

STATE OF MICHIGAN
 DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
 PROCUREMENT
 P.O. BOX 30026, LANSING, MI 48909
 OR
 525 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 3

CHANGE OF CONTRACTOR NAME AND/OR TAX ID NO.

to

CONTRACT NO. 071B2200302

between

THE STATE OF MICHIGAN

and

PREVIOUS NAME & ADDRESS OF CONTRACTOR	PRIMARY CONTACT	EMAIL
SLI GLOBAL SOLUTIONS, INC. 216 16th Street, Suite 700 Denver, CO 80202	Steven Esposito	sesposito@sliglobalsolutions.com
	PHONE	CONTRACTOR'S TAX ID NO. (LAST FOUR DIGITS ONLY)
	480-620-5907	6909

NEW NAME & ADDRESS OF CONTRACTOR	PRIMARY CONTACT	EMAIL
SLI GLOBAL SOLUTIONS, LLC 216 16th Street, Suite 700 Denver, CO 80202	Steven Esposito	sesposito@sliglobalsolutions.com
	PHONE	CONTRACTOR'S TAX ID NO. (LAST FOUR DIGITS ONLY)
	480-620-5907	6088

CONTRACT SUMMARY				
DESCRIPTION: DTMB/MDOS Business Application Modernization Independent Verification and Validation (BAM IV&V)				
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	CURRENT EXPIRATION DATE	
September 14, 2012	September 14, 2015	2, 1 Year Options	September 14, 2015	
PAYMENT TERMS		DELIVERY TIMEFRAME		
N/A		N/A		
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
MINIMUM DELIVERY REQUIREMENTS				
N/A				
DESCRIPTION OF CHANGE NOTICE:				
EXTEND CONTRACT EXPIRATION DATE	EXERCISE CONTRACT OPTION YEAR(S)	EXTENSION BEYOND CONTRACT OPTION YEARS	LENGTH OF OPTION/EXTENSION	EXPIRATION DATE AFTER CHANGE
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.5 MONTHS	November 30, 2015
VALUE/COST OF CHANGE NOTICE:		NEW ESTIMATED AGGREGATE CONTRACT VALUE:		
\$0.00		\$1,275,398.02		

DESCRIPTION OF CHANGE NOTICE:

SLI GLOBAL SOLUTIONS, INC HAS NOTIFIED THE STATE OF MICHIGAN OF A SALE OF BUSINESS ASSETS RESULTING IN THE ASSIGNMENT OF THIS CONTRACT TO SLI GLOBAL SOLUTIONS, LLC.

Effective 9/14/2015:

1. This contract is assigned to SLI Global Solutions, LLC.
2. The State exercises a 2 ½ month option. The new expiration date is 11/30/2015.
3. Prequel Solutions is added as a subcontractor.
4. A typographical error is corrected, adding \$56,000 to the cover page aggregate value that was added to the contract in Change Notice 2 but not accurately reflected on that corresponding cover page.

This is a zero-dollar change notice. All other terms conditions specifications, and pricing remain the same, per Contractor and Agency agreement and DTMB Procurement approval.

STATE OF MICHIGAN
 DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
 PROCUREMENT
 P.O. BOX 30026, LANSING, MI 48909
 OR
 530 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 2
 to
CONTRACT NO. 071B2200302
 between
THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF CONTRACTOR:	PRIMARY CONTACT	EMAIL
SLI Global Solutions 216 16 th Street, Suite 700 Denver, CO 80202	Steven Esposito	sesposito@sliglobalsolutions.com
	TELEPHONE	CONTRACTOR #, MAIL CODE
	480-620-5907	

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
CONTRACT COMPLIANCE INSPECTOR	DTMB	Rose Jarois and James McFarlane	517-373-4790 517-241-1842	JaroisR@michigan.gov McFarlaneJ@michigan.gov
BUYER	DTMB		517-284-	@michigan.gov

CONTRACT SUMMARY:			
DESCRIPTION: DTMB/MDOS Business Application Modernization Independent Verification and Validation (BAM IV&V)			
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
September 14, 2012	September 14, 2015	2, 1 Year Options	September 14, 2015
PAYMENT TERMS	F.O.B	SHIPPED	SHIPPED FROM
N/A	N/A	N/A	N/A
ALTERNATE PAYMENT OPTIONS:			AVAILABLE TO MiDEAL PARTICIPANTS
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS:			
N/A			

DESCRIPTION OF CHANGE NOTICE:				
EXTEND CONTRACT EXPIRATION DATE	EXERCISE CONTRACT OPTION YEAR(S)	EXTENSION BEYOND CONTRACT OPTION YEARS	LENGTH OF OPTION/EXTENSION	EXPIRATION DATE AFTER CHANGE
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>		
VALUE/COST OF CHANGE NOTICE:		ESTIMATED REVISED AGGREGATE CONTRACT VALUE:		
\$56,000.00		\$1,275,398.02		

Effective 8/18/2014 the attached Statement of Work (SOW) is incorporated for the provision of testing consulting services for the BAM IV&V project testing. Contingency hours contractually available under Configuration Management will be utilized for this purpose at a rate of \$140/hour which is \$10/hr. below the standard contracted rate, up to an amount not to exceed \$56,000 for this purpose. SLI will provide a resource to evaluate each identified deliverable area and provide documentation of findings, best practices and recommendations for implementation improvement. All other terms, conditions, pricing and specifications remain the same. Per vendor and agency agreement, and DTMB Procurement approval.



MANAGING TECHNOLOGY RISK

PROFESSIONAL TEST PROCESS ADVISORY SERVICES PROPOSAL

SOW To:

**Michigan Department of State and
Michigan Department of Technology, Management &
Budget
Business Application Modernization**

07.08.2014



Mallory Woods, Account Manager
303.575.6881 x 111 direct
720.982.6276 cell
mwoods@sliglobalsolutions.com



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This PROPOSAL dated July 8th, 2014, which will convert to a STATEMENT OF WORK (“SOW”) on the date of the last signature below, is between Michigan Department of State and Michigan Department of Technology, Management and Budget (“Michigan”) and SLI Global Solutions (“SLI”).

1. INTRODUCTION

SLI Global Solutions (SLI) would like to propose professional testing support services to assist with multiple aspects of the testing process regarding Michigan’s project for DMV Business Application Modernization (BAM). After reviewing previously documented assessment findings of the testing processes employed by HP, a contracted vendor to Michigan, and Michigan employees, SLI is proposing consulting services to provide advisory testing support services. These services are:

- Test Process Optimization/Roadmap
 - Best Practices for using ALM
 - Testing Process Optimization
 - Defects/Defect Reporting
 - Release Strategy
 - Resource Management
 - Communication
- Tool Consolidation
 - Advisory role for consolidating JIRA, ALM & Sharepoint.
 - Advising on tool (ALM) Best Practices
- Reporting
 - Defining usable project metrics

SLI is proposing that these services take place over 10 weeks. This proposal is for advisory services to help guide HP and the State of Michigan on best practices for implementation in a number of areas of quality. HP will be responsible for any implementation of tasks that are the ownership of HP and SLI can provide direction and oversight that align with the implementation plan and process improvements.

All SLI test efforts will be transparent and accessible to Michigan BAM project staff.



2. EXPERIENCE AND QUALIFICATIONS

SLI Global Solutions is an ISO 9001:2008 certified corporation headquartered in Denver, with project locations in capital cities within the US and internationally, providing the highest standards of quality software consulting services. Since our founding in 1996 as SysTest Labs, SLI's focus has been on helping customers build quality and innovation into their products and system implementations, while minimizing risk. Commercial clients include:



The Connected Testing Division at SLI Global Solutions has provided an array of professional testing services to the commercial sector that range from automation testing, load & performance testing, source code review, mobile testing, and security audits. Our staff consultants are experienced professionals that have worked with many tools, such as HP tool suites, Rational tools, Selenium, Test Complete, SilkTest, SilkPerformer, Neoload, JMeter, and many more. SLI's Connected Testing Division adheres to the organization's ISO 9001:2008 standards and is an HP and Oracle partner.

3. SCOPE OF PROJECT

The Services to be performed by SLI under this SOW are referred to collectively herein as the "Project."

SLI will provide a resource to evaluate each area outlined below and deliver findings and recommendations on best practices to implement improvements. SLI can supplement additional staff as needed to support the findings and recommendations of the project.

SLI proposes the work be completed 50% on-site/50% off-site to help maintain reasonable expenses and will require remote access to the systems to be evaluated.



Tasks- Evaluate Test Processes, Test Suite, Reporting, & Tools:

3.1 Roadmap Planning

- Work with State and HP team to discuss and outline planned roadmap for migrating the tools and optimizing the QA processes
- Advise on steps needed and timeline for moving defects from JIRA to ALM

3.2 Tool Consolidation

- Streamline tool usage – advisory role to migrate project artifacts to ALM
 - JIRA and Sharepoint artifacts to ALM
- Help the team optimize use of Quality Center/ALM
 - Facilitate meetings with Project team to review best practices and project setup for efficiencies.
 - Help team define ALM customizations needed to improve project efficiency
- Help the team Create Quality Center/ALM dashboard for project artifacts

3.3 Mentoring

- Work closely with the QA Manager for the State to help mentor and advise on QA best practices for current project delivery

3.4 Test Process

- Guide in Test Processes for Michigan - advise on best practices
 - Guide in defect management/process and recommend opportunities for improvement

3.5 Reporting

- Evaluate and help develop current reporting and dashboards: defect status, test cases execution status and requirements traceability metrics to determine if the correct metrics are being captured to ensure a successful project delivery

3.6 Project Timeline

The period of performance of this project is expected to run approximately ten (10) weeks. SLI will participate in weekly status meetings with SLI staff and Michigan BAM project team [SLI-12-Connected](#)



to report findings and status of HP's implementation tasks. SLI proposes a phased approach beginning with Roadmap development for two (2) weeks, estimated start date of August 4th, 2014 and completion by August 15th, 2014. Remaining eight (8) weeks to begin after the IV&V cycle 4 is completed. Estimated start date is October 1st, 2014 through December 5th, 2014.

Please note, a couple hours of time each week as needed can be used during the IV&V timeframe to help the team with guidance and direction from the roadmap scheduled efforts.

DETAILED SCHEDULE	Start Date	End Date
3.1 Roadmap Planning- Tool Consolidation	8/4/14	8/15/2014
Kick Off Meeting with State of Michigan & SLI	8/4/14	8/4/14
Off-Site Roadmap Planning: Discussions, analysis and planning for migration of Jira to ALM	8/4/14	8/8/14
On-Site Roadmap Planning: Socializing, reviewing, and finalizing Roadmap Plan for Tool Consolidation	8/11/14	8/15/14
3.2 Tool Consolidation	8/4/14	10/8/14
Advisory in migrating Jira & Sharepoint artifacts into ALM	8/4/14	10/8/14
Optimization recommendations for use of Quality Center/ALM	8/4/14	10/8/14
Assist with creation of ALM dashboard for project artifacts	8/4/14	10/8/14
3.3 Mentoring	8/4/14	12/5/14
Mentor and advise on QA best practices- available on an as-needed basis during the IV&V cycle	8/4/14	12/5/14
3.4 Test Process*	10/8/14	12/5/14
Advise & guide best practices for test process	10/8/14	12/5/14

DETAILED SCHEDULE	Start Date	End Date
Advise opportunities for improvement and guide recommendations for defect management/process	10/8/14	12/5/14
3.5 Reporting**	10/8/14	12/5/14
Evaluate and assist with development of dashboards and reporting	10/8/14	12/5/14

*Test Process Task is contingent upon completion of Tool Consolidation activities

**Reporting Task is contingent upon completion of Tool Consolidation activities

3.2 Project Management and Quality Assurance

SLI's Test Process and Tool Expert provides work plan development, tracking, and reporting; oversees the project schedule; conducts kickoff activities; and develops and oversees test improvement methods.

Any and all artifacts developed by SLI are the property of Michigan and will be delivered at the conclusion of the engagement.

4. RESOURCES AND STAFFING

SLI's IV&V contract (#071B2200302), has a provision for "Contingency Hours for Other Services" Activity 14. SLI is proposing to utilize the "Configuration Management" category for this work, which has a not-to-exceed rate of \$150.00 per hour. SLI is offering the staff associated with these testing services for \$140.00 per hour. SLI has longstanding practical experience in professional testing services and test process improvement in which to support Michigan's BAM efforts. This effort will be supported by the proposed SLI resource.

In order to gain momentum upon project initiation, SLI plans to utilize a resource that has performed a recent IV&V periodic assessment on the Michigan BAM project as this project's resource. This will give the Project Lead insight into the processes prior to the start of the project and will make the the engagement more efficient.

SLI Resources

Rob Roy (Project Lead – Test Process and Test Tool Expert)

\$140/hr

SLI-12-Connected Testing-Michigan BAM Test Process Advisory-003

July 8th, 2014

***SLI may change its staff assigned to the Project so long as the replacement staff is qualified to perform the testing outlined in this SOW.**

Project Work Site

The services to be provided by SLI personnel shall be performed at both an SLI off-site facility as well as on-site in Lansing, Michigan.

SLI anticipates that travel to Michigan Department of State offices in Lansing, Michigan will be required. SLI assumes the Project Lead travel up to 50% with the majority of travel occurring in the beginning of the project. The hourly rate is inclusive of all overhead, travel, and personnel costs.

5. PRICING



This Professional Testing Services SOW is a Time based contract not to exceed the Estimated Price in the table below. All material costs have been included in the hourly rate provided. Michigan will only pay for direct hours worked at the hourly rates provided in Section 4 of this document. SLI will bill for and provide individual time sheets for hours worked on the last day each month when these services are provided.



Advisory Test Process Improvement (1 resource)	\$56,000
Total (Labor)	\$56,000

SLI Global Solutions, Inc.

Michigan Department of State

Name: Igor Gershovich

Title: Director of Connected Testing

Date:

Name:

Title:

Date:

SLI Global Solutions, Inc.

