Town of Needham
Facilities Master Plan
Debt Analysis Summary
November 14, 2006

Town of Needham
Facilities Master Plan
Project Financing Assumptions

Facility	Senior Center	High Rock & Modular Project	Pollard Modular	High Rock Modular	High Rock	DPW - Interim	Town Hall (Infill)	DPW Salt Shed	Emery Grover (Annex)	Senior Center Expansion	Emergency Operations Center	Middle School (new)	DPW Phased Complex	DPW - Phase 1	DPW - Phase 2	DPW - Phase 3	DPW - Phase 4	Hillside School	Mitchell School	Totals
Assumptions																				
Project Cost Estimate in 2008	$4,000,000	$15,000,000	$600,000	$1,400,000	$13,000,000	$4,000,000	$12,800,000	$4,900,000	$11,400,000	$5,000,000	$2,100,000	$32,200,000	$20,400,000	$7,200,000	$1,600,000	$5,700,000	$5,900,000	$14,600,000	$15,000,000	$141,400,000
Project Year	2008	2008	2008	2008	2008	2009	2010	2012	2012	2013	2013	2014	2014	2014	2015	2016	2017	2018	2022	
Cost Estimate in Project Year*	**$4,000,000**	**$15,000,000**	**$600,000**	**$1,400,000**	**$13,000,000**	**$4,200,000**	**$14,115,000**	**$5,960,000**	**$13,860,000**	**$6,385,000**	**$2,680,000**	**$43,155,000**	**$29,485,000**	**$9,650,000**	**$2,255,000**	**$8,425,000**	**$9,155,000**	**$23,785,000**	**$29,700,000**	**$192,325,000**
Method of Financing	**Debt**	**Debt**	**Debt**	**Debt**	**Debt**	**Debt**	**Cash & Debt**	**Debt**	**Cash & Debt**	**Debt**	**Debt**	**Debt & Grant**	**Debt**	**Debt**	**Debt**	**Debt**	**Debt**	**Debt & Grant**	**Debt & Grant**	
Project Year Cost	$4,000,000	$15,000,000	$600,000	$1,400,000	$13,000,000	$4,200,000	$14,115,000	$5,960,000	$13,860,000	$6,385,000	$2,685,000	$43,155,000	$29,485,000	$9,650,000	$2,255,000	$8,425,000	$9,155,000	$23,785,000	$29,700,000	$192,330,000
Cash Funding							$6,115,000		$2,610,000			$17,262,000						$9,514,000	$11,880,000	$47,381,000
Cash Source							CPA Reserved Receipts		CPA Reserved Receipts			MSBA 40% Grant						MSBA 40% Grant	MSBA 40% Grant	
Amount Financed by Debt	**$4,000,000**	**$15,000,000**	**$600,000**	**$1,400,000**	**$13,000,000**	**$4,200,000**	**$8,000,000**	**$5,960,000**	**$11,250,000**	**$6,385,000**	**$2,680,000**	**$25,893,000**	**$29,485,000**	**$9,650,000**	**$2,255,000**	**$8,425,000**	**$9,155,000**	**$14,271,000**	**$17,820,000**	**$144,944,000**
Debt Repayment Source	General Fund	Debt Exclusion	Debt Exclusion	Debt Exclusion	Debt Exclusion	General Fund	CPA	Debt Exclusion	CPA & Debt Exclusion	Debt Exclusion	General Fund	Debt Exclusion	Debt Exclusion	Debt Exclusion	Debt Exclusion	Debt Exclusion	Debt Exclusion	Debt Exclusion	Debt Exclusion	
First Note Issued	**2008**		**2008**	**2008**	**2008**	**2009**	**2010**	**2012**	**2012**	**2013**	**2013**	**2014**		**2014**	**2015**	**2016**	**2018**	**2018**	**2022**	
Interest Rate on Notes	5.00%		4.50%	4.50%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%		5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	
Debt Structure	Single Bond; Level Principal	Three Bonds; Each Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Four Bonds; Each Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	Single Bond; Level Principal	
Interest Rate on Bonds	6.50%		6.00%	6.00%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%		6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	
Bond Issued	**2010**		**2009**	**2009**	**2010**	**2011**	**2012**	**2014**	**2014**	**2015**	**2015**	**2016**		**2016**	**2016**	**2018**	**2020**	**2020**	**2024**	
Number of Principal Payments	**15**		**4**	**8**	**18**	**10**	**18**	**10**	**18**	**15**	**10**	**18**		**18**	**18**	**18**	**18**	**18**	**18**	
Final Maturity	2025		2013	2017	2028	2021	2030	2024	2032	2030	2025	2034		2034	2034	2036	2038	2038	2042	
Additional Tax Paid to Retire Debt**	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Tax Classification		Single Rate	Single Rate	Single Rate	Single Rate			Single Rate	Single Rate	Single Rate		Single Rate	Single Rate	Single Rate	Single Rate	Single Rate	Single Rate	Single Rate	Single Rate	
Other Comments		Assumes the three parts are voted as a single project										Assumes total project cost is eligible for State Grant	Assumes the four phases are voted as a single project					Assumes total project cost is eligible for State Grant	Assumes total project cost is eligible for State Grant	

