

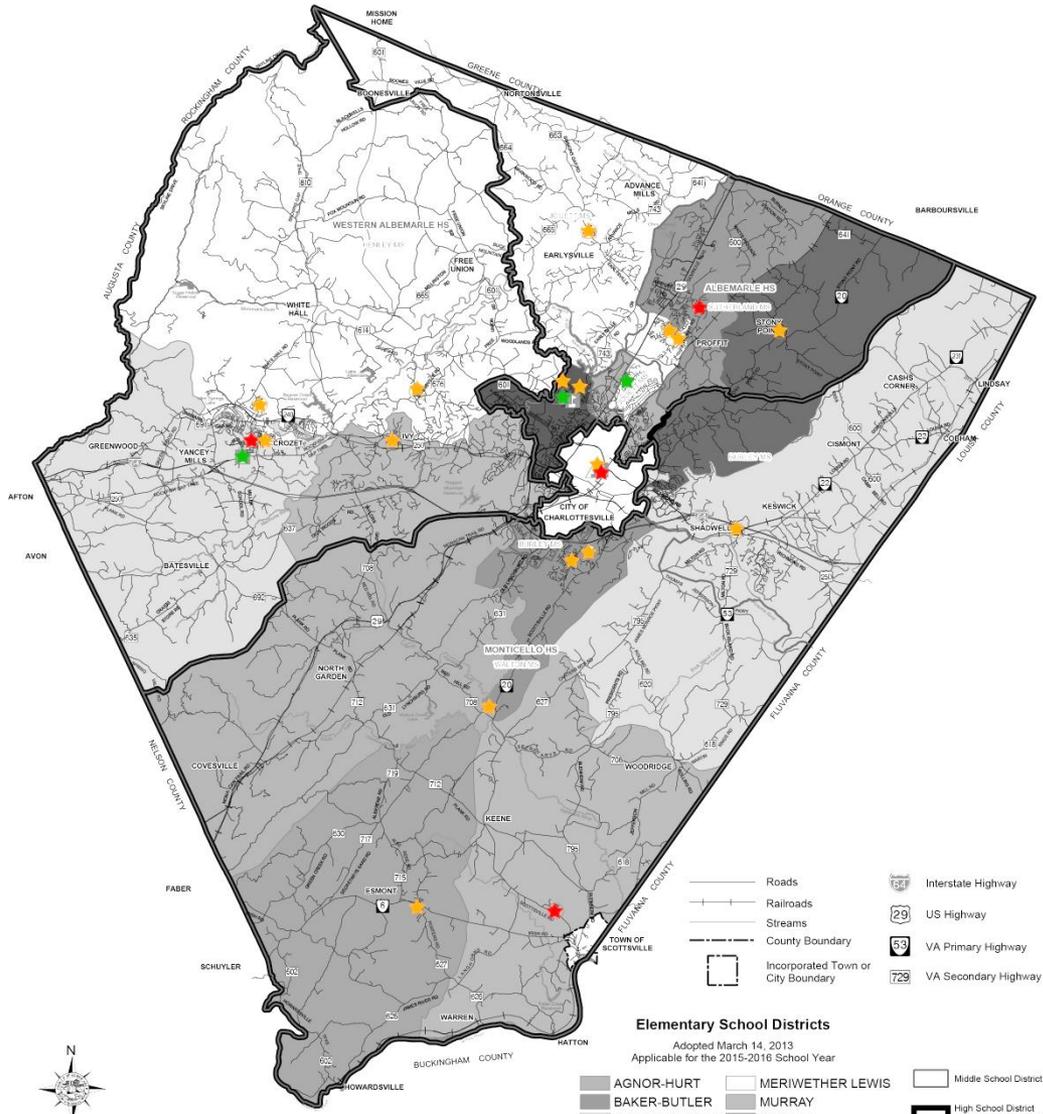


BOND REFERENDUM 2016: SCHOOL PROJECTS OVERVIEW

Board of Supervisors Meeting
May 11, 2016

School Board Requested Projects

| Project | 2017/18 | 2018/19 | Total |
|--|----------------------|----------------------|----------------------|
| Learning Space Modernization | \$ 3,300,000 | \$ 7,600,000 | \$ 10,900,000 |
| Woodbrook Addition, Modernization & Renovation | \$ 15,200,000 | | \$ 15,200,000 |
| WAHS Science Lab Addition & Modernization | \$ 500,000 | \$ 5,500,000 | \$ 6,000,000 |
| School Security Improvements | \$ 1,500,000 | \$ 1,400,000 | \$ 2,900,000 |
| High School Capacity Planning | \$ 500,000 | | \$ 500,000 |
| TOTAL | \$ 21,000,000 | \$ 14,500,000 | \$ 35,500,000 |

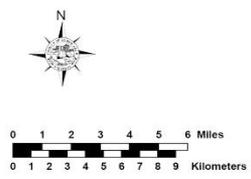


Elementary School Districts

Adopted March 14, 2013
Applicable for the 2015-2016 School Year

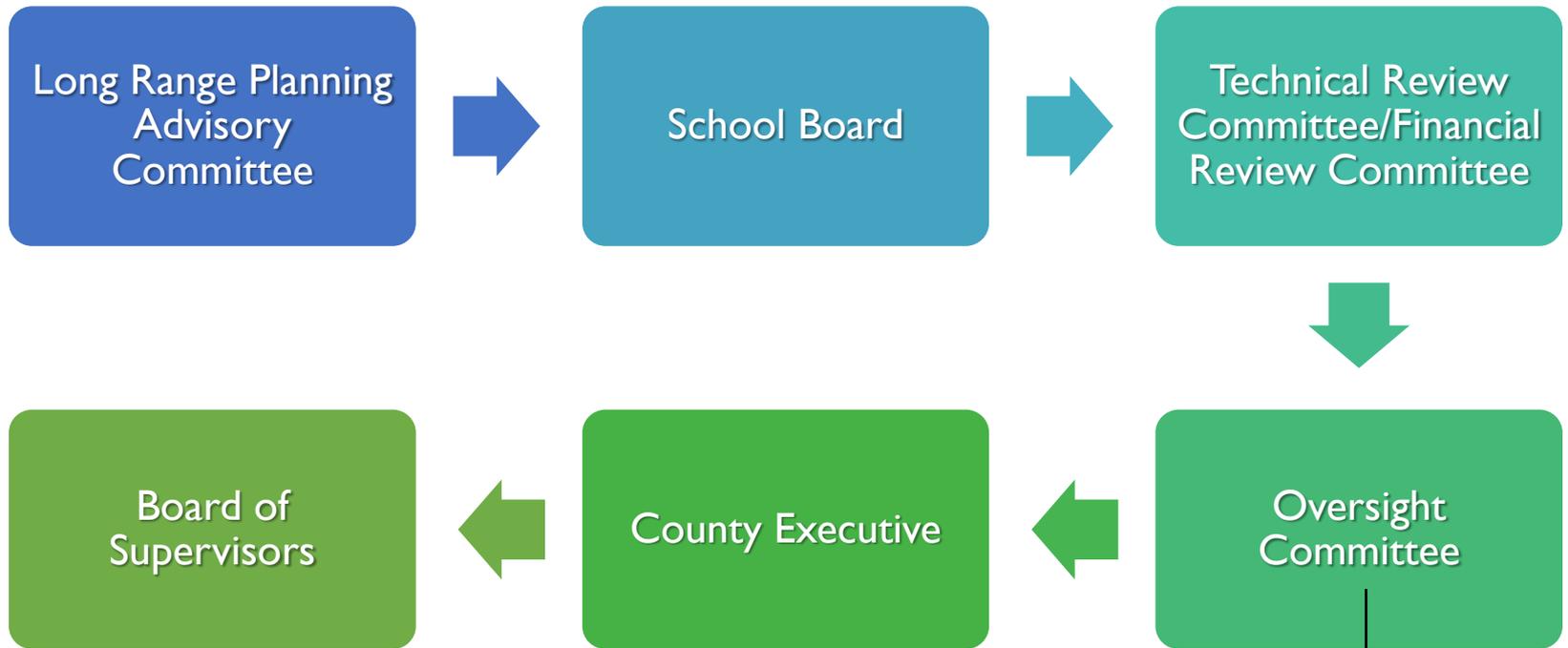
- | | |
|--------------|------------------|
| AGNOR-HURT | MERIWETHER LEWIS |
| BAKER-BUTLER | MURRAY |
| BROADUS WOOD | RED HILL |
| BROWNSVILLE | SCOTTSVILLE |
| CALE | STONE-ROBINSON |
| CROZET | STONY POINT |
| GREER | WOODBROOK |
| HOLLYMEAD | YANNEY |

