Grove City Area School District

MAXIMUM PARAMETERS BOND SALE DOCUMENT

October 9, 2017

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MUNICIPAL MARKET UPDATE

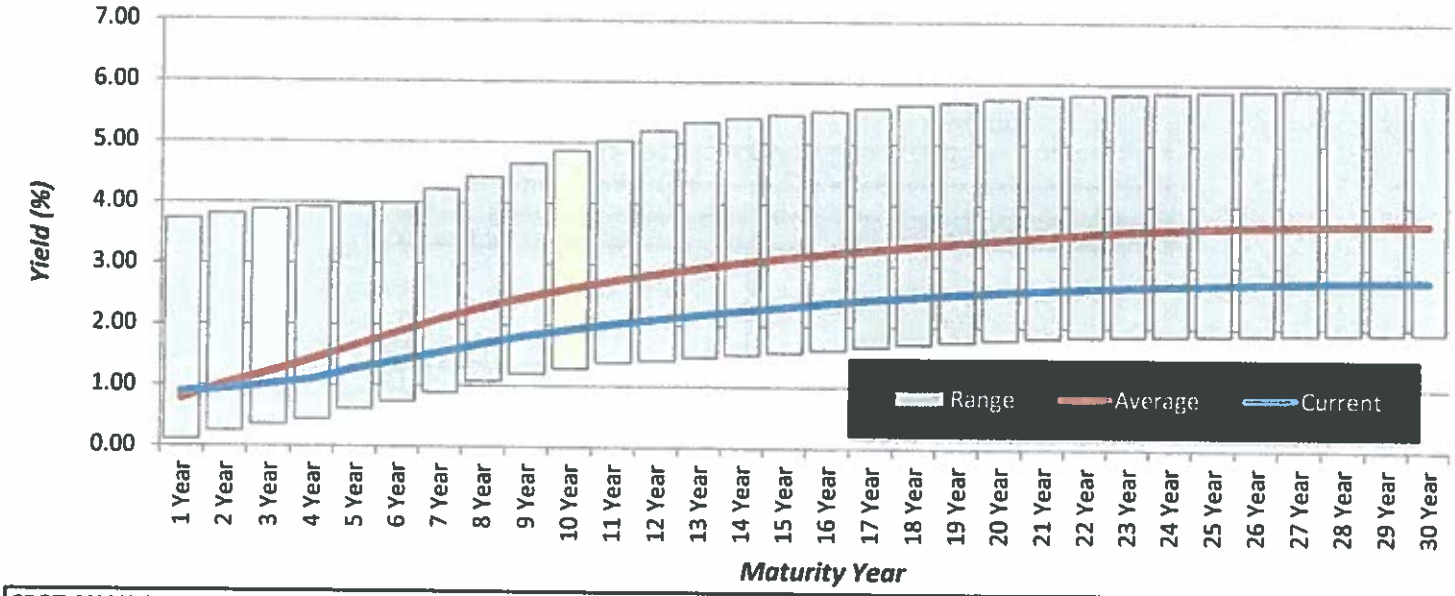
September 27, 2017

MMD YIELD CURVE

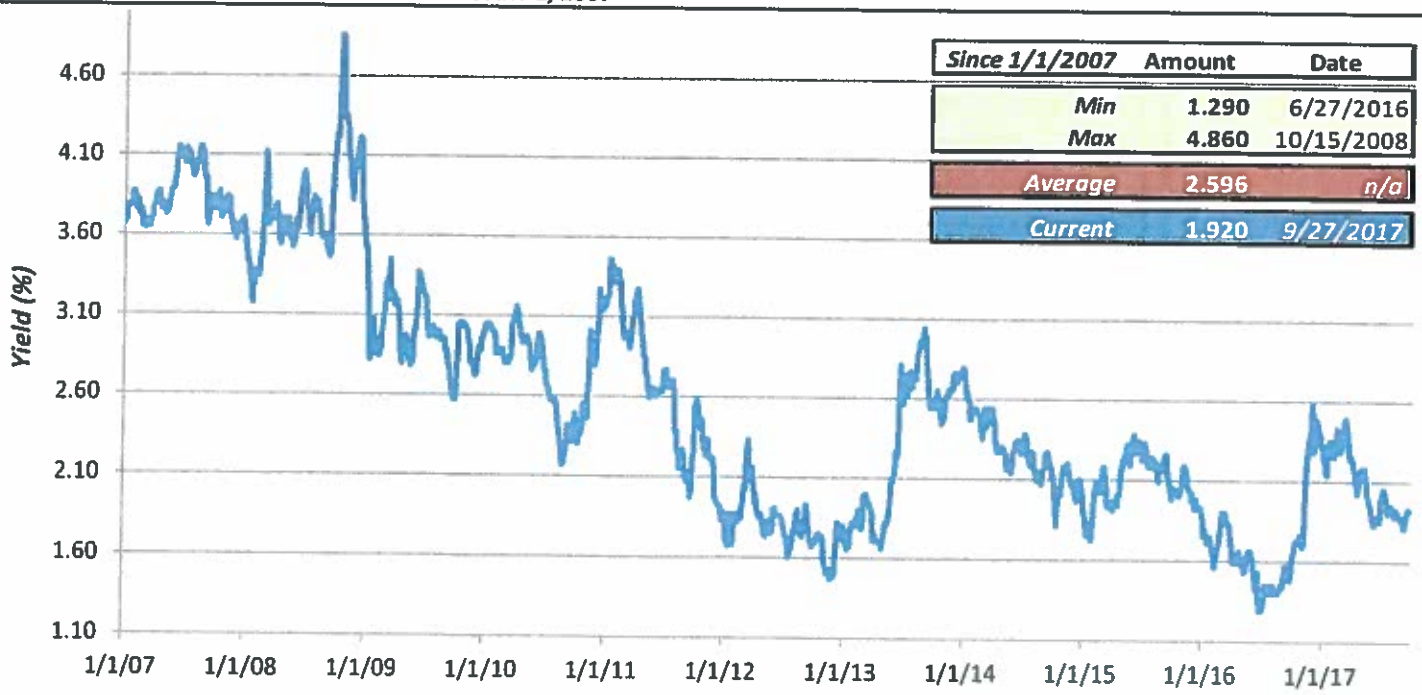
The MMD Yield Curve is a high grade municipal yield curve published daily by Municipal Market Data. It is one of the most commonly used benchmarks in municipal finance. The yields within the curve reflect the current yields for each maturity year at which bondholders would be likely to sell high quality (AAA rated) general obligation backed bonds. The yield curve is typically influenced by new issuances in the primary market as well as post-issuance trading in the secondary market.

Municipal bonds typically trade at a "spread to MMD", meaning the difference between the yield in a specific year of a bond issue and the respective yield in the MMD Yield Curve. While these spreads vary over time, they can be a meaningful and powerful tool in trying to compare relative yield levels in a volatile interest rate environment.

HISTORICAL MMD CURVE ILLUSTRATION - SINCE JANUARY 1, 2007



SPOT ANALYSIS - 10 YEAR MMD - SINCE JANUARY 1, 2007



Since 1/1/2007	Amount	Date
