

Financial Analysis of an Education Capital Project Plan

A. Introduction

Since there has been a lot of discussion about an Education Capital plan, I thought it may be in everyone's best interest to reduce to writing a financial analysis.

This financial analysis report will include specific details of known facts, but will also include a number of assumptions which will be defined and explained.

Included within this report are various spreadsheets used to perform calculations. These attachments will continue to be reviewed and revised as additional information is made available.

Spreadsheets reflecting cash flow drawdown of funds have significant impacts on the multiyear debts budgets, but are not attached to this report. These spreadsheets will be revised periodically and as these revisions are made, the multi-year debt spreadsheets will be updated.

Hopefully, this report will assist us in both our county's financial plan and any capital plans related to Educational Capital Projects and plans.

B. Accounting and Budget Structure of Funds 141, 152,156 and 177

Even though there are other options available for Accounting and Budgeting of Education Capital Projects, we anticipate the following to be used:

- Fund 141 General School Fund, an Operational Fund;
- Fund 152 Rural Debt Service Fund, a fund to be closed after existing debt is paid;
- Fund 156 Education Debt Service Fund, a debt service fund to repay principal and interest of new education indebtedness; and
- Fund 177 Education Capital Project Fund, a capital fund used to pay for purchases or construction of capital assets.

C. Opinion of Financial Positions

Fund 141 General Purpose School Fund

The 141 General Purpose School Fund is an Operational Fund that pays the day to day expenses of education. Local and State revenue is received into the fund to pay these day to day expenses. In the event that excess revenues over expenses have been received into Fund 141, and an adequate fund balance exists, the excess revenue can be transferred into Fund 177 to purchase capital assets or Fund 156 to assist in paying for indebtedness of borrowed funds.

The 2017 Accounting year-end closing reflected additional revenues over expenses of \$800,000. Assuming the fund has a sufficient fund balance, this excess of funds or a part of these funds could be transferred to either the Fund 177 Educational Capital Project or Fund 156 Education Debt Service.

Fund 152 Rural Debt Service Fund

The County's debt policy and annual debt reports reflect that Fund 152 has adequate program revenue to meet the multi-year budget needs until the current indebtedness is paid off. This Fund will be permanently closed once all debt assigned to it has been paid. This Fund was created to pay off debt outside of the Cities of Harriman and Oak Ridge, since both cities had city schools when the debt was issued.

Upon the final payment of this fund, any remaining balance of monies is anticipated to be transferred to Fund 156. The tax rate of 14.5 cents could also be transferred for Fund 156. However, if the tax is levied for Fund 156, then Harriman properties would be assessed a tax which

they are not currently assessed. The final payment of debt in Fund 152 is in 2022, which is noted on page 48 of the “Annual Debt Report as of July 1, 2017.”

Fund 156 Education Service Fund

The County’s debt policy and annual debt report reflect that Fund 156 has adequate program revenue to meet the multi-year budget needs until the current indebtedness is paid-off. Page 51 of the “Annual Debt Report as of July 1, 2017” reflects the multi-year budget, noting an annual revenue of two (2) cents in property tax, which is needed until 2020. The final payment of current debt in Fund 156 is in 2020.

Fund 177 Education Capital Project Fund

As of June 30, 2017 the total cash balance available in Fund 177 was under \$600,000. In relation to the amount of existing educational capital assets to replace and maintain, this amount reflects insufficient funds for current assets, much less for a new capital project.

D. Assumptions

Our analysis looks first at our Annual Debt Report related to Fund 152 Rural Education Debt Service and the Fund 156 Education Debt Service.

Assumptions in the Annual Debt Report:

1. Property tax revenue has three (3) percent annual growth.
2. No new debt is anticipated.
3. Debt fund balance policies are met or explained in extenuating circumstances.

E. Recommendations

Recommendation #1

My first recommendation would be that the Fund 156 Education Debt Service continues to levy the two (2) cent property tax after the existing debt is paid. This recommendation is based on two major premises.

