

ADDENDUM NO. 1**March 6, 2023**

**RE: Spencer County Public Library Annex Building
Taylorsville, KY
Project No. 22078**

**FROM: Brandstetter Carroll Inc.
2360 Chauvin Drive
Lexington, Kentucky 40517
Phone 859-268-1933
Fax 859-268-3341**

TO: Plan Holders

This addendum forms a part of the Construction Documents and modifies the original bidding documents dated 01/02/2023. Each bidder shall acknowledge receipt of this addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of (2) pages, plus attachments.

1. Pre-Bid Meeting Minutes (3 Pages)
2. 004113 Bid Form (4 Pages)
3. 101400.2.3 - Panel Signs (1 Page)
4. E-102 - Power Plans
5. E-501 – Electrical Schedules & Single Lines
6. M-501 – Mechanical Schedules

GENERAL:

1. Question regarding if card readers and access controls are required for the project.
 - A. Card readers and access controls are not required for this project.
2. Question regarding if Fire Extinguisher Cabinets are to be surface mounted or recessed.
 - A. FECs are to be semi-recessed as much as allowable by the depth of the wall. Refer to detail A1/G-101.

CHANGES TO SPECIFICATIONS:

1. Specifications Section 004113 - BID Form
 - A. Added line for alternate #3. Bidders are required to use the attached revised Bid Form.
2. Specifications Section 081113.2.4.C - Hollow Metal Frame
 - A. Delete this entire section. No Kerfed frames will be used in the project.
3. Specifications Section 081113.2.4.E.3.b, c, e, and f - Hollow Metal Frame
 - A. Delete these sections as they are not applicable to the door frames used.
4. Specifications Section 087100.2.3.A.1.a - Keying System
 - A. Revise Section a to read: "Compatible with 7-pin, interchangeable core and keyed into

a Best Patented Cormax factory registered Masterkey System."

5. Specifications Section 101400.2.3 – Exterior Panel Signs
 - A. Replace Section 2.3 Exterior Panel Signs with attached Section 2.3 Panel Signs.
6. Specifications Section 101400.2.4 – Interior Panel Signs
 - A. Delete Section 2.4 Interior Panel Signs in its entirety.
7. Specifications Section 262726 - Wiring Devices
 - A. All devices and cover plates are to be white.
8. Specifications Section 262726.13 - Floor Outlets
 - A. Delete floor boxes in their entirety in Rooms 101 and 102.

CHANGES TO DRAWINGS:

1. E-101 Lighting Plans
 - A. Refer to the Lighting Plan
 - i. Light fixture LSA6 is to be recessed in the eave. The design intent for this fixture is to replace the existing surface mounted fixture at this location.
2. E-102 Power Plans
 - A. Delete in its entirety Power Plan Note 7. PVC conduits for low voltage service entrance are not required.
 - B. Delete in its entirety Power Plan Note 9. Existing telecom service will not be utilized.
 - C. Delete floor boxes in their entirety in Rooms 101 and 102.
3. E-501 Electrical Schedules & Single Line
 - A. Electrical Panel P2 is to be Single Phase. Panel P2 is also to be increased to 400A, in lieu of 200A as shown.
 - B. Light fixture X1 shall be Lithonia LHQM-LED-R-HO RO (or equal).
 - C. Double headed egress fixture shall be Lithonia ELA-T-QWP-L0309 (or equal).
 - D. Refer to the Single Line Diagram
 - i. The existing 4-gang meter stack to be removed and replaced with a 400A high capacity meter base and 400A fused service disconnect. A new 400A panel to be provided. The Existing panel P1 is to be removed complete. All existing circuits that are to remain are to be wired back to new panel. Refer to revised single line diagram.
 - E. Due to the existing building being wired with Romex wiring, the existing Romex wiring can be reused.
 - F. Branch circuits can be in MC. All feeders are to be installed in conduit.

END OF ADDENDUM NO. 1

**CONFERENCE MEMORANDUM
SPENCER COUNTY PUBLIC LIBRARY ANNEX BUILDING
TAYLORSVILLE, KENTUCKY
PROJECT NO. 22078**

Present: See Attached Sign-in Sheet



February 24, 2023

The pre-bid meeting for the Spencer County Public Library Annex Building was held onsite at 10:00 am on Friday, February 24, 2023. Please see the attached sign-in sheet for attendees.

The following items were discussed:

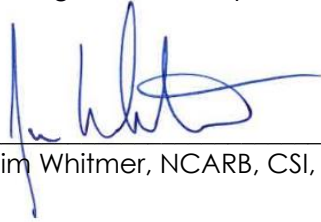
1. Mr. Whitmer gave a brief description of the project.
2. All questions are be sent to Cameron Mitchell at cmitchell@bciaep.com by no later than Wednesday, March 3, 2023.
3. Sealed bids will be received on Thursday, March 9, 2023, until 2:00 p.m. local time. Bids are to be delivered to the Spencer County Public Library, 168 Taylorsville Road, Taylorsville, Kentucky 40071. Bids shall include a cashier's check or satisfactory Bid Bond in the amount of five percent (5%) of the total bid. Proposals should be clearly marked as follows:

**BID PROPOSAL
SPENCER COUNTY PUBLIC LIBRARY ANNEX BUILDING**

4. The anticipated schedule is for Library Board to award the contract on March 14, 2023. Construction would then begin on April 1, 2023.
5. The construction schedule is **180** calendar days; however, the owner reserves the right to extend the project schedule, at their discretion.
6. Within one (1) hour of the bid submission, the completed list of unit prices must be submitted by the two lowest bidders.
7. The successful bidder will be required to provide a Performance and Payment Bond for one hundred percent (100%) of the contract amount.
8. Liquidated damages are \$800 per day.
9. The project will require retainage.
10. A contingency allowance of \$25,000 is to be included in the bidder's base bid amount.
11. Mr. Whitmer stated safety is of the upmost concern as this is an active and operational site. The contractors are to coordinate all work with the Owner to maintain operations.

12. This project is non-prevailing wage.
13. Various contractors had several questions. They were asked to submit them in writing.
14. All parties walked the project site.
15. See Addendum #1 for additional information.

If you should disagree with any information contained herein, please kindly notify our office in writing within 10 days of receipt of this memorandum.

A handwritten signature in blue ink, appearing to read "Jim Whitmer", is positioned above a horizontal line.

Jim Whitmer, NCARB, CSI, CCCA

ATTENDANCE SHEET

PROJECT: Spencer County Public Library Annex Building
PROJECT NO.: 22078



DATE: February 24, 2023

TIME: 10:00 AM

[illegible]

DOCUMENT 004113 - BID FORM

To: Spencer County Public Library

Project: Spencer County Public Library Annex Building

Date: _____

Submitted by:
(full name) _____

(full address) _____

(telephone and fax number) _____

1. OFFER

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Brandstetter Carroll Inc. for the above-mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of

A. BASE BID:

Written Amount

Numeral \$

B. CONTINGENCY ALLOWANCE:

Twenty-Five Thousand Dollars

\$25,000.00

C. TOTAL BID:

Written Amount

Numeral \$

We have included the security Bid Bond required by the Instructions to Bidders.

All Cash and Contingency Allowances described in Section 012100 - Allowances are included in the Bid Sum.

2. ALTERNATES**A. ALTERNATE 1: REMOVE ALL WOOD PANELING COMPLETELY**

Written Amount

Numeral \$

B. ALTERNATE 2: REMOVE AND REPLACE (3) EXTERIOR DOORS AND FRAMES

WITH NEW HM DOORS AND FRAMES*Written Amount**Numeral \$***C. ALTERNATE 3: REMOVE AND REPLACE (8) EXISTING EXTERIOR WINDOWS AND FRAMES***Written Amount**Numeral \$***3. ACCEPTANCE**

This offer shall be open to acceptance and is irrevocable for sixty days from the bid closing date.

If the Owner accepts this bid within the time period stated above, we will:

- Execute the Agreement within seven days of receipt of Notice of Award.
- Furnish the required bonds within seven days of receipt of Notice of Award in the form described in Supplementary Conditions.

If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.

In the event our bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

4. CONTRACT TIME

If this Bid is accepted, we will:

- Complete the Work in ONE hundred EIGHTY (180) days from Notice to Proceed.

