

Core Team stemming focus from May 8th, 2018 Board Meeting:

1. The Board asked the Core Team to focus their work on concepts that include neighborhood schools and tabled the “Transform” concept.

- This includes further analysis of K-3, K-4 and K-5 models
- Consider how the “spirit” of the “Transform” concept could be included in the Neighborhood Models.

2. The Board agreed that these baseline components should be included in an Educational Master Facility Plan...

- Health, Life Safety Items
- ADA Accessibility
- Cosmetic Updates
- Safety & Security Enhancements
- HVAC with Air Conditioning
- Domestic Water Pipe Improvements
- Electrical Capacity Improvements

3. The Board determined that they would like the Core Team to focus on the enrollment average plus one standard deviation for Cafeterias, Kitchens and Kinetic Wellness spaces.

4. The Board asked the Core Team to examine a tiered approach to modernizing our schools and provide a recommendation on what future ready updates should be prioritized by grade level.



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Board Update June 6, 2018

December 2015 – February 2017

- Facility maintenance demands
- Board review of air-conditioning
- Enrollment imbalance
- Short-term Crow Island solution (Kindergarten)

March 2017 – June 2018

- Commission EMFP
- Form Core Team
- Research, Iterate, and Listen

Fall 2018

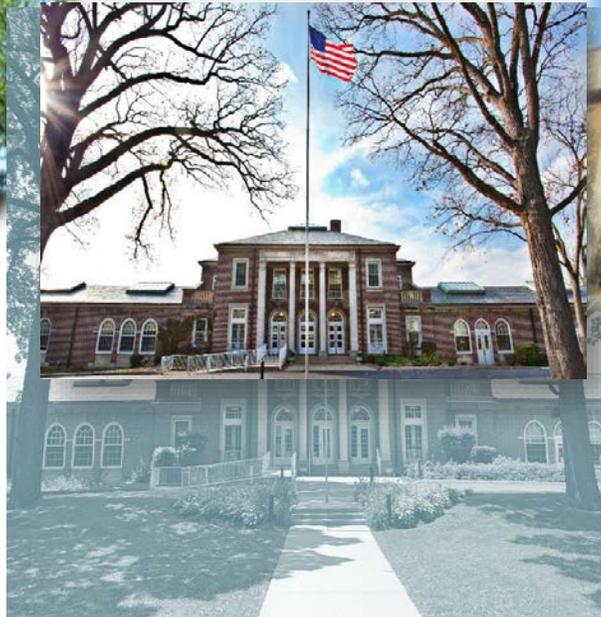
- Educational Master Facility Plan recommendation to School Board

How has the Community Responded in the Past?



1940

2000



1983



1969

2009



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In a letter to the architects, Frances Presler (1941), director of activities at Crow Island School, wrote:

“The school should look to the future. It should not seem complete and finished beyond any addition or adjustment to later demands. It should give children and adults the feeling of flexibility, possibility of change. This is the germ of growth. And rigidity of architecture can cage the energy, and irritate the spirit of those who live within.”



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Tiers of Modernization

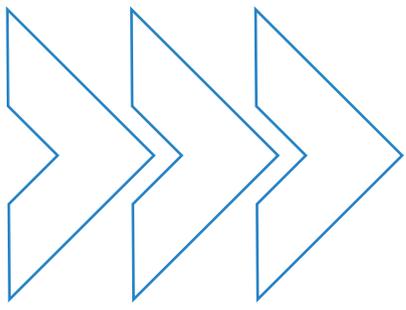


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“Because children spent many working hours in a school, Washburne believed a school and classroom should have all the amenities of a comfortable home -- good lighting, proper ventilation and heat and a safe and sanitary environment. The space was open, flexible, attractive and inviting. The more flexible the space, the more likely it responded to the needs of both teacher and child.”

***~Meuer, W, 1988
re: design of Crow Island School***



Neighborhood Schools

A New Moniker for Facility Change

“Future Ready” = *Modernization*

Modernization Tier: Light

A Light tier of modernization would focus on elements that could be changed with little to no renovation outside of the facility repairs:

- **Lighting:** Add LED task lights where needed
- **Power:** Electrical upgrades to ensure future needs are met
- **Temperature:** Installation of HVAC
- **Acoustics:** -
- **Ownership:** Create places to store and display student projects – both finished and in progress
- **Flexibility:** Change classroom furniture to flexible, varied, active seating.
- **Complexity + Color:** Adding “shape + color” wayfinding to hallways and rooms, which are easier for users than verbal-only

Modernization Tier: Medium

A Medium tier of modernization would include all Low Tier, plus elements that could be changed with some renovation outside of facility repairs:

- **Lighting:** Reduce distracting/non-responsive lighting by changing fixtures to LEDs
- **Temperature:** -
- **Acoustics:** Install acoustic treatment around problem areas
- **Ownership:** -
- **Flexibility:** Add transparent, operable partitions to strategically selected spaces (target 30% of total) to allow for connectivity, expansion, and differentiation
- **Complexity + Color:** -

Modernization Tier: High

A High tier of modernization would include/replace Low and Medium Tiers as well as what's described below, through significant renovation:

- **Lighting:** Adding/altering exterior windows and/or installing solar tubes from roof
- **Temperature:** Installation of room-specific controls
- **Acoustics:** Install additional acoustic treatment/acoustic glass
- **Ownership:** Alter classrooms to developmentally appropriate plans: simple and large for older students, varied shapes and more nooks for younger students
- **Flexibility:** Increased number of operable partitions (see Ownership) and include breakout spaces
- **Complexity + Color:** Altering circulation within the buildings to be wider, more visually open, and with clear pathways

Case Study



Middle School Modernization



During Design, they envisioned:

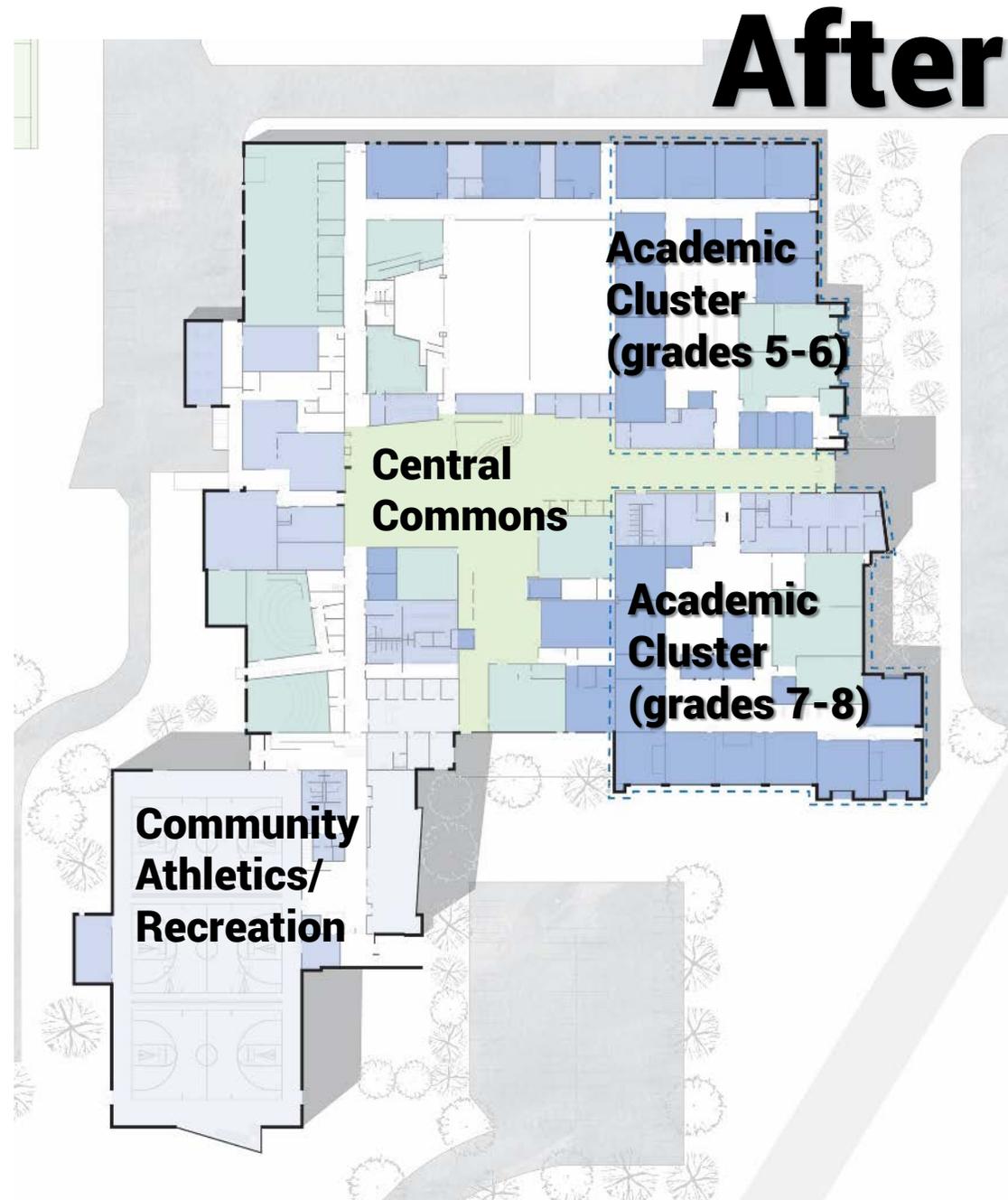
- A Genius Hour
- Increased Collaboration
- Inter-Disciplinary Exploration
- Permission to Fail
- Relevance
- Student Engagement
- Student Agency
- Program Development
- Space Sharing
- Project Based Learning
- Encourage “Casual Collisions”





Before:

- 1960s Traditional Middle School
- Lacking Central Commons
- Traditional Classrooms
- No Community Space





