

**COMMERCIAL DRIVER'S LICENSE  
THIRD PARTY TESTING ANTI-FRAUD  
SYSTEM**

**Phase II – Prototype, Pilot Testing and  
Evaluation**

**Final Evaluation**



**U.S. Department of Transportation  
Federal Motor Carrier Safety Administration**

**November 2007**

## **FOREWORD**

The purpose of this project was to develop specifications and pilot test an anti-fraud system for commercial driver's license (CDL) third party testing activities in at least three jurisdictions. If enhancements are made, additional jurisdictions are expected to adopt the system. The resultant system, designated the Commercial Skills Test Information Management System (CSTIMS), has the potential to strengthen commercial vehicle safety and security by ensuring the integrity of the nation's commercial driving license program.

This project was segmented into two phases. Phase I included documenting the business and technical requirements for a CDL anti-fraud system, detailing the current level of automation in jurisdiction licensing systems, and developing functional and performance specifications and a detailed design for a prototype and pilot system. Phase II included developing a prototype anti-fraud system, testing the system, and assessing the ability of the prototype system to combat CDL fraud. Specifically, the analysis estimated the safety and security benefits offered by the prototype system.

This deliverable documents and completes the efforts of Phase II, Task 5 – Final Evaluation, which was conducted in parallel with Phase II, Task 4 – Prototype and Pilot Testing, which began in February 2006 and continued through December 2006.

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**Technical Report Documentation Page**

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## SI\* (MODERN METRIC) CONVERSION FACTORS

| APPROXIMATE CONVERSIONS TO SI UNITS |                                |                            |                        |                   | APPROXIMATE CONVERSIONS FROM SI UNITS |                        |             |                                |                 |
|-------------------------------------|--------------------------------|----------------------------|------------------------|-------------------|---------------------------------------|------------------------|-------------|--------------------------------|-----------------|
| Symbol                              | When You Know                  | Multiply By                | To Find                | Symbol            | Symbol                                | When You Know          | Multiply By | To Find                        | Symbol          |
| <u>LENGTH</u>                       |                                |                            |                        |                   | <u>LENGTH</u>                         |                        |             |                                |                 |
| in                                  | inches                         | 25.4                       | millimeters            | mm                | mm                                    | millimeters            | 0.039       | inches                         | in              |
| ft                                  | feet                           | 0.305                      | meters                 | m                 | m                                     | meters                 | 3.28        | feet                           | ft              |
| yd                                  | yards                          | 0.914                      | meters                 | m                 | m                                     | meters                 | 1.09        | yards                          | yd              |
| mi                                  | miles                          | 1.61                       | kilometers             | km                | km                                    | kilometers             | 0.621       | miles                          | mi              |
| <u>AREA</u>                         |                                |                            |                        |                   | <u>AREA</u>                           |                        |             |                                |                 |
| in <sup>2</sup>                     | square inches                  | 645.2                      | square millimeters     | mm <sup>2</sup>   | mm <sup>2</sup>                       | square millimeters     | 0.0016      | square inches                  | in <sup>2</sup> |
| ft <sup>2</sup>                     | square feet                    | 0.093                      | square meters          | m <sup>2</sup>    | m <sup>2</sup>                        | square meters          | 10.764      | square feet                    | ft <sup>2</sup> |
| yd <sup>2</sup>                     | square yards                   | 0.836                      | square meters          | m <sup>2</sup>    | m <sup>2</sup>                        | square meters          | 1.195       | square yards                   | yd <sup>2</sup> |
| ac                                  | acres                          | 0.405                      | hectares               | ha                | ha                                    | hectares               | 2.47        | acres                          | ac              |
| mi <sup>2</sup>                     | square miles                   | 2.59                       | square kilometers      | km <sup>2</sup>   | km <sup>2</sup>                       | square kilometers      | 0.386       | square miles                   | mi <sup>2</sup> |
| <u>VOLUME</u>                       |                                |                            |                        |                   | <u>VOLUME</u>                         |                        |             |                                |                 |
| fl oz                               | fluid ounces                   | 29.57                      | milliliters            | ml                | ml                                    | milliliters            | 0.034       | fluid ounces                   | fl oz           |
| gal                                 | gallons                        | 3.785                      | liters                 | l                 | l                                     | liters                 | 0.264       | gallons                        | gal             |
| ft <sup>3</sup>                     | cubic feet                     | 0.028                      | cubic meters           | m <sup>3</sup>    | m <sup>3</sup>                        | cubic meters           | 35.71       | cubic feet                     | ft <sup>3</sup> |
| yd <sup>3</sup>                     | cubic yards                    | 0.765                      | cubic meters           | m <sup>3</sup>    | m <sup>3</sup>                        | cubic meters           | 1.307       | cubic yards                    | yd <sup>3</sup> |
| <u>MASS</u>                         |                                |                            |                        |                   | <u>MASS</u>                           |                        |             |                                |                 |
| oz                                  | ounces                         | 28.35                      | grams                  | g                 | g                                     | grams                  | 0.035       | ounces                         | oz              |
| lb                                  | pounds                         | 0.454                      | kilograms              | kg                | kg                                    | kilograms              | 2.202       | pounds                         | lb              |
| T                                   | short tons<br>(2,000 lbs)      | 0.907                      | megagrams              | Mg                | Mg                                    | megagrams              | 1.103       | short tons<br>(2,000 lbs)      | T               |
| <u>TEMPERATURE (exact)</u>          |                                |                            |                        |                   | <u>TEMPERATURE (exact)</u>            |                        |             |                                |                 |
| °F                                  | Fahrenheit<br>temperature      | 5(F-32)/9<br>or (F-32)/1.8 | Celsius<br>temperature | °C                | °C                                    | Celsius<br>temperature | 1.8 C + 32  | Fahrenheit<br>temperature      | °F              |
| <u>ILLUMINATION</u>                 |                                |                            |                        |                   | <u>ILLUMINATION</u>                   |                        |             |                                |                 |
| fc                                  | foot-candles                   | 10.76                      | lux                    | lx                | lx                                    | lux                    | 0.0929      | foot-candles                   | fc              |
| fl                                  | foot-lamberts                  | 3.426                      | candela/m <sup>2</sup> | cd/m <sup>2</sup> | cd/m <sup>2</sup>                     | candela/m <sup>2</sup> | 0.2919      | foot-lamberts                  | fl              |
| <u>FORCE and PRESSURE or STRESS</u> |                                |                            |                        |                   | <u>FORCE and PRESSURE or STRESS</u>   |                        |             |                                |                 |
| lbf                                 | pound-force                    | 4.45                       | newtons                | N                 | N                                     | newtons                | 0.225       | pound-force                    | lbf             |
| psi                                 | pound-force<br>per square inch | 6.89                       | kilopascals            | kPa               | kPa                                   | kilopascals            | 0.145       | pound-force<br>per square inch | psi             |

\* SI is the symbol for the International System of Units. Appropriate rounding should be done to comply with Section 4 of ASTM E380.

## **ACKNOWLEDGEMENTS**

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## ACRONYMS

|         |  |
|---------|--|
| 3PT     | Third Party Tester                                   |
| AA      | AAMVA Administrator (CSTIMS User)                    |
| AAMVA   | American Association of Motor Vehicle Administrators |
| AK      | Alaska   |
| AU      | Auditor (CSTIMS User)                                |
| AZ      | Arizona  |
| CCD     | Certification Control Documents                      |
| CDL     | Commercial Driver's License                          |
| CDLIS   | Commercial Driver License Information System         |
| CM      | CDL Monitor (CSTIMS User)                            |
| CSTIMS  | Commercial Skills Test Information Management System |
| DMV     | Department of Motor Vehicles                         |
| DOT     | US Department of Transportation                      |
| DPS     | Department of Public Safety                          |
| EX      | Examiner (CSTIMS User)                               |
| FL      | Florida  |
| FM      | FMCSA (CSTIMS User)                                  |
| FMCSA   | Federal Motor Carrier Safety Administration          |
| FYnnnn  | Fiscal Year nnnn                                     |
| GVWR    | Gross Vehicle Weight Rating                          |
| ID      | Identification<br>Identifier                         |
| JA      | Jurisdiction Administrator (CSTIMS User)             |
| MVA     | Motor Vehicle Agency                                 |
| MC      | MVA Clerk (CSTIMS User)                              |
| MVD     | Motor Vehicle Division                               |
| NM, NMx | New Mexico   |
| PDPS    | Problem Driver Pointer System                        |
| RP      | Tester's Responsible Party (CSTIMS User)             |
| SA      | System Administrator (CSTIMS User)                   |
| SC      | South Carolina                                       |
| SD      | South Dakota   |
| U.S.    | United States  |
| VIN     | Vehicle Identification Number                        |
| WI      | Wisconsin  |

## EXECUTIVE SUMMARY

Issuance of fraudulent commercial driver's licenses (CDLs) is a nationwide problem. The United States Department of Transportation, Office of Inspector General released a report in May 2002 stating that suspected criminal activity had been identified in at least 16 jurisdiction CDL programs. Large-scale fraud had been identified in the CDL programs of Florida, Georgia, Illinois, and North Carolina. In each of these jurisdictions, hundreds of CDLs were issued fraudulently. Nationwide, thousands of CDL holders have been retested due to suspicion concerning the issuance of their CDLs. In Illinois alone, nine deaths could be directly traced to crashes involving commercial drivers that fraudulently received their CDLs.

The purpose of this project was to develop specifications and pilot test an anti-fraud system for CDL third party testing activities in at least three jurisdictions. If enhancements are made, additional jurisdictions are expected to adopt the system. The resultant system, designated the Commercial Skills Test Information Management System (CSTIMS), has the potential to strengthen commercial vehicle safety and security by ensuring the integrity of the nation's commercial driving license program.

This project was segmented into two phases with five distinct tasks. These included:

- Phase I – Requirements, Specifications, and Design
  - Task 1: Business Requirements Definition—Document the business and technical requirements for a CDL anti-fraud system, including the identification of known vulnerabilities in the current CDL system(s). This task was completed in February 2004.
  - Task 2: Technology Baseline Assessment—Detail the current level of automation in jurisdiction licensing systems and document specific jurisdiction licensing systems. This task was completed in February 2004.
  - Task 3: Specifications Development and Design—Develop functional and performance specifications and a detailed design for a prototype and pilot system to address the vulnerabilities and meet the business requirements identified in Task 1. This task was completed in December 2004.
- Phase II – Prototype, Pilot Testing, and Evaluation
  - Task 4: Prototype and Pilot Testing—Develop a prototype anti-fraud system and test the system in at least three pilot jurisdictions. This task continued through December 2006.
  - Task 5: Final Evaluation—Assess the ability of the prototype system to combat CDL fraud and estimate the safety and security benefits offered by the prototype system. This task continued through December 2006.

Task 1, which was completed in February 2004, included efforts to conduct a literature review to determine vulnerabilities in CDL testing associated with the use of third party testers. The goal was to identify both the key functionality of an anti-fraud system and any best practices within the MVA community to address such fraud through the proper

administration of a CDL third party tester program at the jurisdiction level. Task 2, which was completed in February 2004, surveyed jurisdictions to determine how technology was currently deployed in support of CDL third party tester programs and also involved an end-to-end review of jurisdiction processes for the establishment, administration, and monitoring of third party testers.

Working within time and budgetary constraints imposed by the Statement of Work, the American Association of Motor Vehicle Administrators (AAMVA) completed site visits to three jurisdictions. AAMVA also formed a Working Group to approve the interview guides and validate the recommendations from these visits.

AAMVA completed site visits in the following jurisdictions: Florida, South Carolina, and Wisconsin. These jurisdictions volunteered time and staff to participate in this effort as did FMCSA staff and, in some instances, third party testers within the jurisdiction. Prior to the site visits, jurisdictions were supplied with a set of questions to be covered during the site visit. During the site visits, a facilitated discussion was conducted based on the distributed questions. Each meeting began with the jurisdiction MVA giving a presentation of their current approach to CDL third party testing. Following that presentation, a question and answer exchange took place as their processes were reviewed further. The sessions concluded with specific discussions of instances of fraud within the jurisdiction.

All jurisdictions visited had a well-defined process in-place to ensure third party testers and all examiners are properly trained and audited; however, every jurisdiction could have benefited from additional automation to improve oversight of the third party testing program.

AAMVA prepared and delivered to FMCSA a Technical Memorandum deliverable which documented the findings of Task 1 – Business Requirements Definition and Task 2 – Technology Baseline Assessment, which were conducted in parallel from December 2003 through February 2004.

Task 3, Specifications Development and Design, consisted of biweekly meetings with representatives that administered, conducted, and monitored CDL third party tester programs. This forum determined the business rules and policies and made the final decisions that were incorporated into the system design. The resulting system design dealt with the events that occurred within the scope of CDL third party testing and described the system responses to each of those events. The events and the system responses were described in terms of information flows. These information flows were subsequently used in Phase II to produce a prototype system that was piloted by jurisdictions and third party testers.

In December 2004, AAMVA prepared and delivered to FMCSA a Technical Memorandum deliverable which documented the requirements of Task 3 – Specifications Development and Design.

Phase II, Task 4, Prototype and Pilot Testing, began in February 2006 and continued through December 2006. During the pilot testing and evaluation period, a prototype CSTIMS was deployed in four jurisdictions (Alaska, Arizona, New Mexico, and South Dakota) and was used to schedule, administer, evaluate, and conduct oversight for CDL skills testing. Thirty-eight jurisdiction and CDL third party testing agencies and 117 CDL testing examiners participated in the evaluation. As of December 31, 2006, the four participating pilot jurisdictions collectively used CSTIMS to schedule 9,246 CDL skills tests for 2,619 CDL applicants and provide real-time and historical oversight. During this period, CSTIMS reported an overall test pass rate of 94% for the participating jurisdictions.

Phase II, Task 5, Final Evaluation, was conducted in parallel with Task 4. During the evaluation period, the pilot jurisdictions, FMCSA, and AAMVA identified and documented 112 issues, areas for enhancement, and recommendations for improvement. Of these items, 28 were designated “critical.” Nineteen funding, functionality, and deployment recommendations were offered to address these items. Estimates for the cost and effort to modify CSTIMS to address these items, to complete CSTIMS deployment and training for all jurisdictions, and to provide ongoing operational support were formulated. Initial costs associated with enhancements, national deployment, and jurisdiction training are estimated at \$1,144,044. Ongoing support costs are estimated at \$280,812 per year.

# 1. PROJECT OVERVIEW

Issuance of fraudulent commercial driver's licenses (CDLs) is a nationwide problem. The United States Department of Transportation, Office of Inspector General released a report in May of 2002 stating that suspected criminal activity had been identified in at least 16 State CDL programs. Large-scale fraud has been identified in the CDL programs of Florida, Georgia, Illinois, and North Carolina. In each of these states, hundreds of CDLs were issued fraudulently. Nationwide, thousands of CDL holders have been retested due to suspicion concerning the issuance of their CDLs. In Illinois alone, nine deaths were directly traced to crashes involving commercial drivers that fraudulently received their CDLs.

The purpose of this project was to develop specifications and pilot test an anti-fraud system for CDL third party testing activities. If enhancements are made, additional jurisdictions are expected to adopt the system. The resultant system, designated the Commercial Skills Test Information Management System (CSTIMS), has the potential to strengthen commercial vehicle safety and security by ensuring the integrity of the nation's commercial driving license program.

This project was segmented into two phases with five distinct tasks. These included:

- Phase I – Requirements, Specifications, and Design
  - Business Requirements Definition—Document the business and technical requirements for a CDL anti-fraud system, including the identification of known vulnerabilities in the current CDL system(s).
  - Technology Baseline Assessment—Detail the current level of automation in state licensing systems and document specific state licensing systems.
  - Specifications Development and Design—Develop functional and performance specifications and a detailed design for a prototype and pilot system to address the vulnerabilities and meet the business requirements identified in Task 1.
- Phase II – Prototype, Pilot testing, and Evaluation
  - Prototype and Pilot Testing—Develop a prototype anti-fraud system and test the system in at least three pilot states.
  - Final Evaluation—Assess the ability of the prototype system to combat CDL fraud and estimate the safety and security benefits offered by the prototype system.
- Task 1 - Business Requirements Definition and Task 2 - Technology Baseline Assessment
  - Third party testing is the administration of CDL skills tests by persons authorized by the jurisdiction's Motor Vehicle Agency (MVA) (including another jurisdiction, an employer, a private driver training facility or other private institution, or a department, agency or instrumentality of a local government). The following conditions must be met by all Third Party Examiners:<sup>1</sup>

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<sup>1</sup> Excerpted from 49 CFR Ch. III (October 1, 2003 Ed.); § 383.75 Third party testing.

- The tests given by the third party are the same as those which would otherwise be given by the State; and
- The third party as an agreement with the State containing, at a minimum, provisions that:
  - Allow the FMCSA, or its representative, and the jurisdiction to conduct random examinations, inspections, and audits without prior notice;
  - Require the State to conduct onsite inspections at least annually;
  - Require that all third party examiners meet the same qualification and training standards as State examiners,
  - Require that, at least on an annual basis, State employees take the tests actually administered by the third party as if the State employee were a test applicant, or that States test a sample of drivers who were examined by the third party to compare pass/fail results; and
  - Reserve unto the State the right to take prompt and appropriate remedial action against the third-party testers in the event that the third party fails to comply with State or Federal standards for the CDL testing program, or with any other terms of the third-party contract.

Jurisdictions use different terms (e.g., third party administrator, third party tester) for the companies/agencies for which the individual tester works. Likewise, jurisdictions refer to the individual performing the examination using different terms (e.g., safety officer, third party tester, third party examiner). In the project documentation, the term “third party tester” refers to companies or agencies regulated by the jurisdiction for CDL testing (except when referring to a specific jurisdiction). The term “examiner” refers to individuals who conduct CDL testing and applies to both third party and jurisdiction MVA employees (again, except when referring to a specific jurisdiction).

