

INDOOR ENVIRONMENTAL SCREENING

**MILLSTONE TOWNSHIP PRIMARY SCHOOL
MILLSTONE TOWNSHIP ELEMENTARY SCHOOL
MILLSTONE TOWNSHIP MIDDLE SCHOOL**

September 3, 2021

Prepared for

**Millstone Township School District
5 Dawson Court
Millstone Township, NJ 08535**

PROJECT NO. 21538.00



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1.0 INTRODUCTION

Vanasse Hangen Brustlin, Inc. (VHB) was been retained by Millstone Township School District to perform an Indoor Environmental Screening of the district's three (3) school buildings. The purpose of the screening was to assess the indoor air quality (IAQ) of the buildings prior to the return of staff and students for the new school year. The screening was conducted by VHB on August 17, 2021.

2.0 BACKGROUND

Millstone Township School District currently occupies three (3) school buildings. The district administrative offices are attached to the Middle School. The schools are as follows:

- Millstone Township Primary School – 18 Schoolhouse Road, Millstone Township, NJ.
- Millstone Township Elementary School – 308 Millstone Road, Millstone Township, NJ.
- Millstone Township Middle School – 5 Dawson Court, Millstone Township, NJ.

The purpose of the screening was to assess the condition of the buildings and to identify conditions that might affect the IAQ upon re-occupancy for the new school year. The general focus was to assess parameters addressed by the New Jersey Public Employees Occupational Safety and Health (PEOSH) Program IAQ Standard (N.J.A.C. 12:100-13) including carbon dioxide (CO₂) and temperature. In addition to collecting these measurements, a visual inspection of accessible areas in the buildings and accessible mechanical system components is performed to identify any evidence of water intrusion, mold, or other conditions likely to affect the IAQ. For example, HVAC filters and condensate pans will be checked for visual cleanliness. Condensers, if accessible will be checked for biofilm accumulation.

The schools were partially occupied (office, administrative, and facilities staff only) at the time of the survey. Floor stripping and waxing was in progress. In general, except for some areas undergoing routine maintenance, the HVAC systems were reported by the Client to be in normal operating mode.

3.0 OBSERVATIONS

VHB performed a visual inspection of each functional space throughout the three (3) school buildings. The following are descriptions of conditions identified within each school building.

3.1 Millstone Township Primary School

- Residual odors from refinishing the hardwood floor were detected in the gym. The district reported that the product used on the floors is a water based, low-VOC floor finish.
- Stained ceiling tiles were observed at the following locations:
 - Lobby between the gym and bathrooms (2 tiles).
 - Computer network room (1 tile).
 - Room C105 (5 tiles).
 - Room C107 (3 tiles).
 - Room E101 at the exterior corner of the building (3 tiles).
 - Room F100 at the exterior corner of the building (2 tiles).
 - Library closet (multiple tiles).
 - Cafetorium (2 tiles) and Stage (2 tiles).
 - Hallway outside Cafetorium (multiple tiles).

- Hallway outside Vocal Music room (1 tile).
- Vocal music room (2 tiles).
- Hallway near lockers along the gym shared wall (3 tiles).
- Art Room (1 tile).
- Visible mold growth was not observed on the affected ceiling tiles.
- Conditions indicative of chronic high humidity and such as sagging ceiling tiles and rusted acoustical ceiling tile grids, musty odors, and excessive rust on accessible HVAC system components were not observed.
- Visual inspection of the accessible surfaces of the HVAC systems did not reveal abnormal dust accumulations or excessive rust on accessible surfaces.

3.2 Millstone Township Elementary School

- Visual inspection of the unit ventilators did not reveal abnormal dust accumulations on accessible surfaces. Randomly selected unit ventilators were checked to verify filter changes had been performed. In each inspected unit, the filters were in good condition. There was some residue in the bottom of the intake plenum from coil cleaning. Cleaning of some units and filter changes on the roof top units was still in progress at the time of the site visit.
- Residual odors from refinishing the hardwood floor were detected in the gym. The district reported that the product used on the floors is a water based, low-VOC floor finish.
- Conditions indicative of chronic high humidity and such as sagging ceiling tiles and rusted acoustical ceiling tile grids, musty odors, and excessive rust on accessible HVAC system components were not observed.
- Stained ceiling tiles were observed at the following locations:
 - Hallway near Room 101.
 - Room 110.
 - Room 139.
 - Room 151.
 - Room 175.
 - Room 191.
 - Hallway outside room 200.
 - Room 203.
- Visible mold growth was not observed on the affected ceiling tiles.

3.3 Millstone Township Middle School

- Routine maintenance of the air handlers including filter changes was scheduled to begin the day after our site visit. The interior accessible surfaces of the air handlers were free from visible mold, rust, and water accumulations.
- Stained ceiling tiles were observed at the following locations:
 - Media Center Room 121.
 - Hallway outside room 942.
 - Room 204
 - Room 311.
 - Room 512.
 - Room 609.
 - Room 611.
 - Room 612.

- Room 812.
- Room 941 (5 tiles).
- Room 945 closet (2 tiles).
- Visible mold growth was not observed on the affected ceiling tiles.
- Conditions indicative of chronic high humidity and such as sagging ceiling tiles and rusted acoustical ceiling tile grids, musty odors, and excessive rust on accessible HVAC system components were not observed.

