NEW ELEMENTARY SCHOOL

REED SITE, ARLINGTON PUBLIC SCHOOLS
SCHOOL BOARD INFORMATION ITEM

SCHEMATIC DESIGN
JULY 17, 2018
PROJET PARAMETERS

1. Create a new neighborhood elementary school with an attendance zone
2. Support APS Strategic Plan Goals, specifically Goal #4 – Provide Optimal Learning Environments
3. Address capacity by providing at least 725 seats
4. Open by start of school 2021
5. Spend a maximum project cost of $55 million, with strong direction to find opportunities to reduce costs.
**OVERALL PROJECT TIMELINE**

- **Apr 2018**: Concept Design SB Approval
- **Aug 2018**: Schematic Design SB Approval
- **Oct 2018**: Design Development Submission
- **May 2019**: Construction Document Submission
- **Sep 2019**: Final Design + GMP SB Approval
- **Sep 2021**: School Opens

Detailed steps:
- Use Permit Approval: Nov 2018
- Building Permit Approval: Aug 2019
PATH TO USE PERMIT APPROVAL

• September 2018 – Use Permit submission
• September to November 2018 – ACG/APS staff collaborate on submission review
  • Fall 2018 – County commission meetings
  • **Fall 2018 – Joint BLPC/PFRC meeting** to review updated design and likely more detail on construction phasing)
• November 17, 2018 – County Board meeting
On-site parking: 133 spaces (9 over min)

Space for 7 buses to load/unload at suggested location

Space for a total of 30 cars to queue on-site in two rows

Interior Class 1 bike storage with 2 showers

Exterior bike racks
## Impervious Areas (sf)

### Existing
- Building: 52,744
- Play Courts: 16,272
- Other Paving: 46,741
- Parking: 26,476
- **Total:** 142,233
- % of site: 39%

### Final Schematic Design
- Building: 58,875
- Play Courts: 8,574
- Other Paving: 50,165
- Parking: 46,982
- **Total:** 164,596
- % of site: 45%
# Capacity Summary

<table>
<thead>
<tr>
<th>Program</th>
<th>Classrooms</th>
<th>Factor</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-K</td>
<td>2</td>
<td>16.00</td>
<td>32.00</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>5</td>
<td>23.33</td>
<td>116.65</td>
</tr>
<tr>
<td>First Grade</td>
<td>5</td>
<td>23.33</td>
<td>116.65</td>
</tr>
<tr>
<td>Second Grade</td>
<td>5</td>
<td>23.33</td>
<td>116.65</td>
</tr>
<tr>
<td>Third Grade</td>
<td>5</td>
<td>23.33</td>
<td>116.65</td>
</tr>
<tr>
<td>Fourth Grade</td>
<td>5</td>
<td>23.33</td>
<td>116.65</td>
</tr>
<tr>
<td>Fifth Grade</td>
<td>5</td>
<td>23.33</td>
<td>116.65</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td></td>
<td><strong>732</strong></td>
</tr>
</tbody>
</table>
Floor 3 & 4. Grade level learning community: Adaptable Rooms/Agile Furniture
Adaptable design: 2 future classrooms
Adaptable design: 5 enclosed classrooms with open collaboration space
Final East Elevation – along 18th Street
View at entry plaza, Final SD
View from north approach on 18th Street, Final SD
Aerial View from north approach on 18th Street, Final SD
Cost control measures

1. Wood construction in lieu of steel
   *Steel and concrete deck for now*

2. Joist v/s beam roof framing & fireproofing issues
   *Beam framing at roof*

3. Stacking K & 1 over Gym for repetitive structure
   *Marginal savings, so not worth it*

4. Exploring prefabrication & different wall systems
   *May use structurally insulated panels*

5. Reduced renovation scope
   *No new construction south of fire wall*

6. Met with Instructional staff to find reductions in program
   *Continue to reduce where possible*

7. Re-use existing classrooms where possible without renovation
   *Create break-out space to meet program*

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Example of extended learning space outside PreK rooms

Not adding a second floor in this area to save $
Cost control measures

1. Energy efficient design to avoid having to bring in a new electrical service or new gas service
   *Right sized systems*

2. Avoided tearing up all existing asphalt or moving any public utility lines
   *Triggers more storm water treatment measures*

3. Preliminary discussions with Arlington County staff on likely Use Permit conditions
   *Manage scope and reduce likelihood of surprises*
SCHEMATIC DESIGN PHASE COST ESTIMATES

• To ensure that School Board action is based on the most complete and up-to-date information, **final total project cost estimates** are prepared at the end of each project phase by both the Architect / Engineering team (A/E) and Construction Manager at-Risk (CMR).

