



The Elementary School Building Environment Through the Eyes of a Child

How Demographics Impact Student Perception of Space: A Comparison Between an Old and New School

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Via Video:

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Sponsored by:

 Evergreen Public Schools

 LSW
ARCHITECTS

 WASHINGTON STATE UNIVERSITY
VANCOUVER

 BELLEVUE
COLLEGE

RESEARCH TEAM



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LSW Architects



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LEARNING OBJECTIVES

- Be equipped to seek out the nuances of how demographics shape a student's experience of space and implement that understanding in the planning and design of your own projects.
- Understand how to work with a district to conduct and analyze this research and respond to findings.
- Provide a useful tool to support schools / districts in their advocacy for building better school facilities and inform best practices on how teaching and learning are impacted by the built environment.
- Be aware of ways to support end users in understanding the intent and vision of new spaces, how these things matter to young students, and how their understanding can impact equity in student teaching and learning. See how partnerships between architects and educators can mitigate these issues.

OUTLINE

- Why Do This Research?
- Introduction to Research Project
- Methodology
- Results
- Informing Best Practices
- What We Learned
- Discussion



IN THIS SCHOOL
WE ARE FAMILY
WE ARE KIND AND INCLUDE EVERYONE
WE CELEBRATE OUR DIFFERENCES
WE ARE EXCITED AND MOTIVATED
WE ARE INTELLIGENT
WE ARE STRONG AND PERSEVERE
WE ARE CURIOUS
CREATIVE

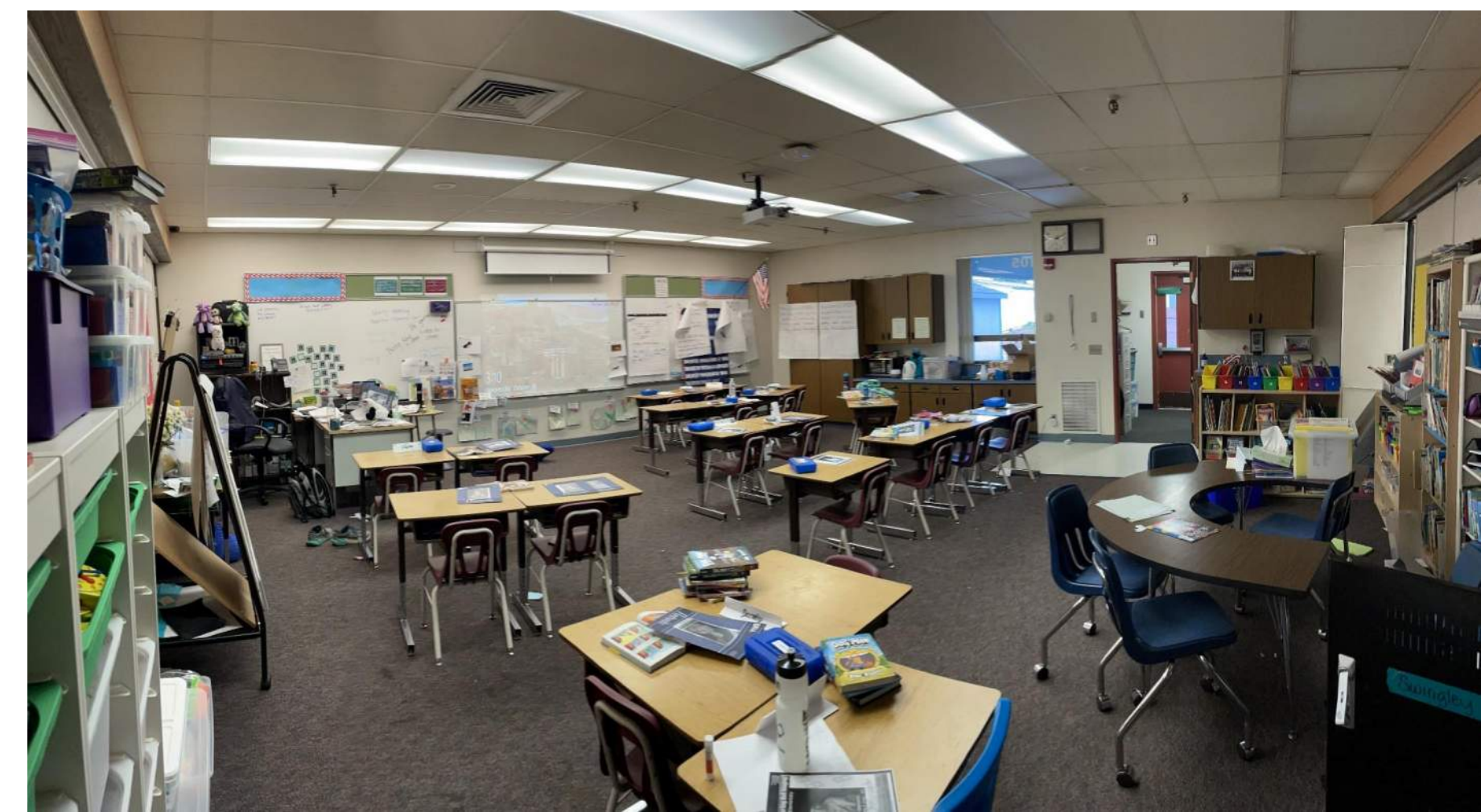
A woman with long dark hair, wearing a black and white checkered dress, stands in the center of the frame, smiling and holding a small plant. She is surrounded by a group of children sitting on a long, low concrete ledge. To the left, a girl with long brown hair, wearing a white top and blue jeans, sits with her back to the camera, reaching up towards a young tree. To the right, three other children are sitting on the ledge, looking towards the woman. The background features a modern brick building with large windows and a clear sky. The overall scene is bright and sunny, suggesting an outdoor educational or community activity.

WHY DO THIS RESEARCH?

WHAT PROMPTED THE RESEARCH?

The opportunity to compare a soon-to-be demolished elementary school with its replacement offered a chance to ask important questions: Does design matter to students? What are they noticing?

- **Does all the time, effort, and dollars spent in building or refreshing a school positively impact teaching and learning as we hope?**
- How do demographic factors shape the experiences of students and parents within our community?
- **Are there any measurable differences that are reflected in assessments and attendance?**
- Finally, how can equity be improved based on these findings?

