School District Major Maintenance

Frank Hauser
Superintendent, Juneau School District

Friday, March 21, 2025


CAR
DROP
OFF
STARTS


Swallow Union
School
Spirit As Strong
As A Tiger !

Juneau School District Snapshot

4,037 Students

817,400 Sq. Ft. of Facility Space

9 School Buildings

1 Maintenance Facility

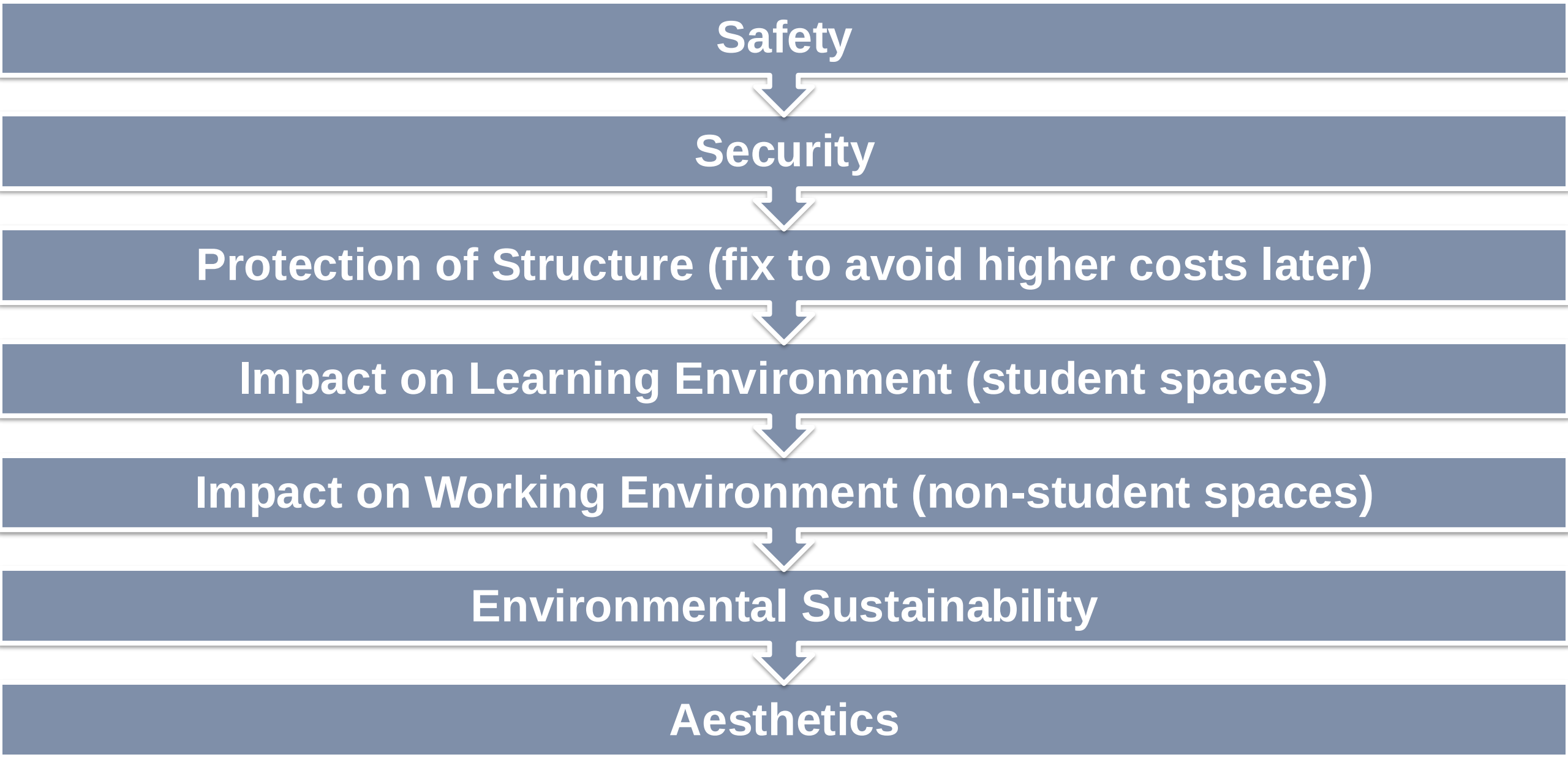
Average Age: 1975 (50 years)

55% are > 50 years old

In FY 2025, the Juneau School District Board of Education closed three (3) schools as part of school consolidation. Three (3) buildings were released back to the City and Borough of Juneau.

