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Thomas Hooker Elementary School
HVAC Verification and Evaluation

Meriden Public School
Meriden, CT

August 2024

Table of Contents

HVAC Verification and Evaluation
Meriden Elementary School

Appendices

A – TAB Report
B – Ventilation Data Calculations
C – Floor Plans

End of Report

1 EXECUTIVE SUMMARY

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 2023, the state of Connecticut codified ventilation assessment at each school building under jurisdiction of local and regional boards of education. Per substitute Senate Bill 1198, "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, 2025, and every five years thereafter.

This report is an overview of findings from the HVAC systems evaluation performed at Thomas Hooker Elementary School. The focus of this report is twofold: First, to identify to what extent the school's current ventilation system components are operational. Second, to evaluate if the system components are operating in such a manner as to provide adequate ventilation to the spaces within the building in accordance with the most recent indoor ventilation standards.

While the school utilizes dedicated classroom unit ventilators and exhaust fans, our findings indicate that the primary source of ventilation in the school is from operable windows. Although the building code allows for ventilation to enter occupied spaces naturally through operable windows, it is not a realistic option during cold weather or hot weather months. Windows will typically be closed during those times, preventing the spaces from being properly ventilated. For this reason, operable windows will not be considered as a reliable source of ventilation in this analysis.

For this reason, it has been identified that nearly all rooms within Thomas Hooker Elementary school fail to meet the outside air requirements prescribed by the ASHRAE Standard 62, as referenced in the state's building code. We recommend soliciting an engineered design to provide consistent ventilation to the affected areas.

1.1 Building Overview

Thomas Hooker Elementary School is a two-story, 43,000 SF building located at 70 Overlook Road, Meriden, CT 06450. It was built in 1962 and had a roof renovation in 2005.

The building's ventilation and exhaust systems consist of one Unit Ventilator (UV) in each classroom for a total of twenty-six (26) UVs, two (2) heating and ventilating units (H&V) serving the Gym/Auditorium, fourteen (14) Exhaust Fans (EFs), and twenty-four (24) Fan Coil Units (FCUs).

Control of the HVAC systems is provided via pneumatic controls. The building is not equipped with a Building Automation System (BAS), or Demand-Controlled Ventilation (DCV).

1.2 HVAC System Overview

- UVs located in each classroom are designed to provide ventilation and heat to the room by forcing mixed air past a hot water heating coil and delivering the heated air to the room. The UVs are Nesbitt Syncretizer Model N-1000/ N-1250 and appear to be original to the building. The UVs are controlled via local pneumatic controls.

- H&V-1 and H&V-2 are located in a storage room in the gym/auditorium. Each unit is a Trane Torrivent Model T12 and appears to be original to the building. The H&V unit is designed to provide ventilation and heat to the room by forcing mixed air past a hot water heating coil and delivering the heated air to the room. The unit works in conjunction with a dedicated exhaust fan to maintain room pressurization. The 1962 HVAC drawings indicate that the units were originally intended to serve the cafeteria as well. The H&V units are controlled via local pneumatic controls.
- Both units appear to be in fair to poor condition and are beyond their expected useful life.
    - HV&-1: The outdoor air intake damper was observed to be closed and the heating coil appeared to be excessively dirty.
    - H&V-2: The outdoor air intake damper was observed to be approximately 25% open, but an opening in the ductwork was discovered at the return plenum box. As a result, the TAB contractors were unable to accurately measure the return/exhaust air.
- EFs are installed on the roof of the building and exhaust the common restrooms and classroom toilet rooms. The fans also serve as general exhaust for faculty areas and the classrooms through exhaust grilles located in the closets. The fans are a combination of Greenheck models GB-180-3X, GB-161-4X, GB-121-4X and Dayton Models 48C188. Drawings indicate the fans were installed during the 2005 roof renovation.
- FCUs are located throughout the building. FCUs were observed in the cafeteria/stage, stairwells, entrance vestibules, and classroom lobbies etc. The units do not provide ventilation but are intended to provide heat to the spaces where they are located.

2 EVALUATION

2.1 Code Compliance

In 2023, substitute senate bill 1198 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 sSB 1198, 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.

The required supply of outside air into interior occupied spaces is governed by the 2022 Connecticut State Building Code, which adopts the 2021 International Mechanical Code (IMC), and ASHRAE Standard 62.1. This code prescribes the flow rate of outdoor air required for occupied areas based on occupancy classification. When occupancy density is unknown, these documents define the design occupant density for each room classification. The required flow rate in CFM for every occupied space is then calculated based on this value.

It shall be noted that although the occupancy classification is education, the IMC does not distinguish between an office space located within 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.

Some room types do not have an outside air requirement, as can be seen in Table 1. Alternatively, these rooms have exhaust rates that must be met, and are evaluated separately in this report. Refer to the exhaust rate evaluation table in Appendix B for individual room exhaust rate evaluations.

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.

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	0	0	20	10	0.18	0.7
Auditorium	1	3733	150	5	0.06	-
Cafeteria	2	2138	100	7.5	0.18	-
Classroom	29	22181	35	10	0.12	-
Computer Lab	1	101	25	10	0.12	-
Conference Room	1	331	50	5	0.06	-
Corridor	15	6558	-	-	0.06	-
Custodial	2	191	-	-	-	-
Greenhouse	0	0	-	-	-	-
Gymnasium	0	0	7	20	0.18	-
Library	0	0	10	5	0.12	-
Lobby	0	0	10	5	0.06	-
Locker Room	2	1255	-	-	-	0.25
Nurse	0	0	5	5	0.06	-
Office	0	0	5	5	0.06	-
Restroom	2	888	-	-	-	50/70*

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)
Stairs	4	1148	-	-	-	-
Storage	24	1033	-	-	0.12	-
Utility	3	753	-	-	-	-
Vestibule	11	1914	10	5	0.06	-
Waiting Room	1	157	30	5	0.06	-

[1] Based on 1962 drawings

[2] Based on 2021 International Mechanical Code

2.2 Field Study Findings and 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. Below is a summary of observations made.

2.2.1 Air Distribution and Outside Air Dampers

A summary of observations includes the following:

- The majority of exhaust grilles were found to be dirty.
- Insulation was not installed on ductwork associated with the H&V units, which can reduce the efficiency of the system. H&V-1 outdoor air damper was found closed, while H&V-2 outdoor air damper was found approximately 25% open.
- The outdoor air louvers associated with the unit ventilators in the classrooms were found to be blanked off. Closed outdoor air dampers and blanked off intake louvers prevent outdoor air from entering the building resulting in unventilated spaces.
- One classroom was found to have been converted from a single space to two separate spaces when compared to the original 1962 drawings. The room was split at the center of the original unit ventilator. We assume that the UV is currently serving both spaces. However, HVAC calculations should be performed and air distribution to the rooms should be designed to provide properly conditioned outdoor air to each side.

2.2.2 Unit Ventilator Units (UV)

A summary of observations includes the following:

- The fresh air intake louvers for the UVs were observed to be blanked off, resulting in the room not getting any outdoor air through the unit.
- As currently configured, the UVs are not providing ventilation as designed or required by code.
- The UVs are in fair to poor condition and are beyond their expected useful life.

2.2.3 Heating and Ventilating Units (H&V)

A summary of observations includes the following:

- A partition wall between the gym/auditorium and the cafeteria is retractable and separates the spaces. When the partition is closed, the cafeteria does not receive outdoor air as designed. See Section 2.3.

- The outdoor air intake damper of H&V-1 was observed to be closed and the heating coil appeared to be excessively dirty.
- The outdoor air intake damper of H&V-2 was observed to be approximately 25% open.
- An opening at the return air plenum was discovered during air testing. This opening allows air to leak into the system, reducing the effectiveness of the system and the accuracy of the air measurements.
- Both H&V units appear to be in fair to poor condition and are operating beyond their expected useful life.

2.2.4 Exhaust Fans

A summary of observations includes the following:

- Most of the exhaust fans measured were found to be running below their design air flow. Please refer to the TAB report in Appendix B for a full list.
- Many of these exhaust fans provide ventilation for the core bathrooms and toilet rooms in the classrooms. According to IMC standards, restrooms require a minimum of 50 cfm of exhaust air per stall or urinal in continuous operation or a minimum of 70 cfm of exhaust air per stall or urinal when operating intermittently.

2.3 Outside Air Flow and Air Change Rates

2.3.1 Airflow Design vs. Measurements

Table 2 and 3 below displays H&V design parameters regarding supply and outside airflows. Design information was obtained from the 1962 as-built drawings. Air flow measurements were performed by Air Balancing Services Co. Ventilation requirements are based on ASHRAE 62.1 as referenced in the state's building code. Note that the measured supply airflows are approximately half of the designed supply airflow of both units.

The H&V units serving the Gym/Auditorium and Cafeteria are operating at approximately 50% of design. H&V-1 has a closed outdoor air damper and does not provide any outdoor air. H&V-2 is supplying approximately 62% of its designed outdoor air at its current operating condition. As such, the outdoor air being supplied to the space is approximately 30% of the designed outdoor air rate. The calculated outdoor air required using current codes is approximately 5% more than the H&V units were initially designed for. An opening in the return air plenum was observed which could impact the accuracy of the air measurements. Appendix A contains the full report provided by Air Balancing Services Co.

Table 2
Design vs. Measured Airflow

H&V	DESIGN AIRFLOW			MEASURED AIRFLOWS		
	SUPPLY CFM	OA CFM (CFM)	DESIGN % OA	SUPPLY CFM	OA CFM	% OA
H&V-1	4500	2130	47%	2063	0	0%
H&V-2	4500	2130	47%	2983	1335	45%

Table 3
Design vs. Calculated Outside Airflow

H&V	DESIGN AIRFLOW			CALCULATED AIRFLOW		
	SUPPLY CFM	OA CFM (CFM)	DESIGN % OA	SUPPLY CFM	OA CFM	% OA
H&V-1	4500	2130	47%	4500	2350	52%
H&V-2	4500	2130	47%	4500	2350	52%

2.3.2 Individual Room Ventilation

Minimum ventilation rates for each room are itemized in Appendix C. As stated previously, the primary source of ventilation in the classrooms is from operable windows. Although the building code allows for ventilation to enter occupied spaces naturally through operable windows, it is not a realistic option during cold weather or hot weather months. For this reason, operable windows will not be considered as a source of ventilation in this analysis. The Unit Ventilators in the classrooms are not providing any outdoor air as the intake louvers are blanked off.

The H&V units serving the Gym/Auditorium and Cafeteria are operating at approximately 50% of design. H&V-1 has a closed outdoor air damper and does not provide any outdoor air. H&V-2 is supplying approximately 62% of its designed outdoor air at its current operating condition. As such, the outdoor air being supplied to the space is approximately 30% of the designed outdoor air rate. It should also be noted that the units are intended to provide ventilation to the cafeteria. The auditorium/gym and cafeteria are separated by a removable partition as previously mentioned in Section 2.2.3. Although some air can reach that space, the wall significantly restricts the flow of air from the auditorium/gym to the cafeteria. While the partition is closed, the cafeteria is not being adequately ventilated based on occupancy requirements.

It has been identified that almost all the rooms within Thomas Hooker Elementary school lack appropriate ventilation to meet the outside air requirements prescribed by the ASHRAE Standard 62 as referenced in the state's building code.

3 Discussion and Recommendations

3.1 General Recommendations to Improve Schools Performance

To preserve the condition and capability of the HVAC equipment serving the building, it is recommended that a maintenance program following ASHRAE 180-2018: *Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems* be implemented. This standard provides a comprehensive guide, that when followed, can increase the HVAC system's ability to achieve acceptable thermal comfort, energy efficiency and indoor air quality within the building.

Recommissioning of the entire HVAC system should be performed in 3–5-year intervals, to ensure all equipment and control components operate as designed. This service optimizes system performance, increases energy savings, and improves system efficiency.

3.2 Air Distribution and Outdoor Air Dampers

It is recommended that cleaning of the school's entire duct systems be performed by a qualified professional. Cleaning can help improve the quality of the air being circulated throughout the school.

Rebalancing of the supply, return, exhaust, and outside air dampers for each H&V unit is also recommended. Rebalancing should be performed after completion of duct cleaning and adjustments to equipment and all associated dampers.

3.3 Unit Ventilators

Due to the age and condition of the UVs it is recommended that the units be replaced. A full HVAC design should be performed to specify the appropriate equipment replacement to meet current requirements.

It is the client's option to have the UVs tested for current capabilities and correct deficiencies through repair. Testing of the UVs should be performed after outdoor air opening blank offs are removed and dampers are repaired.

3.4 Heating and Ventilating Units

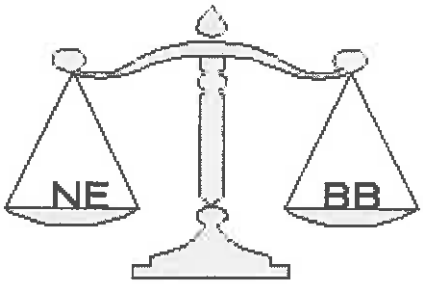
Due to the age and condition of the Heating and Ventilating units, it is recommended that the units be replaced. A full HVAC design should be performed to specify the appropriate equipment replacement to meet current requirements. All associated dampers, ductwork, and accessories should be repaired as required for a complete functioning HVAC system. It is the client's option to have the H&V units tested for current capabilities and correct deficiencies through repair. We also recommend a separate HVAC system be provided to serve the cafeteria.

3.1 Exhaust Fans

All of the exhaust fans were found to be running below their designed airflow rate. F&O recommends the exhaust fans and their associated exhaust registers be re-balanced to provide adequate ventilation according to ASHRAE standards. Exhaust fans that are not operational or incapable of providing adequate ventilation should be repaired or replaced. All exhaust fans should have maintenance performed.

Appendix A

Testing and Balancing Report



CERTIFIED TEST, ADJUST AND BALANCE REPORT

REPORT DATE: 12-29-23

PROJECT: THOMAS HOOKER ELEMENTARY SCHOOL
VENTILATION VERIFICATION

ADDRESS: MERIDEN, CT

CUSTOMER: FUSS & ONEILL, INC.

NEBB TAB CONTRACTOR: AIR BALANCING SERVICE CO.
16 PROGRESS CIRCLE UNIT 1A
NEWINGTON, CT 06111
PHONE NUMBER: (860) 500-5008
FAX NUMBER: (860) 500-5010
WEBSITE: WWW.AIRBAL.COM

TABLE OF CONTENTS

PROJECT: THOMAS HOOKER ELEM. SCHOOL
REPORT DATE: 12-29-23
SUBMITTED BY: AIR BALANCING SERVICE CO. NEBB CERTIFIED #2453
CODE: 23317T

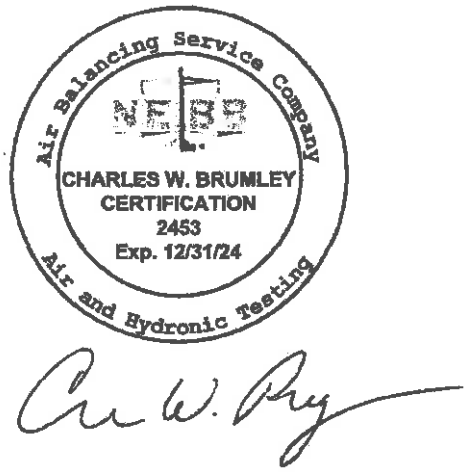
Firm Certification Number: 2453

Firm Name: Air Balancing Service Company

Certification: Testing, Adjusting and Balancing of Environmental Systems

Certified Professional Name: CHARLES W. BRUMLEY

Expiration Date: 12/31/24



** AIR INSTRUMENT CALIBRATION REPORT **

INSTRUMENT SERIAL NUMBER	APPLICATION	CALIBRATION
SHORTRIDGE AIRDATA MULTIMETER ADM-860C SERIAL NO. M20410	MULTIMETER USED IN VELOCITY, STATIC PRESSURES, FLOWHOOD READINGS, DIFFERENTIAL PRESSURES, TEMPERATURE	8/16/2023
TRIPLETT SERIAL NO. 2211629	AIRFLOW VELOCITY	8/16/2023
EXTECH PHOTO TACH SERIAL NO. 201117034	MOTOR AND FAN RPM'S	8/16/2023
EXTECH DIG THERMOMETER RH390 SERIAL NO. A21031496	TEMPERATURE / HUMIDITY	8/16/2023
FLUKE 52/II SERIAL NO. 7092090	TEMPERATURE	8/16/2023
FLUKE AMMETER 323 SERIAL NO. 53965787MV	VOLTAGE AND AMPERAGE	8/16/2023

Pro-Calibration, LLC Calibration Data Sheet

Submitted by: Air Balancing Service Co.
Manufacturer: Shortridge Instruments
Model Number: ADM-860C
Serial Number: M20410
Description: Air Data Multimeter

Asset Number #: ABSC-040
Cal. Technician: CT2
Cal. Date: 8/16/23
Due Date: 8/16/24
Cal. Procedure: Manufacturer Specifications
Cal. Interval: 12 Months

Standards Used:

975	993	1066	1072	1094	1113	1144	1152	

Temperature: 21Deg.C Barometric Pressure: 30.02"HG Humidity: 45%RH

STD#	Tested Function	Range	Standard	Uut. Meas. Val.		Allowable Tolerance Range
1113	Pressure in/wc	0-60"WC	0.0500	0.0500		0.0480 – 0.0520"wc
1144	+/- 2%rdg.,+/-0.001"wc		0.5000	0.5000		0.4890 – 0.5110"wc
1152			1.000	1.000		0.9790 – 1.0210"wc
			10.000	10.05		9.799 – 10.201"wc
			25.000	25.05		24.499 – 25.501"wc
			50.000	50.10		48.999 – 51.001"wc
975	Air Velocity	25-5000	50	50		42 - 59 fpm
993	+/- 3%rdg.,+/-7fpm	Ft/min.	200	200		187 - 213 fpm
1072			500	500		478 - 522 fpm
1144			900	905		866 - 934 fpm
1152			1500	1505		1448 - 1552 fpm
			3100	3110		3000 - 3200 fpm
			4900	4910		4746 - 5054 fpm
1066	Temperature	-65/+250°F	5.00	5.2		4.5 – 5.5◦F
	+/- 0.5°F		32.00	32.2		31.5 – 32.5◦F
	+/- 0.5°F		77.00	77.2		76.5 – 77.5◦F
	+/- 1.0°F		100.00	100.2		99.0 – 101.0◦F
	+/- 1.0°F		240.00	240.2		239.0 – 241.0◦F
1094	Absolute Pressure ±2%, rdg, ±0.1"HG	14 – 40in.Hg	30.02	30.0		29.32 – 30.72 in.Hg.

Note;

Pro-Calibration, LLC Calibration Data Sheet

Submitted by: Air Balancing Service Co.
Manufacturer: Triplett
Model Number: CFM400
Serial Number: 2211629
Description: Rotating Vane Anemometer
Asset Number: ABSC-049

Cal. Technician: CT2
Cal. Date: 8/16/23
Due Date: 8/16/24
Cal. Procedure: Manufacturer Specifications
Cal. Interval: 12 Months

Standards Used:

975	991	992	994	1072	1152			

Temperature: 21Deg.C. Barometric Pressure: 30.02"HG. Humidity: 45%RH.

#	Tested Function	Allowable Range	Standard	Uut. Meas. Val.	After Adj.	Tolerance
1	Air Velocity	90 – 100	95	93		+/-1.5% of rdg, +59fpm
	40-5900fpm	145 – 155	150	149		+/-1.5% of rdg, +59fpm
		391 – 409	400	401		+/-1.5% of rdg, +59fpm
		788 – 812	800	805		+/-1.5% of rdg, +59fpm
		1184 – 1216	1200	1206		+/-1.5% of rdg, +59fpm
		3065 – 3135	3100	3108		+/-1.5% of rdg, +59fpm
2	Temperature	69.46 – 73.46	71.46	72		+/- 1.1deg.F
	-4 – 140deg.F					

Pro-Calibration, LLC Calibration Data Sheet

Submitted by: Air Balancing Service Co.
Manufacturer: Extech Instruments
Model Number: 461920
Serial Number: 201117034
Description: Laser / Photo Contact Tach.

Asset Number: ABSC-036
Cal. Technician: CT2
Cal. Date: 8/16/23
Due Date: 8/16/24
Cal. Procedure: Manufacturer Specifications
Cal. Interval: 12 Months

Standards Used:

883	1005							

Temperature: 21Deg.C Barometric Pressure: 30.02"HG. Humidity: 45%RH.

#	Tested Function	Range	Standard	UUT. Meas. Val.	After Adj.	Tolerance
1	Speed / RPM / Photo	10-99,999	500.00	500.0		± 0.05% + 1dig.
			1000.00	1000		± 0.05% + 1dig.
			1800.00	1800		± 0.05% + 1dig.
			6000.00	6000		± 0.05% + 1dig.
			30,000.00	30,001		± 0.05% + 1dig.
			90,000.00	90,002		± 0.05% + 1dig.

Pro-Calibration, LLC Calibration Data Sheet

Submitted by: Air Balancing Service Co.
Manufacturer: Extech Instruments
Model Number: RH390
Serial Number: A21031496
Description: Digital Psychrometer
Asset Number: ABSC-034

Cal. Technician: CT2
Cal. Date: 8/16/23
Due Date: 8/16/24
Cal. Procedure: Manufacturer Specifications
Cal. Interval: 12 Months

Standards Used:

1003	1057	1080	1081	1135				

Temperature: 21Deg.C Barometric Pressure: 30.02"HG. Humidity: 45%RH

#	Tested Function	Range	Standard	Uut. Meas. Val.	After Adj.	Tolerance
1	Temperature	-20 / +70°C	23.61	23.6		± 1.0°C
2	Relative Humidity	0.0 – 100.0 %rh	33.07	34.8		±2%RH
			58.8	60.2		
			75.47	77.1		(20%-90%)
3	Wet Bulb	0 - 80◦C	18.2	17.6		Calculated
4	Dew Point	-30 / 100◦C	15.1	16.0		Calculated

Pro-Calibration, LLC Calibration Data Sheet

Submitted by: Air Balancing Service Co.
Manufacturer: Fluke
Model Number: 52/II
Serial Number: 7092090
Description: Digital Thermometer

Asset Number #: ABSC-046
Cal. Technician: CT2
Cal. Date: 8/16/23
Due Date: 8/16/24
Cal. Procedure: Manufacturer Specifications
Cal. Interval: 12 Months

Standards Used:

1153								

Temperature: 21Deg.C. Barometric Pressure: 30.02HG. Humidity: 45%RH

#	Tested Function	Range	Standard	Uut. Meas. Val.	After Adj.	Tolerance
1.	Temperature T1	-200 /+1370◦C	-100.00 °C	-99.8		± 0.1% rdg +0.7°C
			-20.00 °C	-19.7		± 0.1% rdg +0.7°C
			0.00 °C	0.1		± 0.1% rdg +0.7°C
			100.00 °C	100.0		± 0.1% rdg +0.7°C
			1200.00°C	1200		± 0.1% rdg +0.7°C
2	Temperature T2	-200 /+1370◦C	-100.00 °C	-99.9		± 0.1% rdg +0.7°C
			-20.00 °C	-19.9		± 0.1% rdg +0.7°C
			0.00 °C	0.0		± 0.1% rdg +0.7°C
			100.00 °C	100.1		± 0.1% rdg +0.7°C
			1200.00°C	1200		± 0.1% rdg +0.7°C

Pro-Calibration, LLC Calibration Data Sheet

Submitted by: Air Balancing Service Co.
Manufacturer: Fluke
Model Number: 323 True RMS
Serial Number: 53965787MV
Description: True RMS clamp meter
Asset Number: ABSC-037

Cal. Technician: CT2
Cal. Date: 8/16/23
Due Date: 8/16/24
Cal. Procedure: Manufacturer Specifications
Cal. Interval: 12 Months

Standards Used:

1153								

Temperature: 21Deg.C Barametric Pressure: 30.02"HG Humidity: 45RH%

#	Tested Function	Range	Standard	Uut. Meas. Val.	After Adj.	Tolerance
1.	DC Voltage	0 - 600.0 V	10.00000V	10.0		1% +/- 5 counts
			100.0000V	100.1		1% +/- 5 counts
			500.000V	500.2		1% +/- 5 counts
2.	AC Voltage @ (60Hz)	0 - 600.0 V	10.0000V	10.0		1.5% +/- 5 counts
			100.000V	100.1		1.5% +/- 5 counts
			500.00V	500.3		1.5% +/- 5 counts
3.	AC Current @ (60 Hz)	0 – 400.0 A	10.0000A	10.0		2.0% +/- 5 counts
			100.000A	100.1		2.0% +/- 5 counts
			390.00A	390.2		2.0% +/- 5 counts
4.	Resistance	0 – 400.0 Ω	10.0000Ω	10.0		1% - 5 counts
			100.000Ω	100.1		1% - 5 counts
			375.00Ω	374.8		1% - 5 counts
5	Continuity / Audible	≤30Ω	Check	OK		≤30Ω

Pro-Calibration, LLC 480 Harwich Rd. Brewster, MA 02631
774-323-3662
www.pro-calibration.com
Veteran owned and operated

ABBREVIATION	MEANING
AC	AIR CONDITIONER
AC/HR	AIR CHANGES PER HOUR
AHU	AIR HANDLING UNIT
AK	AREA FACTOR
AMP	AMPERAGE
CEF	CEILING EXHAUST FAN
CFM	CUBIC FEET PER MINUTE
CNTRL	CONTROL
CU FT	CUBIC FEET
CV	CONSTANT VOLUME
DD	DIRECT DRIVE
DEL	ACTUAL DELIVERED
DES	DESIGN
DIFF	DIFFERENTIAL
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE (" WG)
FPM	FEET PER MINUTE
FT	FEET
H	HEIGHT
HP	HORSEPOWER
HR	HOUR
HTG	HEATING
L	LENGTH
LD	LINEAR DIFFUSER
LFD	LAMINAR FLOW DIFFUSER
LR	LIGHT RETURN
LT	LIGHT TROEFFER
MA	MIXED AIR
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MD	MOTORIZED DAMPER
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER

ABBREVIATION	MEANING
MIN	MINIMUM
MUA	MAKE-UP AIR
NO.	NUMBER
OA	OUTSIDE AIR
OA%	PERCENT OF OUTSIDE AIR
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
PERF	PERFORATED DIFFUSER
POS	POSITION
PRESS	PRESSURE
PRIM	PRIMARY
RA	RETURN AIR
RA%	PERCENT OF RETURN AIR
RHC	REHEAT COIL
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SF	SERVICE FACTOR
SL	SLOT
SN	SERIAL NUMBER
SP	STATIC PRESSURE (" WG)
SQ FT	SQUARE FEET
TEMP	TEMPERATURE
TF	THERMAFUSER
TSP	TOTAL STATIC PRESSURE (" WG)
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY IN FEET PER MINUTE
VFD	VARIABLE FREQUENCY DRIVE
W	WIDTH
WEF	WALL EXHAUST FAN
WG	WATER GAUGE
W/	WITH

PROJECT: THOMAS HOOKER ELEMENTARY SCHOOL
VENTILATION VERIFICATION

PROJECT DESCRIPTION: Test, Investigate, Analysis & Adjustments as requested

COMMENT:

1) The outdoor air louvers for the unit ventilators are blanked off.
2) The building is negative .08" WG relative to outdoors.
3) HV-1:
    a) Serving the Gym / Auditorium, we noticed O.A damper appeared to be closed
    b) Hot water coil is excessively dirty
4) HV-2:
    a. Serving the Gym / Auditorium, we noticed O.A damper approximately 25% open.
    b. We noticed on the return box / plenum in the office where it is hanging, there is an open slot pulling air into the unit, this explains the low return grill readings in the gym.

SUBMITTED BY: AIR BALANCING SERVICE CO. **NEBB CERTIFIED #2453**
REPORT DATE: 12-29-23
CODE: 23317C

TAB MEASUREMENTS

** SUPPLY / EXHAUST READINGS **

FLOOR	ROOM #	ACTUAL ROOM NAMES / TYPE	DRAWING ROOM NAME	TAB MEASURED (SA CFM)	TAB MEASURED (EA CFM)	CALC. OA CFM @ MIN (OA CFM)	MEASURED UNIT OA% (OA CFM)	BAS DAMPER COMMAND (POS%)	ASSOCIATED VAV & RTU/AHU UNIT
LOWER CLASSROOM WING	4	CLASSROOM	1 CLASSROOM	1037	292	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	N/A	CORRIDOR	1 CORRIDOR	0	N/A	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	N/A	STORAGE	1 CUST AND CHAIR STORAGE	N/A	280	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	CR #1 / 1 TOILET	N/A	10	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	VESTIBULE	1 VESTIBULE	72	32	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	6	CLASSROOM	2 CLASSROOM	715	324	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	N/A	CUSTODIAN	2 CUSTODIAN	N/A	55	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	1	CLASSROOM	2 KINDERGARTEN	426	246	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	N/A	TOILET	CR # / 2 TOILET	N/A	35	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	7	CLASSROOM	3 CLASSROOM	590	290	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	8	CLASSROOM	4 CLASSROOM	458	322	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	N/A	TOILET	CR # / 4 TOILET	N/A	84	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	10	CLASSROOM	N/A	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	10	CLASSROOM	N/A	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	10	CLASSROOM	5 CLASSROOM	670	364	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	N/A	TOILET	CR# 5 TOILET	N/A	89	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	12	CLASSROOM	6 CLASSROOM	641	221	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	12	TOILET	CR #6 TOILET	N/A	34	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	14	CLASSROOM	7 CLASSROOM	671	246	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	14	TOILET	CR# 7 TOILET	N/A	28	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	13	CLASSROOM	8 CLASSROOM	568	194	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	11	CLASSROOM	9 CLASSROOM	606	232	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	N/A	PASSAGE	9 PASSAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	PASSAGE	10 PASSAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	9	CLASSROOM	10 SPECIAL CLASSROOM	737	331	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	5	CLASSROOM	11 CLASSROOM	597	267	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	3	CLASSROOM	12 CLASSROOM	790	0	N/A	N/A	PNEUMATIC	FCU
MAIN LEVEL	N/A	STORAGE	AUDIO VISUAL STORAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	CLASSROOM	COAT ROOM	N/A	N/A	N/A	N/A	PNEUMATIC	N/A

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-1A

NEBB CERTIFIED #2453

SHEET NO. 1A

TAB MEASUREMENTS

** SUPPLY / EXHAUST READINGS **

FLOOR	ROOM #	ACTUAL ROOM NAMES / TYPE	DRAWING ROOM NAME	TAB MEASURED (SA CFM)	TAB MEASURED (EA CFM)	CALC. OA CFM @ MIN (OA CFM)	MEASURED UNIT OA% (OA CFM)	BAS DAMPER COMMAND (POS%)	ASSOCIATED VAV & RTU/AHU UNIT
LOWER CLASSROOM WING	N/A	STORAGE	EDUCATIONAL STORAGE	N/A	60	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	LOUNGE	FACULTY LOUNGE	N/A	86	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	WORK	FACULTY WORK	N/A	94	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	OFFICE	GENERAL OFFICE	N/A	175	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	STORAGE	GYM STORAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	AUDITORIUM	GYMNASIUM / AUDITORIUM	5046	2644	2402	40	PNEUMATIC	HV-1 / HV-2
MAIN LEVEL	N/A	TOILET	CR# 3 TOILET	N/A	42	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	HEALTH	HEALTH ROOM	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	HEALTH	HEATER ROOM	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	STAGE	LUNCH / STAGE	1648	55	N/A	N/A	PNEUMATIC	FCU
MAIN LEVEL	N/A	COPY	COPY ROOM	N/A	100	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	STORAGE	OUTDOOR STAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	PRINCIPAL	PRINCIPAL	N/A	99	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	LOBBY	PUBLIC LOBBY	61	N/A	N/A	N/A	PNEUMATIC	FCU
MAIN LEVEL	N/A	STORAGE	RECEIVING ROOM	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	CONFERENCE	CONFERENCE ROOM	N/A	168	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	CLASSROOM	SPECIAL CLASSROOM	N/A	231	N/A	N/A	PNEUMATIC	FCU
MAIN LEVEL	N/A	STORAGE	STORAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	LOBBY	STUDENT LOBBY	98	N/A	N/A	N/A	PNEUMATIC	FCU
MAIN LEVEL	N/A	VESTIBULE	VESTIBULE	81	N/A	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	N/A	PASSAGE	11 PASSAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	STORAGE	MACHINE STORAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	CR # 12 TOILET	N/A	10	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	CR# 13 TOILET	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	CR# 14 TOILET	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	CR# 15 TOILET	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	CR# 16 TOILET	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	CR# 17 TOILET	N/A	429	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	CR# 18 TOILET	N/A	210	N/A	N/A	PNEUMATIC	N/A

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-1B

NEBB CERTIFIED #2453

SHEET NO. 1B

TAB MEASUREMENTS

** SUPPLY / EXHAUST READINGS **

FLOOR	ROOM #	ACTUAL ROOM NAMES / TYPE	DRAWING ROOM NAME	TAB MEASURED (SA CFM)	TAB MEASURED (EA CFM)	CALC. OA CFM @ MIN (OA CFM)	MEASURED UNIT OA% (OA CFM)	BAS DAMPER COMMAND (POS%)	ASSOCIATED VAV & RTU/AHU UNIT
LOWER CLASSROOM WING	N/A	TOILET	CR# 19 TOILET	N/A	303	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	CR# 20 TOILET	N/A	185	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	CR# 21 TOILET	N/A	333	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	PASSAGE	6 PASSAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	TOILET	1 TEACHERS TOILET	N/A	63	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	CORRIDOR	2/3 CORRIDOR	0	N/A	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	2	CLASSROOM	1 KINDERGARTEN	647	190	N/A	N/A	PNEUMATIC	FCU
LOWER CLASSROOM WING	N/A	PASSAGE	5 PASSAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	PASSAGE	4 PASSAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	PASSAGE	3 PASSAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	PASSAGE	2 PASSAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	9	TOILET	CR# 10 TOILET	N/A	105	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	5	TOILET	11 TOILET	N/A	13	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	T.8	T.8	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	PASSAGE	1 PASSAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	STAIR	2 STAIR	103	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	CORRIDOR	4 CORRIDOR	0	N/A	N/A	N/A	PNEUMATIC	FCU
MAIN LEVEL	N/A	ROOM	INCINERATOR ROOM	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
MAIN LEVEL	N/A	CORRIDOR	5 CORRIDOR	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
LOWER CLASSROOM WING	N/A	PASSAGE	7 PASSAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
UPPER CLASSROOM WING	N/A	STORAGE	7 STORAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
UPPER CLASSROOM WING	16	CLASSROOM	13 CLASSROOM	563	362	N/A	N/A	PNEUMATIC	N/A
UPPER CLASSROOM WING	18	CLASSROOM	14 CLASSROOM	1001	331	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	20	CLASSROOM	16 CLASSROOM	1019	274	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	19	CLASSROOM	15 CLASSROOM	1003	142	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	22	CLASSROOM	17 CLASSROOM	1015	425	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	22B	OFFICE	OFFICE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
UPPER CLASSROOM WING	24	CLASSROOM	18 CLASSROOM	565	210	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	26	CLASSROOM	19 CLASSROOM	458	303	N/A	N/A	PNEUMATIC	FCU

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-1C

NEBB CERTIFIED #2453

SHEET NO. 1C

TAB MEASUREMENTS

** SUPPLY / EXHAUST READINGS **

FLOOR	ROOM #	ACTUAL ROOM NAMES / TYPE	DRAWING ROOM NAME	TAB MEASURED (SA CFM)	TAB MEASURED (EA CFM)	CALC. OA CFM @ MIN (OA CFM)	MEASURED UNIT OA% (OA CFM)	BAS DAMPER COMMAND (POS%)	ASSOCIATED VAV & RTU/AHU UNIT
UPPER CLASSROOM WING	N/A	STAIR	2 STAIR	0	N/A	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	N/A	TOILET	2 TEACHERS TOILET	N/A	23	N/A	N/A	PNEUMATIC	N/A
UPPER CLASSROOM WING	N/A	CUSTODIAN	3 CUSTODIAN	N/A	122	N/A	N/A	PNEUMATIC	N/A
UPPER CLASSROOM WING	N/A	STORAGE	3 STORAGE	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
UPPER CLASSROOM WING	N/A	CORRIDOR	6 CORRIDOR	N/A	N/A	N/A	N/A	PNEUMATIC	N/A
UPPER CLASSROOM WING	25	CLASSROOM	20 CLASSROOM	648	185	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	23	CLASSROOM	21 CLASSROOM	1038	333	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	N/A	STAIR	1 STAIR	0	N/A	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	21	CLASSROOM	22 CLASSROOM	654	316	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	17	CLASSROOM	23 CLASSROOM	729	425	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	15	CLASSROOM	24 CLASSROOM	0	250	N/A	N/A	PNEUMATIC	FCU
UPPER CLASSROOM WING	N/A	BOYS	BOYS	N/A	254	N/A	N/A	PNEUMATIC	N/A
UPPER CLASSROOM WING	N/A	GIRLS	GIRLS	N/A	291	N/A	N/A	PNEUMATIC	N/A

HV-1 (NORTH)

** SUPPLY FAN REPORT **

AREA SERVED: GYM - AUDITORIUM
FAN LOCATION: GYM - AUDITORIUM

FAN PERFORMANCE DATA		
	DESIGN	ACTUAL
CFM:	N/A	2063
TOTAL SP (" WG):	N/A	.69
EXT SP (" WG):	N/A	.24
FAN SPEED:	N/A	481
VOLTS/PHASE/CYCLE:	208/3/60	N/A
T1-T2/T2-T3/T1-T3:	N/A	207/207/207
AMPS T1/T2/T3:	4.8	2.9/2.9/2.8

UNIT / MOTOR DATA	
FAN MANUFACTURER:	TRANE
FAN MODEL NO:	TORRIVENT T12
MOTOR MANUFACTURER:	WAGNER
MOTOR HP:	1 1/2
MOTOR RPM:	1750
MOTOR SF:	1.2
MOTOR FRAME:	184
MOTOR SHEAVE BORE X OD:	4
FAN SHEAVE BORE X OD:	14
BELT NO/SIZE:	1/A71
FINAL SHEAVE POSITION:	100% OPEN

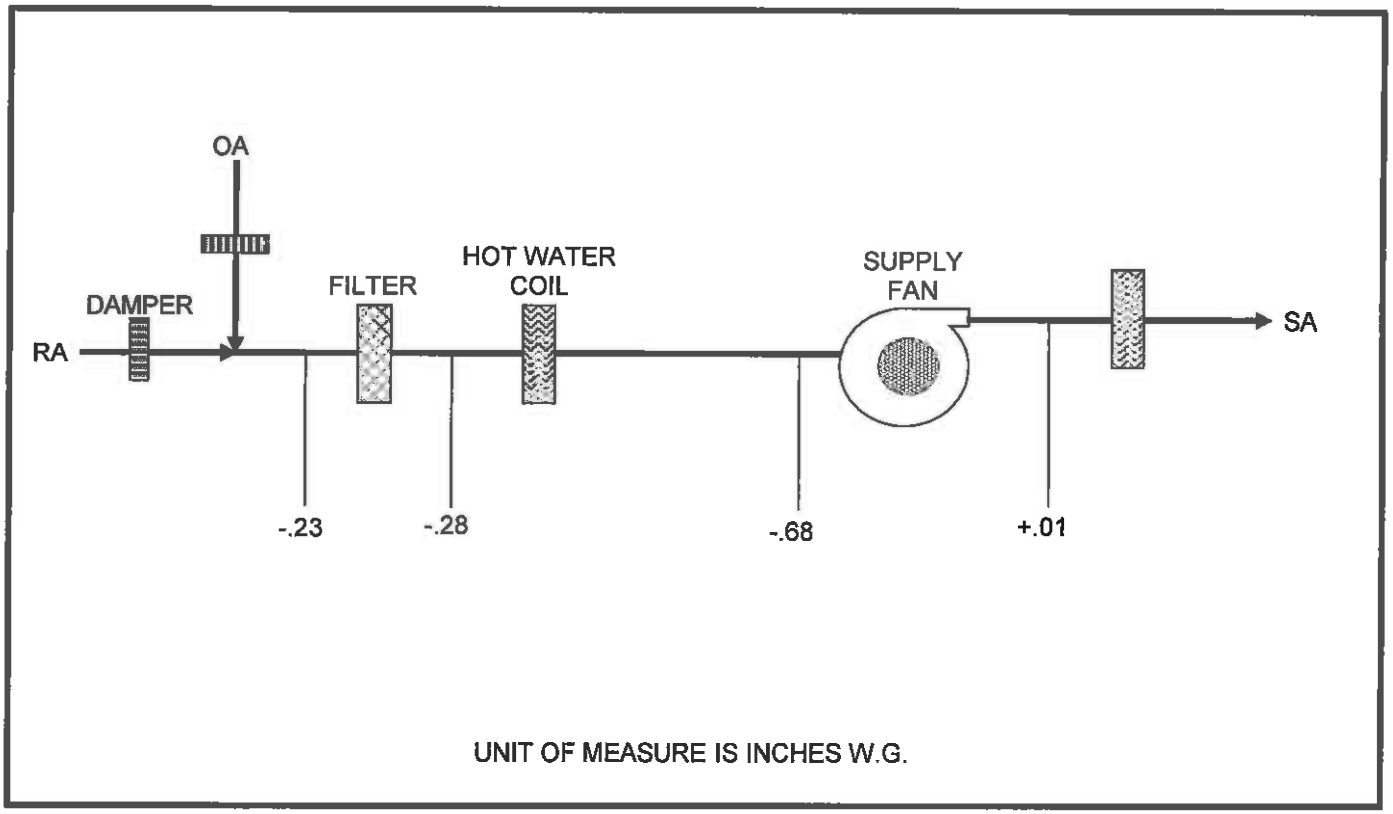
NOTE 1: HOT WATER COIL IS EXCESSIVELY DIRTY
NOTE 2: O.A DAMPER 100% CLOSED

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-1

NEBB CERTIFIED #2453

HV-1

** STATIC PRESSURE PROFILE **



PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-2

NEBB CERTIFIED #2453

SHEET NO. 2

HV-1 (NORTH)

** AIR OUTLET/INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
	SUPPLY							
	GYM - AUDITORIUM		1	72X24	10.69	193	2063	
	RETURN / EXHAUST							
	GYM - AUDITORIUM		1	42X5	.76	693	527	1
	GYM - AUDITORIUM		2	230X5	4.15	482	2000	1
	TOTAL CFM					1175	2527	
	E-7							
	EA DUCT		1	20X16	2.222	589	1309	

NOTE 1: RETURN AIR IS A COMBINATION OF EXHAUST AIR AND RETURN AIR

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-3

NEBB CERTIFIED #2453

HV-2 (SOUTH)

