

# 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

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Thomas Edison Middle School  
Meriden Public Schools

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# 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 CO<sub>2</sub> 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 <sup>1</sup>	Total Area <sup>1</sup> (SF)	Occupancy Rate <sup>2</sup> (People/1000 SF)	Occupancy Ventilation <sup>2</sup> (CFM/person)	Area Ventilation <sup>2</sup> (CFM/SF)	Exhaust Rate <sup>2</sup> (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	
<sup>1</sup> Based on 1998 as-built drawings						
<sup>1</sup> Based on 2021 International Mechanical Code						

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 operable 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.

## 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	408	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
Classroom	420	Small group Room	Stained tiles
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**

AHU <sup>1</sup>	DESIGN AIRFLOWS			MEASURED AIRFLOWS				NOTES	
	Supply CFM	OA CFM	Design % OA	Supply CFM	Return CFM	OA CFM	% OA	Min Damper Position (% Open)	Supply VFD <sup>2</sup> (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

<sup>1</sup> See Appendix B for rooms associated with each air handler.  
<sup>2</sup> NR = No Reading

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 5<sup>th</sup> 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.



**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 CO<sub>2</sub> sensors may also be installed to measure ventilation effectiveness.

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## 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.

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## 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.

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## 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**

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### Wings Testing and Balancing Report



**WING'S** TESTING & BALANCING CO., INC.

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# **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



# WING'S TESTING & BALANCING CO., INC.

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

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VELOCITY PRESSURE READINGS								
<b>PROJECT:</b> Thomas Edison Middle School - Meriden CT						<b>DATE:</b> 4/10/23		
<b>AREA SERVED:</b> Building						<b>TECH:</b> MS,BS, DD		
TRAVERSE LOCATIONS	DUCT SIZE "	AREA SQ.FT.	DESIGN		CENT. STAT. PRESS. "	TEST		NOTES
			FPM	CFM		FPM	CFM	
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	
AHU-2 OA	127" x 98"	86.4	ND	ND	Velgrid	23	1987	
AHU-3 Supply	103" x 66"	47.2	ND	ND	Velgrid	413	19,494	
AHU-3 Return	---	---	ND	ND	Calc.	---	18,685	
AHU-3 OA	108" x 98"	73.5	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	Velgrid	436	9897	45Hz
AHU-6 Return	---	---	ND	ND	Calc.	---	8913	
AHU-6 OA	82" x 72"	41.0	ND	ND	Velgrid	24	984	
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	
<b>REMARKS</b>								
(1) The return fan for AHU-8 is not operational.								
<b>NA</b> Not Available   <b>ND</b> No Design   <b>DD</b> Direct Drive   <b>N/R</b> No Requirement								



## **Appendix B**

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### Table of Existing Conditions



## APPENDIX B - TABLE OF EXISTING CONDITIONS

FIELD NOTES					ASSIGNED EQUIPMENT		
Floor	Room Type	Drawing Room #	Drawing Room Name	Field Comments	VAV (FCU) Type	VAV Room 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	A	006	AHU-1
GROUND	Classroom	008	6TH LAB		A	009	AHU-1
GROUND	Corridor	009	CORRIDOR		---	---	---
GROUND	Classroom	010	6TH CLASS		B	012	AHU-1
GROUND	Classroom	011	6TH CLASS		D	012	AHU-1
GROUND	Corridor	012	CORRIDOR		F	006	AHU-1
GROUND	Restroom	013	BOYS		F	006	AHU-1
GROUND	Corridor	014	CORRIDOR		-	-	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
GROUND	Classroom	023	6TH CLAB	FUME HOOD EXHAUST + MINOR LEAKS + MISSING TILE OVER FUME HOOD	B	021	AHU-1
GROUND	Classroom	024	6TH CLASSROOM		C	025	AHU-2
GROUND	Corridor	025	CORRIDOR		---	---	---
GROUND	Classroom	026	6TH CLASSROOM	SAGGING TILES + AJAR TILE	D	028	AHU-2
GROUND	Classroom	027	6TH CLASSROOM	1 RETURN GROSS	D	031	AHU-2
GROUND	Corridor	028	CORRIDOR		D	028	AHU-2
GROUND	Restroom	029	BOYS		D	028	AHU-2
GROUND	Lobby	030	LOBBY	CEILING HEIGHT 13'2" AND 10" IN DIFFERENT SECTIONS (SEE PHOTO)	A	030	AHU-2
GROUND	Corridor	031	CORRIDOR		H	031	AHU-2
GROUND	Restroom	032	WOMEN		H	---	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	B	034	AHU-2
GROUND	Corridor	038	CORRIDOR		-	-	-
GROUND	Classroom	039	6TH CLASSROOM		B	039	AHU-2
GROUND	Computer Lab	040	6TH CLAB	FUME HOOD EXHAUST	A	041	AHU-2
GROUND	Corridor	041	CORRIDOR		F	034	AHU-2
GROUND	Restroom	042	BOYS		F	034	AHU-2
GROUND	custodial	043	CUST./CORRIDOR	LARGE STAINING TILES + MISSING TILE SECTION/-	-	-	-
GROUND	Corridor	045	CORRIDOR		F	031	AHU-2
GROUND	Computer Lab	046	COMPUTER LAB		B	045	AHU-2
GROUND	Restroom	047	MEN		F	031	AHU-2
GROUND	Classroom	048	PREP ROOM	2 MISSING TILES	H	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				

Appendix B

FIELD NOTES					ASSIGNED EQUIPMENT		
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		FCU	---	---
1	Lobby	102	LOBBY				AHU-12
1	Waiting Room	103	ADMIN WAITING		VAV-G	103	AHU-11
1	Office	104	MAIL				AHU-11
1	Office	105	GENERAL OFFICE		VAV-F	105	AHU-11
1	Storage	106	RECORD STORAGE		VAV-G	107	AHU-11
1	Classroom	107	WORK ROOM		VAV-G	107	AHU-11
1	Storage	108	CLOSET		-	-	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	Restroom	129	HC TOILET		VAV-G	1st Floor	AHU-11
1	Nurse	130	NURSE		VAV-G	1st Floor	AHU-11
1	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		VAV-B	143	AHU-10& ??
1	Classroom	149	Classroom		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	Art Classroom	151.1	KILN	Kiln should have exhaust	---	1st Floor	---
1	Corridor	152	CORR		VAV-F	1st Floor	AHU-13
1	Vestibule	153	VESTIBULE		FCU-A	153	---
1	Classroom	154	Band/Orchestra		VAV-A	159	AHU-10
1	Classroom	155	Practice		VAV-D	160	AHU-10

Appendix B

FIELD NOTES					ASSIGNED EQUIPMENT		
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	Classroom	161	Choral		VAV-B	160	AHU-10
1	Corridor	162	Corridor		VAV-D	160	AHU-10
	Vestibule	163	VESTIBULE		FCU-A	163	FCU
	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
	Utility	174	DATA	Could not access	VAV-C	168	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
	Cafeteria	188	TEACHERS DINING		---	1st Floor	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
	Vestibule	204	VESTIBULE		---	1st Floor	---
	Utility	205	BOILER ROOM		---	1st Floor	---
	Utility	206	ELECTRICAL	2 dampers	---	1st Floor	---
	Utility	207	EMERGENCY GENERATOR	Overhead door, damper air intake	---	1st Floor	---
	Utility	208	MECH EQUIP YARD		---	1st Floor	---
	Utility	209	CHILLER ROOM	See notes	---	1st Floor	---
	Office	210	OFFICE	No access	AC-2	210	---
	Locker Room	211	LOCKERS		G	1st Floor	AHU-5
	Restroom	212	TOILET		---	1st Floor	---
	custodial	213	MAINTENANCE		VAV-F	223	AHU-5
	Storage	214	CUST STORAGE	leaks	UH-A	214	---
	Storage	215	EDUC. STORAGE		UH-A	215	---

## Appendix B

FIELD NOTES					ASSIGNED EQUIPMENT		
Floor	Room Type	Drawing Room #	Drawing Room Name	Field Comments	VAV (FCU) Type	VAV Room Location	AHU
	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	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
	Gymnasium	244	LARGE GYM	RETURNS ON WALL	---	1st Floor	AHU-3
	Storage	245	GYM STORAGE	exhaust fan disconnected, 1 missing ceiling tile	UH-A	245	AHU-5
	Corridor	246	CORR		---	1st Floor	AHU-5
	Office	247	OFFICE	Signs of leaks, ceiling tiles broken/displaced.	H	246	AHU-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		H	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
	Corridor	262	CORR		---	1st Floor	AHU-5
	Storage	263	GYM STORAGE		---	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	Classroom	303	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
1	Computer Lab	307	7TH GRADE CLAB		A	1st Floor	AHU-1
1	Classroom	308	7TH GRADE CLASSROOM		A	1st Floor	AHU-1
1	Corridor	309	CORRIDOR		---	1st Floor	AHU-1

## Appendix B

FIELD NOTES					ASSIGNED EQUIPMENT		
Floor	Room Type	Drawing Room #	Drawing Room Name	Field Comments	VAV (FCU) Type	VAV Room Location	AHU
1	Classroom	310	7TH GRADE CLASSROOM		B	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		A	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		B	1st Floor	AHU-2
1	Classroom	324	7TH GRADE CLASSROOM		C	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		A	1st Floor	AHU-2
1	Restroom	335	GIRLS		A	1st Floor	AHU-2
1	Classroom	336	7TH GRADE CLASSROOM		D	1st Floor	AHU-2
1	Classroom	337	7TH GRADE CLASSROOM		B	1st Floor	AHU-2
1	Corridor	338	CORRIDOR		---	1st Floor	---
1	Classroom	339	7TH GRADE CLASSROOM		B	1st Floor	AHU-2
1	Computer Lab	340	7TH GRADE CLAB		A	1st Floor	AHU-2
1	Corridor	341	CORRIDOR		A	1st Floor	AHU-2
1	Restroom	342	BOYS		A	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		B	1st Floor	AHU-2
1	Restroom	347	MENS		A	1st Floor	AHU-2
1	Office	348	PREP ROOM		H	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	BOY		VAV-F	406	AHU-2
2	Corridor	414	CORRIDOR		---	---	---

Appendix B

FIELD 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	BOY		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`				

## **Appendix C**

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### Room Ventilation Calculation

## APPENDIX C - ROOM VENTILATION CALCULATION

Drawing Room #	Drawing Room Name	Area (ft <sup>2</sup> )	Height (ft-in)	Volume (CF)	OA CFM Rp	OA CFM Ra	Total Vbz
					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'	2298	0	13.8	13.8
042	BOYS	147.2	9'	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



Appendix C

Drawing Room #	Drawing Room Name	Area (ft <sup>2</sup> )	Height (ft-in)	Volume (CF)	OA CFM Rp	OA CFM Ra	Total Vbz
					CFM/PERSON	CFM/SF	CFM
046	COMPUTER LAB	945	10'	9450	190	113.4	303.4
047	MEN	287.9	9'	2591	0	0.0	0.0
048	PREP ROOM	247.5	10'	2475	20	29.7	49.7
049	MECH	60	10'	600	0	0.0	0.0
050	LOBBY	640.4	10'	6404	0	38.4	38.4
051	ENTRY	823.1	10'	8231	0	49.4	49.4
052	STAIRS NO.2	318.8	10'	3188	0	0.0	0.0
053	STAIRS NO.1	298.1	10'	2981	0	0.0	0.0
054	Vestibule East	119.2	10'	1192	0	7.2	7.2
055	UTILITY ROOM	580.4	9' 10"	5707	0	0.0	0.0
056	Vestibule West	122	10'	1220	0	7.3	7.3
057	Machine Room	53.5	12'	642	0	0.0	0.0
101	VESTIBULE	113.76	10'	1138	0	6.8	6.8
102	LOBBY	1246.26	15'	18694	5	74.8	79.8
103	ADMIN WAITING	200	9' 8"	1933	40	12.0	52.0
104	MAIL	68	9'	612	10	4.1	14.1
105	GENERAL OFFICE	573.15	10'	5732	20	34.4	54.4
106	RECORD STORAGE	132.85	10'	1329	0	15.9	15.9
107	WORK ROOM	145.59	10'	1456	50	17.5	67.5
108	CLOSET	8.93	10'	89	0	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

Appendix C

Drawing Room #	Drawing Room Name	Area (ft <sup>2</sup> )	Height (ft-in)	Volume (CF)	OA CFM Rp	OA CFM Ra	Total Vbz
					CFM/PERSON	CFM/SF	CFM
135	CORR	717.3	9'	6456	0	43.0	43.0
136	MEN	214.6	9'	1931	0	0.0	0.0
137	WOMEN	215.8	9'	1942	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'	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'	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

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Drawing Room #	Drawing Room Name	Area (ft <sup>2</sup> )	Height (ft-in)	Volume (CF)	OA CFM Rp	OA CFM Ra	Total Vbz
					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

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Drawing Room #	Drawing Room Name	Area (ft <sup>2</sup> )	Height (ft-in)	Volume (CF)	OA CFM Rp	OA CFM Ra	Total Vbz
					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

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Drawing Room #	Drawing Room Name	Area (ft <sup>2</sup> )	Height (ft-in)	Volume (CF)	OA CFM Rp	OA CFM Ra	Total Vbz
					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
314	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
318	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
321	LOCKER CORRIDOR	181.75	10'	1704	0	10.9	10.9
322	GIRLS	123.52	9'	11241	0	0.0	0.0
323	7TH GRAD CLAB	1272.63	10'	12710	520	152.7	672.7
324	7TH GRADE CLASSROOM	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	667	10'	6581	300	80.0	380.0
328	CORRIDOR	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

Appendix C

Drawing Room #	Drawing Room Name	Area (ft <sup>2</sup> )	Height (ft-in)	Volume (CF)	OA CFM Rp	OA CFM Ra	Total Vbz
					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
402	STAFF WORK RM	365.6	10'	3656	30	21.9	51.9
403	SPECIAL ED	377.5	10'	3775	210	45.3	255.3
404	SPECIAL ED	381.6	10'	3816	0	45.8	45.8
405	GIRLS	121.1	9'	1090	0	0.0	0.0
406	CORRIDOR	171	10'	1710	0	10.3	10.3
407	8TH GRADE CLAB	1276.7	10'	12767	450	153.2	603.2
408	8TH GRADE CLASSRM	719.4	10'	7194	360	86.3	446.3
409	CORRIDOR	180.6	10'	1806	0	10.8	10.8
410	8TH GRADE CLASSRM	755	10'	7550	270	90.6	360.6
411	8TH GRADE CLASSRM	675.3	10'	6753	350	81.0	431.0
412	CORRIDOR	292.2	10'	2922	0	17.5	17.5
413	BOY	121.4	9'	1093	0	0.0	0.0
414	CORRIDOR	115.5	9'	1040	0	6.9	6.9
415	CUST	43.9	9'	395	0	0.0	0.0
416	STAIR NO.4	254.7		0	0	0.0	0.0
417	CORRIDOR	259.3	10'	2593	0	15.6	15.6
418	ELEC/TELE	103.6	10'	1036	0	0.0	0.0
419	DATA	77	10'	770	0	0.0	0.0
420	SMALL GROUP ROOM	331.8	9' 4"	3097	60	39.8	99.8
421	CORR	170.4	10'	1704	0	10.2	10.2
422	GIRLS	1249	9'	11241	0	0.0	0.0
423	8TH GRADE CLAB	1271.02	10'	12710	520	152.5	672.5
424	8TH GRADE CLASSRM	720.2	10'	7202	300	86.4	386.4
425	CORRIDOR	200.8	10'	2008	0	12.0	12.0
426	8TH GRADE CLASSRM	747.5	10'	7475	350	89.7	439.7
427	8TH GRADE CLASSRM	658.1	10'	6581	300	79.0	379.0
428	CORRIDOR	234.7	10'	2347	0	14.1	14.1
429	BOY	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
432	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

