

APPENDIX 7.1 SUMMARY OF COMMUNITY ENGAGEMENT

Staff & Student Surveys

The staff at the Urbana Elementary School is an important resource in interpreting the educational adequacy of the existing school facility. Working and learning in the existing facility every day gives the users particular insights and information regarding the strengths and weaknesses of the school.

In an effort to gain an understanding of how the present staff views the current Urbana Elementary School, a “charrette” was held and several questions were developed and asked of the staff. The results were summarized and are include in the following pages for review and consideration as part of the Urbana Elementary School feasibility study. The staff responses were reviewed and discussed with the steering committee, including the staff leadership group as part of the feasibility study process.

Parent & Community Surveys

In an effort to involve the community at large, including parents of current Urbana Elementary School students, of which some may also be Urbana Elementary School alumni, a “charrette” was held and several questions were developed and asked of the community and parents. The community and parent charrette process and information was reviewed by the steering committee as part of the feasibility study process.

Summarized Information

The information contained on the following pages is a summary of the comments and information received from the two charrette events as part of the feasibility study process. A copy of all of the comments has been provided to the Frederick County Public Schools for review and information.



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STAFF QUESTION RESPONSES

Question 1: I teach best when _____?

When learning area is quiet, Walls, windows and doors, controlled/consistent comfortable temperatures, natural light, individual classrooms, adequate bathrooms, appropriate light levels/placement, adequate storage, storage for backpacks and coats; sinks; secure classrooms; appropriate/adequate reliable technology; organized storage – cabinets and closets; coffee; access to sinks/restrooms; reduced distractions; AC in gym; adequate classroom size; sink in art room; no carpet in art room; teacher desk area/gathering space; acoustics; locking doors; space; traffic flow; bathroom/sinks in classrooms; bigger adult restrooms; bigger faculty lounge; faculty planning space; more storage; tiled flooring; with class-set of textbooks; more computers in classroom; computer labs for testing; tablet for each student; whiteboards instead of chalkboards; planning time in schedule; contained environment; no bugs/bees/rodents.

Question 2: The best thing about my school is _____?

Bathrooms in classrooms; access to playground; special education activity area/classroom; wetland area; outdoor playfields; large space for group activities; ample outside play area; windows/natural light in portables; people/staff; climate/culture; community; good parents; kids are good kids; administration; wetlands/ outdoor space/ filed space; location – don't leave current site; open classrooms = collaboration; grade level clusters/teaming; reputation; covered entrance- student arrival off buses; we have pre-k space; flexible way to build classroom; our staff is problem solvers – “we deal with what we have”; fire hall for overflow parking; nice playgrounds; easy to travel from room to room; PTA; include history of building; proximity to first responders; stage in music; sense of school; group space.

Question 3: If I could change my space, I would _____?

Have walls; equivalent in size; gym/cafeteria combined space; classrooms in the building; adequate technology; better adjacencies; more computers; add storage; sink(at least 1); get rid of bugs/mice; solid walls/doors; promethean boards/white boards; faculty bathrooms; more child bathrooms; power outlets (less cords); no carpet in art room; gym- 2x's size w/speakers and AC; larger cafeteria; more conference rooms; grade leveling clustering; more copy machines; intervention rooms/spaces; ceiling mounted projectors – no carts; teachers workroom; less access points/limited numbers of doors; more storage space; operable windows; add wireless access/WiFi – more technology; lighting controls; mechanical controls; electrical outlets; student belonging space/lockers/cubbies; move music away from media center; casework in classrooms; and new/comfortable furniture; team storage; more than one internet drop; larger counselor space w/conference table – private space; more copy/prep space and copy machines; confidential office space for conversations and paperwork; additional space dedicated to specials; exterior doors at each classroom; better security; larger classrooms for collaboration; ventilated computer labs; decent sized book room; separate weather lab; clustered specials spaces; cafeteria large enough to hold all students; locker/cubbies/coat hooks; separate auditorium; sep gym; sep cafeteria; shared science labs; easy way finding for students/parents; separate TV studio space; tech coordinator office/space.

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Question 4: My students learn best when _____?

Quiet; good air quality; temperature control; good acoustics; adequate/flexible space; planning space; wall space; computer lab; natural light; quiet area, but students in class can be loud; variety of learning environments; technology that works; enough materials; students/staff that feel safe; they have home support; try new things at school; playground equipment; when students can share with each other; feel valued; small class sizes; feel challenged; more teacher aides available/adequate support; they can work together comfortably; they can be creative; access information and connect to the world; noise control with walls; limit travel distances; quiet space; reduced distractions; more room in classrooms; more collaborative /interactive spaces; sturdy non-wobbling tables; personal space; room to move around; good/adequate lighting-daylight; access to more technology; recess with adequate space; adequate/varied furniture systems.

Question 5: If nothing else, I would like to see the modernized school include _____?

Walls; ADA accessible; natural light; adequate parking; separate car/bus entrances; teacher lounge; air quality; paved playground w/markers; showcase for displays; doors between classrooms for collaboration/coverage; generous technology; generous classroom space/size; generous storage; windows/locking doors/walls; solar panel used; sinks with single lever for temperature control; upgraded sewage; improved safety features/continued; running track; adequate blacktop space for recess; enclosed library; display cases; centralized bookroom; better pest control; energy efficiency/green ; keep some green space; adequate day staff parking; more bathrooms; teacher eating area outdoors; new technology; more assembly space; public water/sewer; ADA accessibility; more windows; permanent/individual space; storage; to feel safe during lockdown; separate gym/auditorium/cafeteria; sufficient restrooms; improve parking/pick-up/drop-off – separate; build bridge/pedestrian access over 355 – kids can then walk to school.

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STUDENT INPUT

At the time of the first community charrette in April 2014, there were several students present and their group entertained several questions about their school. Their comments were presented by selected individuals at the same time as those of the community. In addition, the entire school took time before the end of the year to vision what their ideal environment may be. Attached are several of the hundreds of comments and pictures provided by the students of all grade levels of Urbana Elementary School. Besides the pictures, several classes used charts to depict their thoughts of “What a Dream School” would have.



Anchor Chart Themes:

- **Include a Discovery Zone for Science**
- **Lights in classrooms**
- **Cubbies for backpacks**
- **Pool**
- **Smart Board/Whiteboards**
- **Walls/doors and windows in all classrooms**
- **We love the Wetlands and Rock Garden**
- **Books**
- **A Fish Tank**

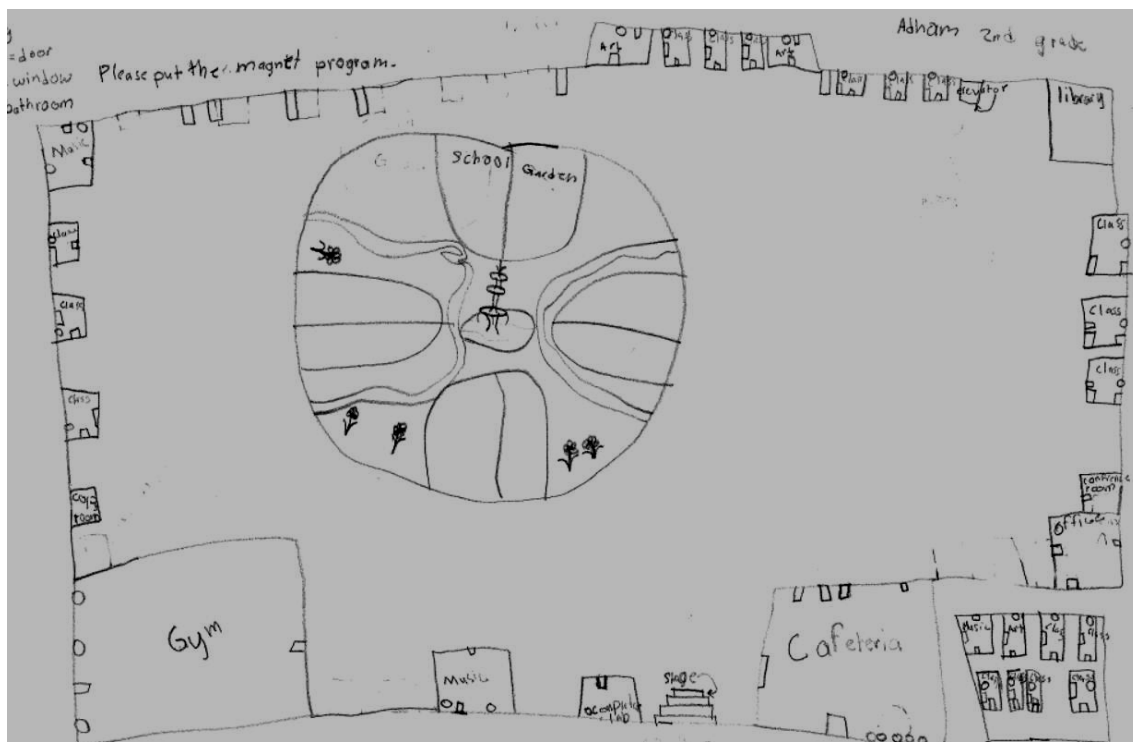
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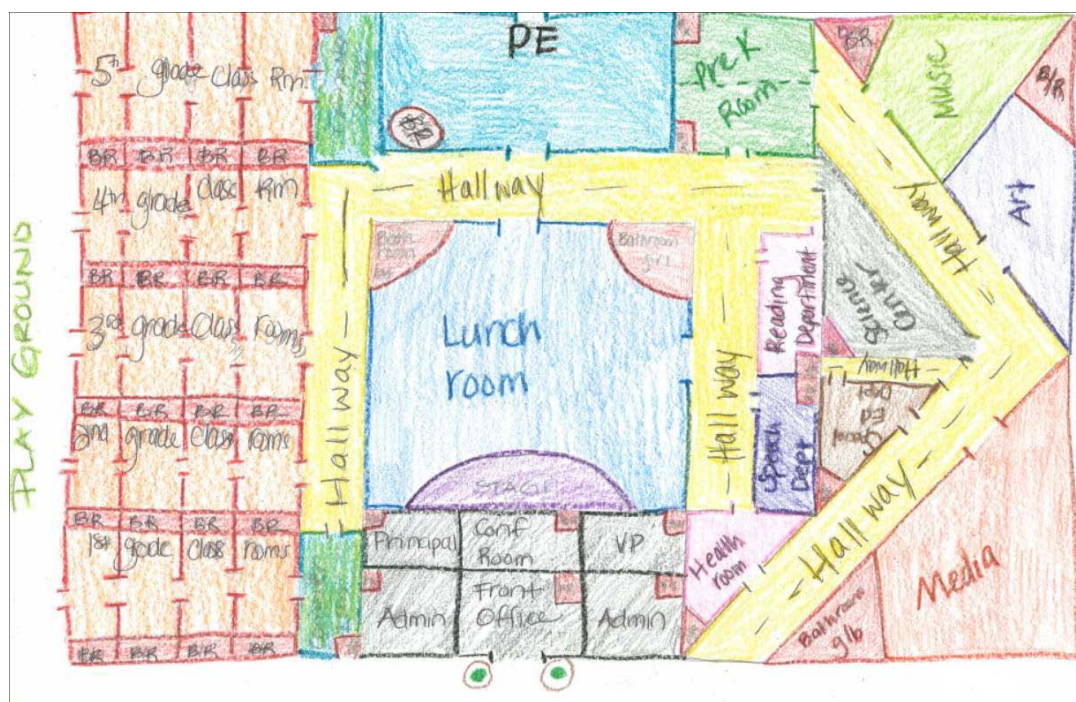
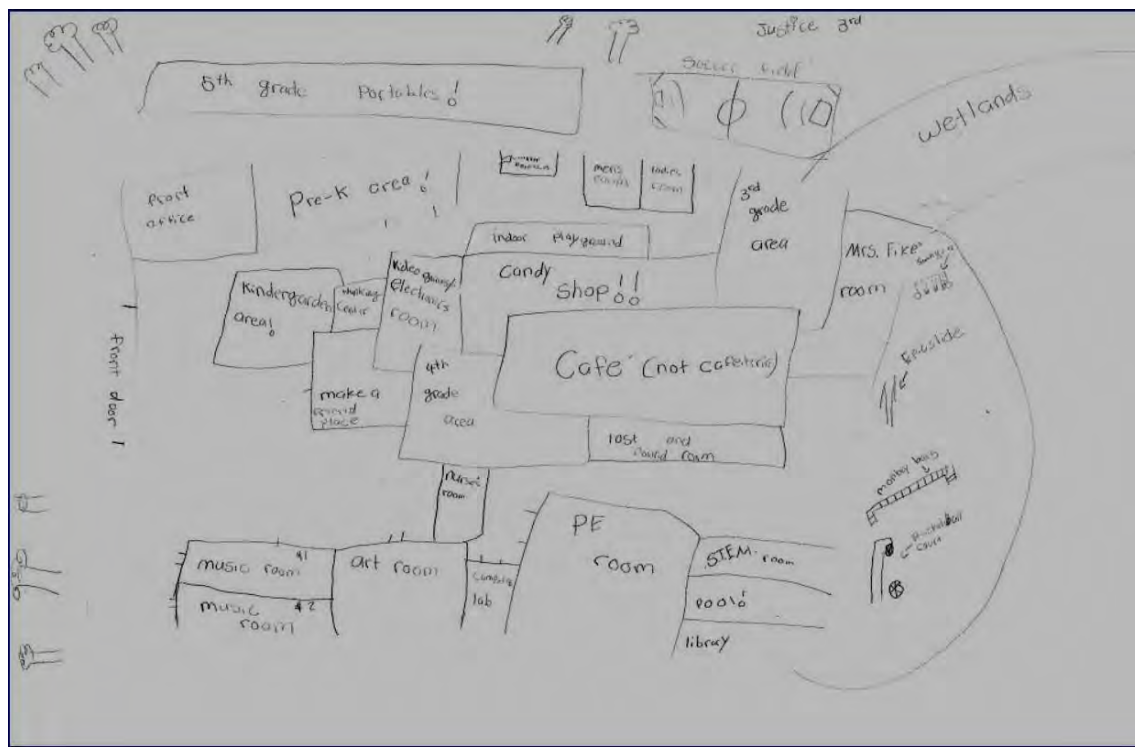
Student Artwork Themes:

- Indoor/Outdoor School
- Windows
- Safety and Emergency Concerns
- STEM
- Nice Teachers
- Green House
- Two Stories
- Café not Cafeteria
- Collaboration spaces to meet with friends and learn
- More Magnet Programs

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Social Media Outreach

In addition, to social outreach, all steering committee meetings were open to the public and the community comments were considered by the steering committee in developing the final report and recommendations of the study.

- From the start of the feasibility study through October 24, FCPS received 3 e-mails:
- Subsequent to the community presentation of the potential options on October 7, 2014, FCPS received over 980 webpage views on the project webpage.
- To date there have been 79 survey responses since October 7th. The survey comments are contained in this appendix. (summarize)
- Social Media
 - 1) Facebook: 2 likes
 - 2) Twitter: 1 Twitter re-tweet on survey posts

Urbana Elementary School Modernization Survey

The following questions were presented in the on line survey to the Urbana community regarding the options presented at the faculty/staff meeting and the community meetings in October of 2014. The 'themes' were presented in Section 5.0 and all of the comments received are presented below.

- 1) What do you like most about Option 1, 2, 3, 4?
- 2) What are the potential challenges for your child's education in Option 1, 2, 3, 4?

Refer to attached survey comments

Urbana Elementary School Feasibility Study Survey

What do you like most about Option 1 ?	What are the potential challenges for your child's education in Option 1?
<p>Really not a fan of this one at all Not a lot to like.</p> <p>Separate on-site parent drop off area. Plenty of recreation area and natural light to all areas inside. Largest space Preserving wetlands</p> <p>THAT AN EXISTING SITE WILL BE REUSED AND REFURBISHED Save the established building</p> <p>Spreads costs over 4 years instead of all in one big sum in one budget year. The total cost is ridiculous! ! Not too much! Way too costly, time consuming, and disruptive to the students in light of the fact that there are other options.</p> <p>Largest square footage of options. Nothing really</p> <p>The overall square footage of this option seems that is might accommodate a population growth.</p> <p>I like the two story educational option as well as a designated parent drop off</p> <p>Natural day light, interior walls and preserving the wetlands.</p> <p>That the Great Herons Wetland is preserved. I question whether the other opportunities will be a reality. All educational spaces will have interior walls and doors There are other elementary schools in the area that need modernization before Urbana elementary school does. I've looked at the online photos of Urbana Elementary and I see a more than adequate, light-filled facility. There are other schools which need updating. Green Valley Elementary, as an example, is dingy and has never been modernized. The carpet is ripped in the main hallway, ceiling tiles are stained and falling from the "gym" ceiling and the first impression you get from the school is depressing. Fix that school first. It's long overdue!</p> <p>Natural light in all classrooms</p> <p>Nothing. Possibly least disruptive to students in terms of having to move schools.</p> <p>Nothing. Lighting and security.</p> <p>The design of the school building. The recycling of the existing facility reducing waste to a landfill. The retention of a building that has been part of this community for so long. I know of grandchildren attending the same school that their grandparents did. That is a strong statement for the history of this county.</p>	<p>Construction contamination on site, unexpected challenges to the retrofit. It will be a long-term construction project which will impact children learning in a comfortable environment. The noise, distractions and moving of student to different rooms will all have negative impacts on their learning. They won't be there by the time it's done.</p> <p>High price, too long of a project, building is too old-needs to be replaced, not patched I do not have kids at UE, but I do in FCPS. I think living under constant construction for so many years will have an adverse affect on students feeling stable.</p> <p>BEING INTERRUPTED BY CONSTANT CONSTRUCTION DAILY. The disruption caused by construction and the length of time</p> <p>None This option would disrupt the students the most. The final product would also be limited considering the fact that they have to work within the constraints of the existing building. Occupying building during construction will be way too disruptive to the learning process. In addition, the added time and expense makes this the least desirable option. The timeframe is way too long w continuous disruption and changes, not to mention noise. The extended length of time for construction will be problematic for learning. With building delays it could be closer to a 48 month build, this could be very disruptive for a long time. our youngest child will be there the entire time of construction, so I would be concerned with the disruption of education. most of the same problems exist. Don't do this This is the MOST disruptive option. Especially for this disruption to last 4 years. Distractions and safety. I am concerned about the safety of the children being in/near construction zones. There will be numerous contractors and workers in vicinity of the children, plus the noise from construction will easily distract or disrupt the children's learning day. I also have a significant issue that the children's access to play areas and fields will be impacted.</p> <p>the difference in heights and roof top mechanical systems, creating points of failure going forward My child suffers from asthma and severe allergies. I cannot see him thriving in this "academic" environment. This seems like the least attractive option - most expensive but we still keep an old building. Continuing to use a wholly inadequate building. Time of project is not reasonable nor cost effective.</p> <p>The four years of disruption at a school. This is too long. The risk of exposure to building materials and construction noise. The impact of the expense to the budget reducing the likelihood of other projects in the county. Not impressed with the traffic flow.</p>

