

MECHANICAL SYMBOLS

EQUIPMENT DESIGNATIONS	
SYMBOL	DESCRIPTION
AHU-X	AIR HANDLING UNIT DESIGNATION
UH-X	UNIT HEATER DESIGNATION
LX	LOUVER DESIGNATION

DUCTWORK SYMBOLS	
SYMBOL	DESCRIPTION
①	HUMIDITY SENSOR
②	TEMPERATURE SENSOR
③	CARBON DIOXIDE SENSOR
④	DUCT SMOKE DETECTOR
⑤	SMOKE DETECTOR (IONIZATION)
→	AIR FLOW
→ 100 CFM	TRANSFER AIR FLOW (CFM INDICATED)
DL	DOOR LOUVER
UCD	UNDERCUT DOOR
⊗	SUPPLY AIR DIFFUSER
⊘	RETURN AIR GRILLE
⊗	EXHAUST AIR GRILLE
⊙	CIRCULAR AIR DIFFUSER
⊚	AIRFLOW MONITORING DEVICE
⊛	STATIC PRESSURE SENSING STATION
FD	FIRE DAMPER
FSD	COMBINATION FIRE / SMOKE DAMPER
VD	VOLUME DAMPER
BDD	BACK DRAFT DAMPER
⊠	AUTOMATIC ISOLATION DAMPER
⊡	AUTOMATIC GAS TIGHT ISOLATING DAMPER
⊢	MANUAL GAS TIGHT ISOLATION DAMPER
⊣	SMOKE DAMPER
⊤	SMOKE DETECTOR
⊥	FLEXIBLE CONNECTOR
⊦	DUCTWORK W/ SOUND LINING
⊧	HORIZONTAL ACCESS DOOR
⊨	VERTICAL ACCESS DOOR
⊩	ELBOW W/ DOUBLE THICKNESS TURNING VANES
⊪	RECTANGULAR BRANCH TAKE-OFF
⊫	BELL MOUTH BRANCH TAKE-OFF
⊬	ROUND BRANCH TAKE-OFF
⊭	ROUND DUCT DROP-OFF BOTTOM
⊮	DUCT TRANSITION
⊯	SQUARE TO ROUND TRANSITION
UP/DN	DUCTWORK CHANGE IN ELEVATION (UP OR DOWN)
⊰	SUPPLY / OUTSIDE AIR DUCT RISER
⊱	RETURN AIR DUCT RISER
⊲	EXHAUST / RELIEF AIR DUCT RISER
⊳	ROUND DUCT RISER
⊴	ALL WELDED VEHICLE EXHAUST DUCT CONNECTION
MAINTENANCE ACCESS AREA	TERMINAL UNIT
MAINTENANCE ACCESS AREA	TERMINAL UNIT WITH REHEAT COIL
MAINTENANCE ACCESS AREA	TERMINAL UNIT W/ ATTENUATOR AND REHEAT COIL
MAINTENANCE ACCESS AREA	EXHAUST TERMINAL UNIT
X	SUPPLY AIR VOLUME TERMINAL UNIT IDENTIFIER
X	EXHAUST AIR TERMINAL UNIT IDENTIFIER
X	AIR DEVICE TYPE
XX	AIR DEVICE IDENTIFIER

