



December 29, 2021

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Gerald Matherly, Couy Griffin, and Vickie Marquardt  
Commissioners for Otero County Commission  
101 New York Avenue  
Alamogordo, NM 88310

**RE: Otero County Audit of 2020 Election**

Dear Honorable Commissioners:

EchoMail, Inc. (“ECHOMAIL”) is pleased to serve Otero County, (“CUSTOMER”) in the auditing of the November 2020 General Election (“Election”). Per our understanding, ECHOMAIL will be serve as the prime contractor and be responsible for the deployment of the EchoMail® Election Systems Integrity™ (ESI) platform to perform the audit for the Election. Based on our review of the requirements, EchoMail will provide the following:

- (1) **Integrated Data Warehouse** - Creaton of an integrated data warehouse that will include such data as following: County’s Voter Rolls, Participating Voter List, Cast Vote Records (CVRs), Images of the Return Ballot Envelopes, Ballot Images (from the Election Management System – EMS), Paper Ballot Scans, Door-to-Door Canvass data. Ref. Schedule A.
- (2) **Data Analytics** – Data analysis will include evaluation of registrations and votes cast at the precinct level and by vote type.
- (3) **Processing of Ballot Images** - Employ EchoMail to analyze approximately up to 25,000 Ballot Images. The Ballot Images are defined to be those images that are produced from the scanning of paper ballots by the County during the Election from their election management system (“EMS”) . EchoMaill will perform image analysis of the Ballot Images to calculate the vote counts for the Races. These vote counts will be compared with the Cast Vote Records (“CVR”). A formal report will be submitted of the findings. Ref. Schedule B.
- (4) **Paper Ballot Scan Comparison with Ballot Images** – Perform image analysis of the Paper Ballot Scans to calculate the vote counts for the Races (Paper Ballot Scans are the images generated by the scanning of the paper ballots). These vote counts will be compared with the Cast Vote Records (“CVR”). EchoMail will perform Image processing to determine the paired Paper Ballot Scan with its Ballot Image, and then evaluate if the vote counts across the pair are the same; and if not, will denote the discrepancies. A formal report will be submitted of the findings. Ref. Schedule C.
- (5) **Return Ballot Envelope Signature Presence Detection** - Perform EchoMail® Pattern Recognition Classification to determine presence of Blanks, Scribbles, and Signature on Return Ballot Envelope Images. A formal report will be submitted of the findings. Ref. Schedule D.



- (6) **Return Ballot Envelope Signature Verification Error Determination** - Perform an independent calculation of the error rates of the Count’s Signature Verification by employing EchoMail® Pattern Recognition Classification capabilities to determine how many of the signatures on unique EVB return envelopes would be classified as “Good Signatures” or “Bad Signatures” before any curing process is executed. Ref. Schedule E.
- (7) **Full Voter Registration Canvass** - Perform door-to-door canvass of Otero County voter registration database to determine accuracy of voter registration database. Canvass will be staffed by volunteers under the direction of New Mexico Audit Force (“Volunteers”) with guidance from EchoMail.

Total investment for this effort from Otero County will be \$49,750 as outlined in Schedule A. The County will not be liable for payment or portions of payments of line items in Schedule A in the event certain items cannot be obtained. The Payment Schedule is as follows:

<b>Timing</b>		<b>Amount</b>
Upon execution of this letter and Master Agreement and Schedule A	-	\$24,875.00
February 1, 2022	-	\$24,875.00

Note: Schedules B through E will be funded by EchoMail's partners.

Sincerely,

Dr. Shiva Ayyadurai  
 President/CEO  
 EchoMail, Inc.

Encl: Master Agreement  
 Schedules A-E



SCHEDULE A

Customer Name: Otero County Commission ("CUSTOMER")
Customer Address: 101 New York Avenue, Alamogordo, NM 88310
Effective Term: January 1, 2022 – May 1, 2022
County: Otero County ("County")
Election: 2020 General Election ("Election")

Title: Integrated Data Warehouse and Analytics

Statement of Work

- (1) Integrated Data Warehouse - Creation of an integrated data warehouse that will include such data as following: County's Voter Rolls, Participating Voter List, Cast Vote Records (CVRs), Images of the Return Ballot Envelopes, Ballot Images (from the Election Management System – EMS), Paper Ballot Scans, Door-to-Door Canvass data.
(2) Data Analytics – Data analysis will include evaluation of registrations and votes cast at the precinct level and by vote type.

