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ABBREVIATION/DEFINITION			
ABBREV	DEFINITION	ABBREV	DEFINITION
ABV	ABOVE	P	PUMP
ACD	AUTOMATIC CONTROL DAMPER	PLPR	PUMP LOW PRESSURE RETURN
AD	ACCESS DOOR	PRSS	PRESSURE
AF	ABOVE FINISHED FLOOR	PRV	PRESSURE REDUCING VALVE
AHU	AIR HANDLING UNIT	PS	PRESSURE SWITCH
AP	ACCESS PANEL	PSI	POUNDS PER SQUARE INCH
ATC	AUTOMATIC TEMPERATURE CONTROL	PSIA	PSI ABSOLUTE
ARCH	ARCHITECT	PSIG	PSI GAUGE
AV	AIR FLOW CONTROL VALVE	PT	PLUGGED TEE
AF	AIR FILTER	PT	PRESSURE-TEMPERATURE
AS	AIR SEPARATOR	PT	RELIEF VALVE
ASD	AREA SMOKE DETECTOR	PVC	POLYVINYL CHLORIDE PIPE
BC	BALANCING COCK	PLBG	PLUMBING
BDD	BACK DRAFT DAMPER	POC	POINT OF CONNECTION
BV	BUTTERFLY VALVE	R	RISE
BHP	BRAKE HORSEPOWER	RA	RETURN AIR
BI	BACKWARD INCLINED	RA	RETURN AIR REGISTER
BEL	BELOW	RAR	ROOF DRAINS
BLDG	BUILDING	REG	REGISTER
BDS	BLOW DOWN SEPARATOR	RG	RETURN GRILLE
CC	COOLING COIL	RHC	REHEATING COIL
CD	CEILING DIFFUSER	REV	REVOLUTIONS PER MINUTE
CFM	CUBIC FEET PER MINUTE	RV	RELIEF VALVE
CH	CHILLED WATER RETURN	SA	SUPPLY AIR
CHS	CHILLED WATER SUPPLY	SAD	SUPPLY AIR DIFFUSER
CHW	CHILLED WATER	SAR	SUPPLY AIR REGISTER
CLG	CEILING	SD	SMOKE DAMPER
COND	CONDENSATE	SE	SUPPLY FAN
CONT	CONTINUATION	SMACNA	SHEET METAL & AC NATIONAL ASSOCIATION
COMP	COMPRESSOR	SFD	COMBINATION SMOKE/FIRE DAMPER
CONC	CONCRETE	SOV	SHUT OFF VALVE
CR	CEILING REGISTER	SQ	SQUARE (FACE)
CUL	CONDENSING UNIT	SO FT	SQUARE FOOT
CV	CHECK VALVE	STR	SOUND TRAP
CWR	CONDENSER WATER RETURN	SCR	SCREEN
CWS	CONDENSER WATER SUPPLY	SHT	SHEET
CSG	CLEAN STEAM GENERATOR	SP	STATIC PRESSURE
D	DROP	SW	SWITCH
DIA	DIAMETER	TC	TEMPERATURE CONTROL
DIFF	DIFFUSER	TCP	TEMPERATURE CONTROL PANEL
DL	DOOR LOUVER	TG	TRANSFER GRILLE
DET	DETAIL	TEMP	TEMPERATURE
DN	DOWN	TEMP	TYPICAL
DR	DRAIN	VTR	VENT THROUGH ROOF
DRWG	DRAWING	W G	WATER GAUGE (PRESSURE)
ESP	EXISTING PIPE	UC	UNDERCUT (DOOR)
EA	EXHAUST AIR	UH	UNIT HEATER
EAF	EXHAUST AIR REGISTER	UTR	UP THROUGH ROOF
EF	EXHAUST FAN		
EG	EXHAUST GRILLE		
EJ	EXPANSION JOINT		
EL	ELEVATION		
ENCL	ENCLOSURE		
EXH	EXHAUST		
EXIST	EXISTING		
ET	EXPANSION TANK		
ES	FLOAT AND THERMOSTATIC TRAPS		
F&T	FULL LOAD AMPERAGE		
FLA	FLEXIBLE		
FLEX	FAN COIL UNIT		
FCU	FIRE DAMPER		
FD	FEET PER MINUTE		
FFM	FINISH		
FIN	FLOOR		
FLR	FRESH AIR		
FA	GAUGE		
GA	GALVANIZED		
GALV	GALLONS PER MINUTE		
GPM	GRADE		
GR	GRAVITY RELIEF VENT		
GV	HIGH		
H	HOSE BIBB		
HB	HEATING COIL		
HC	HEADER		
HDR	HIGH EFFICIENCY PARTICULATE AIR FILTERS		
HEPA-AF	HOT WATER RETURN		
HHR	HOT WATER SUPPLY		
HHS	HORSEPOWER		
HPR	HIGH PRESSURE RETURN		
HPS	HIGH PRESSURE STEAM		
HVAC	HEATING, VENTILATING AND AIR CONDITIONING		
HW	HOT WATER		
HX	HEAT EXCHANGER		
HC	HEATING COIL		
IB	INVERTED BUCKET TRAPS		
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION		
KW	KILOWATT		
L	LONG		
LRA	LOCKED ROTOR (AMPERAGE)		
LAT	LEAVING AIR TEMPERATURE		
LD	LINEAR DIFFUSER		
LDB	LEAVING DB TEMPERATURE		
LPR	LOW-PRESSURE RETURN		
LPS	LOW-PRESSURE STEAM		
MAV	MANUAL AIR VENT		
MAX	MAXIMUM		
MB	MIXING BOX		
MCC	MOTOR CONTROL CENTER		
MECH	MECHANICAL		
MFR	MEDIUM PRESSURE RETURN		
MPS	MEDIUM PRESSURE STEAM		
MIN	MINIMUM		
MOV	MOTOR OPERATED VALVE		
MVD	MANUAL VOLUME DAMPER		
NC	NORMALLY CLOSED		
NIC	NOT IN CONTACT		
NO	NORMALLY OPEN		
NO.	NUMBER		
NTS	NOT TO SCALE		
OBD	OPPOSED BLADE DAMPER		
OSA	OUTSIDE AIR INTAKE		
OD	OUTSIDE AIR DAMPER		
OPW	OPERATING WEIGHT		
OSA	OUTSIDE AIR		
OPNG	OPENING		

