

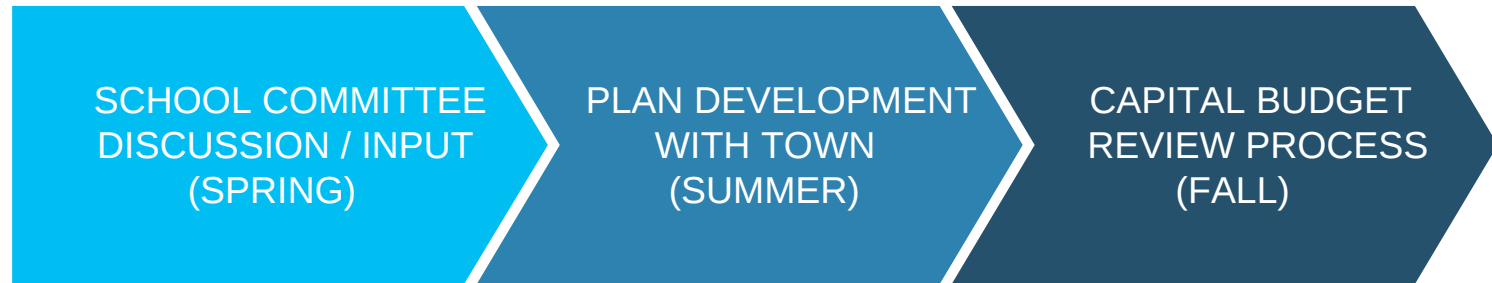
SIX YEAR CAPITAL PLAN FY25–FY30 INTRODUCTION

Bedford School Committee
May 23, 2023



ANNUAL CAPITAL PLANNING PROCESS

2



TIMELINE

3



1.

CAPITAL MAINTENANCE

ANNUAL

CAPITAL MAINTENANCE ITEMS TO CONTINUE

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School Capital Maintenance Items:

- » IT Replacement
- » FFE Replacement

School / Facilities Capital Maintenance Items:

- » Program Space Modification
- » Interior Painting
- » Flooring Replacement

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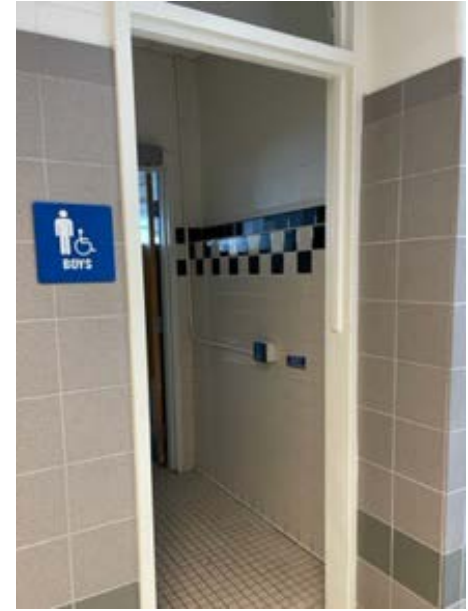
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Old and new science and art tables



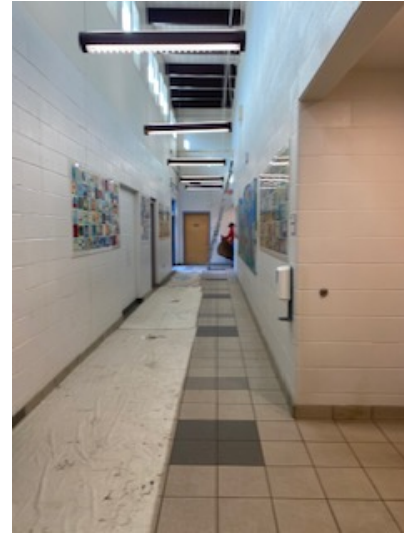
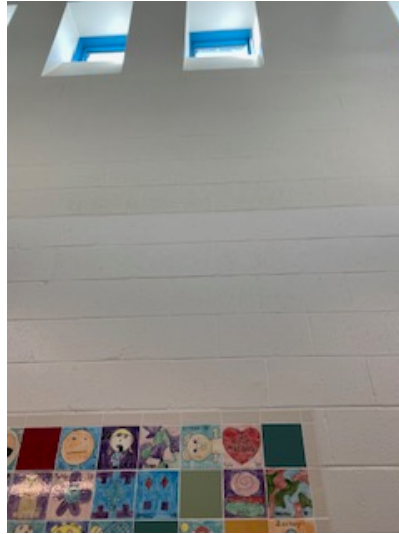
BHS Painting

