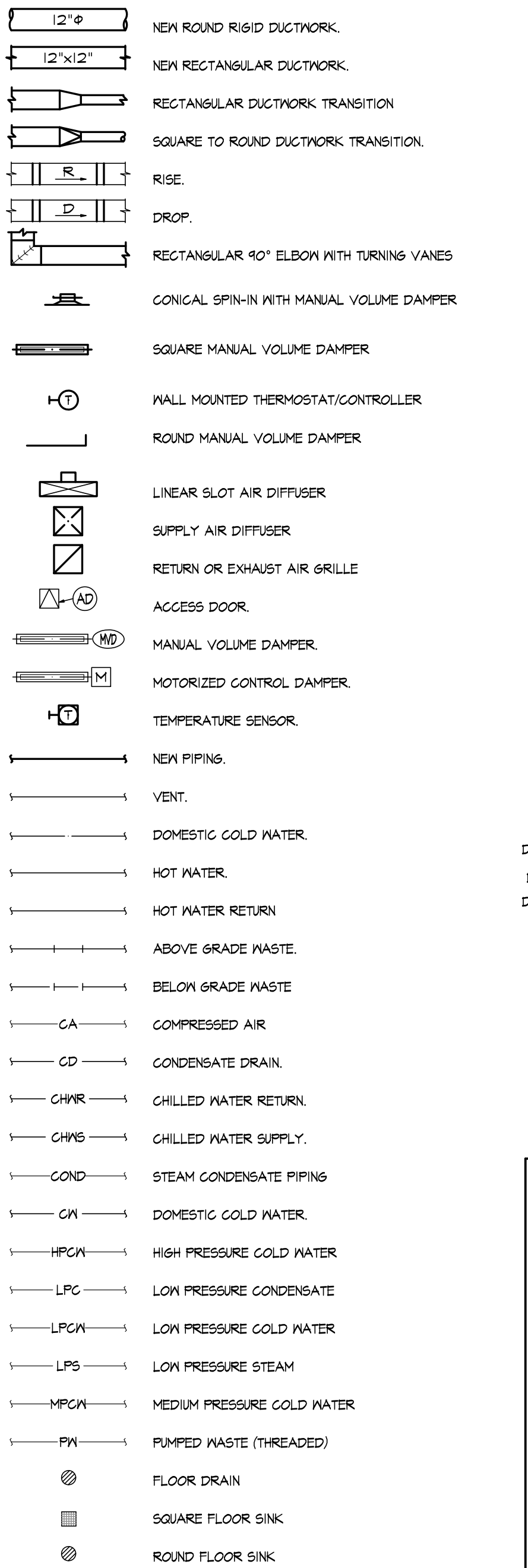


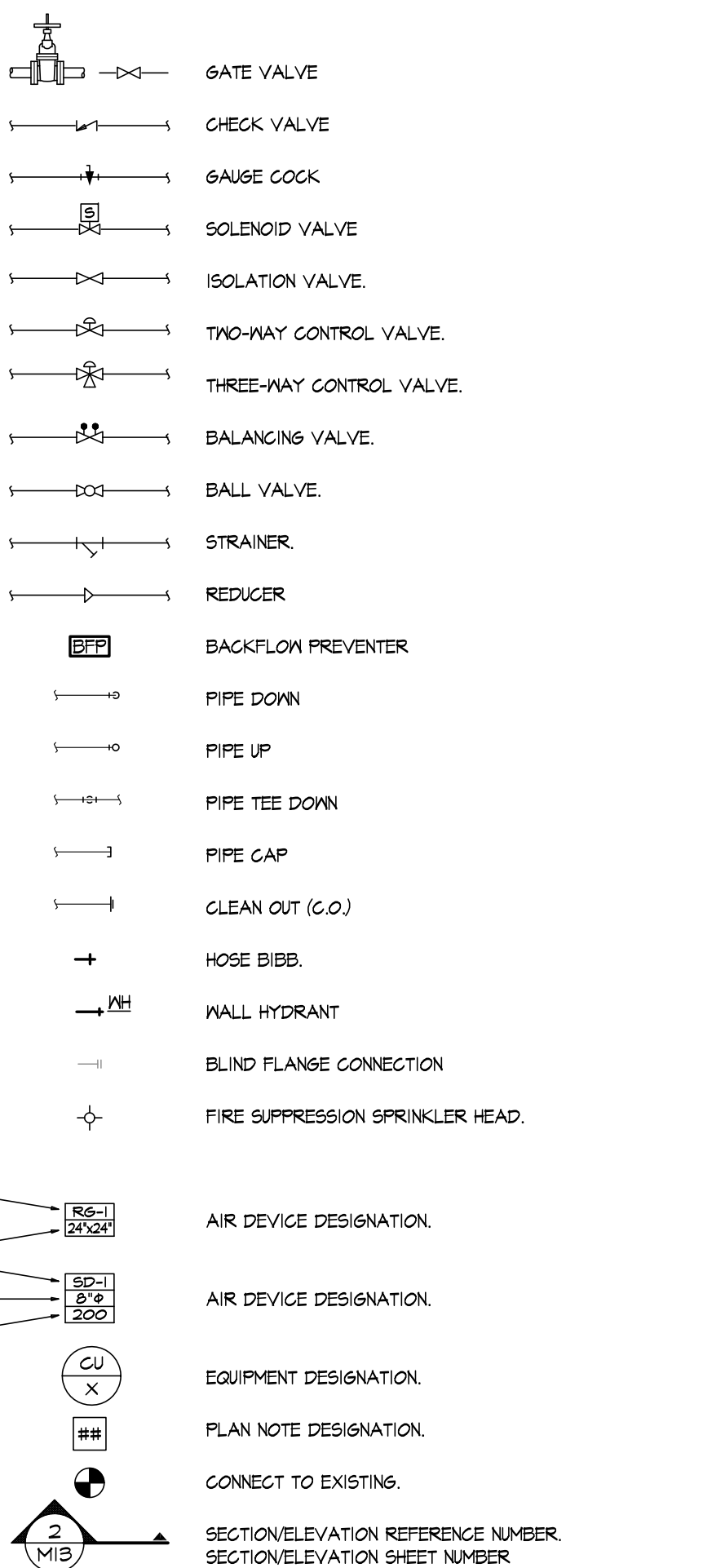
## MECHANICAL/PLUMBING SYMBOLS



### MECHANICAL NOTATIONS

ARF	ABOVE RAISED FLOOR.
ATF	ABOVE FINISHED FLOOR.
UNO	UNLESS NOTED OTHERWISE
FO / FC	FAIL OPEN / FAIL CLOSE
VTR	VENT THRU ROOF
AD	ACCESS DOOR
CD	CONDENSATE DRAIN
UH	UNIT HEATER
FD	FIRE DAMPER
MVD	MANUAL VOLUME DAMPER
FTU	FAN TERMINAL UNIT
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
BOD	BOTTOM OF DUCT ELEVATION
BOF	BOTTOM OF PIPE ELEVATION
OC	ON CENTER
FD	FLOOR DRAIN
RG	RETURN GRILLE
TG	TRANSFER GRILLE
SG	SUPPLY DIFFUSER
XVAV	EXISTING VAV TERMINAL UNIT
VAV	VARIABLE AIR VOLUME
VTR	VENT TO ROOF
CU	AIR COOLED CONDENSING UNIT
REF.1M2	REFERENCE DESIGNATION SHEET NUMBER
	DETAIL/PLAN NUMBER

## MECHANICAL/PLUMBING SYMBOLS



### MECHANICAL GENERAL NOTES

- THESE PLANS ARE SCHEMATIC IN NATURE AND ARE INTENDED TO DEPICT GENERAL SCOPE OF WORK. ALL WORK TO BE PERFORMED PER ALL LOCAL AND STATE CODES AND REGULATIONS.
- COORDINATE WORK WITH ALL OTHER TRADES.
- PROVIDE ALL REQUIRED OFFSETS AND TRANSITIONS AS NECESSARY TO AVOID OBSTRUCTIONS.
- PROVIDE FLEXIBLE CONNECTIONS ON ALL SUPPLY AND RETURN DUCTS CONNECTING TO AIR HANDLING UNITS.
- FURNISH AND INSTALL ALL GALVANIZED STEEL DUCTWORK AND HOUSINGS AS SHOWN ON DRAWINGS. ALL DUCTWORK SHALL BE IN CONFORMANCE WITH CURRENT SMACNA STANDARDS RELATIVE TO GAUGE, BRACING, JOINTS, ETC. SUPPORT HORIZONTAL RUNS OF DUCT FROM STRAP IRON HANGERS ON CENTERS NOT TO EXCEED 8'-0". DO NOT SUPPORT CEILING GRID, CONDUITS, PIPES, EQUIPMENT, ETC. FROM DUCTWORK. HVAC SIZES ON PLANS INDICATE CLEAR INSIDE DIMENSIONS. DUCTWORK SHALL BE MADE LARGER AS REQUIRED TO ACCOMMODATE ACOUSTIC LINING.
- RECTANGULAR DUCTWORK SHALL BE ASTM 680 GALVANIZED STEEL; ASTM A 653/A 653M; DUCT-MATE AND/OR TDF QUALITY FLANGED WITH GASKETS.
- ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS, MANUAL 1SD. ALL SUPPLY AIR DUCT PRESSURE SHALL BE THE SAME AS THE EXTERNAL STATIC PRESSURE (ESP) OF THE EQUIPMENT SUPPLYING THE DUCT. THE EQUIPMENT (ESP) SHALL BE THE PRESSURE CLASS FOR THE ENTIRE SUPPLY DUCT SYSTEM.
- CONTRACTOR SHALL PERFORM TEST READINGS ON UNITS, FAN TERMINAL UNITS, ETC. AND ADJUST EQUIPMENT TO DELIVER SPECIFIED AMOUNTS OF AIR. A TESTING AND BALANCING REPORT LOG SHALL BE MADE SHOWING ALL AIR SUPPLY QUANTITIES, FAN AND UNIT TEST READINGS, ETC. AND TWO COPIES OF THE FINAL COMPLETION OF DATA SHALL BE SUBMITTED TO THE ENGINEER FOR EVALUATION. AIR FLOWS SHALL BE BALANCED TO WITHIN PLUS/MINUS 10% OF DESIGN REQUIREMENTS. ALL EQUIPMENT SHALL BE ADJUSTED TO OPERATE AS INTENDED BY THE DRAWINGS.
- ALL THERMOSTATS AND CONTROL DEVICES SHALL BE ADJUSTED TO OPERATE AS INTENDED. ADJUST FANS, ETC. FOR PROPER AND EFFICIENT OPERATION. CERTIFY TO ENGINEER THAT ALL ADJUSTMENTS HAVE BEEN MADE AND THAT SYSTEM IS OPERATING SATISFACTORILY. ADJUST ALL AIR DEVICES TO SUPPLY THE AMOUNT OF AIR SHOWN ON THE DRAWINGS. FURTHER ADJUSTMENTS SHALL BE MADE TO OBTAIN UNIFORM TEMPERATURE IN ALL SPACES. CALIBRATE, SET, AND ADJUST ALL AUTOMATIC TEMPERATURE CONTROLS. CHECK PROPER SEQUENCING OF ALL INTERLOCK SYSTEMS, AND OPERATION OF ALL SAFETY CONTROLS.
- ALL TESTING AND BALANCING WORK SHALL BE PERFORMED BY A TESTING AND BALANCING AGENCY CERTIFIED BY NEBB OR AABC. THE CONTRACTOR SHALL FURNISH PROPER CERTIFICATION TO THE ENGINEER AND THE OWNER PRIOR TO ANY TESTING AND BALANCING WORK. THE REPORT SHALL INCLUDE CERTIFICATION DOCUMENTATION. ALL BALANCING AND TEST REPORTS SHALL BE SUBMITTED ON STANDARD AABC FORMS OR EQUIVALENT FORMS BY NEBB OR SMACNA.
- THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM HIS/HER WORK.

