

Financing Models: Debt Service

School Board/Town Council workshop
Wednesday, September 23, 2015



Common Questions about Bonds

- Term (bond amortization) = no longer than the life of the project
- Longer term = higher interest rate
- Different terms can be combined

Example of combining projects

TOWN OF BRUNSWICK, MAINE
\$4,120,000
2011 GENERAL OBLIGATION BONDS

AMORTIZATION OF THE BONDS, BY PROJECT

<u>Due</u>	<u>Road Reconst</u>	<u>Storm Sewer</u>	<u>Fire Trucks</u>	<u>School Energy</u>	<u>School Air Qual</u>	<u>35 Union Street</u>	<u>Command Vehicles</u>	<u>The Bonds</u>
11/01/11	\$40,000	\$80,000	\$91,000	\$178,000	\$78,000	\$71,000	\$17,000	\$555,000
11/01/12	40,000	80,000	91,000	178,000	78,000	71,000	17,000	555,000
11/01/13	40,000	80,000	91,000	178,000	78,000	71,000	17,000	555,000
11/01/14	40,000	80,000	91,000	178,000	78,000	71,000	17,000	555,000
11/01/15	40,000	80,000	91,000	178,000	78,000	71,000	12,000	550,000
11/01/16	38,000	74,000	89,000			69,000		270,000
11/01/17	38,000	74,000	89,000			69,000		270,000
11/01/18	38,000	74,000	89,000			69,000		270,000
11/01/19	38,000	74,000	89,000			69,000		270,000
11/01/20	38,000	74,000	89,000			69,000		270,000
Totals	\$390,000	\$770,000	\$900,000	\$890,000	\$390,000	\$700,000	\$80,000	\$4,120,000

Debt service models - Options for demonstration purposes:

- Option 1: Repair both schools now;
Replace Coffin in 10 years
- Option 2a: Repair Junior High now;
Replace Coffin now
- Option 2b: Repair Junior High now;
Minor repairs to Coffin now;
Replace Coffin in 3 years
- Option 3: Repair Coffin now;
Replace Junior High now
- Option 4a: Repair Coffin now;
Renovate Junior High now;
Replace Coffin in 10 years
- Option 4b: Repair Junior High now;
Renovate Coffin now;
Replace Junior High in 10 years



Assumptions/basis used for financial models

- Repair cost
 - Both schools - PDT 2015, rounded to \$5M
- Renovation cost
 - Both schools - PDT 2014, rounded to \$18M
- New construction cost
 - Elementary School - PDT Sept 2014
 - Junior High – PDT Sept 2014 plus sitework, rounded to \$32M
- 3% annual construction inflation
- 2.5% annual tax growth
- Interest rates
 - 3 years 2.25%
 - 10 years 2.50%
 - 15 years 2.75%
 - 25 years 3.00%

Option pages:

Combining possible project options

DEBT SERVICE ONLY

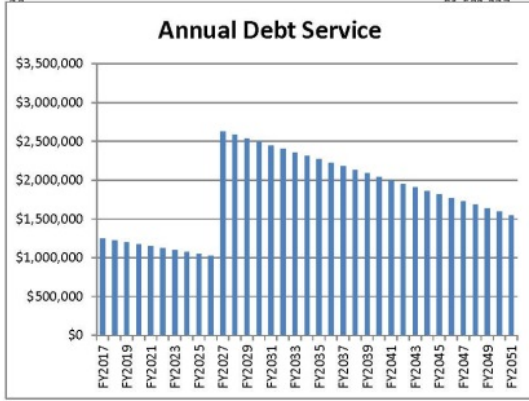
- 1. Tax rate impact
- 2. Long term cost

Brunswick Funded School Construction

Option 1: Repair both schools now; Replace Coffin in 10 years

ASSUMPTIONS				Current 1% Tax	\$375,000
	Elementary	JH	New Elementary	1% Tax Growth	2.50%
Amount	\$5,000,000	\$5,000,000	\$37,558,167	Current New Cost	\$27,132,819
Term	10	10	25	Construction Inflation	3.00%
Rate	2.50%	2.50%	3.00%		
Start Year	1	1	11		