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Davis Painting

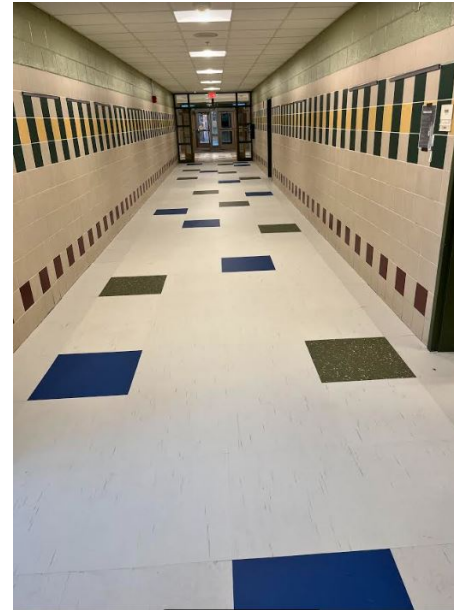
8



JGMS Flooring - Continuation

9

- » JGMS Hall Way &
- » Classrooms
(In the Summer)



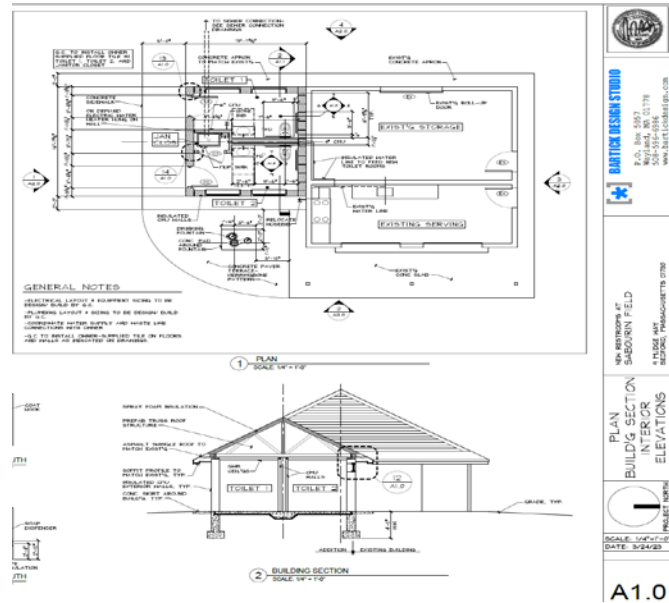
Space Modification Program (Lane Library Rm/Office)

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BHS Field – Bathrooms - Update

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3.

School Safety and Security

FY24 Funded

FY25 Planned

3.

ENERGY NET ZERO PROJECTS

Six year plan

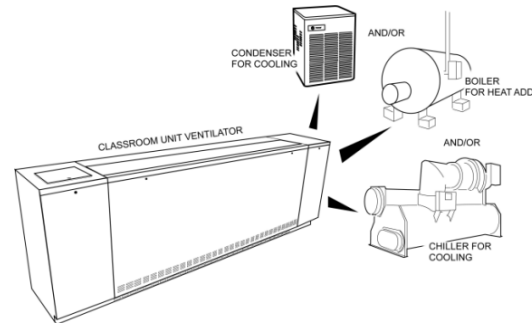
HIGH SCHOOL BUILDING SYSTEMS

14

- » Boiler Replacement #1, #2, #3 (FY24 Design, FY25 Construction)
- » Energy Systems Recommissioning (FY26)
- » Roof Replacement (FY27)
- » Univent Replacement (FY27)
- » Solar System

» Example

Application Considerations The Applied Unit Ventilator



System choice for the classroom unit ventilator

JGMS BUILDING SYSTEMS

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- » Boiler Replacement #1, #2, #3 (FY26 Design, FY27 Construction)
- » Roof Replacement (FY26)
- » Univent Replacement (FY27)

