



2020 - 2030 School Growth Estimates

Based on 2019/2020 Student Enrollment Data
and 2018/2019 RPC growth Data

A 10 Year Facility Construction Plan

Prepared By: CMCSS Facilities Management



Overview:

Clarksville and surrounding Montgomery County remain one of the fastest growing areas in the state of Tennessee. This high rate of growth presents certain challenges to our local education institutions. This study is intended to provide a snapshot of some of the challenges and offer solutions that can be developed to meet the diverse needs of our increasing population. This planning document is updated each year as a way of anticipating, estimating, and developing timelines for capital investments. This is a planning document and serves as a basis for financial discussions as well as for anticipating re-zoning efforts.

The Zoning Region Map found in this report depicts Montgomery County divided into 5 zoning regions. These zoning regions are a combination of 21 civil districts of Montgomery County and 7 high school feeder systems. The purpose of this subdivision is to focus capital investments on capacity where the capacity is needed now and in the next ten years. By reflecting existing school feeder systems, it is possible to minimize mass rezoning and maintain the continuity of school communities. By closely matching county civil districts it is possible to extract information from planning commission and other agency files and analyze other relevant data as it relates to county growth rates independent of previous school rezoning efforts that would invalidate analysis done within existing school boundaries. The essence of the study is a comparison of zoning region capacity and enrollment over time within each zoning region of the county.

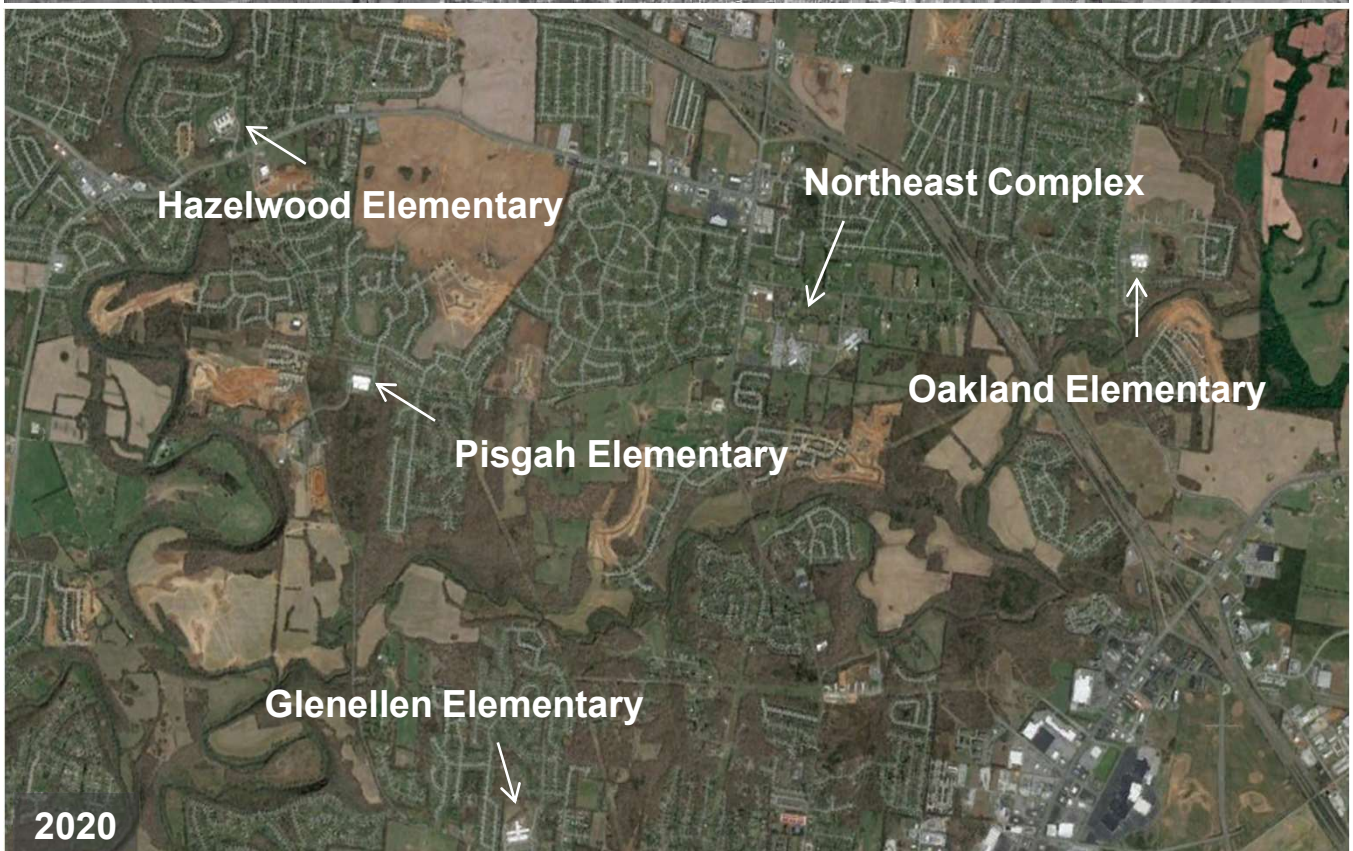
This zoning region capacity and enrollment analysis for each zoning region is found on the pages following the zoning region map. Each page shows a separate capacity break even projection for elementary schools, middle schools, and high schools in the region. Each sheet also summarizes the analysis and the capital construction impact in terms of land acquisition and construction timing.

The capacity break even analysis is developed using three pieces of information. First it plots the historic 40th day enrollment at each school in the region (blue dots) from 1998-99 to the present. The second piece of information indicated is the current established BEP capacity for buildings in the region (pink). The final piece of information is a projection model based on a linear regression of the appropriate enrollment data sets. In some cases, multiple regressions are performed on multiple data sets (such as projected roll-up) to provided additional projections using multiple variables.

The final sheet in the report is a timeline indicating the construction sequence over the next ten years generated by the break-even models. This chart is used for intergovernmental discussions regarding academic needs, land acquisition, zoning, and school funding resolutions. This report is the basis for CMCSS building programs.