Min	1.290	6/27/2016
Max	4.860	10/15/2008
Average	2.596	n/a
Current	1.920	9/27/2017

GROVE CITY AREA SCHOOL DISTRICT
SUMMARY OF OUTSTANDING INDEBTEDNESS

Debt Service Requirements

1	2	3	4
		Mercer County Career Center	
Fiscal Year Ended	G.O. Bonds Series of 2013	Rev. Bonds Series of 2014	Total Debt Service
6/30/2018	976,000	177,719	1,153,719
6/30/2019	977,600	176,968	1,154,568
6/30/2020	978,800	177,097	1,155,897
6/30/2021	974,650	176,836	1,151,486
6/30/2022		178,003	178,003
6/30/2023		177,225	177,225
6/30/2024		178,029	178,029
6/30/2025		177,427	177,427
6/30/2026		177,446	177,446
6/30/2027		177,327	177,327
6/30/2028		176,869	176,869
6/30/2029		176,976	176,976
6/30/2030			
6/30/2031			
Totals	3,907,050	2,127,922	6,034,972

Local Effort Requirements

5	6	7	8
Fiscal Year Ended	G.O. Bonds Series of 2013	Rev. Bonds Series of 2014	Total Local Effort
6/30/2018	842,098	115,390	957,488
6/30/2019	843,479	114,902	958,381
6/30/2020	844,514	114,986	959,500
6/30/2021	840,934	114,816	955,750
6/30/2022		115,574	115,574
6/30/2023		115,069	115,069
6/30/2024		115,591	115,591
6/30/2025		115,200	115,200
6/30/2026		115,212	115,212
6/30/2027		115,135	115,135
6/30/2028		114,838	114,838
6/30/2029		114,908	114,908
6/30/2030			
6/30/2031			
Totals	3,371,025	1,381,620	4,752,645