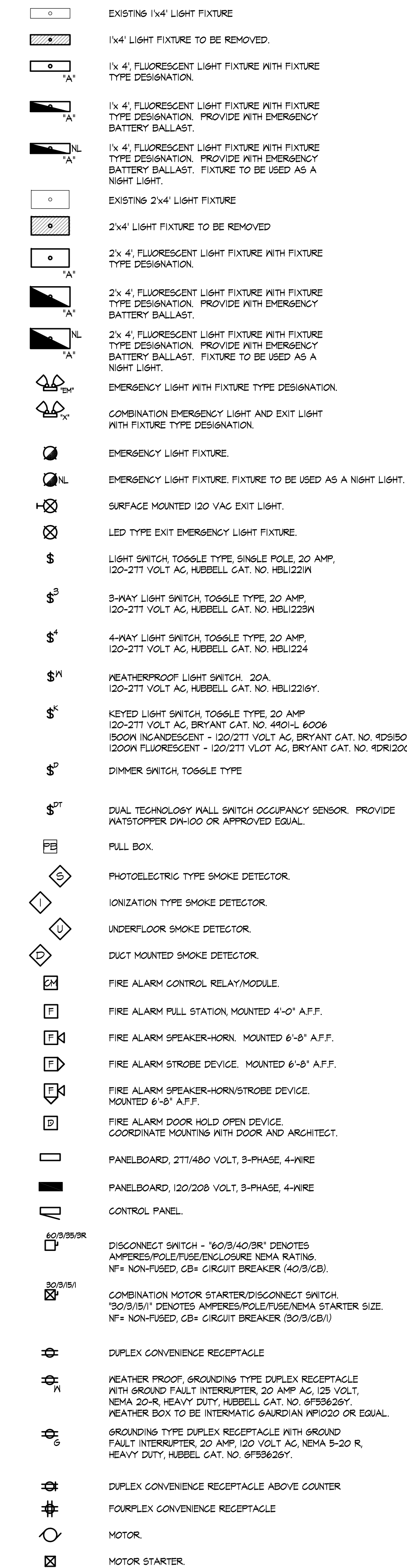
### PUMPING GENERAL NOTES

- THESE PLANS ARE SCHEMATIC IN NATURE AND ARE INTENDED TO DEPICT GENERAL SCOPE OF WORK. ALL WORK TO BE PERFORMED PER ALL LOCAL AND STATE CODES AND REGULATIONS.
- COORDINATE WORK WITH ALL OTHER TRADES.
- PROVIDE ALL REQUIRED OFFSETS AND TRANSITIONS AS NECESSARY TO AVOID OBSTRUCTIONS.
- REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- INSTALL ALL EQUIPMENT WHILE MAINTAINING ALL CLEARANCES PER EQUIPMENT MANUFACTURERS RECOMMENDATIONS AND PER LOCAL CODES.
- THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM HIS/HER WORK.
- ALL FIRE RATED ASSEMBLIES SHALL BE MAINTAINED. CAULK AROUND MECHANICAL PENETRATIONS WITH 3M CP-25 (OR EQUIVALENT) FIRE BARRIER CAULK (THICKNESS AS REQUIRED AND RECOMMENDED BY MANUFACTURE) TO MAINTAIN FIRE RESISTANCE RATING OF THE FIRE RATED ASSEMBLY.
- ALL WALL PENETRATIONS AND/OR FLAM WITHIN WALLS/FLOORS RESULTING FROM THE REMOVAL OF PLUMBING EQUIPMENT SHALL BE PATCHED AND PAINTED TO MATCH ADJACENT SURFACE.
- COORDINATE ALL CONNECTION SIZES AND REQUIREMENTS WITH FINAL EQUIPMENT SELECTION.
- SOME PIPING MAY HAVE BEEN SHOWN OFFSET FOR CLARITY.
- FIELD VERIFY EXACT ROUTING OF PIPE. ALL PIPING TO BE MOUNTED FROM STRUCTURE ABOVE AS HIGH AS POSSIBLE AND ROUTED PARALLEL OR PERPENDICULAR TO BUILDING LINES. PROVIDE OFFSETS AS NECESSARY TO AVOID EXISTING OBSTRUCTIONS.
- ALL PIPING SHALL BE SUPPORTED EVERY 6' MINIMUM.
- ALL EXPOSED PIPES PENETRATING FINISHED WALLS SHALL BE EQUIPPED WITH ESCUTCHEON PLATES FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR.
- CONTRACTOR SHALL ENSURE THAT VENT THROUGH THE ROOF IS LOCATED A MINIMUM OF 5'-0" FROM BUILDING PARAPETS AND 10'-0" FROM ROOF EQUIPMENT AIR INTAKES AND AS REQUIRED TO MEET LOCAL CODES. LOCATE 25'-0" FROM FUTURE SURGICAL ROOM AIR INTAKES.
- CONTRACTOR SHALL FURNISH AND INSTALL PROPER FREESTANDING INTERNAL WALL SUPPORTS FOR ALL WALL FIXTURES TO PREVENT PULLOUT FROM WALL. PLUMBING CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR FINAL CLEANING AND OPERATION OF INSTALLED FIXTURES AND CAULKING OF FIXTURES TO WALLS.
- ALL EXPOSED INSULATION/PIPING SHALL BE PAINTED PER ARCHITECT.
- INSULATE ALL DOMESTIC HOT WATER PIPING WITH 1" THICK MINERAL FIBER PRE-FORMED PIPE INSULATION AND ALL SERVICE JACKET. INSTALL PER MANUFACTURERS INSTRUCTIONS.
- WHERE DOMESTIC AND WASTE WATER PIPES ARE ROUTED IN UNCONDITIONED SPACES (PARKING GARAGE) PROVIDE 1" MINERAL FIBER PRE-FORMED PIPE INSULATION AND ALL SERVICE JACKET. PROVIDE HEAT TRACE FOR ALL EXPOSED PIPING. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER SERVICE.
- ALL WASTE PIPING SHALL BE SLOPED AT 1/4" PER FOOT MINIMUM.

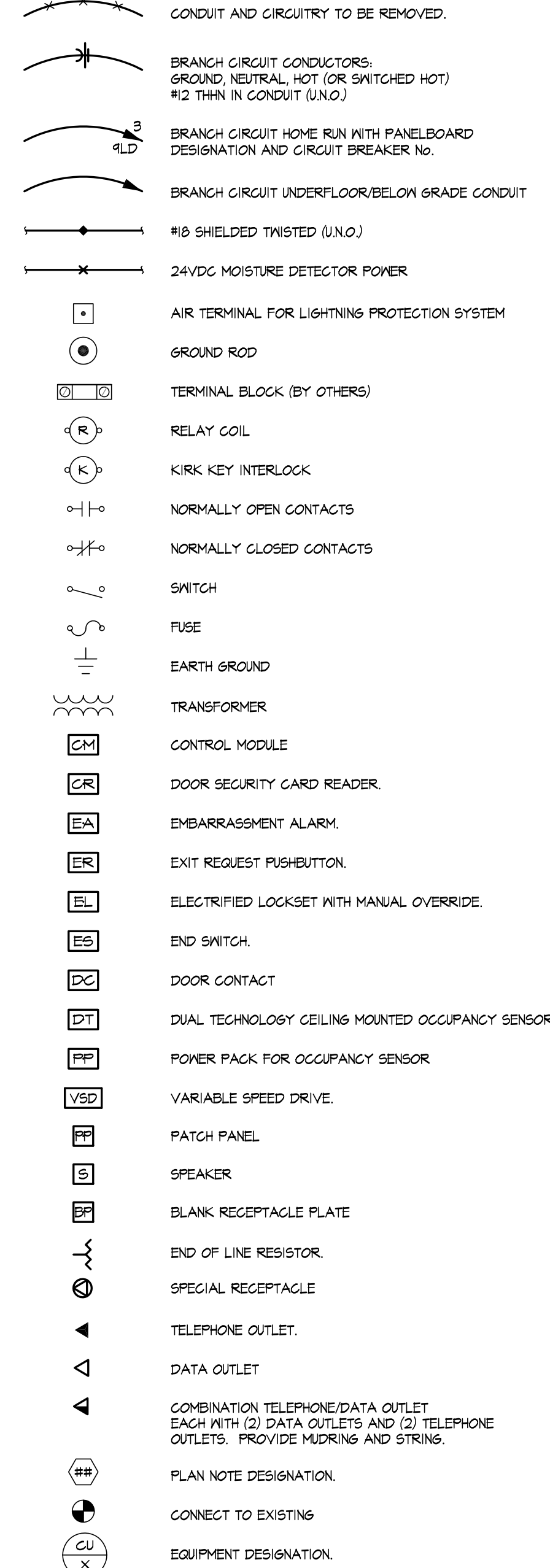
### ELECTRICAL GENERAL NOTES

- THESE PLANS ARE SCHEMATIC IN NATURE AND ARE INTENDED TO DEPICT GENERAL SCOPE OF WORK. ALL WORK TO BE PERFORMED PER ALL LOCAL AND STATE CODES AND REGULATIONS.
- THE SYMBOLS SHOWN ON THIS SHEET ARE A COMPLETE LIST OF SYMBOLS. NOT ALL SYMBOLS OR ABBREVIATIONS MAY BE USED ON THIS PROJECT.
- THESE DRAWINGS ARE SCHEMATIC IN NATURE AND INTENDED TO DEPICT THE GENERAL SCOPE OF WORK ON THIS PROJECT. FIELD VERIFICATION OF EXISTING CONDITIONS IS REQUIRED. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE IN CONFORMANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES HAVING JURISDICTION AND INSPECTION.
- COORDINATE POWER REQUIREMENTS AND FINAL LOCATIONS OF ALL EQUIPMENT, DEVICES, ETC. WITH FINAL EQUIPMENT SELECTION AND INSTALL ALL NECESSARY DEVICES ALLOWING FOR END TERMINATION/CONNECTIONS.
- ALL WIRING SHALL BE IN EMT TUBING AND SHALL BE CONCEALED. LOW VOLTAGE/COMMUNICATION WIRING IN MAY BE EXPOSED IN PLENUM SPACES, BUT MUST BE PLENUM RATED. PROVIDE 90 DEGREE ELBOW WHEN ENTERING PLENUM SPACES WITH APPROVED BUSHINGS AT CONDUIT TERMINATIONS.
- ALL FIRE RATED ASSEMBLIES SHALL BE MAINTAINED. CAULK AROUND ELECTRICAL PENETRATIONS WITH 3M CP-25 FIRE BARRIER CAULK (THICKNESS AS REQUIRED AND RECOMMENDED BY MANUFACTURER) TO MAINTAIN FIRE RESISTANCE RATING OF THE FIRE RATED ASSEMBLY.
- FURNISH AND CONNECT ALL WIRE, WIREWAY, CONDUIT, CONNECTORS, OUTLETS, ETC. NECESSARY TO ACHIEVE A COMPLETE ELECTRICAL INSTALLATION. ALTHOUGH SUCH WORK IS NOT SPECIFICALLY SHOWN OR SPECIFIED EQUIPMENT SHALL BE INSTALLED PER CODE REQUIREMENTS PROVIDING A SOUND, SECURE AND COMPLETE INSTALLATION.
- COORDINATE WORK WITH ALL OTHER TRADES.
- ALL LOW VOLTAGE WIRING (CLASS 2 OR CLASS 3) ROUTED IN PLENUM SPACES AND NOT INSTALLED IN CONDUIT MUST BE NON-COMBUSTIBLE, NON-TOXIC WHEN BURNING, TYPE CL2P, CL3P, CL2R OR CL3R AS STATED IN THE NEC ARTICLE 125.
- REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- BRANCH CIRCUITING CONVENTION - #12 AWG PER PHASE AND NEUTRAL (WHERE REQUIRED) AND 20 AMPERE CIRCUIT BREAKER UNLESS OTHERWISE NOTED. PROVIDE QUANTITY AND SIZE SWITCH CONDUCTORS AS REQUIRED TO MAKE SYSTEM OPERATIONAL. WHERE EQUIPMENT GROUNDING CONDUCTOR AND GROUND ARE NOT INDICATED ON DOCUMENTS, CONTRACTOR SHALL SIZE EQUIPMENT GROUNDING CONDUCTOR AND CONDUIT PER NEC.
- ELECTRICAL CONTRACTOR TO CONNECT TO EXISTING PANELBOARDS AS NOTED ON THE DRAWINGS. PROVIDE ALL NECESSARY CIRCUIT BREAKERS, DISCONNECTS, ETC. FOR COMPLETE OPERATING SYSTEM.
- ALL WALL PENETRATIONS AND/OR FLAMS WITHIN WALLS/FLOORS RESULTING FROM THE REMOVAL OF ELECTRICAL EQUIPMENT AND DEVICES SHALL BE PATCHED AND PAINTED TO MATCH ADJACENT SURFACES.
- THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM HIS/HER WORK.