** SUPPLY FAN REPORT **

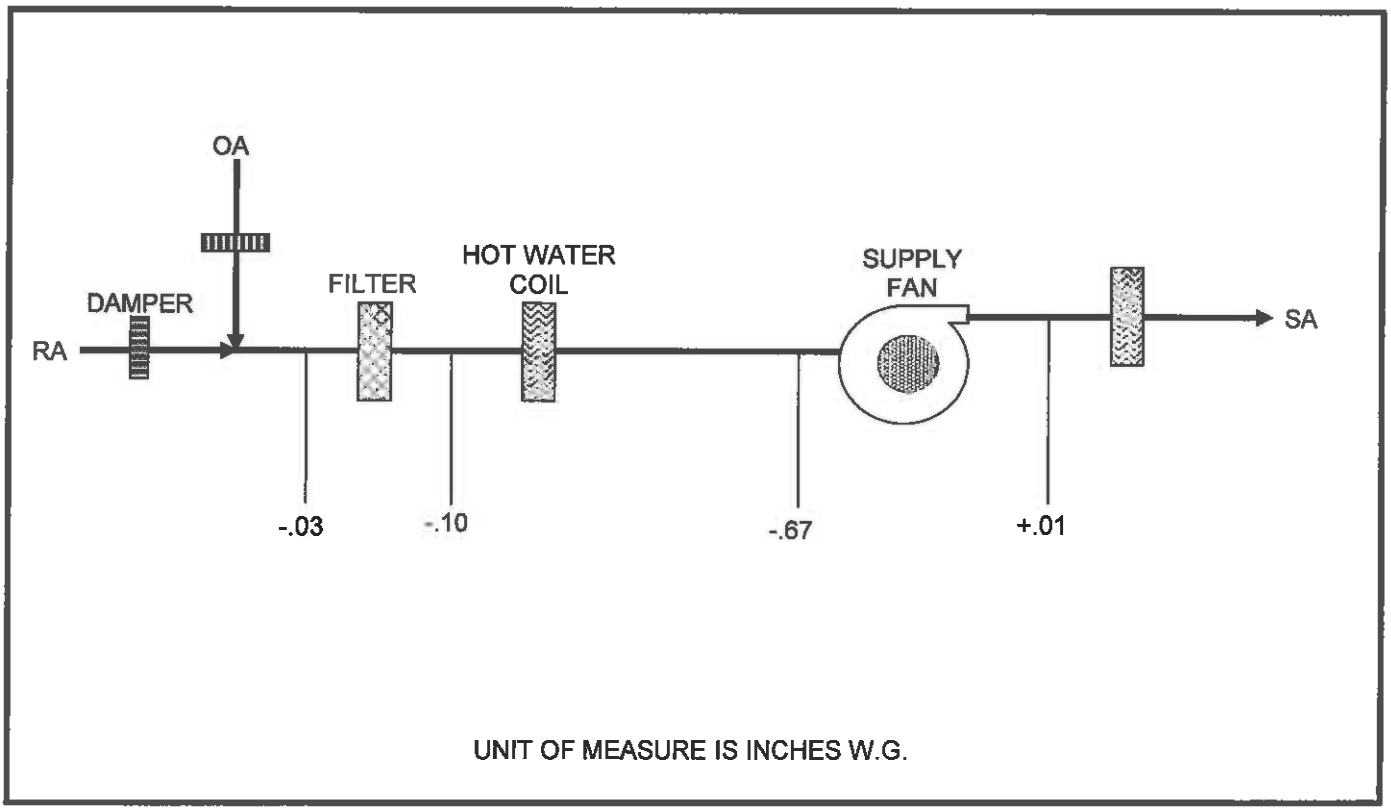
AREA SERVED: GYM - AUDITORIUM
FAN LOCATION: GYM - AUDITORIUM

FAN PERFORMANCE DATA		
	DESIGN	**ACTUAL**
CFM:	N/A	2983
TOTAL SP (" WG):	N/A	.68
EXT SP (" WG):	N/A	.04
FAN SPEED:	N/A	489
VOLTS/PHASE/CYCLE:	208/3/60	N/A
T1-T2/T2-T3/T1-T3:	N/A	207/208/207
AMPS T1/T2/T3:	4.8	2.8/2.8/2.8

UNIT / MOTOR DATA	
FAN MANUFACTURER:	TRANE
FAN MODEL NO:	TORRIVENT T12
MOTOR MANUFACTURER:	WAGNER
MOTOR HP:	1 1/2
MOTOR RPM:	1750
MOTOR SF:	1.2
MOTOR FRAME:	184
BELT NO/SIZE:	1/A71
FINAL SHEAVE POSITION:	100% OPEN

HV-2

** STATIC PRESSURE PROFILE **



PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-5

NEBB CERTIFIED #2453

SHEET NO. 5

HV-2 (SOUTH)

** AIR OUTLET/INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
	SUPPLY							
	GYM - AUDITORIUM		1	72X24	10.69	279	2983	
	RETURN / EXHAUST							
	GYM - AUDITORIUM		1	42X5	.76	169	128	1
	GYM - AUDITORIUM		2	230X5	4.15	182	755	1
	TOTAL CFM					351	883	
	E-6							
	EA DUCT		1	20X16	2.222	601	1335	

NOTE 1: RETURN AIR IS A COMBINATION OF EXHAUST AIR AND RETURN AIR

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-6

NEBB CERTIFIED #2453

SHEET NO. 6

FCU'S

** AIR OUTLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
4	CLASSROOM #1		1	51.5 X 6	1.45	715	1037	
6	CLASSROOM #2		2	51.5 X 6	1.45	493	715	
7	CLASSROOM #3		3	51.5 X 6	1.45	407	590	
8	CLASSROOM #4		4	51.5 X 6	1.45	316	458	
10	CLASSROOM #5		5	51.5 X 6	1.45	462	670	
12	CLASSROOM #6		6	51.5 X 6	1.45	442	641	
14	CLASSROOM #7		7	51.5 X 6	1.45	463	671	
13	CLASSROOM #8		8	51.5 X 6	1.45	392	568	
11	CLASSROOM #9		9	51.5 X 6	1.45	418	606	
9	CLASSROOM #10		10	51.5 X 6	1.45	508	737	
5	CLASSROOM #11		11	51.5 X 6	1.45	412	597	
3	CLASSROOM #12		12	51.5 X 6	1.45	545	790	
26	CLASSROOM #19		13	51.5 X 6	1.45	316	458	
25	CLASSROOM #20		14	51.5 X 6	1.45	447	648	
23	CLASSROOM #21		15	51.5 X 6	1.45	716	1038	
24	CLASSROOM #18		16	51.5 X 6	1.45	390	566	
22	CLASSROOM #17		17	51.5 X 6	1.45	700	1015	
21	CLASSROOM #22		18	51.5 X 6	1.45	451	654	
20	CLASSROOM #16		19	51.5 X 6	1.45	703	1019	
19	CLASSROOM #15		20	51.5 X 6	1.45	692	1003	
17	CLASSROOM #23		21	51.5 X 6	1.45	503	729	
	TOTAL CFM						15210	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-7

NEBB CERTIFIED #2453

SHEET NO. 7

FCU'S

** AIR OUTLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
18	CLASSROOM #14		22	51.5 X 6	1.45	690	1001	
16	CLASSROOM #13		23	51.5 X 6	1.45	388	563	
15	CLASSROOM #24		24	42 X 6.75	1.280	0	0	1
2	KINDERGARTEN #1		25	51.5 X 6	1.45	446	647	
1	KINDERGARTEN #2		26	51.5 X 6	1.45	294	426	
	LUNCH - STAGE		27	38X8	N/A	N/A	470	
	LUNCH - STAGE		28	38X8	N/A	N/A	445	
	LUNCH - STAGE		29	38X8	N/A	N/A	339	
	LUNCH - STAGE		30	38X8	N/A	N/A	394	
	TOTAL CFM						4285	

NOTE 1: FAN NOT RUNNING

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-8

NEBB CERTIFIED #2453

SHEET NO. 8

FCU'S

** AIR OUTLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
	VESTIBULE		1	15X8	N/A	N/A	72	
	LOBBY		2	15X8	N/A	N/A	61	
	MENS ROOM		3	31X6	N/A	N/A	0	1
	WOMENS ROOM		4	31X6	N/A	N/A	0	1
	1ST FLOOR CORRIDOR		5	15X8	N/A	N/A	0	1
	1ST FLOOR CORRIDOR		6	15X8	N/A	N/A	0	2
	STUDENT LOBBY		7	15X8	N/A	N/A	98	
	KINDERGARTEN-1 TLT		8	31X5	N/A	N/A	0	1
	KINDERGARTEN-2 TLT		9	31X5	N/A	N/A	0	1
	RAMP CEILING		10	15X8	N/A	N/A	54	
	RAMP CEILING		11	15X8	N/A	N/A	67	
	RAMP CEILING		12	15X8	N/A	N/A	59	
STAIR #2	EAST STAIRWELL 1ST FLR		13	15X8	.588	176	103	
	WEST STAIRWELL 1ST FLR		14	15X8	N/A	N/A	140	
	RAMP WALL		15	15X8	.588	30	18	
	EAST STAIRWELL 2ND FLR		16	15X8	N/A	30	0	1
	WEST STAIRWELL 2ND FLR		17	15X8	N/A	30	0	1
	CORRIDOR RECEIVING		18	15X8	N/A	30	0	
	CAFÉ WALL		19	15X8	N/A	30	0	
	KINDERGARTEN VESTIBULE		20	15X8	N/A	30	0	1
	STUDENT LOBBY VESTIBULE		21	15X8	N/A	30	81	
	TOTAL CFM						753	

NOTE 1: UNIT NOT RUNNING

NOTE 2: UNIT IS RUNNING

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-9

NEBB CERTIFIED #2453

SHEET NO. 9

E-1

** EXHAUST FAN REPORT **

AREA SERVED: CLASSROOMS 1 , 2 , 3 , 4 , 11 ,12
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	ACTUAL
CFM:	N/A	1495
SUCTION SP (" WG):	N/A	-.67
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.68
FAN SPEED:	N/A	806
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	5.8	3.9

UNIT / MOTOR DATA	
FAN MANUFACTURER:	GREENHECK
FAN MODEL NO:	GB-180-3-X
MOTOR MANUFACTURER:	MAGNETEK
MOTOR HP:	1/3
MOTOR RPM:	1725
MOTOR SF:	1.35
MOTOR FRAME:	L48Z
MOTOR SHEAVE BORE X OD:	1/2 X VP34
FAN SHEAVE BORE X OD:	3/4 X 6 1/2
FINAL SHEAVE POSITION:	80% CLOSED
C-C WITH ADJUSTMENT ("):	6 , +1 1/2 , -1 1/2

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-10

NEBB CERTIFIED #2453

E-1

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
4	CLASSROOM #1		1	12X12	.595	490	292	
6	CLASSROOM #2		2	12X12	.595	545	324	
7	CLASSROOM #3		3	12X12	.595	488	290	
8	CLASSROOM #4		4	12X12	.595	541	322	
3	CLASSROOM #12		5	12X12	.595	0	0	1
5	CLASSROOM #11		6	12X12	.595	448	267	
TOTAL CFM							1495	

NOTE 1: REGISTER FACE DAMPER IS CLOSED.

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-11

NEBB CERTIFIED #2453

E-2

** EXHAUST FAN REPORT **

AREA SERVED: CLASSROOMS 13, 14, 15, 16, 23, 24
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	ACTUAL
CFM:	N/A	1784
SUCTION SP (" WG):	N/A	-.59
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.60
FAN SPEED:	N/A	816
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	6.1	4.4

UNIT / MOTOR DATA	
FAN MANUFACTURER:	GREENHECK
FAN MODEL NO:	GB-180-3-X
MOTOR MANUFACTURER:	MARATHON
MOTOR HP:	1/3
MOTOR RPM:	1725
MOTOR SF:	1.35
MOTOR FRAME:	48Z
MOTOR SHEAVE BORE X OD:	1/2 X VP34
FAN SHEAVE BORE X OD:	3/4 X 6 1/2
FINAL SHEAVE POSITION:	80% CLOSED
C-C WITH ADJUSTMENT ("):	6 , +2 , -1 1/2

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-12

NEBB CERTIFIED #2453

E-2

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
16	CLASSROOM #13		1	12X12	.595	609	362	
15	CLASSROOM #24		2	12X12	.595	420	250	
18	CLASSROOM #14		3	12X12	.595	556	331	
17	CLASSROOM #23		4	12X12	.595	715	425	
19	CLASSROOM #15		5	12X12	.595	238	142	
20	CLASSROOM #16		6	12X12	.595	461	274	
	TOTAL CFM						1784	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-13

NEBB CERTIFIED #2453

E-3

** EXHAUST FAN REPORT **

AREA SERVED: CLASSROOM TLT'S / SUPPLIES / CUSTODIAN
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	**ACTUAL**
CFM:	N/A	1347
SUCTION SP (" WG):	N/A	-.56
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.57
FAN SPEED:	N/A	796
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	4.1	3.1

UNIT / MOTOR DATA	
FAN MANUFACTURER:	GREENHECK
FAN MODEL NO:	GB-161-4-X
MOTOR MANUFACTURER:	FASCO
MOTOR HP:	1/4
MOTOR RPM:	1725
MOTOR SHEAVE BORE X OD:	1/2 X VP25
FAN SHEAVE BORE X OD:	3/4 X 5 1/4
FINAL SHEAVE POSITION:	60% CLOSED
C-C WITH ADJUSTMENT ("):	5 , +2 1/2 , -1

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-14

NEBB CERTIFIED #2453

E-3

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
	TLT #8		1	8X8	.238	0	0	
4	CLASSROOM # 1 TLT		2	8X8	.238	44	10	
3	CLASSROOM # 12 TLT		3	8X8	.238	44	10	
5	CLASSROOM #11 TLT		4	8X8	.238	55	13	
6	CLASSROOM #2 TLT		5	8X8	.238	146	35	
7	CLASSROOM # 3 TLT		6	8X8	.238	178	42	
28	SUPPLIES		7	8X8	N/A	N/A	60	1
	CUSTODIAN		8	8X8	.238	230	55	
	TEACHERS TLT		9	8X8	N/A	2	63	
8	CLASSROOM #4 TLT		10	8X8	.238	355	84	
10	CLASSROOM #5 TLT		11	8X8	.238	375	89	
9	CLASSROOM # 10 TLT		12	8X8	.238	153	36	
9	CLASSROOM # 10 TLT		13	8X8	.238	292	69	
12	CLASSROOM #6 TLT		14	8X8	.238	141	34	
14	CLASSROOM #7 TLT		15	8X8	.238	119	28	
11	CLASSROOM #9 TLT		16	8X8	.238	73	17	
13	CLASSROOM #8 TLT		17	8X8	.238	52	12	
2ND FLR	TEACHERS TLT		18	8X8	N/A	N/A	23	
2ND FLR	CUSTODIAN		19	8X8	.238	512	122	
2ND FLR	BOYS TLT		20	24X24	N/A	N/A	144	
2ND FLR	BOYS TLT		21	24X24	N/A	N/A	110	
2ND FLR	GIRLS TLT		22	24X24	N/A	N/A	144	
2ND FLR	GIRLS TLT		23	24X24	N/A	N/A	147	
	TOTAL CFM						1347	

NOTE 1: FH READING = 60 CFM / 252 FPM TO DETERMINE FACTOR .536

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-15

NEBB CERTIFIED #2453

SHEET NO. 15

E-4

** EXHAUST FAN REPORT **

AREA SERVED: CLASSROOMS 17, 18, 19, 20, 21, 22
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	**ACTUAL**
CFM:	N/A	1776
SUCTION SP (" WG):	N/A	-.61
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.62
FAN SPEED:	N/A	826
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	6.1	5.1

UNIT / MOTOR DATA	
FAN MANUFACTURER:	GREENHECK
FAN MODEL NO:	GB-180-3X
MOTOR MANUFACTURER:	MARATHON
MOTOR HP:	1/3
MOTOR RPM:	1725
MOTOR SF:	1.35
MOTOR FRAME:	48Z
MOTOR SHEAVE BORE X OD:	1/2 X VP34
FAN SHEAVE BORE X OD:	3/4 X 6 1/2
FINAL SHEAVE POSITION:	80% CLOSED
C-C WITH ADJUSTMENT ("):	6 , 2 , -1 1/2

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-16

NEBB CERTIFIED #2453

E-4

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
22	CLASSROOM #17		1	12X12	.595	721	429	
24	CLASSROOM #18		2	12X12	.595	353	210	
26	CLASSROOM #19		3	12X12	.595	510	303	
25	CLASSROOM #20		4	12X12	.595	311	185	
23	CLASSROOM #21		5	12X12	.595	560	333	
21	CLASSROOM #22		6	12X12	.595	531	316	
	TOTAL CFM						1776	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-17

NEBB CERTIFIED #2453

SHEET NO. 17

E-5

** EXHAUST FAN REPORT **

AREA SERVED: CLASSROOMS 5, 6, 7, 8, 9, 10
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	**ACTUAL**
CFM:	N/A	1588
SUCTION SP (" WG):	N/A	-.68
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.69
FAN SPEED:	N/A	820
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	6.1	4.9

UNIT / MOTOR DATA	
FAN MANUFACTURER:	GREENHECK
FAN MODEL NO:	GB-180-3X
MOTOR MANUFACTURER:	MARATHON
MOTOR HP:	1/3
MOTOR RPM:	1725
MOTOR SF:	1.35
MOTOR FRAME:	48Z
MOTOR SHEAVE BORE X OD:	1/2 X VP34
FAN SHEAVE BORE X OD:	3/4 X 6 1/2
FINAL SHEAVE POSITION:	80% CLOSED
C-C WITH ADJUSTMENT ("):	6 , +2 , -1 1/2

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-18

NEBB CERTIFIED #2453

E-5

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
10	CLASSROOM #5		1	12X12	.595	612	364	
12	CLASSROOM #6		2	12X12	.595	372	221	
14	CLASSROOM #7		3	12X12	.595	413	246	
13	CLASSROOM #8		4	12X12	.595	326	194	
11	CLASSROOM #9		5	12X12	.595	390	232	
9	CLASSROOM #10		6	12X12	.595	557	331	
	TOTAL CFM						1588	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-19

NEBB CERTIFIED #2453

EF-6

** EXHAUST FAN REPORT **

AREA SERVED: GYM / AUDITORIUM
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	ACTUAL
CFM:	N/A	1335
SUCTION SP (" WG):	N/A	-.52
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.53
FAN SPEED:	N/A	854
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	4.1	2.6

UNIT / MOTOR DATA	
FAN MANUFACTURER:	GREENHECK
FAN MODEL NO:	GB-161-4-X
MOTOR MANUFACTURER:	FASCO
MOTOR HP:	1/4
MOTOR RPM:	1725
MOTOR SHEAVE BORE X OD:	1/2 X VP25
FAN SHEAVE BORE X OD:	3/4 X 5 1/4
FINAL SHEAVE POSITION:	80% CLOSED
C-C WITH ADJUSTMENT ("):	5 1/2 , +2 , -1 1/2

AIR INLET DATA										
ROOM NO.	DESIGNATION		NO.	SIZE	AK			ACTUAL VEL	ACTUAL CFM	NOTES
	EA DUCT		1	20X16	2.222			601	1335	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-20

NEBB CERTIFIED #2453

EF-7 (NORTH)

** EXHAUST FAN REPORT **

AREA SERVED: GYM / AUDITORIUM
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	ACTUAL
CFM:	N/A	1309
SUCTION SP (" WG):	N/A	-.57
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.58
FAN SPEED:	N/A	783
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	4.1	2.9

UNIT / MOTOR DATA	
FAN MANUFACTURER:	GREENHECK
FAN MODEL NO:	GB-161-4-X
MOTOR MANUFACTURER:	FASCO
MOTOR HP:	1/4
MOTOR RPM:	1725
MOTOR SHEAVE BORE X OD:	1/2 X VP25
FAN SHEAVE BORE X OD:	3/4 X 5 1/4
FINAL SHEAVE POSITION:	100% OPEN
C-C WITH ADJUSTMENT ("):	5 , +1 , -3

AIR INLET DATA										
ROOM NO.	DESIGNATION		NO.	SIZE	AK			ACTUAL VEL	ACTUAL CFM	NOTES
	EA DUCT		1	20X16	2.222			589	1309	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-21

NEBB CERTIFIED #2453

SHEET NO. 21

E-8

** EXHAUST FAN REPORT **

AREA SERVED: LUNCH / STAGE
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	**ACTUAL**
CFM:	N/A	55
SUCTION SP (" WG):	N/A	-.68
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.69
FAN SPEED:	N/A	815
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	6.1	4.2

UNIT / MOTOR DATA	
FAN MANUFACTURER:	GREENHECK
FAN MODEL NO:	GB-180-3-X
MOTOR MANUFACTURER:	MARATHON
MOTOR HP:	1/3
MOTOR RPM:	1725
MOTOR SF:	1.35
MOTOR FRAME:	48Z
MOTOR SHEAVE BORE X OD:	1/2 X VP34
FAN SHEAVE BORE X OD:	X 6 1/2
FINAL SHEAVE POSITION:	80% CLOSED
C-C WITH ADJUSTMENT ("):	6

E-8

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	ACTUAL CFM	NOTES
	LUNCH / STAGE		1	24X24	55	1
	LUNCH / STAGE		2	24X24	0	1
	TOTAL CFM				55	

NOTE 1: REGISTER FACE DAMPER CLOSED.

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-23

NEBB CERTIFIED #2453

E-9

** DIRECT DRIVE EXHAUST FAN REPORT **

AREA SERVED: SPECIAL CLASSROOM / CONFERENCE ROOM
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	ACTUAL
CFM:	N/A	399
SUCTION SP (" WG):	N/A	-.20
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.21
FAN SPEED:	N/A	SET AT 10
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	2.6	1.6

UNIT / MOTOR DATA	
FAN MANUFACTURER:	DAYTON
FAN MODEL NO:	48C188
MOTOR HP:	1/6
MOTOR RPM:	1750

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CONTRACT: 2317-24

NEBB CERTIFIED #2453

SHEET NO. 24

E-9

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
	SPECIAL CLASSROOM		1	10X10	N/A	N/A	231	
	CONFERENCE ROOM		2	10X10	.375	448	168	
	TOTAL CFM					448	399	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-25

NEBB CERTIFIED #2453

SHEET NO. 25

E-10

** EXHAUST FAN REPORT **

AREA SERVED: GENERAL OFFICE / PRINCIPAL / FACULTY WORK
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	**ACTUAL**
CFM:	N/A	454
SUCTION SP (" WG):	N/A	-.20
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.2
FAN SPEED:	N/A	965
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	4.1	2.7

UNIT / MOTOR DATA	
FAN MANUFACTURER:	GREENHECK
FAN MODEL NO:	GB-121-4-X
MOTOR MANUFACTURER:	FASCO
MOTOR HP:	1/4
MOTOR RPM:	1725
MOTOR SHEAVE BORE X OD:	1/2 X VP25
FAN SHEAVE BORE X OD:	3/4 X 4 1/4
FINAL SHEAVE POSITION:	80% CLOSED
C-C WITH ADJUSTMENT ("):	5 , +2 , -1 1/2

E-10

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	ACTUAL CFM	NOTES
	GENERAL OFFICE		1	12X12	175	
	PRINCIPAL		2	10X6	99	
	FACULTY WORK		3	10X6	94	
	FACULTY LOUNGE		4	10X6	86	
	TOTAL CFM				454	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-27

NEBB CERTIFIED #2453

E-11

** DIRECT DRIVE EXHAUST FAN REPORT **

AR[illegible]SERVED: CUSTODIAN / CHAIR STORAGE / TOILETS 4 & 5 / COPY ROOM
FA[illegible]CATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	ACTUAL
CF[illegible]	N/A	560
SU[illegible]SP (" WG):	N/A	-.56
DI[illegible]E SP (" WG):	N/A	+.01
TO[illegible] (" WG):	N/A	.57
FA[illegible]D:	N/A	SET AT 10
VO[illegible]ASE/CYCLE:	115/1/60	119/1/60
AM[illegible]:	2.3	1.6

UNIT / MOTOR DATA	
FA[illegible]ACTURER:	DAYTON
FA[illegible]L NO:	48C189
MO[illegible]:	1/6
MO[illegible]M:	350-1750

PR[illegible]: THOMAS HOOKER ELEM SCHOOL
SU[illegible]D BY: AIR BALANCING SERVICE CO.
CO[illegible]17-28

NEBB CERTIFIED #2453

SHEET NO. 28

E-11

** AIR INLET REPORT **

ROOM NO	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
	CUSTODIAN #1 / CHAIR STORAGE		1	8X8	.238	1177	280	
	TOILET #5		2	10X6	N/A	N/A	81	
	TOILET #4		3	10X6	N/A	N/A	99	
	CORRIDOR		4	10X6	N/A	N/A	100	
	TOTAL CFM						560	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-00

NEBB CERTIFIED #2453

SHEET NO. 29

E-12

** EXHAUST FAN REPORT **

AREA SERVED: KINDERGARTEN #1 & #2 / VESTIBULE
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	**ACTUAL**
CFM:	N/A	468
SUCTION SP (" WG):	N/A	-.46
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.47
FAN SPEED:	N/A	959
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	4.1	2.6

UNIT / MOTOR DATA	
FAN MANUFACTURER:	GREENHECK
FAN MODEL NO:	GB-121-4-X
MOTOR MANUFACTURER:	FASCO
MOTOR HP:	1/4
MOTOR RPM:	1725
MOTOR SHEAVE BORE X OD:	1/2 X VP25
FAN SHEAVE BORE X OD:	3/4 X 4
FINAL SHEAVE POSITION:	75% CLOSED
C-C WITH ADJUSTMENT ("):	5 1/2 , +2 1/2 , -1

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-30

NEBB CERTIFIED #2453

E-12

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
2	KINDERGARTEN #1		1	12X12	.595	320	190	
1	KINDERGARTEN #2		2	12X12	.595	413	246	
	VESTIBULE		3	8X8	N/A	N/A	32	
	TOTAL CFM						468	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-31

NEBB CERTIFIED #2453

SHEET NO. 31

E-13

** DIRECT DRIVE EXHAUST FAN REPORT **

AR[illegible]VED: KINDERGARTEN # 1 AND KINDERGARTEN # 2 / TOILETS
FA[illegible]ION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	ACTUAL
CF[illegible]	N/A	298
SU[illegible]P (" WG):	N/A	-.86
DI[illegible]SP (" WG):	N/A	+.01
TO[illegible]" WG):	N/A	.87
FA[illegible]	N/A	SET AT 10
VO[illegible]SE/CYCLE:	115/1/60	119/1/60
AM[illegible]	2.3	1.4

UNIT / MOTOR DATA	
FA[illegible]ACTURER:	DAYTON
FA[illegible]NO:	48C189
M[illegible]	1/6

PR[illegible]HOMAS HOOKER ELEM SCHOOL
SU[illegible]BY: AIR BALANCING SERVICE CO.
C[illegible]7-32

NEBB CERTIFIED #2453

SHEET NO. 32

E-13

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
2	KINDERGARTEN #1 TOILET		1	8X8	.238	758	180	
1	KINDERGARTEN #2 TOILET		2	8X8	.238	494	118	
	TOTAL CFM						298	

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-33

NEBB CERTIFIED #2453

SHEET NO. 33

E-14

** DIRECT DRIVE EXHAUST FAN REPORT **

AREA SERVED: TOILETS 6 & 7
FAN LOCATION: ROOF

FAN PERFORMANCE DATA		
	DESIGN	**ACTUAL**
CFM:	N/A	176
SUCTION SP (" WG):	N/A	-.39
DISCHARGE SP (" WG):	N/A	+.01
TOTAL SP (" WG):	N/A	.40
FAN SPEED:	N/A	1550
VOLTS/PHASE/CYCLE:	115/1/60	119/1/60
AMPS:	2.6	2.5

UNIT / MOTOR DATA	
FAN MANUFACTURER:	DAYTON
FAN MODEL NO:	16D534
MOTOR MANUFACTURER:I	DAYTON
MOTOR HP:	1/8
MOTOR RPM:	1050 / 1300 / 1550

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-34

NEBB CERTIFIED #2453

E-14

** AIR INLET REPORT **

ROOM NO.	DESIGNATION		NO.	SIZE	AK	ACTUAL VEL	ACTUAL CFM	NOTES
	TOILET #6		1	8X8	.238	351	84	1
	TOILET #7		2	8X8	.238	385	92	1
	TOTAL CFM						176	

NOTE 1: EXHAUST REGISTERS EXCESSIVELY DIRTY

PROJECT: THOMAS HOOKER ELEM SCHOOL
SUBMITTED BY: AIR BALANCING SERVICE CO.
CODE: 23317-35

NEBB CERTIFIED #2453

SHEET NO. 35

Appendix B

Ventilation Data Calculations

Project Number: 20170932.C49
Scope: HVAC Verification and Evaluation

THOMAS HOOKER OUTSIDE AIR VERIFICATION CALCULATION

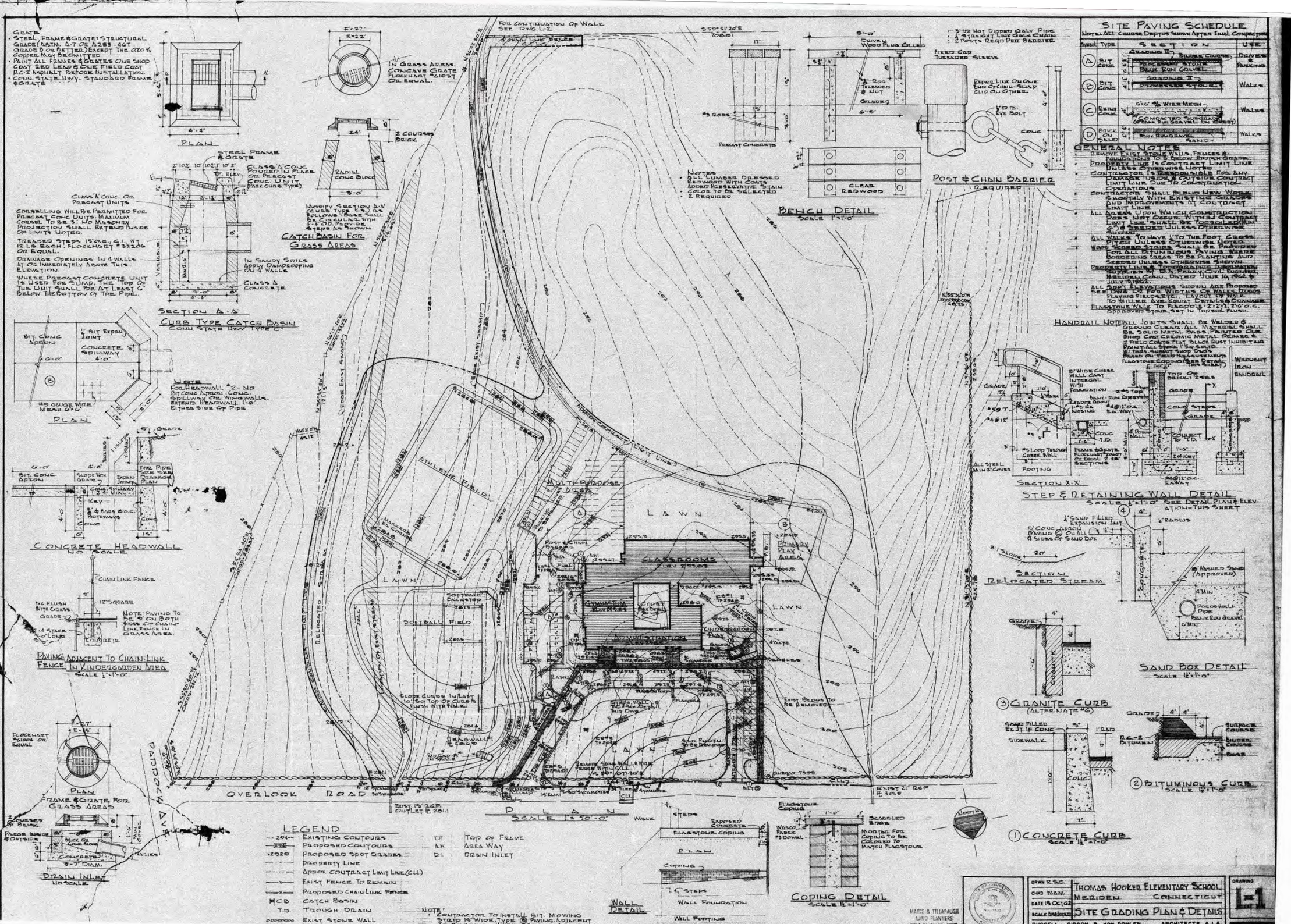
ROOM IDENTIFICATION				OA EQUIPMENT		VENTILATION CALCULATIONS				
Drawing Room Name	Room Type	Area	Volume	AHU	Measured Airflow	Occupany Density	People OA Rate Rp	Area OA CFM Rate Ra	Vbz	OA REQUIREMENT MET
		(ft^2)	(ft^3)		(cfm)	(ppl/1000ft^2)	(cfm/person)	(cfm/ft^2)	(cfm)	Pass/Fail
1 CLASSROOM	Classroom	860	7739	FCU	0	30	300	103	403	FAILS
1 CORRIDOR	Corridor	519	3633	FCU	0	0	0	31	31	FAILS
1 CUST AND CHAIR STORAGE	Storage	201	1606	N/A	0	0	0	24	24	FAILS
1 VEST	Vestibule	106	849	FCU	0	1	5	6	11	FAILS
2 CLASSROOM	Classroom	858	6862	FCU	0	30	300	103	403	FAILS
2 CUST	Custodial	117	1171	N/A	0	0	0	0	0	PASSES
2 KINDERGARTEN	Classroom	1014	7096	FCU	0	35	350	122	472	FAILS
3 CLASSROOM	Classroom	853	7676	FCU	0	30	300	102	402	FAILS
4 CLASSROOM	Classroom	880	7918	FCU	0	31	310	106	416	FAILS
10A	Classroom	204	1836	N/A	0	7	70	24	94	FAILS
10B	Classroom	230	2066	N/A	0	8	80	28	108	FAILS
5 CLASSROOM	Classroom	227	2041	FCU	0	8	80	27	107	FAILS
6 CLASSROOM	Classroom	846	5919	FCU	0	30	300	101	401	FAILS
7 CLASSROOM	Classroom	833	5834	FCU	0	29	290	100	390	FAILS
8 CLASSROOM	Classroom	839	7551	FCU	0	29	290	101	391	FAILS
9 CLASSROOM	Classroom	878	7900	FCU	0	31	310	105	415	FAILS
9 PASSAGE	Corridor	108	756	N/A	0	0	0	6	6	FAILS
10 PASSAGE	Corridor	53	368	N/A	0	0	0	3	3	FAILS
10 SPECIAL CLASSROOM	Classroom	1021	8165	FCU	0	36	360	122	482	FAILS
11 CLASSROOM	Classroom	866	7792	FCU	0	30	300	104	404	FAILS
12 CLASSROOM	Classroom	868	7815	FCU	0	30	300	104	404	FAILS
AUDIO VISUAL STORAGE	Storage	130	1429	N/A	0	0	0	16	16	FAILS
COAT ROOM	Storage	287	2010	N/A	0	0	0	34	34	FAILS
EDUCATIONAL STORAGE	Storage	538	4307	N/A	0	0	0	65	65	FAILS
FACULTY LOUNGE	Cafeteria	343	2742	N/A	0	34	255	62	317	FAILS
FACULTY WORK	Office	173	1383	N/A	0	1	5	10	15	FAILS
GENERAL OFFICE	Office	578	4049	N/A	0	3	15	35	50	FAILS
GYM STORAGE	Storage	152	1215	N/A	0	0	0	18	18	FAILS
GYMNASIUM-AUDITORIUM	Auditorium	3733	67202	HV-1 / HV-2	2150	560	2800	224	3024	FAILS
HEALTH ROOM	Nurse	226	1585	N/A	0	1	5	14	19	FAILS
HEATER ROOM	Nurse	662	5292	N/A	0	3	15	40	55	FAILS
LUNCH-STAGE	Cafeteria	1796	19753	FCU	0	180	1350	323	1673	FAILS
MIMEO ROOM	Computer Lab	101	804	N/A	0	3	30	12	42	FAILS
OUTDOOR STORAGE	Storage	134	-	N/A	0	0	0	16	16	FAILS
PRINCIPAL	Office	176	1232	N/A	0	1	5	11	16	FAILS
PUBLIC LOBBY	Lobby	546	5462	FCU	0	5	25	33	58	FAILS
RECEIVING ROOM	Storage	194	-	N/A	0	0	0	23	23	FAILS
Main Conference	Conference Room	331	2650	N/A	0	17	85	20	105	FAILS
SPECIAL CLASSROOM	Classroom	331	2650	FCU	0	12	120	40	160	FAILS
STORAGE	Storage	131	1444	N/A	0	0	0	16	16	FAILS
STUDENT LOBBY	Lobby	709	4962	FCU	0	7	35	43	78	FAILS
VEST	Vestibule	104	1045	FCU	0	1	5	6	11	FAILS
11 PASSAGE	Corridor	191	1525	N/A	0	0	0	11	11	FAILS
MACHINE STORAGE	Storage	67	538	N/A	0	0	0	8	8	FAILS
6 PASSAGE	Corridor	14	115	N/A	0	0	0	1	1	FAILS
2/3 COORIDOR	Corridor	1436	11491	FCU	0	0	0	86	86	FAILS
1 KINDERGARTEN	Classroom	1001	8005	FCU	0	35	350	120	470	FAILS
5 PASSAGE	Corridor	23	188	N/A	0	0	0	1	1	FAILS
4 PASSAGE	Corridor	26	209	N/A	0	0	0	2	2	FAILS
3 PASSAGE	Corridor	24	191	N/A	0	0	0	1	1	FAILS
2 PASSAGE	Corridor	24	196	N/A	0	0	0	1	1	FAILS
1 PASSAGE	Corridor	26	210	N/A	0	0	0	2	2	FAILS
2 STAIR	Stairs	256	2555	N/A	0	0	0	0	0	PASSES
4 CORRIDOR	Corridor	1892	13247	FCU	0	0	0	114	114	FAILS
INCINERATOR ROOM	Utility	157	-	N/A	0	0	0	0	0	PASSES
5 CORRIDOR	Corridor	473	3782	N/A	0	0	0	28	28	FAILS
7 PASSAGE	Corridor	25	173	N/A	0	0	0	1	1	FAILS
7 STORAGE	Storage	43	345	N/A	0	0	0	5	5	FAILS
13 CLASSROOM	Classroom	809	5662	N/A	0	28	280	97	377	FAILS
14 CLASSROOM	Classroom	817	5717	FCU	0	29	290	98	388	FAILS
16 CLASSROOM	Classroom	811	5676	FCU	0	28	280	97	377	FAILS
15 CLASSROOM	Classroom	822	5756	FCU	0	29	290	99	389	FAILS
17 CLASSROOM	Classroom	588	4117	FCU	0	21	210	71	281	FAILS
OFFICE	Office	221	1545	N/A	0	1	5	13	18	FAILS
18 CLASSROOM	Classroom	807	5652	FCU	0	28	280	97	377	FAILS
19 CLASSROOM	Classroom	808	5656	FCU	0	28	280	97	377	FAILS
2 STAIR	Stairs	249	2492	FCU	0	0	0	0	0	PASSES
3 CUST	Custodial	74	520	N/A	0	0	0	0	0	PASSES
3 STOR	Storage	37	256	N/A	0	0	0	4	4	FAILS
6 CORRIDOR	Corridor	1723	12064	N/A	0	0	0	103	103	FAILS
20 CLASSROOM	Classroom	796	5574	FCU	0	28	280	96	376	FAILS
21 CLASSROOM	Classroom	801	5606	FCU	0	28	280	96	376	FAILS
1 STAIR	Stairs	249	2238	FCU	0	0	0	0	0	PASSES
22 CLASSROOM	Classroom	910	6372	FCU	0	32	320	109	429	FAILS
23 CLASSROOM	Classroom	806	5644	FCU	0	28	280	97	377	FAILS
24 CLASSROOM	Classroom	798	5585	FCU	0	28	280	96	376	FAILS

THOMAS HOOKER EXHAUST AIR VERIFICATION CALCULATION							
Drawing Room Name	**Room Type**	**Area**	**Volume**	**Plumbing Fixtures**	**Measured Exhaust**	**ASHRAE 62.1 Required Exhasut**	**OA REQUIREMENT MET**
		(ft^2)	**(ft^3)**	**QTY**	**(cfm)**	**(cfm)**	**PASS/FAIL**
1 TLT	Restroom	19	130	1	10	50	FAILS
2 TLT	Restroom	19	132	1	35	50	FAILS
4 TLT	Restroom	55	382	2	84	100	FAILS
5 TLT	Restroom	55	383	2	89	100	FAILS
6 TLT	Restroom	26	181	1	34	50	FAILS
7 TLT	Restroom	25	177	1	28	50	FAILS
3 TLT	Restroom	24	191	1	42	50	FAILS
12 TLT	Restroom	22	172	1	10	50	FAILS
13 TLT	Restroom	12	92	1	0	50	FAILS
14 TLT	Restroom	21	171	1	0	50	FAILS
15 TLT	Restroom	11	91	1	0	50	FAILS
16 TLT	Restroom	12	97	1	0	50	FAILS
17 TLT	Restroom	23	180	1	429	50	PASSES
18 TLT	Restroom	23	188	1	210	50	PASSES
19 TLT	Restroom	13	106	1	303	50	PASSES
20 TLT	Restroom	12	97	1	185	50	PASSES
21 TLT	Restroom	22	176	1	333	50	PASSES
1 TCH TLT	Restroom	27	219	1	63	50	PASSES
10 TLT	Restroom	24	190	1	105	50	PASSES
11 TLT	Restroom	11	91	1	13	50	FAILS
T.8	Restroom	36	285	1	0	50	FAILS
2 TEACHERS TOILET	Restroom	24	166	1	23	50	FAILS
BOYS	Restroom	223	1558	9	254	450	FAILS
GIRLS	Restroom	296	2070	8	291	400	FAILS

Appendix C

Floor Plans

- 1962 Mechanical drawings
- 2005 Mechanical Roof drawings



GRATE
- STEEL FRAME & GRATE: STRUCTURAL GRADE (ASTM. A-7 OR A283-46T, GRADE B OR BETTER) EXCEPT THE .020% COPPER MAY BE OMITTED
- PAINT ALL FRAMES & GRATES ONE SHOP COAT RED LEAD & ONE FIELD COAT RC-2 ASPHALT BEFORE INSTALLATION.
- CONN. STATE HWY. STANDARD FRAME & GRATE

CLASS 'A' CONC. OR PRECAST UNITS

CORBELLING WILL BE PERMITTED FOR PRECAST CONC UNITS. MAXIMUM CORBEL TO BE 3". NO MASONRY PROJECTION SHALL EXTEND INSIDE OF LIMITS NOTED.

TREADED STEPS 15" O.C., C.I., WT 12 LB EACH. FLOCKHART #32206 OR EQUAL.

DRAINAGE OPENINGS IN 4 WALLS AT OR IMMEDIATELY ABOVE THIS ELEVATION.

WHERE PRECAST CONCRETE UNIT IS USED FOR SUMP, THE TOP OF THE UNIT SHALL BE AT LEAST 6" BELOW THE BOTTOM OF THE PIPE.

SITE PAVING SCHEDULE

NOTE: ALL COURSE DEPTHS SHOWN AFTER FINAL COMPACTION

SYMBOL	TYPE	SECTION	USE
Ⓐ	BIT CONC	GRADING II BINDER COURSE PROCESSED STONE BANK RUN GRAVEL	DRIVES & PARKING
Ⓑ	BIT CONC	GRADING II PROCESSED STONE	WALKS
Ⓒ	REINF CONC	6"x6" 6/6 WIRE MESH COMPACTED SUBGRADE (6" BANK RUN GRAVEL IN CORE)	WALKS
Ⓓ	BRICK ON SAND	BANK RUN GRAVEL SAND	WALKS

GENERAL NOTES

- REMOVE EXIST STONE WALLS, FENCES & FOUNDATIONS TO 3' BELOW FINISH GRADE.
- PROPERTY LINE IS CONTRACT LIMIT LINE UNLESS OTHERWISE NOTED
- CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE INSIDE & OUTSIDE CONTRACT LIMIT LINE DUE TO CONSTRUCTION OPERATIONS
- CONTRACTOR SHALL BLEND NEW WORK SMOOTHLY WITH EXISTING GRADES AND IMPROVEMENTS AT CONTRACT LIMIT LINE
- ALL AREAS UPON WHICH CONSTRUCTION DOES NOT OCCUR WITHIN CONTRACT LIMIT LINE SHALL BE TOPSOILED (MIN 6") & SEEDED UNLESS OTHERWISE SHOWN.
- ALL WALKS TO HAVE ¼" TO THE FOOT CROSS PITCH UNLESS OTHERWISE NOTED.
- WOOD SCREED STRIPS SHALL BE PROVIDED FOR ALL BITUMINOUS PAVING WHERE BORDERING AREAS TO BE PLANTING AND SEEDED UNLESS OTHERWISE SHOWN.
- PROPERTY LINE & TOPOGRAPHIC INFORMATION SUPPLIED BY D.S. PERRY, CIVIL ENGINEER, MERIDEN, CONN., DATED JUNE 16, 1962 & JULY 13, 1962.
- ALL SPOT ELEVATIONS SHOWN ARE PROPOSED
- SEE DWG L-2 FOR WIDTHS OF WALKS, ROADS PLAYING FIELDS, ETC. LAYOUT OF WALK TO MILLER AVE. COURT DETAILS & DRAINAGE
- FLAGSTONE WALK TO FLAGPOLE: 2'x2'x2", 2'-6" O.C. APPROVED STONE, SET IN TOPSOIL FLUSH.

