Thomas Edison Middle School HVAC Verification and Evaluation

Meriden Public Schools

1355 North Broad Street Meriden, CT 06450

August 2023



146 Hartford Road Manchester, CT 06040



Table of Contents

Thomas Edison Middle School Meriden Public Schools

1	Exe	cutive Summary	1
2	Intro	oduction	2
3	202	1 International Mechanical Code (IMC) Compliance	2
4	Obs	servations, Measurements and Calculations	4
	4.1	General Observations	4
	4.2	Airflow Design vs. Measurements	6
	4.3		
5	Disc	cussion and Recommendations	7
	5.1	Controls	7
	5.2	Rebalancing	8
	5.3	Ductwork Modifications	
	5.4	General Maintenance	8

Appendices

- A Wings Testing and Balancing Report
- B Existing Conditions
- C Room Ventilation Calculation
- D 1998 Edison Drawings

]



1 Executive Summary

In 2022, Public Act 23-167 codified ventilation assessments at each school building under jurisdiction of local and regional boards of education. These assessments must be completed by January 1, 2025, and every five years thereafter. Per the requirements of Public Act 23-167, the assessment included the following inspections and evaluations:

- (A) Documenting for maximum filter efficiency (MERV ratings)
- (B) Physical measurements of outside air delivery rate at the minimum damper position
- (C) Verification of the appropriate condition and operation of ventilation components
- (D) Measurement of air distribution through all system inlets and outlets,
- (E) Verification of unit operation and that required maintenance has been performed in accordance with the most recent indoor ventilation standards promulgated by the American Society of Heating, Refrigerating and Air-Conditioning Engineers
- (F) Verification of control sequences of damper operations
- (G) Verification of carbon dioxide sensors does not apply
- (H) Identification of to what extent each school's current ventilation system components, including any existing central or noncentral mechanical ventilation system, are operating in such a manner as to provide appropriate ventilation to the school building in accordance with most recent indoor ventilation standards promulgated by the American Society of Heating, Refrigerating and Air-Conditioning Engineers.

It has been identified that when VAV and AHU dampers are set to their minimum setpoints, most of the 330 rooms within Thomas Edison Middle School fail to meet the outside air requirements prescribed by the ASHRAE Standard 62 as referenced in the state's building code. This can be improved by increasing the minimum setpoint value in the building management system (BMS).

Similarly, some rooms were measured to have no airflow at the minimum VAV or FCU damper positions, implying that the dampers are closed (setpoint was set to 0% open). VAV or FCU minimum damper position should be set such that required ventilation is continuously supplied to each room. Room or duct-mounted CO₂ sensors may also be installed to measure ventilation effectiveness.

It is recommended to rebalance all interior dampers to confirm appropriate airflows per design. If some rooms remain deficient, ductwork modifications may be required to reassign deficient rooms to air handlers with more outdoor air capacity.

Upon further review with the equipment manufacturer, it was found that the installed air handlers are not able to provide original design ventilation rates and calculated ventilation rates during winter or summer months due to undersized heating and cooling coils. Further analysis is recommended to determine what measures should be taken to rectify this issue.



The observed equipment was found to be in good condition. Equipment generally appeared to be functional. Filters were in generally in good condition, with one unit due for replacement and three instances of incorrect installation.

2 Introduction

The City of Meriden Board of Education has requested a detailed assessment of the mechanical systems ventilation performance in accordance with new regulations set forth by the State of Connecticut. In 2022, the state of Connecticut codified ventilation assessment at each school building under jurisdiction of local and regional boards of education. Per HB5479, "each local and regional board of education shall ensure that its heating, ventilation and air conditioning (HVAC) system is maintained and operated in accordance with the prevailing maintenance standards, such as [ASHRAE] Standard 62 at the time of installation or renovation of such system". These assessments must be completed by January 1, 2024, and every five years thereafter.

Thomas Edison Middle School is located at 1355 North Broad St., Meriden CT. The 3-story, 160,000 square foot school was built in 1999, and include the following systems:

- Thirteen air handling units (AHU) utilize hydronic heating and cooling coils to serve the majority of the building. Indoor air is returned to the unit where it is either exhausted or recirculated back into the supply airstream. Energy recovery wheels are utilized within the air handler to save energy. Outdoor air dampers modulate to ventilate the spaces served. All AHU units have variable frequency drives (VFD), which run based on duct pressure sensors, to control supply and exhaust fans.
- All AHUs are currently utilizing 2" pre-filters and 8" post-filter cartridges. MERV 13 pre-filters were observed in all units.
- Hydronic fan coil units (FCU) and variable air volume (VAV) units are installed to fine tune space
 temperature in zones served by AHU's. These units incorporate a hot water coil and dampers to
 modulate the amount of air entering the room. Based on this modulation, the pressure in the duct
 system instructs the AHU to increase or decrease its supply and exhaust fans.
- Hydronic cabinet heaters are installed at building entrances and stairwells. Hydronic finned tube radiation is located on exterior walls under windows. These units do not utilize or affect room ventilation.
- Some classrooms have operable windows.
- The building is monitored and controlled by a building management system (BAS). The BAS is capable of reading and controlling all available equipment.

3 2021 International Mechanical Code (IMC) Compliance

The supply of outside air to interior occupied spaces is governed by the 2022 Connecticut State Building Code, which adopts the 2021 International Mechanical Code (IMC) and ASHRAE 62, which prescribes



the flow rate of outdoor air required for occupied areas based on occupancy classification. Depending on the room classification and occupant density, the outdoor air flow rates in cubic feet per minute (CFM) per person are defined. When occupancy density is unknown, the code defines occupant density for each room classification type in number of occupants per space floor area. The final flow rate in CFM for every occupied space can then be calculated. It shall be noted that although the occupancy classification is education, the IMC does not distinguish an office in an office building, a school or any other building classification. This applies to all rooms that are not considered traditional educational rooms such as health care offices, gymnasiums, theaters and assembly halls.

Table 1: Room Type & Occupancy Summary

Room Types	Quantity ¹	Total Area ¹ (SF)	Occupancy Rate ² (People/1000 SF)	Occupancy Ventilation ² (CFM/person)	Area Ventilation ² (CFM/SF)	Exhaust Rate ² (CFM)
Art Classroom	2	1,344	20	10	0.18	0.7
Auditorium	1	4,330	150	5	0.06	-
Cafeteria	6	6,724	100	7.5	0.18	-
Classroom	57	40,016	35	10	0.12	
Computer Lab	10	11,706	25	10	0.12	
Conference Room	3	1,370	50	5	0.06	-
Corridor	73	24,141	-	-	0.06	-
Custodial	10	964	-	-	-	-
Greenhouse	1	321				
Gymnasium	3	11,031	7	20	0.18	-
Gymnasium	3	11,031	10	5	0.12	
Library	1	294	10	5	0.06	
Lobby	10	7,299	-	-	-	0.25
Locker Room	6	1,219	5	5	0.06	-
Nurse	4	771	5	5	0.06	-
Office	25	5,571	-	-	-	50/70 *
Restroom	40	7,120	-	-	-	-
Stairs	13	3,681	-	-	0.12	-
Storage	21	5,905	-	-	-	-
Utility	25	6,792				-
Vestibule	15	1,138	10	5	0.06	-
Waiting Room	3	566	30	5	0.06	

¹ Based on 1998 as-built drawings

In addition to providing mechanical ventilation to the space, an alternative method approved by the building code allows for air to enter the occupied space naturally through operable windows. The code states that the minimum openable area to the outdoors shall be 4% of the floor area being ventilated. Although this is an acceptable means of providing outdoor air by code, it is not a realistic option during cold weather or hot weather months, as windows will typically be closed. Operable windows are not considered as sources of ventilation in this analysis.

¹ Based on 2021 International Mechanical Code



4 Observations, Measurements and Calculations

4.1 General Observations

F&O performed a walkdown of the school prior to the TAB testing activities and noted room measurements, observable maintenance concerns and general equipment condition. Table 2 and Table 3 below summarize our observations.

The air handling equipment appeared to be in very good condition. Except for AHU-13, filters were in good condition. Exhaust fans also appeared in good condition. Fan 19J appeared to have a lost belt. Ductwork missing insulation is also noted in Table 2 below.

Discolored ceiling tiles were observed throughout the building and should be replaced. Some discoloration indicates current or past leaks within the ceiling plenum. Leaks could be from sprinkler piping or condensation from poorly insulated cold-water piping or ductwork. The source of the discoloration should be determined, and ceiling panels replaced.

Accumulated debris on return grilles indicates a potential need for duct cleaning as part of future maintenance. Accumulated debris on supply diffusers indicate a need for more frequent air handler filter replacement to prevent particulates from returning to the space. Overall, most return and supply grilles were in good condition.

Table 2: Equipment Observations

Equipment	Observation
AHU-1	MERV 13 cartridge filter dislodged, detached duct
	insulation
AHU-3	Detached duct insulation
AHU-4	MERV 8 filter rack missing filler panel
AHU-5	Prefilters not installed correctly – open area.
AHU-8	Return fan is not operational.
AHU-10	Detached duct insulation, pre-filters installed backwards,
	VFD display missing
AHU-11	Return Fan VFD display missing
AHU-13	Filters due for replacement
Exhaust Fan 19J	Motor running but no airflow. Possible missing belt.

Table 3: Room Observations

Room Type	Drawing Room #	Room Name	Observation
Corridor	001	Corridor	Unmarked number on dwg - above Room 003
Classroom	007	6th CLab	Fume hood exhaust + minor leaks
Custodial	015	Custodial	Missing tile + slightly stained tiles
Utility	019	Data	Missing tile
Classroom	023	6th CLab	Fume hood exhaust, minor leaks, missing tile over fume hood
Classroom	026	6th Classroom	Sagging tiles, ajar tile



Room Type	Drawing Room #	Room Name	Observation
Classroom	027	6th Classroom	Dirty return grille
Restroom	035	Girls	Lightly stained tiles
Classroom	037	6th Classroom	Missing ceiling tile
Computer Lab	040	6th CLab	Fume hood exhaust
Custodial	043	Custodial /Corridor	Stained tiles, missing tile section
Classroom	048	Prep Room	2 missing tiles
Utility	049	Mechanical	Stained tiles
Lobby	050	Lobby	Minor staining of tiles
Lobby	051	Entry	Stained tiles
Utility	055	Utility Room	Missing tiles, minor leaks
Vestibule	056	Vestibule West	Stained tiles
Utility	057	Machine Room	No ceiling tiles
Utility	139	Electrical	Missing ceiling tile
Art Classroom	151.1	Kiln	Kiln may require exhaust
Utility	174	Data	Could not access
Utility	178	Data	One missing ceiling tile, leak
Cafeteria	190	Kitchen	Ceilings yellow
Office	192	Office	Supply/return unit
Utility	207	Emergency Generator	Overhead door, damper air intake
Office	210	Office	Could not access
Storage	214	Custodial Storage	Leaks
Storage	216	Text Storage	Could not access
Storage	245	Gym Storage	Exhaust fan disconnected, 1 missing ceiling tile
Office	247	Office	Signs of leaks, ceiling tiles broken/displaced.
Locker Room	251	Girls Locker Room	One return is next to shower
Storage	265	Chair Storage	Signs of leaks, ceiling tile missing
Corridor	401	Corridor	Stained tiles
Classroom	403	Special Ed	Holes in ceiling tile
Corridor	406	Corridor	Stained tiles
Computer Lab	407	8th Grade CLab	Minor tile stains, fume hood exhaust
Classroom	407	8th Grade Classroom	Stained tiles
custodial	415	Custodial	Missing tile, stained tiles
Corridor	417	Corridor	Stained tiles, broken tile above exit sign
Utility	418	Electrical/tele	Missing tile
Utility	419	Data	Broken tile
	420		Stained tiles
Classroom		Small group Room	
Computer Lab	423	8th Grade CLab	Slight staining on tiles, fume hood exhaust
Classroom	424	8th Grade Classroom	Slight staining on tiles
Classroom	427	8th Grade Classroom	Holes in tile, dirty return grille
Corridor	428	Corridor	1 stained tile
Corridor	434	Corridor	Sagging + stained tiles
Restroom	435	Girls	Dirty exhaust
Classroom	436	8th Grade Classroom	Stained tiles
Computer Lab	440	8th Grade CLab	Fume hood exhaust
Corridor	441	Corridor	Badly stained tiles
Restroom	442	Boys	Dirty supply diffuser
Corridor	443	Corridor	Sagging tiles
Custodial	444	Custodial	Tile out of place
Corridor	445	Corridor	Stained tiles
Computer Lab	446	Computer Room	Hole in tile, stained tiles
Classroom	448	Prep rm	missing tiles, stained tiles
Utility	449	Mechanical	Stained tiles, missing tiles
Lobby	450	Lobby	Stained tiles



4.2 Airflow Design vs. Measurements

Table 4 below displays AHU design parameters regarding supply and outside air flow. This information was obtained from the Thomas Edison Middle School record schedule data. Airflow measurements were performed by Wings TAB. Note that the measured airflows are less than design, and that the minimum outdoor air damper setting through the building management system is nearly shut. Appendix A contains the full report compiled by Wing TAB.

Table 4: Design vs. Measured Airflow

	DESI	GN AIRFI	LOWS	M	EASURED A	AIRFLOW	'S	NOTES	3
AHU¹	Supply CFM	OA CFM	Design % OA	Supply CFM	Return CFM	OA CFM	% OA	Min Damper Position (% Open)	Supply VFD ² (Hz)
AHU-1	30,800	10,500	34%	14,125	11,964	2,161	15%	10%	39
AHU-2	32,000	10,500	33%	12,141	10,154	1,987	16%	10%	34
AHU-3	22,500	12,000	53%	19,494	18,685	809	4%	0%	NR
AHU-4	2,600	600	23%	2,579	1,934	645	25%	10%	NR
AHU-5	3,000	700	23%	2,567	2,441	984	38%	0%	NR
AHU-6	12,500	8,000	64%	9,897	8,913	984	10%	0%	45
AHU-7	10,500	1,600	15%	8,303	6,544	1,759	21%	5%	NR
AHU-8	12,500	8,000	64%	10,376	8,460	1,916	18%	0%	45
AHU-9	3,000	300	10%	3,895	2,644	1,351	35%	0%	NR
AHU-10	11,000	1,725	16%	7,013	5,578	1,432	20%	10%	39
AHU-11	6,000	1,400	23%	2,791	1,681	1,110	40%	5%	35
AHU-12	8,000	2,100	26%	6,430	4,690	1,740	27%	0%	NR
AHU-13	4,000	400	10%	1,642	1,349	293	18%	5%	NR

¹ See Appendix B for rooms associated with each air handler.

Note that the supply fan VFD speed is less than 60 Hz. The maximum supply and return fan speeds for AHU are determined by the building management system based on duct pressure sensors. There appears to be additional capacity available to the system.

Table 5 below highlights the calculated ventilation rates associated with each air handler at the minimum damper positions. Calculated ventilation rates are based on methods described in Section 3. Highlighted cells in the 5th column indicate higher-than-typical outdoor air percentages. Two air handlers are slightly lower than the calculated OA airflows but are within the typical range.

As shown below, the calculated OA is below the design OA for most air handlers, indicating extra capacity for modifications. Our recommendations to address these findings are discussed in Section 5.

² NR = No Reading



Table 5: Calculated Ventilation Airflows

AHU	Design Supply CFM	Design Outdoor Airflow (CFM)	Calculated Outdoor Airflow (CFM)	Design OA %	Calculated OA %
AHU-1	30,800	10,500	5,481	34%	18%
AHU-2	32,000	10,500	14,597	33%	46%
AHU-3	22,500	12,000	2,122	53%	9%
AHU-4	2,600	600	594	23%	23%
AHU-5	3,000	700	1,248	23%	42%
AHU-6	12,500	8,000	947	64%	8%
AHU-7	10,500	1,600	1,710	15%	16%
AHU-8	12,500	8,000	3,471	64%	28%
AHU-9	3,000	300	236	10%	8%
AHU-10	11,000	1,725	1,856	16%	17%
AHU-11	6,000	1,400	758	23%	13%
AHU-12	8,000	2,100	329	26%	4%
AHU-13	4,000	400	431	10%	11%

4.3 Individual Room Ventilation

Ventilation rates for each room at the minimum outdoor air damper position are itemized in Appendix C. At this position, most rooms lack appropriate ventilation based on ASHRAE population densities described in Section 3. As stated above, minimum damper positions should be set such that continuous or monitored ventilation is provided. See Section 5 for recommended adjustments.

5 Discussion and Recommendations

5.1 Controls

The building management system controls and monitors the air handlers, VAV dampers, and room temperatures. The minimum outdoor damper position for air handling units is typically at least 20%, which would increase and satisfy many deficient spaces. In some cases, a minimum position of 30% is acceptable. It is recommended to increase the minimum outdoor air damper setpoint for each air handler to manufacturer guidelines.

Similarly, some rooms were measured to have no airflow at the minimum VAV or FCU damper positions, implying that the dampers are closed. VAV or FCU minimum damper position should be set such that required ventilation is continuously supplied to each room. Room or duct-mounted CO₂ sensors may also be installed to measure ventilation effectiveness.



5.2 Rebalancing

As many of the rooms are deficient at the current minimum damper position, the total calculated outdoor airflow for most rooms falls within the original outdoor air design condition for 11 out of 13 air handlers. For the rooms associated with these units, it is recommended to rebalance the ductwork and minimum VAV dampers settings in each room to maintain appropriate ventilation rates per Table 5. This should be done after the minimum damper position has been reset within the building management system.

5.3 Ductwork Modifications

Two of the air handlers would require a larger-than-typical outdoor air damper position. In this case, air handlers with excess outdoor air availability may be able to be rerouted to the rooms still deemed to be deficient after the rebalancing effort. This task should be performed under the supervision of a professional engineer.

Rooms with no ventilation should be modified to provide minimum ventilation per code. Corridor sections with low or no ventilation may be modified by relocating existing return or supply ductwork.

5.4 General Maintenance

Missing ceiling tiles can disrupt design airflows, especially in schools with a plenum return. Rooms with missing tiles should be repaired.

Stained ceiling tiles indicate past or active leaks above the ceiling, either from dripping plumbing/fire protection equipment or condensation. If the leak remains active, mold can develop. The source of these stains should be evaluated, and tiles replaced.

Appendix A

Wings Testing and Balancing Report



Meriden Public Schools

Thomas Edison Middle Ventilation Verification

* * * *

Fuss & O'Neill Mechanical Engineer
Attn: Jennifer Thurber, PE
146 Hartford Road
Manchester, CT 06040

April 15, 2023



April 15, 2023

Fuss & O'Neill Mechanical Engineer Attn: Jennifer Thurber, PE 146 Hartford Road Manchester, CT 06040

Re: Thomas Edison Middle School Meriden, CT - Ventilation Rates Testing

Dear Jennifer,

The ventilation verification of the above referenced location has been completed, as noted on our attached data sheets. The following are our results:

- We tested all 13 AHUs for total and outside air flow rates.
- OA settings were taken from BMS computer as follow:
 - AHUs 1, 2, 4 and 10; minimum OA damper command = 10%.
 - AHUs 3, 5, 8, 9 and 12; minimum OA damper command = 0%.
 - You will note that these units still have outdoor air flow.
- Based on our flow measurements in each occupied space, we used the percentage of fresh air at each unit to calculate the fresh air ventilation rates for each room on the chart provided, unless otherwise noted.

The following pages are your record of the current tested conditions. If you have any questions, or if we can be of further service please do not hesitate to call.

Very truly yours,

Wing's Testing & Balancing Co., Inc.

ICB Certified Contractor for:

TABB—Commissioning—Fire/Life Safety L1&L2—Sound & Vibration

Marek Sadowski

Certified TABB Technician #BB1083468T CT SM-2 License #7078

MA SM-2 4508

HVAC Fire Life Safety Level 1 Tech FLS11083468T EPA Universal Technician AA2804U0003





PROJECT:	Thomas Edisor	Middle Sch	nool - Meri	iden CT		DATE:	4/1	0/23
AREA SERVED:	Building					TECH:	MS,E	S, DD
TRAVERSE		AREA	DES	IGN	CENT. STAT.	T	EST	
LOCATIONS	DUCT SIZE "	SQ.FT.	FPM	CFM	PRESS."	FPM	CFM	NOTE
AHU-1 Supply	118" x 78"	63.9	ND	ND	Velgrid	221	14,125	39Hz
AHU-1 Return	,;		ND	ND	Calc.		11,964	
AHU-1 OA	127" x 98"	86.4	ND	ND	Velgrid	25	2161	
AHU-2 Supply	118" x 78"	63.9	ND	ND	Velgrid	190	12,141	34Hz
AHU-2 Return			ND	ND	Calc.		10,154	34112
AHU-2 OA	127" x 98"	86.4	ND	ND	Velgrid	23	1987	
AHU-3 Supply	103" x 66"	47.2	ND	ND	Valent d	442	40.404	
AHU-3 Return	103 X 00		ND	ND	Velgrid	413	19,494	
AHU-3 OA	108" x 98"	73.5	ND	ND	Calc.		18,685	
Alio-3 OA	100 X 90	/3.5	ND	ND	Velgrid	11	809	
AHU-4 Supply	24" x 16"	2.67	ND	ND	0.13	966	2579	
AHU-4 Return			ND	ND	Calc.		1934	
AHU-4 OA	42" x 67"	19.54	ND	ND	Velgrid	33	645	
AHU-5 Supply			ND	ND	Calc.		2567	
AHU-5 Return	12" x 44"	3.66	ND	ND	+0.08"	667	2441	
AHU-5 OA	42" x 54"	15.75	ND	ND	Velgrid	8	126	
AHU-6 Supply	68" x 48"	22.7	ND	ND	Volgrid	426	0007	4511
AHU-6 Return			ND	ND	Velgrid Calc.	436	9897	45Hz
AHU-6 OA	82" x 72"	41.0	ND	ND	Velgrid	24	8913 984	
							301	
AHU-7 Supply	66" x 40"	18.33	ND	ND	Velgrid	453	8303	
AHU-7 Return			ND	ND	Calc.		6544	
AHU-7 OA	72" x 69"	34.5	ND	ND	Velgrid	51	1759	
AHU-8 Supply	70" x 50"	24.3	ND	ND	Velgrid	427	10,376	45Hz
AHU-8 Return			ND	ND	Calc.		8460	(1)
AHU-8 OA	90" x 73"	45.6	ND	ND	Velgrid	42	1916	(+)
AHU-9 Supply			ND	ND	Calc.		3895	
AHU-9 Return	32" x 14"	3.11	ND	ND	-0.22"	850	2644	
AHU-9 OA	72" x 73"	36.5	ND	ND	Velgrid	37	1351	
34	MARIE CO.			.,,,	Veigila	37	1991	

(1) The return fan for AHU-8 is not operational.