Michigan Department of Technology,
Management & Budget

Name: Steven Esposito

Title: Senior VP, State and
Local Government Solutions

Date:

Name:

Title:

Date:

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 DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
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THE STATE OF MICHIGAN
 and

NAME & ADDRESS OF CONTRACTOR:	PRIMARY CONTACT	EMAIL
SLI Global Solutions 216 16 th Street, Suite 700 Denver, CO 80202	Steven Esposito	sesposito@sliglobalsolutions.com
	TELEPHONE	CONTRACTOR #, MAIL CODE
	480-620-5907	

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
CONTRACT COMPLIANCE INSPECTOR	DTMB	Rose Jarois and James McFarlane	517-373-4790 517-241-1842	JaroisR@michigan.gov McFarlaneJ@michigan.gov
BUYER	DTMB	Joe Kelly	517-373-3993	kellyj11@michigan.gov

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N/A	N/A	N/A	N/A
ALTERNATE PAYMENT OPTIONS:			AVAILABLE TO MiDEAL PARTICIPANTS
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS:			
N/A			

DESCRIPTION OF CHANGE NOTICE:				
EXTEND CONTRACT EXPIRATION DATE	EXERCISE CONTRACT OPTION YEAR(S)	EXTENSION BEYOND CONTRACT OPTION YEARS	LENGTH OF OPTION/EXTENSION	EXPIRATION DATE AFTER CHANGE
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>		
VALUE/COST OF CHANGE NOTICE:		ESTIMATED REVISED AGGREGATE CONTRACT VALUE:		
\$0.00		\$1,219,398.02		
Effective Immediately payment schedule in Article 1.601 is replaced by the payment schedule attached.				
All other terms, conditions, pricing and specifications remain the same.				
Per vendor and agency agreement, and DTMB Procurement approval.				

Total fixed price value:		\$1,219,398.02																												
Activity Task/Deliverables	Total Deliverable Cost (\$)	Units in Contract	Per unit item cost	11/12 - 2/12		3/13-5/13		6/13-8/13		8/13-10/13		11/13-2/14		3/14-5/14		6/14-8/14		8/14-10/14		11/14-2/15		3/15-5/15		6/15-8/15		8/15-10/15		Activity Totals Summed	Unit Cost x/check	
				Initial Review Est	Off-cycle Oversight	Periodic Review #1	Off-cycle Oversight	Periodic Review #2	Off-cycle Oversight	Periodic Review #3	Off-cycle Oversight	Periodic Review #4	Off-cycle Oversight	Periodic Review #5	Off-cycle Oversight	Periodic Review #5	Off-cycle Oversight													
1. V&V Project Management 1.1: V&V Management Plan	\$19,770.00	6	\$3,295.00	\$3,295.00		\$3,295.00		\$3,295.00		\$3,295.00		\$3,295.00		\$3,295.00		\$3,295.00		\$3,295.00		\$3,295.00		\$3,295.00		\$3,295.00		\$3,295.00		\$3,295.00	\$19,770.00	\$99,940.00
1.2: Initial Review	\$3,300.00	1	\$3,300.00	\$3,300.00																								\$3,300.00	\$3,300.00	
1.3: Periodic Review(s)	\$13,200.00	5	\$2,640.00			\$2,640.00		\$2,640.00		\$2,640.00		\$2,640.00		\$2,640.00		\$2,640.00		\$2,640.00		\$2,640.00		\$2,640.00		\$2,640.00		\$2,640.00		\$2,640.00	\$13,200.00	\$13,200.00
1.4: Executive Briefing(s)	\$14,760.00	12	\$1,230.00	\$1,230.00		\$1,230.00		\$1,230.00		\$1,230.00		\$1,230.00		\$1,230.00		\$1,230.00		\$1,230.00		\$1,230.00		\$1,230.00		\$1,230.00		\$1,230.00		\$1,230.00	\$14,760.00	\$14,760.00
1.5: Monthly Status Report(s)	\$113,860.00	36	\$3,162.78	\$9,488.33		\$9,488.33		\$9,488.33		\$9,488.33		\$9,488.33		\$9,488.33		\$9,488.33		\$9,488.33		\$9,488.33		\$9,488.33		\$9,488.33		\$9,488.33		\$9,488.33	\$113,860.00	\$113,860.00
2. Planning Oversight 2.1: Verify obligations of vendor are clearly defined	\$9,618.33	6	\$1,603.06	\$1,603.06		\$1,603.06		\$1,603.06		\$1,603.06		\$1,603.06		\$1,603.06		\$1,603.06		\$1,603.06		\$1,603.06		\$1,603.06		\$1,603.06		\$1,603.06		\$1,603.06	\$57,709.98	\$57,709.98
3. Project Management 3.1: Project Sponsorship - Assess Only	\$16,490.00	6	\$2,748.33	\$2,980.00		\$16,490.00		\$16,490.00		\$20,610.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00	\$98,940.00	\$98,940.00
4. Quality Management 4.1: Quality Assurance	\$10,305.00	6	\$1,717.50			\$10,305.00		\$10,305.00		\$20,610.00		\$10,305.00		\$10,305.00		\$10,305.00		\$10,305.00		\$10,305.00		\$10,305.00		\$10,305.00		\$10,305.00		\$10,305.00	\$61,830.00	\$61,830.00
5. Requirements Management	\$19,786.67	6	\$3,297.78			\$19,786.67		\$19,786.67		\$39,573.34		\$19,786.67		\$19,786.67		\$19,786.67		\$19,786.67		\$19,786.67		\$19,786.67		\$19,786.67		\$19,786.67		\$19,786.67	\$118,720.02	\$118,720.02
6. Production 6.1: System Hardware	\$19,236.67	6	\$3,206.11			\$19,236.67		\$19,236.67		\$19,236.67		\$19,236.67		\$19,236.67		\$38,473.34		\$19,236.67		\$19,236.67		\$19,236.67		\$19,236.67		\$19,236.67		\$19,236.67	\$115,420.02	\$115,420.02
7. Development Environment 7.1: Development Hardware	\$16,490.00	6	\$2,748.33			\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00		\$16,490.00	\$98,940.00	\$98,940.00
8. Testing Environment 8.1: Testing Hardware	\$13,741.67	6	\$2,290.28			\$13,741.67		\$13,741.67		\$27,483.34		\$13,741.67		\$13,741.67		\$13,741.67		\$13,741.67		\$13,741.67		\$13,741.67		\$13,741.67		\$13,741.67		\$13,741.67	\$82,450.02	\$82,450.02
9. Software Development 9.1: High Level Design	\$27,481.67	6	\$4,581.94	\$82,445.01		\$27,481.67		\$27,481.67		\$27,481.67		\$27,481.67		\$27,481.67		\$27,481.67		\$27,481.67		\$27,481.67		\$27,481.67		\$27,481.67		\$27,481.67		\$27,481.67	\$164,890.02	\$164,890.02
10. System and Acceptance Testing	\$21,985.00	6	\$3,664.17	\$43,970.00		\$21,985.00		\$21,985.00		\$21,985.00		\$21,985.00		\$21,985.00		\$21,985.00		\$21,985.00		\$21,985.00		\$21,985.00		\$21,985.00		\$21,985.00		\$21,985.00	\$131,910.00	\$131,910.00
11. Data Management 11.1: Database Design	\$8,250.00	6	\$1,375.00			\$8,250.00		\$8,250.00		\$16,500.00		\$8,250.00		\$8,250.00		\$8,250.00		\$8,250.00		\$8,250.00		\$8,250.00		\$8,250.00		\$8,250.00		\$8,250.00	\$49,500.00	\$49,500.00
12. Operational Oversight 12.1: Operational Change Tracking	\$12,366.33	6	\$2,061.06			\$12,366.33		\$12,366.33		\$24,732.66		\$12,366.33		\$12,366.33		\$12,366.33		\$12,366.33		\$12,366.33		\$12,366.33		\$12,366.33		\$12,366.33		\$12,366.33	\$74,197.98	\$74,197.98
Total estimate per cycle				\$195,945.00	\$10,718.33	\$192,404.67	\$10,718.33	\$190,897.67	\$10,718.33	\$191,031.34	\$10,718.33	\$192,404.67	\$10,718.33	\$192,404.67	\$10,718.33	\$192,404.67	\$10,718.33	\$192,404.67	\$10,718.33	\$192,404.67	\$10,718.33	\$192,404.67	\$10,718.33	\$192,404.67	\$10,718.33	\$192,404.67	\$10,718.33	\$192,404.67	\$1,219,398.04	\$1,219,398.04
Total Billings				\$1,219,398.04																									\$1,219,398.04	

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	TELEPHONE	CONTRACTOR #, MAIL CODE
	480-620-5907	

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
CONTRACT COMPLIANCE INSPECTORS:	DTMB	Rose Jarois and James McFarlane	517-373-4790 517-241-1842	JaroisR@michigan.gov McFarlaneJ@michigan.gov
BUYER:	DTMB	Joe Kelly	517-373-3993	kellyj11@michigan.gov

CONTRACT SUMMARY:			
DESCRIPTION: DTMB/MDOS Business Application Modernization Independent Verification and Validation (BAM IV&V)			
INITIAL TERM	EFFECTIVE DATE	INITIAL EXPIRATION DATE	AVAILABLE OPTIONS
3 year	September 14, 2012	September 14, 2015	2 one year options
PAYMENT TERMS	F.O.B	SHIPPED	SHIPPED FROM
N/A	N/A	N/A	N/A
ALTERNATE PAYMENT OPTIONS:			AVAILABLE TO MiDEAL PARTICIPANTS
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
MINIMUM DELIVERY REQUIREMENTS:			
N/A			
MISCELLANEOUS INFORMATION:			
The terms and conditions of this Contract are those of ITB # 071220071, this Contract Agreement and the vendor's quote. In the event of any conflicts between the specifications, and terms and conditions, indicated by the State and those indicated by the vendor, those of the State take precedence.			
ESTIMATED CONTRACT VALUE AT TIME OF EXECUTION:			\$1,219,398.02

THIS IS NOT AN ORDER: This Contract Agreement is awarded on the basis of our inquiry bearing the ITB No. 0711220071. Orders for delivery will be issued directly by the Department of Technology, Management & Budget through the issuance of a Purchase Order Form.

All terms and conditions of the invitation to bid are made a part hereof.

FOR THE CONTRACTOR:

Firm Name
SLI Global Solutions, Inc.

Authorized Agent Signature

Authorized Agent (Print or Type)

Date

FOR THE STATE:

Signature

Name/Title
Greg Faremouth, IT Division Director

DTMB Procurement

Date



Glossary

Days	Means calendar days unless otherwise specified.
24x7x365	Means 24 hours a day, seven days a week, and 365 days a year (including the 366th day in a leap year).
Additional Service	Means any Services/Deliverables within the scope of the Contract, but not specifically provided under any Statement of Work, that once added will result in the need to provide the Contractor with additional consideration.
Audit Period	See Section 2.110
Business Day	Whether capitalized or not, shall mean any day other than a Saturday, Sunday or State-recognized legal holiday (as identified in the Collective Bargaining Agreement for State employees) from 8:00am EST through 5:00pm EST unless otherwise stated.
Blanket Purchase Order	An alternate term for Contract as used in the States computer system.
Business Critical	Any function identified in any Statement of Work as Business Critical.
Chronic Failure	Defined in any applicable Service Level Agreements.
Deliverable	Physical goods and/or commodities as required or identified by a Statement of Work
DTMB	Michigan Department of Technology, Management and Budget
Environmentally preferable products	A product or service that has a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. Such products or services may include, but are not limited to, those that contain recycled content, minimize waste, conserve energy or water, and reduce the amount of toxics either disposed of or consumed.
Excusable Failure	See Section 2.244.
Hazardous material	Any material defined as hazardous under the latest version of federal Emergency Planning and Community Right-to-Know Act of 1986 (including revisions adopted during the term of the Contract).
Incident	Any interruption in Services.
ITB	A generic term used to describe an Invitation to Bid. The ITB serves as the document for transmitting the RFP to potential bidders
Key Personnel	Any Personnel designated in Article 1 as Key Personnel.
New Work	Any Services/Deliverables outside the scope of the Contract and not specifically provided under any Statement of Work, that once added will result in the need to provide the Contractor with additional consideration.
Ozone-depleting substance	Any substance the Environmental Protection Agency designates in 40 CFR part 82 as: (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or (2) Class II, including, but not limited to, hydro chlorofluorocarbons
Post-Consumer Waste	Any product generated by a business or consumer which has served its intended end use, and which has been separated or diverted from solid waste for the purpose of recycling into a usable commodity or product, and which does not include post-industrial waste.
Post-Industrial Waste	Industrial by-products that would otherwise go to disposal and wastes generated after completion of a manufacturing process, but do not include internally generated scrap commonly returned to industrial or manufacturing processes.
Recycling	The series of activities by which materials that are no longer useful to the generator are collected, sorted, processed, and converted into raw materials and used in the production of new products. This definition excludes the use of these materials as a fuel substitute or for energy production.
Deleted – Not Applicable	Section is not applicable or included in this CONTRACT. This is used as a placeholder to maintain consistent numbering.
Reuse	Using a product or component of municipal solid waste in its original form more than once.



RFP	Request for Proposal designed to solicit proposals for services
Services	Any function performed for the benefit of the State.
Source reduction	Any practice that reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment prior to recycling, energy recovery, treatment, or disposal.
State Location	Any physical location where the State performs work. State Location may include state-owned, leased, or rented space.
Subcontractor	A company Contractor delegates performance of a portion of the Services to, but does not include independent contractors engaged by Contractor solely in a staff augmentation role.
Unauthorized Removal	Contractor's removal of Key Personnel without the prior written consent of the State.
Waste prevention	Source reduction and reuse, but not recycling.
Waste reduction and Pollution prevention	The practice of minimizing the generation of waste at the source and, when wastes cannot be prevented, utilizing environmentally sound on-site or off-site reuse and recycling. The term includes equipment or technology modifications, process or procedure modifications, product reformulation or redesign, and raw material substitutions. Waste treatment, control, management, and disposal are not considered pollution prevention, per the definitions under Part 143, Waste Minimization, of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended.
Work in Progress	A Deliverable that has been partially prepared, but has not been presented to the State for Approval.
Work Product	Refers to any data compilations, reports, and other media, materials, or other objects or works of authorship created or produced by the Contractor as a result of an in furtherance of performing the services required by this Contract.



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Article 1 – Statement of Work (SOW)

1.000 Project Identification

1.001 PROJECT REQUEST

The State of Michigan (SOM) through the Michigan Department of Technology, Management and Budget (DTMB), with assistance from the Michigan Department of State (MDOS) has issued this contract for the services of an Independent Verification and Validation (IV&V) Contractor to assist in the Business Application Modernization (BAM) project and system.

The contract is deliverable-based, three (3) year contract with two (2) one-year options to renew.

