



LEHIGHTON AREA
SCHOOL DISTRICT

1 December 2010



August 2008

- **Land Use Study**

November 2008

- **District-Wide Feasibility Study**

September 2009

- **Miscellaneous Projects**

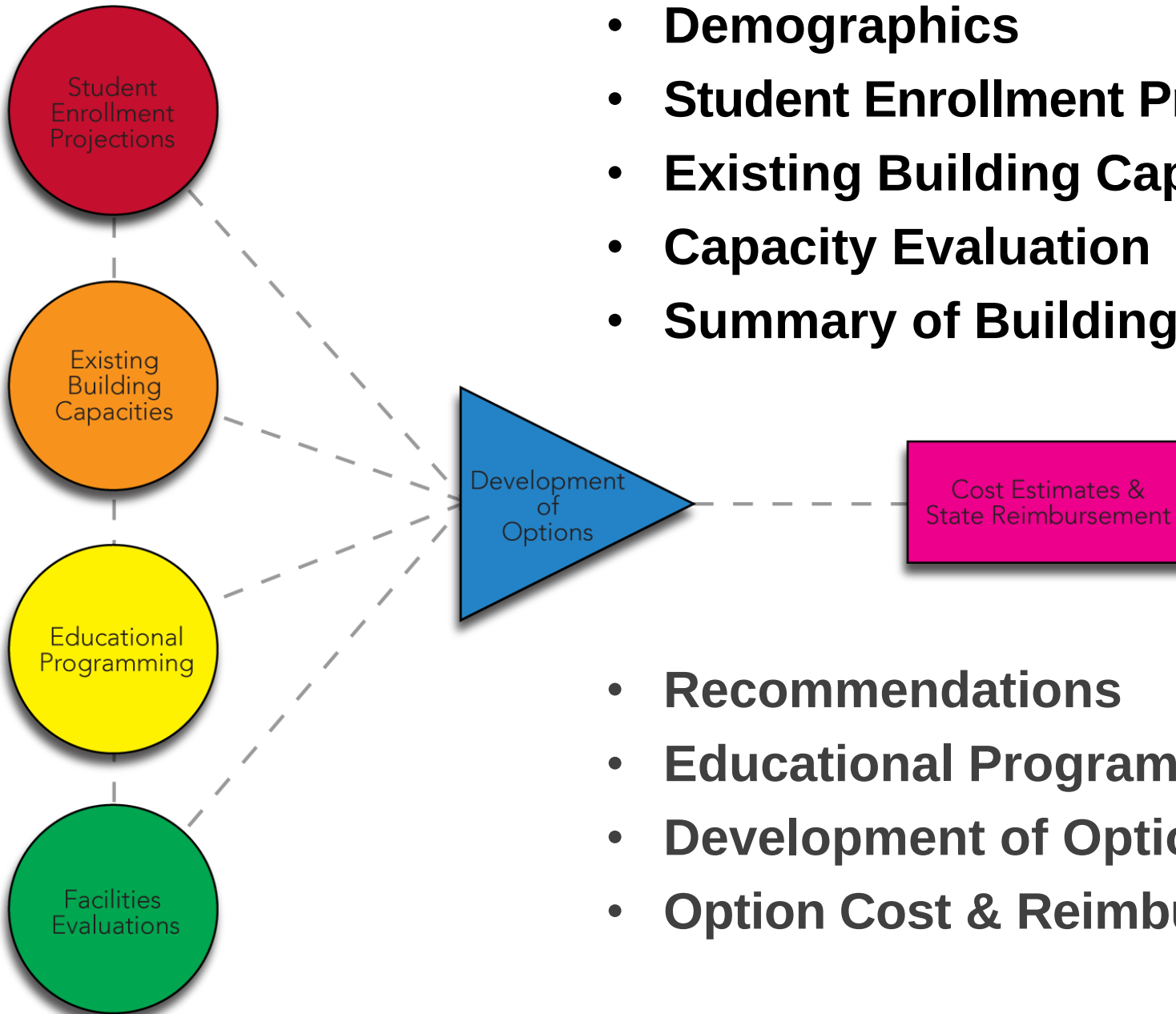
Hot water heater replacement at M.S.

January 2010

- **H.S. – Exterior Wall Masonry Repairs**

East Penn E.S. – Carpet Replacement

Feasibility Study Process



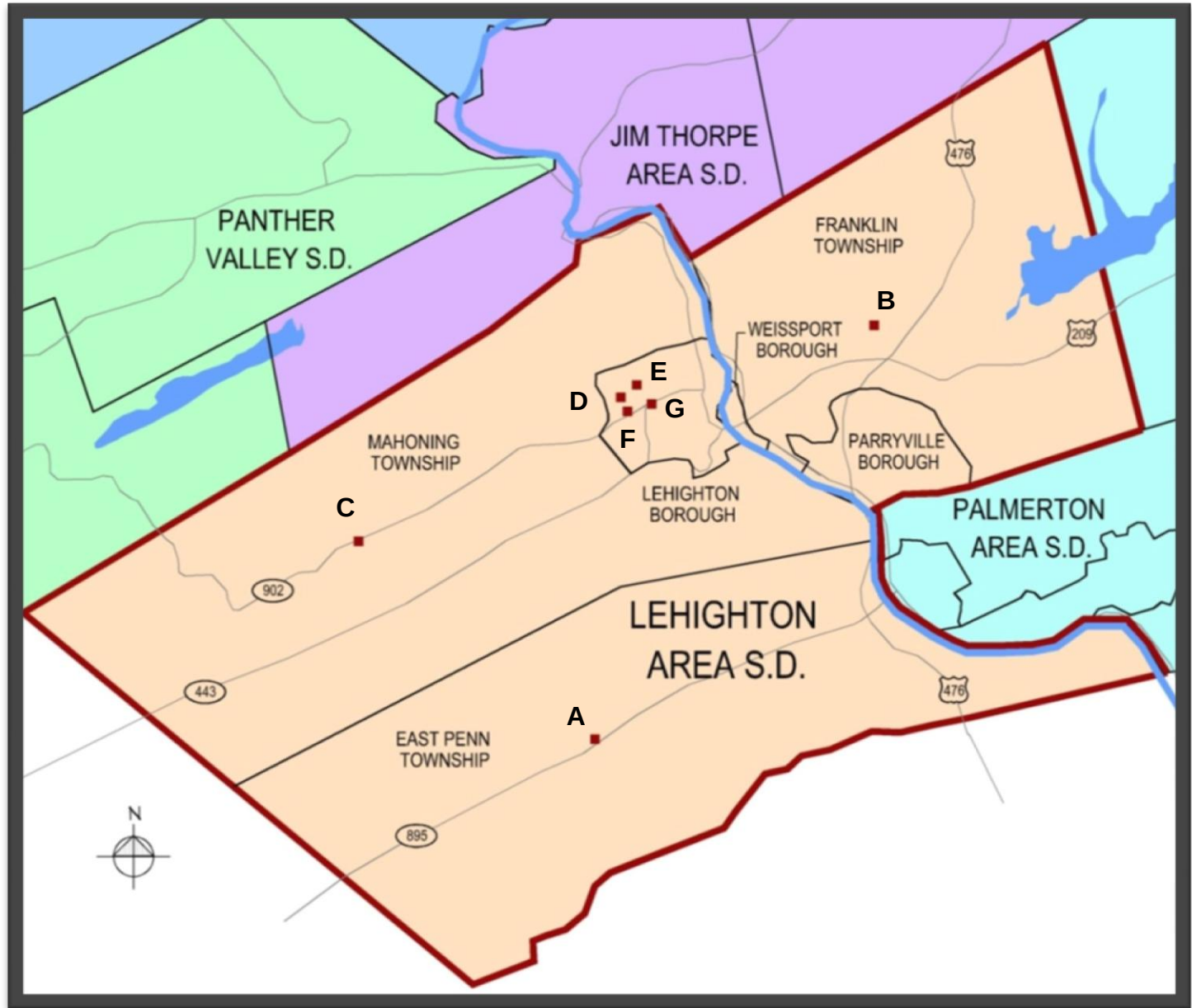
- **Demographics**
- **Student Enrollment Projections**
- **Existing Building Capacity**
- **Capacity Evaluation**
- **Summary of Buildings**

- **Recommendations**
- **Educational Programming**
- **Development of Options**
- **Option Cost & Reimbursement**

District Map

Lehigh Area Schools

- A. East Penn Elementary School
- B. Franklin Elementary School
- C. Mahoning Elementary School
- D. Shull-David Elementary School
- E. Lehigh Area Middle School
- F. Lehigh Area High School
- G. District Administration



Lehigh Area Schools



(K-4) East Penn Elementary School :

Built:	1954; A&A 1991
Site:	12.65 acres
Area:	24,270 SF
Capacity:	125
Current Enrollment:	150



(K-4) Franklin Elementary School :

Built:	1954; A&A 1992
Site:	25.5 acres
Area:	39,915 SF
Capacity:	300
Current Enrollment:	288

Lehigh Area Schools



(K-4) Mahoning Elementary School :

Built:	1954; A&A 1991
Site:	7.13 acres
Area:	28,470 SF
Capacity:	175
Current Enrollment:	193



(K-4) Shull-David Elementary School :

Built:	1959; A&A 1993
Site:	3.63 acres
Area:	38,515 SF
Capacity:	250
Current Enrollment:	306

Lehigh Area Schools



(5-8) Lehigh Area Middle School :

Built: 1964; A&A 1993
Site: 17 acres
Area: 118,450 SF
Capacity: 729
Current Enrollment: 736



(9-12) Lehigh Area High School :

Built: 1992
Site: 91.52 acres
Area: 148,940 SF
Capacity: 781
Current Enrollment: 783



District Administration:

Built: 1994
Site:
Area: 17,330 SF
Capacity: 29
Current Enrollment: N/A

Leighton Area Schools

(K-4) East Penn Elementary School :

Built: 1954; A&A 1991
Site: 12.65 acres
Area: 24,270 SF
Capacity: 125
Current Enrollment: 150

IMPROVEMENTS

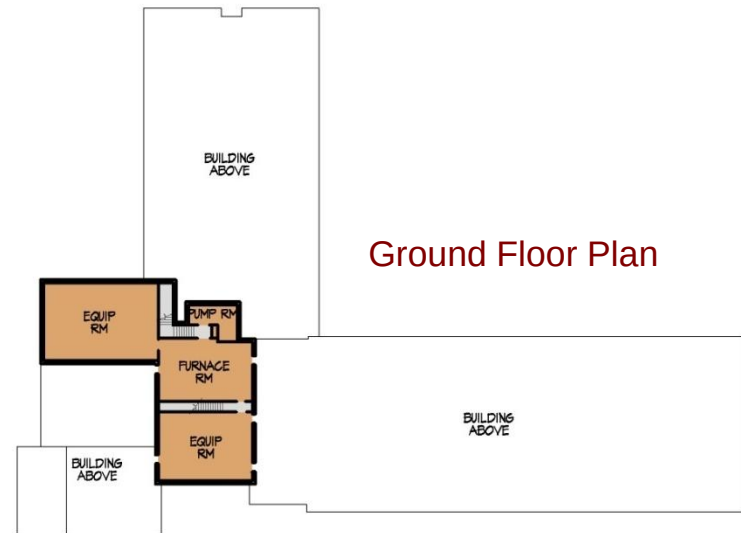
- Upgrade Mechanical, Electrical, Lighting & Plumbing

Systems

- Building Code Upgrades
- Accessibility Upgrades
- Upgrade Security Systems
- Reduction of Energy Use
- Technology Upgrades
- Roof Replacement
- Refurbish Interior Finishes
- Increased Parking
- Repair Paving and Sidewalks
- Improve Site Drainage
- Improve Site Lighting
- Safety at Play Areas
- Increased Security Fencing



First Floor Plan



Ground Floor Plan

Leighton Area Schools

(K-4) Franklin Elementary School :

Built: 1954; A&A 1992
Site: 25.5 acres
Area: 39,915 SF
Capacity: 300
Current Enrollment: 288

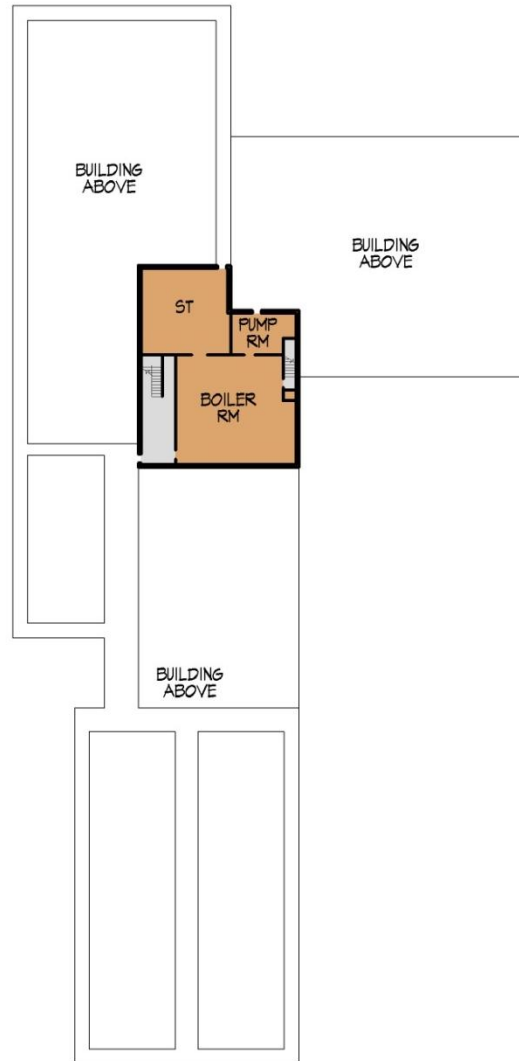
IMPROVEMENTS

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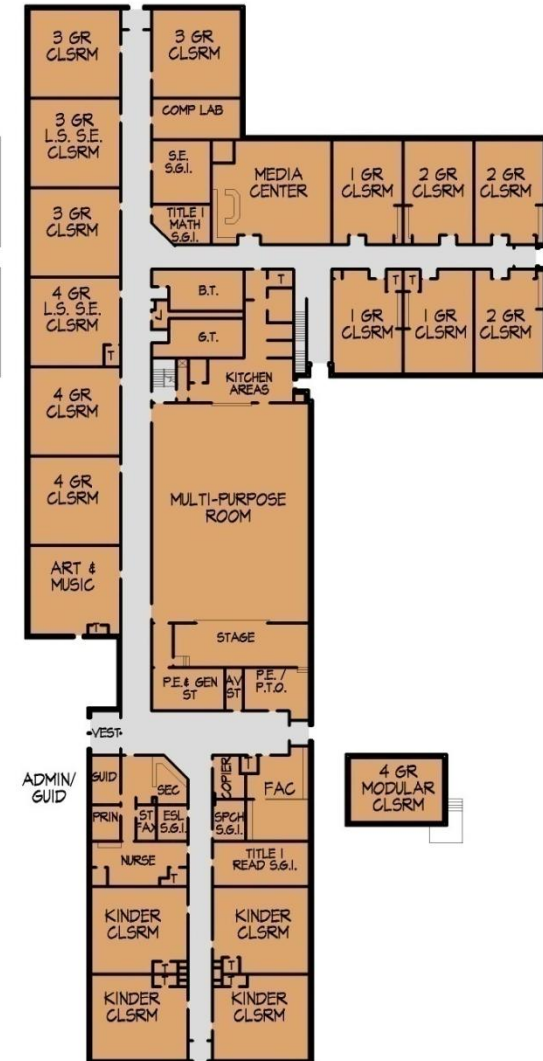
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- Improve Site Lighting
- Safety at Play Areas
- Increased Security Fencing
- Repair Running Track

Ground Floor Plan



First Floor Plan



Lehigh Area Schools

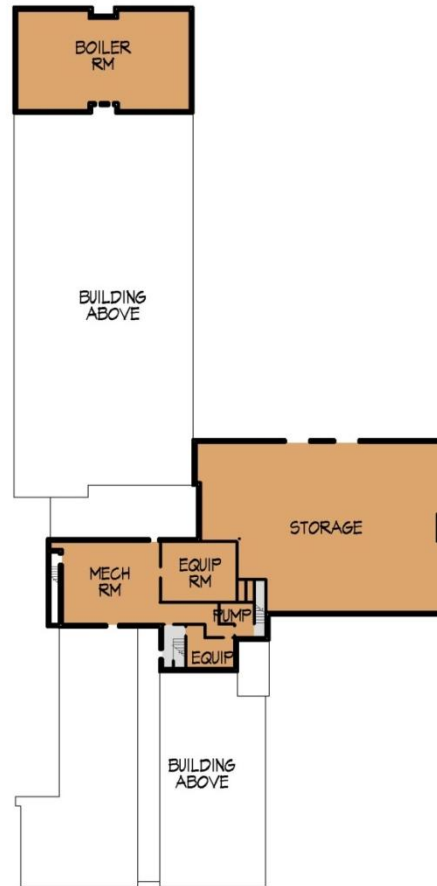
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Site: 7.13 acres
Area: 28,470 SF
Capacity: 175
Current Enrollment: 193

