

# ELECTRICAL LEGEND

# ABBREVIATIONS

# ELECTRICAL GENERAL NOTES

## SWITCHES (ALL SWITCHES AT +44" UNLESS NOTED OTHERWISE)

- S SINGLE POLE SWITCH
- S<sub>2</sub> TWO POLE SWITCH
- S<sub>3</sub> THREE-WAY SWITCH
- S<sub>4</sub> FOUR-WAY SWITCH

## RECEPTACLES (MOUNTED AT +18" TO CENTER UNLESS NOTED OTHERWISE)

- ⊖ DUPLEX RECEPTACLE
- CTR ⊖ DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - VERIFY MOUNTING HEIGHT
- GFI ⊖ GFI RECEPTACLE
- ▶ RECEPTACLE - SPECIAL - MATCH EQUIPMENT
- ⊕ DOUBLE DUPLEX RECEPTACLE
- WP INSTALL WITH SEALED, WEATHERPROOF COVER

## GENERAL

- Ⓝ JUNCTION BOX
- Ⓜ POWER METER
- 📣 HORN
- Ⓜ MOTOR
- Ⓜ DISCONNECT SWITCH
- Ⓜ FUSED DISCONNECT SWITCH
- Ⓜ HOMERUN

## COMMUNICATIONS

- ▼ TELEPHONE OUTLET AT +18"
  - ▼ DATA OUTLET AT +18"
  - ▼ COMBINATION TELE/DATA OUTLET AT +18"
- TERMINATE JACK(S) WITH MODULAR FACEPLACE AND HOMERUN CAT-6 CABLING FROM EACH TO COLLECTION POINT, LEAVE MIN 2' CABLING COILED AT TOP OF BACKBOARD FOR EACH

## FIRE ALARM SYSTEM

- FACP FIRE ALARM PANEL
- MFS MANUAL FIRE ALARM PULL STATION AT +44"
- FH FIRE ALARM HORN AND STROBE AT +80"
- FS FIRE ALARM STROBE AT +80"
- FS FLOW SWITCH
- TS TAMPER SWITCH
- H HEAT DETECTOR
- CO CARBON MONOXIDE DETECTOR
- S SMOKE DETECTOR

- A AMP
- AC ALTERNATING CURRENT
- AF ABOVE FINISH FLOOR
- AFG ABOVE FINISHED GRADE
- AL ALUMINUM
- ALT ALTERNATE
- ATS AUTOMATIC TRANSFER SWITCH
- AWG AMERICAN WIRE GAUGE
- BC BARE COPPER
- BLDG BUILDING
- C CONDUIT
- CB CIRCUIT BREAKER
- CBTV CLOSED CIRCUIT TELEVISION
- CKT CIRCUIT
- CLG CEILING
- CT CURRENT TRANSFORMER
- CTR ABOVE COUNTER
- CU COPPER
- CW COLD WATER
- DISC DISCONNECT
- DN DOWN
- DP DOUBLE POLE
- DT DOUBLE THROW
- DWG DRAWING
- (E) EXISTING TO REMAIN
- E.C. ELECTRICAL CONTRACTOR
- EA EACH
- EMT ELECTRICAL METALLIC TUBING
- ELEC ELECTRICAL OR ELECTRIC
- ELEV ELEVATOR
- EM EMERGENCY
- END OF LINE RESISTOR
- EOL END OF LINE RESISTOR
- EWC ELECTRICAL WATER COOLER
- F FUSE
- FAA FIRE ALARM REMOTE ANNUNCIATOR PANEL
- FACP FIRE ALARM CONTROL PANEL
- FC FOOT CANDLE
- FLR FLOOR
- FT FOOT OR FEET
- G.C. GENERAL CONTRACTOR
- GEN GENERATOR CIRCUIT
- GFI GROUND FAULT INTERRUPTER
- GND GROUND
- HID HIGH INTENSITY DISCHARGE
- HP HORSEPOWER
- HZ FREQUENCY CYCLES PER SECOND
- IC INTERCOM
- IS ISOLATED GROUND CONDUCTOR
- IMC INTERMEDIATE METALLIC CONDUIT
- IN INCH
- J-BOX JUNCTION BOX
- K KIRK KEY INTERLOCKED THOUSAND CIRCULAR MIL(S)
- KH KITCHEN HOOD
- KV KILOVOLT
- KVA KILOVOLT AMPERE(S)
- KVAR KILOWATT(S)
- KW KILOWATT(S)
- KWHR KILOWATT HOUR
- MAX MAXIMUM
- MCC MOTOR CONTROL CENTER
- MH MANHOLE
- MIN MINIMUM
- MTD MOUNTED
- MTR MOTOR
- MTS MANUAL TRANSFER SWITCH
- N.C. NORMALLY CLOSED
- NEC NATIONAL ELECTRIC CODE
- NF NON FUSED
- N.O. NORMALLY OPEN
- # NUMBER
- NTS NOT TO SCALE
- NIC NOT IN THIS CONTRACT
- OC ON CENTER
- OL OVERLOAD ELEMENT
- PB PUSH BUTTON
- PF POWER FACTOR
- PH PHASE
- PNL PANEL
- PT POTENTIAL TRANSFORMER
- PVC POLYVINYL CHLORIDE
- (R) RELOCATE
- RMS ROOT MEAN SQUARE
- SHT SHEET
- SMR SURFACE METAL RACEWAY
- SP SINGLE POLE
- SPEC SPECIFICATIONS
- ST SINGLE THROW
- SW SWITCH
- SWBD SWITCHBOARD
- TEL TELEPHONE
- TEMP TEMPORARY
- TSTAT THERMOSTAT
- TTB TELEPHONE TERMINAL BOARD
- TTC TELEPHONE TERMINAL CABINET
- TV TELEVISION
- TYP TYPICAL
- UG UNDERGROUND
- UH UNIT HEATER
- UPS UNINTERRUPTED POWER SUPPLY
- V VOLT(S)
- VA VOLT AMP(S)
- VAR REACTIVE VOLT AMPERES
- VP VAPOR PROOF
- W/ WITH
- W/O WITHOUT
- WATT(S) WATT(S)
- WP WEATHERPROOF
- WM WIREMOLD
- XFMR TRANSFORMER
- X EXISTING - REMOVE
- XP EXPLOSION PROOF

## PANELS AND RELATED ITEMS

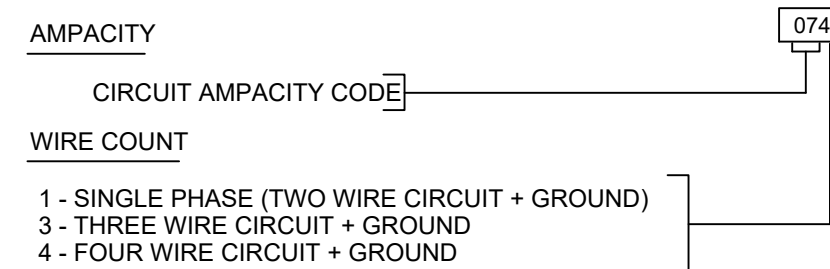
- ▬ PANELBOARD - SURFACE AT +72" TO TOP

WHERE INDICATED, ALL 120/208V, 3Ø PANELBOARDS TO BE PROVIDED WITH AN ISOLATED GROUNDING BUS. PANELBOARDS WITH ISOLATED GROUND BUSES SHALL HAVE FEEDERS INSTALLED WITH TWO GROUND CONDUCTORS. ISOLATED GROUND CONDUCTOR TO BE IN ACCORDANCE WITH NEC.

## ANNOTATION TAGS AND NOMENCLATURE

- ① KEYED NOTE SYMBOL
- ② TOP NUMBER DESIGNATES DETAIL, BOTTOM NUMBER DESIGNATES SHEET ON WHICH DETAIL IS LOCATED
- (3) 1-1/2" C = 3 SETS OF ONE AND ONE HALF INCH CONDUITS
- AHU 1 MECHANICAL EQUIPMENT CROSS REFERENCE

## FEEDER SCHEDULE NOMENCLATURE



MOUNTING HEIGHTS GIVEN ARE STANDARD. WHERE DIMENSIONAL NUMBERS ARE SHOWN AT SYMBOL, THIS SHALL BE THE MOUNTING HEIGHT OF THIS DEVICE. MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE, UNLESS INDICATED OTHERWISE.

NOTE: NOT ALL SYMBOLS ARE USED ON THIS PROJECT.

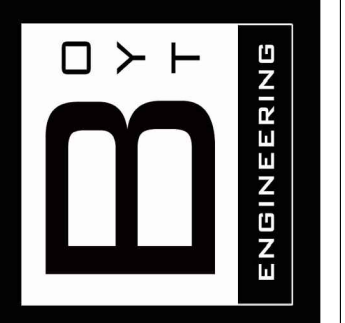
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE N.E.C. AND ALL APPLICABLE STATE AND LOCAL CODES.
2. ALL MATERIAL SHALL BEAR THE PROPER U.L. LABEL.
3. ALL EXPOSED WIRING SHALL BE IN CONDUIT. FLEXIBLE CABLING IN MANUFACTURED RACEWAY (AC/MC WHERE PERMITTED) IS ALLOWED FOR CONCEALED. BRANCH CIRCUIT WIRING ONLY. ALL HOMERUNS SHALL BE IN RIGID CONDUIT.
4. G.F.I. TYPE RECEPTACLES SHALL BE SELF-CONTAINED UNITS WITH CLASS "A" SENSITIVITY. WHERE GFI BREAKERS ARE USED TO PROTECT ENTIRE CIRCUIT, EACH RECEPTACLE SHALL RECEIVE LABEL INDICATING IT IS A GROUND FAULT PROTECTED OUTLET.
5. WHERE SINGLE POLE BRANCH CIRCUIT CONDUCTORS HAVE BEEN INCREASED ABOVE THE SIZE OF THE CIRCUIT BREAKER TO COMPENSATE FOR VOLTAGE DROP, THE INCREASED SIZE SHALL EXTEND THROUGHOUT THE ENTIRE CIRCUIT, EXCEPT WHERE IT IS NECESSARY TO REDUCE THE SIZE FOR CONNECTION TO SWITCH AND RECEPTACLE TERMINALS, ETC. EQUIPMENT GROUNDING CONDUCTORS SHALL ALSO BE ADJUSTED PROPORTIONATELY PER N.E.C. #250-122 (b).
6. EXERCISE EXTREME CAUTION TO INSURE THAT THERMAL INSULATION IS NOT INSTALLED CLOSE ENOUGH TO RECESSED LIGHTING FIXTURES TO PREVENT PROPER VENTILATION AND COOLING OF THE UNITS. FIXTURES SHALL COMPLY WITH ARTICLE 410 OF THE N.E.C.
7. UNLESS OTHERWISE NOTED OR DIRECTED, ALL CONDUIT SHALL BE CONCEALED BELOW FLOORS, IN WALLS, OR ABOVE CEILING.
8. ELECTRICAL CONTRACTOR SHALL VERIFY SERVICE AND VOLTAGE REQUIREMENTS FOR ALL EQUIPMENT TO BE CONNECTED (BOTH NEW AND EXISTING) PRIOR TO MAKING CONNECTIONS.
9. DUPLEX RECEPTACLES SHALL BE MOUNTED AT 16" ABOVE THE FINISHED FLOOR EXCEPT WHERE OTHERWISE NOTED, AND EXCEPT WHERE RECEPTACLES ARE SHOWN ABOVE CABINETS, COUNTERS, ETC. WHERE RECEPTACLES ARE SHOWN AT COUNTERS OR CABINETS, THEY SHALL BE INSTALLED 6" TO BOTTOM ABOVE THE CABINET TOP. WHERE THERE IS A BACKSPASH, THE RECEPTACLES SHALL BE JUST ABOVE THE BACKSPASH, WHERE RECEPTACLES ARE SHOWN ADJACENT TO LAVATORIES, THE RECEPTACLE SHALL BE MOUNTED AT APPROXIMATELY 6" TO BOTTOM ABOVE THE LAVATORY TOP.
10. SURFACE MOUNTED LIGHTING FIXTURES INSTALLED IN AREAS THAT DO NOT HAVE AN ACCESSIBLE CEILING SPACE ABOVE THEM SHALL BE INSTALLED IN COMPLIANCE WITH ARTICLE 410 OF THE N.E.C.
11. COORDINATE ALL CEILING MOUNTED EQUIPMENT, (i.e. LIGHTING FIXTURES, SPEAKERS, GRILLES, ETC.) WITH ALL OTHER EQUIPMENT & TRADES PRIOR TO & DURING INSTALLATION TO AVOID CONFLICTS. SHOULD IT BECOME NECESSARY TO REPOSITION SMOKE DETECTORS, EXERCISE CAUTION NOT TO EXCEED THE 30' AND 15' SPACING AS REQUIRED BY THE LIFE SAFETY CODE.
12. FIRE AND SMOKE STOP AROUND ALL CONDUIT, EQUIPMENT, ETC. WHICH PENETRATES FLOORS, WALLS, AND CEILINGS.
13. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO BIDDING IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND ANY DISCREPANCIES OR QUESTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER PRIOR TO BIDDING.
14. COMPLY WITH ALL CODES AND REGULATIONS, ETC. REGARDING PENETRATION OF THE CEILING FOR THIS TYPE OF CONSTRUCTION.
15. WHERE LIGHTING SWITCHES AND RECEPTACLES ARE TO BE SURFACE MOUNTED IN FINISHED AREAS, USE OUTLET BOXES EQUAL TO "WIREMOLD SERIES 700".
16. JUNCTION BOXES SHALL NOT BE MOUNTED BACK TO BACK.
17. WHERE DEVICE BACKBOXES ARE LOCATED IN A RATED WALL, THESE BOXES SHALL BE RATED FOR SUCH USE. COORDINATE WITH ARCHITECTURAL PLANS.
18. ALL INSTALLED EMPTY CONDUITS TO INCLUDE PULL CORD.
19. CONTRACTOR SHALL REPAIR/REPLACE DAMAGED SITE SURFACE FINISH ASPHALT, CONCRETE, TURF ETC. WHETHER INTENTIONAL OR NON-INTENTIONAL TO A CONDITION EQUAL TO OR EXCEEDING ORIGINAL EXISTING CONDITION.
20. CONTRACTOR SHALL PROVIDE TYPEWRITTEN PANEL BOARD DIRECTORIES PER NEC 408.4 IDENTIFYING SPECIFIC LOADS AND AREAS SERVED.
21. CONTRACTOR SHALL VERIFY MOUNTING HEIGHTS OF ALL ELECTRICAL DEVICES PRIOR TO ROUGH-IN.
22. CONTRACTOR SHALL VERIFY ELECTRICAL AND CONNECTION REQUIREMENTS OF ALL EQUIPMENT PRIOR TO ROUGH-IN.
23. ALL EQUIPMENT QUESTIONS REGARDING HEIGHTS, LOCATIONS ETC. SHALL BE DIRECTED TO THE ARCHITECT. DO NOT CONTACT THE ENGINEER DIRECTLY.
24. ALL WIRING SHOWN THESE PLANS SHALL BE MINIMUM #12 AWG COPPER UNLESS NOTED OTHERWISE ON PLANS AND/OR EQUIPMENT SCHEDULES.
25. ALL CONDUIT SHOWN THESE PLANS SHALL BE MINIMUM 3/4" UNLESS NOTED OTHERWISE ON PLANS AND/OR EQUIPMENT SCHEDULES.
26. TO MITIGATE THE POSSIBILITY OF ELECTROMAGNETIC INTERFERENCE ON LOW VOLTAGE SYSTEMS (TELE, DATA, TV, FIRE ALARM ETC.) THE FOLLOWING MINIMUM CABLE SEPARATIONS SHALL BE ADHERED TO BETWEEN LINE VOLTAGE AC AND LOW VOLTAGE SYSTEMS:
  - a. 6" - WHEN BOTH SYSTEMS ARE ENCLOSED IN GROUNDED METAL CONDUIT.
  - b. 12" - WHEN THE LINE VOLTAGE SYSTEM ONLY IS ENCLOSED IN GROUNDED METAL CONDUIT.
  - c. 24" - WHEN NEITHER SYSTEM IS ENCLOSED IN GROUNDED METAL CONDUIT.
30. ALL GFCI RECEPTS SHALL BE SELF TESTING TYPE.

