Business & Finance Committee Meeting



Pittsburgh Public Schools Facilities Department

November 28, 2023

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Agenda

- Introduction & Facility Information
- Capital Planning and Budgeting Basics
- Capital Project Process Overview
- 2023 Capital Plan by Category
- 2024 Capital Plan by Category
- 2024-2030 Capital Plan by Category
- 2024-2030 Capital Budget Summary
- Vision for PPS 2050
- Board Engagement, Comments/Questions

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Introduction of Team

Chief Operations Officer – Michael McNamara

Director of Facilities – Stephen Connell

Assistant Director of Facilities, Design and Planning – Damian Link

Assistant Director of Facilities, Construction and Planning – Vacant

Facilities Finance and Contract Manager – Ashley Kozikoski

PPS Facilities

District Overview

PPS Facilities, Maintenance, and Plant Operations are responsible for the construction, renovation, repair, improvement and day-to-day operation of all district facilities.

Schools:

58	**School programs and buildings – Includes all schools and Early Childhood Centers (ECC)**
6,123,633	**Total square footage of open school facilities**
89	**Average age of our school buildings: years since original construction**
41	**Average functional age of our school buildings: years since last major renovation**

District Facilities:

83	**Total district buildings: – Includes district support facilities, fieldhouses, demountable classroom buildings and closed buildings. Does not include garages, sheds, concession stands, etc.**
6,917,194	**Total square footage of all major PPS facilities**

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PPS Facilities

Utilization

Enrollment:

20,080	**Total Enrollment (includes ECC)**

Capacity:

37,054	**PPS Functional Capacity, K12+ECC**
16,974	**Excess Capacity**

(Data from October 2022-23, enrollment)

Utilization =

$$\frac{\text{Enrollment}}{\text{Functional Capacity}}$$

PPS Utilization =

54%

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PPS Facilities

School Data

<u>High School (9-12):</u> 5844 Students

14	**Schools with grades 9-12**
4	**Schools with grades 9-12 only**
2	**Schools with grades 9-12 with more than 600 high school students**

<u>Middle Schools:</u> 4282 Students

28	**Schools with grades 6-8**
7	**Schools with grades 6-8 only**
3	**Schools with grades 6-8 with more than 300 middle school students**

<u>Elementary Schools:</u> 8526 Students

39	**Schools with grades K-5**
23	**Schools with grades K-5 only**
20	**Schools with grades K-5 with more than 200 elementary school students**

(Data from October 2022-23, enrollment)

<u>6,123,633 total Square Feet (SF)</u>
18,652 Students

=

328 SF Per Student

<u>National Median*</u>
Elementary 188 SF
Middle 174 SF
High 180 SF

*Source: School Construction Report 2015

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PPS Facilities

Air Conditioning

Existing AC installations

Fully Air Conditioned: 18 School buildings

- HS: Brashear
- 6-12: CAPA, Obama, U-Prep/Milliones
- 6-8: Allegheny, South Brook, South Hills, Classical
- K-8: Arlington, Carmalt, King, Langley, Sunnyside
- K-5: Allegheny, Faison, Minadeo, Roosevelt Intermediate, West Liberty
- SP: Conroy, Pioneer

Partially Air Conditioned: 6 School buildings

- HS: Carrick, Westinghouse
- 6-12: SciTech
- 6-8: Sterrett (addition)
- K-8: Colfax (addition)
- K-5: Concord (addition)

Current AC projects

Fully Air Conditioned: 4 School buildings

- Banksville (ESSER III funded)
- Lincoln (ESSER III funded)
- Westwood (GESA)
- Whittier (ESSER III funded)
- Phillips

Since 2020, the District has added full air conditioning at three buildings with 5 more scheduled to be complete by 2025.

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Air Conditioning Costs

New AC installations

Minimum installation: Installation of AC equipment only. Chillers, Cooling towers, terminal units and controls.