## ELECTRICAL SYMBOLS



## ELECTRICAL SYMBOLS

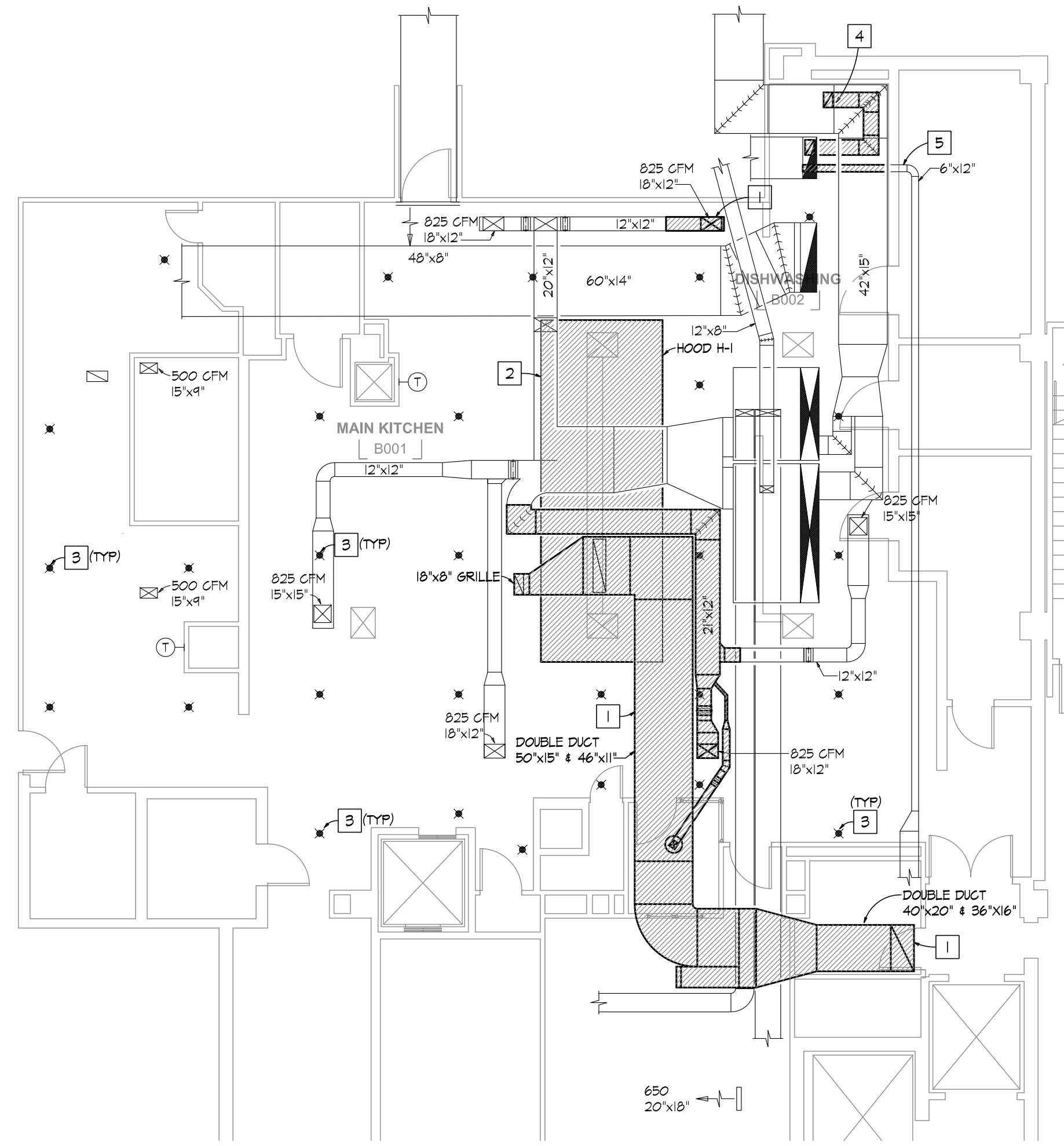


### ELECTRICAL NOTATIONS

ARF	ABOVE RAISED FLOOR.
AFF	ABOVE FINISHED FLOOR.
UNO	UNLESS NOTED OTHERWISE
ICP	INDEPENDENT CONTROLS CONTRACTOR
TCC	TWISTED SHIELDED PAIR
1/C	INDICATES SINGLE CONDUCTOR CABLE
*A OR **	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES DEVICE BOTTOM TO BE MOUNTED 4' ABOVE CENTER TOP BACKSPLASH.
16'	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES GROUND FAULT INTERRUPTER.
16S'	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES ISOLATED GROUND DEVICE.
TL'	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES LOCKING OR TWIST-LOCK TYPE DEVICE.
1W'	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES WEATHER-PROOF ENCLOSURE.
XP'	THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES EXPLOSION-PROOF ENCLOSURE.
60'	DIMENSIONS ADJACENT TO ANY SYMBOL INDICATES MOUNTING HEIGHT TO CENTERLINE OF DEVICE.
REF.1E2	REFERENCE DESIGNATION SHEET NUMBER
	DETAIL/PLAN NUMBER



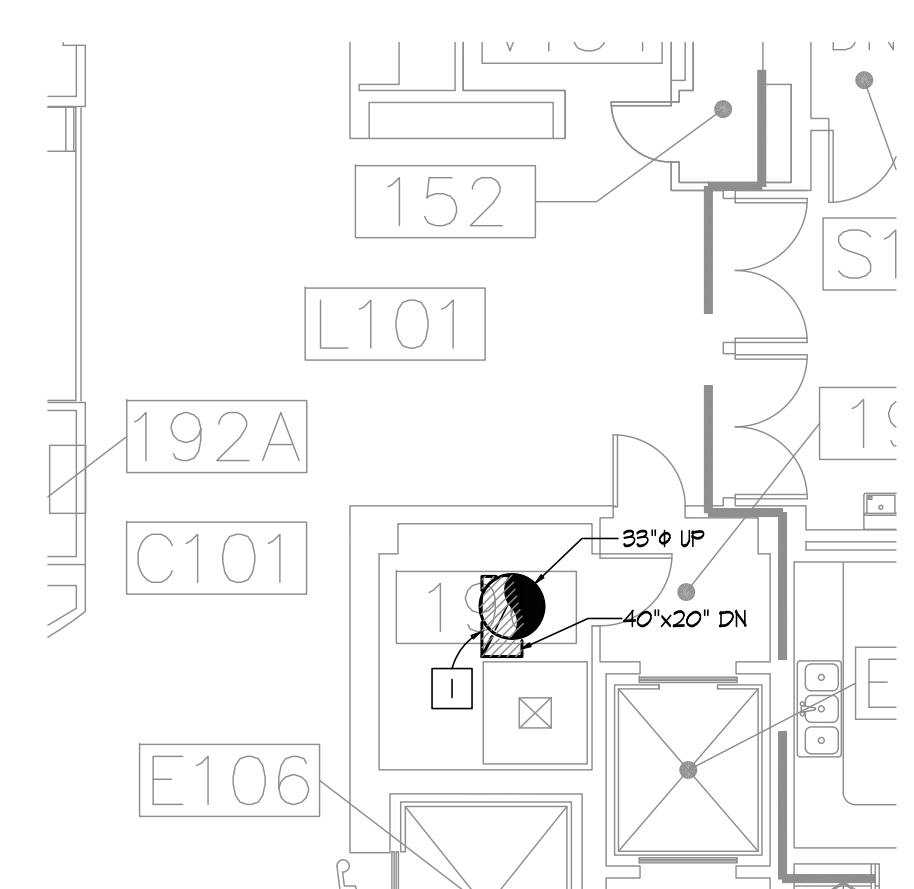
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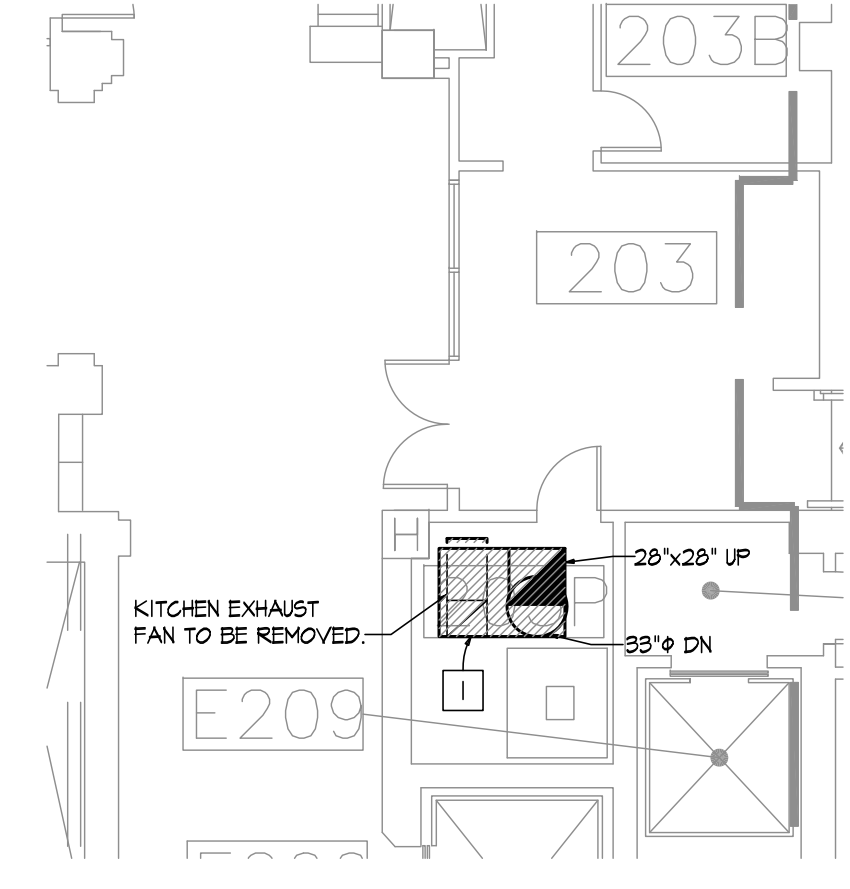
**1 PARTIAL BASEMENT MECHANICAL - DEMOLITION**  
SCALE: 1/8"=1'-0"

**PLAN NOTES:**

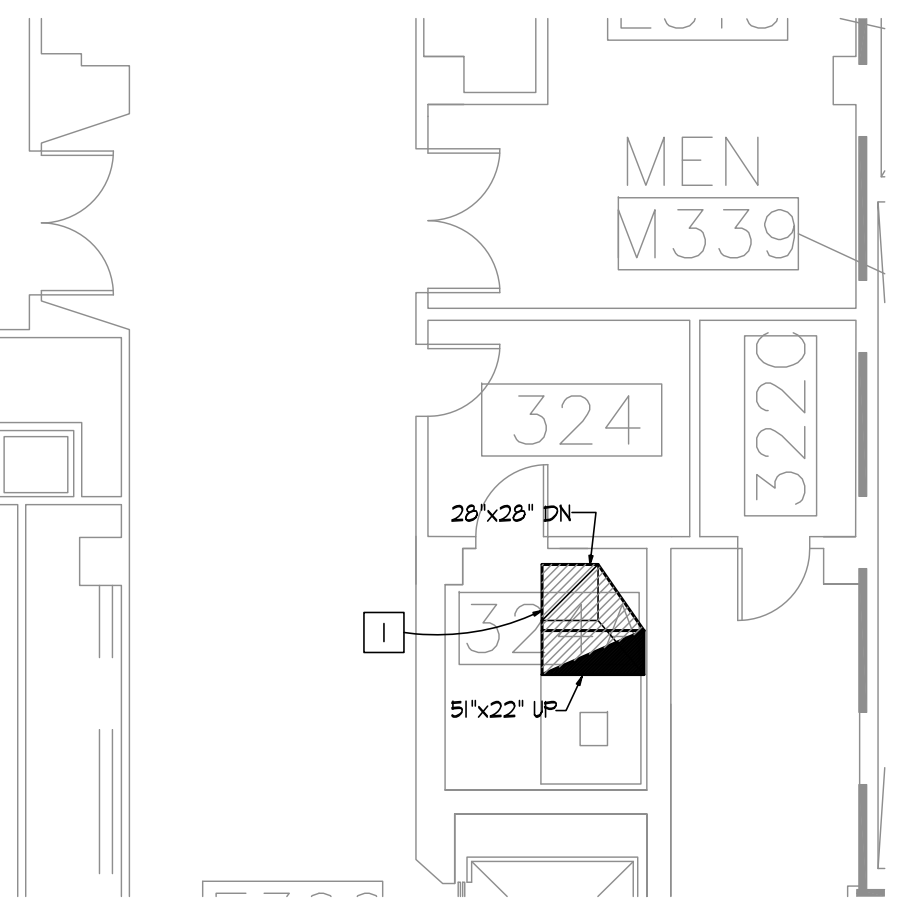
- 1 REMOVE ALL ASSOCIATED DUCTWORK, DIFFUSERS, HANGERS, SUPPORTS, GRILLES, FIRE SPRINKLER PIPING, ETC FOR EXISTING KITCHEN EXHAUST SYSTEM. REMOVE DUCTWORK FROM THIS FLOOR UP TO THE ROOF. REMOVE GREASE DUCT EXHAUST FAN LOCATED ON SECOND FLOOR DIRECTLY ABOVE. COORDINATE ALL WORK WITH PSU AND KITCHEN MANAGEMENT PRIOR TO STARTING DEMOLITION. REMOVE ALL ASSOCIATED FIRE SUPPRESSION PIPING SERVING DUCTWORK.
- 2 REMOVE EXISTING KITCHEN EXHAUST HOOD. COORDINATE ALL WORK WITH PSU AND KITCHEN MANAGEMENT PRIOR TO STARTING DEMOLITION.
- 3 REPLACE EXISTING SPRINKLER HEAD WITH QUICK RESPONSE TYPE.
- 4 EXISTING DISHWASHER. REMOVE ALL ASSOCIATED DUCTWORK, HANGERS, SUPPORTS, ETC. BACK TO NEAREST DEVICE TO REMAIN AND CAP. RE: M200A FOR NEW WORK.
- 5 REMOVE EXISTING SECTION OF RETURN DUCTWORK FOR INSTALLATION OF NEW DISHWASHER DUCTWORK. RE: M200A FOR NEW WORK.