Urbana Elementary School Feasibility Study Survey

What do you like most about Option 1?	What are the potential challenges for your child's education in Option 1?
<p>The older building will be kept instead of replacing a piece of history that all of the older community knows and loves. Concurrent development, students don't change facilities</p> <p>I don't feel any of the opportunities for this option will benefit my children. I don't like anything about Option 1. Long overdue and necessary to continue to provide children with a positive learning experience</p> <p>The children will still be close to home. Nothing... too long and too expensive</p> <p>Not much.</p> <p>Nothing natural daylight</p> <p>I do not like anything about option 1</p> <p>The fact the children could still attend school while the remodeling happened. Nothing. Too much disruption to the school. Too expensive. Size. Room to grow for growing area. I like that all classrooms would have walls and doors. Don't like option one at all</p> <p>Nothing-- this is a bad option.</p> <p>Nothing, this plan will have the greatest negative impact on student and on staff.</p> <p>That all classrooms are located within the building.</p> <p>Third option</p> <p>all classrooms have walls and doors It does not disturb the Great Heron Wetlands. I like that the school location will stay the same and not closer to 270.</p> <p>The square footage appears to be the most of all the options.</p>	<p>I think that the children will be able to work around the renovations and in the end they will also enjoy having new parts added on to the old building instead of having to be transferred to a new school and be displaced from their friends and staff. Nearly the entire elementary experience for some students will involve construction, hate the cost</p> <p>I feel this option will be disruptive to the learning environment due to onsite construction. Also, this option would interfere with recess areas and would be extremely unsafe for students. Finally, our children will still be in an outdated school being exposed to harmful conditions. Takes too long to complete Health and safety hazards. There will be lots of dust and distractions, even when the intent is to only work off hours. This is one of the worst two options. Too much disruption Urbana ES has a special ed. preschool and many children on the autism spectrum. These children do not do well with changes in routine, loud noise, etc. 44 months of constant noise and changes would be a nightmare for these children. Learning while construction going on. Seems expensive. Long time frame Disruption while construction is current, way too long and upper elementary students won't benefit from an updated school.</p> <p>This option raises concerns about the health and safety of the students. In addition, children need consistency and this option of shuffling children around the building is very disruptive to their learning. Almost everything. While attending school during the construction is nice, it will also be loud and not fun. The cost is high. The length of time is crazy. Definitely not the best option.</p> <p>length of time Too much disruption for too long of a time Challenges are too great to consider</p> <p>This is the most expensive option, and it takes the longest to complete, disrupting the children's education for twice as long as the other options. Some of the children will spend 4 out of 6 years at UES in chaos. NOOOOO!!!!!! Un-secure. Asbestos. Construction danger. How is this even an option? Construction while students are in the building is a distraction. The overall length of the process will increase the distraction to students and their learning.</p> <p>The disruption in the classrooms from all the noise from construction. The extreme long period of time of construction. The potential risk to students and staff of performing construction on such an old building while people are in the building. Will the air quality be improved???</p> <p>As an educator at UES, this would be the worst option. The main problem is how long instruction would be disrupted for the students. Also the end result is not very desirable, this is the most expensive option and the location of the fields will make it difficult for recess and outdoor physical education.</p> <p>educational disruptions, time of construction, juggling students, possible health issues related to construction</p> <p>This option is expensive and disruptive to learning. It seems like the construction could be very distracting and make for a difficult learning environment. The long-term construction within the same building will be a huge distraction for elementary school children. My daughter is working on improving her focusing and listening skills, but could easily be distracted or made nervous by construction.</p>

Urbana Elementary School Feasibility Study Survey

What do you like most about Option 1?	What are the potential challenges for your child's education in Option 1?
<p>preserves wetlands, all educational spaces have walls/door/daylight</p> <p>Great Heron Wetlands is preserved and provides a secure environment</p> <p>More square feet. Maybe this way you will not have to put portables in the very next year because of the over crowding that will take place. Plan for the future and use the tax payers money wisely. Go bigger, the students will come.</p> <p>Preserving the Wetlands.</p> <p>Loading Bus and cars are separated. Natural Daylight. School being completely renovated. Secure</p> <p>Being in the facilities/project management, I think this is obviously a great study / comparison. It is good to see this option, so we can value the others.</p> <p>Nothing</p> <p>Great Herons Wetland is preserved.</p> <p>nothing</p> <p>The old building is home to me and some of it will remain.</p> <p>Wetlands preserved and all educational spaces will have interior walls and doors with natural daylight.</p> <p>Also like new gym and cafeteria.</p> <p>Optimal use of space</p> <p>Nothing</p> <p>Largest building, more time until you eventually run out of space in it.</p> <p>That the educational spaces will have interior walls and doors.</p> <p>I do not like Option 1.</p> <p>Not much.</p> <p>Large building</p> <p>I like that all of the fields/play areas are in the same place. I also like that the parent drop-off is on site.</p> <p>Nothing</p> <p>Stay in the building.</p> <p>Nothing</p>	<p>noise, construction crews in building</p> <p>In house renovations are very disruptive and messy. Effects the educational program negatively.</p> <p>COST Prohibitive!!</p> <p>Too much disruption to the school/classes. 4 years is also a very long time to have this ongoing.</p> <p>Restricted to access to play areas and increased portables.</p> <p>Disruption</p> <p>This will create terrible challenges for the children, educators and staff. No matter how much you try to create barriers for dust, noise, site distractions etc.... you can't eliminate it properly for these little minds to learn.</p> <p>construction might be going on during school year no summer programs can take place at UES longest amount of construction time</p> <p>Many impacts on kids and families. The children will be impacted during construction, more portables, the children will be impacted for a longer time and all with the end result being there would still be functional obsolescence such as low ceilings.</p> <p>Too long</p> <p>1. parent drop off loop isn't long enough. 2. limited parking. 3. my child will be dealing with a lot of dust and noise for 4 years. not a good educational environment</p> <p>There will be very little outside area accessible for students to play. There will be noise outside and inside the building. It will take 4 years.</p> <p>disruption of school and most kids will be out before seeing the benefits of the renovation.</p> <p>Highly disruptive, time, cost</p> <p>With the renovations taking the longest children of Urbana will be unsettled for too long.</p> <p>4 year timeframe, cost to taxpayers. Little to no outdoor recess during work period..</p> <p>Construction disruption; typical issues with portables</p> <p>Too long for the construction phase; no summer programs will not be good for Urbana</p> <p>The duration of construction...</p> <p>I am actually a teacher at UES. I see many challenges to Option 1. The biggest is the amount of disruption that will be caused by renovating a building while it is in full use of teachers and students, the process will take close to 4 years and in the end it feels as though we are just kicking the can down the road.</p> <p>Could be disrupted by construction for most of elementary education. Too many portables!</p> <p>Construction, noise, to long to build, too expensive, small playground</p> <p>not a large enough parent drop off where is staff parking? Where do portables go if not large enough</p> <p>I do not like that we would be enduring construction noise for four years. I also do not like the fact that we would not be able to have outdoor recess during this time.</p> <p>Dangerous and distracting to work while construction is in process and it will take several years to complete</p> <p>Expense. Limited access to play fields and outdoor space. Too many portables.</p> <p>Construction is way too long and building is too disjointed</p>

Urbana Elementary School Feasibility Study Survey

What do you like most about Option 1?	What are the potential challenges for your child's education in Option 1?
<p>Each educational space will have walls, doors, and most importantly, natural daylight. The current inner portion of the school is drab and uninspiring.</p> <p>Don't like this option at all.</p> <p>YES! it keeps History to a once small town.</p> <p>I dislike this option the most. Living through a renovation at my work for the past 6 months, I know how desperately distracting it can be - and unhealthy. I would not want to put my child through that.</p>	<p>Can't think of anything crucial.</p> <p>The disruption and costs are the major drawbacks—if so much funding is going to be required, it seems that investing in a completely new space would be preferential.</p> <p>My child will be taught in a building that is under renovation. It will be loud, distracting, and the thought of my son being exposed to potentially hazardous old building materials is not optimal.</p> <p>Too many distractions/health hazards/cost.</p>

Urbana Elementary School Feasibility Study Survey

What do you like most about Option 2?	What are the potential challenges for your child's education in Option 2?
<p>Most closely keeps normal operations for students and staff until construction is complete</p> <p>Wetlands preservation, fewer portables, less disruption.</p> <p>Brand new building, although with the construction of Sugarloaf elementary school going up, not sure we really need another brand new school.</p> <p>Student learning interruption is limited and students are not relocated during renovation.</p> <p>Security and less time to construct</p> <p>preserving wetlands</p> <p>Provides current stable environment while new location built.</p> <p>THAT IT WILL BE A BRAND NEW FACILITY AND THE COST IS LESS THAN OPTION ONE</p> <p>School is moved to the back and the cost wetlands preserved</p> <p>Gets Sugarloaf open to reduce crowded conditions.</p> <p>Major cost savings over option 1, but still ridiculously expensive for a school building.</p> <p>New building.</p> <p>Don't like option 2.</p> <p>Much more reasonable time frame than first option</p> <p>I like that this is a new and separate structure and the building time frame is reduced.</p> <p>lack of disruption</p> <p>much better use of land and future needs</p> <p>Parent drop-off and bus loading areas will be separated and located onsite, with additional parking.</p> <p>Great Herons Wetland is preserved. No additional portables are required for construction.</p> <p>Wetlands will be preserved</p> <p>That the children would not have to switch schools, the wetland is preserved, and less construction time involved than Option 1.</p> <p>Less construction time</p> <p>I like the shorter construction time.</p> <p>Less time involved, less disruption to students/staff, least costly. The old school is OLD and needs replacing.</p> <p>It seems less disruptive than moving buildings.</p> <p>Children won't have to relocate.</p> <p>You did this with North Frederick. It seemed to work. Timing is not terrible.</p> <p>Concurrent development, students don't change facilities</p> <p>In my view this is the best option. It is only slightly more expensive than 3A and it is far less disruption to fewer people. I think a benefit of this design is that the building is furthest from the road of all options ... which seems safer to me.</p> <p>I don't feel any of the opportunities for this option will benefit my children. I don't like anything about Option 1.</p> <p>I don't feel any of the opportunities will benefit my children. Therefore, I don't like Option 2.</p> <p>Nothing</p> <p>Best option less interruption for students accomplishes needs for school</p> <p>The price. Less disruption to the kids. Better drop-off options when done.</p> <p>Nothing</p>	<p>final result is not optimal - school orientation, placement on site, play areas, etc.</p> <p>Natural daylight challenges. Unclear about how little light will be accessible.</p> <p>I do not like that some of the playing fields are right along 355, which is a major road where cars go at high speeds at times.</p> <p>Play areas too close to Urbana Pike.</p> <p>Construction is a huge distraction and potential safety issue. Use the land/site already owned-no need to negotiate and add addtl costs/land.</p> <p>LOSING THE PLAY AREAS AND PLAYFIELDS DURNING CONSTRUCTION.</p> <p>Not optimal for day light, no recess access.</p> <p>None</p> <p>This would leave the current students to go to school near a construction site.</p> <p>Dislike the way the fields are divided in this option, the location of the building on the property, and the lack of natural daylight in the building.</p> <p>Sounds like the final building is still not ideal (no natural light) and may seem awkward after spending an incredible amount of money and time.</p> <p>While this is separated construction it may still be loud and distracting for the children. It may also interfere with the opportunity for outside learning and playing opportunities.</p> <p>N/A</p> <p>Disruption to children during the day and the cost still really expensive. Children just like adults need natural day light to function to their best ability.</p> <p>I do not like the idea that the children are still near the construction areas. I question their safety in such an environment, and the noise from construction would be a disruption to their day.</p> <p>Do the educational areas have interior walls? My son could not concentrate on his work because he could hear noises from other classes.</p> <p>long term displaced play areas; lack of access to school amenities</p> <p>I am very concerned about how the noise with impact instructional time.</p> <p>The placement of the school looks very close to 270. Lack of a playground for 2 years is concerning as well.</p> <p>Long time frame, disruptiveness of construction, and fields fronting Urbana Pike.</p> <p>Costs are still high.</p> <p>Loss of continuity of the building. More environmental impacts loss of outdoor space during construction. Construction noise and traffic near school. Concerned that growth in the neighborhood will still require additional portables that haven't been planned.</p> <p>outdoor playfields are impacted</p> <p>This option would be extremely disruptive to the learning environment for my children. Also, the students recess area will be compromised and not safe.</p> <p>The fact that play areas/phys ed space will be non existent. I'm already disappointed with FCPS commitment to physical activity</p> <p>This is one of my favorite options. Parking and play space may conflict for some time.</p> <p>Not good to have children being educated on a construction site.</p>

Urbana Elementary School Feasibility Study Survey

What do you like most about Option 2?	What are the potential challenges for your child's education in Option 2?
<p>It is okay</p> <p>Centerville and Urbana will have relief earlier if we use this option. Kids can attend school while the construction occurs without too much disruption. Cheaper than first option and better time frame. I like that the school will meet Frederick County specs.</p> <p>Nothing. Worst of the options</p> <p>New building. No portables.</p> <p>Less construction time.</p> <p>Again, not an option I believe we should consider - challenges too great compared to other options</p> <p>The construction timeline is better (2 years).</p> <p>Nothing. The kids will be in portables again. Just this week one of the UES portables had a broken window with rain pouring in on the children's books, while ants invaded the area where they keep their lunches.</p> <p>Excellent choice. Least disruption to the educational program.</p> <p>Less disruption to the educational experience. Shorten construction time.</p> <p>It's a new building! It's further removed from Rte 355.</p> <p>The time frame for completion is more reasonable in this option.</p> <p>The 1st and best option</p> <p>school sits back farther from 355, secure environment, 24 month time frame</p> <p>It does not disturb the Great Heron Wetlands.</p> <p>I love the idea of the kids being able to stay in their existing school without construction going on. I think this plans offers the least disruption to the children.</p> <p>This option has less construction happening around the kids while not increasing the usage of portables.</p> <p>The construction time is shorter. In the end the Kids will have a brand new school. Least amount of disruption for the kids during construction.</p> <p>school is set back further from 355, whole school is new</p> <p>Preserves the Great Heron Wetlands</p> <p>Students remain in familiar environment.</p> <p>Secure</p> <p>While it doesn't allow for the proper orientation as the school was designed, I do like that it sits back from the main road.</p>	<p>As with option 1, Urbana ES has a special ed. preschool and many children on the autism spectrum. These children do not do well with changes in routine, loud noise, etc. While construction time is considerably less than option 1, it would still be a miserable 2 years for our students on the autism spectrum.</p> <p>Still too expensive, no natural daylight</p> <p>too distracting for students</p> <p>It's not an ideal location compared to the other options. Not a fan of the play areas being on different sides. Don't really like how close it is to 270 and farther from Urbana Pike.</p> <p>Construction going on right next to classrooms providing noise and sightline disruptions, equipment too close to kids, and crew too close to kids. After being built, playground areas are across parking lot/driveways causing a safety issue for kids darting around cars.</p> <p>daylight access</p> <p>The play areas in front of the school don't seem as safe as they are now (too close to traffic).</p> <p>Natural light and adjacent play areas are important aspects of a school environment that should not be compromised. In addition, my child will not thrive at school that does not offer play areas and fields.</p> <p>The BOE should consider, instead, a temporary redistricting of Centerville and Urbana to better utilize Green Valley during this time.</p> <p>Chaos. Portables. Ultimately, the children have to walk through parking lots to get to their play areas. It is less safe, and they spend valuable play/exercise time traveling to the fields.</p> <p>Outside play areas will be farther from building.</p> <p>Still has construction noise to distract the classrooms. Can the children play outside safely?</p> <p>The location of the building on the property makes placements of fields and playground areas are scattered and difficult to get to. Also the fact that play areas would not be accessible during construction makes things difficult.</p> <p>none</p> <p>not enough outdoor space for PE/ recess, noise impact on learning</p> <p>Students would have to cross the parking lot and/or roadway to reach the front play areas. Other play areas are not easily accessible. The ongoing construction while students occupy the old UES would be extremely disruptive to learning. The school is too far back off the road. Parking is already an issue, this option would increase this problem during construction.</p> <p>I don't see any.</p> <p>I'm sure my daughter would like the disruption to the play areas during construction. Once completed, I have concerns about safety and security of the play areas that would be between Urbana Pike and the parking lot.</p> <p>loss of athletic fields, not optimal for daylight</p> <p>This site is not as ideal as the old site</p> <p>Construction noise may disrupt learning.</p> <p>Not big enough</p> <p>Play areas not accessible for children. Disruption during daily learning.</p> <p>Disruption, laying field next to major road.</p>

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What do you like most about Option 2?	What are the potential challenges for your child's education in Option 2?
<p>Great Herons Wetland is preserved. No additional portables are required for construction. Cost effective with new building</p> <p>This plan takes less time and will give us a new state of the art building. We do not have to leave our classrooms during building.</p> <p>no more portables and faster time for school to be built.</p> <p>Not Much.</p> <p>Limited disruption (but at the cost of less than optimal use of space)</p> <p>Less costs and faster completion, less time disrupted.</p> <p>I don't like it - although short time frame to build, must live with consequences of poor use of land / layout / negative impact on natural light, etc.</p> <p>less time to complete; like the new play areas</p> <p>The location of the school on the property, sitting back off 355.</p> <p>I will only have to pack up and move my classroom one time?</p> <p>No additional portables; less time</p> <p>shorter time and cheaper than option 1</p> <p>Shorter schedule than option 1 and less disruptive</p> <p>No moving students or teachers.</p> <p>Optimum for students. Required construction time for school is less than 24 months.</p> <p>Less disruption time to educational program, and shorter construction time.</p> <p>The future children get a new space at a more reasonable cost than option 1 and the current students will have less disruption than option 1. This is the option of preference for me.</p> <p>I like this option the most. It worked well at North Frederick. I feel it would be least disruptive.</p> <p>at least the kids are not exposed to the construction within the school.</p>	<p>Children impacted by construction. Educational spaces may not have optimal orientation for natural daylight. Play areas may not be adjacent to the building. Play areas and rear playfields will not be accessible during construction.</p> <p>None</p> <p>concerned about the play areas adjacent to 355</p> <p>Very little outside space for exercise. There will be a lot of noise outside the building. When the school is done it will be set back a way from the road. Not sure if the placement of the school will adversely effect the natural drainage to our wetlands.</p> <p>no playgrounds and parking</p> <p>Too much disruption for the students. A poor experience for existing students. NOT desirable.</p> <p>Less than optimal use of space</p> <p>School sitting that deep into the property looks odd and sports fields split up with the front one being very close to 355.</p> <p>2 year time to complete. Kids have to cross parking lot to access front play areas.</p> <p>consequences of poor use of land / layout / negative impact on natural light, etc.</p> <p>That the educational spaces may not have natural daylight and play areas not adjacent.</p> <p>This process seems incredibly disruptive and unsafe to the day to day educational environment. It feels as though the end result will not be as good as it could be.</p> <p>Potential disruption. Limited natural daylight.</p> <p>Construction noise</p> <p>baseball and soccer cannot be played at the same time for safety. Proximity to 270 - noise factor not large enough school is there a rec center in the school for after school events? Staff parking? Where do portables go?</p> <p>Might not be as disruptive or dangerous as option 1</p> <p>The noise of construction, parking, traffic, safety concerns.</p> <p>Site plan should be redesigned to properly organize fields and properly orient the buildings classroom wings.</p> <p>Lack of natural daylight in classrooms.</p> <p>My main concern with this is the lack of access to play areas and playfields--perhaps there is something that could address this to at least some degree?</p> <p>Safe play areas and drop off while construction vehicles are on the property.</p>

