

# DEPARTMENT OF HEALTH CHILDREN'S SPECIAL HEALTH CARE NEEDS HVAC IMPROVEMENTS DFCM PROJECT No. 06171390

**DFCM DESIGN AND CODE CRITERIA**  
(Fee A.E. Attach and fill in applicable data for each drawing submittal)

Applicable Codes: Year 2006  
 International Building Code Year 2006  
 Planning & Design Criteria to Prevent International Mechanical Code Year 2006  
 Architectural Barriers for the Aged and International Plumbing Code Year 2006  
 the Physically Handicapped. Ashrae/IES Energy Code 2004  
National Electrical Code 2004

A. Occupancy and Group : EXISTING BUILDING—NO CHANGES TO OCCUPANCY OR USE  
 Change in Use : Yes  No  Mixed Occupancy : Yes  No

B. Type of Construction (Circle) EXISTING BUILDING  
 I F.R. II F.R. III 1 HR. B 1 HR. N H.T. IV 1 HR. V N

C. Location on Property : F.R. Ext. Walls (Hrs.): \_\_\_\_\_ Ext. Wall Opening(s) Protection (Hrs.) \_\_\_\_\_  
 Each Occupancy

D. Occupancy separation required (Hrs.): \_\_\_\_\_  
 Sprinklered: Indicate  Yes or No  No  
 Stories : 1 or  multiple

	%	Area (ft <sup>2</sup> )	%	Area (ft <sup>2</sup> )	%	Area (ft <sup>2</sup> )
a. Actual Area <sup>2</sup> (ft <sup>2</sup> ) EXISTING						
b. Basic allowable area : N/A						
c. Allowable Area Increase: N/A due to side yards: N/A						
d. Side yard area increase (ft <sup>2</sup> ):						
Accumulative sub-total (b+d):						
Sprinkler: area increase (x3 single) (x 2 multi)						
e. Total Allowable Area for a single story:						
x 2 for multi-story building:						
f. Ratio = a/e (Actual divided by allowable)						

E. Fire-Resistive Requirements N/A (Hrs.): (1 Hr., 2Hr., 3Hr., 4Hr., N. H.T.)

Exterior Bearing Walls:	N/A	Floors - Ceiling Floors	N/A
Interior Bearing Walls:	N/A	Roofs - Ceiling Roofs	N/A
Exterior Non-bearing Walls:	N/A	Exterior Doors and Windows	N/A
Structural Frame:	N/A	Shaft Enclosures	N/A
Partitions - Permanent:	N/A		

(OCCUPANCY SEPARATION - N.A.)



State of Utah—Department of Administrative Services

## DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

4110 State Office Building / Salt Lake City, Utah 84114 / 538-3018



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### DRAWING INDEX:

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 MD101- 2ND LEVEL MECHANICAL DEMOLITION PLAN  
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MECHANICAL LEGEND

SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION
GENERAL TERMINOLOGY			AIR SIDE			WET SIDE			WET SIDE CONT		
	A	SECTION LETTER DESIGNATION			EXISTING AIR DUCT TO BE REMOVED			PUMP - INLINE			PITCH DOWN
	ME-101	SECTION DRAWN ON THIS SHEET			EXISTING AIR DUCT TO REMAIN		PSD	PUMP SUCTION DIFFUSER			ELBOW UP
	A2	DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION			NEW AIR DUCT			UNION			ELBOW DOWN
	AH	MECHANICAL EQUIPMENT DESIGNATION			RECT. TO RECT. AIR DUCT TAKE-OFF			MANUAL ACTUATOR (BALL, BUTTERFLY, NEEDLE, ETC. VALVES)			TEE UP
	1	EQUIPMENT ITEM DESIGNATION			RECT. TO RND. AIR DUCT TAKE-OFF			MANUAL ACTUATOR (GATE, GLOBE, S&D, OS&Y, ETC. VALVES)			TEE DOWN
	D-1	REGISTER OR DIFFUSER DESIGNATION WITH BALANCING CFM LISTED BELOW			RND. TO RND. AIR DUCT TAKE-OFF			EXISTING PIPING TO BE REMOVED			EXISTING PIPING TO REMAIN
	R-1	GRILLE, OR LOUVER DESIGNATION WHERE BALANCING NOT REQUIRE			RECT. TAKE-OFF AT END OF MAIN			NEW PIPING			PIPE CAP OR PLUG
		REVISION DESIGNATOR AND NUMBER			FLEXIBLE AIR DUCT			PNEUMATIC DIAPHRAGM ACTUATOR			CONCENTRIC REDUCER
		KEY NOTE DESIGNATOR AND NUMBER			LINED DUCT		M	ELECTRIC MOTOR ACTUATOR			ECCENTRIC REDUCER
	POC	POINT OF CONNECTION			VANED ELBOW			THREADED OR SWEAT VALVE CONNECTION			EXPANSION JOINT
	POR	POINT OF REMOVAL			RADIUS ELBOW			FLANGED VALVE CONNECTION			FLEXIBLE CONNECTION
	AFF	ABOVE FINISHED FLOOR			CONCENTRIC DUCT TRANSITION			BUTTERFLY VALVE			ANCHOR POINT
	AP	ACCESS PANEL			ECCENTRIC DUCT TRANSITION			GATE VALVE			CONDENSATE DRAIN
	Q. EL.	CENTER LINE ELEVATION			FLEXIBLE AIR DUCT			GLOBE VALVE - STRAIGHT PATTERN		MU	MAKE-UP WATER LINE
	INV. ELEV.	INVERT ELEVATION			SUPPLY AIR DIFFUSER			GLOBE VALVE - ANGLE PATTERN		CW	CULINARY COLD WATER
	GC	GENERAL CONTRACTOR			RETURN AIR, FRESH AIR, AND TRANSFER AIR			MOTORIZED 2-WAY CONTROL VALVE		HW	CULINARY HOT WATER
	MC	MECHANICAL CONTRACTOR			RETURN OR OUTSIDE AIR DUCT UP			MOTORIZED 3-WAY CONTROL VALVE			RECIRCULATED CULINARY HOT WATER
	CC	CONTROL CONTRACTOR			SUPPLY DUCT UP			CHECK VALVE		D	EQUIPMENT DRAIN
	EC	ELECTRICAL CONTRACTOR			RETURN OR OUTSIDE AIR DUCT DOWN		PRV	PRESSURE REDUCING VALVE		HWS	HEATING WATER SUPPLY
	FPC	FIRE PROTECTION CONTROL			SUPPLY DUCT DOWN		CBV	CIRCUIT BALANCING VALVE		HWR	HEATING WATER RETURN
	NIC	NOT IN CONTRACT			ROUND DUCT UP		BV	BALL VALVE			
	NTS	NOT TO SCALE			LOWER DUCT DOWN		PRV	PRESSURE RELIEF VALVE			
	C	COMMON			FLEXIBLE DUCT CONNECTION			NEEDLE VALVE			
	NC	NORMALLY CLOSED			EXISTING EQUIPMENT TO BE REMOVED			AUTOMATIC AIR VENT			
	NO	NORMALLY OPEN			EXISTING EQUIPMENT TO REMAIN			MANUAL AIR VENT			
					NEW EQUIPMENT			STRAINER			
				MVD	MOTORIZED VOLUME DAMPER			STRAINER W/ PLUGGED BLOW OFF			
				T-STAT	WALL MOUNTED THERMOSTAT		VTI	VENTURI			
				SA	SUPPLY AIR			PRESSURE GAUGE AND GAUGE COCK - WATER			
				RA	RETURN AIR			THERMOMETER AND THERMOWELL			
				OA	OUTSIDE AIR			WATER TEMPERATURE SENSOR AND THERMOWELL			
				MA	MIXED AIR			FLOW SWITCH			
				FA	FRESH AIR		PS	PRESSURE SWITCH			
				RF	RELIEF AIR		TW	THERMOWELL			
								PRESSURE AND TEMPERATURE TAP			
								DIRECTION OF FLOW			

GENERAL NOTES:

- [G-1] MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. EXISTING BUILDING CONDITIONS, I.E. AVAILABLE CEILING SPACE AND AREAS FOR THE ROUTING OF DUCTS AND PIPING MUST BE COORDINATED.
- A - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF: EFFICIENCY, QUALITY OR GOVERNING CODE.
- B - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.
- C - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS), THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.
- D - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.
- E - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.
- [G-2] ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE SUBMITTED TO THE ENGINEER IN WRITING OR DRAWINGS. CONTRACTOR SHALL NOT MAKE ANY CHANGES UNLESS APPROVED BY ENGINEER.
- [G-3] CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.
- [G-4] THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS.
- [G-5] THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.
- [G-6] SHEET METAL DUCT SIZES SHOWN ON DRAWINGS ARE FREE AREA DIMENSIONS.
- [G-7] PROVIDE AND INSTALL BALANCING DAMPERS IN ALL SUPPLY AND EXHAUST AIR BRANCH DUCTS. BALANCE TO CFM SHOWN ON PLAN.
- [G-8] PROVIDE TURNING VANES IN ALL ELBOWS OF RECTANGULAR DUCT.
- [G-9] THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY IN HANDLING AND DISPOSING OF REFRIGERANTS, OILS, ETC. ALL SUCH MATERIALS SHALL BE HANDLED, DISPOSED, AND USED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.
- [G-10] THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWING BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.
- [G-11] C.F.M. LISTED IS ACTUAL AIR.
- [G-12] SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.
- [G-13] CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.
- [G-14] ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2006 EDITION OF THE IMC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.
- [G-15] THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINING DOWN AND RE-FILLING OF ALL SYSTEMS NECESSARY TO COMPLETE THE WORK OUTLINED BY THIS PROJECT. THIS INCLUDES PROVIDING THE REQUIRED CHEMICAL TREATMENT WHEN RE-FILLING THE SYSTEM.

CONSULTANTS



PROJECT NAME & ADDRESS

DEPARTMENT OF HEALTH  
CHILDREN'S SPECIAL  
HEALTH CARE NEEDS -  
HVAC UPGRADE

DFCM No. 06171390

Salt Lake city, Utah

MARK	DATE	REVISION

PROJECT MANAGER: SLW  
DRAWN BY: STAFF  
CHECKED BY: SLW  
DATE: 04/11/07  
WHW JOB NO.: 06062  
SHEET TITLE



MECHANICAL GENERAL  
NOTES AND LEGENDS

SHEET NO. **M001**



- SHEET NOTES:**
- ① EXISTING 6" HWS AND HWR PIPING ABOVE CANOPY BRIDGE TO SERVE FRASER LAB SHALL REMAIN.
  - ② EXISTING 3" HWS AND HWR PIPING TO SERVE THE MEDICAL EXAMINERS BLDG. SHALL REMAIN.
  - ③ SEE SHEET ME401 FOR LARGE SCALE MECHANICAL EQUIPMENT ROOM AND PIPING.
  - ④ SEE SHEET ME402 FOR LARGE SCALE MECHANICAL EQUIPMENT ROOM AND PIPING.
  - ⑤ SEE SHEET ME701 FOR FLOW DIAGRAM CHANGES IN ALL THREE BUILDINGS.

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**SITE PLAN**

SHEET NO. **MS101**

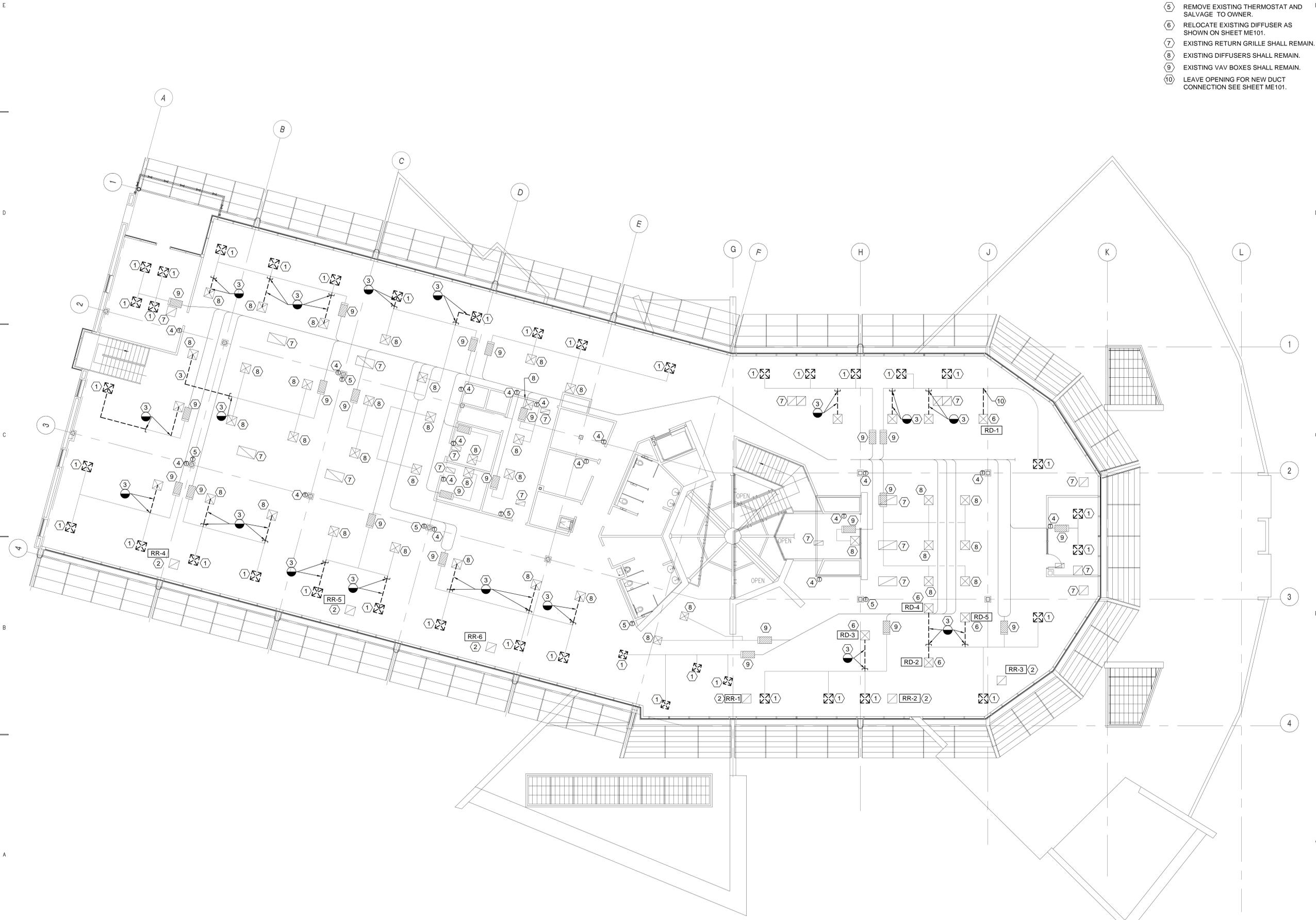
**SITE PLAN**  
SCALE: 1/16" = 1'-0"



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- SHEET NOTES:**
- ① REMOVE EXISTING DIFFUSER.
  - ② RELOCATE EXISTING RETURN GRILLE. SEE SHEET ME101 FOR NEW LOCATION.
  - ③ REMOVE EXISTING DUCTWORK, HANGERS ETC. AS SHOWN. CAP TAKE-OFF AT MAIN.
  - ④ EXISTING THERMOSTAT SHALL REMAIN. SEE ME101.
  - ⑤ REMOVE EXISTING THERMOSTAT AND SALVAGE TO OWNER.
  - ⑥ RELOCATE EXISTING DIFFUSER AS SHOWN ON SHEET ME101.
  - ⑦ EXISTING RETURN GRILLE SHALL REMAIN.
  - ⑧ EXISTING DIFFUSERS SHALL REMAIN.
  - ⑨ EXISTING VAV BOXES SHALL REMAIN.
  - ⑩ LEAVE OPENING FOR NEW DUCT CONNECTION SEE SHEET ME101.



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**2ND LEVEL MECHANICAL  
DEMOLITION  
PLAN**

SHEET NO.

**MD101**

**2ND LEVEL MECHANICAL DEMOLITION PLAN**

SCALE: 1/8" = 1'-0"



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2ND LEVEL NEW  
MECHANICAL PLAN

SHEET NO.