NA Not Available | ND No Design | DD Direct Drive | N/R No Requirement

	Thomas Edisor	Middle Sch	nool - Meri	den CT		DATE:	4/1	2/23
AREA SERVED:	Building					TECH:		S, DD
TRAVERSE		AREA	DES	IGN	CENT. STAT.	TE		1
LOCATIONS	DUCT SIZE "	SQ.FT.	FPM	CFM	PRESS."	FPM	CFM	NOTE
AHU-10 Supply	70" x 48"	23.3	ND	ND	Velgrid	301	7013	39Hz
AHU-10 Return			ND	ND	Calc.		5578	00112
AHU-10 OA	82" x 72"	41.0	ND	ND	Velgrid	35	1432	
AHU-11 Supply			ND	ND	Calc.		2791	35Hz
AHU-11 Return	30" x 20"	4.17	ND	ND	-0.03"	403	1681	00111
AHU-11 OA	72" x 60"	30.0	ND	ND	Velgrid	37	1110	
AHU-12 Supply	40" x 18"	5.0	ND	ND	+0.41"	1286	6430	
AHU-12 Return			ND	ND	Calc.		4690	
AHU-12 OA	72" x 60"	30.0	ND	ND	Velgrid	58	1740	
AHU-13 Supply			ND	ND	Calc.		1642	
AHU13 Return	42" x 10"	2.92	ND	ND	-0.48"	462	1349	
AHU-13 OA	45" x 72"	22.5	ND	ND	Velgrid	13	293	
			REMA	DKC				



Appendix B

Table of Existing Conditions

APPENDIX B - TABLE OF EXISTING CONDITIONS

		FIE	LD NOTES			ASSIGNED EQ	UIPMENT
El	D T	Danisia Barra II	Danier Danie Name	Field Comments	VAV (FCU)	VAV Room	A1111
Floor	Room Type	Drawing Room #	Drawing Room Name	Field Comments	Туре	Location	AHU
GROUND	Corridor	001	CORRIDOR	Unmarked number on dwg - above Room 003	D		AHU-1
GROUND	Classroom	002	STAFF WORK ROOM		F	006	AHU-1
GROUND	Classroom	003	SPECIAL ED		F	006	AHU-1
GROUND	Classroom	004	SPECIAL ED		F	006	AHU-1
GROUND	Restroom	005	GIRLS		F	006	AHU-1
GROUND	Corridor	006	CORRIDOR		F	006	AHU-1
GROUND	Classroom	007	6TH CLAB	FUME HOOD EXHAUST + MINOR LEAKS	А	006	AHU-1
GROUND	Classroom	008	6TH LAB	ELAKO	A	009	AHU-1
GROUND	Corridor	009	CORRIDOR				
GROUND	Classroom	010	6TH CLASS		В	012	AHU-1
GROUND	Classroom	011	6TH CLASS		D	012	AHU-1
		012	CORRIDOR	+	F	006	AHU-1
GROUND	Corridor	.			F F		
GROUND	Restroom	013	BOYS			006	AHU-1
GROUND	Corridor	014	CORRIDOR	A MISSINIO TILE COLOUTIV	-	-	AHU-1
GROUND	custodial	015	CUST.	MISSING TILE + SLIGHTLY STAINED TILES	-	-	AHU-1
GROUND	Stairs	016	Stairs NO.4				
GROUND	Corridor	017	CORRIDOR		D	030	AHU-1
GROUND	Utility	018	ELEC/TELE		-	-	AHU-1
GROUND	Utility	019	DATA	MISSING TILE	-	-	AHU-1
GROUND	Classroom	020	SMALL GROUP ROOM		D	030	AHU-1
GROUND	Corridor	021	CORRIDOR		D	028	AHU-2
GROUND	Restroom	022	GIRLS		D	028	AHU-2
CDOUND	Classina	023	6TH CLAB	FUME HOOD EXHAUST + MINOR LEAKS + MISSING TILE OVER	В	021	AHU-1
GROUND	Classroom	024	6TH CLASSROOM	FUME HOOD	С	025	AHU-2
GROUND	Classroom Corridor	024				025	Anu-z
GROUND	1	025	CORRIDOR	CACCINIC THES . ALAB THE		028	A1111.2
GROUND	Classroom	026	6TH CLASSROOM	SAGGING TILES + AJAR TILE	D D		AHU-2
GROUND	Classroom	027	6TH CLASSROOM	1 RETURN GROSS	D	031 028	AHU-2 AHU-2
GROUND	Corridor	029	CORRIDOR BOYS		D	028	AHU-2
GROUND	Restroom	030	LOBBY	CEILING HEIGHT 13'2" AND 10" IN DIFFERENT SECTIONS (SEE PHOTO)	A	030	AHU-2
GROUND	Corridor	031	CORRIDOR		Н	031	AHU-2
GROUND	Restroom	032	WOMEN		Н		AHU-2
GROUND	Stairs	033	Stair No. 3				
GROUND	Corridor	034	CORRIDOR		F	034	AHU-2
GROUND	Restroom	035	GIRLS	LIGHTLY STAINED TILES	F	034	AHU-2
GROUND	Classroom	036	6TH CLASSROOM		D	034	AHU-2
GROUND	Classroom	037	6TH CLASSROOM	MISSING CEILING TILE	В	034	AHU-2
GROUND	Corridor	038	CORRIDOR		-	-	
GROUND	Classroom	039	6TH CLASSROOM		В	039	AHU-2
GROUND	Computer Lab	040	6TH CLAS	FUME HOOD EXHAUST	А	041	AHU-2
GROUND	Corridor	040	CORRIDOR	I GIVIL HOOD EXHAUST	A F	034	AHU-2
		042	BOYS	+	F	034	AHU-2
GROUND	Restroom	042	CUST./CORRIDOR	LARGE STAINING TILES +	<u> </u>	-	- -
GROUND	custodial		,	MISSING TILE SECTION/-			
GROUND	Corridor	045	CORRIDOR		F	031	AHU-2
GROUND	Computer Lab	046	COMPUTER LAB		В	045	AHU-2
GROUND	Restroom	047	MEN		F	031	AHU-2
GROUND	Classroom	048	PREP ROOM	2 MISSING TILES	Н	045	AHU-2
GROUND	Utility	049	MECH	STAINED TILES	FD?	049	-
GROUND	Lobby	050	LOBBY	VERY MINOR STAINING OF TILES	FCU-B	051	-
GROUND	Lobby	051	ENTRY	STAINED TILES	A, FCU-B	050, 051	AHU-1
GROUND	Stairs	052	STAIRS NO.2				

		FIE	LD NOTES			ASSIGNED EC	QUIPMENT
Floor	Room Type	Drawing Room #	Drawing Room Name	Field Comments	VAV (FCU) Type	VAV Room Location	AHU
GROUND	Stairs	053	STAIRS NO.1		,,		
GROUND	Vestibule	054	Vestibule East		FCU-1	054	-
GROUND	Utility	055	UTILITY ROOM	MISSING TILES + MINOR LEAKS	FD?	055	MUA
GROUND	Vestibule	056	Vestibule West	STAINS ON TILES	FCU-1	056	-
GROUND	Utility	057	Machine Room	NO CEILING TILES			
1	Vestibule	101	VESTIBULE	110 02121110 11220	FCU		
1	Lobby	102	LOBBY		. 55		AHU-12
1	Waiting Room	103	ADMIN WAITING		VAV-G	103	AHU-11
1	Office	104	MAIL		***************************************	103	AHU-11
1	Office	105	GENERAL OFFICE		VAV-F	105	AHU-11
1	Storage	106	RECORD STORAGE		VAV-I	107	AHU-11
1	_	107	WORK ROOM		VAV-G VAV-G	107	AHU-11
	Classroom		CLOSET		VAV-G	1	
1	Storage	108			-	-	AHU-11
1	Conference Room	109	CONFERENCE		VAV-C	111	AHU-11
1	Office	110	PRINCIPAL		VAV-F	111	AHU-11
1	Corridor	111	CORR		-	-	AHU-11
1	Office	112	ASSIST PRINCIPAL		VAV-G	111	AHU-11
1	Office	113	ASSIST PRINCIPAL		VAV-G	111	AHU-11
1	Restroom	114	HC TOILET		VAV-G	103	AHU-11
1	Office	115	GUID. COUNSELOR		VAV-G	121	AHU-11
1	Waiting Room	116	GUID. WAITING		VAV-G	116	AHU-11
1	Conference Room	117	CONFERENCE		VAV-F	117	AHU-11
1	Office	118	SOCIAL WORKER		VAV-H	117	AHU-11
1	Office	119	GUIDANCE COUNSELOR		VAV-G	121	AHU-11
1	Office	120	GUIDANCE COUNSELOR		VAV-G	121	AHU-11
1	Corridor	121	CORR		VAV-G	1st Floor	AHU-11
1	Office	122	PSYCH		VAV-G	121	AHU-11
1	Restroom	123	HC TOILET		VAV-G	1st Floor	AHU-11
1	Corridor	124	CORR		VAV-G	1st Floor	AHU-11
1	Storage	125	STORAGE		VAV-G	1st Floor	AHU-11
1	Nurse	126	EXAM		VAV-G	124	AHU-11
1	Nurse	127	EXAM		VAV-G	128	AHU-11
1	Nurse	128	COT ROOM		VAV F	128	AHU-11
1		129	HC TOILET		VAV-G	1st Floor	AHU-11
1	Restroom	+			1	l .	
1	Nurse	130	NURSE		VAV-G	1st Floor	AHU-11 AHU-11
	Waiting Room	131	HEALTH WAITING		VAV-F	128	AHU-11
1	Corridor	132	MAIN CORR			1st Floor	
1	Restroom	133	GIRLS		VAV-D	1st Floor	AHU-13
1	Restroom	134	BOYS		VAV-D	1st Floor	AHU-13
1	Corridor	135	CORR		VAV-D	1st Floor	AHU-13
1	Restroom	136	MEN		VAV-D	1st Floor	AHU-13
1	Restroom	137	WOMEN		VAV-D	1st Floor	AHU-13
1	Classroom	138	SPECIAL ED		VAV-D	137	AHU-10
1	Utility	139	ELEC	one ceiling tile missing		1st Floor	AHU-10
1	Utility	140	DATA			1st Floor	AHU-10
1	Greenhouse	141	GREENHOUSE			1st Floor	AHU-13
1	Office	142	WRKRM			1st Floor	AHU-13
1	Corridor	143	CORR		VAV-B	143	AHU-10
1	Vestibule	144	VESTIBULE		FCU-A	144	AHU-10
1	Classroom	145	TECHNOLOGY		VAV-B	143	AHU-13
1	Lobby	146	DISPLAY		VAV-B	1st Floor	AHU-13
1	Office	147	OFFICE		VAV-B	143	AHU-10
1	Office	148	TECH	1	VAV-B	143	AHU-10& ??
1	Classroom	149	Classroom	<u> </u>	VAV-B	143	AHU-10& ??
1	Storage	150	STORAGE	+	UP TO REF -40?		1st Floor
1	Art Classroom	151	ART		VAV-B	143	AHU-10& ??
1		151.1	KILN	Kiln should have exhaust		145 1st Floor	
	Art Classroom		CORR	Mili Siloulu Have exildust	VAV-F		
1	Corridor	152		+		1st Floor	AHU-13
1	Vestibule	153	VESTIBULE		FCU-A	153	
1	Classroom	154	Band/Orchestra		VAV-A	159	AHU-10

		FI	ELD NOTES			ASSIGNED EC	UIPMENT
Floor	Room Type	Drawing Room #	Drawing Room Name	Field Comments	VAV (FCU) Type	VAV Room Location	AHU
1	Storage	156	Storage		VAV-D	160	AHU-10
	Classroom	157	PRACTICE		VAV-D	160	AHU-10
1	Office	158	Office		VAV-D	160	AHU-10
1	Corridor	159	Corridor		VAV-G	159	AHU-10
	Corridor	160	Corridor		VAV-D	162	AHU-10
1		161	Choral		VAV-B	160	AHU-10
1	Classroom	162			VAV-B VAV-D	160	
	Corridor		Corridor VESTIBULE				AHU-10 FCU
	Vestibule	163			FCU-A	163	
	Corridor	164	CORRIDOR			1st Floor	AHU-7
1	Classroom	165	Studio		VAV-F	162	AHU-7
1	Conference Room	166	CR / CONF / STUDIO		VAV-B	162	AHU-7
	Classroom	167	READING AREA			1st Floor	AHU-7
1	Classroom	168	Media Center	2 of the 4 returns are on the wall		1st Floor	AHU-7
	Lobby	169	CIRCULATION DESK			1st Floor	AHU-7
	Office	170	OFFICE		VAV-F	171	AHU-7
	Classroom	171	WORK ROOM		VAV-F	171	AHU-7
	Corridor	172	CORRIDOR			1st Floor	
	Classroom	173	WORK ROOM		VAV-C	168	AHU-7
	+	174	DATA	Could not accord		168	
	Utility			Could not access	VAV-C	-	AHU-7
1	Storage	175	AV Storage			1st Floor	
1	Storage	176	Periodical Storage			1st Floor	
1	Library	177	Professional Library		VAV-F	182	AHU-7
	Utility	178	DATA	One missing ceiling tile, leak		1st Floor	AHU-7
	Utility	179	ELEC/TELE			1st Floor	AHU-7
	Restroom	180	WOMEN			1st Floor	AHU-7
	Restroom	181	MEN			1st Floor	AHU-7
	Corridor	182	Corridor			1st Floor	
	Restroom	183	GIRLS			1st Floor	AHU-7
	Restroom	184	BOYS			1st Floor	AHU-7
	Corridor	185	MAIN CORRIDOR			1st Floor	AHU-12
	Cafeteria	186	CAFETERIA			1st Floor	AHU-8
	Cafeteria	187	SEATING AREA			1st Floor	AHU-8
		188	TEACHERS DINING			1st Floor	
	Cafeteria						AHU-8
	Cafeteria	189	SERVING AREA			1st Floor	AHU-9
	Cafeteria	190	KITCHEN	Ceilings yellow		1st Floor	AHU-8
	custodial	191	Cust.			1st Floor	AHU-8
	Office	192	OFFICE	Supply/return unit	AC-1	192	AHU-8
	Corridor	193	CORR			1st Floor	AHU-8
	Storage	194	DRY STORAGE			1st Floor	AHU-8
	Storage	195	FREEZER		RV-2	1st Floor	AHU-9
	Storage	196	REFRIGERATOR			1st Floor	AHU-9
	Corridor	197	CORRIDOR			1st Floor	AHU-9
	Locker Room	198	LOCKERS			1st Floor	AHU-9
	Restroom	199	HC TOILET			1st Floor	AHU-9
	Cafeteria	200	DISH WASHING OR PAPER STOR			1st Floor	AHU-9
	Corridor	201	DISPLAY			1st Floor	AHU-12
	Corridor	202	MAIN CORRIDOR			1st Floor	AHU-12
	Corridor	203	CORRIDOR			1st Floor	AHU-5
		204	VESTIBULE			-	
	Vestibule	204				1st Floor	
	Utility		BOILER ROOM	2 4		1st Floor	
	Utility	206	ELECTRICAL	2 dampers		1st Floor	
	Utility	207	EMERGENCY GENERATOR	Overhead door, damper air intake		1st Floor	
		208	MECH EQUIP YARD			1st Floor	
	Utility	206		See notes		1st Floor	
	Utility Utility	209	CHILLER ROOM	see notes		131 F1001	
	Utility	209			+	-	
	Utility Office	209 210	OFFICE	No access	AC-2	210	
	Utility Office Locker Room	209 210 211	OFFICE LOCKERS		AC-2 G	210 1st Floor	AHU-5
	Utility Office Locker Room Restroom	209 210 211 212	OFFICE LOCKERS TOILET		AC-2 G 	210 1st Floor 1st Floor	AHU-5
	Utility Office Locker Room	209 210 211	OFFICE LOCKERS		AC-2 G	210 1st Floor	AHU-5

		FI	ELD NOTES			ASSIGNED EC	QUIPMENT
Floor	Room Type	Drawing Room #	Drawing Room Name	Field Comments	VAV (FCU)	VAV Room	AHU
	,,				Туре	Location	
	Storage	216	TEXT STORAGE	Could not access	UH-A	216	
	auditorium	217	AUDITORIUM			1st Floor	AHU-6
	Auditorium	218	REGULAR STAGE			1st Floor	AHU-6
	Utility	218a	Electrical			1st Floor	
1	custodial	219	Cust.			1st Floor	
	custodial	220	CUST			1st Floor	
	Vestibule	221	CONTROL BOOTH		AC-3	221	AHU-6
	Corridor	222	DISPLAY			1st Floor	AHU-12
1	Corridor	223	CORR		VAV-F	223	AHU-5
1	Office	224	Teachers Workroom		VAV-G	223	AHU-5
1	Classroom	226	Classroom		VAV-F	223	AHU-5
1	Classroom	227	Speech		VAV-G	223	AHU-5
1	Office	228	Physical Occupational Therapy		VAV-G VAV-G	223	AHU-5
	_						
	Corridor	229	CORR		VAV-F	223	AHU-5
	Vestibule	230	VESTIBULE	-	FCU-A	230	
1	Classroom	231/232	Physically Disabled		VAV-D	223	AHU-5
1	Storage	233	Storage		D	1st Floor	AHU-5
1	Restroom	234	Toilet			1st Floor	AHU-5
	Vestibule	235	VESTIBULE		FCU-A	1st Floor	
	Corridor	236	CORR			1st Floor	
	Storage	237	OUTSIDE STORAGE			1st Floor	
	Storage	238	CLOSET			1st Floor	
	Corridor	239	CORR			1st Floor	
	Storage	240	CLOSET			1st Floor	AHU-5
	Corridor	241	CORR			1st Floor	AHU-5
	Utility	242	ELEC			1st Floor	AHU-5
	Utility	243	DATA			1st Floor	AHU-5
	,	<u> </u>		DETLIBNIC ON MALL			
	Gymnasium	244	LARGE GYM	RETURNS ON WALL		1st Floor	AHU-3
	Chamana	245	GYM STORAGE	exhaust fan disconnected, 1	UH-A	245	AHU-5
	Storage	246	CORR	missing ceiling tile		1st Floor	AHU-5
	Corridor	246	CORR	Ciana affication action atten		151 F1001	AHU-5
	046:	247	OFFICE	Signs of leaks, ceiling tiles	Н	246	AHU-5
	Office	240	VALCAMENT	broken/displaced.		4-4-51	A1111.5
	Restroom	248	WOMEN			1st Floor	AHU-5
	Corridor	249	CORR			1st Floor	AHU-5
	Vestibule	250	VESTIBULE			1st Floor	AHU-5
	Locker Room	251	GIRLS LOCKER ROOM	one return is next to shower		1st Floor	AHU-5
	Locker Room	252	GIRLS SHOWER			1st Floor	AHU-5
	Vestibule	253	VESTIBULE			1st Floor	AHU-5
	Corridor	254	CORR			1st Floor	AHU-5
	Office	255	OFFICE		Н	254	AHU-5
	Restroom	256	STAFF MENS			1st Floor	AHU-5
	Corridor	257	CORR			1st Floor	AHU-5
	Vestibule	258	VESTIBULE			1st Floor	AHU-5
	Locker Room	259	Boys Locker Room			1st Floor	AHU-5
	Locker Room	260	BOYS SHOWER			1st Floor	AHU-5
	Vestibule	261	VESTIBULE	+		1st Floor	AHU-5
		262	CORR	+		1st Floor	AHU-5
	Corridor		GYM STORAGE				
	Storage	263		-		263	AHU-3
	Gymnasium	264	SMALL GYM	 		1st Floor	AHU-4
	Storage	265	CHAIR STORAGE	Signs of leaks, ceiling tile missing		1st Floor	
	Gymnasium	266	BLEACHERS				
1	Corridor	301	CORRIDOR		D	1st Floor	AHU-1
1	Office	302	STAFF WORK RM		F	1st Floor	AHU-1
1		SPECIAL ED		F	1st Floor	AHU-1	
1	Classroom	304	SPECIAL ED		F	1st Floor	AHU-1
1	Restroom	305	GIRLS RR		F	1st Floor	AHU-1
1	Corridor	306	CORRIDOR		F	1st Floor	AHU-1
	COLLIGO						
	Computer Lab	207	7TH GDADE CLAB				
1	Computer Lab Classroom	307 308	7TH GRADE CLAB 7TH GRADE CLASSROOM		А А	1st Floor 1st Floor	AHU-1 AHU-1

		FIE	LD NOTES		\/A\/ /ES\	ASSIGNED EC	ĮOIPIVIEN I		
Floor	Room Type	Drawing Room #	Drawing Room Name	Field Comments	VAV (FCU)	VAV Room	AHU		
1	Clarana and	210	ZTIL CRADE CLASSROOM		Type B	Location	A1111 4		
1	Classroom	310	7TH GRADE CLASSROOM			1st Floor	AHU-1		
1	Classroom	311	7TH GRADE CLASSROOM		D	1st Floor	AHU-1		
1	Corridor	312	CORRIDOR	_	A	1st Floor	AHU-1		
1	Restroom	313	BOYS		Α	1st Floor	AHU-1		
1	Corridor	314	CORRIDOR			1st Floor			
1	custodial	315	CUSTODIAL			1st Floor			
	Stairs	316	STAIR NO. 4		_				
1	Corridor	317	CORRIDOR	D	1st Floor	AHU-1			
1	Utility	318	ELEC/TELE			1st Floor	AHU-1		
1	Utility	319	DATA	_		1st Floor	AHU-1		
1	Classroom	320	SMALL GROUP ROOM	_		1st Floor	AHU-1		
1	Corridor	321	LOCKER CORRIDOR		D	1st Floor	AHU-2		
1	Restroom	322	GIRLS		D	1st Floor			
1	Computer Lab	323	7TH GRAD CLAB		В	1st Floor	AHU-2		
1	Classroom	324	7TH GRADE CLASSROOM		С	1st Floor	AHU-2		
1	Corridor	325	CORRIDOR			1st Floor			
1	Classroom	326	7TH GRADE CLASSROOM		D	1st Floor	AHU-2		
1	Classroom	327	7TH GRADE CLASSROOM		D	1st Floor	AHU-2		
1	Corridor	328	CORRIDOR		D	1st Floor	AHU-2		
1	Restroom	329	BOYS		D	1st Floor	AHU-2		
1	Lobby	330	H.O LOBBY			1st Floor			
1	Corridor	331	CORRIDOR		F	1st Floor	AHU-2		
1	Restroom	332	WOMENS		F	1st Floor	AHU-2		
2	Stairs	333	STAIR NO.3						
1	Corridor	334	CORRIDOR		Α	1st Floor	AHU-2		
1	Restroom	335	GIRLS		Α	1st Floor	AHU-2		
1	Classroom	336	7TH GRADE CLASSROOM		D	1st Floor	AHU-2		
1	Classroom	337	7TH GRADE CLASSROOM		В	1st Floor	AHU-2		
1	Corridor	338	CORRIDOR			1st Floor			
1	Classroom	339	7TH GRADE CLASSROOM		В	1st Floor	AHU-2		
1	Computer Lab	340	7TH GRADE CLAB		Α	1st Floor	AHU-2		
1	Corridor	341	CORRIDOR		Α	1st Floor	AHU-2		
1	Restroom	342	BOYS		Α	1st Floor	AHU-2		
1	Corridor	343	CORRIDOR						
1	custodial	344	CUSTODIAL						
1	Corridor	345	CORRIDOR		A	1st Floor	AHU-2		
1	Computer Lab	346	COMPUTER ROOM		В	1st Floor	AHU-2		
1	Restroom	347	MENS		Α	1st Floor	AHU-2		
1	Office	348	PREP ROOM		Н	1st Floor	AHU-2		
1	Utility	349	MECH				AHU-2		
1	Lobby	350	LOBBY		A	1st Floor	AHU-2		
1	Vestibule	350A	VESTIBULE						
1	Vestibule	350B	VESTIBULE						
1	Corridor	351	CONNECTING CORRIDOR						
2	Stairs	352	STAIR NO.2						
2	Stairs	353	STAIR NO.1`						
2	Corridor	401	CORRIDOR	STAINED TILES	VAV-D	417	AHU-2		
2	Office	402	STAFF WORK RM		VAV-F	401	AHU-2		
2	Classroom	403	SPECIAL ED	HOLES IN CEILING TILE	VAV-F	401	AHU-2		
2	Classroom	404	SPECIAL ED		VAV-F	401	AHU-2		
2	Restroom	405	GIRLS		F				
2	Corridor	406	CORRIDOR	STAINED TILES	VAV-F	406	AHU-2		
2	Computer Lab	407	8TH GRADE CLAB	MINOR TILE STAINS + FUME HOOD EXHAUST	VAV-A	406	AHU-2		
2	Classroom	408	8TH GRADE CLASSRM	STAINED TILES	VAV-A	409	AHU-2		
2	Corridor	409	CORRIDOR						
2	Classroom	410	8TH GRADE CLASSRM		VAV-B	412	AHU-2		
2	Classroom	411	8TH GRADE CLASSRM		VAV-D	412	AHU-2		
2	Corridor	412	CORRIDOR		VAV-F	406	AHU-2		
2	Restroom	413	ВОҮ		VAV-F	406	AHU-2		
2	Corridor	414	CORRIDOR						