Jurisdictions use a variety of approaches to employ third party examiners for CDL testing. Some jurisdictions conduct CDL testing strictly with MVA employees, some use a combination of MVA employees and third party examiners, while still others rely solely on third party examiners. The possibility for fraudulent licensing activity occurs regardless of the approach.

Phase I, Task 1 – Business Requirements Definition and Phase I, Task 2 – Technology Baseline Assessment were conducted in parallel beginning in December of 2003 and continuing through February of 2004. Task 1 included efforts to conduct a literature review to determine vulnerabilities in CDL testing associated with the use of third party testers. The goal was to identify both the key functionality of an anti-fraud system and any best practices with the MVA community to address such fraud through the proper administration of a CDL third party tester program at the jurisdiction level. Task 2 surveyed jurisdictions to determine how technology was currently deployed in support of CDL third party tester programs and also involved an end-to-end review of jurisdiction processes for the establishment, administration, and monitoring of third party testers.

Working within time and budgetary constraints imposed by the Statement of Work, the American Association of Motor Vehicle Administrators (AAMVA) completed site visits to three jurisdictions. AAMVA also formed a Working Group to approve the interview guides and validate the recommendations from these visits.

AAMVA completed site visits in the following jurisdictions: Florida, South Carolina, and Wisconsin. These jurisdictions volunteered time and staff to participate in this effort, as did FMCSA staff and, in some instances third party testers within the jurisdiction. Prior to the site visits, jurisdictions were supplied with a set of questions to be covered during the site visit. During the site visits, a facilitated discussion was conducted based on the distributed questions. Each meeting began with the jurisdiction MVA giving a presentation of their current approach to CDL third party testing. Following that presentation, a question and answer exchange took place as their processes were reviewed further. The sessions concluded with specific discussions of instances of fraud within the jurisdiction. A description of each jurisdiction’s processes was provided as part of Task 2.

All jurisdictions visited had a well-defined process in-place to ensure third party testers and all examiners were properly trained and audited; however, every jurisdiction would benefit from additional automation to improve oversight of the third party testing program. Based on recommendations from the jurisdictions that were visited, the following table of recommendations was compiled. Table 1 lists business requirements, recommendations to satisfy these requirements, and notes on how implementing these recommendations would reduce CDL fraud opportunities. Subsequent continuing discussions with and analysis by, the Working Group determined which recommendations should be implemented electronically in a new system and which ones would require procedural changes.

**Table 1. Business Requirement Recommendations for third party testing**

| Recommendation  | Business Reason   |
|---|---|
| Notification to the Motor Vehicle Agency (MVA) for any driver control actions (withdrawals, suspensions, cancellations, and revocations) taken against an Examiner and Notification to the MVA if an Examiner has been removed from the program and the reason for his/her removal.   | Ensure timely notification to the MVA of Examiners no longer eligible to test CDL applicants. |
| Schedules for all tests to be conducted by any examiner (with the applicant’s name) should be provided to the MVA in advance.   | Detect unusual testing patterns and minimize multiple testing.                                |
| Timely notification to the MVA of all test results (pass or fail)   | Prevent applicants from taking multiple tests before results can be received at the MVA.      |
| <p>Identification of individuals involved in CDL third party testing (third party testers and Third Party Examiners) where fraud is suspected or proven.</p> <p>Ability to identify all drivers tested by a particular examiner over a certain time period if: (a) fraud is determined to exist (even if the driver has moved to another jurisdiction) and (b) when a driver is convicted of an offense or involved in a crash.</p> | Reduce continuing fraud by those individuals previously suspected or convicted.               |

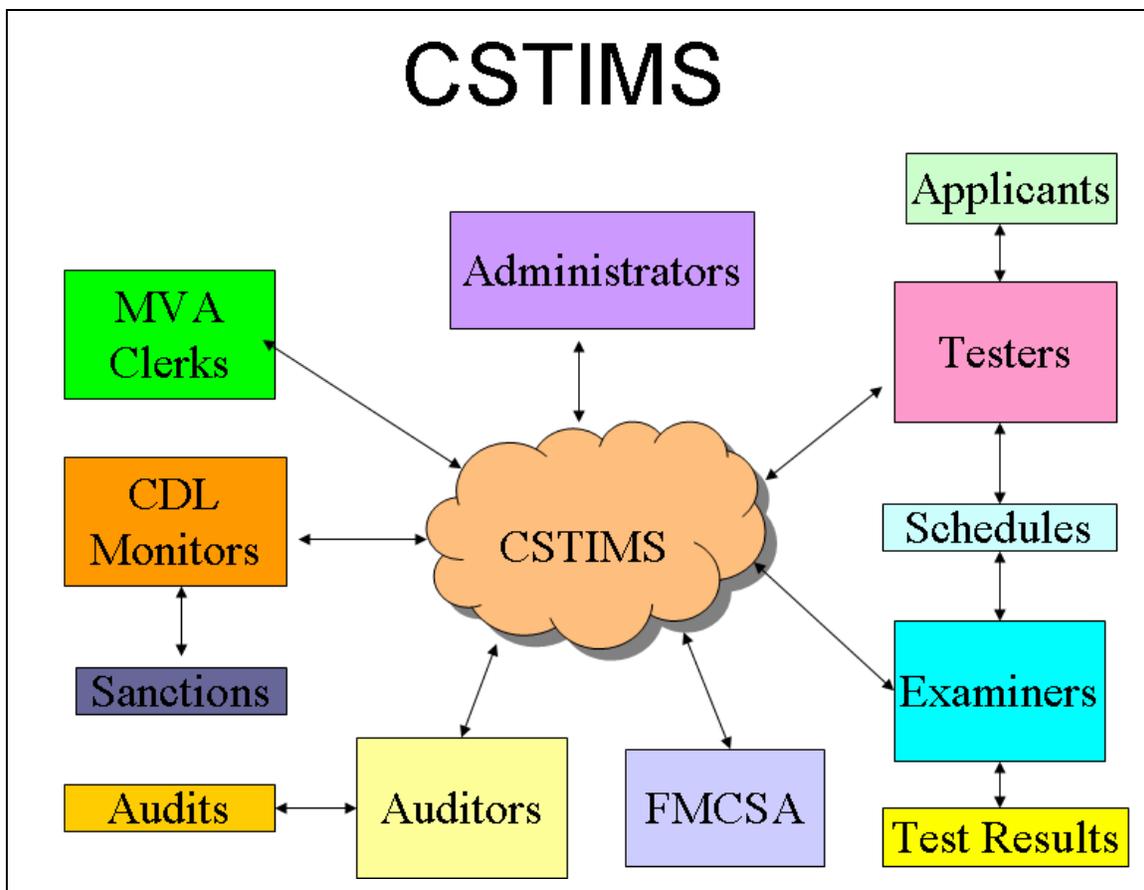
| Recommendation   | Business Reason   |
|--|---|
| <p>Pass/fail rates for examiners should be provided on a regular schedule and also on demand. Also, the total number of tests administered by each examiner and the number per day per examiner should be reviewed based on parameters that reveal patterns which may indicate possible fraud. In addition, the days of the week on which an examiner tests should be evaluated. (e.g., if an examiner is only testing on Saturday and Sunday, this may raise a red flag).</p>       | <p>For quality assurance, it should be possible retrieve various statistics on tests administered by one Examiner.</p>                                      |
| <p>Allow the maneuvering and road skills portions of the test to be conducted by a different Examiner than the one who administered the pre-trip.</p>  | <p>While the best case is to have one examiner administer all portions of the test, inclement weather, illness of the Examiner, etc. may preclude this.</p> |
| <p>Capability to obtain test results when driver moves to another jurisdiction.</p>  | <p>Ensure driver history contains testing information in addition to accidents, convictions, and driver control actions.</p>                                |
| <p>Strict control over accountable forms (those forms issued to the tester or examiner by the MVA and given to the applicant by the Examiner upon successful completion of the test).<br/><br/>Many jurisdictions already issue and control document numbers as part of their oversight of third party testers and Examiners [FL: "waiver," SC: Safety Officer Certification Form (Form 447SO), WI: "Half sheet"]. In many jurisdictions, this is a manually controlled process.</p> | <p>Reduce the possibility of fraudulent documents created from official stock.</p>  |
| <p>Provide the option for jurisdictions that issue licenses centrally to record electronically whether CDLs to the address stated in the application are returned as undeliverable.</p>  | <p>Permits jurisdictions to detect residency fraud.</p>   |
| <p>Provide the option for jurisdictions to record electronically whether the identification of CDL applicants was checked by the third party examiner prior to testing.</p>  | <p>Include third party examiners more fully in implementing anti-fraud measures.</p>  |
| <p>Provide the option for jurisdictions to allow third party testers to check applicant driver license and vehicle registration status prior to testing.</p>   | <p>Include third party examiners more fully in implementing anti-fraud measures.</p>  |
| <p>Provide the option for jurisdictions to automate transmission of test results while requiring the testers to maintain, or follow-up by submitting, records with original signatures.</p>  | <p>Allow jurisdictions to ensure greater authenticity of test results.</p>  |
| <p>Automatic notification to MVA on any convictions received or driver control actions taken on third party examiners.</p>   | <p>Ensure drivers are qualified to administer examinations.</p>   |

AAMVA prepared and delivered to FMCSA a Technical Memorandum deliverable which documented the findings of Task 1 – Business Requirements Definition and Task 2 – Technology Baseline Assessment, which were conducted in parallel from December 2003 through February 2004.

### Task 3 – Specifications Development and Design

Phase I, Task 3, Specifications Development and Design, consisted of biweekly meetings with representatives that administer, conduct, and monitor CDL third party tester programs. This forum determined the business rules and policies and made the final decisions that were incorporated into the system design. The resulting system design dealt with the events that occur within the scope of CDL third party testing and describe the system responses to each of those events. The events and the system responses were described in terms of information flows. These information flows were subsequently used in Phase II to produce a prototype system that would be piloted by jurisdictions and third party testers.

Figure 1 summarizes the resultant high-level CSTIMS system design elements, participants, and information flow.



**Figure 1. Commercial Skills Test Information Management System**

CSTIMS was designed to run on the Internet. Jurisdictions do not need to write or support any computer programs. Authorized users may log onto and use CSTIMS from any computer with Internet access.

The CSTIMS process flow and system design was centered on the users involved with CDL skills testing and associated testing information. Applicants make appointments for CDL skills

tests with Jurisdiction or third party testers. The testers create schedules on CSTIMS for the applicants and assign examiners to administer the skills tests. The examiners administer the skills tests, and either the tester or examiner may enter the test results into CSTIMS. Once the applicant has successfully passed all applicable skills tests, the applicant may be issued the applicable CDL. An MVA clerk may retrieve the applicant's test results from CSTIMS to verify completion of all tests and eligibility for the CDL. Jurisdiction administrators may set up and monitor jurisdiction-specific oversight criteria. Auditors may perform audits of testers and maintain audit record for testers on CSTIMS. CDL monitors may use CSTIMS to monitor sanctions on testers/examiners to ensure eligibility to administer testing. FMCSA will have complete oversight access to all skills testing activity. Authorized users may run oversight reports to monitor applicant, tester, and examiner eligibility, scheduling, testing, sanctions, and audits.

In December 2004, AAMVA prepared and delivered to FMCSA a Technical Memorandum deliverable which documented the requirements of Task 3 – Specifications Development and Design.

#### Task 4 – Prototype and Pilot Testing

Phase II, Task 4, Prototype and Pilot Testing, began in February 2006 and continued through December 2006. During the pilot testing and evaluation period, a prototype CSTIMS was deployed in four jurisdictions (Alaska, Arizona, New Mexico, and South Dakota) and was used to schedule, administer, evaluate, and conduct oversight for CDL skills testing. Thirty-eight jurisdiction and third party CDL testing agencies and 117 CDL testing examiners participated in the evaluation.

As of December 31, 2006, the four participating pilot jurisdictions (see note in Table 2) collectively used CSTIMS to schedule 9,246 CDL skills tests for 2,619 CDL applicants and provide real-time and historical oversight. During this period, 6,536 skills tests were administered, with an overall test pass rate of 94% for the participating jurisdictions. Table 2 provides state-specific operational pilot activity through December 31:

**Table 2. State-Specific Pilot Activities**

| <b>Pilot Jurisdiction</b> | <b>Operational Start Date</b> | <b>Test Applicants</b> | <b>Tests Scheduled</b> | <b>Tests Administered</b> | <b>Pass Rate</b> |
|---------------------------|-------------------------------|------------------------|------------------------|---------------------------|------------------|
| <b>Alaska*</b>            | 07/07/2006                    | 61                     | 209                    | 109                       | 91%              |
| <b>Arizona</b>            | 04/24/2006                    | 668                    | 2,237                  | 1,760                     | 90%              |
| <b>New Mexico</b>         | 07/18/2006                    | 828                    | 3,139                  | 1,644                     | 93%              |
| <b>South Dakota</b>       | 06/12/2006                    | 1,062                  | 3,661                  | 3,023                     | 96%              |
| <b>Totals</b>             |                               | 2,619                  | 9,246                  | 6,536                     | 94%              |

\*Alaska ended its operational CSTIMS pilot participation on August 15, 2006. Arizona, New Mexico, and South Dakota continued to use CSTIMS as of December 31, 2006.

## Task 5 – Final Evaluation

Phase II, Task 5, Final Evaluation, was conducted in parallel with Task 4. During the evaluation period, the four pilot jurisdictions (Alaska, Arizona, New Mexico, South Dakota), one non-pilot jurisdiction (Oregon), FMCSA, and AAMVA identified and documented 112 issues, areas for enhancement, and recommendations for improvement. Of these items, 28 were designated “critical.” Nineteen funding, functionality, and deployment recommendations were offered to address these items. Estimates for the cost and effort to modify CSTIMS to address these items, to complete CSTIMS deployment and training for all jurisdictions, and to provide ongoing operational support were formulated. Initial costs associated with enhancements, national deployment and jurisdiction training are estimated at \$1,144,044. Ongoing support costs are estimated at \$280,812 per year. The remainder of this report discusses the activities and outcome of Task 4 and Task 5. This deliverable documents and completes the efforts of Phase II, Task 5, Final Evaluation.

## **2. PILOT PARTICIPATION EXPERIENCE**

### **2.1 BACKGROUND**

AAMVA, in conjunction with FMCSA and a Working Group consisting of representatives from the 24 jurisdictions involved in CDL third party testing, designed and developed an Internet-based, online system to address and combat potential CDL skills test fraud. The system was named the CDL Skills Test Information Management System (CSTIMS).

AAMVA solicited jurisdiction volunteers from the Working Group to participate in a pilot evaluation of CSTIMS. A mandatory requirement for participation was that both the jurisdiction's motor vehicle agency and at least one major third party tester commit to use CSTIMS for all CDL skills test scheduling and administration during the full pilot evaluation period. Four jurisdictions volunteered to participate in the pilot evaluation: Alaska, Arizona, New Mexico, and South Dakota. All four met or exceeded the participation criteria and were selected.

Following FMCSA approval of the prototype system, CSTIMS was deployed to the four selected pilot jurisdictions to be used operationally in support of their CDL skills testing programs and to evaluate its effectiveness in supporting overall CDL testing oversight and fraud-prevention goals.

The formal CSTIMS pilot evaluation began in February 2006 and was conducted by the jurisdictions of Alaska, Arizona, New Mexico, and South Dakota. In each pilot jurisdiction, participants included each of the jurisdiction motor vehicle agencies and selected jurisdiction and third party testing organizations. A total of 41 agencies and organizations in these 4 jurisdictions participated, including 38 CDL testing organizations with 117 examiners. See appendix A for a detailed list of pilot participants.

Prior to commencement of formal CSTIMS pilot usage and evaluation, AAMVA traveled to each of the participating jurisdictions and presented a 2-day onsite training session to the motor vehicle agency and third party tester personnel who would be either directly using CSTIMS, overseeing its usage, and/or evaluating its effectiveness to combat CDL testing fraud. The CSTIMS user training consisted of a combination of nine modules of PowerPoint presentations with supporting user hands-on sessions. The syllabus covered the following topics:

- CSTIMS Basic Concepts
- User Procedures
- Administration
- Applicant Management
- Schedule Management
- Test Results Management
- Audits and Sanctions
- Reports
- Detecting Fraud

Following the onsite training, jurisdictions conducted additional training for personnel who were unable to attend the AAMVA-administered sessions. AAMVA provided a training version of CSTIMS for the participants to use for internal training and for development of procedures to integrate use of CSTIMS into existing CDL skills test scheduling, management, and anti-fraud monitoring processes.

After a jurisdiction had completed its internal training, testing, procedures development, initial administrative setup, and data entry, AAMVA developers migrated the jurisdiction's CSTIMS data from the training database to the production database, and the jurisdiction was placed into production status. The jurisdiction then began formal pilot use of CSTIMS to schedule, manage, and monitor CDL skills testing activity. Formal CSTIMS pilot usage and evaluation began with Arizona, and then continued with South Dakota, Alaska, and New Mexico. The formal pilot evaluation period ended in August 2006.

At the conclusion of the formal pilot period, representatives from the motor vehicle agencies and testing organizations in the pilot jurisdictions, FMCSA, and AAMVA participated in a CSTIMS pilot debrief meeting on August 15-16, 2006, at AAMVA Headquarters. Each pilot jurisdiction motor vehicle agency and participating third party tester presented reports which detailed their pilot experiences, provided their insights regarding operational issues, and offered recommendations to address perceived operational inefficiencies and enhance overall anti-fraud effectiveness of the application. Each jurisdiction report provided valuable feedback, insight, and recommendations for enhancement of CSTIMS for eventual national deployment. See appendix B for the complete jurisdiction reports.

