PURPOSE

- Continued refinement of our methodology to calculate building capacity to ensure we are planning and providing optimum learning environments
- Quantify and articulate adequate auxiliary/small spaces outside of classrooms
- Ensure our planning tool is informed by instruction
DEFINITIONS

• PROGRAM CAPACITY is the student capacity of a school based on the optimum use of each learning space. It is how many students the building can support when the limitations of the program of study are applied. This is also referred to as functional capacity.

• CLASSROOM MULTIPLIER is the average of how many students should be in each classroom. The number is multiplied against the number of classrooms to determine capacity. This is also referred to a “student to classroom,” “class size” or “student per teaching station” ratio.

• UTILIZATION FACTOR is a percentage applied to the capacity figure at secondary schools to account for learning spaces that cannot be used 100% of the time (i.e. 7 out of 8 periods).
METHODOLOGY

Number of Classrooms × Classroom Multiplier × Utilization Factor (Secondary Only)

Which classrooms do we count?
What “class size” do we use?
What factor do we use?
Count # of classrooms

Sample:

1 2 3 4 5
6 7 8 9 10
ELEME NTARY SCHOOLS - CURRENT

Count #
of classrooms

Reduce for:
• Art
• Music
• Gifted
• SPED Resource
• Title 1
• ESOL

Sample:

1 2 3  Art  Music
4 5  ESOL  Gifted  SPED
Count # of classrooms

Reduce for:
- Art
- Music
- Gifted
- SPED Resource
- Title 1
- ESOL

Multiply remaining classrooms by:
- x 8 for SPED
- x 16 for Pre-K
- x Classroom multiplier * for K-5

Sample:

<table>
<thead>
<tr>
<th>Count</th>
<th>Reduce for</th>
<th>Multiply remaining</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>20</td>
<td>Art</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>Music</td>
</tr>
<tr>
<td>16</td>
<td>20</td>
<td>ESOL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gifted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPED</td>
</tr>
</tbody>
</table>

Capacity = 84

*Varies by school
ELEMENTARY SCHOOLS - PROPOSED

Count #
of classrooms
Count # of classrooms

Reduce for:
• Art
• Music
• Gifted
• SPED Resource
• Title 1
• ESOL
ELEMENTARY SCHOOLS - PROPOSED

Count # of classrooms

Reduce for:
• Art
• Music

Count # of auxiliary spaces:
• Small <200sf
• Medium 200-400sf
• Large > 400sf

Match needed functions to quantity of spaces

*Varies by school
**Elementary Schools - Proposed**

Count # of classrooms → Reduce for:
- Art
- Music

Reduce by # of classrooms to meet auxiliary space deficit

Count # of auxiliary spaces:
- Small <200sf
- Medium 200-400sf
- Large > 400sf

Match needed functions to quantity of spaces

If auxiliary space is not available deduct classroom space equivalent

*Varies by school*
**ELEMENTARY SCHOOLS - PROPOSED**

Count # of classrooms

Reduce for:
- Art
- Music

Reduce by # of classrooms to meet auxiliary space deficit

Multiply remaining classrooms by:
- x 8 for SPED
- x 18 for Pre-K
- x Classroom multiplier * for K-5

Count # of auxiliary spaces:
- Small <200sf
- Medium 200-400sf
- Large > 400sf

Match needed functions to quantity of spaces

If auxiliary space is not available deduct classroom space equivalent

*Varies by school*
AUXILIARY SPACE NEEDS

- PE Office
- EDEP Office
- Psychologist
- Speech
- Guidance
- Teacher Lounge
- Conference Room
- Family Support Workers
- SPED
- RTI and/or Title
- ESOL
- TDT (Region 10)
- A-Base
- B-Base
- FLES
- Gifted

Goal: Ensure all schools have adequate space for these needs based on their **population** and **size**.
### Auxiliary Space Requirements by School

