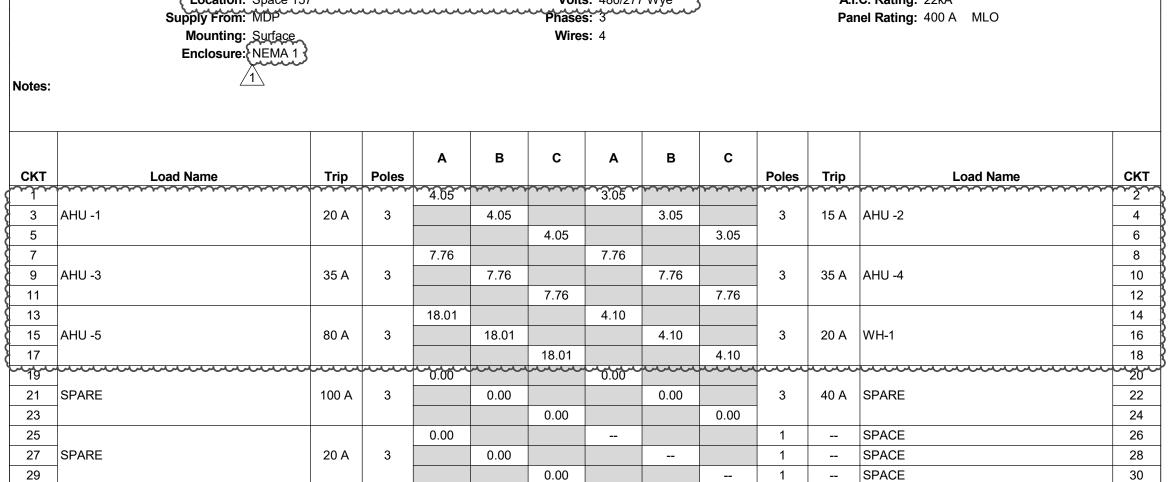
PANELBOARD DOOR. IF CIRCUIT IS A

PANELBOARD SCHEDULE AND

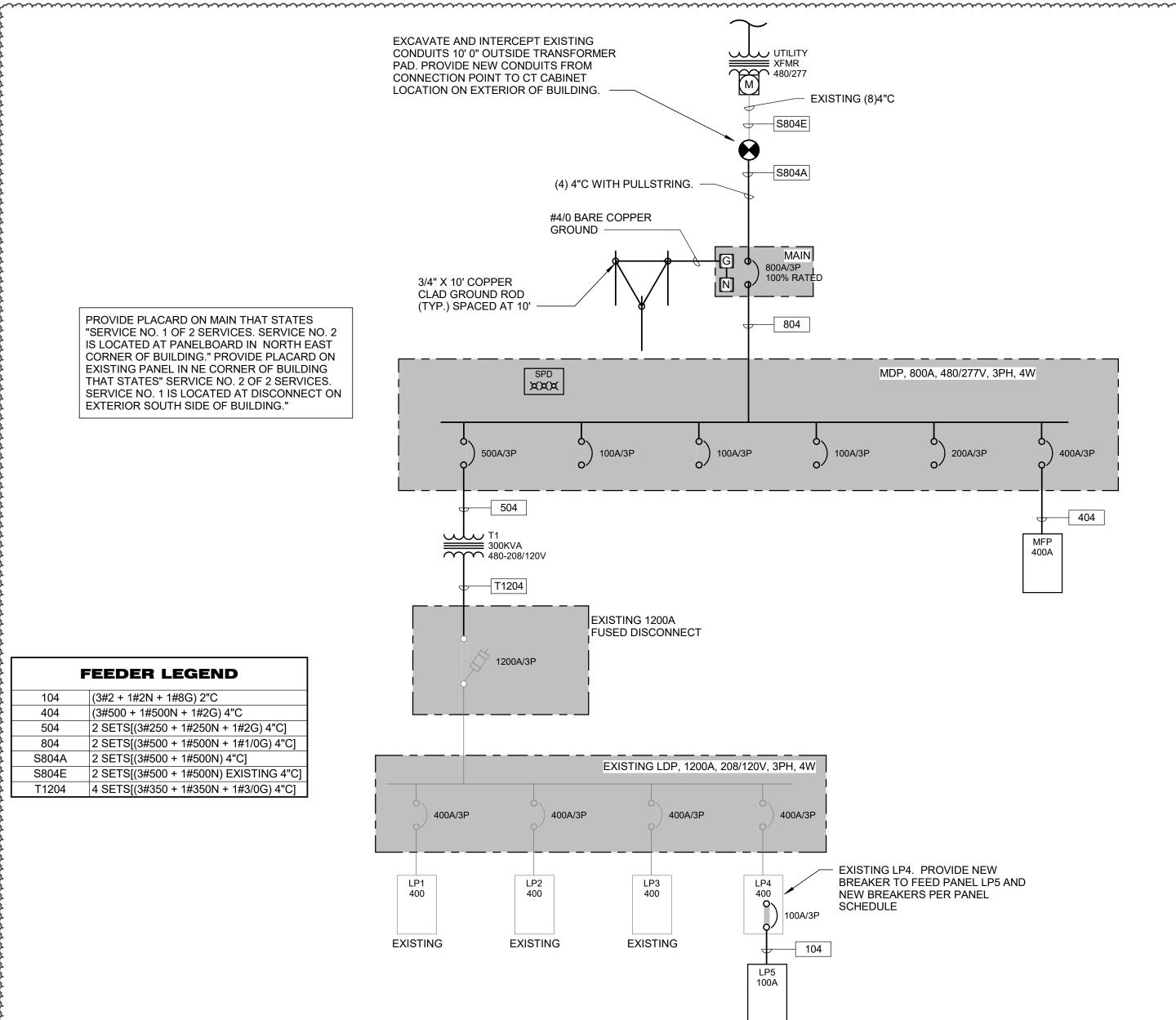
"SPARE", REFER TO NOTE (8).

PLACE ON INTERIOR OF

		Panel Totals	
	PHASE A	PHASE B	PHASE C
Total Load:	44.73 kVA	44.73 kVA	44.73 kVA
Total Amps:	161 A	161 A	161 A
Total Conn. Load:	134.18 kVA		
Total Design Currents	252.4		



	PHASE A	PHASE B	PHASE C		
Total Load:	44.73 kVA	44.73 kVA	44.73 kVA		
Total Amps:	161 A	161 A	161 A		
Total Conn. Load:	134.18 kVA				
Total Design Current:	252 A				

