Technical Proposal: State of Michigan, Department of State Proposal to Enhance UOCAVA Ballot Distribution Process

Catalog of Federal Domestic Assistance Number: **12.217**

BAA number: **HQ0034-FVAP-11-BAA-0001**

Title of Proposal: Enhanced Delivery and Tracking of Absentee Ballots for Military and Overseas Voters

CAGE Code and DUNs Number:

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Proposed Period of Performance: ~~Date of Grant Award through November 2014~~

13 January 2012 through 30 November 2016

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TECHNICAL APPROACH AND JUSTIFICATION

Executive Summary

The Michigan Department of State's proposal is designed to increase the participation of military and overseas voters in the electoral process. This will be accomplished by providing an enhanced electronic ballot that will be easier to create for Michigan election officials and easier to vote for military and overseas voters. The proposed software enhancements and technical improvements will facilitate and speed up the issuance and tracking of absentee ballots for voters covered by the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) in *All Michigan Cities and Townships*. The enhancements will place particular emphasis, however, on improving the processing of UOCAVA absentee ballots in Michigan's smallest cities and townships.

The proposal calls for software development that will permit all election officials in Michigan to electronically create, process and track ballots for absentee voters (including military and overseas absentee voters). In Michigan's highly decentralized election management system, over 700 of the smallest cities and townships (non-QVF communities) do not have electronic access to the state's voter registration system (the Qualified Voter File or "QVF"). These jurisdictions must rely on their county clerks to track absentee ballots. This is a burden on both the local clerks and the county clerks. The proposal calls for a web-based application that will permit Michigan's smallest jurisdictions to enter tracking data into the QVF for all absentee voters. Once the proposal is implemented, software will compile all absentee voter information required by FVAP and the Election Assistance Commission's (EAC) biennial survey which will provide the EAC with more timely and more accurate data. The proposal also calls for enhancements to the software that creates electronic ballots required by the Military and Overseas Voter Enhancement Act (MOVE). The enhancements will permit all city and township clerks in Michigan to create MOVE ballots more quickly and easily and will provide the voter with a better voting experience. Finally, the proposal will provide for an integrated plan to communicate more effectively with military and overseas voters with the goal of increasing their participation in the electoral process.

Goals and Objectives

The State of Michigan proposes four separate, but related projects to implement the objectives identified in the Executive Summary above:

I. Objective: Improve the electronic ballot developed for voters covered by the Military and Overseas Voter Empowerment Act (MOVE). Michigan has already implemented software that permits local election officials to create an electronic ballot for any overseas or military voter who requests one. The existing process involves a number of steps that election officials find cumbersome to follow. The user must also have the software needed to create a pdf. While a number of vendors offer pdf creation software as a free download, the process is unnecessarily cumbersome and time consuming. The ballot creation process must become a one-step process. The selection of the voter from the QVF system should automatically create a pdf ballot or link to a pre-created pdf ballot.

Under the existing process, local officials create the votable pdf ballot (the ballot includes ovals similar to those seen on an optical scan ballot) and emails it to overseas and military voters upon request along with voting instructions and information on returning the ballot to the proper election official. The voter must print the ballot and then vote the ballot by filling in ovals. The enhanced ballot will be designed in a manner that permits the voter to fill in ovals on the ballot (make voting selections) electronically. These enhancements will make this program easier for Michigan election officials and easier for the UOCAVA voters.

How the proposal will establish and operate successful, sustainable and affordable electronic tools that will improve voting systems for voters covered by UOCAVA.

A vast majority of the cost associated with improving the creation of the electronic ballot mandated by the MOVE Act is programming. Ongoing costs will be minimal. The data needed to create MOVE ballots already exists. No additional administrative costs will be added by the software improvements. The enhancements will positively affect every jurisdiction in Michigan. This proposal will implement software changes that will make the electronic ballot creation process much more seamless and much faster and will eliminate the need for local election officials to have special software available to create a pdf. MOVE ballot creation will become a simple 3-step process for the election official:

1. Search and select the voter,
2. Click to create an electronic ballot,
3. Send the ballot by email to the voter.

The failure rate in the creation of the electronic MOVE ballot should be reduced to near zero in every jurisdiction in Michigan. The streamlined process of creating the ballot will make it significantly less likely that a local election official will fail to send an electronic ballot to a UOCAVA voter. UOCAVA voters will now mark their ballots on-line which will eliminate stray marks and any confusion associated with which oval the voter meant to mark.

II. Objective: Make the Absentee Voter (AV) ballot tracker useable by non-QVF communities. Michigan permits voters (military/overseas and others) to track the AV process on-line. However, there are 710 non-QVF cities and townships in Michigan that do not have electronic access to the QVF system. Currently, the only way for non-QVF communities to get their AV application and ballot information into the ballot tracking system is have the county clerk enter the data. The county clerk must enter AV Applications Received, AV Ballots Sent and AV Ballots Received for AV Voters. (As an alternative, non-QVF clerks may travel to the county clerk's office to do the data entry themselves, but this is rarely practical.) While county clerks have shown a willingness to enter military/overseas voter ballots, they are less amenable to entering other types of AV ballot into the QVF for all their small jurisdictions' AV voters. The non-QVF clerks responsible for issuing absentee ballots have little control over the tracking process. The result is inconsistent tracking of both military/overseas and standard AV ballots. The process is a particular burden for county clerks in a major election year. As with most levels of government, county clerk offices are facing significant budget cuts.