Principal*:	3,755,000	1,769,662	5,524,662

PE%:	23.42%	59.87%
PE% Status:	Temp.	Temp.
AR% (17-18):	58.58%	58.58%
Call Date:	5/15/2018	5/1/2019
Purpose:	Adv Ref 2009	Adv Ref portion of 2009

* Outstanding as of September 27, 2017

GROVE CITY AREA SCHOOL DISTRICT
SUMMARY OF NEW MONEY PLAN

SCENARIO 3 - ASSUMES A $36,950,000 PROJECT WITH $6,965,000 CASH CONTRIBUTION TO DOWNSIZE BORROWING

ESTIMATED
For Illustrative Purposes Only

	1	2	3	4
	STEP 1	STEP 2	STEP 3	Total
Principal	$9,995,000	$9,995,000	$9,995,000	$29,985,000
District Cash Contribution	$0	$6,965,000	$0	$6,965,000
Term	Wrap	Wrap	Wrap	Wrap
Bank Qualified?	BQ	BQ	BQ	
Settlement	11/28/2017	8/1/2018	6/1/2019	

5	6	7	8	9
Fiscal Year	Millage Rate	2017-2018 Act 1 Index	Incremental Millage	Est. Project Millage
6/30/2018	62.00	3.40%	0.00	
6/30/2019	64.11	3.40%	2.11	0.28
6/30/2020	66.29	3.40%	2.18	0.29
6/30/2021	68.54	3.40%	2.25	0.28
6/30/2022	70.87	3.40%	2.33	0.29

Assumes future Act 1 Index levels are equal to 2017-2018 published values.

10	11	12	13	14	15	16	17	18	19	20	21	22	23
Fiscal Year Ending	Existing Local Effort	Proposed Debt Service	Proposed Debt Service	Proposed Debt Service	Total New Debt Service	Total Debt Service	Gross Millage Equivalent[1]	Less: State Reimbursement	Less: Annually Budgeted District Funds***	Less: Capitalized Interest: District Cash	Less: Est. Indirect Cost /(Savings)****	Estimated Net Local Effort	Estimated Net Millage Equivalent[1]
6/30/2016	951,257					951,257						951,257	
6/30/2017	952,152	494,076	226,971		721,047	1,673,199	3.91	(97,530)	(500,000)	(30,000)	(43,353)	1,002,316	0.28
6/30/2018	953,264	397,579	394,034	223,670	1,015,282	1,968,546	1.60	(137,328)	(500,000)	(232,000)	(43,353)	1,055,865	0.29
6/30/2019	949,535	397,446	393,910	388,374	1,179,730	2,129,264	0.87	(159,572)	(500,000)	(318,000)	(43,353)	1,108,340	0.28
6/30/2020	113,592	623,994	605,831	610,348	1,840,172	1,953,764		(248,904)	(500,000)		(43,353)	1,161,507	0.29
6/30/2021	113,095	626,922	604,577	609,161	1,840,660	1,953,755		(248,970)	(500,000)		(43,353)	1,161,433	
6/30/2022	113,609	624,298	602,876	612,414	1,839,587	1,953,195		(248,825)	(500,000)		(43,353)	1,161,017	
6/30/2023	113,224	626,109	605,634	610,123	1,841,866	1,955,090		(249,133)	(500,000)		(43,353)	1,162,604	