ELEMENTARY ROOF REPLACEMENTS

17

- » Davis Roof Replacement (FY26)
- » Lane Roof Replacement (FY26)

15- Yr Energy Plan - DRAFT

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Project	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035
Reeford High School - Building Systems Retrocommissioning (Energy Efficiency)	\$	\$	\$	\$	\$ 205,889	\$	\$	\$	\$	\$	\$	\$	\$
Reeford High School - Boiler #1, #2, #3 Replacement (FY24 Design/FY25 Construction) (Energy Net Zero)	\$	\$	\$ 316,270	\$	\$ 4,561,870	\$	\$	\$	\$	\$	\$	\$	\$
Reeford High School - Roof Replacement (Energy Efficiency) 2027	\$	\$	\$	\$	\$ 2,375,000	\$	\$	\$	\$	\$	\$	\$	\$
Reeford High School DRUs (Energy Recovery Units)	\$	\$	\$	\$	\$	\$	\$	\$	\$ 2,033,040	\$	\$	\$	\$
Reeford High School A/C units	\$	\$	\$	\$	\$	\$	\$	\$	\$ 140,331	\$	\$	\$	\$
Reeford High School-Hot Water Heaters (Electric Units @ 25k ea.)	\$	\$	\$	\$	\$	\$ 137,653	\$	\$	\$	\$	\$	\$	\$
Reeford High School-Instant Replacements (Energy Efficiency)	\$	\$	\$	\$	\$	\$ 1,446,800	\$	\$	\$	\$	\$	\$	\$
Davis School- Roof Replacement (Energy Efficiency) 2026	\$	\$	\$	\$ 1,644,200	\$	\$	\$	\$	\$	\$	\$	\$	\$
Davis School- Energy 27F, Measure B&C Systems Retrocommissioning	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Davis School- Boiler Replacement (FY25 Design/FY26 Construction) (Energy Net Zero)	\$	\$	\$	\$	\$	\$	\$ 337,790	\$ 4,729,360	\$	\$	\$	\$	\$
Davis School-Instant Replacement (Energy Efficiency)	\$	\$	\$	\$	\$	\$	\$	\$ 1,644,200	\$	\$	\$	\$	\$
Davis School-Roofing Units	\$	\$	\$	\$	\$	\$	\$	\$ 296,161	\$	\$	\$	\$	\$
Davis School- Partial P&Z (done with addition, 2017)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Davis School- Air Conditioning Units	\$	\$	\$	\$	\$	\$	\$	\$ 70,819	\$	\$	\$	\$	\$
Davis School-Hot Water Heater 2	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$ 31,139	\$	\$
Davis School-Hot Water Heater 2	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$ 31,139	\$	\$
John Glenn Middle School - Building Systems Retrocommissioning (Energy Efficiency)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
John Glenn Middle School- Boiler #1, #2, #3 Replacement (FY26 Design/FY27 Construction) (Energy Net Zero)	\$	\$	\$	\$	\$	\$ 138,270	\$ 4,416,555	\$	\$	\$	\$	\$	\$
John Glenn Middle School- Roof Replacement (Energy Efficiency) 2026	\$	\$	\$	\$ 2,678,200	\$	\$	\$	\$	\$	\$	\$	\$	\$
John Glenn Middle School- Instant Replacements (Energy Efficiency)	\$	\$	\$	\$	\$	\$	\$	\$ 1,447,440	\$	\$	\$	\$	\$
John Glenn Middle School- Pump & Unit (done with addition, 2016)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
John Glenn Middle School- Air Conditioning Units (see 2016)	\$	\$	\$	\$	\$	\$	\$	\$ 71,844	\$	\$	\$	\$	\$
John Glenn Middle School-Hot Water Heaters (Funded 2020)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Lane School- AC Cooling Equipment	\$	\$	\$	\$	\$	\$	\$	\$ 281,975	\$	\$	\$	\$	\$
Lane School- Instant Replacement	\$	\$	\$	\$	\$	\$	\$	\$	\$ 1,693,000	\$	\$	\$	\$
Lane School- Boiler Replacement (FY26 Design/FY27 Construction) (Energy Net Zero)	\$	\$	\$	\$	\$	\$	\$	\$	\$ 380,670	\$ 4,463,000	\$	\$	\$
Lane School-Hot Water Heater 1	\$	\$	\$	\$	\$	\$	\$	\$	\$ 26,139	\$	\$	\$	\$
Lane School-Hot Water Heater 2	\$	\$	\$	\$	\$	\$	\$	\$	\$ 13,571	\$	\$	\$	\$
