

An Open Letter to the Gwinnett County Board of Elections

Gwinnett County Citizens for Voting Integrity

Thank you for allowing us the time to comment on the voting equipment in Gwinnett County. Our democracy depends on the reliability, accuracy, accessibility, and transparency of the voting systems we use to choose our representatives. It is our opinion that Gwinnett County will be best served by an optical scan system paired with disabled-accessible ballot marking devices. There are several good reasons to choose optical scanners over touchscreens, even those that have a voter-verified paper trail (VVPT). These include cost, reliability, and voter confidence.

First, optical scanners are a significantly less expensive voting system than touchscreens. We base this assertion on voter registration data from the Georgia State Board of Elections and an ES&S price sheet from the North Carolina Association of County Commissioners (NCACC).¹ **This should not be construed as an endorsement of ES&S.** However, this information allows us to make an apples-to-apples comparison of actual voting systems sold this year to a nearby state. This comparison shows that Gwinnett County could save \$2,216,970 in initial purchase costs by selecting precinct-based optical scanners combined with ballot markers. A cost projection indicates that Gwinnett County will save \$2,182,882 over five years by selecting an optical scan-based system².

Second, optical scanners are the preferred voting system of the vast majority of independent computer scientists³. Additionally, optical scanners and ballot markers have the support of voters. The voters of Gwinnett County recognize that the latest technologies are not always the best. The question we should ask ourselves is not “Is it new?” but “Will it work?” In particular, independent disabled voters in have expressed a clear preference for the AutoMARK ballot marker over the available touchscreen systems. Problems with the AutoMARK in other jurisdictions have been due to a single wire that came loose during improper handling during delivery. This problem – which is trivial to detect and fix – should not be used by opponents of election integrity as an opportunity to stall on much-needed improvements to the integrity of elections in Georgia.

Finally, we encourage Gwinnett County to be part of the solution and not part of the problem. Twenty-seven states have passed election integrity reform bills that restore confidence to the voting process by combining paper-based voting systems with mandatory audits. It was Ronald Reagan who said “Trust, but verify.” While many of us trust the Secretary of State and the Boards of Elections to do their job with professionalism and honesty, as citizens we feel it is our duty to independently verify the integrity of our democracy.

You have an opportunity to move Georgia in the right direction. Please consider these facts when discussing proper voting systems with our state government.

Sincerely,

Gwinnett County Citizens for Voting Integrity

¹The NCACC data provides the uniform, state-wide prices of the hardware and software purchased by that state earlier this year. Since North Carolina is of comparable size and population to Georgia, we believe our State Board would be capable of negotiating a similar deal.

²A precinct-by-precinct cost breakdown is included as an appendix to this letter

³In 2004 the Association for Computing Machinery – one of the largest and most prestigious professional organizations for computer scientists – took a public policy position that supported strong engineering standards paired with voter-verified paper ballots. It was supported by over 95% of their members. See <https://www.myacm.org/opinion/poll.cfm>

A Gwinnett Cost Comparison

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Baycreek A 005	3,660	1 Audio iVotronic(s) 12 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$43,935	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$33,990
Baycreek B 041	2,634	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Baycreek C 080	2,755	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Baycreek D 091	3,102	1 Audio iVotronic(s) 10 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$37,345	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$27,400
Baycreek E 108	2,773	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Baycreek F 134	1,706	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Baycreek G 145	2,081	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Baycreek H 146	2,359	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Baycreek I 147	2,736	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Baycreek J 156	1,487	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Berkshire A 011	1,308	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Berkshire B 012	2,439	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Berkshire C 031	979	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Berkshire D 032	1,275	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Berkshire E 033	1,590	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Berkshire F 034	1,173	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Berkshire G 052	1,189	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Berkshire H 065	702	1 Audio iVotronic(s) 2 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$10,985	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$1,040
Berkshire I 067	1,867	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Berkshire J 092	1,986	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Berkshire K 013	445	1 Audio iVotronic(s) 1 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$7,690	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	-\$2,255
Berkshire L 103	1,544	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Berkshire M 109	1,154	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Berkshire N 112	945	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Berkshire O 119	1,908	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Berkshire P 120	855	1 Audio iVotronic(s) 2 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$10,985	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$1,040

