STATE OF CALIFORNIA

DEPARTMENT OF CONSUMER AFFAIRS

State and Consumer Services Agency

DEPARTMENT OF CONSUMER AFFAIRS

Bureau of Automotive Repair

BAR-2012 EMISSIONS INSPECTION SYSTEM

(Name Changed to: CALIFORNIA VEHICLE INSPECTION SYSTEM)

SPECIAL PROJECT REPORT

March 24, 2011

C O N F I D E N T I A L

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1 Executive Project Approval Transmittal

Information Technology Project Request

Special Project Report
Executive Approval Transmittal

Department Name			
Department of Consumer Affairs, Bureau of Automotive Repair			
Project Title (maximum of 75 characters)			**Project Acronym**
California Vehicle Inspection System Project			Cal-VIS
FSR Project ID	**FSR Approval Date**	**Department Priority**	**Agency Priority**
1110-109	11/24/2009	1	1

I am submitting the attached Special Project Report (SPR) in support of our request for the California Technology Agency's approval to continue development and/or implementation of this project.

I certify that the SPR was prepared in accordance with the State Administrative Manual Sections 4945-4945.2 and that the proposed project changes are consistent with our information management strategy as expressed in our current Agency Information Management Strategy (AIMS).

I have reviewed and agree with the information in the attached Special Project Report.

I also certify that the acquisition of the applicable information technology (IT) product(s) or service(s) required by my department, which are subject to Government Code 11135 applying Section 508 of the Rehabilitation Act of 1973 as amended, meets the requirements or qualifies for one or more exceptions (see following page).

APPROVAL SIGNATURES

Chief Information Officer		**Date Signed**
		3/29/11
Printed name:	Debbie Balaam	
Budget Officer		**Date Signed**
		3/29/11
Printed name:	Janice Shintaku-Enkoji	
Acting Department Director		**Date Signed**
		04/04/11
Printed name:	Brian Stiger	
Agency Chief Information Officer		**Date Signed**
		04/29/11
Printed name:	Andrew Armani	
Agency Secretary		**Date Signed**
		5/02/11
Printed name:	Anna Caballero	

1.1 IT Accessibility Certification

Executive Approval Transmittal
IT Accessibility Certification

Yes or No

Yes	**The Proposed Project Meets Government Code 11135 / Section 508 Requirements and no exceptions apply.**

Exceptions Not Requiring Alternative Means of Access

Yes or No	Accessibility Exception Justification
No	The IT project meets the definition of a national security system.
No	The IT project will be located in spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment (i.e., “Back Office Exception”.)
No	The IT acquisition is acquired by a contractor incidental to a contract.

Exceptions Requiring Alternative Means of Access for Persons with Disabilities

Yes or No	Accessibility Exception Justification
No	Meeting the accessibility requirements would constitute an “undue burden” (i.e., a significant difficulty or expense considering all agency resources). Explain: Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.
No	No commercial solution is available to meet the requirements for the IT project that provides for accessibility. Explain: Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.

Special Project Report
Executive Approval Transmittal
IT Accessibility Certification
(continued)

Exceptions Requiring Alternative Means of Access for Persons with Disabilities

Yes or No	Accessibility Exception Justification
No	No solution is available to meet the requirements for the IT project that does not require a fundamental alteration in the nature of the product or its components. Explain: Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.

2 Information Technology Project Summary Package

2.1 Section A: Executive Summary

1.	Submittal Date	03/24/2011

		FSR	SPR	PSP Only	Other:
2.	Type of Document		X		
	Project Number	1110-109			

			Estimated Project Dates	
3.	Project Title	California Vehicle Inspection System Project	Start	End
	Project Acronym	Cal-VIS	11/24/2009	03/03/14

4.	Submitting Department	Department of Consumer Affairs, Bureau of Automotive Repair
5.	Reporting Agency	State and Consumer Services Agency

6.	Project Objectives
	1. Utilize commercial off-the-shelf equipment components that Smog Check station owners and technicians can self-install for use with an On Board Diagnostic (OBD) Inspection System. **2.** Provide OBD Inspection System software updates at no cost to the Smog Check stations. **3.** Procure a single OBD Data Acquisition Device (DAD) (hardware and software) solution and integrate with commercial off-the-shelf equipment components to create an OBD Inspection System. **4.** Capture 100% of OBD data available for model-year 2000 and newer vehicles. **5.** Develop and implement one version of OBD DAD software for model-year 2000 and newer vehicles. **6.** Deploy an OBD Inspection System with 100% vehicle connectivity for model-year 2000 and newer vehicles that accommodates remote software updates. **7.** Utilize Open System Architecture Design (OSAD) with a standardized OBD interface that will work with evolving technologies. **8.** Include two vehicle identification methods in the OBD

8	Major Milestones	Estimated Completion Date
	Feasibility Study Report Approved	11/24/2009
	Special Project Report Approved	06/06/2011
	Phase I - Invitation For Bid Released	08/31/2011
	Phase I - Pre-Qualified Bidders Selected	01/12/2012
	Phase I - Final Proposal Requirements Completed	05/15/2012
	Phase I - Final Proposals Due	07/31/2012
	Phase I - OBD DAD Contractor Contract Awarded	11/28/2012
	Phase I – OBD DAD Procurement Phase Completed	*01/08/2013*
	Phase II - NGET System Requirements Completed	08/31/2011
	Phase II - NGET System Design Completed	12/13/2011
	Phase II - NGET System Development Completed	06/28/2012
	Phase II - OBD DAD Integration Requirements Completed	12/13/2012
	Phase II - OBD DAD Integration Design Completed	12/31/2012
	Phase II - OBD DAD Received for Testing	01/12/2013
	Phase II - OBD DAD Integration Development Completed	01/28/2013
	Phase II - OBD Inspection System Accepted	03/15/2013
	Phase II - OBD DAD Certified	04/17/2013
	Phase II – OBD Inspection System Development and Testing Phase Completed	*04/18/2013*
	Phase III - OBD Inspection System Deployment Begins	04/19/2013

Inspection System.
9. Include two technician identification methods including complex passwords in the OBD Inspection System.
10. Utilize an updateable and complex password in the OBD Inspection System.
11. Accept Internet transmission to and from the NGET System.

Phase III - OBD Inspection System Deployment Ends	**08/21/2013**
Phase III – OBD Inspection System Implementation and Deployment Phase Completed	***09/30/2013***
Post-Implementation Evaluation Report (PIER) Completed	**03/03/2014**

Key Deliverables	Estimated Completion Date
Feasibility Study Report	**11/24/2009**
Special Project Report	**06/06/2011**
Phase I - Invitation For Bid	**08/31/2011**
Phase I - Pre-Qualified Bidder Notification	**01/12/2012**
Phase I - Final Proposal Requirements	**05/15/2012**
Phase I - Final Proposals	**07/31/2012**
Phase I - OBD DAD Contractor Contract	**11/28/2012**
Phase I – OBD DAD Procurement Phase Completed	***01/08/2013***
Phase II - NGET System Requirements	**08/31/2011**
Phase II - NGET System Design	**12/13/2011**
Phase II - NGET System Code	**06/28/2012**
Phase II - OBD DAD Integration Requirements	**12/13/2012**
Phase II - OBD DAD Integration Design	**12/31/2012**
Phase II - OBD DAD	**01/12/2013**
Phase II - OBD DAD Integration Code	**01/28/2013**
Phase II - OBD Inspection System	**03/15/2013**
Phase II - OBD DAD Certification	**04/17/2013**
Phase II – OBD Inspection System Development and Testing Phase Completed	***04/18/2013***
Phase III - OBD Inspection System Deployment Initiation	**04/19/2013**
Phase III - OBD Inspection System Deployment Completion	**08/21/2013**
Phase III – OBD Inspection System Implementation and Deployment Phase Completed	***09/30/2013***
Post-Implementation Evaluation Report (PIER)	**03/03/2014**

7	Proposed Solution
	The Department of Consumer Affairs (DCA), Bureau of Automotive Repair (BAR) is charged with the authority for developing and implementing the State's Motor Vehicle Inspection Program, more commonly referred to as the Smog Check Program (Health and Safety Code Section 44002). Included with this authority are the requirements to investigate and incorporate new technologies into the program (Health and Safety Code Section 44024), periodically update new equipment (Health and Safety Code Section 44036), and prescribe and quantify emission standards (Health and Safety Code Sections 44013). BAR, with assistance from a vendor, proposes to acquire an OBD DAD that will be integrated with commercial off-the-shelf equipment components to create an OBD Inspection System.

2.2 Section B: Project Contacts

Project #	**1110-109**
Doc. Type	**SPR**

Executive Contacts								
	First Name	**Last Name**	**Area Code**	**Phone #**	**Ext.**	**Area Code**	**Fax #**	**E-mail**
Agency Secretary	Anna	Caballero	916					Anna.Caballero@scsa.ca.gov
Department Director	Brian	Stiger	916	574-8208		916	574-8613	Brian.Stiger@dca.ca.gov
Budget Officer	Janice	Shintaku-Enkoji	916	574-7173		916	574-8613	Janice.Shintaku-Enkoji@dca.ca.gov
Chief Information Officer (CIO)	Debbie	Balaam	916	574-8004		916	574-8600	Debbie.Balaam@dca.ca.gov
Executive Project Sponsor	Patrick	Dorais	916	255-4300		916	255-1369	Patrick.Dorais@dca.ca.gov

Direct Contacts								
	First Name	**Last Name**	**Area Code**	**Phone #**	**Ext.**	**Area Code**	**Fax #**	**E-mail**
Document prepared by	Patrick	Dorais	916	255-4300		916	255-1369	Patrick.Dorais@dca.ca.gov
Primary contact	Chris	Edwards	916	255-4471		916	255-1369	Chris.Edwards@dca.ca.gov
Project Manager	Chris	Edwards	916	255-4471		916	255-1369	Chris.Edwards@dca.ca.gov

2.3 Section C: Project Relevance to State and/or Departmental Plans

1.	**What is the date of your current Operational Recovery Plan (ORP)?**	**Date**	**October 2009**
2.	**What is the date of your current Agency Information Management Strategy (AIMS)?**	**Date**	**2008**
3.	**For the proposed project, provide the page reference in your current AIMS and/or strategic business plan.**	**Doc.**	**BAR Strategic Plan**
		Page #	**5**

Project #	**1110-109**
Doc. Type	**SPR**

		Yes	No
4.	**Is the project reportable to control agencies?**	X	
	If YES, CHECK all that apply:		
	a) The project involves a budget action.		
	b) A new system development or acquisition that is specifically required by legislative mandate or is subject to special legislative review as specified in budget control language or other legislation.		
X	**c) The estimated total development and acquisition cost exceeds the departmental cost threshold and the project does not meet the criteria of a desktop and mobile computing commodity expenditure (see SAM 4989 – 4989.3).**		
	d) The project meets a condition previously imposed by Finance.		

2.4 Section D: Budget Information

Project #	1110-109
Doc. Type	SPR

Budget Augmentation Required?		
	No	X
	Yes	

If YES, indicate fiscal year(s) and associated amount:

FY		FY		FY		FY		FY	
$		$		$		$		$	

PROJECT COSTS

1.	Fiscal Year	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	TOTAL
2.	One-Time Cost	$ 322,069	$ 546,832	$ 685,639	$ 1,420,431	$ 1,275,394	$ 0	$ 4,250,365
3.	Continuing Costs	$ 0	$ 0	$ 0	$ 0	$ 363,364	$ 573,761	$ 937,125
4.	TOTAL PROJECT BUDGET	$ 322,069	$ 546,832	$ 685,639	$ 1,420,431	$ 1,638,758	$ 573,761	$ 5,187,490

PROJECT FINANCIAL BENEFITS

5.	Cost Savings/ Avoidances	$	$	$	$	$	$	$
6.	Revenue Increase	$	$	$	$	$	$	$

2.5 Section E: Vendor Project Budget

Vendor Cost for FSR Development (if applicable)	$ 0
Vendor Name	N/A

Project #	1110-109
Doc. Type	SPR

VENDOR PROJECT BUDGET

1.	Fiscal Year	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	TOTAL
2.	Primary Vendor Budget	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
3.	Independent Oversight Budget	$ 0	$ 8,696	$ 0	$ 0	$ 0	$ 0	$ 8,696
4.	IV&V Budget	$ 71,520	$ 48,480	$ 230,400	$ 230,400	$ 57,600	$ 0	$ 638,400
5.	Other Budget	$ 170,822	$ 302,813	$ 172,800	$ 381,000	$ 117,750	$ 0	$ 1,145,185
6.	TOTAL VENDOR BUDGET	$ 242,342	$ 359,989	$ 403,200	$ 611,400	$ 175,350	$ 0	$ 1,792,281

----------(Applies to SPR only)----------

PRIMARY VENDOR HISTORY SPECIFIC TO THIS PROJECT

7.	Primary Vendor	Not Yet Awarded
8.	Contract Start Date	
9.	Contract End Date (projected)	
10.	Amount	$

PRIMARY VENDOR CONTACTS

	Vendor	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
11.									
12.									
13.									