$110-$120 per Square Foot

Comprehensive installation: Installation of AC equipment and additional work necessary such as electrical service upgrades, ceilings & lighting, code required fire alarm upgrades and sprinkler installation, accessibility upgrades, classroom casework, and abatement.

$140-$180 per Square Foot

AC Estimate

37 School buildings

3,343,744 Square feet

Minimum installation at 4 locations

Comprehensive installation at 33 locations

Low range: $443,250,000

High range: $552,607,000

The HVAC system typically accounts for 25% of the cost of an overall construction budget.

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Obama Update

Summary:

Multiple failures of HVAC system components including the chiller, an air handler and air supply fans. As a result, the students and staff in the building experienced discomfort.

Much of the HVAC system and equipment dates back to the building renovation in 1975.

Facilities mobilized a team of engineers, technicians, electricians, and mechanical contractors to investigate, recommend, and implement numerous repairs and system improvements.

The chiller was repaired for short-term operation and is being replaced this year.

Total cost, excluding engineering and in-house expenses = $813,653

PPS Facilities

Challenges

Ongoing Challenges

- Aging infrastructure
- Restricted budgets
- Accommodation of additional and changing programs
- Building code changes
- Safety improvements
- Technology upgrades
- Limited timeframe for construction projects
- Ever increasing deferred maintenance backlog

New Challenges, post Covid

- Inflation
  - Material costs
  - Labor costs
- Fees
  - City Zoning & Building permit
  - ACHD
- Supply chain issues
  - Material and equipment availability
  - Extended lead times
  - Quality Control
- Staffing
  - District
  - Contractors
  - Manufacturers

PPS Facilities

Challenges

Structural Obstacles:

- Environmental/Hazardous materials
- Accessibility
- Security
- Below-grade classrooms
- Outdoor space
- Cafeteria/Auditorium/Gymnasium configuration
- Administrative and Support spaces

Many obstacles cannot be easily overcome given the existing building configurations.

Nationwide Issue

- 2021 State of our Schools
  - Report by National Council on School Facilities, International Well Building Institute, and 21st Century School Fund.
  - $85 billion annual gap in the level of funding for the maintenance, operation, and periodic capital improvements nationwide.
- GAO-20-494
  - Report to Congress, June 2020.
  - 54% of public-school districts need to update or replace multiple building systems or features in their schools.
    - HVAC, Lighting, Roofing, Safety & Security, Structural, Environmental
- 2021 Report Card for America's Infrastructure
  - Report by American Society of Civil Engineers.
  - Schools received a grade of D+, indicating poor and at-risk condition.

PPS Facilities

Commitments

<u>Safety</u>

- Environmental Health & Safety
  - Drinking Water Quality Initiative
  - Indoor Air Quality
    - Carbon Monoxide
- Life Safety Upgrades
  - Security Systems
  - Communication Systems
  - Monitoring and Response
- Inspections and Upkeep
  - Playgrounds
  - Bleachers
  - Stage Curtains and Rigging

<u>Sustainability</u>

- Energy Efficiency
- Water Efficiency
- Stormwater Management
- Waste disposal Management
- Carbon Reduction
- Renewable Energy Sources

Pioneer Aqua Therapy Pool designed to LEED standards

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PPS Facilities

Commitments

Partnerships

- Western Pennsylvania Conservancy
- Green Building Alliance
- Grow Pittsburgh
- Tree Pittsburgh
- Trust for Public Land

Process Improvement

- Asset Management System
  - Coming on-line in 2024
  - Includes work order management

Equity & Diversity

- EBE participation

Relationships

- School-Based Staff
- Consultants
  - Architects
  - Engineers
- Vendors
- Contractors
- Governmental Agencies and Commissions

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Capital Planning and Budgeting Basics

Capital Plan

Definitions

Major Maintenance Fund (305): These funds account for financial resources that are designated for Improvements and Maintenance of existing sites, including capital expenditures that are incurred in the purchasing of service systems and built-in equipment to bring the asset to a state of usefulness.

Capital Projects Fund (306): These funds account for financial resources that are restricted, committed, or assigned to capital outlays which include facilities acquisition and construction of existing or new sites and any capital expenditures and incidental costs which extend the useful life of the asset.