IMPROVEMENTS

- Upgrade Mechanical, Electrical, Lighting & Plumbing Systems
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- Accessibility Upgrades
- Upgrade Security Systems
- Reduction of Energy Use
- Technology Upgrades
- Roof Replacement
- Refurbish Interior Finishes
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- Improve Site Drainage
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Ground Floor Plan



First Floor Plan



Lehigh Area Schools

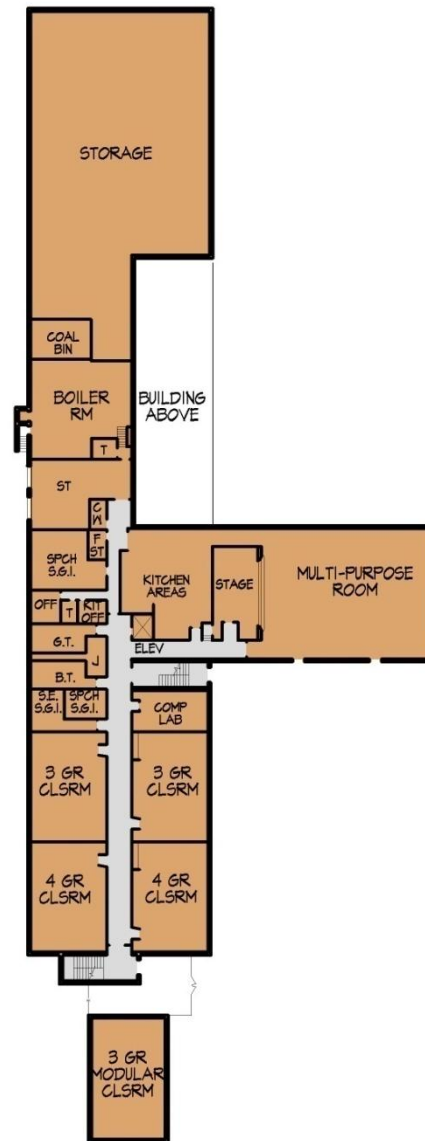
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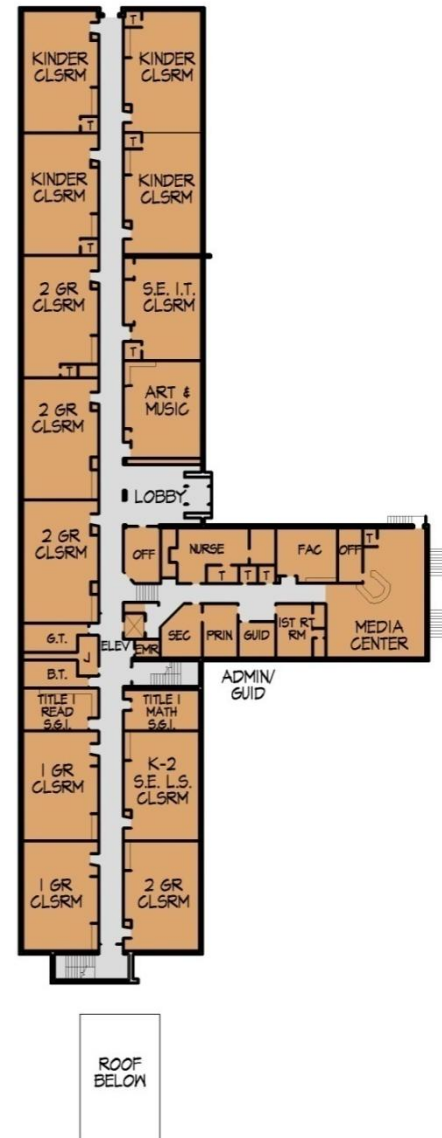
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Ground Floor Plan



First Floor Plan



Lehigh Area Schools

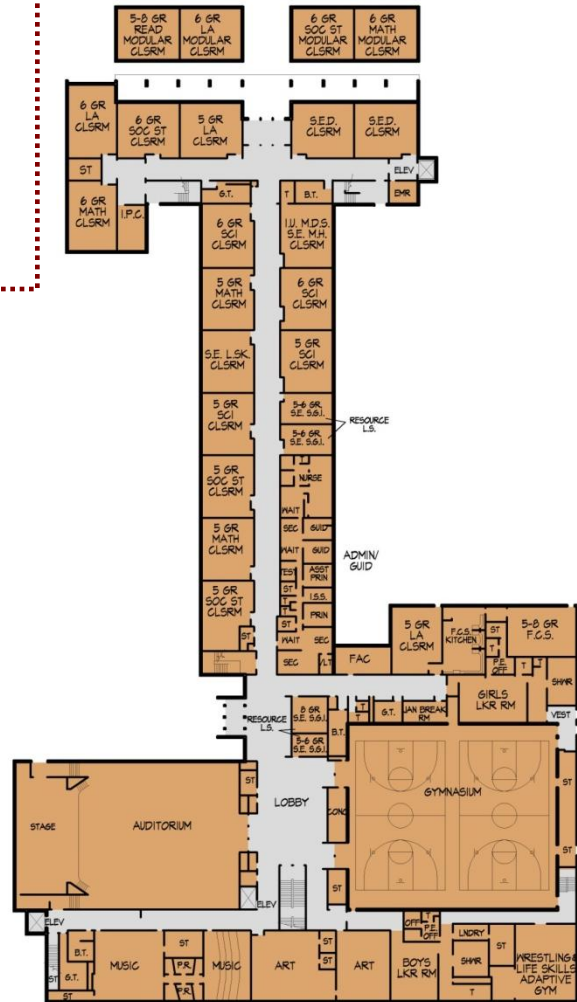
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Built: 1964; A&A 1993
Site: 17 acres
Area: 118,450 SF
Capacity: 729
Current Enrollment: 736

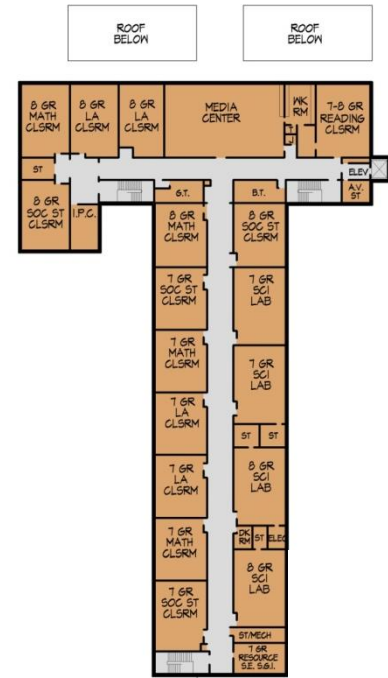
IMPROVEMENTS

- Upgrade Mechanical, Electrical, Lighting & Plumbing Systems
- Building Code Upgrades
- Accessibility Upgrades
- Upgrade Security Systems
- Reduction of Energy Use
- Technology Upgrades
- Roof Replacement
- Window Replacement
- Refurbish Interior Finishes
- Repair Paving and Sidewalks
- Improve Site Drainage
- Improve Site Lighting

FIRST FLOOR



SECOND FLOOR



GROUND FLOOR



Lehigh Area Schools

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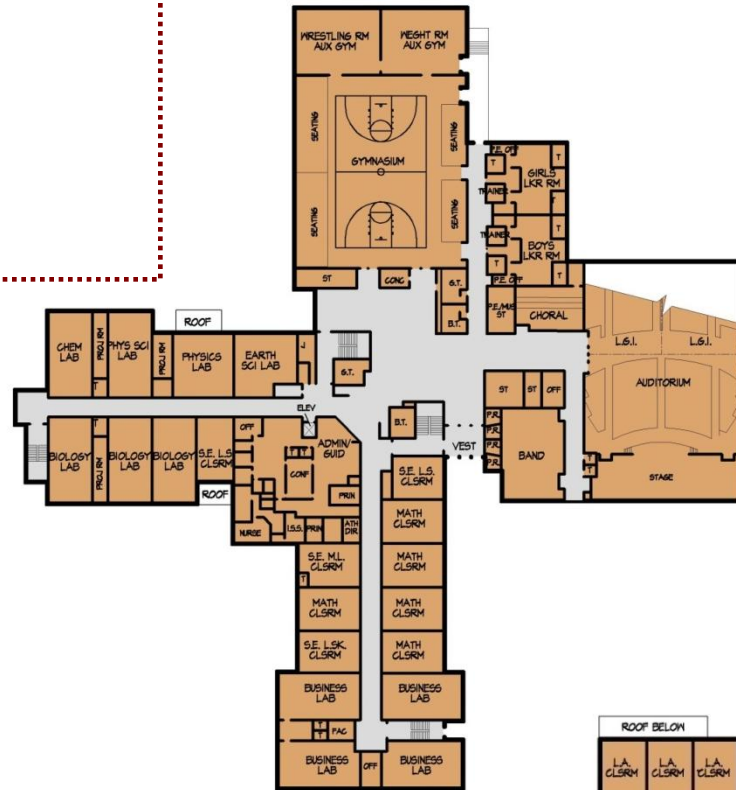
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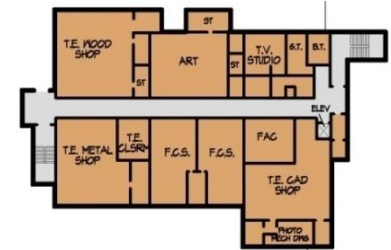
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- Improve Site Drainage
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- Safety at Play Areas
- Increased Security Fencing
- Improve Field Irrigation System
- Improve ADA Access to Fields

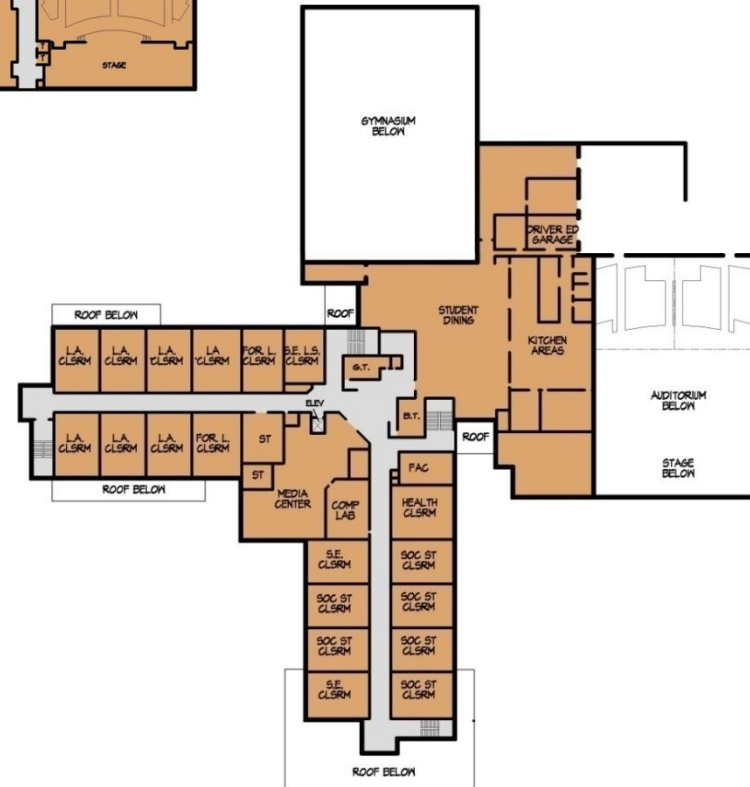
FIRST FLOOR



GROUND FLOOR



SECOND FLOOR



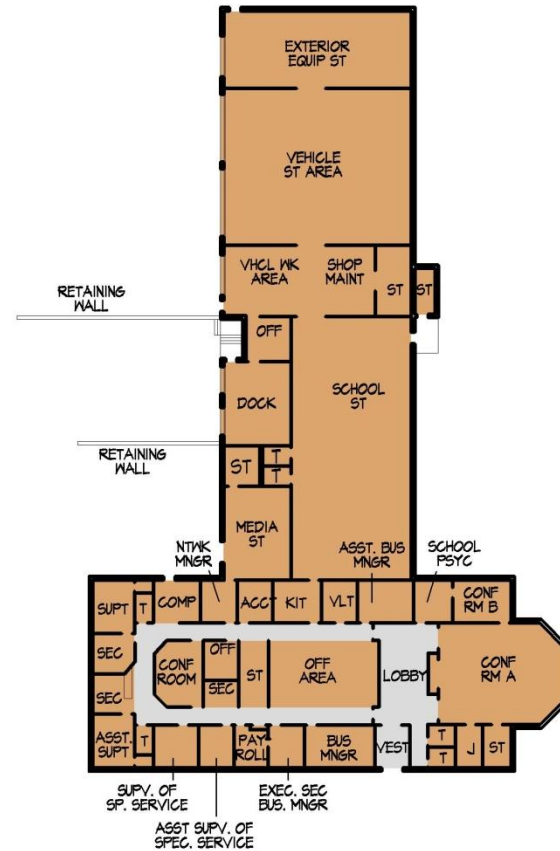
Lehigh Area Schools

District Administration Office:

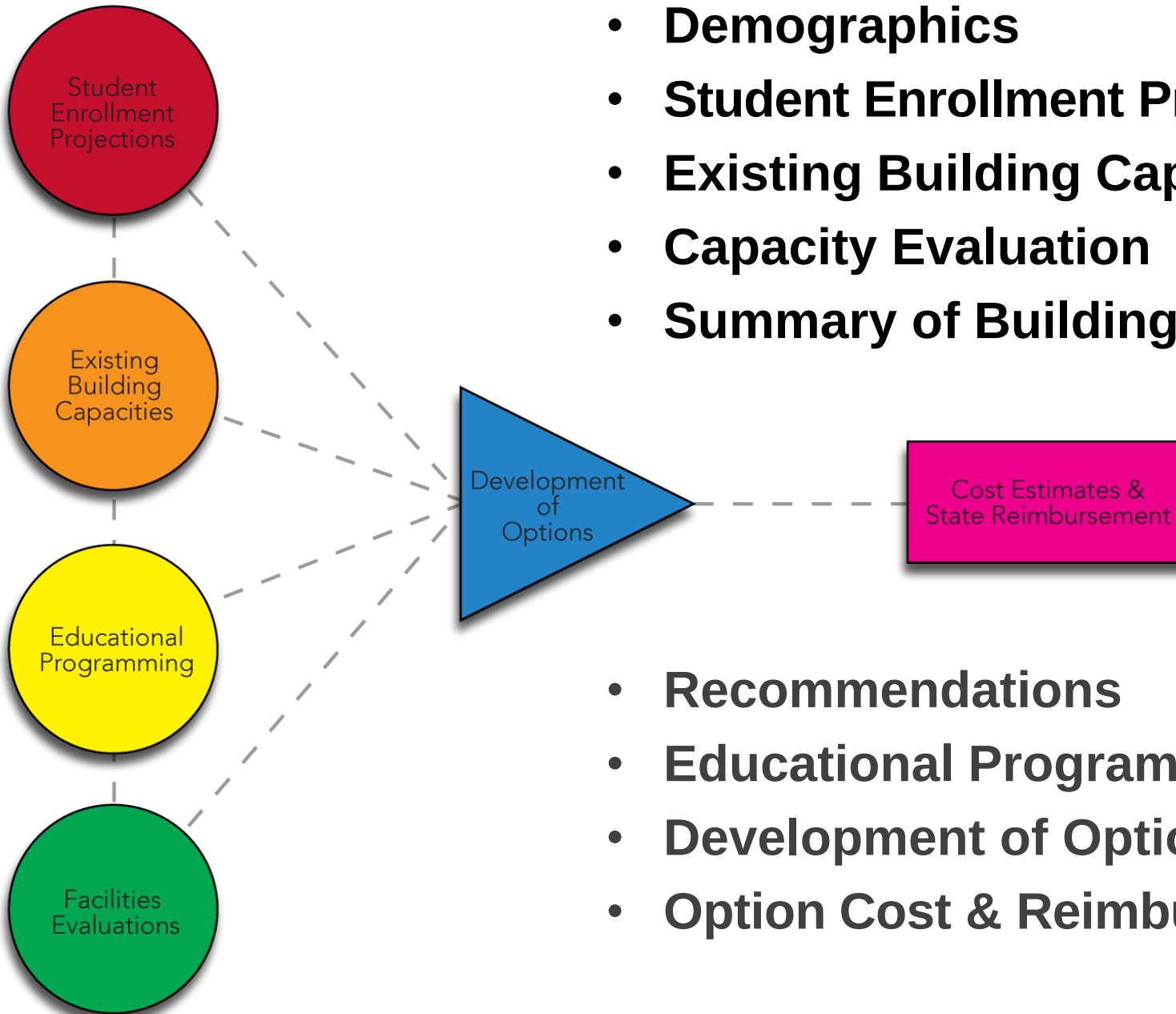
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Feasibility Study Process