2.6 Section F: Risk Assessment Information

Project #	**1110-109**
Doc. Type	**SPR**

RISK ASSESSMENT

	Yes	No
Has a Risk Management Plan been developed for this project?	X	

General Comment(s)
The Risk Management Plan describes the standard processes to be used by the Project Management Team to implement risk analysis, risk action planning and tracking, and risk escalation. The Risk Management Plan is consistent with the California Technology Agency California Project Management Methodology (CA-PMM) and is viewed as an integral part of overall project management and execution, and not as a separate process executed outside of day-to-day project management activities. Refer to Section 5.1 Risk Register for a listing of the project risks.

3 PROPOSED PROJECT CHANGE

During the BAR 2012 EIS FSR development and the continued work on the BAR 2012 EIS Project many different issues caused delays in the project. As DCA struggled with the size and cost of the BAR 2012 EIS Project, BAR issued multiple Requests for Information (RFIs) to receive feedback from the Smog Check equipment industry. Several Smog Check equipment firms suggested that BAR take a completely different approach that was more designed around testing late model vehicles. Therefore, DCA/BAR worked with both the legislature and the Air Resources Board to introduce legislation (Assembly Bill 2289, Eng) that would allow the Smog Check Program to have more flexibility in performing Smog Check tests on late model vehicles. Because of this, much of the delay was caused to changing the scope of the project to match the Smog Check industry recommendations and include the California Air resources Board's (ARB) recommendations. Once AB 2289 was chaptered in October 2010 the flexibility for the Smog Check Program allowed BAR to make significant changes to the scope and schedule of the project.

As part of this Special Project Report (SPR), the California Department of Consumer Affairs (DCA), Bureau of Automotive Repair (BAR) proposes to change the project name to the California Vehicle Inspection System (Cal-VIS) Project to more accurately reflect the revised focus of the project that was approved as the BAR-2012 Emissions Inspection System (EIS) Project on November 24, 2009.

The revised project scope (explained below in greater detail) no longer includes a replacement of the BAR-97 EIS units that Smog Check technicians currently use to inspect vehicles subject to the Smog Check Program. Due to the lapse in time since this project was originally researched, a complete replacement of the BAR-97 EIS units is no longer cost-effective when considering that the number of vehicles capable of being inspected on this equipment will continue to diminish. The BAR-97 EIS units will continue to be used to perform tailpipe tests and On Board Diagnostic (OBD) tests for model-year 1999 and older vehicles. Consistent with the approach taken in AB 2289, a new OBD Inspection System will be developed to perform OBD-focused inspections on model-year 2000 and newer vehicles in order to ensure standardized testing for these vehicles and to minimize cost to the Smog Check stations.

The Cal-VIS Project includes an OBD Inspection System that will consist of a procurement of a single OBD Data Acquisition Device (DAD) (hardware and software) solution that when combined with commercial off-the-shelf equipment components will become the OBD Inspection System. In addition, the Cal-VIS Project will include modifications to the Next Generation Electronic Transmission (NGET) System to allow for OBD-focused inspections that will be included in the current contract. The NGET System is currently under contract with an outside entity to host the application through November 2013, with a possible extension to November 2014. All aspects of this contract will remain intact for the duration of the contract.

Attachment 1 – SPR Glossary contains terms and definitions to assist in understanding the terminology used in this document.

3.1 Project Background/Summary

The Health and Safety Code requires that California, via the Smog Check Program, meet or exceed the air quality standards established by the federal Clean Air Act, while meeting the following objectives:

- Focus on the detection, diagnosis, and repair of broken, tampered, or malfunctioning vehicle emission control systems;

- Include flexibility to incorporate and implement future new scientific findings and technological advances; and
- Consider the convenience and cost to those who are required to participate, including consumers, Smog Check stations, and technicians.

Prior to the enactment of AB 2289, all vehicles inspected at Smog Check stations were required to have a tailpipe test. The passage of AB 2289 allows BAR, in consultation with the Air Resources Board (ARB), to specify the type of Smog Check test, including OBD-focused inspections and test equipment for model-year 2000 and newer vehicles as early as January 2013.

Given the enactment of AB 2289, BAR can now offer multiple test types. This allows BAR to keep the older BAR-97 EIS units performing tailpipe tests on model-year 1999 and older vehicles thereby avoiding a costly upgrade and to develop new technology for OBD-focused tests on model-year 2000 and newer vehicles. The implementation of multiple test types will require changes to the test equipment as well as changes to the State-procured enterprise transaction processing system known as the NGET System.

The NGET System records about one million Smog Check inspections per month and enables the electronic transmission of Smog Check results (required by Health and Safety Code 44037.1) to and from the BAR-97 EIS units located at approximately 7,200 Smog Check stations throughout the State, to the Department of Motor Vehicles (DMV).

Approximately ten million vehicles are inspected each year. At the Smog Check station, vehicle data is either scanned from the DMV registration renewal notice or manually entered into the BAR-97 EIS units by the technician. The data include model-year, make, model, engine displacement, transmission type, fuel type, vehicle type, Vehicle Identification Number (VIN), license plate, and vehicle repair data. Inspection data collected include results for a visual check of all emission control components, an analysis of tailpipe emissions, OBD diagnostic trouble codes, readiness monitors, and other critical checks of the vehicle. Other data include Smog Check Certificate of Compliance tracking and the reason for the vehicle inspection (e.g., biennial, change of ownership, initial registration).

After the technician enters the VIN and license plate number into the BAR-97 EIS, these two pieces of information, along with the Smog Check emission and inspection results for the vehicle, are collected and transmitted to the NGET System. The Smog Check certificate is then sent to DMV for vehicles that pass the entire inspection. In addition, all Smog Check station banking information needed to purchase certificate books is stored in the NGET System.

In order to continue to meet the mandates of the Health and Safety Code, the business problems identified below must be addressed in the Cal-VIS Project.

3.1.1 Incomplete OBD Data

The existing Smog Check equipment does not allow the State to collect all of the OBD data available on model-year 2000 and newer vehicles.

3.1.2 Multiple Test Types

The existing Smog Check equipment does not accommodate multiple test types as specified in AB 2289.

3.1.3 Differing OBD Vehicle Connectivity

Different manufacturers of OBD devices have varying success interrogating and collecting OBD information on vehicles, which can lead to inconsistent OBD data results with model-year 2000 and newer vehicles. Therefore, BAR proposes to reduce these problems by using a single manufacturer of an OBD data acquisition device.

Because of the changes in statute, some of the business problems and objectives required change. Table 1 – FSR Business Problems, Objectives, and Requirements Matrix provides the original FSR business problems, objectives, and requirements. Table 2 – SPR Business Problems, Objectives, and Requirements Matrix contains a complete set of the revised requirements. Table 5 - Comparison of FSR Objectives to SPR Objectives contains an explanation of whether the original business objective was still met in the SPR.

Table 1 – FSR Business Problems, Objectives, and Requirements Matrix

Business Problems	Business Objectives	Business Requirements
1. EIS Reliability		
1. Obsolete technology emissions measurement device fails without warning.	1.1 Provide failure warnings on equipment components.	1.1.1 Employ self-diagnostics to identify impending hardware failure.
2. BAR-97 EIS must be fully functional to perform inspections even though the failing component may not be required for the subject vehicle.	1.2 Increase EIS uptime.	1.2.1 Accommodate user replaceable components. 1.2.2 Design software to continue test if defective hardware component is not required for subject vehicle.
3. Sole source replacement parts availability affects repair time.	1.3 Certify at least two brands of replacement parts.	1.3.1 Make more than one brand replacement parts available. 1.3.2 Support off-the-shelf EIS equipment components. 1.3.3 Use currently available technologies that have replacement parts available.
4. Inadequate BAR-97 EIS repair results in increased downtime.	1.4 Improve EIS BAR-Authorized Service Representative performance by 10%.	1.4.1 Collect service information to report on and enforce BAR-Authorized Service Representative performance.
5. Equipment deterioration affects test accuracy and stability.	1.5 Increase the average amount of time between calibrations by 20%.	1.5.1 Design new emissions measurement device with greater accuracy and stability.
2. High Operating Cost		
1. BAR-97 EIS update costs affect consumer test cost and Smog Check station profit.	2.1 Reduce Smog Check station software update fees by 50%.	2.1.1 Distribute State-owned software updates to the Smog Check stations at no cost.
2. Inadequate service repair time stops Smog Check inspections and reduces Smog Check station profit.	2.2 Reduce service repair time by 20%.	2.2.1 Collect service data to monitor performance.
3. No competition for replacement parts results in uncontrolled pricing.	2.3 Certify at least two brands of replacement parts.	2.3.1 Introduce replacement part competition.
4. Increasing part obsolescence increases part replacement costs.	2.4 Utilize Open System Architecture Design (OSAD) with a standardized interface that will work with evolving technologies.	2.4.1 Certify at least two (2) brands of each component.

Table 1 – FSR Business Problems, Objectives, and Requirements Matrix

Business Problems	Business Objectives	Business Requirements
3. Flexibility		
1. Smog Check Program improvements cannot be implemented with current software.	3.1 Implement 100% of mandated program improvements.	3.1.1 Implement table driven software test procedures.
2. Different data formats for Roadside, Referee, and Smog Check stations cause application data processing problems to match records.	3.2 Consolidate 100% of test record data formats.	3.2.1 Design database structure to accommodate all station types.
3. Smog Check stations have to pay to have new hardware installed because they cannot self-install.	3.3 Allow Smog Check station owners to install 80% of their hardware component updates/ equipment.	3.3.1 Include extra industry standard type connectors including wireless to plug in new hardware.
4. Updates from multiple different BAR-97 EIS manufacturers cause a large amount of certification testing.	3.4 Reduce State software certification testing time by 25%.	3.4.1 Utilize one common user interface/operating system/software version for all EIS.
5. Update response time is not effectively controlled making implementation planning difficult.	3.5 Reduce rollout of software update time to one month.	3.5.1 Implement software updates onto the EIS through a new centralized BAR server.
6. Four versions of software result in slightly different inspection procedures.	3.6 Maintain only one standard implementation of the inspection procedures.	3.6.1 Utilize a single software version for all Smog Check stations.
4. Outdated Security		
1. Enforcement is difficult when vehicles are not sufficiently linked to inspection results.	4.1 Include two vehicle identification methods.	4.1.1 Link vehicles to their inspection results data.
2. Technician license sharing makes inappropriate technician behavior enforcement more difficult.	4.2 Include a camera in the BAR-2012 EIS.	4.2.1 Utilize improved technician identification measures. 4.2.2 Tier the access controls based on the user identification. 4.2.3 Implement camera if authority is granted.
3. Potential test result falsification through misuse of obsolete password algorithm.	4.3 Reduce technician password sharing by 10% and update password algorithm.	4.3.1 Monitor user access. 4.3.2 Use updateable password.