Despite the sign, the District office building was released back to the City and Borough of Juneau. The Juneau School District has no dedicated district office building.

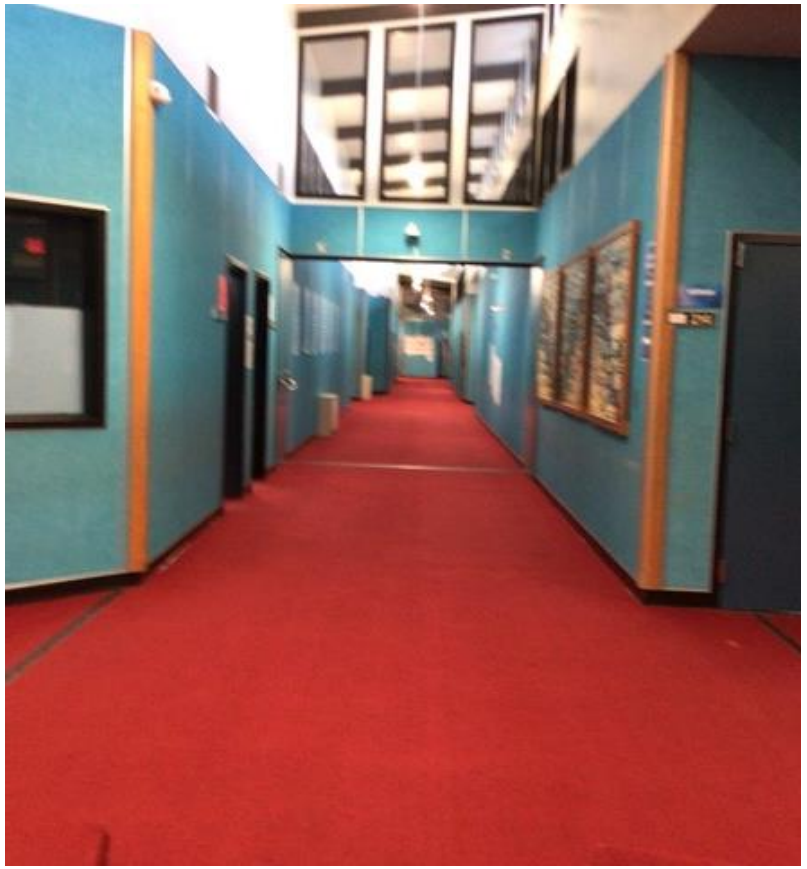
JSD Prioritization Guidelines / Evaluation Criteria