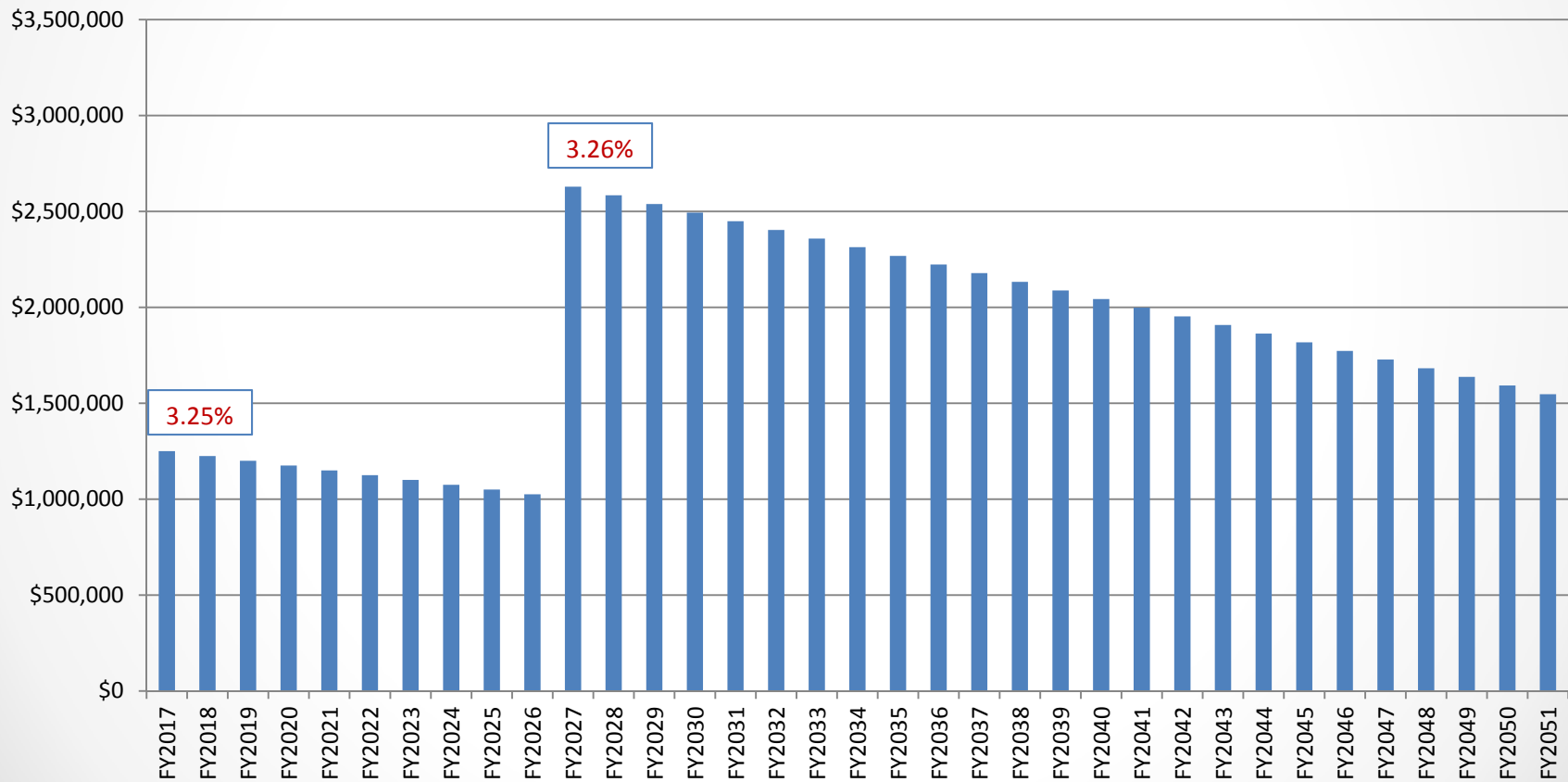
Year	Principal	Interest	Principal	Interest	Principal	Interest	Annual Debt Service	YOY Tax Impact	1% Tax Impact
FY2016	0						\$0		\$375,000
FY2017	1	\$500,000	\$125,000	\$500,000	\$125,000		\$1,250,000	3.25%	\$384,375
FY2018	2	\$500,000	\$112,500	\$500,000	\$112,500		\$1,225,000	-0.06%	\$393,984
FY2019	3	\$500,000	\$100,000	\$500,000	\$100,000		\$1,000,000	-0.06%	\$403,834
FY2020	4	\$500,000	\$87,500	\$500,000	\$87,500		\$1,000,000	-0.06%	\$413,930
FY2021	5	\$500,000	\$75,000	\$500,000	\$75,000		\$1,000,000	-0.06%	\$424,278
FY2022	6	\$500,000	\$62,500	\$500,000	\$62,500		\$1,000,000	-0.06%	\$434,885
FY2023	7	\$500,000	\$50,000	\$500,000	\$50,000		\$1,100,000	-0.06%	\$445,757
FY2024	8	\$500,000	\$37,500	\$500,000	\$37,500		\$1,075,000	-0.05%	\$456,901
FY2025	9	\$500,000	\$25,000	\$500,000	\$25,000		\$1,050,000	-0.05%	\$468,324
FY2026	10	\$500,000	\$12,500	\$500,000	\$12,500		\$1,025,000	-0.05%	\$480,032
FY2027	11					\$1,502,327	\$1,126,745	3.26%	\$492,032
FY2028	12					\$1,502,327	\$1,081,675	-0.09%	\$504,333
FY2029	13					\$1,502,327	\$1,036,605	-0.09%	\$516,942
FY2030	14					\$1,502,327	\$991,536	-0.09%	\$529,865
FY2031	15					\$1,502,327	\$946,466	-0.08%	\$543,112
FY2032	16					\$1,502,327	\$901,396	-0.08%	\$556,690
FY2033	17					\$1,502,327	\$856,326	-0.08%	\$570,607
FY2034	18					\$1,502,327	\$811,256	-0.08%	\$584,872
FY2035	19					\$1,502,327	\$766,187	-0.08%	\$599,494
FY2036	20					\$1,502,327	\$721,117	-0.07%	\$614,481
FY2037	21					\$1,502,327	\$676,047	-0.07%	\$629,843
FY2038	22					\$1,502,327	\$630,977	-0.07%	\$645,589
FY2039	23					\$1,502,327	\$585,907	-0.07%	\$661,729
FY2040	24					\$1,502,327	\$540,838	-0.07%	\$678,272
FY2041	25					\$1,502,327	\$495,768	-0.06%	\$695,229
FY2042	26					\$1,502,327	\$450,698	-0.06%	\$712,610
FY2043	27					\$1,502,327	\$405,628	-0.06%	\$730,425
FY2044	28					\$1,502,327	\$360,558	-0.06%	\$748,686
FY2045	29					\$1,502,327	\$315,489	-0.06%	\$767,403
FY2046	30					\$1,502,327	\$270,419	-0.06%	\$786,588
FY2047	31					\$1,502,327	\$225,349	-0.06%	\$806,253
FY2048	32					\$1,502,327	\$180,279	-0.05%	\$826,409
FY2049	33					\$1,502,327	\$135,209		\$847,069
FY2050	34					\$1,502,327	\$90,140		\$868,239
FY2051	35					\$1,502,327	\$45,070		\$889,419
FY2052	36						\$0	0.00%	\$910,606
FY2053	37						\$0	0.00%	\$931,811
FY2054	38						\$0	0.00%	\$953,031
FY2055	39						\$0	0.00%	\$974,266
FY2056	40						\$0	0.00%	\$995,526



