



NOTE: WHERE SUSPENDED CEILING SYSTEM MAIN TEE IS SHOWN TO BE INTERRUPTED BY NEW LIGHT FIXTURE INSTALLATION, CUT GRID AND REMOVE SECTION AS REQD. PROVIDE SUPPORT AS SHOWN ON DETAIL AS/AE150.

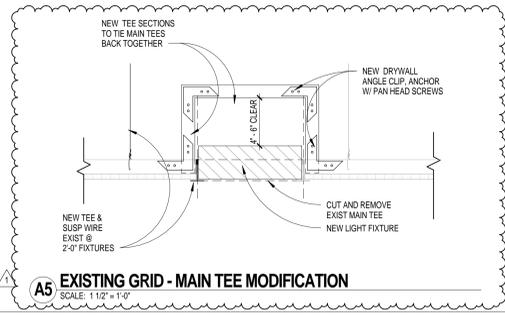
NOTE: WHERE SUSPENDED CEILING SYSTEM MAIN TEE IS SHOWN TO BE INTERRUPTED BY NEW LIGHT FIXTURE INSTALLATION, CUT GRID AND REMOVE SECTION AS REQD. PROVIDE SUPPORT AS SHOWN ON DETAIL AS/AE150.

REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

- CEILING NOTES:**
- EXISTING (TO REMAIN) AND NEW GWB CEILINGS TO BE PAINTED P-3.
 - EXPOSED CEILINGS, OPEN TO STR ABOVE, TO BE PAINTED P-4 (INCLUDING DUCTWORK, STRUCTURE, PIPING AND DECK). PAINT TO CONCEAL ANY VISIBLE MECH OR STR ELEMENTS, MINIMUM 10 FEET BEYOND EDGES OF TRIMMED APC AREAS, UNLESS OTHERWISE NOTED ON DRAWINGS OR IN SPECIFICATIONS.
 - PROVIDE TRACK AND HARDWARE FOR NEW PRIVACY PANELS (DPP-1) WHERE INDICATED.
 - REMOVE AND REPLACE EXISTING CEILINGS TO REMAIN AS REQUIRED TO ACCOMMODATE DUCTWORK MODIFICATIONS. SEE MECH.

CEILING FINISH LEGEND

	APC-1 (EXISTING TO REMAIN)		APC-1 (NEW)		ASP-1 SUSPENDED GRID, BOTTOM OF ELEMENT AT 8'-0", TYP.
	GWB CEILING (EXISTING TO REMAIN)		GWB CEILING (NEW)		EXPOSED (EXISTING TO REMAIN)
	EXPOSED (EXISTING TO REMAIN)		EXPOSED, OPEN TO STR DECK ABOVE, SEE NOTE 2.		



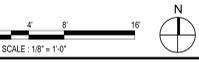
REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	12/18/2015

FILE LOG

ACTIVITY	BY
Manager	
Design	Designer
Draw	Author
Check	Checker

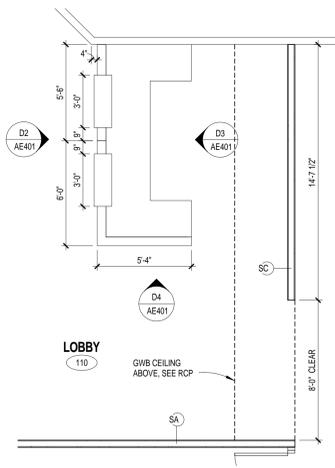
CONSTRUCTION DOCUMENTS



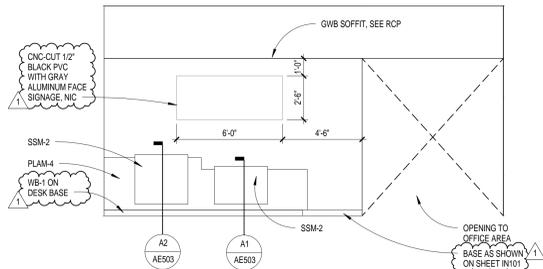
Project No. 001-10127-001
December 8, 2015

REFLECTED CEILING PLAN

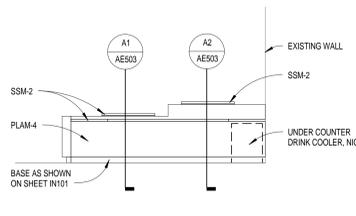
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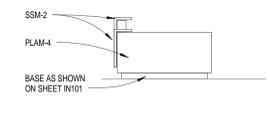
D1 LOBBY
SCALE: 1/4" = 1'-0"



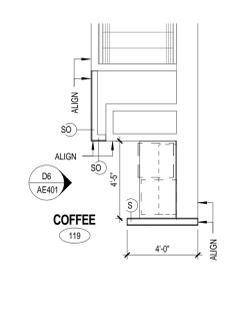
D2 LOBBY - RECEPTION DESK FRONT
SCALE: 1/4" = 1'-0"



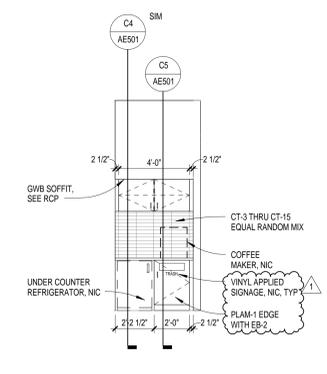
D3 LOBBY - RECEPTION DESK BACK
SCALE: 1/4" = 1'-0"



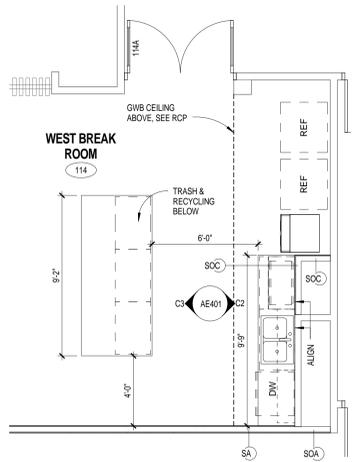
D4 LOBBY - RECEPTION DESK SIDE
SCALE: 1/4" = 1'-0"



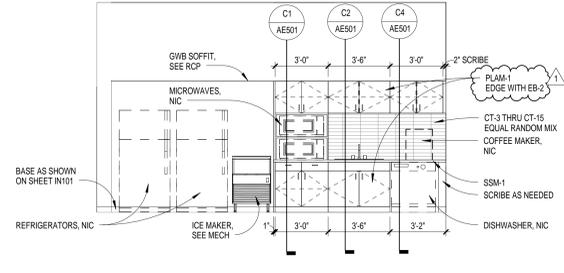
D5 COFFEE COUNTER
SCALE: 1/4" = 1'-0"



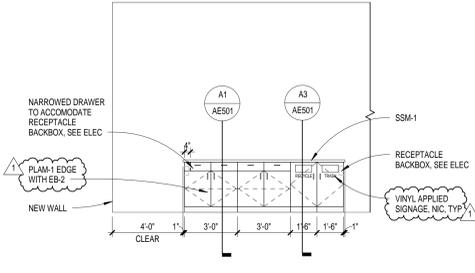
D6 COFFEE COUNTER - EAST WALL
SCALE: 1/4" = 1'-0"



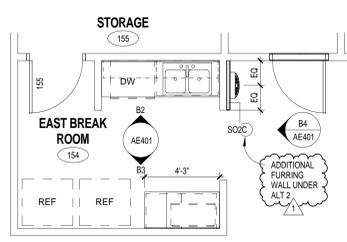
C1 WEST KITCHEN
SCALE: 1/4" = 1'-0"



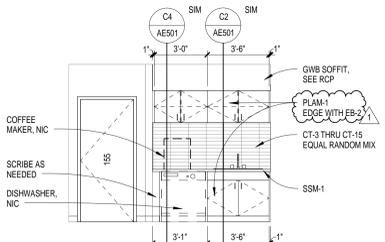
C2 WEST KITCHEN - EAST WALL
SCALE: 1/4" = 1'-0"



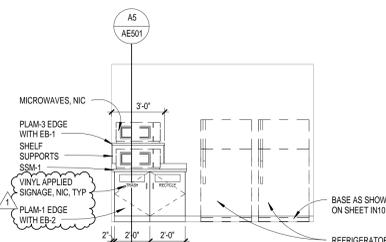
C3 WEST KITCHEN - ISLAND
SCALE: 1/4" = 1'-0"



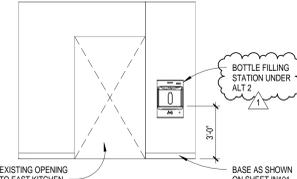
B1 EAST KITCHEN
SCALE: 1/4" = 1'-0"



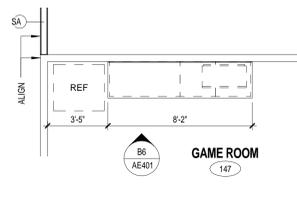
B2 EAST KITCHEN - NORTH WALL
SCALE: 1/4" = 1'-0"



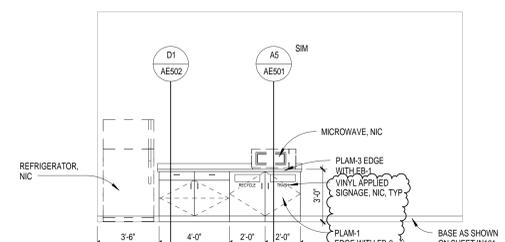
B3 EAST KITCHEN - SOUTH WALL
SCALE: 1/4" = 1'-0"



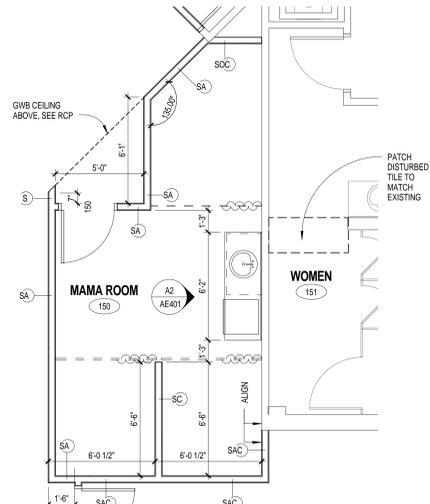
B4 EAST KITCHEN - WATER WALL
SCALE: 1/4" = 1'-0"



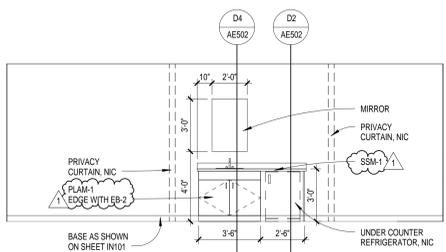
B5 GAME ROOM
SCALE: 1/4" = 1'-0"



B6 GAME ROOM - NORTH WALL
SCALE: 1/4" = 1'-0"



A1 MAMA ROOM
SCALE: 1/4" = 1'-0"



A2 MAMA ROOM - EAST WALL
SCALE: 1/4" = 1'-0"

REVISIONS

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FILE LOG

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Manager	
Design	Designer
Draw	Author
Check	Checker

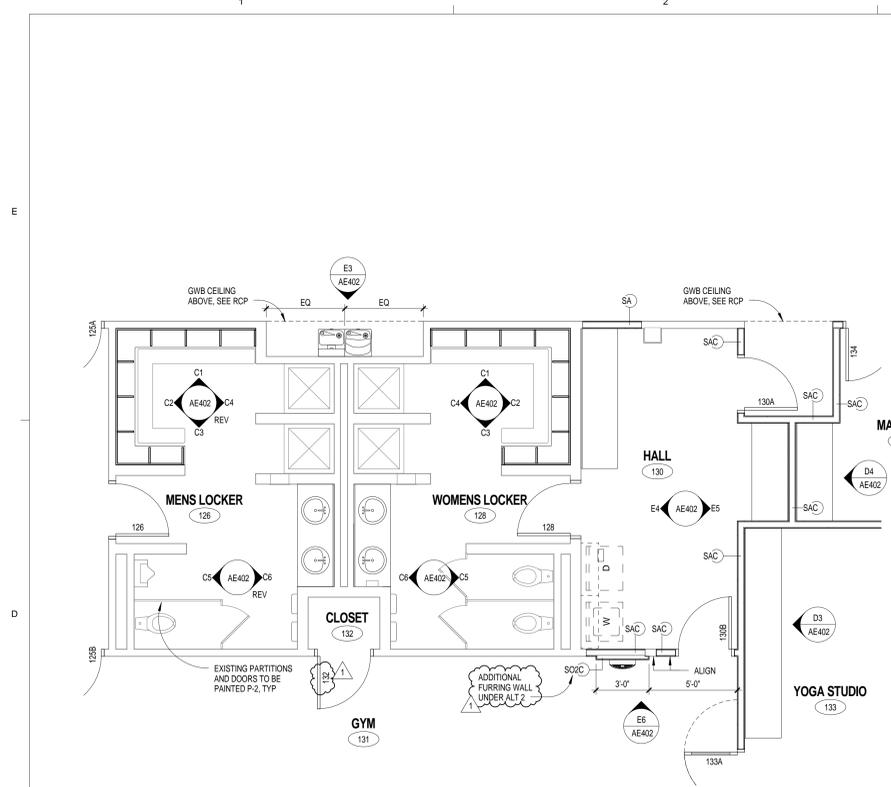
CONSTRUCTION DOCUMENTS



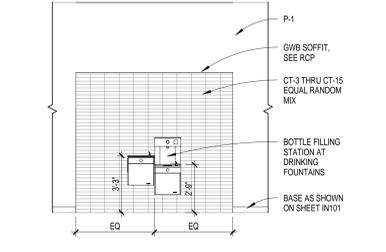
Project No.001-10127-001
December 8, 2015

LARGE SCALE PLANS AND ELEVATIONS

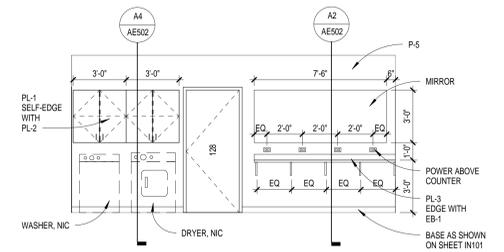
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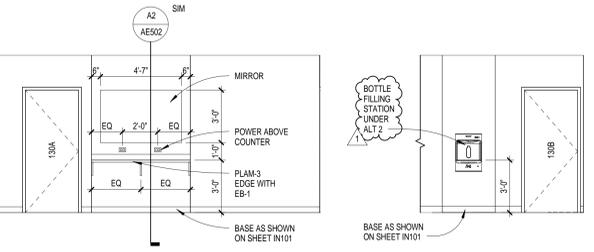
D1 LOCKER ROOMS
SCALE: 1/4" = 1'-0"