Appendix B

		FIE	LD NOTES		ASSIGNED EQUIPMENT					
Floor	Room Type	Drawing Room #	Drawing Room Name	Field Comments	VAV (FCU) Type	VAV Room Location	AHU			
2	custodial	415	CUST	MISSING TILE + STAINED TILES						
	stairs	416	STAIR NO.4							
2	Corridor	417	CORRIDOR	STAINED TILES + BROKEN TILE ABOVE EXIT SIGN	VAV-D & VAV-F	417	AHU-2			
2	Utility	418	ELEC/TELE	MISSING TILE			AHU-2			
2	Utility	419	DATA	BROKEN TILE			AHU-2			
2	Classroom	420	SMALL GROUP ROOM	STAINED TILES	VAV-D	417	AHU-2			
2	Corridor	421	CORR		VAV-D	428	AHU-2			
2	Restroom	422	GIRLS		D		AHU-2			
2	Computer Lab	423	8TH GRADE CLAB	SLIGHT STAINING ON TILES + FUME HOOD EXHAUST	VAV-B	421	AHU-2			
2	Classroom	424	8TH GRADE CLASSRM	SLIGHT STAINING ON TILES	VAV-C	425	AHU-2			
2	Corridor	425	CORRIDOR							
2	Classroom	426	8TH GRADE CLASSRM		VAV-C	428	AHU-2			
2	Classroom	427	8TH GRADE CLASSRM	HOLES IN TILE + DIRTY RETURN	VAV-D	417	AHU-2			
2	Corridor	428	CORRIDOR	1 STAINED TILE	VAV-D	428	AHU-2			
2	Restroom	429	воу		VAV-D	429	AHU-2			
2	Lobby	430	LOBBY	SKYLIGHT	VAV-A	445	AHU-2			
2	Corridor	431	CORRIDOR		F					
2	Restroom	432	WOMEN		VAV-F	417	AHU-2			
2	Stairs	433	STAIR NO.3							
2	Corridor	434	CORR	SAGGING + STAINED TILES	VAV-F	434	AHU-2			
2	Restroom	435	GIRLS	DIRTY EXHAUST	VAV-F	2nd Floor	AHU-2			
2	Classroom	436	8TH GRADE CLASSRM	STAINED TILES	VAV-D	436	AHU-2			
2	Classroom	437	8TH GRADE CLASSRM		VAV-D	436	AHU-2			
2	Corridor	438	CORRIDOR		F					
2	Classroom	439	8TH GRADE CLASSRM		VAV-B	438	AHU-2			
2	Computer Lab	440	8TH GRADE CLAB	FUME HOOD EXHAUST	VAV-A	441	AHU-2			
2	Corridor	441	CORRIDOR	BADLY STAINED TILES	VAV-F	434	AHU-2			
2	Restroom	442	BOYS	DIRTY SUPPLY	VAV-F	434	AHU-2			
2	Corridor	443	CORRIDOR	SAGGING TILES						
2	custodial	444	CUST	OUT OF PLACE TILE			AHU-2			
2	Corridor	445	CORRIDOR	STAINED TILES	VAV-H	445	AHU-2			
2	Computer Lab	446	COMPUTER ROOM	HOLE IN TILE + STAINED TILES	VAV-B	445	AHU-2			
2	Restroom	447	MEN		VAV-F	417	AHU-2			
2	Classroom	448	PREP RM	MISSING TILES + STAINED TILES	VAV-H	445	AHU-2			
2	Utility	449	MECH	STAINED TILES + MISSING TILES			AHU-2			
2	Lobby	450	LOBBY	STAINED TILES			AHU-2			
	Stairs	451	STAIRS NO.5							
	Stairs	452	STAIR NO.2							
	Stairs	453	STAIR NO.1`							



Room Ventilation Calculation

APPENDIX C - ROOM VENTILATION CALCULATION

Drawing			Height	Volume	OA CFM Rp	OA CFM Ra	Total Vbz
Room #	Drawing Room Name	Area (ft ²)	(ft-in)	(CF)	CFM/PERSON	CFM/SF	CFM
001	CORRIDOR	267.9	10'	2679	0	16.1	16.1
002	STAFF WORK ROOM	326.1	10' 6"	3424	80	39.1	119.1
003	SPECIAL ED	403.66	10'	4037	80	48.4	128.4
004	SPECIAL ED	404.2	10'	4042	90	48.5	138.5
005	GIRLS	144.1	9'	1297	0	0.0	0.0
006	CORRIDOR	278.8	10'	2788	0	16.7	16.7
007	6TH CLAB	1317.78	10'	13178	530	158.1	688.1
008	6TH LAB	743.1	10'	7431	280	89.2	369.2
009	CORRIDOR	180	10'	1800	0	10.8	10.8
010	6TH CLASS	787.6	10'	7876	270	94.5	364.5
011	6TH CLASS	678.47	10'	6785	280	81.4	361.4
012	CORRIDOR	228	10'	2280	0	13.7	13.7
013	BOYS	139.8	9'	1258	0	0.0	0.0
014	CORRIDOR	134.6	9'	1211	0	8.1	8.1
015	CUST.	6.8	9'	61	0	0.0	0.0
016	Stairs NO.4	318.2	9'	2864	0	0.0	0.0
017	CORRIDOR	241.7	10'	2417	0	14.5	14.5
018	ELEC/TELE	110.2	10'	1102	0	0.0	0.0
019	DATA	82.1	10'	821	0	0.0	0.0
020	SMALL GROUP ROOM	336.6	9' 3''	3114	60	40.4	100.4
021	CORRIDOR	225.8	10'	2258	0	13.5	13.5
022	GIRLS	141.5	9'	1274	0	0.0	0.0
023	6TH CLAB	1335.5	10'	13355	520	160.3	680.3
024	6TH CLASSROOM	754.4	10'	7544	320	90.5	410.5
025	CORRIDOR	213.9	10'	2139	0	12.8	12.8
026	6TH CLASSROOM	797.1	10'	7971	320	95.7	415.7
027	6TH CLASSROOM	690.7	10'	6907	280	82.9	362.9
028	CORRIDOR	243.3	10'	2433	0	14.6	14.6
029	BOYS	147.8	9'	1330	0	0.0	0.0
030	LOBBY	1082.3	12'	12988	0	64.9	64.9
031	CORRIDOR	249.7	10'	2679	0	15.0	15.0
032	WOMEN	179.9	9'	1619	0	0.0	0.0
033	Stair No. 3	386.7	10'	3867	0	0.0	0.0
034	CORRIDOR	234.9	10'	2349	0	14.1	14.1
035	GIRLS	144.7	9'	1302	0	0.0	0.0
036	6TH CLASSROOM	718.6	10'	7186	350	86.2	436.2
037	6TH CLASSROOM	827.84	10'	8278	300	99.3	399.3
038	CORRIDOR	239.8	10'	2398	0	14.4	14.4
039	6TH CLASSROOM	745.8	10'	7458	300	89.5	389.5
040	6TH CLAB	1326.7	10'	13267	550	159.2	709.2
041	CORRIDOR	229.8	10' 9'	2298	0	13.8	13.8
042	BOYS CUST /CORRIDOR	147.2		1325	0	0.0	0.0
043	CUST./CORRIDOR	170.5	9'	1535	0	0.0	0.0
045	CORRIDOR	179.5	10'	1795	0	10.8	10.8

Drawing			Height	Volume	OA CFM Rp	OA CFM Ra	Total Vbz
Room #	Drawing Room Name	Area (ft ²)	(ft-in)	(CF)	CFM/PERSON	CFM/SF	CFM
046	COMPUTER LAB	945	10'	9450	190	113.4	303.4
040	MEN	287.9	9'	2591	0	0.0	0.0
047	PREP ROOM	247.5	10'	2475	20	29.7	49.7
048	MECH	60	10'	600	0	0.0	0.0
050	LOBBY	640.4	10'	6404	0	38.4	38.4
050	ENTRY	823.1	10'	8231	0	49.4	49.4
051	STAIRS NO.2	318.8	10'	3188	0	0.0	0.0
052	STAIRS NO.1		10'	2981	0		0.0
053		298.1 119.2	10'	1192	0	0.0 7.2	7.2
	Vestibule East UTILITY ROOM		9' 10"	5707	0	0.0	0.0
055 056		580.4	10'	1220	0	7.3	7.3
056	Vestibule West	122	12'	642	0		0.0
	Machine Room	53.5	-			0.0	
101	VESTIBULE	113.76	10'	1138	<u> </u>	6.8	6.8 79.8
102 103	LOBBY ADMIN WAITING	1246.26 200	15' 9' 8''	18694	40	74.8	
-			9 8	1933		12.0	52.0
104	MAIL OFFICE	68		612	10	4.1	14.1
105	GENERAL OFFICE	573.15	10'	5732	20 0	34.4	54.4
106	RECORD STORAGE	132.85	10'	1329	50	15.9	15.9
107	WORK ROOM	145.59	10' 10'	1456	0	17.5	67.5
108	CLOSET	8.93		89		1.1	1.1
109	CONFERENCE	290.08	10'	2901	50	17.4	67.4
110	PRINCIPAL	254.51	10'	2545	25	15.3	40.3
111	CORR	240.56	10'	2406	0	14.4	14.4
112	ASSIST PRINCIPAL	141.08	10'	1411	15	8.5	23.5
113	ASSIST PRINCIPAL	135	10'	1350	20	8.1	28.1
114	HC TOILET	52.75	10'	528	0	0.0	0.0
115	GUID. COUNSELOR	141.93	10'	1419	15	8.5	23.5
116	GUID. WAITING	244.61	9' 10"	2405	30	14.7	44.7
117	CONFERENCE	393.42	10'	3934	25	23.6	48.6
118	SOCIAL WORKER	118.78	9'	1069	20	7.1	27.1
119	GUIDANCE COUNSELOR	132.58	10'	1326	20	8.0	28.0
120	GUIDANCE COUNSELOR	135.99	10'	1360	20	8.2	28.2
121	CORR	224	10'	2240	0	13.4	13.4
122	PSYCH	137.81	10'	1378	15	8.3	23.3
123	HC TOILET	57.33	9'	516	0	0.0	0.0
124	CORR	108.97	10'	1090	0	6.5	6.5
125	STORAGE	66.46	9' 5"	626	0	8.0	8.0
126	EXAM	131.73	10'	1317	10	7.9	17.9
127	EXAM	139.17	10'	1392	10	8.4	18.4
128	COT ROOM	383.95	9' 6"	3648	25	23.0	48.0
129	HC TOILET	77.65	9'	699	0	0.0	0.0
130	NURSE	115.86	9' 9''	1130	5	7.0	12.0
131	HEALTH WAITING	121.59	9' 9''	1186	25	7.3	32.3
132	MAIN CORR	929.18	10'	9292	0	55.8	55.8
133	GIRLS	305.65	9'	2751	0	0.0	0.0
134	BOYS	308.65	9'	2778	0	0.0	0.0

Drawing			Us	iah+	Voluma	OA CEMA Do	OA CFM Ra	Total Vbz
Drawing Room #	Drawing Room Name	Area (ft ²)		ight -in)	Volume (CF)	OA CFM Rp		
135	CORR	717.3	9'	1117	6456	CFM/PERSON 0	CFM/SF 43.0	CFM 43.0
136	MEN	214.6	9'		1931	0	0.0	0.0
137	WOMEN	214.0	9'		1931	0	0.0	0.0
138	SPECIAL ED	793.58	10'		7936	310	95.2	405.2
139	ELEC	48.309	9'	10''	475	0	0.0	0.0
140	DATA	51.9	10'	10	519	0	0.0	0.0
141	GREENHOUSE	320.6	9'	10"	3153	0	0.0	0.0
142	WRKRM	77.8	9'	10"	765	5	4.7	9.7
143	CORR	1194.3	10'	10	11943	0	71.7	71.7
144	VESTIBULE	73	10'		730	5	4.4	9.4
145	TECHNOLOGY	729.7	9'	10''	7175	220	87.6	307.6
146	DISPLAY	245.2301587	19'	6"	4782	5	14.7	19.7
147	OFFICE	109.2	10'		1092	10	6.6	16.6
148	TECH	1124	10'		11240	140	67.4	207.4
149	Classroom	1322.5	10'		13225	330	158.7	488.7
150	STORAGE	250	10'		2500	0	30.0	30.0
151	ART	1275.6	10'		12756	330	229.6	559.6
151.1	KILN	68.1	10'		681	20	12.3	32.3
152	CORR	844.3	10'		8443	0	50.7	50.7
153	VESTIBULE	71.6	10'		716	0	4.3	4.3
154	Band/Orchestra	1933.32	13'	7"	26261	390	232.0	622.0
155	Practice	137.5	10'		1375	20	16.5	36.5
156	Storage	133.2	10'		1332	0	16.0	16.0
157	PRACTICE	136.75	10'		1368	200	16.4	216.4
158	Office	135.65	10'		1357	15	8.1	23.1
159	Corridor	492.98	10'		4930	0	29.6	29.6
160	Corridor	359.9	10'		3599	0	21.6	21.6
161	Choral	1318.14	13'	7''	17905	200	158.2	358.2
162	Corridor	493.8	10'		4938	0	29.6	29.6
163	VESTIBULE	61.8	10'		618	0	3.7	3.7
164	CORRIDOR	211.29	10'		2113	0	12.7	12.7
165	Studio	311.28	10'		3113	50	37.4	87.4
166	CR / CONF / STUDIO	686.61	10'		6866	0	41.2	41.2
167	READING AREA	208.4	19'	5"	4046	0	25.0	25.0
168	Media Center	4573.4	12'		54881	840	548.8	1388.8
169	CIRCULATION DESK	209.7	10'		2097	0	12.6	12.6
170	OFFICE	146.43	10'		1464	10	8.8	18.8
171	WORK ROOM	135.5	10'		1355	20	16.3	36.3
172	CORRIDOR	154.5	10'		1545	0	9.3	9.3
173	WORK ROOM	143.6	10'		1436	10	17.2	27.2
174	DATA	369.3	10'		3693	0	0.0	0.0
175	AV Storage	240.51	9'	10"	2365	0	28.9	28.9
176	Periodical Storage	112.95	9'	10"	1111	0	13.6	13.6
177	Professional Library	293.74	9'	10"	2888	25	35.2	60.2
178	DATA	89.3	10'		893	0	0.0	0.0
179	ELEC/TELE	113.37	10'		1134	0	0.0	0.0

Drawing			Height	Volume	OA CFM Rp	OA CFM Ra	Total Vhz
Room #	Drawing Room Name	Area (ft ²)	(ft-in)	(CF)	CFM/PERSON	CFM/SF	CFM
180	WOMEN	204.33	9'	1839	0	0.0	0.0
181	MEN	196.1	9'	1765	0	0.0	0.0
182	Corridor	806.19	10'	8062	0	48.4	48.4
183	GIRLS	279.73	9'	2518	0	0.0	0.0
184	BOYS	283.44	9'	2551	0	0.0	0.0
185	MAIN CORRIDOR	1673.97	15'	25110	0	100.4	100.4
186	CAFETERIA	3859.8	13'	50177	2145	694.8	2839.8
187	SEATING AREA	207.1	19' 6"	4038	150	37.3	187.3
188	TEACHERS DINING	686.2	10'	6862	135	123.5	258.5
189	SERVING AREA	1015.94	10'	10159	0	182.9	182.9
190	KITCHEN	837	10'	8370	0	150.7	150.7
191	Cust.	23.41	10'	8370	0	0.0	0.0
192	OFFICE	55.5	10'	555	10	3.3	13.3
193	CORR	86	10'	860	0	5.2	5.2
194	DRY STORAGE	134.53	10'	1345	0	16.1	16.1
195	FREEZER	111.88	10'	1119	0	13.4	13.4
196	REFRIGERATOR	105.86	10'	1059	0	12.7	12.7
197	CORRIDOR	40.65	10'	407	0	2.4	2.4
198	LOCKERS	62.77	10'	628	0	3.8	3.8
199	HC TOILET	57.8	10'	578	0	0.0	0.0
200	DISH WASHING OR PAPER STOR	117.5	10'	1175	0	21.2	21.2
201	DISPLAY	655.91	10'	6559	0	39.4	39.4
202	MAIN CORRIDOR	965.8	10'	9658	0	57.9	57.9
203	CORRIDOR	646.81	10'	6468	0	38.8	38.8
204	VESTIBULE	249.66	10'	2497	0	15.0	15.0
205	BOILER ROOM	1158.1	16' 8"	19302	0	0.0	0.0
206	ELECTRICAL	449.31	17'	7638	0	0.0	0.0
207	EMERGENCY GENERATOR	358.41	17'	6093	0	0.0	0.0
208	MECH EQUIP YARD	1790.6		0	0	0.0	0.0
209	CHILLER ROOM	545.8	17'	9279	0	0.0	0.0
210	OFFICE	43.59	10'	436	0	2.6	2.6
211	LOCKERS	62.7	10'	627	0	3.8	3.8
212	TOILET	68.2	10'	682	0	0.0	0.0
213	MAINTENANCE	499.44	10'	4994	0	0.0	0.0
214	CUST STORAGE	471.4	10'	4714	0	56.6	56.6
215	EDUC. STORAGE	497.63	10'	4976	0	59.7	59.7
216	TEXT STORAGE	430.47	10'	4305	0	51.7	51.7
217	AUDITORIUM	4329.5	29' 9''	128803	500	259.8	759.8
218	REGULAR STAGE	1775.38	27' 3"	48379	50	106.5	156.5
218a	Electrical	54	10'	540	0	0.0	0.0
219	Cust.	36.75	9' 10''	361	0	0.0	0.0
220	CUST	60.25	10'	603	0	0.0	0.0
221	CONTROL BOOTH	180.6	10'	1806	20	10.8	30.8
222	DISPLAY	865.86	10'	8659	0	52.0	52.0
223	CORR	1271	10'	12710	0	76.3	76.3
224	Teachers Workroom	427.96	10'	4280	60	25.7	85.7

Drawing			Height	Volume	OA CFM Rp	OA CFM Ra	Total Vbz	
Room #	Drawing Room Name	Area (ft ²)	(ft-in)	(CF)	CFM/PERSON	CFM/SF	CFM	
226	Classroom	545	10'	5450	240	65.4	305.4	
227	Speech	249.77	10'	2498	70	30.0	100.0	
228	Physical Occupational Therapy	336.9	9' 10"	3313	40	20.2	60.2	
229	CORR	107.22	10'	1072	0	6.4	6.4	
230	VESTIBULE	66.3	10'	663	0	4.0	4.0	
231/232	Physically Disabled	881.64	10'	8816	240	105.8	345.8	
233	Storage	115.44	10'	1154	0	13.9	13.9	
234	Toilet	81.14	10'	811	0	0.0	0.0	
235	VESTIBULE	74.7	10'	747	0	4.5	4.5	
236	CORR	83.4	10'	834	0	5.0	5.0	
237	OUTSIDE STORAGE	407	10'	N/A	0	48.8	48.8	
238	CLOSET	20	10'	200	0	2.4	2.4	
239	CORR	85.5	10'	855	0	5.1	5.1	
240	CLOSET	20	10'	200	0	2.4	2.4	
241	CORR	108.7	10'	1087	0	6.5	6.5	
242	ELEC	127.5	10'	1275	0	0.0	0.0	
243	DATA	92.59	9' 10''	910	0	0.0	0.0	
244	LARGE GYM	6536.5	34' 3"	223875	915.11	1176.6	2091.7	
245	GYM STORAGE	405.3	9' 7"	3884	0	48.6	48.6	
246	CORR	85.4	10'	854	0	5.1	5.1	
247	OFFICE	168.35	9' 10"	1655	15	10.1	25.1	
248	WOMEN	131.63	9' 10"	1294	0	0.0	0.0	
249	CORR	65.5	10'	655	0	3.9	3.9	
250	VESTIBULE	35.93	10'	359	0	2.2	2.2	
251	GIRLS LOCKER ROOM	301.73	9' 9"	2942	0	18.1	18.1	
252	GIRLS SHOWER	237.7	9' 9"	2318	0	14.3	14.3	
253	VESTIBULE	36.4	10'	364	0	2.2	2.2	
254	CORR	103.2	10'	1032	0	6.2	6.2	
255	OFFICE	168.3	9' 10"	1655	20	10.1	30.1	
256	STAFF MENS	139.5	9' 10"	1372	0	0.0	0.0	
257	CORR	64.3	10'	643	0	3.9	3.9	
258	VESTIBULE	34.9	10'	349	0	2.1	2.1	
259	Boys Locker Room	305.1	9' 9"	2975	0	18.3	18.3	
260	BOYS SHOWER	249.3	9' 9"	2431	0	15.0	15.0	
261	VESTIBULE	34.2	10'	342	0	2.1	2.1	
262	CORR	99	10'	990	0	5.9	5.9	
263	GYM STORAGE	251	10'	2510	0	30.1	30.1	
264	SMALL GYM	3302.5	34' 3''	113111	0	594.5	594.5	
265	CHAIR STORAGE	214.6	10'	2146	0	25.8	25.8	
266	BLEACHERS	1191.9	10'	11919	0	214.5	214.5	
301	CORRIDOR	248.25	10'	2483	0	14.9	14.9	
302	STAFF WORK RM	370.82	10' 6''	3424	40	22.2	62.2	
303	SPECIAL ED	374.525	10'	4037	80	44.9	124.9	
304	SPECIAL ED	374.525	10'	4042	90	44.9	134.9	
305	GIRLS RR	120.5	9'	1297	0	0.0	0.0	
306	CORRIDOR	240.42	10'	2788	0	14.4	14.4	

