



Mountain Brook Schools Facility Assessment & Master Plan



Part 1: Overview & Common Issues

Part 2: Individual School
Assessments & Plans

Part 3: Preliminary Cost Estimates

Part 1: Overview

“Build, Operate and maintain facilities which will accommodate all programs and curricula of the school system.”

1. Physical Condition Assessment
 - On-Site Observations
 - Interviews with Faculty & Facilities Personnel
 - Work Session with Mechanical Engineer

2. Program Assessment
 - Interviews with School Administrations & Faculty
 - Statistical Comparisons

3. Development of Graphic Master Plans
 - Iterations Reviewed with School Administrations

4. Development of Preliminary Cost Estimates
 - Historic Cost Data
 - Previous Cost Estimates

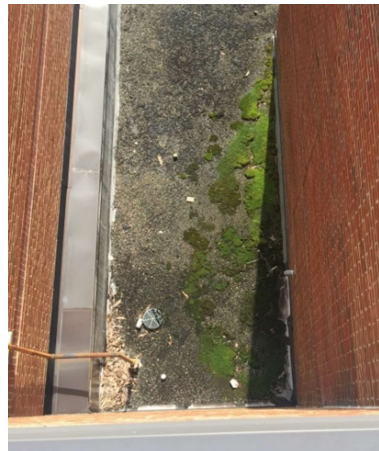
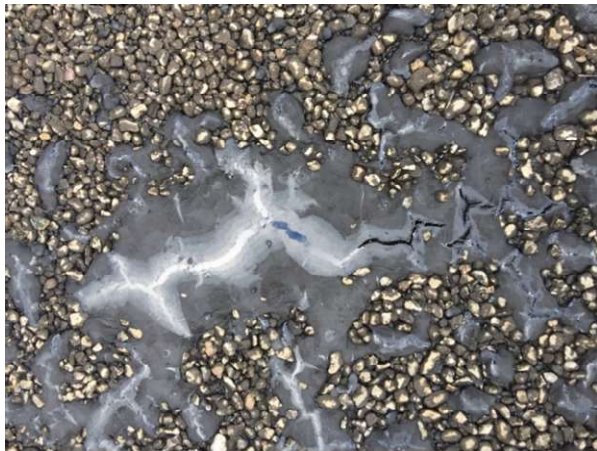
The Good

- Well maintained facilities
- Heritage & Character
- Neighborhood Integration
- Problems can be fixed

The Bad

- Aging Facilities
- Landlocked Sites
- Inefficient Layouts
- Expensive to Update

The Ugly



Mountain Brook Schools Facility Assessment & Master Plan

Physical Condition Assessment

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Facility Condition Assessment

1. Routine Scheduled Replacements

- Roofing
- Mechanical Replacements
- Carpet
- Paint
- Athletic Surfaces

Facility Condition Assessment

2. Other Reoccurring Issues

- Sprinklers
- Restrooms
- Mechanical Upgrades
- Lighting

Roofing

- 243,000 Square Feet
- \$18 Square Foot
- \$4.4 million

Mechanical - Building Automation System (BAS)

- Existing system no longer supported
- New Control System: \$175,000

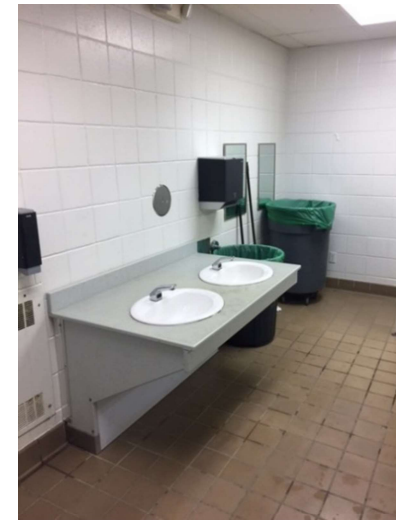
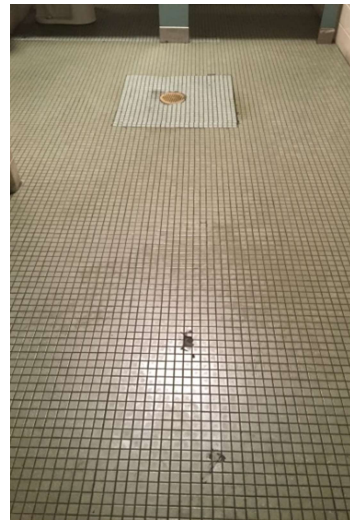
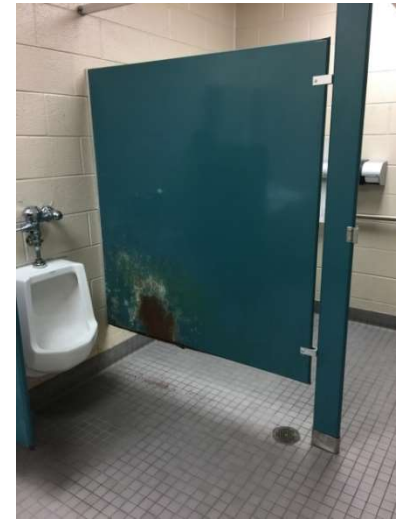
Mechanical Replacements

- Need to be engineered
- Fix Comfort Problems
- Fresh Air Requirements
- Building Automation Controllers
- Coordinated with Roofing & Lighting Upgrades
- Much Higher Cost: \$9.6 million

Sprinklers

- Typical in new school construction
- 578,000 square feet
- \$2.05 million

Restrooms



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Restrooms

- Odor Problems
- Old Plumbing Fixtures & Partitions
- Accessibility Issues
- \$2.8 million

LED Retrofit

- Broad Range of Fluorescent
- Industrial Lighting Study:
\$5.2 million savings over 10
years
- Potential Electrical Capacity
- Offsetting Mechanical Costs

Program Assessment

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School Trends

- Flexibility
- STEM “Lab” Spaces
- Better Security
- Special Needs Growth
- Technology

Infrastructure for Technology

- New CAT6 Data Wiring (\$600,000)
- Generators (\$540,000)
- Charging Stations (\$300,000)