4.0 IAQ TESTING METHODOLOGY

For general IAQ measurements, a TSI Velocicalc Model #7545 was utilized. The instrument is equipped with multi-function probe and was set to record four basic functions including Temperature in degrees Fahrenheit (°F), Relative Humidity percentage (%RH), Carbon Dioxide (CO₂), and Carbon Monoxide (CO). The instrument was used in "Survey Mode", which allows for capture of "snapshot" measurements by the user. The measurements are taken at representative locations within each inspected area, after allowing the instrument to acclimate to the conditions within the space. The instrument is calibrated prior to use to ensure proper function.

5.0 IAQ TESTING RESULTS

Tables of results from the IAQ sampling are included in Appendix I. The following is a summary of the abnormal findings:

5.1 Millstone Township Primary School

- CO₂, CO, and temperature measurements were within acceptable ranges.
- Relative humidity varied throughout the building, ranging from approximately 50-70%.

5.2 Millstone Township Elementary School

- CO₂ and CO, and temperature measurements were within acceptable ranges.
- Relative humidity varied throughout the building, ranging from approximately 55-70%.

5.3 Millstone Township Middle School

- CO₂ and CO, and temperature measurements were within acceptable ranges.
- Relative humidity varied throughout the building, ranging from approximately 50-70%.

6.0 DISCUSSION of IAQ CRITERIA

Carbon Dioxide (CO₂)

PEOSH promulgates an upper threshold limit of 1,000 PPM for CO₂. This criterion applies to all public buildings in the State of New Jersey. United States Department of Labor, Occupational Safety and Health Administration (OSHA) had promulgated a Permissible Exposure Limit (PEL) for carbon dioxide at 5,000 PPM expressed as an 8-Hour Time Weighted Average (TWA). CO₂ is a byproduct of combustion and respiration. The concentrations found indoors are directly related to the amount of fresh air in the building, effectiveness of air distribution, and occupancy.

Carbon Monoxide (CO)

The OSHA PEL for carbon monoxide is 50 PPM. The American Conference of Governmental Industrial Hygienists (ACGIH) has set a Threshold Limit Value (TLV) for CO, TLV-TWA at 25 PPM. The Indoor Air Quality Association (IAQA) recommends a maximum concentration of 9.0 PPM for CO as an eight-hour average. PEOSH has not established a specific standard for CO. CO is a colorless, odorless, tasteless gas formed during hydrocarbon combustion. CO is a chemical asphyxiant to humans. When inhaled it combines with the hemoglobin of the blood to form carboxyhemoglobin, which prevents oxygen transportation to the brain, heart, and other parts of the body.

Temperature (°F)

The PEOSH IAQ Standard states that when temperatures in the building are outside of the range of 68-79°F that the employer shall check to make sure that the HVAC system is in working order, and that buildings without mechanical ventilation are maintained such that windows, doors, vents, stacks, and other portals used for natural ventilation are in operable condition. The American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) recommends the indoor temperatures be maintained at 68-74° F in the winter and 73-79° F in the summer. These values are considered acceptable ranges of operative temperature and humidity for persons wearing typical summer clothing and typical winter clothing. Higher temperatures can cause discomfort and exacerbate symptoms caused by other IAQ problems. These "comfort zones" assume that occupants are engaged in only light activity, such as in a typical office setting. ASHRAE considers comfort ranges to be met if 80% of occupants find the conditions acceptable.

Relative Humidity (%)

OSHA recommends humidity control within a 20% to 60%. ASHRAE recommends humidity be maintained at 30% to 60%. PEOSH has not established a specific standard for RH. Low relative humidity can result in eye irritation and complaints of nose and throat discomfort. In addition, irritated mucous membranes can predispose susceptible individuals to the effects of certain chemical and microbiological air contaminants. High humidity levels (over 60%), given certain other favorable conditions, can promote the growth of microorganisms on building surfaces and furnishings, and cause or contribute to microbial IAQ problems.

7.0 CONCLUSIONS

7.1 Millstone Township Primary School

- The indoor environmental conditions appear acceptable for re-occupancy.
- CO₂ and temperature within the building meet the PEOSH criteria.
- Relative humidity varied and was over 60% in approximately 2/3 of the building. This is likely related to having some HVAC systems down for repairs and excess moisture indoors from floor stripping and waxing. It should also be noted that the outdoor humidity was over 65% for the entire duration of testing that day.
- Conditions that typically indicate damage from chronic high humidity were not observed within the building. Musty odors were not detected. Visible mold was not observed on susceptible surfaces.

- The building does not appear to be at an elevated risk for mold growth conditions caused by high humidity. The humidity measurements that day are likely not representative of the conditions during normal staff/student occupancy.
- The district appears to be performing routine preventative maintenance on HVAC systems in accordance with the PEOSH IAQ Standard. Filters were in good condition, and the interior of air handlers were generally clean.
- Most of the ceiling tile staining was limited to small, dried staining of single tiles. The stained ceiling tiles are likely related to small isolated roof or flashing leaks, or condensation on mechanical components. The conditions as observed do not present an elevated risk of negative impacts on IAQ and should not affect building occupancy.

