

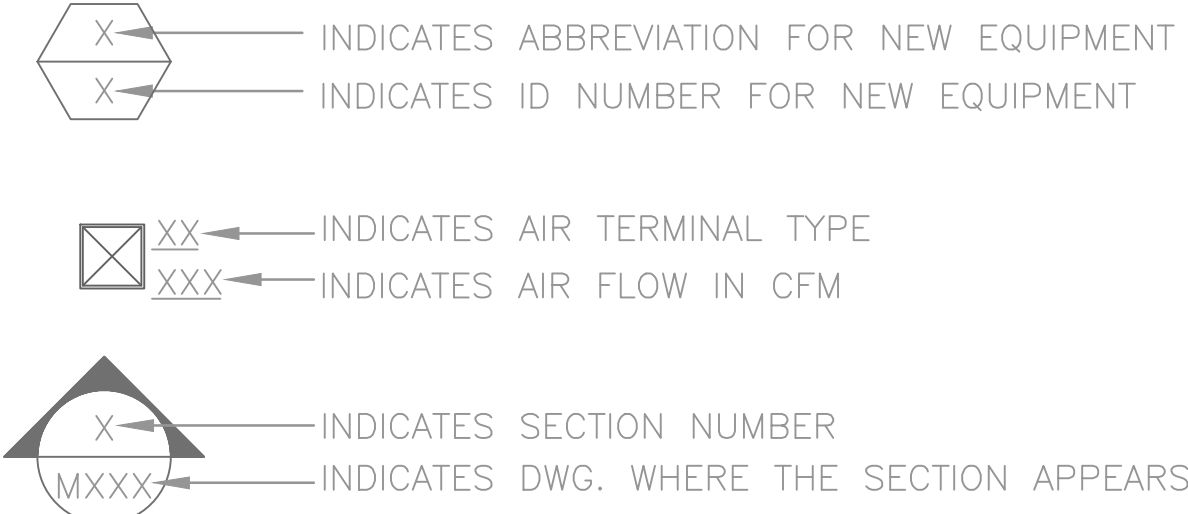
ABBREVIATIONS:

ABB	ABBREVIATION	I-B-R	INSTITUTE OF BOILER AND RADIATOR
AFF	ABOVE FINISH FLOOR	ID	IDENTIFICATION
AMP	AMPERAGE	IN.	INCHES
AS	AIR SEPARATOR	IN.WG.	INCHES OF WATER GAUGE
		KEF	KITCHEN EXHAUST FAN
		KW	THOUSANDS OF WATT
BAS	BUILDING AUTOMATION SYSTEM		
BHP	BREAK HORSE POWER	LAT	LEAVING AIR TEMPERATURE
BSMT	BASEMENT	LBS	POUNDS
BTU/HR	BRITISH THERMAL UNITS PER HOUR	LSD	LINEAR SLOT DIFFUSER
		LWT	LEAVING WATER TEMPERATURE
CAC	CENTRAL AIR CONDITIONING UNIT		
CD	CONDENSATE DRAIN	MAX.	MAXIMUM
CDP	CONDENSATE DRAIN PUMP	MAU	MAKE-UP AIR UNIT
CFM	CUBIC FEET PER MINUTE	MBH	THOUSANDS OF BTU/HOUR
CH	CHILLER	MCA	MINIMUM CIRCUIT AMPS
CHW	CHILLED WATER	MC OR M.C.	MECHANICAL CONTRACTOR
CHWR	CHILLED WATER RETURN	MIN.	MINIMUM
CHWS	CHILLED WATER SUPPLY		
CHWS&R	CHILLED WATER SUPPLY AND RETURN		
CMPSR.	COMPRESSOR		
CONTR.	CONTRACTOR	NO.	NUMBER
CONV	CONVECTOR		
CT	COOLING TOWER	OA	OUTSIDE AIR
CU	CONDENSING UNIT	O.B.D.	OPPOSED BLADE DAMPER
CUH	CABINET UNIT HEATER		
CVU	CLASSROOM VENTILATION UNIT	P	PUMP
		PA	PRIMARY AIR
		PAU	PRIMARY AIR UNIT
		PD	PRESSURE DROP
		PSI	POUNDS PER SQUARE INCH
		QUAN.	QUANTITY
		R	RETURN
EA	EXHAUST AIR	RA	RETURN AIR
EAT	ENTERING AIR TEMPERATURE	RD	ROUND SUPPLY AIR DIFFUSER
ECP	ELECTRIC CEILING PANEL	RLA	RATED LOAD AMPS
EDH	ELECTRIC DUCT HEATER	RM	ROOM
EF	EXHAUST AIR FAN	RPM	REVOLUTIONS PER MINUTE
EG	EXHAUST AIR GRILLE	RR	RETURN AIR REGISTER
ESP	EXTERNAL STATIC PRESSURE		
EWT	ENTERING WATER TEMPERATURE		
EXT	EXTERNAL	S	SUPPLY
		SA	SUPPLY AIR
*F	FAHRENHEIT-DEGREE	SD	SUPPLY AIR DIFFUSER
FCU	FAN COIL UNIT	SF	COMBUSTION AIR FAN
FD	FIRE DAMPER	SENS.	SENSIBLE
FL	FLOOR	SYMBOL.	SYMBOL
FLA	FULL LOAD AMPS		
FOP	FULE OIL PUMP	TEMP.	TEMPERATURE
FPF	FIN PER FEET	TD	TEMPERATURE DROP
FPI	FIN PER INCH	TG	TRANSFER AIR GRILLE
FPM	FEET PER MINUTE	TOT.	TOTAL
FT	FEET OR FOOT	TSP	TOTAL STATIC PRESSURE
FTR	FINNED TUBE RADIATION	TYP.	TYPICAL
		UH	UNIT HEATER
GA	GAUGE	V/ø/HZ	VOLTAGE/PHASE/HERTZ
GC OR G.C.	GENERAL CONTRACTOR	VEL.	VELOCITY
GEF	GYM EXHAUST FAN		
GEN.	GENERAL		
GPH	GALLONS PER HOUR	WB	WET BULB
GPM	GALLONS PER MINUTE	WG	WATER GAUGE
		WH	WALL MOUNTED CABINET UNIT HEATER
HE	HEAT EXCHANGER	WT	WATER TREATMENT
HHW	HEATING HOT WATER		
HHWR	HEATING HOT WATER RETURN		
HHWS	HEATING HOT WATER SUPPLY		
HHWS&R	HEATING HOT WATER SUPPLY AND RETURN		
HHW/CHW	HEATING HOT WATER/CHILLED WATER		
HP	HORSEPOWER		
HR	HOUR		
HWB	HOT WATER BOILER		

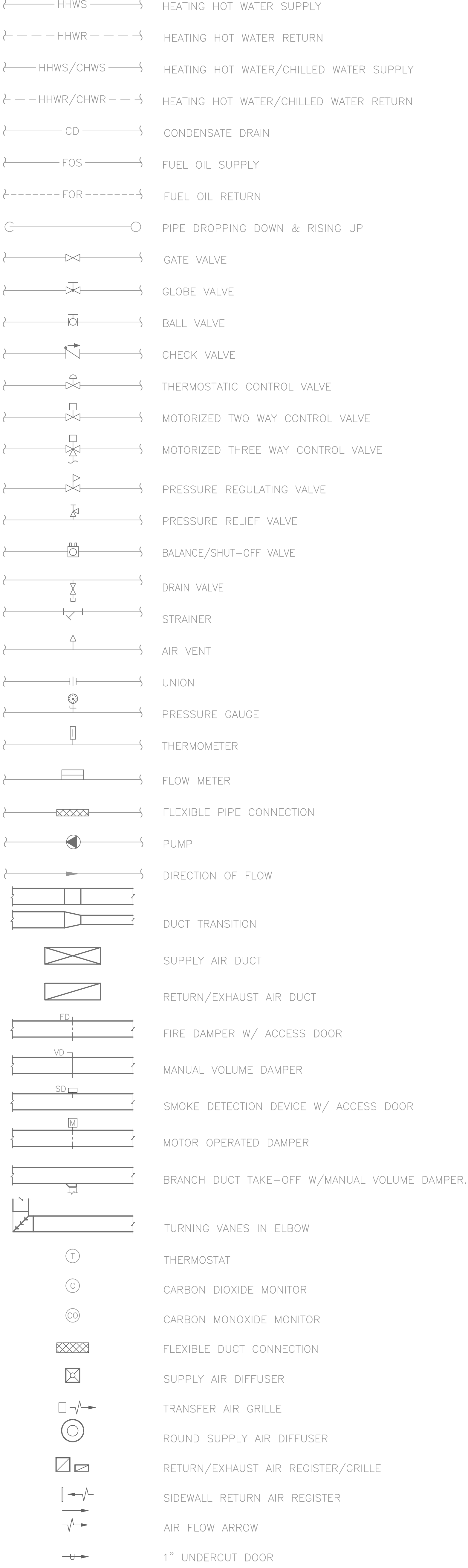
DRAWING LIST:

DRAWING NO.	TITLE
M000	GENERAL NOTES, SYMBOLS & ABBREVIATIONS
M100	BASEMENT HVAC PLAN
M101	FIRST FLOOR HVAC PLAN
M102	SECOND FLOOR HVAC PLAN
M103	THIRD FLOOR HVAC PLAN
M104	FOURTH FLOOR HVAC PLAN
M105	ROOF HVAC PLAN
M200	BASEMENT PIPING PLAN
M201	FIRST FLOOR PIPING PLAN
M202	SECOND FLOOR PIPING PLAN
M203	THIRD FLOOR PIPING PLAN
M204	FOURTH FLOOR PIPING PLAN
M205	ROOF PIPING PLAN
M300	PRIMARY PIPING SYSTEM DIAGRAM
M301	SECONDARY PIPING SYSTEM DIAGRAM 1
M302	SECONDARY PIPING SYSTEM DIAGRAM 2
M303	PRIMARY AIR UNIT AIR FLOW DIAGRAM 1
M304	PRIMARY AIR UNIT AIR FLOW DIAGRAM 2
M305	NETWORK SCHEMATIC 1
M306	NETWORK SCHEMATIC 2
M307	CONTROL SYSTEM DIAGRAM 1
M308	CONTROL SYSTEM DIAGRAM 2
M309	CONTROL SYSTEM DIAGRAM 3
M310	CONTROL SYSTEM DIAGRAM 4

KEY TO SYMBOLS:

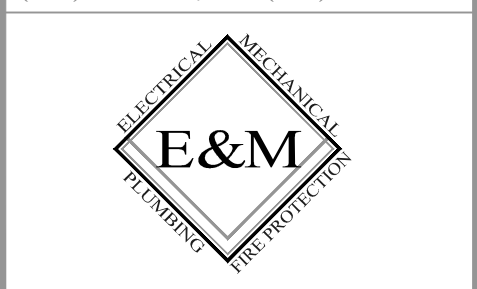
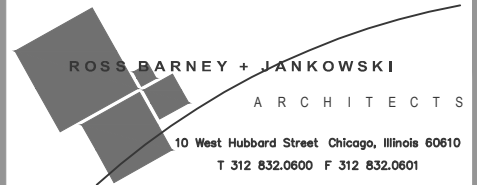
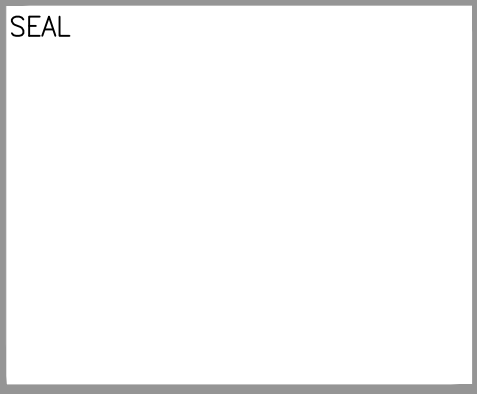


LINE DESIGNATIONS & SYMBOLS:



GENERAL NOTES FOR NEW CONSTRUCTION WORK:

- DIMENSIONS AND CONFIGURATION SHOWN ON DRAWINGS ARE DIAGRAMMATIC AND FOR DESIGN INTENTS ONLY. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS BY FIELD MEASUREMENT BEFORE BEGINNING ANY FABRICATION OR CONSTRUCTION WORK.
- ALL WORK SHALL BE IN STRICT CONFORMANCE WITH THE LATEST INTERNATIONAL BUILDING CODE AND MECHANICAL CODE.
- ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- SHEETMETAL DUCTWORK DIMENSIONS SHOWN ARE AIR WAY DIMENSIONS.
- ALL SHEETMETAL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED ACCORDING TO THE LATEST SMACNA STANDARD MANUAL.
- THE CONTRACTOR SHALL:
 - PATCH AND REPAIR ALL DISTURBED SURFACES. PATCHING SHALL MATCH EXISTING ADJACENT AREA APPEARANCE AND SAME PATCHING MATERIAL AS USED THROUGHOUT THE PROJECT.
 - SECURE, SUSPEND AND/OR ANCHOR ANY EXISTING CONSTRUCTION AS REQUIRED TO OBTAIN A PROPER AND RIGID INSTALLATION AND PROVIDE ALL NECESSARY TEMPORARY BARRICADES AND OTHER FORMS OF PROTECTION AS REQUIRED IN THE JOB SITE.
 - INSTALL PROTECTIVE COVERINGS IMMEDIATELY AFTER SETTING EQUIPMENT OR SYSTEMS. AT ALL STAGES OF THE INSTALLATION, OPENINGS IN SYSTEMS MUST BE PROTECTED FROM THE ENTRANCE OF DIRT AND DEBRIS.
 - NOTIFY AND COORDINATE SIZE AND LOCATION OF ALL RECESSES AND OPENINGS REQUIRED FOR HVAC SYSTEM.
 - BE RESPONSIBLE FOR PREVENTION OF HAZARDS TO PERSONNEL AND PROPERTY, AND RESPONSIBLE FOR COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT.
 - SUBMIT SHOP DRAWINGS ON DUCTWORK AND EQUIPMENT FOR ENGINEER'S REVIEW PRIOR TO THE INSTALLATION.
 - PROVIDE FIRE DAMPERS WITH ACCESS DOOR WHERE ARCHITECTURAL DRAWING INDICATES FIRE RATED WALL, EVEN IF NOT SHOWN ON MECHANICAL DRAWINGS.
 - INSTALL AIR VENTS AT HIGH POINTS OF HEATING HOT WATER PIPING SYSTEM, AS SHOWN ON DRAWINGS AND AS REQUIRED FOR PROPER AIR VENTING OF SYSTEM.
 - INSTALL BALANCING DEVICES ON ALL HEATING HOT WATER PIPED UNITS.
 - FURNISH AND INSTALL EQUIPMENT STARTERS, DISCONNECT SWITCHES AND CONTROL WIRING FOR ALL HVAC EQUIPMENT, INCLUDING INSTALLATION AND CONTROL WIRING CONNECTION OF DUCT SMOKE DETECTOR.
- FIRE ALARM WORK INCLUDES FURNISHING DUCT SMOKE DETECTORS AND THEIR CONNECTIONS TO THE FIRE ALARM SYSTEM.
- ELECTRICAL WORK INCLUDES FURNISHING AND INSTALLING POWER CABLE/CONDUIT FOR ALL HVAC EQUIPMENT AND FINAL CONNECTIONS OF DISCONNECT SWITCHES.
- ALL DUCTWORK LOCATED WITHIN GYM #225 CEILING SPACE SHALL BE PROVIDED WITH INTERNAL ACOUSTICAL LINING.
- ALL DUCTWORK LOCATED WITHIN GYM #225 CEILING SPACE SHALL BE STREAMLINE TYPE SHEET METAL JOINTS AND PAINTED TO MATCH INTERIOR CEILING COLOR, WHICH SHALL BE SELECTED BY ARCHITECT.