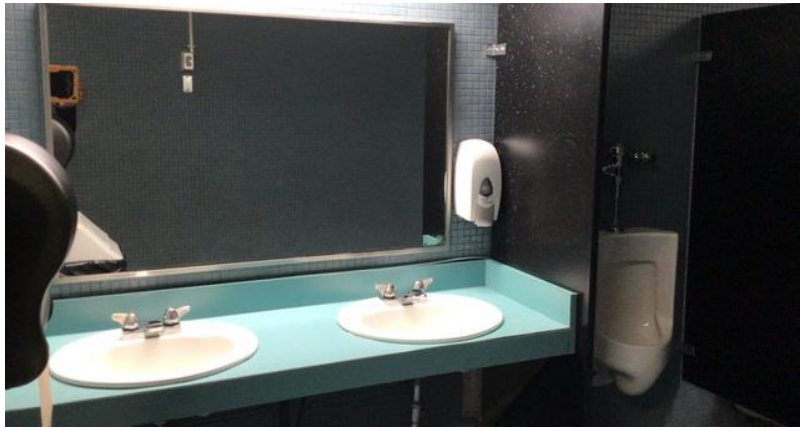


FY 2026 Major Maintenance CIP List

Rank	Priority Purpose	CIP Project	Project Cost
70	C	Dzantik'i Heeni Roof Replacement Roof is at the end of its useful life	$1,966,474
77	C	Kax̲dig̲oowu Héen Elementary School Roof Roof is at the end of its useful life	$2,599,028
N/A	C	Juneau-Douglas High School Roof Repair Roof is at the end of its useful life	$1,450,000
N/A	C	Floyd Dryden Roof Repair Roof is at the end of its useful life (Completed FY 2025. Funded by CBJ)	$596,000
N/A	C	Mendenhall River Community School Renovation. Built in 1983. A facility survey needs study noted the need to address many of its end-of-life-cycle issues, including electrical, plumbing, exterior envelope and sidewalks.	$35,000,000
N/A	C	Juneau-Douglas High School Boiler Room Renovation, Boiler Exhaust Stack, and Sump Pump	$3,542,000

Mendenhall River Community School
Juneau School District
Original 1983 construction (and carpet)





Mendenhall River Community School

Juneau-Douglas High School
Partial Roof Replacement

Effectiveness and Efficiency of School Capital Investments Across the U.S.*

Barbara Biasi† Julien Lafortune‡ David Schönholzer§

July 12, 2023

Abstract

This paper studies the impact of capital projects on student learning and the real estate market, using nationwide data on U.S. school districts and focusing on what investments work and on whom. We use newly collected data on school capital bonds, test scores, and house prices for 28 U.S. states and a new research design that identifies the causal impact of bond authorizations in the presence of dynamic and heterogeneous treatment effects. On average, bond authorization significantly raises test scores and house prices. Yet, there are large differences across bonds and districts. Spending on infrastructure renovation and upgrades, such as HVAC or roofs, raises test scores but not house prices; conversely, spending on athletic facilities increases house prices but not test scores. Bond authorization is most beneficial in districts with more disadvantaged student populations, in part because these districts prioritize bonds that improve learning. We find suggestive evidence that capital funding rules drive differences in bond impacts.

JEL Classification: H41 H75, I22, I24, R30

Keywords: School Expenditures, School Capital, Test Scores, Real Estate

Bond Debt Reimbursement

- **Local Governments Have Competing Priorities**
- **Equity Among Districts**
- **Aging Infrastructure and Deferred Maintenance = Increased Future Costs**
- **Three (3) JSD schools could be impacted by future glacial lake outburst floods**
- **Only one school bond in JSD since the moratorium ($15M for roofs in 2020).**