## REVISIONS

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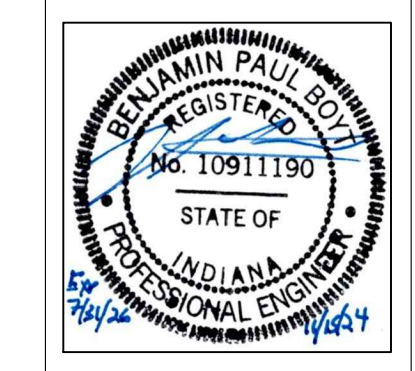
PROJECT  
**GRIFFIN BIKE PARK CLUBHOUSE**  
**VIGO COUNTY PARKS DEPT.**  
**BONO ROAD, TERRE HAUTE**

JOB NUMBER  
BE #27000124  
DATE  
11-15-2024  
SCALE  
SHEET TITLE  
ELECTRICAL LEGEND & NOTES  
SHEET NUMBER  
E0.1

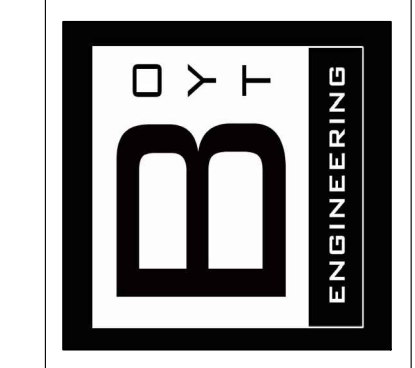
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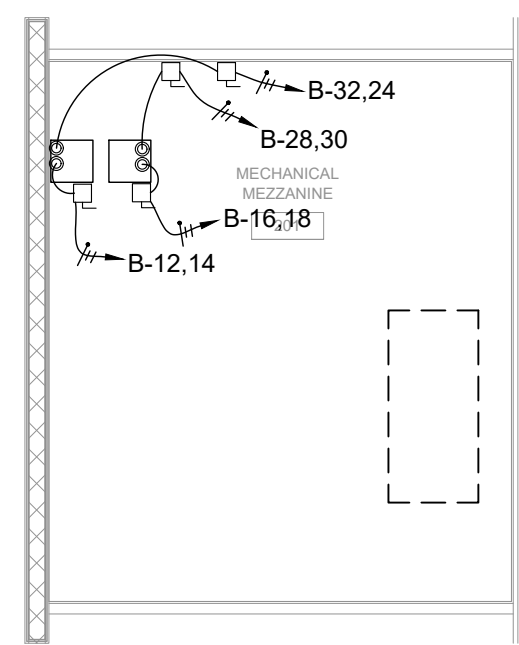
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3/16"=1'-0"  
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ELECTRICAL PLAN

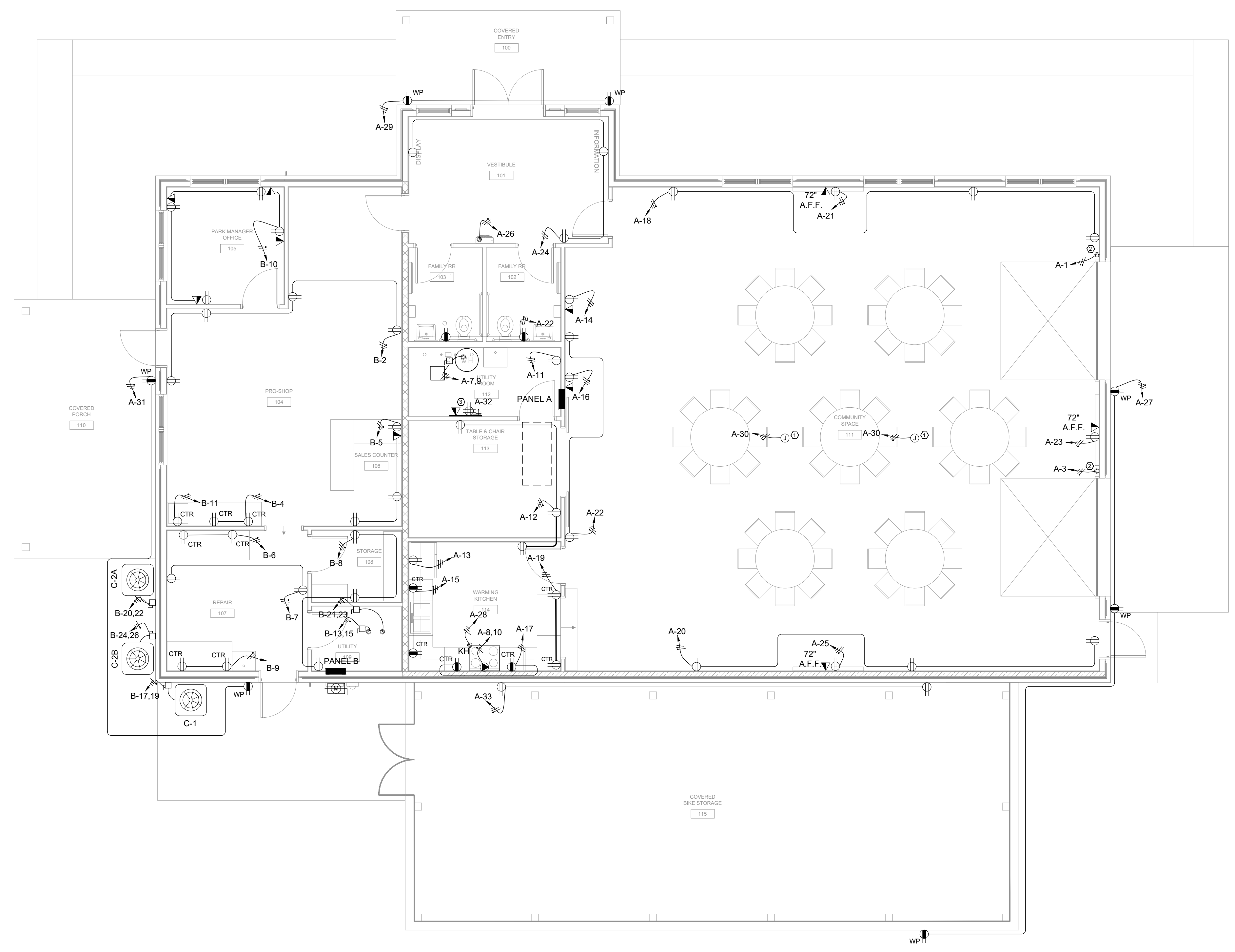
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- ELECTRICAL KEYNOTES**
- JUNCTION BOX FOR CEILING FAN.
  - OVRHANG DOOR MOTOR.
  - COMMUNICATIONS BACKBOARD COLLECTION BOARD.

**MEZZANINE ELECTRICAL PLAN**  
SCALE 3/16" = 1'-0"  
NORTH

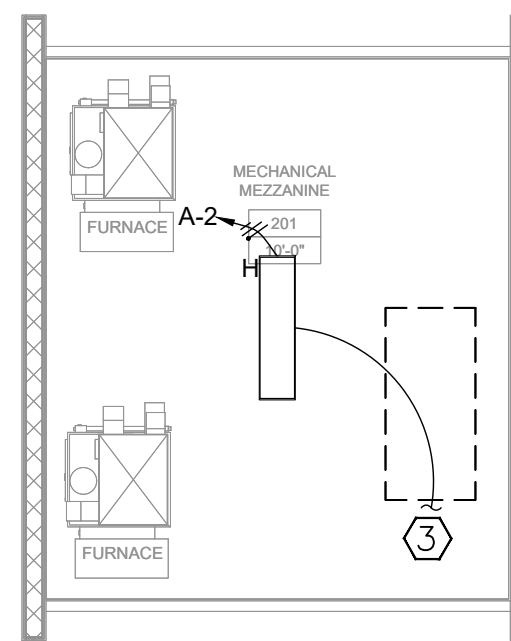


- ELECTRICAL LEGEND**
- DUPLEX RECEPTACLE
  - GFCI-PROTECTED DUPLEX RECEPTACLE "DEVICE OR BY GFI BREAKER"
  - QUADRUPLEX RECEPTACLE
  - CTR = DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER
  - INSTALL WITH SEALED, WATERPROOF COVER
  - RECEPTACLE - SPECIAL - MATCH EQUIPMENT
  - COMBINATION TELE/DATA OUTLET AT +18" DIRECT CONNECTION POINT
  - JUNCTION BOX
  - POWER METER
  - MOTOR
  - DISCONNECT SWITCH
  - HOMERUN

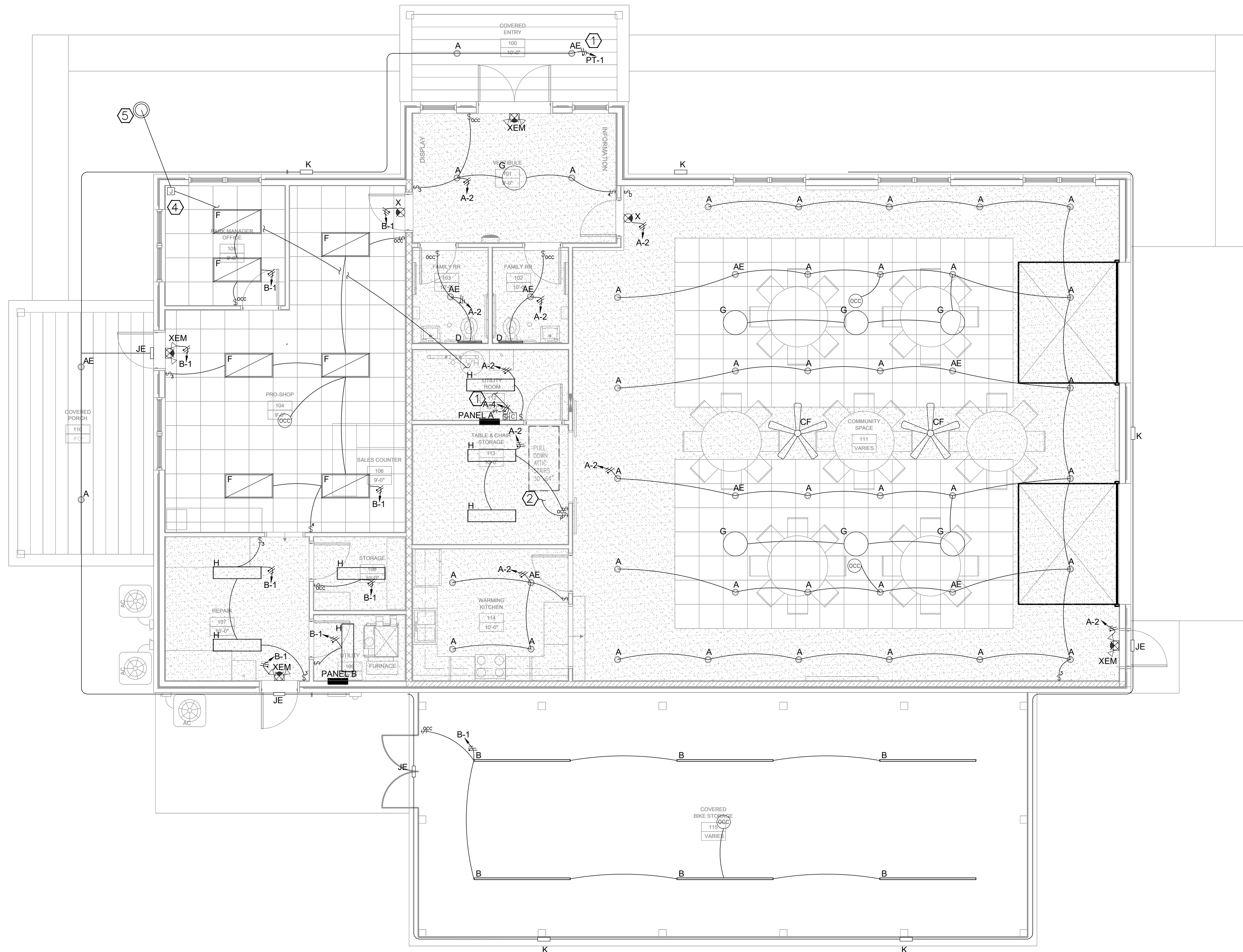
**ELECTRICAL PLAN**  
SCALE 3/16" = 1'-0"  
NORTH

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**MEZZANINE LIGHTING PLAN**  
SCALE 3/16" = 1'-0"  
NORTH



**FIRST FLOOR LIGHTING PLAN**  
SCALE 3/16" = 1'-0"  
NORTH

**LEGEND - LIGHTING**

- A/AE ○ A/AE: 6" RECESSED LED DOWNLIGHT
- B — B: 8' LED LINEAR SURFACE
- CF ★ CF: CEILING FAN
- D — D: LED VANITY
- F ▭ F: 2'X4' LED RECESSED FLAT PANEL
- G: DECORATIVE PENDANT
- H ▭ H: LED SURFACE WRAP
- JE ⊞ JE: EXTERIOR LED EGRESS FLOODLIGHT, W/BATTERY BACKUP
- K ⊞ K: EXTERIOR LED FLOODLIGHT
- X ⊞ X: EMERGENCY LED EXIT SIGN
- XEM ⊞ XEM: COMBINATION EMERGENCY LED EXIT SIGN AND EGRESS LIGHT
- SWITCH, LINE VOLTAGE:  
3-3-WAY, 4-4-WAY  
OCC=OCCUPANCY SENSING (CIRCLE=CEILING MOUNT) SHALL BE PIR+AUDIO (SENSOR SWITCH)  
D= DIMMING CONTROLLER, 0-10VDC SIGNAL TO FIXTURES IN SPACE SERVED  
PT= PROGRAM TIMER SWITCH  
CIRCUIT CALLOUTS:  
PANEL CKT#(letter)=SWITCHED CKT  
HOMERUN WITH PANEL CKT IDENTIFIED  
JUNCTION BOX  
CONTACTOR/RELAY ENCLOSURE

**KEYNOTES**

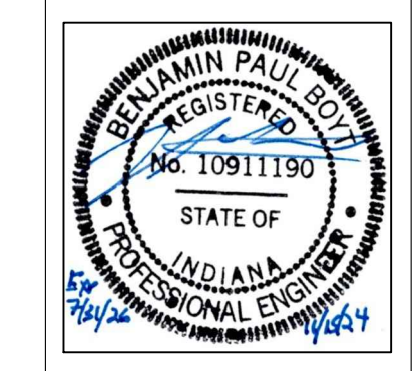
- ROUTE CIRCUIT FOR ALL EXTERIOR LIGHTING THRU PROGRAMMABLE TIMER SWITCH FOR DUSK TO DAWN OPERATION. COORDINATE LOCATION WITH OWNER.
- TIE TO LIGHTING FIXTURE(S) ABOVE. SEE MEZZANINE LIGHTING PLAN.
- TIE TO SWITCHES) BELOW. SEE FIRST FLOOR LIGHTING PLAN.
- HANDHOLE FLUSH WITH GRADE. SEALED, CAST LID STATING "ELECTRIC." ALL CIRCUITS TO THIS POINT SHALL BE BROUGHT UP INSIDE HANDHOLE FOR EASY ACCESS.
- PROVIDE BURIED CONDUIT, 1-1/2" OR LARGER, FROM PANCEL MDP TO HANDHOLE SHOWN. ALL HOMERUNS TO THIS POINT SHALL BE ACCESSIBLE FROM GRADE WITH APRE PULL TAPE IN EACH CONDUIT. JUNCTION BOX ON INTERIOR SHALL BE DEEP 4"X4" ACCESSIBLE WITH BLANK COVER AND TAG NOTING "EXTERIOR LIGHTING."

**GENERAL LIGHTING NOTES**

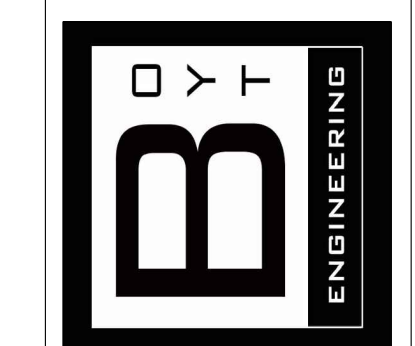
- CONDUIT AND WIRING NOT SHOWN FOR PLAN CLARITY.
- PROVIDE ELECTRONIC DIMMER SWITCHES WHERE INDICATED ON WALL FOR LOCAL ON/OFF OVERRIDE AND FOR DIMMING/LEVEL CONTROL OF EACH DIMMING CIRCUIT NOTED. FIELD VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN. ELECTRONIC WALL DIMMER SHALL BE SELECTED FROM MANUFACTURER'S LIST FOR COMPATIBILITY WITH LED LIGHTING FIXTURES INSTALLED, FOR 0-10VDC SIGNAL AND 1%-100% DIMMING RANGE.
- ROUTE ALL HOMERUN CIRCUITS FROM FIXTURE CIRCUITS TO PANEL CIRCUIT INDICATED.
- OCCUPANCY SENSOR SWITCHES SHOWN IN RECESSED WALL SWITCH LOCATIONS SHALL BE TYPICAL DUAL-TECH WITH PASSIVE INFRARED AND ACOUSTIC 'MICROPHONICS' CONTROL TO CORRECTLY TRIGGER AND MAINTAIN 'ON' AND TO AVOID NUISANCE 'OFF'.  
OCC=SENSOR SWITCH SHALL BE SENSORSWITCH #WSD-PDT-WH (TYPICAL).
- MULTIPLE GROUPINGS OF DEVICES SHALL BE GANGED UNDER THE SAME COVERPLATE.
- HALF-SHADING (AS SHOWN IN LEGEND) OR 'NL' DENOTES NIGHTLIGHT FIXTURE. CONNECT TO HOT (UNSWITCHED) LEG OF CIRCUIT FOR 24/7 OPERATION. (TYPICAL)
- EXIT SIGNS AND EMERGENCY EGRESS FIXTURES SHALL BE WIRED TO THE UNSWITCHED (HOT) LEG OF THE CIRCUIT SERVING THE SAME SPACE.
- LIGHTING FIXTURES ALONG PATH(S) OF EGRESS SHALL HAVE BATTERY BACKUP. CONNECT TO THE UNSWITCHED (HOT) LEG OF THE CIRCUIT SERVING THE SAME SPACE.
- PROGRAMMABLE TIMER SWITCH (SEE KN#1) SHALL BE PROGRAMMED AS DESIRED BY OWNER FOR AUTOMATIC SECURITY AND ACCESS LIGHTING. COORDINATE SCHEDULE AS REQUIRED.

