BRAILSFORD & DUNLAVEY

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President

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Senior Vice President

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Regional Vice President

Beth Penfield
Senior Project Manager

Perkins Eastman

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Senior Associate
The MPSP develops a process for prioritizing school construction and renovation projects in future years. PGCPS plans to use the MPSP to help to determine what projects are needed and when they should be done.

The MPSP will also be used as a resource to inform decisions on school closures, boundary changes, and other planning recommendations.
MISSION AND OBJECTIVES

To provide safe and effective schools that are educationally appropriate and meet local, state and national educational standards

To update the 2012 Parson’s Facility Condition Index (FCI) ranking of facilities and prepare for the next school construction & renovation projects

To evaluate and sort school buildings built before 1999 based on their ability to meet PGCPS educational program needs such as increasing Pre-Kindergarten classrooms

Capital Project Prioritization and Definition
MISSION

Mission

- Deliver educationally-appropriate and correctly-sized facilities
- Provide sustainable, safe, and healthy environments conducive to teaching and learning
- Major initiatives:
  - Expanding language immersion programs
  - Expanding Pre-Kindergarten
  - Implementing career academies
  - Integrating special education services
Over $2 billion in facility repair identified, with majority of needs in major building systems such as heating, cooling, electrical, plumbing, etc. (only addresses facility conditions).

More than 50% of the inventory is over 40 years old. The majority is not modernized to latest standards.

Current annual spending on repairs and upgrades is not keeping pace with project demand. Annual funding of $130 million dollars will not clear the backlog of projects in 20 years.

$130 million yearly is not guaranteed funding and does not address mission- and function-based upgrades or expansions.
+ Updated the 2012 Parsons report with more recently completed capital projects from each school

+ Used the 2012 Parsons data to identify highest impact repair needs based upon:
  - Critical projects that improve safety and health
  - Priority projects that will directly impact learning
  - Difficulty to repair

+ Created a ‘Weighted’ FCI
How do we better assess what’s needed at each school?

+ Using existing floor plans and existing State Rated Capacity (SRC) maximum enrollment numbers

+ Understand how rooms are actually being used through new BIM plans that can be converted to “Smart Data”

+ Clarify how many students each school can actually hold by surveying 193 schools in 6 weeks noting:
  • Original designed use of rooms
  • Existing use of rooms
Overutilization is predominant in the northern portion of the county.

Underutilization is predominant in the southern portion of the county.

Average Utilization Rates:
- > 105%
- 80-105%
- < 80%

Note: Counts above exclude Regional and Pre-K – 8 schools.
UTILIZATION
By School Type

Elementary Schools

> 106%
96 -106%
81 – 95%
61 – 80%
< 60%

Middle Schools

High Schools
UTILIZATION IMBALANCE
All Schools, Districtwide

- **Over Utilized**: > 95%
- **Ideal Utilization**: 81 – 95%
- **Under Utilized**: < 80%

- 19%
- 31%
- 50%
UTILIZATION IMBALANCE
All Schools, by Region

North
- Over Utilized: > 95%
- Ideal Utilization: 81 – 95%
- Under Utilized: < 80%

Central
- Over Utilized: 18%
- Ideal Utilization: 18%
- Under Utilized: 64%

South
- Over Utilized: 8%
- Ideal Utilization: 23%
- Under Utilized: 69%
Used the Board-approved educational specifications to survey 163 facilities

Over 70 survey questions used to:

• Evaluate room sizes and quantities against approved standards

• Assess ability of facilities to support current and future educational programs
<table>
<thead>
<tr>
<th>MODERNIZATION PROJECT TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULL RENOVATION or REPLACEMENT</td>
</tr>
<tr>
<td>LIMITED RENOVATION</td>
</tr>
<tr>
<td>SYSTEMS REPLACEMENT</td>
</tr>
<tr>
<td>OTHER</td>
</tr>
</tbody>
</table>
PLANNING PROCESS OVERVIEW