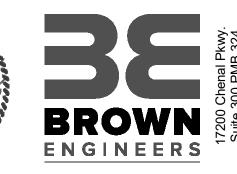


Branch Panel: LP4 Location: MEETING ROOM 015 Volts: 120/208 Wye A.I.C. Rating: 22kA Panel Rating: 400 A MLO Supply From: LDP Phases: 3 Mounting: Surface Wires: 4 Enclosure: NEMA 1 **Notes: EXISTING PANEL** CKT **Load Name** Load Name CKT 9.82 2.35 3 LIFT STATION CPNL AND PUMP (6) 70 A 100 A LP5 (6) 4 2.35 8.28 6 2.35 8.44 FOR FUTURE USE AT GARDEN AREA (4... 20 A 1 0.00 0.72 1 20 A WEST EXTERIOR RECEPTS 8 9 FOR FUTURE USE AT GARDEN AREA... 20 A RECEPTACLES CLASSROOM 013 10 0.18 11 FOR FUTURE USE AT GARDEN AREA... 20 A 0.00 0.90 20 A RECEPTACLES CDL CLASSROOM 016 13 FOR FUTURE USE AT GARDEN AREA... 20 A 1 1 0.72 20 A RECEPTACLES MEETING ROOM 015 20 A POWERED FURNITURE COMP LAB 012 15 FOR FUTURE USE AT GARDEN AREA... 20 A 1 0.00 0.72 20 A POWERED FURNITURE COMP LAB 012 17 POWERED FURNITURE COMP LAB 012 20 A 0.72 0.72 19 POWERED FURNITURE COMP LAB 012 20 A 1 20 A POWERED FURNITURE COMP LAB 012 0.72 0.72 21 POWERED FURNITURE COMP LAB 012 20 A 20 A POWERED FURNITURE COMP LAB 012 0.72 0.72 23 POWERED FURNITURE COMP LAB 012 20 A 1 20 A RECEPTACLES COMP LAB 012 0.72 0.72 24 25 RECEPTACLES CLASSROOM 013 0.72 20 A RECEPTACLES CLASSROOM 013 26 27 AC RECEPTS MEETING ROOM 0.72 20 A COFFEE MAKER MEETING ROOM 015 20 A 1 0.36 28 1 20 A RECEPTACLES MEETING ROOM 015 29 RECEPTACLES CDL CLASSROOM 016 20 A 0.72 0.90 30 31 RECEPTACLES MEETING ROOM 015 0.90 1 20 A RECEPTACLES HALL 011 32 20 A 1 0.90 33 LIGHTING CDL CLASSROOM 016 1.16 1 20 A LIGHTING MEETING ROOM 015 34 35 DOOR OPERATOR (1) 1 20 A SPARE (6) 36 0.70 0.00 37 DOOR OPERATOR (1) 20 A 1 20 A | SPARE (6) 38 0.70 0.00 39 DOOR OPERATOR (1) 0.70 1 20 A SPARE (6) 40 20 A 1 0.00 0.00 | 1 | 20 A | SPARE (6) 41 DOOR OPERATOR (1) 42 0.70 **Panel Totals** PHASE A PHASE B PHASE C 17.59 kVA Total Load: 19.09 kVA 16.69 kVA **Total Amps:** 160 A 139 A 148 A Total Conn. Load: 53.36 kVA Total Design Current: | 233 A

CONTRACTOR SHALL FIELD VERIFY EXISTING BREAKERS IN PANEL AND PROVIDE ADDITIONAL AS REQUIRED TO POWER CIRCUITS AS SHOWN ON SCHEDULE.