REVISIONS

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LIGHTING PLAN

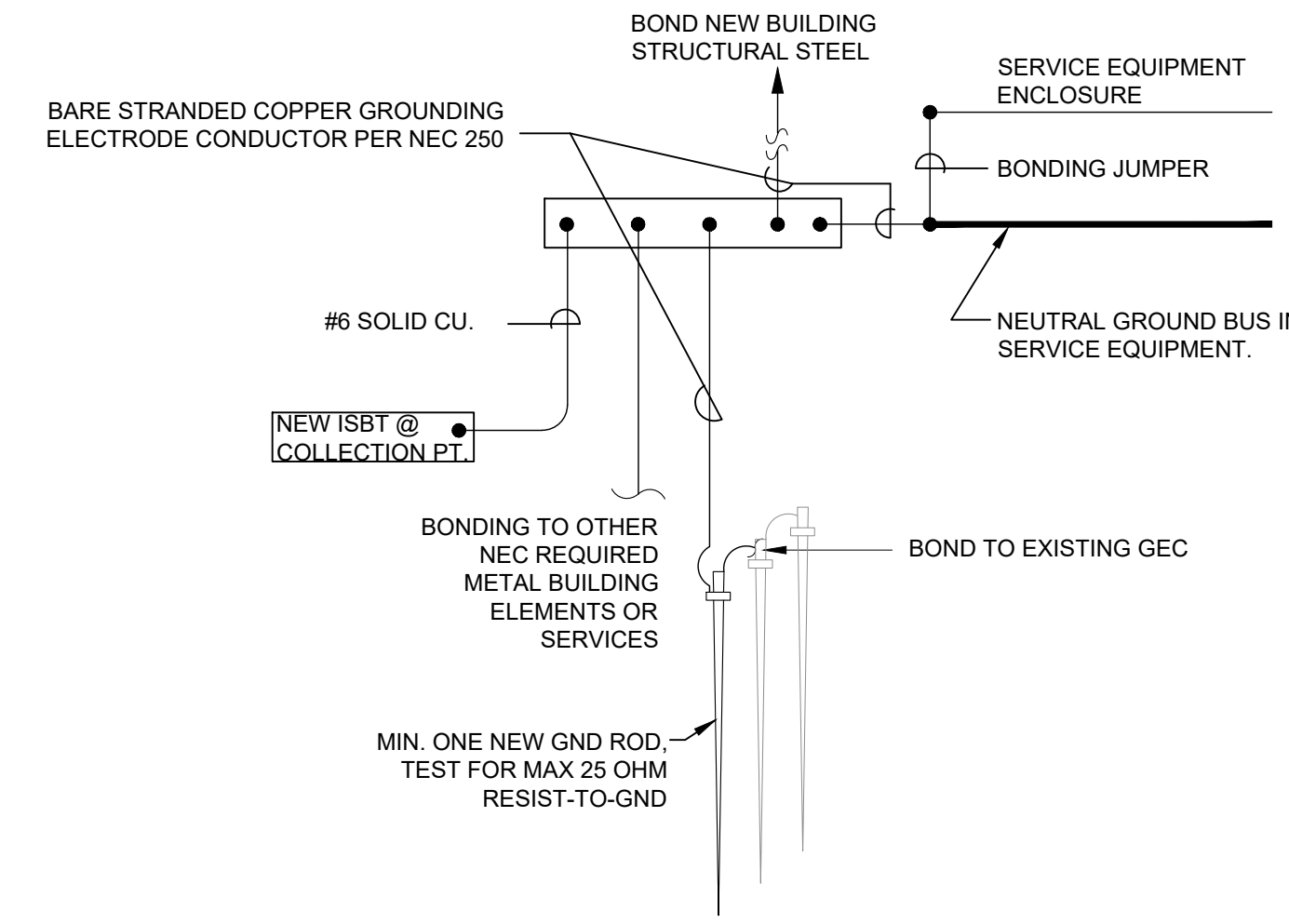
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PANELBOARD A				SCHEDULE			
VOLTAGE: 120/240V, 1Ph, 3W		LOAD - VA		LOCATION: 112 UTILITY		ENCLOSURE: NEMA 1	
BUS RATING: 200A				MOUNTING: RECESSED		MIN. AIC: 10000	
MAINS: MCB							
TYPE: PLUG-ON							
CIRCUIT DESCRIPTION	BKR	CKT NUM	PHASE	PHASE	CKT NUM	BKR	CIRCUIT DESCRIPTION
OVERHEAD DOOR MOTOR	20	1	750		2	1	LIGHTING COMMUNITY
OVERHEAD DOOR MOTOR	20	3	1330	750	20	1	LIGHTING EXT
SPARE	20	5		423	4	20	LIGHTING EXT
DWH	30	7		4500	6	1	RANGE
		9	4500	7800	8	40	
		2	7800		10	2	
RECPT 112 UTILITY	20	11		180	12	20	RECPT 113 STOR
RECPT REFRIG	20	13	750	540	14	1	RECPT 111 FLR RECPT
RECPT 114 COUNTER	20	15	180	360	16	20	RECPT 111 FLR RECPT
RECPT 114 COUNTER	20	17	360	540	18	20	RECPT 111 NORTH
RECPT 114 COUNTER	20	19	540	360	20	1	RECPT 111 SOUTH
RECPT TV NORTH 111	20	21	180	360	22	20	RECPT RR
RECPT TV EAST 111	20	23		180	24	1	RECPT VEST 101
RECPT TV SOUTH 111	20	25	180	1000	26	20	BOTTLE FILLER
RECPT EXT	20	27		720	28	1	KITCHEN HOOD
RECPT EXT	20	29	720	500	30	20	LUCIAN CEILING FAN
RECPT EXT	20	31	200	540	32	1	RECPT 112 UTILITY
RECPT CVRD STOR	20	33	360	720	34		
		35			36		
		37			38		
		39			40		
		41			42		
CONNECTED LOAD		19210	18833	OPTIONS			
DESIGN LOAD		18813	18109	*Provide AFCI/GFCI where Code/AHJ required			
LINE AMPS		156.8	150.9				
DESIGN LOAD KVA		36.92125					

PANELBOARD B				SCHEDULE			
VOLTAGE: 120/240V, 1Ph, 3W		LOAD - VA		LOCATION: 109 UTILITY		ENCLOSURE: NEMA 1	
BUS RATING: 600				MOUNTING: SURFACE		MIN. AIC: 65000	
MAINS: MCB							
TYPE: PLUG-ON							
CIRCUIT DESCRIPTION	BKR	CKT NUM	PHASE	PHASE	CKT NUM	BKR	CIRCUIT DESCRIPTION
LIGHTING SHOP	20	1	904		20	1	RECPT 104 PRO SHOP
LIGHTING SPARE	20	3	720		20	1	RECPT 104 P S COUNTER
RECPT 104 P S POS CNTR	20	5	540	360	4	20	RECPT 107 REPAIR CTR
RECPT 107 REPAIR	20	7	360	540	8	20	RECPT 108 STOR
RECPT 107 REPAIR CTR	20	9	360	720	10	1	RECPT 105 OFFICE
RECPT 104 P S REFRIG	20	11		180	15	15	HP-2A
HP-1	15	13	696	852	12	2	
		15		696	14	2	
		2		852	16	15	HP-2B
C-1	20	17	1656	852	18	2	
		19			35	2	C-2A
HP-1 HEAT STRIP	50	21	5000	2580	20	2	
		23		5000	35	2	C-2B
		2		2580	24	2	
		25			26	2	
		1		2580	28	70	HP-2A HEAT STRIP
		27			30	2	
		29		7500	32	70	HP-2B HEAT STRIP
		1		7500	34	2	
		31			36	1	
		33			38	1	
		1		7500	40		
		35			42		
		37					
		1					
PANEL A	200	39		19188			
		41		17389			
		2					
CONNECTED LOAD		50209	48188	OPTIONS			
DESIGN LOAD		50435	48188	*Provide AFCI/GFCI where Code/AHJ required			
LINE AMPS		420.3	401.6				
DESIGN LOAD KVA		98.62225					

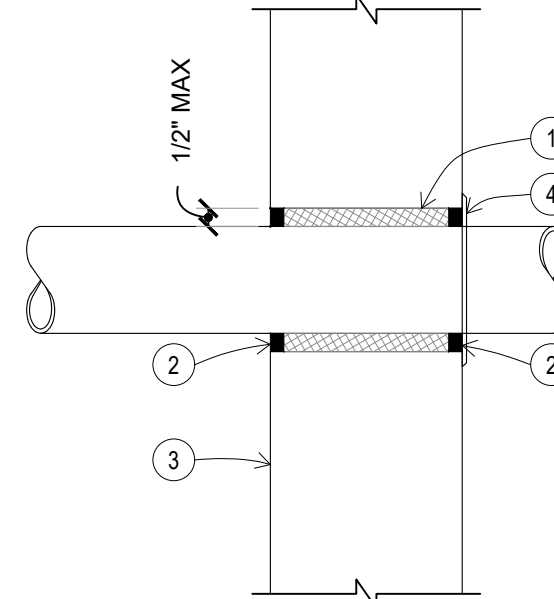


SERVICE GROUNDING DETAIL

PANEL # (TYP)  
225A, 208Y/120V, 3PH, 4W  
SOURCE: TF-#, MDP-#-#

- DETAIL NOTES:
- NAMEPLATE SHALL BE ENGRAVED, THREE LAYER LAMINATED PLASTIC, 1/4" BLACK LETTERS ON A WHITE BACKGROUND WITH BEVELED EDGES, ADHESIVE BACKED.
  - INSTALL AS SPECIFIED AND ON ALL POWER/LTG PANELS, CONTROL PANELS OR CABINETS, DISCONNECTS, AND ELECTRICAL ENCLOSURES.
  - LINE 1: DEVICE DESCRIPTION/ID-TAG.
  - LINE 2: RATED AMPACITY, VOLTAGE, NUMBER OF PHASES, NUMBER OF CONDUCTORS.
  - LINE 3: SOURCE DESIGNATION WITH CIRCUIT NUMBER(S).

ENGRAVED NAMEPLATE DETAIL



- DETAIL KEYNOTES:
- THE ELECTRICAL CONTRACTOR SHALL FILL JOINT PENETRATING ANY RATED PARTITION WITH 3M FIREDAM 150 CAULK OR EQUIVALENT.
  - THE ELECTRICAL CONTRACTOR SHALL FILL SURFACE OF JOINT WITH APPROVED PAINTABLE CAULK OR MASTIC.
  - ELECTRICAL CONDUIT, SIZE AS INDICATED ON THE DRAWINGS.
  - THE ELECTRICAL CONTRACTOR SHALL INSTALL CONDUIT SUPPORT ADJACENT TO THE WALL OR ESCUTCHEON RING (EXPOSED OCCUPIED AREAS) PER SECTION 260529.

PENETRATIONS DETAIL

2-WIRE (+GND) CIRCUIT					3-WIRE (+GND) CIRCUIT					4-WIRE (+GND) CIRCUIT (<50% Non-Linear)					4-WIRE (+GND) CIRCUIT (>50% Non-Linear)									
TAG	AMPS	RUNS	CONDUIT	CONDUCTORS	GND	TAG	AMPS	RUNS	CONDUIT	CONDUCTORS	GND	TAG	AMPS	RUNS	CONDUIT	CONDUCTORS	GND	TAG	AMPS	RUNS	CONDUIT	CONDUCTORS	GND	
621	20	(1x)	3/4"	[2] #12 AWG	#12 AWG	023	20	(1x)	3/4"	[3] #12 AWG	#12 AWG	024	20	1	3/4"	[4] #12 AWG	#12 AWG	024	20	1	3/4"	[4] #12 AWG	#12 AWG	
631	30	(1x)	3/4"	[2] #10 AWG	#10 AWG	033	30	(1x)	3/4"	[3] #10 AWG	#10 AWG	034	30	1	3/4"	[4] #10 AWG	#10 AWG	034	30	1	3/4"	[4] #10 AWG	#10 AWG	
041	40	(1x)	3/4"	[2] #8 AWG	#10 AWG	043	40	(1x)	1"	[3] #8 AWG	#10 AWG	044	40	1	1"	[4] #8 AWG	#10 AWG	044	40	1	1"	[4] #8 AWG	#10 AWG	
051	50	(1x)	3/4"	[2] #8 AWG	#10 AWG	053	50	(1x)	1"	[3] #8 AWG	#10 AWG	054	50	1	1-1/4"	[4] #6 AWG	#10 AWG	054	50	1	1-1/4"	[4] #6 AWG	#10 AWG	
061	60	(1x)	3/4"	[2] #6 AWG	#10 AWG	063	60	(1x)	1"	[3] #6 AWG	#10 AWG	064	60	1	1-1/4"	[4] #6 AWG	#10 AWG	064	60	1	1-1/4"	[4] #6 AWG	#10 AWG	
071	70	(1x)	1"	[2] #4 AWG	#8 AWG	073	70	(1x)	1"	[3] #4 AWG	#8 AWG	074	70	1	1-1/4"	[4] #4 AWG	#8 AWG	074	70	1	1-1/4"	[4] #4 AWG	#8 AWG	
081	80	(1x)	1"	[2] #4 AWG	#8 AWG	083	80	(1x)	1"	[3] #4 AWG	#8 AWG	084	80	1	1-1/4"	[4] #4 AWG	#8 AWG	084	80	1	1-1/4"	[4] #4 AWG	#8 AWG	
101	100	(1x)	1"	[2] #3 AWG	#8 AWG	103	100	(1x)	1-1/4"	[3] #3 AWG	#8 AWG	104	100	1	1-1/2"	[4] #3 AWG	#8 AWG	104	100	1	1-1/2"	[4] #3 AWG	#8 AWG	
111	110	(1x)	1"	[2] #2 AWG	#6 AWG	113	110	(1x)	1-1/4"	[3] #2 AWG	#6 AWG	114	110	1	1-1/2"	[4] #2 AWG	#6 AWG	114	110	1	2"	[4] #1 AWG	#6 AWG	
121	120	(1x)	1-1/4"	[2] #1 AWG	#6 AWG	123	120	(1x)	1-1/4"	[3] #1 AWG	#6 AWG	124	120	1	2"	[4] #1/0 AWG	#6 AWG	124	120	1	2"	[4] #1/0 AWG	#6 AWG	
151	150	(1x)	1-1/4"	[2] #1/0 AWG	#6 AWG	153	150	(1x)	1-1/2"	[3] #1/0 AWG	#6 AWG	154	150	1	2"	[4] #1/0 AWG	#6 AWG	154	150	1	2"	[4] #1/0 AWG	#6 AWG	
171	170	(1x)	1-1/2"	[2] #2/0 AWG	#6 AWG	173	170	(1x)	2"	[3] #2/0 AWG	#6 AWG	174	170	1	2"	[4] #2/0 AWG	#6 AWG	174	170	1	2-1/2"	[4] #3/0 AWG	#6 AWG	
201	200	(1x)	2"	[2] #3/0 AWG	#6 AWG	203	200	(1x)	2"	[3] #3/0 AWG	#6 AWG	204	200	1	2-1/2"	[4] #3/0 AWG	#6 AWG	204	200	1	2-1/2"	[4] #4/0 AWG	#6 AWG	
221	225	(1x)	2"	[2] #4/0 AWG	#4 AWG	223	225	(1x)	2"	[3] #4/0 AWG	#4 AWG	224	225	1	2-1/2"	[4] #4/0 AWG	#4 AWG	224	225	1	3"	[4] 250 Kcmil	#4 AWG	
251	250	(1x)	2"	[2] 250 Kcmil	#4 AWG	253	250	(1x)	2-1/2"	[3] 250 Kcmil	#4 AWG	254	250	1	3"	[4] 250 Kcmil	#4 AWG	254	250	1	3"	[4] 350 Kcmil	#4 AWG	
301	300	(1x)	2"	[2] 350 Kcmil	#4 AWG	303	300	(1x)	2-1/2"	[3] 350 Kcmil	#4 AWG	304	300	1	3"	[4] 350 Kcmil	#4 AWG	304	300	1	3"	[4] 500 Kcmil	#4 AWG	
351	350	(1x)	3"	[2] 500 Kcmil	#3 AWG	353	350	(1x)	3"	[3] 500 Kcmil	#3 AWG	354	350	1	3"	[4] 500 Kcmil	#3 AWG	354	350	1	3"	[4] 500 Kcmil	#3 AWG	
401	400	(2x)	2"	[2] #3/0 AWG	#3 AWG	403	400	(2x)	2"	[3] #3/0 AWG	#3 AWG	404	400	2	2-1/2"	[4] #3/0 AWG	#3 AWG	404	400	2	2-1/2"	[4] #4/0 AWG	#3 AWG	
451	450	(2x)	2"	[2] #4/0 AWG	#2 AWG	453	450	(2x)	2-1/2"	[3] #4/0 AWG	#2 AWG	454	450	2	2-1/2"	[4] #4/0 AWG	#2 AWG	454	450	2	2-1/2"	[4] 250 Kcmil	#2 AWG	
501	500	(2x)	2-1/2"	[2] 250 Kcmil	#2 AWG	503	500	(2x)	2-1/2"	[3] 250 Kcmil	#2 AWG	504	500	2	3"	[4] 250 Kcmil	#2 AWG	504	500	2	3"	[4] 300 Kcmil	#2 AWG	
601	600	(2x)	2-1/2"	[2] 350 Kcmil	#1 AWG	603	600	(2x)	2-1/2"	[3] 350 Kcmil	#1 AWG	604	600	2	3"	[4] 350 Kcmil	#1 AWG	604	600	2	3"	[4] 500 Kcmil	#1 AWG	
701	700	(3x)	2-1/2"	[2] 250 Kcmil	#1/0 AWG	703	700	(3x)	3"	[3] 250 Kcmil	#1/0 AWG	704	700	3	3"	[4] 250 Kcmil	#1/0 AWG	704	700	3	3"	[4] 300 Kcmil	#1/0 AWG	
801	800	(4x)	2-1/2"	[2] #3/0 AWG	#1/0 AWG	803	800	(4x)	3"	[3] #3/0 AWG	#1/0 AWG	804	800	4	2-1/2"	[4] #3/0 AWG	#1/0 AWG	804	800	4	2-1/2"	[4] #4/0 AWG	#1/0 AWG	
1001	1000	(4x)	2"	[2] 250 Kcmil	#2/0 AWG	1003	1000	(3x)	4"	[3] 400 Kcmil	#2/0 AWG	1004	1000	4	3"	[4] 250 Kcmil	#2/0 AWG	1004	1000	3	4"	[4] 500 Kcmil	#2/0 AWG	
	1203	1200	(4x)	3"	[3] 350 Kcmil	#3/0 AWG	1204	1200	4	3"	[4] 350 Kcmil	#3/0 AWG	1204	1200	4	4"	[4] 500 Kcmil	#3/0 AWG	1204	1200	4	4"	[4] 500 Kcmil	#3/0 AWG
	1603	1600	(5x)	4"	[3] 400 Kcmil	#4/0 AWG	1604	1600	5	4"	[4] 400 Kcmil	#4/0 AWG	1604	1600	5	4"	[4] 500 Kcmil	#4/0 AWG	1604	1600	5	4"	[4] 500 Kcmil	#4/0 AWG
	2003	2000	(6x)	4"	[3] 400 Kcmil	250 Kcmil	2004	2000	6	4"	[4] 400 Kcmil	250 Kcmil	2004	2000	6	4"	[4] 500 Kcmil	250 Kcmil	2004	2000	6	4"	[4] 500 Kcmil	250 Kcmil
	2503	2500	(7x)	4"	[3] 500 Kcmil	350 Kcmil	2504	2500	7	4"	[4] 500 Kcmil	350 Kcmil	2504	2500	7	4"	[4] 500 Kcmil	350 Kcmil	2504	2500	7	4"	[4] 500 Kcmil	350 Kcmil
	3003	3000																						

NOTIFY ENGINEER IN EVENT OF DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS IN THE PROJECT DOCUMENTS. CONTRACTOR IS NOT AUTHORIZED TO SCALE THE DRAWINGS. ALL QUESTIONS SHALL BE IMMEDIATELY DIRECTED TO THE ENGINEER.