10YR TOTAL	\$5,000,000	\$687,500	\$5,000,000	\$687,500	\$0	\$0	\$11,375,000		
20YR TOTAL	\$5,000,000	\$687,500	\$5,000,000	\$687,500	\$15,023,267	\$9,239,309	\$35,637,576		
30YR TOTAL	\$5,000,000	\$687,500	\$5,000,000	\$687,500	\$30,046,534	\$13,971,638	\$55,399,172		
40YR TOTAL	\$5,000,000	\$687,500	\$5,000,000	\$687,500	\$37,558,167	\$14,647,685	\$63,580,853		

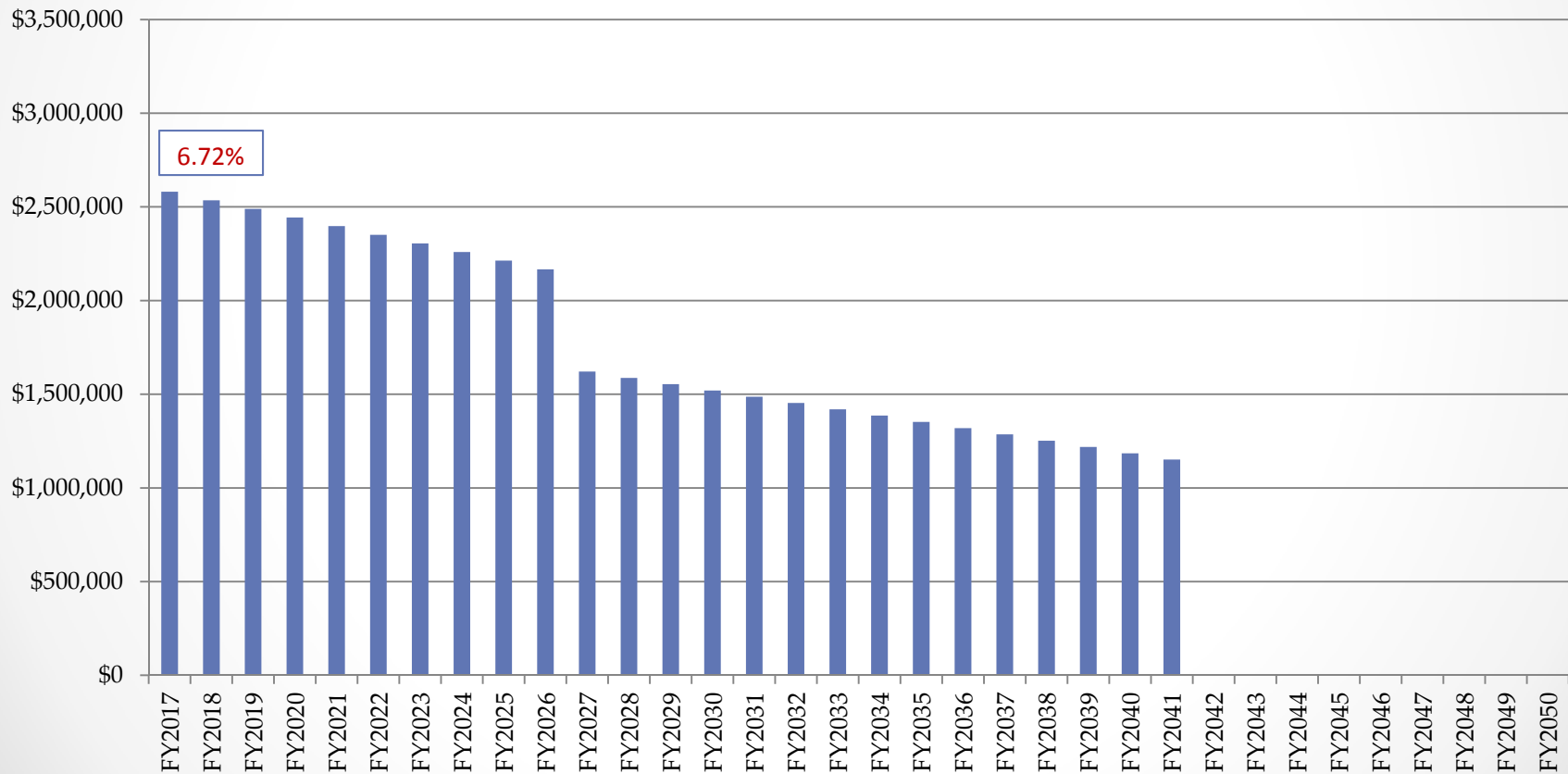
Option 1: Repair both schools now Replace Coffin in 10 years

Option 1 Annual Debt Service



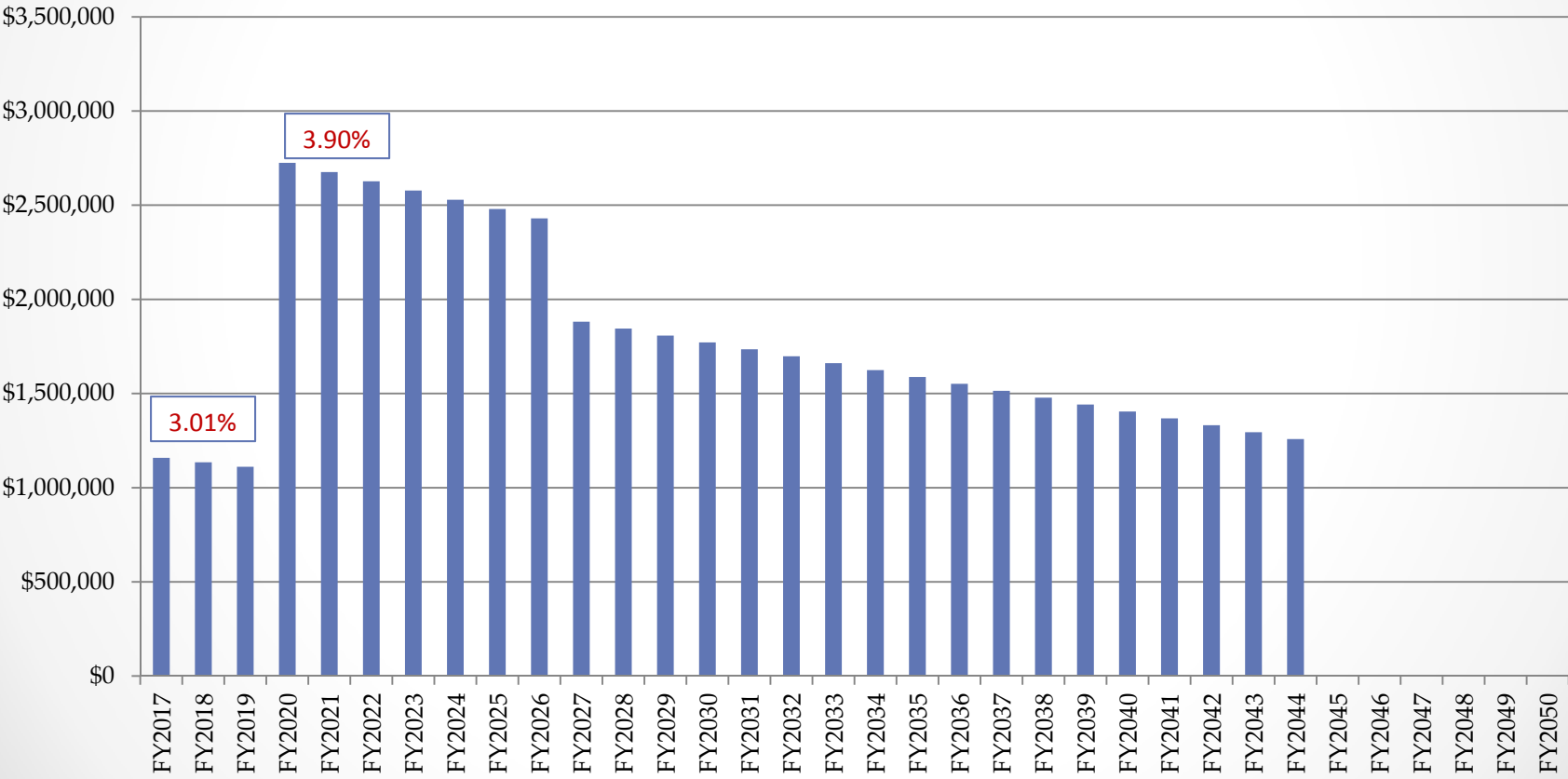
Option 2a: Repair Junior High now Replace Coffin now