lotes:	Location: DATA/ EI Supply From: LP4 Mounting: Surface Enclosure: 1		Volts: 120/208 Wye Phases: 3 Wires: 4						A.I.C. Rating: 22kA Panel Rating: 100 A MLO				
СКТ	Load Name	Trip	Poles	A	В	С	A	В	С	Poles	Trip	Load Name	СКТ
1				2.78			1.45			1		LIGHTING VESTIBULE 2 014	2
3	DSCU -01	30 A	2		2.78			0.72		1	20 A	EAST EXTERIOR RECEPTS	4
5	HVAC CONVENIENCE RECEPTS	20 A	1			0.54			0.38	1		EXTERIOR LIGHTING	6
7	FACP (2)	20 A	1	0.06			0.85			1		OFFICES, CONTROL ROOM LTG	8
9	ACP	20 A	1		0.06			0.61		1		LTG RM 15, 016, 17, 18, 19, 20, 21	10
11	LCP	20 A	1			0.06			0.81	1	20 A	LIGHTING LOBBY 002	12
13	UH -01	20 A	1	0.50			0.72			1	20 A	LIGHTING LOBBY 002	14
15	RECIRC PUMP	20 A	1		0.18			0.18		1	20 A	COFFEE MAKER LOBBY 002	16
17	GFI RECEPTS, EWC (4)	20 A	1			0.72			0.90	1	20 A	RECEPTACLES LOBBY 002	18
19	RECEPTACLES DATA/ ELEC. 021	20 A	1	0.36			0.72			1	20 A	RECEPTACLES LOBBY 002	20
21	RECEPTACLES OFFICE 004	20 A	1		0.72			0.54		1	20 A	ABOVE COUNTER RECEPTS LOBBY 002	22
23	RECEPTACLES OFFICE 006	20 A	1			0.90			0.72	1	20 A	RECEPTACLES OFFICE 005	24
25	RECEPTACLES OFFICE 008	20 A	1	0.72			0.72			1	20 A	RECEPTACLES OFFICE 007	26
27	RECEPTACLES LOBBY 002	20 A	1		0.72			0.72		1	20 A	RECEPTACLES OFFICE 009	28
29	RECEPTACLES CONTROL ROOM 010	20 A	1			0.90			0.72	1	20 A	RECEPTACLES CONTROL ROOM 010	30
31	RECEPTACLES CONTROL ROOM 010	20 A	1	0.72			0.36			1	20 A	RECEPTACLES DATA/ ELEC. 021	32
33	RECEPTACLES CONTROL ROOM 010	20 A	1		0.90			0.54		1	20 A	RECEPTACLES CONFERENCE 003	34
35	RESTROOMS RECEPTS	20 A	1			0.90			0.90	1	20 A	RECEPTACLES CONFERENCE 003	36
37	BATHROOM SENSORS	20 A	1	0.25			0.00			1	20 A	SPARE	38
39	SPARE	20 A	1		0.00			0.00		1	20 A	SPARE	40
41	SPARE	20 A	1			0.00			0.00	1	20 A	SPARE	42
						Panel	Totals						
				PHA	SE A	PHA		PHA	SE C				
Total Load: 9.82 kVA					8.28 kVA 8.44 kVA								
-				82 A 69 A 71 A					1				
		al Conn. L		26.54 kV	Α					+			
lotes:	lota	al Design (current:	92 A									