HANDRAIL NOTE: ALL JOINTS SHALL BE WELDED & GROUND CLEAR. ALL MATERIAL SHALL BE SOLID METAL BARS. PAINTED ONE SHOP COAT CHROMIC METAL PRIMER & 2 FIELD COATS FLAT BLACK RUST INHIBITING PAINT. ALL STOCK 1" SQ SOLID W.I. BARS. SUBMIT SHOP DWG'S BASED ON FIELD MEASUREMENTS

LEGEND

--294--	EXISTING CONTOURS
—294—	PROPOSED CONTOURS
×292.0	PROPOSED SPOT GRADES
— - —	PROPERTY LINE
— - - - —	APPROX. CONTRACT LIMIT LINE (CLL)
—×—	EXIST FENCE TO REMAIN
═×═	PROPOSED CHAIN LINK FENCE
▣ C.B.	CATCH BASIN
T.D.	TROUGH DRAIN
oooooooo	EXIST STONE WALL
T.F.	TOP OF FRAME
A.W.	AREA WAY
D.I.	DRAIN INLET

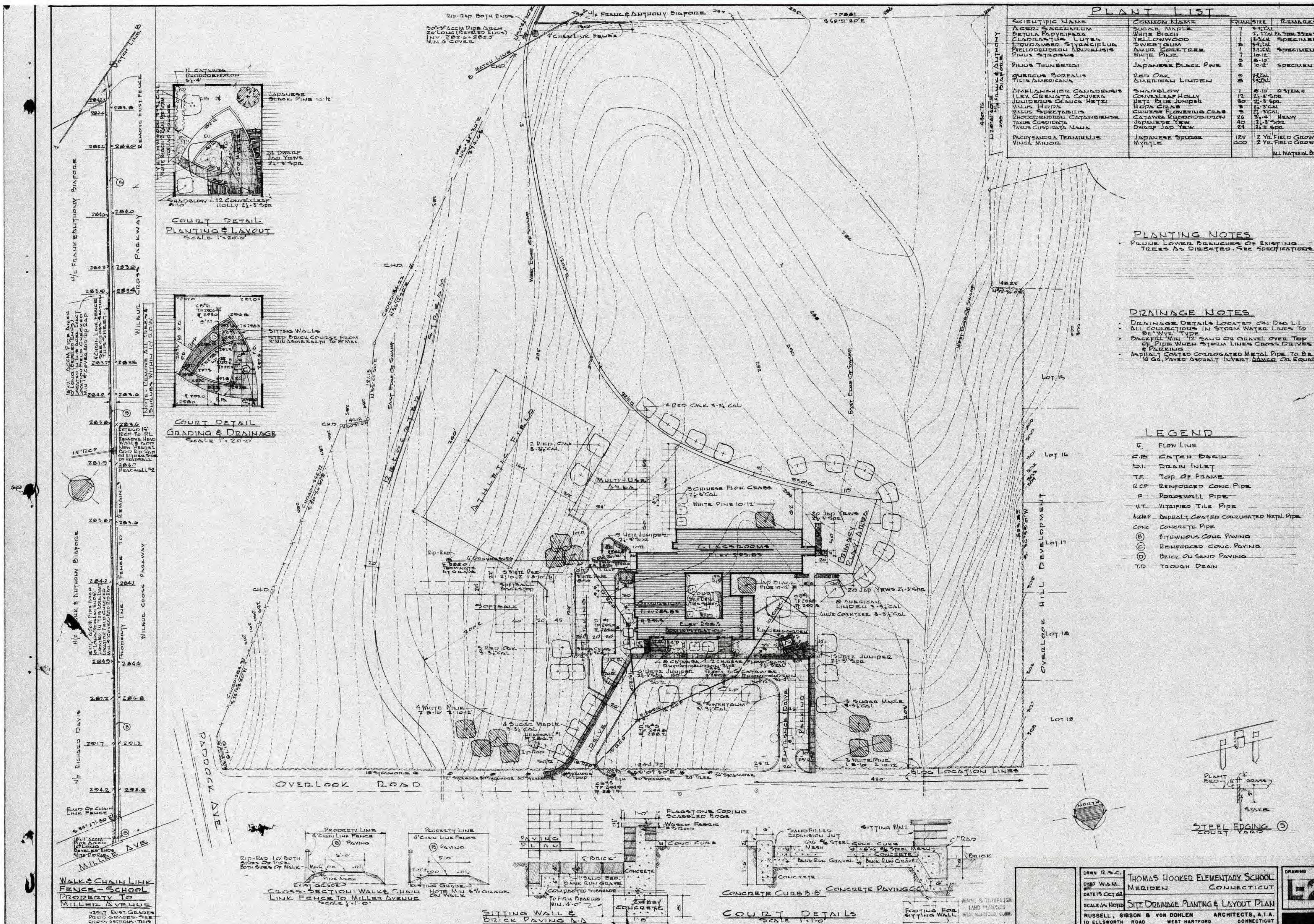
NOTE:
- CONTRACTOR TO INSTALL BIT. MOWING STRIP 15" WIDE, TYPE Ⓑ PAVING ADJACENT TO BUILDING WHERE GRASS ABUTS

DRWN R.S.C.
CHKD W.A.M.
DATE 19 OCT 62
SCALE AS NOTED

THOMAS HOOKER ELEMENTARY SCHOOL
MERIDEN CONNECTICUT
SITE GRADING PLAN & DETAILS

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

DRAWING
L-1



PLANT LIST

SCIENTIFIC NAME	COMMON NAME	QUAN	SIZE	REMARKS
ACER SACCHARUM	SUGAR MAPLE	7	3-3½"CAL	
BETULA PAPYRIFERA	WHITE BIRCH	1	2½-3"CAL EA STEM. 3 STEM SPEC	
CLADRASTUS LUTEA	YELLOWWOOD	1	3-3½"CAL	SPECIMEN
LIQUIDAMBER STYRACIFLUA	SWEETGUM	3	3-3½"CAL	
PHELLODENDRON AMURENSIS	AMUR CORKTREE	1	3-3½"CAL	SPECIMEN
PINUS STROBUS	WHITE PINE	7	10-12'	
		5	8-10'	
PINUS THUNBERGI	JAPANESE BLACK PINE	2	10-12'	SPECIMEN
QUERCUS BOREALIS	RED OAK	9	3-3½"CAL	
TILIA AMERICANA	AMERICAN LINDEN	8	3-3½"CAL	
AMELANCHIER CANADENSIS	SHADBLOW	1	8'-10'	6 STEM +
ILEX CRENATA CONVEXA	CONVEXLEAF HOLLY	12	2½-3'SPR	
JUNIPERUS GLAUCA HETZI	HETZ BLUE JUNIPER	30	2½-3'SPR	
MALUS HOPA	HOPA CRAB	3	2½-3"CAL	
MALUS SPECTABILIS	CHINESE FLOWERING CRAB	3	2½-3"CAL	
RHODODENDRON CATAWBIENSE	CATAWBA RHODODENDRON	26	3½-4'	HEAVY
TAXUS CUSPIDATA	JAPANESE YEW	40	2½-3'SPR	
TAXUS CUSPIDATA NANA	DWARF JAP YEW	24	2½-3'SPR	
PACHYSANDRA TERMINALIS	JAPANESE SPURGE	125	2 YR. FIELD GROWN	
VINCA MINOR	MYRTLE	600	2 YR. FIELD GROWN	

ALL MATERIAL B&B

PLANTING NOTES

- PRUNE LOWER BRANCHES OF EXISTING TREES AS DIRECTED. SEE SPECIFICATIONS.

DRAINAGE NOTES

- DRAINAGE DETAILS LOCATED ON DWG L-1
- ALL CONNECTIONS IN STORM WATER LINES TO BE "WYE" TYPE
- BACKFILL MIN 12" SAND OR GRAVEL OVER TOP OF PIPE WHEN STORM LINES CROSS DRIVES & PARKING
- ASPHALT COATED CORRUGATED METAL PIPE TO BE 14 GA, PAVED ASPHALT INVERT. ARMCO OR EQUAL.

LEGEND

FL	FLOW LINE
C.B.	CATCH BASIN
D.I.	DRAIN INLET
T.F.	TOP OF FRAME
RCP	REINFORCED CONC. PIPE
P	POROSWALL PIPE
V.T.	VITRIFIED TILE PIPE
ACCMP	ASPHALT COATED CORRUGATED METAL PIPE
CONC	CONCRETE PIPE
Ⓑ	BITUMINOUS CONC PAVING
Ⓒ	REINFORCED CONC. PAVING
Ⓓ	BRICK ON SAND PAVING
T.D.	TROUGH DRAIN

DRWN R.S.C.
CHKD W.A.M.
DATE 15 OCT 62
SCALE AS NOTED

THOMAS HOOKER ELEMENTARY SCHOOL
MERIDEN CONNECTICUT
SITE DRAINAGE, PLANTING & LAYOUT PLAN

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

DRAWING L-2

CLASSROOM 1 | CLASSROOM 2 | CLASSROOM 3 | CLASSROOM 4 | CLASSROOM 5 | CLASSROOM 6 | CLASSROOM 7

CORRIDOR 4

BASEMENT PLAN (TRANSFORMER VAULT)
SCALE: 1/8"=1'-0"

OUTDOOR STOR. | RECEIVING ROOM | LOADING PLATFORM | AREAWAY | HEATER ROOM | GYM STOR. | INCINERATOR ROOM | STAIR 2 | RAMP DOWN 2'-8" | CORRIDOR 5

CLASSROOM 12 | CLASSROOM 11 | RAMP DOWN 2'-8" | EDUCATIONAL STOR. | SPECIAL CLASSROOM 10 | CLASSROOM 9 | CLASSROOM 8

STAIR

GYMNASIUM-AUDITORIUM | LUNCH-STAGE | COURT | CORRIDOR 2 | CORRIDOR 3 | RAMP UP 2'-8" | KINDERGARTEN 1 | COAT ROOM | KINDERGARTEN 2

RAMP DOWN 2'-8" | CORRIDOR 1 | PUBLIC LOBBY | SPECIAL CLASSROOM | CUSTODIAN 1 AND CHAIR STORAGE | MIMEO ROOM | PASSAGE 8 | STUDENT LOBBY | FACULTY LOUNGE | FACULTY WORK | PRINCIPAL | GENERAL OFFICE | HEALTH ROOM

LOWER FLOOR PLAN
SCALE: 1/8"=1'-0"

NOTE: ALL PARTITIONS SHALL BE BUILT TO BOTTOM OF SLAB OR STEEL ABOVE.

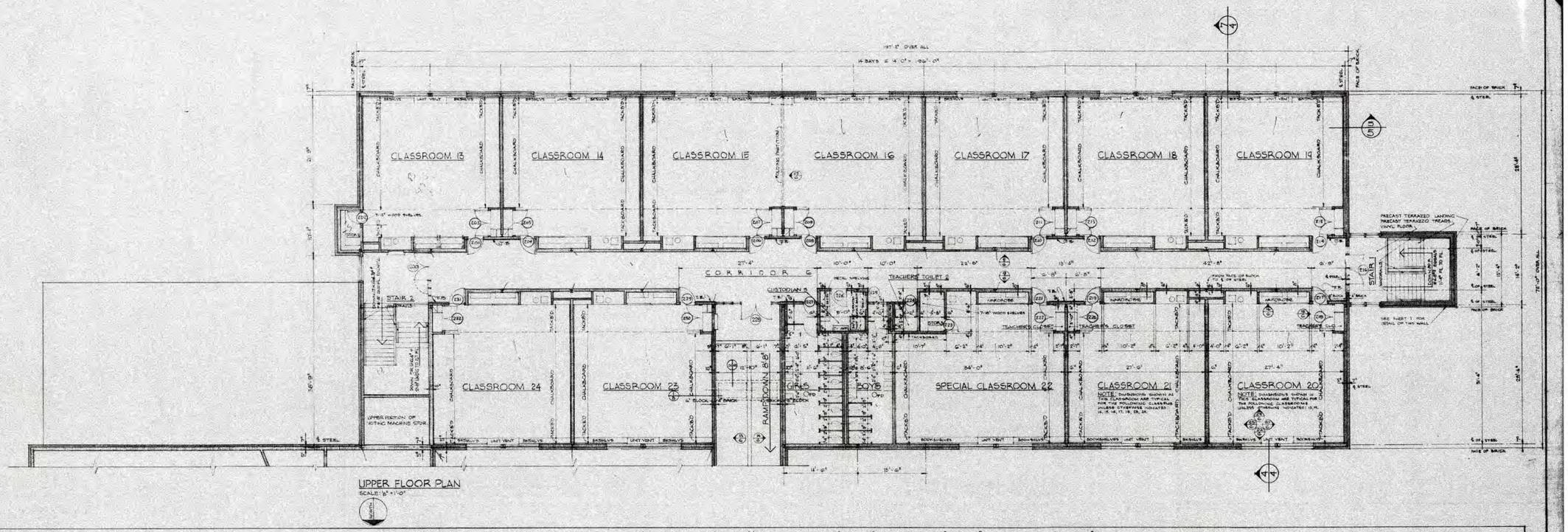
NORTH

TYPICAL COLUMN DETAILS
SCALE: 3/4"=1'-0"

1. EXT. CLRM. WALL AT CHASE
2. EXT. CLRM. WALL - TYPICAL
3. EXT. WALL AT RAMP
4. EXT. WALL AT STUDENT LOBBY
5. CLRM. WALL AT TEACHER'S CLO
6. CORRIDOR WALL AT CHASE
7. CORRIDOR WALL AT WARDROBE

DRWN CTB	THOMAS HOOKER ELEMENTARY SCHOOL
CHKD JLR	MERIDEN CONNECTICUT
DATE 15 OCT 62	LOWER FLOOR PLAN & DETAILS
SCALE AS SHOWN	DRAWING 1

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT



UPPER FLOOR PLAN

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

ROOM FINISH SCHEDULE

SPACE	FLOOR	BASE	WALLS	WAINSCOT	CEILING	CLG HGHT	REMARKS
STUDENT LOBBY	VINYL ASB. TILE	BRICK	BRICK	—	ACOUSTIC TILE	8'-0"	DISPLAY CASE
PUBLIC LOBBY	"	"	"	"	"	10'-8"	—
HEALTH ROOM	ASPHALT TILE	5/8" PLASTIC FACE BLOCK	PAINTED BLOCK	—	"	8'-0"	RUBBER T. BASE @ CASE WORK
GENERAL OFFICE	"	"	"	—	"	8'-0"	—
PRINCIPAL	"	"	"	—	"	8'-0"	—
FACULTY WORK	"	"	"	—	"	8'-0"	—
FACULTY LOUNGE	"	"	"	—	"	8'-0"	—
MIMEO RM.	"	PAINTED WOOD @ PL. FACE BL.	"	—	"	8'-0"	PAINTED WOOD SHELVING
GYM - AUD	VINYL ASB. TILE	WOOD & PL. FACE BL.	WD. FACE TINTED BL. & WOOD	CORK ON EAST WALL	PAINTED STEEL @ GYP. BD.	—	—
LUNCH - STAGE	"	PLASTIC FACE BLOCK	"	—	ACOUSTIC TILE	12'-6"	—
THEATER ROOM	HARDENED CONC.	UNPAINTED BLOCK	UNPAINTED BLOCK	—	VERMICULITE	12'-0"	—
STAIR NO. 1	V.A.T., TERRAZZO TREADS @ LNDG.	BRICK, @ PTD. STEEL	BRICK	—	ACOUSTIC TILE	8'-0"	—
STAIR NO. 2	V.A.T. AND TERRAZZO TRDS	PL. FACE BL. @ PTD. STEEL	PLASTIC FACE BLOCK	—	"	8'-0"	—
INCINERATOR	HARDENED CONC.	UNPAINTED BLOCK	UNPAINTED BLOCK	—	VERMICULITE	8'-0"	—
RECEIVING RM.	"	"	"	—	PAINTED STEEL @ STEEL DECK	—	PAINTED WOOD SHELVING
OUTDOOR STOR.	"	"	"	—	VERMICULITE PLASTER	10'-0"	—
GYM STORAGE	"	"	"	—	PAINTED STEEL @ ST. DECK	—	—
VEST NO. 1	VINYL ASB. TILE	BRICK	BRICK	—	ACOUSTIC TILE	8'-0"	RUBBER MAT @ RECESS
VEST NO. 2	"	"	"	—	"	10'-8"	"
VOTING MACH. STOR.	HARDENED CONC.	PAINTED BLOCK	PAINTED BLOCK	—	"	8'-0"	—

SPACE	FLOOR	BASE	WALLS	WAINSCOT	CEILING	CLG HGHT	REMARKS
CLASSROOM 1	ASPHALT TILE	PL. FACE BL. @ RUBBER TILE	PLASTIC FACED BLK & PTD BLK	—	ACOUSTIC TILE	8'-0" 9'-0"	SEE ELEVATIONS
" 2	"	"	"	—	"	8'-0" 9'-0"	"
" 3	"	"	"	—	"	8'-0" 9'-0"	"
" 4	"	"	"	—	"	8'-0" 9'-0"	"
" 5	"	"	"	—	"	8'-0" 9'-0"	"
" 6	"	"	"	—	"	8'-0" 9'-0"	"
" 7	"	"	"	—	"	8'-0" 9'-0"	"
" 8	"	"	"	—	"	8'-0" 9'-0"	"
" 9	"	"	"	—	"	8'-0" 9'-0"	"
" 10	"	"	"	—	"	8'-0" 9'-0"	"
" 11	"	"	"	—	"	8'-0" 9'-0"	"
" 12	"	"	"	—	"	8'-0" 9'-0"	"
SPECIAL C.R.	"	"	"	—	"	8'-0"	FOLDING PARTITION
TOILET 1 & 2	CERAMIC TILE	PLASTIC FACE BLOCK	PL. FACED BLK	—	"	8'-0"	—
" 3	"	"	"	—	"	8'-0"	—
" 4 & 5	"	"	"	—	"	8'-0"	—
" 6 & 7	"	"	"	—	"	8'-0"	—
" 8 THRU 21	"	"	"	—	"	8'-0"	—
TEACHERS TOILET 1	"	"	"	—	"	8'-0"	—
AUDIO VISUAL STOR.	HARDENED CONC.	PAINTED BLOCK	PAINTED BLOCK	—	PAINTED ST. @ ST. DECK	—	PAINTED WOOD SHELVING

SPACE	FLOOR	BASE	WALLS	WAINSCOT	CEILING	CLG HGHT	REMARKS
EDUCATION STOR.	HARDENED CONC.	PAINTED BLOCK	PAINTED BLOCK	—	ACOUSTIC TILE	8'-0"	METAL SHELVING
STORAGE NO. 1	VINYL ASB. TILE	PLASTIC FACE BLOCK	FP. BLK. TO 8'-0" PTD BLK ABOVE	—	PAINTED ST. @ ST. DECK	—	PAINTED WOOD SHELVING
CUSTODIAN NO. 1	ASPHALT TILE	PL. FACE BLOCK - WD. @ SHELVING	"	—	"	—	"
" NO. 2	"	"	"	—	"	—	"
PASSAGE 1 THRU 7	"	PLASTIC FACE BLOCK	PLASTIC FACE BLOCK	—	ACOUSTIC TILE	8'-0"	—
PASSAGE 8	VINYL ASB. TILE	BRICK	BRICK & CORK	—	"	8'-0"	—
" 9	ASPHALT TILE	PAINTED BLOCK	PAINTED BLOCK	—	"	8'-0"	CLOSET WITH SHELF & ROD
" 10	VINYL ASB. TILE	PLASTIC FACE BLOCK	PLASTIC FACE BLOCK	—	"	8'-0"	—
" 11	"	"	"	—	"	10'-8"	FOLDING GATE
KINDERGARTEN 1 & 2	ASPHALT TILE	"	"	—	"	8'-0"	—
COAT ROOM	"	"	"	—	"	8'-0"	PAINTED CUBICLES & BENCH
CORRIDOR 1	VINYL ASB. TILE	BRICK	BRICK	—	"	8'-0"	SLOPED FLOOR FOLDING GATE
" 2	"	"	"	—	"	VARIES	EGG CRATE CLG. @ SKY LIGHTS
" 3	"	"	"	—	"	"	"
" 4	"	PLASTIC FACE BLOCK	PLASTIC FACE BLOCK	—	"	8'-0"	—
" 5	"	"	"	—	"	8'-0"	SLOPED FLOOR

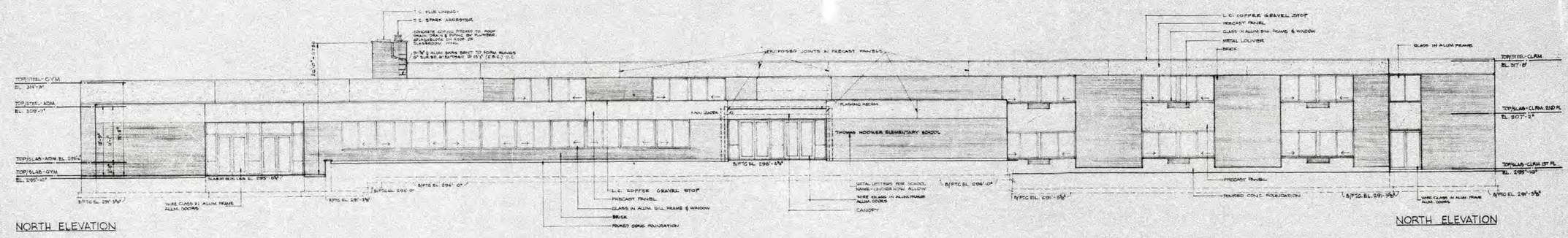
SPACE	FLOOR	BASE	WALLS	WAINSCOT	CEILING	CLG HGHT	REMARKS
SECOND FLOOR							
CLASSROOM 13	ASPHALT TILE	PL. FACE BL. @ RUBBER TILE	PLM. FACED BLK & PTD BLOCK	—	ACOUSTIC TILE	8'-0" 9'-0"	SEE ELEVATIONS
" 14	"	"	"	—	"	8'-0" 9'-0"	"
" 15	"	"	"	—	"	8'-0" 9'-0"	"
" 16	"	"	"	—	"	8'-0" 9'-0"	"
" 17	"	"	"	—	"	8'-0" 9'-0"	"
" 18	"	"	"	—	"	8'-0" 9'-0"	"
" 19	"	"	"	—	"	8'-0" 9'-0"	"
" 20	"	"	"	—	"	8'-0" 9'-0"	"
" 21	"	"	"	—	"	8'-0" 9'-0"	"
" 22	"	"	"	—	"	8'-0" 9'-0"	"
" 23	"	"	"	—	"	8'-0" 9'-0"	"
" 24	"	"	"	—	"	8'-0" 9'-0"	"
CORRIDOR 6	VINYL ASB. TILE	PLASTIC FACE BLOCK	PLASTIC FACE BLOCK	—	"	8'-0"	—
BOYS	CERAMIC TILE	"	"	—	"	8'-0"	METAL PARTITION
GIRLS	"	"	"	—	"	8'-0"	"
TEACHERS TOILET 2	"	"	"	—	"	8'-0"	—
STORAGE 2 & 3	ASPHALT TILE	"	PAINTED BLOCK	—	PAINTED ST. @ ST. DECK	—	PAINTED WOOD SHELVES
CUSTODIAN 3	"	"	"	—	"	—	"

DRWN CTB, JC
CHKD JLR
DATE 10OCT66
SCALE 1/8"=1'-0"

THOMAS HOOKER ELEMENTARY SCHOOL
MERIDEN CONNECTICUT
LOWER FLOOR PLAN & FINISH SCHEDULE

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

DRAWING 2

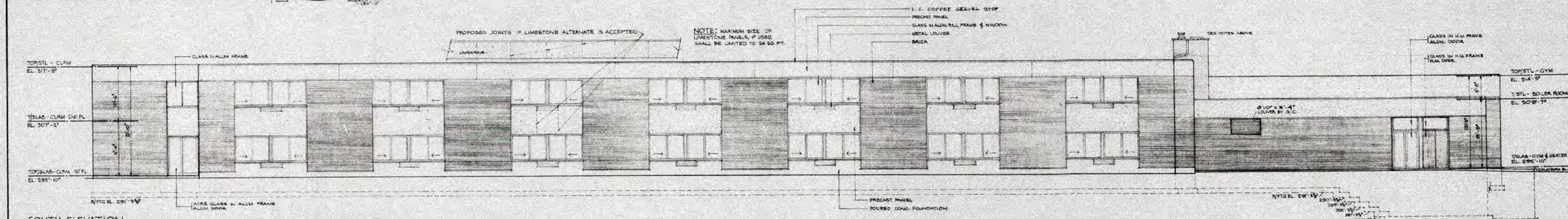


NORTH ELEVATION

NORTH ELEVATION

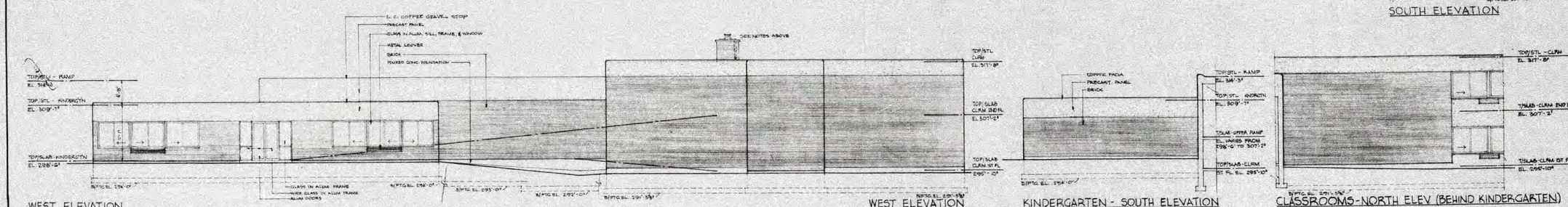
EAST ELEVATION

COURT - WEST ELEVATION



SOUTH ELEVATION

SOUTH ELEVATION



WEST ELEVATION

WEST ELEVATION

KINDERGARTEN - SOUTH ELEVATION

CLASSROOMS - NORTH ELEV (BEHIND KINDERGARTEN)

COURT - NORTH ELEVATION

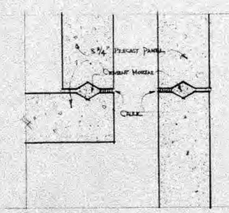
COURT - EAST ELEVATION

COURT - SOUTH ELEVATION

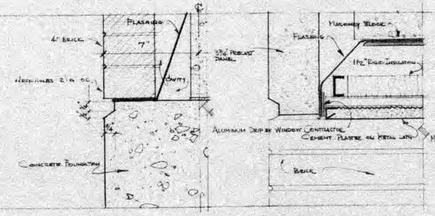
CANOPY - NORTH ELEVATION

CANOPY - WEST ELEVATION

DRWN CTB	THOMAS HOOKER ELEMENTARY SCHOOL	DRAWING 3
CHKD JLR	MERIDEN CONNECTICUT	
DATE 15 OCT 62		
SCALE 1/8"-1'-0"	EXTERIOR ELEVATIONS	
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.		
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT		

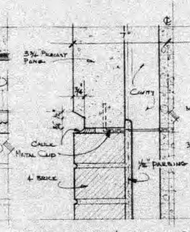


VERTICAL JOINTS @ PRECAST PANELS
SCALE 3"=1'-0"

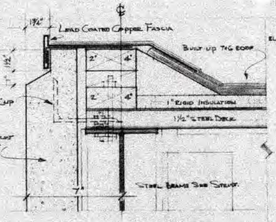


TYPICAL NOTCH @ FOUNDATION
SCALE 3"=1'-0"

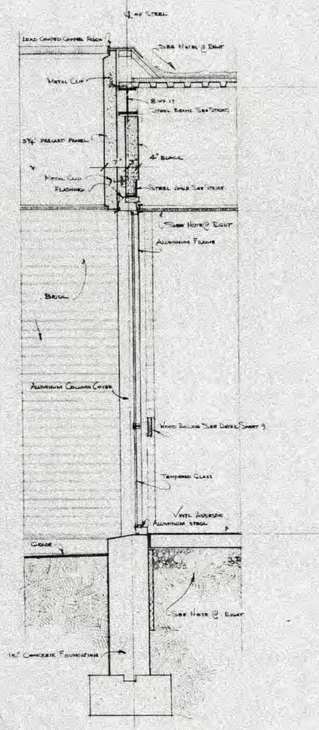
SOFFIT @ PRECAST PANEL
SCALE 3"=1'-0"



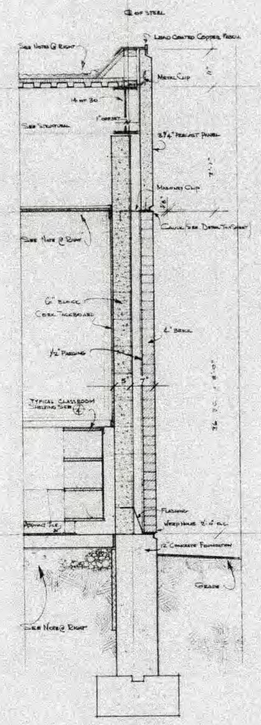
JOINT @ BRICK & PRECAST PANEL
SCALE 3"=1'-0"



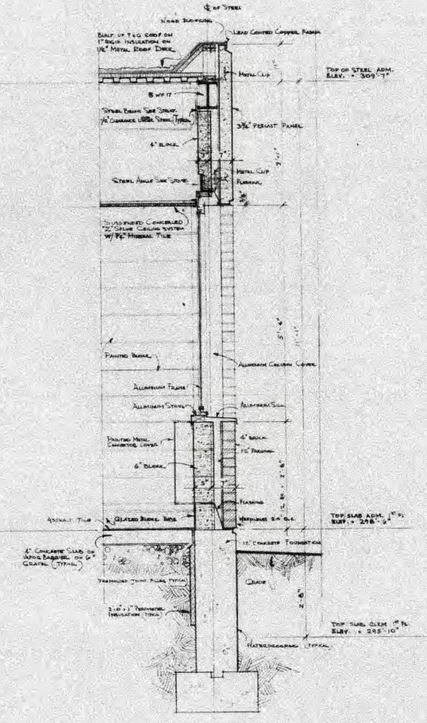
TYPICAL DETAIL OF FASCIA
SCALE 3"=1'-0"



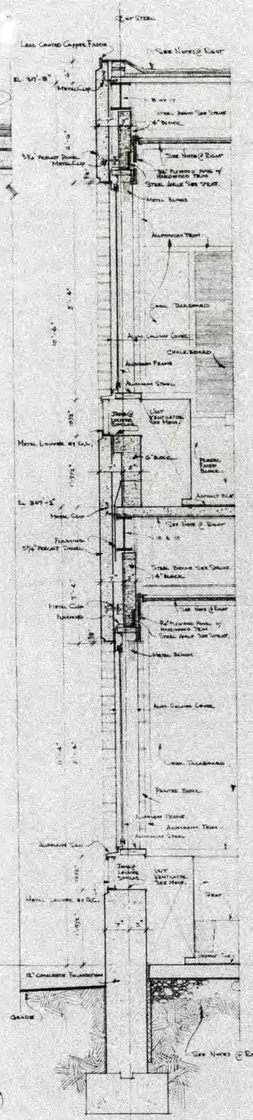
1/4 WINDOW WALL CORRIDOR 1
ADMINISTRATION



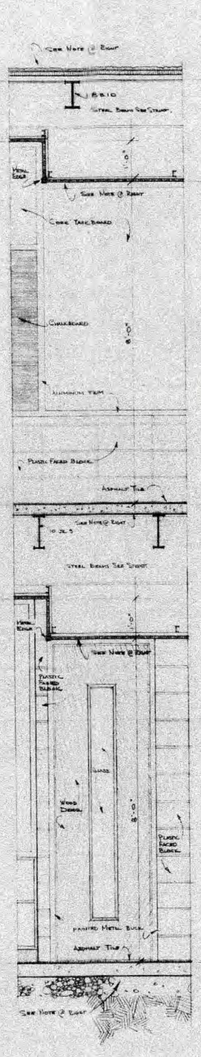
2/4 MASONRY SIDE WALL
ADMINISTRATION ~ KINDERGARTEN



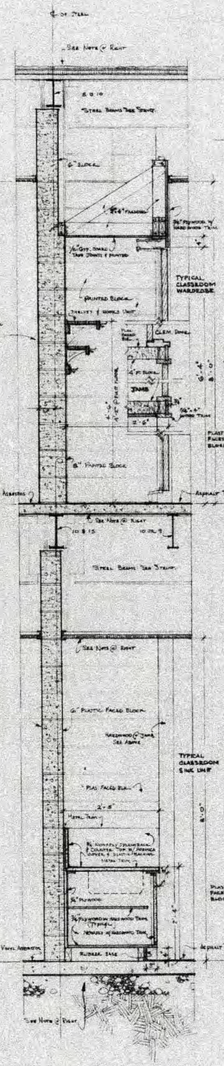
3/4 WINDOW WALL
ADMINISTRATION ~ KINDERGARTEN (SIMILAR)



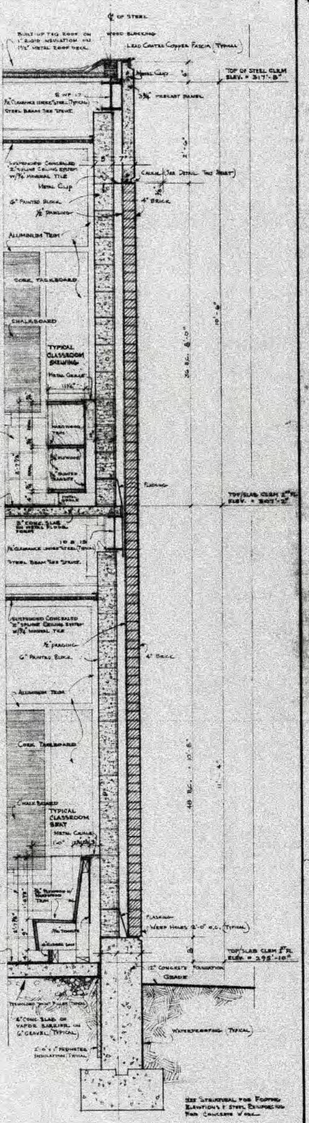
4/4 WINDOW WALL @ UNIT VENTILATORS
CLASSROOM WING



5/4 LINE OF CEILING BREAK
CLASSROOM WING

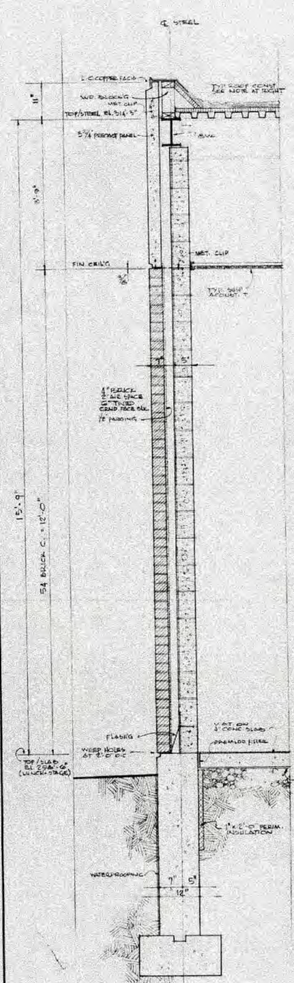


6/4 CORRIDOR WALL
CLASSROOM WING

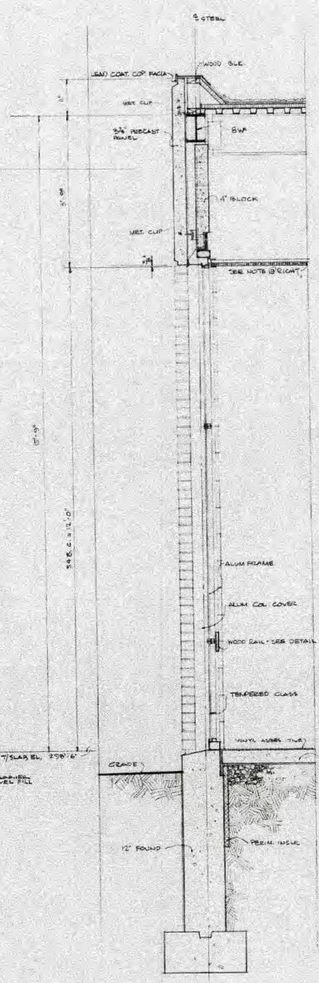


7/4 MASONRY SIDE WALL
CLASSROOM WING

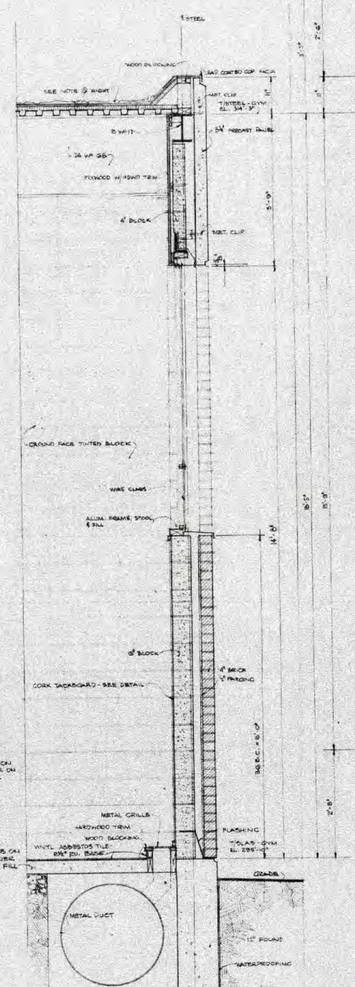
DRWN TPH	THOMAS HOOKER ELEMENTARY SCHOOL	DRAWING 4
CHKD J.L.E.	MERIDEN CONNECTICUT	
DATE 5 OCT 62		
SCALE 3/4"=1'-0"	SECTIONS & DETAILS	
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.		
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT		



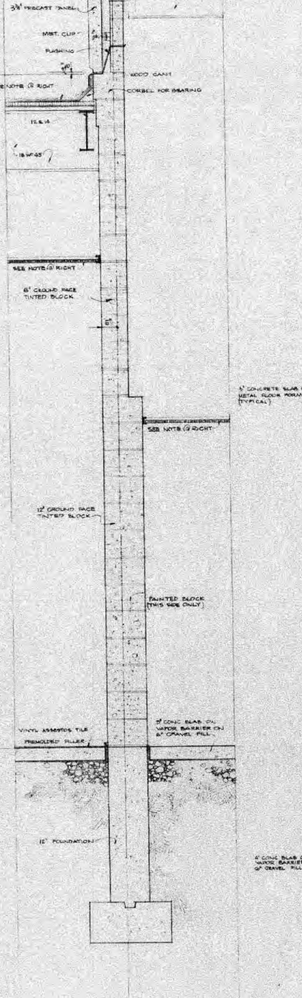
(1/5) MASONRY WALL (GYM MASONRY WALL SIMILAR)
LUNCH - STAGE



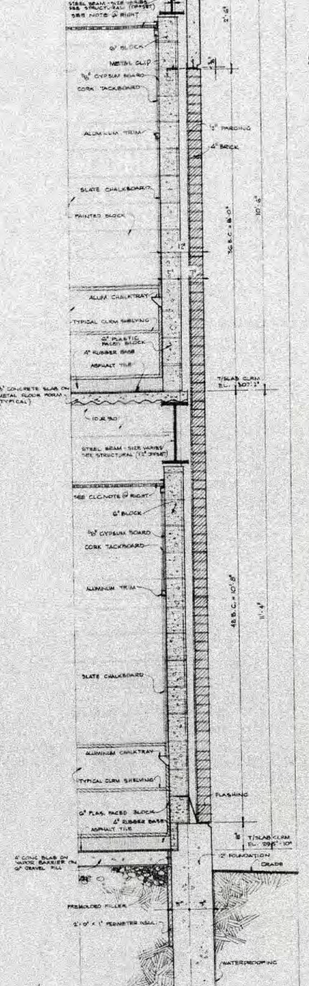
(2/5) WINDOW WALL
LUNCH - STAGE



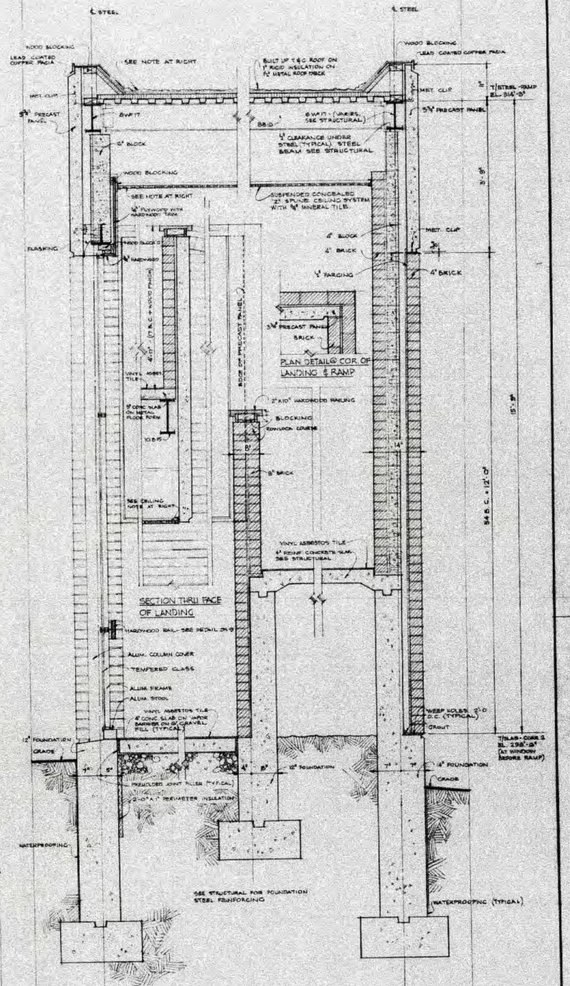
(3/5) WINDOW WALL
GYMNASIUM



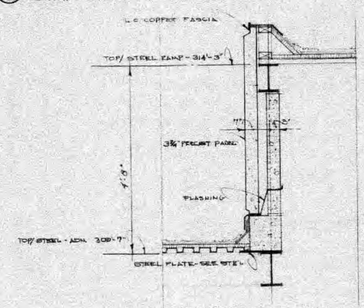
(4/5) MASONRY WALL BETWEEN
LUNCH - STAGE + CLASSROOM WING



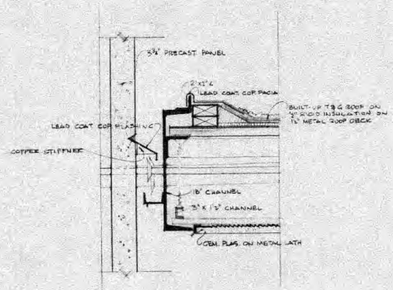
(5/5) MASONRY END WALL
CLASSROOM WING



(6/5) RAMP WINDOW WALL + MASONRY WALL
CORRIDOR 2 + 3



(7/5) LOW + HIGH ROOFS
ADMINISTRATION - RAMP



(8/5) DETAIL OF CANOPY @
PRECAST PANEL

DRWN TPH	THOMAS HOOKER ELEMENTARY SCHOOL	DRAWING 5
CHKD JLK	MERIDEN CONNECTICUT	
DATE 15 OCT 62	WALL SECTIONS & DETAILS	
SCALE 3/4"-1'-0" 3/8"-1'-0"		
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A. 10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT		

1/6 PASSAGE #9 NORTH ELEV.

2/6 PASSAGE #5 SOUTH ELEV.

3/6 PASSAGE #8 WEST ELEV.

4/6 PASSAGE #8 NORTH ELEV.

5/6 CORRIDORS #1 #6 SOUTH ELEVATION

6/6 PASSAGE #11 WEST ELEV.

7/6 CORRIDOR #5 SOUTH ELEVATION

8/6 CORRIDOR #4 NORTH ELEVATION

9/6 CORRIDOR #6 NORTH ELEVATION

10/6 PUBLIC LOBBY EAST ELEVATION

11/6 CORRIDOR #1 SOUTH ELEVATION

12/6 CORRIDOR #1 NORTH ELEVATION

13/6 CORRIDOR #2 EAST ELEVATION

14/6 CORRIDORS #61 #3 WEST ELEVATION

CORRIDOR ELEVATIONS 1/8" = 1'-0"

15/6 TYP TEACH. CLO.

16/6 TYP. WARDROBE

17/6 WINDOW WALL

18/6 REAR WALL

TYPICAL CLASSROOMS

19/6 CORRIDOR WALL

20/6 FRONT WALL

21/6 COAT ROOM SOUTH ELEV.

22/6 WINDOW WALL

23/6 REAR WALL

24/6 CORRIDOR WALL

25/6 FRONT WALL - FOLDING PART'N CL.RM. NO 4 1/6 (NO 3 1/6 OPP HAND)

TYPICAL CLASSROOMS

26/6 COAT ROOM EAST ELEV.