1. It is anticipated that there would continue to be a need for capital asset replacements or new capital asset needs in education. These assets have a high probability of being funded by debt and revenue would be needed to help pay this debt.
2. Assuming new debt would be issued for the above mentioned assets, the fund balance currently projected in Fund 156 is not adequate for any additional debt proposed and the fund balance should be increased and could be increased by leaving the two (2) cent tax in place.

Recommendation #2

My second recommendation would be that upon payment of the final debt in Fund 152 Rural Debt Service any remaining funds, currently estimated at \$50,000, be transferred to Fund 156 in order to increase the 156 fund balance.

Recommendation #3

My third recommendation addresses the property tax currently assigned to the Fund 152 Rural Debt Service, which is 14.5 cents. Options available would be to reduce the tax burden, apply revenue into the Fund 156 Education Debt Service, or apply revenue into the Fund 177 Education Capital Project. The best scenario would be a tax reduction; however, due to the continuous capital needs of education, a tax reduction is not practical. Applying the tax revenue to the Fund 177 Capital Project may reduce the need of future indebtedness;

however, it could take years for sufficient funds to be accumulated to pay for large capital projects. Therefore, the most practical option would be levying the existing tax to the Fund 156 Education Debt Service, which would provide revenue to pay for anticipated debt payments. My recommendation would be to transfer the tax levy of Fund 152 Rural Debt Service to the Fund 156 Education Debt Service.

F. Creation of New Multiyear Debt Budget

The annual debt report was used as a basis to create spreadsheets incorporating a potential \$50 million in new debt. These new spreadsheets assume recommendations #1, #2 and #3 are approved as noted in section E.

The new multi-year debt budget also assumes an annual \$1 million transfer from the Fund 141 General Purpose School to assist in the repayment of the \$50 million indebtedness. (available through efficiencies of the new project.)

Based on the above assumptions, if a revenue short fall exists, the revenue short fall would be used as a plug number (revenue) to calculate the additional revenue needed to insure sufficient funds are available to pay annual indebtedness and reach an acceptable fund balance.

Summary of Assumptions:

1. Issuing \$50 million of new debt.
2. Recommendations #1, #2, and #3 approved.
3. Schools transfer \$1 million to Fund 156 annually.

Amortization scheduling of \$50 million

Assumptions are \$50 million of new debt, four percent interest rate, and straight line amortization.

The loan amortization reflects a payment schedule of almost \$2.9 million annually. Other cost in the fund is estimated at about \$50,000. See attachment labeled “Loan Amortization Schedule.”

Proformas

Upon preparing and analyzing the new multiyear Fund 156 Education Debt Service budget, the **primary issue is timing** of a potential capital project.

The many “ifs” in these scenarios are having a \$1 million school transfer annually and having a project started and completed within a defined number of years.

- If a \$50 million project started in 2023 with the County servicing the debt in 2024 with an annual school transfer of \$1 million, no tax increase would be anticipated. The fund balance would be within policy.
See Attachment “156-2023”.
- If a \$50 million project started in 2018 on a drawdown of funds over three (3) years (drawdown could vary) with the school making a \$1 million transfer in 2024, then a revenue shortfall would exist. This revenue shortfall would exist for five (5) years totaling around \$4.79 million. See Attachment “156 Drawdown”.

- If a \$50 million project starts in 2019 on a drawdown fund over three (3) years (drawdown could vary) with the schools making a \$1 million transfer in 2024, then revenue shortfall would exist. This revenue shortfall would exist for four (4) years totaling around \$2.9 million. See Attachment “156 DD2.”

G. In Conclusion

In conclusion, two critical components present themselves in our analysis.

1. Timing of the capital project and drawdown of funds.
2. How to fund revenue shortfalls in a capital project that start before 2023.