Existing Building: Before

After: Commons





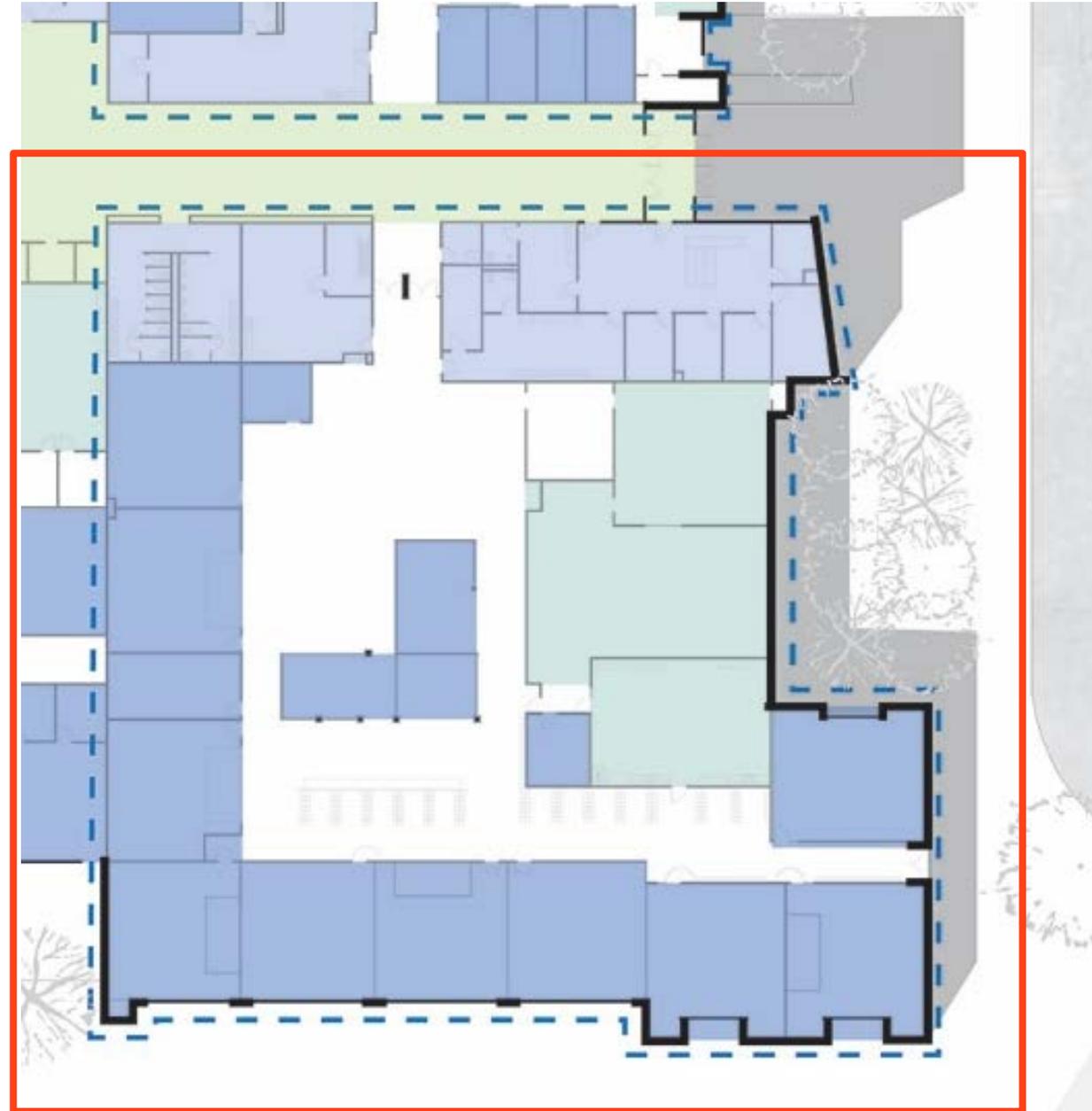
Existing Building: Before

Existing Building: Before



Academic Cluster:

Modernized Classrooms
Designed for Flexibility



Academic Cluster



Year One



Transition Over Time: More Agency/Collaboration

Cluster: Today



Cluster: Today





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Comparing the Neighborhood Models

VISION FOR TEACHING & LEARNING

Congruency with current needs
of education

Forward thinking for the future
needs

Continue to provide **engaging,
progressive approach** to meet
the needs of the current and
future generations of learners

ENROLLMENT

Overall **declining** enrollment

Imbalance among 3 elementary
schools' enrollments

Commitment to class size &
consistent programming

Short-term solution: all
Kindergarteners at Greeley &
Hubbard Woods

FACILITIES

Cost/benefit of **maintaining**
aging infrastructure

Greeley School, Hubbard Woods
School, and the Skokie School
are at or near **100 years old**

**Updates, repairs, and
replacements** needed at all
schools

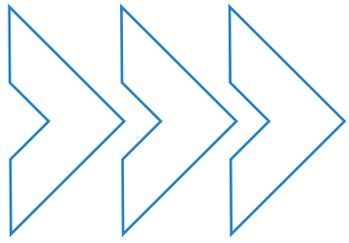


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May 8, 2018 – Board requested prioritization of grade levels for modernization.

The Core Team prioritized modernization at the Intermediate and Middle grades.



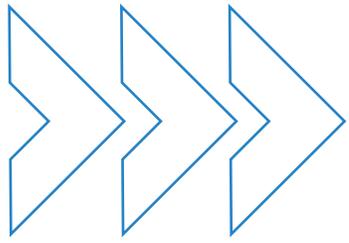
Neighborhood Schools

K-3 4-8: Space Highlights

- **Three K-3 Neighborhood Schools (Early Childhood focus)**
- **A 4-8 School organized into developmentally appropriate grade level centers**
 - **4-5 Intermediate**
 - **6-8 Middle School**

K-3 Neighborhood Schools	4-8 School
Available Classroom Space (Flexible Use)	New / Renovated Classrooms @ 950 SF
Cafeterias (CI / HW)	Two Cafeterias
Kitchen (All)	Expanded Kitchen
Expanded Gyms / KW Storage (All)	Expanded Gym / KW Storage
	Renovated Resource Center
	Dedicated Project Rooms (~9,000sf)
	Inquiry Learning Space (~2,000sf)
	Dedicated Study Space (~3,000sf)

Note: The Core Team also added an option of a New 4-8 School for comparison

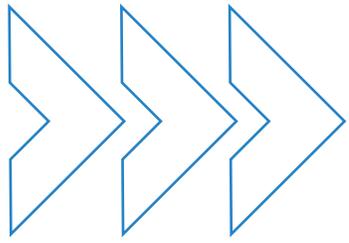


Neighborhood Schools

K-4 5-8: Space Highlights

- **Three K-4 Neighborhood Schools**
- **A 5-8 School organized into developmentally appropriate grade level centers**
 - **5-6 Intermediate OR 5 grade center**
 - **7-8 Middle School OR 6-8 Middle School**

K-4 Neighborhood Schools	5-8 School
Available Classroom Space (GR / HW)	New Classrooms @ 950 SF
Added Classrooms at CI (3)	Renovated Classrooms @ Existing SF
Cafeterias (CI / HW)	Two Cafeterias
Kitchen (All)	Expanded Kitchen
Expanded Gyms / KW Storage (All)	Expanded Gym / KW Storage
	Renovated Resource Center
	Dedicated Project Rooms (~5,000sf)
	Inquiry Learning Space (~2,000sf)
	Dedicated Study Space (~2,500sf)



