

**Technical Proposal**

Catalog of Federal Domestic Assistance #: 12.217

BAA#: HQ0034-FVAP-11-BAA-0001

**Maricopa County Elections Department  
UOCAVA Voter Interface Upgrade Project**

CAGE Code: [REDACTED]

DUNS#: [REDACTED]

Applicant: Maricopa County Elections Department

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Performance Period: January 2, 2011- December 31<sup>st</sup>, 2012

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### **iii. Technical Approach and Justification:**

#### **1. Executive Summary:**

Arizona UOCAVA voters are afforded some “luxuries” that not all other voters in the United States have: the ability to register online as well as to request, receive, and return their ballot electronically. Yet, we are never satisfied with the status quo if there are available enhancements to be made, and until all UOCAVA voters who want to participate can do so at the same level of effectiveness of our standard voting population, there is room for improvement.

Maricopa County utilizes voter registration and administrative systems which have all been developed in-house by our talented IT staff. This internal resource allows for innovation and modification to our procedures without timely delays in procurement procedures and vendor selection. Most recently our programming team augmented the existing Secretary of State’s system (which allows for UOCAVA voters to request a ballot electronically) with an internal, automated ballot delivery process negating the need for staff intervention. Previous manual procedures of pulling the ballot PDF, attaching it to the instructional email, and sending it to the voter are now done systematically. We seek to provide additional improvements which we feel will noticeably enrich the UOCAVA voter’s experience with our website, encourage participation, and escalate the efficaciousness of successful ballot casting.

The improvement of both the public point of contact, as well as increased economy on the processing of the information being provided, will reduce the time needed to facilitate voter registration, ballot delivery, as well as strengthen the likelihood that the ballot will be tabulated.

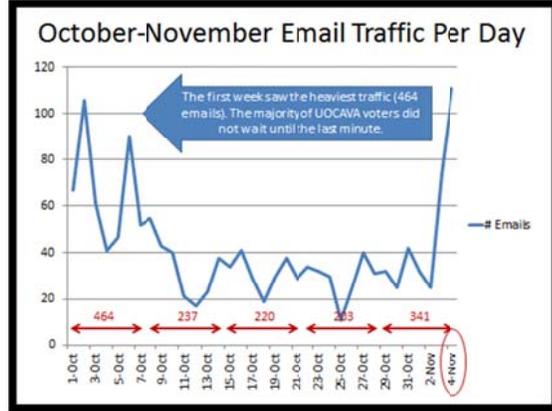
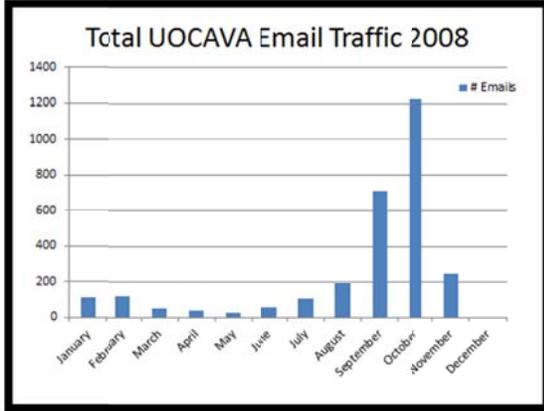
Once the new website format is established and the connectivity interface developed to our existing election management system (EMS), the website will remain current upon any upgrade to the EMS as a whole. The sustainability of the project will require minimal maintenance.

#### **2. Goals and Objectives:**

The Maricopa County Elections Department Voter Assistance Program has a mission. That mission is to “ensure equal access to the electoral process for all its citizens and to provide the assistance some voters may require”. Voters require assistance for a variety of reasons based on physical and mental abilities, mobility concerns, language skill sets, and for our UOCAVA voters, the challenges of time and distance. Our goal is to eliminate obstacles to the voting process for all eligible voters. Providing services to aid voters is noble; however, if voters don’t know that they are available, or how to utilize them, they are useless. Upgrading the voter information interface on the website is an attempt to empower the public to successfully participate in the electoral process at the same level as our standard voting public.