JSD Deferred Maintenance Backlog

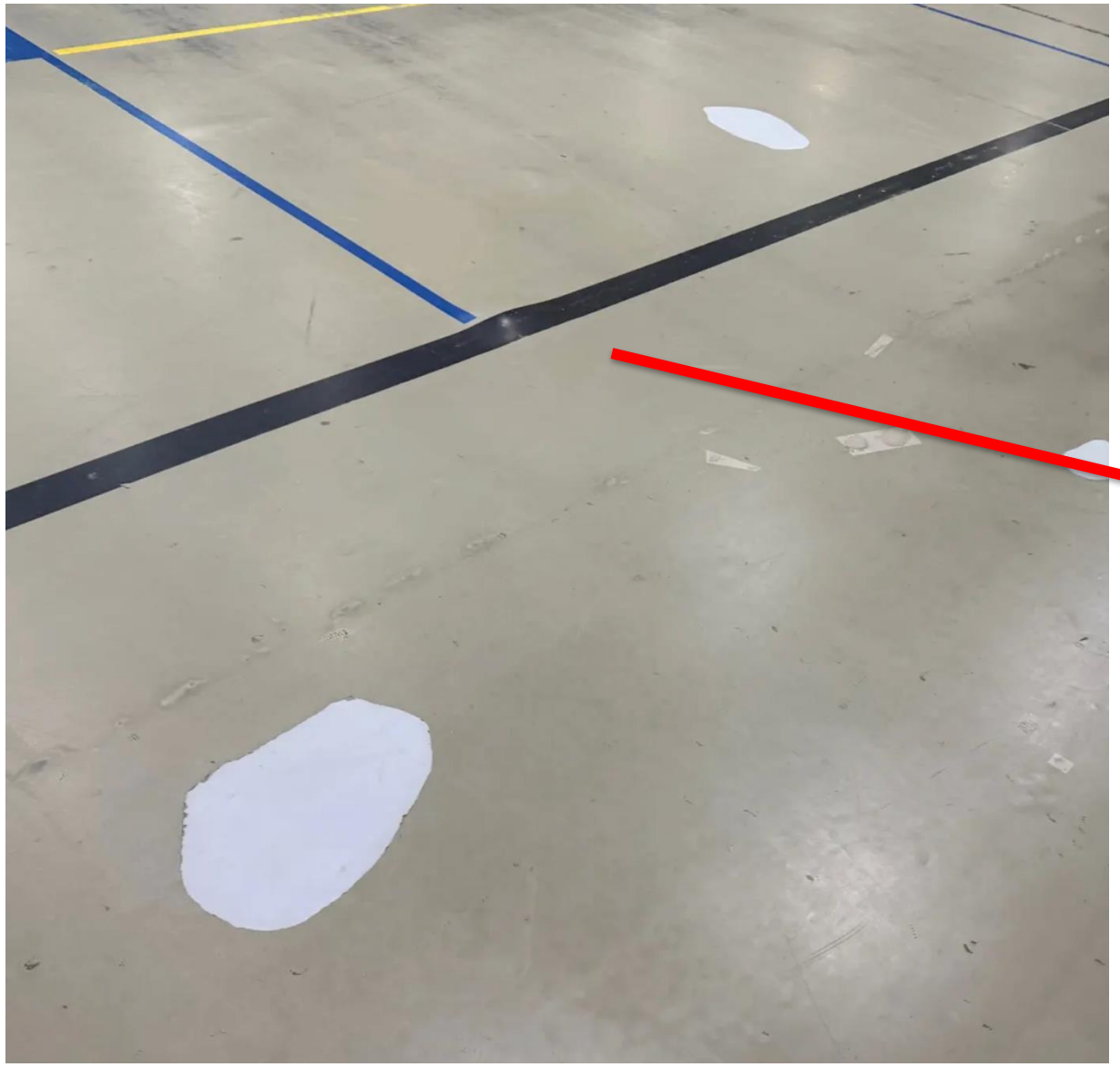
- Smaller projects for regular upkeep and preventative maintenance
- 27 identified items on the JSD deferred maintenance list
- Estimated cost – at this time – over $7,500,000