ME101

GENERAL NOTES:

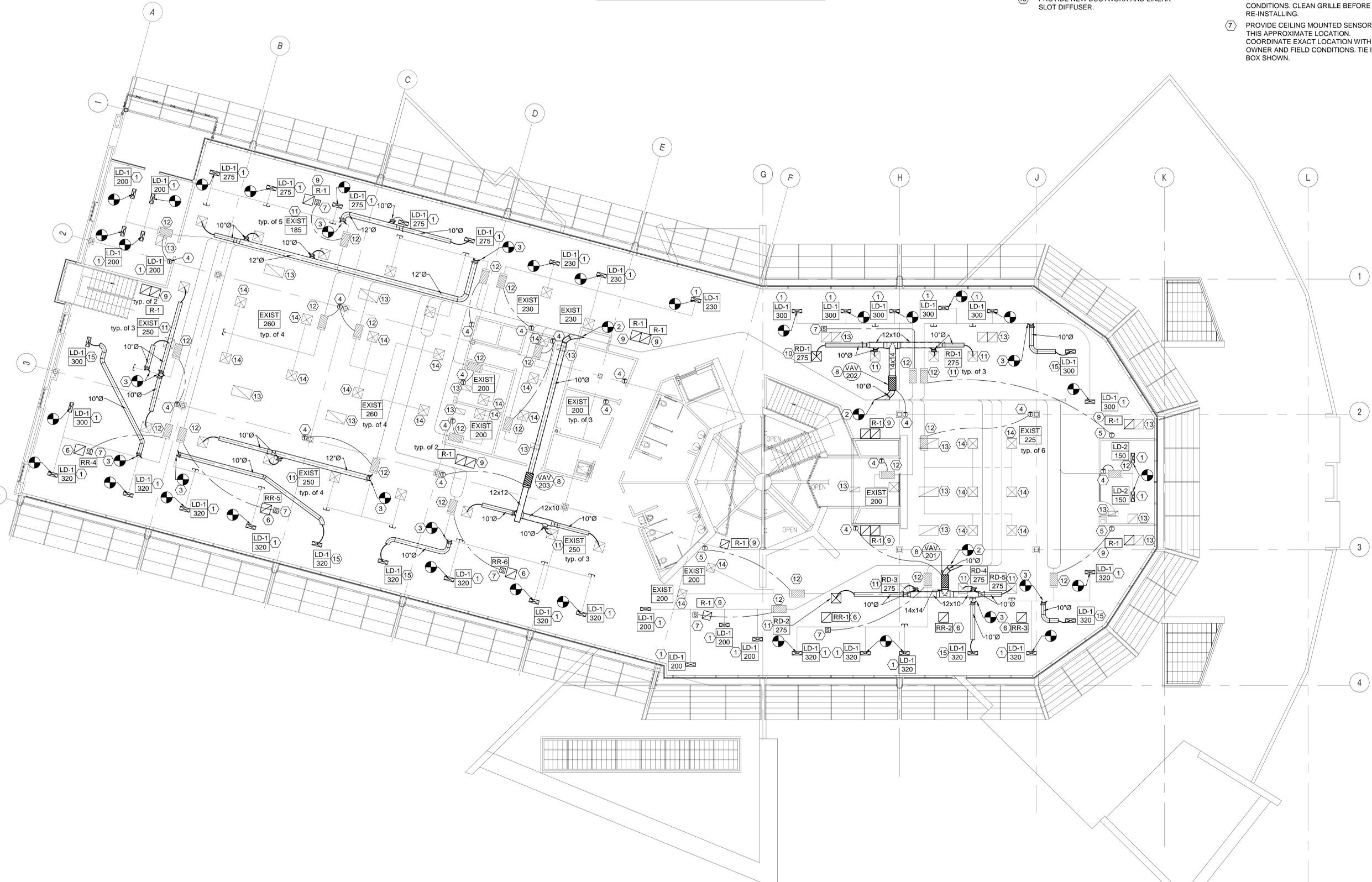
1. CONTROLS CONTRACTOR SHALL RE-COMMISSION ALL THERMOSTATS ON THIS LEVEL. FIELD CALIBRATE ALL EXISTING THERMOSTATS ON THIS FLOOR TO ± 1/2° F. VERIFY PROPER OPERATIONS, CONNECTED BOX, PROPER GRAPHICS, ETC. MAKE CORRECTIONS AND REPAIRS AS NECESSARY.
2. FIELD VERIFY EXACT LOCATIONS, SIZES, DIMENSIONS, ETC. OF ALL EXISTING EQUIPMENT, DUCTWORK, PIPING, AND ALL OTHER FIELD CONDITIONS PRIOR TO ORDERING OR FABRICATING.
3. BALANCE NEW AND EXISTING DIFFUSERS TO CFM SHOWN.
4. MAKE CEILING TILE MODIFICATIONS AS NECESSARY FOR NEW DIFFUSERS. PROVIDE NEW TILE SECTIONS WHERE LINEAR SLOT DIFFUSERS REPLACE 2'x2' DIFFUSERS. MATCH EXISTING CEILING TILE. VERIFY WITH BLDG. MAINTENANCE IF ANY SPARE TILE ARE AVAILABLE.

SHEET NOTES CONTINUED:

8. PROVIDE NEW VAV BOX AND ASSOCIATED DUCTWORK. TIE INTO EXISTING MEDIUM PRESSURE DUCTWORK AT THIS APPROXIMATE LOCATION.
9. PROVIDE NEW RETURN GRILLES AT THIS APPROXIMATE LOCATION. SEE DETAIL C1/ME501.
10. INSTALL RELOCATED DIFFUSER FROM MD101 AT THIS LOCATION.
11. CONNECT NEW DUCTWORK TO EXISTING DIFFUSERS. RELOCATE DIFFUSERS WHERE SHOWN.
12. EXISTING VAV BOXES SHALL REMAIN.
13. EXISTING RETURN AIR GRILLES SHALL REMAIN.
14. EXISTING DIFFUSER SHALL REMAIN.
15. PROVIDE NEW DUCTWORK AND LINEAR SLOT DIFFUSER.

SHEET NOTES:

1. PROVIDE NEW LINEAR SLOT DIFFUSER AND PLENUM. RECONNECT TO EXISTING DUCTWORK. ADJUST TO HORIZONTAL PATTERN BLOWING TOWARDS WINDOWS. SEE DETAIL A1/ME501.
2. TIE NEW MEDIUM PRESSURE DUCT BRANCH INTO EXISTING MAIN AT THIS APPROXIMATE LOCATION.
3. TIE INTO EXISTING SUPPLY AIR DUCT AT THIS APPROXIMATE LOCATION. FIELD VERIFY.
4. RECONNECT EXISTING THERMOSTAT TO BOX SHOWN.
5. PROVIDE NEW THERMOSTAT AND CONNECT TO BOX SHOWN.
6. RELOCATE EXISTING RETURN GRILLE TO THIS APPROXIMATE LOCATION. COORDINATE WITH MD101 AND FIELD CONDITIONS. CLEAN GRILLE BEFORE RE-INSTALLING.
7. PROVIDE CEILING MOUNTED SENSOR AT THIS APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH OWNER AND FIELD CONDITIONS. TIE INTO BOX SHOWN.



2ND LEVEL NEW MECHANICAL PLAN

SCALE: 1/8" = 1'-0"



**GENERAL NOTE:**  
1. SEE SHEET ME101 FOR DUCTWORK, DIFFUSERS, THERMOSTATS, ETC.  
2. EXISTING PIPING IS A REVERSE/RETURN SYSTEM.

- SHEET NOTES:**
- ① PROVIDE NEW HOT WATER PIPING TO NEW VAV BOX. SEE DETAIL A4/ME501. CONNECT TO EXISTING PIPING AT THIS APPROXIMATE LOCATION. FIELD VERIFY SIZE AND LOCATION OF EXISTING PIPING.
  - ② EXISTING 3" HWS AND 3" HWR SERVICE FROM BELOW TO SERVE 2ND FLOOR.
  - ③ PROVIDE SUFFICIENT LENGTH OF PIPING FOR COIL CONNECTION.