Appendix C

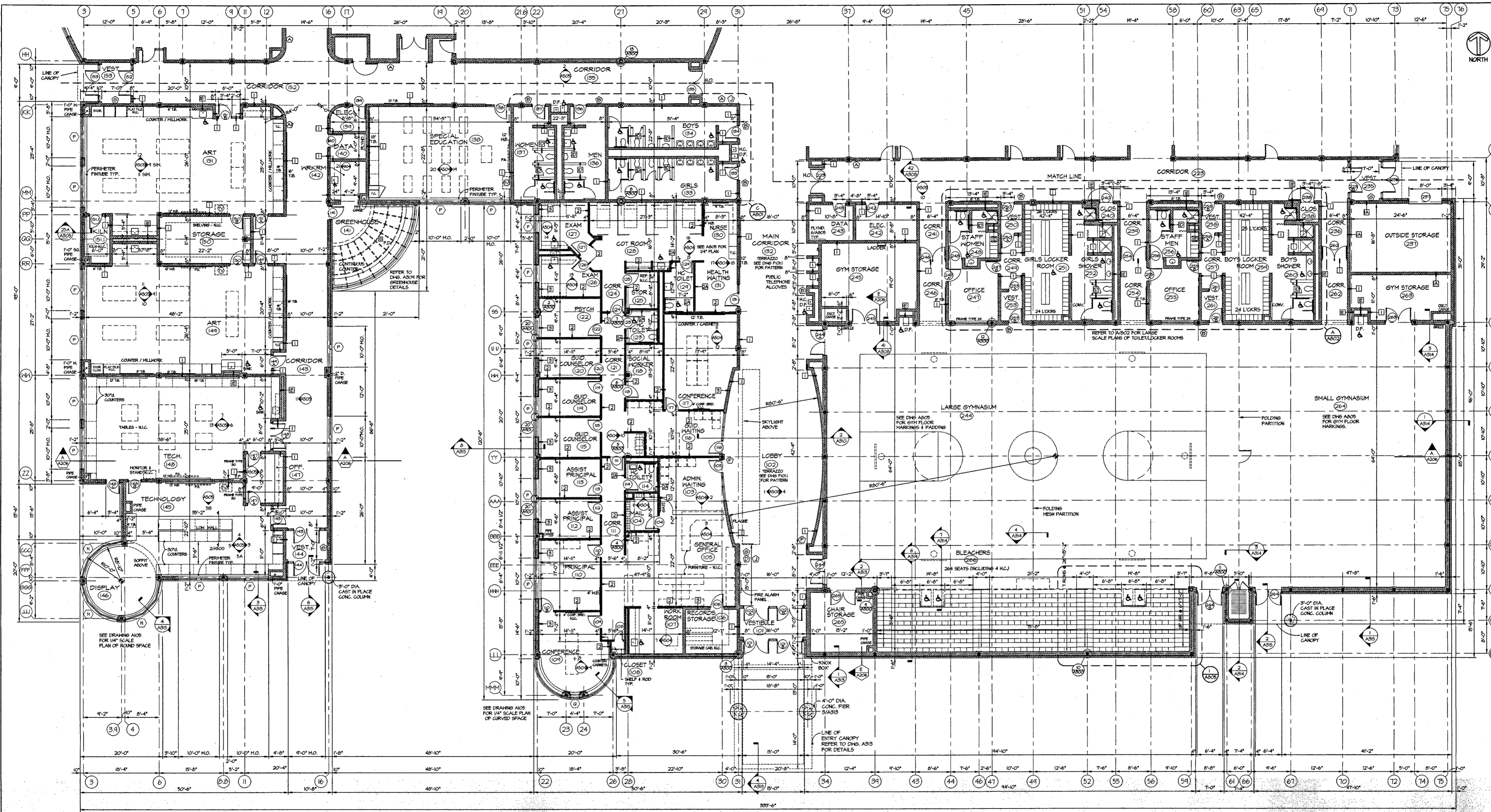
Drawing Room #	Drawing Room Name	Area (ft <sup>2</sup> )	Height (ft-in)	Volume (CF)	OA CFM Rp	OA CFM Ra	Total Vbz
					CFM/PERSON	CFM/SF	CFM
444	CUST	40.8	9'	367	0	0.0	0.0
445	CORRIDOR	249.6	10'	2496	0	15.0	15.0
446	COMPUTER ROOM	897.6	10'	8976	350	107.7	457.7
447	MEN	138.2	9'	1244	0	0.0	0.0
448	PREP 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**

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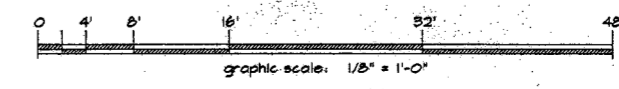
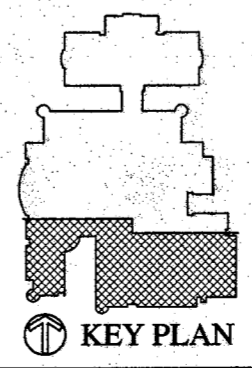
### 1998 Edison Drawings





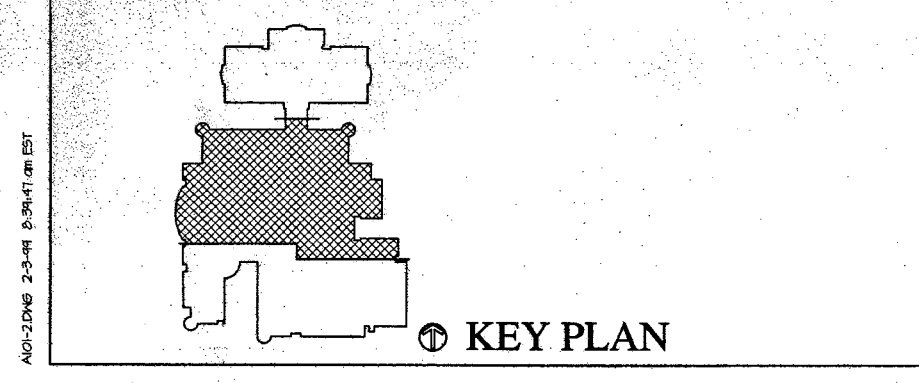
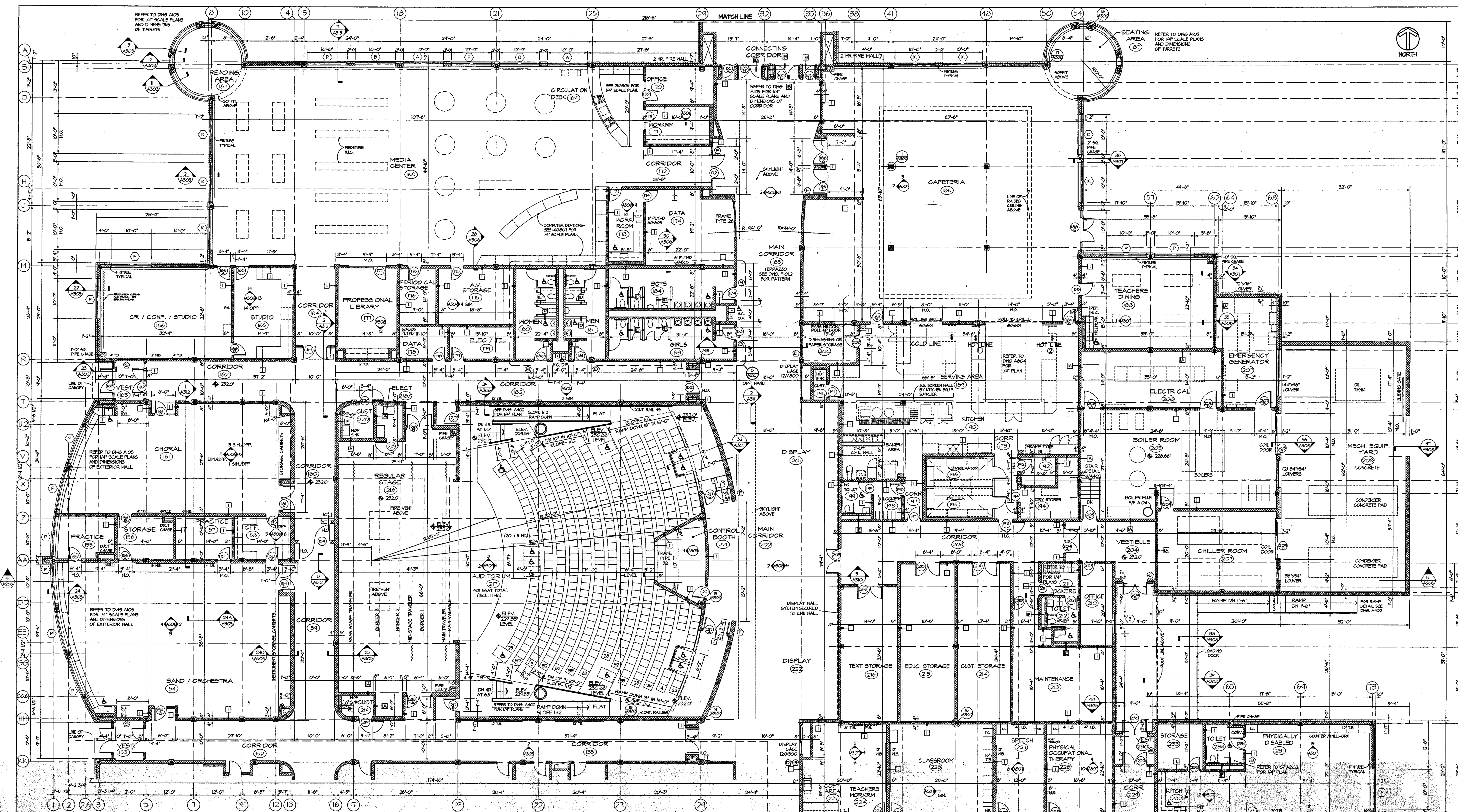
GRAPHICS LEGEND			
	ROOM NAME AND NUMBER		SIGNAGE DESIGNATION (SEE SHEET A409)
	DOOR NUMBER		COLUMN GRID LINES AND DESIGNATIONS
	INTERIOR ELEVATIONS (SEE SHEETS A401-A407)		REFERENCE POINT
	HATCH TYPE (SEE SHEET A401)		HALL TYPE (SEE INFO DRAWING)
	DETAIL NUMBER		REVISION MARK
	BUILDING SECTION		

REFER TO DRAWINGS A400 - A402 FOR 1/4" SCALE STAIR / RAMP PLANS AND DETAILS  
 REFER TO DRAWINGS A401 - A402 FOR 1/4" SCALE TOILET ROOM PLANS AND DETAILS



<b>Antiozzi Associates</b>  <b>Architecture &amp; Interiors</b> 4021 Main Street Stamford, Connecticut	STATE PROJECT NO. : 080-076 <b>THE THOMAS EDISON MIDDLE SCHOOL</b> 105 NORTH BRAD STREET MIDDLETOWN, CONNECTICUT	<b>A 101.1</b>
	COMMONS BUILDING PARTIAL FIRST FLOOR PLAN FLOOR ELEV. : 252.0' CHECKED BY: _____ SCALE: 1/8" = 1'-0" DATE: 20 OCT 98 JOB NO: 4801	

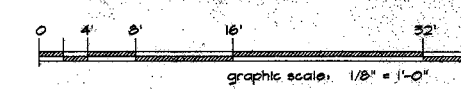
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**GRAPHICS LEGEND**

ROOM	ROOM NAME AND NUMBER	⊗	SIGNAGE DESIGNATION (SEE SHEET A600)	⊠	BUILDING SECTION
22	DOOR NUMBER	⊕	COLUMN GRID LINES AND DESIGNATIONS	⊡	HALL TYPE (SEE INFO DRAWING)
1A	INTERIOR ELEVATIONS (SEE SHEETS A601-A607)	⊙	REFERENCE POINT	⊠	REVISION MARK
1	HATCH TYPE (SEE SHEET A601)				
1	DETAIL NUMBER				

REFER TO DRAWINGS A400 - A402 FOR 1/4" SCALE STAIR / RAMP PLANS AND DETAILS.  
 REFER TO DRAWINGS A601 - A602 FOR 1/4" SCALE TOILET ROOM PLANS AND DETAILS.



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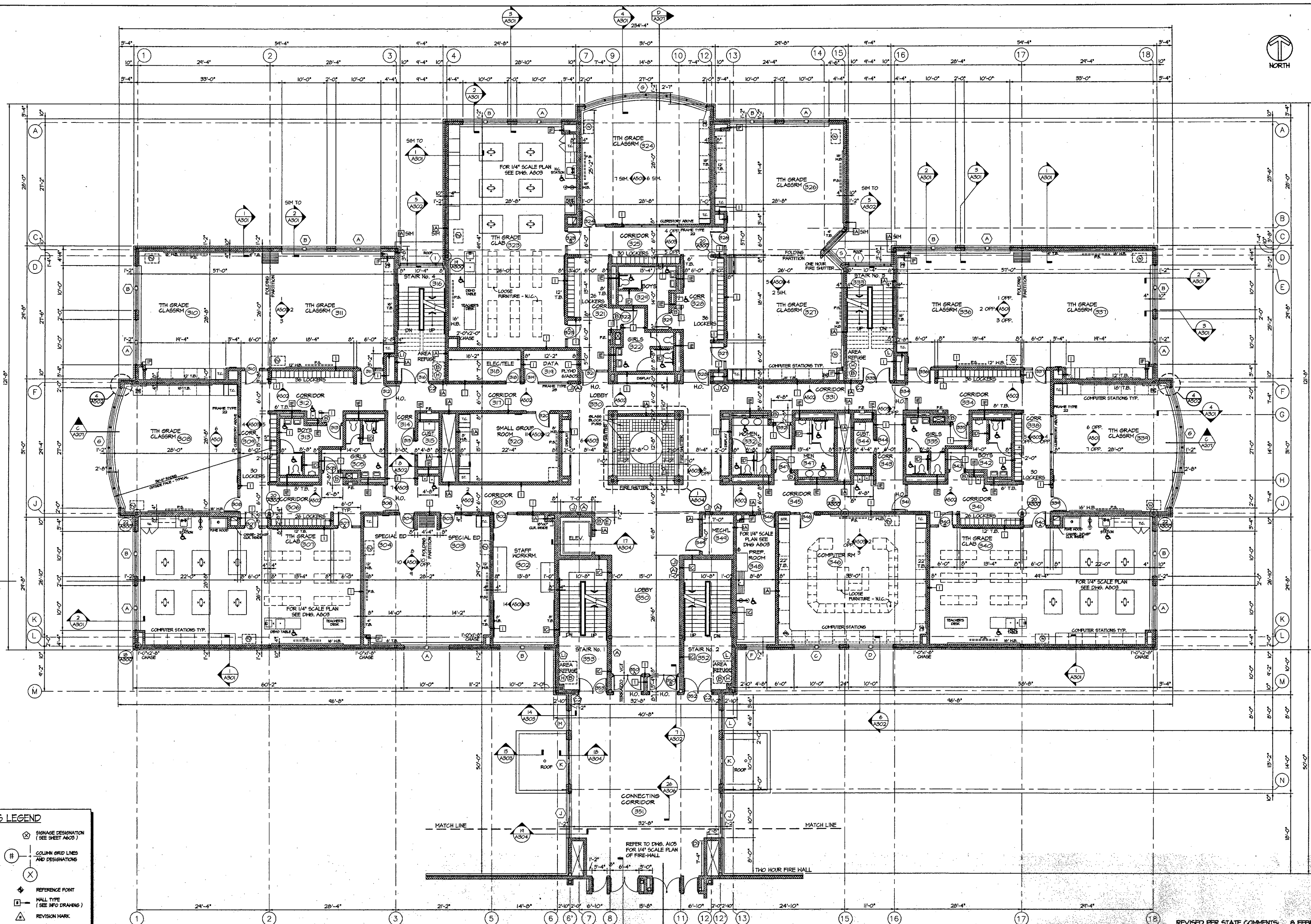
STATE PROJECT NO. : 080-076  
**THE THOMAS EDISON**  
**MIDDLE SCHOOL**  
 100 NORTH BROAD STREET  
 MERIDEN, CONNECTICUT

COMMONS BUILDING  
 FIRST FLOOR  
 PARTIAL PLAN  
 FLOOR ELEV. : 292.0'

SCALE: 1/8" = 1'-0" DATE: 20 OCT 98 JOB NO: 0201  
 CHECKED BY: [Signature]

REVISED PER STATE COMMENTS: 8 FEBRUARY 1999

**A 101.2**

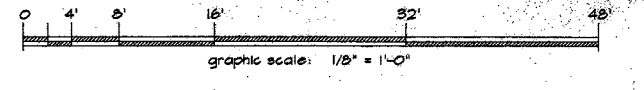
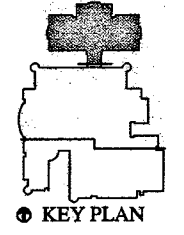


**GRAPHICS LEGEND**

	ROOM NAME AND NUMBER (SEE SHEET A300)		SIGNAGE DESIGNATION (SEE SHEET A300)
	DOOR NUMBER		COLUMN GRID LINES AND DESIGNATIONS
	INTERIOR ELEVATIONS (SEE SHEETS A301-A307)		REFERENCE POINT
	WINDOW TYPE (SEE SHEET A301)		HALL TYPE (SEE INFO DRAWING)
	DETAIL NUMBER		REVISION MARK
	BUILDING SECTION		

REFER TO DRAWINGS A400 - A402 FOR 1/4" SCALE STAIR / RAMP PLANS AND DETAILS.  
 REFER TO DRAWINGS A301 - A302 FOR 1/4" SCALE TOILET ROOM PLANS AND DETAILS.  
 REFER TO DRAWING A305 FOR FIRE SHUTTER ELEVATION AND DETAIL.