5. ADDENDA

Acknowledge receipt of all addenda issued for the project in the spaces provided below. Failure To do so may disqualify the bid or bids received. Acknowledgment of the receipt of the addenda shall indicate that all related modifications to the Bid Documents have been considered and all costs are included in the Bid Sum.

Addendum # 1 Dated _____

Addendum # 2 Dated _____

Addendum # 3 Dated _____

5. BID SUPPLEMENTS

The following supplements are a part of the Bid form and are attached hereto.

1. 004322 – List of Unit Prices
2. 004336 – List of Subcontractors

6. BID FORM SIGNATURE (S)

The Corporate Seal of

(Bidder - print the full name of your firm)

was hereunto affixed in the presence of:

(Authorized signing officer Title)

(Seal)

(Authorized signing officer Title)



















If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

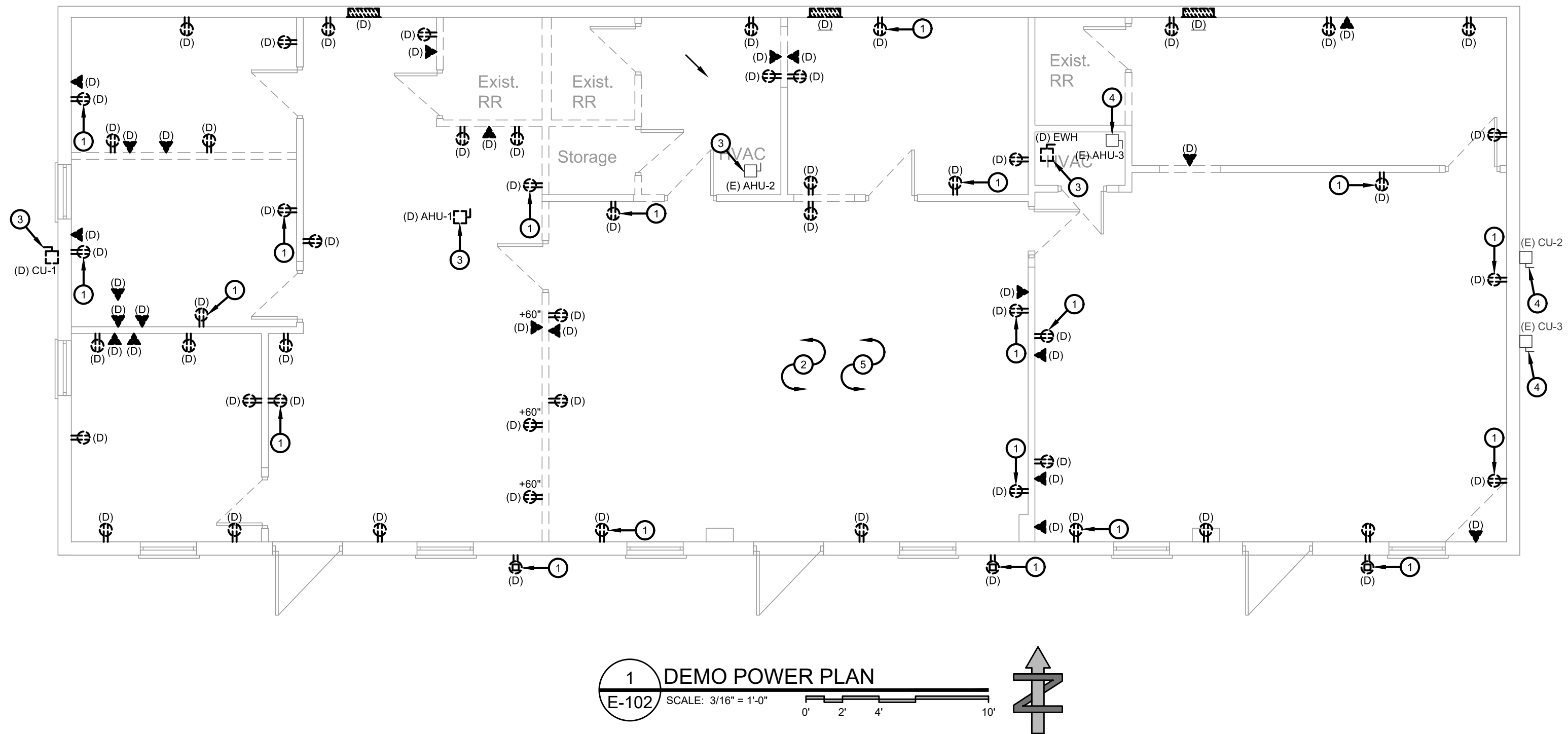
END OF BID FORM

2.3 PANEL SIGNS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide ASI Modulex SIGNETCH 1 or a comparable product by one of the following: See Drawings for layout.
1. ACE Sign Systems, Inc.
 2. Advance Corporation; Braille-Tac Division.
 3. ASI-Modulex, Inc.
 4. Best Sign Systems Inc.
 5. Gemini Incorporated.
 6. Innerface Sign Systems, Inc.
 7. Signature Signs, Incorporated.
- B. Panel Signs: Provide panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements:
1. Material: Zinc, in 0.125 inch thickness.
 2. Paint: Primer and Urethane Based Color Coat, of type standard with manufacturer. Provide UV resistant clear urethane topcoat required for exterior applications.
 3. Edge Condition: Square with 0.125 inch border.
 4. Edge Finish: Brushed.
 5. Corner Condition: Square.
 6. Raised text and graphic finishes:
 - a. Metallic Finishes:
 - 1) Silvertone, vertical grain.
 7. Recessed Graphics Color Options:
 - a. As selected by Architect from manufacturer's full range.
 8. Recessed Area Texture Options:
 - a. Sandstone or Suede paint as selected by the Architect.
 9. Letter style: Arial Bold
 10. Mounting:
 - a. Interior: System VT, vinyl tape.
 - b. Exterior: System ST, stud mount.
 - c. Provide back plate for glass mounted signs to conceal mounting anchor.
 11. Tactile Characters: Characters and Grade 2 Braille raised **1/32 inch** above surface with contrasting colors.
- C. Tactile and Braille Sign: Manufacturer's standard process for producing text and symbols complying with ADA-ABA Accessibility Guidelines and with ICC/ANSI A117.1. Text shall be accompanied by Grade 2 Braille. Produce precisely formed characters with square-cut edges free from burrs and cut marks; Braille dots with domed or rounded shape.
1. Raised-Copy Thickness: Not less than **1/32 inch**.