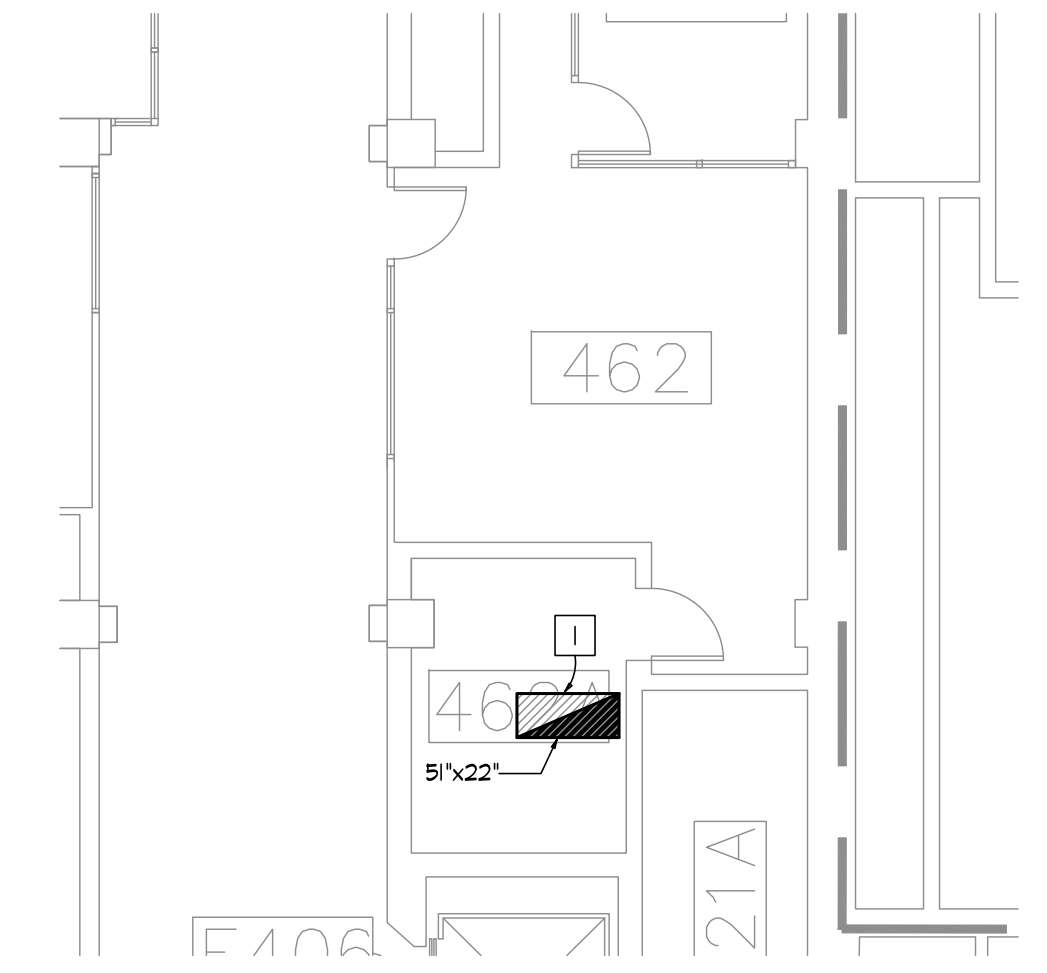
**2 PARTIAL 1st FLOOR PLAN MECHANICAL DEMOLITION**  
SCALE: 1/8"=1'-0"



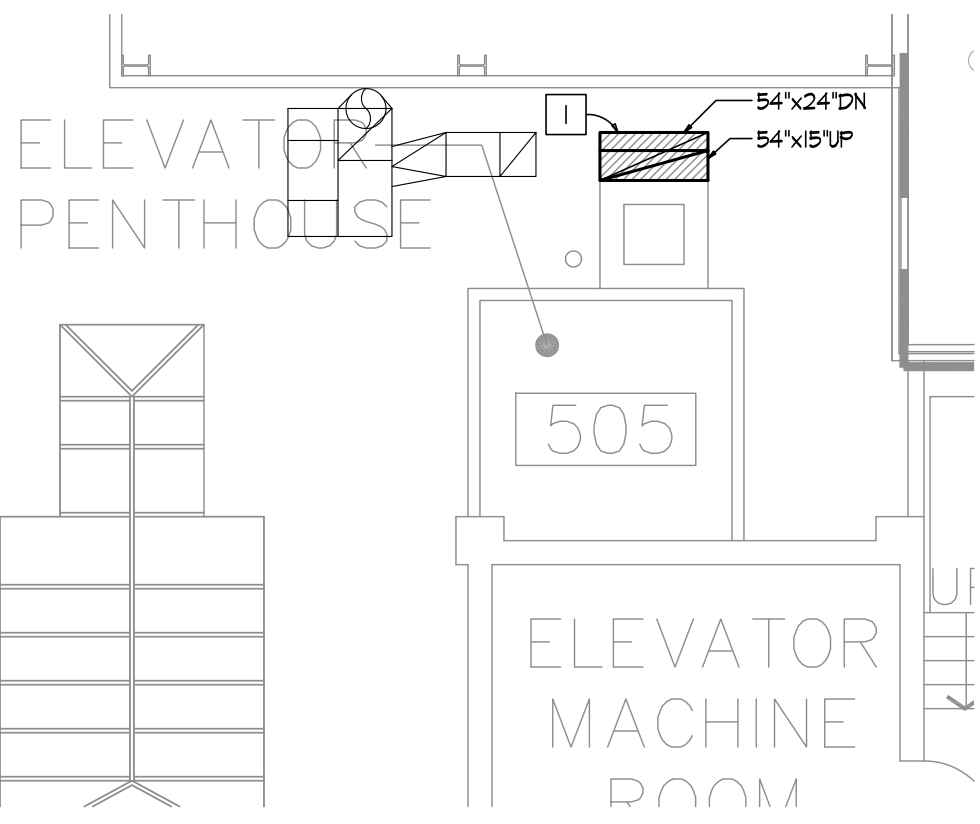
**3 PARTIAL 2nd FLOOR PLAN MECHANICAL DEMOLITION**  
SCALE: 1/8"=1'-0"



**4 PARTIAL 3rd FLOOR PLAN MECHANICAL DEMOLITION**  
SCALE: 1/8"=1'-0"



**5 PARTIAL 4th FLOOR PLAN MECHANICAL DEMOLITION**  
SCALE: 1/8"=1'-0"



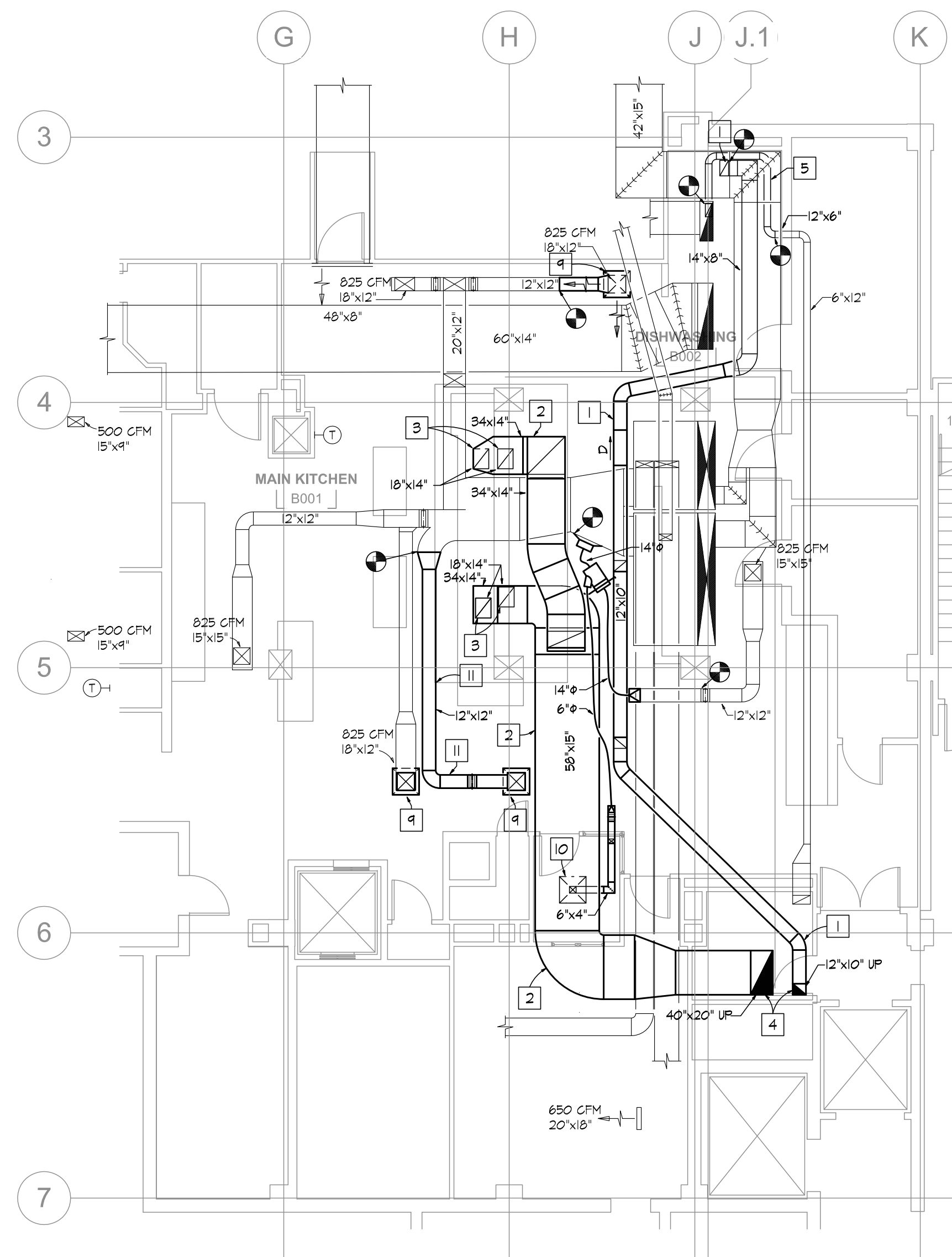
**6 PARTIAL PENTHOUSE PLAN MECHANICAL DEMOLITION**  
SCALE: 1/8"=1'-0"