MECHANICAL ABBREVIATIONS

#	NUMBER, POUND	HWR	HOT WATER RECIRCULATION
\$	DOLLAR	HZ	HERTZ
%	PERCENT	IA	INSTRUMENT AIR
&	AND	ICW	INDUSTRIAL COLD WATER
+	PLUS	IHR	INDUSTRIAL HOT WATER RECIRCULATION
-	MINUS	IHW	INDUSTRIAL HOT WATER
/	DIVIDE BY, PER	IN	INCH, INCHES
<	LESS THAN	INV EL	INVERT ELEVATION
=	EQUALS, EQUAL TO	KW	KILOWATTS
>	GREATER THAN	L	LONG, LENGTH
x	MULTIPLY BY, BY	LA	LABORATORY AIR
x"	INCHES, INCH	LAT	LEAVING AIR TEMPERATURE
x'	FEET, FOOT	LBS	POUNDS
±	PLUS OR MINUS	LBS/HR	POUNDS PER HOUR
≤	LESS THAN OR EQUAL TO	LN	LIQUID NITROGEN
≥	GREATER THAN OR EQUAL TO	LP	LIQUID PROPANE
@	AT	LPG	LIQUID PETROLEUM GAS
A	COMPRESSED AIR	LPR	LOW PRESSURE STEAM RETURN
AV	AUTOMATIC AIR VENT	LPS	LOW PRESSURE STEAM SUPPLY
ACV	AUTOMATIC CONTROL VALVE	LV	LABORATORY VENT, LABORATORY VACUUM
AD	ACCESS DOOR, AREA DRAIN	LW	LABORATORY WASTE
AF	ANTIFREEZE	LWT	LEAVING WATER TEMPERATURE
AFF	ABOVE FINISHED FLOOR	MA	MEDICAL AIR
ARG	ARGON GAS	MAV	MANUAL AIR VENT
ATC	AUTOMATIC TEMPERATURE CONTROL	MAX	MAXIMUM
BAS	BUILDING AUTOMATION SYSTEM	MBH	THOUSAND BTU THERMAL UNITS PER HOUR
BBD	BOILER BLOWDOWN	MCC	MOTOR CONTROL CENTER
BCWR	BEARING COOLING WATER RETURN	MED	MECHANICAL EQUIPMENT
BCWS	BEARING COOLING WATER SUPPLY	MH	MILE
BD	BACKDRAFT DAMPER	MIN	MINIMUM
BDF	BACKFLOW PREVENTER	MISC	MISCELLANEOUS
BHP	BRAKE HORSEPOWER	MO	MOTOR OIL PIPING
BMS	BUILDING MANAGEMENT SYSTEM	MOP	MOTOR OPERATED DAMPER
BO	BLOW OFF	MPS	MEDIUM PRESSURE STEAM RETURN
BTU	BRITISH THERMAL UNIT	MS	MEDIUM PRESSURE STEAM SUPPLY
BTUH	BRITISH THERMAL UNIT PER HOUR	NAV	MEDICAL VACUUM
BV	BALANCING VALVE	N	NITROGEN
CA	CONTROL AIR	NA, N/A	NOT APPLICABLE
CBD	CONTINUOUS BLOWDOWN	NC	NOISE CRITERIA, NORMALLY CLOSED
CC	CAMPUS CONDENSATE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CCM	CENTRAL CONTROL AND MONITORING SYSTEM	NG	NATURAL GAS
CCD	CONDENSATE DRAIN	NO	NORMALLY OPEN, NITROUS OXIDE
CF	CHEMICAL FEED	N#	NUMBER
CFM	CUBIC FEET PER MINUTE	NOM	NORMAL
CFM	CUBIC FEET PER MINUTE	NPSH	NET POSITIVE SUCTION HEAD
CHL	CHILLED WATER RETURN	NPW	NON-POTABLE WATER
CHL	CHILLED WATER SUPPLY	O	OXYGEN
CHL	CHILLED WATER HEAT EXCHANGER	OA	OUTSIDE AIR
CO	CO	OD	OVERFLOW DRAIN
CO2	CARBON DIOXIDE	OED	OPEN ENDED DUCT
CS	CLEAN STEAM	OF	OVERFLOW
CT	COMBUSTION TURBINE	OSY	OUTSIDE STEM AND YOKE
CW	COLD WATER, DOMESTIC CITY WATER	P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
CHR	CONDENSER WATER RETURN	PA	PLANT AIR
CWS	CONDENSER WATER SUPPLY	PC	PUMPED CONDENSATE
°C	DEGREE(S) CELSIUS	PCHR	PRIMARY CHILLED WATER RETURN
D	DEEP, DRAIN WATER	PCHS	PRIMARY CHILLED WATER SUPPLY
DB	DECIBEL, DRY BULB	PCP	PUMP CONTROL PANEL
DOC	DIRECT DIGITAL CONTROL	PCR	PUMPED CONDENSATE RECIRCULATION
DESIG	DESIGNATION	PCWR	PROCESS COOLING WATER RETURN
DHR	DISTRIBUTION HEATING WATER RETURN	PCWS	PROCESS COOLING WATER SUPPLY
DHS	DISTRIBUTION HEATING WATER SUPPLY	PD	PRESSURE DROP, PUMP DISCHARGE
DHWR	DOMESTIC HOT WATER RETURN	PG	PILOT GAS
DHWS	DOMESTIC HOT WATER SUPPLY	PGR	PROCESS GLYCOL WATER RETURN
DIA, Ø	DIAMETER	PGS	PROCESS GLYCOL WATER SUPPLY
DIR	DIRTY WATER RETURN	PH	PHASE
DIS	DEIONIZED WATER SUPPLY	PHR	PRIMARY HEATING RETURN