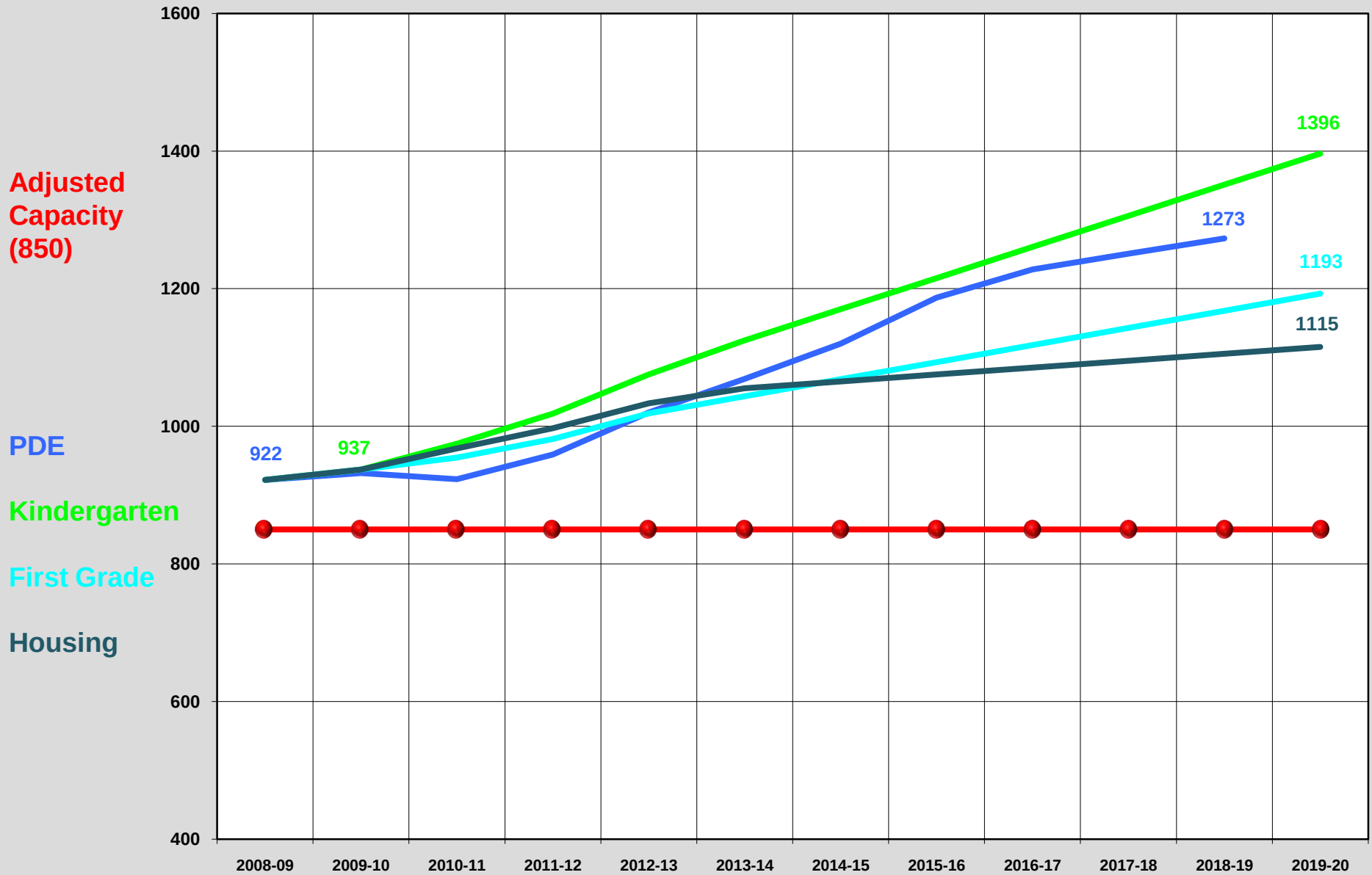
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- **Existing Building Capacity**
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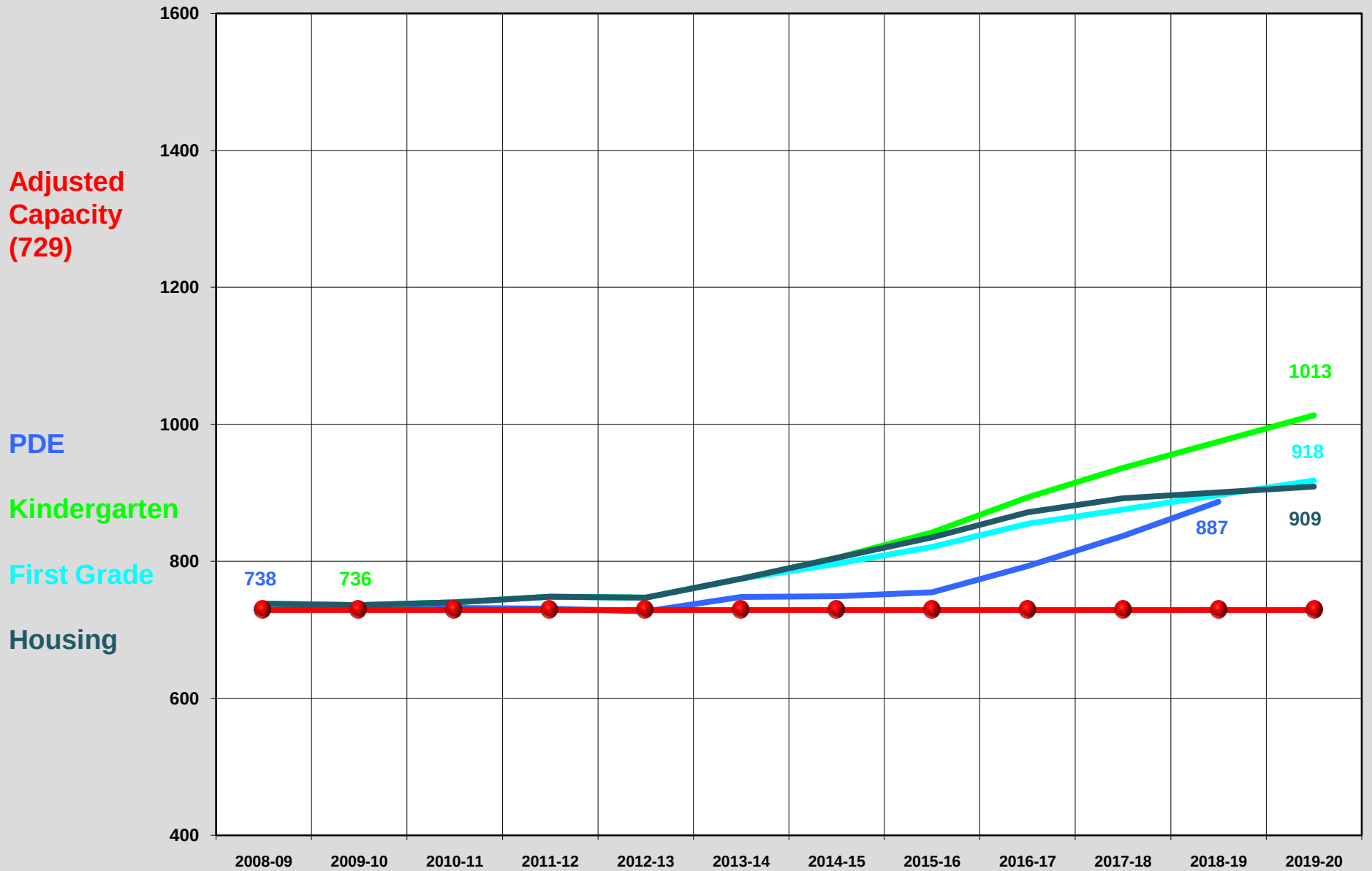
Pennsylvania Department of Education Enrollment Projections

	K	1	2	3	4	K - 4	5	6	7	8	5 - 8	9	10	11	12	9 - 12	K-12
2004-05	162	183	175	180	163	863	216	163	203	209	791	246	205	198	164	813	2467
2005-06	170	175	168	172	173	858	171	209	164	208	752	212	202	217	203	834	2444
2006-07	166	176	166	167	190	865	178	171	207	154	710	214	194	222	201	831	2406
2007-08	189	185	188	169	183	914	178	197	179	218	772	174	240	213	255	882	2568
2008-09	207	184	172	185	174	922	184	179	194	181	738	218	180	227	198	823	2483
RATIOS	1.157	1.195	0.932	0.995	1.005		1.005	99107	1.007	1.007		1.014	1.024	1.05	1.007		
2009-10	194	201	172	171	194	932	175	182	180	195	732	184	223	189	229	825	2489
2010-11	185	201	187	171	179	923	195	173	183	181	732	198	188	234	190	810	2465
2011-12	216	191	187	186	179	959	180	193	174	184	731	184	203	197	236	820	2510
2012-13	238	223	178	186	195	1020	180	178	194	175	727	187	188	213	198	786	2533
2013-14	243	246	208	177	195	1069	196	178	179	195	748	178	191	197	215	781	2598
2014-15	248	251	229	207	185	1120	196	194	179	180	749	198	182	201	198	779	2648
2015-16	252	256	234	228	217	1187	186	194	195	180	755	183	203	191	202	779	2721
2016-17	257	260	239	233	239	1228	218	184	195	196	793	183	187	213	192	775	2796
2017-18	262	265	242	238	244	1251	240	216	185	196	837	199	187	196	215	797	2885
2018-19	266	270	247	241	249	1273	245	238	218	186	887	199	204	196	197	796	2956

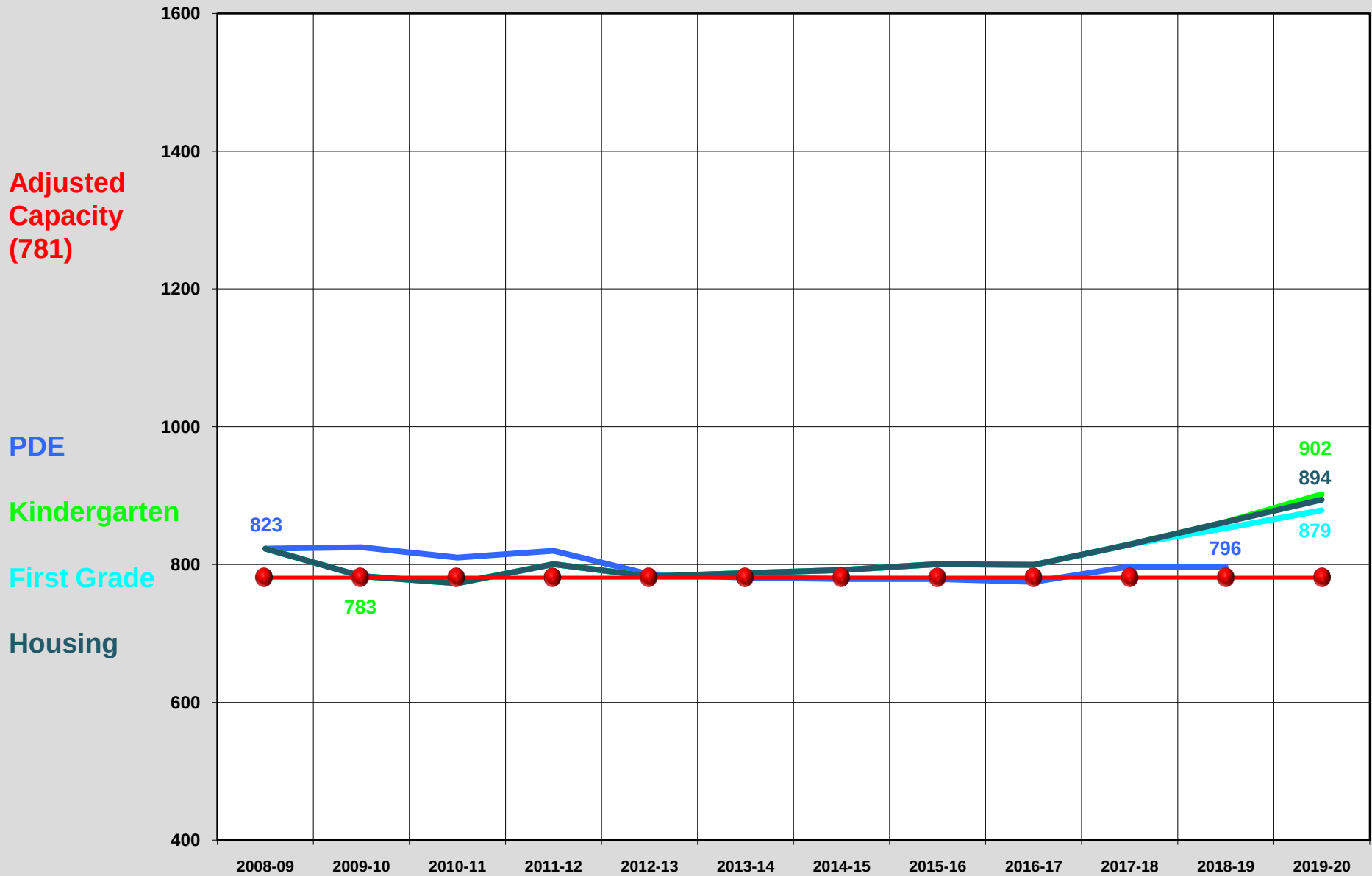
K - 4 Capacity vs. Enrollment



5 - 8 Capacity vs. Enrollment

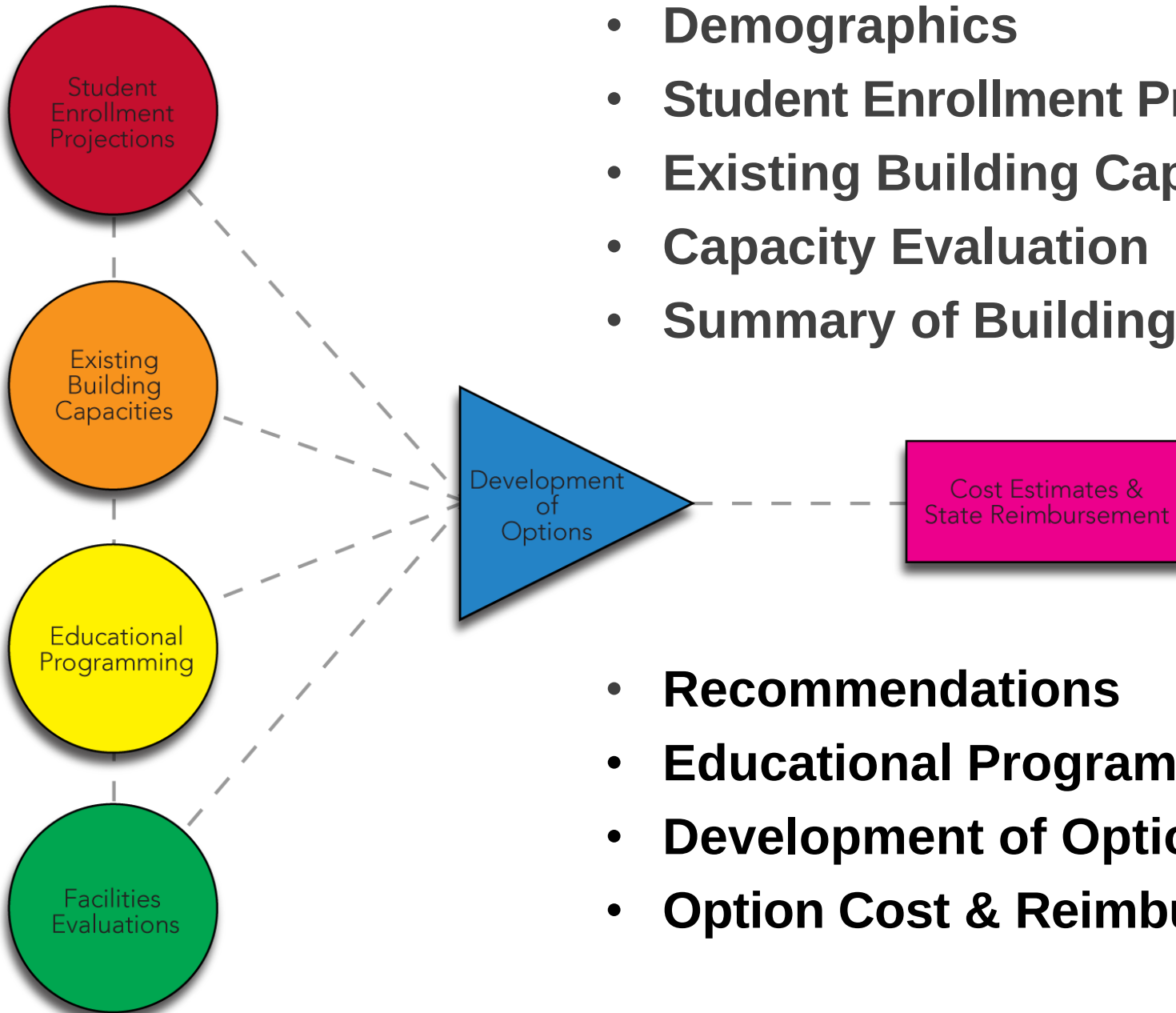


9 - 12 Capacity vs. Enrollment



Recommendations

- **Demographics**
- **Student Enrollment Projections**
- **Existing Building Capacity**
- **Capacity Evaluation**
- **Summary of Buildings**