SYMBOL/ABBREVIATION/DEFINITION		
SYMBOL	ABBREV	DEFINITION
		DETAIL TOP - ID NUMBER
		REFERENCE BOTTOM - SHEET NUMBER
		SECTION TOP - ID NUMBER
		REFERENCE BOTTOM - SHEET NUMBER
	SA	SUPPLY AIR DUCT
	RA	RETURN AIR DUCT
	EA	EXHAUST AIR DUCT
	CSFD	COMBINATION SMOKE/FIRE DAMPER
	FD	FIRE DAMPER
	VD	VOLUME DAMPER
	MD	MOTORIZED DAMPER
	CD	TYPE, NECK SIZE, CEILING DIFFUSER
	CD	SUPPLY AIR, CFM, BLOW WAY
	CRR	TYPE, SIZE, CEILING RETURN REGISTER
	CRR	RETURN AIR, CFM
	CER	TYPE, SIZE, CEILING EXHAUST REGISTER
	CER	EXHAUST AIR, CFM
	CD	TYPE, NECK SIZE, CEILING DIFFUSER
	CD	SUPPLY AIR, CFM
	SSD	TYPE, SIZE, SIDEWALL SUPPLY DIFFUSER
	SSD	SUPPLY AIR, CFM
	SRG	TYPE, SIZE, SIDEWALL RETURN GRILLE
	SRG	RETURN AIR, CFM
	SEG	TYPE, SIZE, SIDEWALL EXHAUST GRILLE
	SEG	EXHAUST AIR, CFM
	TG	TRANSFER GRILLE
	RG	RELIEF GRILLE
		INCLINED RISE IN DIRECTION OF AIR FLOW
		INCLINED DROP IN DIRECTION OF AIR FLOW
		EXISTING TO BE REMOVED
		EXISTING TO REMAIN
		ELBOWS WITH TURNING VANES
		TEE DUCT WITH TURNING VANES
		TRANSITION SQUARE TO ROUND
		TRANSITION SQUARE TO SQUARE/ROUND TO ROUND
		FLEXIBLE DUCT
		FLEXIBLE CONNECTION
		RADIUS ELBOW
	POC/POD	POINT OF CONNECTION/POINT OF DISCONNECTION
	L	DOOR LOUVER
	U	DOOR UNDERCUT
	T	THERMOSTAT
	H	HUMIDISTAT
	S	WALL SWITCH
	SD	SMOKE DETECTOR
	DSD	DUCT SMOKE DETECTOR
	GV	GATE VALVE
	GLV	GLOBE VALVE
	CV	CHECK VALVE
	STR	STRAINER
	BV	BUTTERFLY VALVE
	BLV	BALL VALVE
	U	UNION
	RED	CONCENTRIC REDUCER
		DIRECTION OF FLOW
	IA	INSTRUMENT AIR
	CHWS	CHILLED WATER SUPPLY
	CHWR	CHILLED WATER RETURN
	HHS	HEATING HOT WATER SUPPLY
	HHR	HEATING HOT WATER RETURN
	CD	CONDENSATE DRAIN
	HPS	HIGH PRESSURE STEAM
	MPS	MEDIUM PRESSURE STEAM
	LPS	LOW PRESSURE STEAM
	HPC	HIGH PRESSURE CONDENSATE
	MPC	MEDIUM PRESSURE CONDENSATE
	LPC	LOW PRESSURE CONDENSATE