At the debrief meeting, FMCSA announced that FY2008 funds had been obtained for enhancement and continued operation of CSTIMS, but that they were unable to obtain FY2007 funds to sustain operation during FY2007. Current CSTIMS operations would end on December 31, 2006, or sooner depending on remaining FY2006 funding. The pilot jurisdictions expressed a desire to continue to use and evaluate CSTIMS as a CDL skills test monitoring and anti-fraud tool for the balance of CY2006 and through CY2007, subject to continuing availability of sustaining project funding. However, they stated they would have no incentive to continue using CSTIMS for the remainder of CY2006 if there was no likelihood of continued CSTIMS operation in CY2007. Additionally, two of the current CSTIMS pilot jurisdictions stated they would not continue using CSTIMS until certain critical modifications were made.

In response to this request, FMCSA secured additional funds to support continued operation of CSTIMS into CY2007. Funding would cover basic operation and maintenance of CSTIMS computer hardware, software, and databases at current levels of functionality through May 2007. No funding for CSTIMS enhancements was included at this level of funding support.

As of December 31, 2006, evaluation of CSTIMS still continued and the four pilot jurisdictions had collectively scheduled 2,619 CDL applicants for 9,246 skills tests, and reported an overall jurisdiction-wide test pass rate of 94%.

## **2.2 ALASKA**

### **CDL Oversight Prior to Pilot**

Prior to using CSTIMS, Alaska's CDL skills testing program consisted of a combination of automated and paper-based elements. The CDL knowledge test was administered via a testing machine that calculated and retained scores. third party tester and examiner information was maintained by the DMV in an MS-Excel database. Daily information on road tests was entered by the tester into an MS-Access database. The tester created biweekly reports on road tests and sent them to the DMV. The majority of the actual process for CDL skills test application, scheduling, administration, scoring, and transmittal to the DMV for review and CDL issuance was manual and paper-based. The applicants hand-carried their CDL applications and associated testing scores to the DMV for final document review and CDL issuance. All applicable forms were submitted with batch work to be scanned for archiving.

Auditing was done once a year, if time allowed, by a DMV staff person. No covert audits had been conducted. Throughout the year, third party testers faxed or e-mailed CDL exam logs to the DMV, where they were filed without review, comparison, or data entry. The DMV ran a quarterly report of the number of tests conducted by tester.

Issues and problems with the current manual system included forged documents or changed test scores. Sloppy penmanship and hard to read, incomplete information on forms could lead to fraud or incomplete information.

### **CDL Oversight with CSTIMS**

Formal oversight usage of CSTIMS occurred from July 7, 2006, to the debrief meeting on August 15, 2006. No further CSTIMS usage or evaluation was conducted after that date.

During that time, CSTIMS monitored 61 CDL applicants who made 74 appointments to take 209 individual CDL skills tests. Of the 209 scheduled tests, 109 tests were administered, with an overall passing rate of 91%.

### **Costs Associated with Using CSTIMS**

The tester reported specific dollar costs associated with implementing/using CSTIMS for the pilot: startup: \$2,000, training: \$2,500, and ongoing costs: \$50-\$100/day.

### **Changes Associated with Using CSTIMS**

During the CSTIMS pilot, current CDL skills testing procedures and policies remained unchanged. The participating third party tester continued to schedule, administer, score, and process CDL skills testing with the existing manual/paper-based system, then repeated the data entry and update process with CSTIMS.

The third party tester stated that it had to maintain the current CDL skills testing procedures while it also used CSTIMS. It found the duplicate data entry and management associated with both systems to be a time-consuming burden.

### **Level of Participation**

Alaska participation in the CSTIMS pilot included the Department of Motor Vehicles (DMV) and one third party testing organization with 13 examiners. Onsite training of the DMV users occurred in February 2006, followed by data preparation and setup.

### **CSTIMS Support for New Oversight Requirements**

The third party tester identified two new skills testing management/oversight requirements that CSTIMS could be used to meet/satisfy: the capability to provide newer, more comprehensive reports, and the ability to export information to spreadsheets/databases for processing by existing jurisdiction DMV management systems.

### **Impact of Using CSTIMS**

The perceived impact of using CSTIMS in support of CDL skills testing differed between the DMV and the participating third party tester. While the DMV felt CSTIMS was moderately effective in meeting fraud detection/prevention goals, the tester did not feel that it helped to detect fraud. The DMV considered CSTIMS highly effective as an oversight/enforcement tool, whereas the tester did not see any benefit. Both the DMV and the tester felt that the piloted version of CSTIMS was not very effective as a skills test scheduling/management tool. The DMV felt CSTIMS was highly effective as a reporting tool, whereas the tester felt it was not very good.

The DMV found that CSTIMS would eliminate the current need for CDL applicants to carry test scores to and from the DMV/third party tester and for third party testers to complete and turn in test logs. CSTIMS reports on tester/examiner employment, testing activity, and pass/fail rates helped meet DMV and tester management/oversight requirements.

## **2.3 ARIZONA**

### **CDL Oversight Prior to Pilot**

Prior to using CSTIMS, Arizona's CDL skills testing program consisted of a combination of paper-based and automated elements. Examinations were scored manually on paper forms. Test results were manually input into various electronic tracking tools. Automated reports were produced on data entered into a third party tester database. Additional manual elements included receiving and evaluating third party tester authorizations and certification applications. According to the MVD, the current process was very labor intensive. Employees had to enter

data into several tracking tools that were not related, which made comprehensive data analysis extremely difficult.

### **CDL Oversight with CSTIMS**

Formal pilot evaluation began on April 24, 2006, and continued as of December 31, 2006. During that time, CSTIMS monitored 668 CDL applicants who made 807 appointments to take 2,237 individual CDL skills tests. Of the 2,237 scheduled tests, 1,760 tests were administered, with an overall passing rate of 90%.

### **Costs Associated with Using CSTIMS**

Reported costs associated with implementing CSTIMS for the pilot were in terms of personnel resources, rather than in dollars. There were no startup costs: computers and system access were already available to the participants. Ongoing costs involved additional time spent by participants performing data entry into CSTIMS. One MVD administrator managed CSTIMS exception e-mails. The two-day training session involved 11 people, including one MVD examiner who traveled 180 miles to participate.

### **Changes Associated with Using CSTIMS**

During the CSTIMS pilot, all existing procedures continued unaffected and in parallel with the pilot. The only change to the current procedures was the addition of CSTIMS-related data entry and data management.

### **Level of Participation**

Arizona participation in the CSTIMS pilot included the Motor Vehicle Division (MVD) and six jurisdiction and third party testing organizations with a total of 56 examiners. Onsite training of the MVD users occurred in February 2006, followed by data preparation and setup.

### **CSTIMS Support for New Oversight Requirements**

The MVD identified two new skills testing management/oversight requirements that CSTIMS could be used to meet/satisfy: calendar-based scheduling of examiners, and the capability to provide pass/fail data in real time, rather than in rigidly scheduled month-end reports.

### **Impact of Using CSTIMS**

The MVD found that the CSTIMS automated reports were more complete and concise than were available in the existing system. For the pilot, data entry was required on the part of the participants for the first time. A special aspect of CSTIMS was cited: this was the first time third party testers had to report or establish a schedule of examinations. E-mails generated by CSTIMS to alert of skills testing process exceptions kept one MVD person busy identifying and cataloging them for subsequent analysis.

CSTIMS met or satisfied existing skills testing management/oversight requirements which included comprehensive tester/examiner pass/fail reporting, scheduling of test applicants, and tracking changes to the status of applicants. Within the scope of the trial, all expectations were met. However, MVD cautioned that the enhancements list indicated that more remained to be done.

Though the MVD was unsure if CSTIMS was effective in meeting fraud detection/prevention goals, it did see effectiveness as an oversight/enforcement tool. The available data provided new insights into their testing activity: it disproved a claim that jurisdiction personnel were failing at least 60% of applicants, and it revealed that pass/fail rates for school district and public works third party testers were nearly the same as for jurisdiction testers. The MVD found CSTIMS to be effective as a skills test scheduling/management tool: its functionality was more comprehensive than current functionality built into the jurisdiction's tracking tool. As an effective reporting tool, within the confines of the pilot, CSTIMS provided reasonably comprehensive data that was easily sorted and compared.

## **2.4 NEW MEXICO**

### **CDL Oversight Prior to Pilot**

Prior to using CSTIMS, New Mexico's CDL skills testing program was an all-manual system. Testing was performed by 180 examiners from nine third party testers affiliated with jurisdiction educational institutions—there were no MVD examiners. As part of the CDL testing oversight program, all testers were required to provide the CDL monitor with weekly testing schedules and monthly test activity reports.

### **CDL Oversight with CSTIMS**

Formal pilot evaluation began on July 18, 2006, and continued as of December 31, 2006. During that time, CSTIMS monitored 828 CDL applicants who made 1,053 appointments to take 3,139 individual CDL skills tests. Of the 3,139 scheduled tests, 1,644 tests were administered, with an overall passing rate of 93%.

### **Costs Associated with Using CSTIMS**

No specific CSTIMS-associated costs were cited by the MVD or the third party testers.

### **Changes Associated with Using CSTIMS**

During the pilot, the six participating third party testers used CSTIMS exclusively to schedule applicants for CDL skills testing and to enter test results.

## **Level of Participation**

New Mexico participation in the CSTIMS pilot included the Motor Vehicle Division and six third party testing organizations with a total of 16 examiners. Onsite training of the MVD users occurred in February 2006, followed by data preparation and setup.

## **CSTIMS Support for New Oversight Requirements**

The MVD cited one new skills testing management/oversight requirements that CSTIMS could be used to meet/satisfy: linkage with existing knowledge testing system whereby knowledge test result and endorsement information is passed seamlessly into CSTIMS to maintain a complete skills testing history for each individual.

## **Impact of Using CSTIMS**

The MVD looked upon CSTIMS to provide testing program oversight and monitoring information. According to the CDL Monitor: “New Mexico (currently) is a paper state, but when I see CSTIMS, I see a lot of paper disappearing.”

## **2.5 SOUTH DAKOTA**

### **CDL Oversight Prior to Pilot**

Prior to using CSTIMS, South Dakota’s CDL skills testing program consisted of a combination of paper-based and automated elements. When an applicant was scheduled for a skills test, a “pre-trip” information form with driver information was faxed to the intended third party tester. Examiners used paper worksheets to record/score test results. Worksheets were scanned into a file system to have a copy on file. CDL testing data was entered on a mainframe for subsequent verification. Weekly, monthly, and annual reports were automated. This process of verifying all procedures for verification of a CDL took a long time.

### **CDL Oversight with CSTIMS**

Formal pilot evaluation began on June 12, 2006, and continued as of December 31, 2006. During that time, CSTIMS monitored 1,062 CDL applicants who made 1,277 appointments to take 3,661 individual CDL skills tests. Of the 3,661 scheduled tests, 3,023 tests were administered, with an overall passing rate of 96%.

### **Costs Associated with Using CSTIMS**

No significant costs were associated with implementing/using CSTIMS for the pilot. There were no startup costs; ongoing costs consisted of staff time and phone charges. One-on-one training sessions were performed by a single trainer traveling throughout the jurisdiction.

## **Changes Associated with Using CSTIMS**

During the CSTIMS pilot, current CDL skills testing procedures and policies remained unchanged. Participating third party testers continued to schedule, administer, score, and process CDL skills testing with the existing manual/paper-based system, then repeated the data entry and update process with CSTIMS. Introduction of CSTIMS added two additional steps for verification of CDL testing. Manual data entry was required twice by examiners to complete the process. Prior to the pilot, examiners were not required to report schedule tests; however, with CSTIMS, they now were required to do so.

Two factors impacted the CSTIMS pilot experience for South Dakota's participating third party testers: most of their examiners had very little computer experience and were intimidated by CSTIMS, or they did not have access to high-speed Internet and had to deal with slow transaction response times.

## **Level of Participation**

South Dakota participation in the CSTIMS pilot included the Department of Public Safety (DPS) and 25 Third Party testing organizations with a total of 32 examiners. Onsite training of the DPS users occurred in February 2006, followed by data preparation and setup.

## **CSTIMS Support for New Oversight Requirements**

The DPS did not cite any new skills testing management/oversight requirements that CSTIMS could be used to meet/satisfy.

## **Impact of Using CSTIMS**

South Dakota's DPS found that CSTIMS' facilities for test scheduling and test pass/fail score reporting supported existing jurisdiction testing management/oversight requirements. However, based on their pilot experiences to date, they were not ready to render an overall assessment regarding CSTIMS' effectiveness in meeting fraud detection/prevention goals.

### **3. ISSUES AND REQUESTED ENHANCEMENTS RESULTING FROM PILOT**

Throughout the CSTIMS pilot, AAMVA, FMCSA, the CSTIMS Working Group, and the participating pilot jurisdictions maintained an ongoing dialog to characterize common and jurisdiction-specific requirements for CDL skills testing anti-fraud oversight, assess how well CSTIMS was addressing them, and how CSTIMS might be enhanced to better address current and evolving requirements. Feedback from all stakeholders was gathered and consolidated to form a timely roadmap of functional areas within CSTIMS where enhancements might be made to best achieve desired goals.

Some cited issues and requests for enhancement by the pilot jurisdictions appear to be related to users learning a new application, becoming familiar with it, and then becoming impatient because it continued to require more deliberate steps than they felt was necessary to perform certain operations. As user experience and proficiency with CSTIMS increased, expectations for “user-friendliness” and efficiency changed.

#### **3.1 ALASKA**

The Alaska Department of Motor Vehicles and the participating third party tester provided both joint and user-specific reactions and expectations for CSTIMS. Among their main recommendations, both user groups requested that a more “user-friendly” calendar tool be provided to better facilitate the applicant and examiner scheduling function. They also recommended that all information needed to issue a license to an applicant be displayed on a single screen, including everything on the skills test sheet.

Both groups recommended that CSTIMS be integrated with the DMV’s automated knowledge testing system and with the DMV’s driver records system. The DMV recommended that CSTIMS import and maintain knowledge test scores so that all test scores (knowledge and skills) were in a common database accessible to authorized DMV representatives and testers. The DMV additionally requested that CSTIMS be able to import test scores into an individual’s driving record and also be able to push information to FMCSA.

The participating tester requested an expanded reporting capability, including a capability to export information to an external spreadsheet/database to feed existing reporting to the jurisdiction DMV. The tester also recommended that common information for a scheduled series of skills tests be entered only once instead of multiple times.

The DMV found CSTIMS to be an improvement over their existing system by providing a database of testers and examiners, a means for tracking appointments on a calendar, data entry of test results, and the ability to run reports. However, since CSTIMS was a self-contained, stand-alone program not integrated into their current system, it required more work for their DMV representatives and third party testers instead of streamlining their process, mainly because of parallel appointment scheduling with existing calendars and then, again, with CSTIMS. The

DMV did not find that CSTIMS created or made worse any current issues or problems. From the DMV perspective, “the potential of what the program can do for tracking CDL skill tests, testers, and examiners for the purpose of fraud prevention is promising.”

### **3.2 ARIZONA**

The Arizona Motor Vehicle Division provided both joint and user-specific reactions and expectations for CSTIMS. Their overall reaction was that CSTIMS provided a more comprehensive view of examiner performance for three types of testers: jurisdiction, school district, and public works third party, specifically their pass/fail rates.

During the pilot, skills test scheduling information appeared to be entered in “batches,” either just prior to the actual test date, or after the fact, instead of real-time, as the events occurred. Though this was a procedural issue, it did generate many exception alert e-mails to oversight personnel which became difficult to effectively interpret and manage. To promote better testing oversight management, the MVD requested that an e-mail alert filtering capability by category of alert be provided on a jurisdiction and individual level, and that an alert summary report be provided.

The MVD encountered cases where current test vehicle identification and test scoring rules did not adequately handle some non-traditional vehicle configurations. They recommend that CSTIMS be expanded to support new rules and passing scores provided in the AAMVA Model CDL Examiner’s Manual, 2005 CDL Testing Model.

Participants requested elimination of cases where re-entry of redundant information regarding a test vehicle was required, and that the number of screens to navigate to locate a scheduled or administered test be reduced. They would like to see all relevant test result information (applicant, schedule, and test) summarized on one screen for MVD staff. Additionally, they recommended modifying names of some items on computer screens and in selection lists to better fit current accepted usage.

Arizona requested several long-term enhancements to extend the anti-fraud scope and effectiveness of CSTIMS: electronic scoring of the skills exam, automated data transfer to the jurisdiction licensing system to post the results of the exam directly to the applicant’s driving record, linkage with CDLIS for applicant record comparison and validation, and linkage with local (jurisdiction) management systems that would provide nationwide reports without duplication of efforts.

### **3.3 NEW MEXICO**

New Mexico’s Motor Vehicle Division and participating third party testers offered several similar recommendations to enhance CSTIMS to improve its effectiveness as an anti-fraud tool. Simplicity in online forms and information entry/management were high on their list. Single-screen, rather than multiple-screen, data entry was of particular importance. The MVD Deputy

Director summarized: “If the goal is ‘anti-fraud,’ then don’t lose focus: drop items that don’t support anti-fraud.”

The MVD recommended streamlining information-intensive functions by providing basic information on a common screen with optional information on separate user-selectable screens/views. The capability to generate oversight reports from any set of criteria was cited as highly desirable.

Both the MVD and testers requested linkage between the current knowledge testing system and CSTIMS, whereby a CSTIMS schedule for a skills test would be automatically generated upon successful candidate completion of the knowledge test.

