

BUILDING CAPACITY UPDATE

School Board Meeting – May 11, 2017



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



Which classrooms
do we count?

What “class size”
do we use?

What factor
do we use?



ELEMENTARY SCHOOLS - CURRENT

Count #
of classrooms

Sample:

1	2	3	4	5
6	7	8	9	10



ELEMENTARY SCHOOLS - CURRENT

Count #
of classrooms



Reduce for:

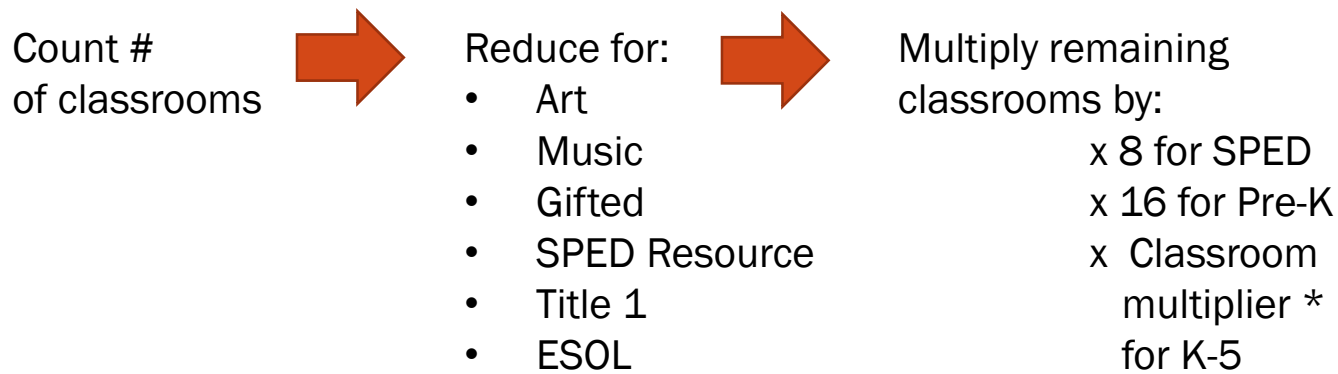
- Art
- Music
- Gifted
- SPED Resource
- Title 1
- ESOL

Sample:

1	2	3	Art	Music
4	5	ESOL	Gifted	SPED



ELEMENTARY SCHOOLS - CURRENT



Sample:

8	20	20	Art	Music
16	20	ESOL	Gifted	SPED

Capacity = 84

*Varies by school



ELEMENTARY SCHOOLS - PROPOSED

Count #
of classrooms



ELEMENTARY SCHOOLS - PROPOSED

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:



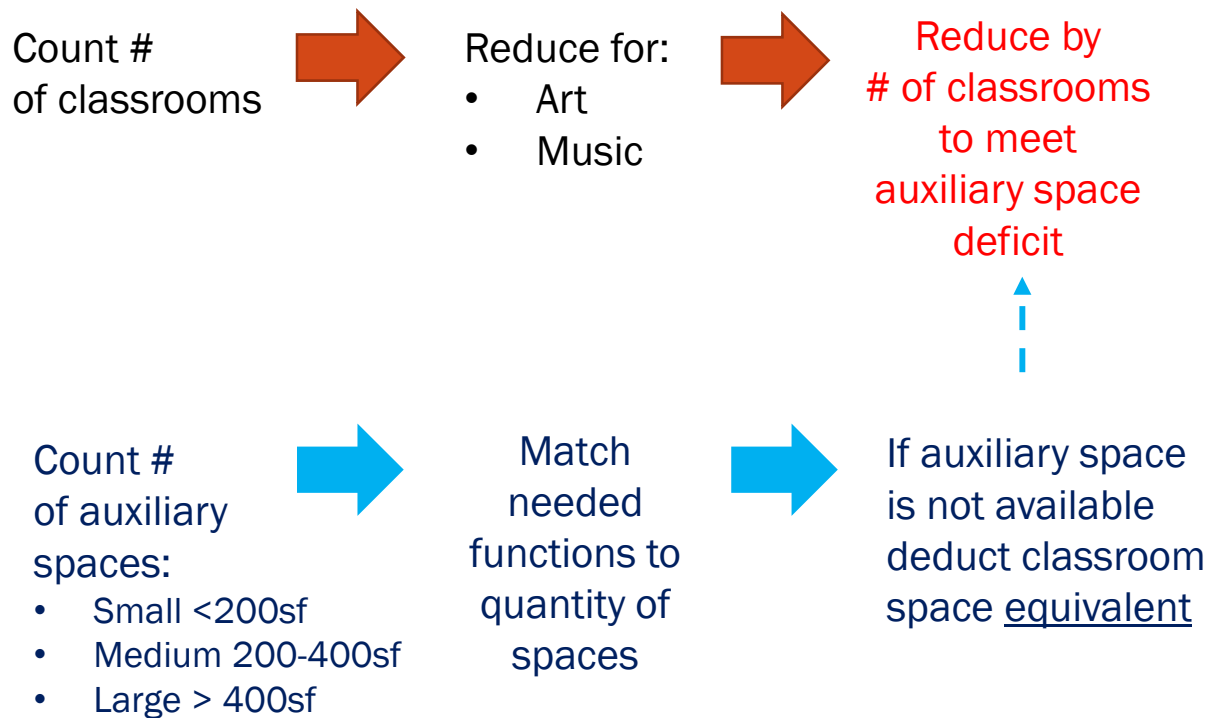
- Small <200sf
- Medium 200-400sf
- Large > 400sf