FINDINGS
- WFCI
- Educational Adequacy
- Utilization

PLANNING STRATEGIES
- Mission-Based Principles
- Logistical Considerations
- Stakeholder Input

RECOMMENDATIONS
- Project Types
- Sequencing
- Portfolio Optimization
**MISSION-BASED PLANNING PRINCIPLES**

- Supporting student achievement and PGCPS mission
- Minimize operating and capital costs
- Focus on at-risk facilities
- Equitable distribution of project funds
- Complete the program in 15-20 years
LOGISTICAL CONSIDERATIONS

+ Construction market capacity and school district implementation capacity
+ Annual funding constraints and maximizing state funding eligibility
+ Land acquisition timelines
STAKEHOLDER INPUT

+ Equitable distribution of project funds
+ Maintain neighborhood schools
+ Swing space availability
+ Sequencing and selection of closures/consolidations
+ Impact to immediate community during construction
+ Use of objective data & tools to support recommendations and relative sequencing of planning areas

+ Project recommendation categories aligned with state requirements

+ Focus investments on facilities over 15 years old

+ Modernize receiving schools for students prior to closing sending schools
PLANNING STRATEGIES

+ Use of Planning Areas

• 40 Planning Areas (33 ES, 4 MS, 3 HS)
• Review logistical impacts and establish local sequencing requirements
• ‘Rightsize’ Portfolio
• Evaluate geographic distribution
• Distribution of Specialized Services and Specialty Programs
• Evaluate transportation impacts
PLANNING AREAS

Elementary School P.A. 1-33
Middle School P.A. 34-37
High School P.A. 38-40
PLANNING AREA EXAMPLE

School A

CURRENT
Seats: 496
Enroll: 621
Utiliz.: 125%

PROPOSED
Seats: 735
Enroll: 671
Utiliz.: 91%

ACTION
Modernize to: 735 seats (addition)
Send/Receive: +50 (inc. special ed)
Start Year: 2017

Add’t’n

School D

CURRENT
Seats: 572
Enroll: 636
Utiliz.: 111%

PROPOSED
Seats: 572
Enroll: 536
Utiliz.: 94%

ACTION
Modernize to: no capacity change
Send/Receive: -100 (inc. special ed)
Start Year: 2022

School C

(proviously modernized)

CURRENT
Seats: 882
Enroll: 751
Utiliz.: 85%

PROPOSED
Seats: 882
Enroll: 826
Utiliz.: 94%

ACTION
Modernize to: no capacity change
Send/Receive: +50 (inc. special ed)
Start Year: 2022

School B

CURRENT
Seats: 702
Enroll: 623
Utiliz.: 89%

PROPOSED
Seats: 702
Enroll: 648
Utiliz.: 96%

ACTION
Modernize to: 702 seats (renovate)
Send/Receive: +50
Start Year: 2019

School E

CURRENT
Seats: 382
Enroll: 260
Utiliz.: 52%

PROPOSED
Seats: 0
Enroll: 0
Utiliz.: close

ACTION
Modernize to: close
Send/Receive: -200
Start Year: 2022

School F

(proviously modernized)

CURRENT
Seats: 848
Enroll: 645
Utiliz.: 76%

PROPOSED
Seats: 848
Enroll: 795
Utiliz.: 94%

ACTION
Modernize to: no capacity change
Send/Receive: -150 (inc. special ed)

Current Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>CURRENT</th>
<th>PROPOSED</th>
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<tr>
<td>Utilization</td>
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<td>93%</td>
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<tr>
<td>Schools in P.A.</td>
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<td>5</td>
</tr>
<tr>
<td>Number of over utilized schools</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Number of under utilized schools</td>
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<tr>
<td>Number of ideal schools</td>
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<td>5</td>
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</table>

Future Characteristics

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<tr>
<th>Characteristic</th>
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<th>PROPOSED</th>
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</thead>
<tbody>
<tr>
<td>Utilization</td>
<td>93%</td>
<td>93%</td>
</tr>
<tr>
<td>Schools in P.A.</td>
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<td>5</td>
</tr>
<tr>
<td>Number of over utilized schools</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of under utilized schools</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of ideal schools</td>
<td>5</td>
<td>5</td>
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</table>
## Planning Area Timeline: 2017-2022