Since the timing of drawdown of funds is so critical to funding needs of the project, the school staff has begun working with their architect and engineers to develop a more defined schedule of drawdown of funds. Revenue shortfalls will be identified by both the school staff and the Executives office. We will work to resolve the projected revenue shortfalls by a potential financial contribution, or by timing the project's schedule or a combination of both.

Loan Amortization Schedule

Enter values		Loan summary	
Loan amount	\$ 50,000,000	Scheduled payment	\$ 2,891,504.96
Annual interest rate	4.00 %	Scheduled number of payments	30
Loan period in years	30	Actual number of payments	30
Number of payments per year	1	Total early payments	\$ -
Start date of loan	5/1/2020	Total interest	\$ 36,745,148.70
Optional extra payments	\$ -		

Lender name: <input type="text" value="Roane County Gov't"/>	Education Penny	\$ 104,000
	Every Penny buys you	\$ 2,891,505
	Pennies needed for Payment	28

Pmt No.	Payment Date	Beginning Balance	Scheduled Payment	Total Payment	Principal	Interest	Ending Balance
1	5/1/2021	\$ 50,000,000.00	\$ 2,891,504.96	\$ 2,891,504.96	\$ 891,504.96	\$ 2,000,000.00	\$49,108,495.04
2	5/1/2022	49,108,495.04	2,891,504.96	2,891,504.96	927,165.15	1,964,339.80	48,181,329.89
3	5/1/2023	48,181,329.89	2,891,504.96	2,891,504.96	964,251.76	1,927,253.20	47,217,078.13
4	5/1/2024	47,217,078.13	2,891,504.96	2,891,504.96	1,002,821.83	1,888,683.13	46,214,256.30
5	5/1/2025	46,214,256.30	2,891,504.96	2,891,504.96	1,042,934.70	1,848,570.25	45,171,321.59
6	5/1/2026	45,171,321.59	2,891,504.96	2,891,504.96	1,084,652.09	1,806,852.86	44,086,669.50
7	5/1/2027	44,086,669.50	2,891,504.96	2,891,504.96	1,128,038.18	1,763,466.78	42,958,631.32
8	5/1/2028	42,958,631.32	2,891,504.96	2,891,504.96	1,173,159.70	1,718,345.25	41,785,471.62
9	5/1/2029	41,785,471.62	2,891,504.96	2,891,504.96	1,220,086.09	1,671,418.86	40,565,385.53
10	5/1/2030	40,565,385.53	2,891,504.96	2,891,504.96	1,268,889.54	1,622,615.42	39,296,495.99
11	5/1/2031	39,296,495.99	2,891,504.96	2,891,504.96	1,319,645.12	1,571,859.84	37,976,850.87
12	5/1/2032	37,976,850.87	2,891,504.96	2,891,504.96	1,372,430.92	1,519,074.03	36,604,419.95
13	5/1/2033	36,604,419.95	2,891,504.96	2,891,504.96	1,427,328.16	1,464,176.80	35,177,091.79
14	5/1/2034	35,177,091.79	2,891,504.96	2,891,504.96	1,484,421.29	1,407,083.67	33,692,670.51
15	5/1/2035	33,692,670.51	2,891,504.96	2,891,504.96	1,543,798.14	1,347,706.82	32,148,872.37
16	5/1/2036	32,148,872.37	2,891,504.96	2,891,504.96	1,605,550.06	1,285,954.89	30,543,322.31
17	5/1/2037	30,543,322.31	2,891,504.96	2,891,504.96	1,669,772.06	1,221,732.89	28,873,550.24
18	5/1/2038	28,873,550.24	2,891,504.96	2,891,504.96	1,736,562.95	1,154,942.01	27,136,987.30
19	5/1/2039	27,136,987.30	2,891,504.96	2,891,504.96	1,806,025.46	1,085,479.49	25,330,961.83
20	5/1/2040	25,330,961.83	2,891,504.96	2,891,504.96	1,878,266.48	1,013,238.47	23,452,695.35
21	5/1/2041	23,452,695.35	2,891,504.96	2,891,504.96	1,953,397.14	938,107.81	21,499,298.21
22	5/1/2042	21,499,298.21	2,891,504.96	2,891,504.96	2,031,533.03	859,971.93	19,467,765.18
23	5/1/2043	19,467,765.18	2,891,504.96	2,891,504.96	2,112,794.35	778,710.61	17,354,970.83
24	5/1/2044	17,354,970.83	2,891,504.96	2,891,504.96	2,197,306.12	694,198.83	15,157,664.70
25	5/1/2045	15,157,664.70	2,891,504.96	2,891,504.96	2,285,198.37	606,306.59	12,872,466.34
26	5/1/2046	12,872,466.34	2,891,504.96	2,891,504.96	2,376,606.30	514,898.65	10,495,860.03
27	5/1/2047	10,495,860.03	2,891,504.96	2,891,504.96	2,471,670.56	419,834.40	8,024,189.48
28	5/1/2048	8,024,189.48	2,891,504.96	2,891,504.96	2,570,537.38	320,967.58	5,453,652.10
29	5/1/2049	5,453,652.10	2,891,504.96	2,891,504.96	2,673,358.87	218,146.08	2,780,293.23
30	5/1/2050	2,780,293.23	2,891,504.96	2,780,293.23	2,669,081.50	111,211.73	0.00