The State of Michigan proposes to create a web based application that will allow non-QVF users to enter all absent voter ballot information without going through the county clerk or the QVF software. The QVF's AV module is complex. It assigns ballot numbers, tracks dates and issues a variety of reports. The web application will include all features of the QVF Absentee Voter Module which provides customized AV applications and labels in addition to assigning ballot numbers and various dates. The AV module has numerous checks to prevent data entry errors. These system checks will be carried over to the web version. The proposal will require some redesign of the current AV module.

How the proposal will establish and operate successful, sustainable and affordable electronic tools that will improve voting systems for voters covered by UOCAVA.

Most costs associated with implementing the web-bases AV tracking system are up-front programming costs. Any increase in ongoing costs to track AV ballots will be minimal. No additional administrative costs will be added by the software development. The software development will positively affect the 700+ cities and townships that do not have direct access to the QVF system and will reduce the workload of the county clerks that currently track AV ballots for the small jurisdictions within their counties. The software development will also speed up the processing of all AV ballots-electronic and paper-requested by UOCAVA voters. UOCAVA voters will receive their ballots more quickly which will greatly reduce the likelihood that their ballots will not be received in time to be counted.

III. Objective: Streamline EAC's Election Administration and Voting Survey data collection process and FVAP data requests to ensure that every jurisdiction properly categorizes military/overseas ballots. There are a number of nuanced selections that must be tracked at the time an Absentee Ballot is issued in order to easily capture data required for Federal reporting purposes. Regardless of the efforts made before each election to ensure that the local election officials track of this data properly, they simply don't. By the time a survey is sent to users following each Federal election cycle, detailed and accurate military/overseas ballot data is no longer available in many jurisdictions. The proposal includes programming all necessary selections types into the software created by the enhanced ballot tracker described above so that the data required by the EAC Survey is captured at the point the ballot is issued and will then be readily available for the report without contacting each local jurisdiction. New data elements will identify 1) Absentee Ballots issued to uniformed services voters; 2) Absentee ballots issued to the spouse or dependents of uniformed services voters or to overseas civilian voters. The software enhancements will also allow the electronic calculation of 1) the number of absentee ballots sent to uniformed services voters, the spouses and dependents of uniformed services voters and overseas civilian voters that were returned by the voter by the close of the polls on election night; 2) the number of absentee ballots sent to uniformed services voters, the spouses and dependents of uniformed services voters and overseas civilian voters that were returned by the voter after the election; 3) the number of absentee ballots sent to uniformed services voters, the spouses and dependents of uniformed services voters and overseas civilian voters that were never returned. This will ensure accurate and timely information regarding all EAC survey questions for 100% of Michigan jurisdictions.

How the proposal will establish and operate successful, sustainable and affordable electronic tools that will improve voting systems for voters covered by UOCAVA.

All costs associated with streamlining the EAC Survey data collection process will be up front programming costs. Ongoing costs will decrease considerably. Once the military/overseas ballot information is collected at the point of issuance, there will be no more need for local election officials to maintain the information independently and no need for the Department of State to use valuable staff time to survey over 1500 election officials in Michigan following each Federal Election. EAC report data will be produced electronically which will speed up the reporting process. No local data record will be lost. The result will be a far more accurate report to the EAC in a far more timely fashion.

IV. Objective: Improve and enhance communication with Michigan's military and overseas voters. Once implemented, the proposal will increase awareness of Michigan's voter registration and absentee ballot options that are available to military and overseas voters, and thus increase voter participation. The Department of State will develop an ongoing targeted, multi-faceted approach to identify and communicate with these Michigan citizens. Elements of the program include:

- Working with all branches of the military and foreign U.S. embassies to identify and inform Michigan citizens in the military and/or living overseas of voter registration requirements and methods for them to cast ballots in Michigan. This effort will include use of these organizations' available communication networks, data, and any existing methods they have available for communicating with Michigan citizens that are overseas.
- Working with Michigan local clerks to enhance and increase their efforts to identify, collect and maintain data (email addresses, mailing addresses) on Michigan registered voters who are in the military and/or are living overseas.
- Developing a targeted Web and email communication plan to regularly and automatically inform Michigan citizens in the military and those living overseas of upcoming elections, deadlines and process related to voting.
- Tracking and measuring detailed data on military and overseas voter registration and voter participation on an ongoing basis.

The objective will be accomplished, in part, by adding fields to the QVF database to more accurately identify military voters and overseas non-military voters. Software enhancements will all provide a method of maintaining the email addresses of military and non-military overseas voters for the purpose of providing ongoing communications with these votes in an efficient and cost effective manner. Military and overseas voters change their physical overseas addresses frequently. Email address changes are less frequent which will enable Michigan election officials to maintain communications with UOCAVA votes who have moved.

How the proposal will establish and operate successful, sustainable and affordable electronic tools that will improve voting systems for voters covered by UOCAVA.

Most costs associated with setting up an effective communication system targeting military and overseas voters will result from software enhancements to the QVF system that will better identify military and overseas voters and track their email addresses. Up front costs will also include a USPS mailing to all known military and overseas voters to collect their email addresses, apprise them of the many voting options available to them and to point them to Department of State's Web site. Most future communications will take place via email at little or no cost.