7.2 Millstone Township Elementary School

- The indoor environmental conditions appear acceptable for re-occupancy.
- CO₂ and temperature within the building meet the PEOSH criteria.
- Most of the ceiling tile staining was limited to small, dried staining of single tiles. The stained ceiling tiles are likely related to small isolated roof or flashing leaks, or condensation on mechanical components. The conditions as observed do not present an elevated risk of negative impacts on IAQ and should not affect building occupancy.
- Relative humidity varied and was over 60% in most of the building. This is likely related to having some HVAC systems down for repairs and excess moisture indoors from floor stripping and waxing. It should also be noted that the outdoor humidity was over 65% for the entire duration of testing that day.
- Conditions that typically indicate damage from chronic high humidity were not observed within the building. Musty odors were not detected. Visible mold was not observed on susceptible surfaces.
- The building does not appear to be at an elevated risk for mold growth conditions caused by high humidity. The humidity measurements that day are likely not representative of the conditions during normal staff/student occupancy.
- The district appears to be performing routine preventative maintenance on HVAC systems in accordance with the PEOSH IAQ Standard. Filters were in new condition, and the interior of air handlers were generally clean.

7.3 Millstone Township Middle School

- The indoor environmental conditions appear acceptable for re-occupancy.
- CO₂ and temperature within the building meet the PEOSH criteria. Temperature and relative humidity were within the recommended acceptable ranges.
- Most of the ceiling tile staining was limited to small, dried staining of single tiles. The stained ceiling tiles are likely related to small isolated roof or flashing leaks, or condensation on mechanical components. The conditions as observed do not present an elevated risk of negative impacts on IAQ and should not affect building occupancy.
- The district appears to be performing routine preventative maintenance on HVAC systems in accordance with the PEOSH IAQ Standard.
- Relative humidity varied and was over 60% in most of the building. This is likely related to having some HVAC systems down for repairs and excess moisture indoors from floor stripping and waxing. It should also be noted that the outdoor humidity was over 65% for the entire duration of testing that day.

- Conditions that typically indicate damage from chronic high humidity were not observed within the building. Musty odors were not detected. Visible mold was not observed on susceptible surfaces.

8.0 RECOMMENED FOLLOW-UP

8.1 Millstone Township Primary School

- Stained ceiling tiles should be replaced. A log should be maintained as to the location of the stained tiles. Periodic checks of the affected locations should be performed and tiles replaced as needed until the source can be identified and corrected.
- Once floor finishing is complete and mechanical systems are restored to full operating capacity, the building should be given time to stabilize, and the relative humidity should be retested.
- If the odors in the gym do not dissipate naturally, fresh air flushing of the gym should be performed. If the products used contain Hazardous Materials as defined by the New Jersey Department of Health – New Jersey Right to Know Hazardous Substance List, ensure that a copy of the product information is included in the Right-to-Know file for the facility and district central file.
- A copy of this report and response actions should be provided to the districts PEOSH IAQ Plan Designated Person for recordkeeping purposes in accordance with the PEOSH IAQ Standard.

8.2 Millstone Township Elementary School

- Stained ceiling tiles should be replaced. A log should be maintained as to the location of the stained tiles. Periodic checks of the affected locations should be performed and tiles replaced as needed until the source can be identified and corrected.
- Once floor finishing is complete and mechanical systems are restored to full operating capacity, the building should be given time to stabilize, and the relative humidity should be retested.
- If the odors in the gym do not dissipate naturally, fresh air flushing of the gym should be performed. If the products used contain Hazardous Materials as defined by the New Jersey Department of Health – New Jersey Right to Know Hazardous Substance List, ensure that a copy of the product information is included in the Right-to-Know file for the facility and district central file.
- A copy of this report and response actions should be provided to the districts PEOSH IAQ Plan Designated Person for recordkeeping purposes in accordance with the PEOSH IAQ Standard.

8.3 Millstone Township Middle School

- Stained ceiling tiles should be replaced. A log should be maintained as to the location of the stained tiles. Periodic checks of the affected locations should be performed and tiles replaced as needed until the source can be identified and corrected.
- Once floor finishing is complete and mechanical systems are restored to full operating capacity, the building should be given time to stabilize, and the relative humidity should be retested.
- A copy of this report and response actions should be provided to the districts PEOSH IAQ Plan Designated Person for recordkeeping purposes.

9.0 LIMITATIONS

The location and quantity of samples collected is determined using our best professional judgment and are collected as a screening tool to assist in the overall assessment. The findings in this report are reflective of the conditions at the time of VHB's inspection. Several factors can affect microbiological

sampling results including wind, temperature, and precipitation. All findings and recommendations are valid as of the date of the report. All conclusions and recommendations are limited based on the site conditions at the time of our inspection.

9.0 SIGNATURE

This report was prepared and is respectfully submitted by

Vanasse Hangen Brustlin, Inc.