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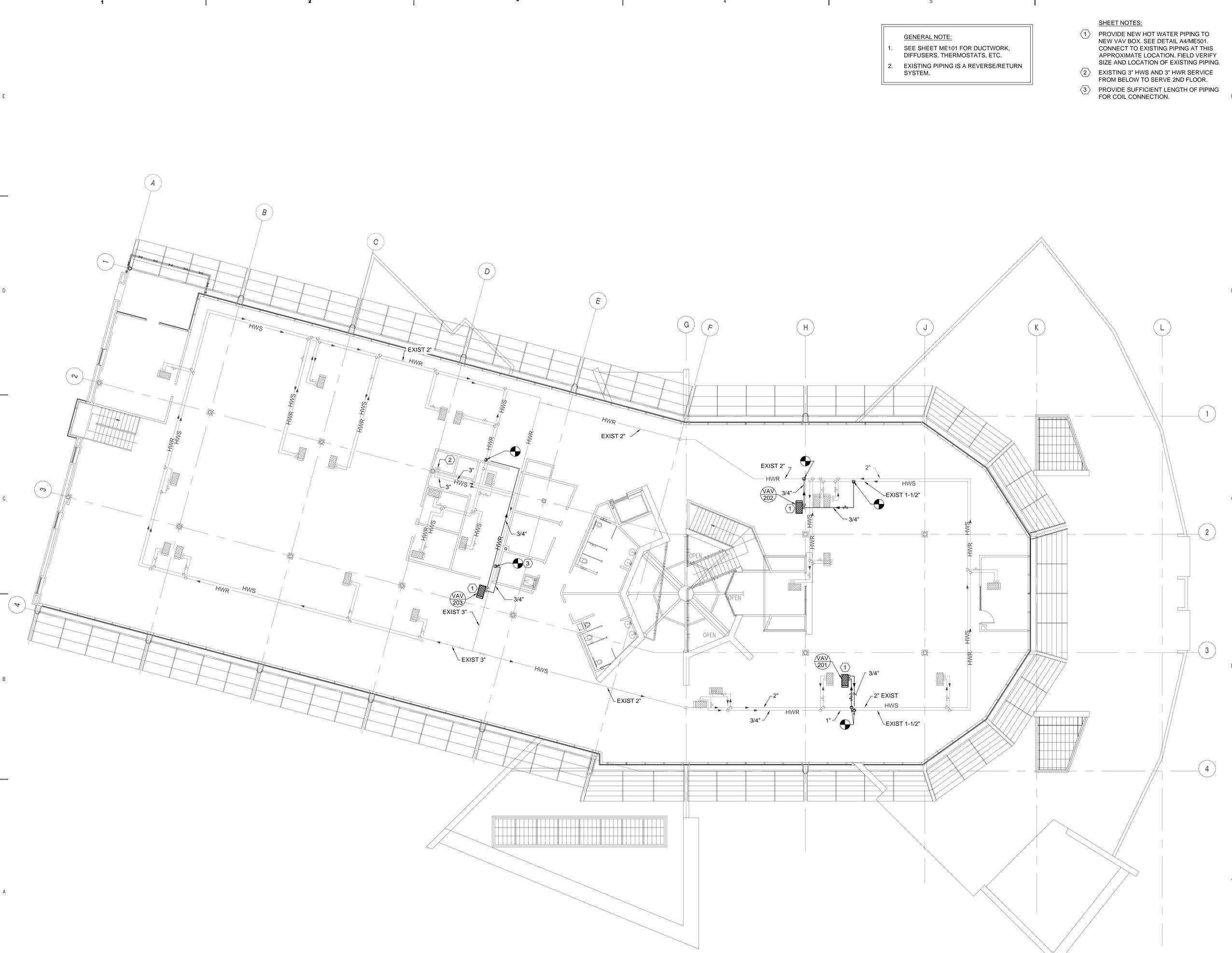
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**2ND LEVEL MECHANICAL PIPING PLAN**

SHEET NO. **ME102**



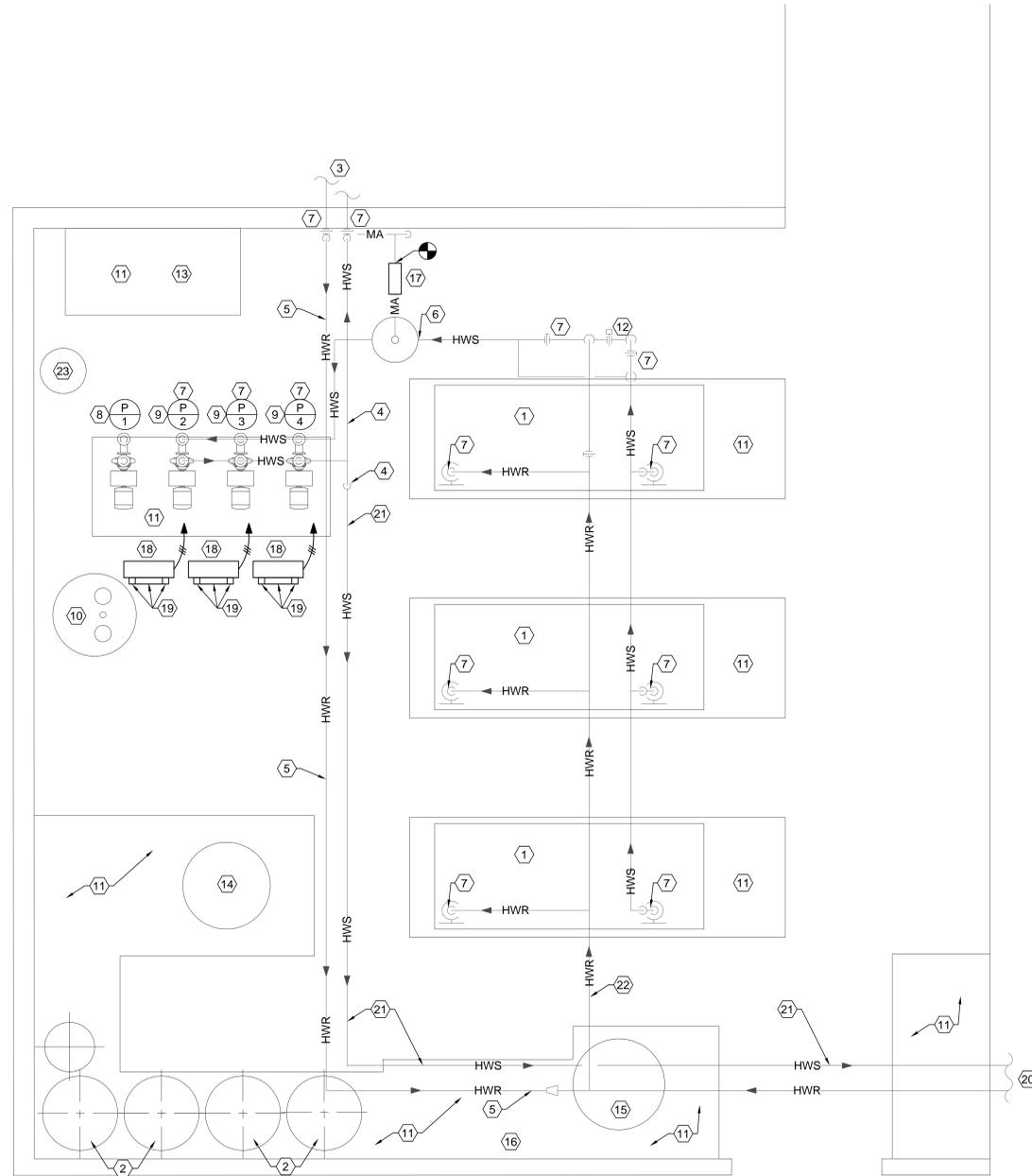
**2ND LEVEL MECHANICAL PIPING PLAN**  
SCALE: 1/8" = 1'-0"



CONSULTANTS



- SHEET NOTES:**
- ① EXISTING BOILERS SHALL REMAIN.
  - ② EXISTING EXPANSION TANKS SHALL REMAIN.
  - ③ 3" HWS & HWR PIPING TO MEDICAL EXAMINERS OFFICE SHALL REMAIN.
  - ④ 3" HWS TO MEDICAL EXAMINERS SHALL REMAIN.
  - ⑤ 3" HWR FROM MEDICAL EXAMINERS SHALL REMAIN.
  - ⑥ HEATING HOT WATER AIR ELIMINATOR SHALL REMAIN.
  - ⑦ BUTTERFLY VALVES SHALL REMAIN.
  - ⑧ EXISTING CHILLED WATER PUMP SHALL REMAIN.
  - ⑨ EXISTING HOT WATER PUMPS SHALL REMAIN.
  - ⑩ EXISTING DUPLEX SUMP PUMP SHALL REMAIN.
  - ⑪ EXISTING CONCRETE PADS SHALL REMAIN.
  - ⑫ AUTO BUTTERFLY VALVE SHALL REMAIN.
  - ⑬ EXISTING GLYCOL PACKAGE i.e. EXCHANGER, AIR SEPARATOR, PUMP AND PIPING SHALL REMAIN.
  - ⑭ EXISTING STEAM BOILER SHALL REMAIN.
  - ⑮ EXISTING CULINARY HOT WATER BOILER SHALL REMAIN.
  - ⑯ SOFTNER EQUIPMENT IN THIS AREA SHALL REMAIN.
  - ⑰ BREAK INTO EXISTING MAKE-UP WATER AT THIS POINT AND PROVIDE NEW PRV STATION. SEE DETAIL A3/ME501.
  - ⑱ PROVIDE NEW VARIABLE FREQUENCY DRIVES FOR EXISTING PUMPS P-1, P-2, AND P-3.
  - ⑲ MOUNT VFD'S ON UNISTRUT FRAME BOLTED TO FLOOR. PROVIDE TWO VERTICAL AND TWO HORIZONTAL STRUTS PER DRIVE.
  - ⑳ 6" HWS AND HWR TO AND FROM BUILDING AND FRASER LAB SHALL REMAIN.
  - ㉑ 6" HWS TO BUILDING AND FRASER LAB SHALL REMAIN.
  - ㉒ MAIN 6" HWR FROM ALL THREE BUILDINGS SHALL REMAIN.
  - ㉓ CHILLED WATER CHEMICAL FEED TANK SYSTEM SHALL REMAIN.



