WOODBROOK ELEMENTARY Addition, Renovation, & Modernization

COMMUNITY MEETING NOVEMBER 29, 2016



Scope

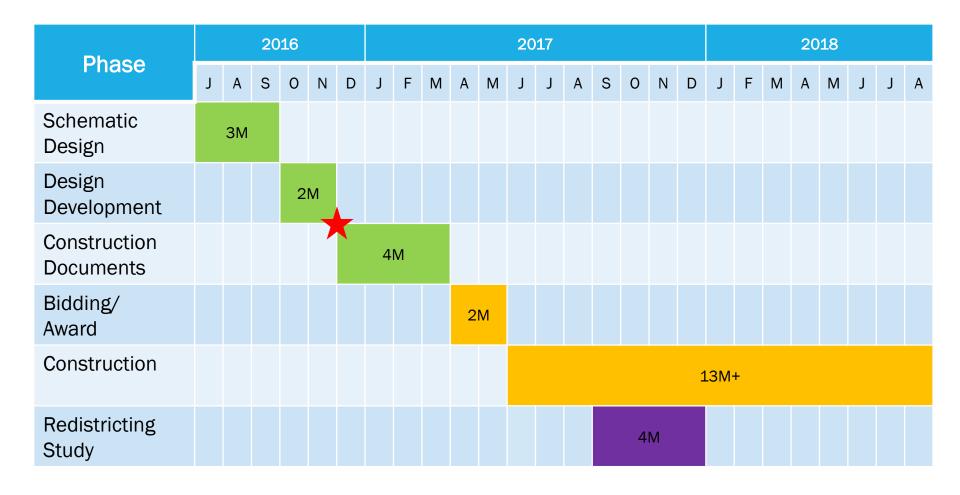
Additions

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

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

Project Schedule



Key Changes Since September

- Traffic study complete
- Further refinement of site plan
- Development of interior floor plans

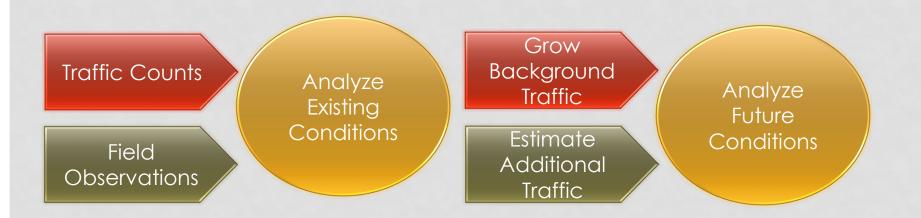




WOODBROOK ELEMENTARY SCHOOL EXPANSION

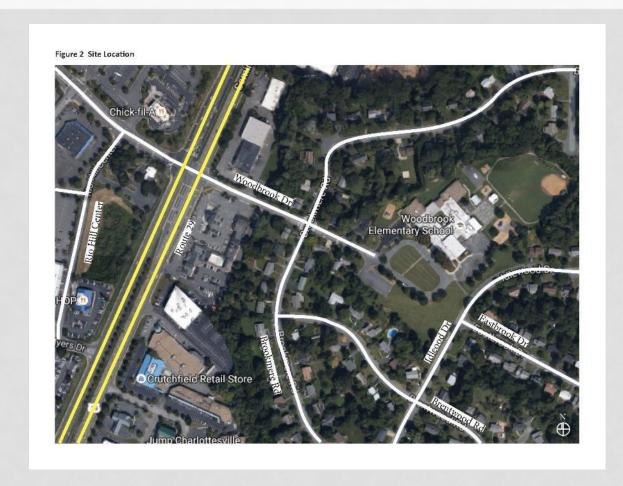
TRAFFIC STUDY OVERVIEW

Study Process



Examine Queuing and Delay Compare the Build and No-Build Conditions Identify needed improvements