This project has these major components:

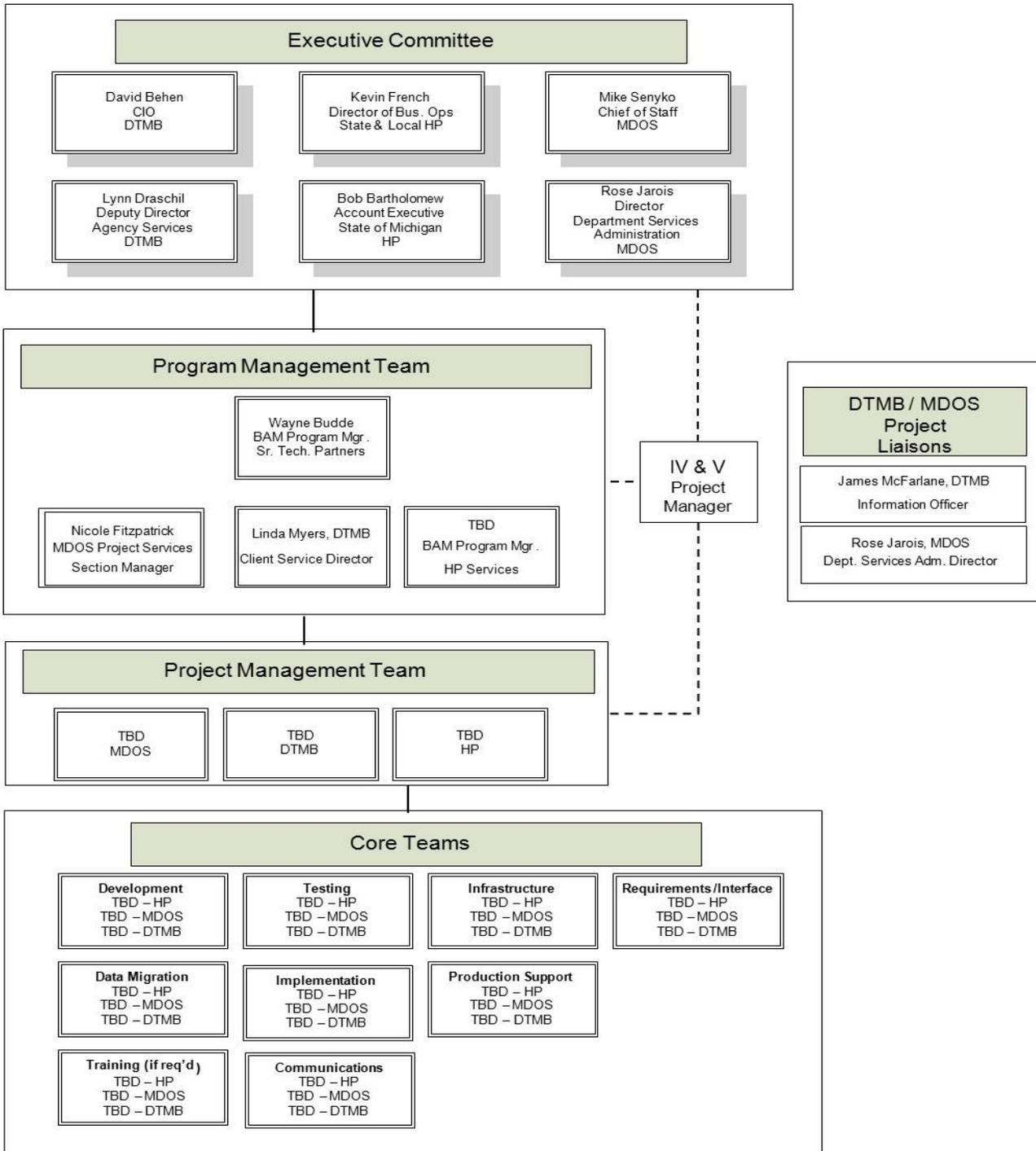
1. The IV&V vendor shall review processes being used in conjunction with BAM to ensure that the project is being conducted in accordance with state and industry standard project management methodologies and system engineering methodologies. The review will include recommendations for changes to BAM processes.
2. The vendor will provide oversight for the project on an on-going basis. This will include continuing review of processes and deliverables.

IV&V imposes periodic reviews of software development activities that include site visits employing industry standards to conduct artifact analysis and interviews of a project's team and stakeholders in order to fashion a comprehensive "snapshot" of a project's management and technical processes at work at a given point in time. IV&V encompasses work performed by both State employees and contractors, including both management and technical activities.

The Contractor (and any subcontractors) are prohibited from soliciting, proposing, or being awarded any project management, quality assurance, software design, development, testing, or other manner of planning, design, development, or implementation phase activity on the BAM project for which these IV&V services are being procured. This exclusion extends to any other project within the department that may interact with or otherwise provide services to the BAM project or to the department during the full term of this contract. The purpose of this exclusion is to ensure the IV&V contractor does not find itself involved with any real or perceived conflicts of interest. Such conflicts of interest could be alleged were the IV&V Contractor found to be reviewing work products, deliverables, and/or processes for which they currently are or were responsible to plan, design, develop, implement, or operate. Therefore, these exclusions seek to ensure the credibility of the IV&V Contractor.



Current BAM Management Organizational Chart



1.002 BACKGROUND

In the late 1990s, an IT assessment performed by an external consultant recommended that MDOS modernize the Branch Office Systems. This was based in part on the large backlog of service requests to change the COBOL/XGEN/ALGOL based mainframe components. The last major upgrade to the system was in 2002, when the user interfaces was upgraded to VB-6 using Citrix servers.

MDOS modernization was based on nine (9) mandatory objectives that became the cornerstone for the BAM project. The nine (9) mandatory objectives include:



1. Single customer focus
2. Simplified and secure electronic access and sharing of business information within DOS and with business partners
3. Real time updating of critical business information
4. Alignment to consolidated call center project (later updated to alignment with other initiatives/projects)
5. Expanded self-service opportunities for customers
6. Optimize the ability to respond rapidly to changes such as new legislative requirements
7. Ensure system availability to all employees
8. Retain electronic records of required transactions
9. Develop systems with a friendly user interface that is standardized and intuitive

EDS was awarded the contract for design of BAM with the main focus of business reengineering and a technical infrastructure design. Key deliverables for this phase included:

- Business process changes/improvements
- Technical infrastructure plan
- Phased implementation approach for incorporating business changes and building new technical infrastructure
- Change management plan that included training and “readiness” assessment, along with impact statement on staffing “shifts” with a BAM implementation
- Estimated project budget for building phase

Contract Budget:

Phase:	Date(s):	Original Budget:	Duration
BAM –Phase 3	2005-Present	\$49 Million*	6 + Years

The original BAM budget of \$49,395,584 was allotted to:

- Development (>75%)
- Hardware and software (> 15%)
- Enhancements (7.5%)
- Post-production support (1.5%)

The original and revised budgets will be discussed in detail with the selected vendor.

The build contract started in October, 2005. The work and deliverables are outlined by eight different activities:

1. Project Start Up, Planning, Execution, and Closedown
2. Technical Planning and Support
3. Application Development
4. Data Conversion
5. Testing and Software Implementation
6. Implementation Support
7. Ongoing Production Support
8. Miscellaneous (System enhancements & transition)

The initial timeline for the BAM project was a complete implementation by June, 2010. Key deliverables and dates were missed generating the need for re-planning activities. Early in 2008, MDOS and MDIT reviewed a Department of Motor Vehicles (DMV) framework that the vendor SABER supposedly had close to production ready in another state. HP recommended this framework and it was adopted as a means of getting system delivery back on track. The new timeline for delivery was December, 2009.

Because Saber’s technical solution did not align with the EDS technical solution, the implementation approach was redefined. Vehicle functionality would be delivered in four separate code drops. Initial driver functionality was also scheduled to be delivered in four separate code drops. The schedule was revised to March, 2010 which was missed. The web delivery was then scheduled for September and then November, 2010 for release of eight transactions. The actual implementation of the web transaction functionality was implemented in July, 2011.



1.100 Scope of Work and Deliverables

1.101 IN SCOPE

The Contractor will provide Independent Verification and Validation (IV&V) services on an as-needed basis to support the processes, procedures, system development methodology, configuration management and documents associated with the design development, and implementation of BAM.

The Contractor will use pre-defined checklists based on the State Unified Information Technology Environment (SUITE) and other industry standards regarding project management and systems engineering methodologies. SLI will interview and observe BAM project management staff, MDOS staff, and DTMB technical staff in project meetings and as they perform various activities. The purpose of the interviews and observation is to understand the current processes and procedures used in the BAM project environment. The Contractor will review and analyze all applicable and available documentation for adherence to SUITE and other accepted, contractually-defined industry standards.

SLI will tailor their existing structured interview technique and the SLI Interview Guide Notes and Library (SIGNaL) tool, to be consistent with SUITE guidelines.

The Contractor will conduct an initial review and subsequent periodic reviews, each resulting in a report of findings and recommendations. SLI understands the State expects periodic IV&V reviews to occur and the entire review cycles are to be conducted in no longer than a ten to twelve-week timeframe from initiation through to final report delivery and presentation.

The Contractor will review the existing contract (071B8200173) to assess any risks associated with this six year old contract. The Contractor will conduct IV&V activities to ensure the implementation Vendor’s work is aligned with the contract, on an on-going basis.

The high level scope of IV&V review, evaluation, and reporting for the BAM project includes the following activities and tasks:

#	Task	Sub-Tasks
1	IV&V Project Management	1.1: IV&V Management Plan
		1.2: Initial Review
		1.3: Periodic Reviews
		1.4: Executive Briefings
		1.5: Monthly Status Reports
2	Planning Oversight	2.1 Verify obligations of vendor are clearly defined
3	Project Management	3.1 Project Sponsorship – Assess only
		3.2: Management Assessment
		3.3: Project Management
		3.4: Communication Management
		3.5: Configuration Management
		3.6: Project Estimating and Scheduling
		3.7: Project Personnel
		3.8: Project Organization
4	Quality Management	4.1: Quality Assurance
5	Requirements Management	5.1: Requirements Management
		5.2: Security Requirements
		5.3: Requirements Analysis



#	Task	Sub-Tasks
		5.4: Interface Requirements
		5.5: Requirements Allocation and Specification
6	Production	6.1: System Hardware
		6.2: System Software
		6.3: Database Software
		6.4: System Capacity
7	Development Environment	7.1: Development Hardware
		7.2: Development Software
8	Testing Environment	8.1: Testing Hardware
		8.2: Testing Software
9	Software Development	9.1: High Level Design
		9.2: Detailed Design
		9.3: Job Control
		9.4: Code
		9.5: Unit Test
10	System and Acceptance Testing	10.1: System Integration Test
		10.2: Acceptance and Turnover
11	Data Management	11.1: Database Design
12	Operational Oversight	12.1: Operational Change Tracking
		12.2: Customer and User Operational Satisfaction
		12.3: Operational Goals
		12.4: Operational Documentation

A more detailed description of the work and deliverables is provided in Article 1, Section 1.104, Work and Deliverables.

1.102 OUT OF SCOPE

During the BAM IV&V effort, the following tasks and deliverables may be reviewed by the IV&V vendor, but the IV&V vendor will not conduct these activities.

- Business requirements development
- Implementation, including data conversion, data migration, and configuration
- Testing
- Training, including end user and system administration
- Production services
- Maintenance and support
 - Help desk
 - Technical support

1.103 ENVIRONMENT

The links below provide information on the State’s Enterprise information technology (IT) policies, standards and procedures which includes security policy and procedures, IT strategic plan, eMichigan web development and the State Unified Information Technology Environment (SUITE).



Contractors are advised that the State has methods, policies, standards and procedures that have been developed over the years. All services and products provided as a result of this contract must comply with all applicable State IT policies and standards. Contractor is required to review all applicable links provided below and state compliance in their response.

Enterprise IT Policies, Standards and Procedures:

<http://www.michigan.gov/dit/0,1607,7-139-34305---,00.html>

All software and hardware items provided by the Contractor must run on and be compatible with the DTMB Standard Information Technology Environment. Additionally, the State must be able to maintain software and other items produced as the result of the Contract. Therefore, non-standard development tools may not be used unless approved by DTMB. The Contractor must request, in writing, approval to use non-standard software development tools, providing justification for the requested change and all costs associated with any change. The DTMB Project Manager must approve any tools, in writing, before use on any information technology project.

It is recognized that technology changes rapidly. The Contractor may request, in writing, a change in the standard environment, providing justification for the requested change and all costs associated with any change. The State's Project Manager must approve any changes, in writing, and DTMB, before work may proceed based on the changed environment.

Enterprise IT Security Policy and Procedures:

<http://www.michigan.gov/dit/0,1607,7-139-34305-108216--,00.html>

The State's security environment includes:

- DTMB Single Login.
- DTMB provided SQL security database.
- Secured Socket Layers.
- SecureID (State Security Standard for external network access and high risk Web systems)

DTMB requires that its single - login security environment be used for all new client-server software development. Where software is being converted from an existing package, or a client-server application is being purchased, the security mechanism must be approved in writing by the State's Project Manager and DTMB Office of Enterprise Security.

IT Strategic Plan:

<http://www.michigan.gov/dit/0,1607,7-139-30637-135173--,00.html>

IT eMichigan Web Development Standard Tools:

http://www.michigan.gov/documents/Look_and_Feel_Standards_2006_v3_166408_7.pdf

The State Unified Information Technology Environment (SUITE):

Includes standards for project management, systems engineering, and associated forms and templates – must be followed: <http://www.michigan.gov/suite>

Agency Specific Technical Environment

The BAM application has two parts:

- A public facing web application
- A thick client application to be used in Michigan Secretary of State branch offices and also utilized in in-house supporting units

The web application is written in .NET 3.5 & MVC 1.0 and is accessed through the internet by the public. The branch thick client application is written in .Net. Both connect to a centralized backend SQL database. There is an electronic interface between the new BAM applications and the current mainframe database, so that the current systems know about changes made in BAM. There are also interfaces to outside organizations that the Department of State shares information with, like AAMVA.



1.104 WORK AND DELIVERABLES

The IV&V Contractor shall provide deliverables/services and staff, and otherwise do all things necessary for or incidental to the performance of work, as set forth below.

The required IV&V activities, tasks, deliverables, and time periods are listed below.

The first activity, IV&V Project Management, includes the IV&V Management Plan, Initial Review, Periodic Review(s), Executive Briefing(s), and monthly status reports. This activity and its associated tasks and deliverables continue throughout the term of the IV&V Contract. It is important to note that Activities 2-13 provide **input and content** for IV&V Project Management deliverables. Only IV&V Project Management has deliverables associated with the activity. Activities 2-13 involve tasks such as review, verify, evaluate, and recommend, which all feed into the deliverables described in Activity 1. Also note that Activities 2-13 are applicable to specific project lifecycle phases, whereas Activity 1 spans all phases.