27/6 WINDOW WALL

28/6 EXTERIOR WALL

KINDERGARTEN N° 2 (KINDERGARTEN N° 1 OPP. HAND)

29/6 CORRIDOR WALL

30/6 INTERIOR WALL

31/6 FOLDING PARTITION

32/6 NORTH WALL

33/6 EAST WALL

SPECIAL CLASSROOM

34/6 SOUTH WALL

35/6 WEST WALL

36/6 EAST WALL

FACULTY LOUNGE

37/6 NORTH WALL

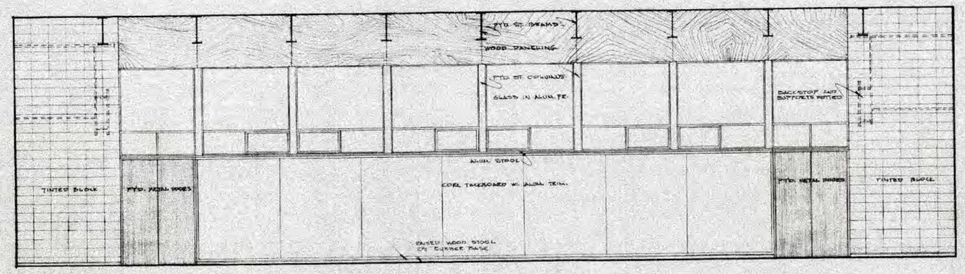
GENERAL OFFICE

38/6 WEST WALL

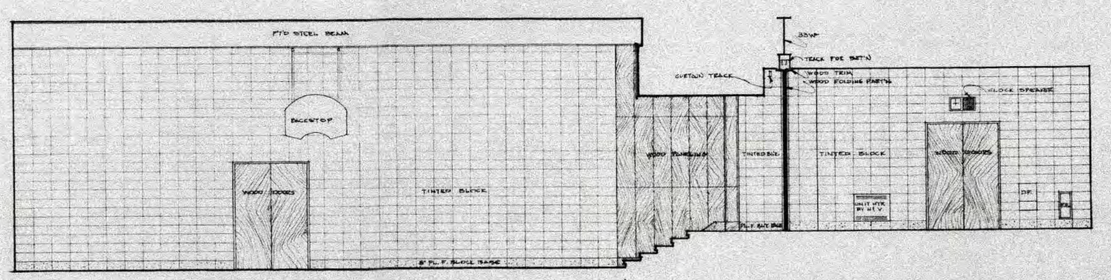
DRWN EILEN	THOMAS HOOKER ELEMENTARY SCHOOL
CHKD JLP	MERIDEN CONNECTICUT
DATE 15 OCT 62	INTERIOR ELEVATIONS
SCALE 1/4"=1'-0"	

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

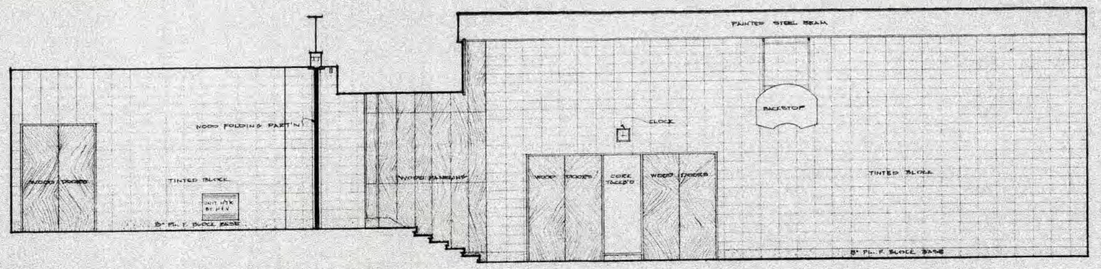
DRAWING 6



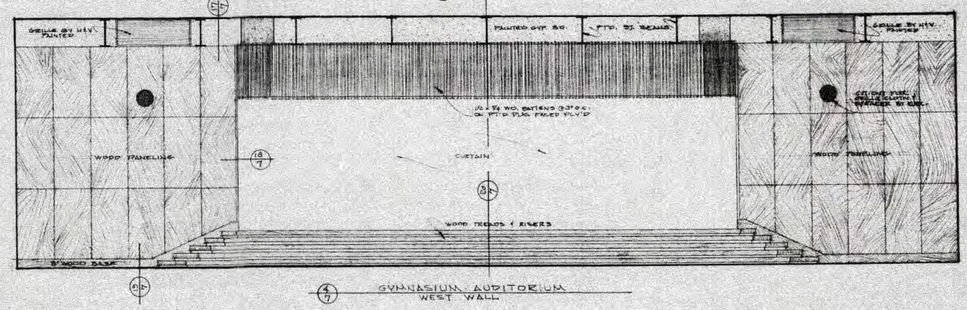
1/7 GYMNASIUM - AUDITORIUM EAST WALL



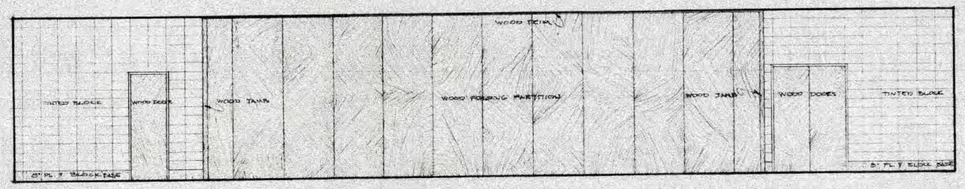
GYMNASIUM - AUDITORIUM SOUTH WALL 8/7 LUNCH - STAGE SOUTH WALL



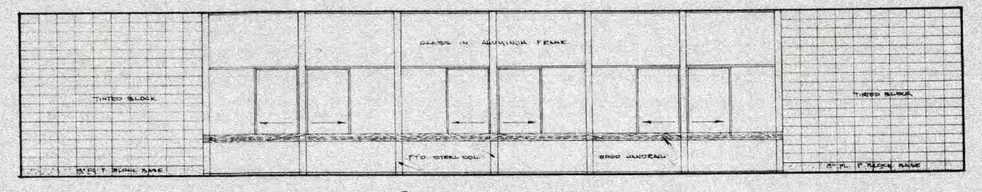
LUNCH - STAGE NORTH WALL 3/7 GYMNASIUM - AUDITORIUM NORTH WALL



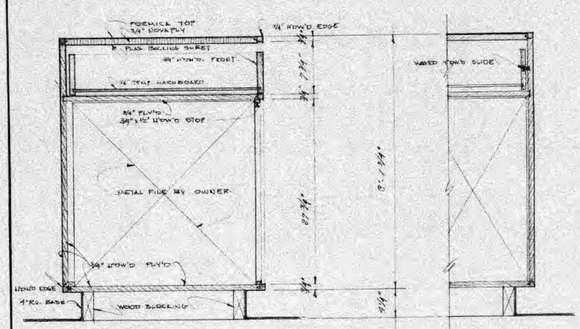
4/7 GYMNASIUM - AUDITORIUM WEST WALL



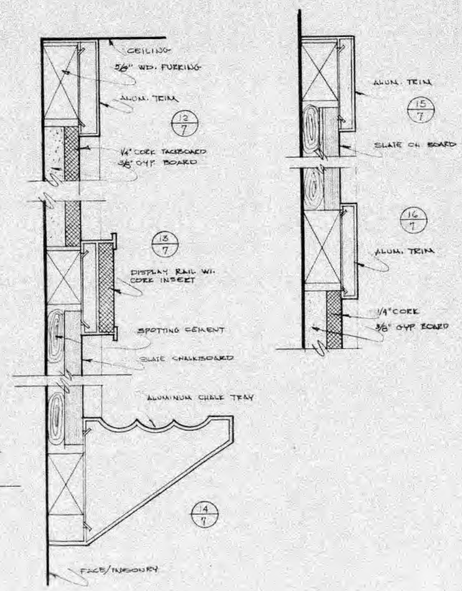
5/7 LUNCH - STAGE EAST WALL

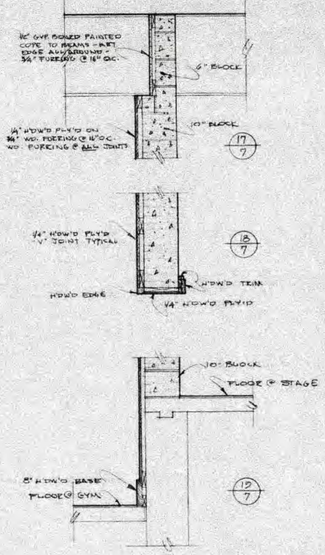


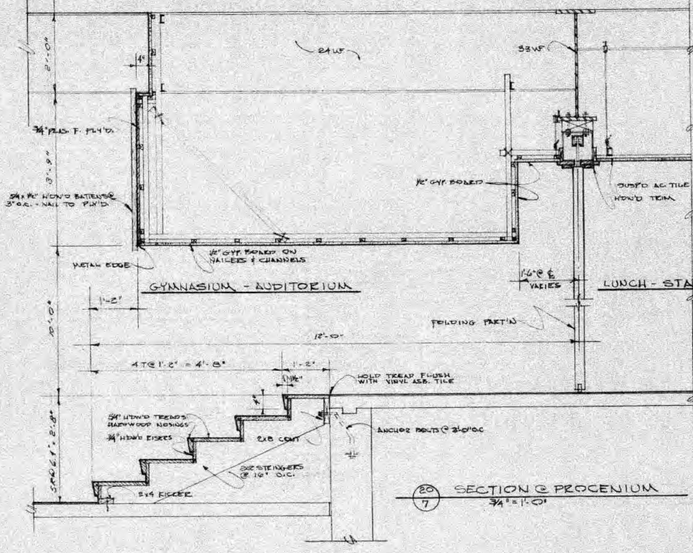
6/7 LUNCH - STAGE WEST WALL



10/7 CROSS SECTION 1½" = 1'-0" 11/7 END SECTION 1½" = 1'-0"





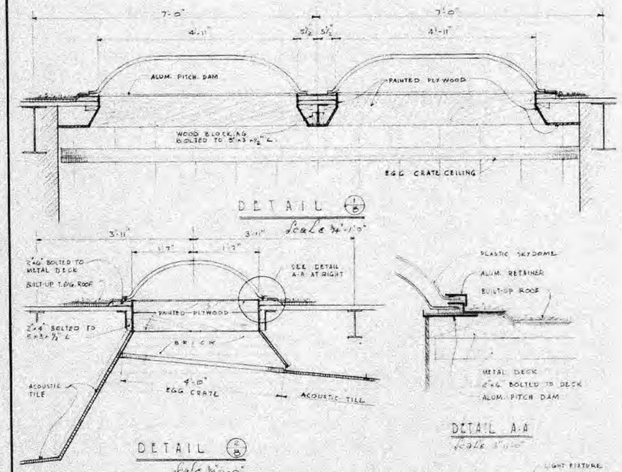


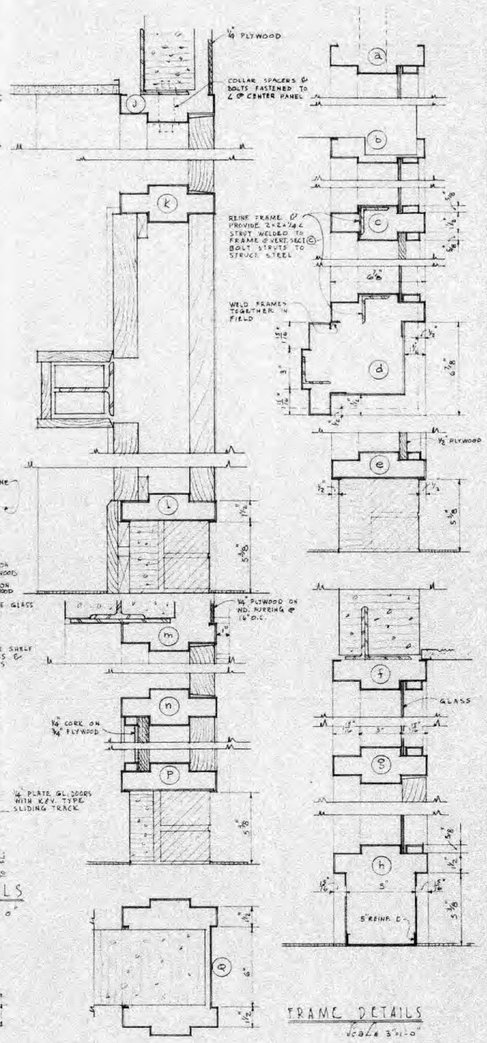
80/7 SECTION @ PROCENIUM 3/4" = 1'-0"

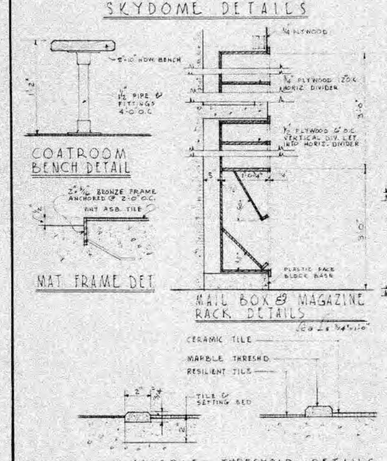
COUNTER @ GENERAL OFFICE ELEVATIONS & DETAILS

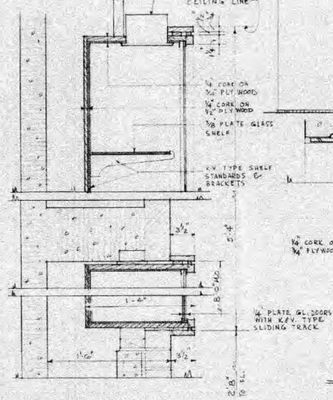
TYPICAL TACKBOARD & CHALKBOARD DETAILS SCALE: FULL SIZE

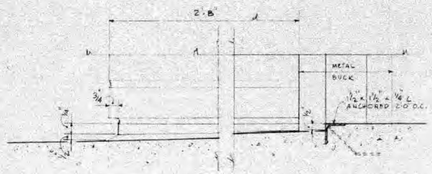
DRAWN JRILEY	THOMAS HOOKER ELEMENTARY SCHOOL	DRAWING 7
CHKD J.L.P.	MERIDEN CONNECTICUT	
DATE 15 OCT '62	INTERIOR ELEVATIONS	
SCALE 1/4" = 1'-0"		
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.		
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT		

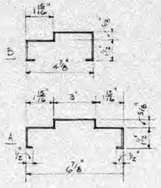


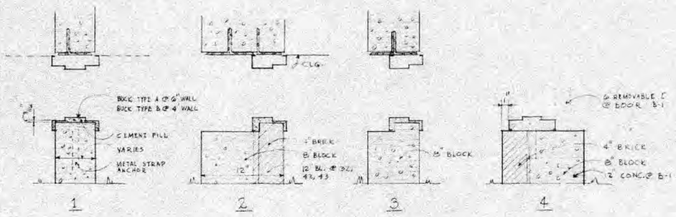


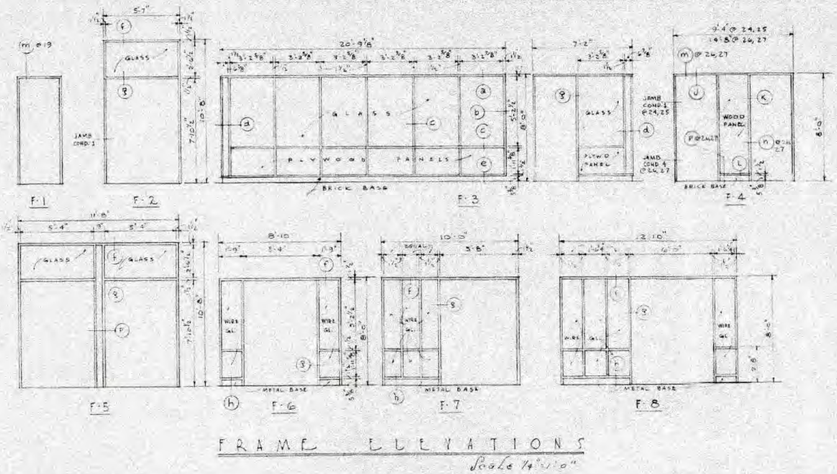








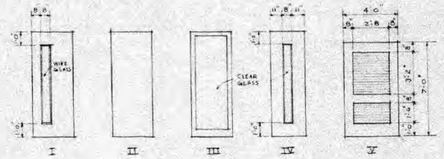




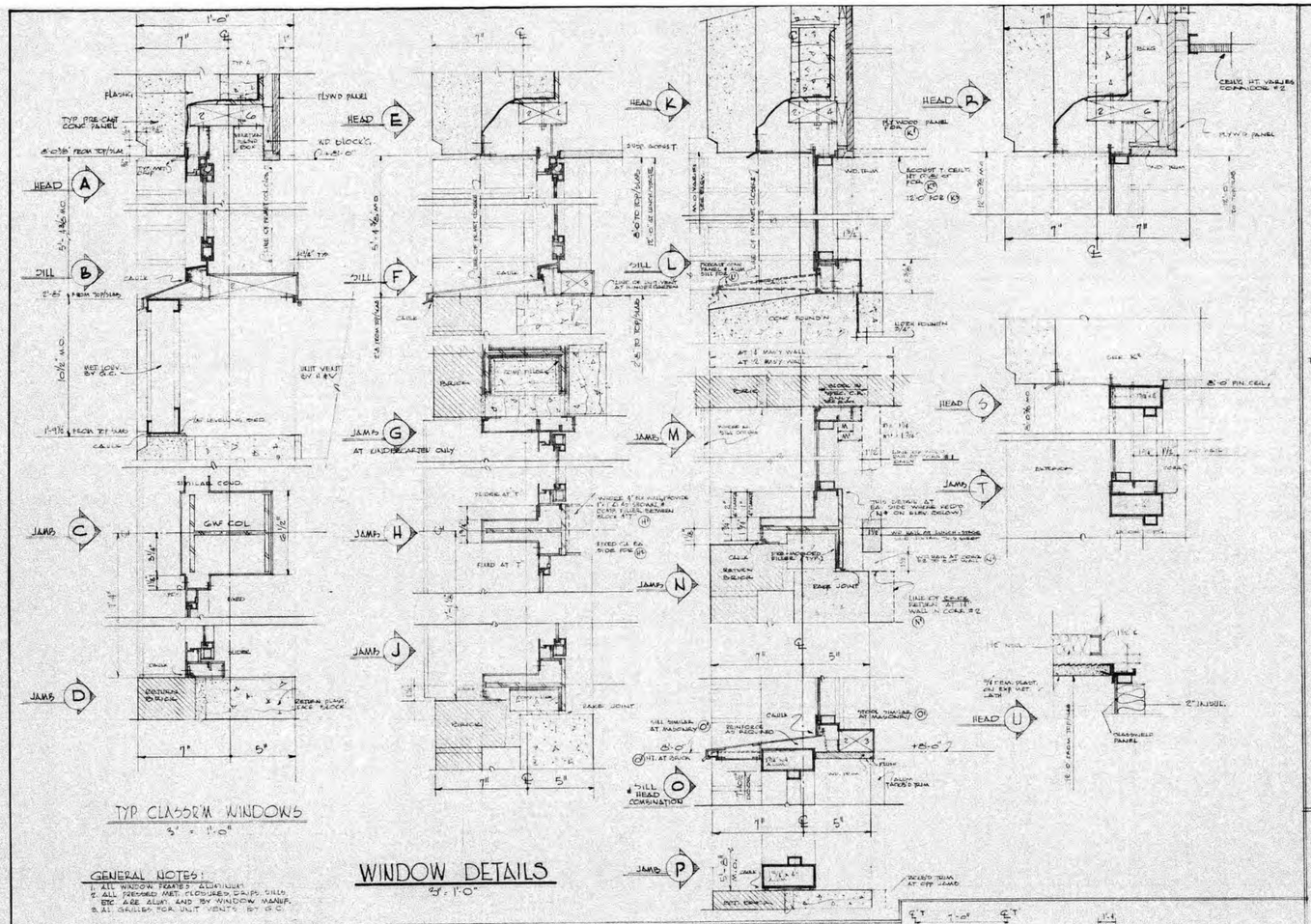
D O O R & F R A M E S C H E D U L E

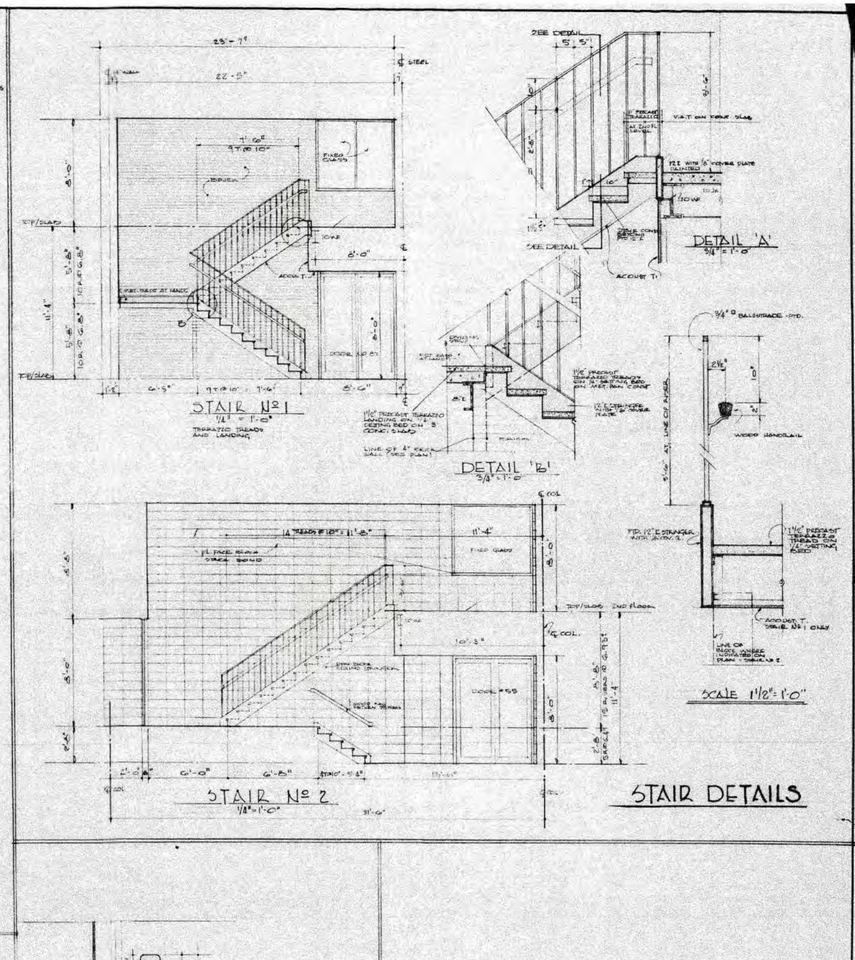
No	SIZE	DOOR ELEV.	DOOR MAT.	DOOR LOUVRE	FRAME ELEV.	FRAME MAT.	FRAME BUCK TYPE	FRAME JAMB COND	THRESH OLD	REMARKS
1	2'-8"x6'-10½"x1¾"	III	ALUM.	—	—	ALUM	SEE DET. 3 SHT 9		METAL	SEE ELEV. THROUGH BY HDW.
2	2'-8"x6'-10½"x1¾"	III	"	—	—	"	"		"	"
3	2'-8"x6'-10½"x1¾"	III	"	—	—	"	"		"	"
4	2'-8"x6'-10½"x1¾"	III	"	—	—	"	"		"	"
5	2'-8"x6'-10½"x1¾"	III	"	—	—	"	SEE WINDOW DET.		METAL	FRAME BY WINDOW MFR. THRESH. BY HDW.
6	3'-0"x7'-10½"x1¾"	II	WOOD	—	F-3	H.M.	SEE	ELEV.	—	—
7	3'-0"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
8	2'-6"x7'-10½"x1¾"	II	"	½" UNDRCT	F-1	"	A	1	MARBLE	—
9	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
10	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	A	1	—	—
11	2'-8"x7'-10½"x1¾"	II	"	½" UNDRCT	F-1	"	A	1	—	—
12	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
13	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
14	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
15	3'-0"x7'-10½"x1¾"	II	"	—	F-1	"	A	1	—	—
16	2'-6"x7'-10½"x1¾"	II	"	½" UNDRCT	F-1	"	A	1	MARBLE	—
17	2'-6"x7'-10½"x1¾"	II	"	"	F-1	"	A	1	"	—
18	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	2	—	—
19	2'-8"x7'-10½"x1¾"	II	"	½" UNDRCT	F-1	"	A	4	—	—
20	2'-8"x6'-10½"x1¾"	III	ALUM.	—	—	ALUM	SEE DET. 3 SHT 9		METAL	SEE EXT. ELEV. THRESH. BY HDW.
21	2'-8"x6'-10½"x1¾"	III	"	—	—	"	"		"	"
22	2'-8"x6'-10½"x1¾"	III	"	—	—	"	"		"	"
23	2'-8"x6'-10½"x1¾"	III	"	—	—	"	"		"	"
24	3'-0"x7'-10½"x1¾"	I	WOOD	—	F-6	H.M.	A	1	—	SEE ELEV.
25	3'-0"x7'-10½"x1¾"	I	"	—	F-6	"	A	1	—	"
26	2'-8"x7'-10½"x1¾"	I	"	—	F-6	"	A	1	—	"
27	2'-8"x7'-10½"x1¾"	I	"	—	F-6	"	A	1	—	"
28	3'-0"x7'-10½"x1¾"	II	"	—	F-1	"	B	3	—	—
29	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	3	—	—
30	2'-8"x7'-10½"x1¾"	II	H.M.	—	—	ALUM.	SEE WINDOW DETAILS		METAL	—
31	2'-8"x7'-10½"x1¾"	II	"	—	—	"	"		"	—
32	2'-8"x6'-10½"x1¾"	I	WOOD	—	F-1	H.M.	B	2	—	—
33	2'-8"x6'-11"x1¾"	II	H.M.	—	F-2	"	A	1	METAL	SEE ELEV.
34	2'-8"x7'-10½"x1¾"	II	WOOD	—	F-1	"	A	1	RESILIENT STRIP	—
35	2'-8"x7'-11"x1¾"	II	H.M.	—	F-3	"	A	1	METAL	SEE ELEV.
36	2'-8"x6'-11"x1¾"	II	"	—	F-3	"	A	1	"	"
37	2'-6"x6'-8"x1¾"	II	WOOD	—	F-1	"	A	1	—	—
38	2'-6"x6'-8"x1¾"	II	"	—	F-1	"	A	1	—	—
39	3'-0"x6'-8"x1¾"	II	H.M.	—	F-1	"	A	1	—	8 LABEL DOOR & FRAME.
40	2'-2"x6'-8"x1¾"	II	WOOD	—	F-1	"	B	3	RESILIENT STRIP	—
41	3'-0"x6'-8"x1¾"	II	"	—	F-1	"	A	1	"	6 LABEL DOOR & FRAME.
42	3'-0"x7'-10½"x1¾"	II	"	—	F-1	"	B	2	—	—
43	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	2	—	—
44	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	RESILIENT STRIP	—
45	2'-8"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
46	2'-8"x7'-10½"x1¾"	I	"	—	F-7	"	A	1	—	SEE ELEV.
47	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
48	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
49	2'-6"x7'-10½"x1¾"	III	"	½" UNDRCT	F-1	"	B	1	—	—
50	3'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	MARBLE	—
51	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	"	—
52	2'-8"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	—	—
53	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
54	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
55	2'-8"x7'-10½"x1¾"	III	ALUM.	—	—	ALUM	SEE EXT. ELEV.		METAL	THRESHD. BY HDW.
56	3'-0"x7'-10½"x1¾"	I	WOOD	—	F-1	H.M.	A	1	—	—
57	2'-6"x7'-10½"x1¾"	IV	"	½" UNDRCT	F-1	"	B	1	—	—
58	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	MARBLE	—
59	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	"	—
60	2'-8"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	—	—
61	3'-0"x7'-10½"x1¾"	II	"	—	F-1	"	A	1	—	—
62	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
63	2'-6"x7'-10½"x1¾"	IV	"	½" UNDRCT	F-1	"	B	1	—	—
64	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	MARBLE	—
65	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	"	—
66	2'-6"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	—	—
67	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
68	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
69	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
70	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
71	2'-6"x7'-10½"x1¾"	IV	"	½" UNDRCT	F-1	"	B	1	—	—
72	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	MARBLE	—
73	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	"	—

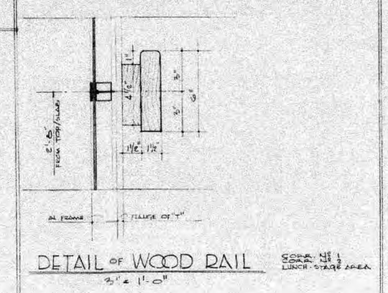
No	SIZE	DOOR ELEV.	DOOR MAT.	DOOR LOUVRE	FRAME ELEV.	FRAME MAT.	FRAME BUCK TYPE	FRAME JAMB COND	THRESH OLD	REMARKS
74	2'-6"x7'-10½"x1¾"	IV	WOOD	½" UNDRCT	F-1	H.M.	B	1	—	—
75	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
76	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
77	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
78	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
79	2'-6"x7'-10½"x1¾"	IV	"	½" UNDRCT	F-1	"	B	1	—	—
80	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	MARBLE	—
81	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	"	—
82	2'-6"x7'-10½"x1¾"	IV	"	"	F-1	"	B	1	—	—
83	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
84	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
85	2'-8"x6'-10½"x1¾"	I	"	—	F-6	"	A	1	—	SEE ELEV.
86	2'-8"x7'-10½"x1¾"	III	ALUM.	—	—	ALUM	SEE EXT. ELEV.		METAL	THRESHOLD BY HDW.
87	2'-8"x7'-10½"x1¾"	III	"	—	—	"	"		"	"
88	3'-0"x7'-10½"x1¾"	I	WOOD	—	F-1	H.M.	A	1	—	—
89	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
90	2'-6"x7'-10½"x1¾"	IV	"	½" UNDRCT	F-1	"	B	1	—	—
91	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	MARBLE	—
92	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	"	—
93	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
94	2'-2"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
95	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
96	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
97	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
98	3'-4"x7'-10½"x1¾"	IV	"	½" UNDRCT	F-1	"	B	1	—	—
99	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	MARBLE	—
100	2'-0"x7'-10½"x1¾"	II	"	"	F-1	"	B	1	"	—
101	2'-6"x7'-10½"x1¾"	II	"	"	F-1	"	A	1	—	—
102	3'-0"x7'-10½"x1¾"	II	"	"	F-1	"	A	1	—	—
103	3'-0"x7'-10½"x1¾"	II	"	"	F-1	"	A	1	BRONZE STRIP	—
104	2'-8"x7'-10½"x1¾"	I	"	—	F-8	"	A	1	—	SEE ELEV.
105	6'-0"x8'-0"	BRICK OPENING								
106	3'-0"x7'-10½"x1¾"	I	WOOD	—	F-1	H.M.	A	1	—	—
107	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
108	2'-6"x7'-10½"x1¾"	II	"	½" UNDRCT	F-1	"	A	1	MARBLE	—
109	2'-8"x7'-10½"x1¾"	II	"	"	F-1	"	A	1	—	—
110	3'-0"x7'-10½"x1¾"	II	"	"	F-1	"	A	1	—	—
111	2'-8"x6'-10½"x1¾"	III	ALUM.	—	—	ALUM	SEE EXT. ELEV.		METAL	THRESHD. BY HDW.
112	3'-0"x7'-10½"x1¾"	II	WOOD	—	F-1	H.M.	A	1	—	—
113	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
114	2'-8"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
115	3'-0"x7'-10½"x1¾"	II	"	—	F-1	"	A	1	—	—
116	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
SECOND FLOOR										
200	2'-8"x7'-10½"x1¾"	I	WOOD	—	F-7	H.M.	A	1	—	SEE ELEV.
201	3'-0"x7'-10½"x1¾"	II	"	—	F-1	"	A	1	—	—
202	2'-6"x7'-10½"x1¾"	II	"	—	F-1	"	A	1	—	—
203	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
204	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
205	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
206	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
207	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
208	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
209	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
210	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
211	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
212	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
213	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
214	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
215	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
216	2'-8"x7'-10½"x1¾"	I	"	—	F-6	"	A	1	—	SEE ELEV.
217	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
218	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
219	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
220	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
221	3'-0"x7'-10½"x1¾"	I	"	—	F-1	"	A	1	—	—
222	2'-8"x6'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
223	2'-6"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
224	2'-0"x7'-10½"x1¾"	II	"	½" UNDRCT	F-1	"	A	1	MARBLE	—
225	2'-8"x7'-10½"x1¾"	II	"	½" UNDRCT	F-1	"	A	1	"	—
226	3'-0"x7'-10½"x1¾"	II	"	—	F-1	"	B	1	—	—
227	2'-8"x7'-10½"x1¾"	II	"	½" UNDRCT	F-1	"	A	1	MARBLE	—
228	2'-3"x7'-10½"x1¾"	I	"	—	F-8	"	A	1	—	SEE ELEV.
B-1	4'-0"x7'-0"x1¾"	II	METAL	METAL	F-1	H.M.	A	4	6" ∈	REMOVABLE ∈ THRESH.



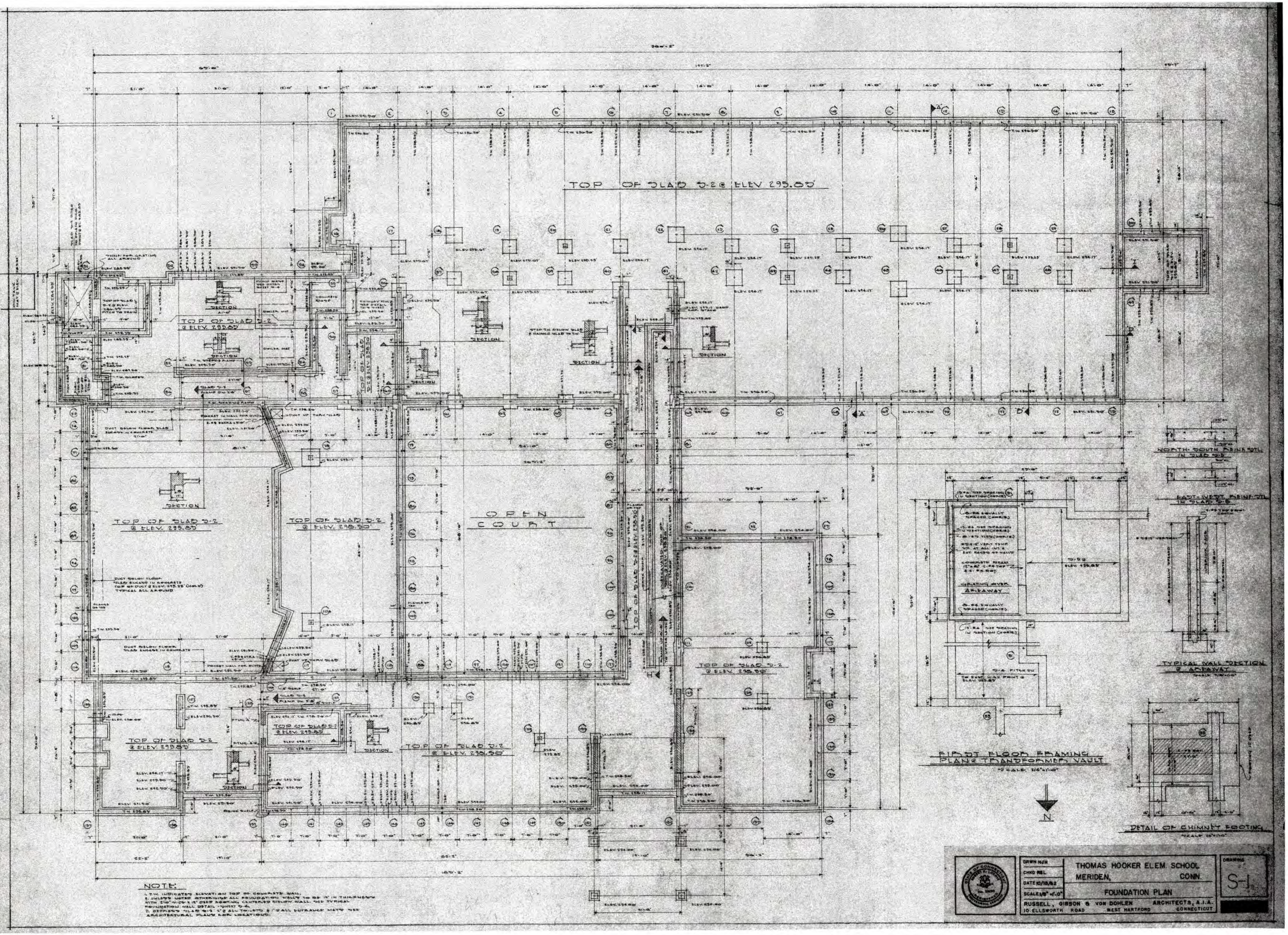
DRWN. M.	THOMAS HOOKER ELEMENTARY SCHOOL	DRAWING 8
CHKD	MERIDEN CONNECTICUT	
DATE 15 OCT. 62	DOOR SCHEDULE & DETAILS	
SCALE AS SHOWN	RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.	
	10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT	

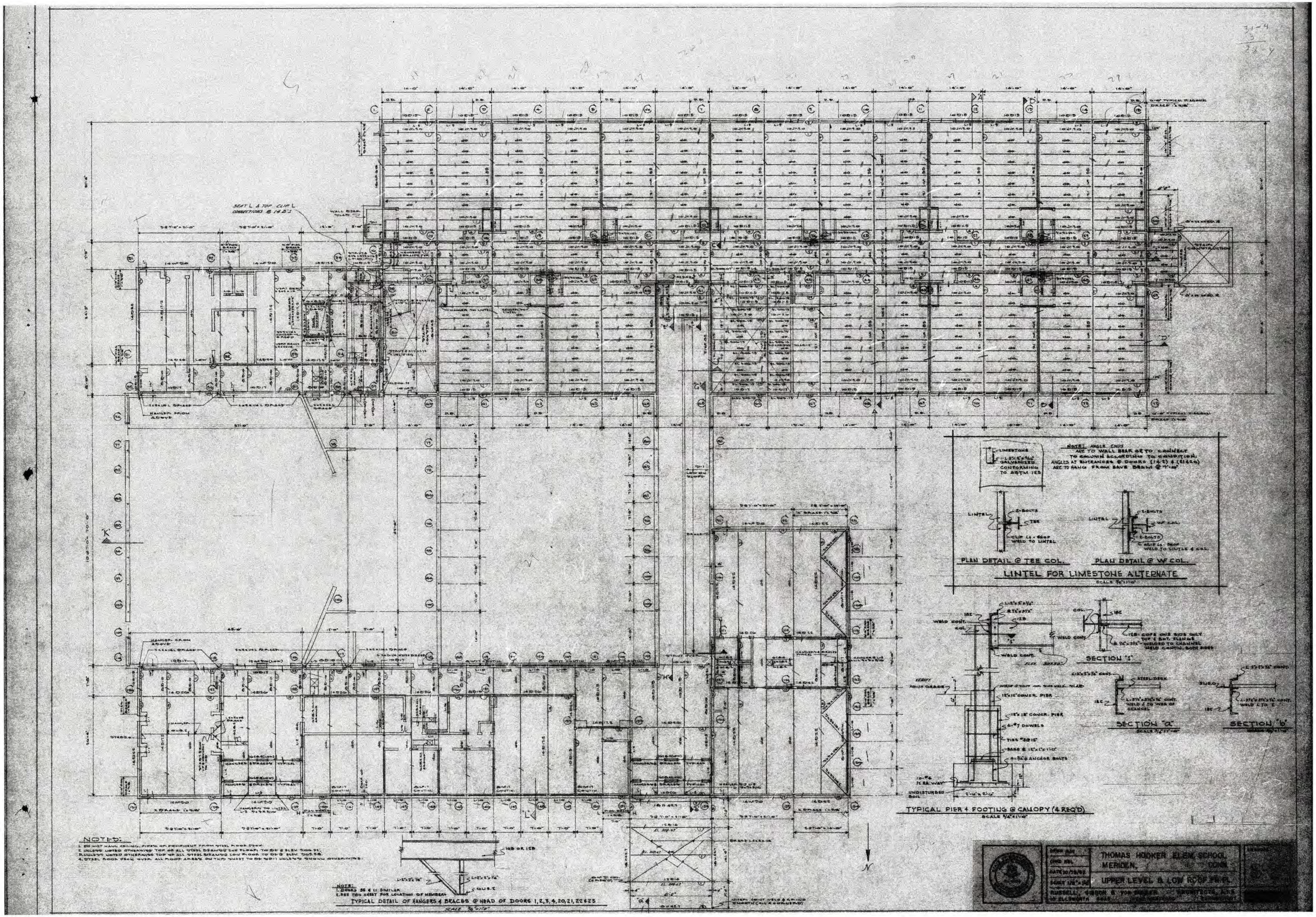




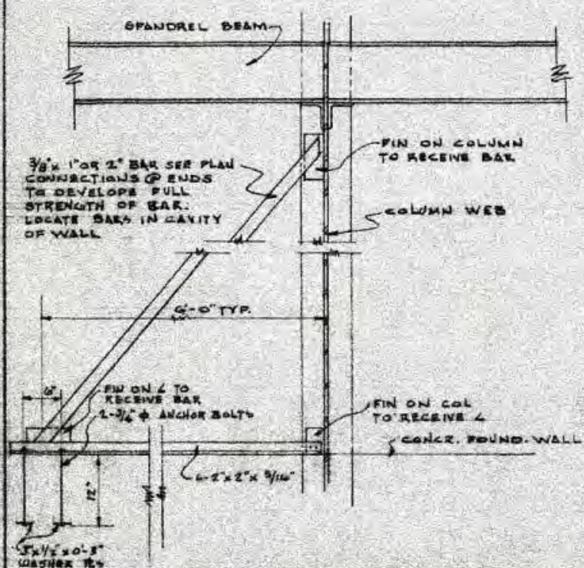


DRWN JJM	THOMAS HOOKER ELEMENTARY SCHOOL	DRAWING 9
CHKD		
DATE 15 OCT 62	MERIDEN CONNECTICUT	
SCALE AS SHOWN	WINDOW & STAIR DETAILS	
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A. 10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT		


TOP OF SLAB S-2@ ELEV 295.00
TOP OF SLAB S-2 @ ELEV. 295.00
OPEN COURT
FIRST FLOOR FRAMING PLAN & TRANSFORMER VAULT
NORTH-SOUTH REINF. DTL. IN SLAB S-5
EAST-WEST REINF. DTL. IN SLAB S-5
TYPICAL WALL SECTION @ AREAWAY
DETAIL OF CHIMNEY FOOTING
N
NOTE:
1. T.W. INDICATES ELEVATION TOP OF CONCRETE WALL.
2. UNLESS NOTED OTHERWISE ALL FOUNDATION WALLS TO BE 12" IN THICKNESS WITH 2'-0" WIDE X 12" DEEP FOOTING CENTERED BELOW WALL. SEE TYPICAL FOUNDATION WALL DETAIL - SHEET S-4.
3. DEPRESS SLAB S-2 2" @ ALL TOILETS & 1" @ ALL ENTRANCE MATS SEE ARCHITECTURAL PLANS FOR LOCATIONS.
DRWN HJH
CHKD RBL
DATE 10/18/62
SCALE 1/8" = 1'-0"
THOMAS HOOKER ELEM. SCHOOL
MERIDEN, CONN.
FOUNDATION PLAN
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT
DRAWING
S-1



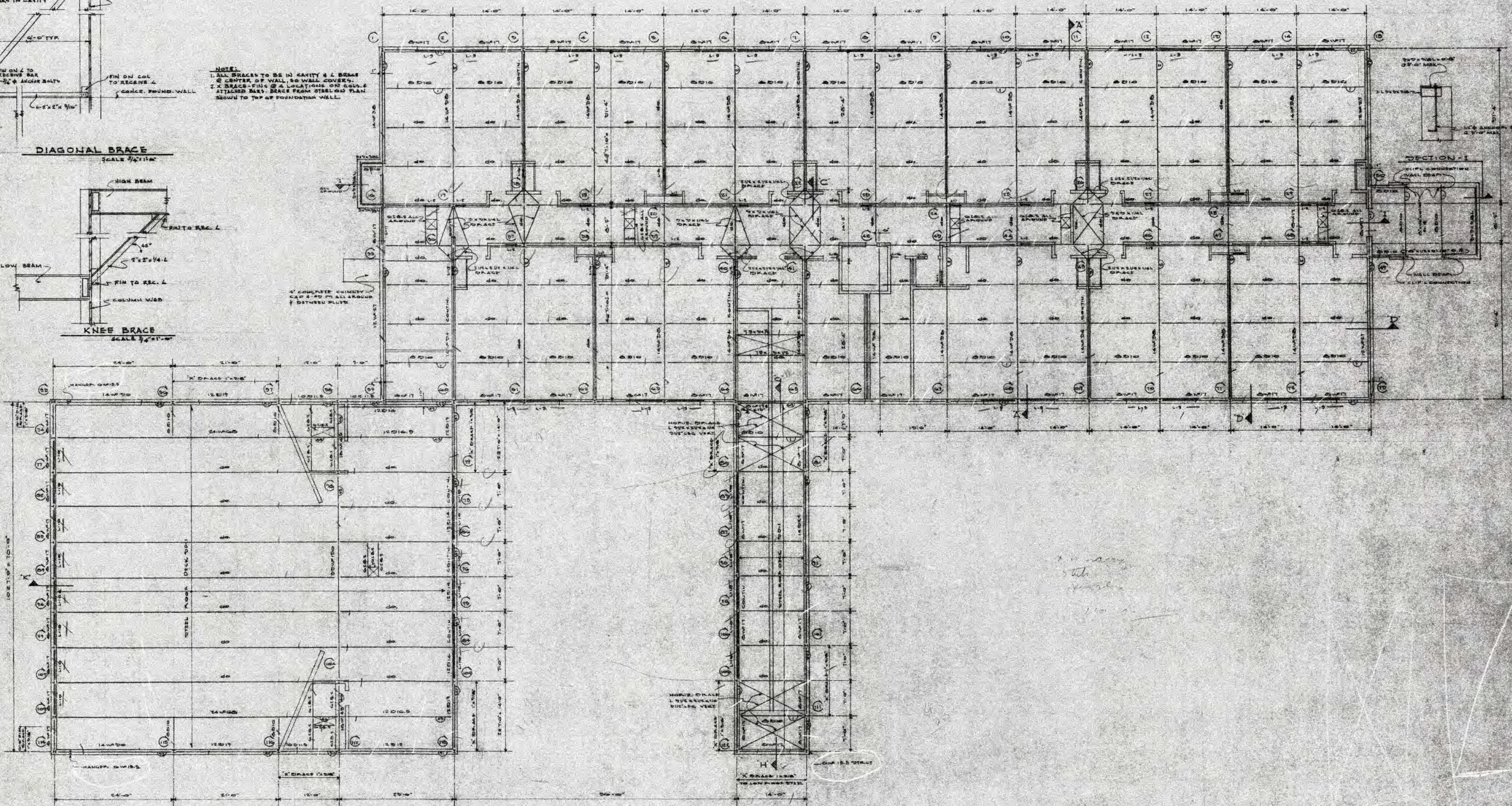
NOTE: ANGLE ENDS ARE TO WALL BEAR OR TO CONNECT TO COLUMN ACCORDING TO CONDITION. ANGLES AT ENTRANCES @ DOORS (1 & 2) & (21 & 20) ARE TO HANG FROM EAVE BEAM @ 7'-0"
LIMESTONE
1-L 8"x 5"x 5/16" GALVANIZED CONFORMING TO ASTM 123
LINTEL
2-BOLTS
TEE
CLIP L's - SHOP WELD TO LINTEL
WF COL.
PLAN DETAIL @ TEE COL.
PLAN DETAIL @ WF COL.
LINTEL FOR LIMESTONE ALTERNATE
SECTION "1"
SECTION "a"
SECTION "b"
STEEL DECK
18"x 18" CONCR. PIER
4-#7 DOWELS
UNDISTURBED SOIL
TYPICAL PIER & FOOTING @ CANOPY (4 REQ'D)
SCALE 3/4" = 1'-0"
NOTES:
TYPICAL DETAIL OF HANGERS & BRACES @ HEAD OF DOORS 1, 2, 3, 4, 20, 21, 22 & 23
THOMAS HOOKER ELEM. SCHOOL
MERIDEN, CONN.
DATE 10/15/63
UPPER LEVEL & LOW ROOF FR. PL.
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD



DIAGONAL BRACE
SCALE 3/4" = 1'-0"

KNEE BRACE

NOTE:
1. ALL BRACES TO BE IN CAVITY & L BRACE @ CENTER OF WALL, SO WALL COVERS.
2. X BRACE-FINS @ 4 LOCATIONS ON COLS. & ATTACHED BARS. BRACE FROM STEEL ON PLAN SHOWN TO TOP OF FOUNDATION WALL.