Median Growth in School Size: 1995-2014*

- Elementary School: 80 sf / Student
- Middle School: 45 sf / Student
- High School: 30 sf / Student

* School Planning & Management, February 2015

Elementary School Size Comparisons

SCHOOL SPACE COMPARISONS

	Mountain Brook Elementary		Crestline Elementary		Brookwood Forest Elementary		Cherokee Bend Elementary	
	Square Feet	S.F. / Student	Square Feet	S.F. / Student	Square Feet	S.F. / Student	Square Feet	S.F. / Student
	486 Students		735 Students		531 Students		458 Students	
Support Spaces								
Lunch Room	3,049	6.27	4,259	5.8	2,382	4.5	2,457	5.4
Serving Line	291	0.60	382	0.5	197	0.4	111	0.2
Kitchen	1,670	3.44	3,450	4.7	1,145	2.2	1,544	3.4
Gymnasium	5,400	11.11	5,097	6.9	5,465	10.3	5,504	12.0
Auditorium Seating Area	2,393	4.92	3,170	4.3	2,468	4.6	2,496	5.4
Auditorium Stage	758	1.56	1,131	1.5	1,099	2.1	1,003	2.2
Library / Media Center	4,529	9.32	3,391	4.6	2,755	5.2	3,810	8.3
Administration	1,203	2	2,749	3.7	1,286	2	1,695	3.7
Existing Gross Area	97,939	201.5	113,110	153.9	75,668	142.5	88,537	193.3
Proposed Gross Area			129,544	176.3	86,313	162.5		
2015 SouthEast Elementary Median	90,000	182.2	90,000	182.2	90,000	182.2	90,000	182.2

High School & Junior High Size Comparisons

SCHOOL SPACE COMPARISONS	Mountain Brook Junior High		Mountain Brook High School	
	Square Feet	S.F. / Student	Square Feet	S.F. / Student
		1,060 Students		1,054 Students
Existing Gross Area	156,786	147.9	175,945	166.9
Proposed Gross Area	178,062	168	187,769	178
2015 National Median	118,500	173	173,727	180

Individual School Assessments & Plans

Mountain Brook Schools Facility Assessment & Master Plan

Mountain Brook Elementary



Year Built: 1929

Additions: 1939, 1949, 1950, 1961, 1963, 1989, 1996, 2001, 2006

Area: 93,944 square feet

Mountain Brook Schools Facility Assessment & Master Plan

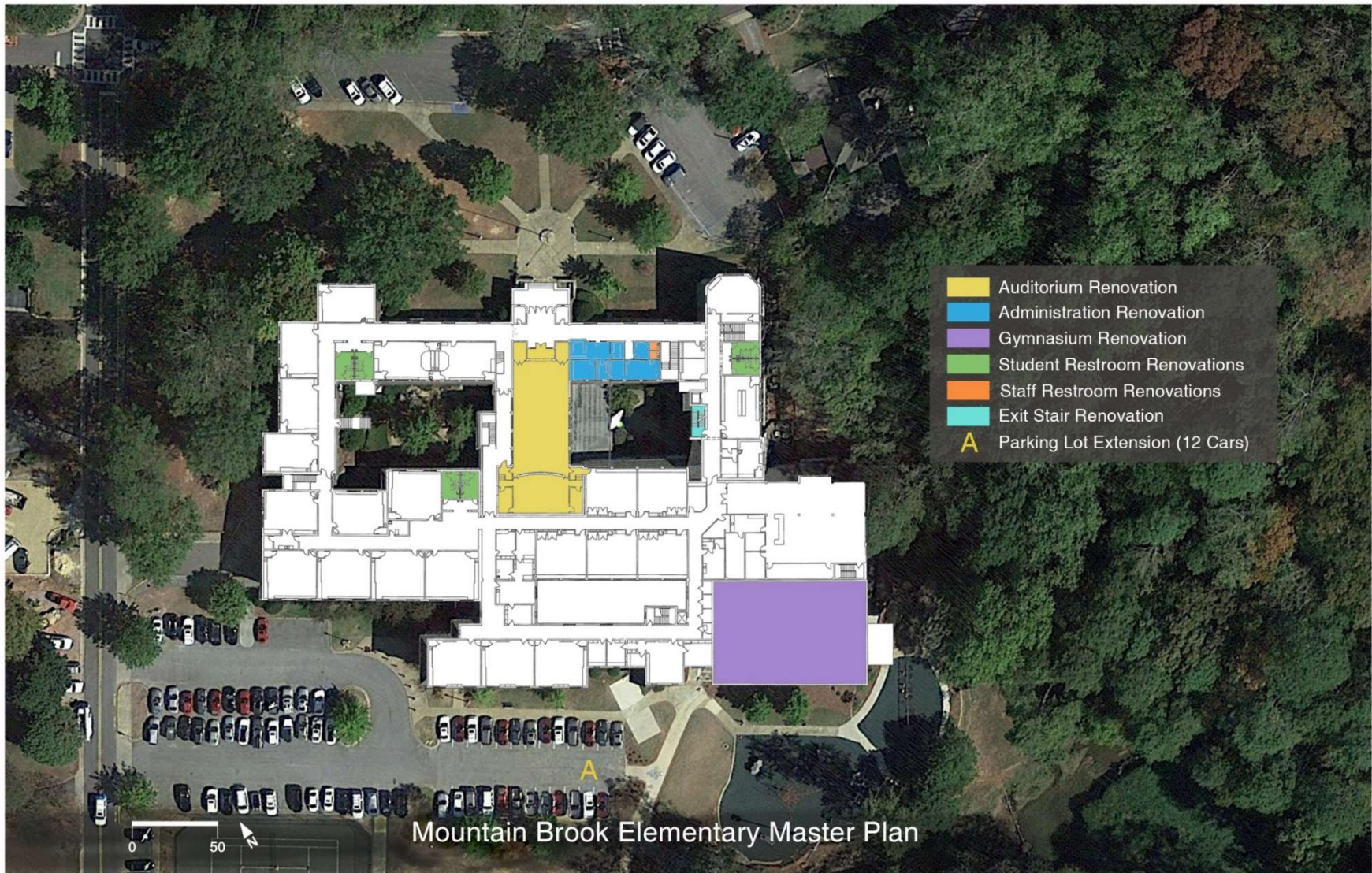
Elementary School Size Comparisons

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Mountain Brook Elementary

- Unified Paint & Carpet Plan
- Auditorium Renovation
- Administration Renovation
- Gymnasium Renovation
- Below Grade Waterproofing
- Window Replacements