LIGHTING FIXTURE SCHEDULE										
TAG	CATEGORY	MANUFACTURER	DESIGN BASE MODEL	LAMP	WATTS	LUMENS	TEMP (K)	ELEC	LOCATION	Description
A	DOWNLIGHT	LITHONIA	LDN6 40/20 L06 AR LSS MVOLT GZ10	LED	23 W	2,000 L	4000k	120V	RECESSED CEILING	6" LED DOWNLIGHT, WET LOCATION, DIMMABLE TO 10%
		GOTHAM	EVO6 40/20 AR MWD LSS MVOLT GZ10							
		HALO								
AE	DOWNLIGHT, BATTERY BACKUP	LITHONIA	LDN6 40/20 L06 AR LSS MVOLT GZ10 ELSD	LED	23 W	2,000 L	4000k	120V	RECESSED CEILING	6" LED DOWNLIGHT, WET LOCATION, DIMMABLE TO 10%, BATTERY BACKUP WITH SELF-DIAGNOSTIC
		GOTHAM	EVO6 40/20 AR MWD LSS MVOLT GZ10 ELSD							
B	SURFACE LINEAR	LITHONIA	L96 6000LM HEF RDL MVOLT 40K	LED	54 W	6,000 L	4000k	120V	SURFACE	8' LED STRIP FIXTURE, DAMP LOCATION CURVED LENS, FINISHED END CAPS, FROSTED LENS, SURFACE/DIRECT-MOUNT TO BOTTOM CHORD OF TRUSS/STRUCTURE.
		WILLIAMS	75L-8-L76/840-DMA-UNV							
		CREE	LS8-80L40K							
CF	CEILING FAN	KICHLER	LUCIAN CEILING FAN 60" 330243SBK	LED	67 W	-	-	120V	SUSPENDED	60" 5 BLADE CEILING FAN
D	VANITY	LITHONIA	FMVCSL 24IN MVOLT 30K 90CRI BN	LED	19 W	1,300 L	3000k	120V	WALL	24" CONTEMPORARY SQUARE VANITY WITH ACRYLIC DIFFUSER, BUSHED NICKEL FINISH
		KICHLER	11146NILED							
F	2x4 RECESSED FLAT PANEL	LITHONIA	CPX 2X4 6000LM 80 40K A12 MIN10 ZT MVOLT	LED	53 W	6,000 L	4000k	120V	GRID CEILING RECESSED	2x4 LED FLAT PANEL, DIMMABLE TO 10%
		DAY-BRITE	2FPZ 60L 840 4 DS UNV DIM							
		C-LITE	C-TR-C-PP24-62L-40K-WH							
G	DECORATIVE PENDANT	KICHLER	HATTERAS BAY PENDANT 26910Z	LED	23 W	2,600 L	4000k	120V	SUSPENDED	DIMMABLE DECORATIVE PENDANT, CLEAR FRESNEL GLASS, METAL DOME SHADE, PROVIDE COMPATIBLE LED BULB TO MATCH COLOR TEMPERATURE IN SAME SPACE EQUAL TO SATCO S12448
H	SURFACE WRAP	RAB	GUS4-50W-N	LED	50 W	6,000 L	4000k	120V	SURFACE	4' LED WRAPAROUND WITH ACRYLIC DIFFUSER.
		METALUX	4AWS-L3C3-UNV							
		LITHONIA	FML4Q 48 AL06 SEF 840 MVOLT							
X	EXIT SIGN	LITHONIA	LQM-SW3R120ELNSD	LED	3 W	-	-	120V	PER LOCATION	EMERGENCY ILLUMINATED SIGN, WHITE, THERMOPLASTIC, NICAD BATTERY BACKUP: RED "EXIT" WITH UNIVERSAL CHEVRONS, ONE OR TWO FACE PER LOCATION, SELF DIAGNOSTIC TO MATCH "XEM"
		DUAL-LITE	EVE-URWEI							
		CHLORIDE	VERWEM							
XEM	EXIT SIGN EGRESS COMBO	LITHONIA	LHQM-LED-R-HOSD	LED	3 W	-	-	120V	SURFACE WALL	COMBINATION FIXTURE WITH EXIT SIGN AND EMERGENCY NICAD BATTERY BACKUP EGRESS LED LIGHTING WITH SELF DIAGNOSTIC TO MATCH "X"
		DUAL-LITE	EVCURWI							
		CHLORIDE	VLTCR3R							

EXTERIOR LIGHTING FIXTURE SCHEDULE										
MARK	TYPE	MANUFACTURER	MODEL #	LAMP	WATTS	LUMEN	TEMP (K)	VOLT	LOCATION	DESCRIPTION
JE	EXTERIOR Wallmount EMERGENCY	LITHONIA	WPX1 LED P2 40K MVOLT E4WH	LED	24 W	2900lm	4000 k	120 V	SURFACE WALL	EXTERIOR LED WALLPACK WITH FULL CUT-OFF OPTICS, GLASS LENS, WITH EMERGENCY BATTERY BACKUP, ON HOT LEG OF CIRCUIT, COORDINATE FINISH WITH ARCHITECT
		GARDCO	121 16L 530 NW-G4 2 EBPC UNV							
K	EXTERIOR Wallmount Security	LITHONIA	WPX2 LED 40K MVOLT	LED	47 W	6000lm	4000 k	120 V	SURFACE WALL	EXTERIOR LED WALLPACK WITH FULL CUT-OFF OPTICS, GLASS LENS
		GARDCO	121 16L 1200 NW-G4 2 UNV							
NOTES										
1. FIXTURES SHOWN ON PLANS WITH AN "E" SUFFIX SHALL INCLUDE MANUFACTURER'S EMERGENCY BATTERY BACKUP SYSTEM INCLUDING BATTERY, CHARGING CIRCUIT, AND AUTOMATIC SWITCHING BASED ON MONITORING THE PRESENCE OF POWER ON THE UNSWITCHED (HOT) LEG OF THE CIRCUIT.										
2. WHERE NOT OTHERWISE SHOWN, DUSK TO DAWN OPERATION OF EXTERIOR FIXTURES SHALL BE ACCOMPLISHED VIA INTEGRATED PHOTOCCELL.										
3. COORDINATE ALL FIXTURE FINISHES WITH ARCHITECT.										

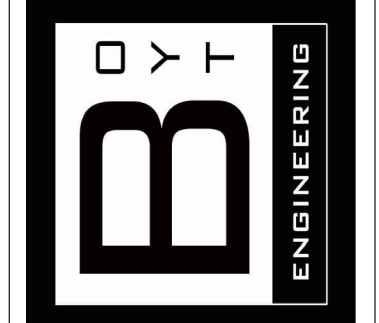
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NO.	DATE	DESCRIPTION



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Sanders and Associates, Inc.  
500 SOUTH 7TH STREET  
TERRE HAUTE, INDIANA 47807  
PHONE (812) 232-5256

PROJECT  
**GRIFFIN BIKE PARK CLUBHOUSE**  
**VIGO COUNTY PARKS DEPT.**  
**BONO ROAD, TERRE HAUTE**

JOB NUMBER  
BE #27000124

DATE  
11-15-2024

SCALE

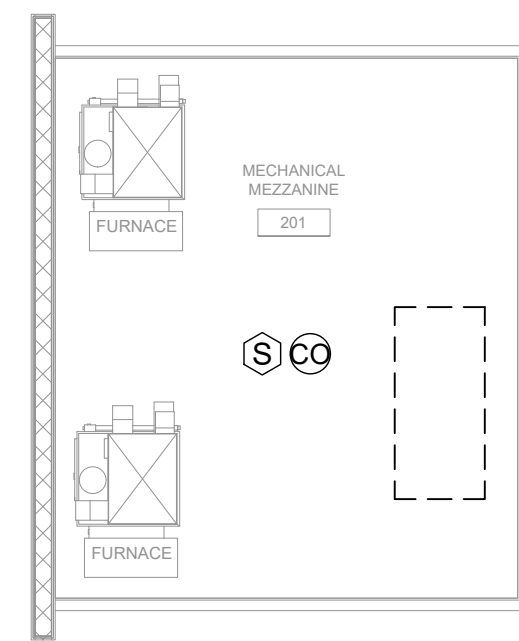
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LIGHT SCHEDULE

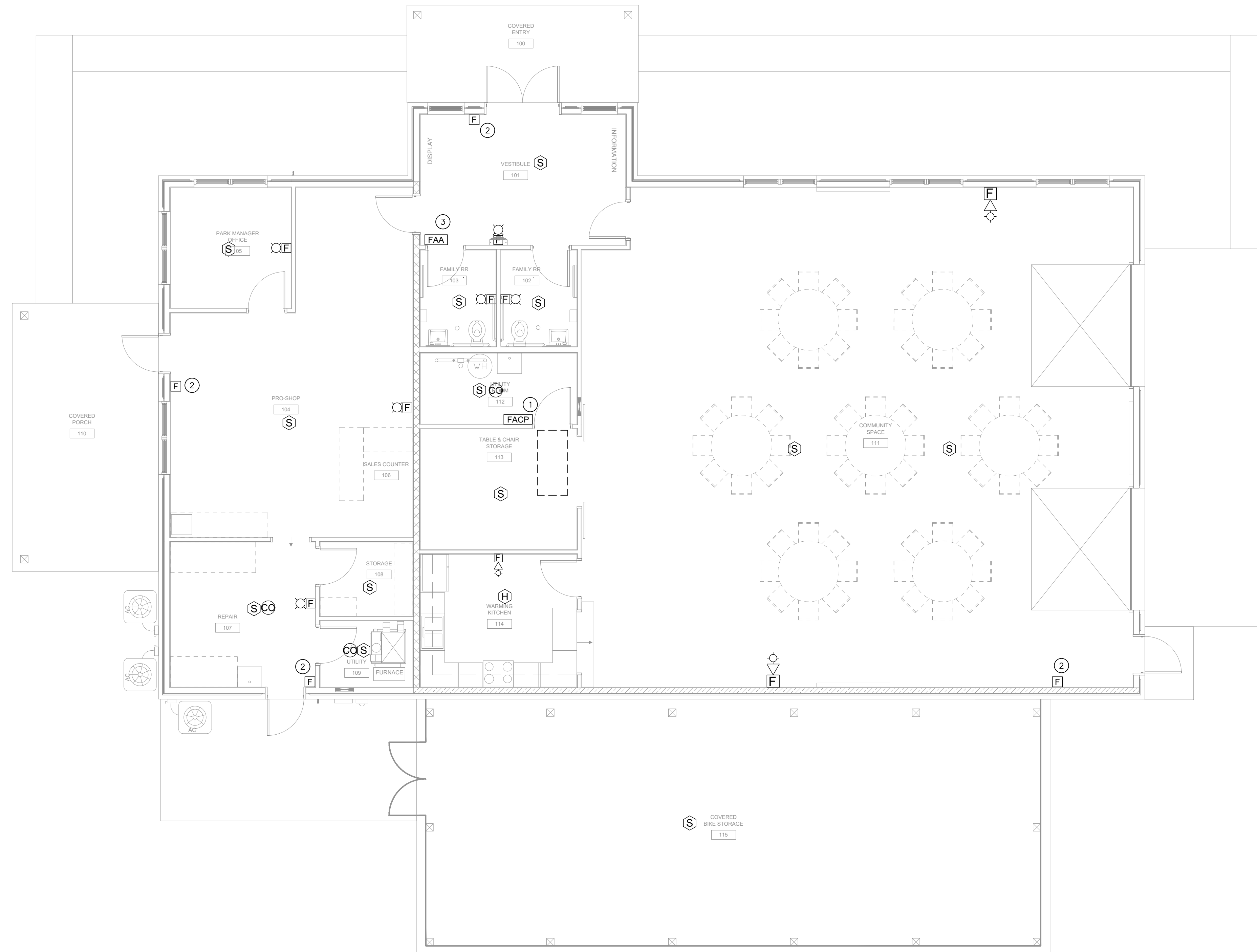
SHEET NUMBER  
**E6.2**

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**BOYT ENGINEERING**  
**400 N. MARKET ST.**  
**MARION, IL 62959**  
**618-964-9418**  
 Benjamin P. Boyt  
*Sole Proprietor*



**MEZZANINE FIRE ALARM PLAN**  
SCALE 3/16" = 1'-0"  
NORTH



**FIRST FLOOR FIRE ALARM PLAN**  
SCALE 3/16" = 1'-0"  
NORTH

**FIRE ALARM SYSTEM**

- FACP** FIRE ALARM PANEL
- FAA** FIRE ALARM ANNUNCIATOR
- F** MANUAL FIRE ALARM PULL STATION AT +44"
- F** FIRE ALARM HORN AND STROBE AT +80"
- F** FIRE ALARM STROBE
- S** SMOKE DETECTOR
- H** HEAT DETECTOR
- CO** CARBON MONOXIDE DETECTOR

**KEYNOTES** #

1. PROVIDE NEW FIRE ALARM CONTROL PANEL AS SPECIFIED.
2. COORDINATE LOCATION OF PULL STATION WITH LOCAL A.H.J. ENGINEER INTENDS FOR THE USE OF PULLSTATIONS THIS PROJECT DUE TO THE 'PUBLIC' USE OF THIS BUILDING TO AVOID 'NUISANCE' FIRE ALARM SYSTEM ACTIVATION.
3. COORDINATE LOCATION OF FIRE ALARM ANNUNCIATOR PANEL WITH LOCAL A.H.J.

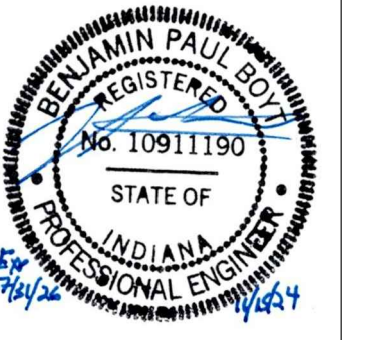
**GENERAL FIRE ALARM NOTES**

1. FIRE ALARM DEVICES AND LAYOUT SHOWN ON THESE PLANS INDICATES INTENT FOR BIDDING REFERENCE PURPOSES ONLY. CONTRACTOR SHALL OBTAIN THE SERVICES OF A MINIMUM NICET IV-LEVEL FIRE ALARM SYSTEM DESIGNER CERTIFIED AT PROJECT LOCATION TO PROVIDE A 100% COMPLETE AND OPERATIONAL SYSTEM DESIGN AND LAYOUT THAT MEETS THE REQUIREMENTS OF THE PROPERTY OWNER AND THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ).
2. FIRE ALARM SYSTEM SHALL INCLUDE ALL REQUIRED COORDINATION WITH ELECTRICAL TRADE FOR POWER, AND INSTALLED SYSTEM SHALL INCLUDE ALL NECESSARY COMPONENTS, INCLUDING CABLING AND PRE-PROGRAMMING, TO ENSURE A 100% OPERABLE SYSTEM COMPLIANT WITH AHJ REQUIREMENTS. VERIFY EXACT REQUIREMENTS PRIOR TO BID.
3. INSTALL NEW CONCEALED CABLING AND CABLING IN RACEWAY AS SPECIFIED AND WHERE NECESSARY TO CONNECT ALL CIRCUITS BETWEEN DEVICES AND PANELS. WHERE CIRCUITS IN OCCUPIED FINISHED AREAS CANNOT BE CONCEALED DUE TO CONSTRUCTION, METAL WIREMOLD MATCHING SURROUNDING FINISH SHALL BE USED AND DEVICES SHALL BE SURFACE MOUNTED ON LOW-PROFILE "FINISH" BOX TO ENSURE SECURE, CONCEALED CABLE ENTRY.
4. NEW CONDUIT/CIRCUIT CONDUCTORS SHALL BE RUN CONCEALED WHEREVER POSSIBLE AND ROUTED TO ALL LOCATIONS INSTALLED ABOVE CEILINGS. ALL RACEWAY OR CONCEALED CABLING HANGERS/SUPPORTS SHALL BE ANCHORED DIRECTLY TO STRUCTURAL ELEMENTS SUCH THAT NO PORTION OF SYSTEM RESTS UPON OR IS SUPPORTED BY OTHER PIPING, SURFACES, GRIDS, EQUIPMENT, OR SYSTEMS.
5. NOTIFICATION CIRCUITS SHALL BE MINIMUM #16 COPPER AND LISTED FOR THE APPLICATION. CONDUCTORS SHALL HAVE PLENUM-RATED INSULATION SHEATH WHERE RUN CONCEALED OR BE RUN IN CONDUIT OR METAL RACEWAY WHERE EXPOSED. ALL RACEWAY PENETRATIONS AND JUNCTION BOXES SHALL BE MARKED RED AND LABELED FOR FIRE SYSTEM. DESIGN BASE SURFACE BOX WHERE NECESSARY: HUBBELL 5753R OR EQUAL AS SPECIFIED.
6. BALANCE NOTIFICATION DEVICE LOAD BETWEEN NOTIFICATION APPLIANCE PANEL CIRCUITS.
7. PROVIDE AND INSTALL NEW NOTIFICATION APPLIANCE POWER PANELS, INCLUDING ADDITIONAL TRANSFORMERS/CIRCUITS AS REQUIRED FOR NEW HORNS, STROBES, AND RELATED ACTIVATION DEVICES SUCH AS HOLD-OPENS COORDINATED WITH ARCHITECTURAL DOOR HARDWARE PLANS. PANELS SHALL BE MOUNTED ON CLEAR WALL SPACE ADJACENT TO ELECTRICAL OR OTHER SYSTEM PANELS TO ENSURE ACCESSIBLE HEIGHT AND CLEARANCE TO MEET ALL APPLICABLE CODE AND LOCAL AHJ REQUIREMENTS.
8. ENSURE ALL STROBES WITHIN SIGHT OF EACH OTHER ARE SYNCHRONIZED, IN ANY COMMON OR OPEN CONTIGUOUS SPACE, INCLUDING CORRIDORS, LOBBIES, AND ROOMS WITH MULTIPLE STROBES.
9. ALL MANUAL PULL STATIONS AT PUBLIC EGRESS LOCATIONS SHALL BE PROTECTED BY CLEAR ACRYLIC COVER WHICH WILL SOUND A LOCAL ALARM WHEN OPENED, WITH KEYS RESET.
10. COORDINATE WITH ELECTRICAL TRADE FOR POWER CIRCUITS REQUIRED BY ALL DEVICES AND ENCLOSURES.
11. PROVIDE ALL POWER SUPPLIES, BATTERY BACKUP, AND POWER-LIMITED CABLING FOR POWER AND SIGNALS TO COMPLETE A FULLY FUNCTIONAL SYSTEM.
12. PROVIDE ADDRESSABLE INTERFACE FOR ANY DUCT SMOKE DETECTORS THAT MAY BE PRESENT IN PACKAGED AIR HANDLER UNITS. COORDINATE EXACT LOCATION OF UNITS WITH MECHANICAL TRADE AND CONNECT FIRE ALARM CIRCUIT AS REQUIRED FOR EQUIPMENT SHUTDOWN IN THE EVENT OF SMOKE DETECTOR ACTIVATION.
13. MOUNT CARBON MONOXIDE DETECTOR IN EACH SPACE WHERE REQUIRED DUE TO PRESENCE OF GAS-BURNING APPLIANCES AT ELEVATION RECOMMENDED BY MANUFACTURER.