General Obligation Bonds: Bonds typically used to fund the Capital Plan.

7-Year Capital Plan: The 7-year Capital Plan is the current budget document approved by the Board that contains all the Facilities Capital Projects and Major Maintenance items separated by building over the next 7 years.

Capital Plan

Budget Process Overview

Developing the capital budget plan is an ongoing process which constantly changes based upon feedback of many stakeholders. Facilities collaborates with Maintenance, Plant Operations, Food Service, Executive Staff and School-Based Leaders to compile capital project requests and assess the need, urgency, code compliance, cost and timeline for new projects.

Standpoint of the current budget plan being drafted:

- First year/column: Project designs are finalized, reviewed and getting ready to go out to bid. Budget estimates are updated before Board approval.
- Second year/column of the capital plan: Facilities is requesting proposals from architects and engineers for projects in the second year of the plan.
- Third year and beyond/columns: Facilities collaborates with all stakeholders to compile Capital Project Requests and assess the need, urgency and timeline for new projects and those already in the plan. Facilities personnel meet with Principals and other stakeholders at the site to determine scope and develop preliminary budgets.

Board actions:

- The detailed capital budget is included in the annual budget book submitted in December of each year for Board approval.
- In December of each year the Board approves:
  - A resolution to establish the next years Major Maintenance Fund and Capital Projects Fund
  - A capital reimbursement resolution for expenditure advancements

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Capital Plan

Project Contracting

Contracting types:

- Design/Bid/Build: Typical Process with consulting A/E, public bidding, award to low bid contractor(s).
  - Single Prime
  - Multiple Prime: General – 31, Plumbing – 32, Mechanical – 33, Electrical –34, Abatement – 35
- Extraordinary Maintenance: Two-year contracts publicly bid for use on emergency and smaller projects.
  - General, Electrical, Masonry, Roofing
- Cooperative Purchasing: "Pre-bid" by organizations or public agencies that provide fixed price or discount. Examples include Costars, Keystone Purchasing Network, Omnia Partners, TIPS, etc.
- Guaranteed Energy Savings Act (GESA): Design-Build process authorized by PA Guaranteed Energy Savings Act. Project costs are paid for by reduction of utility costs.

Larger projects are often completed over multiple years due to the limited availability of the buildings during the school year. Some projects are bid once for a multi-year project and others are bid in multiple phases over several years.

Comments/Questions?