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Project	Bonds	Rates for Notes (Bonds)	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
High Rock Project	**$13,000,000**	5.00%	**2008**	$585,000	$650,000	$1,570,000	$1,522,875	$1,475,750	$1,428,625	$1,381,500	$1,334,375	$1,287,250	$1,240,125	$1,193,000	$1,145,875	$1,098,750	$1,051,625	$1,004,500	$957,375	$910,250	$863,125
		6.50%	**2010**																		
High Rock Modular	**$1,400,000**	4.50%	**2008**	$63,000	$259,000	$248,500	$238,000	$227,500	$217,000	$206,500	$196,000	$185,500									
		6.00%	**2009**																		
Pollard Modular	**$600,000**	4.50%	**2008**	$27,000	$186,000	$177,000	$168,000	$159,000													
		6.00%	**2009**																		
High Rock & Modular Project Total																					
$15,000,000				$675,000	$1,095,000	$1,995,500	$1,928,875	$1,862,250	$1,645,625	$1,588,000	$1,530,375	$1,472,750	$1,240,125	$1,193,000	$1,145,875	$1,098,750	$1,051,625	$1,004,500	$957,375	$910,250	$863,125
Additional Tax Impact to Repay the Debt Service for this Project *				$66	$107	$194	$188	$181	$160	$155	$149	$143	$121	$116	$112	$107	$102	$98	$93	$89	$84
DPW Salt Shed	**$5,960,000**	5.00%	**2012**					$298,000	$298,000	$987,400	$948,400	$909,400	$870,400	$831,400	$792,400	$753,400	$714,400	$675,400	$596,400		
		6.50%	**2014**																		
Additional Tax Impact to Repay the Debt Service for this Project *								$29	$29	$96	$92	$89	$85	$81	$77	$73	$70	$66	$58		
CPA Debt Service Supported by Debt Exclusion								$227,500	$198,575	$963,400	$893,850	$824,300	$754,750	$685,200	$615,650	$546,100	$476,550	$407,000	$337,450	$267,900	$198,350
Additional Tax Impact to Repay the Debt Service for this Project *								$22	$19	$94	$87	$80	$74	$67	$60	$53	$46	$40	$33	$26	$19
Senior Center Expansion	**$6,385,000**	5.00%	**2013**						$319,250	$319,250	$865,025	$810,775	$783,150	$755,525	$727,900	$700,275	$672,650	$645,025	$617,400	$589,775	$562,150
		6.50%	**2015**																		
Additional Tax Impact to Repay the Debt Service for this Project *									$31	$31	$84	$79	$76	$74	$71	$68	$66	$63	$60	$57	$55
New Middle School	**$25,893,000**	5.00%	**2014**							$1,294,650	$1,294,650	$3,126,045	$3,029,250	$2,935,650	$2,842,050	$2,748,450	$2,654,850	$2,561,250	$2,467,650	$2,374,050	$2,280,450
		6.50%	**2016**																		
Additional Tax Impact to Repay the Debt Service for this Project *										$126	$126	$304	$295	$286	$277	$268	$259	$249	$240	$231	$222
DPW Phase 1	**$9,650,000**	5.00%	**2014**							$482,500	$482,500	$1,167,250	$1,132,150	$1,097,050	$1,061,950	$1,026,850	$991,750	$956,650	$921,550	$886,450	$851,350
		6.50%	**2016**																		
DPW Phase 2	**$2,255,000**	5.00%	**2015**								$112,750	$112,750	$276,575	$268,125	$259,675	$251,225	$242,775	$234,325	$225,875	$217,425	$208,975
		6.50%	**2017**																		
DPW Phase 3	**$8,425,000**	5.00%	**2016**									$421,250	$421,250	$1,017,625	$987,075	$956,525	$925,975	$895,425	$864,875	$834,325	$803,775
		6.50%	**2018**																		