- **Recommendations**
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Lehigh Area Middle School

GRADES 5-8

Built: 1964;
A&A 1993

Site: 17 acres

Area: 118,450 SF

Capacity: 729

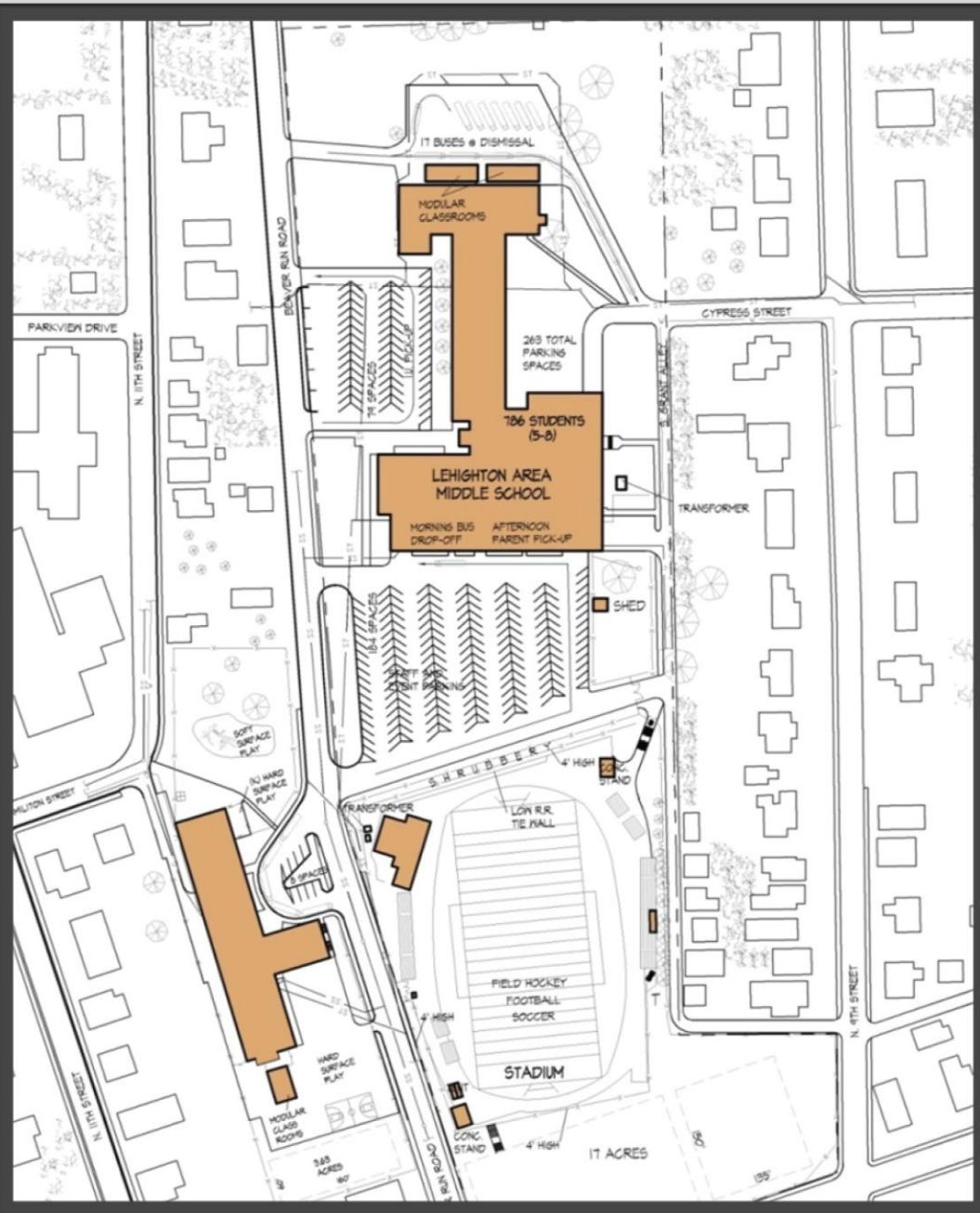
Enrollment: 736



Lehigh Area Middle School

SITE IMPROVEMENTS

- Repair Paving
- Improve Site Drainage
- Improve Site Lighting



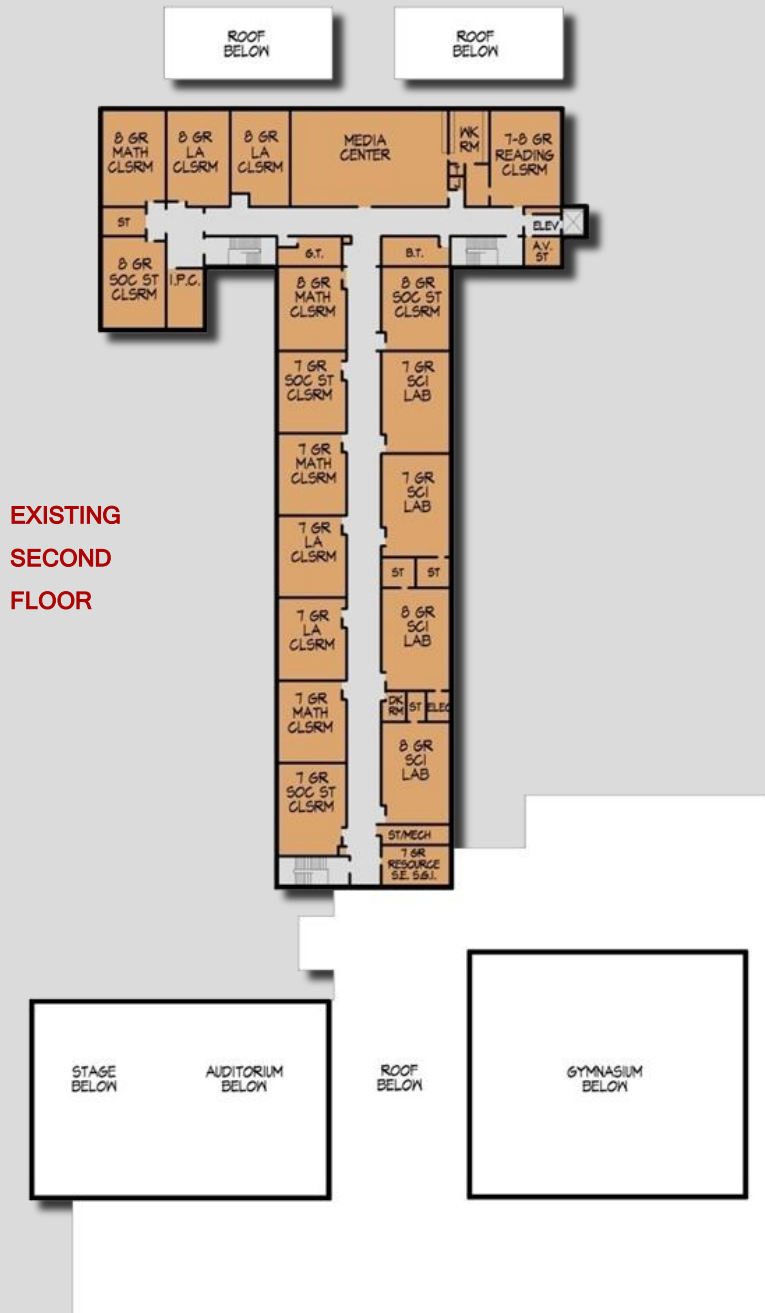
Lehigh Area Middle School

EXISTING
GROUND
FLOOR

BUILDING ABOVE

EXISTING
FIRST
FLOOR

Lehigh Area Middle School



IMPROVEMENTS

- **Replace Infrastructure Systems:**
 - Mechanical Electrical Plumbing**
- **Security & Technology**
- **Building Code and Accessibility**
- **Improved Energy Use**

Lehigh Area Middle School



Paving deteriorating in Drives

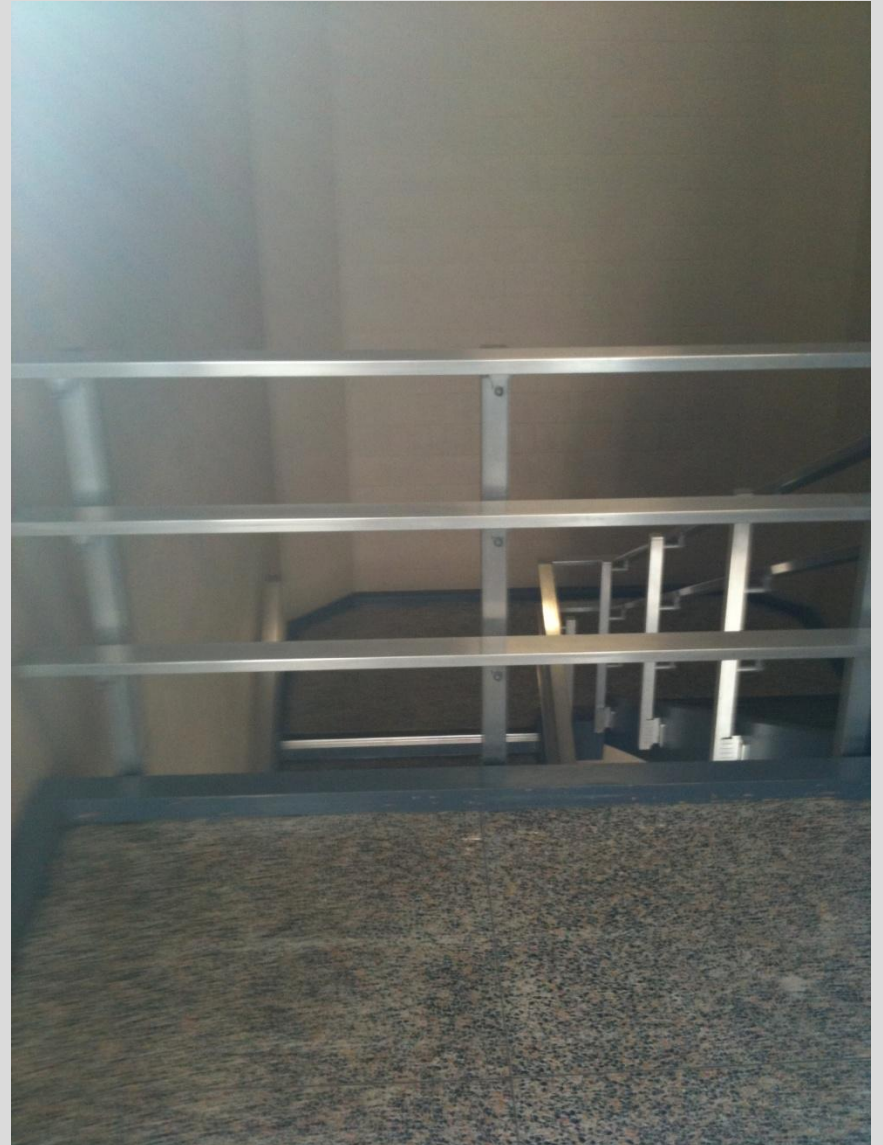


Paving deteriorating in Drives

Lehigh Area Middle School



Typical Roof Area-Installed in 1988 (rubber roof)
Recoated to extend life cycle of rubber membrane



Stair Railings (do not meet current requirements)

Lehigh Area Middle School



Emergency Generator (Exit Signs and Egress Lighting Only)



Blocked Drains (in walls and below concrete)

Lehigh Area Middle School



ATC Air Compressor/Air Dryer (pneumatic controls limited outdated technology)



Typical Asbestos Pipe Insulation and Valves Throughout Building (above ceilings etc.) (please note many of the valves leak or are frozen in their current position)

Lehigh Area Middle School



Asbestos Floor Tiles in Classrooms (also underneath carpeted areas)