Match
needed
functions to
quantity of
spaces

*Varies by school



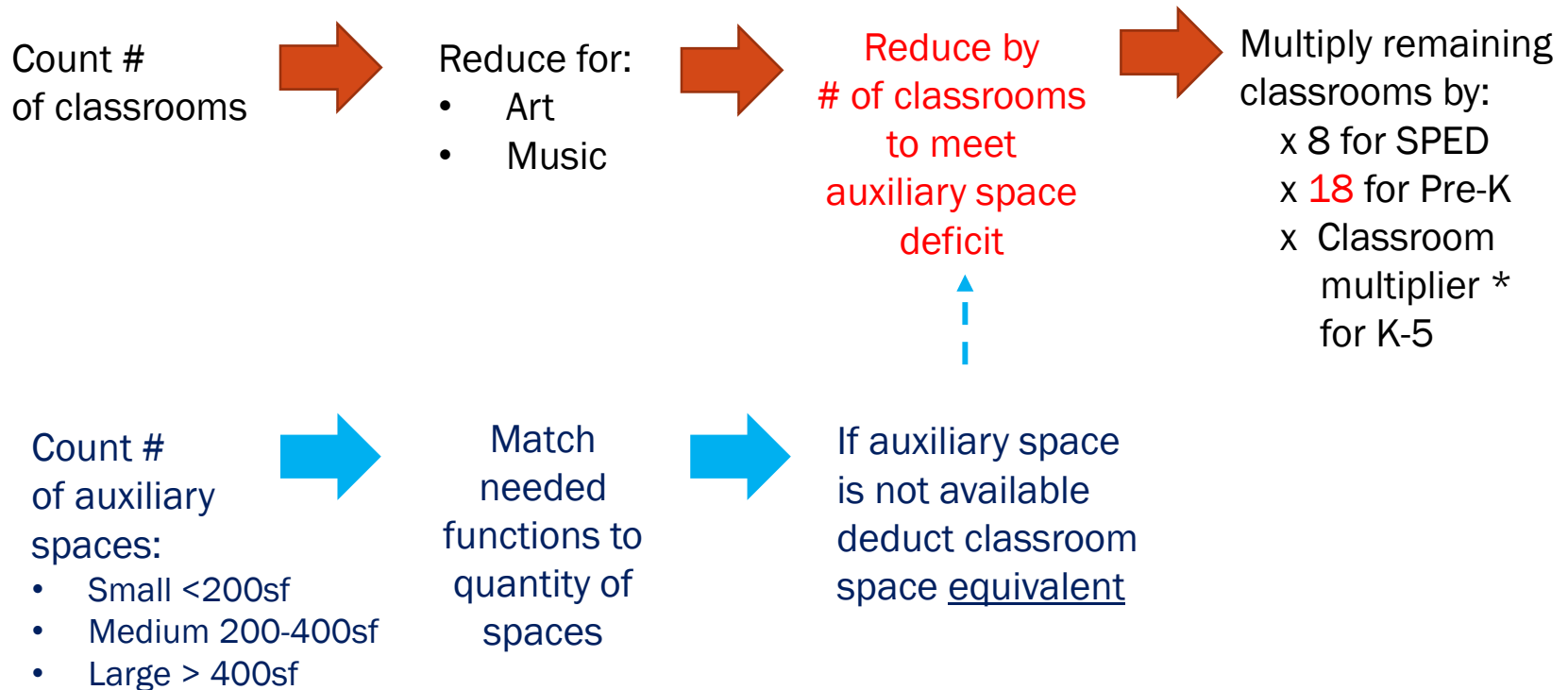
ELEMENTARY SCHOOLS - PROPOSED



*Varies by school



ELEMENTARY SCHOOLS - PROPOSED



*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

See Appendix B

School	Classrooms	Small <200sf	Medium 200sf - 400sf	Large >400sf	Deficit	Figure Used in Capacity Calculation (Classroom Equivalent)																								
Agnor-Hurt	37	6	6	3	4	1	2	3	5	R	K	4	6	7	9	R	R	T	S	RR	EE	A	B	8						
Baker-Butler	37	12	7	0	2	1	2	3	4	7	R	R	R	R	5	6	E	R	T*	S	S	A	8							
Broadus Wood	23	8	1	2	1	1	2	3	4	5	7	E	6	RR	S	8														
Brownsville	42	3	7	4	2	1	3	11	2	7	10	R	T	S	S	4	S	6	RR	A	8	E								
Cale	45	6	6	4	4	1	2	3	4	7	11	5	6	R	T	S	S	RE	RE	RE	RE	R	12	12	9	10	A	B	8	
Crozet	22	5	6	1	2	1	2	7	E	R	3	4	5	6	R	T	S	A	8											
Greer	40	11	7	3	4	1	3	4	6	E	E	R	R	R	10	11	5	7	9	E	T	S	S	K	RR	RE	EE	A	B	8
Hollymead	29	5	6	1	2	1	2	3	E	R	4	5	6	7	R	K	S	A	8											
Meriwether Lewis	24	6	1	2	2	1	3	4	5	7	E	6	RR	S	A	8	12													
Murray	19	2	2	1	2	1	K	3	5	7	4	E	S	R	6	R														
Red Hill	13	4	3	0	3	1	2	6	E	3	5	7	K	4	9	T	RR	S												
Scottsville	13	6	3	2	0	1	2	3	4	5	6	7	9	T	RR	S														
Stone Robinson	34	5	5	4	0	1	2	3	9	E	4	5	7	T	6	8	RR	S												
Stony Point	18	6	1	0	3	1	2	3	4	5	7	6	B	S	R	RT														
Woodbrook	25	3	0	3	5	1	5	7	6	8	S	2	3	4	RR	T	9	E	R	B	12									
Yancey	12	4	2	0	2	1	2	3	4	5	6	7	S	T	RR															

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
- K K
- A A Base
- B B Base
- T TDT/Region10
- S SPED
- R RTI and/or Title
- E ESOL

Minimum Space Requirements

Located in Gym

Exceptions: Greer, MWL, Murray...need to double check locations

Unless shared with guidance or speech, common in smaller schools

or

or

or

or

or

exception -schools <300, gifted space is shared with library, art or other space

or

Small if Brights Stars only, Medium if shared with K-5 FSW or Region 10

or

if >625

if >700 or has a principal intern

Not private, just a workspace in a larger shared space if available

or

Depends where it currently located, because plumbing & Equipment is associated with it