NOTE:
1. DO NOT HANG CEILING, PIPES OR EQUIPMENT FROM STEEL ROOF DECK.
2. UNLESS NOTED OTHERWISE TOP OF ALL STEEL BEAMS @ CLASSROOM ROOF TO BE @ ELEV. 517.67
3. UNLESS NOTED OTHERWISE TOP OF ALL STEEL BEAMS @ GYM-AUD, LUNCH-STAGE & RAMP ROOFS TO BE @ ELEV. 514.25.
4. STEEL ROOF DECK OVER ALL AREAS ON THIS SHEET TO BE SD-2 UNLESS SHOWN OTHERWISE.

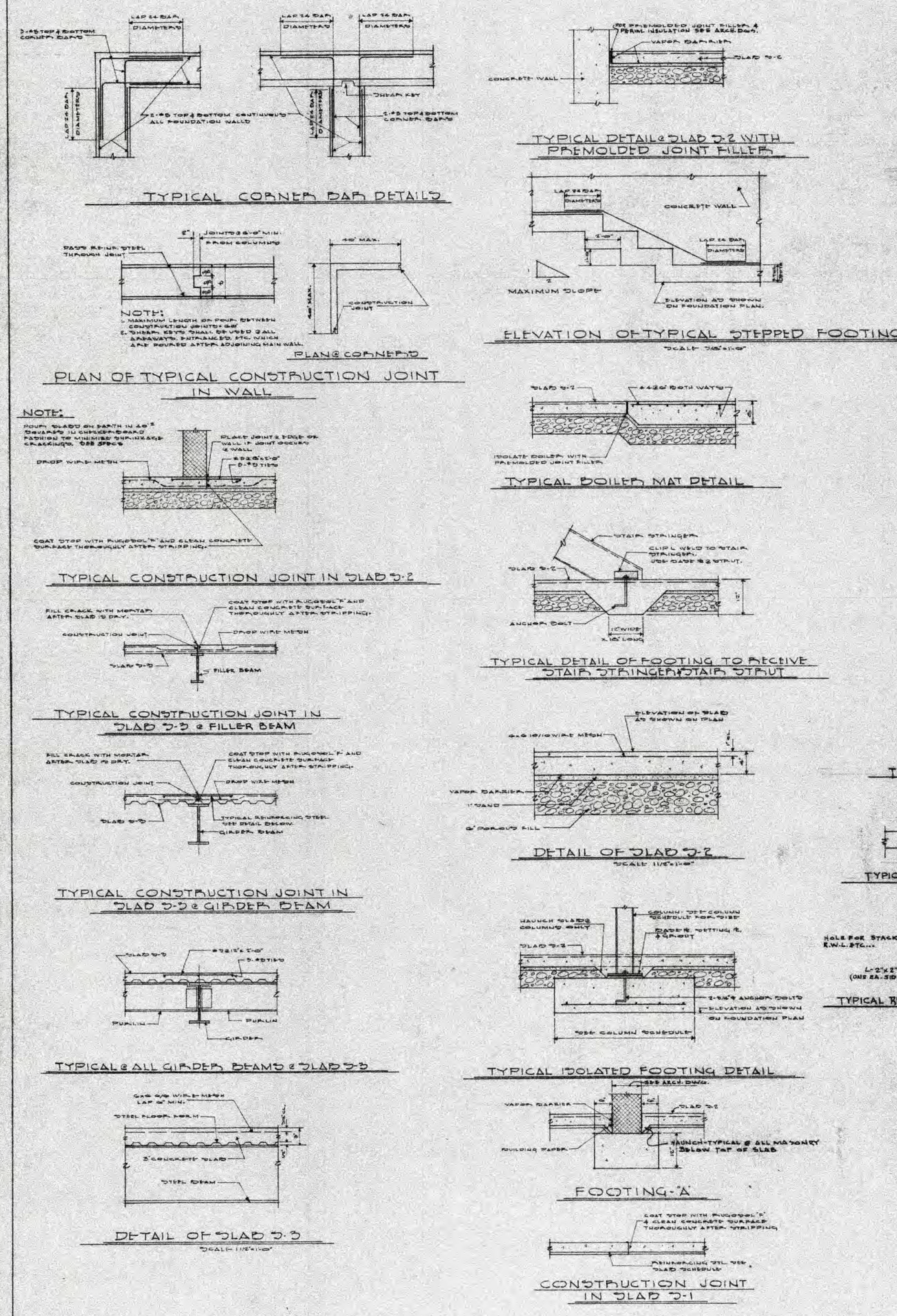
STEEL ROOF DECK SCHEDULE

STEEL DECK MARK	3 SPAN CONTIN. BASED ON SPAN	REQ'D S	REQ'D I	DEPTH	MIN GAGE
SD-1	7'-0"	.120	.079	1 1/2"	20
SD-2	8'-0"	.154	.047	1 1/2"	20

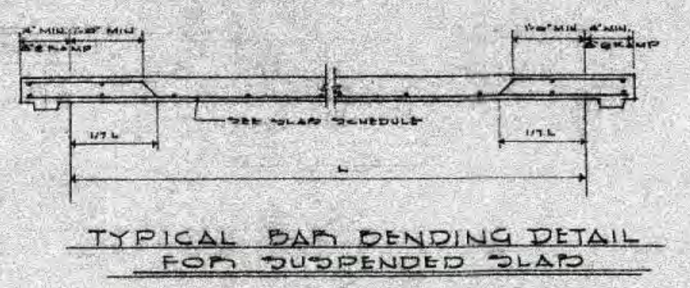
DRWN NJH	THOMAS HOOKER ELEM. SCHOOL
CHKD RSL	MERIDEN, CONN.
DATE 10/15/62	
SCALE 1/8" = 1'-0"	HIGH ROOF FRAMING PLAN

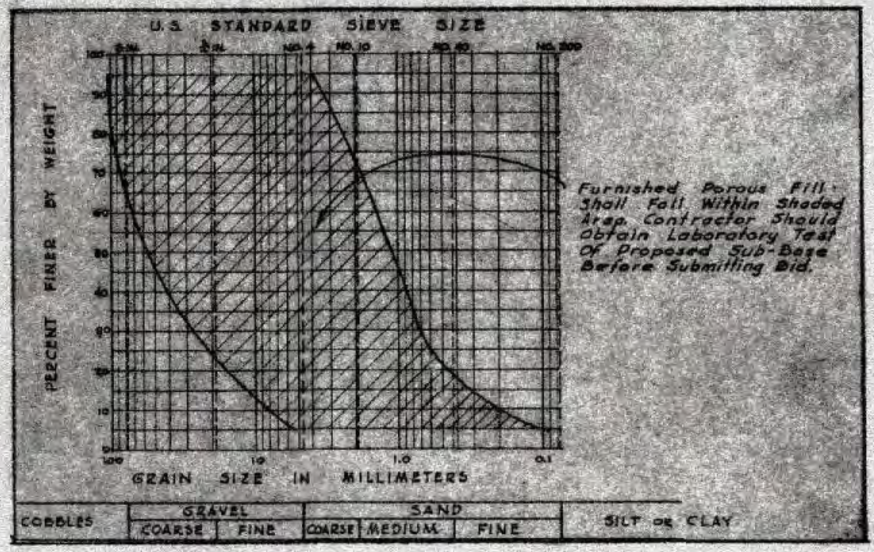
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

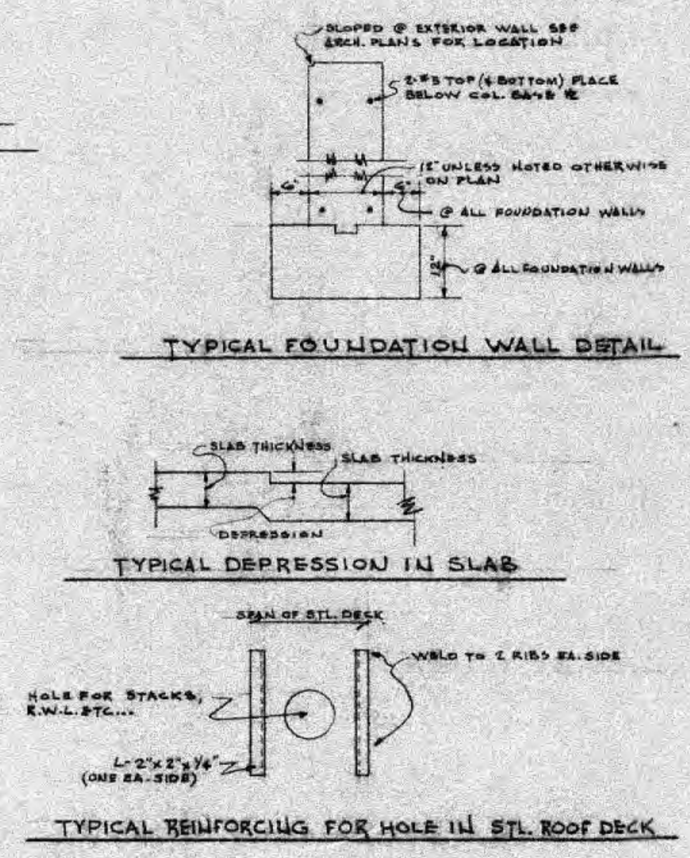
DRAWING S-3
[redacted]

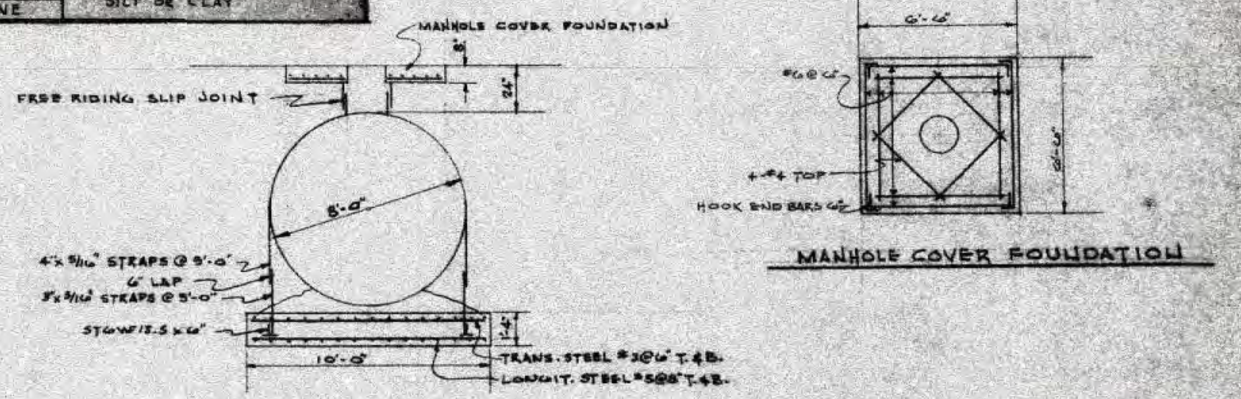


CONCRETE SLAB SCHEDULE				
MARK	DEPTH	MAIN REINF. STL.	TEMP. STEEL	REMARKS
S-1	4"	#4 @ 8"	#3 @ 12"	BEND ALT. BARS
S-2	4"	6 x 6 10/10 WIRE MESH		TYPICAL SLAB ON GRADE
S-3	5" NOM.	6 x 6 6/6 WIRE MESH		TYPICAL SLAB @ 2ND FLOOR (CLASS)
S-4	5" MIN.	#5 @ 8"	#3 @ 8"	BEND ALT. BARS
S-5	6"	#4 @ 10" TOP & BOT. EACH WAY	—	2 WAY SLAB









General Notes:

(For Fuller Explanation Of Materials And Workmanship See Specifications)

Allowable Live Loads, (Lbs/ Sq. Ft.)

Allowable Maximum Soil Bearing Pressure 3 Tons/ Sq. Ft.

The Soils Log Shown Is For General Information Only. The Contractor Shall Not Rely Upon This Information In Making His Bid, Since The Log Cannot Show A Fair Representation As To The Balance Of Conditions Nor The Permeability Of The Materials.

All Concrete Shall Have A Minimum Compressive Strength Of [illegible] psi @ 28 Days.

All Elevations Are Based On A Floor Elevation Of [illegible]
(a) Elevations Of Footings Are To Bottom Of Footings. All Footings Shall Rest On Undisturbed Soil.
(b) Elevations Of Steel Beams Are To Tops Of Steel Beams.
(c) Elevations Of Slabs Are To Tops Of Concrete Slabs.

Concrete Coverage Of Reinforcing Steel Shall Be:
3" For Bottoms Of Footings.
2" For Other Concrete In Contact With Soil.
1½" For Concrete Beams, Piers, And Columns Not In Contact With Soil.
3/4" For Slabs.

All Reinforcing Steel Shall Be New Billet Steel Of Intermediate Or Hard Grade Conforming To A.S.T.M. A-305 Revised To Date.

All Welded Wire Fabric For Concrete Reinforcement Shall Conform To A.S.T.M. A-185 Revised To Date. Welded Wire Fabric In Concrete Slabs On Earth Shall Be Placed Approximately 1" From The Top Of The Slab.

All Reinforcing Bars Marked Continuous Shall Lap A Minimum Of 24 Bar Diameters.

All Structural Steel Shall Be In Accordance With A.I.S.C. Type II Construction.

Minimum Connections Except For Girts, Sag Bars, And Bracing Shall Be Designed For A Minimum of 10 Kips For Welded Connections And 7 Kips For Bolted Or Riveted Connections.

All Structural Steel Which Carries Masonry Shall Be Shored By The General Contractor Until Masonry Is All On And Is Safe. This Note Applies Also To Steel Lintels Over 4'-0" M.O. Note Is Not Intended For Beams Carrying Walls Through A Floor System.

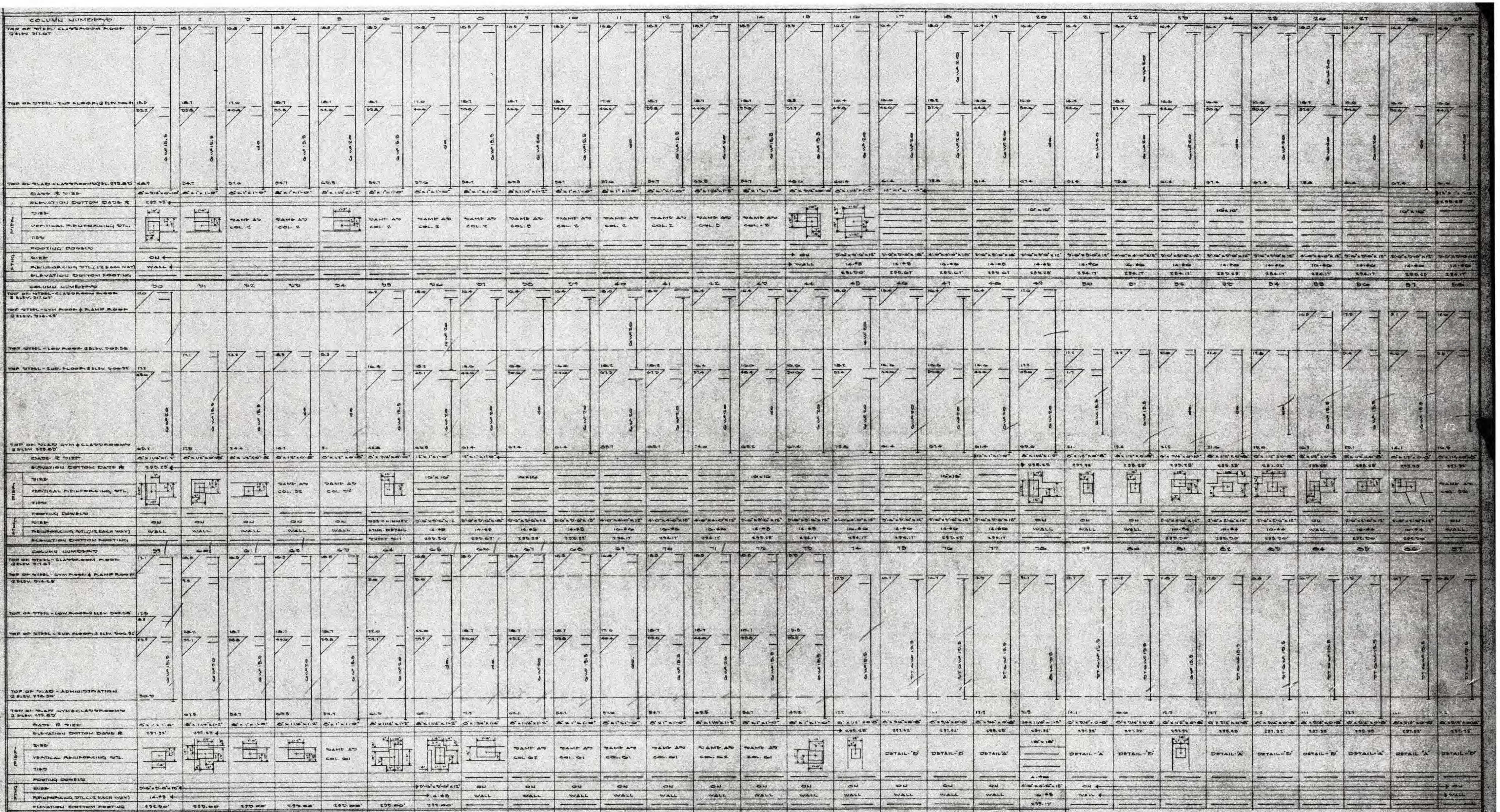
All Lintels Shall Have 6" Minimum Bearing.

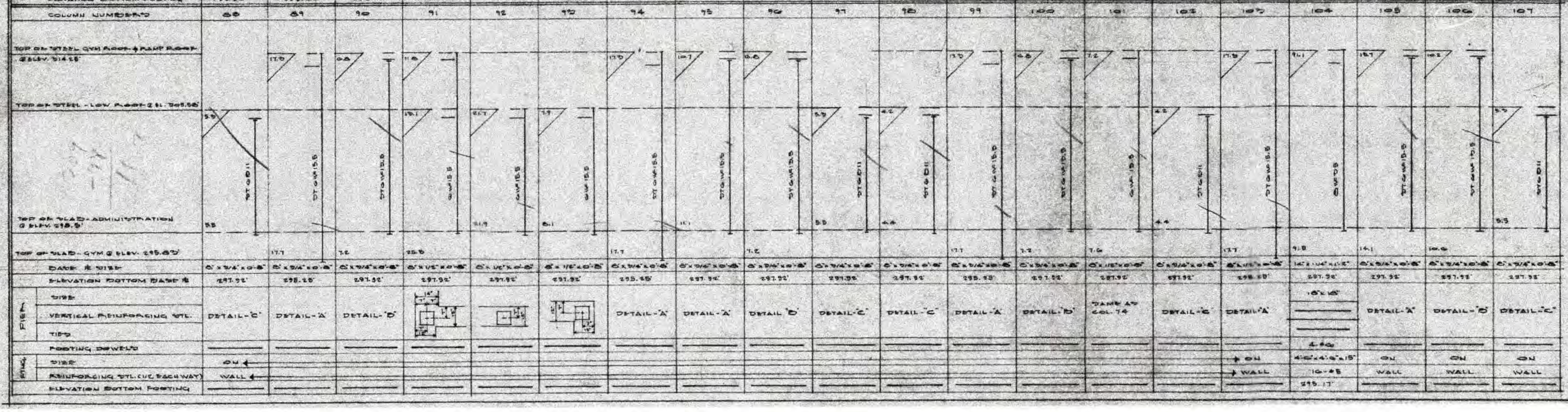
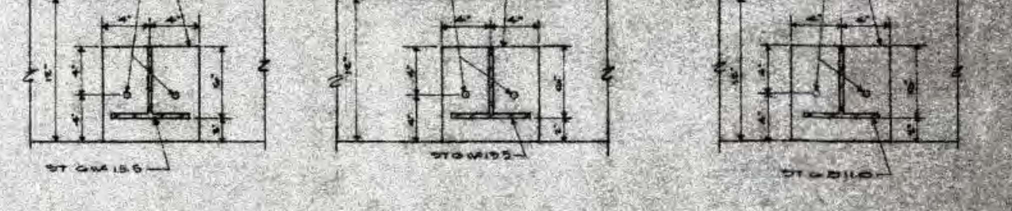
The General Contractor Shall Coordinate The Dimensions Of The Roof, Floor, And Wall Openings So The Framing Properly Fits The Mechanical Trade Requirements.

NOTE:
SCALE 3/4"=1'-0" UNLESS NOTED OTHERWISE

DRWN HJH	THOMAS HOOKER ELEM. SCHOOL MERIDEN, CONN.	DRAWING S-4
CHKD RSL		
DATE 10/15/62	TYPICAL DETAILS	
SCALE AS NOTED		

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT



DETAIL-"A" DETAIL-"B" DETAIL-"C"

TYPICAL BASE PL DETAILS @ STL.

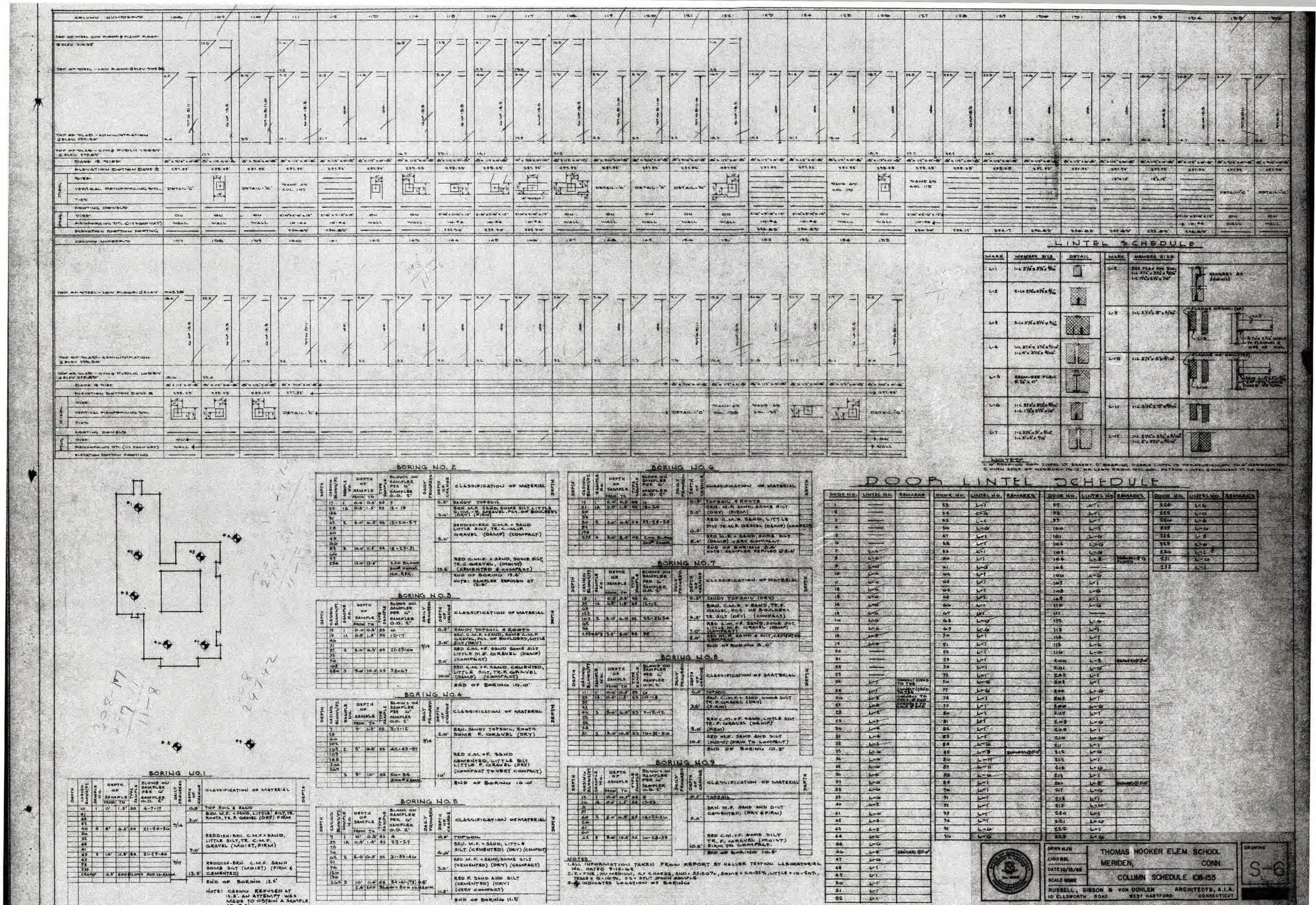
SCALE 1 1/2"=1'-0"

NOTE:
EXTEND ANCHOR BOLTS TO WITHIN 3" FROM BOTTOM OF FOOTING @ COLS.

DRWN MJH	THOMAS HOOKER ELEM. SCHOOL MERIDEN, CONN.
CHKD RSL	
DATE 10/15/68	COLUMN SCHEDULE 1-107
SCALE NONE	

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

DRAWING S-5



LINTEL SCHEDULE

MARK	MEMBER SIZE	DETAIL
L-1	1-L 3½"x3½"x5/16"	
L-2	2-L 3½"x3½"x5/16"	
L-3	3-L 3½"x3½"x5/16"	
L-4	1-L 3½"x3½"x5/16" 1-L 5"x3½"x5/16"	
L-5	BEAM - SEE PLAN PL ¼"x11"	
L-6	1-L 3½"x3½"x5/16" 1-L 1½"x2½"x¼"	
L-7	1-L 3½"x5"x5/16" 1-L 5"x5"x5/16"	
L-8	SEE PLAN FOR DIM. 1-L 3½"x3½"x5/16" 1-L 1½"x2½"x¼"	HANGERS AS SHOWN
L-9	1-L 3½"x5"x5/16"	
L-10	1-L 3½"x5"x5/16"	
L-11	1-L 3½"x5"x5/16"	
L-12	1-L 5½"x3½"x5/16" 1-L 5"x3½"x5/16"	

NOTES:
1. 6" BEARING FOR LINTEL [illegible] EXCEPT 5" BEARING WHERE LINTEL IS PERPENDICULAR TO 4" MASONRY WALL.
2. WHEN EDGE OF MASONRY IS 12" OR LESS FROM STL. COL. EXTEND LINTEL & CONNECT IT TO COLUMN.

DOOR LINTEL SCHEDULE

DOOR NO.	LINTEL NO.	REMARKS	DOOR NO.	LINTEL NO.	REMARKS	DOOR NO.	LINTEL NO.	REMARKS	DOOR NO.	LINTEL NO.	REMARKS
1	——		53	L-1		97	L-1		224	L-6	
2	——		54	L-6		98	L-1		225	L-6	
3	——		55	L-6		99	L-1		226	L-6	
4	——		56	L-6		100	L-1		227	L-6	
5	——		57	L-1		101	L-6		228	L-8	
6	——		58	L-1		102	L-6		229	L-6	
7	L-6		59	L-1		103	L-10		230	L-1	
8	L-6		60	L-1		104	L-8	HANGERS @ ⅓ POINTS	231	L-6	
9	L-6		61	L-6		105	——		232	L-1	
10	L-6		62	L-1		106	L-6				
11	L-6		63	L-1		107	L-1				
12	L-6		64	L-1		108	L-6				
13	L-6		65	L-1		109	L-1				
14	L-6		66	L-1		110	L-6				
15	L-6		67	L-1		111	——				
16	L-6		68	L-6		112	L-6				
17	L-6		69	L-6		113	L-1				
18	L-3		70	L-1		114	L-1				
19	L-4		71	L-1		115	L-6				
20	——		72	L-1		116	L-6				
21	——		73	L-1		200	L-8	HANGERS @ 5'-0"			
22	——		74	L-1		201	L-6				
23	——		75	L-1		202	L-1				
24	L-1	CONNECT (1) END TO TEE	76	L-6		203	L-1				
25	L-1	CONNECT (1) END TO TEE	77	L-6		204	L-6				
26	L-5	CONNECT TO COLS. @ END	78	L-1		205	L-1				
27	L-5	CONNECT TO COLS @ END	79	L-1		206	L-6				
28	L-2		80	L-1		207	L-1				
29	L-7		81	L-1		208	L-6				
30	L-4		82	L-1		209	L-1				
31	L-4		83	L-1		210	L-6				
32	L-3		84	L-6		211	L-1				
33	L-6		85	L-8	HANGERS @ 5'-0"	212	L-6				
34	L-6		86	L-11		213	L-1				
35	L-6		87	L-11		214	L-6				
36	L-6		88	L-6		215	L-1				
37	L-6		89	L-1		216	L-8	HANGERS @ 5'-0"			
38	L-6		90	L-1		217	L-6				
39	L-6		91	L-1		218	L-1				
40	L-2		92	L-1		219	L-6				
41	L-6		93	L-1		220	L-1				
42	L-3		94	L-1		221	L-6				
43	L-3		95	L-6		222	L-1				
44	L-6		96	L-6		223	L-6				
45	L-6										
46	L-8	HANGERS @ 5'-0"									
47	L-6										
48	L-1										
49	L-1										
50	L-1										
51	L-1										
52	L-1										

BORING NO. 1

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DAILY PROGRESS	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL	DEPTH
	10	1	0'	1.5'	SS	4-7-17		0.5'	TOP SOIL & SAND	
	41									
	48							3.0'	BRN. M.F. + SAND, LITTLE SILT, TR. ROOTS, TR. F. GRAVEL (DRY) FIRM	
	42						9/14			
	40	2	5'	6.5'	SS	21-20-26				
	26									
	32									
	48									
	41							9.0'	REDDISH-BRN. C.M.F. + SAND, LITTLE SILT, TR. C.M.F. GRAVEL (MOIST, FIRM)	
	43	3	10'	11.5'	SS	21-29-40				
	42						9/17			
	78									
	239									
	250/6"		13.5'			200 BLOWS 300 LB. HAMM.		13.5'	REDDISH-BRN. C.M.F. SAND SOME SILT (MOIST) (FIRM & CEMENTED)	
									END OF BORING 13.5'	

NOTE: CASING REFUSED AT 13.5'. AN ATTEMPT WAS MADE TO OBTAIN A SAMPLE AT 13.5'

BORING NO. 2

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DAILY PROGRESS	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL	DEPTH
	17	1	0.0'	0.5'	SS	7		0.5'	SANDY TOPSOIL	
	25	1A	0.5'	1.5'	SS	13-19				
	134							3.0'	BRN. M.F. SAND, SOME SILT, LITTLE C.-M.-F. GRAVEL, PCS. OF BOULDERS (DRY) (FIRM)	
	31									
	43	2	5.0'	6.5'	SS	13-20-27				
	28									
	40									
	43							8.0'	REDDISH-BRN C.M.F. + SAND LITTLE SILT, TR. C.-M.-F. GRAVEL (DAMP) (COMPACT)	
	66									
	83	3	10.0'	11.5'	SS	18-23-31				
	66									
	93									
	254		13.0'	13.4'		200 BLOWS				
						300# HAMM.		13.4'	RED C.M.F. + SAND, SOME SILT, TR. C. GRAVEL, (MOIST) (CEMENTED & COMPACT)	
						NO. REC.			END OF BORING 13.4'	

NOTE: SAMPLER REFUSED AT 13.4'

BORING NO. 3

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DAILY PROGRESS	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL	DEPTH
	12	1	0.0'	0.5'	SS	6		0.5'	SANDY TOPSOIL & ROOTS	
	19	1A	0.5'	1.5'	SS	12-17				
	46									
	31							3.0'	BRN. C.M.F. + SAND, SOME C.M.F. GRAVEL, PCS. OF BOULDERS, LITTLE SILT (DRY)	
	37	2	5.0'	6.5'	SS	21-29-40	9/19			
	32									
	76							7.0'	RED C.M. + F. SAND SOME SILT LITTLE M.F. GRAVEL (DAMP) (COMPACT)	
	163									
	280	3	9.0'	10.0'	SS	38-69		10.0'	RED C.M. + F. SAND, CEMENTED, LITTLE SILT, TR. F. GRAVEL (DAMP) (COMPACT)	
									END OF BORING 10.0'	

BORING NO. 4

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DAILY PROGRESS	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL	DEPTH
	7	1	0'	1.5'	SS	3-7-12				
	28							2.0'	BRN. SANDY TOPSOIL, ROOTS SOME F. GRAVEL (DRY)	
	60									
	102						9/14			
	103	2	5'	6.5'	SS	42-49-57				
	109									
	148									
	204									
	269									
		3	9'	10'	SS	56-84		10'	RED C.M. + F. SAND CEMENTED, LITTLE SILT LITTLE F. GRAVEL (DRY) (COMPACT TO VERY COMPACT)	
						300# HAMM.			END OF BORING 10.0'	

BORING NO. 5

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DAILY PROGRESS	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL	DEPTH
	7	1	0'	0.5'	SS	4		0.5'	TOPSOIL	
	39	1A	0.5'	1.5'	SS	22-27				
	70									
	76							4.5'	BRN. M.F. + SAND, LITTLE SILT (CEMENTED) (DRY) (COMPACT)	
	62	2	5.0'	6.5'	SS	31-39-46				
	51									
	74							7.0'	RED M.F. + SAND, SOME SILT (CEMENTED) (DRY) (COMPACT)	
	126									
	190									
	269	3	10'	11.4'	SS	54-61-(75) = 4"				
			11.4'	200 BLOWS 300 LB. HAMM.				11.5'	RED F. SAND AND SILT (CEMENTED) (DRY) (VERY COMPACT)	
									END OF BORING 11.5'	

BORING NO. 6

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DAILY PROGRESS	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL	DEPTH
	17	1	0.0'	0.5'	SS	6		0.5'	TOPSOIL & ROOTS	
	31	1A	0.5'	1.5'	SS	13-24				
	50							3.0'	BRN. M.F. SAND, SOME SILT (DRY) (FIRM)	
	34									
	30	2	5.0'	6.5'	SS	23-28-25				
	32									
	198							6.5'	RED C.M.F. SAND, LITTLE SILT TR. M.F. GRAVEL (DAMP) (COMPACT)	
	275	4	8.0'	8.4'	OE	200 BLOWS				
						300# HAMM.		8.4'	RED M.F. + SAND, SOME SILT (DAMP) VERY COMPACT	
									END OF BORING 8.4' NOTE: SAMPLER REFUSED @ 8.4'	

BORING NO. 7

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DAILY PROGRESS	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL	DEPTH
	18	1	0.0'	0.5'	SS	6		0.5'	SANDY TOPSOIL (DRY)	
	37	1A	0.5'	1.5'	SS	12-12				
	64									
	122									
	103	2	5.0'	6.5'	SS	22-32-34		4.5'	BRN. C.M.F. + SAND, TR. F. GRAVEL, PCS. OF BOULDERS TR. SILT (DRY) (COMPACT)	
	62									
	94							7.0'	RED C.M. + F. SAND, SOME SILT, LITTLE M.F. GRAVEL (DAMP) (COMPACT)	
	295=6"	3	7.5'	8.0'	SS	95		8.0'	RED M.F. SAND & SILT, CEMENTED COMPACT	
									END OF BORING 8.0'	

BORING NO. 8

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DAILY PROGRESS	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL	DEPTH
	11	1	0.0'	0.5'	SS	6		0.5'	TOPSOIL	
	29	1A	0.5'	1.5'	SS	10-18				
	37									
	43							3.0'	BRN. C.-M.F. + SAND, SOME SILT TR. F. GRAVEL (DRY) (FIRM)	
	40	2	5.0'	6.5'	SS	9-12-12				
	22									
	24									
	28							8.0'	RED C.M. + F. SAND, LITTLE SILT TR. F. GRAVEL (DAMP) (FIRM)	
	31	3	9.0'	10.5'	SS	16-31-50		10.5'	RED M.F. SAND AND SILT (MOIST) (FIRM TO COMPACT)	
									END OF BORING 10.5'	

BORING NO. 9

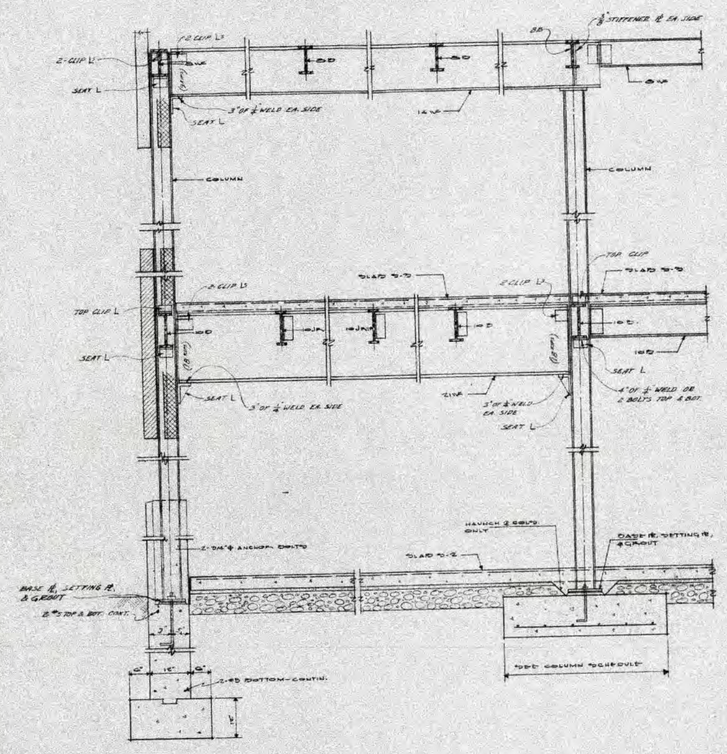
DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DAILY PROGRESS	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL	DEPTH
	12	1	0.0'	0.5'	SS	5		0.5'	TOPSOIL	
	26	1A	0.5'	1.5'	SS	17-23				
	31									
	37									
	40	2	5.0'	6.5'	SS	14-21-26		5.0'	BRN. M.F. SAND AND SILT CEMENTED, (DRY & FIRM)	
	24									
	41									
	60									
	62	3	9.0'	10.5'	SS	16-28-38		10.5'	RED C.M. + F. SOME SILT TR. F. GRAVEL (MOIST) FIRM TO COMPACT.	
									END OF BORING 10.5'	

NOTES
1. ALL INFORMATION TAKEN FROM REPORT BY HALLER TESTING LABORATORIES, INC. DATED 9-19-62
2. F = FINE, M = MEDIUM, C = COARSE, AND = 35-50%, SOME = 20-35%, LITTLE = 10-20%, TRACE = 0-10%, SS = SPLIT SPOON SAMPLE.
3. ⊕ INDICATES LOCATION OF BORING

DRWN NJH	THOMAS HOOKER ELEM. SCHOOL
CHKD RSL	MERIDEN, CONN.
DATE 10/15/62	COLUMN SCHEDULE 108-155
SCALE NONE	

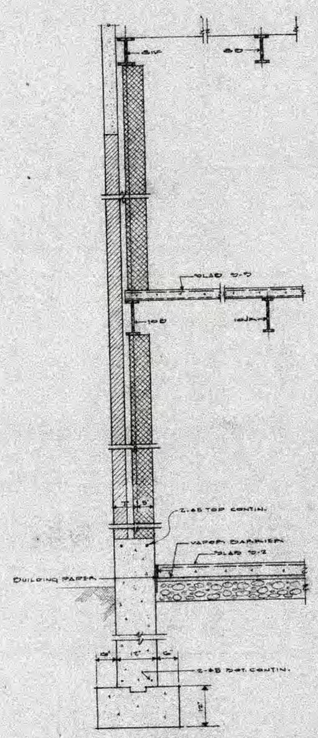
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

DRAWING
S-6



SECTION-A

SCALE ¾"=1'-0"



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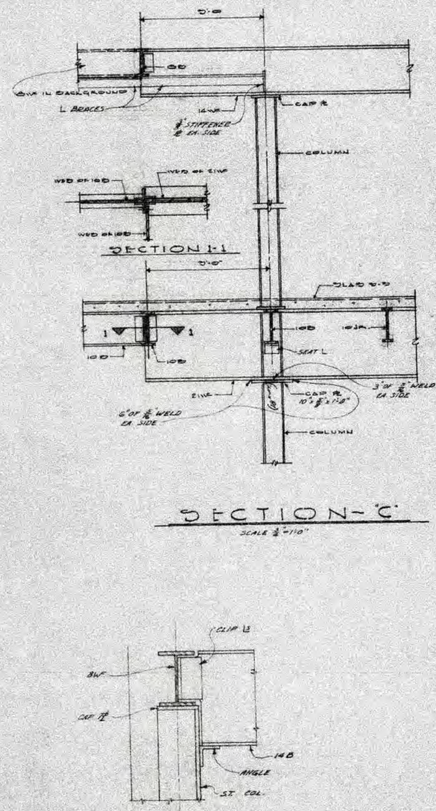

SECTION-C

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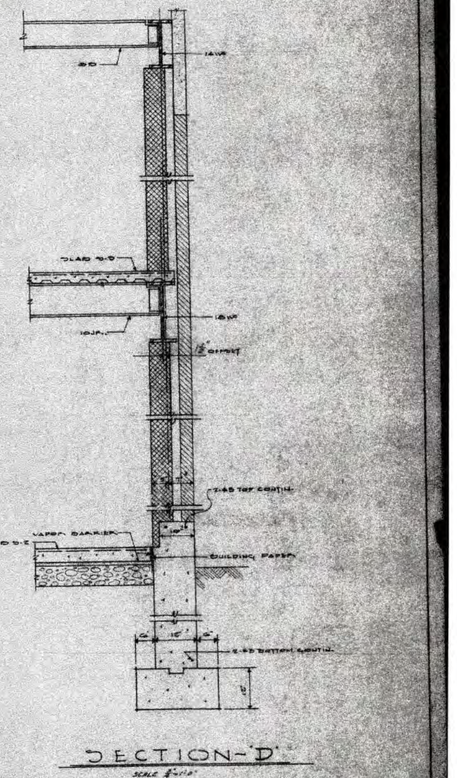