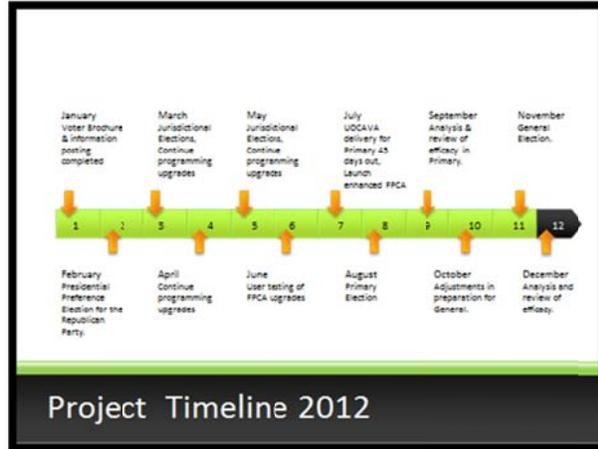
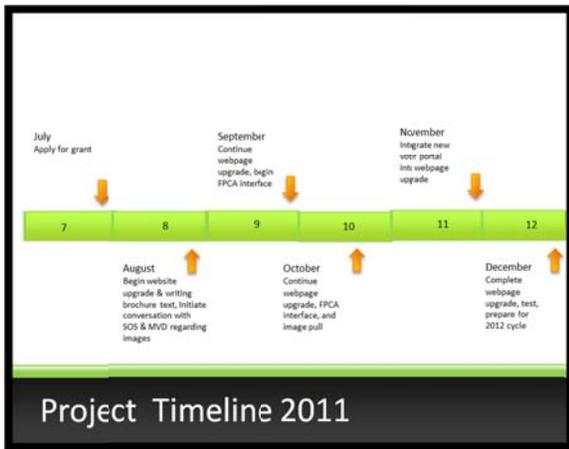
### 3. Schedule and Milestones:

Analysis of the use of our website in the last presidential election year demonstrates the timeline that we need to be cognizant of to ensure maximization of usefulness:



The election cycle in Arizona will kick-off 2012 with our Presidential Preference Election in February for the Republican Party. Jurisdictional elections will follow in March and May with our Primary Election taking place on August 28<sup>th</sup>. We anticipate having the launch of our online information in January with the back-end processing upgrades ready for testing in June of 2012.

#### PROJECT TIMELINE:



This timeline is fluid depending on the availability of grant funds (should they be approved) and the number of elections called over the ensuing 18 months. While we anticipate utilizing permanent staff for many of the functions, given that we are also preparing for a Presidential Election we expect that the need will arise for subcontracted labor. Our proposal is founded on that premise and reflects the resources necessary to make that happen.

#### **4. Reports:**

Part of this project will focus on the current questions asked in the FVAP Survey as well as the EAC Election Day Survey to incorporate data-gathering and this specific report generation into our election management system. Additionally, the standard UOCAVA analysis will continue to see if there is improvement over established internal benchmarks as well as comparison to national standards.

#### **iv. Management Approach:**

##### **Definition of Strategic Goals**

UOCAVA voters encounter challenges in requesting, obtaining, and returning voting materials and information in a timely fashion to the detriment of being able to participate in the electoral process to the same extent as their civilian/local counterparts. We seek to overcome some of those barriers with an upgrade to the online UOCAVA services provided by Maricopa County Elections Department with the following actions:

##### **1. Streamline the process on the UOCAVA page for voters to determine their registration and covered voter status.**

We seek to provide the voter the ability to determine if they are currently registered in our system as a covered UOCAVA voter, as well as the ability to view the expiration date of that coverage, and what mailing & email address we have on file for them.

##### **2. Enable voters to update the information used to obtain their ballot, mailing or email address, via the site to reduce ballot “fallout”.**

Should the voter find that the information we have is incorrect or outdated, the upgrade would allow the voter to update their information via a GUI interface which will interact with existing signature image captures to update their record.

##### **3. Increase functionality of the online, fillable FPCA form.**

Currently we have an online, fillable FPCA that is printed off and keyed into our registration and early voting system. This project will seek to establish an increased function such that for an existing voter it will pull their information for verification as well as attach their signature clip-image from our registration records for any modifications. If the FPCA is being used as an initial registration, we will have that data go into our system for voter eligibility validation. We will need to explore the capability for the signature image to be captured from DMV (as we do with the SOS’s online voter registration system). Currently 70-75% of the FPCA applicants provide their Arizona driver’s license number which will expedite this process.