**FIRST FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"  
 276 LOCKERS



REVISED PER STATE COMMENTS: 8 FEBRUARY 1994

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 Stratford, Connecticut

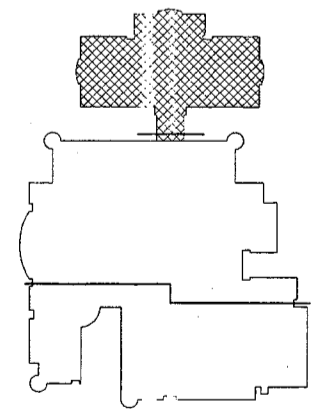
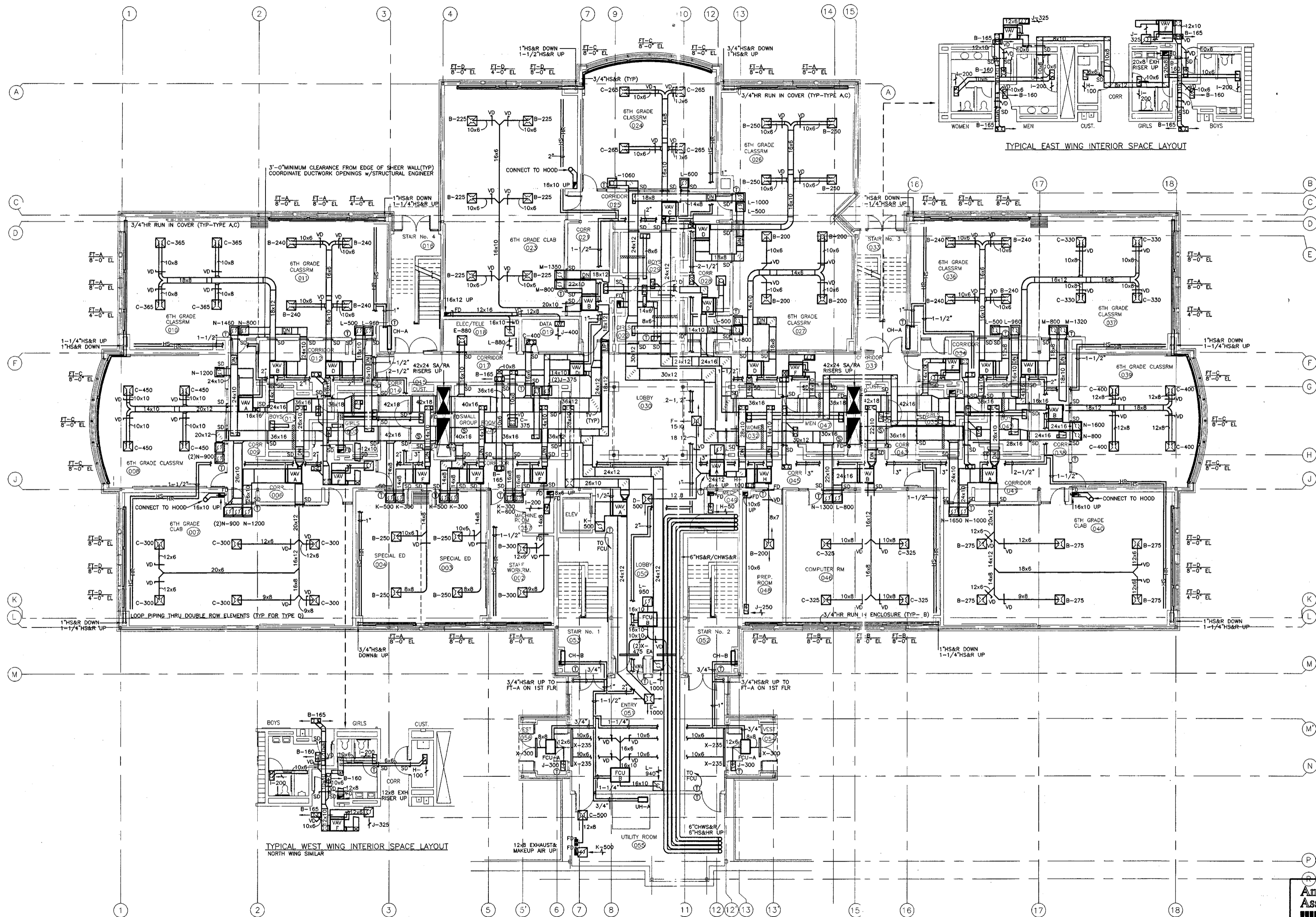
STATE PROJECT NO. : 080-076  
**THE THOMAS EDISON MIDDLE SCHOOL**  
 135 NORTH BROAD STREET  
 MERIDEN, CONNECTICUT

ACADEMIC BUILDING  
 FIRST FLOOR PLAN  
 FLOOR ELEV. : 252.0'

**A 101.3**

CHECKED BY: SCALE: 1/8" = 1'-0" DATE: 20 OCT 92 JOB NO: 4801

AUGUST 24, 1993 10:50 AM EST



KEY PLAN

REVISED PER STATE COMMENTS: 08 FEB 99

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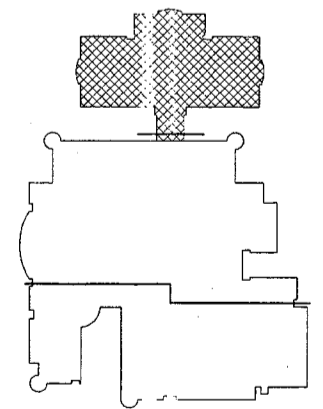
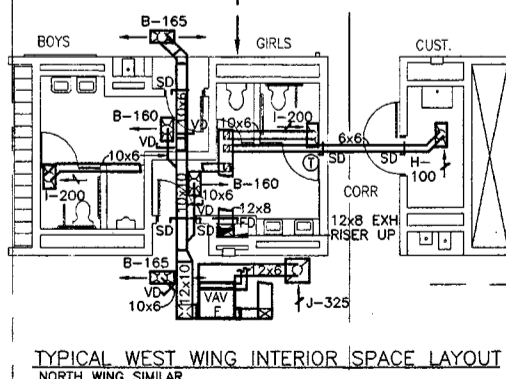
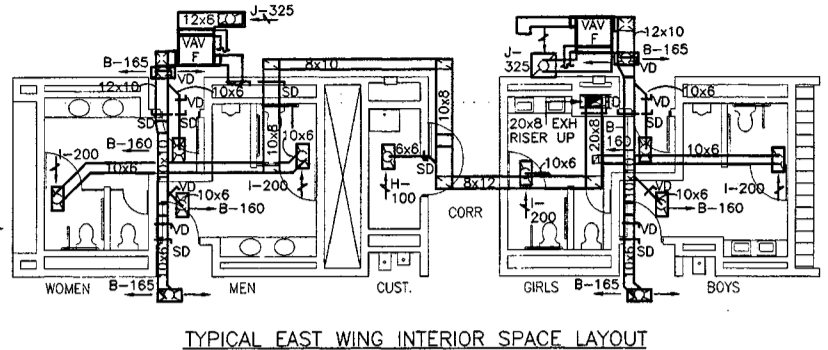
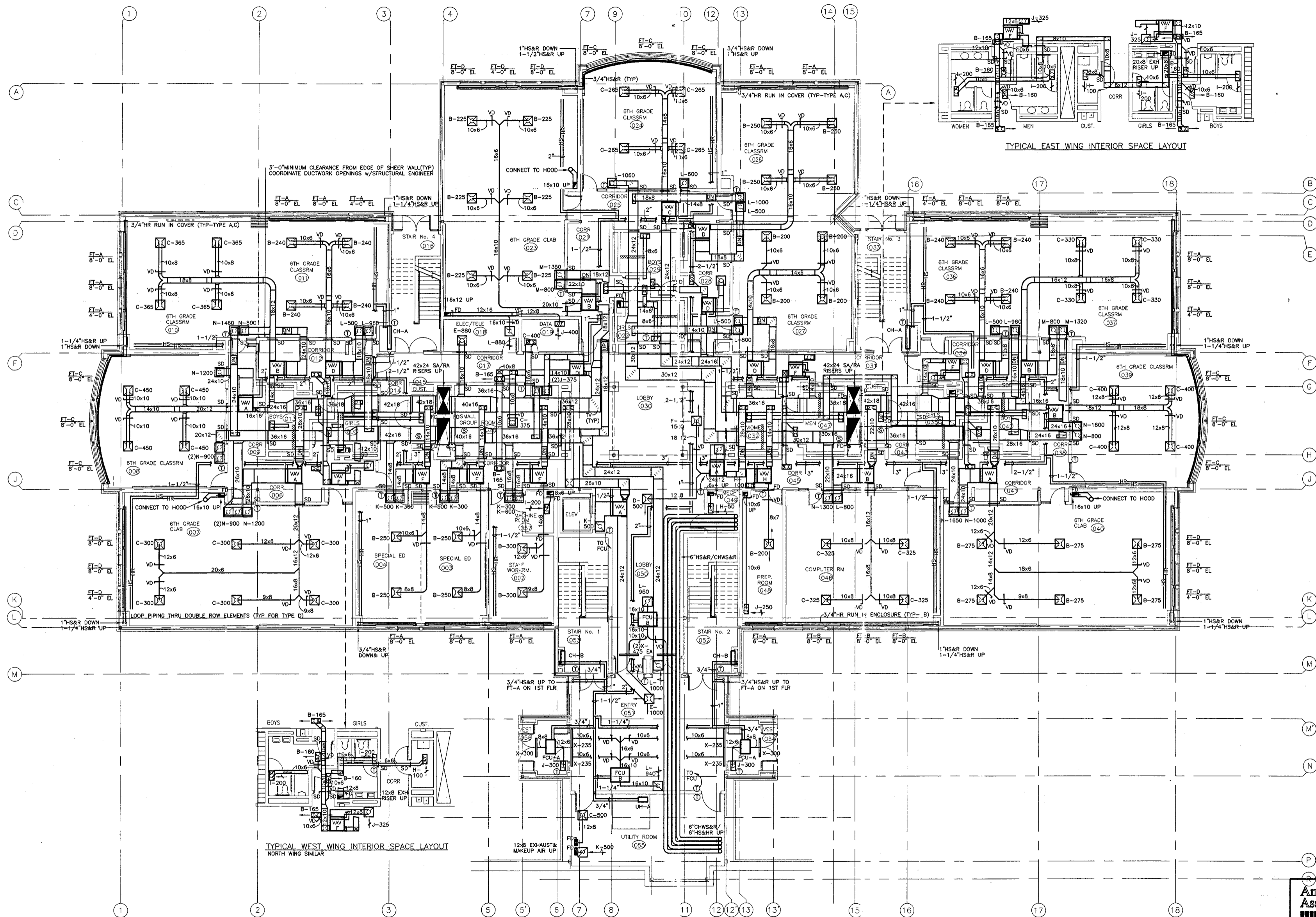
STATE PROJECT NO. : 080-076  
**THE THOMAS EDISON  
 MIDDLE SCHOOL**  
 MERIDEN, CONNECTICUT

ACADEMIC BUILDING  
 GROUND FLOOR  
 MECHANICAL PLAN

**M  
 100**

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

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KEY PLAN

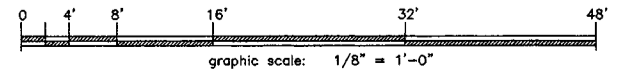
REVISED PER STATE COMMENTS: 08 FEB 99

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 MIDDLE SCHOOL**  
 MERIDEN, CONNECTICUT

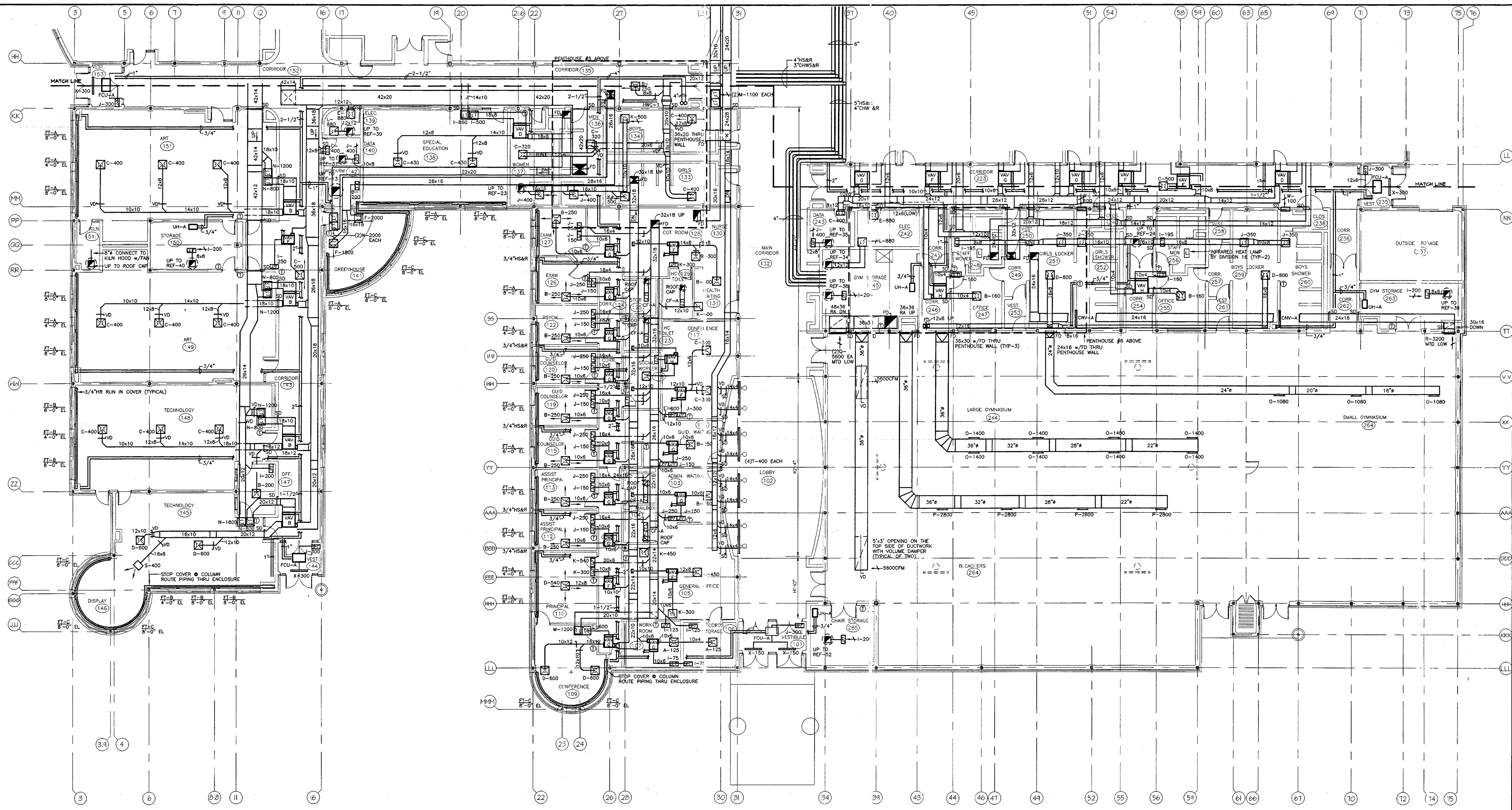
ACADEMIC BUILDING  
 GROUND FLOOR  
 MECHANICAL PLAN

**M  
 100**



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

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REVISED PER STATE COMMENTS: 08 FEB 99