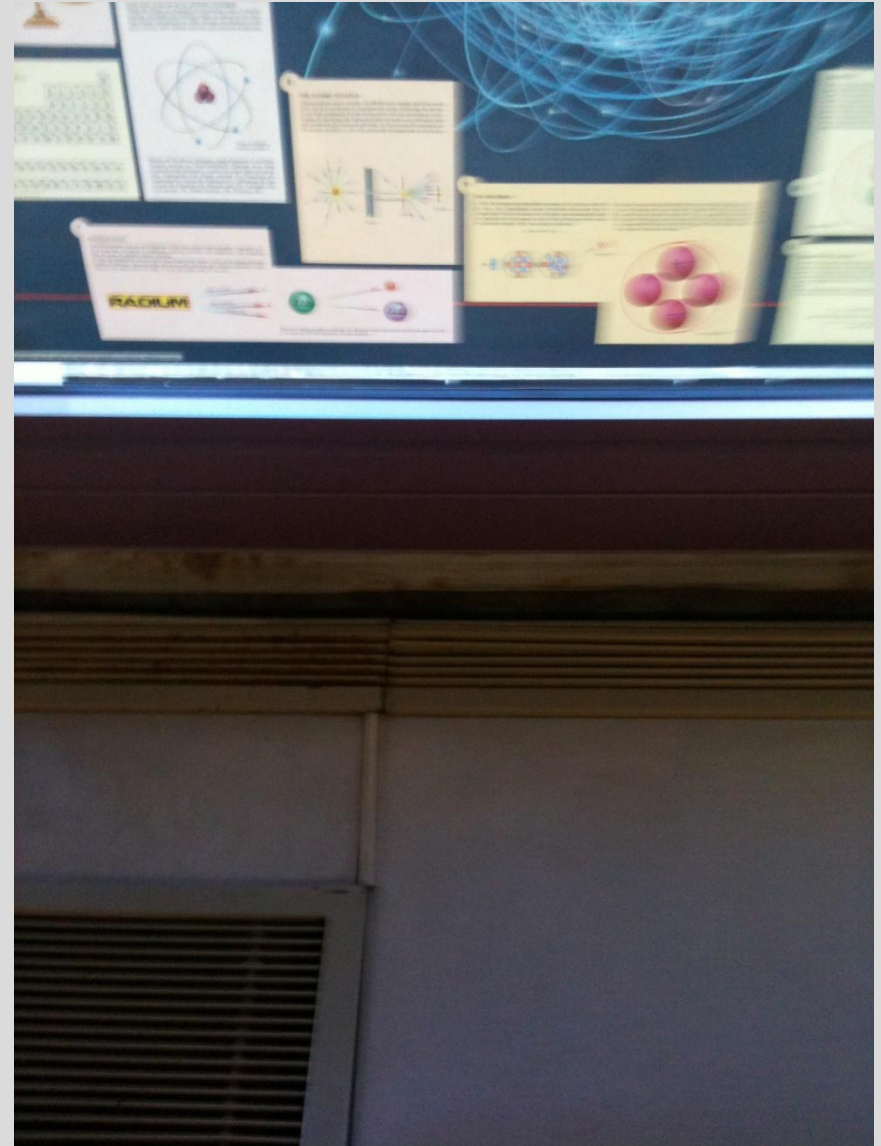


Typical Pipe Chase with Asbestos Insulation

Lehigh Area Middle School



Unit Vent/No Wall Insulation

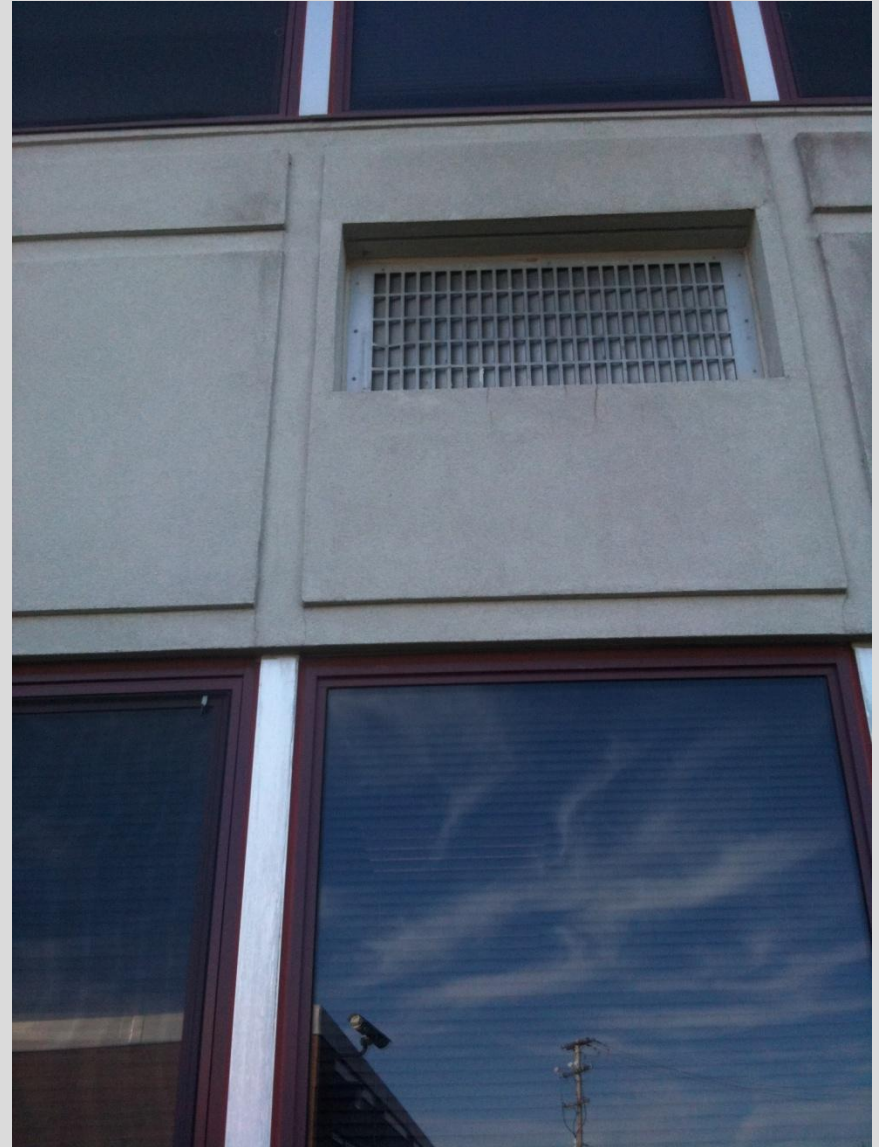


Unit Vent/No Wall Insulation

Lehigh Area Middle School



Deterioration of External Dryvit Insulation System and Caulking



Deterioration of External Dryvit Insulation System and Caulking

Lehigh Area Middle School



Leaking Curtain Wall System



Fire Alarm Panel / Phone Dialer-Non Addressable System (Does Not Meet Current NFPA Code Requirements)

Lehigh Area Middle School



Security Panel (Obsolete Currently to be Replaced)

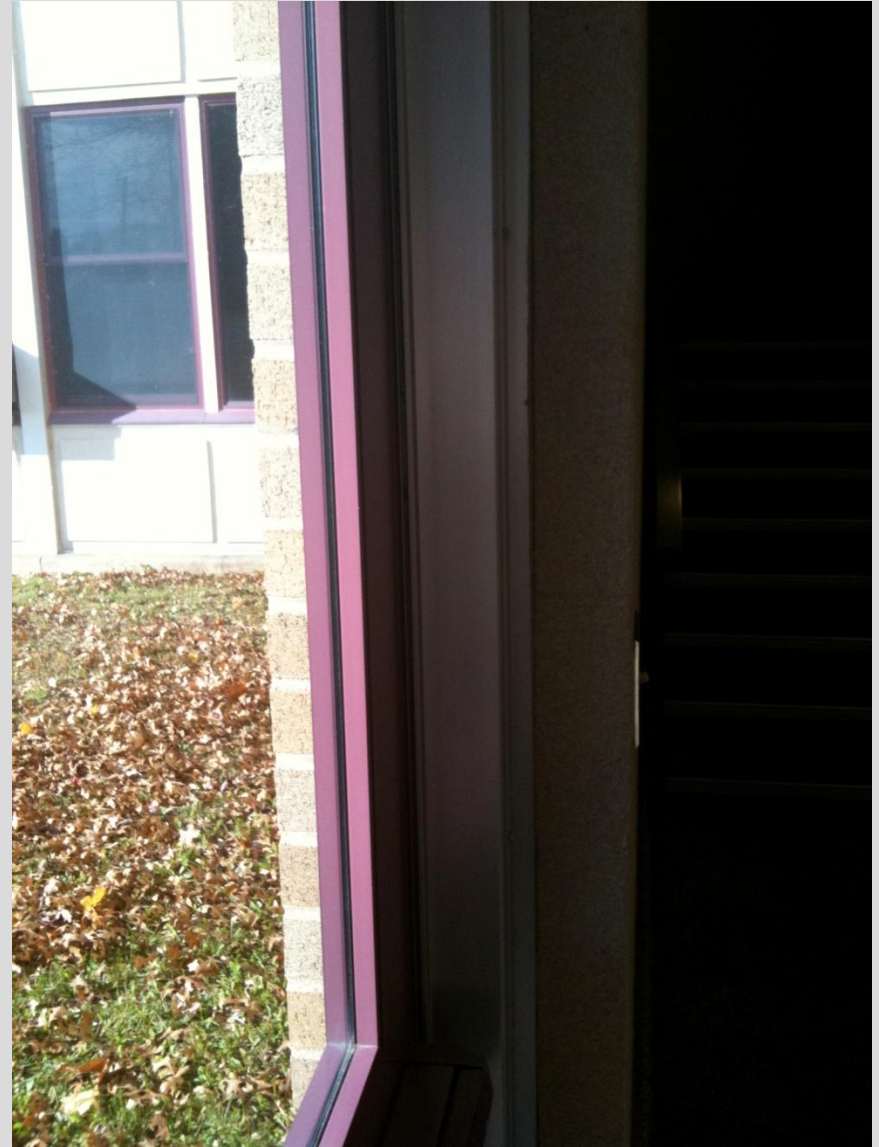


Typical Sub-Main Electrical Distribution Panel (Breakers Overheating Internally)

Lehigh Area Middle School



Typical Exterior Dryvit Panels Installed Over Metal Sheeting

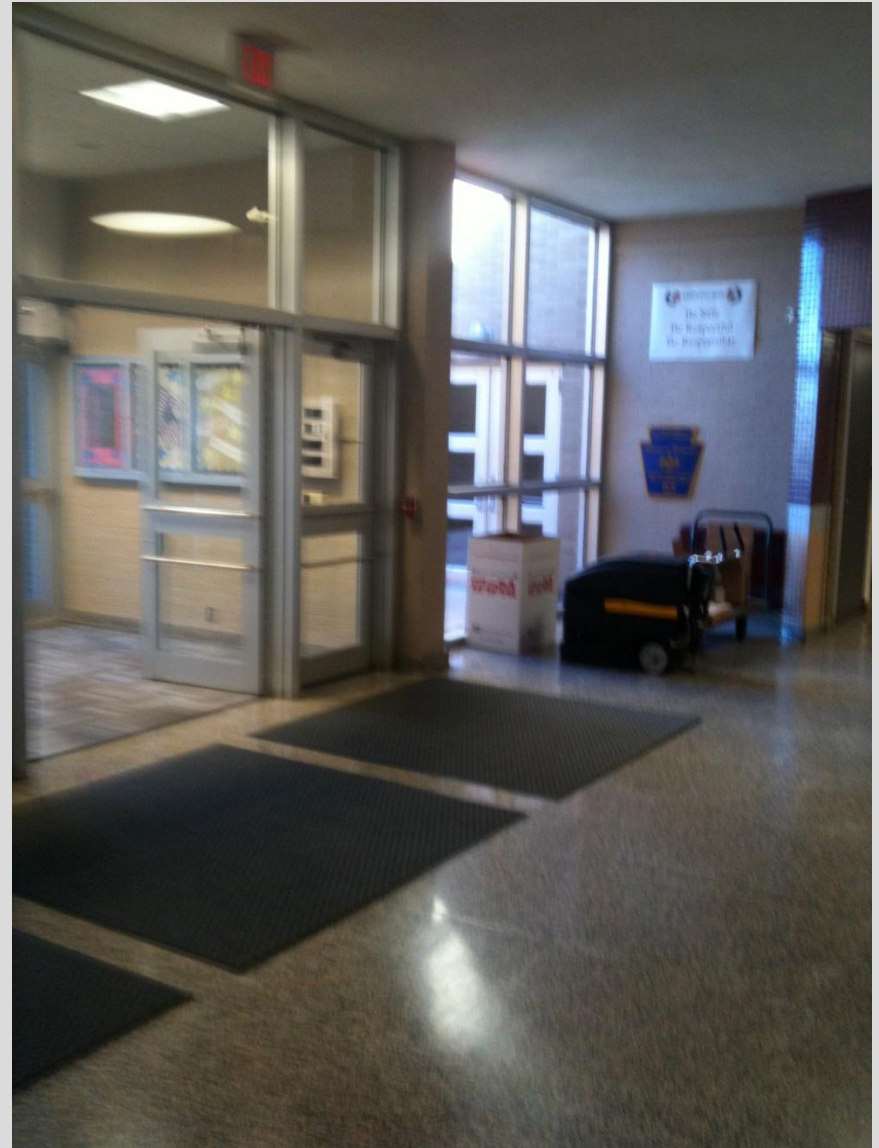


Masonry Side View at Doorway-No Insulation Between Interior and Exterior Masonry Units

Lehigh Area Middle School

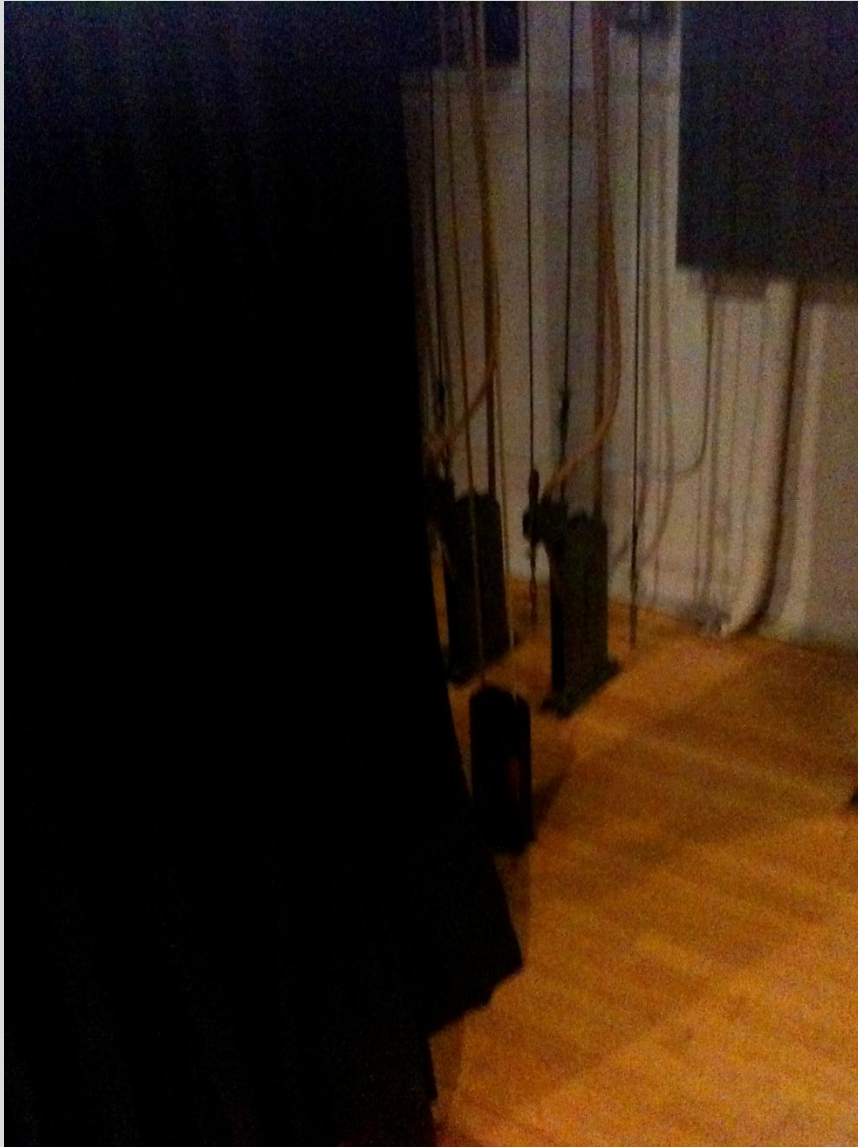


Single Pane Glass/Aluminum Frame at Main Entrance

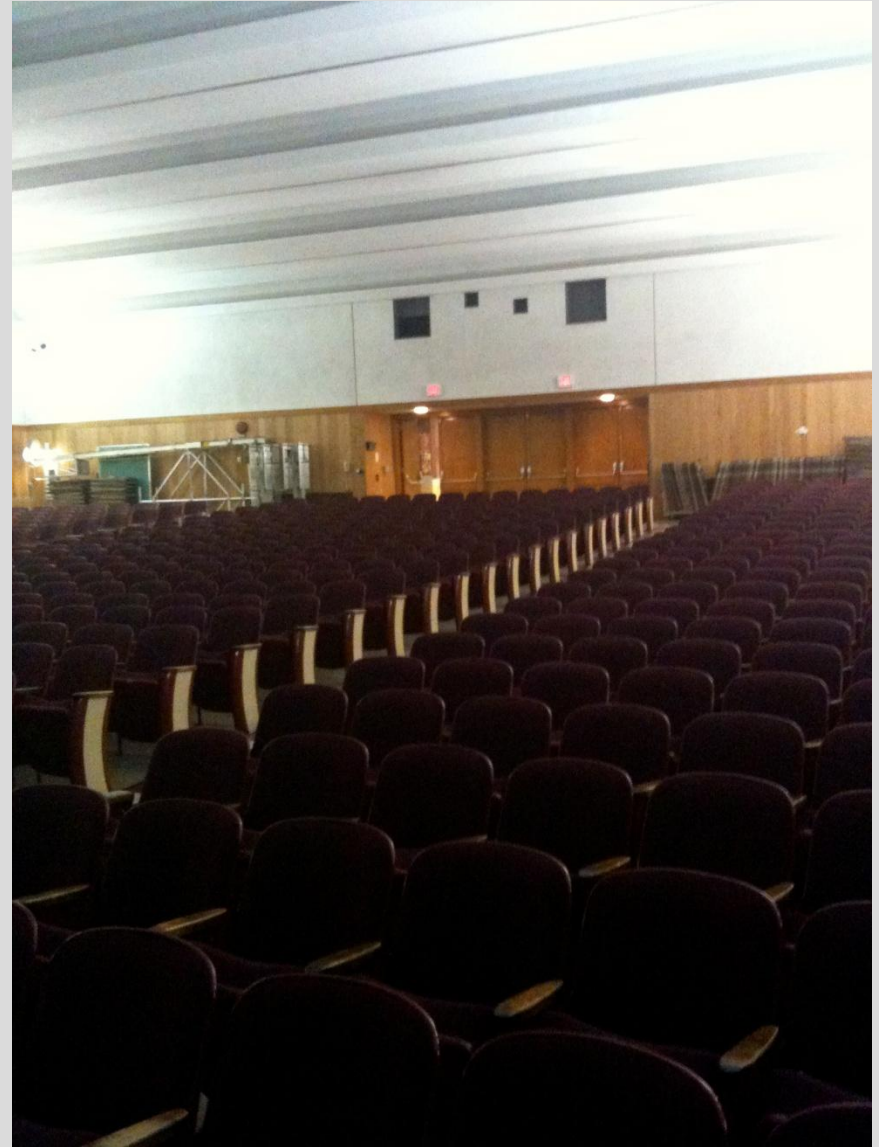


Single Pane Glass/Aluminum Frame at Main Entrance

Lehigh Area Middle School



Stage Curtain Weighted Rope System (Safety Concern)