Residential Growth – North Clarksville Between 1997 – 2020





Growth in Region 1 Between 1998 – 2020



1998



Rossview
Campus

2020

Montgomery County Student Growth Statistics

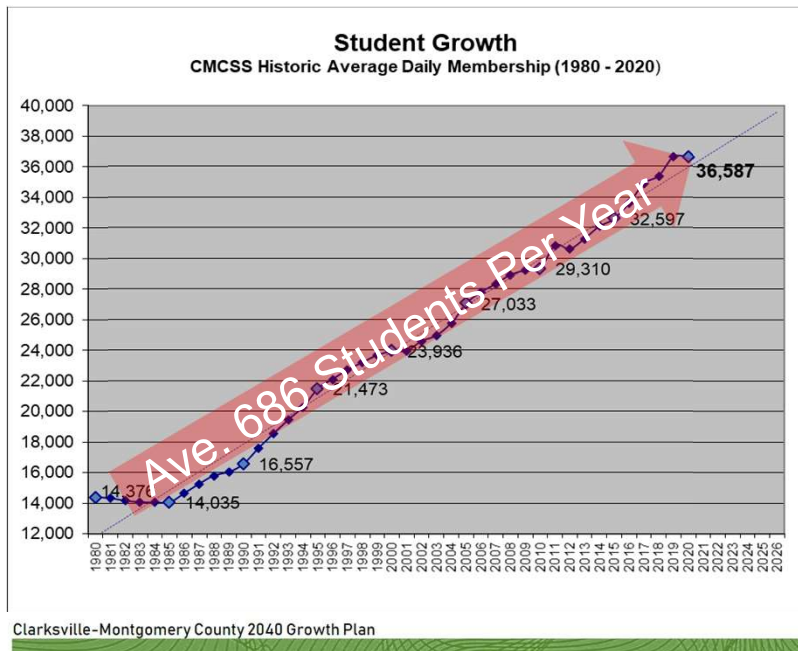
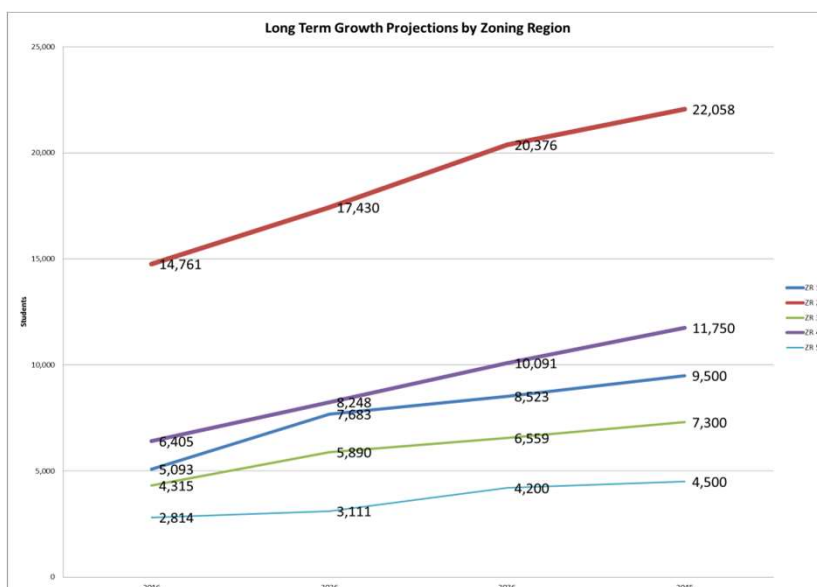
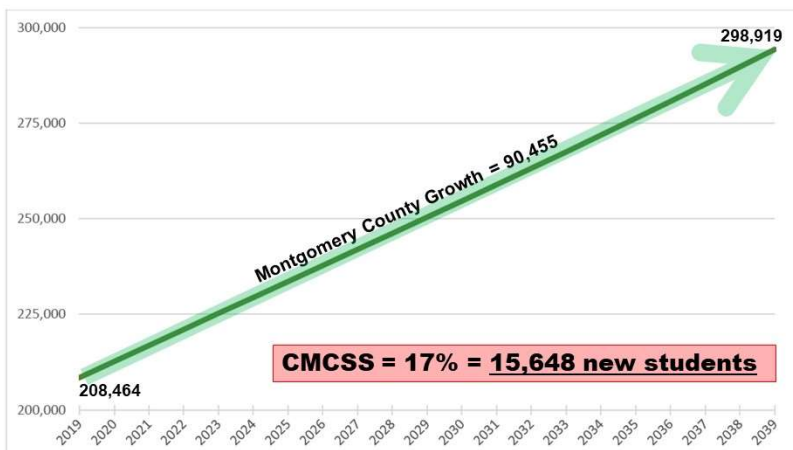


Figure 15: Montgomery County Population Projection 2019-2040



Growth Data Analysis:

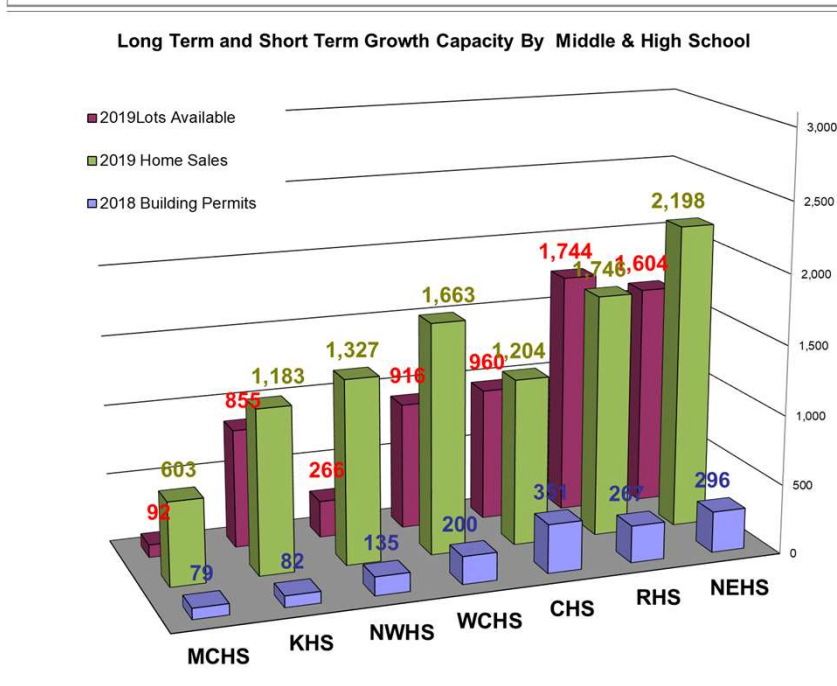
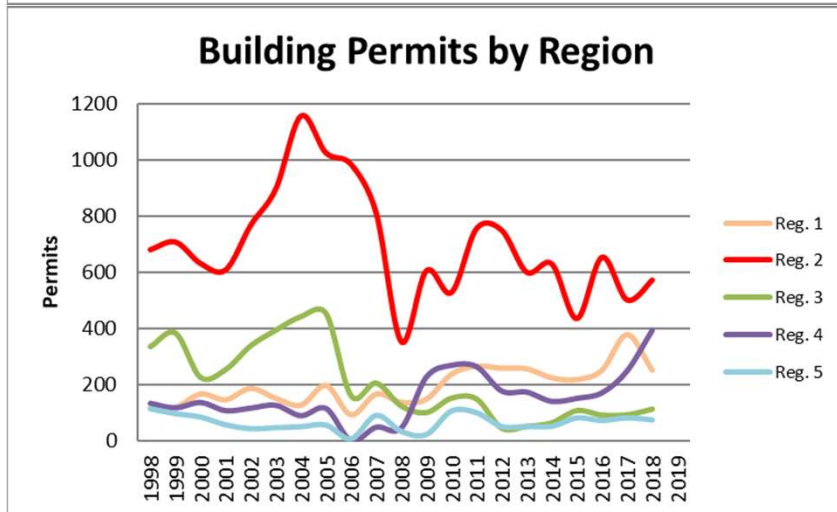
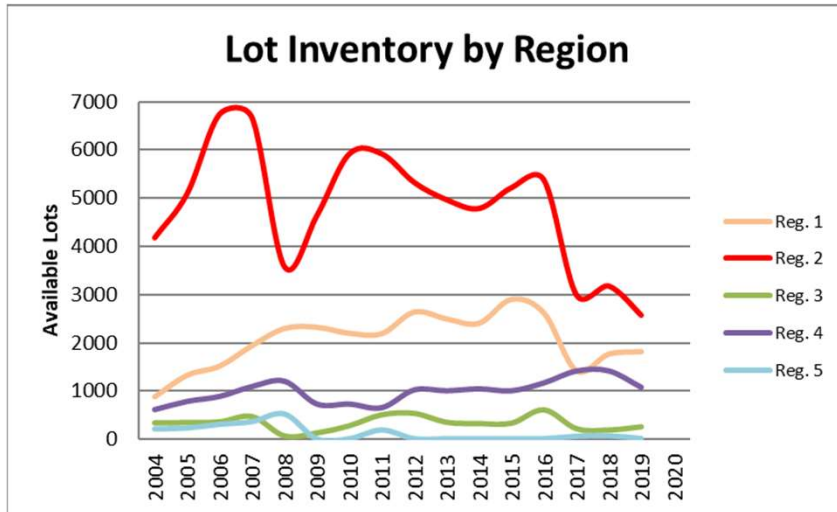
Enrollment growth in the district continues to rise at a 30 year average of approximately 686 students per year. Construction of new school capacity has kept up with this growth rate with one new school constructed every 1.4 years until the opening of Oakland Elementary. No new schools have been constructed since 2014 and as a result, the CMCSS proposed building program will struggle to meet projected capacity needs.

Growth projections from the state of Tennessee and the Regional Planning Commission indicate continued increases. The Clarksville Montgomery County 2040 Growth plan figures show 43% growth in the community through 2040. Growth in Montgomery County is historically impacted by variables associated with general community employment and the Fort Campbell Army Base. The data suggests that Montgomery will continue on this trend, increasing by approximately 90,455 new residents over the next 20 years. This will result in CMCSS growth of approximately 15,648 new students over that period and reaching 52,275 new students by 2040. This growth would mirror growth in CMCSS since 1995. That growth resulted in 11 elementary schools, 3 middle schools, 3 high schools, and over 20 building additions.

Third party modelling by home builders also indicates continued growth in Montgomery County through 2045; as high as 60%. CMCSS would have a projected total enrollment in 2045 of over 55,000 students. This growth is more aggregated and anticipated to occur regionally throughout the County with the highest growth expected in the Northern and Eastern regions.