Drawing			Height	Volume	OA CFM Rp	OA CFM Ra	Total Vbz
Room #	Drawing Room Name	Area (ft ²)	(ft-in)	(CF)	CFM/PERSON	CFM/SF	CFM
307	7TH GRADE CLAB	1274.92	10'	13178	530	153.0	683.0
308	7TH GRADE CLASSROOM	736.33	10'	7194	360	88.4	448.4
309	CORRIDOR	175.83	10'	1806	0	10.5	10.5
310	7TH GRADE CLASSROOM	768.02	10'	7550	270	92.2	362.2
311	7TH GRADE CLASSROOM	668.51	10'	6753	350	80.2	430.2
312	CORRIDOR	229.11	10'	2922	0	13.7	13.7
313	BOYS	121.2	9'	1093	0	0.0	0.0
313	CORRIDOR	93.44	9'	1040	0	5.6	5.6
315	CUSTODIAL	42.93	9'	395	0	0.0	0.0
316	STAIR NO. 4	252.23	10'	2522	0	0.0	0.0
317	CORRIDOR	241.96	10'	2593	0	14.5	14.5
317	ELEC/TELE	102.17	10'	1036	0	0.0	0.0
319	DATA	78.68	10'	770	0	0.0	0.0
320	SMALL GROUP ROOM	322.48	9' 4"	3097	60	38.7	98.7
320	LOCKER CORRIDOR	181.75	10'	1704	0	10.9	10.9
321	GIRLS	123.52	9'	11241	0	0.0	0.0
323	7TH GRAD CLAB	1272.63	10'	12710	520	152.7	672.7
323	7TH GRAD CLAS	745.24	10'	7202	300	89.4	389.4
325	CORRIDOR	196.08	10'	2008	0	11.8	11.8
326	7TH GRADE CLASSROOM	745.21	10'	7475	350	89.4	439.4
327	7TH GRADE CLASSROOM 7TH GRADE CLASSROOM		10'	6581	300	80.0	380.0
328	CORRIDOR	667 229.45	10'	2347	0	13.8	13.8
329	BOYS	121.05	9'	1120	0	0.0	0.0
330	H.O LOBBY	748.96	10'	9731	0	44.9	44.9
331	CORRIDOR	233.32	10'	2483	0	14.0	14.0
332	WOMENS	125.12	9'	1208	0	0.0	0.0
333	STAIR NO.3	244.94	10'	2449	0	0.0	0.0
334	CORRIDOR	219.93	10'	2375	0	13.2	13.2
335	GIRLS	122.18	9'	1085	0	0.0	0.0
336	7TH GRADE CLASSROOM	687.69	10'	6670	290	82.5	372.5
337	7TH GRADE CLASSROOM	749.1	10'	7501	300	89.9	389.9
338	CORRIDOR	215.17	10'	1824	0	12.9	12.9
339	7TH GRADE CLASSROOM	751.85	10'	7217	280	90.2	370.2
340	7TH GRADE CLAB	1266.86	10'	12690	520	152.0	672.0
341	CORRIDOR	222.38	10'	2632	0	13.3	13.3
342	BOYS	123.14	10'	1245	0	0.0	0.0
343	CORRIDOR	88.95	9'	3518	0	5.3	5.3
344	CUSTODIAL	39.62	9'	367	0	0.0	0.0
345	CORRIDOR	274.58	10'	2496	0	16.5	16.5
346	COMPUTER ROOM	905.94	10'	8976	350	108.7	458.7
347	MENS	122.6	9'	1244	0	0.0	0.0
348	PREP ROOM	136.09	10'	2401	5	8.2	13.2
349	MECH	58.08	9' 2"	523	0	0.0	0.0
350	LOBBY	740.64	10'	5895	0	44.4	44.4
350A	VESTIBULE	22.5	10'	225	0	1.4	1.4
350B	VESTIBULE	21.9	10'	219	0	1.3	1.3
3300	VESTIBULE	21.9	Ιτο	219	l U	1.3	1.3

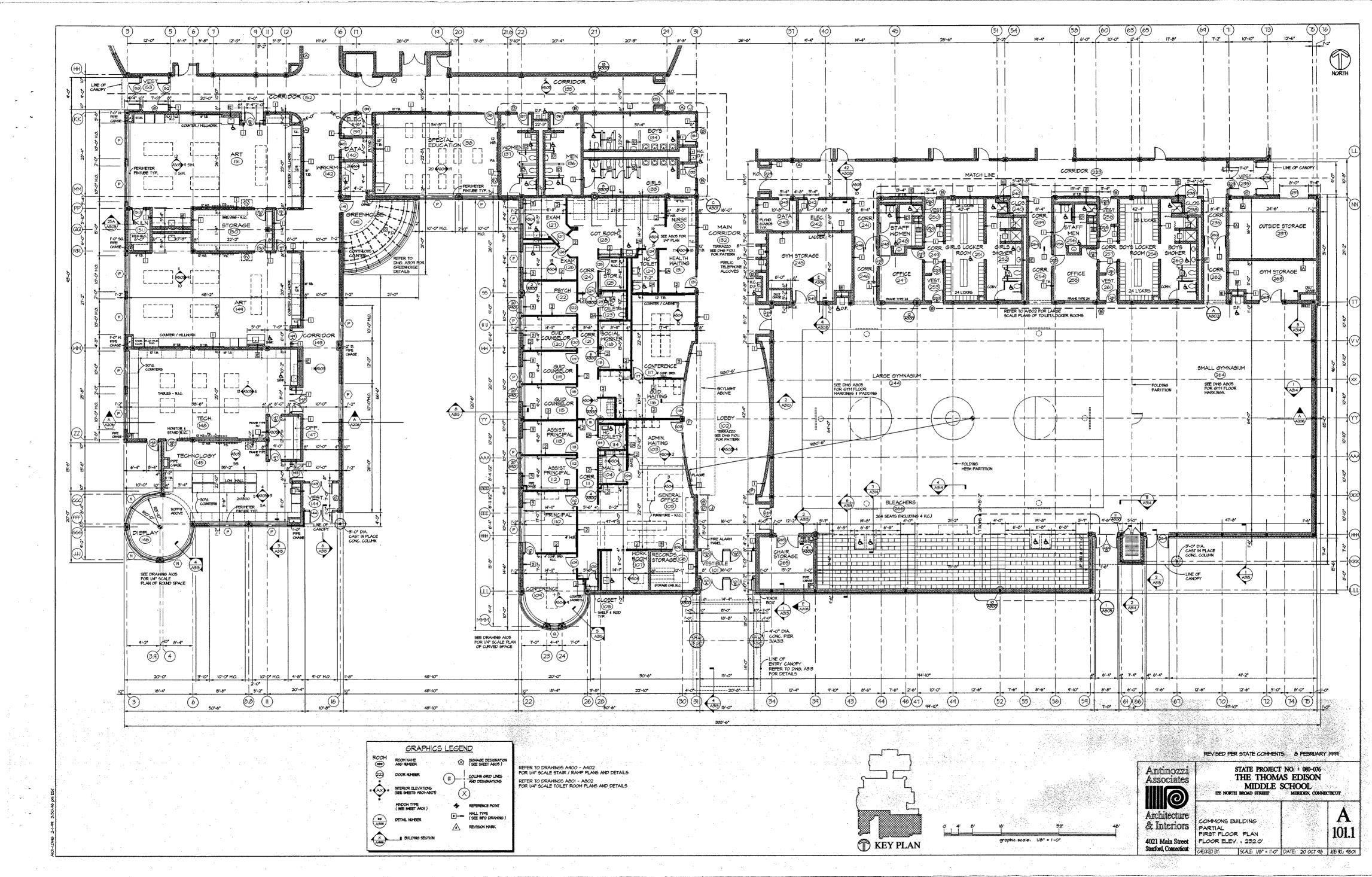
Drawing			Height	Volume	OA CFM Rp	OA CFM Ra	Total Vbz
Room #	Drawing Room Name	Area (ft ²)	(ft-in)	(CF)	CFM/PERSON	CFM/SF	CFM
351	CONNECTING CORRIDOR	1319.13	10'	2401	0	79.1	79.1
352	STAIR NO.2	287.62	9' 2"	523	0	0.0	0.0
353	STAIR NO.1`	391.14	10'	5895	0	0.0	0.0
401	CORRIDOR	274.93	10'	2749	0	16.5	16.5
401	STAFF WORK RM	365.6	10'	3656	30	21.9	51.9
402	SPECIAL ED	377.5	10'	3775	210	45.3	255.3
403	SPECIAL ED SPECIAL ED	381.6	10'	3816	0	45.8	45.8
404	GIRLS		9'	1090	0	0.0	0.0
406	CORRIDOR	121.1 171	10'	1710	0	10.3	10.3
406	8TH GRADE CLAB	1276.7	10'	12767	450	153.2	603.2
407	8TH GRADE CLASSRM		10'	7194	360	86.3	446.3
408	CORRIDOR	719.4 180.6	10'	1806	0	10.8	10.8
					270		
410 411	8TH GRADE CLASSRM 8TH GRADE CLASSRM	755 675.3	10' 10'	7550 6753	350	90.6 81.0	360.6 431.0
411	CORRIDOR	292.2		6753 2922		17.5	17.5
-	BOY		10' 9'		0		
413 414	CORRIDOR	121.4	9'	1093 1040	0	0.0 6.9	0.0 6.9
		115.5	9'		0	0.0	0.0
415	CUST STAIR NO. 4	43.9	9	395	0	0.0	0.0
416 417	STAIR NO.4	254.7	10'	0 2593	0	15.6	15.6
-	CORRIDOR	259.3	10'		0	0.0	0.0
418 419	ELEC/TELE DATA	103.6 77	10'	1036 770	0	0.0	0.0
			9' 4"	_	60	39.8	99.8
420 421	SMALL GROUP ROOM	331.8		3097	0		
-	CORR	170.4	10' 9'	1704	0	10.2 0.0	10.2
422 423	GIRLS 8TH GRADE CLAB	1249 1271.02	10'	11241 12710	520	152.5	0.0 672.5
423	8TH GRADE CLASSRM	720.2	10'	7202	300	86.4	386.4
424	CORRIDOR	200.8	10'	2008	0	12.0	12.0
425	8TH GRADE CLASSRM	747.5	10'	7475	350	89.7	439.7
420	8TH GRADE CLASSRM	658.1	10'	6581	300	79.0	379.0
427	CORRIDOR	234.7	10'	2347	0	14.1	14.1
428	ВОУ	124.4	9'	1120	0	0.0	0.0
430	LOBBY	973.1	10'	9731	0	58.4	58.4
431	CORRIDOR	233.32	10'	2333	0	14.0	14.0
431	WOMEN	134.2	9'	1208	0	0.0	0.0
433	STAIR NO.3	261.3		0	0	0.0	0.0
434	CORR	237.5	10'	2375	0	14.3	14.3
435	GIRLS	120.6	9'	1085	0	0.0	0.0
436	8TH GRADE CLASSRM	667	10'	6670	290	80.0	370.0
437	8TH GRADE CLASSRM	750.1	10'	7501	300	90.0	390.0
438	CORRIDOR	182.4	10'	1824	0	10.9	10.9
439	8TH GRADE CLASSRM	721.7	10'	7217	280	86.6	366.6
440	8TH GRADE CLAB	1269	10'	12690	520	152.3	672.3
441	CORRIDOR	263.2	10'	2632	0	15.8	15.8
442	BOYS	124.5	10'	1245	0	0.0	0.0
443	CORRIDOR	390.9	9'	3518	0	23.5	23.5
443	CONNIDON	330.3	ן ס	2310	L U	23.3	23.5

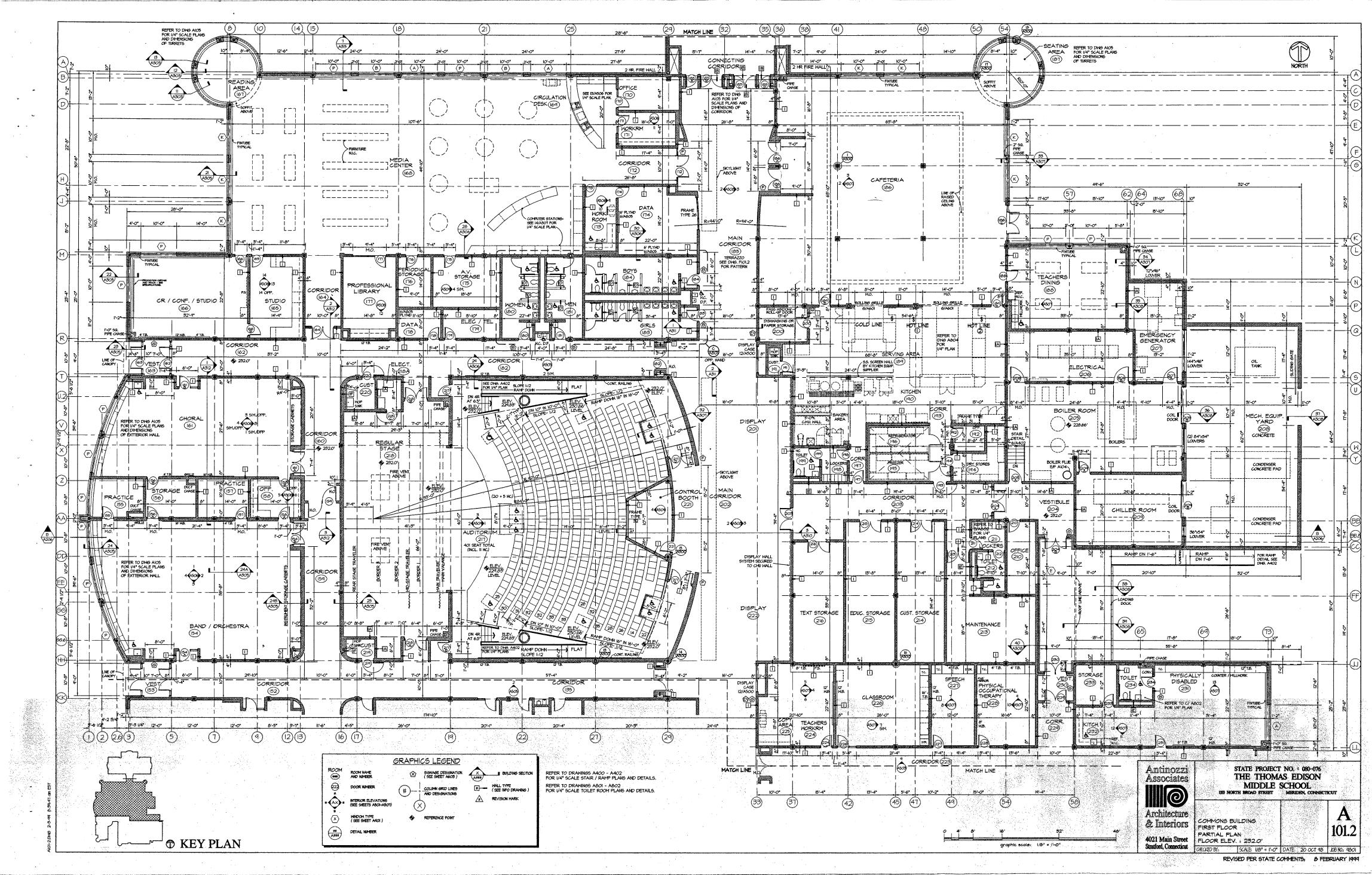
Drawing	Drawing Room Name	Area (ft ²)	Height	Volume	OA CFM Rp	OA CFM Ra	Total Vbz
Room #	Drawing Room Name	Alea (It)	(ft-in)	(CF)	CFM/PERSON	CFM/SF	CFM
444	CUST	40.8	9'	367	0	0.0	0.0
445	CORRIDOR	249.6	10'	2496	0	15.0	15.0
446	COMPUTER ROOM	897.6	10'	8976	350	107.7	457.7
447	MEN	138.2	9'	1244	0	0.0	0.0
448	PREP RM	240.1	10'	2401	10	28.8	38.8
449	MECH	57.1	9' 2"	523	0	0.0	0.0
450	LOBBY	589.5	10'	5895	0	35.4	35.4
451	STAIRS NO.5	74.01	10'	740	0	0.0	0.0
452	STAIR NO.2	301.2	10'	3012	0	0.0	0.0
453	STAIR NO.1`	291.7	10'	2917	0	0.0	0.0
							·
							·