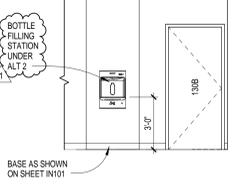
E3 LOCKER ROOMS - DRINKING FOUNTAINS
SCALE: 1/4" = 1'-0"



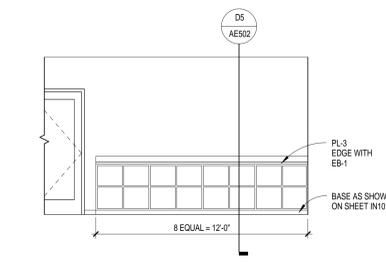
E4 HALL - WEST WALL
SCALE: 1/4" = 1'-0"



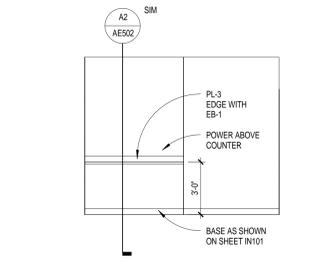
E5 HALL - EAST WALL
SCALE: 1/4" = 1'-0"



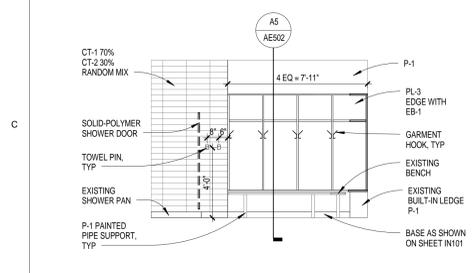
E6 GYM - WATER
SCALE: 1/4" = 1'-0"



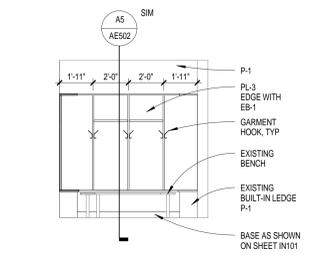
D3 YOGA STUDIO - WEST WALL
SCALE: 1/4" = 1'-0"



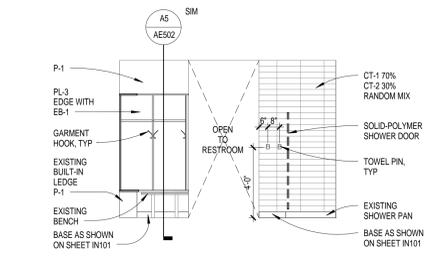
D4 MASSAGE - WEST WALL
SCALE: 1/4" = 1'-0"



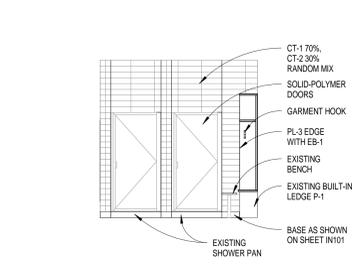
C1 WOMENS LOCKER - NORTH WALL
SCALE: 1/4" = 1'-0"



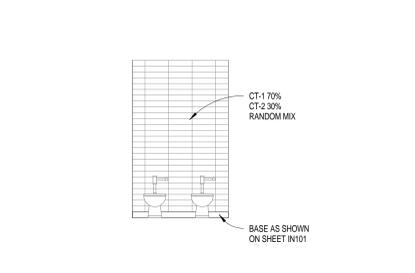
C2 WOMENS LOCKER - EAST WALL
SCALE: 1/4" = 1'-0"



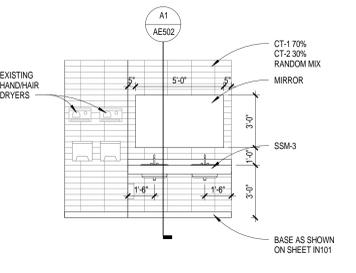
C3 WOMENS LOCKER - SOUTH WALL
SCALE: 1/4" = 1'-0"



C4 WOMENS LOCKER - WEST WALL
SCALE: 1/4" = 1'-0"



C5 WOMENS LOCKER - TOILET WALL
SCALE: 1/4" = 1'-0"



C6 WOMENS LOCKER - SINK WALL
SCALE: 1/4" = 1'-0"

REVISIONS

NO.	DESCRIPTION	DATE
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FILE LOG

ACTIVITY	BY
Manager	
Design	Designer
Draw	Author
Check	Checker

DATEPLOT

CONSTRUCTION DOCUMENTS

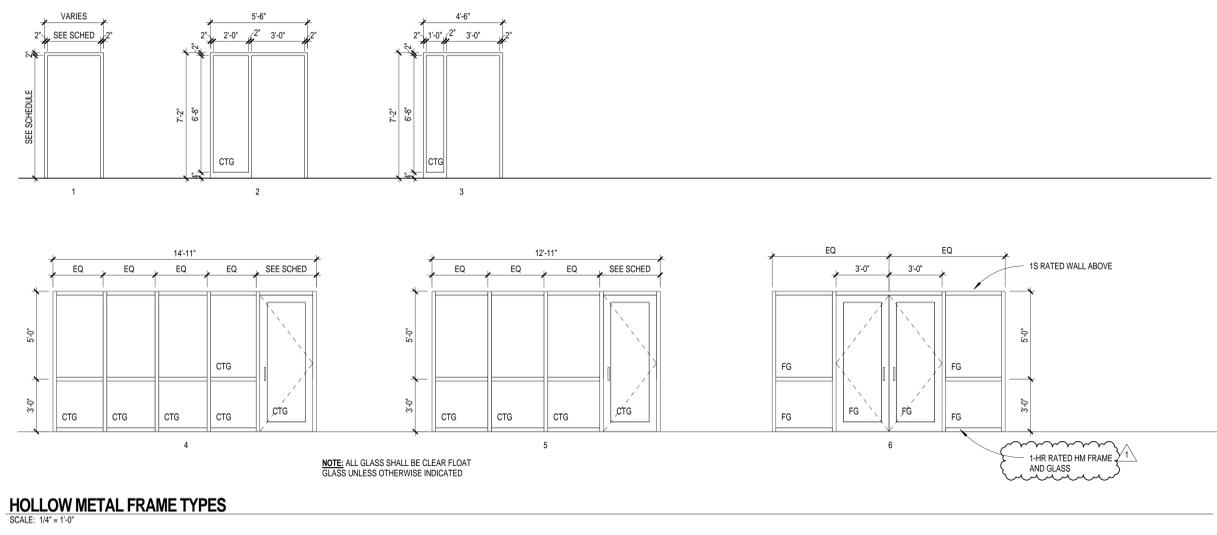
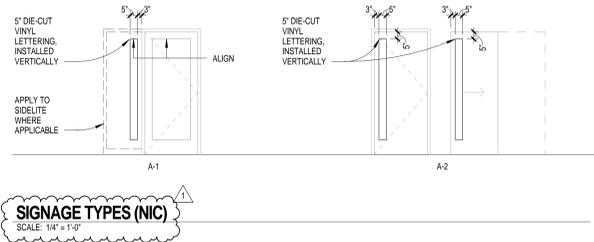
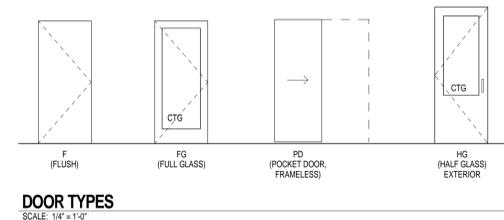


Project No. 001-10127-001
December 8, 2015

LARGE SCALE PLANS AND ELEVATIONS

AE402

DOOR NO	ROOM NAME	DOOR		HDWE SET	DOOR			FRAME			SIGN TYPE (NIC)	LABEL HOUR	REMARKS
		WIDTH	HEIGHT		TYPE	MAT'L	FIN	TYPE	MAT'L	FIN			
104	HALL	3'-0"	7'-0"	1									EXISTING DOOR; DI-NOC (3M FILM) COVERED, HARDWARE TO BE REINSTALLED
105	LOBBY	3'-0"	7'-0"	1									EXISTING DOOR; NEW HARDWARE, DI-NOC (3M FILM) COVERED
110	LOBBY	PR 3'-0"	7'-9 1/2"	2	FG	HM	P-6	6	HM	P-6		60	
111	SUPPLIES	3'-0"	7'-0"	3	F	WD	S-1	1	HM	P-1			
112	CONFERENCE (6-8)	3'-0"	7'-0"	4	FG	WD	S-1	2	HM	P-1	A-1, "CONFERENCE"		
113	TRAINING	3'-0"	7'-0"	4	FG	WD	S-1	3	HM	P-1	A-1, "TRAINING"		
114A	WEST BREAK ROOM	PR 3'-0"	7'-0"	5	FG	WD	S-1	1	HM	P-1			
114B	WEST BREAK ROOM	3'-0"	7'-9 1/2"	6	HG	*	*	*	*	*			*EXTERIOR DOOR, TO MATCH EXISTING PATIO DOOR
115A	CONFERENCE (8-10)	3'-0"	7'-0"	4	FG	WD	S-1	2	HM	P-1	A-1, "CONFERENCE"		
115B	CONFERENCE (8-10)	3'-0"	7'-0"	4	F	WD	S-1	1	HM	P-1	A-1, "CONFERENCE"		
116	MARKETING STORAGE	3'-0"	7'-0"	8	F	WD	S-1	1	HM	P-1			
117	OFFICE	3'-0"	7'-9 1/2"	4	FG	WD	S-1	4	HM				
118	PHONE BOOTH	2'-8"	7'-0"	9	PD	WD	S-1	--	--	--	A-2, "PHONE BOOTH"		FRAMELESS POCKET DOOR
120	COMM	3'-0"	7'-0"	8	F	WD	S-1	1	HM	P-1			
125A	HALL	3'-0"	7'-0"	10	--	--	--	--	--	--	A-1, "MEN"		EXISTING DOOR; NEW HARDWARE, DI-NOC (3M FILM) COVERED
125B	HALL	3'-0"	7'-0"	10	--	--	--	--	--	--	A-2, "GYM"		EXISTING DOOR; NEW HARDWARE, DI-NOC (3M FILM) COVERED
126	MENS LOCKER	3'-0"	7'-0"	10	--	--	--	--	--	--	A-2, "LOCKERS"		EXISTING DOOR; NEW HARDWARE, DI-NOC (3M FILM) COVERED
128	WOMENS LOCKER	3'-0"	7'-0"	10	--	--	--	--	--	--	A-1, "LOCKERS"		EXISTING DOOR; NEW HARDWARE, DI-NOC (3M FILM) COVERED
130A	HALL	3'-0"	7'-0"	5	F	WD	S-1	1	HM	P-1	A-2, "WOMEN"		
130B	HALL	3'-0"	7'-0"	5	F	WD	S-1	1	HM	P-1	A-2, "GYM"		
131	GYM	3'-0"	7'-9 1/2"	6	HG	*	*	*	*	*			*EXISTING DOOR
132	CLOSET	3'-0"	7'-0"	--	--	--	--	--	--	--			EXISTING DOOR; DI-NOC (3M FILM) COVERED, HARDWARE TO BE REINSTALLED
133A	YOGA STUDIO	PR 3'-0"	7'-0"	11	FG	WD	S-1	1	HM	P-1			180-DEGREE DOOR SWING
133B	YOGA STUDIO	3'-0"	7'-0"	5	F	WD	S-1	1	HM	P-1			
134	MASSAGE	3'-0"	7'-0"	12	F	WD	S-1	1	HM	P-1	A-1, "MASSAGE"		
135	CONFERENCE (6-8)	3'-0"	7'-0"	4	FG	WD	S-1	2	HM	P-1	A-1, "CONFERENCE"		
140	ELEC	3'-0"	7'-0"	8	F	WD	S-1	1	HM	P-1			
141	IT	3'-0"	7'-0"	13	F	WD	S-1	1	HM	P-1			
142	PAYROLL STORAGE	3'-0"	7'-0"	8	F	WD	S-1	1	HM	P-1			
143	OFFICE	3'-0"	7'-9 1/2"	4	FG	WD	S-1	5	HM	P-1			
144	PHONE BOOTH	2'-8"	7'-0"	9	PD	WD	S-1	--	--	--	A-2, "PHONE BOOTH"		FRAMELESS POCKET DOOR
145	PHONE BOOTH	2'-8"	7'-0"	9	PD	WD	S-1	--	--	--	A-2, "PHONE BOOTH"		FRAMELESS POCKET DOOR
146	CONFERENCE (8-10)	3'-0"	7'-0"	4	FG	WD	S-1	2	HM	P-1	A-1, "CONFERENCE"		
147	GAME ROOM	6'-0"	8'-6"	14	--	--	--	--	--	--	A-1, "GAME ROOM"		EXISTING SLIDING DOOR, NEW PULL/LATCH HARDWARE ONLY, SECURE SLIDING GUIDE TO EXISTING WALL AT THE FLOOR AFTER FINISHES AND WALL BASE ARE INSTALLED, *PAINT GAME ROOM-FACING PANEL P-2, PAINT OFFICE-FACING PANEL P-1 PRIOR TO ARCYLIC GRAPHIC APPLICATION
147A	GAME ROOM	3'-0"	7'-0"	5	F	WD	S-1	1	HM	P-1			
147B	GAME ROOM	3'-0"	7'-9 1/2"	*	HG	*	*	*	*	*			*EXISTING DOOR
147C	GAME ROOM	3'-0"	7'-9 1/2"	*	HG	*	*	*	*	*			*EXISTING DOOR
148	CONFERENCE (10-12)	3'-0"	7'-0"	4	FG	WD	S-1	2	HM	P-1	A-1, "CONFERENCE"		
150	MAMA ROOM	3'-0"	7'-0"	4	F	WD	S-1	1	HM	P-1	A-1, "MAMA ROOM"		
155	STORAGE	3'-0"	7'-0"	--	--	--	--	--	--	--			EXISTING DOOR; DI-NOC (3M FILM) COVERED, HARDWARE TO BE REINSTALLED
156	ELEV EQUIP	3'-0"	7'-0"	--	--	--	--	--	--	--			EXISTING DOOR; DI-NOC (3M FILM) COVERED, HARDWARE TO BE REINSTALLED
160	EAST STAIR	PR 3'-0"	7'-0"	--	--	--	--	--	--	--		60	EXISTING DOOR; DI-NOC (3M FILM) COVERED, HARDWARE TO BE REINSTALLED