Contractor Written Deliverable Format and Inclusion

The deliverables for this Contract shall be provided in hardcopy form and on electronic media, using the following software standards (or lower convertible versions):

DOCUMENT TYPE	FORMAT
Word Processing	Microsoft Word 2010
Spreadsheets	Microsoft Excel 2010
Graphics	Microsoft PowerPoint 2010
Project Schedule	Microsoft Project 2010

State Responsibility

The state’s responsibility related to all project tasks is as follows. Any additional responsibilities for specific tasks are listed with those tasks.

- Provide workspace for up to three (3) IV&V Contractor staff while on-site on the BAM project for the duration of the contract. The workspace will include desk or table, access to the State network, and access to a copier and fax.
- Provide input and clarifications to the Contractor as needed.
- Provide access to BAM project information, including, but not limited to, technical documentation and project status data.
- Provide access to State and other contractor personnel for information related to BAM activities.
- The State is **not** responsible for providing clerical or administrative support to the IV&V Contractor.

Activity 1 IV&V Project Management

Task 1.1 IV&V Management Plan

The IV&V Management Plan sets the level of expectations for the Execution and Control Stage activities that will span the remaining duration of the IV&V contract. The Preliminary Project Plan WBS included in Attachment B is fully compliant with the activities and tasks listed in Article 1, Section 1.1.04. The WBS identifies tasks and timeframes for State review of deliverables necessary for IV&V project execution, as well as on-site versus off-site IV&V contractor activities.

All SLI projects are supported entirely by SLI’s proprietary SQM³ – Standard Quality Management, Methods, and Models – methodology, parts of which are adapted from IEEE 1012-2004, Standard for Software Verification and Validation:

- **Verification:** The evaluation of whether or not a product, service, or system complies with a regulation, requirement, specification, or imposed condition. Ensuring the system is built right.



- **Validation:** The assurance that a product, service, or system meets the needs of the customer and other identified stakeholders. It often involves acceptance and suitability with external customers. Ensuring the right system is built.

The IV&V Project Manager will stay informed during off-cycle periods by attending key project management and executive briefings, and providing input to key status and executive committee meetings on an as needed basis, for up to 40 hours per month.

The IV&V Management Plan provides for:

- Working with the Project Management Team to develop a plan of proposed IV&V activities that occur in each periodic IV&V cycle based on the project's schedule. The specific onsite times and resources to be used in the periodic review cycle
- A schedule for the submission of the Deliverables Expectation Document (DED), draft and final periodic assessment deliverables
- The timeline for State review and acceptance of IV&V deliverables

The Management Plan will be refreshed on an annual cycle, so a new Management Plan and WBS are produced for each 12 month period, then updated in each review cycle.

The Management Plan is developed into a WBS to ensure that the IV&V activities, tasks, resources and periodic review schedule are in-synch with the project milestones and deliverables.

- There will be semi-annual IV&V cycles for the BAM project.
- There will be a limited monthly involvement by the Project Manager to provide in-scope oversight on an on-going basis as requested (up to 40 hours per month), primarily to monitor the implementation contractor's alignment with the BAM contract.

The State is responsible for reviewing IV&V Management Plan deliverables, including:

- Resumes of all IV&V team personnel
- Organization chart for the IV&V team and the team's place within the SLI corporate structure
- Names and contact information to be used for dispute resolution and customer feedback
- WBS schedule describing the next two IV&V review periods, including tasks, activities, deliverables, and milestones, and showing the schedule's critical path
- Narrative description of all deliverables, including expected format, content, and organization, to be developed and delivered during the next two IV&V reviews (12 months cycle)
- Appendices for all project IV&V checklists to be used during the next two IV&V reviews

The IV&V Management Plan will include the appropriate SUITE documents to provide standard project controls. The State's role will include reviewing these quality management deliverables, the IV&V Management Plan and the IV&V Project Plan WBS to ensure that it meets the State's needs and is aligned with the Implementation Contractor's project management plans and schedule.

1.1.1 Develop IV&V Management Plan

Description

As the first deliverable, the IV&V Contractor shall develop an IV&V Management Plan. This plan shall describe the activities, personnel, schedule, standards, and methodology for conducting the IV&V reviews.

Deliverable

The IV&V Management Plan, which must contain the following:

- a. Resumes of all IV&V Service personnel
- b. Schedule describing the next two IV&V review periods, including tasks, activities, deliverables, and milestones, showing the schedule's critical path



- c. Organization chart reflecting the IV&V team, including the team's place within the IV&V Service Provider's corporate structure, and providing the names and contact information to be used for dispute resolution and customer feedback.
- d. Narrative description of all deliverables, including expected format, content, and organization, to be developed and delivered during IV&V reviews.
- e. Appendices, including all applicable, project lifecycle-appropriate IV&V checklists to be utilized during the next two IV&V Reviews.

Time Period

To be delivered within the first thirty (30) days from the date of contract award, and updated and delivered two weeks prior to the commencement of the onsite portion of the initial and each subsequent periodic IV&V Review.

1.1.2 Develop IV&V Review**Description**

The IV&V Contractor shall develop a checklist, in question and answer format, presenting elements to be reviewed, observed, monitored, and commented on, with regard to all aspects of the State Unified Information Technology Environment (SUITE), or project management methodology (PMM) used by vendor. All State and vendor staff working on the BAM project are required to use SUITE (or PMM used by vendor) processes. Therefore, SUITE/PMM is the foundation upon which IV&V checklists must be built. The IV&V Contractor may also incorporate industry standards for project management and system engineering, as found in the Project Management Body of Knowledge (PMBOK) and the Capability Maturity Model Integrated (CMMI).

Deliverable

IV&V Checklist, as applicable to the project lifecycle phase to be monitored and reviewed. Applicable checklists are included in the IV&V Management Plan, which is updated and delivered two weeks prior to the commencement of the onsite portion of the initial and each subsequent periodic IV&V Review.

Time Period

The IV&V Checklist are to be compiled and delivered on an ongoing basis and delivered as a component of the IV&V Management Plan applicable to the project lifecycle phase to be monitored and reviewed. As IV&V work progresses and project lifecycle phases change, applicable, updated IV&V Checklist will be delivered as part of the updated IV&V Management Plan two weeks prior to commencement of the on-site portion of that respective, periodic IV&V review.

Contractor Responsibility

- Create and submit the IV&V Management Plan, including IV&V Checklist.
- Correct any deficiencies identified by MDOS prior to implementation of the plan.
- Review State policies and SUITE methodology prior to creating the plan.

Acceptance Criteria

- Documentation of the IV&V Management Plan
- Use of SUITE processes.

Task 1.2 Initial Review

A baseline assessment of each focus area will be performed during the initial assessment cycle. Ongoing review of each focus area will be conducted throughout the project, in subsequent assessment cycles, as needed and appropriate. The focus includes:

- Planning oversight, including a review of the projects procurement strategy, the primary contract, a review of the contractor, sub-contractors and external staff obligations and commitments.



- Project management including project sponsorship, management assessments, project management process evaluations and a review of the project management plan components of integrated change control, communications management and configuration management
- Quality management including quality assurance and process definition and project standards
- Requirements management including security requirements and reverse engineering,
- Production which includes the operating environment, system hardware, system software, database software, system capacity, and back-up and recovery
- Development environment including development hardware and software
- Testing environment which includes test hardware and software
- Software development including high level design, detailed design, integration, job control, code, and unit testing
- System and acceptance testing including system integration testing, interface testing, pilot test, user acceptance testing, and performance testing
- Data management including data conversion and database design
- Production oversight including operational change tracking, operational goals, documentation, customer and user satisfaction.

The detailed information on each of the key IV&V focus areas is collected by SLI during review of:

- Procurement documents including RFPs, Proposals, BAFOs, Contracts, and Subcontracts
- Initial project deliverables such as project charters, governance documents, planning documents (schedule, resource, scope, risk, issue, communication), work plan schedules, and state standards
- In the case of BAM, already a six-year long construction effort, project deliverables produced in later life-cycle stages of development

The initial IV&V assessment period focuses directly upon review of the status of contractor-submitted planning and project documentation, and overall project governance, toward addressing the overall goals, objectives, and project milestones of the BAM Project. Contractor will map out the next two to three cycles, to ensure that the appropriate IV&V experts are scheduled to conduct reviews of upcoming deliverables and risk areas.

State Roles:

- Provide project plans, process and procedural documentation to the IV&V team in the evaluation of the assessment areas for BAM
- Review, provide feedback, and approve IV&V Findings and Recommendations for inclusion in project process and product improvements

IV&V Contractor Roles:

- Provide an understanding of the approach, plans, processes and procedures for the assessment areas under review
- Work with the Project Management Team to ensure that IV&V Findings and Recommendations are clearly understood and actionable

1.2.1 Conduct Initial Review

Description

The initial review includes both on-site and off-site components. The on-site portion includes interviews, attendance and observation of project meetings, and identification/collection of documentation. In the off-site component, the IV&V Contractor leaves the project site and conducts a review and analysis of collected project artifacts at their own place of business.

**Deliverable**

The on-site portion of the initial review includes the following deliverables:

- a. Schedule of on-site review activities to be performed with State and vendor project staff
- b. List of project team and stakeholder interviews to be performed
- c. List of project documentation to be provided for IV&V review
- d. List of project meetings to be attended and observed by the IV&V Contractor
- e. List of Activities and Tasks to be included in the review

Time Period

The Initial IV&V Review will commence within sixty (60) days from the date of contract award, with the first activity of the Initial IV&V Review being the on-site review. The IV&V Contractor will be restricted to conducting its on-site review within ten (10) business days.

1.2.2 Develop Initial Review Report (draft and final)**Description**

Based on its on-site review and its off-site analysis, the IV&V Contractor shall develop a draft Initial Review Report and submit it to MDOS Department Services Administration (DSA) Director Rose Jarois and James McFarlane, IO. The IV&V Contractor will correct mistakes of fact to the draft report and redeliver the Initial Review Report as final.

Deliverable

The Initial Review Report includes two deliverables:

- a. Initial Review Report (draft)
- b. Initial Review Report (final)

For each area evaluated, the report should contain the current status of the State's effort, including any pertinent historical background information. The report should also contain a detailed analysis of each area, which answers, at the least, the following general questions:

- What is the State's current process in this area?
- What's good about the State's process?
- What about the State's process or technology needs improvement?
- Is the State making measurable progress in this area?
- Is the effort within the triple constraints of budget, scope, and schedule?
- What standards (SUITE, PMBOK, CMMI) is the project following internally?
- Are the appropriate documentation and other project artifacts accurate and up-to-date?
- Is there adequate stakeholder involvement in the Project?
- Are best practices and metrics employed to identify issues, progress, performance, etc.?

Responses should be quantified whenever possible. The report should also contain detailed recommendations in each area specifying what can be done immediately and in the long term to improve the State's operation. Any technologies, methodologies, or resources recommended should reflect industry standards and be appropriate for the unique circumstances and constraints of the BAM project. The recommendations should also specify a method of measuring the State's progress against the recommendations.



Follow-up reports should have quantified information on the progress that the State has made against the recommendations from the previous review. The follow-up report should also contain any additional and/or modified recommendations at the same level of detail as the initial recommendations. All report findings and recommendations should be historically traceable (with a clear and consistent method of identification/numbering) from the time they are first reported by SLI until closure.

Time Period

- a. An Initial Review Report (draft) will be delivered to the DSA Director and the DTMB/MDOS Information Officer sixty (60) calendar days after the start of the onsite portion of the Initial Review.
- b. The State will provide comments to the draft version of the Initial Review Report within twenty (20) calendar days of receipt of the draft report.
- c. The IV&V Contractor will correct mistakes of fact to the draft version of the Initial Review Report, append to the draft version all other State comments, and redeliver the Initial Review Report, marked as final, to the MDOS DSA Director and the DTMB/MDOS Information Officer. This final version of the Initial Review Report deliverable concludes the Initial IV&V Review.

Contractor Responsibility

- Create and submit Initial Review deliverables, as described in this contract

Acceptance Criteria

- Delivery of the final version of the Initial Review Report as described in this contract
- Use of SUITE processes.

Task 1.3 Periodic Reviews

The schedule, frequency, and duration of periodic IV&V assessments is defined and controlled by the IV&V Project Plan.

While the initial IV&V report will provide an assessment of all twelve project focus areas, the subsequent assessment periods will address a subset of the focus areas dependent upon the SDLC activities ongoing at the time of the review. Definition of the specific focus area is a collaborative effort between the SLI IV&V Project Manager and the BAM Project Management Team prior to each review cycle. The IV&V team will support each review with the appropriate group of specialists to match the review focus areas.

The bullets below outline, at a high level, the focus for each of the key IV&V areas. All of these will be reviewed during the initial assessment and the findings and observations will be included in the IV&V Review Reports delivered at the end of each cycle review period.

- **Planning Oversight.** The assessment of planning oversight is to provide a comprehensive, consistent method for reviewing the project's planning process, key project performance metrics, and taking steps to monitor the project to ensure its success. As part of the Planning Oversight IV&V tasks, SLI will verify that the Implementation Contractor's contractual and quality assurance commitments and obligations are planned, monitored, and executed according to the baseline project schedule and include the level of quality that is expected from the BAM Project processes.
- **Project Management.** The assessment of the project organization and control task includes examination of the organization, plans, procedures, and processes used to manage implementation of the hardware and software components and configuration management of the BAM Project. The processes associated with changing, controlling, and reporting requirements and document revisions and code versions are reviewed and reported. As a customary part of the IV&V services, SLI reviews and assesses the Configuration Management Plan and Change Control Process to ensure that a set of change control procedures that identify, document, control, and track all requested changes from their



inception through disposition are addressed. For the BAM project the IV&V team will also evaluate the capabilities of the technical staff and the organizational structure of the technical team.

- **Quality Management.** The IV&V assessment of the Quality Management processes serves to inform the State of the thoroughness and effectiveness of the project's product standards and process controls. SLI will monitor specific project results to determine if they comply with relevant quality standards, and identifying ways to eliminate causes of unsatisfactory performance. The assessment considers if the plan emphasizes that quality must start at the beginning of the software implementation lifecycle and continue to be an integral part of the design, development, build, and test process. The assessments will evaluate the existence of product standards that the conformance to standards is monitored, and a process for improvement is in place and effective.

For the BAM project the IV&V team will also assess the project's conformance with CMM Level 3 practices.