<table>
<thead>
<tr>
<th>School</th>
<th>Small &lt;200SF</th>
<th>Medium 200SF–400SF</th>
<th>Large &gt;400SF</th>
<th>Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agnor–Hurt</td>
<td>37</td>
<td>6</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Baker–Butler</td>
<td>37</td>
<td>12</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Broadus Wood</td>
<td>23</td>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Broadus Wood</td>
<td>23</td>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Cale</td>
<td>42</td>
<td>3</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Crozet</td>
<td>45</td>
<td>6</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Greer</td>
<td>22</td>
<td>5</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Hollymead</td>
<td>40</td>
<td>11</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Meriwether Lewis</td>
<td>29</td>
<td>5</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Murray</td>
<td>24</td>
<td>6</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Red Hill</td>
<td>13</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Scottsville</td>
<td>13</td>
<td>6</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Stone Robinson</td>
<td>34</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Stony Point</td>
<td>18</td>
<td>6</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Woodbrook</td>
<td>25</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Yancey</td>
<td>12</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

### Key Function

1. PE Office
2. EDEP Office
3. Psychologist
4. Speech
5. Guidance
6. Teacher Lounge
7. Conference Room
8. Gifted
9. Family Support Worker
10. PT Guidance
11. Second AP Office
12. FLES
13. A Base
14. B Base
15. T TDT/Region10
16. SPED
17. RTI and/or Title
18. ESOL

### Minimum Space Requirements

- Located in Gym
- or
- Located in Office
- or
- Located in Family Support Worker
- or
- Located in Teacher Lounge
- or
- Located in Conference Room
- or
- Located in Library
- or
- Located in Art
- or
- Located in Gifted
- or
- Located in Title
- or
- Located in SPED
- or
- Located in ESOL

- Located in Cale
- or
- Located in Crozet
- or
- Located in Greer
- or
- Located in Hollymead
- or
- Located in Meriwether Lewis
- or
- Located in Murray
- or
- Located in Red Hill
- or
- Located in Scottsville
- or
- Located in Stone Robinson
- or
- Located in Stony Point
- or
- Located in Woodbrook
- or
- Located in Yancey

### Exceptions

- Greer, MWL, Murray...need to double check locations
- Unless shared with guidance or speech, common in smaller schools
- Depends where it currently located, because often plumbing is associated with it
- Small if Brights Stars only, Medium if shared with K-S FSW or Region 10
- Not private, just a workspace in a larger shared space if available
- Depends where it currently located, because plumbing & Equipment is associated with it
- Small *exception BRN -3; if F/R >40%, 1 area* per 100 students
- # of areas per space
- # of areas per space
- # of areas per space

See Appendix B
<table>
<thead>
<tr>
<th>Category</th>
<th>2015/16 Qty</th>
<th>Multiplier</th>
<th>Total</th>
<th>2017/18 Qty</th>
<th>Multiplier</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room Total</td>
<td>37</td>
<td></td>
<td></td>
<td>37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art</td>
<td>(1)</td>
<td></td>
<td></td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>(1)</td>
<td></td>
<td></td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gifted</td>
<td>(1)</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPED Resource</td>
<td>(1)</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESOL</td>
<td>(1)</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Title 1</td>
<td>0</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auxiliary Deficit</td>
<td>(4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPED (SCC)</td>
<td>1 x 8 = 8</td>
<td></td>
<td>8</td>
<td>0 x 8 = 0</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Pre-K</td>
<td>1 x 16 = 16</td>
<td></td>
<td>16</td>
<td>3 x 18 = 54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-K SPED</td>
<td>0 x 8 = 0</td>
<td></td>
<td>0</td>
<td>0 x 8 = 0</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>K-5</td>
<td>30 x 18 = 540</td>
<td></td>
<td>540</td>
<td>28 x 18 = 504</td>
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<tr>
<td><strong>BUILDING CAPACITY</strong></td>
<td><strong>564</strong></td>
<td></td>
<td></td>
<td><strong>558</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Formula for Classroom Multiplier (NO CHANGE):

\[
\text{School's Classroom Multiplier} = \frac{\text{Enrollment}*}{\text{Class Size}**} + \frac{\text{Differential Staff FTE}}{2}
\]

