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MECHANICAL LEGEND

(VERSION /07)

SYMBOL	ABBREV	DESCRIPTION
	AMD	AIR MEASURING DEVICE
	SA	SUPPLY AIR DUCT (UP)
	EA/RA	EXHAUST/RETURN AIR DUCT (UP)
	SA	SUPPLY AIR DUCT (DOWN)
	EA/RA	EXHAUST/RETURN AIR DUCT (DOWN)
		ELBOW WITH TURNING VANES
	F.D.	FIRE DAMPER WITH ACCESS DOOR
	S.D.	SMOKE DAMPER
	F.S.D.	FIRE SMOKE DAMPER WITH ACCESS DOOR
	VD	VOLUME DAMPER
		FLAT OVAL
	FC	FLEXIBLE CONNECTION
		LINEAR DIFFUSER WITH FLEXIBLE DUCT AND SPIN-IN FITTING
	SD	SMOKE DETECTOR
		SOUND ATTENUATOR
	SL	SOUND LINING
		STAINLESS STEEL DUCTWORK
		TRANSITION RECTANGULAR OR ROUND
		TRANSITION ROUND TO RECTANGULAR
VFC	VFC	VARIABLE FREQUENCY CONTROLLER
		VARIABLE AIR VOLUME TERMINAL
		VARIABLE AIR VOLUME TERMINAL W/RHC
		DIFFUSER - ONE-WAY THROW
		DIFFUSER - TWO-WAY THROW
		DIFFUSER - THREE-WAY THROW
	CFM	CUBIC FEET PER MINUTE
		CENTER LINE
—CHS—	CHS	CHILLED WATER SUPPLY
— —CHR— —	CHR	CHILLED WATER RETURN
—CS—	CS	CONDENSER WATER SUPPLY
— —CR— —	CR	CONDENSER WATER RETURN
—HS—	HS	HOT WATER HEATING SUPPLY
— —HR— —	HR	HOT WATER HEATING RETURN
—LPS—	LPS	LOW PRESSURE STEAM SUPPLY (PSIG)
— —LPR— —	LPR	LOW PRESSURE CONDENSATE RETURN
—MPS—	MPS	MEDIUM PRESSURE STEAM SUPPLY (PSIG)
— —MPR— —	MPR	MEDIUM PRESSURE CONDENSATE RETURN
—HPS—	HPS	HIGH PRESSURE STEAM SUPPLY (PSIG)
— —HPR— —	HPR	HIGH PRESSURE CONDENSATE RETURN
—RS—	RS	REFRIGERANT SUCTION
—RL—	RL	REFRIGERANT LIQUID
—HG—	HG	REFRIGERANT HOT GAS
— —FOS— —	FOS	FUEL OIL SUPPLY
— —FOR— —	FOR	FUEL OIL RETURN
—FOV—	FOV	FUEL OIL VENT
—FOF—	FOF	FUEL OIL FILL
—FOG—	FOG	FUEL OIL GAGE
	FTR	FINNED TUBE RADIATION
	F&T	FLOAT & THERMOSTATIC TRAP
	IB	INVERTED BUCKET
	TD	THERMODYNAMIC TRAP
	P/T	PRESSURE AND TEMPERATURE PLUG
DPS	DPS	DIFFERENTIAL PRESSURE SWITCH
	RA	RETURN AIR
	SA	SUPPLY AIR
		THERMOMETER

SYMBOL (SINGLE LINE)	SYMBOL (DOUBLE LINE)	ABBREV	DESCRIPTION
		V-	TWO WAY CONTROL VALVE
		V-	THREE WAY CONTROL VALVE
			STRAINER WITH BLOWDOWN VALVE
		AAV	AUTOMATIC AIR VENT
		MAV	MANUAL AIR VENT
		GV	GATE VALVE
		GBV	GLOBE VALVE
		CKV	CHECK VALVE
		BFP	BACKFLOW PREVENTER
		BV	BALANCING VALVE
			BALANCING VALVE W/FMF
			CONCENTRIC REDUCER
			ECCENTRIC REDUCER
			FLANGED CONNECTION
		HB	HOSE BIBB
		HED	HOSE END DRAIN
			PIPE ANCHOR
			PIPE GUIDE
			PIPE UP
			PIPE DOWN
			PIPE/DUCT CAPPED
			PIPE FLOW DIRECTION
			PRESSURE GAGE
			PRESSURE GAGE WITH COCK AND SNUBBER
		PRV	PRESSURE REDUCING VALVE
			PRESSURE RELIEF VALVE
			UNION
			MANUAL BUTTERFLY VALVE
			MOTORIZED BUTTERFLY VALVE
			BALL VALVE
			PLUG VALVE
		FMF	FLOW METER FITTING (ANNUBAR TYPE)
		FMF	FLOW METER FITTING (VENTURI TYPE)
		CX	POINT OF CONNECTION, NEW TO EXISTING
		DIA	DIAMETER
		AD	AREA DRAIN
		FD	FLOOR DRAIN
		RD	ROOF DRAIN
		CW	DOMESTIC COLD WATER
		HW	DOMESTIC HOT WATER
		HWR	DOMESTIC HOT WATER RECIRCULATING
		SAN	SANITARY
		V	VENT PIPE
—AW—		AW	ACID WASTE
— — —AV— — —		AV	ACID VENT
—D—		D	DRAIN
—SW—		SW	STORM WATER
— —FD— —			FOUNDATION DRAIN
—CO		CO	CLEANOUT IN HORIZONTAL
—CO		CO	CLEANOUT IN VERTICAL
—F—		F	FIRE PROTECTION
—SP—		SP	SPRINKLER
—A—		A	COMPRESSED AIR
—G—		G	NATURAL GAS
—O—		O	OXYGEN
—N—		N	NITROGEN
—NO—		NO	NITROUS OXIDE
—MA—		MA	
—AES—		AES	[illegible]EVACUATION
—V—		V	VACUUM

SYMBOL	ABBREV	DESCRIPTION
1H	1H	1 HOUR SEPARATION
2H	2H	2 HOUR SEPARATION
3H	3H	3 HOUR SEPARATION
S	S	SMOKE TIGHT PARTITION
SB	SB	SMOKE BARRIER
	S.A.	SHOCK ABSORBER
	WH	WALL HYDRANT
	FDV	FIRE DEPARTMENT VALVE
TP	TP	TRAP PRIMER PIPE
	P-	PUMP