- FLUE VENT DUCTWORK SHALL BE DOUBLE WALL.
- ALL EXTERIOR CONDENSER WATER PIPING AND COOLING TOWER EXTERIOR MAKE-UP WATER PIPING SHALL BE PROVIDED WITH ELECTRICAL HEAT TRACE. THIS WORK IS NOT PART OF ALTERNATE BID #9.
- ALL CENTRAL AIR CONDITIONING UNITS (CAC), PRIMARY AIR UNITS (PAU), MAKE-UP AIR UNIT (MAU) AND KITCHEN EXHAUST AIR FAN (KEF) AND ALL THEIR ASSOCIATED DUCTWORK AND PIPING EXPOSED TO THE OUTDOORS, SHALL BE WEATHERPROOF PAINTED TO MATCH ROOF COLOR, WHICH SHALL BE SELECTED BY ARCHITECT.
- CENTRAL AIR CONDITIONING UNITS CAC-1 AND CAC-3, AND PRIMARY AIR UNITS PAU-1 AND PAU-2 SHALL BE PROVIDED WITH 18" ROOF CURB. PROVIDE 4" THICK ACOUSTICAL LINING FOR ROOF CURB.
- ALL OTHER CENTRAL AIR CONDITIONING UNITS (CAC), MAKE-UP AIR UNIT (MAU), KITCHEN EXHAUST AIR FAN (KEF) AND EXTERIOR DUCTWORK ROOF/FLOOR OPENINGS SHALL BE PROVIDED WITH 12" ROOF CURB. PROVIDE 4" THICK ACOUSTICAL LINING FOR ROOF CURB.
- ALL EXTERIOR PIPING PENETRATING ROOF/FLOOR SHALL BE PROVIDED WITH PIPE ROOF CURB.
- PROVIDE NEOPRENE PADDING BETWEEN CHILLER CH-1 LOCATED IN BASEMENT AND IT HOUSING PAD.
- PROVIDE NEOPRENE PADDING FOR ALL EQUIPMENT LOCATED IN THE OPEN MECHANICAL AREA #X44 AND PRIMARY AIR UNITS PAU-1 AND PAU-2. PADDING SHALL BE PROVIDED BETWEEN THE ROOF CURB AND THE EQUIPMENT.
- ALL EXTERIOR SUPPLY AND RETURN AIR DUCTWORK FOR ALL CENTRAL AIR CONDITIONING UNITS (CAC), PRIMARY AIR UNITS (PAU) AND MAKE-UP AIR UNIT (MAU) SHALL BE PROVIDED WITH 2" THICK ACOUSTICAL LINING.
- INDOOR DUCTWORK THAT SHALL BE PROVIDED WITH INTERNAL ACOUSTICAL LINING INSTEAD OF EXTERNAL INSULATION, SHALL BE PROVIDED WITH 1" THICK ACOUSTICAL LINING.
- KITCHEN EXHAUST AIR DUCTWORK:
 - SHALL BE STAINLESS STEEL AND ALL JOINTS AND SEAMS SHALL BE WELDED LIQUID TIGHT.
 - VERTICAL STACK SHALL BE PREFABRICATED DOUBLE WALL DUCTWORK.
 - SHALL BE PROVIDED WITH ACCESS DOORS FOR DUCT CLEANOUT EVERY 10'-0".
 - SHALL BE PROVIDED WITH A POINT OF GREASE OR RESIDUE COLLECTION AT THE BASE OF VERTICAL STACK.



SCHOOL & LOCATION
Commodore John Barry Elementary School
5900 Race Street, Philadelphia PA 19139

PROJECT TITLE
NEW CONSTRUCTION

DRAWING TITLE
GEN. NOTES, SYMB. & ABB.

APPROVED BY

SCHOOL DISTRICT OF PHILADELPHIA
THE SCHOOL REFORM COMMISSION

DEPARTMENT OF DESIGN AND CONSTRUCTION SERVICES

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CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS AT SITE

9	8	7	6	5	4	3	2	1	00/11/07	ADDITION	No. 1
									DATE	REVISION	

SPEC NO. B-840C of 2005/06	DATE 12/29/06
SCALE NONE	LOCATION NO. 120
DRAWN BY KHL	TYPE NO. -
CHECKED BY MMT	FILE NO. -

DRAWING NO.

M000