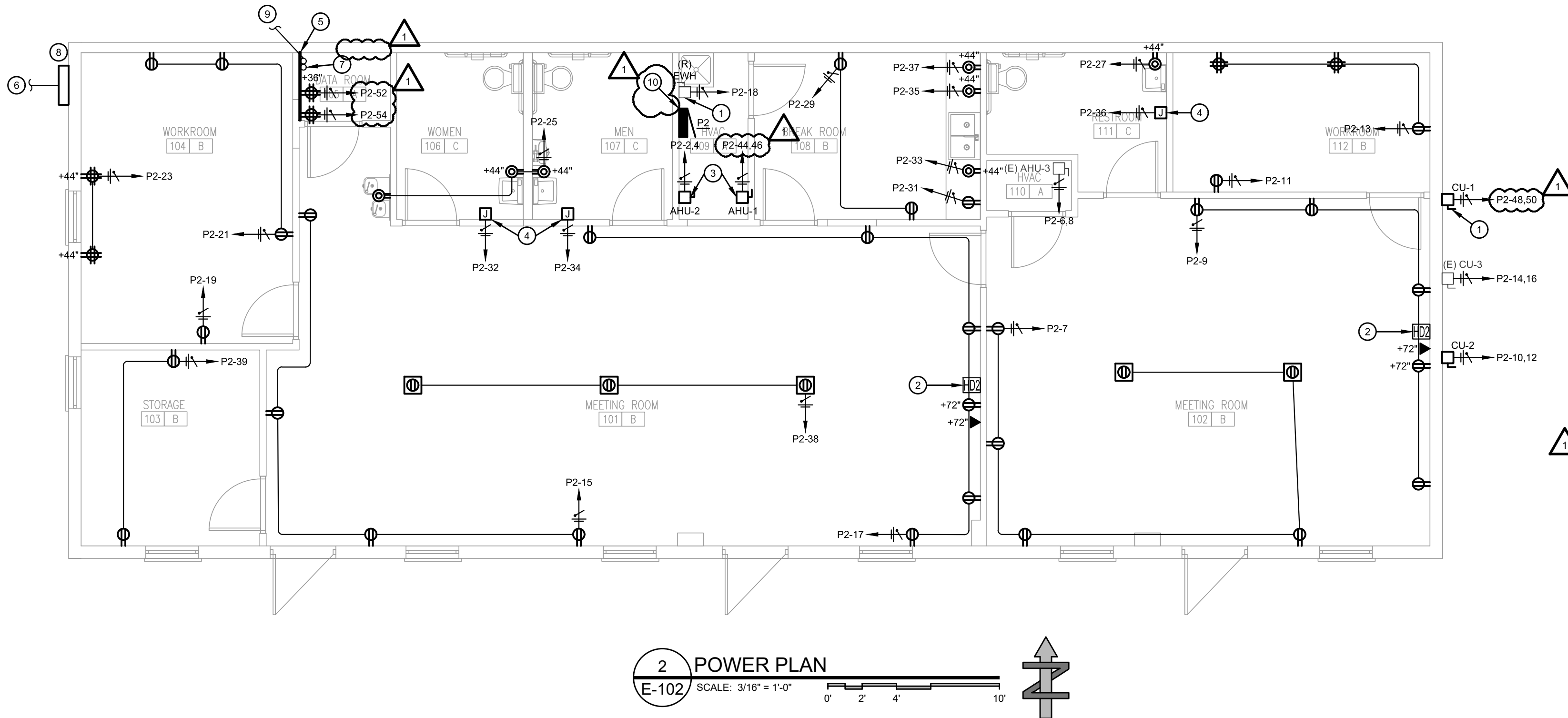
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POWER PLAN SYMBOL LEGEND					
	+0"	DUPLEX RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED			
	+0"	SPECIAL USE DEDICATED RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED REFER TO PANEL SCHEDULE FOR MORE INFORMATION			
	+0"	GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED			
	+0"	WEATHER PROOF RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED			
	+0"	QUADPLEX RECEPTACLE MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED			
	+0"	DATA JACK MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED			
	+0"	TELEVISION JACK MOUNT AT +18" A.F.F. UNLESS OTHERWISE NOTED			
		JUNCTION BOX			
		NON-FUSED DISCONNECT			
		FUSED DISCONNECT			
	10 MOTOR CONNECTION			30 MOTOR CONNECTION	
		FLUSH MOUNTED PANEL A = PANEL DESIGNATION			
		SURFACE MOUNTED PANEL A = PANEL DESIGNATION			
		METER			
		HOME RUN A = PANEL DESIGNATION B = CIRCUIT NUMBER			
N = NEW E = EXISTING R = RELOCATED D = DEMO F = FUTURE +0" = MOUNTING HEIGHT OF THE DEVICE ABOVE FINISHED FLOOR.					



DEMO POWER PLAN NOTES	
①	RECEPTACLE MARKED AS DEMO TO BE REPLACED WITH NEW IN SAME LOCATION. SEE DETAIL 2 FOR MORE INFORMATION.
②	CAPTURE EXISTING CIRCUITS FOR REUSE.
③	EQUIPMENT TO BE REMOVED AND SALVAGED FOR REUSE. SEE DETAIL 2 FOR NEW LOCATION.
④	EXISTING EQUIPMENT TO BE LEFT IN PLACE AND REWIRED TO NEW PANEL. REWORK WIRING AS NEEDED. SEE DETAIL FOR NEW DESIGNATED CIRCUIT.
⑤	FIELD VERIFY EXISTING PHONE AND DATA CABLING. COORDINATE DATA AND PHONE WITH OWNER PRIOR TO DEMOLITION.

EXISTING CONDITIONS AND RELOCATION NOTES	
1.	THE CONTRACTOR SHALL INCLUDE ALL COSTS FOR REMOVALS AND RELOCATIONS IN THE CONTRACT. THESE COSTS SHALL INCLUDE WORK DESCRIBED IN THE SPECIFICATIONS AND SHOWN ON THE DRAWINGS WITH ALLOWANCES FOR NORMAL UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED EXCEPT IN SPECIFIC CASES CONSIDERED JUSTIFIABLE BY THE ENGINEER.
2.	THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING ELECTRICAL WORK WHICH INTERFERES WITH THE NEW LAYOUTS AND SCHEMES. ALL WORK WHICH IS NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF POWER SUPPLY. ALL DEVICES THAT ARE TO REMAIN SHALL BE CONNECTED TO THE EXISTING BRANCH CIRCUITS OR NEW ONES AS REQUIRED.
3.	ALL ELECTRICAL WORK IN ADJOINING AREAS WHICH IS REQUIRED TO FUNCTION BUT IS AFFECTED BY DEMOLITION WORK SHALL BE RECONNECTED AND RESTORED TO ITS PRESENT FUNCTION AS PART OF THE ELECTRICAL SYSTEM OF THE BUILDING.
4.	ALL PRESENT MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER AND/OR SHALL BE DISPOSED OF BY THE ELECTRICAL CONTRACTOR AS DIRECTED.
5.	PORTIONS OF FEEDER LINES THAT HAVE TO BE REMOVED AS A RESULT OF DEMOLITION WORK, BUT ARE REQUIRED TO CONTINUE TO FUNCTION SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED FOR CONTINUATION OF THEIR PRESENT FUNCTION. NEW FEEDER EXTENSIONS SHALL MATCH EXISTING ONES IN ALL RESPECTS: CONDUCTOR CAPACITY, CONDUIT SIZE, ETC.
6.	THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH CONSTRUCTION SCHEDULES. THE CONTRACTOR SHALL FOLLOW THE ARCHITECT'S DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.
7.	ON DEMOLITION AND NEW WORK DRAWINGS, CORRESPONDING ANNOTATION: E - EXISTING D - DEMO R - RELOCATED



POWER PLAN NOTES	
①	RELOCATED EQUIPMENT TO BE REWIRED TO NEW PANEL. REWORK WIRING AS NEEDED.
②	PROVIDE BOX LOW WITH HDMI CABLE UP TO BEHIND TV FOR COMPUTER CONNECTION.
③	PROVIDE POWER CONNECTION TO NEW AHU.
④	120V POWER TO HAND DRYER.
⑤	PROVIDE 3/4" FIRE RETARDANT PLYWOOD ON WALL. EXTEND TO +8'-0" AFF.
⑥	SERVICE ENTRANCE ELECTRICAL CONDUCTORS. REFER TO SINGLE LINE DIAGRAM FOR MORE INFORMATION.
⑦	PROVIDE (2) 4" PVC CONDUITS FOR LOW VOLTAGE SERVICE ENTRANCE.
⑧	ELECTRIC METER. REFER TO SINGLE LINE DIAGRAM FOR MORE INFORMATION.
⑨	CAPTURE EXISTING TELECOM SERVICE.
⑩	ALL EXISTING CIRCUITS THAT ARE EXISTING AND TO REMAIN ARE TO BE WIRED BACK TO NEW PANEL P2. EXTEND EXISTING CIRCUITS TO NEW PANEL AS NEEDED.



Lexington Cincinnati Cleveland Dallas Charleston



EXPIRATION DATE: 6/30/2023
Jan S. Ayer

Revisions: Addendum #1 March 06, 2023
Issue Date: January 20, 2023

Spencer County
Public Library Accessory
Building
116 Taylorsville Rd
Taylorsville, KY 40071

Power Plans

Project No.

22078

E-102

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- PROJECT GENERAL NOTES
1.

THE DRAWINGS ARE DIAGRAMMATIC ONLY AND INDICATE THE GENERAL ARRANGEMENT OF THE SYSTEMS AND ARE TO BE FOLLOWED INSOFAR AS POSSIBLE. IF DEVIATIONS FROM THE LAYOUTS ARE NECESSITATED BY FIELD CONDITIONS, DETAILED LAYOUTS OF THE PROPOSED DEPARTURES SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW BEFORE PROCEEDING WITH THE WORK.
2.

THE ELECTRICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS IN DETAIL AS THEY MAY RELATE TO THEIR WORK.
3.

EACH CONTRACTOR SHALL INSPECT THE SITE ON WHICH THE WORK IS TO BE PERFORMED, AND THE OBSTACLES THAT MAY BE ENCOUNTERED, AND ALL RELEVANT MATTERS CONCERNING THE WORK.
4.

