5.0 Requirements & Requirements Response

5.1 Administrative Requirements

5.1.1 Proposal Submission

The following section must be completed by two members of the Proposer's Executive Team.

1) We affirm that the firm's authorized representatives have read and understand all applicable Federal, State, and local election and information technology laws and regulations.

2) We affirm that the firm's authorized representatives have read, understood, and agreed to comply with the requirements of New York State Election Law.

3) We affirm that the proposed voting system and functionality provided by the election management system and all voting devices shall comply with all provisions of Federal, State, and local election and information technology laws and regulations, and future modifications to those laws and regulations.

ES&S RESPONSE

ES&S will exercise all commercially reasonable efforts to make any technologically feasible modifications to its proprietary voting devices and election management system software as may be required in order to comply with applicable relevant federal, state and local election laws and regulations, including New York state voting system standards, as may be required in order to certify such voting system for use by the City of New York.

Specifically, during the warranty period and thereafter so long as the City is receiving ES&S Hardware Maintenance Services and ES&S Software Maintenance and Support Services, the equipment and licensed software shall be maintained or upgraded by ES&S in such a way as to remain compliant with all applicable state election laws and regulations, including all current and future requirements necessary to remain certified for use in the State of New York. "Maintained or upgraded" shall mean only such changes to individual items of the licensed software (but not equipment) as are technologically feasible and commercially reasonable. The City shall be responsible for the cost of all replacements, retrofits or modifications to the equipment purchased under this RFI. City shall also be responsible for (i) the cost of any third party items that ES&S notifies City are hereinafter required in order for the equipment and licensed software to remain compliant and certified, and (ii) City's pro-rata share of the costs of any future state certifications or recertifications and any mandated modifications to the equipment and/or licensed software that may result therefrom that are not otherwise required as a result of any changes or modifications voluntarily made by ES&S to the licensed software or equipment licensed and sold hereunder.

4) We affirm that our proposed voting system response to this RFI is true and correct

5) We affirm that the proposed costs in our response to this RFI will be valid for contract for **120** days from proposal due date.

Proposal Submission Subcategories	Vendor Response
Describe actions the firm will take to keep the proposed voting system supplied to the BOE in NYC in compliance with all applicable election laws and regulations.	During the warranty period and thereafter so long as the City has paid for and is receiving ES&S Hardware Maintenance Services and ES&S Software Maintenance and Support Services, the equipment and licensed software shall be maintained or upgraded by

Proposal Submission Subcategories	Vendor Response
	ES&S in such a way as to remain compliant with all applicable state election laws and regulations related to accessibility, including all current and future requirements necessary to remain certified for use in the State of New York. "Maintained or upgraded" shall mean only such changes to individual items of the licensed software (but not equipment) as are technologically feasible and commercially reasonable in ES&S' discretion. The City shall be responsible for the cost of all replacements, retrofits or modifications to the ES&S equipment that may be developed and offered by ES&S in order for such ES&S equipment to remain compliant with applicable laws and regulations. City shall also be responsible for (i) the cost of any third party items that ES&S notifies City are hereinafter required in order for the equipment and licensed software to remain compliant and certified, and (ii) City's pro-rata share of the costs of any future state certifications or recertifications and any mandated modifications to the equipment and/or licensed software that may result therefrom that are not otherwise required as a result of any changes or modifications voluntarily made by ES&S to the licensed software or equipment licensed and sold hereunder. City's pro-rata share of such certification or recertification costs and any mandated modifications to the equipment and/or licensed software that may result therefrom shall be determined at the time by dividing the number of registered voters in the City's jurisdiction by the total number of registered voters in all New York cities and counties to which ES&S has sold and/or licensed the equipment and licensed software purchased and licensed by the City.

Print Name/Title:

Thomas F. O'Brien, CFO

Signature:

Print Name/Title:

Matthew E. Nelson, Senior Vice President of Sales

Signature:

5.2 Voting System Design Requirements

As shown in the Glossary, BOE in NYC defines "Voting System" as the total combination of mechanical, electro-mechanical, or electronic equipment, and any ancillary equipment and all

software, firmware, and documentation required to program, control, and support the equipment, all of which is used to define ballots, cast and count votes, report and/or display election results, and maintain and produce any audit trail information. Similarly, we define "Pollsite Voting System (PVS)" as that portion of a Voting System that is intended for use at a pollsite. Therefore, a PVS is both the scanner and the disability device when these are intended to be used in a pollsite. When answering the questions below, describe your scanner related capabilities in the column marked "Precinct Scanner" and your disability voting capabilities in the column marked "Ballot Marking Device". If your proposed solution is a combined scanner and BMD, and there are shared resources note that fact so that it is clear that the resources in total are not over-represented.

5.2.1 Pollsite Voting System Mechanical Characteristics

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
1) ***Durable Material*** – Describe how the proposed Pollsite Voting System is composed of durable materials and assembled in a durable fashion.	The DS200's internal components are assembled in a rugged, impact resistant GE C6600 – Polycarbonate Acrylonitrile Butadiene Styrene (ABS) plastic housing. The terminal's outer coloring is integrated into the plastic to prevent chipping or scratching on the outside surface.	The ES&S AutoMARK is designed with materials and assembly practices that exceed federal vibration, shock, and environment testing standards, which are based on military testing standards. As part of the federally mandated ITA testing process, the ES&S AutoMARK has passed the 1.5 million mark test, environmental testing, and standard functionality testing. Additionally, the System was subjected to and passed Florida State's 12" drop test, ensuring the system will operate normally after such a drop. Most significantly, however, the most compelling evidence of the ES&S AutoMARK's durability is its proven, day-in and day-out use during elections across the country and abroad with more than 38,000 units in use.
2) ***Durability*** – Describe how the proposed Pollsite Voting System as a whole is durable and unlikely to fail when used throughout the Election Cycle as a result of use and transportation.	The DS200 is provided with a protective enclosure rendering the equipment capable of withstanding the transportation and storage requirements outlined in the VVSG, Volume I, section 3, subsections 3.3.3, "Transport and Storage of Precinct Systems," and 3.2.2.14, "Environmental Control – Transit and Storage." The DS200 is unlikely to fail when properly stored and transported in the included carrying case. The lockable case is capable of withstanding slight impact, shock, and vibration loads accompanying	The ES&S AutoMARK BMD has been tested and certified to meet all VVS standards for vibration and physical shock, including system shake and drop tests. The ES&S AutoMARK system is unlikely to fail when stored and delivered in the NYC BMD transport cart or in an optional carrying case. The NYC steel transport table was designed specifically for the City of New York BOE election use of the ES&S AutoMARK BMD. This lockable and sealable cart provides a durable enclosure to store, transport and utilize the BMD and

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
	private ground transportation. The systems must also be stored correctly – in a controlled environment – to minimize failure.	its accessories. The cart has oversized wheels that provide additional durability during transport to and from the pollsite.
3) ***Reliability & Accuracy*** – Describe how the proposed Pollsite Voting System records the cast ballot reliably and accurately.	The DS200 pollsite scanner employs advanced image scanning technology to quickly process ballots formatted in a variety of lengths and accurately discriminate between valid voter selection marks and extraneous ballot elements such as perforations, smudges and folds. The ES&S DS200 has been tested and certified to sustain reading accuracy during the required operating period with a reliability level exceeding 99.999 percent. Ballots are cast on the DS200. Reliability is measured by identifying the Mean Time Between Failure (MTBF). MTBF is the value of the ratio of operating time to the number of failures, which have occurred in the specified time interval as per the United States Federal Election Commission (FEC) National Voting System Standards. The higher the MTBF, the more reliable the system. Note: For the purpose of defining system reliability, a "failure" is defined as any event that results in the loss or unacceptable degradation of one or more of the system functions. The MTBF for the DS200 exceeds 163 hours based on Federal certification testing. Accuracy is measured by identifying the subsystem's Bit Error Rate in a four-hour interval. This rate is determined by the ratio of data bit errors to the total number of data bits processed at the nominal or designed rate of processing. The bit error rate includes all errors from any source in the processing subsystem.	Not applicable. The ES&S AutoMARK is a ballot marking device only. As part of the Federally mandated ITA testing process, the ES&S AutoMARK has passed the 1.5 million mark test.

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
	ES&S designed the DS200 to meet or exceed the Maximum Acceptable Value (MAV) error rate of 1 part in 1,000,000 and the Nominal Specification Value (NSV), which is 1 part in 10,000,000. The DS200 reads only properly marked ballot targets that appear in the scanner's designated read area. ES&S configures the scanner's optical thresholds to ignore erasures and improperly marked targets, and to read only marks that meet the strict requirements to be considered a valid vote and converted into digital data for vote accumulation. Reliability and accuracy are also determined by identifying Percentage of Up Time (POUT), which is the probability the system will respond to an operational demand. DS200 election audit trails provide the supporting documentation for verifying the accuracy of reported election results. They present a concrete, indestructible archival record of all system activity related to the vote tally, and are essential for public confidence in the accuracy of the tally, for recounts, and for evidence in the event of criminal or civil litigation. The DS200 was designed to meet or exceed all EAC VVSG 2005 requirements for system audits. The system audit record can be printed from the internal thermal printer on the DS200 without interruption of any other reporting function.	
4) ***Mechanical Modifiability*** – Describe how the proposed Pollsite Voting System can be easily modified from a mechanical perspective to meet the needs of BOE in NYC.	ES&S is committed to meeting the BOE's unique needs, which includes the ability to make mechanical modifications. The ES&S solution is designed to accommodate increased growth and volume as well as modifications, adjustments, or additions – based on changes in election law, client-requested changes, or enhancements developed by the company.	
5) ***Storage for Supplies*** – Describe how the proposed Pollsite Voting System has storage space in or on the System	The DS200 comes complete with a durable carrying case that can be locked and	Storage for supplies for the ES&S AutoMARK are accommodated within the NYC BOE steel transport

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
for current and future BOE in NYC Election Day supplies.	transported without additional packing. Its sturdy construction incorporates space for the power cord/AC adapter and control keys. The DS200 carrying case is also utilized as the top section of the plastic ballot box during storage or operation. It can be removed and transported separately from the plastic lower ballot bin, and includes rollers and a telescoping handle. Additional pollsite scanner supplies used during Election Day operations (official ballots, emergency ballots, spare seals, marking device pens, etc.) can be transported to the pollsite in the lockable, lower ballot bin of the DS200 and removed prior to poll opening. Approximately 3,500 ballots fit into the lower ballot bin.	table. All required components of the system − the unit itself, headphones, AC power cord/extension reel, rocker paddles, sip & puff device, and UPS/battery pack −fit neatly into the NYC BOE steel transport table.
6) ***Clear and Concise Error Messages*** **–** Describe how the proposed Pollsite Voting System will provide clear, concise error messages for inspectors, voters and technical staff. Can the jurisdiction revise error messages to meet their procedures? List all Inspector messages in Appendix D-1 List all voter messages in Appendix D-2 List all technical messages in Appendix D-3	The DS200 displays status and error messages on the terminal's 12-inch color screen. Messages are displayed in full text or numeric format. All DS200 error messages requiring intervention by an operator or poll official are displayed unambiguously in easily understood language text on the LCD display. Depending on the language options set in election coding software, the system will also support languages other than English. ES&S can modify the colors, shapes, fonts and messages used on all screens by modifying the **adminscreens_xx_XX.xml** file, the **messages_xx.xml** file, **sysobjects_xx.xml**, the **votermessages_xx.xml** and the graphics files (.png format) used for the backgrounds to suit a specific jurisdiction. A full list of error message listings for inspectors, voters, and the BOE technical staff appear in **Appendices D.1 through D.3.**	The ES&S AutoMARK displays error messages on the terminal's 15-inch screen. A full list of error message listings for inspectors, voters, and the BOE technical staff appear in **Appendices D.1** through **D.3.**

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
7) ***Visible Messages*** – Describe how the proposed Pollsite Voting System display provides voters and pollworkers with messages, feedback and instructions. For messages to voters, are messages available in all of the following required languages? a) English b) Spanish c) Korean d) Chinese	The DS200 pollsite scanner is designed to meet all the Common Standards of the Accessibility requirement in VVSG Volume 1 - Section 2.2.7.1. In addition to these accessibility requirements, the DS200 design includes a large LCD screen to improve voter feedback, and a touch screen interface to simplify voter interface. Situations that require voter interaction are displayed clearly in plain text, and are supplemented with an audible warning signal. A confirmation screen provides clear feedback to the voter that their ballot has been successfully tabulated. Voter messages are displayed in the language chosen by the voter. All other messages are displayed in English. All listed languages (a-d) are supported by the ES&S AutoMARK.	The ES&S AutoMARK provides visual feedback through the terminal's 15-inch diagonal screen. Voter messages are displayed in the language chosen by the voter. All other messages are displayed in English. All listed languages (a-d) are supported by the ES&S AutoMARK.
8) ***Audible Messages*** – Describe how the proposed voting system audible device provides clear messages, feedback and instructions to voters that require this type of assistance. Are messages available in all of the following required languages? a) English b) Spanish c) Korean d) Cantonese Chinese e) Mandarin Chinese	The DS200 produces an audible alarm – at a frequency and volume level that may be heard without being disruptive. Audio ballot functions are executed using the ES&S AutoMARK.	Voters using the ES&S AutoMARK are offered many audio ballot options. ES&S has worked with disability groups to determine the clarity of the audio messages, feedback and instructions. ES&S will work with the BOE to develop audio ballots that meet New York voters' language and comfort needs. Key features of the ES&S AutoMARK audio presentation include: • Audio presentation in either synthesized speech or real voice files. • Ballot and voter instruction/ message presentation in the language selected by the voter both in audio and visual formats. All listed languages are provided. (Note that write-in names are limited to use of the English alphabet.)

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
		• Tempo and volume controls for adjusting audio ballot presentation. • Pause/resume audio capabilities. • Multiple ballot navigation and selection methods, including touch screen, Braille-embossed keypad, sip & puff tube, foot pedal or any other two-position switch. • Continuous Audio prompts as to next actions available, such as "Press the right arrow to move to the next contest." All pollworker functions are visually provided via the touch screen.
9) ***Ease of Adding Languages*** **–** Describe how the proposed voting system enables a jurisdiction to add additional languages for voters. What additional languages have been used by other jurisdictions on the proposed voting system?	All voter messages are contained in a **messages_xx.xml file** where the **xx** stands for the two-character abbreviation for the language. For example, the **messages_fr.xml** file would contain the voter messages in French. So long as a TrueType font exists for the language, a jurisdiction requiring a new language need only construct an additional **messages_xx.xml** file with the proper translations and add it to the machine using the existing update process. The DS200 has displayed Creole and French in addition to the required languages for New York City.	The ballot marking system currently supports the following languages: English, Spanish, Mandarin Chinese, Cantonese Chinese, Korean, Vietnamese, Japanese, Tagalog, and Creole. Customers have also used Lakota and Navaho languages on the AutoMARK. To add a language that is not part of the supported list, a set of translation files and graphic files are substituted for one of the supported languages not used in that election. ElectionWare currently has the function to add an audio language. In the future, ElectionWare will be able to add a screen language. This will allow the BOE in NYC to show Chinese text on the screen, and have ballots in both Mandarin and Cantonese audio languages.
10) ***Ease of Ballot Revision*** – Describe how the proposed Pollsite Voting System can enable flexibility for last minute ballot changes.	Setting up ballots for the DS200 allows for quick revisions. DS200 ballot information is stored to a removable USB memory stick. Once a change is identified and implemented using ES&S election management software, memory sticks can be updated in a matter of seconds.	Setting up ballots for use on the ES&S AutoMARK is a process that enables quick revisions. All ballot information is stored to a removable compact flash memory card. Once a change is identified and implemented using the EMS software, updated memory cards can be programmed in a matter of seconds.

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
11) ***Full-Face Requirements*** – Describe how the pollsite voting system meets the State New York full-face ballot requirements.	The DS200 meets New York State full-face ballot requirements. The system can process portrait and landscape ballots – reading both sides simultaneously. The DS200 reads the same ballot that has already been used for both of New York City's Primary and General Elections in 2008.	The ballot used with the ES&S AutoMARK meets New York State full-face ballot requirements. The ballot is organized in row and column for party and contest presentation and can be presented in either portrait or landscape. The full partisan ballot can be presented on one side with the back side of the ballot used for referenda if space is not available on the front. The ES&S AutoMARK utilized New York City's full face ballot format in both the primary and general formats in 2008.
12) ***Accessories Required*** – List the accessories (which are reusable from election to election) that are required to support the pollsite voting system.	In the operational mode, the DS200 pollsite voting system is self-contained. Reusable accessories include: • AC power adapter and cord. • USB flash drive containing the election definition. • Ballot privacy sleeve. • Power cord. • Keys.	In the operational mode, the ES&S AutoMARK ballot marking system is self-contained. Reusable accessories include: • 1 GB compact flash memory card containing ballot data. • Headphones. • Sip & puff device. • Switch paddle device. • Ballot privacy sleeve. • Power cord. • Keys (NYC unique access door key ("silver") and power key ("gold").
13) ***Supplies Required*** – List the supplies (which are used in the election cycle throughout the year) that are required to support the pollsite voting system.	• DS200 paper rolls.	• ES&S AutoMARK Ink cartridges
14) ***Additional Equipment Necessary –*** Describe what additional equipment (beside Pollsite Voting System) if any, will be required before, during or after Election Day.	No additional equipment is needed to operate the ES&S DS200.	No additional equipment is required to operate the ES&S AutoMARK.
15) ***Ink Specifications –*** Can the Ballot Marking Device mark ballots in colors other than black? If so, which?	Not applicable.	No. The ES&S AutoMARK uses an inkjet printer to mark an optical scan ballot with black ink only. The printing technology is an HP Inkjet cartridge.
16) ***Reading of Ballots*** – If the pollsite voting system is optical scan system, describe the kinds of ballots that the pollsite voting system currently uses, and indicate if the pollsite voting	The DS200 pollsite voting system is capable of reading either portrait or landscape ballots in lengths from 11" to 19". All BOE in NYC ballot	The ES&S AutoMARK is capable of reading either portrait or landscape ballots in lengths from 11" to 19". All BOE in NYC ballot styles can be supported, however

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
system can be modified to use current BOE in NYC paper ballots.	styles can be supported; however the Paper Ballot module (DSIM) code channel is required.	the Paper Ballot module (DSIM) code channel is required
17) ***Device Calibration*** – Describe the nature and frequency of any requirements to calibrate any part of the pollsite voting system, e.g., screens, ballot counters, audio features, sip and puff features, etc.	The DS200 is meticulously calibrated at the factory before shipment to a customer. The touch screen and the scanner sensor have user-accessible calibration routines, but neither requires frequent calibration. All settings should be tested during regular maintenance periods by the VMF technicians.	Touch screen and printer calibration are straightforward processes clearly defined in documentation. This should be done as part of the pollsite setup for each election. Scanner calibration is typically done only after a scanner is replaced and requires calibration ballots. This process should be performed by qualified technicians.
18) ***Environmental Requirements*** – List the temperature (F) and relative humidity (%) range in which the Pollsite Voting Equipment operates. Add any addition environment constraints.	**Storage:** -4 to +140 degrees Fahrenheit; no humidity requirement. **Operation:** +60 to +100 degrees Fahrenheit; no humidity requirement. If stored in an uncontrolled environment, the DS200 should be kept in its portable carrying case. Units can be stacked five (5) high when stored in this case.	**Storage:** +50 to +104 degrees Fahrenheit. Between 10% and 85% non-condensing humidity. **Operation:** +50 to +104 degrees Fahrenheit. Between 10% and 85% non-condensing humidity. If stored in an uncontrolled environment, the BMD should be kept in its portable carrying case. Units can be stacked five (5) high when stored in the case.

Pollsite Voting System Mechanical Characteristics Subcategories	Vendor Response for Poll Site Scanner	Vendor Response for Ballot Marking Device
19) ***Voter Review of Choices*** **–** Describe the jurisdiction's capabilities to control all aspects of the mechanism used by voter to review the ballot including font, color, messages, time, cycles, etc.	The DS200 pollsite scanner includes a large touch screen display to provide clear feedback to the voter on the disposition of their ballot. If any errors or irregularities (as defined by the election jurisdiction) are recognized, the voter has the ability to return the ballot for review, or instruct the system to read it as is. The background colors, fonts and messages are precisely defined in the **adminscreens_xx_XX.xml,** the **messages_xx.xml** files, **sysobjects_xx.xml** and **votermessages_xx.xml** where the **xx** and **XX** represent the two letter abbreviation for the language and its subcategory. For example, **adminscreens_en_US.xml** holds the information for US style English. ES&S can modify the colors, shapes, fonts and messages used on all screens by modifying the **adminscreens_xx_XX.xml** file, the **messages_xx.xml** file, **sysobjects_xx.xml**, the **votermessages_xx.xml** and the graphics files (.png format) used for the backgrounds to suit a specific jurisdiction. The messages appear on the screen until the user presses one of the options presented for a particular situation. The DS200 meets the requirements of MIL-STD-1472 Human Design Criteria.	The ES&S AutoMARK touch screen follows the same operating principles as an ATM touch screen. Intuitive menus, dynamic selection highlighting and a comprehensive ballot summary provide voters the best possible environment to select desired candidates and ballot options without confusion. The ES&S AutoMARK supplies voters with vision and mobility disabilities with the tools to privately cast a paper ballot. The terminal's zoom and high-contrast display options, audio ballot and Braille-embossed keypad provide full support for voters with vision impairments. A port for a sip & puff device, foot pedal, or other two-position switch facilitates unassisted voting for voters with mobility issues. Selections are recorded on a paper ballot used by any voter, ensuring privacy and anonymity during ballot counting.

5.2.2 Pollsite Voting System Functionality

Pollsite Voting System Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Ease of Set-up*** – Describe how the proposed Pollsite Voting System is easily prepared for Election Day. a) Vendors' proposals shall give an estimate of the time required to set up the individual DREs, system controllers, and/or optical scan voting equipment to make them ready for delivery to the polls for each component of the PVS and for both a Primary and a General Election using the Test Script of the State BOE.	A DS200 takes minutes to set up. Election workers simply remove the scanner from its carrying case (if not already completed), mount it on the ballot bin, plug in the unit, and raise the top cover of the DS200 unit to automatically start the machine boot-up process. The unit boots up in a matter of minutes. If the City elects to acquire a transport cart to store and transport the DS200, the setup process could be further simplified for the pollworkers. Housing the DS200 and its associated supplies within an integrated cart would only require that the pollsite inspector cut appropriate seals, plug the device into a standard three-prong AC outlet, and then raise the top cover of the DS200 to begin the automatic boot process. Boot time takes only a few minutes and does not require any further interaction by the poll worker to ready the machine for the first voter. a) If the pre-marked test ballots from the AutoMARK are used as a test deck, the DS200 could be tested and prepped for delivery in 15 minutes. However, outside of the machine preparation it is recommended that the portable memory device is downloaded into the reported system to complete the end-to end testing process.	The ES&S AutoMARK can be readied for use in a matter of minutes. Pollsite inspectors must simply cut the seals on the transport cart doors, open the back door to gain access to the AC power cord, plug the unit into a standard three-prong AC outlet, and turn the control key to the ON position. Boot-up time for the ES&S AutoMARK varies with the number of ballot styles loaded on the machine's compact flash memory card, the complexity of the ballot styles and the level of detail of the audio files (i.e. whether voice recording or computer-generated voice files are utilized). a) Using the 14-ballot test used in acceptance testing as an example, the AutoMARK could be tested and ready to go deliver to the polls in approximately 30 minutes.
2) ***Time Required to Prepare Equipment (to Meet BOE in NYC Implementation Time Frame)*** – Describe the proposed plan for implementing the proposed voting system in time for the September 8, 2009 Primary Election.	ES&S' ability to meet the key dates and timelines outlined in this RFI are dependent on the NYSBOE certification and acceptance testing schedule for the DS200. In order to meet the May 4 start date for receipt and acceptance testing of the DS200, NYSBOE certification must be complete by late April. Central acceptance testing in Albany by the NYSBOE must begin immediately thereafter to meet the City's start date of May 4 for receipt and testing of the new pollsite voting system. Key dates outlined in this RFI for EMS software integration, poll worker and VMT training, and election-specific preparations can be supported by ES&S.	

Pollsite Voting System Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
3) ***Degree of Voting Privacy*** – Describe how the proposed voting system will enable a voter (including voters with disabilities) to cast his or her ballot in complete privacy and security.	ES&S sells several types of voting booths that provide a private and secure environment for voters to mark a paper ballot. If additional security is required, the DS200 system includes an optional privacy sleeve that may be used to ensure ballot secrecy as the voter transports a ballot from the voting booth to the DS200. In addition, the voter's privacy and anonymity are preserved during the process of recording, verifying and auditing ballot choices. The DS200 does not display any information that may reveal the identity of the voter or contents of the voter's ballot while reading, verifying and auditing ballots.	The following system features ensure private ballot marking for voters with disabilities. • Option to blank the screen during audio voting clears the terminal display to prevent onlookers from viewing ballot selections. • Physical privacy screen shields the ES&S AutoMARK display during voting. • Optional ballot privacy sleeve may be used to transport the paper ballot from the ballot-marking terminal to the polling place tabulator or ballot box without revealing selections. • Marked ballots inserted into the ES&S AutoMARK generate an audio and display ballot summary to confirm that ballot selections were marked as intended prior to casting. • Selections are recorded on the same type of paper ballot used by standard voters, ensuring privacy and anonymity during ballot counting.
4) ***Amount of Assistance Required*** – Describe how the proposed voting system will enable a voter (including voters with disabilities) to cast their ballot with minimal assistance.	Voters can insert a ballot into the DS200 in any orientation. Once the counter recognizes that a ballot has been inserted, internal rollers gently input the ballot with no further action required from the voter. A minimum amount of assistance may be required to feed a ballot into the system for voters with profound mobility issues. Situations that require voter interaction (exception messages provided to the voter) are displayed clearly in plain text, and are supplemented with an audible warning signal. A confirmation screen provides clear feedback to the voter that their ballot has been successfully tabulated.	The ES&S AutoMARK supplies voters with vision and mobility disabilities with the tools to privately cast a paper ballot. The terminal's zoom and high-contrast display options, audio ballot and Braille-embossed keypad provide full support for voters with vision impairments. A port for a sip & puff device, foot pedal, or other two-position switch facilitates unassisted voting for voters with mobility issues. Selections are recorded on the same type of paper ballot used by standard voters,

Pollsite Voting System Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	From a system standpoint, the election jurisdiction can enhance the voting experience for voters with disabilities by providing accessible voting privacy booths, magnifiers, or other ballot marking provisions to assist the voter in the marking of their ballot.	ensuring privacy and anonymity during ballot counting. No poll worker assistance is required during ballot navigation and marking for any cast mode. Voters with profound mobility issues may require assistance when transporting a ballot from the ES&S AutoMARK to a ballot box or pollsite tabulator. An optional ballot secrecy sleeve is available to ensure that the paper ballot remains secret during this transfer. An optional privacy feature included with the AutoMARK is AutoCast. The feature allows the voter to designate whether he or she desires the ballot to return or be placed in a secure container in the rear of the ES&S AutoMARK. NYC BOE chose to not use this feature in the 2008 election cycle.
5) ***Time Required to Cast Votes*** – Describe how the proposed voting system allows for a reasonable length of time for any voter (including voters with disabilities) to complete and cast his or her ballot.	Voters can take as much time as they need to mark their ballots in a conventional voting booth and then insert their ballot into the DS200. This method of voting allows as many voters as the pollsite can accommodate to mark ballots simultaneously. The DS200 can scan a typical ballot in 8 to 15 seconds, depending upon the size and complexity of the document.	Marking a ballot with the ES&S AutoMARK can take several minutes depending on the size and complexity of the ballot and the input method selected by the voter (audio, display, rocker paddle, or sip & puff). One of the advantages of having a separate device for ADA voters is that it in no way interrupts the service of the DS200 being utilized by the rest of the polling place voters.
6) ***Ease of Pollsite Voting System Modification & Re-certification*** – Describe the proposed plan by which the proposed Pollsite Voting System can be modified and recertified (by the NYS BOE) if needed to meet the needs of BOE in NYC for implementation for the September 8, 2009 Primary Election.	Any system modification requires NYSBOE recertification. ES&S will be required to submit the system to the qualified voting system testing lab for testing and qualification prior to submitting the modification to the NYSBOE. The NYSBOE will then review the test results and certify the system or recommend additional modifications. The amount of time required to modify and certify the proposed system depends on a variety of factors, including the extent of required changes, and the degree of system testing required by the NYSBOE.	
7) ***Multiple Election Districts*** – Describe how each proposed Pollsite Voting System can handle multiple Election	The DS200 can handle as many Election Districts on a single machine in a poll site as the	The ES&S AutoMARK supports a theoretically unlimited number of ballot

Pollsite Voting System Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
Districts.	jurisdiction might find reasonable. The absolute limit depends upon the size and complexity of the election and the capacity of the USB memory stick used to hold the election definition files. The DS200 will produce a results tape for each of the election districts programmed for that polling location.	styles, election districts and languages. All election files – including ballot audio – are stored on the terminal's compact flash memory card. Any size card may be used.
8) ***Additional Equipment Necessary*** – Describe what additional equipment (beside Pollsite Voting System) if any, will be required before, during or after Election Day.	No additional equipment is required to operate the DS200. ES&S recommends that NYC BOE consider the acquisition of a transport cart to store and transport the DS200 unit, plastic ballot bin, ballots, and any other BOE Election Day supply items. If desired, our sales team will work with you to design and acquire this capability.	No additional equipment is required to operate the ES&S AutoMARK.
9) ***Exception Handling*** – Describe how the proposed Pollsite Voting System will cleanly and clearly handle any exception while still maintaining the systems data.	The DS200 will return any paper ballots with exceptions, without recording any election data. The system generates audible and visual alerts for the voter. Error messages are either descriptive or numeric; both message types have recommended user corrective actions featured in the system user manuals. Exceptions do not affect recorded election totals.	The ES&S AutoMARK is a ballot marking device. No votes or ballot records are stored or vote total maintained. The official ballot, inserted to activate voting, records all vote selections. Once printing of vote selections is completed, the ballot is removed for tabulation elsewhere. Any exceptions that occur during this process are identified on the display screen and audibly if applicable with instructions for recovery. Logs of all exceptions are maintained in non-volatile memory for diagnostic use.
10) ***Power Outage & Vote Tabulation -*** Discuss what happens during a power outage or in case of other disasters at the pollsite with focus on the preservation of the vote counts.	The DS200 uses an environmentally friendly, internal lithium ion battery that requires no special maintenance. Batteries can be checked and charged without turning the unit on. The battery obtains its charge automatically from the system's power supply, and no poll worker intervention required to switch from AC to DC power. The DS200's internal battery supplies a minimum of two hours of continuous use in the event of power failure. The unit's backup	In the event of a power outage, the ES&S AutoMARK is equipped with an internal battery pack that provides sufficient capacity to allow two hours of voting. The power supply automatically switches from the 12 VDC provided by the brick's supply to battery power when AC power is lost.