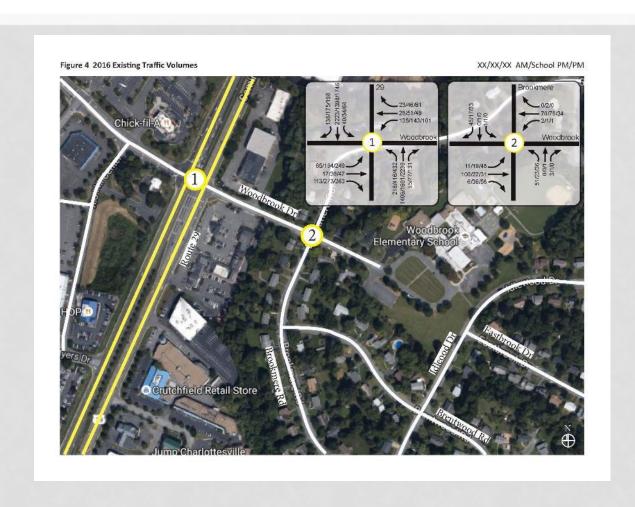
Study Area



Study Intersections



Existing Traffic Volumes



Estimated New Trips

Site Trip Generation

Three methodologies were considered to develop the trip generation estimates associated with the school expansion. The methodologies include:

- · The percent increase compared the existing school related traffic,
- The Institute of Transportation Engineers (ITE) Trip Generation Manual, and
- A manual estimate based on 260 students, 74% bus ridership, and vehicle occupancy of 1.25 provided by Albemarle County School staff.

A discussion of the three methods can be found in Appendix F.

After comparing the trip generation methods, *ITE Trip Generation 9th Edition* was used to calculate the future site trips. **Table 5** provides a summary of the trip generation for the expansion.

Table 5 Site Trip Generation

	description	lu	unit	qty	daily	AM		school PM		commuter PM	
		code				in	out	in	out	in	out
	elementary school	520	students	260	335	64	53	33	40	19	20

New Traffic



Future Traffic Volumes (2017)



Future Traffic Volumes (2022)