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

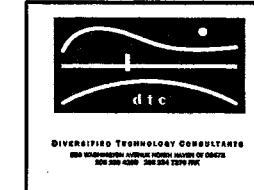
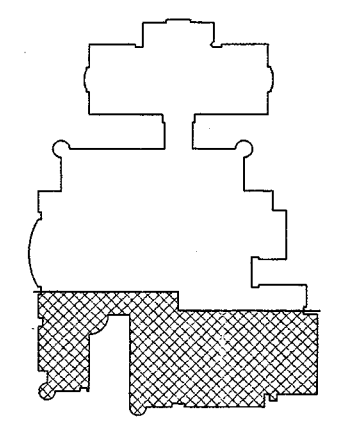
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 4021 Main Street  
 Stratford, Connecticut

PARTIAL  
 FIRST LEVEL  
 MECHANICAL PLAN

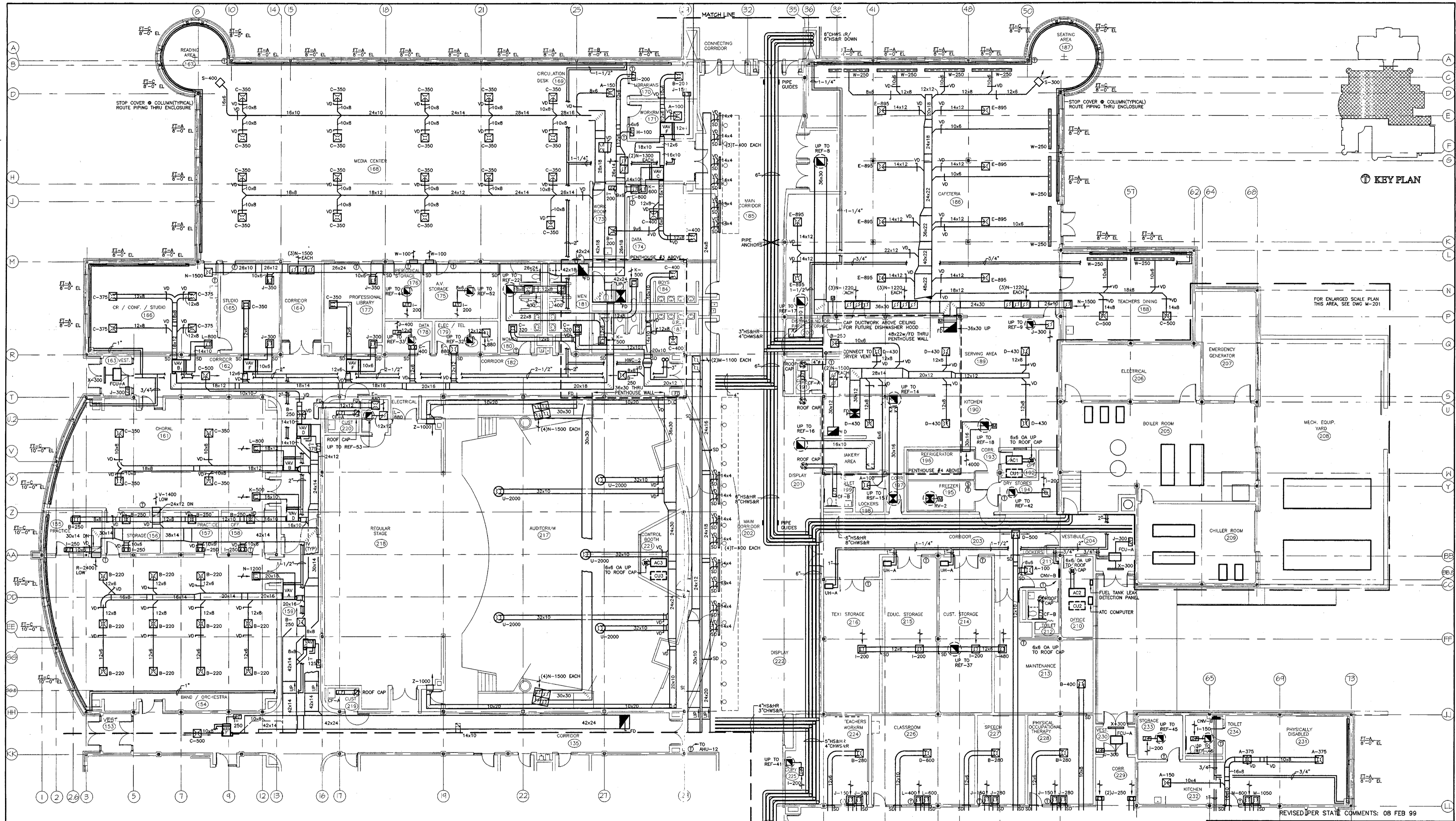
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KEY PLAN



08/27/97 10:00 AM 002 449



KEY PLAN

REVISED PER STATE COMMENTS: 08 FEB 99

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

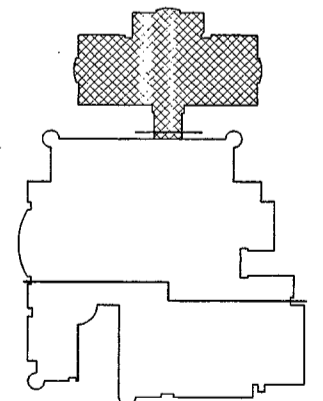
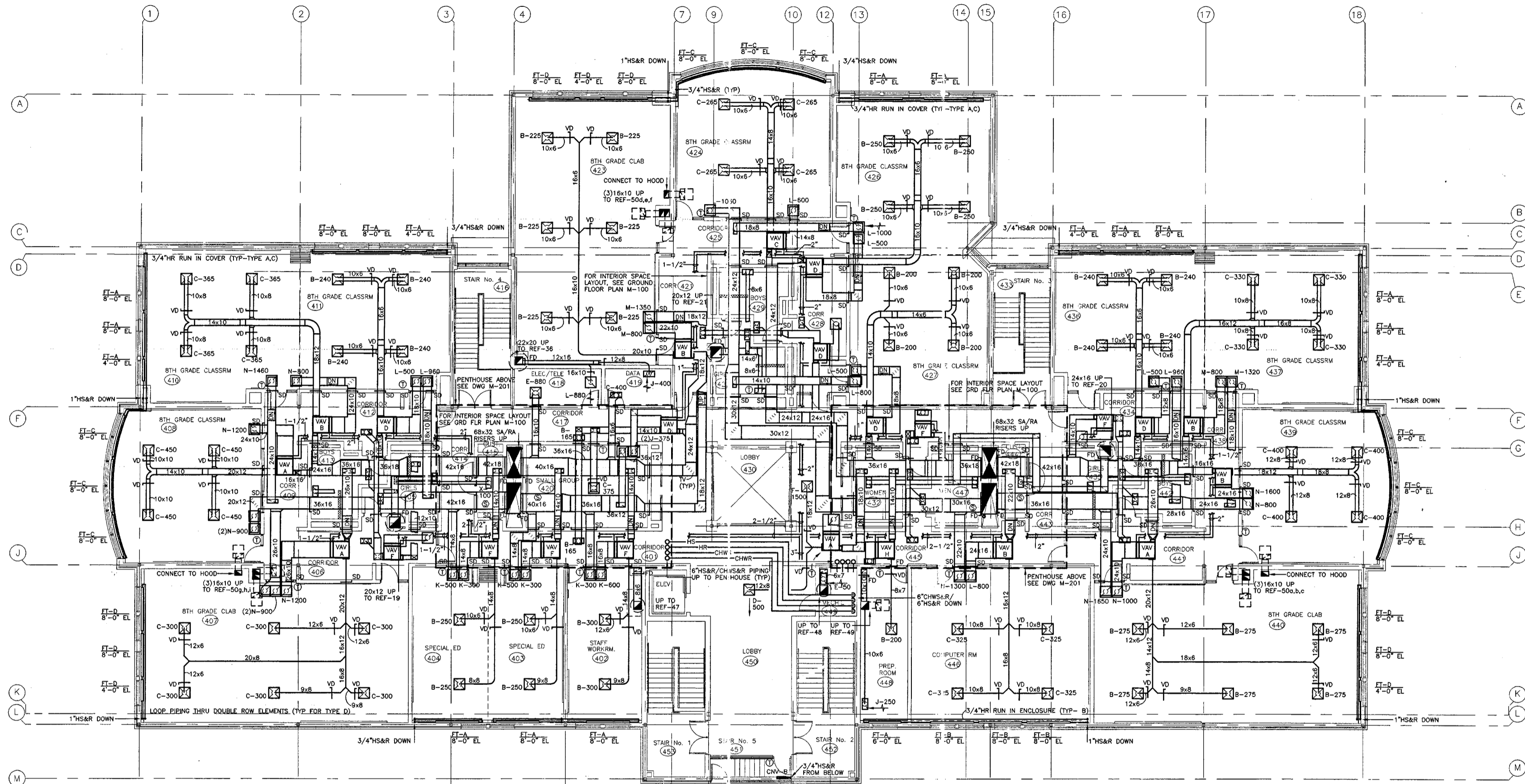
**Antiozzi Associates**  
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PARTIAL  
 FIRST LEVEL  
 MECHANICAL PLAN

**M  
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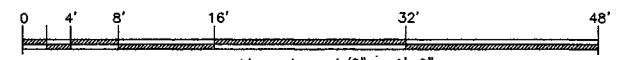
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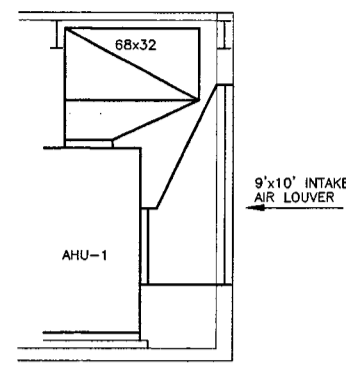
REVISED PER STATE COMMENTS: 08 FEB 99

<b>Antinozzi Associates</b>  <b>Architecture &amp; Interiors</b> 4021 Main Street Stratford, Connecticut	<b>STATE PROJECT NO. : 080-076</b> <b>THE THOMAS EDISON MIDDLE SCHOOL</b> MERIDEN, CONNECTICUT		<b>M 102</b>
	<b>ACADEMIC BUILDING SECOND FLOOR MECHANICAL PLAN</b>		
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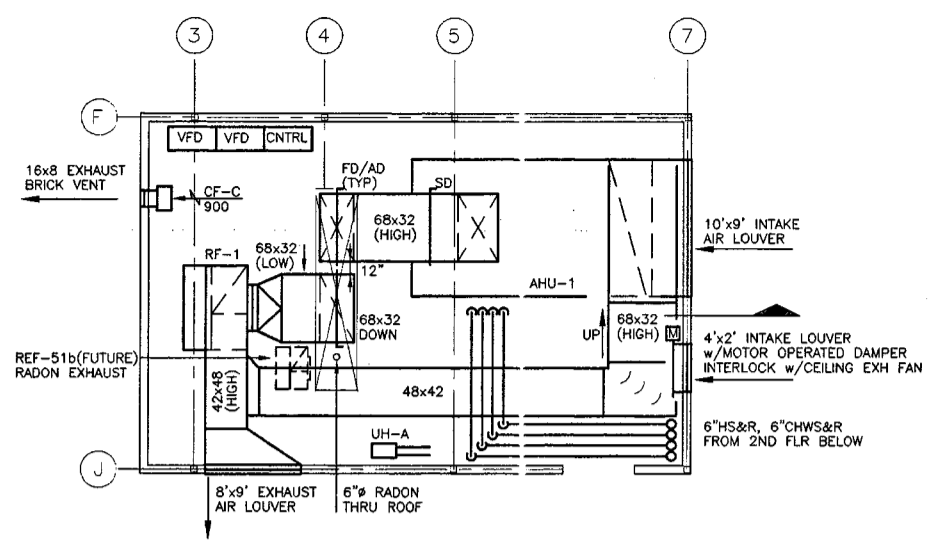


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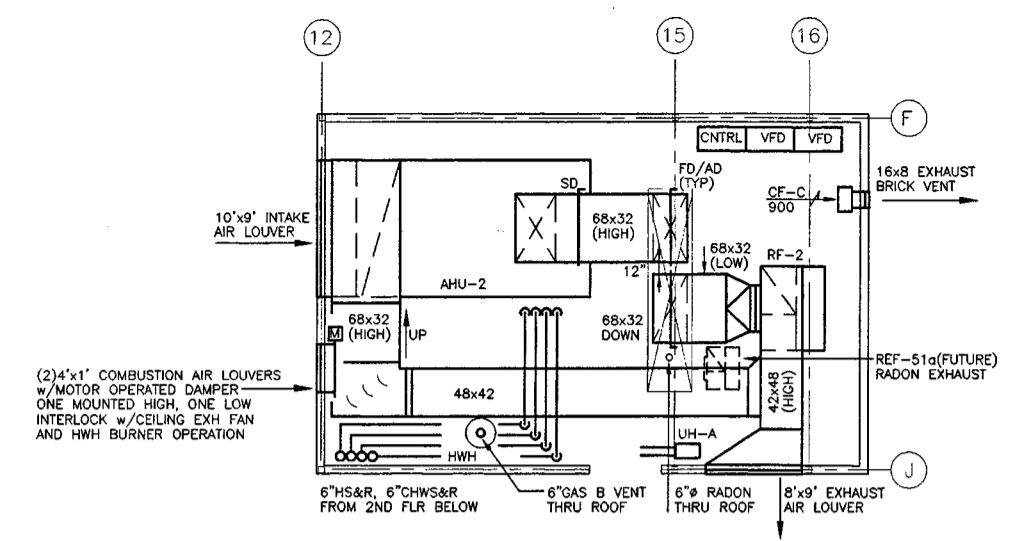