CONVENTIONS

SECTION DESIGNATION

- LETTER DENOTES SECTION IDENTIFICATION
- INDICATES DRAWING NUMBER WHERE SECTION IS DRAWN
- INDICATES DRAWING NUMBER WHERE SECTION IS TAKEN

SYMBOL	DESCRIPTION
	EXISTING DUCTWORK, PIPING, AND EQUIPMENT TO REMAIN (LIGHT, SOLID)
	NEW DUCTWORK, PIPING, AND EQUIPMENT (HEAVY, SOLID)
	EXISTING DUCTWORK, PIPING, AND EQUIPMENT TO BE REMOVED (HEAVY, DASHED)
	AIR DEVICE DESIGNATION
	DENOTES REFERENCE TO DRAWING NOTES
	SUPPLY AIR TERMINAL UNIT DESIGNATION
	RETURN AIR TERMINAL UNIT DESIGNATION
	EXHAUST AIR TERMINAL UNIT DESIGNATION
	DENOTES REFERENCE TO MEDICAL GAS/VACUM OUTLETS
	SANITARY RISER DIAGRAM NUMBER
	DOMESTIC WATER RISER DIAGRAM NUMBER
<00.00>	INVERT (ELEVATION)
FD-AP3"	FLOOR DRAIN - TYPE "A", 3" DIAMETER WITH TRAP PRIMER
FD-B3"	FLOOR DRAIN - TYPE "B", 3" DIAMETER
FD-CFP3"	FLOOR DRAIN - TYPE "C", 3" DIAMETER WITH FUNNEL AND TRAP PRIMER
FD-SFD4"	FLOOR DRAIN - TYPE "D", 4" DIAMETER LARGE CAPACITY EQUIPMENT DRAIN
AD-E4"	AREA DRAIN - TYPE "E", 4" DIAMETER
RD-F4"	ROOF DRAIN - TYPE "F", 4" DIAMETER
H-_	DENOTES REFERENCE TO HOSPITAL EQUIPMENT DESIGNATION.

ABBREVIATIONS

AABC	ASSOCIATED AIR BALANCE COUNCIL
ABBREV	ABBREVIATION
ABV	ABOVE
ACCU	AIR COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AP	ALARM PANEL
APPROX	APPROXIMATE, APPROXIMATELY
ARCH	ARCHITECT, ARCHITECTURAL
ARRG	ARRANGEMENT
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
ASPE	AMERICAN SOCIETY OF PLUMBING ENGINEERS
ATC	AUTOMATIC TEMPERATURE CONTROL
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BLW	BELOW
BTUH	BTU PER HOUR
CLG	CEILING
C.	COMMON
CC	COOLING COIL
CONC	CONCRETE
CONN	CONNECTION, CONNECT
CONT	CONTINUATION
CUH	CABINET UNIT HEATER
DB	DRY BULB
DBA	DECIBEL (REFERENCE "A" SCALE)
DESIG	DESIGNATION
DIFF	DIFFUSER
DN	DOWN
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EFF	EFFICIENCY
ELEC	ELECTRICAL
ELEV	ELEVATION
ENT	ENTERING
ESP	EXTERNAL STATIC PRESSURE
EX	EXISTING
EXP	EXPOSED
F	DEGREES FAHRENHEIT
FB	FILTER BANK
FCU	FAN COIL UNIT
FHC	FIRE HOSE CABINET
FLR	FLOOR
FO	FUEL OIL
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET
GA	GAGE
GAL	GALLON
GALV	GALVANIZED
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR.	GRILLE
H	HEIGHT
H.P.	HIGH PRESSURE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HZ	HERTZ
IN.	INCHES
IN. W.G.	INCHES OF PRESSURE, WATER GUAGE
KW	KILOWATT
L	LENGTH
L.P.	LOW PRESSURE
LAT	LEAVING AIR TEMPERATURE
LBS/HR	POUNDS PER HOUR (STEAM)
LVG	LEAVING
MAX	MAXIMUM
MECH	MECHANICAL
MBH	THOUSAND BTU PER HOUR
MIN	MINIMUM
MO	MOTOR OPERATOR
MTD	MOUNTED
N.C.	NORMALLY CLOSED
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
N.O.	NORMALLY OPEN
NC	NOISE CRITERIA
NO.	NUMBER
OA	OUTSIDE AIR
OED	OPEN END DUCT
OS&Y	OUTSIDE STEM AND YOKE
PD	PRESSURE DROP
PH	PHASE
PLBG	PLUMBING
PPM	PARTS PER MILLION
PSI(G)	POUNDS PER SQUARE INCH (GAGE)
QTY	QUANTITY
REG	REGISTER
RA	RETURN AIR
REQ'D	REQUIRED
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RWC	RAINWATER CONDUCTOR
RX	REMOVE EXISTING
SA	SUPPLY AIR
SH	SENSIBLE HEAT
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
TH	TOTAL HEAT
TYP	TYPICAL
V	VOLTS
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VTR	VENT THRU ROOF
W.G.	WATER GAGE
WB	WET BULB
W/	WITH