Cannot be shared

Cannot be shared

if F/R > 20%, exc. BRN

or

If < 550, Large ; If >500, Medium x 2

1

or

1

or

2

of areas per space

2 areas *(exception BRN -3); If F/R >40%, 1 area* per 100 students

1

or

1

or

2

of areas per space

1 area* per staff member; small if hourly



EXAMPLE

Room Total

Art

Music

~~Gifted~~

~~SPED Resource~~

~~ESOL~~

~~Title 1~~

Auxiliary Deficit

SPED (SCC)

Pre-K

Pre-K SPED

K-5

BUILDING

CAPACITY

AGNOR-HURT											
2015/16						2017/18					
37						37					
(1)						(1)					
(1)						(1)					
(1)						0					
(1)						0					
(1)						0					
0						0					
						(4)					
<u>Qty</u>	<u>Multiplier</u>				<u>Total</u>	<u>Qty</u>	<u>Multiplier</u>				<u>Total</u>
1	x	8	=		8	0	x	8	=		0
1	x	16	=		16	3	x	18	=		54
0	x	8	=		0	0	x	8	=		0
30	x	18	=		540	28	x	18	=		504
564						558					



Formula for Classroom Multiplier (NO CHANGE):

$$\begin{array}{c} \text{STUDENTS} \\ \boxed{\text{Enrollment}^*} \\ \text{School's Classroom Multiplier} = \frac{\text{Enrollment}^*}{\boxed{(\text{Enrollment}^*/\text{Class Size}^{**}) + (\text{Differential Staff FTE}/2)}} \\ \text{Multiplier} \\ \text{TEACHERS} \end{array}$$

