



Avon Grove School District District-wide Facility Study

March 2015



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FACILITY STUDY INTRODUCTION

Purpose

The purpose of the District-wide Facility Study is to develop a comprehensive plan to address the needs of all District facilities. This is required as part of the PlanCon Part A – Project Justification submission, if the district is considering to pursue reimbursement for any major renovations or new construction project. The Department of Education, as defined in the Basic Education Circular (BEC) 24 P.S. 7-733, “School Construction Reimbursement Criteria,” requires a district-wide facility study as a condition of reimbursement:

“School districts must develop a complete building facility study of all district educational facilities including the district administration office. The study must be completed prior to, and within two years of, the date of the PlanCon Part A, Project Justification, submission. The study must provide an appraisal as to each facility’s ability to meet current and planned educational program requirements, the degree to which the present facilities meet reasonably current construction standards, and an estimated cost of necessary repairs and improvements. Facility studies must contain documentation regarding the author’s credentials for producing the document.”

This document will help guide the District in evaluating the extent of work required to properly maintain the district’s buildings and to give insight as to how the buildings are able to deliver the educational programs. Also it will show what the associated costs are to upgrade the facilities to bring them up to code and to provide programs that coincide with the district’s strategic plan and educational vision. This tool can be used for short-term and long-range planning for developing budgets and addressing the current and future needs of the school district.

The study will review the enrollment data, update the building capacities relative to the current building uses, and provide options for those facilities that have the most needs as follows:

- An analysis of the demographics and projected enrollments;
- An analysis of the existing building capacities;
- An evaluation of those building’s physical condition and compliance with building codes;
- Preparation of the Energy Star Portfolio Manager;
- An analysis of construction/renovation options; and
- Cost estimates for construction/renovation options.

Based on information received through the building evaluations and owner-provided information, our role will be to develop options with related costs to give the School Board the information needed to make informed and educated decisions for future construction planning.

Goals of the Facility Study

Identify the best uses of existing facilities and sites to meet the educational needs of students, based on the educational programs, material in the strategic plan and the enrollment growth.

- How do the buildings serve staff members who are engaged in meeting educational program goals?
- How do the buildings conform to the standards established by the Department of Education?
- How do the buildings conform to current local, state and federal regulations and laws?
- Recommend improvements to maintain the facilities while meeting the educational goals.
- Present information and options to the Board of School Directors and district personnel to address identified needs.

Principals of the Facility Study

In the Commonwealth of Pennsylvania, the Departments of Education, Environmental Protection, and the Department of Labor and Industry have established basic guidelines for school programs, school sites, buildings and supporting facilities needed to provide a complete educational experience for the students. These guidelines include:

- Curriculum Regulations and the State's position on how standards-based education will impact facilities.
- School sites must be of adequate size to provide for the safety of students and provide outdoor play areas, bus loading and unloading, parking facilities for students, staff and visitors.
- School buildings are to be safe and create an environment that will encourage students to learn.
- Facilities should meet the educational, physical, intellectual, social and emotional needs of students.
- Flexibility, including spaces to provide for the various teaching/learning styles, is essential to the modern school.
- The Universal Accessibility Standards, Chapter 60, of the Department of Labor and Industry requires schools, as public facilities, to be accessible to individuals with physical disabilities.
- The Department of Labor and Industry restroom equity rule and regulation amending Title 34 requires twice as many toilet fixtures for women than men.

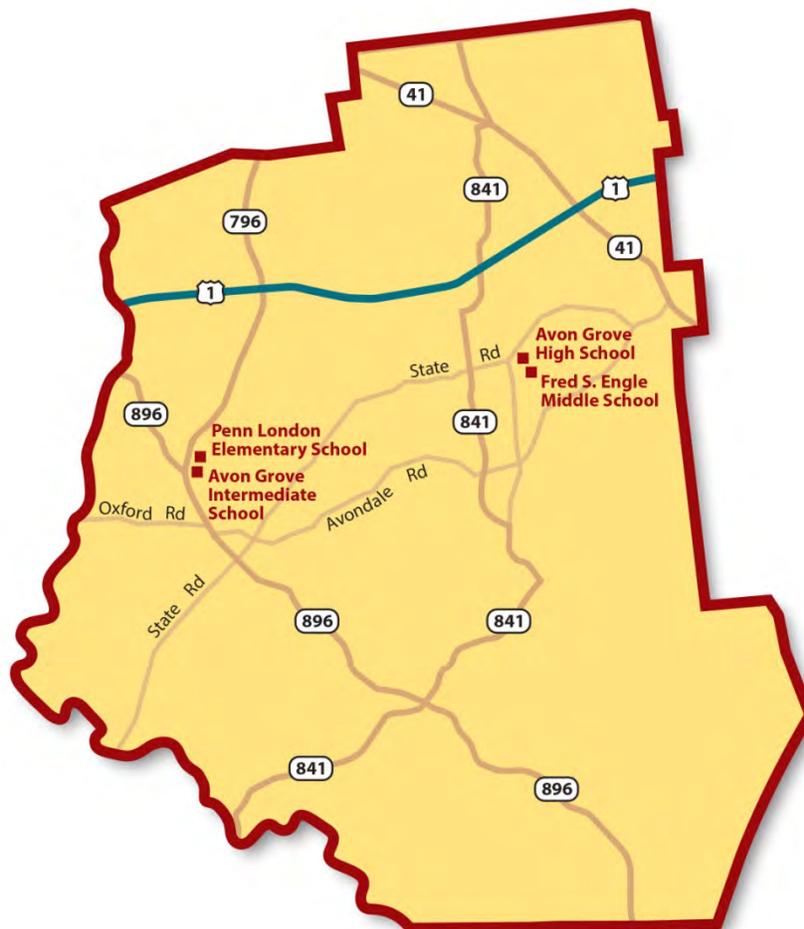
SCHOOL DISTRICT OVERVIEW

The Avon Grove School District is a K-12 public school system that serves about 5,088 students (October 1, 2014) in four schools: Penn London Elementary School (K-2); Avon Grove Intermediate School (3-6); Fred S. Engle Middle School (7-8); and Avon Grove High School (9-12). The following data sources were used to compile the following information.

- ▶ Avon Grove School District
- ▶ US Census
- ▶ Delaware Valley Regional Planning Commission
- ▶ Environmental Systems Research Institute, Inc.

GEOGRAPHY

Avon Grove School District is located in southern Chester County in a rural-suburban setting 34 miles southwest of Philadelphia, Pennsylvania, and 18 miles northwest of Wilmington, Delaware. The school district covers 67 square miles and consists of five townships, namely New London (1704), London Grove (1723), London Britain (1725), Penn (created from Londenberry Township in 1817), and Franklin (1852), which were created and organized in that order. Avondale (1894) and West Grove (1893) are the two boroughs with London Grove Township, and they are the largest population centers in the Avon Grove School District.



WEALTH

The median household income and family income in 2013 is slightly higher than the Chester County average.

Residents reported as living above the poverty level has gone down from 4.8% in 2010 to 4.2% in 2013 compared to a rise in the poverty level in Chester County which has risen by .7% over the same three year time frame. Persons living below the poverty level in Chester County is approximately half that of the average in Pennsylvania.

Wealth, 2013

	Avon Grove School District	Chester County	Pennsylvania
Per Capita Income	\$36,696	\$42,210	\$28,502
Median Household Income	\$91,694	\$86,050	\$52,548
Median Family Income	\$105,612	\$105,278	\$66,646
Persons Below Poverty	4.2%	6.9%	13.3%

Source: US Census, American Community Survey, 2013 5-Year Estimates

Wealth, 2010

	Avon Grove School District	Chester County	Pennsylvania
Per Capita Income	\$36,179	\$41,251	\$27,049
Median Household Income	\$93,137	\$84,741	\$50,398
Median Family Income	\$105,336	\$101,760	\$63,364
Persons Below Poverty	4.8%	6.2%	12.4%

Source: US Census, American Community Survey, 2010 5-Year Estimates

Wealth, 2000

	Avon Grove School District	Chester County	Pennsylvania
Per Capita Income	n/a	\$31,627	\$20,880
Median Household Income	n/a	\$65,295	\$40,106
Median Family Income	n/a	\$76,916	\$49,184
Persons Below Poverty	n/a	5.2%	11.0%

Source: US Census, American Community Survey, Census 2000 Summary File 3

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Of the neighboring Pennsylvania school districts, only Kennett Consolidated and Unionville-Chadds Ford School Districts exceed Avon Grove’s Per Capita Income, Median Household and Median Family Income.

Wealth, 2013

	Avon Grove School District	Kennett Consolidated School District	Octorara Area School District	Oxford Area School District	Unionville-Chadds Ford School District	Chester County	Pennsylvania
Per Capita Income	\$36,696	\$47,937	\$26,945	\$25,235	\$58,353	\$42,210	\$28,502
Median Household Income	\$91,694	\$97,401	\$64,389	\$67,331	\$123,585	\$86,050	\$52,548
Median Family Income	\$105,612	\$116,345	\$70,181	\$74,409	\$141,135	\$105,278	\$66,646
Persons Below Poverty	4.2%	7.3%	8.9%	9.3%	2.1%	6.9%	13.3%

Source: US Census, American Community Survey, 2013 5-Year Estimates

GROWTH

Based on US Census information, Avon Grove School District population is estimated to have had moderate growth between 2010 and 2013 which is similar to that projected for Chester County and Pennsylvania.

Total Population

	2000	2010	2013 (Estimate)
Avon Grove School District	n/a	30,080	31,054
Chester County	443,501	498,886	503,075
Pennsylvania	12,281,054	12,702,379	12,731,381

Source: US Census, American Community Survey, Summary File 1 (2000 & 2010), 2013 5-Year Estimates

Based on the Environmental Systems Research Institute, Inc. information, Avon Grove School District population is projected to experience a population growth of 5.2% from 2014 to 2019.

Avon Grove School District	2000 Census	2010 Census	2014 Estimates	2019 Projections	Change 2014-19	Change 2014-19 (%)
Total Population	23,067	30,080	31,570	33,212	1,642	5.2%

Based on the Delaware Valley Regional Planning Commission Report in January 2012, the population by municipality in the Avon Grove School District is expected to increase over the next 10 years from 30,080 total residents in 2010 to 33,487 in 2020 or by 11%.

Municipal Population Forecasts, Chester County, 2015-2040

Year	Avondale	West Grove	New London	London Grove	London Britain	Penn	Franklin	Chester County
2010 Census	1,265	2,854	5,631	7,475	3,139	5,364	4,352	498,886
2020 Forecast	1,397	3,055	6,355	8,474	3,271	6,084	4,851	538,809
2030 Forecast	1,622	3,402	7,600	10,189	3,498	7,320	5,710	607,407
2040 Forecast	1,754	3,603	8,324	11,188	3,630	8,040	6,209	647,330
Absolute Change 2010-2040	489	749	2,963	3,713	491	2,676	1,857	148,444
% Change 2010-2040	38.7%	26.2%	47.8%	49.7%	15.6%	49.9%	42.7%	29.8%

Source: Delaware Valley Regional Planning commission, January 2012

DEMOGRAPHICS

The Avon Grove School District is comprised of five townships, namely New London (1704), London Grove (1723), London Britain (1725), Penn (created from Londenberry Township in 1817), and Franklin (1852). Avondale (1894) and West Grove (1893) are the two boroughs with London Grove Township. Chester County is anticipated to gain 39,923 people between 2010 and 2020 according to the Delaware Valley Regional Planning Commission report (January 2012).

Avon Grove has the highest percentage of married couples with children in Chester County with the exception of Unionville-Chadds Ford School District.

Percentage of Total Households with Families, 2013

	Avon Grove School District	Kennett Consolidated School District	Octorara Area School District	Oxford Area School District	Unionville-Chadds Ford School District	Chester County	Pennsylvania
Married Couples with Children	69.4%	61.0%	63.3%	62.8%	71.3%	58.9%	48.6%
Male Household, No Wife Present	3.6%	3.9%	5.1%	4.8%	1.6%	3.3%	4.3%
Female Householder, No Husband Present	6.3%	7.2%	9.5%	11.4%	5.8%	8.4%	11.9%
Non-Family Household	20.7%	27.9%	22.1%	21.0%	21.3%	29.4%	35.2%

Source: US Census, American Community Survey, 2013 5-Year Estimates

Avon Grove has the highest percentage of married couples with children under 18 in Chester County with the exception of Unionville-Chadds Ford School District.

Percentage of Households By Family Type with Own Children Under 18 Years, 2013

	Avon Grove School District	Kennett Consolidated School District	Octorara Area School District	Oxford Area School District	Unionville-Chadds Ford School District	Chester County	Pennsylvania
Married Couples with Children	87.4%	84.0%	79.4%	80.5%	91.7%	83.8%	69.9%
Male Household, No Wife Present	4.2%	6.1%	5.2%	3.7%	1.2%	4.2%	6.4%
Female Householder, No Husband Present	8.4%	9.9%	15.4%	15.9%	7.1%	12.0%	23.7%

Source: US Census, American Community Survey, 2013 5-Year Estimates

Student Demographics

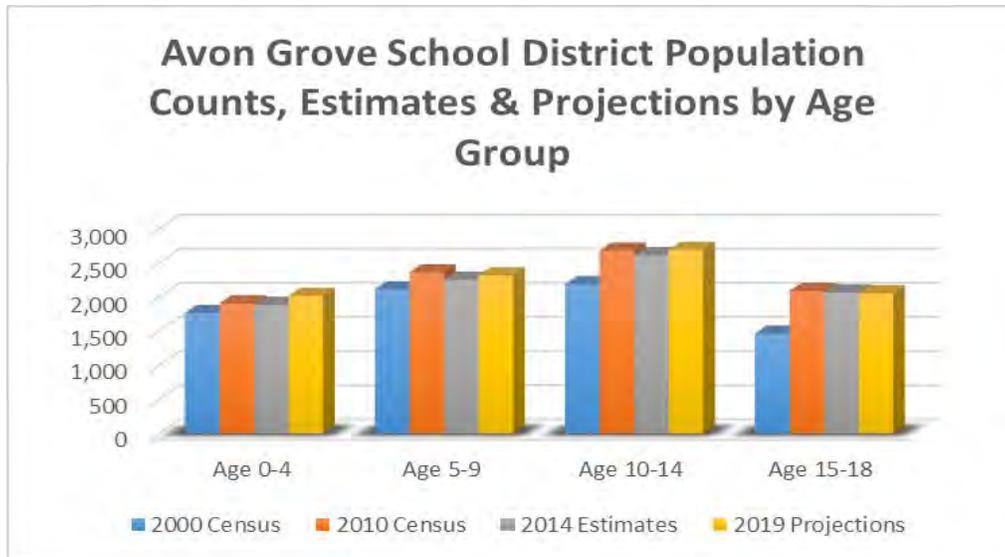
The current demographics of the school system is comprised of 75% Caucasian; 19.5 % Hispanic; 2.5% African American; 1.9% Asian; and less than 1% both American Indian/Alaskan Native and multi-racial.

School-Aged Children

The Environmental Systems Research Institute, Inc. (ESRI) indicates the highest increase in students from the 2000 to the 2010 Census to be in the 10-14 and 15-18 age groups. The 2014 estimates and 2019 projections are anticipated to maintain the 2010 population.

Avon Grove School District	2000 Census	2010 Census	2014 Estimates	2019 Projections	Change 2014-19	Change 2014-19 (%)
Total Population	23,067	30,080	31,570	33,212	1,642	5.2%
Age 0-4	1,767	1,908	1,888	2,018	130	6.9%
Age 5-9	2,114	2,364	2,257	2,320	63	2.8%
Age 10-14	2,189	2,683	2,617	2,694	77	2.9%
Age 15-18	1,465	2,091	2,069	2,055	-14	-0.7%
Total Age 0-18	7,535	9,046	8,831	9,087	256	2.9%
Median Age	36.0	39.5	39.9	39.8	-0.1	-0.3%
Median Household Income	\$72,383	\$93,137	\$92,641	\$107,083	\$14,442	15.6%
Average Household Income	\$82,139	\$110,181	\$119,341	\$139,137	\$19,796	16.6%
Average Family Size	3.39	3.35	3.36	3.36	0.00	0.0%
Total Family Households	6,124	8,032	8,402	8,808	406	4.8%

Source: ESRI



TRANSPORTATION

Access to the Avon Grove School District is possible via:

Roadways:

- Pennsylvania Routes 896 and 841
- Maryland Route 213
- Delaware Route 896 and 41
- U.S. Route 1

Bus Service:

- Pennsylvania Route 896

K-12 EDUCATIONAL PROGRAM

The following is an excerpt from the Avon Grove School District’s District Level Plan dated 7/1/2015 – 6/30/2018.

Strategic Planning

The Avon Grove School District utilized a dynamic new strategic planning process designed to set a new standard for the district in seeking input from all stakeholders through surveys, interviews, and public meetings. Known as "Creating Our Future Together," Avon Grove's strategic planning process involved three broad phases.

1. Phase I: Designing Avon Grove's Future Together
2. Phase II: Planning Avon Grove's Future Together
3. Phase III: Achieving Avon Grove's Future Together

A Core Strategic Planning Team was established in June of 2013 and charged with the development of the strategic planning process and all related activities. The core team was comprised of various administrators in the district.

Phase I, Designing Avon Grove's Future Together, occurred in January 2014 through April of 2014. This phase included a number of activities including analyzing existing student achievement data,

gathering information from a broad group of stakeholders including a limited number of one-on-one interviews, surveying parents, teachers and staff, and students in grades six through 12, and holding community forums. The work completed during phase one was summarized in a White Paper titled "Avon Grove School District Performance & Perceptions".

Phase II, Planning Avon Grove's Future Together, occurred in August 2014 through September 2014. This phase utilized a Co-lab structure and the use of the Structured Democratic Dialogue (SDD) process. A Co-lab is a unique and powerful type of facilitated gathering of stakeholders who share, learn, and create a deep understanding of a complex problem. The SDD process used in the Co-lab was researched and developed over 40 years and provides today's best chance to make progress on complex problems organizations face. The six principles upon which the Co-lab was built include:

1. **Dialogue must be structured** so participants can think clearly by ensuring they are not overloaded with too much information.
2. **Each idea must be protected** so that its independence and genuineness remain.
3. **The whole group learns and evolves** as each participant sees how their ideas influence those of others.
4. **A diversity of viewpoints is essential** when engaging stakeholders in a dialogue for defining and resolving a complex issue.
5. **Participants will understand the relative importance of their ideas** only when their ideas are compared with others.
6. **Through understanding how different people's ideas relate**, participants become wiser about the meaning of their own ideas. (Flanagan, T.R. & Christakis, A.N., 2009)

Three Co-labs occurred over a four day period in August and September of 2014.

The Visioning Co-lab occurred on August 15 and 16 and focused on the following Triggering Question:

- *What are descriptors of an ideal Avon Grove School District that ensures all students who reside within its boundaries are exceptionally well-prepared to succeed and lead full and meaningful lives?*

The Barriers Co-lab occurred on September 5 and focused on the following Triggering Question:

- *What are the barriers to achieving the ideal Avon Grove School District (as described in Co-lab 1) within the next five years?*

The Action Planning Co-lab occurred on September 6 and focused on the following Triggering Question:

- *What actions, if adopted and implemented, will overcome the barriers and lead to the ideal Avon Grove School District in the coming years?*

The work of each Co-lab was captured including every idea generated along with a clarification of the idea, clusters where the ideas were grouped to show the dimensions of the problem, and an Influence Map detailing the patterns of influence between a subset of the ideas generated during each respective session. The Influence Map and ideas themselves served as primary information sources for the development of the District Strategic Plan.

Participants for the Co-labs were solicited from the entire school community. Over 35 individuals participated in the Co-labs representing over 50 stakeholder groups including parents, community members, teachers, support staff, administrators, board members, business partners and various other groups.

Following the Action Planning Co-lab, the Core Planning Team participated in a Consensus Action Scenario Session that served as a transition between Co-labs and Project Planning. The core Planning Team reviewed all artifacts from all Co-labs and through consensus identified 38 of the 98 Actions identified in the Action Co-lab to incorporate into the Comprehensive Plan. The Core Planning Team re-clustered the 38 Actions into three goal areas:

- Systems
- Communication & Community Outreach
- Increased Learning Opportunities

The Core Planning Team then developed goals and implementation steps to begin in July of 2015 launching Phase III, Achieving Avon Grove's Future Together.

Mission Statement

The purpose of the Avon Grove School District is to foster a learning environment for all students to be exceptionally well-prepared to succeed and lead full and meaningful lives.

Vision Statement

All Avon Grove students are well prepared to create their own futures.

Shared Values

The Avon Grove School Community believes that...

- all students are unique, have personalized goals, and understand what is necessary to achieve them,
- all students are taught by the highest-quality educators who make learning customized and purposeful,
- all students are life-long learners who will be emotionally prepared for their success and failure,
- all students and parents are partners in the Avon Grove School District Mission and are critical to its future,
- all students are supported with the technology and infrastructure to pursue their goals,
- all stakeholders are aware of the priorities, decisions, and actions of the Avon Grove School District through a comprehensive and inclusive communication system, and
- all financial decisions are prioritized and aligned with the Avon Grove School District Mission.

Core Foundations

Standards

Mapping and Alignment

Elementary Education-Primary Level

Standards	Mapping	Alignment
Arts and Humanities	Developing	Developing
Career Education and Work	Accomplished	Accomplished
Civics and Government	Accomplished	Accomplished
PA Core Standards: English Language Arts	Accomplished	Accomplished
PA Core Standards: Literacy in History/Social Studies, Science and Technical Subjects	Non Existent	Non Existent
PA Core Standards: Mathematics	Accomplished	Accomplished
Economics	Accomplished	Accomplished
Environment and Ecology	Needs Improvement	Needs Improvement
Family and Consumer Sciences	Non Existent	Non Existent
Geography	Accomplished	Accomplished
Health, Safety and Physical Education	Accomplished	Accomplished
History	Accomplished	Accomplished
Science and Technology and Engineering Education	Needs Improvement	Needs Improvement
Alternate Academic Content Standards for Math	Accomplished	Accomplished
Alternate Academic Content Standards for Reading	Accomplished	Accomplished
American School Counselor Association for Students	Accomplished	Accomplished
Early Childhood Education: Infant-Toddler through Second Grade	Developing	Developing
English Language Proficiency	Developing	Developing
Interpersonal Skills	Developing	Developing
School Climate	Developing	Developing

The mapping and alignment of the following curricular areas are currently nonexistent at the elementary level: *Family & Consumer Science* and *PA Core Standards: Literacy in History/Social Studies, Science and Technical Subjects*.

Family & Consumer Science is not taught at the elementary level in Avon Grove School District. The *PA Core Standards: Literacy in History/Social Studies, Science and Technical Subjects* is focused on grades 6-12.

Two areas that need improvement are *Environment and Ecology* and *Science and Technology and Engineering Education* standards which are connected to the science curriculum at the elementary level. The science curriculum is scheduled for review beginning in the 2015-2016 school year; year 1 of the formal curriculum review cycle.

Elementary Education-Intermediate Level

Standards	Mapping	Alignment
Arts and Humanities	Developing	Developing
Career Education and Work	Accomplished	Accomplished
Civics and Government	Accomplished	Accomplished
Standards: English Language Arts	Accomplished	Accomplished
PA Core Standards: Literacy in History/Social Studies, Science and Technical Subjects	Accomplished	Accomplished
PA Core Standards: Mathematics	Accomplished	Accomplished
Economics	Accomplished	Accomplished
Environment and Ecology	Needs Improvement	Needs Improvement
Family and Consumer Sciences	Needs Improvement	Needs Improvement
Geography	Accomplished	Accomplished
Health, Safety and Physical Education	Accomplished	Accomplished
History	Accomplished	Accomplished
Science and Technology and Engineering Education	Needs Improvement	Needs Improvement
Alternate Academic Content Standards for Math	Accomplished	Accomplished
Alternate Academic Content Standards for Reading	Accomplished	Accomplished
American School Counselor Association for Students	Accomplished	Accomplished
English Language Proficiency	Developing	Developing
Interpersonal Skills	Accomplished	Accomplished
School Climate	Developing	Developing

The mapping and alignment of the following curricular areas are currently nonexistent at the intermediate level: *Family & Consumer Science* and *PA Core Standards: Literacy in History/Social Studies, Science and Technical Subjects*.

Family & Consumer Science is not taught at the elementary level in Avon Grove School District. The *PA Core Standards: Literacy in History/Social Studies, Science and Technical Subjects* is focused on grades 6-12.

Two areas that need improvement are *Environment and Ecology* and *Science and Technology and Engineering Education* standards which are connected to the science curriculum at the elementary level. The science curriculum is scheduled for review beginning in the 2015-2016 school year, year 1 of the formal curriculum review cycle.

Middle Level

Standards	Mapping	Alignment
Arts and Humanities	Developing	Developing
Career Education and Work	Accomplished	Accomplished
Civics and Government	Accomplished	Accomplished
PA Core Standards: English Language Arts	Accomplished	Accomplished
PA Core Standards: Literacy in History/Social Studies, Science and Technical Subjects	Accomplished	Accomplished
PA Core Standards: Mathematics	Accomplished	Accomplished
Economics	Accomplished	Accomplished
Environment and Ecology	Needs Improvement	Needs Improvement
Family and Consumer Sciences	Non Existent	Non Existent
Geography	Accomplished	Accomplished
Health, Safety and Physical Education	Accomplished	Accomplished
History	Accomplished	Accomplished
Science and Technology and Engineering Education	Needs Improvement	Needs Improvement
Alternate Academic Content Standards for Math	Accomplished	Accomplished
Alternate Academic Content Standards for Reading	Accomplished	Accomplished
American School Counselor Association for Students	Accomplished	Accomplished
English Language Proficiency	Developing	Developing
Interpersonal Skills	Accomplished	Accomplished
School Climate	Developing	Developing
World Language	Developing	Developing

The *Environment and Ecology* and *Science and Technology and Engineering Education* standards are loosely contained in the science curriculum in grade 8. This curriculum, however, has not been fully audited or reviewed in several years and is slated for such beginning in the 2015-2016 school year, year 1 of the formal curriculum review cycle.

The *Family and Consumer Sciences* curriculum has not been audited or reviewed. In addition to the course structure at Fred S. Engle Middle School, there needs to be an alignment study with the Avon Grove High School curriculum, considering the full scope of learning opportunities and their alignment to the standards.

High School Level

Standards	Mapping	Alignment
Arts and Humanities	Developing	Developing
Career Education and Work	Accomplished	Accomplished
Civics and Government	Accomplished	Accomplished
PA Core Standards: English Language Arts	Accomplished	Accomplished
PA Core Standards: Literacy in History/Social Studies, Science and Technical Subjects	Accomplished	Accomplished
PA Core Standards: Mathematics	Accomplished	Accomplished
Economics	Accomplished	Accomplished
Environment and Ecology	Needs Improvement	Needs Improvement
Family and Consumer Sciences	Needs Improvement	Needs Improvement
Geography	Accomplished	Accomplished
Health, Safety and Physical Education	Accomplished	Accomplished
History	Accomplished	Accomplished
Science and Technology and Engineering Education	Needs Improvement	Needs Improvement
Alternate Academic Content Standards for Math	Accomplished	Accomplished
Alternate Academic Content Standards for Reading	Accomplished	Accomplished
American School Counselor Association for Students	Accomplished	Accomplished
English Language Proficiency	Developing	Developing
Interpersonal Skills	Accomplished	Accomplished
School Climate	Developing	Developing
World Language	Developing	Developing

The *Environment and Ecology* standards are loosely contained in the course "Earth and Space", currently an option for students in grades 11 or 12. This curriculum, however, has not been fully audited or reviewed in several years and is slated for such beginning in the 2015-2016 school year, year 1 of the formal curriculum review cycle. At present, the "Earth and Space" curriculum is the only curriculum addressing these standards and is not taught to all students at Avon Grove High School.

The *Science and Technology and Engineering Education* standards are loosely embedded in several science courses at Avon Grove High School. The connectedness and explicit connections for students are not clear, however, and need to become more formalized. This work is slated to begin with the formal curriculum review during the 2014-2015 school year.

The *Family and Consumer Sciences* curriculum has been adapted and adjusted over several years to align with the interests of the students and the time constraints of the Avon Grove High School schedule. This work, however, has been done in isolation and is in need of a full mapping and alignment audit to determine where the standards are being met within the department sequencing, as well as within each individual course.

Adaptations

Elementary Education-Primary Level

- Career Education and Work
- Civics and Government
- PA Core Standards: English Language Arts
- PA Core Standards: Mathematics
- Economics
- Environment and Ecology
- Geography
- Health, Safety and Physical Education
- History

Elementary Education-Intermediate Level

- Career Education and Work
- Civics and Government
- PA Core Standards: English Language Arts
- PA Core Standards: Mathematics
- Economics
- Environment and Ecology
- Geography
- Health, Safety and Physical Education
- History

Middle Level

- Career Education and Work
- Civics and Government
- PA Core Standards: English Language Arts
- PA Core Standards: Mathematics
- Economics
- Environment and Ecology
- Geography
- Health, Safety and Physical Education
- History

High School Level

- Career Education and Work
- Civics and Government
- PA Core Standards: English Language Arts
- PA Core Standards: Mathematics
- Economics
- Environment and Ecology
- Geography
- Health, Safety and Physical Education
- History

The Avon Grove School District has a five year curriculum review cycle to ensure the continuous development and alignment of the district curriculum to the Pennsylvania academic standards. The areas not checked above on the cycle for revision in the next 3 years.

Curriculum

Planned Instruction

Elementary Education-Primary Level

Curriculum Characteristics	Status
Objectives of planned courses, instructional units or interdisciplinary studies to be achieved by all students are identified for each subject area.	Accomplished
Content, including materials and activities and estimated instructional time to be devoted to achieving the academic standards are identified.	Accomplished
The relationship between the objectives of a planned course, instructional unit or interdisciplinary studies and academic standards are identified.	Accomplished
Procedures for measurement of mastery of the objectives of a planned course, instructional unit or interdisciplinary studies are identified.	Accomplished

Elementary Education-Intermediate Level

Curriculum Characteristics	Status
Objectives of planned courses, instructional units or interdisciplinary studies to be achieved by all students are identified for each subject area.	Accomplished
Content, including materials and activities and estimated instructional time to be devoted to achieving the academic standards are identified.	Accomplished
The relationship between the objectives of a planned course, instructional unit or interdisciplinary studies and academic standards are identified.	Accomplished
Procedures for measurement of mastery of the objectives of a planned course, instructional unit or interdisciplinary studies are identified.	Accomplished

Middle Level

Curriculum Characteristics	Status
Objectives of planned courses, instructional units or interdisciplinary studies to be achieved by all students are identified for each subject area.	Accomplished
Content, including materials and activities and estimated instructional time to be devoted to achieving the academic standards are identified.	Accomplished
The relationship between the objectives of a planned course, instructional unit or interdisciplinary studies and academic standards are identified.	Accomplished
Procedures for measurement of mastery of the objectives of a planned course, instructional unit or interdisciplinary studies are identified.	Accomplished

High School Level

Curriculum Characteristics	Status
Objectives of planned courses, instructional units or interdisciplinary studies to be achieved by all students are identified for each subject area.	Accomplished
Content, including materials and activities and estimated instructional time to be devoted to achieving the academic standards are identified.	Accomplished
The relationship between the objectives of a planned course, instructional unit or interdisciplinary studies and academic standards are identified.	Accomplished
Procedures for measurement of mastery of the objectives of a planned course, instructional unit or interdisciplinary studies are identified.	Accomplished

The Avon Grove School District’s curriculum is developed by classroom teachers of the specific content area of grades K-12 and administrators. A Planned Course Outline serves as the overview of the District curriculum and is based upon the Pennsylvania Standards for the specific content area. The *Understanding by Design (UbD)* process is utilized to develop curriculum and includes the following components:

Standards – Pennsylvania standards for the discipline

Big Ideas – Core concepts, principles, theories

Enduring Understandings – Lasting understandings that involve the big ideas and give meaning to important facts

Essential Questions – Key questions linked to enduring understandings and assessment

Knowledge & Skills – Concepts and skills students need to know and be able to do

Assessments – Tools to measure student understanding and achievement of concepts and skills

Specific grade level modules are developed that outline an overview of the instructional units and curriculum maps provide specific instructional practices and activities designed to promote student attainment of the knowledge and skills for the content area.

Modification and Accommodations

The Avon Grove School District embraces the philosophy that "all children are more alike than different" and designs its programs and curriculum according to this approach. All students begin their day in the regular education homeroom and continue their educational program in the regular education classroom to the maximum extent appropriate. Planned instruction contains modifications and accommodations that allow all students at all mental and physical ability levels to access and master a rigorous standards aligned curriculum at the appropriate grade level. Based on the individual student's needs, the IEP team considers the extent to which modifications, accommodations, supplementary aides, and services can be provided in the regular education classroom to allow the student derive the meaningful benefit from the regular education curriculum. The team considers a wide variety of aides and services to implement in the regular education classroom. These may include testing accommodations such as extended time or modified tests, organization and student tools such as guided notes and unit outlines, and assistive technology devices such as books on audio or speech-to-text software. Students performing below grade level may require curriculum modifications in order to eventually meet grade level expectations. The curriculum modifications may include instruction on concepts and skills from a previous grade level that the student has yet to master previously yet is critical for the student to be successful on the grade level curriculum. In addition, the District has adopted a co-teaching model across grade levels and content areas. Utilizing this approach, teachers

with expertise in the development and implementation of appropriate accommodations and modifications are involved in lesson planning, preparation, and delivery.

Instruction

Instructional Strategies

- Formal classroom observations focused on instruction
- Walkthroughs targeted on instruction
- Annual Instructional evaluations
- Peer evaluation/coaching
- Instructional Coaching

Regular Lesson Plan Review

- Administrators

Provide brief explanation of LEA's process for incorporating selected strategies.

The Avon Grove School District Supervision Model aligns with the requirements of Act 82: Educator Effectiveness and includes both a Formal Observation Model and a Differentiated Supervision Model. The Differentiated Supervision Model includes three options: Peer Coaching, Portfolio and Action Research. The District Supervision Model uses a three year cycle so that teachers annually participate in either the Formal Observation Model or the Differentiated Supervision Model. Both options ensure that teachers select professional and instructional goals to improve student performance. Classroom walkthroughs are included in both the Formal Observation Model and the Differentiated Supervision Model. Annual evaluations are conducted as part of the District Supervision Model. The District Supervision Model is a collaborative, reflective process for teachers and administrators.

Instructional coaching is focused on a district-wide service delivery model. At the elementary level, there are two instructional coaches; one for mathematics and one for language arts. There are also two instructional coaches at the secondary level - math and reading. One instructional technology specialist/coach supports the entire district. All instructional coaches provide a combination of individual and team coaching through observations, planning, and modeling. Additionally, the instructional coaches support the work of the Professional Learning Community (PLC) in each school and shape the professional development plans at both the school and district levels.

Section 2
Enrollment Analysis

ENROLLMENT ANALYSIS

The following Enrollment Projections Report was prepared in conjunction with Tracy Healy, President and Owner of FutureThink, LLC, a woman-owned and EDGE-certified business, which has been in operation since May 2006. Previously, she served as a Vice President at DeJONG-HEALY and was one of its founding members.

FutureThink focuses primarily on enrollment projections and demographic studies while continuing to offer a wide range of planning services, including:

- Facility Master Planning
- Capacity Analysis
- Educational Specifications
- Redistricting
- Strategic Planning
- Geographic Information Systems in Planning

Their mission is to empower the people and communities with whom they work—enhancing the educational experience through planning. It is their goal to provide high quality service—ensuring that their clients have the tools necessary to make informed decisions to improve the learning environments in their districts.

METHODOLOGY AND ASSUMPTIONS

This report contains ten-year enrollment projections for the Avon Grove School District. Enrollment projections were developed by analyzing the following data:

- Historical enrollment
- Birth data
- Demographics
- Housing information

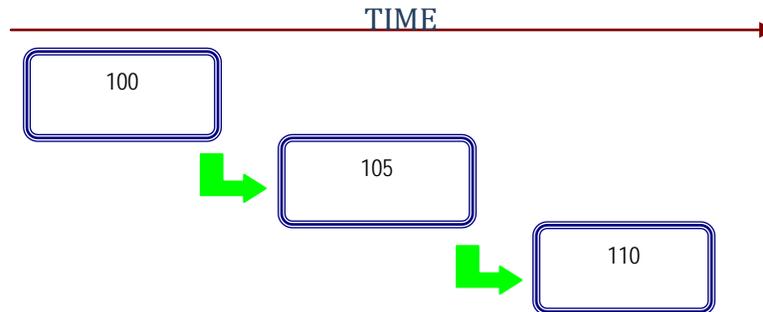
Data sources included:

- Avon Grove School District – historical enrollment
- Pennsylvania Department of Health – birth data
- US Census – demographics
- State of the Cities Data System (SOCDS) Building Permits Database

The methodology used to project enrollments was the Cohort Survival Method.

A cohort is a group of persons [in this case, students]. The cohort survival projection methodology uses previous live birth data and historical student enrollments to “age” a known population or cohort throughout the school grades. For instance, a cohort begins when a group of kindergarteners enroll in grade K and moves to first grade the following year, second grade the next year, and so on.

A “survival ratio” is developed to track how this group of students grew or decreased in number as they moved through the grade levels. By determining survival ratios for each grade transition [i.e., 1st to 2nd grade] over a ten-year period of time, patterns emerge. Projection ratios are then developed to be used as a multiplier in projecting future enrollment.



For example, if student enrollment has consistently increased from the 8th to the 9th grade over the past ten years, the survival ratios for each year would be greater than 100 percent. Through analysis of the survival ratios, the projection ratio is determined and is multiplied by the current 8th grade to develop a projection for next year's 9th grade.

This methodology can be carried through to develop ten years of projection figures. Because there is not a grade cohort to follow for students coming into kindergarten, live birth counts are used to develop a survival ratio. Babies born five years previous to the kindergarten class are compared in number, and a ratio is developed to project future kindergarten enrollments.

FutureThink has developed two sets of projection methodologies based on the standard deviation and overall average of the survival ratios.

- The first projection mimics the current trends in the district and the charter schools.
- The second projection assumes that some families who would have chosen charter schools that provide full-day kindergarten will instead choose to attend public school in the district if full-day kindergarten is provided. The expectation is that approximately half of the Charter School kindergarten students would return to the public school system.

After developing the ratios, FutureThink then establishes the projection ratios to use for each grade based on a variety of factors including recent trends in population and birth counts, housing starts, changes in attendance boundaries, etc.

The cohort survival method is useful in areas where population is stable [relatively flat, growing steadily, or declining steadily], and where there have been no significant fluctuations in enrollment, births, and housing patterns from year to year.

Assumptions include:

- Birth counts will remain constant in the future.
- Future enrollment trends will mimic those of the past.
- Trends in housing will stay the same.

HISTORICAL ENROLLMENT

The Avon Grove School District had been experiencing significant growth that peaked in 2007-08. Since then, the District has faced a steady decline in the Kindergarten enrollment likely as a result of the recession that began in 2008, coupled with expanded program offerings in the last few years at the Avon Grove Charter School for full-day Kindergarten.

From the highest enrollment in 2007-08 of 5,445, student enrollment in the Avon Grove School District has decreased by **361** students. Total enrollment for the 2014-15 school year is 5,084 students.