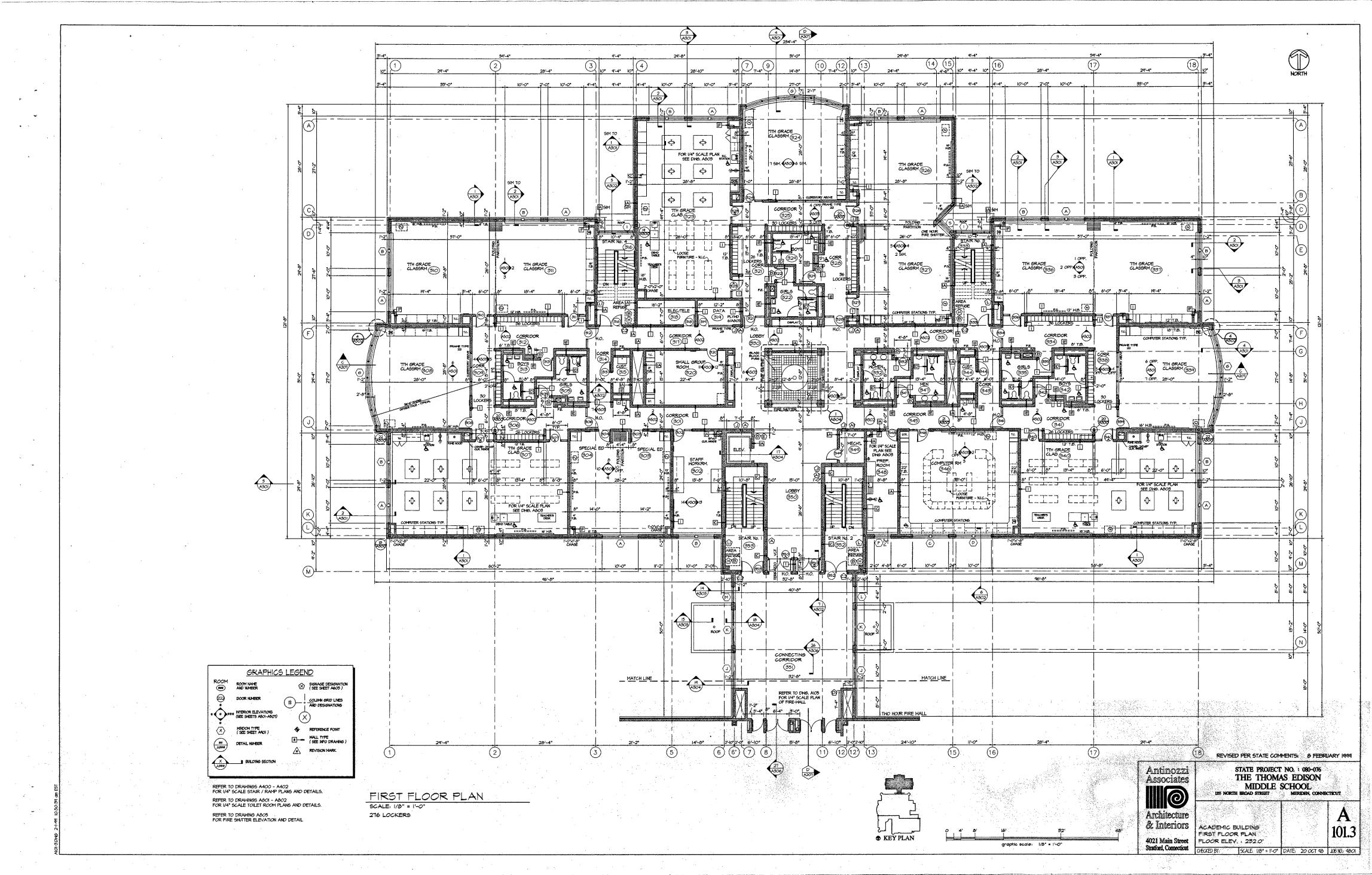


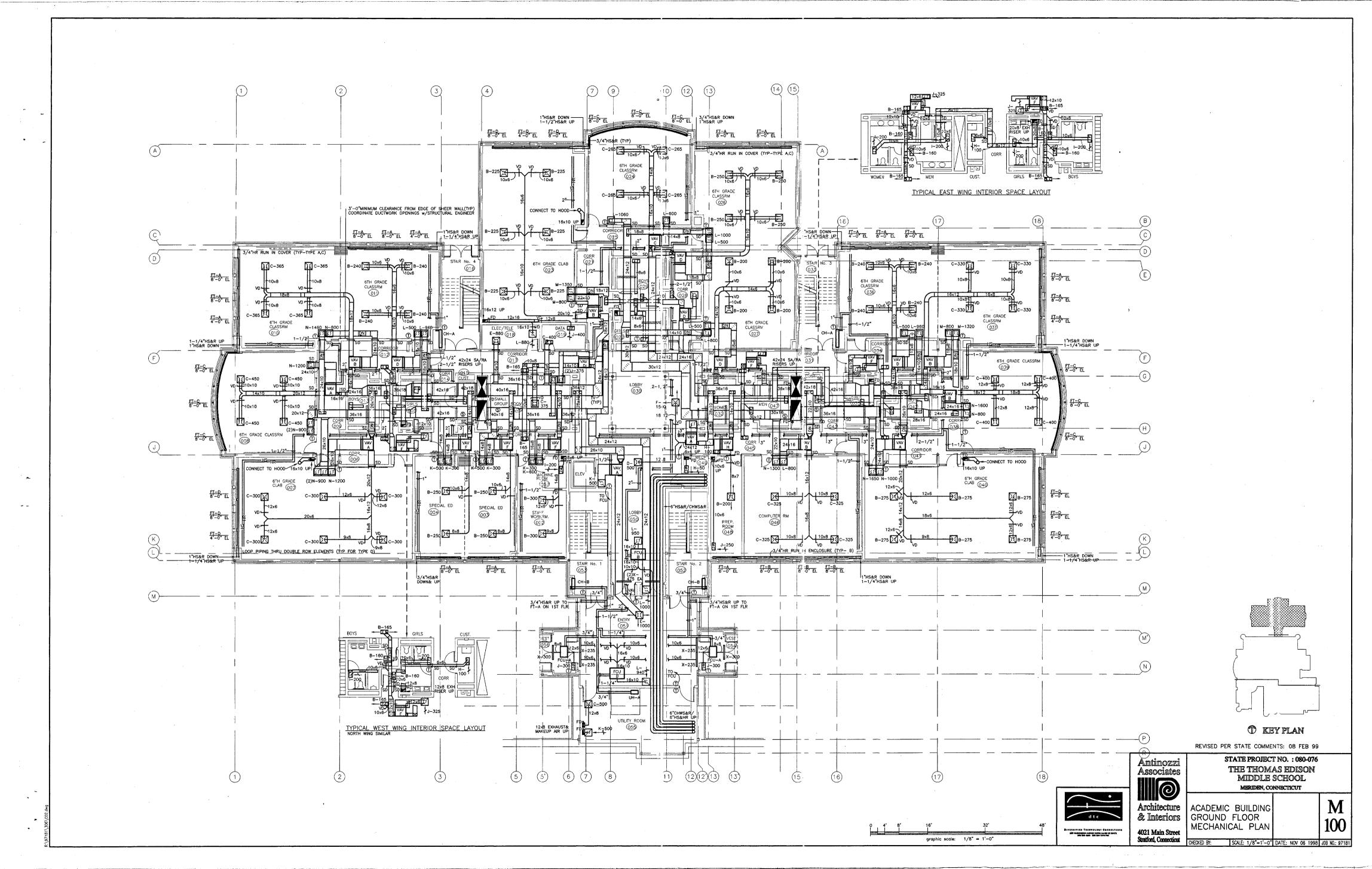
Appendix D

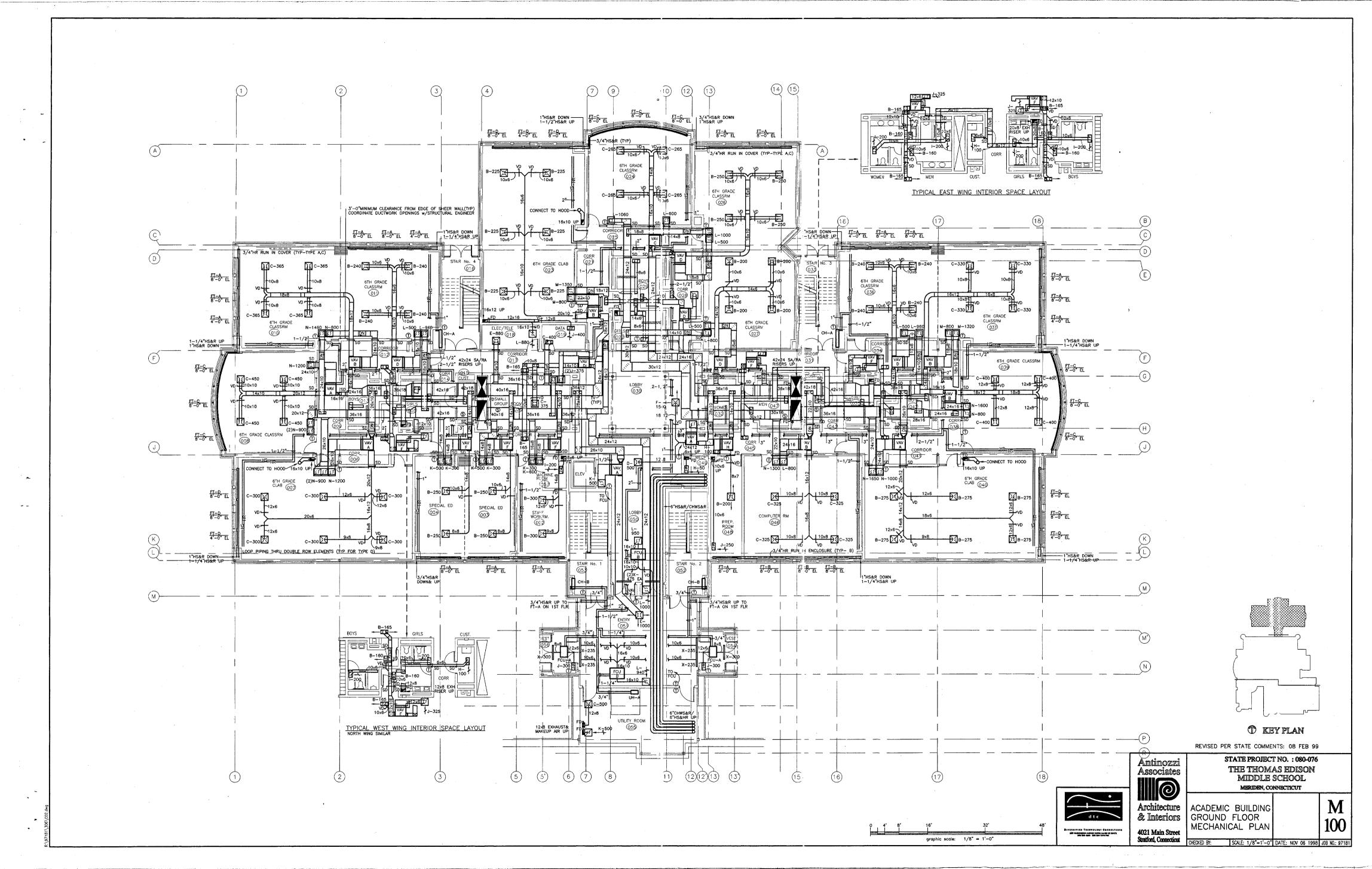
1998 Edison Drawings

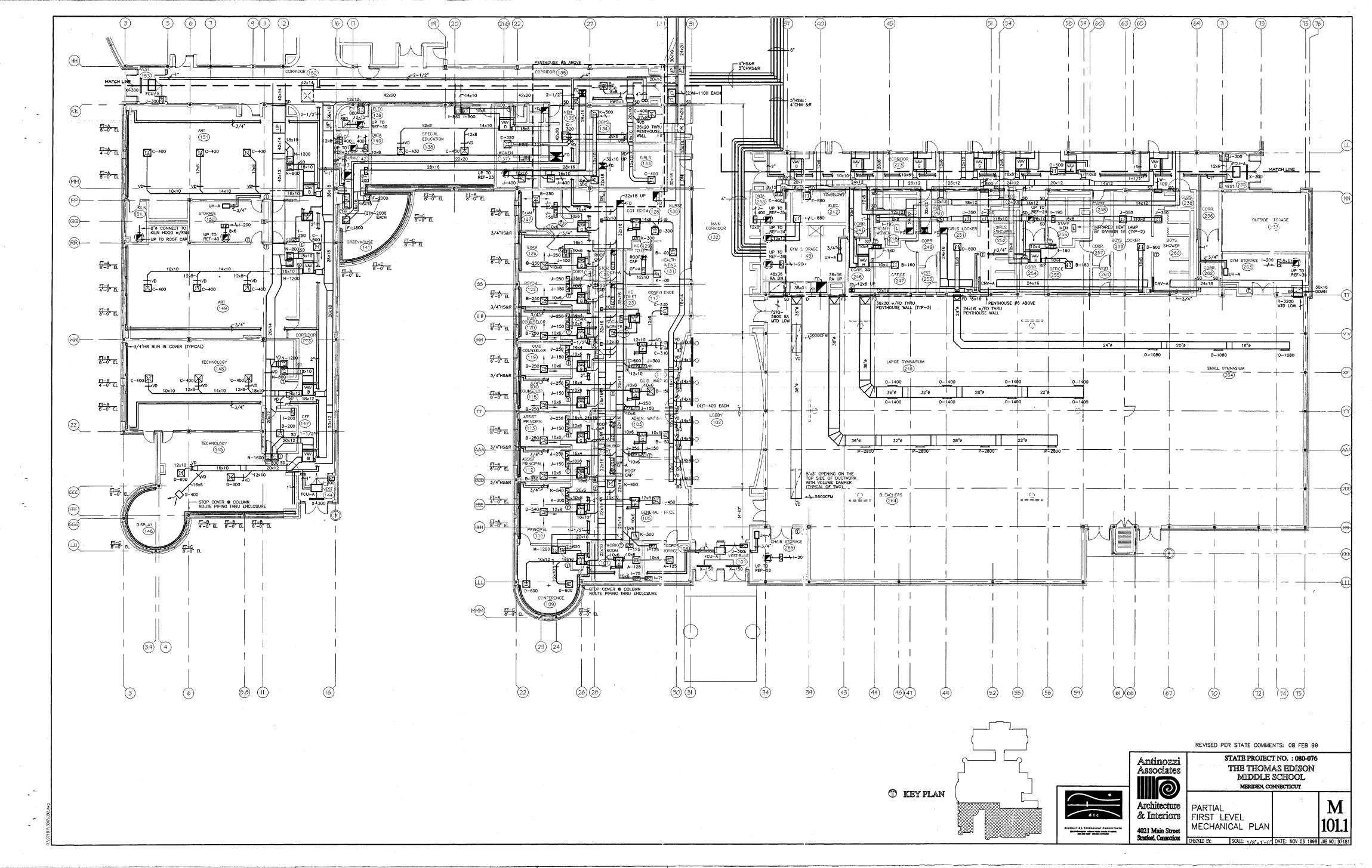


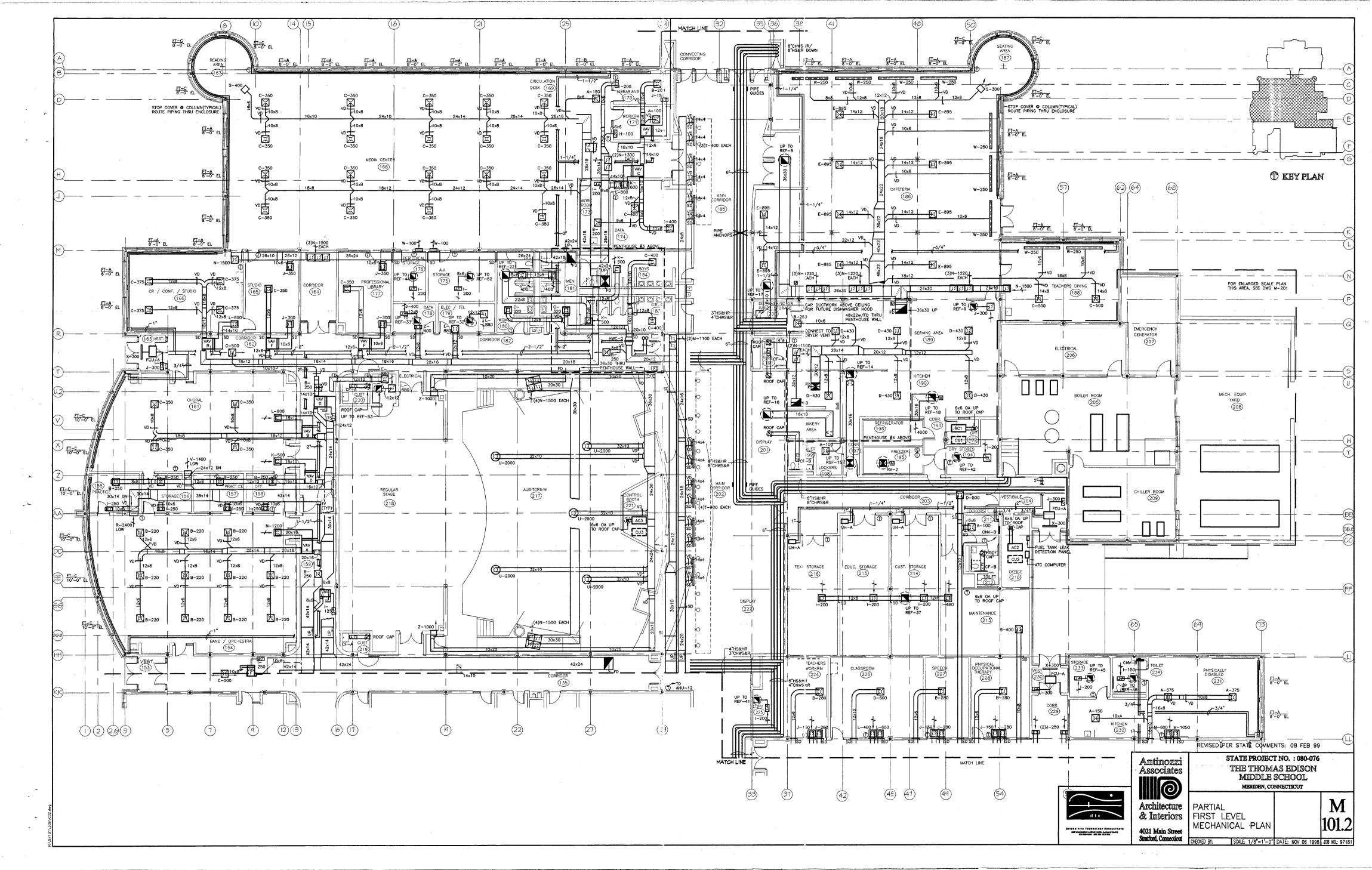


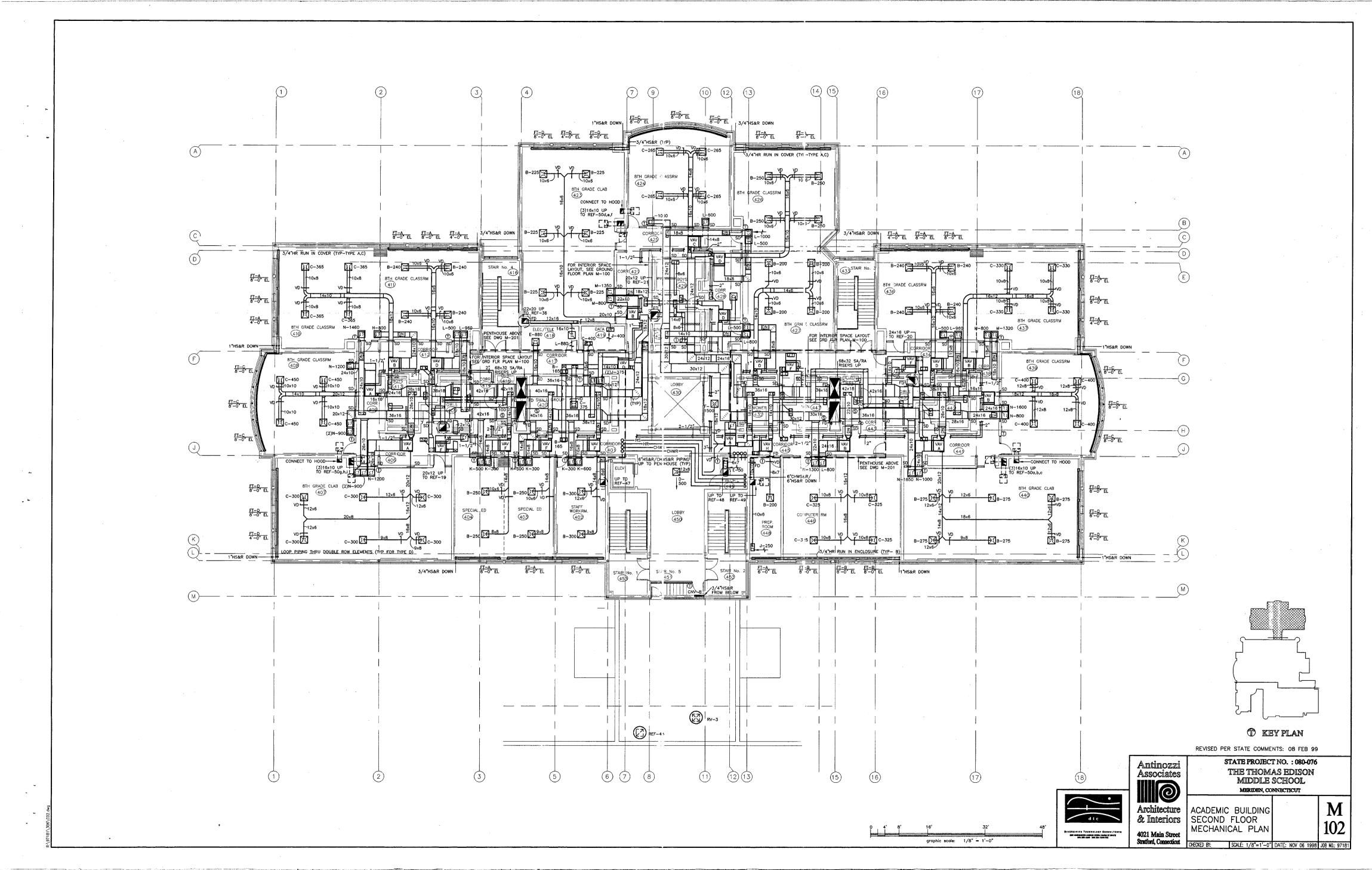


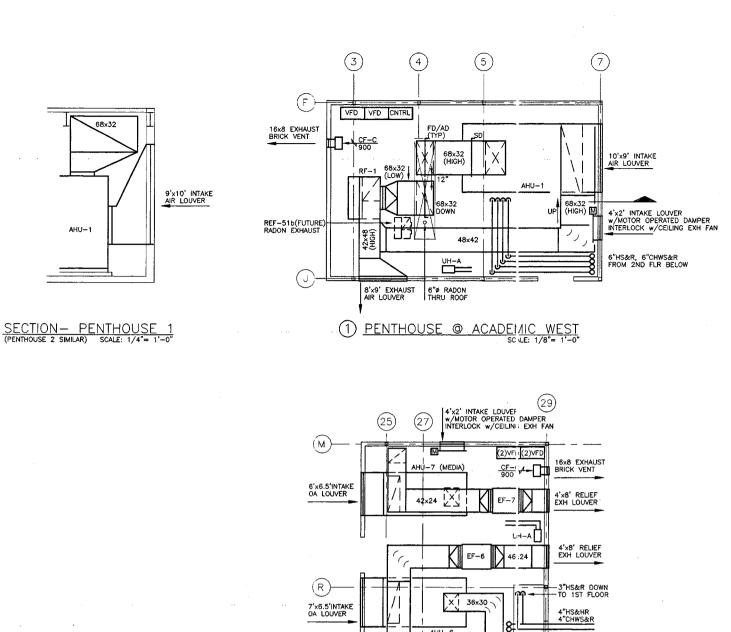




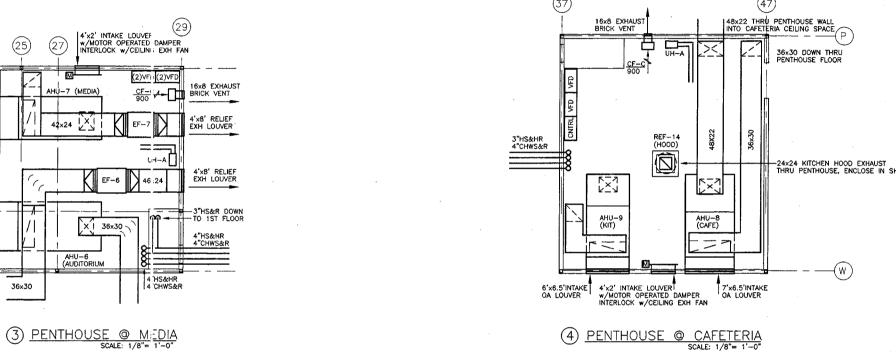








5'X6.5'RELIEF EXH LOUVER



(12)

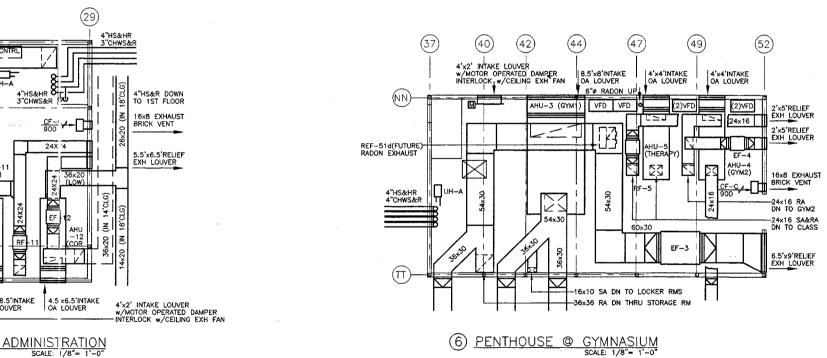
10'x9' INTAKI AIR LOUVER

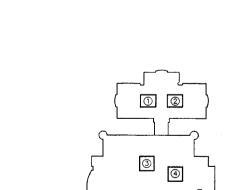
(2)4'x1' COMBUSTION AIR LOUVERS W/MOTOR OPERATED DAMPER ONE MOUNTED HIGH, ONE LOW INTERLOCK W/CEILING EXH FAN AND HWH BURNER OPERATION

CNTRL VFD VFD

6"GAS B VENT 6"Ø RADON 8'x9' EXHAUST THRU ROOF THRU ROOF AIR LOUVER

2 PENTHOUSE @ ACADEMIC EAST SCALE: 1/8"= 1'-0"





© KEYPLAN

6

M

REVISED PER STATE COMMENTS: 08 FEB 99

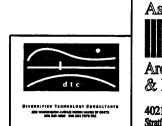
Antinozzi Associates Architecture & Interiors 4021 Main Street Stratford, Connecticut

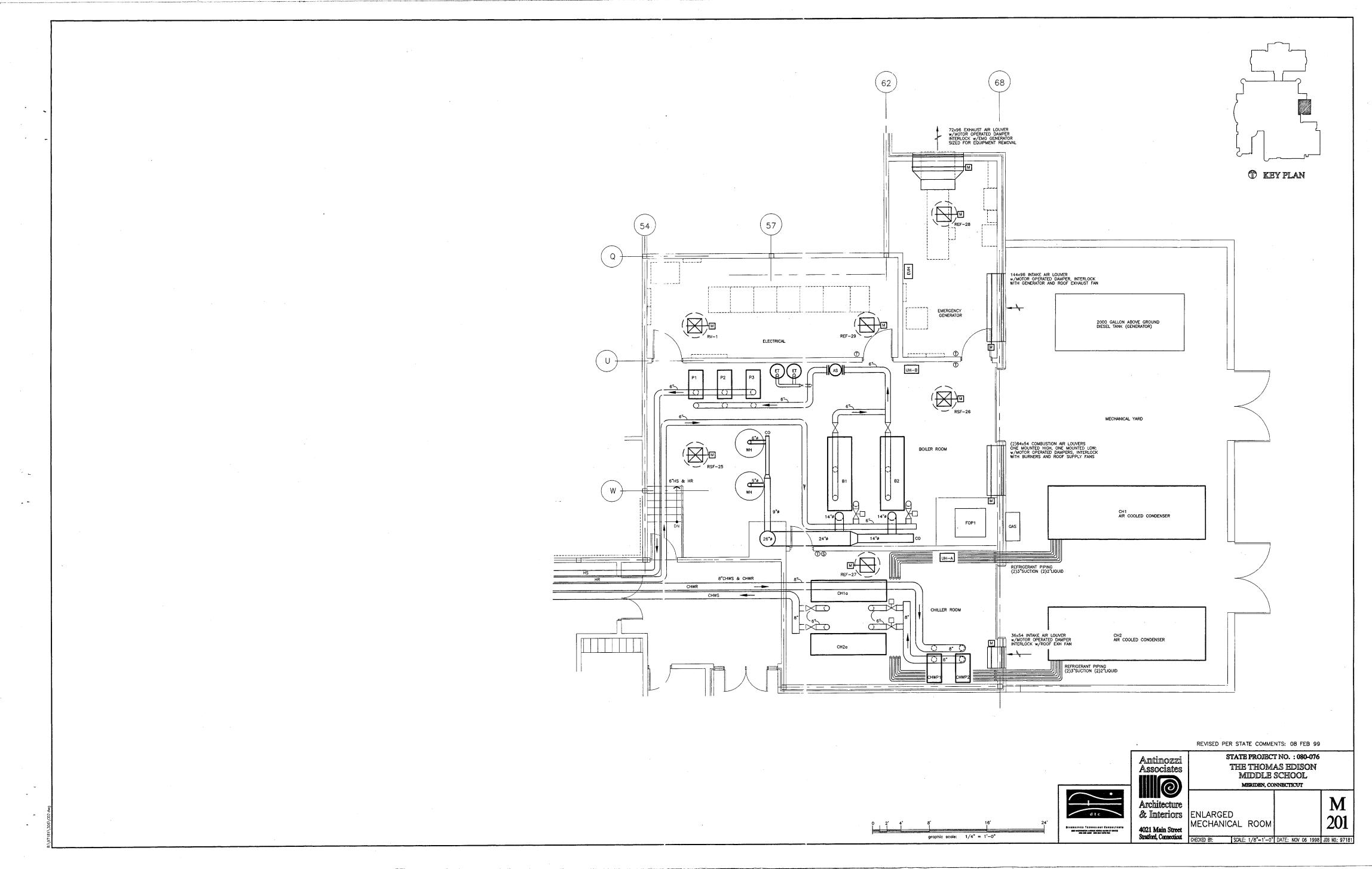
STATE PROJECT NO.: 080-076 THE THOMAS EDISON MIIDDLE SCHOOL MERIDEN, CONNECTICUT