Christopher Glowacki, CIH, CIEC
Industrial Hygienist

September 3, 2021

Date



Jason P. Hooper
Senior Project Manager

September 3, 2021

Date

APPENDIX I

TABLES OF INDOOR AIR QUALITY MEASUREMENTS

LogDat2 Data File

Model Number: 7545
 Serial Number: T75451339001
 Test ID: 2
 Test Abbreviation: Test 002
 Start Date: 8/17/2021
 Start Time: 10:34:08
 Duration (dd:hh:mm:ss): 0:01:41:09
 Log Interval (mm:ss): 0:10
 Number of points: 62
 Notes: Test 002

Statistics	Channel:	CO2	T	H	CO
	Units:	ppm	deg F	%rh	ppm
	Average:	399	74	67.4	0.7
	Minimum:	343	56.3	50.6	0.3
	Time of Minimum:	12:14:58	11:27:12	10:42:14	11:02:59
	Date of Minimum:	8/17/2021	8/17/2021	8/17/2021	8/17/2021
	Maximum:	780	83.5	96.1	2.5
	Time of Maximum:	10:49:33	12:15:17	11:27:12	11:27:12
	Date of Maximum:	8/17/2021	8/17/2021	8/17/2021	8/17/2021

Calibration	Meter:	8/29/2017
Calibration	Sensor:	8/16/2021

Location	CO2 ppm	T deg F	H %rh	CO ppm
Main Office	465	74.7	53.2	0.8
Lobby	384	74.3	64	0.8
CST Office	380	73.9	68	0.6
CST Office	379	74	68	0.7
B Hall	382	74.6	69.4	0.7
B106	383	72.2	53.6	0.8
B107	384	71	50.6	0.8
B105	443	71.4	61.9	0.6
B104	432	74.9	69.8	0.4
B102	547	75.9	66.4	0.6
B103	559	72	66.1	0.7
B100	531	72.6	66.3	0.7
B101	780	73.9	67.9	0.6
C114	372	73.3	69.8	0.6
IT Closet	383	72.9	68.6	0.6
C112	398	71.8	68.2	0.6
C111	360	72	67.1	0.7
C110	363	71.7	64.9	0.7
C109	362	72.4	62.7	0.5
C108	361	72.6	62.6	0.4
C106	348	70	61.4	0.6

C104	347	70.4	63.3	0.3
C107	354	72.4	68.6	0.5
C105	373	72.9	63.8	0.5
C Hall	406	74	59.2	0.7
C102	363	75.9	66.9	0.5
C100	355	74.9	66.5	0.5
C103	390	76.2	65.7	0.6
C101	364	74.5	65.3	0.7
Library	410	73.3	62	0.6
Nurse	461	73.6	64	0.6
Art Room	407	74.4	65.9	0.4
Cafetorium	443	56.3	66.1	2.5
Kitchen	370	72.4	67.2	0.8
Mechanical	407	77.7	65.8	0.6
Teacher Room	364	78.4	64.3	0.7
Vocal Music	482	75.6	60.8	0.8
Instrumental Music	381	76.8	62	0.8
E102	415	77.5	57.6	0.8
E100	365	74.7	55.3	0.8
E101	387	76.3	58.5	0.8
E103	406	75.1	61.2	0.8
E105	369	76	62.9	0.6
E107	361	73.1	51.5	0.6
E108	425	75	63.7	0.6
E104	397	77	63.7	0.8
F110	345	76.9	61.4	0.7
F108	370	77.3	60.8	0.8
F109	393	75	55.9	0.8
F107	345	72.3	54.3	0.8
F106	357	72.1	55.9	0.8
F105	395	72.1	56.8	0.7
F104	358	71.7	57.4	0.7
F103	393	73.6	59.1	0.8
F102	387	75	60.1	1.2
F100	366	73.5	58.8	0.8
F101	371	73.1	58.1	0.8
Gymnasium	374	74.9	69.1	0.7
Gymnasium	374	74.9	69.9	0.7
Computer Room	428	75.8	59.9	0.6
Outdoor	343	82.1	67.8	0.3
Outdoor	355	83.5	69.4	0.4

LogDat2 Data File

Model Number: 7545
 Serial Number: T75451339001
 Test ID: 1
 Test Abbreviation: Test 001
 Start Date: 8/17/2021
 Start Time: 8:18:22
 Duration (dd:hh:mm:ss): 0:01:52:34
 Log Interval (mm:ss): 0:10
 Number of points: 54
 Notes: Test 001

Statistics	Channel:	CO2	T	H	CO
	Units:	ppm	deg F	%rh	ppm
	Average:	438	73.3	64.9	0.8
	Minimum:	342	69.2	46.2	0.7
	Time of Minimum:	10:10:56	9:10:06	10:05:23	9:30:36
	Date of Minimum:	8/17/2021	8/17/2021	8/17/2021	8/17/2021
	Maximum:	675	81.9	81	1.5
	Time of Maximum:	9:01:52	10:10:37	9:30:36	9:43:54
	Date of Maximum:	8/17/2021	8/17/2021	8/17/2021	8/17/2021

Calibration	Meter:	8/29/2017
Calibration	Sensor:	8/16/2021

Location	CO2 ppm	T deg F	H %rh	CO ppm
Office	465	70.9	56.7	0.8
166	478	70.4	62.1	0.8
167	453	70.3	69.3	0.8
161	398	72.5	73.4	0.7
162	500	73.1	60.8	0.8
168	475	72.8	67.2	0.8
Hallway	420	71.4	61	0.8
169	439	75.3	75.1	0.8
163	433	75.7	75.1	0.8
164	418	73.4	54.2	0.8
174	428	73.7	73.5	0.8
175	402	70.1	61.1	0.8
176	395	70	62.8	0.8
191	401	71.2	64	0.8
192	424	70.6	64.5	0.8
Gym	413	73.3	70.9	0.7
199	380	73.9	77.6	0.8
209	423	74.4	68.3	0.8
200	531	74.4	70.6	0.8
210	675	74.2	63.9	0.8
201	411	74.1	70.8	0.8