Pricing Schedule

Table with 6 columns: Part Number, Part Description, Units, Unit Cost, One-Time, Recurring. Rows include Professional Services (Project Planning, Data Warehouse, Hardware Forensics, Data Analytics and Reporting) and Licenses (EchoMail® Data Warehouse) with sub-totals and a final NET-Total of \$49,750.00.

Other Terms:

Additional charges shall apply at the Unit Price set forth above in the event that quantity of use of the foregoing licensed Software and Services exceeds purchased amounts hereunder. Such additional charges shall be billed to the CUSTOMER on monthly basis. ECHOMAIL shall issue no credits to CUSTOMER for any licenses not used by CUSTOMER On the expiration date, and unused licenses may not be carried over into subsequent periods.

In the event CUSTOMER requests ECHOMAIL with prior written confirmation to ECHOMAIL to take specific actions, for example travel for onsite training or strategy meeting, shipping data on physical media such as tapes or disks etc., costs of shipping, telecommunications, mailing, traveling and out-of-pocket expenses incurred by EchoMail, Inc. in the performance of such actions are not included herein, and will be billed directly to CUSTOMER on a monthly basis.



This Schedule is governed by the EchoMail Software & Services Licensing Agreement. If there is any conflict between this Schedule and the EchoMail Software & Services Licensing Agreement, all terms of the EchoMail Software & Services Licensing Agreement shall control, except payment terms. Payment is due prior to start of work and use of Software and Services. Both parties agree to the foregoing as of this \_\_\_ day of \_\_\_\_\_ in the year of 2022, and to execute their performance obligations as set forth herein.

ECHOMAIL Authorized Representative

CUSTOMER Authorized Representative

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_



**SCHEDULE B**

- Effective Term:** January 1, 2022 – May 1, 2022
- County:** Otero County (“County”)
- Election:** 2020 General Election (“Election”)
- Est. Number of Voters:** 25,000 +/- 10%
- Number of Races:** All Races in Otero County (“Races”)
- Number of Ballot Types:** TBD (“Ballot Types”)

**Title:** Processing of Digital Ballot Images

**Statement of Work**

Employ EchoMail to analyze approximately up to 25,000 Ballot Images. The Ballot Images are defined to be those images that are produced from the scanning of paper ballots by the County during the Election from their election management system (“EMS”). EchoMail will perform image analysis of the Ballot Images to calculate the vote counts for the Races. These vote counts will be compared with the Cast Vote Records (“CVR”). A formal report will be submitted of the findings.

County Provided Data - County will provide ECHOMAIL the following data:

1. Ballot images from EMS in a commonly used digital format e.g. TIFF;
2. CVR database;
3. Ballot Types templates, each pre-encoded by County for Races

County is expected to provide the above data to ECHOMAIL, ideally shipped on a hard drive. Other methods may be used; however, unless the data is not substantially large upload and download times may be significant. ECHOMAIL will provide training to Volunteers on how to encode a Ballot Type template.

ECHOMAIL Processing – EchoMail will perform the following processing on each ballot image per ballot type:

1. Use the Ballot Type information provided by County to process a Race
2. Pre-process i.e. auto-align, size calibrate, etc. the ballot image
3. Identify choices for each of the Races
4. Store results in relational database for reporting and analysis

ECHOMAIL Deliverables - EchoMail will deliver the following data:

1. Tabulated counts for Races
2. Comparison of EchoMail tabulated counts with that reported in CVR for Races

**Pricing Schedule**

<b>Part Number</b>	<b>Part Description</b>
	<b>Professional Services</b>
EM-DW-IMG-SETUP	Setup of EchoMail Data Warehousing for Image Processing including receipt and uploading of all Ballot Images
EM-RPT-Services	Preparation of Final Report for submission to Attorney General or Election Official.
EM-PS-PROJ-MGT	Project Management



	<b>Licenses</b>
EM-BI-10EPU-SVR	EchoMail Ballot Image Processing Server (up to 10 EPU <sup>1</sup> )

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<sup>1</sup> One (1) EPU equals for 10,000 Ballot images.