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<tr>
<th>Current Characteristics</th>
<th>Future Characteristics</th>
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<tbody>
<tr>
<td><strong>Utilization:</strong></td>
<td><strong>Utilization:</strong></td>
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<tr>
<td>90%</td>
<td>93%</td>
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<tr>
<td><strong>Schools in P.A.:</strong></td>
<td><strong>Schools in P.A.:</strong></td>
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<tr>
<td>6</td>
<td>5</td>
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<tr>
<td><strong>Number of over utilized schools:</strong></td>
<td><strong>Number of over utilized schools:</strong></td>
</tr>
<tr>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Number of under utilized schools:</strong></td>
<td><strong>Number of under utilized schools:</strong></td>
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<tr>
<td>2</td>
<td>0</td>
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<tr>
<td><strong>Number of ideal schools:</strong></td>
<td><strong>Number of ideal schools:</strong></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>
RECOMMENDATIONS

20 yrs. $8.5B

A $425 million per year modernization program will correct all deferred capital improvements and ensure all schools are educationally appropriate per the latest standards.

140 Projects

The modernization program includes a variety of project types ranging from new schools and full renovations to building additions and small system replacements.

Mission Focus

The modernization program will provide an optimized portfolio with balanced utilization rates achieved via multiple boundary realignments and select school closure recommendations. Implementation will carefully consider academic initiatives and geographic impacts.
$5.5B The cost for 140 projects in 2015 dollars, not including closures.

$2.3B Approximate cost associated with escalation over a 20 year program.

$700M Approximate program cost, capital labor cost, and compliance costs over the life of the program.

$8.5 Billion projected program cost

$(616)M Approximate savings from projected 29 closures over a 20 year program.
## RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Projects</th>
<th>Cost*</th>
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<tbody>
<tr>
<td>Full Renovation/Replacement</td>
<td>77</td>
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<tr>
<td>Limited Renovation</td>
<td>39</td>
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<tr>
<td>Systems Replacement</td>
<td>11</td>
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<tr>
<td>Other</td>
<td>5</td>
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<tr>
<td>New</td>
<td>8</td>
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<tr>
<td>Close</td>
<td>29</td>
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<td><strong>TOTAL:</strong></td>
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*Direct project costs net of closures, does not include program-level costs
### Cost* by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Cost</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>North</td>
<td>$2.4B</td>
<td>43%</td>
</tr>
<tr>
<td>Central</td>
<td>$1.4B</td>
<td>25%</td>
</tr>
<tr>
<td>South</td>
<td>$1.2B</td>
<td>21%</td>
</tr>
<tr>
<td>Regional</td>
<td>$542M</td>
<td>10%</td>
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### Cost* by School Type

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<thead>
<tr>
<th>Type</th>
<th>Cost</th>
<th>Percentage</th>
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<tr>
<td>ES</td>
<td>$2B</td>
<td>36%</td>
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<tr>
<td>MS</td>
<td>$1.5B</td>
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<tr>
<td>HS</td>
<td>$1.5B</td>
<td>27%</td>
</tr>
<tr>
<td>Regional</td>
<td>$542M</td>
<td>10%</td>
</tr>
</tbody>
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**TOTAL:** $5.5B

*Direct project costs net of closures, does not include program-level costs
8 new schools:

- 3 ES (2 North, 1 Central)
- 3 MS (3 North)
- 2 HS (2 North)

Close 29 schools over 20-Year program

- 26 Elementary (2 North, 13 Central, 11 South)
- 3 High Schools (1 Central, 2 South)

Saves over $600 Million in capital costs

Balances utilization district wide

Consolidates small elementary schools
Allow for program ramp up in FY 2017 and 2018

Boundary adjustments needed to balance utilization

Start with new middle schools in the north and central regions and existing elementary schools in the south

Distribute projects over 20 year program period

Evaluate opportunities for school reuse

Coordinate with other agencies to improve walkability and reduce transportation costs
The capital program recommendations are broken down into three CIP cycles. The metrics relate to “project starts” in the proposed time frame.