ATC DIAGRAM LEGEND

SYMBOL	DEVICE	DESIGNATION
	AUTOMATIC CONTROL DAMPER (OPPOSED BLADE)	D-
	AUTOMATIC CONTROL DAMPER (PARALLEL BLADE)	D-
SD	SMOKE ISOLATION DAMPER	SD-
HTT	HUMIDITY/TEMPERATURE TRANSMITTER	HTT-
TT	TEMPERATURE TRANSMITTER	TT-
HT	HUMIDITY TRANSMITTER	HT-
FZ	FREEZE STAT (ELECTRIC)	FZ-
	AUTOMATIC CONTROL VALVE (TWO-WAY)	V-
	AUTOMATIC CONTROL VALVE (THREE-WAY)	V-
	AIR MEASURING DEVICE (DUCT MOUNTED)	AMD-
SD	SMOKE DETECTOR	SD-
	PUMP	P-
SPT	STATIC PRESSURE TRANSMITTER	SPT-
TT	TEMPERATURE TRANSMITTER (PNEUMATIC)	TT-
VFC	VARIABLE FREQUENCY CONTROLLER	VFC-
DPS	DIFFERENTIAL PRESSURE SWITCH	
T	SPACE THERMOSTAT (PNEUMATIC)	T-
TT	SPACE THERMOSTAT (DIGITAL)	
H	SPACE HUMIDISTAT (PNEUMATIC)	H-
HT	SPACE HUMIDITY TRANSMITTER	HT-
TN	NIGHT THERMOSTAT (PNEUMATIC)	TN-
FT	DIFFERENTIAL FLOW TRANSMITTER	FT-
	FLOW METER FITTING	FM-
AS	AQUASTAT	AS-
	FLOW SWITCH	FS-
	FAN (VANE AXIAL)	
	FAN (CENTRIFUGAL)	
TE	SPACE THERMOSTAT - ELECTRIC	TE-
HL	HUMIDITY HIGH LIMIT DIGITAL	HL-
ES	END SWITCH	ES-
	AUTOMATIC BUTTERFLY VALVE	V-
	AIR MEASURING DEVICE (FAN INLET)	AMD-
	FILTER	
	COIL	
LL	TEMPERATURE LOW LIMIT	LL-
FM	INSERTION FLOW METER (TRANSMITTER)	FM-
CS	CURRENT SWITCH	CS-
VPT	VELOCITY PRESSURE TRANSMITTER	VPT-
	SOLENOID VALVE	SV-
	PLENUM FAN	

GENERAL NOTES:

G1. ALL ROOF DUCTWORK AND EQUIPMENT CURBS SHALL BE PROVIDED BY DIVISION 15. REFER TO ARCHITECTURAL DRAWING FOR ADDITIONAL REQUIREMENTS.

G2. COORDINATE EXACT THERMOSTAT LOCATION WITH OWNER AND ARCHITECTURAL ELEVATIONS PRIOR TO THERMOSTAT INSTALLATION.

G3. ALL FLOOR PENETRATIONS WITHIN THE BUILDING SHALL BE CORE DRILLED. PRIOR TO CORE DRILLING FLOOR, CONTRACTOR SHALL VERIFY EXACT LOCATION OF STRUCTURAL MEMBERS, DUCTWORK, PIPING, EQUIPMENT, ETC., IN CEILING SPACE BELOW.

G4. REFER TO MECHANICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

G5. COORDINATE EXACT LOCATION OF FIRE AND SMOKE RATED WALL TYPES WITH ARCHITECTURAL PLANS

G6. PROVIDE ALL SLEEVES, SAW CUTTING, CORE-DRILLING AND FIRE STOPPING ASSOCIATED WITH DIVISION 15 (EXCLUDING FIRE PROTECTION) WORK. SEAL (FIRE, SMOKE, AS REQUIRED) ALL PENETRATIONS (BOTH NEW AND DEMOLITION WORK) CAUSED BY PLUMBING/MECHANICAL WORK. SEAL ALL FLOOR AND DECK PENETRATIONS CAUSED BY MECHANICAL/PLUMBING DEMOLITION WITH CONCRETE. ALL PENETRATIONS MUST BE FIRE STOPPED IN THE SAME DAY THEY ARE CREATED.

G7. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO ENSURE THAT AT THE BEGINNING OF EACH NIGHT OUTAGE, THAT AIR, PLUMBING, MEDICAL GASES AND ALL OTHER SERVICES DISRUPTED/AFFECTED BY THIS SCOPE OF WORK ARE SUPPLIED TO ALL AREAS OF THE FACILITY REMAINING IN OPERATION. THIS INCLUDES FURNISHING AND INSTALLING ANY TEMPORARY MATERIALS NECESSARY TO ACCOMPLISH THIS.

G8. FURNISH AND INSTALL ALL ROOF MOUNTED SUPPORT STRUCTURES. INCLUDE ALL SUPPORTS, CURBS, ANGLES, CLIPS, ALL THREAD, BOLTS, AND OTHER CONNECTIONS TO SUPPORT AND MOUNT NEW WORK. COORDINATE WITH ROOFING TRADE CONTRACTOR.

G9. DUCTWORK INSULATION SHALL BE COMPLETED WITHIN ONE (1) WEEK OF COMPLETION OF DUCTWORK SEALING AND TESTING.

G10. ALL INDIVIDUAL DUCTWORK SECTIONS SHALL BE WRAPPED PRIOR TO DELIVERY TO JOBSITE TO PREVENT CONTAMINATION. WRAPPING SHALL BE MAINTAINED UNTIL DUCTWORK IS HUNG IN PLACE.

G11. AT THE END OF EACH SHIFT, THE CONTRACTOR SHALL SEAL THE OPEN ENDS OF DUCTWORK TO PREVENT DUST INFILTRATION.

G12. PIPING SHALL BE INSTALLED ABOVE FINISHED CEILINGS UNLESS NOTED OTHERWISE.

G13. PROVIDE PIPE UNIONS AT ALL AUTOMATIC CONTROL VALVES AND VARIABLE AIR VOLUME TERMINAL UNIT REHEAT COIL CONNECTIONS. REFER TO SPECIFICATION SECTION 15050 FOR ADDITIONAL REQUIREMENTS.