It is anticipated that the communication project will double the number of military and overseas voters who request electronic ballots as provide by MOVE.

Schedule and Milestones

Objective I

Work on a detailed analysis and work statement will begin as soon as soon as the Grant Application is approved and funds are available. The technical staff at DTMB will meet with BOE staff to verify project criteria. DTMB will draft a formal Statement of Work.

Milestone 1: Approval of Statement of Work. Approximate Elapsed time: 30 days.

DTMB staff will create screen prototypes of the new electronic MOVE ballot creation process and enhanced electronic MOVE ballot.

Milestone 2: Approval of ballot creation and enhanced ballot prototypes. Approximate Elapsed time: 30 days after Milestone 1.

DTMB staff will program based on approvals of Milestones 1 and 2. DTMB will deliver programs for unit testing.

Milestone 3: Delivery of software for testing. Approximate elapsed time: 30 days after Milestone 2.

BOE staff will test programs.

Milestone 4: Final approval. Approximate elapsed time: one week after Milestone 3.

Objective II

Work on a detailed analysis and work statement will begin as soon as soon as the Grant Application is approved and funds are available. This process will take place simultaneously with Objective 1 analysis and work statement. The technical staff at DTMB will meet with BOE staff and Ken Borsare to verify project criteria. DTMB will draft a formal Statement of Work. Work statement will include analysis if enhancements needed to QVF software.

Milestone 1: Approval of Statement of Work. Approximate Elapsed time: 60 days.

DTMB staff will create screen prototypes of the new ballot tracking web application. Ken Borsare will begin enhancements to QVF software.

Milestone 2: Approval of ballot creation and enhanced ballot prototypes. Approximate Elapsed time: 45 days after Milestone 1.

DTMB staff will program based on approvals of Milestones 1 and 2. DTMB will deliver programs for unit testing.

Milestone 3: Delivery of enhanced QVF software for testing. Approximate elapsed time: 30 days after Milestone 1.

Milestone 4: Delivery of new web application software for testing. Approximate elapsed time: 60 days after Milestone 2.

BOE staff will test all programs.

Milestone 5: Final approval. Approximate elapsed time: one week after Milestone 4.

Objective III

Work on a detailed analysis and work statement will begin approximately 60 days after the Grant Application is approved and funds are available. The Ken Borsare will meet with BOE staff to verify project criteria. Ken Borsare will draft a formal Statement of Work.

Milestone 1: Approval of Statement of Work. Approximate Elapsed time: 30 days from beginning of project.

Borsare staff will create screen prototypes of the enhanced QVF software.

Milestone 2: Approval of software prototypes. Approximate Elapsed time: 15 days after Milestone 1.

Borsare will program based on approvals of Milestones 1 and 2. Borsare will deliver programs for unit testing.

Milestone 3: Delivery of software for testing. Approximate elapsed time: 30 days after Milestone 2.

BOE staff will test programs.

Milestone 4: Final approval. Approximate elapsed time: one week after Milestone 3.

Objective IV

BOE staff will begin drafting a communications plan as soon as soon as the Grant Application is approved and funds are available.

Milestone 1: Completion of Communications Plan. Approximate Elapsed time: 30 days from start of project.

BOE staff will identify overseas voters by querying the QVF system.

Milestone 2: Draft mailing and send to overseas voters. Approximate Elapsed time: 30 days after Milestone 1.

Milestone 3: Establishment of email list of overseas voters. Approximate elapsed time: TBD.

Milestone 4: Implement ongoing communication plan prior to each election.

Reports

1. Programmatic and Financial Progress Reports

The Department of State will provide quarterly programmatic progress reports including:

a) Progress toward each Milestone
b) Problems and Issues
c) Plans for following quarter

The Department of State will provide quarterly financial progress reports including:

a) Staff hours spent during quarter broken down by staff members and by objectives
b) Dollars expended during the quarter broken down by staff members and by objectives
c) Explanation of variations from budget plan

2. Data collection points reports

a) At the beginning of the project the Department of State will compile statistics on UOCAVA ballots sent and returned during the 2008 and 2010 Federal election cycles.
b) At the beginning of the project the Department of State will compile statistics on electronic MOVE ballots sent and returned during the 2008 and 2010 Federal election cycles.
c) Following the 2012 and 2014 State Primary and State General Elections the Department of State will compile statistics on UOCAVA ballots sent and returned.

d) Following the 2012 and 2014 State Primary and State General Elections the Department of State will compile statistics on electronic MOVE ballots sent and returned.

3. Final Report

Following the 2014 Federal election cycle, the Department of State will provide a thorough evaluation of impact of the implementation of the objectives described in the Grant Application. The report will list all success and failures experienced as a result of the implementation of each objective.