		7/1/2016	7/1/2017	7/1/2018	7/1/2019	7/1/2020	7/1/2021	7/1/2022	7/1/2023	7/1/2024
Fund 156 Education Debt Service		2017	2018	2019	2020	2021	2022	2023	2024	2025
		Actual	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget
Beginning of Year										
Undes. Fund Bal. Est.	654,525	498,170 [1]	420,212	326,342	250,417	187,570	435,450	742,182	2,720,560	2,868,905
Property Tax		103,587	104,500	107,635	110,864	114,190	117,616	121,144	124,778	128,522
Tax Rate		2	2	2	2	2	2	16.5	16.5	16.5
Revenue										
	Revenue Short Fall	-	-	-	-	-	-	-	-	-
40110	Current Property Tax	207,173	209,000	215,270	221,728	228,380	235,231	1,998,878	2,058,845	2,120,610
40120	Trustee Prior Year Collec	6,538	8,200	8,000	8,000	8,000	8,000	8,000	8,000	8,000
40130	Delinquent Tax	6,761	9,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
40140	Interest & Penalty	1,774	1,200	1,000	1,000	1,000	1,000	1,000	1,000	1,000
40150	Pick-Up Taxes	-	-	-	-	-	-	-	-	-
44110	Investment Income	500	500	500	500	500	500	500	500	500
	Transfers from 141			-	-	-	-	-	1,000,000	1,000,000
	Transfers from 152	-	-	-	-	-	52,000	-	-	-
Total Revenues		222,746	227,900	234,770	241,228	247,880	306,731	2,018,378	3,078,345	3,140,110
Expenditures										
82130-601- -2008C	Principal on Bonds	120,000	145,000	140,000	140,000	-	-	-	-	-
82130-601- -2009B	Principal on Bonds	130,000	135,000	140,000	145,000	-	-	-	-	-
NEW DEBT- Principal	\$50 Million	-	-	-	-	-	-	-	890,000	930,000
Total Principal		250,000	280,000	280,000	285,000	-	-	-	890,000	930,000
82230-601- - 2008C	Interest on Bonds	25,870	21,250	14,000	7,000	-	-	-	-	-
82230-601- - 2009B	Interest on Bonds	18,970	14,420	9,695	5,075	-	-	-	-	-
New Debt-Interest	\$50 Million on Drawdown	-	-	-	-	-	-	-	2,000,000	1,964,000
Total Interest		44,840	35,670	23,695	12,075	-	-	-	2,000,000	1,964,000
82330-312	Contracts w/Private Age	1,472	1,600	2,000	2,000	-	-	5,000	5,000	5,000
82330-510	Trustee's Commission	4,392	4,500	5,000	5,000	-	-	35,000	35,000	35,000
Total Other		5,864	6,100	7,000	7,000	-	-	40,000	40,000	40,000
Total Expenditures		300,704	321,770	310,695	304,075	-	-	40,000	2,930,000	2,934,000