THE CONTRACTOR SHALL FILE ALL NECESSARY NOTICES, OBTAIN AND PAY FOR ALL PERMITS, FEES, AND OTHER COSTS INCLUDING UTILITY CONNECTIONS OR EXTENSION, IN CONNECTION WITH HIS WORK, AS NECESSARY. HE SHALL FILE ALL REQUIRED PLANS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL UTILITY AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.
5.

IGNORANCE OF CODES, RULES, AND REGULATIONS, UTILITY COMPANY REQUIREMENTS, LAWS, ETC. SHALL NOT DIMINISH OR ABSOLVE CONTRACTOR'S RESPONSIBILITIES TO PROVIDE AND COMPLETE ALL WORK IN COMPLIANCE WITH SUCH.
6.

ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE KENTUCKY BUILDING CODES, NATIONAL FIRE CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL AGENCIES OR DEPARTMENTS HAVING JURISDICTION.

- PANEL SCHEDULE NOTES
1.

NEW CIRCUIT BREAKERS ADDED TO EXISTING PANELS SHALL MATCH PANEL MANUFACTURER, VOLTAGE LEVEL, AND FAULT CURRENT RATING OF EXISTING PROTECTIVES.
2.

IDENTIFY MAIN DISCONNECTS AND ALL UP AND DOWNSTREAM DISCONNECTING MEANS FOR ALL CIRCUITS AT PANEL.
3.

FILL OUT BRANCH CIRCUIT DIRECTORY INDICATING CIRCUIT NUMBERS, AREA(S) SERVED, AND LOAD TYPE. INDEX SHALL BE NEATLY TYPED. BRANCH CIRCUIT DIRECTORIES SHALL BE UPDATED OR REPLACED IN ALL AREAS OF ALTERATIONS. BLACK LAMINATED PHENOLIC NAMEPLATES SHALL BE PROVIDED ON ALL NEW AND EXISTING PANEL BOARDS SECURED BY #8-32 SCREWS, LOCK WASHERS AND NUTS ON EACH CORNER OF NAMEPLATE.
4.

CONTRACTOR MAY ARRANGE CIRCUITS TO SUIT FIELD CONDITIONS, BUT LOADING BETWEEN PHASES SHALL BE +/- 10%.

- ELECTRICAL GENERAL NOTES
1.

THE TERM "PROVIDE" SHALL MEAN CONTRACTOR SHALL FURNISH AND INSTALL ITEMS AND CONNECT AS REQUIRED TO OBTAIN A COMPLETE WORKING SYSTEM.
2.

RECEPTACLES SHALL BE CIRCUITED WITH A SEPARATE GROUND WIRE. RECEPTACLES PROTECTED BY GROUND FAULT CIRCUIT INTERRUPTER DEVICES SHALL EACH HAVE A SEPARATE NEUTRAL WIRE PULLED FOR THAT CIRCUIT.
3.

ALL CONDUIT SHALL BE RUN CONCEALED WHEREVER POSSIBLE ABOVE CEILINGS, INSIDE WALLS, OR UNDER FLOOR SLAB (ONLY WHERE SHOWN DASHED ON PLAN), UNLESS OTHERWISE NOTED ON PLAN. IN HIGH-BAY (NO CEILING) AREAS, RUN EXPOSED CONDUIT HIGH AS POSSIBLE. ALL CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO NEARBY SURFACES OR STRUCTURAL MEMBERS AND FOLLOW THE SURFACE CONTOURS AS MUCH AS PRACTICAL. NO NONMETALLIC CONDUIT SHALL BE RUN IN AIR RETURN PLENUM.
4.

FROM EACH TELEPHONE, CRT, TV, ETC., COMMUNICATION TYPE OUTLET, PROVIDE A (MIN.) 3/4-INCH CONDUIT (WITH PULL STRING) STUBBED ABOVE LAY-IN CEILING, UNLESS OTHERWISE NOTED.
5.

TELEPHONE AND OTHER COMMUNICATIONS WIRING SHALL BE PLENUM RATED IF CONDUCTORS PASS THROUGH AN AIR RETURN PLENUM.
6.

ELECTRICAL DRAWINGS SHALL BE COORDINATED WITH ASSOCIATED MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR FOR MOTORS, DEVICES, FIXTURES, ETC., FOR EXACT LOCATIONS BEFORE ROUGH-IN OF CONDUIT SYSTEM.
7.

MINIMUM CONDUIT SIZE IS 3/4 INCH. MINIMUM WIRE SIZE IS #12 AWG, UNLESS OTHERWISE NOTED ON PLANS OR IN CIRCUIT REVIEWS.
8.

MOUNTING HEIGHTS ABOVE FINISHED FLOOR (A.F.F.) ARE TO CENTER OF DEVICE UNLESS NOTED OTHERWISE.
9.

ALL WIRING SHALL BE INSTALLED PER THE NATIONAL ELECTRIC CODE (NEC). ALL WIRING SHALL BE SECURED AND SUPPORTED PER NEC 300.11.
10.

CONTRACTOR SHALL INCLUDE THE COST TO SECURE ALL APPLICABLE PERMITS IN BASE BID.
11.

ALL RECEPTACLES IN THE KITCHEN/PREP AREA SHALL BE GFCI WHETHER SHOWN AS SUCH OR NOT.
12.

ALL EXIT AND EMERGENCY LIGHTING SHALL BE WIRED EITHER AHEAD OF LOCAL SWITCHING ON THE LOCAL AREA CIRCUIT OR ON A DEDICATED EXTREMITY EMERGENCY CIRCUIT. THE METHOD CHOSEN SHALL MEET THE REQUIREMENTS OF N.E.C. ARTICLE 700 AND THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
13.

ALL 120V AND 277V CIRCUITS SHALL HAVE A DEDICATED NEUTRAL. SHARING A NEUTRAL CONDUCTOR IS PROHIBITED.
14.

ALL RECEPTACLES BEHIND VENDING MACHINES AND REFRIGERATORS TO BE GFCI WITH REMOTE AND OR ACCESSIBLE RESET.

GENERAL NOTES - RISER DIAGRAM

- A.

PARALLEL FEEDER CONDUCTORS SHALL BE CUT TO THE EXACT SAME LENGTHS AND SHALL BE FROM THE SAME FACTORY RUN. ALL CONNECTIONS FOR SAME WORK SHALL BE TORQUED TO IDENTICAL VALUES.
- B.

EXTERIOR ELECTRICAL WORK SHALL NOT ONLY BE WEATHERPROOF AND WATER TIGHT, BUT SHALL BE RUST RESISTANT.
- C.

CONDUCTORS BELOW GRADE OR SUBJECT TO MOISTURE SHALL BE "XHHW-2".
- D.

PROVIDE FACTORY SERIES COORDINATION FOR ALL CIRCUIT BREAKERS (INCLUDING ALL BRANCH BREAKERS) RELATIVE TO "UPSTREAM" BREAKERS, SO THAT ONLY THE BREAKER CLOSEST IN THE CIRCUIT TO THE LOAD TRIPS UPON AN OVERLOAD OF FAULT CONDITION.
- E.

POWER DISTRIBUTION EQUIPMENT SUPPLIER SHALL PROVIDE APPROPRIATELY RATED AND BRACED TO ACCOMMODATE THE AVAILABLE FAULT CURRENT AT THE UTILITY COMPANY TRANSFORMER SECONDARIES. THIS SUPPLIER SHALL ACCORDINGLY PROVIDE ANY RELATED CALCULATIONS SO THAT THEIR EQUIPMENT IS PROPERLY COORDINATED FOR THE AVAILABLE FAULT CURRENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE THIS SUPPLIER WITH COPIES OF THE ELECTRICAL DOCUMENTS AS REQUIRED SO THAT PROPERLY RATED/BRACED EQUIPMENT IS PROVIDED UNDER BASE BID.
- F.

GROUNDING ELECTRODE CONDUCTORS SHALL BE PROVIDED IN STRICT COMPLIANCE WITH NEC, INCLUDING ARTICLE 250 AND TABLE 250-66. THESE CONDUCTORS MAY NOT BE INDICATED ON RISERS OR SINGLE LINE DIAGRAMS, BUT SHALL BE PROVIDED UNDER BASE BID NEVERTHELESS.
- G.