- **Requirements Management.** The SLI IV&V team understands that Requirements Management includes establishing an effective structure for the requirements to be associated with a specific hardware or software function or subsystem. SLI reviews requirements documentation to ensure this allocation occurs and is maintained. Of special importance is the assessment of security requirements given the sensitive nature of the data in BAM. The SLI IV&V team will evaluate how these requirements are implemented and followed.
- **Production.** The IV&V effort for reviewing the Production Environment focuses on implementation of the system hardware required, system software applications, database software and schemas, system capacity, environment, and both external and internal interfaces. The objective of the assessment is to assure that the defined hardware, software, databases, and interfaces for the BAM Project have been installed and configured according to requirements.
- **Development Environment.** Contractor will review the environment to determine any gaps for the development process for new releases. The IV&V Analyst also verifies and validates the documented, as well as the actual, environment for proper hardware configuration, proper development software versions, compatibility, and completeness. A review and evaluation of the software for proper versioning, upgrade availability, and compatibility is done to ensure the proper environment configuration is controlled and maintained.
- **Test Environment.** The SLI IV&V team understands that the availability of the test environment is often on the critical path of many projects so that the testing effort is not compromised. Contractor will review the environment to determine that it is stable and contains the data and software necessary to conduct the testing effort. A review and evaluation of the software for proper versioning, upgrade availability, and compatibility is done to ensure the proper environment configuration is controlled and maintained.
- **Software Development.** IV&V focuses on the alignment of five key areas of the software development process. These are:
 - Detailed Design
 - Integration
 - Job Control
 - Coding Standards and Practices
 - Unit Test

The SDLC and methodology for each release cycle must be well defined and documented so the process can be followed and measured. Coding standards must be adhered to in a manner allowing for the development of efficient, workable code that satisfies all of the system and interface requirements. The assessment will examine these key process areas for software development.



- **System and Acceptance Testing.** As one of the nation's premier ISO 17025 accredited software testing authorities, SLI is highly sensitive to the need for and application of rigorous testing methodologies. The IV&V experience shows that developers often advocate for a diminished testing timeframe as a solution for schedule slippage – usually to the detriment of the project. Contractor will assess the BAM project approach to, and results from, Systems and Integration Testing, Performance Testing, and User Acceptance Testing, and evaluate whether sufficient time, resources and process disciplines are applied to the testing activities.
- **Data Management.** Data management includes both the design of the database as well as the data conversion effort. The data conversion effort is often the largest single point of risk for projects of this size given the complexities of converting data from a legacy environment to a modern BAM, while minimizing changes to the user interface and maintaining system performance characteristics.
- **Production Oversight.** The SLI IV&V team comprehensively reviews the Operations Plan to verify that all program goals and performance standards are being achieved. The processes and activities associated with disaster recovery and business continuity are reviewed in full and assessed for their completeness. The impact to equipment and business processes, the backup alternatives available to the State, and the timeliness with which a planned recovery effort can be implemented are all evaluated.

The following sections outline the process to complete the IV&V assessment reporting for BAM.

Periodic IV&V Assessment Approach

The same planning, scheduling, and detailed preparations are required for each periodic review cycle update as was needed for the initial assessment period presented earlier in this document; Initial Review. The delivery of this updated plan occurs two weeks prior to the start of the onsite portion of each review cycle. At that time, the IV&V Project Manager contacts the BAM Project Management Team to verify the start date of the review cycle, determine updates in project status, and begin to ascertain the project process areas that currently have the highest activity and priority.

SLI provides the appropriate technical personnel as needed, depending upon the phase and status of the project. The work plan is then adjusted and submitted to the State's Project Manager showing the projected IV&V schedule, staffing, and tasking levels for the review. In addition, project staff that need to be interviewed are identified, as are the deliverables that are scheduled for review. In this way, when the IV&V Team arrives onsite, they are immediately productive and the use of BAM project team members' time is kept to a reasonable minimum.

The on-site IV&V assessment process follows the guidelines addressed in the Initial Review Section, with a meeting scheduled with the Project Management Team to coordinate the on-site review activities, review current project status, review risk and issues identified in the previous cycle(s), locate documentation and deliverables available since the previous review cycle, confirm the interview schedule for project team members and stakeholders, and complete the assessments of each of the ten topic areas that are the focus of the current cycle.

IV&V Review Reports

Each periodic IV&V Periodic Review Report provides continuity to the previous IV&V Review Reports. Each report includes an Executive Summary that relates the focus of previous periodic reviews to the current assessment, summarizes the significant findings and recommendations from the current assessment period, and tracks the resolution (or lack thereof) of recommendations from the previous IV&V reports. The IV&V Review Report also provides the details for key findings for each of the focus areas included for the review.



Task Description	Periodic IV&V Review Reports evaluate and quantify project efforts to address the findings and recommendations in the previous Review Reports. A tracking tool to monitor progress toward resolution of IV&V findings and recommendations is included. Sufficient detail is provided within the findings summary of the report to allow the project team to understand the rationale for any identified issues or recommendations.
General Approach	The work done to produce the initial review allows the SLI IV&V team to progress through subsequent reviews with the proper baseline. Contractor will begin each review by coordinating with the BAM Project Manager to determine the current status of the project. Prior to arrival at the project site, the focus areas are prioritized and the SLI IV&V Team begins coordinating project stakeholder interviews and deliverables to be reviewed. During evaluation of the onsite review work, the status of all IV&V findings and recommendations made in previous review cycles will be determined.
Subtasks	<p>The onsite portion of the IV&V review requires that planning activities be coordinated with BAM prior to the SLI IV&V Team arriving onsite:</p> <ul style="list-style-type: none"> ➤ Submit a schedule of onsite review activities to be performed with BAM State personnel and the Implementation Contractor ➤ Submit a list of Project Team and Stakeholder interviews to be performed and deliverables required to review ➤ Submit a list of project deliverables to be provided for IV&V team review ➤ Submit a list of project meetings to be attended and observed by the IV&V team ➤ Review status of risks and issues from previous cycles ➤ Assess effectiveness of mitigation efforts ➤ Review deliverables and produce DEDs ➤ Conduct interviews and collect data in adherence with each of the focus areas as detailed in the IV&V Services contract, making use of SLI Quality Checklists ➤ Present preliminary findings and recommendations of IV&V Project Team ➤ Submit draft IV&V Review Report ➤ Incorporate appropriate changes into IV&V Review Report
Deliverable	An IV&V Review Report is submitted for each review cycle. The report contains subsections addressing the perceived health and status of each project focus area, as defined in this contract.
Timeframe	The draft IV&V Periodic Review report is delivered sixty (60) calendar days after the start of the on-site portion of the respective review cycle. State comments to the draft version will be returned within twenty (20) calendar days of receipt of the draft report.
IV&V Staff Assigned	IV&V Team

State Roles:

- Provide project plans, process and procedural documentation to IV&V in the evaluation of the assessment areas for BAM
- Review, provide feedback, and approve IV&V Findings and Recommendations for inclusion in project process and product improvements

Contractor Roles:

- Provide an understanding of the approach, plans, processes and procedures for the assessment areas under review
- Work with IV&V to ensure that IV&V Findings and Recommendations are clearly understood and actionable



1.3.1 Conduct Periodic Reviews

Description

The Periodic Review(s) follow the same process as the Initial Review. A Periodic Review(s) includes both on-site and off-site components. The on-site portion includes interviews, attendance and observation of project meetings, and identification/collection of documentation. In the off-site component, the IV&V Contractor leaves the project site and conducts a review and analysis of collected project artifacts at their own place of business.

Deliverable

The on-site portion of the Periodic Review includes the following deliverables:

- a. Schedule of on-site review activities to be performed with State and vendor project staff
- b. List of project team and stakeholder interviews to be performed
- c. List of project documentation to be provided for IV&V review
- d. List of project meetings to be attended and observed by the IV&V Contractor
- e. List of Activities and Tasks to be included in the review

Time Period

Periodic IV&V Reviews will commence six (6) months following the start of the previous IV&V review or at an agreed upon time with the State with the first activity of the Periodic IV&V Review being the on-site review. The IV&V Contractor will be restricted to conducting its on-site review within ten (10) business days, or longer if required and agreed to by State.

1.3.2 Develop Periodic Review Reports (draft and final)

Description

Based on its on-site review and its off-site analysis, the IV&V Contractor shall develop a draft Periodic Review Report and submit it to the MDOS DSA Director and DTMB/MDOS Information Officer. The IV&V Contractor will correct mistakes of fact to the draft report and redeliver the Initial Review Report as final.

Deliverable

The Periodic Review Report includes two deliverables:

- Initial Review Report (draft)
- Initial Review Report (final)

For each area evaluated, the report shall contain the current status of the State's effort, including any pertinent historical background information. The report shall also contain a detailed analysis of each area, which answers, at the least, the following general questions:

- What is the State's current process in this area?
- What's good about the State's process?
- What about the State's process or technology needs improvement?
- Is the State making measurable progress in this area?
- Is the effort within the triple constraints of budget, scope, and schedule?
- What standards (SUITE, PMBOK, CMMI) is the project following internally?
- Are the appropriate documentation and other project artifacts accurate and up-to-date?
- Is there adequate stakeholder involvement in the Project?
- Are best practices and metrics employed to identify issues, progress, performance, etc.?



Responses should be quantified whenever possible. The report should also contain detailed recommendations in each area specifying what can be done immediately and in the long term to improve the State's operation. Any technologies, methodologies, or resources recommended should reflect industry standards and be appropriate for the unique circumstances and constraints of the BAM project. The recommendations should also specify a method of measuring the State's progress against the recommendations.

Follow-up reports should have quantified information on the progress that the State has made against the recommendations from the previous review. The follow-up report should also contain any additional and/or modified recommendations at the same level of detail as the initial recommendations. All report findings and recommendations should be historically traceable (with a clear and consistent method of identification/numbering) from the time they are first reported by SLI until closure.

Time Period

- a. A Periodic Review Report (draft) will be delivered to the MDOS DSA Director and the DTMB/MDOS Information Officer sixty (60) calendar days after the start of the on-site portion of the respective Periodic Review.
- b. State comments to the draft version of the Periodic Review Report will be returned to the IV&V Contractor within twenty (20) calendar days of receipt of the draft report.
- c. The IV&V Contractor will correct mistakes of fact to the draft version of the Periodic Review Report, append to the draft version all other State comments, and redeliver the Periodic Review Report, marked as final, to the MDOS DSA Director and the DTMB/MDOS Information Officer. This final version of the Initial Review Report deliverable concludes the Initial IV&V Review.

Contractor Responsibility

- Create and submit Periodic Review deliverables, as described in this contract.

Acceptance Criteria

- Delivery of the final version of the Periodic Review Report(s).
- Use of SUITE processes.

Task 1.4 Executive Briefings

After each IV&V assessment, there will be a formal presentation of the findings of the IV&V review given to the BAM Executive Steering Committee with the opportunity to ask questions. In addition, the SLI IV&V team may provide interim briefings to BAM Project Management Team, and the IV&V Project Manager will attend the regularly scheduled quarterly meetings of the BAM Executive Steering Committee.

Management and Project Team Briefings

The SLI IV&V Project Manager makes arrangements with the designated BAM Project Management Team representative and provides at least 10 days' notice, for the formal presentation of each IV&V Review Report. The presentation for each report takes place after the submittal of the final IV&V report for each cycle, which has been reviewed, and commented on by State staff, and any factual mistakes corrected by the IV&V Team. The presentation is made on-site at a BAM designated location, during the review cycles or prepared remotely during off cycle periods but delivered in person by the IV&V Project Manager.

The SLI IV&V Team works with BAM Project Management Team in the planning and scheduling of the interim management and project team briefings. Though not as formal as the Executive and project stakeholder presentations, they are important as they keep BAM Project Management Team and the project teams' current with the IV&V findings. The SLI IV&V Team works with Project Management Team on the schedule for distributing the agenda and for the briefings. The IV&V team uses standard SLI meeting attendance forms to capture the names of all attendees. During the briefing the SLI IV&V Project Manager will walk-through the



appropriate deliverables for that briefing. The IV&V team produces the minutes of these briefings and distributes them within two business days of the briefing.

Presentations shall be created using Microsoft PowerPoint, with accompanying handouts for meeting attendees.

Executive Team Briefings

SLI will prepare and formally present the findings of each IV&V Final Periodic Review Report to the BAM Executive Steering Committee and project stakeholders. The SLI Project Manager will work with BAM Project Management Team in establishing the schedule for each IV&V presentation, ensuring that at least ten (10) business days’ notice is given prior to the presentation. The SLI Project Manager develops the agenda for each presentation and ensures it is distributed to all invitees at least two business days prior to the presentation.

During the presentation, the SLI IV&V Team will walk through each significant deliverable, will summarize the findings of other reviewed documentation, and summarize the overall IV&V view of the status of the project. The IV&V team will respond to questions regarding the methods employed, findings and recommendations of the Periodic Review Report. All documentation associated with each IV&V presentation will be delivered in hardcopy and electronic media in accordance with Section 1.104.

Task Description	The SLI IV&V Project Manager prepares and delivers a formal presentation to the BAM and DTMB Executive Steering Committee and project stakeholders, reviewing the results of each, respective (Initial or Semi-Annual) IV&V Review Report. Other presentations or debriefings for project management may be requested by the BAM System Owner at any time.
General Approach	A debrief of the contents of the IV&V Review Report is another routine deliverable created by SLI for large projects. The debriefing is formally presented by the SLI IV&V Project Manager. The PowerPoint presentation compiled for the debrief includes a summary of what on the project is going well, the top concerns for IV&V based upon the current review cycle, status of any actions taken based on IV&V recommendations since the last cycle and an overview of the priority recommendations that are currently open on the project.
Subtasks	<ul style="list-style-type: none"> ➤ Upon delivery of the final version of each periodic review report, determine the major items of project management interest for an IV&V debrief ➤ Prepare and present a debrief of the final IV&V Periodic Review Report for each cycle
Deliverable	<ul style="list-style-type: none"> ➤ A PowerPoint presentation that conveys the IV&V independent perspective of the project, presented onsite at a BAM approved location. ➤ Attendance at quarterly BAM Executive Steering Committee meetings.
Timeframe	The presentation is scheduled after final delivery of the IV&V Periodic Review Report. At least ten business days’ notice will be provided prior to the presentation.
IV&V Staff Assigned	IV&V Project Manager

State Roles:

- Schedule BAM Executive Steering Committee meetings, including both regular quarterly meetings and special meetings to receive formal IV&V briefing presentations
- Review, provide feedback, and approve IV&V Presentation Briefing materials

Description

The IV&V Contract team reports to the BAM Executive Steering Committee, which is chaired by the MDOS DSA Director. A formal briefing presentation will be delivered to the BAM Executive Steering Committee at its next regularly scheduled meeting after submission of the final version of the Initial Review Report and Periodic Review Reports. The Executive Steering Committee meets quarterly. The MDOS DSA Director may opt to schedule a special Executive Steering Committee meeting to receive the IV&V briefing sooner than its next regularly scheduled meeting, preferably within two (2) calendar weeks of submission of the final version of the reports.