**Cycle 1 2017-22**
- $2.1 Billion
- 45 Project Starts
- 39% of total project cost
- Focus on Over-utilization

**Cycle 2 2023-28**
- $2.3 Billion
- 64 Project Starts
- 41% of total project cost
- Focus on Conditions/Consolidations

**Cycle 3 2029-36**
- $1.1 Billion
- 31 Project Starts
- 20% of total project cost
- Complete Planning Areas
### RECOMMENDATIONS
Capital Investments – CIP Cycles

<table>
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<tr>
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<tbody>
<tr>
<td></td>
<td>Quan.</td>
<td>Cost</td>
<td>Quan.</td>
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<tr>
<td>ES</td>
<td>20</td>
<td>$564M</td>
<td>40</td>
</tr>
<tr>
<td>MS</td>
<td>14</td>
<td>$932M</td>
<td>5</td>
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<tr>
<td>HS</td>
<td>4</td>
<td>$444M</td>
<td>8</td>
</tr>
<tr>
<td>Regional</td>
<td>7</td>
<td>$186M</td>
<td>11</td>
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<td><strong>TOTAL</strong></td>
<td>45</td>
<td><strong>$2.1B</strong></td>
<td>64</td>
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*Direct project costs net of closures in 2015 dollars, does not include escalation or program-level costs*
## RECOMMENDATIONS
### Capital Investments – CIP Cycles

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<tbody>
<tr>
<td></td>
<td>Quan.</td>
<td>Cost</td>
<td>Quan.</td>
</tr>
<tr>
<td>North</td>
<td>20</td>
<td>$1B</td>
<td>22</td>
</tr>
<tr>
<td>Central</td>
<td>12</td>
<td>$659M</td>
<td>15</td>
</tr>
<tr>
<td>South</td>
<td>6</td>
<td>$275M</td>
<td>16</td>
</tr>
<tr>
<td>Regional</td>
<td>7</td>
<td>$186M</td>
<td>11</td>
</tr>
<tr>
<td>TOTAL</td>
<td>45</td>
<td>$2.1B</td>
<td>64</td>
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</table>

*Direct project costs net of closures in 2015 dollars, does not include escalation or program-level costs.*
## Cycle 1 (2017-22) Detail

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Quantity</th>
<th>% Total</th>
<th>Planning Areas</th>
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</thead>
<tbody>
<tr>
<td>Full Renovation or Replacement</td>
<td>33</td>
<td>66%</td>
<td>2, 3, 5, 7, 8, 9, 12, 13, 17, 21, 24, 29, 32, 34, 35, 36, 37, 38, 40</td>
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<tr>
<td>New School</td>
<td>7</td>
<td>14%</td>
<td>3, 12, 34, 38</td>
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<tr>
<td>Limited Renovation</td>
<td>3</td>
<td>6%</td>
<td>2, 12, 35</td>
</tr>
<tr>
<td>System Replacement</td>
<td>1</td>
<td>2%</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2%</td>
<td>18</td>
</tr>
<tr>
<td>Master Planning Only</td>
<td>5</td>
<td>10%</td>
<td>2, 3, 12, 17, 34</td>
</tr>
</tbody>
</table>
# RECOMMENDATIONS
## Capital Investments – CIP Cycle 1