• Process for developing the final estimates:
  • A/E and CMR complete independent estimates
  • A/E and CMR meet to review draft estimates and reconcile and clarify scope
  • A/E and CMR provide revised estimates incorporating reconciliation efforts
  • Estimates influenced by both **historic cost databases** and current **market conditions**.

• Input from market activity reports and subcontractors confirm that the DC region remains very busy and that material costs for some trades continue to experience above average increases. Estimates include **5% per annum in escalation**.
### Maximum Project Funding (Millions)¹

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Major Construction Bonds</td>
<td>$44.25</td>
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<tr>
<td>Capital Reserve</td>
<td>$4.00</td>
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<tr>
<td>Other (Operating)²</td>
<td>$1.25</td>
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<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$49.50</strong></td>
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<tr>
<td>ACG/APS Jointly Funded Items</td>
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<tr>
<td>APS Funding</td>
<td>$2.75</td>
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<tr>
<td>ACG Funding</td>
<td>$2.75</td>
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<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$5.50</strong></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>$55.00</strong></td>
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</tbody>
</table>

Notes:
2. Furniture and equipment that cannot be bond funded.

### Estimated Cost (Millions)¹

<table>
<thead>
<tr>
<th>Item</th>
<th>A/E</th>
<th>CMR</th>
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</thead>
<tbody>
<tr>
<td>GMP (Construction Costs)</td>
<td>$41.87</td>
<td>$42.71</td>
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<tr>
<td>Owner (Soft) Costs²</td>
<td>$12.24</td>
<td>$12.28</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$54.11</strong></td>
<td><strong>$54.99</strong></td>
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</tbody>
</table>

Note:
1. Based on final reconciled total project cost estimates.
2. Owner costs include design, project management, and other professional services fees, utility/permitting fees, furniture, equipment, and project contingencies.
COST CONTROL IN DESIGN DEVELOPMENT PHASE

• Design development phase will provide additional opportunities to manage cost as the design becomes more detailed and more information about the project is known.

• Pursue various options for cost savings measures including:
  • Right-size architectural design elements (wall and roofing systems) to work in conjunction with engineering systems (HVAC, plumbing, electrical, etc.).
  • Engage subcontractor community for design options that reduce costs.
  • Develop a series of design alternatives which could be accepted to mitigate unexpected cost increases, including options for building materials.
  • Refinements to owner costs as more project information is known.
• Review accepted value engineering (VE) items from recent projects.
COST CONTROL IN DESIGN DEVELOPMENT PHASE

• Produce **cost analysis** on various design elements to create the **best value** for APS:
  • Balancing exterior sunshades/enclosures and mechanical systems
  • Millwork
  • Roofing, exterior materials, and window systems
  • Ceiling and floor types
  • Emergency electrical systems
  • Site amenities
  • Building volume
  • Alternatives for extent of existing building renovations

• Complete **final total project cost estimates** at the conclusion of the design development phase and share with the School Board as a monitoring item in Fall 2018.
RECOMMENDATIONS

• Reaffirm project criteria for a **new neighborhood elementary school** with an attendance zone, a minimum capacity of **725 seats**, and a project completion in time for start of school **September 2021**;

• Approve the **proposed schematic design** as generally described in Exhibits A through E;

• Approve the **proposed project funding** as described in Exhibit F;

• Direct staff to proceed to the **design development phase**, including preparation of the **Use Permit** application;

• Direct staff to begin discussions with Arlington County on quantifying **APS/AGC jointly funded items**; and

• Charge staff to continue to pursue **cost savings measures** to complete the project as close to the original $49 million available funding as possible.