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What do you like most about Option 3A?	What are the potential challenges for your child's education in Option 3A?
<p>Can't see beyond delay in opening Sugarloaf.</p> <p>The fields and play areas are away from 355 compared to Option 2. Natural sunlight will also be present in most educational rooms.</p> <p>Short time to complete. Lowest cost.</p> <p>Lowest cost to taxpayer.</p> <p>time line is most reasonable and reuse of existing land. Best price. Preservation of wetlands is important.</p> <p>This is #1 choice.</p> <p>its least costly</p> <p>Price and construction time. Less risk to potential hazards for students and staff</p> <p>THAT IT IS A NEW FACILITY AND STAFF AND STUDENTS WILL BE LOCATED OFF SITE DURING CONSTRUCTION.</p> <p>nothing</p> <p>Shortest time, least expensive, optimal use of space</p> <p>I like the fact that the children's learning will not be disrupted by construction noises and I like the low cost and the fact that natural light will be in all educational spaces.</p> <p>A little less cost, but still 150% above a reasonable cost.</p> <p>Most ideal, hands down, best option for the building, the staff, the future and the current students. The current students will have no exposure to hazardous materials, poor air quality, and other potential dangers of construction. This is the cheapest, fastest, and least disruptive for this learning environment.</p> <p>This option seems to satisfy all of the necessary concerns. Mostly, it allows students to learn uninterrupted by construction, in a new, modern facility, making the most of that building before it is opened as Sugarloaf Elem. This option is also the best bang-for-our-buck.</p> <p>Much more reasonable option offering little disruption to Urbana elementary students.</p> <p>I like this option for building the most. It removes the children from the construction area ensuring that they are not being distracted by the construction.</p> <p>New construction. Separate parent drop off and bus drop off. Less disruption during construction</p> <p>THIS IS THE BEST OPTION!!!!!!!!!!!!!!!!!!!!!! PLEASE LEAD WITH WISDOM NOT JUST THE SQUEEKY WHEEL PARENT!!!!!!!!!!!!!!!!!!!!!!</p> <p>Wetlands are preserved, natural daylight, and minimal disruption to education.</p> <p>I like all of the opportunities related to this option, especially that the children will be in a school with no possibility of safety issues related to being near a construction area.</p> <p>least disruption for students, move a whole to new building then occupy new school when ready</p> <p>The students are completely off site while the new school is being constructed.</p> <p>Makes the most sense for less disruption to students and staff. Also safer away from construction zones.</p> <p>It would be beneficial to have the children separated from the construction site.</p> <p>Cost and the shortest time frame to rid ourselves of a school that should have been razed many years ago.</p> <p>I like this option: least amount of challenges or negatives, minimal amount of disruption to teaching, and access to playgrounds.</p> <p>Concurrent development, students don't change facilities</p>	<p>fewest challenges of all options</p> <p>Delay to Sugarloaf is unacceptable given current crowding at UES and Centerville.</p> <p>I do not believe that occupying another school is the best choice in order to rebuild one. Some of the children will be relocated to the new school anyways, which will lessen the population at Urbana E.S and make it easier to move students around to allow for building while in that school. Although, the construction during school times becomes a noise issue.</p> <p>Students have to get used to a new location for a couple of years.</p> <p>none</p> <p>nothing school bus will drop them at sugarloaf</p> <p>Delays opening of SLE which is badly needed.</p> <p>None. They are flexible.</p> <p>NON THAT I CAN IMAGINE AT THE MOMENT</p> <p>Still crowded conditions</p> <p>None</p> <p>Will need to convince BOE of the benefits of this option, so that budget can remain on schedule. It really looks like the most affordable and least disruptive of all the options.</p> <p>Other than the ordeal of relocating to a different property, I don't see a negative to this option. I think we learned from the LHS/OHS situation, that relocating students as an entire student body and then returning them to their new building, as such, is not necessarily a negative and is a challenge that can certainly be overcome. The delay opening of Sugarloaf Elem is a non-issue.</p> <p>This comes at a price to all of Urbana's elementary students. It impacts Centerville and Urbana students by forcing them both to cope w overcrowded conditions for even longer than necessary. The building time is decreased, but cannot happen until Sugarloaf is complete and drags out total disruption time too close to that of option 1.</p> <p>The delay in opening Sugarloaf Elementary may cause some additional classroom crowding or use of portables.</p> <p>The possibility of moving back and forth between schools.</p> <p>There are none!</p> <p>I do not find any potential challenges for my child's education with this option.</p> <p>Interior walls and doors for the classroom?</p> <p>None</p> <p>None.</p> <p>This looks like the best use of already allocated resources.</p> <p>None</p>

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What do you like most about Option 3A?	What are the potential challenges for your child's education in Option 3A?
<p>It is the most cost effective without being disruptive to the children's education. The children would get to experience the luxury of being in a brand new building! Love this option! I don't feel any of the opportunities for this option will benefit my children. I don't like anything about Option 1.</p> <p>Best option. Least disruption to education as most children are bused to school and the estimated construction time is the shortest. Wish that the school design could be the one presented in option 1.</p> <p>A new facility. We need a new updated building. If the cheapest of all.</p> <p>Cost</p> <p>Least expensive</p> <p>The students will be in an optimum learning environment. The classrooms will encourage maximized learning potential. Finally, recess and parking areas will be safe.</p> <p>Best option in my opinion. It provides the opportunity to make things right instead of piece meal things together. The least impact on the education quality for my child</p> <p>may be a good option to prevent interruption</p> <p>A nice clean building for the physical and mental health of the students and staff.</p> <p>This worked very well for LHS. Efficient in terms of both time and money.</p> <p>This option appears to be the shortest construction time and the least disruptive option for students. This option will be much better than dealing with years of construction noise and changes. All educational spaces having natural daylight is also a plus.</p> <p>Less impact to the school</p> <p>I believe this might be a better scenario for all, students, parents and employees</p> <p>Seems most reasonable to me, relocate students and then build new school, most cost effective too.</p> <p>This option is the least disruptive for all impacted parties-students, staff and parents because the students will have outdoor play areas, the staff and parents will have safe/close parking available (an assumption), students will return to a school that is located on the same footprint as the existing school.</p> <p>Clearly the most ideal situation. I love that the original school will be torn down and a brand new school will be built in the ideal place with the ideal plans to meet Fred. County specs. The fact it's the cheapest and quickest is nice too.</p> <p>Plan has the best use of the grounds in its layout. Kids are relocated to new school during construction. Lowest costs. Like this one the best.</p> <p>Use of Sugarloaf as temporary school. Cost, size, short construction</p> <p>Shortest time, lowest cost!!! LOVE, LOVE this option! This will also help get students acquainted with Sugarloaf ES, since a lot of UES students will end up going to Sugarloaf once the boundaries are reorganized.</p> <p>It just makes good sense all-around from an educational, construction, and facility stand-point as well as cost. It will limit drastically how much disruption the educational impact to students and staff will be. Being a new, updated facility as UES waits to be modernized is a much better scenario than staying in an over 50 year old building that is outdated, aging and doesn't meet the FCPS educational specs. Being overcrowded is a challenge but being overcrowded and in an aging building, which is what could possibly be the scenario for UES is not acceptable as a new facility is near to use until UES gets the modernization it needs.</p> <p>Short construction schedule, natural light, low cost.</p> <p>This is the best option. It costs the least and gets the new UES constructed in the shortest amount of time. The children get a real school to attend during construction, which is safer and allows them to concentrate without the disruption of construction chaos.</p>	<p>I see none!</p> <p>Using the Sugarloaf school prevents alleviating over crowding in the other schools for another 2 years.</p> <p>Delays relief for overcrowding at neighborhood schools that continues to grow. Loss of direct access to the Wetlands during the construction.</p> <p>The overcrowding of the new school Sugarloaf.</p> <p>off-site location</p> <p>None</p> <p>The delay for building the new school is lengthy.</p> <p>I'm guessing overcrowding at Centerville</p> <p>Does not help over crowding while under construction, my children will be in middle school and above with under construction</p> <p>This is one of my favorite two options. Overcrowding might be an issue?</p> <p>Not knowing how crowded the new school will be. Seems like there will be a lot of challenges that parents won't really know about until the kids are in there.</p> <p>none</p> <p>Minimal impact.</p> <p>Getting permission to move the kids to a different school for two years will be a big challenge.</p> <p>Very limited adjustment to new school is all I can think of.</p> <p>None</p> <p>Only challenge that is on the table for this option is the funding gap between Sugarloaf and the modernization to UES, which would put the UES community at Sugarloaf for a longer period of time until funding becomes available for UES. This could be a positive thing in advocating for more construction dollars at the local and state level as the UES community sits in a very overcrowded facility as growth continues around the Urbana area.</p> <p>none</p> <p>Nothing.</p>

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What do you like most about Option 3A?	What are the potential challenges for your child's education in Option 3A?
<p>This is the best option. It allows everyone to be in a safe new school as soon as possible.</p> <p>Everything, short construction time, little impact to instruction, Wetland is preserved, cost is the lowest. Everything! Least expensive.</p> <p>This to me is by far the best option. There would be minimal disruption to the student's instruction during construction. The construction crew would be able to complete the building with out the dangers of having the children near by. And this option is projected to take the least amount of time.</p> <p>Second best option</p> <p>construction time, best use of property space, allows students to be housed in a safe and secure new facility while school is remodeled</p> <p>Least expensive and least disruptive to the educational program. Better bus and parent drop off locations. The school location would stay the same without the children having to go through the construction process.</p> <p>This seems like the best option. It's the lowest cost, fastest construction time frame and doesn't impact the kids besides changing routines.</p> <p>quickest option, like used for Linganore HS</p> <p>This provides the least amount of disruption and the most amount of normalcy for the children. Students will all be kept together as a school. Will only have to deal with one re-districting of the area.</p> <p>This is a great option.</p> <p>Most expedient. Most cost effective.</p> <p>Wetlands are preserved.</p> <p>I like that this option allows for the school to be built like it was designed (orientation/sunlight, etc). If this only delays the opening of Sugarloaf by 1 year, then I would say this option is my favorite. If it is 2 years or longer, then I would go with option 2.</p> <p>BEST OPTION!shortest construction time least amount of money kids are away from the area at Sugarloaf Elem while construction is going on</p> <p>Best option!! Faculty, staff and students will be relocated off-site prior to construction. Great Herons Wetland is preserved.</p> <p>none</p> <p>Faster, less cost. Daily teaching/learning is less affected.</p> <p>this option works the best</p> <p>The children of "old Urbana and the new Sugarloaf" school will all be in new schools during our construction.No one has to be in an old building while the "fancy " one opens. The children will have outside space to exercise and learn. The building will take less time to construct. No construction noise. wetlands preserved, natural daylight, new school and fastest timing</p> <p>This is my favorite. It offers the least disruption to current students. Portables are not desirable and unfair to the young kids.</p> <p>Optimal use of existing space. My preference.</p>	<p>Should wait to redistrict Sugarloaf until Urbana is complete. Sugarloaf shouldn't have to support new Sugarloaf district PLUS old Urbana district. Sugarloaf should only be old Urbana district kids until construction is complete, THEN redistrict for a new Sugarloaf district.</p> <p>The additional classroom space is needed in the Urbana area. We can't hold up the permanent occupation of the new building while the renovations to use are completed.</p> <p>The challenges for my children will be none.</p> <p>None</p> <p>nothing too significant. Minor issue would be that my daughter will have to adjust to a new school but as long as she is among the same peers, teachers, this shouldn't be a big deal.</p> <p>adjusting to new facility for holding, readjustment to new building once open</p> <p>May delay the opening of the new school which is desperately need due to overcrowding. However UES housed over a thousand students before Centerville opened.</p> <p>I think it is confusing for the children to move around so much and to get used to a school that they aren't going to be attending.</p> <p>Don't foresee any challenges if the use of Sugarloaf elementary is approved.</p> <p>wait for new temporary school be built</p> <p>Two transitions will be needed, first to Sugarloaf Elem and then back to UES.</p> <p>Not big enough</p> <p>None</p> <p>relocation is not convenient</p> <p>Staff will have to move out, in and out and in twice. We will need portables at the new school while old Urbana's new building is being built. There will be more that 725 students after the houses start going up. Perhaps they could put a hold on the building until both schools were ready.</p> <p>transportation and delayed timing</p> <p>This is perfect!</p> <p>Relocation to Sugarloaf ES</p>

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What do you like most about Option 3A?	What are the potential challenges for your child's education in Option 3A?
<p>This option makes the most sense as it displaces the students for the least amount of time and is most cost effective. Has similar feel of current setup. This option seemed to work well for Oakdale and Langanore.</p> <p>Lowest costs and fastest turnaround. The kids will at least get to experience a new school with real buildings as opposed to a fleet of trailers. This is probably your best bet.</p> <p>Relatively short timeline (at least after Sugarloaf is built); provides best use of existing land; low cost like using another school; like the less time period</p> <p>Everything mainly best cost</p> <p>The way the building is situated on site.</p> <p>This seems to be the best option! I like that we will be completely off-site so the new facility can be built quickly, requiring the least amount of money and yielding the best results. It just makes sense!</p> <p>New building will be in optimal spot. Limited disruption. Natural daylight.</p> <p>This is my favorite option. Cheaper, faster, off site in new school</p> <p>Favorite option as it keeps kids out of construction and short schedule</p> <p>Students and staff will be in a safe, secure, up to date building while the new Urbana Elementary is being built.</p> <p>Site plan organization works</p> <p>All educational spaces will have natural daylight.</p> <p>The cost is appealing and I am supportive of the idea of my child being placed in the new Sugarloaf school although do have a concern about crowding at that facility.</p> <p>Children will get to attend the new school.</p> <p>One it keeps History in Urbana, 2 you can always add. Why continue to accommodate with new - oh, unless you didn't grow up in the area you're ok with the new housing/development congested roads.</p> <p>Urbana was once urban that's where it's name originated - maybe you can rename it to accommodate everyone coming into Frederick County. So, IMO - Southern Frederick County is a "city/town"; in itself.</p> <p>This to me is the most ideal solution and one that really benefits the teachers and students most. It will provide the most ideal learning scenario.</p>	<p>I see no problems for the UES community with this option.</p> <p>Continued overcrowding and overburdening of resources. But we're used to it.</p> <p>This would probably take at least as long as option 1 because Sugarloaf must be built first...</p> <p>none</p> <p>Delaying the opening of Sugarloaf elementary</p> <p>We will have to move more than once.</p> <p>For two years, children attending Sugarloaf will not feel like they have a home school. Why can't we just have one larger school?</p> <p>staff parking? Where do portables go? What about a Rec Center gym? Delaying Sugarloaf means more overcrowding!!</p> <p>The disruption and confusion of students having to "change" schools once the new school is complete.</p> <p>This could be upsetting to some students.</p> <p>Overcrowding</p> <p>Students, faculty and staff being relocated to an off-site location. Chaotic.</p> <p>The dependency on funding by the BOE is a little concerning.</p> <p>Class sizes may be large.</p> <p>Changing schools back and forth - to Urbana -to Sugarloaf and then perhaps back to Urbana due to redistricting.</p>

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What do you like most about Option 3B?	What are the potential challenges for your child's education in Option 3B?
Nothing. Terrible option for children in some of the most critical years of their education. Not to mention for teachers.	Temporary school situation would be difficult and confusing
Students are still on-site and the construction time is not that long compared to other options.	Portables are dangerous in bad weather, can limit healthy restroom use timing, and can cause health issues due to ventilation and off-gassing concerns.
Nothing.	Being in portables is distracting and not always the safest option. How will gym be in portables? the cafeteria?
Wetland preservation	Portables...really? Haven't we had enough "hell!", dealing with portables already?
nothing	too expensive and portables are a horrible option.
Gets Sugarloaf open quickly; reduces crowding	I do not have kids at UE, but I do in FCPS. My son is at TUES in a portable. This is not a good solution for two years of most of the school in portables. School unity would be lost.
Nothing!! This is preposterous to even suggest spending \$5 million unnecessarily on renting portables.	NOT FOND OF THE IDEA OF LOCATING THE STAFF AND STUDENTS IN PORTABLES FOR 24 MONTHS. I BELIEVE THIS WILL BE TOO DISTRACTING FOR STUDENTS.
New facility, up to current codes and standards.	I don't mind portable, but it does increase the potential for safety concerns. Too bad we have to consider it.
Don't see any benefits to this option over Option 3A.	None
Much less disruption than working on same building they are in. Gives them access to play fields which should be one of the priorities.	Less ideal than 3a for current students, due to fact that this options lengthens the process (because of the need to construct another temporary school).
The school design new construction	I think portable classrooms are always a challenge. They don't offer the same quality learning environment or safety to students that the school building provides. The end result of this option is the same as Option 3A - but 3A is less expensive and less construction time. Both of which are important factors to consider. Option 3A is the best choice, by far.
Wetlands will be preserved	I was in portable classrooms in elementary school for a year and had no issues with it. I think long term it could pose problems but a couple of years should work fine. It will take that long for the novelty to wear off and their school will be done then. It will not further disrupt Centerville.
I do not like this option.	Using the portables for the entire school could prove to be costly and disruptive. It could also be a continued distraction for the students.
remain on same site	Being placed in portables during construction.
there would be a new school	hope all kids can trek through the weather to a hideous option.
The end product.	Holy COW! The price tag on this option is nuts!
	There are numerous. This is my least preferred option.
	Interior walls and doors for classrooms?
	disruption of education program
	I would like to know more about the location of the temporary school.
	I don't like the idea of everything existing in portables for 2 years. Not at all.
	Too long in too many portables. Disruptiveness of construction.
	As a teacher I believe a whole school of portables is terrible. I taught in a portable and it is fine for one class, but other logistics will be a nightmare for 2 years of the students schooling. Everyone gets wet in storms, less actual learning time due to longer transitions going in and out of portables. Least favorite option.
	Please no portable communities. This is not acceptable. Subjecting teachers and students to the chemicals in the portables with no place to go for relief and air exchange while still experiencing construction noise, traffic and pollution. The overcrowding will still be felt.
	Hate additional portables
	This option will disrupt learning for students. Also this classroom setting will not be optimum for younger students. Also, I have concerns for safety in recess areas.
	I have a serious problem with the amount of tax money I pay for my child to be educated in a portable.
	What happens with media center, access to technology, gymnasium? My child will not receive the education that she deserves.
	Time is off the essence our kids are in a prison like school environment with so many kids and so many rules.
	Portables are gross and not very school-oriented. This is one of my least favorite options.
Would help with overcrowding of Centerville, since would not delay Sugarloaf construction	
Concurrent development, students don't change facilities	

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What do you like most about Option 3B?	What are the potential challenges for your child's education in Option 3B?
<p>Nothing much... again too much time and money</p> <p>I don't feel any of the opportunities for this option will benefit my children. I don't like anything about Option 1.</p> <p>Nothing</p> <p>redistricting relief can happen</p> <p>I do not like anything about this option</p> <p>My second favorite option for the same reasons as 3A. I like the idea of removing completely the existing school to build the ideal school for the children. While the mobile school will be a pain for two years, the ultimate result would be worth the wait.</p> <p>Non-starter. Full-time portables is not good.</p> <p>Cost, size, daylight use, GHW preserved</p> <p>I like this option better than Option 1 because there would be less disruption to the educational day (they won't be in the middle of a construction site)</p> <p>It is similar to Option 3A since it will be a new facility and the timeframe of construction is shorter but the challenges of being in portables during construction is not optimal</p> <p>short construction timeframe, new fields, and continued access to fields during construction.</p> <p>Nothing.</p> <p>Nothing.</p> <p>Children will be offsite from construction.</p> <p>new building when complete</p> <p>Nothing</p> <p>This is the least favorable option.</p> <p>replaces old school</p> <p>This is my favorite option. I myself went to Urbana Elem. and it should really be torn down and completely re-built from scratch to last many years.</p> <p>I like the end results.... just not the way in getting there.</p> <p>NOTHING!</p> <p>New building, Great Herons Wetland is preserved</p> <p>none</p> <p>We will get a new facility.</p> <p>wetlands preserved natural daylight</p>	<p>Student going to school in portables for two years in not good. What about common areas such as gymnasium, cafeteria, media centers, etc...</p> <p>Being onsite in portables still leaves students dealing with the noise and disruptions associated with construction. Moving the younger students (especially the pre-k) between portables for specials also presents a safety concern.</p> <p>Portables are awful and least secure. Harder to learn in a portable.</p> <p>Being relocated to portables</p> <p>seriously, all education in portables? Not good.</p> <p>Nobody likes mobile classrooms, but I feel the pain of those two years will be worth the outcome, as the school that will be built would be in the ideal location with the ideal specs.</p> <p>Limited space and crowding.</p> <p>Portable buildings - don't like.</p> <p>Portables are not ideal places for learning (especially if all students and staff have to be in a portable ALL DAY LONG)</p> <p>Being in portables for construction is not ideal when there is a new facility to use while UES is under construction.</p> <p>disruption to the educational program for 2 years. The BOE should consider, instead, a temporary redistricting of Centerville and Urbana to better utilize Green Valley during this time.</p> <p>More portables. They are not safe. They may be located somewhere in the community? Does this remove land and play areas from the community?</p> <p>NOOOOOO!!!!!! Un-secure. Asbestos. Construction danger. How is this even an option?</p> <p>Having all classes in portables is a distraction to the learning environment. Having the students go outside to change classes or to the lunch room seems like a security issue.</p> <p>Working in portables have challenges but Urbana has been doing it successfully for years.</p> <p>Although the end result is the same as 3A, I feel this is not a good option. I would prefer the students to be able to attend school in an actual school building as opposed to portables.</p> <p>unknown location of "portable"; school, being housed in an unsafe, unsecurable location for 2 years</p> <p>Expensive option! It seems extremely costly and ineffective to bring in portable classrooms. This would really hurt the sense of community that UES has developed over the years.</p> <p>Portables are never ideal and would be a last option.</p> <p>The use of portables will be distracting and potentially unpleasant during winter months.</p> <p>more disruptions, everyone is in portables</p> <p>Too costly</p> <p>This sounds like a logistics nightmare!</p> <p>Not big enough</p> <p>Terrible idea to put all the kids in portables for however long the construction process takes.</p> <p>all classes being held in portables construction noise, hazards</p> <p>Children should not be relocated to portables. More disruption to the educational program during construction than Option 3A</p> <p>portables are not comfortable</p> <p>children in portables for 2 years isn't a good idea.</p> <p>We will need to store Kindergarten materials and move into a portable classroom for 2 years. I will have no playground access or gym for movement. Young children need to move as they learn. Very stressful for staff to squeeze in temporary structures and try to have a welcoming environment for young children.</p> <p>Moving twice with materials needing to go in storage probably.</p> <p>more portables and somewhat off property longer timeline</p>