Pollsite Voting System Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	memory and power supply ensure that no votes are ever lost due to power loss or equipment failure. The battery is "floating" on the system, meaning the DS200 transitions to battery operation immediately without system impact. When the battery gets low, the system deactivates gracefully to ensure no ballots are being scanned, or data is being written to the USB memory stick when it loses power completely. When power returns, a recovery procedure allows voting to continue where it left off. The system's integrated ballot box includes an emergency ballot bin for temporary storage of voted ballots until power returns.	
11) ***Audit of Voting Tabulation*** – Describe how the proposed voting system's central tabulation hardware and software is capable to efficiently consolidate vote results from each Election District and performing a full audit (i.e. a re-tabulation of the total vote count for purposes of determining the official election results) within a satisfactory time after the election (as determined by the BOE in NYC). Discuss how the process is protected in emergency situations.	a) The DS200 Audit Log report lists all events (errors, exceptions, and user initiated functions) that occur on the system from the time an election worker inserts the terminal's USB memory stick until the stick is removed. Each event appears in the audit record with a date and time stamp. The DS200 Ballot Status Accounting Report also includes the total number of write-in votes cast, the number of blank ballots, the number of overvoted ballots; and the number of crossover ballots processed by the system. In addition, the DS200 keeps an individual record of each ballot cast and exports these records onto the memory stick when the user closes the election on the unit. These records are then available for retabulation as the jurisdiction might require.	Not applicable. All votes are tallied on the DS200.
12) ***Audit Logs*** – Describe the logging capabilities of the pollsite voting system. a) Which components have logging of events? b) What types of events are logged? c) How are logs managed? d) Are the logs circular? e) How is log size controlled?	a) The DS200 Audit Log holds entries from all internal components capable of producing an audit log entry. These are the power management board, the scanner hardware board and the election processing firmware. b) The Audit Log report lists all events (errors, exceptions, and user initiated functions) that occur on the system from the time an	The ES&S AutoMARK operation log captures all significant operations that occur on the scanner. a) The ES&S AutoMARK operations log records the following terminal events: • System Powered On • System Shutdown OK • Keyswitch Test Mode

Pollsite Voting System Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
f) What log reports are available? g) Are the audit logs synchronized with the EMS?	election worker inserts the terminal's USB memory stick until the stick is removed. Each event appears in the audit record with a date and time stamp. c) The log file is stored on the removable USB memory stick and is available to the Reporting Manager program after the stick is processed. d) The Audit Log is not circular. e) The system warns the user when the storage device is full. f & g) A user can print the contents of the Audit Log on the thermal printer built into the machine or from the Reporting Manager Software after a user has closed the election and transferred the data from memory device.	• Keyswitch Run Mode • Hour Print Report • Printer Calibration • Unrecognized Ballot • Ballot Marked Successful • Ballot Returned Unmarked • Test Print Successful • Printer Malfunction • Printer Low On Ink • Printer Ink Used Up • Scanner Malfunction • Paper Misfeed • No Election Data • CF Card Access Failure • Loaded Ballot Id xxxx • Marked Ballot Inserted • Unit Locked Time Out • Battery Low • Running on Battery Power • Running on External Power • Login Successful • Login Failure • Date/Time Change • Battery Charged • Eject Ballot From Test Mode • Test Print Screen • Service Print Cartridge Screen • Manual Print Calibration Screen • View Operation Log Screen • Battery Status Screen • Software Versions Screen • Calibrate Touch Screen • Unlock Flash Card Screen • View Scan/Service Log Screen • Upload Firmware Screen • Set Password Screen • Set Date/Time Screen • Set Print Head Screen • Loaded Election xxxxxxxxxxx • Print Head Missing • Unknown Operation

Pollsite Voting System Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
		b) The AutoMARK has three logs. One is an operation log that keeps track of voter events and menu events: ballot inserted, ballot marked, test menu entered, etc. The scanner log records any problems reported by the scanners. The service log keeps track of any hardware failures of the unit. c) Logs are stored on the compact flash memory card that was used to load the election data onto the AutoMARK. d) AutoMARK audit logs are circular. If the allocated amount of space is exceeded, the first entries will be overwritten. The amount of space is much larger than is typically used in the course of an election. e) The VAT audit logs are limited to 10 MBs (277,777 entries) since they are stored on the compact flash card. f) The AutoMARK has an operation log, a scanner log, and a service log. The operation log keeps track of all voter operations. The scanner log keeps track of any problems reported by the scanners. The service log keeps track of any hardware failures of the unit. g) Each AutoMARK will have its own audit log.

5.2.3 Election Management System (EMS) Functionality

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***EMS Functionality*** – Describe the key functions that the EMS performs and what is required to initialize it.	The Unity Election Management System software suite provides end-to-end election management. Key functions and modules include: • Election database creation and maintenance, using the Unity Election Data Manager (EDM)	The Unity Election Management System modules which support our DS200 Poll Site Scanner are also used to support the AutoMark Ballot Marking Device: • BMD configuration, using

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	module. • Election ballot layout creation, using ElectionWare Paper Ballot (DSIM), but now integrated into the ElectionWare suite of applications. • Election equipment configuration, using ElectionWare (Configure). • Election equipment media creation and burning, using ElectionWare (Process and Package). • Election results accumulation and report generation, using the Unity Election Reporting Manager. The Unity software election database application greatly reduces the workload for election administrators. District relationships are set up once, making election setup for future elections extremely efficient. The user simply highlights the active election districts and enters contest and candidate information into the Unity Election Data Manager. An XML file containing the election definition is created by EDM and imported by ElectionWare. Once this information is in the ElectionWare database, the user can design ballots and program media for all ES&S tabulation products. **Initialization** Election workers run ES&S software from a compliant Windows-based PC. Each software module is password protected and records all system events by date, time and user to a comprehensive audit log. Refer to **Appendix C and D.5** for more details on ES&S' Election Management System software.	ElectionWare Configure. • BMD media creation and burning, using ElectionWare Process and Package modules. **Note:** These new ElectionWare modules replace the AutoMARK Information Management System (AIMS) which was used in the NY 2008 Primary and General elections. **Initialization** Election workers run ES&S software from a compliant Windows-based PC. Each software module is password protected and records all system events by date, time and user to a comprehensive audit log. Refer to **Appendix C** and **D.5** for more details on ES&S' Election Management System software.
2) ***User Friendly*** – Describe the user-friendliness functionality of the proposed EMS.	Unity software follows the standard Windows model for user interaction – ensuring that novice users can get up to speed quickly. Each module includes a comprehensive Help file for instant application assistance.	

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
3) ***Setup of Election*** – Describe the extent to which the proposed EMS has the flexibility to change the Election Set-up to meet current and future BOE in NYC needs	Unity software is proven, robust, end-to-end election management solution that met all BOE requirements for election setup, configuration and BMD support in the 2008 Primary and General elections. The proposed ES&S solution has been enhanced to be a scalable system, designed to accommodate increased growth and volume as well as modifications, adjustments or additions based on changes in election law and client requested changes. For example, enhancements developed by the ES&S allow for up to 13 languages in any election. Ballot identification via the code channel has been increased to allow up to 26,000 uniquely identified ballot styles.	
4) ***Data Import*** – Describe the capabilities of the proposed EMS to allow for different input file formats.	The ES&S Unity election system contains a flexible Import Wizard which accepts election data from any source. Every piece of election data needed to create ballots can be imported into the Unity election system. Examples of data that can be imported include: • Election Districts. • Political Districts. • Offices. • Candidates. • Pollsites. • Jurisdictional-specific data that is printed on the ballot. Input files can be formatted as fixed length fields or can be delimited. Both ASCII and Unicode formats can be imported which provides support for multi-byte character languages such as Chinese. Header rows can be used to define the table and field names of the information contained in the import files. The Unity EDM also contains an Automatic Import feature which provides a one-click process to import all election data needed to create an election. Simply put all your import files into a single disk folder, browse to that folder and click Auto Import. EDM imports all the files and automatically performs all tasks necessary to create the election. The Import Wizard eliminates the need for duplicate data entry and reduces errors in the election process.	The election definition needed to support the BMD is created from the same data as the PSS, thus it does not require any additional election definition import functionality. The BMD does allow for the importing of audio files.

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
5) ***Election Setup*** – Describe the step by step operation of the EMS for the setup of an election. Detail the differences between a primary election and a general election.	The Election Data Manager (EDM) is used to enter the election definition, which will be used by the DS200 and AutoMARK systems. Election information can be manually entered or imported into EDM. Typically, a master election database is created one time and contains all election districts, political districts and election district and political district relationships. This master file is then used to build each election, to which election-specific contests can be manually added or copied from a previous election file. Next, candidates and propositions are added to the election (manually entered or imported). Note that some jurisdictions import the entire election definition each election and choose not to create elections from the master election database. Once the election definition process is completed and proofed, ballot styles are created and assigned to the respective Election Districts. The ballot style information is now used by the various Unity modules and vote tabulation devices – Paper Ballot (DSIM), DS200, ElectionWare, AutoMARK and ERM. EDM has the ability to print all required reports of Election Districts, political districts, district combinations, contest, ballot style listing, etc. The EDM module generates ballot codes based on information entered by the user. Ballots can be coded with the following information: • Ballot style ID. • Election District number. • Split number. • Party number or ballot type. The DS200, Paper Ballot (DSIM), and BMD can now support more than 26,000 uniquely identified ballot styles. There are no differences in the system between a primary and general election. Each type of election can be set up manually or using the import facilities of EDM. Using the Copy Election function within EDM does allow for an easy transition from a primary to general election. You can use the primary election as the basis when creating a general election and simply delete any contests and candidates that will not appear in the general.	
6) ***Ballot Layout Process (Manual Over-ride)*** – Describe the capability of the proposed EMS to provide automatic ballot layout functionality, while still allowing manual changes in order to maintain "party integrity" for General Elections. a) Describe the ability of the system to retain previously defined formats for ballot layout.	ElectionWare contains a desktop publishing WYSIWYG application specifically designed to create NYC election ballots. Templates exist to design the three ballot layouts used in NYC elections: Democratic primary, Republican primary, and Landscape general. Each template contains default font, font size, alignment, and data elements for each of the ballot	ElectionWare automatically creates BMD page layouts by using its Paper Ballot template information. ElectionWare is an integrated application that uses a single Postgres database for all of the election functions that comprises it. This database is initially populated from the files produced by EDM and the initial information is then

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	components, such as: • Office. • Party. • Candidate. • Write-in. • Headings. ElectionWare reads the ballot style election definition created by EDM and applies the selected template to automatically lay out the DS200 ballot. All ballot styles defined in the election can now be viewed and printed. Every piece of information that is printed on the ballot can be modified to allow for manual adjustments. Changes can be made on a global scale or for a specific ballot style. For instance, with one edit you can change the font size of an Office Title on every ballot style on which it appears, or you can change the Office Title on one specific ballot style. Party integrity is maintained during manual changes because ElectionWare – Paper Layout was created specifically to lay out NYC ballots. It has been programmed to adhere to all NYC ballot layout requirements during the ballot layout process. Once a ballot has been designed and adjustments made for multiple languages, long office and candidate names, propositions, etc., these settings can be named and saved to a new template. For example, the template used for the 2008 General election can be used to lay out the 2012 General election.	used and added to by the application functions included in ElectionWare. This includes paper ballot layout, configuring all DS200 and AutoMARK options, formatting the AutoMARK display screen, creating all data files for the DS200 and AutoMARK, providing the ability to integrate all audio files for the AutoMARK and creating the media for the DS200 and AutoMARK.
7) ***Language Translation Input*** – Describe the capabilities of the proposed EMS to input language translations.	The ES&S Unity election system supports up to 13 Latin (single byte) and Character (double byte) languages throughout the system. Language ballot translations are entered into EDM and used by all downstream modules. Language translations are entered into the system the same way English ballot information is entered:	All ballot language information needed by the BMD is provided by the Unity EMS. The BMD also contains import functionality for poll worker and voter information screens, and for audio files which correspond to the election information and instruction to enable audio voting.

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	manually or imported. Depending on the amount of translated data, ES&S recommends importing the language translations into the system. Character language import files must be in Unicode format. The jurisdiction is responsible for all language translations and entering them into EDM. The software does not automatically translate English into foreign languages.	
8) ***Audio Preparation*** – Describe the capabilities of the proposed EMS to provide an efficient method of preparing the audio ballots. a) Describe the types of voice files that can be used (recorded, synthesized, or both) along with the methods of sharing and storing voice files. b) Is synthesized voice available for both Cantonese and Mandarin Chinese? If not, describe alternatives and what steps you will take to provide synthesized voice for both dialects. c) Since the proposed system cannot be networked, describe how the EMS allows BOE in NYC to verify both audio files and visual ballot elements (both translated and non-translated) within a reasonable timeframe.	The DS200 does not have an audio component.	The ES&S AutoMARK employs a removable compact flash memory card that contains ballot style information. All ballot style information is prepared using ElectionWare, which uses data exported from the Unity Election Management System. ElectionWare currently uses recorded audio, and can support both Mandarin and Cantonese Chinese. In addition to ballot style information, the ES&S AutoMARK has additional files necessary for HAVA compliance, including audio ballot files. ES&S will provide and assist the City of New York with specific testing procedures for verifying the auxiliary files and their HAVA compliance. The jurisdiction is responsible for translations for all system files (i.e. instructions and warnings) and entering them into ElectionWare. The software does not automatically translate English into foreign languages. Translations are entered by importing them into the application via a spreadsheet. Ballots can be previewed and tested in ElectionWare prior to being written to removable compact flash memory cards that are inserted into the

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
		ES&S AutoMARK unit prior to opening the polls. ElectionWare includes support for English, Spanish, Korean, and Chinese (Mandarin and Cantonese) languages in audio and display formats. Additional languages can be added by creating custom bitmaps for the visual prompts (for non-Latin based languages) and custom audio files for the audio prompts.
9) ***Recorded vs. Synthesized*** - What are the advantages and disadvantages of using recorded voice versus synthesized voice and what is the impact on the voting process?	The DS200 does not have an audio component.	Both recorded and synthesized speech have been used successfully in voting applications. Many jurisdictions prefer human recorded audio, perceiving that it is more pleasant to hear. The ballot is often recorded in two voices, one for instructions, and one for ballot content. Synthesized speech may be simpler to prepare, although phonics adjustments are usually required. All languages may not be available for synthesized speech.
10) ***Setting PVS Parameters*** – Detail the PVS parameters that may be changed through the EMS and the process to do so. (i.e. closing polls, over/under alerts, exception handling & messages, reporting)	The following parameters may be changed through the EMS for the DS200: • Allow reopen polls (yes or no). • Number of report tapes to print on close. • Number of zero tapes to print on open. • Poll or precinct level report. • Auto print audit log report on close (yes or no). • Media or summary (regular) report format. • Query, accept, or reject undervotes. • Query, accept, or reject overvotes.	Most of the characteristics listed here are characteristics usually associated with a tabulation device, not a ballot marking device. The ES&S AutoMARK will alert the voter if a contest is undervoted and will not allow a contest to be overvoted. Default system messages and election-specific messages can be changed by the user. In ElectionWare Configure the user can also change the following settings on the AutoMARK settings screen: • Alert the voter if not all contest choices are displayed on the screen. • Force the voter to view all contest choices.

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	• Query, accept, or reject blank ballots. • Diverter installed (yes, no). • Identify (divert or stamp) blank ballots. • Identify ballots with marked write-ins. • Identify ballots with overvoted contests with write-ins. • Set jurisdiction image that appears on voter-facing screens**.**	• Allow the write-in keyboard to include numbers. • Set the ballot margin properties. • Set the write-in line properties. • Create a non-audio election. • Set the zoom percentage. • Display party graphics.
11) ***Modifications of Instructions*** **–** Describe the extent to which the EMS allows the jurisdiction to modify instructions (messages, alerts, etc.) presented on or by the PVS in form and content.	The EMS allows the jurisdiction to change instructions that appear on the ballot. Voter messages that appear on the DS200 cannot currently be changed in the EMS. All voter messages are contained in a **messages_xx.xml** file where the **xx** stands for the two character abbreviation for the language used. A jurisdiction requiring a modification to a message need only change the **messages_xx.xml** file with the desired text and add it to the machine using the existing update process.	The jurisdiction can change voter messages in ElectionWare if required, by importing them via a spreadsheet.
12) ***PMD Writing*** – Describe how the ballot data is written onto the Portable Memory Devices (PMDs).	**Pre-Election** DS200 ballot definitions are generated by ElectionWare and written to DS200 USB memory sticks from a management screen. **Election Day** The DS200 stores election totals to the inserted USB memory stick as ballots are scanned on Election Day.	**Pre-Election** ES&S AutoMARK ballot definition files are formatted and written to compact flash memory cards using ElectionWare software. **Election Day** The ES&S AutoMARK does not scan ballots or tabulate results. No information is written to the scanner's memory card during Election Day operation. Once the ballot definition is finalized, the code can be written to the ES&S AutoMARK compact flash card in seconds. The user can create pollsite-specific compact flash cards, put the entire election onto the cards or place groups of polls (such

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
		as boroughs) on compact flash cards. Once an original card is created using ElectionWare, users can cut and paste the election definition from this initial "master" card to multiple, additional cards using standard Windows cut and paste procedures.
13) ***Write-ins*** – Describe how a write-in vote is defined in the EMS.	The EMS defaults the number of write-ins for a contest to be equal to its Vote For number. For instance, a contest that allows voters to select two candidates (Vote For 2) would automatically have two write-in lines. The EMS also allows the BOE to override the number of write-ins that are associated with a contest. For instance, the BOE can change the number of write-ins associated with a Vote For 30 contest to a number less than 30, if the BOE wants to minimize the amount of space taken by the write-ins on the ballot. Write-ins can be turned on and off at the contest level. Write-ins and the number of write-ins can be set when importing contest data, which eliminates manual steps when setting up an election.	
14) ***Ballot Proofing*** – Describe your recommended approach to ballot proofing for BOE in NYC including displayed, printed, synthesized, spoken ballots in English, Spanish, Mandarin Chinese, Cantonese Chinese and Korean and including ballot rotation	ES&S recommends that the BOE in NYC consider proofing at multiple levels. The first level of proofing is to make sure that every piece of election information entered into the EMS is spelled correctly, such as candidate names, office titles, AD/ED names, etc. This will ensure that displayed and printed ballots are correct. The EMS provides reports to add the proofing process. Every piece of information that can be entered into the EMS can be printed out on a report for proofing purposes. English and language translations both need to be proofed. **NOTE:** Data does not get modified or changed when moving from the BOE to ES&S's EMS, when using the Import Wizard or Automatic Import features of the Unity EMS. The second level of proofing is to make sure that generated ballot styles are accurate. It is recommended that the BOE proof to make sure that offices are in the correct order, the number of ballot style are as expected, rotated contests and candidates are accurate, etc. The ES&S Unity election software provides many places to help audit	It is equally important to proof spoken ballot information that is used on the BMD. ElectionWare allows for review of the display and recorded audio for all ballots via a standard desktop PC. This system allows users to proof and review all election information before programming the individual compact flash memory cards. Proofing can be done at the individual ballot element level or at the ballot style level. For instance, the BOE can listen to every candidates name in the candidate list, or each candidate's name can be reviewed by walking through each ballot style.

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	and validate election data to ensure that ballot styles are generated accurately. Software validation processes can be run which analyze relationships defined by the entered data and look for incomplete or inaccurate data, which can cause incorrect ballot styles to be generated. Some of these processes can identify: • Whether ED to political district relationships are defined accurately. • Contests without candidates. • Candidates without parties. • Offices without active districts. • Polls without EDs assigned. The ES&S Unity election software provides numerous reports to proof and validate election data. Every piece of information that is entered into the system can be printed on a report for auditing purposes. In addition, all information relating to the ballot style creation process is available in a report, such as: • Ballot styles assigned to election districts. • Election districts assigned to ballot styles. • Rotation by election district. • Ballot style by poll.	
15) ***Moving from Primary to General*** – Describe how the proposed EMS can enable the BOE in NYC to move from the Primary to the General Election with a minimum of effort.	The procedures for programming primary and general elections with Unity software follow the same path. Each type of election can be set up manually or using the import facilities of the EMS. Using the Copy Election function within EDM does allow for an easy transition from a primary to general election. The primary election can be used as the basis when creating a general election. Any contests and candidates that will not appear in the general election can simply be deleted.	
16) ***Ballot Rotation*** – Describe the capabilities of the proposed voting system to comply with all ballot rotation requirements of NY State Law and BOE in NYC, including "candidate rotation and "group rotation".	Unity ballot rotation algorithms meet all NYC requirements for rotation, including provisions for candidate and group rotation, as demonstrated in the 2008 Primary election. Unity's EDM is responsible for creating the ballot styles containing candidate and group rotations. All other downstream Unity modules and systems use this same ballot style information.	

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
17) ***Last Minute Ballot Changes*** – Describe the capabilities of the proposed EMS to handle "last minute" ballot changes in an efficient and easy manner.	Last-minute ballot changes are handled by the EMS in various ways, depending on the types of changes needed. Ballot changes that do not affect the position of a candidate or proposition response can be made easily in Paper Ballot module (DSIM) and a new PDF can be generated. Ballot changes that do affect the position of a candidate or proposition response require the information to be updated in EDM, and the Generate Ballot Style process must be run. The new data must be brought into Paper Ballot module (DSIM) so new ballot PDFs can be created. The new data must also be brought into EW Process so new DS200 USB memory sticks can be programmed. Changes can be added to Unity and processed through the system in a matter of minutes.	
18) ***Reporting Capabilities*** – Describe the capabilities of the proposed EMS to produce standard, custom and ad-hoc reports as required by BOE in NYC. Also list: a) All of the files and reports that can be produced and in what format (HTML, XML, XLS, etc.) b) The steps required to produce these files and reports in the various formats c) The version of formats used to produce files (if applicable) d) Any third-party software that BOE will need to use with the proposed software to generate reports	Election Reporting Manager (ERM) produces a wide array of election reports and election results displays. Poll level and accumulated totals reports provide a quick and effective means of accommodating candidate and media requests for election results and are available upon demand. ERM also generates various public displays, printed reports and links to the media. The display program scrolls automatically through the live results with a user-definable time delay. All reports can be printed on demand as well as printed to disk for display on television or computer monitors. Multiple free standing PCs, overhead displays or large screen video monitors attached to the reporting PCs provide very effective dissemination of election results. ERM generates HTML reports that can be posted on a Web site so the public and media can obtain the results via the Internet. All reports types and option settings are selectable from drop-down tabs and subsequent option buttons and option forms made available when a report is selected. Although the user cannot alter basic report formats, all reports can be generated in ASCII format for export to Excel, Access and many other standard formats for user customization. HTML and ASCII reports are generated by selecting the appropriate menu option. No third party software is required to generate standard reports. The Unity EMS uses Crystal Reports to generate reports from our front-end Election Data Manager (EDM). All information that can be entered into EDM will have an associated report – for instance, Election District, political district, contest and candidate reports can be used to validate data entry and imported data. Crystal Report provides built in features to allow reports to be created and saved in various formats, such as HTML, Excel, Word, etc. The BOE can use Crystal Reports to create ad-hoc reports.	
19) ***Error Logs*** – Describe the capabilities of the proposed EMS to maintain, produce, and print out error logs.	The EMS applications maintain complete event and error logs that record the date and time of each user action and error condition encountered by the system. The Unity EDM and ERM applications use the Windows log for all log message recording. These logs are accessed using Windows-provided methodology. ElectionWare maintains its own log and is accessed through ElectionWare menu selections.	

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
20) ***Aids to Manual Re-canvass*** – Describe how the proposed EMS will aid the BOE in NYC in the efficient conduct of a manual re-canvass.	Best practices dictate that poll-based optical scan customers utilize the Election District results reports available in the Election Reporting Manager of Unity and manually compare these reports to the poll tapes printed from each DS200 at the close of polls. If the poll tapes from the DS200 cannot be found, additional copies can be printed on any DS200 and then be used for this manual audit.	Ballots marked on the ES&S AutoMark ballot marking device are fed into and tabulated on the poll level optical scanner(s) at each respective poll site. These ballots are then audited in the same manner as all other ballots processed into the optical scanner.
21) ***Control Mechanism for PMD Last Minute Ballot Change*** – Describe the process for making last minute changes to a ballot that has already been loaded onto a voting system on Election Day.	DS200 USB memory sticks can be reprogrammed and/or replaced at any time prior to the election should the BOE require a last-minute change. However, any last-minute change required for a paper-based system must allow lead time for ballot production and printing.	Contest and candidate changes can be added to Unity programming in a matter of minutes. AutoMARK compact flash memory cards can be reprogrammed and/or replaced at any time prior to the election if last-minute changes are required.
22) ***Automatic Update to EDs Affected by a Ballot Change*** – Describe if and how the proposed EMS will automatically update all Election Districts affected by a ballot change.	Changes made to the election database will update the records for all affected contests across all ballot styles. For example, if a candidate name is changed in EDM, the name need only be changed once to update all ballot styles in which the name appears. The election database file must be re-merged and all downstream modules can now use this new election definition as their source. New PDFs must be recreated for all ballots that are affected by the ballot changes. All changes will apply to both the PSS and the BMD.	
23) ***Archival Functionality & Capac*****ity** – Describe the archival capability of the proposed EMS and its capacity to meet NYS record retention requirements.	ES&S designs all election systems to exceed the 22-month federal requirements for election data retention. Election records do not expire automatically and can be maintained as long as the BOE requires.	
24) ***Network Topology*** – The BOE in NYC **may** elect to operate a system in the future in which the election results of each polling site are transmitted electronically to a Central Office, directly or via a regional collection center. a) Describe all hardware, software, documentation, training, services and supplies necessary to implement and operate the system at each of these locations and to inter-connect them for the purpose of vote tabulation and reporting.	ES&S has many years of experience implementing secure and authenticated transmission of election results in large jurisdictions across the country. The ES&S Model DS200 optical scanner can be configured with either a landline-based or wireless modem for the purpose of transmitting pollsite-level election results to a central office. The transmission of pollsite-level election results utilizes open SSL on the DS200 to initiate the secure transfer of election results. The results bundle is transferred utilizing a VPN to a secure FTP server at the central office. The Election Reporting Manager of	Ballots voted on the ES&S AutoMark ballot marking device are fed into and tabulated on the poll level optical scanner(s) at each respective poll site. These results are then captured along with all other ballots cast and tabulated on each DS200 optical scanner and become intermingled with the results bundles transferred from either the polling place of regional collection center.

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	Unity monitors the presence of transferred election results and updates these results into the citywide results database for reporting and publication. If regional collection centers are set up, each center is equipped with a laptop PC and a secure USB port for the reading of the USB memory sticks from each DS200 optical scanner. Each laptop is configured to attach to a secure VPN and transfer each results bundle to the FTP server at the Central Office. The current practice of using the police precincts to assist with the collection of election results would fit very nicely with the concept of regional collection centers. Regardless of the type of transfer chosen to deploy, all results files transferred are digitally signed and then verified before the results are accumulated into the citywide totals. Furthermore, all remote connections to the FTP server are authenticated using election-specific user IDs and passwords to further ensure that only privileged access to the FTP server is granted.	
25) ***Ease of EMS Modification & Re-certification*** – Describe the proposed plan by which the proposed EMS Voting System can be modified and recertified (by the NYS BOE) if needed to meet the needs of BOE in NYC for implementation for the September 8 2009 Primary Election.	Any system modification requires NYSBOE recertification. ES&S will be required to submit the system to the qualified Voting System Testing Lab for testing and qualification prior to submitting the modification to the NYSBOE. The NYSBOE will then review the test results and certify the system or recommend additional modifications. The amount of time required to modify and certify the proposed system depends on a variety of factors, including the extent of required changes, and the degree of system testing required by the NYSBOE. The amount of time required to modify and certify the proposed system depends on a variety of factors including the extent of required changes, and the degree of system testing required by the BOE.	
26) ***Absentee & Affidavit Voting Results*** – If BOE in NYC chooses to replace its current central count optical scan system, do you have a central count system that reads the PVS ballots your are proposing? Are you submitting this central count system for NY State certification?	ES&S proposes that the Board of Elections continue to follow current procedures for central ballot tabulation at this time. Totals from the City's current central scan system can either be manually added to automated totals generated by the ES&S pollsite scan system, or ES&S may look	Not applicable. Implementing the ES&S AutoMARK will have no impact on New York absentee and affidavit tabulation. The ES&S AutoMARK does not store vote totals or ballot information.

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	into importing the totals into the reporting system as an interim step. A central scan solution that meets all of the Board's requirements is currently under development at ES&S with expected entry into certification in the early summer of 2009.	
27) ***Audit Logs*** – Describe the logging capabilities of the EMS system. a) Which applications have event logging? b) What types of events are logged? c) How are logs managed? d) Are the logs circular? e) How is log size controlled? f) What log reports are available? g) Are logs encrypted? h) Are there different logs for system issues vs. logs for particular election?	All of the applications in the Unity suite include audit log functionality. The application modules log all user- and system-initiated activities. Audit logs are maintained in both the Windows Event Log Viewer and an application specific audit logging database. Log events are classified as Fatal, Error, Warning, Informational and Verbose. Any database write action, user response to warnings, relevant user actions (like opening an election, switching to a different module, exiting the application etc.) are logged. Verbose events are details within a single user event (like processing details). There is a fallback audit logger which will log the last event in the situation when there is an error logging into the primary logging system. The system will force the user to exit the application if the primary logger fails. The fallback logger is the primary logger until a database connection is established. Hence, unsuccessful login attempts will be logged to the fallback logger. All Audit Log information is designed to be retained for at least the required 22-month retention period. ES&S recommends external system backups, along with all data from each specific election event, so that all records regarding an election are properly archived. The primary logger is limited only by the size of the database. The emergency fallback logger is a rolling log. There are three log files. When the first one reaches 4K it creates the second file, and	The ES&S Unity EMS provides election definition, ballot layout and device media preparation for both the DS200 optical scanner and ES&S AutoMark ballot marking device. Audit logs for the preparation of these devices are inherent in the same database as described for the Poll Site Scanner. Each of these two hardware devices maintains their own logs of audit events.

EMS Functionality Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	when the second file reaches 4K, it creates the third file. When the third file reaches 4K, it rolls over and overwrites the first file. An audit event report by election is available. All reports are by election, and the user can choose a date range, event type(s), and if the report is to be sorted ascending or descending. The primary logger is encrypted and protected by the database security itself. The fallback logger is digitally signed since it resides external to the database. All the audit events get logged to the same repository. However, there are provisions to filter the events by election and by event type. In addition to application event logging, ES&S has journal logging on all tables. Every table in the database has a journal table which has history of all events that happened in that table.	
28) ***Ballot Style Number Management*** – As contests and candidates are added and deleted during the petitioning period and subsequent court challenges, how are ballot style numbers and code channels maintained between previously printed ballots for unaffected pollsites and the ballot definitions for the BMD.	If the number of ballot styles does not change, then the EMS maintains the ballot style numbers and code channels between the old and new ballot definitions. The BOE would simply create the needed PDFs, USB memory sticks and compact flash memory cards for the affected pollsites.	

5.2.4 EMS Server Environment

EMS Server Environment Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Vendor Provided vs. Off-the-Shelf*** – Given NYC volumes, describe the specifications of the EMS server. Can the server be acquired by BOE in NYC directly from the manufacturer or must it be acquired bundled in this procurement?	ES&S has included specifications for the EMS server in **Appendix D.4.** Third party items are available for purchase through ES&S but may be directly acquired by the City. Please respect the proposed hardware configuration should the City acquire this hardware themselves.	The EMS server recommended for the poll site system will also service all requirements for the Ballot Marking Device.

EMS Server Environment Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
2) ***OS Requirements*** – Describe the specifications of the EMS Server Operating System software. Can this software be acquired by BOE in NYC directly from the manufacturer or must they be acquired bundled in this procurement?	All applications proposed by ES&S are compatible with the current NYC BOE preferred Server OS, Windows 2003 Server. All ES&S client applications are certified to run under Windows XP Pro.	
3) ***Other Third-Party Application Software*** – Describe the specifications of the EMS Server other third party software. Can these be acquired by BOE in NYC directly from the manufacture or must they be acquired bundled in this procurement?	ES&S has included all specifications for the EMS Server in **Appendix D.4**. Third party application software is available for purchase through ES&S but may be directly acquired by the City.	The EMS server recommended for the poll site system will also service all requirements for the Ballot Marking Device.
4) ***Setup and Data Distribution to Boroughs*** – Describe the EMS portion of the Election setup and the methods of data distribution to the boroughs.	Please see the response to question 6 below.	
5) ***Vendor's System Architecture*** – Provide a high-level description, and attach a diagram, of the overall Vendor's System architecture that clearly illustrates the proposed components and their interrelationship.	ES&S has included a proposed system architecture diagram as **Appendix D.5.**	
6) ***Networking of EMS*** – As mandated by the State of New York, due to security concerns, any product that counts votes or configures voting systems is not permitted to reside on a network. Therefore, the current and the proposed 2009 Election Management Systems (EMS) must exist as stand alone systems. For the purpose of this RFI, BOE in NYC asks each respondent to provide two (2) EMS configurations (networked and stand alone) in its response in the event that the State of New York determines it is acceptable for EMS systems to reside on a network. a) Follow the current NYS restrictions and assume that no network may be used by the proposed EMS. b) Assume that the NYS BOE will	In a networked implementation, ES&S recommends that the NYC BOE install the EMS applications on the current NYC BOE WAN that includes the NYC BOE and all borough BOEs and VMFs. See **Appendix D.6.** ES&S suggests the installation and use of a dedicated file server at the NYC BOE that will be used for all ES&S data stores. By running on the existing WAN, all entities involved in the NYC election process may share a common database of the entire NYC election. In a stand-alone implementation, ES&S recommends the NYC BOE install a dedicated hardware platform at the BOE, and also dedicated hardware platforms at each of the borough facilities. This will allow the election definition to be completed and audited at a Citywide level, and subsets of	The ES&S AutoMark ballot marking device will utilize the same networked and/or stand-alone hardware platform as the DS200 optical scan system and proposed ES&S EMS. The preparation of the AutoMark ballot marking device is an integral part of our proposed EMS solution – Unity NY 3.0.

EMS Server Environment Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
in the future allow for the use of secure network environments for Voting Systems	elections then created for each of the boroughs. This will enable the boroughs, should it be the desire of the NYC BOE, to prepare and L&A test the tabulation system media for their specific election districts from a common, Citywide election definition database.	