Neighborhood Schools

K-5 6-8: Space Highlights

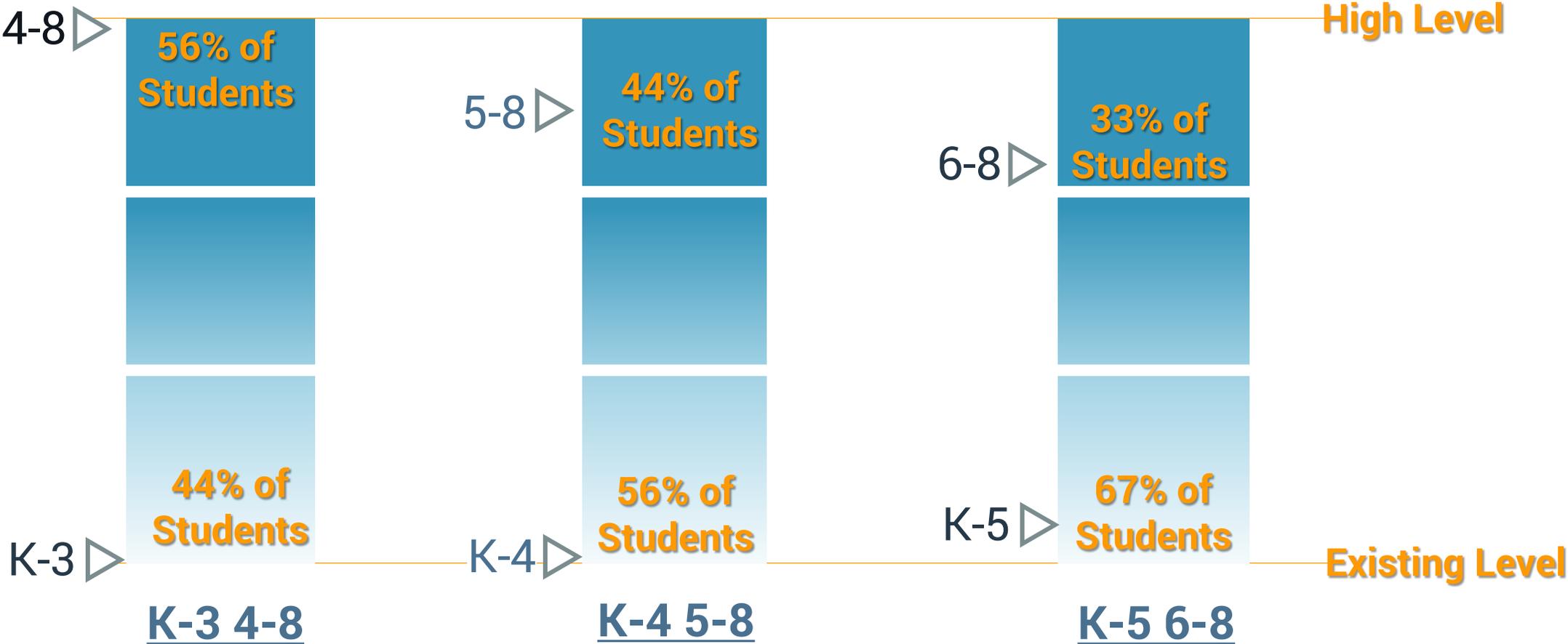
- **Three K-5 Neighborhood Schools**
- **A 6-8 Middle School**

K-5 Neighborhood Schools	6-8 Middle School
Available Classroom Space (GR)	Renovated Classrooms @ Existing SF
Added Classrooms (CI - 6 / HW - 2)	-
Cafeterias (CI / HW)	Expanded Single Cafeteria
Kitchen (All)	Expanded Kitchen
Expanded Gyms / KW Storage (All)	Expanded Gym / KW Storage
	Renovated Resource Center
	Dedicated Project Rooms (~3,500sf)
	Inquiry Learning Space (~1,500sf)
	Dedicated Study Space (~2,500sf)



Neighborhood Schools

Relative Level of Modernization





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Panel Explanation

1. **Teaching and Learning**
2. **Enrollment**
3. **Costs and Timeline**



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Teaching and Learning

- **Flexibility & Modernization**
- **Programming and Curriculum**
- **Professional Collaboration**



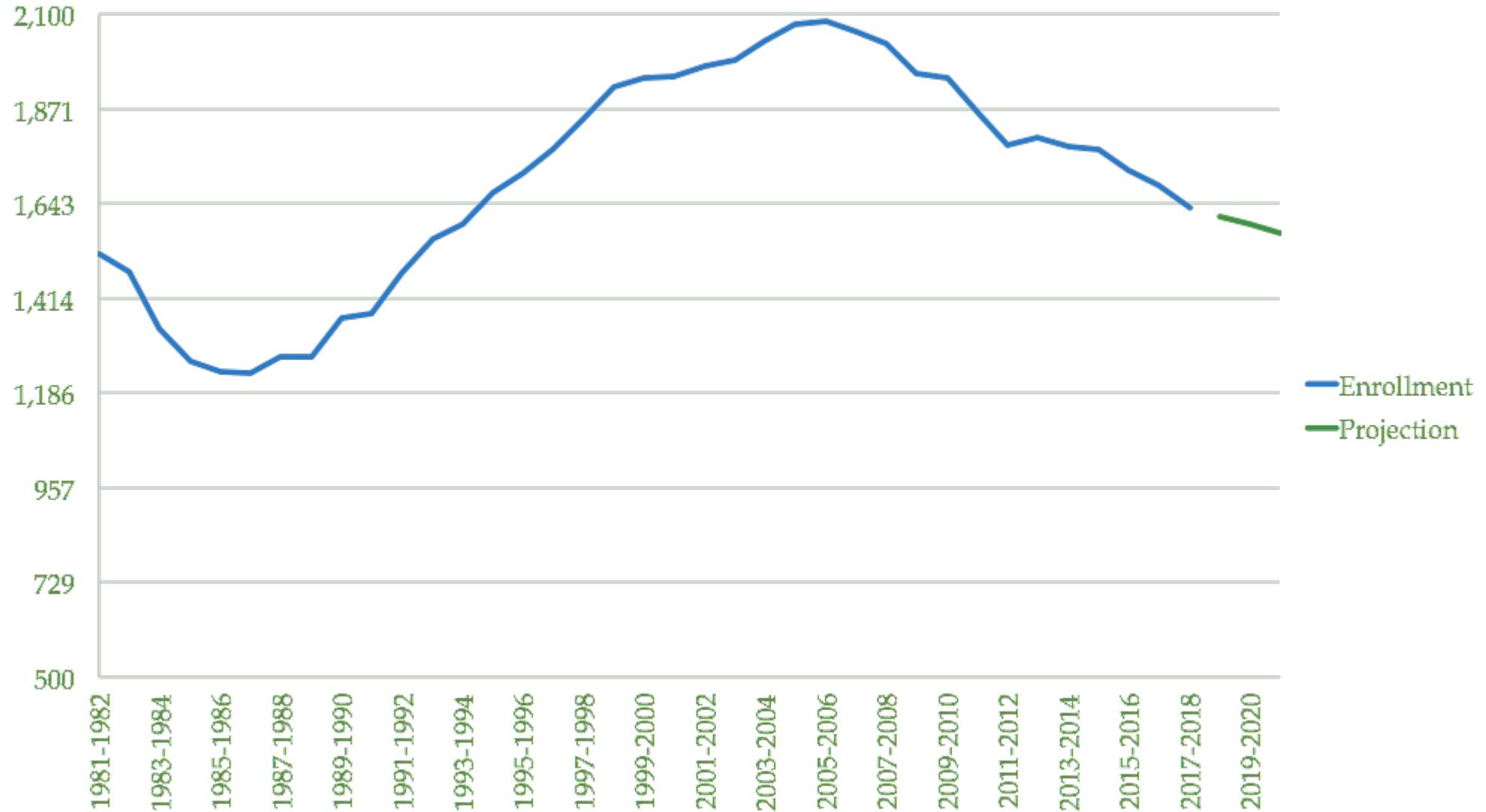
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Enrollment