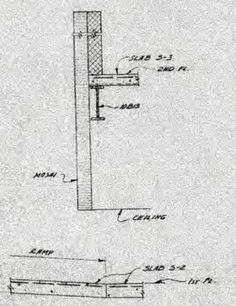
SECTION-D

SCALE ¾"=1'-0"

PLAN VIEW TAKEN THRU CAP PL

SECTION-L

SCALE 1½"=1'-0"



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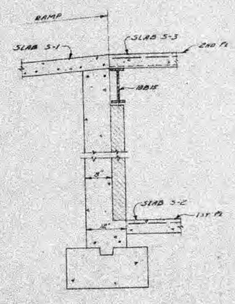
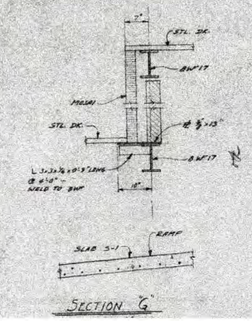
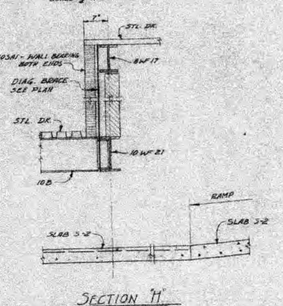


SECTION-F

SCALE ¾"=1'-0"



SECTION-G



SECTION-H

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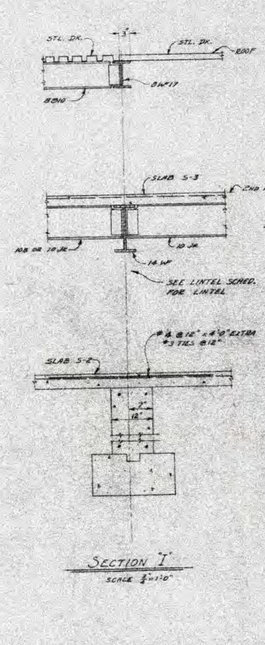
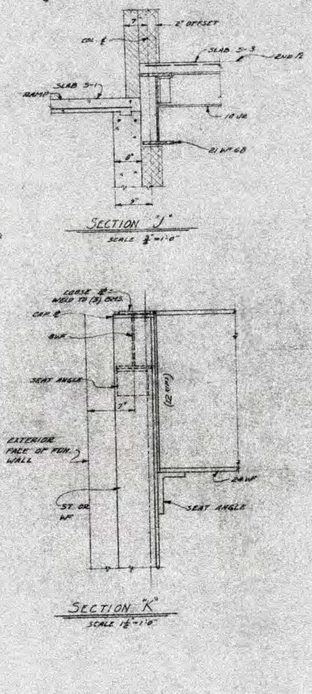


SECTION-I

SCALE ¾"=1'-0"

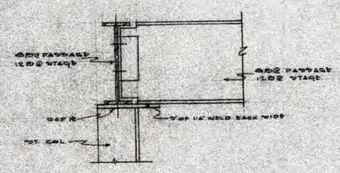


SECTION-J

SCALE ¾"=1'-0"

SECTION-K

SCALE 1½"=1'-0"



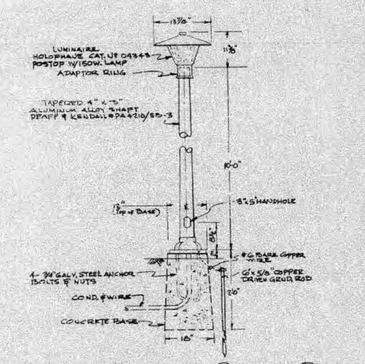
TYPICAL DETAIL

SCALE 1½"=1'-0"

DRWN NJH	THOMAS HOOKER ELEM. SCHOOL	DRAWING S-7
CHKD RGL	MERIDEN, CONN.	
DATE 10/15/82	SECTIONS	
SCALE AS NOTED	RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.	
	10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT	

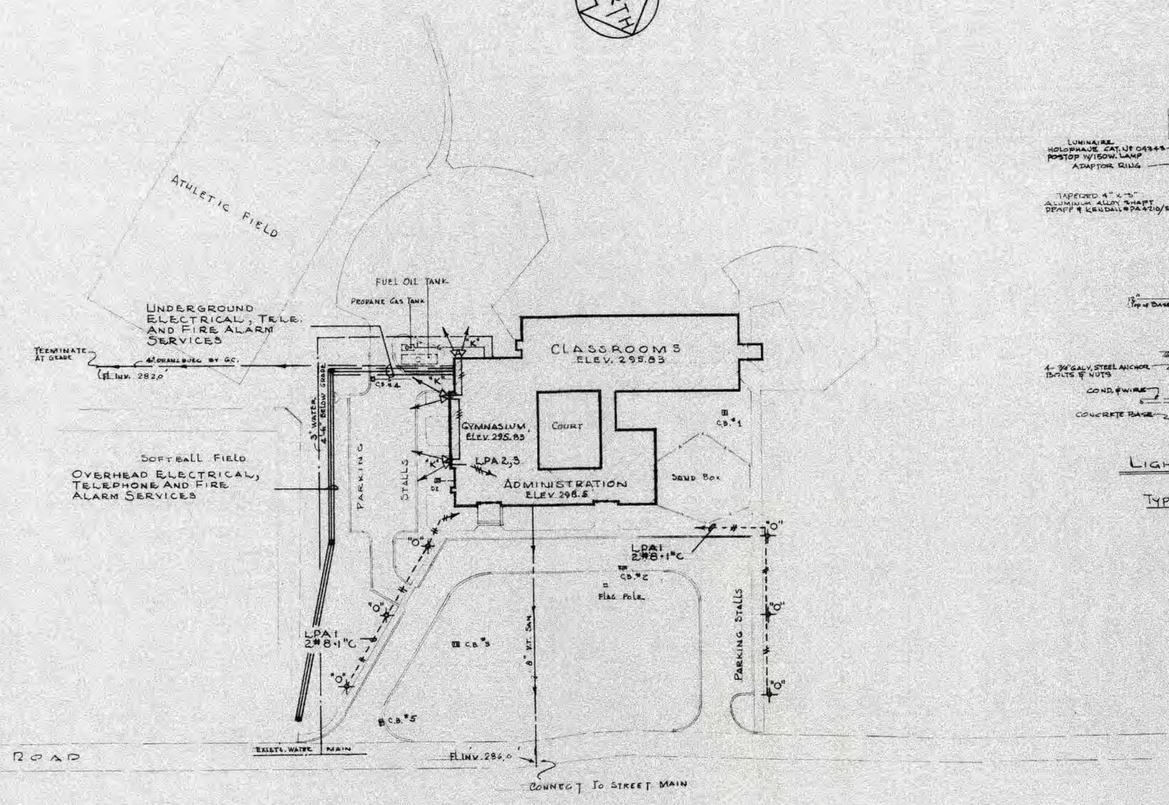
NOTES

1. RUN ELECTRICAL, TELEPHONE & FIRE ALARM SERVICES 36" BELOW GRADE & 18" APART
2. RISE UP AT RISER POLE WITH TELEPHONE SERVICE CONDUIT 10'-0" & TERMINATE WITH A WEATHER CAP.
3. PROVIDE DRAINAGE FOR TELEPHONE SERVICE CONDUIT AT LOW POINT AS REQUIRED BY THE S.N.E.T. CO.
4. SEE ELECTRICAL FLOOR PLANS FOR CONTINUATION OF ALL LINES
5. REFER TO THE ELECTRICAL SPECIFICATIONS FOR OTHER ITEMS PERTAINING TO THE ELECTRICAL, TELEPHONE & FIRE ALARM SYSTEMS

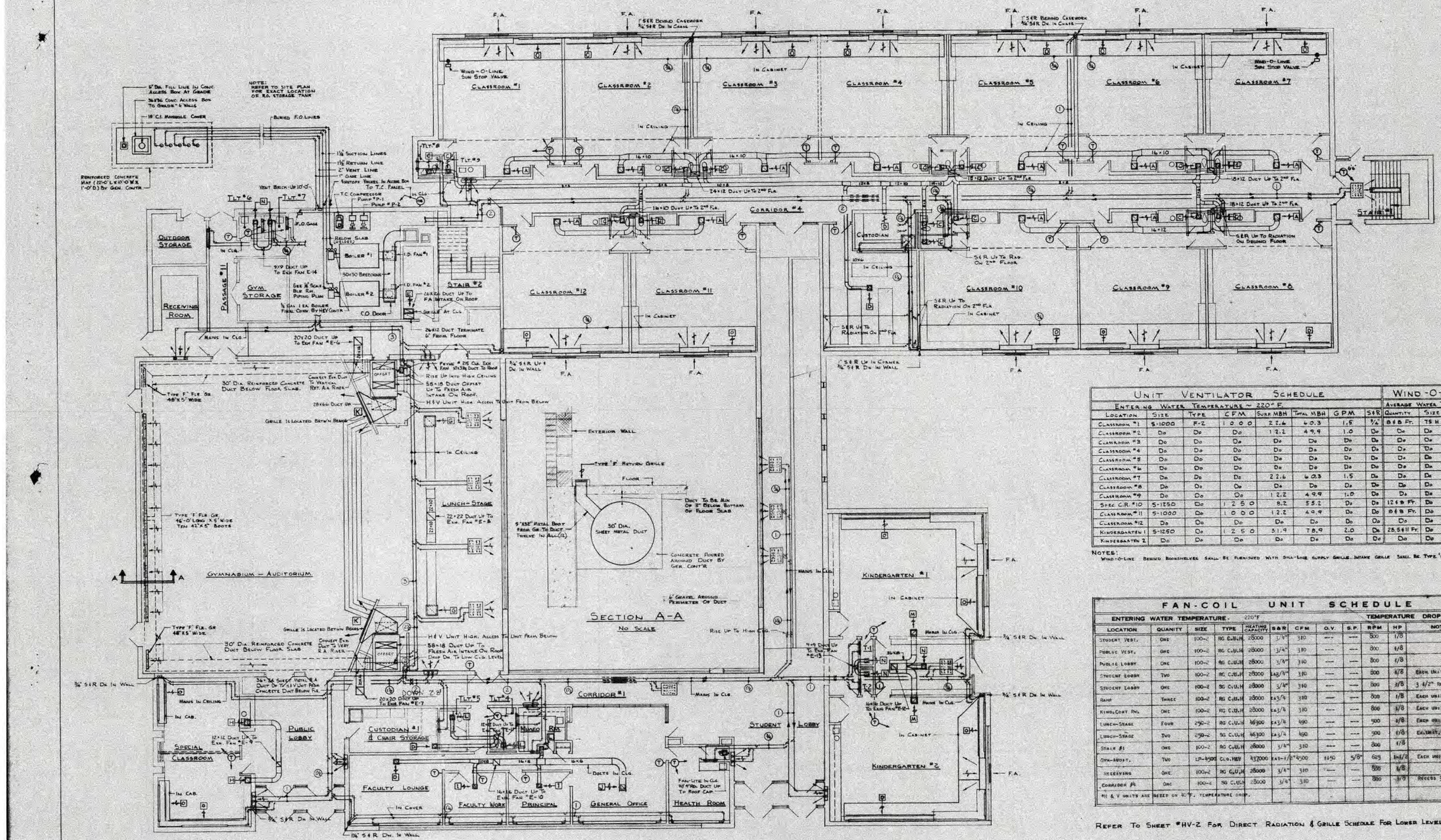


LIGHTING STANDARD DETAIL
SCALE: 3/4"=1'-0"

TYPE "O" FIXTURE



DRWN WB	THOMAS HOOKER ELEMENTARY SCHOOL	DRAWING SU 1
CHKD JM	MERIDEN CONNECTICUT	
DATE 5 OCT 62	SITE UTILITY PLAN	
SCALE: 1"=50'-0"		
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A. 10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT		



UNIT VENTILATOR SCHEDULE

Entering Water Temperature ~ 220° F.

Location	Size	Type	CFM	Surf MBH	Total MBH	GPM	S&R
Classroom #1	S-1000	F-2	1000	27.6	40.3	1.5	¾
Classroom #2	Do	Do	Do	12.2	49.9	1.0	Do
Classroom #3	Do	Do	Do	Do	Do	Do	Do
Classroom #4	Do	Do	Do	Do	Do	Do	Do
Classroom #5	Do	Do	Do	Do	Do	Do	Do
Classroom #6	Do	Do	Do	Do	Do	Do	Do
Classroom #7	Do	Do	Do	22.6	40.3	1.5	Do
Classroom #8	Do	Do	Do	Do	Do	Do	Do
Classroom #9	Do	Do	Do	12.2	49.9	1.0	Do
Spec. C.R. #10	S-1250	Do	1250	8.2	55.2	Do	1¼
Classroom #11	S-1000	Do	1000	12.2	49.9	Do	¾
Classroom #12	Do	Do	Do	Do	Do	Do	Do
Kindergarten 1	S-1250	Do	1250	51.9	78.9	2.0	Do
Kindergarten 2	Do	Do	Do	Do	Do	Do	Do

WIND-O-LINE

Average Water Temp. ~200° F.

Quantity	Size	BTU/Hr.
8 @ 8 Ft.	7 S H	12800
Do	Do	Do
Do	Do	Do
Do	Do	Do
Do	Do	Do
Do	Do	Do
Do	Do	Do
Do	Do	Do
Do	Do	Do
12 @ 8 Ft.	Do	16000
8 @ 8 Ft.	Do	12800
Do	Do	Do
28.5 @ 8 Ft.	Do	35200
Do	Do	Do

NOTES:
WIND-O-LINE BEHIND BOOKSHELVES SHALL BE FURNISHED WITH SILL-LINE SUPPLY GRILLE. INTAKE GRILLE SHALL BE TYPE 'O'

FAN-COIL UNIT SCHEDULE

Entering Water Temperature - 220°F. Temperature Drop - 20°F.

Location	Quanity	Size	Type	Heating Capacity	S&R	CFM	O.V.	S.P.	RPM	HP	Notes
Student Vest.	One	100-2	RG C.U.U.H	28000	1"	310	---	---	800	1/8	
Public Vest.	One	100-2	RG C.U.U.H	28000	1¼"	310	---	---	800	1/8	
Public Lobby	One	100-2	RG C.U.U.H	28000	1¼"	310	---	---	800	1/8	
Student Lobby	Two	100-2	RG C.U.U.H	28000	2@1¼"	310	---	---	800	1/8	Each Unit
Student Lobby	One	100-2	RG C.U.U.H	28000	1¼"	310	---	---	800	1/8	3 1/2" Recess
Ramp	Three	100-2	RG C.U.U.H	28000	2@1¼	310	---	---	800	1/8	Each Unit
Kind. Cont. Rm.	One	100-2	RG C.U.U.H	28000	2@1¼	310	---	---	800	1/8	Each Unit
Lunch-Stage	Four	250-2	RG C.U.U.H	46300	2@1¼	690	---	---	900	1/8	Each Unit
Lunch-Stage	Two	250-2	RG C.U.U.H	46300	2@1¼	690	---	---	900	1/8	Each Unit, 9-1/2" Recess
Stair #1	One	100-2	RG C.U.U.H	28000	1¼"	310	---	---	800	1/8	
Gym-Audit.	Two	LP-4500	C.U.U.H	137000	2@1-1/2"	4500	1150	5/8"	625	1@1/2	Each Unit
Receiving	One	100-2	RG C.U.U.H	28000	1¼"	310	---	---	800	1/8	Recess 3 1/2"
Corridor #1	One	100-2	RG C.U.U.H	28000	1¼"	310	---	---	800	1/8	

H & V units are based on 80°F. temperature drop.

Refer To Sheet #HV-2 For Direct Radiation & Grille Schedule For Lower Level

HEATING & VENTILATING
LOWER FLOOR PLAN

SCALE — ⅛" = 1'-0"

DRWN A.M.C.
CHKD J.J.M.
DATE OCT 62
SCALE ⅛"-1'-0"

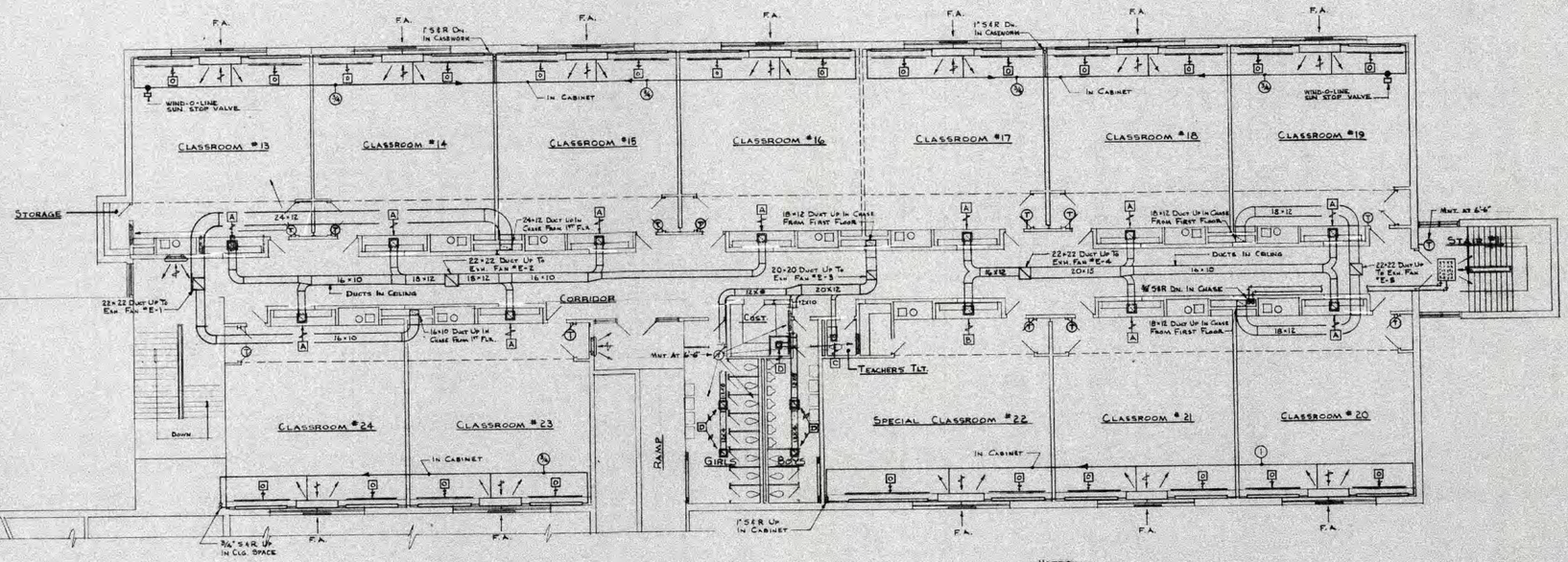
THOMAS HOOKER ELEMENTARY SCHOOL
MERIDEN CONNECTICUT
HEATING & VENTILATING-LOWER LEVEL

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

DRAWING HV-1

LEGEND

- HOT WATER HEATING LINE & DIRECTION OF FLOW
- COLD WATER FEED LINE
- HOT WATER RISER (UP OR TOWARD OBSERVER)
- HOT WATER RISER (DOWN OR AWAY FROM OBSERVER)
- GATE VALVE
- CHECK VALVE
- UNION
- DRAIN VALVE
- BALANCING FITTING
- PRESSURE RELIEF VALVE
- FLO-CONTROL VALVE
- THERMOMETER
- MANUAL AIR VENT AT HIGH POINT
- (T) THERMOSTAT
- E ELECTRICAL LINE
- (2) NUMBER IN CIRCLE DENOTES PIPE SIZE
- (A) COMBINATION BOILER FEED & RELIEF VALVE
- (B) LETTER IN CIRCLE REFERS TO NOTE
- PIPE ANCHOR
- EXPANSION COMPENSATOR & PIPE GUIDES
- GLOBE VALVE
- STRAINER
- THREE WAY MIXING VALVE
- OUTDOOR BULB
- AUTOMATIC CONTROL VALVE



NOTE:
INSTALL FIRE DAMPERS WHERE DUCTS PASS FROM 1ST. TO 2ND FLOOR.

HEATING & VENTILATING
UPPER LEVEL PLAN
SCALE - 1/8"=1'-0

UNIT VENTILATOR SCHEDULE

	ENTERING WATER TEMPERATURE - 220° F.							WIND-O-LINE Average Water Temp. - 200°F.		
LOCATION	SIZE	TYPE	CFM	SURF. MBH	TOTAL MBH	GPM	S&R	QUANTITY	SIZE	BTU/Hr.
CLASSROOM #13	S-1000	F-2	1000	22.6	60.3	1.5	3/4	8'8 Ft.	75 H	12800
CLASSROOM #14	Do	Do	Do	Do	Do	Do	Do	Do	Do	Do
CLASSROOM #15	Do	Do	Do	Do	Do	Do	Do	Do	Do	Do
CLASSROOM #16	Do	Do	Do	Do	Do	Do	Do	Do	Do	Do
CLASSROOM #17	Do	Do	Do	Do	Do	Do	Do	Do	Do	Do
CLASSROOM #18	Do	Do	Do	Do	Do	Do	Do	Do	Do	Do
CLASSROOM #19	Do	Do	Do	Do	Do	Do	Do	Do	Do	Do
CLASSROOM #20	Do	Do	Do	Do	Do	Do	Do	Do	100 H	Do
CLASSROOM #21	Do	Do	Do	Do	Do	Do	Do	Do	Do	Do
SPEC. CR. #22	S-1250	Do	1250	21.3	68.5	Do	Do	12'8 Ft.	Do	16000
CLASSROOM #23	S-1000	Do	1000	22.6	60.3	Do	Do	8'8 Ft.	75 H	12800
CLASSROOM #24	Do	Do	Do	Do	Do	Do	Do	Do	Do	Do

NOTE:
1. WIND-O-LINE BEHIND BOOKSHELVES SHALL BE COMPLETE WITH SILL-LINE DISCHARGE GRILLE & STAMPED METAL INLET GRILLE TYPE 'D'

DIRECT RADIATION SCHEDULE

ENTERING WATER TEMPERATURE - 220°				TEMPERATURE DROP - 20°		
LOCATION	QUANITY	SIZE	TYPE	HEATING CAPACITY	S & R	NOTES
GIRLS TOILET	6 FT.	E-15	SILL-LINE	14400	3/4"	
BOYS TOILET	5 FT.	E-15	SILL-LINE	12000	3/4"	
STORAGE	ONE	36 X 24 X 4	RG. CONVECTOR	4500	3/4"	
CUSTODIAN	ONE	36 X 24 X 4	RG. CONVECTOR	4500	3/4"	
TEACHERS TLT.	ONE	36 X 24 X 4	RG. CONVECTOR	4500	3/4"	

NOTES
1. E-15 SILL-LINE SHALL HAVE 1 ROW OF TYPE S ELEMENT - 1" COPPER TUBE WITH 63 4 1/4" X 3 1/2" ALUMINUM FINS/FT. HEATING CAPACITY OF 2400 BTU/HR/LIN. FT. OF ELEMENT @ 210° AVERAGE WATER TEMP. 20° DROP. COVER TO BE 20" HIGH.
2. RECESSED CONVECTORS SHALL BE MOUNTED 6" ABOVE FLOOR. COVER TO HAVE 4 SIDE OVERLAP.

FAN-COIL UNIT SCHEDULE

ENTERING WATER TEMPERATURE -										TEMPERATURE DROP -	
LOCATION	QUANITY	SIZE	TYPE	HEATING CAPACITY	S&R	CFM	O.V.	S.P.	RPM	HP	NOTES
STAIR #1	ONE	100-2	RG. C.U.	23000	3/4	310	---	---	800	1/8	
CORRIDOR	ONE	100-2	RG. C.U.	23000	3/4	310	---	---	800	1/8	3 1/2" RECESS
RAMP	ONE	100-2	RG. C.U.	23000	3/4	310	---	---	800	1/8	3 1/2" RECESS

NOTE:
RECESSED CAB. U.H. SHALL BE MOUNTED 4" ABOVE FLOOR COVER TO HAVE 4 SIDE OVERLAP.

GRILLE & DIFFUSER SCHEDULE

DESIGNATION	MODEL	SIZE	C.F.M.	TYPE	FINISH	DUCT SIZE
A	RH-50	12 X 12	450	EXHAUST	SATIN ALUM.	12 X 8
B	RH-50	12 X 14	550	EXHAUST	SATIN ALUM.	14 X 8
C	RH-50	8 X 8	90	EXHAUST	SATIN ALUM.	8 X 4
D	RH-50	8 X 8	200	EXHAUST	SATIN ALUM.	8 X 6
E	RH-50	36 X 8	------	INTAKE	SATIN ALUM.	28 X 12
F	3000	SEE PLAN	9000	RETURN	SATIN ALUM.	32 X 5
G	RH-50	24 X 24	1400	EXHAUST	SATIN ALUM.	24 X 12
H	RH-50	8 X 10	220	EXHAUST	SATIN ALUM.	12 X 6
J	RH-50	8 X 8	150	EXHAUST	SATIN ALUM.	8 X 6
J	RH-50	12 X 12	400	EXHAUST	SATIN ALUM.	------
K	S-277	72 X 24	4500	SUPPLY	PRIME COAT	------
L	RH-50	8 X 8	120	EXHAUST	SATIN ALUM.	8 X 4
M	RH-50	12 X 12	500	EXHAUST	SATIN ALUM.	12 X 8
N	RH-50	8 X 8	60	EXHAUST	SATIN ALUM.	8 X 4
O	DEB. G-2	4" WIDE	------	INTAKE	PRIME COAT	TOE SPACE

NOTES:
1. TYPE 'O' GRILLE SHALL RUN CONTINUOUSLY FROM WALL TO UNIT VENT IN TOE SPACE OR COUNTER IN ALL ROOMS WHERE WIND-O-LINE IS CONCEALED BEHIND CABINETS. SHALL BE FACTORY FINISH STEEL. GRILLE IS TO BE 4" WIDE SMALL TO STANDARD.

FAN SCHEDULE

NO.	SIZE	CFM	S.P.	RPM	TIP SPEED	O.V.	HP	NOTES
E-2	LC-25	2800	1/4"	550	3370	---	1/3	
E-4	LC-25	2800	1/4"	550	3370	---	1/3	
E-6	LC-22	2130	1/4"	595	3630	---	1/6	
E-7	LC-22	2130	1/4"	595	3270	---	1/4	
E-8	LC-25	2800	1/4"	550	3370	---	1/3	
E-9	LC-13	980	1/4"	1000	2820	---	1/6	
E-10	LC-19	1015	1/4"	675	2890	---	1/6	
E-11	LC-13	980	1/4"	1000	2820	---	1/6	
E-12	LC-19	1015	1/4"	675	2890	---	1/6	
E-13	LC-4	180	1/4"	1500	3450	---	1/25	
E-5	LC-25	2800	1/4"	550	3370	---	1/3	
E-1	LC-25	2800	1/4"	550	3370	---	1/3	
E-3	LC-22	2130	1/4"	595	3630	---	1/4	
E-14	LC-4	180	1/4"	1500	3450	---	1/25	

NOTES:
ALL FANS SHALL BE MOUNTED ON PREFABRICATED SONOTROL CURBS.

DIRECT RADIATION SCHEDULE

ENTERING WATER TEMPERATURE - 220°F				TEMPERATURE DROP - 20°F		
LOCATION	QUANITY	SIZE	TYPE	HEATING CAPACITY	S & R	NOTES
SPEC. C.R. (SOUTH)	8 FT.	CN-15	ARCH. SILL-LINE	18720	3/4"	
SPEC. C.R. (NORTH)	10 & 8 FT.	CN-15	ARCH. SILL-LINE	32120	1"	
FACULTY LOUNGE	14 FT.	CN-15	ARCH. SILL-LINE	32760	3/4"	
FACULTY WORK	10 FT.	CN-15	ARCH. SILL-LINE	23400	3/4"	
PRINCIPAL	10 FT.	CN-15	ARCH. SILL-LINE	23400	3/4"	
GENERAL OFFICE	16 FT.	CN-15	ARCH. SILL-LINE	37440	3/4"	
HEALTH ROOM	10 FT.	CN-15	ARCH. SILL-LINE	23400	3/4"	
CONC. STORAGE	9 FT.	E-15	SILL-LINE	21600	3/4"	
TOILET 1	ONE	36 X 24 X 4	RG CONVECTOR	4500	3/4"	
TOILET 2	ONE	36 X 24 X 3	RG CONVECTOR	4500	3/4"	
TOILET 3	ONE	36 X 24 X 4	RG CONVECTOR	4500	3/4"	
TOILET 4	ONE	36 X 24 X 5	RG CONVECTOR	4500	3/4"	
TOILET 5,6 & 7	ONE	36 X 24 X 4	RG CONVECTOR	4500	3/4"	
TOILET 8	ONE	36 X 24 X 4	RG CONVECTOR	4500	3/4"	
CUSTODIAN	ONE	18 X 24 X 4	RG CONVECTOR	2900	3/4"	
SERVICE ENTR.	ONE	48 X 24 X 6	RG CONVECTOR	9000	3/4"	RECESS 4"

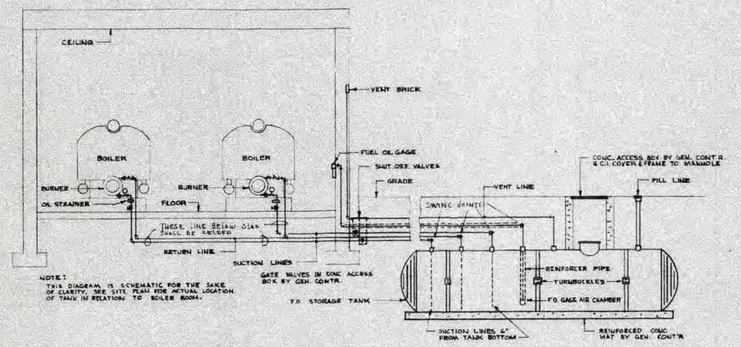
← THIS SCHEDULE REFERS TO LOWER LEVEL FLOOR PLAN

NOTES:
1. E-15 SILL-LINE SHALL HAVE 1 ROW OF TYPE S ELEMENT - 1" COPPER TUBE WITH 63 4 1/4" X 3 1/2" FINS/FT. HEATING CAPACITY OF 2400 BTU/HR/LIN. FT. @ 210° AVERAGE WATER TEMP, 20° DROP, 20" HIGH COVER.
2. CN-15 ARCHITECTURAL SILL-LINE SHALL HAVE 1 ROW OF TYPE S ELEMENT SAME AS ABOVE EXCEPT RATED AT 2450/BTU/HR/LIN. FT. COVER TO BE 24" HIGH & FURNISHED IN BAKED ENAMEL.
3. RECESSED CONVECTORS SHALL BE MOUNTED 4" ABOVE FLOOR. COVER SHALL HAVE 4 SIDE OVERLAP

STATE OF CONNECTICUT NO. 1512 REGISTERED ARCHITECT

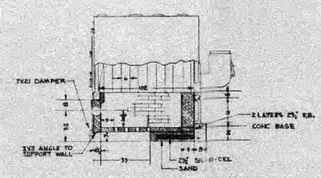
DRWN A.M.C.	THOMAS HOOKER ELEMENTARY SCHOOL
CHKD J.J.B.	MERIDAN CONNECTICUT
DATE 15 OCT. 65	HEATING & VENTILATING-UPPER LEVEL
SCALE 1/8"=1'-0"	RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
	10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

DRAWING HV-2

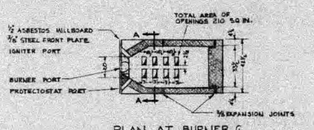


OIL BURNER & TANK PIPING DIAGRAM

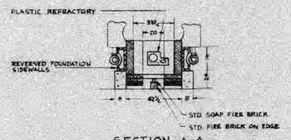
NO SCALE



ELEVATION AT BURNER ℄



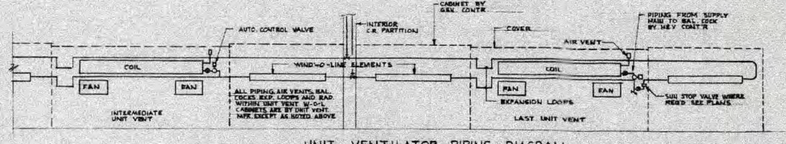
PLAN AT BURNER ℄



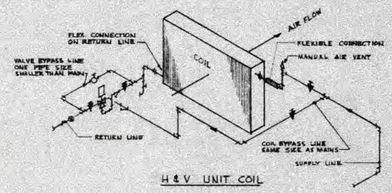
SECTION A-A

COMBUSTION CHAMBER DETAILS

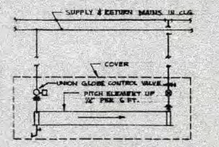
NO SCALE



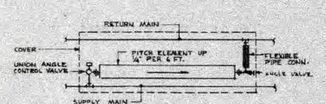
UNIT VENTILATOR PIPING DIAGRAM



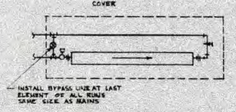
H & V UNIT COIL



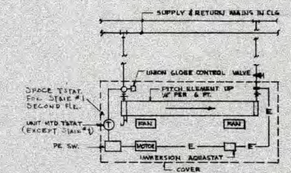
CONVECTOR



ONE TIER SILL-LINE



TYPICAL END OF RUN SILL-LINE

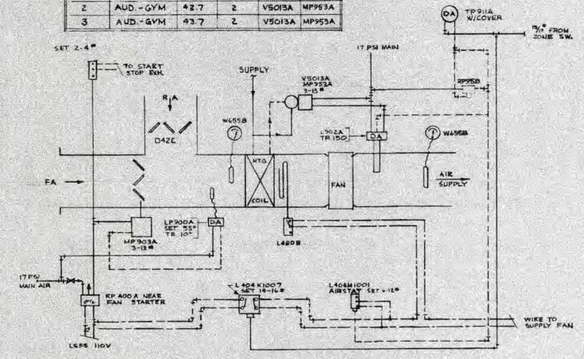


CABINET UNIT HEATER

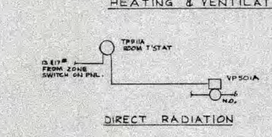
RADIATION DIAGRAMS

NOT TO SCALE

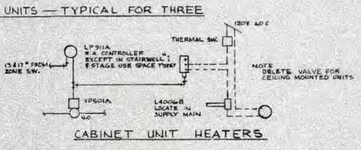
HTG & VENT. UNIT COIL VALVE SCHEDULE					
UNIT #	LOCATION	GPM	SIZE	VALVE	MOTOR
1	LUNCH-STAGE	53.5	2½	V5013A	MP953A
2	AUD.-GYM	42.7	2	V5013A	MP953A
3	AUD.-GYM	43.7	2	V5013A	MP953A



HEATING & VENTILATING UNITS — TYPICAL FOR THREE



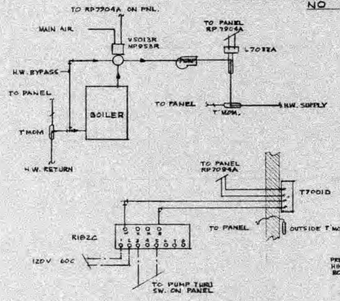
DIRECT RADIATION



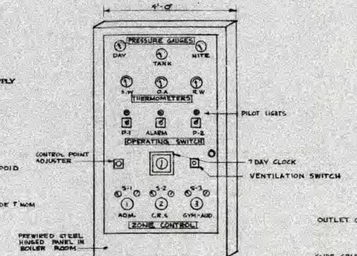
CABINET UNIT HEATERS

TEMPERATURE CONTROL DIAGRAMS

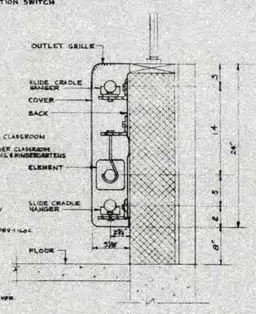
NO SCALE



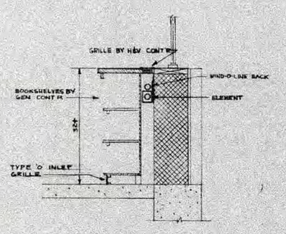
PRIMARY WATER RESET



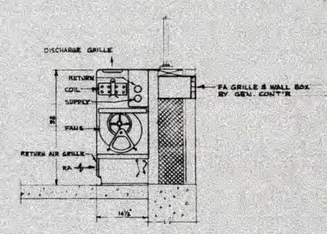
TEMPERATURE CONTROL PANEL



SECTION THRU SILL-LINE



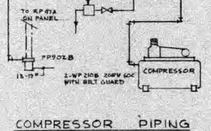
SECTION THRU TYPICAL WIND-O-LINE



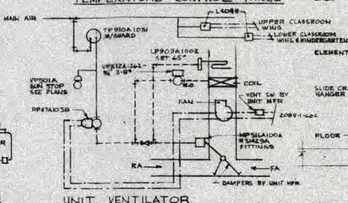
SECTION THRU TYPICAL UNIT VENTILATOR

DIRECT RADIATION

CABINET UNIT HEATERS



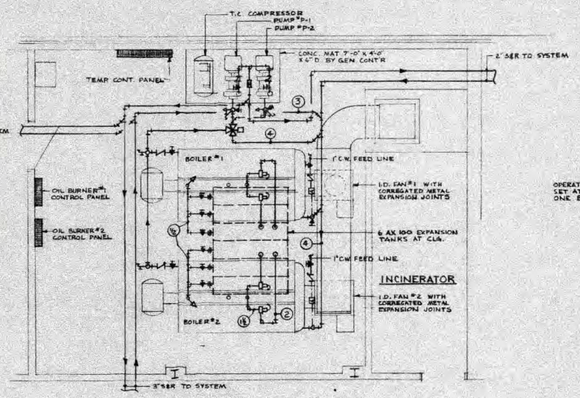
COMPRESSOR PIPING



UNIT VENTILATOR

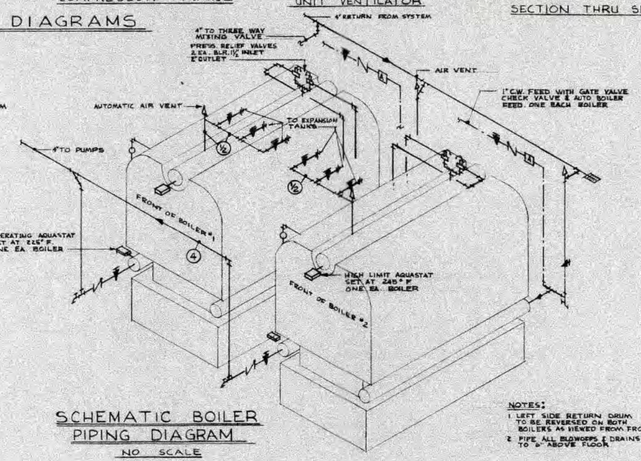
TEMPERATURE CONTROL DIAGRAMS

NO SCALE



BOILER ROOM PIPING PLAN

SCALE — ¼"=1'-0"



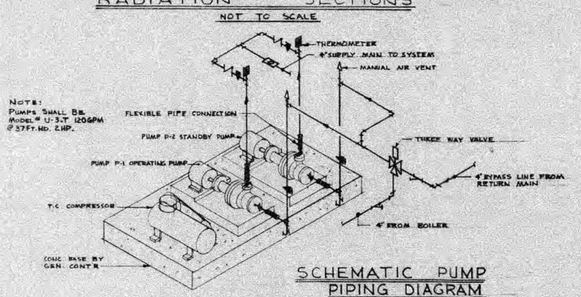
SCHEMATIC BOILER PIPING DIAGRAM

NO SCALE

NOTES:
1. LEFT SIDE RETURN DRUM TO BE REVERSED ON BOTH BOILERS AS VIEWED FROM FRONT
2. PIPE ALL BLOWOFFS & DRAINS TO 6" ABOVE FLOOR

RADIATION SECTIONS

NOT TO SCALE



NOTE:
PUMPS SHALL BE MODEL # U-3.T 120 GPM @ 37 FT. HD. 1 HP.

SCHEMATIC PUMP PIPING DIAGRAM

NO SCALE

STATE OF CONNECTICUT — REGISTERED ARCHITECT — NO. 1913

DRWN: D.C.	THOMAS HOOKER ELEMENTARY SCHOOL	DRAWING HV-3
CHKD: J.J.M.	MERIDAN CONNECTICUT	
DATE: 15 OCT '62	HEATING & VENTILATING DETAILS	
SCALE: AS NOTED		

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

NORTH

CLASSROOM 1 | CLASSROOM 2 | CLASSROOM 3 | CLASSROOM 4 | CLASSROOM 5 | CLASSROOM 6 | CLASSROOM 7

CLASSROOM 12 | CLASSROOM 11 | CLASSROOM 10 | CLASSROOM 9 | CLASSROOM 8

TRANS VAULT PLAN

OUTDOOR STOR.

GYM STOR.