5.2.5 Ballot Display

Ballot Display Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Ballot Languages*** – Describe the language capabilities of the proposed Pollsite Voting System. Which languages are supported? BOE in NYC currently requires English, Spanish, Chinese (Mandarin and Cantonese), and Korean. Can the proposed Pollsite Voting System support additional languages? If so, which ones. Are all instructions and ballot information provided to the voter provided in each of these languages?	The Unity EMS supports the following 13 languages: • Chinese. • Creole. • Dutch. • English. • French. • German. • Italian. • Japanese. • Korean. • Portuguese. • Spanish. • Tagalog. • Vietnamese. Instructions and ballot information provided to the voter can be displayed in each of these languages.	All listed languages are supported. The ES&S AutoMARK includes "out of the box" support audio and display support for eight languages. Five languages – English, Spanish, Chinese, Korean and Japanese – are automatically supported with display text and synthesized voice translations generated by the system's Eloquence speech engine. The software includes built-in translated ballot text for Tagalog, Vietnamese and Haitian Creole. Additional languages can be added by creating custom bitmaps for the visual prompts (for non-Latin based languages) and custom audio files for the audio prompts. All instructions and ballot information are provided to the voter in each listed language.
2) ***Contests vs Font-size Limitations*** – Describe the capabilities of the proposed Pollsite Voting System to display all BOE in NYC contests, while still maintaining the required font sizes.	**DS200 Paper Ballot (DSIM) Settings** Minimum – 6 pt. Maximum – 72 pt.	**ES&S AutoMARK display limits** Minimum font size – 11 pt. Max font size – 26 pt.
3) ***Appearance (color, font-size)*** – Describe the capabilities of the proposed Pollsite Voting System to allow the voter and/or administrator to adjust the ballot appearance.	Printed ballots to be tabulated on the DS200 may be formatted with a variety of font colors and sizes, offering many appearance options such as:	The ES&S BMD support grants voters full control over on screen ballot presentation. Voters can select options to zoom the ballot text for individual contests and change the screen display

Ballot Display Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	• Font, font size, font color. • Alignment: left, center, right, justify. • Rotate: 0, 90, 180, 270 degrees. • Left and right margins. • Text wrap and text kerning.	from full color to a high-contrast view (white text on black background) for voters with color blindness. The ES&S AutoMARK has been tested and certified to the usability and readability guidelines of the 2002 Federal Voting System Standards. No testing specifically addressing whether multi-page displays influence voter perception or readability has been performed.
4) ***Ballot Clarity (font)*** – Describe the capabilities of the proposed Pollsite Voting System to ensure that the ballot is clear and readable to all voters.	The ballot design will influence the clarity of the ballot. ElectionWare provides unlimited control of the appearance of text displayed on a ballot (see question 3). It is up to the user to design ballots that meet all readability requirements.	The BMD uses the Paper Ballot (DSIM) template for ballot page display.
5) ***Ballot Format & Orientation*** – Describe the capabilities of the proposed Pollsite Voting System to be flexible to allow BOE in NYC to format ballots in either direction (landscape or portrait), regardless of the election type.	ElectionWare contains a desktop publishing WYSIWYG application specifically designed to create NYC election ballots. Ballots can be designed in either landscape or portrait orientation. Orientation can also be selected for each side of the ballot. For example, the front of the ballot can be portrait and the backside of the ballot can be landscape. The flexibility of ElectionWare has been demonstrated to the BOE in NYC during the 2008 primary and general elections.	Whether the paper ballot is formatted in portrait or landscape, after showing the ballot overview, the ES&S AutoMARK displays each contest on a separate screen for voting selection. This allows flexibility of layout choice on the physical ballot.
6) ***Party Colors & Logos*** – Describe the capabilities of the proposed Pollsite Voting System to allow for party colors and logos (i.e. party emblem or party graphic).	ElectionWare capabilities allow paper ballots to be formatted using unlimited colors and logos to designate political parties. These capabilities were demonstrated to the BOE in NYC during the 2008 primary and general elections.	The ES&S AutoMARK ballot display was designed to reflect the contents of the inserted paper ballot as accurately as possible. The system display mimics the colors and logos that appear on the paper ballot.
7) ***Break by Party*** – Ballot layout must display each party in its own column. Describe how your solution will accommodate this requirement.	ElectionWare contains a desktop publishing WYSIWYG application specifically designed to create NYC election ballots. The software has been programmed to ensure that ballot layouts display each party in its own column. Overrides also exist if the BOE needs to combine multiple parties into a single column when space is limited on the ballot.	The paper ballot format, in which each party appears in an individual column, is mimicked in the initial ballot display when the ES&S AutoMARK is activated. The system then displays each contest on a separate screen for voter choice selection.

Ballot Display Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	Both portrait and landscape ballot layouts support party column layouts. These capabilities have been demonstrated to the BOE in NYC during the 2008 primary and general elections.	
8) ***Last Minute Ballot Changes*** – Describe the capabilities of the proposed Pollsite Voting System to handle "last minute" ballot changes (candidates on/off the ballot). What lead time do you recommend for the finalization of ballot definitions to allow for preparation of your voting system in time for Election Day?	In order to make a system-wide ballot change that involves the reprinting of ballots, the user would modify the applicable office/name/issue in the Unity Election Data Manager. Any change such as adding or deleting a name or office can be accomplished in less than five minutes. After the change is made in the Election Data Manager, the files must be re-merged to create the ballot styles used for all downstream modules and equipment. This is an automated process but can take 5 to 30 minutes in a large, complex election. ElectionWare can now be used to produce a new optical scan ballot to be reprinted. ElectionWare can now create new memory devices for the DS200 precinct counters that have to be reburned. This process would take less than one hour for 250 machines.	ElectionWare Process is also used to re-code the respective compact flash memory cards as required, depending upon the BMD's affected by the change.
9) ***Ballot Limitations*** – Describe the following***:*** a) Maximum number of columns, rows and ballot positions of the pollsite voting system b) Maximum number of lock-outs on voting machine c) Maximum number of voters each voting machine can accommodate per election d) Maximum number of ballot styles available for use in an election e) Maximum number of pages per ballot f) Maximum number of code channels	a) The Paper Ballot module template has a matrix of 1,680 (70 by 24) potential choices for voting targets on each side of the ballot. Actual availability will depend on the amount of text and the size of the text that is used for candidate and contest information. b) The DS200 and ES&S AutoMARK BMD do not have physical lock-out features. c) The maximum number of voters depends upon the size of the USB memory stick used and if the jurisdiction sets the machine to save ballot images. In an Election Day scenario, the DS200 can accommodate thousands of voters. d) The maximum number of ballot styles available in an election is 26,000+. e) The maximum number of pages per ballots is 12 (each page contains a front and back). f) There is one code channel that can support more than 26,000 ballot styles.	
10) ***Ballot Layout*** – Describe the capabilities of the proposed Voting System to support the following;	ElectionWare contains a desktop publishing module that manipulates the image of a ballot containing election information from the Unity Election Data Manager (EDM) database. Ballot headings, titles and	

Ballot Display Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
a) Support both automated and manual ballot layout design. b) Flexibility to allow modifications and corrections to the ballot layout. Describe which formatting factors can be modified such as ballot layout and orientation.	graphics can be quickly and easily placed and changed using this module. The system can make universal changes that carry over to all ballot styles, or permit edits to individual ballot elements on one ballot style. a) Templates can be used for automatic layout design. The user can also change the template settings if a manual layout is desired. b) ElectionWare allows the user to use a true ballot typesetting system for ballot layout and changes. The typographic attributes (font, font size, alignment, etc.) of all ballot elements (contest title, candidate name, party name, props, etc) can be modified by the user. The ballot layout capabilities of the system were demonstrated to the BOE in NYC during the 2008 primary and general elections.	
11) ***Screen Navigation*** – Describe how a voter navigates through the screen of the pollsite voting system (moves back and forth between screens, between contests, etc.)	If user input is required, the DS200 presents the voter with a message and choices represented as buttons on the display/touch screen.	The ES&S AutoMARK's touch screen controls and keypad buttons are interconnected. Voters may use either system to navigate the ballot at any time. The touch screen navigation options meet all applicable guidelines for text size and readability, and the physical keypad has been designed and tested with significant contributions from special needs groups. The keys are arranged and shaped to provide an intuitive voting session. Braille and printed text labels describe each key's function. • Arrow keys are used to indicate up, down, left, and right. • The square key serves as an "enter" key. • The diamond-shaped key turns the screen on and off for audio-only voting. • The round key repeats the last audio prompt. • Two sets of long oval keys control the volume and tempo of audio files. Voters can easily change ballot selections by navigating back to the appropriate contest and selecting the change.

Ballot Display Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
12) ***Paper Specifications*** – Describe in detail the requirements for paper to be used as ballots. *Can colors other than white be used for ballot paper?*	Standard specifications for ES&S ballots follow: **Grain Direction on Finished Ballot:** Long **Basis Weight:** 80# text weight (36.2874 kg) **Thickness:** 0.0061 in. (0.015494 cm) **Smoothness:** 130 Sheffields **Moisture:** 5.5 percent **Opacity:** 97.0 **Brightness:** 92 to 94 **PPI:** 338	
13) ***Printing Specifications*** – Describe in detail the requirements for printing ballots to be used with this Pollsite Voting System.	The ballots will be printed in accordance with all state and local requirements and will be printed to meet all ES&S tabulator specifications. These specifications are defined in the ES&S Ballot Production Manual and will include but are not limited to: 1. Correct paper stock. 2. Proper ink density. 3. Registration of ballot image on paper. 4. Front to back registration. 5. Finishing requirements. All printers that produce a ES&S ballot must complete a authorization process which includes demonstrating their ability to produce a ballot that meets the ES&S standards.	
14) ***Ink Specifications –*** Describe in detail the requirements for the ink used to print ballots. Are some ink colors not recognized by the scanner? Are there colors other than black which may be used?	For ballots to be read by ES&S optical scanners, no limitations on color apply and any commercial grade ink may be used. However, there are limitations on how dark the shading can be and on how close the lines, shading and graphics can be to active voting positions. Ink density must remain between 1.15 and 1.25, flat ink should always be used, and powder should not be used when printing.	

5.2.6 Election Management Systems (EMS) Specifications

EMS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Data Elements*** – Provide a list of data elements and database tables for ballot content and ballot layout, include which elements are required and which are not, and include field lengths and character types.	Sample database tables for the Unity Election system are located at **Appendix D.11.**	
2) ***Languages*** – Indicate if the following languages can be supported within the EMS: a) For Text: English, Spanish, Chinese and Korean, b) For Audio: English, Spanish,	The Unity EMS supports the following 13 languages in a Text environment: • Chinese. • Creole.	All listed languages are supported. The ES&S AutoMARK includes “out of the box” support for eight languages in audio and display formats.

EMS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
Mandarin Chinese, Cantonese Chinese, and Korean, What additional languages are supported? If any of these languages are not supported, please describe what steps will be taken to meet this requirement.	• Dutch. • English. • French. • German. • Italian. • Japanese. • Korean. • Portuguese. • Spanish. • Tagalog. • Vietnamese. Instructions and ballot information provided to the voter can be displayed in each of these languages.	Five languages – English, Spanish, Chinese, Korean and Japanese – are automatically supported with display text and synthesized voice translations generated by the system's Eloquence speech engine. The software includes built-in translated ballot text for Tagalog, Vietnamese and Haitian Creole. Additional languages can be added by creating custom bitmaps for the visual prompts (for non-Latin based languages) and custom audio files for the audio prompts. Languages that are not supported by Eloquence (synthesized speech) must have custom files defined and added.
3) ***Language Experience*** - Which languages have been used in other jurisdictions? Where, when and to what extent?	ES&S has extensive language experience supporting customers utilizing our optical scan tabulators, DRE tabulators, and ballot marking device. The following list provides examples of our language experience: • Spanish (Southwest Dialect) – Texas (ongoing). • Spanish (Castilian) – Florida, Pennsylvania (ongoing). • Cantonese Chinese – Boston (3 years); San Francisco. • Creole – Florida (7 years); Louisiana (2004). • Continental French – Canada (ongoing). • Lakota – South Dakota (ongoing). • Navajo – New Mexico (ongoing). • Japanese (2007). • Tagalog – Philippines (2008).	
4) ***Capacities*** – According to the federal Elections Assistance Commission (EAC), ballot styles are at minimum different from one another in content, and under some definitions they may additionally differ by size of type, graphical presentation, language used or method of presentation (e.g., visual or audio). Define which aspects (such as content, language, rotation or any other aspect) are included in your software as a "ballot style".	The EMS has numerous options that support the ballot requirements of a jurisdiction which may have an effect on the ballot styles generated in an election. The software uses the following aspects when creating ballot styles: • Partisan or non-partisan ballot. • Combination of offices and candidates by AD/ED. • Rotation: candidate and group. • Language. • By ED or By Style election: a unique ballot style is created for each ED or a ballot style can be applied to one or more EDs.	

EMS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
5) Based upon this definition, respond to the following: a) What is the maximum number of ballot styles supported by the proposed EMS and for the Pollsite hardware? b) What is the maximum number of translated ballot styles supported by the proposed EMS and for the Pollsite hardware? c) What is the maximum number of contests per ballot style supported by the proposed EMS and for the Pollsite hardware? d) What is the maximum number of candidates per contest supported by the proposed EMS and for the Pollsite hardware? e) What is the maximum number of ED/ADs which are supported by the proposed EMS and for the Pollsite hardware? f) What is the maximum number of political parties/independent bodies that are supported by the proposed EMS? g) What is the maximum number of code channels supported by the proposed EMS?	a) 26,000 ballot styles can be supported by the Unity EMS. b) 26,000 translated ballot styles can be supported by the Unity EMS. c) This is not limited by the EMS. It is limited by the physical ballot; i.e. the number of candidates in the contests, the number of response positions required by these candidates and the physical space required for the text of the contests and candidate using a font that meets presentation requirements. d) This is limited to 200 candidates in a contest. e) Currently 9,999 ED/ADs are supported by the Unity EMS. f) The EMS can handle 62 parties. g) There is one code channel that can support more than 26,000 ballot styles	
6) ***Pollsite Voting System Boot Time*** – What would be the boot-up time for the Pollsite Voting System based on the number of lots, recorded voice for office, candidate names, and instructions, for five languages in keeping with the volumes shown in Appendix A and including all other factors that would affect boot-up time for BOE.	The DS200 will generally boot to the user screens in less than one minute. Depending upon the size of the election, the DS200 will process the election definition data and complete the open routine in less than one minute as well. It is possible to create an extremely complicated election and include every election district on a single machine. In this case, the open process could take substantially longer.	It is anticipated that the maximum boot-up time for the indicated election would be 10 minutes. This improvement is due to a change in audio file format and handling of verification.

5.2.7 Pollsite Voting System (PVS) Specifications

PVS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Portability*** – Describe how the proposed Pollsite Voting System is "portable" in terms of size and weight. a) Size/Dimensions of all equipment (including peripherals such as printers, sip & puff devices, etc.) b) Weight for all equipment c) Portability once system is set up at pollsite	**DS200 Physical Dimensions** a) The DS200 pollsite voting system size and dimensions follows: **Closed:** 5.5" H x 14" W x 16" D **Operational:** 13" H x 14" W x 16" D **Carrying Case Dimensions:** 8" H x 27" W x 24" D **Metal Ballot Box Dimensions – Operational:** 38" H x 25" W x 22.5" D **Plastic Ballot Box Dimensions – Operational:** 41.5" H x 24" W x 26" D b) The DS200 component weights follow: **DS200 Unit Weight:** 23 pounds **DS200 Carrying Case Weight:** 29 pounds **Metal Ballot Box Weight:** 70 pounds **Plastic Ballot Box Weight:** 34 pounds c) If there is a requirement to move the DS200 within the pollsite after setup, the ease of that movement depends on the configuration that that NYC BOE chooses to use with the machines on Election Day. If the DS200 and plastic ballot box are used, the unit is easily moved about as the ballot box has rollers on the bottom of the box. The total weight of that configuration would be 86 pounds (DS200, carrying case, and plastic ballot box). Alternatively, the City could choose to place the DS200, plastic ballot box and any accessories into a transport cart. This configuration would also allow easy movement of the pollsite voting system around the pollsite, if required.	**Dimensions: Operational** 17.6" H x 20.8" W x 26.0" D **Closed:** 7.5" H x 20.8" W x 26.0" D **Weight:** 48 lbs with internal battery **Portability:** The unit is easily moved about the pollsite within the NYC steel transport table.

PVS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
2) ***Pollsite Voting System Case*** – Provide the following information for the proposed Pollsite Voting System Case (if applicable): a) Carrying/Packing case design b) Size/Dimensions c) Weight d) Transport aids (e.g. wheels, handles, etc.)	The DS200 plastic ballot box comes complete with a durable carrying case that can be locked and transported without additional packing. Its sturdy construction renders it capable of withstanding impact, shock, and vibration loads accompanying surface and air transportation. The carry case is also utilized as the top section of the plastic ballot box during operation. It can be removed and transported separately from the plastic lower ballot bin, and includes rollers and a telescoping handle. The carrying case is 8" H x 27"W x 24"D. The DS200 carrying case weighs 29 pounds. If NYC elects to purchase steel ballot boxes in lieu of the plastic ballot box, the DS200 can be stored and delivered in a separate, durable transport case that does not fit on top of the steel ballot box. Its sturdy construction renders it capable of withstanding impact, shock, and vibration loads accompanying surface and air transportation.	The ES&S AutoMARK is delivered in an airtight, durable carrying case that can be locked and transported without additional packing. The sturdy construction of these cases render them capable of withstanding impact, shock, and vibration loads accompanying surface and air transportation to and from the voting poll sites. Many jurisdictions typically use county staff and/or moving companies to transport the units to the poll sites and complete set up prior to Election Day. The cases can be stacked five (5) high during transport or storage. **Case** Width – 26 inches Depth – 34 Inches Height – 14 Inches Weight – 60 lbs including unit The storage case is equipped with durable and a telescoping handle to aid transport.
3) ***Multiple Ballot Formats*** – Describe how the proposed Pollsite Voting System will handle all of the required ballot formats for all New York City Elections, including listing parties across the ballot in the General Election.	ES&S's Pollsite Voting System, the DS200, is designed to accept ballots in any format. The DS200 does not care if the ballots are portrait or landscape as long as the ovals are in the specified grid pattern. This allows for unlimited ballot format designs. To support NYC elections, ES&S, in coordination with NYC BOE EVS, designed a desktop publishing WYSIWYG application (ElectionWare Paper Ballot) specifically designed to conform to NYC ballot layout rules. Templates exist to match the ballot layouts used in NYC elections, including listing parties across the ballot as used in General elections.	There are a number of ballot formats and sizes that can be used with the ES&S AutoMARK. All can meet the State full-face ballot requirements. All ballots are 8 ½" in the short dimension. There are 4 sizes in the long dimension. These are 11", 14", 17" and 19". Each ballot has a matrix of potential voting targets that can be organized in row and column for party and contest presentation and can be presented in either portrait or landscape. There are a total of 22 ballot templates, 11 for portrait use and 11 for landscape use. The matrix for all templates has 24 positions on the shorter side. The number of positions in the matrix for the long side of the ballot is 38 or 50

PVS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	The ballots created by NYC for the 2008 elections, using ES&S's Unity software, can be used with the proposed DS200 Pollsite Voting System.	for the 11" ballot; 41, 50 or 65 for the 14" ballot; 50, 62 or 81 for the 17" ballot; 56, 70 or 91 for the 19" ballot. The full partisan ballot can be presented on one side with the back side of the ballot used for referenda if space is not available on the front. The layout can meet the required format of a matrix of parties and candidates in the General Election and still be used listing contests sequentially in the Primary Election.
4) ***Ballot Style Capacity*** – Indicate the number of ballot styles that each pollsite voting system can support and provide some other measure of memory capacity.	A single DS200 terminal can scan ballots for up to 26,000 ballots styles and 9,999 Election Districts.	The ES&S AutoMARK supports a theoretically unlimited number of ballot styles, election districts and languages. All election files – including ballot audio – are stored on the terminal's compact flash memory card. Any size card may be used.
5) ***Voting Session Capacity*** – Indicate the total number of ballots each pollsite voting system can cast in one session before any manual intervention by a pollworker is needed, e.g., to change ink toner, etc.	The DS200 thermal printer requires no ink or user maintenance on Election Day. Printer paper should be changed before voting begins if necessary. There is no reason to change printer paper during voting. The DS200 plastic ballot box holds up to 3,500 paper ballots. Election workers will be required to clear the ballot container if this capacity is exceeded.	The ES&S AutoMark is rated to be able to print a minimum of 100 ballots before an ink cartridge should be changed. There are no other consumables requiring poll worker intervention.
6) ***PMD Capacity*** – Indicate the storage capacity of the Portable Memory Device.	Standard USB memory stick size for the DS200 is 2 GB, with larger capacity devices available. The number of ballot records that can be stored to this card depends on the size and complexity of the election.	The ES&S AutoMARK only marks ballots. It stores no information stored related to ballot selections. Only a log record is added to the file for each ballot voted so PMD capacity is not impacted by the number of ballots printed.
7) ***Capacity Limitations*** – Indicate any additional capacity limitations that the pollsite voting system has.	ES&S designed the DS200 as a scalable solution for both large and small voting jurisdictions and to require minimal user intervention during Election Day use. We believe that individual unit capacities ensure that any required user intervention shall be minimal during normal Election Day use.	The number of voters that can be processed on a unit will be limited by the time used by each voter. In addition to the normal variation experience between individuals, this will also depend on the size and complexity of the ballot and whether the voter is voting using the touch screen or using one of the ADA functions (which is a lengthier process).

PVS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
8) ***Counters:*** a) *Public Counter* – Describe how the Pollsite Voting System can keep a running total of the number of ballots cast or marked by the device for a given election (divided by party for a Primary)**.** b) *Spoiled Ballots* – Describe how the Pollsite Voting System can control the number of times a voter can "re-do" a ballot? c) *Protective Counter* – Indicate if the Pollsite Voting System has a protective counter that keeps a running total by the device over its life, and at what specific event in machine's process causes the increment of the counter and which component of the PVS is the subject of the counter (i.e. which component, if replaced, resets the counter)	**Public Counter** After the DS200 scans and securely stores a marked paper ballot, the system displays a confirmation message for the voter and increments the public count to confirm that the ballot has been counted and the totals have been added to system memory. **Spoiled Ballots** The system imposes no mechanical limitation on the number of times a voter can spoil and edit a ballot for recasting. If the BOE requires a limit on recasts, pollsite workers must enforce this limit procedurally. **Protective Counter** The DS200 protective count – which includes the total number of ballots processed for the life of the terminal – appears in the DS200 initialization report that prints automatically when the terminal is turned on and in the terminal's configuration report printed from the DS200 administration menu.	The ES&S AutoMARK is not a tabulator and does not contain a public counter. There is a life-cycle counter that counts every ballot ever processed through the device.
9) ***Electrical Requirements*** – Detail the electrical requirements of the components of the Pollsite Voting System. For each component supply the following: a) *Average Load* – Describe the average load (in amps) drawn by each component. b) *Peak Load* – Describe the peak load (in amps) drawn by each component and the circumstances under which the peak load is required. c) *Charge Load* – Describe the load (in amps) during battery charging.	Current draw for the ES&S DS200: a) Average Load: 1.7A b) Peak Load: 2.1A c) Charge Load, unit powered off: 800mA	Current draw for ES&S AutoMARK: a) Average Load = 1.5A b) Peak amps at boot-up = 1.8A c) Charge Load, from a 120VAC line is approximately 0.5A rms when unit is charging a discharged battery.
10) ***Heat Requirements –*** Detail the amount of heat (in British Thermal Units) generated by each device of the PVS during use, storage and charging.	The maximum heat output of the DS200 is 233 BTU when scanning a ballot in a powered on state @120VAC. Heat output during storage (not	The maximum heat output of the ES&S AutoMARK in BTUs when fully powered on is 700 BTU. Heat output in non-operational states would be ambient.

PVS Specifications Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	powered up) is 0 BTU. Heat output when charging the battery @120VAC is 66 BTU.	
11) ***Ventilation Requirements*** – Detail the ventilation requirements of each device of the PVS during use, storage and charging. List any dangerous chemicals that could be out-gassed during any of these stages.	The ES&S DS200 is designed for storage and operation in any enclosed facility ordinarily used as a warehouse or polling place. Between elections and to prepare for the next election, you must always charge the battery on the ES&S DS200. **No dangerous chemicals are out-gassed during storage or operation.**	The ES&S AutoMARK is designed for storage and operation in any enclosed facility ordinarily used as a warehouse or polling place. **No dangerous chemicals are out-gassed during storage or operation.**

5.3 Board Operations Requirements

5.3.1 EMS & Pollsite Voting System (PVS) Maintenance

EMS & PVS Maintenance Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Automatic or Manual Simulation*** – Describe the capabilities of the proposed voting system to enable automatic and manual testing.	Upon activation, the DS200 automatically performs a series of internal system diagnostic checks. These checks are always executed on startup. Automatic self-tests include checking the scanner software, checking the printer, and other system checks. There is no menu for this step, but a report of the test results will be generated. If the system fails any of the tests, the menu system will jump to the main menu and the election definition will be removed. This includes the automatic printing of the initial state report, and zero report, which provide all the information needed to verify equipment readiness. If any of these systems tests fail, or the unit fails to print the necessary reports, the unit will not enter the vote mode. BOE election staffs should test the ballot tabulation and	The ES&S AutoMARK automatically performs a series of diagnostic tests each time the system is activated. The results of these tests appear on screen as each test concludes. Election workers test the ballot marking and mechanical subsystem by feeding blank test ballots through the unit, navigating contests and selecting and manually recording on screen selections from the ballot display and audio presentations. The resulting marked ballot is then compared to the expected selections to ensure that each ballot position is marked accurately.

EMS & PVS Maintenance Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	mechanical scanning functions during Logic and Accuracy testing by feeding an audited stack of pre-marked ballots – called a ballot test deck – through the scanner and comparing the resultant scanner totals to the expected test totals.	
2) ***Staff Level of Expertise Required to Maintain & Repair*** – Describe the suggested staffing levels and skill sets required of BOE in NYC staff to maintain and repair the proposed Pollsite Voting System. Describe the level of such maintenance and repair and what level should remain a vendor activity.	Clients can perform most ES&S DS200 and AutoMARK preventative maintenance tasks with minimal training from ES&S, but only qualified ES&S technicians should perform some advanced maintenance activities. ES&S maintenance guidelines ensure that all personnel follow comprehensive, consistent and thorough maintenance procedures. ES&S requires that all jurisdiction maintenance personnel receive training from ES&S and read system maintenance manuals.	
3) Vendor Support Staff – Describe the process for ensuring all staff members who will provide support for the Proposer's voting system, both hardware and software functionality will be appropriately trained (and preferably certified) by the Proposer.	Election Systems & Software focuses solely on elections. Because we do not split our resources among multiple industries, each of our full-time associates and every member of our contract staff is qualified to provide the highest quality election support available. Each ES&S associate is rigorously trained to operate ES&S election equipment and software and required to attend mandatory in-house refresher training courses prior election periods.	
4) Maintenance Routines – Describe the maintenance routines for the Pollsite Voting System.	Typical maintenance tasks for the DS200 include: • Check ballot transport. • Check belt tension. • Replace the ink stamp. • Make sure all screws and set screws are tight. • Make sure that all bushing/collar and pulley/side plate gaps are correct. • Make sure the tensions for the rollers and springs are correct. • Ensure all internal hardware and boards are secure. • Check the printer assembly. • Verify that no cable or wiring is stressed, pinched,	Typical maintenance tasks for the ES&S AutoMARK include: • Install and remove the compact flash memory card. • Install a new ink cartridge. • Calibrate the printer. • Calibrate the scanner. • Remove the top cleanout. • Install and remove the terminal cover. • Remove/install the diverter support assembly. • Open and close the input tray. • Clean CIS scan modules.

EMS & PVS Maintenance Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	or obstructing the feed path or transport mechanisms. • Apply power to the unit in battery mode to verify that it comes ready with no AC applied. • Obtain a USB memory stick that is programmed with an election definition. Insert the device into each of the USB ports, one at a time, to ensure all ports are operating correctly. • Check the amount of paper remaining in the printer paper compartment and replenish the paper, if necessary. • Open the ballot transport mechanism and clean the contact image sensors. • Check the battery and charge it, if necessary.	
5) ***BOE Repair & Maintenance*** – Describe the type and extent of repair and maintenance work which will be permissible by BOE in NYC technical staff.	BOE and NYC technical staff can perform most DS200 and ES&S AutoMARK preventative maintenance tasks with appropriate training and support from ES&S. Some advanced maintenance activities, such as significant system upgrades and extensive corrective maintenance, should be completed by ES&S technicians. An ES&S certified technician is needed to perform the following hardware replacement tasks: • Replace the ballot scanner. • Replace the backup battery. • Replace the ITX power supply. • Replace the power management board. • Replace the motherboard.	
6) ***Can Board Become Vendor Independent in Five (5) Years?*** – Describe the requirements and process by which the BOE in NYC could become vendor independent over a period of time (5 years during the warranty period) for all repairs.	Yes. ES&S will work with the City to establish vendor independence – offering a technician certification program to City technicians.	
7) ***Repair*** – Describe the requirements and process by which BOE in NYC staff could maintain and repair the proposed Pollsite Voting System.	BOE staff technicians will be able to maintain and repair the ES&S Pollsite Voting Systems – achieving vendor independence within the BOE's goal of five years – once ES&S' Certified Technician training program has been taken and passed.	

EMS & PVS Maintenance Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
8) ***Replacement*** – How often do other jurisdictions replace the proposed voting system equipment? List the experience of at least five (5) large jurisdictions.	The DS200 is built to last up to 10 years with frequent use. Historical replacement data is not available for the DS200 because it is new technology.	The ES&S AutoMARK is built to last up to 10 years with frequent use. Historical replacement data is not available for the ES&S AutoMARK because it is new technology.
9) ***Storing and Transportation*** – Describe the storage and transportation requirements for the proposed pollsite voting system: a) Environmental requirements b) Electrical/Charging requirements c) Transportation requirements for shipping the device safely to, and from, pollsites d) Recommended Voting Machine Facility storage placement e) Dimensions in the open and closed positions.	a) **Environmental** **Storage:** -4 to +140 degrees Fahrenheit; no humidity requirement. b) **Electrical** The DS200 comes with a power supply that operates from standard AC line voltages. It also includes batteries with sufficient capacity to allow the unit to operate for at least 2 hours after loss of AC power. The maximum continuous current is 0.6A @120VAC. **Charging** Each DS200 should be charged no more than 4 weeks prior to an election for up to 8 hours to ensure a fully charged battery. A LED on the back of the unit indicates the charge state of the battery. **c) Transportation and Storage** The DS200 is unlikely to fail when properly stored and transported in the included carrying case. The lockable case is capable of withstanding slight impact, shock, and vibration loads accompanying private ground transportation. The systems must also be stored correctly – in a controlled environment to minimize failure. d) If stored in an uncontrolled environment, the DS200 should be kept in its portable carrying case. Units can be stacked five (5) high when stored in this case. e) The DS200 pollsite voting system size and dimensions	a) **Environmental** **Storage:** 50 to 104 degrees Fahrenheit. Between 10% and 85% non-condensing humidity. b) **Electrical/Charging** The ES&S AutoMARK contains a built-in power supply that operates from standard AC line voltages. It also includes batteries with sufficient capacity to allow the unit to continue to operate for at least 2 hours after loss of AC power. **Specifications** • Input power voltage: 93-264 VAC • Input power frequency: 45-66 Hz • North American line cord: 6 feet. • Battery Hd-up Time (min.): 2 hours c) **Transportation and Storage** The ES&S AutoMARK should be transported to the pollsite in the NYC transport cart to minimize any damage from impact, shock, or vibration loads during the transit. The ES&S AutoMARK can also be transported to the pollsite in an optional, durable carrying case that can be locked and transported without additional packing. The unit's sturdy construction renders it capable of withstanding impact, shock, and vibration loads accompanying surface and air transportation. Units can be stacked five (5) high when stored in this case. d) During non-election periods, the ES&S AutoMARK terminals should be stored in the NYC transport cart in a controlled environment . e) **Dimensions: Operational**

EMS & PVS Maintenance Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	follows: **Closed:** 5.5" H x 14" W x 16" D **Operational:** 13" H x 14" W x 16" D **Carrying Case Dimensions:** 8" H x 27" W x 24" D **Metal Ballot Box Dimensions – Operational:** 38" H x 25" W x 22.5" D **Plastic Ballot Box Dimensions – Operational:** 41.5" H x 24" W x 26" D	17.6" H x 20.8" W x 26.0" D **Closed:** 7.5" H x 20.8" W x 26.0" D **Case:** 14" H x 26.0" W x 34.0" D **Weight:** 48 lbs with internal battery

5.3.2 Pre-Election Set-up

Pre-Election Set-up Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Setup EMS (Initial input & On-going Updates & Confirmation)*** – Describe the EMS Setup procedures of the proposed EMS system. Describe the suggested timeframes for these activities.	The ES&S software suite can be installed in under 30 minutes. If the NYC BOE intends to import election data from election to election, the setup within the ES&S suite is minimal. It is important to become familiar with the record lengths within the ES&S suite so data that is imported does not get truncated.	
2) ***Do Language Translations & Confirmation*** – Describe the suggested procedures for language translation and translation confirmation for the proposed EMS system.	Paper ballots for the DS200 can be printed in any of the 13 supported languages identified in section 5.2.5 Question 1. All language translations must first be entered into the Election Data Manager (EDM). EDM allows the user to identify each language required in an election. For example, a three-language election may consist of English, Spanish, and Chinese. Once each language has been identified, EDM dynamically creates language-specific data entry screens for all required election information. For example, the Candidate data entry area will consist of three dialogs, one for English, one for Spanish, and one for Chinese. Once all language-specific data has been entered into the EDM, it is seamlessly used by all other Unity and ElectionWare applications, and the BMD. The NYC BOE is responsible for all language translations and	The ElectionWare software includes "out of the box" support for eight languages in audio and display formats. Five languages – English, Spanish, Chinese, Korean and Japanese – are automatically supported with display text and synthesized voice translations generated by the system's Eloquence speech engine. Recorded speech can optionally be used in place of synthesized speech if desired. The software also includes built-in translated ballot support in both display and audio formats for Tagalog, Vietnamese and Haitian Creole. Additional languages can be added by creating custom bitmaps for the visual prompts (for non-Latin based languages) and custom audio files for the audio prompts.