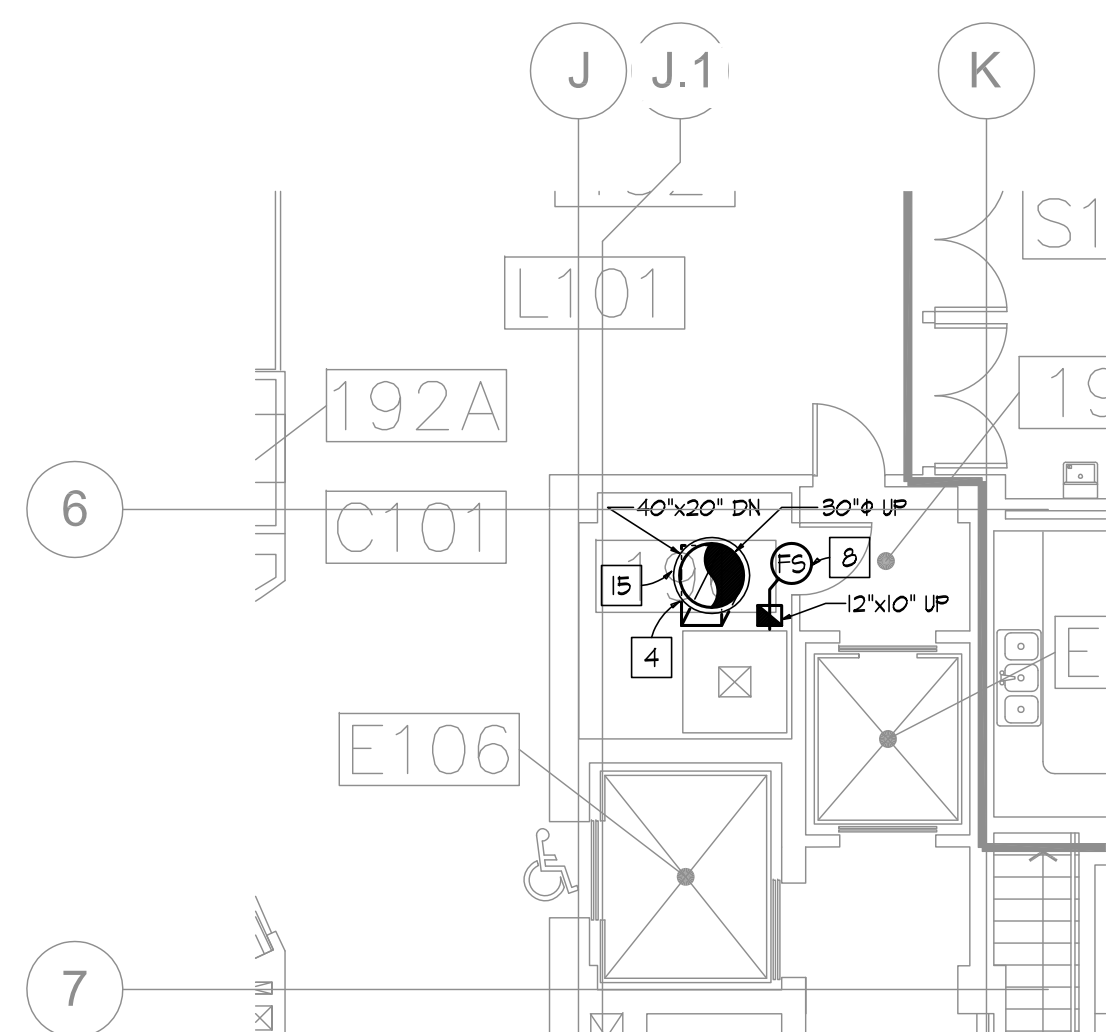
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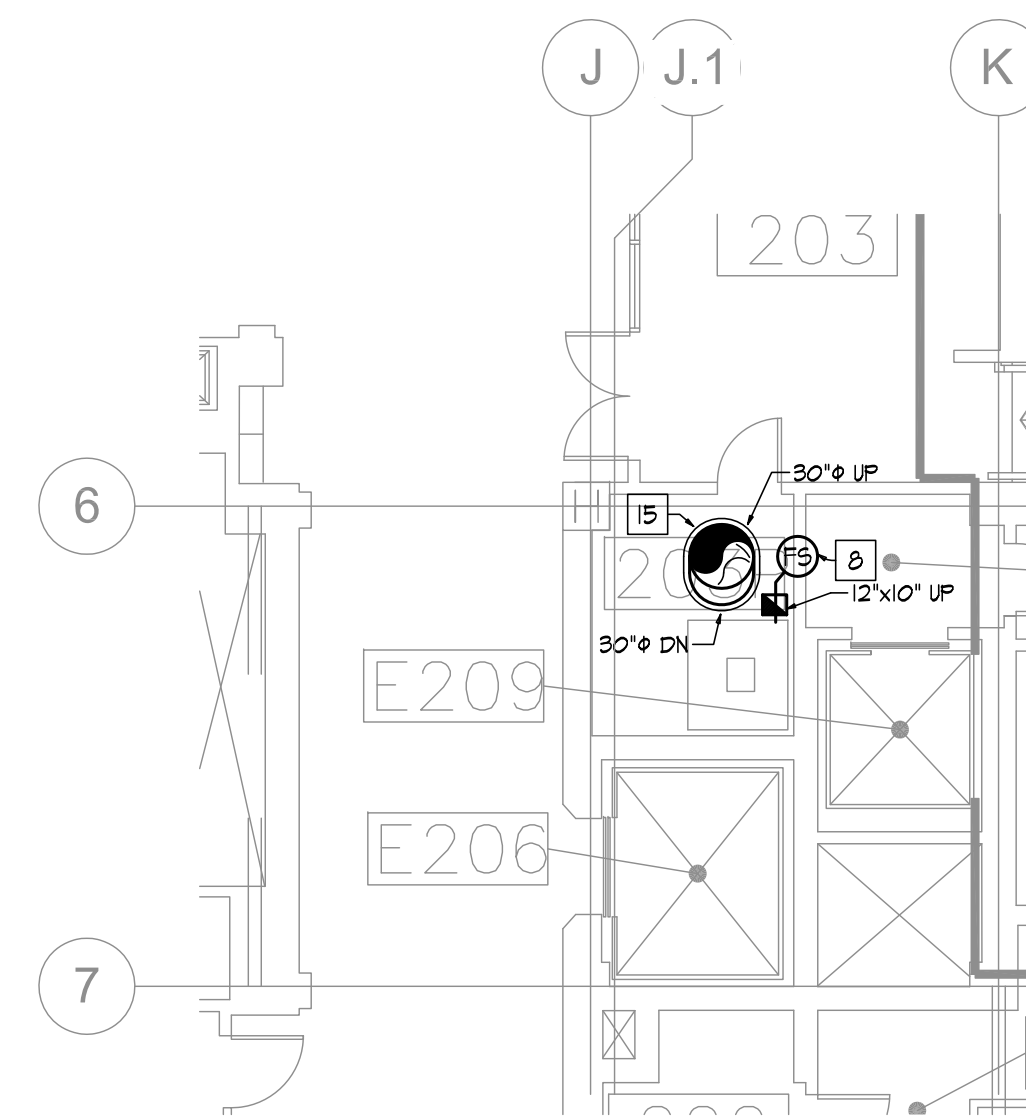
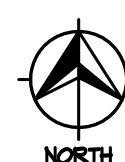
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DRAWING TYPE
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CAD FILE
PROJECT NO.
13-3914-0



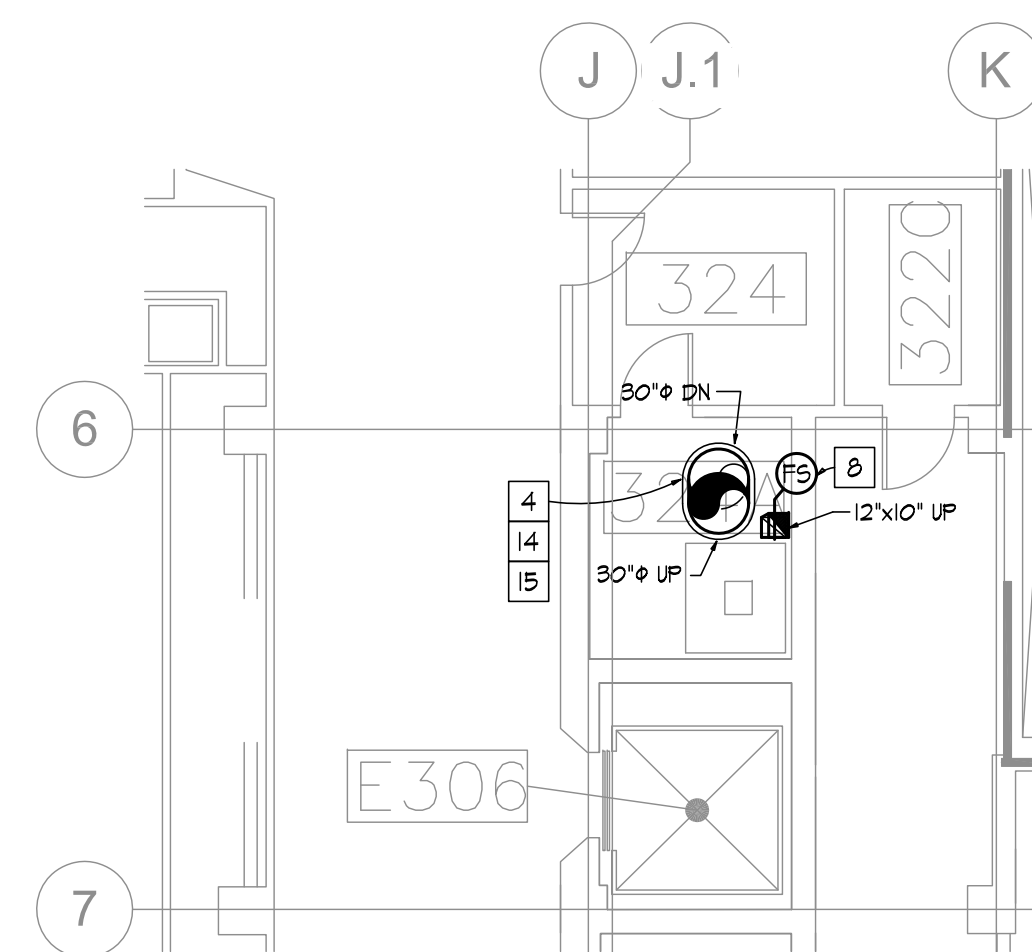
**1 PARTIAL BASEMENT PLAN  
MECHANICAL NEW WORK**  
SCALE: 1/8"=1'-0"



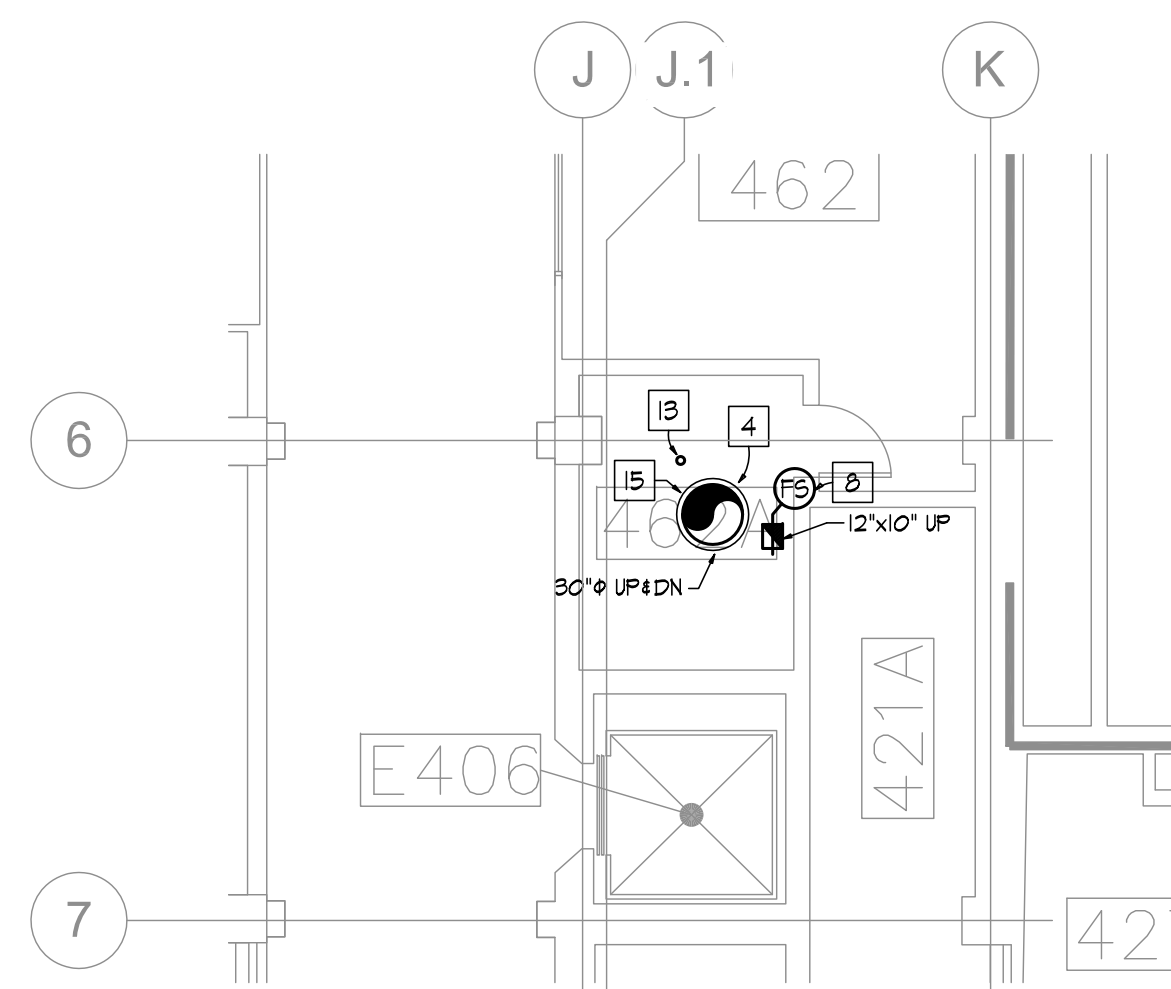
**2 PARTIAL 1ST FLOOR PLAN  
MECHANICAL NEW WORK**  
SCALE: 1/8"=1'-0"