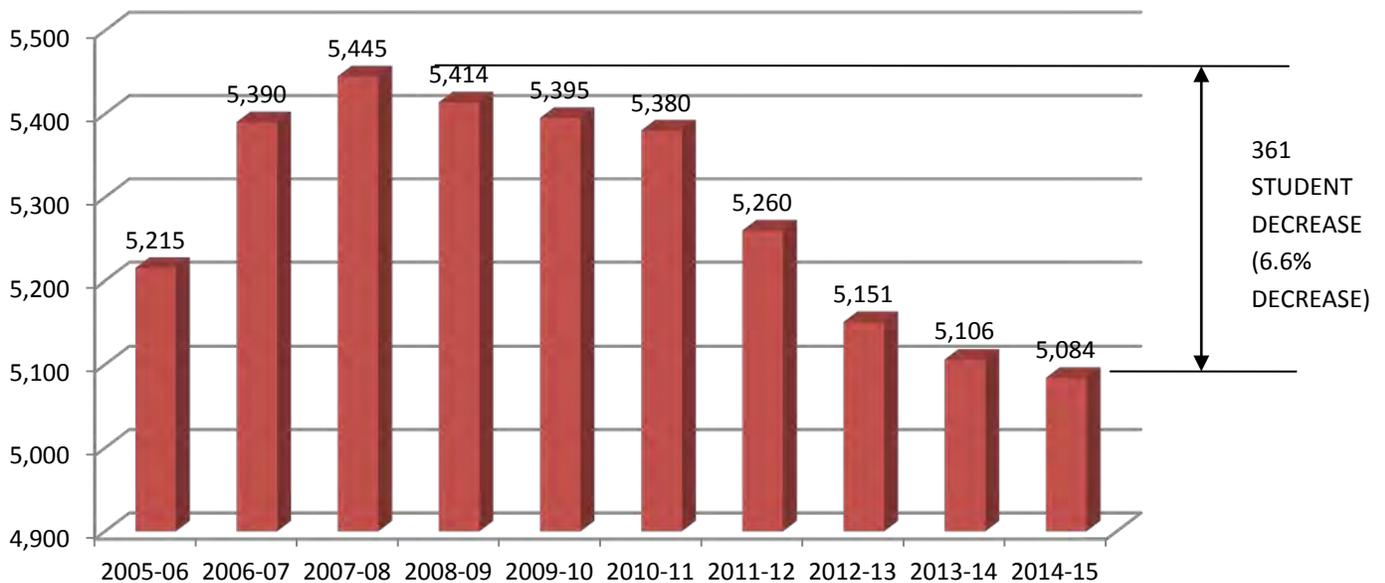
The following table and graph illustrate the District’s enrollment history from 2005-06 through 2014-15.

**Avon Grove School District
Historical Enrollment**

Grade	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
K	309	330	313	302	317	300	300	272	259	252
1	388	354	387	372	341	360	343	339	318	295
2	374	425	376	378	391	350	367	350	342	332
3	369	408	439	380	395	404	357	373	375	365
4	398	387	413	448	380	402	389	356	378	382
5	389	421	399	421	442	390	398	388	371	385
6	403	404	426	408	414	442	397	406	393	379
7	457	427	431	459	454	447	460	422	425	416
8	433	474	441	429	461	453	449	461	427	444
9	452	496	502	481	455	485	467	470	481	448
10	455	422	478	490	442	459	473	448	470	491
11	405	443	416	452	475	419	428	461	437	467
12	383	399	424	394	428	469	432	405	430	428
K-12 Total	5,215	5,390	5,445	5,414	5,395	5,380	5,260	5,151	5,106	5,084

Source: Avon Grove School District, September Count; except for 2014-15 which is November Count

Avon Grove School District Historic Enrollment

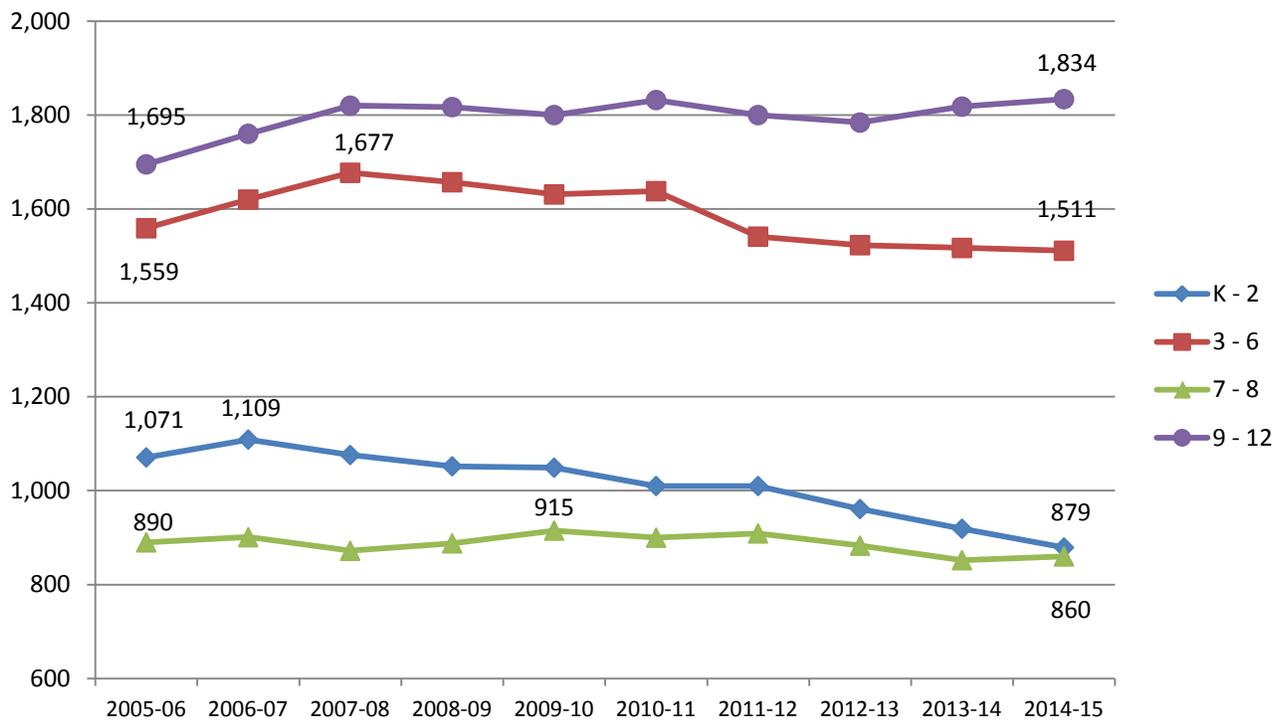


**Avon Grove School District
Historical Enrollment by Grade Group**

Grade	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
K - 2	1,071	1,109	1,076	1,052	1,049	1,010	1,010	961	919	879
3 - 6	1,559	1,620	1,677	1,657	1,631	1,638	1,541	1,523	1,517	1,511
7 - 8	890	901	872	888	915	900	909	883	852	860
9 - 12	1,695	1,760	1,820	1,817	1,800	1,832	1,800	1,784	1,818	1,834
K-12 Total	5,215	5,390	5,445	5,414	5,395	5,380	5,260	5,151	5,106	5,084

Source: Avon Grove School District, September Count; except for 2014-15 which is November Count

Historic Enrollment by Grade Group



LIVE BIRTH DATA

Utilization of live birth data is recommended when projecting future kindergarten enrollments as it provides a helpful overall trend. The live birth counts are used in determining a birth-to-kindergarten survival ratio. This ratio identifies the percentage of children born in a representative area who attend kindergarten in the District five years later. The survival ratios for birth-to-kindergarten as well as grades 1-12 can be found later in this report.

The Pennsylvania Department of Health provides information about birth events. Data is arranged by the residence of the mother.

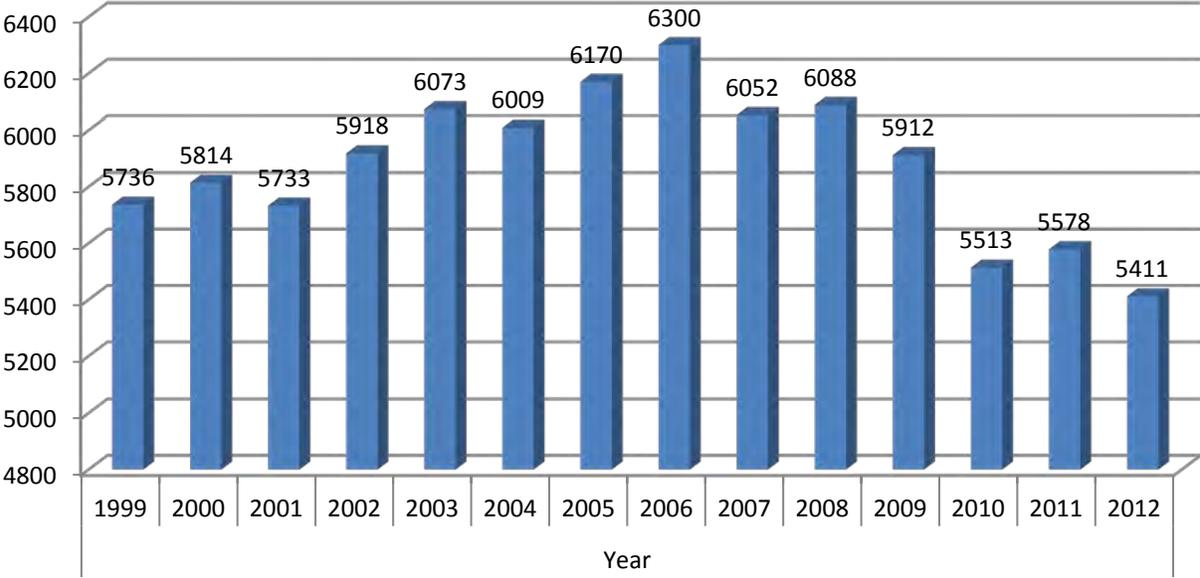
The following chart and graph include the live birth counts for Chester County.

**Chester County
Resident Live Birth Count
1999-2012**

Year	Total # of Live Births
1999	5,736
2000	5,814
2001	5,733
2002	5,918
2003	6,073
2004	6,009
2005	6,170
2006	6,300
2007	6,052
2008	6,088
2009	5,912
2010	5,513
2011	5,578
2012	5,411

Source: Commonwealth of Pennsylvania,
Department of Health, Health Statistics & Research

Chester County Resident Live Birth Count



ENROLLMENT TABULATION

Private school enrollment in the Avon Grove School District is broken down by type of school/grade in the following table. *From kindergarten to 1st grade, there is a decrease in charter school enrollment which is an indicator that families have an interest in full-day kindergarten.*

AVON GROVE SCHOOL DISTRICT
ENROLLMENT TABULATION
October 1, 2014

RESIDENT STUDENTS ENROLLED IN AVON GROVE SCHOOLS														
	KG	01	02	03	04	05	06	07	08	09	10	11	12	Total
Penn London Elementary	251	295	332											878
Avon Grove Intermediate				365	382	388	380							1,515
Fred S. Engle Middle School								417	442					859
Avon Grove High School										450	492	466	428	1,836
	251	295	332	365	382	388	380	417	442	450	492	466	428	5,088
ELEMENTARY TOTAL: 2,393								SECONDARY TOTAL: 2,695						

TECHNICAL COLLEGE HIGH SCHOOL														
	KG	01	02	03	04	05	06	07	08	09	10	11	12	Total
Technical College HS	-	-	-	-	-	-	-	-	-	-	66	77	67	210

Technical College HS is a part-time program. Students are counted in the overall AGHS enrollment.

RESIDENT STUDENTS ENROLLED IN OTHER SCHOOLS & FACILITIES														
	KG	01	02	03	04	05	06	07	08	09	10	11	12	Total
IU Placements	1	2	2	1	1	1	3	2	3	1	1	3	15	36
Approved Private Schools	1	-	-	-	1	-	-	2	-	-	-	2	4	10
Adjudicated	-	-	-	-	-	-	-	-	-	-	1	-	1	2
Charter/Cyber Schools	137	100	91	78	67	70	56	50	50	30	38	27	22	816
Avon Grove Charter	135	99	91	77	64	64	51	41	43	21	27	19	15	747
	139	102	93	79	69	71	59	54	53	31	40	32	42	864
ELEMENTARY TOTAL: 612								SECONDARY TOTAL: 252						

Source: Avon Grove School District

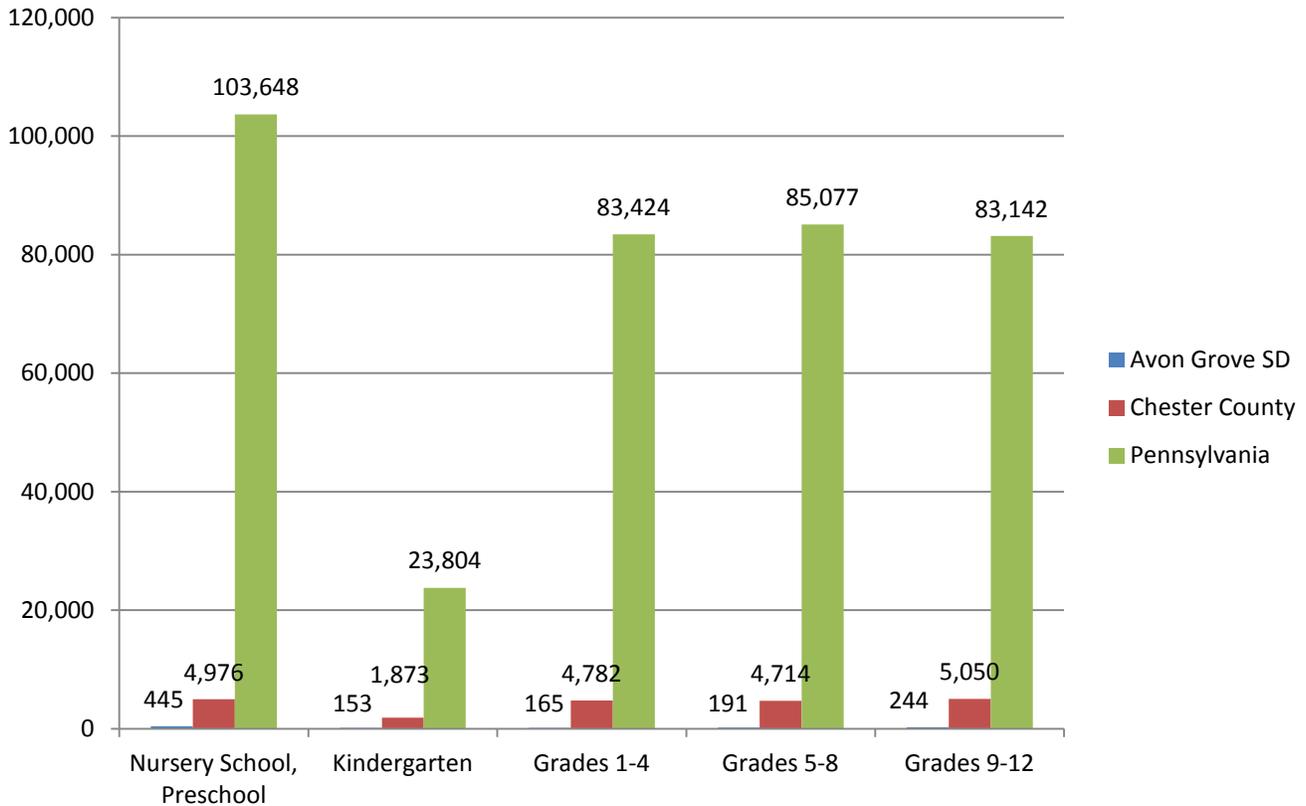
Private school enrollment is broken down by type of school/grade in the following table for Avon Grove School District and Chester County. In Avon Grove School District, approximately 14.9% of children enrolled in school attended private school in 2013, which is less than the total % in Chester County.

**Private School Enrollment
By Type of School
2013**

Type	Avon Grove School District	Chester County	Pennsylvania
Nursery School, Preschool	445	4,976	103,648
Kindergarten	153	1,873	23,804
Grades 1-4	165	4,782	83,424
Grades 5-8	191	4,714	85,077
Grades 9-12	244	5,050	83,142
Total	1,198	21,395	379,095
% of Total Enrolled in School	14.9%	21.3%	17.2%

Source: US Census, American Community Survey, 2013 3-Year Estimates

Private School Enrollment by Grade Groups



HOUSING INFORMATION

Anticipated Housing Units Impacting Future Enrollments

The percentage of owner-occupied housing anticipates moderate stability within the Avon Grove population. Chester County and Pennsylvania are trending slightly down between 2010 and 2013.

Owner-Occupied Housing Units

	2000	2010	2013 (Estimate)
Avon Grove School District	n/a	84.0%	84.3%
Chester County	80.6%	76.2%	75.7%
Pennsylvania	75.4%	69.6%	69.8%

Source: US Census, American Community Survey, Summary File 1 (2000 & 2010), 2013 5-Year Estimates

Housing Development

The following 10-year historical single family building permits were issued for the city, county and township of Avon Grove School District.

of Building Permits Issued for Single Family Dwellings

Year	Avondale	West Grove	New London	London Grove	London Britain	Penn	Franklin	Chester County
2003	0	1	55	77	14	168	15	2,818
2004	0	2	33	177	19	232	32	3,102
2005	0	23	45	85	29	229	47	2,865
2006	0	17	34	102	9	147	37	2,229
2007	0	8	29	20	12	57	16	1,763
2008	0	0	19	13	8	2	8	1,427
2009	8	0	17	36	8	14	13	882
2010	12	0	17	59	7	28	6	839
2011	20	1	18	80	7	7	7	783
2012	4	0	17	70	10	6	3	845
2013	0	0	24	94	8	2	2	1,045
2014*	0	0	10	51	6	2	17	727

Source: SOCDs Building Permits Database

*preliminary through November 2014

Based on the Subdivision & Land Development Reviews for 2014 through November, the following are under review for *single-family residential* for Avon Grove School District townships and boroughs:

- Avon Grove – 0
- Franklin Township – 8 units
- London Britain Twp. – 3 units
- London Grove Twp. – 1 unit
- New London Township – 2 units
- Penn Township – 2 units
- West Grove – 0

ENROLLMENT PROJECTIONS

Enrollment projections were developed primarily using the cohort survival methodology after analyzing the data collected in this report.

The projections not including the return of Charter School students indicates a **decrease of 353 students** district-wide from the actual enrollment numbers in 2014-15 to 2024-25. The following tables and graph illustrate projected enrollments by grade and by grade group through the 2024-25 school year.

Avon Grove School District
Projected Enrollment

Grade	2014-15 Actual	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
K	252	260	242	299	256	283	284	285	286	287	288
1	295	289	299	278	342	293	324	326	327	328	329
2	332	305	299	308	287	354	303	335	336	338	339
3	365	351	322	316	326	303	373	320	354	355	356
4	382	372	357	328	321	331	308	380	325	360	361
5	385	392	381	366	336	329	340	316	389	334	369
6	379	392	399	388	373	342	335	346	322	396	340
7	416	405	419	426	414	398	365	358	369	343	423
8	444	425	413	427	435	422	406	372	365	376	350
9	448	466	445	433	448	456	442	425	390	382	394
10	491	453	470	450	437	452	460	447	429	394	386
11	467	484	446	463	443	431	445	453	440	423	388
12	428	451	467	430	447	427	415	429	437	424	408
Grand Total	5,084	5,045	4,959	4,912	4,865	4,821	4,800	4,792	4,769	4,740	4,731

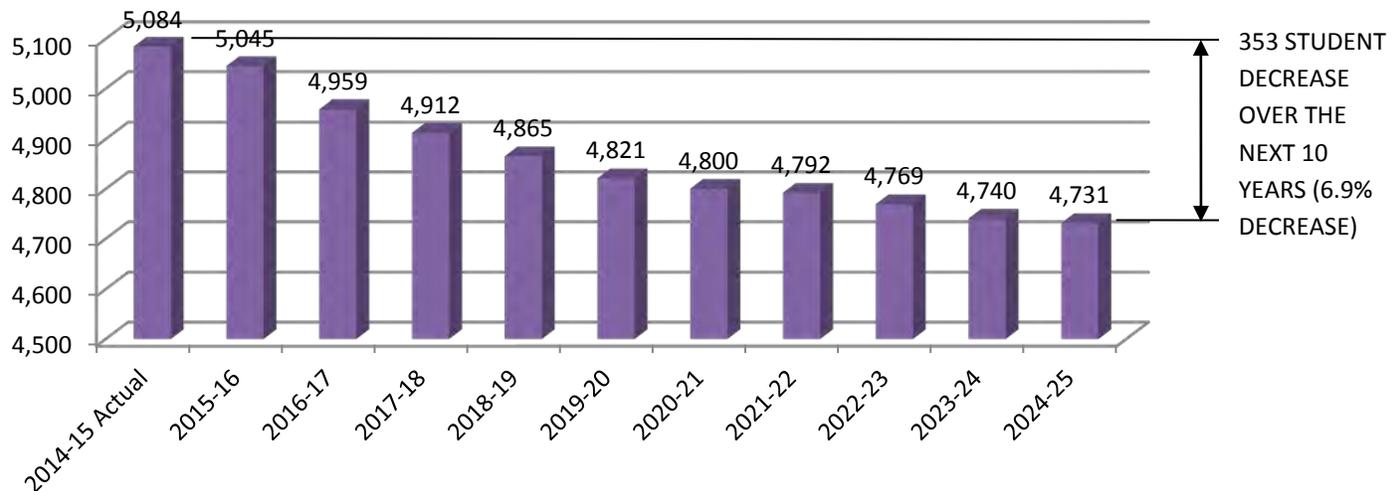
Source: FutureThink

Avon Grove School District
Projected Enrollment by Grade Group

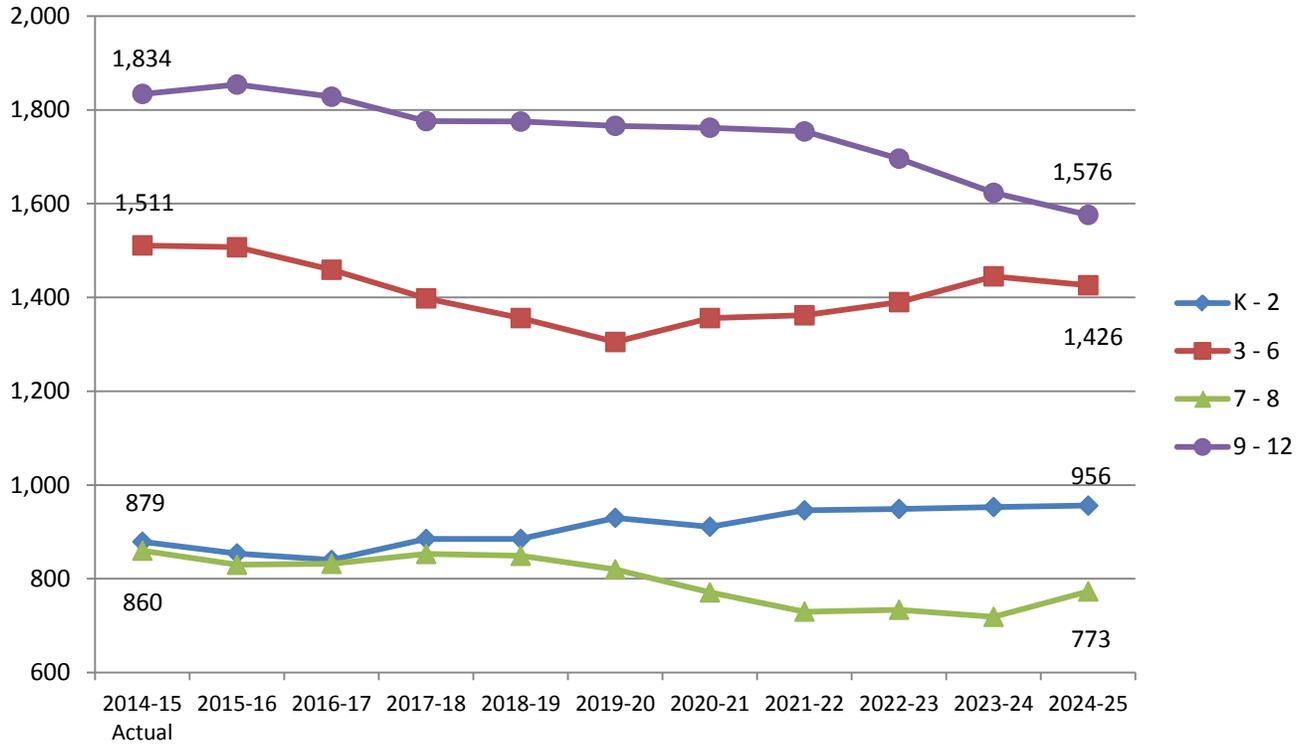
Grade	2014-15 Actual	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
K - 2	879	854	840	885	885	930	911	946	949	953	956
3 - 6	1,511	1,507	1,459	1,398	1,356	1,305	1,356	1,362	1,390	1,445	1,426
7 - 8	860	830	832	853	849	820	771	730	734	719	773
9 - 12	1,834	1,854	1,828	1,776	1,775	1,766	1,762	1,754	1,696	1,623	1,576
Grand Total	5,084	5,045	4,959	4,912	4,865	4,821	4,800	4,792	4,769	4,740	4,731

Source: FutureThink

Avon Grove School District Projected Enrollment without returning Charter Students



Avon Grove School District Enrollment Projections by Grade Group without Charter Students



The projections that include the return of the Charter School students anticipate that approximately ½ of the kindergarten age students would return back to the public school system if commensurate programs were provided at the public schools. This is a net result of about 50+/- students projected in the 10th year and an **increase of 227 students** district-wide from the actual enrollment numbers in 2014-15 to 2024-25. The following tables and graph illustrate projected enrollments by grade and by grade group through the 2024-25 school year.

Avon Grove School District
Projected Enrollment

Grade	2014-15 Actual	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
K	252	301	280	345	296	327	328	330	331	332	333
1	295	289	345	321	396	339	375	377	378	379	380
2	332	305	299	357	332	409	351	388	389	390	392
3	365	351	322	316	377	351	432	370	409	411	412
4	382	372	357	328	321	383	356	439	376	416	418
5	385	392	381	366	336	329	393	365	450	386	427
6	379	392	399	388	373	342	335	400	372	458	393
7	416	405	419	426	414	398	365	358	427	397	489
8	444	428	416	431	438	426	409	375	368	439	408
9	448	466	449	436	451	459	446	428	393	385	460
10	491	453	470	453	441	456	464	450	433	397	389
11	467	484	446	463	446	434	449	457	444	426	391
12	428	460	476	439	456	439	427	442	449	437	419
Grand Total	5,084	5,098	5,059	5,069	5,077	5,092	5,130	5,179	5,219	5,253	5,311

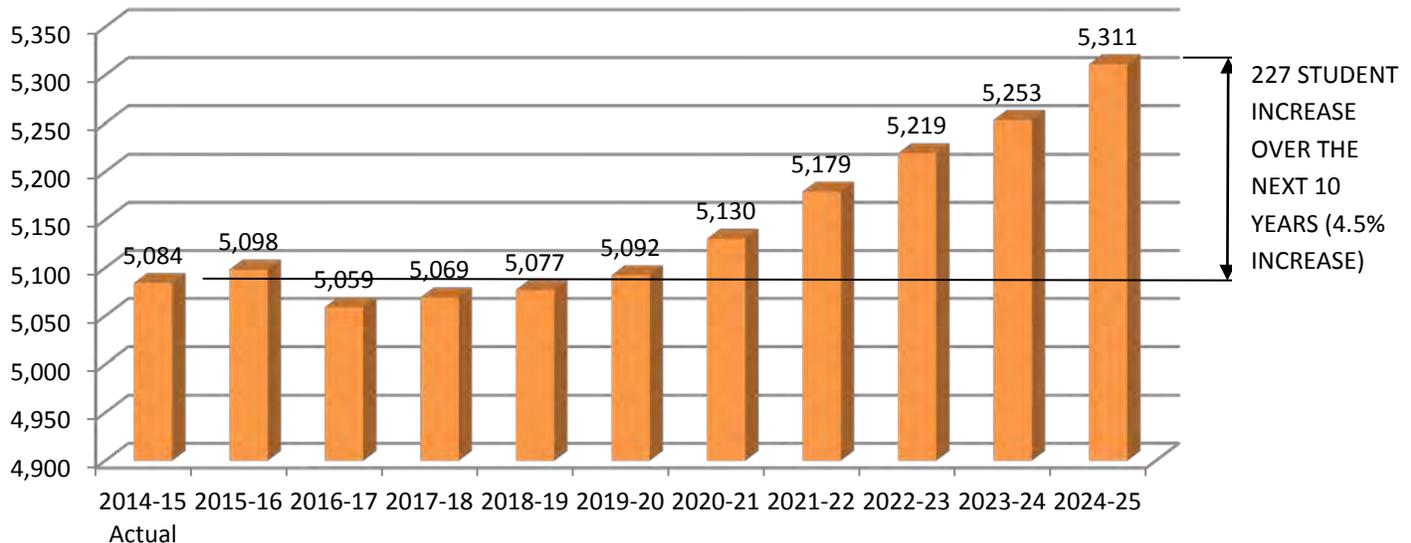
Source: FutureThink

Avon Grove School District
Projected Enrollment by Grade Group

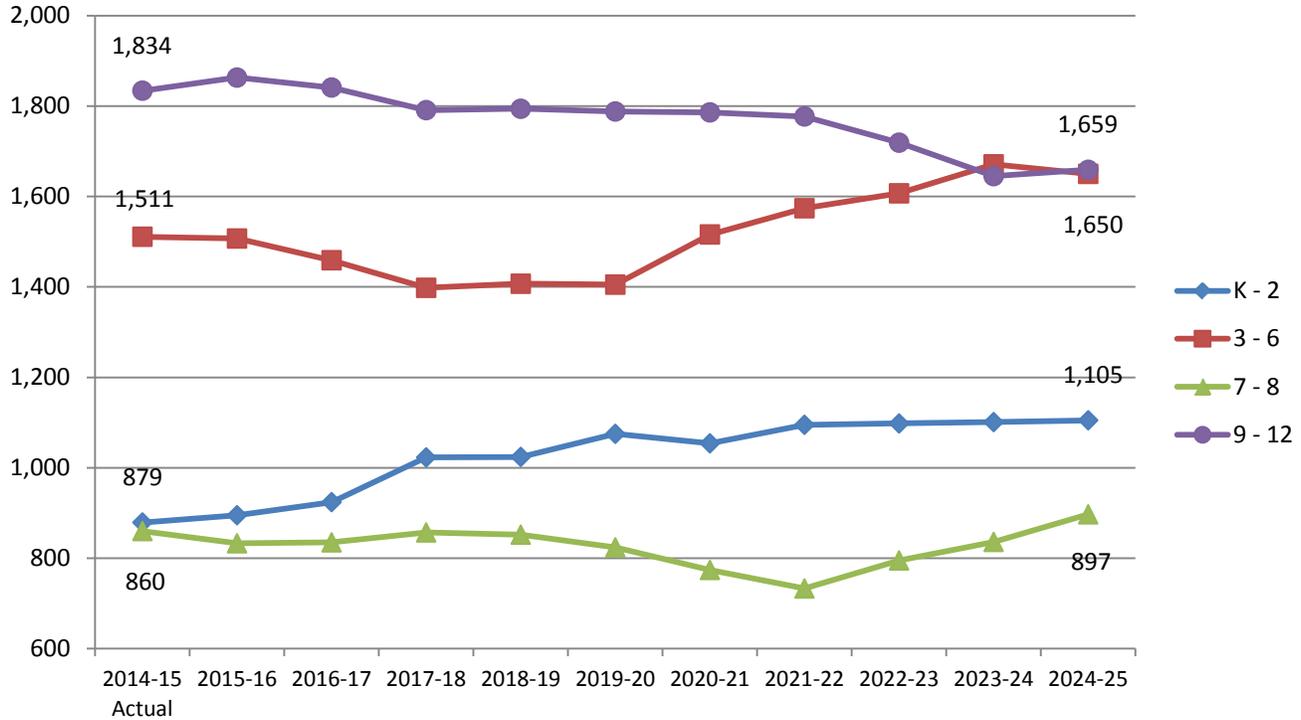
Grade	2014-15 Actual	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
K - 2	879	895	924	1,023	1,024	1,075	1,054	1,095	1,098	1,101	1,105
3 - 6	1,511	1,507	1,459	1,398	1,407	1,405	1,516	1,574	1,607	1,671	1,650
7 - 8	860	833	835	857	852	824	774	733	795	836	897
9 - 12	1,834	1,863	1,841	1,791	1,794	1,788	1,786	1,777	1,719	1,645	1,659
Grand Total	5,084	5,098	5,059	5,069	5,077	5,092	5,130	5,179	5,219	5,253	5,311

Source: FutureThink

Avon Grove School District Projected Enrollment including returning Charter Students



Avon Grove School District Enrollment Projections by Grade Groups including returning Charter Students



CONCLUSION

Contributing factors to the decline in Kindergarten enrollment likely include the additional full-day Kindergarten program offerings provided at the Avon Grove Charter School, coupled with the downturn in the economy. A District effort to provide commensurate programs to the Charter School is anticipated to reverse this current downward trend. For the purposes of this study in analyzing capacity versus enrollments in Section 5 – Construction Options, the enrollment projections used are based on the return of the Charter School students.

In projecting enrollment, many factors are taken into consideration and there are several variables. Projections within 5% of the actual enrollment are considered to be “quite good” according to the demographic literature. Within the first five years, the projections are the most accurate. After 5 years, they begin to become less so as conditions change. For growing districts, it is our recommendation that projections be updated every 1-2 years to address any changes immediately.

The Weldon Cooper Center for Public Service at the University of Virginia published their accuracy rates for enrollment projections at the district-wide level. We believe these provide a good guideline for planning purposes: 1 year out the accuracy should be within 1.5%; 3 years out within 2.9%; 5 years out within 4.8%.

As with any projection, the Avon Grove School District should pay close attention to live birth counts, enrollment in elementary schools, non-public enrollment, in/out migration patterns, and any housing growth. Each of these factors will have an impact on future student enrollment. As the housing market recovers and residential development begins to occur at a faster rate, the enrollment projections may need to be updated and adjusted accordingly.

Section 3
Building Capacity Analysis

BUILDING CAPACITY ANALYSIS

INTRODUCTION

Establishing the building capacity of a school is subject to variations in school district established class sizes, program variations and standards established by the Pennsylvania Department of Education (PDE). For the purposes of planning, we have compared the PDE capacity standards to the capacities established by either the school district and/or the Council of Educational Facility Planners International (CEFPI) recommendations.

In order to determine the current capacity of each school, Gilbert Architects met with each of the school principals and/or administrative representatives to determine the current use of each space in the school. The current number of classrooms, shown as the "PRESENT CAPACITY," is indicated on the following elementary and middle/secondary building capacity forms. The Pennsylvania Department of Education has established standards to calculate the capacity of a school facility. In these standards, a unit for student capacity is assigned to various areas of the facility. However, special and support spaces, distribution of students by grade levels, course selections on the middle and high school levels and attendance areas create situations in which it is not possible for a district to place as many students in each unit of the facility as identified in the PDE standards.

- For elementary schools, PDE assigns a capacity assuming that each classroom is used 100% of the time (100% FTE or full-time equivalent). To establish the functional building capacity at the elementary level, and after a review of the 2009 Avon Grove School District Class Size Task Force recommendations, for the purposes of this study a class size of 22 students for grades K-5 and 28 students for grade 6 have been used.
- At the secondary level, PDE recognizes a utilization factor of 90%. The Avon Grove School District Class Size Task Force made no recommendations for class size at the secondary level. To establish the functional building capacity at the secondary level, CEFPI applies a utilization factor of 85% at the middle school level and a utilization factor of 80% for high school facilities.

The capacity range between the PDE criteria and the AGSD/CEFPI criteria allows for planning within the recommended "**functional capacity**" of the building to provide adequate space for growth and support programs.

The educational programs offered in schools today vary greatly and may receive different capacities assigned to those spaces even though the rooms may be similar in size. The capacity of a facility will change from year to year based on the types of programs it houses. The capacity for each space is determined by:

- Current use of the space;
- Established maximum class size policies of the School Board or standards established by the Pennsylvania Department of Education;
- Specialized programs such as Kindergarten, Special Education, etc.;
- Spaces which are used for all students for specialized instruction, such as art or music at the elementary level are not counted as part of the instructional capacity of the facility;
- Spaces which fall below the minimum PDE recommended size of 660 square feet for general classrooms, and various recommended sizes for secondary classrooms and instructional spaces, are not counted as part of the instructional capacity of the facility.
 - The undersized classrooms at the high school are currently being used for general instruction classrooms and are counted towards the Avon Grove School District (AGSD/CEFPI) capacity.

- **Permanent** modular construction must meet certain criteria to be considered eligible for reimbursement. Temporary modular classrooms that do not meet that criteria as defined in the PlanCon General Instructions, Attachment D, are not counted as part of the instructional capacity of the facility by PDE and are not eligible for reimbursement.
 - The temporary modular classrooms at the middle and high school are used for general instruction classrooms and are counted towards Avon Grove School District (AGSD/ CEFPI) capacity.

EXISTING CAPACITIES BY BUILDING

Elementary Schools

EXISTING ELEMENTARY BUILDING CAPACITY												
District/CTC: Avon Grove School District				Project Name: District-wide Facility Study				Grades: K - 6				
SCHOOL: Penn London ES (K-2)							SCHOOL: Avon Grove IS (3-6)					
PRESENT CAPACITY							PRESENT CAPACITY					
PDE CAPACITY							AVON GROVE FUNCT. CAPACITY					
#1	#2	#3	#4	#5	#6	#7	#2	#3	#4	#5	#6	#7
NAME OF SPACE	UNIT FTE CAP	NUMBER OF UNITS	TOTAL FTE CAP	UNIT FTE CAP	NUMBER OF UNITS	TOTAL FTE CAP	UNIT FTE CAP	NUMBER OF UNITS	TOTAL FTE CAP	UNIT FTE CAP	NUMBER OF UNITS	TOTAL FTE CAP
HALF-TIME KINDRGRTN	50	6	300	44	6	264						
FULL-TIME KINDRGRTN	25											
REG CLSRM 660+ SQ FT(1-6)	25	29	725				25	63	1,575			
REG CLSRM 660+ SQ FT(1-5)				22	29	638				22	46	1,012
REG CLSRM 660+ SQ FT(6)										28	17	476
SPECIAL ED AUTISTIC	0	1		0	1		0	1		0	1	
LIFE SKILLS	0	1		0	1		0	1		0	1	
LEARNING SUPPORT (SP ED)	0	1		0	1		0	7		0	7	
ENGLISH SECOND LANG (ESL)	0	5		0	5		0	6		0	6	
BUILDING CAPACITY	XX	XXXXXX	1,025		XXXXXX	902	XX	XXXXXX	1,575		XXXXXX	1,488

Secondary Schools

EXISTING MIDDLE/SECONDARY BUILDING CAPACITY									
District/CTC: Avon Grove School District					Project Name: District-wide Facility Study			Grades: 7 - 12	
		SCHOOL: Fred S. Engle MS (7-8)				SCHOOL: Avon Grove HS (9-12)			
		PRESENT CAPACITY		PRESENT CAPACITY		PRESENT CAPACITY		PRESENT CAPACITY	
		PDE CAPACITY		AGSD CAPACITY		PDE CAPACITY		AGSD CAPACITY	
#1	#2	#3	#4	#5	#6	#3	#4	#5	#6
NAME OF SPACE	UNIT FTE CAP	NUMBER OF UNITS	TOTAL FTE CAP	NUMBER OF UNITS	TOTAL FTE CAP	NUMBER OF UNITS	TOTAL FTE CAP	NUMBER OF UNITS	TOTAL FTE CAP
REG CLSRM 660+ SQ FT	25	19	475	19	475	32	800	32	800
CLASSROOM - MODULAR	0	5		5	125	12	0	12	300
UNDERSIZED CLSRM <660+ SQ FT	0					2		2	50
SPECIAL ED CLSRM	0	5		5		5		5	
SPECIAL ED CLSRM - MODULAR	0	3		3					
SPECIAL ED RESOURCE - GIFTED	0	1		1		1		1	
SCIENCE CLSRM 660+ SQ FT	25	8	200	8	200	2	50	2	50
UNDERSIZED SCIENCE CLSRM <660+ SQ FT	0					4		4	100
SCIENCE LAB 660+ SQ FT	20					11	220	11	220
ALTERNATIVE ED ROOM 660+ SQ FT	20								
BUSINESS CLSRM 660+ SQ FT	25								
BUSINESS LAB 660+ SQ FT	20					6	120	6	120
COMPUTER LAB 660+ SQ FT	20	2	40	2	40	3	60	3	60
COMPUTER LAB- MODULAR	0	1		1	20				
TV INSTRUCTIONAL STUDIO 660+ SQ FT	20					1	20	1	20
TV INSTRUCTIONAL STUDIO <660 SQ FT	0								
ART CLASSROOM 660+ SQ FT	20	1	20	1	20	2	40	2	40
ART CLASSROOM <660+ SQ FT	0					1		1	20
MUSIC CLASSROOM 660+ SQ FT	25	1	25	1	25				
BAND ROOM 660+ SQ FT	25	1	25	1	25	1	25	1	25
ORCHESTRA ROOM 660+ SQ FT	25								
CHORAL ROOM 660+ SQ FT	25					1	25	1	25
FAMILY/CONSMR SCIENCE 660+ SQ FT	20	1	20	1	20	3	60	3	60
IA/SHOP 1800+ SQ FT (WOOD OR MTL)	20	1	20	1	20	2	40	2	40
TECH ED 1800+ SQ FT	20								
VO AG SHOP W/CLSRM 660+ SQ FT	20								
DRIVER'S ED 660+ SQ FT	20								
GYM 6500-7500 SQ FT	66	1.5	99	1.5	99	1.5	99	1.5	99
AUX GYM 2500 SQ FT (FITNESS RM)	33					1	33	1	33
AUX GYM <2500 SQ FT	0					1	0	1	33
OTHER: AUDION - CHORAL ROOM	25	1	25	1	25				
OTHER: AUDITORIUM	0					1		1	
BUILDING TOTAL		100%	949	XXXXX	1,094	100%	1592	XXXXX	2,095
MS/SEC UTILIZATION (PDE-REIMBURSEMENT)		90%	854	XXXXX		90%	1433		
MS/SEC UTILIZATION (RECOM. CEFPPI FUNCTIONAL CAPACITY)		85%		XXXXX	930				
HS/SEC UTILIZATION (RECOM. CEFPPI FUNCTIONAL CAPACITY)				XXXXX		80%		XXXX	1,676
HS/SEC FUNCTIONAL CAPACITY WITHOUT SUBSTANDARD CLRM		85%		XXXXX	807	80%		XXXX	1,274

The undersized and modular classrooms are considered substandard and are not recognized by PDE to receive capacity. For both Fred S. Engle Middle School and Avon Grove High School, the Avon Grove Capacities shown in red represent that the school is using undersized and modular classrooms for general instruction and receive capacity. These rooms are needed to deliver the educational program based on the current enrollment. If these rooms were not included in the capacity count, the CEFPPI Functional Capacity at the middle school and high school results in significantly less capacity.