Mountain Brook Schools Facility Assessment & Master Plan

Cherokee Bend Elementary



Year Built: 1969
Additions: 1977, 1993, 1999
Area: 88,537 square feet

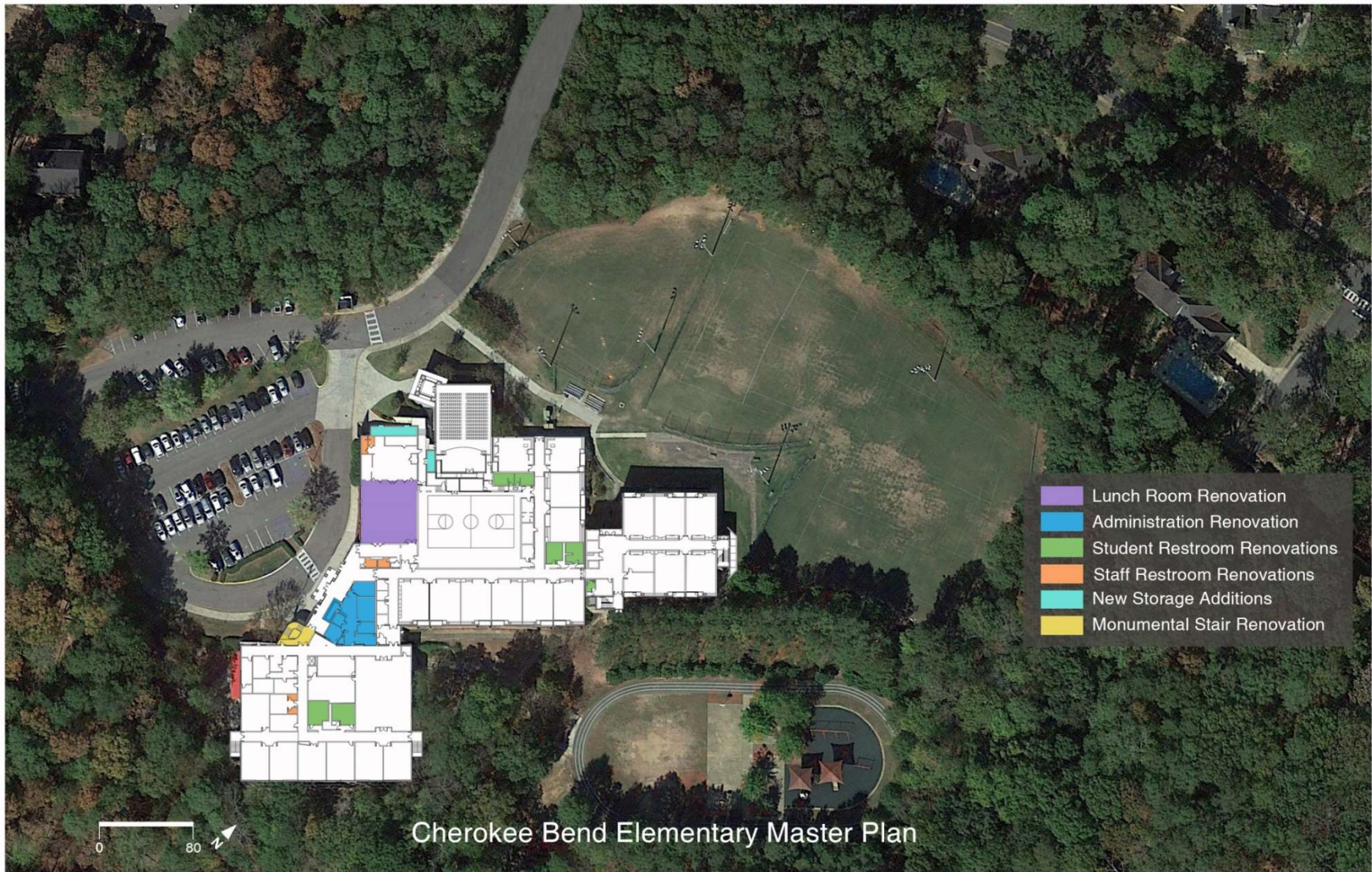
Elementary School Size Comparisons

SCHOOL SPACE COMPARISONS

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Cherokee Bend Elementary

- Lunch Room Renovation
- Administration Renovation
- Restroom Renovations
- Monumental Stair Renovation & Waterproofing
- New Storage Rooms



Mountain Brook Schools Facility Assessment & Master Plan

Crestline Elementary



Year Built: 1946
Additions: 1969, 1986, 1990, 1995, 2013
Area: 113,110 square feet