**Deliverable**

There are two deliverables for this activity:

- a. Formal briefing presentation of the Initial Review Report and subsequent Periodic Review Reports to the BAM Executive Steering Committee. The IV&V team will respond to questions from Executive Steering Committee members.
- b. Attendance at quarterly meetings of the BAM Executive Steering Committee to provide brief status updates and respond to questions.

Time Period

It is anticipated that delivery of the formal briefing presentation will occur within two (2) weeks of submission of the final version of the Initial Review Report and subsequent Periodic Review Reports. The BAM Executive Steering Committee meets quarterly, and IV&V Contractor attendance is required at each regularly scheduled meeting.

State Responsibility

- Schedule BAM Executive Steering Committee meetings, including both regular quarterly meetings and special meetings to receive formal briefing presentations.

Contractor Responsibility

- Create and deliver a formal executive briefing on the Initial Review Report and subsequent Periodic Review Reports to the BAM Executive Steering Committee.

Acceptance Criteria

- Delivery of the executive briefing
- Attendance at quarterly BAM Executive Steering Committee meetings.

Task 1.5 Monthly Status Reports

The IV&V Project Manager will prepare and submit the Monthly Status Reports using the approved SUITE format to the DTMB/MDOS Executive Committee Liaison that provide the accomplishments, critical concerns, issues and risks that have been identified in that period. The Monthly Status Report also includes a project schedule update covering deliverables, milestones, timeline and budget status, and a summary of the BAM project's performance relative to quality concerns, contract compliance, findings and recommendations from the last IV&V periodic review.

The Monthly Status Report to be delivered within two (2) calendar weeks after the end of each month will include:

- A general overview of the BAM IV&V Project Status
- Overview of key verification and validation activities occurring in the prior period, personnel utilized, schedule, and budget actuals-to-estimates performance
- A preview of key verification and validation activities planned for the next reporting period
- An overview of staffing changes or resource concerns
- A listing and current status of all open action items
- Overview of any identified risk factors and risk mitigation plans
- Overview of progress or resolutions to any action items or issues since the last report.

State Roles:

- Review, provide feedback, and approve status reporting protocols and IV&V Monthly Status Reports

**Description**

The IV&V Contractor will develop and deliver a Monthly Status Report to the DTMB/MDOS Executive Committee Liaisons, which will include, at a minimum, accomplishments, critical issues, personnel utilized, activity, task, and deliverable status, budget status, and items planned for the next reporting period. It will also summarize schedule performance and budget performance to compare actual project performance with plan(s). The format of the monthly status report will conform to the SUITE Project Management Methodology. The Executive Committee Liaison will escalate issues to the Executive Committee as he deems necessary.

Deliverable

Monthly Status Report.

Time Period

Monthly, within two (2) calendar weeks after the end of a month.

State Responsibility

- Review and approve status reporting protocols.
- Review and approve deliverables.

Contractor Responsibility

- Obtain consensus for report format.
- Complete monthly Project Status Reports.

Acceptance Criteria

- Use of approved format.
- Inclusion of accomplishments, critical issues, personnel utilized, and items planned for the next reporting period.
- Reporting of identified issues and risks and associated mitigation strategies.
- Comparison of schedule and budget performance to actual project plan.
- Use of SUITE Project Management Methodology.
- Submission of Monthly Status Report.

Activity 2 Planning Oversight

Planning oversight provides a comprehensive, consistent method for reviewing the project's planning process, key project performance metrics, and taking steps to monitor the project to ensure its success. As part of the Planning Oversight IV&V tasks, SLI will verify that the Implementation Contractor's contractual and quality assurance commitments and obligations are planned, monitored, and executed according to the baseline project schedule and include the level of quality that is expected by the BAM Project.

Task 2.1 Verify obligations of vendor are clearly defined

SLI will verify that the obligations of the vendor, sub-contractors and external staff (terms, conditions, statement of work, requirements, technical standards, performance standards, development milestones, acceptance criteria, delivery dates, etc.) are clearly defined. This includes verifying that performance metrics have been included that will allow tracking of project performance and progress against criteria set by the State.

This process begins with a thorough review and analysis of the Implementation Contractor's response to the RFP and a full understanding of the Implementation Contractor commitments, project schedule and development approach. SLI's IV&V Team will review project scope and approach documents and agreements and work with the State to ensure that all commitments, deliverables and quality factors are clearly present in the Project Management Plan and schedule. SLI will assist the State and the Implementation Contractor with the development of an effective deliverable review process that provides the level of quality that is expected by the State's BAM Project.



SLI’s planning oversight quality assurance approach addresses how controls are implemented and reported in the project regarding elements that require strict control such as the project schedule and schedule maintenance, change control, communications management, risks and issues management, and the deliverable review and acceptance processes.

Planning Oversight ensures that the involved organizations, project team, clients and other stakeholders will work together to provide the details necessary to properly plan and control the project. It moves away from ad-hoc project management to a structured, productive, and consistent approach that provides predictable and repeatable processes, tools, techniques, and standards.

The goals in evaluating the planning oversight processes put in place by the Implementation Contractor include the identification and verification of key performance metrics that support the project throughout its lifecycle. Further, the presentation and recurrence of key progress reporting artifacts are assessed to ensure that the information is accurate, is measured against a baseline or established criteria, and that true progress can be tracked as the weeks and months of the project proceed. This close evaluation of the project contractual and planning documents gives the IV&V Team in-depth knowledge of the obligations and reporting metrics that are essential to project performance and planning oversight.

State Roles:

- Provide project plans, process and procedural documentation to IV&V in the evaluation of the assessment areas under review for BAM
- Review, provide feedback, and approve IV&V Findings and Recommendations for inclusion in project process and product improvements

IV&V Contractor Roles:

- Provide an understanding of the approach, plans, processes and procedures for the assessment areas under review
- Work with IV&V to ensure that IV&V Findings and Recommendations are clearly understood and actionable

This activity and its associated tasks provide input to IV&V Review(s). Activities are selected for IV&V review(s) depending on multiple factors, including project lifecycle phase, State concerns, and industry standards. Selected activities and tasks are incorporated into the IV&V Management Plan and updated prior to semi-annual reviews.

Activity 3 Project Management

Task #	Task Name	Subtask #	Subtask Description
3.1	Project Sponsorship	3.1.1	Assess and recommend improvement, as needed, to assure continuous executive stakeholder buy-in, participation, support and commitment, and that open pathways of communication exist among all stakeholders.
3.2	Management Assessment	3.2.1	Verify and assess project management and organization, verify that lines of reporting and responsibility provide adequate technical and managerial oversight of the project.
		3.2.2	Evaluate project progress, resources, contract dollars and budget, schedules, work flow, and reporting and provide recommendations for improvement.
		3.2.3	Assess coordination, communication and management to verify agencies and departments are not working independently of one another and following the communication plan.
3.3	Project Management	3.3.1	Verify that a Project Management Plan is created and being followed. Evaluate the project management plans and procedures to verify that they are developed, communicated, implemented, monitored and complete. Provide recommendations for improvement.



Task #	Task Name	Subtask #	Subtask Description
		3.3.2	Evaluate project reporting plan and actual project reports to verify project status is accurately traced using project metrics. Provide recommendations for improvement.
		3.3.3	Verify milestones and completion dates are planned, monitored, and met.
		3.3.4	Verify the existence and institutionalization of an appropriate project issue tracking mechanism that documents issues as they arise, enables communication of issues to proper stakeholders, documents a mitigation strategy as appropriate, and tracks the issue to closure. This should include but is not limited to technical and development efforts.
		3.3.5	Evaluate the system's planned life-cycle development methodology or methodologies (waterfall, evolutionary spiral, rapid prototyping, incremental, etc.) to see if they are appropriate for the system being developed. Provide recommendations for improvement.
3.4	Communication Management		Verify that a Communication Plan is created and being followed. Evaluate the communication plans and strategies to verify they support communications and work product sharing between all project stakeholders; and assess if communication plans and strategies are effective, implemented, monitored and complete. Provide recommendations for improvement.
3.5	Configuration Management	3.5.1	Review and evaluate the configuration management (CM) plans and procedures associated with the development process. Provide recommendations for improvement.
		3.5.2	Verify that all critical development documents, including but not limited to requirements, design, code and JCL are maintained under an appropriate level of control.
		3.5.3	Verify that the processes and tools are in place to identify code versions and to rebuild system configurations from source code.
		3.5.4	Verify that appropriate source and object libraries are maintained for training, test, and production and that formal sign-off procedures are in place for approving deliverables.
		3.5.5	Verify that appropriate processes and tools are in place to manage system changes, including formal logging of change requests and the review, prioritization and timely scheduling of maintenance actions.
		3.5.6	Verify that mechanisms are in place to prevent unauthorized changes being made to the system and to prevent authorized changes from being made to the wrong version.
		3.5.7	Review the use of CM information (such as the number and type of corrective maintenance actions over time) in project management.
3.6	Project Estimating and Scheduling	3.6.1	Evaluate and make recommendations on the estimating and scheduling process of the project to ensure that the project budget and resources are adequate for the work-breakdown structure and schedule.
		3.6.2	Review schedules to verify that adequate time and resources are assigned for planning, development, review, testing and rework.
		3.6.3	Examine historical data to determine if the project/department has been able to accurately estimate the time, labor and cost of software development efforts.
3.7	Project Personnel	3.7.1	Examine the job assignments, skills, training and experience of the personnel involved in program development to verify that they are adequate for the development task.



Task #	Task Name	Subtask #	Subtask Description
		3.7.2	Evaluate the State’s hiring plan for the project to verify that adequate human resources will be available for development and maintenance. Provide recommendations for improvement.
		3.7.3	Evaluate the State’s personnel policies to verify that staff turnover will be minimized. Provide recommendations for improvement.
3.8	Project Organization	3.8.1	Verify that lines of reporting and responsibility provide adequate technical and managerial oversight of the project.
		3.8.2	Verify that the project’s organizational structure supports training, process definition, independent Quality Assurance, Configuration Management, product evaluation, and any other functions critical for the project’s success.

When the draft project work plans and schedules are developed, the SLI IV&V Team reviews the artifacts in detail to help assure that they are realistic and achievable. An essential component of this evaluation is the degree to which the management team has effectively leveraged current technologies within their Project Management Planning, Integrated Change Control, Issue Tracking, and Reporting tools.

SLI will utilize and adapt to customer policies, standards, and guidelines. SLI uses a set of project management evaluation procedures based on the practices and methods recommended by the Project Management Institute and described in its *Project Management Body of Knowledge, PMBOK, 4th Edition*. The *PMBOK* documents and describes practices and methods that are generally accepted in the project management profession. SLI will evaluate the planned methodology for completeness and ensure it is appropriately applied.

The SLI approach to quality assurance within this framework is to validate at each level of planning that the requirements detailed in the work products conform to the product vision and Management Plan, and to verify that the design and software products conform to the standards established by the project. This approach verifies that the priorities, estimates, and commitments support the product vision. Design artifacts, which are required to communicate consistent design within and across the Project Team, are inspected to verify sound design principles in support of the established product architecture. In addition, inspection of the developed code and demonstrated product functionality verify that the team is meeting the commitments established and detailed through the various stages of planning.

The table below briefly describes each of the project management components and their intended objectives. The SLI IV&V Team applies these components to the project management quality assurance efforts and determines whether the Implementation Contractor has adequately addressed them.

Integration Management	To ensure that the various elements of the project are properly coordinated, which includes: <ul style="list-style-type: none"> ➤ <i>Project Plan Development.</i> Integrating and coordinating all project plans to create a consistent, complete and coherent document ➤ <i>Project Plan Execution.</i> Executing the project plan by performing the activities included therein ➤ <i>Integrated Change Control.</i> Coordinating changes across the project
Scope Management	To ensure that the project includes all the work required, and only the work required, to complete the project successfully, which includes: <ul style="list-style-type: none"> ➤ <i>Initiation.</i> Authorizing the project or phase ➤ <i>Scope Planning.</i> Develop a written scope statement scope definition – subdividing the major project deliverables into smaller, more manageable components ➤ <i>Scope Verification.</i> Formalizing acceptance of the project scope ➤ <i>Scope Change Control.</i> Controlling changes to project scope



<p>Time Management</p>	<p>To ensure timely completion of the project, which includes:</p> <ul style="list-style-type: none"> ➤ <i>Activity Definition.</i> Identifying the specific activities that must be performed to produce the various project deliverables ➤ <i>Activity Sequencing.</i> Identify and document interactive dependencies ➤ <i>Activity Duration Estimating.</i> Estimating the number and duration of work periods needed to complete individual activities ➤ <i>Schedule Development.</i> Analyzing activity sequences, activity durations, and resource requirements to create the project schedule ➤ <i>Schedule Control.</i> Controlling changes to the project schedule
<p>Cost Management</p>	<p>To ensure that the project is completed within the approved budget, which includes:</p> <ul style="list-style-type: none"> ➤ <i>Resource Planning.</i> Determining resources (people, equipment, materials) and quantities needed to perform project activities ➤ <i>Cost Estimating.</i> Developing an estimate of the costs of the resources needed to complete project activities ➤ <i>Cost Budgeting.</i> Allocate estimates to individual work activities ➤ <i>Cost Control.</i> Controlling changes to the project budget
<p>Quality Management</p>	<p>To ensure that the project satisfies the needs for which it was undertaken, which includes:</p> <ul style="list-style-type: none"> ➤ <i>Quality Planning.</i> Identifying quality standards relevant to the project and determining how to satisfy them ➤ <i>Quality Assurance.</i> Evaluate project performance on a regular basis ➤ <i>Quality Control.</i> Monitor specific project results to determine compliance with relevant quality standards and identify ways to eliminate causes of unsatisfactory performance
<p>Resource Management</p>	<p>Project Resource Management to make the most effective use of the people involved with the project, which includes:</p> <ul style="list-style-type: none"> ➤ <i>Organizational Planning.</i> Identifying, documenting, and assigning project roles, responsibilities, and reporting relationships ➤ <i>Staff Acquisition.</i> Assign the needed human resources to the project ➤ <i>Team Development.</i> Developing individual and group skills to enhance project performance

Task 3.6: Project Estimating and Scheduling

The BAM Project Management Team and the Implementation Contractor must work collaboratively to establish reasonable estimates for each project activity and task. The team must develop a detailed project plan with inter-dependencies to accomplish these activities.