For the existing district-wide building capacities charted below, the Avon Grove Functional Capacity at the secondary schools includes the undersized and modular classrooms that are currently being used for capacity.

EXISTING DISTRICT-WIDE BUILDING CAPACITIES

EXISTING GRADE ALIGNMENT	SCHOOL NAME	PDE BUILDING FTE	PDE CAPACITY		AVON GROVE BUILDING FTE	AGSD / CEFPI FUNCTIONAL CPCTY.	
			UTIL. FACTOR	CAPACITY		UTIL. FACTOR	CAPACITY
K-2	PENN LONDON ELEMENTARY	1,025	100%	1,025	902		902
3-6	AVON GROVE INTERMEDIATE	1,575	100%	1,575	1,488		1,488
7-8	FRED S. ENGLE MIDDLE	949	90%	854	1,094	85%	930
9-12	AVON GROVE HIGH	1592	90%	1,433	2,095	80%	1,676
	DISTRICT TOTAL	5,141		4,887	5,579		4,996

COMPARISON OF EXISTING CAPACITIES TO CURRENT ENROLLMENTS

Table 1: AGSD / CEFPI Capacity including Substandard and Modular Classrooms

EXISTING GRADE ALIGNMENT	SCHOOL NAME	CURRENT ENROLLMENT	PDE CAPACITY			AGSD / CEFPI FUNCTIONAL CAPACITY		
			CAPACITY	+/- CAP	UTIL. FACTOR	CAPACITY	+/- CAP	UTIL. FACTOR
K-2	PENN LONDON ELEMENTARY	929	1025	96	91%	902	(27)	103%
3-6	AVON GROVE INTERMEDIATE	1513	1575	62	96%	1,488	(25)	102%
7-8	FRED S. ENGLE MIDDLE	858	854	(4)	100%	930	72	92%
9-12	AVON GROVE HIGH	1806	1433	(373)	126%	1,676	(130)	108%
	TOTAL	5106	4887	(219)	104%	4,996	(110)	102%

Table 2: AGSD / CEFPI Capacity not including Substandard or Modular Classrooms

EXISTING GRADE ALIGNMENT	SCHOOL NAME	CURRENT ENROLLMENT	PDE CAPACITY			AGSD / CEFPI FUNCTIONAL CAPACITY		
			CAPACITY	+/- CAP	UTIL. FACTOR	CAPACITY	+/- CAP	UTIL. FACTOR
K-2	PENN LONDON ELEMENTARY	929	1025	96	91%	902	(27)	103%
3-6	AVON GROVE INTERMEDIATE	1513	1575	62	96%	1,488	(25)	102%
7-8	FRED S. ENGLE MIDDLE	858	854	(4)	100%	807	(51)	106%
9-12	AVON GROVE HIGH	1806	1433	(373)	126%	1,274	(532)	142%
	TOTAL	5106	4887	(219)	104%	4,471	(635)	114%

Conclusion

Based on the analysis of existing capacities to current enrollments, the elementary schools (grades K-6) exceed the recommended 90% utilization indicating current space deficiencies. Table 1 indicates capacity deficiencies at both the middle school and high school to meet the current enrollment even when the substandard and modular classrooms are included in the capacity count. Not including the undersized and modular classrooms in the capacity count in Table 2 indicates even further functional capacity deficiencies at both secondary schools, with significant space concerns at the high school.

BUILDING EVALUATIONS

INTRODUCTION

The information provided in this section is a conditions report of the Avon Grove School District’s facilities. To document the condition of each of the facilities, Gilbert Architects Inc., Moore Engineering Company and K&W Engineers visually surveyed the buildings and sites, and reviewed records provided by the school district, to prepare the building and site assessments.

Building Information Summaries

The Building Information Summaries provide a building-to-building comparison of the existing features of all district-owned facilities. The current building information is provided as a reference for facilities and maintenance personnel to use in the potential standardization of equipment; replacement of materials, systems and equipment; and life-cycle planning.

- Avon Grove School District Summary of District Owned Facilities
- Exterior Building Materials
- Heating Boilers
- Chillers
- HVAC Pumps
- Domestic Hot Water Systems
- Interior Lighting Systems
- Communications Systems
- Electrical Distribution
- Fire Alarm and Security System

Building Evaluation Content

For each district-owned building, general information is provided to describe the existing conditions. A needs analysis of the program; accessibility and building code compliance; and physical plant needs are identified. An ENERGY STAR Portfolio Manager Survey is provided as well as costs to upgrade each building to meet current standards.

Building and Site Evaluation Tabs:

Penn London Elementary School	Grades K-2
Avon Grove Intermediate School	Grades 3-6
Fred S. Engle Middle School	Grades 7-8
Avon Grove High School	Grades 9-12
Avon Grove District Administration Building	
Sunnyside Property	

District-wide Building Evaluation Rating System

To determine which facilities are in the most need of upgrades, the District-wide Building Evaluation Rating System rates the condition of the facility by discipline: Architectural, Structural, Mechanical (HVAC), Plumbing, Fire Protection, Electrical, Technology, and Site Amenities and Site Conditions. A District-wide Building Evaluation Rating Summary is provided herein. The rating matrix for each building is provided at the end of each building section with more detailed information that describes the logic used in determining the point structure.

BUILDING INFORMATION SUMMARIES

Avon Grove School District Summary of District Owned Facilities						
Building	Construction/ Renovation	Site Size	Grades	Building Square Footage	Building FTE PDE Capacity	Building FTE Avon Grove Capacity
Penn London ES	1992 B/ 2002 A	212 acres, shared with AGIS and DAO	K-2	106,500	1,025	902
Avon Grove Intermediate School	2002 B	212 acres, shared with PLES and DAO	3-6	210,000	1,575	1,488
Fred S Engle Middle School	1961 B/ 1970 R/ 1997 R/ 2009 A/ 2010 R	70.1 acres shared with AGHS	7-8	117,490	854	913
Avon Grove High School	1957 B/ 1995 R/ 1997 A/ 2008 R	70.1 acres shared with FSEMS	9-12	214,104	1,433	1,917
Avon Grove District Administration Offices	1991 B	212 acres shared with PLES and AGIS	N/A	9,600	N/A	N/A

Exterior Building Materials							
Building	Construction	Structural System	Exterior veneer materials	Wall backup material	Roofing	Windows	Doors
Penn London ES	Noncombustible, Type IIB, K Center IIIB	Steel Frame and Masonry wall bearing	Brick veneer with 6" ground face CMU base	8" CMU with 2" rigid insulation	Ballasted 3 ply modified bitumen, 2" insulation total	Aluminum double hung, insulated glazing	Painted hollow metal doors and frames
Avon Grove Intermediate School	Noncombustible	Steel Frame	Brick veneer with limestone accents	8" CMU with 2" rigid insulation	Ballasted 3 ply modified bitumen with 4" insulation	Aluminum fixed and awning, insulated glazing	Aluminum entrance doors and frames, hollow metal service doors and frames
Fred S Engle Middle School	Noncombustible, Type IIB	Steel Frame, masonry load bearing	Brick veneer with metal panel at top of walls	4" CMU with 2" rigid insulation	Ballasted 3 ply modified bitumen with 2" insulation	Aluminum fixed and hopper, insulated glazing	Aluminum entrance doors and frames, hollow metal service doors and frames
Avon Grove High School	Noncombustible, Type IIB	Steel Frame	Brick veneer with EIFS wall panels and window infills	8" CMU and metal stud backup with 2" rigid insulation	Ballasted built up roofing with 4" insulation	Aluminum fixed and hopper, insulated glazing	Aluminum entrance doors and frames, hollow metal service doors and frames
Avon Grove District Administration Offices	Ordinary, Type V	Balloon Framing with metal studs, wood joists and trusses	Brick veneer with 4" ground face CMU base	6" steel stud backup with 6" batt insulation infill	Architectural dimensional shingles	Aluminum double hung, insulated glazing	Painted hollow metal doors and frames

Heating Boilers										
Building	Year Boiler was Manufactured	Age	ASHRAE Life Cycle	Fuel Type	Manufacturer	Model	MBH Input	MBH Output	Original Efficiency	Comments
Avon Grove Admin	Not listed	--	30	#2 Fuel Oil	Weil McLain	Model 380	346	278	80%	Boiler is in good condition. There is not any backup if the unit fails.
Penn London ES	1990	24	25	#2 Fuel Oil	Bryan	CL210-W-FDO	2100	1680	80%	Boiler is nearing the end of their typical useful life and will soon need to be replaced.
Penn London ES	1990	24	25	#2 Fuel Oil	Bryan	CL210-W-FDO	2100	1680	80%	Boiler is nearing the end of their typical useful life and will soon need to be replaced.
Avon Grove Intermediate School	2001	13	25	#2 Fuel Oil	Cleaver Brooks	CBI-100-125-125	4184	3348	80%	Boiler is in good condition
Avon Grove Intermediate School	2001	13	25	#2 Fuel Oil	Cleaver Brooks	CBI-100-125-126	4184	3348	80%	Boiler is in good condition
Avon Grove Intermediate School	2001	13	25	#2 Fuel Oil	Cleaver Brooks	CBI-100-125-127	4184	3348	80%	Boiler is in good condition
Fred S Engle Middle School	1969	45	25	#2 Fuel Oil	Cleaver Brooks	CB-552-125	4897	3920	80%	Boiler was rebuilt in the last renovation and is in good condition.
Fred S Engle Middle School	1969	45	25	#2 Fuel Oil	Cleaver Brooks	CB-552-125	4897	3920	80%	Boiler was rebuilt in the last renovation and is in good condition.
Avon Grove High School	1996	18	25	#2 Fuel Oil and Natural Gas	Cleaver Brooks	CBE-200-200	8400	6695	80%	Boiler is in good condition
Avon Grove High School	1996	18	25	#2 Fuel Oil and Natural Gas	Cleaver Brooks	CBE-200-200	8400	6695	80%	Boiler is in good condition

Chillers									
Building	Year Chiller was Manufactured	Chiller Age	ASHRAE Life Cycle	Type	Manufacturer	Model	Tonnage	Comments	
Avon Grove Admin	1992	22	20	Air Cooled Split Chillers	Trane	RAUC-C25	25	Chiller in fair to poor condition	
Penn London ES	2001	13	20	Outdoor Air Cooled	Trane	CGAF-C60	60	Chiller is in good condition	
Penn London ES	2005	9	20	Outdoor Air Cooled	Trane	RTAC-225	225	Chiller is in good condition	
Avon Grove Intermediate School	2001	13	20	Air Cooled Split Chillers	Trane	RAUC-C60	60	Chiller is in good condition	
Avon Grove Intermediate School	2001	13	20	Air Cooled Split Chillers	Trane	RTAA-240	240	Chiller is in good condition	
Avon Grove Intermediate School	2001	13	20	Air Cooled Split Chillers	Trane	RTAA-240	240	Chiller is in good condition	
Fred S Engle Middle School	2009	5	20	Outdoor Air Cooled	Carrier	30RBA-275	250	Chiller is in very good condition	
Fred S Engle Middle School	2009	5	20	Outdoor Air Cooled	Carrier	30RBA-275	250	Chiller is in very good condition	
Avon Grove High School	1997	17	20	Outdoor Air Cooled	McQuay	ALR050D	50	Chiller is in fair condition	

HVAC Pumps			
Building	Condition	System	Comments
Avon Grove Admin	Good	Hot Water Heating Loop	Duplex
Avon Grove Admin	Fair	Chilled Water Loop	Simplex
Penn London ES	Good	Dual Temp System Loop	Duplex
Penn London ES	Good	Primary Chilled-Small Chiller	Simplex
Penn London ES	Poor	Primary Chilled-Large Chiller	Simplex
Avon Grove Intermediate School	Good	Hot Water Heating Loop	Duplex
Avon Grove Intermediate School	Good	Dual Temp System Loop	Duplex
Avon Grove Intermediate School	Good	Primary Chilled - Chiller 1	Simplex
Avon Grove Intermediate School	Good	Primary Chilled - Chiller 2	Simplex
Avon Grove Intermediate School	Good	Primary Chilled - Chiller 3	Simplex
Fred S Engle Middle School	Good	Chilled Water Loop	Duplex
Fred S Engle Middle School	Good	Hot Water Heating Loop	Duplex
Fred S Engle Middle School	Good	Boiler Blend Pump	Simplex
Fred S Engle Middle School	Poor	Boiler Blend Pump	Simplex
Avon Grove High School	Good	Hot Water Heating Loop	Duplex
Avon Grove High School	Fair	Chilled Water Loop	Simplex

Domestic Hot Water Systems								
Building	Heater Fuel	Manufacturer	Model	Input (MBH)	Storage Volume (Gallons)	Condition	Building Recirculation	Comments
Penn London ES	#2 Fuel Oil	Bock	241E ASME	277	109	Good	Yes	There is not a backup system if the unit fails.
Avon Grove Intermediate School	Oil Fired	PVI	1250P400ATPO	1000	400	Good	Yes	There is not a backup system if the unit fails.
Fred S Engle Middle School	Nat Gas	Bradford White	EF100T300ENA2	300	100	Good	Yes	Water heater is in good condition.
Fred S Engle Middle School	Nat Gas	Bradford White	EF100T300ENA2	300	100	Good	Yes	Water heater is in good condition.
Fred S Engle Middle School	Nat Gas	Bradford White	EF100T300ENA2	300	100	Good	Yes	Water heater is in good condition.
Avon Grove High School	#2 Fuel Oil	Bock	241E ASME	277	109	Good	Yes	Unit is in good condition but seems undersized for the use.
Avon Grove High School	Nat Gas	Lochinvar	SNR201-100	199	90	Good	Yes	Unit is in good condition but seems undersized for the use.

Interior Lighting Systems				
Building	Room Type	Type of Fixture/Lamp	Condition	Comments
Avon Grove Admin	Conference	2x4 Parabolic/T12	Fair	T12 lamps are being phased out and should be replaced with type T8 or Type T5
Avon Grove Admin	Offices	2x4 Parabolic/T12	Fair	T12 lamps are being phased out and should be replaced with type T8 or Type T5
Penn London ES	Classroom	Coffered Ceiling Wrap-around 1x4 T12 Lamp	Fair	T12 lamps are being phased out and should be replaced with type T8 or Type T5
Penn London ES	Classroom (Addition)	Suspended Linear/T8	Good	
Penn London ES	LGI	2x4 Troffers/T12	Fair	T12 lamps are being phased out and should be replaced with type T8 or Type T5
Penn London ES	Gymnasium	Metal Halide Low-bay	Fair	High bay T5 or T8 fluorescent fixtures would reduce energy cost, are instant on and are compatible with automatic light control
Penn London ES	Media Center	Suspended Louvered Linear/T12	Fair	T12 lamps are being phased out and should be replaced with type T8 or Type T5
Penn London ES	Cafeteria	Suspended Louvered Linear/T12	Fair	T12 lamps are being phased out and should be replaced with type T8 or Type T5
Penn London ES	Corridors	Suspended Linear/T12	Fair	T12 lamps are being phased out and should be replaced with type T8 or Type T5
Avon Grove Intermediate School	Classroom	Suspended Linear/T8	Good	No automatic light control
Avon Grove Intermediate School	Classroom Commons	Suspended Linear/T8	Good	Direct/Indirect Suspended Linear Fluorescent
Avon Grove Intermediate School	LGI	Suspended Linear/T8	Good	No automatic light control
Avon Grove Intermediate School	Gymnasium	Metal Halide Pendant Glass Refractor	Fair	High bay T5 or T8 fluorescent fixtures would reduce energy cost, are instant on and are compatible with automatic light control
Avon Grove Intermediate School	Media Center	Suspended Linear/T8 Louvered	Fair	No automatic light control
Avon Grove Intermediate School	Cafeteria	Recessed Metal Halide	Fair	High bay T5 or T8 fluorescent fixtures would reduce energy cost, are instant on and are compatible with automatic light control
Avon Grove Intermediate School	Corridors	Compact Fluorescent Downlights & 1x4/T8	Good	No automatic light control
Fred S Engle Middle School	Classroom	Coffered Ceiling Wrap-around 1x4 T8 Lamp	Fair	Lenses are showing discoloration.
Fred S Engle Middle School	Art Room	Suspended Louvered Linear/T8	Good	
Fred S Engle Middle School	Audion	Suspended Linear/T8 Recessed Premium Volumetric Troffer	Good	
Fred S Engle Middle School	Gymnasium	Metal Halide Pendant Glass Refractor	Good	High bay T5 or T8 fluorescent fixtures would reduce energy cost, are instant on and are compatible with automatic light control
Fred S Engle Middle School	Media Center	Suspended Perforated Panel Linear/T8	Good	
Fred S Engle Middle School	Cafeteria	Indirect Decorative Pendants	Good	
Fred S Engle Middle School	Corridors	Recessed Fluorescent Troffers T8	Good	

Interior Lighting Systems				
Building	Room Type	Type of Fixture/Lamp	Condition	Comments
Avon Grove High School	Classroom	Coffered Ceiling Wrap-around 1x4 T8 Lamp & Recessed Fluorescent Troffers T8	Good	Fixtures showing discoloration and age. No automatic light control
Avon Grove High School	Digital Art Room	recessed parabolic fluorescent T8	Good	No automatic light control
Avon Grove High School	Audion	Suspended Linear/T8 Recessed Premium Volumetric Troffer	Good	No automatic light control
Avon Grove High School	Gymnasium	Metal Halide Pendant Lo-Bay	Good	High bay T5 or T8 fluorescent fixtures would reduce energy cost, are instant on and are compatible with automatic light control
Avon Grove High School	Media Center	Tubular Direct/Indirect Pendant T8	Poor	Lenses missing and broken
Avon Grove High School	Cafeteria	Indirect Decorative Pendants	Good	No automatic light control
Avon Grove High School	Corridors	Recessed Fluorescent Troffers T8	Good	No automatic light control

Communications Systems								
Building	Telephone	Data Network	Cable TV	Intercom/Paging	Public Address System	Clock System	Overall Condition	Comments
Avon Grove Admin	TronCom	Seimon CAT 5e	N/A	VOIP Telephone	Telephone paging	N/A	Good	
Penn London ES	Cisco	Seimon CAT 5e (VOIP CAT6)	Coax	Bogen PCM2000	Recessed ceiling speakers and VOIP phones	AllSync	Good	
Avon Grove Intermediate School	IWATSU ADIX	Seimon CAT 5e	Coax	Simplex 5120	Recessed ceiling speakers classrooms and corridors	Simplex	Good	
Fred S Engle Middle School	Cisco	Seimon CAT 5e	Coax	Bogen Multicom 2000	Surface wall clock/speaker classrooms	Bogen	Good	
Avon Grove High School	Cisco Voip (Admin) Intercom Handsets (Classrooms)	Amp CAT5	Coax	Bogen Multicom 2000	Recessed ceiling speakers classrooms and corridors	Standard 1460 digital clocks	Fair	May want to update data network to CAT6. Upgrade to VOIP phones in Classrooms.

Electrical Distribution											
Building	Service type	Voltage	Main	Branch Panels	Distribution System Age	Distribution System Life	Emergency Power Plant	Overall Condition	Emergency Generator Age	Emergency Generator Life	Comments
Avon Grove Admin	Secondary	277/480V, 3 phase, 4 wire	Square D NF 200A MCB	Square D	(1991/2014) 24	30	New exterior generator 200A transfer sw	New	(2014) 0	20	Panel fronts were removed at time of survey. Generator and transfer switch were being installed
Penn London ES	Secondary	277/480V, 3 phase, 4 wire	Square D QED switchboard 1200A MCB	Square D	(2002/1992) 23	30	Diesel Onan 150 kW 225 A Onan ATS Onan APM	Good	(1992) 23	20	Life safety loads are not separated from standby loads
Avon Grove Intermediate School	Secondary	277/480V, 3 phase, 4 wire	Cutler Hammer Power Line C Fused switchboard 2500A Main	Cutler Hammer	(2002) 13	30	Diesel Katolight 300kW 600A Asco ATS Lake Shore APM	Good	(2002) 13	20	Life safety loads are not separated from standby loads
Fred S Engle Middle School	Secondary	277/480V, 3 phase, 4 wire	Square D QED switchboard 2000A Main	Square D	(2009) 5	30	Diesel (base tnk) Kohler 200kW (2)600A ATS	Good	(2009) 5	20	Has separate life safety ATS
Avon Grove High School	Dual Secondary	277/480V, 3 phase, 4 wire	Westinghouse Cutler Hammer Power Line C (2) 2500A Main	Cutler Hammer	(1997) 18	30	Diesel (base tnk) Olympian 200kW 800A Olympian ATS Olympian APM	Good	(1997) 18	20	Life safety loads are not separated from standby loads

Fire Alarm & Security System							
Building	Security System				Fire Alarm		
	Security System	Access Control	Video Surveillance System	Condition	Fire Alarm System	System Type	Condition
Avon Grove Admin	Bosch Motion sensors Door Contacts	None	None	Good	Silent Knight	Zoned (minimal)	Fair
Penn London ES	Vector 3000 Motion sensors Door Contacts	Aiphone Video Entry Station (no card access)	Yes POE cameras	Good	Cerberus Pyrotronics (Siemens)	addressable	Fair (due to age and available parts)
Avon Grove Intermediate School	Bosch Motion sensors Door Contacts	Paxton System	Yes POE cameras	Good	Simplex 4020	addressable	Good
Fred S Engle Middle School	ITI-Pro 5000 Motion sensors Door Contacts	Yes Card Access	Yes POE cameras	Good	Silent Knight IFP- 1000	addressable	Good
Avon Grove High School	Bosch	Yes Card Access	Yes POE cameras	Good	Cerberus Pyrotronics	Good	Fair (due to age and available parts)

BUILDING EVALUATION CONTENT

The facility evaluations for each building are classified into three categories – Program, Accessibility and Building Code, and Physical Plant needs. As a needs analysis, only inadequate conditions are typically identified.

- PROGRAM – Instructional areas are evaluated against the program criteria. This includes a determination of adequacy in terms of capacity, size, spatial relationships, furnishings, equipment, and overall teaching conditions. Additionally, program needs have been determined after discussion with the individual building principals, including verification of current building utilization.
- ACCESSIBILITY AND BUILDING CODE – Current accessibility and building codes are more restrictive than those enforced when the original buildings were constructed. Existing conditions that do not meet today’s requirements for ADA accessibility, fire-rated construction and adopted IBC building code will be addressed as part of this evaluation.
- PHYSICAL PLANT – Physical plant needs describe damaged or deteriorating systems and conditions which should be corrected in order to extend the life of the facility and maintain safe conditions.

ENERGY STAR Portfolio Manager Summary

- ENERGY STAR is a government funded program for certifying energy efficient buildings.
- Certification is a symbol of exceptional financial and environmental performance.
- The online tool called Portfolio Manager allows energy and water usage tracking of multiple buildings.
- Buildings are scored on a scale of 1-100, where a rating of 50 indicates that a building consumes less energy than 50% of similar buildings nationwide.
- A rating of 75% is required to achieve an ENERGY STAR Rating.
- An ENERGY STAR Portfolio Manager summary has not been included for the District Administration Building since the electric power billing is shared with Penn London Elementary School.

Energy Performance Highlights Year Ending 6/30/2014

Property Name	Property Floor Area (Building(s)) (ft ²)	ENERGY STAR Score	Site EUI (kBtu/ft ²)	Source EUI (kBtu/ft ²)	National Median Source EUI (kBtu/ft ²)	Percent Better than National Median Source EUI	Total GHG Emissions (Metric Tons CO ₂ e)	Water Use (All Water Sources) (kgal)	Energy Cost (\$)	Total Water Cost (All Water Sources) (\$)
Avon Grove High School	214,104	50	62.5	123.3	124.2	-0.7	1211.4	Not Available	\$236,757	Not Available
Avon Grove Intermediate School	210,000	70	45.9	102.5	124.5	-17.6	1045.4	Not Available	\$253,887	Not Available
Fred S. Engle Middle School	117,490	77	49.8	101.8	134.8	-24.4	544.5	Not Available	\$111,984	Not Available
Penn London Elementary School	106,500	42	79.1	145.6	136.5	6.7	821.1	Not Available	\$211,578	Not Available

The Intermediate and Middle Schools are scoring well above average. Penn London Elementary School is scoring low which is not atypical for an elementary school. The elementary school is largely a one-story building with more exterior walls which, in part, reduces the energy performance.

Cost to Upgrade each Building to meet Current Standards

- The summary below compares the cost to fully renovate, versus the cost to replace the school at the current square footage, versus the cost to bring the building up to current standards.
- Upgrades to meet current standards are to be considered in the context of capital improvement projects and not as a comprehensive renovation project. The costs do not address any program modifications, additions or changes in building capacity. The existing modular classrooms would remain.
- Included in the following evaluations for each building, items have been identified for each discipline (architectural, structural, mechanical (HVAC), plumbing, fire protection, electrical, technology and site) with associated costs to update the building and site to current standards. Upgrades include systems, materials and equipment that have outlived their life expectancies to maintain the operation of the building. Upgrades to meet current codes are initiated once the existing facility is altered.
- Building accessibility (American’s with Disabilities Act – ADA & ANSI 117.1) non-compliance features have been identified in the existing buildings. ADA upgrades are required when an existing facility is altered in any way that affects usability and those areas or elements being altered must comply with the ADA Standards. The path of travel to the altered area, as well as the amenities serving the altered area, must be made accessible. When a building is expanded, the new spaces or elements that are constructed as part of the addition must meet the ADA standards.

Summary of Renovation vs Replacement vs Upgrades of each Building to meet Current Standards

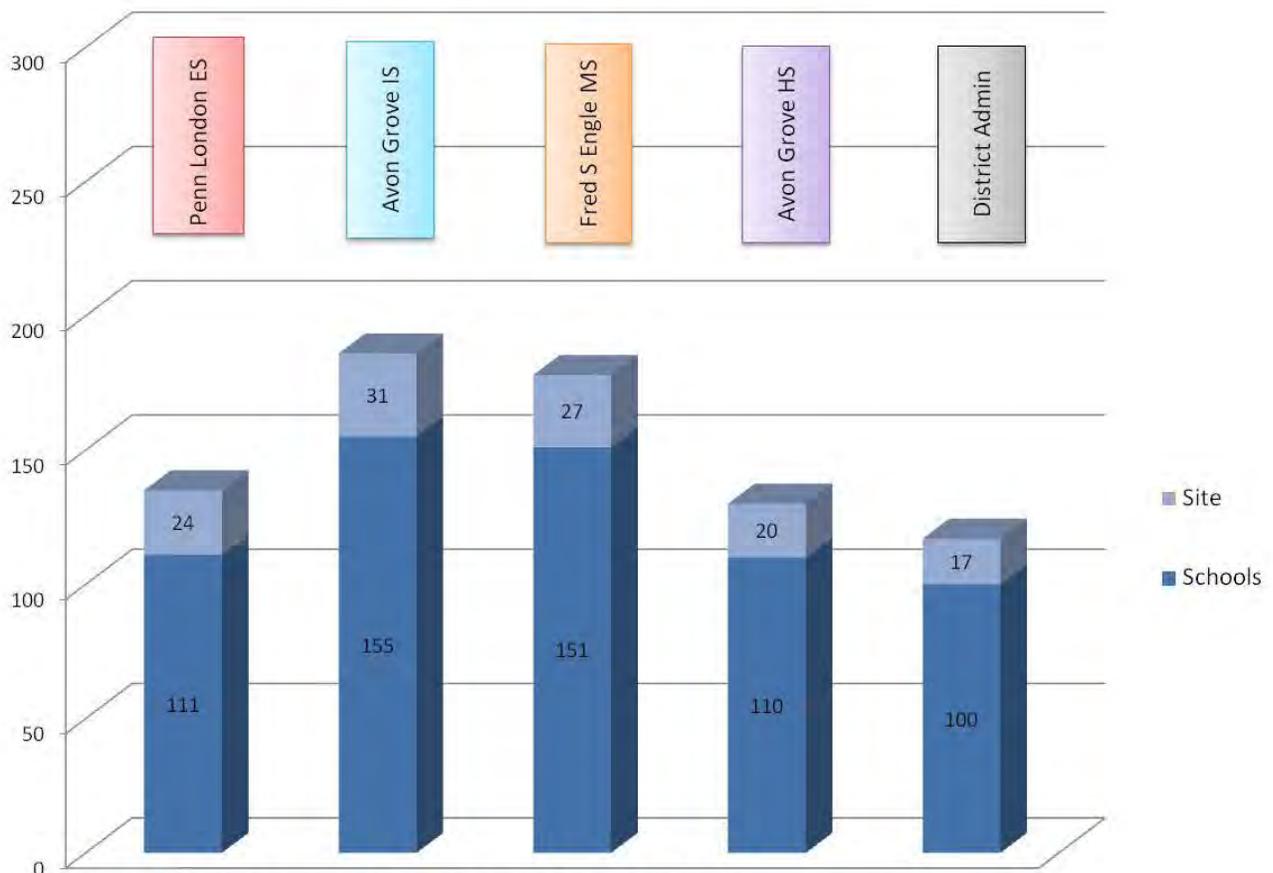
Building	Size	Building History	Renovation @ \$140/s.f. (2) + 30% Fees and Contingency	Replacement @ \$200/s.f. (2) + 30% Fees and Contingency	Capital Improvements	Asbestos Abatement	Total Cap Improvement (6) plus Asbestos (7)	Total Cap Improvement including asbestos (8) as % of Renovations (4)	Total Cap Improvement including asbestos (8) as % of Replacement (5)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Penn London Elementary School	106,500	Built 1992 Add/Reno. 2002	\$19,383,000	\$27,690,000	\$5,800,600	\$0	\$5,800,600	30%	21%
Avon Grove Intermediate School	210,000	Built 2002	\$38,220,000	\$54,600,000	\$1,472,900	\$0	\$1,472,900	4%	3%
Fred S Engle Middle School	117,490	Built 1961 Add/Reno. 1970, 1997, 2009, 2010	\$21,383,180	\$30,547,400	\$1,977,950	\$20,000	\$1,997,950	9%	7%
Avon Grove High School	214,104	Built 1957, Add/Reno. 1995, 1997, 2008	\$38,966,928	\$55,667,040	\$19,992,500	\$65,000	\$20,057,500	51%	36%
Avon Grove Stadium	N/A	Built 1957 Reno 2005	N/A	N/A	\$1,729,000	\$0	\$1,729,000		
Avon Grove District Offices	9,600	Built 1991	\$1,747,200	\$2,496,000	\$1,047,800	\$0	\$1,047,800	60%	42%
Total	657,694		\$119,700,308	\$171,000,440	\$32,020,750	\$85,000	\$32,105,750		

DISTRICT-WIDE BUILDING EVALUATION RATING SYSTEM

The current condition of each building is rated on a scale from excellent (4 points), good (3 points), fair (2 points), poor (1 point) to failing (0 points). To show the overall condition for each school and site as compared to other buildings in the district, the “District-wide Building Evaluation Rating Summary” is provided below.

The district administration office building rating is an anomaly when considering a cross-section comparison of the district-owned facilities since it is a smaller building and does not have the same features as a school.

The analysis does show that the high school ranks lowest overall, followed by Penn London Elementary School. The original construction at Penn London Elementary School has not been renovated since constructed over 20 years ago.



Avon Grove School District Building Evaluations

District-wide Building Evaluation Rating Summary

Rating System: Excellent (4 points); Good (3 points); Fair (2 points); Poor (1 point); and Failing (0 points)

	ES K-2	IS 3-6	MS 7-8	HS 9-12	ADMIN
	Penn London ES	Avon Grove IS	Fred S Engle MS	Avon Grove HS	District Office
Architectural					
Walls	2	4	2	3	3
Roof	3	3	3	2	3
Windows	3	4	4	2	3
Doors	3	3	3	2	2
Casework	2	4	4	2	3
Finishes	2	3	3	2	3
ADA compliance	1	4	2	1	1
Elevator	2	4	4	3	0
Security	1	3	3	1	2
Sub-total:	19	32	28	18	20
Structural					
Roof construction	4	4	4	3	4
Floor framing	4	4	4	3	3
Structural integrity	4	4	4	3	4
Exterior walls	2	4	3	3	3
Interior walls	4	4	3	4	3
Lintels	3	4	3	3	3
Expansion joints	3	4	3	3	N/A
Sub-total:	24	28	24	22	20
Mechanical - HVAC					
Boilers	1	3	2	3	3
Chillers	3	3	4	2	1
Pumps	1	3	4	3	2
HVAC Piping	2	3	4	3	2
Classroom HVAC units	2	3	3	2	N/A
Air handling units	3	3	3	2	2
Terminal heating equipment	3	3	3	2	3
Fuel storage tank	3	3	4	2	2
Toilet room exhaust systems	3	4	3	2	3
Kitchen exhaust hood	3	4	3	3	N/A
Temperature control system	1	4	4	2	2
Indoor air quality	2	3	3	3	2
Sub-total:	27	39	40	29	22
Plumbing					
Fixtures	2	3	3	2	2
Water heater	3	3	4	3	3
Water piping	1	4	4	3	3
Sanitary piping	3	4	3	3	3
Water service	4	4	4	3	3
Kitchen grease trap	3	3	2	4	N/A
Sub-total:	16	21	20	18	14
Fire Protection					
Fire protection system	0	4	4	0	0
Sub-total:	0	4	4	0	0
Electrical					
Lighting	1	3	3	2	1
Exterior Lighting	2	2	2	2	2
Receptacles in classrooms	2	3	3	3	N/A
Intercom	3	3	4	3	N/A
Panel boards	4	4	4	3	4
Electric service	3	4	4	3	4
Smoke detection system	3	3	4	2	3
Fire alarm system	2	3	4	2	3
Emergency generator	2	3	4	2	4
Sub-total:	22	28	32	22	21
Technology					
Data cabling	3	3	3	1	3
Sub-total:	3	3	3	1	3
Building Total:	111	155	151	110	100
Percentage Score of possible 180	61.67%	86.11%	83.89%	61.11%	55.56%

District-wide Building Evaluation

	ES K-2	IS 3-6	MS 7-8	HS 9-12	ADMIN
	Penn London ES	Avon Grove IS	Fred S Engle MS	Avon Grove HS	District Office

Site Amenities

Staff parking	3	4	3	2	3
Visitor parking	3	4	3	3	3
Parent drop-off	1	4	3	0	N/A
Stormwater management	2	3	3	3	3
Play facilities	4	3	3	4	N/A
Site safety	3	3	3	3	3
Sub-total:	16	21	18	15	12

Site Conditions

Site accessibility	2	3	3	2	2
Bus drop-off	4	4	3	0	N/A
Site size	2	3	3	3	3
Sub-total:	8	10	9	5	5

Site Total: 24 31 27 20 17

Combined Total: 135 186 178 130 117

Percentage Score of possible 216 62.50% 86.11% 82.41% 60.19% 54.17%

* District Administration score is lower than other buildings as many categories do not apply

PENN LONDON ELEMENTARY SCHOOL

BUILDING DATA:

Address: 383 South Jennersville Road, West Grove, PA 19390-8401

Administrators: Cynthia Holland, Principal; Suzanne Magee, Assistant Principal

Current Grades: 1/2 day K-2

Capacity: 1,025 PDE Capacity, 902 AGSD/CEFPI Capacity

2014-2015 Enrollment: 879

Staff: 67 Faculty

Construction Completion: original construction 1992, Kindergarten addition in 2002

Gross Square Feet: 92,000 s.f. original
16,500 s.f. Kindergarten addition
106,500 s.f. total

Site Acreage: 212.3 acres shared with District Administration Building and Avon Grove Intermediate School

Current Zoning: New London Township R-2
Penn Township R-2

Parking: 162 regular parking spaces, 6 handicapped





General Site Description

SITE SIZE AND OVERALL CONDITION

The AGSD District Administrative Office (DAO), Penn London Elementary School, and Avon Grove Intermediate School buildings are all located along the western property boundary of the approximately 212.3 acre AGSD elementary campus. The property includes these buildings along with supporting parking areas, access drives, play areas, and athletic fields. The undeveloped areas of the site are predominantly wooded, other than two areas of cultivated farmland in the southwest corner and central-eastern portions of the property, and include several drainage channels (Unnamed Tributaries to West Branch Clay Creek – designated a “Trout Stocking Fishery” stream by PaDEP).

VEHICULAR CIRCULATION

The site is accessed via two driveways, one from South Jennersville Road (SR 0796) across from Quimby Road and one from Newark Road (SR 0896) across from Violet Lane. The DAO is accessed via the driveway off of Quimby Road which is shared with the Penn London Elementary School (note that it appears that parents park along / within the travel lane of this driveway during pick-up times at Penn London). Penn London is served by separated bus drop-off (at the rear of the building) and parent drop-off (in front of the school) areas, while the Intermediate School includes two bus staging areas (a curbside area on the northwest side of the building and a bus corral area behind the building) with a separate parent drop-off area to the northeast of the building.

PEDESTRIAN CIRCULATION

Existing sidewalks with handicap accessible ramps and crosswalks connect the southeast side of the Penn London Elementary School to the Intermediate School. Sidewalks do not exist, however, to allow for pedestrian access from the north side of that building to the southern parts of campus (including the athletic fields and Intermediate School) or along South Jennersville Road. The proximity of any housing developments and associated number of walking students from these areas may not warrant such facilities).

PARKING

The DAO is served by an approximately 30-space parking lot located directly in front of the building. Multiple parking areas totaling approximately 175 parking spaces are provided surrounding the Penn London Elementary School with visitor / parking spaces situated on the north / northeast sides and a large visitor lot situated behind (i.e. south side) the building. The Intermediate School includes approximately 265 spaces across two parking fields in front of the building (separated by a curbed island “peninsula” with sidewalk on both sides for pick-up / drop-off).

PLAY AND ATHLETICS

The campus includes a baseball field, two softball fields, and four multipurpose fields (including one which overlaps the baseball field southeast of the Intermediate School). One of the softball fields and two of the multi-purpose fields are located in close proximity to the Penn London building, along with multiple hard and soft surface play areas (each containing play equipment).

STORMWATER MANAGEMENT AND UTILITIES

The property is served by public water (Chester Water Authority) and an onsite wastewater treatment plant. A stormwater detention basin is located to the southeast of the building.