DL	DOOR LOUVER	PHS	PRIMARY HEATING SUPPLY
DN	DOWN	PV	POST INDICATING VALVE
DSP	DRY SPRINKLER PIPE	PHH	POUNDS PER HOUR
DTR	DUAL TEMPERATURE RETURN	PRV	PRESSURE REDUCING VALVE, PRESSURE REGULATING VALVE
DTS	DUAL TEMPERATURE SUPPLY	PSI	POUNDS PER SQUARE INCH
DW	DISTILLED WATER	PSIG	POUNDS PER SQUARE INCH GAUGE
EA	EXHAUST AIR	PW	POTABLE WATER
EAT	ENTERING AIR TEMPERATURE	RA	RETURN AIR, RELIEF AIR
ED	EQUIPMENT DRAIN	RAF	RETURN AIR FAN
EJ	EXPANSION JOINT	RD	REFRIGERANT DISCHARGE
ELEV	ELEVATION	RDR	ROOF DRAIN
EMS	ENERGY MANAGEMENT SYSTEM	RH	RELATIVE HUMIDITY
EQ	EQUIPMENT, EQUALIZING	RHR	REHEAT WATER RETURN
ESP	EXTERNAL STATIC PRESSURE	RHS	REHEAT WATER SUPPLY
ETC	ETCETERA	RI	REMOVE AND REINSTALL
EVAC	GAS EVACUATION	RL	REFRIGERANT LIQUID
EWT	ENTERING WATER TEMPERATURE	ROR	REVERSE OSMOSIS WATER RETURN
EX	EXISTING	ROS	REVERSE OSMOSIS WATER SUPPLY
#2FOR	NUMBER 2 FUEL OIL RETURN	RRM	REVOLUTIONS PER MINUTE
#2FOS	NUMBER 2 FUEL OIL SUPPLY	RS	REFRIGERANT SUCTION
#6FOR	NUMBER 6 FUEL OIL RETURN	RV	RELIEF VENT, REFRIGERANT VENT
#6FOS	NUMBER 6 FUEL OIL SUPPLY	RIX	REMOVE EXISTING
F	FIRE LINE	SA	SUPPLY AIR, SHOCK ARRESTOR
FAT	FLOAT AND THERMOSTATIC TRAP	SAN	SANITARY, SOIL WASTE
FC	FLEXIBLE CONNECTION	SCHR	SECONDARY CHILLED WATER RETURN
FD	FIRE DAMPER, FOUNDATION DRAIN	SCHS	SECONDARY CHILLED WATER SUPPLY
FDR	FLOOR DRAIN	SD	STORM DRAIN, SMOKE DETECTOR
FDV	FIRE DEPARTMENT VALVE	SF	SQUARE FOOT
FE	FINISHED FLOOR	SHR	SECONDARY HEATING WATER RETURN
FFE	FINISHED FLOOR ELEVATION	SHS	SECONDARY HEATING WATER SUPPLY
FF	FEET PER FOOT	SL	SOUND LINING
FFINCH	FINS PER INCH	SP	STATIC PRESSURE
FM	FLOWMETER	SPR	SPRINKLER LINE
FMF	FLOWMETER FITTING	SQ FT	SQUARE FOOT
FO	FUEL OIL	SS	STAINLESS STEEL
FOF	FUEL OIL FILL	SSUL	SODIUM SULFATE
FOO	FUEL OIL OVERFLOW	STDR	STORM DRAIN
FOR	FUEL OIL RETURN	SW	SOFT WATER
FOS	FUEL OIL SUPPLY	TS	TAMPER SWITCH
FOSUCT	FUEL OIL SUCTION	TSP	TOTAL STATIC PRESSURE
FOT	FUEL OIL TRANSFER	TW	TREATED WATER
FOTP	FUEL OIL TRANSFER PUMP	TWR	TEMPERED WATER RETURN
FOV	FUEL OIL VENT	TWS	TEMPERED WATER SUPPLY
FBM	FEET PER MINUTE	TYP	TYPICAL
FPS	FEET PER SECOND	ΔT	TEMPERATURE DIFFERENCE
FS	FLOW SWITCH	UCD	UNDERCUT DOOR
FT	FOOT, FEET	UL	UNDERWRITERS LABORATORIES
FW	FEED WATER	V	VACUUM VOLTS
FWR	FEED WATER RECIRCULATION	V	VOLUME DAMPER
FWS	FEED WATER SUCTION	VENT	VENTILATION
°F	DEGREE(S) FAHRENHEIT	VFD	VARIABLE FREQUENCY DRIVE
G	NATURAL GAS	VPD	VACUUM PUMP DISCHARGE
GAL	GALLON, GALLONS	VSD	VARIABLE SPEED DRIVE
GEN	GENERATOR	VTR	VENT THROUGH ROOF
GHR	GLYCOL HEATING RETURN	W	WATTS, WIDE
GHS	GLYCOL HEATING SUPPLY	WB	WET BULB
GPH	GALLONS PER HOUR	WC	WATER COLUMN
GPM	GALLONS PER MINUTE	WG	WATER GAUGE
GR	AUTOMATIC LUBRICATION PIPING	WH	WALL HYDRANT
H	HIGH	WWF	WELDED WIRE FABRIC
HB	HOSE BIB	WWM	WELDED WIRE MESH
HED	HOSE END DRAIN VALVE		
HP	HORSEPOWER		
HPR	HIGH PRESSURE STEAM RETURN		
HPS	HIGH PRESSURE STEAM SUPPLY		
HR	HEATING WATER RETURN		
HRR	HEAT RECOVERY RETURN		
HRS	HEAT RECOVERY SUPPLY		
HRSQ	HEAT RECOVERY STEAM GENERATOR		
HS	HEATING WATER SUPPLY		
HT	HEIGHT		
HTHR	HIGH TEMPERATURE HEATING WATER RETURN		
HTHS	HIGH TEMPERATURE HEATING WATER SUPPLY		
HW	HOT WATER		