Some users experienced very slow response times via dial-up, in some cases losing their connection while waiting for transactions to up/download.

### **3.4 SOUTH DAKOTA**

South Dakota’s Department of Public Safety provided both joint and user-specific reactions and expectations for CSTIMS. As with other jurisdictions during the pilot, they expressed concern with the amount of extra time required to enter information into CSTIMS, as well as their current system.

The DPS offered suggestions for enhancing the test scoring facility to better support test vehicle types and associated passenger endorsements. As with other jurisdictions, they, too, requested that screen navigation and data entry be further streamlined for test scheduling and scoring, especially in consideration of the limited computer experience of many of their third party tester users. They requested that more key information be provided on a single screen so that users did not have to navigate several screens to perform core skills test processing and oversight functions. Testers requested broader latitude to handle applicant cancellations of scheduled tests prior to the actual test date.

As with New Mexico, some South Dakota users experienced very slow response times via dial-up, in some cases losing their connection while waiting for transactions to up/download.

During the pilot, South Dakota began using the AAMVA CDL Examiner’s Manual 2005 CDL Testing Model, but was having difficulty using the current version of CSTIMS and its scoring model to render correct passing scores for test vehicles. The DPS recommended that CSTIMS functionality be expanded as soon as possible to support the 2005 CDL Testing Model.

South Dakota and the other pilot jurisdictions cited a common issue: how to better support anti-fraud efforts with CSTIMS where third party testers are faced with delayed reporting situations (i.e., long distances between test sites and motor vehicle agency offices).

### 3.5 FUNCTIONALITY REQUIREMENTS

Throughout the CSTIMS project, issues, desired enhancements, and recommendations were compiled from the project stakeholders (jurisdictions, FMCSA, AAMVA). At the pilot debrief meeting which followed the formal pilot period, a composite list containing 112 items was reviewed and prioritized by the stakeholders. Stakeholders assigned each item a relative priority based on their perception of the impact of the item on the short- and long-term usability and effectiveness of CSTIMS (see Table 3).

**Table 3. Functionality Requirement Priority Ranking Definitions**

| Priority     | Meaning   |
|--------------|---|
| Critical (C) | Show-stopper: can't use CSTIMS now without it   |
| High (H)     | Must have: but can use CSTIMS now without it    |
| Medium (M)   | Should have: but can use CSTIMS now without it  |
| Low (L)      | Nice-to-have: can use CSTIMS forever without it |

The 112 detailed enhancement recommendations represent a core set of 13 major functionality requirements for CSTIMS. These functionality requirements are key to maintaining continued CSTIMS effectiveness, facilitating full deployment, and achieving long-term CDL oversight goals. Each detailed item in the list is tied to one or more of these core functionality requirements.

Each core functionality requirement was assigned a priority rank (Critical, High, Medium, Low) according to the overall ranking scores of its constituent enhancement recommendations and was also numerically ranked within its priority group. A complete list of issues, enhancements, and recommendations, priority assessments by the project stakeholders, and supported core functionality requirements, is included in appendix C. The following sections describe each functionality requirement.

#### **Critical**

Three functionality requirements, representing 24 separate enhancement recommendations, permit CSTIMS to continue to be used by the four pilot jurisdictions. Each requirement represents either a mandatory expansion of current capability to permit compliance with evolving CDL testing fraud oversight rules/regulations or provides increased data integrity and system access security.

#### ***C1: Expand CSTIMS functionality to support the new AAMVA CDL Examiner's Manual 2005 CDL Testing Model.***

During the pilot, some jurisdictions began using the 2005 model for CDL skills test administration/scoring but were unable to use CSTIMS to fully support the multiple scoring forms permitted by the new model. Without full support for the new scoring model, CSTIMS

will not be able to meet the CDL skills test administration needs of current and future jurisdiction users.

***C2: Provide CSTIMS users with capability to make changes/corrections to, merge, or delete duplicate data or data entered in error.***

This is critical to maintaining data integrity. During the pilot evaluation period, users were not allowed to change or delete certain types of information. For continued operational use by the current pilot jurisdictions and for subsequent national deployment, these restrictions must be removed.

***C3: Replace current multiple-login ID/permissions settings for each user with a single login ID and composite set of permissions for the user.***

Operational experience gained from the pilot revealed that jurisdiction MVA staffing shortfalls require personnel to perform multiple roles for CDL testing administration, management, and oversight. CSTIMS must be modified to let each user also perform multiple roles at the same time.

**High**

Three functionality requirements, representing 46 separate enhancement recommendations, permit CSTIMS to be deployed to the remaining 47 jurisdictions. These requirements represent CSTIMS usability features that will permit jurisdictions to have maximum access to skills test applicant profiles and associated test score results information to facilitate timely, accurate, and unambiguous verification of eligibility to receive the CDL. Operational experience gained from the pilot revealed that the MVA staffing shortfalls also reduced available personnel time to perform basic skills for testing administration and oversight functions. During the pilot debrief, jurisdiction MVA and third party tester users identified cases where highly used CSTIMS functions could be streamlined for greater efficiency.

- H1: Reduce/eliminate cases of repetitive/redundant data entry by allowing information to be entered once and shared across multiple screens/functions (e.g., contact information, test vehicle information, etc.). Autofill fields with applicable default values to reduce additional data entry to only require changes from default values.
- H2: Streamline current CSTIMS screen navigation to remove and consolidate redundant/intermediate processing steps and associated screens for high-usage functions.
- H3: Expand skills test results information provided to MVA clerks to include applicant information (e.g., knowledge test history, etc.); examiner identification; actual/passing test scores; specific indication of applicable CDL (including class, endorsements, restrictions) that applicant is eligible to be issued.

## Medium

Five functionality requirements, representing 41 separate enhancement recommendations, provide continued optimum CSTIMS performance for the current pilot jurisdictions and provide optimum deployability to the remaining 47 jurisdictions. These requirements represent CSTIMS features that provide key jurisdiction-specific oversight monitoring and notification thresholds, and provide expanded visibility for jurisdiction/tester/examiner/applicant test history/outcome reporting. Operational experience gained from the pilot revealed that the jurisdictions require maximum flexibility in setting oversight monitoring thresholds: national thresholds did not always work for every jurisdiction/region.

- M1: Provide jurisdictions with enhanced capability to set and enforce jurisdiction-specific eligibility, scheduling, and notification criteria for testers, examiners, and applicants to achieve and sustain enhanced CDL skills test oversight goals.
- M2: Add capability for jurisdictions or users to specify/filter which alerts they are to receive to facilitate more effective testing oversight.
- M3: Expand scope of CSTIMS data change log function to include all data, not just schedules/tests.
- M4: Expand CSTIMS reporting by adding a report for applicant data.
- M5: Expand pass/fail reporting to provide pass/fail statistics at the state and national level.

## Low

Two functionality requirements, representing 11 separate enhancement recommendations, provide long-term optimum deployability and operation for all jurisdictions. These requirements represent CSTIMS features that provide key access to external systems to integrate CSTIMS with existing automated systems and to provide access/support for users with limited current technology. Operational experience gained from the pilot revealed that once jurisdictions began operationally using CSTIMS, they quickly saw the need to be able to import/export information and to be able to support users without access to high-speed Internet access.

- L1: Provide a CSTIMS capability to import/export information between external systems (e.g., CDLIS, PDPS, driver history file, automated knowledge test machines) or for external analysis.
- L2: Provide special CSTIMS capability to efficiently process transactions from users with low-speed Internet connections (e.g., dial-up, possibly via special abbreviated-content windows).

## **4. COST ESTIMATES**

Estimates for the cost and effort to modify CSTIMS to address the 13 major functionality requirements, to complete CSTIMS deployment and training for all jurisdictions, and to provide ongoing operational support were formulated.

### **4.1 ENHANCEMENT COSTS**

Identified issues, requested enhancements, and proposed recommendations related to the efficacy of the system were prioritized according to the perceived level of impact to users in a full national deployment. Appendix C contains a detailed composite list of each item and the relative priorities assigned by the project stakeholders.

The overall cost to provide requested post-pilot enhancements includes associated level-of-effort-based costs for analysis/design, development, testing/quality assurance, staff management, and project management. In addition to post-pilot enhancement costs, jurisdiction deployment costs and ongoing support and operational costs must also be considered. These costs are not directly related to the level of effort to provide the requested enhancements, but they are required for full deployment of CSTIMS to all of the jurisdictions, its continued operation, and requisite ongoing support. Each of these estimates is discussed below.

The overall cost to provide the requested enhancements is outlined in the Table 4, with the major CSTIMS functionality enhancement areas grouped and ranked by relative priority. This task will implement the changes to CSTIMS resulting from the pilot and will result in Release 1.0.0 of CSTIMS, which will be made available to all jurisdictions.

**Table 4. Functional Requirements Enhancement Costs**

| <b>CSTIMS Functional Enhancement</b>         | <b>Enhancement Cost</b> |
|--|-------------------------|
| <b>Critical:</b>                             |                         |
| C1: 2005 test scoring model                  | \$35,418                |
| C2: Users change/delete data                 | \$33,440                |
| C3: User single login/permissions            | \$75,089                |
| <b>High:</b>                                 |                         |
| H1: Remove repetitive test data entry        | \$92,374                |
| H2: Streamline screen navigation             | \$43,604                |
| H3: Provide MVA clerk more information       | \$44,982                |
| <b>Medium:</b>                               |                         |
| M1: Jurisdiction-specific oversight criteria | \$105,498               |
| M2: Jurisdiction/user-specific alerts        | \$34,722                |
| M3: Expanded change log                      | \$17,139                |
| M4: Applicant information reporting          | \$38,342                |
| M5: Expanded pass/fail reporting             | \$14,346                |
| <b>Low:</b>                                  |                         |
| L1: Import/export test information           | \$79,588                |
| L2: Low-speed Internet support               | \$0 (long-term/defer)   |
| <b>Total:</b>                                | <b>\$614,542</b>        |

## 4.2 DEPLOYMENT COSTS

Following implementation of CSTIMS enhancements, deployment and stakeholder training will be provided to the remaining 47 jurisdictions. CSTIMS deployment costs for the 47 remaining jurisdictions are estimated to be \$529,502, as shown in Table 5.

**Table 5. CSTIMS Deployment and Training Costs**

| <b>Deployment Costs</b>         | <b>People</b> | <b>Days</b> | <b>Total</b>     |
|---------------------------------|---------------|-------------|------------------|
| Deployment/Training Staff       | 2             | 5           | \$9,000          |
| Travel                          |               |             |                  |
| Airfare                         | 2             |             | \$900            |
| Car Rental                      |               | 3           | \$150            |
| Hotel                           | 2             | 3           | \$720            |
| Meals                           | 2             | 4           | \$496            |
| Miscellaneous                   | 2             | 3           | \$600            |
| Per jurisdiction:               |               |             | \$11,266         |
| <b>TOTAL (47 jurisdictions)</b> |               |             | <b>\$529,502</b> |

CSTIMS deployment and user training activities will be conducted at a designated site in each jurisdiction at a time agreeable to the participants. Deployment costs will be incurred for two deployment coordinators to travel to each participating jurisdiction and present a 2-day training session. Each jurisdiction where CSTIMS is to be deployed will provide a training facility and will provide at least two CDL monitors and two third party tester representatives (a third party tester Responsible Party and a third party examiner). Attendance by as many additional jurisdiction and tester personnel as possible will be encouraged to maximize the information transfer opportunity of each deployment training session.

Deployment training will be conducted on a “train-the-trainer” basis. All training materials will be made available to all other participants after the initial implementation. Answers to Frequently Asked Questions (FAQs) will also be produced to assist in the training of new participants.

### 4.3 ONGOING OPERATIONAL COSTS

These estimated annual costs are associated with the hardware/software warranty, developer labor, hosting, and full-time help desk support required to sustain the CSTIMS operating environment. These costs include subsequent user training associated with changes to CSTIMS as the functionality expands. Additional enhancements to CSTIMS will be provided by annual software releases. Annual ongoing operational costs are estimated to be: \$280,812, as shown in Table 6.

**Table 6. CSTIMS Ongoing Operational Costs**

| Operational Task                    | Cost      |
|-------------------------------------|-----------|
| Hardware/Software Warranty Renewals | \$7,500   |
| Labor (developer)                   | \$95,712  |
| Hosting                             | \$24,000  |
| Help Desk                           | \$153,600 |
| Total                               | \$280,812 |

### 4.4 TOTAL COSTS

Estimated total costs include initial enhancement and jurisdiction deployment costs of \$1,144,044 and annual ongoing operational costs of \$280,812, as shown in Table 7.

**Table 7. CSTIMS Total Costs**

| Costs                 | Total              |
|-----------------------|--------------------|
| <b>Initial Costs:</b> |                    |
| Enhancements          | \$614,542          |
| Deployment            | \$529,502          |
| Sub-total             | \$1,144,044        |
| <b>Annual Costs:</b>  |                    |
| Ongoing Operations    | \$280,812          |
| <b>Total Costs:</b>   | <b>\$1,424,856</b> |

## 5. CONCLUSIONS

Issuance of fraudulent Commercial Driver's Licenses is an acknowledged nationwide problem. The purpose of the CSTIMS project is to prevent and detect fraud perpetrated by third party testers during the skills testing portion of the CDL process. To achieve this goal, specifications were developed and pilot testing was conducted for an automated anti-fraud system for CDL third party testing activities. If enhancements are made, additional jurisdictions are expected to adopt the system.

Based on the experiences and feedback from the pilot jurisdictions, CSTIMS demonstrates a capability to strengthen the oversight of the CDL program by the states and FMCSA in the area of CDL third party testing. A chief fraud-prevention element of CSTIMS is its ability to provide visibility to the CDL skills testing process, including application, qualification, scheduling, administration, scoring, verification, and issuance. By providing this visibility and consequent auditability to the entire process, CSTIMS drastically reduces opportunities to attempt fraudulent activity. Another key fraud prevention element is CSTIMS' process exception filtering, alerting, and reporting features. Jurisdiction CDL monitors receive real-time alerts when skills testing process events exceed jurisdiction-specific exception thresholds, permitting them to take appropriate actions to address potential fraud or substandard operation.

There was no baseline or control group in the pilot testing of CSTIMS, so it was not possible to measure any direct effect on fraud. None of the participating jurisdictions reported any fraudulent activity specifically detected or uncovered by CSTIMS.

However, it was possible to measure the perception of the impact of the project on CDL skills testing fraud. CSTIMS' process visibility and exception monitoring features did provide new levels of confidence in the integrity and efficiency of the CDL skills test administration programs to jurisdiction MVA and third party tester participants.

Pilot participant perception of CSTIMS effectiveness as an anti-fraud tool, as an oversight tool, and as an administration tool varied by jurisdiction and by user role. Some individuals felt that using CSTIMS in their CDL skills testing process was too difficult and time-consuming. Since the formal pilot period was limited in duration, some third party testers chose to use both their current system and CSTIMS to schedule and administer their skills tests, thus requiring multiple entry of information into separate systems. This was the main reason Alaska chose to not continue use of CSTIMS beyond the formal pilot evaluation period. Once a jurisdiction migrated to full use of CSTIMS, this would no longer be a concern. Following completion of the formal pilot evaluation period, Arizona, New Mexico, and South Dakota continued using CSTIMS. South Dakota subsequently began using CSTIMS exclusively for paperless verification of skills test scores prior to actual CDL issuance.

Some pilot participants felt that there was unnecessary redundancy in entering and updating skills testing information, that verifying applicable information prior to issuing a CDL took more effort than desired, and that there was no way to score skills tests using the new 2005 CDL testing model. Some pilot jurisdictions indicated their continued use of CSTIMS was contingent on enhancements being made to address these three critical priority issues.

As of December 2006, Arizona, New Mexico, and South Dakota continue to actively use CSTIMS and plan to continue into 2007. They find that the benefits of using CSTIMS over current paper-based systems outweigh short-term issues that will be addressed by planned enhancements that were identified during the formal evaluation period.

## **6. RECOMMENDATIONS**

For CSTIMS to evolve beyond its current pilot implementation and move to full national deployment as an anti-fraud tool, a commitment must be made to fund key functionality enhancements to CSTIMS to augment and improve current fraud-prevention features and to facilitate its integration into jurisdiction CDL testing oversight and fraud-prevention programs. The following CSTIMS funding, functionality, and deployment recommendations address and provide solution paths to achieving these goals.

### **6.1 FUNDING**

- FMCSA provide basic funding for FY2007 to support the continued and uninterrupted availability of the current CSTIMS application—Funding must cover basic operation and maintenance of CSTIMS computer hardware, software, and databases at current levels of functionality. No enhancements are included at this level of funding support.
- FMCSA provide additional funding above basic operation and maintenance levels for FY2007 to support immediate modifications to the current CSTIMS application to provide or expand critical CDL oversight, anti-fraud, and data integrity capabilities
- FMCSA provide funds to revise CSTIMS training materials to reflect changes in functionality and process
- FMCSA provide funds for national deployment of the enhanced CSTIMS and training of users

### **6.2 FUNCTIONALITY**

These functionality requirements are key to maintaining continued CSTIMS effectiveness, facilitating full deployment, and achieving long-term CDL oversight goals. They are grouped according to the priorities (Critical, High, Medium, and Low) described in section 3.5 and are ranked by decreasing importance within each priority group.