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Berkshire Q 148	1,077	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Cates A 010	1,834	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Cates B 029	1,232	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Cates C 030	1,682	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Cates D 035	2,231	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Cates E 036	2,092	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Cates F 046	1,425	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Cates G 047	2,233	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Cates H 053	2,060	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Cates I 068	2,428	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Cates J 069	2,158	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Cates K 079	1,894	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Cates L 081	2,651	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Cates M 093	2,965	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Cates N 094	1,939	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Cates O 107	828	1 Audio iVotronic(s) 2 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$10,985	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$1,040
Dacula 003	3,360	1 Audio iVotronic(s) 11 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$40,640	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$30,695
Duluth A 007	2,937	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Duluth B 048	2,321	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Duluth C 056	1,465	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Duluth D 057	2,686	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Duluth E 082	1,071	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Duluth F 095	1,120	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Duluth G 096	1,632	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Duluth H 111	1,638	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Duluth I 138	2,170	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Duluth J 140	1,370	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Duluth K 150	1,041	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Duncans A 008	2,662	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Duncans B 129	3,310	1 Audio iVotronic(s) 11 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$40,640	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$30,695
Duncans C 157	1,853	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Garners A 014	2,688	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Garners B 045	2,264	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Garners C 049	1,370	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Garners D 064	2,097	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Garners F 118	1,233	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Goodwins A 006	2,523	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Goodwins B 070	2,642	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Goodwins C 077	3,607	1 Audio iVotronic(s) 12 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$43,935	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$33,990

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Goodwins D 083	3,318	1 Audio iVotronic(s) 11 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$40,640	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$30,695
Goodwins E 097	3,170	1 Audio iVotronic(s) 10 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$37,345	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$27,400
Goodwins F 098	1,745	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Goodwins G 124	1,397	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Goodwins H 128	1,863	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Goodwins I 149	1,703	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Harbins A 001	2,606	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Harbins B 133	1,852	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Harbins C 151	1,121	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Hog Mountain A 026	1,956	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Hog Mountain B 027	2,716	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Hog Mountain C 136	2,553	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Hog Mountain D 158	1,679	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Lawrenceville A 015	2,171	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Lawrenceville B 016	2,532	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Lawrenceville C 042	1,888	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Lawrenceville D 060	1,178	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Lawrenceville E 061	1,598	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Lawrenceville F 071	2,014	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Lawrenceville G 084	1,530	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Lawrenceville H 085	2,037	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Lawrenceville I 090	2,126	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Lawrenceville J 127	1,335	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Lawrenceville K 132	2,186	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Lawrenceville L 143	2,622	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Lawrenceville M 144	3,204	1 Audio iVotronic(s) 10 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$37,345	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$27,400

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Lawrenceville N 153	1,510	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Martins A 017	1,272	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Martins B 018	1,587	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Martins C 019	1,520	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Martins D 043	980	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Martins E 072	2,027	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Martins F 086	1,191	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Martins G 110	1,307	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Martins H 115	2,487	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Martins I 116	1,802	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Martins J 117	1,743	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Martins K 139	2,221	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Pinckneyville A 020	996	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Pinckneyville A 126	2,145	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Pinckneyville B 021	800	1 Audio iVotronic(s) 2 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$10,985	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$1,040
Pinckneyville C 022	1,284	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Pinckneyville D 023	1,321	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Pinckneyville E 037	845	1 Audio iVotronic(s) 2 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$10,985	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$1,040
Pinckneyville F 038	795	1 Audio iVotronic(s) 2 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$10,985	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$1,040
Pinckneyville G 039	1,111	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Pinckneyville H 040	2,389	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Pinckneyville I 050	1,139	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Pinckneyville J 051	746	1 Audio iVotronic(s) 2 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$10,985	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$1,040
Pinckneyville K 058	1,817	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Pinckneyville L 062	1,825	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Pinckneyville M 063	1,883	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Pinckneyville N 059	1,747	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Pinckneyville O 066	1,805	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Pinckneyville P 073	1,331	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Pinckneyville Q 074	797	1 Audio iVotronic(s) 2 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$10,985	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$1,040
Pinckneyville R 078	743	1 Audio iVotronic(s) 2 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$10,985	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$1,040
Pinckneyville S 087	1,705	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Pinckneyville T 099	1,871	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Pinckneyville U 101	1,279	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Pinckneyville V 113	1,171	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Pinckneyville W 114	1,036	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Pinckneyville X 121	2,044	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Pinckneyville Y 123	1,018	1 Audio iVotronic(s) 3 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$14,280	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$4,335
Pinckneyville Z 125	1,517	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Pucketts A 009	2,592	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Pucketts B 102	3,386	1 Audio iVotronic(s) 11 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$40,640	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$30,695
Pucketts C 135	3,020	1 Audio iVotronic(s) 10 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$37,345	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$27,400
Pucketts D 154	1,771	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Rockbridge A 002	2,008	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Rockbridge B 044	2,290	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Rockbridge C 075	2,561	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Rockbridge D 076	2,163	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Rockbridge E 088	2,585	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Rockbridge F 104	2,744	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Rockbridge G 122	2,654	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Rockycreek A 028	1,987	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220
Rockycreek B 137	2,829	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Rockycreek C 152	2,184	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Sugar Hill A 024	1,359	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Sugar Hill B 025	2,882	1 Audio iVotronic(s) 9 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$34,050	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$24,105
Sugar Hill C 054	2,615	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Sugar Hill D 055	1,675	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Sugar Hill E 089	1,542	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Sugar Hill F 105	2,287	1 Audio iVotronic(s) 7 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$27,460	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$17,515
Sugar Hill G 141	1,680	1 Audio iVotronic(s) 5 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$20,870	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$10,925
Suwanee A 004	1,417	1 Audio iVotronic(s) 4 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$17,575	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$7,630
Suwanee B 100	2,405	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Suwanee C 106	2,456	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Suwanee D 130	2,517	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Suwanee E 131	3,853	1 Audio iVotronic(s) 12 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$43,935	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$33,990

