

General Government and
Educational
Capital Needs that may be financed
through the use of debt and
the associated tax rate increase
needed to support the identified
projects

**Projects Anticipated in the next 3-5 years
from the Infrastructure of Needs Report:**

Jail Expansion
OES Facility
High School(s)

Kaley Walker, CGFM
November, 2014

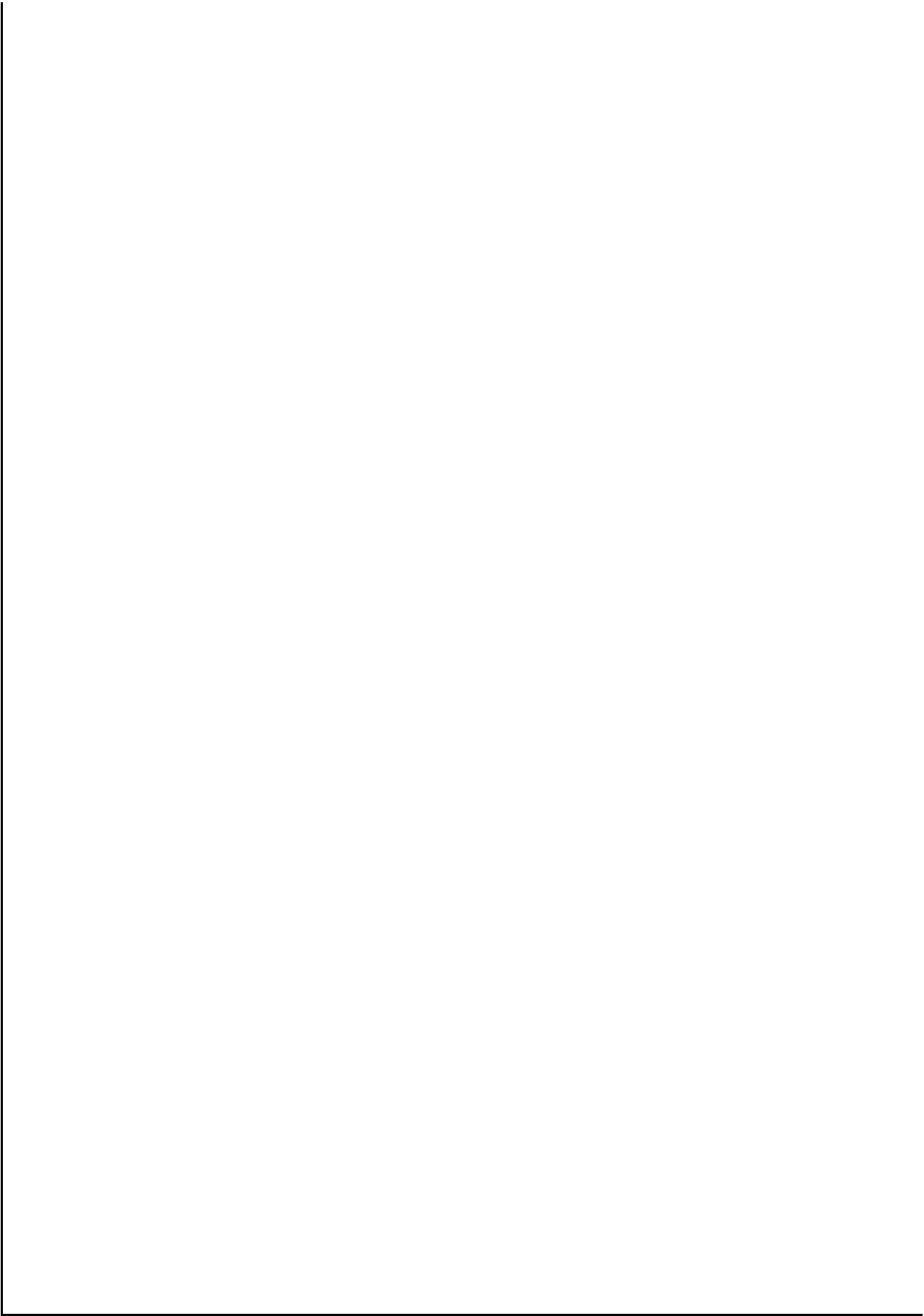
Methodology

- 1 The value of the penny is derived from information from the County Property Assessor's Office. The Assessor has stated that property values countywide will most likely decrease 10%-20% in the 2015 reappraisal. The estimate of a decrease of 15% is used in this calculation for the 2016 budget projection.
- 2 Historically the penny value grows 3% annually but in recent years we have not seen any growth. This projection shows no growth for 2 more years and then a return to the 3% growth.
- 3 All of the estimated loans are calculated at 20 year terms with 3% interest rates.
- 4 The projects that are identified have come from the Roane County Infrastructure of Needs Survey which is conducted annually and is the first step in the capital budgeting process and is a review of the most expensive capital projects. The projects contained in this report are those which are most eminent and are anticipated to occur within the next 3-5 years.
- 5 The analysis following shows the first year payments including both interest and principal on the full loan amount upon approval of the project. In practice the principal payments may be pushed back a year or two until construction would be completed.
- 6 The following analysis reflects the tax rate being levied the year the project has been approved or the year immediately following approval. The policy of levying the tax as early as possible is to ensure adequate fund balance to comply with the growing debt budget and need for a higher fund balance to stay within the required range.

Anticipated Capital Needs Provided by Debt

From General Debt Service Fund 151	
	2016
Jail	5,000,000
OES Building	<u>1,000,000</u>
Total Need	6,000,000
Annual Debt Payment for 20 years at 3%	403,294