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Project	Bonds	Rates for Notes (Bonds)	Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	Totals
High Rock Project	**$13,000,000**	5.00%	**2008**	$816,000	$718,875																**$22,234,875**
		6.50%	**2010**																		
High Rock Modular	**$1,400,000**	4.50%	**2008**																		**$1,841,000**
		6.00%	**2009**																		
Pollard Modular	**$600,000**	4.50%	**2008**																		**$717,000**
		6.00%	**2009**																		
High Rock & Modular Project Total																					
$15,000,000				$816,000	$718,875																**$24,792,875**
Additional Tax Impact to Repay the Debt Service for this Project *				$79	$70																**$2,415**
DPW Salt Shed	**$5,960,000**	5.00%	**2012**																		**$8,675,000**
		6.50%	**2014**																		
Additional Tax Impact to Repay the Debt Service for this Project *																					**$845**
CPA Debt Service Supported by Debt Exclusion				$128,800	$59,250																**$7,584,625**
Additional Tax Impact to Repay the Debt Service for this Project *				$13	$6																**$739**
Senior Center Expansion	**$6,385,000**	5.00%	**2013**	$534,525	$506,900	$479,275	$436,650														**$10,325,500**
		6.50%	**2015**																		
Additional Tax Impact to Repay the Debt Service for this Project *				$52	$49	$47	$43														**$1,006**
New Middle School	**$25,893,000**	5.00%	**2014**	$2,186,850	$2,093,250	$1,999,650	$1,906,050	$1,812,450	$1,718,850	$1,625,250	$1,501,650										**$44,452,995**
		6.50%	**2016**																		
Additional Tax Impact to Repay the Debt Service for this Project *				$213	$204	$195	$186	$177	$167	$158	$146										**$4,330**
DPW Phase 1	**$9,650,000**	5.00%	**2014**	$816,250	$781,150	$746,050	$710,950	$675,850	$640,750	$605,650	$500,550										**$16,535,200**
		6.50%	**2016**																		
DPW Phase 2	**$2,255,000**	5.00%	**2015**	$200,525	$192,075	$183,625	$175,175	$166,725	$158,275	$149,825	$141,375	$47,925									**$3,826,000**
		6.50%	**2017**																		
DPW Phase 3	**$8,425,000**	5.00%	**2016**	$773,225	$742,675	$712,125	$681,575	$651,025	$620,475	$589,925	$559,375	$528,825	$463,275								**$14,450,600**
		6.50%	**2018**																		

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Project	Bonds	Rates for Notes (Bonds)	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
DPW Phase 4	**$9,155,000**	5.00%	**2017**										$457,750	$457,750	$1,105,075	$1,071,925	$1,038,775	$1,005,625	$972,475	$939,325	$906,175
		6.50%	**2019**																		
DPW Phased Complex Totals																					
	$29,485,000								$482,500	$595,250	$1,701,250	$2,287,725	$2,840,550	$3,413,775	$3,306,525	$3,199,275	$3,092,025	$2,984,775	$2,877,525	$2,770,275	$2,663,025
Additional Tax Impact to Repay the Debt Service for this Project *									$47	$58	$166	$223	$277	$332	$322	$312	$301	$291	$280	$270	$259
Hillside School Update	**$14,271,000**	5.00%	**2018**											$713,550	$713,550	$1,723,615	$1,670,875	$1,619,200	$1,567,525	$1,515,850	$1,464,175
		6.50%	**2020**																		
Additional Tax Impact to Repay the Debt Service for this Project *														$69	$69	$168	$163	$158	$153	$148	$143
Mitchell School Update	**$17,820,000**	5.00%	**2022**															$891,000	$891,000	$2,148,300	$2,083,950
		6.50%	**2024**																		
Additional Tax Impact to Repay the Debt Service for this Project *																		$87	$87	$209	$203
Debt Excluded FMP Projects	**$114,814,000**			$675,000	$1,095,000	$1,995,500	$1,928,875	$2,387,750	$2,461,450	$5,635,200	$6,127,550	$8,844,520	$8,965,400	$9,954,875	$10,251,200	$10,877,115	$10,440,225	$10,895,400	$10,419,575	$10,683,650	$10,222,475
				$66	$107	$194	$188	$233	$240	$502	$539	$696	$650	$693	$666	$737	$705	$760	$724	$760	$726