203	401	73.2	64.1	0.8
Hallway	388	70.9	63.8	0.8
211	550	70.5	65.4	0.8
212	421	69.2	63.9	0.8
Library	506	71.2	64.6	0.8
150	551	72.3	74.2	0.8
151	504	72.8	74.5	0.8
Hallway	655	75.1	67.7	0.8
CST Office	404	74.4	61.4	0.8
Art Room	435	72	54.3	0.8
Faculty Room	386	74.3	69.4	0.8
139	415	73.2	56.8	0.8
138	399	73.7	71	0.7
140	359	71.7	68.6	0.8
137	361	72.7	69.2	0.8
136	431	75.8	69.6	0.8
135	405	71	57.7	1.2
Nurse	417	73.1	65.9	1.5
Cafeteria	540	76.2	76.2	0.8
Mechanical Room	442	75.1	61.3	1.5
Kitchen	374	71.8	58.3	0.8
116	384	74.9	57	0.8
114	453	71.6	59	0.9
110	395	71.6	62	0.8
109	445	74.1	67.3	0.8
113	574	72.5	55.7	0.8
108	375	71.7	59.4	0.8
112	374	74.4	46.9	0.8
101	370	74.5	46.2	0.8
102	545	75.3	56.8	0.8
103	348	80.4	64.5	0.7
Outdoor	357	81.9	68.6	0.7
Outdoor	342	81.8	67.3	0.8

LogDat2 Data File

Model Number: 7545
 Serial Number: T75451339001
 Test ID: 3
 Test Abbreviation: Test 003
 Start Date: 8/17/2021
 Start Time: 12:41:57
 Duration (dd:hh:mm:ss): 0:02:15:32
 Log Interval (mm:ss): 0:10
 Number of points: 83
 Notes: Test 003

Statistics	Channel:	CO2	T	H	CO
	Units:	ppm	deg F	%rh	ppm
	Average:	405	73.2	64.9	0.4
	Minimum:	337	69.8	51	0.1
	Time of Minimum:	14:56:11	13:43:10	13:58:46	14:22:08
	Date of Minimum:	8/17/2021	8/17/2021	8/17/2021	8/17/2021
	Maximum:	606	82.5	78.6	0.7
	Time of Maximum:	13:04:06	14:56:11	13:20:50	12:42:07
	Date of Maximum:	8/17/2021	8/17/2021	8/17/2021	8/17/2021

Calibration	Meter:	8/29/2017
Calibration	Sensor:	8/16/2021

Location	CO2 ppm	T deg F	H %rh	CO ppm
Office	434	78	59.5	0.7
Principal Office	410	77.1	61.4	0.7
150	472	75.2	61.8	0.5
Guidance	393	74.8	64.6	0.6
Guidance	381	74.1	65.9	0.5
941	379	74	66.5	0.6
942	440	71.9	66.6	0.5
945	397	70.5	65.7	0.6
Stage	371	70.4	70.4	0.5
Theater	366	70.5	71.6	0.2
Theater	368	70.3	71.8	0.2
Board Office	592	73.7	64.6	0.2
Board Office	598	73.1	65	0.4
Board Office	606	73.2	65.7	0.5
Board Office	565	72.8	66.5	0.4
Board Office	559	72	66.6	0.3
Cafeteria	434	72.3	69.9	0.6
Faculty Dining	502	71.7	69.3	0.2
Boiler Room	395	74	70	0.3
Kitchen	423	73.5	68.3	0.5
Kitchen	416	73.3	68.4	0.5

Gymnasium 1	405	73	67.8	0.4
Gymnasium 1	420	73	66.6	0.5
Boys Lockers	363	74.5	68.6	0.3
Girls Lockers	366	75.3	68.4	0.4
Gymnasium 2	361	74.9	61.6	0.4
Gymnasium 2	374	74.6	58.6	0.5
715	363	74.9	59.2	0.7
716	362	74.5	59.6	0.4
713	365	72.4	61	0.4
714	363	71.7	62.5	0.3
711	390	72.3	63.5	0.3
712	356	71.7	63.7	0.4
704B	396	72.4	64.6	0.2
704A	423	72.5	64.5	0.3
703	395	71.6	59.3	0.6
503	373	69.8	61.6	0.3
509	389	70	69.5	0.2
511	451	71.5	67.1	0.2
513	404	71.6	66.8	0.2
515	370	71.9	64.6	0.4
514	361	72.4	65.7	0.3
512	389	72.5	65.7	0.4
Media Center	419	73.2	51.4	0.4
Media Center	401	72.9	51	0.3
309	411	72.5	61.3	0.3
311	397	73.3	62	0.5
313	356	72	61.5	0.4
315	433	71.4	62.7	0.5
314	370	71.9	64.1	0.3
312	375	72	64.3	0.5
Nurse	428	73.4	62.2	0.5
414	398	74.3	62.8	0.4
412	379	73.3	61.6	0.6
515	459	74.1	62.6	0.5
413	375	73.9	64.6	0.1
411	383	74.2	62.8	0.5
409	422	74.2	61.6	0.5
402	370	73.5	56.6	0.6
612	348	74.5	63.9	0.4
613	405	73.8	63.7	0.6
614	386	73.7	63.8	0.6
615	352	73.5	63.2	0.5
611	427	73.8	67.7	0.5
Hallways	428	73.8	67.6	0.4
Media Suite	401	72.6	57.9	0.5
609	392	73.1	64.4	0.4
602	425	72.3	60.3	0.6
802	431	72.6	60.2	0.3
203	400	72.7	59.9	0.4
204	469	72.3	60.8	0.3