Montgomery County Demographics

Residential Growth Statistics



Growth Data Analysis:

Residential growth in Montgomery County has historically been a good indicator of regional student growth trends in CMCSS. Current Regional Planning Commission (RPC) data indicates that the northeastern portion of Montgomery County (Regions 1 and 2) continue to develop at the fastest rate and hold the most capacity (approved lots) for future residential development. Local realtors support this theory and also suggest that the highest potential for residential sales probability remains in the north and eastern regions as well.

Although residential growth in Montgomery County had been slowed in 2008 due to national economic conditions, current RPC building permit data indicates continued building at, or at near, historic annual levels with the highest activity in the **north** and **southeastern** sections of the county. Growth seems to be shifting east (from region 1 towards region 4) as inventories and counts for those regions have converged. Region 4 has the highest rate of increase

CMCSS continues to focus school building programs in these highly impacted areas (Regions 1, 2 and 4), after seven consecutive years requesting funding a new middle school. Kirkwood Middle School, has been approved with an opening date of Aug 2022. School capacity continues to be strained in RHS, NEHS areas due to Build-out of approved existing lots and portable classroom inventory has doubled in the region over the last five years as a result.

Montgomery County Capacity Statistics

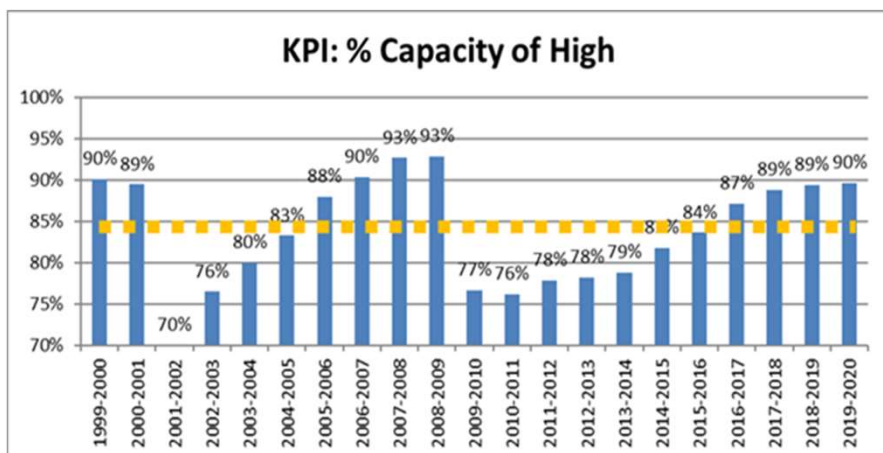
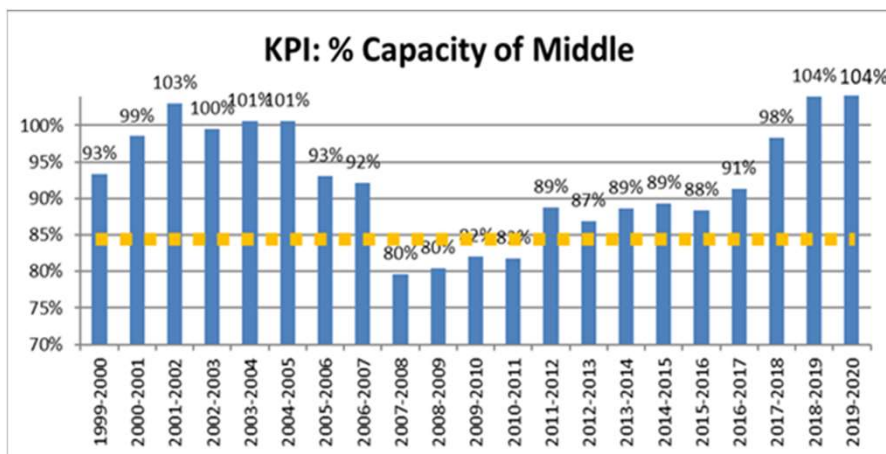
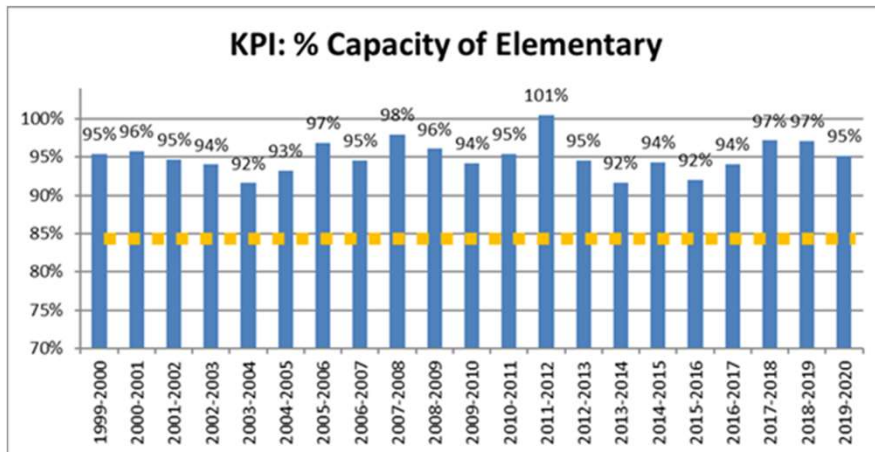
Capacity Data Analysis:

A key performance indicator for district space allocation requirements is the overall percent of capacity for all buildings across the district. As student populations and grade levels are not consistent and highly variable it is important to provide adequate space for special populations and programs. A KPI percent capacity of 85% has been established as the KPI target. At 85% capacity, the district can absorb approximately 9.2 years of growth at the average 30 year annual growth rate of 634 additional students per year even if no action is taken regarding additional capacity.

Capacity at the Elementary school level continues to be strained throughout the district. The Northern areas of the county that have been most impacted by residential growth exhibit the majority of capacity issues. Additions at RVES, OES, WCES have started and will add a total of 36 classrooms once completed. Even with the addition of the classrooms the District will still be above the 85% desired overall capacity.

Capacity at the Middle school level is now at a critical level across the district. Middle schools remain at 104%, above the 85% target. At this time CMCSS is working with Montgomery County and the IDB to find property to replace the old Kirkwood site.

Capacity at the High schools is in the best shape across the district although they are above the 85% district target. At 90% there is room to absorb additional student growth in some areas of the County with the exception of the northeastern region where capacity has been marginally increased by 12 classrooms.



Montgomery County Capacity Statistics

Montgomery County, Tennessee Population Pyramid \$2021



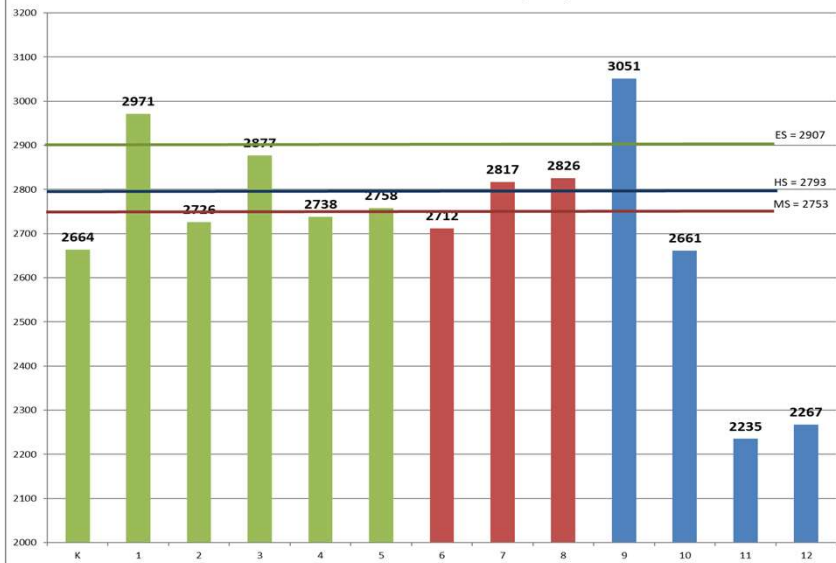
Demographic Capacity Analysis:

Montgomery County population data continues to indicate that the largest current demographic (commonly referred to as millennials) is now of child bearing age (25-40). An echo boom is building quickly behind them at the Elementary level. 0 to 5 year olds are now the third highest demographic in the Montgomery County population pyramid and the highest of the school aged population. This is likely to drive additional growth at Pre-K, Kindergarten, and elementary levels in the near future.