NOTE: ALL GLASS SHALL BE CLEAR FLOAT GLASS UNLESS OTHERWISE INDICATED

1-HR RATED HM FRAME AND GLASS



Fusion Medical Staffing Tenant Fit-Out
11808 Grant Street
Omaha, NE 68164



8600 Indian Hills Drive
Omaha, Nebraska 68114-4039
Tel 402.391.8111 Fax 402.391.8564

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	12/18/2015

FILE LOG

ACTIVITY	BY
Manager	
Design	Designer
Draw	Author
Check	Checker

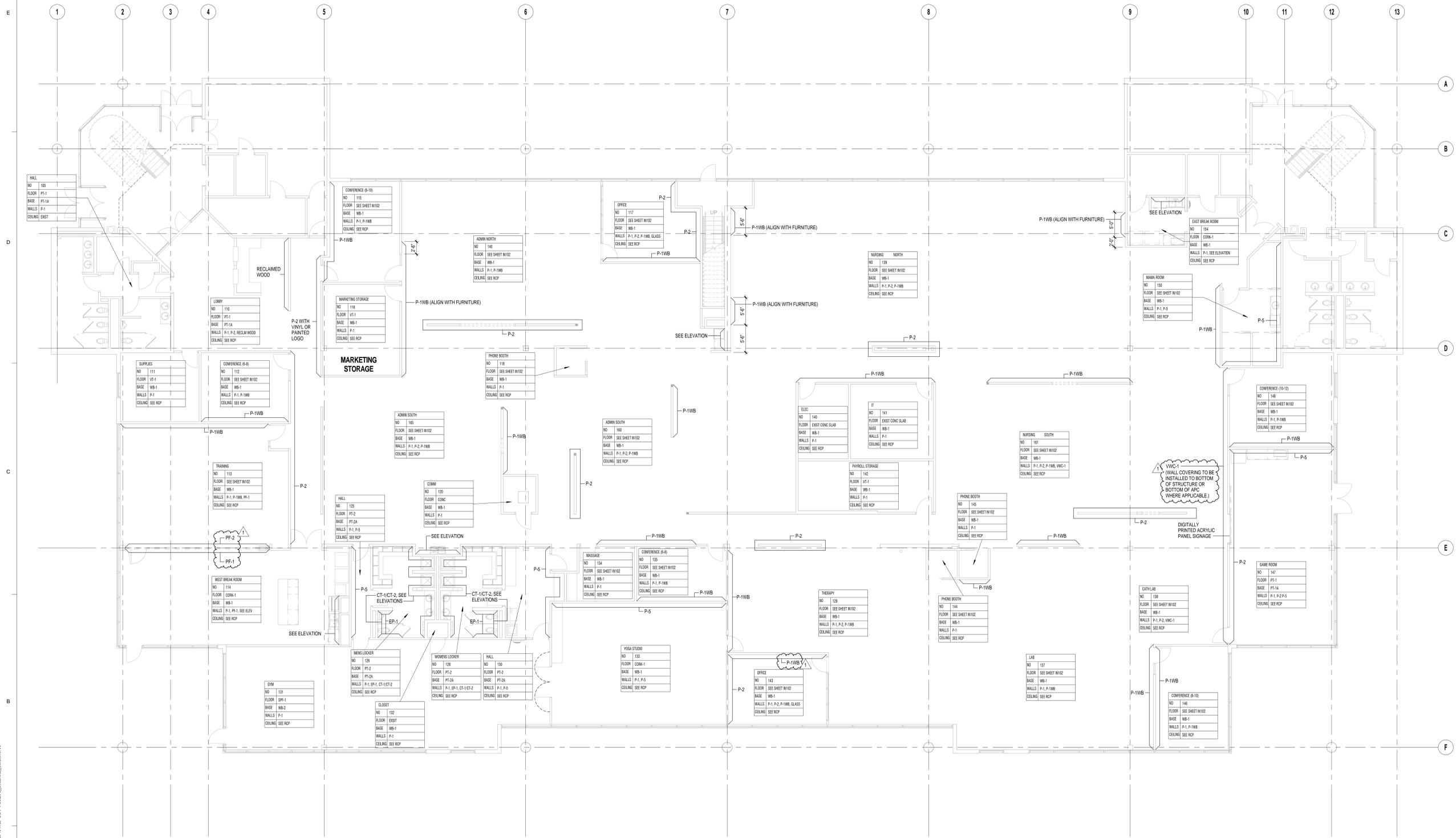
CONSTRUCTION DOCUMENTS

Project No. 001-10127-001
December 8, 2015

DOOR SCHEDULE AND TYPES

AE601

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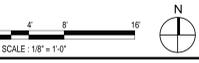
REVISIONS

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FILE LOG

ACTIVITY	BY
Manager	SEA
Design	JFT
Draw	JFT
Check	SEA

CONSTRUCTION DOCUMENTS



Project No. 001-10127-001
December 8, 2015

FINISH PLAN

IN101

FINISH PLAN
SCALE: 1/8" = 1'-0"

- FINISH NOTES:**
1. ALL EXPOSED VERTICAL OR WB SURFACES ARE TO BE PAINTED P-1, UNLESS OTHERWISE NOTED.
 2. ALL EXPOSED SURFACES ABOVE CEILING ARE TO BE PAINTED P-4, INCLUDING BUT NOT LIMITED TO DUCTWORK, STRUCTURE, PIPING AND DECK.
 3. EXISTING FINISHES ARE NOT TO BE DISTURBED IN ROOMS WITHOUT FINISH TAGS.
 4. BUILD-UP AND/OR FEATHER OUT EXISTING SUBSTRATE TO CREATE FLUSH TRANSITIONS AT ALL FLOORING CHANGES. VERIFY COMPLIANCE WITH ADA COMPLIANCE.

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MECHANICAL NOTES

- 1 ALL WORK AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE MOST RECENTLY REVISED VERSION OF ALL APPLICABLE CODES, LAWS, RULES, REGULATIONS AND ORDINANCES OF LOCAL AUTHORITIES, WHETHER INDICATED ON THE DRAWINGS OR NOT.
2 CONTRACTOR TO PROVIDE ALL REQUIRED EQUIPMENT, MATERIALS AND LABOR TO ESTABLISH A COMPLETE AND OPERABLE MECHANICAL SYSTEM AS DESCRIBED ON THE DRAWINGS AND SPECIFICATIONS.
3 ADHERE TO THE DRAWINGS WHEN REQUIREMENTS ARE STRICTER THAN CODE REQUIREMENTS AND ARE PERMITTED UNDER THE CODE. ALL EQUIPMENT SHALL BE INSTALLED PER EQUIPMENT MANUFACTURERS RECOMMENDATIONS.
4 REPORT ANY ALTERATION TO AND/OR DEVIATIONS FROM THE DRAWINGS, AS REQUIRED BY THE ABOVE AUTHORITIES, TO THE ARCHITECT AND SECURE HIS APPROVAL, BEFORE STARTING ALTERATIONS.
5 THE CONTRACTOR SHALL REQUEST SUPPLEMENTARY INSTRUCTIONS FROM THE ARCHITECT IN ALL CASES OF DOUBT, AS TO THE WORK INTENDED, OR IF ADDITIONAL EXPLANATION IS NEEDED.
6 INSTALL FLANGES OR UNIONS AT PIPING CONNECTIONS TO ALL EQUIPMENT SUCH THAT EQUIPMENT CAN BE REMOVED WITHOUT DISMANTLING ALL PIPING.
7 ALL CONCEALED PIPING SHALL BE INSULATED.
8 COORDINATE ALL MECHANICAL WORK (HVAC, PLUMBING, FIRE PROTECTION, ETC.) WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL WHICH MAY DESIGNATE WORK TO BE COMPLETED IN DUCTWORK AND/OR PIPING TO BYPASS OBSTRUCTIONS SHALL BE AT NO ADDITIONAL COST TO OWNER. ENSURE LOCATIONS WHICH MAY REQUIRE ACCESS PANELS TO (GAIN SERVICE) FOR DAMPERS, VALVES, SMOKE ELECTRICAL, ETC.
9 ALL THERMOSTATS (AND SIMILAR DEVICES) SHALL BE MOUNTED 48" ABOVE FINISH FLOOR UNLESS NOTED. DO NOT INSTALL THERMOSTAT ABOVE DISCREPANCY.
10 REFER TO BUILDING STANDARD AND SPECIFICATION IF ANY DISCREPANCIES OCCUR.
11 PROVIDE HANGERS TO SUPPORT REQUIRED LOADS (MECH EQUIPMENT, DUCTWORK, PIPING, ETC.). WHERE NECESSARY, SUPPORTS SHALL BE DESIGNED TO PERMIT MOVEMENT DUE TO EXPANSION AND CONTRACTION. PROVIDE VIBRATION ISOLATORS WHERE APPLICABLE TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE. HANGER SUPPORT APPLICATIONS SHALL COMPLY WITH MSS STANDARDS (MANUFACTURERS STANDARDIZATION SOCIETY) AND ANSI (AMERICAN STANDARD CODE FOR PRESSURE PIPING). DIELECTRIC PROTECTION - FURNISH ACCEPTABLE PROTECTION OR COPPER PLATED HANGERS BETWEEN FERROUS AND NONFERROUS METAL PIPE AND HANGERS ON ALL PIPING AND/OR DUCTWORK.
12 ALL MECHANICAL AND ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO: COMPONENTS ASSOCIATED SUPPORT CONNECTIONS AND BRACING SHALL BE DESIGNED BY THE MANUFACTURER TO MEET THE SEISMIC DESIGN REQUIREMENTS OF CHAPTER 16 OF THE IBC 2003 AND THE APPLICABLE VERSION OF ASCE 7.
13 CONTROL WIRING AND CONDUIT SHALL MEET REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC).
14 PROVIDE SHOP DRAWING FOR ALL EQUIPMENT ITEMS.
15 ALL PIPE PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE PROVIDED WITH SLEEVES AND ESCUTCHEON PLATES. PIPES SHALL BE CENTERED TO ALLOW FOR EXPANSION AND CONTRACTION. PROVIDE CAULKING AND WATERPROOFING WHERE REQUIRED.
16 ALL PIPING THAT PENETRATES FLOOR SLAB SHALL BE WATERPROOFED BY A CERTIFIED WATERPROOFING COMPANY.
17 PENETRATIONS IN RATED WALLS (DUE TO DUCTWORK, PIPING, ETC.) SHALL BE APPROPRIATELY SEALED TO MAINTAIN WALL INTEGRITY.
18 FULL ACCESS AND MANUFACTURERS'S RECOMMENDED CLEARANCES SHALL BE PROVIDED TO ALL EQUIPMENT, VALVES, AND OTHER SERVICEABLE ITEMS OF EQUIPMENT. EXAMPLES INCLUDE WATER CONTROL VALVES, TRAPS, FLUID CONNECTIONS, MOTORS, DAMPERS, ELECTRONIC COMPONENTS, OR PUMP COMPONENTS REQUIRING ADJUSTMENT, SERVICE OR INSPECTION.
19 ALL SCHEDULED EQUIPMENT SHALL BE PROVIDED BY MANUFACTURER NOTED OR EQUAL.

WARRANTIES

- 1 MECHANICAL SYSTEM EQUIPMENT, MATERIAL, ETC.) SHALL BE WARRANTED AGAINST DEFECTS OR UNUSUAL WEAR FOR A TIME PERIOD OF TWO YEARS FROM SUBSTANTIAL COMPLETION. ALL THAT BECOME DEFECTIVE WITHIN THAT PERIOD OF TIME SHALL BE FIXED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER. WARRANTY INCLUDES CORRECTION OF FACILITY WORKMANSHIP.

PERMITS

- 1 CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS, FEES, LICENSES, INSPECTIONS, ETC. AS REQUIRED BY LOCAL AUTHORITIES, REGULATIONS AND UTILITY COMPANIES.

1 - DUCTWORK SPECIFICATIONS

- A. ALL HVAC SUPPLY, RETURN, AND EXHAUST AIR DUCTWORK SHALL BE CONSTRUCTED AS FOLLOWS: LOW PRESSURE - CLASS 2" (W) AND SEALED TO SEAL CLASS A.
B. DUCTWORK SHALL CONFORM TO NFPA STANDARD 90A AND THE REQUIREMENTS OF SMACNA. ALL DUCTWORK SEAMS SHALL BE SEALED TO CLASS A. TYPE RE4 ELBOWS AND STRAIGHT TAPS FOR RECTANGULAR DUCTWORK ARE NOT PERMITTED. PROVIDE TURNING VANES IN WELDED DUCT ELBOWS. SUPPLY DUCTWORK SHALL RUN IN MOST DIRECT ROUTE POSSIBLE WITH A MINIMUM NUMBER OF BENDS. TAKEOFFS TO DIFFUSERS SHALL BE MADE WITH A MAXIMUM OF 24 INCHES OF FLEXIBLE DUCT AND HAVE NO GREATER THAN 90 DEGREES TOTAL CHANGE OF DIRECTION. CLEAN ALL DUCT INTERIORS OF DEBRIS. INSIDE RADIUS OF ALL CURVES AND BENDS SHALL NOT BE LESS THAN THE WIDTH OF DUCTS IN PLANE OF BEND. PROVIDE THIS RADIUS. SQUARE ELBOWS WITH TURNING VANES SHALL BE USED. PROVIDE MANUAL VOLUME DAMPERS IN EACH GRILLE AND DIFFUSER BRANCH DUCT AND WHERE SHOWN ON DRAWINGS. DAMPERS IN ROOM WITH OTHER THAN REMOVABLE TYPE CEILING UTILIZE (YOUNG NO. 30) CONCEALED DAMPER REGULATORS. ALL DUCT SIZES INDICATED ON THE DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS. INTERNALLY LINED DUCTWORK SHALL BE INCREASED IN BOTH DIMENSIONS BY TWICE THE THICKNESS OF THE LINER.
C. THE FOLLOWING MINIMUM CONSTRUCTION MUST BE PROVIDED WITHOUT EXCEPTIONS: LONGITUDINAL SEAMS SHALL BE PITTSBURGH SEAM WITH SEALANT. DUCT JOINTS UP TO 18" SHALL BE DRIVE SLIP. OVER 18" SHALL BE EITHER STANDING SLIP, STANDING SEAM POINT OR POCKET LOCK. ALL WITH SEALANT. SHEET METAL TRANSITIONS SHALL BE MADE WITH SLOPES NOT EXCEEDING ONE (1) TO SEVEN (7).
D. CONTRACTOR SHALL VERIFY THAT DUCTWORK SHOWN WILL FIT IN THE ALLOTTED SPACE PRIOR TO FABRICATION. CONTACT ARCHITECT WHERE CONFLICTS OCCUR.
E. DUCTWORK TO BE FIELD PAINTED WHERE EXPOSED.