**CHILDREN'S CENTER BOILER AND EQUIPMENT ROOM**

SCALE: 3/8" = 1'-0"

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**LARGE SCALE SPECIAL  
NEEDS BASEMENT MECH.  
PLAN**

SHEET NO.  
**ME401**

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LARGE SCALE  
MECHANICAL PLAN

SHEET NO.

**ME402**

SHEET NOTES CONT.

- ALTERNATE #1 (16) REMOVE AND REPLACE EXISTING HOT WATER AND GLYCOL PUMPS INCLUDING SUCTION DIFFUSERS, BUTTERFLY VALVES, CHECK VALVES, PRESSURE GAUGES, FLEX CONNECTIONS AND BALANCING VALVE. SEE DETAIL D1/ME501.
- ALTERNATE #1 (17) PROVIDE NEW CONCRETE PUMP PAD FOR ALL THREE PUMPS. SEE PUMP PAD DETAIL C3/ME501.
- (18) EXISTING CHILLED AND CONDENSER WATER PUMPS SHALL REMAIN.
- (19) REMOVE EXISTING PIPING, STRAINER ETC. AS REQUIRED FOR NEW PIPING INSTALLATION.
- (20) PROVIDE NEW 2" HWS CONNECTION FOR SERVICE TO CULINARY HOT WATER SYSTEM. SEE ISOMETRIC C1 THIS SHEET.
- (21) EXISTING CONTROL VALVES AND BALL VALVES SHALL REMAIN.
- (22) REMOVE EXISTING HWS FROM TEE TO NEW HWS CONNECTION. REPLACE TEE WITH 90° ELL.
- (23) EXISTING INLINE VERTICAL PUMP SHALL REMAIN.
- (24) PROVIDE NEW 6" CONNECTIONS TO EXISTING HWS & HWR FOR NEW BRIDGE.
- (25) 6"Ø HWS & HWS FROM CHILDREN'S SPECIAL NEEDS BUILDING. CONNECT TO EXISTING 2" HWS IN THIS APPROXIMATE LOCATION.
- (26) REMOVE EXISTING CROSSOVER PIPING INCLUDING VALVE AN AUTO AIR RELIEF. CAP PIPING AT BOTH HWS & HWR.
- (27) RE-CONNECT HOT WATER RETURN FROM DOMESTIC WATER EXCHANGER TO EXISTING HOT WATER RETURN PIPING AS SHOWN.

SHEET NOTES:

- (1) EXISTING CHILLER SHALL REMAIN.
- (2) EXISTING GLYCOL HEAT EXCHANGER SHALL REMAIN.
- (3) EXISTING BUILDING HOT WATER PUMPS SHALL REMAIN.
- (4) EXISTING AIR HANDLING UNIT SHALL REMAIN.
- (5) EXISTING CULINARY HOT WATER EXCHANGER SHALL REMAIN.
- (6) EXISTING CULINARY HOT WATER STORAGE TANK SHALL REMAIN.
- (7) EXISTING GLYCOL HEATING PUMPS SHALL REMAIN.
- (8) EXISTING HWS SHALL REMAIN.
- (9) EXISTING HWR SHALL REMAIN.
- (10) PROVIDE NEW CROSS-OVER BRIDGE AT THIS LOCATION. SEE ALSO SHEET ME701.
- (11) PROVIDE NEW 6" BALANCING VALVE.
- (12) PROVIDE NEW 3" BALANCING VALVE.
- (13) PROVIDE NEW 2-WAY AUTOMATIC CONTROL VALVE. COORDINATE WITH ATC TO PROGRAM, TIE INTO DDC, AND UPGRADE GRAPHICS.
- (14) PROVIDE NEW 3-WAY AUTOMATIC MIXING VALVE. COORDINATE WITH ATC TO PROGRAM, TIE INTO DDC SYSTEM AND UPDATE GRAPHICS.
- (15) EXISTING CULINARY HOT AND COLD WATER PIPING SHALL REMAIN. SEE FLOW SHEET ME701.