EQUIPMENT GROUNDING CONDUCTORS SHALL BE PROVIDED IN STRICT COMPLIANCE WITH NEC, INCLUDING ARTICLE 250 AND TABLE 250-122. THESE CONDUCTORS MAY NOT BE INDICATED ON RISERS OR SINGLE LINE DIAGRAMS, BUT SHALL BE PROVIDED UNDER BASE BID NEVERTHELESS.
- H.

WORKING CLEARANCES SHALL BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT (SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, STARTERS, DISCONNECTS, ETC. AS APPLICABLE) IN STRICT COMPLIANCE WITH NEC CHAPTER 1, PART B SECTION 110-26(a). LOCATIONS SHOWN ON THE FLOOR PLANS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE WITH THE ABOVE NEC REFERENCE. THIS REQUIREMENT APPLIES TO EQUIPMENT ON FLOOR PLANS AS WELL AS TO EQUIPMENT SHOWN ON THE RISER.
- I.

HOLD ALL NEW OVERHEAD ELECTRICAL WORK AS TIGHT AS POSSIBLE TO THE BOTTOM OF THE OVERHEAD STRUCTURE. LOCATE ANY RELATED PULL BOXES SO THAT THEY WILL BE FULLY ACCESSIBLE AFTER ALL CONSTRUCTION WORK IS COMPLETE. AS WITH ALL WORK, COORDINATE IN ADVANCE WITH OTHER TRADES.
- J.

ROUTE FEEDER CONDUITS BELOW GRADE WHEREVER POSSIBLE. VERY LIMITED SPACE EXISTS ABOVE ACOUSTICAL TILE CEILINGS AND MANY, IF NOT MOST, OF THE SPACE ABOVE GYPSUM BOARD CEILINGS IS NOT AVAILABLE FOR RUNNING CONDUIT. STUDY ALL ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS VERY CAREFULLY BEFORE LAYING OUT FEEDER ROUTES.
- K.

ALL PANELS HAVE NEMA 1 ENCLOSURES UNLESS OTHERWISE NOTED.
- L.

ALL PANELS ARE SURFACE MOUNTED UNLESS OTHERWISE NOTED.

SINGLE LINE SYMBOL LEGEND

	CIRCUIT BREAKER
	FUSE
	UTILITY METER
	NON-FUSED DISCONNECT
	FUSIBLE DISCONNECT
	PANELBOARD, MAIN LUGS ONLY WITH FEED THROUGH LUGS Y= RATING X= NAME
	PANELBOARD, MAIN LUGS ONLY Y= MAIN LUGS RATING X= NAME
	PANELBOARD, MAIN CIRCUIT BREAKER Y = MCB RATING X = NAME
	MOTOR - SINGLE PHASE Z = HP RATING
	MOTOR - THREE PHASE Z = HP RATING
	TRANSIENT VOLTAGE SURGE SUPPRESSION

1

1

Volts		Phase	Wire	Panel Type	Electrical Panel Schedule P2					Ampacity Provided		Mount	AIC	Fed From
120/240		1Ø	3	Main Lug Only						400 Amps		Surface	22,000	
Circuit #	Breaker	Poles	Notes	Description	A	B		A	B	Description	Notes	Poles	Breaker	Circuit #
1	20	1		103-109 Lighting	536			5,595		AHU-2		2	60	2
3	20	1		Meeting Room 101 Lts		646			5,595					4
5	20	1		Meeting Room 102, 110-112 Lts	601			1,716		AHU-3		2	60	6
7	20	1		Meeting Room 102 Receptacles		720			1,716					8
9	20	1		Meeting Room 102 Receptacles	900			4,750		CU-2		2	25	10
11	20	1		Workroom 112 Copier	900	1,000			4,750					12
13	20	1		Workroom 112 Receptacles				2,496		CU-3		2	40	14
15	20	1		Meeting Room 101 Receptacles		720			2,496					16
17	20	1		Meeting Room 101 Receptacles	1,080			1,500		Water Heater		2	20	18
19	20	1		Workroom 104 Copier		1,000			1,500					20
21	20	1		Workroom 104 Receptacles	500			360		Existing Outdoor Sign		1	20	22
23	20	1		Workroom 104 Quads		720		1,080		Existing Circuit		1	20	24
25	20	1		Restroom Rcpts. & Water Fountain	540			720		Existing Circuit		1	20	26
27	20	1		Restroom Receptacle		180			900	Existing Circuit		1	20	28
29	20	1		Break Room Receptacles	360					Spare		1	20	30
31	20	1		Refrigerator		180		1,200	1,200	Women's Hand Dryer	LO	1	20	32
33	20	1		Break Room Counter des. Rcpt.	180			1,200		Men's Hand Dryer	LO	1	20	34
35	20	1		Break Room counter des. Rcpt.		180		1,200		Restroom Hand Dryer	LO	1	20	36
37	20	1		Break Room Counter des. Rcpt.	500			360		Meeting Room 101 Floor Boxes		1	20	38
39	20	1		Storage Receptacles		360				Spare		1	20	40
41	20	1		Exterior Lights	84					Spare		1	20	42
43	20	1		Spare					5,595	AHU-1		2	60	44
45	20	1		Spare					5,595					46
47	20	1		Spare					2,185	CU-1		2	40	48
49	20			Spare					2,185					50
51	20			Spare					360	Data Room Quad		1		52
53	20			Spare					360	Data Room Quad		1		54
55														56
57														58
59														60
Total Connected Load Phase A:					33,018	Load Description		Watts	Factor	Total	Panel Schedule Notes:			
Total Connected Load Phase B:					34,283	Receptacles < 10,000		10,000	100%	10,000	New circuit breakers added to existing panels shall match panel manufacturer, voltage level, and fault current rating of existing protectives.			
Total Connected Load:					67,301 Watts	Receptacles > 10,000		1,300	50%	650	Identify main disconnects and all up and downstream disconnecting means for all circuits at panel.			
Notes:						Lighting Loads		1,867	125%	2,334	Fill out branch circuit directory indicating circuit numbers, area(s) served, and load type. Index shall be neatly typed. Branch circuit directories shall be updated or replaced in all areas of alterations.			
						Track Lighting		0ft	75W/ft	0	Black laminated phenolic nameplates shall be provided on all new and existing panel boards secured by #8-32 screws, lock washers, and nuts on each corner of nameplate.			
AF					Arc Fault Circuit Interrupter	Motor Loads		0	100%	0	Contractor may arrange circuits to suit field conditions, but loading between phases shall be +/- 10%.			
GF					Ground Fault Circuit Interrupter	Largest Motor		0	125%	0				
LO					Lock Out Breaker	Cooling Loads		8,424	100%	8,424				
ST					Shunt Trip	Heating Loads		39,250	100%	39,250				
PWF					Provide new fuse in slot	Continuous Loads		0	125%	0				
REF					Re-use existing spare fusible switch	Non-Continuous Loads		6,460	100%	6,460				
EX					Blank loads on panel are unknown and shall be calculated under the existing panel demand (or existing building peak demand) category in the load calculations section. Engineer offers no warranty as to the condition or load information on unknown circuit breakers.	Kitchen Equipment Loads		0	100%	0				
						Existing Panel Demand			125%	0				
						Sub-Total:				67,118				
						Total Connected Ampacity:				279.66				
						Total Connected Load %:				70%				