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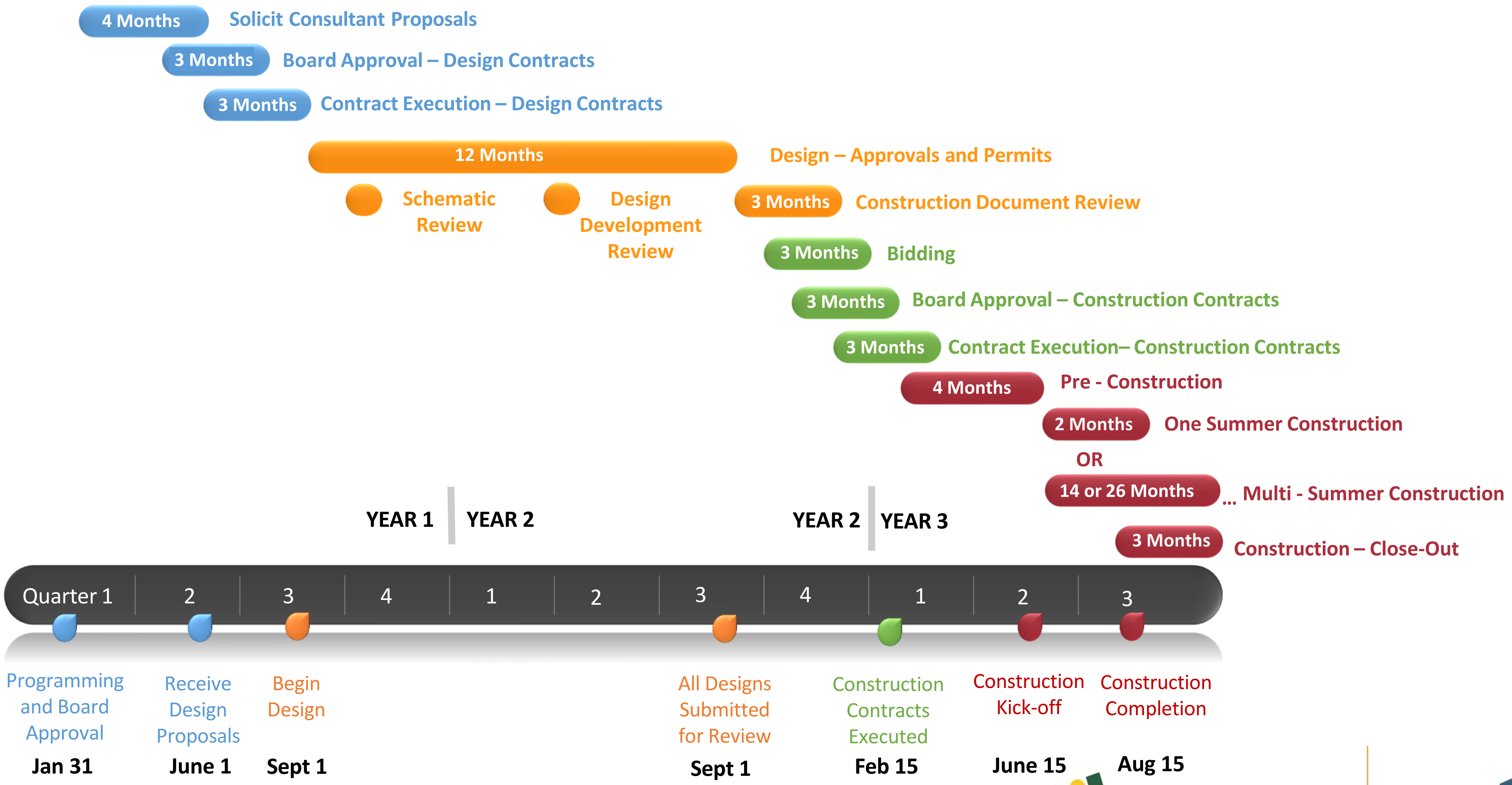
Project Categories:

- BE – Building Exterior: roofing, windows, masonry, doors, etc.
- BI – Building Interior: flooring, ceilings, finishes, restrooms, bleachers, signage, etc.
- EI – Educational Improvements: building renovations, classroom & lab renovations, libraries, food service, etc.
- ES – Electrical Systems: service, switchgear, distribution, lighting, generators, and systems including PA/intercom, security (access control & surveillance), fire alarm, etc.
- GI – Grounds Improvements: sidewalks, parking lots, landscaping, etc.
- MS – Mechanical Systems: HVAC systems, plumbing systems, elevators, etc.
- PD – Planning Design: architectural and engineering design services for capital plan projects in following years

Capital Plan

Project Timeline



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Capital Plan Project Review

2023 Capital Projects

Projects:

- HVAC Renovation @ Westwood
- Electrical Distribution at Brashear
- Window replacement and Exterior Envelope at Carmalt
- Unit Ventilator replacement at Brookline
- Emergency Generator replacements at Allegheny and King
- Roof Replacements at Greenway, Milliones and Perry
- Flooring at Langley, Schiller, and South Hills
- Boiler replacement at Liberty
- Fire Alarm System upgrades at 6 locations
- Security System upgrades at 9 locations
- PA System upgrades at 14 locations
- CO detector phase 5
- Water Cooler replacement, phase 6
- Chartiers Learning Garden

ESSER:

- HVAC Renovations with AC @ Banksville, Lincoln, and Whittier
- HVAC Retro-commissioning & Controls Upgrades
- Pioneer Aqua Therapy Pool
- Whiteboards and Interactive display panels