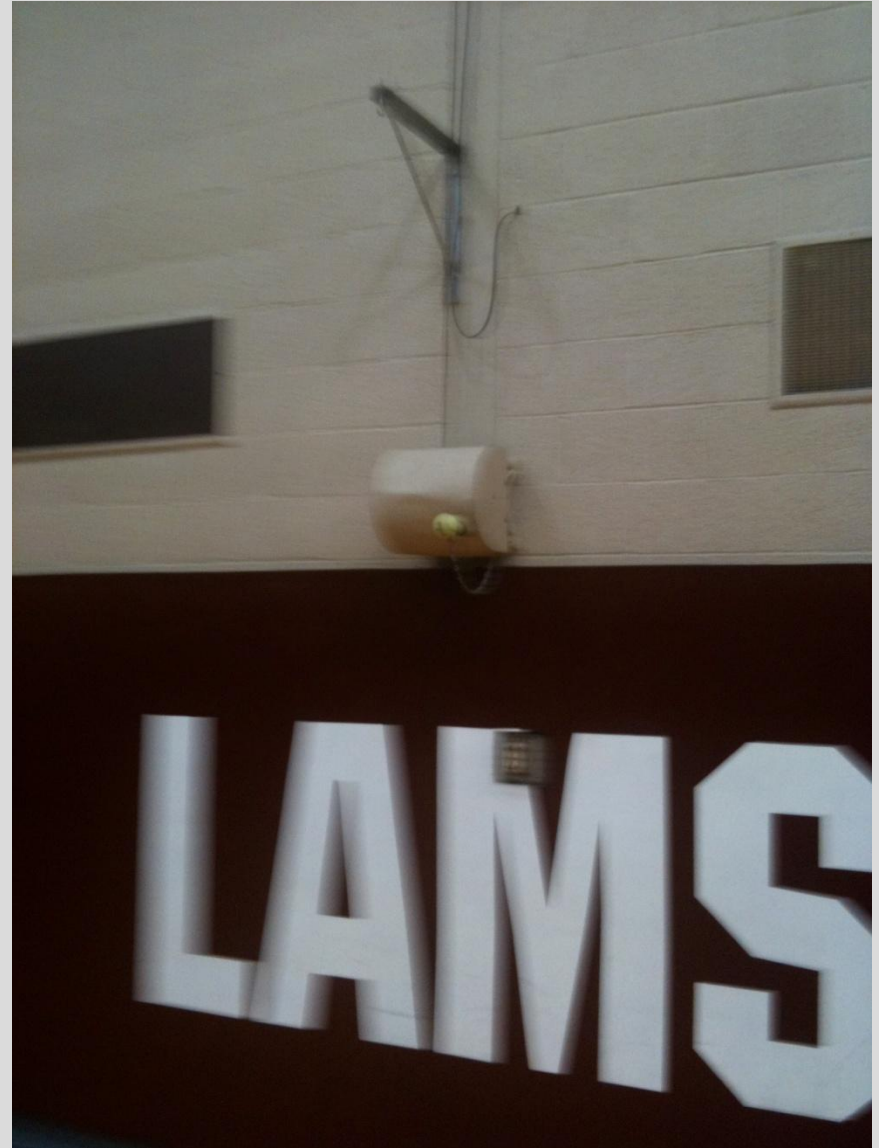


House Lighting/Asbestos Ceiling (lighting poor and inefficient)

Lehigh Area Middle School

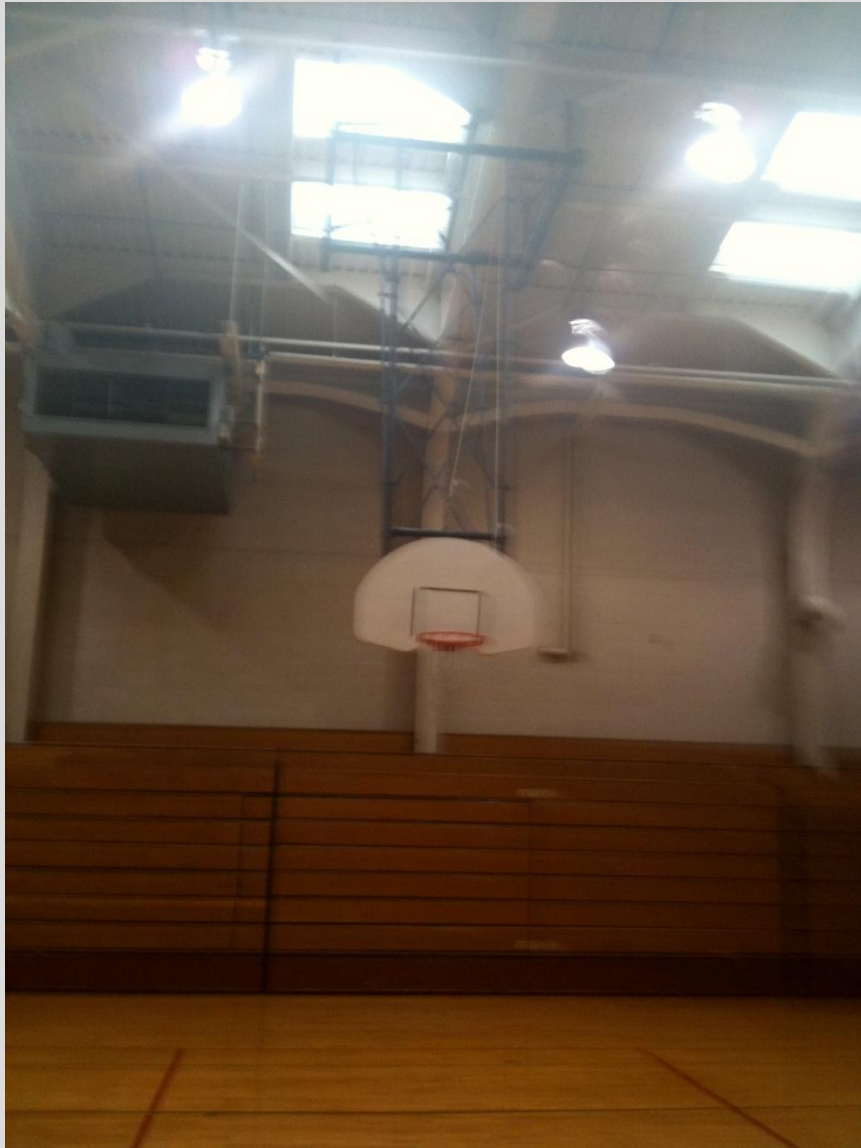


Retractable Divider Wall (Safety and Maintenance Concerns)

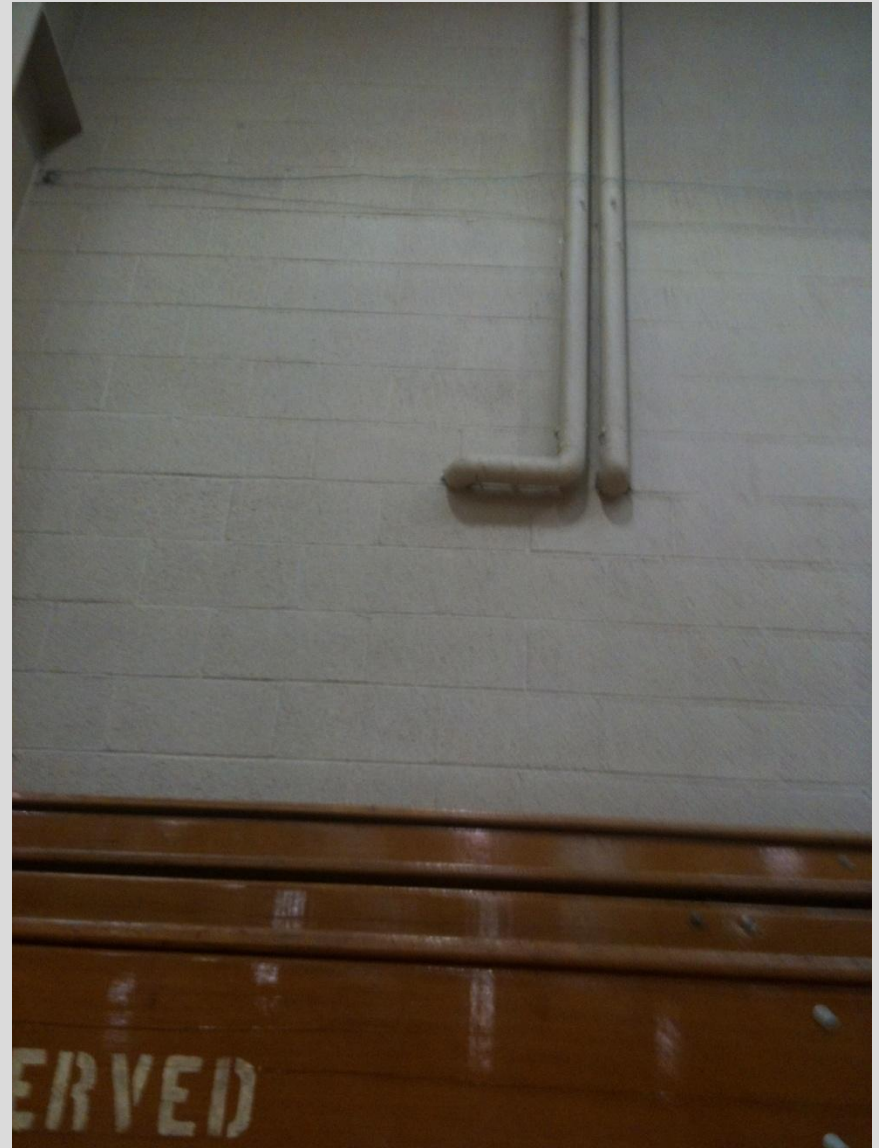


Basketball Backboard Winch (Safety/Maintenance Concerns)

Lehigh Area Middle School



Sky Lights that are Deteriorating/Leaking as well as roof fasteners protruding through roof decking



Asbestos pipe insulation throughout

Lehigh Area Middle School



Dishwasher Room (old equipment , floor drain issues through out lower level of building)



Dishwasher Room (old equipment , floor drain issues through out lower level of building)

Lehigh Area Middle School



Food Serving Area



Walk-in Refrigerator/ Freezer (too small)

Lehigh Area Middle School



Student Area

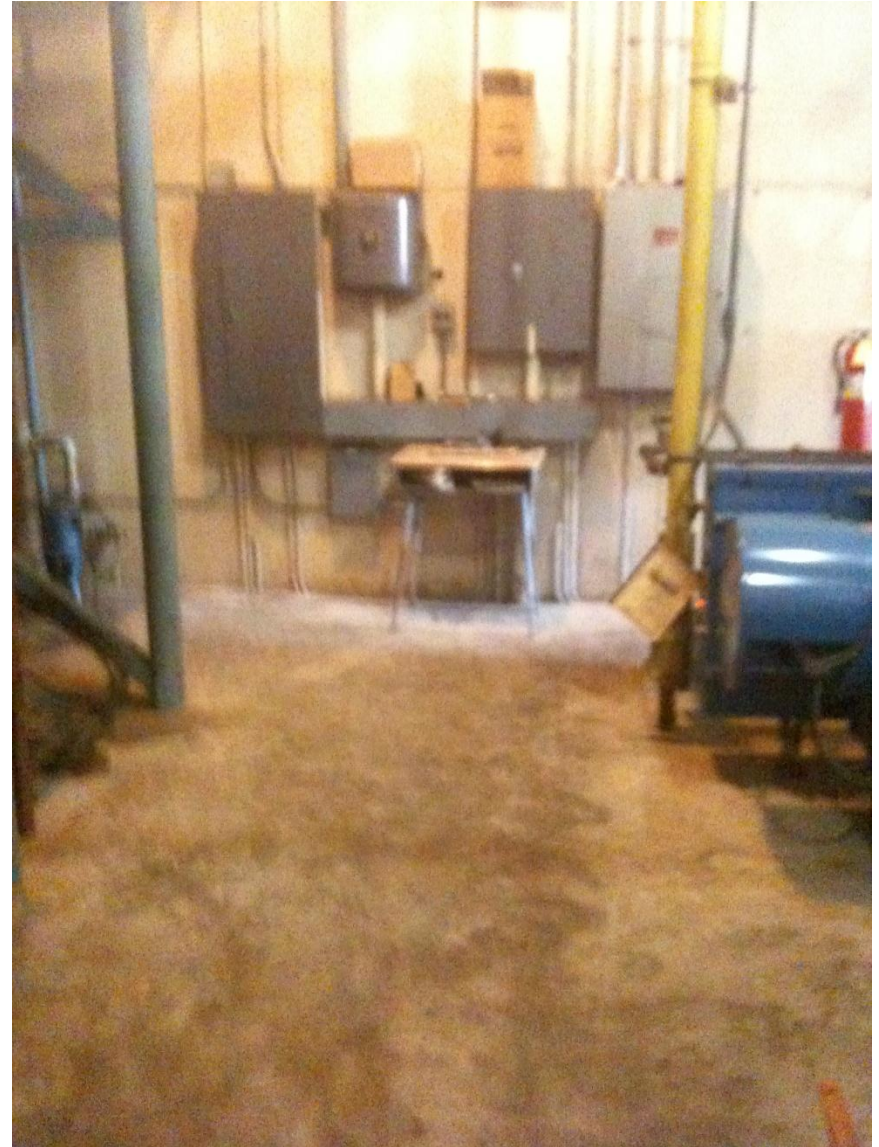


Kitchen Equipment (old)

Lehigh Area Middle School



Electrical Main Panel



Electrical Sub Panel

Lehigh Area Middle School

Building Improvement Construction Costs

IMPROVEMENT CATEGORY	COST
SITE EVALUATION	\$500,000.00
EXTERIOR EVALUATION	\$83,500.00
INTERIOR EVALUATION	\$2,269,000.00
HEATING / VENTILATION EVALUATION	\$5,030,000.00
PLUMBING EVALUATION	\$805,000.00
ELECTRICAL EVALUATION	\$2,237,000.00
CODE EVALUATION	\$1,199,500.00
SUBTOTAL	\$12,124,000.00
EDUCATIONAL UPGRADES	\$595,000.00
EDUCATIONAL RENOVATIONS	\$2,679,500.00
TOTAL BUILDING	\$15,398,500.00

Total Building cost addresses building improvements needed within the existing building. It does not include costs for any building additions which would address the modular classrooms or modifications for security.

