DISTRICT-WIDE FACILITIES STUDY PRESENTATION

JUNE 25, 2018
KCBA – Architecture/Interior Design/Structural Eng.

Lehigh Valley Engineering – MEP Engineering

Barry Isett & Associates – Civil Engineering

Corsi Associates – Kitchen Consulting

FutureThink – Demographics & Enrollment Consulting
This study entailed a review of existing conditions, delivery of educational programs, and enrollment projections (Phase 1) to produce a series of long-term upgrade and/or reconfiguration options (Phase 2). The following buildings and campuses were included in this process:

- Hopewell Elementary School
- Liberty Bell Elementary School
- J.P. Liberati Intermediate School
- Southern Lehigh Middle School
- Southern Lehigh High School
PHASE 1: DATA COLLECTION - DELIVERABLES

Research was conducted to produce the following:

- Enrollment Study
- Existing Conditions Analysis
- Analysis of Program-Related Needs
- Itemized Maintenance Matrix
ENROLLMENT
STUDY
10-year enrollment projections for SLSD were developed through an analysis of the following data:

- Live birth data
- Historical enrollment
- Charter school enrollment
- Non-public school enrollment
- Community demographics
- Housing information
## HISTORICAL ENROLLMENT

### Southern Lehigh School District

### Historical Enrollment

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Source: Southern Lehigh School District
# 5-Year Age and Income Projections

<table>
<thead>
<tr>
<th>Southern Lehigh School District</th>
<th>2017 Estimates</th>
<th>2022 Projections</th>
<th>Change 2017-22</th>
<th>Change 2017-22 (%)</th>
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</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>22,531</td>
<td>23,530</td>
<td>999</td>
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<tr>
<td>Age 0-4</td>
<td>999</td>
<td>1,021</td>
<td>22</td>
<td>2.2%</td>
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<tr>
<td>Age 5-9</td>
<td>1,339</td>
<td>1,287</td>
<td>-52</td>
<td>-3.9%</td>
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<tr>
<td>Age 10-14</td>
<td>1,527</td>
<td>1,523</td>
<td>-4</td>
<td>-0.3%</td>
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<tr>
<td>Age 15-18</td>
<td>1,283</td>
<td>1,321</td>
<td>38</td>
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<tr>
<td>Total Age 0-18</td>
<td>5,148</td>
<td>5,152</td>
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<td>0.1%</td>
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<tr>
<td>Median Age</td>
<td>43.9</td>
<td>44.7</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Southern Lehigh School District</th>
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<th>2022 Projections</th>
<th>Change 2017-22</th>
<th>Change 2017-22 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Household Income</td>
<td>$88,402</td>
<td>$96,120</td>
<td>$7,718</td>
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</tr>
<tr>
<td>Average Household Income</td>
<td>$117,898</td>
<td>$131,501</td>
<td>$13,603</td>
<td>11.5%</td>
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<td>Average Family Size</td>
<td>3.08</td>
<td>3.09</td>
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<td>Total Family Households</td>
<td>6,013</td>
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## 10-YEAR PROJECTIONS – HIGH LEVEL – DISTRICT-WIDE

### Southern Lehigh School District
Projected Enrollment - High

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<td>K</td>
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<td>187</td>
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Source: FutureThink
10-YEAR PROJECTIONS – HIGH LEVEL – BY GRADE GROUP

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<td>9-12</td>
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<td>1,151</td>
<td>1,157</td>
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<td>1,162</td>
<td>1,159</td>
<td>1,176</td>
<td>1,145</td>
<td>1,194</td>
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Source: FutureThink
EXISTING CONDITIONS
ANALYSIS
An architectural/engineering analysis of each building and campus was conducted that evaluated the following:

- Overall functionality
- General condition
- Building systems
- Code compliance
- Energy efficiency
- Security protocols
Southern Lehigh School District
Existing Facilities Report – High School
5800 Main Street #1, Center Valley, PA 18034

**History:**
Southern Lehigh High School was built in 1954. Major additions and renovations occurred in 1974, 1988, and in 2003.

**Building Statistics:**
- **Total Floor Area:** approximately 193,000 sf (two stories with basement level)
- **Building Footprint:** approximately 176,000 sf
- **Site Area:** approximately 57.2 acres

**Grades:**
The school currently educates students in 9th through 12th grades. As of the 2016-2017 school year, PDE reported that the school houses 1,674 students (273 in 9th grade, 270 in 10th grade, 255 in 11th, and 277 in 12th grade).