Value of the Penny *	102,000
Property Tax rated needed to support debt	0.04

From Education Debt Service Fund 156	
	2016
New High School	50,000,000
Annual Debt Payment for 20 years at 3%	3,360,785
Value of the Penny *	89,250
Property Tax rated needed to support debt	0.38



General Government
Large Capital Need Related Debt

11/7/2014

	2016	2017	2018	2019	2020	2021
Jail	\$ 5,000,000					
OES Building	\$ 1,000,000					
Total Need	6,000,000					
Annual Debt Payment for 20 years at 3%	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25
Value of the Penny *	\$ 102,000.00	\$ 102,000.00	\$ 102,000.00	\$ 105,060.00	\$ 108,211.80	\$ 111,458.15
Property Tax rated needed to support debt	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04

	2022	2023	2024	2025	2026	2027
Annual Debt Payment for 20 years at 3%	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25
Value of the Penny *	\$ 114,801.90	\$ 118,245.96	\$ 121,793.33	\$ 125,447.13	\$ 129,210.55	\$ 133,086.86
Property Tax rated needed to support debt	\$ 0.04	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03

	2028	2029	2030	2031	2032	2033
Annual Debt Payment for 20 years at 3%	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25	\$ 403,294.25
Value of the Penny *	\$ 137,079.47	\$ 141,191.85	\$ 145,427.61	\$ 149,790.44	\$ 154,284.15	\$ 158,912.68
Property Tax rated needed to support debt	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.03

	2034	2035	Total
Annual Debt Payment for 20 years at 3%	\$ 403,294.25	\$ 403,294.25	\$ 8,065,885.00
Value of the Penny *	\$ 163,680.06	\$ 168,590.46	
Property Tax rated needed to support debt	\$ 0.02	\$ 0.02	

* penny value is reduced 15% from current based on data from the Roane County Property Assessor's Office

Loan Amortization Schedule

Enter values	
Loan amount	\$ 6,000,000.00
Annual interest rate	3.00 %
Loan period in years	20
Number of payments per year	1
Start date of loan	7/1/2015
Optional extra payments	

Loan summary	
Scheduled payment	\$ 403,294.25
Scheduled number of payments	20
Actual number of payments	20
Total early payments	\$ -
Total interest	\$ 2,065,884.91

Lender name:

Pmt. No.	Payment Date	Beginning Balance	Scheduled Payment	Extra Payment	Total Payment	Principal	Interest	Ending Balance	Cumulative Interest
1	7/1/2016	\$ 6,000,000.00	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 223,294.25	\$ 180,000.00	\$ 5,776,705.75	\$ 180,000.00
2	7/1/2017	\$ 5,776,705.75	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 229,993.07	\$ 173,301.17	\$ 5,546,712.68	\$ 353,301.17
3	7/1/2018	\$ 5,546,712.68	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 236,892.87	\$ 166,401.38	\$ 5,309,819.82	\$ 519,702.55
4	7/1/2019	\$ 5,309,819.82	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 243,999.65	\$ 159,294.59	\$ 5,065,820.17	\$ 678,997.15
5	7/1/2020	\$ 5,065,820.17	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 251,319.64	\$ 151,974.60	\$ 4,814,500.52	\$ 830,971.75
6	7/1/2021	\$ 4,814,500.52	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 258,859.23	\$ 144,435.02	\$ 4,555,641.29	\$ 975,406.77
7	7/1/2022	\$ 4,555,641.29	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 266,625.01	\$ 136,669.24	\$ 4,289,016.29	\$ 1,112,076.01
8	7/1/2023	\$ 4,289,016.29	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 274,623.76	\$ 128,670.49	\$ 4,014,392.53	\$ 1,240,746.50
9	7/1/2024	\$ 4,014,392.53	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 282,862.47	\$ 120,431.78	\$ 3,731,530.06	\$ 1,361,178.27
10	7/1/2025	\$ 3,731,530.06	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 291,348.34	\$ 111,945.90	\$ 3,440,181.72	\$ 1,473,124.17
11	7/1/2026	\$ 3,440,181.72	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 300,088.79	\$ 103,205.45	\$ 3,140,092.92	\$ 1,576,329.63
12	7/1/2027	\$ 3,140,092.92	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 309,091.46	\$ 94,202.79	\$ 2,831,001.47	\$ 1,670,532.41
13	7/1/2028	\$ 2,831,001.47	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 318,364.20	\$ 84,930.04	\$ 2,512,637.26	\$ 1,755,462.46
14	7/1/2029	\$ 2,512,637.26	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 327,915.13	\$ 75,379.12	\$ 2,184,722.14	\$ 1,830,841.57
15	7/1/2030	\$ 2,184,722.14	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 337,752.58	\$ 65,541.66	\$ 1,846,969.56	\$ 1,896,383.24
16	7/1/2031	\$ 1,846,969.56	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 347,885.16	\$ 55,409.09	\$ 1,499,084.40	\$ 1,951,792.33
17	7/1/2032	\$ 1,499,084.40	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 358,321.71	\$ 44,972.53	\$ 1,140,762.68	\$ 1,996,764.86
18	7/1/2033	\$ 1,140,762.68	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 369,071.37	\$ 34,222.88	\$ 771,691.32	\$ 2,030,987.74
19	7/1/2034	\$ 771,691.32	\$ 403,294.25	\$ -	\$ 403,294.25	\$ 380,143.51	\$ 23,150.74	\$ 391,547.81	\$ 2,054,138.48
20	7/1/2035	\$ 391,547.81	\$ 403,294.25	\$ -	\$ 391,547.81	\$ 379,801.38	\$ 11,746.43	\$ -	\$ 2,065,884.91

Education
Capital Need Related Debt

11/7/2014

	2016	2017	2018	2019	2020	2021
New High School	\$ 50,000,000					
Annual Debt Payment for 20 years at 3%	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785
Value of the Penny *	\$ 89,250	\$ 89,250	\$ 89,250	\$ 91,928	\$ 94,685	\$ 97,526
Property Tax rated needed to support del	\$ 0.38	\$ 0.38	\$ 0.38	\$ 0.37	\$ 0.35	\$ 0.34

	2022	2023	2024	2025	2026	2027
Annual Debt Payment for 20 years at 3%	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785
Value of the Penny *	\$ 100,452	\$ 103,465	\$ 106,569	\$ 109,766	\$ 113,059	\$ 116,451
Property Tax rated needed to support del	\$ 0.33	\$ 0.32	\$ 0.32	\$ 0.31	\$ 0.30	\$ 0.29

	2028	2029	2030	2031	2032	2033
Annual Debt Payment for 20 years at 3%	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785	\$ 3,360,785
Value of the Penny *	\$ 119,945	\$ 123,543	\$ 127,249	\$ 131,067	\$ 134,999	\$ 139,049
Property Tax rated needed to support del	\$ 0.28	\$ 0.27	\$ 0.26	\$ 0.26	\$ 0.25	\$ 0.24