**FRASER LAB. NEW HOT WATER SUPPLY CONNECTIONS ISOMETRIC**

(D1) SCALE: NONE

**NEW HWS & HWR - MEDICAL EXAMINER'S BRIDGE CROSSOVER**

(D3) SCALE: NONE

**FRASER LAB. NEW HWS & HWR BRIDGE CROSSOVER**

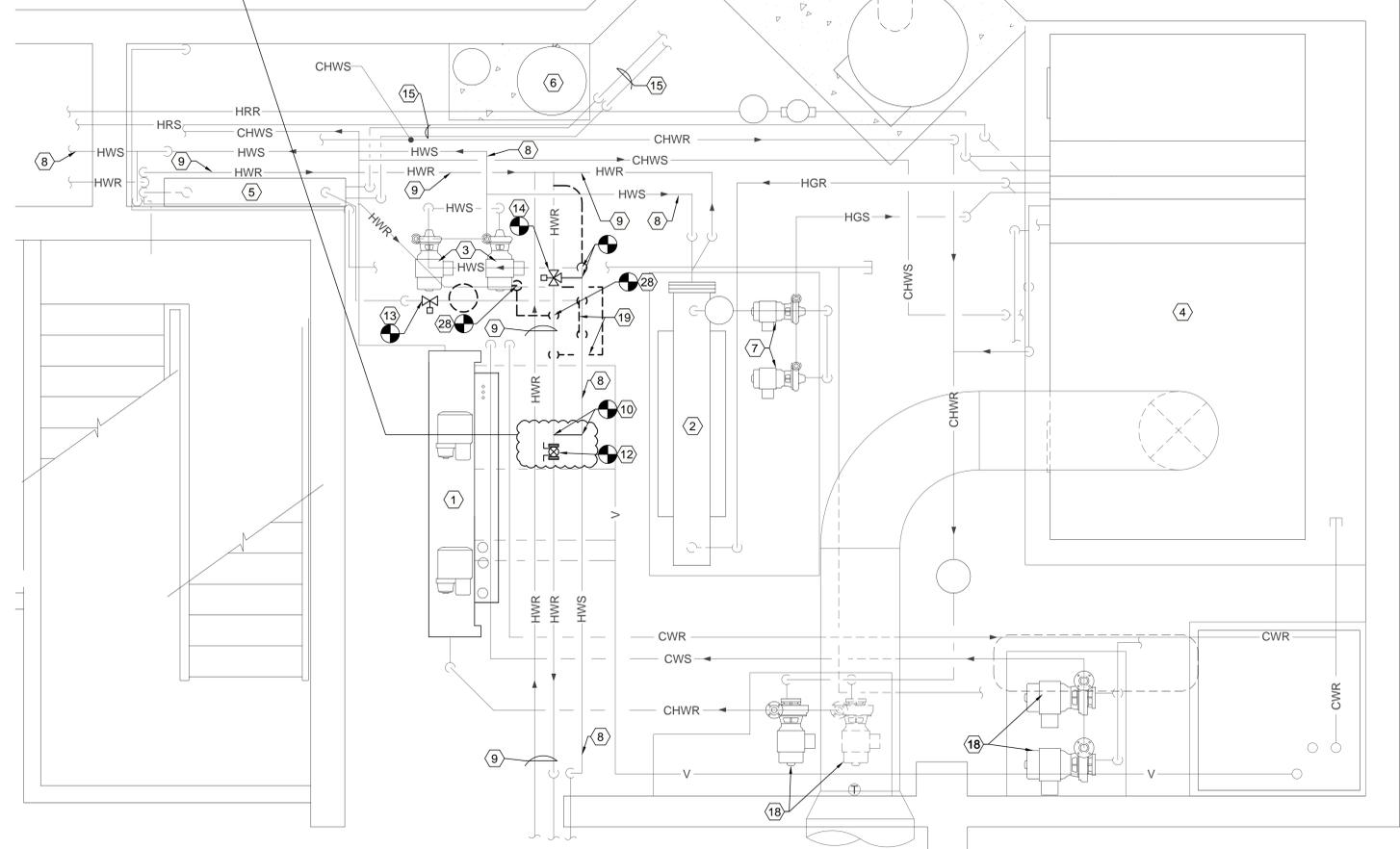
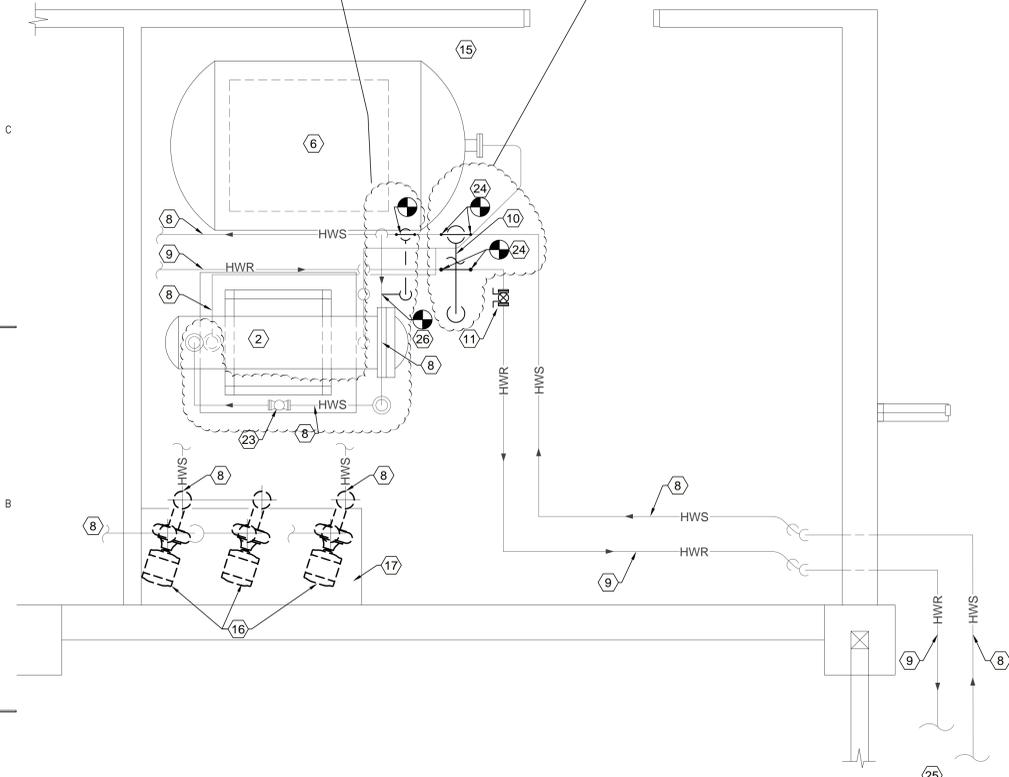
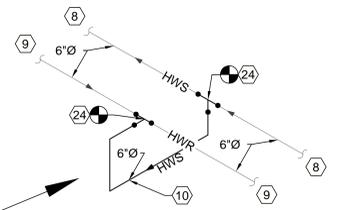
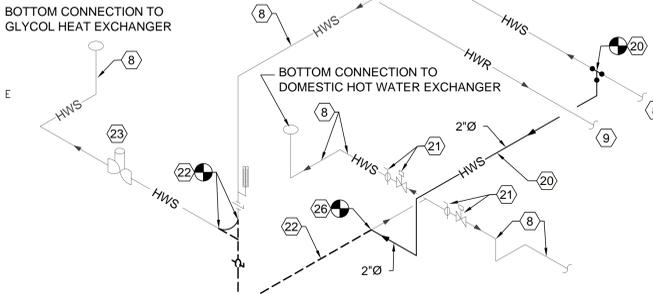
(C2) SCALE: NONE

**FRASER LABS LARGE SCALE MECHANICAL PLAN**

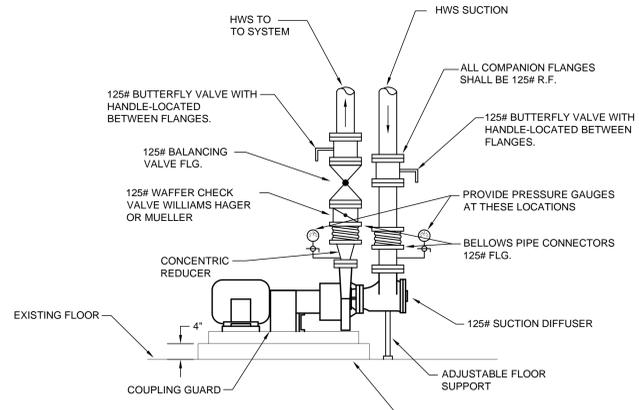
(A1) SCALE: 1/2" = 1'-0"

**O.M.E. LARGE SCALE LOWER LEVEL MECHANICAL PLAN**

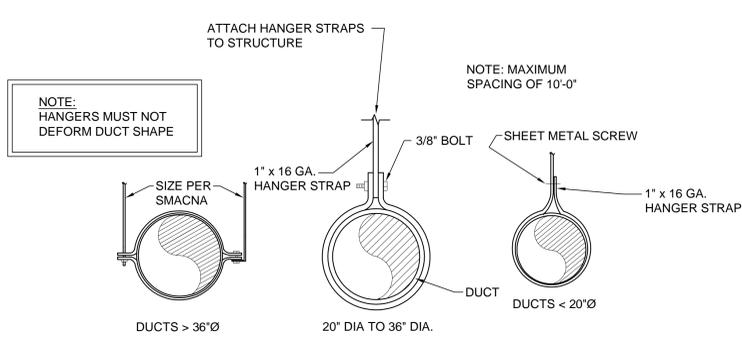
(A4) SCALE: 1/2" = 1'-0"