*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

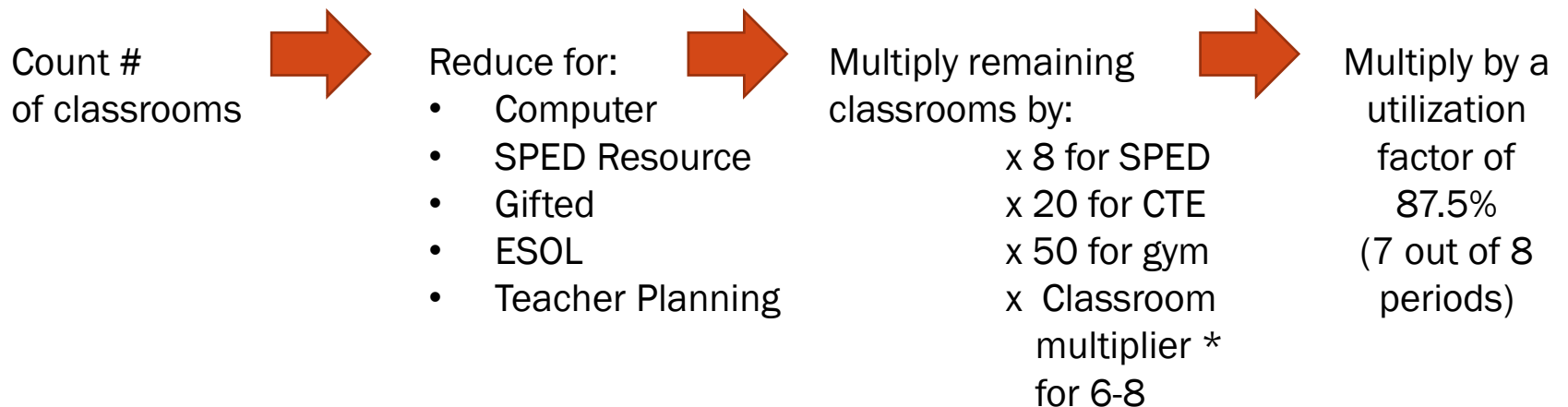
KEY CHANGES

- 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



SCHOOL	Current	Pro- posed	Multi- plier	Construc- tion	SPED/ PK	Art/ Music	Aux- iliary	Net Difference	
Agnor-Hurt	564	558			+12		-18	-6	-1%
Baker Butler	636	636		+20		-20		0	0%
Broadus Wood	380	400					+20	20	5%
Brownsville	744	761	+36		+2	-21		17	2%
Cale	694	679		+19	+4	-19	-19	-15	-2%
Crozet	350	331					-19	-19	-5%
Greer	578	574		+18,+36	-4	-18	-36	-4	-1%
Hollymead	494	496			+2			2	0%
Meriwether Lewis	407	420			+13			13	3%
Murray	296	289	+14				-21	-7	-2%
Red Hill	178	162			+2		-18	-16	-9%
Scottsville	178	208	+9	+19	+2			30	17%
Stone Robinson	540	570			-10		+40	30	6%
Stony Point	244	236			-8			-8	-3%
Woodbrook	338	304			+2		-36	-34	-10%
Yancey	142	144			+2			2	1%
Elementary Total	6,763	6,768	+59	+112	+19	-78	-107	+5	-.1%

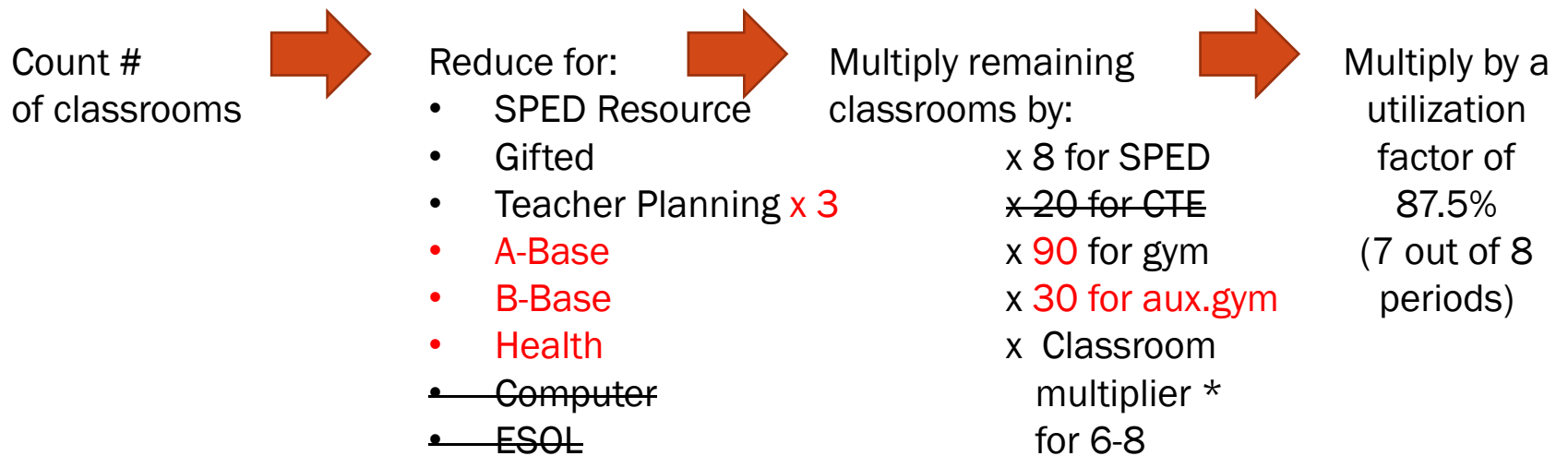
MIDDLE SCHOOLS - CURRENT



*Varies by school



MIDDLE SCHOOLS - PROPOSED



*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

Seat difference 75% vs. 87.5%*	
Burley	51
Henley	98
Jouett	51
Sutherland	43
Walton	28

*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



Middle School	Current	Pro- posed	Multi- plier	SPED, Comp. CTE, ESOL	Construc- -tion	Gym	Utili- zation Factor/ Misc.	Difference	
Burley	716	717				+17	-16	+1	0%
Henley	949	999		+28	+23	+17	-18	+50	5%
Jouett	733	717		-17		+17	-16	-16	-2%
Sutherland	737	653	-28	-35		+17	-38	-84	-11%
Walton	534	499		-35		+17	-17	-35	-7%
Total	3,668	3,585	-28	-59	+23	+85	-105	-83	-2%





QUESTIONS?