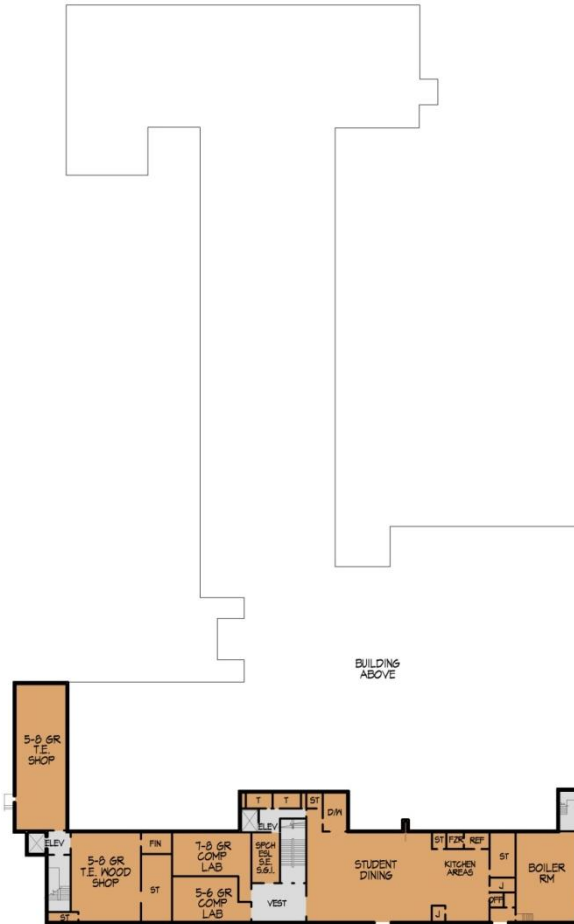
OPTION -- 5-8 Middle School Renovation & Expansion

Project Cost:	\$21,500,000	
Max. Eligible Reimbursement:	\$8,200,000	
Local Effort		\$1,553,000
Millage Impact:		1.85

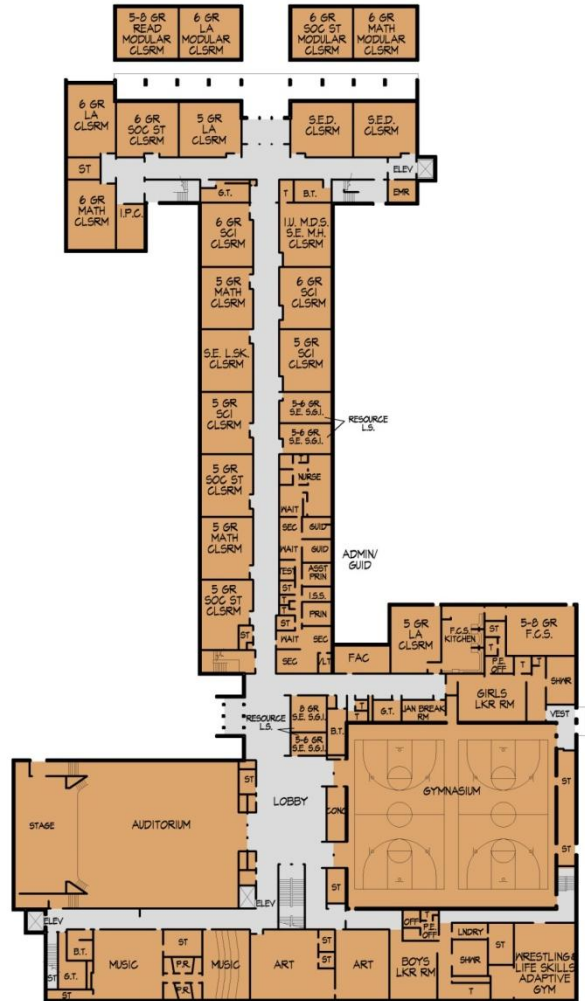
OPTION -- 5-8 New Middle School

Project Cost:	\$25,875,000	
Max. Eligible Reimbursement:	\$8,200,000	
Local Effort		\$1,819,600
Millage Impact:		2.46

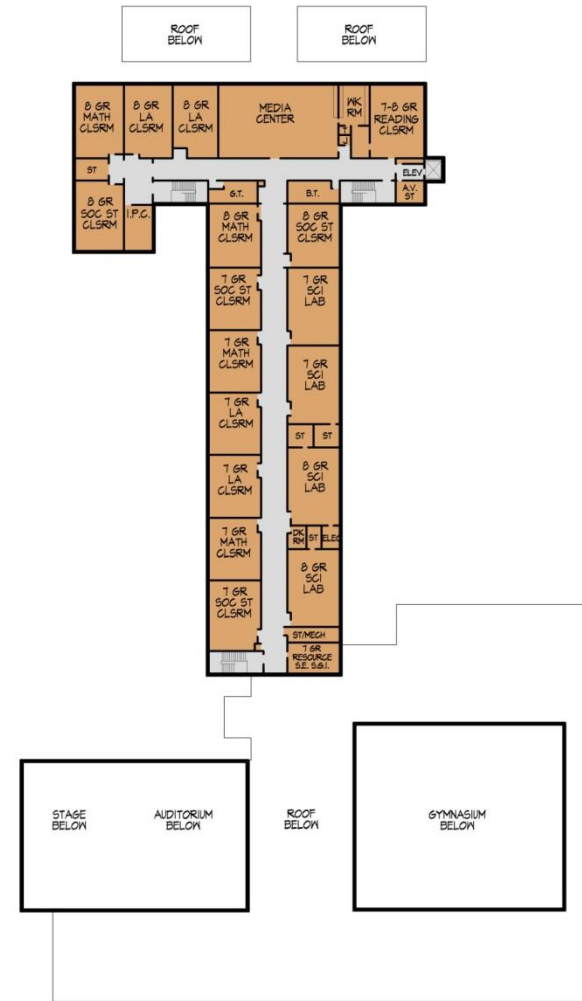
Existing Building



GROUND FLOOR



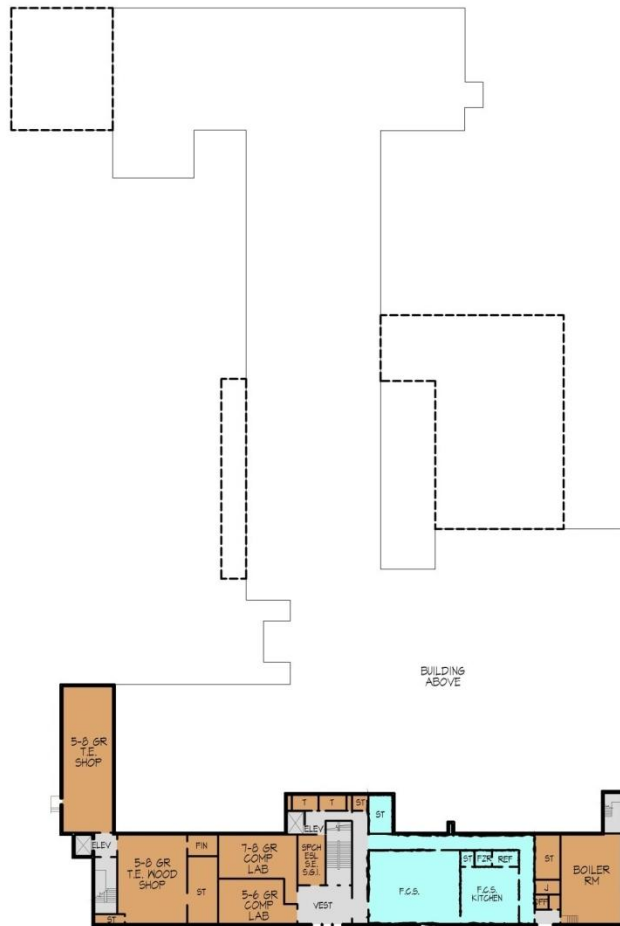
FIRST FLOOR



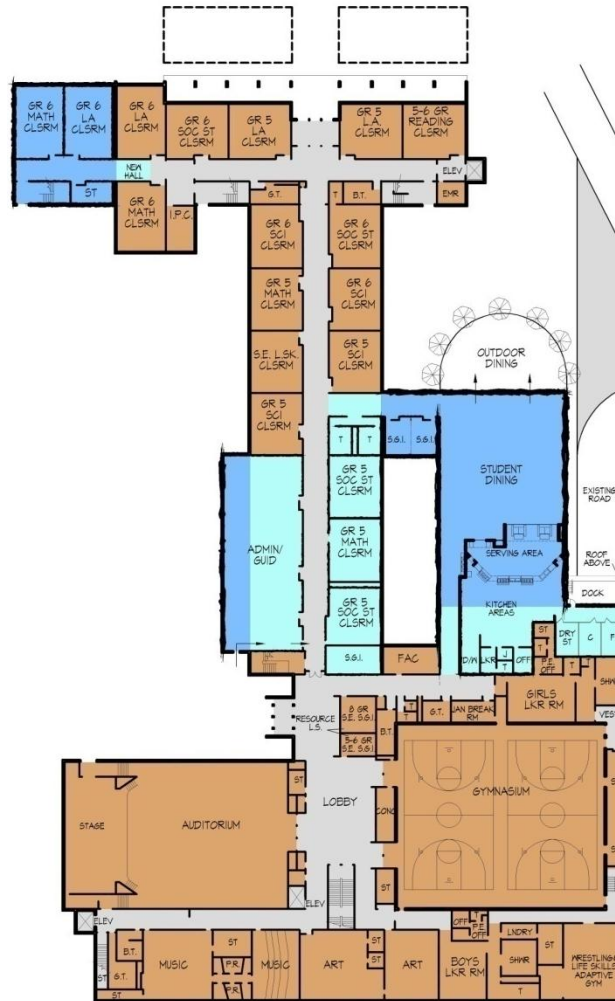
SECOND FLOOR

Option -- Renovation & Expansion

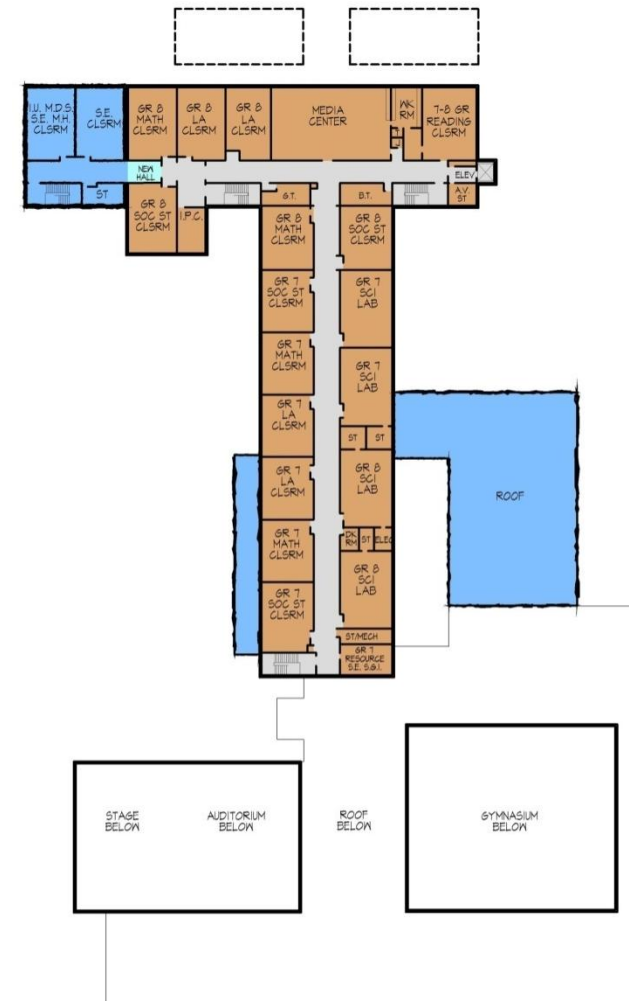
- EXISTING AREA
- RENOVATED AREA
- NEW AREA



GROUND FLOOR



FIRST FLOOR



SECOND FLOOR

Lehigh Area Middle School

Option :

Renovation
& Expansion

Proposed
Total Cost of Project
\$21,500,000

Local Effort after PDE Reimbursement
\$1,553,000

Cost to Taxpayers in Millage
1.85 Mills

Average Assessed Home Value : **\$44,250**

Annual Cost : **\$80** Per Household

Break it down even more.....

Weekly Cost : **\$1.60**

Daily Cost : **20 ¢**

ENERGY COST DIFFERENCE : JUNE 2009 - MAY 2010

TRADITIONAL VS. GREEN SCHOOLS



SALISBURY ELEMENTARY SCHOOL

Building Area : 102,000 s.f.

Year Built : 1963, Addition in 1970 & 2002

Student Capacity: 600

Yearly Energy Cost :

\$82,016 (.81¢ / S.F.)

PARADISE ELEMENTARY SCHOOL

Building Area : 92,140 s.f.

Year Built : December 2008

Student Capacity: 600

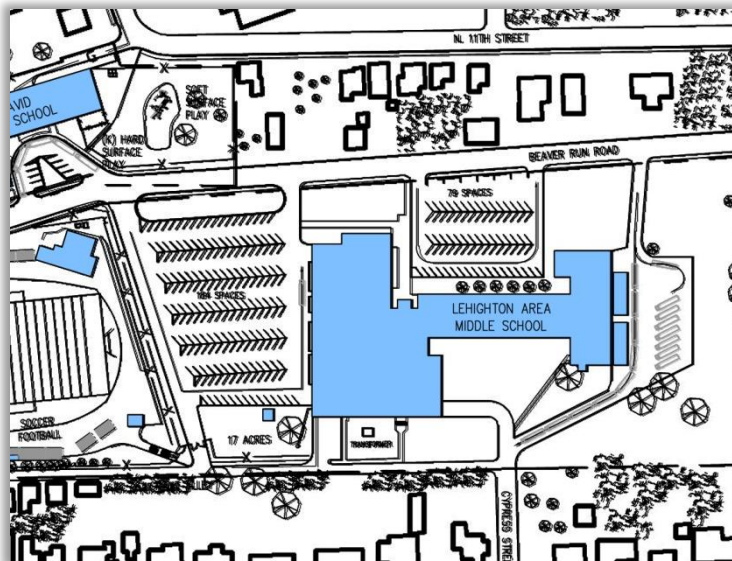
Yearly Energy Cost :

\$29,489 (.32¢ / S.F.)

\$52,527
YEARLY DIFFERENCE

ENERGY COST DIFFERENCE : 1 YEAR ESTIMATION

EXISTING MIDDLE SCHOOL VS. NEW MIDDLE SCHOOL

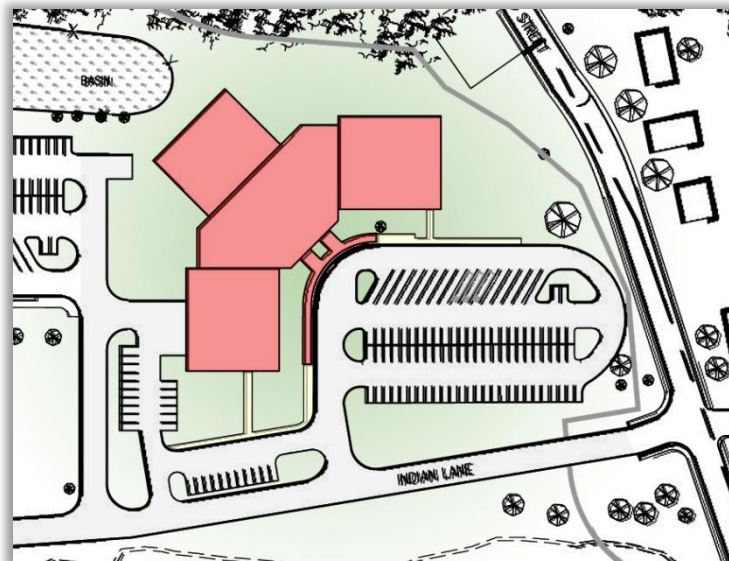


EXISTING LEIGHTON AREA MIDDLE SCHOOL

Building Area : 118,400 s.f.

July 2009 to June 2010

\$156,437 (\$1.32 / S.F.)



NEW LEIGHTON MIDDLE SCHOOL

Building Area : 115,000 s.f.

\$40,250 (.35¢ / S.F.)