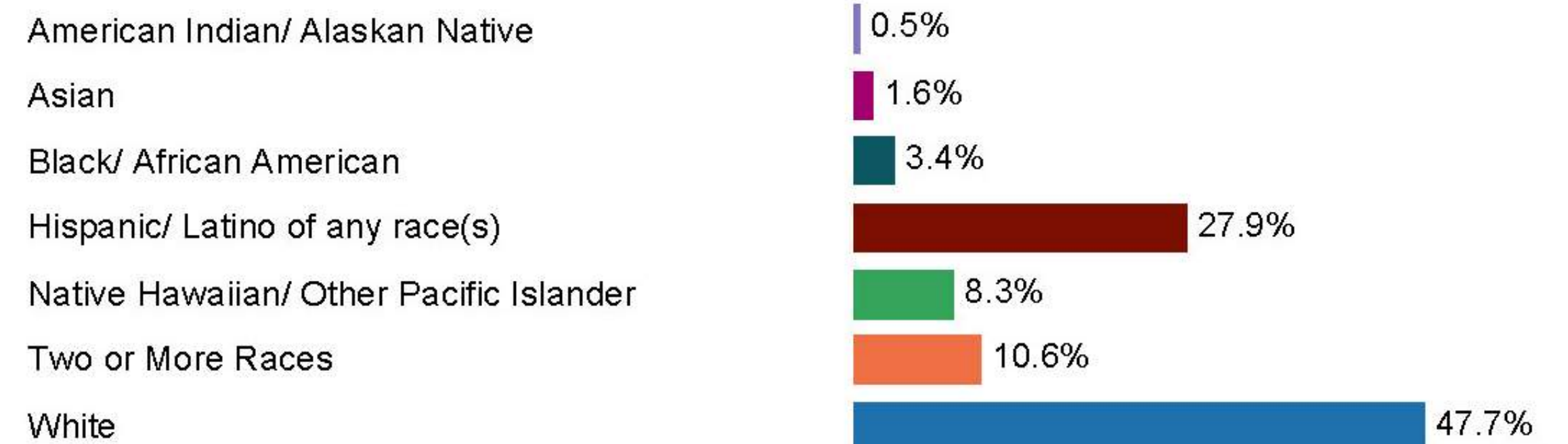


THE RESEARCHER'S VIEW:

How do built spaces influence the learning process?

- Stress and learning disabilities are increasing
- Diversity of students
- Increasing awareness of systemic racism

Race/Ethnicity



Program and Characteristic



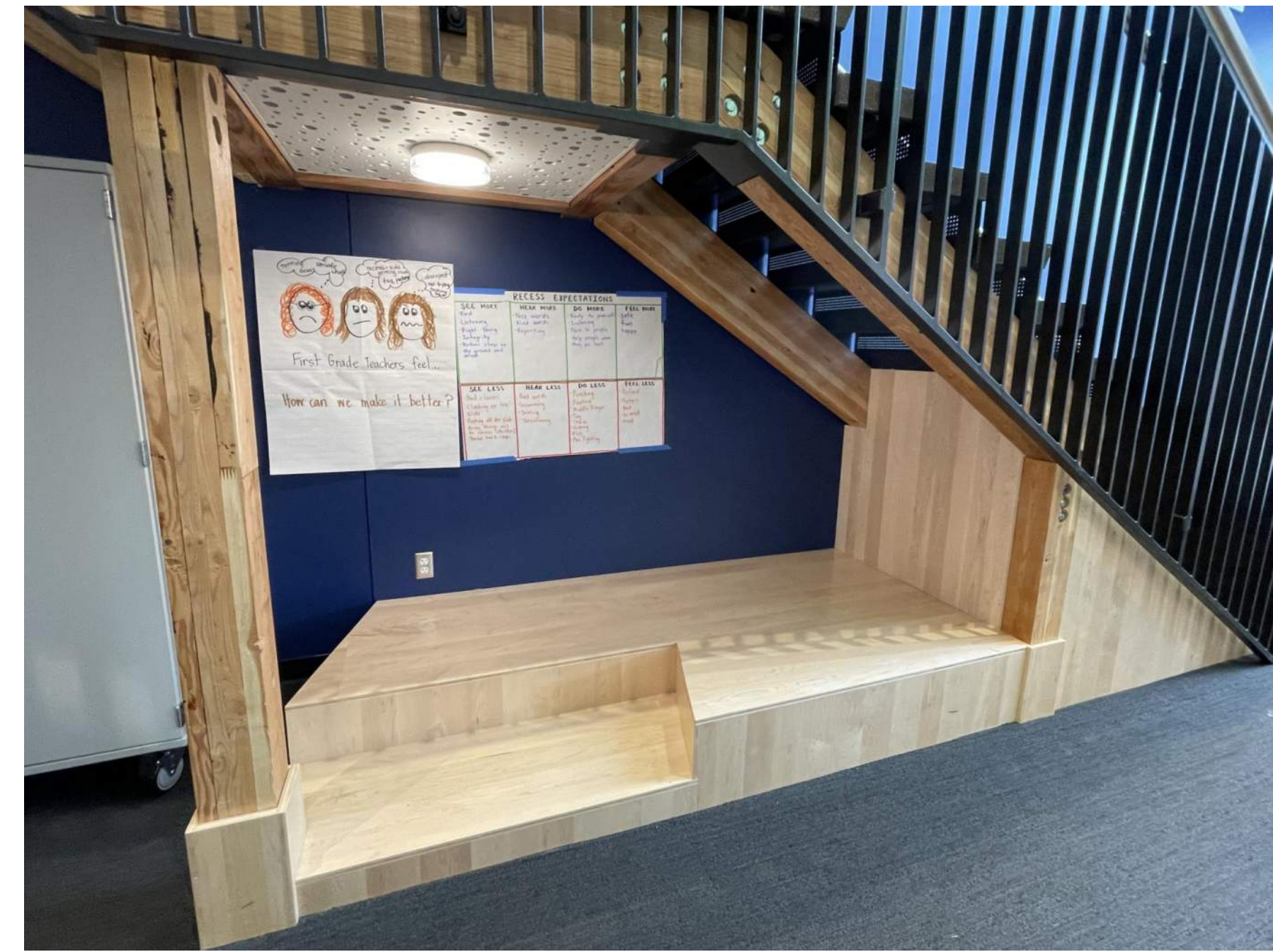
WHY DO THIS RESEARCH?

THE RESEARCHER'S VIEW:

How do built spaces influence the learning process?

- Social & Emotional Well Being (SEWB) influences learning and academic performance
- The physical building has influence on SEWB
- Even greater impact when student & teacher voices are involved in decision-making





THE RESEARCHER'S VIEW:

How do built spaces influence the learning process?