Effect on Fund Balance		(77,958)	(93,870)	(75,925)	(62,847)	247,880	306,731	1,978,378	148,345	206,110
Total Ending Restricted Fund Balance		420,212	326,342	250,417	187,570	435,450	742,182	2,720,560	2,868,905	3,075,015
	fund balance/expenditur	140%	101%	81%	62%	#DIV/0!	#DIV/0!	6801%	98%	105%

156 drawdown

		7/1/2016	7/1/2017	7/1/2018	7/1/2019	7/1/2020	7/1/2021	7/1/2022	7/1/2023	7/1/2024
Fund 156 Education Debt Service		2017	2018	2019	2020	2021	2022	2023	2024	2025
		Actual	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget
Beginning of Year										
Undes. Fund Bal. Est.	654,525	498,170 [1]	420,212	326,342	251,417	422,570	690,450	877,182	1,364,560	1,510,905
Property Tax		103,587	104,500	107,635	110,864	114,190	117,616	121,144	124,778	128,522
Tax Rate		2	2	2	2	2	2	16.5	16.5	16.5
Revenue										
	Revenue Short Fall	-	-	90,000	700,000	1,200,000	1,400,000	1,400,000	-	-
40110	Current Property Tax	207,173	209,000	215,270	221,728	228,380	235,231	1,998,878	2,058,845	2,120,610
40120	Trustee Prior Year Collec	6,538	8,200	8,000	8,000	8,000	8,000	8,000	8,000	8,000
40130	Delinquent Tax	6,761	9,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
40140	Interest & Penalty	1,774	1,200	1,000	1,000	1,000	1,000	1,000	1,000	1,000
40150	Pick-Up Taxes	-	-	-	-	-	-	-	-	-
44110	Investment Income	500	500	500	500	500	500	500	500	500
	Transfers from 141			-	-	-	-	-	1,000,000	1,000,000
	Transfers from 152	-	-	-	-	-	52,000	-	-	-
Total Revenues		222,746	227,900	324,770	941,228	1,447,880	1,706,731	3,418,378	3,078,345	3,140,110
Expenditures										
82130-601- -2008C	Principal on Bonds	120,000	145,000	140,000	140,000	-	-	-	-	-
82130-601- -2009B	Principal on Bonds	130,000	135,000	140,000	145,000	-	-	-	-	-
NEW DEBT- Principal	\$50 Million	-	-	-	-	-	-	891,000	927,000	964,000
Total Principal		250,000	280,000	280,000	285,000	-	-	891,000	927,000	964,000
82230-601- - 2008C	Interest on Bonds	25,870	21,250	14,000	7,000	-	-	-	-	-
82230-601- - 2009B	Interest on Bonds	18,970	14,420	9,695	5,075	-	-	-	-	-
New Debt-Interest	\$50 Million on Drawdown	-	-	89,000	466,000	1,180,000	1,520,000	2,000,000	1,965,000	1,927,000
Total Interest		44,840	35,670	112,695	478,075	1,180,000	1,520,000	2,000,000	1,965,000	1,927,000
82330-312	Contracts w/Private Age	1,472	1,600	2,000	2,000	-	-	5,000	5,000	5,000
82330-510	Trustee's Commission	4,392	4,500	5,000	5,000	-	-	35,000	35,000	35,000
Total Other		5,864	6,100	7,000	7,000	-	-	40,000	40,000	40,000
Total Expenditures		300,704	321,770	399,695	770,075	1,180,000	1,520,000	2,931,000	2,932,000	2,931,000