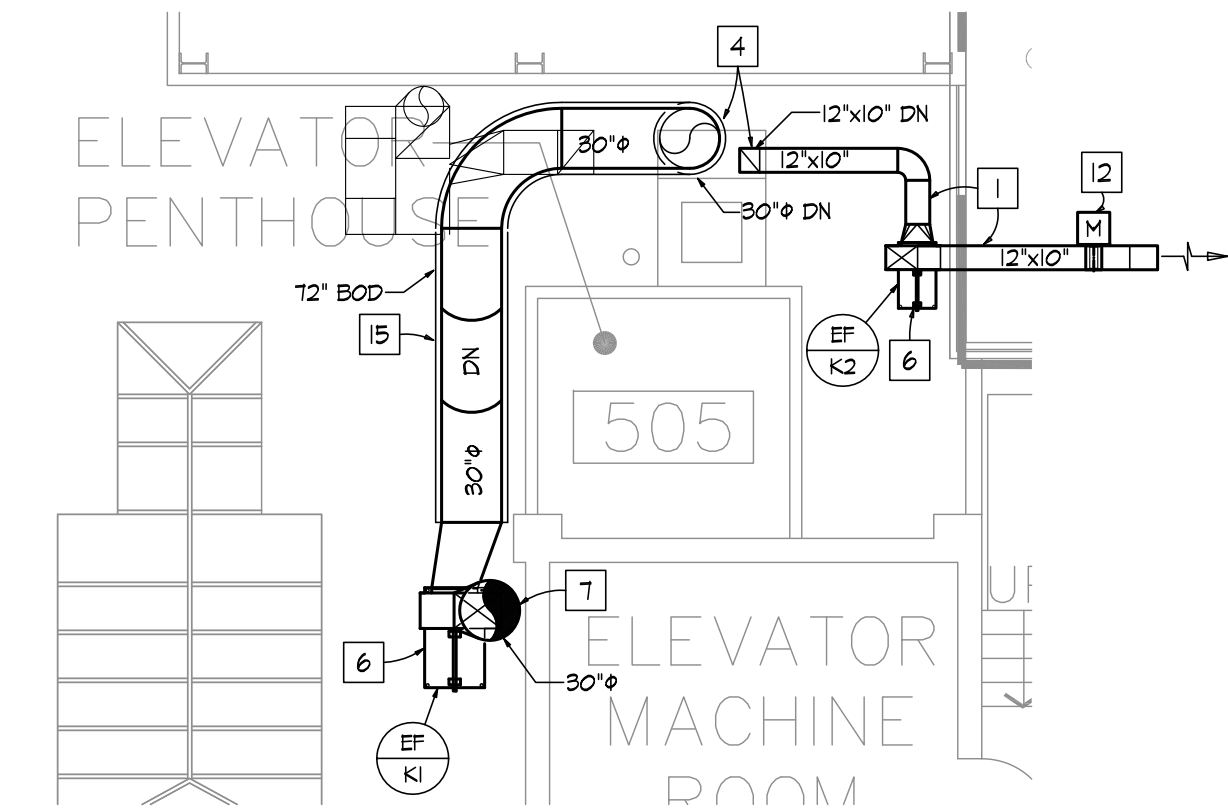
**3 PARTIAL 2nd FLOOR PLAN  
MECHANICAL NEW WORK**  
SCALE: 1/8"=1'-0"



**4 PARTIAL 3rd FLOOR PLAN  
MECHANICAL NEW WORK**  
SCALE: 1/8"=1'-0"



**5 PARTIAL 4th FLOOR PLAN  
MECHANICAL NEW WORK**  
SCALE: 1/8"=1'-0"



**6 PARTIAL PENTHOUSE PLAN  
MECHANICAL NEW WORK**  
SCALE: 1/8"=1'-0"



**PLAN NOTES:**

- 1 PROVIDE AND INSTALL NEW DISHWASHER EXHAUST DUCTWORK. RECONNECT NEW DISHWASHER EXHAUST DUCTWORK TO EXISTING DISHWASHER HOOD. PROVIDE WELDED STAINLESS DUCTWORK. RE: SPECIFICATIONS.
- 2 PROVIDE AND INSTALL NEW GREASE DUCT IN LOCATION SHOWN. ALL GREASE DUCT SHALL BE FIRE WRAPPED. RE: SPECIFICATIONS FOR SLOPING REQUIREMENTS, AND FIRE RATED ACCESS PANEL (FOR CLEANING) REQUIREMENTS.
- 3 CONNECTION TO NEW HOOD. REFERENCE GAYLORD INDUSTRIES DRAWINGS (KITCHEN EQUIPMENT DRAWINGS) FOR EXACT REQUIREMENTS.
- 4 ROUTE EXHAUST DUCT UP TO ROOF TO NEW EXHAUST FAN.
- 5 REROUTE RETURN AIR DUCTWORK SERVING STORAGE ROOM TO ACCOMMODATE ROUTING OF NEW DISHWASHER EXHAUST DUCTWORK.
- 6 PROVIDE AND INSTALL NEW ROOF MOUNTED KITCHEN EXHAUST FAN. MOUNT ON NEW ROOF CURBS. RE: ARCHITECTURAL DRAWINGS FOR CURB DETAILS. MOUNT FAN ON SPRING ISOLATORS. PROVIDE COATED-FABRIC HIGH TEMPERATURE FLEXIBLE DUCT CONNECTOR RATED FOR 250 DEGREES OPERATING TEMPERATURE AT FAN INLET. RE: SPECIFICATIONS.
- 7 ROUTE GREASE DUCT UP. TERMINATE DUCT 40' ABOVE ELEVATOR MACHINE ROOM ROOF. MAINTAIN MINIMUM OF 3" BETWEEN DUCT AND NONCOMBUSTIBLE CONSTRUCTION AND 18" BETWEEN DUCT AND COMBUSTIBLE CONSTRUCTION.
- 8 PROVIDE AND INSTALL NEW STAINLESS STEEL COMBINATION FIRE SMOKE DAMPER AT FLOOR LEVEL. PROVIDE RUSKIN FSD3555 OR APPROVED EQUAL. PROVIDE WITH ELECTRIC FUSE LINK.
- 9 PROVIDE AND INSTALL NEW SUPPLY AIR DIFFUSER. PROVIDE TITUS MODEL TDC, 2-WAY CORNER THROW (G2), TYPE 3 BORDER, 15x15 NECK, 24x24 FACE OR APPROVED EQUAL. BALANCE TO 825 CFM.
- 10 PROVIDE AND INSTALL NEW SUPPLY AIR DIFFUSER. PROVIDE TITUS MODEL TDC, 4-WAY THROW, TYPE 3 BORDER, 6'x6' NECK, 24x24 FACE OR APPROVED EQUAL. BALANCE TO 50 CFM.
- 11 PROVIDE AND INSTALL NEW SUPPLY AIR DUCTWORK.
- 12 PROVIDE AND INSTALL NEW MOTORIZED CONTROL DAMPER. PROVIDE RUSKIN MODEL CD-50 OR APPROVED EQUAL. PROVIDE WITH 120VAC ACTUATOR.
- 13 EXISTING FIRE LINE. 4" PIPE WITH ISOLATION VALVE, TAMPER SWITCH, FLOW SWITCH, ETC. ROTATE AND/OR RELOCATE AS NECESSARY TO ACCOMMODATE NEW DUCT ROUTING.
- 14 PROVIDE ELBOWS AND OFFSETS IN DUCT RISE TO AVOID PIPING.
- 15 PROVIDE AND INSTALL NEW FACTORY BUILT 2-HOUR FIRE RATED ROUND GREASE DUCT. GREASE DUCT SHALL BE SELKIRK ZERO CLEAR Z3/ZG OR APPROVED EQUAL.
- 16 PROVIDE AND INSTALL NEW KITCHEN GREASE EXHAUST HOOD. HOOD SHALL BE GAYLORD MEDIUM DUTY HOOD, 24" DEEP WITH GAYLORD VARIABLE FLOW CONTROL SYSTEM. PROVIDE HOOD WITH COMPLETE FIRE SUPPRESSION SYSTEM.

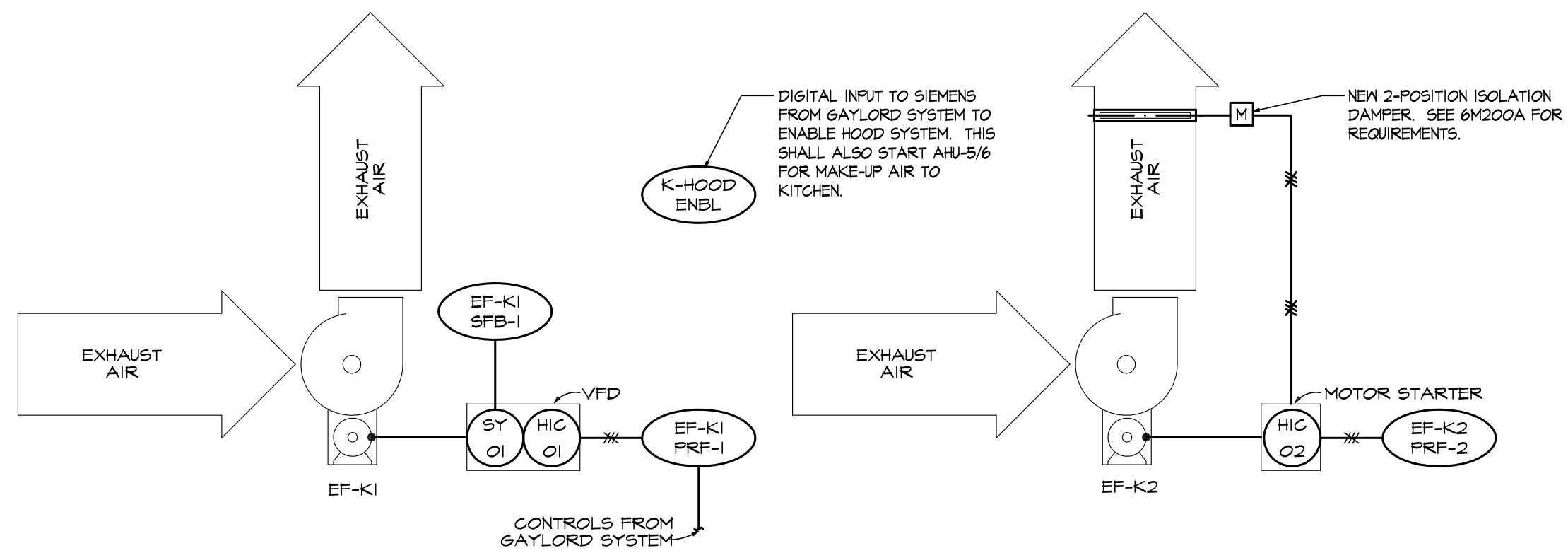
**GENERAL NOTES:**  
1) BALANCING CONTRACTOR TO BALANCE NEW GREASE HOOD, DISHWASHER EXHAUST, EXHAUST FANS EF-K1 AND EF-K2, NEW SUPPLY DIFFUSERS AND ALL EXISTING SUPPLY DIFFUSERS SERVING THE KITCHEN AND ADJACENT AREAS SHOWN IN THE BASEMENT DRAWINGS.



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<b>DRAWING TYPE</b>
PERMIT SET
CAD FILE
<b>PROJECT NO.</b>
13-3914-0



### 3 KITCHEN EXHAUST SYSTEM P&ID DIAGRAM

NO SCALE

#### SEQUENCE OF OPERATION:

**KITCHEN GREASE HOOD SEQUENCE:**  
 THE NEW KITCHEN GREASE HOOD SHALL BE CONTROLLED BY THE GAYLORD VARIABLE AIR VOLUME CONTROL SYSTEM. THE SYSTEM SHALL BE PROGRAMMED TO OPERATE ON A SET DAILY SCHEDULE PER THE OWNER. UPON ACTIVATION OF THE HOOD SYSTEM A DIGITAL INPUT SIGNAL SHALL BE SENT TO THE EXISTING SIEMENS APOSEE SYSTEM. ONCE THE SIGNAL IS RECEIVED THE SIEMENS SYSTEM SHALL ENABLE AHU-5/6 TO PROVIDE MAKE-UP AIR TO THE KITCHEN. WHEN THE GAYLORD SYSTEM IS OFF AHU-5/6 SHALL OPERATE ON ITS NORMAL SCHEDULE. EXHAUST FAN EF-K1 SHALL BE CONTROLLED BY THE GAYLORD SYSTEM, BUT SIEMENS SHALL MONITOR FAN SPEED AND PROOF.

**DISHWASHER SEQUENCE:**  
 EXHAUST FAN EF-K2 SHALL BE ENABLED/DISABLED BY THE DISHWASHER CONTROL PANEL. SIEMENS SHALL MONITOR FAN PROOF. WHEN EF-K2 IS ON THE ISOLATION DAMPER SHALL BE OPEN AND WHEN IT IS OFF IT SHALL BE CLOSED.

UPDATE SIEMENS WORKSTATION GRAPHICS AT THE PSU FACILITIES OFFICE WITH ALL NEW SYSTEMS.