- Inclusive design can result in an increase in the sense of belonging.
- Sense of belonging contributes to ability to learn.

WHY DO THIS RESEARCH?

THE SCHOOL DISTRICT'S VIEW (video)





INTRODUCTION TO THE PROJECT

WHAT DO WE KNOW ABOUT THE SCHOOL AND DISTRICT?

- Facts about district
- Design Drivers
- Equity Lens
- Areas that were mentioned the most:
 - Gym, media, dining, music, classrooms, office, individual classrooms, playground



ENROLLMENT



Evergreen School District (Clark)

Address and Phone
 13413 NE LEROY HAAGEN
 MEMORIAL DR
 VANCOUVER, WASHINGTON 98684
 3606044005

Enrollment

Enrollment
 2023-24 School Year
 22,127

Low-Income
 2023-24 School Year
 52.8%

English Language Learners
 2023-24 School Year
 17.8%

Finance

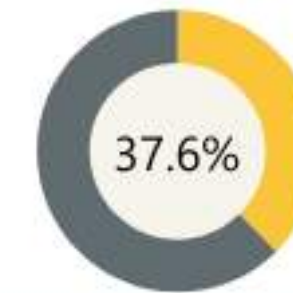
Per Pupil Expenditure
 2022-23 School Year



\$17,767

Assessment

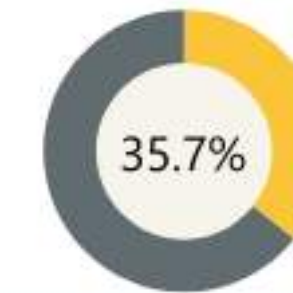
ELA
 2022-23 School Year



Math
 2022-23 School Year



Science
 2022-23 School Year



Growth & Attendance

Have High ELA Growth
 2022-23 School Year
 27.1%



Have High Math Growth
 2022-23 School Year
 30.7%



Regular Attendance
 2022-23 School Year
 60.4%



Educators

Average Class Size
 2022-23 School Year



18.5

Teacher Count
 2022-23 School Year



1,502

Percent Teachers with Master's Degree or Higher
 2022-23 School Year



76.8%

Teacher Experience
 2022-23 School Year



14.9

Some data is not disclosed to protect student privacy and will be represented by N<10. Blank fields indicate no data was submitted to OSPI for this district or school. Due to reporting cycles, the most recent data for each measure may be from different school years. If a measure is blank, there is no data for that organization in the currently reported year. To see more, visit <https://washingtonstatereportcard.ospi.k12.wa.us/>. If you have questions or comments, contact ReportCardRedesign@k12.wa.us.

ENROLLMENT



Washington Office of Superintendent of
PUBLIC INSTRUCTION

Burton Elementary School

Address and Phone

13501 NE 28TH STREET
VANCOUVER, WASHINGTON 98682
3606044975

Enrollment

Enrollment
2023-24 School Year
444

Low-Income
2023-24 School Year
63.5%

English Language Learners
2023-24 School Year
22.1%

Finance

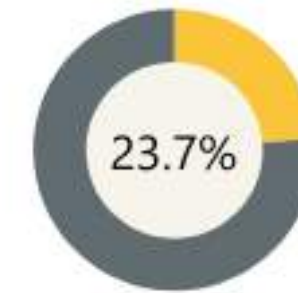
Per Pupil Expenditure
2022-23 School Year



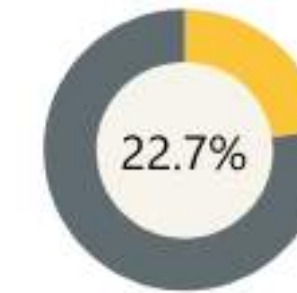
\$20,535

Assessment

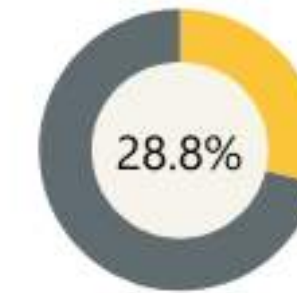
ELA
2022-23 School Year



Math
2022-23 School Year



Science
2022-23 School Year



Growth & Attendance



Have High ELA Growth
2022-23 School Year
15.2%



Have High Math Growth
2022-23 School Year
16.2%



Regular Attendance
2022-23 School Year
60.4%

Educators

Average Class Size
2022-23 School Year



19.5

Teacher Count
2022-23 School Year



33

Percent Teachers with Master's Degree or Higher
2022-23 School Year



87.9%

Teacher Experience
2022-23 School Year



15.1

ATTENDANCE

What percent of students had fewer than two absences per month, on average?

Burton Elementary School 2022-23

All Students



Gender



Gender X



Race/Ethnicity

American Indian/ Alaskan Native | N<10

Asian | N<10

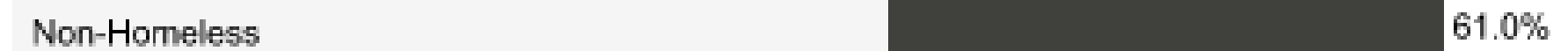
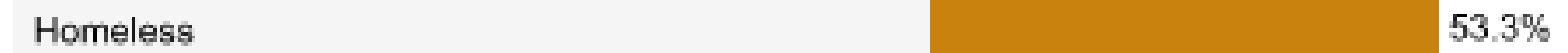
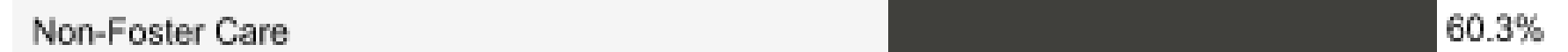
Black/ African American | N<10



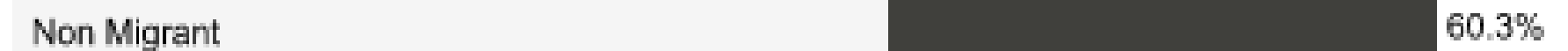
Program and Characteristic



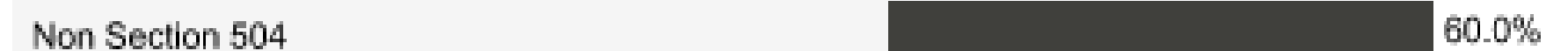
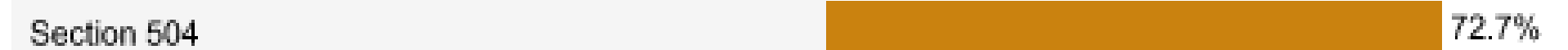
Foster Care | N<10