-  Security Projects
-  Individual School Projects
-  Modernization Projects



Prepared by: Department of Community Development
Office of Geographic Data Services
This Map is for Display Purposes Only.
MAP CREATED: 03/11/2016

CIP Project Review Process



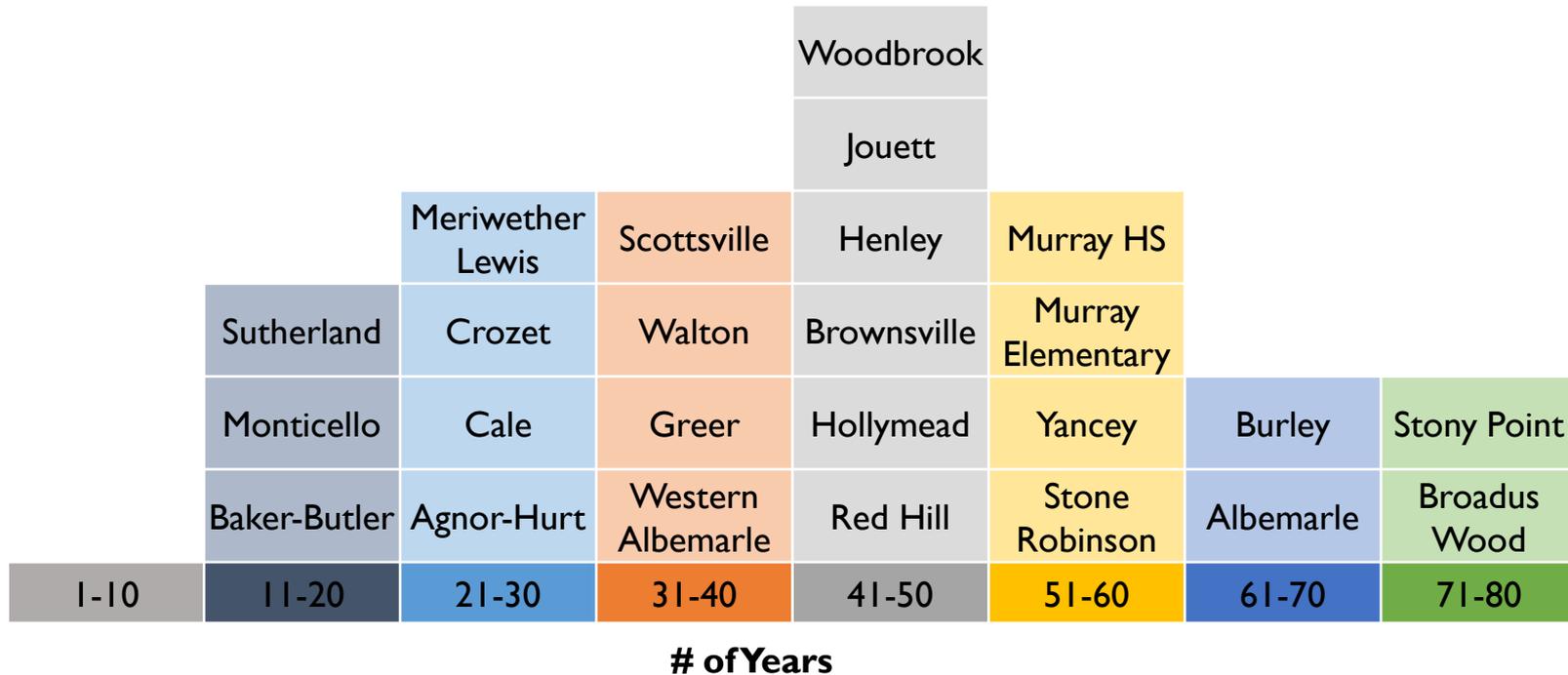
All projects were in OC's
"Preferred Scenario"

Learning Space Modernization

mod·ern·ize *verb* \ 'mä-dər-, nīz \ :
to make (something) modern
and more suited to present
styles or **NEEDS**

Building Age

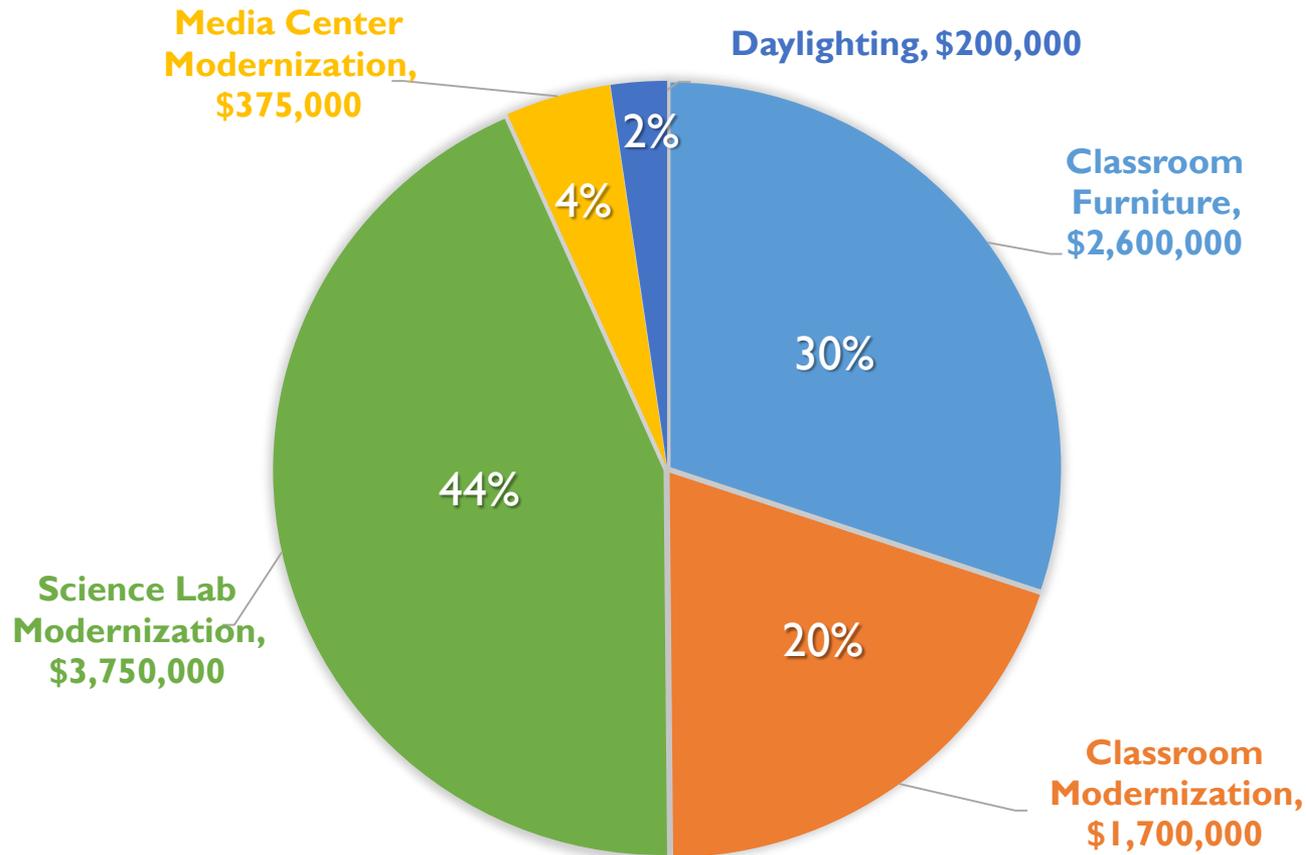
Age of Original Building



Project Categories

- Classroom Furniture Upgrade
- Classroom Modernization
- Media Center Modernization
- Science Lab Modernization
- Daylighting

Project Costs by Categories



*Amounts do not include contingency, design or PM fees

Key Features

- Furniture that promotes movement, flexibility, student comfort/choice
- Lighting
 - Natural Light
 - Dimmable LED Lighting
- Connectivity
 - Outdoors
 - Adjacent Classrooms
 - Hallway
- Adequate Power
- Color
- Updates to finishes, casework and storage

What does the research say?