Table 1 – FSR Business Problems, Objectives, and Requirements Matrix

Business Problems	Business Objectives	Business Requirements
4. Unauthorized replacement parts use can cause false test results.	4.4 Decrease non-certified parts use by 10%.	4.4.1 Track part serial numbers and installation dates for BAR's Enforcement division.
5. Obsolete Communication Protocol		
1. Slow transmission time to central database adds test time and increases smog test cost effectiveness.	5.1 Reduce transmission time to BAR's central database by 10%.	5.1.1 Utilize internet connection for transmission.
2. Smog Check stations have to pay for software update installations because they cannot be performed remotely.	5.2 Perform 100% of all software updates remotely.	5.2.1 Utilize a centralized BAR server to develop, host, and push updates out to the EIS at no cost to the Smog Check stations.
3. Many technicians ignore BAR ET Blast text messages sent through the EIS affecting test performance.	5.3 Increase communication effectiveness by 20%.	5.3.1 Include new message formats (e.g., pictures, graphics). 5.3.2 Track ET Blast messages that are viewed.
4. Obsolete modem banks are increasingly difficult to support as only used replacement parts are available.	5.4 Replace 70% of all modems.	5.4.1 Require EIS communication to central database through Internet.
5. Obsolete communication protocol not as secure as current methods.	5.5 Upgrade EIS security communication path.	5.5.1 Employ handshake security methods similar to online banking.

The Cal-VIS Project business objectives are summarized in Table 2 – SPR Business Problems, Objectives, and Requirements Matrix.

Table 2 – SPR Business Problems, Objectives, and Requirements Matrix

Business Problems	Business Objectives	Business Requirements
1. EIS Reliability		
1. Smog Check Program equipment component deterioration and failure, lack of competition, replacement part availability, and unauthorized replacement parts results in downtime.	1.1 Utilize commercial off-the-shelf equipment components that Smog Check station owners and technicians can self-install for use with an OBD Inspection System.	1.1.1 The OBD Inspection System must uniquely identify and track OBD Inspection System equipment component information. 1.1.2 The OBD Inspection System must accommodate commercial off-the-shelf equipment components. 1.1.3 The OBD Inspection System must allow Smog Check station owners and technicians to self-install equipment components.
2. High Operating Cost		
2. Smog Check Program software update fees can be expensive for Smog Check stations and can impact consumer test cost.	2.1 Provide OBD Inspection System software updates at no cost to the Smog Check stations.	2.1.1 The OBD Inspection System must provide software updates to the Smog Check stations at no cost.
3. The Smog Check Program equipment does not accommodate multiple test types.	3.1 Procure a single OBD DAD (hardware and software) solution and integrate with commercial off-the-shelf equipment components to create an OBD Inspection System.	3.1.1 The OBD Inspection System must include a single OBD DAD (which includes both hardware and software) that is integrated with commercial off-the-shelf equipment components to create an OBD Inspection System.
3. Flexibility		
4. The Smog Check Program does not capture all of the OBD data on model-year 2000 and newer vehicles.	4.1 Capture 100% of OBD data available for model-year 2000 and newer vehicles.	4.1.1 The OBD Inspection System must capture 100% OBD data available for model-year 2000 and newer vehicles.
5. The Smog Check Program has four different versions of OBD DAD software that causes data inconsistency.	5.1 Develop and implement one version of OBD DAD software for model-year 2000 and newer vehicles.	5.1.1 The OBD Inspection System must include one version of OBD DAD software for model-year 2000 and newer vehicles.

Table 2 – SPR Business Problems, Objectives, and Requirements Matrix

Business Problems	Business Objectives	Business Requirements
6. The Smog Check Program does not utilize a single version of software to control OBD vehicle connectivity on model-year 2000 and newer vehicles.	6.1 Deploy an OBD Inspection System with 100% vehicle connectivity for model-year 2000 and newer vehicles that accommodates remote software updates.	6.1.1 The OBD Inspection System must include 100% vehicle connectivity for model-year 2000 and newer vehicles. 6.1.2 The OBD Inspection System must accommodate remote software updates.
7. Increasing part obsolescence increases part replacement costs.	7.1 Utilize OSAD with a standardized OBD interface that will work with evolving technologies.	7.1.1 The OBD Inspection System must be capable of using at least two brands of commercial off-the-shelf equipment.
4. Outdated Security		
8. Smog Check Program enforcement is difficult when vehicles are not sufficiently linked to inspection results.	8.1 Include two vehicle identification methods in the OBD Inspection System.	8.1.1 The OBD Inspection System must include two vehicle identification methods.
9. Smog Check Program technician license sharing makes inappropriate technician behavior enforcement more difficult.	9.1 Include two technician identification methods including complex passwords in the OBD Inspection System.	9.1.1 The OBD Inspection System must include two technician identification methods including complex passwords.
10. Smog Check Program security methods are not as secure as current industry methods.	10.1 Utilize an updateable and complex password in the OBD Inspection System.	10.1.1 The OBD Inspection System must utilize an updateable and complex password.
5. Obsolete Communication Protocol		
11. Smog Check Program obsolete modem banks and slow transmission time to NGET System adds test time.	11.1 Accept Internet transmission to and from the NGET System.	11.1.1 The OBD Inspection System must utilize Internet transmission to the NGET System. 11.1.2 The NGET System must also accept Internet transmission from the BAR-97 EIS units to the NGET System.

3.2 Project Status

The FSR for the BAR-2012 EIS Project was approved on November 24, 2009. DCA/BAR released a Request for Information (RFI) on December 9, 2009 in order to gain industry feedback on the original project scope and schedule. Shortly thereafter, a Project Office was established. In early 2010 a draft Request for Proposal (RFP) was completed, which incorporated the RFI feedback, and was pending review at the Department of General Services (DGS).

Since that time, the enactment of AB 2289 legislation (Eng, Chapter 258, Statutes of 2010) has necessitated changes in project requirements and the procurement method. In response to these changes, DCA/BAR released a new RFI on October 1, 2010. This second RFI was intended to help the Inspection and Maintenance (I/M) industry understand the project changes and to solicit feedback on the revised project scope and schedule. The information obtained from the RFI was incorporated into this SPR and the resulting procurement.

Table 3 – FSR Project Milestones, below, details the original FSR Completion Dates. The completed milestone has been colored gray for easier visibility.

Table 3 – FSR Project Milestones

FSR Major Milestone	FSR Completion Date
Feasibility Study Report Approved	11/02/09
EIS Integration Vendor Contract Award	07/27/10
Phase I Requirements Acceptance	01/12/11
Phase I Software Design Acceptance	04/12/11
Phase I Construction of Software Completed	08/18/11
Phase I Training Materials Completed	12/02/11
Phase I User Acceptance Test Completed	01/10/12
Phase I BAR-2012 EIS Pilot Start	01/17/12
Phase II Requirements Completed	06/22/11
Phase II Design Completed	08/18/11
Phase II Construction Completed	10/14/11
Phase II Training Materials Completed	01/12/12
Phase II User Acceptance Test Completed	08/15/12
Phase II Rollout Completed	11/07/12 – 09/25/13
PIER	12/02/13

Table 4 – FSR Project Costs, below, details the original FSR Projected Costs as well as the actual costs expended as of February 28, 2011.

Table 4 – FSR Project Costs

FSR Project Costs	FSR Projected Costs	FSR Actual Costs
Total One-Time Costs	$14,934,035	$673,293
Total Continuing Costs	$2,781,331	$0
Total Costs	**$17,715,366**	**$673,293**

3.3 Reason for Proposed Change

Chaptered in September 2010, AB 2289 was signed into law and included language that precluded BAR from implementing new inspection equipment prior to January 2013. AB 2289 provides flexibility to use OBD-focused test equipment and to address concerns about the economic impact, of purchasing new

test equipment, on small business and the need for Smog Check stations to plan for the transition to OBD-focused inspections and any new inspection equipment requirements. AB 2289 also includes language requiring BAR to recommend ways to mitigate the cost of any new equipment.

Following the enactment of AB 2289, BAR worked with ARB to update the project's scope and schedule to better serve the objectives of the Smog Check Program. In an effort to mitigate the cost of new equipment, BAR is proposing to forego the changes to the BAR-97 EIS and re-focus the project to allow OBD-focused testing on model-year 2000 and newer vehicles. This will minimize cost to the Smog Check stations while still ensuring that the clean air objectives of the Program and business objectives of the Cal-VIS Project are met. The complexity of BAR's original 24 business objectives of developing a BAR-2012 Emissions Inspection System has been considerably reduced to just 11 business objectives. Table 5 – Comparison of FSR Objectives to SPR Objectives provides detail about the changes in project objectives.

Table 5 – Comparison of FSR Objectives to SPR Objectives

Original FSR Objectives	SPR Objectives
1. EIS Reliability	
1.1 Provide failure warnings on equipment components.	*This business objective no longer applies since updates to the emissions measurement device in the BAR-97 EIS have been removed from the scope of the project.*
1.2 Increase EIS uptime.	*This business objective no longer applies since updates to the BAR-97 EIS have been removed from the scope of the project.*
1.3 Certify at least two brands of replacement parts.	3.1 Procure a single OBD DAD (hardware and software) solution and integrate with commercial off-the-shelf equipment components to create an OBD Inspection System.
1.4 Improve EIS BAR-Authorized Service Representative performance by 10%.	*This business objective no longer applies since updates to the BAR-97 EIS have been removed from the scope of the project.*
1.5 Increase the average amount of time between calibrations by 20%.	*This business objective no longer applies since design of a new emissions measurement device in the BAR-97 EIS has been removed from the scope of the project.*
2. High Operating Cost	
2.1 Reduce Smog Check station software update fees by 50%.	2.1 Provide OBD Inspection System software updates at no cost to the Smog Check stations.
2.2 Reduce service repair time by 20%.	*This business objective no longer applies since updates to the BAR-97 EIS have been removed from the scope of the project.*
2.3 Certify at least two brands of replacement parts.	*This business objective was a duplicate of 1.3.*
2.4 Utilize Open System Architecture Design (OSAD) with a standardized interface that will work with evolving technologies.	7.1 Utilize OSAD with a standardized OBD interface that will work with evolving technologies.
3. Flexibility	
3.1 Implement 100% of mandated program improvements.	4.1 Capture 100% of OBD data available for model-year 2000 and newer vehicles.

Table 5 – Comparison of FSR Objectives to SPR Objectives

Original FSR Objectives	SPR Objectives
3.2 Consolidate 100% of test record data formats.	*This business objective no longer applies since a redesign of the NGET System has been removed from the scope of the project.*
3.3 Allow Smog Check station owners to install 80% of their hardware component updates/ equipment.	1.1 Utilize commercial off-the-shelf equipment components that Smog Check station owners and technicians can self-install for use with an OBD Inspection System.
3.4 Reduce State software certification testing time by 25%.	*This business objective no longer applies since updates to the BAR-97 EIS have been removed from the scope of the project.*
3.5 Reduce rollout of software update time to one month.	6.1 Deploy an OBD inspection with 100% vehicle connectivity for model-year 2000 and newer vehicles that accommodates remote software updates.
3.6 Maintain only one standard implementation of the inspection procedures.	6.1 Deploy an OBD inspection with 100% vehicle connectivity for model-year 2000 and newer vehicles that accommodates remote software updates.
4. Outdated Security	
4.1 Include two vehicle identification methods.	8.1 Include two vehicle identification methods in the OBD Inspection System.
4.2 Include a camera in the BAR-2012 EIS.	*This business objective no longer applies since updates to the BAR-97 EIS have been removed from the scope of the project.*
4.3 Reduce technician password sharing by 10% and update password algorithm.	9.1 Include two technician identification methods including complex passwords in the OBD Inspection System.
4.4 Decrease non-certified parts use by 10%.	*This business objective no longer applies since updates to the BAR-97 EIS have been removed from the scope of the project.*
5. Obsolete Communication Protocol	
5.1 Reduce transmission time to BAR's central database by 10%.	6.1 Deploy an OBD Inspection System with 100% vehicle connectivity for model-year 2000 and newer vehicles.
5.2 Perform 100% of all software updates remotely.	5.1 Develop and implement one version of OBD DAD software for model-year 2000 and newer vehicles.
5.3 Increase communication effectiveness by 20%.	11.1 Accept Internet transmission to and from the NGET System.
5.4 Replace 70% of all modems.	*This business objective no longer applies since updates to the BAR-97 EIS have been removed from the scope of the project.*
5.5 Upgrade EIS security communication path.	10.1 Utilize an updateable and complex password in the OBD Inspection System.

3.4 Proposed Project Change

3.4.1 Accessibility

The functional and technical requirements in the procurement will address Government Code 11135 and Section 508 accessibility requirements.