Traffic Conditions Comparison 2022 Brookmere/Woodbrook

2022 No Build VS. 2022 Build Queue Comparison Woodbrook Dr/Brookmere Rd - Morning Peak Hour



2022 No Build VS. 2022 Build Queue Comparison Woodbrook Dr/Brookmere Rd - Afternoon School Peak Hour



Traffic Conditions Comparison 2017 Route 29 / Woodbrook

2017 No Build VS. 2017 Build Queue Comparison Route 29/Woodbrook Dr - Morning Peak Hour



2017 No Build VS. 2017 Build Queue Comparison Route 29/Woodbrook Dr - Afternoon School Peak Hour



Traffic Conditions Comparison 2022 Route 29 / Woodbrook

2022 No Build VS. 2022 Build Queue Comparison Route 29/Woodbrook Dr - Morning Peak Hour

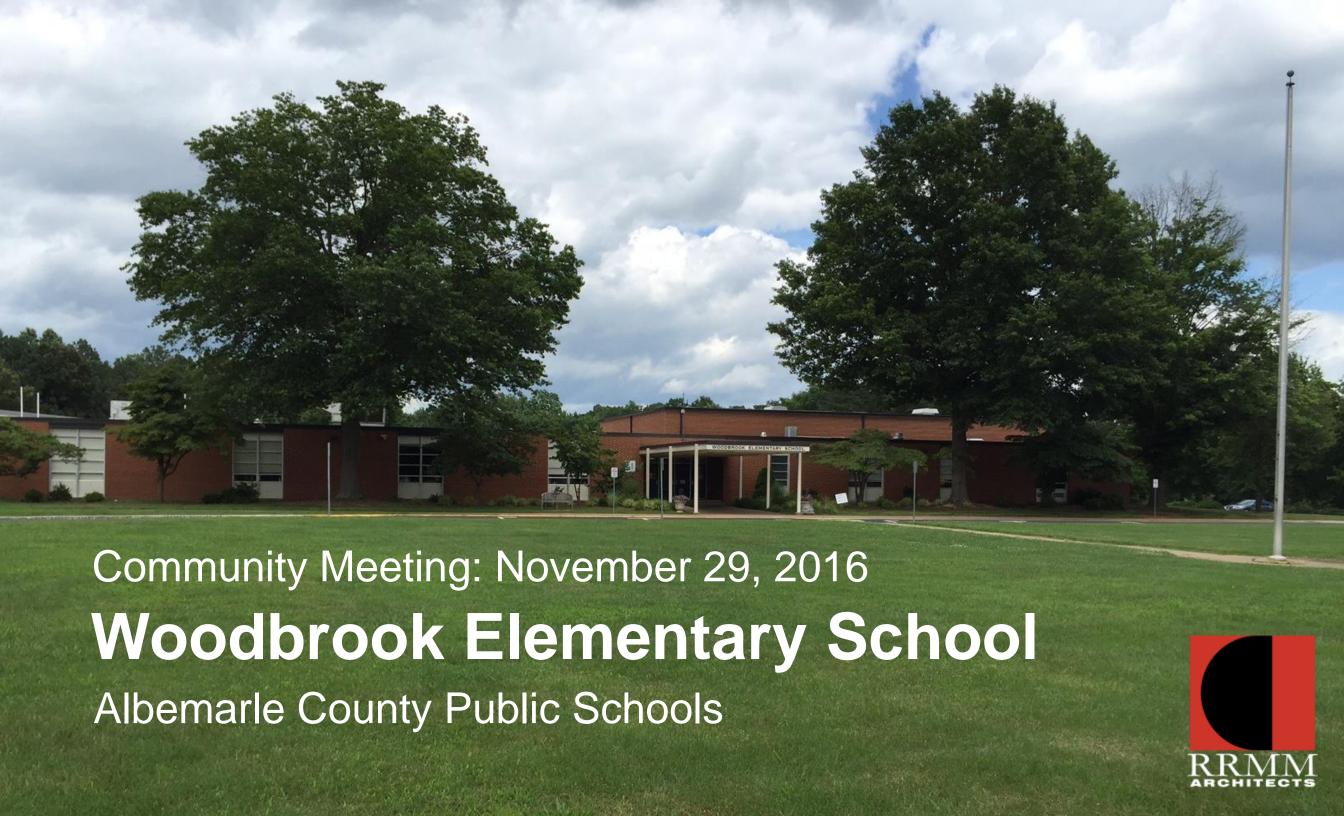


2022 No Build VS. 2022 Build Queue Comparison Route 29/Woodbrook Dr - Afternoon School Peak Hour



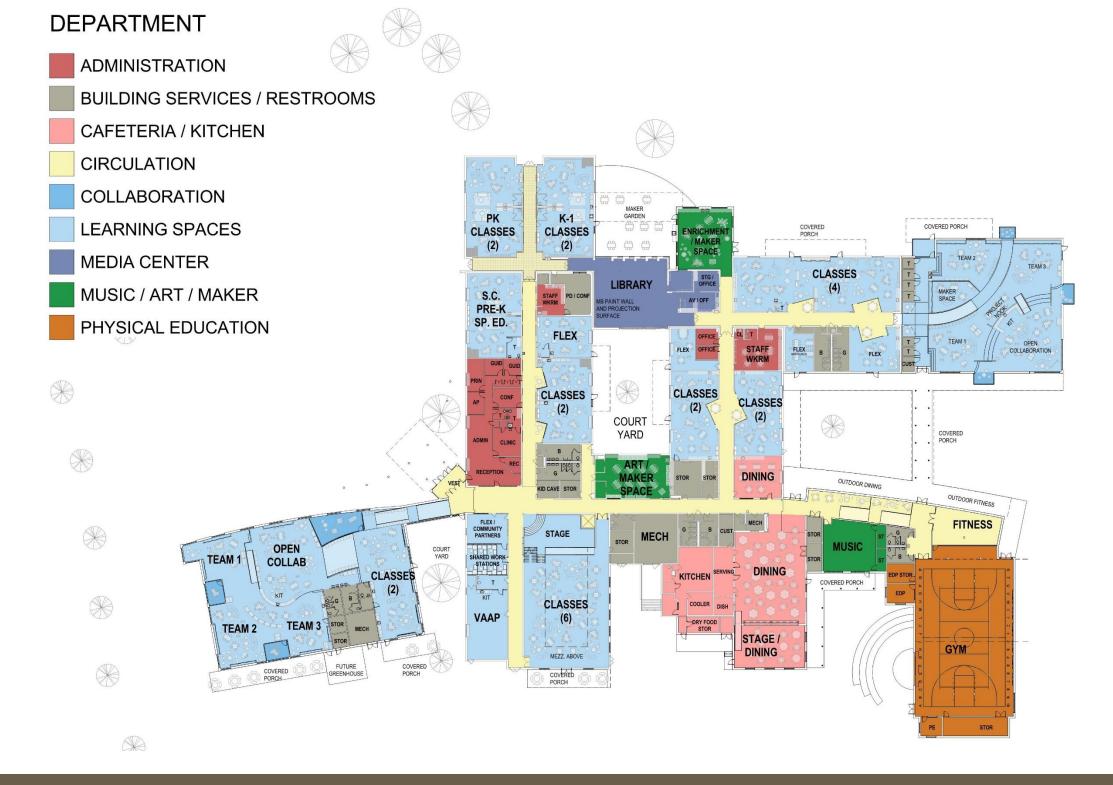
Summary

- Brookmere Rd minimal increase in queue of one vehicle.
 Very little impact to delay (1.3s on average)
- Route 29 Maximum of 2 more cars in queue. Increase in delay of 2.7s. All cars still make it through in once cycle.
- Impacts might be less if Berkmar Extended takes more cars off of Route 29 than included in the analysis.









