

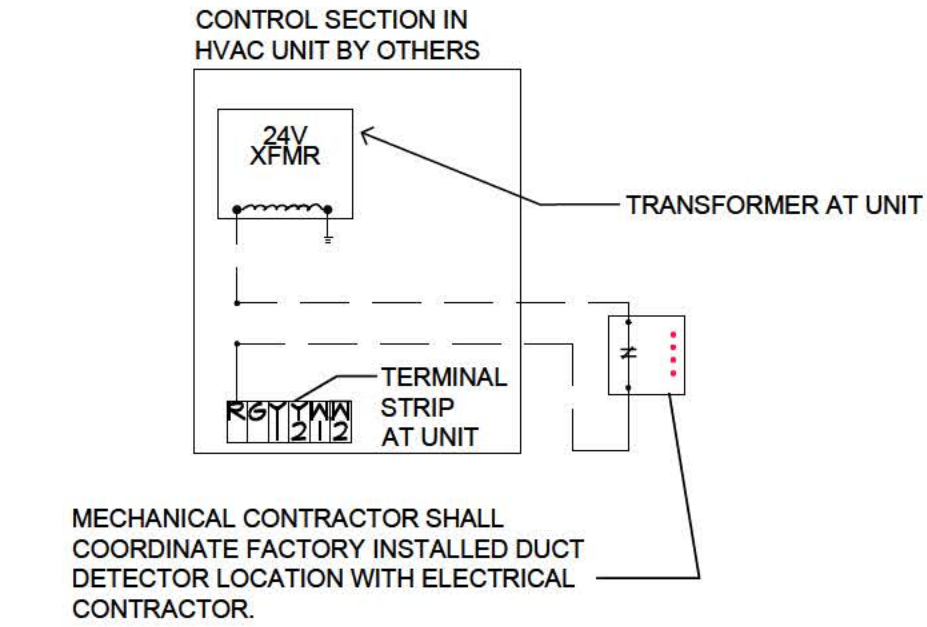
PANELBOARD: MP														
BUS AMPS: 400A MAIN SIZE/TYPE: MLO VOLT/PHASE: 120V/208V, 3PH, 4W TYPE: SDO, LINE NO.														
AIC RATING: 22AIC SERVES: GENERAL POWER MOUNTING: SURFACE LOCATION: TENANT SUITE														
GRAYBAR ELECTRICAL CO. INC. 11885 LACKLAND ROAD ST. LOUIS, MO. 63146														
CKT NO.	DESCRIPTION	VOLTAMPS/PHASE			WIRE NO.	BKR AMP	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE			DESCRIPTION	CKT NO.
A	B	C								A	B	C		
1	SPARE				20	1	3	45	8	3600			RTU 1	2
3	GENERAL LIGHTING	3			12	20	1			3600			SPACE	4
5	SPARE				20	1	1						SPACE	6
7	SPARE				20	1	3	50	8	4920			RTU 2	8
9	SPARE				20	1	1			4920			SPACE	10
11	SPARE				20	1	1			4920			SPACE	12
13	GENERAL LIGHTING	449			12	20	1	3	45	8	3600		RTU 3	14
15	SPACE									3600			SPACE	16
17	SPACE									3600			SPACE	18
19	SPACE									60			SMOKE DETECTORS	20
21	SPACE												SPACE	22
23	BUILDING LIGHTING		210		12	20	1	1					SPACE	24
25	SITE LIGHTING	600			10	20	1	1					SPACE	26
27	SECURITY SITE LIGHTING		300		10	20	3	1					SPACE	28
29	SITE SIGN	1300			0	20	1	1					SPACE	30
31	SPARE				0	20	1	1					SPACE	32
33	SPARE				20	1	1						SPACE	34
35	SPARE				20	3	1						SPACE	36
37	SPARE												SPACE	38
39	SPARE												SPACE	40
41	SPARE				20	1	1	20					SPACE	42
SUBTOTAL		2549	360	1510						12170	12120	12120	SUBTOTAL	
TOTAL PHASE A - VA		15518			LOAD				CONN. VA	DF	ACCESSORIES			
AMPS		129.3			COOLING				88599	1.00	1. EQUIPMENT GROUND BAR			
TOTAL PHASE B - VA		12473			HEATING				N.A.	1.00	2. ISOLATED GROUND BAR			
AMPS		103.9			LIGHTING				N.A.	1.25	3. SDO D #001PAF - LOCKABLE CLIPS			
TOTAL PHASE C - VA		14179			GEN. RECEPT.				1640	1.0/3	4. MUST BE TYPE "HACR" BREAKER			
AMPS		118.0			MOTORS				N.A.	1.00	5. CIRCUIT TO BE ROUTED THROUGH TRANSFER SWITCH "E"			
TOTAL PANEL VA		42162			APPLIANCES				N.A.	1.00	6. CIRCUIT TO BE ROUTED THROUGH TIME CLOCK			
AMPS		171.1			DISC. EQUIP.				N.A.	0.50	7. PANEL TO BE SUPPLIED WITH FEED THRU LUGS			
											TOTAL DEMAND - VA		43202	
											AMPS		120.0	
											PANEL AMPS AT 90%		320	