## **Critical**

- AAMVA immediately expand CSTIMS functionality to support the AAMVA CDL Examiner's Manual 2005 CDL Testing Model
- AAMVA provide CSTIMS users with capability to make changes/corrections to, merge, or delete duplicate data or data entered in error—This is critical to maintaining data integrity.
- AAMVA replace current multiple-login ID/permissions settings for each user with a single login ID and composite set of permissions for the user

## **High**

- AAMVA reduce/eliminate cases of repetitive/redundant data entry by allowing information to be entered once and shared across multiple screens/functions (e.g., contact information, test vehicle information, etc.); Autofill fields with applicable default values to reduce additional data entry to only require changes from default values
- AAMVA immediately streamline current CSTIMS screen navigation to remove/consolidate redundant/intermediate processing steps and associated screens for high-usage functions
- AAMVA expand skills test results information provided to MVA clerks to include applicant information (e.g., knowledge test history, etc.), examiner identification, actual/passing test scores, and specific indication of applicable CDL (including class, endorsements, restrictions) that applicant is eligible to be issued

## **Medium**

- AAMVA provide jurisdictions with enhanced capability to set and enforce jurisdiction-specific eligibility, scheduling, and notification criteria for testers, examiners, and applicants to achieve and sustain enhanced CDL skills test oversight goals
- AAMVA add capability for jurisdictions or users to specify/filter which alerts they are to receive to facilitate more effective testing oversight
- AAMVA expand scope of CSTIMS data change log function to include all data, not just schedules/tests
- AAMVA expand CSTIMS reporting by adding a report for applicant data
- AAMVA expand pass/fail reporting to provide pass/fail statistics at the state and national level

## **Low**

- AAMVA provide a CSTIMS capability to import/export information between external systems (e.g., CDLIS, PDPS, driver history file, automated knowledge test machines) or for external analysis

## **6.3 DEPLOYMENT**

- The CSTIMS deployment remain at its current pilot size (4 jurisdictions: AK, AZ, NM, SD) until recommended changes to CSTIMS are made and until sufficient funding is provided to support deployment to additional jurisdictions and training of their personnel
- AAMVA update current CSTIMS training materials to accurately reflect changes and enhancements to process and functionality and provide update training to current pilot jurisdictions
- Following implementation of CSTIMS post-pilot enhancements, AAMVA provide CSTIMS deployment and stakeholder training to the remaining 47 jurisdictions

# APPENDIX A

## CSTIMS PILOT PARTICIPANTS

The following jurisdictions, agencies, testing organizations, examiners, and oversight personnel participated in the CSTIMS pilot and provided valuable feedback, insight, and recommendations for enhancement of this system for national deployment.

### Pilot Jurisdictions:

- Alaska**
- State of Alaska/DMV
    - Gail Buenaflor
    - Stephen Elliott
    - Donna Kadrich
    - Shelly Mellott
    - Elaine Newton
    - Mary G. White-Meacham
  - Center for Education Employment (CEE)
    - Wayne Craft
    - William Croft
    - Connie Duran
    - John Lovdahl
    - James D. MacLean
    - Frederic Ready
    - Tim Selk
    - Rebecca White
- Arizona**
- City of Phoenix – Personnel Department
    - Clark Burns
    - Romeo Cordova
    - Sheila J. Denney
    - Carlos Diaz
    - Steven Dopke
    - Roger Fyffe
    - Dominic Galaviz
    - Charles L. Giddens
    - Joe S. Gorriaz
    - Gilbert Holguin Jr.
    - Carlos A. Huerta
    - Jack R. Nobel Jr.
    - Bennie Padilla
    - Timothy J. Sterne
  - Mesa Unified School District #4
    - Allena Bothwell
    - David R. Charland
    - Gary L. Curtis
    - Alanea L. Duran
    - Larry E. Feldkamp
    - Stan E. Fleming
    - Judy Jones
    - Caroline M. Maclelland
    - Patricia A. Willis

- Motor Vehicle Division
    - Ken Dillman
    - Nicholas Grabowski, Jr.
    - Paul Lamprill
    - Lupe Montoya
    - David Paul
    - William Raiford
  - Scottsdale Unified School District
    - Darlene A. Huebner
- New Mexico**
- Central New Mexico
    - Steven Caucutt
    - Denise Gardner
    - Alvin Johnson
    - Dona Ana Community College
    - Harold D. Coffman
    - Charles Houghton
    - Carolyn Vandergeisen
  - Eastern New Mexico University – Roswell
    - Louis Bell
    - Bernice Jeminez
    - Carl E. Rempe
  - Southwest Truck Driver Training, Inc.
    - Ken E. Barton
    - Kenneth A. Cockrell
    - Rene Flores
    - Louis J. Karl
    - Darlene A. Kube
    - Hilary H. Williams
    - Sean A. Williams
  - Tucson CDL
    - Cristina Marquez
  - Motor Vehicle Division
    - MVD Santa Fe
    - MVD Cottonwood
    - MVD Sandiavista
    - MVD Montgomery
    - MVD Hobbs
    - MVD Las Cruces
    - MVD Farmington
    - MVD Roswell
    - Megan McCawley-Rivera
    - Keith Perry
    - Albert Sisneros
    - Christopher Ybarra
  - New Mexico Junior College
    - Randolph Brecken
    - Randy Cook
    - Don Hancock
    - Michael D. Stout
  - NMDOT
  - San Juan College – School of Energy
    - Terry G. Fredericks
    - Irvin Lowder
    - Gene Smith

- South Dakota**
- Aberdeen DOT
    - Alan J. Petrich
  - Asphalt Surfacing Co.
    - Richard Nash
  - Aurora County
    - Dale Steffen
  - B-J School Buses
    - Richard Meyer
  - Belle Fourche DOT
    - John Kissack
  - Bowes Construction
    - Tom Honkomp
  - Central States Transportation
    - Sid Gonsor
  - Cranny Sales and Service
    - Patrick Cranny
  - Curran Transportation, Inc.
    - Kelly Curran
  - Dells Materials Co.
    - Robin Karst
  - Department of Public Safety
    - Jeannelle Arndt
    - Brenda Badger
    - Geneva Barkley
    - Lynn Bixler
    - Richard Blaedorn
    - Sonja Briggs
    - Misty Burton
    - Tim Coomes
    - Pam Crossley
    - Marcia Droz
    - Craig Dudley
    - Jason Eckroate
    - Jenni Faulstich
    - Cheryl Finney
    - Tina Flynn
    - Don Hayward
    - Wendy Hedeem
  - Terri Heiser
  - Marilyn Hershly
  - Kate Hoisington
  - Ed Hruska
  - Terry James
  - Linda Jirsa
  - Paul Jung
  - Stan Knox
  - Todd Knudson
  - Brian Kribell
  - Karen Larson
  - Eileen Leichner
  - Jim Lilla
  - Jennifer Mohr
  - Ken Mowrer
  - Sue Myers
  - Char Nicolaisen
  - Ruby Reichling
  - Doug Rogers
  - Bruce Rollag
  - Roch Rosheim
  - Jane Schrank
  - Larry Schuman
  - Sandy Skalla
  - Dave Stackenwaldt
  - Laura Taylor
  - Carla Troudt
  - Linda Verba
  - Steve Vevig
  - Terry Weaver

- Hubert Excavating
  - Donald Hubert
- Huron School District
  - June Berg
- Johnson Feed, Inc.
  - Randy Hindt
- Lake Area Technical Institute
  - David Dahl
  - Arvid Kraemer
- MCT Transportation, LLC
  - Sharon Deeb
  - Don Knowler
- Opperman Trucking
  - Cal Peck
- Parkhurst Construction
  - Cliff Parkhurst
- Rapid City DOT
  - Gary Zeller
- School Bus, Inc.
  - David Haynes
  - Valerie Nardini
- Jim Shafer Sioux Falls Transit
  - Dale Dorman
- Tri-State Transportation
  - Calvin Erhart
- Watertown School District
  - Patricia A. Story
- Western Dakota Technical Institute
  - Joseph Doyle
  - Robert Doyle
- Whitley Central Distribution Co., Inc.
  - Mark Leibrich
- Williams Sanitation
  - Russell Williams

**Federal Motor Carrier Safety Administration**

- Quon Kwan
- Lloyd Goldsmith

## APPENDIX B

### CSTIMS PILOT JURISDICTION DEBRIEF REPORTS

Pilot reports were presented by the pilot jurisdiction motor vehicle agencies and participating third party testers at a debrief meeting held at AAMVA Headquarters on August 15-16, 2006. Each report included pilot experiences, insights regarding operational issues, and recommendations to address perceived operational inefficiencies and enhance the anti-fraud effectiveness of the application. The debrief reports provided valuable feedback, insight, and recommendations for enhancement of CSTIMS for national deployment.

Reports were presented by:

- Alaska: State of Alaska/DMV
- Alaska: Center for Education Employment
- Arizona: Motor Vehicle Division
- New Mexico: New Mexico Junior College
- South Dakota: Department of Public Safety

In each report, jurisdiction comments have been highlighted in bold.

## ALASKA - STATE OF ALASKA/DMV

- Introduce jurisdiction members
  - Name: **Elaine Newton**
  - Organization: **State of Alaska DMV**
  - Job title/responsibilities: **Contract Services Manger**
  - CSTIMS role: **JA/AU**
- Describe (at high-level) CDL skills testing program before pilot
  - Procedures/policies:
    - third party testers complete application to become third party tester. When application is approved, number is assigned. Examiners complete Application for Examiner and sign Ethics Form. PDPS/CDLIS/ALVIN is checked. third party tester notifies DMV that Examiner Training is complete. Certificate is printed and number is assigned.***
    - third party tester and examiner information is maintained in an EXCEL data base.***
    - Applicant Applicant completes top portion of Application for Commercial Driver License. Applicant takes knowledge test on machine that calculates and retains scores. Scores are entered on application by DMV Representative. Applicant takes application to third party tester for verification of passed scores. Road test appointments are scheduled on paper calendar. When applicant completes road skills test, third party tester enters scores on Application for Commercial Driver License and Vehicle Inspection Skills Test Form. third party tester embosses Vehicle Inspection Skills Test with their stamp, keeps copy of Vehicle Inspection Skills Test Form and gives applicant original. Applicant brings Application for Commercial Driver License and Vehicle Inspection Skills Test form to DMV and completes Application for Alaska Driver License. If PDPS and CDLIS are clear, DMV issues a license. ALVIN requires the tester number. All forms are submitted with batch work to be scanned for archiving.***
    - Auditing: third party testers fax, mail, or e-mail, CDL Exam Log. These logs are filed without review, comparison, or data entry. DMV runs a quarterly report of number of tests conducted by tester. Auditing is done once a year, if time allows, by a DMV staff person in the third party tester Area. No covert audits have been conducted.***
    - People involved, type/number: Applicant, DMV Rep, third party tester, Contract Service Staff**
  - Automated portions: **Knowledge test and scanning documents for archiving**
  - Manual portions: **Applicant completing forms. DMV and third party entering test scores on forms. Calendar.**

- Special aspects
- Issues/Problems: **Forging documents or changing test scores. Sloppy penmanship, hard to read, incomplete information on forms could lead to fraud or incorrect information.**
- Describe (at high level) CDL skills testing program during pilot: what was changed/what stayed the same
  - Procedures/policies: **Everything stayed the same. CEE entering appointments and scores in CSTIMS. DMV reps were not involved in the pilot.**
  - People involved, type/number: **Three people from DMV – RP, JA, CMs One third party tester**
  - Automated portions
  - Manual portions
  - Special aspects
  - Issues/Problems: **Because CSTIMS does not have a user-friendly calendar, road skill appointments will still have to be made on a calendar and then entered into CSTIMS. Deleting RPs and Users. I changed the passwords of an ex-employee because anyone with a password can access CSTIMS from anywhere.**  
**All information needed to issue a license to an applicant needs to be on one page, including everything that is on the skills test sheet.**  
**CSTIMS should eliminate the need for an applicant to carry test scores to and from the DMV/third party tester.**
  - The pass/fail rate and number of test per tester/examiner report is very helpful. This will eliminate the need for third party testers to compete and turn in a test log and also lets the DMV know if an examiner is not doing tests and may no longer be working at the third party tester.
- Describe level of participation/activity during pilot
  - How many months/weeks CSTIMS was used: **1 month in production**
  - Number of participating Jurisdiction DMV offices
    - Number of administrators – **1**
    - Number of CDL monitors – **1**
    - Number of MVA clerks – **0**
    - Number of auditors – **1**
  - Number/type of participating testers (third party/jurisdiction)
    - Number of responsible parties – **3**
  - Number of participating examiners
    - Number who scheduled themselves – **0**
    - Number who were scheduled by tester – **13**
  - Number of applicants processed – **118**
  - Number of scheduled appointments – **209**

- Number/type of scheduled tests
- Number/type of completed tests
- Pass/fail rates
  - For state – **n/a**
  - By tester – 91% pass, 9% fail
- Costs associated with implementing/using CSTIMS for pilot
  - Startup
  - Ongoing
  - Training
  - Travel
  - Other (specify) – **Staff Time**
- Existing skills testing management/oversight requirements that CSTIMS:
  - Met/satisfied: **Being able to run reports and check the calendar for appointments**
  - Did not meet/satisfy: **Still the need for test scores to be carried to third party tester and back to DMV. Still have to maintain another calendar. Need for knowledge test scores to be included in applicant's info on CSTIMS.**
- New skills testing management/oversight requirements that CSTIMS could be used to meet/satisfy
- Issues/problems that CSTIMS:
  - Fixed/resolved: **The ability to have a data base or testers and examiners, track appointments on the calendar, and data enter test results and run reports.**
  - Did not fix/resolve: **CSTIMS is a self-contained, stand-alone program that will create more work for our DMV reps (and third party testers), instead of streamlining, such as the appointments still being made on a calendar and then later entered into CSTIMS.**
  - Created/made worse: **None – the potential of what the program can do for tracking CDL skill tests, testers and examiners for the purpose of fraud prevention is promising.**
- Recommendations based on pilot experience
  - Enhancements to CSTIMS better meet current requirements: **Input of knowledge scores so all the scores are in one database and can be viewed by DMV Reps and skill testers.**
  - New requirements that CSTIMS should satisfy: **Ability to push info to FMCSA. Need to integrate with DMV system to import test scores on driving record.**

- Impact of using CSTIMS
  - Effectiveness in meeting fraud detection/prevention goals: **Medium**
  - Effectiveness as an oversight/enforcement tool: **High**
  - Effectiveness as an skills test scheduling/management tool: **Low**
  - Effectiveness as a reporting tool: **High**

## ALASKA - CENTER FOR EDUCATION EMPLOYMENT

- Introduce jurisdiction members
  - **John Lovdahl/Rebecca White**
  - **Center for Employment Education**
  - **President/Administrative Assistant**
  - **Oversight/daily inputting and reporting**
- Describe (at high-level) CDL skills testing program before pilot
  - Procedures/policies: **Exclusive contract for all CDL testing in the Municipality of Anchorage. Responsible for testing 800–1,600 CDL tests annually. Individual goes to DMV for knowledge tests. Brings original paper work to CEE at time of test. After test is complete, paperwork is filled out by examiner, embossed for authenticity, and given to applicant to bring back to DMV to finish licensing procedures. Enter daily information on road tests into Access Database. Create reports biweekly and send to DMV (all information about road tests).**
  - People involved: **13 examiners, 3 office staff**
  - Automated portions: **None**
  - Manual portions: **All**
  - Special aspects:
  - Issues/Problems: **No direct link to DMV to verify scores or to check on tests taken.**
- Describe (at high level) CDL skills testing program during pilot: what was changed/what stayed the same
  - Procedures/policies: **Increased inputting time (CSTIMS is very slow). Double inputting (had to maintain procedures that were in place).**
  - People involved: **13 examiners, 3 office staff**
  - Automated portions: **None**
  - Manual portions: **ALL**
  - Special aspects

- Issues/Problems: **Time it takes to enter information into CSTIMS. Entering information for one road test three separate times, which increases the time it takes and has more potential for wrong information to be entered. Reports not able to be generated to match existing reporting needs. Can't export to EXCEL.**
- Describe level of participation/activity during pilot
  - How many months/weeks CSTIMS was used: **2 months; 1 month in the training mode, 1 month full version.**
  - Number of participating Jurisdiction DMV offices
    - Number of administrators: ??
    - Number of CDL monitors: ??
    - Number of MVA clerks: ??
    - Number of auditors: ??
  - Number/type of participating testers (third party/jurisdiction)
    - Number of responsible parties: **3**
  - Number of participating examiners
    - Number who scheduled themselves: **None**
    - Number who were scheduled by Tester: **13**
  - Number of applicants processed: **61**
  - Number of scheduled appointments: **74**
  - Number/type of scheduled tests: **TOTAL TESTS SCHEDULED 74, CDL A, 45, CDL B 17, CDL B SCHOOL BUS, 8, CDL C PASSENGER, 3, CDL C SCHOOL BUS, 1**
  - Number/type of completed tests: **CDL A, 27, CDL B 10, CDL B SCHOOL BUS, 4, CDL C PASSENGER, 1, CDL C SCHOOL BUS, 1**
  - Pass/Fail rates
    - For state: ??
    - By tester: ??
- Costs associated with implementing/using CSTIMS for pilot
  - Startup: **\$2,000**
  - Ongoing: **\$50-\$100 per day**
  - Training: **\$2,500**
  - Travel: **N/A**
  - Other (specify)
- Existing skills testing management/oversight requirements that CSTIMS:
  - Met/satisfied: **Ability to see examiners pass/fail rate.**
  - Did not meet/satisfy: **Increased time it takes to do required activities.**