Lane School-Roofing Units	\$	\$	\$	\$	\$	\$	\$	\$	\$ 954,225	\$	\$	\$	\$
Lane School- Roof Replacement Lane School 2026 (Energy Efficiency)	\$	\$	\$	\$ 1,644,200	\$	\$	\$	\$	\$	\$	\$	\$	\$
Total Facilities- Energy & Sustainability Upgrades	\$	\$	\$	\$ 3,126,270	\$ 3,335,870	\$ 3,096,000	\$ 1,476,908	\$ 790,581	\$ 7,069,698	\$ 8,807,471	\$	\$ 42,118	\$
Current Fire Station- Direct Expansion Cooling Equipment Condensing Unit - Replacement (Energy Efficiency)	\$ 90,770	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Current Fire Station- Heating Systems (Excludes Boiler) (Energy Net Zero)	\$ 191,970	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Current Fire Station- Roofing Unit AC - Cooling w/ Gas Heat (Energy Efficiency)	\$ 32,367	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Current Fire Station- Windows (Energy Efficiency)	\$	\$	\$	\$	\$	\$	\$	\$ 3,000,000	\$	\$	\$	\$	\$
New Fire Station (land acquisition 2024, schematic design 2024, build 2025)	\$ 3,900,000	\$ 3,900,000	\$ 3,900,000	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
DRW- HVAC Controls Upgrade DDC System Replacement (Energy Efficiency)	\$	\$	\$	\$ 181,625	\$	\$	\$	\$	\$	\$	\$	\$	\$
DRW-DRW (Energy Net Zero) Full-Range Electric Fan Coil (Design 2023, build 2025)	\$	\$	\$	\$	\$	\$ 795,675	\$	\$	\$	\$ 520,000	\$ 3,200,000	\$	\$
DRW- Roof Replacement (2006)	\$	\$	\$	\$	\$	\$ 196,287	\$	\$	\$	\$	\$	\$	\$
DRW- Roofing Unit AC-Cooling w/ Gas Heat (Energy Efficiency)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Police Station Unit (electric boiler construction)	\$ 3,260,000	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Library- Atrium Windows Replacement (Energy Efficiency)	\$	\$	\$	\$	\$	\$ 69,350	\$	\$	\$	\$	\$	\$	\$
Library- HVAC Replacement	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Library- Police Desk (vehicle) (Energy Efficiency)	\$	\$	\$	\$	\$	\$ 26,862	\$	\$	\$	\$	\$	\$	\$
Old Town Hall- Roof Replacement (2001) (Energy Efficiency)	\$	\$	\$ 276,200	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Town Center- Appliances (Energy Efficiency)	\$ 10,900	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Town Center- Schematic Design & Addition (Energy Net Zero)	\$	\$	\$ 331,644	\$ 3,348,880	\$	\$	\$	\$	\$	\$	\$	\$	\$
Town Campus- Mixed-Use	\$	\$	\$	\$	\$	\$	\$	\$ 13,919,962	\$	\$	\$	\$	\$
Town Hall-Aluminum Windows (Energy Efficiency)	\$	\$	\$	\$ 344,591	\$	\$	\$	\$	\$	\$	\$	\$	\$
Town Wide- Building Feasibility Study (Energy Efficiency) (all Town Municipal Buildings FY2023) (not incl. school)	\$ 262,000	\$ 260,360	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Town Wide Energy Management System (Energy Efficiency)	\$	\$	\$	\$ 944,700	\$	\$	\$	\$	\$	\$	\$	\$	\$
Town Wide Electric Vehicle Chargers (FY 2023)	\$ 7,444	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Total Facilities- Town Energy & Sustainability Upgrades	\$ 3,404,740	\$ 3,341,655	\$ 3,113,570	\$ 3,843,571	\$ 1,033,382	\$ 10,562	\$ 14,725,962	\$	\$ 520,000	\$ 3,200,000	\$	\$	\$
Total Facilities- Energy & Sustainability Upgrades (LOWA WQS: towns school)	\$ 3,404,740	\$ 3,341,655	\$ 3,113,570	\$ 3,843,571	\$ 1,033,382	\$ 10,562	\$ 14,725,962	\$	\$ 520,000	\$ 3,200,000	\$	\$	\$

4.