Urbana Elementary School Feasibility Study Survey

What do you like most about Option 3B?		What are the potential challenges for your child's education in Option 3B?
<p>NOTHING. This one is terrible. Optimal use of existing space</p> <p>There is not a whole lot of good in this option.</p> <p>That is will not delay the opening of Sugarloaf. Both 3A and 3B have a logical layout to the land and building. Both are a favorite design however the logistics of doing the design seem more cumbersome.</p> <p>This comes in a close second to Option 3A.</p> <p>bus and parent drop off separated. Nothing</p> <p>Students will remain on site during construction. Site plan organization Educational spaces having natural daylight. best compromise between costs and benefits</p> <p>Preservation of Great Heron Wetland--although that is the case for each option. This seemed to work ok at Lincoln. No to portables. - they do not provide safety a building does - there is only one entrance/exit and portable heat, Do Not like portables at ANY school. Portables are not where children should learn. It's one thing to have the upper grades in them, but not the little ones. this would be my second choice.</p>		<p>Portables, portables, and portables. Do we have permission to have portables on the fire grounds? How will Library and PE be handled in portables? Higher cost and it doesn't look like there is enough space in the portables on the drawing. Portables are not the best environment for learning and so on. These is no gym. Plus the fire people won't like it as it prevents use of their space for 2 years. Construction disruption; typical issues with portables That the students will spend time in portables for 2 years. The large portable at Centerville is efficient but it is cut off from the school. Will all the portables feel removed from one another. What will that mean to large school activities. I would still have concerns about the safety and disruptions because we are still essentially on-site. I am concerned about the amount of space and storage that will be available to the music department in a modular environment. Please no portables. Disruption during construction. Don't like all the portables. Tornado? staff parking over Crowding at surrounding schools. Rec center in school missing Everything - portables for all students and classes to me is just not an option. Safety and security, especially for younger students and those with disabilities. It reflects very poorly upon our county to have so many portables. Portables are a costly disaster. Relocation to an off-site facility/facilities. There are a number of challenges provided by this option--all of which are stated in the challenges section listed above. I do not support this option. Not the best learning environment.</p>

APPENDIX 7.2 – DETAILED COST ESTIMATES**Methodology and Approach**

Construction costs for this estimate were derived from an analysis of the FCPS elementary prototype that was bid in 2010, guidance from the Maryland State Department of Education, and analysis of renovation costs for comparable elementary school projects currently under construction within the region. RS Means Square Foot Costs for 2014 was used to determine the historical cost indexes and construction cost increases from 2010 to 2014.

The bid packages (for building only) for the new North Frederick Elementary School Replacement bid in 2010 equated to approximately \$210 per square foot. In reviewing the historical cost indexes in the 2014 RS Means Square Foot Costs book, overall from 2010 to 2014, there was an approximate 10.5% increase in construction cost. There was an approximate 3% increase from 2010 to 2011, 4% increase from 2011 to 2012, 1% increase from 2012 to 2013 and a 2.5% increase from 2013 to 2014. Adding the 10.5% of \$210 (\$22) to \$210 (2010 square foot cost) equates to \$232 per square foot if the same building were bid in 2014. It was also discussed that the site costs for North Frederick Elementary School totaled approximate \$5,000,000 and since the replacement school options for this study would have the same site amenities (parking, play areas, play fields, drop-off areas, etc.) as North Frederick that the same site number was to be used for the replacement school options for this study.

A General Requirements section was added to each of the estimates to compare the construction durations for each option. Because Option 3A had the shortest construction duration it was the option that the remaining options were compared to. \$125,000 of additional costs was added for each month each of the options extended past the construction duration for Option 3A.

Regarding contingencies and because the project is still in a preliminary, pre-design phase, we included a design contingency of 5% (of the Construction Cost Sub-Total) for anything that may not be known at this point in time along with a construction contingencies of 3% (of the Construction Cost Sub-Total) for new buildings and 7% (of the Construction Cost Sub-Total) for renovation/addition projects. A higher percentage is used for renovation/addition projects since there are typically more unforeseen conditions associated with renovation projects.

There are two categories of demolition presented. Selective demolition occurs in options where some or all of the existing building is being retained. Where selective demolition occurs, greater care must be taken to protect items scheduled to remain in place. In contrast, complete demolition represents the razing of some or all of the existing building. Such work requires significantly less care/skill and therefore is less costly.

A 3% per year escalation factor has been applied to the costs to the anticipated midpoint of construction. Since it will be at least 2017 till construction will begin on one of the options at least 12% (of the Construction Cost Sub-Total) will be added along with the duration to the midpoint of construction. Because of the long duration until construction would begin, this adds a lot of cost to the bottom line of each option, however it is needed as you need to assume the worst case scenario when putting together budgets for projects.

Regarding AE and CM fees as part of the Soft Costs, the lower percentages were used where the FCPS elementary prototype is being used as the replacement school. Because everything associated with the prototype is known and has been done before, the cost associated with putting the project together would be less. Option 1 being an additions/renovations project and everything being unknown and the construction duration a lot longer, would carry a higher percentage fee for both the AE and CM.

URBANA ELEMENTARY SCHOOL FEASIBILITY STUDY
FREDERICK COUNTY PUBLIC SCHOOLS
PROBABLE CONSTRUCTION COST

10/23/2014

OPTION 1 - PHASED ADDITIONS/REN. WHILE OCCUPYING EXISTING BUILDING

CONSTRUCTION COSTS

	Quantity	Unit	Unit Cost	Total Cost
ADDITIONAL GENERAL REQUIREMENTS				
Additional Construction Duration	20	Month	\$125,000	\$2,500,000
TOTAL ADDITIONAL GENERAL REQUIREMENTS				\$2,500,000
SITE WORK				
Expanded Parking During Construction		Lump Sum		\$100,000
Extend Water/Sewer Laterals to Site		Lump Sum		\$326,291
Temp. Tie-ins of Exist. Bldg. to New Water/Sewer Laterals		Lump Sum		\$50,000
Install. Of Water & Sewer Laterals, Pump Station & Tie-ins		Lump Sum		\$267,224
New Site Work		Lump Sum		\$4,600,000
TOTAL SITE WORK				\$5,343,515
DEMOLITION/ RENOVATIONS				
Hazmat Abatement - 1975 Addition	17,825	SF	\$4	\$71,300
Total Demolition- Portion of 1975 Addition	17,825	SF	\$12	\$213,900
Build Temporary Exterior Wall	4,392	SF	\$18	\$79,056
Hazmat Abatement - Existing Café./Kit.	5,100	SF	\$4	\$20,400
Total & Selective Demolition- Existing Café./Kit.	5,100	SF	\$14	\$71,400
Hazmat Abatement - Remainder of Exist. Bldg.	41,208	SF	\$4	\$164,832
Major Renovations (Incl. Selective Demo.)	41,208	SF	\$175	\$7,211,400
TOTAL DEMOLITION/ RENOVATIONS	41,208	SF	\$190	\$7,832,288
NEW CONSTRUCTION				
New Classroom Addition	67,575	SF	\$237	\$16,015,275
New Café./Kit./Mech. Room	14,668	SF	\$242	\$3,549,656
TOTAL NEW CONSTRUCTION	82,243	SF	\$238	\$19,564,931
CONSTRUCTION COST SUB-TOTAL	123,451	SF	\$285	\$35,240,734
Design Contingency - 5% of Construction Cost Sub-Total				\$1,762,037
Construction Contingency - 7% of Construction Cost Sub-Total				\$2,466,851
Escalation to Construction - 3% per year to mid point of Constr.		Lump Sum		\$5,286,110
TOTAL CONSTRUCTION COST				\$44,755,732

SOFT COSTS

AE Fees - 6% of Total Construction Cost				\$2,685,344
CM Fees - 6% of Total Construction Sub-Total				\$2,114,444
F&E (Fixtures and Equipment)		Lump Sum		\$2,070,000
Relocate Existing Portable CR's Onsite	15	Each	\$20,000	\$300,000
Add New Portable CR's (Incl. removal at end of project)	8	Each	\$80,000	\$640,000
Relocate Existing Portable CR's Offsite at end of Project	15	Each	\$20,000	\$300,000
Temporary Facilities (Administration & Kitchen/Cafeteria)	1	Lump Sum		\$500,000
Permits, Utility Connection Fees, etc.		Lump Sum		\$800,000
TOTAL SOFT COSTS				\$9,409,788

TOTAL PROJECT COST

\$54,165,520

- Includes total building and site work and is a rounded number
- Based on 2017 construction start
- \$1.8 million + 5 years of escalation @ 3% (to mid point of construction)

URBANA ELEMENTARY SCHOOL FEASIBILITY STUDY **FREDERICK COUNTY PUBLIC SCHOOLS** **PROBABLE CONSTRUCTION COST**

10/23/2014

OPTION 2 - REPLACEMENT SCHOOL WHILE OCCUPYING EXISTING BUILDING

CONSTRUCTION COSTS

	Quantity	Unit	Unit Cost	Total Cost
ADDITIONAL GENERAL REQUIREMENTS				
Additional Construction Duration	4	Month	\$125,000	\$500,000
TOTAL ADDITIONAL GENERAL REQUIREMENTS				\$500,000
SITE WORK				
Expanded Parking During Construction		Lump Sum		\$100,000
Temporary Play Area During Construction		Lump Sum		\$80,000
Extend Water/Sewer Laterals to Site		Lump Sum		\$326,291
Temp. Tie-ins of Exist. Bldg. to New Water/Sewer Laterals		Lump Sum		\$50,000
Install. Of Water & Sewer Laterals, Pump Station & Tie-ins		Lump Sum		\$317,320
New Site Work		Lump Sum		\$5,000,000
TOTAL SITE WORK				\$5,873,611
DEMOLITION				
Hazmat Abatement - Existing Building	64,133	SF	\$4	\$256,532
Total Demolition- Existing Building	64,133	SF	\$12	\$769,596
TOTAL DEMOLITION				\$1,026,128
NEW CONSTRUCTION				
New Building	96,000	SF	\$232	\$22,272,000
TOTAL NEW CONSTRUCTION				\$22,272,000
CONSTRUCTION COST SUB-TOTAL	96,000	SF	\$309	\$29,671,739
Design Contingency - 5% of Construction Cost Sub-Total				\$1,483,587
Construction Contingency - 3% of Construction Cost Sub-Total				\$890,152
Escalation to Construction - 3% per year to mid point of Constr.		Lump Sum		\$3,560,609
TOTAL CONSTRUCTION COST				\$35,606,087

SOFT COSTS

AE Fees - 4% of Total Construction Cost				\$1,424,243
CM Fees - 4% of Construction Cost Sub-Total				\$1,186,870
F&E (Fixtures and Equipment)		Lump Sum		\$2,016,000
Relocate Existing Portable CR's Offsite at end of Project	15	Each	\$20,000	\$300,000
Permits, Utility Connection Fees, etc.		Lump Sum		\$900,000
TOTAL SOFT COSTS				\$5,827,113

TOTAL PROJECT COST

\$41,433,200

- Includes total building and site work and is a rounded number
- Based on 2017 construction start
- \$1.8 million + 4 years of escalation @ 3% (to mid point of construction)

URBANA ELEMENTARY SCHOOL FEASIBILITY STUDY
FREDERICK COUNTY PUBLIC SCHOOLS
PROBABLE CONSTRUCTION COST

10/23/2014

OPTION 3A - REPLACEMENT SCHOOL WHILE RELOC. TO SUGARLOAF E.S.

CONSTRUCTION COSTS

	Quantity	Unit	Unit Cost	Total Cost
ADDITIONAL GENERAL REQUIREMENTS				
				\$0
TOTAL ADDITIONAL GENERAL REQUIREMENTS				\$0
SITE WORK				
Extend Water/Sewer Laterals to Site		Lump Sum		\$326,291
Install. Of Water & Sewer Laterals, Pump Station & Tie-ins		Lump Sum		\$267,224
New Site Work		Lump Sum		\$5,000,000
TOTAL SITE WORK				\$5,593,515
DEMOLITION				
Hazmat Abatement- Existing Building	64,133	SF	\$4	\$256,532
Total Demolition- Existing Building	64,133	SF	\$12	\$769,596
TOTAL DEMOLITION				\$1,026,128
NEW CONSTRUCTION				
New Building	96,000	SF	\$232	\$22,272,000
TOTAL NEW CONSTRUCTION				\$22,272,000
CONSTRUCTION COST SUB-TOTAL	96,000	SF	\$301	\$28,891,643
Design Contingency - 5% of Construction Cost Sub-Total				\$1,444,582
Construction Contingency - 3% of Construction Cost Sub-Total				\$866,749
Escalation to Construction - 3% per year to mid point of Constr.		Lump Sum		\$3,466,997
TOTAL CONSTRUCTION COST				\$34,669,972

SOFT COSTS

AE Fees - 4% of Total Construction Cost				\$1,386,799
CM Fees - 4% of Construction Cost Sub-Total				\$1,155,666
F&E (Fixtures and Equipment)		Lump Sum		\$2,016,000
Permits, Utility Connection Fees, etc.		Lump Sum		\$900,000
TOTAL SOFT COSTS				\$5,458,465

TOTAL PROJECT COST

\$40,128,436

- Includes total building and site work and is a rounded number
- Based on 2017 construction start
- \$1.8 million + 4 years of escalation @ 3% (to midpoint of construction)

URBANA ELEMENTARY SCHOOL FEASIBILITY STUDY
FREDERICK COUNTY PUBLIC SCHOOLS
PROBABLE CONSTRUCTION COST

10/23/2014

OPTION 3B - REPLACEMENT SCHOOL WHILE RELOCATED TO PORTABLES

CONSTRUCTION COSTS

	Quantity	Unit	Unit Cost	Total Cost
ADDITIONAL GENERAL REQUIREMENTS				
Additional Construction Duration	4	Month	\$125,000	\$500,000
TOTAL ADDITIONAL GENERAL REQUIREMENTS				\$500,000
SITE WORK				
Extend Water/Sewer Laterals to Site		Lump Sum		\$326,291
Install. Of Water & Sewer Laterals, Pump Station & Tie-ins		Lump Sum		\$267,224
Temporary Play Area During Construction		Lump Sum		\$80,000
New Site Work		Lump Sum		\$5,000,000
TOTAL SITE WORK				\$5,673,515
DEMOLITION				
Hazmat Abatement- Existing Building	64,133	SF	\$4	\$256,532
Total Demolition- Existing Building	64,133	SF	\$12	\$769,596
TOTAL DEMOLITION				\$1,026,128
NEW CONSTRUCTION				
New Building	96,000	SF	\$232	\$22,272,000
TOTAL NEW CONSTRUCTION				\$22,272,000
CONSTRUCTION COST SUB-TOTAL	96,000	SF	\$307	\$29,471,643
Design Contingency - 5% of Construction Cost Sub-Total				\$1,473,582
Construction Contingency - 3% of Construction Cost Sub-Total				\$884,149
Escalation to Construction - 3% per year to mid point of Constr.		Lump Sum		\$3,536,597
TOTAL CONSTRUCTION COST				\$35,365,972

SOFT COSTS

AE Fees - 4% of Total Construction Cost				\$1,414,639
CM Fees - 4% of Construction Cost Sub-Total				\$1,178,866
F&E (Fixtures and Equipment)		Lump Sum		\$2,016,000
Temporary Portable School (Incl. relocation of school at end of proj.)		Lump Sum		\$5,000,000
Permits, Utility Connection Fees, etc.		Lump Sum		\$900,000
TOTAL SOFT COSTS				\$10,509,505

TOTAL PROJECT COST

\$45,875,476

Includes total building and site work
and is a rounded number
Based on 2017 construction start
\$1.8 million + 4 years of escalation @ 3%
(to mid point of construction)

APPENDIX 7.3 LIFE CYCLE COST ANALYSIS

Life Cycle Cost Analysis

- The following is a summary of the 40-year energy cost based on today's fuel rates. The 40-year cost is a simple cost and does not reflect inflation of the fuel sources.

OPTION 1	ANNUAL ENERGY COST	40-YEAR ENERGY COST
High Efficiency VAV/FCU	\$408,022	\$16,320,880
Hybrid Geothermal	\$375,194	\$15,007,760
Geothermal	\$356,266	\$14,250,640

OPTION 2	ANNUAL ENERGY COST	40-YEAR ENERGY COST
High Efficiency VAV/FCU	\$385,928	\$15,437,120
Hybrid Geothermal	\$345,712	\$13,828,480
Geothermal	\$329,539	\$13,181,560

OPTION 3	ANNUAL ENERGY COST	40-YEAR ENERGY COST
High Efficiency VAV/FCU	\$382,600	\$15,304,000
Hybrid Geothermal	\$346,910	\$13,876,400
Geothermal	\$324,412	\$12,976,480

Since the comparison of options utilized new mechanical systems, the maintenance and replacement costs were considered to be equal.

APPENDIX 7.3 LIFE CYCLE COST ANALYSIS

- The following is a summary of the energy cost based on today's fuel rates and the 40-year life cycle cost analysis (LCCA) for each of the Options developed in the feasibility study. The 40-year cost is a simple cost and does not reflect inflation of the fuel sources.

OPTION 1	ANNUAL ENERGY COST	40-YEAR LCCA
High Efficiency VAV	\$110,476	\$14,185,491
High Efficiency FCU	\$152,912	\$17,338,174
Geothermal	\$107,831	\$14,161,975
Hybrid Geothermal	\$112,543	\$15,624,119

OPTION 2	ANNUAL ENERGY COST	40-YEAR LCCA
High Efficiency VAV	\$97,083	\$12,863,971
High Efficiency FCU	\$107,445	\$14,256,192
Geothermal	\$86,445	\$11,980,181
Hybrid Geothermal	\$91,131	\$13,301,193

OPTION 3A	ANNUAL ENERGY COST	40-YEAR LCCA
High Efficiency VAV	\$97,083	\$12,863,971
High Efficiency FCU	\$107,445	\$14,256,192
Geothermal	\$86,445	\$11,980,181
Hybrid Geothermal	\$91,131	\$13,301,193

OPTION 3B	ANNUAL ENERGY COST	40-YEAR LCCA
High Efficiency VAV	\$97,083	\$12,863,971
High Efficiency FCU	\$107,445	\$14,256,192
Geothermal	\$86,445	\$11,980,181
Hybrid Geothermal	\$91,131	\$13,301,193

FREDERICK COUNTY PUBLIC SCHOOLS

Urbana Elementary School Study

APPENDIX 7.3 LIFE CYCLE COST ANALYSIS**SUMMARY 40 YEAR LIFE CYCLE COST ANALYSIS - BUILDING OPTION #1**

PROJECT: URBANA ELEMENTARY SCHOOL LOCATION: FREDERICK COUNTY	USING AGENCY FREDERICK COUNTY PUBLIC SCHOOLS			DATE: NOVEMBER, 2014
	HVAC SYSTEM OPTION #1	HVAC SYSTEM OPTION #2	HVAC SYSTEM OPTION #3	HVAC SYSTEM OPTION #4
(a) INITIAL MECHANICAL INSTALLATION	\$5,625,200	\$5,752,300	\$6,008,560	\$5,885,000
<u>ANNUAL COSTS</u>				
- ENERGY	\$110,476	\$152,912	\$107,831	\$112,543
- SERVICE*	\$95,399	\$109,338	\$98,233	\$103,558
- ROUTINE MAINTENANCE	\$112,483	\$123,560	\$65,445	\$108,212
(b) TOTAL ANNUAL COST	\$318,358	\$385,810	\$271,509	\$324,313
(c) PRESENT VALUE OF TOTAL ANNUAL COST (b x P.W.)	\$9,560,291	\$11,585,874	\$8,153,415	\$9,739,119
TOTAL LIFE CYCLE COST (a + c)	\$15,185,491	\$17,338,174	\$14,161,975	\$15,624,119

RECOMMENDED SYSTEM: OPTION #3: \$14,161,975

*Includes equipment replacement costs.