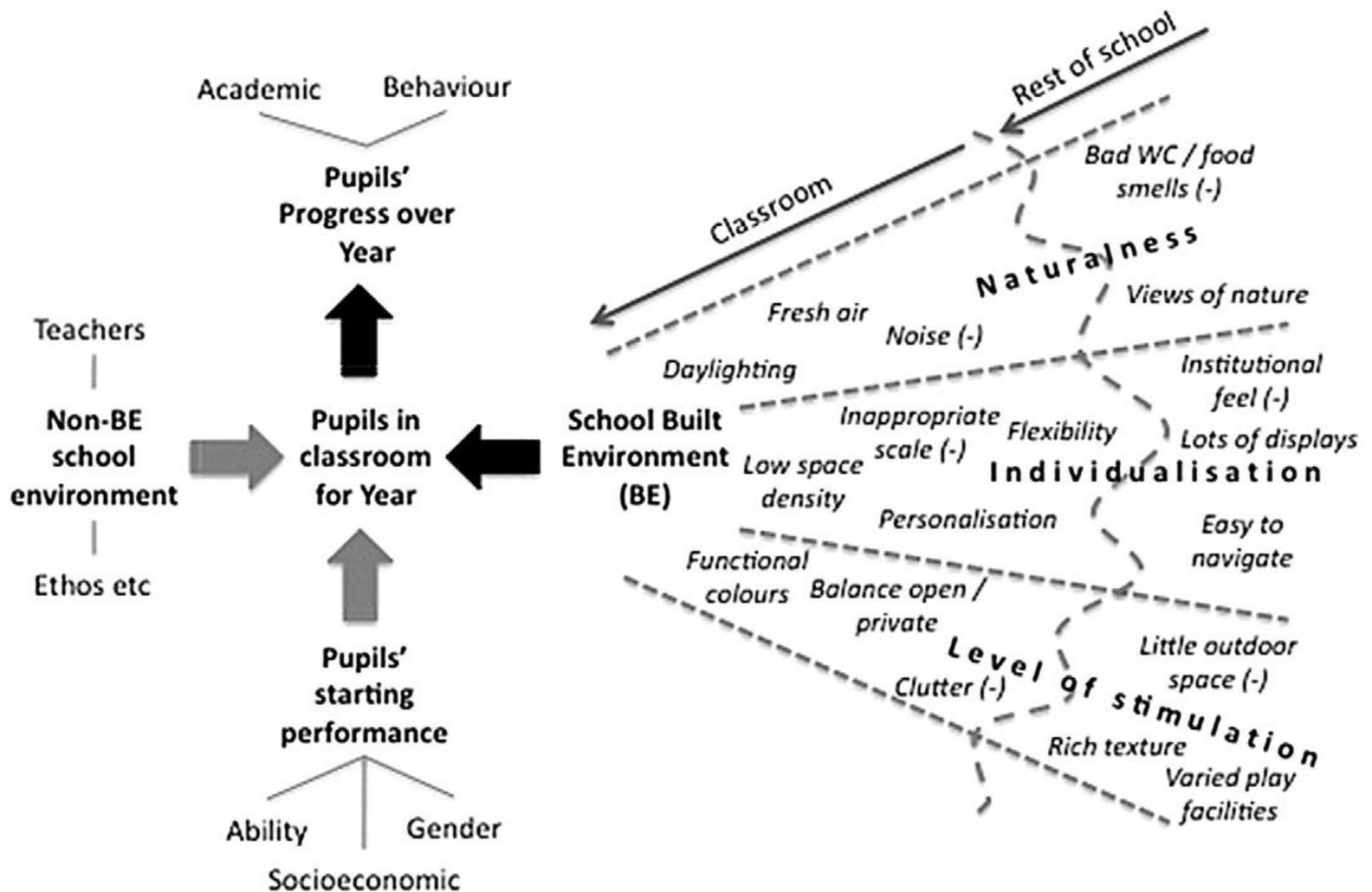
“A holistic, multi-level analysis identifying the impact of classroom design on pupils’ learning”

Peter Barrett, Yufan Zhang, Joanne Moffat, Khairy Kobbacy

School of the Built Environment, Maxwell Building, University of Salford, Salford M5 4WT, UK

- “The aim of this study was to explore if there is any evidence for demonstrable impacts of school building design on the learning rates of pupils in primary schools.”
- Studied 751 Pupils in 34 Classrooms at 7 schools
- The study uses multilevel statistical modeling.





“A holistic, multi-level analysis identifying the impact of classroom design on pupils’ learning”

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“The **most distinctive** classroom characteristics that relate to the improvement of the pupils’ academic achievement via the model”:

| Design Principles | Design Parameters |
|-------------------|-------------------|
| Naturalness | Light |
| Individualism | Choice |
| | Flexibility |
| | Connection |
| Stimulation | Complexity |
| | Color |

Key Finding:

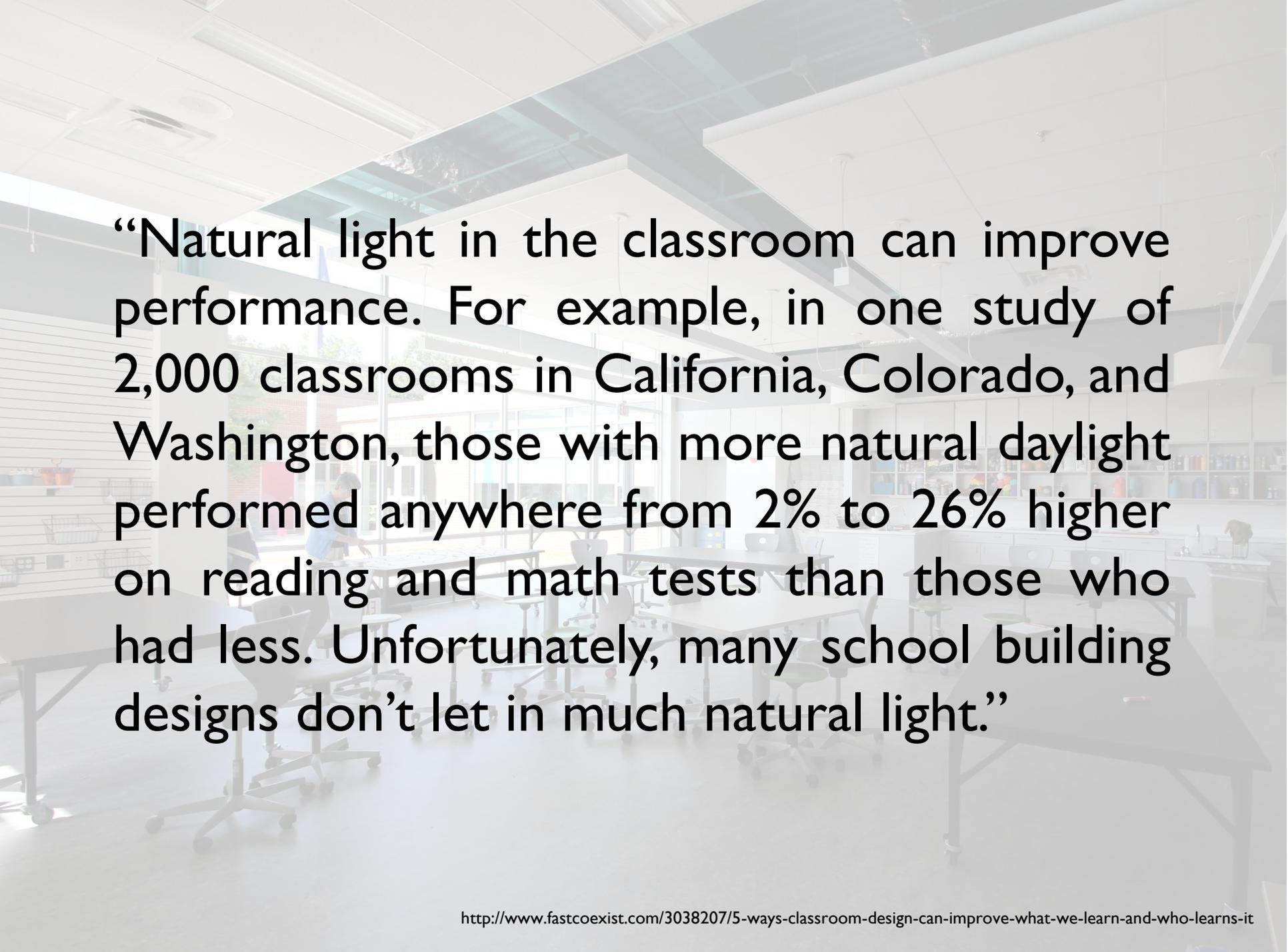
“The impact of these environmental factors alone has also been scaled and appears to account for, in the

order of, **25%** of the learning progression of pupils.”