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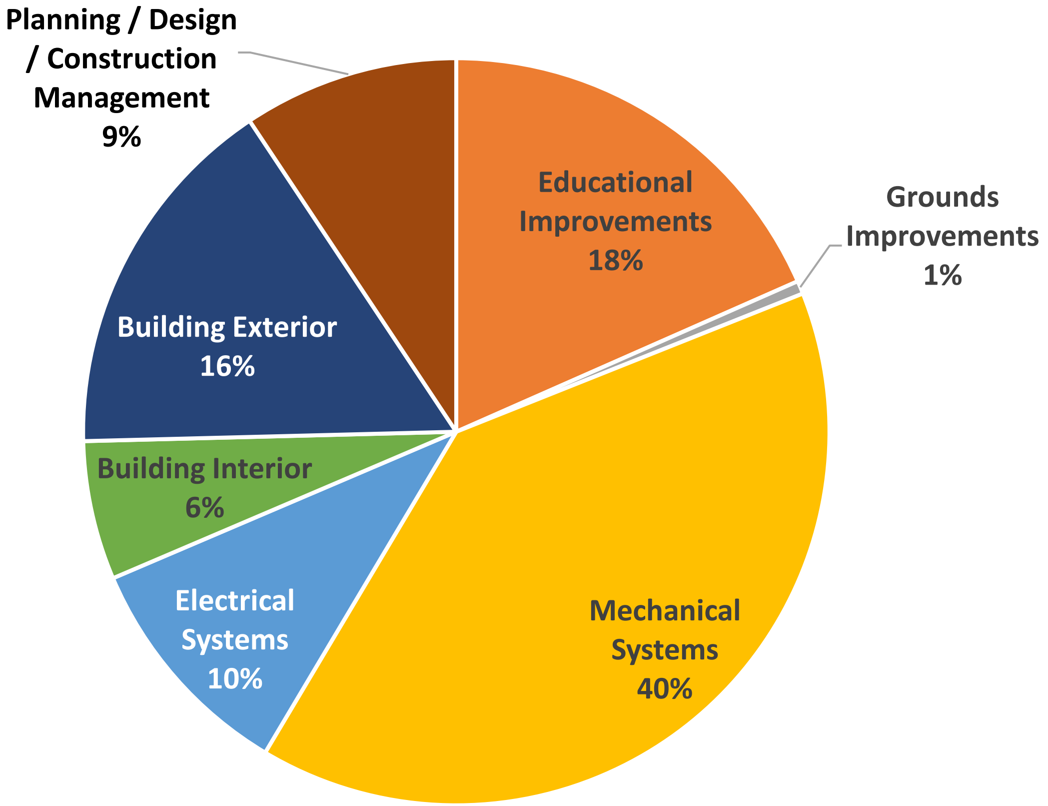
2023 Capital Plan by Category

CATEGORY	TOTAL FUNDS
Educational Improvements	$ 10,770,400
Grounds Improvements	$ 332,500
Mechanical Systems	$ 23,176,000
Electrical Systems	$ 5,872,400
Building Interior	$ 3,520,000
Building Exterior	$ 9,399,840
Planning / Design / Construction Management	$ 5,469,680
SUB TOTAL	$ 58,540,820
Grants (ESSER 2)	$ -7,018,200
Grants (ESSER 3)	$ -15,300,000
GRAND TOTAL	**$ 36,222,620**