Mountain Brook Schools Facility Assessment & Master Plan

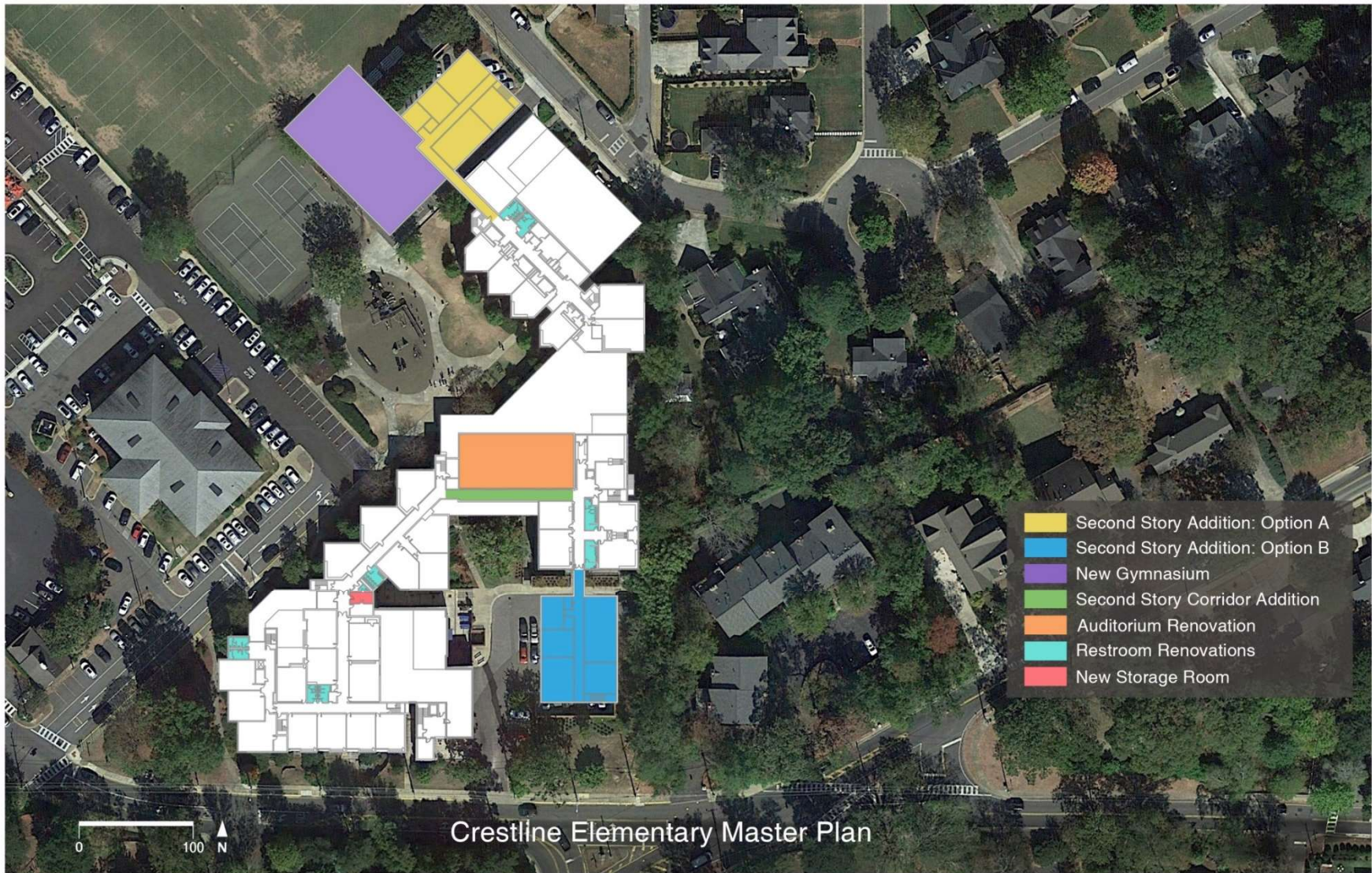
Elementary School Size Comparisons

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Crestline Elementary

- New Gymnasium
- Auditorium Renovation
- Restroom Renovations
- New “STEM” Labs
- New Band Room
- New Teacher Workroom
- New Instructional Coaches Space
- Fix HVAC Comfort Problems (18 Classrooms)
- Extensive Re-Roofing Needed



