STRATFORD MIDDLE SCHOOL
RENOVATION AND ADDITION
ARLINGTON PUBLIC SCHOOLS

PFRC/BLPC
JULY 21, 2016
• Arlington County heard discussions regarding the driveway and indicated support of the driveway (4-1)
• APS School Board approved Schematic Design on June 2, 2016
• Arlington County Board and School Board approved local historic district designation
• Arlington County and VDOT approved the TIA for the proposed signal at intersection of Stratford driveway and Old Dominion Drive
### APPROVED SCHEMATIC DESIGN ESTIMATE

<table>
<thead>
<tr>
<th>PROJECT COST ($ MILLIONS)¹</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SITE WORK</td>
<td>$8.15</td>
</tr>
<tr>
<td>ADDITION</td>
<td>$20.14</td>
</tr>
<tr>
<td>RENOVATION</td>
<td>$7.12</td>
</tr>
<tr>
<td>APS STAFF</td>
<td>$0.55</td>
</tr>
<tr>
<td>EXPAND SCOPE OF LIGHTING REPLACEMENT²</td>
<td>$0.34</td>
</tr>
</tbody>
</table>

**SUBTOTAL PROJECT COST³** $36.30

<table>
<thead>
<tr>
<th>HISTORIC COMMEMORATION ALLOWANCE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL PROJECT COST</td>
<td>$36.55</td>
</tr>
</tbody>
</table>

**NOTES:**
1. Based on two independent professional cost estimates.
2. Recommended to enhance Universal Design, improve the quality of the instructional environment, and reduce energy.
3. Matches maximum approved by the School Board at Concept Design.
<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>USE PERMIT</td>
<td></td>
<td>1/2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CERT. OF APPROP.</td>
<td></td>
<td>1/2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DESIGN DEV.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONST. DOCS.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUILDING PERMIT</td>
<td></td>
<td></td>
<td>9/2017</td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION</td>
<td></td>
<td></td>
<td></td>
<td>TBD</td>
</tr>
<tr>
<td>SCHOOL OPEN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• 1st Submission: 9/1/2016
• 2nd Submission: 10/2016
• Presenting to Commissions: (Fall/Winter 2016)
  • E2C2
  • HALRB
  • Parks and Recreation
  • Planning
  • Transportation
  • Urban Forestry
• County Board: 1/2017
VIEW FROM EAST
ENERGY TARGETS

- EUI (energy use intensity) = total energy consumed / total gross square footage
- Metric that expresses a building’s energy use as a function of size and other characteristics

![Bar chart showing energy use intensity (EUI) targets](chart.png)

- EUI 51-55
- EUI 43.7
- EUI 40-43
- EUI 36-39

1Existing metrics from APS Energy Report Cards 2013/2014/2015
SUSTAINABLE OPPORTUNITIES

1 HIGH PERFORMANCE ENVELOPE

2 DAYLIGHTING

3 PASSIVE HEATING AT GYM DOUBLE-GLAZING

4 CREATING COMMUNITY

5 COMMUNITY DASHBOARD AT COMMONS

6 VRF HVAC SYSTEM

7 PV SYSTEM POWERS DEMO LAB

DEMO LAB
BUILDING ENVELOPE

- Pre-Patinated Copper Shingle
- Phenolic Rainscreen Panel
- Light Diffusion Glazing
- Sun Shade
- High Performance Glazing
- Manganese Ironspot Brick
BUILDING ENVELOPE

HIGH R-VALUE ASSEMBLY (R-30+)
- METAL SHINGLE CLADDING
- WEATHER BARRIER
- NAILBASE INSULATION (WOOD SHEATHING AND 3.5" R-19 POLYISO)
- 6" STUD WALL WITH R-19 BATTs
- 1/2" GWB

FIRST FLOOR MASS WALLS (R-15+)
- BRICK VENEER
- SPRAY INSULATION (R-13+)
- CONCRETE WALL
- (ALT) ICF WALL (R-28)
• Goal 1: Challenge and Engage All Students
• Goal 2: Eliminate Achievement Gaps
• Goal 3: Recruit, Retain & Develop High Quality Staff
• Goal 4: Provide Optimal Learning Environments
• Goal 5: Meet the Needs of the Whole Child

SOUTH ELEVATION
• New elevator at east end of building
• Renovated cafeteria
• New teacher collaboration spaces
• Conversion of existing Library to Work and Family Life space
• Renovating select rooms to meet Neighborhood MS program needs
• Replacing ceiling and lighting (to LED) in core classroom as funding allows
• Moderate renovations to existing toilet rooms
Q: How many spaces are required?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPLOYEES</td>
<td>134</td>
<td>1 staff parking space per 7.5 students</td>
</tr>
<tr>
<td>VISITORS</td>
<td>25</td>
<td>1 visitor parking space per 40 students</td>
</tr>
<tr>
<td>PARK USERS</td>
<td>10</td>
<td>Agreement with County Staff to use DPR feedback for park users</td>
</tr>
<tr>
<td>TOTAL</td>
<td>169</td>
<td></td>
</tr>
</tbody>
</table>

Q: Where are the spaces located?
A: According to zoning, all parking to be provided on-site
### Data-Based TDM Assumptions

**Q: How many spaces are required?**

<table>
<thead>
<tr>
<th>Category</th>
<th>Required Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>134</td>
</tr>
</tbody>
</table>
| Total estimated employees = 153 (124 F/T + 29 P/T based on existing MS staffing levels)  
Average MS staff drive rate from 2013 survey = 92% (141)  
Additional 5% reduction for TDM = 134 |
| Visitors       | 14              |
| Based on maximum number of visitors recorded at Swanson MS at any hour during 2015 APS Neighborhood MS Visitor Survey. Swanson provided most reliable data set of the survey |
| Park Users     | 10              |
| Based on feedback from DPR. |

**Q: Where are the spaces located?**

<table>
<thead>
<tr>
<th>Location</th>
<th>Required Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Site</td>
<td>14</td>
</tr>
<tr>
<td>To reduce parking on-site, TDG surveyed available on-street parking during school hours and recommended that 14 of total required spaces be accommodated through on-street parking on Vacation Lane and 23rd Street.</td>
<td></td>
</tr>
<tr>
<td>On-Site</td>
<td>144</td>
</tr>
<tr>
<td>Total to be provided on-site</td>
<td></td>
</tr>
</tbody>
</table>
PARKING CALCULATIONS

PARKING LOCATIONS

ADJACENT TO STRATFORD PARK
38 SPACES

NORTH ADDITION ENTRANCE:
6 SPACES

TOTAL ON-SITE PARKING PROVIDED:
144 SPACES

NORTH LOT:
39 SPACES

VACATION LANE LOT:
60 SPACES
SPECIAL PAVING

O C U L U S
EXISTING TREES TO BE REMOVED

O C U L U S
EXISTING TREES TO REMAIN

TREE REPLACEMENT REQUIRED: 211
PROPOSED TREES -- IN-PROGRESS

OCULUS

OCULUS

CANOPY TREES PROPOSED: 93 (1:1)
UNDERSTORY TREES PROPOSED: 126 (3:1)
ADJUSTED TOTAL: 136
ADDITIONAL TREES NEEDED: 75