- New skills testing management/oversight requirements that CSTIMS could be used to meet/satisfy: **Better reports, ability to export information to a spreadsheet/database for existing reporting to DMV Jurisdiction (may vary by jurisdictions).**
- Issues/problems that CSTIMS:
  - Fixed/resolved: ??
  - Did not fix/resolve: ??
  - Created/made worse: **Triples time it takes to schedule road tests and report information to DMV.**
- Recommendations based on pilot experience
  - Enhancements to CSTIMS better meet current requirements: **Be able to enter common information for a road test once instead of three times. Right now, there is no area or screen that addresses removal of airbrake restriction or automatic transmission restrictions.**
  - New requirements that CSTIMS should satisfy: **Generate reports that can export information, speed up system time when inputting.**
- Impact of using CSTIMS
  - Effectiveness in meeting fraud detection/prevention goals: **From a third party tester point of view, CSTIMS has not helped detect fraud. It has made a more cumbersome system that costs the end-user more money to implement. If the system were to have quicker response time, less duplicate inputting, and more flexibility for reporting results to states jurisdictions requirements, then it would help. One of the issues is the amount of extra work it generated. We could not replace our current scheduling process to use the CSTIMS scheduling, which means we are doubling the work just for scheduling. When you have to do twice the work, it can mean that sometimes staying caught up is an issue. Then we were going back and entering past appointments, which does nothing for fraud detection. Ultimately I think all states are in a similar situation, trying to do more with less. This system could be effective if it were to be developed more.**
  - Effectiveness as an oversight/enforcement tool: **Our experience was that we did not see any benefit.**
  - Effectiveness as an skills test scheduling/management tool: **Not very good**
  - Effectiveness as a reporting tool: **As a third party, not very good.**

## ARIZONA – MOTOR VEHICLE DIVISION

- Introduce jurisdiction members
  - **William (Randy) Raiford**
  - **Motor Vehicle Division**
  - **Deputy Assistant Division Director**
  - **Competitive Government Partnerships Program**
  - **Ken Dillman**
  - **Motor Vehicle Division**
  - **Northern Region CDL Coordinator**
  - **Motor Carrier Program**
- Describe (at high-level) CDL skills testing program before pilot
  - Procedures/policies: **Examinations are scored manually on paper forms. Results are tracked by manually inputting the result data into various electronic tracing tools.**
  - People involved: type/number: **Jurisdiction Examiners 13, Third Party Examiners 378**
  - Automated portions: **Canned reports of the data entered in the third party database**
  - Manual portions: **Scoring an examination, inputting examination results data, receiving, and evaluating third party authorization and certification applications**
  - Special aspects
  - Issues/Problems: **The current process is very labor intensive. Employees must enter data into several tracking tools that are not related in any way. This makes comprehensive data analysis extremely difficult.**
- Describe (at high level) CDL skills testing program during pilot: what was changed/what stayed the same
  - Procedures/policies: **The only change to the current procedures is the addition of data entry and data management relating to CSTIMS. All existing procedures continued unaffected and in parallel with the pilot.**
  - People involved: type/number: **MVD 3, two administrative personnel and one jurisdiction examiner.**
  - Automated portions: **Reports from CSTIMS are more complete and concise than are available in the existing system.**
  - Manual portions: **Data entry was required on the part of the participants for the first time.**
  - Special aspects: **This is the first time third party had to report or establish a schedule of examinations.**

- Issues/Problems: **The exception: e-mails kept one MVD person busy identifying and cataloging for analysis.**
- Describe level of participation/activity during pilot
  - How many months/weeks CSTIMS was used: **6 months**
  - Number of participating Jurisdiction MVD offices: **2 headquarters personnel and one field office**
    - Number of administrators: **1**
    - Number of CDL monitors: **3**
    - Number of MVA clerks: **0**
    - Number of auditors: **1**
  - Number/type of participating testers (third party/jurisdiction): **One (1) Jurisdiction and four (4) third parties**
    - Number of responsible parties: **5**
  - Number of participating examiners
    - Number who scheduled themselves
    - Number who were scheduled by tester
  - Number of applicants processed
  - Number of scheduled appointments
  - Number/type of scheduled tests
  - Number/type of completed tests
  - Pass/fail rates
    - For state: **94%**
    - By tester
      - **City of Phoenix 86%**
      - **Mesa USD 89%**
      - **Scottsdale USD 84%**
      - **Southwest Truck 95%**
      - **Tucson CDL 80%**
- Costs associated with implementing/using CSTIMS for pilot
  - Startup: **None. Computers and access already available to the participants.**
  - Ongoing: **Additional time spent by participants performing data entry into CSTIMS. One MVD administrator managing exception e-mails.**
  - Training: **One two-day training session involving 11 people.**
  - Travel: **One MVD examiner traveled 180 miles round trip to the training.**
  - Other (specify)

- Existing skills testing management/oversight requirements that CSTIMS:
  - Met/satisfied: **Comprehensive pass/fail reporting; scheduling of applicants; tracking of changes to the status of an applicant.**
  - Did not meet/satisfy: **Within the scope of the trail, all expectations were met. The enhancement list indicates we have a long way to go.**
- New skills testing management/oversight requirements that CSTIMS could be used to meet/satisfy:
  - **Scheduling of examiners.**
  - **Pass/fail data available in real time, instead of waiting for month end reporting.**
- Issues/problems that CSTIMS:
  - Fixed/resolved: **CSTIMS provided a more comprehensive view of what the performance of the three different types of participants displayed. Specifically the pass/fail ratios.**
  - Did not fix/resolve: **Data entry appeared to be performed in “batches” as opposed to real time. This process created a lot of alert e-mails. Arizona does not believe that this issue would continue in “live” production.**
  - Created/made worse: **There appears to be an issue with the forms. If an examiner is examining for a passenger endorsement, and the bus has an exposed frame, the form scoring numbers do not account for the items on the frame that need to be inspected. These items are not accessible on a traditional coach/transit bus. They are accessible on a traditional school bus type of vehicle. This issue may be mitigated with the deployment of the new score sheet and BCS testing AAMVA has proposed in their sample CDL Examiners Manual circa 2005. CSTIMS will need to be updated to apply those changes anyway.**
- Recommendations based on pilot experience
  - Enhancements to CSTIMS better meet current requirements:
    - Ability for a tester to “void” a certificate.
    - Rename Class B and C “non coach/school bus” to truck.
    - Audit tracking could be changed from a “pass/fail” to a method of tracking various levels of “non-compliance.”
    - Eliminate the need to reenter redundant data regarding the vehicle.
    - Need a “back” button on various screens.
  - New requirements that CSTIMS should satisfy
    - Electronic scoring of the skills exam.
    - Automated data transfer to the Jurisdiction licensing system, to post the results of the exam directly to the applicants DL record.
    - Link with CDLIS for applicant record comparison and validation.
    - Link with local management system that would provide nationwide reports without duplication of efforts.

- Impact of using CSTIMS:
  - Effectiveness in meeting fraud detection/prevention goals: **Unsure**
  - Effectiveness as an oversight/enforcement tool: **The data began to develop specific trends. On one hand, the data began to dispel a claim that jurisdiction personnel failed at least 60% of applicants. On the other hand, school district and public works third parties were performing near jurisdiction pass/fail ratios.**
  - Effectiveness as a skills test scheduling/management tool: **CSTIMS functionality is more comprehensive than the current functionality built into Arizona's tracking tool.**
  - Effectiveness as a reporting tool: **Within the confines of the pilot, the application provided reasonably comprehensive data that was easily sorted and compared.**

## NEW MEXICO – NEW MEXICO JUNIOR COLLEGE

- By: **Randy Cook - Hobbs, New Mexico**
- Goals:
  - **Highway Safety—Individuals, Vehicles, and Fraudulent CDLs.**
- Problems:
  - **Too complicated of form, too many screens (change to one pull up form per individual)**
  - **Hardware/Programs/Personnel/Commitment/Finances**
  - **Personnel: Training, Experience as well as Certification/re-certifications of Examiners, Audits-covert and overt, scheduling tests, paperwork, Variety of management/methods/style,**
  - **50+ States/Jurisdictions, too many differences.**
    - Major differences with just the 4-involved right not let alone 50+.
  - **Entering information of candidate, and then problems with: no shows, examiner changes**
- What's Needed:
  - **Simplicity in the form and information.**
  - **Allow jurisdictions to add their own specific/individual State information.**
  - **Have MVD initiate the form when candidate takes the Knowledge tests, and gets in the system, especially Hazmat.**
  - **Have CDL candidate take additional appropriate knowledge tests first to be able to take the Skills tests. Example-(tanker) (Hazmat, placarded, but no product on board).**
    - (Or) wait to get CDL for a period of time, so the Examiner can turn in the paperwork.
    - (Or) initiate Examiner/3rd. party, instant (1-hr.) computer input in system.
  - **One screen per CDL candidate, scroll down for all information.**
  - **Generate report from any criteria.**
  - **Forms correctable anytime only with comments and corrector's name attached.**
  - **Online training for Examiners or other appropriate officials with clearance, with verifiable certification of training.**
  - **Change form to cover class "C" skills testing different from A & B**
  - **Have all criteria on "Bus" with a strike through if not appropriate.**
    - (Or) call it a Coach—Other Bus—School Bus.

## **SOUTH DAKOTA – DEPARTMENT OF PUBLIC SAFETY**

- Introduce jurisdiction members
  - **Stan Knox**
    - Department of Public Safety
    - Training Specialist
    - JA – CM
  - **Jenni Faulstich**
    - Department of Public Safety
    - Telephone Representative
    - JA
- Describe (at high-level) CDL skills testing program before pilot
  - Procedures/policies: **Examiners use paper to record test results. The forms are then scanned into a file system to have a copy on file.**
  - People involved, type/number:
    - third party testers: **30**
    - Jurisdiction Examiners: **0**
  - Automated portions: **Weekly, Monthly, and Yearly reports**
  - Manual portions: **Scoring on worksheets. Encoding on mainframe when converting CDL for verification.**
  - Special aspects
  - Issues/Problems: **It takes a long time to verify all procedures for verification of CDL.**
- Describe (at high level) CDL skills testing program during pilot: what was changed/what stayed the same
  - Procedures/policies: **Another two steps to follow for verification of CDL testing**
  - People involved: **49**
  - Automated portions:
  - Manual portions: **Data entry is required twice by third party examiner (RP) to complete process.**
  - Special aspects: **Prior to third party examiner (RP) were not required to report schedule tests.**
  - Issues/Problems: **Most (RPs) have very little computer experience or do not have access to high speed Internet.**
- Describe level of participation/activity during pilot:
  - How many months/weeks CSTIMS was used: **training 3-14-06 to 6-11-06; production 6-12-06 to present**

- Number of participating Jurisdiction DMV offices
  - Number of administrators: **3**
  - Number of CDL monitors: **4**
  - Number of MVA clerks: **45**
  - Number of auditors: **3**
- Number/type of participating testers (third party/jurisdiction)
  - Number of responsible parties: **30**
- Number of participating examiners: **0**
  - Number who scheduled themselves: **30**
  - Number who were scheduled by tester: **0**
- Number of applicants processed: **223**
- Number of scheduled appointments: **248**
- Number/type of scheduled tests
- Number/type of completed tests
- Pass/fail rates
  - For state
  - By tester: **Pass 96%**
- Costs associated with implementing/using CSTIMS for pilot
  - Startup: **None**
  - Ongoing staff time, program phone charges
  - Training: **One on One time**
  - Travel Trainer: **Traveled using one–on-one training session throughout the state of SD**
  - Other (specify)
- Existing skills testing management/oversight requirements that CSTIMS:
  - Met/satisfied: **Pass/fail reporting rate scheduling drivers**
  - Did not meet/satisfy
- New skills testing management/oversight requirements that CSTIMS could be used to meet/satisfy
- Issues/problems that CSTIMS:
  - Fixed/resolved
  - Did not fix/resolve: **Does not have a place for passenger endorsement for other than coach/transit school bus**
  - Created/made worse: **Created another task before examining drivers. Takes more time to enter information into CSTIMS (before/after).**

- Recommendations based on pilot experience
  - Enhancements to CSTIMS better meet current requirements
  - New requirements that CSTIMS should satisfy
- Impact of using CSTIMS
  - Effectiveness in meeting fraud detection/prevention goals: **Unsure at this time.**
  - Effectiveness as an oversight/enforcement tool
  - Effectiveness as an skills test scheduling/management tool
  - Effectiveness as a reporting tool

## LIST OF CONCERNS

- **Do the Feds want us to keep a log of cancellations on a driver? (how many times a driver cancels and reschedules)**
- **To be able to cancel a test when driver notifies the tester, not on the day the test is scheduled for.**
- **When canceling a test, there needs to be a way to cancel all tests at once instead of individually.**
- **Passenger scoring criteria.**
- **When giving a skill test to an individual, that test will always be completed in the same vehicle. Is there a way where all the vehicle information will stay in the fields instead of inserting the information each time?**
- **To be able to cancel all test at once (VI, BC, RT).**
- **To be able to put in more than one form.**
- **Having trouble changing general information in system once we have add an applicant.**

# APPENDIX C

## PILOT ISSUES, ENHANCEMENTS, RECOMMENDATIONS, AND PRIORITIES

Throughout the CSTIMS project, issues, desired enhancements, and recommendations were compiled from the following project stakeholders: the four pilot jurisdictions (Alaska [AK], Arizona [AZ], New Mexico [NM1, NM2, NM3], and South Dakota [SD]), one non-pilot jurisdiction (Oregon [OR]), FMCSA, and AAMVA. At the pilot debrief meeting which followed the formal pilot period, a composite list containing 112 items was reviewed and prioritized by the stakeholders.

Stakeholders assigned each item a relative priority based on their perception of the impact of the item on the short- and long-term usability and effectiveness of CSTIMS, as shown in Table 8.

**Table 8. Priority Definitions**

| Priority     | Meaning   |
|--------------|---|
| Critical (C) | Show-stopper: Can't use CSTIMS now without it   |
| High (H)     | Must have: But can use CSTIMS now without it    |
| Medium (M)   | Should have: But can use CSTIMS now without it  |
| Low (L)      | Nice-to-have: Can use CSTIMS forever without it |

The 112 detailed enhancement recommendations represent a core set of 13 major functionality requirements for CSTIMS:

### Critical

- C1: Expand CSTIMS functionality to support the new AAMVA CDL Examiner's Manual 2005 CDL Testing Model.
- C2: Provide CSTIMS users with capability to make changes/corrections to, merge, or delete duplicate data or data entered in error.
- C3: Replace current multiple-login ID/permissions settings for each user with a single login ID and composite set of permissions for the user.

### High

- H1: Reduce/eliminate cases of repetitive/redundant data entry by allowing information to be entered once and shared across multiple screens/functions (e.g., contact information, test vehicle information, etc.). Autofill fields with applicable default values to reduce additional data entry to only require changes from default values.

- H2: Streamline current CSTIMS screen navigation to remove and consolidate redundant/intermediate processing steps and associated screens for high-usage functions.
- H3: Expand skills test results information provided to MVA clerks to include applicant information (e.g., knowledge test history, etc.), examiner identification, actual/passing test scores, specific indication of applicable CDL (including class, endorsements, restrictions) that applicant is eligible to be issued.

### **Medium**

- M1: Provide jurisdictions with enhanced capability to set and enforce jurisdiction-specific eligibility, scheduling, and notification criteria for testers, examiners, and applicants to achieve and sustain enhanced CDL skills test oversight goals.
- M2: Add capability for jurisdictions or users to specify/filter which alerts they are to receive to facilitate more effective testing oversight.
- M3: Expand scope of CSTIMS data change log function to include all data, not just schedules/tests.
- M4: Expand CSTIMS reporting by adding a report for applicant data.
- M5: Expand pass/fail reporting to provide pass/fail statistics at the state and national level.

### **Low**

- L1: Provide a CSTIMS capability to import/export information between external systems (e.g., CDLIS, PDPS, driver history file, automated knowledge test machines) or for external analysis.
- L2: Provide special CSTIMS capability to efficiently process transactions from users with low-speed Internet connections (e.g., dial-up, possibly via special abbreviated-content windows).

Table 9 through Table 23 describes each item, its relative priority to project stakeholders, and associated CSTIMS functionality recommendation(s) supported by the feature.