PANELBOARD: PLP														
BUS AMPS: 400A MAIN SIZE/TYPE: MLO VOLT/PHASE: 120V/208V, 3PH, 4W TYPE: SDO, LINE NO.														
AIC RATING: 22AIC SERVES: GENERAL POWER MOUNTING: SURFACE LOCATION: TENANT SUITE														
GRAYBAR ELECTRICAL CO. INC. 11885 LACKLAND ROAD ST. LOUIS, MO. 63146														
CKT NO.	DESCRIPTION	VOLTAMPS/PHASE			WIRE NO.	BKR AMP	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE			DESCRIPTION	CKT NO.
A	B	C								A	B	C		
1	SPARE				20	1	1	20					SPACE	2
3	SPARE				20	1	1	20					SPACE	4
5	SPARE				20	1	1	20					SPACE	6
7	SPARE				20	1	1	20					SPACE	8
9	SPARE				20	1	1	20					SPACE	10
11	SPARE				20	1	1	20					SPACE	12
13	SPARE				20	1	1	20					SPACE	14
15	SPARE				20	1	1	20					SPACE	16
17	SPARE				20	1	1	20					SPACE	18
19	SPARE				20	1	1	20					SPACE	20
21	SPARE				30	1	1	20					SPACE	22
23	SPARE				20	1	1	20					SPACE	24
25	RECEPTACLE IRRADIATION	1000			12	20	1	1	20				SPACE	26
27	SPARE				20	1	1						SPACE	28
29	SPARE				20	1	1						SPACE	30
31	SPARE				20	1	1						SPACE	32
33	SPARE				20	1	1	20					SPACE	34
35	SPARE				20	1	1	20					SPACE	36
37	SPARE				20	1	1	20					SPACE	38
39	SPARE				1	1	1	15					SPACE	40
41	SPARE				1	1	1	20					SPACE	42
SUBTOTAL		1000	0	0						0	50	640	SUBTOTAL	
TOTAL PHASE A - VA		1000			LOAD				CONN. VA	DF	ACCESSORIES			
AMPS		8.3			COOLING				N.A.	1.00	1. EQUIPMENT GROUND BAR			
TOTAL PHASE B - VA		50			HEATING				N.A.	1.00	2. ISOLATED GROUND BAR			
AMPS		4.4			LIGHTING				N.A.	1.25	3. GFCI BREAKER CKT. #021#16			
TOTAL PHASE C - VA		540			GEN. RECEPT.				1090	1.0/3	4. SDO D #001PAF CKT. #33			
AMPS		4.5			MOTORS				N.A.	1.00	5. MUST BE TYPE "HACR" BREAKER			
TOTAL PANEL VA		1590			APPLIANCES				N.A.	1.00	6. CIRCUIT TO BE ROUTED THROUGH TRANSFER SWITCH "E"			
AMPS		4.4			DISC. EQUIP.				N.A.	0.50	7. 9Q D #001PAF - LOCKABLE CLIPS			
											TOTAL DEMAND - VA		1590	
											AMPS		4.4	
											PANEL AMPS AT 90%		320	