## SCHEDULE C

**Effective Term:** January 1, 2022 – May 1, 2022

**County:** Otero County (“County”)

**Election:** 2020 General Election (“Election”)

**County:** Otero County (“County”)

**Est. Number of Voters:** 25,000 +/- 10%

**Number of Races:** TBD (“Races”)

**Number of Ballot Types:** TBD (“Ballot Types”)

**Title:** Paper Ballot Scan Comparison with Ballot Images

### Statement of Work

This Statement of Work assumes that Ballot Image processing has been completed through another Schedule. For this Statement of Work, ECHOMAIL will receive scanned versions of the Paper Ballots (“Paper Ballot Scans”) from County. EchoMail will perform image analysis of the Paper Ballot Scans to calculate the vote counts for the Races. These vote counts will be compared with the Cast Vote Records (“CVR”). ECHOMAIL will perform Image processing to determine the paired Paper Ballot Scan with its Ballot Image, and then evaluate if the vote counts across the pair are the same; and if not, will denote the discrepancies. A formal report will be submitted of the findings.

County Provided Data - County will provide ECHOMAIL the following data:

1. Paper Ballot Scans in a commonly used digital format e.g. TIFF;
2. CVR database (if not already provided from previous Schedule)
3. Ballot Types templates, each pre-encoded by County for Races (if not provided from previous Schedule)

County is expected to provide the above data to ECHOMAIL, ideally shipped on a hard drive. Other methods may be used; however, unless the data is not substantially large upload and download times may be significant. ECHOMAIL will provide training to Volunteers on how to encode a Ballot Type template.

ECHOMAIL Processing – EchoMail will perform the following processing on each Paper Ballot Scan per ballot type:

1. Use the Ballot Type information provided by County to process a Race
2. Pre-process i.e. auto-align, size calibrate, etc. the Paper Ballot Scan
3. Identify choices for each of the Races
4. Identify the Ballot Image pair for a Paper Ballot Scan
5. Compare the results of the Ballot Image with the Paper Ballot Scan
6. Store results in relational database for reporting and analysis

ECHOMAIL Deliverables - EchoMail will deliver the following data:

1. Tabulated counts for Races for the Paper Ballot Scans
2. Comparison of EchoMail tabulated counts of Paper Ballot Scans with that reported in CVR for Races
3. Comparison of the Paper Ballot Scan Races tabulation with the Ballot Images tabulation.

### Pricing Schedule



Part Number	Part Description
	<b>Professional Services</b>
EM-DW-IMG-SETUP	Setup of EchoMail Data Warehousing for Image Processing including receipt and uploading of all Paper Ballot Scans
EM-RPT-SRVICES	Preparation of Final Report for submission to Attorney General or Election Official.
EM-PS-PROJ-MGT	Project Management
	<b>Licenses</b>
EM-BI-10EPU-SVR	EchoMail Paper Ballot Scan Processing Server (up to 10 EPU <sup>1</sup> )
EM-BI-10EPU-SVR	EchoMail Comparison Processing of Paper Ballot Scan with Ballot Images (up to 10 EPU <sup>1</sup> )

<sup>1</sup> One (1) EPU equals for 10,000 Paper Ballot Scans





**SCHEDULE D**

**Effective Term:** January 1, 2022 – May 1, 2022

**County:** Otero County (“County”)

**Election:** 2020 General Election (“Election”)

**Est. Number of Envelopes:** 6,000

**Title:**Return Ballot Envelope Signature Presence Detection

**Statement of Work**

This project aims to perform an EchoMail® Pattern Recognition Classification to determine presence of Blanks, Scribbles, and Signature on Return Ballot Envelope Images.