We will apply practical functions which will increase validity of the information keyed by the voter and positively impact success rates. Recently we added a redundant email field to the online FPCA so that the voter has to key it uniformly twice. Prior to that format change we had

a steady volume of emails which were not valid. By mandating that the applicant key it twice, and consistently, we have eliminated that error and now have all emails reaching the applicant. The overwhelming majority, 70-80%, of our FPCA applicants provide us with an email address.

This back-end automation will prove extremely beneficial to not only the voter, but it will be a better use of resources. As we saw with the implementation of our online voter registration system in Arizona, the keying of a registration form manually costs roughly \$ .83 per form whereas the online system is only \$ .03.

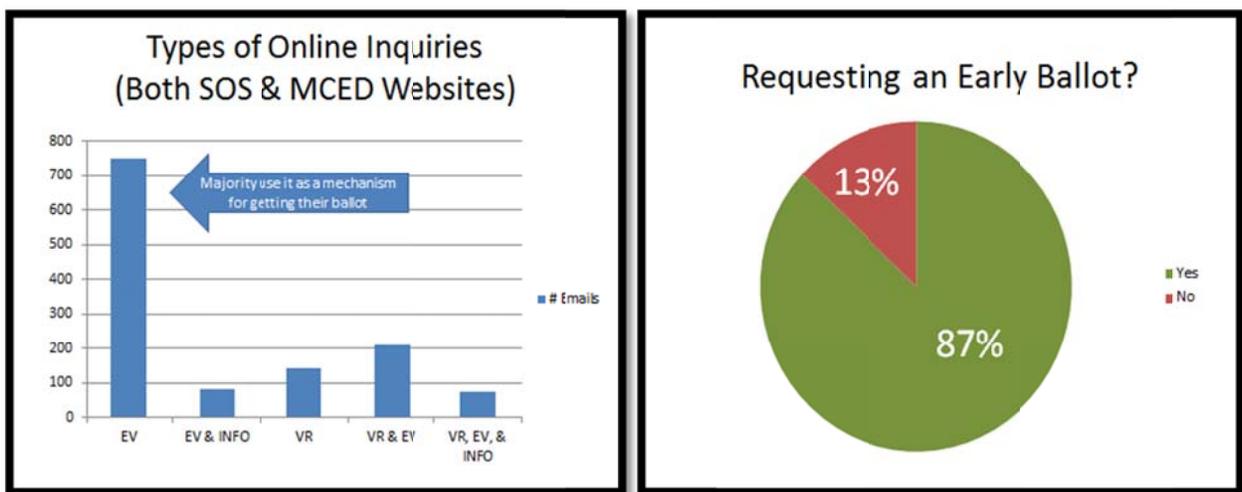
**4. Publish succinct communication on the entire process including step by step instructions to set voter expectation as well as promoting understanding of their rights and responsibilities.**

The publication of an online voter information brochure for the unique challenges and procedures a UOCAVA voter faces will provide the voter with all of the information that they need to successfully navigate the process.

An additional enhancement to voter communication we will implement will be an automated email sent to voters prior to the ballot delivery to ensure that the email address is still valid. Because we have the end date for UOCAVA coverage we also look to provide the voter with an email notification of that expiration date with a link to the fillable FPCA form should the voter be eligible to extend that coverage.

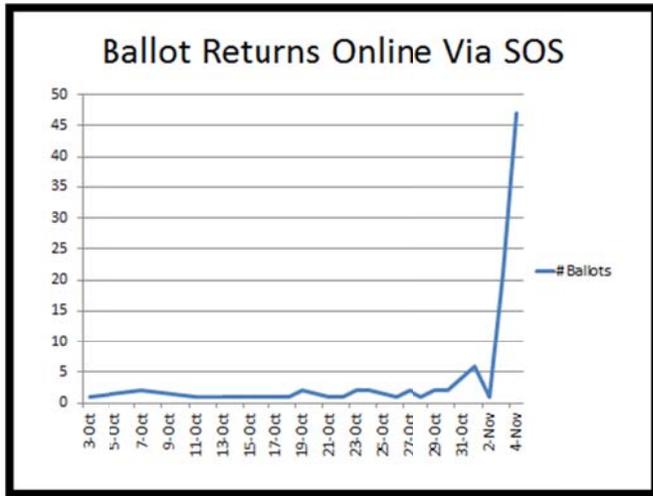
**5. Incorporate UOCAVA voter data gathering functions into our results reporting.**