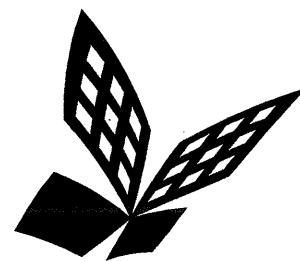
SYMBOL/ABBREVIATION/DEFINITION		
SYMBOL	ABBREV	DEFINITION
		FURNISHED BY ELECTRICAL CONTRACTOR INSTALLED BY ELECTRICAL
		FURNISHED BY MECHANICAL CONTRACTOR INSTALLED BY MECHANICAL CONTRACTOR
	DI	DIGITAL INPUT
	DO	DIGITAL OUTPUT
	AI	ANALOG INPUT
	AO	ANALOG OUTPUT
		INSTRUMENT LOCATED FRONT OF PANEL
		INSTRUMENT MOUNTED LOCALLY
		INSTRUMENT MOUNTED REAR OF PANEL
		PNEUMATIC SIGNAL
		ELECTRICAL SIGNAL
	MTR	MOTOR
	INTER	INTERLOCK
	IA	INSTRUMENT AIR SUPPLY
	ABV	AUTOMATIC BUTTERFLY VALVE
	A2V	AUTOMATIC 2-WAY VALVE
	A3V	AUTOMATIC 3-WAY VALVE
	SV	SOLENOID VALVE
	MD	MANUAL DAMPER
	AD	AUTOMATIC CONTROL DAMPER
	P	PUMP
	HX	HEAT EXCHANGER
	FEW	FLOW ELEMENT (WATER)
	FEA	FLOW ELEMENT (AIR)
		ADJUSTABLE PITCH AXIAL FAN
		PROPELLER FAN
		CENTRIFUGAL FAN
		IN-LINE CENTRIFUGAL FAN
		DUCT SILENCER
	HIS	HAND INDICATING SWITCH
	HOA	HAND-OFF-AUTOMATIC SWITCH
	HS	HAND SWITCH
	ZS	END OR LIMIT SWITCH