“A holistic, multi-level analysis identifying the impact of classroom design on pupils’ learning”
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Natural Light:
Agnor-Hurt Elementary Art Room

A bright, modern classroom with large windows and desks. The room is filled with natural light, and the ceiling features recessed lighting. Several desks and chairs are arranged in rows, and a teacher is visible in the background. The overall atmosphere is clean and well-lit.

“Natural light in the classroom can improve performance. For example, in one study of 2,000 classrooms in California, Colorado, and Washington, those with more natural daylight performed anywhere from 2% to 26% higher on reading and math tests than those who had less. Unfortunately, many school building designs don’t let in much natural light.”

Research: Active Seating



“Physical movement increases oxygen supply and is essential for stimulating cognition. When students are physically engaged, specific hormones are released that have a positive influence on brain activity. As a result, attention spans grow longer, and the ability to concentrate improves. Research proves that this relationship between movement and brain activity leads to better academic results.”

“Bodies in Motion, Brains in Motion”

Dr. Dieter Breithecker, German Health & Kinetic Scientist

What do our educators think?



“I just recently was given three student rocking chairs. This simple

change in **seating** has caused specific students to demonstrate higher levels of focus and stronger participation in group discussions. I feel very proud to work in a division where this kind of fluidity and flexibility is embraced.”

Leslie Wills-Taylor
Woodbrook Teacher

“When asked to think about why **modernization** is important in the world of education one simply needs to think about how much our world is changing and at the ever increasing speed and ask why would we want our students in a learning environment that represents what was best in the world of education in 1963.”

Lisa Molinaro
Woodbrook Principal

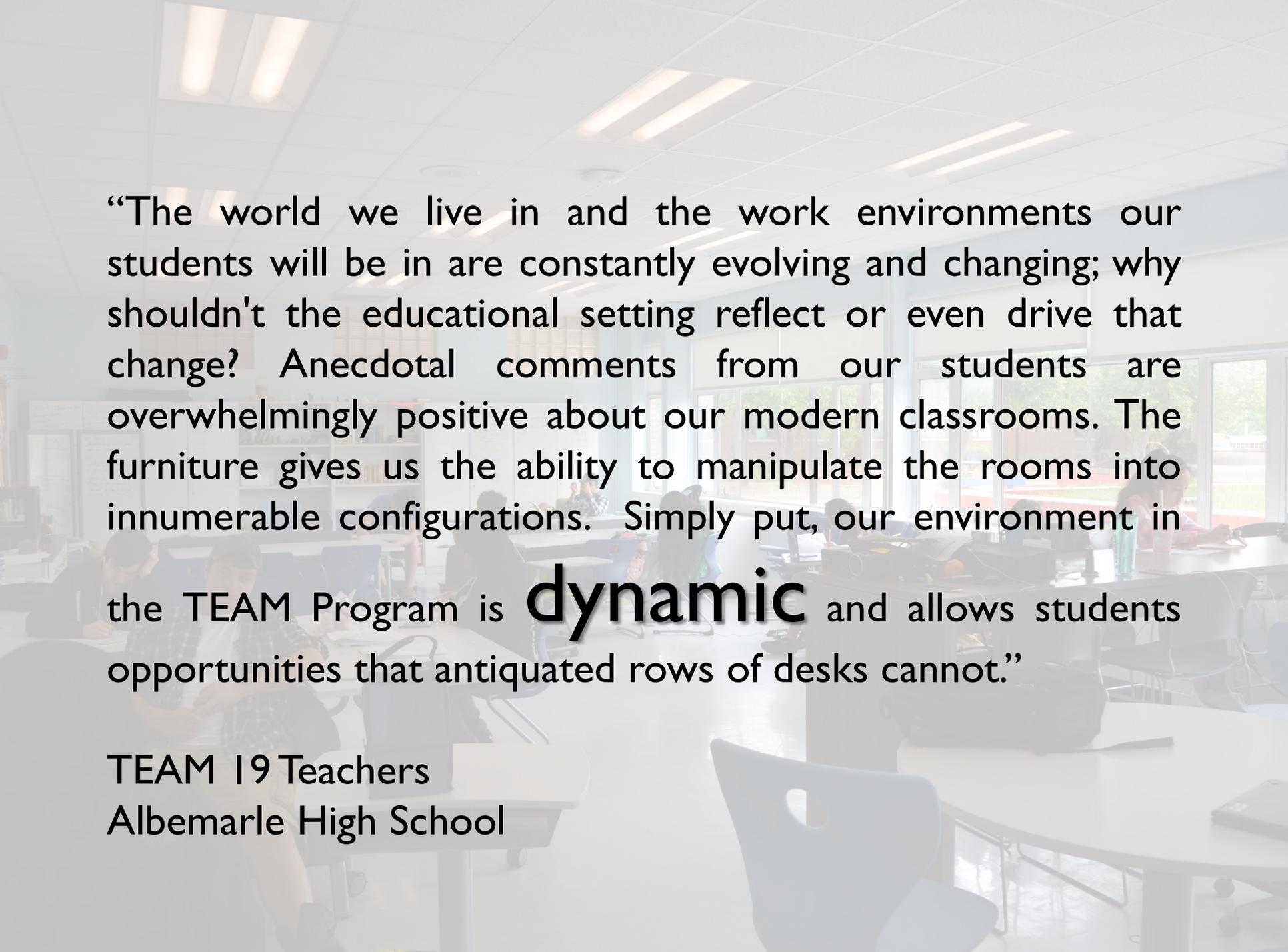
Do Learning Spaces Really Matter?

To answer that question look around your own work space and home and ask yourself does your lighting, comfort, color windows, accessibility to tools, materials and information impact your productivity, your mood, your comfort, your willingness to try new things or inspire you? If we design work or home spaces with our comfort and needs in mind, why wouldn't we do that with the needs of our children in mind when we think of where they spend a part of their days learning.

DeeDee Jones
Cale Principal



Team 19 Classroom
Albemarle High School

A photograph of a modern classroom with students working at tables. The room is bright and open, with large windows and modern furniture. The text is overlaid on the image.