\$116,180

YEARLY DIFFERENCE



**ENERGY
USE**

30-50%

**CARBON
EMISSIONS**

35%

**WATER
USE**

40%

**SOLID
WASTE**

70%

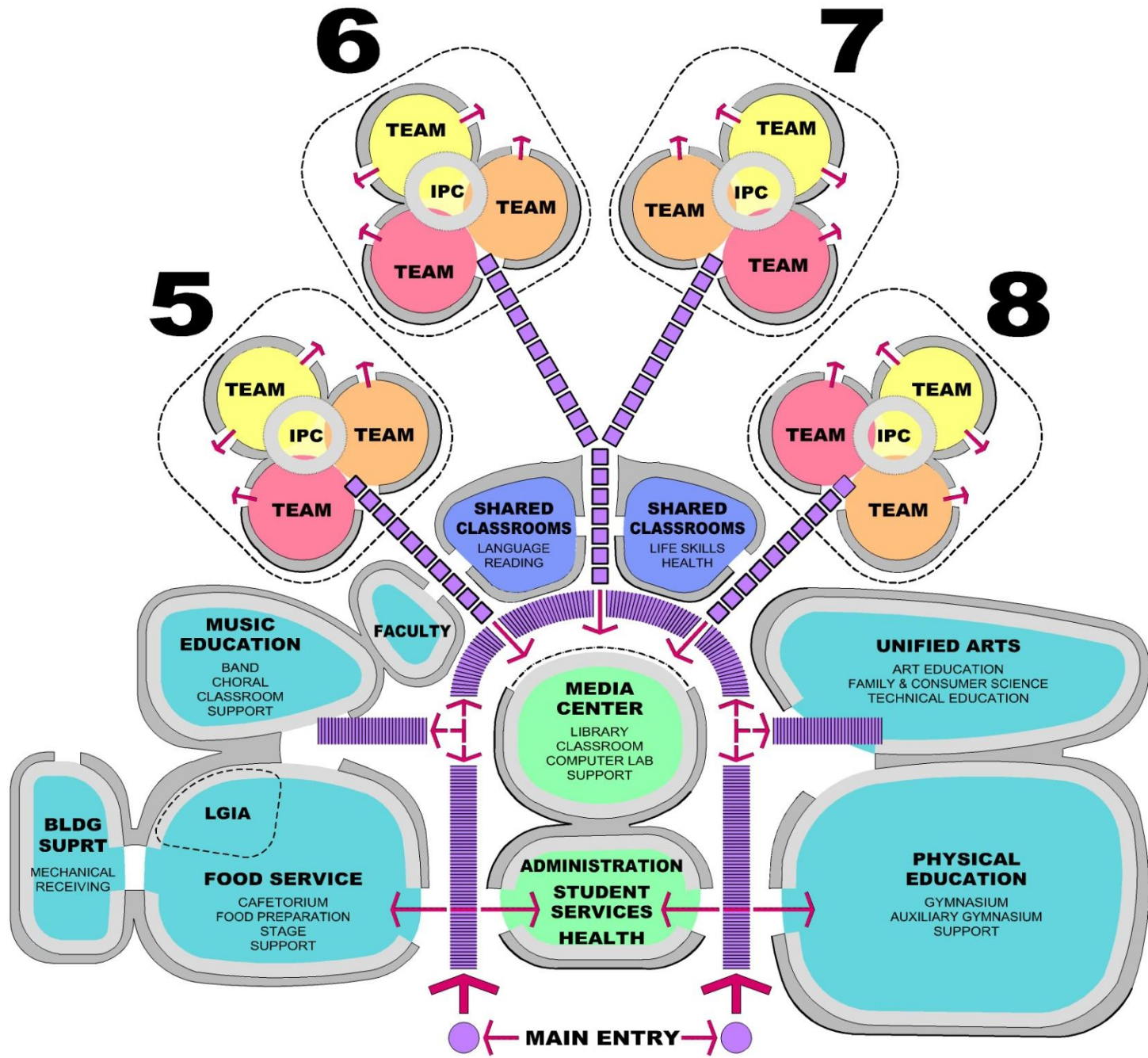
Average Savings of Green Buildings

PDE Eligible Reimbursement for LEED

\$730,000

**Pennsylvania Department of Education provides 10% Additional
Eligible Reimbursement for LEED Silver Certified Projects**

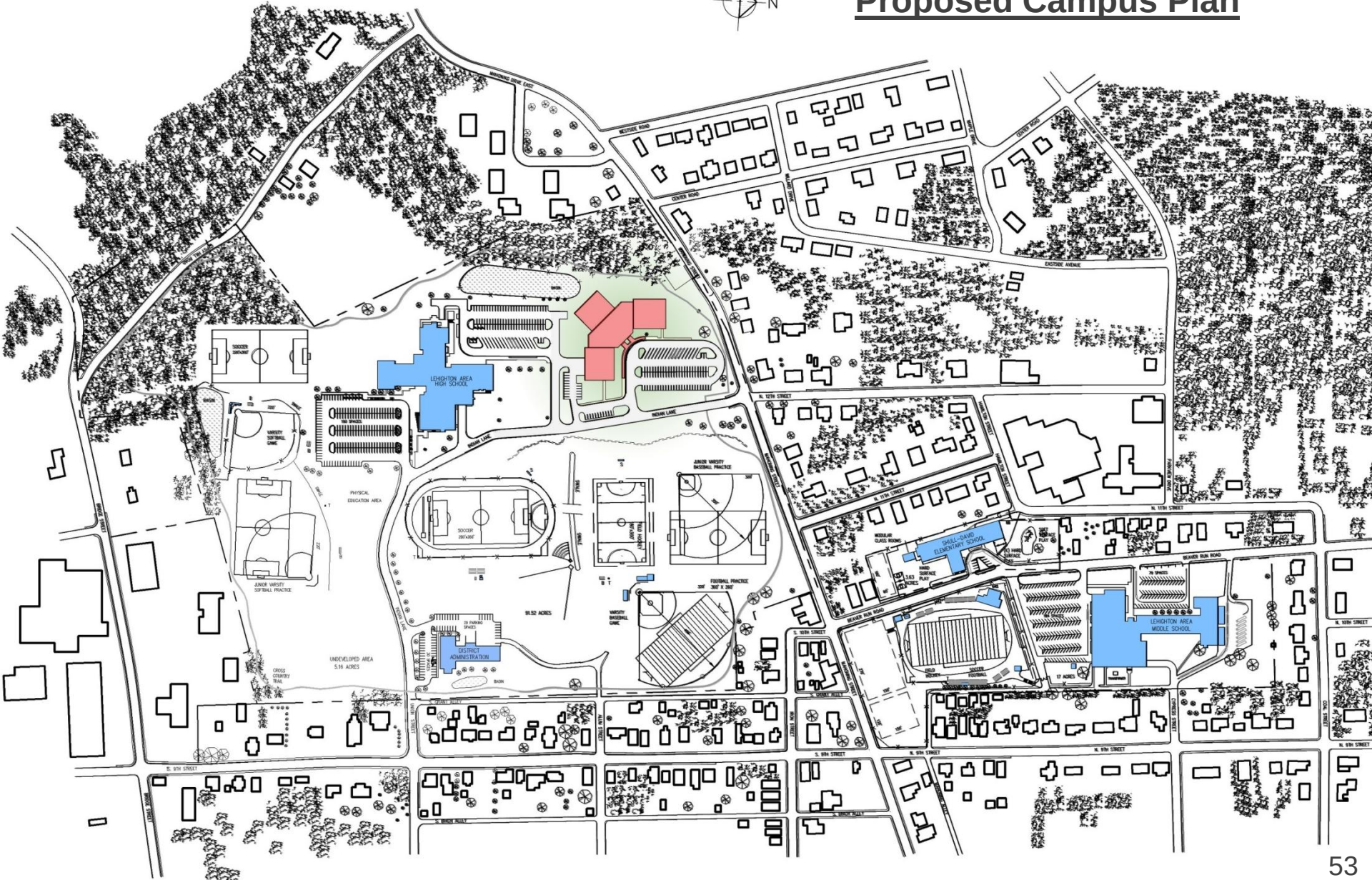
Middle School Conceptual Diagram



Option -- New Building



Proposed Campus Plan



Option -- New Building



Proposed Campus Plan



Lehigh Area Middle School

Option :

New
Middle
School

Proposed
Total Cost
of Project

\$25,875,000

Local Effort
after PDE Reimbursement

\$1,819,600

Cost to
Taxpayers
in Millage

2.46 Mills

Average Assessed Home Value : **\$44,250**

Annual Cost : **\$110** Per Household

Break it down even more.....

Weekly Cost : **\$2.10**

Daily Cost : **30 ¢**

Lehigh Area Middle School

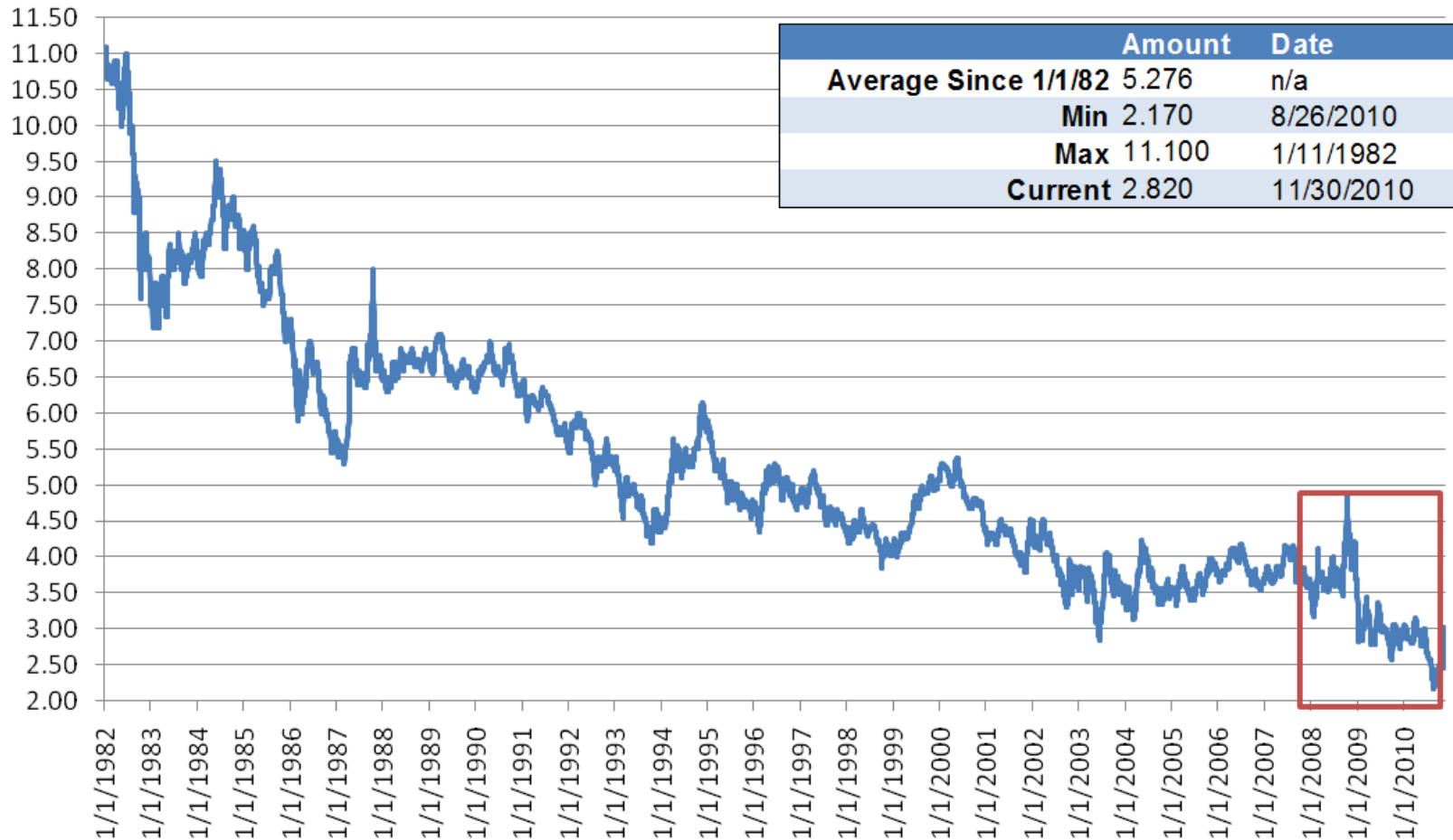
Option : Renovation & Expansion

Project Cost	\$21,500,000	Millage Impact	1.85	Daily Cost	20 ¢
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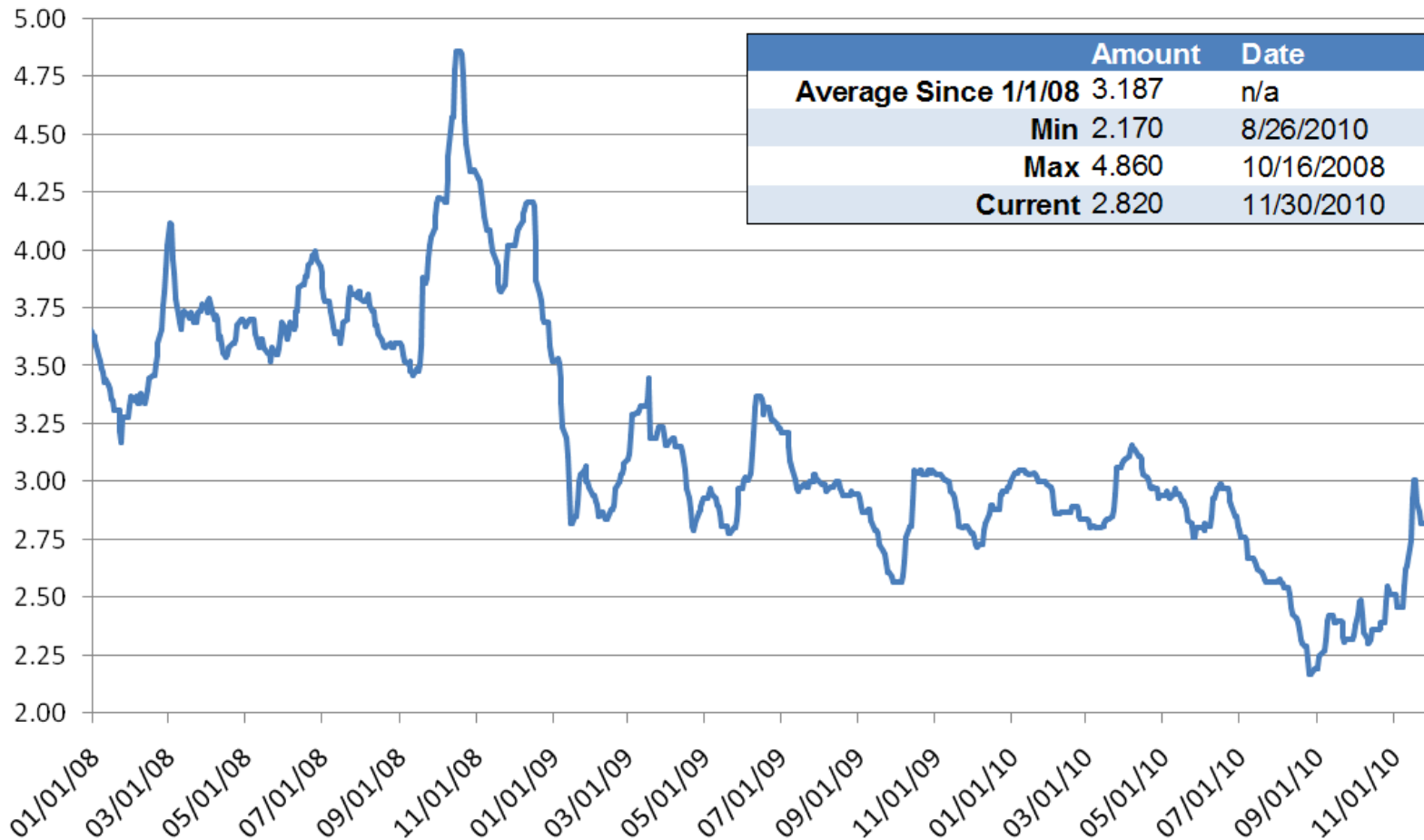
Option : New Building

Project Cost	\$25,875,000	Millage Impact	2.46	Daily Cost	30 ¢
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10 Year MMD (AAA Fixed Rate Bond Rates) 1/1/1982 - 11/29/2010



10 Year MMD (AAA Fixed Rate Bond Rates) 1/1/2008 - 11/29/2010



Renovation & Expansion

Pros :

1. Reuse of Existing Building
2. Expand to Current Enrollment
3. Improved Energy Efficiency

Cons :

1. Impact on Education – Occupied Building During Construction
2. Layout Dependent upon Existing Building Constraints – “Middle School Teaming Concept”
3. Energy Efficiency Relative to Existing Building Constraints

New Building

Pros :

1. Building Layout Designed for Educational Program & Enrollment
2. Maximize Energy Efficiency
3. Campus Plan
4. Less Impact to Students
5. Long-Term Educational Solution

Cons :

1. Construction Cost

Project Timeline

- | | |
|-----------------------------|---|
| 1 December 2010 | • Community Meeting |
| Dec – Jan 2011 | • Decision Making Process |
| February 2011 | • Choose an Option |
| March 2011 | • Start PlanCon Process |
| March 2011 | • Schematic Design & Design Development |
| April 2011 | • Act 34 Hearing |
| June 2011 – Jan 2012 | • Develop Construction Documents |
| February 2012 | • Bid Project / Award |
| March 2012 | • Begin Construction |
| July 2013 | • Complete Project |
| Begin 2013-2014 School Year | |



LEHIGHTON AREA
SCHOOL DISTRICT

1 December 2010