MANAGEMENT APPROACH

Personnel and Contractors

The following state personnel and contractors will form the project team:

Department of State, Bureau of Elections (BOE)

Timothy M. Hanson, Director, Program Development Division
Stuart Talsma, Analyst, Program Development Division

Michigan Department of Technology, Management and Budget (DTMB)

Jelly Gillig, Senior Programmer
Ray Johnson, Programmer

Contract Programmer

Ken Borsare, Freelance Developer

Project Management Analysis

The Department of State, Bureau of Elections and the Department of Technology, Management and Budget have collaborated since 1995 to create and maintain Michigan's nationally recognized statewide voter registration system (the Qualified Voter File or QVF). The QVF was the model for the statewide voter registration system requirement of the Help America Vote Act (HAVA), Public Law 107 – 252 of 2002. Mr. Borsare was a programmer for the vendor who initially created the QVF software and has been maintaining and enhancing the QVF as an independent contractor since 2002.

When created, the QVF replaced all existing voter registration systems that were in use in Michigan. Michigan election administration is highly decentralize, with 1,515 city and township clerks responsible for the administration of elections and voter registration. Michigan's 83 county clerks also have a role in the administration of elections. Prior to QVF, a voter registration system of some sort existed in each city and township. Systems ranged from highly sophisticated computerized election management systems to manually managed paper files. To create the QVF, BOE and DTMB collaborated closely with

representatives of cities, townships and counties which resulted in a voter registration and election management system that was acceptable all election officials and ultimately became the standard by which other statewide systems were measured. The collaboration has continued as worked groups including BOE, DTMB and representatives of city, township and county clerk offices have worked together to make clerk requested enhancements to the system and to implement legislatively mandated changes. DTMB maintains the system hardware and Oracle database while Mr. Borsare maintains the user interface software.

The proposed project team has all collaborated repeatedly to write web applications to provide services to the county, city and township clerks of Michigan as well as the general public. The largest project was the creating of the Michigan Voter Information Center (MVIC), a Web site used by the public to check registration status, view a sample ballot for every election and find a map and directions to polling locations. In addition, the team has designed and created a secure Web site to exchange election sensitive information (the Election Data Exchange). The Election Data Exchange is used by all county, city and township clerks to exchange sensitive information. The group also teamed up to create an electronic ballot in response to the MOVE Act.

BOE has also had preliminary discussions with counterparts in the State of Indiana to work together to identify people who may be registered to vote in both states. The states border each other and many residents of Indiana have vacation residences in the Michigan cities and townships that border Lake Michigan.

This project will assist UOCAVA voters in a number of ways:

Strategic Goal 1: Enhance Electronic MOVE Ballot and Ballot Creation Process. The existing ballot creation process can be improved. The county, city or township clerk currently goes to a secure Web site and searches for the voter who requests the electronic ballot. Upon verification of registration, the clerk requests a ballot by clicking a radio button. The ballot is created along with instructions on voting and returning the ballot. A 6-step process is followed to create a pdf of the ballot and save it. The clerk must have a software package needed to create the pdf available on the computer. The clerk then generates an email and attaches the pdf.

Web designers will create new software to streamline the process. The new process will eliminate the pdf creation process including the need for special software. A click on the radio button will provide a facsimile ballot ready to send to the voter. The enhancement simplifies the production of the electronic ballot and greatly reduces the error rate thus ensuring that the voter will get the ballot in a timely manner. In addition, the voter must currently print the ballot and then fill in ovals next to selections. The software enhancement will permit voters to fill in the ovals on line ensuring that they hit the target oval properly. This will provide a better voting experience for the voter and reduce the potential for marking the wrong oval or leaving stray marks on the paper ballot make the voter's intention unclear.

There is little risk associated with the software that is envisioned. Software engineers will ensure that electronic ballots are delivered to voters in a secure manner. We believe the changes will encourage election officials to publicize the program to their UOCAVA votes.

We believe voters will find the process very easy and will publicize it to other UOCAVA voters. The measure of performance is an increase in participation by UOCVA voters. We have measure participation since 2008 and will continue to do so after the enhancements are complete.

The programming work will be provided by DTMB staff members. They will track their hours daily and all hours will be verified by a manager.

Strategic Goal 2: Make the Absentee Voter (AV) ballot tracker useable by non-QVF communities. The purpose of the ballot tracking system is to let all voters-particularly UOCAVA voters-know the status of their AV applications in a timely manner. This is particularly critical for overseas voters where time delays due to mailing may result in a ballot that is not counted. Because of Michigan's highly decentralized election management and because over 700 cities and townships have no electronic access to the ballot tracking database, there may be delays in getting tracking data into the Web site used by voters to find out the status of their AV applications. This delay is a result of counties clerks having to provide entry services to their cities and townships that have no electronic access. If there is a delay in posting data, UOCAVA voters are concerned their requests have not been received. The proposed enhancements will allow every city and township to enter tracking information into the database as soon as a request is received. This will speed up the process considerably and provide much more timely service to the UOCAVA voters.

The main risk associated with meeting the strategic goal is purely technical. The project opens up the use of the Internet for tracking voter information. Since the information that will be transmitted is non-private, the risk is minimal and will be mitigated by employing security measure such as encryption, individual UserIDs and complex passwords.

The programming work will be provided by DTMB staff and a contractor. They will track their hours daily and all hours will be verified by a manager.