3.4.2 Impact of Proposed Change on the Project

The Cal-VIS Project complexity has been significantly reduced, consistent with AB 2289, by re-focusing the project to allow OBD-focused testing on model-year 2000 and newer vehicles, which will minimize cost to the Smog Check stations while still ensuring that the clean air objectives of the Program and business objectives of the Cal-VIS Project are met.

3.4.2.1 Project Phases

In the BAR-2012 FSR, the project consisted of two major phases as follows:

- BAR-2012 EIS OBD Development and Implementation Phase; and
- BAR-2012 EIS Full Development and Implementation Phase.

After discussions with and input from the Executive Project Sponsor, the IT Sponsor, ARB, and other project stakeholders regarding the enactment of AB 2289, the project phases were adjusted as follows:

Phase I - OBD DAD Procurement Phase:

Phase I - OBD DAD Procurement Phase includes:

- Procurement of a single OBD DAD (hardware and software) solution and five years support, which will ensure a single version of software and hardware to ensure accurate vehicle connectivity;

Phase II - OBD Inspection System Development and Testing Phase:

Phase II - OBD Inspection System Development and Testing Phase includes:

- Enhancement of the NGET System software to interface with the OBD DAD in order to perform OBD-focused inspections on model-year 2000 and newer vehicles;
- Acceptance testing of the integrated OBD DAD, enhanced NGET System, and OBD Inspection system equipment components; and
- BAR-certification of the OBD DAD.

Phase III - OBD Inspection System Implementation and Deployment Phase:

Phase III - OBD Inspection System Implementation and Deployment Phase includes:

- Purchase of the OBD Inspection System equipment components (i.e., OBD DAD, computer, printer, bar code scanner) by Smog Check stations from third party vendors;

- Deployment of the OBD Inspection System to Smog Check stations; and
- Implementation of the OBD DAD software and NGET System software.

3.4.2.2 Development and Testing Responsibilities

Activity	Responsible Party	Resources Allocated
NGET System Requirements	NGET System Contractor	NGET System Contractor, BAR
NGET System Design	NGET System Contractor	NGET System Contractor, BAR
NGET System Development	NGET System Contractor	NGET System Contractor
OBD DAD Integration Requirements	NGET System Contractor	NGET System Contractor, BAR
OBD DAD Integration Design	NGET System Contractor	NGET System Contractor, BAR
OBD DAD Integration Development	NGET System Contractor	NGET System Contractor
OBD DAD Integration System Testing (which includes multiple OBD DAD test environments)	NGET System Contractor	NGET System Contractor
OBD Inspection System Equipment Requirements	BAR	BAR
Test OBD Inspection System Equipment	BAR	BAR
OBD Inspection System Testing (OBD DAD)	OBD DAD Contractor	OBD DAD Contractor, BAR
OBD Inspection System Testing (NGET System)	NGET System Contractor	NGET System Contractor, BAR
OBD Inspection System Testing (Acceptance Testing)	BAR	NGET System Contractor, OBD DAD Contractor, BAR

3.4.2.3 OBD DAD Procurement

The term of the contract, based on the Department of General Services (DGS) approval, shall be five years, which consists of:

1) Procurement of a single OBD DAD (hardware and software) solution ; and
2) Five years support of the OBD DAD.

In addition, the State will have the option to exercise several one-year extensions for up to five additional years for continued maintenance of the OBD DAD.

3.4.2.4 NGET System Software

The NGET System software will be enhanced to accommodate test records from the new OBD Inspection System and acceptance tested by BAR. In addition, the communication protocol for the NGET System will be upgraded to also accept Internet transmission. The NGET System Contractor will also provide the needed test environment(s) for testing Cal-VIS.

3.4.2.5 OBD DAD Certification

BAR will certify the OBD DAD for use in the Smog Check stations by testing the OBD DAD with commercial off-the-shelf equipment (e.g., printer, bar code scanner, and computer) that will be used to make up the OBD Inspection System.

3.4.2.6 Equipment Purchase

The OBD Inspection System equipment will be purchased by the Smog Check stations from third party vendors and/or suppliers.

3.4.2.7 Implementation

The OBD DAD software and the NGET System software will be implemented by BAR for use with the OBD Inspection System. The OBD Inspection System will be sold and deployed to Smog Check stations by third party vendors.

3.4.2.8 Schedule Impact

BAR conducted project requirements gathering sessions, utilized knowledge from previous BAR projects, and allowed for review and input from experienced project managers in developing the Cal-VIS Project Schedule. Additionally, BAR worked collaboratively with DGS and DCA's Project Management Office to build the procurement portion of the schedule shown in Table 6 – SPR Major Milestones. More detailed schedule information is contained in Attachment 2 – Cal-VIS Project Schedule.

Table 6 – SPR Major Milestones

Major Milestones	SPR Completion Date *
Feasibility Study Report Approved	11/24/09
Special Project Report Approved	06/06/11
Phase I - Invitation For Bid Released	08/31/11
Phase I - Pre-Qualified Bidders Selected	01/12/12
Phase I - Final Proposal Requirements Completed	05/15/12
Phase I - Final Proposals Due	07/31/12
Phase I - OBD DAD Contractor Contract Awarded	11/28/12
Phase I - OBD DAD Procurement Phase Completed	***01/08/13***
Phase II - NGET System Requirements Completed	08/31/11
Phase II - NGET System Design Completed	12/13/11
Phase II - NGET System Development Completed	06/28/12
Phase II - OBD DAD Integration Requirements Completed	12/13/12

Table 6 – SPR Major Milestones

Major Milestones	SPR Completion Date *
Phase II - OBD DAD Integration Design Completed	12/31/12
Phase II - OBD DAD Received for Testing	01/12/13
Phase II - OBD DAD Integration Development Completed	01/28/13
Phase II - OBD Inspection System Accepted	03/15/13
Phase II - OBD DAD Certified	04/17/13
Phase II - OBD Inspection System Development and Testing Phase Completed	***04/18/13***
Phase III - OBD Inspection System Deployment Begins	04/19/13
Phase III - OBD Inspection System Deployment Ends	08/21/13
Phase III - OBD Inspection System Implementation and Deployment Phase Completed	***09/30/13***
Post-Implementation Evaluation Report (PIER) Completed	03/03/14

**** Subject to change based on SPR approval date.***

3.4.2.9 Cost Impact

Table 7 – FSR and SPR Costs, below, details the original FSR Projected Costs, the new SPR Projected Costs, and any variances.

Table 7 – FSR and SPR Costs

Project Costs	FSR Projected Costs	SPR Projected Costs	Variance
Total One-Time Costs	$14,934,035	$4,250,365	<$10,683,670>
Total Continuing Costs	$2,781,331	$937,125	<$1,844,206>
Total Costs	**$17,715,366**	**$5,187,490**	**<$12,527,876>**

Note: As of February 28, 2011, $673,293 has been expended.

3.4.3 Feasible Alternatives Considered

The three primary alternatives considered (and documented in the Economic Analysis Worksheet (EAW)) are as follows:

Proposed Alternative - Develop an OBD Inspection System

- This proposed alternative meets BAR's revised business objectives as outlined in Table 2 – SPR Business Problems, Objectives, and Requirements Matrix. This alternative has minimal complexity and risk.

Alternative 1 - Upgrade the BAR-97 EIS

- This alternative does not satisfy BAR's business objectives as outlined in Table 2 – SPR Business Problems, Objectives, and Requirements Matrix. The BAR-97 EIS equipment would have to be upgraded by the existing manufacturers to include the new OBD

functionality and the Internet connectivity, and would increase cost to the Smog Check stations because of the cost of software and hardware updates that are proprietary to the manufacturers. In addition, the State would have to implement any future mandated program improvements in the BAR-97 EIS equipment at a cost to the Smog Check stations. This alternative has a high level of complexity and risk.

Alternative 2 - Replace the BAR-97 EIS with a BAR-2012 EIS

- This alternative meets BAR's original business objectives as outlined in Table 1 – FSR Business Problems, Objectives, and Requirements Matrix. However, this alternative is the most expensive alternative for the Smog Check stations and would not mitigate costs for the Smog Check stations as required by AB 2289. This alternative also has a high level of complexity and risk and would delay the availability of the new OBD functionality described earlier in this document.

3.4.4 Implementation Plan

BAR will conduct a deployment outreach campaign to the Smog Check stations. The deployment outreach campaign will provide information, such as the anticipated cost of the OBD Inspection System, the planned schedule for when the OBD Inspection System will be available for purchase, and other relevant information. This campaign will assist the Smog Check station owners in making business decisions about participation in the OBD-focused inspection program and planning their transition.

BAR, in cooperation with the OBD DAD Contractor, the NGET System Contractor, ARB, DCA, and DMV, will develop an Implementation Plan and carefully coordinate the implementation of the OBD DAD software and NGET System software. Meanwhile, the OBD Inspection System equipment will be purchased by the Smog Check stations from third party vendors and/or suppliers who will deploy OBD Inspection System equipment to the Smog Check stations. In addition, BAR will conduct training for approximately 7,200 Smog Check stations and additional outside entities (as needed), and conduct statewide public workshops offering hands-on training.

After the OBD Inspection System is deployed, consistent with AB 2289, the BAR-97 EIS will be used primarily for testing pre-2000 model-year vehicles, while the new OBD Inspection System will be used for OBD-focused testing of model-year 2000 and newer vehicles.

4 UPDATED PROJECT MANAGEMENT PLAN

4.1 Project Manager Qualifications

Chris Edwards will continue in his role of State Project Manager. Mr. Edwards is a Senior Programmer Analyst (Supervisor) in the Technology Services Branch at BAR and has over 20 years of experience in California State IT projects, with over 15 years in Project Management positions. In his previous roles in project management, Mr. Edwards has been the Technical Project Manager with oversight responsibility for the planning and implementing of projects using formal Project Management Body of Knowledge (PMBOK) practices, Institute of Electrical and Electronics Engineers (IEEE) project methodology, including a wide variety of platforms and technologies.

Mr. Edwards has managed up to 100 people, including staff, contractors and vendors, and was instrumental in using alternative procurement guidelines to procure two major contracts while at BAR. One contract was for the Electronic Transmission project created in 1994, and the other was for the Referee created in 1997. Mr. Edwards' leadership and guidance in the development of the Referee procurement saved the State of California $8,000,000 annually and was used as a model for future procurements. Both of these projects were over $25,000,000, involved more than 25 project staff members, and were over seven years in duration. Based on his background and experiences, BAR believes Mr. Edwards is the right choice for the revised scope of this project.

4.2 Project Management Methodology

There is no change to the Project Management methodology specified in the FSR. The detailed Project Management process is documented in Attachment 3 – Cal-VIS CA-PMM Toolkit and in Attachment 4 – Cal-VIS Master Project Plan.

The principals of the California State Information Management Manual (SIMM) Section 17 – California Project Management Methodology and the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK), as well as project management "best practices" based on lessons learned from prior BAR projects, have been incorporated into Attachment 4 – Cal-VIS Master Project Plan.

4.3 Project Organization

All project issues are forwarded to the State Project Manager for resolution. If the State Project Manager is unable to provide a resolution, the State Project Manager escalates to the State Executive Project Sponsor, the State Business Project Director, and the State IT Project Director simultaneously. Issues are vetted with the Executive Steering Committee, as appropriate. However, the authority to provide a resolution, as well as approve all escalated change requests for scope, schedule, and budget, rests with the State Executive Project Sponsor. For more detailed project organization information and specific project roles and responsibilities, please refer to Section 4.5.4 – Project Roles and Responsibilities.

Figure 1 – DCA/BAR Organizational Structure and Figure 2 - Cal-VIS Project Reporting Structure are shown on the following pages.