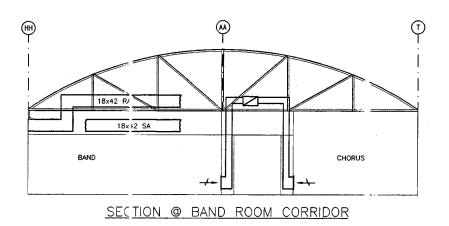
PENTHOUSES MECHANICAL PLAN

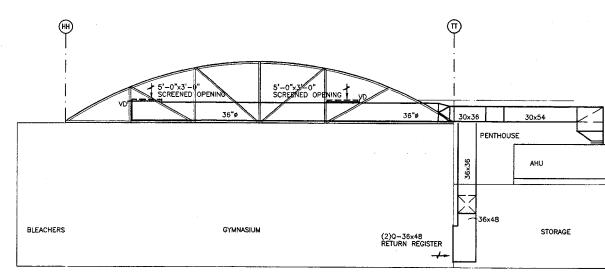
104 SCALE: 1/8"=1'-0" DATE: NOV 06 1998 JOB NO.: 97181



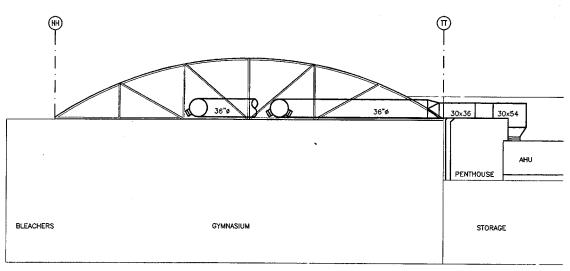








SECTION @ GYMNASIUM- RETURN DUCTWORK



SECTION @ GYMNASIUM- SUPPLY DUCTWORK

REVISED PER STATE COMMENTS: 08 FEB 99



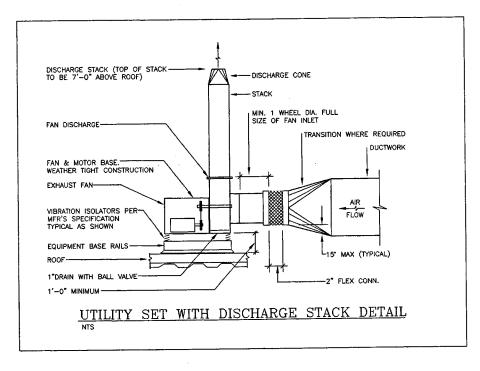


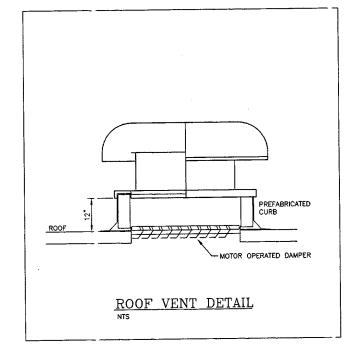
STATE PROJECT NO.: 080-076 THE THOMAS EDISON MIDDLE SCHOOL MERIDEN, CONNECTICUT

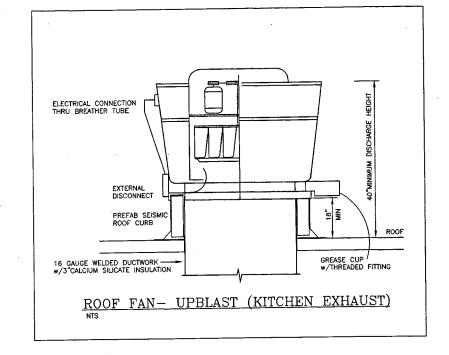
MECHANICAL SECTIONS

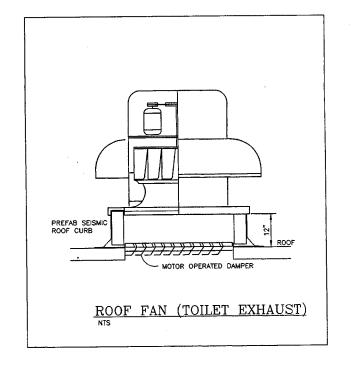
M 301

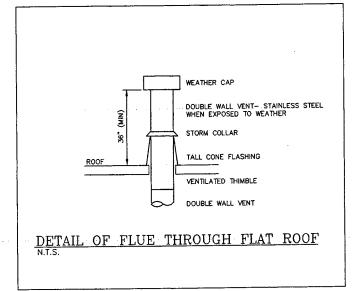
CHECKED BY: SCALE: 1/8"=1'-0" DATE: NOV 06 1998 JOB NO.: 97181

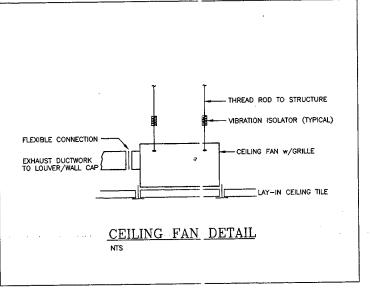


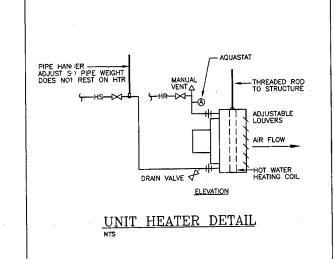


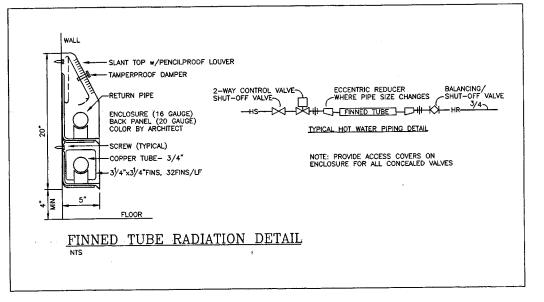


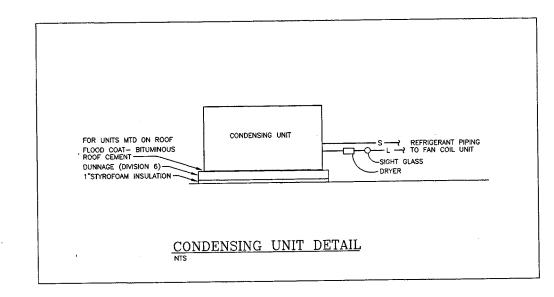


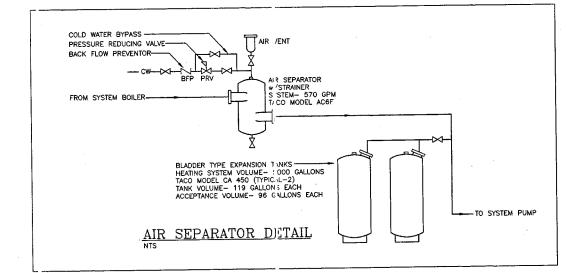


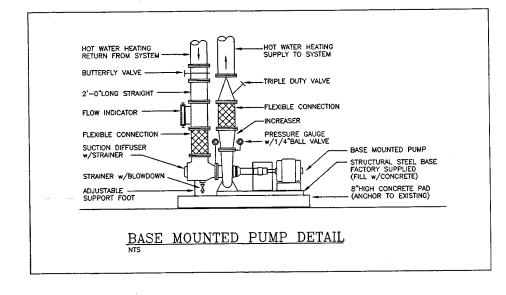


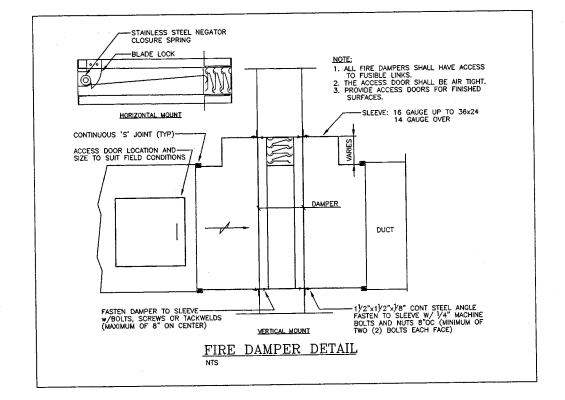


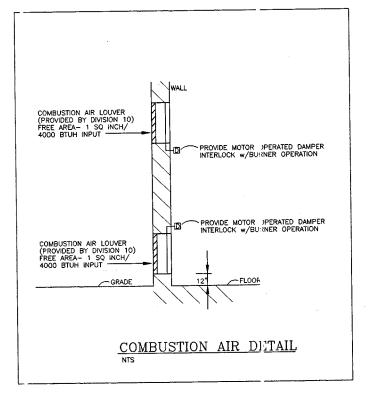


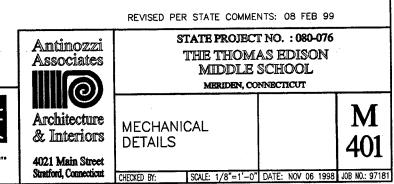






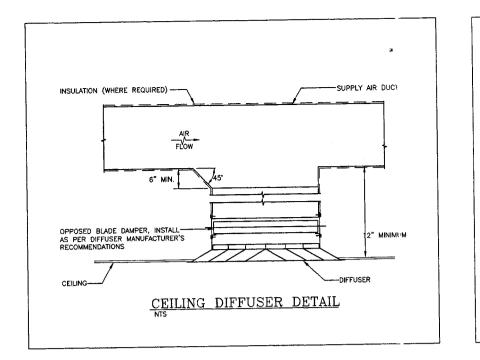


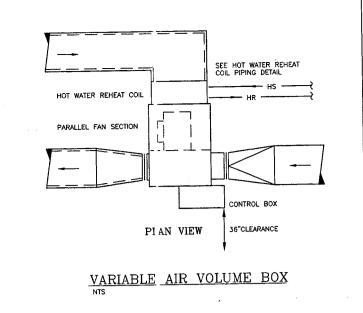


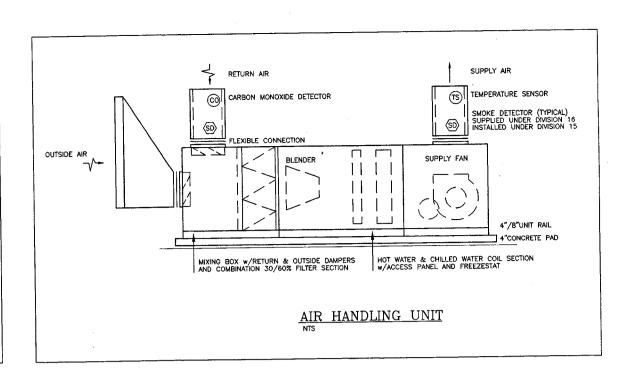


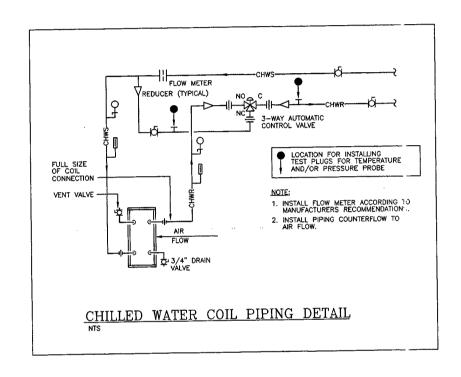
REVISED PER STATE COMMENTS: 08 FEB 99

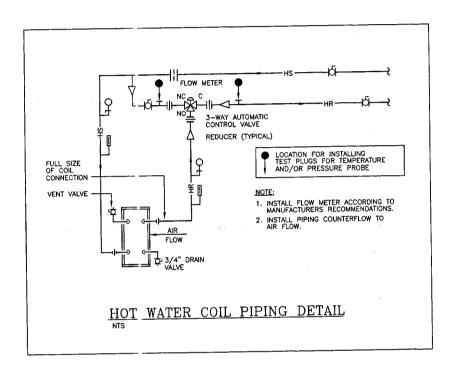
STATE PROJECT NO.: 080-076 THE THOMAS EDISON MIDDLE SCHOOL MERIDEN, CONNECTICUT M 401

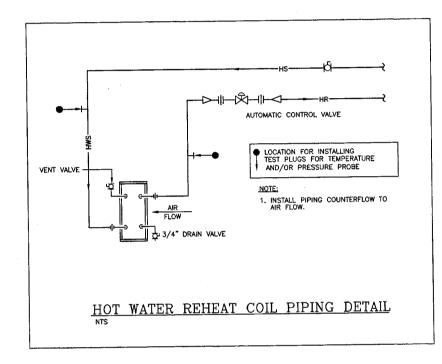


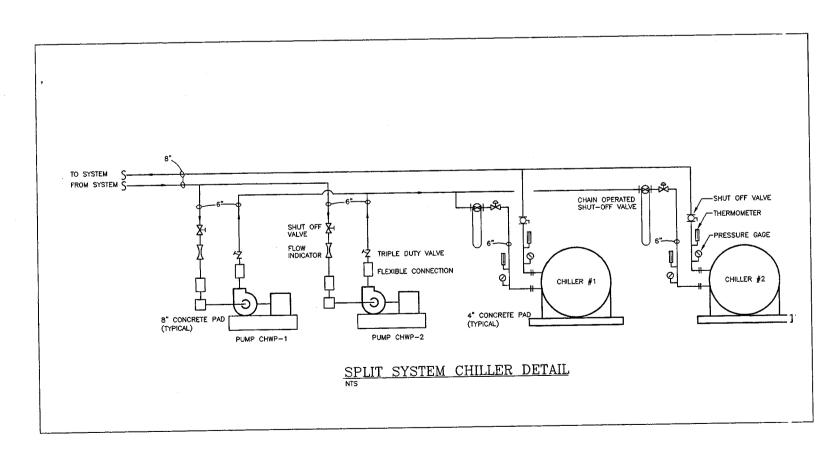


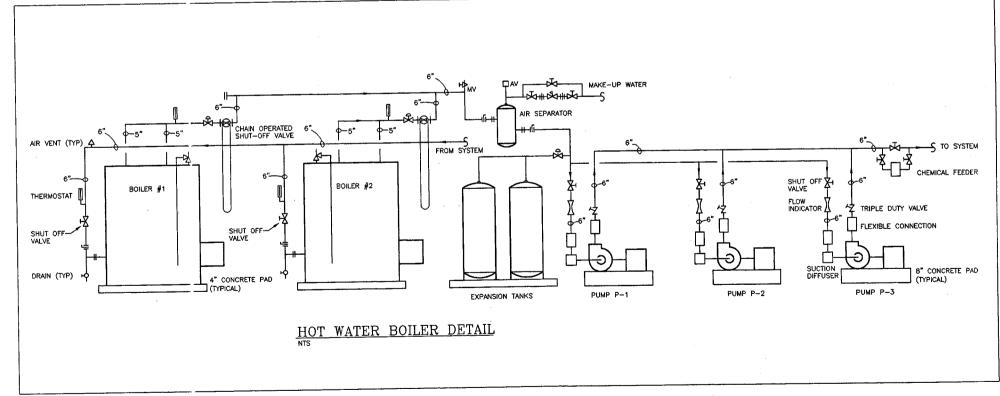












REVISED PER STATE COMMENTS: 08 FEB 99



Antinozzi Associates Architecture & Interiors DETAILS 4021 Main Street Stratford, Connecticut

MECHANICAL

402

M

CHECKED BY: SCALE: 1/8"=1'-0" DATE: NOV 06 1998 JOB NO.: 97181

STATE PROJECT NO.: 080-076

THE THOMAS EDISON MIDDLE SCHOOL

MERIDEN, CONNECTICUT

Δ	AIR HANDLING UNIT SCHEDULE																													
	USE WATER COM																		25,11010											
MARK	MFR	MODEL			Y FAN			COIL D	ATA								L					LWT	GPM I	WIDD	FILTER	ELECT	WEIGHT	AREA SERVED	REMARKS	
""""			TOTAL CFM	OA CFM	TYPE	ESP	HP	AREA SQFT	APD FTHD	TOT MBH	SEN	EAT DB/WB	LAT DR/WR	EWT	LWT	GPM	WPD	TOT MBH	EAT	LAT	EWT	L**'		FTHD			LBS			
		CAHO65FDAC			AF40	2.0	25	67	.44	1110		80/66			54°F	220			49°F	80°F	180°F	165°F	139	17.1	30%/60%	460V/3ø	10667	ACADEMIC-WEST	ECONOMIZER, BLENDER, F	KEEZESTAT, VARIABLE FREQUENCY DRIVE
AHU-1								67	.54	1209		79/66			54°F	239		1081	50°F	80°F	180°F	165'F	140	17.2	30%/60%	460V/3ø	10801	ACADEMIC-EAST	ECONOMIZER, BLENDER, F	KEEZESTAT, VARIABLE FREQUENCY DRIVE
AHU-2		CAHO65FDAC				+	30	67				82/69			54'F	206	11.7	1572	35°F	95°F	180°F		200	9.9	30%/60%	460V/3ø	8389	GYMNASIUM-1	ECONOMIZER, BLENDER, F	CEEZESTAT, VARIABLE FREQUENCY DRIVE
AHU-3	MCQUAY	CAH050FDAC				_	20	49	.69	1051					54°F	16	2.7	95	58°F	90°F	180°F	165°F	12	3.3	30%/60%	460V/3ø	1766	GYMNASIUM-2	ECONOMIZER, BLENDER, I	REEZESTAT, VARIABLE FREQUENCY DRIVE
AHU-4		CAHOO6FDAC			FC13		3	6	.48	81		78/65		-	54°F	10	3.2	79	58°F	81°F	180°F	165°F	10	1.3	30%/60%	460V/3ø		THERAPY ROOM	ECONOMIZER, BLENDER, I	LEEZESTAT, VARIABLE FREQUENCY DRIVE
AHU-5		CAHO08FDAC	+		AF15		3	8	.33	94		78/65				101		656	27°F	72°F	180°F	165°F	82	9.5	30%/60%	460V/3ø		AUDITORIUM	ECONOMIZER, BLENDER, I	LEEZESTAT, VARIABLE FREQUENCY DRIVE
AHU-6		CAH025FDAC		-			15	24	.66	614	384	83/70			54°F	121	13.0		64°F	73°F	180 F	165°F	72	6.5	30%/60%	460V/3ø				REEZESTAT, VARIABLE FREQUENCY DRIVE
. AHU-7.	MCQUAY	CAHO21FDAC	10500	. 1600	AF22	2.0	15	20	. 47	297	237	77/64	_		54°F.	59	11.2	238		<u> </u>		_	92	9.5	30%/60%	460V/3¢		· · · · · · · · · · · · · · · · · · ·		REEZESTAT, VARIABLE FREQUENCY DRIVE
AHU-8	MCQUAY	CAH025FDAC	12500	8000	AF24	2.0	15	24	.66	614	384	83/70	55/55	44°F	54°F	121	13.0	656	27°F	72°F	180°F	165°F	82			460V/3¢		KITCHEN	ECONOMIZER, BLENDER,	
AHU-9	MCQUAY	CAHOO6FHAC	3000	300	FC11	1.0	3	5		-		<u> </u>				<u> </u>	<u> </u>	102	55°F	85°F	180°F	165°F	13	2.4	30%/60%			MUSIC		FIEEZESTAT, VARIABLE FREQUENCY DRIVE
AHU-10	MCQUAY	CAHO25FDAC	11000	1725	AF24	2.0	10	24	.38	317		77/64			54°F	63	8.4	341	63'F	90°F	180°F	165°F	44	6.5	30%/60%	460V/3ø				R BLENDER, FREEZESTAT, VARIABLE FREQUENCY DRIVE
AHU11	MCQUAY	CAHO12FDAC	6000	1400	AF16	2.0	7.5	12	.45	209	146	78/66	56/55					223	40°F	72°F	180°F	165'F	28	6.4	30%/60%	460V/3ø		ADMINISTRATION		• ———
AHU-12	MCQUAY	CAHO17FDAC	8000	2100	AF20	2.0	7.5	17	.47	266	199	78/66	56/55	44°F	54'F	52	14.4	163	55°F	71°F	180°F	165°F	19	2.9	30%/60%	460V/3ø		CORRIDOR	ECONOMIZER, BLENDER,	
AHU-13		CAHOO6FHAC	4000	400	FC13	1.0	5	7	_	_	Γ-	-	_	-	-	l		76	68°F	85°F	180°F	165°F	10	1.2	30%/60%	460V/3ø	1544	GREENHOUSE	ECONOMIZER, BLENDER,	TEEZESTAT
1.2.3			4		_	 										1	1		l .	1	I	i			I	1	ı	1	I .	