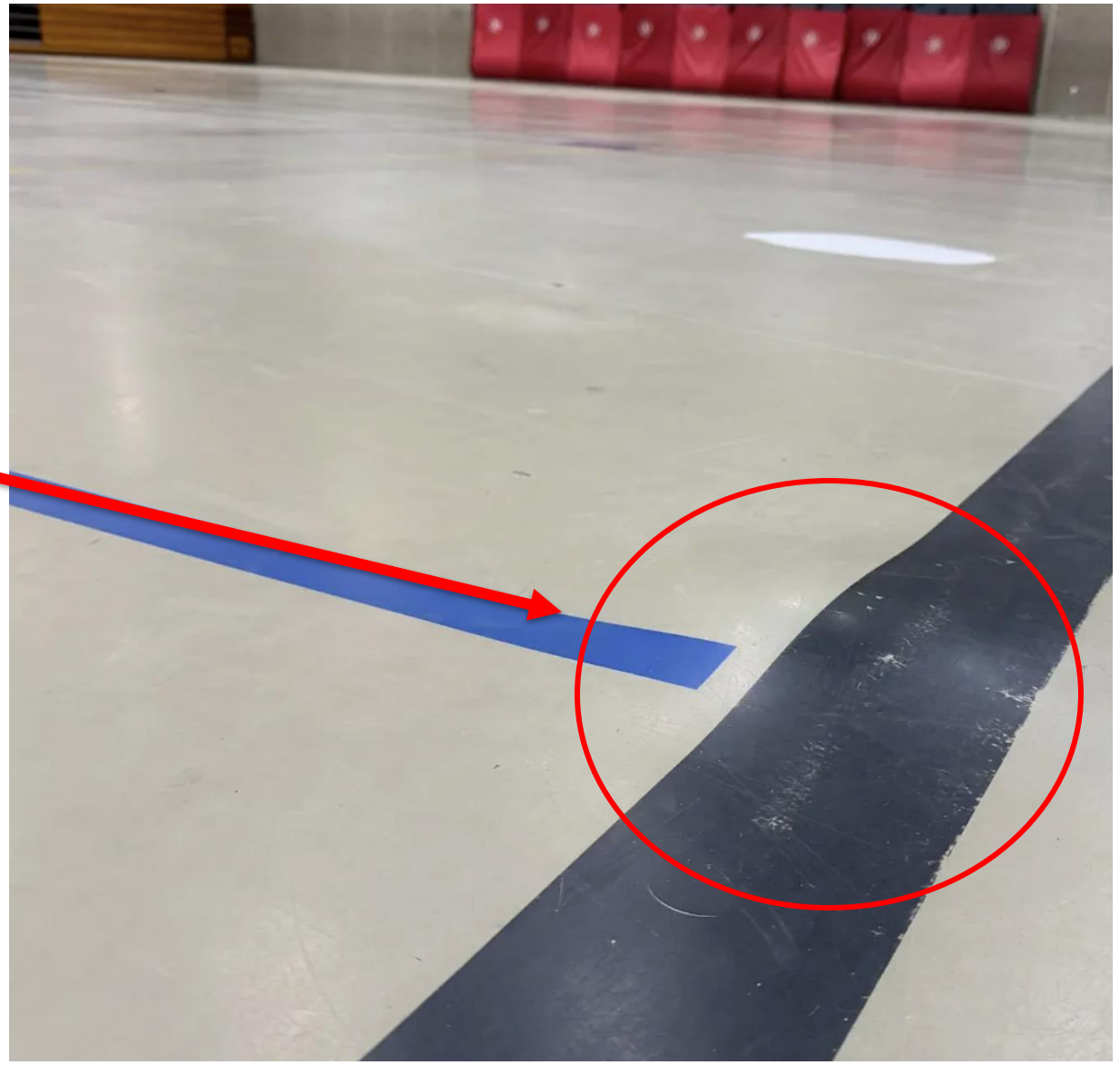
Description of DM Project	Additional Information	Noted
Emergent Needs Projects	hold $500,000 annually	1,2,3,4,5
Security camera upgrade districtwide	Included in Legislative and CBJ CIPs for $2,000,000 request.	1, 2, 4, 5
Districtwide Classroom painting rotation	Set up annual summer classroom painting rotation - ideal to have each done within five years.	3, 4, 7
Districtwide Covered Playground repairs	Replace wall panels, upgrade lighting to LED, pressure wash roofs and structure, paint.	3, 4, 7
Playground fencing districtwide	Assessment of project scope needed to upgrade fencing at many elementary school playgrounds.	1,2,3,6
Playground safety surfacing districtwide		1,3
MRCS Lunch room double doors to hall	Lunchroom relocated for FY25. Exterior door crash bar added per Fire Marshal. Hallway double doors to would improve flow of student traffic.	1,4
Roof assesment districtwide	Gastineau, DH, KHE roofs done recently. JDHS on CBJ and DEED CIPs, need full assessment to plan projets and phases.	3
GV roof	Leaking to playground and RALLY door walkway creates ice.	1, 3
Dualsource / Backup heating system for JD, TM	Assessment needed	3, 4, 5, 6
DH flooring upgrades - classrooms and hallways	This includes science classrooms to hard surface.	4
Parking lot and exterior light upgrade to photocell	Removal of computer scheduling would decrease need for staff Overtime and reautomate parking lot lights to sunset/sunrise.	1, 2, 6
GV parking lot lights	Increase lighting for safe visibility and convert to LED	1, 2, 7
DH parking lot lights	Increase lighting for safe visibility and convert to LED	1, 2, 7
KHE Parking lights	Increase lighting for safe visibility and convert to LED	1, 2, 7
AB stair and deck replacement at back	Replacement of warped, rotted, rusted materials	1, 3, 7
JDHS Greenhouse - assessment, replace, or remove	Assessment needed to determine if repair or removal is best option	3, 4, 6, 7
JDHS exterior pressure wash and paint		3, 7
GV exterior pressure wash and paint		3, 7
JDHS AC unit in server room replacement		3, 4 ,5
DH paving of loading area behind school	This is main access for Maintenance and Custodial vehicles to storage area.	5
TMMS Pave drive to kitchen area	For Food Service and plowing needs.	5
AB pave parking and drop off area		
KHE upper parking lot paving		
GV Storage built off Covered area	To be upgraded - roof and panels	
GV Gym lighting upgrade	Partial repairs completed, need full LED conversion	4, 5, 6
MRCS Resurface drain pad on playground by covered area		1 ,3