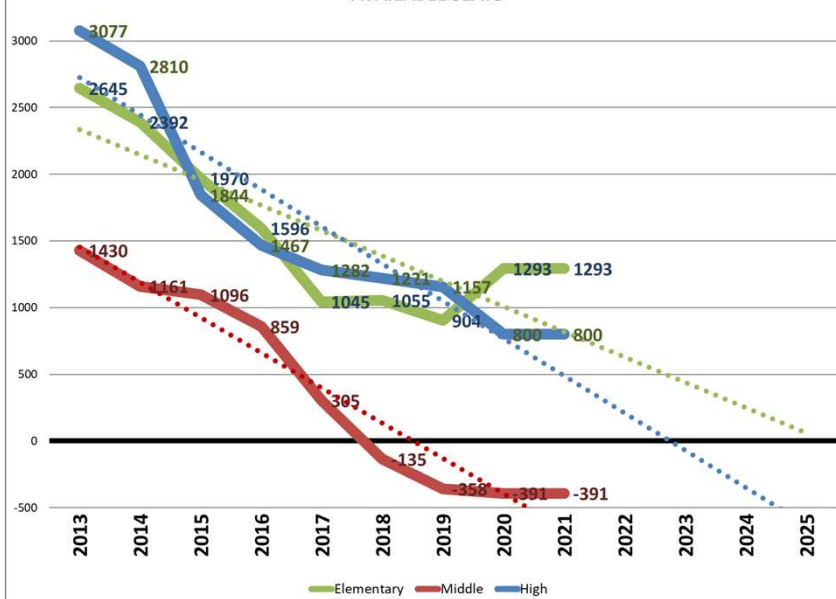
This is supported by current CMCSS grade level enrollment data which suggests that growth is not consistent between highest and lowest grade levels. The elementary wave that started a few years ago is now showing in the capabilities of the middle school and the number of portables. As these students roll forward, capacities will start to be stretched thin at high schools. Kindergarten enrollment is 24% higher than 12th grade enrollment.

This increase in grade level enrollment at the middle school is having a drastic impact districtwide in classroom capacity. Middle schools are now over design capacity by 391 seats. Seats available at both Elementary and High schools will go negative by 2023 at current rates.

2020-21 Class Size versus Capacity

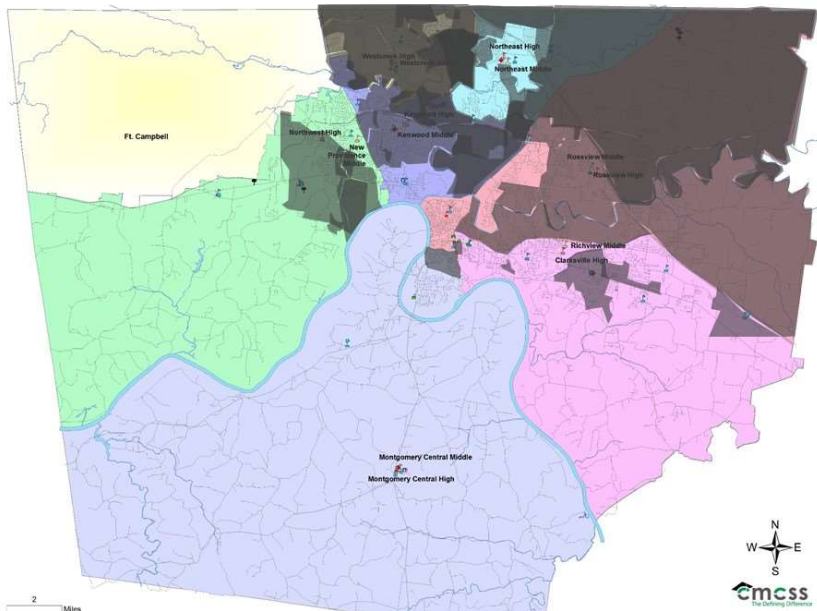


AVAILABLE SEATS



Montgomery County Student Growth Statistics

CMCSS 10 year Zoning History



Zoning Analysis:

Analysis of past school rezoning indicates that, by far, the majority of rezoning has occurred in the North and Northeastern regions of the county. A comprehensive Rezoning typically occurs with the opening of new capacity to balance enrollment between buildings. Spot rezoning also occurs where capacity imbalances can be corrected effectively in small local pockets within the regions. The executive limitations of CMCSS policy state that school rezoning should do the following:

- Ensure equitable distribution of resources according to the learning needs of all students
- Consider proximity of students to existing schools
- Move as few students as possible
- Transport students the least distance possible
- Consider the BEP capacity and percent-utilization of existing facilities
- Allow for future growth where possible (based on Planning Commission lot and permit data)

The Board of Education believes that it is critical to student achievement to build strong communities and therefore, while appropriate to rezone students within their communities, it is inappropriate to disrupt families by placing students outside of their zoning regions.

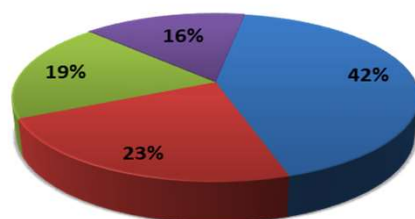
Rezoning over the past 11 years has resulted in over 8,000 students being relocated from their communities. Feedback from families indicate overwhelmingly that rezoning is not acceptable. The reasons families prefer to not be disrupted include; Academic or extracurricular activities, stress and anxiety to students and families, decline in property values, and safety concerns.

Schools in the south of the county have been relatively untouched by school rezoning. This is very likely to change in the future as it will be a requirement by the County Commission to make a comprehensive rezoning throughout the county.

Year	Levels	Zoning Region	Civil District	Students	From Zone	To Zone
2017/2018	Middle High	1, 2	2, 6	72 107 57 75 311	WCMS WCMS NEMS NEMS	KWMS KWMS KWMS KWMS
2015/2016	Elementary	1, 2	1, 2, 6	128 574 11 713	NPPS RUES RUES	OES OES Carnell
2013/2014	Elementary	2	2, 3	307 17 65 318 244 251 1202	BMES BMES HWES WCES NEES HWES	HWES WCES PES PES PES NEES
2012/2013	Middle High	1, 2, 3, 4	2, 3, 7, 11, 12	84 98 128 180 268 331 85 105 140 145 1547	KMS KMS WCMS WCMS RvMS RvMS KMS KMS RvMS CHS	WCMS WCMS NEMS NEMS KMS KMS NEMS NWMS RvMS RMS
2010/2011	Middle High	1, 2	1, 2	56 89 145	RvMS RMS	NEMS NEMS
2009/2010	Elementary	1, 2, 4	1, 2, 6, 12	182 277 98 45 50 652	NEES Sunco St. B. Burt Moore	RUES RUES RUES RUES NSCS
2008/2009	Elementary	2	2, 3, 7	254 441 295 276 118 137 109 1530	NCCS RPPS HWPS RUES RUES KMPA DMCS	HWES WCES WCES WCES, KWPS, RUES IPS RUES, RUES WCES
2007/2008	Middle High	2	2, 3	857 1084 1941	NEMS NEMS	WCMS WCMS
10 Year Total Rezoned:				8,044	Students	

Rezoning Feedback Concerns

- Academic/Extracurricular
- Stress/Anxiety to Students & Families
- Decline in Property Values/Finances
- Safety/Environment