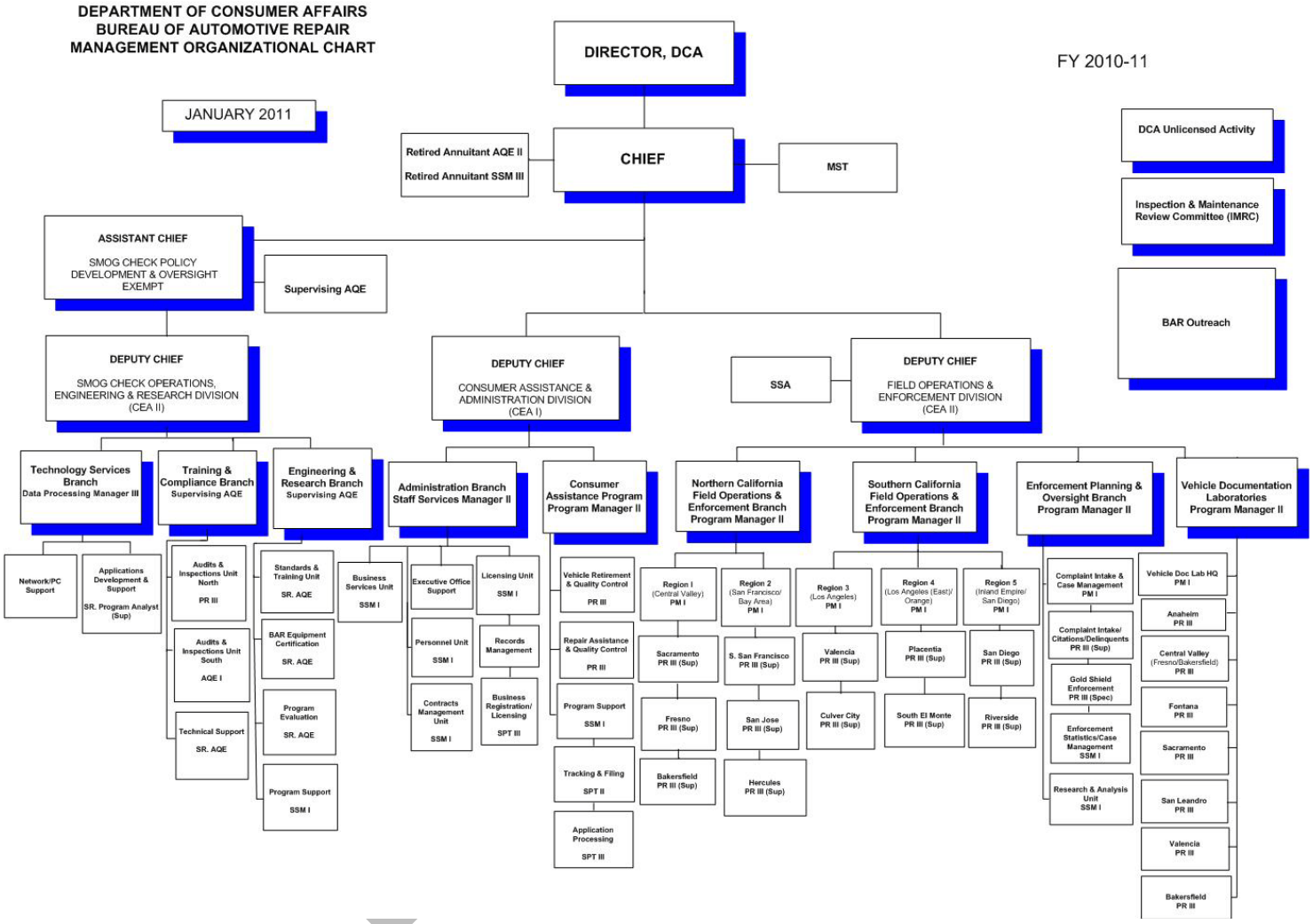

Figure 1 – DCA/BAR Organizational Structure

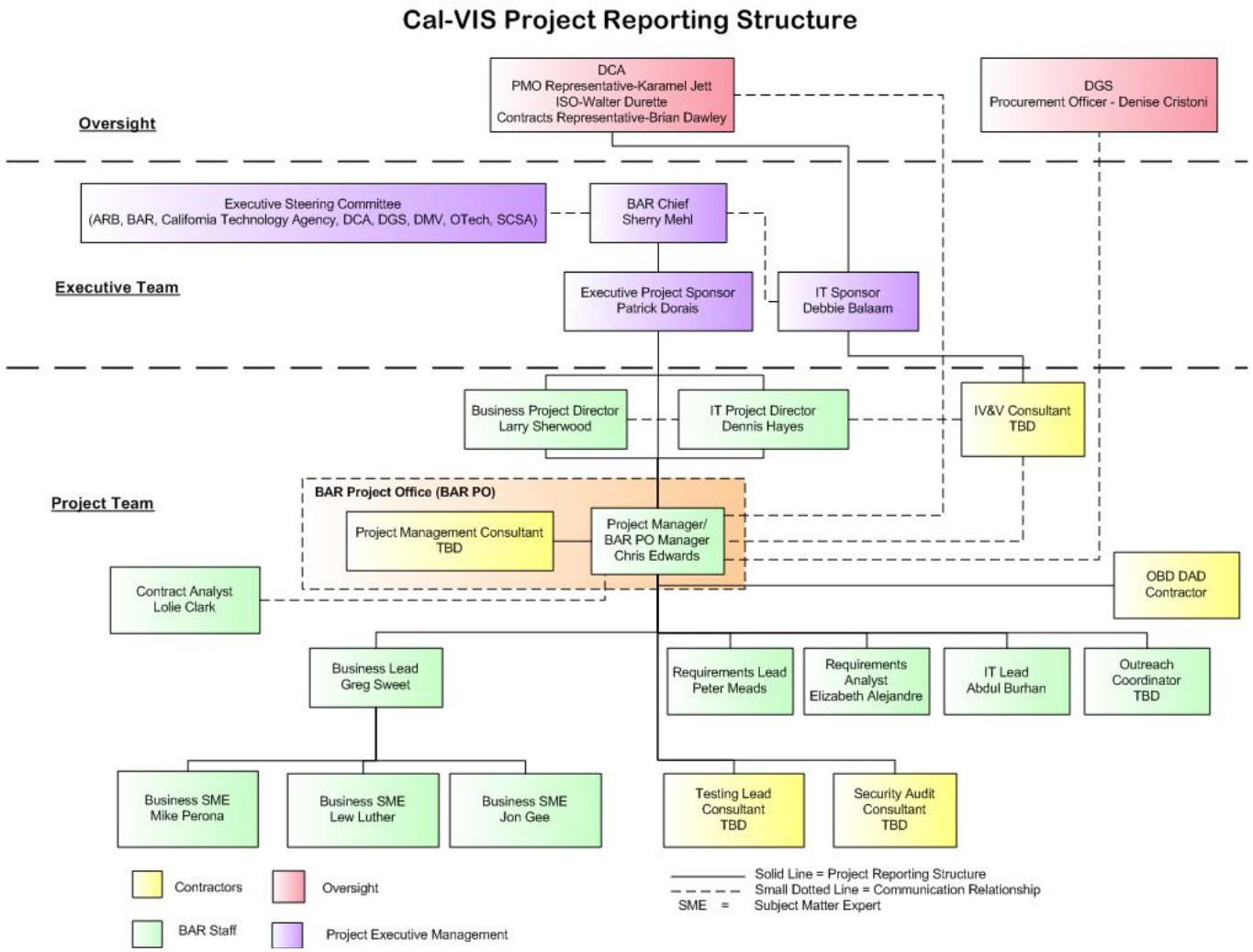

Figure 2 - Cal-VIS Project Reporting Structure

4.4 Project Priorities

There is no change to the Project Priorities specified in the FSR as shown in Table 8 – Project Priority Trade-Off Matrix.

Table 8 – Project Priority Trade-Off Matrix

	Constrained	Acceptable	Improved
Scope		X	
Resources			X
Schedule	X		

4.5 Project Plan

4.5.1 Project Scope

Health and Safety Code Section 44024 prescribes BAR to work with the ARB to develop an enhanced Smog Check inspection program that conforms to newer automotive technologies and requires BAR to ensure that the Program and equipment used to perform emissions inspections on vehicles conduct uniform and consistent Smog Check tests across the State (Health and Safety Code Section 44036). The new OBD Inspection System will allow timely updates to support California's Smog Check Program changes, as well as accommodate advances in automotive technology.

The Cal-VIS Project includes the following:

- Procurement of a single OBD DAD (hardware and software) solution and five years support for the device;
- Enhancement of the NGET System software;
- Certification testing of the OBD DAD in conjunction with off-the-shelf equipment;
- Acceptance testing of the OBD DAD, off-the-shelf-equipment, and NGET System software changes; and
- Deployment of the OBD Inspection System.

The scope of the Cal-VIS Project does not include the following:

- Updates to the BAR-97 EIS.
- RFP for a new contractor to take over the current NGET System.

4.5.2 Project Assumptions

The following sets forth the assumptions on which the revised Cal-VIS Project is based and the constraints under which the project is to be conducted:

- SCSA, DCA, BAR, and ARB executive staff will support the effort throughout all phases;
- Executive Steering Committee members will support the effort throughout all phases;
- DGS will support the effort throughout all phases;
- Sufficient personnel with the proper skill sets will be available;

- Project funding will be available throughout the project;
- The Cal-VIS Project will remain BAR's top priority - Department or Agency higher priority projects will not impact the schedule or resource requirements;
- Contracts will be processed in a timely manner;
- The project will adhere to the CA-PMM methodology;
- Technology to be used will conform to California State architectural and information security standards;
- Third party software components will be fully supported by their respective vendors for the duration of the contract; and
- Software security provisions will be integrated into OBD Inspection System.

4.5.3 Project Phasing

The revised project scope includes procurement of a single OBD DAD (hardware and software) solution and deployment of an OBD Inspection System.

The project will include the SPR deliverables shown in chronological order in Table 9 – SPR Deliverables.

Table 9 – SPR Deliverables

Deliverable Name	Estimated Completion Date
Feasibility Study Report	11/24/09
Special Project Report	06/06/11
Phase I - Invitation For Bid	08/31/11
Phase I - Pre-Qualified Bidder Notification	01/12/12
Phase I - Final Proposal Requirements	05/15/12
Phase I - Final Proposals	07/31/12
Phase I - OBD DAD Contractor Contract	11/28/12
Phase I - OBD DAD Procurement Phase Completed	***01/08/13***
Phase II - NGET System Requirements	08/31/11
Phase II - NGET System Design	12/13/11
Phase II - NGET System Code	06/28/12
Phase II - OBD DAD Integration Requirements	12/13/12
Phase II - OBD DAD Integration Design	12/31/12
Phase II - OBD DAD	01/12/13
Phase II - OBD DAD Integration Code	01/28/13
Phase II - OBD Inspection System	03/15/13

Table 9 – SPR Deliverables

Deliverable Name	Estimated Completion Date
Phase II - OBD DAD Certification	04/17/13
Phase II - OBD Inspection System Development and Testing Phase Completed	***04/18/13***
Phase III - OBD Inspection System Deployment Initiation	04/19/13
Phase III - OBD Inspection System Deployment Completion	08/21/13
Phase III - OBD Inspection System Implementation and Deployment Phase Completed	***09/30/13***
Post-Implementation Evaluation Report (PIER)	03/03/14

4.5.4 Project Roles and Responsibilities

In order to provide all project stakeholders with a clear understanding of the authority and responsibilities for successful completion of the Cal-VIS Project, BAR has defined the roles and responsibilities of key participants within the project.

1. **Executive Steering Committee –** The Executive Steering Committee (ESC) provides focus, oversight, strategic guidance, and vision to the project. The ESC is responsible for guiding the overall implementation from a State point of view, including contract compliance, budget, policy, and public outreach. Throughout the project lifecycle, the ESC will review critical business and design decisions made by the project team, as well as, resolve any potential key project issues regarding resources. The ESC is made up of executive members from ARB, BAR, California Technology Agency, DCA, DGS, DMV, OTech, SCSA, and the OBD DAD Contractor. BAR will provide the overall vision and strategic direction for the project. DCA PMO will perform primary oversight over the project.
2. **Project Office –** The Project Office, managed by the State Project Manager is responsible for the day-to-day coordination and management of the Cal-VIS Project, its staff resources, activities, and communication using the CA-PMM.
3. **Project Team** – The Project Team is made up of various subject matter experts. This includes DMV, ARB, and BAR staff such as Engineering, Technology Services Branch (TSB), and Enforcement. External consultants will be used where State resources are insufficient. The Project Team provides day-to-day business and technical input for the project. Since TSB has limited resources and, very little if any software development will be required for the OBD DAD, TSB will focus their resources on testing the OBD DAD and how it integrates into Cal-VIS. This includes all components built by the NGET System Contractor. TSB staff will work with the IV&V/Quality Assurance Consultant to ensure that all components meet current coding and naming standards agreed to by DCA and SGS.
4. **End Users** – The ultimate end-user, the Smog Check stations, were involved in the initial concept design through surveys and through Bureau Advisory Group meetings. They will be involved during beta testing of the equipment and will attend public workshops and outreach events. ARB is a stakeholder/SME on OBD, compliance of OBD software, as well as recommending program improvements and legislation impacting the mobile emission control. DMV is an end user who

will test to ensure that smog certificates of compliance are sent to the DMV registration system for automobile registration.