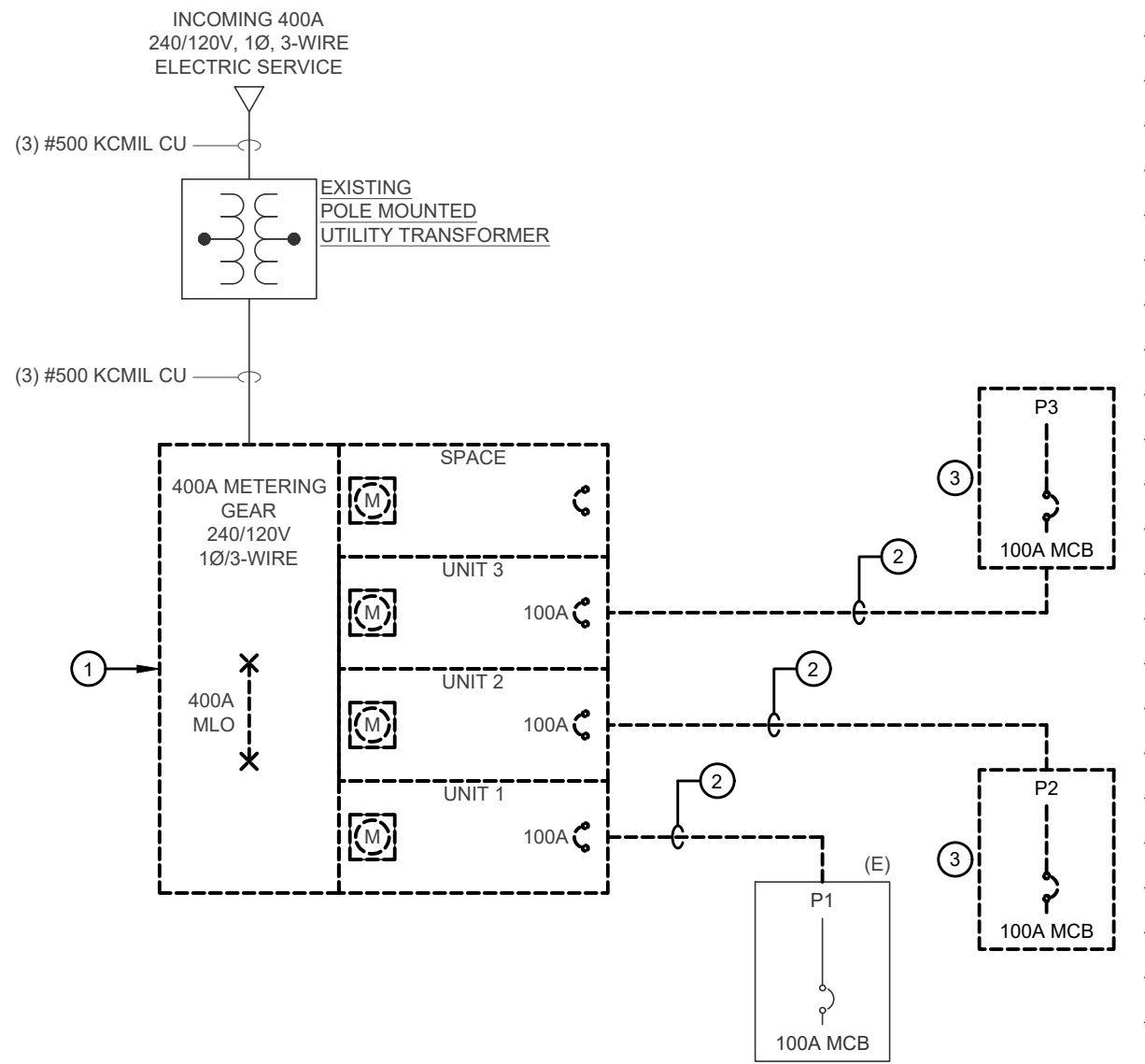
DEMOLITION SINGLE LINE PLAN NOTES

- 1

EXISTING METER BASE TO BE REMOVED COMPLETE.
- 2

EXISTING FEEDER FROM METER BASE TO PANEL TO BE REMOVED.
- 3

EXISTING PANEL TO BE REMOVED COMPLETE.



1 DEMOLITION SINGLE LINE DIAGRAM

E-501 SCALE: NONE

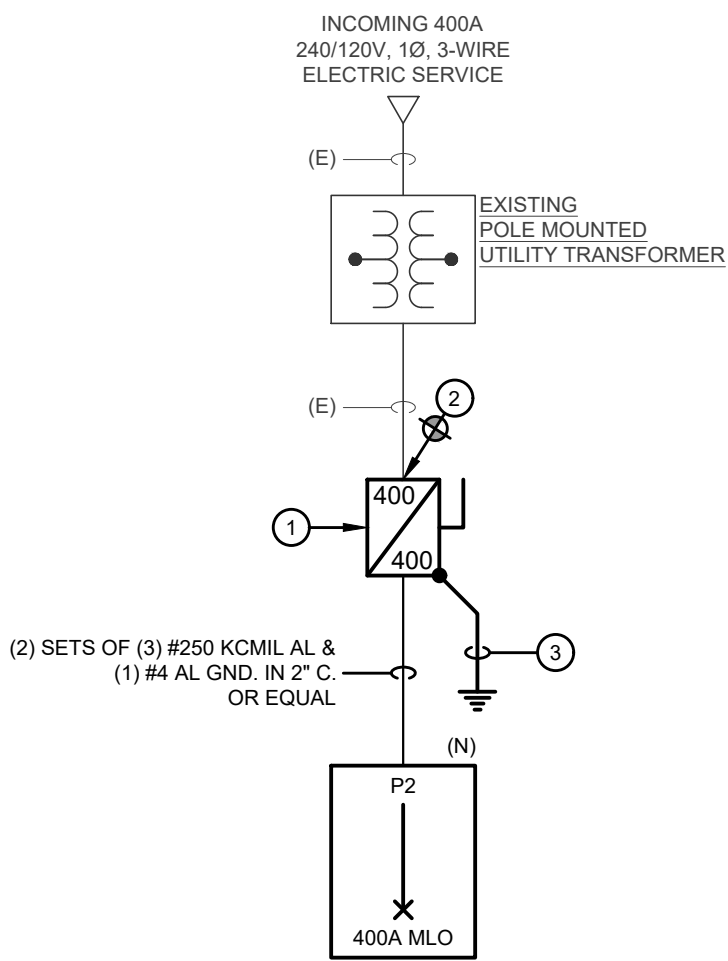
SINGLE LINE PLAN NOTES

- 1

NEW 400A SERVICE DISCONNECT.
- 2

CAPTURE AND CONNECT TO EXISTING SERVICE CONDUCTORS.
- 3

CAPTURE EXISTING SERVICE GROUNDING ELECTRODE.



2 SINGLE LINE DIAGRAM

E-501 SCALE: NONE

LIGHT FIXTURE SCHEDULE

SYMBOL		ID	DESCRIPTION	FIXTURE INFORMATION		ELECTRIC INFORMATION		MISCELLANEOUS INFORMATION	
	LC2	24" X 24" RECESSED LED FIXTURE	MAKE	LITHONIA	VOLTAGE	1VOLT	MOUNTING	RECESSED	
			MODEL	2AVL2 30LHE MDR EZ1 LP835	LAMP QTY		HEIGHT		
			ALTERNATE		LAMP TYPE	LED	NOTES		
	LC2-E	24" X 24" RECESSED LED FIXTURE WITH EMERGENCY BATTERY PACK	MAKE	LITHONIA	VOLTAGE	1VOLT	MOUNTING	RECESSED	
			MODEL	2AVL2 30LHE MDR EZ1 LP835 EL14L	LAMP QTY		HEIGHT		
			ALTERNATE		LAMP TYPE	LED	NOTES		
	LC4	24" X 48" RECESSED LED FIXTURE	MAKE	LITHONIA	VOLTAGE	1VOLT	MOUNTING	RECESSED	
			MODEL	2AVL4 40LHE MDR EZ1 LP835	LAMP QTY		HEIGHT		
			ALTERNATE		LAMP TYPE	LED	NOTES		
	LC4-E	24" X 48" RECESSED LED FIXTURE	MAKE	LITHONIA	VOLTAGE	1VOLT	MOUNTING	RECESSED	
			MODEL	2AVL4 40LHE MDR EZ1 LP835 EL14L	LAMP QTY		HEIGHT		
			ALTERNATE		LAMP TYPE	LED	NOTES		