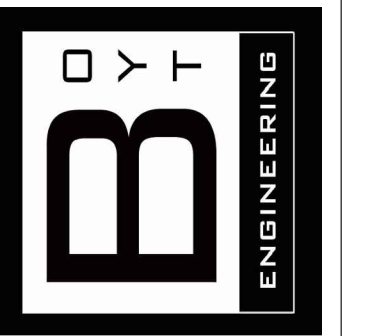
FIRE ALARM DEVICES SHOWN ARE FOR DESIGN INTENT ONLY. CONTRACTOR SHALL OBTAIN THE SERVICES OF A LOCAL, NICET CERTIFIED FIRE ALARM INSTALLER TO PROVIDE A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM THAT MEETS ALL LOCAL AND STATE REQUIREMENTS FOR A BUILDING OF THIS TYPE, USE AND OCCUPANCY. SUBMIT A FULL SET OF FIRE ALARM PLANS TO THE ARCHITECT AND LOCAL JURISDICTION HAVING AUTHORITY FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.

FIRE SMOKE DAMPERS (NOT SHOWN ON PLAN) ARE PROVIDED AND INSTALLED BY MECH CONTRACTOR. FINAL CONNECTION BY ELECTRICAL CONTRACTOR. VERIFY EXACT LOCATIONS AND REQUIREMENTS WITH MECH CONTRACTOR AS REQUIRED.

REVISIONS		
NO.	DATE	DESCRIPTION



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MAB



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PHONE (812) 232-5256

**PROJECT**  
**GRIFFIN BIKE PARK CLUBHOUSE**  
**VIGO COUNTY PARKS DEPT.**  
**BONO ROAD, TERRE HAUTE**

JOB NUMBER  
BE #27000124  
DATE  
11-15-2024  
SCALE  
3/16"=1'-0"  
SHEET TITLE  
FIRE ALARM PLAN

**BOYT ENGINEERING**  
400 N. MARKET ST.  
MARION, IL 62959  
618-964-9418  
Benjamin P. Boyt  
Sole Proprietor

SHEET NUMBER  
FA1.1

NOTIFY FOUNDER IN EVENT OF DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS IN THE PROJECT DOCUMENTS. CONTRACTOR IS NOT AUTHORIZED TO SCALE THE DRAWINGS. ALL QUESTIONS SHALL BE IMMEDIATELY DIRECTED TO THE ENGINEER.

HEAT PUMP										CONDENSERS				
TAG	SERVES	INDOOR DAIKIN MODEL	SUPPLY AIR	OUTSIDE AIR	ELECTRICAL	MCA	MOP	HEAT INPUT KW	TAG	DAIKIN MODEL	COOLING CAPACITY	ELECTRICAL	MCA	MOP
HP-1	OFFICES	AMST24BU1300	1215 CFM	155 CFM	208-240/60/1	5.8	15	10 KW	C-1	DH4SEA2410	24 MBH	208-240/60/1	13.8	20
HP-2A AND 2B	COMMUNITY AREA	AMST36CU1300	1830 CFM	440 CFM	208-240/60/1	7.1	15	15 KW	C-2A & C-2B	DH4SEA3610	35 MBH	208-240/60/1	21.5	35

NOTES

- 1 ACCEPTABLE SUBSTITUTES AND FURTHER INFORMATION: SEE SECTION 235400
- 2 CONDENSERS SHALL BE SECURED TO PAD AND PLUMB AND LEVEL.
- 3 REFRIGERANT PIPE ROUTING SHALL BE UNOBTRUSIVE AND CONCEALED IN WALLS AND ABOVE CEILING EXCEPT IN EQUIPMENT ROOM
- 4 FULLY INSULATED (BOTH GAS AND LIQUID) PER SECTION 230700
- 5 ALL REFRIGERANT PIPING (BOTH GAS AND LIQUID) SHALL BE WRAPPED IN 1/2" ARMAFLEX INSULATION AND JACKETED WHERE EXPOSED
- 6 CONDENSATE SHALL BE ROUTED TO NEAREST DRAIN AS UNOBTRUSIVELY AS POSSIBLE, AVOIDING SERVICE PANELS AND FILTER.
- 7 HEAT PUMP SHALL HAVE LOW AMBIENT CAPACITY TO -10 DEG F
- 8 HP-2A AND HP-2B SHALL USE DEMAND CONTROL VENTILATION SCHEME FOR OUTSIDE AIR
- 9 INCLUDE ELECTRIC HEAT KIT HP-1 SHALL USE HKTSD10X1 HP-2A & HP-2B SHALL USE HKTSD15X1

EXTERIOR WALL LOUVERS					
TYPE	DESIGN BASE	MODEL	SIZE	OA CFM MIN	OA CFM MAX
EXTERIOR WALL	NAILOR	1604AD	24"x12"	0	200
			24"x16"	201	400
			24"x24"	401	600
			28"x28"	601	1000
32"x28"	1001	1500			

NOTES

- 1 SEE SECTION 233000 FOR FURTHER INFORMATION AND ACCEPTABLE SUBSTITUTE MANUFACTURERS
- 2 LOUVERS SHALL BE ALUMINUM
- 3 LOUVERS SHALL HAVE ADJUSTABLE DRAINABLE BLADE

EXHAUST FANS						
TAG	SERVES	DESIGN BASE: GREENHECK	EXHAUST AIR	TYPE	ELECTRICAL	Horse Power
EF-1	BATHROOM, UTILITY, STORAGE	SP-B90	75 CFM	CEILING	120/1/60	50 Watt

NOTES

- 1 ACCEPTABLE SUBSTITUTES AND FURTHER INFORMATION: SEE SECTION 233400
- 2 EXHAUST FAN SHALL BE DIRECT DRIVE, ELECTRICALLY COMMUTATED (ECM) MOTORS.
- 3 ALL EXHAUST FANS SHALL INCLUDE BACKDRAFT DAMPERS AND VIBRATION ISOLATORS.
- 4 EXHAUST FANS USED IN PUBLIC TOILETS SHALL BE TIED TO SWITCHED LIGHTING CIRCUIT TO ENSURE OPERATION WHEN SPACE IS OCCUPIED. COORDINATE WITH ELECTRICAL TRADE.

SUPPLY DIFFUSERS					
TYPE	NAILOR MODEL	NOM. SIZE	NECK	CFM RANGE	REMARKS
SQUARE	AUNI OR ARNSA	12"x12"	6" DIA	0 TO 100	SQUARE DIFFUSER, PLASTER OR GRID CEILING PER LOCATION
			8" DIA	101 TO 200	
			10" DIA	201 TO 325	
		24"x24"	6" DIA	0 TO 100	
			8" DIA	101 TO 300	
			10" DIA	301 TO 450	
WALL, SOFFIT, OR DUCT	71DH-OA	8"x4"	8x4	0 TO 75	FLUSH MOUNT ON DUCT OR IN WALL WHERE SHOWN W/FITTING AS REQ'D
			12"x4"	100 TO 200	
			14"x6"	200 TO 350	
			14"x8"	350 TO 450	

NOTES

- 1 ACCEPTABLE SUBSTITUTES AND FURTHER INFORMATION: SECTION 233700.
- 2 DIFFUSERS SHALL BE ALUMINUM OR GALVANIZED STEEL PAINTED AFTER FABRICATION. COLOR SELECTED BY ARCHITECT, VISIBLE PORTIONS INSIDE PAINTED MATTE BLACK OR INSULATED WITH BLACK COATING.
- 3 DIFFUSERS SHALL HAVE VOLUME DAMPER. INCLUDE VOLUME CONTROL DEVICE AT BRANCH TAKEOFF, OR WHERE NOT POSSIBLE (DIRECT DUCT-MOUNTED, NO ACCESS, ETC.) FACTORY MOUNTED BEHIND FACE WITH ACCESS FROM FRONT, FOR BALANCING
- 4 FRAME & OPTIONS SHALL MATCH SURFACE WHERE INSTALLED

SUPPLY DIFFUSERS					
TYPE	CARNES MODEL	NOM. SIZE	NECK	CFM RANGE	REMARKS
SLOT	DARC	24"	8" DIA	0 TO 200	CLNG OR WALL AS
		48"	10" DIA	0 TO 400	WALL AS

NOTES

- 1 SEE SECTION 233000 FOR FURTHER INFORMATION
- 2 DIFFUSERS SHALL BE STAMPED STEEL, PAINTED
- 3 DIFFUSERS SHALL HAVE VOLUME DAMPER OR
- 4 FRAME & OPTIONS SHALL MATCH SURFACE WHERE

RETURN GRILLES				
TYPE	NAILOR MODEL	SIZE	CFM RANGE	REMARKS
CEILING	4360AA	12"x12"	0 TO 100	SQUARE GRILLE, PLASTER OR GRID CEILING PER LOCATION
		24"x24"	100 TO 1000	
		10"x6"	0 TO 200	
WALL OR DUCT MOUNT	5145H	12"x12"	201 TO 500	FLUSH MOUNT WHERE SHOWN W/TRANSITION FITTING
		18"x18"	501 TO 1100	
		24"x24"	1101 TO 2000	

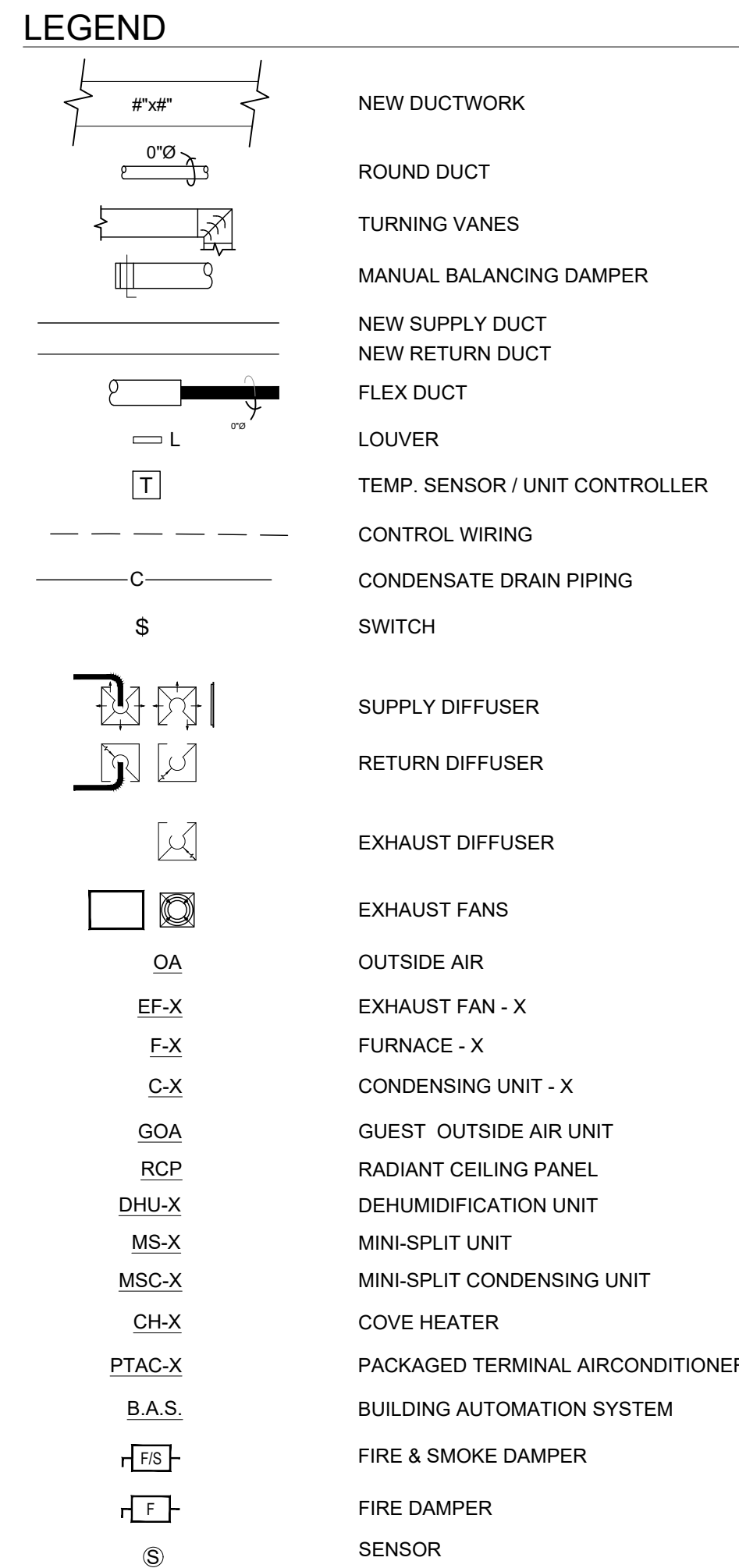
NOTES

- 1 ACCEPTABLE SUBSTITUTES AND FURTHER INFORMATION: SECTION 233700.
- 2 GRILLES SHALL BE ALUMINUM OR GALVANIZED STEEL PAINTED AFTER FABRICATION. COLOR SELECTED BY ARCHITECT, VISIBLE PORTIONS INSIDE PAINTED MATTE BLACK OR INSULATED WITH BLACK COATING.
- 3 WHERE MORE THAN ONE RETURN INLET IS SHOWN ON DRAWINGS, INCLUDE VOLUME CONTROL DAMPER IN BRANCH DUCT OR, WHERE NOT POSSIBLE (DIRECT DUCT-MOUNTED, NO ACCESS, ETC.) FACTORY MOUNTED BEHIND FACE WITH ACCESS FROM FRONT, FOR BALANCING
- 4 FRAME & OPTIONS SHALL MATCH SURFACE WHERE INSTALLED

LOUVERED PENTHOUSE				
TAG	DESIGN BASE	MODEL NUMBER	MIN THROAT SIZE	CFM MIN @0.05" ESP
LP	LOREN-COOK	TRE1212-BDMI-RCG	12"x12"	375
	GREENHECK	WIH SERIES		
	RUSKIN	PH837-381		

NOTES

- 1 LOUVERED PENTHOUSE CONSTRUCTION SHALL BE ALUMINUM OF MIN 3 TIERS, ON MIN 14" CURB, WITH DUCT ADAPTER AS REQUIRED IN INTERSTITIAL SPACE BELOW. PROVIDE PEST SCREEN.
- 2 PROVIDE BACKDRAFT DAMPER



KITCHEN HOOD				
TAG	SERVES	DESIGN BASE:	MODEL	LENGTH
KH-1	KITCHEN	ACCUREX	XRRS	30"

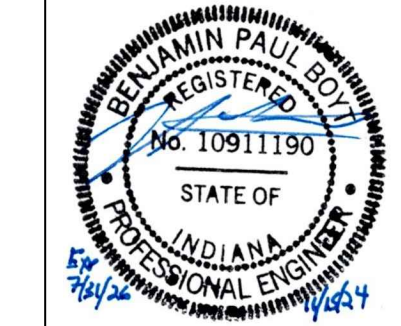
NOTES:

- 1 SEE SPECIFICATIONS FOR ACCEPTABLE
- 2 HOOD SHALL BE ICC EVALUATED AND CERTIFIED AS COMPLIANT WITH IMC, IFC, AND UMC.
- 3 HOOD SHALL BE WALL-STYLE WITH WALL MOUNTING BRACKET.
- 4 HOOD SHALL BE 18 GAUGE MINIMUM, 300 SERIES STAINLESS STEEL OUTER SHEEL, MANUFACTURED AND ASSEMBLED WITH NO VISIBLE OUTER WELDS OR WELD MARKS, ALL INTERNAL SEMA SHALL BE SEALED WITH NSF-APPROVED CAULK
- 5 PROVIDE METAL MESH FILTER.
- 6 TWO (2) 2200-2700K COLOR LED RECESSED HOOD LIGHTS SHALL PROVIDE OVER 50 FC OF EVENLY-DISPERSED LIGHTING ON THE RANGE BELOW.
- 7 HOOD SHALL INCLUDE FACTORY-INSTALLED UL SUBJECT 300A FIRE SUPPRESSION SYSTEM, INCLUDING FULLY MONITORED ELECTRONIC DETECTION AND ACTUATION.
- 8 HOOD SYSTEM SHALL INCLUDE AN ELECTRONIC SHUT OFF DEVICE THAT SHALL BE RESPONSIBLE FOR DESABLING THE RANGE UPON DETECTING A HIGH TEMPERATURE. ELECTRIC DISCONNECT SHALL INCLUDE A 4-PRONG 250/VAC 50A POWER RECEPTACLE.
- 9 HOOD SYSTEM SHALL BE CONFIGURED AS A FACTORY-SUPPLIED INTEGRAL FAN WITH RECIRCULATING ONLY.