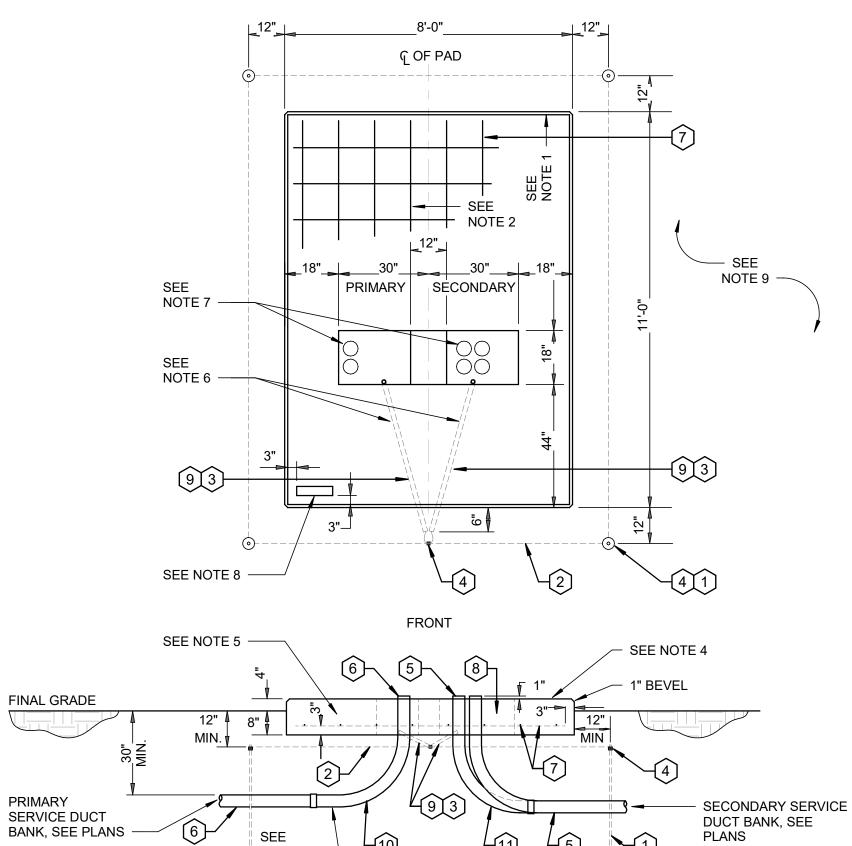




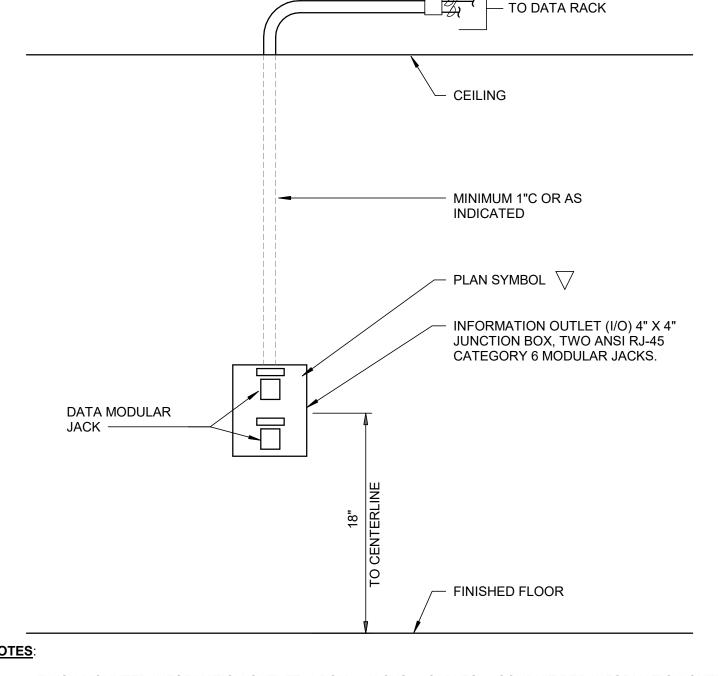
TRANSFORMER PAD KEYED NOTES:

- INSTALL NEW COPPER CLAD GROUND ROD, 3/4" x 10"-0", TYPICAL
- INSTALL NEW #2/0 BARE COPPER CONDUCTOR (TYPICAL). INSTALL NEW #2 BARE COPPER CONDUCTOR.
- INSTALL NEW EXOTHERMIC WELD, TYPICAL OF 5. INSTALL NEW SECONDARY CONDUITS, SEE SITE PLAN.
- INSTALL NEW 1" GRSC UNDER PAD FOR GROUND WIRES
- UTILIZE LONG SWEEP 90° BEND PVC CONDUITS ON PRIMARY
- UTILIZE LONG SWEEP 90° BEND CONDUITS ON SECONDARY CONDUITS.

- WHERE POSSIBLE. DO NOT PLACE CONDUIT UNDER THIS
- REINFORCING #4 BARS 12" O.C. BOTH WAYS. WHEN INSTALLING CONDUIT, DISTURB GROUND IN
- TOP OF FOUNDATION TO BE SMOOTH AND LEVEL. FINAL
- CONTRACTOR TO FURNISH 1" CONDUIT UNDER PAD FOR
- WITH CONCRETE NAILS OR SHEET METAL SCREWS.
- TRANSFORMER PAD REQUIRES A MINIMUM 3'-0" CLEARANCE AROUND EACH SIDE AND BACK OF PAD. A 15'-0" CLEARANCE IS REQUIRED ON FRONT SIDE OF PAD.



BACK



PROVIDE BUSHING

CAT-6 CABLE

FLUSH MOUNTED INFORMATION OUTLET: 1 BOX, 2 JACKS, 2 CABLES, 1 CONDUIT PER INFORMATION OUTLET. ROUTE UP THROUGH WALL AND STUB ABOVE CEILING. CAP, TAG, AND IDENTIFY ALL CONDUIT. PROVIDE PULLWIRE IN ALL CONDUIT. PULLWIRE TO REMAIN AFTER CABLE INSTALLATION. TWO JACKS AND CABLES UNLESS OTHERWISE NOTED.