Option 2a Annual Debt Service



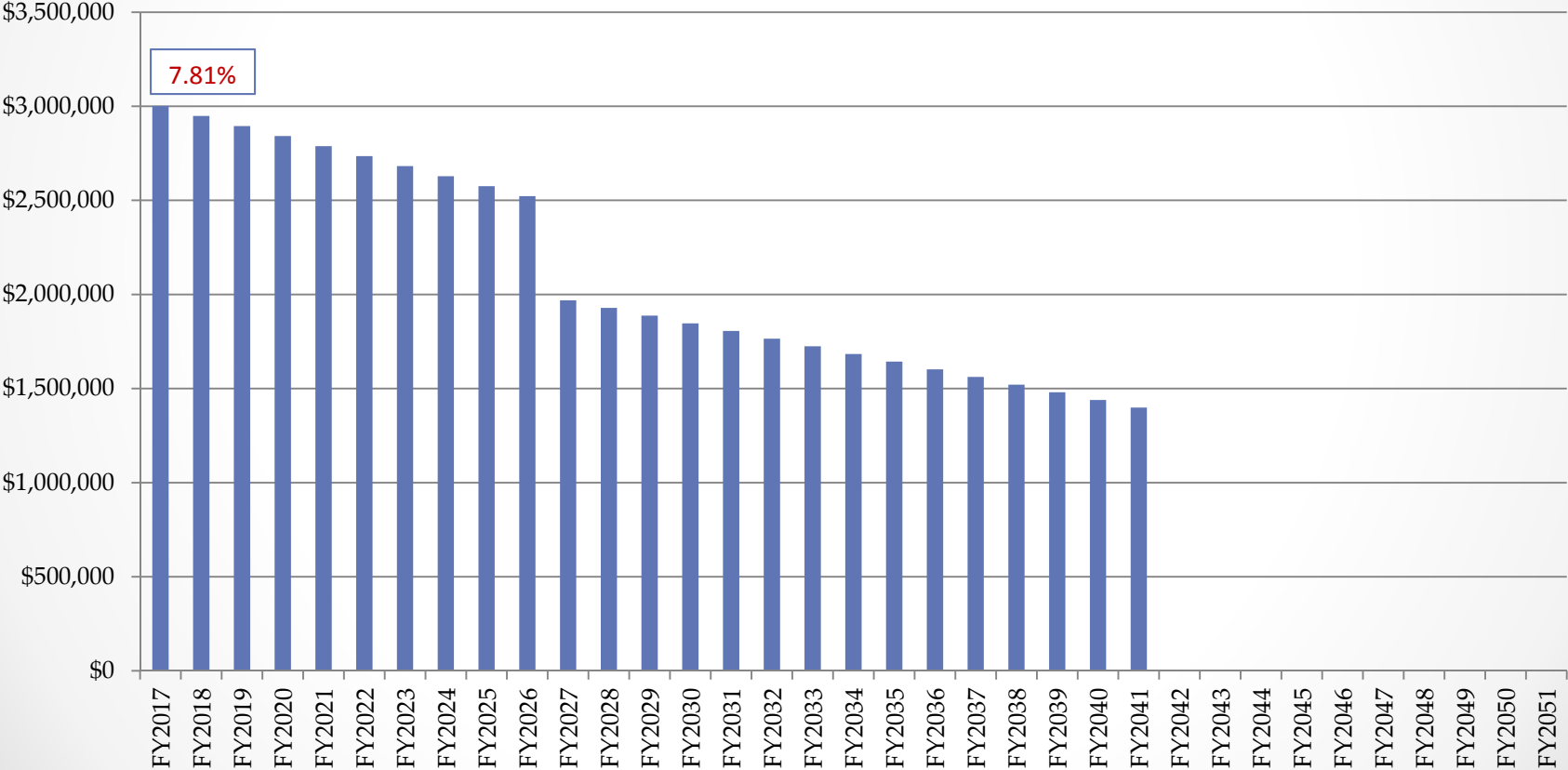
Option 2b: Repair Junior High now Minor repairs to Coffin, Replace Coffin in 3 years