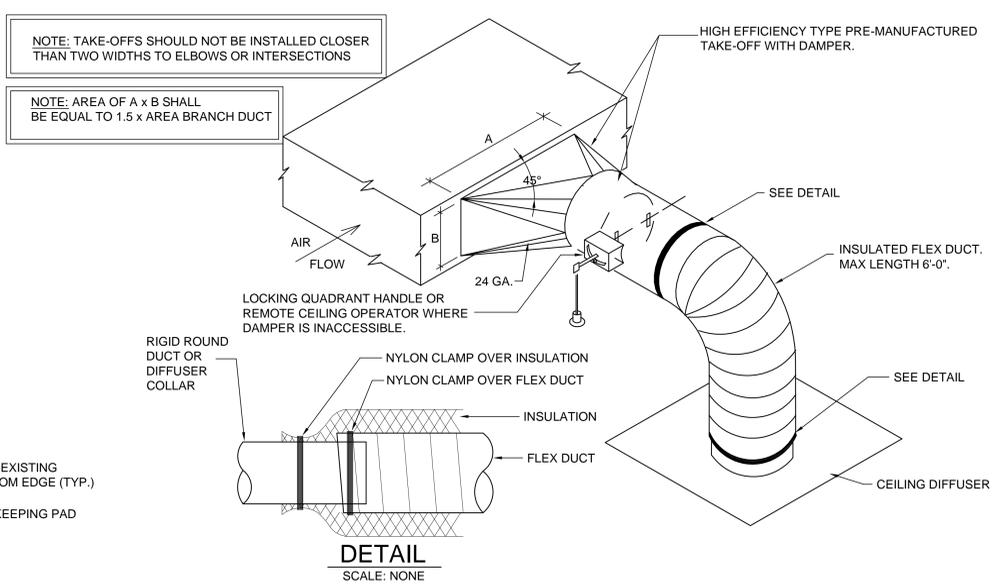
CONSULTANTS



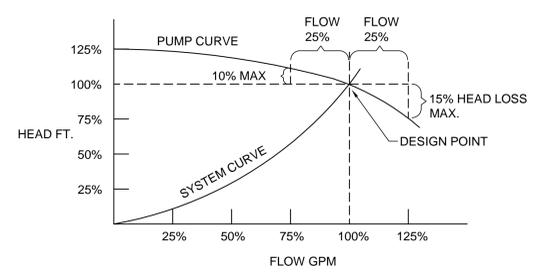
**D1 BASE MTD. PUMP PIPING DETAIL**  
SCALE: NONE



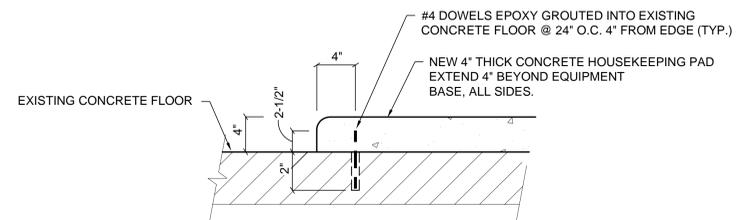
**D3 ROUND DUCT SUPPORT DETAIL**  
SCALE: NONE



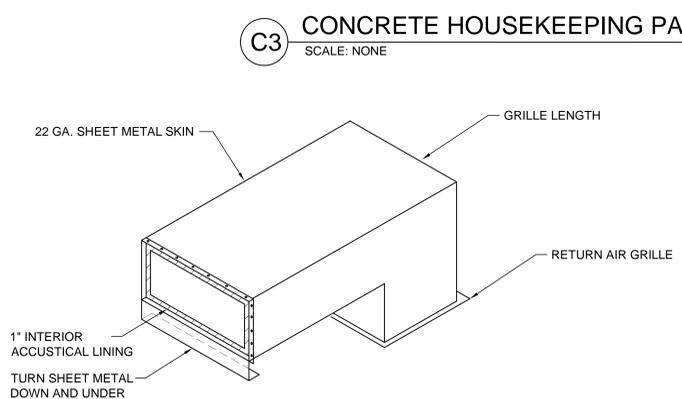
**D5 RECTANGULAR-TO-ROUND TAKE-OFF DETAIL**  
SCALE: NONE



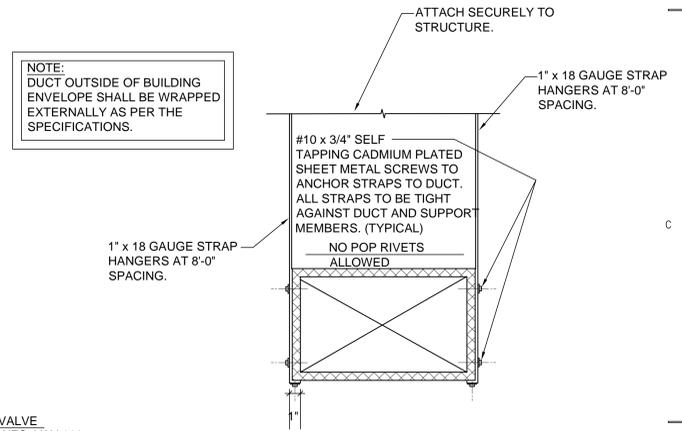
**C1 PUMP CURVE DETAIL**  
SCALE: NONE



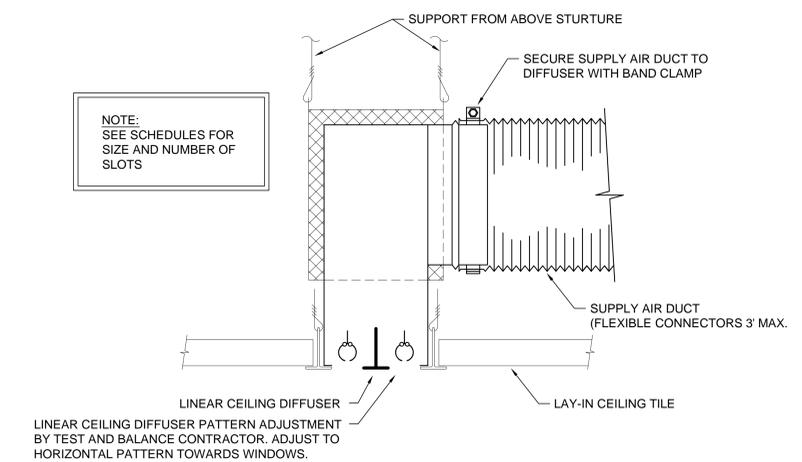
**C3 CONCRETE HOUSEKEEPING PAD**  
SCALE: NONE



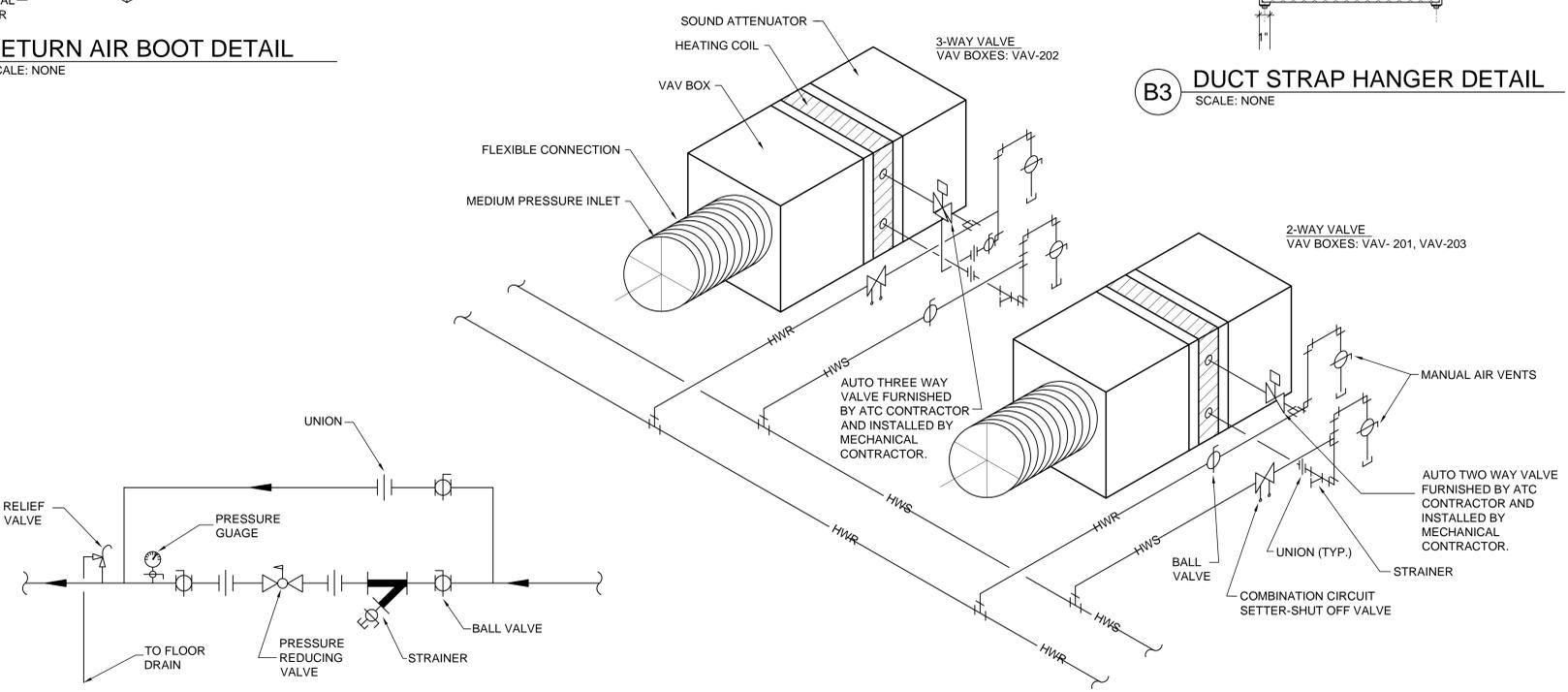
**B2 RETURN AIR BOOT DETAIL**  
SCALE: NONE