Zoning Regions

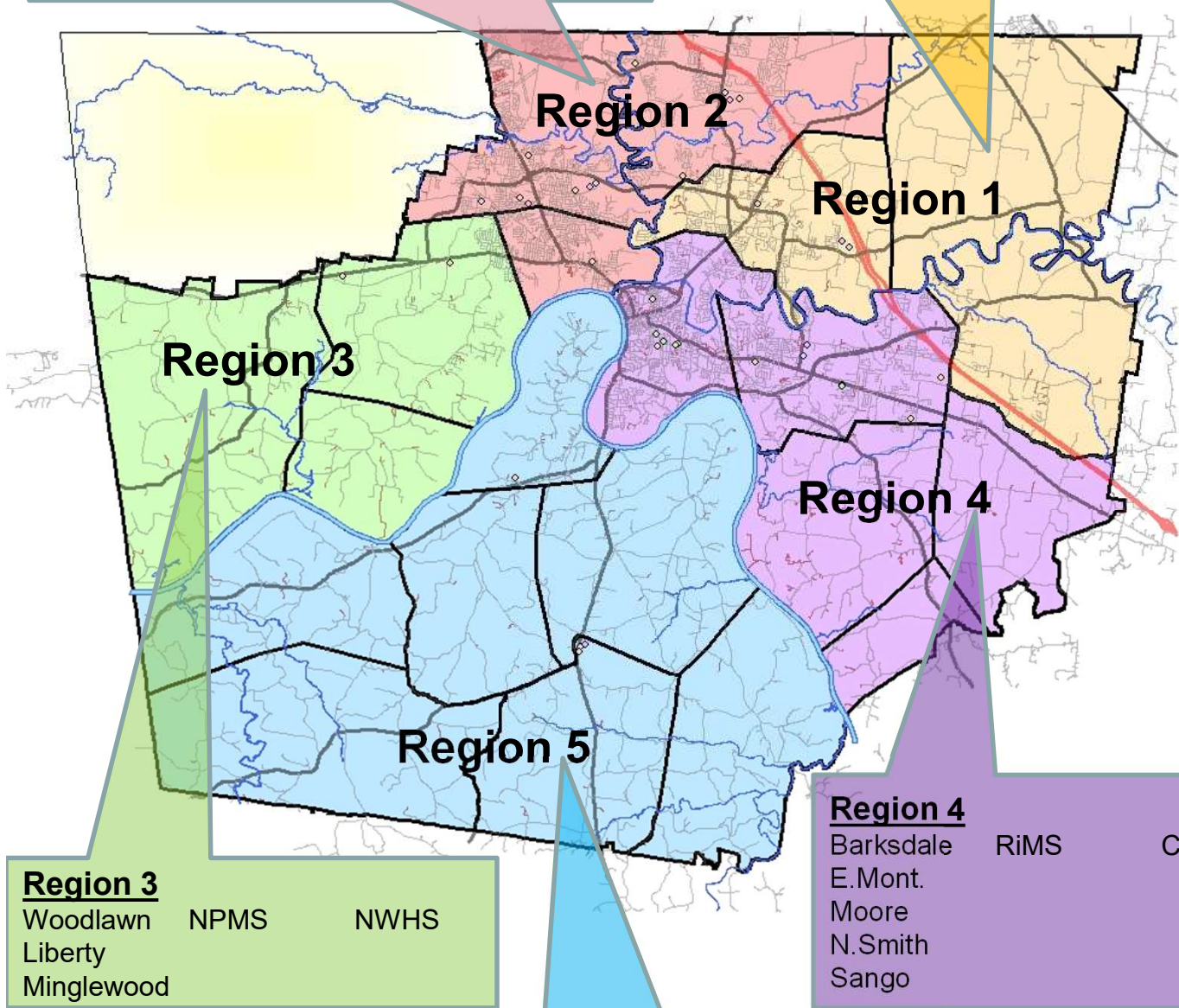
Combination of 21 Civil Districts and 7 Mid/High Feeder Systems

Region 2

Barkers Mill	KMS	KHS
Glenellen	NEMS	NEHS
Hazelwood	WCMS	WCHS
Kenwood		
Northeast		
Oakland		
Pisgah		
Ringgold		
B. Darden		
West Creek		

Region 1

Carmel	RoMS	RHS
St B./Burt		
Rossvie		



Region 4

Region 4

Barksdale	RiMS	CHS
E.Mont.		
Moore		
N.Smith		
Sango		

Region 3

Woodlawn	NPMS	NWHS
Liberty		
Minglewood		

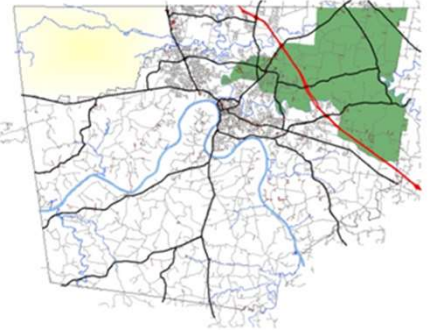
Region 5

Region 5

Cumb. Hts.	MCMS	MCHS
Central		

Region 1 Capacity

Zoning Region Capacity and Enrollment Analysis 2019 to 2040

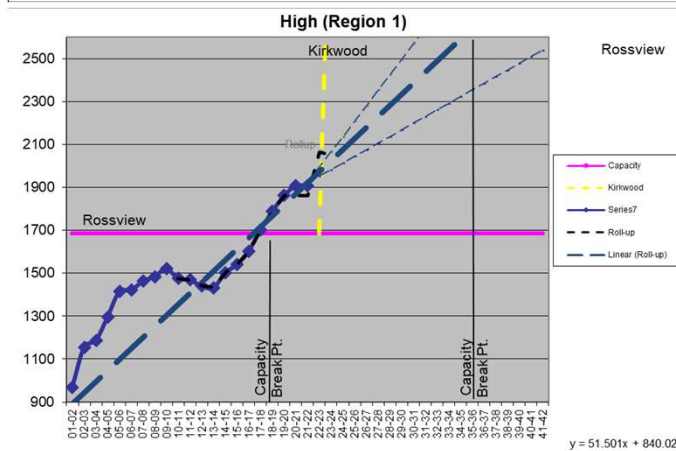
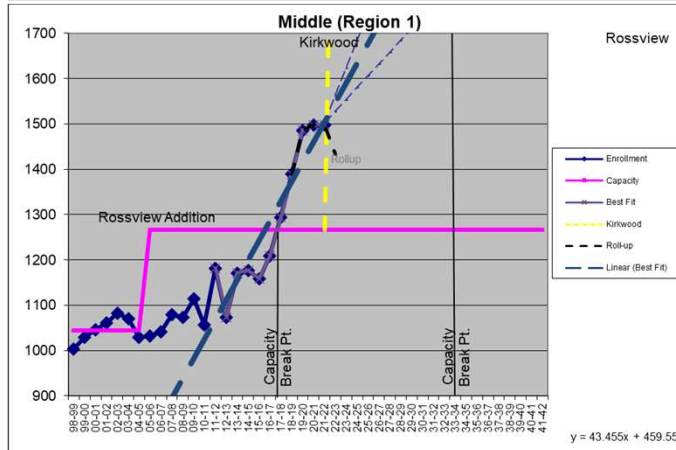
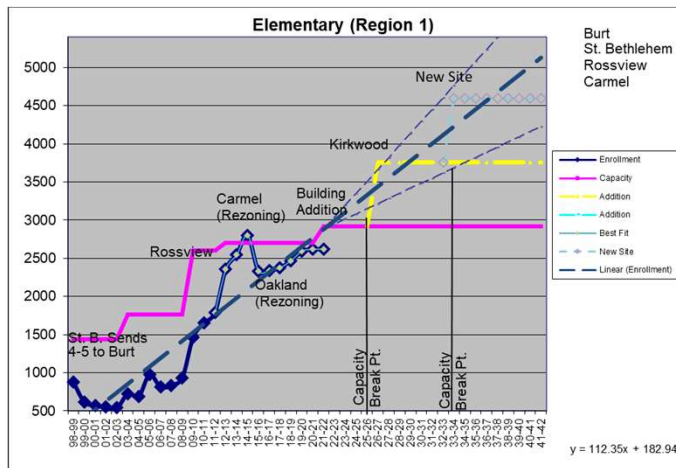


Community Growth Data:

2018 Permits: 252
2019 Approved Lots: 1,821



Student Growth Data:



Analysis:

Zoning Region **One** encompasses 81 square miles in the most northeastern portion of Montgomery County. This area lies East of the industrial park, South of the Kentucky state line, West of the Robertson County line, and north of downtown and Highway 41-A.

This region continues to experience the County's second highest long term student growth trend at elementary, middle, and high schools. There is high residential growth in this region and high potential for growth. This is leading to localized capacity constraints that will worsen in the future.