By expanding the online functionality of our UOCAVA site we hope to empower voters to remain active partners in their voting process by providing all of the information and tools necessary to ensure MCED has the correct information in order to provide them with their correct balloting materials, in the manner that the voter has designated, with sufficient time for casting and return of the ballot. In the last Presidential Election the majority of UOCAVA voters utilized our online services to obtain their ballot, so that will be a primary focus of our efforts:



By providing a clear narrative on what the process is, we hope to convey to voters the importance of returning their ballot as soon as they have completed voting, and that they do not have to wait until Election Day. With this message we hope to provide sufficient time to address any voter's concerns or issues with an appropriate window of time for resolution before the 7 PM deadline on election night.

In the 2008 election many voters returned their ballot via the Secretary of State's secure portal on Election Day;

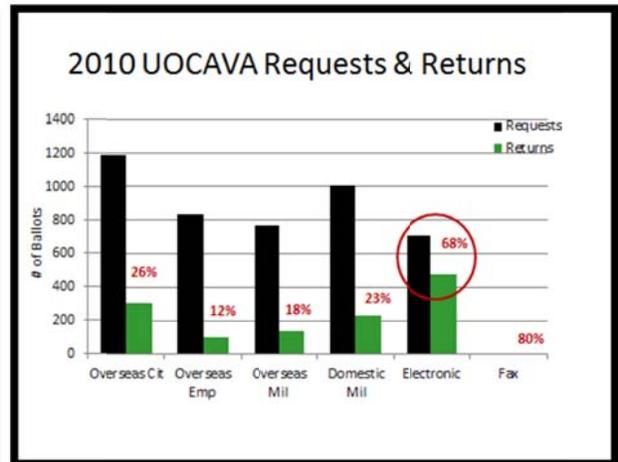


### Analysis of Current Process

The 2010 General Election saw a dramatic decrease in the number of returned early ballots mailed out to the voters of Maricopa County. Prior to the last General Election we enjoyed a return rate in the low 90s% for the majority of our voters who vote by mail. However, the 2010 election saw a return rate for our overall population plummet to only 77%. UOCAVA voters were no exception to the reduced return rate; they returned their ballots only 28%--well below even the 2006 mid-term election return rate. Yet, the ability to return the voted ballot electronically dramatically improved performance of UOCAVA ballot casting:

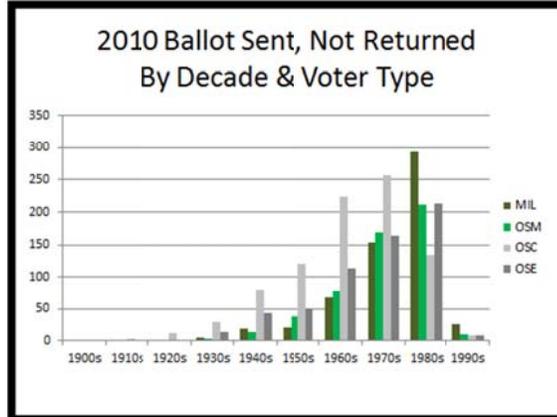
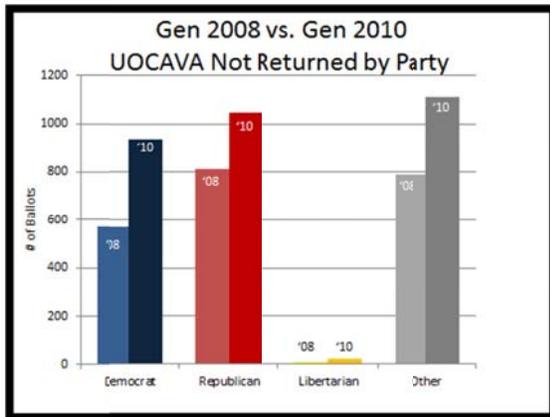
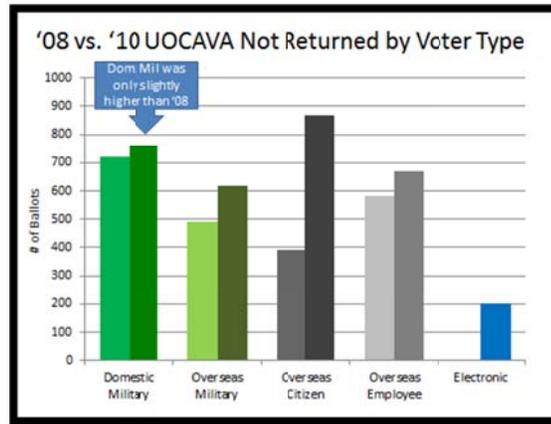
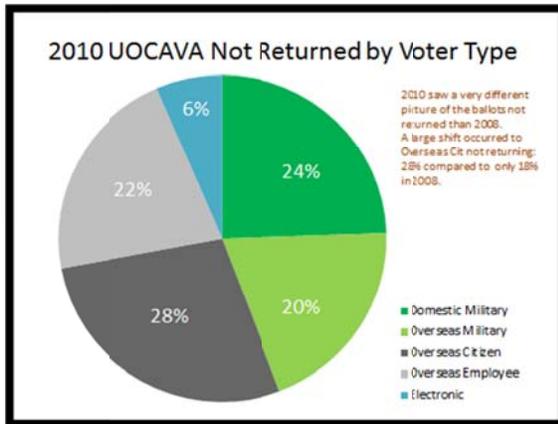
#### Rate of Return