OTHER SCHOOL PROJECTS

Upcoming in the six year plan

Recent and Potential Proposals

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- » All Schools– Security/Safety Study & System (FY25)
- » All Schools– Intrusion Detection Security System (FY27)
- » Solar Screening / Window Blinds annual capital maintenance (TBD)
- » Mass State Elevators Upgrades (New Requirements for Door Safety)
- » Energy Management System (EMS)
- » Microgrid (Town Campus)

FY20 -FY35 Schools Projects

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Project	Dept	Total	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035
Yellow Highlighted means to be added to Amy's report. (already on Facilities calendar)																		
All Schools- Equipment/Replacement	Fac - Sch	\$ 262,022				\$ 29,292		\$ 18,171	\$ 18,716	\$ 19,278	\$ 19,856	\$ 20,452	\$ 21,065	\$ 21,697	\$ 22,348	\$ 23,018	\$ 23,709	\$ 24,420
All Schools- Flooring	Fac - Sch	\$ 1,202,834			\$ 56,658	\$ 58,358	\$ 76,650	\$ 78,950	\$ 81,318	\$ 83,758	\$ 86,270	\$ 88,858	\$ 91,524	\$ 94,270	\$ 97,098	\$ 100,011	\$ 103,011	\$ 106,101
All Schools- Interior Painting	Fac - Sch	\$ 968,081			\$ 56,658	\$ 58,358	\$ 60,109	\$ 61,912	\$ 63,769	\$ 65,682	\$ 67,653	\$ 69,683	\$ 71,773	\$ 73,926	\$ 76,144	\$ 78,428	\$ 80,781	\$ 83,205
All Schools- Program Space Modifications	Fac - Sch	\$ 749,007			\$ 43,837	\$ 45,152	\$ 46,506	\$ 47,902	\$ 49,339	\$ 50,819	\$ 52,343	\$ 53,913	\$ 55,531	\$ 57,197	\$ 58,913	\$ 60,680	\$ 62,500	\$ 64,376
All Schools- Security System (pending SC approval/Intrusion Detection System)	Fac - Sch	\$ 775,000				\$ 75,000	\$ 350,000	\$ 350,000										
Bedford High School- Building Systems Retrocommissioning (Energy Efficiency)	Fac - Sch	\$ 205,388									\$ 205,388							
Bedford High School- Boiler #1, #2, #3 Replacement (FY24 Design/FY25 Construction)(Make Ready Net Zero)	Fac - Sch	\$ 5,018,057						\$ 456,187	\$ 4,561,870									
Bedford High School- Roof Replacement (Energy Efficiency) 2027	Fac - Sch	\$ 2,575,000								\$ 2,575,000								
Bedford High School-ERUs (Energy Recovery Units)	Fac - Sch	\$ 2,533,540												\$ 2,533,540				
Bedford High School- AC units	Fac - Sch	\$ 140,131													\$ 140,131			
Bedford High School-Hot Water Heaters (8 Electric Units @ 75K ea.)	Fac - Sch	\$ 320,000						\$ 320,000										
Bedford High School- Univent Replacements (Energy Efficiency)	Fac - Sch	\$ 1,648,000									\$ 1,648,000							
Bedford High School/John Glenn Middle School- Exterior Painting	Fac - Sch	\$ 143,916				\$ 143,916												
Bedford High School/Lane School- Emergency Standby Generator Expansion	Fac - Sch	\$ 31,016							\$ 31,016									
Davis School- Elevator Controls Replacement	Fac - Sch	\$ 72,000						\$ 72,000										
Davis School- Roof Replacement (Energy Efficiency) 2026	Fac - Sch	\$ 1,648,000							\$ 1,648,000									
Davis School-Energy Eff. Measure Bldg Systems Retrocommissioning	Fac - Sch	\$ 66,948	\$ 66,948															
Davis School-Boiler Replacement (FY29 Design/FY30 Construction)(Energy Net Zero)	Fac - Sch	\$ 5,067,500										\$ 357,700	\$ 4,709,800					