Pre-Election Set-up Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	entering them into EDM. The software does not automatically translate English into foreign languages. Language translations can either be manually entered into the system or imported. Depending on the amount of translated data, ES&S recommends importing the language translations into the system using the Import Wizard. Character or double byte languages must be imported in Unicode format. Ballots can be designed using one or more languages. If each ballot contains only one language, the first design can be copied so it can be used by the other languages. Space adjustments can be made for the different lengths of words required by certain languages. The system also allows users to add multiple languages to the same ballot, although there is a practical limit due to paper size restraints. Language ballots are then printed to PDF and sent to the third party print vendor − the same as English ballots. The language translation and confirmation abilities of ES&S's EMS have been demonstrated to the BOE in NYC during the 2008 primary and general elections.	ElectionWare software provides an emulation of the AutoMARK that allows for review of the display as well as listen to the audio ballot whether using synthesized or recorded speech. All ballot styles may be selected and reviewed via a standard desktop PC. This system allows users to proof and review all election information before programming the individual flash cards.
3) ***Ballot Printing*** – Describe the suggested procedures for ballot printing for the proposed EMS system.	As with any election-related print job, proofing prior to going to press is extremely important. Once the proofing process is complete, the ElectionWare Paper Ballot module (formerly Digital Scan Image Manager) allows the user to create PDF images for actual ballot production. Ballots can be created in house using a ballot on demand solution or by a commercial printer. It is important to make sure the chosen printer can meet the requirements to create a ballot within specifications.	
4) ***PMD Production*** – Describe the suggested procedures for PMD production for the proposed EMS system.	**Pre-Election** DS200 ballot definitions are generated from the election merge file – created with EDM – and written to DS200 USB memory sticks using ElectionWare.	**Pre-Election** ES&S AutoMARK ballot definition files are formatted and written to compact flash memory cards using ElectionWare software audio ballot module.

Pre-Election Set-up Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	Election Day The DS200 stores election totals to the inserted USB memory stick as ballots are scanned on Election Day.	**Election Day** The ES&S AutoMARK does not scan ballots or tabulate results. No information is written to the scanner's memory card during Election Day operations.
5) ***Device Setup & Testing*** – Describe the capabilities and suggested procedures by which the proposed Pollsite Voting System allows BOE in NYC to set-up and test all required functions in an efficient manner	Testing the tabulation of vote totals and accumulation processes on the DS200 is accomplished using data created during testing of the entire system. This ballot tabulation/ accumulation information is processed using ES&S' Election Reporting Manager software. Election reports are provided as part of the test. The transmission and reporting process is the exact process that is used on election night. This level of testing ensures the integrity of the entire system.	Detailed Logic and Accuracy (L&A) testing is performed to ensure that the election-specific hardware and software is functioning correctly and accurately. ES&S recommends that all subsystems be physically tested. Election workers should test the ES&S AutoMARK by activating the system for Election Day operation and feeding blank test ballots through the unit. Workers should mark several ballots, using a mixture of audio and display ballot navigation, and maintain an external record of selections as the ballot is marked. After the ES&S AutoMARK terminal process and marks the ballot, the election worker should compare the marked selections to recorded ballot selections to ensure that the system accurately marks the ballot. Another method of testing the device marking capability is to run the Print Test function. The blank ballot is inserted into the ES&S AutoMARK and Print Test is selected. The test will fill in every oval on the ballot and print the candidate name on the election definition adjacent to the oval for verification of the election definition and ballot marking capability.
6) ***Testing the Ballot*** – Once an election has been setup, describe how all ballots can be viewed or listened to without allowing voting (so as to not disturb the count or configuration) and	Sample paper ballots are typically printed and posted at the polling place, allowing voters to familiarize themselves with the contents of the ballot before voting. In addition, many jurisdictions display sample ballots on the jurisdiction Web site to allow voters to peruse the ballot they will be issued on Election Day. Sample ballots are usually printed with a translucent	

Pre-Election Set-up Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
without requiring individual ballot activation.	watermark that reads “SAMPLE” or “UNOFFICIAL.”	
7) Cut-off For Ballot Changes – What lead time (cut-off date) do you recommend for the finalization of ballot definitions to allow for ballot preparation using the proposed voting system?	ES&S recommends the City finalize ballot definitions one month before final election setup of the DS200 and ES&S AutoMARK. Once a ballot change is made in the election management system, an updated USB memory stick or compact flash memory card can be programmed in a matter of seconds.	
8) *Pre-Election Supply Packaging & Transporting* – Describe the capabilities and requirements of the proposed Pollsite Voting System for the packaging of Election Day supplies, the transport of Pollsite Voting System to pollsites and the protection features designed to prevent damage or loss. Describe recommend transport methods and procedures that are in keeping with State rules and regulations.	The DS200 comes complete with a durable carrying case that can be locked and transported without additional packing. Its sturdy construction incorporates space for the power cord/AC adapter and control keys. The DS200 carrying case is also utilized as the top section of the plastic ballot box during storage or operation. It can be removed and transported separately from the plastic lower ballot bin, and includes rollers and a telescoping handle. Additional pollsite scanner supplies used during Election Day operations (official ballots, emergency ballots, spare seals, marking device pens, etc.) can be transported to the pollsite in the lockable, lower ballot bin of the DS200 and removed prior to poll opening. Approximately 3,500 ballots fit into the lower ballot bin. In accordance with New York State election rules and regulations found in New York State Rules of the Board of Elections, 6209.9, ES&S recommends that the pollsite voting system be transported in vehicles and containers that will adequately protect the voting system from damage while being transported from the VMF to the pollsite and returned. ES&S recommends that NYC BOE utilize air-ride trailers with appropriate locking rails to minimize shock, vibration or damage to the equipment.	Storage for supplies for the ES&S AutoMARK is accommodated within the NYC BOE transport cart. All required components of the system − the unit itself, headphones, AC power cord/extension reel, rocker paddles, sip & puff device, and UPS/battery pack fit neatly into the NYC BOE transport cart. The durability and transportability of the NYC transport cart was successfully proven during the 2008 election cycle.

5.3.3 Post-Election Activities & Testing

Post-Election Activities & Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Post-Election Supply Packaging & Transporting*** – Describe the capabilities and requirements of the proposed Pollsite Voting System for the packaging of Election Day supplies, the transport of Pollsite Voting System from pollsites and the protection features designed to prevent damage or loss. Describe recommend transport methods and procedures consistent with NYS Board rules and regulations.	The DS200 can be returned to the VMF, post-election, in either the durable carrying case/plastic ballot box enclosure or in an optional, integrated transport cart. ES&S recommends that the City consider the acquisition of NYC-specific transport carts to store and transport the DS200 during election and non-election cycles. The DS200 is provided with a protective enclosure rendering the equipment capable of withstanding the transportation and storage requirements outlined in the VVSG, Volume I, section 3, subsections 3.3.3, "Transport and Storage of Precinct Systems", and 3.2.2.14, "Environmental Control − Transit and Storage". In accordance with New York State election rules and regulations found in New York State Rules of the Board of Elections, 6209.9, ES&S recommends that the pollsite voting system be transported in vehicles and containers that will adequately protect the voting system from damage while being transported from the VMF to the pollsite and returned. ES&S recommends that NYC BOE utilize air-ride trailers with appropriate locking rails to minimize shock, vibration, or damage to the equipment.	Post-election, the ES&S AutoMARK and associated supplies will be transported from the pollsite to the VMF in the NYC BOE transport cart. The BOE has developed extensive procedures and shipping safeguards to ensure the carts and enclosed BMD devices are protected from shock, vibration, or damage. The transport cart was designed to safeguard the AutoMARK from shipping hazards.
2) ***Receive Machines*** – Describe the recommended procedures for receipt of Pollsite Voting System at Voting Machine Facilities post-Election.	Only the DS200 USB memory sticks and results tapes must be transported to the location(s) where the results will be accumulated. The DS200 can be stored at the pollsite overnight or returned to a VMF for check-in and processing on Election Night. There are several ways to accumulate the results from the DS200 PMDs, although NY law will not currently allow some of the methods to be utilized. 1. Most simplistic – Bring all	The ES&S AutoMARK can be stored at the pollsite overnight or returned to a VMF for check-in and processing. The compact flash memory card can be left in the unit or removed and returned to Election Headquarters by the pollsite election official as directed by NYC BOE directives. If post-election simulations are required by New York City BOE, we would recommend that you use the

Post-Election Activities & Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	PMDs back to borough BOE locations for downloading. This solution is the slowest as it has to allow for drive time from all pollsites. 2. Bring PMDs to regional sites, such as police precincts, for reading into a regional PC. This solution shortens drive time as well as cuts down on the number of PMDs that are actually read into a single PC. 3. Fastest – Modem results directly from polling place using a landline or wireless modem solution. This solution, although extremely fast, is illegal under current NY law. For this reason, DS200s will not be outfitted with modems of any kind. Once the City defines the location where post-election receipt of critical election data will be delivered, ES&S will work closely with the City to detail procedures and processes that include delivery methods, transmittal protocols, accountability, robust safeguards and accumulation methods for the associated results data.	same procedures as were conducted during pre-election testing. The ES&S AutoMARK does not record voter selections and as such, any simulations required could focus on the logic and accuracy of marking a ballot for a sampling of devices used on Election Day.
3) ***Read PMDs into EMS*** – Describe the capabilities and suggested procedures by which the proposed EMS will read PMDs Post-election in an efficient manner.	Unity Election Reporting Manager is a Windows-based application that carries out all of the operations required to read DS200 USB memory sticks and store a results image record of each card. The option to display all precinct or accumulated results in real-time is provided. Election Reporting Manager can also print all required Election District and accumulated results reports. All subsystem activity is tracked in the system log including the number of ballots accumulated from each Election District. Election Reporting Manager processes each USB memory stick in a matter of moments. The system can print unofficial totals reports as cards are processed.	Not applicable The ES&S AutoMARK is not a voting system tabulator. Its primary function is to mark the paper ballot for the disabled voter. No vote totals are recorded on the device PMD.

Post-Election Activities & Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
4) ***Produce Reports*** – Describe the capabilities and suggested procedures by which the proposed EMS will allow BOE in NYC to customize and produce ad-hoc reports	Official or unofficial reports consisting of any combination of vote data, and presented in any available format can be produced at any time during the tabulation of votes or thereafter. Election Reporting Manager offers the capability to produce reports that meet the above requirements. These requirements are met by special options in the coding of elections. Election Reporting Manager produces a wide array of election reports and election results displays. The poll level and accumulated totals reports provide a quick and effective means of accommodating candidate and media requests for election results and are available upon demand. Election Reporting Manager also has the ability to provide various public displays, printed reports and links to the media. The display program scrolls automatically through the live results with a user-definable time delay. All reports can be printed on demand as well as printed to disk for display on the monitors. Multiple free standing PCs, overhead displays or large screen video monitors attached to the reporting PCs provide very effective dissemination of election results. All of the Election Reporting Manager election reports can be printed in HTML format that can be posted on a Web server so the public and the media can view results via the Internet. The basic format of reports cannot be altered by the user, but all reports may be exported into Excel, Access and many other standard formats for use in creating your own customized reports.	Not applicable. The ES&S AutoMARK is not a voting system tabulator. No changes to New York City's current reporting system are required.
5) ***Upload into S-Elect*** – Describe the capabilities and suggested procedures by which the results from the portable memory devices may be gathered and	The Unity ERM module is used to upload ED results from the portable memory devices, aggregate them and then use	Not applicable. The ES&S AutoMARK is not a voting system tabulator. No changes to New York City's

Post-Election Activities & Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
uploaded into the BOE in NYC S-Elect system.	them in all reports. ERM may generate a standard ASCII file, which can easily be formatted for export and uploaded in the NYC S-Elect system. PMDs can either be directly read by ERM at the central BOE location or, if permitted, read at regional sites and results transmitted (or manually moved on media) to the BOE location where they can be uploaded into ERM. Also, if permitted, ED results may be directly sent by the DS200 to the BOE central site for use by ERM.	current reporting system are required.
6) ***Canvass /Re-canvass*** – Describe the procedure you recommend to balance voter and ballot counts at the conclusion of an election (e.g. voters, number of ballots, public counters, rejected ballots, fled voters, no votes, under-votes, etc.) Describe the procedure for both a Primary and a General. How are all relevant numbers maintained for each party in a Primary Election? Describe functions and reports that assist with the procedure.	The procedure for confirming number of votes cast – for both a general and primary election – is the same. The DS200 election results tapes print, upon the closing of the polls at 9 p.m., and include vote totals by contest, candidate, party, undervotes, overvotes, and so on. The total number of votes may be reconciled with the total number of voters who checked in, with the ED/AD poll workers.	Not applicable. The ES&S AutoMARK marks voter selections on paper ballots for tabulation on separate equipment. The system does not record votes, report results or store ballot images and does affect the City's re-canvass procedure.
7) ***Central vs Pollsite Scanning*** **–**How do you propose handling the ballots currently canvassed by BOE central scanning system?	The results from the current central scanning system can be brought into the ES&S Election Reporting Manager by importing or by the "update election results manually" feature which allows for hand keying results. The other option is to merge both sets of results into the NYC BOE S-Elect system.	
8) ***3% Manual Audit*** – Describe the capabilities and suggested procedures by which the proposed new voting system will allow the BOE in NYC to manually count the required 3% of the paper ballots and audit the electronic results against those manual tallies within a reasonable time frame.	There are a few ways to tackle this depending on how the state finalizes the rules on this event. 1. The PMD from election day can be zeroed and the ballots are rerun and the results tapes are simply compared side by side to the actual election day results tape. 2. A new PMD is programmed for that polling location, the ballots are rerun and the results tapes are compared.	N/A

Post-Election Activities & Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
9) Periodic Testing – Describe the capabilities of the proposed voting system to enable periodic testing and provide estimates of the BOE in NYC staffing requirements for this activity. Describe the suggested procedures for this activity.	ES&S system documentation includes full procedures for acceptance and Logic and Accuracy testing. Quarterly testing can be implemented for all equipment or a random sample of all units in stock. The number of staff required to test the equipment depends on the number of units tested and the test scope (testing for maintenance or election setup). For the purposes of quarterly testing, the BOE can determine a machine is functioning properly by feeding a single ballot.	Periodic testing of the ES&S AutoMARK requires the technician to run through a variety of test routines using a demo election. These tests take about 15 minutes per device. The battery should always be charged on a quarterly interval. If the quarterly test coincides with the scheduled annual Preventative Maintenance (PM) inspection, an additional 30-45 minutes is required to complete the additional testing and inspections. The PM should be conducted by a certified technician. Staff estimates can be calculated on the ability of the technician to complete 3-4 quarterly inspections per hour.
10) *Election Testing –* Describe the process for conducting both manual and automatic testing of the devices in accordance with State rules and regulations (including all disability features and auxiliary components) as follows: a) Pre-qualification – Before Election Day during device setup and after last minute changes have been made. b) Election Day – On election day at the open and close of polls ***c)*** Post-election – After Election Day through the canvass of the vote.	**Pre-qualification** Tabulation of DS200 vote totals and accumulation processes are accomplished using data created during test voting of the entire system. This information is processed using ES&S' Election Reporting Manager software. Election reports are provided as part of the test. The transmission and reporting process is the exact process that is used on election night. This level of testing ensures the integrity of the entire system. **Election Day** The DS200 automatically performs diagnostic tests each time the system activates. The results of these tests appear on screen as each test concludes. All manual testing should be completed before Election Day. **Post-Election** ES&S recommends physically inspecting election hardware for damage during check-in at the City's post-election storage facility.	**Pre-qualification** Election workers should test the ES&S AutoMARK by activating the system for Election Day operation and feeding blank test ballots through the unit. Workers should mark several ballots, using a mixture of audio and display ballot navigation, and maintain an external record of selections as the ballot is marked. After the ES&S AutoMARK terminal processes and marks the ballot, the election worker should compare the marked selections to recorded ballot selections to ensure that the system accurately marks the ballot. ES&S recommends that NYC BOE include testing of disability accessories like sip & puff, paddles and a head pointer on a sampling of the ES&S AutoMARKs to ensure the devices accurately respond to the inputs of the disability accessories. **Election Day**

Post-Election Activities & Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
		The ES&S AutoMARK automatically performs diagnostic tests each time the system is activated. The results of these tests appear on screen as each test concludes for the ES&S AutoMARK. All manual testing should be completed before Election Day. **Post-Election** ES&S recommends physically inspecting election hardware for damage during check-in at the City's post-election storage facility.
11) Diagnostics **–** Describe self-diagnostics and testing capabilities of each component of the new voting system.	Upon activation, the DS200 automatically performs a series of internal system diagnostic checks. These checks are always executed on startup. Automatic self-tests include checking the scanner software, checking the printer, and other system checks. There is no menu for this step, but a report of the test results will be generated. If the system fails any of the tests, the menu system will jump to the main menu and the election definition will be removed. This includes the automatic printing of the initial state report, and zero report, which provide all the information needed to verify equipment readiness. If any of these systems tests fail, or the unit fails to print the necessary reports, the unit will not enter the vote mode.	The ES&S AutoMARK executes automated diagnostic tests of all system functions and components when the system is activated. The ES&S AutoMARK Power-on Self Test (POST) diagnostic on the motherboard examines RAM and peripherals. Like any other motherboard, the POST looks at the clock chip for the time. If the battery is dead, it loads the default time for the clock chip. The motherboard is built to have the battery last for 10 years. Other diagnostic tests include Test Ballot Print, Intensity Measurement, and Scanner Calibration. The Test Ballot Print prints a candidate name on every oval location on the ballot; from this the SBC can determine if it needs to calibrate the printer. The Intensity Measurement option checks the health of the scanner and the Scanner calibration is available on the System Maintenance menu.

5.4 Election Day Operations Requirements

5.4.1 Pollworker Activity

Pollworker Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Pollworker User Friendly*** – Describe how the proposed Pollsite Voting System will be user friendly in terms of the following. a) Operations b) Configuration & size c) Staffing d) Environment (climate control).	The DS200 is a user-friendly pollsite scanner device that requires minimal effort to setup and operate at the poll site. Once the device is powered up on Election Day, minimal action is required by the poll worker other than possibly assisting voters as they insert their ballot into the unit for pollsite tabulation. **Operations** The DS200 provides a secure and independent method for NYC voters to cast an official ballot by simply inserting their marked paper ballot, in any orientation, into the DS200 input slot and following the easy-to-read instructions displayed on the terminal's 12-inch LCD touch screen. High voter turnout may require the poll worker to replace the unit's printer paper roll and/or remove voted ballots from the lower ballot bin when the number of voted ballots exceeds 3,500 to 5,000 ballots. Both of these actions are easy to accomplish and can be completed in less than 5 minutes. **Configuration and Size** The DS200 is portable device that can be easily integrated into any polling site configuration. The DS200 weighs less than 25 pounds and is enclosed in a hard shell carrying case mounted on top of the secure ballot box. Wheels on the bottom of the ballot bin allow the poll worker to easily maneuver the pollsite scanner to a new location within the pollsite, if needed. **Staffing** The DS200 is easy for poll workers to learn and use, and requires no additional pollsite staffing. **Environment** The DS200 was designed for	The ES&S AutoMARK is a user-friendly ballot marking device that requires minimal effort to setup and operate at the poll site. Once the device is powered up on Election Day, no further action is required by the poll worker other than providing the disabled voter with his or her ballot and ensuring the voter is comfortably seated. The pollworker may also need to ensure the voter understands how to navigate through the ballot either audibly or on the touch screen. **Operations** The ES&S AutoMARK provides secure, independent ballot marking assistance for voters with disabilities. The system marks standard paper ballots that are processed with the jurisdiction's tabulation system. **Configuration and Size** The ES&S is portable device that can be easily integrated into any polling site configuration. The unit weighs less than 50 pounds and is enclosed in the NYC BOE transport cart for easy delivery and set up. **Staffing** The ES&S AutoMARK is easy for poll workers to learn and use, and requires no additional polling place staffing. **Environment** The ES&S AutoMARK was designed for operation at any facility normally used as a polling place. Polling places must be wired for electricity. The device uses

Pollworker Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	operation at any facility normally used as a polling place. Polling places should be wired for electricity or have emergency power backup available. The DS200 uses standard AC voltages and has a battery backup capability of approximately 2 hours.	standard AC voltages.
2) ***Open Polls*** – Describe the capabilities of the proposed Pollsite Voting System that enables it to be easily set up (both physically and electronically) by pollworkers on Election Day while still maintaining security. What device, if any, is used in the process?	The DS200 can be programmed to power up when the LCD screen is raised. The pollworker simply needs to unlock the lid of the DS200, raise the LCD screen, and wait a few moments for the system to initialize. When the **OPEN POLLS** screen appears, the pollworker presses the **OPEN POLLS** button on the screen. Depending on options set for the election definition, the DS200 will automatically print a status report, a zero totals report and/or a zero certification report. Once the start-up reports are complete, the pollworker closes and locks the switch door and secures the key in a safe place. The DS200 is ready to receive Election Day ballots.	The ES&S AutoMARK integrates closely with elections management software and optical scan hardware, streamlining the setup and testing process before an election. At the polling place, election workers simply unpack the terminal, place the unit on a standard, disability-compliant voting table, connect the system to an electrical outlet and turn the ES&S AutoMARK control key to the ON position to prepare the system for voting. The terminal's key activated administrative controls and election memory card are stored behind a locking panel to prevent unauthorized access.
3) ***Handle Devices/Cards Required*** – Describe the Election Day pollworker activity during the course of voting. What devices/cards are required and by whom are they handled?	The DS200 is a user-friendly pollsite scanner device that requires minimal effort to setup and operate at the poll site. Once the device is powered up on Election Day, minimal action is required by the poll worker other than possibly assisting voters as they insert their ballot into the unit for pollsite tabulation. ES&S recommended procedures call for the proper USB memory sticks to be inserted and sealed into the DS200 prior to delivering equipment to the polls. Poll workers should have no contact with the system's memory sticks until poll closing, when the PMD device could be removed from its sealed location to be transported to the accumulation location.	ES&S recommended procedures call for the proper compact flash memory cards to be inserted and sealed into the ES&S AutoMARK prior to delivering equipment to the polls. Pollworkers should have no contact with the system's memory cards.

Pollworker Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
4) ***Activate for Voter*** – Describe the capabilities and procedures that demonstrate the ease with which the proposed Pollsite Voting System can be activated for each voter. What mechanism is used to activate the correct ballot for the voter?	The DS200 automatically activates when a voter inserts a marked paper ballot into the terminal's input slot. Messages on the LCD screen guide the voter through the process, and confirm that the ballot has been tabulated.	The ES&S AutoMARK automatically activates when a voter inserts a blank paper ballot into the terminal's input slot. A series of on screen and audio prompts guide the voter through ballot navigation and selections. After the voter completes ballot selections, the system summarizes selections and marks the voter's ballot.
5) ***Voter with Disability Readiness*** – Describe the capabilities of the proposed Pollsite Voting System that make it easy to place the machine into, and return back from, disability readiness for voter with special needs.	The ES&S AutoMARK ballot marking device is designed to mark the ballot for voters with disabilities. After the disabled voter's ballot is marked, the ballot is privately and independently transported by the voter to the DS200 for tabulation.	The ES&S AutoMARK has only one system configuration. When placed on an optional ES&S AutoMARK voting table or within the NYC transport cart, the system meets all HAVA and disability requirements for reach and accessibility.
6) ***Visual & Audio Indications*** – Describe the capabilities of the proposed Pollsite Voting System that provide clear visual/audibly indication that the current ballot has been cast and the equipment is ready for the next voter.	When a voter inserts a ballot into the DS200, the terminal scans the entire ballot (front and back), interprets voter selections and accepts the ballot, adding votes to the system tally. A confirmation screen provides clear feedback to the voter that their ballot has been successfully tabulated.	After the ES&S AutoMARK marks a ballot, the system emits an audible tone and displays a message instructing the voter to remove the marked ballot from the output slot or allow the AutoCast feature to drop the ballot out the back of the device into a secure container. The ES&S system resets for voting almost instantaneously.
7) ***Read Error Messages*** – Describe the capabilities of the proposed Pollsite Voting System that provide error messages that are clear and understandable by the average inspector.	If there is an exception condition, such as undervotes, overvotes, crossover votes or ballot mismarks, the terminal displays a warning message on the terminal's large text 12-inch LCD display and plays an audible alert. The DS200 then provides step-by-step instructions for resolving any ballot issue. The jurisdiction is responsible for determining the correct procedure for handling blank and/or overvoted ballots. These ballots can be predetermined to be returned to the voter or to be accepted into the unit without an alert message. Ballots returned to the voter can be removed,	The ES&S AutoMARK includes built-in error detection features and provides correction methods. Error messages are displayed on the touch screen monitor when the ES&S AutoMARK detects a critical condition that requires operator intervention to correct the problem before the voting process can be continued. A listing of error messages presented to the poll inspector and voter are found in **Appendix D.1 and D.2.**

Pollworker Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	reviewed, replaced with a new ballot and revoted, or the voter may decide to keep the original ballot and condition and not make any changes. This process vastly dramatically reduces the number of invalid ballots cast during your election, ensuring that every ballot cast represents the voter's intent. A listing of error messages presented to the poll inspector and voter are found in **Appendix D.1 and D.2.**	
8) ***Election Day Error Solutions*** – Describe the capabilities of the proposed Pollsite Voting System that provide simple solutions for correcting Election Day errors. Distinguish between those correctable by Pollworkers and those that would require a Voting Machine Technician.	The DS200 is capable of displaying images, animation and video. This allows pollworkers to visually see solutions instead of just reading which might not be as clear. For example, a potential error message could be "Memory device not found". The "Show Me" button provides a picture of the memory device being inserted into the proper location. Pollworkers can correct task-related errors. A voting machine technician should be called when an issue moves from task-related to component failure.	The ES&S AutoMARK generates a full complement of error messages in audio and display format. ES&S' training documentation offers preliminary troubleshooting steps which often resolve errors – including ballot jams, feed errors, memory card insertion errors, and so on. Functionality errors requiring the assistance of a technician are indicated by messages as well.
9) ***Close Polls*** – Describe the capabilities of the proposed Pollsite Voting System that provide easy to close (both physically and electronically) while still maintaining security. What device, if any is used in the process?	Once the polls are closed and voting has ended, the pollworker unlocks the access door, then presses and holds the **CLOSE POLLS** button for approximately 5 seconds. Once the **CLOSE POLLS** button is released, the DS200 will close the polls and automatically print a Voting Results Report and any other reports set up to automatically print, such as an Audit Log Report.	Once the polls are closed, poll workers simply turn off the control key, unplug the unit. and close and seal the doors of the transport cart..
10) ***Reporting*** – Describe the capabilities of the proposed Pollsite Voting System that provide clear, readable reports for the Poll Worker.	The DS200 generates a variety of results reports after the polls close. Depending on the options configured for your election definition, the scanner may automatically print reports when you close the polls. Or you can manually select reports from the **POLLS CLOSED** screen.	The ES&S AutoMARK does not tabulate results and is not configured to print automatic reports. Election officials can print the system event log and scan log from the unit's administration menus. All reports are printed in full

Pollworker Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	1. Close the polls to access the **POLLS CLOSED** screen and press **RESULTS REPORT** to reprint any automatic reports generated when the polls are closed. The types of reports generated depend on your election definition settings. 2. To print additional reports, return to the **POLLS CLOSED** screen and select from one of the following report options: • Precinct Report Media. • Precinct Report Summary. • Audit Log Report. • Poll Report Media. • Poll Report Summary. • Election Configuration Report.	text to be easily understood by election staff.
11) ***Collect PMDs*** – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for the collection of portable memory devices containing the election results from each pollsite, and the entry of said results into the system's software, and reporting of same? How long do you estimate the described Election Night procedure will take in NYC?	There are several ways to accumulate the results from the DS200 PMDs, although NY law will not currently allow some of the methods to be utilized. 1. Most simplistic – Bring all PMDs back to borough BOE locations for downloading. This solution is the slowest as it has to allow for drive time from all pollsites. 2. Bring PMDs to regional sites, such as police precincts, for reading into a regional PC. This solution shortens drive time as well as cuts down on the number of PMDs that are actually read into a single PC. 3. Fastest – Modem results directly from polling place using a landline or wireless modem solution. This solution, although extremely fast, is illegal under current NY law. For this reason, DS200s will not be outfitted with modems of any kind.	The ES&S AutoMARK does not tabulate results or store ballots. ES&S can provide recommended procedures for processing ballots, if requested.
12) ***Handle Supplies*** – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for the handling of election supplies upon poll closing by pollworkers.	The DS200 is capable and it is the suggested procedure to bring back the following upon poll closing: 1. Both tabulated and untabulated ballots.	Election supplies can be stored in the ES&S AutoMARK carrying case when the system is not in service for an election. ES&S will work with the BOE to determine the best

Pollworker Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	2. PMD within the DS200 3. Copy or copies of the result tapes generated by the DS200. (The DS200 will generate the number of copies the NYC BOE chooses.)	method for storing supplies and returning equipment to storage upon closing the polls.
13) Voters per Machine – What is the maximum and typical number of voters that can vote on the proposed voting system in 15 hours on Election Day?	It is the experience of ES&S that this number is typically one of physical capacity of the ballot box and not throughput of the DS200. Depending on the length of the ballot and the ballot box being utilized, the DS200 can accommodate from 3,500 to 5,000 voters.	Estimated throughput for the ES&S AutoMARK depends on the selected input method. Voters who exclusively use the touch screen typically take between three and five minutes to vote and mark a ballot. Voters who use ballot audio, which includes all ballot instructions and candidate listings, could take up to 15 minutes if the voter listens to all audio files associated with the ballot. ES&S estimates the maximum real-world throughput rate of the system – where voters use only the touch screen input − at about 20 ballots marked per hour or 300 ballots processed in a 15-hour day.
14) *Pollsite Operation Breakdown* – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for its ease of disassembly and preparation for shipping.	Pollworkers simply lower the LCD screen and close the lid of the DS200 to power down the unit, then lock the lid. If necessary, the DS200 can be removed from the ballot box on which it rests and placed back into its carrying case, which will then be locked for transport.	Election workers simply deactivate the unit using the system's control key, remove the ES&S AutoMARK from the terminal's voting table, place the unit back in the carrying case, and lock the case for transport.