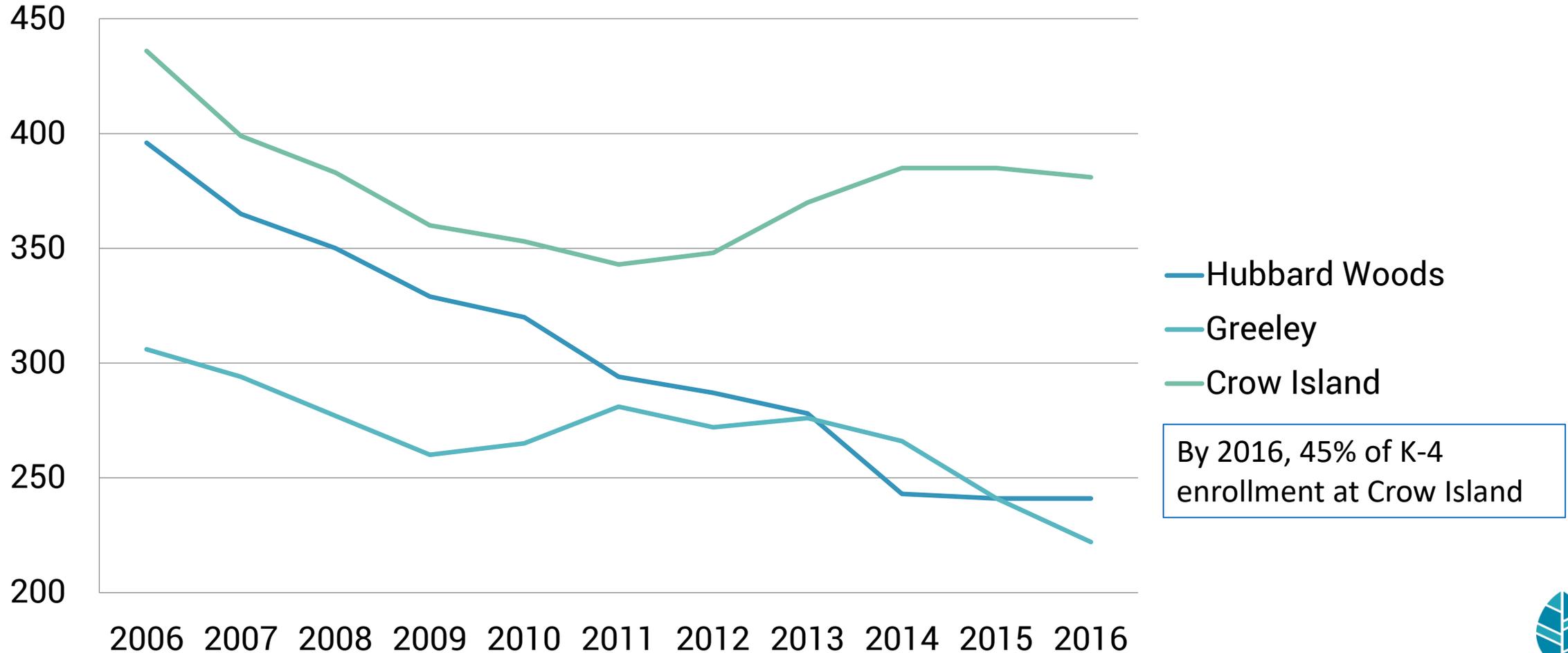
- **Enrollment Variance**
- **Redistricting**

Past & Projected Enrollment



2006 – 2016 Elementary Enrollment

Elementary Enrollment 2006-2016



Estimated Enrollment (Through 2027)

Model	K-3; 4-8	K-4; 5-8	K-5; 6-8
Lower School	191 - 242	247 -308	296-366
Upper School	342 – 352 (gr 4/5) 555 – 610 (gr 6-8) 898 – 962 (total)	352 – 370 (gr 5/6) 374 – 414 (gr 7/8) 726 – 783 (total) 169 – 171 (gr 5) 557 – 612 (gr 6, 7, 8) 726 – 783 (total)	557-612

Redistricting Impact

	Estimated Number of Students	Estimated Number of Households
K-3 & 4-8	50-90	40-75
K-4 & 5-8	60-115	50-85
K-5 & 6-8	80-125	55-90

Note: Multiple mapping options are under consideration



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Cost and Timeline

- Updated Costs
- Durations for Implementation

Revised Baseline (Included in all Models)