803	487	72.8	62.5	0.5
804	354	72.5	64.3	0.4
811	351	72.5	68.4	0.3
812	408	71.8	66.1	0.4
814	371	71.9	65.7	0.5
813	375	71.5	65.3	0.5
816	367	71.7	67.3	0.4
815	356	71.9	69.3	0.3
Hallways	378	71.4	68.8	0.5
Outdoor	349	82.4	68.2	0.5
Outdoor	337	82.5	66.2	0.6
Outdoor	339	82	66	0.7

APPENDIX II

PHOTOGRAPHIC LOG

#1 – Staining on acoustical ceiling tiles (typical conditions).



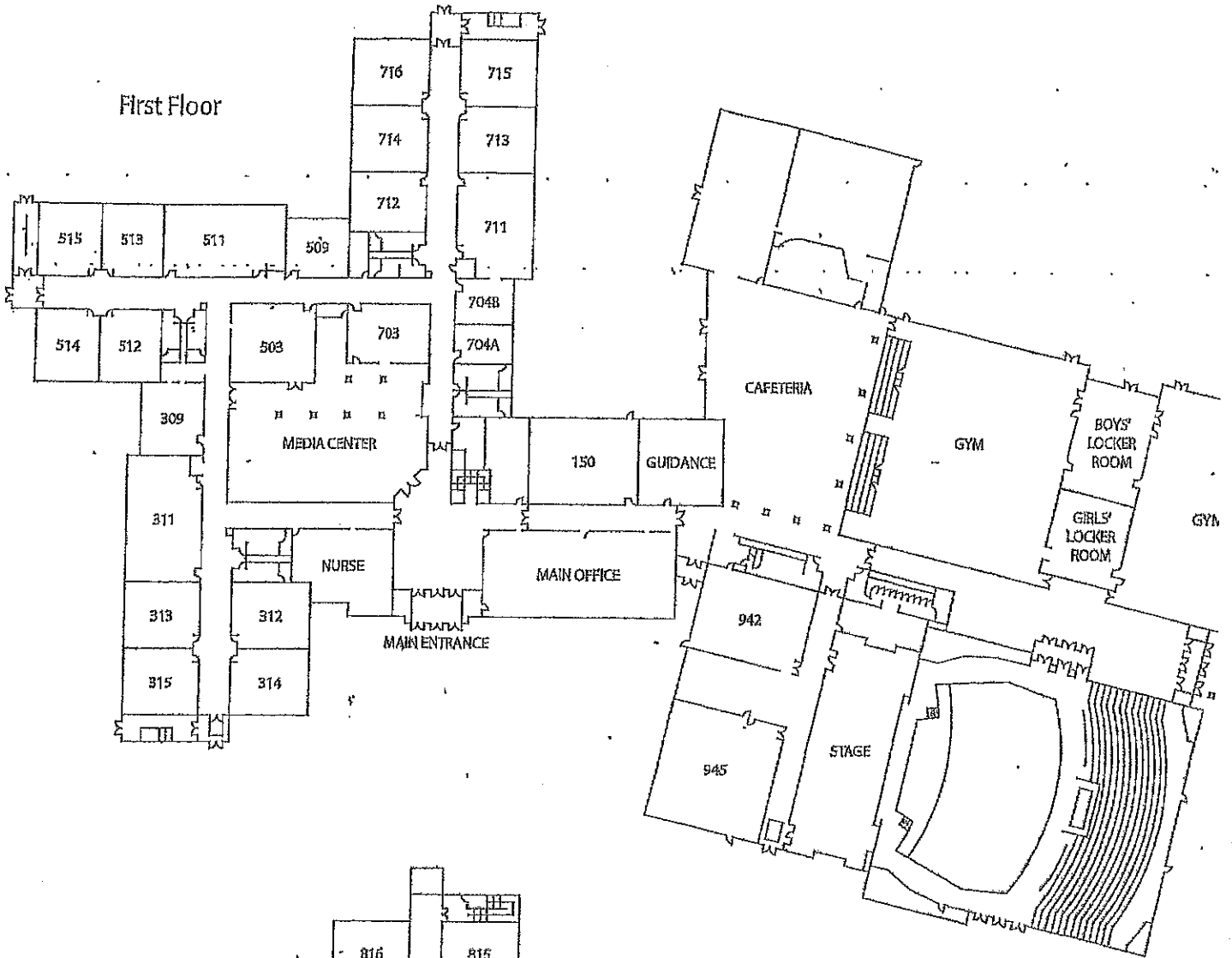
#2 – Staining on acoustical ceiling tiles, typical conditions.