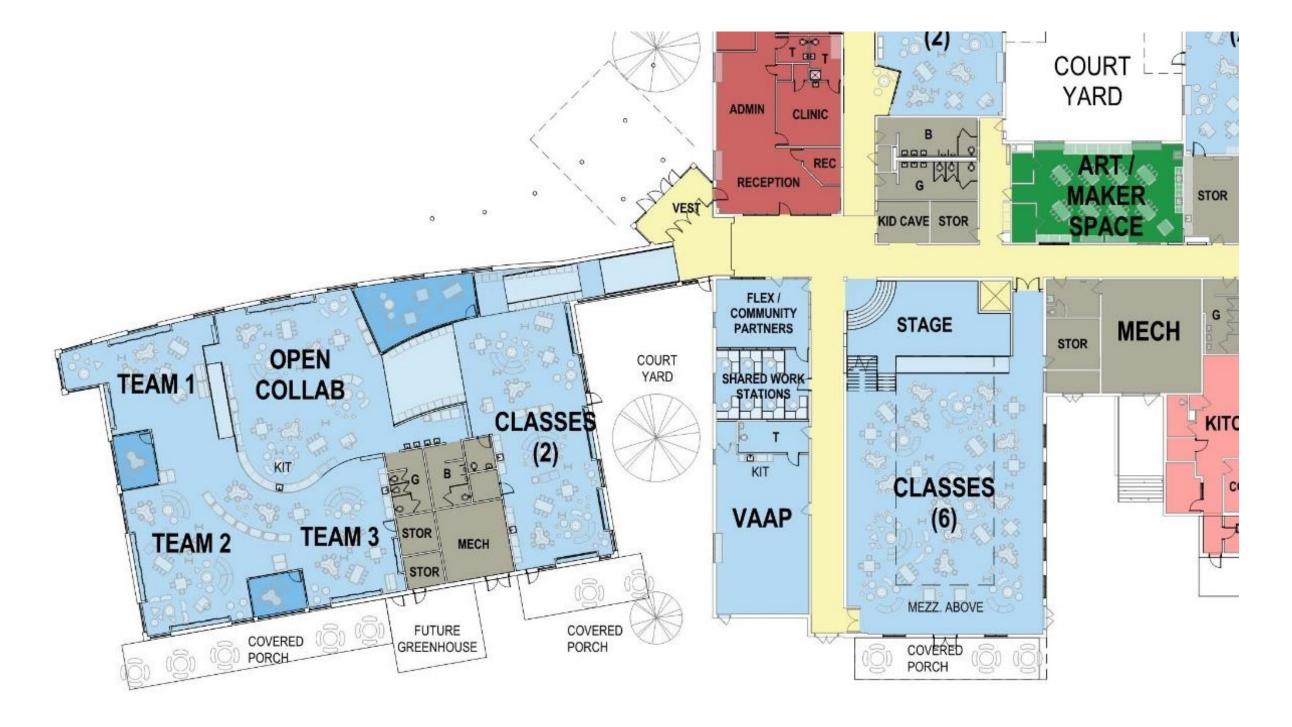




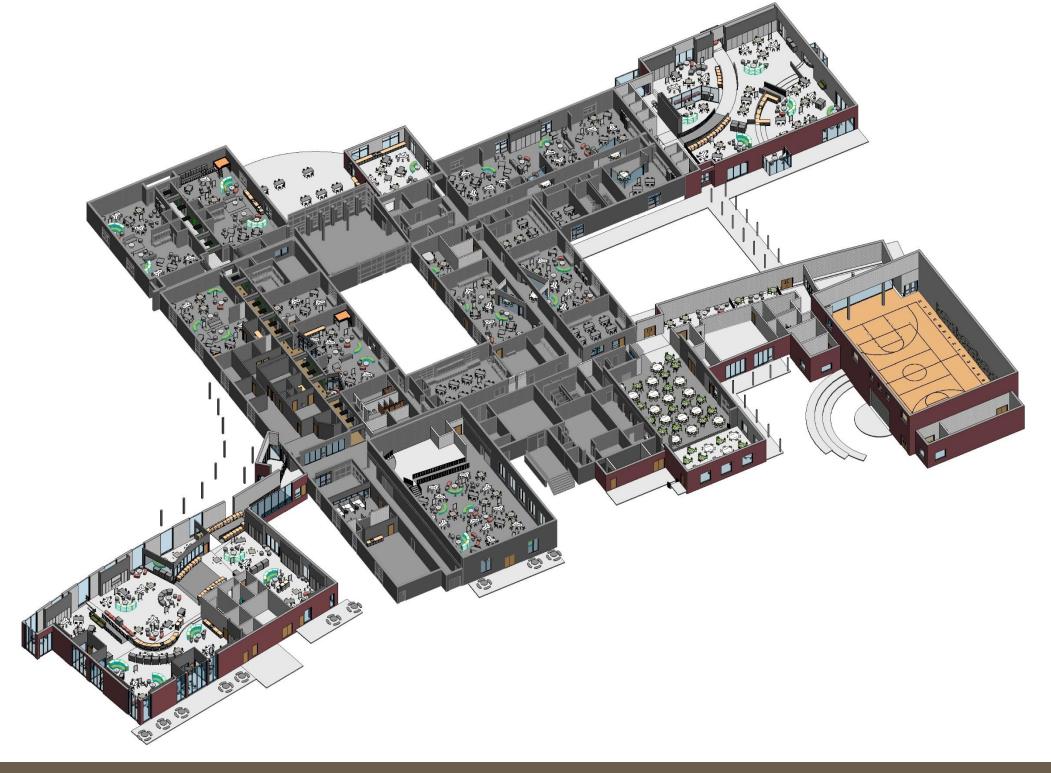




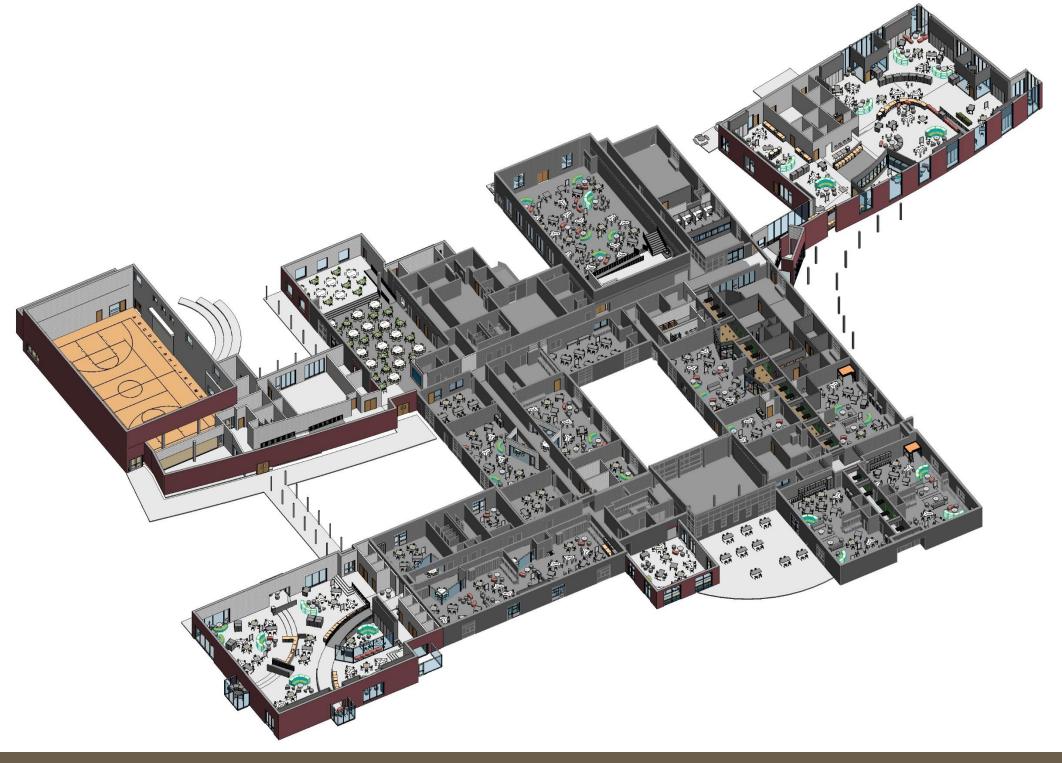