**Site:**
The existing accessible route from bus drop off location to student entrance requires a student to travel over 475 feet further than students who climb the stairs to the entrance. This route is not clearly visible from the majority of the bus stalls and forces students with disabilities to travel along back of house portions of the building including a loading dock and air handling equipment.

The existing concrete stairs and brick masonry site walls of the bus drop off entrance are failing. The existing handrails do not meet current code requirements and connections to stairs are not stable.

The existing concrete sidewalks at the bus drop off entrance is uneven and presents a trip hazard. The higher positioned pads have been ground down to limit the height change, but is still not ADA compliant and may present a tripping hazard. Concrete and asphalt walkways along the East and North facade are cracking, spalling and heaving. A large asphalt area on the northeastern side of the building contains several cracks with weeds and partially exposed brick border.

Concrete sidewalks have settled lower than the adjoining concrete pads at exterior entrances creating Accessibility non-compliance issues.

Concrete stairs at loading dock have failed, exposing embedded rebar for handrail post.

Significant driveway and parking improvements were constructed with the classroom wing in 2002, and the laminated pavements are currently in good condition. Some cracks were observed in the service area.

The ground surrounding the catch basin in the southern lawn area between the buildings has settled below the top of grate.

The School District has indicated that additional parking for student cars is needed.

**Issues to consider:**
- HS.S.5.01 A new ADA compliant ramp should be built in a more convenient, equitable and dignified location. It might be possible to reduce the entrance length of the accessible route by 350 feet.
- HS.S.5.02 The concrete stairs, brick site walls and stair railings should be rebuilt to current standards properly detailed to avoid water intrusion related failures.
- HS.S.5.03 The section of sidewalk where movement has occurred should be replaced with new concrete.
LIBERTY BELL ELEMENTARY SCHOOL

Age: Built 1963; Expanded 1999

Grades: K to 3

Current Enrollment: 411

Size: 60,400 SF on approx. 23 acres

Overall Condition: Satisfactory with some systems, equipment and materials in poor condition.
Identified Issues:

- Driveway/parking in poor condition
- Roofing due for replacement
- Accessibility
- Remove carpet
- Mechanical, electrical and plumbing replacement
HOPEWELL ELEMENTARY SCHOOL

Age: Built 2016

Grades: K to 3

Current Enrollment: 397

Size: 58,540 SF on approx. 27 acres

Overall Condition: Excellent
HOPEWELL ELEMENTARY SCHOOL

Identified Issues:
- High efficiency gas boiler
- Backflow preventer
JOSEPH P. LIBERATI INTERMEDIATE SCHOOL

Age: Built 2009

Grades: 4 to 6

Current Enrollment: 755

Size: 132,000 SF on approx. 21 acres

Overall Condition: Good
Identified Issues:

- Site circulation maintenance
- Acoustics in gym
- High efficiency boilers
SOUTHERN LEHIGH MIDDLE SCHOOL

Age: Built 1966; several renovation projects (most recent was 1998)

Grades: 7 and 8

Current Enrollment: 536

Size: 121,600 SF on approx. 20 acres

Overall Condition: Poor
Identified Issues:
- Site circulation maintenance
- Accessibility
- HVAC controls, dehumidification & efficiency improvements
- Additional electric needed in classrooms
- Stage systems
SOUTHERN LEHIGH HIGH SCHOOL

Age: Built 1955; several renovation projects (most recent was 2003)

Grades: 9 to 12

Current Enrollment: 1,107

Size: 193,000 SF on approx. 57.2 acres

Overall Condition: Satisfactory/Poor
SOUTHERN LEHIGH HIGH SCHOOL

Identified Issues:
- Exterior circulation condition
- Roof replacement
- Accessibility
- Old materials and equipment
- Mechanical system upgrades
STADIUM

Identified Issues:

- Turf field
- Track replacement
- Bleachers – code/accessibility
- Field House
DISTRICT ADMINISTRATION OFFICE

Age: Built 1924, renovated 1992

Overall Condition: Poor

Identified Issues:
- Age of material and systems
- Air/water leakage in building envelope
- HVAC system
ANALYSIS OF PROGRAM-RELATED NEEDS
Research was conducted via interviews with administrators and faculty as well as three community workshops to collect data related to:

- School capacity
- Operational needs
- Security protocols
- Academics
- Arts
- Athletics
DISTRICT-WIDE PROGRAM NEEDS

- Full day Kindergarten
- Performing Arts Center
- Aquatics Center
- Ballfield improvements
- Field House
Identified Issues:

- Full Day Kindergarten
- Secure vestibule
- Lacks small group instruction spaces
- Conference space
- Science Lab
- Site circulation/parking
Identified Issues:

- Too few small group instruction areas
- Cafeteria congestion
- Additional music room
- Storage
Identified Issues:
- Assembly space undersized
- Operational challenges in cafeteria
- Parking
SOUTHERN LEHIGH MIDDLE SCHOOL

Identified Issues:
- Specialty classrooms outdated & undersized
- Classrooms lacking natural light
- Secure vestibule
- Performance space
- Media center and STEM labs
Identified Issues:
- Secure vestibule / two entrances
- Performance space
- Additional curriculum spaces
- Music and Art space
- Auxiliary Gym
DISTRICT ADMINISTRATION OFFICES

Identified Issues:
- Insufficient space
- Conference Space
- Privacy
- Security
- Site circulation
ITEMIZED MAINTENANCE MATRIX
ITEM PRIORITY RANKING

At the conclusion of the research gathering process, deficient items were identified and ranked on the following scale:

1. **Long term need to be addressed within a 5-10 year timeframe**
2. **Medium term need to be addressed within a 4-5 year timeframe**
3. **Short term need to be addressed within a 2-3 year timeframe**
4. **Immediate need to be corrected within the next 1-2 years**
5. **Critical need represents a safety concern and should be corrected as soon as possible**
### Facilities Study Pages – Physical Needs Matrix

#### Southern Lehigh School District

**Physical Needs Matrix**

<table>
<thead>
<tr>
<th>School Category</th>
<th>Item #</th>
<th>Description</th>
<th>Priority</th>
<th>Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>DW PR</td>
<td>01</td>
<td>Construct a three-classroom addition at both Liberty Bk &amp; EIS and Hopenwell EIS for expansion to full day Kindergarten.</td>
<td>4</td>
<td>Selection to be made between (3) options: DW.PR.01, DW.PR.02, DW.PR.03</td>
<td></td>
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<tr>
<td>DW PR</td>
<td>02</td>
<td>Construct a Kindergarten center attached to one of the elementary schools. The addition would include 12 Kindergarten classrooms and three small group support rooms. The addition would result in three unassigned classrooms in each elementary school for future population growth.</td>
<td>4</td>
<td>Selection to be made between (3) options: DW.PR.01, DW.PR.02, DW.PR.03</td>
<td></td>
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<tr>
<td>DW PR</td>
<td>03</td>
<td>Realign grades, moving third grade to the Intermediate school. With both elementary schools reduced to K-2 grades, first grade classrooms with dedicated toilet rooms can be reallocated for Kindergarten. An addition would not be needed at either elementary school, but additional space would be required at another building in the district to accommodate the grade realignment.</td>
<td>4</td>
<td>Selection to be made between (3) options: DW.PR.01, DW.PR.02, DW.PR.03</td>
<td></td>
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<tr>
<td>DW PR</td>
<td>04</td>
<td>Construct additional intervention rooms at each school. These rooms should accommodate up to 12 students each.</td>
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<tr>
<td>DW PR</td>
<td>05</td>
<td>Construct a Performing Arts Center with assembly seating for 1,200 people with a large orchestra pit for 100 performers. Center to include a large stage with fly loft and wings, green rooms, changing rooms, toilet facilities, dance studio, keyboard lab, ensemble room, set design space, set storage space, costume storage and loading dock.</td>
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<td>Construct a district aquatic center.</td>
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<td>Construct a synthetic turf field.</td>
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<td>DW PR</td>
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<td>Rebuild track at stadium with (8) lanes.</td>
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<td>DW PR</td>
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<td>Construct a Field House adjacent to the stadium.</td>
<td>4</td>
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<td>DW PR</td>
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<td>Renovate/rebuild stadium bleachers, increasing the capacity and providing full accessibility.</td>
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<td>DW PR</td>
<td>11</td>
<td>Install bleachers at additional fields at the High School and Middle School.</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DW PR</td>
<td>12</td>
<td>Construct a marching band practice area.</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DW PR</td>
<td>13</td>
<td>Construct a rifle range.</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DW PR</td>
<td>14</td>
<td>Maximize the size and flexibility in the design of all new classrooms and renovation of existing classrooms.</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LB PR</td>
<td>01</td>
<td>Reconfigure main entrance and administration to create a secure vestibule.</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LB PR</td>
<td>02</td>
<td>Construct public/adult toilet rooms near the main entrance.</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LB PR</td>
<td>03</td>
<td>Replace the hardware on all doors to educational rooms with access control devices.</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NEXT STEPS

• Continue to evaluate findings to date
• Develop a range of long-term options
  • Renovation and/or expansion
  • Building/grade/boundary reconfiguration
  • New construction
• Present final report in September 2018
THANK YOU!