*** The Average Single Family Home (ASFH) added tax impact is calculated based on 2006 valuation data; assumes s single tax rate, not a dual "split" rate between commercial and residential; assumes 2% CPA surcharge remains in effect.**

Project	Bonds	Rates for Notes (Bonds)	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Senior Center at Ridge Hill	**$4,000,000**	5.00%	**2008**	$180,000	$200,000	$535,000	$517,125	$499,250	$481,375	$463,500	$445,625	$427,750	$409,875	$392,000	$374,125	$356,250	$338,375	$320,500	$302,625	$159,750	
		6.50%	**2010**																		
Additional Tax Impact to Repay the Debt Service for this Project				None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	
DPW (Interim)	**$4,200,000**	5.00%	**2009**		$210,000	$210,000	$693,000	$665,700	$638,400	$611,100	$583,800	$556,500	$529,200	$501,900	$474,600	$447,300					
		6.50%	**2011**																		
Additional Tax Impact to Repay the Debt Service for this Project				None	None	None	None	None	None	None	None	None	None	None	None	None					
Emergency Operations Center	**$2,680,000**	5.00%	**2013**						$134,000	$134,000	$444,200	$426,650	$409,100	$391,550	$374,000	$356,450	$338,900	$321,350	$303,800	$266,250	
		6.50%	**2015**																		
Additional Tax Impact to Repay the Debt Service for this Project				None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	
General Fund FMP Projects	**$10,880,000**			**$180,000**	**$410,000**	**$745,000**	**$1,210,125**	**$1,164,950**	**$1,253,775**	**$1,208,600**	**$1,473,625**	**$1,410,900**	**$1,348,175**	**$1,285,450**	**$1,222,725**	**$1,160,000**	**$677,275**	**$641,850**	**$606,425**	**$426,000**	

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Project	Bonds	Rates for Notes (Bonds)	Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	Totals
DPW Phase 4	**$9,155,000**	5.00%	**2017**	$873,025	$839,875	$806,725	$773,575	$740,425	$707,275	$674,125	$640,975	$607,825	$574,675	$516,525																	**$15,709,900**
		6.50%	**2019**																												
DPW Phased Complex Totals																															
$29,485,000				$2,555,775	$2,448,525	$2,341,275	$2,234,025	$2,126,775	$2,019,525	$1,842,275	$1,184,575	$1,037,950	$516,525																		**$50,521,700**
Additional Tax Impact to Repay the Debt Service for this Project *				$249	$238	$228	$218	$207	$197	$179	$115	$101	$50																		**$4,921**
Hillside School Update	**$14,271,000**	5.00%	**2018**	$1,412,500	$1,360,825	$1,309,150	$1,257,475	$1,205,800	$1,154,125	$1,102,450	$1,050,775	$999,100	$947,425	$895,750	$804,075																**$24,487,790**
		6.50%	**2020**																												
Additional Tax Impact to Repay the Debt Service for this Project *				$138	$133	$128	$122	$117	$112	$107	$102	$97	$92	$87	$78																**$2,385**
Mitchell School Update	**$17,820,000**	5.00%	**2022**	$2,019,600	$1,955,250	$1,890,900	$1,826,550	$1,762,200	$1,697,850	$1,633,500	$1,569,150	$1,504,800	$1,440,450	$1,376,100	$1,311,750	$1,247,400	$1,183,050	$1,118,700	$1,054,350												**$30,605,850**
		6.50%	**2024**																												
Additional Tax Impact to Repay the Debt Service for this Project *				$197	$190	$184	$178	$172	$165	$159	$153	$147	$140	$134	$128	$121	$115	$109	$103												**$2,981**
Debt Excluded FMP Projects	**$114,814,000**			$9,761,300	$9,250,125	$8,127,500	$7,768,000	$7,014,475	$6,697,600	$6,380,725	$5,963,850	$3,688,475	$3,425,825	$2,788,375	$2,115,825	$1,247,400	$1,183,050	$1,118,700	$1,054,350												$201,446,335
				$691	$652	$553	$529	$466	$445	$425	$401	$244	$233	$221	$206	$121	$115	$109	$103												$14,700