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS APPLY TO THIS PROJECT

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6-27-07

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Carolinas Healthcare System

Carolinas Medical Center - Union

Monroe, North Carolina

PHARMACY COMPOUNDING RENOVATIONS

MECHANICAL LEGEND, CONVENTIONS, AND ABBREVIATIONS

M-001

JOB NO 2285 JUNE 27, 2007

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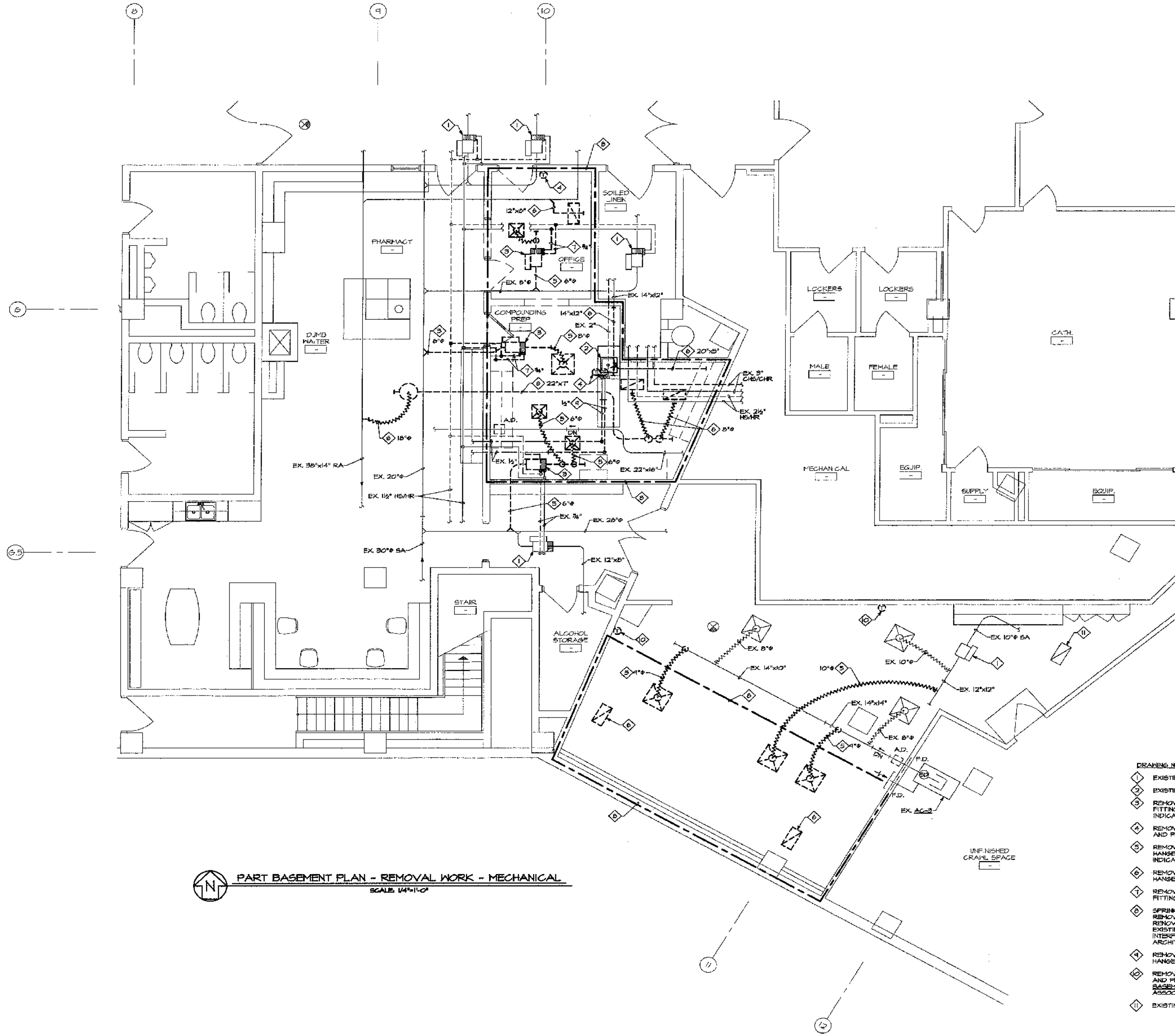

PART BASEMENT PLAN - REMOVAL WORK - MECHANICAL
SCALE: 1/4"=1'-0"

DRAWING NOTES:

1. EXISTING SUPPLY AIR TERMINAL UNIT TO REMAIN.
2. EXISTING COUNTERTOP SINK AND EYEWASH STATION TO REMAIN.
3. REMOVE EXISTING SUPPLY AIR TERMINAL UNIT AND ALL ASSOCIATED FITTINGS, HANGERS, SUPPORTS, INSULATION AND AIR DEVICES TO THE EXTENT INDICATED.
4. REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED FITTINGS, SUPPORTS AND PNEUMATIC TUBING.
5. REMOVE EXISTING SUPPLY AIR DUCTWORK AND ALL ASSOCIATED FITTINGS, HANGERS, SUPPORTS, INSULATION AND AIR DEVICES TO THE EXTENT INDICATED.
6. REMOVE EXISTING RETURN AIR DUCTWORK AND ALL ASSOCIATED FITTINGS, HANGERS, SUPPORTS AND AIR DEVICES TO THE EXTENT INDICATED.
7. REMOVE EXISTING HEATING HOT WATER PIPING AND ALL ASSOCIATED FITTINGS, HANGERS, SUPPORTS AND INSULATION TO THE EXTENT INDICATED.
8. SPRINKLER AND FIRE PROTECTION REMOVAL WORK SHALL CONSIST OF THE REMOVAL OF ALL SPRINKLER HEADS AND BRANCH PIPING WITHIN THE RENOVATED AREA. SPRINKLER MAINS MAY BE REUSED PROVIDED THE EXISTING SIZES MEET THE CURRENT REQUIREMENTS OF NFPA AND DO NOT INTERFERE WITH ANY NEW WORK (MECHANICAL, ELECTRICAL, AND/OR ARCHITECTURAL).
9. REMOVE EXISTING DOMESTIC WATER PIPING AND ALL ASSOCIATED FITTINGS, HANGERS, SUPPORTS AND INSULATION TO THE EXTENT INDICATED.
10. REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED FITTINGS, SUPPORTS AND PNEUMATIC TUBING, RETAIN FOR RELOCATION. REFER TO PART BASEMENT PLAN - NEW WORK - MECHANICAL ON DRAWING M-102 FOR ASSOCIATED NEW WORK.
11. EXISTING PLENUM RETURN AIR GRILLE TO REMAIN.