Strategic Goal 3: Streamline FVAP and EAC's Election Administration and Voting Survey data collection process to ensure that every jurisdiction properly categorizes military/overseas ballots. Because of Michigan's highly decentralized election administration, over 1,500 cities and townships must track and report AV ballots issued to military and overseas voters. Up to now, this data is provided in response to surveys. It takes weeks or months and considerable staff time for the Department of State, Bureau of Elections to collect and process the surveys. It is likely that some of the 1,500+ city and township clerks do not keep accurate records which significantly degrades data. This process can be enhanced considerably by collecting the information electronically at the moment it is captured. Streamlining this process in conjunction with implementing strategic goal 2 described above will provide much more accurate and timely information regarding the issuance of AV ballots to UOCAVA voters. This can only benefit the voters.

There is no risk associated with implementing this process. This is a modification to existing software and security controls are already in place.

The programming work will provided by a contractor. He will track his hours daily and all hours will be verified by a manager.

Strategic Goal 4: Objective: Improve and enhance communication with Michigan's military and overseas voters. It is possible to do much more in terms of outreach to military and overseas voters. It is currently difficult to identify with a high degree of accuracy UOCAVA voters. This information will be captured up front with the proposed enhancements to the database. In addition, both state and local election officials will make a concerted effort to capture and maintain accurate email addresses for UOCAVA voters. UOCAVA voters-particularly those who serve in the armed forces-frequently change addresses making paper mailings both expensive and unproductive. The enhancements will allow state and local election officials to identify UOCAVA voters with a much higher degree of accuracy and to communicate much more effectively by capturing email addresses social media information. The primary goal of the proposed system enhancement is to establish and efficient means of communicating frequently with UOCAVA voters and deliver information quickly and efficiently. We can provide information on various deadlines, law changes and procedures designed to give UOCAVA voters a high likelihood of casting a ballot that will be counted. Since Michigan election law makes electronic ballot mandatory for all elections, an additional goal of the communications enhancements is to increase the number of UOCAVA voters who vote in non-Federal elections.

There is no risk associated with this communications project. Work will be completed by Bureau of Elections staff members who will track their hours daily and identify other program costs. All costs will be verified by a manager.

Current and Pending Project Proposal Submissions

There are no current and pending project proposal submissions.

Qualifications

See attached resumes.

BUDGET PROPOSAL

Software development required to implement Objective I will be provided by technical staff employed by the Michigan Department of Technology, Management and Budget (DTMB). The primary consultants will be Jerry Gillig and Ray Johnson. DTMB will modify an existing process that creates electronic ballots for UOCAVA voters. This will simplify the creation of the ballot for city and township clerks. It will greatly simplify the process of voting for UOCAVA voters. All costs are upfront. There will be no ongoing costs. At a minimum, this enhancement is likely to increase the number of absentee ballots issued to overseas and military voters from small jurisdictions by 10%. The following is a summary of the two items staff will accomplish:

1. Create new process to create an electronic ballot (DTMB)
2. Create enhanced electronic ballot that can be marked on-line (DTMB)

DTMB hours estimated for analysis, design and testing new electronic ballot: 560
Hourly Rate for all DTMB Staff: $125.00/hour

Total Direct Cost: 560 hours X $125/hour = $70,000
Indirect Cost: $70,000 X 17.1% FY11 Indirect Rate = $11,970

Total Objective I Cost: **$81,970**

Software development required to implement Objective II will be provided by technical staff employed by the Michigan Department of Technology, Management and Budget (DTMB). Ken Borsare will make adjustments to the QVF software as needed to create the web application. The primary DTMB consultants will be Jerry Gillig and Ray Johnson. DTMB will create a web-based application accessible through an existing secure portal already used by election officials to access election related data. Using the portal allows developers to leverage existing trusted user screening processes. This is a new web application that will be accessible to over 700 cities and townships which makes this a major undertaking. The fact that this enables nearly half of the cities and townships in the state to provide immediate service to overseas and military voters rather than going indirectly through a county clerk makes this a major improvement for the voters. Most costs are upfront. There will be few ongoing costs. At a minimum, this enhancement is likely to increase the number of absentee ballots issued to overseas and military voters from small jurisdictions by 10%. The following is a summary of the three items staff will accomplish:

3. Create ability for remote users with valid credentials to sign on to the portal and be presented with the AV Ballot Processing option. (DTMB)
4. Create a web-based AV Ballot Processing system that mirror, where applicable, the existing Qualified Voter File (QVF) client-based system. (DTMB)
5. Make QVF Adjustments as needed. (Ken Borsare)

DTMB hours estimated for analysis, design and testing web-based AV Ballot processing system: 1,780

Hourly Rate for all DTMB Staff: $125.00/hour

Ken Borsare hours estimated for adjustments to QVF software: 100
Hourly Rate for Ken Borsare: $90.00

Total Direct Cost: 1,780 hours X $125/hour + 100 hours X $90/hour = $231,500
Total Indirect Cost: $231,500 X 17.1% FY11 Indirect Rate = $39,587

Total Objective II Cost: **$271,087**

Software development required to implement Objective III will be provided by Ken Borsare, a programmer under contract with the Department of State, Bureau of Elections. Mr. Borsare will enhance the existing QVF Absentee Voter Module to include the specific reason an AV ballot was issued. In the process, the module itself will need to be enhanced to make is more user friendly. He will also enhance the QVF's Reports Module to include the new statistical information that will be available. This will allow the Bureau of Election (BOE) to more accurately track the issuance of absentee ballots to UOCAVA voters immediately. BOE will be able to see which cities and townships are and are not issuing ballots to UOCAVA voters and take appropriate steps as needed. All costs are upfront. There will be no ongoing costs. By targeting individual cities and townships it is estimated that issuing AV ballots to UOCAVA voters will increase by a minimum of 10%. The following is a summary of the two changes that will be made to implement the objective:

Enhance QVF Absentee Voter Module: 200 hours
Enhance QVF Reports Module: 200 hours
Hourly Rate for Ken Borsare: $90.00

Total Direct Cost: 400 hours X $90/hour = $36,000
Total Indirect Cost: $36,000 X 17.1% FY11 Indirect Rate = $6,156

Total Objective III Cost: **$42,156**

Implementing Objective IV will require a mailing to approximately 27,000 voters who currently have on overseas address. In addition, the project will require a mailing to all 1599 county city and township clerks. The remainder of the project cost will be dedicated staff time to create and implement a communications plan to better identify military and overseas voters and to capture email addresses and to draft numerous electronic communications. The return on this investment will be great and will increase the return on investment from Objective I-IV. The following is a cost summary of implementing Objective IV:

Overseas mailings: $27,000
Staff Time: 100 hours at $40/hr = $4,000

Total Direct Cost: $27,000 + $4,000 = $31,000
Total Indirect Cost: $31,000 X 17.1% FY11 Indirect Rate = $5,301

Total Objective IV Cost: **$36,301**

Budget Summary

Objective I:	$ 81,970
Objective II:	$271,087
Objective III:	$ 42,156
Objective IV:	$ 36,301

Total Project Cost: **$431,514**

Appendix-Resumes

Application Developer Credentials

Ray Johnson – Senior Information Technology Analyst 12, Department of Technology Management & Budget/Agency Services, State of Michigan

Experience:

Hired by the State of Michigan in 1989 as an application developer supporting County Assistance Workers. Responsible for development and maintenance of a variety of specialized client-side and browser-based applications.

Technical Skills:

Skilled in a multiple development technologies including mainframe systems, stand-alone PC based systems and internet applications. Knowledgeable in C, C++, C#, Java, and Visual Basic. Currently using Microsoft .Net technologies to provide web-based solutions for the Michigan Department of State—Bureau of Elections.

Supported Systems:

System: Statewide Index
Purpose: Provides election officials and Bureau of Elections staff a way look up and monitor critical information stored in the QVF.
Role: Primary Analyst/Developer and Technical Lead

System: Election Data Exchange
Purpose: Provides Bureau of Election support staff a secure way to exchange critical election related data with election clerks throughout the state and trusted vendors.
Role: Primary Analyst/Developer and Technical Lead

System: Map Verification Application
Purpose: Provides election officials a way to visually examine and correct if necessary maps used to direct voters to clerk and polling locations.
Role: Primary Analyst/Developer and Technical Lead

Jerry Gillig – Senior Information Technology Analyst 12, Department of Technology Management & Budget/Agency Services, State of Michigan

Experience:

1989-1994 Application developer supporting the State of Michigan Retirement System for the Department of Treasury. Served as the department's XGEN instructor from 1992-1994.

1994-2001	Programmer/Analyst Worked supporting the State of Michigan Payroll System for the Department of Management and Budget. Served as the department's XGEN instructor.
2001-2006	Primary developer and technical lead supporting multiple web and client-server application for the Department of Treasury. Project team member and trainer for the SERENA (Application Lifecycle Management vendor) implementation project.
2006-Present	Primary Analyst, Developer and Technical lead for a variety of specialized client-side and browser-based applications.

Technical Skills:

Data Bases:	DMSII, Oracle, Access, SQLServer
Languages:	COBOL, XGEN, C, FORTRAN, SQL, PL/SQL, T-SQL, JAVA, VBScript, JavaScript, C#.NET, VB.NET, HTML, Delphi, ASP, ASP.Net
Programs:	XGEN/RAD, Microsoft Office Suite, Erwin, PowerBuilder, Websphere Application Developer, Microsoft Visual Studio 6, Microsoft Visual Studio 2003.NET, Microsoft Visual Studio 2008.Net, Serena Suite

Currently using Microsoft .Net technologies to provide web-based solutions for the Michigan Department of State— Bureau of Elections, Bureau of Branch Office Services, Bureau of Driver and Vehicle Records, Department of State Information Center, Program Procedures Section, and Program Support Section.

Supported Systems:

System:	Basic Driver Improvement Course
Purpose:	Allows course providers to electronically report course results. It initiates collection of fees from the course providers. It also provides reporting functions to the course providers.
Role:	Primary Analyst/Developer and Technical Lead

System:	Branch Office Locator
Purpose:	Allows the general public to locate the nearest Secretary of State Branch based on Zip, City or County.
Role:	Primary Analyst/Developer and Technical Lead

System:	Michigan Voter Information Center
Purpose:	Allows citizens to view information regarding their voter registration, their polling location(s), a calendar of upcoming elections, their County and local clerks, and if available, a sample ballot from their polling location.
Role:	Primary Analyst/Developer and Technical Lead

System:	Military and Overseas Voter Act
Purpose:	Allows clerks to provide ballots electronically to military and overseas voters who request them.