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SPLIT SYSTEM SCHEDULE				
EQUIPMENT MARK	AHU-1	CU-1	AHU-2	CU-2
MANUFACTURER	CARRIER	CARRIER	CARRIER	CARRIER
MODEL #	FV4CNF003L00	25TPA736A003	FV4CNF003L00	25TPA724A003
COOLING COIL MODEL#	---	---	---	---
ENERGY EFFICIENCY RATIO (SEER)		17		17
INDOOR FAN H.P.	1/2		1	
DESIGN CFM	900		670	
EXTERNAL STATIC PRESSURE IN H2O	0 - 1.00		0 - 1.00	
CONDENSER AMBIENT CONDITIONS				
TEMPERATURE °F		95°F		95°F
COOLING DATA				
ENTERING AIR TEMP. db / wb °F	80/67		80/67	
TOTAL COOLING CAPACITY IN M.B.H.	33.64	33.64	23.23	23.23
SENSIBLE COOLING CAPACITY IN M.B.H.	24.61	24.61	16.94	16.94
REFRIGERANT TYPE	R410A	R410A	R410A	R410A
HEATING DATA				
GAS INPUT IN M.B.H. H/L				
GAS OUTPUT IN M.B.H. H/L				
HEATING EFFICIENCY (AFUE %)				
ELECTRIC RESISTANCE IN K.W. @ VOLT	10.00KW @ 240		10.00KW @ 240	
HEAT PUMP REVERSE CYCLE IN M.B.H.		21.2		21.2
STAGES	2		2	
HEATER MODEL #	KFCEH2601C10		KFCEH2601C10	
ELECTRICAL DATA				
VOLTS / PHASE/ HERTZ	240/1/60	240/1/60	240/1/60	240/1/60
MINIMUM CIRCUIT AMPS	58.5	19	53.8	16.5
MAX OVERCURRENT PROTECTION IN AMPS	60	40	60	25
PHYSICAL DATA				
UNIT WEIGHT IN POUNDS	150	273	150	255
ACCESSORIES	A THRU K	---	A THRU K	
A. TRANSFORMER				
B. THERMAL EXPANSION VALVE.				
C. BOTTOM RETURN FILTER RACK.				
D. INSULATED PLENUM COOLING COIL.				
E. REFRIGERANT FILTER/ DRIER.				
F. COMPRESSOR SHORT CYCLE CONTROL.				
G. FURNANCE MOUNTING PAD				
H. REFRIGERANT LINE SET				
I. RETURN AIR PLENUM				
J. PROGRAMMABLE THERMOSTAT				
NOTES:				
1. CONDENSING UNIT SHALL BE INSTALLED ON CONCRETE PAD.				
2. AIR HANDLING UNIT TO HAVE ONE (1) 3/4" PVC CONDENSATE DRAIN LINES PIPED TO NEAREST FLOOR DRAIN.				
3. INSTALL SYSTEMS PER MANUFACTURER'S INSTRUCTIONS.				

SMACNA HVAC DUCTWORK SHEET METAL GAUGES											
MAXIMUM DUCT DIMENSIONS	SMACNA PRESSURE CLASS										
	0.50 W.C.		1.00 W.C.		2.00 W.C.		3.00 W.C.		4.00 W.C.		10.00 W.C.
	A	B	A	B	A	B	A	B	A	B	A
4" - 8"	24	-	24	-	24	-	24	24	24	24	22
9" - 10"	24	-	24	-	24	-	24	24	22	24	20
11" - 12"	24	-	24	-	24	-	24	24	22	24	18
13" - 14"	24	-	24	-	24	24	22	24	20	22	18
15" - 16"	24	-	24	-	24	22	24	20	24	18	20
17" - 18"	24	-	24	24	22	24	20	24	18	22	16
19" - 20"	24	24	24	24	20	24	18	24	18	24	16
21" - 22"	22	24	22	24	18	24	18	24	16	22	-
23" - 24"	22	24	22	24	18	24	18	24	18	22	16
25" - 26"	20	24	20	24	18	24	18	24	16	22	-
27" - 28"	18	24	18	24	18	24	18	22	16	22	-
29" - 30"	18	24	18	24	18	24	18	22	16	22	-
31" - 36"	18	24	18	24	16	24	16	20	-	20	-
37" - 42"	16	24	16	24	-	22	-	20	-	18	-
43" - 48"	16	24	16	22	-	22	-	18	-	18	-
49" - 54"	-	24	-	22	-	20	-	18	-	18	-
55" - 60"	-	24	-	22	-	20	-	18	-	16	-
61" - 72"	-	22	-	18	-	18	-	16	-	16	-
73" - 84"	-	22	-	18	-	16	-	16	-	16	-
85" - 96"	-	20	-	18	-	16	-	16	-	16	-
97" - 108"	-	18	-	16	-	16	-	16	-	16	-
109" - 120"	-	16	-	16	-	16	-	16	-	16	-
NOTES:											
1. THIS TABLE IS BASED ON THE FOLLOWING:											
1.1. COLUMN A: DUCT GAUGE REQUIREMENT WITH NO REINFORCEMENT											
1.2. COLUMN B: DUCT GAUGE WITH REINFORCEMENT AS INDICATED BELOW											
1.2.1. 0.50" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR SPACING 19" - 120"											
1.2.2. 1.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR SPACING 17" - 108" AND 4 FEET SPACING FOR 109" - 120"											
1.2.3. 2.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR 13" - 84" AND 4 FEET SPACING FOR 85" - 108" AND 3 FEET SPACING FOR 109" - 120"											
1.2.4. 3.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR 4" - 84", 4 FEET SPACING FOR 85" - 96" AND 3 FEET SPACING FOR 97" - 120"											
1.2.5. 4.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR 4" - 60", 4 FEET SPACING FOR 61" - 72" AND 3 FEET SPACING FOR 73" - 120"											
1.2.6. 6.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR 4" - 48", 4 FEET SPACING FOR 49" - 60" AND 3 FEET SPACING FOR 61" - 120"											
1.2.7. 10.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR 4" - 42", 4 FEET SPACING FOR 43" - 54", 3 FEET SPACING FOR 55" - 72" AND 2 FEET SPACING FOR 73" - 120"											

REGISTER, DIFFUSER AND GRILLE SCHEDULE	MARK	SD-6S	SD-8	SD-10	RG-1	RD-8	RD-10	RD-12
	MANUFACTURER	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE
	MODEL NUMBER	SPD	SPD	SPD	535 SERIES	SPD	SPD	SPD
	TYPE	FLAT PLAQUE	FLAT PLAQUE	FLAT PLAQUE	LOUVERED	FLAT PLAQUE	FLAT PLAQUE	FLAT PLAQUE
	DIRECTION	4-WAY	4-WAY	4-WAY	1-WAY	4-WAY	4-WAY	4-WAY
	MOUNTING	LAY-IN	LAY-IN	LAY-IN	SIDEWALL	LAY-IN	LAY-IN	LAY-IN
	G / R / D	D	D	D	G	D	D	D
	CFM	AS NOTED	AS NOTED	AS NOTED	---	---	---	---
	NECK SIZE	6"Ø	6"Ø	10"Ø	16" X 8"	6"Ø	10"Ø	12"Ø
	PANEL SIZE	12x12	24x24	24x24	18x10	24x24	24x24	24x24
	MATERIAL	STEEL	STEEL	STEEL	STEEL	STEEL	STEEL	STEEL
	FINISH	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
NOTES:	DAMPERS	YES	YES	YES	NO	NO	NO	NO
	SOUND (NC)	<20	<20	<20	<25	<25	<25	<25
	REMARKS / NOTES	1,2	1,2	1,2	2	2	2	2
1. DIFFUSERS SHALL BE 4-WAY FLOW UNLESS OTHERWISE NOTED								
2. PROVIDE WITH DRYWALL WALL MOUNTING FRAME WHERE REQUIRED.								
3. PROVIDE WITH DUCT MOUNTING FRAME WHERE REQUIRED.								

LOUVER SCHEDULE									
MARK	SERVICE	WIDTH	HEIGHT	WALL THICKNESS	MATERIAL	DAMPER	MANUFACTURER	MODEL	NOTES
LVR-1	FRESH AIR INTAKE	16"	12"	4"	GALV. STEEL	---	GREENHECK	FSJ-402	1,2,3,4
NOTES:									
1. PROVIDE WITH GRAVITY BACKDRAFT DAMPER.									
2. INTERNAL BIRD SCREEN.									
3. COLOR TO BE SELECTED BY ARCHITECT.									
4. OR EQUAL.									

EXHAUST FAN SCHEDULE									
MARK	MANUFACTURER / MODEL #	FAN DATA			MOTOR DATA			BACKDRAFT DAMPER	NOTES
		CFM	SP	RPM	VOLTS	PHASE	WATTS / HP		
EF-1	GREENHECK / SP-A90	70	0.25	950	120	1	13W	YES	1
EF-2	GREENHECK / SP-A90	70	0.25	950	120	1	13W	YES	1
EF-3	GREENHECK / SP-A90	70	0.25	950	120	1	13W	YES	1
EF-4	GREENHECK / SP-A125	100	0.25	1058	120	1	18W	YES	1
NOTES:									
1. PROVIDE WITH SPEED CONTROLLER.									