BOILER ROOM

RECEIVING ROOM

EDUCATIONAL STORAGE

CUSTODIAN

GYMNASIUM - AUDITORIUM

LUNCH - STAGE

COURT

CORRIDOR

CORRIDOR

RAMP DOWN

RAMP DOWN

CORRIDOR 1

KINDERGARTEN 1

KINDERGARTEN 2

COAT ROOM

STUDENT LOBBY

HEALTH ROOM

GENERAL OFFICE

PRINCIPAL

FACULTY WORK

FACULTY LOUNGE

PUBLIC LOBBY

SPECIAL CLASSROOM

MIMEO ROOM

PASSAGE

MAIN FLOOR PLAN - PLUMBING

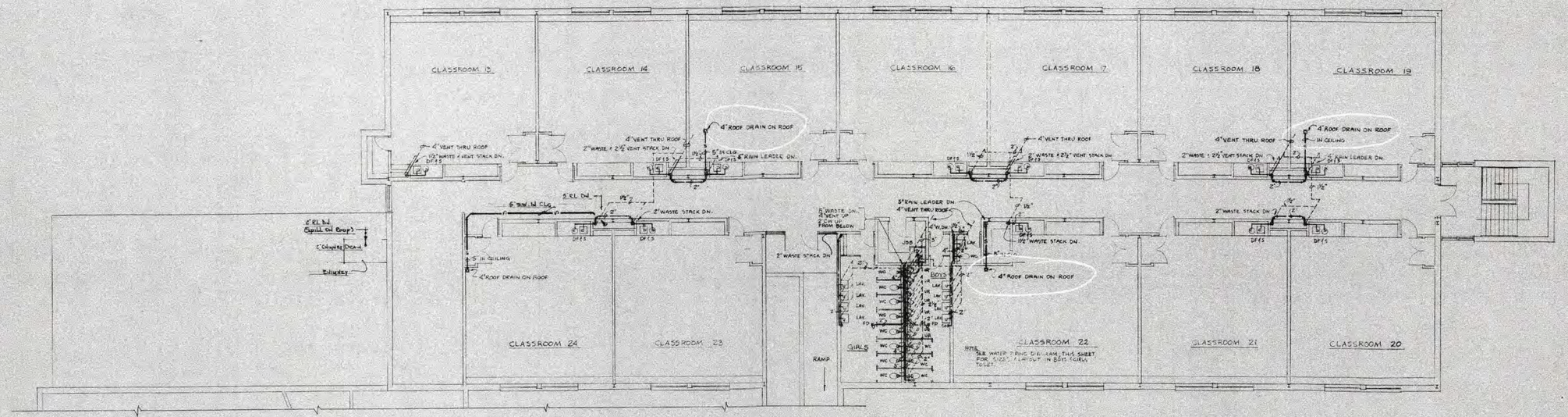
SCALE 1/8" = 1'-0"

WATER PIPING DIAGRAM
CLASSROOM № 1 TOILET
NO SCALE

WATER PIPING DIAGRAM
TYPICAL CLASSROOM UNITS
NO SCALE

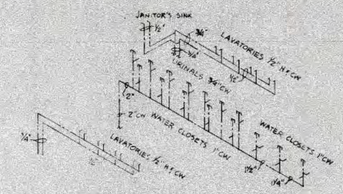
DRWN C.K.	THOMAS HOOKER ELEMENTARY SCHOOL
CHKD J.M.	MERIDEN CONNECTICUT
DATE 15 OCT 62	LOWER FLOOR PLUMBING PLAN
SCALE AS NOTE	DRAWING P1

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT



SECOND FLOOR PLAN - PLUMBING

SCALE 1/8"=1'-0"

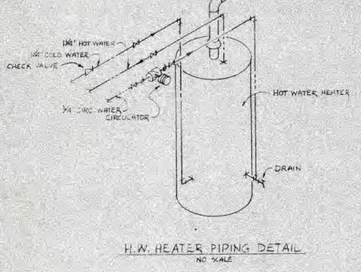


WATER PIPING DIAGRAM - BOY'S & GIRL'S TOILETS

SECOND FLOOR

NOT TO SCALE

PLUMBING FIXTURE SCHEDULE					
DESIG.	FIXTURE	WASTE	VENT	CW	HW
WC	WATER CLOSET	4"	2"	*	
UR.	URINAL	2"	1½"	¾"	
LAV.	LAVATORY	1½"	1½"	½"	½"
DF&S	DRINKING FTN.& SINK	1½"	1½"	½"	½"
JSB	JANITOR'S SERVICE BASIN	3"	2"	½"	½"
SC.	SILLCOCK			¾"	
DF.	DRINKING FTN.	1½"	1½"	½"	
SINK	SINK	1½"	1½"	½"	½"



H.W. HEATER PIPING DETAIL

NO SCALE

PLUMBING SYMBOLS

- SOIL OR WASTE ABOVE GRADE
- SOIL OR WASTE BELOW GRADE
- FIXTURE VENT
- S STORM WATER PIPING ABOVE GRADE
- S STORM WATER PIPING BELOW GRADE
- CW COLD WATER PIPING
- HW HOT WATER PIPING
- HWC HOT WATER CIRCULATING LINE
- G GAS LINE
- GATE VALVE
- STRAINER
- CHECK VALVE
- UNION
- COCK

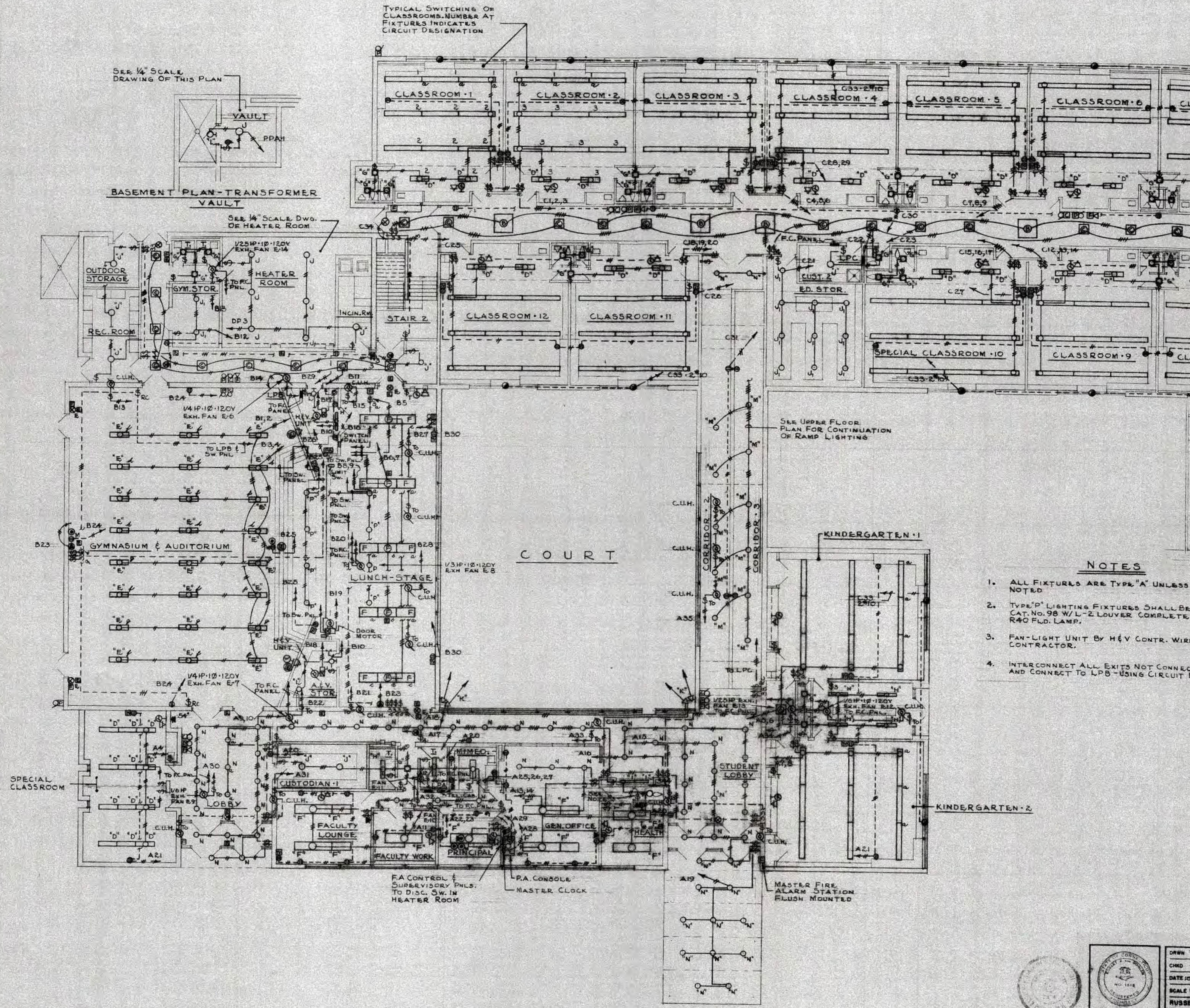
P	P-TRAP
SC	SILLCOCK
HB	HOSE BIBB
FD	FLOOR DRAIN
AD	AREA DRAIN
RL	RAIN LEADER
CO	CLEANOUT

DRWN	E.K.
CHKD	J.H.
DATE/IS OUT OF	
SCALE	As Noted

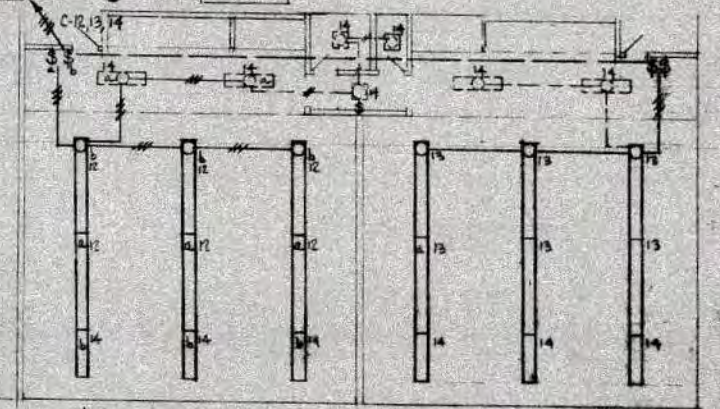
THOMAS HOOKER ELEMENTARY SCHOOL
MERIDEN CONNECTICUT
UPPER FLOOR PLUMBING PLAN

DRAWING P2

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT



Typical Switching Of Classrooms. Number At Fixtures Indicates Circuit Designation
See 1/4" Scale Drawing Of This Plan
VAULT
PPA-1
BASEMENT PLAN - TRANSFORMER VAULT
See 1/4" Scale Dwg. Of Heater Room
CLASSROOM · 1
CLASSROOM · 2
CLASSROOM · 3
CLASSROOM · 4
CLASSROOM · 5
CLASSROOM · 6
CLASSROOM · 7
STAIR · 1
OUTDOOR STORAGE
GYM. STOR
HEATER ROOM
REC. ROOM
INCIN. RM
STAIR 2
CLASSROOM · 12
CLASSROOM · 11
P.C. PANEL
CUST. 2
ED. STOR
SPECIAL CLASSROOM · 10
CLASSROOM · 9
CLASSROOM · 8
See Upper Floor Plan For Continuation Of Ramp Lighting
GYMNASIUM & AUDITORIUM
LUNCH - STAGE
COURT
CORRIDOR · 2
CORRIDOR · 3
KINDERGARTEN · 1
KINDERGARTEN · 2
SPECIAL CLASSROOM
LOBBY
CUSTODIAN · 1
FACULTY LOUNGE
FACULTY WORK
MIMEO.
PRINCIPAL
GEN. OFFICE
HEALTH
STUDENT LOBBY
F.A. Control & Supervisory Pnls. To Disc. Sw. In Heater Room
P.A. Console
Master Clock
Master Fire Alarm Station Flush Mounted



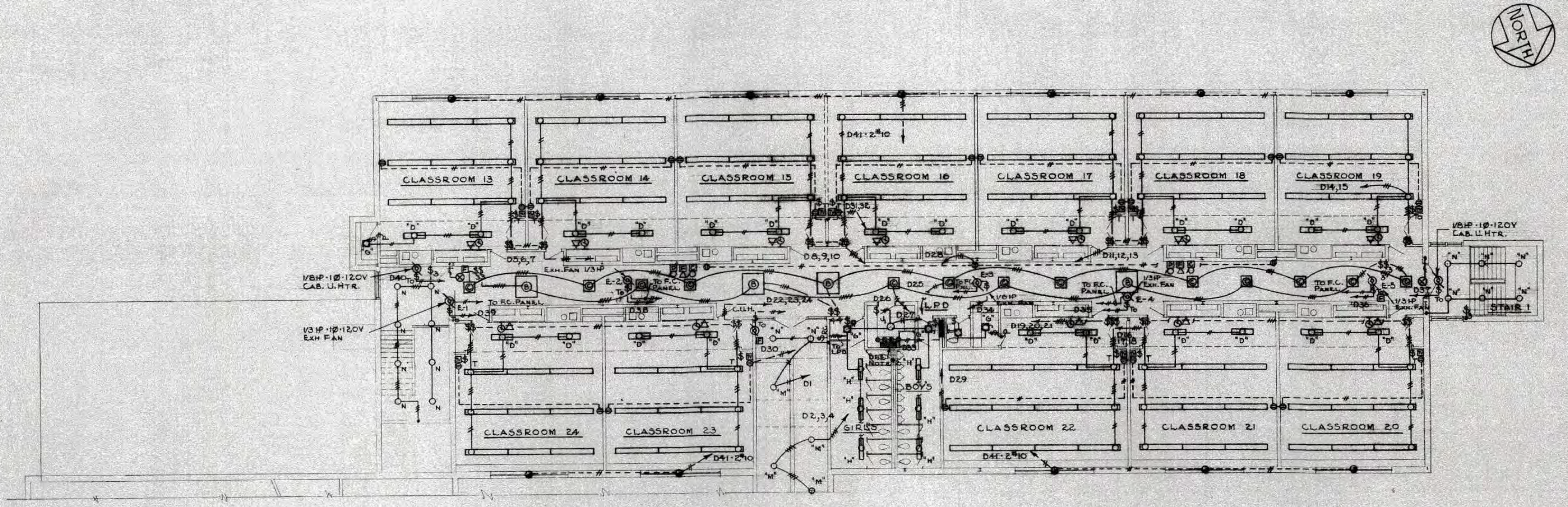
ALTERNATE E-1 ~ REVISED CLASSROOM LIGHTING
TYPICAL FOR ALL CLASSROOMS
SCALE ~ 1/8" = 1'-0"

NOTES

1. ALL FIXTURES ARE TYPE "A" UNLESS OTHERWISE NOTED
2. TYPE "P" LIGHTING FIXTURES SHALL BE PRESCOLITE CAT. NO. 98 W/ L-2 LOUVER COMPLETE WITH 1-300W R40 FLD. LAMP.
3. FAN-LIGHT UNIT BY H&V CONTR. WIRED BY ELECTRICAL CONTRACTOR.
4. INTERCONNECT ALL EXITS NOT CONNECTED TOGETHER AND CONNECT TO LPB - USING CIRCUIT B-31

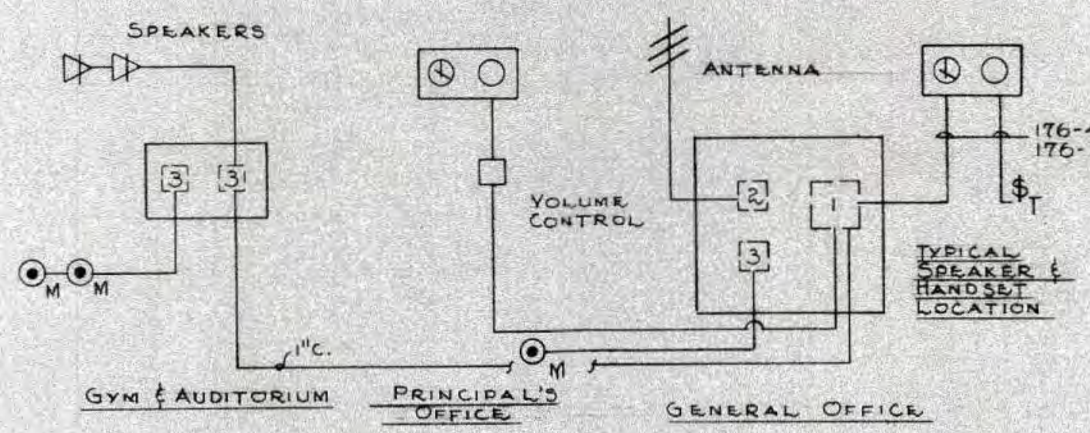
DRWN WD	THOMAS HOOKER ELEMENTARY SCHOOL	DRAWING
CHKD JM	MERIDEN, CONNECTICUT	E1
DATE 15 OCT 62	LOWER FLOOR ELECTRICAL PLAN	[redacted]
SCALE 1/8"=1'-0"		

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT



UPPER FLOOR PLAN

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



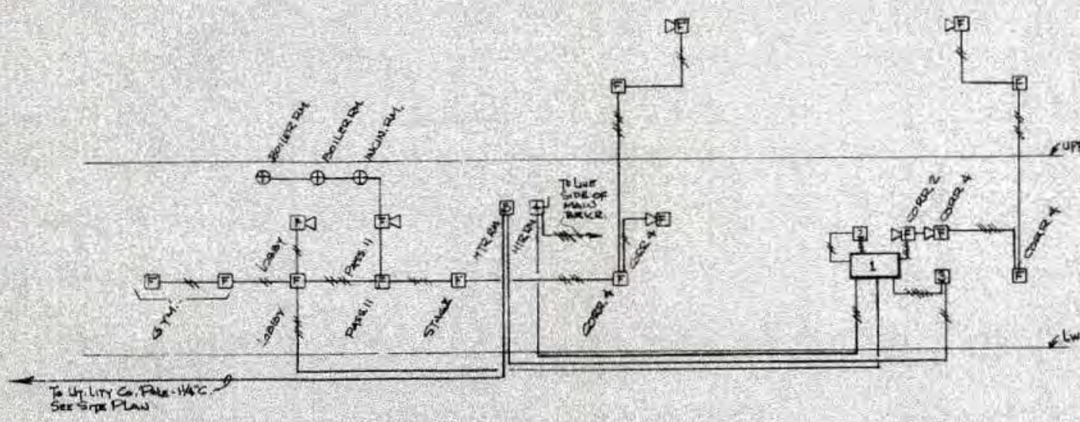
① 12"x12"x4" J.B. W/2" PORCELAIN BUSHING IN FRONT COVER
② 1-GANG OUTLET BOX
③ 2-GANG OUTLET BOX

P.A. RISER NO SCALE

P A N E L	S C H E D U L E											
PANEL	LOCATION	TYPE	MTG	MAINS	MAIN CIR BRKR	BRANCH CIRCUITS POLES	FRAME	TRIP	ACTIVE	SPARE	TOTAL POLES	REMARKS
LPA	PASS #9	NLAB	R	225 A	125A·3P	1	50	20	35	7	42	ASCO #925 · CONTR CIR# 1,2,3
LPB	STOR #1	NLAB	R	225 A	100A·3P	1	50	20	26	7	42	ASCO #925 · CONTR CIR# 1,2
						3	50	20	3			
LPC	CUST #2	NLAB	R	225 A	150A·3P	1	50	20	33	7	42	
						2	50	40	1			
LPD	VESTIBULE AT BOYS TOILET	NLAB	R	100 A	70A·3P	1	50	20	20	0	20	2 PANELS - 1 CABINET ASCO #925 CONTR CIR# 1 THRU 4
				100 A	70A·3P	1	50	20	20	10	32	
						2	50	40	1			
DP	HEATER RM	NCB	S	100 A	100A·3P	1	50	20	10	5	36	
						3	50	20	5	2		

NOTES

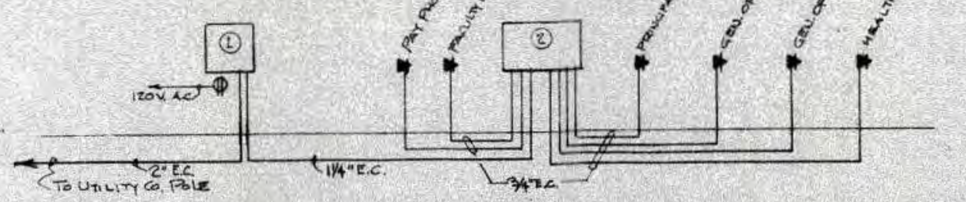
1. ALL FIXTURES ARE TYPE "A" UNLESS OTHERWISE NOTED
2. TELEVISION EQUIPMENT CABINET



FIRE ALARM - RISER DIAGRAM

NO SCALE

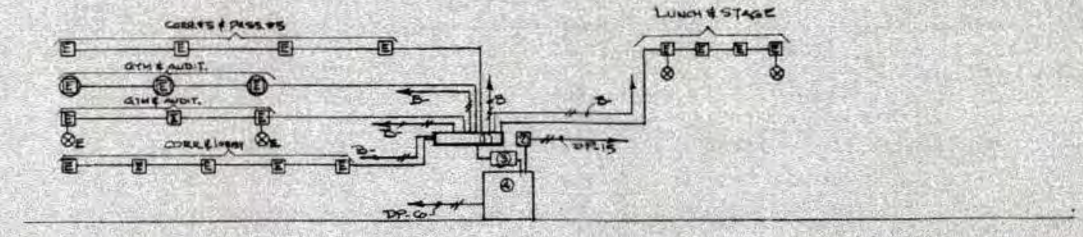
#1 = FIRE ALARM CONTROL PANEL
2 = SUPERVISORY & LOCAL ALARM PANEL
3 = MASTER STATION
4 = 30A-2P DISC. SW. CONNECT TO SUPPLY SIDE OF MAIN DISCONNECTING DEVICE.



TELEPHONE RISER DIAGRAM

NO SCALE

① = 4'x8'x3/4" PLYWOOD BACKBOARD WITH 2 COATS OF ALUMINUM PAINT
② = 18"x24"x5" TELEPHONE TERMINAL CABINET.



EMERGENCY LIGHTING ~ RISER DIAGRAM

NO SCALE

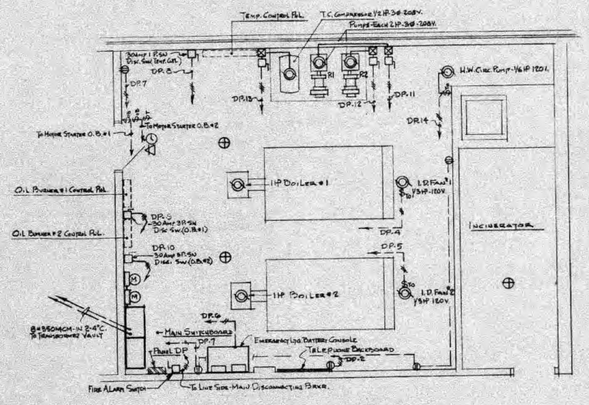
① 5HDR-105 ZONE CONTROL PANEL
② BATTERY FAILURE ALARM PANEL
③ FUSE FAILURE ALARM PANEL
④ BATTERY CONSOLE 32C-AUT-60

STATE OF CONNECTICUT · REGISTERED ARCHITECT · NO. 1519

DRWN W.B.	THOMAS HOOKER ELEMENTARY SCHOOL
CHKD J.M.	MERIDEN, CONNECTICUT
DATE: 15 OCT 68	UPPER FLOOR ELECTRICAL PLAN
SCALE: AS NOTED	

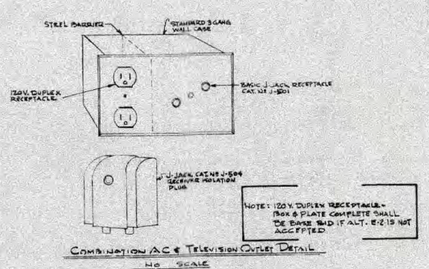
RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

DRAWING E 2



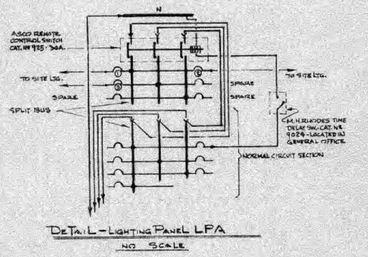
HEATING ROOM — EQUIPMENT PLAN

SCALE: 1/4" = 1'-0"



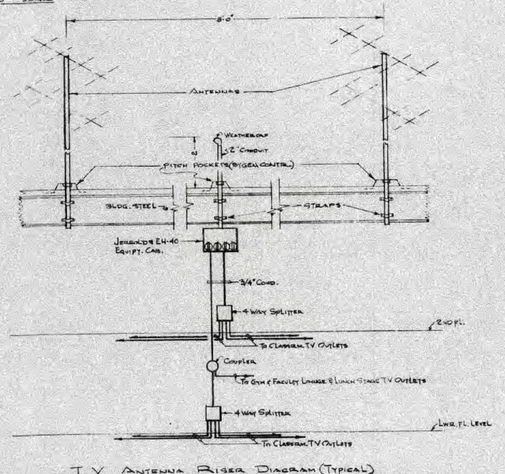
COMBINATION A.C. & TELEVISION OUTLET DETAIL

NO SCALE



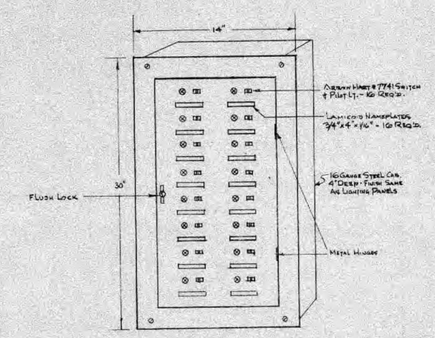
DETAIL - LIGHTING PANEL LFA

NO SCALE



TV ANTENNA RISER DIAGRAM (TYPICAL)

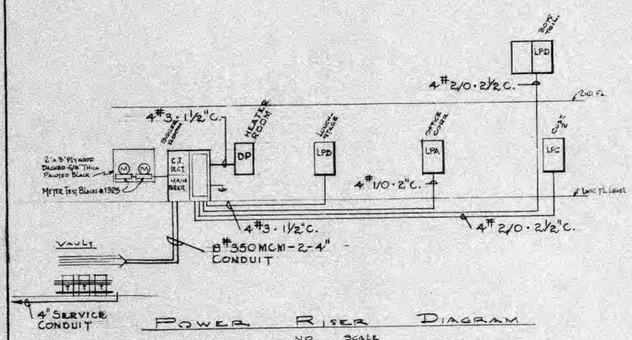
NO SCALE



FAN CONTROL PANEL DETAIL

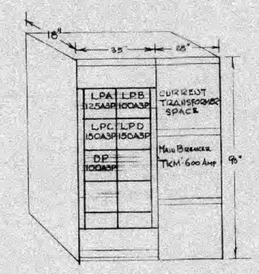
NO SCALE

NOTE: PROVIDE DIRECTORY DESIGNATING AREA SERVED BY EXHAUST FANS



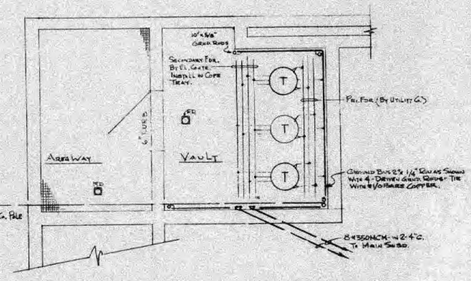
POWER RISER DIAGRAM

NO SCALE



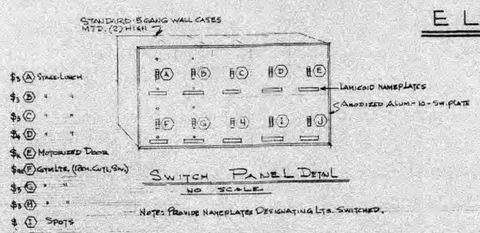
MAIN DISTRIBUTION SWITCHBOARD DETAIL

NO SCALE



PLAN - TRANSFORMER VAULT

SCALE: 1/4" = 1'-0"



SWITCH PANEL DETAIL

NO SCALE

NOTE: PROVIDE NAMEPLATES DESIGNATING LTS. SWITCHED.

ELECTRICAL DETAILS

LEGEND

- 4' OR 8' FLUORESCENT LIGHTING FIXTURE & OUTLET - LETTER DENOTES TYPE
- CEILING LIGHT FIXTURE & OUTLET - LETTER DENOTES TYPE
- CEILING LIGHT FIXTURE & OUTLET - LETTER DENOTES TYPE
- WALL BRACKET LIGHT & OUTLET - LETTER DENOTES TYPE
- $ SINGLE POLE SWITCH - MNT. HT. 48"
- $3 THREE WAY SWITCH - MNT. HT. 48"
- $4 FOUR WAY SWITCH - MNT. HT. 48"
- $ SWITCH & RECEPTACLE - MNT. HT. 48"
- $TO THERMAL OVERLOAD SWITCH
- $OB OIL BURNER DISCONNECT SWITCH - MNT. HT. 48"
- $P SWITCH & PILOT - MNT. HT. 48"
- $RC REMOTE CONTROL STATION CONTROLLING ASCO SWITCH IN PANEL
- MOTOR
- DISCONNECT SWITCH
- LIGHT PANEL
- POWER PANEL
- UP RISER
- DOWN RISER
- MOTOR CONTROLLER
- TELEPHONE OUTLET - MNT. HT. 18" UNLESS NOTED.
- FLOOR TELEPHONE OUTLET
- M MICROPHONE OUTLET
- P.A. SPEAKER
- X CONV. OUTLET DUPLEX RECEPTACLE 2 WIRE, 15A, 125 VOLTS, GROUNDED TYPE, ARROW HART CAT. NO. 5262 OR EQUAL. "X" INDICATES ABOVE COUNTER.
- PAGING CHIME
- PROGRAM BELL
- COMBINATION CLOCK & SPEAKER UNIT
- CLOCK (SEE SPECIFICATION)
- COMBINATION A.C. & TELEVISION OUTLET (SEE DETAIL AND SPECIFICATION)
- UNIT VENTILATOR JUNCTION BOX BY H&V CONTR. WIRING TO JUNCTION BOX BY ELECTRICAL CONTRACTOR
- C.U.H. CABINET UNIT HEATER V8 H.P. 1Ø. 120V MOTOR
- $T TALK BACK SWITCH FOR SOUND COMMUNICATION SYSTEM MNT. HT. 48"
- PROJECTOR OUTLET - 30A. 2W. 125 VOLT GROUNDED TYPE
- EXIT SIGN - RECESSED - MILLER CAT. NO. SR-1200 OR EQUAL PROVIDE WIRE GUARDS FOR GYMNASIUM UNIT
- EXIT SIGN - TOP MNT. - MILLER CAT. NO. ST-1200-R OR EQUAL
- EXIT SIGN - TOP MNT. - MILLER CAT. NO. ST-2200-L OR EQUAL
- FIRE ALARM STATION MNT. HT. 54"
- FIRE ALARM HORN
- FIRE ALARM DETECTOR
- E EXIT SIGN W/EMERGENCY 32 V. - 32 CP. DC. LAMP & 2 NORMAL AC LAMPS DUAL-LITE CAT. NO. 12.6
- E EMERGENCY LIGHT - DUAL-LITE CAT. NO. EXT-122 W/2-50 CP LAMP
- E EMERGENCY LIGHT DUAL-LITE CAT. NO. EXT-124 W/2-32 CP LAMPS

DRWN	W.D.
CHKD	J.M.
DATE	5 OCT 62
SCALE	AS NOTED

THOMAS HOOKER ELEMENTARY SCHOOL
MERIDAN, CONNECTICUT
ELECTRICAL DETAILS

RUSSELL, GIBSON & VON DOHLEN ARCHITECTS, A.I.A.
10 ELLSWORTH ROAD WEST HARTFORD CONNECTICUT

DRAWING E3

THOMAS HOOKER ELEMENTARY SCHOOL
ROOF REPLACEMENT

70 OVERLOOK ROAD
MERIDEN, CONNECTICUT 06450

STATE PROJECT NO: 080-0087-RR

JANUARY 24, 2005

SUPERINTENDENT OF SCHOOLS
MARY N. CORTRIGHT

MAYOR
MARK BENIGNI

BOARD OF EDUCATION
FRANK KOGUT, PRESIDENT
NOREEN TOW, VICE PRESIDENT
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DAVID PARIAN
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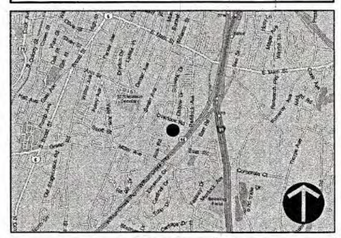
DAVID FORDIANI
RICHARD GROSSMAN
ROBERT LORENZO
FRED STARK
PATRICIA MURPHY
JOHN GARLOCK, JR.
THOMAS ARESCO

ARCHITECT

FRIAR ASSOCIATES INC.
281 FARMINGTON AVENUE
FARMINGTON, CT. 06032

INDEX OF DRAWINGS



SET NUMBER

GENERAL NOTES

1. AT PROJECT COMPLETION, ALL AREAS WITH-IN CONTRACT LIMITS SHALL BE CLEAN, FREE OF TRASH, CONSTRUCTION MATERIALS + EQUIPMENT.
2. REPLACE OR REPAIR ALL LAWN, PLANTINGS, AND PAVED SURFACES AS REQUIRED WHICH MAY BE DAMAGED BY CONSTRUCTION ACTIVITIES.
3. AT LAWN AREAS DISTURBED, PROVIDE REPAIR AS SHOWN IN DETAIL 1 ON THIS DRAWING.
4. FERTILIZE AT THE RATE OF 1000 LBS/PER ACRE WITH 10-10-10 FERTILIZER. 40% OF THE NITROGEN TO BE A SLOW RELEASE FORM. LIME TO A PH OF 6.5 AT A RATE PF 100 LBS. PER 1000 SF.
5. SEED MIXTURE AS FOLLOWS:
   - 40% KENTUCKY BLUEGRASS
   - 30% CHEWING RED FESCUE
   - 10% PERENNIAL RYEGRASS
6. ROOFING CONTRACTOR SHALL PROVIDE OVERHEAD PROTECTION AS REQUIRED AT ALL DOOR OPENINGS WHILE WORKING ON ROOF WHEN BUILDING IS OCCUPIED.

1 TOPSOIL/ LAWN
SCALE: N.T.S.

CONTRACTOR'S SITE STAGING & SITE UTILIZATION PLAN

REVISIONS

NO.	DATE	DESCRIPTION

DATE: 1/24/05
DRAWN BY: JJC
SCALE: 1"=40'-0"
REVIEWED BY: ---
PROJECT NO.: 24054
EX-24054

ROOF REPLACEMENT PROJECT
STATE PROJECT NO: 080-0087-RR
THOMAS HOOKER ELEMENTARY SCHOOL
OVERLOOK ROAD
MERIDEN, CONNECTICUT

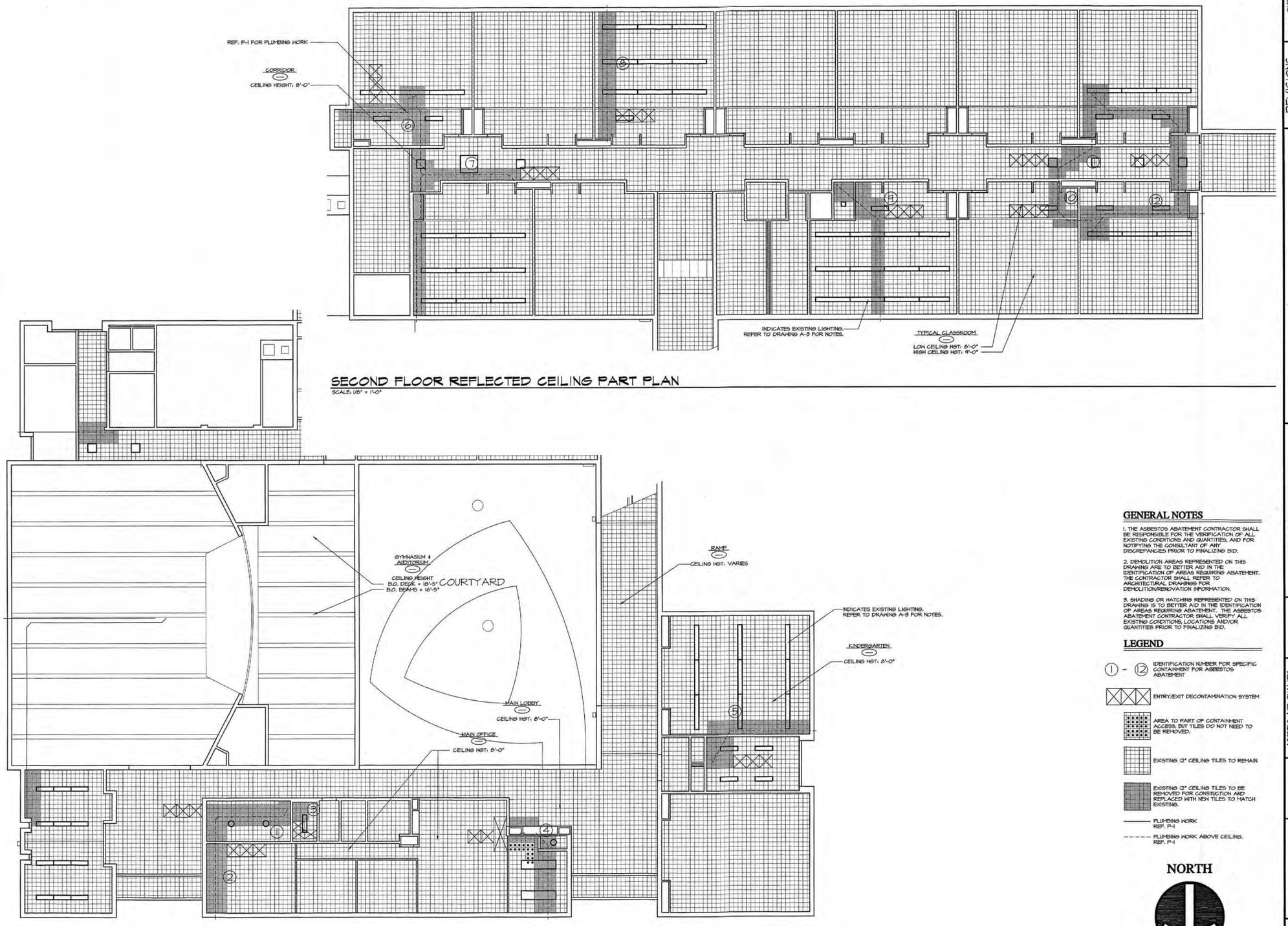
CONSULTANT'S SEAL

ARCHITECT'S SEAL

Friar Associates inc.
Architects
281 Farmington Avenue
Farmington, CT 06032

SHEET NO.
L-1

G:\ACAD\24059 THOMAS HOOKER ROOF\PLANS\24059\DWG\24059(L-1)STAGING.DWG, 1/24/2005 12:36:16 PM, jjm



SECOND FLOOR REFLECTED CEILING PART PLAN

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

FIRST FLOOR REFLECTED CEILING PART PLAN

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

GENERAL NOTES

1. THE ASBESTOS ABATEMENT CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL EXISTING CONDITIONS AND QUANTITIES, AND FOR NOTIFYING THE CONSULTANT OF ANY DISCREPANCIES PRIOR TO FINALIZING BID.

2. DEMOLITION AREAS REPRESENTED ON THIS DRAWING ARE TO BETTER AID IN THE IDENTIFICATION OF AREAS REQUIRING ABATEMENT. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR DEMOLITION/RENOVATION INFORMATION.

3. SHADING OR HATCHING REPRESENTED ON THIS DRAWING IS TO BETTER AID IN THE IDENTIFICATION OF AREAS REQUIRING ABATEMENT. THE ASBESTOS ABATEMENT CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, LOCATIONS AND/OR QUANTITIES PRIOR TO FINALIZING BID.

LEGEND

- ① - ⑫ IDENTIFICATION NUMBER FOR SPECIFIC CONTAINMENT FOR ASBESTOS ABATEMENT
- ENTRY/EXIT DECONTAMINATION SYSTEM
- AREA TO PART OF CONTAINMENT ACCESS, BUT TILES DO NOT NEED TO BE REMOVED.
- EXISTING 12" CEILING TILES TO REMAIN
- EXISTING 12" CEILING TILES TO BE REMOVED FOR CONSTUCTION AND REPLACED WITH NEW TILES TO MATCH EXISTING.
- PLUMBING WORK REF. P-1
- PLUMBING WORK ABOVE CEILING. REF. P-1

NORTH

DATE: 01/24/2005
DRAWN BY: kpm
SCALE: 1/8" = 1'-0"
REVIEWED BY: —
PROJECT NO: 24054
A-X RoofPlan-Details

REVISIONS

NO.	DATE	DESCRIPTION

ASBESTOS ABATEMENT PLAN

ROOF REPLACEMENT PROJECT
STATE PROJECT NO: 1880-0087-RR

THOMAS HOOKER ELEMENTARY SCHOOL

OVERLOOK ROAD
MERIDEN, CONNECTICUT

CONSULTANT'S SEAL

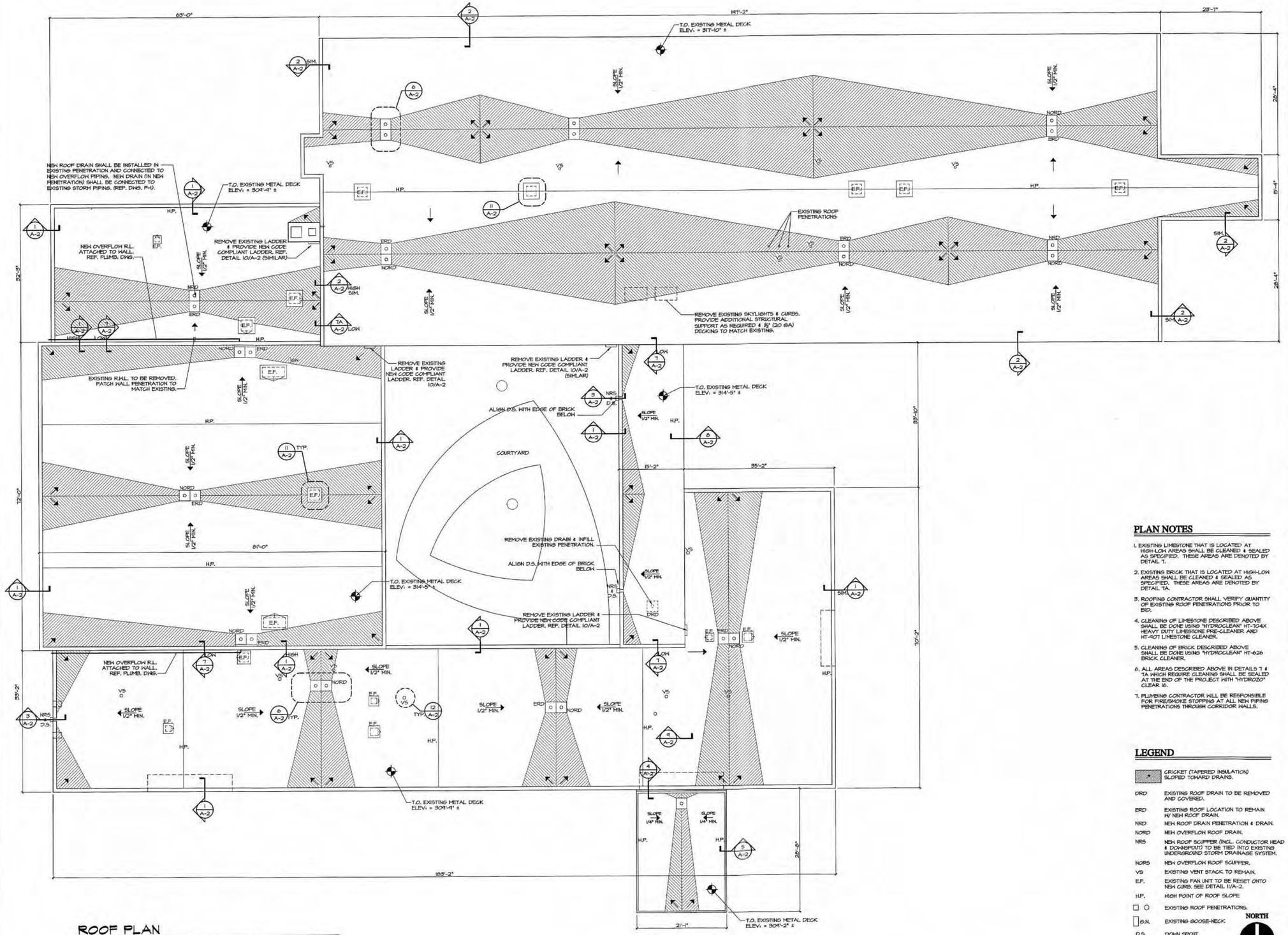
MYSTIC AIR QUALITY CONSULTANTS, INC.
1304 NORTH ROAD
GROTON, CT 06340

ARCHITECT'S SEAL

Friar Associates inc.
Architects
281 Farmington Avenue
Farmington, CT. 06032

SHEET NO.
ASB-1

G:\ACAD\24059\THOMAS HOOKER ROOF\CD\24059 (A-X)ROOF PLAN-DETAILS.DWG, 1/26/2005 3:55:11 PM, Bryan



ROOF PLAN

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

PLAN NOTES

1. EXISTING LIMESTONE THAT IS LOCATED AT HIGH-LOW AREAS SHALL BE CLEANED & SEALED AS SPECIFIED. THESE AREAS ARE DENOTED BY DETAIL 7.
2. EXISTING BRICK THAT IS LOCATED AT HIGH-LOW AREAS SHALL BE CLEANED & SEALED AS SPECIFIED. THESE AREAS ARE DENOTED BY DETAIL 7A.
3. ROOFING CONTRACTOR SHALL VERIFY QUANTITY OF EXISTING ROOF PENETRATIONS PRIOR TO BID.
4. CLEANING OF LIMESTONE DESCRIBED ABOVE SHALL BE DONE USING "HYDROCLEAN" HT-704X HEAVY DUTY LIMESTONE PRE-CLEANER AND HT-407 LIMESTONE CLEANER.
5. CLEANING OF BRICK DESCRIBED ABOVE SHALL BE DONE USING "HYDROCLEAN" HT-626 BRICK CLEANER.
6. ALL AREAS DESCRIBED ABOVE IN DETAILS 7 & 7A WHICH REQUIRE CLEANING SHALL BE SEALED AT THE END OF THE PROJECT WITH "HYDROZO" CLEAR 16.
7. PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR FIRE/SMOKE STOPPING AT ALL NEW PIPING PENETRATIONS THROUGH CORRIDOR WALLS.