Role: Primary Analyst/Developer and Technical Lead

System: Organ Donor
Purpose: Allows citizens to add their name to Michigan's Organ, Tissue, and Eye Donor Registry. It also provides role based administration, reporting and donor verification services to the Department of State and the Gift of Life of Michigan.
Role: Primary Analyst/Developer and Technical Lead

System: Web Renew
Purpose: Allows customers to renew their license plate or watercraft registration online and print a PDF version of their vehicle or watercraft registration.
Role: Primary Analyst/Developer and Technical Lead

KENNETH E. BORSARE (978) 207-1255
124 Elm Street, North Reading, MA 01864 Email: ken@borsare.com

OBJECTIVE Provide technical expertise using **Delphi** and **Oracle** under a **Windows** platform on a team development project, long or short-term contract basis.

VALUES Technical Excellence, Perseverance, and Integrity.

TOOLS AND TECHOLOGY

Platforms	Windows 95, NT 4.0, 98, 2000, XP, and 2003; and Unix.
Databases	Oracle 7, 8i, and 10g; Paradox; and DBISam.
Development	Borland Delphi 1, 2, 3, 4, 7, and 8.
Components	ReportBuilder, Oracle Data Access (ODac), DBISam, ZipForge, XceedZip, Envision Graphics Library, Indy Socket Components (TCP/IP, FTP, SMTP, Pop3), and Help & Manual (help authoring).
Programming Expertise	Delphi (Pascal), Windows API, SQL92, and Oracle PL/SQL, Windows Scripting Language; C, and C++.
Applications Developed	Distributed/replicated Oracle client/server GUIs; desktop database GUIs; SQL queries; PL/SQL procedures, functions, and packages; ActiveX web components; and various GUI and command line utilities.
Commonly Used Apps	MS Word, Excel, PowerPoint, Outlook, FrontPage, Windows Media Encoder, Remote Desktop; PC Anywhere; Roxio Easy Media Creator; Paperport; OmniPage Pro; Google Desktop.
Specializations	Voter registration, large scale data matching, server administration, custom signature replication.
Hardware	PC configuration, setup, and maintenance; DVD/CD burners; cable modems; network routers, hubs, and switches; laser, deskjet, and Dymo single label printers; scanners; memory; and various USB devices.
Sideline	Skills Video editing and encoding, in particular for the production of training material.
Web Site Admin	CPanel, Envision Power Board, HTML, PHP, MySQL, and E Mail account setup.
Disciplines	Analysis, planning, design, and development utilizing a Rapid Prototyping approach.

EXPERIENCE

Nov 1998- Present **MICHIGAN BUREAU OF ELECTIONS Lansing, Michigan**
Delphi/Oracle Consultant

Michigan Qualified Voter File System

- Redesigned, streamlined, and radically improved many of the modules originally designed/implemented by SAIC (**Delphi 2** and **Oracle 7.3.4**) that failed to meet customer's expectations.

- Migrated the application to **Delphi 4** and **Oracle 8i**, and then eventually to **Delphi 7** and **Oracle 10g**.
- Migrated all reports from **ReportSmith** to **ReportBuilder**.
- Overcame problems printing to custom paper sizes from **Windows**.
- Developed tools that enable non-technical users to build **Oracle** replica servers.
- Developed a system that applies software and schema changes to all 473 **Oracle** replicas nightly without any user intervention.
- Implemented Phase I and II of the state's **digitized signature** feature, the second of which involved the development of a **custom signature replication** system using **Oracle PL/SQL** packages, procedures, and functions.
- Developed several **ActiveX** web applications using **Delphi 5**, **Delphi 7**, and **MS FrontPage**; including an ad hoc query execution tool, a replica server information browser tool, and a Data Problem Monitor (DPM) tools.
- Developed and enhanced many **Delphi** custom components.
- Developed a centralized dispatch mechanism that sends Emails over **SMPT** using Oracle packages.
- Implemented extensive software enhancements mandated by the Help America Vote Act (HAVA).
- Implemented extensive software enhancements mandated by the state of Michigan's recently adopted Election Consolidation legislation.
- Developed software that allowed CGI personnel to redistrict the entire street index throughout the state of Michigan in response to the year 2000 US Census.
- Setup, maintained, and administered many **Oracle 7, 8i, and 10g** replica servers for development and testing purposes.
- Operated an independent web site (borsare.com) specifically to facilitate the sharing of files with other project members, and to host a discussion forum used to track software bugs and software improvement suggestions.
- Matched the entire QVF voter population against the Social Security Administration's death master file and in order to help the state flag and eventually eliminate inactive voter records.
- Developed and debugged **PL/SQL** as needed.
- Wrote **SQL92** queries and performed data extraction/analysis for project staff as needed.
- Analyzed, diagnosed, and corrected data and software problems as requested.
- Conducted various studies to evaluate migration/design options.
- Evaluated, configured, and/or programmed various development tools, reporting tools, component libraries, page printers, color printers, label printers, scanners, USB add/on ports, CD burners, network adaptors, cable modems, network hubs, network switches, network routers, memory of various types, and other peripherals.
- Created several informational/training videos using **Windows Media Encoder**.