6/30/2024	113,236	627,282	602,848	612,266	1,842,395	1,955,631		(249,205)	(500,000)		(43,353)	1,163,074	
6/30/2025	113,160	622,906	604,520	613,756	1,841,183	1,954,343		(249,041)	(500,000)		(43,353)	1,161,949	
6/30/2026	112,868	623,020	605,574	609,680	1,838,274	1,951,142		(248,647)	(500,000)		(43,353)	1,159,142	
6/30/2027	112,937	627,473	601,130	610,046	1,838,649	1,951,586		(248,698)	(500,000)		(43,353)	1,159,535	
6/30/2028		645,875	699,395	609,807	1,955,076	1,955,076		(264,446)	(500,000)		(43,353)	1,147,277	
6/30/2029		648,234	651,062	653,171	1,952,466	1,952,466		(264,093)	(500,000)		(43,353)	1,145,020	
6/30/2030		644,932	657,764	650,105	1,952,802	1,952,802		(264,138)	(500,000)		(43,353)	1,145,310	
6/30/2031		645,938	653,703	651,340	1,950,981	1,950,981		(263,892)	(500,000)		(43,353)	1,143,735	
6/30/2032		648,137	653,938	651,803	1,951,876	1,951,876		(264,013)	(500,000)		(43,353)	1,144,510	
6/30/2033		645,514	653,352	656,360	1,955,225	1,955,225		(264,466)	(500,000)		(43,353)	1,147,406	
6/30/2034		644,069	656,832	650,091	1,950,991	1,950,991		(263,893)	(500,000)		(43,353)	1,143,745	
6/30/2035		646,727	654,379	652,974	1,954,079	1,954,079		(264,311)	(500,000)		(43,353)	1,146,415	
6/30/2036		648,414	651,119	654,814	1,954,346	1,954,346		(264,347)	(500,000)		(43,353)	1,146,646	
6/30/2037		644,242	656,880	650,738	1,951,860	1,951,860		(264,011)	(500,000)		(43,353)	1,144,496	
6/30/2038		644,225	656,568	650,779	1,951,571	1,951,571		(263,972)	(500,000)		(43,353)	1,144,246	
6/30/2039		643,300	655,300	654,741	1,953,340	1,953,340		(264,211)	(500,000)		(43,353)	1,145,776	
6/30/2040		646,380	653,119	652,639	1,952,138	1,952,138		(264,048)	(500,000)		(43,353)	1,144,736	
6/30/2041		643,462	654,941	654,516	1,952,919	1,952,919		(264,154)	(500,000)		(43,353)	1,145,412	
6/30/2042		644,542	655,656	655,290	1,955,487	1,955,487		(264,502)	(500,000)		(43,353)	1,147,632	
6/30/2043		644,508	655,260	654,954	1,954,722	1,954,722		(264,398)	(500,000)		(43,353)	1,146,970	
6/30/2044		643,356	658,642	653,504	1,955,502	1,955,502		(264,504)	(500,000)		(43,353)	1,147,645	
6/30/2045													
6/30/2046													
6/30/2047													
6/30/2048													
6/30/2049													
6/30/2050													
TOTAL	4,711,929	17,260,968	17,026,807	16,557,480	50,844,224	55,556,154	6.38	(6,677,252)	(14,000,000)	(580,000)	(1,213,884)	32,885,018	1.14