Table 10 – Project Key Participant Roles and Responsibilities identifies the key participants and their responsibilities on the project.

Table 10 – Project Key Participant Roles and Responsibilities

Key Participant Role	Responsibility
BAR Chief – Sherry Mehl The BAR Chief provides oversight and guidance to the Cal-VIS Project.	• Champions the project and project team • Commits time and political capital to the project • Facilitates sustained buy-in • Guides through and minimizes the political minefields
State Executive Project Sponsor – Patrick Dorais, BAR Deputy Chief The State Executive Project Sponsor must have a thorough knowledge of BAR's organization, policies, processes, and goals. The State Executive Project Sponsor must have the authority to quickly and effectively make decisions that impact BAR's policies, processes and goals as it relates to the Cal-VIS Project.	• Approves Cal-VIS Master Project Plan and Cal-VIS Project Schedule • Champions the project and project team • Commits time and political capital to the project • Facilitates sustained buy-in • Follows up to ensure that promised benefits are realized • Ensures that the State Project Manager's skills and experience meet the needs of the project • Conducts appraisal of the State Project Manager's performance • Oversees the State Project Manager • Conducts appraisal of the Project Management Consultant's performance • Approves escalated changes to the Cal-VIS Master Project Plan and Cal-VIS Project Schedule • Approves all escalated change requests for scope, schedule, and budget • Keeps informed about project status • Guides through and minimizes the political minefields • Provides direction and guidance for key organizational strategies • Resolves strategic and State Project Director-escalated issues • Understands project complexity
State IT Sponsor – Debbie Balaam, DCA CIO The State IT Sponsor must have a thorough knowledge of DCA's IT organization, policies, processes, and goals. The State IT Sponsor must have the authority to quickly and effectively make decisions that impact DCA's policies, processes and goals as it relates to the Cal-VIS Project.	• Approves Cal-VIS Master Project Plan and Cal-VIS Project Schedule • Commits time and political capital to the project • Facilitates sustained buy-in • Approves escalated changes to the Cal-VIS Master Project Plan and Cal-VIS Project Schedule • Approves all escalated change requests for scope, schedule, and budget • Keeps informed about project status • Guides through and minimizes the political minefields • Understands project complexity

Table 10 – Project Key Participant Roles and Responsibilities

Key Participant Role	Responsibility
State Business Project Director – Larry Sherwood, Supervising Senior Air Quality Engineer This position requires the ability to direct the work of a multi-disciplinary team of Engineering staff engaged in development and implementation of large-scale engineering projects. The State Business Project Director must have a thorough knowledge of BAR's organization, policies, processes, and goals as they relate to the Cal-VIS Project.	• Coordinates and ensures that business organizational, policy, and procedure changes are implemented • Ensures timely availability of needed business resources • Reviews changes to the Cal-VIS Master Project Plan and Cal-VIS Project Schedule • Reviews and approves change requests for scope, schedule, and budget • Shields business staff from unrealistic customer demands • Communicates project status to the State Executive Project Sponsor, Project Team, BAR staff, and external stakeholders in cooperation with the State IT Project Director and State Project Manager • Reviews and resolves escalated issues and risks raised by the State Project Manager
State IT Project Director – Dennis Hayes, Data Processing Manager III This position requires the ability to direct the work of a multi-disciplinary team of staff engaged in the development and implementation of a large-scale technology project. The State IT Project Director must have a thorough knowledge of BAR's IT policies, processes, and goals as they relate to the Cal-VIS Project.	• Coordinates and ensures that IT organizational, policy, and procedure changes are implemented • Ensures timely availability of needed IT resources • Reviews changes to the Cal-VIS Master Project Plan and Cal-VIS Project Schedule • Reviews and approves change requests for scope, schedule, and budget • Shields IT staff from unrealistic customer demands • Communicates project status to the State Executive Project Sponsor, State IT Sponsor, Project Team, BAR staff, and external stakeholders in cooperation with the State Business Project Director and State Project Manager • Reviews and resolves escalated issues and risks raised by the State Project Manager

Table 10 – Project Key Participant Roles and Responsibilities

Key Participant Role	Responsibility
State Project Manager – Chris Edwards, Senior Programmer Analyst (Supervisor) This position requires the ability to plan and organize the work of a multi-disciplinary team of staff engaged in the development and implementation of a large-scale technology project. Also required will be the ability to effectively apply project management concepts, practices, methods, and principles to the Cal-VIS Project to ensure a successful implementation.	• Manages the BAR Project Office • Responsible for the day-to-day activities of the project staff engaged in the project • Acts as the principle interface to the contractors • Makes the day-to-day decisions that do not impact overall project cost, schedule, scope, contract, or that impact the BAR organizational policies, procedures, or structure • Coordinates and ensures that subject matter experts are engaged appropriately and timely • Ensures deliverables and functionality are achieved as defined • Communicates detailed project status to the Project Team • Communicates project progress weekly to the State Project Directors and State Executive Project Sponsor • Communicates project status to the State Executive Project Sponsor, State IT Sponsor, Project Team, BAR staff, and external stakeholders • Reviews BAR project planning documents and schedules and escalates issues and concerns as appropriate • Reviews deliverables and change requests and makes a recommendation to the State Project Directors and State Executive Project Sponsor • Leads risk identification sessions for the project • Reports schedule and cost status at Executive Steering Committee meeting • Escalates issues and concerns to the State Project Directors and State Executive Project Sponsor as appropriate

Table 10 – Project Key Participant Roles and Responsibilities

Key Participant Role	Responsibility
Project Management Consultant (PMC) – TBD The position requires the expertise stipulated in the Statement of Work (SOW), including requirements of the CA-PMM.	• Takes direction from the State Project Manager and the State Project Directors • Mentors State Project Manager • Tracks and reports deliverables and whether functionality is achieved as defined • Accountable to the State Project Manager, State Project Directors, and State Executive Project Sponsor for all BAR Project Office-related activities • Plans, guides, and oversees the day-to-day internal activities that support the BAR Project Office • Monitors the Cal-VIS Master Project Plan and Cal-VIS Project Schedule • Develops, maintains, and ensures adherence to BAR Project Office infrastructure and supporting methodologies (e.g., processes, procedures, standards, templates) that are in compliance with best practices and policies • Provides guidance on PMBOK methodology and other industry-standard project management techniques • Provides guidance and supports the development of the procurement documents and the Information Technology Procurement Plan (ITPP) • Oversees and manages the generation of the procurement documents • Integrates all pieces and ensures consistency and continuity throughout procurement process and conformity to procurement standards, rules, and regulations • Manages the procurement document development as well as the procurement schedule • Facilitates identification and management of risks • Monitors risk management efforts to ensure they do not adversely impact the project • Participates in high-level risk management activities that cross project boundaries or are beyond the project's control • Communicates project status to the State Project Directors, Project Team, BAR staff, and external stakeholders • Escalates issues/concerns to the State Project Manager and the State Project Directors, as appropriate • Prepares and submits weekly and monthly project status reports to State Project Manager, State Project Directors, State Executive Project Sponsor, and State IT Sponsor • Performs project closeout activities

Table 10 – Project Key Participant Roles and Responsibilities

Key Participant Role	Responsibility
State Requirements Lead – Peter Meads This position requires the ability to elicit and document requirements.	• Communicates progress weekly to the State Project Manager • Elicits business requirements • Finalizes all business requirements documentation • Escalates issues and concerns to the State Project Manager • Coordinates business requirement issues
State Requirements Analyst – Elizabeth Alejandre This position requires the ability to elicit and document requirements.	• Finalizes all business requirements documentation
State IT Lead – Abdulkader Burhan This position requires the ability to plan and organize the work of the IT staff.	• Communicates IT staff project progress weekly to the State Project Manager • Coordinates the IT staff work including testing and quality audits of Cal-VIS components • Ensures deliverables and functionality are achieved as defined • Escalates issues and concerns to the State Project Manager
State Business Lead – Greg Sweet This position requires the ability to oversee the business requirements development, acceptance test plans, design, cases, and procedures development, and equipment certification.	• Communicates business staff project progress weekly to the State Project Manager • Oversees the elicitation and documentation of the business requirements from the business SMEs • Leads the development, documentation, and execution of the acceptance test plans, acceptance test design, acceptance test cases, and acceptance test procedures • Reviews the OBD DAD certification plan • Recommends certification of the OBD DAD equipment • Ensures deliverables and functionality are achieved as defined • Escalates issues and concerns to the State Project Manager

Table 10 – Project Key Participant Roles and Responsibilities

Key Participant Role	Responsibility
State Business SMEs – Jon Gee, Lew Luther, Mike Perona This position requires the ability to understand and document business requirements; develop and execute acceptance test plans, design, cases, and procedures, and certify equipment.	• Communicates progress weekly to the State Business Lead • Works with the State Requirements Lead and State Business Lead to document business requirements • Develops, documents, and executes acceptance test plans, acceptance test design, acceptance test cases, and acceptance test procedures • Reviews the OBD DAD certification plan • Recommends certification of the OBD DAD equipment • Ensures deliverables and functionality are achieved as defined • Escalates issues and concerns to the State Business Lead
State Outreach Coordinator – TBD This position requires the ability to communication project progress with the Smog Check stations.	• Communicates progress weekly to the State Project Manager • Communicates project progress to the Smog Check stations • Coordinates Outreach efforts • Escalates issues and concerns to the State Project Manager
State Contract Analyst – Lolie Clark This position requires knowledge and understanding of State procurement policies and practices.	• Communicates progress weekly to the State Project Manager • Coordinates contract activities • Escalates issues and concerns to the State Project Manager
Testing Lead Consultant – TBD The position requires the expertise stipulated in the Statement of Work (SOW).	• Leads the planning and execution of OBD DAD integration testing
Independent Verification and Validation (IV&V) Consultant – TBD The position requires the expertise stipulated in the Statement of Work (SOW).	• Leads the quality assurance activities • Assesses the NGET System architecture • Provides independent perspective for reviews and meetings • Monitors project activities • Evaluates project's adherence to industry standard project management and software development methodologies • Evaluates project risk management efforts • Evaluates project progress towards completion of the project

Table 10 – Project Key Participant Roles and Responsibilities

Key Participant Role	Responsibility
Security Audit Consultant – TBD The position requires the expertise stipulated in the Statement of Work (SOW).	• Conducts an independent security audit
California Technology Agency – TBD This position requires the ability to understand procurement documents.	• Approves the IFB • Monitors project oversight
Independent Project Oversight (IPO) – TBD This position requires the ability to review project management concepts, practices, methods, and principles to ensure a successful project.	• Provides independent perspective for reviews and meetings • Monitors project activities • Evaluates project's adherence to industry standard project management methodologies • Evaluates project risk management efforts • Evaluates project progress towards completion of the project • Briefs the State Executive Project Sponsor and State IT Sponsor
DCA PMO Representative – Karamel Jett This position requires the ability to review project management concepts, practices, methods, and principles to ensure a successful project.	• Provides independent perspective for reviews and meetings • Monitors project activities • Evaluates project's adherence to industry standard project management methodologies • Evaluates project issue and risk management efforts
DCA Contracts Representative – Brian Dawley This position requires knowledge and understanding of State procurement policies and practices.	• Coordinates DCA contract activities
DCA ISO – Walter Durette This position requires knowledge and understanding of State information security policies and practices.	• Coordinates DCA information security activities • Participates in security audits

Table 10 – Project Key Participant Roles and Responsibilities

Key Participant Role	Responsibility
DGS Procurement Officer – Denise Cristoni This position requires knowledge and understanding of State procurement policies and practices.	• Coordinates DGS procurement activities

Table 11 – Project Management Team Responsibilities by Project Life Cycle Phase identifies the Project Management Team responsibilities for the project

Table 11 – Project Management Team Responsibilities by Project Life Cycle Phase

(State Executive Project Sponsor, State IT Sponsor, State Business Project Director, State IT Project Director, State Project Manager, PMC)

Procurement	Planning, Development and Implementation			Maintenance
	Planning	Development	Implementation	
➢ Develop procurement documents ➢ Review evaluation criteria ➢ Evaluate Bidder Proposals ➢ Conduct risk management reviews	➢ Participate in planning sessions ➢ Review planning documentation ➢ Perform technical risk management reviews	➢ Review planning documentation ➢ Coordinate acceptance ➢ Perform technical risk management reviews	➢ Coordinate Smog Check station deployment ➢ Coordinate updating of Smog Check Manual ➢ Perform technical risk management reviews	➢ Support on-going production issues and change requests

Table 12 – Project Team Responsibilities by Project Life Cycle Phase identifies the Project Team responsibilities for the project.