EXTRA HEAVY DUTY,

FINISHED GRADE

SCHEDULED

AND CONDUIT

CONDUIT

NON-METALLIC COVER WITH

LOGO "ELECTRIC" OR "SIGNAL"

3500 PSI CONCRETE, ALL SIDES

EXTENSIONS AND SOLID BOTTOM

SECTIONS WITH DRAIN HOLE AS

3/4" x 10'-0" COPPERCLAD GROUND

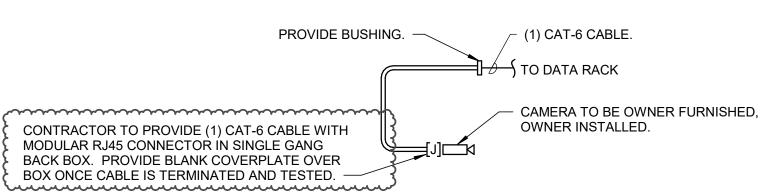
ROD VIA 2" DIAMETER OPENING

REQUIRED FOR DEPTH

NOT TO SCALE

TRANSFORMER PAD DETAIL NOT TO SCALE

1-1/2" MIN.



_FINISHED GRADE____

SELECT BACKFILL TO

- #4/0 AWG BARE COPPER

GROUND COUNTERPOISE

DETECTABLE 3" WARNING TAPE

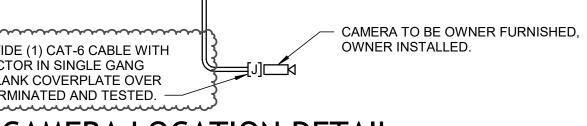
- UNDISTURBED OR COMPACTED

SOIL AROUND DUCT BANK

SELECT BACKFILL REFER

TO SPECIFICATIONS

MATCH EXISTING





NAMEPLATE DETAIL

3/4" CHAMFER

#3 REBAR

ALL AROUND

1" AFG MIN.

CONDUIT

___3' MINIMUM_\(\sime\)

FOR CAPPED

STUBOUTS

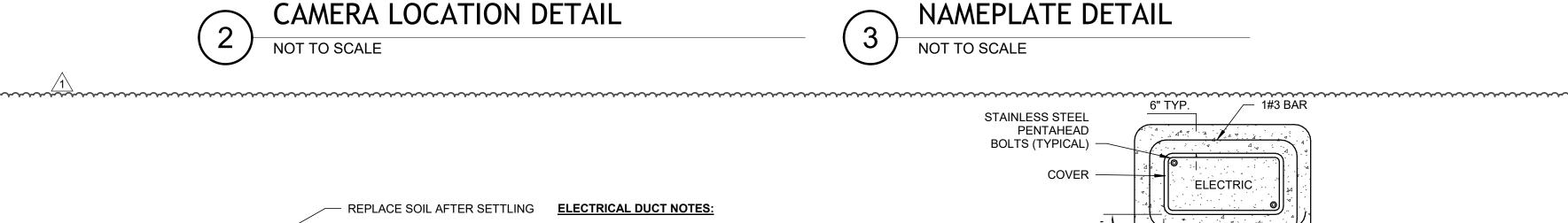
1" DRAIN HOLE

12" GRAVEL MAT

MAIN CONTROL PANEL

- 1/4" HIGH BLACK LETTERING ON A

WHITE BACKGROUND



- CONTRACTOR SHALL STAKE THE DUCT INSTALLATION IN PLAN AND ELEVATION FOR NEW ELECTRICAL DUCTS TO AVOID EXISTING UTILITIES.
- CONTRACTOR SHALL ADJUST THE DEPTH OF THE ELECTRICAL DUCTS AS REQUIRED TO MAINTAIN THE MINIMUM COVER REQUIREMENT INDICATED AND AVOID EXISTING UTILITIES.
- SIMILAR CONSTRUCTION FOR OTHER DUCT SIZES. SEE DUCT BANK SCHEDULE FOR QUANTITY AND SIZES. INSTALL DUCT CONDUIT SUPPORTS AT 5'-0" O.C. MAXIMUM SPACING (TYPICAL ALL DUCTS). OFFSETS AND BENDS OVER 10 DEGREES AND ELBOWS IN
- CONDUIT. NO PVC SHALL EMERGE FROM THE GROUND OR CONCRETE SLAB OR ENCASEMENT, PVC SHALL CONVERT TO GALVANIZED RIGID STEEL CONDUIT PRIOR TO ITS