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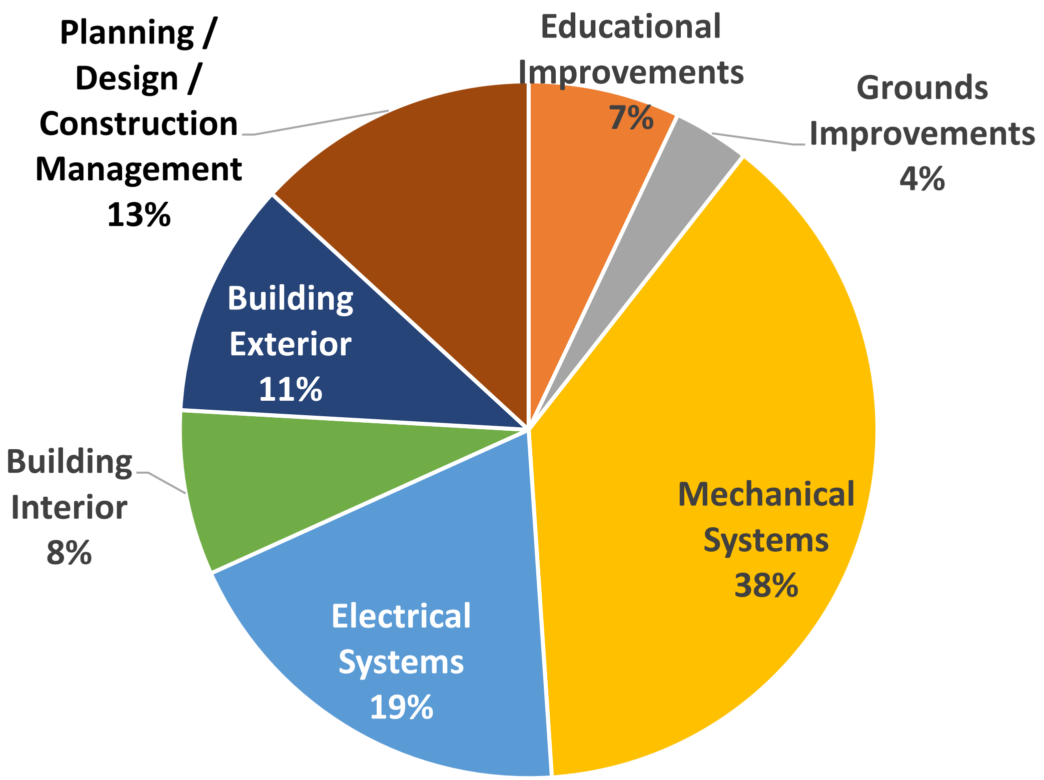
2024 Capital Projects

<u>Projects</u>:

- Secure Vestibule at Allderdice
- HVAC Renovations & AC at Allderdice, Year 1
- Retaining wall repairs at Brashear
- Underground heating oil tank removal at Brashear and Obama
- Pool Lighting at High Schools
- Pool Filter upgrades
- Ramp Restoration/replacement at Conroy
- Fire Escape at Colfax
- Field turf and track rehabilitation at Cupples
- Emergency Generator replacements at CAPA, Banksville
- Roof Replacements at Greenway, Milliones
- Flooring at Conroy, Langley, and Westinghouse
- Air Conditioning at Phillips
- HVAC Controls at 6 locations
- Elevator Modernization at 3 locations
- Fire Alarm System upgrades at 3 locations
- Security System upgrades at 3 locations
- PA System upgrades at 2 locations
- CO detector phase 5
- Water Cooler replacement, phase 6 (Fieldhouses)
- Lighting upgrades at 3 locations (Safety Grant)