5.4.2 Voter Activity - Voting Process

Voting Process Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) *Voter User Friendly* – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System that enable it to be user friendly.	To cast an official ballot on the DS200, voters simply insert marked paper ballots, in any orientation, into the DS200 input slot and follow the easy-to-read instructions displayed on the terminal's 12-inch LCD touch screen. The terminal scans the entire ballot (front and back), interprets	Easy-to-follow instructions on the ES&S AutoMARK screen or audio ballot will guide the voter through marking the ballot. Once the ballot is marked, the voter will place the ballot into the privacy sleeve and take it to the DS200, then insert it so the ballot can be

Voting Process Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	voter selections and either accepts the ballot, adding votes to the system tally; or identifies and alerts the voter to any exception condition (undervotes, overvotes, crossover votes or ballot mismarks) with large, easy-to-read system messages and audible alerts. The DS200 provides instructions for resolving any ballot issue, vastly improving voter oversight and accountability and dramatically reducing the number of invalid ballots cast during your election.	tallied.
2) ***Over Voting & Under-voting*** – Describe how the Pollsite Voting System prevents the voter from over voting and notifies the voter that they are under voting and how the voter can correct his or her ballot. a) Can the under-voting alert be configured to be turned-off?	The DS200 can be programmed to stop and return ballots to voters who have made an error in marking their ballot. It can also be programmed to detect overvotes, undervotes, mismarked ballots and crossover ballots. When an incorrect ballot is fed into the DS200, the unit stops processing and emits an audible signal and displays a message describing the problem. It also activates two buttons: an **ACCEPT** button and a **REJECT** button. If the voter chooses to mark a new ballot, he/she or the poll official would press the **RETURN BALLOT** button, which sends the ballot out to be spoiled. If the voter chooses not to mark a new ballot, the **COUNT AS MARKED** button is pressed and the ballot is placed in the ballot box. The City of New York will be responsible for determining the correct procedure for handling blank and/or undervoted ballots. These ballots can be predetermined to be returned to the voter or to be accepted into the unit without an alert message. Ballots returned to the voter can be removed, reviewed, replaced with a new ballot and revoted, or the voter may decide to keep the original ballot and condition and not make any changes.	The ES&S AutoMARK guards voters from selecting more than the allowed number of candidates or ballot options for a contest. System messages identify any contests where a voter marks fewer than the allowed number of selections.
3) ***Independency*** – Describe how the	The DS200 allows for ballots to be	The ES&S AutoMARK

Voting Process Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
Pollsite Voting System will allow voters with disabilities to completely cast their ballot independently and in privacy.	deposited utilizing a secrecy sleeve which completely covers the ballot for ultimate privacy.	records selections on the same paper ballot used by every voter at the polling place, ensuring privacy and anonymity during ballot counting. Voters who use the ES&S AutoMARK's large LCD display to select their ballot options, do so behind a standard privacy screen to prevent onlookers from viewing the ballot display. If a voter is using an audio ballot, the screen can be blanked to prevent onlookers from seeing the voter's choices. Once the voter's ballot is marked by the AutoMARK and returned to the voter, a privacy sleeve can be used by the voter to transport the completed ballot to the DS200 for tabulation at the precinct.
4) ***Voter Verification*** – Describe how the design of the voter verification feature makes it efficient to use. a) Does the voter review operate in such a manner that the jurisdiction can limit the time or cycles of review in order to ensure voter does not unduly slow the voting process.	Voters using the DS200 can review all their choices on their paper ballots before inserting it into the DS200 for scanning. In the setup of the DS200 the NYC BOE will have the ability to set the reviewing criteria for the voters. For example, you can force a voter to view their overvote error before being able to cast ballot or you can allow them to cast their ballot right from the error notification screen.	There is software provision in the AutoMARK to limit the time or cycles of review. Since this unit is primarily to support ADA voting, the extended time of a voting session will not slow the mainstream voting process since it does not require its use. The intrinsic time of a voting session, especially if voting by audio, will be longer than voting a paper ballot by hand and the review time will normally not be the primary contributor.
5) ***Intuitive*** – Describe how the proposed Pollsite Voting System would be familiar to NYC voters or easy for them to use.	The ballot is designed to mimic the look and feel of a lever machine ballot, making it very familiar to NYC voters. The ballot can be inserted into the DS200 in any orientation so the voter cannot make an error in that regard. In addition, the screen runs animation to show where the ballot is inserted. Any error messages will be displayed in that voter's language of choice.	The ES&S AutoMARK touch screen follows the same operating principles as an ATM touch screen. Intuitive menus, dynamic selection highlighting and a comprehensive ballot summary provide voters the best possible environment to select desired candidates and ballot options without confusion.

5.4.3 Voter Assistance Devices

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Font Size Selection*** – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for font size selection.	The background colors, fonts and messages are precisely defined in the **adminscreens_xx_XX.xml**, the **messages_xx.xml** files, **sysobjects_xx.xml** and **votermessages_xx.xml** where the **xx** and **XX** represent the two-letter abbreviation for the language and its subcategory. For example, **adminscreens_en_US.xml** holds the information for US style English. ES&S can modify the colors, shapes, fonts and messages used on all screens by modifying the **adminscreens_xx_XX.xml** file, the **messages_xx.xml** file, **sysobjects_xx.xml**, the **votermessages_xx.xml** and the graphics files (.png format) used for the backgrounds to suit a specific jurisdiction.	The ES&S AutoMARK supplies voters with vision and mobility disabilities with the tools to privately cast a paper ballot. The terminal's zoom and high-contrast display options, audio ballot and Braille-embossed keypad provide full support for voters with vision impairments. A port for a sip & puff device, foot pedal, or other two-position switch facilitates unassisted voting for voters with mobility issues. Selections are recorded on the same type of paper ballot used by standard voters, ensuring privacy and anonymity during ballot counting.
2) ***Contrast Selection*** – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System for contrast selection.	The background colors, fonts and messages are precisely defined in the **adminscreens_xx_XX.xml**, the **messages_xx.xml** files, **sysobjects_xx.xml** and **votermessages_xx.xml** where the **xx** and **XX** represent the two letter abbreviation for the language and its subcategory. For example, **adminscreens_en_US.xml** holds the information for US style English. ES&S can modify the colors, shapes, fonts and messages used on all screens by modifying the **adminscreens_xx_XX.xml** file, the **messages_xx.xml** file, **sysobjects_xx.xml**, the **votermessages_xx.xml** and the graphics files (.png format) used for the backgrounds to suit a specific jurisdiction.	High contrast (white text on black background) ballot presentation can be activated at any time while interacting with the ballot.
3) ***Language Selection*** – Describe the capabilities and suggested procedure	The DS200 display screen has	Multiple languages can be

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
of the proposed Pollsite Voting System for language selection. a) Can the voter choose the language? b) Can the choice of language be done both visually and through audio?	the capability to utilize multiple languages. The proposed method would be to use English as the default with clearly visible buttons displaying the other language options. ES&S feels that this method cuts down on clutter and more efficiently processes voters. a) Yes, the voter can select their language of choice simply by pressing a single button. b) The audio ballot is handled by the ES&S AutoMARK.	stored on a single machine for use with both audio and display ballot presentations. Audio contents are presented in either synthesized speech or real voice recordings. The voter selects the desired ballot language after inserting a ballot for marking. Five languages are currently supported with synthesized speech: English, Spanish, Chinese, Korean and Japanese. Real voice files can be formatted to support any ballot language.
4) ***Audio Function*** – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System audio function is clear and easy for the voter to use. a) Can the volume of the audio ballot be easily adjusted by the voter (higher/lower)? b) Can the speed of the audio ballot be easily adjusted by the voter (faster/slower)? c) Do the audio controls work with both synthesized and recorded audio? d) Do the headsets provided include technology to prevent interference with hearing aids?	These audio ballot functions are available on the ES&S AutoMARK.	ES&S AutoMARK audio control keys are arranged and shaped to provide an intuitive voting session. Braille and printed text labels describe each key's function. • Arrow keys are used navigate up, down, left, and right. • The square key serves as an "enter" key. • The diamond-shaped key turns the screen on and off for audio only voting. • The round key repeats the last audio prompt. • Two sets of long oval keys control the volume and tempo of audio files. The audio speed can be easily adjusted by the voter. The controls work with both synthesized and recorded audio. ES&S AutoMARK headphones are fully compatible with hearing aids. The earpiece on the headset covers the entire ear canal. The same model of headset is regularly supplied to hospitals and nursing homes.
5) ***Device Positioning*** – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System that enable it to be positioned in an easy and	The DS200 and ballot box are on wheels, making it easy to place in the desired location of any	The AutoMARK steel transport table already purchased by the NYC BOE

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
safe manner to handle all voters. a) Can the voter place the keyboard in their lap? b) Does the voting system require re-positioning for voters in wheelchairs? c) Can the voting system be adjusted to avoid glare from ceiling lights?	polling place. The throat of the machine is at a comfortable height for all voters. a) The DS200 does not require a keyboard. b) The DS200 does not require repositioning for voters in wheelchairs. c) The LCD screen can be adjusted to avoid glare from ceiling lights.	has wheels making it easy to place in the desired location. a) The AutoMARK does not require an external keyboard. However, the external devices such as the audio headset, rocker paddle, and sip & puff device all have cords long enough to achieve the desired comfort. b) The AutoMARK steel transport table already purchased by the NYC BOE is at the proper height for wheelchair voters. c) The AutoMARK screen can be tilted as desired to avoid glare from ceiling lights.
6) ***Sip & Puff*** – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System that allows the voter to navigate the equipment with a sip & puff device. a) Can the voter control navigation (move from contest to contest) as well as selection using sip & puff? b) Can the voter use the display as output and "sip & puff" as input? Can this be done as fast as the voter can see and respond or is it dependent upon the audio speed of the device?	Not applicable for the DS200. If the voter requires the use of a voter assistive sip & puff device, they should be directed to the ES&S AutoMARK to mark their ballot and then insert the marked ballot into the DS200 for tabulation.	A sip & puff device, foot pedal, or other two-position switch can be attached to the system to facilitate unassisted voting for voters with mobility issues. a) Yes. The sipping action is the scrolling function that allows a voter to move from contest to contest by highlighting the next button, and the puffing action is the selecting function. b) The display is used as output, where a highlighted bar allows the voter to visually see where they are on the ballot. This can be done as fast as the voter can see and respond.
7) ***Paddles*** – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System that allows the voter to navigate the equipment with paddles. a) Can the voter control navigation (move from contest to contest) as well as selection using paddles? b) Can the voter use the display as output and "paddles" as input? Can this be done as fast as the voter can see and respond or is it dependent upon the audio speed of the device?	Not applicable for the DS200. If the voter requires the use of voter assistive rocker paddles, they should be directed to the ES&S AutoMARK voter assist terminal to mark their ballot and then insert the marked ballot into the DS200 for tabulation.	The paddle provides a standard two-position switch interface for screen navigation. Clicking one side of the paddle cycles through options on the screen while clicking the other side of the paddle selects the highlighted option. a) Yes. The "no" side of the paddle will scroll until the next button is highlighted, and the "yes" side of the paddle will move to the next contest. b) The display is used as output, where a highlighted

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
		bar allows the voter to visually see where they are on the ballot. This can be done as fast as the voter can see and respond.
8) ***Device Combinations – Ballot Presentation and Cast Modes*** – List all the ways in which a ballot may be presented (i.e. screen, synthesized audio, recorded audio, printed on paper) and all the ways in which a ballot may be cast (i.e. touch screen, QWERTY keyboard, alpha keyboard, keypad, telephone keypad, sip & puff, rocker paddle, etc.). a) Can every presentation mode be used with every cast mode? b) If not, which combinations cannot be used? c) If so, can the voter vote completely without assistance (including write-ins) using any combination of modes? ***i)*** If not, which mode combinations require poll worker assistance?	The DS200 provides the voter the opportunity to cast a paper ballot. The voter is able to view their ballot in printed form as well as see any errors with their ballot on the DS200 touch screen. These messages are available in the voter's language of choice. All other presentation and cast modes are available on the ES&S AutoMARK.	The ES&S AutoMARK includes the following ballot presentations and cast modes: • **Display ballot –** Voters can navigate the ballot using the ES&S AutoMARK touch screen. The ballot display includes full support for high-contrast display, Zoom and simultaneous audio display. • **Audio ballot –** Voters who require an audio-only ballot use the navigation keys on the ES&S AutoMARK control pad to navigate the ballot and indicate selections. The ES&S AutoMARK audio ballot includes full support for volume and tempo adjustments and an option to blank the screen while voting to ensure voter privacy. • **Two-position switch device –** The ES&S AutoMARK includes an input port for any two-position switch device including a sip & puff tube and two-position switch pedal. Voters can use this input to navigate and cast a ballot in either audio or display format. The voting process remains the same for each ballot selection method. Every ballot presentation mode may be used with every cast mode. No poll worker assistance is required during ballot navigation and marking for any cast mode. Voters with profound mobility issues may require assistance when transporting a ballot from the ES&S AutoMARK to a ballot

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
		box or pollsite scanner. An optional ballot secrecy sleeve is available to ensure that the paper ballot remains secret during this transfer. Also, optional would be the use of the AutoCast feature which allows the voter to designate whether he or she desire the ballot to return or be placed in a secure container in the rear of the ES&S AutoMARK.
9) ***Support for Other Assistive Devices*** – Can the voter use any other two-position switch assistive device (such as a head switch) that has a standard 3.5 mm mono plug interface? Cite a county in which such device has been used in an election.	Not applicable for the DS200. If the voter requires the use of a voter assistive two-position switch, they should be directed to the ES&S AutoMARK voter assist terminal to mark their ballot and then insert the marked ballot into the DS200 for tabulation.	Yes, a two-position head switch with a standard 3.5 mm mono plug interface will work with the ES&S AutoMARK. ES&S does not have access to any records that could validate locations where disabled voters utilized a head switch to mark their ballot on the ES&S AutoMARK BMD.
10) ***Voting Tables*** – Describe the feasibility of using the proposed Voting System in conjunction with ADA[1] approved Voting Tables. a) Describe which voting table, if any, are recommended for use with your proposed Voting System. b) Describe any additional special needs or considerations for the BOE in using ADA approved Voting Tables.	The DS200 is mounted on top of a ballot box. Jurisdictions using the DS200 normally provide ADA-approved voting tables or booths to voters for the purpose of marking their ballot. a) There are many ADA voting booths contained within our OGS price list that are recommend for use. b) Considerations to selecting a voting booth or table would be available marking surface, weight, portability, construction, plastic, steel, etc.	The use of a voting table is feasible, but not required, as the NYC BOE has already procured and deployed an ADA voting table with the ES&S AutoMARK inside.
11) ***Write-ins*** – Describe the capabilities and suggested procedure of the proposed Pollsite Voting System that provides the voter with an easy and clear method of casting a write-in vote. a) What is the write-in method? i) Keyboard? (QWERTY or Alphabetic order?) ii) Keypad? (QWERTY or Alphabetic order?	NYC voters will indicate their voting choices on a paper ballot. If the voter desires to make a write-in selection for a particular contest, the voter simply fills in the write-in designation on the ballot and fills in the oval adjacent to that designation. The ballot is then inserted into the DS200 pollsite voting system where it is stored on the USB memory stick. a) Physically written on the	a) When a voter selects a write-in target within an ES&S AutoMARK contest, the terminal displays an emulated QWERTY keyboard on the unit's touch screen. Voters use this keyboard to input the name of their selected write-in candidate. The candidate name then replaces the write-in line on the selected contest screen and in the audio and display ballot summary for the selected contest. When the

[1] Americans with Disabilities Act

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
iii) Paper scroll? b) Explain how write-in voting is accomplished for voters using: i) Spanish. ii) Chinese. iii) Korean. c) Explain as an example, how write-in is accomplished for blind, Mandarin Chinese only language voter? i) Does voter need to listen and select letters in alphabetic order? Can voter skip through alphabet? d) Explain how "Sip & Puff" and "Rocker Paddle" voters are able to perform a write-in without assistance.	ballot. b) Regardless of language it is physically written on the ballot. c) Not applicable. d) Not applicable.	voter approves the ballot summary and marks the ballot, the ES&S AutoMARK prints the write-in candidate name in the appropriate space on the paper ballot. b & c) Currently the write-in keyboard is displayed in English only. d) Voters can use either sip & puff or rocker paddles to perform write-in votes by scrolling through the alphabet and selecting letters to spell a candidates name.
12) ***Time to Vote with Disability*** – Describe the capabilities of the proposed solution in terms of input and output modes for the voter. Give an estimate of the average time to vote using each mode. Indicate if the voter is able to enter a write-in in each mode with complete privacy and without assistance. a) Display Output & Touch Input b) Audio Output & Touch Input c) Audio Output & Keyboard/Key Pad Input d) Display Output & Sip & Puff Input e) Audio Output & Sip & Puff Input f) Audio Output & Rocker Paddle Input	The DS200 quickly scans both sides of the ballot when recording results. Once a ballot is marked on the ES&S AutoMARK, it should take less than 5 seconds to scan the ballot and confirm that the votes have been tabulated.	Time to vote depends entirely on the length and complexity of the ballot. and the familiarity of the voter with the selected input mode (sip & puff, paddle switch, etc.). The following estimates are intended to supply the BOD with a frame of reference rather than a guaranteed throughput rate. **a) Display Output and Touch Input −** Voting an average length ballot using touch screen inputs typically takes 3-5 minutes. **b) Audio Output and Touch Input −** Voters who use the system's audio output strictly to reinforce a touch screen input vote in about the same amount of time as voters who use only the touch screen (3-5 minutes). **c) Audio Output and Keypad Input −** Voters who use a pure audio ballot − which includes all instructions and

Voter Assistance Devices Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
		candidate names − take up to 15 minutes to vote an average-size ballot. **d) Display Output and Sip & Puff Input −** Voters who use a sip & puff input to vote a display ballot can be expected to take slightly longer than voters who use the touch screen – depending on the voter's familiarity with the sip & puff system. **e) Audio Output and Sip & Puff Input −** Voters who use a sip & puff input to vote an audio ballot can be expected to take slightly longer than voters who use the keypad – depending on the voter's familiarity with the sip & puff system. **f) Audio Output and Foot Pedal Input −** Ballot casting time for voters familiar with the foot pedal system is roughly the same as voters who use the sip & puff input.
13) ***Change Voting Mode*** – Describe what steps must be taken if a voter wishes to change voting mode (i.e. touch & keyboard vs audio & rocker) after voting has begun**.**	Does not apply to DS200.	The voter can use any of the terminal's voting modes at any time without change. For example, a voter may make selections on the touch screen and use the keypad to move to the next contest. The only exception would be if the voter wanted to switch from the rocker paddle to sip & puff or vice versa as they share the same port. If this occurred simply unplug one and plug the other in its place.

5.4.4 Technician Activity

Technician Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Technician User Friendly*** – Describe how the proposed Pollsite Voting System will be user friendly in terms of the following:	**Pre-Election Setup** DS200 pre-election setup procedures are detailed in the system Operator's Manual.	**Pre-Election Setup** ES&S AutoMARK pre-election setup procedures are detailed in the system

Technician Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
a) ***Pollsite Setup*** – Describe the ease with which voting technicians can set up, test and deploy the proposed pollsite voting system. b) ***On-site Corrections*** –The ease with which problems with the new voting system can be diagnosed and repaired at the pollsite. c) ***Diagnostics*** – Describe the self-diagnostics and testing capabilities of each component of the new voting system	Preparing the DS200 for an election includes the following steps, as a minimum: 1. Install new paper roll. 2. Attach the DS200 to the ballot box. 3. Prepare the scanner by charging the battery, clearing the DS200, loading the election definition, and checking the election definition for accuracy. 4. Check the scanner's ability to scan a ballot and run a report to validate the scan results. 5. Run a hardware configuration report to check the scanner settings. 6. Change date and time settings. 7. Calibrate scanner and touch screen. 8. Test the thermal printer. **Pollsite Setup** On Election Day, the DS200 can be readied for voting in less than five minutes. The DS200 can be programmed to power up when the LCD screen is raised. The pollworker simply needs to unlock the lid of the DS200, raise the LCD screen, and wait a few moments for the system to initialize. When the **Open Polls** screen appears, the pollworker presses the **Open Polls** button on the screen. Depending on options set for the election definition, the DS200 will automatically print a status report, a zero totals report and/or a zero certification report. Once the start-up reports are complete, the pollworker closes and locks the switch door and secures the key in a safe place. The DS200 is ready to receive Election Day ballots. **On-site Corrections** System messages identify any required maintenance task. The	Operator's Manual. Preparing the ES&S AutoMARK is a five-step process: 1. Connect AC power. 2. Install the election definition on compact flash card. 3. Install ink cartridge. 4. Test printing. 5. Test the touch screen interface and ADA functionality of devices. After technicians at the Voting Machine Facility make sure the terminal properly marks all ballot positions, they then secure the unit in its BMD transport cart for transport to the pollsite. **Pollsite Setup** On Election Day, the ES&S AutoMARK can be readied for voting in less than five minutes. Election workers simply remove the seals on the front and rear doors, plug the unit into a standard three-prong outlet and turn the gold control key to the ON position. **On-site Corrections** System messages identify any required maintenance task. The BOE staff can resolve most issues with assistance from ES&S telephone support from the BOE call center or ES&S Help Desk. **Diagnostics** A basic troubleshooting guide for the ES&S AutoMARK is found in the ES&S DS200 Systems Operator Manual, version release 2.1.0.0, dated January 5, 2009, Chapter 11.

Technician Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	BOE staff can resolve most issues with assistance from ES&S telephone support from the BOE call center or ES&S Help Desk. **Diagnostics** A complete troubleshooting guide for the DS200 is found in the DS200 System Installation and Maintenance manual, version release 1.4, dated November 21, 2008, Chapter 19.	
2) Repair/Replacement – Describe the extent to which any component of the new voting system can be repaired and/or replaced.	BOE and NYC technical staff can perform most DS200 preventative maintenance tasks with appropriate training and support from ES&S. Some advanced maintenance activities, such as significant system upgrades and extensive corrective maintenance, should be completed by ES&S technicians. An ES&S certified technician is needed to perform the following hardware replacement tasks: • Replace the ballot scanner. • Replace the backup battery. • Replace the ITX power supply. • Replace the power management board. • Replace the motherboard.	The ES&S AutoMARK's modular design facilitates quick diagnosis and repair of the unit. ES&S is committed to maintaining available spare parts and repair supplies for its tabulation systems. Many of the key components provided in the ES&S systems are proprietary in design and manufacture. This ensures that we can control their life cycle and quality without being subject to rapid technological change prevalent in many other areas of the electronics industry. We typically stock for our anticipated service requirements for a period of time sufficient to meet the lead times of the individual components utilizing safety stock levels to protect from any unexpected shortages. As a result, we can ensure adequate parts availability for our customers.
3) *Tools Required* – Describe any special hardware or software tools required for routine maintenance and/or repair of the Pollsite Voting System.	The following tools are needed to conduct routine maintenance on the DS200: • Compressed air − 10 oz. can minimum. • Isopropyl alcohol 70% − 16 fluid ounce bottle or more. • Non lint-based cloth. • Static mat with wrist strap. • #1 Philips screwdriver.	Routine maintenance requires the following equipment: • TORX T-10 screwdriver. • Cleaning spray. • Lint-free cloth. Standard maintenance tasks include cleaning optical sensors and adjusting belt tension.

Technician Activity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	• #2 Philips screwdriver. • T-10 screwdriver with a security center pin.	

5.5 Security & Privacy Requirements

5.5.1 Security Strategy & Physical Security

Physical Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Facilities Assessment for Security*** – Describe your approach to facilities security assessment. a) How do you propose to perform a facilities security assessment of the five (5) borough voting machine facilities? b) How will you identify any security issues and show how the proposed solution will handle potential problems?	ES&S would recommend hiring an independent security auditor to complete the facilities security assessment. Utilizing an independent auditor to complete the assessment will ensure complete integrity and confidentiality for any finding. The audit would include the system, facilities and processes. The audit report would include findings and proposed/recommended mitigation for any vulnerabilities discovered, ensuring the confidentiality, integrity and availability of the proposed system. ES&S urges our clients to implement facility and software access control policies based on industry best practices and the jurisdiction's unique requirements. These recommendations include activating applicable operating system controls, user and password management and audit logging, locking down storage facilities with keypad or swipe card locks, and performing background checks on all personnel responsible for the storage and handling of election equipment.	
2) ***Flexibility to Modify Product for Security*** – Should BOE in NYC identify security issues with the proposed product, how will you address those issues? Describe the security protections employed during system modification that ensures the integrity of the system.	Should the BOE require changes for the security aspects of the proposed DS200 solution, ES&S will work with the BOE to define and implement changes to meet the security needs of the City. Updates that are required due to a change in the jurisdiction's security requirements shall be provided at an additional fee to be mutually agreed upon by the parties if they constitute a material change to ES&S' proprietary software and/or require a substantial amount of time by ES&S to complete	Upgrades to the ES&S AutoMARK are made by trained technicians using a password to authenticate credentials prior to allowing updates. Should the BOE require changes for the security aspects of the proposed solution, ES&S will work with the BOE to define and implement changes to meet the security needs of the City. Updates that are required due to a change in the jurisdiction's security requirements shall be provided at an additional fee to be mutually agreed upon by the parties if they constitute a material change to ES&S' proprietary software and/or require a substantial amount of time by ES&S to complete.

Physical Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
3) ***Ability to Secure Equipment Outside of BOE Facilities*** – Describe the security features of the proposed voting system which protect it when it is not in a BOE facility (in transport, at pollsite before & after election).	**External Security Features:** • The DS200 carrying case can be locked with a key. • Numbered tamper-evident seals may be applied to the shipping case. • The media access door can be secured with tamper-evident seals. • The device cannot be powered up without the control key. • Tamper-evident seals can be applied to the case itself to prevent malicious entry. Please reference the **Best Practices −Security Locks and Seals** document in **Appendix D.7** for a complete description of the tamper-evident seals and locks available for use on ES&S voting equipment.	**External Security Features:** • The ES&S AutoMARK steel transport table is equipped with unique key locks. • Numbered tamper-evident seals may be applied to the Transport Table. • The media access door can be locked and tamper-evident seals can be applied. • The device cannot be powered up without the control key. Please reference the **Best Practices − Security Locks and Seals** document in **Appendix D.7.** for a complete description of the tamper-evident seals and locks available for use on ES&S voting equipment.
4) ***Security Controls on Firmware & Software*** – Describe the different levels of security that would have to be bypassed in order for a person to gain access to firmware or software code in any proposed voting system component. Describe how each device of PVS can only be programmed by a copy of the EMS authorized by the BOE in NYC.	Procedures for the DS200 include validation of the firmware/software against the secure hash signatures for the authorized software. They also include automated digital signature validation for the election definitions prior to loading and using them in the DS200. With these procedures in place, no unauthorized software can be loaded to or used on the DS200. All three controls described below must be compromised to present a threat to the DS200. **Physical Security:** • Access to the devices and the facilities where the devices are stored. • Access to the keys to the device. **Logical:** • Access to the passwords for the device.	All three controls described below must be compromised to present a threat to the ES&S AutoMARK. **Physical Security:** • Access to the devices and the facilities where the devices are stored. • Access to the keys to the device. **Logical:** • Access to the passwords for the device.
5) ***Component Security*** – Describe how the various components of the proposed voting system are secured from tampering, access or	The ES&S DS200 and ballot box are secured with locking doors and covers.	The ES&S AutoMARK system consists of the following components:

Physical Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
alteration?	The ES&S DS200 and ballot box were designed with multiple locations for wire type seals. Additionally paper seals can be added at multiple locations for further tamper proofing. The DS200 uses tamper-proof security Torx head screws to attach the covers. Details on recommended security practices can be found in the operator's manual. Please reference the ES&S Security Locks and Seals Document (This was submitted to NYSTEC) along with **Best Practices Security Seals and Locks** document in **Appendix D.7.**	• The ES&S AutoMARK ballot marking device itself; it is a single-purpose, sealed unit with a touch screen and ballot scanner/marker. It only recognizes selections made on the screen or through the assistive devices; no direct input is available. • **Assistive device:** Toggle pad, sip & puff, joy stick; recognizes scroll and select commands only. There is no direct input ability. • **Audio headset:** Plays sounds only; no input is possible. • **Removable memory device:** A memory card with the election definition; it is locked behind a door (physical key lock) to prevent tampering.
6) ***Serial Number Security*** – Describe how the components of the proposed voting system are secured through the use of physical and electronic serial numbers.	Each DS200 is externally labeled with a unique serial number. Device serial numbers are also stored electronically in the system.	Each ES&S AutoMARK is externally labeled with a unique serial number. Device serial numbers are also stored electronically in the system.
7) ***End-to-End Process Security*** – Describe the proposed approach to assessment and recommendations for process end-to-end security for BOE in NYC.	As referenced in the response to question 1 above, the proposed security audit should include the facilities, systems, and procedures used to protect the proposed solution, including the protection of the confidentiality, integrity and availability of the proposed solution. ES&S urges our clients to implement facility and software access control policies based on industry best practices and the jurisdiction's unique requirements. These recommendations include activating applicable operating system controls user and password management and audit logging, as well as locking down storage facilities with keypad or swipe card locks, and performing background checks on all personnel responsible for the storage and handling of election equipment.	
8) ***PVS Locks*** – ***a)*** Describe all locks of the PVS. ***b)*** Each PVS that tabulates votes must include a lock or locks, the use of which locks all operation of the tabulation element of the PVS and which absolutely prevents (i.e. seals) the	a) The DS200 scanner utilizes a barrel key to be able to raise the screen, and to provide access to the PMD, power and close poll buttons as well as the back compartments. The ballot box uses a standard key to lock the DS200 into place and secure the top to the bottom and lock the	a) There is one key lock to turn on the unit and another unique key lock to open a panel to access the compact flash memory card that contains the election definition. b) Not applicable. The ES&S AutoMARK is a Ballot Marking Device and has no tabulation

Physical Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
alteration of the cumulative count of votes. ***c)*** Detail which locks are unique to particular units and which are common across all like devices from the Proposer.	ballot compartment doors. b) The barrel key locks all operation of the DS200. In addition, there are places for the use of tamper-evident and locking seals. c) The DS200 keys are common across all like devices.	or vote counting feature. Therefore, there is no vote count to compromise on this device. c) The two keys are different but each is the same for all like devices. However, the key for the steel transport table is unique to a particular unit.
9) ***Voting Device Tamper Prevention*** – Describe your proposed product's ability to preclude tampering or damage related to an election.	The ES&S DS200 election definition is stored on a USB memory stick that is inside a locked compartment. The memory stick itself can employ a wire-type seal to add tamper evidence. The compartment door remains locked throughout the election day, and the memory stick can remain sealed in the DS200 until the time to download results. Both prior to and after use, additional seals can be used to secure the DS200 itself, as well as all ballot box compartments. Details on recommended security practices can be found in the operator's manual. All administrative functions are password protected. These passwords are user configurable.	The ES&S AutoMARK's election configuration card and key-activated administrative controls are stored behind a locking panel to the left of the terminal touch screen. Prior to or during the election, the media access door can be sealed to prevent unauthorized entry by unauthorized individuals. The ES&S AutoMARK is a Ballot Marking Device and has no tabulation or vote counting feature to protect. Finally, the ES&S AutoMARK does not have any exposed ports or connections that would allow tampering during the election. Tamper-proof seals can be applied to the unit to detect tampering during pre-election and Election Day.

5.5.2 Software Security

Software Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Joint Security Protections Between Current BOE Systems and Proposed System*** – Describe your proposed approach to ensuring security controls between your proposed voting system and current BOE software applications. a) Describe any data encryption methods used by the proposed Voting System b) What features already exist in your proposed system for file	a) The ES&S application software provides for encryption of the data where required by the VSS 2002 and VVSG 2005. Those documents require transmitted information to be protected by encryption (VSS 2002, I.6.5.3; VVSG 2005, I.7.5.1.b and I.7.7.3.a). Clients who use transmission will have their data encrypted when it is transmitted. The ES&S application software also uses encryption for some additional features beyond those	The proposed solution uses physical media to move election definition data between the EMS and the ES&S AutoMARK. There is no capability for any electronic file transfer. The output of the ES&S AutoMARK is a paper ballot that is placed into the ballot box or AutoCast secure container and managed through the City's normal ballot box procedures. a&b) Data is not encrypted

Software Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
transfer security?	required by the VVSG. The primary use is key management and protection. The key exchange process between the EMS PC and the DS200 encrypts the keys exchanged between the devices to ensure their confidentiality.  b) All of these features are already in the system and used to protect the transfer of information.	but file transfer is secure as all files are signed using secure digital hash signatures created from a FIPS sanctioned algorithm and a signing key derived from a password entered at the NYC EMS for this purpose.
2) ***Wireless Security*** – Describe the protections in the proposed system that ensure that wireless communications components are either not included or how BOE can have certainty that they are disabled. How are ports controlled to prevent the attachment of foreign devices (such as wireless communications devices)?	ES&S' proposed system does not include wireless data transmission.	
3) ***Modification toward Compatibility with Current BOE in NYC Security Platform*** – Describe in what ways you will provide or modify a strategy for security between the proposed system and existing BOE systems.	ES&S will work with the BOE to determine the best methods for modifying ES&S systems for compatibility with existing BOE systems. ES&S election software and hardware conform to industry best practices for physical and application security. Updates required due to a change in jurisdiction requirements shall be provided at an additional fee to be mutually agreed upon by the parties if updates constitute a material change to ES&S' proprietary software and/or require a substantial amount of time by ES&S to complete. Modifications due to changes in security requirements that are routine or can be reasonably anticipated or that do not require a substantial amount of time for ES&S to complete for the City, shall be provided at no additional charge. This substitution is in the best interest of the City because it prevents ES&S from having to build a "cushion" for such expenses into our pricing proposal. Because such expenses are so unpredictable, inestimable and often do not impact all of ES&S' customers similarly, it is often in the best interest of all of ES&S' customers to pay such expenses when (and if) incurred rather than risk initially paying too large of a cushion up front.	
4) ***Operating System Access Security*** – Describe the security features of the proposed EMS and pollsite voting system operating	**Election Management System** The proposed solution includes the deployment of Unity software in a properly configured PC with a hardened installation of the OS that limits OS functions to those required by the EMS. This PC is	

Software Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
systems. a) In what ways do they prevent unauthorized access? b) Are all unnecessary components of the operating system identified and removed?	maintained in a controlled environment. Security is strong when the jurisdiction follows recommended configuration and installation guidelines, including establishment of proper user credentials and roles. To gain improper access to the software, an individual would need to breach the physical security where the device is located and defeat the Windows administration security. Using the recommend guidelines, the system logs would be reviewed and catch any such attempt. **DS200** • The DS200 incorporates a Linux OS. • a) The DS200 disallows the attachment of a keyboard and disallows the entry to the native Linux environment when in the deployed state. The device restricts use to the features presented by the application to the pollworker and/or voter. • b) The Linux OS that has been stripped of all non-utilized services and components. **Ballot Marking Device System** The ES&S AutoMARK OS is a Windows CE system configured by an authorized Microsoft partner to contain the functions and features required for AutoMARK hardware and functional compatibility. It is preinstalled from a trusted copy of the one certified, and conformance to the original is verifiable using hash checking. The system is dedicated to the single BMD application function and no other applications can be invoked. The OS cannot be changed without compromising the physical security of the AutoMARK, comprised of locks and seals and is detectable, and removing the covers and attaching an external USB keyboard. Special procedures would then have to be used to break out of the application.	
5) ***System Instance Security*** – Describe how BOE in NYC will be protected should some part of another county's voting system find its way to NYC's instance of the proposed system.	The DS200 has a hash checking port to assure that NYS certified firmware is being utilized. DS200 devices that have not been prepared by the jurisdiction will not have the necessary key repository. Any such device would not be able to validate the digital signature on the election definition media and would therefore not be able to be used for the election.	The ES&S AutoMARK has a hash check port to assure that NYS certified firmware is being utilized. Inadvertent use of another jurisdiction's power cord, ear phones, or accessibility would be inconsequential in that they are all interchangeable.
6) ***Use of SHS for Software Integrity*** – Describe the extent to which the proposed voting systems will enable the comparison of software installed on the delivered system to certified software, via the use a Secure Hash Signature Standard (SHS) validation program, contained in Federal Information Processing Standards Publication 180-2 issued by the National Institute Standards Technology.	The ES&S solution provides utilities using third-party open source methods to validate the software installed against the trusted Secure Hash Signatures for the system software. The Open SSL tool is used; it is FIPS 140-2 certified. [redacted]	The ES&S solution provides utilities using third-party open source methods to validate the software installed against the trusted Secure Hash Signatures for the system software. The Open SSL tool is used; it is FIPS 140-2 certified. [redacted]

Software Security Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
7) ***Data Recovery Protection*** – Describe how the proposed voting system detects and recovers lost data in any component.	The DS200 stores all votes and election configuration files to an external USB memory stick (up to 8 GB). If a terminal fails, poll workers simply transfer the stick to a backup unit and seamlessly continue voting. The DS200 backup memory and power supply ensure that no votes are ever lost due to power loss or equipment failure. Results storage to an external USB memory stick prevents power surges or terminal malfunctions from affecting recorded results.	The system stores all election and ballot information on a non-volatile compact flash memory card. No data is lost in the event of a terminal failure. Election workers simply remove the card from the current terminal and insert it into a spare unit to continue ballot marking without interruption. The ES&S AutoMARK does not tabulate results or store vote totals.
8) ***Device Interconnection Security*** – a) What protections are provided to prevent the interconnection of foreign devices with components of the proposed voting system (i.e. prevention of USB device attachment to pollsite voting system). b) Ability to connect a projector to demonstration and training machines is desirable. i) How would this be controlled? ii) Do you offer training machines? iii) In what ways do they differ from standard machines and are they interchangeable through configuration? Can BOE do these conversions? iv) Are there simulation machines?	a) The DS200 validates the media type, the digital signature on its contents, and the election identifier contained in the definition before it accepts the USB media for use. The DS200 does not allow other devices to be mounted. b) The DS200 does not allow the connection of a projector. Screen shots are available for inclusion into PowerPoints and other training presentations. ES&S encourages hands on training with equipment for optimum results on election day. Equipment used for training and demonstration is the same as the equipment used during a live election	a) External device connections include an audio jack (for playing of sound), accessibility device connector (for sip & puff users), and a removable memory device compact flash slot (for the election definition). The removable memory device slot is secured behind a locked door. The audio jack and accessibility device connectors do not allow the introduction of commands or data to the system. b) The proposed ES&S equipment does not currently support the ability to connect to a projector or alternate display. Equipment used for training and demonstration is the same as the equipment used during a live election.