Davis School-Univent Replacement (Energy Efficiency)	Fac - Sch	\$ 1,648,000											\$ 1,648,000					
Davis School-Rooftop Units	Fac - Sch	\$ 200,301											\$ 200,301					
Davis School- Partial ENZ (done with addition, 2017)	Fac - Sch	\$ -																
Davis School- Air Conditioning Units	Fac - Sch	\$ 70,939										\$ 70,939						
Davis School-Hot Water Heater 1	Fac - Sch	\$ 31,159														\$ 31,159		
Davis School-Hot Water Heater 2	Fac - Sch	\$ 31,159														\$ 31,159		
John Glenn Middle School- Elevator Controls Replacement	Fac - Sch	\$ 72,000						\$ 72,000										
John Glenn Middle School/ Lane School- Fire Alarm System Replacement	Fac - Sch	\$ 235,341						\$ 235,341										
John Glenn Middle School- Emergency Generator 200 KW - Diesel Replacement	Fac - Sch	\$ 131,509								\$ 131,509								
John Glenn Middle School- Building Systems Retrocommissioning (Energy Efficiency)	Fac - Sch	\$ 115,728			\$ 115,728													
John Glenn Middle School- Boiler #1, #2, #3 Replacement (FY28 Design/FY27 Construction)(Energy Net Zero)	Fac - Sch	\$ 4,469,611								\$ 419,056	\$ 4,190,555							
John Glenn Middle School- Roof Replacement (Energy Efficiency) 2026	Fac - Sch	\$ 2,926,323										\$ 2,926,323						
John Glenn Middle School- Univent Replacements (Energy Efficiency)	Fac - Sch	\$ 1,860,000										\$ 1,860,000						
John Glenn Middle School- Partial ENZ (done with addition 2020)	Fac - Sch	\$ -																
John Glenn Middle School- Air Conditioning Units (est 2043)	Fac - Sch	\$ 71,643										\$ 71,643						
John Glenn Middle School-Hot Water Heaters (funded 2020)	Fac - Sch	\$ 100,000			\$ 100,000													
Lane School- Elevator Controls Replacement	Fac - Sch	\$ 59,946				\$ 59,946												
Lane School- Emergency 200 KW Generator - Diesel Replacement	Fac - Sch	\$ 139,518									\$ 139,518							
Lane School - split units	Fac - Sch	\$ 175,000				\$ 175,000												
Lane School- AC Equipment	Fac - Sch	\$ 242,073											\$ 242,073					
Lane School Univent Replacement	Fac - Sch	\$ 1,648,000												\$ 1,648,000				
Lane School- Boiler Replacement (FY28 Design/FY29 Construction)(Energy Net Zero)	Fac - Sch	\$ 4,826,170											\$ 340,670	\$ 4,485,500				
Lane School-Hot Water Heater 1	Fac - Sch	\$ 20,159											\$ 20,159					
Lane School-Hot Water Heater 1	Fac - Sch	\$ 19,571											\$ 19,571					
Lane School-Rooftop Units	Fac - Sch	\$ 956,225											\$ 956,225					
Lane School- Roof Replacement/Lane School (Energy Efficiency) 2026	Fac - Sch	\$ 1,648,000						\$ 1,648,000										
Lane School- Paving System (**was hidden/removed from 9/21/2022 6 year)	Fac - Sch	\$ -						\$ -										
	Fac - Sch	\$ -																
Sabourin Field- Public Bathrooms	Fac - Sch	\$ 120,488				\$ 120,488												
Total Facilities- School Only		\$ 45,385,303	\$ -	\$ 66,948	\$ 372,881	\$ 765,510	\$ 533,265	\$ 1,712,463	\$ 8,102,029	\$ 3,550,490	\$ 4,556,195	\$ 7,367,812	\$ 8,176,391	\$ 9,054,261	\$ 254,502	\$ 324,455	\$ 270,001	\$ 278,101