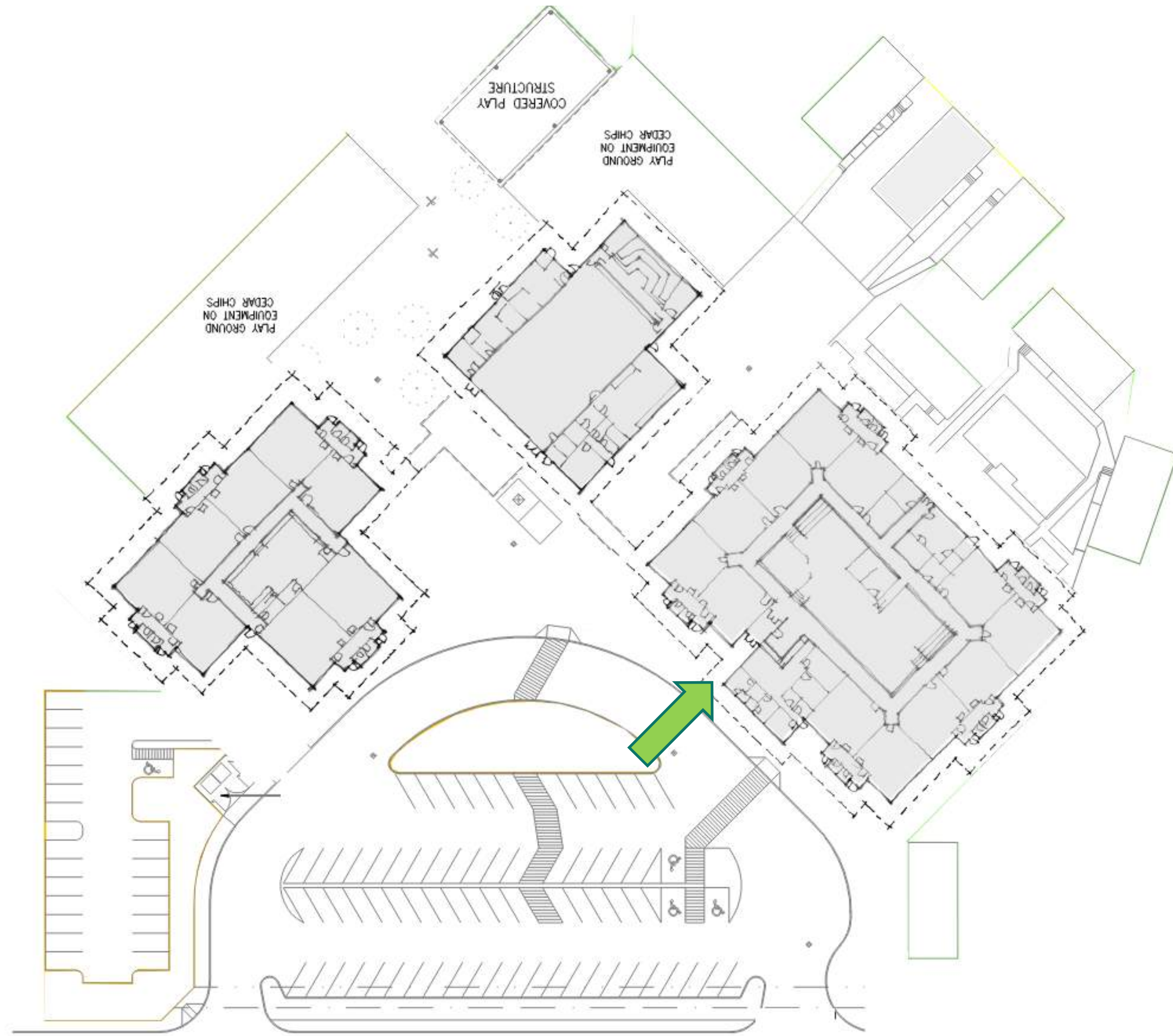
Migrant | N<10



Military Parent | N<10



OLD BURTON



EQUITY LENS AND DESIGN DRIVERS



PURPOSE & CONNECTION
Describe the proposed action, desired results, outcomes, and connection to the EPS Equity vision: to be a diverse and inclusive community of schools that provides each member with the opportunities, access, resources, and support they need to be successful.

- What beliefs, values and assumptions (some of which will be cultural) guide how the topic is being considered?
- What information/data are you basing your decision or action upon?

ENGAGING STAKEHOLDERS
Articulate how you have intentionally involved stakeholders who are also members of the communities affected by this policy, program, practice or decision.

- Is there stakeholder support or opposition to the proposal? Why?

OPPORTUNITIES FOR EQUITY
Explain how the proposed action expands opportunities for equity and social justice for marginalized communities.

- Who are the demographic groups affected?
- How will each group be impacted/affected by the decision or action?

BARRIERS TO EQUITY
Explain how the proposed action addresses barriers to equitable outcomes.

- How will you track progress toward reducing disparities?
- Are there any potential unintended consequences for specific groups/populations?
- Are there strategies in place to mitigate any negative impacts?

CHANGING ACTIONS
Describe any changes you have made or will make to the action after applying this lens.



EPS Design Drivers

1. Reflect a balanced approach to design
2. Offer an invitation
3. Connect community and school
4. Teach
5. Be diverse
6. Offer choices
7. Encourage strategic and innovative practice
8. Be responsive and adaptive
9. Ensure safety

METHODOLOGY



METHODOLOGY

- Guiding Principles
- Drawbacks of common past methods
- Methods chosen
 - Mapping
 - Walking Interviews (WI)
 - Focus Groups (FG) for parents



A wide-angle photograph of a modern library interior. The space is characterized by high ceilings, large windows, and a balcony. The main floor is filled with bookshelves and green reading nooks. A balcony with a wooden railing and glass panels is visible on the upper level. The large windows offer a view of a landscape with mountains and a field. The word "RESULTS" is overlaid in the center of the image.

RESULTS

RESULTS

OLD BURTON

MOST POSITIVE



MOST NEGATIVE



DEMOGRAPHIC DIFFERENCES

Old Burton			New Burton	
Mapping			Mapping	
All Participants n=26			All Participants n=27	
Pos	65%		Pos	71%
Neg	35%		Neg	29%
ESL n=5			ESL n=5	
Pos (64%)*	58%		Pos (70%)*	72%
Neg (36%)*	42%		Neg (30%)*	28%
Race/Ethnicity n=11			Race/Ethnicity n=14	
Pos (77%)*	55%		Pos (71%)*	70%
Neg (23%)*	45%		Neg (29%)*	30%

n= number of participants in that group
 * = Percentages noted are the percentages from the non-special population.