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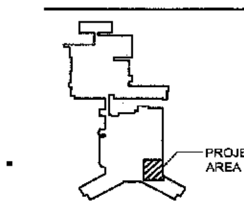

KEYPLAN

PART BASEMENT PLAN - REMOVAL WORK - MECHANICAL

PLAN NORTH

M-101

JOB NO 2285 JUNE 27, 2007

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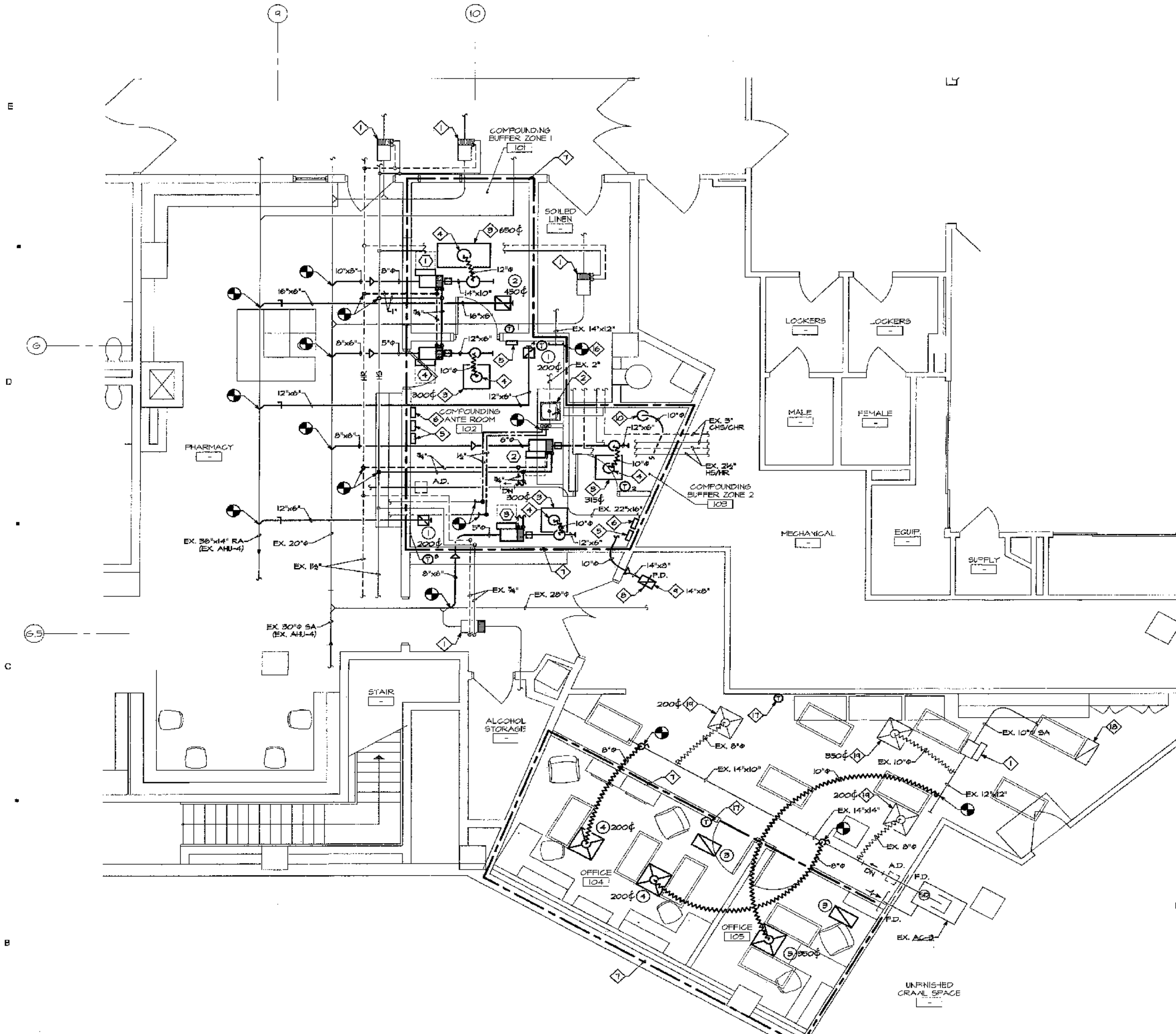
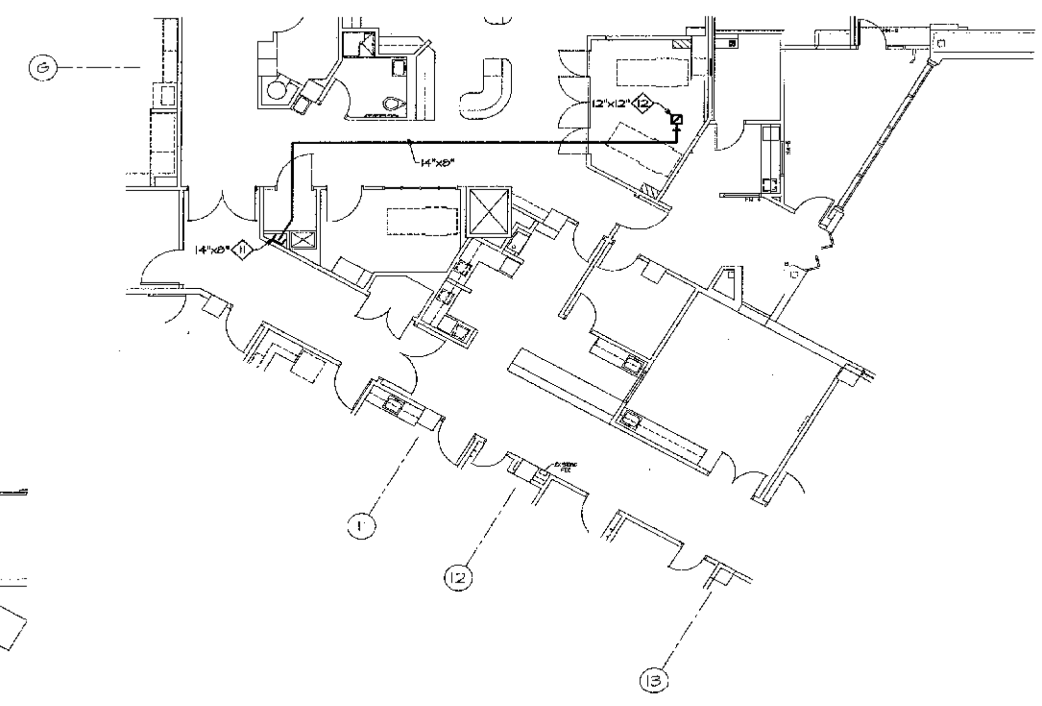
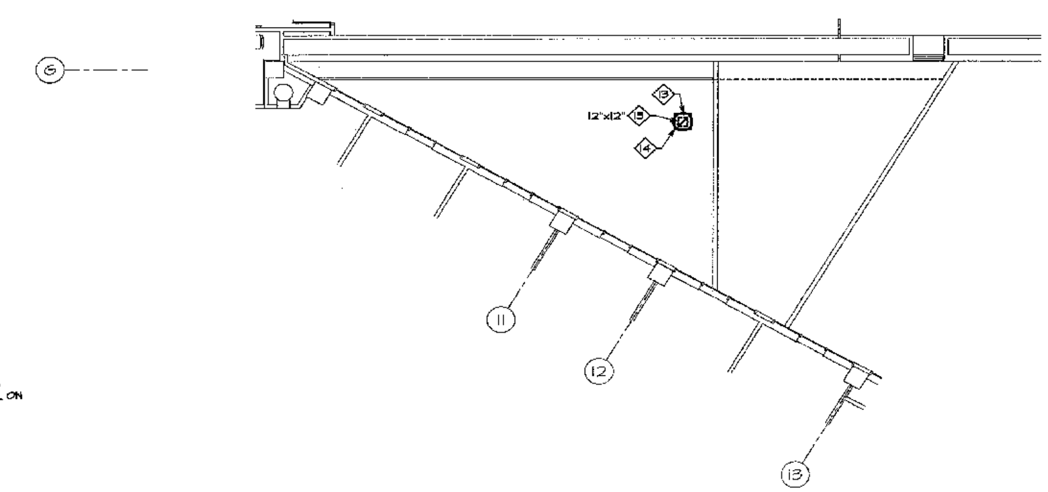