List of Schools with Capital Projects in CIP Cycle 1

<table>
<thead>
<tr>
<th>School Name</th>
<th>Project Name</th>
<th>School Name</th>
<th>Project Name</th>
<th>School Name</th>
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</thead>
<tbody>
<tr>
<td>Berwyn Heights ES</td>
<td>New ES3 12</td>
<td>William Beanes ES</td>
<td>Kettering MS</td>
<td>Suitland HS w/ Annex</td>
</tr>
<tr>
<td>Calverton ES</td>
<td>North Forestville ES</td>
<td>Woodridge ES</td>
<td>New MS No. 1 (PA No. 34)</td>
<td>Gwynn Park HS</td>
</tr>
<tr>
<td>Cherokee Lane ES</td>
<td>Potomac Landing ES</td>
<td>Benjamin Stoddert MS</td>
<td>New MS No. 2 (PA No. 34)</td>
<td>Annapolis Road Academy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Alternative HS</td>
</tr>
<tr>
<td>Glenn Dale ES</td>
<td>Riverdale ES</td>
<td>Benjamin Tasker MS</td>
<td>New MS No. 3 (PA No. 34)</td>
<td>C Elizabeth Rieg Regional</td>
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<tr>
<td>Hyattsville ES</td>
<td>Robert R. Gray ES</td>
<td>Charles Carroll MS</td>
<td>Thomas Johnson MS</td>
<td>Croom HS @ RICA</td>
</tr>
<tr>
<td>James McHenry ES</td>
<td>Rogers Heights ES</td>
<td>Drew-Freeman MS</td>
<td>Walker Mill MS</td>
<td>Frances R Fuchs ECC</td>
</tr>
<tr>
<td>Longfields ES</td>
<td>Rose Valley ES</td>
<td>Gwynn Park MS</td>
<td>William Wirt MS</td>
<td>Green Valley Academy</td>
</tr>
<tr>
<td>Magnolia ES</td>
<td>Springhill Lake ES</td>
<td>Hyattsville MS</td>
<td>New HS No. 1 (PA No. 38)</td>
<td>James E Duckworth</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Regional</td>
</tr>
<tr>
<td>New ES1 3</td>
<td>Templeton ES</td>
<td>Kenmoor MS</td>
<td>New HS No. 2 (PA No. 38)</td>
<td>Margaret Brent</td>
</tr>
</tbody>
</table>
**Districtwide Utilization Balance**

Current Conditions

- Over Utilized: > 95%
- Ideal Utilization: 81 – 95%
- Under Utilized: < 80%

After Master Plan Implementation

- Over Utilized: 6%
- Ideal Utilization: 82%
- Under Utilized: 12%
RECOMMENDATIONS
Program Outcomes, Balanced Utilization

North
- Over Utilized: 20%
- Ideal Utilization: 81%
- Under Utilized: 62%

Central
- Over Utilized: 18%
- Ideal Utilization: 64%
- Under Utilized: 18%

South
- Over Utilized: 23%
- Ideal Utilization: 69%
- Under Utilized: 8%

Current Conditions

After Master Plan Implementation

- Over Utilized: > 95%
- Ideal Utilization: 81 – 95%
- Under Utilized: < 80%
+ Portfolio optimization

  • Improved capability to deliver high-quality academic programs county-wide
  • Current Maintenance & Operations budget: $3.00/sqft
  • Post-Closure savings budget: $3.62/sqft

+ Program Time/ Value Comparisons

  • $425 Million per year with projected costs of $8.5 Billion in 20 years
  • $130 Million per year with projected costs of $17 Billion in 60+ years
PROGRAM OUTCOMES
Mission and Goals

$425M  $130M

✔ ✔ MAINTAIN NEIGHBORHOOD SCHOOLS

✔ ❓ FOCUS ON AT-RISK FACILITIES

✔ ❓ DISTRIBUTE FUNDS EQUITABLY

✔ ❓ SUPPORT STUDENT ACHIEVEMENT

✔ X MINIMIZE OPERATION COSTS

✔ X COMPLETE PROGRAM IN 15-20 YEARS
Next Steps

+ Plan for vetting MPSP recommendations for possible inclusion into the Educational Facilities Master Plan and Capital Improvement Program

June - July
Stakeholder Input: 2nd round

August
Preliminary CIP

September
Public Hearing on CIP

October
Final CIP

December 2015
PGCPS Long Range Plan is issued to the School Board

+ Questions/ Comments