To compare Old Burton to New Burton, compare these cells.

To compare non-special population to special population, compare these cells.

Overall Comparison of Walking Interview Results

Old Burton			New Burton	
Walking Interview			Walking Interview	
All Participants n=25			All Participants n=26	
Pos	47%		Pos	63%
Neg	25%		Neg	8%
Mixed	23%		Mixed	16%
Neutral	5%		Neutral	13%
ESL n=5			ESL n=7	
Pos (46%)*	42%		Pos (64%)*	59%
Neg (22%)*	34%		Neg (8%)*	8%
Mixed (27%)*	19%		Mixed (15%)*	21%
Neutral (5%)*	5%		Neutral (13%)*	12%
Race/Ethnicity n=10			Race/Ethnicity n=12	
Pos (46%)*	44%		Pos (62%)*	62%
Neg (25%)*	26%		Neg (8%)*	8%
Mixed (25%)*	24%		Mixed (18%)*	15%
Neutral (4%)*	6%		Neutral (12%)*	15%

n= number of participants in that group
 * = Percentages noted are the percentages from the non-special population.

OVERALL IMPROVEMENTS

Mapping results indicate greater improvement than Walking Interview Results. Why?

Methodological differences are at play:

- Mapping forced a binary decision - a positive or negative word.
- Walking Interviews allowed for more complex feedback, i.e. “I really like this area but....”; “So much better than old school but I wish....”

Compare Map & Walk Interview Results New Burton

Old Burton			New Burton	
Mapping			Mapping	
All Participants n=26			All Participants n=27	
Pos	65%		Pos	71%
Neg	35%		Neg	29%
Race/Ethnicity n=11			Race/Ethnicity n=14	
Pos (77%)*	55%		Pos (71%)*	70%
Neg (23%)*	45%		Neg (29%)*	30%
Walking Interview			Walking Interview	
All Participants n=25			All Participants n=26	
Pos	47%		Pos	63%
Neg	25%		Neg	8%
Mixed	23%		Mixed	16%
Neutral	5%		Neutral	13%
Race/Ethnicity n=10			Race/Ethnicity n=12	
Pos (46%)*	44%		Pos (62%)*	62%
Neg (25%)*	26%		Neg (8%)*	8%
Mixed (25%)*	24%		Mixed (18%)*	15%
Neutral (4%)*	6%		Neutral (12%)*	15%

n= number of participants in that group

* = Percentages noted are the percentages from the non-special population.