*Enrollment Used for Teacher Allocation in Budget Book

**Class Sizes by Grade Levels in 2017/18 Budget:

- K-3: 20.45
- 4-5: 22.85
- 6-8: 23.44
- 9-12: 23.1
KEY CHANGES

- Quantification and impact of small-space requirements
- Elimination of specific exclusions for Gifted, SPED, Title & ESOL
- Inclusion of new programs with space impact: FLES, A-Base, B-Base
- Additional reduction for Art & Music space for larger schools
- Increased Pre-K classrooms capacity to 18 to reflect current standards
- Updated K-5 classroom multipliers to reflect current staffing levels
- Updated to reflect recent construction projects which created or eliminated rooms
<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>Current</th>
<th>Proposed</th>
<th>Multiplier</th>
<th>Construction</th>
<th>SPED/ PK</th>
<th>Art/Music</th>
<th>Auxiliary</th>
<th>Net Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agnor-Hurt</td>
<td>564</td>
<td>558</td>
<td></td>
<td></td>
<td>+12</td>
<td>-18</td>
<td>-6</td>
<td>-1%</td>
</tr>
<tr>
<td>Baker Butler</td>
<td>636</td>
<td>636</td>
<td>+20</td>
<td></td>
<td>-20</td>
<td></td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Broadus Wood</td>
<td>380</td>
<td>400</td>
<td>+36</td>
<td>+19</td>
<td>+2</td>
<td>-19</td>
<td>-19</td>
<td>20%</td>
</tr>
<tr>
<td>Brownsville</td>
<td>744</td>
<td>761</td>
<td></td>
<td>+36</td>
<td>-4</td>
<td>-18</td>
<td>-36</td>
<td>17%</td>
</tr>
<tr>
<td>Cale</td>
<td>694</td>
<td>679</td>
<td>+19</td>
<td>+4</td>
<td></td>
<td>-19</td>
<td>-15</td>
<td>-2%</td>
</tr>
<tr>
<td>Crozet</td>
<td>350</td>
<td>331</td>
<td></td>
<td></td>
<td>-14</td>
<td></td>
<td>-19</td>
<td>-5%</td>
</tr>
<tr>
<td>Greer</td>
<td>578</td>
<td>574</td>
<td>+18,+36</td>
<td>-4</td>
<td>-18</td>
<td>-36</td>
<td>-4</td>
<td>-1%</td>
</tr>
<tr>
<td>Hollymead</td>
<td>494</td>
<td>496</td>
<td></td>
<td></td>
<td>+2</td>
<td></td>
<td></td>
<td>2%</td>
</tr>
<tr>
<td>Meriwether Lewis</td>
<td>407</td>
<td>420</td>
<td>+14</td>
<td></td>
<td>-21</td>
<td></td>
<td>-7</td>
<td>-2%</td>
</tr>
<tr>
<td>Murray</td>
<td>296</td>
<td>289</td>
<td>+14</td>
<td></td>
<td>-18</td>
<td></td>
<td>-16</td>
<td>-9%</td>
</tr>
<tr>
<td>Red Hill</td>
<td>178</td>
<td>162</td>
<td>9</td>
<td>+19</td>
<td>+2</td>
<td>-18</td>
<td>-34</td>
<td>-10%</td>
</tr>
<tr>
<td>Scottsville</td>
<td>178</td>
<td>208</td>
<td>+9</td>
<td></td>
<td>-10</td>
<td>+40</td>
<td>30</td>
<td>17%</td>
</tr>
<tr>
<td>Stone Robinson</td>
<td>540</td>
<td>570</td>
<td></td>
<td>-10</td>
<td>+40</td>
<td>30</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Stony Point</td>
<td>244</td>
<td>236</td>
<td>-8</td>
<td></td>
<td>-8</td>
<td></td>
<td>-3%</td>
<td></td>
</tr>
<tr>
<td>Woodbrook</td>
<td>338</td>
<td>304</td>
<td>+2</td>
<td></td>
<td>-36</td>
<td>-34</td>
<td>-10%</td>
<td></td>
</tr>
<tr>
<td>Yancey</td>
<td>142</td>
<td>144</td>
<td>+2</td>
<td></td>
<td></td>
<td></td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Elementary Total</strong></td>
<td><strong>6,763</strong></td>
<td><strong>6,768</strong></td>
<td><strong>+59</strong></td>
<td><strong>+112</strong></td>
<td><strong>+19</strong></td>
<td><strong>-78</strong></td>
<td><strong>-107</strong></td>
<td><strong>+5%</strong></td>
</tr>
</tbody>
</table>
Count # of classrooms