5.5.3 Voter Privacy

Voter Privacy Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Ballot Secrecy*** – Describe how proposed voting system ensures the end-to-end protection of the secrecy of each voter's ballot.	Voters mark their paper ballots in the privacy of a voting booth, and then place their ballots into a privacy sleeve to transport it to the DS200. The ballot is passed through the DS200 for tabulation, then immediately is dropped into	The following system features ensure private ballot marking for voters with disabilities. • Option to blank the screen during audio voting clears the terminal

Voter Privacy Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	the locked ballot box.	display to prevent onlookers from viewing ballot selections. • Physical privacy screen shields the ES&S AutoMARK display during voting. Optional ballot privacy sleeve may be used to transport the paper ballot from the ballot-marking terminal to the polling place tabulator or ballot box without revealing selections.

5.6 Implementation Services

5.6.1 Interfaces

Interfaces Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Prior Jurisdiction Interfaces*** – Describe voting system interfaces that your firm has done for other jurisdictions.	ES&S has many years of experience interfacing with legacy systems in several large election jurisdictions across the U.S. and Canada. Some examples of these are: • City of Chicago. • Cook County, IL. • Dallas County, TX. • Miami-Dade County, FL. • Broward County, FL. • Hennepin County, MN (Minneapolis area). • Allegheny County, PA (Pittsburg area). • Toronto, ON.	
2) ***Interface Methodology*** – Describe your method for developing interfaces from the proposed voting system to other systems.	ES&S has worked with many jurisdictions, voter registration companies, commercial printers, and partners developing interfaces into and out of our EMS. EDM's flexible Import Wizard is the only method to import data into the EMS. An ES&S representative works with the jurisdiction to guide them through the process of formatting their data files for import into EDM. The process includes the following steps: • ES&S provides data specification and Import Wizard documents. • Various meetings take place to walk through the process. • Questions are answered by phone or e-mail. • Test files are sent to ES&S for validation. ES&S has worked with many jurisdictions to provide election results data in various file formats from Unity's ERM application. Flat files	

Interfaces Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	and XML files are the most used format. The method is the same for developing interfaces back to the jurisdiction as it is from getting information from the jurisdiction. Also, jurisdiction IDs can be imported into the EMS and associated to ED's, offices and candidates. These IDs can be included in the results output file that is sent back to the jurisdiction.	
3) ***BOE in NYC interfaces*** – Describe your approach to creating an interface between the proposed voting system and the current BOE in NYC systems based on the descriptions provided above of these BOE systems and how long do you estimate the effort will require? a) S-Elect b) Fleet Management System c) Pollsite Management System.	a) **S-Elect:** An interface between the BOE's S-Elect system and Unity already exits. The BOE creates election export files that are imported into Unity with a single click. Up to 95 percent of the election definition can be imported with this process. The process has been demonstrated successfully in the 2008 primary and general elections. b & c) **Fleet Management and Pollsite Management Systems:** Meetings with the BOE would be required so ES&S developers could learn the Fleet Management and Pollsite Management systems. Subsequent to that meeting, a data analysis would be performed and data requirements and an interface design would be created so all relevant election data Information could be transferred. ES&S would work with the BOE to determine whether automated interfaces are necessary and the extent of required modification.	
4) ***Confirmation Reports*** – Does the proposed system provide a confirmation report of what was sent and what was received especially in downloads from EMS to pollsite voting system?	Yes. The ElectionWare Package module has a Track Media report which lists the type of media created, the user who created it, the affiliated pollsite, the creation date, and an event number (i.e., burn number 3). In addition, the ElectionWare Process module includes a report of the files created, both global and pollsite specific.	

5.6.2 Receipt & Acceptance Testing

Receipt & Acceptance Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***EMS Installation, Receipt & Acceptance*** – Describe your recommended process and services for the installation, receipt and acceptance of the proposed EMS.	The ES&S EMS can be installed by ES&S or by the customer. It is an easy-to-use installation package that follows standard Microsoft procedures. Once the system is installed, the software should be opened and reviewed to determine that the installation was successful. ES&S recommends having a person on-site for 15 days during the Acceptance Testing procedure to ensure that all functionality is being performed properly and that both parties agree to the acceptance of the EMS.	
2) ***Pollsite Voting System Installation, Receipt & Acceptance*** – a) **Procedures** – Describe acceptance test procedures. b) **Timing** – Provide an estimate of time to conduct acceptance testing for a single unit. c) **Support** – Indicate what vendor	a) NYC acceptance testing at each borough begins after completion of mandatory State acceptance testing in Albany. The NYC testing includes physical examination of the delivered units as well as a specific test pattern exercise to be performed by BOE Voting Machine Technicians on the equipment. The test pattern is a	This is not applicable. Acceptance testing of the ES&S AutoMARK BMD was successfully completed in August 2008.

Receipt & Acceptance Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
support resources are provided during acceptance testing. d) **Repair/Replacement** – Describe your repair or replacement policy during BOE in NYC testing. State BOE requires that if a PVS leaves BOE custody it must be re-accepted by the State BOE.	step-by-step check of all relevant equipment functionality that will be logged onto a BOE-approved Acceptance Checklist form. The form will be retained by the City for acceptance and signoff. b) Based on our experience in assisting you in conducting acceptance testing activities in the boroughs in 2008 as well as our extensive experience conducting testing for DS200s in Florida, we estimate it will take a minimum of 30 minutes to thoroughly acceptance test a DS200 scanner in NYC. c) Just as we demonstrated in our support to you in 2008 acceptance testing of the BMD, ES&S technicians will be available to assist with acceptance testing tasks as needed by the boroughs. d) During testing and acceptance, all non-conforming equipment will be corrected and rectified by on-site ES&S technicians. Any equipment that our technicians cannot repair on-site will be returned to our Omaha repair facility and expeditiously returned for re-acceptance by NYSBOE. If NYSBOE activities in Albany have concluded when a repair and return are in progress, ES&S will coordinate the SBOE re-acceptance to occur in Albany or at the NYC borough site as agreed to by NYSBOE, NYCBOE, and ES&S.	

5.6.3 Staff Training

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Training Types*** – What types of training do you propose (i.e. pollworker, EMS, etc.). Describe your approach to each type of training?	When implementing a new election system, training must be a primary consideration. There are many different approaches to this challenge. ES&S measures the success of new installations by the ability of our clients to more efficiently manage their election process	The training provided for the BMD follows the same principles defined in the poll site scanner column. We will complement the investment of training previously provided for NYC in 2008. The courses that ES&S

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	using our systems. Our comprehensive training program has been developed to promote a strong level of competency for all intended users. We have developed a series of training modules that provide the skills to perform the necessary operations by each targeted segment of your election team The type of training recommended varies by product solution and client requirements. Standard methodology appears below: **"Election Overview: Partnering With and Converting to ES&S" Course** – This course provides a high-level overview of a typical election, ES&S hardware and software, and typical procedure and process methodologies. **ES&S DS200 Operations Courses –** These courses introduce the selected hardware and voting system. The participant gains the knowledge, skills and abilities to operate the system. They include an in-depth overview of the system; Pre-Election Day preparation requirements; and Election Day operations and troubleshooting. The audience for this course includes: BOE staff, election officials, voting machine technicians, and training consultants/adjunct trainers. **Product Train the Trainer Course (Optional) –** This course of training shares the training techniques surrounding the selected voting system solution. The participant gains the knowledge, skills and abilities to train other on operating the varying components of the voting system. Topics include how to best train adults; pre-training preparations; an overview of the system; Election Day operations including poll opening and closing and voting procedures; troubleshooting procedures and practice training. The audience	recommends for BMD are listed below. ES&S will work with the BOE staff to customize these programs for their needs and will continue to modify them based upon lessons learned and a full solution implementation. **ES&S AutoMARK Operations Courses–** This course introduces the selected hardware and voting system. The participant gains the knowledge, skills and abilities to operate the system. It includes an in-depth overview of the system; Pre-Election Day preparation requirements; and Election Day operations and troubleshooting. The audience for this course includes: BOE staff, election officials, voting system technicians, and training consultants/ adjunct trainers. **Product Train the Trainer Course (Optional) –** This course of training shares the training techniques surrounding the selected voting system solution. The participant gains the knowledge, skills and abilities to train others on operating the varying components of the voting system. Topics include: how to best train adults; pre-training preparations; an overview of the system; Election Day operations including poll opening and closing and voting procedures; troubleshooting procedures and practice training. The audience for this course includes: election officials, city and election district trainers and training consultants/adjunct trainers. This course can be

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	for this course includes: election officials, city and poll worker trainers and training consultants/adjunct trainers. This course can be modified to meet objectives of NYC and accommodation of tabulation and BMD solution. **ES&S DS200 Poll Worker Training –** This course will introduce poll workers to the voting system. The participant gains the knowledge, skills and abilities to operate the voting systems. Topics include: an overview of the system; Election Day operations including poll opening and closing and voting procedures, and troubleshooting procedures. The audience for this course is poll workers. **ElectionWare and Unity Software Training (selected modules) –** This course will introduce EMS staff to the individual modules within ES&S' ElectionWare and Unity suite software. The participant gains the knowledge, skills and abilities to perform basic system functions and to build, maintain and store related information in one database. The participant will also gain the knowledge to create an election ballot, program election hardware with election-specific information and reporting. While ES&S has developed a standard curriculum approach, we believe a key element in a successful implementation is the appropriate customization and integration of our training to incorporate the laws, regulations, and procedures unique to the state and to the jurisdictions within. ES&S will work with election staff to develop a training product that is current and relevant to the City. ES&S training is designed to provide hands-on instruction to election staff responsible for the administration and management of the proposed system. ES&S recommends conducting training	modified to meet objectives of NYC and accommodation of tabulation and BMD solution. **ES&S AutoMARK Poll Worker Training –** This course will introduce poll workers to the voting system. The participant gains the knowledge, skills and abilities to operate the voting systems. Topics include: an overview of the system; Election Day operations, including poll opening and closing and voting procedures, and troubleshooting procedures. The audience for this course is pollworkers.

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	in a facility that allows attendees access to the system for hands-on instruction. Providing training at the BOE and within the boroughs allows attendees to dedicate the recommended time to attend classes with minimal interruption. Providing opportunities within the boroughs also offers peer group partnering and the sharing of ideas on how to best implement those changes within each area. The optimum class size for equipment operations training is no more than 20 participants per class. Optimal class size for software training is a maximum of 10 per class.	
2) ***Training Materials*** – Describe the type and quantity of training materials proposed (including written, video, audio, diagrams and equipment) to meet the needs of BOE in NYC prior to the Primary & General Elections in 2009.	ES&S will provide training materials (participant training manuals, handouts) to the NYC BOE in sufficient quantities to support the required courses. While we have developed a standard curriculum approach, we believe a key element in a successful implementation is the appropriate customization and integration of our training to incorporate the laws, regulations and procedures unique to the State of New York and the City. ES&S would work with the BOE in NYC to modify materials to achieve mutual training objectives.	
3) ***Trainer Certification*** – Indicate the number and type of training certifications held by the proposed trainers on the proposed voting system.	At ES&S, we know the successful implementation and continuous operation of any new voting system directly hinges on an effective training program for election personnel, as well as the voters themselves. Knowing that ***training stands as the most critical component of any installation and support plan*** for the election system, ES&S takes great pride in providing our clients extensive, world-class voter system training programs and the individuals that deliver this training. Our staff possess various certificates and degrees related to adult education and training. Depending on the member of the team, we have certifications from American Society of Training and Development (ASTD), bachelor's and master's degrees in adult and continuing education, and various certificates from individual subject line content. We begin our internal certification process with a thorough selection process. Prior to joining the team, individuals must possess a minimum of two years experience as a trainer. Training experience in a technical product/subject area is preferred. They must demonstrate the basic instructor techniques; well-rounded written and verbal communication skills, including presentation skills; and proficiency in skills in Microsoft productivity suite applications. We also look for knowledge of instructional system design methodology in the candidates we select. In addition, we have a team of individuals who provided training	

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	through out the boroughs in 2008. They have become familiar with specific customization, borough desires and terminology used by the City. These experienced individuals would be utilized in this implementation.	
4) ***Trainer Certification Program*** – Describe the type and number of hours required for a trainer to be certified by the Proposer.	Prior to completing any client training, all ES&S trainers complete a certification process. The process is designed to prepare and certify ES&S trainers who will possess the knowledge, skills and abilities to provide ES&S customers the highest quality product and service training available. The length of time it takes to become certified can vary by product and the experience level that the individual brings. Typically it takes 2-3 weeks to become fully certified on the hardware and 6-8 weeks to become certified on the software. The certification program consists of five phases: 1. **Selection –** Defined above. 2. **Training –** Candidates attend a trainer preparation program. The number and type of courses the trainer attends is dependent on products/services and the versions that candidate will be supporting. 3. **Observation –** The candidate's performance during his/her train back session will determine the quantity of field observation. If required, the candidate will accompany a certified trainer during an actual training event. When the candidate demonstrates the required performance standard for certification, the trainer will recommend the candidate for certification to the Training Services Director. 4. **Initial Certification –** The ES&S Training Services Director will observe each candidate during a training event and certify the individual as a trainer if her/she demonstrates the required performance standard for certification 5. **Annual Observations –** The ES&S Training Services Director will observe each certified trainer periodically and at least once every 12 months. Recertification will be required where appropriate.	
5) ***Trainee Certification*** – Indicate the number and type of trainee certifications that will be offered to BOE in NYC staff on the proposed voting system.	**BOE –** Depending on the role played, ES&S recommends that each election official attend the Election Overview course, applicable Product Operations courses and the ElectionWare and Unity Software Training. The curriculum gives the individual a strong foundation in typical procedures and processes as well a strong overview of hardware and software solutions utilized by the city. **Trainers (optional) −** ES&S will work with the BOE to provide a Train-the-Trainer program that complements the NYC Train-the-Trainer program. Our typical recommendation is that each individual selected by the client to train others on their behalf become certified. Varying with the curriculum that the trainer is going to support, 3-5 days of training will be required to become certified. The initial training is the completion of operations training for each piece of equipment on which they will train. Trainers will then need to complete a two-day Train-the-Trainer course. The	

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	Train-the-Trainer course trains election staff in complete equipment operations − specific to the piece of equipment the trainer will be teaching others to use. Trainers need only attend one Train-the-Trainer course although they may have completed multiple operations training for each piece of equipment on which they will train.	
6) ***Training Board Staff*** – How do you plan to provide training for the Board's planning, development, managerial, supervisory and training staffs so that they can plan, develop, manage, supervise and train Board staff and pollworkers in the use of new procedures that will result from the use of the proposed new voting system prior to the Primary & General Elections in 2009?	ES&S training instructors will conduct requested "Train the Trainer" courses to BOE staff trainers on ES&S DS200 and AutoMARK operations and other courses requested by the BOE. The timing of the delivery of these courses can be incorporated into the overall project plan to match the planning needs of the staff.	
7) ***Training EMS*** – Describe in detail the classes you will provide for Broad technical staff who will be responsible for administering, testing and setting up the proposed voting system's software prior to the Primary & General Elections in 2009.	ES&S training instructors will conduct requested classes on the applicable EMS (Unity and ElectionWare) modules to the BOE technicians. This training will complement the training previously provided. We will make every effort to utilize resources who have previously worked with EMS staff. These individuals have become very familiar with NYC current systems and usage.	
8) ***Training Technicians*** – Describe in detail the classes you will provide for Voting Machines Technicians responsible for setting up, testing, deploying and maintaining the proposed pollsite voting system prior to the Primary & General Elections in 2009.	ES&S training instructors will conduct requested VMT classes on ES&S DS200 and AutoMARK operations and other courses and training activities requested by the BOE. ES&S previously worked with the BOE to customize a VMT Technician program that meets the needs of a BMD solution and implementation. We would provide a similar effort in customization and implementation of courses and technician training for the poll site scanner solution.	
9) ***Training Pollworkers*** – When the Board is conducting classes for more than 40,000 pollworkers, how do you plan to provide a corps of qualified trainers to conduct hands-on training directly on the proposed voting system for each pollworker prior to the Primary & General Elections in 2009?	ES&S training instructors will conduct requested pollworker classes on ES&S DS200 and AutoMARK operations and other courses and training activities requested by the BOE. We have prior experience on resourcing large implementations like NYC.	
10) ***Training Modifications*** – Indicate the ways in which the vendor would be willing to modify its training program to accommodate the needs of BOE in NYC.	ES&S will work with the BOE staff to share product and course knowledge to incorporate it with the NYC materials and objectives.	
11) ***Vendor "Train the Trainer" Support*** – Indicate the types of classes and the number of vendor support staff, and the number of hours or days of monitoring support the vendor will provide to monitor BOE in NYC led training of	ES&S can train individual staff to train poll workers or conduct the poll worker training in conjunction with NYC adjunct trainers. Using a model similar to prior implementation, we will work with the BOD to provide product knowledge and training to adjunct trainers to train certain roles while facilitating individual sessions. The number of support staff involved is	

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
pollworkers for Election Day: a) Primary in 2009. b) General in 2009.	determined by the number of individuals who need the training. We recommend that all adjunct trainers complete the DS200 and AutoMARK Operations courses and a Train-the-Trainer course. The course descriptions are as follows: **ES&S DS200 Operations Courses –** This course introduces the selected hardware and voting system. The participant gains the knowledge, skills and abilities to operate the system. It includes an in-depth overview of the system; Pre-Election Day preparation requirements; and Election Day operations and troubleshooting. The audience for this course includes: BOE staff, election officials, voting system technicians, and training consultants/adjunct trainers. This course is generally a half day, depending on the size of the audience. **ES&S AutoMARK Poll Worker Training –** This course will introduce poll workers to the voting system. The participant gains the knowledge, skills and abilities to operate the voting systems. Topics include: an overview of the system; Election Day operations including poll opening and closing and voting procedures, and troubleshooting procedures. The audience for this course is poll workers. This course is generally a half day, depending on the size of the audience. **Product Train the Trainer Course –** This course of training shares the training techniques surrounding the selected voting system solution. The participant gains the knowledge, skills and abilities to train other on operating the varying components of the voting system. Topics include: how to best train adults; pre-training preparations; an overview of the system; Election Day operations including poll opening and closing and voting procedures; troubleshooting procedures and practice training. The audience for this course includes: election officials, city and precinct trainers and training consultants/adjunct trainers. This course can be modified to meet objectives of NYC and accommodation of tabulation and BMD solution. This course is typically two days, including a train-back on the products.	
12) ***Ongoing "Train the Trainer" Support -*** Indicate the proposed levels of support for elections thereafter	ES&S will work with the NYC BOE to meet future needs of training that may be needed due to turnover or future requirements. The exact amount of training provided would be determined based upon the need.	

5.6.4 Pollworker Training

Pollworker Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Pollworker Training Plan*** – Describe your plan for training NYC's 40,000 pollworkers.	While ES&S has developed a standard curriculum approach, we believe a key element in a successful implementation is the appropriate customization and integration of our training to incorporate the laws, regulations and procedures unique to the state and to the jurisdictions within. ES&S will work with election staff to develop a training program that is current and relevant to the City. ES&S training is designed to provide hands-on instruction to the pollworkers. ES&S recommends conducting training in a	

Pollworker Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	facility that allows attendees access to the system. The optimum size of an equipment class is no more than 20 participants, ideally with 2-3 individuals per piece of hardware. ES&S trainers would work in conjunction with NYC Adjunct Trainers to complete the training for pollworkers. Courses could be designed in a number of different fashions to accommodate the full solution and varying roles at NYC polling places. ES&S would block off the appropriate number of resources necessary to complete training in a timely manner to support the election. Each trainer would be prepped on NYC specific materials and use of product. Scheduling would be completed in conjunction with NYC BOE and borough representatives to accommodate the training in a timely fashion.	
2) ***Timing of Training*** - Pollworkers must be trained as close to an election as possible. How will the Proposer meet this requirement?	ES&S will work with the BOE and boroughs to schedule classes close to the election to increase content retention. ES&S has experience with large implementations and will work to have adequate qualified resources available to conduct the training in the weeks prior to the Primary and General elections.	
3) ***Hands-On Training*** - NYC experience is that training is most effective when trainees have direct hands-on training on the voting system (no more than 6 trainees per machine). How will the Proposer meet this requirement?	ES&S training is designed to provide hands-on instruction to poll workers. ES&S recommends conducting training in a facility that allows attendees access to the system. The optimum size of an equipment class is no more than 20 participants, ideally with 2-3 individuals per piece of hardware. To meet these requirements, ES&S would work with BOE and borough staff on scheduling and use of equipment.	
4) ***Trainer Qualifications*** - NYC would like the Proposer to provide qualified (certified?) trainers for training for the initial election.	Our staff possesses various certificates and degrees related to adult education and training. Depending on the member of the team, we have certifications from American Society of Training and Development (ASTD), bachelor's and master's degrees in adult and continuing education and various certificates from individual subject line content. ES&S also certifies each trainer utilized on subject content, product knowledge and adult learning principles. We begin our internal certification process with a thorough selection process. Prior to joining the team, individuals must possess a minimum of two years experience as a trainer. Training experience in a technical product/subject area is preferred. They must demonstrate the basic instructor techniques; well-rounded written and verbal communication skills, including presentation skills; and proficiency in skills in Microsoft productivity suite applications. They must demonstrate defined product knowledge for each course they are certified on prior to any facilitation with clients. We also look for knowledge of instructional system design methodology in the candidates we select.	
5) ***Types of classes*** - Is training provided in a single session or are there multiple classes (equipment training, procedure training, simulated pollsite training)?	The type of training recommended varies by product solution and client requirements. Standard methodology appears below. **"Election Overview: Partnering With and Converting to ES&S" Course –** This course provides a high-level overview of	

Pollworker Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	a typical election, ES&S hardware and software, and typical procedure and process methodologies **ES&S AutoMARK Operations Courses –** This course introduces the selected hardware and voting system. The participant gains the knowledge, skills and abilities to operate the system. It includes an in-depth overview of the system; Pre-Election Day preparation requirements; and Election Day operations and troubleshooting. The audience for this course includes: election officials, voting system technicians, and training consultants/adjunct trainers. **ES&S DS200 Operations Courses –** This course introduces the selected hardware and voting system. The participant gains the knowledge, skills and abilities to operate the system. It includes an in-depth overview of the system; Pre-Election Day preparation requirements; and Election Day operations and troubleshooting. The audience for this course includes: election officials, voting system technicians, and training consultants/adjunct trainers. **Product Train the Trainer Course (Optional) –** This course of training shares the training techniques surrounding the selected voting system solution. The participant gains the knowledge, skills and abilities to train other on operating the varying components of the voting system. Topics include: how to best train adults; pre-training preparations; an overview of the system; Election Day operations, including poll opening and closing and voting procedures; troubleshooting procedures and practice training. The audience for this course includes: election officials, city and election district trainers and training consultants/adjunct trainers. **ES&S AutoMARK Poll Worker Training –** This course will introduce pollworkers to the voting system. The participant gains the knowledge, skills and abilities to operate the voting systems. Topics include: an overview of the system; Election Day operations, including poll opening and closing and voting procedures, and troubleshooting procedures. The audience for this course is pollworkers. **ElectionWare and Unity Software Training (selected modules) –** This course will introduce EMS staff to the individual modules within ES&S' ElectionWare and Unity suite software. The participant gains the knowledge, skills and abilities to perform basic system functions and to build, maintain and store related information in one database. The participant will also gain the knowledge to create an election ballot, program election hardware with election-specific information, and reporting. While ES&S has developed a standard curriculum approach, we believe a key element in a successful implementation is the appropriate customization and integration of our training to incorporate the laws, regulations and procedures unique to the state and to the jurisdictions within. ES&S will work with election staff to develop a training product that is current and relevant to the City. ES&S training is designed to provide hands-on instruction to election staff responsible for the administration and management of the proposed system. ES&S recommends	

Pollworker Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	conducting training in a facility that allows attendees access to the system for hands-on instruction. Providing training at the BOE and within the boroughs allows attendees to dedicate the recommended time to attend classes with minimal interruption. Providing opportunities within the boroughs also offers peer group partnering and the sharing of ideas on how to best implement those changes. The optimum class size for equipment operations training is no more than 20 participants per class. Optimal class size for software training is a maximum of 10 per class.	
6) ***Training Sub-contractor*** - Will a sub-contractor who is a specialist in training be included as part of the training program?	ES&S utilizes both employees and contractors when providing training. Any trainer completing training on ES&S' behalf, employee or contractor, completes a certification program prior to be deployed or assigned.	
7) ***Training Videos*** - Will videos be developed on NYC pollworker training and deployed at each training session to ensure training consistency?	ES&S will provide training materials (participant training manuals, handouts) to the NYC BOE in sufficient quantities to support the required courses. ES&S can work with NYC to develop a customized video for poll workers. Pricing for this project would vary with the amount of customization and number of videos developed and delivered.	

5.6.5 First-Time Support

First-Time Support Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***First-Time Implementation Services*** – What first-time support services does the Proposer offer?	Projected services provided to the NYC BOE by ES&S for the implementation of the pollsite scanner are detailed in our cost response. Examples of support areas that ES&S would recommend the City include in the City of New York BOE Purchase Order follow: • Project management. • Acceptance testing support. • VMF facility assessment. • Pre-election equipment setup. • Staff/Board, VMT and poll worker training. • EMS acceptance testing support. • EMS pre-election support. • Election Day support (VMT, poll worker, and call center).	BMD implementation support services were provided to New York City BOE and the five boroughs pursuant to the State of New York Office of General Services Contract No. PC63810.

5.6.6 One-time Other Services

One-time Other Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Project Management*** – The Proposer shall provide the following Project Management Services for the project tasks under their control: a) Project Reporting b) Project Scheduling & Planning c) Change Management d) System Implementation e) Data Conversion f) Interface Implementation g) Testing h) Knowledge/Skills Transfer i) Training j) System and Training Documentation k) Notification Process for Delivery of PVS	In nearly 40 years supporting elections, ES&S has installed more than 190,000 systems for election jurisdictions of every size and complexity. Our staff of elections experts possesses unequalled on-site project management expertise, and our account managers instinctively understand the tasks required to achieve a trouble-free election. Our experience and disciplined approach sets the ES&S account management team apart from other vendors. **ES&S Project Management Approach Overview** **PROJECT PHASES** Decades of successful ES&S project management experience – a critical benefit for a large-scale implementation such as New York City − contribute to the development of our project implementation strategy. **Phase 1: Initiating the Project** Every project begins with our responsibility to demonstrate that we understand your specific needs, and are prepared to deliver a voting system that meets expectations. When NYC selects ES&S as its election partner, we work with you to quickly fine-tune our thinking and formulate contract terms that define project expectations throughout the implementation process. **Phase 2: Planning the Project** Next, we formalize a project-specific project plan – striving to ensure a successful project implementation. ES&S project plans include specific milestones for the execution of logistics, training, testing and election project support. The plan details the project objectives, scope, schedule, risk and resources, and recommends a communications structure designed to maintain open and clear communication. Once the client approves the project plan, we hold a critical kick-off meeting with all key stakeholders to review the details and solidify our partnership. **Phase 3: Executing the Project** From the moment ES&S begins an implementation, our project management team minds the details – and methodically executes the tasks agreed upon in the project plan. Key milestones include: • Delivery of any necessary equipment. • Program acceptance testing. • Installation of any necessary software and/or IT networks. • Training administrative personnel on all facets of system operation. • Logistical support (usability testing, managing ongoing training, etc.) Throughout the process, ES&S' implementation team will be available to answer questions and to quickly resolve problems.	

One-time Other Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	Notification Process for Delivery of PVS Just as we did during the implementation and delivery of the BMD devices to NYC in 2008, ES&S will conform with the delivery notification process mandated by NYC BOE. Key individuals within the BOE and each borough will be notified at least 24 hours prior to the delivery of pollsite scanners from Albany. Notification will occur by e-mail and will be accompanied with a Bill of Lading and list of serial numbers for the shipment.. **Phase 4: Controlling the Project** ES&S uses leading-edge project management software solutions and industry best practices to keep projects on track and manage changes to implementation requirements. At any time during an implementation, we can generate custom reports to demonstrate our progress or pinpoint any roadblocks to success. Our reliable and detailed tracking mechanism mitigates risk and provides the framework for communications with our client. **Phase 5: Closing the Project** After a successful implementation, ES&S conducts a closing meeting to review our initial commitments and ensure each project objective has been fulfilled to your satisfaction. At ES&S, we see the conclusion of a successful project as a first step in an important and long-term partnership with our customer.	
2) ***Quality Assurance*** – Describe your proposed quality assurance and testing practices. Explain your internal quality management program. This should include reference to the use of any specific methodologies, as well as the receipt of any quality certifications.	ES&S is proud of our long record of delivering high quality products and services, and successful elections. We continue to identify potential improvements, however, in order to further our quality management practices in: • Manufacturing process. • Selection of ISO 9000 certified manufacturers and facilities. • Extensive incoming quality assurance. • High-quality documentation and defined unit acceptance criteria. • Pre-defined system acceptance testing. • Software process. • Extensive and robust internal test lab. • External test resources. • Well-established test scripts with more than 20 election types. • Ballot production and election programming. • Documented ballot specification, production requirements and test fixtures. • On-site supervision of high-risk third-party production. • Specific data gathering and validation. • Extensive internal test deck process for DRE and document based systems.	