**B3 DUCT STRAP HANGER DETAIL**  
SCALE: NONE



**A1 LINEAR DIFFUSER MOUNTING DETAIL**  
SCALE: NONE



**A4 VAV BOX (W/ HEATING COIL) HOT WATER PIPING DETAIL**  
SCALE: NONE

**A3 MAKE-UP WATER PRV**  
SCALE: NONE

PROJECT NAME & ADDRESS

DEPARTMENT OF HEALTH  
CHILDREN'S SPECIAL  
HEALTH CARE NEEDS -  
HVAC UPGRADE

DFCM No. 06171390

Salt Lake city, Utah

MARK	DATE	REVISION

PROJECT MANAGER: SLW  
DRAWN BY: STAFF  
CHECKED BY: SLW  
DATE: 04/11/07  
WHW JOB NO.: 06062  
SHEET TITLE



MECHANICAL DETAILS

SHEET NO. **ME501**

CONSULTANTS



ALTERNATE No 1 PUMP SCHEDULE												
SYMBOL	TYPE	GPM	FT. HEAD	SUCTION SIZE	DISCHARGE SIZE	MOTOR			SIZE	SERVICE	MANUFACTURER	SCHEDULE NOTES
						V - Ø - Hz	HP	RPM				
	BASE MOUNTED END SUCTION	205	23	4	3	208/3/60	3	1750	3AC	HEATING HOT WATER	BELL & GOSSETT 1531	1,2
	BASE MOUNTED END SUCTION	205	23	4	3	208/3/60	3	1750	3AC	HEATING HOT WATER	BELL & GOSSETT 1531	1,2
	BASE MOUNTED END SUCTION	300	40	4	3	208/3/60	5	1750	3AC	HEATING HOT WATER GLYCOL	BELL & GOSSETT 1531	1,2

1. ALL PUMPS SHALL BE SIZED IN THE FLAT PART OF THE CURVE. SEE DETAIL.  
2. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.

DIFFUSER SCHEDULE							
SYMBOL	TYPE	MAX CFM	FACE SIZE	NECK SIZE	CEILING TYPE	BLOW	SCHEDULE NOTES
	CEILING	320	48"x6"	EXISTING 10"Ø	3-SLOT	HORIZONTAL	1,2,3,4,5,6
	CEILING	150	24"x6"	EXISTING 8"Ø	3-SLOT	HORIZONTAL	1,2,3,4,5,6

1. PROVIDE LAY-IN CEILING AND BORDER / MODULE AS REQUIRED.  
2. MAXIMUM NC 25 AT CFM LISTED.  
3. TRANSITION AS REQUIRED TO DUCT WORK SHOWN ON PLAN.  
4. SHALL BE PRICE TBD3 OR EQUAL IN SPECIFICATIONS.  
5. FINISH SHALL BE OFF-WHITE BAKED ENAMEL.  
6. PROVIDE WITH (3) 1" SLOTS.

REGISTER, LOUVER & GRILLE SCHEDULE							
SYMBOL	TYPE	SERVICE	MAX CFM	NOMINAL SIZE	THROAT SIZE	CEILING TYPE	SCHEDULE NOTES
	CEILING	RETURN	1100	22/22	22/22	LAY-IN	1,2,3,4
	EXISTING RELOCATED	-	-	-	-	-	-
	EXISTING RELOCATED	-	-	-	-	-	-
	EXISTING RELOCATED	-	-	-	-	-	-
	EXISTING RELOCATED	-	-	-	-	-	-
	EXISTING RELOCATED	-	-	-	-	-	-

REGISTER, LOUVER AND DIFFUSER SCHEDULE NOTES:  
1. MAXIMUM NC = 25 @ MAXIMUM CFM NOTED.  
2. SHALL BE PRICE 535 OR EQUAL BY OTHER APPROVED MANUFACTURERS.  
3. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.  
4. FINISH SHALL BE OFF-WHITE BAKED ENAMEL.

VAV BOX SCHEDULE														
SYMBOL	INLET DIA. (INCHES)	COOLING		HEATING								NC LEVEL	MANUF. MODEL #	SCHEDULE NOTES
		MAX CFM	MIN CFM	COIL EAT	COIL LAT	MAX CFM	COIL BTUH	FLOW GPM	EWT	(FT) PD	ROWS			
	10"Ø	1100	250	60	95	1100	39	2	180	1.0	2	24	PRICE SDV	1,2
	10"Ø	1100	250	60	95	1100	39	2	180	1.0	2	24	PRICE SDV	1,2
	10"Ø	750	150	60	95	750	34	2	180	1.0	2	20	PRICE SDV	1,2

1. DISCHARGE NC AT 1.5" DELTA PS.  
2. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.

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DEPARTMENT OF HEALTH  
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MECHANICAL SCHEDULES

SHEET NO.

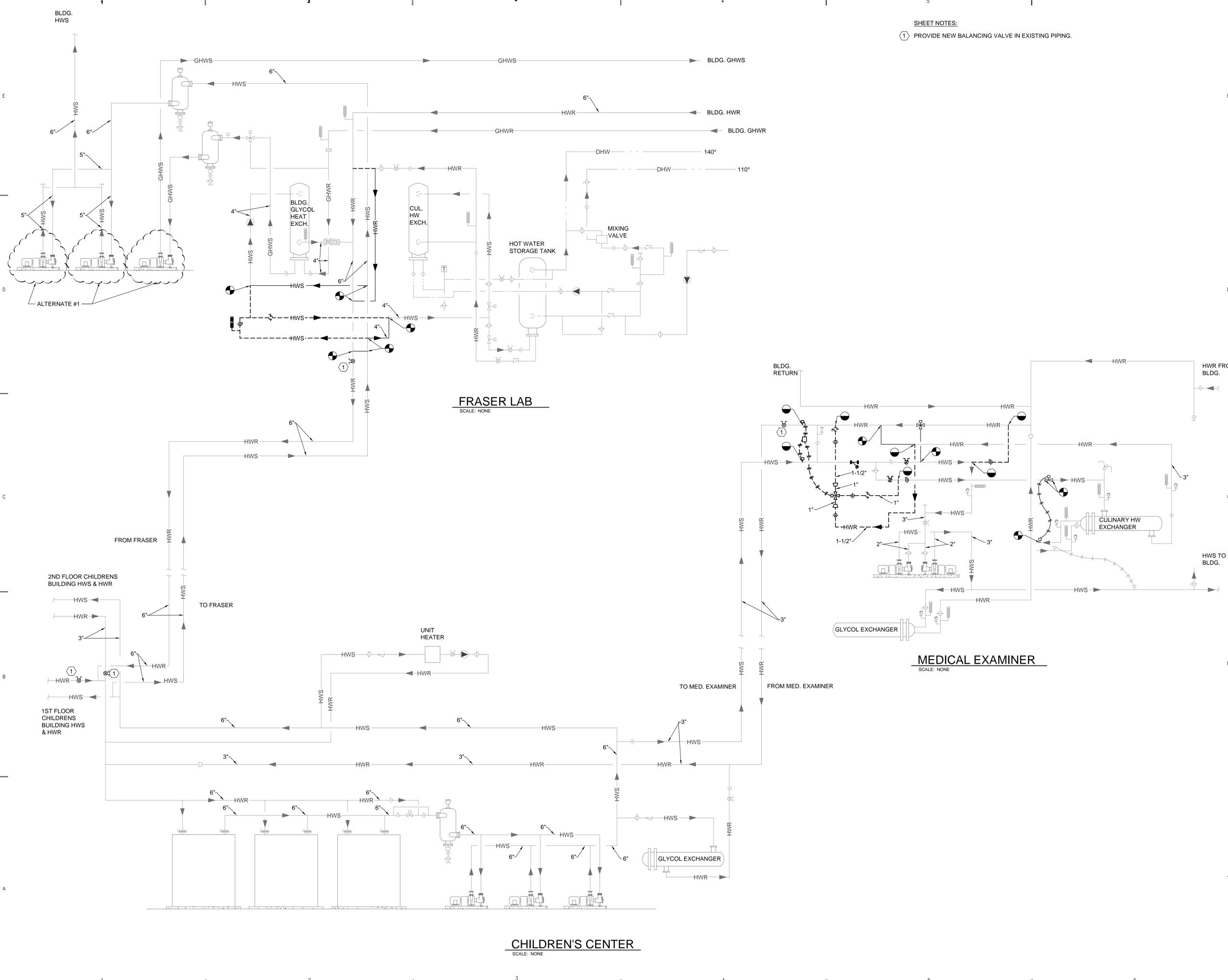
ME601

CONSULTANTS



SHEET NOTES:

- 1 PROVIDE NEW BALANCING VALVE IN EXISTING PIPING.



FRASER LAB  
SCALE: NONE

MEDICAL EXAMINER  
SCALE: NONE

CHILDREN'S CENTER  
SCALE: NONE

PROJECT NAME & ADDRESS

DEPARTMENT OF HEALTH  
CHILDREN'S SPECIAL  
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MECHANICAL FLOW  
DIAGRAM

SHEET NO. **ME701**