Reduce for:
- Computer
- SPED Resource
- Gifted
- ESOL
- Teacher Planning

Multiply remaining classrooms by:
- x 8 for SPED
- x 20 for CTE
- x 50 for gym
- x Classroom multiplier *
  for 6-8

Multiply by a utilization factor of 87.5%
(7 out of 8 periods)

*Varies by school
## Middle Schools - Proposed

<table>
<thead>
<tr>
<th>Count # of classrooms</th>
<th>Reduce for:</th>
<th>Multiply remaining classrooms by:</th>
<th>Multiply by a utilization factor of 87.5% (7 out of 8 periods)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• SPED Resource</td>
<td>x 8 for SPED</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Gifted</td>
<td>x 20 for CTE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Teacher Planning x 3</td>
<td>x 90 for gym</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• A-Base</td>
<td>x 30 for aux.gym</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• B-Base</td>
<td>x Classroom multiplier *</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Health</td>
<td>for 6-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Computer</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ESOL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Varies by school*
CHANGES TO GYM CAPACITY

- The capacity of the gym was previously calculated at 50 students, based on the state’s methodology.
- In reality, schools are typically scheduling 3 sections at a time with about 90 students total.
- Instruction is delivered in the gym, outside, and a health classroom.
- The health classroom is now an exclusion from the classroom count since students using that space are counted in the gym.
- With the addition of the multipurpose space at Henley, the inclusion of a multiplier for an auxiliary gym is proposed to be included.
# Utilization Factor

<table>
<thead>
<tr>
<th>School</th>
<th>Seat Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burley</td>
<td>51</td>
</tr>
<tr>
<td>Henley</td>
<td>98</td>
</tr>
<tr>
<td>Jouett</td>
<td>51</td>
</tr>
<tr>
<td>Sutherland</td>
<td>43</td>
</tr>
<tr>
<td>Walton</td>
<td>28</td>
</tr>
</tbody>
</table>

*Assumes 3 teacher planning areas (1/grade)
MIDDLE SCHOOL - KEY CHANGES

- Inclusion of new programs: A-Base, B-Base
- Elimination of Computer Lab and ESOL exclusions
- Revision of how gym capacity is calculated
- Elimination of the delineation of CTE classrooms
- Ensured each school had three teacher planning areas
- Calculations reflect recent construction projects
<table>
<thead>
<tr>
<th>Middle School</th>
<th>Current</th>
<th>Proposed</th>
<th>Multiplier</th>
<th>SPED, Comp. CTE, ESOL</th>
<th>Construction</th>
<th>Gym</th>
<th>Utilization Factor/ Misc.</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burley</td>
<td>716</td>
<td>717</td>
<td></td>
<td></td>
<td></td>
<td>+17</td>
<td>-16</td>
<td>+1</td>
</tr>
<tr>
<td>Henley</td>
<td>949</td>
<td>999</td>
<td>+28</td>
<td>+23</td>
<td>+17</td>
<td>-18</td>
<td>+50</td>
<td>5%</td>
</tr>
<tr>
<td>Jouett</td>
<td>733</td>
<td>717</td>
<td>-17</td>
<td></td>
<td>+17</td>
<td>-16</td>
<td>-16</td>
<td>-2%</td>
</tr>
<tr>
<td>Sutherland</td>
<td>737</td>
<td>653</td>
<td>-28</td>
<td>-35</td>
<td>+17</td>
<td>-38</td>
<td>-84</td>
<td>-11%</td>
</tr>
<tr>
<td>Walton</td>
<td>534</td>
<td>499</td>
<td>-35</td>
<td></td>
<td>+17</td>
<td>-17</td>
<td>-35</td>
<td>-7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,668</td>
<td>3,585</td>
<td>-28</td>
<td>-59</td>
<td>+23</td>
<td>+85</td>
<td>-105</td>
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</tbody>
</table>
QUESTIONS?