SYMBOL/ABBREVIATION/DEFINITION		
SYMBOL	ABBREV	DEFINITION
	I/P	CURRENT TO PNEUMATIC CONVERTER
	FC	FLOW CONTROLLER
	FCV	FLOW CONTROL VALVE
	FE	FLOW ELEMENT
	FI	FLOW INDICATOR
	FIC	FLOW INDICATING CONTROLLER
	FS	FLOW SWITCH
	FT	FLOW TRANSMITTER
	TCV	TEMPERATURE CONTROL VALVE
	TC	TEMPERATURE CONTROLLER
	TE	TEMPERATURE ELEMENT
	TI	TEMPERATURE INDICATOR
	TIC	TEMPERATURE INDICATING CONTROLLER
	TS	TEMPERATURE SWITCH
	TT	TEMPERATURE TRANSMITTER
	PI	PRESSURE INDICATOR
	PC	PRESSURE CONTROLLER
	PCV	PRESSURE CONTROL VALVE
	PE	PRESSURE ELEMENT
	PS	PRESSURE SWITCH
	PT	PRESSURE TRANSMITTER
	PIC	PRESSURE INDICATING CONTROLLER
	PSV	PRESSURE SUSTAINING VALVE
	PRV	PRESSURE REDUCING VALVE
	BDD	BACK DRAFT DAMPER
	FAD	FRESH AIR DAMPER
	FCD	FLOW CONTROL DAMPER
	PCD	PRESSURE CONTROL DAMPER
	RAD	RETURN AIR DAMPER
	SAD	SUPPLY AIR DAMPER
	DPI	DIFFERENTIAL PRESSURE INDICATOR
	DPS	DIFFERENTIAL PRESSURE SWITCH
	DPT	DIFFERENTIAL PRESSURE TRANSMITTER
	HS	HUMIDITY SWITCH
	HE	HUMIDITY ELEMENT
	HC	HUMIDITY CONTROLLER
	HIC	HUMIDITY INDICATING CONTROLLER
	HT	HUMIDITY TRANSMITTER

GENERAL NOTES		
1.	REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF DIFFUSERS AND REGISTERS. VARY LOCATIONS AS REQUIRED TO MATCH FINAL ARCHITECTURAL REFLECTED CEILING PLANS WHEN ISSUED.	
2.	FLEXIBLE DUCT CONNECTION TO DIFFUSERS AND REGISTERS TO BE A MINIMUM OF 48" AND A MAXIMUM OF 72" LONG. FLEXIBLE DUCTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS: FLEXIBLE DUCTS SHALL CONSIST OF AN EXTERIOR REINFORCED LAMINATED VAPOR BARRIER, 1-1/2" THICK FIBERGLASS INSULATION (K= 25 AT 75°F), ENCAPSULATED SPRING STEEL WIRE HELIX AND IMPERVIOUS, SMOOTH, NON-PERFORATED INTERIOR VINYL LINER. INDIVIDUAL LENGTHS OF FLEXIBLE DUCTS SHALL CONTAIN FACTORY FABRICATED STEEL CONNECTION COLLARS. THE MAXIMUM LENGTH OF THE FLEXIBLE DUCT CONNECTING FROM THE RIGID DUCT TO TERMINAL OUTLETS SHALL BE 7'-0". SUPPORT FLEXIBLE DUCTS HALF WAY BETWEEN THE RIGID DUCT AND THE TERMINAL OUTLETS WITH A MINIMUM OF 1" WIDE 24 GAUGE STEEL HANGER COLLAR ATTACHED TO THE STRUCTURE. <b>RFI 130-2</b>	
3.	LOCATE ALL ROOM SENSORS 5'- 0" ABOVE FINISHED FLOOR. LOCATE ALL THERMOSTATS 4'- 0" ABOVE FINISHED FLOOR.	
4.	ALL DUCT INSULATION, FLEX-DUCT, PIPE INSULATION, SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND SMOKE DEVELOPED OF NOT MORE THAN 50.	
5.	PROVIDE EQUIPMENT WITH A PERMANENT LABEL AFFIXED TO THE EQUIPMENT WHICH WILL EITHER CLEARLY INDICATE THE ROUTINE MAINTENANCE ACTIONS WHICH MUST BE PERFORMED TO MAINTAIN THE EQUIPMENT IN EFFICIENT, OR REFER TO A MAINTENANCE MANUAL IN THE ENGINEERING DEPARTMENT.	
6.	DAMPER MANUFACTURERS LABEL SHALL INDICATE MAXIMUM LEAKAGE OF 3%.	
7.	ALL DUCT INSULATION, AND WRAPPING SHALL HAVE A MOLD-HUMIDIFY AND FOSLOW RESISTANT FACTOR THAT MEETS THE REQUIREMENTS OF U.L. 181 STANDARDS NO. 1-10.	
8.	PROVIDE MANUAL VOLUME DAMPERS AT ALL DUCT BRANCHES FROM MAIN SUPPLY AIR DUCTS.	
9.	NOT USED.	
10.	MAKE ALL EQUIPMENT ANCHORS ON ROOF WATERPROOF.	
11.	MAKE ALL FLASHING AND COUNTER FLASHING FOR MECHANICAL WORK WATERPROOF.	
12.	THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.	
13.	SYMBOLS AND ABBREVIATIONS ARE SHOWN FOR REFERENCE; NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED.	
14.	ASBESTOS OR HAZARDOUS WASTE: IT IS UNDERSTOOD AND AGREED THAT THIS CONTRACT DOES NOT CONTEMPLATE THE HANDLING OF ASBESTOS OR ANY HAZARDOUS WASTE MATERIAL. IF ASBESTOS OR ANY HAZARDOUS WASTE MATERIAL IS ENCOUNTERED, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY. DO NOT DISTURB, HANDLE, OR ATTEMPT TO REMOVE.	
15.	THE PREMISES AND EXISTING BUILDING AT THE SITE WILL BE IN USE AT THE TIME THE WORK OF THIS CONTRACT IS IN PROGRESS. CONDUCT WORK SO AS TO CAUSE NO INCONVENIENCE OR DANGER TO THE PERSONNEL ON THE PREMISES. MAINTAIN CONTINUITY OF SERVICE TO THE EXISTING HVAC SYSTEM, HOT & COLD WATER AND SANITARY SEWER SYSTEMS, EXCEPT FOR DESIGNATED IN SERVALS DURING WHICH CONNECTIONS CAN BE MADE. THE SCHEDULING OF THE SHUT DOWN PERIOD SHALL BE AT A TIME DIRECTED BY THE OWNER'S REPRESENTATIVE.	
16.	ALL CONDENSATE DRAIN LINES IN THE BUILDING SHALL BE INSULATED.	