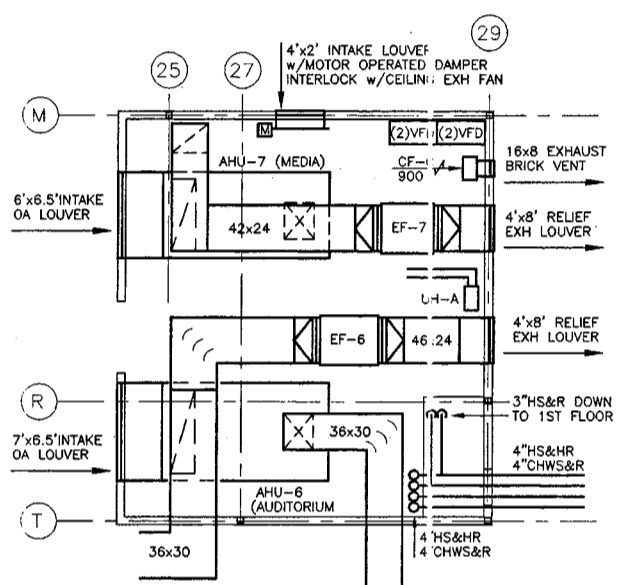
SECTION - PENTHOUSE 1  
(PENTHOUSE 2 SIMILAR) SCALE: 1/4" = 1'-0"



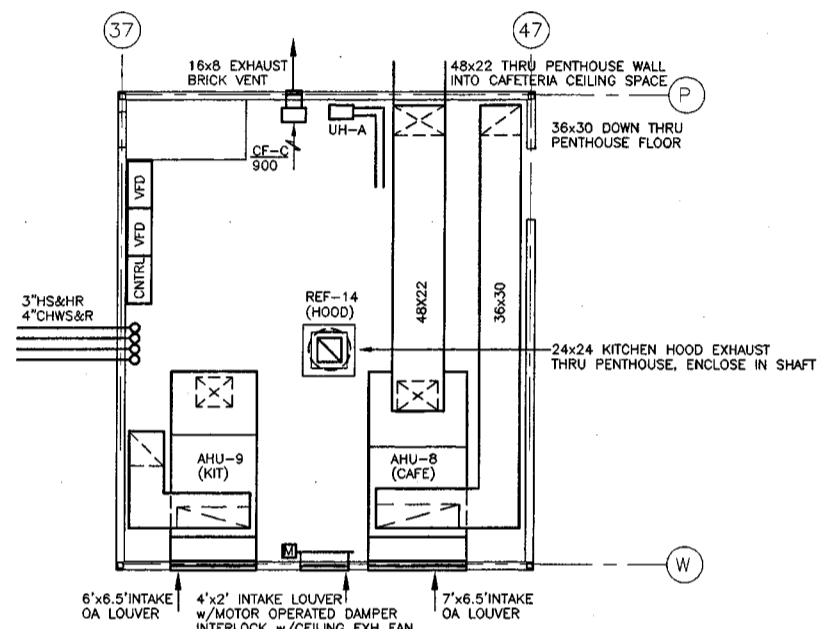
1 PENTHOUSE @ ACADEMIC WEST  
SCALE: 1/8" = 1'-0"



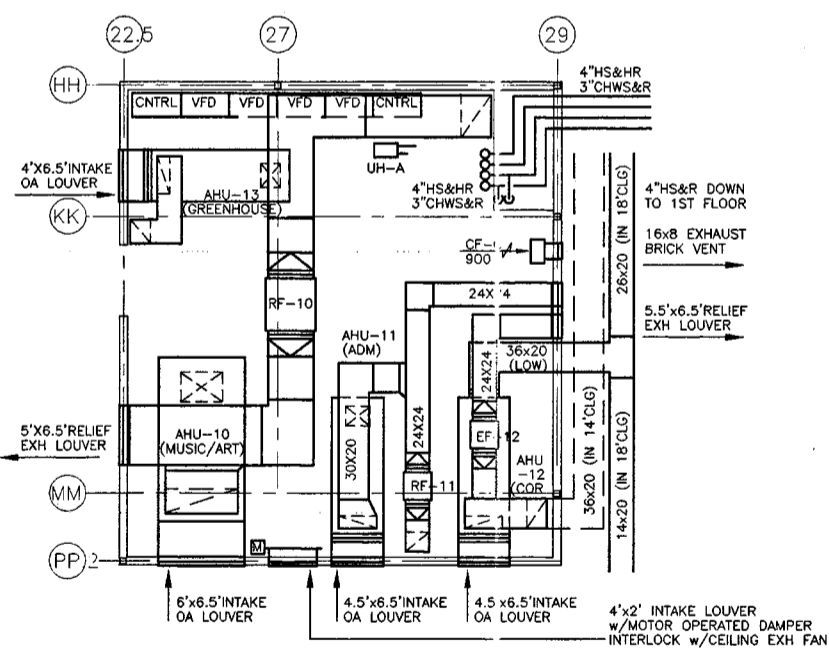
2 PENTHOUSE @ ACADEMIC EAST  
SCALE: 1/8" = 1'-0"



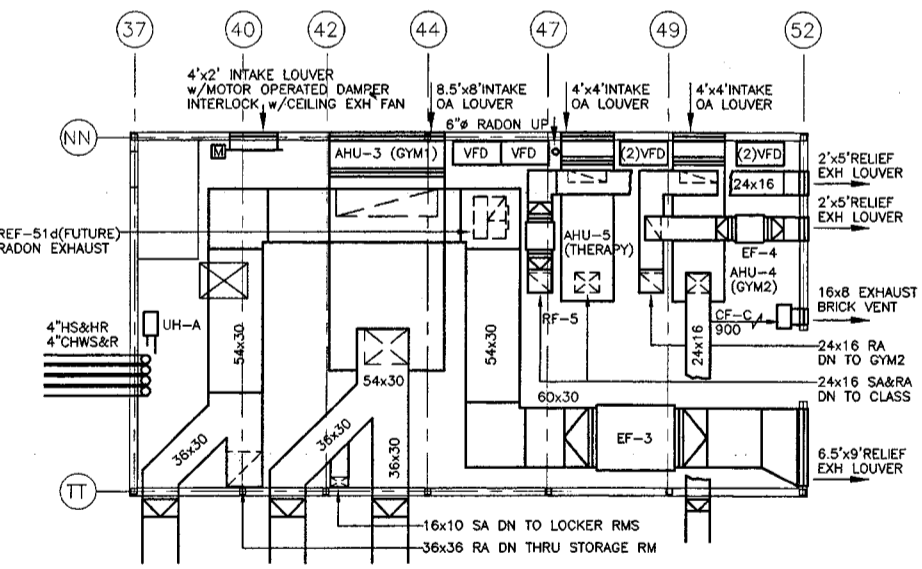
3 PENTHOUSE @ MEDIA  
SCALE: 1/8" = 1'-0"



4 PENTHOUSE @ CAFETERIA  
SCALE: 1/8" = 1'-0"

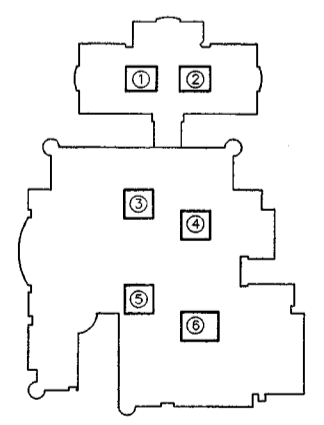


5 PENTHOUSE @ ADMINISTRATION  
SCALE: 1/8" = 1'-0"



6 PENTHOUSE @ GYMNASIUM  
SCALE: 1/8" = 1'-0"

- NOTES**
1. PROVIDE 4" HIGH CONCRETE PADS UNDER AIR HANDLING UNITS AND FLOOR MOUNTED FANS
  2. PROVIDE 4" HIGH x 2" WIDE CURB AROUND DUCTWORK AND PIPE PENETRATIONS THRU PENTHOUSE FLOORS

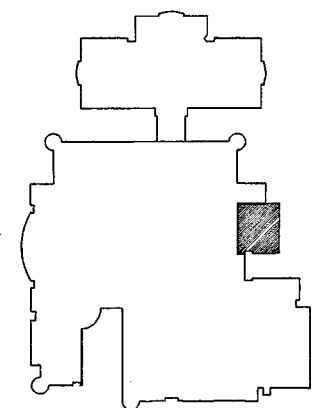


KEY PLAN

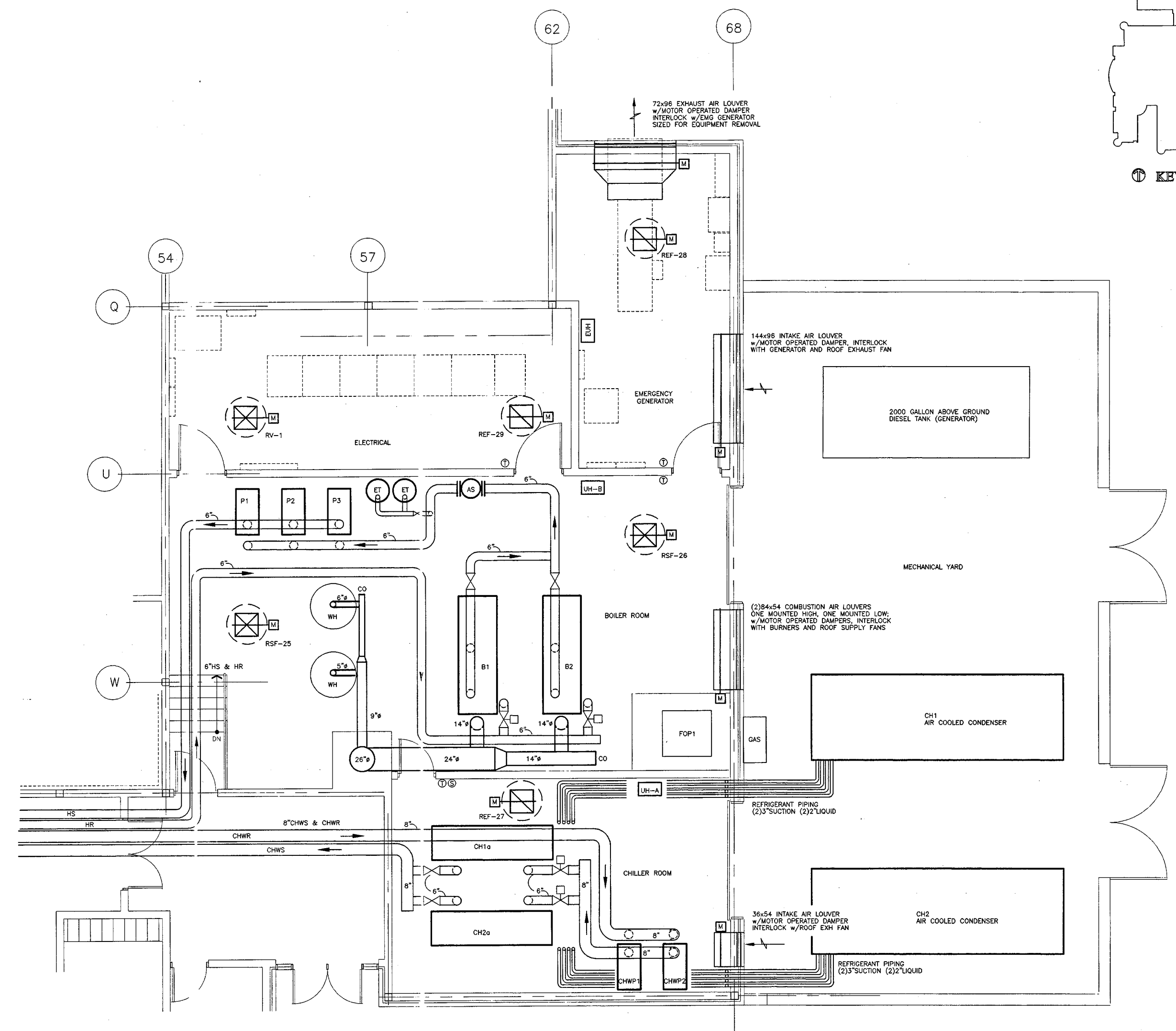
REVISED PER STATE COMMENTS: 08 FEB 99

<b>Antinozzi Associates</b>  <b>Architecture &amp; Interiors</b> 4021 Main Street Stratford, Connecticut	STATE PROJECT NO. : 080-076 <b>THE THOMAS EDISON MIDDLE SCHOOL</b> MERIDEN, CONNECTICUT	<b>M 104</b>
	<b>PENTHOUSES MECHANICAL PLAN</b>	

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KEY PLAN

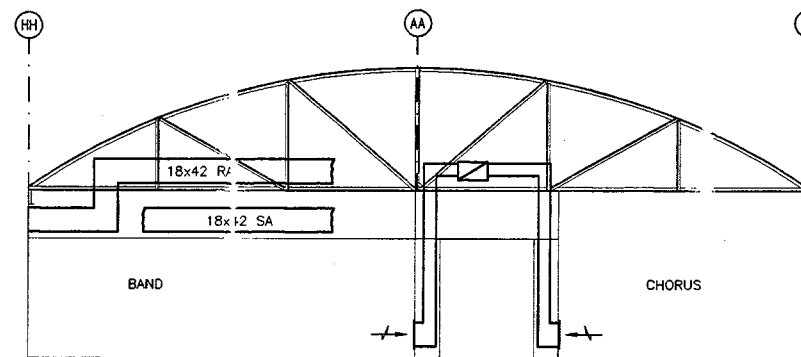


REVISED PER STATE COMMENTS: 08 FEB 99

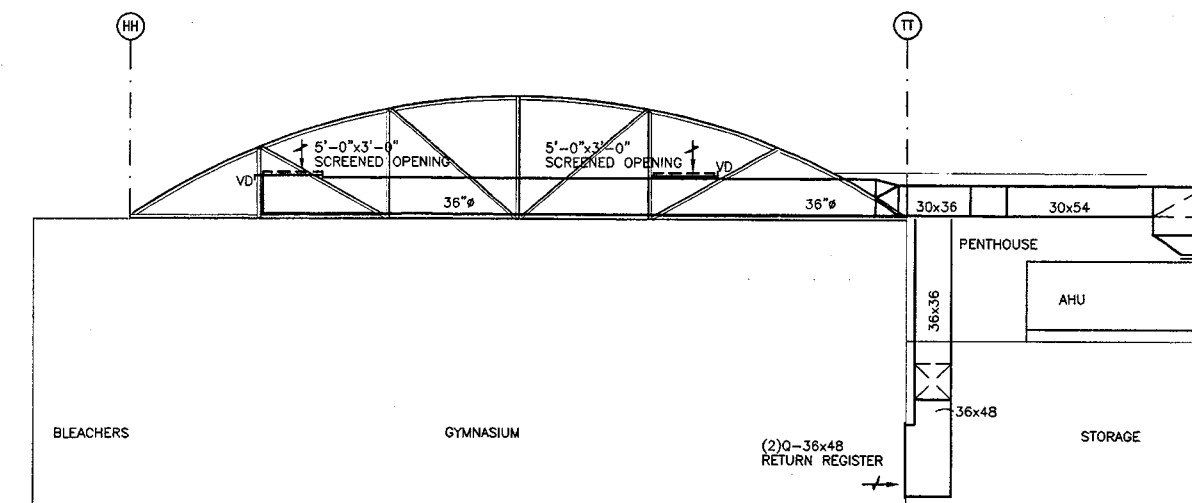
**Antinozzi Associates**  
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4021 Main Street  
Stratford, Connecticut