- General Election 2008 UOCAVA voters returned their ballots **64%** of the time, total ballot return for all early voters was **92%**.
- General Election 2010 UOCAVA voters returned their ballots **28%** of the time, total ballot return for all early voters was **77%**. (But electronic return was much closer, at **68%**.)



In the 2008 election the disparate return rate of Standard to UOCAVA ballots was a spread of almost 30 percentage points. In 2010, with the expansion of the electronic return, we saw that gap narrow to just under 10 percentage points for UOCAVA voters who selected that return option. The additional functions of the website will engender more accurate information and should increase the success rates of both the ballots returned electronically as well as those voters who select the traditional method of returning their paper ballot.

By conducting a full analysis of the voter profile of ballots which were not returned we are able to isolate the voting population most vulnerable:

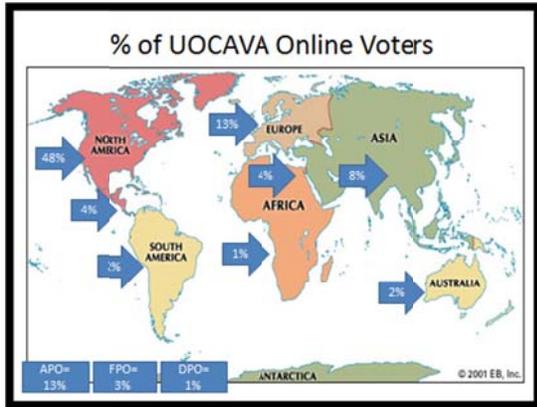


This analysis also demonstrates that we have an opportunity to increase the success rate of our electronic balloting voters as there were 200 voters who did not return their voted ballot. We believe that by clearly defining the process we will be able to improve upon that metric. Younger voters have an expectation of online capabilities and we seek to increase their participation as well by ensuring that level of e-service.

### Identification of Potential Risks and Mitigating Strategies

The UOCAVA population is global. This can be viewed as both a security risk as well as an asset. Because votes are dispersed to the far corners of the world and cast their ballots over a 45

day period, 24 hours a day, the ability to isolate and target the ballot casting process provides an inherent security. Our analysis of voters who utilized the online options also demonstrated that almost half of them were stateside:



It is important to note however, that regardless of the ballot casting option that the voter selects, either via a paper ballot or electronic return, eventually all ballots are funneled into a central collection point albeit via the United States Post Office or a secure server. It is at this point of cast ballot reception where the electronic method may actually provide more security in that the paper ballots are collected and returned to the United States for *all 50 states* at those USPS distribution centers, whereas the electronic return has 5 *unique* server locations. Additionally, the number of individuals who have physical access to the paper ballots en route would be greater than the number of individuals who have the knowledge and skillset to hack into secure government servers.