One-time Other Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	• Automated testing procedures for logic and accuracy. • Election support services. • Maintenance service forms. • Extensive product training and skills assessment. • Formalized review process, customer survey and follow-up. • Regular client meetings. • Review of closed Team Support call issues for improvement. • Quality Incident Report form for any issue. We are dedicated to continuing our quality improvements in all phases of our products and services. As the leading innovator in developing election technology, we have shown this commitment over our history. As our clients continue to provide an ever-increasing level of service to their voters, we are well-positioned to support them. **System Testing and System Standards** All of the systems provided by ES&S are tested to ensure that they meet the standards of election authorities prior to an election. Our solutions have been used in more than 40,000 live, binding government elections in the last decade, and the results have to stand up to public scrutiny. The voters and election administrators must have 100 percent confidence that the systems they use work accurately and reliably. For ES&S to certify a system, each solution must be capable of passing rigorous testing by certified Voting System Testing Lab (VSTL). ES&S test standards meet or exceed all voting system industry standards. As a standard practice, ES&S tests all systems at the factory before delivery to ensure that each product conforms to the requirements of the local authority. Before Election Day, the BOE, with the assistance of the assigned ES&S Account Manager, tests the systems again in the presence of political party representatives to complete an official L&A test before the systems are sealed.	
3) ***Project Methodology*** – BOE in NYC expects that Project Management Institute project management and control methodologies, or their equivalent, will be used.	ES&S Project Managers are experienced election specialists who bring a solid record of success to any new voting system implementation. The majority of our account managers are certified Project Management Professionals (PMP) through the Project Management Institute (PMI), a leader in cultivating best of breed project execution in the United States. With more than 39 years in the elections business, ES&S has completed more than 2,000 voting system installations – projects of every size and complexity. Written plans and execution tools are important pieces of a successful implementation equation. But there is nothing more important than project management expertise, and account managers who instinctively understand the tasks required to achieve a trouble-free election. That is what sets the ES&S project management methodology apart from other vendors.	

5.6.7 Public Education Assistance

Public Education Assistance Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Voter Education Programs*** – Describe the proposed approach and methodology for participating in voter education.	Just as it is important to build into any new system implementation training for those who will administer the system and run elections, it is equally important to ensure that the voters come to the polls well-educated about the change. ES&S is well-prepared to assist in the development and execution of a smart, effective and strategic public awareness campaign. ES&S is capable of supporting voter education needs in a variety of fashions based upon the degree level of involvement that the BOE desires. With a high-involvement strategy, we would work with you to develop a Voter Outreach Action Plan and work with you on implementing that plan. On a lower involvement level, similar to how we assisted with 2008 implementation, we can work with the BOE group on a How to Vote DVD and provide support staff for public demonstrations. We've provided some examples and details of *optional* voter outreach materials (5.6.7 #2) but a specific plan can be developed after the award of the contract.	
2) ***Voter Education Material*** – Describe the proposed type and quantity of voter education materials to be provided.	Examples of ES&S voter education materials can be found in **Appendix D.8.** Materials can be provided to the NYC BOE in a variety of languages and in the quantities needed.	
3) ***Voter Demonstration Equipment*** – BOE in NYC has found that dedicated voter demonstration equipment is useful in performing "road shows" to various community groups. Does your proposal include pollsite voting systems dedicated to this purpose? How many?	ES&S will work with the BOE to provide an appropriate number of DS200 pollsite scanners to conduct "road shows" to various community groups. ES&S understands the importance of demonstrating the new pollsite voting system to the constituents of NYC and will work hand-in-hand with you to ensure you have sufficient systems available to conduct the demonstrations.	

5.7 On-Going Support

5.7.1 Warranty Services

Warranty Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Warranty Start*** – The warranty period shall start when all components of the voting system are accepted into production and must cover both system function and performance.	The warranty period for proposed election equipment begins at the completion of acceptance testing for the number of units per each separate order placed by the BOE and after all required acceptance documentation has been completed. Acceptance testing will be provided to the Board of Elections for the City of New York according to the negotiated pricing, terms, and conditions contained in the State of New York Contract. The parties shall mutually agree on a common warranty start date for the initial purchase of equipment by the BOE; provided such warranty start date occurs no later than thirty (30) days after final delivery and acceptance of the initial purchase of the equipment by the BOE. For equipment purchased by the BOE after the initial purchase, the warranty period shall commence upon completion of acceptance testing. A detailed description of ES&S' warranty coverage is found in number 2 below.	

Warranty Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
2) ***Warranty*** – For each component of the PVS, (including batteries, carts, accessories, etc.) describe the proposed terms of your warranty program and describe how they will meet the needs of BOE in NYC and State OGS Contract.	During the warranty period, ES&S will repair or replace any of our proprietary equipment or software that is defective in material or workmanship, or otherwise fails to perform substantially in accordance with our documentation. The warranty shall not include the repair or replacement of any ES&S equipment components that are consumed in the normal course of operating the equipment, including ink cartridges, paper rolls, batteries, removable memory devices PCMCIA Cards, ink pads or other consumable items used in the operation of the ES&S equipment. Any repaired or replaced item of ES&S equipment or ES&S software shall be warranted only for the unexpired term of the warranty period. All replaced components of the ES&S equipment or ES&S software will become the property of ES&S. This warranty is effective provided that (I) BOE promptly notifies ES&S of the failure of performance or defect and is otherwise in compliance with its obligations under the resulting Agreement, (II) the ES&S equipment or ES&S software to be repaired or replaced has not been repaired, changed, modified or altered except as authorized or approved in writing by ES&S, (III) the ES&S equipment or ES&S software to be repaired or replaced is not damaged as a result of accident, disaster, theft, vandalism, neglect, abuse, use which is not in accordance with instructions or specifications furnished by ES&S or causes beyond the reasonable control of ES&S or the BOE, including acts of God, fire, riots, acts of war, terrorism or insurrection, labor disputes, transportation delays, governmental regulations and utility or communication interruptions, and (IV) the BOE has installed and is using the most recent update provided to it by ES&S. This warranty is void for any units of equipment which: (i) have been subjected to physical, mechanical or electrical stress or alteration or any conversion by persons other than those expressly approved in writing by ES&S, (ii) have been used for purposes other than the purpose for which such units have been designated or use not in accordance with documentation provided by ES&S, (iii) damaged resulting from or occurring in connection with use, custody or control of any equipment by any person other than those authorized users, or (iv) severely handled so as to cause mechanical damage to the unit, or have been operated or handled in a manner inconsistent with reasonable treatment of an electronic product. A description of the standard Hardware Break/Fix Warranty Program and Firmware Maintenance and Support are provided below. **Hardware Break/Fix Program:** ES&S will repair or replace any component of our proprietary equipment or software which, while under normal use and service, (a) fails to perform in accordance with its documentation in all material respects, or (b) is defective in material or workmanship. The principle elements of this program are: a) Equipment requiring repairs must be sent to a location designated by ES&S. b) Customer is responsible for freight to and from the designated ES&S repair location. c) Repairs as a result of negligent care of the equipment are not covered under this program. **Firmware Maintenance and Support:** ES&S shall provide maintenance and support services for the ES&S Firmware to enable it to perform in accordance with its	

Warranty Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	documentation in all material respects, and to cure any defect in material or workmanship. During the Firmware Warranty Term, ES&S shall provide updates in accordance with any update schedule determined by ES&S. **Unity and ElectionWare Software Maintenance and Support:** ES&S shall provide maintenance and support services for the Software (a) to enable the Software to perform in all material respects in accordance with its documentation, as provided by ES&S, and (b) to cure any defect in material or workmanship. The specific Software Maintenance and Support services provided by ES&S and each party's obligations with respect to such services are set forth below. During the Software Warranty Term, ES&S may provide new releases, upgrades or maintenance patches to the Software, along with appropriate documentation ("Updates"), on a schedule defined by ES&S. Customer is responsible for obtaining and installing any upgrades or purchases of third party hardware or software required to operate the Updates. Customer shall install Updates in accordance with ES&S' recommended instructions or may request that ES&S install the Updates. ES&S will charge Customer separately to (a) deliver the Updates, (b) train customer on the use of such Updates, and (c) provide maintenance and support on the Software which is required as a result of Customer's failure to timely install an Update. Customer shall pay ES&S for any Update which is required due to a change in state law. **Software Maintenance and Support Services Provided by ES&S Under the Agreement** 1. Telephone support ES&S will provide support on procedural questions of a specific nature not covered in ES&S' User Manuals; ES&S will verify the appropriate steps to take to resolve issues identified by the Customer. 2. Issue Resolution (to be provided on a limited basis) ES&S will provide issue resolution on a limited basis once the Customer has followed all issue resolution procedures as set forth in the User Manuals and as directed in the required training course. If it becomes apparent that the Customer has not followed the appropriate User Manual and/or training directives, Customer will be advised to begin the issue resolution process over by following the procedures identified in the User Manuals or by utilizing ES&S Election Services. The Customer may also be advised that additional training may be necessary to ensure the Customer has the appropriate level of issue resolution training. 3. ES&S will provide Technical Bulletins on a schedule to be determined by ES&S regarding specific issues the Customer may be experiencing.	
3) ***Fixes During Warranty*** – Describe the proposed methodology for reporting and tracking bugs and anomalies discovered during the warranty period. Describe how you	ES&S publishes Technical Bulletins when required that identify system defects, anomalies and other technical information. These bulletins identify the system issue, version or versions the defect applies to and the suggested work-around until a system fix can be built, tested, certified and released to the end user. Subsequent	

Warranty Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
will notify BOE in NYC staff that a fix had been developed, was applied, and is ready for testing. Do you track the date of each sub-event (report of problem, initial fix, fix applied, fix tested, fix verified, fix implemented to production, etc.)?	system releases will identify which of these system defects are addressed in each new release. Service requests are received through a toll-free 800 number or by e-mail normally by the Technical Services Department (Hardware and Software). All requests are logged to the ES&S service database and assigned a work order number. All technician warranty service is tracked by part and equipment serial number. **Work Management Systems, Practices & Processes** In an effort to improve the Software Development Process for Workload Management, the ES&S Software Development organization implemented a corporate wide process for managing development efforts. The objectives of this process are: • To implement an efficient process for submitting enhancements. • To develop a process to set priorities for all projects. • To track and report the status of all projects. • To implement an efficient process for submitting defects. • To develop a process to set priorities for all defects. • To track and report status of all defects. This process is supported with two tools sharing a common database, TeamTrack (tTrack) and TeamSupport (tSupport). **TeamTrack** TeamTrack for Defect and Issue Management is a Web-designed defect and issue tracking solution that shares information among multiple team members and customers. TeamTrack enables users to manage and resolve issues actively, effectively and efficiently in a real-time environment. **TeamSupport** TeamTrack for Support Centers allows users to streamline customer support, increasing the level of service and responsiveness to customers while lowering overall costs. Issues can be escalated from TeamSupport based on analysis and become TeamTrack work items. **Processing Requests** Requests come from two different paths: as production issues through tSupport to tTrack or directly into tTrack through the Product Management process. When a customer or internal coding center identifies a required enhancement or bug, the request is captured in TeamTrack by the technical services specialist who receives the notification. This technical services specialist performs preliminary analysis and data gathering. Enhancements, bugs or items that cannot be resolved at the entry level are promoted to the next level (development review) resource. During these processes, any workaround or manual alternatives are identified and communicated back to the customer (internal or external). If, however, a system defect is identified that needs to be fixed or a system enhancement is required, the information is submitted through product owners into tTrack for review and prioritization.	

Warranty Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	Additionally, product owners may identify future enhancements for a product. The Quality Assurance area, as a part of testing and acceptance efforts, may also identify defects or functionality gaps that require development support, either prior to product rollout or as deferred work items for future release. These items are directly entered into the tTrack system. All development work items are then collected into tTrack and processed using an established ticket management workflow and methodology through final delivery.	
4) ***Upgrades During Warranty*** – Indicate to what extent the cost of system hardware and software upgrades are covered during the warranty period.	During the warranty period and thereafter so long as the City is currently subscribing and has paid for post-warranty maintenance and support services, ES&S will provide upgrades, new releases and maintenance patches for ES&S' proprietary software without additional charge (except for upgrades or new releases that are required due to changes in law). ES&S may provide such upgrades, new releases and maintenance patches for ES&S' proprietary software, along with appropriate documentation, on a schedule defined by ES&S. ES&S is constantly engaged in research to enhance our current products. ES&S will make available to the City such equipment upgrades, add-ons or new products as they become available by ES&S, on terms and conditions acceptable to both parties.	
5) ***Requested Upgrades*** – Describe the process of providing hardware and software updates for enhancements requested by BOE in NYC during warranty in accordance with the State BOE rules an regulations.	Custom programming or enhancements to ES&S' proprietary software and hardware are available to the City. Upon ES&S' receipt of a software or hardware enhancement request from the City, ES&S will review the enhancement request and determine if ES&S will develop such enhancement. Upon ES&S' determination that such enhancement will be developed, ES&S will meet with the City to outline the estimated cost and payment terms to provide the requested enhancement. In addition, ES&S will outline to the City the proposed timeframes necessary for the design, development, testing, certification, delivery and implementation of the requested enhancement. Upon the City's acceptance of the terms set forth by ES&S, ES&S will provide the requested enhancement on a schedule determined by ES&S.	
6) ***Periodic Upgrades*** – Describe the process of providing periodic hardware and software updates during warranty including BOE in NYC staff roles and typical timelines.	ES&S is constantly engaged in research to enhance current products. Hardware, software, and firmware enhancements are engineered, developed, and tested on ongoing bases. Enhancements made to comply with a change in election law would be released with the timeframe governed by the law. We typically release other enhancements every year. During the warranty period and while the client continues to pay for and receive software maintenance and support, ES&S provides new releases, upgrades or maintenance patches to the ES&S proprietary software (except for upgrades or new releases that are required due to changes in state law) at no additional charge.	
7) ***Warranty Period*** – **a)** For each component of the PVS, when does the Proposer consider the 5 year guarantee on parts and service to begin? **b)** BOE in NYC requires that for security reasons, all access for system support be on-site,	The warranty period for proposed election equipment begins at the completion of acceptance testing for the number of units per each separate order placed by the BOE and after all required acceptance documentation has been completed. Acceptance testing will be provided to the Board of Elections for the City of New York according to the negotiated pricing, terms, and conditions contained in the State of New York Contract. The parties shall mutually agree on a common warranty start date for the initial purchase of equipment by the BOE; provided such warranty start date occurs no later than thirty (30) days after final delivery and acceptance of the initial	

Warranty Services Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
unless specifically agreed to by BOE in NYC. Whenever remote support is provided, this must be under strict supervision of BOE in NYC. Describe your approach to meeting this requirement.	purchase of the equipment by the BOE. For equipment purchased by the BOE after the initial purchase, the warranty period shall commence upon completion of acceptance testing. Any contract requiring full-time, on-site personnel would have to be structured to pay for any such resources that are or are not located in NYC. A process could be created for these dedicated resources to communicate with home office resources for additional help.	

5.7.2 Staff Training

Staff Training Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
8) ***Ongoing Staff Training Support*** – Describe available ongoing training support for staff in the following areas: **a)** Refreshing skills of existing staff on existing equipment and processes **b)** Training new staff on existing equipment and processes **c)** Training new and existing staff on new processes developed over the life of the EMS and PVSes. **d)** Training new and existing staff on upgrades and expanded capabilities over the life of the EMS and the PVSes.	ES&S offers refresher training for new staff and when upgrades are made available. The ongoing training is available for all of courses and varying roles. This training can be provided at the then-contracted rate. In addition to availability of instructor-led refresher training, ES&S has product DVDs that are sold and used by many clients to accommodate turnover within their staff.	

5.7.3 Pollworker Training

Poll Working Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
9) ***Ongoing Poll Working Training Support*** – Describe available ongoing training support for pollworkers in the following areas: **a)** Refreshing pollworker skills of existing staff on existing equipment and processes **b)** Training pollworkers on new processes developed over the life of the EMS and PVSes. **c)** Training pollworkers on upgrades and expanded	Similar to staff training, ES&S offers refresher training for new poll workers and when upgrades are made available. The ongoing training is available for all of courses and varying roles. This training can be provided at the then-contracted rate. In addition to availability of instructor-led refresher training, ES&S has product DVDs that are used by many clients to accommodate turnover within their staff.	

Poll Working Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
capabilities over the life of the EMS and the PVSes.		

5.7.4 Ongoing Support Services

Support Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Pre-election Number & Skills of Support Staff (On-Site, Off-Site)*** – Describe the number and skill levels of proposed full-time permanent vendor staff that will support (show on-site and off-site separately) BOE in NYC prior to: a) Election Day for the Primary in 2009 b) Election Day for Primary Run-off in 2009 (14 days after Primary) c) Election Day for the General Elections in 2009 d) And for any other Elections that occur for the term of the contract.	ES&S is capable of supporting this requirement. Our company will, once again, commit sufficient resources to meet all your pre-election, election day, and post election support needs to implement the DS200 throughout the five boroughs of NYC. This would be true for the 2009 Primary, 2009 Run-off, 2009 General, as well as any other elections for the term of the contract. ES&S will provide both technical and project management staff to each borough to ensure that each meets its deadlines for receipt, acceptance testing, and election preparation of the DS200 pollsite scanner and ES&S AutoMARK BMD.	
2) ***Election Day Support For Pollworkers, & Technicians*** – BOE in NYC believes that it will need approximately one (1) instructional support person for every 20 pollsites and one (1) technical support person for every 40 poll sites. Describe the number and skill level of proposed full-time permanent vendor staff that will support (show on-site and off-site separately) BOE in NYC on: a) Election Day for the Primary in 2009 b) Election Day for Primary Run-off in 2009 c) Election Day for the General Elections in 2009 d) Election Day thereafter	ES&S is capable of supporting this requirement and the numbers defined for 2009 Primary and General Election events. Our company has more than three years of experience implementing and supporting more than 38,000 ES&S AutoMARKs located in more than 1,100 counties in 29 states, as well as more than 5,000 DS200s in the State of Florida. Required services will be provided to the Board of Elections for the City of New York according to the negotiated pricing, terms, and conditions contained in the State of New York Contract. ES&S Election Day support staff and technicians are required to participate in specific training and testing prior to providing support for an election. The training and testing are specific to their assigned products and clients. ES&S would make every attempt to utilize the resources that supported the NYC 2008 elections. These individuals have gained specific client knowledge that would assist in future NYCE elections. ES&S will work with NYC BOE to define the specific number of individuals needed in each borough and call center as the 2009 elections near. In addition, we can supply necessary resources for 2009 and beyond.	
3) ***Repair Due to Trucking –*** Describe the resources and services you will provide to repair or replace PVS devices damaged during transport to, and from, the poll site. a) Will you provide BOE with accounting for these costs to	ES&S will provide the BOE with an accounting of all costs that are incurred in providing repair services for those units of ES&S equipment which have been damaged during transport to, and from, the poll site. Since the cost of repairing a unit due to damage as a result of transporting such unit to, and from, the poll site is not covered under ES&S' warranty or post warranty maintenance and support services	

Support Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
repair should they not be under warranty?	program, the BOE shall be responsible for all costs associated with such repairs.	
4) ***Replacement of Accessories Not Returned on Election Day –*** Describe the resources and services you will provide to replace accessories such as keys, power cords, extension cords, head phones and rocker paddles that are not returned on Election Day.	ES&S will work with the BOE and our supply vendors to replace any accessories not returned to the BOE on Election Day. The BOE shall be responsible for all costs associated with the replacement of these items.	
5) ***Spare Parts & Accessories and Supplies*** – Indicate if and which spare parts, accessories and supplies must be purchased and kept in inventory at BOE in NYC Facilities. Confirm that all of these items are listed in your OGS Contract Price List.	As long as the City is under contract with ES&S for maintenance and support, spare and replacement parts – with the exception of consumable supplies and instances of abuse/damages – shall be provided at no additional charge. All accessories and consumables are listed on the OGS contract price list. However, every component that makes up the ES&S voting system is not currently listed on the OGS price list due to these items being covered by the warranty.	
6) ***Help Desk*** – Describe your Help Desk and the procedures and problem resolution approach proposed for BOE in NYC.	ES&S Help Desk support personnel are located in Omaha, Nebraska. Customers requiring assistance call into our Help Desk toll free number (1-877-377-8683), Monday through Friday, 8 a.m. to 5 p.m. Central time, and select the appropriate prompt specific to their issue. At that point, the customer is routed to the appropriate technician who will assist the caller with resolving the issue. Customers may also send a Help Desk request through our dedicated e-mail address (technicalservices@essvote.com) and receive a reply or callback within 1 business day. On Election Day, ES&S increases the number of technical support staff at the Help Desk. Support hours are unlimited on Election Day. On Election Day, the Help Desk is available until all elections are complete. Customers use the same toll-free number to receive this support.	
7) ***Escalation Procedure*** – Describe the proposed escalation procedure to handle support calls and assure timely resolution of support and maintenance requests.	If an ES&S Help Desk technician cannot resolve the issue, the issue is escalated to a development staff member for resolution. Once a resolution is determined, the Help Desk technician will contact the customer and provide the resolution. If an issue requires a maintenance event, the ES&S Help Desk will notify the Field Services group of the request and provide all necessary information to perform a maintenance event.	
8) ***Help Desk Reporting*** – Describe the software used at your Help Desk to track problems reported. Do you agree to provide reports, on request, to BOE in NYC detailing the problems reported and their open/closed status?	ES&S uses call-tracking software to manage customer Help Desk calls. Issue and resolution reports may be made available – according to the terms of the contract − at the request of the BOE. ES&S Customer Relations will manage Help Desk reporting to the BOE.	
9) ***Mandated Changes*** – Describe your provisions for upgrades to the software in a timely manner for changes required by law for the	During the warranty period and thereafter so long as the City has paid for and is receiving ES&S Hardware Maintenance Services and ES&S Software Maintenance and Support Services, the equipment and licensed software shall be maintained or upgraded by ES&S in	

Support Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
proposed voting system.	such a way as to remain compliant with all applicable state election laws and regulations related to accessibility, including all current and future requirements necessary to remain certified for use in the State of New York. "Maintained or upgraded" shall mean only such changes to individual items of the licensed software (but not equipment) as are technologically feasible and commercially reasonable in ES&S' discretion. The City shall be responsible for the cost of all replacements, retrofits or modifications to the ES&S equipment that may be developed and offered by ES&S in order for such ES&S equipment to remain compliant with applicable laws and regulations. City shall also be responsible for (i) the cost of any third party items that ES&S notifies City are hereinafter required in order for the equipment and licensed software to remain compliant and certified, and (ii) City's pro-rata share of the costs of any future state certifications or recertifications and any mandated modifications to the equipment and/or licensed software that may result therefrom that are not otherwise required as a result of any changes or modifications voluntarily made by ES&S to the licensed software or equipment licensed and sold hereunder. City's pro-rata share of such certification or recertification costs and any mandated modifications to the equipment and/or licensed software that may result therefrom shall be determined at the time by dividing the number of registered voters in the City's jurisdiction by the total number of registered voters in all New York cities and counties to which ES&S has sold and/or licensed the equipment and licensed software purchased and licensed by the City. Updates that are required due to a change in such laws and regulations shall be provided at an additional fee to be mutually agreed upon by the parties.	
10) ***Requested Upgrades*** – Describe the process of providing software updates for enhancements requested by BOE in NYC in accordance with the State BOE rules an regulations.	Custom programming or enhancements to ES&S' proprietary software is available to the City. Upon ES&S' receipt of a software enhancement request from the City, ES&S will review the enhancement request and determine if ES&S will develop such enhancement. Upon ES&S' determination that such enhancement will be developed, ES&S will meet with the City to outline the estimated cost and payment terms to provide the requested enhancement. In addition, ES&S will outline to the City the proposed timeframes necessary for the design, development, testing, certification, delivery and implementation of the requested enhancement. Upon the City's acceptance of the terms set forth by ES&S, ES&S will provide the requested enhancement on a schedule determined by ES&S.	
11) ***Periodic Upgrades*** – Provide description of the proposed software enhancement program including schedule of regular software updates in accordance with the State BOE rules and regulations.	ES&S is constantly engaged in research to enhance current products. Hardware, software, and firmware enhancements are engineered, developed, and tested on ongoing bases. Enhancements made to comply with a change in election law would be released with the timeframe governed by the law. We typically release other enhancements every year. During the warranty period and while the client continues to receive software maintenance and support, ES&S provides new releases, upgrades or maintenance patches to the ES&S proprietary software (except for upgrades or new releases that are required due to changes in state law) at no additional charge. In addition, since ES&S is constantly engaged in research to enhance our current products, ES&S will make available to the	

Support Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	using entity and/or the State such equipment upgrades, add-ons or new products as they become available, on terms acceptable to both parties.	
12) ***Support Contact*** – Identify one technical support contact that BOE in NYC system administrators can use to directly communicate technical issues.	Vicki Crosby will act as single point of contact for technical issues. Mike Mankin will be the contact person for all other project-related matters. ES&S employs a team of technical experts to provide specialized product support.	
13) ***Maintenance Period*** – Specify an offer for annual maintenance services for 1, 3 and 5 years after voting system warranty period.	ES&S offers post-warranty maintenance and support programs for our equipment and software. The pricing of these programs will be ES&S' then-current fees at the time a program is put in place. For the purposes of responding to requirement 5.7.4 (13), our estimated fees for 1, 3, and 5 years of post-warranty maintenance services for the **DS200** pollsite scanner are as follows. **1 Year**: Hardware Preventative Maintenance and Support: $ 213.00/unit Firmware Maintenance and Support: $ 91.00/unit **3 Year**: Hardware Preventative Maintenance and Support: $ 672.00/unit Firmware Maintenance and Support: $ 288.00/unit **5 Year**: Hardware Preventative Maintenance and Support: $1,178.00/unit Firmware Maintenance and Support: $ 505.00/unit	
14) ***List of Past Upgrades*** – Provide a list of past software upgrades so that BOE in NYC can discern the history, frequency and scope of change to the proposed voting system.	An extract of the NASED federal certification listing showing the history of certifications for the ES&S AutoMARK can be found in **Appendix D.9.** Also included in the appendix is a copy of the State of Florida certification letter, dated August 7, 2007, for the DS200.	

5.7.5 Testing

Testing Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Ongoing Testing Support*** **–** In addition the "Post-Election Activities & Periodic Testing" and "Receipt & Acceptance Testing" referenced else where in this section, describe the ongoing testing support offered for the following situations: a) Problem Detection & Resolution b) Recertification after repair c) Recertification after upgrade d) Periodic Maintenance e) End of Life Processing	a) ES&S provides hardware and software support (Help Desk toll free: 1-877-ESS-VOTE) to resolve issues experienced during hardware and software setup/use. Issue reporting and resolution procedures are detailed in our response to Section 5.7.1(3). Ongoing testing to support resolution of any issues detected is supported by an experienced team of software developers, quality assurance testers, product line engineers, and certification specialists. b) ES&S is well staffed to support ongoing testing resulting from repairs (bug corrections) detected in the system's hardware, firmware, or software. Ongoing testing to support resolution of any issues detected is supported by an experienced team of software developers, quality assurance testers, product line engineers, and certification specialists. Any non-de minimus defects requiring recertification by NYSBOE will be submitted to the State in accordance with NYS Election Law. c) ES&S is well staffed to support ongoing testing resulting from upgrades (improvements/enhancements) to the system's hardware, firmware, or software. Ongoing testing to support upgrades is supported by an experienced team of software developers, quality assurance testers, product line engineers, and certification specialists. Any non-de minimus improvements requiring recertification by NYSBOE will be submitted to the State in accordance with NYS Election Law. d) ES&S provides hardware and software support (Help Desk toll free: 1-877-ESS-VOTE) to resolve issues experienced during periodic maintenance, election setup, and election use. Issue reporting and resolution procedures are detailed in our response to Section 5.7.1(3). Ongoing testing to support resolution of any issues detected during periodic maintenance is supported by an experienced team of software developers, quality assurance testers, product line engineers, and certification specialists. e) ES&S conducts an aggressive continuous sustaining engineering program to combat end-of-life components (EOL). When EOL components are identified, Engineering Change Orders will be written and then approved by NYSBOE before implementation.	

5.8 Vendor Strength & Experience Requirements

5.8.1 Certification (2002 & 2005)

Certification (2002 & 2005) Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Certification to 2002 Federal Guidelines*** - Indicate which proposed voting system components are certified to federal 2002 Guidelines. Provide dates and evidence of when software, hardware, and firmware received certification.	The proposed State of NY version of the ES&S DS200 pollsite scanner software, hardware, and firmware components have not been federally certified to the 2002 Guidelines. The DS200 is currently in federal certification under the 2002 Guidelines as Unity 3.2.0.0 and Unity 4.0.0.0 (both versions	The proposed State of NY version of the ES&S AutoMARK Ballot Marking Device software, hardware, and firmware components have not been federally certified to the 2002 Guidelines. Earlier versions of the ES&S AutoMARK Ballot

Certification (2002 & 2005) Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	include DS200 firmware version 1.3.7.0).	Marking Device software, hardware, and firmware components are qualified to the Federal Election Commission 2002 Voting System Standards by NASED and have received the following designations of approval: • NASED # N-1-16-22-22-001 (2002), 10/24/2005. • NASED # N-2-16-22-22-002 (2002), 08/31/2006. • NASED # N-2-16-22-22-003 (2002), 08/31/2006.
2) ***Certification to 2005 Federal Guidelines*** – Indicate which proposed voting system components are certified to federal 2005 Guidelines. Provide dates and evidence of when software, hardware, and firmware received certification.	The proposed State of NY ES&S DS200 pollsite scanner software, hardware, and firmware components have not yet been federally certified to the 2005 Guidelines. DS200 hardware and firmware (version 2.0.3.0) are currently in NYSBOE certification under the 2005 Guidelines.	The proposed State of NY ES&S AutoMARK Ballot Marking Device software, hardware, and firmware components have not yet been federally certified to the 2005 Guidelines. The hardware and firmware (1.4.3223) are currently in certification with the NYSBOE.
3) ***Certification in Any Other Jurisdiction*** – Indicate any other jurisdictions where the proposed hardware and software (or similar) has been certified. List the type of certification awarded and any conditions or provisions.	The DS200 with firmware version 1.3.7.0 has been certified for use in the State of Florida and was most recently utilized in the 2008 Primary and General elections. The DS200's predecessor, the M100 poll site scanner, has been certified for use in 37 states.	The ES&S AutoMARK ballot marking device has been certified for use in 30 states.
4) ***Certification Denied or Decertification*** – Indicate any other jurisdictions where the proposed hardware and software (or similar) has been refused certification or has been decertified. List the type of certification awarded and any conditions or provisions.	The proposed DS200 poll site scanner has never been denied certification.	The proposed ES&S AutoMARK ballot marking device has never been denied certification.

5.8.2 Reference Jurisdictions

Reference Jurisdictions Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Vendor Voting System References*** – Provide five (5) references including name & size of jurisdiction, type & number of voting systems, date of first election,	**Reference #1: Collier County, FL** **Registered voters:** 194,439 **Precincts:** 94	**Reference #1: Wayne County, MI** **Registered voters:** 1.4 million **Precincts:** 1,198

Reference Jurisdictions Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
contact information including name, title, phone number and email address.	**Voting system:** 120 DS200s, 120 ES&S iVotronic ADAs, and 2 Model 650 central counters **First election use:** August 26, 2008 **Contact name:** Jennifer Edwards Supervisor of Elections **Contact phone/E-mail:** 239-252-8450 jenniferedwards@colliergov.net **Reference #2: Lee County, FL** **Registered voters:** 287,203 **Precincts:** 171 **Voting system:** 240 DS200s, 240 ES&S iVotronic ADAs, and 3 Model 650 central counters **First election use:** August 26, 2008 **Contact name:** Sharon Harrington, Supervisor of Elections **Contact phone/E-mail:** 239-533-8683 sharrington@leeelections.com **Reference #3: Lake County, FL** **Registered voters:** 177,195 **Precincts:** 102 **Voting system:** 130 DS200s, 130 ES&S iVotronic ADAs, and 2 Model 650 central counters **First election use:** August 26, 2008 **Contact name:** Emogene Stegall, Supervisor of Elections **Contact phone/E-mail:** 352-343-9734 elections@lakecountyfl.gov **Reference #4: Martin County, FL** **Registered voters:** 96,837 **Precincts:** 53 **Voting system:** 75 DS200s, 75	**Voting system:** 800 ES&S AutoMARKs and 1,200 Model 100 pollsite ballot counters **First election use:** August 2005 **Contact name:** Cathy Garrett, County Clerk **Contact phone/E-mail:** 313-224-0200 cgarrett@co.wayne.mi.us **Reference #2: Will County, IL** **Registered voters:** 350,000 **Precincts:** 462 **Voting system:** 462 ES&S AutoMARKs and 502 ES&S Model 100 pollsite ballot counters **First Election Use:** March 2006 **Contact Name:** Nancy Schultz Voots, County Clerk **Contact Phone/E-mail:** 815-740-4615 nvoots@willcountyillinois.com **Reference #3: City of Detroit, MI** **Registered voters:** 639,053 **Precincts:** 620 **Voting system:** 400 ES&S AutoMARKs and 746 ES&S Model 100 pollsite ballot counters **First election use:** November 2006 **Contact name:** Daniel Baxter, Director of Elections **Contact phone/E-mail:** 313-876-0190 E-mail address not available **Reference #4: Lake County, IL** **Registered voters:** 421,837

Reference Jurisdictions Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	ES&S iVotronic ADAs, and 2 Model 650 central counters **First election use:** August 26, 2008 **Contact name:** Vicki Davis, Supervisor of Elections **Contact phone/E-mail:** 772-288-5637 vdavis@martinvotes.com **Reference #5:** **Pasco County, FL** **Registered voters:** 276,669 **Precincts:** 153 **Voting system:** 185 DS200s, 185 ES&S iVotronic ADAs, and 2 Model 650 central counters **First election use:** August 26, 2008 **Contact name:** Brian Corley, Supervisor of Elections **Contact phone/E-mail:** 352-521-4302 bcorley@pascovotes.com	**Precincts:** 481 **Voting system:** 300 ES&S AutoMARKs, 397 ES&S Model 100 pollsite ballot counters, and 2 Model 650 central counters **First election use:** October 11, 2005 **Contact name:** Cindy Pagano, Chief Deputy Elections **Contact phone/e-mail:** 847-377-2309 cpagano@co.lake.il.us **Reference #5:** **Cuyahoga County, OH** **Registered voters:** 1,053,232 **Precincts:** 1436 **Voting system:** 639 ES&S AutoMARKs and 14 ES&S Model 650 central counters. **First election use:** March 4, 2008 **Contact name:** Jane Platten, Elections Director **Contact phone/E-mail:** 216-443-6454 bejmp@cuyahogacounty.us
2) Current Use – List every jurisdiction where your proposed voting system is currently used. Include in the list the number of registered voters, number of devices and languages used for each of these jurisdictions.	ES&S has provided DS200s to 14 counties in the United States. Information including customer names, number of registered voters (where data is available) and number of devices for each client is listed in **Appendix D.10.** DS200 language use in Florida is Spanish, English and Creole.	ES&S has provided ES&S AutoMARKs to more than 1,100 counties in the United States. Information including customer names, number of registered voters (where data is available) and number of devices for each client is listed in **Appendix D.10.** ES&S AutoMARK language use is decided individually by our clients.