Per Board Direction May 8, 2018

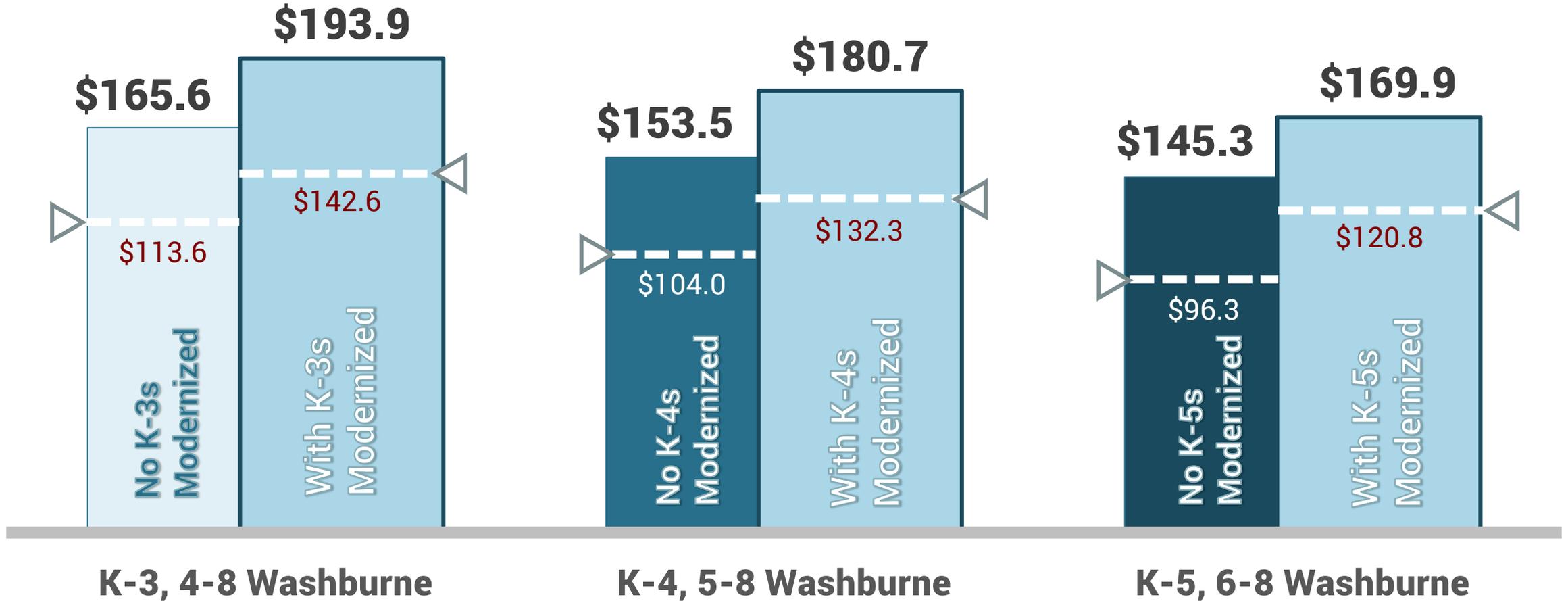
- **Health, Life Safety Items**
- **ADA Accessibility**
- **Cosmetic Updates**
- **Safety & Security Enhancements**
- **HVAC with Air Conditioning**
- **Domestic Water Pipe Improvements**
- **Electrical Capacity Improvements**

Estimated Costs Total for 5 schools \$61.3M

Comparison of Estimated Costs (over 30 years)

Notes:

1. Contingencies excluded in comparison
2. All costs are Millions of Dollars without escalation or phasing.
3. All 4-8, 5-8 or 6-8 include Modernizations.
4. Estimated costs as of 06/06/2018.

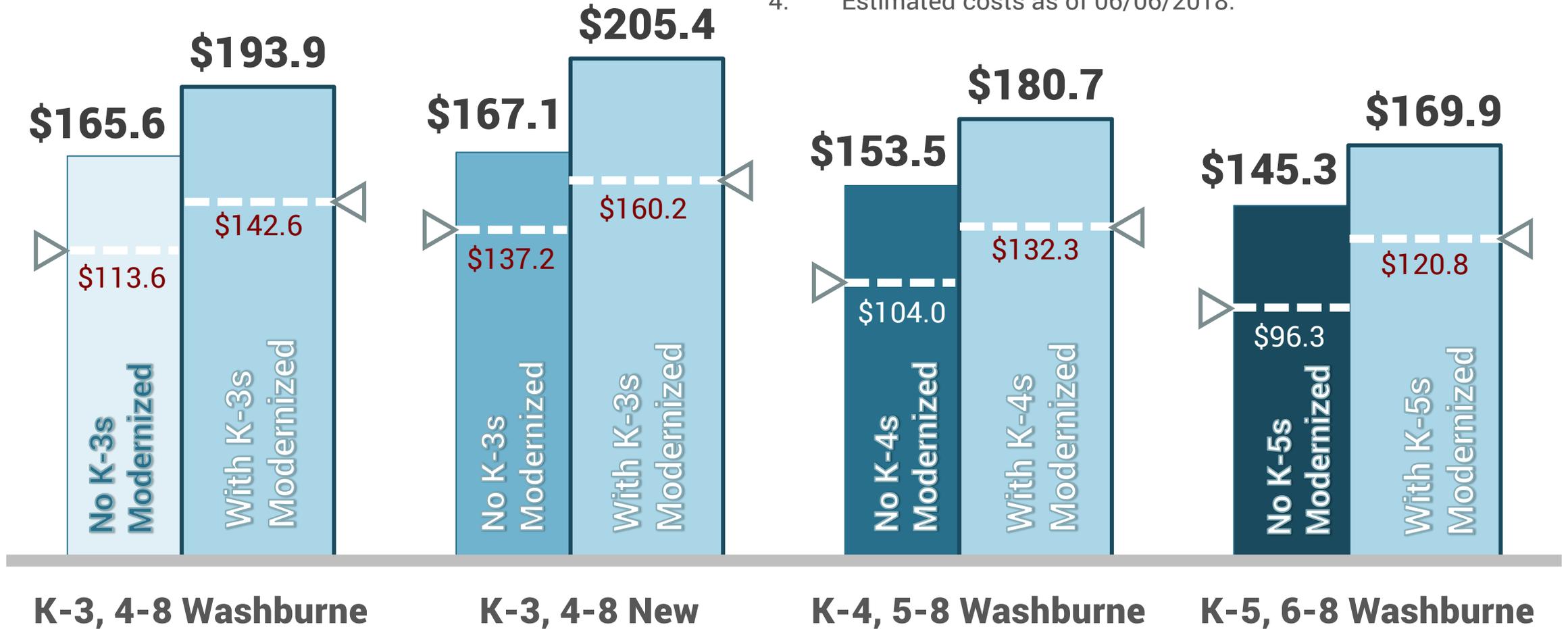



 Listed below this line are the initial costs. Listed at the top of the bar are Initial + 30 yr OM&E costs.
 D36 Debt Limit = ~\$96.9M

Comparison of Estimated Costs (over 30 years)