PVC CONDUIT RUNS SHALL BE GALVANIZED RIGID STEEL

- EMERGENCE. INSTALL GROUND RODS AT ENDS OF ELECTRICAL DUCT OR CONNECT TO GROUND RING.
- INSTALL CONDUCTORS AND CABLES AS NOTED ON DRAWING. INSTALL PULLWIRE IN ALL SPARE DUCTS.
- MINIMUM COVER REQUIREMENT FOR DUCT BANKS UNDER ROADS, DRIVEWAYS AND PARKING LOTS SHALL BE 24". MINIMUM COVER REQUIREMENTS FOR ELECTRICAL
- SECONDARY SERVICE DUCT BANKS SHALL BE 30". MINIMUM COVER REQUIREMENTS FOR ELECTRICAL

PRIMARY SERVICE DUCT BANKS SHALL BE 36".

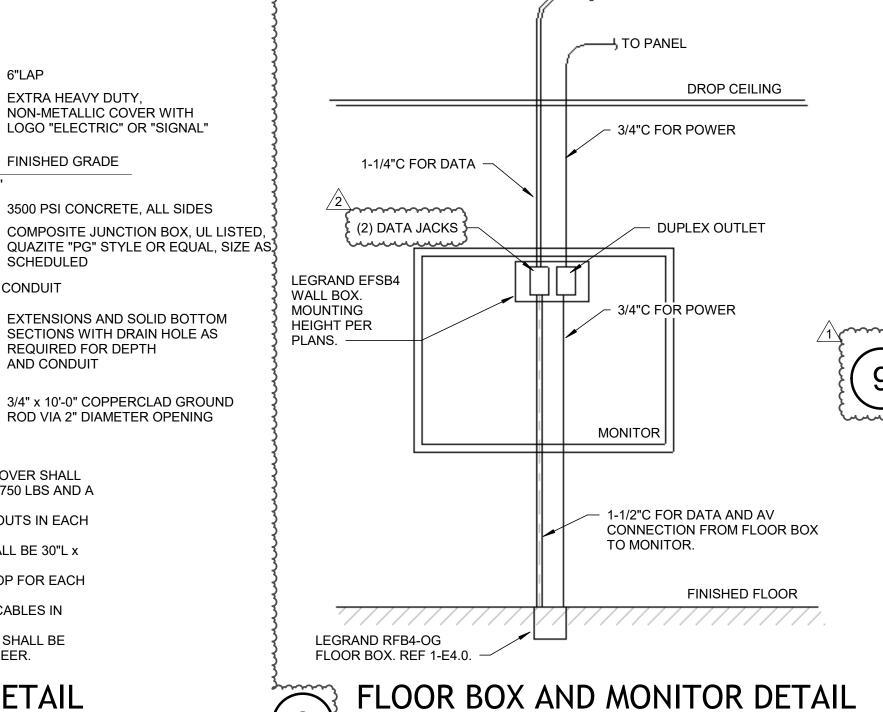
NOTES: HANDHOLE AND EXTRA HEAVY-DUTY COVER SHALL BE DESIGNED FOR A TEST LOAD OF 33,750 LBS AND A DESIGN LOAD OF 22,500 LBS PROVIDE HANDHOLE WITH 2-2"C STUBOUTS IN EACH