### EXHAUST FAN SCHEDULE

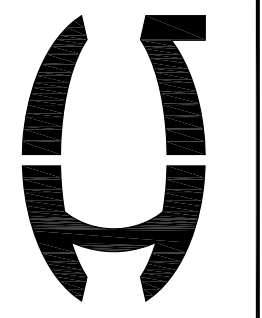
FAN NO.	MANUFACTURER	MODEL	SIZE	CFM	ESTIMATED EXT. S.P. IN. W.G.	EST. FAN RPM	INLET/OUTLET VELOCITY FPM	ARRANGEMENT	DISCHARGE	APPROX. WEIGHT LBS.	STATIC EFF.	MOTOR DATA				NOTES	
												RPM	H.P.	B.H.P.	VOLTS		PHASE
EF-K1	GREENECK	5NB-224-T5	-	1,250	3.0	1142	2,803	10	UPBLAST	664	64.0	1125	7.5	6.95	208	3	123,456,789,0
EF-K2	GREENECK	5NB-208-5	-	600	2.0	2380	944	10	UPBLAST	191	50.7	1125	1/2	0.38	208	3	123,4,0

- NOTES:**
- PROVIDE FAN WITH VENTED ROOF CURB
  - FAN TO BE LISTED PER UL-762.
  - PROVIDE WITH INVERTER (VFD) GRADE MOTOR.
  - PROVIDE WITH PREMIUM EFFICIENT MOTOR. RE: SPECIFICATIONS.
  - NORMAL TEMPERATURE TEST: EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300 DEGREES F UNTIL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.
  - ABNORMAL FLARE-UP TEST: EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 300 DEGREES F FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION. PROVIDE FAN WITH HIGH TEMPERATURE ALUMINUM, PAINT AND ALL ACCESSORIES.
  - PROVIDE FAN WITH BOLTED ACCESS DOOR FOR GREASE CLEANING.
  - PROVIDE FAN WITH 1" THREADED DRAIN CONNECTION WITH PLUS.
  - PROVIDE EXHAUST FAN WITH VARIABLE FREQUENCY DRIVE. INSTALL DRIVE INSIDE HOOD CABINET PROVIDED BY HOOD MANUFACTURER. COORDINATE WITH KITCHEN CONSULTANT.
  - PROVIDE WITH WEATHER HOOD MADE OF HIGH TEMPERATURE ALUMINUM.

### DDC POINT LIST - KITCHEN EXHAUST FANS

POINT NUMBER	POINT NAME	POINT TYPE	POINT DESCRIPTION	DEVICE TYPE	TREND	ALARM (I)	SHOW ON GRAPHIC
-	EF-K1-SFB-1	AV	EXHAUST FAN FEEDBACK	PANEL INPUT VIA VFD COMMUNICATION LINK	X	-	X
-	EF-K1-PRF-1	DI	GREASE HOOD EXHAUST FAN PROOF	CURRENT SWITCH	X	X	X
-	-	-	-	-	-	-	-
-	EF-K2-PRF-2	DI	DISHWASHER EXHAUST FAN PROOF	CURRENT SWITCH	X	X	X
-	-	-	-	-	-	-	-
-	K-HOOD-ENBL	DI	KITCHEN HOOD ENABLED (VIA GAYLORD)	RELAY CONTACT CLOSURE	-	X	X
-	-	-	-	-	-	-	-

**NOTES:**  
 1. FOR POINTS CHECKED PROVIDE HIGH AND LOW TEMPERATURE ALARMS.



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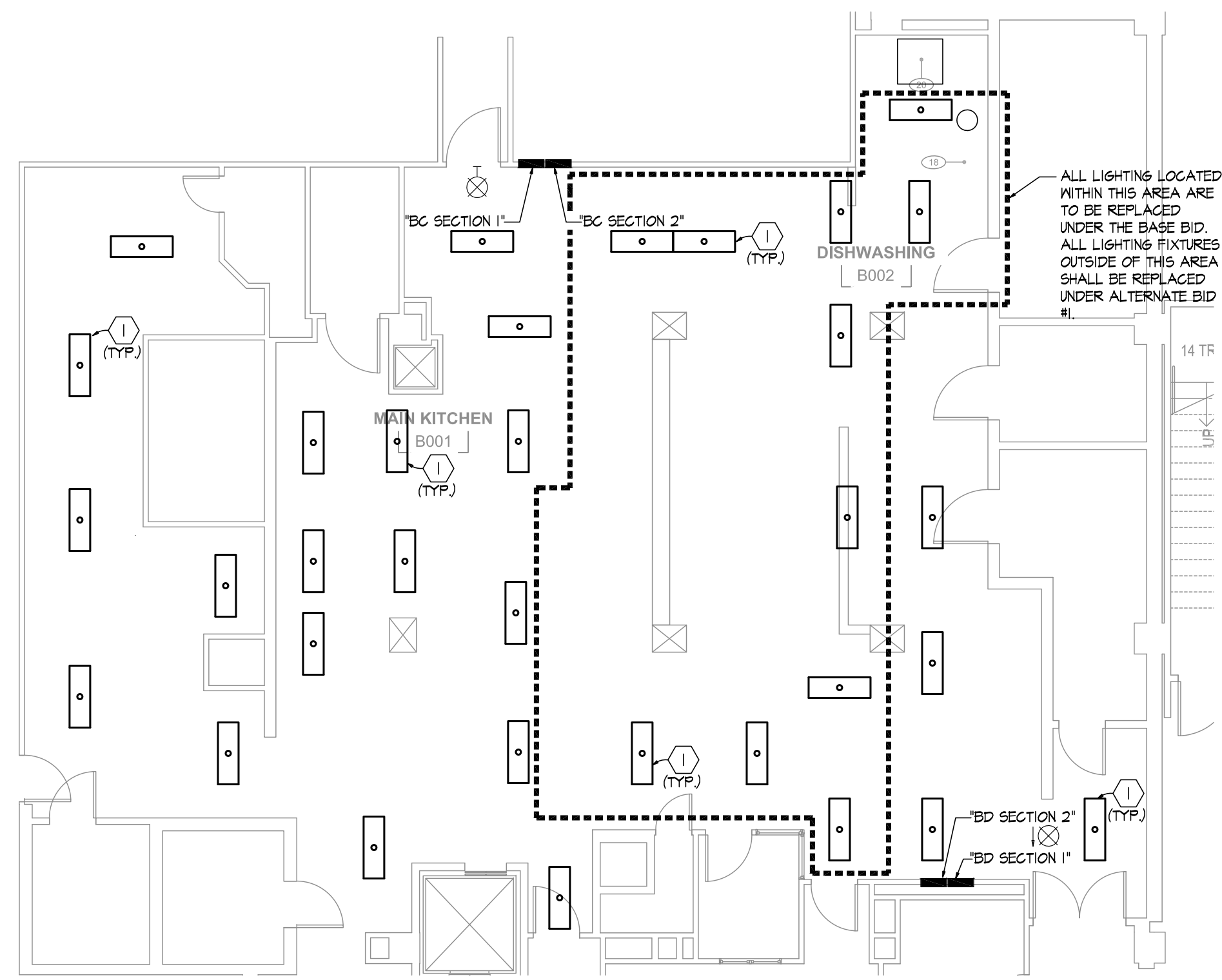
PORTLAND STATE UNIVERSITY  
**SMSU**  
 KITCHEN HOOD  
 REPLACEMENT



DATE	DWN. BY	CHK. BY
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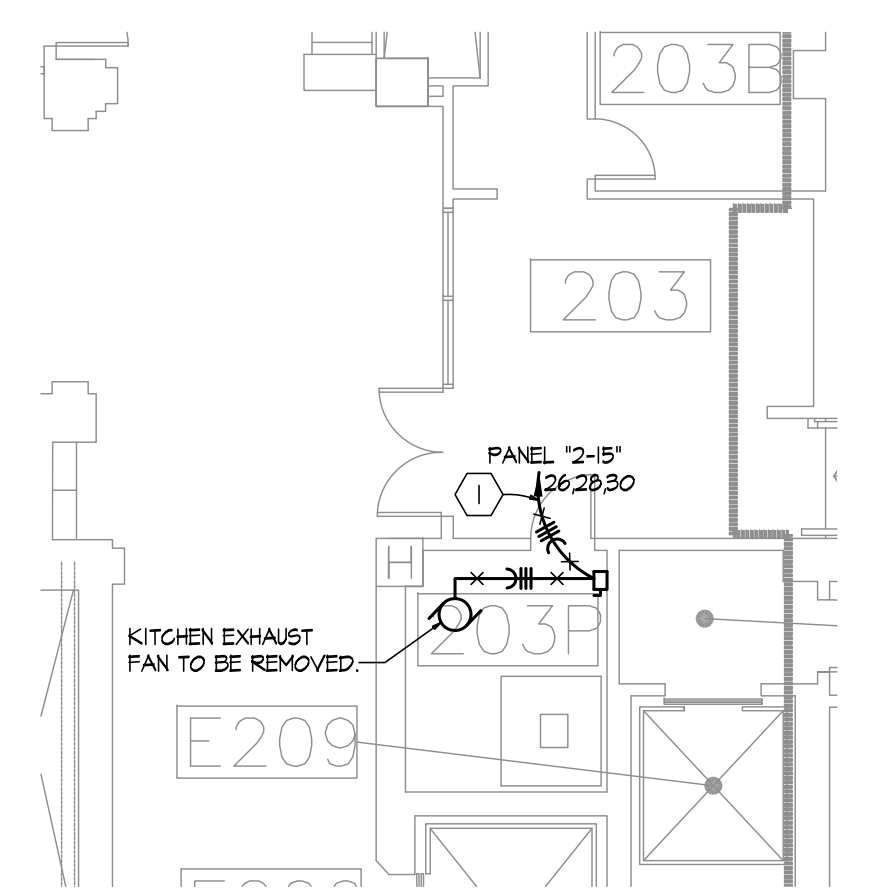
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 DRAWING TYPE  
 PERMIT SET  
 CAD FILE  
 PROJECT NO.  
 13-3914-0



**1 PARTIAL BASEMENT PLAN ELECTRICAL DEMOLITION**  
 SCALE: 1/8"=1'-0"

**PLAN NOTES:**

- 1 REMOVE EXISTING LIGHTING FIXTURE AND REPLACE WITH NEW. PROVIDE COLUMBIA MODEL SM14-232-PSA141N1V-EP. FIXTURE SHALL BE A LOW PROFILE SURFACE MOUNT WITH INVERTED LENS AND GASKETED FOR USE IN DAMP LOCATIONS.



**2 PARTIAL 2nd FLOOR PLAN ELECTRICAL DEMOLITION**  
 SCALE: 1/8"=1'-0"

**PLAN NOTES:**

- 1 REMOVE POWER SERVING EXISTING KITCHEN EXHAUST FAN BACK TO PANEL DESIGNATED. REMOVE ALL ASSOCIATED CONDUIT, WIRE, DISCONNECTS, CONTROLS, ETC BACK TO SOURCE.



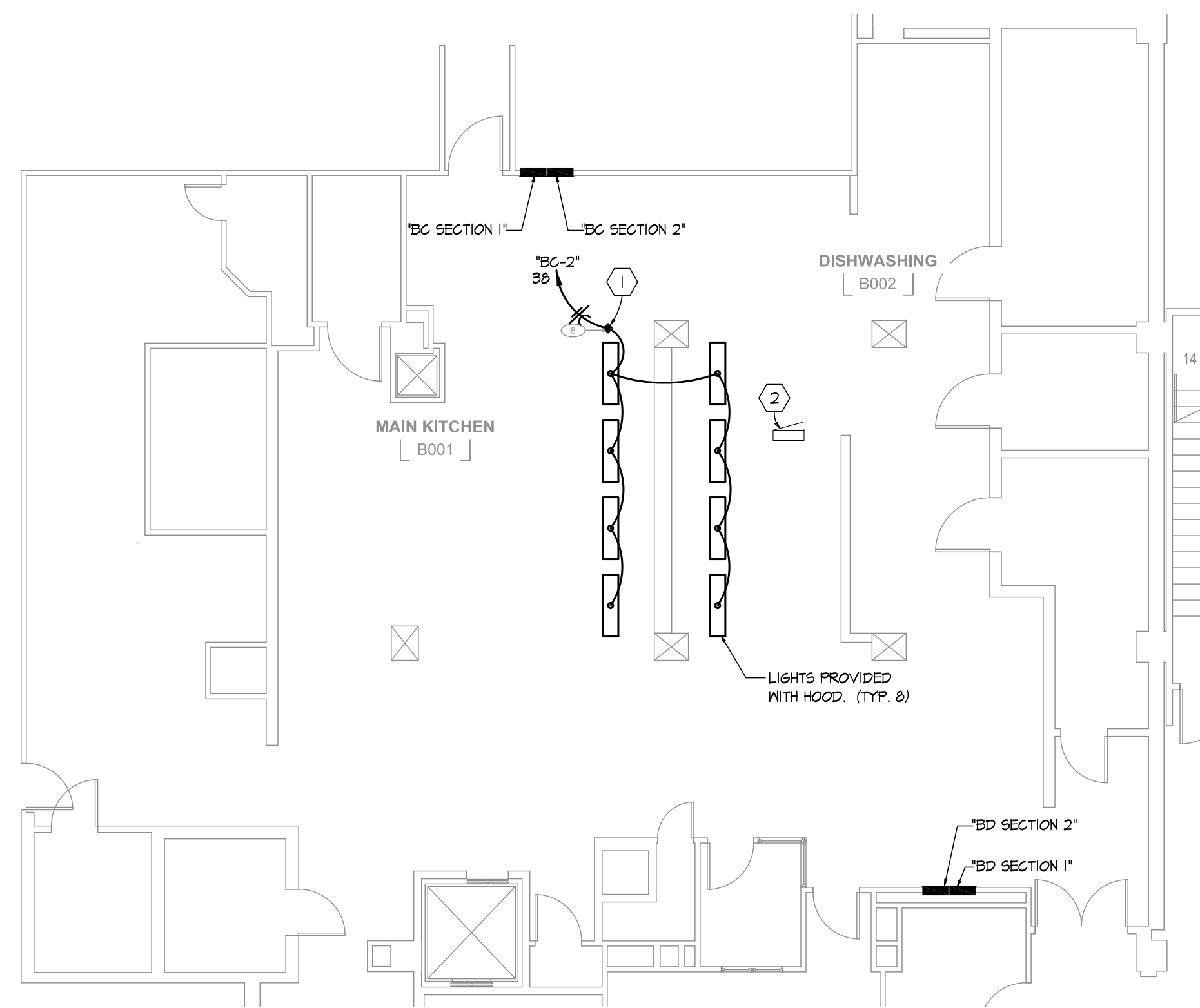
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**SHEET NUMBER**  
**E101A**  
**DRAWING TYPE**  
 PERMIT SET  
 CAD FILE  
**PROJECT NO.**  
 13-3914-0

