

Citywide Cost of New Voting Equipment
 (by pollsite and number of reg. voters, assumes 1% or 2% use audio, sip&puff, or rocker paddles)

Teresa Hommel, WheresThePaper.org, 11/6/06

How many machines are needed, if number of reg. voters served per machine is:

Poll Sites	Reg Voters	DRE					OpScan			BMD*		
		200	300	400	500	600	2000	2500	3000	1%, 37min	2%, 37min	
Bronx:												
218	578,490	3,002	2,040	1,562	1,269	1,072	405	341	306	482	682	
DREs:	\$8,000	24,016,000	16,320,000	12,496,000	10,152,000	8,576,000						
	\$9,000	27,018,000	18,360,000	14,058,000	11,421,000	9,648,000						
	\$10,000	30,020,000	20,400,000	15,620,000	12,690,000	10,720,000						
				OpScan, BMD* Prices: \$5,500			2,227,500	1,875,500	1,683,000	2,651,000	3,751,000	
							OpScan, plus BMD for 1%:			4,878,500	4,526,500	4,334,000
							OpScan, plus BMD for 2%:			5,978,500	5,626,500	5,434,000
Brooklyn:												
392	1,140,731	5,899	3,994	3,054	2,480	2,098	781	659	582	928	1,316	
DREs:	\$8,000	47,192,000	31,952,000	24,432,000	19,840,000	16,784,000						
	\$9,000	53,091,000	35,946,000	27,486,000	22,320,000	18,882,000						
	\$10,000	58,990,000	39,940,000	30,540,000	24,800,000	20,980,000						
							OpScan, BMD* Prices: \$5,500			4,295,500	3,624,500	3,201,000
							OpScan, plus BMD for 1%:			9,399,500	8,728,500	8,305,000
							OpScan, plus BMD for 2%:			11,533,500	10,862,500	10,439,000
Manhattan:												
359	896,586	4,674	3,173	2,430	1,979	1,678	637	544	484	749	1,061	
DREs:	\$8,000	37,392,000	25,384,000	19,440,000	15,832,000	13,424,000						
	\$9,000	42,066,000	28,557,000	21,870,000	17,811,000	15,102,000						
	\$10,000	46,740,000	31,730,000	24,300,000	19,790,000	16,780,000						
							OpScan, BMD* Prices: \$5,500			3,503,500	2,992,000	2,662,000
							OpScan, plus BMD for 1%:			7,623,000	7,111,500	6,781,500
							OpScan, plus BMD for 2%:			9,339,000	8,827,500	8,497,500

How many machines are needed, if number of reg. voters served per machine is:

Poll Sites	Reg Voters	DRE 200	DRE 300	DRE 400	DRE 500	DRE 600	OpScan 2000	OpScan 2500	OpScan 3000	BMD* 1%, 37min	BMD* 2%, 37min	
Queens:												
311	926,037	4,795	3,246	2,478	2,003	1,706	618	531	466	752	1,066	
DREs:	\$8,000	38,360,000	25,968,000	19,824,000	16,024,000	13,648,000						
	\$9,000	43,155,000	29,214,000	22,302,000	18,027,000	15,354,000						
	\$10,000	47,950,000	32,460,000	24,780,000	20,030,000	17,060,000						
							OpScan, BMD* Prices: \$5,500	3,399,000	2,920,500	2,563,000	4,136,000	5,863,000
							OpScan, plus BMD for 1%:	7,535,000	7,056,500	6,699,000		
							OpScan, plus BMD for 2%:	9,262,000	8,783,500	8,426,000		
Staten Island:												
87	234,155	1,215	828	630	517	437	168	142	128	196	284	
DREs:	\$8,000	9,720,000	6,624,000	5,040,000	4,136,000	3,496,000						
	\$9,000	10,935,000	7,452,000	5,670,000	4,653,000	3,933,000						
	\$10,000	12,150,000	8,280,000	6,300,000	5,170,000	4,370,000						
							OpScan, BMD* Prices: \$5,500	924,000	781,000	704,000	1,078,000	1,562,000
							OpScan, plus BMD for 1%:	2,002,000	1,859,000	1,782,000		
							OpScan, plus BMD for 2%:	2,486,000	2,343,000	2,266,000		
5 Boroughs:												
1,367	3,775,999	19,585	13,281	10,154	8,248	6,991	2,609	2,217	1,966	3,107	4,409	
DREs:	\$8,000	\$156,680,000	\$106,248,000	\$81,232,000	\$65,984,000	\$55,928,000						
	\$9,000	\$176,265,000	\$119,529,000	\$91,386,000	\$74,232,000	\$62,919,000						
	\$10,000	\$195,850,000	\$132,810,000	\$101,540,000	\$82,480,000	\$69,910,000						
							OpScan, BMD* Prices: \$5,500	\$14,349,500	\$12,193,500	\$10,813,000	\$17,088,500	\$24,249,500
							OpScan, plus BMD for 1%:	\$31,438,000	\$29,282,000	\$27,901,500		
							OpScan, plus BMD for 2%:	\$38,599,000	\$36,443,000	\$35,062,500		

*To calculate the number of BMDs (Ballot Marking Devices), we assumed that 20% of registered voters have disabilities, 50% of them wish to vote, and half of these will use absentee ballots and half vote at the pollsites. This yields 5% of registered voters who may wish to use BMDs. Of these, one or two fifth may use audio, sip&puff, or rocker paddles, which yields 1% or 2% of registered voters using these devices. The State Board of Elections assessed that voters using these attachments on BMDs to be used in 2006 required 30 to 45 minutes to vote. We used 37 minutes as the average for these voters. We estimated 5 min. for the other three or four-fifth of voters with disabilities using BMDs. Then the total minutes use of BMD by the 5% of voters was divided by 900 minutes.