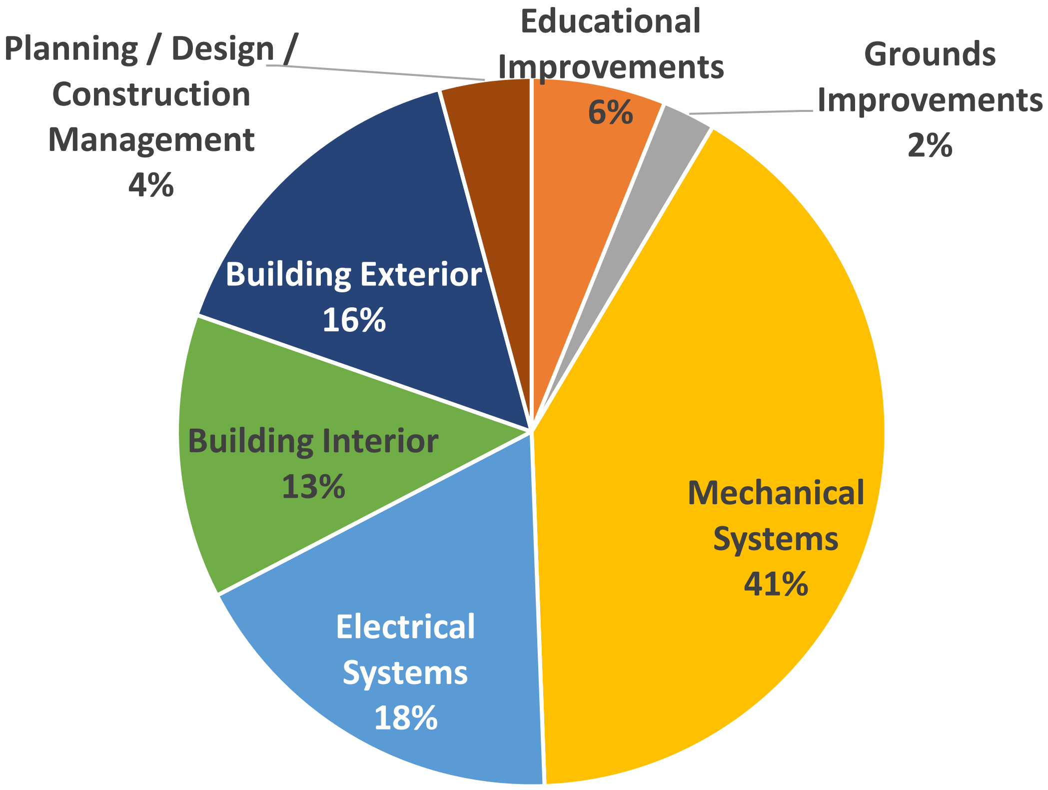
2024 Capital Plan by Category

CATEGORY	TOTAL FUNDS
Educational Improvements	$ 2,817,000
Grounds Improvements	$ 1,419,000
Mechanical Systems	$ 15,361,500
Electrical Systems	$ 7,728,800
Building Interior	$ 3,068,100
Building Exterior	$ 4,379,840
Planning / Design / Construction Management	$ 5,271,120
GRAND TOTAL	**$ 40,045,360**



2024-2030 Capital Plan by Category

CATEGORY		TOTAL FUNDS
Educational Improvements	$	22,143,800
Grounds Improvements	$	8,750,800
Mechanical Systems	$	148,056,558
Electrical Systems	$	64,959,400
Building Interior	$	47,002,700
Building Exterior	$	55,971,840
Planning / Design / Construction Management	$	15,221,120
GRAND TOTAL	**$**	**362,106,218**