**Table 9. Jurisdiction Parameters**

| # | Item/<br>Function                           | Change  | Functionality<br>Requirement | Requested<br>by  | AK  | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|---|---|------------------------------|------------------|-----|----|-----|-----|-----|----|----|
| 1 | Passing Score<br>Criteria                   | Add support for new skills test pass/fail score and criteria documented in AAMVA CDL Examiner's Manual, 2005 CDL Testing Model. Allow jurisdictions to select which set of skills test scoring criteria to use: the current Version 2.0, or the new 2005 version.   | C1                           | Working<br>Group | C   | C  | C   | C   | M   | C  | L  |
| 2 | Applicant<br>Minimum Age                    | Currently, all Applicants must be at least 18 years old, regardless of jurisdiction. Add new jurisdiction-specific parameter: "Applicant Minimum Age," with a default value of "18," to allow jurisdictions to set their own minimum age for skills testing (i.e., cross-check DOB).                      | M1                           | AK               | H   | L  | L   | L   | L   | L  | L  |
| 3 | CDL Required                                | Current CDL-requirement parameter applies only to third party examiners, not to Jurisdiction Examiners. Add another CDL-requirement parameter to apply to Jurisdiction Examiners.   | M1                           | AK               | H   | M  | n/a | L   | L   | L  | L  |
| 4 | Applicant Multi-<br>scheduling<br>Same Test | Currently CSTIMS allows a jurisdiction to restrict scheduling an Applicant for the same test with different Testers, but allows multiple scheduling of the same test with the same Tester. Should the CSTIMS rule be changed to not allow all duplicate schedules for the same test regardless of Tester? | M1                           | AAMVA            | Yes | M  | L   | L   | H   | L  | M  |
| 5 | Scheduling Days                             | Day-of-week scheduling limitations; some jurisdictions don't allow testing on Sunday  | M1                           | FMCSA            | L   | L  | L   | L   | L   | L  | L  |
| 6 | Test Scores                                 | Should pull-downs be provided for Vehicle Inspection (Vehicle Type, Brakes, Axles, Min Pass Score, Max Score) and Road Test (Class, Vehicle Type, Transmission)? This would allow jurisdiction to select only those combinations that are germane and eliminate the "active" checkbox on VI.              | H1                           | AAMVA            | M   | H  | H/M | M   | L   | H  | L  |

**Table 10. Organizations**

| # | Item/<br>Function          | Change  | Functionality<br>Requirement | Requested<br>by | AK | AZ | NM1 | NM2 | NM3 | SD | OR  |
|---|----------------------------|---|------------------------------|-----------------|----|----|-----|-----|-----|----|-----|
| 1 | Tester flag                | Add the capability to change an Organization's designation as a Tester to a non-Tester (and visa versa). Some checks required before allowing (e.g., if there are Examiners assigned, then can't make a Tester a non-Tester). | C2                           | Working Group   | H  | L  | L   | L   | L   | L  | L   |
| 2 | Number of Examiners        | Calculate "Number of Examiners" rather than providing manual entry capability. Flag if less than Jurisdiction minimum.  | H1                           | Working Group   | L  | H  | L   | L   | L   | L  | M   |
| 3 | Organization Relationships | Is there a need to consider a parent-child relationship between Organizations (i.e., state DMV and branch DMV offices; Tester HQ and branch offices)?   | H1                           | AAMVA           | L  | H  | L   | L   | L   | L  | n/a |

Table 11. Testers

| # | Item/Function       | Change   | Functionality Requirement | Requested by | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|---------------------|--|---------------------------|--------------|----|----|-----|-----|-----|----|----|
| 1 | Number of Examiners | Current Tester screen has user-entered/maintained "Number of Examiners" data item. The same item on the Tester and Examiner Reports is dynamically calculated and displays the number of linked examiners for that Tester. Can Tester screen be modified to do the same? | H1                        | AK, AZ       | M  | H  | M   | M   | L   | M  | M  |
| 2 | Insurance Dates     | Add "Insurance Effective Date" and "Insurance Expiration Date" data items for each of the types of third party insurance (Notification prior to expiration?)   | M1                        | AK           | M  | M  | L   | L   | L   | M  | M  |
| 3 | Test Fees           | Test Fees display with four decimal places. Can that be changed to two decimal places?   | M1                        | AAMVA        | M  | M  | L   | L   | L   | L  | L  |
| 4 | Principal Party     | On third party tester screen, need check box to ask if Principal Party info is same as Organization Point of Contact, and autofill if Yes.   | H1                        | AAMVA        | H  | M  | H   | H   | H   | L  | M  |
| 5 | Operating Hours     | Ability to set operating hours by day for Testers; some jurisdiction DMVs are open at different times on different days.   | M1                        | FMCSA        | M  | H  | M   | M   | H   | L  | M  |

Table 12. Users

| # | Item/Function                            | Change   | Functionality Requirement | Requested by | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|--|--|---------------------------|--------------|----|----|-----|-----|-----|----|----|
| 1 | User ID<br>User Role                     | Each User should have single LoginID and all applicable permissions/roles assigned once. Current system of requiring different UserIDs in order to assign different roles/permissions to same User is nuisance.  | C3                        | AK, AZ, SD   | H  | H  | C   |     | L   | H  |    |
| 2 | Secret Question                          | The Secret Question/Answer should not be required inputs when adding a User; they should be entered by the User upon initial login (like FEWS).  | C3                        | AZ, SD       | M  | H  | C   | L   | L   | M  | M  |
| 3 | User Roles                               | CSTIMS currently allows non-Tester roles (SA, JA, CM, MC, AU, FMCSA) to be assigned to Users who belong to Tester Organizations and Tester roles (RP, EX) to be assigned to Users who belong to non-Tester Organizations. This should not be allowed. The system should check for consistency between the Organization's Type and the Roles of its User members. | C3                        | AK           | H  | H  | H   | H   | L   | L  | L  |
| 4 | User Roles                               | Jurisdiction Administrator (JA) should have ability to set up any User in a jurisdiction with any jurisdiction-specific Role: CM, MC, AU, RP, EX. Currently Tester Roles (RP, EX) can only be set up by User with CM Role, and non-Tester Roles (CM, MC, AU) can only be set up by User with JA role: a nuisance. (Critical: tied to #1.)                        | C3                        | AK           | H  | M  | C   | C   | L   | H  | L  |
| 5 | User Roles                               | FMCSA Jurisdiction Administrators (JAs) should be able to add other FMCSA JAs and other Users only with the FMCSA role; currently, System Administrators (SAs) must add all FMCSA personnel.   | C3                        | AAMVA        | L  | M  | C   | C   | L   | H  | M  |
| 6 | User versus Organization Primary Contact | When adding a User to an Organization and assigning a User Role, should there be a way to designate that the Organization's Primary Contact will be that User and to use the Primary Contact information from the Organization?  | C3                        | AAMVA        | M  | M  | C   | C   | L   | C  | M  |

| #  | Item/<br>Function | Change  | Functionality<br>Requirement | Requested<br>by | AK | AZ | NM1 | NM2 | NM3 | SD | OR  |
|----|-------------------|---|------------------------------|-----------------|----|----|-----|-----|-----|----|-----|
| 7  | User Roles        | Is there a need for a new, read-only supervisor/regional manager role within a jurisdiction? Currently the MVA Clerk (MC) role may meet this need unless regional managers need to look at other than test results (like permissions for current "FMCSA" Role, but only with Current Jurisdiction scope). | C3                           | AAMVA           | L  | M  | L   | L   | L   | L  | n/a |
| 8  | Examiner Role     | Currently there is no linkage between the "Examiner" Security Role entry and the "User is Examiner" check box. Should there be linkage between them such that assigning a Security Role of "Examiner" will also check the "User is Examiner" box and visa-versa?  | C3                           | AAMVA           | L  | H  | M   | L   | L   | M  | L   |
| 9  | User Status       | Currently there is no way to "deactivate" a User (i.e., retirement, job change). Do we need a way to activate/deactivate a User (new date field?), specify reason for the status change, and be able to list Users based on status (All, Active, Not Active)?   | C2                           | AAMVA           | H  | H  | C   | C   | L   | C  | M   |
| 10 | Delete User       | Want ability to delete Users  | C2                           | AK              | M  | H  | C   | C   | L   | M  | M   |
| 11 | Examiner Role     | Should all Examiners be Users with an Examiner User Role (not a separate entity) even if they don't enter test results?   | C3                           | AAMVA           | M  | M  | L   | L   | L   | L  | no  |

Table 13. Users

| # | Item/<br>Function                           | Change  | Functionality<br>Requirement | Requested<br>by | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|---|---|------------------------------|-----------------|----|----|-----|-----|-----|----|----|
| 1 | Testing Authorizations                      | Generate an on-screen alert if an Examiner is required to hold a CDL and the Examiner's testing authorizations exceed their license class and endorsement(s) (e.g., if the Examiner has a Class B license and the CM enters authorization for Class A testing, an alert is generated)   | M1                           | AZ, SD          | L  | M  | M   | L   | L   | H  | M  |
| 2 | Add Examiner                                | Send a confirmation e-mail alert to the Tester's Responsible Party and to the Examiner when a CDL Monitor adds the Examiner to that Tester (or modifies Examiner's testing authorization, e.g., class 'A' versus 'B')   | M1                           | AK              | M  | M  | L   | L   | L   | M  | M  |
| 3 | Notification when Examiner Due for Training | Need to send out notification when Examiner is due for training refresher. Send scheduled alert to CDL Monitors, Tester's Responsible Parties, and Examiners if current date is more than jurisdiction-specified number of days (new jurisdiction parameter needed) after the "Date Last Attended DMV Approved Examiner Training Course." | M1                           | AK              | M  | M  | L   | L   | L   | L  | L  |
| 4 | Employment End Date                         | Add capability to list Examiners by current employment status: All Examiners, Active, Inactive (based on Employment End date)   | H1                           | AK              | L  | M  | M   | L   | L   | H  | L  |
| 5 | Examiner Availability                       | Need a way to post/track Examiner availability (vacations, doctor's appointments, etc.) for scheduling. Need expanded calendar to allow for indicating available/non-available time for scheduling tests  | H1                           | FMCSA           | M  | M  | M   | L   | L   | M  | L  |

Table 14. Applicants

| # | Item/Function              | Change  | Functionality Requirement | Requested by         | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|----------------------------|---|---------------------------|----------------------|----|----|-----|-----|-----|----|----|
| 1 | Applicant SSN              | Add Applicant SSN as optional data item (originally Critical for AK; per FMCSA, item should be withdrawn due to legal/privacy issues; try instead FN+LN+DOB)  | M1                        | AK                   | H  | L  | L   | L   | L   | M  | L  |
| 2 | Knowledge Test Information | Expand Knowledge Test section to include all applicable knowledge tests, not just the most current one (i.e., link to knowledge test system)  | H1, M4                    | AK, AZ               | C  | H  | L   | C   | L   | L  | M  |
| 3 | Knowledge Test Information | Need a way to interface knowledge test machines with CSTIMS in order to update the Applicant Profile on CSTIMS with all knowledge tests (long-term: defer)  | L1                        | AK                   | H  | H  | M   | M   | L   | L  | L  |
| 4 | Merge Applicants           | Need a way to merge Applicant records if entered twice and the two entries are, in fact, the same individual  | C2, M4                    | FMCSA                | C  | C  | C   | C   | L   | C  | H  |
| 5 | Schedule/Test History      | Would like tab labeled "Schedule" relabeled "Schedule/Test History"; would like it to be more user-friendly (i.e., be able to select/view schedule/test entries from this list and make updates if necessary) | H2                        | NM-DMV (debrief mtg) | -  | -  | H   | -   | -   | -  | -  |

**Table 15. Scheduling**

| # | Item/<br>Function              | Change  | Functionality<br>Requirement | Requested<br>by | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|--------------------------------|---|------------------------------|-----------------|----|----|-----|-----|-----|----|----|
| 1 | Non-CDL skills tests           | Be able to schedule/manage non-CDL skills tests administered by either Jurisdiction and/or third party testers. Also ensure not exceeding total number of Tests per day.  | M1                           | AK, NM          | H  | M  | M   | L   | H   | L  | L  |
| 2 | Examiner Calendars             | Outlook-like hourly calendaring feature for scheduling Examiners to avoid overlapping bookings (long-term: defer)   | H1                           | AK, NM          | C  | H  | M   | M   | H   | L  | M  |
| 3 | Schedule Test without Examiner | Be able to schedule a test in advance and not be required to assign an Examiner to it in advance: Tester may book Applicants and tests way in advance, but not know which Examiners may be available until later on. (For interim, try a "TBD" as Examiner)   | M1                           | AK, NM          | H  | H  | H   | H   | L   | L  | L  |
| 4 | Minimum Waiting Period         | Currently, jurisdictions may specify only one minimum waiting period before retesting following a failed exam regardless of test type. Allow jurisdictions to specify different minimum waiting periods for each Test Type. (In AK, they require 7-days waiting period following a failed BCS or RT, but only 1 day following a failed VI.) | M1                           | AK              | H  | L  | C   | C   | L   | L  | H  |
| 5 | Candidate Examiners            | Restrict pull down list of candidate Examiners for a schedule being booked to include only "qualified" Examiners instead of all Examiners for a Tester.   | H1                           | AK              | M  | M  | M   | L   | L   | L  | M  |
| 6 | Candidate Examiners            | Limit the Examiners selected to be scheduled to those authorized and not under sanction; a solution may be to change the process of scheduling for an RP (e.g., when the Applicant wants to schedule a test, the RP asks for Class, etc.; only those Examiners available would show up on a "calendar"?)                                    | H1                           | FMCSA           | H  | M  | H   | H   | L   | L  | M  |

| #  | Item/<br>Function        | Change  | Functionality<br>Requirement | Requested<br>by | AK | AZ | NM1       | NM2 | NM3 | SD | OR |
|----|--------------------------|---|------------------------------|-----------------|----|----|-----------|-----|-----|----|----|
| 7  | Reschedule Test          | Require the User to specify the reason a test was rescheduled (change made to Scheduled Test Date/Time/Site/Route/ Examiner, etc), either from a pre-defined Reason for Reschedule selection list, or an entry in the Comments field.   | H1                           | AK              | H  | M  | C         | C   | L   | L  | L  |
| 8  | Out of State Applicant   | Some jurisdictions will allow their Examiners to administer tests to out-of-state drivers; the "Driver License Issuing State" should default to the current jurisdiction but allow selection of another; this is, possibly, yet another jurisdiction parameter ("Test Out-of-State Drivers?") | H1                           | AK              | H  | L  | n/a       | C   | L   | L  | L  |
| 9  | Examiner Scheduling      | Currently, only the Tester's Responsible Party may schedule tests for Examiners. Allow Examiners to be able to schedule their own tests (not centrally through an RP). (EX may schedule self, but not other EXs for same Tester)  | C3                           | SD              | H  | M  | M/L       | L   | L   | H  | H  |
| 10 | Test Vehicle Information | Some Testers that provide the test vehicle use the same vehicle for multiple applicants; can the vehicle information be saved between schedules? (i.e., add a tab for Tester Vehicles?)   | H1                           | AZ              | M  | H  | H         | C   | L   | H  | L  |
| 11 | Save versus Add Buttons  | There are "Save" and "Add" buttons on the schedule input screen – what's the difference? Rename "Add" to be "Clear"?  | H2                           | AZ              | L  | H  | C         | C   | L   | L  | L  |
| 12 | Import Schedules         | Upload from jurisdiction-developed online scheduling systems into CSTIMS  | L1                           | FMCSA           | ?  | M  | M         | M   | L   | L  | L  |
| 13 | Schedule Reason          | Add an "Other" entry to list of reasons for scheduling/re-scheduling the test(s). Include optional explanation in Comments.   | H1                           | FMCSA           | L  | M  | H         | H   | L   | M  | M  |
| 14 | Non-CDL Tests            | Ability to track non-CDL tests for jurisdiction Examiners; they are not limited to CDL testing and do many non-CDL exams; want to be able to ensure "Maximum Tests per Day" not exceeded.   | M1                           | FMCSA           | H  | H  | n/a       | L   | L   | L  | L  |
| 15 | Cancel/Delete Schedules  | Provide capability to cancel/delete unused schedules and associated tests.  | C2                           | AAMVA           | H  | M  | w/<br>cmt | C   | L   | H  | M  |

| #  | Item/<br>Function                | Change   | Functionality<br>Requirement | Requested<br>by         | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|----|----------------------------------|--|------------------------------|-------------------------|----|----|-----|-----|-----|----|----|
| 16 | Scheduling<br>Overlaps           | Some way to ensure Examiners aren't scheduled for multiple Applicants at the same time (Applicant convenience); may require additional jurisdiction parameters for the average length of each Test (VI, BCS, and Road) or addition of a "Scheduled Test End Time" data item for each Test. | M1                           | FMCSA                   | L  | H  | H   | L   | L   | H  | H  |
| 17 | Applicant Prior<br>Test Failures | Wants an alert on Applicant's DL if person previously failed a test and retakes it later (want to see previous history)  | M1                           | NM3<br>(debrief<br>mtg) | -  | -  | -   | M   | -   | -  | -  |