Mountain Brook Schools Facility Assessment & Master Plan

Brookwood Forest



Year Built: 1964
Additions: 1970, 1989, 1995, 1999
Area: 75,190 square feet

Mountain Brook Schools Facility Assessment & Master Plan

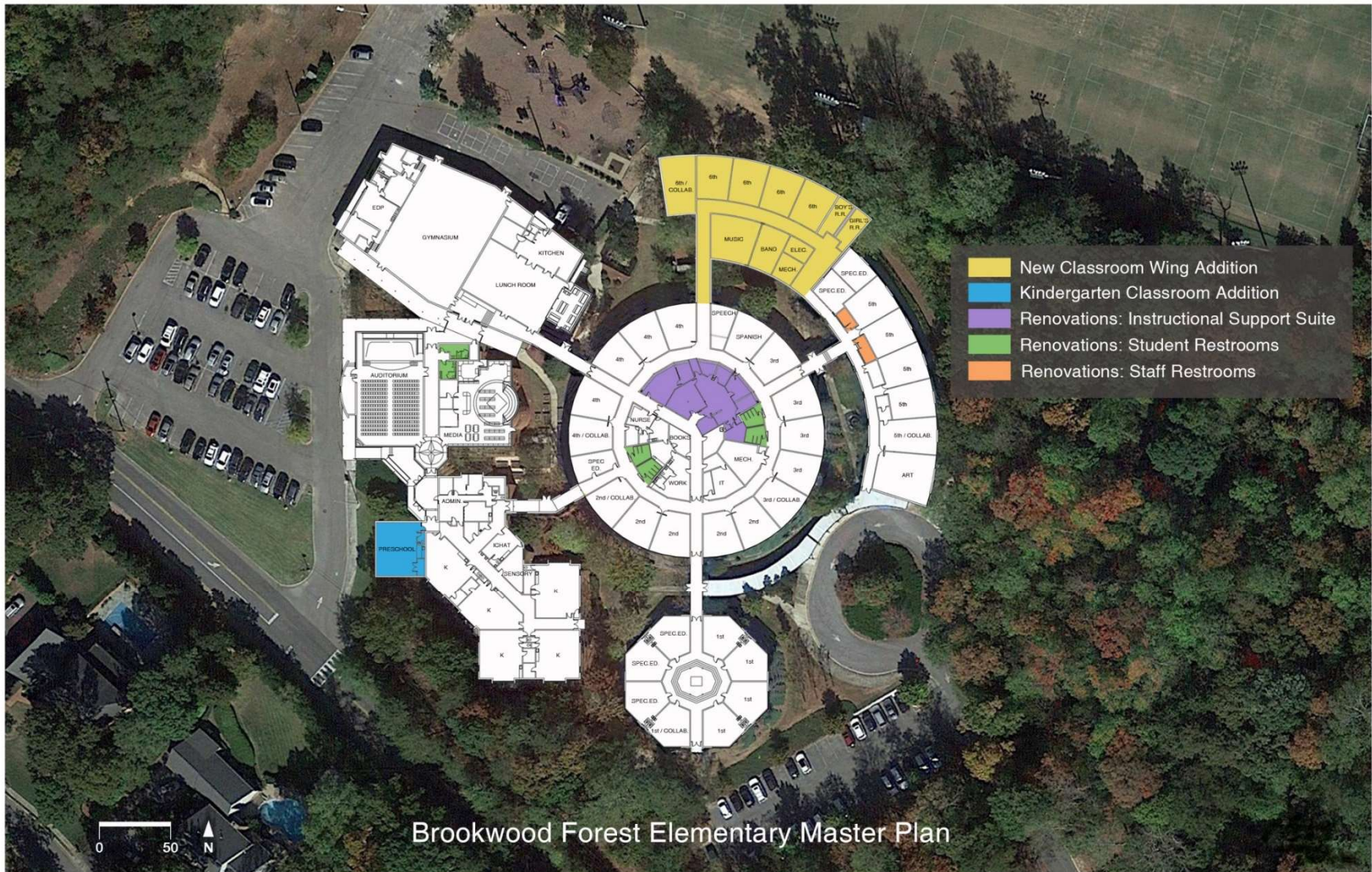
Elementary School Size Comparisons

SCHOOL SPACE COMPARISONS

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Brookwood Forest

- School is at full capacity.
- New STEM Lab
- Four New Classrooms
- New Preschool Room
- Restroom Renovations
- Additional Teacher Restrooms
- Fix HVAC Problems in 200, 300 & 500 wings.



Mountain Brook Schools Facility Assessment & Master Plan

Mountain Brook Junior High

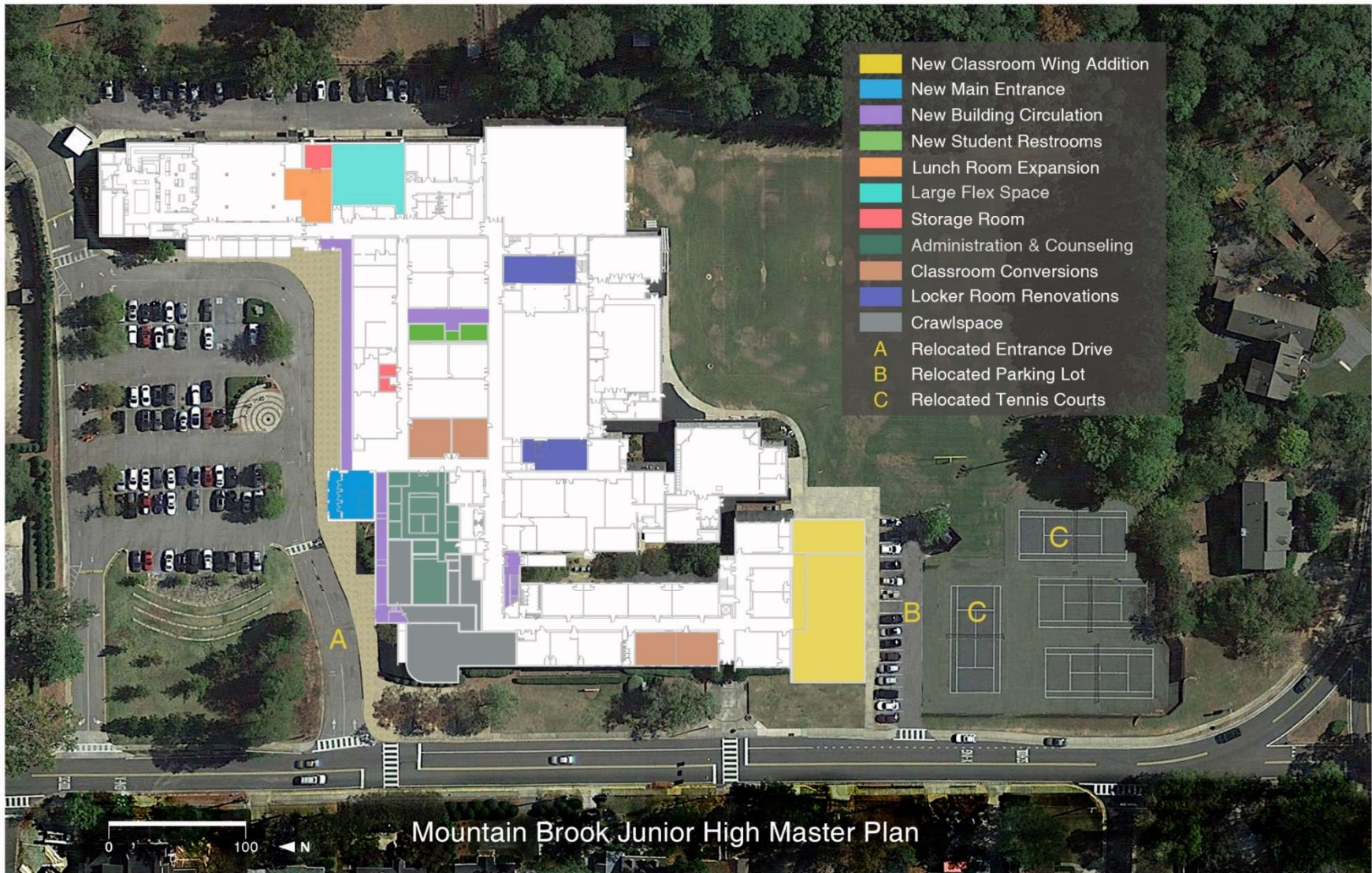


Year Built: 1956
Additions: 1976, 1993, 1987, 1999
Area: 156,786 square feet

Mountain Brook Schools Facility Assessment & Master Plan

Mountain Brook Junior High

- Address Crowded Circulation
- Improve Security
- Create a More Visible Main Entry
- New STEM Space
- Flex Meeting Space for 200
- Lunchroom Expansion
- Restroom Renovations
- Enlarge & Renovate Special Education
- Three New Classrooms
- Overbrook Wing Waterproofing