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

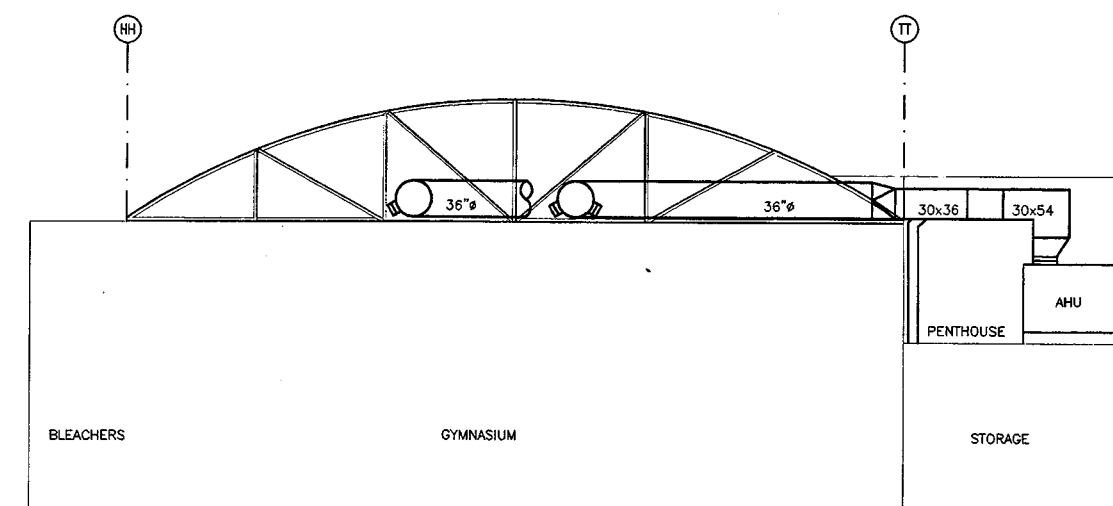
ENLARGED MECHANICAL ROOM  
M 201  
CHECKED BY: SCALE: 1/8"=1'-0" DATE: NOV 06 1998 JOB NO: 97181



SECTION @ BAND ROOM CORRIDOR




SECTION @ GYMNASIUM- RETURN DUCTWORK

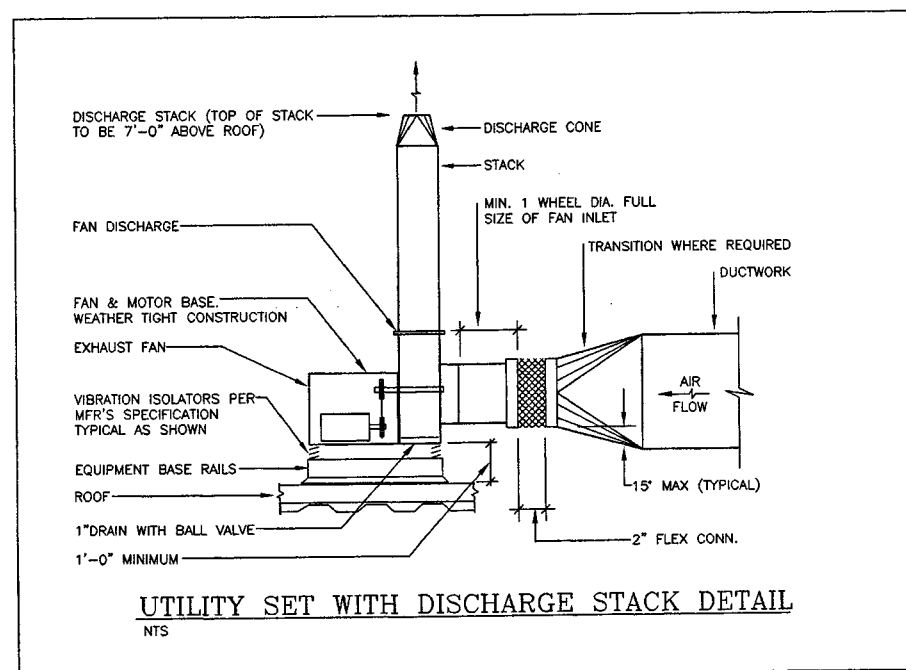


SECTION @ GYMNASIUM- SUPPLY DUCTWORK

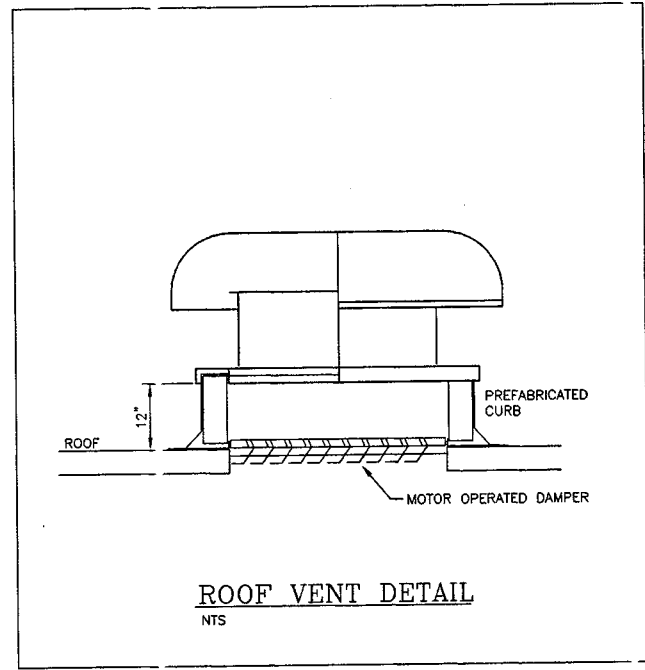
REVISED PER STATE COMMENTS: 08 FEB 99

 <b>Antinozzi Associates</b> Architecture & Interiors 4021 Main Street Stratford, Connecticut	STATE PROJECT NO. : 080-076 <b>THE THOMAS EDISON MIDDLE SCHOOL</b> MERIDEN, CONNECTICUT		<b>M</b> <b>301</b>	
	MECHANICAL SECTIONS			
CHECKED BY:		SCALE: 1/8"=1'-0"	DATE: NOV 06 1998	JOB NO: 97181

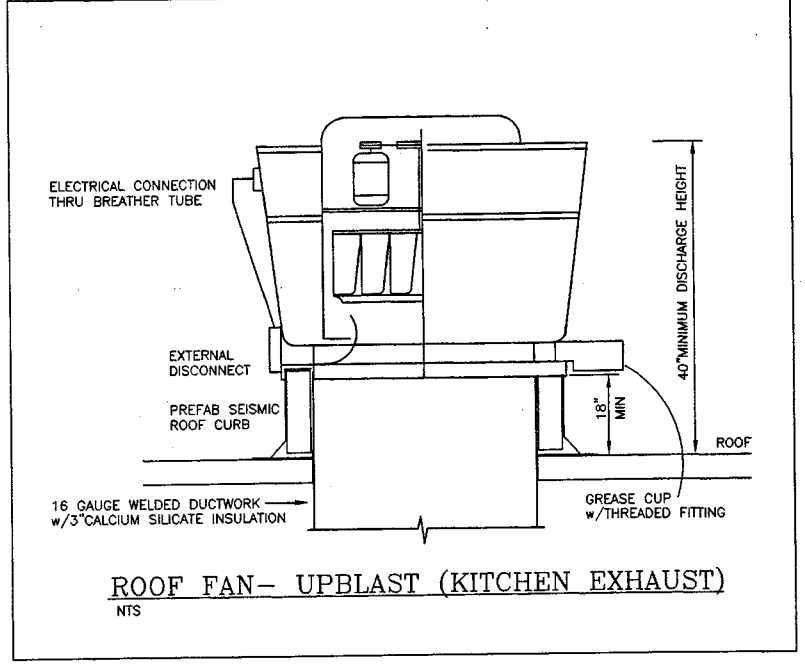
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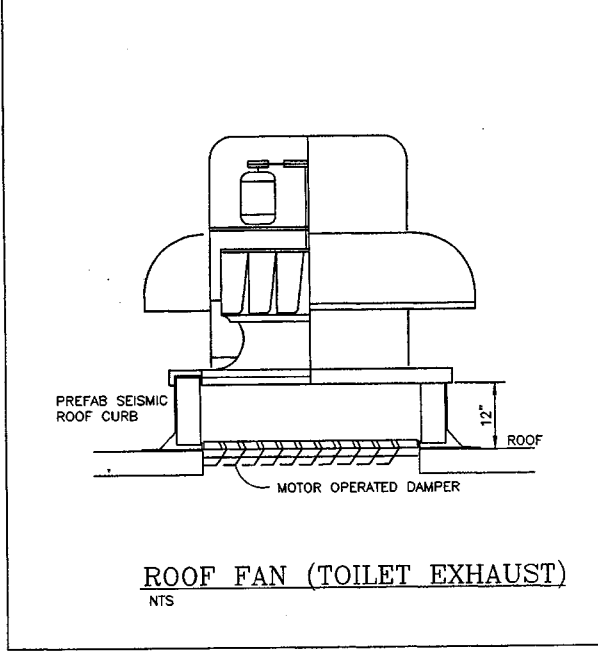
**UTILITY SET WITH DISCHARGE STACK DETAIL**  
NTS



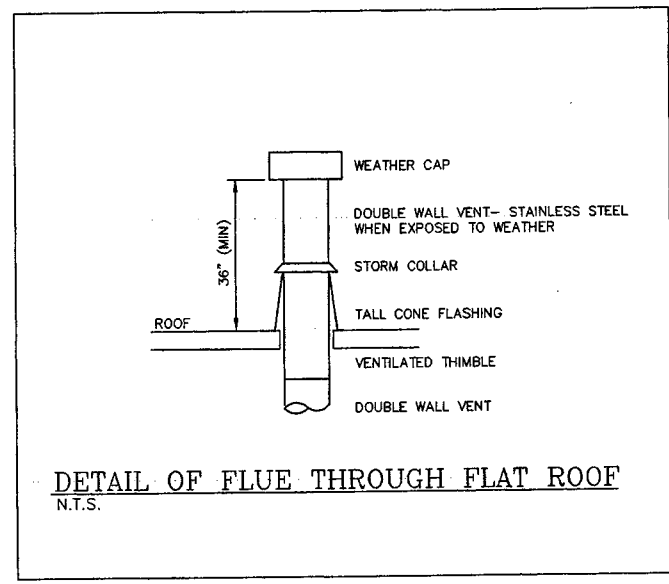
**ROOF VENT DETAIL**  
NTS



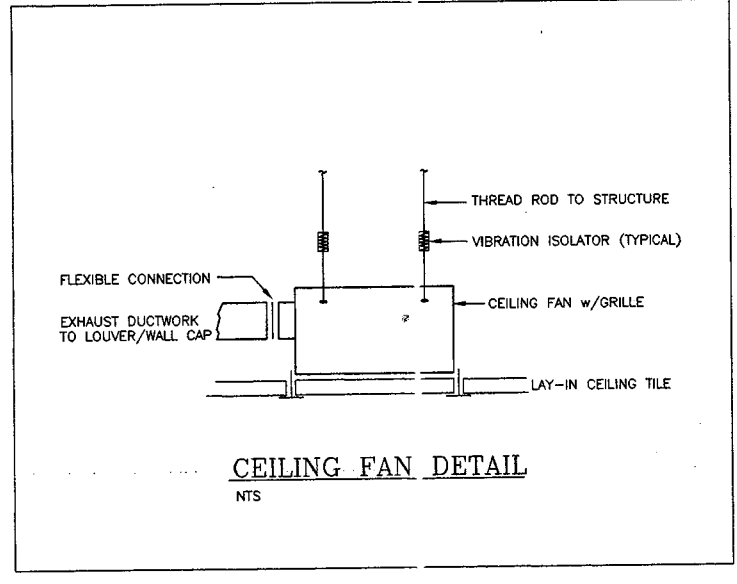
**ROOF FAN- UPBLAST (KITCHEN EXHAUST)**  
NTS



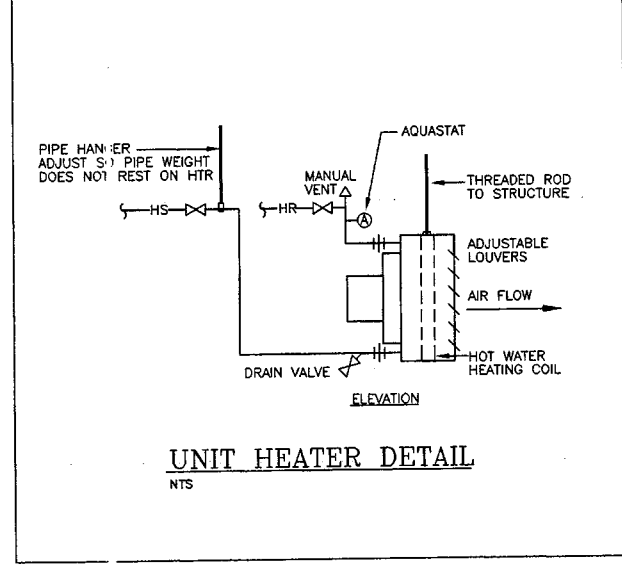
**ROOF FAN (TOILET EXHAUST)**  
NTS



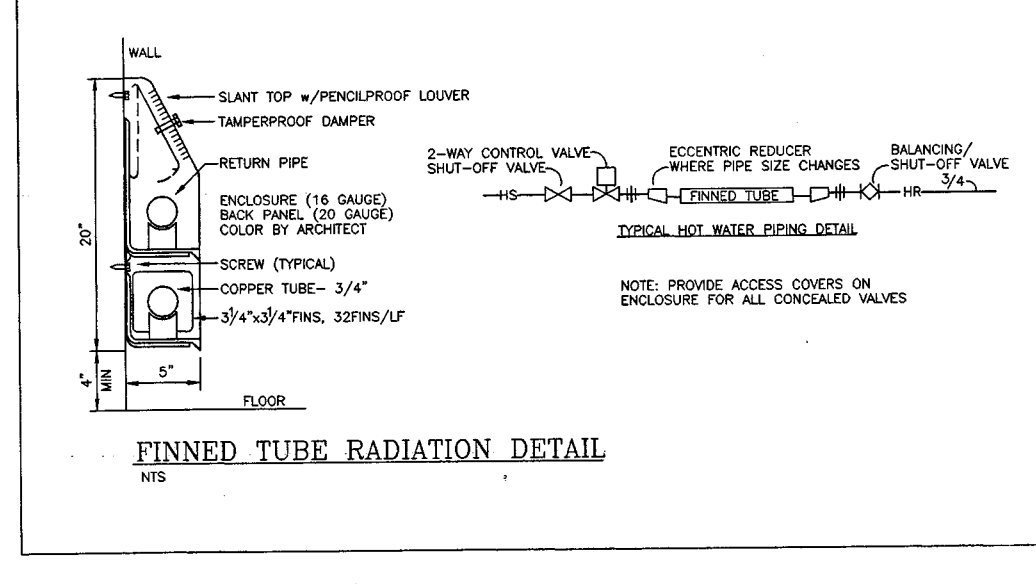
**DETAIL OF FLUE THROUGH FLAT ROOF**  
N.T.S.