SLI will review the plan to ensure that it includes all resource assignments (leveled appropriately on a regularly recurring schedule) and specific dependencies that must be met in order to meet project deadlines. The plans should be published and the quality execution of the plans should be the primary focus of the project team. Project timelines must be enforced, progress must be monitored and delays and issues addressed in a timely manner.

The effectiveness of the estimating and scheduling process is determined by its ability to ensure that activities, tasks, milestones, and completion dates are planned, monitored, and completed on BAM. SLI uses PMI's defined standard project management metrics that are widely used to evaluate a project's estimating and scheduling performance. The IV&V Team will apply earned value metrics to evaluate the project's performance against the project schedule.

SLI will review the project schedule for reasonableness and the projects ability to accurately estimate and schedule the work of the project and provide recommendations for improvement, as appropriate, and based on PMI standards.



The SLI IV&V Team will continuously review the work plans and schedules and will review the completed artifacts in detail to help assure that schedules are realistic and achievable.

Task 3.7: Project Personnel

The IV&V Team will work with BAM to identify metrics that can be used to evaluate staff assignments. These metrics will be used to verify that the personnel are qualified and compatible for the job by examining their task assignments, skills, training, and experience. SLI will evaluate and verify that adequate human resources and hiring plans are in place for the development and maintenance of the BAM systems.

The SLI IV&V Team will validate that job assignments, skills, knowledge and experience of project staff are adequate for the effective completion of assigned work. Organizational functions and the project's hiring plans will be reviewed to verify that the necessary resources and skills will be available when they are needed.

In addition, staff turnover is expected over the duration of the project, therefore the IV&V Team evaluates the Implementation Contractor's and BAM's plan for staff retention and the hiring plans to verify that adequate human resources are available to replace staff that leave the project.

Task 3.8: Project Organization

The SLI IV&V Team will validate the lines of reporting and responsibilities. Project organization charts and responsibility matrices will be compared and recommendations made to ensure adequate oversight of the project. Other organizational functions will be reviewed to verify that they support sound development practices, appropriate oversight, training, process definition, independent QA, configuration management, and other critical aspects of the project.

The structure cannot be designed as too rigid or too loose, since the project organization's purpose is to facilitate the interaction of people to achieve the project's ultimate goals within the specified constraints of scope, schedule, budget and quality. The objective in designing an optimized project structure is to provide a formal environment that the Project Manager can use to influence team members to do their best in completing their assignments and duties. The structure needs to be designed to help develop collaboration among individual team members; all in a cost effective way with a minimum of duplication of effort and overlaps.

The IV&V Team verifies that the organizational structure is well defined, that the critical roles are included and properly staffed, and the lines of reporting and responsibility provide adequate technical and managerial oversight of the project.

Activity 4 Quality Management

Quality Management is defined as a subset of project management that includes the processes required to ensure that the project will satisfy the needs for which it was undertaken. It consists of Quality Planning, Quality Control, and Quality Assurance.

Quality management reinforces the likelihood of project success. Quality management planning, quality control, quality assurance, and continuous process improvement must be viewed by the project team as an integral part of project execution and must be performed during the life of the project. Quality must be planned so there is agreement regarding how quality is measured, when quality checks occur, and how corrective actions are determined and implemented.



Task 4.1: Quality Assurance

Task #	Task Name	Subtask #	Subtask Description
4.1	Quality Assurance	4.1.1	Evaluate and make recommendations on the project's Quality Assurance plans, procedures and organization.
	Evaluate and recommend	4.1.2	Evaluate QA staffing procedures and processes for appropriateness and make recommendations for improvements.
	Evaluate and recommend	4.1.3	Evaluate the procedures and processes used by the QA organization to monitor the fidelity of all defined processes in all phases of the project and make recommendations for improvements.
		4.1.4	Determine if the quality of all products produced by the project is monitored by formal reviews and sign-offs. Make recommendations for improvements.
		4.1.5	Determine if project self-evaluations are performed and if measures are continually taken to improve the process. Make recommendations for improvements.
		4.1.6	Monitor the performance of the QA contractor by reviewing its processes and reports and performing spot checks of system documentation; assess findings and performance of the processes and reports. Make recommendations for improvements.
		4.1.7	Determine if QA has an appropriate level of independence; evaluate and make recommendations on the project's Quality Assurance plans, procedures and organization. Make recommendations for improvements.
		4.1.8	Determine if the QA vendor provides periodic assessment of the CMM activities of the project and if the project takes action to reach and maintain CMM Level 3. Make recommendations for improvements.
		4.1.9	Evaluate if appropriate mechanisms are in place for project self-evaluation and process improvement. Make recommendations for improvements.

A Quality Management Plan identifies the expectations for quality and how the plan will ensure that expectations are met. Producing a Quality Management Plan involves identifying all the deliverables at the start of the project and deciding how to best validate their quality. A Quality Management Plan will define the metrics and standards applied to ensure the project deliverables meet expectations. The QMP is very specific to the plans and other work artifacts produced during the project, and serves as a guide throughout the project. For example, review activities projected to occur during each phase of the project are listed in the plan. Review activities are defined by the documents to be reviewed, the required attendees and the expected results or subsequent follow through required for the review.

As part of SLI's SQM³ Methodology, the SLI IV&V Team works with the Project Team during its early stages to establish agreements on the Quality Management Plan, Quality Standards, and Processes. To satisfy these agreements, constraints of the project and organizational policies are verified, modified, or added to project work tasks, resources, or supplemental procedures.

A comprehensive QMP allows SLI to have a guide for the duration of the project, ensuring the items necessary to conduct a robust quality program for the project are in place. The QMP is reviewed and revised at least once during each Phase of the project.

The SLI Project Manager verifies that the Quality Management Plan and any updated project plan, standards, processes, and work tasks fit the project's needs, add value, reduce risk, and are usable for performing quality reviews, inspections, and uncovering quality problems throughout the lifecycle of the project.



Quality Assurance includes evaluating, identifying, and recommending adjustments to the activities or tasks (and associated resources) that must be performed in the project to provide confidence that the project satisfies relevant quality standards. SLI develops and provides a Quality Management Plan for its QA work, including determination of the appropriate Quality Assurance activities and activity estimates required to conduct the QA process.

SLI's SQM³ Methodology's Standard Lab Procedures (SLPs) provide the basis for Quality Management as follows:

- **Q-Plan:** Quality Management planning. Guidelines for the aspects of creating a Quality Management Plan for a project in which an implementation contractor produces design, Implementation and test deliverables
- **Q-Asses:** Quality Assessment procedures for reviewing deliverables associated with a large SDLC effort to produce or maintain a software system
- **Q-Req:** Requirements management procedures to guide the analysis and control of requirements for a software Implementation project
- **Q-Test:** Details the steps for creating test plans for independent verification and review of system and integration level test plans implemented by a contractor and for developing User Acceptance test plans and cases for software Implementer projects
- **Q-Risk:** Provides key components and tools for identifying, assessing, reporting and tracking items which may impact the quality of the final product under development

As the IV&V Contractor, SLI's Team reviews project activities, conducts interviews, and inspects specified work product deliverables, throughout the life of the project to verify compliance, and provides testing. This provides visibility to the project's adherence to established plans, process, and product quality standards, and associated quality work tasks. In order to accomplish this throughout the execution of each project phase, SLI ensures that details pertinent to specific project deliverables, personnel, and procedures are included in the Quality Management Plan.

As the quality tasks are executed, the occasional consequence is the issuance of discrepancies. SLI identifies, documents, and tracks any deviations found to closure and verifies that corrections have been made. Issues are first addressed within the project for resolution. Those that cannot be resolved within the project are escalated to a designated level of management according to the project charter for resolution. Continued escalation of high-risk issues to the designated executive stakeholders is accomplished by way of the QA Status and Reports supplemented by verbal and e-mail notifications when necessary.

Quality Assurance

Quality Assurance involves seven (7) subtasks, including:

1. Evaluating and making recommendations on the Implementation Contractor s and BAM's Quality Assurance plans, procedures, and organization
2. Verifying that the Implementation Contractor's QA is sufficiently independent from the development organization
3. Verifying that the Implementation Contractor's QA monitors the fidelity of all defined processes throughout the project
4. Verifying that the quality of all products produced by the Project is monitored by formal reviews and sign-offs
5. Verifying that Project self-evaluations are performed and that measures are continually taken to improve the process
6. Evaluating the mechanisms in place for Project self-evaluation and process improvement
7. Monitoring the performance of the Implementation Contractor and BAM's QA by reviewing its processes and reports, and performing spot checks of documentation.



In an effort as large as the BAM Project, the use of product standards and process controls for the effort is vital. The IV&V assessment of the Implementation Contractor’s Quality Assurance mechanisms serves to inform BAM of the thoroughness and effectiveness of the methods chosen. It also provides a view of the independence of the quality organization from project development.

Quality Control

Quality control is a task of monitoring of specific project results to determine if they comply with relevant quality standards, and identifying ways to eliminate causes of unsatisfactory performance. As a quality program is evaluated, its approach is appraised for the ability to continually improve techniques and tools, and to address the needs of all stakeholders. The assessment considers if the plan emphasizes that quality must start at the beginning of the software implementation lifecycle and continue to be an integral part of the design, development, build, and test process. Quality control should ensure that every process, stage, and task that contributes to the integration and implementation of the project is controlled and repeatable.

The SLI IV&V Team will ensure that each of the related quality subtasks is addressed and monitored for the existence of formal reviews that are held regarding the quality of the products produced. IV&V reviews of system documentation produced by the Implementation Contractor s and the BAM’s testing team. Results of the product process and report reviews are reported.

Quality Checklists

As part of the quality planning process, the SLI IV&V Team shall determine how the quality standards are to be monitored and measured. This is represented in the Quality Checklists, which combine the selected quality standards with the expected monitoring activities to be used by the quality control process. The next step after creating an operational definition of all the Quality Standards is to determine how they will be monitored for inclusion throughout the project and then develop a support tool. The Quality Checklists thus become the precise instrument with which the SLI team can provide measurements of the quality progress of the project.

Exhibit 1.104.4-2, *BAM IV&V Process Areas Mapped to SLI Quality Checklists*, shows the industry standards that are incorporated into the Quality Checklists. SLI is fully prepared to deliver a comprehensive set of QA Checklists to the BAM Project based on the existing SQM³ Quality Checklists (QCs). These SQM³ checklists, already developed by SLI, provide a base foundation for tailoring to meet the needs of the BAM Project.

Assessment of planning oversight is to provide a comprehensive, consistent method for reviewing the project’s planning process, key project performance metrics, and taking steps to monitor the project to ensure its success. As part of the Planning Oversight IV&V tasks, SLI will verify that the Implementation Contractor’s contractual and quality assurance commitments and obligations are planned, monitored, and executed according to the baseline.

Planning Oversight	Project Planning and Cost Management Checklist Project Governance Quality Checklist Project Integrated Change Control Checklist	PMBOK IEEE Std 1058-1998
Project Management	Project Management Plan Quality Checklist	PMBOK IEEE Std 1058-1998
Quality Management	Configuration Management Plan Quality Checklist Quality Control - Quality Checklist Document Identification Quality Checklist	IEEE Std 730-2002 IEEE Std 828-1998
Training/Documentation	Training and Training Materials Quality Checklist Training Plan Quality Checklist User’s Manual Quality Checklist	IEEE Std 1063-2001
Requirements Management	System Requirements Specification Quality Checklist Business Rule Specifications Quality Checklist	IEEE 830-1998
Production	System Hardware Checklist System Software Checklist Database Software Checklist System Capacity Checklist Back-up and Recovery Checklist	IEEE 1490-2003 IEEE 830-1998
Development	Code Review Quality Checklist	CMMI for Development, V



Environment	Solutions Design Quality Checklist Design Standards Quality Checklist Information Security Plan Quality Checklist	1.2 IEEE Std 1074-2006
Testing Environment	Test Plan Quality Checklist Test Results Quality Checklist Defect Tracking Quality Checklist	IEEE Std 1012-2004 IEEE Std 829-1998
Software Development	Data Conversion Quality Checklist Interface Design Specification Quality Checklist Interface Test Quality Checklist	EEE 1490-2003 IEEE 830-1998NIST SP800-123 – NIST SP800-122 - HIPAA NIST SP800-41
System and Acceptance Testing	Test Plan Quality Checklist Test Results Quality Checklist Defect Tracking Quality Checklist	IEEE Std 1012-2004 IEEE Std 829-1998
Data Management	Turnover Plan Quality Checklist	IEEE 1540-2001
Production Oversight	Disaster Recovery Quality Checklist Turnover Plan Quality Checklist Implementation Plan Quality Checklist	IEEE 1540-2001

Exhibit 1.104.4-2: BAM Project IV&V Process Areas Mapped to SLI Quality Checklists. *Each area of IV&V contractor responsibility focus areas is supported by standards-based SLI Quality Checklists.*

Quality Control Reviews

The SLI IV&V Team conducts scheduled Quality Control Reviews of components, subsystems, or processes by following the Quality Management Plan. These reviews determine the status of the processes and products taking place in the current period. Process review includes verifying indications that each process has been completed, measured, ranked, and reported. These results are compiled into a written report that addresses the specific deliverable or life cycle model applied by the Implementation Contractor.

Additionally, the completed QC process reviews are evaluated with the SLI IV&V Team and the results summarized for input to the next IV&V Monthly Status Report.

The Quality Control Reviews include reviewing the Implementation Contractor’s Work Plan on an ongoing basis and reviewing deliverables identified in the Implementation Contractor’s Work Plan and specified by the State’s SOW for the IV&V Services Contractor. SLI’s approach includes tracking these reviews in the Baseline Project Plan and looking at each of these deliverables in a systematic way.

The deliverables that are reviewed by the IV&V Contractor for the BAM Project include Software Development related documentation and tasks. SLI’s team performs a full assessment of the BAM Project’s deliverables beginning at the Requirements Validation phase.

QC Review of Implementation Contractor’s Project Plan

The Work Plans and Management Methodologies presented by the Implementation Contractor should constitute an integrated set of mutually agreed upon and understood components constituting the plan for the project. In assessing the proposed project plan and work schedule of the Implementation Contractor. SLI will determine if it is adequate and feasible. This includes assessing them for the inclusion of project tasks and milestones needed for adherence to the Project Charter, such as status meetings, reporting, and escalation processes.