The opening of Oakland Elementary school in 2015 alleviated overcrowding at Rossview Elementary as over 600 students were moved to region 2, but this only provided temporary relief and Rossview is at 130% capacity. Likewise, Oakland is now over 120% capacity and has six portable classrooms. Due to physical boundaries such as the Red River and current transportation limitations, capacity at Carmel (at 80%) cannot easily be utilized to reduce growth in the Rossview zone and Oakland zones. Annual elementary growth is approximately 4.5%

Middle school capacity has surpassed the break even point with a steep inflow of the Elementary students. After 5 years of discussions about funding being tabled Kirkwood Middle School has been approved with an open date of August of 2022. Annual middle school growth is approximately 2.7%

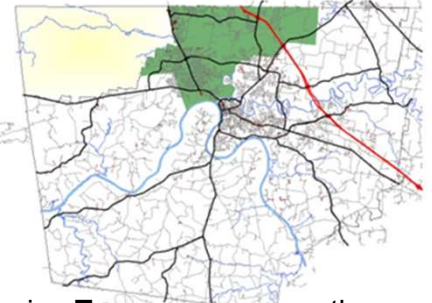
Current growth trends indicate high school capacity is reaching a break even point. Relief for high school growth will be provided by the construction of Kirkwood High School which will impact both zoning regions 1 and 2. Annual growth is approximately 3.1%

Construction Summary:

- Elementary Addition: 2020 (RvES)
- Rezone Middle School: 2022 (New)
- Elementary Addition: 2024
- Rezone High School: 2022/2023 (Kirkwood)
- Open Elementary: 2024 (Kirkwood)
- Purchase Land / Open Elementary: 2029
- Open Middle School: 2033 (New)
- Open High School: 2034 (New)
- Open Elementary School: 2037 (New)

Region 2 Capacity

Zoning Region Capacity and Enrollment Analysis 2019 to 2040



Community Growth Data:

2018 Permits: 574
2019 Approved Lots: 2,566



Student Growth Data:

Analysis:

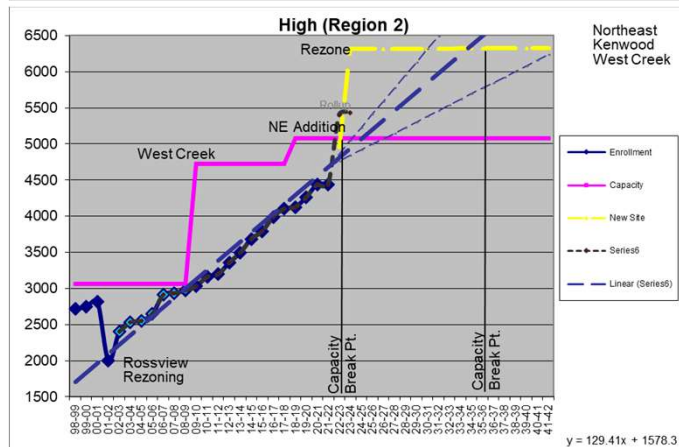
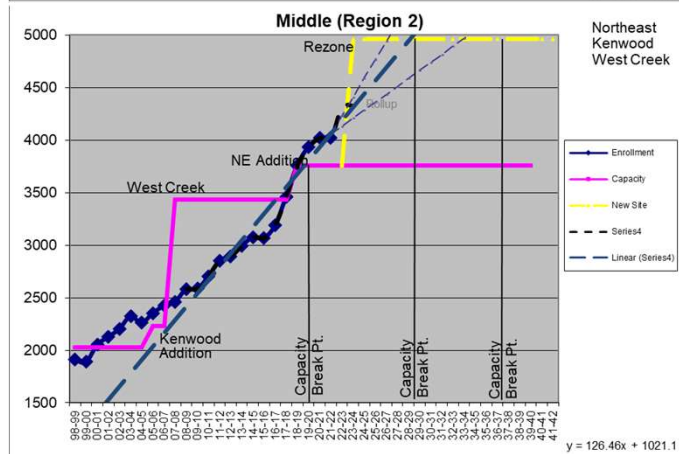
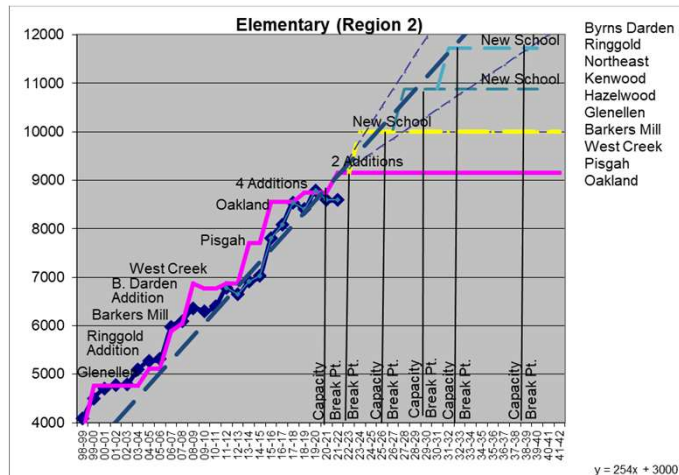
Zoning Region **Two** encompasses the most northernmost portion of Montgomery County. Covering approximately 55 square miles, this region is the smallest of the five regions. It falls between the Industrial Park and the Ft. Campbell Army Base which is located to its west.

This region continues to experience the County's highest long term growth trends at all three levels. Residential growth in this region continues to grow quickly with the potential for significant future growth. Middle and high school growth outpaces the other four regions by 60% or greater.

Elementary School capacity is at its break even point. A twelve classroom addition opened at Barkers Mill Elementary school which provided short term relief. Annual growth is approximately 3.0%.

Even with a ten classroom addition at Northeast Middle, the middle school capacity is above the breaking point in Region 2. Twenty one portables are being used to meet the student enrollment in this area. The twelve classroom addition that was completed at Northeast High School has helped on the high school capacity to keep it below the breaking point. The construction of the Kirkwood Middle and High Schools would also reduce the capacity needs in region 1. Annual growth is approximately 3.4%.

Spot re-zoning or the use of temporary classrooms will be necessary at all levels in this region depending on variations in growth trends or to better utilize existing capacity in facilities across the district. Plans for acquiring additional middle school capacity are in discussions. Annual growth is approximately 3.2%.

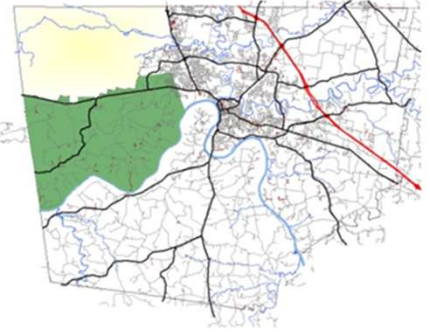


Construction Summary:

- Elementary Add: 2021 (W Creek)
- Elementary Add: 2021 (Oakland)
- Elementary Add: 2022
- Open High School: 2023 (New)
- Open Elementary: 2025 (New)
- Elem addition: 2025 (NE)
- Elem Addition: 2027 (HW)
- MS Addition: 2030
- Land & New Elementary: 2031
- HS Addition: 2035
- MS Addition: 2035
- Elem Addition: 2038

Region 3 Capacity

Zoning Region Capacity and Enrollment Analysis 2019 to 2040



Community Growth Data:

2018 Permits: 114
2019 Approved Lots: 256



Analysis:

Zoning Region **Three** encompasses 77 square miles of the western most portion of Montgomery County. This area is directly south of the Ft. Campbell Army installation, and borders Stewart County to the west.