- ❖ The Geothermal system is recommended based on the return on investment as indicated by the total Life Cycle Costs

FREDERICK COUNTY PUBLIC SCHOOLS

Urbana Elementary School Study

APPENDIX 7.3 LIFE CYCLE COST ANALYSIS**SUMMARY - 40 YEAR LIFE CYCLE COST ANALYSIS - BUILDING OPTION #2, 3A & 3B**

PROJECT: URBANA ELEMENTARY SCHOOL LOCATION: FREDERICK COUNTY	USING AGENCY FREDERICK COUNTY PUBLIC SCHOOLS			DATE: NOVEMBER, 2014
	HVAC SYSTEM OPTION #1	HVAC SYSTEM OPTION #2	HVAC SYSTEM OPTION #3	HVAC SYSTEM OPTION #4
(a) INITIAL MECHANICAL INSTALLATION	\$4,455,000	\$4,875,000	\$5,062,500	\$4,950,000
<u>ANNUAL COSTS</u>				
- ENERGY	\$97,083	\$107,445	\$86,323	\$91,738
- SERVICE*	\$83,951	\$96,217	\$86,445	\$91,131
- ROUTINE MAINTENANCE	\$98,985	\$108,732	\$57,591	\$95,226
(b) TOTAL ANNUAL COST	\$280,019	\$312,394	\$230,359	\$278,095
(c) PRESENT VALUE OF TOTAL ANNUAL COST (b x P.W.)	\$8,408,971	\$9,381,192	\$6,917,681	\$8,351,193
TOTAL LIFE CYCLE COST (a + c)	\$12,863,971	\$14,256,192	\$11,980,181	\$13,301,193

RECOMMENDED SYSTEM: OPTION #3**\$11,980,181**

*Includes equipment replacement costs.

- ❖ The Geothermal system is recommended based on the return on investment as indicated by the total Life Cycle Costs

APPENDIX 7.4 COMBINED CONSTRUCTION TIMELINES FOR OPTIONS

Methodology and Approach

In order to adequately assess the Urbana Elementary School construction durations, timelines were established for each option developed and then shown in combined format. This tool is used to establish estimated construction durations that affect general condition durations as well as anticipated durations for the entire project. This method assumes non-accelerated schedules and is based on industry standard practice, known durations of previous projects of similar nature and size and was reviewed with FCPS Facilities for their comments and input. This provides only a baseline to compare the various options but may not indicate final construction durations for a given project.

FREDERICK COUNTY PUBLIC SCHOOLS
URBANA ELEMENTARY SCHOOL FEASIBILITY STUDY - OPTION TIME LINES

10/23/2014

OPTION 1 - PHASED ADDITIONS/RENOVATIONS WHILE OCCUPYING EXISTING BUILDING

[illegible]

OPTION 2 - REPLACEMENT SCHOOL WHILE OCCUPYING EXISTING BUILDING

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APPENDIX 7.5 MEP SYSTEM RECOMMENDATIONS

SYSTEM RECOMMENDATIONS

- **Building Approaches**

All mechanical and plumbing systems are at or are beyond their useful life and are recommended to be replaced in their entirety. There is limited infrastructure space (6" bottom of steel to top of existing ceiling construction) to locate new mechanical, electrical and fire protection systems.

Public water and sanitary systems are available which new systems will connect to such that the existing water wells and septic system can be abandoned. Construction phasing of these utilities is a concern/challenge depending on individual building recommendations.

New mechanical and plumbing systems shall be designed to meet and/or exceed the latest State of Maryland Requirements and LEED prerequisites.

- **Option 1 – Renovation**

Under Option 1, renovation, incorporating an energy efficient system into the existing building will be complex (i.e. expensive). There are often physical limitations which result in compromise to the system design often reducing system efficiency. Typically older structures cannot support roof mounted equipment to meet the new code snow drift requirements without substantial structural modifications. The existing building utilizes a return air plenum so ceiling space for a ducted return air system is unrealistic. A large, linear penthouse is recommended to house air handling equipment as well as enclose mechanical (ducts/pipes)/electrical (conduit systems)/fire protection (sprinkler system) systems such to create a pathway to serve various areas of the building. Typically a decentralized fan coil unit system or geothermal water to air heat pump system using mechanical closets can be employed to minimize ceiling space requirements however large dedicated outdoor air units are still needed and the mechanical closets reduce usable floor space for education. The system which "fits" into the existing building may end up being different than that proposed for the addition as the addition can be constructed to maximize the efficiency of the mechanical system. A different system for the addition may also be needed to enhance the total building energy efficiency. Typically based on the 40 year LCCA, this option has the highest energy cost.

- **Option 2 – Limited Replacement**

Option 2, limited replacement is less complex than Option 1 as a greater percentage of the building is new construction and a lower percentage is renovation. The same complexities exist but is of a smaller magnitude. Typically based on the 40 year LCCA, this option has the median energy cost.

- **Option 3 - Replacement**

Option 3, replacement maximizes the efficiency of the systems while simplifying constructability issues associated with working within the physical limitations of an existing building. Typically based on the 40 year LCCA, this option has the lowest energy cost.

APPENDIX 7.5 MEP SYSTEM RECOMMENDATIONS

MECHANICAL SYSTEM DESCRIPTION

- **Proposed Mechanical System Replacement Options**

The Mechanical Systems shall include all work associated within the building of Heating, Ventilating, Air Conditioning (HVAC), and Plumbing Systems. These systems shall extend to 5 feet beyond the building wall.

The Mechanical Systems, in concert with the Architectural considerations, are intended to create spaces that are flexible, functional, energy efficient, and respond to the needs of this facility.

Within the envelope of the new facility, the proper heating, cooling, ventilation, air exchanges, and Automatic Temperature Control/Energy Management Systems shall be provided for all spaces to create the appropriate thermal environment. All areas shall be provided with heating, ventilation, and air conditioning. The HVAC and related Mechanical Systems shall not only be functional and responsive to the need, but shall be simple, reliable, durable, maintainable, and easily accessible. The HVAC System utilizes energy conservation techniques to the greatest extent possible, while maintaining comfortable control. All HVAC components shall be capable of a complete override from the Energy Management System.

Heating and Cooling Systems and their associated controls shall be designed and zoned to enable the building to operate at less than full occupancy without conditioning the entire building.

The Mechanical Systems shall be designed to meet ASHRAE Standard 90.1-2010 (State Requirement) while exceeding ASHRAE Standard 90.1-2007 (current LEED Base Model Requirement) in an effort to achieve LEED Silver Certification.

- ❖ From an energy efficiency and 2009 LEED NC-EA credit 1 the proposed system options shall obtain the following minimum requirements based on new construction.

<u>HVAC OPTION</u>	<u>% ENERGY COST SAVINGS</u>	<u>LEED POINTS</u>
Option 1	22%	6
Option 2	20%	5
Option 3	26%	8
Option 4	24%	7

APPENDIX 7.5 MEP SYSTEM RECOMMENDATIONS

PLUMBING SYSTEMS

- All plumbing fixtures shall be included and shall be good commercial grade of institutional quality. Water closets and urinals shall be flush valve, water-conserving, LEED compliant type. Water closets shall be floor-mounted type. Faucets for lavatories shall be the self-metering types. Handicapped fixtures shall comply with ADA Requirements. Mounting heights for all fixtures shall be coordinated with the Owner.

ELECTRICAL SYSTEMS

Existing Electrical Systems/Evaluation

- Summary
 - General
 - The existing electrical distribution system is antiquated and ongoing maintenance is an increasing issue. Distribution equipment, wiring and receptacles original to the building should be replaced/upgraded as part of building renovations. Lighting and associated controls should be upgraded to be compliant with current energy codes.

Systems Recommendations

- Preliminary Summary of Physical Plant Recommendations
 - Upgrade electrical service to accommodate renovations. Existing switchboard is antiquated and service voltage is recommended to be 480/277V.
 - Replace electrical distribution system. Existing equipment is antiquated, additional equipment needed to accommodate renovations.
 - Replace original branch circuit wiring and receptacles, add ground conductors.
 - Replace interior and exterior lighting systems and controls per adopted energy code for energy savings.
 - Provide an emergency generator and distribution system for life safety and selected standby loads.
 - Modify/reconfigure fire alarm system devices as required to suit revised architectural layout.
- System Recommendations
 - Electrical Service

APPENDIX 7.5 MEP SYSTEM RECOMMENDATIONS

- The main distribution switchboard is recommended to be replaced, as it has reached or exceeded its anticipated useful life and replacement parts become difficult and/or costly to obtain. The service is recommended to be replaced at 480/277V to serve HVAC equipment and lighting loads. Connections to a portable generator may be incorporated, if required, to accommodate the use of parts of the building as a shelter.
- Electrical Distribution System
 - The majority of the electrical distribution equipment is recommended to be replaced, as it has reached or exceeded its anticipated useful life and replacement parts become difficult and/or costly to obtain. Local dry type transformers are recommended to obtain 208/120V service for receptacle and miscellaneous loads. Panels serving computer loads will be provided with K-factor rated transformers.
 - Cascaded surge protection devices is recommended on panelboards serving non-linear computer loads. Dedicated panelboards with 200% rated neutrals are recommended for this application, served from K-factor rated dry type transformers. A separate neutral conductor is recommended to be installed for each computer circuit in order to reduce the effects of harmonics caused by non-linear loads. Ground conductors will be provided in each circuit.
 - Double duplex receptacles will be provided for all computers and selected equipment at all work stations, teaching stations, Office and Administration Area workstations/desks. Tamper resistant receptacles will be provided in instructional areas as required by code. The top half of each receptacle will be switched off via the BMS in office areas.
 - Typical classrooms/instructional areas will have a minimum of five computer receptacles (one [1] teacher and four [4] student) on three 20-ampere circuits. In addition, general receptacles will be provided on one to two circuits per classroom. Computer Labs, and other specialized instructional areas will be provided with computer and general receptacles per student station as required.
 - Individual motor starters in appropriate enclosures will be provided to serve remote mechanical equipment. Power factor correction capacitors will be provided for motors to maintain a minimum power factor of 90%.
- Emergency Distribution System
 - An emergency generator is recommended to provide standby power for life safety and optional loads, compliant with current codes. The generator would be located outdoors in a weatherproof enclosure. A natural gas genset is recommended as FCPS's preferred fuel source.
 - The fire alarm system and select fixtures throughout the building means of egress, as well as exit signs, will be connected to the emergency source in order to comply with NFPA 101. Communications systems (voice, public address) are also recommended to remain on the backup source. Kitchen refrigeration equipment, heating plant equipment, MDF and IDF cooling systems are also recommended to be connected to the generator per FCPS standards.

APPENDIX 7.5 MEP SYSTEM RECOMMENDATIONS

- Two automatic transfer switches will be required to separate life safety and optional standby loads. Panelboards and dry-type transformers would be provided to accommodate the load requirements.
- Lighting
 - Removal and reinstallation of acrylic 2'x4' fixtures has proven as costly as replacement fixtures in systemic HVAC replacement projects. Therefore, the lighting is generally recommended to be replaced. The replacement fixtures are also recommended to be 277V.
 - Lighting systems that meet adopted energy codes for lighting power density as well as controllability are recommended. Lighting control will generally be by vacancy sensor in individual spaces, with occupancy sensor control in restrooms and corridors. In general, all offices and instructional spaces will have multi-level control of lighting, typically switched by row to facilitate A/V presentations. Daylight harvesting will be provided where applicable, with photocell control of electronic dimming fluorescent ballasts.
 - Emergency lighting will be provided for all paths of egress throughout the school and in selected areas. LED array exit signs, as well as interior corridor night security lighting, will also be included in the design. Emergency egress lighting is recommended to be interfaced with the security system so that when the system is armed, emergency lighting (excluding exit signs) will be turned off.
 - The exterior building mounted and pole mounted area lighting is recommended to be replaced with cut-off fixtures utilizing LEDs, designed to meet the adopted energy codes. Lighting fixtures at exit doors are recommended to be connected to an emergency standby source per code and controlled via photocell. Exterior lighting served by a normal power source is proposed to be photocell enabled, controlled via the building management system or time clock.
 - Lighting is a critical aspect of the Building Design. The School will have a variety of lighting design criteria for each vision task. The major Lighting Design Criteria will include the following

LIGHTING TASK	TARGET ILLUMINATION LEVELS (Foot Candles)
Classrooms	50.0
Gymnasium	50.0
Art Classrooms	50.0
Science Laboratories	50.0
Music Rooms	50.0
Media Center	30.0

APPENDIX 7.5 MEP SYSTEM RECOMMENDATIONS

LIGHTING TASK	TARGET ILLUMINATION LEVELS (Foot Candles)
Offices/Administration Areas	50.0
Teacher Lounges	20.0
Work Rooms	30.0
Toilet Rooms	20.0
Exterior: Pedestrian Walkway	0.6
Exterior: General Parking	0.6

- Fire Alarm System
 - The recently installed fire alarm system is recommended to be reused if the building is renovated, with additional devices as required to suit the new space configuration.
 - The entire Fire Alarm System will be designed in accordance with the State of Maryland Fire Code, IBC, and NFPA. All audible, visible, and initiating devices will be designed to meet all ADA requirements.
- Design Criteria
 - All systems and components will be designed in accordance with the following:
 - Frederick County Board of Education - Educational Specifications.
 - All applicable national, state, and local requirements.
 - Maryland State Interagency Committee for Public School Construction Standards.
 - Americans with Disabilities Act (ADA) Requirements.
 - American National Standards Institute (ANSI).
 - Institute of Electrical & Electronic Engineers (IEEE).
 - National Electrical Code (NEC).
 - National Electrical Manufacturer's Association (NEMA).
 - National Electrical Safety Code (NESC).
 - National Fire Protection Association (NFPA).
 - Underwriters Laboratories (UL).
 - International Building Code (IBC).
 - Illuminating Engineering Society (IES).
 - American Society of Testing and Materials (ASTM).
 - American Society of Mechanical Engineers (ASME).

APPENDIX 7.5 MEP SYSTEM RECOMMENDATIONS

TECHNOLOGY/ SECURITY SYSTEMS

Telecommunications Systems

- Summary
 - The telecommunications systems infrastructure includes an overhead service via pole lines then transitions underground from the pole to underground conduits near the utility transformer. The telephone and cable television services enter the building on the same wall as the existing gas meter near the boiler room.
- Recommendations
 - Wireless Access points are to be located in selected locations throughout the building. The wireless network design will be based on the latest IEEE 802.11n standard.
 - New Category 6 data cabling should be provided throughout the building to increase data speeds and for future proofing of technology. The 1 Gigabyte per second Data Network will be star-wired 1000 Base-T and consist of Category 6 cabling.
 - Tie the telecommunications equipment into the new emergency generator.

Public Address

- Summary/ Recommendations
 - The existing school public address system uses a recently installed Telecor public address system. The existing Telecor microprocessor based public address system should be considered to be reused if the existing building is renovated. A new system should be provided and the existing system turned over to the Owner if the new building option is selected.
 - The existing public address speakers are in poor condition and should be replaced.

Computer Network Jacks

- Summary/ Recommendations
 - The CAT5 data computer cabling distribution system was installed in 2000 under the TIMS project,. The data system is in fair condition and should be replaced and expanded to meet the needs of the renovation and meet current technology standards. New computer network jacks will be added to cover renovated areas and other areas not currently served. The exact scope of work will be coordinated with FCPS under the design phase.

APPENDIX 7.5 MEP SYSTEM RECOMMENDATIONS

CATV Distribution & Streaming Video System

- Summary/ Recommendations
 - The video distribution system was installed in 2000 under the TIMS project. These systems are all in fair condition and should be replaced and expanded to meet the needs of the renovation.

Master Clock System

- Summary/ Recommendations
 - Existing Master Clocks are connected to the existing Master Clock / Bell System. A Telecor Time Control unit located in the public address cabinet.

Instructional Technologies

- Summary/ Recommendations
 - Ceiling mounted Epson projectors are provided in selected areas (conference rooms).
 - Cart mounted media carts contain document cameras and projectors and printers are used in many instructional spaces. Manual pull down projection screens are used in most instructional spaces.

Security Systems

- Summary/ Recommendations
 - The security system equipment is not located in a secure dedicated space. There is a need to be to centralize all the security system equipment in a secure, and environmentally controlled dedicated room.
 - The existing security system head-end equipment and power supplies are not tied into the emergency generator power. Recommend tying the head-end equipment into the new emergency generator.
 - There is no campus alert / mass notification system or visual display messaging system located in the building. Recommend one of the two options.
 - There is no building wide Security Alarm system, only local individual alarm systems. Recommend a building wide system be provided with sub-systems or partitions created for the special needs spaces.
 - Access control card readers are located at only selected entrances. Recommend providing a complete access control card reader system for selected exterior and interior doors.
- Intrusion Detection System
 - Summary/ Recommendations

APPENDIX 7.5 MEP SYSTEM RECOMMENDATIONS

- The existing Honeywell Vista 128 BP Security System located in the Boiler room next to the fire alarm system. The main using a combination of door contacts and motion detectors to provide perimeter protection. A Communicator Panel provides dial-up communications with the UL Monitoring Service. The existing Security System is at its maximum capacity and will need to be replaced with the current FCPS standard of a Vista 250BP.
- The intrusion detection system uses a combination of approx. 39 motion detectors and door contacts with arm/disarm keypads located at main entrances.. New devices will be added to cover renovated areas and other areas not currently protected. The System should be provided with additional keypads located throughout the school to arm and disarm the alarm.
- Access Control System
 - Summary/ Recommendations
 - Currently, the school uses a BEST Access Control / Card Reader System. The access control panel is located in the MDF room.
 - An Aiphone video intercom door entry system is used to remotely release and “buzz” people into the building from the main office.
- Surveillance Camera System
 - Summary/ Recommendations
 - Currently the existing school has multiple security cameras that are connected to a UTC Interlogix (GE) Tru-Vision DVR 30 located in the main telecom room.
 - There are multiple security surveillance cameras systems inside and outside the school powered by an Altronix power supply located in the security rack in the MDF room.
 - The security camera system is backed up by a UPS (APC Smart UPS 1500).
 - The exact scope of work for the surveillance camera system will be coordinated with FCPS under the design phase.
- Emergency Notification System
 - Summary/ Recommendations
 - An existing Alertus localized emergency notification display panel is located in the main office. This alarm display is in good condition and should be reused for the renovation.

SUSTAINABLE DESIGN FEATURES

- Refer to appendix 7.6 for information regarding sustainable design approaches to the modernization of Urbana Elementary School.

APPENDIX 7.6 SUSTAINABLE DESIGN

SUSTAINABLE APPROACHES

- The basis for modernization of Urbana elementary School will be registered with the US Green Building Council as a LEED project and will pursue LEED Silver certification under the current version of the LEED for Schools Rating system, at the time the project is designed.
 - Some highlights that may be a focus in the project include the following, daylighting throughout 75% of educational spaces, 40% or more reduction of water use throughout the building, orientation of the building to maximize exposure along the north and south elevations, construction waste management, use of a geothermal mechanical system with heat pumps and reductions of VOC off gassing within the building. It will be critical that materials selected throughout the facility be durable to withstand the wear and tear of a typical school environment. Initially, the project may target a 25% reduction of energy use within the building. This possible goal may be met through a higher R-value thermal envelope, mechanical selections and daylighting. It is important that this be balanced with proper amounts of daylighting and air exchanges to promote a healthy and energetic atmosphere within the building.
 - The early approach is to identify more points than are required for the project, with the knowledge that some may not be feasible as the project develops. By having more points initially, and if difficulties are encountered during the project, new concepts will not be required to be added into a project late in design.
- The following outlined categories follow the divisions of the LEED for Schools rating system and possible credits to achieve:

1. Sustainable Sites

Integrating building location and sustainable site features will minimize the environmental impact of buildings on the site. Potential Strategies include:

- Minimize site disruption, soil erosion, and air pollution associated with construction activities.
- Site selection (reuse of existing site).
- Development Density and community connectivity.
- Appropriate landscaping for energy conservation.
- Eliminate the use of pesticides/herbicides in order to promote protection of regional watersheds.
- Storm water Design - quantity and quality control.
- No "light pollution" since exterior lighting is installed at a minimum (for safety requirements) to allow for view of night sky.
- Review reflective coated roofing to reduce heat island effects.
- Low-emitting and fuel efficient vehicle parking areas.