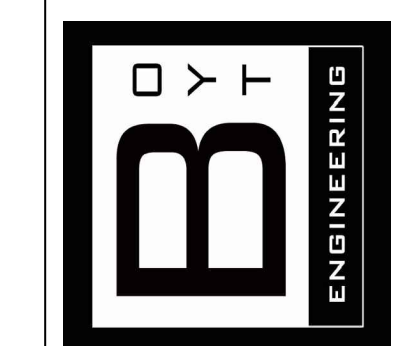
### GENERAL MECHANICAL NOTES

1. ALL WORK IS TO BE DONE IN ACCORDANCE WITH ALL STATE AND LOCAL BUILDING CODES. IF ANY CONFLICT EXISTS THE DEFAULT IS TO THE BUILDING CODE MEETING WITH APPROVAL OF THE AUTHORITY HAVING JURISDICTION. DESIGN INTENT IS TO MEET ASHRAE 62, ASHRAE 55, AND ASHRAE 90.1, AND NFPA MOST CURRENT EDITIONS.
2. DUCTWORK TO BE INSTALLED IN ACCORDANCE WITH MOST CURRENT EDITION OF SMACNA GUIDELINES.
3. CONTRACTOR SHALL INSTALL ALL EQUIPMENT/APPLIANCES TO MEET STATE BUILDING CODES FOR VIBRATION ISOLATION & SEISMIC REQUIREMENTS PROVIDE FLEXIBLE CONNECTIONS BETWEEN HVAC UNITS AND SHEETMETAL DUCTWORK.
4. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR VISITING THE PROJECT SITE AND BECOMING FAMILIAR WITH PROJECT PRIOR TO BIDDING WORK.
5. MECHANICAL CONTRACTOR SHALL PROVIDE AS BUILT DRAWINGS TO THE OWNER PRIOR TO FINAL PAYMENT
6. START-UP SERVICE SHALL BE PROVIDED FOR HVAC SYSTEM. OWNER REPRESENTATIVE SHALL BE TRAINED ON EQUIPMENT INSTALLED.
7. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR A FULLY FUNCTIONAL AND OPERABLE COMPLETE SYSTEM. DRAWINGS ARE DIAGRAMMATIC IN NATURE ONLY. CONFIRM ALL DIMENSIONS BY FIELD MEASUREMENT AND ADJUST FOR OBSTRUCTIONS AT NO FURTHER COST TO OWNER.
8. ALL DRAWINGS ARE SCHEMATIC IN NATURE AND INDICATES THE GENERAL AND APPROXIMATE LOCATION OF EQUIPMENT, PIPING, AND DUCTWORK.
9. DESIGN INTENT IS FOR A COMPLETE AND FUNCTIONAL SYSTEM. DRAWINGS AND NOTES TOGETHER SHALL ACT AS A BASIS FOR DESCRIBING THE SYSTEM FOR THE FACILITY.
10. CONTRACTOR IS RESPONSIBLE TO OBTAIN AND PAY FOR ALL PERMITS AND APPROVALS TO PROCEED WITH WORK.
11. VERIFY EACH MANUFACTURERS REQUIREMENTS FOR THEIR RESPECTIVE EQUIPMENT. INSTALL EQUIPMENT PER MANUFACTURERS REQUIREMENTS AND RECOMMENDATIONS.
12. ALL DUCTWORK, PIPING, AND EQUIPMENT SHALL MEET THE REQUIRED CODE INSTALLATION SUPPORT REQUIREMENTS FOR THE SEISMIC ZONE OF THE PROJECT LOCATION AND GENERAL STRUCTURAL REQUIREMENTS FOR INSTALLATION.
13. DIMENSIONS GIVEN ARE FOR CLEAR INTERIOR CROSS SECTIONAL AREA. RECTANGULAR OR ROUND DUCTWORK MAY BE USED; A HYDRAULICALLY SIMILAR SUBSTITUTE DUCT ARRANGEMENT TO AVOID OBSTRUCTIONS OR CHANGE SHAPES MAY BE SUBMITTED TO AND APPROVED BY THE ENGINEER. DUCTWORK IS DESIGNED TO APPROXIMATE 0.08" PER 100 FEET OF DUCT. PROVIDE NEOPRENE INSULATED FLEXIBLE CONNECTION AT SA AND RA DUCT CONNECTIONS FOR SPLIT SYSTEM HVAC UNITS. OUTLET FLEXIBLE DUCT CONNECTIONS SHALL NOT EXCEED 6" IN LENGTH.
14. PROVIDE FIRE/SMOKE DAMPERS AT ALL LOCATIONS NOT EXEMPTED BY CODE. WHERE DUCTWORK PENETRATES RATED PARTITIONS AND FLOORS, SEAL ALL RATED PENETRATIONS WITH FIRESTOPPING. COORDINATE WITH ARCHITECTURAL DRAWINGS REGARDING FIRE AND SMOKE RATED PARTITIONS AND ENSURE DAMPERS ARE APPROVED BY LOCAL A.H.J.
15. DAMPERS SHALL BE INCLUDED IN ALL BRANCH TAKEOFFS TO ALLOW FOR A TEST AND BALANCE OF THE AIR SYSTEM. DAMPERS MAY NOT BE SHOWN FOR READABILITY. IT IS THE CONTRACTORS RESPONSIBILITY TO INCLUDE DAMPERS AT TAKEOFFS OR IN DIFFUSERS
16. ALL DIFFUSERS SHALL BE SELECTED WITH FRAME APPROPRIATE FOR CEILING TYPE WHERE SHOWN OR INDICATED BY ARCHITECT RCP.
17. CONDENSATE DRAINS SHALL BE RUN CONCEALED TO NEAREST SANITARY CONNECTION OR FLOOR DRAIN. UNLESS OTHERWISE SHOWN, USE CONDENSATE PUMPS MATCHING NECESSARY RUN DISTANCES AND HEAD LOSS.
18. DUCT TURNING VANES SHALL BE INSTALLED WHERE TURNS EXCEED 45 DEGREES.
19. HVAC CONTRACTOR SHALL BALANCE HVAC SYSTEM TO AIR QUANTITIES INDICATED AND PROVIDE REPORT TO OWNER UPON COMPLETION.
20. ALL DUCTWORK FOR AIR AT TEMPERATURES BELOW AMBIENT SHALL BE INSULATES AS SPECIFIED.
21. ALL DUCTWORK SHALL BE INSTALLED AS HIGH AS PRACTICAL, TIGHT TO STRUCTURE ABOVE WHERE POSSIBLE TO MAXIMIZE USABLE CLEARANCE ABOVE CEILING THROUGHOUT.
22. THE CONTRACTOR SHALL COORDINATE ALL DUCTS, GRILLES, AND REGISTERS WITH THE LIGHTS AND STRUCTURE. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF THE STRUCTURE PRIOR TO DUCT FABRICATION.
23. CONTRACTOR SHALL COORDINATE ALL MECHANICAL EQUIPMENT WITH STRUCTURE AND ARCHITECTURAL DRAWINGS. VERIFY FINAL LOCATION OF EQUIPMENT PRIOR TO INSTALLING.
24. AVOID ROUTING DUCTWORK ABOVE ELECTRICAL PANELS AND EQUIPMENT. COORDINATE WITH ELECTRICAL CONTRACTOR FOR PANEL LOCATIONS.
25. ALL EQUIPMENT REQUIRING AN ELECTRICAL CONNECTION SHALL BEAR AN APPROPRIATE 3RD-PARTY LABEL FOR THE SPECIFIC APPLICATION OF THE EQUIPMENT.
26. ALL CONTROL WIRING SHALL BE FURNISHED AND INSTALLED BY HVAC CONTRACTOR. THERMOSTATS SHALL BE INSTALLED ON WALL -48" AFF. COORDINATE WITH ELECTRICAL TRADE FOR RACEWAY ROUGH-IN. FINAL LOCATIONS SELECTED BY OWNER/ARCHITECT.
27. MULTI-TAP BLOWER MOTORS SHALL HAVE CORRECT TAP CONNECTED TO MEET AIR VOLUME AND HAVE SUFFICIENT STATIC CAPABILITY TO PROVIDE WITHIN 95% OF SCHEDULED TOTAL.
28. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR. CONFIRM CIRCUIT AMPACITY, OVERCURRENT PROTECTION, SERVICE DISCONNECTS AND GROUNDING PER NAMEPLATE DATA FOR ALL EQUIPMENT.
29. GAS PIPING INSTALLED AND CONNECTED TO EQUIPMENT AS SPECIFIED IN MANUFACTURER'S INSTALLATION GUIDE WITH COMPLETE GAS TRAIN TO ENSURE PERFORMANCE. INACCESSIBLE LOCATIONS SHALL NOT HAVE UNIONS, FITTINGS OR RUNNING THREADS. SHUTOFF VALVES SHALL BE UPSTREAM OF EACH EQUIPMENT GAS TRAIN.
30. CONTRACTOR SHALL INSTALL ALL FUEL GAS PIPING & FLUE GAS VENTS PER STATE BUILDING CODE 301.6. ALL FLUES SHALL MEET NFPA CODE REQUIREMENTS AND MANUFACTURER'S INSTALLATION GUIDE.
31. MAINTAIN A MINIMUM OF 10' SEPARATION BETWEEN OUTDOOR AIR INTAKES AND EXHAUSTS.
32. ALL PIPE, DUCT, GAS VENTS, ETC. SHALL BE SLEEVED THRU ALL PENETRATIONS AND SEALED
33. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN MANNER/ORIENTATION THAT ALLOWS ACCESS TO CONTROLS AND ACCESS PANELS FOR MAINTENANCE AND SERVICEABILITY.
34. COORDINATE ALL PENETRATIONS WITH STRUCTURAL BLOCKING AND DRAFTSTOPPING.

REVISIONS		
NO.	DATE	DESCRIPTION



CERTIFIED BY  
BPB  
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500 SOUTH 7TH STREET  
TERRE HAUTE, INDIANA 47807  
PHONE (812) 232-5256

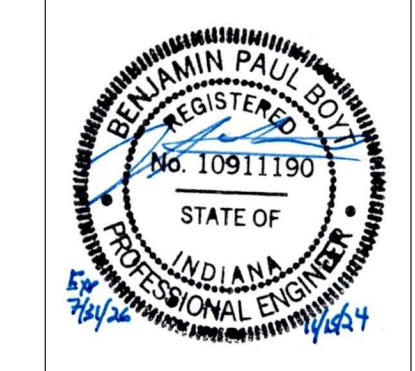
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VIGO COUNTY PARKS DEPT.  
BONO ROAD, TERRE HAUTE

JOB NUMBER  
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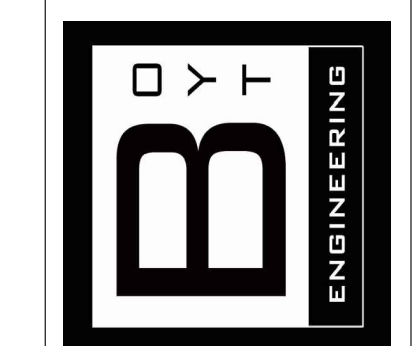
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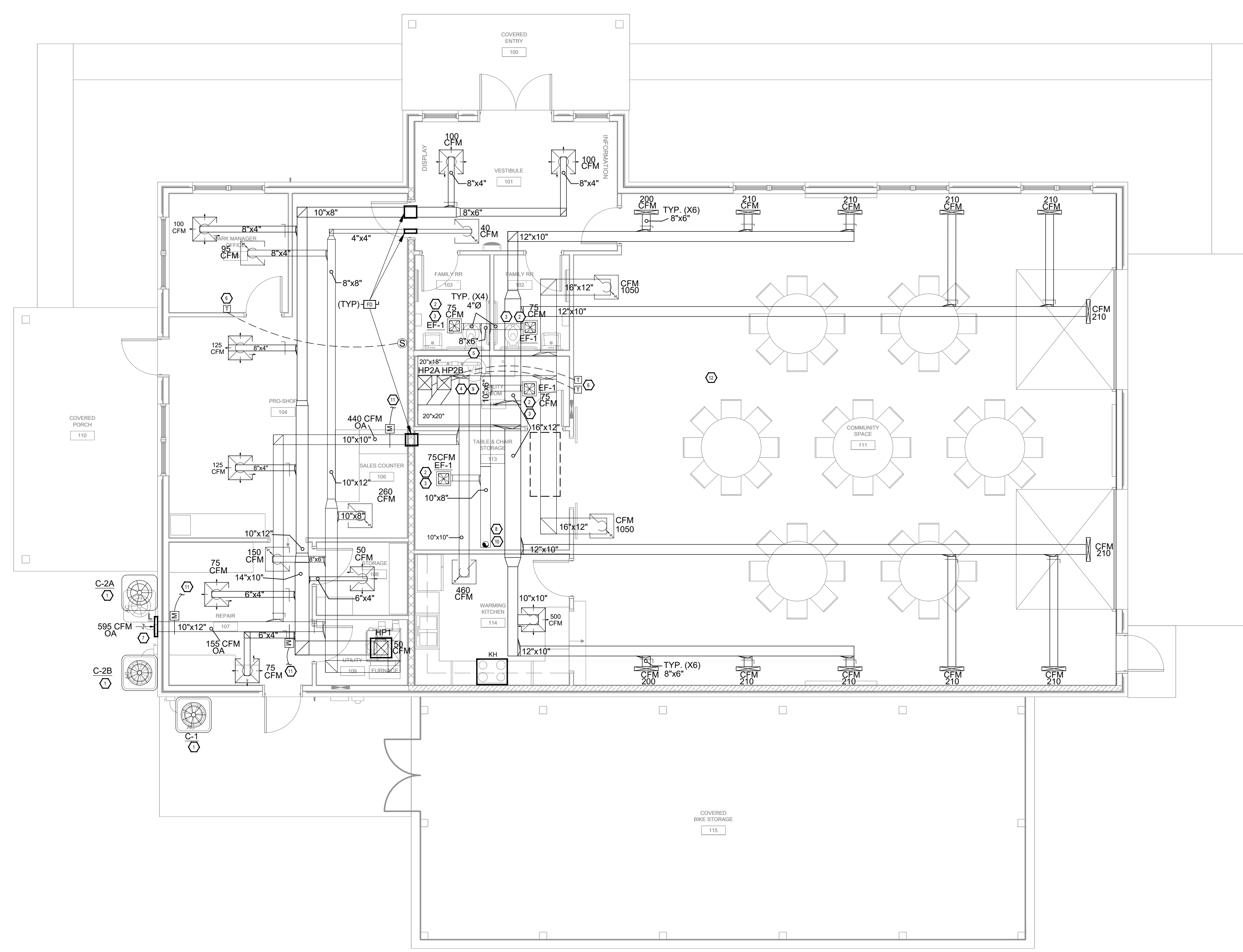


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PROJECT  
**GRIFFIN BIKE PARK CLUBHOUSE**  
**VIGO COUNTY PARKS DEPT.**  
**BONO ROAD, TERRE HAUTE**

JOB NUMBER	BE #27000124
DATE	11-15-2024
SCALE	
SHEET TITLE	MECHANICAL PLAN
SHEET NUMBER	M1.0

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**KEYNOTES**

- PLACE SECURELY ON PAD, PLUMB AND LEVEL, ADHERING TO ALL MANUFACTURERS REQUIREMENTS AND RECOMMENDED SPACINGS. VERIFY PLACEMENT WITH ARCHITECT/OWNER. CONCRETE PAD SHALL EXTEND AT LEAST 6" WIDER THAN EQUIPMENT ON ALL SIDES.
- SUSPEND EXHAUST FAN AS HIGH AS POSSIBLE, SECURED DIRECTLY TO STRUCTURE ABOVE WITH RUBBER ISOLATION BUSHING ON ROD HANGERS FOR VIBRATION ISOLATION. INSTALL BACK DRAFT DAMPERS AS NEEDED.
- EXHAUST FANS TO BE CONNECTED TO LIGHT SWITCH TO OPERATE DURING BUILDING OCCUPANCY.
- HEAT PUMP UNITS LOCATED IN MECHANICAL MEZZANINE SPACE ABOVE. CONTRACTOR SHALL ROUTE CONDENSATE TO MOP SINK BELOW IN UTILITY ROOM.
- COORDINATE DUCTWORK WITH PLUMBING TRADE IN THIS AREA.
- PLACE THERMOSTAT IN CLEAR PLASTIC LOCKABLE COVER KEYS ALIKE, VERIFY FINAL LOCATION WITH ARCHITECT / OWNER PRIOR TO PLACEMENT.
- COORDINATE LOCATION OF OUTSIDE AIR INTAKE LOUVER TO BE INSTALLED. COORDINATE AESTHETICS WITH ARCHITECT.
- RESTROOM AND STORAGE EXHAUSTED THROUGH LOUVERED PENTHOUSE ON ROOF.
- RETURN BOX SHALL BE ELASTOMERIC ACOUSTIC INSULATION LINER.
- COORDINATE ROOF PENETRATIONS WITH STRUCTURAL. PENETRATIONS SHALL BE FLASHED AND SEALED WATERTIGHT PER MANUFACTURERS REQUIREMENTS TO MAINTAIN ROOF WARRANTY.
- MOTORIZED DAMPERS FOR OUTSIDE AIR CONTROL. DEFAULT TO CFMS SHOWN.
- ROOM FUNCTIONS ON DEMAND CONTROL VENTILATION SUPPLY. ALL CONTROLS NECESSARY TO FACILITATE SYSTEMS AND SEE CONTROLS SPECIFICATIONS.

NOTIFY ENGINEER IN EVENT OF DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS IN THE PROJECT DOCUMENTS. CONTRACTOR IS NOT AUTHORIZED TO SCALE THE DRAWINGS. ALL QUESTIONS SHALL BE IMMEDIATELY DIRECTED TO THE ENGINEER.