May 1998- Oct 1998 **KRONOS INCORPORATED Waltham, Massachusetts**
Delphi Consultant

Smart Scheduler Commercial Product

- Developed three high-end GUI editors in **Delphi 3 Client/Server** under **Windows 95/NT4**, running against an **Oracle 7.X** server.

- Developed a complex logical **middle-tier** consisting of dozens of classes and data structures in order to maintain data-integrity within the editors, promote code reuse, and boost performance.
- Seamlessly integrated components created by other developers into the editors.
- Editors sported professional features such as graphical bar charts, drag and drop, cut and paste, and undo.

Nov 1989- May 1998 **SAIC/SYNETICS Wakefield, Massachusetts Senior Software Engineer**

Michigan and Texas Voter Registration Systems

- **Object-Oriented client/server** systems written in Borland **Delphi 1.0/2.0** under **Windows 3.1/95/NT,** running against **Oracle 7.X and 8.X** servers.
- Worked on design, development, and support of both projects.
- Coordinated team development and implemented a practical approach to **configuration management**.
- Mentored junior **Delphi** and **Oracle** developers.
- Created **reusable** custom **Delphi components** to increase programmer productivity, system modularity, and reduce support costs.
- Created **reusable Delphi** classes, functions, and procedures.
- Created installation programs using **InstallShield**.
- Designed, implemented, and supported many screens in both systems.
- Developed an electronic software update system for Michigan that downloads and installs software patches over the **Internet** using **FTP**.
- Pioneered a "print now/later" architecture for Texas the allows users to submit print requests to the server and retrieve them at a later time.
- Utilized many advanced programming techniques in order to "push the envelope", including the **Win32 API**.
- Defined the standard workstation configuration for Michigan that was used to deploy over 500 client and server workstations throughout the state, including the installation/configuration of **Windows NT 4.0**, **Windows 95**, **Personal Oracle**, the **BDE**, **TCP/IP**, **HP printer drivers**, resource **sharing**, software updates, **replica databases**, and **PCAnywhere**.
- Analyzed, optimized, and **Tuned SQL** statements using **Oracle's explain plan** and **tkprof** features to boost system performance.

Project Leader For Two Major Coast Guard GUI Systems

- RV/VR (Report Validation / Vessel Routing) is a **Motif/C++** application that allows an operator to validate ship reports and create routes using a world map featuring full pan/zoom.
- DBTools (Database Tools) is a **Motif/C** application that provides administration features for the same Coast Guard system.
- Both **client/server** systems run on an **Iris Workstation** under **Unix** against an **Oracle** back end.
- Led the development effort, creating initial design, practical team configuration management methods, monthly progress reports, controlling the budget and schedule, and coordinating the delivery.

- Developed easy-to-use programmer interface to the **Oracle OCI** that provides row-based access to tables that interfaces directly through mechanically generated **C structures**. This interface was used on these Coast Guard projects as well as the Texas Voter Registration system mentioned above.
- Developed internal component, libraries, objects, and API's that were used by developers to provide basic business logic common to the entire application.
- Both systems were developed in the early 90's, delivered **on time** and **on budget**, and are still use on a day-to-day basis for mission critical operations at the Coast Guard.

Jan 1995- 2003 **CRUIZIN TOURS Fort Lauderdale, FL Delphi/Paradox Contract Developer**

- Implemented several **desktop database** applications for this travel agency business.
- All applications were implemented in various versions of **Delphi** and eventually upgraded to **Delphi 5** utilizing **Paradox databases**.

Jan 1996- 2002 **ACCEL SOFTWARE Stoneham, MA Shareware Developer/Marketer**

- Sole proprietor.
- Developed a Windows utility (**Delphi 5**) called **OmniSync** that is used to compare multiple folders, zip files, and FTP folders.
- Available for download on the Internet and sold by **DigiBuy**.

Jan 1990- Dec 1994 **BEST TECHNOLOGY Stoneham, MA Shareware Developer/Marketer**

- Sole proprietor.
- Developed a high-performance disk copying utility called ***DUPE*** (Turbo C Language).
- Generated over 500 registration sales to date. Major site license customers include EXXON, AT&T, GTE, Walt Disney, Unisys, Hewlett-Packard, Nova, Ernst & Young, and Deloitte & Touch.
- Published in the book ***DOS 6.0 Secrets***.

Jul 1984- Oct 1989 **W. J. SCHAFER ASSOCIATES Chelmsford, Massachusetts PC Analyst/Software Engineer**

- Provided PC hardware and software support for this 100-person facility.
- Configured, purchased, setup, and maintained all PC's.
- Developed custom applications to support engineers and the Finance Department.
- Became proficient with MS-DOS, MSBasic, C, Pascal, DataEase, WordPerfect, and TBBS.

EDUCATION **BENTLEY COLLEGE Waltham, Massachusetts**

- BA Computer Information Systems, May 1986.

- AS Accounting, May 1986.

Oct 1990 **SILICON GRAPHICS Mountain View, California**

Attended an intensive one-week training course on **IRIS Graphics Language Programming**.

Oct 1995 **BORLAND INTERNATIONAL Waltham, Massachusetts**

Attended an intensive one-week training course on **Delphi Client/Server development**.

PERSONAL

- Held DoD Secret security clearance. Former member of the Delphi Developers Group of Boston.
- Former Chairman of the Monterosa of Stoneham Condominium Trust.