2 - DUCT INSULATION SPECIFICATIONS

- A. ACCEPTABLE MANUFACTURERS: JOHNS MANVILLE, OWENS-CORNING, CGS AND KNAUF, UNLESS OTHERWISE NOTED.
ADHESIVES AND COATINGS SHALL BE AS MANUFACTURED BY INSULCOUSTIC, BENJAMIN-FOSTER OR APPROVED EQUAL.
C. INSULATE AS FOLLOWS:
1. ALL EXHAUST DUCTWORK WITHIN 3 FT. OF ROOF. 1-1/2" THICK MINERAL FIBER BLANKET WRAP.
2. CONCEALED SUPPLY AIR DUCT: 1-1/2" THICK MINERAL FIBER BLANKET WRAP.
3. CONCEALED RETURN AIR DUCT: 1-1/2" THICK MINERAL FIBER BLANKET WRAP.
4. CONCEALED OUTDOOR DUCT: 1-1/2" THICK MINERAL FIBER BLANKET WRAP.
5. EXPOSED SUPPLY RETURN/TRANSFER AIR DUCT: 1-1/2" THICK INTERNAL DUCT LINING, 1-1/2 LB. PER CU. FT. DENSITY.
6. ALL INSULATION SHALL HAVE A COMPOSITE (INSULATION, JACKET OR FACING, AND ADHESIVE USED TO ADHERE THE FACING OR JACKET TO THE INSULATION) FIRE AND SMOKE HAZARD RATING AS TESTED BY PROCEDURE ASTM E84, NFPA 255, AND UL 723 NOT EXCEEDING:
FLAME SMOKE DEVELOPED 25
7. ACCESSORIES SUCH AS ADHESIVES, MASTICS, CEMENTS, AND TAPES SHALL HAVE THE SAME COMPONENT RATING AS LISTED ABOVE.
8. DIMENSIONS OF LINED DUCTS SHOWN ON DRAWINGS ARE THE CLEAR INSIDE DIMENSIONS OF THE DUCT AFTER THE LINING HAS BEEN INSTALLED.

3 - PACKAGED WATER TO AIR HEAT PUMPS

- 1. FURNISH AND INSTALL ALL SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTENANCES AND DEVICES INCIDENTAL TO OR NECESSARY FOR A SOUND, SECURE AND COMPLETE INSTALLATION.
2. HEAT PUMP UNITS PACKAGED FOR SUSPENDED OPERATION, CAPABLE OF STARTING IN 40 DEGREE F AMBIENT WITH 55-110 DEGREE F ENTERING WATER, AND PROVIDING FAN DISCHARGE IN 2 POSSIBLE CONFIGURATIONS.
3. BASIC UNIT SHALL BE RATED IN ACCORDANCE WITH AHRI90 13256-1.
4. WARRANTIES SHALL CONSIST OF A STANDARD WARRANTY, 1 YEAR LIMITED PRODUCT WARRANTY AND 2-YEAR COMPRESSOR WARRANTY.
5. FACTORY-TESTED AND ASSEMBLED SINGLE-PIECE PACKAGED HEATING AND COOLING HEAT PUMP UNIT SHALL BE FACTORY WIEED, CHARGED WITH R-410A, CONTAIN REFRIGERANT TO WATER HEAT EXCHANGER, AIR-VALVE, FAN MOTOR ASSEMBLY, COMPRESSOR, METERING DEVICES.
6. UNIT SHALL HAVE HEAT PUMP DUTY, FULLY HERMETIC TYPE COMPRESSOR, WITH INTERNAL ISOLATION, AND EXTERNAL RUBBER-GROMMET ISOLATION.
A. AIR TO REFRIGERANT COIL SHALL BE ALUMINUM/COPPER FINNED-TUBE CONSTRUCTION FULLY DEGREASED AT FACTORY.
B. WATER TO REFRIGERANT HEAT EXCHANGER SHALL BE COPPER/COPPER COAXIAL TUBE-IN-TUBE TYPE RATED FOR 450 PSIG REFRIGERANT, 300 PSIG WATER SIDE PRESSURES.
C. THE UNIT CONTROL SYSTEM SHALL PROVIDE CONTROL OF UNITS COMPRESSOR, REVERSING VALVE, FAN AND SAFETY LOCKOUT. THE 24-V CONTROLS SHALL BE CONVENIENTLY LOCATED IN A DEDICATED CONTROL BOX FOR MAXIMUM SAFETY AND EASE OF SERVICEABILITY.
7. PROVIDE STANDARD 1" THICK THROWAWAY TYPE FILTERS, MOUNTED IN COMBINATION FILTER PACK RETURN AIR DUCT COLLAR.
8. HEAT PUMPS SHALL RUN CONTINUOUS AND BE PROVIDED WITH ELECTRONIC 7-DAY PROGRAMMABLE THERMOSTAT WITH SETBACK CAPABILITY, SIMILAR TO HONEYWELL TH8321R.
9. PANEL SHALL BE A DECORATIVE, INDOOR, WALL-MOUNTED PANEL, PROVIDE CLEAR LOCKABLE COVER OVER ALL THERMOSTATS.

4 - AIR DISTRIBUTION EQUIPMENT SPECIFICATIONS

- 1. PROVIDE FLEXIBLE CONNECTORS AT THE INTAKE AND DISCHARGE SIDES OF ALL AIR CONDITIONING UNITS. FLEXIBLE CONNECTORS SHALL BE MADE OF VINYL COVERED GLASS FIBER MATERIAL. CONNECTORS SHALL BE NOT LESS THAN 6" LONG NOR MORE THAN 10" LONG.

5 - VOLUME CONTROL DAMPER SPECIFICATIONS

- A. AT EACH NEW MAIN BRANCH TAKE-OFF, PROVIDE VOLUME DAMPERS OF THE OPPOSED BLADE, MULTI-LOUVERED TYPE, OPERATED BY AIR. DAMPERS, HANGERS AND SET SCREWS, VOLUME DAMPERS AND ALL MANUAL DAMPERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA AND ASHRAE STD.
B. PROVIDE 45 DEG. CLINCH COLLARS AT MAIN TAKEOFFS.

6 - ACCESS DOORS SPECIFICATIONS

- A. PROVIDE SUITABLY SIZED ACCESS DOORS BEFORE AND AFTER IN DUCT ELECTRIC HEATERS. ACCESS DOORS AND OTHER METHODS RECOMMENDED BY SMACNA, AND SHALL BE 12" X 12" OR 12" X FULL DEPTH OF DUCT IF SMALLER THAN 12".
B. ACCESS DOORS IN DUCTWORK HANDLING CONDITIONED AIR SHALL BE OF THE DOUBLE PANEL TYPE, WITH INSULATION THICKNESS SAME AS DUCTULATION, SET BETWEEN 18 GAGE INTERIOR CASING. SINGLE PANEL ACCESS DOORS SHALL BE FABRICATED OF 18 GAGE UP TO 12" X 12" AND 16 GAGE WHEN LARGER.
C. ACCESS DOORS SHALL BE PROVIDED WITH HEAVY ANGLE IRON FRAMES AND SHALL BE FITTED WITH A MINIMUM OF TWO (2) HINGES AND CAM FASTENERS. ACCESS DOORS ON THE BOTTOM OF DUCTS SHALL HAVE CAM FASTENERS.

7 - HANGERS AND SUPPORTS SPECIFICATIONS

- A. WHERE HANGER STRAPS ARE USED THEY SHALL BE 1" X 1/8 GA. MIN., GALVANIZED STEEL BAND IRONS ARE NOT ACCEPTABLE.
B. ALL MECHANICAL AND ELECTRICAL EQUIPMENT AND OTHER METHODS RECOMMENDED BY SMACNA, AND AS APPROVED, FOR SUPPORTING HANGER STRAPS AND BRACING HANGERS.
C. TRANSITION PIECES FROM RECTANGULAR TO ROUND AT FAN DISCHARGE SHALL BE 1/8 GAUGE ALL-WELDED CONSTRUCTION. PROVIDE SUITABLE ANGLE REINFORCEMENT.

8 - VIBRATION ISOLATOR SPECIFICATIONS

- A. PROVIDE RUBBER VIBRATION ISOLATORS FOR MOUNTING OF ALL EQUIPMENT FROM STRUCTURE.

9 - PIPING SPECIFICATIONS

- A. CONDENSATE PIPING SHALL BE SCHEDULE 40, PVC PIPE WITH SOLVENT-WELDED JOINTS. PROVIDE 1/2" FIBERGLASS INSULATION WITH ALL SERVICE JACKET AT ALL CONDENSATE PIPING LOCATED IN CEILING PLENUM. INSULATION SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
B. HEAT PUMP WATER PIPING SHALL BE TYPE L DRAWN COPPER PIPE WITH WROUGHT COPPER FITTINGS.

10 - PIPE HANGERS SPECIFICATIONS

- A. PROVIDE PIPE HANGERS TO SUPPORT THE REQUIRED LOADS. WHERE NECESSARY, SUPPORTS SHALL BE DESIGNED TO PERMIT MOVEMENT DUE TO EXPANSION AND CONTRACTION. SIZE HANGERS TO FIT ON THE OUTSIDE OF INSULATION. PROVIDE INSULATION SADDLE FOR RECTANGULAR HANGERS. HANG PIPING FROM BUILDING STRUCTURE. DO NOT SUSPEND PIPE FROM ROOF DECK. PIPING SHALL NOT BE HUNG FROM OTHER PIPING. ALL RIGID HANGERS SHALL PROVIDE A MEANS OF VERTICAL ADJUSTMENT AFTER ERECTION. "C" CLAMPS SHALL NOT BE USED TO SUPPORT PIPING, UNLESS PROVIDED WITH PURPOSE MADE RESTRAINING CUPS.

11 - PRODUCT DATA SUBMITTALS SPECIFICATIONS

- A. PRODUCT DATA TO BE SUBMITTED SHALL BE PUBLISHED BY THE MANUFACTURER AND SHALL CONTAIN COMPLETE AND DETAILED ENGINEERING AND DIMENSIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT PRODUCT DATA AS DESCRIBED BELOW.

- 1. PRODUCT DATA SUBMITTED SHALL CONTAIN ONLY INFORMATION RELEVANT TO THE PARTICULAR EQUIPMENT OR MATERIAL TO BE FURNISHED. THE CONTRACTOR SHALL NOT SUBMIT CATALOGS WHICH DESCRIBE SEVERAL DIFFERENT ITEMS IN ADDITION TO THOSE ITEMS TO BE USED, UNLESS ALL IRRELEVANT INFORMATION IS MARKED OUT OR UNLESS RELEVANT INFORMATION IS CLEARLY MARKED. PRODUCT DATA FROM EACH MANUFACTURER SHALL BE IDENTIFIED AND SUBMITTED SEPARATELY.

12 - OPERATING INSTRUCTIONS AND MAINTENANCE

- A. THE CONTRACTOR SHALL PROVIDE OPERATING INSTRUCTION AND MAINTENANCE DATA BOOKS FOR ALL NEW EQUIPMENT AND MATERIALS FURNISHED. MAINTENANCE INSTRUCTION MANUALS SHALL INCLUDE COMPLETE DATA AND PROCEDURES FOR THE FOLLOWING EQUIPMENT AND MATERIALS (WHERE APPLICABLE):
1. IDENTIFYING NAME AND MARK NUMBER.
2. LOCATIONS (WHERE SEVERAL SIMILAR ITEMS ARE USED, PROVIDE A LIST)
3. COMPLETE NAME/PLATE DATA
4. PARTS LIST
5. PERFORMANCE CURVES AND DATA
6. WIRING DIAGRAMS
7. LUBRICATION CHARTS
8. MANUFACTURERS RECOMMENDED OPERATING AND MAINTENANCE INSTRUCTIONS WITH ALL NON-APPLICABLE INFORMATION DELETED.

13 - SHOP DRAWING SUBMITTALS

- A. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO COMMENCING ANY WORK. SHOP DRAWINGS SHALL INCLUDE COMPLETE DATA AND APPLICABLE PROCEDURES FOR THE FOLLOWING EQUIPMENT AND MATERIALS (WHERE APPLICABLE):
1. ALL VALVES
2. VIBRATION ISOLATORS (MOUNTING, HANGERS, AND BASES)
3. ALL INSULATION MATERIALS
4. ALL PLUMBING FIXTURES AND TRIM
4. ALL FANS
6. PUMPS, EXPANSION TANKS, WATER HEATERS, HEAT PUMPS, GLYCOL SOLUTION, GLYCOL FEED TANK
7. AIR DISTRIBUTION SPECIALTIES (FILTERS, VOLUME DAMPERS, FIRE DAMPERS, GRILLES, REGISTERS, DIFFUSERS AND LOUVERS).

14 - BALANCING - ADJUSTING AND TESTING

- A. AFTER DUCT SYSTEM HAS BEEN INSTALLED, COMPLETE WITH ALL GRILLES, DAMPERS, DUCTS, AND OTHER ITEMS SPECIFIED OR SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL MAKE ADJUSTMENTS, AS REQUIRED, TO DELIVER THE VOLUME OF AIR AT EACH AIR OUTLET WITHIN 10% OF DESIGN FLOWS AS SHOWN ON THE DRAWINGS. AFTER THE FINISHED AREA IS OCCUPIED, THE AIR VOLUMES SHALL BE READJUSTED, IF REQUIRED, TO PROPERLY BALANCE THE COOLING AND HEATING LOADS THROUGHOUT THE CONDITIONED SPACE.
B. AIR OUTLETS SHALL BE BALANCED WITH AIR PATTERN AS SHOWN ON THE DRAWING. CONTRACTOR SHALL SUBMIT A CERTIFIED AIR BALANCING REPORT TO THE PROJECT ARCHITECT FOR REVIEW AND APPROVAL, PRIOR TO TURNING OVER THE HVAC SYSTEM TO THE OWNER.
D. BALANCING OF SYSTEMS - GENERAL
1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT SERVICES NECESSARY FOR TESTING AND REBALANCING THE AIR CONDITIONING SYSTEMS. THE CONTRACTOR SHALL BE A MEMBER OF EITHER ASSOCIATED AIR BALANCE COUNSEL (AABC), OR NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) AND PROCEDURES SHALL BE IN ACCORDANCE WITH THOSE PUBLISHED BY (AABC) AND (NEBB).
2. SUBMIT NAME OF TEST AND BALANCE AGENCY, WITHIN 15 DAYS AFTER RECEIPT OF CONTRACT APPROVAL, FOR APPROVAL BY THE ARCHITECT.
3. BALANCING RESULT SHALL BE GUARANTEED FOR 90 DAYS. BALANCING CONTRACTOR SHALL BE SUBJECT TO RECALL TO THE SITE TO VERIFY RESULTS BEFORE APPROVAL OF BALANCING REPORT BY OWNER. CONTRACTOR SHALL SUBMIT CERTIFICATION WITH BALANCE REPORT.
E. FINAL REPORT:
1. CONTRACTOR SHALL SUBMIT FOUR COPIES OF FINAL BALANCE AND TEST REPORT. REPORT TO INCLUDE LISTING OF APPARATUS USED, CALIBRATION DATES, AND CERTIFICATION OF TEST TECHNICIAN. ALSO INCLUDED SHALL BE REPRODUCIBLE AS-BUILT DRAWINGS WHICH INDICATE THE TEST POINTS AND ASSOCIATED REFERENCE POINTS NOTED IN THE BALANCE REPORT. FINAL REPORT SHALL BE SUBMITTED TWO WEEKS AFTER COMPLETING THE BALANCING. NO FINAL PAYMENTS WILL BE MADE UP TO RECEIPT OF FINAL REPORT.