Mountain Brook Schools Facility Assessment & Master Plan

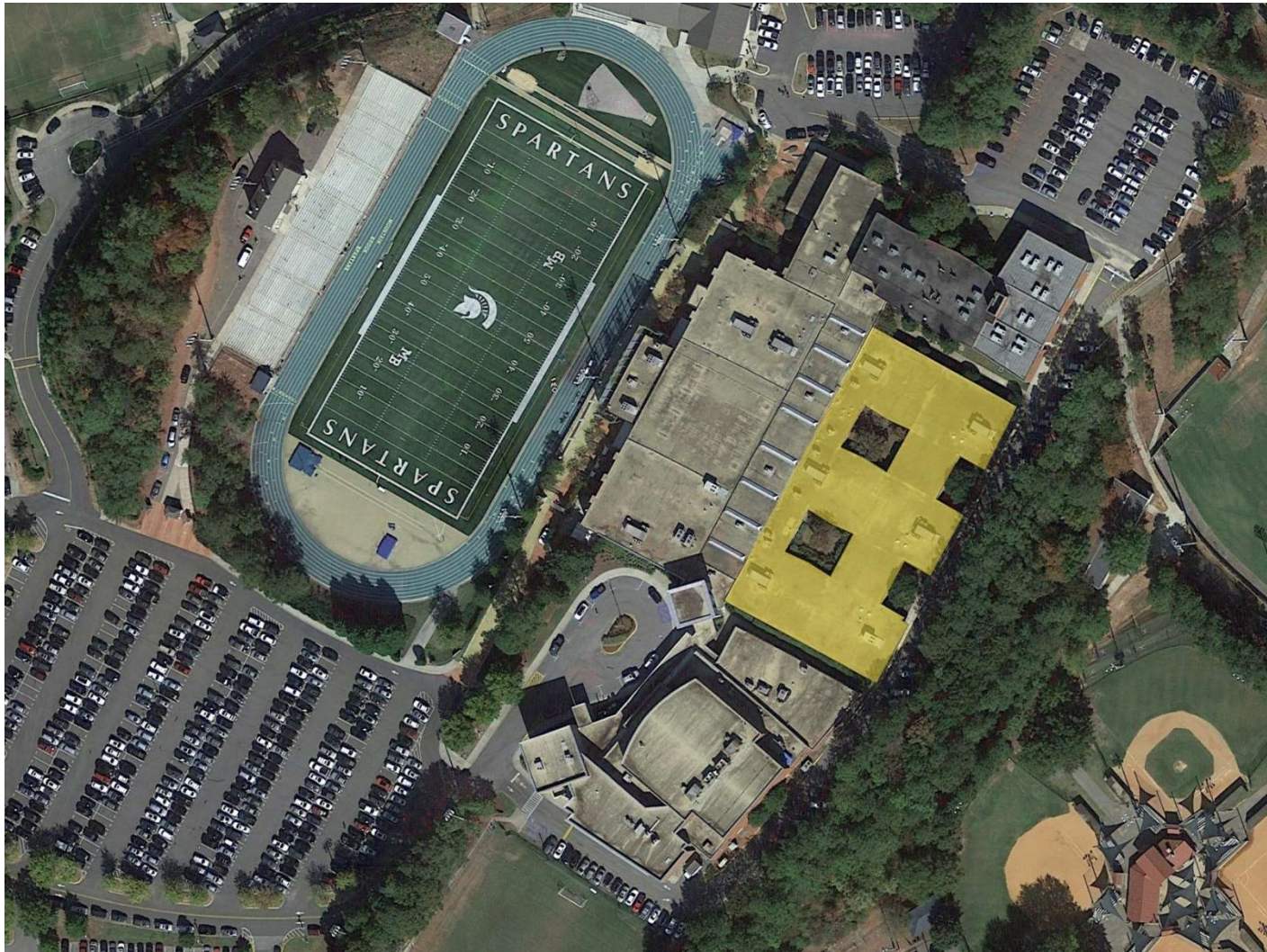
Mountain Brook High School



Year Built: 1966
Additions: 1967, 1983, 1995, 1999, 2008
Area: 175,945

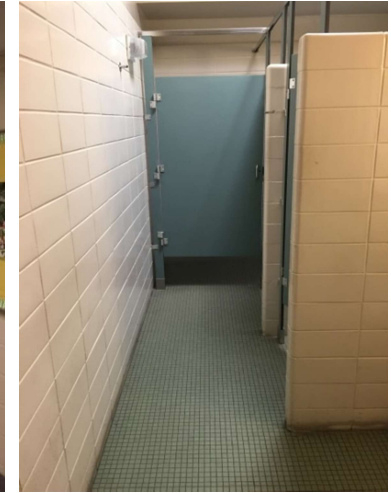
Mountain Brook Schools Facility Assessment & Master Plan