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Suwanee F 142	2,468	1 Audio iVotronic(s) 8 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$30,755	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$20,810
Suwanee G 155	1,842	1 Audio iVotronic(s) 6 Plain iVotronic(s) 1 iVotronic Print Pack(s)	\$24,165	1 AutoMARK(s) 1 M100 Scanner(s)	\$9,945	\$14,220

Precinct	Voters	DRE		Optical Scan		Cost Savings
		Machines	Cost	Machines	Cost	
Software And Extras		1 iVotronic Supervisor Terminal 1 Software Suite (for DREs)	\$77,410	1 Software Suite (no DREs)	\$64,780	\$12,630
GRAND TOTALS	303,120	158 Audio iVotronic(s) 934 Plain iVotronic(s) 158 iVotronic Print Pack(s)	\$3,849,350	158 AutoMARK(s) 158 M100 Scanner(s)	\$1,636,090	\$2,213,260

Type of Product	Initial Costs	Support, Maintenance & Operations					Total Costs
		Year 1	Year 2	Year 3	Year 4	Year 5	
DRE	\$3,849,350	\$13,813	\$180,793	\$187,345	\$193,897	\$378,445	\$4,803,643
Optical Scan	\$1,636,090	\$120,035	\$216,665	\$219,983	\$223,459	\$249,529	\$2,665,761

B Cost Data and Assumptions

- 2005 per-precinct registration data from the Georgia SOS:
<http://www.sos.state.ga.us/elections/voter%5fregistration/county%5f%5fgender.pdf>
- ES&S price sheet available at the NCACC web site:
<http://www.ncacc.org/documents/equipmentpricing-ess.pdf>

Voting Equipment and Software Licensing	
Audio-Enabled DRE	\$3,395
Standard DRE	\$3,395
AutoMARK	\$4,950
M100 Scanner	\$4,995
Support Software (with DREs)	\$74,780
Support Software (no DREs)	\$64,780

Auxillary Equipment	
iVotronic Printer Pack (one per precinct)	\$1,000
iVotronic Support Equipment	\$2,630
VVPAT Paper (one roll)	\$5.75
DRE Battery	\$163
M100 Battery	\$37
AutoMARK Battery	\$105
Hardware, counties with less than 10000 registered voters	\$3,743
Hardware, counties with less than 50000 registered voters	\$7,866
Hardware, counties with less than 100000 registered voters	\$18,064
Hardware, counties with more than 100000 registered voters	\$25,213

Maintenance Costs	
Support Software (with DREs)	\$14,100
Support Software (no DREs)	\$12,100
DRE, Year 1	\$0
DRE, Year 2	\$140
DRE, Year 3	\$146
DRE, Year 4	\$152
DRE, Year 5	\$158
AutoMARK, Year 1	\$0
AutoMARK, Year 2	\$310
AutoMARK, Year 3	\$322
AutoMARK, Year 4	\$335
AutoMARK, Year 5	\$348
M100, Year 1	\$0
M100, Year 2	\$225
M100, Year 3	\$234
M100, Year 4	\$243
M100, Year 5	\$253

Other Assumptions	
Elections per year	2
Year at which all batteries need replacing	5
Maximum turnout	70%
Voters who vote on election day (not early or absentee)	70% of turnout
Percent of extra paper ballots/rolls printed/purchased	10%
Registered voters per DRE	300
Registered voters per scanner	5000
Average cost, optical scan ballot (based on Durham County data, 2002 – 2004)	\$0.18