5.8.3 Election Experience

Election Experience Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Organizational Capability*** – **a)** Describe your organizational capability (e.g., technical, managerial and financial) to successfully provide the requisite products and services to the BOE in NYC for the 2009 Primary, Run-off and General Elections. **b)** For the 2010 Primary and General Elections?	ES&S employs approximately 300 full-time and contract personnel with skills ranging from system programmers and ballot layout artists to Project Directors and on-site election technical specialists. Every member of our staff is a specialist in one or more aspects of automated elections. ES&S corporate headquarters is in Omaha, Nebraska. The company maintains eight facilities across the United States. ES&S has a client base of more than 2,500 jurisdictions, including more than 1,700 county jurisdictions. ES&S does business in 41 U.S. states, Canada, and several other countries around the globe. As the world's largest provider of election equipment, software and services, ES&S is fully staffed to meet the City of New York's implementation and support requirements in 2009 and beyond.	
2) ***Qualified and Experienced Staff*** – Indicate the number of full-time permanent staff dedicated to voting and elections systems in the US. For each such staffer person, indicate number of elections they have supported.	Election Systems & Software focuses solely on elections. Because we do not split our resources among multiple industries, each of our full-time associates and every member of our contract staff is qualified to provide the highest quality election support available. We understand the industry's risks and are acutely mindful of the unforgiving deadlines inherent to any election, and we support each of our clients with an entire company of professionals prepared to respond to any election emergency. While the number of elections supported by each of our staff members varies, the average ES&S associate has more than four years of experience with the company. ES&S supported more than 7,000 individual elections in 2008 alone with all of our U.S. clients requiring some level of service and support for the U.S. General Election on Tuesday, November 4. This volume of support is not an exception. ES&S has supported more than 19,000 elections in the last three years.	
3) ***Indicate Names & Titles*** – Indicate the names and titles of staff that will be assigned and the names and numbers of staff that will be dedicated to BOE in NYC for 2009 primary & general elections.	Mike Mankin, State of NY Project Manager, and Vicki Crosby, ES&S' Project Manager for New York City, will be the main contacts for the NYC BOE staff. Supporting staff in Omaha will include key staff members familiar to the BOE including: Colleen Haack (Training), Joe Waldron (EMS), Al Moraczewski and Kurt Deckelman (Maintenance), and Sheri Menges (Election Support). ES&S will work with the BOE to determine staffing requirements for supporting the 2009 NYC Primary and General elections and will meet all of our resulting commitments to the BOE. Due to the nature of elections and until ES&S finalizes project requirements with the BOE, additional names of assigned staff are not included in this RFI response.	

5.8.4 Litigation

Litigation Subcategories	Vendor Response
1) [1]WITHIN THE PAST FIVE (5) YEARS, HAS THE VENDOR, ANY PRINCIPAL, OWNER, OFFICER, MAJOR STOCKHOLDER (10% OR MORE OF THE VOTING SHARES FOR PUBLICLY TRADED COMPANIES, 25% OR MORE OF THE SHARES FOR ALL OTHER COMPANIES), AFFILIATE[2] OR ANY PERSON INVOLVED IN THE BIDDING, CONTRACTING OR LEASING PROCESS BEEN THE SUBJECT OF ANY OF THE FOLLOWING:	
a) ***Conviction for a Crime*** - A judgment or conviction for any business related conduct constituting a crime under federal, state or local government law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing or bid collusion or any crime related to truthfulness and/or business conduct?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
b) ***Criminal Investigation or Indictment*** - A criminal investigation or indictment for any business related conduct constituting a crime under federal, state or local government law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing or bid collusion or any crime related to truthfulness and/or business conduct?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
c) ***Unsatisfied Judgment, Injunction or Lien*** - an unsatisfied judgment, injunction or lien for any business related conduct obtained by any federal, state or local government agency including, but not limited to, judgments based on taxes owed and fines and penalties assessed by any federal, state or local government agency?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
d) ***Civil or Criminal Investigation*** - An investigation for a civil or criminal violation for any business related conduct by any federal, state or local agency?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **YES** 1. Secretary of State of California. On August 20, 2007, the California Secretary of State issued a Notice of Public Hearing to accept public

[1] Taken from OGS RFP for Voting Systems.

[2] "Affiliate" meaning: (a) any entity in which the vendor owns more than 50% of the voting stock; (b) any individual, entity or group of principal owners or officers who own more than 50% of the voting stock of the vendor; or (c) any entity whose voting stock is more than 50% owned by the same individual, entity or group described in clause (b). In addition, if a vendor owns less than 50% of the voting stock of another entity, but directs or has the right to direct such entity's daily operations, that entity will be an "affiliate" for purposes of this questionnaire.

Litigation Subcategories	Vendor Response
	comment on the Secretary's intention to seek administrative relief against ES&S for allegedly deploying uncertified AutoMARK ballot marking devices. The administrative hearing took place on October 15, 2007. ES&S is currently challenging the administrative hearing process conducted by the Secretary of State on this matter. ES&S filed a petition for a writ of mandamus, claiming that the Secretary's administrative hearing on this matter was deficient. ES&S has appealed a lower court ruling in favor of the Secretary of State on the administrative hearing process and this matter is currently scheduled to be heard in March of 2009. In addition to and subsequent to conducting the public hearing of October 15, 2007, the California Secretary of State issued a Statement of Findings and Decision on November 19, 2007 and on that same date filed a civil lawsuit against ES&S, alleging that ES&S provided certain counties within the State of California with federally certified and now California-certified hardware modifications to certain Ballot Marking Devices that were not properly certified according to California statutes. The lawsuit does not seek specific performance or restitution in connection with any federal, state or local contract or lease. ES&S believes the lawsuit is without merit and is vigorously defending it. ES&S has filed a motion for summary adjudication of some of the Secretary's claims and the parties are preparing for trial which is currently scheduled for April 2009. The facts in this matter clearly demonstrate the limited modifications made to the ballot marking device's hardware were extremely minor and had nothing to do with the operation or functionality of the voter assist terminal. The California Secretary of State's office has not disputed that fact. Further, the hardware modifications were approved through the established process to review, test and qualify voting equipment at the national level. As a result, the ES&S AutoMARK in use across the country and in California has been tested and federally qualified for certification and now also certified by the California Secretary of State. Neither the Statement of Findings issued by the California Secretary of State, nor the allegations included in her subsequent lawsuit against ES&S, will in any way affect ES&S' financial or organizational ability to perform under the proposed contract with the City of New York.
e) ***Grant of Immunity*** - A grant of immunity for any business-related conduct constituting a crime under federal, state or local governmental law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing, bid collusion or any crime related to truthfulness and/or business conduct?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**

Litigation Subcategories	Vendor Response
f) ***Suspension or Debarment*** - A federal, state or local government suspension or debarment from the contracting process?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
g) ***Contract Suspension or Termination*** - A federal, state or local government contract suspension or termination for cause prior to the completion of the term of a contract?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
h) ***Denial of a Lease or Contract Award*** - A federal, state or local government denial of a lease or contract award for non-responsibility?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
i) ***Administrative Proceeding or Civil Action*** - An administrative proceeding or civil action seeking specific performance or restitution in connection with any federal, state or local contract or lease?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **YES** 1. Secretary of State of Indiana. While ES&S believes this matter is not directly responsive to this litigation subcategory (nor any other litigation subcategory set forth herein) as the Secretary of State of Indiana did not seek specific performance or restitution in connection with any federal, state or local contract or lease, in the interest of providing the City with full disclosure, ES&S provides the following information for review by the City: In April 2006, the Secretary of State of Indiana instituted a proceeding pursuant to the Indiana Election Code respecting certain services provided by ES&S. ES&S completely resolved this matter with the Secretary of State in July 2006 and ES&S continues to provide election equipment, software and services to numerous customers in Indiana. ES&S would like to emphasize for the City of New York that the proceeding in Indiana did not in any way involve any investigation of, or allegations of any civil or criminal violations by, ES&S' voting equipment or software. Both the equipment and software provided to Indiana customers was not defective in any way or below industry standards for voting systems. The matter was solely related to alleged services issues. ES&S would like to reiterate that at no time did this now-resolved proceeding in any way affect ES&S' ability to deliver, implement and support ES&S voting systems, nor will it in any way have any impact on ES&S' ability to deliver, implement and support ES&S voting systems proposed for use in the City

Litigation Subcategories	Vendor Response
	of New York. 2. On November 20, 2007 ES&S was served with a lawsuit filed by the City of San Francisco. The lawsuit alleged that ES&S breached its contract by providing alleged uncertified ballot marking devices to the City and sought as part of its demand restitution in connection with ES&S' contract with the City. ES&S denied the allegations brought by the City and vigorously defended the action. On January 18, 2008, the City and ES&S settled the lawsuit and dismissed it with prejudice. Neither the allegations included in the lawsuit, nor the terms of ES&S' settlement of the lawsuit, will in any way affect ES&S' financial or organizational ability to perform under the proposed contract with the City of New York.
j) ***Willful Violation of Law or Regulation*** - A federal, state or local determination of a willful violation of any public works or labor law or regulation?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
k) ***Imposed Sanction*** - A sanction imposed as a result of judicial or administrative proceedings relative to any business or professional license?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
l) ***Consent Order*** - A consent order with the New York State Department of Environmental Conservation, or a federal, state or local government enforcement determination involving a violation of federal, state or local laws?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
m) ***OSHA Notification*** - An Occupational Safety and Health Act citation and Notification of Penalty containing a violation classified as serious or willful?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
n) ***MacBride Fair Employment Principles*** - A rejection of a bid on a New York State contract or a lease with the State for failure to comply with the MacBride Fair Employment Principles?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
o) ***Citation, Violation Order, Pending Hearing or Proceeding*** - A citation, violation order, pending administrative hearing or proceeding or determination issued by a federal, state or local government for violations of: i) health laws, rules or regulations ii) unemployment insurance or workers'	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**

Litigation Subcategories	Vendor Response
compensation coverage or claim requirements iii) ERISA (Employee Retirement Income Security Act) iv) human rights laws v) federal U.S. Citizenship and Immigration Services laws vi) Sherman Act or other federal anti-trust laws	
p) ***Voluntary Exclusion from Contracting*** - Entered into an agreement to a voluntary exclusion from contracting with a federal, state or local governmental entity?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
q) ***MBE/WBEA Decertification, Revocation or Forfeiture -*** Denial, decertification, revocation or forfeiture of Women's Business Enterprise, Minority Business Enterprise or Disadvantaged Business Enterprise status?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
r) ***MBE/WBEA Violation*** - A rejection of a low bid on a federal, state or local contract for failure to meet statutory affirmative action or Minority or Women's Business Enterprise or Disadvantaged Business Enterprise status requirements on a previously held contract?	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
s) ***Non-responsibility Finding Under Exec Order 127*** - A finding of non-responsibility by an agency or authority due to the intentional provision of false or incomplete information as required by Executive Order 127.	**Yes or No. If Yes, describe.** **ES&S RESPONSE** **NO**
2) ***Past Performance Issues*** – Describe any past issues regarding the performance of your proposed EMS, or voting devices including delivery issues, support services issues, or de-certification issues, etc.	**ES&S RESPONSE** **N/A**

5.8.5 Manufacturing & Delivery Capacity

Manufacturing & Delivery Capacity Subcategories	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) ***Manufacturing Site(s)*** – List the sites, their square footage & address in which manufacture of the proposed voting system shall occur.	**Manufacturing Sites:** Ricoh Electronics, Inc. "REI" 1100 Valencia Avenue Tustin, CA 92780 ~200,000 square feet	
2) ***Peak Production*** – Provide the peak production capacity in units per month for each site. Show evidence of when this capacity was	**Production in Units per Month:** As many as 2,000/month. This production level has been reached	**Production in Units per Month:** As many as 2,000/month. This production level has been

reached.	during July-August 2007.	reached during May-July 2008.
3) ***Initial Delivery*** – Indicate how soon (in business days) after contract award can delivery of a copy of the proposed EMS and one voting system be delivered to the BOE in NYC	**Number of Business Days After Award:** One (1) Pollsite Scanner System (DS200) and one (1) copy of EMS can be delivered to NYC BOE in less than one week after contract award.	**Number of Business Days After Award:** Not applicable. 1,798 ES&S AutoMARKs were delivered to NYC BOE and boroughs in 2008.
4) ***Subsequent Deliveries*** – Indicate how soon (in business days) after award the following numbers of voting systems can be delivered to the BOE in NYC.	ES&S can meet the DS200 delivery timelines outlined in the Key Dates schedule of this RFI. **Delivery Capacity:** +20 Units: Delivered to Albany within 10 business days of receipt of PO (See Note 1 & 2). +50 Units: Delivered to Albany within 10 business days of receipt of PO (See Note 1 & 2). +100 Units: Delivered to Albany within 10 business days of receipt of PO (See Note 1 & 2). +500 Units: Delivered to Albany within 15 business days of receipt of PO (See Note 1 & 2). +1,000 Units: Delivered to Albany within 15 business days of receipt of PO (See Note 1 & 2). +10,000 Units: See Note 1 and 2 for DS200 manufacturing run rate and timeline for additional DS200 units.. **Note 1:** ES&S has reserved 1,500 DS200 pollsite scanners within our Omaha inventory to accommodate a potential New York City order. In addition, ES&S has taken further steps to initiate the manufacturing process for additional DS200 scanners that would be required to fill a New York City order resulting from a contract award under this RFI. Specifically, on 12/3/2008, ES&S directed REI to manufacture 5,600 DS200 pollsite scanners. REI requires a 17-week lead time to commence production of this order. REI has estimated it will be able to deliver 500 units per business week commencing 4/1/09. The final shipment of the 5,600 order is estimated to occur	+20 Units**:** Not applicable. Units already delivered to NYC. +50 Units: Not applicable. Units already delivered to NYC. +100 Units: Not applicable, units already delivered to NYC. +500 Units: Not applicable. Units already delivered to NYC. +1,000 Units: Not applicable. Units already delivered to NYC. +10,000 Units: Not applicable. Units already delivered to NYC. +Remainder of Units:

	on 6/27/09. **Note 2:** All manufactured units for the NYC pollsite scanner contract would be shipped to Albany for NYSBOE centralized Acceptance Testing prior to being delivered to the applicable NYC boroughs. **Note 3:** Manufacturing release date for DS200 plastic ballot box is pending the NYC contract award and a subsequent decision from NYC BOE on whether a customized lower metal bin is required instead of the current plastic bin. The plastic ballot box manufacturer requires a multi-week lead time to commence production at a rate of 800 boxes per week. ES&S does not maintain inventory of this product.	

5.8.6 Summary of Key Proposal Considerations

These are key proposal considerations for BOE in NYC. Each of them has been incorporated into the appropriate proceeding sections. The questions should be answered in the appropriate section, but the question is also shown here to ensure that particular attention is paid to answers to these questions.

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
1) NYC Ballot Formats – Describe how the proposed Pollsite Voting System will handle all of the required ballot formats for all New York City Elections, including listing parties across the ballot in the General Election. ***(See Section 5.2.7)***	ES&S's Pollsite Voting System, the DS200, is designed to accept ballots in any format. The DS200 does not care if the ballots are portrait or landscape as long as the ovals are in the specified grid pattern. This allows for unlimited ballot format designs. To support NYC elections, ES&S, in coordination with NYC BOE EVS, designed a desktop publishing WYSIWYG application (ElectionWare Paper Ballot) specifically designed to conform to NYC ballot layout rules. Templates exist to match the ballot layouts used in NYC elections, including listing parties across the ballot as used in General elections. The ballots created by NYC for the 2008 elections, using ES&S's Unity software, can be used with the proposed DS200 Pollsite Voting System.	There are a number of ballot formats and sizes that can be used with the ES&S AutoMARK. All can meet the State full-face ballot requirements. All ballots are 8 ½" in the short dimension. There are 4 sizes in the long dimension. These are 11", 14", 17" and 19". Each ballot has a matrix of potential voting targets that can be organized in row and column for party and contest presentation and can be presented in either portrait or landscape. There are a total of 22 ballot templates, 11 for portrait use and 11 for landscape use. The matrix for all templates has 24 positions on the shorter side. The number of positions in the matrix for the long side of the ballot is 38 or 50 for the 11" ballot; 41, 50 or 65 for the 14" ballot; 50, 62 or 81 for the 17" ballot; 56, 70 or 91 for the 19" ballot. The full partisan ballot can be presented on one side with the

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
		back side of the ballot used for referenda if space is not available on the front. The layout can meet the required format of a matrix of parties and candidates in the General Election and still be used listing contests sequentially in the Primary Election.
2) Languages Supported – Does the proposed voting system provide text and audio in the following languages: English, Spanish, Mandarin Chinese, Cantonese Chinese and Korean? Can all instructions and ballot information be provided to the voter in each of these languages? ***(See Section 5.2.1)***	The Unity EMS supports the following 13 languages: • Chinese. • Creole. • Dutch. • English. • French. • German. • Italian. • Japanese. • Korean. • Portuguese. • Spanish. • Tagalog. • Vietnamese. Instructions and ballot information provided to the voter can be displayed in each of these languages.	All listed languages are supported. The ES&S AutoMARK includes "out of the box" audio and display support for eight languages. Five languages – English, Spanish, Chinese, Korean and Japanese – are automatically supported with display text and synthesized voice translations generated by the system's Eloquence speech engine. The software includes built-in translated ballot text for Tagalog, Vietnamese and Haitian Creole. Additional languages can be added by creating custom bitmaps for the visual prompts (for non-Latin based languages) and custom audio files for the audio prompts. All instructions and ballot information are provided to the voter in each listed language.
3) Ballot Presentation and Cast Modes – List all the ways in which a ballot may be presented (i.e. screen, synthesized audio, recorded audio, printed on paper) and all the ways in which a ballot may be cast (i.e. touch screen, QWERTY keyboard, alpha keyboard, keypad, telephone keypad, sip & puff, rocker paddle, etc.). ***a)*** Can every presentation mode be used with every cast mode? ***b)*** If not, which combinations cannot be used? ***c)*** If so, can the voter vote completely without assistance	The DS200 provides the voter the opportunity to cast a paper ballot. The voter is able to view their ballot in printed form as well as see any errors with their ballot on the DS200 touch screen. These messages are available in the voters language of choice. All other presentation and cast modes are available on the ES&S AutoMARK.	The ES&S AutoMARK includes the following ballot presentations and cast modes: • **Display Ballot –** Voters can navigate the ballot using the ES&S AutoMARK touch screen. The ballot display includes full support for high-contrast display, zoom and simultaneous audio display. • **Audio Ballot –** Voters who require an audio only ballot use the navigation keys on the ES&S AutoMARK control pad to navigate the ballot and indicate selections. The ES&S AutoMARK audio ballot includes full support for

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
(including write-ins) using any combination of modes? ***d)*** If not, which mode combinations require pollworker assistance? ***(See Section 5.4.3)***		volume and tempo adjustments and an option to blank the screen while voting to ensure voter privacy. • **Two position switch device –** The ES&S AutoMARK includes an input port for any two-position switch device including a sip & puff tube and two-position switch pedal. Voters can use this input to navigate and cast a ballot in either audio or display format. The voting process remains the same for each ballot selection method. Every ballot presentation mode may be used with every cast mode. No poll worker assistance is required during ballot navigation and marking for any cast mode. Voters with profound mobility issues may require assistance when transporting a ballot from the ES&S AutoMARK to a ballot box or pollsite scanner. An optional ballot secrecy sleeve is available to ensure that the paper ballot remains secret during this transfer. Also optional would be the use of the AutoCast feature which allows the voter to designate whether he or she desire the ballot to return or be placed in a secure container in the rear of the ES&S AutoMARK.
4) Audio Ballot Creation – Describe your recommended approach to audio ballot creation for BOE in NYC. ***(See Section 5.2.3)***	The DS200 does not have an audio component. Audio ballot capability is accommodated by the ES&S AutoMARK ballot marking device.	The use of recorded speech or synthesized speech for audio use is strictly up to the jurisdiction. Synthesized speech is what most jurisdictions use and has the benefit of requiring the least amount of setup labor, lead time and cost as it is mostly derived from the text used in ballot display. Exceptions are handled with entry of phonetic pronunciation when the speech directly produced from the text is not as desired.
5) Ballot Proofing – Describe your recommended approach to ballot proofing for BOE in NYC including	ES&S recommends that the BOE in NYC consider proofing at multiple levels. The first level	It is equally important to proof spoken ballot information that is used on the BMD. ElectionWare

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
displayed, printed, synthesized, spoken ballots in English, Spanish, Mandarin Chinese, Cantonese Chinese and Korean and including ballot rotation. ***(See Section 5.2.3)***	of proofing is to make sure that every piece of election information entered into the EMS is spelled correctly, such as candidate names, office titles, AD/ED names, etc. This will ensure that displayed and printed ballots are correct. The EMS provides reports to add the proofing process. Every piece of information that can be entered into the EMS can be printed out on a report for proofing purposes. English and language translations both need to be proofed. **NOTE:** Data does not get modified or changed when moving from the BOE to ES&S' EMS, when using the Import Wizard or Automatic Import features of the Unity EMS. The second level of proofing is to make sure that generated ballot styles are accurate. It is recommended that the BOE proof to make sure that offices are in the correct order, the number of ballot style are as expected, rotated contests and candidates are accurate, etc. The ES&S Unity election software provides many places to help audit and validate election data to ensure that ballot styles are generated accurately. Software validation processes can be run which analyze relationships defined by the entered data and look for incomplete or inaccurate data, which can cause incorrect ballot styles to be generated. Some of these processes can identify: • Whether ED to political district relationships are defined accurately. • Contests without candidates. • Candidates without parties. • Offices without active districts. • Polls without EDs assigned. The ES&S Unity election	allows for review of the display and recorded audio for all ballots via a standard desktop PC. This system allows users to proof and review all election information before programming the individual compact flash memory cards. Proofing can be done at the individual ballot element level or at the ballot style level. For instance, you can listen to every candidates name in the candidate list, or you can review each candidate's name by walking through each ballot style.

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	software provides numerous reports to proof and validate election data. Every piece of information that is entered into the system can be printed on a report for auditing purposes. In addition, all information relating to the ballot style creation process is available in a report, such as: • Ballot styles assigned to election districts. • Election districts assigned to ballot styles. • Rotation by election district. • Ballot style by poll.	
6) Ballot Cut-off – What lead time do you recommend for the finalization of ballot definitions to allow for preparation of your voting system in time for Election Day? ***(See Section 5.3.2)***	ES&S recommends the City finalize ballot definitions one month before final election setup of the DS200 and ES&S AutoMARK. Once a ballot change is made in the election management system, an updated USB memory stick or compact flash memory card can be programmed in a matter of seconds.	
7) Ballot Activation – What mechanism is used to activate the correct ballot for the voter? ***(See Section 5.4.1)***	The DS200 automatically activates when a voter inserts a marked paper ballot into the terminal's input slot. Messages on the LCD screen guide the voter through the process, and confirm that the ballot has been tabulated.	The ES&S AutoMARK automatically activates when a voter inserts a blank paper ballot into the terminal's input slot. A series of on screen and audio prompts guide the voter through ballot navigation and selections. After the voter completes ballot selections, the system summarizes selections and marks the voter's ballot.
8) Interface - How will you participate in the development of the ballot data extraction procedures from the Board's existing computer systems? How long do you estimate this effort will take? ***(See Section 5.6.1)***	An interface between the BOE's S-Elect system and Unity already exists. The BOE creates election export files that are imported into Unity with a single click. Up to 95 percent of the election definition can be imported with this process. The process has been demonstrated successfully in the 2008 primary and general elections.	
9) Training Board Staff - How do you plan to provide training for the Board's planning, development, managerial, supervisory and training staffs so that they can plan, develop, manage, supervise and train Board staff and pollworkers in the use of new procedures that will result from the use of the proposed new voting	ES&S training instructors will conduct requested "Train the Trainer" courses to BOE staff trainers on ES&S DS200 and AutoMARK operations and other courses requested by the BOE. The timing of the delivery of these courses can be incorporated into the overall project plan to match the planning needs of the staff.	

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
system? ***(See Section 5.6.3)***		
10) Training EMS - Describe in detail the classes you will provide for Broad technical staff who will be responsible for administering, testing and setting up the proposed voting system's software. ***(See Section 5.6.3)***	ES&S training instructors will conduct requested classes on the applicable EMS (Unity and ElectionWare) modules to the BOE technicians. This training will complement the training previously provided. We will make every effort to utilize resources who have previously worked with EMS staff. These individuals have become very familiar with NYC current systems and usage.	
11) Training Technicians- Describe in detail the classes you will provide for Voting Machines Technicians responsible for setting up, testing, deploying and maintaining the proposed pollsite voting system. ***(See Section 5.6.3)***	ES&S training instructors will conduct requested VMT classes on ES&S DS200 and AutoMARK operations and other courses and training activities requested by the BOE. ES&S previously worked with the BOE to customize a VMT Technician program that meets the needs of a BMD solution and implementation. We would provide a similar effort in customization and implementation of courses and technician training for the poll site scanner solution.	
12) Training Pollworkers - When the Board is conducting classes for more than 30,000 pollworkers, how do you plan to provide a corps of qualified trainers to conduct hands-on training directly on your equipment for each pollworker? ***(See Section 5.6.3)***	ES&S training instructors will conduct requested poll worker classes on ES&S DS200 and AutoMARK operations and other courses and training activities requested by the BOE. We have prior experience on resourcing large implementations like NYC.	
13) Pollsite Voting System Boot Time – What would be the boot-up time for the Pollsite Voting System based on the number of lots, recorded voice for office, candidate names, and instructions, for five languages in keeping with the volumes shown in Appendix A and including all other factors that would affect boot-up time for BOE. ***(See Section 5.2.6)***	The DS200 will generally boot to the user screens in less than one minute. Depending upon the size of the election, the DS200 will process the election definition data and complete the open routine in less than one minute as well. It is possible to create an extremely complicated election and include every election district on a single machine. In this case, the open process could take substantially longer.	It is anticipated that the maximum boot-up time for the indicated election would be 10 minutes. This improvement is due to a change in audio file format and handling of verification.
14) Support - How do you plan to provide a corps of qualified personnel to provide on-site support at pollsites throughout Election Day, allowing for one (1) support person for approximately forty (40) Election Districts geographic proximity? ***(See Section 5.7.4)***	ES&S is capable of supporting this requirement and the numbers defined for 2009 Primary and General Election events. Our company has more than three years of experience implementing and supporting more than 38,000 ES&S AutoMARKs located in more than 1,100 counties in 29 states, as well as more than 5,000 DS200s in the State of Florida. Required services will be provided to the Board of Elections for the City of New York according to the negotiated pricing, terms, and conditions contained in the State of New York Contract. ES&S Election Day support staff and technicians are required to participate in specific training and testing prior to providing support for an election. The training and testing are specific to their	

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
	assigned products and clients. ES&S would make every attempt to utilize the resources that supported the NYC 2008 elections. These individuals have gained specific client knowledge that would assist in future NYCE elections. ES&S will work with NYC BOE to define the specific number of individuals needed in each borough and call center as the 2009 elections near. In addition, we can supply necessary resources for 2009 and beyond.	
15) ***Opening & Closing Polls*** - Describe the process for opening and closing polls and what device (if any) is used in these processes. ***(See Section 5.4.1)***	**Opening Polls** The DS200 can be programmed to power up when the LCD screen is raised. The pollworker simply needs to unlock the lid of the DS200, raise the LCD screen, and wait a few moments for the system to initialize. When the Open Polls screen appears, the pollworker presses the Open Polls button on the screen. Depending on options set for the election definition, the DS200 will automatically print a status report, a zero totals report and/or a zero certification report. Once the start-up reports are complete, the pollworker closes and locks the switch door and secures the key in a safe place. The DS200 is then ready to receive Election Day ballots. **Closing Polls** Once the polls are closed and voting has ended, the pollworker unlocks the access door, then presses and holds the **CLOSE POLLS** button for approximately 5 seconds. Once the **CLOSE POLLS** button is released, the DS200 will close the polls and automatically print a Voting Results Report and any other reports set up to automatically print, such as an Audit Log Report.	**Opening Polls** The ES&S AutoMARK integrates closely with elections management software and optical scan hardware, streamlining the setup and testing process before an election. At the polling place, election workers simply unpack the terminal, place the unit on a standard, disability-compliant voting table, connect the system to an electrical outlet and turn the ES&S AutoMARK control key to the ON position to prepare the system for voting. The terminal's key activated administrative controls and election memory card are stored behind a locking panel to prevent unauthorized access. **Closing Polls** Once the polls are closed, poll workers simply turn off the control key, unplug the unit. and close and seal the doors of the transport cart.
16) PMD Collection - What procedures do you recommend on Election Night for the collection of portable memory devices containing the election results from each pollsite, and the entry of said results into the system's software, and reporting of same? How long do you estimate	There are several ways to accumulate the results from the DS200 PMDs, although NY law will not currently allow some of the methods to be utilized. 1. Most simplistic – Bring all PMDs back to borough BOE locations for downloading. This	The ES&S AutoMARK does not tabulate results or store ballots. ES&S can provide recommended procedures for processing ballots, if requested.

Key Considerations	Vendor Response Poll Site Scanner	Vendor Response Ballot Marking Device
the described Election Night procedure will take in NYC? ***(See Section 5.4.1)***	solution is the slowest as it has to allow for drive time from all pollsites. 2. Bring PMDs to regional sites, such as police precincts, for reading into a regional PC. This solution shortens drive time and cuts down on the number of PMDs that are actually read into a single PC. 3. Fastest – Modem results directly from polling place using a landline or wireless modem solution. This solution, although extremely fast, is illegal under current NY law. For this reason, DS200s will not be outfitted with modems of any kind.	
17) Canvass - Describe the procedure you recommend to balance voter and ballot counts at the conclusion of an election (e.g. voters, number of ballots, public counters, rejected VVPATs, fled voter, no vote, under-votes, etc.) Describe the procedure for both a General and a Primary. How are all relevant numbers maintained for each party in a Primary Election? Describe functions and reports that assist with the procedure. ***(See Section 5.3.3)***	The procedure for confirming number of votes cast – for both a general and primary election – is the same. The DS200 election results tapes print, upon the closing of the polls at 9 p.m., and include vote totals by contest, candidate, party, undervotes, overvotes, and so on. The total number of votes may be reconciled with the total number of voters who checked in with the ED/AD poll workers.	Not applicable. The ES&S AutoMARK marks voter selections on paper ballots for tabulation on separate equipment. The system does not record votes, report results or store ballot images and does not affect the City's recanvass procedure.
18) 3% Audit - What procedure do you recommend for the required manual tallying of Voter Verified ballot selections and the audit of the electronic results against those manual tallies? ***(See Section 5.4.1)***	There are a few ways to tackle this depending on how the state finalizes the rules on this event. 1. The PMD from Election Day can be zeroed and the ballots rerun. The results tapes are simply compared side by side to the actual Election Day results tape. 2. A new PMD is programmed for that polling location, the ballots are rerun and the results tapes are compared.	Not applicable to the ES&S AutoMARK ballot marking device.