**MECHANICAL PLAN**  
SCALE 3/16" = 1'-0"  
NORTH

**BOYT ENGINEERING**  
400 N. MARKET ST.  
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618-964-9418  
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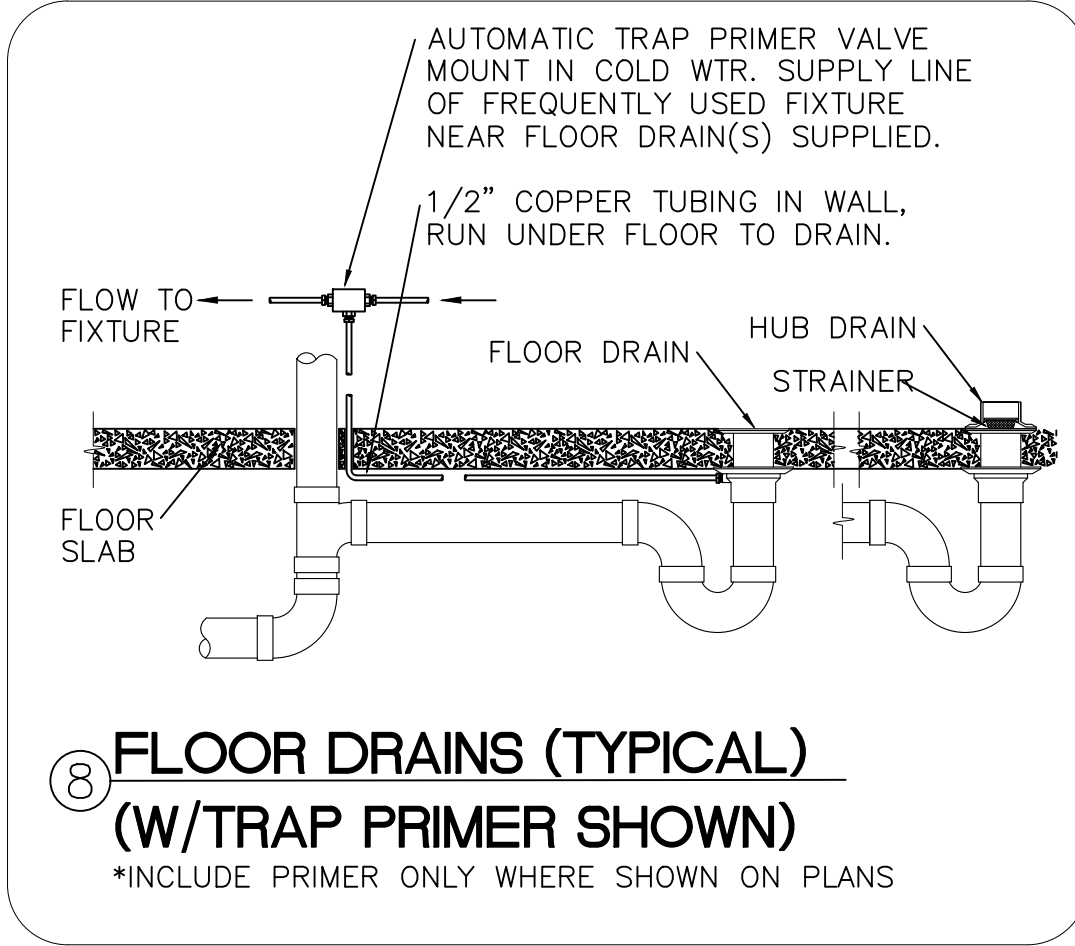
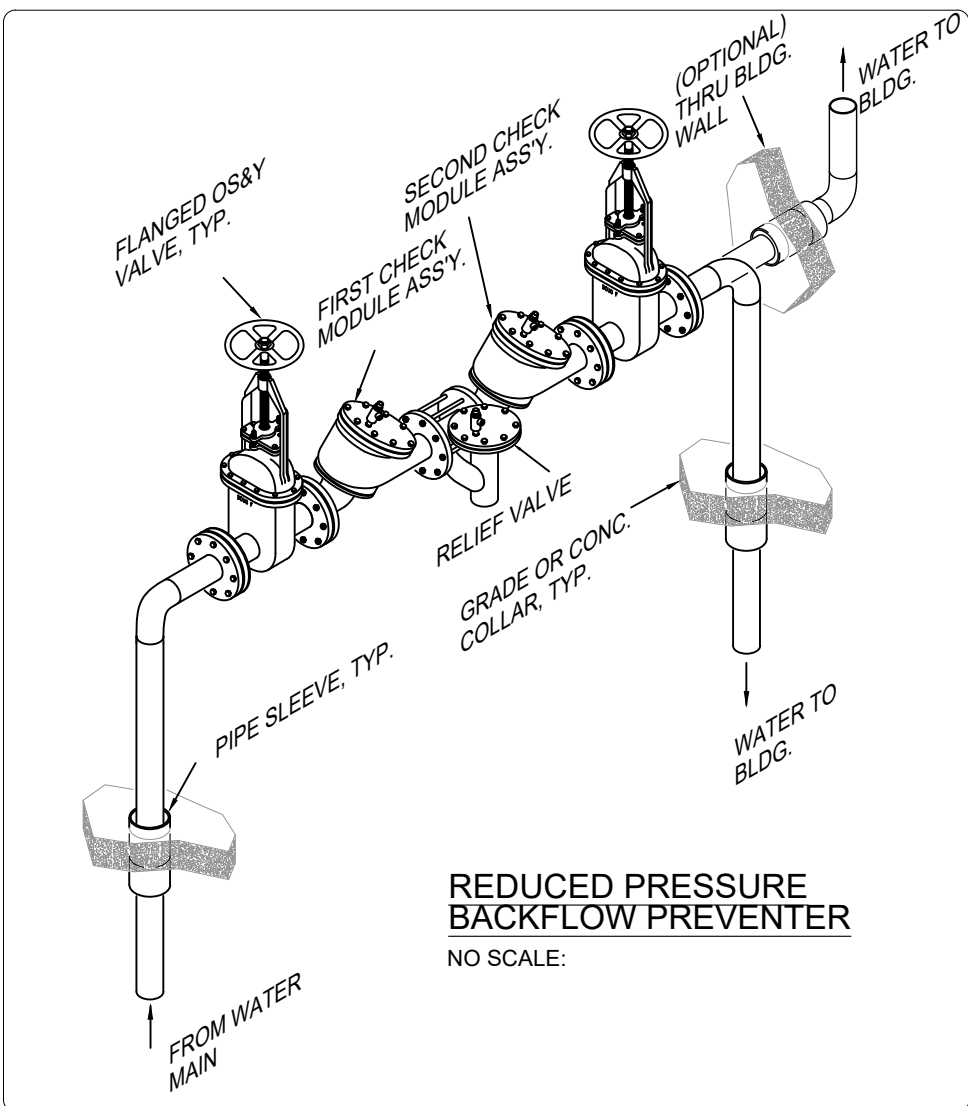
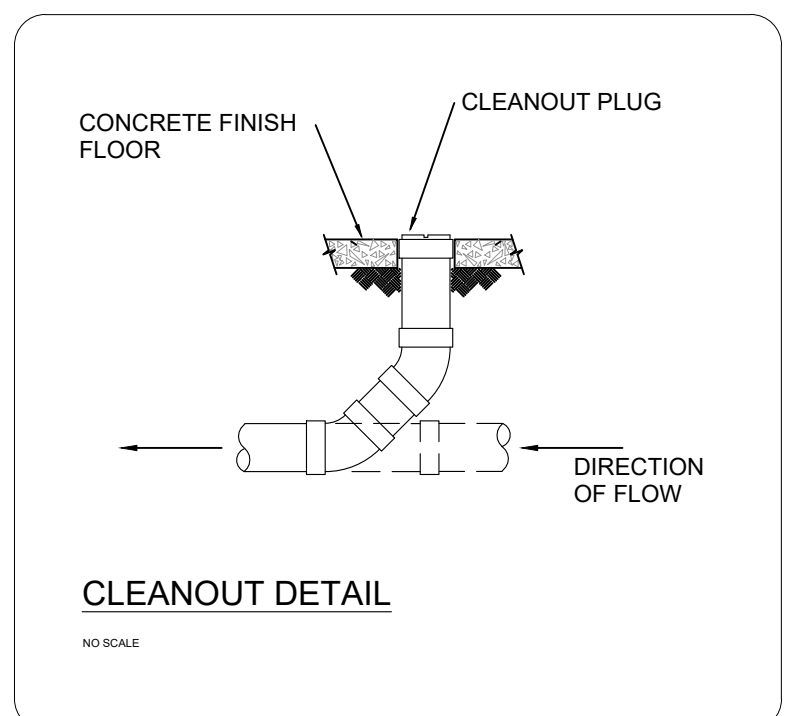
LEGEND	
—●—	SANITARY SEWER PIPING
----	SANITARY VENT PIPING
----	DOM. COLD WATER PIPING
----	DOM. HOT WATER PIPING
----	DOM. HOT WATER RETURN PIPING
	BALL VALVE
	CHECK VALVE
	BALANCING VALVE
WC-HC	WATER CLOSET HANDICAP
LAV-HC	LAVATORY HANDICAP
MS	MOP SINK
MB	MOP BASIN
KS	KITCHEN SINK
DWH	DOMESTIC WATER HEATER
FD	FLOOR DRAIN
HB	HOSE BIBB
WH	WALL HYDRANT
CO	CLEAN OUT
YCO	YARD CLEAN OUT
VTR	VENT THRU ROOF

**PLUMBING GENERAL NOTES:**

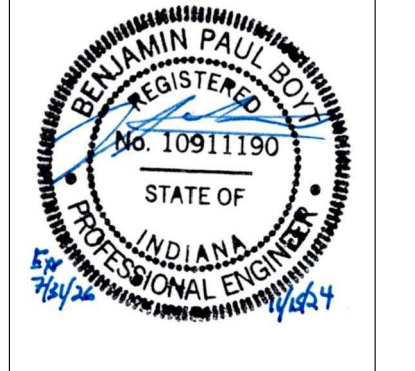
- CONTRACTOR SHALL BE FAMILIAR WITH THE PROJECT AND VERIFY ALL CONDITIONS, MATERIALS, EQUIPMENT AND DIMENSIONS THAT MAY AFFECT THE WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING SITE AND BECOME FAMILIAR WITH ALL DRAWINGS AND REQUIREMENTS PRIOR TO BIDDING.
- THESE DRAWINGS ARE SCHEMATIC IN NATURE AND REPRESENT ONLY THE GENERAL AND APPROXIMATE LOCATIONS OF FIXTURES, PIPING, ETC. REFER TO MANUFACTURER'S DOCUMENTATION FOR ALL FIXTURES AND COORDINATE WITH ALL OTHER TRADES.
- PLUMBING CONTRACTOR SHALL PROVIDE COMPLETE SYSTEMS AND EQUIPMENT AS SHOWN AND COMPLY WITH ALL APPLICABLE CODE REQUIREMENTS. SAW CUTTING OF SLAB MAY BE NECESSARY. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL SAW CUTTING, REMOVAL OF DEBRIS, AND FILL.
- PLUMBING SHALL MEET THE 2015 INTERNATIONAL PLUMBING CODE CURRENTLY ADOPTED AT THE PROJECT LOCATION, AND ACCESSIBILITY CODES AS REQUIRED.
- WHERE CONFLICTS EXIST BETWEEN THESE DOCUMENTS AND THE PREVAILING PLUMBING CODE, DEFAULT TO THE STATE AND LOCAL PLUMBING CODE.
- PLUMBING CONTRACTOR SHALL INSTALL ALL PLUMBING, FIXTURES, AND PLUMBING SPECIALTIES (AIR GAPS, ANTI-SIPHON DEVICES, VALVES, WATER HAMMER ARRESTORS, ETC.) AS NECESSARY TO COMPLY WITH THE PLUMBING CODE AND ALL LOCAL REQUIREMENTS.
- COORDINATE ALL UTILITY CONNECTIONS SUCH AS NATURAL GAS, WATER, AND SEWERS WITH MUNICIPAL DEPARTMENTS AND UTILITY COMPANIES HAVING JURISDICTION.
- THE WATER SERVICE METER, THE SEWER TAP, AND SITE PIPING SHALL BE PROVIDED BY THE SITE WORK CONTRACTOR AT NO FURTHER COST TO OWNER.
- NOT ALL VENT PIPING IS SHOWN. PROVIDE A COMPLETE VENT SYSTEM UTILIZING AS FEW ROOF PENETRATIONS AS POSSIBLE.
- PLUMBING CONTRACTOR SHALL LOCATE ALL VENTS AT LEAST 15' AWAY FROM ALL HVAC OUTSIDE AIR INTAKES.
- INSTALL ALL SUPPLY PIPING AS HIGH AS POSSIBLE ABOVE CEILINGS, TYPICALLY UP AGAINST THE CEILING/ROOF STRUCTURE. VENT PIPING SHALL EXTEND UP AS HIGH AS PRACTICABLE AND ROUTED WITH MIN SLOPE TO PENETRATIONS.
- LOAD BEARING BEAMS OR MEMBERS SHALL NOT BE CUT OR MODIFIED IN ANY MANNER. NO NOTCHING OF ANY STRUCTURAL MEMBERS WITHOUT STRUCTURAL ENGINEER APPROVAL.
- PROVIDE CLEANOUTS AT THE BASE OF ALL PLUMBING STACKS.
- SEE ARCHITECTURAL PLANS FOR ALL FIRESTOPPING DETAILS AND MEET RATED CONSTRUCTION FOR ALL PIPING PENETRATIONS.
- PROVIDE AIR CHAMBERS OR WATER HAMMER ARRESTORS AT ALL WATER SUPPLY CONNECTIONS TO ALL PLUMBING FIXTURES; 1/2" DIAMETER X 12" LONG AT ALL SINKS, LAVS, WATER CLOSETS.
- FIXTURES OR PIPING WITH CONCEALED SLIP JOINT CONNECTIONS SHALL BE PROVIDED WITH AN ACCESS PANEL OR UTILITY SPACE AT LEAST 12" IN ITS SMALLEST DIMENSION OR OTHER APPROVED ARRANGEMENT SO AS TO PROVIDE ACCESS TO THE SLIP CONNECTIONS FOR INSPECTION AND REPAIR. WHERE SUCH ACCESS CANNOT BE PROVIDED, ACCESS DOORS SHALL NOT BE REQUIRED PROVIDED THAT ALL JOINTS ARE SOLDERED, SOLVENT CEMENTED, OR FASTENED SO AS TO FORM A SOLID CONNECTION.
- ALL VALVES IN A CONCEALED LOCATION SHALL BE PROVIDED WITH AN ACCESS PANEL OR UTILITY SPACE AT LEAST 12" IN ITS SMALLEST DIMENSION OR OTHER APPROVED ARRANGEMENT SO AS TO PROVIDE ACCESS TO THE VALVE.
- ALL INDIRECT WASTE PIPING THAT EXCEEDS 2 FEET IN DEVELOPED LENGTH MEASURED HORIZONTALLY, OR FOUR FEET IN TOTAL DEVELOPED LENGTH, SHALL BE TRAPPED.
- EVERY TRAP AND TRAPPED FIXTURE SHALL BE VENTED IN ACCORDANCE WITH ONE OF THE VENTING METHODS SPECIFIED IN THE APPLICABLE PLUMBING CODE.
- PLUMBING CONTRACTOR SHALL PROVIDE AS BUILT DRAWINGS TO THE OWNER PRIOR TO FINAL PAYMENT.
- WHERE EQUIPMENT IS NOTED AS SUPPLIED BY OWNER, THE ITEM WILL BE DELIVERED TO THE JOB SITE BY THE OWNER TO BE INSTALLED BY THE CONTRACTOR OR SUB CONTRACTOR.
- ANY DISPENSER SUPPLIED DEVICES WITH POTABLE WATER SHALL BE PROVIDED WITH AN APPROVED BACKFLOW PREVENTER DEVICE APPROPRIATE FOR EACH APPLICATION AND SHALL HAVE AN ASSE-1022 OR ASSE-1032 (WITH PORT) DEVICE IN-LINE. THE DOUBLE CHECK DEVICE SHALL BE CONSTRUCTED OF STAINLESS STEEL MATERIALS.
- ALL BACKFLOW DEVICES SHALL BE TESTED AND APPROVED BY A CROSS CONNECTION CONTROL DEVICE INSPECTOR (CCCDI) OR AUTHORITY HAVING JURISDICTION (AHJ) BEFORE INITIAL OPERATION.
- VALVES FOR ISOLATED BRANCH TAKEOFFS ARE SHOWN ON ISOMETRIC DIAGRAMS IN FUNCTIONAL LOCATION ONLY, AND SHALL BE ARRANGED NEATLY AT ONE COMMON LOCATION AND ALIGNED ON WALL OR CEILING OF UTILITY ROOM PRIOR TO PENETRATION OF CEILING OR WALL FOR CONCEALED PIPING RUNOUTS TO FIXTURES.
- ASSURE EXTERIOR WALL CHASES ARE INSULATED TO PREVENT FREEZING. WATER LINES SHALL NOT BE INSTALLED IN AREAS SUBJECT TO FREEZING TEMPERATURES.
- ALL PIPING SHALL BE SECURED TO STRUCTURE TO MEET SEISMIC LOADING BOTH TRANSVERSE AND LONGITUDINAL.
- ALL FLOOR DRAINS SHALL BE INSTALLED WITH A TRAP PRIMER.