15 - CLEANING - DUCT AND EQUIPMENT

- A. THOROUGHLY CLEAN ALL DUCTWORK OF ALL FOREIGN SUBSTANCES, INSIDE AND OUT, BEFORE BEING TESTED AND PUT INTO OPERATION.
B. IF PART OF A SYSTEM SHOULD BE STOPPED BY FOREIGN MATTER, AFTER BEING PLACED IN OPERATION, THAT PART SHALL BE DISCONNECTED, CLEANED, AND RECONNECTED. WHEREVER NECESSARY, TO LOCATE AND REMOVE OBSTRUCTION, ANY WORK DAMAGED IN THE COURSE OF REMOVING OBSTRUCTION SHALL BE REPAIRED OR REPLACED WHEN THE SYSTEM IS RECONNECTED. AT NO ADDITIONAL COST TO THE OWNER.
C. DURING THE COURSE OF CONSTRUCTION, ALL DUCTS, SHALL BE CAPPED IN AN APPROVED MANNER TO INSURE ADEQUATE PROTECTION AGAINST THE ENTRANCE OF FOREIGN MATTER.
D. THE SYSTEM WILL NOT BE BROUGHT INTO OPERATION FOR TESTING PURPOSES WITHOUT NEW FILTERS. PRIOR TO ACCEPTANCE OF THE SYSTEM BY THE OWNER, THE HVAC CONTRACTOR SHALL PROVIDE COMPLETE NEW SETS OF FILTERS.

17 - FIRE PROTECTION

- A. THE EXISTING SPRINKLER SYSTEM SHALL BE MODIFIED TO SUIT THE FINISHED ROOM CONFIGURATION.
B. THE SYSTEM SHALL BE HYDRAULICALLY DESIGNED AND MEET ALL THE REQUIREMENTS OF NFPA 13, STATE OF NEBRASKA INSPECTION BUREAU AND THE CITY OF OMAHA FIRE INSPECTOR. SUBMIT PLANS FOR APPROVAL TO THE AUTHORITY HAVING JURISDICTION BEFORE EQUIPMENT IS INSTALLED.
C. ROOMS WITH SUSPENDED CEILINGS SHALL HAVE CONCEALED HEADS. SPRINKLER HEADS SHALL BE BRASS WITH FACTORY-PAINTED COVER PLATE. COVER PLATE SHALL BE PAINTED WHITE. INSTALL SPRINKLERS IN SUSPENDED CEILING IN CENTER OF ACOUSTICAL CEILING PANELS.
D. ROOMS WITH MULTI-LOUVERED TYPE, OPERATED BY AIR, DAMPERS, HANGERS AND SET SCREWS, VOLUME DAMPERS AND ALL MANUAL DAMPERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA AND ASHRAE STD.

17 - FIRE PROTECTION

- A. THE EXISTING SPRINKLER SYSTEM SHALL BE MODIFIED TO SUIT THE FINISHED ROOM CONFIGURATION.
B. THE SYSTEM SHALL BE HYDRAULICALLY DESIGNED AND MEET ALL THE REQUIREMENTS OF NFPA 13, STATE OF NEBRASKA INSPECTION BUREAU AND THE CITY OF OMAHA FIRE INSPECTOR. SUBMIT PLANS FOR APPROVAL TO THE AUTHORITY HAVING JURISDICTION BEFORE EQUIPMENT IS INSTALLED.
C. ROOMS WITH SUSPENDED CEILINGS SHALL HAVE CONCEALED HEADS. SPRINKLER HEADS SHALL BE ROUGH BRASS WITH FACTORY-PAINTED COVER PLATE. COVER PLATE SHALL BE PAINTED WHITE. INSTALL SPRINKLERS IN SUSPENDED CEILING IN CENTER OF ACOUSTICAL CEILING PANELS.
D. ROOMS WITHOUT CEILINGS SHALL HAVE UPRIGHT HEADS. UPRIGHT SPRINKLERS SHALL BE FACTORY PAINTED BLACK IN SPACES EXPOSED TO VIEW.

PLUMBING SPECIFICATIONS

- 1. UNDERGROUND DOMESTIC WATER SERVICE SHALL BE DUCTILE IRON WITH MECHANICAL OR PUSH-ON JOINT OR TYPE K COPPER WITH WROUGHT COPPER SOLDER JOINTS.
2. ABOVEGROUND DOMESTIC WATER PIPING SHALL BE TYPE L HARD DRAWN COPPER TUBING WITH WROUGHT COPPER FITTINGS.
3. UNDERGROUND SANITARY DRAINAGE PIPING SHALL BE CAST IRON SOIL PIPE OR COPPER DRAINAGE TUBE (DWV).
4. ABOVEGROUND SANITARY DRAINAGE AND VENT PIPING SHALL BE CAST IRON SOIL PIPE WITH CAST IRON FITTINGS, STANDARD WEIGHT GALVANIZED STEEL PIPE WITH BLACK CAST IRON DRAINAGE FITTINGS, OR COPPER DRAINAGE TUBE (DWV) WITH WROUGHT COPPER DRAINAGE FITTINGS.
5. DOMESTIC WATER PIPING SHALL BE INSULATED WITH FIBERGLASS OR TYPE 1 OR 2 FLEXIBLE ELASTOMERIC PIPE INSULATION. ALL EXPOSED INSULATION SHALL HAVE PRE-MOLDED COVER. ALL CONCEALED INSULATION SHALL HAVE TAPE AND VAPOR BARRIER OR PRE-MOLDED COVER, THICKNESS: CW 1", HW 1".
6. ALL DOMESTIC WATER SHUT-OFF VALVES SHOWN ARE BALL VALVES UNLESS NOTED OTHERWISE. BALL VALVES SHALL BE BRONZE OR BRASS BODY, FULL PORT, 2-PIECE CONSTRUCTION WITH SCREWED ENDS, DESIGNED FOR 600 PSI AT 150 DEGREE F. CHROME PLATED OR STAINLESS STEEL BALL, STEEL HANDLE WITH VINYL GRIP AND REPLACEABLE TEFLOON SEATS.
7. PROVIDE PLUMBING FIXTURES AND PLUMBING SPECIALTIES AS SCHEDULED ON THE DRAWINGS. WATER CLOSETS SHALL BE PROVIDED WITH WHITE SOLID PLASTIC SEATS. ALL FIXTURES SHALL BE PROVIDED WITH STOPS IN SUPPLY LINES. ALL LAVATORIES AND SINKS SHALL BE PROVIDED WITH CHROME PLATED TRAPS AND TAILPIECES. INSULATE ALL EXPOSED PIPING UNDER LAVATORIES.
8. WALL HYDRANTS AND HOSE BIBBS SHALL BE PROVIDED WITH AN ACCESSIBLE BALL VALVE IN THE HEATED PORTION OF BUILDING TO ALLOW WINTER DRAINAGE OF PIPING SUBJECT TO FREEZING.
9. PROVIDE WATER HAMMER ARRESTORS DESIGNED IN ACCORDANCE WITH P.D.I. STANDARD WH201. LOCATE ABOVE CEILING LINE FOR ACCESS. ZURN 2-1700 "SHOKTROL", WADE "SHOKSTOP" OR JOSAM "ABSORBO" FROM.
10. THE ENTIRE DOMESTIC WATER SYSTEM SHALL BE DRAINABLE THROUGH THE USE OF DRAIN VALVES AND OPENING FIXTURE SUPPLY FITTINGS. PROVIDE DRAIN VALVES AS REQUIRED TO PREVENT ANY TRAPPING OF WATER.
11. WORK IS TO BE ACCEPTABLE UNDER OMAHA PLUMBING CODE OR ACCEPTED AS SUITABLE FOR PROPOSED USE UNDER AUTHORITY HAVING JURISDICTION, WHERE EXISTING UNITS ARE TO BE ABANDONED. WORK SHALL BE CONDUCTED TO PERFORM WORK AS REQUIRED BY LOCAL CODES AND CODE AUTHORITIES.
12. PROVIDE PIPE HANGERS TO SUPPORT THE REQUIRED LOADS. WHERE NECESSARY, SUPPORTS SHALL BE DESIGNED TO PERMIT MOVEMENT DUE TO EXPANSION AND CONTRACTION. SIZE HANGERS TO FIT ON THE OUTSIDE OF INSULATION. HANG PIPE FROM SUBSTANTIAL BUILDING STRUCTURE. DO NOT SUSPEND PIPE FROM ROOF DECK. PIPING SHALL NOT BE HUNG FROM OTHER PIPING. ALL RIGID HANGERS SHALL PROVIDE A MEANS OF VERTICAL ADJUSTMENT AFTER ERECTION. "C" CLAMPS SHALL NOT BE USED TO SUPPORT PIPING, UNLESS PROVIDED WITH PURPOSE MADE RESTRAINING CUPS. WHERE NONINSULATED PIPES, IN WHICH VIBRATIONS MAY OCCUR, PASS THROUGH WALLS, FLOORS, OR PARTITIONS, ENCASE PIPE WITHIN ACOUSTICAL WALL SLEEVE.

PROJECT CLOSE OUT

- A. THE HVAC CONTRACTOR SHALL PERFORM THE FOLLOWING TASKS UPON PROJECT COMPLETION. ALL REQUIRED REPORTS AND AS-BUILTS SHALL BE SUBMITTED WITHIN TWO WEEKS OF DATE OF SUBSTANTIAL COMPLETION OR TENANT OCCUPANCY.

- 1. SUBMIT "AS-BUILT" RECORD DRAWINGS INDICATING ACTUAL AS-BUILT CONDITIONS TO THE ARCHITECT/ENGINEER FOR REVIEW. RECORD DRAWINGS SHALL BE STAMPED "AS BUILT" AND SHALL HAVE THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE CONTRACTOR, ALL ENGINEERS SEALS SHALL BE REMOVED FROM THE DRAWINGS. PROVIDE TWO (2) BLUE LINES AND ONE (1) PAPER SEPIA TO OWNER.
2. SUBMIT TWO COPIES OF OWNER'S MAINTENANCE MANUALS. THE MANUALS SHALL INCLUDE RATINGS, CAPACITIES, PARTS LISTS, WIRING DIAGRAMS, SERVICE/ MAINTENANCE RECOMMENDATIONS, AND WARRANTIES.
3. SUBMIT WRITTEN RESPONSE TO ALL FIELD REPORTS INDICATING CORRECTIVE ACTIONS TAKEN AND DATE CORRECTIVE ACTION WAS TAKEN TO THE ARCHITECT/ENGINEER FOR REVIEW.
B. THE PLUMBING CONTRACTOR SHALL PERFORM THE FOLLOWING TASKS UPON PROJECT COMPLETION. ALL REQUIRED REPORTS AND "AS-BUILTS" SHALL BE SUBMITTED WITHIN TWO WEEKS OF DATE OF SUBSTANTIAL COMPLETION OR OWNER OCCUPANCY.
1. SUBMIT "AS-BUILT" RECORD DRAWINGS INDICATING ACTUAL AS-BUILT CONDITIONS TO THE ARCHITECT/ENGINEER FOR REVIEW. RECORD DRAWINGS SHALL BE STAMPED "AS-BUILT" AND SHALL HAVE THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE CONTRACTOR. ALL ENGINEERS SEALS SHALL BE REMOVED FROM THE DRAWINGS. PROVIDE TWO (2) BLUE LINES AND ONE (1) PAPER SEPIA TO OWNER.
2. SUBMIT TWO COPIES OF OWNER'S MAINTENANCE MANUALS. THE MANUALS SHALL INCLUDE RATINGS, CAPACITIES, PARTS LISTS, WIRING DIAGRAMS, SERVICE/ MAINTENANCE RECOMMENDATIONS, AND WARRANTIES.
3. SUBMIT WRITTEN RESPONSE TO ALL FIELD REPORTS INDICATING CORRECTIVE ACTIONS TAKEN AND DATE CORRECTIVE ACTION WAS TAKEN TO THE ARCHITECT/ENGINEER FOR REVIEW.

MECHANICAL SYMBOLS

Table with 4 columns: SYMBOL, DESCRIPTION, SYMBOL, DESCRIPTION, SYMBOL, DESCRIPTION. Lists various mechanical symbols such as SANITARY SEWER, GATE VALVE, CHECK VALVE, BALL VALVE, etc.



Fusion Medical Staffing Tenant Fit-Out 11808 Grant Street Omaha, NE 68164



8600 Indian Hills Drive, Omaha, NE 68114

REVISIONS

Table with 3 columns: NO., DESCRIPTION, DATE. Revision 1: ADDENDUM NO. 1, 12/18/2015.