	2034	2035	Total
Annual Debt Payment for 20 years at 3%	\$ 3,360,785	\$ 3,360,785	\$ 67,215,708
Value of the Penny *	\$ 143,220	\$ 147,517	
Property Tax rated needed to support del	\$ 0.23	\$ 0.23	

* penny value is reduced 15% from current based on data from the Roane County Property Assessor's Office

Loan Amortization Schedule

Enter values	
Loan amount	\$50,000,000.00
Annual interest rate	3.00 %
Loan period in years	20
Number of payments per year	1
Start date of loan	7/1/2015
Optional extra payments	

Loan summary	
Scheduled payment	\$ 3,360,785.38
Scheduled number of payments	20
Actual number of payments	20
Total early payments	\$ -
Total interest	\$ 17,215,707.60

Lender name:

Pmt. No.	Payment Date	Beginning Balance	Scheduled Payment	Extra Payment	Total Payment	Principal	Interest	Ending Balance	Cumulative Interest
1	7/1/2016	\$ 50,000,000.00	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 1,860,785.38	\$ 1,500,000.00	\$ 48,139,214.62	\$ 1,500,000.00
2	7/1/2017	\$ 48,139,214.62	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 1,916,608.94	\$ 1,444,176.44	\$ 46,222,605.68	\$ 2,944,176.44
3	7/1/2018	\$ 46,222,605.68	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 1,974,107.21	\$ 1,386,678.17	\$ 44,248,498.47	\$ 4,330,854.61
4	7/1/2019	\$ 44,248,498.47	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,033,330.43	\$ 1,327,454.95	\$ 42,215,168.04	\$ 5,658,309.56
5	7/1/2020	\$ 42,215,168.04	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,094,330.34	\$ 1,266,455.04	\$ 40,120,837.71	\$ 6,924,764.60
6	7/1/2021	\$ 40,120,837.71	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,157,160.25	\$ 1,203,625.13	\$ 37,963,677.46	\$ 8,128,389.74
7	7/1/2022	\$ 37,963,677.46	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,221,875.06	\$ 1,138,910.32	\$ 35,741,802.40	\$ 9,267,300.06
8	7/1/2023	\$ 35,741,802.40	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,288,531.31	\$ 1,072,254.07	\$ 33,453,271.09	\$ 10,339,554.13
9	7/1/2024	\$ 33,453,271.09	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,357,187.25	\$ 1,003,598.13	\$ 31,096,083.85	\$ 11,343,152.26
10	7/1/2025	\$ 31,096,083.85	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,427,902.86	\$ 932,882.52	\$ 28,668,180.98	\$ 12,276,034.78
11	7/1/2026	\$ 28,668,180.98	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,500,739.95	\$ 860,045.43	\$ 26,167,441.03	\$ 13,136,080.21
12	7/1/2027	\$ 26,167,441.03	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,575,762.15	\$ 785,023.23	\$ 23,591,678.88	\$ 13,921,103.44
13	7/1/2028	\$ 23,591,678.88	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,653,035.01	\$ 707,750.37	\$ 20,938,643.87	\$ 14,628,853.81
14	7/1/2029	\$ 20,938,643.87	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,732,626.06	\$ 628,159.32	\$ 18,206,017.80	\$ 15,257,013.12
15	7/1/2030	\$ 18,206,017.80	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,814,604.85	\$ 546,180.53	\$ 15,391,412.96	\$ 15,803,193.66
16	7/1/2031	\$ 15,391,412.96	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,899,042.99	\$ 461,742.39	\$ 12,492,369.97	\$ 16,264,936.05
17	7/1/2032	\$ 12,492,369.97	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 2,986,014.28	\$ 374,771.10	\$ 9,506,355.69	\$ 16,639,707.14
18	7/1/2033	\$ 9,506,355.69	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 3,075,594.71	\$ 285,190.67	\$ 6,430,760.98	\$ 16,924,897.81
19	7/1/2034	\$ 6,430,760.98	\$ 3,360,785.38	\$ -	\$ 3,360,785.38	\$ 3,167,862.55	\$ 192,922.83	\$ 3,262,898.43	\$ 17,117,820.64
20	7/1/2035	\$ 3,262,898.43	\$ 3,360,785.38	\$ -	\$ 3,262,898.43	\$ 3,165,011.47	\$ 97,886.95	\$ -	\$ 17,215,707.60