General Building Description

Construction type:	Non-combustible, Type II B construction
Occupancy group:	'E' - Educational
Number of stories:	Two
Structural system:	Steel frame, masonry wall bearing
Building exterior envelope:	Brick veneer with 6" ground-face concrete masonry unit base, brick water table, 2" rigid insulation, 8" CMU backup. Precast, structural glazed faced concrete masonry units, brick rowlock and soldier course accents.
Roofing:	Ballasted 3-ply modified bitumen roofing with 2 layers 1" urethane insulation and 1/2" cover board. A standing seam metal roof is over the corridor connecting the Kindergarten addition. Architectural dimensional shingles installed in 2010 over 5" fire rated stress skin.
Windows:	Aluminum double hung insulated glass windows
Doors:	Hollow metal doors painted exterior, wood interior doors

Interior Materials:

PENN LONDON ELEMENTARY SCHOOL							
Space	Floors	Bases	Walls	Ceilings	Soffits	Casework/Cntr	CB/MB/TB
LOBBY	Fritz Tile	GFCMU	Ptd CMU	2x4 ACT	GWB	-	-
CORRIDORS	Fritz Tile/VCT	GFCMU	Ptd CMU	2x4 ACT	GWB	-	-
OFFICE	Carpet	Wood	GWB	2x4 ACT	-	PLAM/PLAM	-
GUIDANCE	New Carpet	Wood	GWB/CMU	2x4 ACT	-	PLAM/PLAM	-
NURSE	VCT	GFCMU/VB	GWB	2x4 ACT	-	PLAM/PLAM	-
CLASSROOM	Carpet/Sheet Vinyl	GFCMU	Ptd CMU	2x4 ACT	-	PLAM/PLAM	SB over CB
ART ROOM	VCT	GFCMU	Ptd CMU	2x4 ACT	-	Wood/PLAM	SB over CB
MUSIC ROOM	Carpet	GFCMU	Ptd CMU	2x4 ACT	-	PLAM/PLAM	SB over CB
CAFETERIA	VCT	GFCMU	Ptd CMU, Ptd ACCMU, SGFT	2x4 ACT	GWB	-	-
STAGE	Wood	Wood	Ptd CMU, SGFT	GWB	-	-	-
LIBRARY	Carpet	GFCMU	Ptd CMU, Ptd ACCMU, SGFT	2x4 ACT	GWB	PLAM/PLAM	-
LITTLE THEATER	Carpet	GFCMU	Ptd CMU	2x4 ACT	GWB	-	-
KITCHEN	QT	QT	Ptd CMU	2x4 FG	-	SS Equipment	-
TOILETS	CT	CT	CT	GWB	-	Plastic Counters	-
GYMNASIUM	Sports Floor	GFCMU	Ptd CMU, Ptd ACCMU, SGFT	GWB	GWB	-	-
MECHANICAL	Sealed Conc.	-	Ptd CMU	-	-	-	-
VCT - Vinyl Composition Tile							
QT - Quarry Tile							
CT - Ceramic Tile							
RB - Rubber Base							
GFCMU - Ground-faced Concrete Masonry Units							
ACCMU - Acoustical CMU							
CMU - Concrete Masonry Units							
SGFT - Structural Glazed Faced Tile							
ACT - Acoustical Ceiling Tile							
GWB - Gypsum Wallboard							
PTD - Painted							
AP- Acoustical Panels							
PLAM - Plastic Laminate							
CB - Chalkboard							
MB - Markerboard							
TB - Tackboard							
SB - Smartboard							
TS- Tacksurface							

PROGRAM

In general, the building functions well as a primary center for grades K-2 with ½ day Kindergarten.

- Kindergarten students do not eat lunch in the cafeteria. The cafeteria is 4,890 square feet and can accommodate 325 per lunch serving. For grades 1-2, 1/3 of the current enrollment of 879 at 293 can be seated in the cafeteria in three lunch servings.
- The Kindergarten and first grade classrooms have toilet rooms directly adjacent to the classroom.
- The toilet rooms were not designed to provide any privacy from the corridors as anyone at the sink areas is visible from the hallways.

SECURITY

- There is no secure entrance vestibule that enters directly into administration office. Visitors enter into the building corridor and are directed to check into the office via signage.

ACCESSIBILITY & BUILDING CODE

Building Accessibility (American's with Disabilities Act – ADA & ANSI 117.1)

CIRCULATION

- Door approach and wall clearances at a number of support entrances do not comply with ADA requirements. The door and wall configurations will need to be revised. (OT, Reading, and other spaces).



- The hallway ramps are 32' in length, which exceed the allowable length for a ramp of 30' without a landing. Handrails do not extend 1' beyond the length of the ramp on both ends.
- Several doors to library support rooms do not have the required ADA clearances on the latch side of doors. Doors with glazing in this area have vision panels that are too high per code requirements. Vision panels are required to be no higher than 43" above the floor for ADA requirements.



- Reading rooms have no ADA access as the hallway entrances do not have the clearances on the latch side of doors and from the library have stairs to access the classroom level.
- Drinking fountains in hallways should be recessed to prevent them from protruding more than 4" into the corridors to meet ADA requirements.

ELEVATOR

- The building has an elevator that provides access to all main floor levels, however it does not meet the current code requirements for cab size to be able to accommodate a stretcher.

STAGE ACCESS

- The stage at the Gymnasium/Cafeteria and also at the Little Theater does not have handicap access. A handicap ramp or chair lift should be added to make the stage accessible.

TOILET ROOMS

- Toilet rooms in the administration and nurse's area are not ADA compliant. Toilet rooms in 1992 building classrooms also are not ADA compliant. The fixtures do not have the required clearances, no grab bars are present, and mirrors are installed too high. Kindergarten center toilets are ADA compliant.



- Accessible toilet room stalls are not ADA compliant, fixture clearances are not large enough, and doors are too small. Stalls are too small for sinks to be located in them as well. Grab bars are installed but do not meet current code requirements.
- Central sinks countertops are at 34" above finished floor. Lay-in sinks rims are installed in countertops, which extend above that height.

SIGNAGE

- The entire building signage does not comply with ADA requirements; lettering is too small and does not have Braille. New ADA signage should be installed throughout the school.
- Tactile exit signs are not installed in the building by exits as currently required by code.

DOOR HARDWARE

- All door hardware is not ADA compliant. Classroom closets have knobs that should be replaced with lever hardware.

CLASSROOM

- There are no ADA-compliant cubbies in the classrooms.

Building Code

SPRINKLER

- The existing building has no fire protection sprinkler system and is grand-fathered until the time when the building is renovated. Depending on the level of renovation, fire protection upgrades to bring the building up to current code may include partially or fully sprinklering the building, or constructing fire separation walls which will be analyzed as part of the design process.
- The existing water supply will have to be evaluated to determine the availability of sufficient water pressure to properly activate a new sprinkler system.

ALLOWABLE AREA

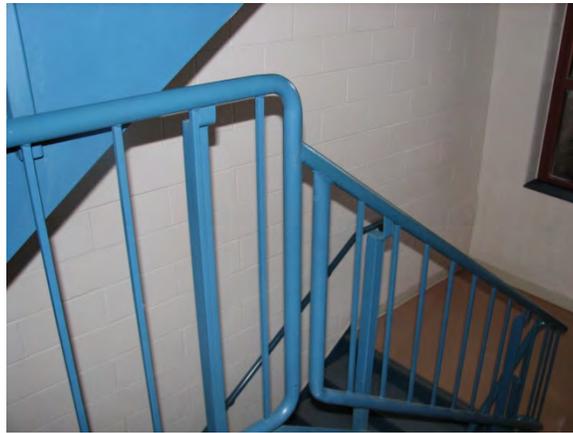
- Allowable building areas do not comply with the current building code. The addition of fire separation walls and rated corridor doors are required in several areas to break the building up into smaller fire areas if significant renovations are done. Any new additions would require them to be separated from the existing non-conforming area by fire walls.

STAIRS

- Equipment is being stored at the top landing of stairways as well as some outdoor equipment at the bottom of stairways. Stairways are not to be used for any storage.
- The walls of the stairways are to be 1 hour rated and should extend to the roof deck or have rated ceilings. Per existing conditions, there are large openings in the walls above the ceilings at the stairways that should be filled in and rated.



- Stairway balusters are to be spaced no more than 4" apart per current code requirements. Railings should be modified to meet current code requirements.
- Steel beams are exposed in stairs and should have 1-hour fire rating per building code. Layers of gypsum wallboard, CMU wall infill, or Intumescent paint can achieve this.
- Guardrails are not high enough along the open side of the stairs per current codes.



RAILINGS

- At Kindergarten center mechanical mezzanine, safety chains surround an opening in the floor, which does not meet code. A guardrail should be installed to protect the opening.

PHYSICAL PLANT

Exterior Envelope

MASONRY

- Service area screen wall has efflorescence. It should be evaluated for water penetration into the wall that is leeching the salts from the mortar.
- Precast window sills are missing mortar which should be replaced.
- Brickwork repaired at stairway is showing signs of additional cracking.
- There are cracks in ground face concrete masonry units in the service area. Water may not be draining properly from the cavity of the wall.
- There is moisture damage to the ground face concrete masonry units in the service area. This appears to be signs of moisture not draining properly from the wall.



METAL FASCIA

- Metal fascia above arched louver is rusting and should be painted or replaced.



WINDOWS/DOORS

- Window lintels are peeling and should be repainted.
- Windows are aluminum with insulated glazing and are in good condition.
- Sealants around windows, particularly the bottoms are failing and should be replaced.



ROOFS

- Architectural dimensional shingles were installed in 2010 and are in very good condition.
- Low-pitched roofs are modified bituminous that are in good condition.
- Existing drains should be cleaned out and areas of moss growth should be removed to maintain good condition of roof.
- There is no easy access to roof areas by either access doors or roof hatches, only by extension ladders.
- Standing seam roof at K-center addition is in good condition.
- Broken roof drain cages should be replaced so that they properly screen debris.
- Downspouts that empty on the low-pitched roof areas should have splash blocks installed to prevent wear on the roofing.
- Several downspouts at grade do not have boot connector or splash block.

ENTRANCES

- Exterior doors are hollow metal and many of them are peeling and should be repainted.



MISCELLANEOUS

- Classroom unit vent louvers are peeling and should be repainted.
- Hollow metal handrails are peeling and should be repainted.

Interior Finishes

CORRIDORS

- The lobby has Fritz tile flooring, which shows signs of wear on the finish of the tile resulting in an inconsistent coloring of the tile. Walls are CMU, which are in good condition.



- VCT along expansion joint covers is cracking and failing. Cover plates and VCT should be replaced.



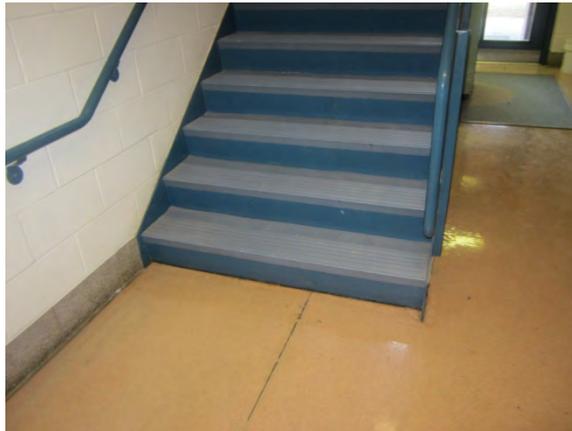
- Acoustical tile ceilings are in good condition, except some are water damaged in areas where previous roof leaks occurred.



- “Total door” hardware is showing signs of age and wear and will need to be replaced as it fails. “Total doors” have plastic parts that will ultimately break down over time.



- Exposed ductwork has some peeling paint that needs to be replaced in storage rooms.
- Vinyl flooring at stairs is separating at the seams and should be replaced.



- At doors in Kindergarten Center, wood trim is separating from round windows. Additional fasteners should be installed to maintain glazing in its stops.
- Walls are in good condition but painting is recommended to freshen up the appearance of the building and maintain the clean ability of the walls.

CLASSROOMS

- Classroom carpeting is worn and seams are failing. Carpeting should be replaced in all classrooms.



- Vinyl flooring at sink areas is showing signs of wear and seams are separating. This flooring should be replaced when the carpeting is replaced. Transition strips should be ADA compliant.

- Plastic laminate countertops have absorbed water around sinks where sealant has failed. Sink countertops should be replaced with a water resistive material such as solid surfacing.



- Student wardrobe cabinets are in good condition.

CORE SPACES (LIBRARY, MUSIC, AND ART)

- Carpeting in the Large Group Instruction is worn and should be replaced.
- Blinds at high windows in LGI are manually controlled. Due to the height of the windows, consideration should be given to providing motorized blinds.
- There are some minor wall cracks in OT support room. Patch walls and repaint.



- Wood casework in Art Classroom is water damaged and the veneer is peeling. Plastic laminate countertop has absorbed water and is in poor condition. Casework in art classroom should be replaced. Solid surface or other water impervious materials should be considered for wet areas. Art Room VCT and walls are in good condition.



- There is water damaged ACT tile in the library and other support spaces from previous roof leaks and should be replaced.

GYMNASIUM

- Paint lines in gymnasium are faded and should be repainted.
- Wall mats are original and well worn. Mats are too far above the floor to provide low level protection.
- Blinds at high windows in LGI are manually controlled. Due to the height of the windows, consideration should be given to providing motorized blinds.

CAFETERIA

- Blinds at high windows in LGI are manually controlled. Due to the height of the windows, consideration should be given to providing motorized blinds.

TOILET ROOMS

- Toilet rooms have rusty toilet partitions, which should be replaced. Ceramic tile floors are in good condition.
- Sink areas are very visible from the hallways, as the entrances provide no privacy.

Environmentally Sensitive Materials

No known asbestos exists in this building.

Mechanical System Description

HVAC SYSTEM

- The school is heated and cooled by a 2-pipe hot water/chilled water system. While this type of system does provide a level of temperature control, they are generally quite problematic, particularly in the changeover months (spring and fall). This is due to the fact that the system can only be in heating or cooling mode, but not both at the same time. On mild days, both heating and cooling are generally required. This type of system cannot meet both needs and result in hot and cold zones. Also, a heating/cooling system changeover can take as long as 24 hours, so a cold morning and a warm afternoon result in uncomfortable room temperature conditions.
- Heating hot water is generated by two oil-fired Bryan flex tube boilers. These boilers are in good condition but are nearing the end of their typical life expectancy.
- Fuel oil is stored in a 12,000-gallon aboveground oil tank with underground oil distribution piping and an oil pump set. The oil piping appears to be installed in a containment pipe. This helps protect against soil contamination in the event of an oil pipe leak. This system is in good condition.
- Two Trane chillers located on the roof generate chilled water. Both units appear to be in good condition. One serves the original main portion of the building and the other was added as part of the last addition.
- Pumps circulate water to units throughout the facility. The duplex loop water pumps and the pump for the smaller chiller are in good condition. The pump for the original larger chiller is showing signs of its age and should be upgraded. In addition, consideration should be given to providing duplex pumps for the chillers to allow for backup if they should fail.
- Classrooms are heated and cooled with 2-pipe classroom unit ventilators with outdoor air through wall louvers. Large group areas utilize 2-pipe air handlers. There are signs of equipment wear (belts and bearings), but the units were generally found to be in good condition.
- The newer wing utilizes a ceiling plenum return to the units in the mechanical mezzanine.
- Building pressure relief is provided through ducted systems at the ceiling level.
- Miscellaneous cabinet heaters, wall fin and convectors are utilized for supplemental heat. Some baseboard heaters are damaged.
- Much of the pipe insulation at the air handlers was found to be in very poor condition. This insulation should be replaced.
- The kitchen hood is in good condition and does have the code required make up air system.
- Toilet room ventilation systems are adequate and appear to be operating properly.
- An electronic Johnson Metasys Control System with pneumatic valve actuation controls the HVAC system.

PLUMBING SYSTEM

- A 4" domestic water service feeds this facility. This system does have a backflow prevention device installed.
- A tap is extended from the water service to the District Office facility located on the same campus. This line is not protected with a separate backflow prevention device.
- The existing water pressure booster system appears to have been deactivated and is no longer utilized.
- One oil fired Bock water heater generates domestic hot water. There is not any redundant water heater so if the unit fails, the school will not have any domestic hot water. A second unit should be installed for backup.
- The newer addition has a separate electric water heater that serves the domestic hot water needs of that area.

- The hot water recirculation pumps are in poor condition and should be replaced in the near future.
- Plumbing fixtures do not meet current ADA standards.
- Fixtures are in good condition but are not the water-saving type. It is recommended that they be replaced with new fixtures and controls.
- The piping system has been problematic. There have been pinhole leaks developing on the domestic water system – particularly on the hot water side. This piping system should be replaced.

SPRINKLER SYSTEM

- The building does not have a fire sprinkler system. There are some areas of wood construction that should have some level of protection. Sprinklers should be added where required by code.

Electrical System Description

ELECTRICAL DISTRIBUTION

- The electrical service is provided by PECO Energy Company and enters the building by underground secondary feeders and terminates into a Square D QED 1200 main switchboard in the electrical room. The switchboard is in good condition and has provision for additional breakers to be added.
- Step-down transformers are located throughout the building to obtain 120/208-volt power for receptacle and miscellaneous circuits.
- The branch panels are typically Square D type NF for 277/480 Volts and Square D NQOD for 120/208-volt loads. The panels are in good condition.
- Provide wiring for mechanical equipment upgrades as required and install new panels with branch circuits to support building expansion as required and to serve mechanical equipment replacement and air conditioning units if selected.
- Receptacle coverage in classrooms appears to be adequate for the School's needs. The devices are in good condition.
- Kitchen receptacles need to be replaced with GFCI type or GFCI breakers need to be added to the kitchen panel. The kitchen equipment is totally electric.

LIGHTING

- Classroom lighting consists of coffered ceilings with wrap around fluorescent fixtures with, two T12 lamps. Replace fixtures or upgrade to T8 or T5 fluorescent lamps.
- Suspended linear direct/indirect fixtures utilizing T8 lamps illuminate classrooms in the newer addition. The fixtures are in good condition.
- The gymnasium lighting is high bay, metal halide fixtures. The fixtures are contactor controlled and are in good condition. Replacement with high-bay fluorescent is recommended for better light control and energy savings.
- Suspended louvered linear fluorescent fixtures utilizing T12 lamps illuminate cafeteria and Media Center. Replace fixtures or upgrade to T8 or T5 fluorescent lamps.
- LGI utilizes 2x4 fluorescent troffers with T12 lamps. Replace fixtures with T8 or T5 volumetric type fluorescent luminaires,
- Corridor lighting consists of suspended linear fluorescent fixtures utilizing T12 lamps. Replace fixtures or upgrade to T8 or T5 fluorescent lamps.
- Provide automatic light control to all areas to comply with the International Energy Conservation Code (IECC) and the International Building Code (IBC)
- Exit signs utilize compact fluorescent type lamps. Replace exit signs with LED fixtures to comply with the IECC 5 watt/face requirement.

- Cafeteria Stage/Platform has border lights controlled by a Lehigh dimming system. The system is limited but appears to be in good condition.
- Exterior lighting consists of building-mounted metal halide, wall packs, metal halide parking lot lighting on 15' poles, and some open refractor "street"-style fixtures mounted on the building. The District may want to consider replacement with LED fixtures for energy savings and ease and frequency of maintenance.

EMERGENCY GENERATOR

- The emergency generator is a 150 kW Onan diesel unit, located in the Boiler Room. A 225A Onan transfer switch and Onan Area Protection Monitor accompany it. The system does not have a separate transfer switch for life safety loads as required by the National Electrical Code (NFPA70). The generator and associated equipment is in good condition.
- The emergency lights are part of the existing fluorescent fixtures.

TELECOMMUNICATIONS/CATV

- The telephone system is fed underground from the Avon Grove School District Office, which is next door to this School. It is terminated in Nortel Avaya terminal protector boxes.
- There are POTS lines for fire alarm and security systems use.
- The school has a Cisco VOIP system in administrative areas and Classrooms.
- All classrooms are equipped with CATV jacks.

INTERCOM SYSTEM

- The intercom system is a Bogen CPM2000 and is in good condition. The system has an interface to accept the signal from VOIP telephone system.
- Speakers are typically recessed ceiling mounted.
- Extend and expand the existing system into new areas as required.

CLOCK SYSTEMS

- The master clock is an AllSync unit mounted in the Bogen sound rack.
- Clocks are analog type.

REMOTE SOUND SYSTEMS

- There is a remote sound system for the stage consists of University Sound amplifiers, Shure wired and wireless microphone system, cassette tape drive, DVD/VHS player and AM/FM radio.
- There are wall-mounted speakers for the system in the Cafeteria/Auditorium.
- There are no assisted listening devices as required by The Americans with Disabilities Act (ADA)

FIRE ALARM SYSTEM

- The fire alarm is a Pyrotronics XL3 System with manual pull stations and bell and strobes. System is approximately 22 years old and should be upgraded or replaced to comply with current codes.

SECURITY

- The current security system consists of door contacts and motion detectors. There is one keypad to arm/disarm the panel. The system is Vector 3000.
- POE CCTV cameras are located throughout the Building
- There is an Aiphone video intercom at the main entry.
- There is no card access system.

COMPUTER CABLING

- The computer cabling consists of category 5E cables with floor-mounted racks or cabinets located in communications closets.
- Patch panels are typically Siemon.
- Cameras and Wireless Access Ports are wired with CAT6 cables and Leviton patch panels.
- The computer-cabling infrastructure should be expanded or replaced and conform to the latest standards set forth by EIA/TIA. Although not necessary the District may want to consider upgrading to CAT6 cable and devices for faster data transmission. CAT6 is the current standard.



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ENERGY STAR®
Score

**Avon Grove SD - Penn London Elementary School
- 124150503**

Primary Function: K-12 School
Gross Floor Area (ft²): 106,500
Built: 1992

Property Address:
Avon Grove SD - Penn London Elementary
School - 124150503
383 South Jennersville Road
West Grove, Pennsylvania 19390-8401

For Year Ending: June 30, 2014
Date Generated: December 18, 2014

For the year ending in June 2014, this building used 145.6 (kBtu/ft²) on a source energy basis. The Environmental Protection Agency's (EPA's) ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.



Buildings with a score of 75 or higher may qualify for EPA's ENERGY STAR.

Signature of Verifying Professional

I _____ (Name) verify that the information regarding energy use and property use details is true and correct to the best of my knowledge.

Signature: _____ Date: _____



ENERGY STAR® Statement of Energy Performance

42

**ENERGY STAR®
Score¹**

Avon Grove SD - Penn London Elementary School - 124150503

Primary Property Function: K-12 School
Gross Floor Area (ft²): 106,500
Built: 1992

For Year Ending: June 30, 2014
Date Generated: December 18, 2014

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information

Property Address

Avon Grove SD - Penn London
Elementary School - 124150503
383 South Jennersville Road
West Grove, Pennsylvania 19390-8401

Property Owner

() - _____

Primary Contact

() - _____

Property ID: 4263749

Energy Consumption and Energy Use Intensity (EUI)

Site EUI	Annual Energy by Fuel	National Median Comparison	
79.1 kBtu/ft²	Electric - Grid (kBtu) 3,288,598 (39%)	National Median Site EUI (kBtu/ft²)	74.1
	Fuel Oil (No. 2) (kBtu) 5,131,944 (61%)	National Median Source EUI (kBtu/ft²)	136.5
		% Diff from National Median Source EUI	7%
Source EUI	Annual Emissions		
145.6 kBtu/ft²	Greenhouse Gas Emissions (Metric Tons CO2e/year)	821	

Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____ Date: _____

Licensed Professional

() - _____



Professional Engineer Stamp
(if applicable)

Proposed Costs to Update Building to Current Standards

Penn London Elementary School	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Total
Constructed: 1992						
Renovation: N/A						
Addition: 2002						
SITE						
Lower parking lot - subgrade repair/paving repairs		\$100,000				\$100,000
Front driveway(s) and parking lot - crack repair and seal			\$30,000			\$30,000
Replace two sets of stairs/rails to lower parking lot	\$20,000					\$20,000
Railing west play area may not be code compliant		\$15,000				\$15,000
Grounds Maintenance					\$60,000	\$60,000
ARCHITECTURAL						
Secure Entrance Improvements		\$200,000				\$200,000
Replace Bathroom Stall Partitions		\$40,000				\$40,000
Painting Hallways, Classrooms, Bathrooms		\$5,000	\$100,000			\$105,000
Replace Classroom Carpeting		\$160,000				\$160,000
Modify Door Entrances for Accessibility				\$25,000		\$25,000
ADA Ramp Modifications and Handrails					\$15,000	\$15,000
Provide ADA Compliant Access to Stage			\$20,000			\$20,000
Modify Nurse and Admin Toilet Rooms for Accessibility				\$50,000		\$50,000
Modify Classroom Toilets to Comply with ADA					\$200,000	\$200,000
Update Group Toilet Rooms to Meet ADA				\$100,000		\$100,000
Replace Building Signage for ADA Compliance		\$15,000				\$15,000
Replace Door Knobs with Levers at Closets			\$20,000			\$20,000
Provide rating of steel in Stairways	\$25,000					\$25,000
Infill above Stair Ceilings for 1 Hr Rating	\$10,000					\$10,000
Replace Stair Handrails with Compliant Handrails		\$25,000				\$25,000
Provide ADA Compliant Cubbies					\$10,000	\$10,000
Repair Window Sill Mortar	\$3,500					\$3,500
Brickwork Repairs at Stairs/CMU		\$20,000				\$20,000
Repaint Exterior Hollow Metal Doors, Louvers, Railings		\$25,000				\$25,000
Replace Exterior Sealants		\$45,000				\$45,000
Roof Repairs/Roof Access			\$30,000			\$30,000
Repair of Floor Expansion Joints			\$5,000			\$5,000
Replacement of Water Damaged ACT			\$5,000			\$5,000
Replacement of Vinyl Flooring in Classrooms and Stairs		\$60,000				\$60,000
Replacement of Art Room Casework and Countertops			\$40,000			\$40,000
Replacement of Plastic Laminate Classroom Counters/ADA Sinks				\$100,000		\$100,000
Replace High Manual Blinds with Motorized				\$50,000		\$50,000
Paint Gymnasium Game Lines				\$3,000		\$3,000
Replacement of Gymnasium Wall Pads			\$7,500			\$7,500
Replace Hallway Flooring					\$50,000	\$50,000
MECHANICAL SYSTEMS						
Temperature Control Upgrades			\$585,000			\$585,000
Replace Boilers		\$500,000				\$500,000
Upgrade Chilled Water Pumps		\$100,000				\$100,000
Repair Damaged HVAC Pipe Insulation at Air Handlers	\$20,000					\$20,000
PLUMBING SYSTEMS						
Install Backup Water Heater		\$20,000				\$20,000
Removed Equipment in Boiler Room No Longer Used		\$5,000				\$5,000
Replace Hot Water Recirculation Pumps		\$5,000				\$5,000
Replace Hot Water Piping System Due to Pin Holes		\$175,000				\$175,000
Upgrade Group Toilet Room Fixtures				\$75,000		\$75,000

FIRE PROTECTION SYSTEMS						
Install Sprinkler System					\$400,000	\$400,000
ELECTRICAL SYSTEMS						
Replace Interior Lighting System and Add Automatic Controls		\$330,000				\$330,000
Replace Fire Alarm System		\$224,000				\$224,000
Replace Generator and Switchgear			\$150,000			\$150,000
Provide electrical for boiler replacement		\$25,000				\$25,000
Provide electrical for chilled water pump replacement		\$25,000				\$25,000
Provide Access Control System			\$55,000			\$55,000
Replace Exterior Light Fixtures with LED			\$45,000			\$45,000
Replace CAT 5e with CAT6					\$34,000	\$34,000
	\$58,500	\$2,004,000	\$1,062,500	\$403,000	\$709,000	\$4,462,000
Design Fees, Contingency and Escalation (30%)						\$1,338,600
Total						\$5,800,600

Penn London Elementary School Evaluation Rating

Rating System: Excellent (4 points); Good (3 points); Fair (2 points); Poor (1 point); and Failing (0 points)

	Score	Remarks
Architectural		
Walls	2	There are moisture issues at the cavity walls in the rear of the Cafeteria
Roof	3	Roof is in good condition, but not much insulation on low sloped roof
Windows	3	Windows are in good condition, sealants should be replaced
Doors	3	Exterior HM doors and frames need to be painted
Casework	2	Art casework failing, plastic laminate counters at sinks are poor
Finishes	2	Classroom carpet and vinyl should be replaced
ADA compliance	1	Toilet rooms are not compliant in existing, several doors are not compliant
Elevator	2	Elevator is present but not large enough to handle stretcher
Security	1	There is no secure vestibule to control the entrance
Sub-total:	19	
Structural		
Roof construction	4	Structural roof systems are in very good condition
Floor framing	4	Structural floor systems are in very good condition
Structural integrity	4	There does not appear to be any issues with the structural framing
Exterior walls	2	Exterior walls show some issues behind the cafeteria with moisture
Interior walls	4	Interior walls are in very good condition
Lintels	3	Lintels are in good condition but should be painted
Expansion joints	3	Expansion joints overall are good, some minor issues with the sealant
Sub-total:	24	
Mechanical - HVAC		
Boilers	1	Boilers are at the end of their typical life expectancy
Chillers	3	Rooftop chillers are in good condition, 1 new with K addition
Pumps	1	Original pumps exceeded their life expectancy
HVAC Piping	2	No visual or reported issues, but insulation is failing
Classroom HVAC units	2	Some units are beginning to show wear
Air handling units	3	Air handling units overall in good condition
Terminal heating equipment	3	Terminal heating equipment overall in good condition
Fuel storage tank	3	Tank in good condition, piping appears to be installed in containment
Toilet room exhaust systems	3	Exhaust appears to be adequate and appear to be operating properly
Kitchen exhaust hood	3	Kitchen exhaust is in good condition and has a make up air system
Temperature control system	1	Pneumatic control system does not meet current standards
Indoor air quality	2	2-pipe systems do not provide good year round control
Sub-total:	27	
Plumbing		
Fixtures	2	Fixtures are not water saving type
Water heater	3	A backup system is recommended
Water piping	1	System has experienced multiple pin hole leaks
Sanitary piping	3	The sanitary system is functioning properly
Water service	4	4" domestic supply with backflow prevention system
Kitchen grease trap	3	No reported issues with the grease trap system
Sub-total:	16	

Penn London Elementary School

Score

Remarks

Fire Protection

Fire protection system	0	There is no sprinkler system installed in the building
Sub-total:	0	

Electrical

Lighting	1	Luminaires with T12 lamps need replaced. Add automatic light control
Exterior Lighting	2	Consider replacing metal halide lights with LED
Receptacles in classrooms	3	Receptacle coverage in the building appears to be adequate overall
Intercom	4	Intercom is in good condition and can accept VOIP phone system
Panel boards	3	Panel boards appear to be in good condition
Electric service	3	Electrical service is adequate and in good condition
Smoke detection system	2	Functional but recommend replacement due to age
Fire alarm system	2	Functional but recommend replacement due to age
Emergency generator	2	Genset at typical life expectancy. Separate life safety loads.
Sub-total:	22	

Technology

Data cabling	3	Data cabling is Cat 5e. Current standard is Cat 6
Sub-total:	3	

Building Total: 111

Site Amenities

Staff parking	3	Appears to be adequate
Visitor parking	3	Appears to be adequate
Parent drop-off	1	Conflicts with visitor spaces and access for same
Stormwater management	2	Appears to be adequate
Play facilities	4	Appears to be good
Site safety	3	Appears to be adequate
Sub-total:	16	

Site Conditions

Site accessibility	2	Accessible spaces are across an access drive from the entrance
Bus drop-off	4	Appears to be good
Site size	2	Site size for ES is limited in its expandability
Sub-total:	8	

Site Total: 24

Combined Total: 135

AVON GROVE INTERMEDIATE SCHOOL

BUILDING DATA:

Address:	395 South Jennersville Road, West Grove, PA 19390-8401
Administrators:	Jeffrey Detweiler, Principal; Kelly Cooper, Assistant Principal; Michael Garvin, Assistant Principal
Current Grades:	3-6
Capacity:	1,575 PDE Capacity, 1,488 AGSD/CEFPI Capacity
2014-2015 Enrollment:	1,511
Staff:	115 Faculty
Construction Completion:	Original construction 2002
Gross Square Feet:	210,000 s.f.
Site Acreage:	212.3 acres shared with District Administration Building and Penn London Elementary School
Current Zoning:	New London Township R-2 Penn Township R-2
Parking:	257 regular parking spaces, 8 handicapped





General Site Description

SITE SIZE AND OVERALL CONDITION

The AGSD District Administrative Office (DAO), Penn London Elementary School, and Avon Grove Intermediate School buildings are all located along the western property boundary of the approximately 212.3 acre AGSD elementary campus. The property includes these buildings along with supporting parking areas, access drives, play areas, and athletic fields. The undeveloped areas of the site are predominantly wooded, other than two areas of cultivated farmland in the southwest corner and central-eastern portions of the property, and include several drainage channels (Unnamed Tributaries to West Branch Clay Creek – designated a “Trout Stocking Fishery” stream by PaDEP).

VEHICULAR CIRCULATION

The site is accessed via two driveways, one from South Jennersville Road (SR 0796) across from Quimby Road and one from Newark Road (SR 0896) across from Violet Lane. The DAO is accessed via the driveway off of Quimby Road which is shared with the Penn London Elementary School (note that it appears that parents park along / within the travel lane of this driveway during pick-up times at Penn London). Penn London is served by separated bus drop-off (at the rear of the building) and parent drop-off (in front of the school) areas, while the Intermediate School includes two bus staging areas (a curbside area on the northwest side of the building and a bus corral area behind the building) with a separate parent drop-off area to the northeast of the building.

PEDESTRIAN CIRCULATION

Existing sidewalks with handicap-accessible ramps and crosswalks connect the southeast side of the Penn London Elementary School to the Intermediate School. Sidewalks do not exist, however, to allow for pedestrian access from the north side of that building to the southern parts of campus (including the athletic fields and Intermediate School) or along South Jennersville Road. The proximity of any housing developments and associated number of walking students from these areas may not warrant such facilities).

PARKING

The DAO is served by an approximately 30-space parking lot located directly in front of the building. Multiple parking areas totaling approximately 175 parking spaces are provided surrounding the Penn London Elementary School with visitor / parking spaces situated on the north / northeast sides and a large visitor lot situated behind (i.e. south side) the building. The Intermediate School includes approximately 265 spaces across two parking fields in front of the building (separated by a curbed island “peninsula” with sidewalk on both sides for pick-up / drop-off).

PLAY AND ATHLETICS

The campus includes a baseball field, two softball fields, and four multipurpose fields (including one which overlaps the baseball field southeast of the Intermediate School). One of the softball fields and two of the multipurpose fields are located in close proximity to the Penn London building, along with multiple hard and soft surface play areas (each containing play equipment).

STORMWATER MANAGEMENT AND UTILITIES

The property is served by public water (Chester Water Authority) and an onsite wastewater treatment plant. A stormwater detention basin is located to the southeast of the building.

General Building Description

Construction type:	Non-combustible
Occupancy group:	'E' - Educational
Number of stories:	Two
Structural system:	Steel frame, masonry wall bearing
Building exterior envelope:	4" Brick veneer with limestone accents (matching brick sizes), 2" rigid insulation, 8" CMU backup.
Roofing:	Ballasted 3-ply modified bitumen roofing with 4" insulation and 1/2" cover board. Standing seam metal roof
Windows:	Aluminum fixed and awning insulated glass windows
Doors:	Aluminum entrance doors and hollow metal doors painted exterior, wood interior doors

Interior Materials:

AVON GROVE INTERMEDIATE SCHOOL							
Space	Floors	Bases	Walls	Ceilings	Soffits	Casework	CB/MB/TB
LOBBY	Enhanced VCT	RB	Ptd CMU	Exposed	GWB	-	-
CORRIDORS	Enhanced VCT	RB	Ptd CMU	2x2 ACT	GWB	-	-
OFFICE	Carpet	RB	GWB	2x4 ACT	GWB	PLAM/PLAM	-
NURSE							
GUIDANCE	Carpet	RB	Ptd CMU/GWB	2x4 ACT	-	PLAM/PLAM	
CLASSROOM	VCT/Carpet	RB	Ptd CMU	2x4 ACT	-	PLAM/PLAM	MB over CB
ART ROOM	VCT	RB	Ptd CMU/GWB	2x2 ACT	GWB	PLAM/PLAM	-
MUSIC ROOM	VCT/Carpet	RB	Ptd CMU	2x2 ACT	-	PLAM/PLAM	MB over CB
CAFETERIA	Enhanced VCT	RB	Ptd CMU	2x4 ACT	GWB	-	-
STAGE	Wood	Wood	Ptd CMU	GWB	-	-	-
LIBRARY	Carpet	RB	Ptd CMU	2x2 ACT	GWB	PLAM/PLAM	MB/SB
AUDION	Carpet	RB	Ptd CMU/GWB	2x4 ACT	GWB	-	MB
KITCHEN	QT	QT	Ptd CMU	FG ACT	-	SS Equipment	-
TOILETS	CT	CT	Ptd CMU/CT	2x4 ACT	-	-	-
GYMNASIUM	Sports Floor	RB	Ptd CMU/AP	Exposed	-	-	-
MECHANICAL	Conc	-	Ptd CMU	Exposed	-	-	-
VCT - Vinyl Composition Tile							
QT - Quarry Tile							
CT - Ceramic Tile							
RB - Rubber Base							
GFCMU - Ground-faced Concrete Masonry Units							
ACCMU - Acoustical CMU							
CMU - Concrete Masonry Units							
SGFT - Structural Glazed Faced Tile							
ACT - Acoustical Ceiling Tile							
GWB - Gypsum Wallboard							
PTD - Painted							
AP- Acoustical Panels							
PLAM - Plastic Laminate							
CB - Chalkboard							
MB - Markerboard							
TB - Tackboard							
SB - Smartboard							
TS- Tacksurface							

PROGRAM

The population of accommodating four grade levels in this facility has shown to be problematic instructionally and from operations stand point.

- The current population is 1500 students for grades 3-6 which poses some safety and security concerns for the size of the population. There was discussion that the school was originally intended to accommodate only 3 grade levels if the entire construction plan had been implemented. 6th grade was held at the intermediate school in anticipation of the 6th grade being moved out of the intermediate school for a 6-8 grade configuration at another school.
- The cafeteria/multipurpose room is 10,350 square feet and can accommodate 690 per lunch serving. For grades 3-6, 1/3 of the current enrollment of 1,511 at 504 can be seated in the cafeteria in three lunch servings. Therefore, the size of the cafeteria is adequate to serve the students in a timely manner.
- The schedule dictates instruction, availability of spaces, and specialist scheduling.
- There is a disconnect based on the grade configuration of the schools for PSSA testing in the transitioning from 2nd grade at Penn London to 3rd grade at the intermediate school.

ACCESSIBILITY & BUILDING CODE

Building Accessibility (American's with Disabilities Act - ADA & ANSI 117.1)

When an existing facility is altered in any way that affects usability, the areas or elements being altered must comply with the ADA Standards. The path of travel to the altered area as well as the amenities serving the altered area must be made accessible. When a building is expanded, the new spaces or elements that are constructed as part of the addition must meet the ADA Standards.

ELEVATOR

- An accessible elevator was installed in the building, which meets current code requirements for size.

STAGE ACCESS

- One must exit the Cafeteria/Multipurpose room to the hallway in order to use the ramp to access the stage, which is not in compliance with current ADA requirements.

TOILET ROOMS

- ADA toilet stalls do not have the 18" vertical grab bar to assist with sitting and standing in the stall. Fixtures, clearances and accessories are ADA compliant.



Building Code

SPRINKLER

- The building is equipped with a automated sprinkler system.

MEANS OF EGRESS EXITS

- The corridor from the serving area has an overhead grille to provide security that creates a dead end condition when in the closed position. The hallway controls have been disabled to prevent it from being closed.

- There are large full-height fixed window openings in the main floor corridor that have no protective rails in front to prevent someone from falling through the glazing. Guardrails should be installed at these windows on the upper floor level.



TOILET ROOMS

- Urinal screens do not comply with existing codes, which require the tops to be at 60" a.f.f. and the bottoms to be 12".

PHYSICAL PLANT

Exterior Envelope

MASONRY

- Overall the brick masonry is in good condition. There is some minor discoloration of the brick at exterior hydrants and vents.
- Some of the columns show signs of efflorescence and should be cleaned. If efflorescence continues, the columns should be checked for water infiltration.



- Some of the control joint sealants are failing and should be replaced.



- There is some small brick and limestone damage by the concrete retaining wall. The brick is broken to the cores of the brick and should be replaced before water penetration becomes an issue.



CANOPY SOFFITS

- There are wooden soffits at classroom canopies, which are in good condition.

WINDOWS

- The windows are insulated aluminum windows with fixed and operable window panels that are in good shape. Some windows have flashing that overhang the windows at the head of the window. The flashing should be flush with the frame.



ROOFS

- Modified bituminous roofs have been installed across the building and are in good condition. The roof drains had not been installed correctly and have been an ongoing issue. At the time of inspection, these drains were being repaired and this issue should have been corrected.
- The original skylights had issues with leaking around the perimeter and have been replaced. The skylight debris was left on the roof and should be removed and cleaned up.