2. Water Efficiency

Water harvesting and water conservation are to be implemented. Potential Strategies include:

- Maximize water conservation – students, staff, and community can learn about these features as an educational tool.
- Eliminate the use of potable water for irrigation.

APPENDIX 7.6 SUSTAINABLE DESIGN

- Low flush toilet fixtures and low flow aerators for sink faucets.
- Recycled water for mechanical system recharge.
- Recycle mechanical system condensate.
- Manage and conserve storm water and reduce storm water runoff.
- Harvesting rainwater for many uses including irrigation.
- Designing pervious parking lots and paved surfaces to capture storm water below paved areas instead of as runoff.
- Using retention and detention ponds as educational tools – Great Heron Wetlands.

3. Energy and Atmosphere

Reduce energy consumption of buildings. Potential Strategies include:

- Computer energy modeling used to inform the design of the building. Annual energy savings and yearly operating cost reduction goal should be a minimum of 30% over the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) Standard 90.1.
- The building should be zoned and controlled in a way specific to occupancy and use profiles.
- All building system components selected will be free of chlorofluorocarbons (CFCs) and hydro chlorofluorocarbons (HCFCs).
- Daylighting should be present in all classrooms and spaces that are regularly occupied by students along with lighting controls that recognize the amount of useful daylight present in each space.
- Natural ventilation should be used where possible.
- Mechanical ventilation should be decoupled from space conditioning to ensure fresh air and energy recovery independent of space conditioning requirements.
- The modernization project should incorporate enhanced building system commissioning to insure that the design intent will be met.

4. Materials and Resources

Sustainable material choices will reduce use of virgin materials within the building. Potential strategies include:

- Storage and collection of recyclable materials within the school.
- Divert a minimum of 75% of the materials during demolition and construction from landfills through recycling or salvaging.
- Using new construction materials that have a significant percentage of recycled content.
- Using regional materials that are harvested, extracted, and manufactured within a 500 mile radius of the project site.

APPENDIX 7.6 SUSTAINABLE DESIGN**5. Indoor Environmental Quality (IEQ)**

Reducing levels of contaminants, increasing filtered outside air and ventilation, and monitoring humidity all contribute to a more desirable indoor air quality. Potential strategies include:

- Smoke free school zone.
- Classroom spaces will meet a certain STC rating for acoustics - increased insulation, seals and special acoustic ceiling tiles for better communication between teachers and students.
- Low emitting materials including adhesives & sealants, paints & coatings, flooring systems, furniture, and ceiling & wall systems.
- Appropriate ventilation and elimination of chemicals and pollutants such as copy machines and tracked-in dirt from the exterior.
- Use outdoor spaces as instructional areas giving students the opportunity for fresh air during the day. (Great Heron Wetlands)
- Carbon dioxide (CO₂) monitors that inform the building controls to insure adequate amounts of ventilation where and when needed.
- Designing lighting strategies to take advantage of natural light in spaces.
- A mold free environment.
- The modernization design should implement the use of daylight and views throughout.
- Individual temperature control of rooms to provide adequate comfort for all occupants.

6. Innovation in Design

Incorporating innovative techniques that are unique to Urbana Elementary School and setting a precedent for other LEED school projects in the future. One potential example of an innovation credit for this project would be:

- Green housekeeping plan for the school, based on FCPS standards including the use of non-toxic cleaning and maintenance products and environmentally friendly practices.

7. Regional Priority

Frederick and surrounding Frederick County areas potentially have materials or regional differences that could result in achieving specific Regional Priority credits. In addition, if Option 1 is selected, building re-use would be considered for a regional priority. More research will be done to determine what sets the area apart and where we could achieve these additional credits.

8. The school as a teaching tool

The school design process and building can be used and incorporated as part of the school day curriculum. Students will take part in recognizing how the building works and why the various sustainable features of the site and building are important for understanding the larger built environment.

APPENDIX 7.6 SUSTAINABLE DESIGN

BUILDING APPROACHES

Key sustainable goals must be outlined at the very beginning of the design process and evaluated as the design progresses. Major mechanical and plumbing system components shall be designed to meet and/or exceed the latest State of Maryland requirements and LEED prerequisites. In addition, design alternatives should be considered to achieve LEED Silver Certification.

- A metering and measurement with verification plan is recommended to be designed even if it is bid under as an add alternate. Sub-meters shall be designed to measure plug loads, lighting loads, HVAC loads, kitchen load, makeup water usage, domestic hot water usage and fuel oil usage. An enhancement to this option may be to include a dashboard system.
- Solar hot water heating system is recommended to heat or preheat domestic hot water. A Geothermal water heater system may also be considered.

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

Methodology and Approach

In order to adequately assess the Urbana Elementary School facility, it is imperative that a baseline, or benchmark be established, from which the evaluation and any subsequent recommendations are based upon. In completing this facility evaluation, Crabtree, Rohrbaugh & Associates Architects and the design team utilized the following Evaluation Criteria, as well as the Maryland Department of Education Guidelines for School Facilities and the Frederick County Public School 2014 Design Guidelines as well as Mission and Strategic Goals, and the Vision statement of Urbana Elementary School as tools to assist in the evaluation and recommendation process for the Urbana Elementary School.

Additionally, the input of the Frederick County Public School Division administrative team, faculty, parents and community members, as well as students, informed the facility evaluation and recommendation process.

Evaluation Criteria

The criteria is based on the educational program needs as well as life cycle costs and life span expectations, maintenance needs, energy efficiency, and current applicable accessibility, life safety and building code considerations.

The Maryland Uniform Statewide Building Code is based on the following series of codes with state amendments. The 2012 editions are currently in effect.

The following codes are relevant to this facility evaluation:

- 2012 ICC International Building Code (IBC) with Amendments
- 2011 National Electrical Code (NEC) with Amendments
- 2012 ICC International Plumbing Code (IPC) with Amendments
- 2012 ICC International Mechanical Code (IMC) (as referenced by the 2012 IBC)
- 2012 ICC International Fuel Gas Code (IFGC)
- 2012 NFPA 1 Fire Code (National Fire Protection Association) with Amendments per State of Maryland Fire Prevention Code
- 2012 NFPA 101 Life Safety Code (National Fire Protection Association) with Amendments per State of Maryland Fire Prevention Code
- 2012 ICC International Energy Conservation Code
- Maryland Building Rehabilitation Code COMAR 05.16.01
- Chapter 11, IBC 2012 or Maryland Accessibility Code, COMAR Section 05.02.02
- Maryland Building Performance Standards COMAR 05.02.07

Note: The existing Urbana Elementary School was constructed in multiple phases, over the course of many years. The original building and the subsequent building additions/renovations met the codes applicable at the time of their construction. Code issues identified in this report are those that would be required to meet current building codes in the event of a building construction and/or renovation project. Building code issues identified within this report are preliminary and should be reviewed and updated as part of a detailed building code analysis, conducted as part of any future construction and/or renovation project.

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

The Evaluative Criteria for the facility analysis of the Urbana Elementary School, as well as subsequent recommendations, are organized into the following major categories:

- **ACCESSIBILITY, LIFE SAFETY AND BUILDING CODE**
- **EDUCATIONAL PROGRAM**
- **PHYSICAL PLANT**

I. ACCESSIBILITY, LIFE SAFETY AND BUILDING CODE CRITERIA

A. ADA Compliance

Recommendations in this report regarding upgrades related to the Americans with Disabilities Act are made when buildings or areas of a building can be made accessible without “undue burden”.

“Section 35.150 requires that each service, program, or activity conducted by a public entity, when viewed in its entirety, be readily accessible to and usable by individuals with disabilities.”

ADA Regulation for Title II, as printed in the Federal Register (7/26/91).

- 1. Exterior Routes** At least one accessible route shall be provided within the boundary of the site from accessible parking spaces, passenger loading areas and public streets and walks to an accessible building entrance. At least one accessible route shall connect accessible buildings, accessible facilities, accessible elements and accessible spaces that are on the same site. Handicapped access to grade (accessible entrances) shall be provided at a minimum of 50% of all public entrances.
- 2. Parking** Property configured and marked accessible parking spaces shall be provided per code and zoning requirements of Frederick County. Frederick County Zoning Code also requires bike racks at a rate of 2 spaces per classroom. Therefore the school is required to provide bike racks for a total of 74 bikes.
- 3. Exterior Signage** Proper signage shall be provided on-site to designate handicapped accessible route(s) to the building and related facilities. If a particular entrance is not made accessible, appropriate accessible signage indicating the location of the nearest accessible entrance(s) shall be installed at or near the inaccessible entrance, such that a person with disabilities will not be required to retrace the approach route from the inaccessible entrance.
- 4. Interior Routes** At least one accessible route shall connect accessible building or facility entrances with available programs within the building. The path of travel to an altered area and the restrooms, telephones, and drinking fountains serving the altered area, shall be readily accessible to and usable by individuals with disabilities.
- 5. Railings** Handrails and railings on stairs and/or ramps shall be designed to meet code requirements. Ramps shall have a maximum slope of 1 to 12.

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

- 6. Elevator** One passenger elevator shall serve each level providing programs to the public including mezzanines, in all multi-story buildings.
- 7. Doors** At each accessible entrance to a building, at least one door shall meet code width and maneuvering clearances. Door openings are to be a minimum clear width of 32" and a minimum clearance of 4'-0" shall exist between pairs of entrance doors in vestibules. Each door that is an element of an accessible route or means of egress shall meet the width and maneuvering clearances per code requirements.
- 8. Rescue Assist.** Areas of Rescue Assistance shall be provided where there is no direct egress to grade. The total number of areas per story shall be not less than 1 for every 200 persons of calculated occupant load served by the area of rescue assistance. Area of Rescue Assistance may not be required if the building is fully sprinklered.
- 9. Interior Signage** Proper signage shall be placed throughout the building to adequately identify accessible routes and areas of rescue assistance. Room identification signs throughout the building shall be in compliance with ADA.
- 10. Hardware** Door locksets to all accessible spaces should be lever-type accessible units. Door closers should meet pull load requirements.
- 11. Restrooms** Existing toilet room facilities on each level of a building shall be accessible or an accessible toilet room shall be provided near the existing facilities. Additional toilet facilities shall be accessible when required by the program or service provided.
- 12. Fountains** At least one accessible drinking fountain should be provided on each level of a building and 50% of the total number of drinking fountains provided shall be accessible. Two drinking fountains mounted side by side or on a single post, are usable by people with disabilities and people who find it difficult to bend over. Knee clearances shall not be required at units used primarily by children ages 12 and younger where clear floor space for a parallel approach is provided and where the spout is no higher than 30 in, measured from the floor or ground surface to the spout outlet.
- 13. Fire Alarm** Visual strobe alarms are to be provided in toilet rooms and other general use areas. (Meeting rooms, lobbies, corridors and common use areas.) Visual strobes are also required in instructional and staff spaces used by hearing impaired students or staff members. Typically, visual strobes are provided in all occupied spaces at the time a new fire system is installed. One or more audible devices are also installed in nearly all spaces to assure that the minimum sound level required by the codes is achieved under all conditions.
- 14. Telephone** If public pay telephones are provided, they are to be accessible. An accessible telephone shall meet the maneuvering clearances per ADA requirements and be mounted at the proper height. TDD or equally effective telecommunication

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

systems shall be available to communicate with individuals with impaired hearing or speech.

15. Seating In places of assembly with fixed seating, accessible wheelchair locations shall be provided. At least one companion fixed seat shall be provided next to each wheelchair seating area. When the seating capacity exceeds 300, wheelchair spaces shall be provided in more than one location.

Capacity of Seating in Assembly Area	Number of Required Wheelchair Locations
4 to 25	1
26 to 50	2
51 to 300	4
301 to 500	6
over 500	6 plus 1 additional space for each total seating capacity increase of 100

16. Workstations Accessible workstations in core spaces in the elementary school level such as art rooms, the library/media center, computer labs and other core subject spaces in the secondary level should be provided.

17. Performance Areas An accessible route shall connect wheelchair-seating locations with performing areas, including stages and spaces used by the performers such as dressing rooms or locker rooms. An Assistive Listening System (ALS) should be provided and located within 50 feet viewing distance of the stage or performing area and shall have a complete view of the stage.

B. Site Code Compliance

- 1. Security**

Vehicular routes and pedestrian paths should be clear in terms of field of view. Pedestrian paths shall be well lighted.
- 2. Vehicular Circulation**

Safe drop-off facilities should be provided for each bus, automobile, and service vehicle traffic. Cross traffic between vehicles and pedestrians should be eliminated or minimized.
- 3. Parking**

Vehicular parking shall be designed to meet local municipal authority requirements. An adequate amount of parking should be available for students, staff and visitors.

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

- 4. Fencing** Fences should have properly functioning gates and contain no rust or loose posts or fabric.
- 5. Drainage** Storm water management shall be designed to meet local municipal authority requirements. Wet and dry ponds shall be properly marked and separated from student activities. Walks and drives shall be properly drained to prevent icy conditions in winter.

C. Building Code Compliance

- 1. Security** Entries shall be observable and promote scrutiny of visitors. Access to roof and other high areas shall be secured.
- 2. Means of Egress** Interior elements comprising *means of egress* shall be continuous and unobstructed from any space within the building to the *exit discharge* in accordance with local building codes.
- 3. Fire Alarm** Fire Alarm System should meet the current requirements of NFPA72 and be connected to an alarm monitoring station. Spare parts and trained personnel to maintain the system should be available in the District or by a contracted company.
- 4. Annunciator** There should be an NFPA72 remote panel at an entrance designated by the Fire Department, well protected, with available parts and maintenance service.
- 5. Sprinkler System** An automatic fire suppression system shall be installed throughout all buildings in accordance with local building codes.
- 6. Fire Extinguishers** Fire extinguishers shall be an approved type to meet local building code criteria for number and spacing and shall be mounted at the proper height. Fire extinguishers shall be annually serviced by licensed personnel and inspected monthly by building operations employees.
- 7. Hazardous Materials** Properly vented and grounded hazardous materials cabinets should be provided for all dangerous chemicals and materials. Multiple cabinets are required to separate reactive chemicals. Cabinets should be locked and isolated from the student population.
- 8. Ventilation & Exhaust** Ventilation and exhaust to be in accordance with the 2012 ICC International Mechanical Code (IMC) (as referenced by the 2012 IBC) and ASHRAE standard 62, whichever is more restrictive.
- 9. Roof** Roofs to have minimum ¼" per foot slope with positive drainage to existing roof drains.
- 10. Lighting** Lightning risk should be evaluated using NFPA Manual 780 and a

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

Protection	lightning protection system installed where the assessed expected lightning strike frequency exceeds the tolerable lightning strike frequency.
11. Automatic Lighting Controls	Automatic lighting controls to provide energy savings as required by the Energy Code shall be provided
12. Lock Box	Provide a lock box containing keys and an access card for the building where the local Fire Department or Municipality require lock boxes.

II. PROGRAM RELATED CRITERIA

Educational	<p>Program revisions should meet the intent of the current FCPS Elementary School educational specifications, the long range or strategic plan and the district technology plan and current design guidelines within the framework of a limited budget.</p> <p>Technology should be incorporated into all areas of the curriculum within the parameters of the FCPS technology plan.</p> <p>The media center should be equipped with current technology to allow for on-line searching and centralized media distribution.</p> <p>Public use facilities should be easily accessible and located near building entrances, adjacent to vehicular parking.</p>
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A. Elementary School

1. Site	<p>The elementary schools should be located on a site adequately sized to provide for safe student pick-up and drop-off, visitor and staff parking, and athletic fields for student and community use. In addition, adequate and safe play structures should be provided for student use.</p> <p>Student loading areas should be separated from other vehicular traffic and pedestrian walkways.</p> <p>Playgrounds should be separated from streets and parking areas with fencing, or other permanent material.</p> <p>Playgrounds should be well equipped and appropriate for age levels. Playground equipment should be accessible to students with disabilities and equipment should be free of sharp edges, be of sound construction and in good condition.</p>
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APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

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|-------------------------------------|---|
| 2. Layout | According to the general planning guidelines, an elementary school site should contain a minimum of 10 acres, plus one additional acre for each 100 students. The elementary schools should support the educational programs and contain sufficient space to accommodate specialized support programs and services. |
| 3. Core Spaces | <p>Core spaces for special subjects and support spaces should be centrally located and easily accessible. Core spaces shall meet or exceed Maryland Department of Education guidelines.</p> <p>All schools should have a room designed for separate art and music instruction. Schools with a student capacity of 500 or more students should have a separate room for each art and music.</p> <p>All schools should have a space suitable for physical education. Schools with a capacity in excess of 500 students should have a separate room suitable for physical education, or have a multi-purpose room large enough to allow for simultaneous use of each side of the multi-purpose room.</p> |
| 4. Instructional Classrooms | <p>Size of instructional classrooms is large enough to allow for alternative room arrangements to facilitate curricular objectives.</p> <p>Size of Pre-kindergarten and kindergarten space is large enough to accommodate developmental range and needs of young children.</p> |
| 5. Small Group Instruction | Adequate space is available for small group instruction to support curricular objectives and to provide spaces for pull-out, specialized instruction, tutoring, and itinerate type activities |
| 6. Large Group Instruction | Adequate space is available for large group instruction activities. |
| 7. Faculty Areas | Adequate space is available for faculty planning and work areas, as well as appropriate and separate space for faculty dining, meetings and socializing. |
| 8. Equipment & Furniture | Equipment and furniture are the appropriate size for the buildings student population and is in good condition |
| 9. Storage | Adequate space is provided throughout the building for the storage of educational materials and building maintenance supplies. |

III. PHYSICAL PLANT CRITERIA

A. Site

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|--------------------|---|
| 1. Paving | Asphalt paving should be in good condition, showing no signs of deterioration or cracking. Storm water should be diverted to drainage inlets with no ponding. |
| 2. Walkways | Concrete sidewalks should be in good condition, showing no signs of deterioration, major cracks or tripping hazards. |

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

- 3. Site Furnishings** Play equipment should be located in a safe area of the site with no broken or rusted equipment. It should be age appropriate.
 - 4. Service Area** The service area should be properly located near food services, mechanical rooms and receiving/ storage areas. The service area should be separate from pedestrian and play areas, with trash and recycling containers away from the building and properly screened.
 - 5. Student Loading** Adequate space should be provided for bus loading, as well as staff and visitor parking. Vehicular and pedestrian traffic are to be separated as much as possible.
 - 6. Parking** Bituminous paving should be in good condition and adequately illuminated by artificial light when natural light is not available.
 - 7. Landscaping** Landscaping should be attractive, conducive to activity and well- maintained.
 - 8. Storm Drainage** Storm drainage to be provided and in accordance with the local municipality storm water management plan.
 - 9. Utilities** Utilities shall be adequate for the current use and occupancy load of the building and shall have reserve capacity and/or provisions for expansion. Utilities shall be properly maintained and located away from students when they present a danger.
- B. Building**
- 1. Foundations** All footings shall bear on suitable soil; concrete slabs on compact grade.
 - 2. Structural System** Structural systems should be intact with no uncertified modifications. There should be no evidence of cracking or settling of structural components.
 - 3. Energy** Buildings should meet or exceed ASHRAE 90.1 Standards.
 - 4. Roofing System** Roofing systems should be in maintainable condition with adequate slope to roof drains or gutters and no ponding, roof leaks or visible damage.
 - 5. Envelope** Exterior walls should be masonry cavity wall on masonry backup with adequate insulation or masonry cavity wall on metal stud and reinforced gypsum drywall with adequate insulation.
 - 6. Exterior Trim** Exterior trim should be heavy gauge metal or wood with no rotted areas, completely painted and properly fastened.
 - 7. Windows** Windows should be clear or tinted glass units, in thermally broken aluminum frames, or aluminum clad wood with undamaged finish. Windows should be easily operable and have proper caulking.