					FM POINTS	ΔPs		FAN	DATA				HOT WAT	ER COIL				REMARKS
M .RK	MFR	MODEL	SIZE	MAX	MIN	MIN	CFM	ESP	HP	ELEC	TOT MBH	GPM	ΔТ	PIPE SIZE	EAT	LAT	DISCHARGE AIR INTO RM	KEMAKKS
 'A\-A	ENVIROTECH	VFR-WC	1418	2400	1200	.08	1200	.25	1/2	277V/1PH	42	6	15	1-1/4"	70°F	105°F	85°F	PARALLEL FLOW FAN POWERED BOX, PRESSURE INDEPENDANT
 A\ −B	ENVIROTECH	VFR-WC	1411	1600	800	.08	800	.25	1/4	277V/1PH	28	4	15	1"	70°F	105°F	85°F	PARALLEL FLOW FAN POWERED BOX, PRESSURE INDEPENDANT
AV -C	ENVIROTECH	VFR-WC	1211	1200	600	.08	600	.25	1/4	277V/1PH	21	3	15	1*	70°F	105°F	85°F	PARALLEL FLOW FAN POWERED BOX, PRESSURE INDEPENDANT
AV -D	ENVIROTECH	VFR-WC	1006	1000	500	.08	500	.25	1/6	277V/1PH	18	2.5	15	1"	70°F	105°F	85°F	PARALLEL FLOW FAN POWERED BOX, PRESSURE INDEPENDANT
A) -F	ENVIROTECH		0806	600	300	.08	300	.25	1/6	277V/1PH	11	1.5	15	3/4"	70°F	105°F	85°F	PARALLEL FLOW FAN POWERED BOX, PRESSURE INDEPENDANT
'A\ -G	ENVIROTECH		0604	300	150	.08	150	.25	1/13	277V/1PH	6	1	15	3/4"	70°F	105°F	85°F	PARALLEL FLOW FAN POWERED BOX, PRESSURE INDEPENDANT
AV	ENVIROTECH		0504	200	100	.08	100	.25	1/13	277V/1PH	4	.5	15	3/4"	70°F	105°F	85°F	PARALLEL FLOW FAN POWERED BOX, PRESSURE INDEPENDANT

FAN	SCHE	EDULE											
MARK	MFR	MODEL	CFM	SP	RPM	HP	ELECT	DRIVE	TYPE	SERVICE	WT LBS	AREA SERVED	REMARKS
RF−1	GREENHECK	44-BISW	30000	1.50	677	20	460V/3ø	BELT	UTILITY SET	RETURN	2500	AÇADEMIC — WEST	ARRANGEMENT 1-Z, CW TAU DISCHARGE, VARIABLE FREQUENCY DRIVE
RF-2	GREENHECK	49-BISW	37600	1.50	629	25	460V/3ø	BELT	UTILITY SET	RETURN	2500	ACADEMIC - EAST	ARRANGEMENT 1-Z, CW TAU DISCHARGE, VARIABLE FREQUENCY DRIVE
EF-3	GREENHECK	44-TCF	22500	1.50	651	10	460V/3ø	BELT	INLINE FAN	EXHAUST	2000	GYM1	ARRANGEMENT 9, HORIZONTAL CEILING MOUNT, VARIABLE FREQUENCY DRIVE
EF-4	GREENHECK	TCB-1-16	2600	1.25	848	2	460V/3ø	BELT	INLINE FAN	EXHAUST	500	GYM2	HORIZONTAL CEILING MOUNT, VARIABLE FREQUENCY DRIVE
RF-5	GREENHECK	TCB-1-16	3000	1.25	1003	2	460V/3ø	BELT	INLINE FAN	RETURN	500	THERAPY	HORIZONTAL CEILING MOUNT, VARIABLE FREQUENCY DRIVE
EF-6	GREENHECK	33-TCF	12500	1.50	861	7.5	460V/3ø	BELT	INLINE FAN	EXHAUST	1000	AUDITORIUM	ARRANGEMENT 9, HORIZONTAL CEILING MOUNT, VARIABLE FREQUENCY DRIVE
EF-7	GREENHECK	30-TCF	10500	1.50	984	7.5	460V/3¢	BELT	INLINE FAN	EXHAUST	750	MEDIA	ARRANGEMENT 9, HORIZONTAL CEILING MOUNT, VARIABLE FREQUENCY DRIVE
REF-8	GREENHECK	GB-360-30	12500	.375	545	3	460V/3ø	BELT	ROOF FAN	EXHAUST	1000	CAFETERIA	MOTOR OPERATED DAMPER, VARIABLE FREQUENCY DRIVE, SEISMIC CURB
REF-9	GREENHECK	GB-380-30	300	.250	930	1/4	1157/10	BELT	ROOF FAN	EXHAUST	200	KITCHEN	SEISMIC CURB
		30-TCF	11100	1.50	1039	7.5	460V/3ø	BELT	INLINE FAN	RETURN	750	MUSIC	ARRANGEMENT 9 HORIZONTAL CEILING MOUNT, VARIABLE FREQUENCY DRIVE
RF-10	GREENHECK	24-TCF	5824	1.50	1122	3	460V/3ø	BELT	INLINE FAN	RETURN	500	ADMINISTRATION	ARRANGEMENT 9 HORIZONTAL CEILING MOUNT, VARIABLE FREQUENCY DRIVE
RF-11	GREENHECK		8000	1.50	856	5	460V/3¢	BELT	INLINE FAN	EXHAUST	750	CORRIDOR	ARRANGEMENT 9 HORIZONTAL CEILING MOUNT
EF-12	GREENHECK	30-TCF	4000	.375	585	1/2	460V/3¢	BELT	ROOF FAN	EXHAUST	450	GREENHOUSE	SEISMIC CURB
REF-13	GREENHECK	GB-240-5 CUBE-360HP-50	7500	1.50	645	5	460V/3¢	BELT	ROOF UPBLAST	EXHAUST	1000	KITCHEN HOOD	GREASE TRAP, EXTERNAL WIRING, SEISMIC CURB
REF-14	GREENHECK GREENHECK	RSFP-150	4000	1.50	890	3	460V/3ø	BELT	ROOF FAN	SUPPLY	600	KITCHEN HOOD	FILTER, SEISMIC CURB
RSF-15		CUBE-140HP-7	1000	1.50	1890	3/4	460V/3ø	BELT	ROOF UPBLAST	EXHAUST	300	BAKERY HOOD	SEISMIC CURB
REF-16	GREENHECK		1000	1.50	1890	3/4	460V/3¢	BELT	ROOF UPBLAST	EXHAUST	300	DISHWASHER HOOD	FUTURE DISHWASHER
REF-17	GREENHECK	CUBE-140HP-7	4000	.250	830	3/4	460V/3¢	BELT	ROOF FAN	EXHAUST	500	REFRIG/FREEZER COMPR	SEISMIC CURB, INTERLOCK w/RV-2
REF-18	GREENHECK	GB-200-7	1500	.375	785	1/4	115V/1ø	BELT	ROOF FAN	EXHAUST	500	TOILET ROOMS (ACADEMIC)	SEISMIC CURB
REF-19,21	GREENHECK	GB-160-4	2700	.375	855	1/2	460V/3ø	BELT	ROOF FAN	EXHAUST	500	TOILET ROOMS (ACADEMIC)	SEISMIC CURB
REF-20	GREENHECK	GB-180-5	2000	.375	825	1/4	115V/1ø	BELT	ROOF FAN	EXHAUST	500	TOILET ROOMS (COMMONS)	SEISMIC CURB
REF-22,23	GREENHECK	GB-160-4	1800	.250	785	1/4	115V/1¢	BELT	ROOF FAN	EXHAUST	500	LOCKER ROOM	SEISMIC CURB
REF-24	GREENHECK	GB-160-4	4000	.250	505	1	460V/3ø	BELT	ROOF FAN	SUPPLY	1000	BOILER ROOM	SEISMIC CURB, INTERLOCK W/LOUVER
RSF-25,26	GREENHECK	RSFP-150	3750	.250	505	1/3	115V/1ø	BELT	ROOF FAN	EXHAUST	500	CHILLER ROOM	SEISMIC CURB, INTERLOCK W/LOUVER
REF-27	GREENHECK	GB-240-3	1000	.250	1000	1/4	115V/1¢	BELT	ROOF FAN	EXHAUST	300	GENERATOR ROOM	SEISMIC CURB, INTERLOCK W/LOUVER
REF-28	GREENHECK	GB-120-4		.250	985	1/2	460V/3ø	BELT	ROOF FAN	EXHAUST	500	ELECTRICAL ROOM	SEISMIC CURB, INTERLOCK w/RV-1
REF-29	GREENHECK	GB-160-5	2500		910	1/4	115V/1ø	BELT	ROOF FAN	EXHAUST	300	ELECTRICAL ROOM (COMMONS)	SEISMIC CURB
REF-30,32,34		GB-120-4	880	.250	1050		115V/1¢	BELT	ROOF FAN	EXHAUST	200	DATA ROOM (COMMONS)	SEISMIC CURB
REF-31,33,35		GB-80-4	400	.250	855	1/4	460V/3ø	BELT	ROOF FAN	EXHAUST	500	ELECTRICAL ROOM (ACADEMIC)	SEISMIC CURB
REF-36	GREENHECK	GB-180-5	2640	.375		1/2	115V/1ø	BELT	ROOF FAN	EXHAUST	300	STORAGE (EDUCATIONAL)	SEISMIC CURB
REF-37	GREENHECK	GB-120-4	1080	.250	1000	1/4	115V/19	BELT	ROOF FAN	EXHAUST	200		
REF-38,39,40 41,42,44,52	GREENHECK	GB-70-4	200	.250	1230	1/4	1134/19	OFFI	1,001 1,41		1	STORAGE (GYM,LIBRARY,ART,KIT) WORK RM COPY AREA	
	ADEEN FOR	00.00.4	500	775	1000	1/4	115V/1ø	BELT	ROOF FAN	EXHAUST	200	UTILITY ROOM	SEISMIC CURB, INTERLOCK w/RV-3
REF-43	GREENHECK	GB-90-4	500	.375	1050	1/4	115V/1¢	BELT	ROOF FAN	EXHAUST	200	THERAPY	SEISMIC CURB
REF-45,46	GREENHECK	GB-70-4	150 200	.250	1290	1/4	115V/1¢	BELT	ROOF FAN	EXHAUST	200	ELEV MACH RM	SEISMIC CURB
REF-47	GREENHECK	GB-70-4	300	.375	1050	1/4	115V/1¢	BELT	ROOF FAN	EXHAUST	200	PIPE ROOM	SEISMIC CURB
REF-48	GREENHECK	GB-80-4			1304	1/4	115V/1¢	BELT	ROOF UTILITY	EXHAUST	200	SCIENCE PREP RM	24 HOUR OPERATION, NON-SPARK, EXPLOSION PROOF, WEATHER HOOD, STRUCTURAL SUPPORT
REF-49	WOOD	6739	750	.375				BELT	ROOF UTILITY	' EXHAUST	200	SCIENCE HOOD	NON-SPARK, EXPLOSION PROOF, WEATHER HOOD, STRUCTURAL SUPPORT
REF-50a-i	WOOD	6752	1000	.750	1000	1/3	115V/1ø	BELI	ROOF UTILITY	EXHAUST	- 200	RADON	FUTURE
REF-51a-f	ļ -	-	-	ļ -	-		445)///	DIRECT	CEILING	EXHAUST	25	TOILET ROOMS (PRIVATE)	SONES- 1.8, CEILING GRILLE, WALL SWITCH
CF-A	GREENHECK	SP-216	100	.250		50watts	115V/1ø	DIRECT	CEILING	EXHAUST	25	TOILET/LOCKER (PRIVATE)	SONES - 3.4, CEILING GRILLE, WALL SWITCH
CF-B	GREENHECK	SP-224	200	.250	1.777	83watts	115V/1ø			EXHAUST	75	PENTHOUSES	CEILING GRILLE, BRICK VENT
CF-C	GREENHECK	SP-262	900	.500	1450	420watts	115V/1ø	DIRECT	CEILING	EXTINUST	//	1 ENTITOOSES	

CF-C	GREENING	ECK 3F-202		300	.000	1 +00 1.2	.0					1 '	1	_ _	 000.11
												ا ر			
													J		
												م	К		
												'	L		 \bot
DAC	KACE	D SPLI	T SY	STEM	I AIR	CON	ודזמו	IONEF	3			1	М		
IA	MAGE	ים זכו עו		01111		001						┤ '	N	$\perp \!\!\! \perp \!\!\! \perp$	
MARK	MFR	MODEL	C	FM	COOLIN	IG HEA	ATING		CTRICAL.	AREA SERVED	REMARKS] '	0		 DL
MAKK		MODEL	SA	OA					VOLT/PH		DUCTLESS SPLIT SYSTEM HEAT PUMP w/3 KW ELECTRIC HEATER, OUTSIDE AIR CONNECTION w/ROOF CAP, CONDENSATE PUMP		P		 DL
AC/CU-1	EMI	SCC/SHC15	450	25	15 MBI	H 14	MBH	9	208-230/1	KITCHEN OFFICE		4	Q		 33RL
AC/CU-2	EMI	SCC/SHC15	450	25	15 MBI	H 14	MBH	9	208-230/1	CUSTODIAN OFFICE	DUCTLESS SPLIT SYSTEM HEAT PUMP w/3 KW ELECTRIC HEATER, OUTSIDE AIR CONNECTION w/ROOF CAP, CONDENSATE PUMP	1	R		33RL
				25	15 MBI		MBH	-	208~230/1	CONTROL ROOM	DUCTLESS SPLIT SYSTEM HEAT PUMP w/3 KW ELECTRIC HEATER, OUTSIDE AIR CONNECTION w/ROOF CAP, CONDENSATE PUMP	1	S		 DL
AC/CU-3	EMI	SCC/SHC15	450	25	15 MBI	T 14	MON	ļ	200 200/1	COLLEGE ROOM		1	T		LL-1

	CON	IDENSI.	NG UN	TT S	CHEL	ULE								
	MARK	MFR	MODEL	NOM TONS	TYPE	FRIG	AMBIENT AIR ON UNIT	COMPR	ESSOR FLA	ELECTRI V-Ø-Hz	CAL.	TOTAL OPERATING WEIGHT	AREA SERVED	REMARKS
	CU-4	MCQUAY	ALP019	20	R-22	TEMP 38	95°F	2	15.3	460/3/60	39	1000	ADMINISTRATION (AHU-11)	LOW AMBIENT CONTROL
					T			1		i	1	ļ		

ARK	MFR	MODEL	втин	GРM	PD	EWT	EAT	SA	OA	ESP	HP	ELECT	DRIVE	TYPE	DIMENSIONS	REMARKS
-011 4	MCQUAY	FC-C-04	12384	2	3.0	180°F	40°F	300	0	.2	1/10	115/1	DIRECT	FAN COIL UNIT		RECESSED CEILING MOUNTED W/DUCT CONNECTIONS
		FC-C-12	58030	-	3.0	180°F	40'F	950	0	.2	1/4	115/1	DIRECT	FAN COIL UNIT	-	RECESSED CEILING MOUNTED W/DUCT CONNECTIONS
	MCQUAY	RWI-1130-08	57800		3.85	180°F	40'F	860	0	.2	(2)1/10	115/1	DIRECT	CABINET HEATER	33"Wx46"Lx18"D	FLOOR MOUNTED, INVERTED FLOW
	STERLING	RWI-1130-08	18800	2.5	.36	180°F	40°F	230	0	.2	1/15	115/1			33"Wx46"Lx18"D	FLOOR MOUNTED, INVERTED THROW
	STERLING		43600	2.5	.2	180°F	60°F	900	0	0	1/30		DIRECT		-	T'STAT CYCLES FAN
	STERLING	HS-60		10	.5	180°F	60°F	1900		0	1/20		DIRECT		_	T'STAT CYCLES FAN
	STERLING	HS-120	87000	12		100 F		600		-	13KW		DIRECT			
EUH .	ELECTROMODE	EUH12B23CT	40000		<u> </u>		60°F					400/3	BITCO	CONVECTOR	48"Lx32"Hx4"D	RECESSED WALL MOUNTED, PERFORATED INLET/OUTLET, INTEGRAL T'STAT
CNV-A	RITTLING	TYPE PS48x32x4	5600	1		180°F	65'F						 -		20"Lx14"Hx4"D	RECESSED WALL MOUNTED, PERFORATED INLET/OUTLET, INTEGRAL T'STAT
CNV-B	RITTLING	TYPE PS20x14x4	1400	.5	<u> </u>	180°F	65°F					<u> </u>		CONVECTOR	1	
FT-A	RITTLING	REGENCY FSOD	800/LF	1	-	180°F	65°F		-	_	-			FINNED TUBE RADIATION	3/4C-3/4×3/4×32	RETURN PIPING IN COVER
FT-B	RITTLING	ELEMENT	800/LF	1		180°F	65°F	-	_	-	-	-	-	FINNED TUBE RADIATION	3/4C-3/4x3/4x32	ELEMENT ONLY, ENCLOSURE BY ARCHITECT
FT-C	RITTLING	REGENCY FSOD	800/LF	1	 -	180°F	65°F		_	-		-	-	FINNED TUBE RADIATION	3/4C-3/4x3/4x32	CURVED ENCLOSURE, RETURN PIPING IN COVER
FT-D	RITTLING	REGENCY FSOD	1100/LF	1	 	180°F	65°F			-	-	-	T -	FINNED TUBE RADIATION	3/4C-3/4x3/4x32	DOUBLE ELEMENT
	USA COIL	F108-12×24	32000	- `-	2.5	180°F	65°F	1440				T _	1	HOT WATER COIL	14x26x4	DUCT MOUNTED

AIR	COOL	LED SC	REW CHIL	LER	w/R	EMO'	TE E	VAPOR	ATOR	SCHE	DULE			
	T		7.00		0014	545	LWT	PRESS DROP	COMP	RESSOR	ELEC	Τ		REMARKS
MARK	MFR	MODEL	TYPE	TONS	GPM	EWT	_	H ₂ 0	QUANT	TOTAL KW	VOLT/PH	EER	MCA	
CH-1.2	MCQUAY	ALS204A	EXTERIOR UNITS	202					2	225	460V/3PH	9.6	399	SINGLE POINT POWER CONNECTION, DISCONNECT SWITCH, SOUND LEVEL
CH-1a,2a	MCQUAY	CDE20101	INTERIOR BUNDLES		480	54	44	14'						♥30 FT TO SIDE- 75 dba

BOIL	ER SCHEI	OULE											
MARK	MFR	MODEL	IN	PUT TOIL GPH	OUTPUT MBH	EWT	PUT LWT	тон	нР	ELECT	EFF	FLUID	REMARKS
B-1,2	WEIL MCLAIN	1088WF	3103	21.5	2132	165	180	1'	73.2	120V/1PH/60HZ	80%	WATER	RAY BURNER- DUAL FUEL OUTDOOR TEMPERATURE RESET
				T									

PUM	P SCHEDU	الكبك										,	
MARK	MFR	SERIES	MODEL	RPM	GPM	TDH		DISCH	НР	ELECT	EFF	FLUID	REMARKS
P1, P2	BELL & GOSSETT	1510	2-1/2FB	1750	285	65'	2"	2-1/2"	7-1/2	460V/3PH	75%	WATER	
.P3	BELL & GOSSETT	1510	4BC	1750	570	65'	. 5"	4"	.15	460V/3PH	82%	WATER	STANDBY, 100% CAPACITY
CHWP1,2	BELL & GOSSETT	1510	4BC	1750	485	70'	5"	4°	15	460V/3PH	80%	WATER	

ARK	MFR	SERIES	PANEL SIZE	NECK SIZE	CFM RANGE	REMARKS
A	TITUS	TDCA	24×24	6×6	-150	CEILING SUPPLY DIFFUSER, 4-WAY THROW, UNLESS SHOWN ON PLANS; OFF-WHITE
В	+		/24x12	• 9x9	150-300	
c	+-		/24x12	* 12×1 2	300-500	
D	++-			15x15	500-780	
E	+	++-		18×13	780-1100	
F	++-	+	 	21×21	1100-1500	
G	+	_	1			NOT USED
Н.	+	350RL	/24x1: /24x1:	2* 6x6	-100	CEILING RETURN/EXHAUST REGISTER; OPPOSED BLADE DAMPER; OFF-WHITE
	++-	1 1	/24×12		100-250	
	++		/24×12	* 12x12	250-450	
K	1-1-		11	14x14	450-600	
L	+			18x13	600-1000	
М	+			20x2)	1000-1300	
N		1		22×2 2	1300-2000	
0		DL	T	50x1)	1500	DRUM TYPE DIFFUSER
Р		DL		70×1)	2800	DRUM TYPE DIFFUSER
Q		33RL		48x33	5600	HEAVY DUTY SIDEWALL RETURN REGISTER, OPPOSED BLADE DAMPER
R		33RL		30x30	3200	HEAVY DUTY SIDEWALL RETURN REGISTER, OPPOSED BLADE DAMPER
S		DL		18×6	400	DRUM TYPE DIFFUSER
Ť		LL-1		96×6	400	LINEAR DIFFUSER
U		TMR		30" 5	2000	ROUND CEILING DIFFUSER
٧		33RL		24x2)	1400	HEAVY DUTY SIDEWALL RETURN REGISTER, OPPOSED BLADE DAMPER
W		301 RL		24×13	700	DOUBLE SIDED TRANSFER GRILLE
X		TBD-10	48×2	8"¢	300	PLENUM SLOT DIFFUSER w/1"SLOT WIDTH
Υ		LL-1		96×1)	1000	LINEAR DIFFUSER
Z	1	300 RL	1	20x2)	1000	SIDEWALL REGISTER; OPPOSED BLADE DAMPER

MECHANICAL SYSTEMS GENERAL NOTES

- DO NOT SCALE DRAWINGS, CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS IN THE FIELD AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY & ALL DISCREPANCIES.
- 2. IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY PIPE, FITTING OR MINOR DETAIL. SYSTEM & COMPONENTS SHALL BE INSTALLED ACCORDING TO THE INTENT AND MEANING OF CONTRACT DOCUMENTS AND IN ACCORDANCE WITH GOOD PRACTICE.

 3. CONTRACTOR IS RESPONSIBLE TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS WITH FACILITIES AND SERVICES TO MEET REQUIREMENTS INDICATED AND IN ACCORDANCE WITH APPLICABLE CODES AND ORDINANCES.
- 4. EQUIPMENT AND COMPONENTS HAVING EQUAL PERFORMANCE CHARACTERISTICS BY OTHER MANUFACTURERS MAY BE CONSIDERED, PROVIDED DEVIATIONS IN DIMENSIONS, OPERATION AND OTHER CHARACTERISTICS DO NOT CHANGE DESIGN CONCEPT OR INTENDED PERFORMANCE AS JUDGED BY THE ENGINEER, BURDEN OF PROOF OF EQUALITY OF PRODUCTS IS ON THE CONTRACTOR.
- EQUIPMENT AND PIPING TO BE INSTALLED IN ACCORDANCE WITH SEISMIC REQUIREMENTS OF SECTION 1113 OF THE CONNECTICUT STATE BUILDING CODE.
- 6. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL OTHER TRADES.
- 7. ALL EQUIPMENT SUPPORTS, DUCTWORK AND PIPE HANGERS TO BE CONNECTED FROM THE BUILDING STRUCTURE.
- 8. ALL PENETRATIONS THRU RATED WALLS, FLOORS AND CEILINGS SHALL BE SEALED TO MAINTAIN RATING.
- 9. ALL PENETRATIONS THRU SHEER WALLS TO BE COORDINATED WITH STRUCTURAL ENGINEER.
- THERMOSTAT AND TEMPERATURE SENSOR LOCATIONS TO BE COORDINATED WITH INTERIOR WALL LAYOUT, REFER TO ARCHITECTURAL PLANS.
- 11. CEILING DIFFUSER AND REGISTER LOCATIONS TO BE COORDINATED WITH CEILING GRID, LIGHTING & SPRINKLER LAYOUT. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
- 12. PROVIDE FLEXIBLE DUCTWORK CONNECTION TO ALL CEILING DIFFUSERS AND REGISTERS. (MAXIMUM 5'-0" LONG)
- 13. PROVIDE MANUAL VOLUME DAMPERS AT ALL BRANCH DUCTWORK TAKEOFFS. 14. PROVIDE FIRE DAMPERS W/ACCESS DOORS AT ALL FIRE RATED WALLS.
- 15. PROVIDE SMOKE DAMPERS W/ELECTRIC ACTUATORS AT ALL SMOKE BARRIER WALLS.
- 16. PROVIDE FLEXIBLE CONNECTIONS BETWEEN MECHANICAL EQUIPMENT AND DUCTWORK.
- 17. PROVIDE MINIMUM OF 10' ACQUISTICAL DUCTWORK LINING AT EACH AIR HANDLING UNIT AND VARIABLE AIR VOLUME BOX SUPPLY & RETURN UNIT CONNECTION.
- 18. INSULATE SUPPLY AND RETURN DUCTWORK WITH 1-1/2" DUCTWRAP.
- 19. PROVIDE SHUT-OFF VALVES AT ALL BRANCH PIPING TAKEOFFS. 20. INSULATE HOT WATER HEATING AND CHILLED WATER SUPPLY AND RETURN PIPING.