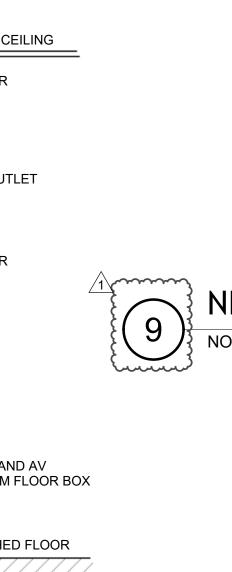
ELECTRIC

<u>PLAN VIEW</u>

- FACE, CAPPED WATERTIGHT. HANDHOLE INTERIOR DIMENSIONS SHALL BE 30"L x 17"W x 28"D. PROVIDE MINIMUM 3' SLACK CABLE LOOP FOR EACH
- CABLE. COLOR CODE. TAG AND IDENTIFY ALL CABLES IN HANDHOLE.
- EXACT LOCATION OF EACH HANDHOLE SHALL BE APPROVED BY THE OWNER AND ENGINEER.



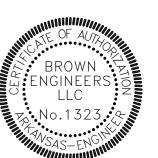




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- INSTALL NEW PRIMARY CONDUITS, SEE SITE PLAN. INSTALL NEW #4 REBAR, 12"O.C. BOTH WAYS. CONSTRUCT NEW PAD USING CONCRETE, 3500 PSI AT 28 DAYS.

TRANSFORMER PAD NOTES:

- SECTION OF FOUNDATION.
- FOUNDATION AREA AS LITTLE AS POSSIBLE. EXTEND CONDUIT 1" ABOVE FOUNDATION.
- GRADE SHALL SLOPE AWAY FROM PAD.
- CONCRETE SHALL BE 3500 PSI AT 28 DAYS AND 1:2:4 MIXTURE WITH 6 GAL. MAX. WATER CONTENT PER SACK OF CEMENT.
- GROUND WIRE.

- LOCATE CONDUITS UNDER PRIMARY AND SECONDARY BUSHINGS. TRANSFORMER LOCATION TAG SHALL BE ATTACHED TO PAD

FINAL GRADE

TYPICAL INFORMATION OUTLET

GROUND GRID NOTES:

INSTALL 1/0 AWG STRANDED BARE SOFT DRAWN COPPER (BSDC) WIRE AND BOND GROUND TO REINFORCING STEEL BAR IN CONCRETE

METAL WATER PIPE

─ CONCRETE-ENCASED ELECTRODE

—→TO PANEL

MONITOR

MONITOR DETAIL

20 FT. MIN.

SERVICE ENTRANCE

GROUNDING

ELECTRODE CONDUCTOR

EQUIPMENT

BONDING JUMPERS

GROUND

ROD

NOT TO SCALE

GROUNDING

ELECTRODE

CONDUCTOR

GROUNDING

ELECTRODE

— 3/4"C FOR POWER

— DUPLEX OUTLET

1-14"C FOR DATA -

 $\xrightarrow{}$

(2) DATA JACKS

LEGRAND EFSB4

WALL BOX. MOUNTING

HEIGHT PER

PLANS -

DROP CEILING

FINISHED FLOOR

FOUNDATION IN

NO. 4 AWG OR LARGER BARE

LESS THAN 1/2-IN. DIAMETER

BONDING JUMPER

COPPER CONDUCTOR OR STEEL

REINFORCING BAR OR ROD NOT

DIRECT CONTACT WITH EARTH

BOLTED-TYPE CONNECTION

NONMETALLIC

CONCRETE FOUNDATION

PROTECTIVE SLEEVE

DEVICE OR EXOTHERMIC WELD

- STRUCTURE FOOTING. MAKE ALL CONNECTIONS USING EXOTHERMIC WELDING (CADWELD)
- INSTALL 3/4" CONDUIT WITH (1)-#1/0 AWG COPPER GROUNDING ELECTRODE CONDUCTOR BETWEEN BUILDING STEEL COLUMN AND
- GROUND. REMOVE PAINT DOWN TO BARE AND BOND GROUND TO STEEL WITH MECHANICAL LUG. REPAINT AFTER INSTALLATION IS COMPLETE. **NEC 250 ELECTRICAL GROUNDING DETAIL**