Table 12 – Project Team Responsibilities by Project Life Cycle Phase

(State Business Lead, State Requirements Lead, State IT Lead, State Business SMEs, State Requirements Analyst, DCA Contracts Representative, BAR Contract Analysts, Outreach Coordinator, Testing Lead Consultant, IV&V Consultant, Security Audit Consultant)

Procurement	Planning, Development and Implementation			Maintenance
	Planning	Development	Implementation	
➢ Elicit and document business requirements ➢ Develop evaluation criteria ➢ Develop procurement documents ➢ Evaluate Bidder Proposals ➢ Maintain requirements traceability from FSR to procurement documents	➢ Identify and communicate planning issues ➢ Review planning documentation ➢ Trace detailed requirements to procurement documents	➢ Review technical documentation ➢ Participate in acceptance ➢ Certify OBD DAD	➢ Participate in Smog Check station deployment ➢ Update Smog Check Manual ➢ Create Training Materials ➢ Verify acceptance and certification ➢ Verify equipment readiness for implementation	➢ Support on-going production issues and change requests

Table 13 – OBD DAD Contractor Team Responsibilities by Project Life Cycle Phase identifies the OBD DAD Contractor Team responsibilities for the project.

Table 13 – OBD DAD Contractor Team Responsibilities by Project Life Cycle Phase

(OBD DAD Contractor)

Procurement	Planning, Development and Implementation			Maintenance
	Planning	Development	Implementation	
➢ Respond to Invitation For Bid	➢ Work with State Project Manager and PMC to develop project schedule and planning documents ➢ Develop planning documentation ➢ Produce weekly and monthly status reports ➢ Maintain Project Schedule	➢ Support Acceptance ➢ Develop technical documentation ➢ Produce weekly and monthly status reports ➢ Maintain Project Schedule	➢ Perform deployment and implementation activities ➢ Produce weekly and monthly status reports ➢ Maintain Project Schedule	➢ Support ongoing maintenance

Table 14 – Oversight Team Responsibilities by Project Life Cycle Phase identifies the Oversight Team responsibilities for the project.

Table 14 – Oversight Team Responsibilities by Project Life Cycle Phase

(DCA PMO Representative, IPO)

Procurement	Planning, Development and Implementation			Maintenance
	Planning	Development	Implementation	
➢ Conduct procurement practices reviews ➢ Assist in maintaining requirements traceability from FSR to procurement documents ➢ Assist in conducting risk management reviews ➢ Conduct project management practices and CA-PMM reviews	➢ Continue project management and CA-PMM reviews ➢ Verify effectiveness of change management processes ➢ Assist in performing technical risk management reviews	➢ Continue project management and CA-PMM reviews ➢ Assist in performing technical risk management reviews ➢ Work with Information Security Officer and security consultant on risk analysis	➢ Continue project management and CA-PMM reviews ➢ Verify acceptance and certification compliance ➢ Verify equipment readiness for implementation compliance ➢ Review system maintenance and operations plans ➢ Assist in performing technical risk management reviews	➢ Perform Close-out reviews

Table 15 – Project Security Team Responsibilities by Project Life Cycle Phase identifies the Project Security Team responsibilities for the project.

Table 15 – Project Security Team Responsibilities by Project Life Cycle Phase

(DCA Information Security Officer, Security Audit Consultant)

Procurement	Planning, Development and Implementation			Maintenance
	Planning	Development	Implementation	
➢ Develop security requirements ➢ Evaluate and define updates to existing security policies, procedures and standards ➢ Develop evaluation criteria for security requirements ➢ Review procurement documents ➢ Evaluate Bidder Proposals	➢ Risk assessment / risk mitigation strategies ➢ Begin Operational Recovery Planning: identify backup schedule, redundancy and system restoration needs ➢ Ensure security requirements are incorporated ➢ Identify security strategies for reducing vulnerabilities ➢ Coordinate system security with NGET System Contractor and OBD DAD Contractor ➢ Identify requirements related to vulnerabilities, laws, or changes in technology ➢ Define Security Test Cases	➢ Conduct Security Risk Assessment ➢ Ensure security requirements ➢ Develop security test scripts and test data ➢ Conduct system security testing ➢ Evaluate security test results ➢ Update Operational Recovery Plan ➢ Conduct Security Scan (infrastructure security readiness)	➢ Security Acceptance ➢ Publish any revised or new security policies or procedures, and provide training ➢ Security Scan of application components ➢ Work with DCA technical staff to resolve any security issues	➢ On-going security risk assessment ➢ Review security logs and audit trials ➢ Quarterly security scanning of infrastructure and application components ➢ On-going coordination with DCA Information Security Officer ➢ Annual Operation Recovery Plan ➢ Security testing of major revisions and version releases

4.5.5 Project Schedule

Table 16 – Preliminary Major Milestones is a preliminary major milestones chart with deliverables and estimated completion dates throughout the phases of the project. The key deliverables shown below do not explicitly identify all of the required deliverables for the OBD DAD Contractor. A complete list of deliverables will be included in Appendix A – Mandatory Deliverables in the procurement documents.

Table 16 – Preliminary Major Milestones

Major Milestones	Deliverable(s)	Estimated Completion Date *
Feasibility Study Report Approved	Feasibility Study Report	11/24/09
Special Project Report Approved	Special Project Report	06/06/11
Phase I - Invitation For Bid Released	Phase I - Invitation For Bid	08/31/11
Phase I - Pre-Qualified Bidders Selected	Phase I - Pre-Qualified Bidders Notification	01/12/12
Phase I - Final Proposal Requirements Completed	Phase I - Final Proposal Requirements	05/15/12
Phase I - Final Proposals Due	Phase I - Final Proposals	07/31/12
Phase I - OBD DAD Contractor Contract Awarded	Phase I - OBD DAD Contractor Contract	11/28/12
Phase I – OBD DAD Procurement Phase Completed		***01/08/13***
Phase II - NGET System Requirements Completed	Phase II - NGET System Requirements	08/31/11
Phase II - NGET System Design Completed	Phase II - NGET System Design	12/13/11
Phase II - NGET System Development Completed	Phase II - NGET System Code	06/28/12
Phase II - OBD DAD Integration Requirements Completed	Phase II - OBD DAD Integration Requirements	12/13/12
Phase II - OBD DAD Integration Design Completed	Phase II - OBD DAD Integration Design	12/31/12
Phase II - OBD DAD Received for Testing	Phase II - OBD DAD	01/12/13
Phase II - OBD DAD Integration Development Completed	Phase II - OBD DAD Integration Code	01/28/13
Phase II - OBD Inspection System Accepted	Phase II - OBD Inspection System	03/15/13

Table 16 – Preliminary Major Milestones

Major Milestones	Deliverable(s)	Estimated Completion Date *
Phase II - OBD DAD Certified	Phase II - OBD DAD Certification	04/17/13
Phase II – OBD Inspection System Development and Testing Phase Completed		***04/18/13***
Phase III - OBD Inspection System Deployment Begins	Phase III - OBD Inspection System Deployment Initiation	04/19/13
Phase III - OBD Inspection System Deployment Ends	Phase III - OBD Inspection System Deployment Completion	08/21/13
Phase III – OBD Inspection System Implementation and Deployment Phase Completed		***09/30/13***
Post-Implementation Evaluation Report (PIER) Completed	Post-Implementation Evaluation Report (PIER)	03/03/14

** Subject to change based on SPR approval date.*

4.6 Project Monitoring and Oversight

Due to the dramatically reduced complexity of the project, the Independent Verification and Validation resource has been removed. The DCA PMO will provide project monitoring and oversight. The detailed Project Monitoring and Oversight required for the project is documented in Attachment 3 - Cal-VIS CA-PMM Toolkit and in Attachment 4 – Cal-VIS Master Project Plan.

4.7 Project Quality

There is no change to the Project Quality specified in the FSR. The detailed Project Quality required for the project is documented in the Attachment 3 - Cal-VIS CA-PMM Toolkit and in Attachment 4 – Cal-VIS Master Project Plan.

4.8 Change Management

There is no change to the Change Management specified in the FSR. The detailed Change Management required for the project is documented in the Attachment 3 - Cal-VIS CA-PMM Toolkit and in Attachment 4 – Cal-VIS Master Project Plan.

4.9 Authorization Required

Approval of this SPR is required by DCA, California Technology Agency, and the State and Consumer Services Agency (SCSA).

5 UPDATED RISK MANAGEMENT PLAN

There is no change to the Risk Management procedures specified in the FSR. The detailed Risk Management process is documented in the Attachment 3 - Cal-VIS CA-PMM Toolkit and in Attachment 4 – Cal-VIS Master Project Plan. The risks that were originally identified in the FSR, as well as new risks identified since the FSR, have been incorporated into the project risk-tracking tool, Risk Radar.

5.1 Risk Register

Table 17 – Project Risks indicates the current project risks (tracked in Risk Radar).

Table 17 – Project Risks

Risk Rank	Risk ID	Risk Title	Risk Prob.	Risk Impact	Risk Level	Risk Horizon	Risk Status
1	0223	NGET Contractor cannot finish NGET System enhancements in time	70%	Major	High	FAR	Mitigate/ Reduce
2	0252	No OBD DAD Bidders	30%	Moderate	Medium	FAR	Mitigate/ Reduce
3	0255	OBD DAD cannot be built in time	30%	Moderate	Medium	FAR	Mitigate/ Reduce
4	0256	Integration testing identifies problems	30%	Moderate	Medium	FAR	Mitigate/ Reduce
5	0243	New procurement method	30%	Moderate	Medium	FAR	Mitigate/ Reduce
6	0209	Different certification testing process	30%	Minor	Low	FAR	Mitigate/ Reduce
7	0260	OBD DAD cost too high	10%	Minor	Low	FAR	Mitigate/ Reduce
8	0227	Legislative changes for future proposals	10%	Critical	Low	FAR	Accept/ Monitor
9	0113	Negative public input	10%	Serious	Low	FAR	Accept/ Monitor
10	0129	New BAR headquarters	10%	Moderate	Low	FAR	Accept/ Monitor

6 UPDATED ECONOMIC ANALYSIS WORKSHEETS (EAWS)

As shown in Table 18 – Anticipated Project Costs, the Total Costs for the Cal-VIS Project are projected to decrease by more than 70%, or $12,527,875, due to the proposed revisions to the project. More detailed information is included in Attachment 5 - SPR Economic Analysis Worksheets. The original FSR Economic Analysis Worksheets are included as Attachment 6 - FSR Economic Analysis Worksheets.

Table 18 – Projected Project Costs

Project Costs	FSR Projected Costs	SPR Projected Costs *	Variance
One-Time Costs			
Staff	$4,121,842	$2,310,772	<$1,811,070>
Hardware Purchase	$99,902	$0	<$99,902>
Software Development	$7,103,890	$0	<$7,103,890>
Contract Services	$3,608,400	$1,792,281	<$1,816,119>
**Other (OE&E)	$0	$147,312	$147,312
Total One-Time Costs	**$14,934,035**	**$4,250,365**	**<$10,683,669>**
Continuing Costs			
Staff	$1,181,035	$749,353	<$431,682>
Hardware Lease/Maintenance	$0	$0	$0
Software Maintenance/Licenses	$1,440,000	$0	<$1,440,000>
Telecommunications	$21,600	$0	<$21,600>
Data Center	$138,696	$0	<$138,696>
Other (OE&E)	$0	$187,772	$187,772
Total Continuing Costs	**$2,781,331**	**$937,125**	**<$1,844,206>**
Total Costs	**$17,715,366**	**$5,187,490**	**<$12,527,875>**

**** Subject to change based on SPR approval date.***

*****Other (OE&E) project costs are for BAR's Engineering lab costs for calibration gases and test fixtures.***

6.1 Proposed Alternative Cost Worksheet

6.1.1 One-Time IT Project Costs

Because of changes made since FSR approval, as provided by AB 2289, the Total One-Time Costs for the revised project decreased by $10,683,669 and the Total Continuing Costs decreased by $1,844,206, resulting in an overall project savings of $12,527,875.