County Responsibilities - County will:

- 1) Provide envelope images from the County for the Election
- 2) Ensure envelope images are delivered via postal mail on a hard drive or uploaded to a secure repository for ECHOMAIL to download

ECHOMAIL Processing – EchoMail will perform the following processing on each envelope image:

- 1) Pre-process i.e. auto-align, size calibrate, etc. the envelope image
- 2) Detect if a signature does not exist on an envelope
- 3) Tabulate the total number of envelopes with and without signatures

ECHOMAIL Deliverables - EchoMail will deliver the following:

- 1) Total number of envelopes with blank signatures (pixel density is 0% to 0.1%)
- 2) Total number of envelopes with potential scribbles (pixel density is 0.1% to 1%)
- 3) Total number of envelopes with potential signatures (pixel density is greater than 1%)
- 4) Images of Return Ballot Envelopes containing no signatures

NOTE: Deliverables are dependent on County providing data in a timely manner.

**Pricing Schedule**

Part Number	Part Description
	<b>Professional Services</b>
EM-BI-SETUP	Setup EchoMail Business Intelligence Server
EM-RPT-SERVICES	Data Reporting Services
EM-PS-PROJ-MGT	Project Management
	<b>Licenses</b>
EM-BI-10EPU-SVR	EchoMail Business Intelligence Server (up to 10 EPU <sup>1</sup> )

<sup>1</sup> One (1) EPU equals the processing of up to 10,000 images.



## SCHEDULE E

**Effective Term:** January 1, 2022 – May 1, 2022  
**County:** Otero County (“County”)  
**Election:** 2020 General Election (“Election”)

**Est. Number of Envelopes:** 2,500

**Title:** Ballot Envelope Signature Verification Error Determination

### **Statement of Work:**

This project aims to perform an independent calculation of the error rates of the County’s Signature Verification by employing EchoMail’s pattern recognition classification capabilities to determine how many of the signatures on unique EVB return envelopes would be classified as “Good Signatures” or “Bad Signatures” before any curing process is executed.

County Responsibilities – County shall provide the following to EchoMail:

- 1) Provide all EVB return envelope images in – full size – format for the County in the Election
- 2) Provide Voter Registration file containing for each voter, their name, voter-ID, address, etc. including the digital image of the voter’s signature or take direction from ECHOMAIL in acquiring the statistically significant number of signature images from other publicly available source.
- 3) The Standardized Operating Procedure (SOP) and/or the algorithms used by County for Signature Verification

ECHOMAIL Processing – EchoMail will perform the following processing:

- 1) If the algorithm used by County is provided, implement the algorithm into EchoMail’s system; and, if not, deploy EchoMail® Signature Matching Process;
- 2) For a particular voter-ID, pre-process i.e. auto-align, size calibrate, etc. the EVB return envelope image to extract the Signature Region and the signature of the voter in that Signature Region;
- 3) Execute feature extraction on signature extracted from Signature Region of EVB return envelope image to acquire the signature image alone;
- 4) For a particular voter-ID, pre-process i.e. auto-align, size calibrate, etc. each digital image of a signature from Voter Registration file or the public source to extract the signature alone;
- 5) Execute feature extraction on the signature from the Voter Registration file or public source to acquire the signature image alone;
- 6) Perform signature matching analysis either using the 27-point algorithm or EchoMail’s Signature Matching Process; and,
- 7) Categorise the signature matches as either “Good Signature” or “Bad Signature” based on specified thresholds.

ECHOMAIL Deliverables - EchoMail will deliver the following:

- 1) A report of signature matches across a statistically determined sample
- 2) Segmentation of the signatures categorized as “Bad Signatures”
- 3) An image library containing for each EVB return envelope image, its related image in the Voter Registration file or public source



**Pricing Schedule**

<b>Part Number</b>	<b>Part Description</b>
	<b>Professional Services</b>
EM-BI-SETUP	Setup EchoMail Business Intelligence Server
EM-RPT-SERVICES	Data Reporting Services
EM-PS-PROJ-MGT	Project Management
	<b>Licenses</b>
EM-BI-10EPU-SVR	EchoMail Business Intelligence Server (up to 10 EPU <sup>1</sup> )

<sup>1</sup> One (1) EPU equals the processing of up to 10,000 images.