SEISMIC NOTES		
1.	N/A	
2.	N/A	
3.	BRACING OF ALL PIPES, CONDUITS, DUCTWORK AND ANY OTHER DISTRIBUTION SYSTEM SHALL MEET CURRENT CBC AND TITLE 24 REQUIREMENTS. SYSTEMS SHALL BE BRACED USING PRE-APPROVED SYSTEMS SUCH AS MASON INDUSTRIES INC. OPA #0348 OR I.S.A.T. OPA #0485 DESIGNED PER DESIGN CRITERIA OF NOTE 6 ON STRUCTURAL DRAWING S.O.	
4.	SHOP DRAWINGS SHOWING THE LOCATIONS OF ALL VERTICAL SUPPORTS AND BRACING AS WELL AS DETAILS OF CONNECTIONS ARE REQUIRED FOR ALL SYSTEMS INCLUDING PRE-APPROVED SYSTEMS. THE SHOP DRAWING SHALL BE REVIEWED AND SHOP-DRAWING STAMPED BY SEOR TO VERIFY ADEQUACY OF ELEMENTS AND COMPLIANCE OF THE PRE-APPROVED SYSTEM.	

CONTRACTORS SHALL REVIEW ARCHITECTURAL DRAWINGS FOR FLOOR LEVELS AND SHELL AREAS OF FUTURE PHASING WORK  
THE MECHANICAL PLANS SHALL ALL HVAC WORK INCLUDING THE SHELL AREA OF ALL PHASES.



FKP Architects

ARCHITECT OF RECORD

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ARCHITECT - PAUL C. GLORIOD

CONSULTANT

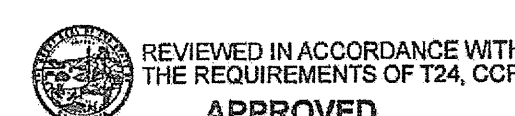
T M A D  
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& GAINES

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Project No. 2305-163-07



REVISIONS

APPROVAL



JAN 28 2010

Office of Statewide Health  
Planning & Development  
FACILITIES DEVELOPMENT DIVISION

PROJECT NAME

CHILDREN'S HOSPITAL  
OF ORANGE COUNTY

455 S. Main St.  
Orange, CA 92868-3874

TOWER II



PROJECT NUMBER

12011.00  
Increment #7

OSHPD - PROJECT NUMBER

IL 072072-30

ISSUE

OSHPD PERMIT

DATE

01/27/2010

SCALE

NONE

DRAWING TITLE

LEGENDS, DEFINITIONS,  
SYMBOLS, ABBREVIATIONS,  
NOTES AND GENERAL NOTES

DRAWING NUMBER

M0.02