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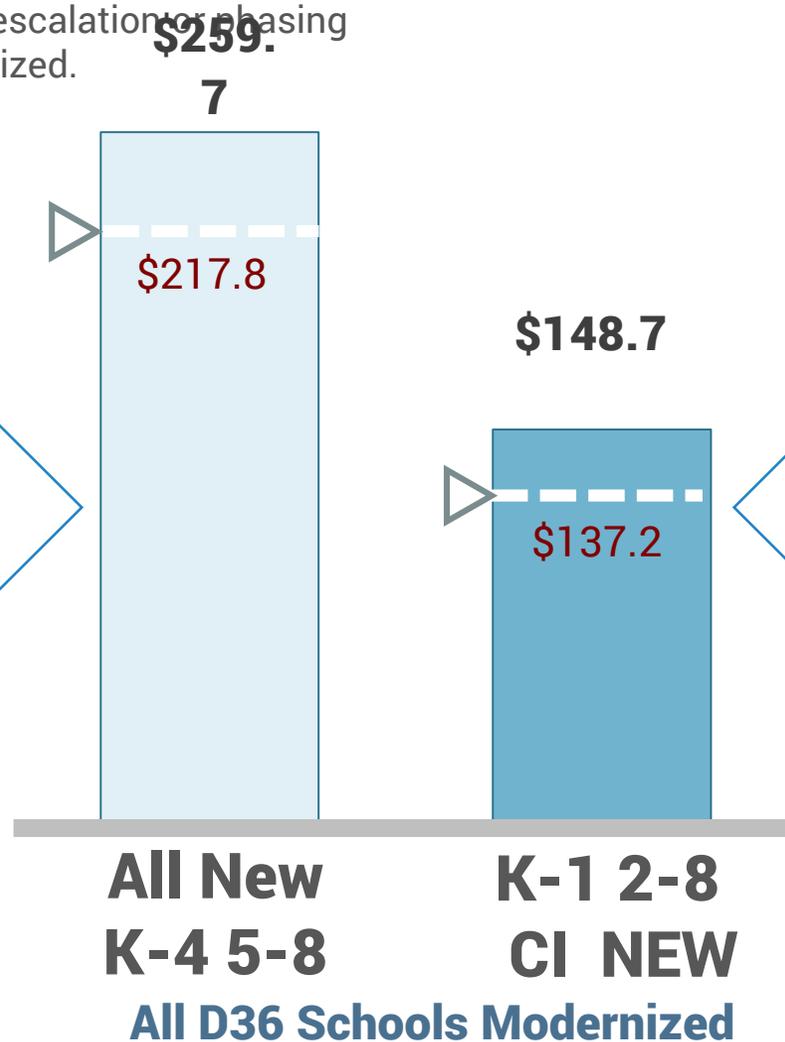

 Listed below this line are the initial costs. Listed at the top of the bar are Initial + 30 yr OM&E costs.
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“Bookend Models”: Estimated Costs (over 30 years)

Notes:

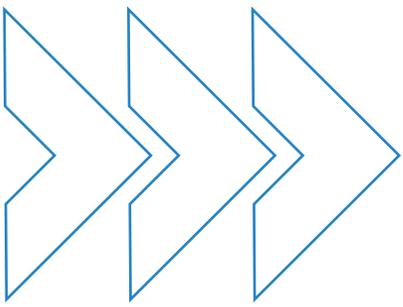
1. Contingencies excluded in comparison
2. All costs in Millions of Dollars without escalation or phasing
3. All D36 facilities would be new/modernized.
4. Estimated costs as of 06/06/2018

This model presumes all schools would be rebuilt as new facilities on their current sites. This “bookend” is the highest order of construction and 26% more expensive than the most expensive Neighborhood Model.



This model presumes two grade level centers would operate (updated Transform). Should significant enrollment growth occur, reconfiguration would be required. **This Model was tabled by the School Board and is included for comparison only.

— — — — — Listed below this line are the Initial costs. Listed at the top of the bar are Initial + 30 yr OM&E costs.



Neighborhood Schools

Durations for Implementation (Months)

K-3 4-8 New @ SK



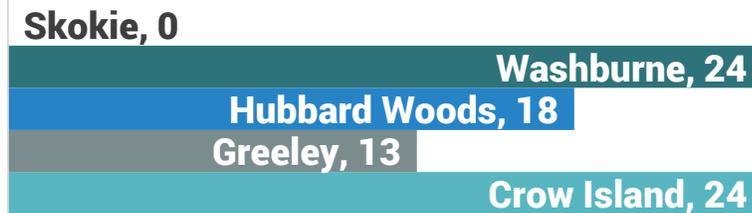
K-3 4-8 CW



K-4 5-8



K-5 6-8





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Panel Discussion



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Additional Information

What factors impact students?

A 2015 study of 153 classrooms and 3766 students (Barrett et al) found that the following factors, combined, can explain 16% of the differences in students' achievement levels:

- Lighting
- Temperature
- Acoustics
- Ownership
- Flexibility
- Complexity + Color

Lighting

Increasing exposure to daylight (while accounting for glare) and ensuring that artificial light is appropriate in both type and placement.

Three levels of lighting change are listed here, in order of least to most significant change to the building:

- Reducing distracting/non-responsive lighting by changing fixtures to LEDs and adding LED task lights where needed
 - *This also conserves energy*
- Adding strategic glass sections to interior walls to allow light to “travel” further into the building
 - *This also improves visual connectivity/passive surveillance*
- Adding/altering exterior windows and/or installing solar tubes from roof



LED light replacement: LED lights create a consistent atmosphere when natural light can not be achieved

(Mt. Carmel HS Chicago, IL)

Acoustics

Ensuring that important sounds, such as the teacher's voice, reach students clearly – and that distracting noise, including echoes and outside noise, are minimized.

Two levels of acoustic intervention are listed here, in order of least to most significant change to the building:

- Selecting appropriate furniture and flooring finishes in classrooms, to avoid noise caused by moving furniture.
 - *This can also improve flexible/active seating options.*
- Installing acoustic treatment in/near areas of special concern: music rooms, physical activity spaces, social areas.

Temperature

Studies link high temperatures to decreased performance on tests (>77°) and to increased irritability – especially in crowded settings (>93°).

Temperatures that are too low (<68°) can decrease attention, energy, and performance on tests.

Based on best practices in the built environment, it is recommended:

- HVAC be installed in all buildings
- Individual classrooms have some degree of control over thermostat
 - *Allows teachers to fine-tune environment, and also imparts a sense of control*

Ownership

A sense of ownership, distinctiveness, and comfort help students identify the classroom and build a connection with different spaces.