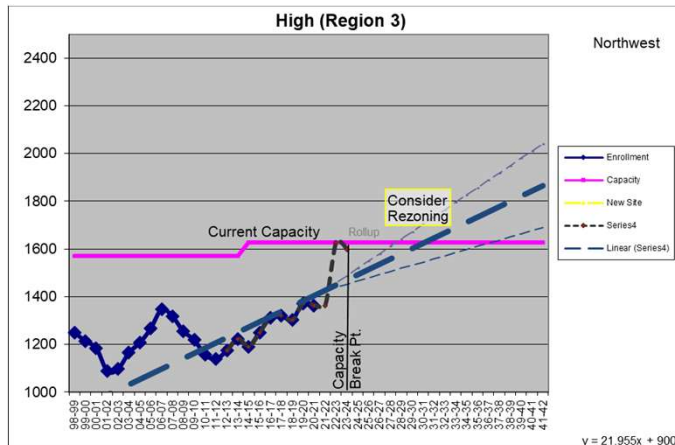
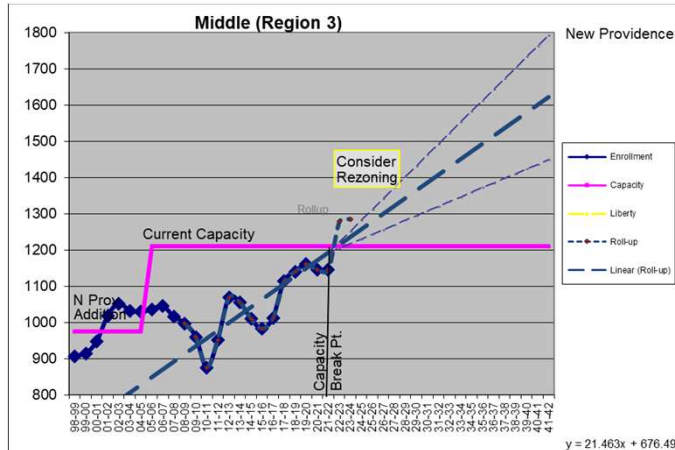
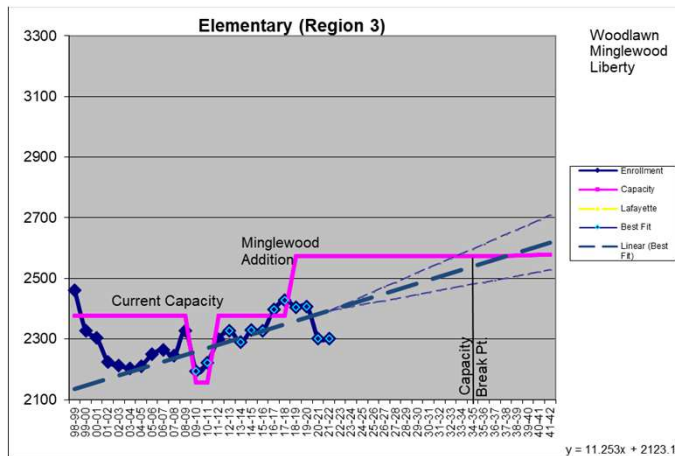
Zoning Region Three continues to experience the county's second slowest growth rate.

While this region contains a more transient population, small pockets of residential growth still remain along Dover Road. While not high; it warrants watching because remaining capacities are limited. A twelve classroom addition project was completed and opened at Minglewood Elementary School providing capacity for future growth. Annual growth is approximately 0.9%.

Due to the lower residential growth rate, enrollment is difficult to predict beyond five years. The data seems to indicate that middle and high school enrollment will hover just below capacity until 2022 when an addition, redistricting, or new construction at Liberty may be necessary. Annual growth is approximately 2.1%.

Construction in this region will likely focus mainly on renovating existing facilities with the addition of new capacity where possible. Annual growth is approximately 1.7%.

Student Growth Data:

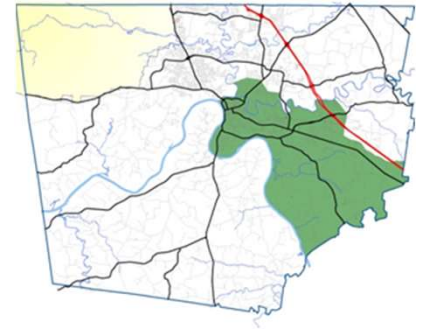


Construction Summary:

- Middle Add (renovation): 2024 (NPMS)
- OR-
- Rezone Mid/High : 2022/2023
- New Elementary: 2026
- New Elementary: 2033

Region 4 Capacity

Zoning Region Capacity and Enrollment Analysis 2019 to 2040



Community Growth Data:

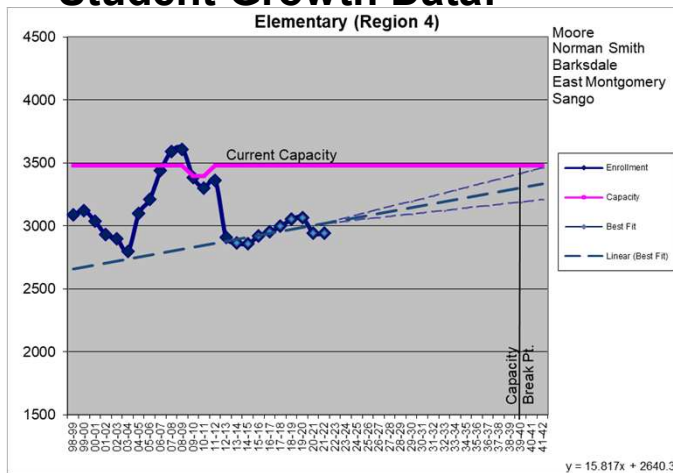
2018 Permits: 394
2019 Approved Lots: 1,070



Analysis:

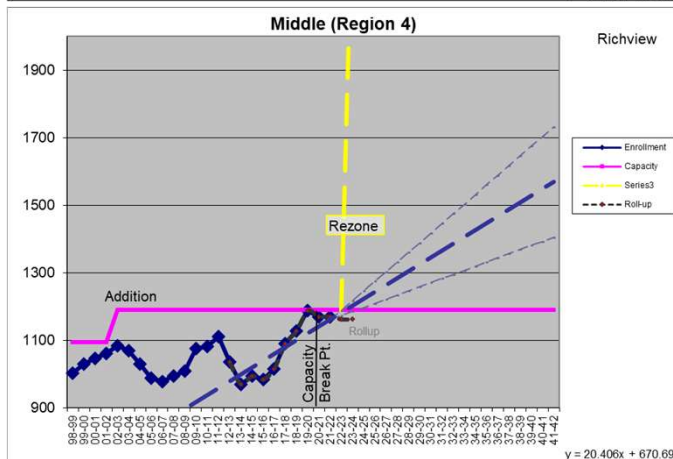
Zoning Region **Four** encompasses the Southeastern portion of Montgomery County. This 88 square mile area extends from downtown Clarksville to Interstate 24 and the Cheatham County Line, and along the Cumberland River.

Student Growth Data:



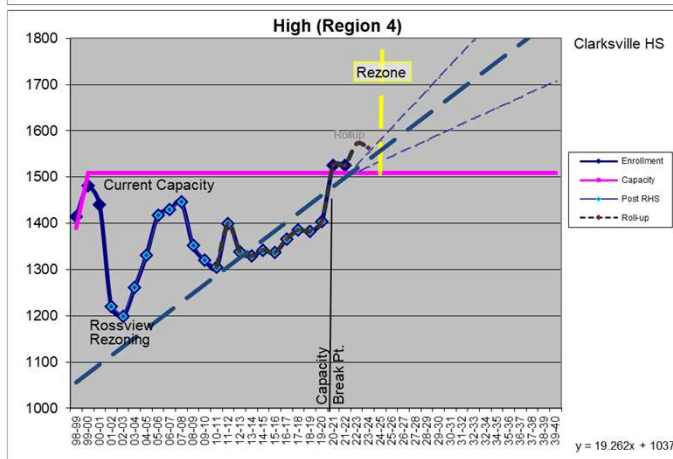
Student growth in this region is relatively flat, but seems to be picking up. Potential for residential growth is third smallest of the five.

While residential growth in this region skyrocketed in the mid 2000's, it has stabilized at a much lower pace of late. This may be due to a number of factors such as availability of utilities, age of population, and higher real estate prices in the area. Annual growth is approximately 1.2%.



Elementary school capacity in this region is currently above enrollment and the model suggests that this should be the case for the foreseeable future. Annual growth is approximately 1.8%.

Middle and high school enrollment is nearing capacity, but with fewer students feeding from the elementary schools this should be manageable. Annual growth is approximately 1.3%.



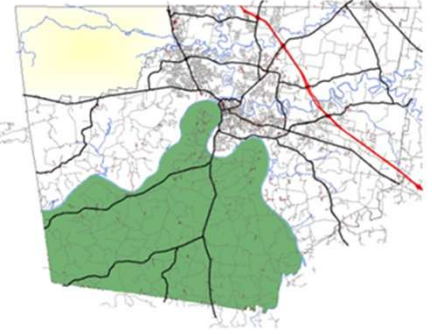
Spot re-zoning or the use of temporary classrooms may be necessary at the middle and high school level depending on regional variations in development or to better utilize existing capacity in facilities across the district.