Deferred Maintenance Leads to Increased Facilities Costs

- JDHS Boiler Leak – total replacement required - $1,600,000
- Original 1956 JDHS Chimney – Failed and starting to collapse
- Water Heater at Glacier Valley – Complete replacement
- Heating and Ventilation Replacement – Heating coils, computer control systems

Dzantik’i Heeni Campus Gym Floor





All that's holding up the exterior wall of a woodshop at the back of the school in Sleetmute are some two-by-six studs that were added for reinforcement two years ago. The repairs were meant to be temporary. The insulation inside the wall is moldy and there's visible water damage in the ceiling and the header the temporary studs support. (Emily Schwing/KYUK)

Taylor Hayden points out a series of wall studs underneath the school gym that aren't attached to anything any more. Many are split down the middle. In 2021, an architech recommended Sleetmute's school be condemned. (Emily Schwing/KYUK)

"'Let me show you why I'm so smart and my school is so junky,' said five-year old Nolan Adam Smith breathless, as he enthusiastically prepared to give a tour of the Jack Egnaty Senior School in Sleetmute."

Among the stops on 5-year-old Nolan Adam Smith's tour of Sleetmute's public school is the gymnasium door. Students are not allowed on the other side because the foundation that holds up the back wall of the gym is structurally unsafe. (Emily Schwing/KYUK)

https://alaskapublic.org/news/2024-03-13/as-their-public-school-deteriorates-sleetmute-residents-worry-their-community-isnt-far-behind

"Though it might seem counterintuitive to focus on facility repairs when students need instructional support, research underscores the role of school facilities in shaping student achievement and well-being. Well-maintained and adequately equipped school environments positively influence students' academic performance and motivation, while inadequate facilities contribute to absenteeism, health issues, and diminished cognitive abilities."

"The Mississippi Model" – "Focus on Facility Repairs"

https://www.future-ed.org/mississippi-school-districts-break-the-mold-on-pandemic-recovery-spending

Reduced Illness Absence and Chronic Absenteeism

Association of classroom ventilation with reduced illness absence: a prospective study in California elementary schools

M. J. Mendell, E. A. Eliseeva, M. M. Davies, M. Spears, A. Lobscheid, W. J. Fisk, M. G. Apte
First published: 19 March 2013 **https://doi.org/10.1111/ina.12042** Citations: 205