High School 100/200/300 Wing



Mountain Brook Schools Facility Assessment & Master Plan

High School 100/200/300 Wing



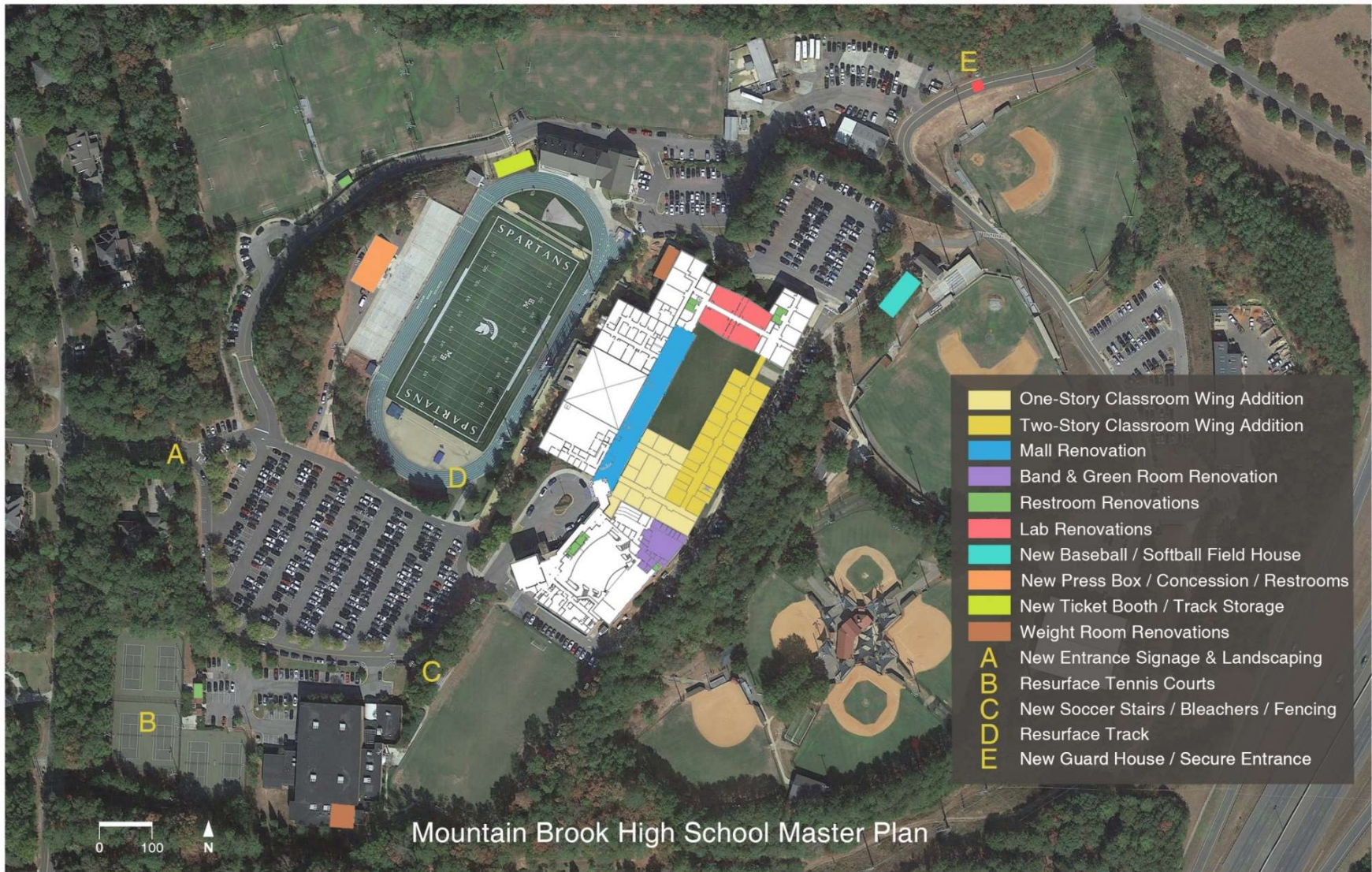
Mountain Brook Schools Facility Assessment & Master Plan

Mountain Brook high School

- Improve Site Security
- Replacement of 100/200/300 Wings
- New Innovation Lab & Engineering Lab
- New STEM Space
- Flex Technology Hub
- Renovation of Band & Green Rooms
- Restroom Renovations
- 500 Wing Renovations
- Mall Renovations

High School Athletics

- New Press Box / Concession / Restroom
- Back Entrance Ticket Booth
- Stadium Renovations
- Track Storage Building
- Resurface Track
- New Soccer Stairs
- New Soccer Seating
- Baseball/Softball? Field House
- Motorized Bleachers for High School Gym



Mountain Brook Schools Facility Assessment & Master Plan

Budget Estimates

Mountain Brook Schools Facility Assessment & Master Plan

Mountain Brook High School

MOUNTAIN BROOK SCHOOLS MASTER PLAN PRELIMINARY BUDGET ESTIMATE

4/30/2018

		SF	Cost/SF	1	2	3
MTN. BROOK HIGH SCHOOL						
	Carpet / Flooring			\$ 96,466		
	HVAC Unit Replacement			\$ 5,451,756		
	Roofing Replacement	28,446	\$ 18.00	\$ 512,028		
	100/200/300 Wing Replacement	49,410	\$ 265.00		\$ 13,093,650	
	Fine Arts Wing Restroom Renovations	1,025	\$ 135.00	\$ 138,375		
	Renovation of Band & Green Rooms	7,755	\$ 45.00			\$ 348,975
	Rework Drive from Upper Parking Lot					\$ 175,000
	New Guard Shack/Entry @ Rear Entrance				\$ 45,000	
	Pave Back Parking Lot					\$ 85,000
	New Landscaping & Signage at School Entrances					\$ 110,000
	500 Wing Renovation	31,988	\$ 40.00			\$ 1,279,520
	Renovate Mall	10,876	\$ 75.00		\$ 815,700	
	New Sprinklered Area	45,823	\$ 3.25	\$ 178,925		
	HIGH SCHOOL TOTAL			\$ 6,377,550	\$ 13,954,350	\$ 1,998,495
	CUMMULATIVE TOTAL				\$ 20,331,900	\$ 22,330,395

Mountain Brook Schools Facility Assessment & Master Plan

High School Athletics

HIGH SCHOOL ATHLETICS

Resurfacing Running Track			\$ 789,000		
New Press Box/Concession/Restroom Building	4,750	\$ 285.00			\$ 1,353,750
New Track Storage/Rear Ticket/Restroom Building	1,650	\$ 225.00		\$ 371,250	
Renovate or Replace Stadium Seating				\$ 40,000	
Stadium ADA Compliance				\$ 80,000	
Install Stadium Additional Railing				\$ 30,000	
Arena Weight Room Renovation/Expansion	1,200	\$ 65.00		\$ 78,000	
New Gym motorized Bleachers				\$ 55,000	
New Gym Sound System				\$ 25,000	
New Softball/Baseball Facility Improvements	5,700	\$ 265.00			\$ 1,510,500
New Soccer Field Access Stairs				\$ 18,000	
New Soccer Field Fencing				\$ 30,000	
New Soccer Spectator Seating				\$ 57,000	
Track Circuit Room Renovation			\$ 30,000		
			\$ 819,000	\$ 784,250	\$ 2,864,250
ATHLETICS TOTAL				\$ 1,603,250	\$ 4,467,500
CUMMULATIVE TOTAL					