PART BASEMENT PLAN - NEW WORK - MECHANICAL
SCALE: 1/4"=1'-0"



PART FIRST FLOOR PLAN - NEW WORK - MECHANICAL
SCALE: 1/8"=1'-0"



PART ROOF PLAN - NEW WORK - MECHANICAL
SCALE: 1/8"=1'-0"

DRAWING NOTES:

1. EXISTING SUPPLY AIR TERMINAL UNIT.
2. EXISTING COUNTERTOP SINK AND EYEWASH STATION.
3. MEDICAL AIR SOLUTIONS APS MODULE FURNISHED BY OWNER FOR INSTALLATION BY CONTRACTOR. MAKE ALL FINAL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS. BALANCE APS MODULE TO INDICATED AIRFLOW.
4. EXTEND SUPPLY AIR DUCTWORK TO APS MODULE. MAKE ALL FINAL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS.
5. APS MODULE CONTROL PANEL FURNISHED BY OWNER FOR INSTALLATION BY CONTRACTOR. MAKE ALL FINAL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS.
6. ROOM PRESSURE MONITOR FURNISHED BY OWNER FOR INSTALLATION BY CONTRACTOR. MAKE ALL FINAL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS. ATC CONTRACTOR SHALL PROVIDE WIRING TO THE BUILDING AUTOMATION SYSTEM SUCH THAT ALL ALARMS ARE REPORTED THE OPERATOR'S WORK STATION .
7. SPRINKLER CONTRACTOR SHALL MODIFY EXISTING WET PIPE SPRINKLER SYSTEM PER NFPA 13, NEW SPACE LAYOUT, AND OWNERS INSURANCE COMPANY'S HAZARD OCCUPANCY CLASSIFICATION (APPROXIMATELY 814 SQFT). ALL NEW SPRINKLER HEADS SHALL BE PROVIDED IN RENOVATED AREA. REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
8. PROVIDE FIRE DAMPER AND ACCESS DOOR AT FLOOR PENETRATION. REFER TO DETAIL FOR ADDITIONAL REQUIREMENTS.
9. EXHAUST AIR DUCTWORK UP THROUGH SLAB TO FIRST FLOOR CEILING SPACE. REFER TO PART FIRST FLOOR PLAN - NEW WORK - MECHANICAL ON THIS SHEET FOR CONTINUATION.
10. EXTEND EXHAUST AIR DUCTWORK TO I.V. PREP HOOD. MAKE ALL FINAL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS.
11. EXHAUST AIR DUCTWORK DOWN THROUGH CHASE TO BASEMENT CEILING SPACE. REFER TO PART BASEMENT PLAN - NEW WORK - MECHANICAL ON THIS SHEET FOR CONTINUATION.
12. EXHAUST AIR DUCTWORK UP THROUGH ROOF TO EXHAUST FAN EF-1. REFER TO PART ROOF PLAN - NEW WORK - MECHANICAL ON THIS SHEET FOR CONTINUATION.
13. EXHAUST FAN EF-1. REFER TO SCHEDULE AND DETAIL FOR ADDITIONAL REQUIREMENTS.
14. PROVIDE ROOF CURB FOR EXHAUST FAN. REFER TO ARCHITECTURAL DRAWINGS FOR FLASHING AND SEALING REQUIREMENTS. REFER TO DETAIL FOR ADDITIONAL REQUIREMENTS.
15. EXHAUST AIR DUCTWORK DOWN THROUGH ROOF TO FIRST FLOOR CEILING SPACE. REFER TO PART FIRST FLOOR PLAN - NEW WORK - MECHANICAL ON THIS SHEET FOR CONTINUATION.
16. CAP AND SEAL EXISTING DUCTWORK REMAINING FROM REMOVAL WORK.
17. INSTALL RELOCATED THERMOSTAT IN THIS LOCATION. MAKE ALL FINAL CONNECTIONS TO MATCH EXISTING.
18. EXISTING PLENUM RETURN AIR GRILLE.
19. BALANCE EXISTING SUPPLY AIR DIFFUSER TO INDICATED AIRFLOW.

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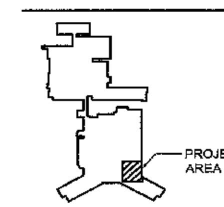

KEYPLAN

PART BASEMENT AND FIRST FLOOR PLANS - NEW WORK - MECHANICAL

PLAN NORTH

M-102

JOB NO 2285 JUNE 27, 2007

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ROOM AIR BALANCE SCHEDULE

ROOM NO	SPACE NAME	AREA (SQFT)	CEILING HEIGHT (FT)	MINIMUM AIR CHANGES / HOUR	OUTSIDE AIR CHANGES / HOUR	REQUIRED AIR FLOW (CFM)	SUPPLY AIR FLOW (CFM)	RETURN / EXHAUST AIR FLOW (CFM)	ROOM PRESSURE (+, -, N)
101	COMPOUNDING BUFFER ZONE 1	108	8	45	2	648	650	450	+
102	COMPOUNDING ANTEROOM	244	8	15	2	548	600	400	+
103	COMPOUNDING BUFFER ZONE 2	52	8	45	2	312	515	515	N
104	OFFICE	107	8	4	2	57	200	200	-
105	OFFICE	100	8	4	2	53	200	200	-

FAN SCHEDULE

DESIG.	SERVICE	TYPE (REFER TO SPEC.)	AIR FLOW (CFM) MAX.	AIR FLOW (CFM) MIN.	S.P. (INCHES W.G.)	H.P. (BHP)	WHEEL (DIA IN.)	BLADE TYPE	FAN RPM	VOLT/PHASE HZ	MOTOR RPM	REMARKS
EF-1	HOOD UNIT NO. 1	P	515	515	1.5	1/2 (0.31)	-	BI	2165	277/1/60	1725	GREENHECK CUBE-101HP-5

NOTES:

1. PROVIDE EXHAUST FAN WITH THE FOLLOWING FACTORY INSTALLED OPTIONS:
   - NEMA-1 DISCONNECT SWITCH, MOUNTED AND WIRED
   - ROOF CURB WITH HINGED CAP AND CABLES
   - GRAVITY OPERATED BACKDRAFT DAMPER
   - BIRD SCREEN

DUCT CONSTRUCTION SCHEDULE

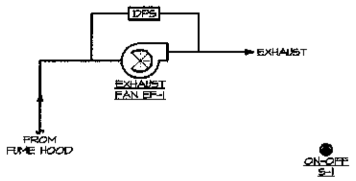
SYSTEM	SMACNA DUCT CONSTRUCTION	SMACNA SEAL CLASS	DUCT TEST PRESSURE
MEDIUM PRESSURE SUPPLY AIR DUCTWORK	3"	"A"	3.3"
EXHAUST AIR DUCTWORK	2"	"B"	2.0"
SUPPLY DUCTWORK FROM AIR TERMINAL BOXES	1/2"	"B"	1/2"
RETURN AIR DUCTWORK BRANCHES FROM MAINS TO INLETS	1/2"	"C"	1/2"

NOTES:

1. ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA SEAL CLASS "A", UNLESS OTHERWISE INDICATED. (SEAL ALL TRANSVERSE JOINTS, LONGITUDINAL SEAMS AND DUCT WALL PENETRATIONS)
2. MEDIUM PRESSURE SUPPLY AND EXHAUST MAINS 2.0 W.G. AND ABOVE SHALL BE TESTED WITH MAXIMUM LEAKAGE OF 1.5%.
3. LOW PRESSURE SUPPLY AND RETURN MAINS, 1.0" W.G. AND BELOW SHALL BE TESTED WITH MAXIMUM LEAKAGE OF 3%.
4. REFER TO PROJECT SPECIFICATION FOR FURTHER INFORMATION.

AIR DEVICE SCHEDULE

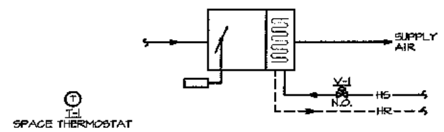
DESIG. ◯	SERVICE	TYPE (REFER TO SPEC.)	DESCRIPTION	NOMINAL SIZE (INCHES)	# OF SLOTS/ SLOT WIDTH	INLET/NECK SIZE (INCHES)	MAX N.C. LEVEL	FINISH	REMARKS
1	RETURN	I	RETURN REGISTER	10x10	-	10x10	25	#26 FINISH	350 RL, TYPE I, F6
2	RETURN	I	RETURN REGISTER	14x14	-	14x14	25	#26 FINISH	350 RL, TYPE I, F6
3	RETURN	L	RETURN PERFORATED PANEL	12x24	-	-	25	#26 FINISH	PXP
4	SUPPLY	C	LOUVERED CEILING DIFFUSER	18x18	-	8" RND	25	#26 FINISH	TDC , BORDER TYPE 3
5	SUPPLY	C	LOUVERED CEILING DIFFUSER	18x18	-	10" RND	25	#26 FINISH	TDC , BORDER TYPE 3



FUME HOOD
SEPARATE FAN

FUME HOOD (SEPERATE FAN)

HOOD FAN SWITCH S-1, LOCATED AT FUME HOOD, SHALL ENERGIZE FAN.



AIR TERMINAL WITH REHEAT CONTROL
(PNEUMATIC)

AIR TERMINAL WITH REHEAT CONTROL (PNEUMATIC)

CONSTANT VOLUME APPLICATIONS

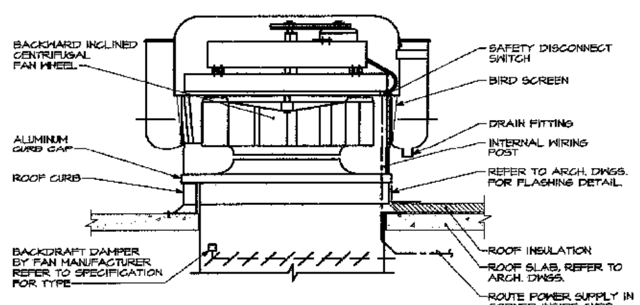
ON A FALL IN SPACE TEMPERATURE, ROOM THERMOSTAT T-1 SHALL MODULATE REHEAT VALVE V-1 TO MAINTAIN ITS ADJUSTABLE SETTING. ON A RISE IN SPACE TEMPERATURE THE REVERSE SHALL OCCUR.

SUPPLY AIR TERMINAL SCHEDULE

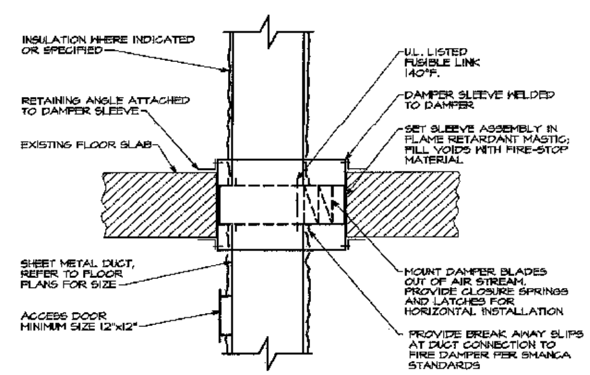
DESIG. ⬡	TYPE (REFER TO SPEC.)	DUTY	UNIT SIZE	AIR FLOW (CFM) MAX.	AIR FLOW (CFM) MIN.	MAX. DP (NOTE 3)	HEATING COIL (NOTE 2) CAP. MBH	GPM @180 F	MIN. ROWS	LAT (F)	MAX. SOUND (db) (NOTE 1)	REMARKS
1	VSP	CV	8	650	650	0.541	28.08	3	2	95	60	-
2	VSP	CV	6	315	315	0.231	13.61	1	2	95	60	-
3	VSP	CV	5	300	300	0.177	12.96	1	2	95	54	-
4	VSP	CV	5	300	300	0.177	12.96	1	2	95	54	-

NOTES:

1. MAXIMUM SOUND POWER SCHEDULED IS END DISCHARGE SOUND POWER LEVEL BASED ON MAXIMUM SCHEDULED AIRFLOW AT 1.0 INCH W.G. PRESSURE DROP ACROSS ASSEMBLY AT 500 HZ. OCTAVE BAND.
2. HEATING COIL DUTY RATED AT MINIMUM AIR FLOW UNLESS OTHERWISE NOTED.
3. MAXIMUM DIFFERENTIAL PRESSURE (DP) IS AT MAXIMUM SCHEDULED AIRFLOW WITH REHEAT COIL WHERE INDICATED.

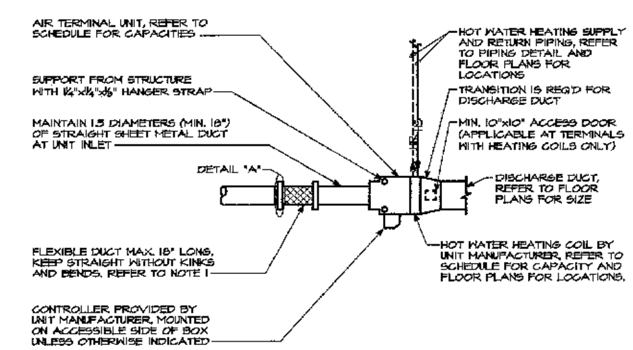


DETAIL - UPBLAST CENTRIFUGAL ROOF EXHAUSTER - (TYPE "P")
NOT TO SCALE

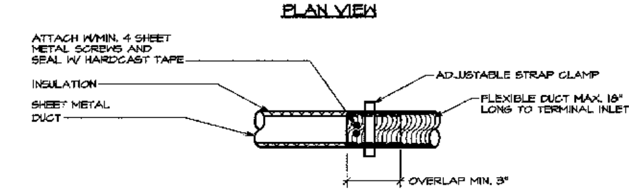


VERTICAL AIR FLOW

INSTALLATION DETAIL - FIRE DAMPER
NOT TO SCALE



PLAN VIEW

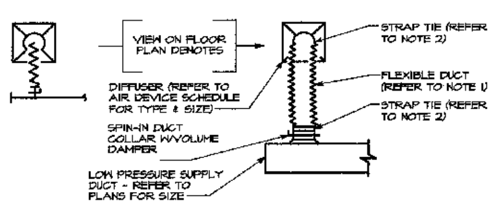


DETAIL "A"

INSTALLATION DETAIL - AIR TERMINAL UNIT
NOT TO SCALE

NOTES:

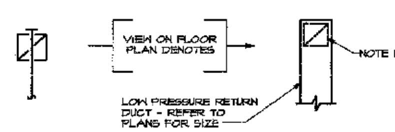
1. FLEXIBLE CONNECTION MAY BE OMITTED AT CONTRACTOR'S OPTION.



TYPICAL DIFFUSER

NOTES:

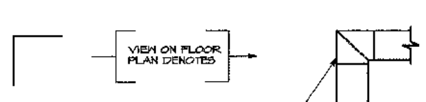
1. ALL FLEXIBLE DUCT SHALL BE MAX. 6'-0" LENGTH, FREE OF SHARP BENDS & KINKS
2. INDIVIDUALLY STRAP TIE INNER AND OUTER FLEXIBLE DUCT COVERINGS TO SPIN-IN DUCT COLLAR AND DIFFUSER NECK.



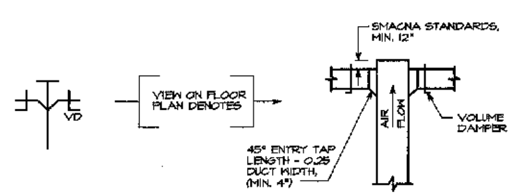
TYPICAL REGISTER

NOTES:

1. ALL DUCTWORK TO REGISTER CONNECTIONS SHALL BE HARD DUCTED AND FREE OF SHARP BENDS AND KINKS

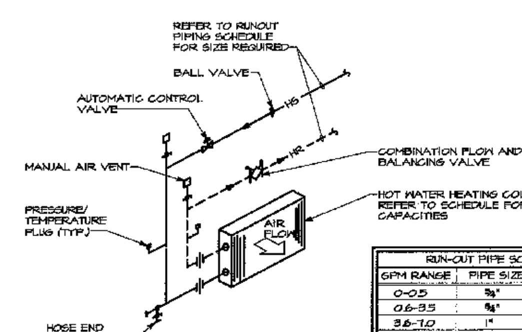


90° ELBOW



BRANCH CONNECTION

DETAIL - DUCT CONNECTIONS
NOT TO SCALE



RUN-OUT PIPE SCHEDULE		
GPM RANGE	PIPE SIZE	VALVE SIZE
0-0.5	¾"	½"
0.6-3.5	¾"	¾"
3.6-7.0	1"	1"

PIPING DETAIL - TERMINAL UNIT HOT WATER HEATING COIL
NOT TO SCALE

NOTES:

1. PIPING SPECIALTIES SHALL BE LOCATED ADJACENT TO COILS.

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6-27-07

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Carolinas Medical Center - Union

Monroe, North Carolina

PHARMACY COMPOUNDING RENOVATIONS

MECHANICAL SCHEDULES, DETAILS AND ATC

M-601

JOB NO 2285 JUNE 27, 2007

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