Construction Summary:

- Rezone Middle School: 2022/2023 (New)
- Rezone High School: 2022/23 (New)
- New Elementary: 2030

Region 5 Capacity

Zoning Region Capacity and Enrollment Analysis 2019 to 2040



Community Growth Data:

2018 Permits: 76
2019 Approved Lots: 23



Analysis:

Zoning Region **Five** encompasses the Southernmost portion of Montgomery County. This area encompasses 174 square miles from downtown Clarksville, south of the Cumberland River to the Houston and Dickson County Lines.

Residential growth in this region remains slow but steady. There is a low student growth trend in elementary, middle, and high schools.

The probability of residential development remains low in the long term with little potential for growth in the short term future.

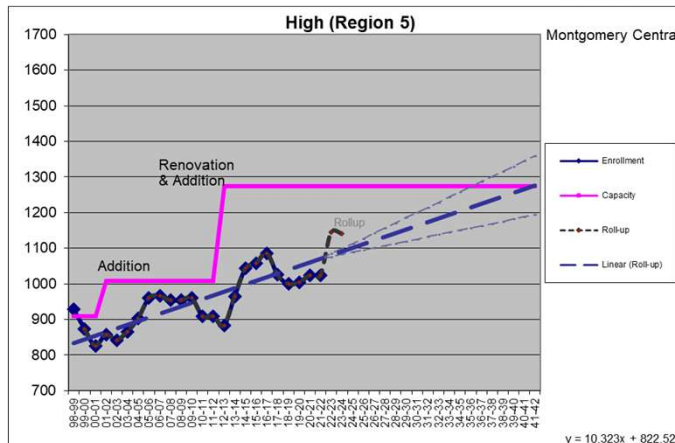
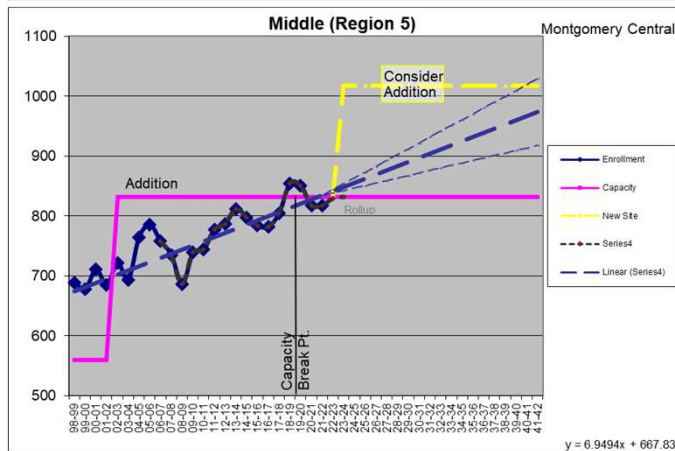
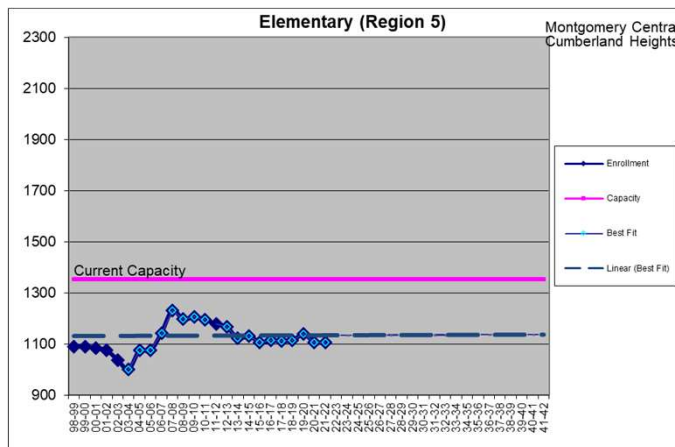
Elementary school capacity in this region is currently above enrollment and the model suggests that this should be the case beyond 2030. Annual growth is approximately 0.1%

Middle school enrollment is nearing capacity, but should be manageable for the near future. There is sufficient high school capacity as well. Annual growth is approximately 0.9%

The use of temporary classrooms may be necessary at the middle school level prior to 2020 to balance with the high school which recently had an addition. Annual growth is approximately 1.1%

Planning should begin for additional middle school capacity beyond 2030.

Student Growth Data:

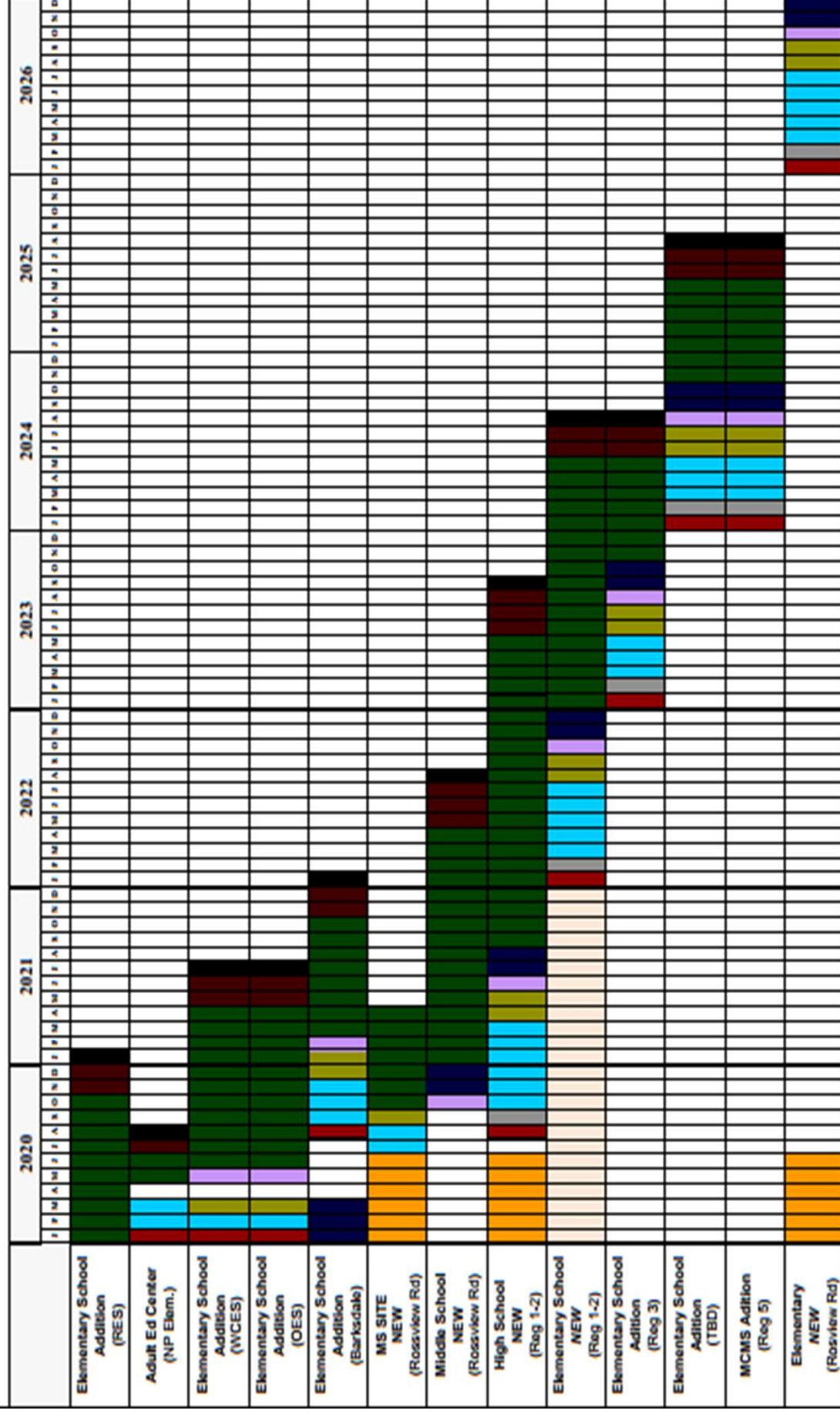


Construction Summary:

- Middle School Addition (6 classroom): 2024
- Elementary Addition: 2039
- Middle School Addition: 2039
- High School Addition: 2040

5 Year Facility Construction Plan

(Construction Timeline 2020- 2026)



20 Year Facility Construction Plan

(Construction Timeline 2019 - 2039)