The table below, requested by California Technology Agency, draws a monetary comparison between the original FSR EAW estimates and the revised SPR estimates.

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Staff (Salaries and Benefits)	**Cost decreased by $1,811,070 due to revised resource estimates due to the change in the project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	Costs are for procurement document development, source selection, contract award, and Phase I requirements and design.	Costs are for Phase I construction, test preparation, system testing, and UAT and Phase II requirements, design, construction, test preparation, and system testing.	Costs are for Phase II UAT, hardware certification, training, and station deployment.	Costs are for Phase II station deployment and project closeout.	No costs in this Fiscal Year.
Special Project Report (SPR)					
Costs are for hardware and software requirements elicitation and documentation and procurement document development.	Costs are for Phase I procurement document development.	Costs are for Phase I selection of pre-qualified Bidders, and Phase I working sessions.	Costs are for Phase I Final Proposal evaluation, Phase I contract award, and Phase II OBD Inspection System testing.	Costs are for Phase II OBD Inspection System testing, Phase III implementation and deployment, and project closeout.	No costs in this Fiscal Year.
Hardware Purchase	**Cost decreased by $99,902 due to the elimination of the hardware purchase.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	No costs in this Fiscal Year.	Costs are for circuits, routers, servers, and switches.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.
Special Project Report (SPR)					
No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Software Purchase/License	**Cost did not change.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.
Special Project Report (SPR)					
No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.
Software Customization	**Cost decreased by $7,103,890 due to the change in the project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	Costs are for software development.	Costs are for software development.	Costs are for software development.	Costs are for software development.	No costs in this Fiscal Year.
Special Project Report (SPR)					
No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Project Management* **	**Cost decreased by $245,765 due to the change in the project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	Costs are for PMC and PSC to support procurement document development and Project Office.	Costs are for PMC and PSC to support Project Office.	Costs are for PMC and PSC to support Project Office.	Costs are for PMC and PSC to support Project Office.	No costs in this Fiscal Year.
Special Project Report (SPR)					
Costs are for PMC and PSC to support FSR development, procurement document development and Project Office.	Costs are for PMC to support SPR development, procurement document development and Project Office.	Costs are for PMC to support Project Office.	Costs are for PMC to support Project Office.	Costs are for PMC to support Project Office.	No costs in this Fiscal Year.
Project Oversight	**Cost decreased by $264,304 due to the reduction in complexity that occurred in the project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	Costs are for IPO.	Costs are for IPO.	Costs are for IPO.	Costs are for IPO.	No costs in this Fiscal Year.
Special Project Report (SPR)					
No costs in this Fiscal Year.	Costs are for IPO.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.

*** Project management costs for fiscal years 2009 through 2011 include assisting the Project Office with the following work products: schedule creation and updates, planning documents, status reports, RFI creation and responses, and Ad Hoc project reports. Two resources were needed for this highly complex and sensitive project. The scope and complexity reduction being requested in this SPR will allow a PMC to work at ¾ time on the project without a need for a PSC.

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
IV&V Services	**Cost decreased by $124,800 due to the reduction in complexity that occurred in the project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	Costs are for IV&V.	Costs are for IV&V.	Costs are for IV&V.	Costs are for IV&V.	No costs in this Fiscal Year.
Special Project Report (SPR)					
Costs are for IV&V.	Costs are for IV&V.	Costs are for IV&V.	Costs are for IV&V.	Costs are for IV&V.	No costs in this Fiscal Year.

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Other Contract Services	**Cost decreased by $1,181,250 due to the change in project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	No costs in this Fiscal Year.	$118,050 (Testing Support) $189,000 (Implementation Support) $118,050 (Hardware Support) $60,000 (security audit)	$244.200 (Testing Support) $252,000 (Implementation Support) $244,200 (Hardware Support) $60,000 (security audit)	$57,750 (Testing Support) $63,000 (Implementation Support) $57,750 (Hardware Support)	No costs in this Fiscal Year.
Special Project Report (SPR)					
No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	$178,200 (Software Testing Support) $30,000 (Security Audit)	$44,550 (Software Testing Support) $30,000 (Security Audit)	No costs in this Fiscal Year.
Other	**Cost increased by $147,312 due to the omission of OE&E in the FSR costs.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.
Special Project Report (SPR)					
Costs are for staff OE&E.	Costs are for staff OE&E.	Costs are for staff OE&E.	Costs are for staff OE&E.	Costs are for staff OE&E.	No costs in this Fiscal Year.

6.1.2 Continuing IT Project Costs

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Staff (Salaries and Benefits)	**Cost decreased by $431,682 due to revised resource estimates due to the change in the project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	Costs are for certification plan execution and training support.	Costs are for software maintenance.	Costs are for software maintenance and problem analysis.
Special Project Report (SPR)					
No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	Costs are for testing.	Costs are for deployment.	Costs are for on-going support.
Software Maintenance/Licenses	**Cost decreased by $1,440,000 due to the change in the project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	Costs reflect partial year of contract software maintenance.	Costs reflect full year of contract software maintenance.	Costs reflect full year of contract software maintenance.
Special Project Report (SPR)					
No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Telecommunications	**Cost decreased by $21,600 due to the change in the project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	Costs are for dedicated DS1 circuit.	Costs are for dedicated DS1 circuit.
Special Project Report (SPR)					
No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.
Data Center Services	**Cost decreased by $138,696 due to the change in the project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	Costs are for servers, backup, storage, network connectivity, and database support.	Costs are for servers, backup, storage, network connectivity, and database support.
Special Project Report (SPR)					
No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.
Other	**Cost increased by $187,772 due to the omission of OE&E in the FSR costs.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.
Special Project Report (SPR)					
No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	Costs are for staff OE&E.	Costs are for staff OE&E.

6.1.3 Continuing Existing Costs

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Continuing Existing IT Costs	**Cost decreased by $224,000 due to change in project approach.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	Costs are for PCs and software for the Contractor.	Costs are for BAR server and installation.	Costs are for license maintenance for the server and desktops, and server maintenance, backup and recovery.	Costs are for license maintenance for the server and desktops, and server maintenance, backup and recovery.	Costs are for license maintenance for the server and desktops, and server maintenance, backup and recovery.
Special Project Report (SPR)					
No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.	No costs in this Fiscal Year.
Continuing Existing Program Costs (Program Staff)	**Cost decreased by $1,967,428 due to the change in the project scope and schedule as provided by AB 2289.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	Costs are for support of equipment.	Costs are for support of equipment.	Costs are for support of equipment.	Costs are for support of equipment.	Costs are for support of equipment.
Special Project Report (SPR)					
Costs are for support of equipment.	Costs are for support of equipment.	Costs are for support of equipment.	Costs are for support of equipment.	Costs are for support of equipment.	Costs are for support of equipment.

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Other Program Costs	**Cost increased by $3,100 due to the omission of OE&E in the FSR costs.**				
Feasibility Study Report (FSR)					
Fiscal Year accidentally omitted in original EAW.	Costs are for equipment and gases.	Costs are for equipment and gases.	Costs are for equipment and gases.	Costs are for equipment and gases.	Costs are for equipment and gases.
Special Project Report (SPR)					
Costs are for equipment and staff OE&E.	Costs are for equipment and staff OE&E.	Costs are for equipment and staff OE&E.	Costs are for equipment and staff OE&E.	No costs in this Fiscal Year.	No costs in this Fiscal Year.

ATTACHMENT 1 – SPR Glossary

BAR-2012 Emissions Inspection System (EIS) – A conceptual BAR-certified emissions inspection system that was planned under the BAR-2012 EIS Project to replace the BAR-97 EIS in order to conduct both tailpipe and OBD tests.

BAR-97 Emissions Inspection System (EIS) – A BAR-certified emissions inspection system currently used in the Smog Check Program to perform inspections on vehicles. The BAR-97 EIS is capable of performing 4-gas, static-state emissions testing, as well as, an Acceleration Simulation Mode (ASM) 5-gas vehicle emissions test. The BAR-97 EIS components include a dynamometer to simulate on-road vehicle operating conditions while the vehicle remains stationary and allows for the measurement of NO, as well as HC, CO, CO_2, and 0_2.

Bidder – Business entity proposing goods and/or services in response to a solicitation.

California Vehicle Inspection System (Cal-VIS) – Consists of an *OBD Inspection System, the NGET System,* and, the connections between the *OBD Inspection System* and *the NGET System,* including system documentation and procedures.

Equipment – Identified as any component (e.g., Bar Code Scanner, Computer, and Printer) within the planned *OBD Inspection System*.

Independent Project Oversight (IPO) – State resource that performs project management assessment and evaluation of a project to mitigate management risks. The assessment is based on the CA-PMM.

Next Generation Electronic Transmission (NGET) – A transaction processing system, maintained by the NGET Contractor, which stores Smog Check data and encompasses computer hardware, software, support, and procedures. The NGET System also dictates the communication protocol, accepts transmissions from the BAR-97 EIS and the OBD Inspection System, and transmits electronic Smog Check Certificates of Compliance for passing vehicles to the DMV. BAR staff have access to the data, reports, and data analysis tools.

On-Board Diagnostics System (OBD) – The vehicle engine control module that evaluates emission control systems (e.g., catalyst efficiency, evaporative system, comprehensive components) and outputs results in a Society of Automotive Engineer's standardized format, and identifies errors by illuminating the malfunction indicator lamp and recording diagnostic trouble codes.

OBD Data Acquisition Device (OBD DAD) – Hardware and software that is procured under the project and will be used to connect the vehicle being inspected to the OBD Inspection System.

OBD DAD Contractor – Contractor awarded the single OBD DAD contract for sales and maintenance for five years.

OBD Inspection System – System that is built under this project and will include a Computer, Printer, Bar Code Scanner, OBD DAD, and software that communicates with the NGET System and will be used to conduct OBD-focused inspections on model-year 2000 and newer vehicles beginning in 2013.

Operational Recovery Plan (ORP) – A plan developed and maintained to assure continuity of computing operations in support of a system.

Project Management Consultant – Resource hired by the State that reports to BAR and provides overall, hands-on Project Management services for the *Cal-VIS* Project.

Referee – Statewide network of facilities that assist consumers in resolving disputed Smog Check inspection results, as well as inspecting and certifying vehicles with unique inspection problems.

Roadside Program – In cooperation with the California Highway Patrol, *BAR* field staff randomly pull over vehicles driving by, and perform inspections to collect data for Smog Check Program evaluation purposes.

Smog Certificate of Compliance – An electronic certificate issued by an *OBD Inspection System* or by a BAR-97 EIS and used by the Department of Motor Vehicles (DMV) to satisfy a smog requirement associated with the vehicle registration process.

Smog Check Program – California's version of a federally mandated Inspection and Maintenance Program designed to evaluate and certify the performance of the emissions control systems of motor vehicles.

Smog Check Station – Facility licensed to conduct a California Smog Check inspection and/or emissions related repair.

Statement of Work (SOW) – Narrative description of the services that are going to be supplied in response to contract requirements.

System Testing – Testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements.

User Acceptance Testing - Achieves validation of end-to-end business processes, comparing actual vs. expected results. Validates system set-up for transactions and user access, confirms expected and intended use of the system, verifies performance on business-critical functions and confirms application integrity.

ATTACHMENT 2 – Cal-VIS Project Schedule

The Cal-VIS Project Schedule is included on the following pages.

ATTACHMENT 3 – SPR Economic Analysis Worksheets

The SPR Economic Analysis Worksheets are included on the following pages.

ATTACHMENT 4 – FSR Economic Analysis Worksheets

The original FSR Economic Analysis Worksheets are included on the following pages.