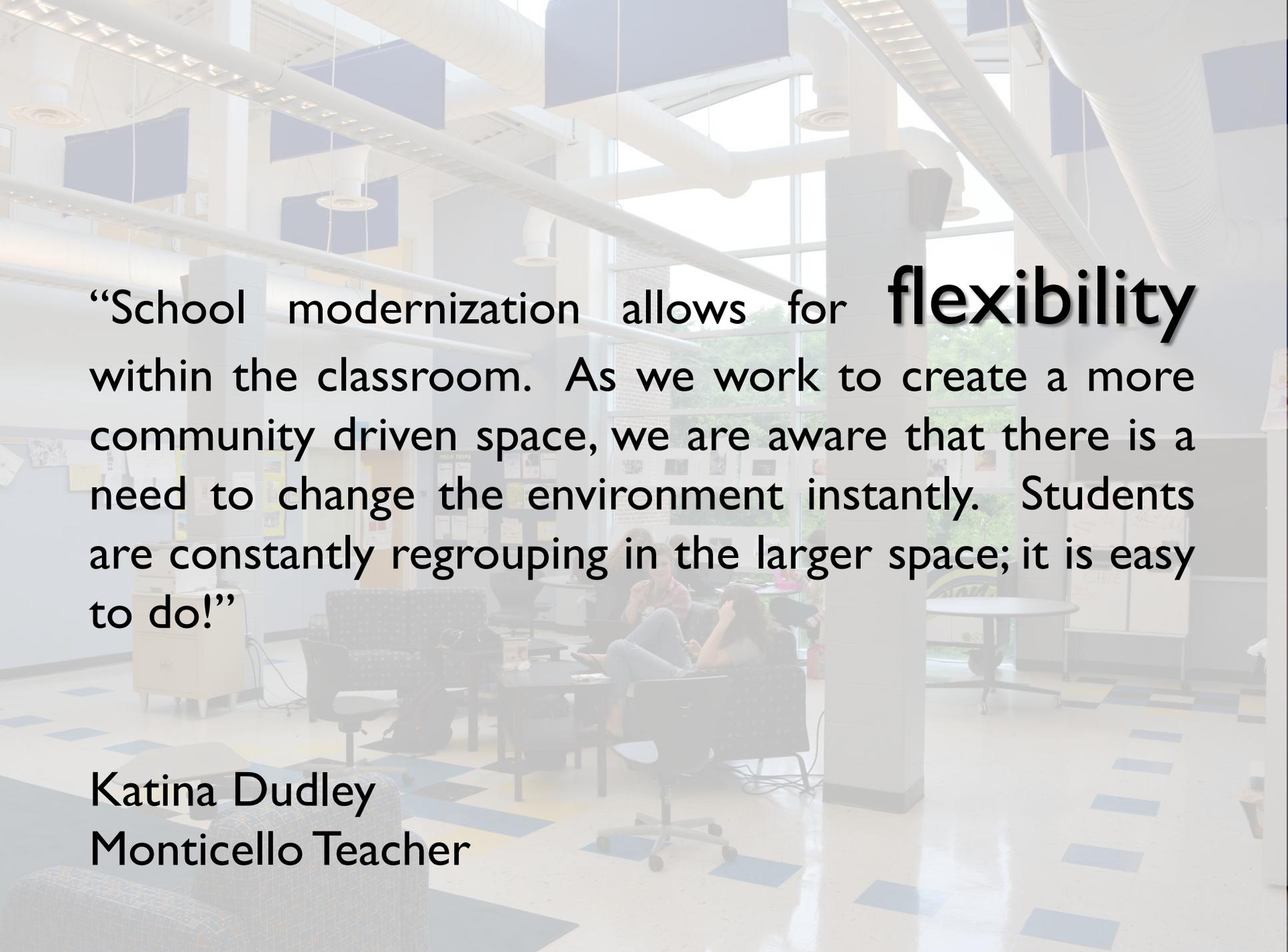
“The world we live in and the work environments our students will be in are constantly evolving and changing; why shouldn't the educational setting reflect or even drive that change? Anecdotal comments from our students are overwhelmingly positive about our modern classrooms. The furniture gives us the ability to manipulate the rooms into innumerable configurations. Simply put, our environment in the TEAM Program is **dynamic** and allows students opportunities that antiquated rows of desks cannot.”

TEAM 19 Teachers
Albemarle High School





HMSA
Monticello High School

A modern school interior with large windows, blue and white decor, and students sitting at tables. The space is bright and open, with a checkered floor and large pillars. The text is overlaid on the image.

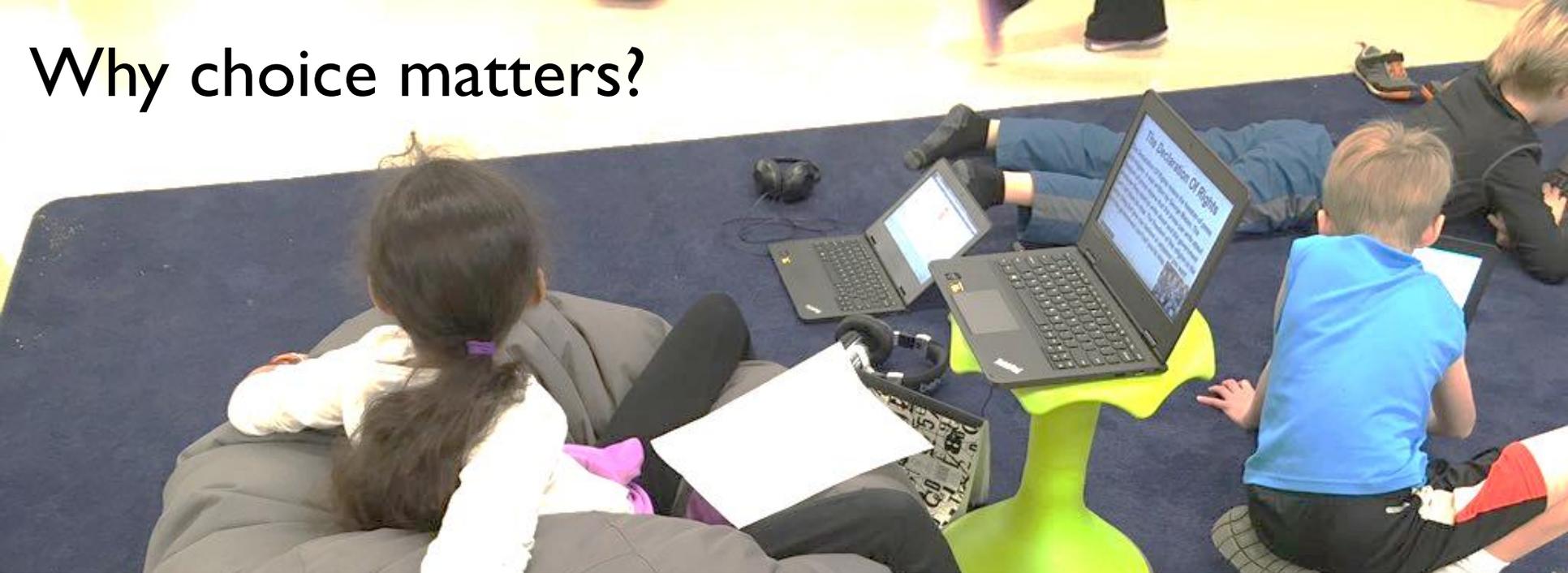
“School modernization allows for **flexibility** within the classroom. As we work to create a more community driven space, we are aware that there is a need to change the environment instantly. Students are constantly regrouping in the larger space; it is easy to do!”

Katina Dudley
Monticello Teacher

“The contemporary classrooms are no longer spaces that have a singular purpose of students going in quietly and sitting at a desk to be given their “lesson” for the day and then leaving. They are now wide open spaces with comfortable furniture spread out that invites all kids to flow freely through them. There is a sense of formal and informal learning taking place. The **choice** of space, furniture, and technology all play a crucial role in promoting a future generation of global thinkers that are comfortable working together and sharing ideas to better one another.”

Mia Shand,
Agnor-Hurt Teacher

Why choice matters?



“Differentiated learning spaces, comfortable seating and multiple technology tools allow students to make important instructional decisions. The more instructional decisions they can make about their own education, the more likely they will be to invest in the everyday process of learning.”

Michael Thorton

Agnor-Hurt Teacher

"As career and tech educators, we aim to develop citizens with valuable skills who will have access to as many future opportunities and successes as possible. Therefore, it's essential to prepare them in the most up-to-date and well-equipped spaces as is possible. Otherwise we risk taking away the competitive edge we hope to provide."

Todd Menadier

Albemarle CTE Teacher

“Modernizing our classrooms will promote individual, group, and whole class explorations into topics that (a) increase workforce readiness skills and (b) help us reach a goal of combining traditional academic paths with career and technical programs.”