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<b>SHEET NUMBER</b>
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13-3914-0

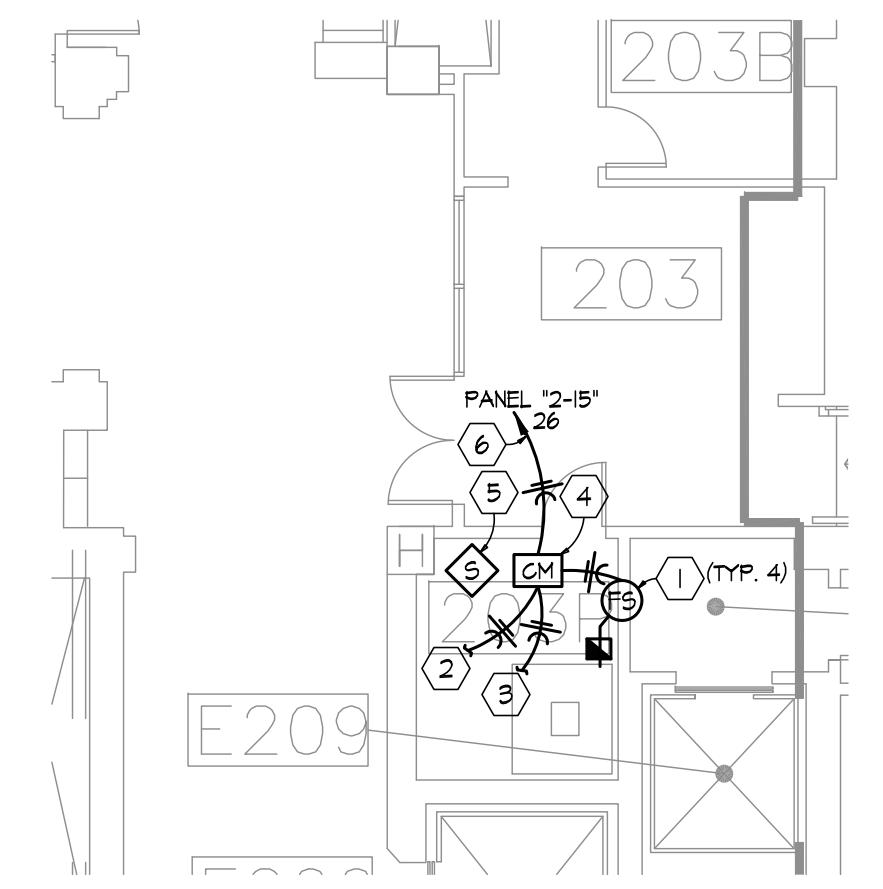


**1 PARTIAL BASEMENT PLAN ELECTRICAL NEW WORK**  
 SCALE: 1/8"=1'-0"

**PLAN NOTES:**

- 1 PROVIDE POWER FOR NEW GAYLORD HOOD CONTROL SYSTEM. ROUTE LIGHTING CONTROL AND GAYLORD CONTROL WIRING TO VENTILATOR AS SHOWN. COORDINATE WITH KITCHEN HOOD SUPPLIER FOR SPECIFIC REQUIREMENTS
- 2 EXISTING SIEMENS TEC CONTROLLER LOCATED ABOVE THE CEILING AND MOUNTED TO EXISTING DUCTWORK. ELECTRICAL CONTRACTOR TO ROUTE (6) #16 IN 1/2" CONDUIT FROM EXISTING TEC CONTROLLER TO NEW GAYLORD KITCHEN HOOD CONTROLLER. TERMINATIONS BY OTHERS.

**KITCHEN EQUIPMENT GENERAL NOTES:**  
 1) REFERENCE KITCHEN EQUIPMENT DRAWINGS FOR ALL REQUIRED RECEPTACLE TYPES, LOCATIONS, ROUGH-INS ETC.  
 2) ALL NEW AND EXISTING ELECTRICAL DEVICES LOCATED BENEATH HOOD SHALL HAVE SHUNT TRIP DEVICES TO DEACTIVATE POWER UPON HOOD FIRE PROTECTION ACTIVATION. PROVIDE ALL WIRING FROM FIRE ALARM DEVICES ASSOCIATED WITH THE HOOD FOR SHUNT TRIP INPUT OF ASSOCIATED CIRCUIT BREAKERS.

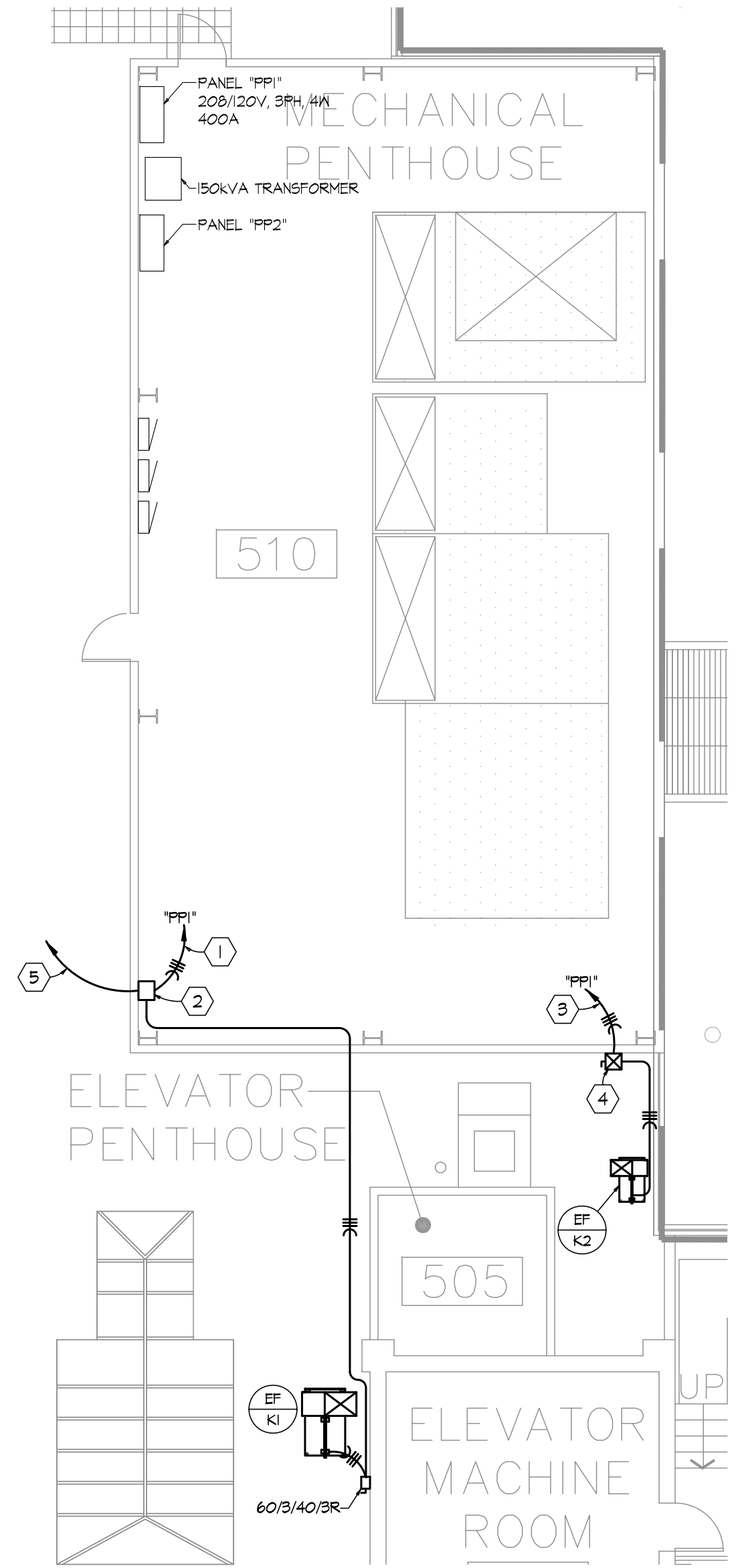


**2 PARTIAL 2nd FLOOR PLAN ELECTRICAL NEW WORK**  
 SCALE: 1/8"=1'-0"

**PLAN NOTES:**

- 1 NEW FIRE/SMOKE DAMPER PROVIDED BY MECHANICAL CONTRACTOR. A FIRE/SMOKE DAMPER IS LOCATED AT THE 1ST, 2ND, 3RD AND 4TH FLOORS. PROVIDE CIRCUITRY TO EACH FIRE/SMOKE DAMPER.
- 2 CONDUIT AND CIRCUITRY TO 1ST FLOOR FIRE/SMOKE DAMPER ACTUATOR.
- 3 CONDUIT AND CIRCUITRY TO 3RD AND 4TH FLOOR FIRE/SMOKE DAMPER ACTUATORS.
- 4 PROVIDE AND INSTALL NEW FIRE ALARM CONTROL MODULE FOR CONTROL OF NEW FIRE/SMOKE DAMPERS. CONNECT NEW CONTROL MODULE TO EXISTING FIRE ALARM SYSTEM.
- 5 PROVIDE AND INSTALL (4) NEW ADDRESSABLE SMOKE DETECTORS WITHIN 5 FEET HORIZONTALLY FROM NEW FIRE/SMOKE DAMPERS. INSTALL ONE SMOKE DETECTOR ON EACH FLOOR LEVEL (1ST, 2ND, 3RD AND 4TH). CONNECT NEW DETECTORS TO EXISTING FIRE ALARM SYSTEM.
- 6 HOMERUN TO PANEL DESIGNATED. PROVIDE AND INSTALL NEW 20A, 1P CIRCUIT BREAKER AND UPDATE PANEL SCHEDULE.

**GENERAL NOTES:**  
 1) CONTRACTOR TO PROVIDE ALL FIRE ALARM SHOP DRAWINGS, CALCULATIONS, ETC. PER THE OREGON STRUCTURAL SPECIALTY CODE, SECTION 901 FOR APPROVAL BY THE AHJ AND PERMITTING.



**3 PARTIAL PENTHOUSE PLAN ELECTRICAL NEW WORK**  
 SCALE: 1/8"=1'-0"

**PLAN NOTES:**

- 1 HOMERUN TO PANEL DESIGNATED. (3) #6, (1) #10 GROUND IN 1" CONDUIT. PROVIDE AND INSTALL NEW 50A, 3P CIRCUIT BREAKER IN AVAILABLE SPACE.
- 2 PROVIDE AND INSTALL NEW VARIABLE FREQUENCY DRIVE. PROVIDE ABB MODEL ACH500 WITH SIEMENS FLN BUS FOR BUILDING AUTOMATION INTEGRATION.
- 3 HOMERUN TO PANEL DESIGNATED. (3) #2, (1) #12 GROUND IN 1/2" CONDUIT. PROVIDE AND INSTALL NEW 15A, 3P CIRCUIT BREAKER IN AVAILABLE SPACE.
- 4 PROVIDE AND INSTALL NEW COMBINATION MOTOR STARTER/FUSIBLE DISCONNECT SWITCH. PROVIDE NEMA SIZE 00 STARTER, 15A FUSES AND NEMA 3R ENCLOSURE. STARTER TO HAVE 120V COIL VOLTAGE. PROVIDE UNIT WITH 208-120VAC CONTROL TRANSFORMER. ROUTE (4) #12 IN 1/2" CONDUIT FROM STARTER TO DISHWASHER CONTROL PANEL LOCATED IN THE BASEMENT. TERMINATE PER DISHWASHER MANUFACTURER TO ENABLE/DISABLE THE FAN WHEN THE DISHWASHER IS ON/OFF.
- 5 ROUTE (2) CAT 5e SHIELDING CABLES IN 3/4" CONDUIT FROM VARIABLE FREQUENCY DRIVE TO NEW GAYLORD CONTROL SYSTEM LOCATED IN THE BASEMENT (KITCHEN ITEM #8). TERMINATIONS BY OTHERS.



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