Mountain Brook Junior High

MTN. BROOK JUNIOR HIGH

Carpet / Flooring			\$ 77,796		
HVAC Unit Replacement			\$ 478,395		
Roofing Replacement	77,347	\$ 18.00	\$ 1,392,253		
Restroom Upgrades	580	\$ 265.00	\$ 153,700		
New Main Entrance & Concourse	5,480	\$ 275.00		\$ 1,507,000	
Stairwell Expansion	540	\$ 175.00			\$ 94,500
New Two Story Addition	13,256	\$ 250.00			\$ 3,314,000
Lunch Room Renovation/Expansion	1,104	\$ 150.00		\$ 165,600	
Administration Renovation/Expansion	3,366	\$ 200.00		\$ 673,200	
Courtyard Infill / New Restrooms	1,466	\$ 425.00	\$ 623,050		
Wrestling Room Expansion				\$ 15,000	
Rework Existing Auditorium	2,400	\$ 125.00		\$ 300,000	
Locker Room Renovations	1,466	\$ 40.00			\$ 58,640
Overbrook Below Grade Waterproofing			\$ 50,000		
New Sprinklered Area	156,786	\$ 3.25	\$ 539,555		
Relocated Parking					\$ 75,000
Relocated Entry Drive					\$ 90,000
Relocated Tennis Courts					\$ 150,000
			\$ 3,314,749	\$ 2,660,800	\$ 3,782,140
				\$ 5,975,549	\$ 9,757,689
	JUNIOR HIGH TOTAL				
	CUMMULATIVE TOTAL				

Cherokee Bend Elementary

CHEROKEE BEND					
Carpet / Flooring			\$	101,119	
HVAC Unit Replacement			\$	1,162,641	
Roofing Replacement			\$	627,833	
Lunch Room Renovation	3,690	\$ 45.00			\$ 166,050
Office Renovation & Expansion	2,930	\$ 70.00			\$ 205,100
Restroom Renovations	3,068	\$ 265.00	\$	813,020	
Monumental Stair Renovation	1,050	\$ 35.00			\$ 36,750
Below Grade Waterproofing			\$	20,000	
New Storage Rooms	500	\$ 110.00			\$ 55,000
New Sprinklered Area	88,537	\$ 3.25	\$	317,745	
CHEROKEE BEND TOTAL			\$	3,042,358	\$ 426,150
CUMMULATIVE TOTAL			\$		\$ 3,505,258

Crestline Elementary

CRESTLINE ELEMENTARY					
Carpet / Flooring			\$	39,941	
HVAC Unit Replacement			\$	741,255	
Roofing Replacement			\$	971,666	
New Second Story Addition	6,060	\$ 295.00			\$ 1,787,700
Second Story Corridor Connection	980	\$ 200.00			\$ 196,000
Renovated Auditorium	4,450	\$ 90.00			
Restroom Upgrades	2,945	\$ 265.00	\$	780,425	\$ 400,500
New Gym	9,671	\$ 225.00			\$ 2,175,975
New Casework in 1st & 5th Grade Special Ed					\$ 12,000
New Sprinklered Area	113,110	\$ 3.25	\$	397,608	
			\$	2,930,894	\$ 2,588,475
					\$ 1,983,700
					\$ 7,503,069
			\$	2,930,894	\$ 2,588,475
			\$	5,519,369	\$ 7,503,069
			\$	2,930,894	\$ 1,983,700
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			\$	5,519,369	\$ 7,503,069

Brookwood Forest Elementary

BROOKWOOD FOREST					
Painting					
Carpet / Flooring			\$	29,989	
HVAC Unit Replacement			\$	815,682	
Roofing Replacement			\$	697,310	
New Classroom Wing Addition	9,545	\$ 325.00			\$ 3,102,125
New Kindergarten Classroom	1,350	\$ 250.00			\$ 337,500
Restroom Renovations	1,200	\$ 265.00	\$	318,000	
New Sprinklered Area	75,668	\$ 3.25	\$	275,921	
BROOKWOOD FOREST TOTAL			\$	2,136,902	\$ 3,439,625
CUMMULATIVE TOTAL					\$ -
					\$ 5,576,527

Other Costs

Fixtures, Furnishings & Equipment		\$	1,250,000		
System Wide Technology Upgrades					
CAT6 Network Wiring		\$	600,000		
Classroom Charging Stations	1,200	\$	250.00	\$	300,000
Generators for Main Servers at Each School	6	\$	90,000.00	\$	540,000
HVAC Control System		\$	175,000		
OTHER MAINTENANCE					
Resurfacing Playgrounds		\$	150,000		
Resurfacing Tennis Courts		\$	90,000		
Painting		\$	500,000		
MTN. BROOK BOE OFFICE					
Painting		\$	48,000		
Carpet / Flooring		\$	65,000		
CONTINGENCY - 15%		\$	3,619,594.54	\$	3,694,635.75
				\$	1,629,800.25
TESTING & DESIGN FEES - 10%		\$	2,071,263	\$	4,248,831
				\$	1,086,533.50
TOTAL		\$	29,821,617	\$	32,574,372
CUMMULATIVE TOTAL				\$	62,395,989
				\$	19,158,195
ESCALATION (3% Per Year)					
	Year 3	\$	31,637,753	\$	66,195,904
	Year 5	\$	33,564,492	\$	70,227,235
	Year 10	\$	38,910,446	\$	81,412,613
				\$	106,409,712

Additional Investigations

- Baseball / Softball Facilities
- Stadium Renovations