LEGEND

	CRICKET (TAPERED INSULATION) SLOPED TOWARD DRAINS.
DRD	EXISTING ROOF DRAIN TO BE REMOVED AND COVERED.
ERD	EXISTING ROOF LOCATION TO REMAIN W/ NEW ROOF DRAIN.
NRD	NEW ROOF DRAIN PENETRATION & DRAIN.
NORD	NEW OVERFLOW ROOF DRAIN.
NRS	NEW ROOF SCUPPER (INCL. CONDUCTOR HEAD & DOWNSPOUT) TO BE TIED INTO EXISTING UNDERGROUND STORM DRAINAGE SYSTEM.
NORS	NEW OVERFLOW ROOF SCUPPER.
VS	EXISTING VENT STACK TO REMAIN.
E.F.	EXISTING FAN UNIT TO BE RESET ONTO NEW CURB. SEE DETAIL 11/A-2.
H.P.	HIGH POINT OF ROOF SLOPE
□ ○	EXISTING ROOF PENETRATIONS.
	EXISTING GOOSE-NECK
D.S.	DOWN SPOUT

NORTH

DATE: 01/24/2005
DRAWN BY: DV/fsm
SCALE: 1/8" = 1'-0"
REVISIONED BY: —
PROJECT NO. 24059
A-1 ROOF PLAN

REVISIONS

NO	DATE	DESCRIPTION

ROOF REPLACEMENT PROJECT
STATE PROJECT NO. 080-0087-RR

THOMAS HOOKER ELEMENTARY SCHOOL
OVERLOOK ROAD
MERIDEN, CONNECTICUT

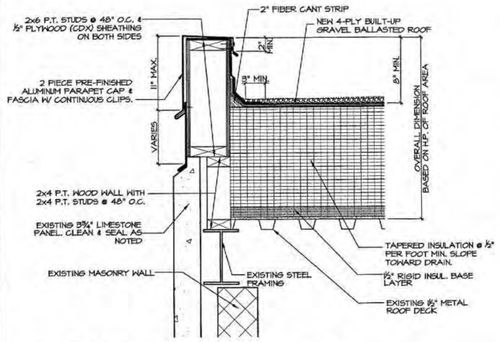
CONSULTANTS SEAL

ARCHITECTS SEAL

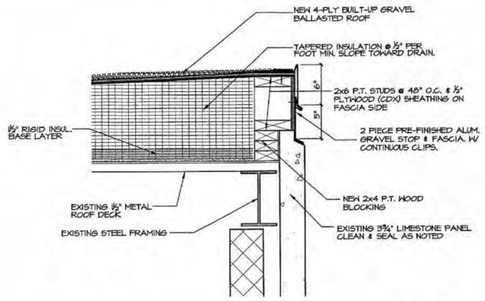
Friar Associates inc.
architects
391 Farmington Avenue
Farmington, CT. 06032

SHEET NO.
A-1

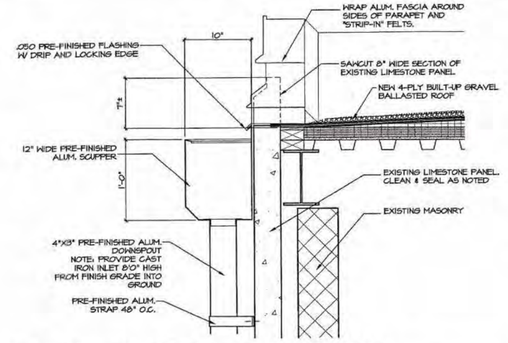
\\ACAD\24059 THOMAS HOOKER ROOF\[CD\24059 (A-X)ROOF PLAN-DETAILS.DWG, 1/26/2005 10:15:18 AM, Bryan



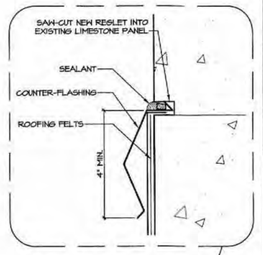
1 A-2 TYPICAL ROOF EDGE DET.
SCALE: 1-1/2" = 1'-0"



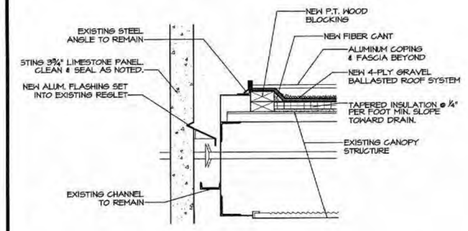
2 A-2 ROOF EDGE DETAIL @ CLASSROOM WING
SCALE: 1-1/2" = 1'-0"



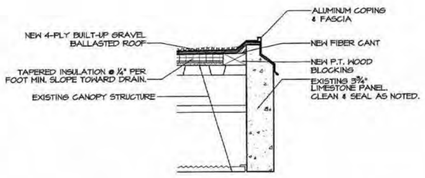
3 A-2 SCUPPER DETAIL @ ADMIN WING
SCALE: 1-1/2" = 1'-0"



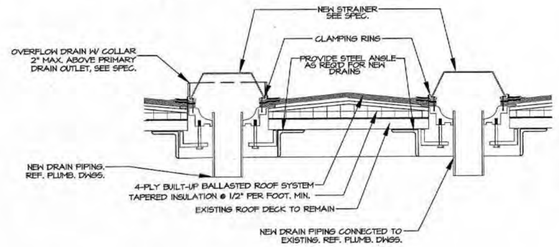
REGLET DETAIL
SCALE: 6" = 1'-0"



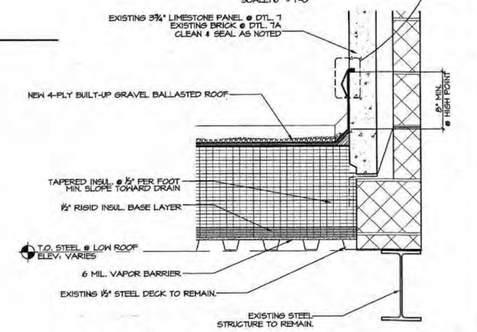
4 A-2 CANOPY-ADMIN CONNECTION DETAIL
SCALE: 1-1/2" = 1'-0"



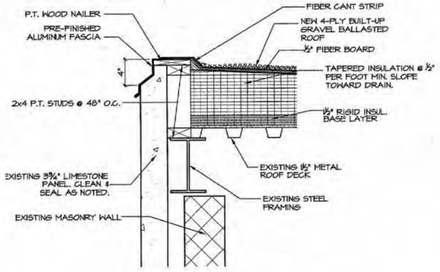
5 A-2 ROOF EDGE DETAIL @ CANOPY
SCALE: 1-1/2" = 1'-0"



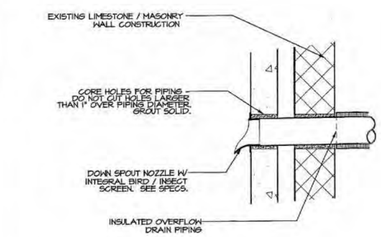
6 A-2 TYPICAL ROOF DRAIN W/ OVERFLOW DRAIN DETAIL
SCALE: 1-1/2" = 1'-0"



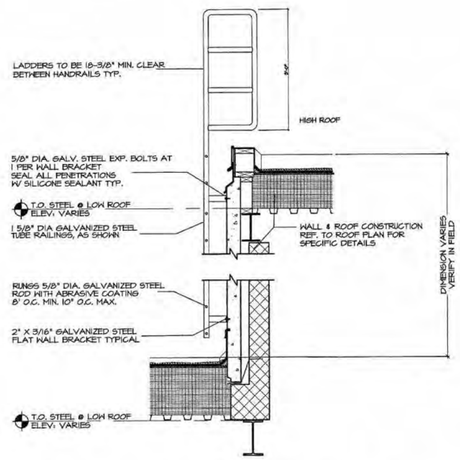
7A A-2 7 A-2 ROOF-WALL VERTICAL TERMINATION DETAIL
SCALE: 1-1/2" = 1'-0"



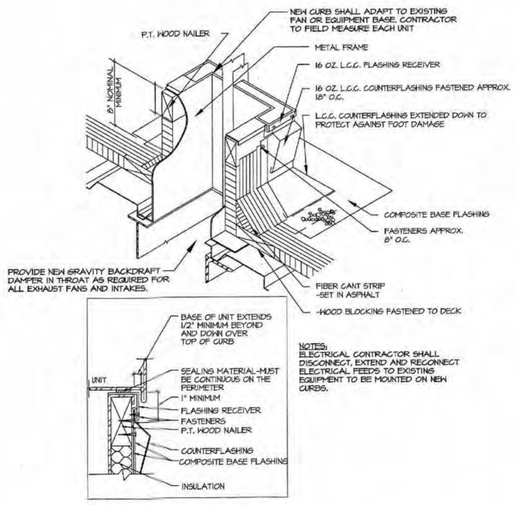
8 A-2 ROOF EDGE DETAIL @ RAMP
SCALE: 1-1/2" = 1'-0"



9 A-2 OVERFLOW PIPING PENETRATION
SCALE: N.T.S.

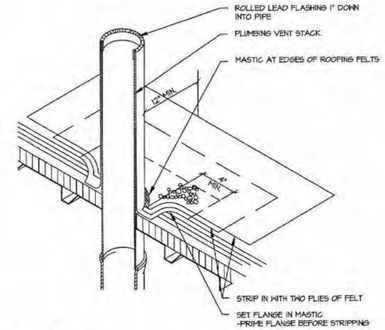


10 A-2 ROOF ACCESS LADDER DETAIL
SCALE: 3/4" = 1'-0"



NOTES:
ELECTRICAL CONTRACTOR SHALL DISCONNECT, EXTEND AND RECONNECT ELECTRICAL FEEDS TO EXISTING EQUIPMENT TO BE MOUNTED ON NEW CURBS.

11 A-2 TYPICAL CURB DETAIL
SCALE: N.T.S.



NOTES:
1. SHEET LEAD MINIMUM OF 2-1/2-LB PER SQUARE FOOT.

12 A-2 TYPICAL VENT STACK DETAIL
SCALE: N.T.S.

DATE: 01/24/2005
DRAWN BY: DV/dpm
SCALE: AS NOTED
REVIEWED BY: —
PROJECT NO. 24059
A-1 ROOF PLAN

REVISIONS

NO.	DATE	DESCRIPTION

ROOF DETAILS

ROCK REEF AGEMENT PROJECT
STATE PROJECT NO. 080-0497-RR

THOMAS HOOKER ELEMENTARY SCHOOL
OVERLOOK ROAD
MERIDEN, CONNECTICUT

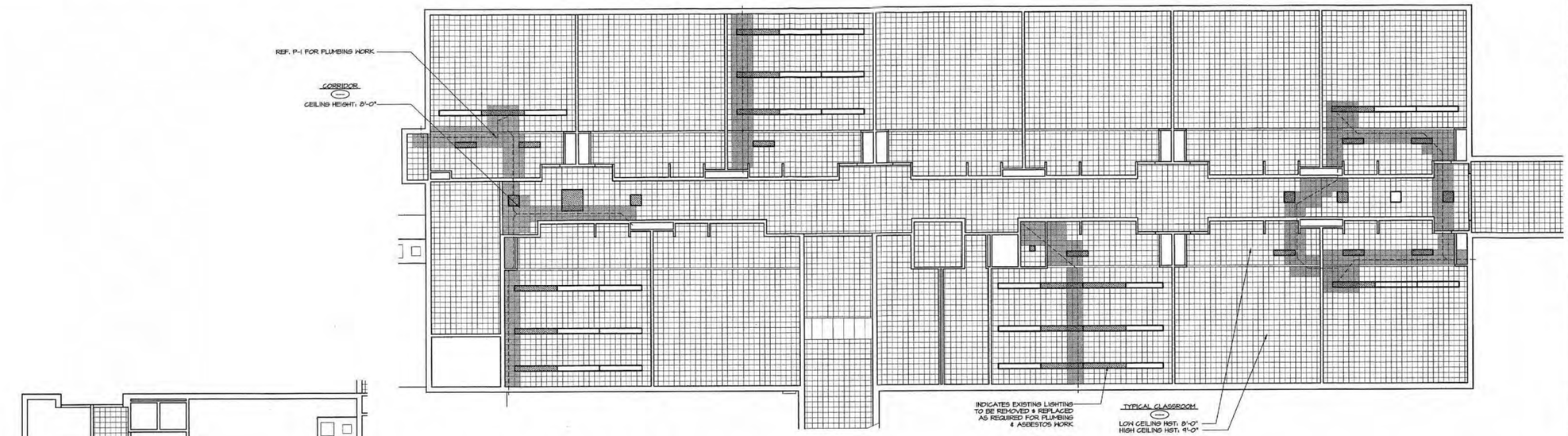
CONSULTANT'S SEAL

ARCHITECT'S SEAL

Friar Associates inc.
Architects
201 Farmington Avenue
Farmington, CT. 06032

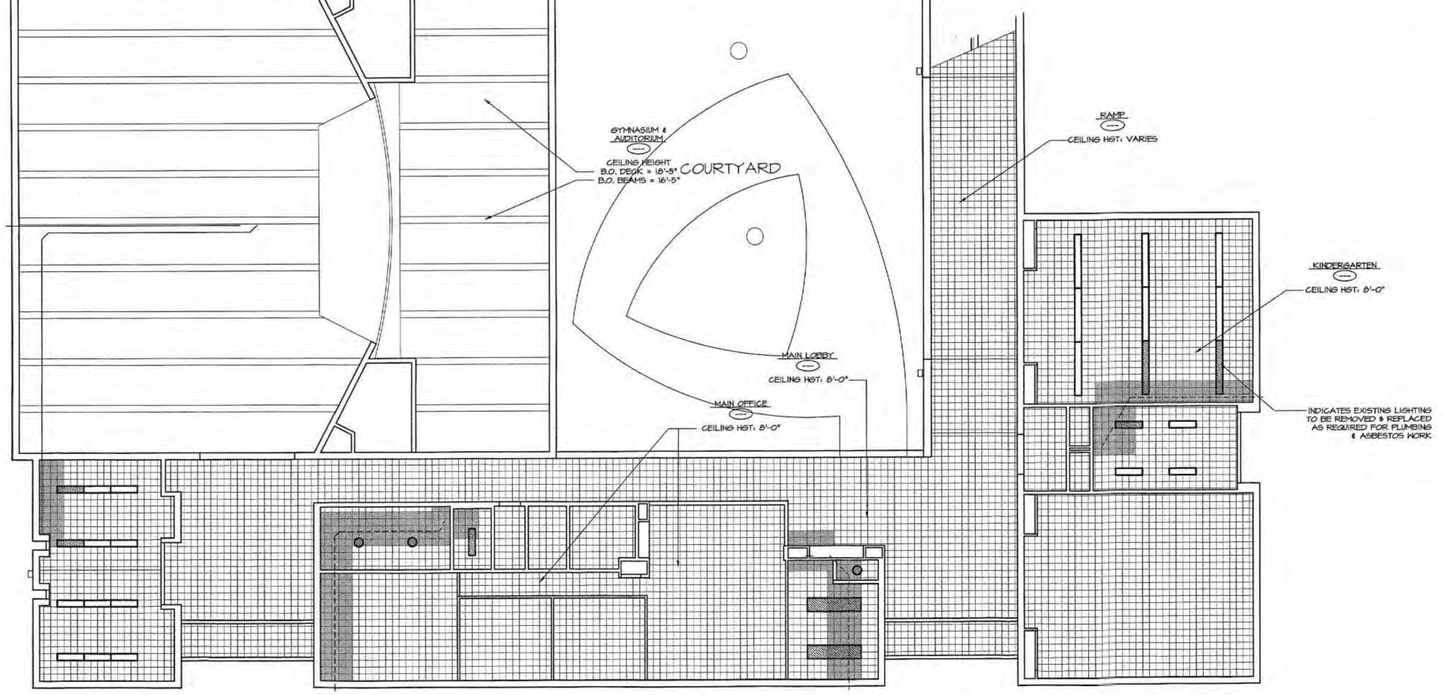
SHEET NO.
A-2

C:\ACAD\24059 THOMAS HOOKER ROOF\CD\24059 (A-ROOF PLAN-DETAILS).DWG, 1/26/2005 10:14:52 AM, Bryce



SECOND FLOOR REFLECTED CEILING PART PLAN

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



FIRST FLOOR REFLECTED CEILING PART PLAN

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

LEGEND

- EXISTING 12" CEILING TILES TO REMAIN
- EXISTING 12" CEILING TILES TO BE REMOVED FOR CONSTUCTION AND REPLACED WITH NEW TILES TO MATCH EXISTING.
- PLUMBING WORK REF. P-1
- PLUMBING WORK ABOVE CEILING. REF. P-1

NORTH

REFLECTED CEILING PLANS

REVISIONS

NO.	DATE	DESCRIPTION

DATE: 01/24/2005
DRAWN BY: kpm
SCALE: 1/8" = 1'-0"
REVIEWED BY: —
PROJECT NO. 24054
A-X RoofPlan-Details

ROOF REPLACEMENT PROJECT
STATE PROJECT NO: 080-0087-RR
THOMAS HOOKER ELEMENTARY SCHOOL
OVERLOOK ROAD
MERIDEN, CONNECTICUT

CONSULTANT'S SEAL

ARCHITECT'S SEAL

Friar Associates inc.
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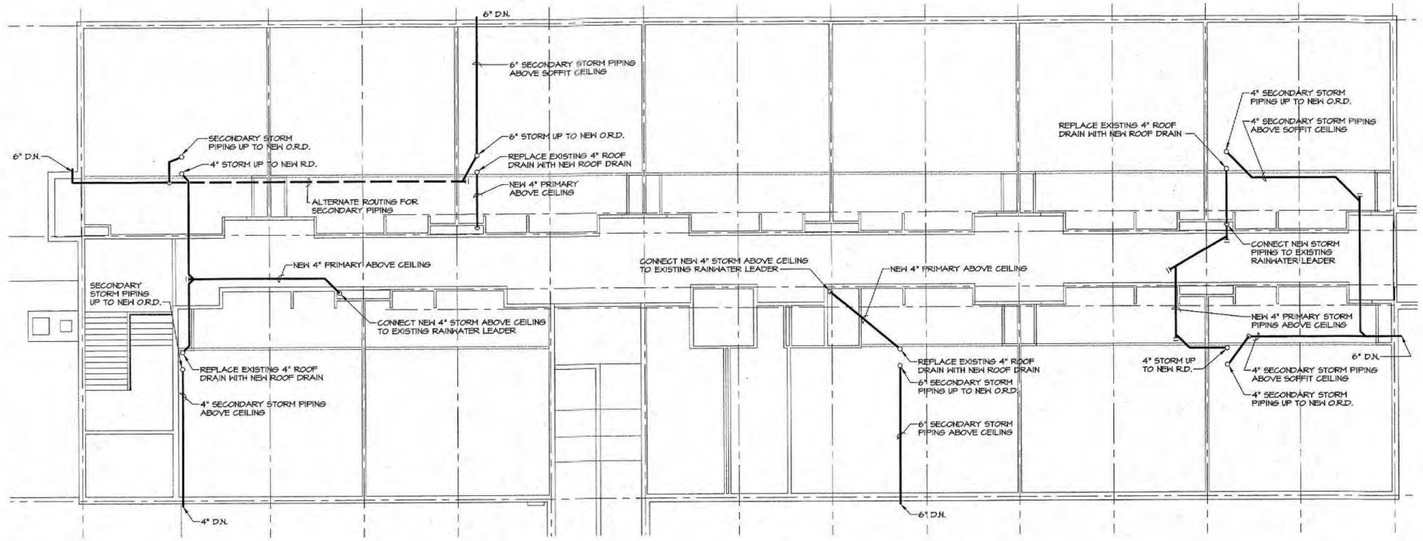
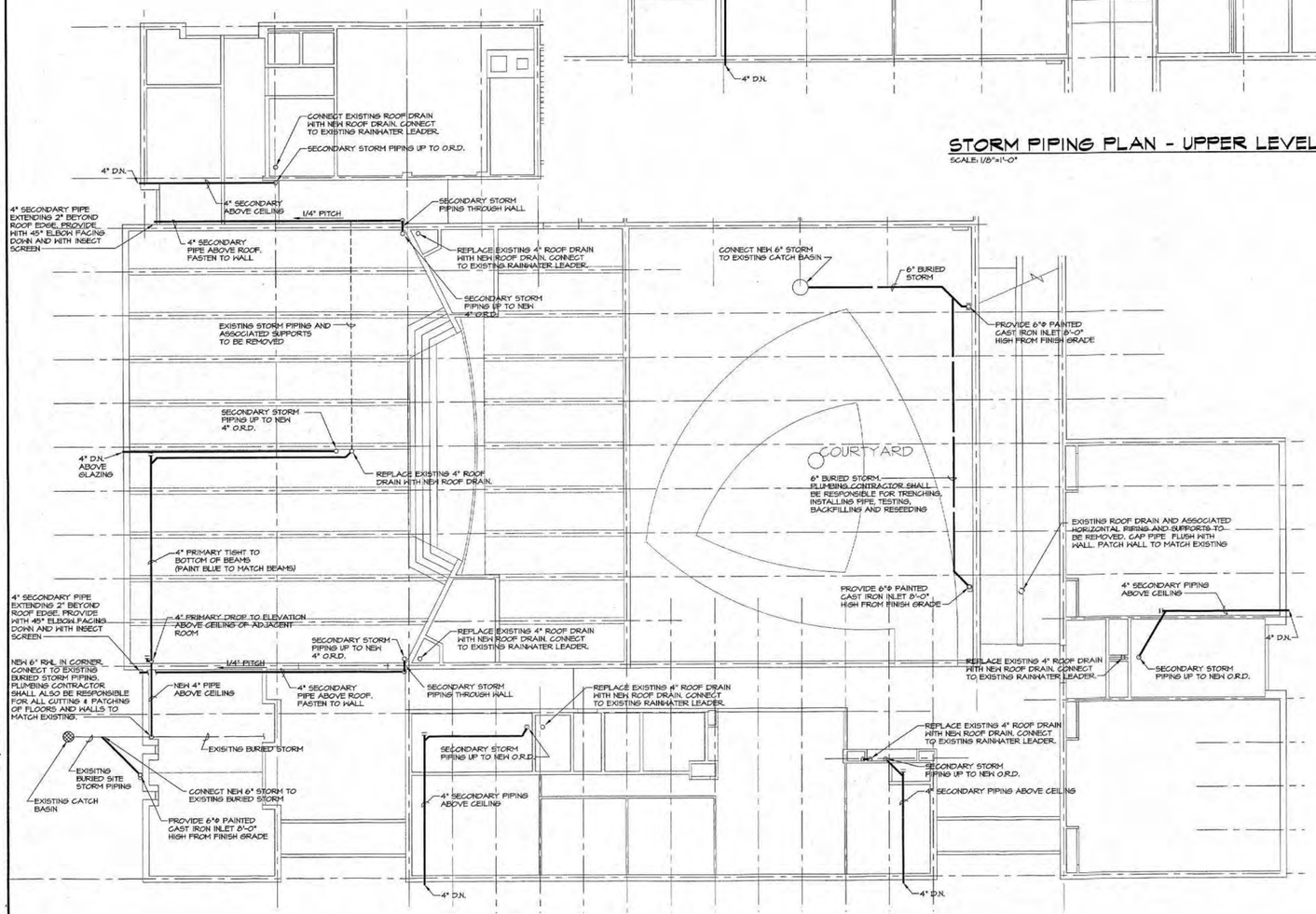
SHEET NO.
A-3

G:\ACAD\24059\THOMAS HOOKER ROOF\CD\24059 (A-X)ROOF PLAN-DETAILS.DWG, 1/26/2005 11:55:59 AM, Bryce



STORM PIPING PLAN - UPPER LEVEL

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



STORM PIPING PLAN - MAIN LEVEL

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

NOTE:

PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE/ SMOKE STOPPING AT ALL NEW PIPING PENETRATIONS THROUGH CORRIDOR WALLS.

NORTH

REVISIONS

NO.	DATE	DESCRIPTION

DATE: 1/24/25
DRAWN BY: SMH
SCALE: 1/8"=1'-0"
REVIEWED BY: JMD
PROJECT NO: 2459.02

STORM DRAIN PLAN
MAIN LEVEL

ROOF REPLACEMENT PROJECT
STATE PROJECT NO. 080-0097-RR

THOMAS HOOKER ELEMENTARY SCHOOL
OVERLOOK ROAD
MERIDEN, CONNECTICUT

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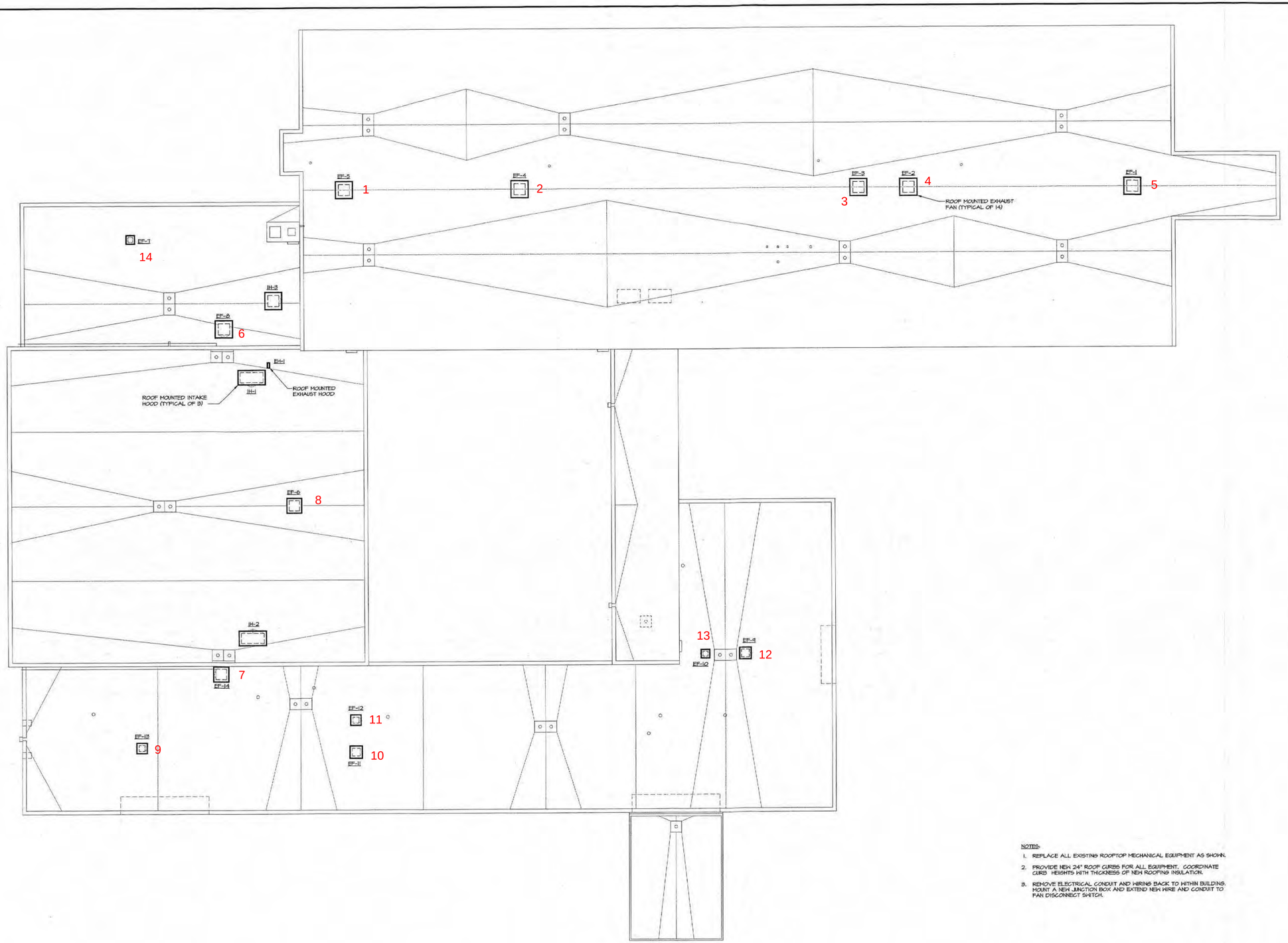
SHEET NO.

P-1



NOTES:

1. REPLACE ALL EXISTING ROOFTOP MECHANICAL EQUIPMENT AS SHOWN.
2. PROVIDE NEW 24" ROOF CURBS FOR ALL EQUIPMENT. COORDINATE CURB HEIGHTS WITH THICKNESS OF NEW ROOFING INSULATION.
3. REMOVE ELECTRICAL CONDUIT AND WIRING BACK TO WITHIN BUILDING. MOUNT A NEW JUNCTION BOX AND EXTEND NEW WIRE AND CONDUIT TO FAN DISCONNECT SWITCH.

NORTH

MECHANICAL & ELECTRICAL ROOF PLAN

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

DATE: 1/24/05
DRAWN BY: ASP
SCALE: 1/8"=1'-0"
REVIEWED BY: RSM
PROJECT NO.2405102

REVISIONS

NO.	DATE	DESCRIPTION

MECHANICAL & ELECTRICAL

ROOF PLAN

ROOF REPLACEMENT PROJECT
STATE PROJECT NO. 080-0087-RR

THOMAS HOOKER
ELEMENTARY SCHOOL

OVERLOOK ROAD
MERIDEN, CONNECTICUT

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SHEET NO.

ME-1

GENERAL SPECIFICATIONS

1.1 GENERAL

A. Architect's General Conditions are a part of this Division. All work shall be done in strict accordance with all applicable Codes and Regulations of local and State Agencies, Owner's insurance underwriter, IRI or FM, local Fire Marshal and utility companies. This Contractor shall bear the cost of all fees, permits, licenses and taxes and any utility company charges in connection with the work. All equipment installed shall be UL listed.

B. Contractor shall allow that work may need to be accomplished under premium time and must be coordinated with the Owner and the Roofing Contractor.

1.2 SCOPE

A. Demolition:
1. Remove all existing roof mounted fans, intake hoods, exhaust hoods, curbs and associated equipment. Coordinate extent of demolition with new work.
2. All materials removed under these divisions and not scheduled for reuse or requested by the Owner, shall be properly and promptly disposed of off site meeting all applicable regulations of local State Agencies.
3. Electrical Contractor shall disconnect mechanical equipment scheduled to be removed. Remove wiring and conduit back to ceiling space below roof. Retain branch circuit for extending to new equipment.

B. New Work:
1. Mechanical Contractor shall furnish and install new rooftop exhaust fans, intake and exhaust hoods, and roof curbs. Coordinate extent of work with Roofing Contractor.
2. Mechanical Contractor shall provide a complete, operational system including start-up by the manufacturer and testing and balancing by a certified firm.
3. Electrical Contractor shall provide new J-Box at building interior and extend new conduit and wiring up to new mechanical equipment and make final connections.

1.3 SHOP DRAWING SUBMITTALS

A. Submit shop drawings on equipment and materials, in sextuplet (6 copies), to the Architect for approval. The Drawings shall include ratings, performance information, operating data and wiring diagrams. The Contractor shall assume full responsibility for work performed or equipment supplied that is not in agreement with approved shop drawings.

B. The following list of items must be submitted by contractor for approval:
1. Rooftop exhaust fans.
2. Rooftop intake and exhaust hoods.
3. Roof curbs.
4. Sheet metal connections/transitions.
5. Damper.
6. Electrical wiring and equipment.

1.4 RECORD DRAWINGS

A. Neatly and accurately record all changes to Contract Documents on record set of drawings furnished by the General Contractor. These record "as-built" drawings shall include locations of specific items as listed in the various specification DIVISIONS. Upon project completion, these record drawings shall be turned over to the Architect.

1.5 DEFINITIONS

A. As used on Contract Drawings, the term "to provide" shall mean "to furnish", install and connect completely in the specified or approved manner the item or material described.

1.6 GUARANTEE

A. All mechanical equipment, materials and workmanship shall have standard warranty against defects in material and workmanship. Failures due to defective or improper materials, equipment, workmanship or design shall be made good, forthwith, by and at the expense of the Contractor, including damage done to areas, materials and other systems resulting from such failures. Guarantee period shall extend for one year from the Date of Acceptance.

1.7 INSPECTION

A. Contract Drawings are diagrammatic and do NOT show every required fitting, etc. The Contractors shall examine the architectural and MEP Drawing and Specifications to determine the scope of work and familiarize themselves with existing site conditions prior to submitting a bid, and shall include all equipment and accessories necessary for complete and operational systems.

B. If so directed by the Architect or Engineer, the Contractor shall, without extra charge, make reasonable modifications in the layout to prevent conflict with those of other trades and for proper installation of work. The Contractor shall coordinate locations of equipment with all trades before starting construction. Any modification to the equipment layout required for installation shall be performed at no additional cost to the Owner.

1.8 WORKMANSHIP

A. Equipment and materials shall be new, of first quality, selected and arranged to fit properly into spaces indicated. Install equipment and materials in accordance with manufacturer's recommendations.

1.9 COORDINATION WITH OWNER

A. Work shall be scheduled with the Owner. Interruptions in Owner's or Faculty's access to the site shall be subject to Owner limitations of date and duration.

1.10 OPERATION OF SERVICES AND UTILITIES

A. Shutdown of existing services and utilities shall, without exception, be coordinated with the proper utility and with the Owner as to date, time of day, and duration before any service is interrupted. Notify the Owner of estimated duration of shutdown period at least ten days in advance of proposed shutdown.

1.11 PROTECTION

A. Close open ends of work with temporary covers or plugs during construction to prevent entry of foreign material. Protect existing property, equipment and finishes from damage. Repair, to original condition, existing property that has been damaged during execution of the work.

1.12 CLEANING

A. Work site must be kept clean. Rubbish, debris and leftover or excess materials shall be removed daily.

1.13 LUBRICATION

A. No equipment shall be operated for temporary service or testing without proper lubrication. Items requiring lubrication shall be left freshly and fully lubricated at time of substantial completion. Furnish Owner with one complete new set of any special lubrication devices required for servicing, e.g., grease guns, fittings and adapters.

1.14 PAINTING

A. Equipment and materials shall have standard manufacturer's finish except where otherwise noted.

1.15 CUTTING AND PATCHING

A. Cutting and patching to be performed by General Contractor. Painting of finished surfaces after patching shall be as specified by Architect or shall match adjacent finishes.

1.16 WATERPROOFING

A. Provide necessary sleeves, caulking and flashing required to make openings waterproof.

1.17 BASES AND SUPPORTS

A. Provide necessary supports, pads, bases and piers for equipment. Equipment shall be securely attached to building structure in acceptable manner in compliance with BOCA 1113 Seismic. Attachments shall be of strong and durable nature, as determined by the Owner.

1.18 TESTS

A. Each piece of equipment, including motors and controls, shall be operated continuously for minimum one-hour test. Correct all defects appearing during tests, and repeat tests until no defects are disclosed. Final tests shall be made in the Owner's presence.

1.19 SYSTEMS OPERATION AND MAINTENANCE

A. Upon completion of the work and at a time designated by the Engineer, the Contractor shall furnish (5) instruction manuals including data, warranties, etc., and shall instruct the Owner or his representative as to the arrangement, location and operation of all equipment and systems furnished and installed under the Mechanical and Electrical Contract.

1.20 FIELD MEASUREMENT

A. The HVAC Contractor shall verify in the field all measurements necessary for the work.

1.21 PERMITS, LAWS, ORDINANCES, CODES AND STANDARDS

A. Obtain and pay for permits, inspections, licenses and certificates required. Work of this Contract shall meet State Building Code, State Fire Safety Code and other laws, rules and regulations of local, State and Federal authorities; National Fire Protection Association #13, 1998 Edition; National Fire Protection Association #90A and #90B, National Fire Protection Association #96, Latest Edition; International Mechanical Code, 1996 Edition and International Plumbing Code, 1997 Edition; National Electrical Code, 1999 Edition. Equipment, materials and components listed UL Product Directories, shall bear UL labels.

1.22 INSURANCE

A. Furnish insurance certificates required by the Owner.

1.23 LOAD BALANCE

A. The Electrical Contractor shall balance the loads on the three phases in the electrical panelboard in which he does work insofar as physically possible, and report each panel loading to the Engineer.

1.24 GENERAL WIRING TESTS

A. At the time of final inspection and test, all wiring and connections throughout the renovation areas must be completed, devices and equipment properly operating, and power and control wiring clearly identified with approved tags ready for acceptance. Each system shall test free from short circuit and grounds.

1.25 OPERATIONAL TESTS

A. Each piece of electrical equipment, including motors and controls, shall be operated continuously for minimum test period of one hour.

B. Demonstrate by operating equipment that circuits and devices are in good operating condition. Each item of control equipment shall be operated minimum of five times. Demonstration shall be performed after wiring tests.

1.26 MECHANICAL SYSTEM ADJUSTMENT AND TESTING

A. Be present during adjustment period and final testing of mechanical systems. Take readings necessary to ensure that electrical systems are operating properly.

B. Take ampere readings with true RMS reading summer ammeter at each electrical component to determine proper operation.

C. Record readings and submit them in triplicate to the Engineer for review.

1.27 LABELING

A. Label all new disconnects, starters, and motors in a manner acceptable to the Engineer. Provide updated panel schedules in all panelboards within the scope of work.

HVAC SPECIFICATIONS

2.1 DUCTWORK

A. All ductwork and accessories shall be constructed, fabricated and installed in accordance with the latest SMACNA Standards manuals for low pressure ducts, fire damper installations and flexible ductwork.

B. All supply and outside air ventilation systems ductwork shall be galvanized sheet metal, two (2") inch static pressure classification, Seal "C".

2.2 AUTOMATIC TEMPERATURE CONTROLS

A. Provide reconnection and verification of any and all temperature control devices encountered.

2.3 CENTRIFUGAL ROOF VENTILATORS

A. Description: Belt-driven or direct-driven centrifugal fans consisting of housing, wheel, fan, shaft, bearings, motor and disconnect switch, drive assembly, curb base, and accessories

B. Housing: Removable, spun aluminum, dome top and outlet baffle; square, one-piece, aluminum base with venturi inlet cone.

C. Fan Wheels: Aluminum hub and wheel with backward-inclined blades.

D. Belt-Driven Drive Assembly: Resiliently mounted to housing, with the following features:
1. Fan Shaft: Turned, ground, and polished steel; keyed to wheel hub.
2. Shaft Bearings: Permanently lubricated, permanently sealed, self-aligning ball bearings.
3. Pulleys: Cast-iron, adjustable-pitch motor pulley.
4. Fan and motor isolated from exhaust airstream.

E. Accessories:
1. Variable-Speed Controller: On direct drive fans only, provide and wire solid-state control to reduce speed from 100 percent to less than 50 percent.
2. Disconnect Switch: Nonfusible type, with thermal-overload protection mounted inside fan housing, factory wired through an internal aluminum conduit.
3. Bird Screens: Removable, 1/2-inch (13-mm) mesh, aluminum or brass wire.
4. Dampers: Counterbalanced, parallel-blade, backdraft dampers mounted in curb base; factory set to close when fan stops.

F. Roof Curbs: Galvanized steel; mitered and welded corners; 1-1/2-inch- (40-mm-) thick, rigid, fiberglass insulation adhered to inside walls; and 1-1/2-inch (40-mm) wood nailer. Size as required to suit roof opening and fan base.
1. Overall Height: 24 inches, coordinate height with roofing insulation thickness.

ELECTRICAL SPECIFICATIONS

2.4 WIRE, CABLE AND RACEWAYS

A. Rigid galvanized steel conduit (RGS) shall be used for all exterior wiring and where subject to dampness, except as noted below or as specifically noted on the Drawings.

B. Electrical Metallic Tubing (EMT) shall be used for feeders run above ground in dry areas, and all exposed branch circuit wiring.

C. Flexible Metallic Conduit (FMC) or liquid-tight flexible metallic conduit (LFMC) shall be used for connections to vibrating equipment and furniture partitions.
1. Greyfan Type LA liquid-tight flexible metal conduit (LFMC) shall be used for final connections to vibrating equipment.

D. Minimum sizes shall be as follows:
1. Conduit and EMT: 3/4" unless otherwise noted.
2. Flexible Metal Conduit: 1/2".

E. Wire #10 and smaller shall be solid conductor with THW/THHN insulation. Minimum size wire for power circuits shall be #12 AWG. The Contractor shall include an individual code sized green insulated ground conductor for all circuits; the use of the conduit system or cable covering as the sole means of grounding will not be permitted.

F. All conduits and wiring shall be run concealed inside walls where possible. Exposed conduits where allowed shall be run neatly in lines parallel or perpendicular to building walls.

G. All splices for #10 or smaller shall be made with "Scotchlok" spring connectors or equal. Splices for #8 or larger shall be made with UL approved compression connectors.

2.5 SAFETY SWITCHES

A. Safety switches shall be 600 VAC, heavy-duty type in NEMA enclosures suitable for the environment in which they shall be installed. Switches shall be Square D, General Electric or Cutler-Hammer equivalent to the following Square D types:
1. Fused disconnect 2- and 3-pole: "Type H".
2. Non-fused disconnect switches: "Type HU".
3. Fused or non-fused, raintight (HP) disconnect switches in NEMA 3R enclosure: "Type H-R" and/or "Type HU-R".

2.6 FUSES

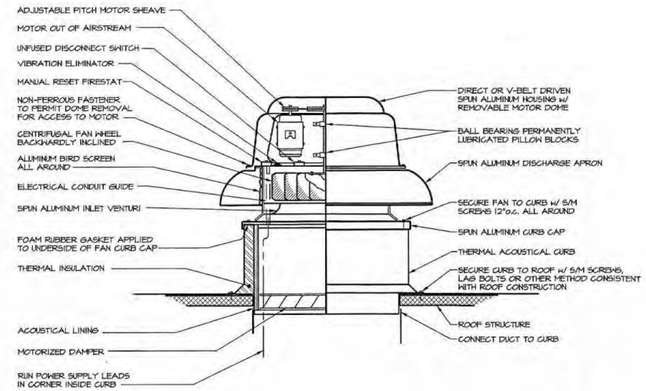
A. Fuses for circuit protection shall be UL listed, non-renewable, low peak, dual-element, time delay fuses, Bussman Type FRN-RK (250 Volt) or FRS-RK (460 Volt) UL Class RK5 or approved equal.

2.7 OUTLET AND JUNCTION BOXES

A. Junction boxes shall be sized in accordance with Code requirements.

B. Junction and outlet boxes where exposed to the weather and wet locations shall be threaded hub type and provided with watertight screw-on covers and gaskets.

END OF SPECIFICATIONS



1 / M-2 ROOF MOUNTED EXHAUST FAN DETAIL
SCALE: NONE

EXHAUST FAN SCHEDULE

UNIT No.	MANUFACTURER MODEL & SIZE	CFM	TOTAL S.P.	FAN RPM	BHP	LWA or SONES	MOTOR HP	MOTOR PH	MOTOR VOLTS	MOTOR RPM	REMARKS
EF-1	GREENHECK 6B-180-3	2800	.25"	810	.33	8.7	1/3	1	120	1150	
EF-2	GREENHECK 6B-180-3	2800	.25"	810	.33	8.7	1/3	1	120	1150	
EF-3	GREENHECK 6B-161-4	2130	.25"	820	.22	8.8	1/4	1	120	1150	
EF-4	GREENHECK 6B-180-3	2800	.25"	810	.33	8.7	1/3	1	120	1150	
EF-5	GREENHECK 6B-180-3	2800	.25"	810	.33	8.7	1/3	1	120	1150	
EF-6	GREENHECK 6B-180-3	2800	.25"	810	.33	8.7	1/3	1	120	1150	
EF-7	GREENHECK 6-010-6	180	.25"	1300	.02	2.6	1/25	1	120	-	
EF-8	GREENHECK 6B-161-4	2130	.25"	820	.22	8.8	1/4	1	120	1150	
EF-9	GREENHECK 6B-121-4	1015	.25"	975	.09	6.6	1/6	1	120	1150	
EF-10	GREENHECK 6-010-6	180	.25"	1300	.02	2.6	1/25	1	120	-	
EF-11	GREENHECK 6B-121-4	1015	.25"	975	.09	6.6	1/6	1	120	1150	
EF-12	GREENHECK 6-090-6	440	.25"	1300	.04	5.5	1/6	1	120	-	
EF-13	GREENHECK 6-090-6	440	.25"	1300	.04	5.5	1/6	1	120	-	
EF-14	GREENHECK 6B-161-4	2130	.25"	820	.22	8.8	1/4	1	120	1150	

NOTES : 1. PROVIDE 24" ROOF CURB, BIRDSCREEN, DISCONNECT, AND GRAVITY DAMPER.
2. CONTRACTOR SHALL MEASURE DUCT SIZES AND PENETRATIONS AND REVIEW WITH ENGINEER PRIOR TO ORDERING EQUIPMENT.

ROOF HOOD SCHEDULE

UNIT No.	MANUFACTURER & MODEL	THROAT SIZE	HEIGHT	FREE AREA (SQ. FT.)	CFM	A.P.D.	VEL. (FPM)	REMARKS
IH-1	GREENHECK WH	58x18	24"	7.25	4500	.05"	600	
IH-2	GREENHECK WH	58x18	24"	7.25	4500	.05"	600	
IH-3	GREENHECK WH	28x28	24"	5.44	2720	.05"	500	
EH	GREENHECK WH	12x18	24"	1.5	500	.025"	350	

NOTES : 1. PROVIDE BIRDSCREEN, AND GRAVITY DAMPER FOR ALL INTAKE HOODS.
2. CONTRACTOR SHALL MEASURE DUCT SIZES AND PENETRATIONS AND REVIEW WITH ENGINEER PRIOR TO ORDERING EQUIPMENT.

REVISIONS

NO.	DATE	DESCRIPTION

DATE: 1/24/05
DRAWN BY: ASP
SCALE: NONE
REVIEWED BY: RSH
PROJECT NO. 2405102

MECHANICAL & ELECTRICAL
DETAILS, SCHEDULES, & SPECS

ROOF REPLACEMENT PROJECT
STATE PROJECT NO: 080-0087-ARR
THOMAS HOOKER ELEMENTARY SCHOOL
OVERLOOK ROAD
MERIDEN, CONNECTICUT

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ME-2