Lisa Boyce

Henley CTE Teacher

Feedback from LED Pilot Program

Dimmability is
key feature

Lights have calming effect

Kids seemed calmer and more attentive

Easier to calm kids

Light is less tiring

Student alertness improved

Endurance of kids has improved

Especially beneficial for kids
with sensory and sound issues

No headaches from
flickering fluorescent lighting

Cleaner, brighter, and more inviting

Better color

What does it look like?





MAKE

READ



Work to be done...





Woodbrook Elementary Addition, Renovation & Modernization

Problem

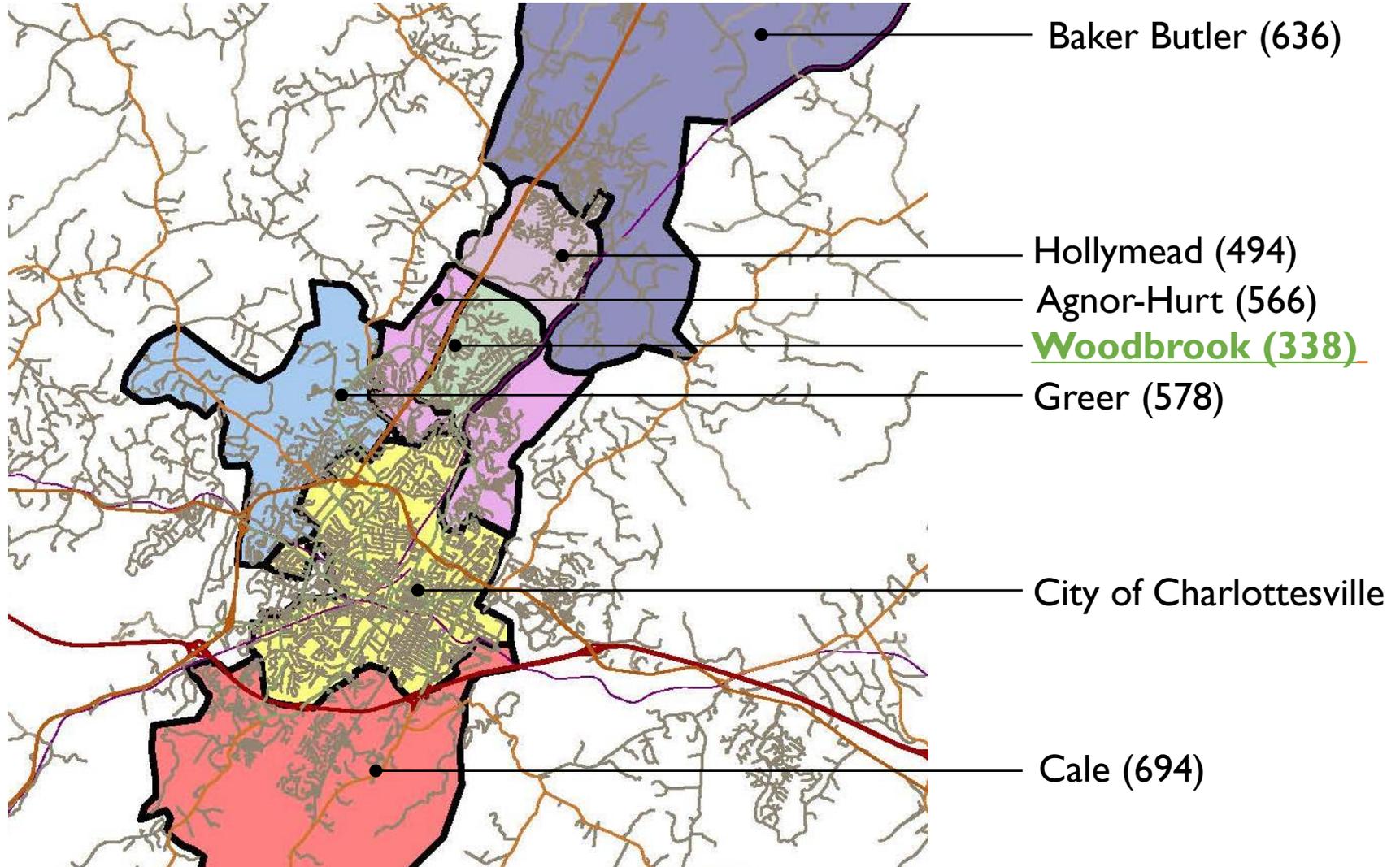
Overcrowding in our Urban Ring Elementary Schools

| School | Building Capacity | Capacity Conflicts | | | | | | | | | | | # of Trailers |
|-------------------|-------------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| | | 15/16 | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | 23/24 | 24/25 | 25/26 | |
| Agnor-Hurt | 566 | 32 | 4 | (6) | (9) | (11) | (28) | (25) | (25) | (36) | (39) | (49) | 0 |
| Greer | 578 | (29) | (65) | (77) | (103) | (95) | (82) | (80) | (80) | (87) | (86) | (94) | 2 |
| Woodbrook | 338 | (18) | (17) | (15) | (25) | (14) | (7) | (9) | (9) | (12) | (10) | (9) | 3 |
| Total | 1482 | 32 | (43) | (104) | (138) | (126) | (78) | (96) | (96) | (115) | (115) | (118) | 5 |

Solution

Addition onto Woodbrook Elementary

- Centrally located
- Addition would benefit multiple schools
- Smallest school in the area



Key: School Name (Building Capacity)

Scope

- Additions (40,000 sf)

- 16 classrooms (2 story)
- 2 SPED Rooms
- Support spaces
- Expanded Cafeteria
- A new Gymnasium and support spaces.

\$12.2M

- Improvements to existing building

- Classroom Modernization & Furniture
- Media Center Modernization
- Kitchen & Serving Line Improvements/Upgrades
- Cafeteria Renovation
- ADA Improvements
- Renovate bathrooms
- Expand admin area
- New signage
- New electrical switch gear

\$3.0M

Size

| Item | # of Classrooms |
|--|-----------------|
| Projected Enrollment Deficit | 8 |
| Current Auxiliary Room Deficit at Woodbrook (Classroom Equivalent) | 3 |
| Unmet Pre-K Need | 3 |
| Growth from Future Developments | 2 |
| Total | 16 |

Addition vs. New School

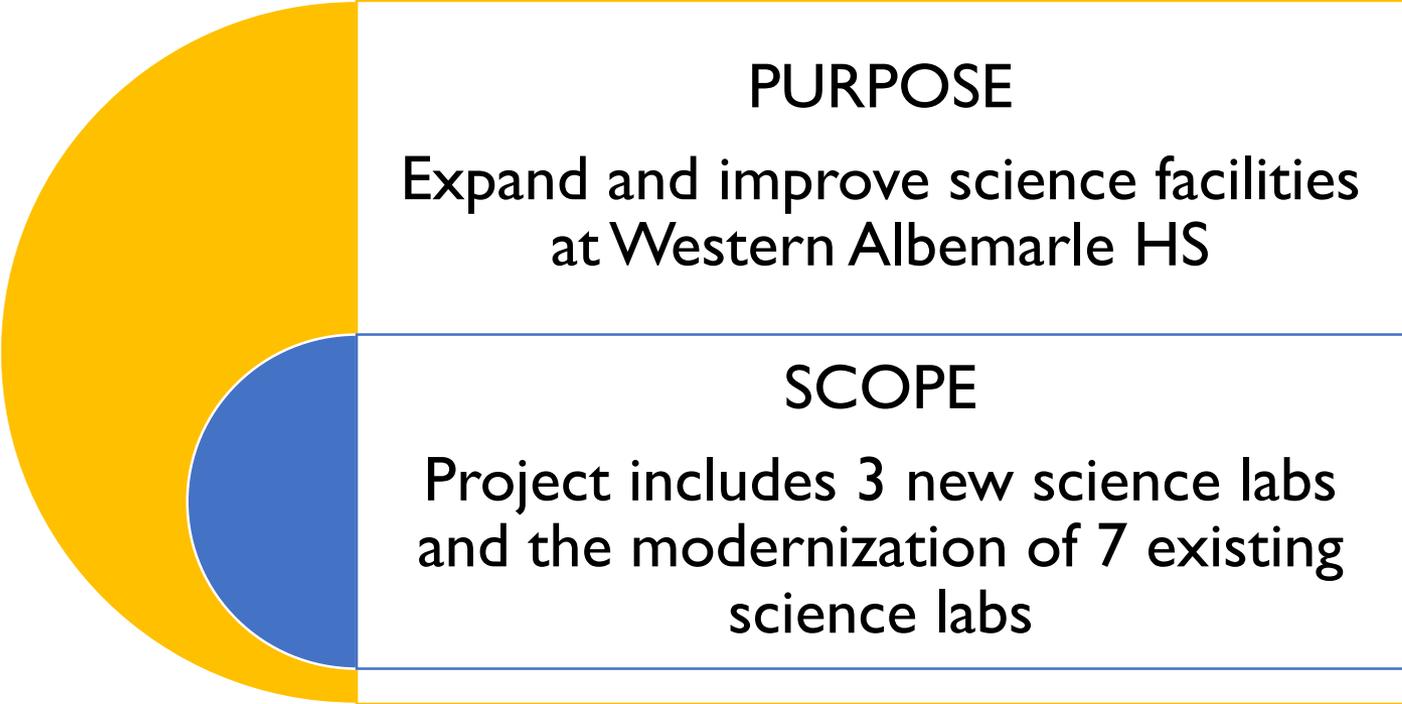
Key Differences:

- Timing
- Costs
- Redistricting Implications

| Project | Schedule | | | | |
|-----------------------------|----------|-----------|-----------|-----------|---------|
| | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21 |
| Woodbrook Addition | Design | Construct | Open | | |
| New School - Proffered Site | | Design | Construct | Construct | Open |

| Project | Class-rooms | Add. Seats | Capital Costs | | Cost/ New Seat | Operating Costs |
|-----------------------------|-------------|------------|---------------|------------------------------|-------------------|-----------------|
| | | | New | Renovation/ Modernization | | |
| Woodbrook Addition | 16 | 288 | \$ 12.2M | \$ 3.0M | \$ 42,361 | \$ 380,000 |
| New School - Proffered Site | 22 | 400 | \$ 18M | n/a | \$ 45,000 | \$1.29M |

Western Albemarle High School Science Lab Additions & Modernization



PURPOSE

Expand and improve science facilities
at Western Albemarle HS

SCOPE

Project includes 3 new science labs
and the modernization of 7 existing
science labs

Science Room Deficit

| Summary | Rooms |
|----------------------------------|------------|
| ESA Science Classroom Need | 4 |
| WAHS Science Classroom Need | 7 |
| Science Classrooms Available | (8) |
| Science Classroom Deficit | (3) |





School Security Improvements

Scope

- Purpose: Create a controlled entrance that forces all visitors to enter through the main office.
- Project began in FY14/15, and after this summer only four schools remain to be completed:
 - Baker-Butler Elementary
 - Scottsville Elementary
 - Henley Middle
 - Murray High School

Work Completed to Date

| Schools | Prior Project | Summer 2014 | Summer 2015 | Summer 2016 |
|----------------|---------------|-------------|-------------|-------------|
| Albemarle | x | | | |
| Greer | x | | | |
| Hollymead | x | | | |
| Broadus Wood | | x | | |
| Brownsville | | x | | |
| Crozet | | x | | |
| Meri. Lewis | | x | | |
| Murray ES | | x | | |
| Stone Robinson | | x | | |
| Stony Point | | x | | |
| Woodbrook | | x | | |
| Yancey | | x | | |
| Burley | | x | | |
| Sutherland | | x | | |
| Walton | | x | | |
| Monticello | | x | | |
| Agnor-Hurt | | | x | |
| Cale* | | | x | |
| WAHS | | | x | |
| Red Hill* | | | | x |
| Jouett* | | | | x |



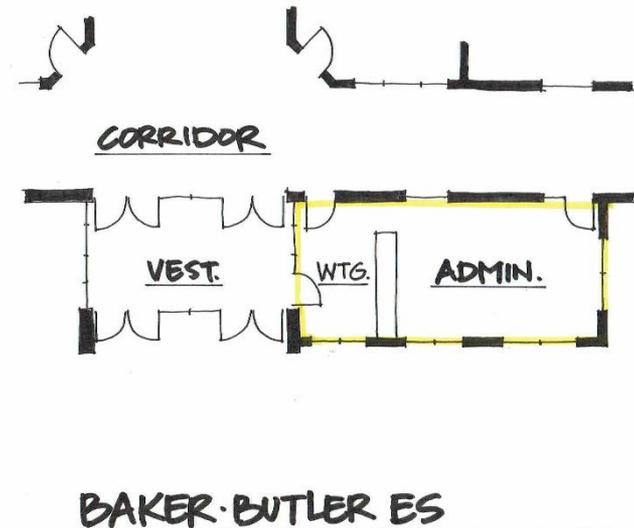
Woodbrook Elementary, 2014

* Small Additions

Front Entrance Additions

A small (>1,000 sf) addition will be added to the front of each school to relocate the admin. suite to front of building.

| School | Cost |
|--------------|---------------|
| Baker-Butler | \$ 610,000 |
| Scottsville | \$ 755,000 |
| Henley | \$ 825,000 |
| Murray HS | \$ 710,000 |
| Total | \$2.9M |



Timing

| School | Original Request | | | Adopted CIP | | | Bond Referendum | | |
|---------------------|------------------|------|------|-------------|------|------|-----------------|------|------|
| | FY17 | FY18 | FY19 | FY17 | FY18 | FY19 | FY17 | FY18 | FY19 |
| Baker-Butler | x | | | | → x | | | x | |
| Scottsville | | x | | | | → x | | x ← | |
| Henley | | x | | | | → x | | | x |
| Murray HS | | x | | | | → x | | | x |

(All projects were postponed by
1 year from the School Board's request)

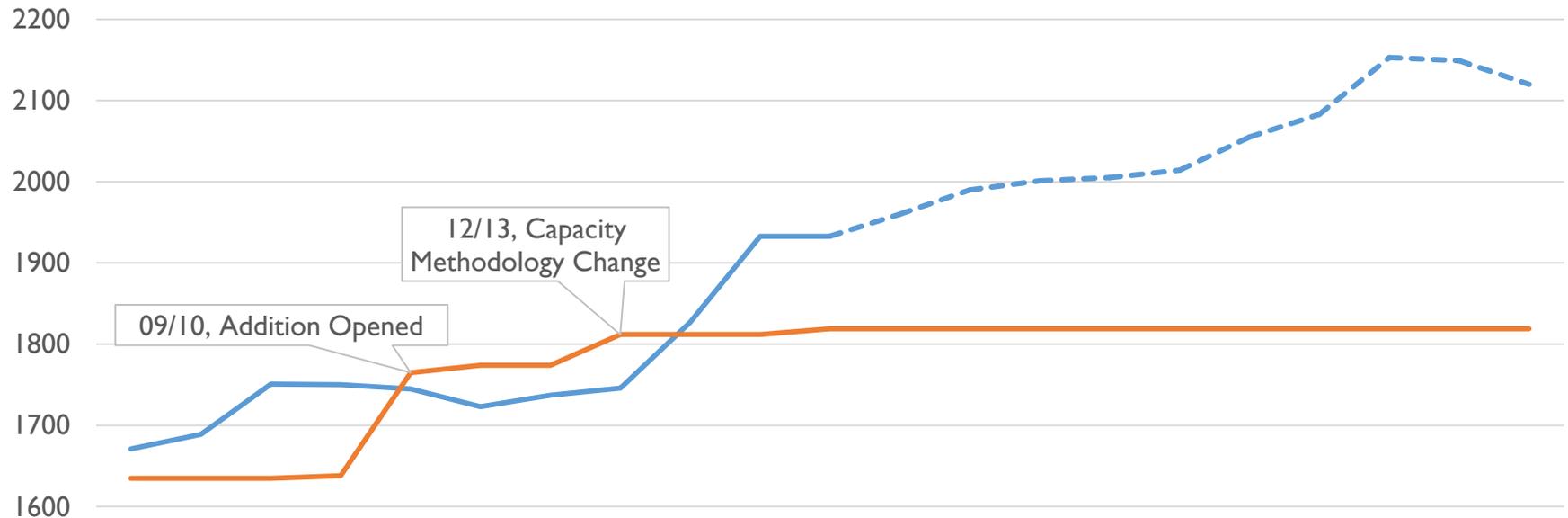
(Scottsville is accelerated by
1 year as compared to adopted CIP)

Main Difference:

Inclusion in a referendum, allows the Scottsville project (\$750,000) to be completed 1 year sooner than the adopted CIP.