PLUMBING FIXTURE SCHEDULE			
TAG	DESIGN BASE		REMARKS
	MAKE	MODEL	
WC/ WC-HC			PROVIDED BY OWNER
LAV/ LAV-HC			PROVIDED BY OWNER
RPBFP	WATTS	SERIES 009-3/4"	3/4" REDUCED PRESSURE BACK FLOW PREVENTOR. INCLUDE ALL VALVES AND HARDWARE FOR A FULLY FUNCTIONING SYSTEM.
MB	FIAT	MSBIDTG2424	24"X24"X10" MOP SERVICE BASIN, INCLUDES FAUCET, HOSE BRACKET AND MOP HANGER.
MS	FIAT	TSB30002424	MOLDED STONE MOP SERVICE SINK. PROVIDE STAINLESS STEEL DRAIN BODY, HOSE, SERVICE FAUCET, MOP HANGER, STAINLESS STEEL WALL GUARD AND BUMPERS.
KS	AMERICAN STANDARD	18DB.000332C1.075	STAINLESS STEEL UNDERMOUNT DOUBLE BOWL SINK WITH GOOSE NECK FAUCET WITH PULL DOWN SPRAY AND SOAP DISPENSER. INCLUDE UNDER MOUNT KIT FOR UNDERMOUNT INSTALLATION.
IMB	SIoux CHIEF	696-G1010	1/2" ICE MAKER BOX WITH WATER HAMMER ARRESTER. SPECIFY CONNECTION TYPE.
WH	J.R. SMITH	5609QT	NON-FREEZE, 1-4 TURN W/ VACUUM BREAKER, 3/4" HOSE CONNECTION, INCLUDE STEM LOCK PACKAGE W/ KEYS.
HB	WOODFORD	B24	KEYED BOX, POLISHED CHROME, W/VACUUM BREAKER, 24" AFF
EW-C-HC	HAWES	1212SFH	HI, LO STAINLESS STEEL FILTERED WITH BOTTLE FILLER.
DWH	A.O.SMITH	DEN-52	50 GAL UPRIGHT COMMERCIAL ELECTRIC WATER HEATER. FAST RECOVERY. DUAL 4.5KW, NON-SIMULTANEOUS, INITIAL SETTING 120°F.
FD-1	SIoux CHIEF	832-3DNR	3" PVC ROUND ADJUSTABLE COMPLETE ASSEMBLY FLOOR DRAIN, NICKEL BRONZE 6.5" TOP GRATE NO HUB
FD-2	SIoux CHIEF	832-4DNR	LIGHT DUTY FLOOR DRAIN WITH ADJUSTABLE TOP, SPECIFY NICKEL BRONZE FINISH, 4" DRAIN
P-1	BELL & BOSSETT	SERIES 100	INLINE BOOSTER PUMP WITH BRONZE BODY, CERAMIC SEAL, 3/4" FLANGED INLET/OUTLET. ELECT. CHAR. 115V/1PH WITH BUILT-IN OVERLOAD PROTECTION.

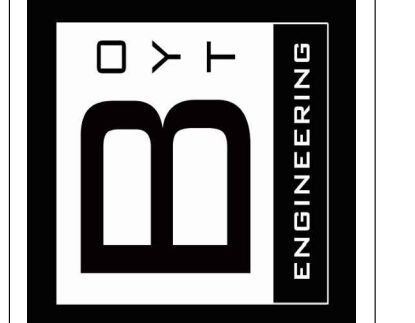
NOTE:  
 1 PROVIDE ENGINEER WITH ALL CUT SHEETS PRIOR TO ORDERING FOR REVIEW SEE SPECIFICATIONS FOR ALL OTHER REQUIREMENTS.  
 2 FIXTURES SHOWN WITH AN "HC" SUFFIX SHALL BE ADA COMPLIANT.



REVISIONS		
NO.	DATE	DESCRIPTION



CERTIFIED BY  
BPB  
 DRAWN BY  
MAB  
 CHECKED BY  
JDF



Boyt Engineering, Inc.  
 500 SOUTH 7TH STREET  
 TERRE HAUTE, INDIANA 47807  
 PHONE (812) 232-5256

PROJECT  
**GRIFFIN BIKE PARK CLUBHOUSE**  
**VIGO COUNTY PARKS DEPT.**  
**BONO ROAD, TERRE HAUTE**

JOB NUMBER  
BE #27000124  
 DATE  
11-15-2024  
 SCALE  
 SHEET TITLE

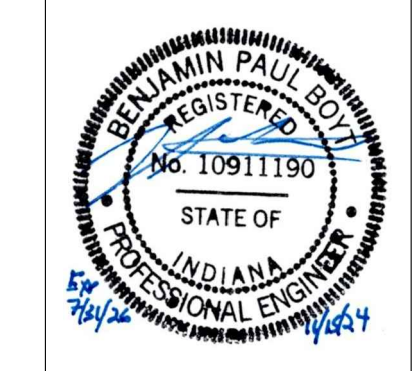
PLBG LEGEND, NOTES

SHEET NUMBER  
**P0.1**

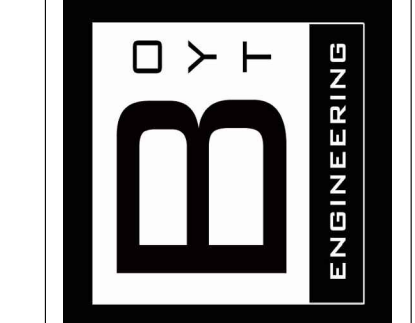
**BOYT ENGINEERING**  
 400 N. MARKET ST.  
 MARION, IL 62959  
 618-964-9418  
 Benjamin P. Boyt  
 Sole Proprietor

NOTYI FOUNDED IN CREDIT OF DISCREPANCIES, DIMENSIONS, AND/OR CONFLICTS IN THE PROJECT DOCUMENTS. CONTRACTOR IS NOT AUTHORIZED TO SCALE THE DRAWINGS. ALL QUESTIONS SHALL BE IMMEDIATELY DIRECTED TO THE ENGINEER.

REVISIONS		
NO.	DATE	DESCRIPTION



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500 SOUTH 7TH STREET  
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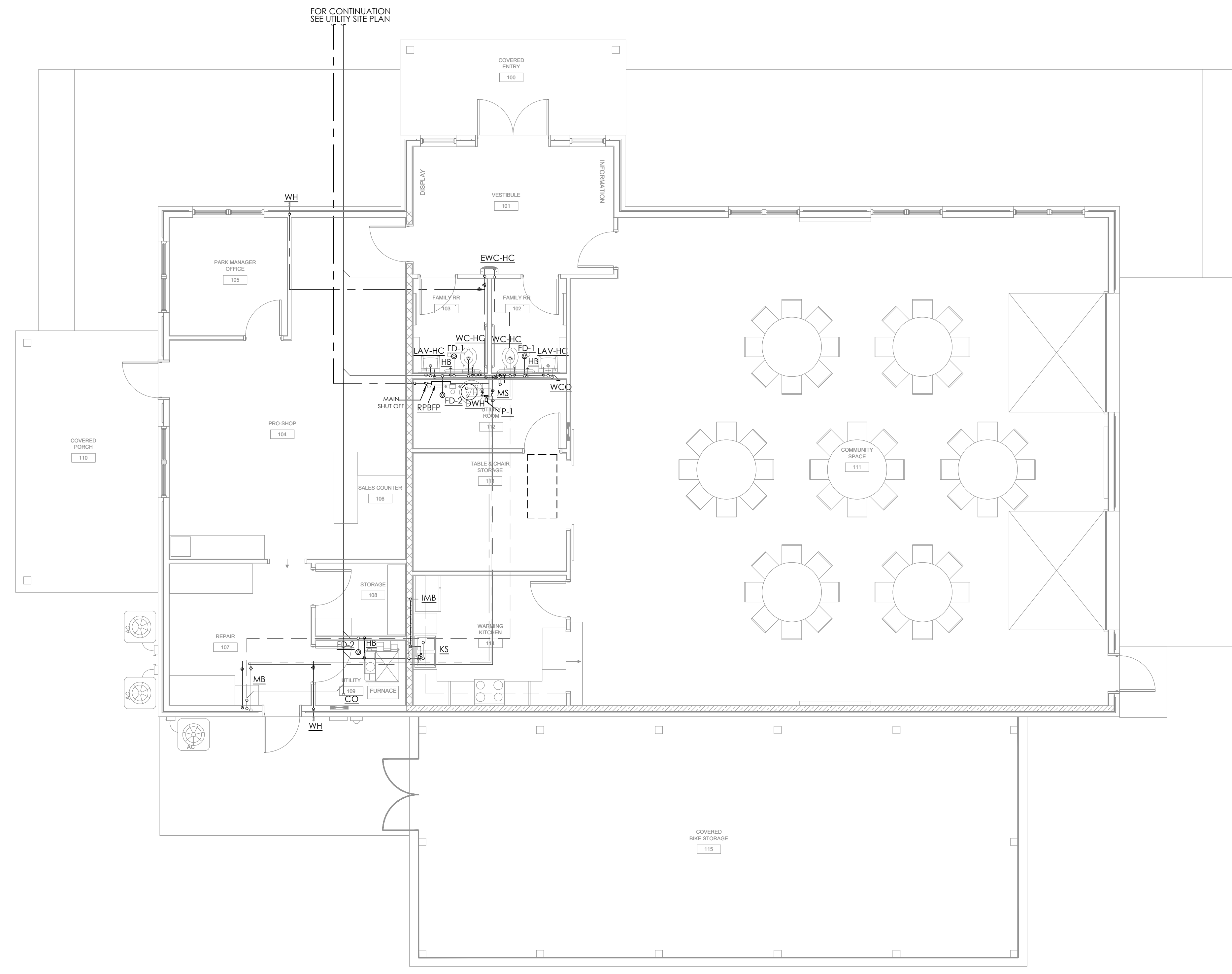
SHEET TITLE


PLBG PLAN

SHEET NUMBER

**P1.1**

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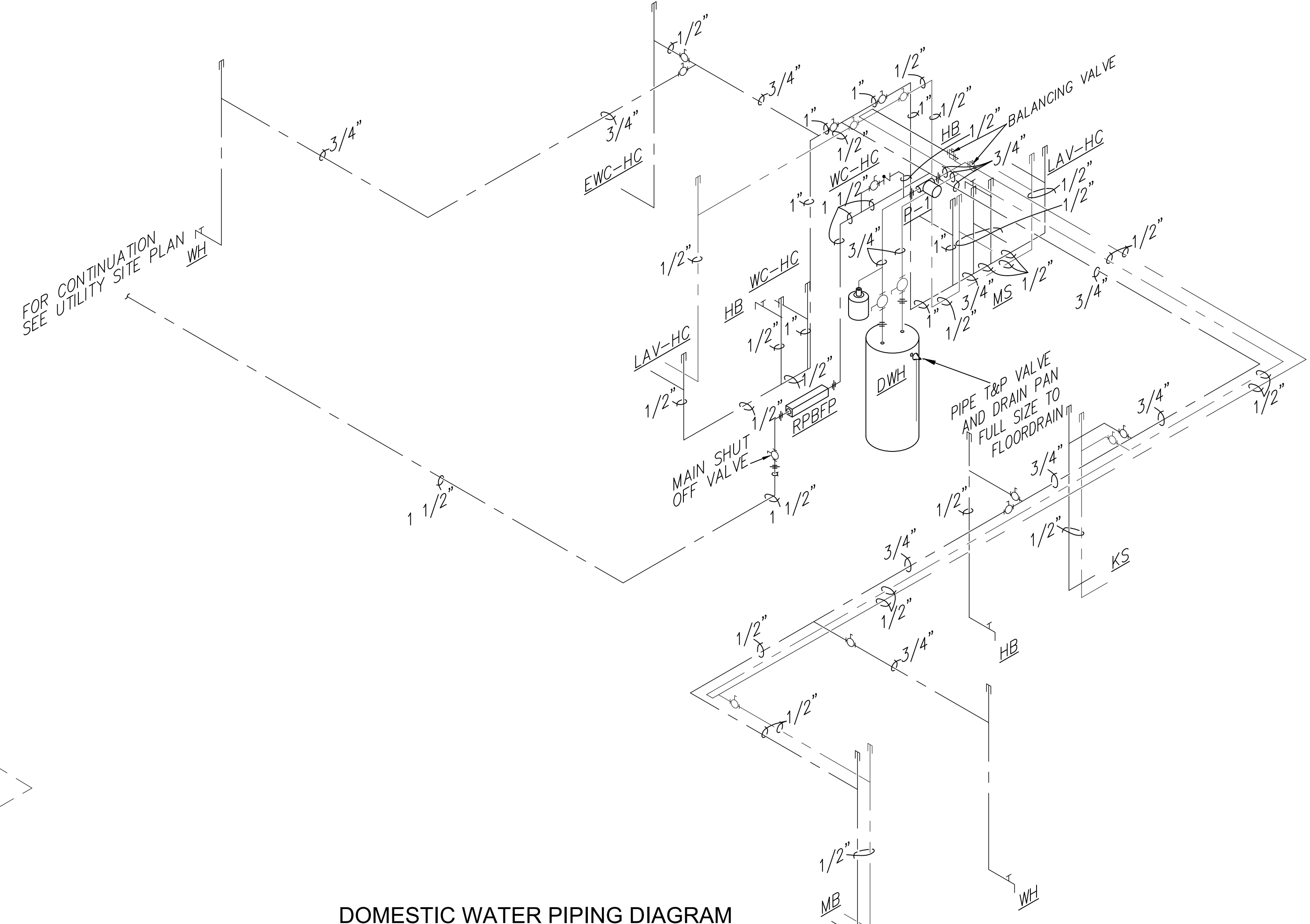
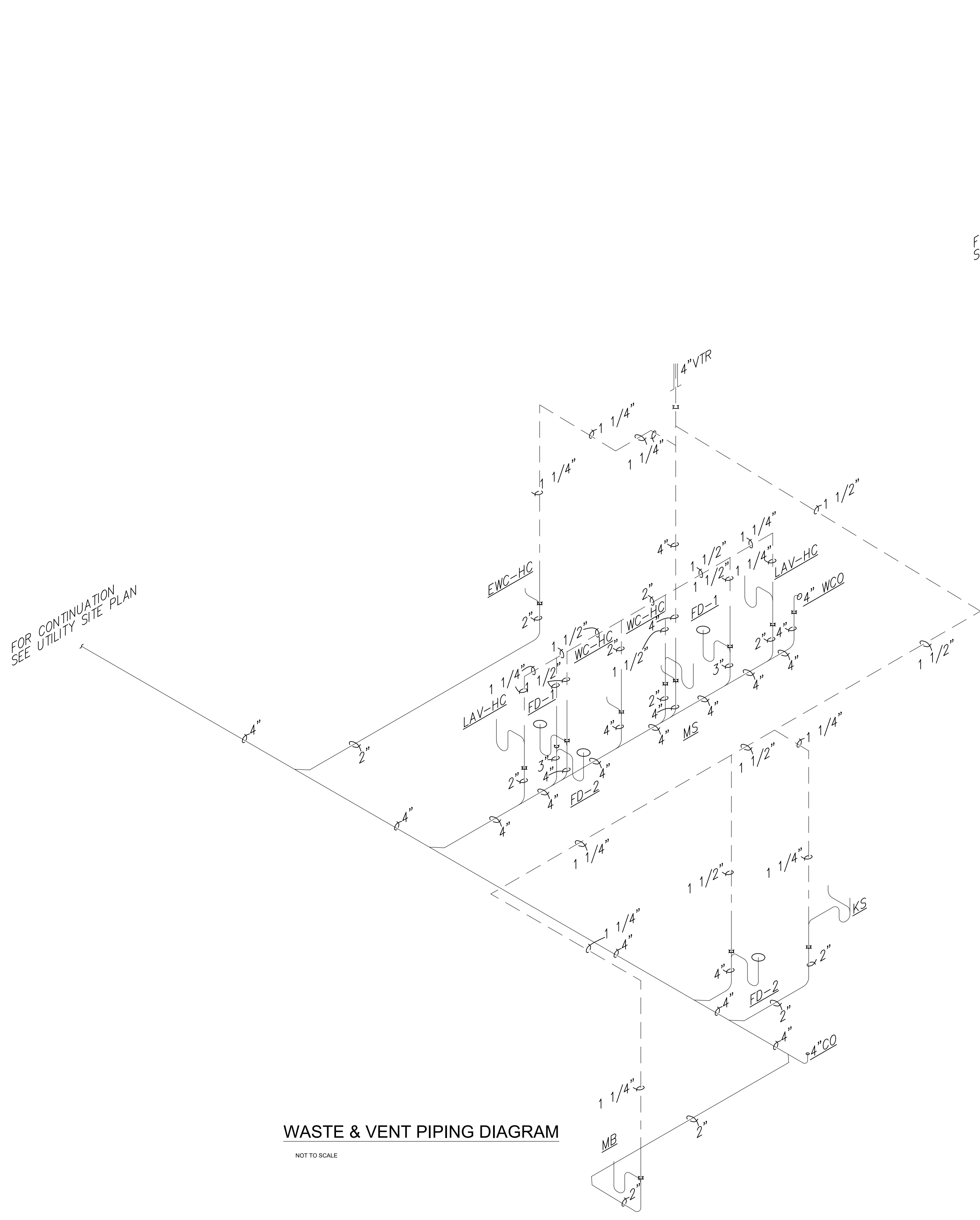


 **PLUMBING PLAN**  
SCALE 3/16" = 1'-0"  
NORTH



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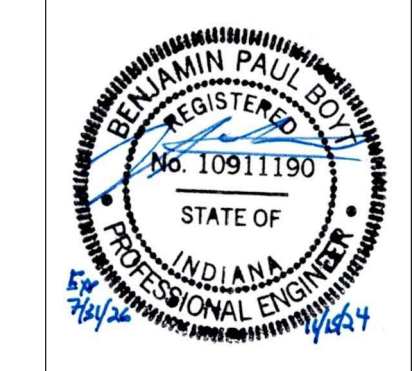
NOTIFY FUNDERS IN EVENT OF DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS IN THE PROJECT DOCUMENTS. CONTRACTORS SHALL BE IMMEDIATELY DIRECTED TO THE ENGINEER.



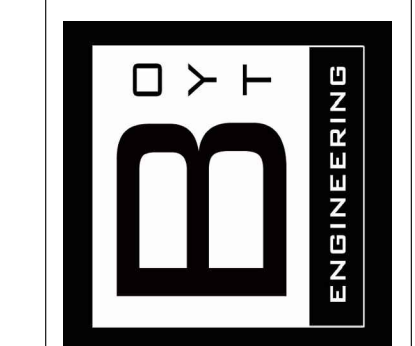
PIPING ISOMETRIC DIAGRAMS

NOTYI FOUNDER IN EVENT OF DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS IN THE PROJECT DOCUMENTS, CONTRACTOR IS NOT AUTHORIZED TO SCALE THE DRAWINGS. ALL QUESTIONS SHALL BE IMMEDIATELY DIRECTED TO THE ENGINEER.

REVISIONS		
NO.	DATE	DESCRIPTION



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PROJECT  
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DATE  
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SCALE

SHEET TITLE

PLBG ISOMETRICS

SHEET NUMBER  
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