[1] 1 Mill = $184,500
PE% = 23.09% *Based on PlanCon Part D*
AR% = 58.58%
Eff % = 13.53%

- Does not include pre-construction spending
*Local Effort in Steps 1-3 estimated based on estimated interest rates. Actual rates to be determined at the time of pricing.
**Local Effort includes the District's pro-rata share of Mercer County Career Center.
***Assumes District will use $500,000 budgeted funds annually for debt service and the funds will no longer be available to fund reserves.
****Per the Act 34 Hearing

GROVE CITY AREA SCHOOL DISTRICT
SERIES OF 2017

STEP 1 - ESTIMATED

Settled 11/28/2017
Dated 11/28/2017

1	2	3	4	5	6	7	8	9	10
Date	Principal	Rate	Interest	Semi-Annual Debt Service	Proposed Fiscal Year Debt Service	*Less:* State Aid	Proposed Local Effort	Existing Local Effort	Total Local Effort
9/1/2018			297,754.65	297,754.65					
3/1/2019			196,321.75	196,321.75	494,076.40	(66,829.38)	427,247.03	952,151.90	1,379,398.93
9/1/2019	5,000	2.580	196,321.75	201,321.75					
3/1/2020			196,257.25	196,257.25	397,579.00	(53,777.02)	343,801.98	953,263.83	1,297,065.81
9/1/2020	5,000	2.740	196,257.25	201,257.25					
3/1/2021			196,188.75	196,188.75	397,446.00	(53,759.03)	343,686.97	949,534.76	1,293,221.73
9/1/2021	235,000	2.880	196,188.75	431,188.75					
3/1/2022			192,804.75	192,804.75	623,993.50	(84,402.12)	539,591.38	113,591.82	653,183.20
9/1/2022	245,000	3.010	192,804.75	437,804.75					
3/1/2023			189,117.50	189,117.50	626,922.25	(84,798.27)	542,123.98	113,095.23	655,219.22
9/1/2023	250,000	3.150	189,117.50	439,117.50					
3/1/2024			185,180.00	185,180.00	624,297.50	(84,443.24)	539,854.26	113,608.62	653,462.88
9/1/2024	260,000	3.270	185,180.00	445,180.00					
3/1/2025			180,929.00	180,929.00	626,109.00	(84,688.27)	541,420.73	113,224.49	654,645.23
9/1/2025	270,000	3.390	180,929.00	450,929.00					
3/1/2026			176,352.50	176,352.50	627,281.50	(84,846.86)	542,434.64	113,236.18	655,670.82
9/1/2026	275,000	3.490	176,352.50	451,352.50					
3/1/2027			171,553.75	171,553.75	622,906.25	(84,255.06)	538,651.19	113,160.23	651,811.42
9/1/2027	285,000	3.570	171,553.75	456,553.75					
3/1/2028			166,466.50	166,466.50	623,020.25	(84,270.48)	538,749.77	112,868.12	651,617.89
9/1/2028	300,000	3.640	166,466.50	466,466.50					
3/1/2029			161,006.50	161,006.50	627,473.00	(84,872.76)	542,600.24	112,936.76	655,537.00
9/1/2029	330,000	3.720	161,006.50	491,006.50					
3/1/2030			154,868.50	154,868.50	645,875.00	(87,361.84)	558,513.16		558,513.16
9/1/2030	345,000	3.770	154,868.50	499,868.50					
3/1/2031			148,365.25	148,365.25	648,233.75	(87,680.89)	560,552.86		560,552.86
9/1/2031	355,000	3.830	148,365.25	503,365.25					
3/1/2032			141,567.00	141,567.00	644,932.25	(87,234.32)	557,697.93		557,697.93
9/1/2032	370,000	3.890	141,567.00	511,567.00					
3/1/2033			134,370.50	134,370.50	645,937.50	(87,370.29)	558,567.21		558,567.21
9/1/2033	385,000	3.950	134,370.50	519,370.50					
3/1/2034			126,766.75	126,766.75	646,137.25	(87,397.31)	558,739.94		558,739.94
9/1/2034	400,000	4.010	126,766.75	526,766.75					
3/1/2035			118,746.75	118,746.75	645,513.50	(87,312.94)	558,200.56		558,200.56
9/1/2035	415,000	4.060	118,746.75	533,746.75					
3/1/2036			110,322.25	110,322.25	644,069.00	(87,117.56)	556,951.44		556,951.44
9/1/2036	435,000	4.100	110,322.25	545,322.25					
3/1/2037			101,404.75	101,404.75	646,727.00	(87,477.08)	559,249.92		559,249.92
9/1/2037	455,000	4.130	101,404.75	556,404.75					
3/1/2038			92,009.00	92,009.00	648,413.75	(87,705.23)	560,708.52		560,708.52
9/1/2038	470,000	4.160	92,009.00	562,009.00					
3/1/2039			82,233.00	82,233.00	644,242.00	(87,140.96)	557,101.04		557,101.04
9/1/2039	490,000	4.180	82,233.00	572,233.00					
3/1/2040			71,992.00	71,992.00	644,225.00	(87,138.66)	557,086.34		557,086.34
9/1/2040	510,000	4.190	71,992.00	581,992.00					
3/1/2041			61,307.50	61,307.50	643,299.50	(87,013.48)	556,286.02		556,286.02
9/1/2041	535,000	4.200	61,307.50	596,307.50					
3/1/2042			50,072.50	50,072.50	646,380.00	(87,430.15)	558,949.85		558,949.85
9/1/2042	555,000	4.210	50,072.50	605,072.50					
3/1/2043			38,389.75	38,389.75	643,462.25	(87,035.49)	556,426.76		556,426.76
9/1/2043	580,000	4.220	38,389.75	618,389.75					
3/1/2044			26,151.75	26,151.75	644,541.50	(87,181.47)	557,360.03		557,360.03
9/1/2044	605,000	4.230	26,151.75	631,151.75					
3/1/2045			13,356.00	13,356.00	644,507.75	(87,176.90)	557,330.85		557,330.85
9/1/2045	630,000	4.240	13,356.00	643,356.00					
3/1/2046			0.00	0.00	643,356.00	(87,021.12)	556,334.88		556,334.88
TOTALS	**9,995,000**		7,265,957.65	17,260,957.65	17,260,957.65	(2,334,738.19)	14,926,219.46	3,760,671.96	18,686,891.42