But the system must vigorously defend against any electronic attack, at every point of the process. By ensuring that the voter is authenticated at the onset by providing personal information matching their registration record, or for those completing an FPCA with dual registration and ballot request functions that they are eligible electors, the singular request can be secure. We seek to determine if the addition of a CAPTCHA function to registration and ballot requests will increase the level of security from an automated attack, thus reducing the risk of wide-scale targeted attacks.

Voters using the online services for registration look-up, ballot requests, FPCA submission, etc. will have their IP address captured and tied to the function they are performing. Multiple requests from a single IP will be one trigger in the oversight of the system to determine if this is a public terminal or multiple requests coming from a single location.

Security is further reinforced when voters have the ability to verify their registrations and ballot status as they are then able to view if a request was made without their knowledge. We cannot solely rely on the voters' due diligence however as many may not take advantage of this option.

## Formalized Performance Indicators

The indicators that we have selected will be a moving target—turnout varies depending on the election: if there are close races on the ballot, if there are any controversial propositions or referendums, how charismatic the candidates are, etc. So we seek to engage the UOCAVA voter at an equal rate of the general population for that given election.

**Indicator:** Increase the percentage of effectively cast ballots by UOCAVA voters.

**Goal:** Equal to, or better, participation rates of the general population.

**Indicator:** Reduce the percentage of ballots returned as undeliverable.

**Goal:** Equal to, or better, participation rates of the general population.

**Indicator:** Reduce the percentage of ballots not returned.

**Goal:** Equal to, or better, participation rates of the general population.

**Indicator:** Reduce the percentage of rejected ballots due to invalid or lack of signature.

**Goal:** Equal to, or better, participation rates of the general population.

**Indicator:** Reduce the percentage of rejected ballots due to late return.

**Goal:** Equal to, or better, participation rates of the general population.

## Justification for Modification of Existing Processes

The success of the electronic process in the 2010 election cycle, particularly in lieu of the historically low return rate, demonstrates the voter's acceptance and growing reliance on the ability to participate in the electoral process via an online method. What we must do is enable the voter the ability to obtain the information that they seek and utilize it to effectively cast their ballot in an environment that is as secure as our existing UOCAVA voting system.

## Projections of Efficacy

After review of the positive impact of the electronic pathways utilized to provide, and receive ballots back from, the UOCAVA population we anticipate that the success rates for voters who select that option to be on par with the general voting population for Maricopa County. Voters who select the traditional paper ballot delivery will still see an improved participation rate due to the better quality of information being utilized.

## Performance Measurement

The performance indicators will be analyzed in comparison to both the general voting public for each election, as well as in context to historical trends of the UOCAVA population in Maricopa County. Voting trends will look at age of the voter, party affiliations, UOCAVA voter type (Military, Overseas Military, Overseas Employee, and Overseas Citizen), and method of casting ballot (standard, electronic, via fax).

## 1. Current and Pending Project Proposal Submissions:

Maricopa County Elections Department does not currently have any other funding support for UOCAVA activities.

## 2. Qualifications:

Rey Valenzuela:

**Years with MCED:** 21

**Area of Expertise:** UOCAVA, Early Voting, Voter Registration, Ballot Layout

**Professional Certifications:** 2008 Auburn University, CERA certified  
Certified Election Official of Arizona

**Professional Association:** Standards Board (2006 +)

**Professional Awards:**

2000 Computerworld Smithsonian Collection Laureate Award: *Vote-by-Mail*

2005 NACo Achievement Award: *Military and Overseas Voter Project*

Terry Thompson:

**Years with MCED:** 19

**Area of Expertise:** IT Director, Systems Architect

**Education:** DeVry University, Bachelor of Science in Computer Science

**Professional Certifications:** Certified Microsoft Developer, Certified Microsoft Systems,

**Professional Awards:**

2000 Computerworld Smithsonian Collection Laureate Award: *Vote-by-Mail*

2005 NACo Achievement Award: *Military and Overseas Voter Project*

2007 NACo Achievement Award: *Election Reporting Database*

2007 Election Center Best Professional Practice Award: *Election Reporting Database*

2007 Harvard University's Kennedy School of Government's Ash Institute Top 50 Innovations in Government: *Election Reporting Database*

2008 NACo Achievement Award: *Voter Assistance & Alternative Format Information Website*

2010 Harvard University's Kennedy School of Government's Ash Institute Bright Ideas Award: *Election Reporting Database*

David Fee:

**Years with MCED:** 11.5

**Area of Expertise:** IT/Project Manager of Application Development

**Education:** Bachelor of Science in Information Technology

**Professional Certifications:** Certified Microsoft Developer, Currently studying for PMP certification

**Professional Awards:**

2000 Computerworld Smithsonian Collection Laureate Award: *Vote-by-Mail*

2005 NACo Achievement Award: *Military and Overseas Voter Project*

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2008 NACo Achievement Award: *Voter Assistance & Alternative Format Information Website*  
2010 Harvard University's Kennedy School of Government's Ash Institute Bright Ideas Award: *Election Reporting Database*

Tammy Patrick:

**Years with MCED:** 8

**Area of Expertise:** Federal Compliance VRA, HAVA, ADA, UOCAVA, NVRA

**Education:** 1991 Purdue University, Bachelor's Degree in American Studies

**Professional Certifications:** 2007 Auburn University, CERA certified  
Certified Election Official of Arizona

**Professional Associations:**

Election Assistance Commission Unwritten Languages Working Group (2008),  
Election Assistance Commission Election Canvassing Working Group (2009),  
Election Assistance Commission Urban/Rural Voting Working Group (2010),  
Election Center Legislative Committee (2005+),  
Election Center Task Force on Education & Training (2007-2008),  
Election Center Benchmarking Task Force (2010+),  
Pew Center on the States Data for Democracy Initiative (2008)

Pew Center on the States Advisory Board on the Performance Index (2008+),  
Pew Center on the States Voter Modernization Project (2009+),  
Pew Center on the States Voter Information Project (2011+),  
Uniform Law Commission Observer, UMOVA (2009-2010)

**Professional Awards:**

2005 NACo Achievement Award: *Boardworker Voter Assistance Training Enhancement Program*

2006 NACo Achievement Award & Best In Category Award: *Voter Language Assistance Proficiency Assurance Program*

2007 NACo Achievement Award: *Election Reporting Database*

2007 Election Center Best Professional Practice Award: *Election Reporting Database*

2007 Harvard University's Kennedy School of Government's Ash Institute Top 50 Innovations in Government: *Election Reporting Database*

2008 NACo Achievement Award: *Voter Assistance & Alternative Format Information Website*

2008 Arizona Disability Advocacy Coalition's ADA Liberty Patriot Award

2009 NACRC Best Practice Award: *Disaster Recovery Plan*

2010 Harvard University's Kennedy School of Government's Ash Institute Bright Ideas Award: *Election Reporting Database*

## **v. Budget Proposal**

The estimated time to complete the website enhancement is approximately 1060 programming and testing hours, the reporting automation 400 programming and testing hours. We anticipate that the first project will be done 80/20 staff to contractor with the second 20/80 as it will fall later in the presidential election cycle.

### Itemized Budget:

a) <b>Direct Labor:</b>		\$32,480.00
• Website:	848 Staff Hours @ \$35.00 HR = \$29,680.00	
• Reporting:	80 Staff Hours @ \$35.00 HR= \$2,800.00	
b) <b>Administrative/Clerical Labor</b>		\$ 27,720.00
• Finance/Reporting:	4 Hours Month X 18 Months X \$35.00 HR= \$2,520.00	
• Systems Administration:	40 Hours Month X 18 Months X \$35.00 HR= \$25,200.00	
c) <b>Fringe Benefits/Overhead etc.</b>		(\$15,050.00)
• Benefits and overhead considered as matching applicant funds.		
d) <b>Travel</b>		\$10,000.00
• 3 FVAP meetings:	Airfare average \$350	
	Hotel average \$200 per night X 3 nights+ \$600	
	Per Diem average \$75	
	Taxi & shuttle \$100	
	Estimated Total= \$1200 per attendee per meeting	
• Possible site visitation:	Washington State SOS; Oskaloosa, FL; TBD.	
e) <b>Subcontract</b>		\$79,800.00
• Website:	212 Hours @ \$150.00 HR = \$31,800.00	
• Reporting:	320 Hours @ \$150.00 HR = \$48,000.00	
f) <b>Consultants—NA</b>		0
g) <b>Materials &amp; Supplies—NA</b>		0
h) <b>Other Direct Costs—NA</b>		0

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Total Request: \$150,000.00