Table 16. Test Results

| # | Item/<br>Function    | Change   | Functionality<br>Requirement | Requested<br>by | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|----------------------|--|------------------------------|-----------------|----|----|-----|-----|-----|----|----|
| 1 | Cancel a Test        | Allow a previously-scheduled Test to be cancelled at any time (currently, previously-scheduled tests cannot be cancelled if current date is earlier than scheduled test date).   | C2                           | AK, SD          | H  | H  | C   | C   | L   | H  | H  |
| 2 | Display Test Results | Add display of actual test score, pass/fail threshold, target CDL+endorsements/restrictions, and Examiner ID to Test Results screens.  | H3                           | AK, NM, SD      | C  | H  | C   | C   | L   | H  | M  |
| 3 | Test Vehicle Type    | CDLs are required for some class C vehicles (e.g., pickup trucks carrying dynamite) that must be placarded; we have made no allowances for this in the Vehicle Type pull-downs (closest is "Straight Truck" but this isn't exactly correct for a VW bug); should we add a type of "Other" (with required description?) only valid for class C? | H1                           | AZ, NM          | M  | H  | M   | M   | H   | H  | M  |
| 4 | Test Result Inquiry  | The summary screen that the MVA Clerk displays to verify test results must be simple, contain all the summary information they need to make a decision (i.e., restrictions), and not force them to have to go to additional screens to get all the needed information. (For AK, this is a show-stopper, must-have item.) (See also #2,)        | H3                           | AK, SD          | C  | H  | C   | C   | L   | H  | M  |
| 5 | Test Result Inquiry  | Add Examiner, actual test score, pass/fail threshold to current display. (See also #2.)  | H3                           | AK              | C  | H  | C   | C   | L   | L  | M  |

| #  | Item/<br>Function                              | Change   | Functionality<br>Requirement | Requested<br>by | AK  | AZ | NM1 | NM2 | NM3 | SD | OR |
|----|--|--|------------------------------|-----------------|-----|----|-----|-----|-----|----|----|
| 6  | Repetitive Entry of "Actual" Test Information  | When entering test results, it is cumbersome to have to enter the actual Examiner, Test Date/Time, Site/Route, and Test Vehicle information for each separate test, especially if it does not change. Need a way to enter actual information for a test then be able to copy it to other tests (i.e., via a "Same As" button), only making changes as necessary; one suggestion was to enter this data and then select the test type (radio button above the Test Results?); may require flag indicating results will be entered for multiple tests. | H1                           | AZ, SD          | C   | C  | C   | C   | L   | H  | M  |
| 7  | Test Vehicle Characteristics and Passing Score | Need to remove requirement to enter actual test vehicle characteristics when entering Basic Control Skills Test results: correct Pass/Fail score is based only on Form number. Need to remove requirement to enter test vehicle characteristics when entering Road Test results: correct Pass/Fail score is the same for all test vehicles (except for some states where passing score depends on transmission type or whether or not the test vehicle is school bus).   | H1                           | AK              | C   | C  | C   | C   | L   | L  | L  |
| 8  | BCS Form Number                                | CSTIMS does not allow selection of a non-default value for the actual Basic Control Skills Test Form Number. Only the default Form Number for the Test Site is used: it cannot be changed. Need to be able to select a non-default Form Number if necessary.   | H1                           | AAMVA (C)       | n/a | H  | M   | M   | L   | H  | M  |
| 9  | Test Vehicle GCWR                              | Modify "GVWR" to accept commas (e.g., 29,200); For Class A vehicles, calculate/display GCWR (Gross Combined Weight Rating) – weight of drive unit and trailer – instead of listing both individually.  | H1                           | AZ              | M   | H  | L   | L   | L   | L  | L  |
| 10 | Individual Test Results                        | A capability to print individual test results showing all the detail (like doing a screen print) (similar to #2).  | H3                           | NM              | H   | M  | C   | C   | L   | M  | M  |

| #  | Item/<br>Function              | Change   | Functionality<br>Requirement | Requested<br>by | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|----|--------------------------------|--|------------------------------|-----------------|----|----|-----|-----|-----|----|----|
| 11 | Applicant Test History         | Add capability to retrieve an Applicant's test history based on a single CCD (e.g., retrieve the Applicant based on the CCD; use that Applicant to search for all other test results); allows an MVA Clerk to see a driver's history to determine if the driver should be licensed (double check on jurisdiction requirements – AZ only allows three failures on a single permit).   | H2                           | AZ              | M  | H  | H   | H   | L   | L  | L  |
| 12 | Test Scores                    | Currently, test/passing scores are treated differently depending on Test Type: as number correct (Vehicle Inspection) or number wrong (Basic Control Skills, Road Test). Allow jurisdiction to select how to enter/evaluate test/passing scores for each type of test: minimum number correct, minimum percent correct, maximum number errors, or maximum percent errors (ex: NM bases/enters passing scores as percentages—not points). | M1                           | AZ, NM          | M  | H  | H   | H   | H   | L  | M  |
| 13 | Maximum Period to Make Changes | Increase maximum-allowed period to make changes to test results from 99 days to 999 days.  | M1                           | SD              | L  | L  | M   | M   | L   | L  | M  |
| 14 | Display Single Test Result     | If the outcome of a Test Result or Test Result Inquiry is just one schedule/test, then the normally displayed search/inquiry results screen, with just one hit, should be bypassed and the actual retrieved test be displayed, thus saving an unnecessary mandatory selection of the sole item from the search results list. This has been done for Applicant search.  | H2                           | AK              | H  | H  | H   | M   | L   | L  | L  |

| #  | Item/<br>Function               | Change   | Functionality<br>Requirement | Requested<br>by | AK | AZ | NM1 | NM2 | NM3 | SD | OR  |
|----|---------------------------------|--|------------------------------|-----------------|----|----|-----|-----|-----|----|-----|
| 15 | Applicant Test Results History  | All of an Applicant's current/previous tests relating to the "target CDL" (class, vehicle type, brakes, and transmission) to be shown on the Test Results Inquiry (designed primarily for the MVA clerk); this would show the history of failures and passes and preclude having to query on multiple schedules to see that all pieces have been passed. | H2, H3                       | SD              | H  | H  | H   | M   | L   | M  | M   |
| 16 | Test Vehicle Class/Type         | Test Results screen needs edit on Class versus Type: e.g., not allow selection of a Class A School Bus,  | H1                           | SD              | H  | H  | H   | H   | L   | H  | L   |
| 17 | Test Results by Tester/Examiner | There is a Test Results Inquiry search for test results by Applicant; users would like search by Tester/Examiner,  | H2                           | AZ              | H  | H  | H   | H   | L   | M  | M   |
| 18 | Vehicle Inspection Autofail     | VI Autofail – One of the listed reasons is "Did not correctly perform at least one of the three parts of air brake check." This number may change. Suggest that the message be made more generic by eliminating the number of parts.   | H1                           | AZ              | H  | H  | M   | M   | L   | L  | M   |
| 19 | Change Test Results             | Currently, no Security Role has the capability to change Test Results after the jurisdiction-specified amount of time. Should CDL Monitor be allowed to be able to change any results at any time if the situation warrants?   | C3                           | AAMVA           | H  | L  | ?   | H   | L   | H  | yes |
| 20 | Test Result Inquiry             | Add an Applicant Profile section to include Applicant's Knowledge Test information.  | H3                           | AK              | M  | M  | M   | L   | L   | L  | L   |

| #  | Item/<br>Function             | Change  | Functionality<br>Requirement | Requested<br>by | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|----|-------------------------------|---|------------------------------|-----------------|----|----|-----|-----|-----|----|----|
| 21 | Applicant Profile Information | Since this is not likely to happen in the near future, what if the DMV user put the Applicant and knowledge test information in the Applicant Profile. The applicant goes to the third party tester for their skills test. The third party tester pulls up the applicant profile, can verify what knowledge tests were passed and schedules the skills test. third party tester enters the skills test information. The applicant comes into the DMV to get their license. The DMV looks them up on the Test Result Inquiry and all the Applicant's information is there for the DMV user to data enter and make a license—paperless! (permissions access issues) (long-term: defer) (short-term: add Applicant information to Test Result Inquiry) | M4, L1                       | AK              | H  | H  | H/M | M   | L   | M  | L  |
| 22 | Restrictions and Endorsements | If we are working towards an Applicant not bringing in a piece of paper with test scores, the Test Result Inquiry should contain the complete list of Restrictions and Endorsements, etc., which is listed on the score sheet (see #2, #4),   | H3                           | AK              | H  | H  | C   | C   | L   | L  | L  |
| 23 | Import Test Results           | If the score sheet can be automated, upload directly into CSTIMS and stored within CSTIMS; this would reduce the paper burden, store the results for posterity, and reduce errors in transcription (long-term: defer),  | L1                           | FMCSA           | H  | H  | H   | H   | L   | L  | L  |
| 24 | Test Results Inquiry          | Some confusion on how much information must be provided to retrieve Test Results. Search rules need to better clarify how much Applicant/CCD information must be provided to retrieve Test Results.   | H2                           | AZ              | M  | H  | H   | H   | L   | M  | L  |
| 25 | Test Results                  | Want capability to be able to request Test Results for all Test Types (Test Type Search), or for all Applicants (Applicant Search), or for all Examiners for a Tester (Examiner Search),  | H2, H3                       | AZ              | H  | H  | H   | H   | L   | H  | M  |

**Table 17. Certification Control Documents (CCDs)**

| # | Item/Function      | Change   | Functionality Requirement | Requested by | AK  | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|--------------------|--|---------------------------|--------------|-----|----|-----|-----|-----|----|----|
| 1 | CCD Discard Reason | Add "Voided" as a Certification Control Document Discard Reason, and provide comment.  | H3                        | NM           | n/a | C  | C   | C   | H   | L  | M  |
| 2 | Examiner CCDs      | Currently, only CDL Monitor can assign CCDs to Testers and/or Examiners. Add capability for Testers Responsible Party to be able to reassign CCD from the Tester to its Examiners, either individually or in blocks (i.e.. RP update access to CCDs for Tester to reassign). | C3                        | NM           | n/a | M  | H   | H   | H   | L  | H  |

**Table 18. Sanctions**

| # | Item/Function             | Change  | Functionality Requirement | Requested by | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|---------------------------|---|---------------------------|--------------|----|----|-----|-----|-----|----|----|
| 1 | Sanction Expiration Alert | CDL Monitor should be e-mailed the "Minimum Advance Days to Notify of Sanction End" when a sanction is about to expire. | M1                        | NM           | L  | M  | H/M | H   | L   | L  | L  |

**Table 19. Audits**

| # | Item/Function        | Change   | Functionality Requirement | Requested by | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|----------------------|--|---------------------------|--------------|----|----|-----|-----|-----|----|----|
| 1 | Audit Documents      | Can documents be linked to Audits (e.g., initial findings, Tester response, etc.)? (long-term: defer)  | L1                        | NM           | M  | H  | M   | M   | H   | H  | L  |
| 2 | Examiner Information | Current Audit function does not include information on Examiners. Need to expand Audit to include Examiner information. What Examiner information should be audited/collected? | C3                        | AK           | M  | H  | M   | M   | L   | H  | M  |
| 3 | Audit Results        | Currently, Audit results are Pass/Fail. Should different terms be used? (e.g.: "Compliant," "Non-compliant," "Serious non-compliance")   | H1                        | AZ           | H  | H  | M   | L   | L   | L  | M  |

**Table 20. E-mail Notifications**

| # | Item/Function                     | Change   | Functionality Requirement | Requested by         | AK | AZ | NM1 | NM2 | NM3 | SD | OR  |
|---|-----------------------------------|--|---------------------------|----------------------|----|----|-----|-----|-----|----|-----|
| 1 | Grace Period                      | Should a grace period or time limit be imposed before sending e-mails for changes to schedules to allow for corrections?   | M2                        | AZ                   | H  | H  | H   | L   | L   | L  | yes |
| 2 | Selectable E-mail trigger reasons | Trucking schools schedule one examiner for sequential test (suite of three) – e.g., 0800, 1000, 1200, 1400; if the first Applicant goes over the time (mechanical problem, showed a little late, etc.), all the subsequent tests will be delayed; entry of the actual time different from scheduled will generate multiple e-mails; desire is for the capability to select for which reasons e-mails are sent (time change, date change, etc.—all(?) the reasons for scheduled/actual changes) | M2                        | AZ                   | H  | H  | H   | H   | L   | M  | M   |
| 3 | Cancelled Test Alert              | Generate an e-mail alert to the Examiner, CDL Monitor(?), and Tester (?) when a Test is cancelled.   | M2                        | FMCSA                | L  | M  | M   | H   | L   | M  | M   |
| 4 | Cancelled/Deleted Schedule Alert  | If a schedule is cancelled/deleted, the Examiner should be notified.   | M2                        | FMCSA                | L  | M  | H   | H   | L   | M  | M   |
| 5 | E-mail Alert Filtering            | Want e-mail alert filtering by category of alert and/or individual alert reason on jurisdiction and/or individual basis (allow jurisdiction administrator to set jurisdiction-level default alert filtering and individuals to modify jurisdiction defaults to meet their needs).  | M2                        | AZ-DMV (debrief mtg) | -  | H  | -   | -   | -   | -  | -   |

**Table 21. Reports**

| # | Item/Function                 | Change  | Functionality Requirement | Requested by          | AK  | AZ | NM1 | NM2 | NM3 | SD | OR  |
|---|-------------------------------|---|---------------------------|-----------------------|-----|----|-----|-----|-----|----|-----|
| 1 | Pass/Fail Report              | Add Jurisdiction and National pass/fail roll-up totals to the Pass/Fail Report.   | M5                        | AK, NM, SD            | M   | H  | H   | H   | H   | H  | L   |
| 2 | Multiple Failure Report       | Add a "Multiple Failure" report which would list all Applicants who have failed a particular test more than once  | M4                        | AZ                    | L   | H  | M   | M   | L   | H  | L   |
| 3 | Tester Report                 | Tester Report has a flag if there are too few Examiners; would like the minimum displayed   | M1                        | NM                    | L   | M  | M   | L   | L   | L  | L   |
| 4 | Quarterly Jurisdiction Report | "Quarterly Jurisdiction Report" can only be selected on calendar quarter; since we ask for the "Fiscal Year Start Month" (Jurisdiction Parameter), should this report be expanded to allow specification of a quarter based on either CY or FY? | M1                        | AAMVA                 | yes | M  | H   | M   | L   | H  | yes |
| 5 | Export to Excel               | Provide a way to save/export reports to an Excel (or other common) file.  | L1                        | AK, NM, SD            | H   | L  | H   | H   | L   | H  | H   |
| 6 | Applicant Report              | Need an Applicant Report to allow tracking of Applicants within and across jurisdictions. Be able to sort/filter on jurisdiction, name, DL, DOB, etc.   | M4                        | AAMVA                 | L   | H  | H   | H   | L   | M  | L   |
| 7 | Schedule Information Report   | MVA Clerks may view Schedules online, but are not allowed to run Schedule Information Report. Should they be allowed to?  | C3                        | AAMVA                 | yes | L  | L   | L   | L   | L  | L   |
| 8 | Alert Summary Report          | Need an Alert Summary Report to allow tracking of alert types (msg, e-mail), reasons, frequency, initiators, recipients within jurisdiction   | C3                        | AZ-DMV (debrief mtg)  | -   | H  | -   | -   | -   | -  | -   |
| 9 | Pass/Fail Report              | Want pass/fail rates broken out by "Reason For Test." (Currently, there is no Reason for Test data element, but there is a Schedule Reason data element.)   | M5                        | AZ -DMV (debrief mtg) | -   | M  | -   | -   | -   | -  | -   |

| #  | Item/Function              | Change  | Functionality Requirement | Requested by         | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|----|----------------------------|---|---------------------------|----------------------|----|----|-----|-----|-----|----|----|
| 10 | Pass/Fail Report           | Want pass/fail rates broken out by school-trained versus off-the-street applicants. (Currently there is no data element for school-trained applicants; there is a "Walk-in" Schedule Reason.) | M5                        | AZ-DMV (debrief mtg) | -  | M  | -   | -   | -   | -  | -  |
| 11 | Average Test Scores Report | Want a report that shows average test scores by test type, grouped by Examiner, Tester, and Jurisdiction, similar to current Pass/Fail Report.  | M5                        | AZ-DMV (debrief mtg) | -  | H  | -   | -   | -   | -  | -  |

Table 22. Change Log

| # | Item/Function         | Change   | Functionality Requirement | Requested by | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|-----------------------|--|---------------------------|--------------|----|----|-----|-----|-----|----|----|
| 1 | Change Log Items      | Expand change log to track all changes to all data items, not just Schedules/Tests.  | M3                        | NM           | L  | M  | M   | L   | H   | M  | L  |
| 2 | User-specific Changes | Add capability to restrict display to changes made by a specific User. Restrict this feature to selected User Roles (CM, FMCSA)? | M3                        | AAMVA        | L  | M  | M   | M   | L   | L  | L  |

**Table 23. General (Miscellaneous)**

| # | Item/Function                 | Change  | Functionality Requirement | Requested by  | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|---|-------------------------------|---|---------------------------|---------------|----|----|-----|-----|-----|----|----|
| 1 | Import                        | Provide a way to import data into some/all CSTIMS tables (long-term: defer).  | L1                        | AK, AZ, NM,SD | H  | H  | H   | H   | L   | H  | M  |
| 2 | Import                        | Upload of test results directly from a PDA (long-term: defer).  | L1                        | AK, AZ, NM,SD | H  | H  | H   | H   | L   | H  | M  |
| 3 | Export                        | Export capability to various formats (comma-delimited, Excel, etc.) so the state may do additional ad-hoc, or more detailed, reporting than is currently offered (long-term).   | L1                        | AK, SD        | H  | M  | H   | H   | L   | H  | M  |
| 4 | Successful Add/Update Message | Terms like "Insert Successful" and "Update Successful" aren't terms with which our users are familiar; they'd prefer "Record Added" and "Record Saved" as replacements; they also requested more prominent (larger font?) and consistent location   | H2                        | NM            | L  | L  | M   | M   | L   | M  | L  |
| 5 | Cancel versus Return/Exit     | Confusion on the "Cancel" button; while it actually will cancel any changes made and not saved, if changes are entered and saved, the "Cancel" button functions as a "Return to Previous Screen" button. Rename the button (Back? Clear?) to anything that doesn't make User think they are somehow canceling their work. | H2                        | AZ, NM        | H  | M  | M   | M   | H   | H  | L  |
| 6 | Calendar Navigation           | Can the calendar be modified to use arrows to go forward and back between months (rather than the pull-downs currently in use)?   | H2                        | AAMVA         | H  | L  | H   | H   | L   | L  | L  |
| 7 | Notices on Home screen        | Add a notification section to Home screen where CSTIMS-wide and/or jurisdiction-specific notices may be displayed. Also allow for way to specify how long the notice will display (tie to Sanctions #1?).   | M2                        | AAMVA         | H  | M  | H   | H   | L   | H  | M  |

| #  | Item/Function                 | Change   | Functionality Requirement | Requested by          | AK | AZ | NM1 | NM2 | NM3 | SD | OR |
|----|-------------------------------|--|---------------------------|-----------------------|----|----|-----|-----|-----|----|----|
| 8  | Search Results                | If a search returns just one hit, do not display the results list with this single entry; instead just display the retrieved record.   | H2                        | AAMVA                 | H  | H  | H   | H   | L   | L  | L  |
| 9  | Delete Records                | Provide a way to delete records if there are no other records depending on them.   | C2                        | AAMVA                 | H  | M  | C   | C   | L   | M  | M  |
| 10 | Terms for Tester and Examiner | The jurisdiction-specific terms for Tester and Examiner should appear on all applicable screens and reports (long-term)  | M1                        | AAMVA                 | H  | M  | M   | M   | L   | H  | M  |
| 11 | Low-speed Internet Support    | Need to be able to support users without high-speed Internet access (i.e., need low-speed/dial-up support for people in the field, away from office), perhaps with a skeleton set of screens for basic applicant test scheduling/test result entry). | L2                        | NM3, SD (debrief mtg) | -  | -  | -   | -   | H   | H  | -  |