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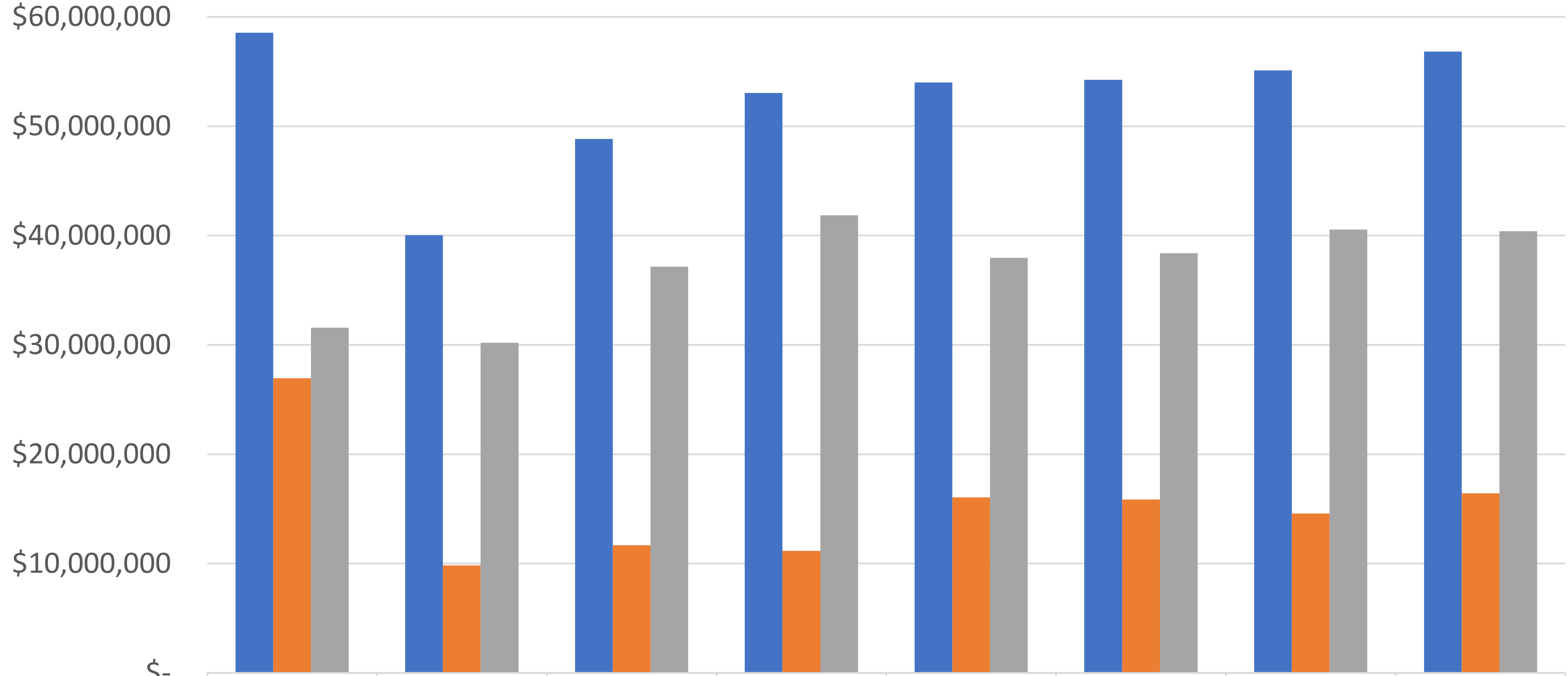
Capital vs. Major Maintenance Obligations



	2023	2024	2025	2026	2027	2028	2029	2030
TOTAL OBLIGATIONS	$58,540,820	$40,045,360	$48,830,000	$53,030,358	$54,009,400	$54,250,800	$55,118,700	$56,821,600
Capital	$26,957,000	$9,844,500	$11,680,000	$11,172,000	$16,048,000	$15,856,000	$14,580,000	$16,430,000
Major Maintenance	$31,583,820	$30,200,860	$37,150,000	$41,858,358	$37,961,400	$38,394,800	$40,538,700	$40,391,600

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2024/30 Capital Program Summary

2024/30 Capital Program Summary

Plan Priorities:

- Warm: HVAC, Building envelope
- Safe: Life Safety System Upgrades, HVAC, Abatement
- Dry: Building envelope, windows, roofing
- Clean: Abatement, flooring, finishes

Structural Obstacles:

- Environmental/Hazardous materials
- Accessibility
- Security
- Below-grade classrooms
- Outdoor space
- Cafeteria/Auditorium/Gymnasium configuration
- Administrative and Support spaces

Additional Considerations:

- Sustainability
- Energy Efficiency
- Air Conditioning

Many obstacles cannot be easily overcome given the existing building configurations.

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Vision 2050: Facilities Goals

- 21st Century Learning Environments – Technology, STEAM etc.
- Air condition every building
- Remove hazardous material
- Provide fresh building stock
- Remove demountables
- Consolidate for efficiency
- Energy savings projects
- Bring all buildings up to established standards of condition and educational adequacy

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Board Engagement

Questions/Comment/Discussion