- There is only one roof hatch to access the entire low pitch roof areas and ladders must be used to access the lower low-pitched roof areas. No safety rails are installed at the roof hatch, which are recommended for safe access to roof. Additionally, ladders should be added between the lower and upper roofs and consideration should be given to adding more roof hatches.
- The standing seam roofing has lost a large number of plastic snow guards. Most of these are inconsequential as they are over sloped roofs that are above lower low-pitched roofs. However, alternate snow guards should be installed over sloped roof areas that are over entrances below.
- Wind driven rain is entering louvers in the sidewalls of the raised roof area around the main entrance and falling on the health suite office ceilings. This should be investigated why the water is not captured and drained at the louver.

ENTRANCES

- Entrance doors are heavy-duty aluminum and are in excellent condition.

CHIMNEY

- The masonry of the chimney is in good condition, however it is absorbing water and should have water repellent reapplied. Additionally, the screened cap has been damaged and should be replaced.



MISCELLANEOUS

- There are downspouts that do not connect completely to downspout pipes. This should be repaired before erosion begins to occur.



- The concrete retaining wall has steel ties that extend beyond the face of the wall and are a safety concern. They should be cut back flush to the wall.



Interior Finishes

CORRIDORS

- The two internal monumental stairs between the main and lower levels have enhanced VCT that is cracking and damaged at the joint with the rubber nosings. Replacement with full rubber treads should be considered.



- Some of the round glazing stops in the wooden doors have dried and are loose. Additional fasteners should be installed to keep the glazing and trim tight and from being damaged.

CLASSROOMS

- Finishes in the classrooms are in good condition. The carpeting in the pods of the classroom wings has heavy traffic; shows more wear and should be replaced in the near future.

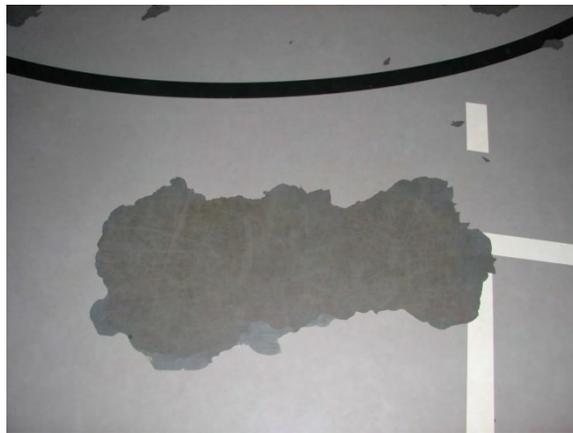
CORE SPACES (LIBRARY, MUSIC AND ART)

- The perimeter ceiling tiles in the music classroom shows signs of bowing due to airborne moisture and should be replaced.



GYMNASIUM

- The sport floor in the gymnasium is in poor condition as the surface has separated from the substrate. The floor replacement has been budgeted as part of the School District's 5-year plan.



- Cracks have formed in the floor and some low concrete masonry units along the wall of the gymnasium where the building transitions from slab on grade to steel-framed upper floor due to differential movement of materials. These cracks appear to be minimal and mostly cosmetic, but may require additional monitoring if they grow larger. Most cracks are not in the path of travel but should be repaired to prevent a tripping hazard.



CAFETERIA/MULTIPURPOSE ROOM

- The cafeteria/multipurpose room and stage finishes are in good condition.

TOILET ROOMS

- Plastic Laminate trim at the sinks in the boy's bathroom has been damaged and should be repaired. Other finishes are in good condition.



Environmentally Sensitive Materials

- No known asbestos exists in this building.

Mechanical System Description

HVAC SYSTEM

- The school is heated and cooled by a 2-pipe hot water/chilled water system. While this type of system does provide a level of temperature control, they are generally quite problematic, particularly in the changeover months (spring and fall). This is due to the fact that the system can only be in heating or cooling mode, but not both at the same time. On mild days, both heating and cooling are generally required. This type of system cannot meet both needs and result in hot and cold zones. Also, a heating/cooling system changeover can take as long as 24 hours, so a cold morning and a warm afternoon result in uncomfortable room temperature conditions.
- Three oil-fired Cleaver Brooks steel tube boilers generate heating hot water. These boilers are in good condition.
- Oil is stored in a 20,000-gallon aboveground oil tank located at the rear of the school. The system includes leak detection and an oil transfer pumps. All components are in good condition.
- Three Trane air-cooled chillers with remote heat exchangers generate chilled water. These units are controlled by a Trane Summit chiller control panel and are all in good condition.
- There are several pumps for distributing heating and cooling water. There are three simplex primary chilled water pumps – one per chiller. Hot water is circulated by a duplex pump system. The dual temperature secondary loop pump (heating/cooling) is also a duplex system and draws off the primary systems. These pumps are all in good condition.
- Classroom areas are heated and cooled with classroom unit ventilators with outdoor air from exterior wall louvers. Interior common areas are fed from central multi-zone units. Larger spaces are fed from central station single-zone air handlers. All of the equipment is in good condition.
- The HVAC systems are controlled by an Invensys electronic control system.
- The toilet room exhaust systems are all working properly and in good condition.
- The kitchen hood is in good condition with adequate makeup air.
- There were not any specific HVAC concerns noted during our facility review.

PLUMBING SYSTEM

- The building is fed with a 4” domestic water service.
- The water service has the code required backflow prevention devices.
- There is a domestic water pressure booster system and other domestic water treatment equipment. It was reported that these systems are no longer utilized.
- A single oil fired PVI water heater produces domestic hot water. There is no backup capability with the system. Consideration should be given to providing a second unit to provide hot water in the event that the existing unit fails.
- Plumbing fixtures throughout were found to be in good condition.
- Fixtures appeared to be installed in accordance with current ADA standards.
- There were some PVC drains in the kitchen area that do not meet current codes.
- The grease trap serving the kitchen was reported to be problem.

SPRINKLER SYSTEM

- The building is fed with a 6” fire service.
- The fire service includes a 30 HP fire pump and four alarm valves.
- The entire building is protected by a fire sprinkler system that appears to be in compliance with current codes and standards.
- Fully-concealed sprinkler heads are used in areas with ceilings.

Electrical System Description

ELECTRICAL DISTRIBUTION

- The electrical service is provided by PECO Energy Company and enters the building by underground secondary feeders and terminates into a Cutler Hammer 2500 Amp, 277/480 Volt main switchboards in the electrical room. The switchboard is in good condition and has provision for additional breakers to be added.
- Step-down transformers are located throughout the building to obtain 120/208-volt power for receptacle and miscellaneous circuits.
- The branch panels are Cutler Hammer. The panels are in good condition.
- Provide wiring for mechanical equipment upgrades as required and install new panels with branch circuits to support building expansion as required and to serve mechanical equipment replacement and air conditioning units if selected.
- Receptacle coverage in classrooms appears to be adequate for the School's needs. The devices are in good condition.
- Kitchen receptacles need to be replaced with GFCI type or GFCI breakers need to be added to the kitchen panel. The kitchen equipment is totally electric.

LIGHTING

- Classroom lighting consists of suspended linear indirect/direct fluorescent T8 lamps. The fixtures are in good condition.
- The gymnasium lighting is high bay, metal halide fixtures. The fixtures are contactor controlled and are in good condition. Replacement with high-bay fluorescent is recommended for better light distribution and ease of application of energy-saving, code-required, automatic light controls.
- Suspended louvered linear fluorescent fixtures utilizing T8 lamps illuminate the LGI and Media Center. Fixtures are in good condition.
- Corridor lighting consists of compact fluorescent down lights and 1x4 T8. Fixtures are in good condition.
- Cafeteria lighting is recessed metal halide down lights. Replacement with high-bay fluorescent is recommended for better light distribution and ease of application of energy-saving, code-required, automatic light controls
- Provide automatic light control to all areas to comply with the International Energy Conservation Code (IECC) and the International Building Code (IBC)
- Exit signs utilize compact fluorescent-type lamps. Replace exit signs with LED fixtures to comply with the IECC 5 watt/face requirement.
- Cafeteria Stage/Platform has border lights controlled by a Lehigh dimming system. The system is limited but appears to be in good condition.
- Exterior lighting consists of building-mounted metal halide, wall packs, metal halide parking lot lighting on 25' poles, and some open compact fluorescent fixtures mounted on the building. The District may want to consider replacement with LED fixtures for energy savings and ease and frequency of maintenance.

EMERGENCY GENERATOR

- The emergency generator is a 300 kW Katolight diesel unit, located in a Generator Room. A 600Amp ASCO automatic transfer switch accompanies it. The system does not have a separate transfer switch for life safety loads as required by the National Electrical Code (NFPA70). There is a Lake Shore Area Protection Monitor. The generator and associated equipment is in good condition.
- The emergency lights are part of the existing fluorescent fixtures. Gymnasium has separate compact fluorescent screw base lamps in RLM pendant fixtures.

TELECOMMUNICATIONS/CATV

- The telephone system is fed underground from the Penn London Elementary School which is next door to this School. It is terminated in Nortel Avaya terminal protector boxes.
- There are POTS lines for fire alarm and security systems use.
- The school has an Iwatsu Adix VOIP system in administrative area.
- Classrooms are equipped with intercom handsets.
- All classrooms are equipped with CATV jacks.

INTERCOM SYSTEM

- The intercom system is a Simplex 5100 and is in good condition.
- Speakers are typically recessed ceiling mounted.
- Extend and expand the existing system into new areas as required.

CLOCK SYSTEMS

- The master clock is a Simplex 2350 unit.
- Clocks are analog type.

REMOTE SOUND SYSTEMS

- There is a remote sound system for the stage consisting of a Sabine Graphi-Q2 equalizer, Peavey MMA-800T Mixer, cassette deck, CD player, Crest CC2800 amplifier. There is no wireless microphone system.
- There are wall-mounted speakers for the system in the Cafeteria/Auditorium.
- There are no assisted listening devices as required by The Americans with Disabilities Act (ADA).

FIRE ALARM SYSTEM

- The fire alarm is a Simplex 4020 System with manual pull stations and bell and strobes. System is approximately 12 years old and is in good condition. System should be expanded and upgraded to serve any proposed building expansion and to comply with current codes.

SECURITY

- The current security system consists of door contacts and motion detectors. There is one keypad to arm/disarm the panel. The system is a Bosch D9412GV3.
- There is an Aiphone video intercom at the main entry.
- There is no card access system.

COMPUTER CABLING

- The computer cabling consists of category 5E cables with floor-mounted racks or cabinets located in communications closets.
- Patch panels are typically Siemon.
- The computer-cabling infrastructure should be expanded or replaced and conform to the latest standards set forth by EIA/TIA. Although not necessary the District may want to consider upgrading to CAT6 cable and devices for faster data transmission. CAT6 is the current standard.



ENERGY STAR® Scorecard

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ENERGY STAR®
Score

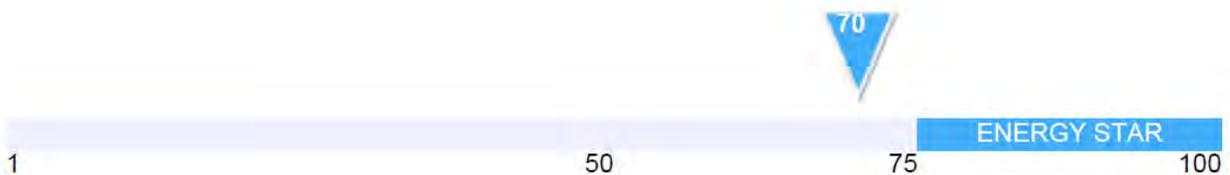
Avon Grove SD - Avon Grove Intermediate School - 124150503

Primary Function: K-12 School
Gross Floor Area (ft²): 210,000
Built: 2002

Property Address:
Avon Grove SD - Avon Grove Intermediate School - 124150503
395 South Jennersville Road
West Grove, Pennsylvania 19390-8401

For Year Ending: June 30, 2014
Date Generated: December 18, 2014

For the year ending in June 2014, this building used 102.5 (kBtu/ft²) on a source energy basis. The Environmental Protection Agency's (EPA's) ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.



Buildings with a score of 75 or higher may qualify for EPA's ENERGY STAR.

Signature of Verifying Professional

I _____ (Name) verify that the information regarding energy use and property use details is true and correct to the best of my knowledge.

Signature: _____ Date: _____



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**ENERGY STAR®
Score¹**

**Avon Grove SD - Avon Grove Intermediate School -
124150503**

Primary Property Function: K-12 School
Gross Floor Area (ft²): 210,000
Built: 2002

For Year Ending: June 30, 2014
Date Generated: December 18, 2014

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information

Property Address	Property Owner	Primary Contact
Avon Grove SD - Avon Grove Intermediate School - 124150503 395 South Jennersville Road West Grove, Pennsylvania 19390-8401	_____ () - _____	_____ () - _____
Property ID: 4262298		

Energy Consumption and Energy Use Intensity (EUI)

Site EUI	Annual Energy by Fuel	National Median Comparison
45.9 kBtu/ft²	Fuel Oil (No. 2) (kBtu) 4,092,114 (42%) Electric - Grid (kBtu) 5,541,068 (58%)	National Median Site EUI (kBtu/ft²) 55.7 National Median Source EUI (kBtu/ft²) 124.5 % Diff from National Median Source EUI -18%
Source EUI		Annual Emissions
102.5 kBtu/ft²		Greenhouse Gas Emissions (Metric Tons CO2e/year) 1,045

Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____ Date: _____

Licensed Professional

() - _____



Professional Engineer Stamp (if applicable)

Proposed Costs to Update Building to Current Standards

Avon Grove Intermediate School	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Total
Constructed: 2002						
Renovation: N/A						
Addition: N/A						
SITE						
Landscaping adjacent to bus/parent loops is too high	\$15,000					\$15,000
Pavement repair in visitor parking/parent loop		\$5,000		\$5,000		\$10,000
Pavement repair at signalized entrance	\$10,000					\$10,000
ARCHITECTURAL						
Security Entrance Improvements		\$75,000				\$75,000
Painting Hallways, Classrooms, Bathrooms				\$40,000		\$40,000
Resurface Gym Flooring	\$50,000					\$50,000
Replace Bathroom Hardware			\$6,000			\$6,000
Replace Stairwell Tread System		\$50,000				\$50,000
Replace Pod Carpeting		\$50,000				\$50,000
Replace Classroom Carpeting				\$300,000		\$300,000
Install ADA Access to Stage					\$15,000	\$15,000
Install Vertical Grab Bars In Toilet Rooms				\$5,000		\$5,000
Install Guardrails at 2nd Floor Low Windows	\$35,000					\$35,000
Replace Urinal Screens					\$5,000	\$5,000
Repair Control Joint Sealants		\$5,000				\$5,000
Repair Damaged Brick and Limestone	\$5,000					\$5,000
Remove Skylight Debris from Roof	\$1,500					\$1,500
Install Additional Roof Hatch and Safety Rails		\$10,000				\$10,000
Replace Missing Snow Guards at Entrance Areas				\$5,000		\$5,000
Replace Damaged Chimney Cap			\$2,500			\$2,500
Remove Ties at Concrete Retaining Wall		\$1,000				\$1,000
Repair Bathroom Sink Countertops/Trim		\$5,000				\$5,000
MECHANICAL SYSTEMS						
No Items						\$0
PLUMBING SYSTEMS						
Remove Systems in Boiler Room that are no longer used	\$5,000					\$0
Provide Backup Water Heater		\$25,000				\$25,000
Replace PVC Drains In Kitchen			\$2,000			\$2,000
FIRE PROTECTION SYSTEMS						
No Items						\$0
ELECTRICAL SYSTEMS						
Replace Exterior Light Fixtures with LED		\$20,000				\$20,000
Replace Cafeteria Lighting		\$40,000				\$40,000
Replace Metal Halide Gymnasium with Fluorescent		\$30,000				\$30,000
Provide automatic light controls		\$145,000				\$145,000
Provide Access Controls			\$95,000			\$95,000
Replace CAT 5e Cable with CAT6					\$75,000	\$75,000
	\$96,500	\$456,000	\$105,500	\$350,000	\$95,000	\$1,133,000
Design Fees, Contingency and Escalation (30%)						\$339,900
Total						\$1,472,900

Avon Grove Intermediate School Evaluation Rating

Rating System: Excellent (4 points); Good (3 points); Fair (2 points); Poor (1 point); and Failing (0 points)

	Score	Remarks
Architectural		
Walls	4	Walls are in very good condition
Roof	3	Minor issues with roof drains, in process of being repaired
Windows	4	Windows are excellent
Doors	3	Doors are in good condition, some interior doors have loose trim
Casework	4	Casework overall is very good
Finishes	3	Finishes are in excellent condition, carpet in Pod areas are worn
ADA compliance	4	Building is ADA compliant
Elevator	4	Elevator is sized appropriately and meets code requirements
Security	3	Building vestibule could be improved for security
Sub-total:	32	

Structural		
Roof construction	4	Roof structure is in very good condition
Floor framing	4	Floor framing is in very good condition
Structural integrity	4	Building structure is in excellent condition
Exterior walls	4	Exterior walls overall is in very good condition
Interior walls	4	Interior walls are in very good condition
Lintels	4	Lintels are in very good condition
Expansion joints	4	Expansion joints are located appropriately to allow for the building movement
Sub-total:	28	

Mechanical - HVAC		
Boilers	3	Boilers are in good condition, currently 13 years old
Chillers	3	Three Trane chillers are in good condition, controlled by Trane Summit
Pumps	3	Simplex pumps serve chiller, a duplex pump system handles hot water, good condition
HVAC Piping	3	Piping is in good condition
Classroom HVAC units	3	Unit Ventilators heat and cool classrooms, season changeover can be problematic
Air handling units	3	Central station single-zone air handlers are in good condition
Terminal heating equipment	3	Terminal units are generally in good condition
Fuel storage tank	3	20,000 gallon tank includes leak detention and transfer pumps
Toilet room exhaust systems	4	Toilet room exhaust in very good condition and working properly
Kitchen exhaust hood	4	Kitchen hood exhaust is in very good condition with adequate make up air
Temperature control system	4	Invensys controls system to control building temperatures
Indoor air quality	3	2-pipe systems do not provide good year round control
Sub-total:	39	

Plumbing		
Fixtures	3	Plumbing fixtures are generally in good condition
Water heater	3	Oil fired PVI water heater, a backup system is recommended
Water piping	4	Piping is in very good condition
Sanitary piping	4	Sanitary piping is in very good condition
Water service	4	4" domestic service with backflow prevention, in very good condition
Kitchen grease trap	3	The grease trap in the kitchen has been reported to have issues
Sub-total:	21	

Avon Grove Intermediate School

	Score	Remarks
Fire Protection		
Fire protection system	4	This building is fully sprinklered, 6" fire service with 30 hp fire pump
Sub-total:	4	

Electrical

Lighting	3	Add automatic light controls, consider high bay fluorescents in gym
Exterior Lighting	2	Consider replacing metal halide lights with LED
Receptacles in classrooms	3	Receptacles in classrooms appear adequate for current needs
Intercom	3	Simplex 5100 system is in good condition
Panel boards	4	Cutler Hammer panels in very good condition
Electric service	4	Cutler Hammer system with expandibility as needed
Smoke detection system	3	Smoke detection system is in good condition
Fire alarm system	3	Simplex 4020 system with manual pull stations, bell and strobes, good condition
Emergency generator	3	Katolight diesel unit, no transfer switch for life safety loads.
Sub-total:	28	

Technology

Data cabling	3	Data cabling is Cat 5e. Current standard is Cat 6
Sub-total:	3	

Building Total: 155

Site Amenities

Staff parking	4	Appears to be good
Visitor parking	4	Appears to be good
Parent drop-off	4	Appears to be good
Stormwater management	3	Coveyance & management provided
Play facilities	3	Appears to be adequate
Site safety	3	Appears to be adequate
Sub-total:	21	

Site Conditions

Site accessibility	3	Have to cross access drives to get to school from accessible spaces
Bus drop-off	4	Appears to be good
Site size	3	Appears to have room to expand
Sub-total:	10	

Site Total: 31

Combined Total: 186

FRED S. ENGLE MIDDLE SCHOOL

BUILDING DATA:

Address: 107 Schoolhouse Road, West Grove, PA 19390-8957

Administrators: Michael Berardi, Principal; Patrick Hogan, Assistant Principal

Current Grades: 7-8

Capacity: 854 PDE Capacity, 930 AGSD/CEFPI Capacity

2014-2015 Enrollment: 847

Staff: 64 Faculty

Construction Completion: Original construction 1961; renovations in 1970, 1997; additions 2009, 2010

Gross Square Feet: 110,434 s.f. original
7,056 s.f. additions
117,490 s.f. total

Site Acreage: 70.1 acre campus shared with Avon Grove High School

Current Zoning: London Grove Township R-R Rural Residential

Parking: 91 parking spaces, 2 handicapped spaces and 22 bus spaces that are shared with Avon Grove HS.





General Site Description

SITE SIZE AND OVERALL CONDITION

The Avon Grove High School and Fred S. Engle Middle School buildings are located in the northwest and southwest (respectively) areas of the approximately 67-acre secondary campus. The property includes the two school buildings, an athletic stadium, and multiple athletic fields along with supporting parking and pick-up / drop-off areas, access drives, stormwater management detention facilities, and bus staging areas. A separate 3.4-acre parcel to the west (across Schoolhouse Road) includes a bus staging / parking area and tennis courts utilized by the secondary campus. The site is almost entirely developed with small wooded / natural areas and a drainage channel (Unnamed Tributary to East Branch White Clay Creek – designated a “Cold Water Fishes” stream by PaDEP) located across the southern portions of the property.

VEHICULAR CIRCULATION

The site is accessed in multiple locations, including three (3) driveways off of State Road and one driveway off of Schoolhouse Road. The majority of bus traffic for the campus utilizes a common pick-up / drop-off area between the two schools via a driveway connection to Schoolhouse Road which is shared with parent and faculty traffic. Pick-up and drop-off also occurs at the High School both in front of the building (i.e. along State Road) and in the vicinity of the service area at the rear of the building. The current driveway and internal traffic configuration creates significant traffic congestion, vehicular / pedestrian conflicts, and safety concerns both within and around campus during arrival and dismissal times. The State Road / Schoolhouse Road intersection appears to function at a very low level of service due to the volume of traffic during arrival / dismissal times with no means of traffic regulation (i.e. signal or manual traffic control) and the conflicting movements associated with the westernmost driveway into the High School portion of campus located almost immediately adjacent this intersection. Access to all driveways from neighboring State Road and Schoolhouse Road relies in large part on driver courtesy (i.e. waving other drivers in / out) since there are no gaps in traffic or mechanisms (i.e. signals or manual traffic control) to create such opportunities, especially for left-turn movements in and out of the driveways.

PEDESTRIAN CIRCULATION

A series of existing walkways and sidewalks connect to the two buildings within campus. The sidewalks in the area of the High School (particularly the student parking lot adjacent the stadium) are limited and appear to be generally inadequate, if not unsafe, for access to the building due to conflicts with vehicular traffic and limited controls (i.e. signage and crosswalks). Further, no sidewalks are located along the adjacent roadways such that students walking from neighboring residential areas utilize roadway shoulders and grass areas for access (it is our understanding via conversation with the High School principal that numerous pedestrian / vehicular incidents have occurred over time in this area).

PARKING

Parking for the High School generally occurs in three different areas – a dedicated faculty parking lot to the southwest of the building, a small area of visitor and faculty parking spaces in front of the building (along State Road), and a shared faculty / visitor / student lot (with limited spaces dedicated for student use) adjacent the stadium. Middle school faculty and visitor parking occurs immediately in front of the building with a smaller lot located behind the building dedicated to faculty use. It is our understanding that the bus pick-up / drop-off area is utilized for vehicular parking during special events and when the

athletic stadium is in use (attendees of those events are also known to utilize the pedestrian walkways adjacent this area to park in non-designated areas closer to the stadium).

PLAY AND ATHLETICS

The campus includes an athletic stadium with synthetic turf field (utilized by multiple sports) and synthetic running track, seven tennis courts (on the separate parcel located across Schoolhouse Road to the west), two baseball fields, two softball fields, and four multipurpose fields (including one natural turf field which overlaps the baseball field at the northern end of campus and two synthetic turf fields located to the east of the stadium). It is our understanding that the demand for field use by AGSD exceeds the number of fields available and that community use of some fields is allowed when the facilities are not occupied by AGSD teams (such use is to be coordinated through the District but this protocol is not always followed and impacts the “recovery time” of the natural turf fields).

STORMWATER MANAGEMENT AND UTILITIES

The property is served by public water and sewer (including an onsite sewage pump station owned and operated by AGSD). The site is managed by a number of stormwater detention facilities including a series of linear surface basins located just below and southwest of the High School building, two different surface basins in the athletic field areas (one immediately to the east of the stadium and one to the east of the northernmost baseball field), a single surface basin situated to the east of the Middle School building, and a series of surface basins located below the tennis courts / bus staging area on the west side of Schoolhouse Road.

General Building Description

Construction type:	Non-combustible, Type II B construction
Occupancy group:	'E' - Educational
Number of stories:	Two
Structural system:	Steel frame, masonry load bearing
Building exterior envelope:	Brick veneer, 2" rigid insulation, 4" CMU backup.
Roofing:	Ballasted 3-ply modified bitumen roofing with 2" insulation and 1/2" cover board.
Windows:	Aluminum fixed and hopper insulated glass windows
Doors:	Aluminum entrance doors, FRP service doors and some hollow metal doors painted exterior, wood interior doors

Interior Materials:

FRED S. ENGLE MIDDLE SCHOOL							
Space	Floors	Bases	Walls	Ceilings	Soffits	Casework	CB/MB/TB
LOBBY	Terrazzo	RB	Brick	2x4 ACT	-	-	-
CORRIDORS	Terrazzo	RB	Ptd CMU	2x4 ACT	-	-	-
OFFICE	Carpet/VCT	6" RB	Ptd CMU	2x4 ACT	-	-	-
NURSE	VCT	RB	Ptd CMU	2x4 ACT	-	-	-
CLASSROOM	VCT	RB	Ptd CMU	2x4 ACT	-	Metal UV cabs	CB/SB
ART ROOM	VCT	RB	Ptd CMU	Ptd Exposed	-	Metal UV cabs	-
MUSIC ROOM	VCT	RB	Ptd CMU	2x4 ACT	-	-	CB/SB
CAFETORIUM	VCT	RB	Ptd CMU	2x4 ACT	GWB	-	-
STAGE	Wood	Wood	Ptd CMU	2x4 ACT	GWB	-	-
LIBRARY	Carpet	RB	Ptd CMU	2x4 ACT	-	-	-
AUDION	VCT	RB	Ptd CMU	2x4 ACT	GWB	PLAM Tables	CB
KITCHEN	QT	QT	Ptd CMU	2x4 FG ACT	GWB	SS Equipment	-
TOILETS	Epoxy	Epoxy	Ptd CMU	Conc.	-	-	-
LOCKER ROOMS	Coated Conc	Ptd CMU	Ptd CMU	Ptd Exposed	-	-	-
GYMNASIUM	Wood	Ptd Wood	Ptd CMU	Ptd Exposed	GWB/Plywd	-	-
MECHANICAL	Concrete	-	Ptd CMU	Exposed	-	-	-
VCT - Vinyl Composition Tile							
QT - Quarry Tile							
CT - Ceramic Tile							
RB - Rubber Base							
GFCMU - Ground-faced Concrete Masonry Units							
ACCMU - Acoustical CMU							
CMU - Concrete Masonry Units							
SGFT - Structural Glazed Faced Tile							
ACT - Acoustical Ceiling Tile							
GWB - Gypsum Wallboard							
PTD - Painted							
AP- Acoustical Panels							
PLAM - Plastic Laminate							
CB - Chalkboard							
MB - Markerboard							
TB - Tackboard							
SB - Smartboard							
TS- Tacksurface							

PROGRAM

The current population of 847 for two grades (7-8) is taxing the buildings ability to accommodate the population, which is confirmed by the addition of modular classrooms on the site that support two teams.

CLASSROOMS

- There are 4 teams per grade level, which include the core curriculum of English, Math, Social Studies and Science classrooms. For the most part, 7th grade is located on the first floor and 8th grade on the lower level. Teams don't travel too far between classrooms and are generally contained within the team structure.
- Classroom changes are staggered by teams (250 students moving at one time) so that no two teams are in the corridors at the same time due to the narrow corridor width and congestion at convergence points. To accommodate this, the school runs a different schedule every day for teachers and the core curriculum.
- The science rooms all have fume hoods and no gas.

CORE SPACES

- In general, the building has limited flexibility and core spaces to enhance the delivery of the educational program.
- The cafeteria is 4,424 square feet and can accommodate 290 per lunch serving. For grades 7-8, there are currently 4 lunch servings for 220+/- students per serving.
- Only one grade can be accommodated in the cafeteria for assemblies.
- The kitchen lines are short with two in and two out that meet at the same point.
- The stage floor is bouncy and is there is no handicapped access. There are no wings on the stage; no projection system and the cafeteria tables are used for performance seating. The cafeteria/stage is not conducive to performances, which are accommodated at the high school.
- The audion is used for choral, team activities and testing.
- The auxiliary gym is small and has a non-slip floor. The windows have a southern exposure with a lot of heat gain and the ventilation is poor.
- The central library is not an inviting space and has no natural light, a low ceiling and physical barriers that are not conducive to the functionality of the space.

MISCELLANEOUS

- The gym bleachers are original, steel and have no egress aisles with handrails.
- The classrooms casework is original.
- Gym storage is limited.
- Storage rooms have been converted to needed conference room and office space so there is limited storage space in the building.
- There was a recent systemic renovation to the building completed in 2011, which included an elevator and toilet room addition. There were no significant changes made programmatically to the building as part of that renovation project.
- The lower level under slab sewer pipes was replaced during the recent renovation.

ACCESSIBILITY & BUILDING CODE

Building Accessibility (American's with Disabilities Act – ADA & ANSI 117.1)

ELEVATOR

- An accessible elevator has been installed as a part of the 2009 addition, which meets current code requirements for size.

STAGE ACCESS

- The stage does not have handicap access. A handicap ramp or chair lift should be added to make the stage accessible. The existing stairs to the stage do not have handrails and should at a minimum have railings on one side.

TOILET ROOMS

- Toilet room entrances and fixtures throughout the school do not comply with ADA requirements. One set of bathrooms has been constructed to provide ADA-compliant restrooms for each floor level. Renovations for all other toilet rooms should be completed for ADA compliance.

SIGNAGE

- ADA-compliant signage has been installed at the new bathrooms. Very little permanent signage is installed throughout the rest of the building.

CORRIDORS

- The ramp in the connected modular classrooms does not have handrails to meet ADA and code requirements. It is recommended that these be added. The ramp in the stairway does have handrails that appear to meet code requirements.

DOOR HARDWARE

- Most of the door hardware has been updated and is ADA compliant. There are existing doorknobs at storage rooms and offices that should be replaced with lever door hardware.

TOILET ENTRANCE DOORS

- Some of the existing toilet room doors do not have the appropriate door clearances per current ADA requirements.

LOCKER ROOMS

- Marble thresholds at shower entrances are too high per current ADA codes. Floors should be flash patched to reduce threshold heights to fall within the allowable 1/4" height.



- There are no ADA-compliant lockers in the locker rooms or instructor offices.

RECEPTION DESKS

- The reception desk at the front Administration Office does not have the lower counter area as required by ADA. The circulation counter in the Media Center has the lower desk area for working with handicapped patrons as required by ADA.

LITTLE THEATER

- The little theater is not ADA accessible as there are tiered levels of seating and the front of the room is depressed.

BAND ROOM

- The Band room is not ADA accessible as all lecture seating is on elevated levels and only the rear seating is at an accessible level. There are no ramps to access the other seating levels.

FAMILY CONSUMER SCIENCE

- The Family Consumer Science lab is equipped with an ADA-compliant kitchen area with sink, cooktop and oven.

SCIENCE

Science rooms have been renovated and equipped with an ADA-compliant lab station.

Building Code

ALLOWABLE AREA

- Allowable building areas do not comply with the current building code. The addition of fire separation walls and rated corridor doors are required to divide the building into smaller fire areas if major building reconfiguration is being considered.

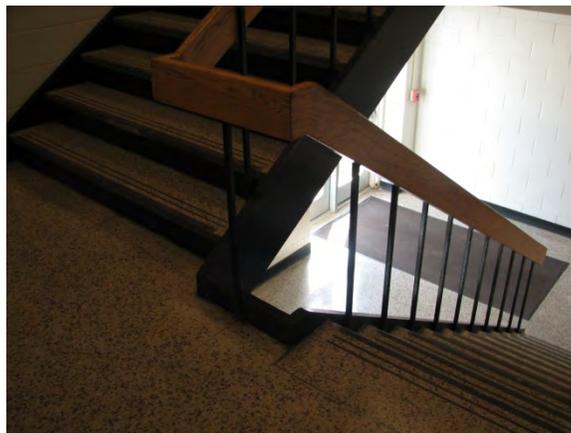
ROOF

- There are rooftop HVAC units that are within 10'-0" of the roof edge that do not have safety rails to protect maintenance workers around the units. Guardrails should be installed to provide the additional safety to meet code.



STAIRS

- The entrance to the connected modular classrooms is through one existing stair tower. The hallway runs under the existing stair landing which does not meet the required minimum height by code.
- The existing stair guardrails are not high enough to meet current codes and the spacing between pickets exceeds the maximum of 4" as required by current codes.



PHYSICAL PLANT

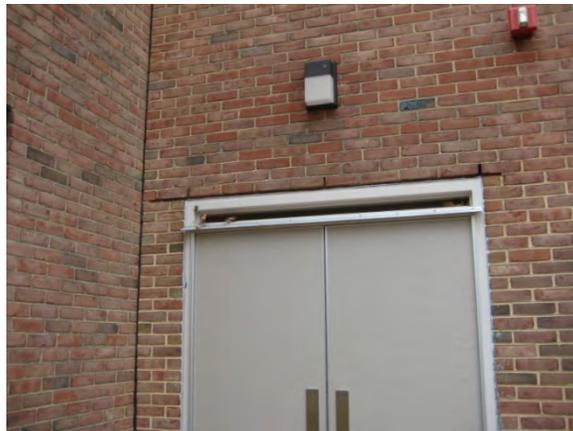
Exterior Envelope

MASONRY

- The exterior walls are brick veneer that is in good condition. Some of the control joints on the building, particularly on upper wall areas have failing sealant that should be replaced. It is recommended that the brick be cleaned to remove dirt and waterproofed, as there are signs that the brick has been holding moisture.



- Some exterior door lintels show signs of rust. These lintels should be sanded, prepped and repainted.



- There are small cracks in the mortar joints near the main entrance. These joints should be cleaned and repaired.

METAL COPING/PANELS

- There are some sections of aluminum trim at the top of the brick veneer that are missing. These sections should be replaced to prevent moisture from penetrating the wall.



- The metal panels at the top of the walls are generally in good condition, however there are a couple panels where the finish is compromised and showing signs of degradation. These panels should be refinished or replaced.



- There are also several panels by the main entrance by the picnic tables that have rusted penetrations at the bottom of the panels. These panels should be replaced.



METAL SOFFITS

- The metal soffits have been replaced as part of the recent renovation project and are in good condition.

WINDOWS

- The existing aluminum windows are in good condition. There is a combination of fixed and hopper windows.

ROOFS

- Most of the roof is ballasted built-up roofing that is in good condition. The existing roof hatch does not have any safety provisions. Safety rails should be installed along with rails along the parapet for fall prevention.



- The toilet room addition has aluminized coated EPDM roofing where the coating is alligatoring due to heat and aging. The roofing should be cored and evaluated if it needs to be replaced or recoated. The elevator shaft has EPDM roofing that appears to be in good condition.



- The roof ladders are rusting and should be sanded and repainted.

ENTRANCES

- The entrance doors are aluminum storefront with aluminum doors and are in good condition. Other doors are FRP with aluminum frames and in good condition. The doors have been replaced as part of the recent renovations. There are a couple of hollow metal doors and frames remaining that have been painted as part of the renovations also and are in good condition.
- The gymnasium entrance has no vestibule air lock that would help improve the building energy efficiency.

MISCELLANEOUS

- There is exposed conduit and gas piping on the exterior of the building that is rusting. These pipes should be painted to extend the life of these systems.



Interior Finishes

CIRCULATION

- Existing corridor floors are terrazzo and are in very good condition.
- New lockers have been installed in the corridors.

CLASSROOMS

- Classroom finishes have been replaced as part of the recent renovation project including new ACT ceilings, new VCT flooring and rubber base, and walls painted. These finishes are in very good condition.
- Several rooms have exposed beams in the rooms while metal panels cover the exterior. As there is minimal insulation at the beams, air is infiltrating the walls and water has condensed on the cold steel. It is recommended that the beams be insulated to improve the classroom environment and the building energy efficiency.

- Some classrooms are modular classrooms. Five rooms have been in place for a significant time and have issues with moisture and dampness. Carpet in these modular classrooms is in very poor condition with seams taped together. Another building of four classrooms and office support areas is more recent and in fair condition. It is recommended that all modular classrooms be removed or replaced with permanent classrooms to improve security and the teaching environment.



CORE SPACES (ART, MUSIC, SCIENCE, AND FAMILY CONSUMER SCIENCES)

- Finishes in core rooms such as art, music, science and family consumer sciences have been replaced as part of recent renovations and are in very good condition.

GYMNASIUM

- The existing gymnasium finishes are in good condition except that the bleachers are older and more difficult to maintain. It is recommended that new bleachers be installed with appropriate egress aisles and handrails as well as front row cutouts to provide for ADA seating as required.

CAFETERIA

- Finishes in the cafeteria have been replaced in the recent renovations and are in good condition.

Environmentally Sensitive Materials

- The AHERA report, updated September 2014, documents the following asbestos containing materials:
 - 1,800 s.f. of vinyl asbestos floor tile in room 51A
 - 300 s.f. of asbestos containing mastic in Computer room 50 that attaches acoustical wall tiles
 - TSI fitting in Tech Ed. room 18.
- All other asbestos has been removed from the building.
- The asbestos containing materials that remain all have low potential for being damaged and causing asbestos to become airborne.

Mechanical System Description

HVAC SYSTEM

- The school is heated and cooled by a 2-pipe hot water/chilled water system. While this type of system does provide a level of temperature control, they are generally quite problematic, particularly in the changeover months (spring and fall). This is due to the fact that the system can only be in heating or cooling mode, but not both at the same time. On mild days, both heating and cooling are generally required. This type of system cannot meet both needs and result in hot and cold zones. Also, a heating/cooling system changeover can take as long as 24 hours, so a cold morning and a warm afternoon result in uncomfortable room temperature conditions.
- Two gas/oil-fired Cleaver Brooks steel tube boilers generate heating hot water. These boilers are 45 years old but were rebuilt in 2009-2010 and are in fairly good condition. The blend pump on the one boiler needs to be replaced or repaired.
- Oil is stored in a small aboveground oil tank. The system includes leak detection and an oil transfer pump. All components are in good condition. The tank is not large enough to run the system for an extended time period if changeover is required by the utility in the dead of winter.
- A 5-year-old roof-mounted Carrier air-cooled chiller that is in very good condition generates chilled water.
- There are several pumps for distributing heating and cooling water. There are duplex chilled water pumps duplex hot water pumps. These pumps are all in good condition.
- Classroom areas are heated and cooled with classroom unit ventilators with outdoor air from exterior wall louvers. Interior common areas are fed from central air handling units with VAV boxes. The VAV boxes have hot water reheat but it is not used in the cooling season due to the 2-pipe system configuration. Larger spaces are fed from central station single-zone air handlers. All of the equipment is in good condition.
- The gym and locker room areas are not air conditioned.
- The HVAC systems are controlled by an electronic TAC control system.
- The toilet room exhaust systems are all working properly and in good condition.
- The kitchen hood is in good condition with adequate makeup air.
- The kiln hoods have a separate ventilation system that is code compliant.
- The shop area includes a wood dust collection system that is in good condition.
- The Family Consumer Science room has ducted exhaust over the ranges.
- Ceiling fans are installed in the kitchens to assist with comfort needs.
- There were not any specific HVAC concerns noted during our facility review.

PLUMBING SYSTEM

- The building is fed with a 3" domestic water service.
- The water services have the code-required backflow prevention devices.
- The booster pump system is utilized to feed the adjacent field irrigation needs.
- Three gas-fired high-efficiency Bradford White water heaters produce domestic hot water. Water temperature is maintained through a central mixing valve station. These units are all in good condition.
- There is a main sewer lift station in the boiler room. This system appears to be adequate and in good condition.
- Several of the roof drain bodies are not insulated. This could allow for surface condensation.
- Plumbing fixtures throughout were found to be in good condition. Hands-free faucets and flush valves were used in some of the areas.
- Art room sinks have clay traps.
- Not all fixtures were installed in accordance with current ADA standards.