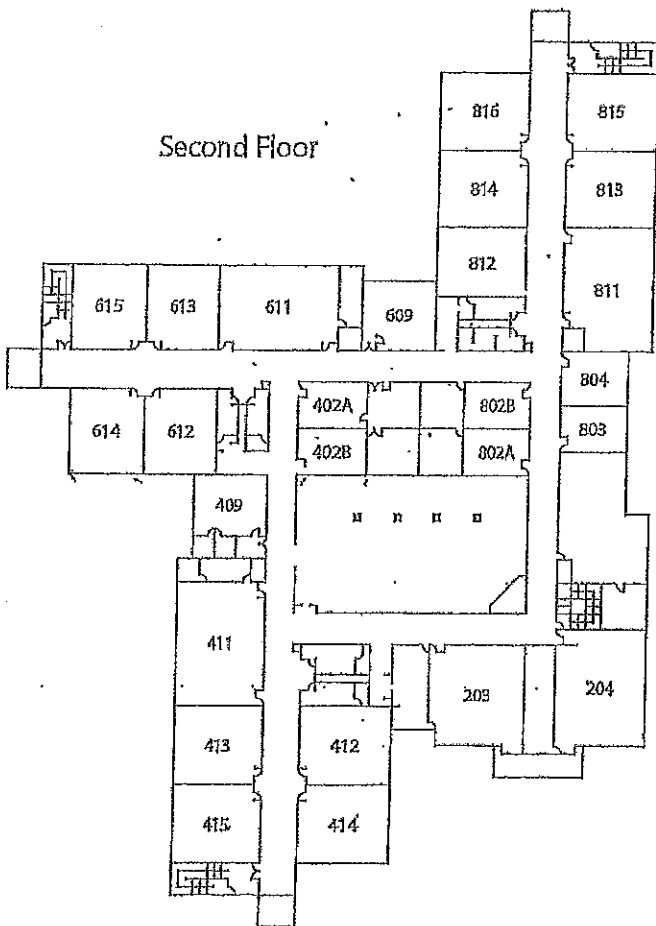
APPENDIX III

BUILDING MAPS AND ROOM IDENTIFICATION

First Floor

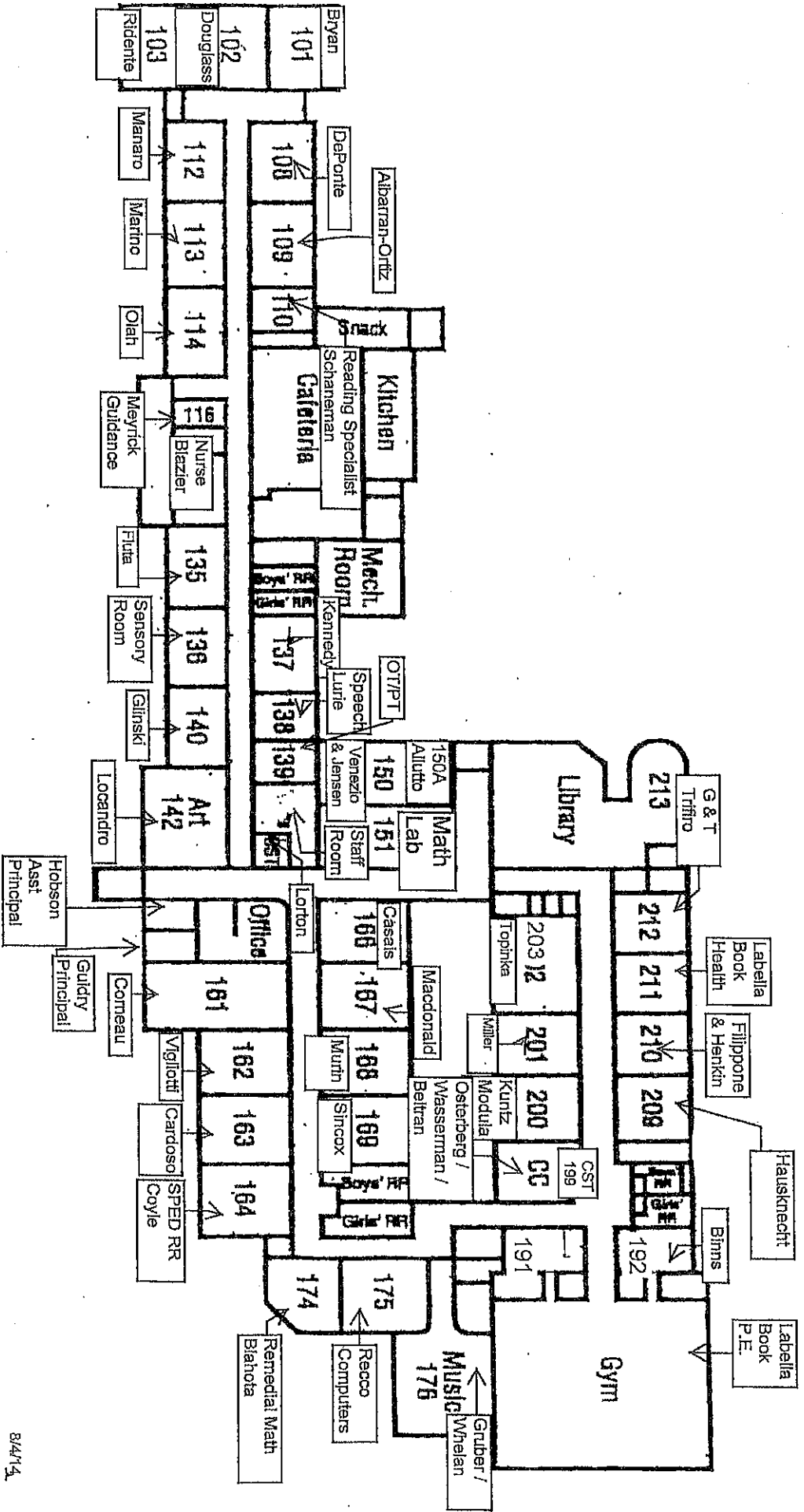


Second Floor

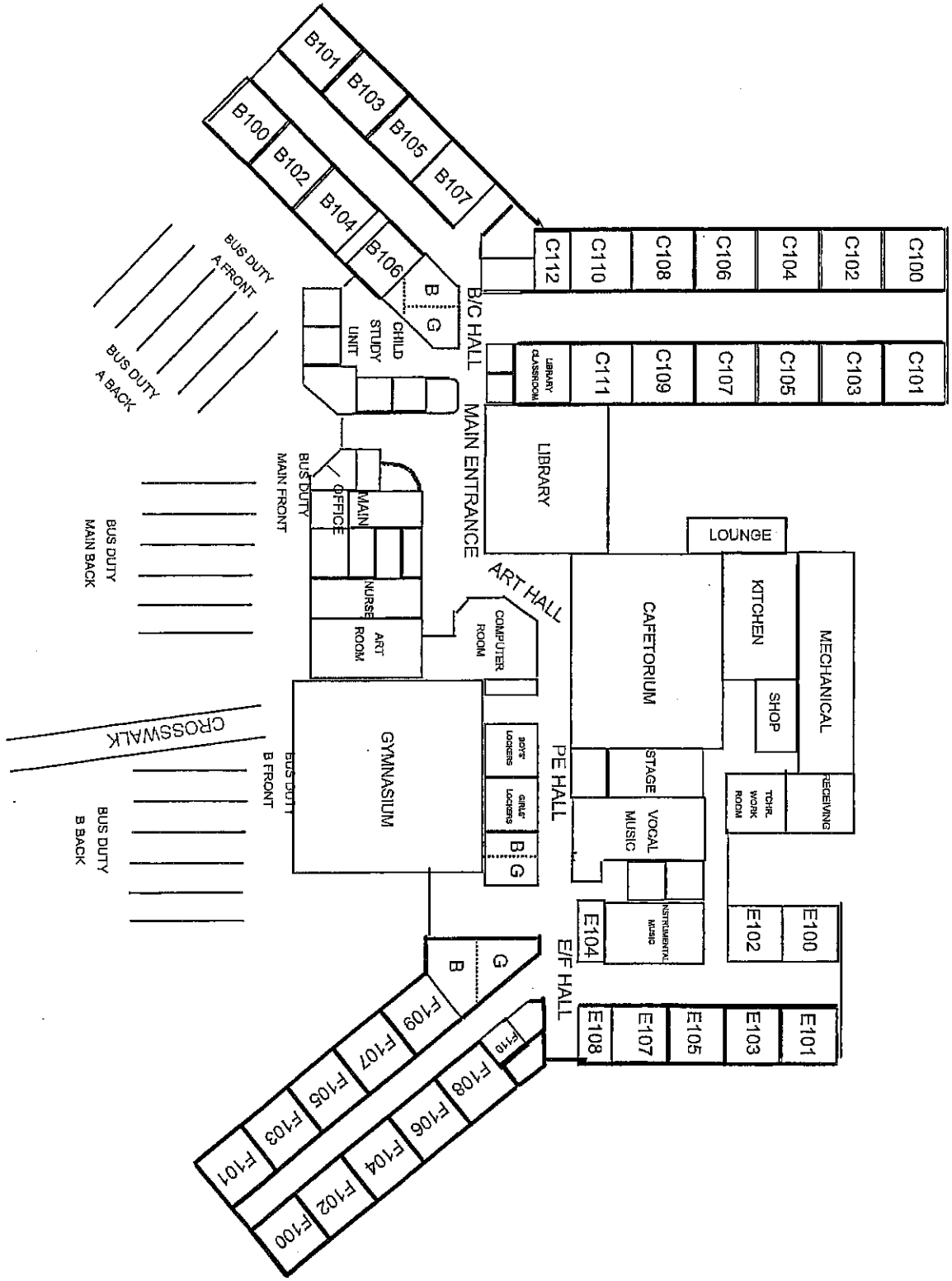


Millstone Township Elementary School

2020-2021



MILLSTONE TOWNSHIP PRIMARY SCHOOL
 SCHOOLHOUSE ROAD, MILLSTONE TOWNSHIP, NJ 08510



o = primary route
o = Secondary route