WOODBROOK ELEMENTARY SCHOOL

OUTDOOR LEARNING SPACES CONCEPT DIAGRAM



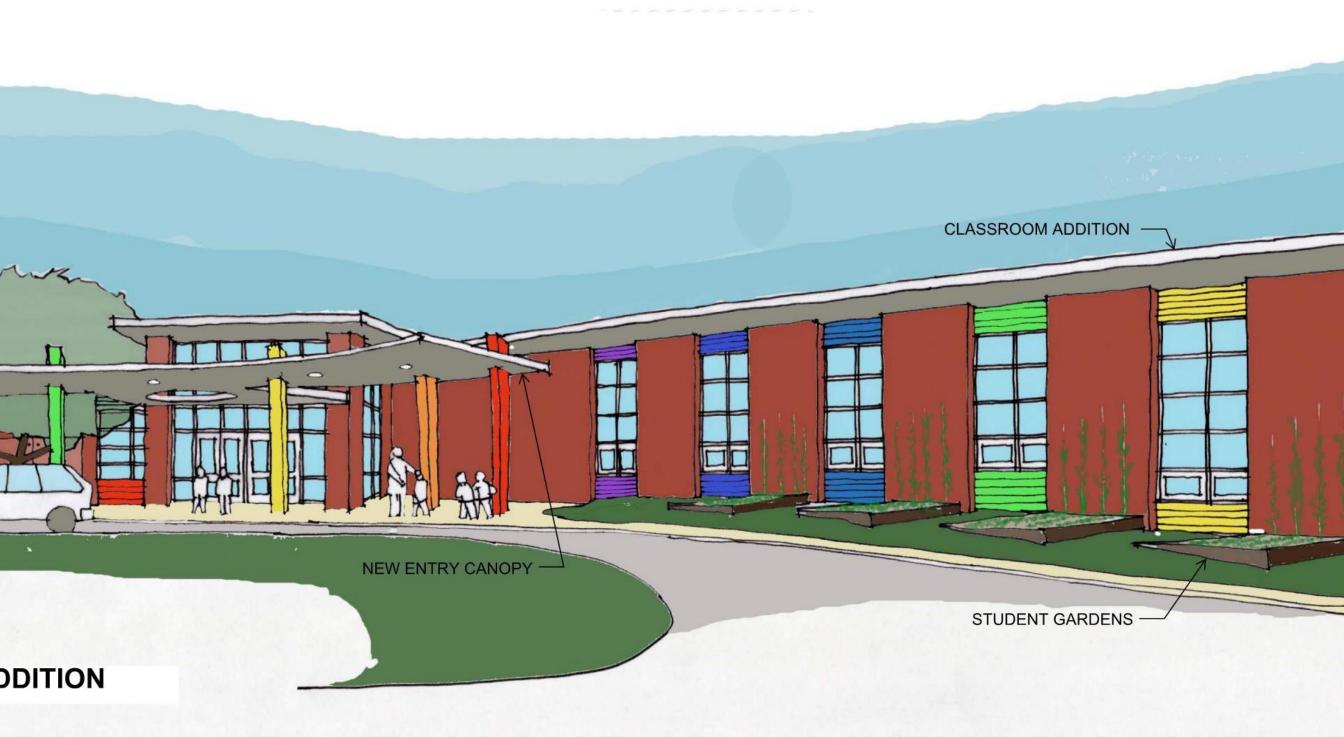














Thank You