Option 2b Annual Debt Service



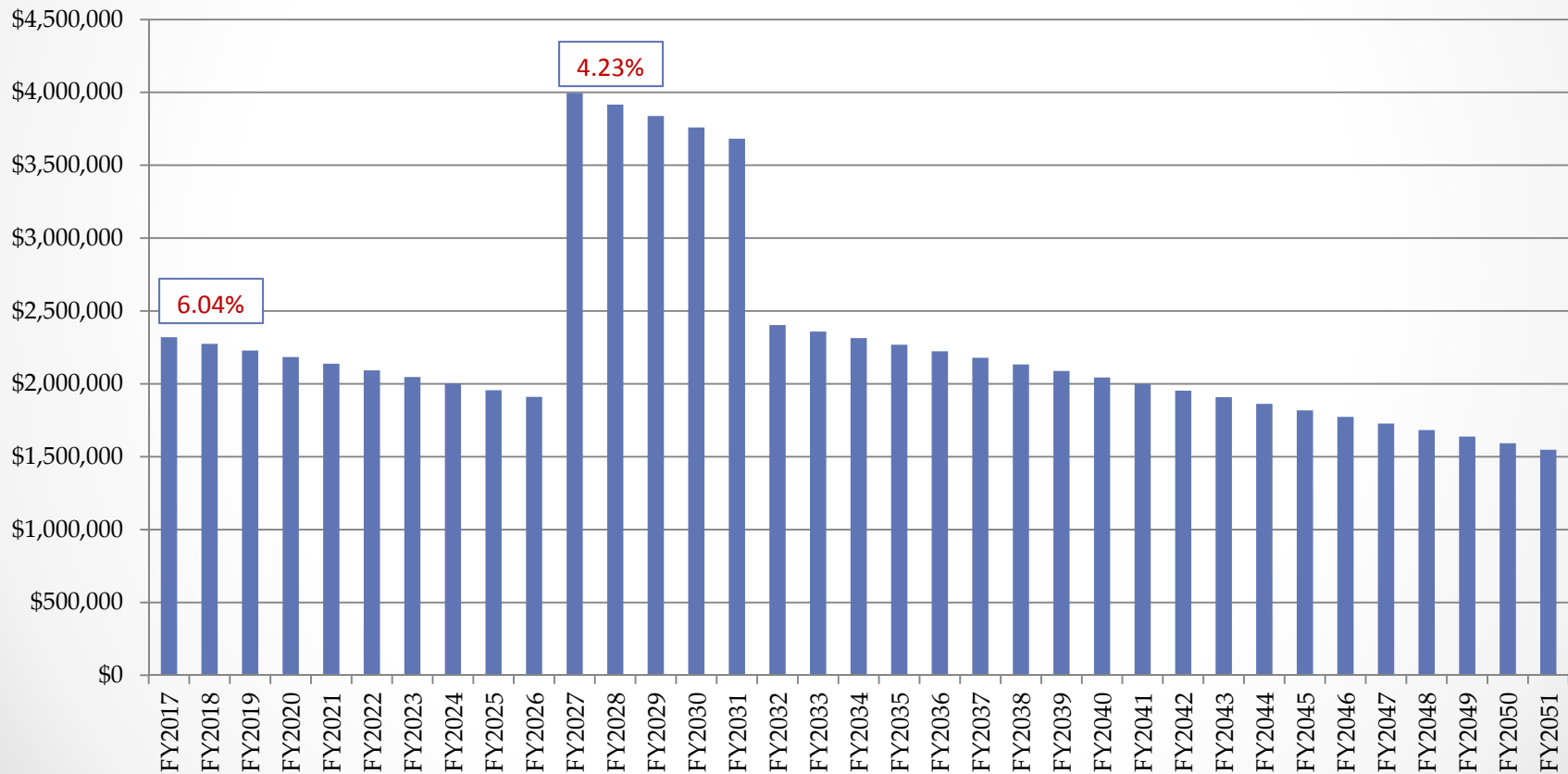
Option 3: Repair Coffin now Replace Junior High now