FILE LOG

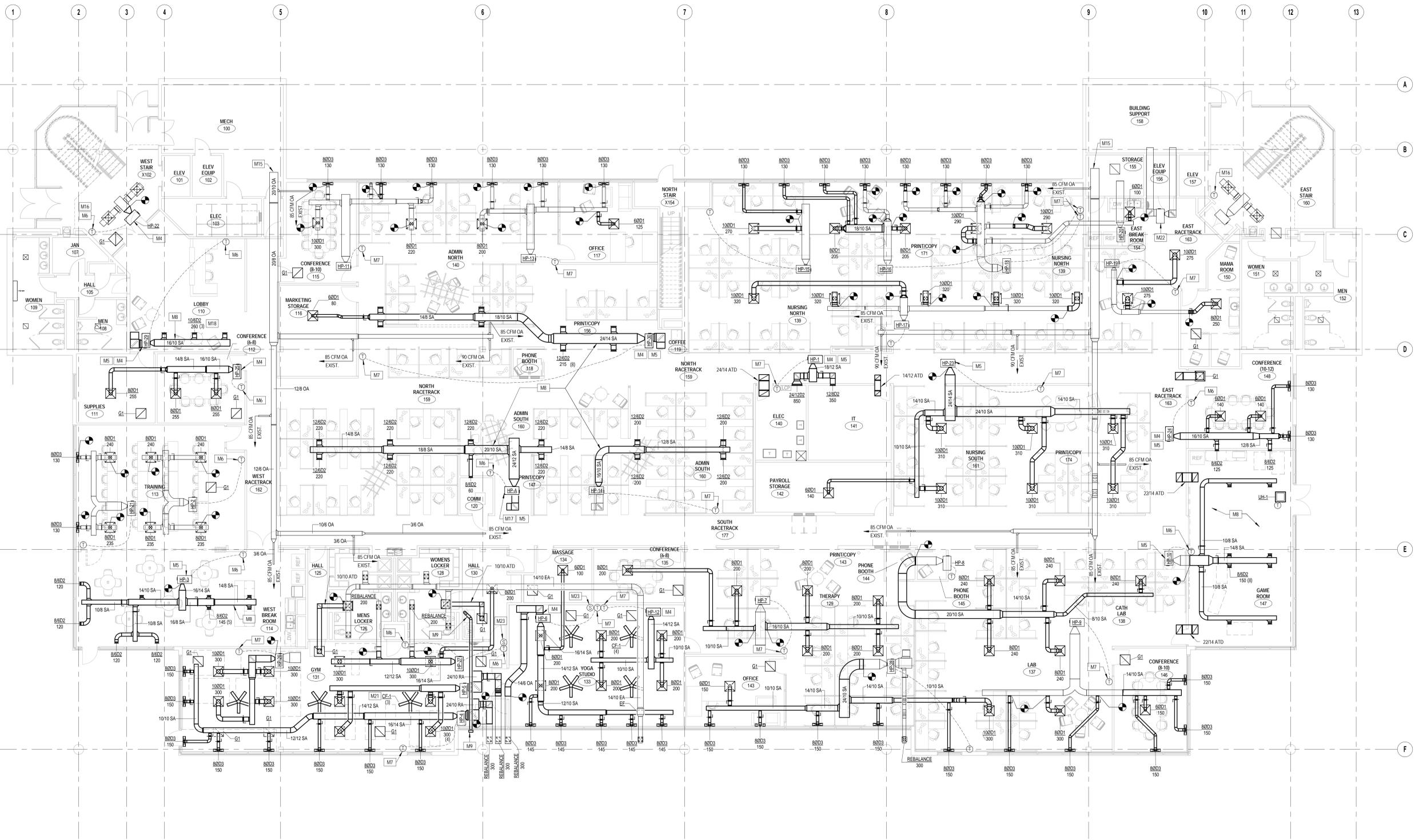
Table with 2 columns: ACTIVITY, BY. Includes entries for Manager, Design, Issue, Check, Stamp.

CONSTRUCTION DOCUMENTS

Project No.001-10127-001 December 8, 2015

MECHANICAL SPECIFICATIONS

M-000



B1 HVAC PLAN LEVEL 1
SCALE: 1/8" = 1'-0"

GENERAL NOTES

- CONTRACTOR SHALL VERIFY PERFORMANCE/OPERATION OF ALL EXISTING HEAT PUMPS. NOTIFY OWNER/ARCHITECT OF ANY MALFUNCTIONING HEAT PUMPS.
- REPLACE ALL FILTERS AT ALL HEAT PUMPS AT COMPLETION OF CONSTRUCTION.
- ALL DIFFUSER DUCT BRANCH CONNECTIONS SHALL MATCH DIFFUSER NECK SIZE UNLESS OTHERWISE NOTED.
- ALL EXPOSED DUCTWORK, PIPING, GRILLES, EQUIPMENT SHALL BE PAINTED BLACK. HEAT PUMP LABELS ACCESS OPENINGS SHALL NOT BE PART OF THE FINISH.
- ALL EXISTING SPRINKLER HEADS SHALL BE REPLACED. PIPING SHALL BE MODIFIED AND HEADS LOCATED AS REQUIRED TO MEET THE NEW SPACE CONFIGURATION AND COMPLY WITH NFPA 13 REQUIREMENTS. ALL SPRINKLER HEADS LOCATED IN AREAS WITH REMOVED CEILING SHALL BE REPLACED AND RECONFIGURED TO DISCHARGE UP AND SPACED PER NFPA 13 REQUIREMENTS. ALL SPRINKLER HEADS LOCATED IN AREAS WITH NEW AND EXISTING CEILING SHALL BE REPLACED WITH CONCEALED TYPE HEADS. ALL SPRINKLER HEADS LOCATED IN AREAS WITH CEILING CLOUDS OPEN TO ADJACENT NON-CEILING AREAS SHALL BE PROVIDED WITH SPRINKLER HEADS BOTH ABOVE AND BELOW LAY IN CEILING PER NFPA 13 REQUIREMENTS.
- THIS PROJECT UTILIZES A PLENUM RETURN AIR CEILING DESIGN. ALL EQUIPMENT AND MATERIALS INSTALLED IN THE PLENUM RETURN CEILING MUST MEET THE FLAME SPREAD AND SMOKE DEVELOPED RATINGS OF 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 AND BE APPROVED FOR USE IN PLENUM RETURN CEILING. ALL EXISTING EQUIPMENT MATERIALS INSTALLED IN PLENUM INCLUDING EXISTING PVC CONDENSATE PIPING SHALL BE INSULATED AS REQUIRED TO MEET THE FLAME/SMOKE INDEX PER IMC 2006.
- PROVIDE CLEAN-POSTATIC COORDINABLE COMPARTMENTED THERMOSTATS UNLESS OTHERWISE NOTED.
- ALL NON-DIGITAL, NON-PROGRAMMABLE THERMOSTATS SHALL BE REPLACED WITH NEW PROGRAMMABLE THERMOSTAT.
- ALL EXISTING AND NEW HEAT PUMP PVC CONDENSATE PIPING LOCATED ABOVE CEILING PLENUMS SHALL BE WRAPPED TO MEET 1-4 FLAME SPREAD INDEX OF 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 PER IMC 2006 REQUIREMENTS.

KEYED SHEET NOTES

- M4 RELOCATED HEAT PUMP. REUSE EXISTING HOSE KIT WHERE POSSIBLE.
- M6 PROVIDE COMPRESSOR SOUND SHEET AT HEAT PUMP.
- M6 PROVIDE NEW HONEYWELL PROGRAMMABLE THERMOSTAT.
- M7 RELOCATED THERMOSTAT.
- M8 EXPOSED DUCTWORK SHALL BE PROVIDED WITH INTERNAL INSULATION/LINER. DUCT DIMENSIONS SHOWN SHALL BE CLEAR INSIDE DIMENSION.
- M9 PROVIDE DRYER VENT DUCT TO BUILDING EXTERIOR WITH WALL CAP. SIZE PER DRYER MANUFACTURER RECOMMENDATION.
- M15 EXISTING VENTILATION AIR DUCTWORK AND AIR FLOWS TO REMAIN.
- M16 THERMOSTAT SHALL NOT BE PROVIDED WITH LOCKABLE COVER.
- M17 HEAT PUMP PROVIDED IN BASE 800 OA.
- M18 ADJUST AIR FLOW DISTRIBUTION AS REQUIRED TO PREVENT ANY SWAY OR MOTION AT SUSPENDED LIGHT FIXTURE DUE TO AIR VELOCITY.
- M21 CEILING FAN LOCATION SHALL BE COORDINATED WITH FINAL GYM EQUIPMENT LAYOUT FOR HEAD CLEARANCE COORDINATION.
- M22 CONTRACTOR TO VERIFY EXISTING HEAT PUMP THERMOSTAT LOCATION. EXISTING THERMOSTAT TO REMAIN.
- M23 PROVIDE CEILING FAN CONTROLLER. CONTROLLER SHALL CONTROL ALL FANS LOCATED IN ROOM AT SAME SPEED.

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	12/18/2015

FILE LOG

ACTIVITY	BY
Manager	MEC
Draw	HEB
Check	ELA

CONSTRUCTION DOCUMENTS

Project No. 001-10127-001
December 8, 2015

HVAC PLAN LEVEL 1

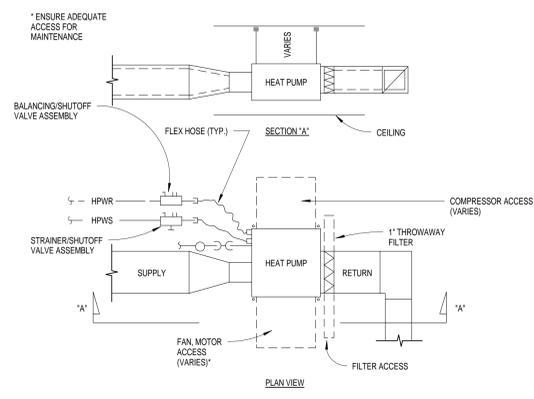
MH101

FUSION TENANT FIT OUT VENTILATION CALCULATION						
ZONE	HEAT PUMP UNIT	ROOM NUMBER	SQ.FT.	NO. OF PEOPLE	ZONE TYPE PER ASHRAE 62.1-2004	ASHRAE 62.1-2004 REQUIRED OUTSIDE AIR
1	HP-1	140	149	0	NA / IT CLOSET	850
		141	246	0	NA / ELECTRICAL CLOSET	350
2	HP-2 & HP-21	113	803	24	CONFERENCE/MEETING	1690
		114	856	24	OFFICE/BREAK ROOM	1205
4	HP-4, HP-5, HP-26, HP-27	131	1326	30	HEALTH CLUB	4200
		130	70	0	HALLWAY	4.2
		125	178	0	HALLWAY	200
		133	841	20	HEALTH CLUB	1905
6	HP-7, HP-8, HP-9, HP-28	134	135	2	OFFICE/MASSAGE	100
		129	1357	18	OFFICE	1300
7	HP-10, HP-24	135	195	8	CONFERENCE/MEETING	200
		137	1370	15	OFFICE	2010
		143	273	1	OFFICE	450
		146	297	10	CONFERENCE/MEETING	600
8	HP-23	138	486	8	OFFICE	480
		147	808	20	CONFERENCE/MEETING	1450
9	HP-15, HP-16, HP-17, HP-18, HP-19	148	360	12	CONFERENCE/MEETING	540
		161	1328	20	OFFICE	1860
		142	272	0	STORAGE	140
		139	4583	47	OFFICE	4450
10	HP-A, HP-11, HP-13, HP-14, HP-30	154	109	2	OFFICE/BREAK ROOM	100
		150	229	3	OFFICE/BREAK ROOM	250
		140	5475	59	OFFICE	5015
11	HP-25	117	284	1	OFFICE	255
		115	286	10	CONFERENCE/MEETING	430
12	HP-29	116	277	0	STORAGE	80
		112	240	8	CONFERENCE/MEETING	510
		111	216	0	STORAGE	216
		110	705	6	LOBBY	780
		ZONE POPULATION:		348	UNCORRECTED OUTDOOR AIR INTAKE (CFM):	3935.1
		SYSTEM POPULATION:		163	CORRECTED OUTDOOR AIR INTAKE (CFM):	2048
		OCCUPANT DIVERSITY:		0.47	ACTUAL SUPPLIED OUTSIDE AIR INTAKE (CFM):	2580

NOTE: PROVIDE BALANCE REPORT SHOWING COMPLIANCE WITH VENTILATION AIRFLOWS AT FINAL INSPECTION.

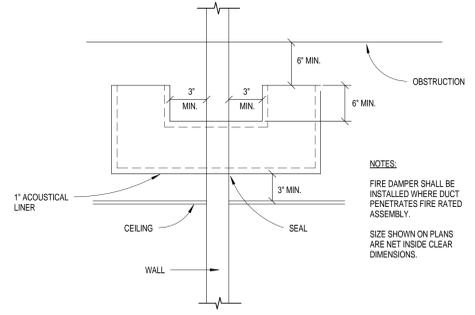
1 HEAT PUMP

SCALE: NONE



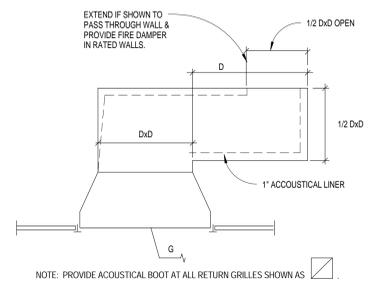
4 AIR TRANSFER DUCT

SCALE: NONE



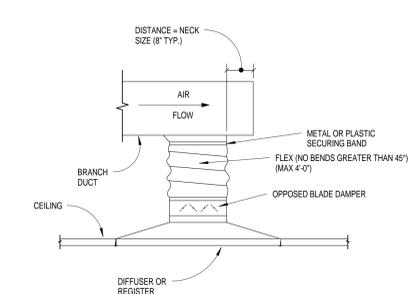
2 RETURN GRILLE

SCALE: NONE



3 DIFFUSER CONNECTION

SCALE: NONE



ELECTRIC UNIT HEATER SCHEDULE											
MARK	LOCATION	TYPE	MIN CAP MBH	KW	ELECTRICAL DATA				MANUFACTURER	MODEL	NOTES
					VOL	PH	HZ	PH			
UH-1	SEE PLANS	CEILING	16.3	4.8	480	3	60	QMARK	EFF4843	1,2	

NOTES:
 1. PROVIDE UNIT MOUNTED THERMOSTAT.
 2. PROVIDE WITH 277V PRIMARY TRANSFORMER / 24V SECONDARY CONTROL RELAY - CATALOG NO. EFF17.

DIFFUSER, REGISTER AND GRILLE SCHEDULE									
MARK	SERVES	TYPE	NECK SIZE	FINISH	MAX PD INCH WG	MANUFACTURER AND MODEL NO.	NOTES		
D1	SUPPLY	2X2X FACE	SEE PLANS	WHITE	0.10	KRUEGER PLO	1		
D2	SUPPLY	SUPPLY REGISTER	SEE PLANS	WHITE	0.08	KRUEGER 360	1		
D3	SUPPLY	LINEAR SLOT 1.5' SLOT WIDTH, 2-SLOT	SEE PLANS	WHITE	0.10	KRUEGER DFB	2		
G1	RETURN	RETURN GRILLE	18x18	WHITE	0.05	KRUEGER 6490	3		

NOTES:
 1. PROVIDE WITH OPPOSED BLADE DAMPER AT REGISTER FOR AIRFLOW BALANCING.
 2. PROVIDE WITH SUPPLY AIR PLENUM BOOT.
 3. ALL RETURN GRILLES SHALL BE PROVIDED WITH ACOUSTICAL PLENUM BOOT PER DETAIL 2M4501.