- There are no longer any showers in the locker rooms.
- Generally the water coolers do not comply with ADA requirements.
- The ADA installed sink in the Family Consumer Science room does not have the required ADA pipe covers.
- The grease trap serving the kitchen is installed in the kitchen floor. Consideration should be given to relocating this to the exterior for sanitation and service purposes.

SPRINKLER SYSTEM

- The building is fed with a 6" fire service.
- The fire service includes a 25 HP fire pump and three alarm valves.
- The entire building is protected by a fire sprinkler system that appears to be in compliance with current codes and standards.

Electrical System Description

ELECTRICAL DISTRIBUTION

- The electrical service is provided by PECO Energy Company and enters the building by underground secondary feeders and terminates into a Square D QED 2000A main switchboard in the electrical room. The switchboard is in good condition and has provision for additional breakers to be added.
- Step-down transformers are located throughout the building to obtain 120/208-volt power for receptacle and miscellaneous circuits.
- The branch panels are typically Square D type NF for 277/480 Volts and Square D NQOD for 120/208-volt loads. The panels are in good condition.
- Provide wiring for mechanical equipment upgrades as required and install new panels with branch circuits to support building expansion as required and to serve mechanical equipment replacement and air conditioning units if selected.
- Receptacle coverage in classrooms appears to be adequate for the School's needs. The devices are in good condition.
- Kitchen receptacles have been replaced with GFCI type. The kitchen equipment is totally electric.

LIGHTING

- Classroom lighting consists of coffered ceilings with wrap-around fluorescent fixtures with two T8 lamps. The fixtures are in fair condition with some cracked and ill-fitting lenses.
- The gymnasium lighting is high bay, metal halide fixtures. The fixtures are contactor controlled and are in good condition. Replacement with high-bay fluorescent is recommended for better light control and energy savings.
- Decorative indirect utilizing Biax lamps illuminate the cafetorium. The fixtures are in good condition.
- Media Center utilizes suspended, perforated panel indirect/direct linear fluorescent fixtures utilizing T8 lamps. The fixtures are in good condition.
- Corridor lighting consists of recessed fluorescent troffers with T8 lamps.
- Automatic lighting control is provided in all areas and spaces.
- Exit signs utilize compact fluorescent-type lamps. Replace exit signs with LED fixtures to comply with the IECC 5 watt/face requirement.
- Cafetorium Stage/Platform has border lights controlled by a Leviton dimming system. The system is limited but appears to be in good condition.

- Exterior lighting consists of building-mounted metal halide, full cut-off, wall packs, metal halide parking lot lighting on 25' poles. The District may want to consider replacement with LED fixtures for energy savings and ease and frequency of maintenance.

EMERGENCY GENERATOR

- The emergency generator is a 200 kW Kohler diesel unit, located outside. It is accompanied by two 600A automatic transfer switches and an Area Protection Monitor. The system has the life safety loads separated and complies with the National Electrical Code (NFPA70). The generator and associated equipment is in good condition.
- The emergency lights are part of the existing fluorescent fixtures.

TELECOMMUNICATIONS/CATV

- The telephone system is fed underground.
- There are POTS lines for fire alarm and security systems use.
- The school has a Cisco VOIP system in administrative areas and classrooms.
- All classrooms are equipped with CATV jacks.

INTERCOM SYSTEM

- The intercom system is a Bogen Multi Com 2000 and is in good condition. The system has an interface to accept the signal from VOIP telephone system.
- Speakers are typically recessed ceiling-mounted in corridors and wall-mounted combination clock/speakers in classrooms.
- Extend and expand the existing system into new areas as required.

CLOCK SYSTEMS

- The master clock is a Bogen unit mounted in the Bogen sound rack.
- Clocks are analog type.

REMOTE SOUND SYSTEMS

- Cafetorium sound rack contains Peavey amplifier only.
- Audion has a Samson sound system that is new.
- Gymnasium has separable sound system for when partition in gym is closed. It consists of a TOA mixer/equalizer, architectural acoustics amplifier and a Peavey amplifier.
- There are wall-mounted speakers for the system in the cafetorium and ceiling hung speakers in the gym.
- There are no assisted listening devices in any of the remote systems as required by The Americans with Disabilities Act (ADA)

FIRE ALARM SYSTEM

- The fire alarm is a Silent Knight IFP-1000 System with manual pull stations, horns and strobes.

SECURITY

- The current security system consists of door contacts and motion detectors. There is one keypad to arm/disarm the panel. The system is a Securitron ITI – Pro 5000.
- POE CCTV cameras are located throughout the building
- There is an Aiphone video intercom at the main entry.
- A card access system is available.

COMPUTER CABLING

- The computer cabling consists of category 5E cables with floor-mounted racks or cabinets located in communications closets.
- Patch panels are typically Siemon.
- The computer-cabling infrastructure should be expanded or replaced and conform to the latest standards set forth by EIA/TIA. Although not necessary the district may want to consider upgrading to CAT6 cable and devices for faster data transmission. CAT6 is the current standard.



ENERGY STAR® Scorecard

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ENERGY STAR®
Score

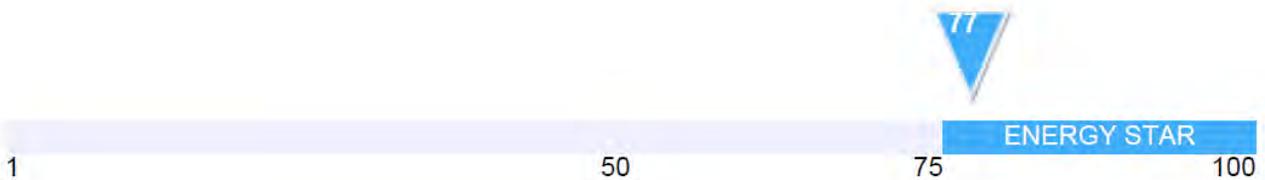
Avon Grove SD - Fred S. Engle Middle School - 124150503

Primary Function: K-12 School
Gross Floor Area (ft²): 117,490
Built: 1961

Property Address:
Avon Grove SD - Fred S. Engle Middle School - 124150503
107 Schoolhouse Road
West Grove, Pennsylvania 19390-8957

For Year Ending: June 30, 2014
Date Generated: December 18, 2014

For the year ending in June 2014, this building used 101.8 (kBtu/ft²) on a source energy basis. The Environmental Protection Agency's (EPA's) ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.



Buildings with a score of 75 or higher may qualify for EPA's ENERGY STAR.

Signature of Verifying Professional

I _____ (Name) verify that the information regarding energy use and property use details is true and correct to the best of my knowledge.

Signature: _____ Date: _____



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**ENERGY STAR®
Score¹**

**Avon Grove SD - Fred S. Engle Middle School -
124150503**

Primary Property Function: K-12 School
Gross Floor Area (ft²): 117,490
Built: 1961

For Year Ending: June 30, 2014
Date Generated: December 18, 2014

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information		
Property Address Avon Grove SD - Fred S. Engle Middle School - 124150503 107 Schoolhouse Road West Grove, Pennsylvania 19390-8957	Property Owner _____ () - _____	Primary Contact _____ () - _____
Property ID: 4263710		

Energy Consumption and Energy Use Intensity (EUI)				
Site EUI 49.8 kBtu/ft²	Annual Energy by Fuel		National Median Comparison	
	Natural Gas (kBtu)	2,678,681 (46%)	National Median Site EUI (kBtu/ft²)	66
	Fuel Oil (No. 2) (kBtu)	388,746 (7%)	National Median Source EUI (kBtu/ft²)	134.8
	Electric - Grid (kBtu)	2,789,433 (48%)	% Diff from National Median Source EUI	-24%
Source EUI 101.8 kBtu/ft²			Annual Emissions	
			Greenhouse Gas Emissions (Metric Tons CO2e/year)	544

Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____ Date: _____

Licensed Professional

() - _____



Professional Engineer Stamp
(if applicable)

Proposed Costs to Update Building to Current Standards						
Fred S Engle Middle School	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Total
Constructed: 1961						
Renovation: 1970, 1997, 2010						
Addition: 2009						
SITE						
Parking Lot Seal Coating and Repairs				\$70,000		\$70,000
Repair railing at west end of building/may not meet code		\$5,000				\$5,000
Dep curb/ ramp at east end of bus may not meet code		\$5,000				\$5,000
Gravel path at west access point needs repaired/paved			\$15,000			\$15,000
ADA signage is not permanently mounted/add new		\$1,000				\$1,000
ARCHITECTURAL						
Security Upgrades at Main Entrance		\$25,000				\$25,000
Re-Coat Roof		\$350,000				\$350,000
Provide ADA Access to Stage			\$15,000			\$15,000
Renovate Toilet Rooms for ADA Compliance					\$250,000	\$250,000
Install ADA Compliant Signage				\$5,000		\$5,000
Install Railings in Ramp to Modular Classrooms	\$3,500					\$3,500
Replace Knobs at Storage Rooms with Levers				\$5,000		\$5,000
Modify Front Reception Desk to Have Low ADA Counter			\$6,000			\$6,000
Install Guardrails at Rooftop Equipment within 10' of Edge	\$8,000					\$8,000
Replace Stair Railings with Code Compliant Guard and Hand Rails			\$30,000			\$30,000
Sand, Prep and Repaint Wall Lintels		\$10,000				\$10,000
Clean Brick, Waterproof and Replace Failing Sealant			\$150,000			\$150,000
Replace Missing Metal Trim at Top of Wall	\$5,000					\$5,000
Replace Metal Fascia Panels w/ Insulated Panels		\$200,000				\$200,000
Install Safety Railings at Roof Hatch			\$3,000			\$3,000
Provide Wind Bracing For Screen Wall	\$7,500					\$7,500
Sand and Repaint Roof Ladders				\$3,000		\$3,000
Install Interior Vestibule Doors at Gymnasium Entrance			\$30,000			\$30,000
Paint Rusted Conduit and Gas Piping				\$2,500		\$2,500
Replace Carpeting in Modular Classrooms		\$30,000				\$30,000
Replace Gymnasium Bleachers				\$125,000		\$125,000
MECHANICAL SYSTEMS						
Replace/Repair Blend Pump	\$5,000					\$5,000
PLUMBING SYSTEMS						
No Items						\$0
FIRE PROTECTION SYSTEMS						
No Items						\$0
ELECTRICAL SYSTEMS						
Replace Exterior Light Fixtures with LED			\$50,000			\$50,000
Upgrade Access System				\$65,000		\$65,000
Replace CAT 5e with CAT 6					\$42,000	\$42,000
	\$29,000	\$615,000	\$284,000	\$205,500	\$292,000	\$1,521,500
Design Fees, Contingency and Escalation (30%)						\$456,450
Total						\$1,977,950

Fred S Engle Middle School Evaluation Rating

Rating System: Excellent (4 points); Good (3 points); Fair (2 points); Poor (1 point); and Failing (0 points)

	Score	Remarks
Architectural		
Walls	2	Walls are sound, however need insulation at metal panel top of ext walls
Roof	3	Roof is in good condition
Windows	4	Windows are in very good condition
Doors	3	Entry doors excellent, HM need painted, need vestibule doors at gym
Casework	4	Casework is in very good condition overall
Finishes	3	Finishes are generally in good condition
ADA compliance	2	Existing bathrooms are not ADA, some door entrys not ADA
Elevator	4	Code compliant elevator has been installed
Security	3	A security vestibule is present, controls should be expanded
Sub-total:	28	

Structural		
Roof construction	4	Roof framing is in very good condition
Floor framing	4	Floor framing is in very good condition
Structural integrity	4	Building structure is in excellent condition
Exterior walls	3	Walls are in good condition, but backup is only 4" CMU
Interior walls	3	Walls are in good condition, 6" CMU wall construction
Lintels	3	Lintels are in good condition, recommended to paint exposed lintels
Expansion joints	3	Expansion joints are located adequately, sealants should be repaired
Sub-total:	24	

Mechanical - HVAC		
Boilers	2	While they were recently rebuilt, they are still quite old, blend pump needs replaced
Chillers	4	5 year old rooftop Carrier air-cooled chiller in very good condition
Pumps	4	Duplex chilled and hot water pumps in very good condition
HVAC Piping	4	Piping is in very good condition
Classroom HVAC units	3	Unit Ventilators heat and cool classrooms, season changeover can be problematic
Air handling units	3	Central station single zone air handling units are in good condition
Terminal heating equipment	3	VAV boxes feed by central air handling unit, have hot water reheat not used in cooling season
Fuel storage tank	4	Small dual fuel oil tank with leak detection in very good condition
Toilet room exhaust systems	3	Toilet room exhaust working properly and in good condition
Kitchen exhaust hood	3	Kitchen hood has code compliant ventilation system
Temperature control system	4	Electronic TAC control system in very good condition
Indoor air quality	3	2-pipe systems do not provide good year round control
Sub-total:	40	

Plumbing		
Fixtures	3	Plumbing fixtures in good condition, some not ADA, some have hands free faucets and flush valves
Water heater	4	Three Bradford White water heaters with a central mixing valve station in very good condition
Water piping	4	Water piping is in very good condition
Sanitary piping	3	Sewer lift station in the boiler room is adequate and in good condition
Water service	4	3" domestic water service with code compliant backflow prevention
Kitchen grease trap	2	Consideration should be given to relocating the unit to outside
Sub-total:	20	

Fred S Engle Middle School

	Score	Remarks
Fire Protection		
Fire protection system	4	This building is fully sprinklered, 6" fire service with 25 hp fire pump
Sub-total:	4	

Electrical

Lighting	3	Automatic Gym Lighting control , consider high bay fluorescents
Exterior Lighting	2	Consider replacing metal halide lights with LED
Receptacles in classrooms	3	Receptacles in classrooms appear adequate for current needs
Intercom	4	Bogen Multi Com 2000, has interface for VOIP
Panel boards	4	Square D panels in very good condition
Electric service	4	Switchboard is in very good condition and has room for expansion
Smoke detection system	4	Smoke detection is in very good condition
Fire alarm system	4	Silent Knight IFP-1000 system with manual pull stations, horns and strobes
Emergency generator	4	Kohler generator with automatic transfer switches and area protection monitoring
Sub-total:	32	

Technology

Data cabling	3	Data cabling is Cat 5e. Current standard is Cat 6
Sub-total:	3	

Building Total: 151

Site Amenities

Staff parking	3	Appears to be adequate
Visitor parking	3	Appears to be adequate
Parent drop-off	3	May conflict with faculty parking
Stormwater management	3	Appears to be adequate
Play facilities	3	Access to adjacent play fields is good
Site safety	3	Appears to be adequate
Sub-total:	18	

Site Conditions

Site accessibility	3	Access to exist. soccer field & HS could be difficult
Bus drop-off	3	Appears to be adequate
Site size	3	Appears to be adequate
Sub-total:	9	

Site Total: 27

Combined Total: 178

AVON GROVE HIGH SCHOOL

BUILDING DATA:

Address: 257 East State Road, West Grove, PA 19390-8956

Administrators: Thomas Alexander, Principal; Gary Benasutti, Assistant Principal; Angela Houghton, Assistant Principal & Academic Support; Natalie Ortega-Moran, Assistant Principal; Vanessa Robitson, HS Director of Athletics and Student Activities

Current Grades: 9-12

Capacity: 1,433 PDE Capacity, 1,676 AGSD/CEFPI Capacity

2014-2015 Enrollment: 1,834

Staff: 124 Faculty

Construction Completion: Original construction 1957, 1995, 1997, 2008

Gross Square Feet: 201,000 s.f. original
13,104 s.f. additions
214,104 s.f. total

Site Acreage: 70.1 acre campus shared with Fred S. Engle Middle School

Current Zoning: London Grove Township R-R Rural Residential

Parking: 473 parking spaces, 9 handicapped spaces and 22 bus spaces that are shared with Fred Engle MS.





General Site Description

SITE SIZE AND OVERALL CONDITION

The Avon Grove High School and Fred S. Engle Middle School buildings are located in the northwest and southwest (respectively) areas of the approximately 67-acre secondary campus. The property includes the two school buildings, an athletic stadium, and multiple athletic fields along with supporting parking and pick-up / drop-off areas, access drives, stormwater management detention facilities, and bus staging areas. A separate 3.4-acre parcel to the west (across Schoolhouse Road) includes a bus staging / parking area and tennis courts utilized by the secondary campus. The site is almost entirely developed with small wooded / natural areas and a drainage channel (Unnamed Tributary to East Branch White Clay Creek – designated a “Cold Water Fishes” stream by PaDEP) located across the southern portions of the property.

VEHICULAR CIRCULATION

The site is accessed in multiple locations, including three (3) driveways off of State Road and one driveway off of Schoolhouse Road. The majority of bus traffic for the campus utilizes a common pick-up / drop-off area between the two schools via a driveway connection to Schoolhouse Road which is shared with parent and faculty traffic. Pick-up and drop-off also occurs at the High School both in front of the building (i.e. along State Road) and in the vicinity of the service area at the rear of the building. The current driveway and internal traffic configuration creates significant traffic congestion, vehicular / pedestrian conflicts, and safety concerns both within and around campus during arrival and dismissal times. The State Road / Schoolhouse Road intersection appears to function at a very low level of service due to the volume of traffic during arrival / dismissal times with no means of traffic regulation (i.e. signal or manual traffic control) and the conflicting movements associated with the westernmost driveway into the High School portion of campus located almost immediately adjacent this intersection. Access to all driveways from neighboring State Road and Schoolhouse Road relies in large part on driver courtesy (i.e. waving other drivers in / out) since there are no gaps in traffic or mechanisms (i.e. signals or manual traffic control) to create such opportunities, especially for left-turn movements in and out of the driveways.

PEDESTRIAN CIRCULATION

A series of existing walkways and sidewalks connect to the two buildings within campus. The sidewalks in the area of the High School (particularly the student parking lot adjacent the stadium) are limited and appear to be generally inadequate, if not unsafe, for access to the building due to conflicts with vehicular traffic and limited controls (i.e. signage and crosswalks). Further, no sidewalks are located along the adjacent roadways such that students walking from neighboring residential areas utilize roadway shoulders and grass areas for access (it is our understanding via conversation with the High School principal that numerous pedestrian / vehicular incidents have occurred over time in this area).

PARKING

Parking for the High School generally occurs in three different areas – a dedicated faculty parking lot to the southwest of the building, a small area of visitor and faculty parking spaces in front of the building (along State Road), and a shared faculty / visitor / student lot (with limited spaces dedicated for student use) adjacent the stadium. Middle school faculty and visitor parking occurs immediately in front of the building with a smaller lot located behind the building dedicated to faculty use. It is our understanding that the bus pick-up / drop-off area is utilized for vehicular parking during special events and when the

athletic stadium is in use (attendees of those events are also known to utilize the pedestrian walkways adjacent this area to park in non-designated areas closer to the stadium).

PLAY AND ATHLETICS / STADIUM

The high school campus is served by a stadium facility with a synthetic turf that is utilized by multiple sports and a synthetic running track around the perimeter; two baseball fields; two softball fields; four multipurpose fields (including one natural turf field which overlaps the baseball field at the northern end of campus and two synthetic turf fields located to the east of the stadium); and seven tennis courts on the separate parcel located across Schoolhouse Road to the west. It is our understanding that the demand for field use by AGSD exceeds the number of fields available and that community use of some fields is allowed when the facilities are not occupied by AGSD teams. Field use is to be coordinated through the District but this protocol is not always followed which impacts the “recovery time” of the natural turf fields.

The stadium upgrades in 2005 included the synthetic turf field, a synthetic running track and infrastructure upgrades. Toilet facilities and a concession stand are available. Based on our visual observation and the amount of use experienced over the past 10-years, the district should budget \$5,000 for routine maintenance (grooming, etc.) to extend the useful life of the turf as much as possible.

For all of the synthetic fields, the district should consider GMax testing or a similar type of investigation at an estimated cost of \$5,000 per field to evaluate their current condition before spending money on a full replacement. Synthetic turf replacement costs within the next 5 years, as provided in the “Proposed Costs to Upgrade Stadium to Current Standards,” are based on the removal and replacement of the existing turf and assumes that the stone and sub-drainage is in good condition and can be reused. Track resurfacing is also a recommended upgrade by coating with a structural spray.

There is currently no field house adjacent to the stadium to support the athletic program. Visiting teams use classrooms in the existing high school for athletic events. A field house that provides amenities such as storage, team rooms with lockers, and toilet room facilities would fully support the stadium functions.

STORMWATER MANAGEMENT AND UTILITIES

The property is served by public water and sewer (including an onsite sewage pump station owned and operated by AGSD). The site is managed by a number of stormwater detention facilities including a series of linear surface basins located just below and southwest of the High School building, two different surface basins in the athletic field areas (one immediately to the east of the stadium and one to the east of the northernmost baseball field), a single surface basin situated to the east of the Middle School building, and a series of surface basins located below the tennis courts / bus staging area on the west side of Schoolhouse Road.

General Building Description

Construction type:	Non-combustible, Type II B construction
Occupancy group:	'E' - Educational
Number of stories:	Two, small basement level
Structural system:	Steel frame, joists and deck
Building exterior envelope:	Brick veneer 2" rigid insulation, 8" CMU or metal stud backup. EIFS window infills and wall panels, brick rowlock and soldier course accents.
Roofing:	Ballasted built-up roofing with 4" insulation Standing seam metal roof over Media Center and some classroom wings
Windows:	Aluminum fixed and hopper insulated glass windows, glass block openings in Gymnasium
Doors:	Aluminum entrance doors, painted hollow metal doors exterior, wood interior doors

Interior Materials:

AVON GROVE HIGH SCHOOL							
Space	Floors	Bases	Walls	Ceilings	Soffits	Casework	CB/MB/TB
LOBBY	Terrazzo	RB	Brick/GWB	2x4 ACT	-	-	-
CORRIDORS	VCT	CR/RB	SGFT/GF	2x4 ACT	-	-	-
ADMIN OFFICE	VCT/Carpet	RB	Wood/GWB	2x4 ACT	-	-	-
NURSE							
CLASSROOM	VCT	RB	Ptd CMU	2x4 ACT	-	-	CB/SB
SCIENCE LABS	VCT	RB	Ptd CMU	2x4 ACT	-	Wood/Epoxy	CB/SB
ART ROOM	VCT	RB	Ptd CMU/TS	2x4 ACT	-	PLAM/PLAM	Sliding MB
BAND	VCT/Rubber Treads	RB	Ptd CMU/AP	2x4 ACT/AP	-	PLAM/PLAM	MB/SB
CHORUS	VCT	RB	Ptd CMY/Brick	Acoust	-	PLAM/PLAM	CB/SB
AUDITORIUM	Conc./Carpet	RB	Wood/AP	Plaster	-	-	-
STAGE	Ptd Plywood	MTL.	Ptd CMU	Exposed	-	-	-
FAM CONSUM	VCT	RB	Ptd CMU	2x4 ACT	-	PLAM/PLAM	CB
TECH ED	Wood	RB	Ptd CMU	Exposed	-	-	-
BUSINESS	VCT	RB	Ptd CMU	2x4 ACT	-		CB/SB
COMPUTER							
CAFETERIA	VCT	RB	Ptd CMU/GWB	2x4 ACT	GWB	-	-
LIBRARY	Carpet	RB	Ptd CMU/GWB	Acoust	GWB	-	-
KITCHEN	Epoxy	-	SGFT/GF	2x4 FG ACT	-	SS Equipment	-
TOILETS	CT	CT	CT/GWB	2x4 ACT	-	-	-
GYMNASIUM	Wood	RB	Ptd CMU/Mats	Acoust	-	-	-
AUX GYM							
LOCKER RM	Epoxy	-	SGFT	Plaster	-	-	-
MECHANICAL	Conc	-	Ptd CMU	Exposed	-	-	-
VCT - Vinyl Composition Tile							
QT - Quarry Tile							
CT - Ceramic Tile							
RB - Rubber Base							
GFCMU - Ground-faced Concrete Masonry Units							
ACCMU - Acoustical CMU							
CMU - Concrete Masonry Units							
SGFT - Structural Glazed Faced Tile							
ACT - Acoustical Ceiling Tile							
GWB - Gypsum Wallboard							
PTD - Painted							
AP- Acoustical Panels							
PLAM - Plastic Laminate							
CB - Chalkboard							
MB - Markerboard							
TB - Tackboard							
SB - Smartboard							
TS- Tacksurface							

PROGRAM

The current population of 1,838 for four grades (9-12) is taxing the buildings ability to accommodate the population that is confirmed by the addition of modular classrooms on the site that support English classrooms. The high school level experiences an impact from the charter school students returning to the public school system in high school.

A 9th grade academy concept is recognized at the high school to transition students from middle school to high school. There are specific credit and keystone requirements as well as after school activities that are part of the high school experience for 9th grade.

GENERAL

- The building is physically limited in the availability of space to accommodate collaborative learning styles, small and large group instruction.
- The high school is arranged by departments with a teaming academy for 9th grade.
- The front entrance is not identifiable and is remote from the administration office. A security checkpoint is provided at the entrance adjacent to the auditorium.
- There is one conference room for the entire school located adjacent to guidance, which is insufficient. This conference room is also used for testing and storage.
- A main convergence point adjacent to the cafeteria further compromises the narrow corridors. Students walk outside in back of the administration offices to avoid the congestion.

ADMINISTRATION

- The location is not directly adjacent to the main entrance. As part of any renovations, this area should be reconfigured to better control the front entrance. A more readily identifiable entrance should be considered for visitors to the school.
- The rooms in the administration area have all been assigned as offices so there is no conference room in the suite.
- The Xerox machine is in the hallway.
- The principal's office is the furthest point away from the administration entrance and there is no visual connection between the principal and staff within the office area.

CLASSROOMS

- Band and choral rooms are too small. The band room is tiered which does not provide instructional flexibility. The band room shares the space with orchestra.
- Instrument storage is too small to fit all the instruments so the students take home the instruments.
- Marching band uniforms are provided in closets.
- The keyboard/piano lab is too small to deliver the program.
- The health room is also used for detention.
- The classroom wings in the original construction (English wing and the wing to the arts programs) have never been renovated.
- The equipment needed for the MDS (multiple disabilities) special education classroom is stored in the corridor.
- There are 2 buildings of modular classrooms onsite to provide the necessary number of teaching stations that should be replaced with permanent classrooms to improve the teaching environment and security.

CORE SPACES

Note: the original core spaces including the auditorium were originally built for 1500 students.

KITCHEN

- The students funnel into the serving area at one entry point that backs up into the cafeteria. There are four checkout lanes.
- The circulation at the dishwashing area conflicts with the ice cream and snack serving line.

CAFETERIA

- The cafeteria is 7,108 square feet that can accommodate approximately 475 students per lunch serving. For grades 9-12, there are currently 4 lunch servings of 459 students per serving. Therefore, the cafeteria is very close to capacity with four lunch servings and consideration should be given to expanding it to accommodate students in 3 lunch servings.
- The cafeteria is used throughout the day for lunches and study hall.
- There is a movable partition to accommodate multi-functions at one time.

GYMNASIUM

- The gymnasium seats 1,600 which is less than the student population. There are only two teaching stations in the main gym – a teaching station in the aux. gym and the weight room on the second floor. For the population, there is not enough physical education teaching stations which is witnessed when bowling is provided in the corridor; ping pong in the auditorium lobby, etc.
- There is a men and women's locker room that was completed as part of the most recent renovation project that included the gymnasium addition. Visiting teams must use the math classrooms at the end of the classroom wing since there are no interior or exterior facilities to accommodate them.
- Lockers are not assigned to the students since there are not sufficient lockers to accommodate the population.
- There are two small team rooms that are very undersized.
- Wrestling mats cannot be suspended from the ceiling and are brought in from the auxiliary gym for competitions.
- Athletic storage is limited – equipment is stored in the corridors, stairwells, etc.
- Paper and dance mats are stored in the designated PE storage room that is currently being used as the trainer's room.
- The main exterior doors are for exit only. Access to the gym for events is through the narrow corridor from the auditorium lobby. The ticket booth has been reassigned to the mailroom so a ticket table is provided at the gym entrance in the corridor.
- Visiting buses drop off at the auditorium entrance.

AUDITORIUM AND STAGE

- The auditorium is currently being used for study hall, used every period of every day, and is showing the signs of overuse. The seating capacity is 700 and there is no handicapped seating available.
- The auditorium seats and carpet has exceeded its life expectancy.
- The existing sound booth located at the back of the seating area replaces the mezzanine level sound booth. This has been constructed with combustible materials and should be replaced with an ADA-accessible, noncombustible sound booth.
- The stage doesn't have a full fly. The wing space appears to be adequate but the overall size of the stage cannot accommodate the Steinway piano, storage, shelving, prop storage, etc.
- There is no projector but there is a drop-down screen.

- The lighting and sound has been upgraded through a donation.
- There is no storage for props and costumes are stored in the basement.

LIBRARY

- The space is large and functional based on current needs.
- There are low bookshelves that give it the appearance of an elementary school library.
- The high window wall faces south, which provides a lot of heat gain to the space.
- The roof leaks at the transition from the two-story section to the single story roofline.

ACCESSIBILITY & BUILDING CODE

Building Accessibility (American's with Disabilities Act – ADA & ANSI 117.1)

ELEVATOR

- An elevator provides access to all three levels and is sized to meet current ADA and code requirements.

STAGE ACCESS

- The stage does not have handicap access without exiting the auditorium. A handicap ramp or chair lift should be added to make the stage accessible from within the auditorium.

TOILET ROOMS

- Most of the toilet rooms were renovated or constructed in the 1997 renovations/additions project but there are still a number of toilet rooms that are not ADA compliant. The compliant toilet rooms should have vertical grab bars added in the ADA stalls to meet the current ADA requirements.

CORRIDORS

- There is a hallway ramp with no handrails as required by ADA. Handrails should be provided in the ramped corridor.



- Hallway drinking fountains should be recessed or located to not protrude into the hallway path beyond 4".

SIGNAGE

- Most signage is sized and located in accordance with ADA requirements. There are several signs that are not ADA compliant.

CLASSROOM ENTRANCE DOORS

- Door approach and wall clearances at many of the classroom entrances do not comply with ADA requirements. The door and wall configurations should be revised if renovations are being considered.



DOOR HARDWARE

- Doors typically have lever hardware that is in compliance with ADA requirements. Some of the levers are showing signs of wear.
- Some doors have vision panels that are too high for ADA compliance. They should not exceed 43" above finished flooring to the bottom of the glass.

ROOM ENTRANCE DOORS

- There are numerous classroom entrances that do not have the required clearances on the latch side of the door from the hallway.
- The darkroom-rotating door is not ADA accessible and consideration should be given to modify to make it compliant.

MUSIC ROOMS

- The band room is tiered and accessible at the rear of the classroom only. The front of the room is on a lower level that is not ADA accessible.
- The choral rooms are one level with portable risers. This room is ADA compliant.

AUDITORIUM

- The sound and lighting control booth is located in the rear of the auditorium significantly elevated, which is not ADA compliant.

Building Code

SPRINKLER

- The floor area does not comply with the current building code requirements so a building wide sprinkler system is required if substantial reconfigurations would occur. The existing water line will have to be evaluated to determine the availability of sufficient water pressure to properly activate a new sprinkler system.

ALLOWABLE AREAS

- Allowable building areas do not comply with the current building code. The addition of fire separation walls and rated corridor doors are required to break the building up into smaller fire areas if major building reconfiguration is being considered.

STAIRS

- Stair picket spacing exceed the maximum allowable clear width. Stair guard railings need to be replaced or renovated to comply with all code requirements.

CORRIDORS

- Materials are being stored in the hallways, as there are not adequate storage rooms in the building.



PHYSICAL PLANT

Exterior Envelope

MASONRY/EIFS

- The exterior is brick veneer base with EIFS finish above. The brick veneer is in good condition. The EIFS generally is in good condition. Some edges of the EIFS have developed cracks that have been sealed.
- The EIFS at the auditorium has been dented by balls and should be repaired.



- There are some areas where the EIFS has been stained by water at scuppers.

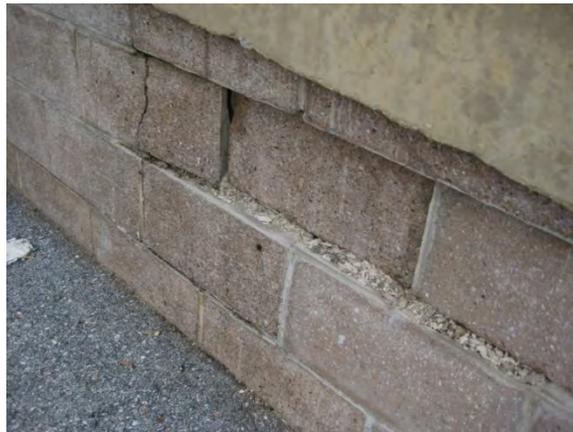


- There is significant dirt build-up on the brick that should be cleaned and sealed. There are some minor cracks and damaged brick that should be repaired.

- Some areas of sealant between brick and EIFS is failing and should be replaced.



- There is damaged CMU along the ramp, to access the loading dock, from a vehicle impacting the wall.



METAL FASCIA

- Some sections of metal coping are missing from the building and should be repaired to prevent moisture from getting in the wall cavity.



CANOPY SOFFITS

- The metal soffits overall are in good condition. Some areas should be repainted to prevent rusting.

WINDOWS

- The existing aluminum windows are in good condition. Metal trim at the head of some of the windows is peeling paint and should be repainted.



- There are a number of windows at the art wing and science that have moisture trapped within the insulated glazing. It is recommended that the insulated panels be replaced.
- The glass block windows in the gymnasium show signs of moisture penetration and should be resealed to correct the issue.

ROOFS

- The existing stair and handrails for roof access are peeling paint and should be repainted.



- The existing ballasted built-up roof is overall in good condition. As the roof is aging it is recommended that it be re-coated to extend the life of the built-up roofing. Existing standing seam roofing is located over the classroom wing and Media Center that is in good condition and has appropriate snow guards to prevent ice damage.
- Gutters have been damaged and worn and should be replaced. Flashing repairs will be necessary with that work.

ENTRANCES

- Front entrance doors are aluminum and in good condition.
- Service doors are hollow metal that are chalking and should be repainted to prevent rusting.



CHIMNEY

- The chimney has been repaired and repointed and is currently in good condition.

MISCELLANEOUS

- Vinyl siding on the modular classrooms has been damaged at the skirting which will allow water into the foundations. It is recommended that ventilation of the interstitial space under the modulares be vented to avoid the formation of mold.
- Existing exterior guard and handrail paint is in poor condition and should be repainted.
- The steel canopy structure at the gymnasium entrance is showing signs of rust and should be repainted.

Interior Finishes

CORRIDORS

- The lobby has terrazzo flooring which is generally in good condition. The steps in the lobby have cracks and the terrazzo should be repaired. The CMU walls are in good condition.



- Acoustical tile ceilings are in good condition, except some are water damaged in areas where previous roof leaks occurred.
- Walls are in good condition but painting is recommended to freshen up the appearance of the building and maintain the clean ability of the walls.
- There are ground-faced CMU walls at the ramped hallway without handrails that show signs of water infiltrating the wall.



- There are some damaged VCT tiles in the hallway that should be replaced.



- Hallway lockers are showing signs of heavy use and will require repairs and should be repainted or replaced.
- The administration area and guidance carpets are worn and should be replaced.

CLASSROOMS

- Classroom finishes have been renovated and are overall in good condition. Classrooms have chalkboards in which many have had smartboards installed over top. Consideration should be given to replacing the instructional boards with markerboards.

CORE SPACES (LIBRARY, MUSIC, AND ART)

- The choral room and library have spray acoustical finish that is starting to deteriorate and leaving debris on the floor. This is occurring due to thermal expansion of the structure and deck.
- The library has carpeting that is in poor condition. It is recommended that the carpeting be replaced.



- Art and Technology Education rooms do not have front approach ADA sinks.



GYMNASIUM

- Floor and wall finishes are in good condition. Wall pads are wearing and should be considered for replacement.

CAFETERIA

- Ceilings at the clerestory windows are exposed metal decking, which provides a hard surface which increases the noise level in the cafeteria. Wall and ceiling acoustical panels would reduce the sound reverberation in the cafeteria.
- Floor and wall finishes are in good condition.

AUDITORIUM

- The flooring and seating in the auditorium are worn and should be upgraded.

PE STORAGE/TRAINER'S ROOM

- A corner of the Trainer's room is used for paper storage. There is a very large quantity of copy paper boxes. As this area is located above the lower level, floor structure should be evaluated to confirm that the floor is not overloaded.



Environmentally Sensitive Materials

- The AHERA report, updated September 2014, documents the following asbestos containing materials:
 - 895 s.f. of 9" x 9" tan vinyl asbestos floor tile in room 507.
 - 890 s.f. of 9" x 9" gray vinyl asbestos floor tile in room 504.
 - 2,835 s.f. of 12" x 12" gray vinyl asbestos tile in rooms 210, 508, 509, and 510.
 - 2,115 s.f. of 12" x 12" tan vinyl asbestos tile in rooms 209, 511 and 512.
 - 890 s.f. of 12" x 12" green vinyl asbestos floor tile in room 502.
 - 675 s.f. of 12" x 12" brown vinyl asbestos floor tile in room 208.
 - 36 s.f. of transite lab countertop and sink in room 203 and 207.
 - 75 s.f. of transite lab tables in rooms 203, 205 and 207.
 - 48 s.f. of transite in a fume hood in room 205.
 - 300 s.f. of asbestos containing mastic in computer room 50 that attaches acoustical wall tiles.
 - TSI material and debris room 212 crawl space.
 - 100 s.f. of transite ceiling in the auditorium table storage.
- Other asbestos has been removed from the building.
- The asbestos containing materials that remain have low potential for being damaged and causing asbestos to become airborne other than the debris in crawl space at room 212. The AHERA update indicated that air samplings are to occur to monitor that material.

Mechanical System Description

HVAC SYSTEM

- The school is heated and cooled by a hot water distribution system. Packaged cooling systems as well as a small chiller for the core spaces provides cooling.
- Two gas/oil-fired 200 HP Cleaver Brooks steel tube boilers generate heating hot water. These boilers are 18 years old and in good condition.
- Oil is stored in an aboveground oil tank. The related oil transfer pump set is in poor condition and is in need of replacement. The system includes leak detection and an oil transfer pump. The tank is not large enough to run the system for an extended time period if changeover is required by the utility in the dead of winter.
- Hot water is distributed by a duplex pump system with VFDs. These pumps are all in good condition.
- Classroom areas are generally heated and cooled with self-contained unit ventilators with outdoor air from exterior wall louvers. Cooling is provided by compressors and dx coils located in the unit. There are also several classrooms that utilize ducted unit ventilators with split system compressors on the roof. These systems all have a 20-year life cycle so they are nearing the end of their typical life expectancy.
- The library and some interior common areas are fed from 4-pipe central air handling units. The chiller is a McQuay air-cooled chiller that is located on the roof. It is 17 years old and in fair condition. Air-cooled chillers generally last around 20 years.
- Larger single zone spaces utilize packaged rooftop units. The packaged systems are nearing the end of their typical useful life cycle.
- The office area utilizes a packaged rooftop unit and individual PTAC units for the exterior offices. These systems are all in nearing the end of their typical 20-year life cycle. Additionally, PTAC units are noisy, inefficient, and drafty. They are not recommended for personal office spaces.
- The modular classrooms utilize self-contained Bard units for heating and cooling and are not connected to the central plant.
- The HVAC systems are controlled by an electronic Delta control system. This system is operational but in need of an upgrade.
- The library duct system has experienced some erosion of the duct liner system. This ductwork should be replaced.
- The toilet room exhaust systems are all working properly and in good condition but are nearing the end of their typical life cycle.
- The kitchen hood is in good condition with adequate makeup air.
- The shop area includes a wood dust collection system, air cleaners, spray booth exhaust, and other special use exhaust systems.
- The unit ventilator system serving the graphic arts room is not adequate for the current use. This system should be replaced and/or supplemented.
- The HVAC system serving the studio is not adequate for the current use. This system should be replaced and/or supplemented.
- Locker room areas do not have adequate heating systems.
- The weight room does not have a cooling system installed.
- There is not any HVAC in the training room. This should be installed.
- The family consumer science room has ducted exhaust over the ranges.
- Many of the convectors in the corridors are in poor condition and in need of replacement.