156 drawdown

Effect on Fund Balance		(77,958)	(93,870)	(74,925)	171,153	267,880	186,731	487,378	146,345	209,110
Total Ending Restricted Fund Balance		420,212	326,342	251,417	422,570	690,450	877,182	1,364,560	1,510,905	1,720,015
	fund balance/expenditu	140%	101%	63%	55%	59%	58%	47%	52%	59%

		7/1/2016	7/1/2017	7/1/2018	7/1/2019	7/1/2020	7/1/2021	7/1/2022	7/1/2023	7/1/2024
Fund 156 Education Debt Service		2017	2018	2019	2020	2021	2022	2023	2024	2025
		Actual	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget
Beginning of Year										
Undes. Fund Bal. Est.	654,525	498,170 [1]	420,212	326,342	250,417	298,570	380,450	907,182	1,874,560	1,985,905
Property Tax		103,587	104,500	107,635	110,864	114,190	117,616	121,144	124,778	128,522
Tax Rate		2	2	2	2	2	2	16.5	16.5	16.5
Revenue										
	Revenue Short Fall	-	-	-	200,000	300,000	1,400,000	1,400,000	-	-
40110	Current Property Tax	207,173	209,000	215,270	221,728	228,380	235,231	1,998,878	2,058,845	2,120,610
40120	Trustee Prior Year Collec	6,538	8,200	8,000	8,000	8,000	8,000	8,000	8,000	8,000
40130	Delinquent Tax	6,761	9,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
40140	Interest & Penalty	1,774	1,200	1,000	1,000	1,000	1,000	1,000	1,000	1,000
40150	Pick-Up Taxes	-	-	-	-	-	-	-	-	-
44110	Investment Income	500	500	500	500	500	500	500	500	500
	Transfers from 141			-	-	-	-	-	1,000,000	1,000,000
	Transfers from 152	-	-	-	-	-	52,000	-	-	-
Total Revenues		222,746	227,900	234,770	441,228	547,880	1,706,731	3,418,378	3,078,345	3,140,110
Expenditures										
82130-601- -2008C	Principal on Bonds	120,000	145,000	140,000	140,000	-	-	-	-	-
82130-601- -2009B	Principal on Bonds	130,000	135,000	140,000	145,000	-	-	-	-	-
NEW DEBT- Principal	\$50 Million	-	-	-	-	-	-	891,000	927,000	964,000
Total Principal		250,000	280,000	280,000	285,000	-	-	891,000	927,000	964,000
82230-601- - 2008C	Interest on Bonds	25,870	21,250	14,000	7,000	-	-	-	-	-
82230-601- - 2009B	Interest on Bonds	18,970	14,420	9,695	5,075	-	-	-	-	-
New Debt-Interest	\$50 Million on Drawdown	-	-	-	89,000	466,000	1,180,000	1,520,000	2,000,000	1,965,000
Total Interest		44,840	35,670	23,695	101,075	466,000	1,180,000	1,520,000	2,000,000	1,965,000
82330-312	Contracts w/Private Age	1,472	1,600	2,000	2,000	-	-	5,000	5,000	5,000
82330-510	Trustee's Commission	4,392	4,500	5,000	5,000	-	-	35,000	35,000	35,000
Total Other		5,864	6,100	7,000	7,000	-	-	40,000	40,000	40,000
Total Expenditures		300,704	321,770	310,695	393,075	466,000	1,180,000	2,451,000	2,967,000	2,969,000

Effect on Fund Balance		(77,958)	(93,870)	(75,925)	48,153	81,880	526,731	967,378	111,345	171,110
Total Ending Restricted Fund Balance		420,212	326,342	250,417	298,570	380,450	907,182	1,874,560	1,985,905	2,157,015
	fund balance/expenditu	140%	101%	81%	76%	82%	77%	76%	67%	73%