CEILING FAN SCHEDULE													
MARK	LOCATION	SERVES	TYPE	MOTOR TYPE	MOTOR DATA				FAN WHEEL DIAMETER IN	MANUFACTURER	MODEL	NOTES	
					AMPS	RPM	VOL	PH					HZ
CF-1	SEE PLANS	YOGA AND GYM	CEILING FAN WITHOUT LED	EC MOTOR WITH DIGITAL INVERTER DRIVE	0.34	179	120	1	60	52	BIG ASS FANS	HAKU MATRIX COMPOSITE SHORT MOUNT K3127	1

NOTES:
 1. PROVIDE SHORT MOUNT. MOUNT FAN 12" BELOW CEILING. PROVIDE WITH WALL MOUNTED CONTROL. PROVIDE STANDARD WHITE FINISH.

HEAT PUMP SCHEDULE																											
MARK	TYPE	AIR FLOW CFM	STAT PRESS IN WG	CONDENSER DATA										ELECTRICAL DATA													
				TOTAL		COOL		EWT°F HTG		GPM	PD FT WG	REFRIG	EAT°F DB		TOTAL MBH	SENS MBH	EER @ DESIGN	EAT°F DB	TOTAL HEAT OUTPUT MBH	COP @ DESIGN	FLA	VOL	PH	HZ	MANUFACTURER	MODEL	NOTES
				COOL	HTG	DB	WB	DB	WB																		
HP-A	HEAT PUMP	1600	0.6	86	68	12	15.23	R-410A	80.6	66.2	47.5	37	12	68	59	4.65	19	208	3	60	DAIKIN	WCCH5048	1				
HP-B	HEAT PUMP	310	0.5	86	68	2.1	7.69	R-410A	80.6	66.2	7.8	6.9	13	68	10	4.75	4.4	208	3	60	DAIKIN	WCCH5007	2				
HP-C	HEAT PUMP	500	0.6	86	68	3.8	4.27	R-410A	80.6	66.2	15.6	12.2	14	68	18.3	4.97	6.6	208	3	60	DAIKIN	WCCH4015	2				
HP-D	HEAT PUMP	330	0.2	86	68	3	10.13	R-410A	80.6	66.2	12.2	8.8	12	68	15.6	4.1	6.6	208	3	60	DAIKIN	WCCH5012	2				
HP-E	HEAT PUMP	650	0.51	86	68	4.5	5.82	R-410A	80.6	66.2	20.5	16.6	12	68	24.2	4.47	8.2	208	3	60	DAIKIN	WCCH4019	2				

NOTES:
 1. UNIT PROVIDED IN BASE BID ONLY.
 2. UNIT PROVIDED AS PART OF BID ALTERNATE NO. 2.

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FITTURE	FITTING	PIPE SIZE - INCHES				MANUFACTURER AND MODEL	NOTES
			WASTE	VENT	COLD WATER	HOT WATER		
SK-1	SINK, STAINLESS STEEL, DROP IN, DOUBLE BOWL, EACH 13 1/2" x 16" x 7 7/8" DEEP	DECK MOUNTED 8" L TYPE SWING SPOUT, 8" FIXED CENTERS, LEVER HANDLES, 2.2 GPM AERATOR	1-1/2	1-1/2	1/2	1/2	ELKAY GOURMET SINK MODEL LR3321PD, CHICAGO FAUCET 1100-369ABCP	1
SK-2	SINK, STAINLESS STEEL, DROP IN, SINGLE BOWL, 16" x 11 1/2" x 7 5/8" DEEP	DECK MOUNTED 5" GOOSENECK SPOUT, 4" FIXED CENTERS, LEVER HANDLES, 1.0 GPM AERATOR	1-1/2	1-1/2	1/2	1/2	ELKAY GOURMET SINK MODEL LR1918, AMERICAN STANDARD 6500.140 CENTERSET FAUCET, V10 AERATOR	2
L-1	COUNTERTOP LAVATORY, VITREOUS CHINA, 15" x 12 1/8" x 5 3/4" DEEP	DECK MOUNTED 3 3/4" CONVENTIONAL SPOUT, 4" FIXED CENTERS, LEVER HANDLES, 1.0 GPM AERATOR	1-1/2	1-1/2	1/2	1/2	AMERICAN STANDARD 0419.019 AND 5932.170 CENTERSET FAUCET, V10 AERATOR	2
BF-1	BOTTLE FILLING STATION, FILTERED IN WALL RECESSED	-	1-1/2	1-1/2	1/2	-	ELKAY EZH2O LZWSIMDK	3,8
EWC-1	BI-LEVEL ELECTRIC WATER COOLER, FILTERED, BOTTLE FILLING STATION	-	1-1/2	1-1/2	1/2	-	ELKAY EZH2O LZSTL8WS(VR)K	3
WB-1	RECESSED WALL DRAIN/VALVE BOX	1/2" QUARTER TURN VALVES WITH HAMMER ARRESTER	2	1-1/2	1/2	1/2	GLY GRAY WASHING MACHINE OUTLET BOX "MMB" SERIES	4,7
WB-2	RECESSED WALL DRAIN/VALVE BOX	1/2" QUARTER TURN VALVE WITH HAMMER ARRESTER	2	1-1/2	1/2	-	GLY GRAY OUTLET BOX "MMB" SERIES	5,7
VB-1	RECESSED WALL VALVE BOX	1/2" QUARTER TURN VALVE WITH HAMMER ARRESTER	-	-	1/2	-	GLY GRAY OUTLET BOX "MMB" SERIES	6,7

NOTES:
 1. PROVIDE WYE CONNECTION IN TAIL PIECE FOR DISHWASHER DISCHARGE CONNECTION.
 2. LESS DRAIN AND POP-UP HOLE, ACCESSIBLE MOUNTING HEIGHT AND PROTECTION ON EXPOSED WATER SUPPLIES, "P" TRAP, AND PIPING.
 3. BARRIER FREE.
 4. DRAIN, HOT AND COLD WATER VALVE BOX FOR WASHER.
 5. DRAIN AND COLD WATER VALVE BOX FOR ICE MACHINE.
 6. COLD WATER VALVE BOX FOR COFFEE MACHINE.
 7. METAL, WHITE POWDER COATED.
 8. PROVIDE UNDER BID ALTERNATE NO. 2.



Fusion Medical Staffing Tenant Fit-Out
 11808 Grant Street
 Omaha, NE 68164



8600 Indian Hills Drive, Omaha, NE 68114

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	12/18/2015

FILE LOG

ACTIVITY	BY
Manager	
Design	HEC
Draw	HEB
Check	HEA

CHAMP

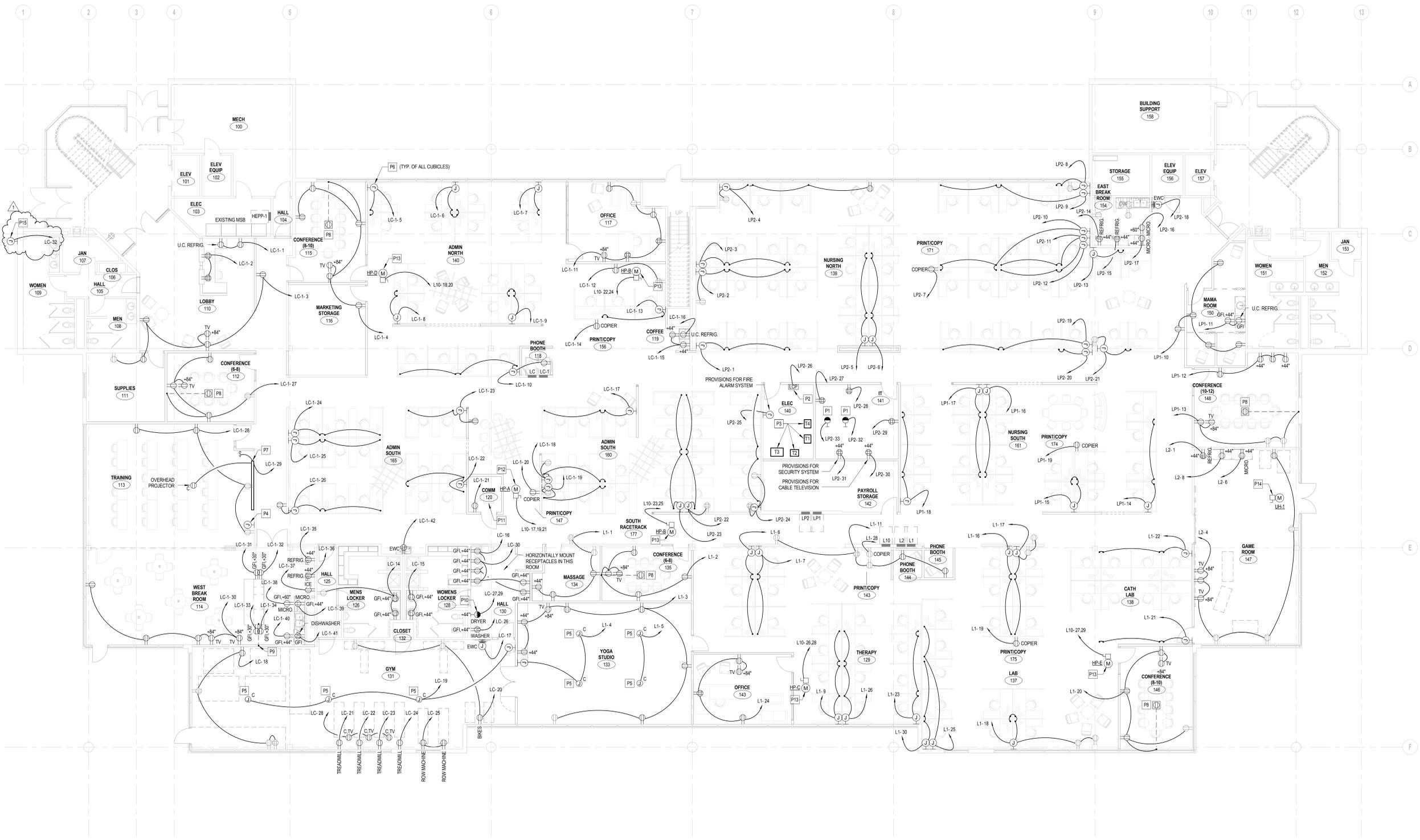
CONSTRUCTION DOCUMENTS

Project No.001-10127-001
 December 8, 2015

MECHANICAL DETAILS AND SCHEDULES

MH501

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POWER PLAN LEVEL 1
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. EXTEND EXISTING CIRCUITS FOR RELOCATED HEAT PUMPS TO NEW LOCATIONS AND RECONNECT. CONTRACTOR SHALL FIELD VERIFY EXISTING BRANCH CIRCUIT CONDUCTORS AND CONDUIT.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CIRCUIT CONTINUITY TO ALL CIRCUITS SERVING LEVEL 2. IF AN OUTAGE NEEDS TO OCCUR, NOTIFY OCCUPANT AND CONSTRUCTION MANAGER NO FEWER THAN TWO (2) WEEKS PRIOR TO SCHEDULED OUTAGE.
3. PROVIDE ALL NEW TYPED PANEL DIRECTORIES IN EXISTING PANELS WITHIN LEVEL 1 TENANT SPACE.
4. ALL TELEVISIONS AND ASSOCIATED SUPPORTS, BRACKETS, AND ACCESSORIES SHALL BE PROVIDED BY OTHERS.

KEYED SHEET NOTES

- P1 PROVIDE ONE (1) 1/2" SQUARE RECEPTACLE MOUNTED TO SIDE OF CABLE TRAY FOR CONNECTION TO NEW DATA RACK POWER AND UPS (UPS FURNISHED BY OWNER). CONNECT TO CIRCUIT AS INDICATED VIA 2#10, #10G, IN 1/2" C.
- P2 PROVIDE NEW 24 RELAY LIGHTING CONTROL PANEL, WATTSTOPPER L24 115277 24 115, OR EQUAL. PROVIDE ALL NECESSARY CABLING, GROUP SWITCH CARDS, LOW-VOLTAGE SWITCHES, ETC. FOR COMPLETE AND FUNCTIONAL SYSTEM.
- P3 RELOCATED EXISTING TRANSFORMERS (TYP. OF 4). FLOOR MOUNT UNITS ON NEW 4" CONCRETE BASE. PROVIDE EXTENDED PRIMARY FEEDERS TO TRANSFORMER LOCATION AND NEW SECONDARY FEEDERS TO EXISTING PANEL LOCATIONS. CONTRACTOR TO FIELD VERIFY EXISTING CONDUIT AND CONDUCTOR SIZES.
- P4 PROVIDE ONE (1) 4" X 1 1/8" SQUARE X 4" DEEP BOX WITH 2" WITH PULLSTRING TO PROJECTOR LOCATION IN CEILING FOR AV CABLING.
- P5 CONNECT CEILING FAN AND CONTROLS AS REQUIRED.
- P6 CONNECT POWERED SYSTEMS FURNITURE AS REQUIRED. CIRCUIT INDICATED SHALL PROVIDE POWER TO QUANTITY OF CUBICLES AS SHOWN. COORDINATE EXACT INSTALLATION WITH FURNITURE SUPPLIER.
- P7 CONNECT RELOCATED MOTORIZED PROJECTOR SCREEN AND CONTROLS AS REQUIRED.
- P8 PROVIDE SURFACE-STYLE FLOOR BOX FOR POWER AND DATA CONNECTIONS TO TABLE CONNECTION SYSTEM OR EQUAL. PROVIDE PLEX RECEPTACLE AS INDICATED AND SEE SHEET E1101 FOR QUANTITY OF DATA CABLES TO PROVIDE. COORDINATE EXACT REQUIREMENTS AND LOCATION OF BOX WITH FURNITURE SUPPLIER.