PLUMBING SYSTEM

- The building is fed with a 3" domestic water service.
- The water service has a double-check backflow prevention device.
- It was reported that the softener and the booster pump systems installed in the boiler room are no longer utilized.
- Two water heaters produce domestic hot water. One unit is a Lochinvar gas-fired high-efficiency unit and the other is a Bock oil-fired unit. Both units are in good condition.
- Water temperature is maintained through a central mixing valve station.
- There is a main sewer lift station in the boiler room. This system appears to be adequate and in good condition. There is also a main lift station on the property that handles the entire sewer from both the HS and the MS.
- Plumbing fixtures throughout were found to be in good condition but are generally not in compliance with ADA standards.
- Faucets and flush valves are not water-saving type. Many are nearing the point where they will need to be replaced.
- There are some PVC drains in the kitchen that should be replaced.
- Recently the three grease traps in the kitchen were replaced.
- Art room sinks have clay traps.
- Generally the water coolers do not comply with ADA requirements.
- There are natural gas outlets in many of the science rooms. All rooms have the required emergency shutoff switch.
- Science rooms utilize an acid waste piping system with the neutralization tank. This tank is in poor condition and needs to be replaced.

SPRINKLER SYSTEM

- The building does not have a fire sprinkler system.

Electrical System Description

ELECTRICAL DISTRIBUTION

- The electrical service is provided by PECO Energy Company and enters the building by underground secondary feeders from two pad-mounted transformers and terminates in two Cutler Hammer, Power-Line-C, and 2500 Amp main switchboards in the electrical room. The switchboards are in good condition and have provisions for additional breakers to be added.
- Step-down transformers are located throughout the building to obtain 120/208-volt power for receptacle and miscellaneous circuits.
- The branch panels are typically Square D type NF for 277/480 Volts and Square D NQOD for 120/208-volt loads. The panels are in good condition.
- Provide wiring for mechanical equipment upgrades as required and install new panels with branch circuits to support building expansion as required and to serve mechanical equipment replacement and air conditioning units if selected.
- Receptacle coverage in classrooms appears to be adequate for the school's needs. The devices are in good condition.
- Kitchen receptacles need to be replaced with GFCI type or GFCI breakers need to be added to the kitchen panel. The kitchen equipment is totally electric.

LIGHTING

- Classroom lighting consists of a mix of coffered ceilings with wrap-around fluorescent fixtures with two T8 lamps and recessed T8 troffers. Some fixtures have discolored cracked lenses.

- The gymnasium lighting is high bay, metal halide fixtures. The fixtures are contactor controlled and are in good condition. Replacement with high-bay fluorescent is recommended for better light control and energy savings.
- Suspended tubular linear, direct/indirect fluorescent fixtures utilizing T12 lamps illuminate the media center. There are fixtures missing lenses and some broken lenses. Replace fixtures or upgrade to T8 or T5 fluorescent lamps.
- The cafeteria utilizes a mix of volumetric style troffers and suspended linear T8 fluorescent fixtures. The fixtures are in good condition.
- Digital arts classroom consists of recessed parabolic louvered 4 lamp T8 troffers. The fixtures are in good condition.
- Corridor lighting consists of recessed fluorescent troffers utilizing T8 lamps. Fixtures are in good condition.
- Provide automatic light control to all areas to comply with the International Energy Conservation Code (IECC) and the International Building Code (IBC)
- Exit signs utilize compact fluorescent-type lamps. Replace exit signs with LED fixtures to comply with the IECC 5 watt/face requirement.
- The auditorium stage/platform has border lights controlled by a Lehigh dimming system. The system is limited but appears to be in good condition.
- Exterior lighting consists of building-mounted metal halide, wall packs, metal halide parking lot lighting on 25' poles, and some open refractor "street"-style fixtures mounted on the building. The district may want to consider replacement with LED fixtures for energy savings and ease and frequency of maintenance.

EMERGENCY GENERATOR

- The emergency generator is a 200 kW Olympian diesel unit, located in the boiler room. It is accompanied by a 800 Amp Olympian transfer switch and an Olympian Area Protection Monitor. The system does not have a separate transfer switch for life safety loads as required by the National Electrical Code (NFPA70). The generator and associated equipment is in good condition.
- The emergency lights are part of the existing fluorescent fixtures.

TELECOMMUNICATIONS/CATV

- The telephone system is fed underground and has a 100 pair link to the Middle School.
- There are POTS lines for fire alarm and security systems use.
- The school has a Cisco VOIP system in administrative areas and intercom handsets in classrooms.
- All classrooms are equipped with CATV jacks.

INTERCOM SYSTEM

- The intercom system is a Bogen Multi-Com 2000 and is in good condition. The system has an interface to accept the signal from VOIP telephone system.
- Speakers are typically recessed ceiling mounted.
- Extend and expand the existing system into new areas as required.

CLOCK SYSTEMS

- The master clock is a Standard 1460 unit mounted in the administration area.
- Clocks are digital type.

REMOTE SOUND SYSTEMS

- There are remote sound systems for the gymnasium, cafeteria, and auditorium.
- There are no assisted listening devices as required by The Americans with Disabilities Act (ADA)

FIRE ALARM SYSTEM

- The fire alarm is a Pyrotronics XL3 System with manual pull stations and bell and strobes. System is approximately 22 years old and should be upgraded or replaced to comply with current codes.

SECURITY

- The current security system consists of door contacts and motion detectors. There is one keypad to arm/disarm the panel. The system is Bosch.
- POE CCTV cameras are located throughout the building
- There is an Aiphone video intercom at the main entry.
- There is a limited card access system.

COMPUTER CABLING

- The computer cabling consists of category 5 cables with floor-mounted racks or cabinets located in communications closets.
- Patch panels are typically Amp Inc.
- Cameras and Wireless Access Ports are wired with CAT6 cables and Leviton patch panels.
- The computer-cabling infrastructure should be expanded or replaced and conform to the latest standards set forth by EIA/TIA. Although not necessary the district may want to consider upgrading to CAT6 cable and devices for faster data transmission. CAT6 is the current standard.



ENERGY STAR[®] Scorecard

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ENERGY STAR[®] Score

Avon Grove SD - Avon Grove High School - 124150503

Primary Function: K-12 School
Gross Floor Area (ft²): 214,104
Built: 1957

Property Address:
 Avon Grove SD - Avon Grove High School - 124150503
 257 East State Road
 West Grove, Pennsylvania 19390

For Year Ending: June 30, 2014
Date Generated: December 18, 2014

For the year ending in June 2014, this building used 123.3 (kBtu/ft²) on a source energy basis. The Environmental Protection Agency's (EPA's) ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.



Signature of Verifying Professional

I _____ (Name) verify that the information regarding energy use and property use details is true and correct to the best of my knowledge.

Signature: _____ Date: _____



50

**ENERGY STAR®
Score¹**

**Avon Grove SD - Avon Grove High School -
124150503**

Primary Property Function: K-12 School
Gross Floor Area (ft²): 214,104
Built: 1957

For Year Ending: June 30, 2014
Date Generated: December 18, 2014

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information		
Property Address Avon Grove SD - Avon Grove High School - 124150503 257 East State Road West Grove, Pennsylvania 19390	Property Owner _____ () - _____	Primary Contact _____ () - _____
Property ID: 4262214		

Energy Consumption and Energy Use Intensity (EUI)			
Site EUI 62.5 kBtu/ft²	Annual Energy by Fuel		National Median Comparison
	Natural Gas (kBtu)	6,408,909 (48%)	National Median Site EUI (kBtu/ft²) 62.9
	Fuel Oil (No. 2) (kBtu)	1,035,690 (8%)	National Median Source EUI (kBtu/ft²) 124.2
Source EUI 123.3 kBtu/ft²	Electric - Grid (kBtu)	5,932,117 (44%)	% Diff from National Median Source EUI -1%
			Annual Emissions
		Greenhouse Gas Emissions (Metric Tons CO2e/year)	1,211

Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____ Date: _____

Licensed Professional

() - _____



Professional Engineer Stamp
(if applicable)

Proposed Costs to Update Building to Current Standards

Avon Grove High School	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Total
Constructed: 1957						
Renovation: 1995, 1997, 2008						
Addition: 1997						
SITE						
Staff Parking Lot Paving/Repairs/Patch Work		\$65,000				\$65,000
Student Parking Lot Sealcoating, repair and Line Striping			\$30,000			\$30,000
Synthetic Turf Replacement Additional Fields					\$800,000	\$800,000
ADA spaces south of service area have no accessible route	\$15,000					\$15,000
Sidewalk/curb are not flush along main drop off area		\$10,000				\$10,000
Parking lot at tennis courts repair			\$27,000			\$27,000
General Landscaping (mulch, annuals/beds)			\$15,000		\$15,000	\$30,000
ARCHITECTURAL						
Security Entrance Improvements		\$250,000				\$250,000
Painting Hallways, Classrooms, Bathrooms				\$250,000		\$250,000
Replace Auditorium Seating, Flooring and Lighting		\$800,000				\$800,000
Re-Coat Roof		\$475,000				\$475,000
Renovate Bathrooms				\$400,000		\$400,000
Provide ADA Access to Auditorium Stage			\$25,000			\$25,000
Provide ADA Signage			\$3,000			\$3,000
Modify Classroom Entrances to be ADA Compliant					\$200,000	\$200,000
Provide ADA Compliant Sound and Lighting Booth			\$60,000			\$60,000
Replace Existing Stair Guardrails with Code Compliant Railings				\$80,000		\$80,000
Repair Exterior Auditorium EIFS from Ball Damage			\$25,000			\$25,000
Replace Exterior Sealants at EIFS and Windows		\$50,000				\$50,000
Repair Damaged CMU Wall at Service Area		\$10,000				\$10,000
Replace Missing Metal Copings	\$7,500					\$7,500
Paint Metal Trim at Window Heads		\$10,000				\$10,000
Replace Deficient Insulated Glazing			\$25,000			\$25,000
Paint Roof Stair and Handrails			\$10,000			\$10,000
Paint Exterior Hollow Metal Doors			\$25,000			\$25,000
Replace All ACT Ceilings (HVAC Work)				\$800,000		\$800,000
Re-Seal/Repair Glass Block in Gymnasium			\$40,000			\$40,000
Replace VCT Throughout Building					\$525,000	\$525,000
Replace Media Center Carpeting		\$20,000				\$20,000
Provide Acoustical Treatment in Cafeteria for Noise Reduction			\$25,000			\$25,000
Repaint/Repair Lockers				\$80,000		\$80,000
MECHANICAL SYSTEMS						
Replace Shop Dust Filters		\$9,500	\$10,000			\$19,500
Install AC in Weight Room		\$40,000				\$40,000
Upgrade Entire HVAC system*			\$6,420,000			\$6,420,000
Replace Duct System in Library		\$50,000				\$50,000
Upgrade HVAC in Studio		\$40,000				\$40,000
Upgrade HVAC in Art Room		\$40,000				\$40,000
Install Adequate Heating in Locker Rooms		\$60,000				\$60,000
Install HVAC in Training Room		\$35,000				\$35,000
* Includes Complete HVAC Systems Including Chillers, Pumps, Equipment, Piping, Controls, Etc.						
PLUMBING SYSTEMS						
Remove Unused Systems in Boiler Room	\$5,000					\$5,000
Upgrade Fixtures and Fittings Buildingwide			\$475,000			\$475,000
Replace PVC Drains in Kitchen		\$3,000				\$3,000
Replace Acid Waste Neutralization Tank for Science Rooms		\$35,000				\$35,000

FIRE PROTECTION SYSTEMS						
Install Fire Sprinkler System					\$850,000	\$850,000
ELECTRICAL SYSTEMS						
Replace Exterior Light Fixtures with LED		\$25,000				\$25,000
Replace Media Center Lighting, Add Automatic Controls		\$150,000				\$150,000
Replace all lighting			\$950,000			\$950,000
Replace fire alarm system		\$245,000				\$245,000
Replace/modify electrical dist. to accommodate HVAC			\$500,000			\$500,000
Upgrade Access Control System				\$110,000		\$110,000
Replace CAT 5e cable with CAT 6					\$100,000	\$100,000
	\$12,500	\$2,347,500	\$8,593,000	\$1,720,000	\$1,675,000	\$15,325,000
Design Fees, Contingency and Escalation (30%)						\$4,597,500
Total						\$19,922,500

Proposed Costs to Update Stadium to Current Standards

Avon Grove Athletic Stadium	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Total
Constructed: 1957						
Renovation: 2005						
Addition:						
SITE						
Synthetic Turf Maintenance/ Replacement Main Field			\$5,000	\$450,000		\$455,000
New Field House		\$750,000				\$750,000
Re-coat Track / structural spray		\$125,000				\$125,000
	\$0	\$875,000	\$5,000	\$450,000	\$0	\$1,330,000
Design Fees, Contingency and Escalation (30%)						\$399,000
Total						\$1,729,000

Avon Grove High School Evaluation Rating

Rating System: Excellent (4 points); Good (3 points); Fair (2 points); Poor (1 point); and Failing (0 points)

	Score	Remarks
Architectural		
Walls	3	Walls are in good condition, EIFS needs repairs at Auditorium
Roof	2	Roof needs recoating
Windows	2	Some windows have moisture trapped in insul glass
Doors	2	Interior doors good, exterior HM need painted
Casework	2	Casework varies from fair to good condition
Finishes	2	Finishes are in fair to good condition
ADA compliance	1	Many toilet rooms non ADA, various floor levels accessed by HC lift
Elevator	3	Building has elevator to access all levels, sized to hold stretcher
Security	1	Building has no secured vestibule entrance, entrance not clearly identifiable
Sub-total:	18	
Structural		
Roof construction	3	Roof structure is in good condition
Floor framing	3	Floor framing is in good condition
Structural integrity	3	Building structure is in good condition
Exterior walls	3	Exterior walls are in good condition with minor repairs necessary
Interior walls	4	Interior walls are sound and in very good condition
Lintels	3	Lintels are in good condition but should be repainted where exposed
Expansion joints	3	Building has appropriate expansion joints but should have sealant repaired
Sub-total:	22	
Mechanical - HVAC		
Boilers	3	Cleaver Brooks boilers are in good condition but are 18 years old
Chillers	2	Nearing the need of its useful life expectancy
Pumps	3	Duplex VFD pumps distribute hot water, pumps in good condition
HVAC Piping	3	HVAC piping is overall in good condition
Classroom HVAC units	2	Some units do not have adequate capacity for the loads
Air handling units	2	Some units do not have adequate capacity for the loads
Terminal heating equipment	2	Many units are damaged beyond repair
Fuel storage tank	2	Oil transfer system is in poor condition
Toilet room exhaust systems	2	Fans nearing the end of their normal life cycle
Kitchen exhaust hood	3	Kitchen exhaust provides necessary ventilation and has makeup air
Temperature control system	2	Not all of the components function properly. System needs upgraded.
Indoor air quality	3	There is a variety of systems in the building, ventilation is not optimal
Sub-total:	29	
Plumbing		
Fixtures	2	Fixtures are not water saving type and do not meet ADA
Water heater	3	Lochinvar and Bock water heaters in good condition
Water piping	3	Overall domestic piping is in good condition
Sanitary piping	3	There is a main lift station in boiler room, onsite a main lift for both HS & MS
Water service	3	Building supplied by a 3" domestic supply with double-check backflow preventer
Kitchen grease trap	4	Three grease traps in kitchen have been recently replaced
Sub-total:	18	

Avon Grove High School

	Score	Remarks
Fire Protection		
Fire protection system	0	The building does not have a fire sprinkler system
Sub-total:	0	

Electrical

Lighting	2	Add automatic light control. Replace lighting due to age and wear
Exterior Lighting	2	Consider replacing metal halide lights with LED
Receptacles in classrooms	3	Receptacles in classrooms appear adequate for current needs
Intercom	3	Bogen Multi-Com 2000 in good condition, has interface for VOIP
Panel boards	3	Panels are Square D and are in good condition overall
Electric service	3	Cutler Hammer Switchboard in good condition and can be expanded
Smoke detection system	2	Due to age and availability of parts
Fire alarm system	2	Due to age and availability of parts
Emergency generator	2	Life safety load separation
Sub-total:	22	

Technology

Data cabling	1	Data cabling is Cat 5e. Current standard is Cat 6
Sub-total:	1	

Building Total: 110

Site Amenities

Staff parking	2	Staff parking entrance/access to visitor parking conflicts, reduced by modulars
Visitor parking	3	Appears to be adequate
Parent drop-off	0	Not well defined
Stormwater management	3	Appears to be adequate
Play facilities	4	Existing play fields appear to be adequate
Site safety	3	One entrance is gated that could cause some maneuvering issues
Sub-total:	15	

Site Conditions

Site accessibility	2	Some challenges with grades to stadium & other field, otherwise appears to be accessible
Bus drop-off	0	Not well defined
Site size	3	Appears to be adequate
Sub-total:	5	

Site Total: 20

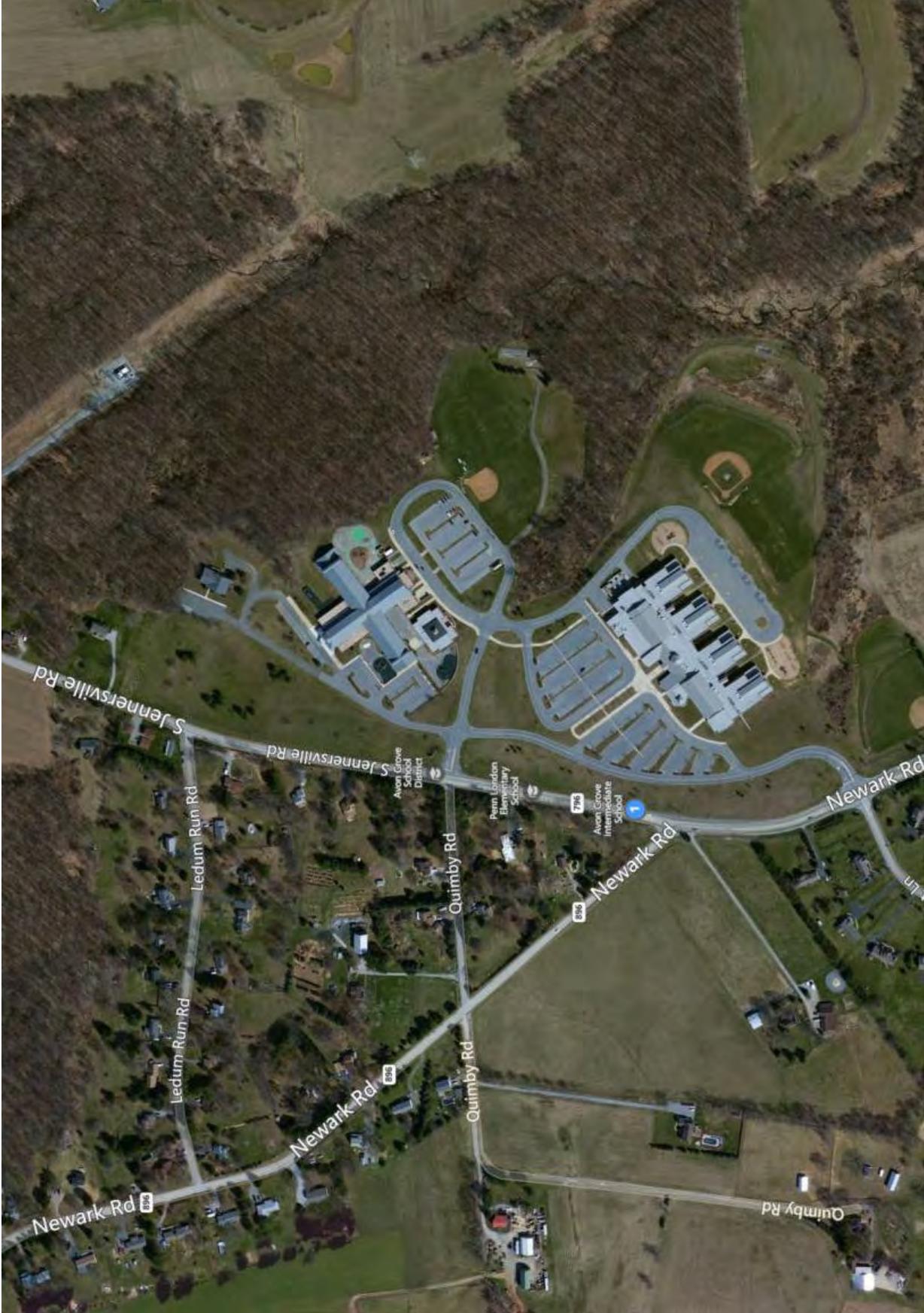
Combined Total: 130

AVON GROVE DISTRICT ADMINISTRATION BUILDING

BUILDING DATA:

Address:	375 South Jennersville Road, West Grove, PA 19390
Administrators:	Dr. M. Chris Marchese, Superintendent; Dr. Margaret Sharp, Assistant Superintendent; Dr. Louis Chance, Director of Pupil Services; Daniel Carsley, Business Manager; Michelle Kelly, Assistant Business Manager; Matthew Crockett, Supervisor of Buildings and Grounds; Wendy Lee Kraft, Personnel Director; Gary Mattei, Director of Technology; Holly Pettine, Supervisor of Special Education; Linda Simasek, Network Administrator
Current Grades:	None
Capacity:	N/A
2014-2015 Enrollment:	N/A
Staff:	28 Staff
Construction Completion:	Original construction 1991
Gross Square Feet:	9,600 s.f. original including basement
Site Acreage:	212.3 acres shared with Penn London Elementary School and Avon Grove Intermediate School
Current Zoning:	New London Township R-2 Penn Township R-2
Parking:	24 parking spaces including handicapped





General Site Description

SITE SIZE AND OVERALL CONDITION

The AGSD District Administrative Office (DAO), Penn London Elementary School, and Avon Grove Intermediate School buildings are all located along the western property boundary of the approximately 212.3 acre AGSD elementary campus. The property includes these buildings along with supporting parking areas, access drives, play areas, and athletic fields. The undeveloped areas of the site are predominantly wooded, other than two areas of cultivated farmland in the southwest corner and central-eastern portions of the property, and include several drainage channels (Unnamed Tributaries to West Branch Clay Creek – designated a “Trout Stocking Fishery” stream by PaDEP).

VEHICULAR CIRCULATION

The site is accessed via two driveways, one from South Jennersville Road (SR 0796) across from Quimby Road and one from Newark Road (SR 0896) across from Violet Lane. The DAO is accessed via the driveway off of Quimby Road which is shared with the Penn London Elementary School (note that it appears that parents park along / within the travel lane of this driveway during pick-up times at Penn London). Penn London is served by separated bus drop-off (at the rear of the building) and parent drop-off (in front of the school) areas, while the Intermediate School includes two bus staging areas (a curbside area on the northwest side of the building and a bus corral area behind the building) with a separate parent drop-off area to the northeast of the building.

PEDESTRIAN CIRCULATION

Existing sidewalks with handicap accessible ramps and crosswalks connect the southeast side of the Penn London Elementary School to the Intermediate School. Sidewalks do not exist, however, to allow for pedestrian access from the north side of that building to the southern parts of campus (including the athletic fields and Intermediate School) or along South Jennersville Road (though the proximity of any housing developments and associated number of walking students may not warrant such facilities).

PARKING

The DAO is served by an approximately 24-space parking lot located directly in front of the building. Multiple parking areas totaling approximately 168 parking spaces are provided surrounding the Penn London Elementary School with visitor / parking spaces situated on the north / northeast sides and a large visitor lot situated behind (i.e. south side) the building. The Intermediate School includes approximately 265 spaces across two parking fields in front of the building (separated by a curbed island “peninsula” with sidewalk on both sides for pick-up / drop-off).

PLAY AND ATHLETICS

The campus includes a baseball field, two softball fields, and four multipurpose fields (including one which overlaps the baseball field southeast of the Intermediate School). One of the softball fields and two of the multipurpose fields are located in close proximity to the Penn London Elementary School, along with multiple hard and soft surface play areas (each containing play equipment).

STORMWATER MANAGEMENT AND UTILITIES

The property is served by public water (Chester Water Authority) and an onsite wastewater treatment plant. A stormwater detention basin is located to the southeast of the building.

General Building Description

Construction type:	Ordinary, Type V
Occupancy group:	'B' - Business
Number of stories:	Two (Lower level below grade, partially accessible at rear)
Structural system:	Balloon framing with steel columns and girders, wood joists and trusses, steel stud wall framing
Building exterior envelope:	4" Brick veneer with 4" ground face concrete masonry unit base, precast water table and sills, 6" steel stud backup with 6" batt insulation infill. Precast and structural glazed faced concrete masonry units accents.
Roofing:	Architectural dimensional shingles over 5" fire-rated stress skin
Windows:	Aluminum double-hung insulated glass windows with wood trim interior
Doors:	Painted hollow metal doors with full glazed panels exterior, wood interior doors

Interior Materials:

AVON GROVE DISTRICT ADMINISTRATION							
Space	Floors	Bases	Walls	Ceilings	Soffits	Casework	CB/MB/TB
LOBBY	Carpet Tile	RB	Ptd GWB	2x4 ACT	-	-	-
CORRIDORS	Carpet Tile	RB	Ptd GWB	2x4 ACT	-	-	-
OFFICES	Carpet Tile	RB	Ptd GWB	2x4 ACT	-	-	
LARGE GROUP	Carpet Tile	Wood	Ptd GWB	2x4 ACT	GWB	Wood/PLAM	MB
TOILETS	CT	CT	CT	GWB	-	-	-
MECHANICAL	Conc.	-	Ptd CMU/GWB	Exposed	-	-	-
VCT - Vinyl Composition Tile							
QT - Quarry Tile							
CT - Ceramic Tile							
RB - Rubber Base							
GFCMU - Ground-faced Concrete Masonry Units							
ACCMU - Acoustical CMU							
CMU - Concrete Masonry Units							
SGFT - Structural Glazed Faced Tile							
ACT - Acoustical Ceiling Tile							
GWB - Gypsum Wallboard							
PTD - Painted							
AP- Acoustical Panels							
PLAM - Plastic Laminate							
CB - Chalkboard							
MB - Markerboard							
TB - Tackboard							
SB - Smartboard							
TS- Tacksurface							

PROGRAM

- The building houses administration staff for the district with the exception of the Supervisor of Special Education, the Director of Elementary Education and the Director of Secondary Education, who are satellited to other buildings in the district. The building is undersized to accommodate the entire district administration.
- The lower level of the building serves as a storage area, with areas converted to office space and a technology work area. Plastic has been attached to the underside of joists over the technology work area.



- The main conference room is sized for smaller meetings and is not large enough to accommodate district board meetings which are held at Avon Grove Intermediate School.
- Basement areas are being used for storage where moisture is a concern. Records, drawings and paper (and any other moisture-sensitive materials) should not be stored on this level.

ACCESSIBILITY & BUILDING CODE

Building Accessibility (American's with Disabilities Act – ADA & ANSI 117.1)

ELEVATOR

- No elevator is provided at this building to access the lower level. Code does not require one with the limited square footage of the building. One would be beneficial considering the storage and staff currently using the lower level.

TOILET ROOMS

- The toilet room entrances and fixtures do not comply with ADA requirements. Fixtures do not have the clearances to be considered compliant with accessibility requirements. The sink is not compliant as the sink is a lay-in sink in a base cabinet and does not allow for wheelchair access.



- ADA toilet does not have vertical grab bar as required by current codes.
- Urinal is not ADA compliant.
- Egress from toilet room does not have appropriate door clearance.

SIGNAGE

- There is little signage present in this building. Tactile egress signs should be added per current code requirements.

DOOR HARDWARE

- There are several doors that have doorknobs. The knobs should be replaced with lever hardware.

OFFICE ENTRANCES

- Due to the presence of filing cabinets and other furniture, several of the door entrances to offices do not have the appropriate ADA clearances.

Building Code

SPRINKLER

- The building currently is not sprinklered and is not required to be for the size of the building. If storage is maintained at this building, it is recommended that area sprinklers be provided. If the building is expanded beyond 12,000 s.f., fire sprinklers will be required.

ALLOWABLE AREA

- The building square footage complies with the allowable area per code requirements.

STAIRS

- The handrails at the stair extend at the top of the stairs per code but do not extend the length of one riser at the bottom as required by code.

PHYSICAL PLANT

Exterior Envelope

MASONRY

- Existing exterior of the building is brick above a precast water table and ground face. The brick veneer and mortar are in good condition. The ground-face concrete masonry units (CMU) are in good condition on all sides of the building except the rear walls by the stairs. There are significant cracks and efflorescence in the walls under and behind the stairs. It appears that moisture is getting in the wall and leaching out masonry and mortar salts. There are also minor areas of spalling CMU at the concrete slab at the top of the stair.



- The control joints in the ground-face concrete masonry units do not appear to be spaced closely enough at the building corners as there are cracks that have formed to relieve the thermal pressures. Control joints should be cut into the masonry to relieve the stresses.



- Downspouts have openings at the bottom joints that allow water to spill out at grade. These openings should be sealed to prevent wear from water at the foundations.

METAL SOFFITS

- Metal soffits are in good condition.

WINDOWS

- Windows are aluminum double-hung double-glazed windows and are in good condition.

ROOFS

- The shingle roof is in good condition.

ENTRANCES

- The existing hollow metal rear door and overhead-coiling door are peeling paint and should be repainted.



Interior Finishes

- There is significant floor vibration in the front open office area from the basement floor mechanical unit. The vibration is very distracting for staff that works in that area.
- Existing carpeting and wall finishes in the office areas are in good condition.
- Lower level areas converted to technology use have exposed mechanical systems.
- Existing mechanical registers have accumulated dust on the registers and surrounding ceilings and should be cleaned or replaced.
- Corners of some stud walls have sustained incidental damage and should be patched and repainted. It is recommended that corner guards be provided for high traffic areas.

- Numerous wood windowsills in the building show signs of water damage. These sills should be repaired and refinished.



Environmentally Sensitive Materials

- There are no asbestos or lead materials known to be existing in the building

Mechanical System Description

HVAC SYSTEM

- The building is heated by a four-pipe HVAC system.
- A new Weil McLain cast iron oil-fired boiler is utilized to produce hot water for heat. There is no backup boiler.
- Oil is stored in two indoor oil storage tanks located in the boiler room. Piping is fed to the boiler by an under floor oil pipe system. Consideration should be given to replacing this with an above floor oil pipe system to protect against soil contamination below the slab.
- The hot water system includes a duplex pumping system and a mixing valve for hot water reset.
- Chilled water is generated by an air-cooled Trane 50-ton chiller with a remote evaporator. This system should be replaced with a new unit of higher efficiency.
- The remote evaporator is located in the basement. Water is distributed through the building by a single chilled water pump. A duplex pumping system is advised to allow for backup in case of pump failure.
- A central station air handler is located in the basement to serve the HVAC needs. This system is a four-pipe unit and includes an economizer cycle. There are multiple zones associated with this system. VVT boxes control the temperature with sensors in each zone. The unit feeds both the upper level and the lower level. Several areas of the building appear to be undersized for cooling including the board room zone. There is also excessive air noise in boardroom that could be related to undersized ductwork and air devices. This system should be replaced as part of any renovation project for better performance and improved energy efficiency.
- Miscellaneous hot water baseboard, cabinet heaters and convectors provide supplemental heat to spaces.
- Some of the HVAC pipe and duct insulation is in need of repair.
- There appears to be moisture and humidity issues in the basement. This should be addressed in the design of any new HVAC system.
- The computer room has an independent mini split-system cooling unit.

PLUMBING SYSTEM

- A 4" sewer line is extended from the facility.
- Domestic water is fed from the well system at Penn London Elementary School. We did not see a backflow prevention device on the main service.
- Plumbing fixtures are in fair condition but are beginning to show signs of aging.
- Fixtures and faucets are not water saving type.
- Plumbing fixtures do not comply with current ADA standards.

SPRINKLER SYSTEM

- The building does not have a fire sprinkler system.

Electrical System Description

ELECTRICAL DISTRIBUTION

- The electrical service is provided by PECO Energy Company and enters the building by underground secondary feeders and terminates into a Square D NF 200 Amp Main Circuit Breaker panel board in the basement mechanical room. The switchboard is in good condition and has provision for additional breakers to be added.
- A step-down transformer is located in the basement to obtain 120/208-volt power for receptacle and miscellaneous circuits.
- The branch panels are typically Square D type NF for 277/480 Volts and Square D NQOD for 120/208-volt loads. The panels are in good condition.
- Provide wiring for mechanical equipment upgrades as required and install new panels with branch circuits to support building expansion as required and to serve mechanical equipment replacement and air conditioning units if selected.
- Receptacle coverage in office spaces appears to be adequate for the district's needs. The devices are in good condition.

LIGHTING

- Lighting is parabolic louvered troffers with T12 lamps. Replace fixtures with T8 or T5 volumetric type fluorescent luminaires.
- Lighting in mechanical spaces are industrial fluorescents with T12 lamps. Replace fixtures with T8 or T5 lamped fluorescent luminaires.
- Provide automatic light control to all areas to comply with the International Energy Conservation Code (IECC) and the International Building Code (IBC)
- Exit signs utilize compact fluorescent type lamps. Replace exit signs with LED fixtures to comply with the IECC 5 watt/face requirement.

EMERGENCY GENERATOR

- The emergency generator is a 125 kW new exterior diesel unit. A Honeywell 200A automatic transfer switch that was in the process of being installed at the building walkthrough accompanies it. The generator and associated equipment is new.
- The emergency lights are separate recessed incandescent fixtures.

TELECOMMUNICATIONS/CATV

- The Cisco VOIP telephone system is fed underground.
- There are POTS lines for fire alarm and security systems use.

INTERCOM SYSTEM

- Telephones used for paging.

FIRE ALARM SYSTEM

- The fire alarm is a Silent Knight System with one bell and no strobes.

SECURITY

- The current security system consists of door contacts and motion detectors. There is one keypad to arm/disarm the panel.
- POE CCTV cameras are located throughout the building
- There is a card access system.

COMPUTER CABLING

- The computer cabling consists of category 5 cables with floor-mounted rack or cabinets located in a communications closet.
- Patch panels are typically Siemon.
- The computer-cabling infrastructure should be expanded or replaced and conform to the latest standards set forth by EIA/TIA. Although not necessary the district may want to consider upgrading to CAT6 cable and devices for faster data transmission. CAT6 is the current standard.

ENERGY STAR PORTFOLIO MANAGER

An ENERGY STAR rating evaluation is not available for the district administration offices since the electrical power billing is shared with Penn London Elementary School.

Proposed Costs to Update Building to Current Standards						
Avon Grove District Administration Building	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Total
Constructed: 1991						
Renovation: N/A						
Addition: N/A						
SITE						
Pavement repair on access drive leading to DAO		\$5,000				\$5,000
Add code compliant ADA signage at accessible spaces	\$500					\$500
ARCHITECTURAL						
Security Entrance Improvements		\$25,000				\$25,000
Modify Toilet Rooms to Comply with ADA					\$75,000	\$75,000
Install ADA Compliant Signage					\$5,000	\$5,000
Replace Storage Room Door Knobs with Levers				\$3,000		\$3,000
Repair CMU Wall at Rear Stairs		\$20,000				\$20,000
Cut Control Joints Into CMU Walls to Relieve Cracking		\$5,000				\$5,000
Paint Hollow Metal Doors and Frames and Overhead Door			\$3,000			\$3,000
Replace Ceilings				\$50,000		\$50,000
Install Corner Guards to Protect GWB Walls				\$3,500		\$3,500
Refinish Wood Window Sill Trim			\$5,000			\$5,000
MECHANICAL SYSTEMS						
Replace Chiller		\$60,000				\$60,000
Replace Chilled Water Pump with Duplex System		\$20,000				\$20,000
Repair Duct and Pipe Insulation	\$5,000					\$5,000
Provide Dehumidification System for Basement		\$17,500				\$17,500
Complete HVAC System Upgrade			\$350,000			\$350,000
PLUMBING SYSTEMS						
Install Backflow Prevention on Water Service		\$8,500				\$8,500
Upgrade Plumbing Fixtures					\$15,000	\$15,000
FIRE PROTECTION SYSTEMS						
Install Fire Protection System					\$75,000	\$75,000
ELECTRICAL SYSTEMS						
Replace Lighting and Provide Automatic Light Controls			\$35,000			\$35,000
Replace/modify distribution syst. To accommodate HVAC			\$30,000			
Provide electrical support for chiller replacement		\$8,000				
Provide electrical support for chiller pump replacement		\$5,000				
Provide electrical support for dehumidification system		\$1,500				
Provide Access Control System			\$12,000			\$12,000
Replace CAT 5e cable with CAT 6				\$8,000		\$8,000
	\$5,500	\$170,500	\$435,000	\$64,500	\$170,000	\$806,000
Design Fees, Contingency and Escalation (30%)						\$241,800
Total						\$1,047,800

District Administration Building Evaluation Rating

Rating System: Excellent (4 points); Good (3 points); Fair (2 points); Poor (1 point); and Failing (0 points)

	Score	Remarks
Architectural		
Walls	3	Walls are in good condition, minor issues at rear of building
Roof	3	Roof is in good condition
Windows	3	Windows are in good condition, interior sills have minor water damage
Doors	2	HM doors and overhead doors need painted
Casework	3	Minor casework in good condition
Finishes	3	Finishes are in good condition
ADA compliance	1	Toilet rooms and some doors are not ADA compliant
Elevator	0	No elevator present, not required but helpful for storage
Security	2	Reception desk at entrance, lighting good but no security measures
Sub-total:	20	
Structural		
Roof construction	4	Roof framing is in very good condition
Floor framing	3	Floor framing is in good condition, recommend humidity control
Structural integrity	4	Overall building structure is in very good condition
Exterior walls	3	Exterior walls are in good condition, control joints should be cut in at corners, recommend fixing wall at rear stair
Interior walls	3	Interior walls are in good condition
Lintels	3	Lintels are in good condition, some should be painted
Expansion joints	N/A	Building not large enough to warrant expansion joints
Sub-total:	20	
Mechanical - HVAC		
Boilers	3	Boiler is in excellent condition, but there is not any backup unit
Chillers	1	Chiller has exceeded its typical life expectancy
Pumps	2	Chilled water pump is in poor condition
HVAC Piping	2	The pipe insulation is in need of replacement
Classroom HVAC units	N/A	
Air handling units	2	Poor system of distribution and temperature control
Terminal heating equipment	3	Some of the units are undersized for the loads
Fuel storage tank	2	Piping should be replaced
Toilet room exhaust systems	3	Toilet room exhaust working properly and in good condition
Kitchen exhaust hood	N/A	
Temperature control system	2	Control system needs to be upgraded
Indoor air quality	2	Poor overall system control
Sub-total:	22	
Plumbing		
Fixtures	2	Fixtures are aging and not of the water saving type
Water heater	3	Domestic water is fed from the well at Penn London
Water piping	3	Water piping is in good condition
Sanitary piping	3	Sanitary piping appears to be in good condition
Water service	3	Domestic water is fed from the well at Penn London, no backflow prevention
Kitchen grease trap	N/A	
Sub-total:	14	
Fire Protection		
Fire protection system	0	The building does not have a fire sprinkler system
Sub-total:	0	

District Administration Building

	Score	Remarks
Electrical		
Lighting	1	Luminaires with T12 lamps need replaced. Add automatic light control
Exterior Lighting	2	Upgrade to LED
Receptacles in classrooms	N/A	
Intercom	N/A	
Panel boards	4	Square D panels in very good condition
Electric service	4	Square D main circuit panel breaker in very good condition with room for expansion
Smoke detection system	3	Smoke detection in good condition
Fire alarm system	3	Silent Knight system with a bell, no strobes
Emergency generator	4	New exterior diesel generator with Honeywell automatic transfer switch
Sub-total:	21	

Technology		
Data cabling	3	Data cabling is Cat 5e. Current standard is Cat 6
Sub-total:	3	

Building Total: 100

Site Amenities

Staff parking	3	Appears to be adequate
Visitor parking	3	Appears to be adequate
Parent drop-off	N/A	
Stormwater management	3	Appears to be adequate
Play facilities	N/A	
Site safety	3	Appears to be adequate
Sub-total:	12	

Site Conditions

Site accessibility	2	Accessible spaces are the furthest spaces from the building entrance
Bus drop-off	N/A	
Site size	3	Appears to be adequate
Sub-total:	5	

Site Total: 17

Combined Total: 117 *District Administration scores are lower than other buildings as many categories do no apply

AVON GROVE SUNNYSIDE PROPERTY

SITE DATA:

Address: Old Baltimore Pike and Sunnyside Road, West Grove, PA19390-9438

Tax Parcel ID: 58-4-71

Site Acreage: 153.8 acres (Chester County Tax Records)

Current Zoning: Penn Township R-2 Residential
Penn Township I-1 Limited Industrial

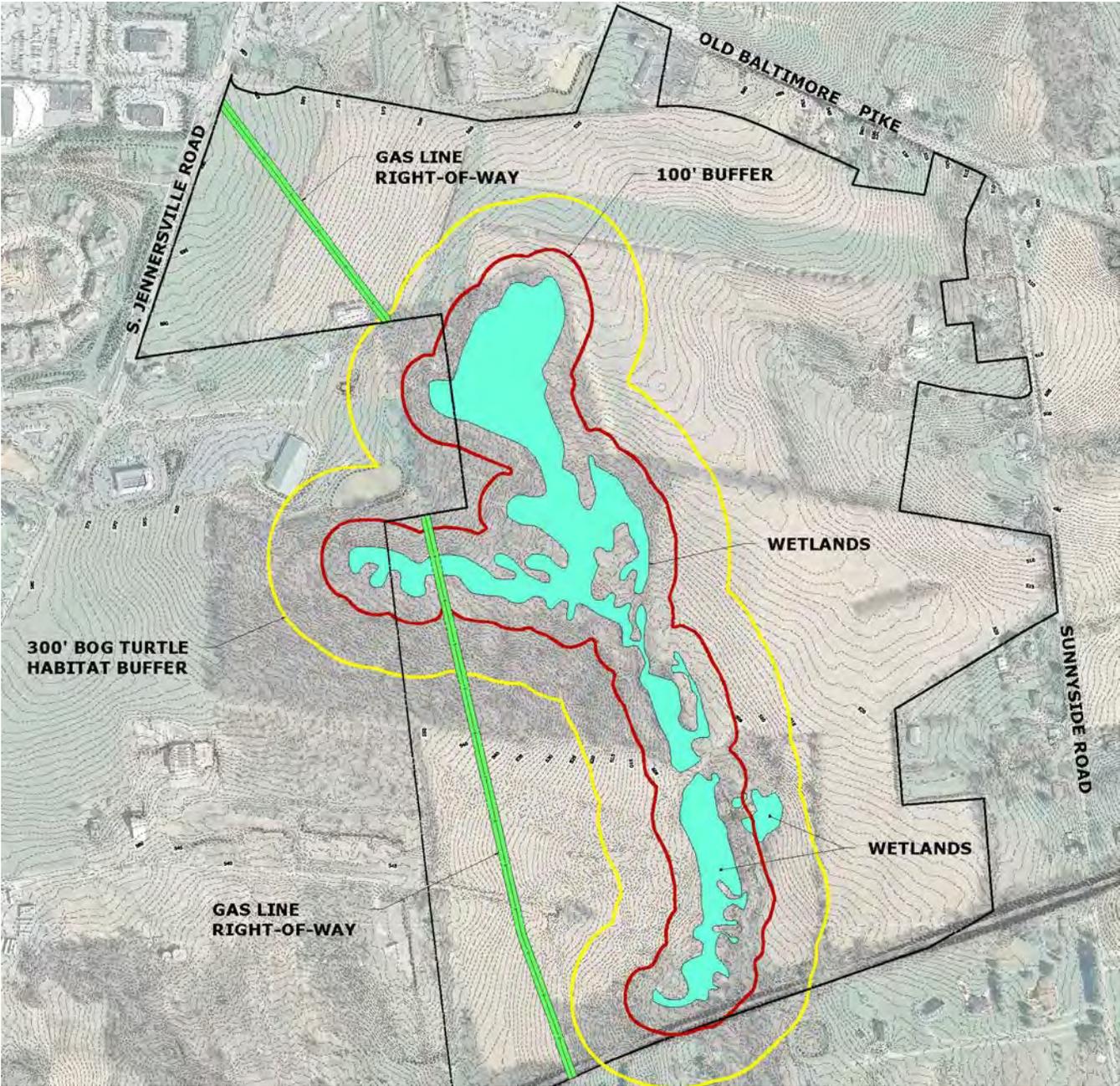
Zoning Requirements:

R-2 Residential

Use Permitted by Right	Educational
Minimum Lot Size	1 Acre
Minimum Lot Width	150' (building line) / 50' (street line)
Front Setback	50'
Side Setback	50'
Rear Setback	50'
Maximum Impervious Coverage	40%
Maximum Building Height	35' (3-stories)
Maximum Floor Area Ratio	60%

I-1 Limited Industrial

Use Permitted by Conditional Use	Educational
Minimum Lot Size	4 Acres
Minimum Lot Width	300' (building line)
Front Setback	100'
Side Setback	50'
Rear Setback	50'
Maximum Impervious Coverage	60%
Maximum Building Height	45'



General Site Description

SITE FEATURES

The subject property is currently undeveloped and includes cultivated farmland, wooded areas, several watercourses (including an Unnamed Tributary to the West Branch of the Clay Creek), and wetlands. The adjacent properties / uses are generally described as follows:

1. North
 - Residential and commercial properties (some undeveloped)
 - Road frontage along Old Baltimore Pike (SR 3026)
2. South
 - Existing East Penn Railways Inc. right-of-way
3. East
 - Residential and commercial properties
 - Road frontage along Sunnyside Road (T-326)
4. West
 - Undeveloped properties (zoned I-1)
 - A church campus (Living Faith Community Church)
 - Road frontage along Kelton Jennersville Road (SR 0796)

SITE ACCESS

The property includes multiple locations for vehicular access to nearby and adjoining roadway networks generally described as follows (note that none of the roads immediately adjacent the site include any sidewalks):

1. North
 - Access to Old Baltimore Pike (SR 3026) is available via (1) a small area of road frontage located at the northeast corner of the property (near the Old Baltimore Pike / Sunnyside Road intersection) and (2) connection to an existing driveway (Vineyard Way) at the north-central portion of the property which currently serves the Jenners Commons commercial development.
2. South
 - No roadway access available
3. East
 - Access to Sunnyside Road (T-326) is available via a small area of road frontage located at the east-central portion of the property.
4. West
 - Access to Kelton Jennersville Road (SR 0796) is available via a small area of road frontage located at the northwestern corner of the property.