EGEND	

ᄕ	3END		
HWR HWS HWS KINS HWS HWS KINS HWS HWS KINS HWS HWS KINS H	CHILLED WATER RETURN CHILLED WATER SUPPLY		AIR CONDITIONING UNIT AIR HANDLING UNIT AIR SEPARATOR BOILER CEILING FAN CABINET HEATER CHILLER CHILLER CHILLED WATER PUMP CONDECTOR CONDENSING UNIT EXHAUST FAN EXPANSION TANK ELECTRIC UNIT HEATER FAN COIL UNIT FUEL OIL PUMP FINNED TUBE PUMP ROOF EXHAUST FAN ROOF FAN ROOF FAN ROOF FAN UNIT HEATER WATER HEATER THERMOSTAT TEMPERATURE SENSOR SMOKE DETECTOR SMOKE DETECTOR SMOKE DETECTOR SHOW BACKFLOW PREVENTER SHUT—OFF VALVE GLOBE VALVE BALANCING VALVE STRAINER FLOW CHECK VALVE
		••	

REVISED PER STATE COMMENTS: 08 FEB 99

STATE PROJECT NO.: 080-076 Antinozzi THE THOMAS EDISON Associates MIDDLE SCHOOL MERIDEN, CONNECTICUT

Architecture & Interiors 4021 Main Street Stratford, Connecticut

MECHANICAL SCHEDULES CHECKED BY: SCALE: NTS DATE: NOV 06 1998 J08 NO.: 97181

501

	l								HA	٩R	D۷	/AF	RЕ																						S	OF	T۱	NΑ	RI	Ε									
	r			Οl	JΤ	Pι	JΤ	S						1	NΡ	U.	TS					Г		,	٩L	AR	MS	S			Τ					•									Τ				_
HW/CHW		DK	GΙ	ſΑ	L	1	١N	Αl	-0	G	D	IG	iΤ/	ΑL	I	A	λN	ΑI	.0	G		[OIC	3I T	ΑL		A١	۱A	L.C	G	1	.,		E٨	15	FI	UN	1C	TIC	ЛС	ıs				L	R	EMA	RK	S
SYSTEMS	CONTROL RELAY	SOLENOID	CONTRACTOR	FLOATING		PNEU. TRANSDUCER	0-10 V.D.C.	4-20 MA	VFD	SETPOINT AD	PRESSURE SWITCH	FLOW SWITCH	CUBBENT DELAY	CUMMENI MELAY	TEMPERATURE	ENTHALPY	PRESSURE	POSITION	CO2 SENSOR	FLOW (CFM)	PERCENTAGE	STATUS	ALARM	SHUTDOWN	MAINTENANCE	2000	HIGH LIMIT	LOW LIMIT			SCHEDULE S/S	DUTY CYCLE	DEMAND LIMITING	NIGHT SETBACK	ECONOMIZER	VENT / RECIRC.	IEMP, CONTROL	ENIMALPY DEHEAT CAIL DESET	H W DOIL FD ODTIN	HOT WATER DESER	HOW A DECET	WAY CONTROL	HEATING / COOLING	MINIMIN POSITION			·		
OUTSIDE AIR	L			L		L						\perp	\perp	\perp	×	L		L	L	L	L	L	Ц		1	1		1	\perp	L	L	\perp				\perp	\perp	\perp	_	\perp		\downarrow	_		┸				_
HOT WATER SUPPLY	L			L	L	L		L					1		×	L	L	Ĺ	L						\perp	;	4	4		L	L	ot	L	Ц		\perp	1	_	\downarrow	1			1		┖				
BOILER #1	×			L		L						\perp	1		L	L	L						×		\perp	\perp	╧		┸	Ĺ	L	Ĺ						\perp))	<u> </u>			$oldsymbol{\perp}$				_
BOILER #2	×				L								┙		L		L						×					\perp	L	L	L								þ	4	Į,	4							
C.A. DAMPERS	×																	L	L												L																		
P-1 PUMP	×												,	×	L							x	×						L	L	L		L										L						
P-2 PUMP	×						L						þ	ĸ	L							X	×			\perp					L		L				1.						L						
CHLR-1	×					L				x		×		\perp	L							L	x		\perp	\perp			L		L												L						
CHLR-2	×		L			L	L			x		×	⊥	l	L	L	L		L			L	x						L		L					\perp					L		L		上				
CHWS	L					L									×	L										ŀ	×	٠		L	L													L	EA	сн с	HILLE	R CO	М
CHWR	L												L		x)	< ×	4															L						
CHW PUMP P-3	x												,	<								X	×																										
CHW PUMP P-4	×												,	<								×	×			Ī					L																		
REFRIG MON	Ĺ											,	4	Ĺ								×																	L										
CHLR RM VAC	×																														L																		
LIGHTING	L		x												L	L	L	L													L																		
PHOTOCELL										\rfloor					L		L				×										L													L					
												\prod	\int		L	Ĺ																	Ц									I		Ĺ					
													I																						\int														
												J	Γ	Ι	Γ										\int											Ī	J	\int		\int		I							_

	Т								_					111					Ť	_		<u> </u>			141	MΑ	71/	. 1											_		
							H/	٩R	D۷	/AF	RE								L												5	SOF	- T	₩ 4	RE	· ·					
¥	Γ		ΟU	TP	רטי	rs						I١	ŀΡΙ	JΤ	S				Τ		,	AL,	٩R	MS	<u>`</u>		T														
* _{VAV}	0	IGI	TAL	-T	A١	۱A۱	-0	G	D	IG	TΑ	L	Г	Α	N۶	۱L()G			DI	GIT	ΓAL	Ţ	ΑN	ΑL	.00	;			E	ИS	F	1 U	10.	ΓIC	N	S				REMARKS
SYSTEMS AHU-1,2,5, 7,10,11	CONTROL RELAY	CONTRACTOR	FLOATING		PNEU. TRANSDUCER	4-20 MA	VFD	BOX CTLR.	PRESSURE SWITCH	FLOW SWITCH	CURRENT RELAY		TEMPERATURE	ENTHALPY	PRESSURE	PUSHION	ELOW (CEA)	PERCENTAGE	STATUS	ALARM	SHUTDOWN	MAINTENANCE	Treat thou	LOW LIMIT				SCHEDULE S/S	DOLY CYCLE	NIGHT SETBACK	ECONOMIZER	VENT / RECIRC.	TEMP. CONTROL	ENTHALPY REHEAT COIL RESET	H.W. BOILER OPTIM	HOT WATER RESET	H.O.W.A. RESET	VAV CONTROL	HEATING / COOLING	MINIMUM POSITION	
H.W. RAD	$\overline{}$	x		Т													Ι	Ι	Γ				Τ				I														TYPICAL
SPACE													х			\prod																					L				TYPICAL
VAV BOX	П							X									×	×	L	L										\perp	L							L			TYPICAL
REHEAT VLV	П					x																				Ц		\perp						_ _		L			Ц		TYPICAL
VAV BOX FAN	×				\bot																															L			Ш		TYPICAL.
SUPP. FAN	x						x				×								×	x															L				Ш	Ц	
RET. FAN	×		Ш				x				×					\perp			×	X						Ц					L			_	L				Ш		EXH. FAN AHU-7
SUPPLY AIR S.P.			П				Ц	Ц		\perp		L			x	\perp			L				,	(x											L			L	Ш		
SUPPLY AIR	Ш	╧	Ш												1	1	×		L	L			>	×	Ц				_	\perp	L		1	_i_	L		L	L		Ц	
RETURN AIR	Ш		Ш	_		Ш										1	×		L	L		\perp	,	×			1			\perp	L			_ _		L			Ш	Ц	
OA DAMPER		\perp	Ш	1		x					L		Ш		╛	\perp		┸	L	L		\perp		\perp	Ц	\perp	1			\perp	L	Ц		_ _	L		L			Ц	
RA DAMPER	Ц		Ц	1		×					L			_	1	\perp	╧	\perp	L	L	Ц	\perp	┸	L	Ц	Ц	1	\perp	1	\perp		Ц		_ _	L	L	L		Ш	Ц	
RLF DAMPER	Ц		Ц	1	\perp	×	Ц	\Box		\perp	\perp		Ц	_		1	L	L	L	L				1	Ц	Ц	1	\perp	_	┸		Ц	1	_ _	L	L			Ш		
CO2	Ц	\perp	Ц	4	\perp	Ш	Ц	Ц	_	\perp	\perp		Ц	1	_	1	4	_	L	L		\perp	Ľ	×	Ц	Ц	1	\perp	_	1	_	Ц	1	_ _	_	L	L		Ц	Ц	
SUPPLY AIR	Ц	_	Ц	1	\perp	Ш			_	1	\perp		Ц	_		1	1	L	L	L	Ц	Ц		\perp	Ц	\perp	1	1	1	\perp		Ц	1	_ _	L	L	L		Ш		
MIXED AIR			\coprod	1	\perp	Ш			_	_	1		Ц		1	\perp	\perp	L	L	L		Ш	1	L	Ц	\perp	\downarrow	\perp	1	\perp	L	Ц	\perp	_ _	L	L		L	Ц	Ш	
ENTHALPY	Ц		Ц		\perp	Ш				\perp		Ц	Ц	x	1	1	\perp	L	L	L	Ц		┸		Ш		1	\perp		\perp		Ц	1	_ _	L		L				
HW VALVE	Ш		Ш	1	\perp	×			_	1	1			1		1			L		Ц		\perp		Ш		1		\perp	_	L	Ц	1	_ _					Ц		
CHW VALVE	Ц		Ш			x							Ш						L	<u> </u>			\perp													L					AS APPLICABLE
D/X COOLING		ĸ		I															ĺ		П		ı				1													ı	AS APPLICABLE

* REFER TO SEQ OF OPERATIONS FOR SPECIFIC SYSTEM CONTROL.

														I	N.	ΡI	U'.	Γ	/	/	0	U	P	U'.	Г	S	U	M	M.	ΑF	R۲	r																					
							ŀ	ΗA	RE	W	AR	Ė																							5	50	FT	W	ΑF	٦E													
CONSTANT			Οl	JTI	ΡU	ITS	3		T				١N	IΡ	JΤ	S					Γ			Αl	A	R۱	1S	;			Γ															I							
VOLUME	D	IGI	TΑ	L	Α	١N	ΑL	.00	3	D	GI	TΑ	L		Α	N	٩L	0	G			DI	G۱	ГΑ	L	A	N	ΑL	0.	G				E١	1S	F	·U	N	СТ	IC	N:	s					f	٦E	MΑ	RH	(S	;	
SYSTEMS AHU-3,4,6 8,12	CONTROL RELAY	CONTRACTOR	FLOATING		PNEU. TRANSDUCER	0-10 V.D.C.	4-20 MA	VFD	BOX CILK.	PRESSURE SWITCH	CONTACT	CURRENT RELAY		TEMPERATURE	ENTHALPY	PRESSURE	POSITION	CO2 SENSOR	FLOW (CFM)	PERCENTAGE	STATUS	ALARM	SHUTDOWN	MAINTENANCE		HIGH LIMIT	LOW LIMIT				SCHEDULE S/S	DUTY CYCLE	DEMAND LIMITING	NIGHT SETBACK	ECONOMIZER	VENT / RECIRC.	TEMP. CONTROL	ENTHALPY	REHEAT COIL RESET	H.W. BOILER OPTIM	HOT WATER RESET	H.O.W.A. RESET	VAV CONTROL	HEATING / COOLING	MINIMUM POSITION						٠		
SPACE	\coprod	\perp	L		Ц			_	1	1	1			×	\Box							L	L	L	L		L				L	L		L							L	L			L	1							
SUPP. FAN	×	_	L	Ц	Ц		-+	×	1	\perp	\downarrow	×		L	Ц			_			╀╌	x	⊢	L		L	L		L		L	L	L	L							L	L	L	L	L	ŀ	10 V	FD /	AHU-	-12			
EXH. FAN	×	\perp	L	Ц	Ц		4	×	1	\downarrow	1	×			Ц						×	X	L	L		L	L	L		L	L										_	L	L	L	L	L						_	
OA DAMPER	Ц	\perp	L				×	\perp	1	\perp	\perp	L						_			L	L	L			L	L				L											L	L	_		1							
RA DAMPER	Ш		L				x		1		1	L								L	L	L		L		L		L			L												L	L	L							_	
RLF DAMPER	Ц		L				×		1			L									L		L	L			L				L	L																				_	
CO2			<u> </u>	Ш				┙	1		L							x				L	L			×	×				L	L	L													l							
SUPPLY AIR	Ц	1	L		Ц		_	4	1		\perp	L								L	L	L	L	L		L	L				L				L						L			L	1.							_	
MIXED AIR	Ц	⊥.	L	Ц	Ц			_	1	\perp	L										L	L	L				L				L		L	L	L	L							L	L	L	l						_	
ENTHALPY	Ц			Ц	Ц			_	1						x						L	L	L				L				L	L									L	L		L							_	_	
HW VALVE	Ц	\perp					x		1													L	L																					L	L								
CHW VALVE	Ц		L				х		1			_												L			L																										
MARK TIMER	Ц	╧		Ц					1		×								_				L		Ш		L				L	L	L	L	L																		,
									1	\perp		L											L								L																						
		\perp					1		1		\perp	L		Ш								L	L								L	L													L								
	Ц	\perp	Ц		Ц	\perp	1		1	\perp	L											L				L	L	Ŀ			L		L		L							L	L									_	
	Ц				Ц				1												L					L						Ĺ														Ι							
		L					\rfloor																																														
	\coprod																																													Ι							
	Ц								\perp												Ĺ																														_		
																															-																						

					_				_	_			_				I	N.	P	U'	T		/	(JC	JI	> [JΊ	ľ	S	U	M	M	ſΑ	ıR	Ϋ́			_									_				_					_
	Τ								H	٩F	?D	W	٩F	RΕ			_							T		_		_	_	_	_						_			- 5	SC	F	ŢΨ	۷A	R	Ε		_				_					
CONSTANT			(ΟU	TF	PU	T	s			I			_	1	NI	Pι	JΤ	S				_	1			,	٩L	Al	₹ <i>N</i>	٧S	5				_				_			_		_	_	_					Ī					
VOLUME	L	ΝG	ΙT	ΑL		Α	N	Αl	.0	G	L	DI	GI	T/	٩L	1		Α	N.	ΑL	0	G	_	1	D	IG	T	Α	_ :	Α	١N	A	LC	G		_		_	E١	15	<u> </u>	FL	IN	С	TI	10	15	}			_	┙	RE	MA	RK	S	
SYSTEMS AHU-9 (KITCHEN)	CONTROL RELAY	SOLENOID	CONTRACTOR	FLOATING		PNEU. TRANSDUCER	0-10 V.D.C.	4-20 MA	VFD	BOX CTLR.	DDECCI IDE CWITCH	ELOW CUITCH	CONTACT	CHERENT RELAY	במטורים שרדעו		TEMPERATURE	ENTHALPY	PRESSURE	POSITION	CO2 SENSOR	FLOW (CFM)	PERCENTAGE	י בועסבאועסב	STATUS	ALARM	SHUTDOWN	MAINTENANCE		HICH TIMIL	LOW LIMIT					SCHEDULE S/S	DUTY CYCLE	DEMAND LIMITING	NIGHT SETBACK	ECONOMIZER	VENT / RECIRC.	TEMP, CONTROL	FNTHAI PY	DEUCAT COIL DECET	יו זיי סטוי בס סטבורי	H.W. BOILER OPIIM	HOT WATER RESET	H.O.W.A. RESET	VAV CONTROL	HEATING / COOLING	MINIMIM POSITION	NOTICOL MOMINIM					
SPACE											L	I		I	I	I	x													×	x														I					L							
SUPPLY FAN	×	·							Ŀ	_	L			. >	۱.	1							L		x	×						L	1	ŀ						L		L	L	1	1						Ŀ						
EXH. FAN	×								L	L	L			,	<u> </u>	1					L		L	1	x	×				L	L	L							L	L	L	L	L	L					_			1					
OA DAMPER	×									L	L					1				L	L	L		1						L		L			1					L		L		╧	_			_		L	L						
SUPPLY AIR	L			_						L	L			ļ	1	1	×		_	L	L	L	L	1						×	×	L		\perp	1				L	L	L		L	\perp	_		_		L	L	L	1					
HW VALVE	L							×			L					1				L	L	L	L	╽										\perp	_				L		L	L	L						L		_	┙					
CHW VALVE								x		L	L		L	L		1				L	L												L	\perp		\Box					L		L						L								
EXH. FANS	×										L			>	4										x	x				Ŀ											L								L			1	TYPICAL				
	L									L	L	L				1						L		1						L		L		1	┙				L			L			1					L	L	1					
									L	L	L			L						_		L				\perp									1				_	L	L	L			1					L	L	1					
	L		_	4	_	_	_			L	ļ	\downarrow	1	\downarrow	_	1	1			_	L		Ļ	1	_	4						-	ļ	1	4	4	4			L	L	-	1	+	1	4	4	_		L		1					
72.00	-	4	4	+				_	_	\vdash	╀	+	+	+	+	+	+			ļ	_	\vdash	╀	+	-	-	-	_	-	_	╀	+	+	+	+	4	-	-		H	╀	\vdash	+	+	+	+	-	_	L	\vdash	+	+		_			
NEUTRA (ZATION	╀	+	+	+	-	-	-	_		\vdash	╀	+	+	+	+	+	\dashv	\dashv		-	_	╀╌	╀	+	+	x	-	-	-	_	╁	╁	╁	+	+	\dashv	\dashv	\dashv	_	┝	\vdash	╀	ł	+	+	+	+	-	L	H	╁	┨		—			
NEUTRALIZATION TANK ALARM	H	\dashv	+	-	\dashv	4	-	-		├-	┞	+	+	+	+	╂	\dashv	\dashv		-	H	╀	+	+	\dashv	$\hat{\dashv}$	-		-	-	╁	╀	+	+	+	-	\dashv	-		┝	+	+	H	+	+	+	-	_	H	+	H	┨					—
	-	+	+	+	\dashv	-	\dashv	L		\vdash	ŀ	╀	+	+	+	+	+	-		L	L	\vdash	+	╁	+	+	-		-	L	+	╁	+	+	+	-	\dashv		_	├	+	+	+	+	+	+	-	_	_	╀	+	+					_
	H	\dashv	+	\dashv	\dashv	\dashv	-	H		├	╀	╀	+	+	+	+	\dashv	\dashv		\vdash	-	┝	╀	╁	+	-			-	H	+	╁	+	+	+	\dashv	\dashv	\dashv	_	┝	H	H	+	+	+	+	+	_	H	+	+	+		—	-		
	\vdash	\dashv	+	+	-	\dashv	\dashv	H	_	├	┞	+	+	+	+	+	+	-		_	H	╀	H	+	+	\dashv	-	\dashv	_	H	╀	+	+	+	+	+	\dashv	-	-	+	╁	╁	+	+	+	+	+	-	-	╁	+	+					
	╀	+	+	+		-	-	-		\vdash	╀	+	+	+	+	╁	+	-		-	\vdash	┝	+	+	+	\dashv	-	-	-	H	H	╁	╁	+	+	-	-	-	-	-	┞	+	╁	+	+	+	\dashv	-	-	╁	╁	+	<u> </u>				
	H	\dashv	+	\dashv		-	-	-	-	\vdash	╀	\dagger	+	+	+	\dagger	+	\dashv		-	-	+	+	\dagger	+	+	\dashv			H	\perp	t	+	+	+	+	┥	-	-	-	+	\dagger	+	+	+	+	+	-	-	╁	+	+					
		Ц					لـــ		_	<u> </u>	_			_				1		L	L			_1.		_	_		_	_	Ь.	<u> </u>	_						_	1	_	۰				L				_	<u></u>				_		
ĺ																																																									

																I	N	P	U	Т	,	/	(JC	JF	Je	JΤ	,	S	U)	Μì	MΔ	ΑF	RΥ	7						_																
								H	łΑ	R۱)W	ΆΓ	₹E																									S	0	- T	W,	۱F	E														1
CONSTANT			(DU.	TF	'n	TS	;						ı	N	Ρl	דנ	s				_	Ī			F	۱L	ΑF	۲М	S								_											Γ	_							1
VOLUME	ш	OIC	ΙE	AL		Α	N/	۱L	00	3	D	IG	T	۹L.	I		Α	N	ΑI	_C	G	_	I	D	IG	IT.	ΑL	_	Α	N	٩L	00	60	L	_		ΕM	15	F	U	<u> </u>	· TI	10	NS	3				L		R	ΕM	AF	RK:	S		
SYSTEMS AHU-13 (GREENHOUSE)	CONTROL RELAY	SOLENOID	CONTRACTOR	FLOATING		PNEU. TRANSDUCER	0-10 V.D.C.	4-20 MA	VFU Sex on a	BOX CILK.	PRESSURE SWITCH	FLOW SWITCH	CURRENT OF AV	רחששבאו שבואו			ENTHALPY	PRESSURE	100000	CO2 SENSOR	FLOW (CFM)	PERCENTAGE	011110	SIAIUS	ALARM	SHUTDOWN	MAINTENANCE		HIGH LIMIT					SCHEDULE S/S	DUTY CYCLE	DEMAND LIMITING	NIGHT SETBACK	ECONOMIZER	VENT / RECIRC.	TEMP. CONTROL	ENTHALPY	REHEAT COIL RESEI	H.W. BOILER OPTIM	HOT WATER RESET	H.O.W.A. RESET	VAV CONTROL	HEATING / COOLING	MINIMUM POSITION									
SPACE	Ц		4	4	4	4	4	1	4	4	_	4	\perp	_	1	×			ļ.,	L	\downarrow	╀	1	1	1	4	4	_	×	Х	_	_	_	L_						_	_	4	_	_	4			_	Ļ							_	1
SUPPLY FAN	×		1	4	4	1	4	4	4	4	\downarrow	4	+	<u> </u>	1	4			ļ.	L	Ļ	1	+	×	-+	_	4	4		_	\perp			L.			Ц			_		4	4					L	Ļ	_							-
EXH. FAN	×		_	_	4	1	4	1	4	4	4	1	1;	×	4	_		L	١.		Ļ	Ļ	ŀ	×	×	1	4	4	_	_	\perp	_		L						_		1	4		_			_	L							_	4
OA DAMPER	X		_	1	1		1	1	1	_	4	1	1	1	1	_		_	ļ.	L	L	Ļ	1	1	1	_	1	_	\perp						_					_			_	4					L							_	1
SUPPLY AIR				_	1		_	1	1	_	4	1	1	1	1	×		L	١.	L	L	┖	ļ	1	1	_	1	_	×	х		_			L								4					_	L							_	┨
HW VALVE					1	1		×	1	_		1	1	1	1				L.		L	L	╽	_										L						_						_		L	L								
RAD VALVE		×			┙	_	_	1	_	_		\perp	1	1	1	_		L	L.	L	L	Ļ	ļ	1			_		\rfloor					L	L					\perp		\perp	\downarrow						L		_						
				_	1	_	_	1	1	_	4	4	\perp	1	1				L.		L	L	╽	1	1	_	\downarrow	╛						Ш									_						L								1
	Ц				1	_	1	4	_	4	4	1	1	1	1	_			ļ.		L	L	L	1	1		1	_				_				L			Ц			1	4						L	_							1
			\perp	_	1	4	\downarrow	1	1	┙	_	1	1	1	_		_	_	L.	L	<u> </u>	L	1	_			_	1	\perp							_						\perp	4				_	L	L								
					1	1		1	1	4		\perp		1	1				ļ.		L	L	l	1	\downarrow	_	_	1												_		\perp	\downarrow		\Box				L								1
					╛			╛	_	_		1	1	╧	┙					L	L	L	1	\perp	_			_							L							\perp						_	L								1
	Ц			\perp	1	_		\perp		1			1		1				_	L		L	1	\perp	_		╛															1							L								
	Ш			\perp	1	╛		\perp	╛	┛		1	╧		1					L		L														L		_ '											L								1
				1	1		1	1	1	_		1		1	1				L.		L		l				_	_													\Box								L								1
				l	1								\perp		1				L.		L		l																										L]
									┙				⊥						L.				l												L														L			٠]
																																																	L								
				Ι			I		\int			I	I	I	I																																		Ĺ]
					\prod		I	\prod	I		I			I	I																																									_	

REVISED PER STATE COMMENTS: 08 FEB 99



STATE PROJECT NO.: 080-076
THE THOMAS EDISON
MIDDLE SCHOOL
MERIDEN, CONNECTICUT

Architecture & Interiors SCHEI

4021 Main Street
Strafford, Connecticut

CHECKED BY:

MECHANICAL SCHEDULES M 502

CHECKED BY: | SCALE: NTS | DATE: NOV 06 1998 JOB NO.: 97181