KEYED SHEET NOTES

- P9 SAW-CUT AND TRENCH CONCRETE FLOOR FOR INSTALLATION OF CONDUITS TO KITCHEN ISLAND CIRCUITS. PATCH, REPAIR AND LEVEL FLOORING TO MATCH EXISTING SURROUNDING SURFACES.
- P10 PROVIDE NEMA 6-30R FOR CONNECTION TO ELECTRIC DRYER. CONNECT TO CIRCUIT AS INDICATED VIA 2#10, #10G, IN 1/2" C.
- P11 COORDINATE POWER REQUIREMENTS WITH COX COMMUNICATIONS AND RECONNECT EXISTING EQUIPMENT TO NEAREST PANELBOARD AS REQUIRED.
- P12 CONNECT NEW HEAT PUMP AS REQUIRED AS PART OF BASE BID ONLY. HEAT PUMP IS NOT INCLUDED IF ADD. ALTERNATE NO. 1 IS ACCEPTED. PROVIDE 20#V, 30A/3P DISCONNECT ADJACENT TO UNIT. CONNECT TO CIRCUIT AS INDICATED VIA 3#12, #10G, IN 1/2" C.
- P13 ADD ALTERNATE NO. 1. CONNECT NEW HEAT PUMP AS REQUIRED AS PART OF ADD. ALTERNATE ONLY. HEAT PUMP IS NOT INCLUDED IF ADD. ALTERNATE NO. 1 IS NOT ACCEPTED. PROVIDE 20#V, 30A/3P DISCONNECT ADJACENT TO UNIT. CONNECT TO CIRCUIT AS INDICATED VIA 2#12, #10G, IN 1/2" C.
- P14 CONNECT NEW ELECTRIC UNIT HEATER AS REQUIRED. PROVIDE 480V, 30A/3P DISCONNECT FUSED AT 10A ADJACENT TO UNIT. CONNECT TO NEW 15A/3P CIRCUIT BREAKER IN PANEL, 15A/3P, 240V, 1PH.
- P15 CONNECT NEW EXTERIOR SIGNAGE AS REQUIRED. PROVIDE RECESSED FLUSH-MOUNT AND WEATHER RESISTANT J-BOX ON SECOND LEVEL OF BUILDING AND CIRCUIT TO PANEL AS INDICATED. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT, CONTROL METHOD (PHOTOCELL/TIMECLOCK), AND POWER REQUIREMENTS WITH SIGNAGE PROVIDER.

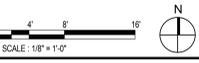
REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	12/18/2015

FILE LOG

ACTIVITY	BY
Manager	
Design	DDM
Draw	BSM
Check	CMR
Stamp	

CONSTRUCTION DOCUMENTS



Project No. 001-10127-001
December 8, 2015

POWER PLAN LEVEL 1

EP101

PANEL NO. LC

MAINS TYPE: MCB TYPE: LIGHTING & APPLIANCE LOCATION: PHONE BOOTH 118
 MAIN BREAKER SIZE: 225 A PHASE BUS RATING: 225A MOUNTING: RECESSED
 SERVICE VOLTAGE: 120/208 Wye 3-PHASE 4-WIRE NEUTRAL BUS RATING: 225A FED FROM ID:
 AIC RATING: 10000

NOTES: EXISTING PANELBOARD
 ALL CIRCUIT BREAKERS ARE EXISTING UNLESS NOTED OTHERWISE. * - INDICATES TO REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW CIRCUIT BREAKER AS INDICATED.
 ** - INDICATES TO PROVIDE NEW CIRCUIT BREAKER AS INDICATED IN EXISTING SPACE.

LOAD DESCRIPTION	BKR	P	CKT NO.	A (VA)	B (VA)	C (VA)	CKT NO.	P	BKR	LOAD DESCRIPTION	
L: NORTHWEST OPEN OFFICES VIA LCP	20	1	1	1094	814		2	1	20	L: CENTER OPEN OFFICES VIA LCP	
L: WEST OPEN OFFICES VIA LCP	20	1	3		560	812	4	1	20	L: NORTH & EAST RACETRACK VIA LCP	
L: MAIN LOBBY	20	1	5				6	1	20	L: NORTH & EAST RACETRACK EGRESS / EXITS /...	
L: ADMIN CONFERENCE, STORAGE	20	1	7	504	224		8	1	20	L: NORTH OFFICE, PHONE BOOTH	
L: COMMUNICATIONS ROOM	20	1	9		56	448	10	1	20	L: WEST CONFERENCE, SUPPLIES	
L: TRAINING ROOM	20	1	11			476	616	12	1	20	L: BREAKROOM, MENS LOCKER, WOMENS LOCKER
L: GYM	20	1	13	560	540		14	1	20	R: MENS LOCKER ROOM	
R: WOMENS LOCKER	20	1	15		360	540	16	1	20	R: WOMENS LOCKER ROOM HALL	
E: GYM WATER COOLER (ADD. ALT. NO. 2)	20	1	17			100	900	18	1	20	R: GYM
E: GYM CEILING FANS	20	1	19	1500	540		20	1	20	** R: GYM	
R: GYM TREADMILL	20	1	21		1500	1500	22	1	20	* R: GYM TREADMILL	
R: GYM TREADMILL	20	1	23			1500	1500	24	1	20	* R: GYM TREADMILL
R: GYM ROW MACHINE	20	1	25	500	1680		26	1	20	* E: CLOTHES WASHER	
* E: CLOTHES DRYER	30	2	27		6000	540	28	1	20	* R: GYM TELEVISIONS	
--	--	--	29			0	540	30	1	20	R: WOMENS LOCKER ROOM HALL
* SPARE	20	1	31	1000	1920		32	1	20	* L: EXTERIOR SIGNAGE	
* SPARE	20	1	33		1000	1000	34	1	20	* SPARE	
* SPARE	20	1	35			1000	1000	36	1	20	* SPARE
EXISTING LC-1	100	3	37	12280	1000		38	1	20	* SPARE	
--	--	--	39		10420	1000	40	1	20	* SPARE	
--	--	--	41			12790	1000	42	1	20	* SPARE
Total Load:				24156.00 VA	25736.00 VA	22306.00 VA					
Total Amps:				203.7 A	216.8 A	185.9 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND...	PANEL TOTALS
Lighting	6512 VA	125.00%	8140 VA	
Other	1506 VA	100.00%	1506 VA	
Power	7600 VA	100.00%	7600 VA	
Receptacles	48580 VA	60.29%	29290 VA	
Spare	8000 VA	100.00%	8000 VA	
TOTAL CONN. LOAD				72.2 kVA
TOTAL CONN. CURRENT				200.4 A
TOTAL EST. DEMAND LOAD				54.5 kVA
TOTAL EST. DEMAND CURRENT				151.4 A
FUTURE LOAD GROWTH				25%
MIN. PANEL RATING (AMPS)				189 A

PANEL NO. LC-1

MAINS TYPE: MLO TYPE: LIGHTING & APPLIANCE LOCATION: PHONE BOOTH 118
 MAIN BREAKER SIZE: 225 A PHASE BUS RATING: 225A MOUNTING: RECESSED
 SERVICE VOLTAGE: 120/208 Wye 3-PHASE 4-WIRE NEUTRAL BUS RATING: 225A FED FROM ID: LC
 AIC RATING: 10000

NOTES: EXISTING PANELBOARD
 ALL CIRCUIT BREAKERS ARE EXISTING UNLESS NOTED OTHERWISE. *** - INDICATES TO PROVIDE NEW CIRCUIT BREAKER AS INDICATED IN EXISTING SPACE.

LOAD DESCRIPTION	BKR	P	CKT NO.	A (VA)	B (VA)	C (VA)	CKT NO.	P	BKR	LOAD DESCRIPTION	
R: MAIN LOBBY UC REFRIG.	20	1	1	540	720		2	1	20	R: MAIN LOBBY DESK	
R: MAIN LOBBY, SUPPLIES, WEST CONF. RM	20	1	3		1080	1260		4	1	20	R: ADMIN CONF. RM, STORAGE
R: ADMIN NORTH CUBICLES	20	1	5				6	1	20	R: ADMIN NORTH CUBICLES	
R: ADMIN NORTH CUBICLES	20	1	7	720	720		8	1	20	R: ADMIN NORTH CUBICLES	
R: ADMIN NORTH CUBICLES	20	1	9		1440	280	10	1	20	R: ADMIN NORTH CUBICLES, PHONE BOOTH	
R: NORTH OFFICE	20	1	11			1440	540	12	1	20	R: ADMIN NORTH CUBICLES
R: ADMIN NORTH CUBICLES	20	1	13	1080	180		14	1	20	R: ADMIN NORTHCOPPER	
R: COFFEE BAR	20	1	15		360	360	16	1	20	R: COFFEE BAR UC REFRIG	
R: ADMIN SOUTH CUBICLES	20	1	17			1080	1260	18	1	20	R: ADMIN SOUTH CUBICLES
R: ADMIN SOUTH CUBICLES	20	1	19	1260	1680		20	1	20	R: ADMIN SOUTH COPIER	
R: COMMUNICATIONS RM	20	1	21		180	1440	22	1	20	R: ADMIN SOUTH CUBICLES	
R: ADMIN SOUTH CUBICLES	20	1	23			900	1080	24	1	20	R: ADMIN SOUTH CUBICLES
R: ADMIN SOUTH CUBICLES	20	1	25	1080	1260		26	1	20	R: ADMIN SOUTH CUBICLES	
R: WEST CONFERENCE RM	20	1	27		1080	720	28	1	20	R: TRAINING ROOM	
E: TRAINING ROOM PROJECTOR SCREEN	20	1	29			430	900	30	1	20	R: WEST BREAKROOM
R: WEST BREAK ROOM ISLAND	20	1	31	180	180		32	1	20	R: WEST BREAK ROOM ISLAND	
R: WEST BREAK ROOM ISLAND	20	1	33		180	180	34	1	20	R: WEST BREAK ROOM ISLAND	
R: WEST BREAK ROOM REFRIG.	20	1	35			1000	1000	36	1	20	R: WEST BREAK ROOM REFRIG
R: WEST BREAK ROOM ICE	20	1	37	1000	1680		38	1	20	R: WEST BREAK ROOM MICRO.	
*** R: WEST BREAK ROOM MICRO.	20	1	39		1680	180	40	1	20	R: WEST BREAK ROOM COUNTER	
R: WEST BREAK ROOM DISHWASHER	20	1	41			500	500	42	1	20	R: WEST WATER COOLER
Total Load:				12280.00 VA	10420.00 VA	12790.00 VA					
Total Amps:				104.7 A	86.8 A	109.0 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND...	PANEL TOTALS
Other	430 VA	100.00%	430 VA	
Receptacles	35060 VA	64.26%	22530 VA	
TOTAL CONN. LOAD				35.5 kVA
TOTAL CONN. CURRENT				98.5 A
TOTAL EST. DEMAND LOAD				23.0 kVA
TOTAL EST. DEMAND CURRENT				63.7 A
FUTURE LOAD GROWTH				25%
MIN. PANEL RATING (AMPS)				80 A

PANEL NO. LP2

MAINS TYPE: MLO TYPE: LIGHTING & APPLIANCE LOCATION: SOUTH RACETRACK 177
 MAIN BREAKER SIZE: 225 A PHASE BUS RATING: 225A MOUNTING: RECESSED
 SERVICE VOLTAGE: 120/208 Wye 3-PHASE 4-WIRE NEUTRAL BUS RATING: 225A FED FROM ID:
 AIC RATING: 10000

NOTES: EXISTING PANELBOARD
 ALL CIRCUIT BREAKERS ARE EXISTING UNLESS NOTED OTHERWISE. * - INDICATES TO REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW CIRCUIT BREAKER AS INDICATED.

LOAD DESCRIPTION	BKR	P	CKT NO.	A (VA)	B (VA)	C (VA)	CKT NO.	P	BKR	LOAD DESCRIPTION	
R: NURSING NORTH CUBICLES	20	1	1	1440	1620		2	1	20	R: NURSING NORTH CUBICLES	
R: NURSING NORTH CUBICLES	20	1	3		1440	1440	4	1	20	R: NURSING NORTH CUBICLES	
R: NURSING NORTH CUBICLES	20	1	5			1440	1440	6	1	20	R: NURSING NORTH CUBICLES
R: NURSING NORTH COPIER	20	1	7	1680	1440		8	1	20	R: NURSING NORTH CUBICLES	
R: NURSING NORTH CUBICLES	20	1	9		1440	1440	10	1	20	R: NURSING NORTH CUBICLES	
R: NURSING NORTH CUBICLES	20	1	11			1080	1080	12	1	20	R: NURSING NORTH CUBICLES
R: NURSING NORTH CUBICLES	20	1	13	720	1000		14	1	20	R: EAST BREAK RM, REFRIG.	
R: EAST BREAK RM REFRIG.	20	1	15		1000	1680	16	1	20	R: EAST BREAK RM, MICRO.	
R: EAST BREAK RM MICRO.	20	1	17			1680	500	18	1	20	E: EAST WATER COOLER (ADD. ALT. NO. 2)
R: NURSING NORTH CUBICLES	20	1	19	1080	720		20	1	20	R: NURSING NORTH CUBICLES	
R: NURSING NORTH CUBICLES	20	1	21		900	1800	22	1	20	R: ADMIN SOUTH CUBICLES	
R: ADMIN SOUTH CUBICLES	20	1	23			1440	1620	24	1	20	R: ADMIN SOUTH CUBICLES
E: FIRE ALARM BOOSTER PANEL (LOCKABLE BREAKER)	20	1	25	100	0		26	1	20	E: LIGHTING CONTROL PANEL	
R: IT ROOM	20	1	27		360	360	28	1	20	R: IT ROOM	
R: IT ROOM	20	1	29			360	360	30	1	20	R: IT ROOM
R: IT ROOM	20	1	31	360	1500		32	1	30	* R: IT TRACK	
* R: IT TRACK	30	1	33		1500	500	34	1	20	SPARE	
SPARE	20	1	35			500	500	36	1	20	SPARE
Total Load:				11660.00 VA	13860.00 VA	12000.00 VA					
Total Amps:				97.2 A	115.9 A	100.4 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND...	PANEL TOTALS
Power	3600 VA	100.00%	3600 VA	
Receptacles	32420 VA	65.42%	21210 VA	
Spare	1500 VA	100.00%	1500 VA	
TOTAL CONN. LOAD				37.5 kVA
TOTAL CONN. CURRENT				104.1 A
TOTAL EST. DEMAND LOAD				26.3 kVA
TOTAL EST. DEMAND CURRENT				73.0 A
FUTURE LOAD GROWTH				10%
MIN. PANEL RATING (AMPS)				80 A



Fusion Medical Staffing Tenant Fit-Out
 11808 Grant Street
 Omaha, NE 68164



8600 Indian Hills Drive, Omaha, NE 68114

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM NO. 1	12/18/2015

FILE LOG

Activity	BY
Manage	
Design	DDM
Draw	DDM
Check	DDM

CONSTRUCTION DOCUMENTS

Project No. 001-10127-001
 December 8, 2015

ELECTRICAL SCHEDULES

EP602