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

- 8. Exterior Doors** Exterior doors and frames should be galvanized hollow metal or finished aluminum. In addition, they must swing in the direction of egress travel, and be accessible.
- 9. Interior Walls** Interior partitions should be structurally sound, free of finish defects and have adequate acoustical properties.
- 10. Interior Doors** Interior doors should be solid core wood in painted metal frames. Doors should have undamaged finish and swing in the direction of egress.
- 11. Interior Glass** Interior glass should be 1/4' tempered or safety glass, or wire glass where required.

C. Interior Finishes

- 1. Terrazzo** Floors should contain no large cracks and have smooth transition to adjacent floor surfaces with no stains or deteriorated areas.
- 2. Resilient Flooring** Resilient floor surfaces should be free of defects, with no cracks, open seams or missing tiles. Asbestos containing floor tiles should be identified and be included in the School District's operation and maintenance plan.
- 3. Carpeting** Carpet should have tight seams, with no unraveling or exposed/frayed ends. They should have anti microbial treatment and be stain resistant where applicable. Area rugs should be non-slip type with no tripping hazards.
- 4. Tile** Ceramic tile should be free of cracked, loose, missing or broken tiles with adequate waterproof grout.
- 5. Resinous Flooring** Resinous flooring should be free of cracks and should not be loose from subsurface.
- 6. Wood Flooring** Wood floors should have appropriate finish and smooth transition to adjacent floor surfaces. They must allow for movement without buckling or spreading. There should be no squeaky or soft spots.
- 7. Ceiling Tile** Ceilings should contain no stained, broken or warped tiles, and the grid should be adequately tied to structure.
- 8. Gyp. Board** Wallboard should have smooth, clean surface with no damage or stains and appropriate transition to adjacent ceiling materials. Wallboard should not be used in areas subject to high student use or abuse.
- 9. Paint** Painted surfaces should have a smooth finish, with no peeling or stains. Appropriate colors should be chosen for reduction of glare, for light reflectivity and overall compatibility with use of space. Lead based paint should not be present.

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

D. Specialties

- 1. Casework** Cabinets should have a solid wood or particleboard core with a high-density plastic laminate finish. Chemical resistant countertops should be provided in science labs where appropriate. Surfaces should be undamaged with properly functioning hardware.
- 2. Chalkboards** Chalkboards should be porcelain on steel, solid construction with no surface cracks or brittle areas. Liquid chalk surface boards are to be provided in computer classrooms and areas with computer and technology equipment.
- 3. Toilet Partitions** Partitions should be painted, galvanized metal or solid phenolic construction. Partitions should be floor supported or overhead braced. Panel surfaces should not be dented, bent or rusted and all hardware should be present and in good working condition.
- 4. Lockers** Lockers should be heavy gauge metal with painted finish. Athletic lockers should be extra-heavy duty or all welded construction, properly vented. Lockers should be in good physical condition with no dents or rust and all hardware should be present and in good operating condition.
- 5. Operable Walls** Partitions should be secured properly to the building structure. They should be easy and safe to operate. The sound transmission rating is to be suitable for its intended use.
- 6. Acoustics** Acoustic separation should be provided between assembly spaces and instructional areas. Large assembly areas, such as gymnasiums, multi-purpose rooms, cafeterias, music rooms and library's should be designed to properly attenuate and distribute sound in order to reinforce the program use. In addition, walls between instructional spaces, private offices, etc. shall extend to the underside of the roof and/or floor deck and be sealed between the wall and deck with acoustical sealant.
- 7. Kitchen Equip.** Equipment should be properly located to accommodate both safety and traffic. Equipment should be stainless steel in good working condition and in compliance with all applicable codes.
- 8. Athletic Equip.** Athletic equipment and bleachers should be in good working condition and meet the minimum code safety requirements. Basketball backstops and related equipment should be in good working condition with appropriate safety measures for operation.
- 9. Stage Equipment** Provide a sound system commensurate with the level and types of theatrical and musical programs provided in the building. Provide a theatrical lighting system commensurate with the level and types of theatrical and musical programs provided in the building. Provide adequately sized projection screen and LCD projector.

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

E. HVAC

- 1. System Design** HVAC System installed should be one that is the most ideal and current for the type of building.

Equipment and air distribution should contain fire protection devices such as fire dampers and duct smoke detectors to meet current local code and life safety requirements.
- 2. Ventilation** Outside air quantities should be designed per local code requirements.
- 3. Exhaust** Proper quantities of exhaust air should be provided in toilet rooms, science rooms, mechanical rooms, kitchen, maintenance closets, storage rooms and copy rooms.
- 4. Distribution** HVAC piping and ductwork should be in good condition
- 5. Equipment** HVAC equipment should be well maintained and in good working condition to operate within the system design. Equipment should be designed to meet local building code requirements.
- 6. Energy Management** Automatic temperature control systems should be current and have energy management capabilities.

F. Plumbing

- 1. Distribution** Sanitary drainage, domestic water and gas piping should be in good condition and operating within system design. Hot water supply shall be provided to every hand sink within classrooms and restrooms.
- 2. Fixtures** Plumbing fixtures should be well maintained and in good working condition to operate within the system design. They shall accommodate the adult or child dimensions and anthropometrics, respectively for their users.
- 3. Equipment** Plumbing equipment should be well maintained and in good working condition to operate within the system design.

G. Electrical

- 1. Interior Lights** Luminaries should have energy efficient long life lamps with non-PCB ballasts. Fixtures should have undamaged finishes and lens with not cracked or discolored items.

Illumination levels should meet the minimum criteria based on foot-candle (fc) levels established by the Illuminating Engineers Society (IES). Applicable parameters are as follows:

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

- 2. Exterior Lights** There should be LED wall mounted lights around the perimeter of building and the lights should be photocell or time clock controlled.

There should be 400 watts high-pressure sodium and LED lights mounted on 25' or less high light poles providing not less than .5 foot candles of illumination to all parking areas. All luminaries should be dark sky compliant full cut-off types and controlled by photo cells and time clocks.
- 3. Power Supply** Power supply should be 480/277 volts, 3 phase, 4 wire or 120/208 volts, 3 phase 4 wire as appropriate for the size of the building and the mechanical systems provided from the Power Company. The transformer should be located in a safe isolated area and per Power Company requirements.
- 4. Electrical Service** The electrical service switchboard should be located in an area not accessible to students and have available replacement branch devices and expansion capacity.
- 5. Distribution** Equipment should have functional panel covers. For LEED certified buildings, separate distribution systems and metering shall be provided for lighting, HVAC and general electrical loads.
- 6. Transformers** There should be 480 by 120/208 volts, 3 phase step-down transformers for power to receptacles and other small 120 volt equipment. Transformers should be located in mechanical spaces and electric rooms and be provided with adequate ventilation.
- 7. Wiring** There should be no signs of deteriorating insulation or loose connections.
- 8. Receptacles** Receptacles should be grounded type with no broken covers. They should be appropriately located for program needs. Shutter type safety receptacles should be provided in kindergarten play areas and child care rooms; Ground fault interrupters are required at wet areas.
- 9. Emergency** Emergency generators should be properly located and sized to meet desired emergency load requirements.

At a minimum, provide emergency power for the following optional loads: Telephone system, paging and intercom system, walk-in freezer, walk-in refrigerator, water pressure pump, data network, security system, access control system and building management system.

Provide emergency power for 60% of classroom lighting in buildings which experience frequent or extended power outages. Provide emergency power for the well pump in buildings where the water storage tank does not have storage capacity for half a day's use.
- 10. P.A System** System should be fully automatic; main panel should control all speakers and receive signals from the bell system class changes. Speakers should be

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

provided in every classroom instructional space, office, corridor gang toilet, and exterior assembly or play space for safety

**11. Remote
Sound System**

The system should provide two-way communications and be zoned.

12. Clocks/Bells

Analog or digital clocks should be installed in each instructional space and should also be connected to the master clock system. Clocks and bells should be on the automatic system.

13. Telephone

A telephone system should be provided with phones in every office and instructional space. Specific functioning and use of the system should be programmed from the central control unit. Provide dedicated copper pair wiring to fax machines, the elevator control and alarm panels.

**14. Television
AV/CATV**

Provide a video signal distribution system capable of providing locally originated, recorded and commercial broadcast signals to all instructional spaces. Coordinate the video distribution system with the classroom technology.

Provide an MDF room of adequate size to house racks for file server, data network, video signal distribution, master clock, closed circuit television and telephone systems. Provide uninterruptible power supplies for all rack mounted equipment. Provide adequate cooling of the space and rack space for future expansion.

Provide access to the internet from all data outlets in the building and wide area network connections to all buildings with-in the District.

Provide IDF rooms within 175 feet of all data jacks in the building. The MDF may act as an IDF if it has adequate space.

Provide IDF rooms on each level of the building and avoid connecting jacks on one floor to equipment on a different floor.

15. Data

Data systems should be implemented to meet the educational needs of the facilities and a long-range technology plan. Systems should be flexible and adaptable for future technological changes.

A building-wide cable distribution system should be provided for installation of present and future low voltage special systems cable. Provide racks for LAN distribution equipment at designated network hub location.

**16. Classroom
Technology**

Provide jacks at one or more teacher's desk locations for data network, telephone, video signal and LCD projector connections. Provide data jacks for student terminals and printers in accordance with the Technology Plan.

Provide a smart board and an LCD projector in each instructional space with connections to each teacher's desk location.

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

- 17. Surge Protection** Provide surge protection devices in the power distribution system to protect equipment in the MDF and IDF rooms. Provide surge protection receptacles at computer station locations.
- 18. Lighting Controls** Provide three levels of lighting in the corridors including night lighting, 50% illumination and full illumination. Provide automatic control of corridor and stair lighting during occupied periods and manual control by way of wall switches during unoccupied periods.
- Provide three zones of lighting in classrooms. Two zones shall be switchable to provide 50% and full illumination in seating and activity areas. The third zone shall comprise the row of luminaries closest to the teaching wall. Control classroom lighting by switches at the door and teaching wall. Turn one zone of lighting on by way of a motion sensor. Turn all lighting off by way of a motion sensor.
- Provide dimming ballasts controlled by a daylight sensor for all luminaries within 12 feet of windows.
- Provide wall switch, motion sensor and daylight harvesting or luminaries in offices.
- Provide wall switch, and dimmer control of lighting in SG1 spaces and offices without windows.
- Provide zoned lighting in gym, cafeteria and multi-purpose rooms. Provide a walk-through zone with switches at all entrances. Provide at least two additional zones with switch control at a single location and motion sensor control of all luminaries.
- In libraries, provide separate zones for check-out, stacks, reading areas, instructional areas and computer classroom areas. Provide walk-through lighting with switches at all entrances. Provide zone control by way of wall switches and motion sensors. Provide daylight harvesting.
- Provide monitoring of the status of lighting at the exterior of the building and in the corridors, stairs, cafeteria, gym, library, auditorium (house only) and other large spaces by way of the Building Automation System. Provide override of the lighting controls in the cafeteria, gym, library, auditorium, and other large spaces by way of the Building Automation System.
- Provide load shedding of at least 20% of the interior and exterior lighting load by way of an interface to the Building Automation System.
- 19. Security** Provide a card access system to manage access to each building. The same system or compatible systems should be used in all buildings to permit District supervisory personnel to access all facilities with a single credential. Provide access readers and keypads only at doors which need to be used regularly for access.

APPENDIX 7.7 EDUCATIONAL FACILITIES EVALUATION CRITERIA

Provide an intrusion detection system consisting of door contacts at all exterior doors and motion sensors in all corridors. Activation of the intrusion detection system shall be reported to a monitoring station. An interface to the Building Automation System shall allow building floor plans to be viewed and the status of all active detection devices to be displayed.

Provide a closed circuit television system (CCTV) to provide surveillance of selected areas of the building. Cameras should view parking lots, play areas, assembly areas, drop-off areas, loading docks and areas not readily visible from the street on the exterior of the building. Cameras should be placed to view activity at all exterior doors in the building. Cameras should also be placed to view all corridors and places of assembly such as gyms and cafeterias. The CCTV system should be interfaced with the Building Management System so that authorized personnel can view any camera in any building and control PT2 cameras. Monitors should be provided at the reception area of each building administration office and in the head custodian's office. A panic button to be provided in the administration office.

APPENDIX 7.8 MARYLAND HISTORIC TRUST SUBMISSION

The following information was submitted to the Maryland Historic Trust for review of the modernization options for Urbana Elementary School. At the time of this printing MHT had not returned review comments regarding the submission.

The project consists of a feasibility study for the Urbana Elementary School for Frederick County Public Schools. As part of the study, four (4) options for the school that are as follows:

This submission included the cover letter, compliance form and project information as attached.



**Crabtree, Rohrbaugh & Associates
Architects**

401 East Winding Hill Road
Mechanicsburg, Pennsylvania 17055
phone: (717) 458-0272 - fax: (717) 458-0047

October 15, 2014

Beth Cole
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032

**RE: Urbana Elementary School Feasibility Study
Frederick County Public Schools
CRA Project No. 2770**

Dear Ms. Cole:

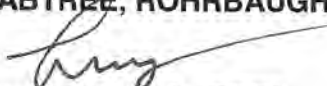
This letter is in reference to the above elementary school. We are in the process of doing a feasibility study for the above referenced school and were asked to submit the proposed options for your review. The project will not be in construction until 2017 however we wanted to get MHT input on the options being proposed. Attached (in the order they appear) for your review is the following: Project Review Form, Project Description, Existing Site Aerial, Existing Floor Plan, Existing Floor Plan indicating the years when new construction was done, Key Plan for Photos of the Existing Building followed by the photos, Option 1 Site Plan, Option 1 Demolition Plan, Option 2 Site Plan, Option 2 Demolition Plan, Option 3A Site Plan, Option 3B Site Plan and Option 3B Demolition Plan.

Per the Project Description, Option 1 is the only additions/renovations option retaining the majority of the existing building with the exception of selected areas to be demolished. The other options are all replacement schools where the existing school is totally demolished. All options will retain the existing bio-swale along the northwest property line and also the Great Heron Wetland Area along the southeast property line. Both are indicated on the attached Existing Site Aerial Plan.

Please review the attached material and let us know of any concerns, issues and/or problems with any of the options. After an option is selected and the project moves into the design phase a final submission will be made. Please call with any questions or if you need additional information.

Sincerely,

CRABTREE, ROHRBAUGH & ASSOCIATES


Larry Levato, R.A., REFP
Project Manager

cc: Beth Pasierb, FCPS (with attachments)
File



PROJECT REVIEW FORM

Request for Comments from the Maryland Historical Trust/
MDSHPO on State and Federal Undertakings

MHT USE ONLY

Date Received:

Log Number:

Project Name **Feasibility Study for Urbana Elementary School** County **Frederick**

Primary Contact:

Contact Name **Elizabeth Pasierb, AICP** Company/Agency **Frederick Co. Public Schools**
Mailing Address **191 South East Street**
City **Frederick** State **MD** Zip **21701**
Email **Beth.Pasierb@fcps.org** Phone Number **301-644-5023** Ext.

Project Location:

Address **3554 Urbana Pike, Frederick, MD 21704** City/Vicinity **Frederick**
Coordinates (if known): Latitude **39.327114309420296** Longitude **77.35641587409975** Waterway **It's at the top end of the Urbana Branch which is in the Lower Monocacy Watershed**

Project Description:

List federal and state sources of funding, permits, or other assistance (e.g. Bond Bill Loan of 2013, Chapter #; HUD/CDBG; MDE/COE permit; etc.).	Agency Type	Agency/Program/Permit Name	Project/Permit/Tracking Number (if applicable)
		MD. Department of Education	N/A

This project includes (check all applicable): ☒ New Construction ☒ Demolition ☒ Remodeling/Rehabilitation
☐ State or Federal Rehabilitation Tax Credits ☐ Excavation/Ground Disturbance ☐ Shoreline/Waterways/Wetlands
Other\Additional Description:

Known Historic Properties:

This project involves properties (check all applicable): ☐ Listed in the National Register ☐ Subject to an easement held by MHT
☐ Included in the Maryland Inventory of Historic Properties ☐ Designated historic by a local government
☐ Previously subject to archeological investigations
Property\District\Report Name

Attachments:

All attachments are required. Incomplete submittals may result in delays or be returned without comment.

☒ Aerial photograph or USGS Quad Map section with location and boundaries of project clearly marked.
☒ Project Description, Scope of Work, Site Plan, and/or Construction Drawings.
☒ Photographs (print or digital) showing the project site including images of all buildings and structures.
☒ Description of past and present land uses in project area (wooded, mined, developed, agricultural uses, etc).

MHT Determination:

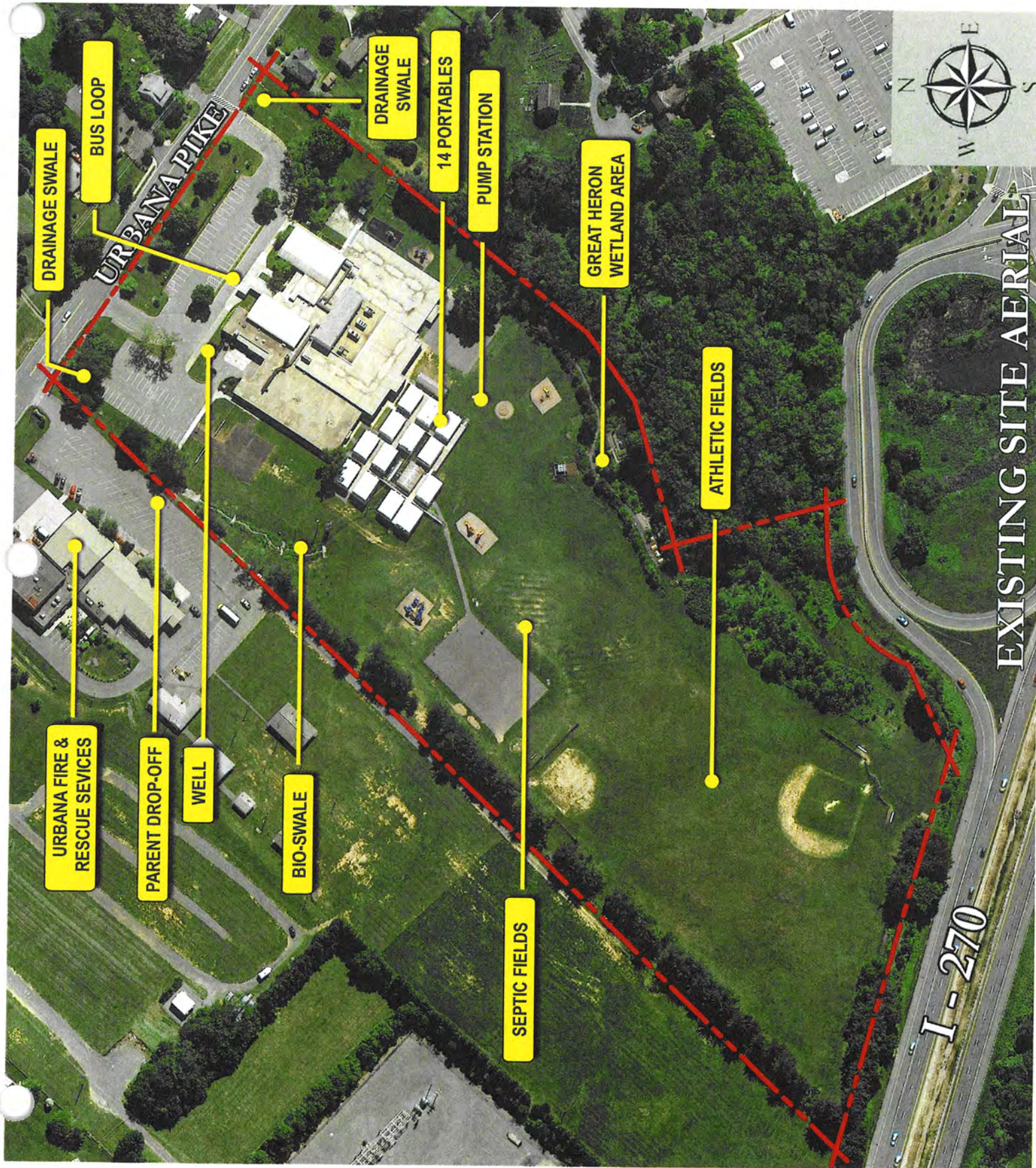
☐ There are **NO HISTORIC PROPERTIES** in the area of potential effect ☐ The project will have **NO ADVERSE EFFECT WITH CONDITIONS**
☐ The project will have **NO EFFECT** on historic properties ☐ The project will have **ADVERSE EFFECTS** on historic properties
☐ The project will have **NO ADVERSE EFFECT** on historic properties ☐ **MHT REQUESTS ADDITIONAL INFORMATION**
MHT Reviewer: Date:

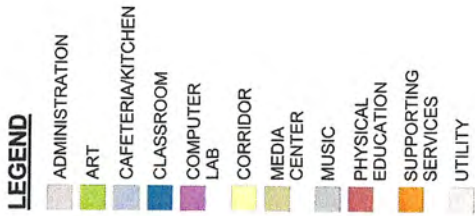
Submit printed copy of form and all attachments by mail to: **Beth Cole, MHT, 100 Community Place, Crownsville, MD 21032**

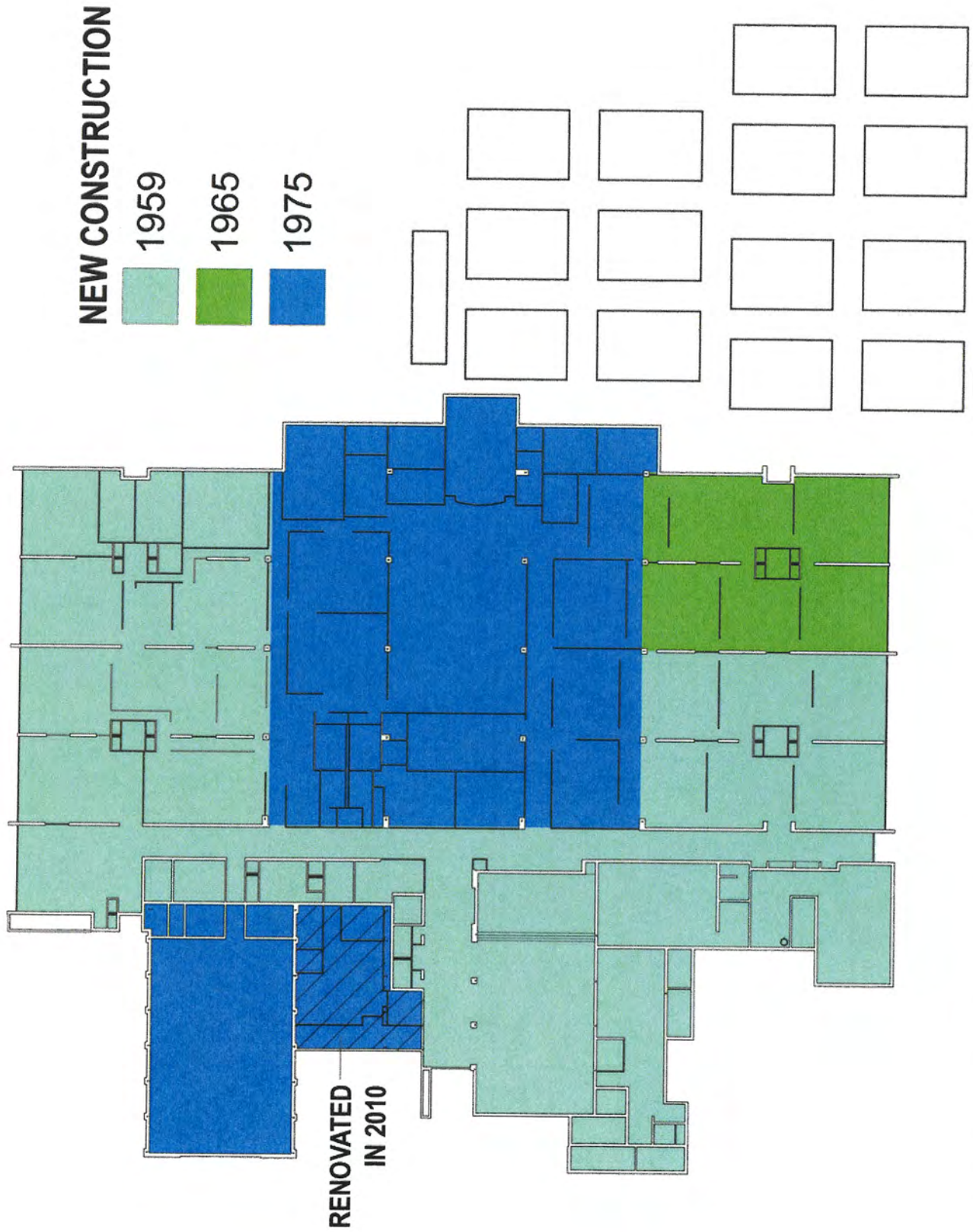
PROJECT DESCRIPTION

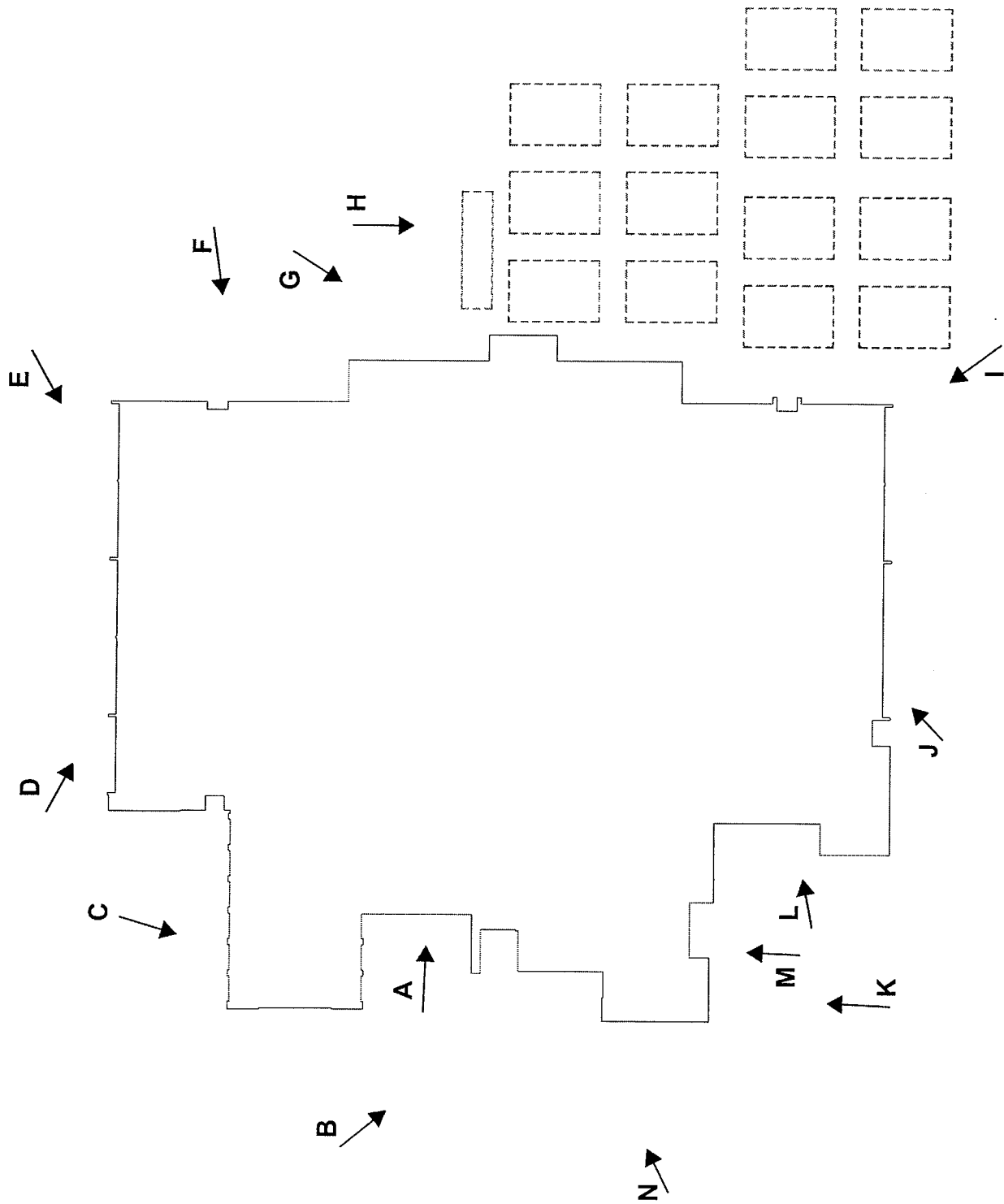
The project consists of a feasibility study for the Urbana Elementary School for Frederick County Public Schools. As part of the study we are proposing four (4) options for the school that are as follows:

1. Option 1 – Phased Additions/Renovations While Occupying the Existing Building:
This option provides additions and major renovations to all portions of the building while occupying the building during construction. The proposed new additions include new mechanical spaces, enlarged kitchen and cafeteria spaces, a new gymnasium as well as a two story educational wing. This option also will consist of the complete demolition of the 1975 addition (infill portion between classroom wings from original 1959 building and 1965 addition) and demolition of miscellaneous portions of the existing building at the northwest corner of the building. Renovations throughout the building will include all new partitions and complete replacement of the mechanical, electrical and plumbing systems as well as exterior windows and doors and roof. This will be a phased construction project over four (4) years.
2. Option 2 – Replacement School While Occupying the Existing Building:
This option provides a replacement school constructed adjacent to the existing building using the FCPS elementary prototype design. This option uses the existing building and portables while the new building is being constructed and then demolishing the existing building and relocating portables at the end of the project.
3. Option 3A – Replacement School While Relocated to Sugarloaf Elementary School:
This option provides a replacement school constructed in place of the existing building using the FCPS elementary prototype, and relocating the faculty and students to the new Sugarloaf Elementary School while the new building is being built. In this option the existing building is demolished prior to beginning construction on the new building.
4. Option 3B – Replacement School While Relocated to Portables:
This option provides a replacement school constructed in the area of the existing building using the FCPS elementary prototype, and relocating the faculty and students to temporary portables on the adjacent site while the new building is being built. In this option the existing building is demolished prior to beginning construction on the new building.



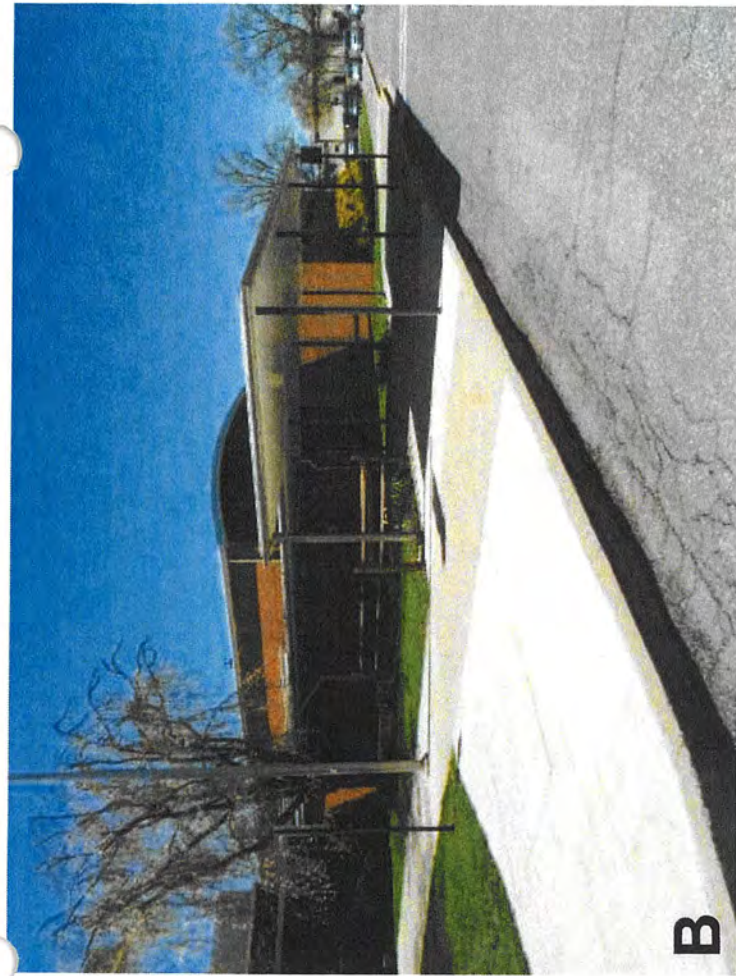






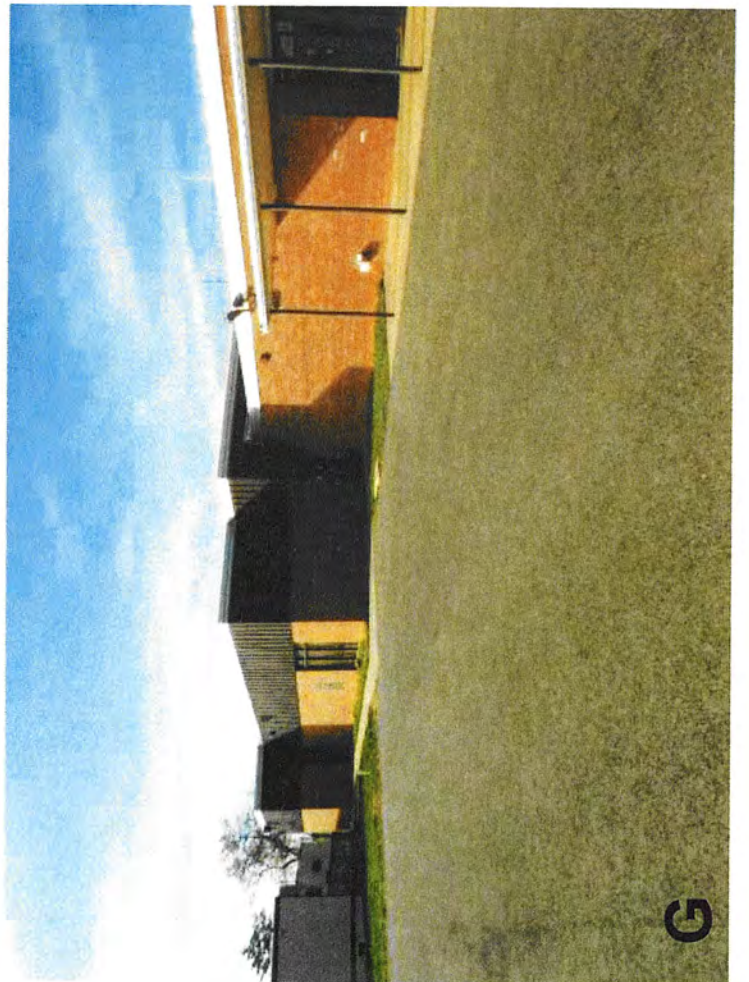
EXISTING CONDITIONS PHOTO KEY PLAN



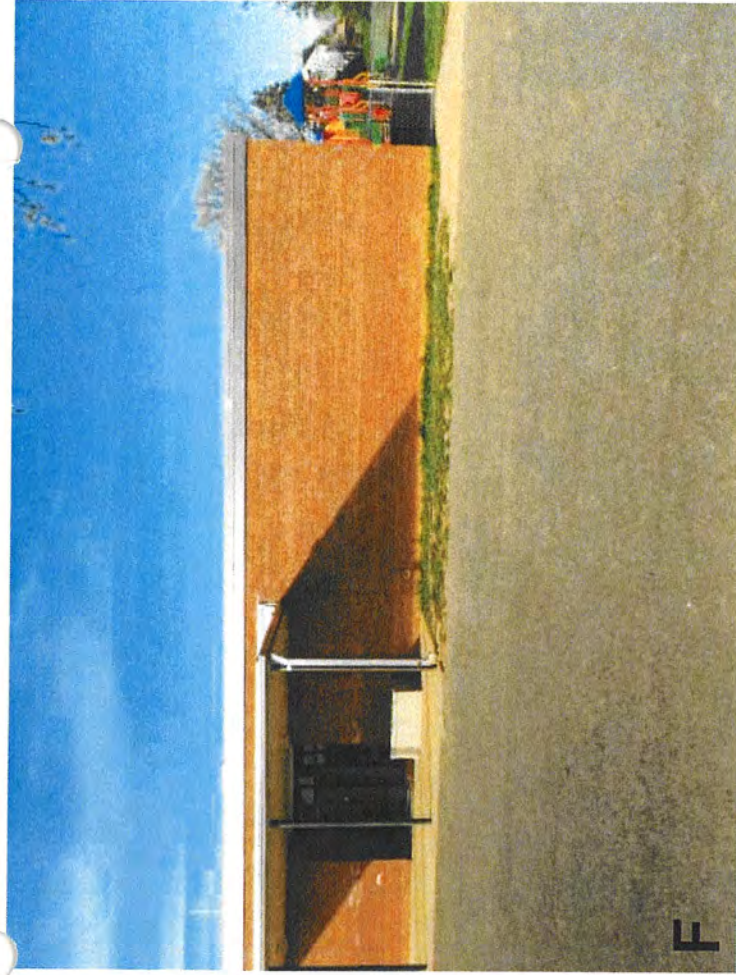




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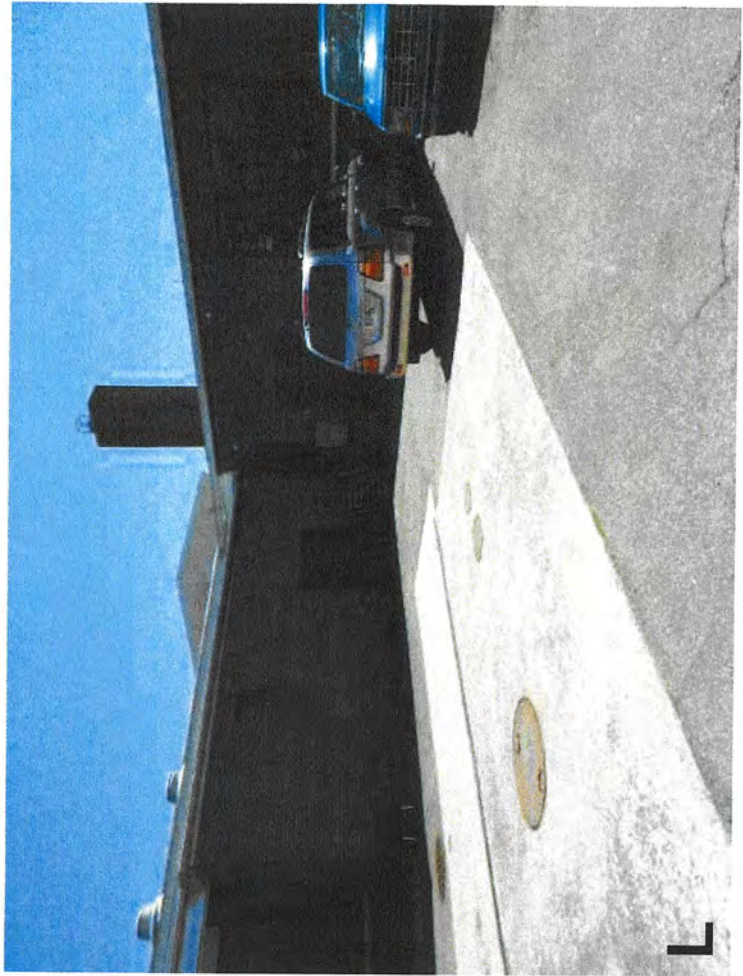
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URBANA ELEMENTARY SCHOOL
FREDERICK COUNTY PUBLIC SCHOOLS

OPTION 1

ADDITIONS/RENOVATIONS WHILE OCCUPIED



OPTION 1 - DEMOLITION ADDITIONS/RENOVATIONS WHILE OCCUPIED



I-270



OPTION 2 REPLACEMENT SCHOOL WHILE OCCUPIED



OPTION 2 - DEMOLITION REPLACEMENT SCHOOL WHILE OCCUPIED



OPTION 3A

REPLACEMENT SCHOOL WHILE UNOCCUPIED



OPTION 3B

REPLACEMENT SCHOOL WHILE UNOCCUPIED



OPTION 3B REPLACEMENT SCHOOL WHILE UNOCCUPIED