Abstract

Limited evidence associates inadequate classroom ventilation rates (VRs) with increased illness absence (IA). We investigated relationships between VRs and IA in California elementary schools over two school years in 162 3rd–5th-grade classrooms in 28 schools in three school districts: South Coast (SC), Bay Area (BA), and Central Valley (CV). We estimated relationships between daily IA and VR (estimated from two year daily real-time carbon dioxide in each classroom) in zero-inflated negative binomial models. We also compared IA benefits and energy costs of increased VRs. All school districts had median VRs below the 7.1 l/s-person California standard. For each additional 1 l/s-person of VR, IA was reduced significantly ($p<0.05$) in models for combined districts (−1.6%) and for SC (−1.2%), and nonsignificantly for districts providing less data: BA (−1.5%) and CV (−1.0%). Assuming associations were causal and generalizable, increasing classroom VRs from the California average (4 l/s-person) to the State standard would decrease IA by 3.4%, increase attendance-linked funding to schools by $33 million annually, and increase costs by only $4 million. Further increasing VRs would provide additional benefits. These findings, while requiring confirmation, suggest that increasing classroom VRs above the State standard would substantially decrease illness absence and produce economic benefits.

International Journal of *Environmental Research and Public Health*

MDPI

Article

Impact of Particulate Matter Exposure and Surrounding "Greenness" on Chronic Absenteeism in Massachusetts Public Schools

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Academic Editors: Jayajit Chakraborty and Sara E. Grineski
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Increased Test Scores and Academic Success

Effects of Classroom Ventilation Rate and Temperature on Students' Test Scores

Ulla Haverinen-Shaughnessy ,
Richard J. Shaughnessy

Published: August 28, 2015
https://doi.org/10.1371/journal.pone.0136165

Students' mean mathematics scores (average 2286 points) were increased by up to eleven points (0.5%) per each liter per second per person increase in ventilation rate within the range of 0.9–7.1 l/s per person (estimated effect size 74 points). There was an additional increase of 12–13 points per each 1°C decrease in temperature within the observed range of 20–25°C (estimated effect size 67 points). Effects of similar magnitude but higher variability were observed for reading and science scores.

School Buildings: The Foundation for Student Health and Success

Eitland, Erika; Allen, Joseph

State Education Standard, v19 n1 p35-38, 44 Jan 2019

Improving the school building may well be the most overlooked means of improving student health, safety, and academic performance. Yet in conversations about factors that lead students to academic success, only rarely does the role of the physical environment come to the fore.

CALIFORNIA POLICY LAB

POLICY BRIEF

OCTOBER 2017

Julien Lafortune
David Schönholzer

Does New School Construction Impact Student Test Scores and Attendance?

Using data from the Los Angeles Unified School District, we find that attending a newly constructed school yields improvements in test scores, attendance, and teacher-reported measures of student effort. These results suggest attending a newly constructed school for four years can eliminate almost half of the math achievement gap between LAUSD students and the state average, and almost 20% of the English gap.

JOURNAL ARTICLE ACCEPTED MANUSCRIPT

What Works and for Whom? Effectiveness and Efficiency of School Capital Investments Across the U.S.

Get access ›

Barbara Biasi ✉, Julien Lafortune, David Schönholzer

The Quarterly Journal of Economics, qjaf013, https://doi.org/10.1093/qje/qjaf013
Published: 18 February 2025

❝ Cite 🔑 Permissions ⟨ Share ▾

Abstract

This paper identifies which investments in school facilities help students and which and are valued by homeowners. Using novel data on school district bonds, test scores, and house prices across 29 U.S. states and a research design based on narrowly decided elections with staggered timing, we find that increased capital spending in schools significantly improves test scores and is efficient on average. However, the effects vary widely depending on the type of project and the characteristics of the school district. Investments in essential infrastructure, such as HVAC systems or pollutant removal, yield notable improvements in student performance, while expenditures on athletic facilities show no measurable academic benefit. Socio-economically disadvantaged districts gain disproportionately from capital investments, even after accounting for project type, yet these districts typically underinvest in such projects.

“increased capital spending in schools significantly improves test scores and is efficient on average.”

Gunalchéesh!

Thank you!