*** The Average Single Family Home (ASFH) added tax impa**

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Project	Bonds	Rates for Notes (Bonds)	Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	Totals
Senior Center at Ridge Hill	**$4,000,000**	5.00%	**2008**																		**$6,403,125**
		6.50%	**2010**																		
Additional Tax Impact to Repay the Debt Service for this Project																					
DPW (Interim)	**$4,200,000**	5.00%	**2009**																		**$6,121,500**
		6.50%	**2011**																		
Additional Tax Impact to Repay the Debt Service for this Project																					
Emergency Operations Center	**$2,680,000**	5.00%	**2013**																		**$3,900,250**
		6.50%	**2015**																		
Additional Tax Impact to Repay the Debt Service for this Project																					
General Fund FMP Projects	**$10,880,000**																				**$16,424,875**

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Town Hall (Infill)	**$8,000,000**	5.00%	**2010**			$400,000	$400,000	$965,000	$936,075	$907,150	$878,225	$849,300	$820,375	$791,450	$762,525	$733,600	$704,675	$675,750	$646,825	$617,900	$588,975
		6.50%	**2012**																		
Additional Tax Impact to Repay the Debt Service for this Project				None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None
Emery Grover (Annex)	**$11,250,000**	5.00%	**2012**					$562,500	$562,500	$1,356,250	$1,315,625	$1,275,000	$1,234,375	$1,193,750	$1,153,125	$1,112,500	$1,071,875	$1,031,250	$990,625	$950,000	$909,375
		6.50%	**2014**																		
Additional Tax Impact to Repay the Debt Service for this Project				Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt
CPA FMP Projects	**$19,250,000**					$400,000	$400,000	$1,527,500	$1,498,575	$2,263,400	$2,193,850	$2,124,300	$2,054,750	$1,985,200	$1,915,650	$1,846,100	$1,776,550	$1,707,000	$1,637,450	$1,567,900	$1,498,350
Annual CPA Payment Ceiling						$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000
CPA Debt Service Supported by Debt Exclusion								$227,500	$198,575	$963,400	$893,850	$824,300	$754,750	$685,200	$615,650	$546,100	$476,550	$407,000	$337,450	$267,900	$198,350
Total Debt Service	**$144,944,000**			**$855,000**	**$1,505,000**	**$3,140,500**	**$3,539,000**	**$4,852,700**	**$5,015,225**	**$8,143,800**	**$8,901,175**	**$11,555,420**	**$11,613,575**	**$12,540,325**	**$12,773,925**	**$13,337,115**	**$12,417,500**	**$12,837,250**	**$12,326,000**	**$12,409,650**	**$11,522,475**