RESULTS

OLD VS NEW BURTON

OLD MEDIA CENTER



NEW MEDIA CENTER



RESULTS

OLD VS NEW BURTON

OLD CLASSROOM



NEW CLASSROOM



RESULTS

OLD VS NEW BURTON

OLD HALLWAY



NEW HALLWAY



RESULTS

OLD VS NEW BURTON

OLD PLAY AREA



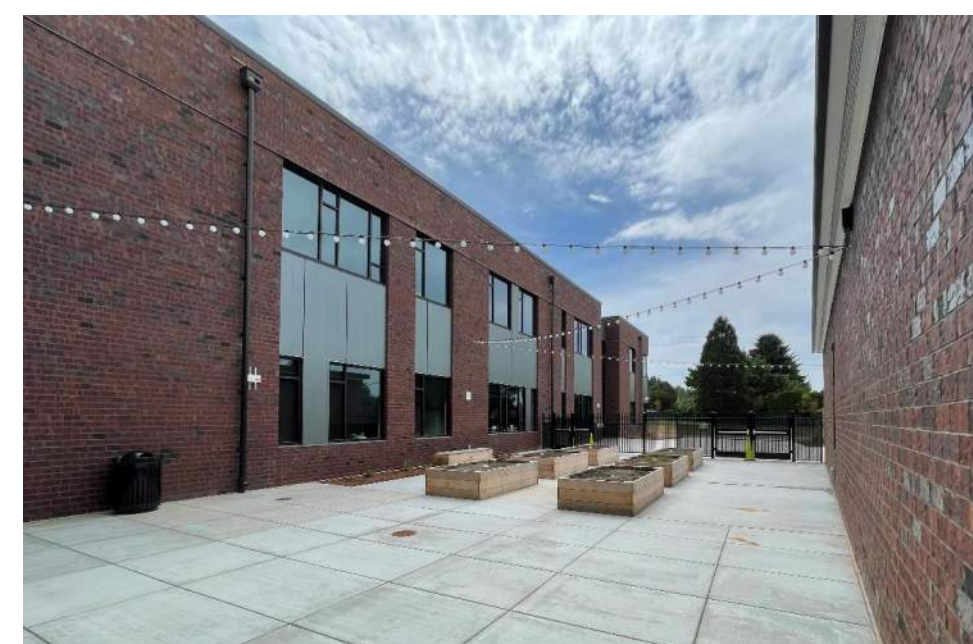
NEW PLAY AREA



FEEDBACK ON NEW BURTON

Compare Map & Walk Interview Results New Burton

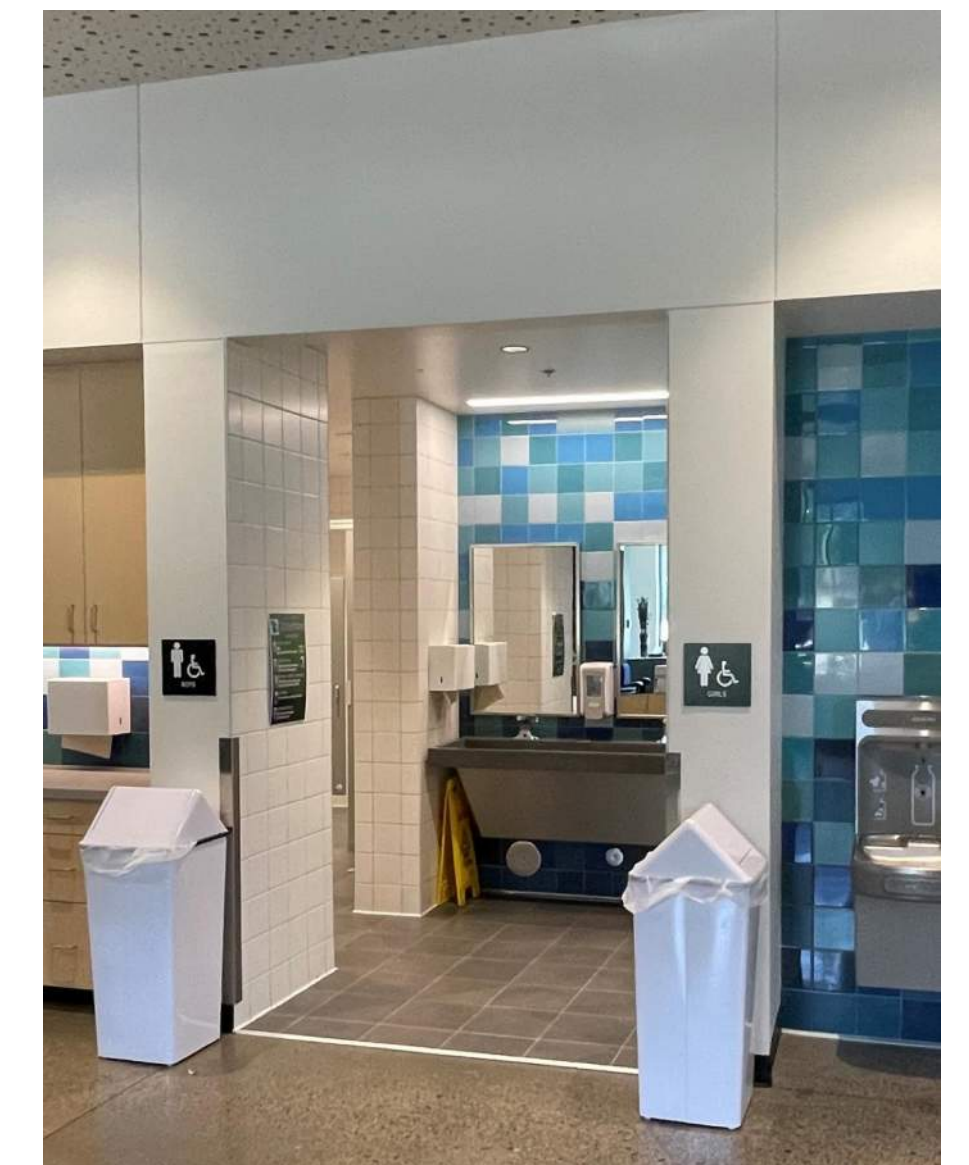
New Burton			New Burton	
Mapping n=27			Walking Interview n=26	
Cafeteria			Cafeteria	
Pos	19		Pos	12
Neg	9		Neg	1
			Mixed	13
			Neutral	0
Learning Stairs			Learning Stairs	
Pos	17		Pos	1
Neg	8		Neg	8
			Mixed	6
			Neutral	10
Courtyard East			Courtyard East	
Pos	17		Pos	11
Neg	5		Neg	2
			Mixed	3
			Neutral	9
Courtyard West			Courtyard West	
Pos	18		Pos	7
Neg	8		Neg	0
			Mixed	1
			Neutral	8



Compare Map & Walk Interview Results Bathrooms

New Burton			New Burton	
Mapping n=27			Walking Interview n=26	
Bathrooms (multi)			Bathrooms (multi)	
Pos	5		Pos	9
Neg	19		Neg	10
			Mixed	4
			Neutral	3

New Burton Bathrooms (Multi)		
	Grades 1-2	Grades 3-5
Pos	6	3
Neg	3	7
Mixed	3	1
Neutral	1	2



FEEDBACK ON NEW BURTON

Most Liked Spaces: Walking Interviews

Most Positive Spaces. 1-2 Grades							Most Positive Spaces. 3-5 Grades						
	Pos	Neg	Mixed	Neutral	Most Liked	Least Liked		Pos	Neg	Mixed	Neutral	Most Liked	Least Liked
Library	13	0	0	0	3	1	Gym	13	0	0	0	1	0
Playground 2	12	0	1	0	0	0	Playground 1	10	0	1	2	0	0
Gym	11	0	2	0	1	0	Library	10	1	2	0	3	0
Classroom	10	1	2	0	3	0	Classroom	9	0	4	0	3	0

Least Liked Spaces: Walking Interviews

Most Negative Spaces. 1-2 Grades							Most Negative Spaces. 3-5 Grades						
	Pos	Neg	Mixed	Neutral	Most Liked	Least Liked		Pos	Neg	Mixed	Neutral	Most Liked	Least Liked
Learning Stairs	1	5	2	5	0	0	Learning Stairs	0	3	4	5	0	1
Under Stair West	4	2	3	2	0	0	Bathrooms	3	7	1	2	0	4
Courtyard East	4	1	2	5	0	0	Cafeteria	4	1	8	0	1	0
Bathrooms	6	3	3	1	0	0	Music Room	6	3	3	1	1	1