Option 3 Annual Debt Service



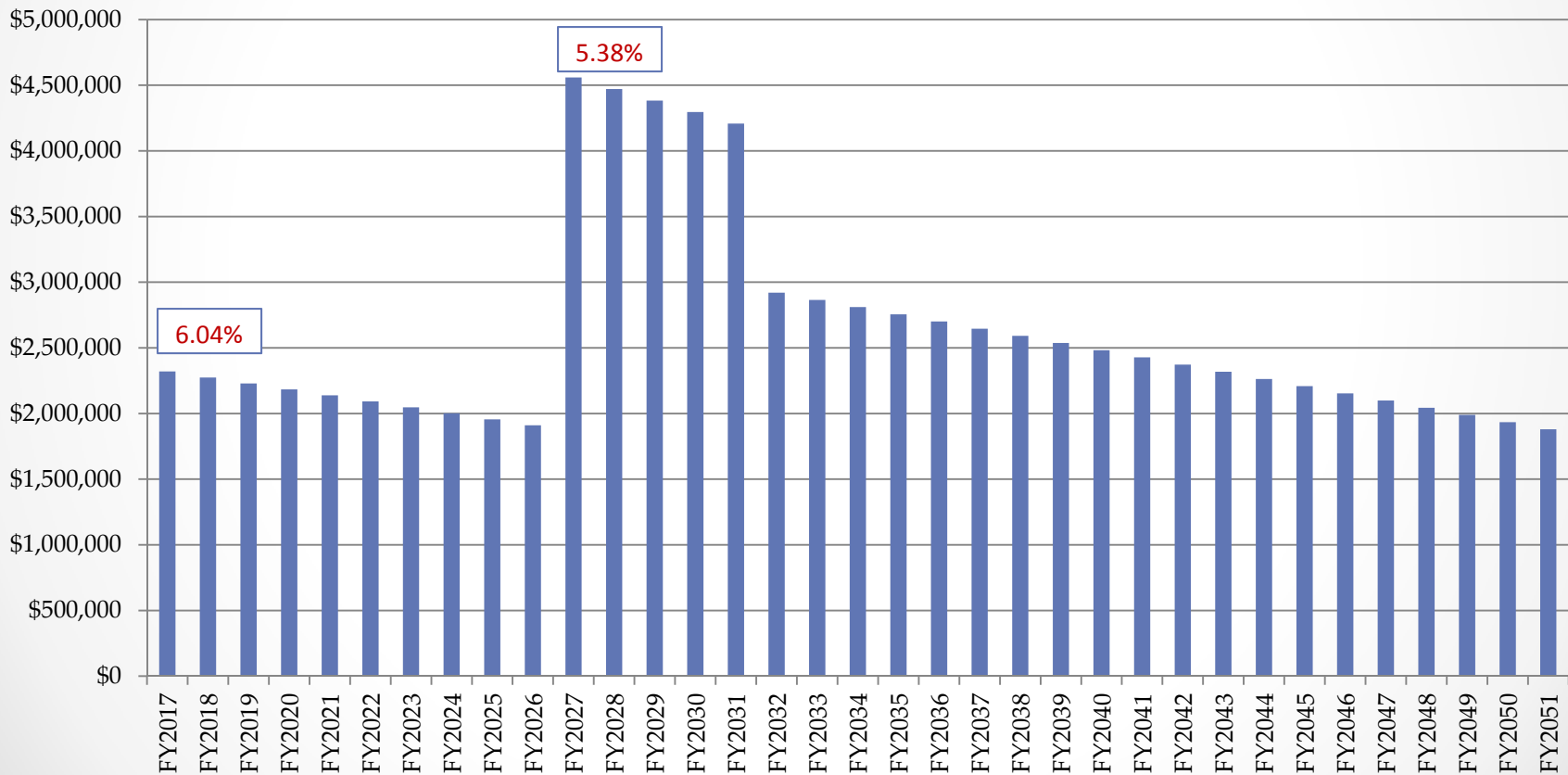
Option 4a: Repair Coffin now Renovate Junior High now, Replace Coffin in 10 years