Schools typically offer a wide range of ownership types, from classroom décor to displays of student work. Recommended for enhancement:

- Places to store and display student projects – both finished and in progress
- Ergonomically and developmentally appropriate, flexible seating for teachers and students
 - *This can also improve flexible/active seating options and acoustics.*

Flexibility

The degree to which the learning space and school respond to students' learning activities, development needs, and the teachers' lessons.

Three levels of lighting change are listed here, in order of least to most significant change to the building :

- Changing classroom furniture to flexible, varied, and active seating.
 - *This can also improve sense of ownership and acoustics.*
- Adding operable walls to strategic areas, to allow for connectivity, expansion, and differentiation of space as needed.
 - *This also improves connection*
- Altering classrooms to developmentally appropriate plans: simple and large for older students, varied shapes and nooks for younger students

Preparing students for future environments: large, flexible, multi-age group learning space with a variety of seating allows students to learn self-regulation, social-emotional skills with realistic technology support
(Agnor-Hurt Elementary, VA)





**Whole school as learning/workspace:
writable walls and tables**
(Jouett Middle School, VA)



Natural light + Responsive light: pop-out window benches have shades to provide privacy or shelter from too much sunlight
(Discovery Elementary, VA)

Connection

A sense of visual and physical connection, as well as navigation, through the space.

Three levels of lighting change are listed here, in order of least to most significant change to the building:

- Adding strategic glass sections to interior walls to allow visual connections to learning, where appropriate
 - *This also improves visual connectivity/lighting*
- Adding operable walls to strategic areas, to allow for connectivity, expansion, and differentiation of space as needed.
 - *This also improves flexibility*
- Altering circulation within the buildings to be wider, more visually open, and with a clear pathway to specific areas.



Natural light + Color-coded wayfinding
(Jordan Middle School, MN)



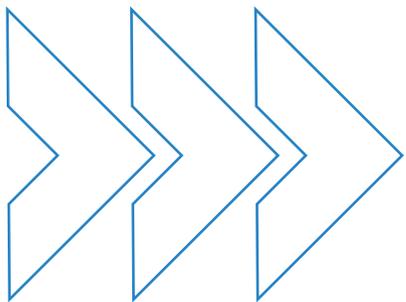
Visual transparency: classroom activity is on display, while nearby nook is visible to teacher
(Galtier Community School, MN)

Complexity and Color

Visual diversity in shape and palette, which support developmentally appropriate stimulation, assist with wayfinding, and support a sense of ownership.

Considerations for a renovated building, in order of least to most significant change to the building :

- Adding “shape + color” wayfinding to hallways and rooms, which are easier for users than verbal-only
- Selecting developmentally appropriate and visually distinctive furniture and finishes in classrooms, to build identity
- Altering classrooms to developmentally appropriate plans: simple and large for older students, varied shapes and nooks for younger students

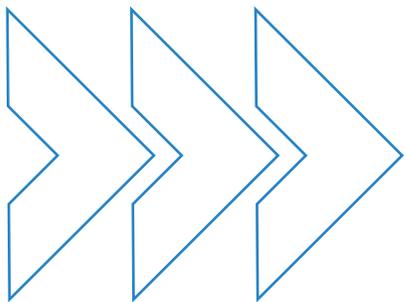


Neighborhood Schools Cost Updates

Since May 8th, the Core Team, DLR Group and Ameresco have been working to analyze, refine and update the models with modernization priority at middle grade levels, enrollment scenarios and other needs. The following changes have directly impacted costs:

- a) **Enrollment numbers have been revised** for each model by school and reflect the latest class size guidelines and redistricting scenarios. **This altered the size of additions at each campus.**
- b) All classroom counts now reflect **100% teacher owned classrooms** (no sharing). **This necessitated more classrooms being added.**
- c) **With modernization and equity in mind, new classrooms are sized at 950sf**, with the exception of new Crow Island classrooms, where the historical significance of the facility will require replication their existing classroom configuration and size at 1,030 sf. 950sf was benchmarked from the most recent classroom addition at Greeley. **This increased the size of the classrooms being added.**
- d) Domestic Water piping and Electrical Service upgrades are included in all Baseline Costs. **Ameresco Estimates \$12.46M for these items at Crow Island, Greeley, Hubbard Woods and Washburne.**

Note: Please refer to the April 24th School Board presentation for cost assumptions. Costs are subject to refinement including phasing and escalation.



Neighborhood Schools Cost Updates: Continued

The following changes have directly impacted costs (continued):

- e) All Models presume that the **highest/most efficient HVAC & A/C systems are installed** at the respective school facilities and include costs for same. Refer to February 27, 2018 Board Meeting presentation for additional information. **This is the higher of the recommended costs.**
- f) The High Tier of Modernization (Future Ready) is included at the Intermediate and Middle School grade levels (either 4-8, 5-8 or 6-8). Refer to the “Relative Level of Modernization” slide for additional information.
- g) **KW space needs have been updated** to meet enrollment average plus one standard deviation and have been reconciled with existing utilization/constraints. **This increased the amount of KW space.**

Note: Please refer to the April 24th School Board presentation for cost assumptions. Costs are subject to refinement including phasing and escalation.

Cost Review: Enrollment Growth Accommodations

Reopen Skokie School vs. Adding a Grade Level

Baseline Cost in 2018 to Repair Skokie School^{3,4} **\$15.4M**

Projected Cost in 2028 to Reopen **\$21.7M**

Projected Cost in 2038 to Reopen **\$30.6M**

Projected Cost in 2048 to Reopen **\$43.1M**

Cost in 2018 to add a Grade level to Washburne⁵ **\$10.8M**

Projected Cost in 2028 to Add **\$15.2M**

Projected Cost in 2038 to Add **\$21.4M**

Projected Cost in 2048 to Add **\$30.2M**

Notes:

1. Contingencies excluded in comparison.
2. Future costs presume 3.5% escalation annually.
3. Baseline 2018 cost to repair Skokie School includes Physical Assessment + Geothermal HVAC + A/C + Security + Electrical + Domestic Water Piping.
4. Potential rental income and operations, maintenance and energy costs over time at a decommissioned Skokie School are NOT factored in to costs.
5. Added grade levels would be modernized and added by renovation or addition to Washburne
6. Cost to add two grade levels to Washburne in 2018 would be \$23,274,952.