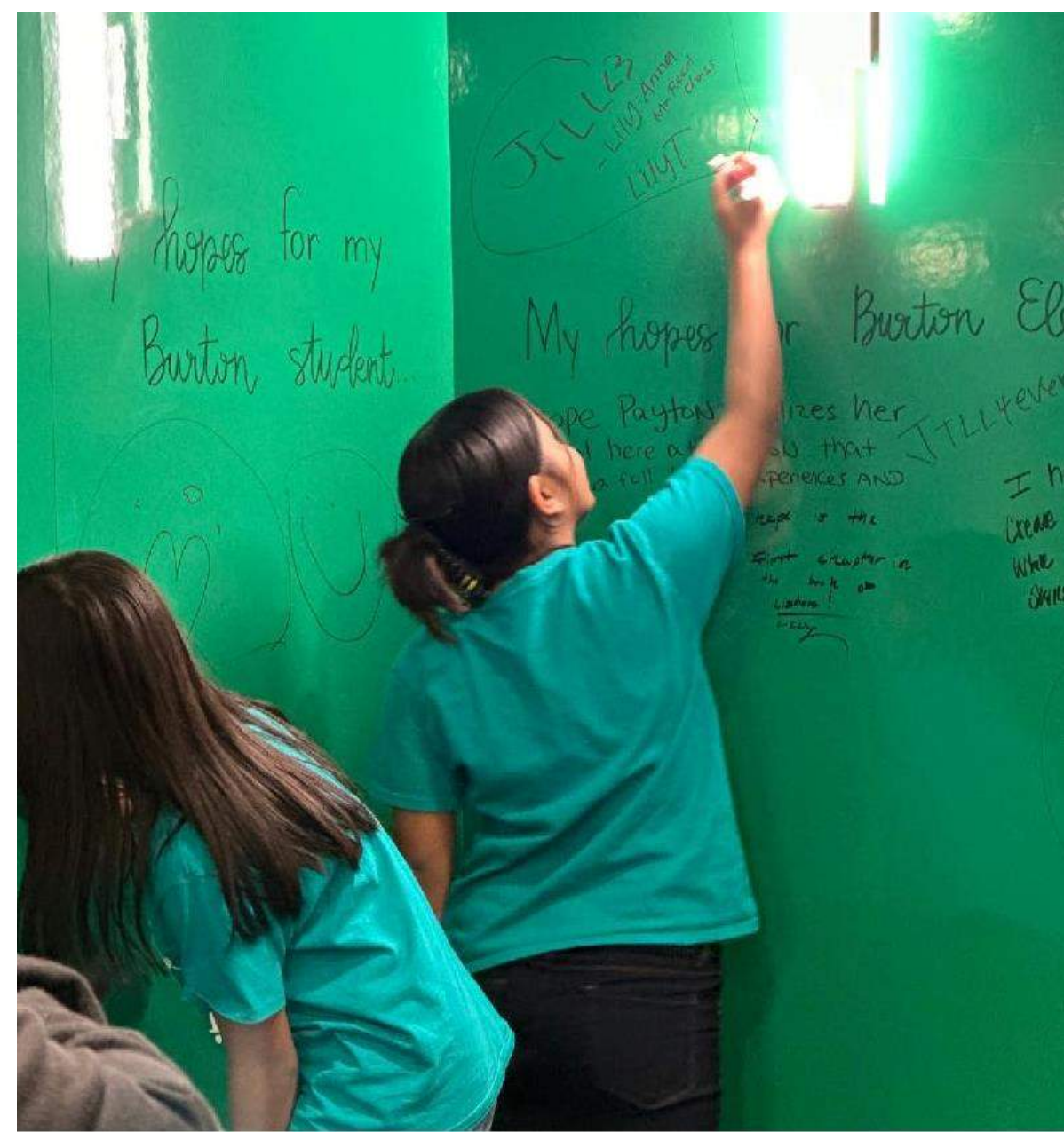




RESULTS

OVERALL IMPROVEMENTS

- More space and built for different body sizes
- Better furniture and walls
- Outside areas are greatly improved
- Views excite students
- Safety features are appreciated





RESULTS

OVERALL IMPROVEMENTS

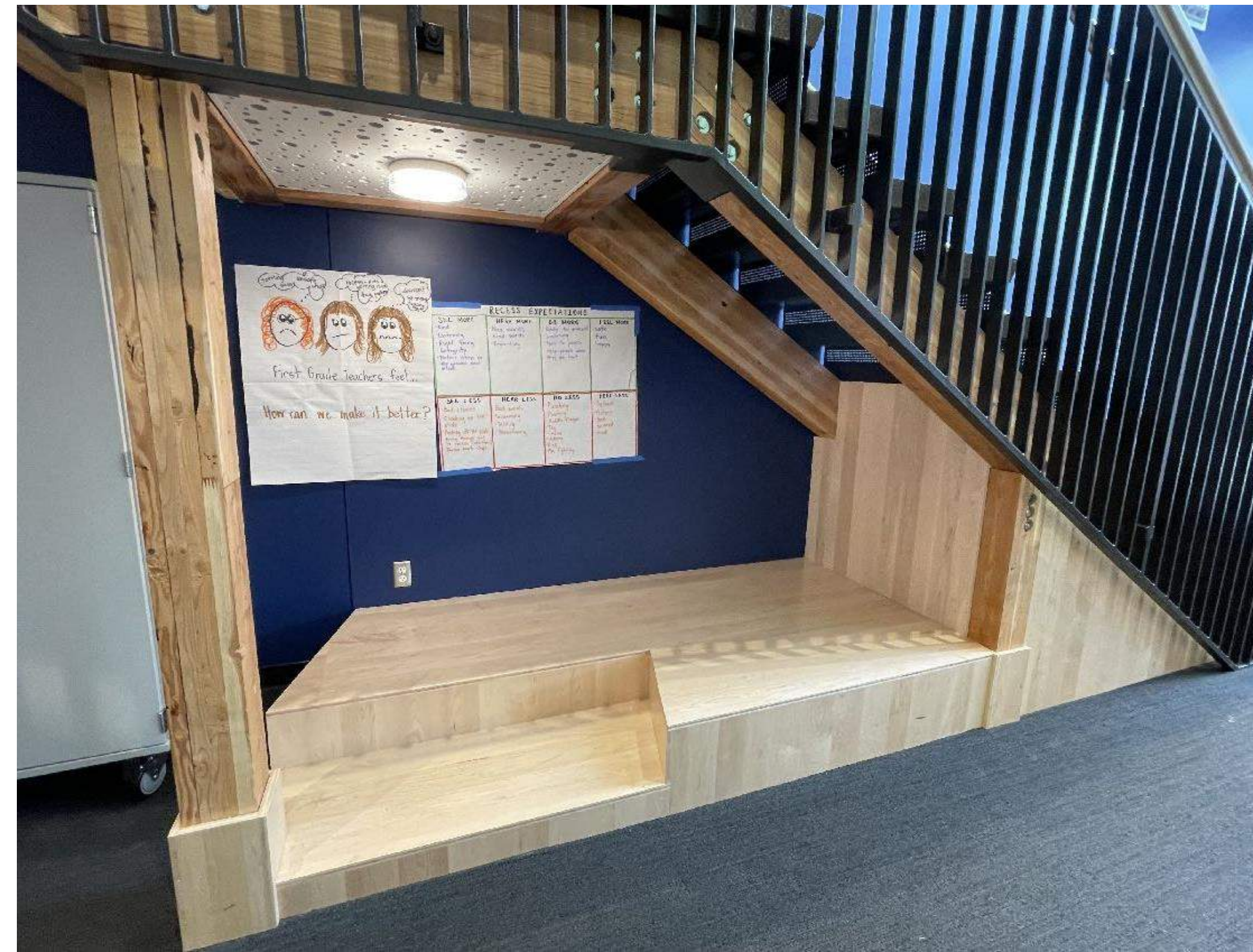
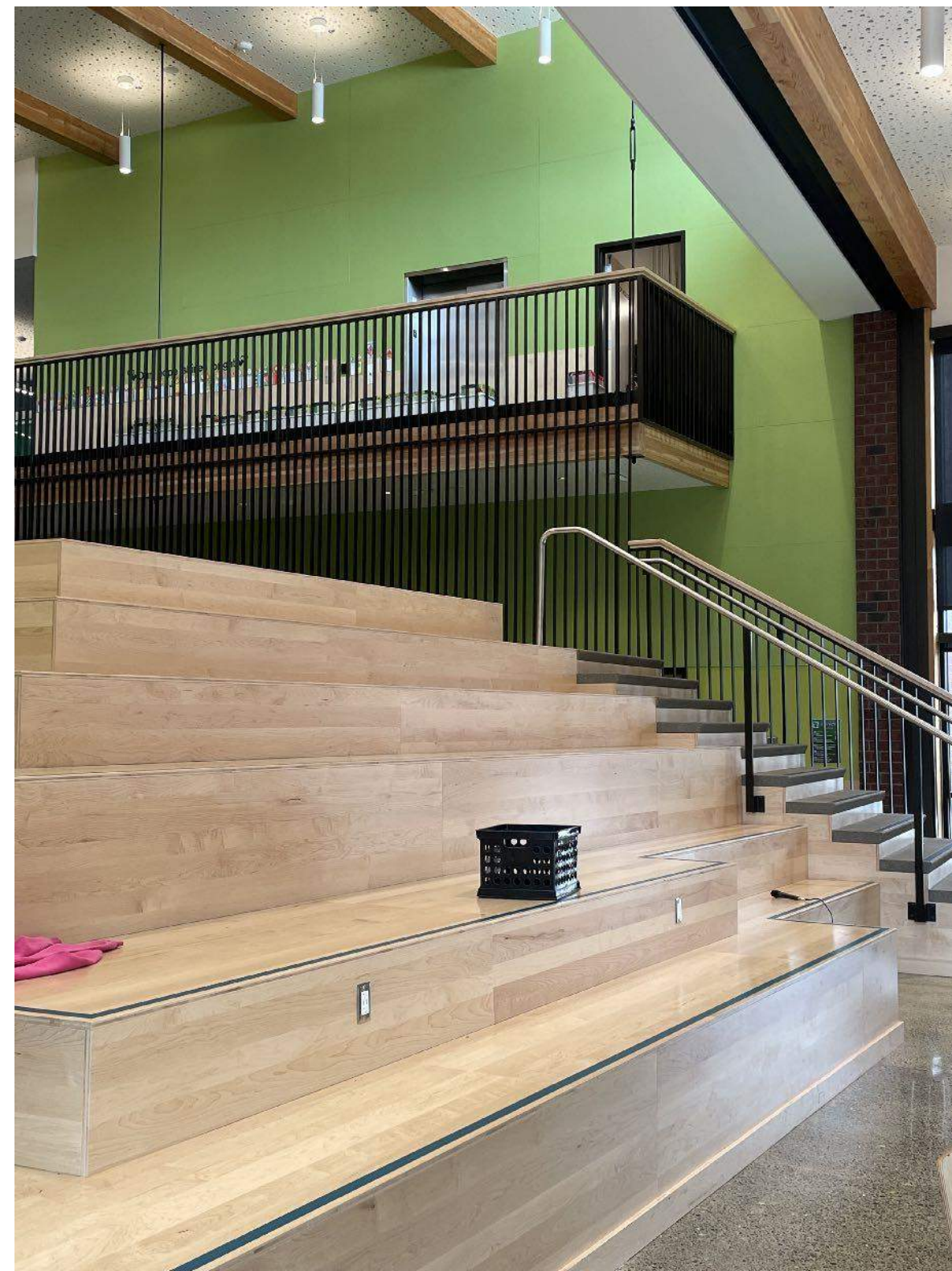
- More space and built for different body sizes
- Better furniture and walls
- **Outside areas are greatly improved**
- **Views excite students**
- Safety features are appreciated