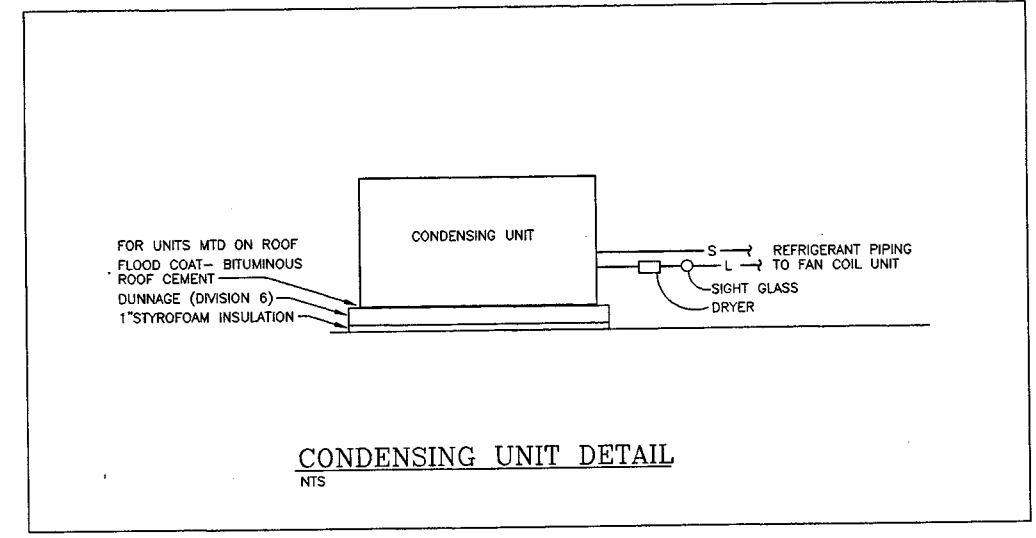
**CEILING FAN DETAIL**  
NTS



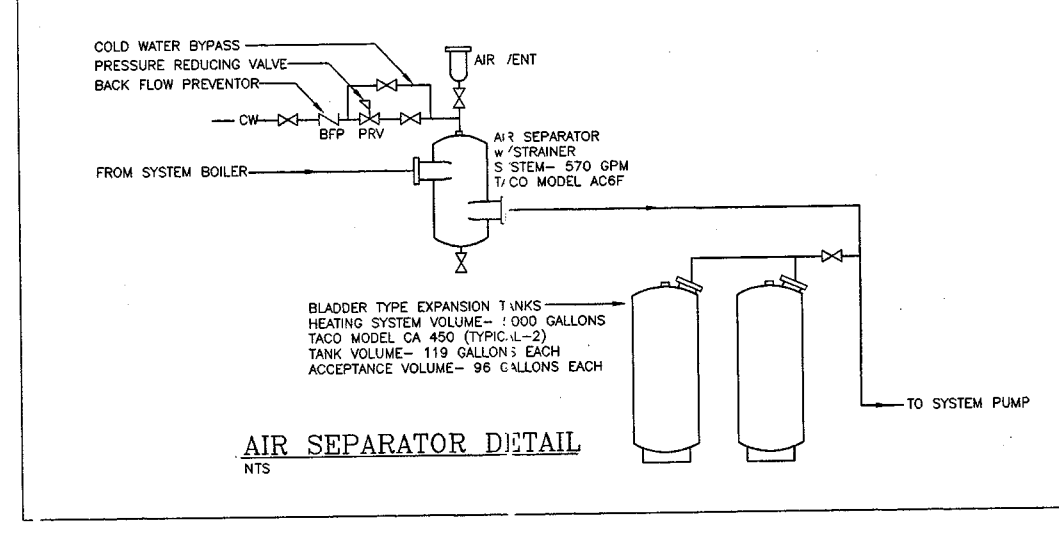
**UNIT HEATER DETAIL**  
NTS



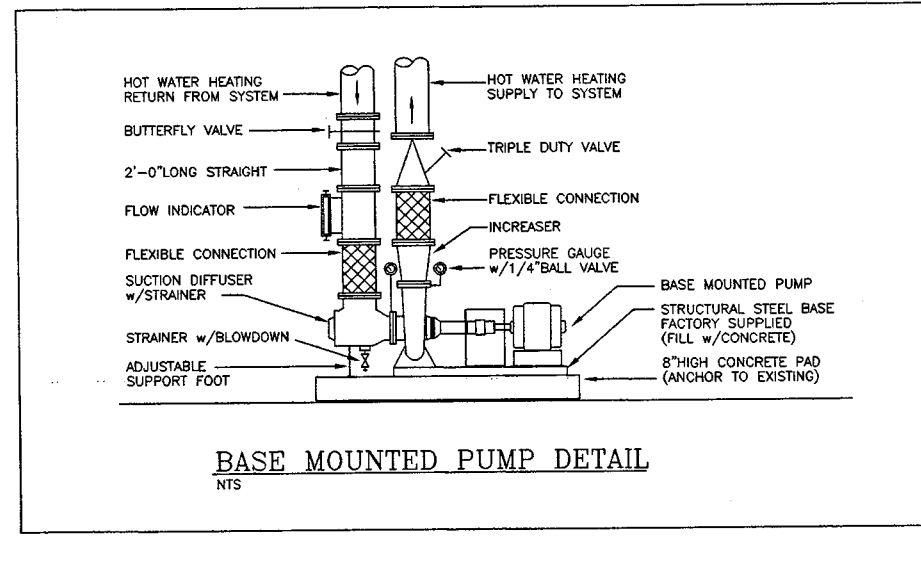
**FINNED TUBE RADIATION DETAIL**  
NTS



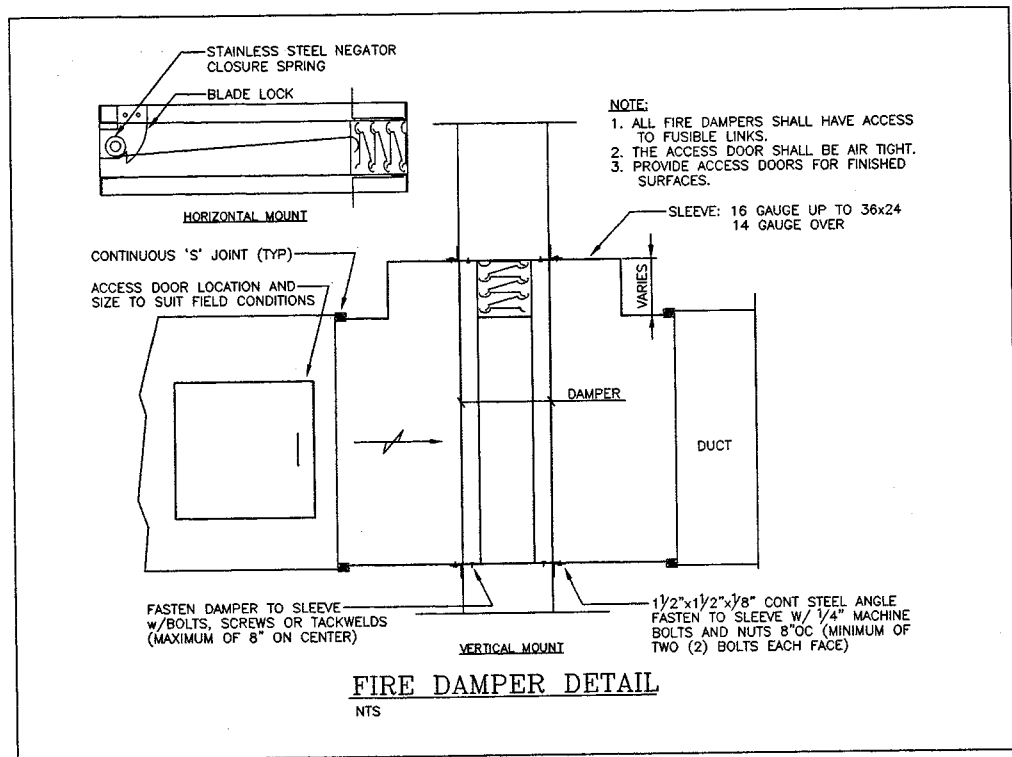
**CONDENSING UNIT DETAIL**  
NTS



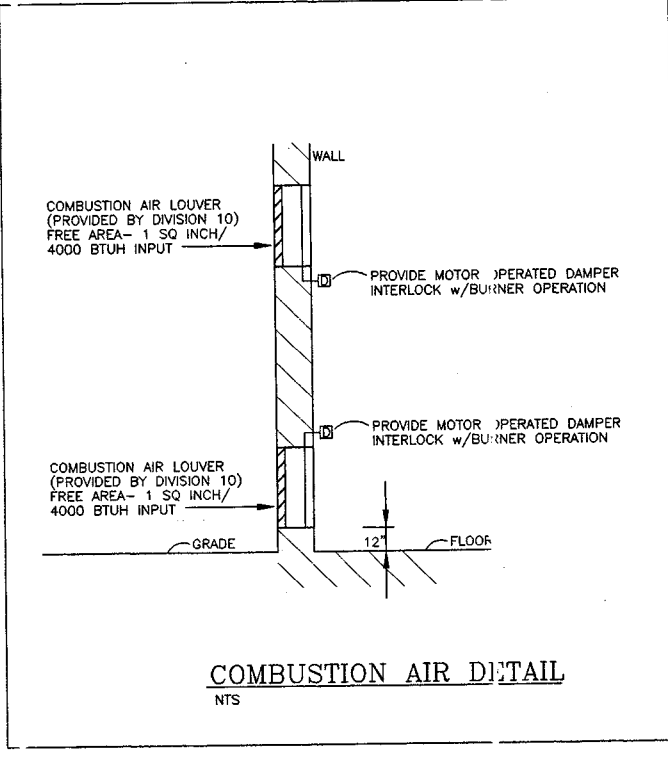
**AIR SEPARATOR DETAIL**  
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**BASE MOUNTED PUMP DETAIL**  
NTS



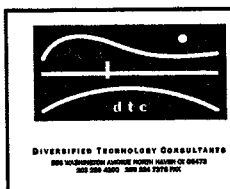
**FIRE DAMPER DETAIL**  
NTS



**COMBUSTION AIR DETAIL**  
NTS

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MIDDLE SCHOOL  
MERIDEN, CONNECTICUT

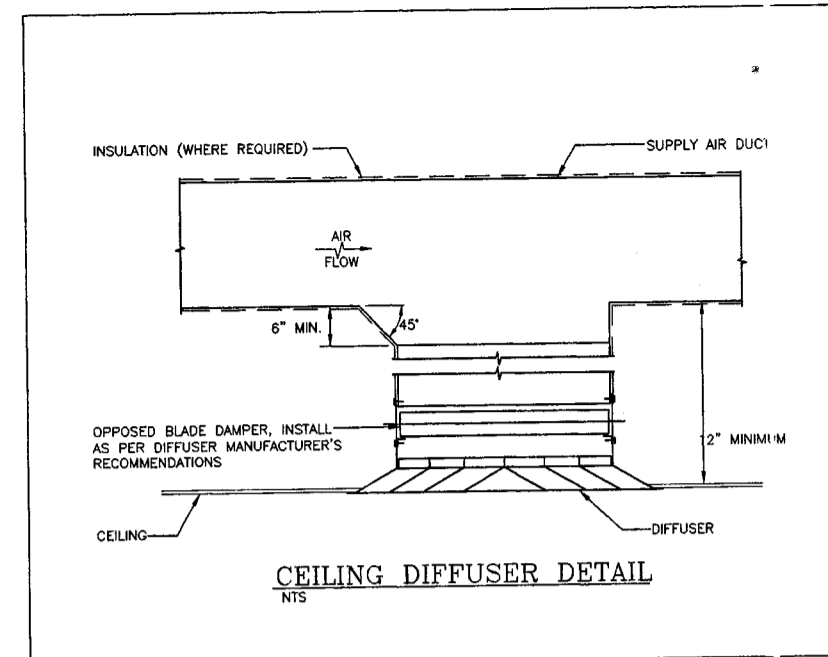


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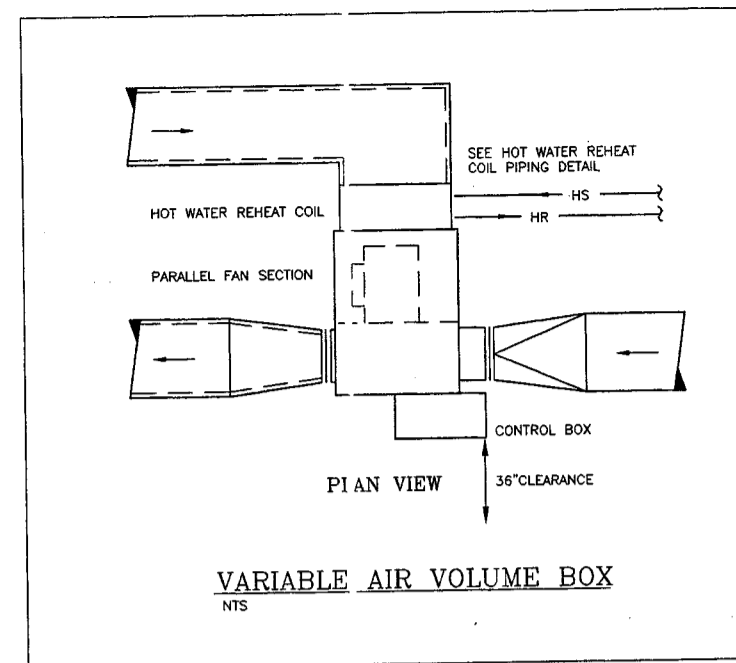
MECHANICAL  
DETAILS

M  
401

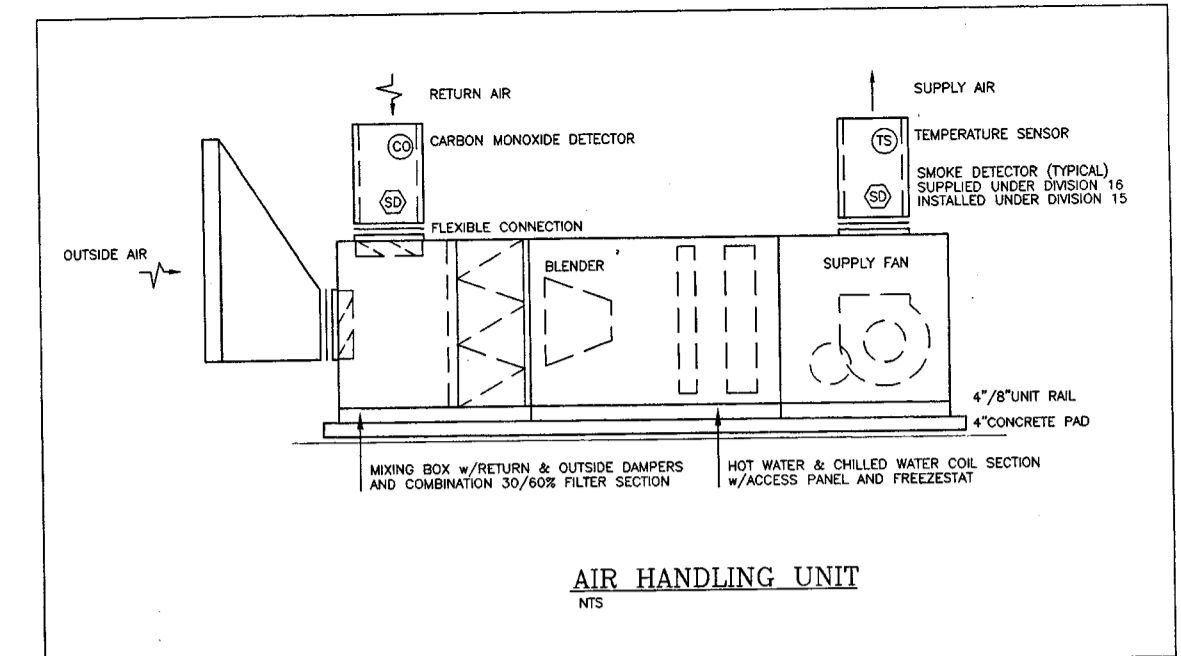
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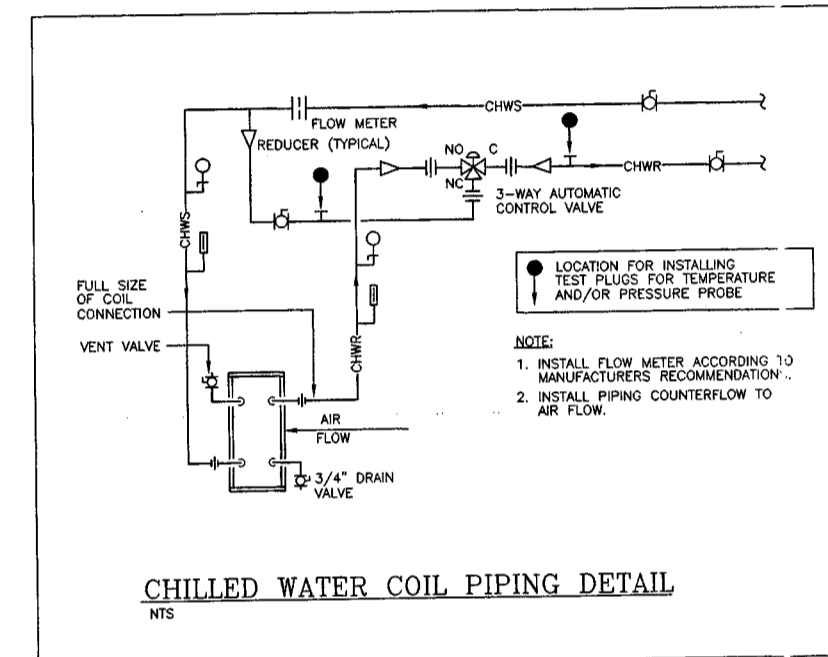
**CEILING DIFFUSER DETAIL**  
NTS