MECHANICAL EQUIPMENT ELECTRICAL CONNECTION SCHEDULE														
DESCRIPTION	VOLTAGE AND PHASE	MCA	HP/ WATT	DIRECT CONNECTION	CONNECTION	PANEL	CIRCUIT NO.	CIRCUIT BREAKER SIZE	DISC. SWITCH	GFI RECEPTACLE	CIRCUIT NO.	SMOKE DETECTOR	NOTES	
					CONDUIT AND WIRE SIZE									
RTU-1	208V-3Ø	30.0	-	●	3#8, 1#10(G), 1".C.	MP	2,4,6	45A/3P	60A-NF-3R	YES	PLP-12	NO	1,2,3,6	
RTU-2	208V-3Ø	41.0	-	●	3#8, 1#10(G), 1".C.	MP	8,10,12	50A/3P	60A-NF-3R	YES	PLP-12	YES	1,2,3,6,8	
RTU-3	208V-3Ø	30.0	-	●	3#8, 1#10(G), 1".C.	MP	14,16,18	45A/3P	60A-NF-3R	YES	PLP-12	NO	1,2,3,6	
1. THE E.C. SHALL VERIFY ALL EQUIPMENT SPECIFICATIONS (VOLTAGE, OVERCURRENT PROTECTION, FUSE SIZES, ETC.) WITH M.C. PRIOR TO DISTRIBUTION OF EQUIPMENT AND ROUGH-IN. THE E.C. SHALL ALSO BE RESPONSIBLE FOR PROVIDING ALL CONNECTIONS, DEVICES, SAFETY SWITCHES, ETC. LISTED ON THIS SCHEDULE UNLESS NOTED ON THIS SCHEDULE AS BEING PROVIDED BY OTHERS. 2. EC SHALL PROVIDE INTEGRAL STARTER AND/OR DISCONNECT SWITCH. E.C. SHALL BRANCH TO FINAL CONNECTION VIA LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT. 3. ROUTE CONDUIT THRU EQUIPMENT CURB OR PROVIDE SEPARATE ROOT CONDUIT BOOT. COORD. NATE WITH M.C. 4. CONNECT TO LOCAL LIGHTING CIRCUIT FOR FAN SERVICE. 5. MULTIPLE ITEMS ARE CONNECTED TO THE SAME CIRCUIT. 6. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS, OR SHAFTS SHALL BE SEALED IN ACCORDANCE WITH WALL TYPE AS SHOWN ON SHEET A1.0. 7. PROVIDE 120V TOGGLE SWITCH FOR DISCONNECTING MEANS. 8. PROVIDE SMOKE DETECTOR CONTROL CIRCUIT AND WIRING CONTROL, SEE DETAIL. * NOT ALL NOTES MAY APPLY														

GENERAL NOTES														
1. COORDINATE ALL RECEPTACLE LOCATIONS & HEIGHTS WITH EQUIPMENT MANUFACTURER CUTSHEETS PRIOR TO ROUGH-IN. 2. COORDINATE ALL NON-EQUIPMENT RELATED RECEPTACLE LOCATIONS AND HEIGHTS WITH ARCHITECTURAL DRAWINGS.														