RESULTS

3 ISSUES TO CONSIDER

- Bathrooms
- Noise
- Underutilized Spaces



A wide-angle photograph of a modern school cafeteria. The space is characterized by its high ceilings with exposed wooden beams and a perforated metal ceiling. Large windows on the left side offer a view of a brick building. The floor is a polished, light-colored material. In the foreground, several round tables with white chairs are arranged. A woman is seated at one table, and a young boy is sitting on the floor at another. In the background, a large wooden staircase is visible, with a person sitting on the steps. The overall atmosphere is bright and open.

WHAT WE LEARNED

RESEARCHER'S VIEW

- Team members need to bring different expertise
- Time & responsive team
- Flexibility
- Barriers to inclusive research
 - Identifying & communicating with parents
 - Translators & translations
 - Finding times/places to talk with parents

Need to blur all kids even more (that aren't part of the user guide photos), full body. If we could do an 'action blur' that would be best.



WHAT WE LEARNED

INFORMING BEST PRACTICES DESIGN

Does design matter? What did we learn?

- Yes, it matters, and in this study, has a notable demographic impact
- It's important for them to see others learning and have space to pull away and still be connected
- Smaller classrooms can feel bigger
- Fewer books organized can feel like more
- Kids need space and don't love sitting on the floor
- Kids focus on the things they use and understand and have ideas about how to utilize the space better (pillows in nooks and crannies, ignored the learning stair)



WHAT WE LEARNED

DOES DESIGN MATTER?

School District's View (Video)



HOW CAN WE SUPPORT OUR SCHOOLS IN PRIORITIZING PLANNING EFFORTS?

- Many districts are challenged with funding due to decreased enrollment, aging facilities, and increased role of our school districts to remedy social and behavioral issues.
 - How do we as design professionals and partners support our schools with our specific skill set?
 - How do we support the end user in getting the most from their renovated or new facilities?



WHAT OTHER THINGS COULD WE LOOK AT FROM HERE TO INFORM OUR WORK?

- How can this information be used to support capital expenditures and garner solid community support?
- How do staff observations and survey results compare with the student experience?
- Document the trends over time in assessments, attendance, and behavior
 - Compare data from the old school to the date of occupancy of the new school and see if there are trends



CALL TO ACTION

- Formulate the ‘Why’ of this research for yourself.
- Gather data from the district for the unique demographic make-up of the specific school with which you are working and ensure that any data gathering is inclusive based on this data.
- Find a champion(s) within the school / district (administrator, equity leader, principal) to assist in gathering the right demographic sample of students, getting family permissions, scheduling the interviews, and working through suggestions for changes.
- Bring a person on the team that understands how to collect, analyze, and report out the findings
- Incorporate changes in your practice based on your findings.



*The Elementary School Building Environment Through the Eyes of a Child
How Demographics Impact Student Perception of Space: A Comparison Between an Old and New School*

DISCUSSION