Order Plans @ WWW.LDOnline.com


100% CD SET 01/31/2020

**SHADOW ROCK ELEMENTARY SCHOOL**  
**GYM HVAC DESIGN**  
 1040 Kingway Drive  
 Lithonia, Georgia 30058

ARCHITECTURE  
 INTERIORS PLANNING  
 PROGRAM MANAGEMENT  
 1186 SPRING STREET, N.W.  
 ATLANTA, GEORGIA 30309-3919  
 404.876.0256  
 404.876.0267 fax  
 www.stanleylove.com

DRAWING TITLE  
 MECHANICAL NOTES,  
 SYMBOLS AND  
 ABBREVIATIONS

PROFESSIONAL SEAL  
  
 ENGINEER  
 DANIEL NOTO

CONSULTANT  
  
 888 HARRISON DRIVE SUITE 725  
 ATLANTA, GA 30328 678.915.0228

SCALES AS STATED HEREON ARE VALID ON THE ORIGINAL DRAWING. THE DIMENSIONS OF THIS DRAWING SHALL BE THE DIMENSIONS OF THE ORIGINAL DRAWING. THE DIMENSIONS OF THIS DRAWING SHALL BE THE DIMENSIONS OF THE ORIGINAL DRAWING. THE DIMENSIONS OF THIS DRAWING SHALL BE THE DIMENSIONS OF THE ORIGINAL DRAWING.

THIS DRAWING IS THE PROPERTY OF STANLEY LOVE & COMPANY, P.C. AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART, IN ANY MANNER, WITHOUT THE WRITTEN PERMISSION OF STANLEY LOVE & COMPANY, P.C. HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT. IT IS TO BE RETURNED UPON REQUEST.

COPYRIGHT © 2016. ALL RIGHTS RESERVED BY STANLEY LOVE & COMPANY, P.C.

DATE  
 01/31/2020  
 PROJECT NO.  
 6919.5  
 DRAWING NO.  
**M-001**

RELEASED FOR CONSTRUCTION 01/31/2020