Town of Needham
Facilities Master Plan
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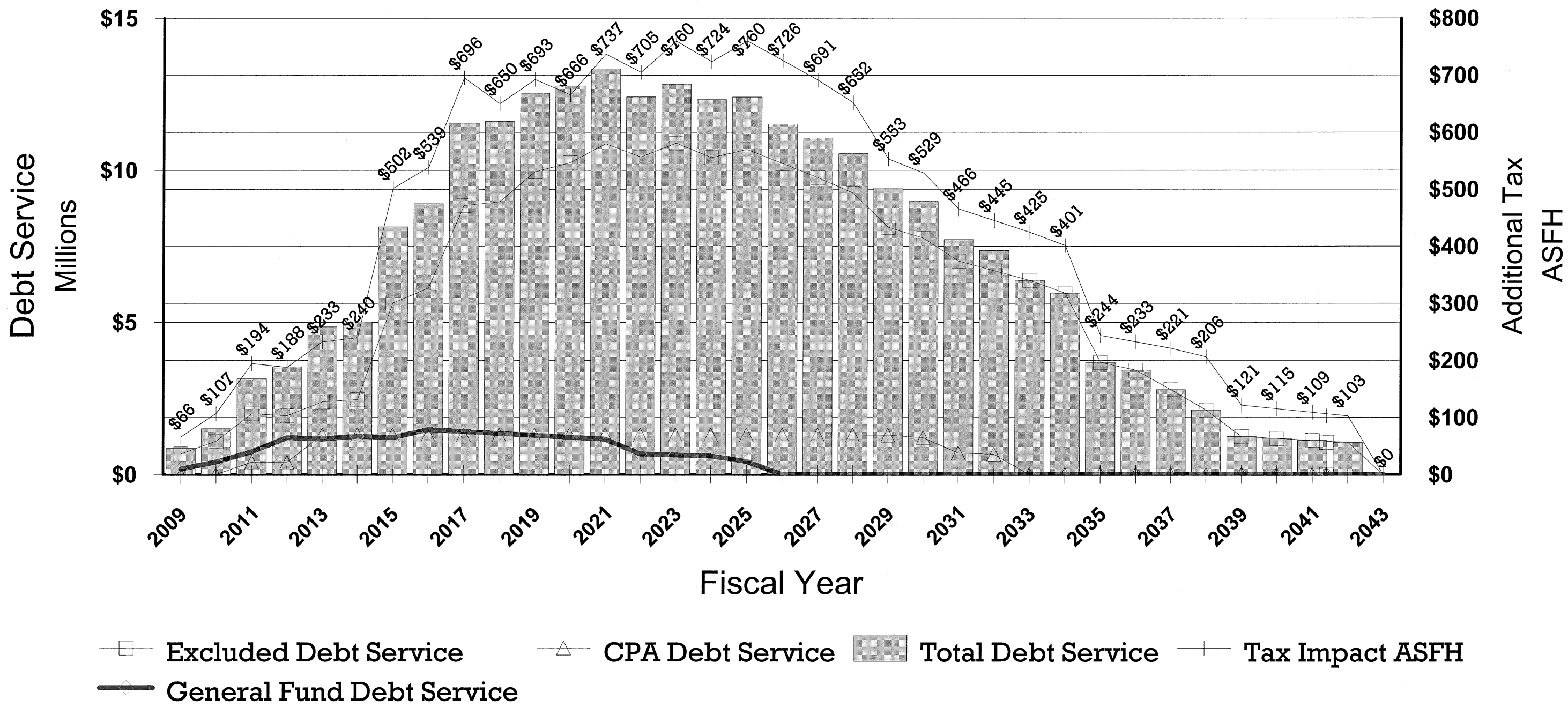
Project	Bonds	Rates for Notes (Bonds)	Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	Totals
Town Hall (Infill)	**$8,000,000**	5.00%	**2010**	$560,050	$531,125	$502,200	$463,275														**$13,734,475**
		6.50%	**2012**																		
Additional Tax Impact to Repay the Debt Service for this Project				None	None	None	None														
Emery Grover (Annex)	**$11,250,000**	5.00%	**2012**	$868,750	$828,125	$787,500	$746,875	$706,250	$665,625												**$19,321,875**
		6.50%	**2014**																		
Additional Tax Impact to Repay the Debt Service for this Project				Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt	Refer to Excluded Debt												
CPA FMP Projects	**$19,250,000**			$1,428,800	$1,359,250	$1,289,700	$1,210,150	$706,250	$665,625												**$33,056,350**
Annual CPA Payment Ceiling				$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000												
CPA Debt Service Supported by Debt Exclusion				$128,800	$59,250																**$7,584,625**
Total Debt Service	**$144,944,000**			**$11,061,300**	**$10,550,125**	**$9,417,200**	**$8,978,150**	**$7,720,725**	**$7,363,225**	**$6,380,725**	**$5,963,850**	**$3,688,475**	**$3,425,825**	**$2,788,375**	**$2,115,825**	**$1,247,400**	**$1,183,050**	**$1,118,700**	**$1,054,350**		**$243,342,935**

Town of Needham
Facilities Master Plan
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