Option 4a Annual Debt Service

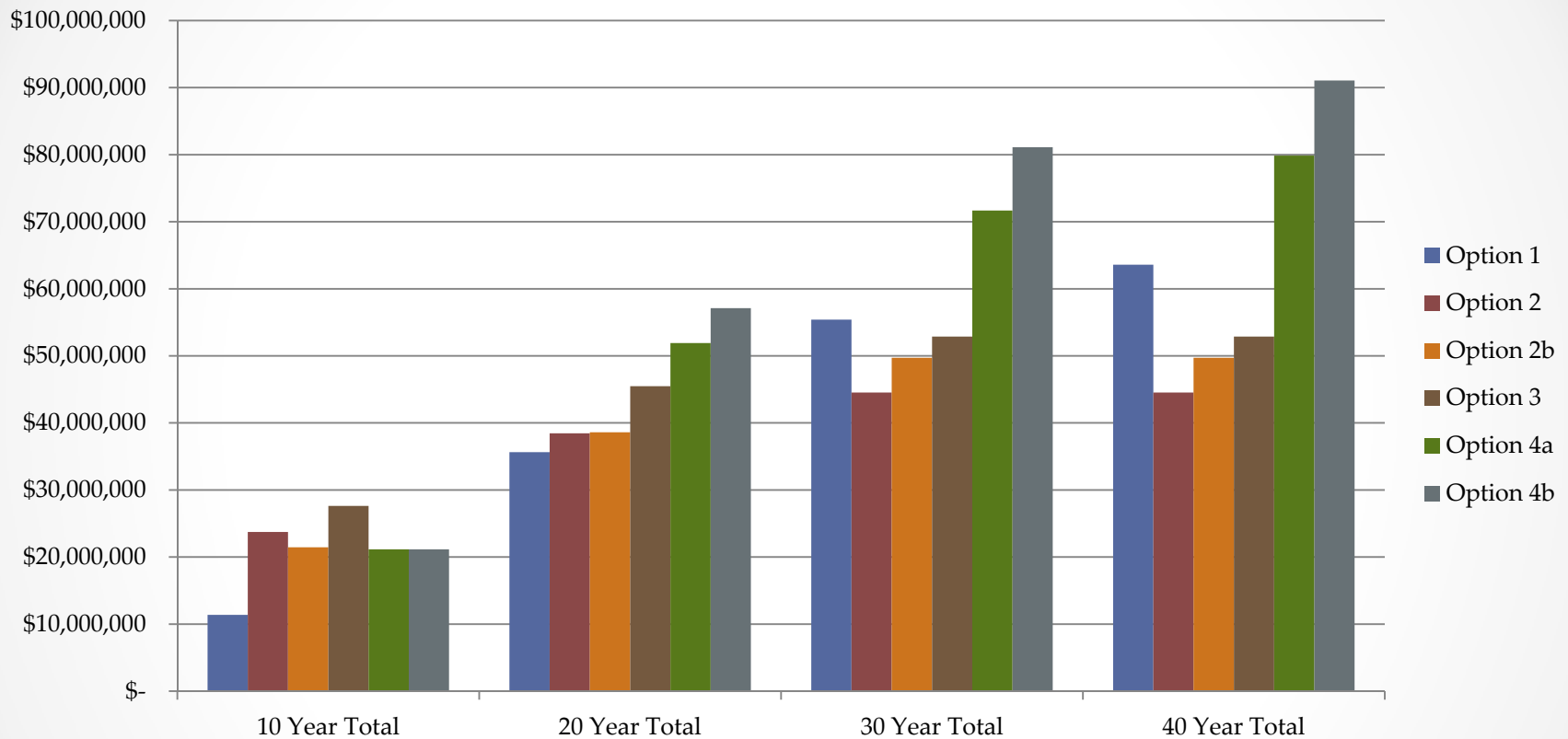


Option 4b: Repair Junior High now Renovate Coffin now, Replace JH in 10 years

Option 4b Annual Debt Service



Long-term debt service cost comparisons



	Option 1	Option 2	Option 2b	Option 3	Option 4a	Option 4b
10 Year Total	\$ 11,375,000	\$ 23,741,135	\$ 21,449,168	\$ 27,618,425	\$ 21,152,500	\$ 21,152,500
20 Year Total	\$ 35,637,576	\$ 38,441,154	\$ 38,611,652	\$ 45,475,494	\$ 51,910,076	\$ 57,120,829
30 Year Total	\$ 55,393,172	\$ 44,533,557	\$ 49,703,136	\$ 52,876,332	\$ 71,665,672	\$ 81,119,236
40 Year Total	\$ 63,580,853	\$ 44,533,557	\$ 49,703,136	\$ 52,876,332	\$ 79,853,353	\$ 91,065,344

Next steps: Financial analysis of old vs. new school buildings

Questions:

- How to estimate square footage rates for operational costs?
- What are estimated savings on annual repair projects?
- What are potential energy efficiency savings?
- How to estimate sizes of new schools?

End

Questions??

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