- GENERAL NOTES:**
- PROVIDE SURFACE MOUNTED 120/208V, 3PH, 4W, 42 CIRCUIT 400A POWER FEED THRU PANEL MP, SEE SCHEDULE. ROUTE IN 2-2" CONDUITS AND FEEDER THROUGH THE EXTERIOR WALL. EC SHALL CORE-DRILL WALL AS REQUIRED AND SEAL ALL AS REQUIRED TO COMPLY WITH LOCAL CODES. ELECTRICAL TRADE SHALL EXTEND FEEDERS AND CONDUIT TO NEW 400A MAIN DISCONNECT AT METER ASSEMBLY. EXTEND AND MAKE ALL FINAL CONNECTION TO METER ASSEMBLY. REFER TO ONE LINE DIAGRAM ON SHEET E1.
 - PROVIDE NEW DEDICATED NIGHT LIGHTING FEEDER ROUTED TO POWER PANEL "MP". CIRCUIT AS NOTED ON PLANS. ROUTE 2-#12 IN 3/4" CONDUIT TO 20A 1P BREAKER. IDENTIFY BREAKER AS 24HR/NL. PROVIDE LOCKED BREAKER.
 - PROVIDE SURFACE MOUNTED 120/208V, 3PH, 4W, 42 CIRCUIT 400A SUB-POWER PANEL PLP, SEE SCHEDULE. ROUTE 2-2" CONDUITS AND FEEDERS TO 400A MAIN DISTRIBUTION PANEL "MP". EXTEND AND MAKE ALL FINAL CONNECTIONS AS REQUIRED TO COMPLY WITH LOCAL CODE. REFER TO ONE LINE DIAGRAM ON SHEET E1.
 - PROVIDE SURFACE MOUNTED GENERAL RECEPTACLE. ELECTRICAL SHALL PROVIDE FEEDER AND ROUTE TO NEW PANEL LOCATION. EXTEND AND MAKE ALL FINAL CONNECTIONS. ROUTE #12 FEEDER IN 3/4" CONDUIT OR AS PER CODE TO 20A 1P BREAKER AS REQUIRED. EXTERIOR RECEPTACLE SHALL BE WP WITH COVER.
 - WIRE NEW EXIT LIGHTING FIXTURES TYPE XR TO SEPARATE UN-SWITCHED SOURCE CIRCUIT. WIRE IN SEPARATE RACEWAY. WIRING IS NOT SHOWN FOR CLARITY. CLEARLY IDENTIFY EXIT LIGHTING CIRCUIT FEEDER UNIT EQUIPMENT IN POWER PANEL AS NOTED. EXIT FIXTURE SHALL BE CAPABLE WITH EXTERIOR EM FIXTURE.
 - PROVIDE ILLUMINATED BATTERY EMERGENCY LIGHTING AS REQUIRED BY CODE. EMERGENCY LIGHTING SHALL PROVIDE A MINIMUM OF ONE FOOT-CANDLE AT THE FLOOR LEVEL. ELECTRICAL CONTRACTOR SHALL PROVIDE DEDICATED FEEDER TO NEW 24HR NIGHT LIGHTING EMERGENCY BRANCH CIRCUIT AS LIGHTING IN THE AREA SERVED. ANY LOCAL SWITCHING, ROUTE CIRCUIT TO LOCAL POWER AS NOTED ON PLANS. CLEARLY IDENTIFY LIGHTING CIRCUIT FEEDER UNIT EQUIPMENT PER LOCAL AUTHORITY AND NEC ELECTRICAL CODE. VERIFY FIXTURE LOCATION NOT TO EXCEED 9'-0" AFF.
 - PROVIDE EXTERIOR WALL MOUNTED EMERGENCY EXIT FIXTURE AS NOTED ON PLANS, INSTALLED ABOVE DOORS. REFER TO ARCHITECT'S PLANS FOR REQUIRED ELEVATION. THIS TRADE SHALL ROUTE 2-#12 IN 3/4" CONDUIT CIRCUIT FEEDERS WITH FULL SIZE GROUND TO FIXTURE FROM PANEL MP. POINT OF SERVICE SHALL BE ROUTED THRU PHOTOCELL. THIS TRADE SHALL ROUTE FEEDER ON INTERIOR WALL ONLY. CIRCUIT SHALL BE NON-SWITCHED. FIXTURES SHALL PROVIDE A MINIMUM OF 1.0FC'S AT THE MEANS OF EGRESSES.
 - PROVIDE REMOTE BATTERY EMERGENCY LIGHTING LED HEAD AS REQUIRED BY CODE. EMERGENCY LIGHTING HEAD SHALL PROVIDE A MINIMUM ILLUMINATION AT THE EXTERIOR DOOR. WIRE TO EXIT LIGHT AS IN AREA SERVED. CONNECT AHEAD OF ANY LOCAL SWITCHING. CLEARLY IDENTIFY EXIT CIRCUIT FEEDER UNIT EQUIPMENT PER LOCAL AUTHORITY AND LOCAL EM ELECTRICAL CODE. COORDINATE FIXTURE VOLTAGE WITH EXIT FIXTURE XR AND ADJUST AS REQUIRED. REFER TO ARCHITECTURAL PLANS FOR FIXTURE ELEVATION.
 - PROVIDE NEW EXTERIOR RATED FOR ENTRY 400A 120/208V, 3PH, 4W, METER ASSEMBLY. ELECTRICAL TRADE SHALL INSTALL PER ALL COMED STANDARDS. THIS TRADE SHALL BE REQUIRED TO COORDINATE THE INSTALLATION GFI/METER AND 400A EXTERIOR MAIN DISCONNECT WITH THE COMED ENGINEER. INSTALLATION AS REQUIRED BY UTILITY AND LOCAL INSPECTIONS. REFER TO ONE-LINE DIAGRAM. ELECTRICAL SHALL VERIFY THE METER ASSEMBLY NUMBER WITH COMED BEFORE ORDERING AND INSTALLATION.



- NOTES:**
- DUCT DETECTOR SHALL BE FURNISHED BY RTU SUPPLIER AND MOUNTED BY M.C., WIRED BY THE E.C.
 - ALL EQUIPMENT & WIRING SHALL BE IN CONFORMANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

HVAC CONTROL WIRING SCHEMATIC

SCALE: NONE

NOTE:
BUILD-OUT LIGHTING FIXTURES INCLUDING STRIP, RECESSED LIGHTING, ADDITIONAL EMERGENCY AND EXIT SHALL BE FURNISHED AND INSTALLED UNDER SEPARATE PERMIT SUBMITTAL.

NOTE:
BUILD-OUT GENERAL POWER INCLUDING RECEPTACLES, EXHAUST FANS, DISPLAY OUTLETS AND ETC SHALL BE FURNISHED AND INSTALLED UNDER SEPARATE PERMIT SUBMITTAL.

NOTE:
ELECTRICAL TRADE SHALL WIRE EXIT LIGHTING TO SEPARATE INDEPENDENT UN-SWITCHED CIRCUIT. WIRE IN SEPARATE RACEWAY. WIRING IS NOT SHOWN FOR CLARITY. NO APPLIANCES, LAMPS OTHER THAN THOSE SPECIFIED AS REQUIRED FOR EMERGENCY USE. SHALL BE SUPPLIED BY EMERGENCY CIRCUITS.

GROUNDING NOTE:
ALL BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR