

HVAC / PLUMBING SYMBOLS

—CWS—	CONDENSER WATER SUPPLY
—CWR—	CONDENSER WATER RETURN
—CHWS—	CHILLED WATER SUPPLY
—CHWR—	CHILLED WATER RETURN
—GCHWS—	GLYCOL CHILLED WATER SUPPLY
—GCHWR—	GLYCOL CHILLED WATER RETURN
—EHWS—	EXTERIOR HOT WATER SUPPLY
—EHWR—	EXTERIOR HOT WATER RETURN
—HWS—	HOT WATER SUPPLY (HEATING)
—HWR—	HOT WATER RETURN (HEATING)
—GHWS—	GLYCOL HOT WATER SUPPLY (HEATING)
—GCHWR—	GLYCOL HOT WATER RETURN (HEATING)
—CD—	CONDENSATE DRAIN
—RS—	REFRIGERANT SUCTION
—RL—	REFRIGERANT LIQUID
—G—	NATURAL GAS
—	DOMESTIC COLD WATER (CW)
—	DOMESTIC HOT WATER (HW)
—	DOMESTIC HOT WATER RECIRC. (HWR)
—SD—	STORM DRAIN
—	SANITARY SEWER
—	SANITARY VENT
—IW—	INDIRECT WASTE
—VA—	VACUUM
→	DIRECTION OF FLOW
↘	SLOPE - FALL PER FOOT
⊗	GATE VALVE
⊕	GLOBE VALVE
⊘	BUTTERFLY VALVE
●	BALL VALVE
⊖	CHECK VALVE
⊕	CIRCUIT SETTER
⊕	ATC FLOW METER
⊕	GAS COCK
⊕	GAS PRESSURE REGULATOR
⊕	AUTOMATIC CONTROL VALVE (3 WAY)
⊕	AUTOMATIC CONTROL VALVE (2 WAY)
⊕	PRESSURE REDUCING VALVE
⊕	TEMPERATURE & PRESSURE RELIEF VALVE
⊕	SAFETY RELIEF VALVE
⊕	MANUAL AIR VENT
⊕	AUTOMATIC AIR VENT
⊕	STRAINER WITH BLOWDOWN VALVE, HOSE END, CAP AND CHAIN
⊕	PIPE UP
⊕	PIPE DOWN
⊕	CONCENTRIC REDUCER
⊕	ECCENTRIC REDUCER
⊕	UNION SCREWED/FLANGED
⊕	PIPE ANCHOR
⊕	PIPE GUIDE
⊕	FLOW METER
⊕	FLEXIBLE PIPE CONNECTOR
⊕	FLOW SWITCH
⊕	DOUBLE CHECK VALVE ASSEMBLY
⊕	AREA DRAIN
⊕	ROOF DRAIN
⊕	FLOOR DRAIN (SQUARE/ROUND)
⊕	CLEANOUT
⊕	DEMOLITION BREAK POINT
⊕	NEW TO EXISTING CONNECTION

⊕	SUPPLY DUCT AND/OR OUTSIDE AIR INTAKE (INTERNAL DIMENSIONS SHOWN)
⊕	RETURN/EXHAUST RELIEF DUCT (INTERNAL DIMENSIONS SHOWN)
⊕	SUPPLY AIR DIFFUSER (PATTERN AS INDICATED)
⊕	RETURN/EXHAUST GRILLE
⊕	90° VANED ELBOW UP
⊕	90° VANED ELBOW DOWN
⊕	INTERNALLY LINED DUCT (INTERNAL DIMENSIONS INDICATED)
⊕	DROP IN DUCT IN DIRECTION OF AIRFLOW
⊕	RISE IN DUCT IN DIRECTION OF AIRFLOW
⊕	BRANCH DUCT TAKE-OFF
⊕	VANED ELBOW
⊕	FULL THROAT RADIUS ELBOW R=1.5W
⊕	FIRE DAMPER WITH ACCESS DOOR
⊕	VOLUME DAMPER
⊕	ATC DAMPER
⊕	SMOKE DETECTOR (DUCT MOUNTED)
⊕	FIRE/SMOKE DAMPER WITH ACCESS DOOR
⊕	THERMOSTAT/SENSOR
⊕	SWITCH
⊕	FLAG NOTE
(E)	EXISTING TO REMAIN
(N)	NEW
(T)	TOTAL
(R)	ABANDON & REMOVE
(S)	SALVAGE
(ER)	EXISTING TO BE RELOCATED

HVAC / PLUMBING ABBREVIATIONS

ABV.	ABOVE	HR	HOUR
AC	ABOVE CEILING	HWR	DOMESTIC HOT WATER RECIRCULATED
AD	AIR DEVICE	HW	DOMESTIC HOT WATER
A/D	ACCESS DOOR	IN.	INCHES
AF	AIRFOIL FAN	INT	INTERNAL
A.F.F.	ABOVE FINISHED FLOOR	INV.	INVERT
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	KW	KILOWATTS
AHU	AIR HANDLING UNIT	LBS	POUNDS
AP	ACCESS PANEL (WALL/CEILING)	LBS/H	POUNDS PER HOUR
ATC	AUTOMATIC TEMPERATURE CONTROL	LAT	LEAVING AIR TEMPERATURE
AWT	AVERAGE WATER TEMPERATURE	LVG	LEAVING
B	BOILER	LWT	LEAVING WATER TEMPERATURE
BF	BELOW FLOOR	MAX	MAXIMUM
BIF	BACKWARD INCLINED FAN	MBH	THOUSANDS OF BRITISH THERMAL UNITS PER HOUR
BLDG	BUILDING	M.C.	MECHANICAL CONTRACTOR
B.O.S.	BOTTOM OF STEEL	MIN	MINIMUM
BTU	BRITISH THERMAL UNITS	MOBDD	MOTOR-OPERATED BACK DRAFT DAMPER
BTU/H	BRITISH THERMAL UNITS PER HOUR	MOD	MOTOR OPERATED DAMPER
CFM	CUBIC FEET PER MINUTE	NC	NORMALLY CLOSED
C.I.	CAST IRON	N.I.C.	NOT IN CONTRACT
CLG.	CEILING	No.	NUMBER
CONT.	CONTINUED/CONTINUATION	NO	NORMALLY OPEN
CONT'R	CONTRACTOR	NTS	NOT TO SCALE
CW	DOMESTIC COLD WATER	OA	OUTSIDE AIR
dB	DECIBELS	O.C.	ON CENTER
DOM	DOMESTIC	OPER.	OPERATING
DDC	DIRECT DIGITAL CONTROL	P.C.	PLUMBING CONTRACTOR
DEPT	DEPARTMENT	PD	PRESSURE DROP
DIS. SW.	DISCONNECT SWITCH	PRV	PRESSURE REDUCING VALVE
DIV	DIVISION	PF	PLENUM FAN
DN	DOWN	PSI	POUNDS PER SQUARE INCH
DX	DIRECT EXPANSION	PSIG	POUNDS PER SQUARE INCH GAUGE
DW	DOUBLE WALL	PVC	POLYVINYL CHLORIDE
DWG	DRAWING	QTY	QUANTITY
EA	EACH	RLA	RATED LOAD AMPS
EAT	ENTERING AIR TEMPERATURE	RA	RETURN AIR
E.C.	ELECTRICAL CONTRACTOR	RECIR	RECIRCULATED
EDH	ELECTRIC DUCT HEATER	RH	RELATIVE HUMIDITY
EER	ENERGY EFFICIENCY RATING	RM	ROOM
EL	ELEVATION	RPM	REVOLUTIONS PER MINUTE
ENT	ENTERING	RWC	RAIN WATER CONDUCTOR
ER	EXHAUST RISER	S.	SANITARY
ETC	ET CETERA	SA	SUPPLY AIR
EX	EXHAUST AIR	SD	STORM DRAIN
EXT	EXTERNAL	SP	STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER	SPEC	SPECIFICATIONS
EWT	ENTERING WATER TEMPERATURE	S.F.	SQUARE FEET
F	FAN	SR	SUPPLY RISER
F.A.I.	FRESH AIR INLET	TEMP	TEMPERATURE
FC	FLEXIBLE CONNECTION	T.O.S.	TOP OF STEEL
FCF	FORWARD CURVED FAN	T-STAT	THERMOSTAT
FCU	FAN COIL UNIT	TYP	TYPICAL
FD	FIRE DAMPER OR FLOOR DRAIN	UH	UNIT HEATER
FLA	FULL LOAD AMPS	V.	VENT
FP	FIRE PROTECTION	VD	VOLUME DAMPER
FPVAV	FAN POWERED VARIABLE AIR VOLUME BOX	V.I.F.	VERIFY IN FIELD
FPM	FEET PER MINUTE	VTR	VENT THROUGH ROOF
FT	FEET	W.	WASTE
G.	GAS	W/	WITH
GA	GAUGE	WH	WALL HEATER
G.C.	GENERAL CONTRACTOR	WG	WATER GAUGE
GAL	GALLON	W/O	WITHOUT
GPM	GALLONS PER MINUTE	#	POUNDS OR NUMBER
GPH	GALLONS PER HOUR	#/HR	POUNDS PER HOUR
H.C.	HVAC CONTRACTOR	*F	DEGREES FAHRENHEIT
HP	HORSEPOWER	*wb	DEGREES FAHRENHEIT WET BULB
		*db	DEGREES FAHRENHEIT DRY BULB
		ø	ELECTRICAL PHASE OR DIAMETER

DRAWING LIST

M1.1	MECHANICAL COVER SHEET
M1.2	MECHANICAL SPECIFICATIONS
M1.3	HVAC SPECIFICATIONS
M1.4	PLUMBING SPECIFICATIONS
M1.5	PLUMBING SPECIFICATIONS
H1.1	HVAC PLAN
H2.1	HVAC DETAILS & SCHEDULES
P1.1	PLUMBING PLAN

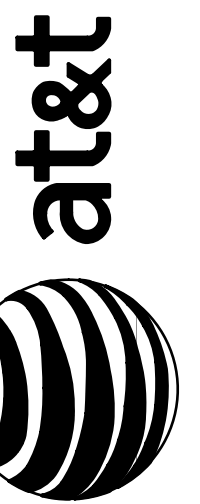
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 DRAWN: GJL
 CHECKED:



711 N. FIELDER RD.
 ARLINGTON, TX 76012
 PH: (817) 635-5696
 FAX: (817) 635-5699

PROJ. COORDINATOR
 15 South 3rd Street
 Philadelphia, PA 19106
 215.922.8270
 FAX: 215.922.4649

RICHARD M. COLE
 & ASSOCIATES



211 MARGINAL WAY
 PORTLAND, MAINE 04101



530 Walnut Street | 11th Floor
 Philadelphia, PA 19106
 TEL 215 923 8270
 FAX 215 923 8272
 www.mwce.net
 a subsidiary of URBAN ENGINEERS, INC.

REVISIONS

MECHANICAL
 COVER
 SHEET

SHEET NUMBER

M1.1

NOTE:
 NOT ALL SYMBOLS AND ABBREVIATIONS
 INDICATED APPEAR ON THESE DOCUMENTS.