ENVIRONMENTAL ITEMS

The subject property includes floodplain and a significant area of wetlands in the central / eastern portion of the site which cannot be disturbed by proposed development without permitting (and, even then, the amount of such disturbance would be limited if allowed at all). In addition, it is our understanding that previous investigations performed on this site have resulted in the need to provide buffers (predominantly in the area of the wetlands) due to the presence of bog turtles / habitat. Updated investigation / delineation of the wetland areas and the bog turtle habitat would likely be required as part of any design / permitting for this site moving forward. Note also that small pockets of steep slopes are present on the site but not likely to significantly impact design.

UTILITIES

The Pennsylvania One Call system has indicated that the following utilities are present within and/or adjacent to the subject property (more detailed coordination with these utilities will be required to confirm if adequate pressure, capacity, etc exists in those facilities to serve any proposed projects):

- Chester Water Authority
- Eastern Shore Natural Gas Company
- Comcast Cablevision
- PECO Energy
- Aqua Pennsylvania Inc.
- Verizon Pennsylvania Inc.
- Penn Township

KEY ELEMENTS FOR DESIGN

- The site contains a wetland area primarily in the wooded portions of the property. A 100' buffer is required to be maintained (i.e. undisturbed) around the wetland areas.
- A 300' "Bog Turtle Habitat" buffer (measured from the edge of the wetland areas) is also required. Proposed improvements within that buffer may require permitting through the PA Fish and Boat Commission and /or the US Fish and Wildlife Service.
- A high-pressure gas line and associated 35' right-of-way traverses the site in a north/south direction along the western edge of the property.
- The site appears to be located in Zone 'X' (area determined to be outside the 0.2% annual flood plain) as per the Flood Insurance Rate Map for Chester County, PA, Map #42029CO285F, revised September 29, 2006.
- This information was obtained from the "Fortugna/Waltman Subdivision Plan (dated 3/27/2007) and "Grading Plan (dated 2/3/2009) previously prepared by others for this site. An updated boundary and topographic survey, wetlands investigation, and bog turtle survey will likely be required prior to design of any improvements.

CONSTRUCTION OPTIONS

INTRODUCTION

In order to fully evaluate a school districts future facilities planning, options are developed to determine the extent of renovations and additions needed to bring the buildings up to code, to review how the buildings are able to support the projected enrollments and deliver the educational program, and to determine the cost of the proposed options.

As part of this process, the design team met with the administrative staff and each of the building principals to discuss how the buildings effectively support the delivery of the educational program. The administration and design team visited regional schools to see and discuss with other administrators how their buildings support both traditional instruction and programs such as Science, Technology, Engineering and Math (STEM) and similar highly technical curriculum. The information gathered was instrumental in the development of options and proposed grade configurations.

Currently the school district is comprised of four educational buildings split between an elementary campus, grades K-6 and a secondary campus, grades 7-12. All students start Kindergarten in Penn London Elementary, grades K-2 and move into the intermediate school, grades 3-5. They then move to the secondary campus, Fred S. Engle Middle School, grades 7-8 and the High School, grades 9-12. The purpose of the district-wide study is to analyze the impact of how projected enrollments, grade reconfigurations, and full-day kindergarten will transition from one building to the next for each of the options. Planning sessions were held with the administration to evaluate the educational benefits of the proposed options and the advantages and disadvantages of each.

Key Planning Considerations

Full-day kindergarten / Primary Center:

- The board supports the recommendation to provide full-day kindergarten to fully support the Avon Grove students from an early age. Currently only half-day kindergarten is provided at Penn London Elementary School. The decision to provide full-day kindergarten will have an impact on space to house the additional students and is anticipated to be the catalyst to bring students back into the school system that currently attends regional charter schools. This potential growth in population will affect all of the district's schools as the students move through the system.
- The educational benefits of early childhood intervention have been widely studied and if the opportunity is available, providing such programs at the Avon Grove School District may be a consideration for long-term planning.

Grade Configuration

- The Intermediate School currently houses grades 3-6. Sixth grade students are both emotionally and academically better suited to be part of the middle school model, grades 6-8, versus an elementary school model, grades K-6. Therefore, options consider moving the 6th grade out of the intermediate school and to create a 6-8 middle school.

New School Opportunities

- Options that consider new school construction have the opportunity to create schools that are better positioned for 21st century instruction and programs. Instructional planning development for programs such as STEM and Early Childhood Intervention will take place after options have been selected. Any new schools designed for the proposed grade configurations are not restricted by the limitations of the existing building sizes, arrangements and configurations. Therefore, the proposed square footages for new construction and the estimates of probable

construction costs are based on preliminary program assumptions which will need to be refined once the building program and design is further developed.

Options

Based on the key planning considerations noted above, the following options have been identified for development. These options are grouped in two categories: options for the primary grade levels, ranging from full-day Kindergarten to grade 5, are depicted by option *numbers* 1, 2 & 3; and options for secondary grade levels, grades 6-12, are depicted by option *letters* A, B & C. To establish a long-term construction planning course for the school district for all grade levels, an option number from the primary school group and an option letter from the secondary school group could be selected to address all schools from Kindergarten to 12th grade.

The suggested options should be viewed as conceptual and were prepared to provide the Avon Grove School District with the opportunity to understand the possibilities related to all of the district schools in meeting the educational needs of the district.

Floor plans of each of these options are provided in Appendix A and will not be publically distributed for security purposes. Instructional programs for a proposed new middle school or a new high school have not been fully developed by the school district. Therefore, building designs have not been included for the new secondary schools.

PRIMARY GRADES K - 5

PRIMARY SCHOOLS - GRADES K-5			
	<u>NEW SCHOOL</u>	<u>PENN LONDON</u>	<u>AG INTERMEDIATE</u>
OPTION 1		FULL-DAY K-1 (NO CONSTRUCTION)	2-5 (4 grade levels) (NO CONSTRUCTION)
OPTION 2	PRIMARY CENTER WITH FULL-DAY K	1-2 (NO CONSTRUCTION)	3-5 (3 grade levels) (NO CONSTRUCTION)
OPTION 3			
PHASE I		FULL-DAY K-2 WITH NEW ADDITION	MAINTAIN EXT'G 3-6 (4 grade levels)
PHASE II		FULL-DAY K-1 WITH AVAILABLE SPACE FOR PROGRAM EXPANSION (NO CONSTRUCTION)	2-5 (4 grade levels) (NO CONSTRUCTION)
OPTION 4			
PHASE I		FULL-DAY K-2 WITH MODULAR CLASSROOMS	MAINTAIN EXT'G 3-6 (4 grade levels)
PHASE II		FULL-DAY K-1 (REMOVE MODULARS)	2-5 (4 grade levels) (NO CONSTRUCTION)

OPTION 1 – GRADE LEVEL REALIGNMENT / NO CONSTRUCTION

**Full-day K-1 at Penn London (no additions required);
Grades 2-5 at Avon Grove Intermediate School (no additions required)**

Scope:

- Reconfigure the grade structure once the 6th grade at AGIS is transitioned to another facility to:
 - Provide full-day Kindergarten at Penn London Elementary without additions being required.
 - Move 2nd grade to AGIS to house four grade levels 2-5 without additions being required. Currently four grade levels are provided at AGIS.

Advantages:

- This is a no cost option since additions or modifications to the buildings are not required to accommodate the proposed grade configurations.
- The proposed location for the additional kindergarten students is in the lower level of the existing Penn London Elementary School which has toilet rooms directly adjacent to the classroom.

Disadvantages:

- Full-day Kindergarten cannot be provided at Penn London until the secondary school construction program is complete and the sixth grade is moved to the middle school.
- Without adding additional space, there is no excess capacity to accommodate any increases in population for grades K-5.
- There are limited opportunities to provide expanded program offerings based on space limitations.

OPTION 2 – NEW PRIMARY CENTER / NO ADDITIONS AT EXISTING SCHOOLS

**Construct a new Primary Center for Full-day Kindergarten;
Grades 1-2 at Penn London (no additions required);
Grades 3-5 at Avon Grove Intermediate School (no additions required)**

Scope:

- Construct a new Primary Center on the available land contiguous with the primary campus to house Full-day Kindergarten with space available for program expansion.
- Grades 1-2 to be provided at Penn London Elementary without additions being required.
- Once the secondary building program is complete and sixth grade is transitioned to the middle school, Avon Grove Intermediate School would house three grade levels for grades 3-5.

Advantages:

- By constructing a new facility adjacent to the primary campus, the primary school campus is maintained. Students will be at one campus from the Kindergarten through 5th grade.
- Building a separate facility to house full-day kindergarten with available space for program expansion provides additional available capacity at Avon Grove Intermediate that could house other programs such as district administration.
- No construction proposed at the existing schools which will eliminate any disruption to the educational program.
- The proposed location for the 1st grade classrooms at Penn London Elementary School currently has toilet rooms directly adjacent to the classroom.

- Construction of the new building can begin immediately to offer full-day kindergarten within 2 years of authorization to proceed.

Disadvantages:

- Higher cost option to build an entire new school.
- Adding a new building for full-day Kindergarten provides additional available capacity as compared to the projected enrollments.
- Additional space will be available at the Intermediate School that could be repurposed to fully utilize the entire building.

OPTION 3 – ADDITION AT PENN LONDON / PHASED GRADE REALIGNMENT

Phase I:

**Construct addition at Penn London to house Full-day K-2;
Maintain existing Grades 3-5 at Avon Grove Intermediate School**

Once the secondary construction program is complete...

Phase II:

**2nd grade moves to AGIS;
Full-Day K-1 at Penn London with space available for program expansion;
Transition to Grades 2-5 at Avon Grove Intermediate School**

Scope – Phased construction as part of a comprehensive K-12 construction program:

Phase I

- Construct an addition at Penn London Elementary School to house full-day Kindergarten through second grade.
- Continue to house four grades levels, grades 3-6, at Avon Grove Intermediate School.

Phase II (once secondary construction program is complete)

- Sixth grade transitions to the middle school; Avon Grove Intermediate School continues to house four levels, but for grades 2-5, with no additions required.
- Move 2nd grade to AGIS. The new addition at Penn London to house full-day Kindergarten through first grade with space available for program expansion.

Advantages:

- Construction of the addition at Penn London can begin immediately to offer full-day kindergarten within two years from authorization to proceed. This option accommodates full-day kindergarten with adequate capacity in Phase I.
- Once the secondary construction projects are completed and the grade transitions implemented, there is additional available space for fluctuations in enrollments and program expansion.
- By expanding Penn London, the primary campus is maintained. Students will be at one campus from the Kindergarten through 5th grade.

Disadvantages:

- Adding onto Penn London will provide some disruption to the educational program. The proposed addition to mirror the kindergarten wing on the opposite side of the cafeteria will require the hard surface play area to be relocated.
- Due to the location of the existing electrical transformer, the proposed addition will require site grading modifications and retaining walls, which will add some additional construction cost to the project.

OPTION 4 – MODULARS AT PENN LONDON / PHASED GRADE REALIGNMENT

Phase I:

**Construct temporary modular classrooms at Penn London to house Full-day K-2;
Maintain existing Grades 3-5 at Avon Grove Intermediate School**

Once the secondary construction program is complete...

Phase II:

**2nd grade moves to AGIS;
Provide Full-Day K-1 at Penn London;
Transition to Grades 2-5 at Avon Grove Intermediate School**

Scope – Phased construction as part of a comprehensive K-12 construction program:

Phase I

- Construct temporary classrooms at Penn London Elementary School to add full-day Kindergarten. The building and modular classrooms will house K through second grade.
- Continue to house four grades levels, grades 3-6, at Avon Grove Intermediate School.

Phase II (once secondary construction program is complete)

- Sixth grade transitions to the middle school; Avon Grove Intermediate School continues to house four levels, but for grades 2-5, with no additions required.
- Move 2nd grade to AGIS. Remove the temporary modulars and restore the site. The building will serve full-day kindergarten to 1st grade.

Advantages:

- By adding temporary modular classrooms to Penn London, full-day kindergarten can be offered within 6–8 months depending on the land development requirements for temporary structures.
- Once the secondary grades are re-aligned, the temporary modulars will be removed the school can continue to provide full-day kindergarten through 1st grade.

Disadvantages:

- Temporary modular classrooms will be required for several years until the secondary projects are completed at a cost that is not recoverable.

SUMMARY OF BUILDING CAPACITIES – PRIMARY SCHOOL OPTIONS

PRIMARY SCHOOLS: K-5						
#1	OPTION 1			OPTION 2		
	#2	#3	#4	#5	#6	#7
NAME OF SCHOOL	GRADE LEVELS	PDE BUILDING CAPACITY	AGSD / CEFFPI BUILDING CAPACITY	GRADE LEVELS	PDE BUILDING CAPACITY	AGSD / CEFFPI BUILDING CAPACITY
New Primary Center				Full-day K	400	352
Penn London ES	Full-day K-1	850	748	Add'l Prog.Cap.	500	440
Avon Grove IS				1-2	825	726
	2-5	1,525	1,342	3-5	1,575	1,386
PDE K-5 Capacity Total	XXXX	2,375		XXXX	2,800	
AGSD K-5 Capacity Total	XXXX		2,090	XXXX		2,464
K-5 Highest Proj. Enrollment		2,362	2,362		2,362	2,362
K-5 Capacity vs Projections		13	(272)		438	102
Additional Program Capacity					938	542

PRIMARY SCHOOLS: K-5												
#1	OPTION 3						OPTION 4					
	PHASE I			PHASE II			PHASE I			PHASE II		
NAME OF SCHOOL	#8	#9	#10	#11	#12	#12	#8	#9	#10	#11	#12	#12
	GRADE LEVELS	PDE BUILDING CAPACITY	AGSD / CEFFPI BUILDING CAPACITY	GRADE LEVELS	PDE BUILDING CAPACITY	AGSD / CEFFPI BUILDING CAPACITY	GRADE LEVELS	PDE BUILDING CAPACITY	AGSD / CEFFPI BUILDING CAPACITY	GRADE LEVELS	PDE BUILDING CAPACITY	AGSD / CEFFPI BUILDING CAPACITY
Penn London ES	Full-dayK-2	1,050	924	K-1	800	704	Full-dayK-2	775	924	Full-dayK-1	850	748
		Add'l Program Capacity:			400	352						
Avon Grove IS	3-6	1,575	1,488	2-5	1,575	1,342	3-6	1,575	1,488	2-5	1,525	1,342
PDE K-5 Capacity Total		2,625			2,375			2,350			2,375	
AGSD K-5 Capacity Total			2,412			2,046			2,412			2,090
K-5 Highest Proj. Enrollment		2,362	2,362		2,362	2,362		2,362	2,362		2,362	2,362
K-5 Capacity vs Projections		263	50		13	(316)		(12)	50		13	(272)
Additional Program Capacity					413	36						

Option 1 – Full-day K-5:

- Without adding additional space, the analysis indicates limited excess capacity to accommodate any increases in population for grades K-5.
- This option accommodates full-day kindergarten with no opportunities for program expansion.

Option 2 – Full-day K-5:

- Constructing a new primary center for full-day Kindergarten with additional space for program expansion can provide adequate capacity for fluctuations in enrollment.

Option 3 – Full-day K-5:

- This option accommodates full-day kindergarten with adequate capacity in Phase I.
- Once the secondary grades are re-aligned, in Phase II the addition provides additional capacity for fluctuations in enrollments and opportunities for program expansion.

Option 4 – Full-day K-5:

- With the addition of temporary modular classrooms, this option accommodates full-day kindergarten with adequate capacity in Phase I. PDE does not give capacity to temporary modular classrooms.
- Once the secondary grades are re-aligned and the temporary classrooms are removed, if the projected enrollments are realized class sizes may need to be increased above the recommended class size to accommodate fluctuations in enrollments. There will also be limited opportunities to provide expanded program offerings based on space limitations.

SECONDARY GRADES 6 - 12

SECONDARY SCHOOLS - GRADES 6-12			
	NEW SCHOOL	FRED S. ENGLE	AG HIGH SCHOOL
OPTION A	6-8 MIDDLE SCHOOL AT SUNNYSIDE	9-12 STEM FOR 400 STUDENTS	REN OV. 9-12 FOR 1600 STUDENTS
OPTION B	9-12 HIGH SCHOOL WITH STEM PROGRAM FOR 2000 STUDENTS (EXPANDABLE TO 2400) AT SUNNYSIDE	DISTRICT ADMIN/ COMMUNITY CENTER	CONVERT HS TO 6-8 MIDDLE SCHOOL
OPTION C	9-12 HIGH SCHOOL FOR 1600 STUDENTS (EXPANDABLE TO 2000) AT SUNNYSIDE	9-12 STEM FOR 400 STUDENTS	CONVERT HS TO 6-8 MIDDLE SCHOOL

**OPTION A Construct a new 6-8 Middle School at Sunnyside;
Renovate Fred S. Engle building for a 9-12 STEM program for 400 students;
Renovate 9-12 Avon Grove High School for 1600 students**

Scope:

- Construct a new 6-8 middle school on the district-owned land at Sunnyside.
- Once the construction of the new middle school is complete, grades 6-8 can be move to the new school. This will allow the Fred S. Engle building to be renovated into a STEM program to house 400 high school students.
- Once the Fred S. Engle building renovations are complete, part of the high school population will move to the building to allow some swing space to renovate the Avon Grove High School in phases to house grades 9-12 for 1600 students.

Advantages:

- A new school to house grades 6-8 accommodates the preferred middle school educational model that that would be difficult to accommodate at the Fred. S. Engle building due to the limitations of the building and site.
- By accommodating a STEM program at the Fred S. Engle building, it relieves some of the space deficiencies at the high school.

Disadvantages:

- Although the 9-12 program is provided on one campus, the two schools are remote and not ideal for students going from one school to another. Movement between the two schools will be necessary on a day-to-day basis since some program instruction will need to occur at the main high school building.
- The existing high school has building and site limitations to increase capacity for future growth.
- The Fred S. Engle building has more capacity than is needed for the STEM program.
- Additional capacity between the two buildings is available at the Fred S. Engle STEM building which does not effectively address the proposed model for a 400 student capacity at the STEM program.

**OPTION B Construct a new 9-12 High School with a STEM program at Sunnyside;
Convert the Fred S. Engle Building into the District Administration Offices
and Community Center;
Convert Avon Grove High School into the 6-8 Middle School**

Scope:

- Construct a new 9-12 high school with a STEM program on the district-owned land at Sunnyside for 2000 students. The core spaces such as the auditorium, cafeteria and gym could be designed for additional capacity to allow expansion of additional classrooms as necessitated by increases in population.
- Once the construction of the high school is complete, the 9-12 high school population can be moved into the new school. This will allow the existing high school to be renovated *unoccupied* to accommodate the 6-8 middle school program.
- Once the high school conversion to the middle school is complete and occupied, the Fred S. Engle building would be converted *unoccupied* into the District Administration Offices and Community Center.

Advantages:

- A new 9-12 high school with a STEM program developed as part of the design would provide many more educational opportunities for 21st century learning than can be accommodated in a renovated building or buildings.
- Each step of this construction option has no impact to the educational program in terms of construction activity adjacent to an occupied school. The new construction is off-site of the existing secondary campus, and the proposed renovations would be executed in unoccupied buildings.
- The existing high school can provide new opportunities for middle school students that are not available at the current middle school. Program spaces at the existing high school, such as the auditorium (which is currently used by the middle school for public performances), and physical education facilities such as the gym and fitness room, provide spaces that can better serve the middle school curriculum.
- Space limitations at the high school building are more manageable by reducing the population from four grade levels (9-12 high school configuration) to three grade levels for a 6-8 middle school configuration.

Disadvantages:

- The administration and design team discussed the advantages and disadvantages of constructing the new high school on a separate campus than at the stadium facility which is currently adjacent to the existing high school. Physical education athletic fields to support the daily educational program can be constructed at the new site. For competitions, the stadium facility would be used. When evaluating options, it was determined that the adjacency to the stadium should not be the primary reason in determining the best educational opportunities for the students. An example was how Penn State University celebrates the team procession to the stadium as an event in and of itself.

**OPTION C Construct a new 9-12 High School without STEM at Sunnyside for 1600 students;
Renovate the Fred S. Engle building for a 9-12 STEM program for 400 students;
Convert Avon Grove High School into the 6-8 Middle School****Scope:**

- Construct a new 9-12 high school on the district-owned land at Sunnyside for 1600 students. The core spaces such as the auditorium, cafeteria and gym could be designed for additional capacity to allow expansion of additional classrooms as necessitated by increases in population.
- Once the construction of the high school is complete, the 9-12 high school population can be transitioned into the new school. This will allow the existing high school to be renovated *unoccupied* to accommodate the 6-8 middle school program.
- Once the conversion of the high school to the middle school is complete, grades 6-8 can be transitioned into the new school. This will allow the Fred S. Engle building to be renovated *unoccupied* into a STEM program to house 400 high school students.

Advantages:

- Each step of this construction option has no impact to the educational program in terms of construction activity adjacent to an occupied school. The new construction is off-site of the secondary campus, and the proposed renovations would be executed in unoccupied buildings.
- The existing high school can provide new opportunities for middle school students that are not available at the current middle school. Program spaces at the high school, such as the auditorium (which is currently used by the middle school for public performances), and physical education facilities such as the gym and fitness room, provide spaces that can better serve the middle school curriculum.
- Space limitations at the high school building are more manageable by reducing the population from four grade levels (9-12 high school configuration) to three grade levels for a 6-8 middle school configuration.

Disadvantages:

- A split 9-12 program on two campuses poses logistics problems in educationally serving the 9-12 population in buildings remote from one another.
- The Fred S. Engle building has more capacity than is needed for the STEM program.

SUMMARY OF BUILDING CAPACITIES – SECONDARY SCHOOL OPTIONS

SECONDARY SCHOOLS: 6-12									
#1	OPTION A			OPTION B			OPTION C		
	#4	#5	#6	#7	#8	#9	#10	#11	#12
New School	New 6-8	1,571	1,483	New 9-12 HS with STEM	2,553	2,270	New 9-12 HS without STEM	1,769	1,572
Fred S. Engle MS	Convert to '9-12 STEM	830	738	Convert to DAO and Comm. Center	N/A	N/A	Convert to '9-12 STEM	830	738
Avon Grove HS	Renov. 9-12 HS	1,751	1,556	Convert HS to 6-8 MS	1,478	1,396	Convert HS to 6-8 MS	1,478	1,396
PDE Capacity Subtotal	XXXX	4,151		XXXX	4,031		XXXX	4,076	
CEFPI Capacity Subtotal			3,777			3,666			3,706
Highest Proj. Enrollment (5 yr)		2,954	2,954		2,954	2,954		2,954	2,954
6-12 Capacity vs Projections		1,197	823		1,077	712		1,122	752

For the purposes of this study, the options are reflective of the same programs for each of the 6-12 secondary school options. Therefore, the difference in the total capacity provided is relatively the same. The difference in the options is providing the 9-12 program in one building or multiple buildings, on one or multiple campuses.

Option A – New 6-8 Middle School; 9-12 STEM at the Fred S. Engle building; renovate the High School for grades 9-12:

- A new middle school would be designed to accommodate the program based on the projected enrollments to adequately meet the capacity requirements and program.
- The Fred S. Engle building has more available capacity than is needed for a 400 student capacity STEM program.
- 9-12 high school curriculum provided at the existing high school/middle school campus in two buildings. Additional high school capacity is available at the Fred S. Engle building STEM building if needed.

Option B – New 9-12 HS with STEM at Sunnyside; convert the Fred S. Engle building to Community Center/DAO; Convert the High School to a 6-8 Middle School:

- A new 9-12 high school with STEM would be designed to accommodate the program *in one building on a new campus* to adequately meet the capacity requirements.
- Converting the existing high school to a middle school provides adequate capacity to accommodate the educational program and projected enrollments.

Option C – New 9-12 High School without STEM at Sunnyside; STEM at the Fred S. Engle building; Convert High School to 6-8 Middle School:

- The 9-12 curriculum is provided between two campuses.
- A new 9-12 high school without STEM would be designed to accommodate the high school program to adequately meet the capacity requirements.

- The Fred S. Engle building has more available capacity than is needed for a 400 student capacity STEM program.
- Converting the existing high school to a middle school provides adequate capacity to accommodate the educational program and projected enrollments.

DISTRICT ADMINISTRATION OFFICE BUILDING

Renovations to update the District Administration Office Building and construct an addition to provide administrative office space and storage.

Scope:

- Construct a two-story building addition to house additional administrative space for staff that is currently remotely located.
- Renovate the existing building that is over 20 years old.

Advantages:

- The administration building is maintained at its current location.
- With the proposed addition, the district's administration team is housed under one roof.
- Additional storage would be provided on the lower level of the addition which would be accessed from the lower level grade.

Disadvantages:

- The preferred location for the addition would require the air-conditioning unit to be relocated. Given the age of the unit, the unit should be replaced with new in a new location.
- To avoid triggering a referendum, the building cannot be expanded by more than 20% of the existing building square footage. The existing building square footage is 9,600 s.f. x 20% would be 1,920 s.f. The proposed addition is shown at 1,800 s.f. or 18.75% of the total building square footage.
- Opportunities are limited to further expand the building for large group areas to accommodate staff development, workshops or public meetings.

SUMMARY OF CONCEPTUAL COST ESTIMATES FOR THE PROPOSED OPTIONS

OPTION	SCHOOL	GRADE LEVELS	TOTAL PROJECT COSTS		
PRIMARY SCHOOLS			LOW	HIGH	
1	PENN LONDON	FULL-DAY K-1	\$0	\$0	
	AGIS	GRADES 2-5	\$0	\$0	
	TOTAL		\$0	\$0	
2	NEW SCHOOL	PRIMARY CENTER	\$16,423,640	\$18,622,080	
	PENN LONDON	GRADES 1-2	\$0	\$0	
	AGIS	GRADES 3-5	\$1,394,314	\$2,178,615	
	TOTAL		\$17,817,954	\$20,800,695	
3	PHASE I	PENN LONDON	FULL-DAY K-2 (ADDITION)	\$4,637,500	\$5,200,625
		AGIS	GRADES 3-6 (EXISTING)	\$0	\$0
		SUBTOTAL		\$4,637,500	\$5,200,625
	PHASE II	PENN LONDON	FULL-DAY K-1 WITH PROGRAM EXPANSION	\$0	\$0
		AGIS	GRADES 2-5	\$0	\$0
		SUBTOTAL		\$0	\$0
BUILD-OUT TOTAL		\$4,637,500	\$5,200,625		
4	PHASE I	PENN LONDON	FULL-DAY K-2 (ADD MODULAR CLASSROOMS)	\$2,606,938	\$2,987,875
		AGIS	GRADES 3-6 (EXISTING)	\$0	\$0
		SUBTOTAL		\$2,606,938	\$2,987,875
	PHASE II	PENN LONDON	FULL-DAY K-1 (REMOVE MODULAR CLASSROOMS)	\$33,125	\$66,250
		AGIS	GRADES 2-5	\$0	\$0
		SUBTOTAL		\$33,125	\$66,250
BUILD-OUT TOTAL		\$2,640,063	\$3,054,125		

OPTION	SCHOOL	GRADE LEVELS	TOTAL PROJECT COSTS	
SECONDARY SCHOOLS			LOW	HIGH
A	NEW SCHOOL	6-8 MIDDLE SCHOOL	\$59,084,400	\$69,336,720
	FRED S. ENGLE	9-12 STEM (400 STUDENTS)	\$12,423,904	\$17,052,368
	HIGH SCHOOL	9-12 HIGH SCHOOL (1600 STUDENTS)	\$57,909,400	\$67,785,654
	TOTAL		\$129,417,704	\$154,174,742
B	NEW SCHOOL	9-12 HS WITH STEM FOR 2000 STUDENTS	\$106,212,000	\$125,164,800
	FRED S. ENGLE	CONVERT TO DAO/COMMUNITY CENTER	\$12,930,204	\$17,540,368
	HIGH SCHOOL	CONVERT TO 6-8 MIDDLE SCHOOL	\$41,472,000	\$49,960,800
	TOTAL		\$160,614,204	\$192,665,968
C	NEW SCHOOL	9-12 HS WITHOUT STEM FOR 1600 STUDENTS	\$86,368,800	\$101,658,240
	FRED S. ENGLE	CONVERT TO 9-12 STEM (400 STUDENTS)	\$12,423,904	\$17,052,368
	HIGH SCHOOL	CONVERT TO 6-8 MIDDLE SCHOOL	\$41,472,000	\$49,960,800
	TOTAL		\$140,264,704	\$168,671,408
DISTRICT ADMINISTRATION OFFICE BUILDING			LOW	HIGH
DAO	EXISTING DAO	RENOVATIONS AND ADDITION	\$2,084,914	\$2,549,300

ENERGY PORTFOLIO SURVEY

For each construction option, an Energy Portfolio Survey has been completed using the EPA/DOE Portfolio Manager tool. The Energy Star Statement of Energy Design Intent has included facility benchmarking and a predictive utility budget for each option to determine the anticipated Energy Star design score. Buildings with a design score of 75 or higher may qualify for EPA’s Energy Star.

SCHOOL NAME	EXISTING ENERGY STAR RATING	PRIMARY SCHOOLS				SECONDARY SCHOOLS			DISTRICT ADMIN. BLDG.
		OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION A	OPTION B	OPTION C	
NEW SCHOOL		PRIMARY CNTR				MS	HS w/STEM	HS w/o STEM	
			79			81	82	84	
				ADD'N ONLY					
PENN LONDON ES	42	42	42	76	42				
AVON GROVE IS	70	70	70		70				
FRED S. ENGLE MS	77					80	80	80	
AVON GROVE HS	50					76	76	76	
DISTRICT ADMIN.	*								*

*No Energy Star rating evaluation is available on the district administration office building since the electric power billing is shared with Penn London Elementary School.

The existing Penn London Elementary School energy rating scores are well below the 75 target. The options do not include renovations to the existing building. The addition would be designed to be within the acceptable range.

The existing Avon Grove High School has an existing low energy rating. As part of any proposed comprehensive renovation project, the energy rating is anticipated to be within an acceptable range.

EDUCATIONAL SPECIFICATIONS

Based on the desired approach, Educational Specifications for any major renovations and additions or new construction project would be developed to confirm the space and program requirements to meet the district’s goals and objectives. Schematic plans and updated cost estimates would be developed to ensure that the project or projects are within the budgetary allowances.

REBATES AND GRANTS

PECO rebates are likely to be available depending on measures taken to reduce electrical usage such as the replacement of lighting or chillers.

Grants are also available through the state including the Alternative and Clean Energy Program (ACE) which provides financial assistance in the form of grant and loan funds that will be used by eligible applicants for the utilization, development and construction of alternative and clean energy projects in the state, such as geothermal. The program is administered jointly by the Pennsylvania Department of Community and Economic Development (DCED) and the Department of Environmental Protection (DEP), under the direction of the Commonwealth Financing Authority (CFA).

AUTHOR'S CREDENTIALS

This study was prepared by Gilbert Architects Inc. and our sub-consultants, with the cooperation and assistance of the persons cited in the following acknowledgments.

GILBERT ARCHITECTS INC.

**Thomas W. Gilbert, AIA, REFP
President**

Mr. Gilbert has been a Registered Architect in the Commonwealth of Pennsylvania since 1976. He holds a Bachelor of Architecture Degree from Syracuse University School of Architecture (1973) and is a Recognized Educational Facilities Professional. As President of Gilbert Architects Inc., he has been responsible for hundreds of major educational projects since the firm was founded in 1988. His special areas of interest are educational programming, feasibility studies, building system analysis and construction administration.



**Danielle V. Hoffer, AIA, REFP, LEED GA
Vice President**

Ms. Hoffer is a Recognized Educational Facilities Professional through the Council of Education Facilities Planners International (CEFPI). With over 31 years of experience, she has had the privilege to design educational facilities for the past 21 years. She holds a Bachelor of Architecture Degree from University of Miami (1983). As a Vice President, Danielle has authored dozens of district-wide facility studies in Pennsylvania that have been the catalyst for short and long-term construction planning. She directs and coordinates the production of facility studies and is responsible for executing the planning from the development of the educational specifications through design and construction.



**Scott A. Adams
Senior Project Manager**

Mr. Adams graduated with a Bachelor Degree of Architecture from Virginia Tech in 1992. With over 22 years of project experience, he has been designing schools for the past 16 years with Gilbert Architects. As a Senior Project Manager, his responsibilities extend from the facility study stage through to design and construction. He has worked on a variety of successful public school projects including elementary and secondary schools, prefabricated construction and other educational support facilities including district administration buildings and maintenance and storage facilities.



CONSULTANTS

FutureThink, Inc.

**Tracy Healy, REFP
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Tracy Healy is the president of FutureThink. Previously, she served as a Vice President at DeJONG and was one of its founding members. Her primary focus is demographic studies.

With a master's degree in English from Ohio State University, experience in city and regional planning, and time spent teaching in the classroom, Tracy is well equipped to meet the needs of clients. She combines over 20 years of experience with her desire to enhance learning environments for students around the world.



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**Kenneth L. Kauffman, P.E., LEED AP
Vice President**

Mr. Kauffman graduated with a Bachelor of Science Degree in Construction Engineering from Pennsylvania State University. He is a Licensed Professional Engineer in Pennsylvania, Maryland and Virginia. In addition to his executive responsibilities, he serves as a Mechanical Project Manager. These responsibilities include the design and specification of HVAC, Plumbing and Fire Protection system design and selection, specification preparation, construction administration, energy life cycle cost analysis, feasibility studies, and overall project coordination. Mr. Kauffman plays an active role in the development and implementation of "Green Design Concepts" from planning through construction.



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**J. Marc Kurowski, P.E., LEED GA
Principal**

Mr. Kurowski graduated from Pennsylvania State University with a Bachelor of Science Degree in Civil Engineering. He is a Licensed Professional Engineer in Pennsylvania and has served as the Principal-in-Charge for significant and varied land development projects including many projects in the educational sector of the market. He has provided such services for site improvements; traffic/transportation analysis and design; stormwater management design; floodplain analysis; sanitary sewer system/water distribution system layout and design; erosion and sedimentation control plan preparation and securing of approval; NPDES Permit preparation and securing of approval; Land Development Plan approval; representation at Municipal meetings; and securing of approvals from numerous governmental agencies.



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Avon Grove School District

Administration:

M. Christopher Marchese, Ed. D., Superintendent
Margaret V. Sharp, Ed. D., Assistant Superintendent
Daniel Carsley, Business Manager
Louis Chance, Ed. D., BCBA, Director of Pupil Services
Wendi Lee Kraft, Ed. D., Director of Personnel
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Matthew Crockett, Buildings & Grounds Supervisor

Administration:

Thomas Alexander, Principal – Avon Grove High School
Michael Berardi, Principal – Fred S. Engle Middle School
Jeffrey Detweiler, Principal – Avon Grove Intermediate School
Cynthia Holland, Ed. D., Principal – Penn London Elementary School
Suzanne Magee, Assistant Principal – Penn London Elementary School

Our hope is that this study will provide the District with the tools necessary to make informed decisions in planning the future direction of the Avon Grove School District.