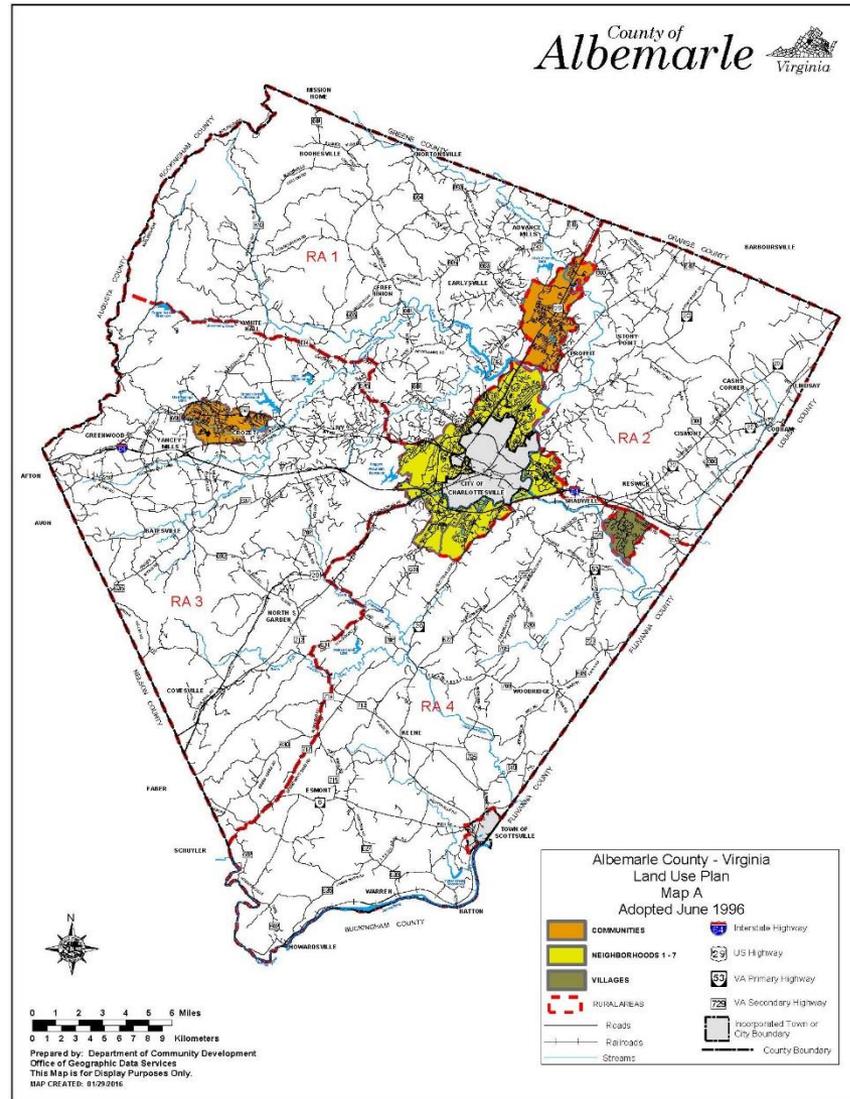
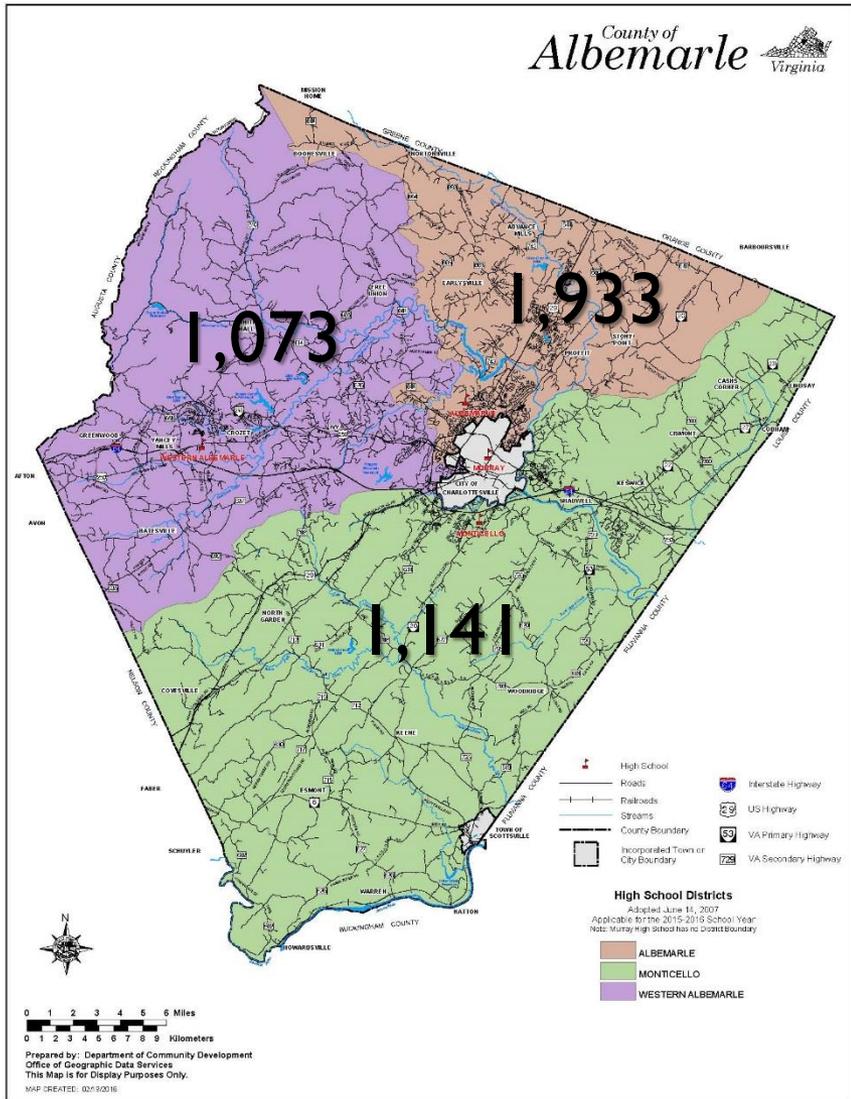
High School Capacity Planning

AHS Past & Future Enrollment



| | 05/06 | 06/07 | 07/08 | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 | 13/14 | 14/15 | 15/16 | 16/17 | 17/18 | 18/19 | 19/20 | 20/21 | 21/22 | 22/23 | 23/24 | 24/25 | 25/26 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Enrollment | 1671 | 1689 | 1751 | 1750 | 1745 | 1723 | 1737 | 1746 | 1827 | 1933 | 1933 | 1960 | 1990 | 2001 | 2005 | 2014 | 2055 | 2083 | 2153 | 2149 | 2120 |
| Capacity | 1635 | 1635 | 1635 | 1638 | 1765 | 1774 | 1774 | 1812 | 1812 | 1812 | 1819 | 1819 | 1819 | 1819 | 1819 | 1819 | 1819 | 1819 | 1819 | 1819 | 1819 |
| Difference | -36 | -54 | -116 | -112 | 20 | 51 | 37 | 66 | -15 | -121 | -114 | -141 | -171 | -182 | -186 | -195 | -236 | -264 | -334 | -330 | -301 |

— Enrollment — Capacity



Planning Study

- Real estate
- Economic modeling
- Land evaluation
- Architectural studies
- Program evaluation
- Repurpose vacated space
- Community input

| Potential Options | Approximate Cost |
|-------------------------|------------------|
| Addition onto Albemarle | \$20M |
| New Comprehensive HS | \$70M |
| Magnet High School | TBD |
| Addition onto WAHS/MHS | TBD |
| Other | TBD |

QUESTIONS?

School Board Requested Projects

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|--|----------------------|----------------------|----------------------|
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