PE%= 23.09% *Based on PlanCon Part D*
AR%= 58.58%
1 MILL= 184,500 Estimated

PFM Financial Advisors LLC 9/27/2017

Maximum Parameters

GROVE CITY AREA SCHOOL DISTRICT
SERIES OF 2017

STEP 1 - MAXIMUM PARAMETERS SCHEDULE

1	2	3	4	5	6
Date	Principal	Coupon	Interest	Semi-Annual Debt Service	Fiscal Year Debt Service
9/1/2018			500,500.00	500,500.00	
3/1/2019			330,000.00	330,000.00	830,500.00
9/1/2019	20,000	5.500	330,000.00	350,000.00	
3/1/2020			329,450.00	329,450.00	679,450.00
9/1/2020	20,000	5.500	329,450.00	349,450.00	
3/1/2021			328,900.00	328,900.00	678,350.00
9/1/2021	310,000	5.500	328,900.00	638,900.00	
3/1/2022			320,375.00	320,375.00	959,275.00
9/1/2022	320,000	5.500	320,375.00	640,375.00	
3/1/2023			311,575.00	311,575.00	951,950.00
9/1/2023	325,000	5.500	311,575.00	636,575.00	
3/1/2024			302,637.50	302,637.50	939,212.50
9/1/2024	335,000	5.500	302,637.50	637,637.50	
3/1/2025			293,425.00	293,425.00	931,062.50
9/1/2025	345,000	5.500	293,425.00	638,425.00	
3/1/2026			283,937.50	283,937.50	922,362.50
9/1/2026	350,000	5.500	283,937.50	633,937.50	
3/1/2027			274,312.50	274,312.50	908,250.00
9/1/2027	360,000	5.500	274,312.50	634,312.50	
3/1/2028			264,412.50	264,412.50	898,725.00
9/1/2028	365,000	5.500	264,412.50	629,412.50	
3/1/2029			254,375.00	254,375.00	883,787.50
9/1/2029	440,000	5.500	254,375.00	694,375.00	
3/1/2030			242,275.00	242,275.00	936,650.00
9/1/2030	450,000	5.500	242,275.00	692,275.00	
3/1/2031			229,900.00	229,900.00	922,175.00
9/1/2031	460,000	5.500	229,900.00	689,900.00	
3/1/2032			217,250.00	217,250.00	907,150.00
9/1/2032	470,000	5.500	217,250.00	687,250.00	
3/1/2033			204,325.00	204,325.00	891,575.00
9/1/2033	480,000	5.500	204,325.00	684,325.00	
3/1/2034			191,125.00	191,125.00	875,450.00
9/1/2034	495,000	5.500	191,125.00	686,125.00	
3/1/2035			177,512.50	177,512.50	863,637.50
9/1/2035	505,000	5.500	177,512.50	682,512.50	
3/1/2036			163,625.00	163,625.00	846,137.50
9/1/2036	515,000	5.500	163,625.00	678,625.00	
3/1/2037			149,462.50	149,462.50	828,087.50
9/1/2037	530,000	5.500	149,462.50	679,462.50	
3/1/2038			134,887.50	134,887.50	814,350.00
9/1/2038	545,000	5.500	134,887.50	679,887.50	
3/1/2039			119,900.00	119,900.00	799,787.50
9/1/2039	565,000	5.500	119,900.00	684,900.00	
3/1/2040			104,362.50	104,362.50	789,262.50
9/1/2040	580,000	5.500	104,362.50	684,362.50	
3/1/2041			88,412.50	88,412.50	772,775.00
9/1/2041	595,000	5.500	88,412.50	683,412.50	
3/1/2042			72,050.00	72,050.00	755,462.50
9/1/2042	615,000	5.500	72,050.00	687,050.00	
3/1/2043			55,137.50	55,137.50	742,187.50
9/1/2043	640,000	5.500	55,137.50	695,137.50	
3/1/2044			37,537.50	37,537.50	732,675.00
9/1/2044	670,000	5.500	37,537.50	707,537.50	
3/1/2045			19,112.50	19,112.50	726,650.00
9/1/2045	695,000	5.500	19,112.50	714,112.50	
3/1/2046					714,112.50
TOTALS	12,000,000		11,501,050.00	23,501,050.00	23,501,050.00

Grove City Area School District

Sample Timeline	
February 13, 2017	Initial presentation to the Board
August 7, 2017	Board Update & Discussion
October 3, 2017 (or later)	Advertise for Parameters Resolution
October 9, 2017 (or later)	Adopt Parameters Resolution (Columbus Day)
October 19, 2017 (or later)	Sale (Lock-in Rates)
November 28, 2017 (or later)	Settlement