Outdoor Air Calculations Per ASHRAE Standard 62.1

Room Number	Room Name	Room Area	System Number	Occupancy Category (Table 6.1)	Exhaust Occupancy Category (Table 6.4)	Minimum Ventilation Known n Occupancy			Minimum Ventilation Default Values			Minimum Exhaust Rate (Table 6.4)	Total Exhaust Rate	Breathing Zone Outdoor Air	Primary Outdoor Air Fraction (Zp)	System #1	Max Zp: 0.33	System #2	Max Zp: 0.20	System #3	Max Zp: 0.33
						CFM Per Person (Rp)	CFM per 1,000 Ft² (Ra)	No. of People (Px)	People per 1,000 Ft² (Pz)	CFM Per Person	Number of People					Supply	Outdoor Air	Supply	Outdoor Air	Supply	Outdoor Air
101	Meeting Room	782 Ft²	1	General - Conference Meeting					50.00	6.00	40.00			240.00	0.33	900	300				
102	Meeting Room	517 Ft²	3	General - Conference Meeting					50.00	6.00	26.00			156.00	0.33					600	195
103	Storage	119 Ft²	2	General - Storage Rooms														150			
104	Workroom	219 Ft²	2	Office Buildings - Office Space					5.00	17.00	2.00			34.00	0.19			225	38		
105	Data Room	21 Ft²		Unoccupied																	
106	Women	72 Ft²	2	Not Applicable - Exhaust Only	Toilets - Public								70.00					60			
107	Men	80 Ft²	2	Not Applicable - Exhaust Only	Toilets - Public								70.00					60			
108	Break Room	128 Ft²	2	General - Break Rooms					25.00	7.00	4.00			28.00	0.20			175	31		
109	HVAC	39 Ft²	2	Unoccupied																	
110	HVAC	14 Ft²	2	Unoccupied																	
111	Restroom	69 Ft²	3	Not Applicable - Exhaust Only	Toilets - Public								70.00						70		
112	Workroom	128 Ft²	3	Office Buildings - Office Space					5.00	17.00	1.00			17.00	0.14				150		21
Notes																3.0 Ton System		2.0 Ton System		2.0 Ton System	
																25% Outdoor Air		9% Outdoor Air		27% Outdoor Air	
																People: 40		People: 6		People: 27	
																System Efficiency: 0.80		System Efficiency: 0.90		System Efficiency: 0.80	
																Occupant Diversity: 1.00		Occupant Diversity: 1.00		Occupant Diversity: 1.00	
																300 CFM O.A. Required		69 CFM O.A. Required		216 CFM O.A. Required	

HVAC NOTES

- SCOPE OF WORK
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
 - ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE INTERNATIONAL MECHANICAL CODE 2006, ALL LOCAL CODES AND ALL OTHER REGULATION GOVERNING WORK OF THIS NATURE.
 - THE CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE FOR HIMSELF THE CONDITIONS THAT MAY AFFECT THE WORK, NO ALLOWANCE SHALL BE MADE IF THE CONTRACTOR FAILS TO MAKE SUCH EXAMINATIONS.
 - ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ENGINEER OR ARCHITECT.
- SHOP DRAWINGS
 - SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT FIVE SETS OF SHOP DRAWINGS AND THEY SHALL BE CLEARLY LABELED.
- FLEXIBLE TYPE DUCT
 - SHALL BE OF TWO ELEMENT SPIRAL CONSTRUCTION COMPOSED OF A CORROSION RESISTANT METAL SUPPORTING SPIRAL AND COATED FABRIC WITH A MINERAL BASE. FLEXIBLE DUCT CONNECTORS SHALL BE LISTED BY U.L. CLASS 1 DUCTS, AND SHALL EFFECT A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50. USE OF FLEXIBLE DUCTWORK SHALL BE LIMITED TO NO MORE THAN 5 LINEAR FEET PER RUN. CONTRACTOR SHALL BE CAREFUL SO AS NOT TO KINK OR COLLAPSE FLEXIBLE DUCT.
- REFRIGERANT PIPING
 - CONTRACTOR SHALL PROVIDE AND INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN SUCH A WAY AS TO BE INCONSPICUOUS AND FREE FROM ANY POSSIBLE CONDENSATION. INSULATE REFRIGERANT LINES WITH ARMOUR-FLEX TYPE INSULATION.
 - SHALL BE TYPE "K" COPPER TUBING, WITH WROUGHT COPPER SOLDER TYPE FITTINGS SUITABLE FOR CONNECTION WITH SILVER SOLDER DUCTWORK.
- SHEET METAL DUCT WORK
 - THE DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "SMACNA" APPLICABLE MANUALS. ALL DUCTWORK SHALL BE THE LOW VELOCITY TYPE, UNLESS SPECIFIED OTHERWISE.
 - CONTRACTOR SHALL PROVIDE AND INSTALL APPROVED FIRE DAMPERS AND ACCESS PANELS IN ANY AND ALL DUCTWORK WHICH PENETRATES A HORIZONTAL OR VERTICAL FIRE PARTITION, OR AS OTHERWISE SHOWN ON DRAWINGS.
 - ALL BRANCH DUCTS TO HAVE VOLUME DAMPERS.
 - SMOOTH TURN RADII DUCTWORK OR TURNING VANES SHALL BE USED THROUGHOUT WHERE FLOW EXCEEDS 150 CFM.
 - ALL DUCT JOINTS TO BE SEALED IN ACCORDANCE WITH "SMACNA" STANDARDS AND ACCEPTED GOOD PRACTICE.
 - ALL DUCT DIMENSIONS SHOWN ARE NET INSIDE VALUES. DIMENSIONS MAY BE CHANGED SO LONG AS THE NET FREE FACE AREA IS MAINTAINED.
 - ALL CONCEALED DUCTWORK SHALL BE INSULATED WITH 1-1/2" FIBERGLASS INSULATING BLANKET WITH ALUMINUM FOIL FACING.
 - ALL SUPPLY AND RETURN DUCTWORK 15 FEET DOWNSTREAM OF THE HVAC UNIT SHALL BE INTERNALLY LINED WITH A 1/2" ACOUSTICAL DUCT LINER.
- DRAINAGE PIPING (CONDENSATE)
 - SHALL BE SCHEDULE 40 PVC PIPE WITH SOLVENT JOINTS. PITCH HORIZONTAL LINES 1" IN 10'-0". CONDENSATE DRAINS SHALL BE ROUTED TO FLOOR DRAIN OR INDIRECT WASTE DRAIN.
- HVAC CONTROLS
 - CONTRACTOR TO SUPPLY AND INSTALL ALL CONTROL WIRING AND THERMOSTATS AS REQUIRED.
- ELECTRICAL
 - CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR LOCATION OF WIRING FOR EACH HVAC UNIT.
- PIPE SUPPORTS
 - ALL PIPE SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN A NEAT AND WORKMANLIKE MANNER. THE USE OF WIRE OR METAL STRAP TO SUPPORT PIPES WILL NOT BE PERMITTED. SPACING OF PIPE SUPPORTS SHALL NOT EXCEED 8 FEET FOR ALL PIPING. PLUMB PIPING TO BE SUPPORTED EVERY 4 FEET.
- MISCELLANEOUS
 - ALL EXTERIOR OPENINGS TO BE PROPERLY CAULKED AND SEALED WITH A SEALANT OF HIGH QUALITY AND LONG LIFE, TO PREVENT INFILTRATION OF OUTSIDE AIR INTO CONDITIONED SPACE.
 - COORDINATE INSTALLATION OF ALL ROOF FLASHING AT ROOF PENETRATION.
 - DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS, AND DIMENSIONS AT THE JOB SITE.
 - THE MECHANICAL PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE AVAILABLE SPACE.
- TESTING AND BALANCING
 - THE HVAC SYSTEM SHALL BE TESTED AND BALANCED BY AN INDEPENDENT AGENCY, UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. A SEALED TYPE WRITTEN REPORT SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL.
- GUARANTEE
 - MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE(1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THIS CONTRACTOR'S EXPENSE.
 - FOR THE SAME PERIOD, THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY HIM.