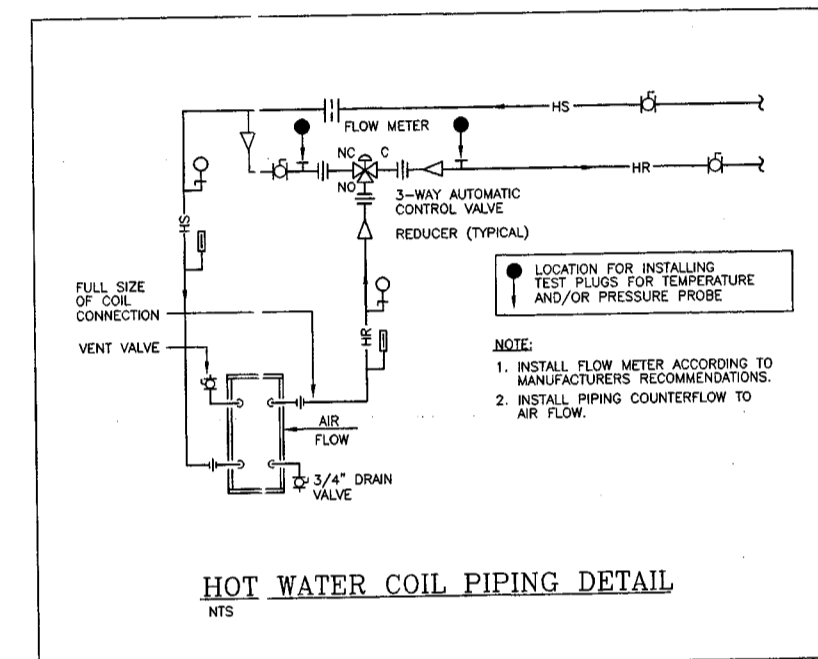
**VARIABLE AIR VOLUME BOX**  
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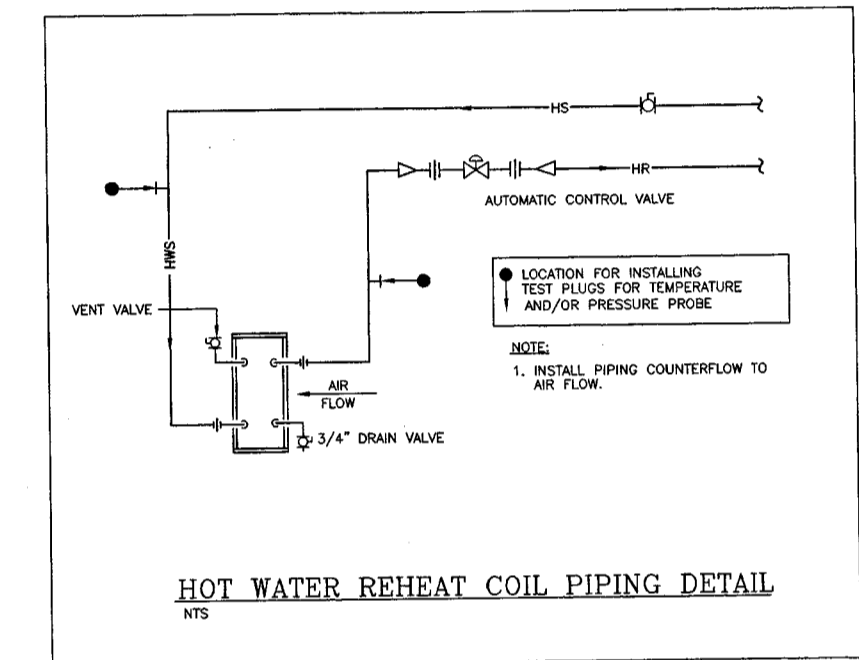
**AIR HANDLING UNIT**  
NTS



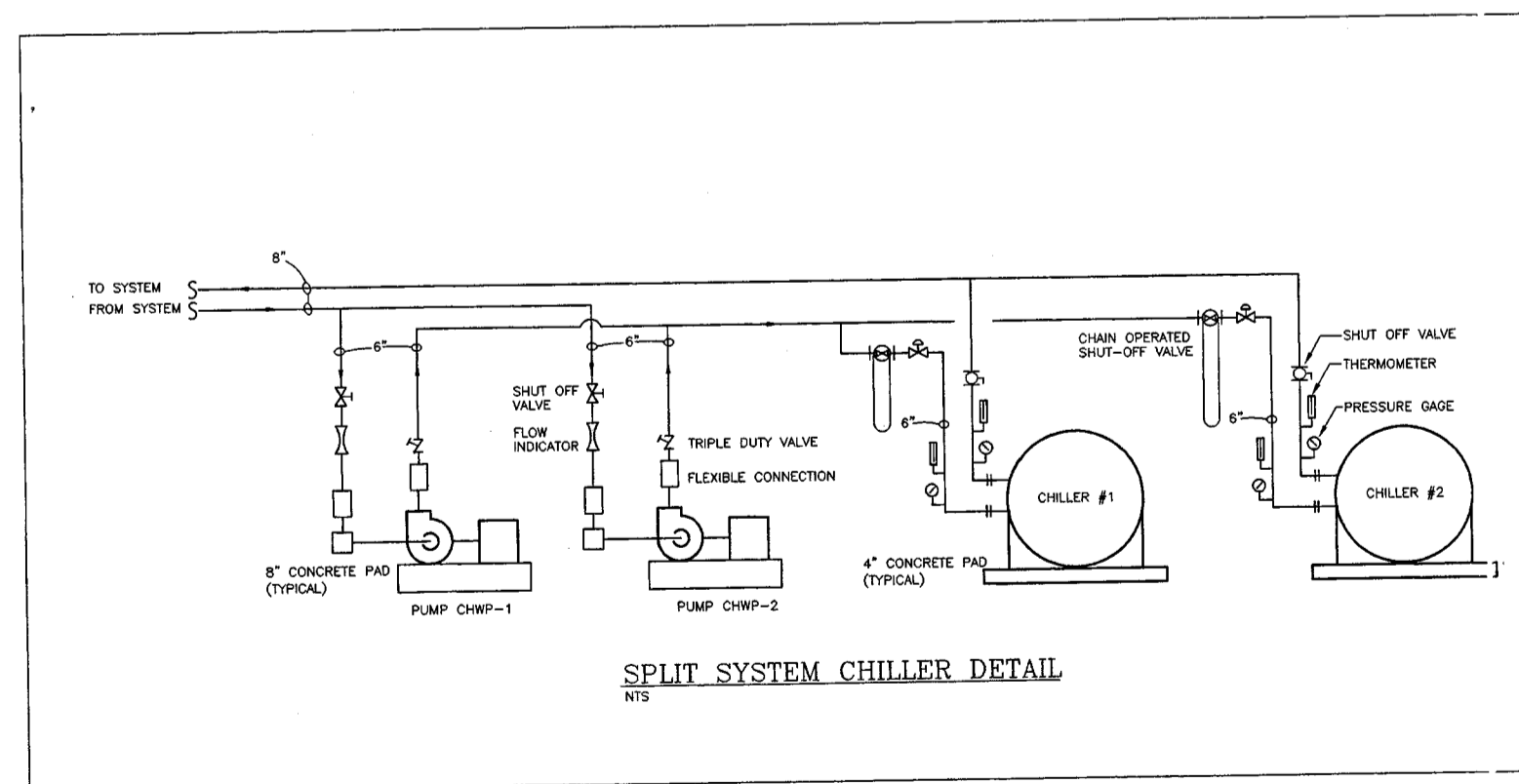
**CHILLED WATER COIL PIPING DETAIL**  
NTS



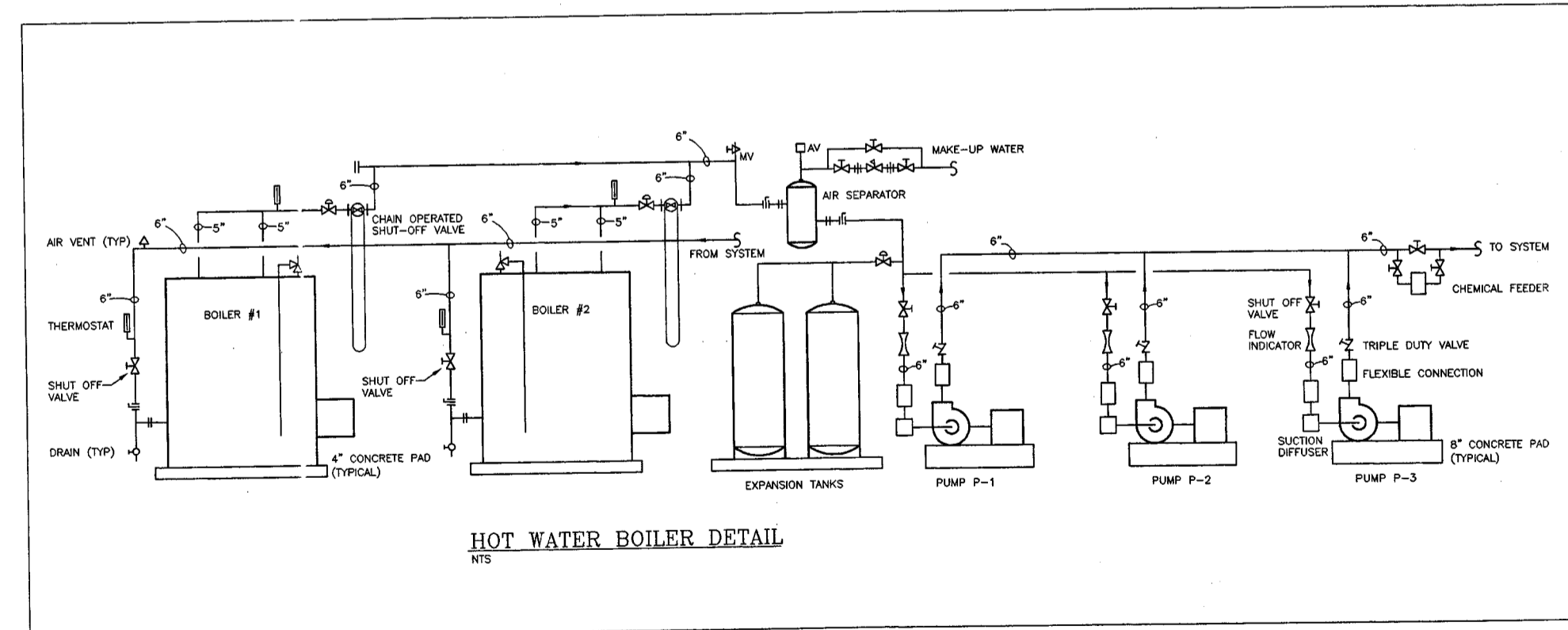
**HOT WATER COIL PIPING DETAIL**  
NTS



**HOT WATER REHEAT COIL PIPING DETAIL**  
NTS



**SPLIT SYSTEM CHILLER DETAIL**  
NTS



**HOT WATER BOILER DETAIL**  
NTS

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MERIDEN, CONNECTICUT

MECHANICAL  
DETAILS

**M**  
**402**

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AIR HANDLING UNIT SCHEDULE table with columns: MARK, MFR, MODEL, SUPPLY FAN, COIL DATA, COOLING COIL, HOT WATER COIL, FILTER, ELECT, WEIGHT, AREA SERVED, REMARKS.

VARIABLE VOLUME UNIT SCHEDULE table with columns: M R K, MFR, MODEL, SIZE, SET-POINTS, FAN DATA, HOT WATER COIL, DISCHARGE AIR INTO RM, REMARKS.

FAN SCHEDULE table with columns: MARK, MFR, MODEL, CPM, SP, RPM, HP, ELECT, DRIVE, TYPE, SERVICE, WT LBS, AREA SERVED, REMARKS.

PACKAGED SPLIT SYSTEM AIR CONDITIONER table with columns: MARK, MFR, MODEL, SA, DA, COOLING, HEATING, ELECTRICAL, AREA SERVED, REMARKS.

CONDENSING UNIT SCHEDULE table with columns: MARK, MFR, MODEL, NOM TONS, REFRIG, AMBIENT AIR ON UNIT, COMPRESSOR, ELECTRICAL, TOTAL OPERATING WEIGHT LB, AREA SERVED, REMARKS.

TERMINAL UNITS- HOT WATER table with columns: MARK, MFR, MODEL, BTUH, GPM, PD, EWT, EAT, SA, OA, ESP, HP, ELECT, DRIVE, TYPE, DIMENSIONS, REMARKS.

AIR COOLED SCREW CHILLER w/REMOTE EVAPORATOR SCHEDULE table with columns: MARK, MFR, MODEL, TYPE, TONS, GPM, EWT, LWT, PRESS DROP H2O, COMPRESSOR, ELECT, MCA, REMARKS.

BOILER SCHEDULE table with columns: MARK, MFR, MODEL, INPUT, OUTPUT, INPUT, TDH, HP, ELECT, EFF, FLUID, REMARKS.

PUMP SCHEDULE table with columns: MARK, MFR, SERIES, MODEL, RPM, GPM, TDH, SIZE, HP, ELECT, EFF, FLUID, REMARKS.

REGISTERS GRILLES DIFFUSERS table with columns: MARK, MFR, SERIES, PANEL SIZE, NECK SIZE, CPM RANGE, REMARKS.

- MECHANICAL SYSTEMS GENERAL NOTES. 1. DO NOT SCALE DRAWINGS... 2. IT IS INTENDED THAT THE DRAWINGS SHOW EVERY PIPE, FITTING OR MINOR DETAIL... 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...

- LEGEND. CHWR CHILLED WATER RETURN... CHWS CHILLED WATER SUPPLY... A TITUS... B 24x24... C 24x12... D 12x12... E 18x13... F 21x21... G NOT USED... H 350RL... I 10x13... J 12x12... K 14x14... L 18x13... M 20x20... N 22x21... O DL... P DL... Q 33RL... R 33RL... S DL... T LL-1... U TMR... V 33RL... W 301 RL... X TBD-10... Y LL-1... Z 300 RL... AC-AHU- AIR HANDLING UNIT... AS-AIR SEPARATOR... B-BOILER... C-CEILING FAN... CH-CABINET HEATER... CHL-CHILLER... CHWP-CHILLED WATER PUMP... CNV-CONNECTOR... CU-CONDENSING UNIT... EXH-EXHAUST AIR EXPANSION TANK... EUH-ELECTRIC UNIT HEATER... FC-FLEXIBLE CONNECTION... FD-PIPE DAMPER WITH ACCESS DOOR... FLR-FLOOR... HS-HOT WATER HEATING SUPPLY... HSAR-HOT WATER HEATING SUPPLY AND RETURN... KIT-KITCHEN... LF-LINEAR FEET... LFD-ROOF SUPPLY FAN... LFW-ROOF SUPPLY AND RETURN... LHM-UNIT HEATER... LHW-WATER HEATER... M-MAXIMUM MANUFACTURER... MIN-MINIMUM... NTS-NOT TO SCALE... O-OUTSIDE... RA-RETURN AIR SUPPLY AIR... SA-SMOKE DAMPER... SD-SMOKED DAMPER... TV-TURNING VANES... TYP-TYPICAL... YAV-VARIABLE VOLUME DAMPER - MANUAL... YVD-VARIABLE VOLUME DAMPER - FREQUENCY DRIVE WITH... Z-Z

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M 501 MECHANICAL SCHEDULES CHECKED BY: SCALE: NTS DATE: NOV 06 1998 JOB NO: 97181