In conducting the assessment, not only the timing and scheduling of tasks is taken into account, but the many planning and dependency aspects are considered as well. SLI determines if there are resource dependencies on state staff that are not accounted for in the project schedule. In addition, SLI checks for the incorporation of contingency planning and the adequacy of those plans. Major scheduling items are also evaluated. SLI determines if the level of effort estimates are reasonable to meet the proposed timeframe for each project phase, also if these are aligned with the proposed project staffing. Furthermore, SLI assesses whether



adequate time is allotted in the work plan for deliverable reviews, end of phase Life Cycle Reviews, Steering Committee Status Meetings and other tasks requiring State resources and State governance processes. Finally, SLI assesses if there are missing key milestones or deliverables based on the expectations documented in the RFP.

QC Review of Implementation Contractor’s Deliverables

Quality Control Reviews will be conducted for deliverables, processes, or subsystems. These QC Reviews are typically conducted for portions of the Implementation Contractor’s processes that occur during design, development, and implementation of the BAM Project. The QC Reviews of the deliverables produced by the Implementation Contractor are also planned and itemized in the IV&V work plan. The reviews are conducted to drill down and provide details that allow the State to determine the quality status of each deliverable.

The Quality Management Plan is where SLI maintains its procedures for QC deliverable review and document control. SLI’s approach to reviewing and reporting on project deliverables, including project plans, schedules, and technical deliverables, is well documented as part of the methodology for performing QC reviews. These procedures will be adjusted to specifically address the plans and deliverables produced for the BAM Project by the Implementation Contractor and will be presented as a section in the QM Plan. Additionally, the standard report templates will be customized to the BAM Project being supported and submitted for State approval.

State Roles:

- Review, provide feedback, and approve the IV&V Quality Management Plan

IV&V Contractor Roles:

- Work with IV&V to ensure that the project is clear on the standards to be applied and IV&V approach to the assessment area under review

This activity and its associated tasks provide input to IV&V Review(s). Activities are selected for IV&V review(s) depending on multiple factors, including project lifecycle phase, State concerns, and industry standards. Selected activities and tasks are incorporated into the IV&V Management Plan and updated prior to semi-annual reviews.

Activity 5 Requirements Management

Requirements management is a systematic approach to eliciting, organizing, and documenting the requirements for the new system. Requirements management is the process that establishes and maintains the requirement framework necessary to ensure agreement between the State stakeholders and the Implementation Contractor.

Task #	Task Name	Subtask #	Subtask Description
5.1	Requirements Management	5.1.1	Evaluate and make recommendations on the project’s process and procedures for managing requirements.
		5.1.2	Verify that system requirements are well-defined, understood and documented.
		5.1.3	Evaluate the allocation of system requirements to hardware and software requirements. Provide recommendations for improvement.
		5.1.4	Verify that software requirements can be traced through design, code and test phases to verify that the system performs as intended and contains no unnecessary software elements.
		5.1.5	Verify that requirements are under formal configuration control.
5.2	Security Requirements	5.2.1	Evaluate and make recommendations on project policies and procedures for ensuring that the system is secure and that the privacy of client data is maintained.
		5.2.2	Evaluate the projects restrictions on system and data access. Provide recommendations for improvement.



Task #	Task Name	Subtask #	Subtask Description
		5.2.3	Evaluate the projects security and risk analysis. Provide recommendations for improvement.
		5.2.4	Verify that processes and equipment are in place to back up client and project data and files and archive them safely at appropriate intervals.
5.3	Requirements Analysis	5.3.1	Verify that an analysis of client and state needs and objectives has been performed to verify that requirements of the system are well understood, well defined, and satisfy federal regulations.
		5.3.2	Verify that all stakeholders have been consulted to the desired functionality of the system, and that users have been involved in prototyping of the user interface.
		5.3.3	Verify that all stakeholders have bought-in to all changes which impact project objectives, cost, or schedule.
		5.3.4	Verify that performance requirements (e.g. timing, response time and throughput) satisfy user needs
		5.3.5	Verify that user's maintenance requirements for the system are completely specified
5.4	Interface Requirements	5.4.1	Verify that all system interfaces are exactly described, by medium and by function, including input/output control codes. Data format, polarity, range, units, and frequency.
		5.4.2	Verify those approved interface documents are available and that appropriate relationships (such as interface working groups) are in place with all agencies and organizations supporting the interfaces.
5.5	Requirements Allocation and Specification	5.5.1	Verify that all system requirements have been allocated to an either a software or hardware subsystem.
		5.5.2	Verify that requirements specifications have been developed for all hardware and software subsystems in a sufficient level of detail to ensure successful implementation.

State Roles:

To support the IV&V of the Requirements Management area, the State will:

- Provide access to staff to interview to assess requirements management effectiveness
- Provide access to State change/scope management standards
- Provide job descriptions of State staff to be trained
- Provide approval to attend Change Control Board sessions
- Provide contractual requirements and Contractor proposal sections related to Requirements Management

IV&V Contractor Roles:

The contractor is responsible for:

- Provide Draft and Final copies of the assessment of the Requirements Management Plan
- Provide Draft and Final copies of the assessment of the Requirements Traceability Matrix
- Assessment of the access to Requirements Management tools and database(s)

This activity and its associated tasks provide input to IV&V Review(s). Activities are selected for IV&V review(s) depending on multiple factors, including project lifecycle phase, State concerns, and industry standards. Selected activities and tasks are incorporated into the IV&V Management Plan and updated prior to semi-annual reviews.

The Contractor understands that the BAM Project is well beyond the need for basic requirements management assessments, as requirements gathering and validation has been completed and much of the coding is done. Therefore, the attention will focused on requirements traceability to help ensure that all requirements are represented in the testing, training, and operational readiness deliverables of the effort.



In a large software Implementation project, the Implementation Contractors are usually required to produce and maintain a Requirements Traceability Matrix (RTM). This matrix associates requirements with the design modules that satisfy them. Further, as the project progresses, the test scripts that verify each requirement are traced within the RTM as they are produced and executed. Reviewing the RTM will occur throughout the project to help ensure that all requirements are present in the delivered system. The aim in doing this is to ensure that all State Requirements are mapped to design, carried out in development, and finally properly tested and executed before implementation.

The SLI IV&V Team defines a review process that seeks to ensure accuracy, clarity, and achievability within the parameters of the project schedule and budget. As the project progresses through each implementation stage, the SLI IV&V team helps ensure that business and technical requirements meet the following objectives:

- Define the criteria to be used for assessing whether the software requirements are met by the system and software
- Check that each system requirement allocated to software is testable (can be fully implemented in the software)
- Verify that all system requirements that should be allocated to software have been allocated
- Establish the link between the system requirements, software requirements and software documentation
- Identify other software requirements based on analyses of the system requirements, system interfaces, and required functions for verifying system and data integrity
- Identify all interfaces between components and interfaces to legacy systems
- Evaluate use cases, models and software Test Scenarios and procedures back to the requirements to ensure test coverage
- Identify open issues between system and software requirements
- Confirm that software requirements are traced through design specifications, development documentation, systems integration test cases, and User Acceptance Test scripts

A formal report will be submitted with the results of the IV&V team's analysis of the RTM and the assessment of the Requirements Analysis deliverables against the success criteria.

SLI monitors the development of new requirements and changes to existing requirements in the context of what is required for to meet the terms of the contract. This process helps to ensure that any suggested changes to requirements do not create conditions that adversely impact the funding charter, and that requirement traceability is maintained throughout the development lifecycle.

Security Requirements

Verifying that the security standards set forth by the State are being implemented is critical to maintain confidence that the system is able to reside on the state network without enabling threats of intrusion. SLI will participate in major security reviews by the State for the modules that are developed specifically for the State, ensuring that relevant code adheres to Statewide and Michigan Security standards, where applicable. The list of areas to be examined includes, but is not limited to the following:

- User Authentication
- Role Based Security
- Database Connectivity
- Password Validation
- Encryption



Interface Requirements

The way application systems and subsystems interact are critical elements to consider on the BAM project. These interfaces occur within the application itself, as well as among external applications that may use or share the same data. This can result in a significant number of instances where data are passed back and forth, and the resulting conditions from one component form the input conditions of others. If any of these interfaces are not operational, it could severely impact the functionality of the entire application, and create issues for end users.

As described above, interfaces occur both within an isolated application, as well as across the enterprise. At the lowest level, individual components or objects must be able to interact with each other. The combination of objects together may form a part or sub-system of the application. Each of the respective sub-systems must then be integrated together to form the full application. There will need to be requirements in place to detail how each piece comes together to form the unified whole.

Once the application is developed, it will be integrated within the enterprise on some level. This means that data could be shared by multiple applications, information created within one may be used within another, or there simply may be shared physical environment. All instances of shared data or components across applications will have associated requirements, the components of the evaluation methodology applicable to this area and their unique elements. Personnel to be interviewed will include but may not be limited to the individuals representing developers, DBA, Network Administrator, and owners of the interfacing applications. The SLI procedural review will encompass the practices utilized by the Implementation Contractor for the following:

- Identification of application level interfaces
- Identification of enterprise level interfaces
- Dependency identification
- Interface Requirements
- Design Requirements
- System Architecture Requirements
- Component or Object Models
- Data Models
- System Architecture Diagrams – showing interfaces
- Enterprise Architecture Diagrams – showing interfaces

In the context of an IV&V Interface Requirements review process, the Contractor will review the work products of the Implementation Contractor(s) to ensure that interface requirements are present in testing plans and execution for all aspects of the system and are in line with industry standards for application interfacing protocols.

Requirements Verification

Software development of framework applications still relies heavily on the continuous tracking, tracing, and sorting of requirements in order to know, not only where to look for the desired functionality in the end product, but whether in fact all of that functionality was implemented.

Requirements Management is a systematic approach to eliciting, organizing, and documenting requirements for the new system. Requirements Management is the process that establishes and maintains the requirement framework necessary to ensure agreement between the DTMB stakeholders and the Implementation Contractor. Typically, as an integral part of the project's early stages, the SLI IV&V Project Manager works with the Implementation Contractor to review the requirement framework in areas such as:



- **Requirements Types.** Identifying requirement classes such as high-level (business rules, vision statements, project goals), design (use cases, business modeling), software, and test requirements.
- **Traceability.** Defining, documenting, and working with DTMB Project Management on the cross-functional teams involved in or impacted by the requirements process and providing for the traceability of requirements across multiple project areas, and throughout the project phases.
- **Multi-Dimensional Attributes.** Establishing requirement characteristics such as priority, owner, team or sub-team responsibility, degree-of-difficulty, and software release are attributes that need to be defined in order to effectively manage requirements and communicate information to stakeholders and the team. This compendium of requirement characteristics provides a tool for managing the scope of the system and for understanding the elements of work that must be accomplished within each project phase. It also defines interdependencies between requirements.

The SLI IV&V Team understands that Requirements Management includes establishing an effective structure for the requirements that allows the business analysts and IT specialists to collect, analyze, and trace the requirements in an efficient and effective manner. SLI reviews plans and processes associated with requirements management to ensure that the BAM Project has established a requirements framework.

The best technique for ensuring the completeness and correctness of the design is a thorough tracing of requirements through the implementation process. The SQM³ methodology supports a trace of all system requirements, originating from the SRS (System Requirements Specification), to the appropriate design documents and then to the test cases. This is the industry-standard accepted way to document that all requirements are accounted for in a system. Furthermore, this is the most logical way to deal with the large amount of information that is associated with the implementation of each requirement. Thus, in using the SQM³ methodology, the SLI IV&V Team supports the BAM Requirements Database with tracking information all the way through the project.

Activity 6 Production

Task #	Task Name	Subtask #	Subtask Description
6.1	System Hardware	6.1.1	Evaluate new and existing system hardware configurations to determine if their performance is adequate to meet existing and proposed system requirements. Provide recommendations for improvement.
		6.1.2	Determine if hardware is compatible with the State's existing processing environment, if it is maintainable, and if it is easily upgradeable. This evaluation will include, but is not limited to CPUs and other processors, memory, network connections and bandwidth, communication controllers, telecommunications systems (LAN/WAN), terminals, printers and storage devices.
		6.1.3	Evaluate current and projected vendor support of the hardware, as well as the State's hardware configuration management plans and procedures. Provide recommendations for improvement.
6.2	System Software	6.2.1	Evaluate new and existing system software to determine if its capabilities are adequate to meet existing and proposed system requirements. Provide recommendations for improvement.
		6.2.2	Determine if the software is compatible with the State's existing hardware and software environment, if it is maintainable, and if it is easily upgradeable. This evaluation will include, but is not limited to, operating systems, middleware, and network software including communications and file-sharing protocols. Provide recommendations for improvement.
		6.2.3	Current and projected vendor support of the software will also be evaluated, as well as the States software acquisition plans and procedures. Provide recommendations for improvement.



Task #	Task Name	Subtask #	Subtask Description
6.3	Database Software	6.3.1	Evaluate new and existing database products to determine if their capabilities are adequate to meet existing and proposed system requirements. Provide recommendations for improvement.
		6.3.2	Determine if the database's data format is easily convertible to other formats, if it supports the addition of new data items, if it is scalable, if it is easily refreshable and if it is compatible with the State's existing hardware and software, including any on-line transaction processing (OLTP) environment.
		6.3.3	Evaluate any current and projected vendor support of the software, as well as the State's software acquisition plans and procedures. Provide recommendations for improvement.
6.4	System Capacity	6.4.1	Evaluate the existing processing capacity of the system and verify that it is adequate for current statewide needs for both batch and on-line processing. Provide recommendations for improvement.
		6.4.2	Evaluate the historic availability and reliability of the system including the frequency and criticality of system failure. Provide recommendations for improvement.
		6.4.3	Evaluate the results of any volume testing or stress testing. Provide recommendations for improvement.
		6.4.4	Evaluate any existing measurement and capacity planning program and will evaluate the system's capacity to support future growth. Provide recommendations for improvement.
		6.4.5	Make recommendations on changes in processing hardware, storage, network systems, operating systems, COTS software, and software design to meet future growth and improve system performance.

The production system must be configured correctly for the BAM system to fulfill the technical and business requirements of DTMB. It also needs to be compliant with State SUITE standards and methodologies, and be able to communicate with the legacy systems. The IV&V production environment task has four sub-topics: System Hardware, System Software, Database Software, and System Capacity.

- **System Hardware:** SLI will evaluate the hardware configuration's ability to meet the existing and proposed business and performance requirements. Contractor will evaluate the current and projected contractor support of the hardware, as well as hardware configuration management plans and procedures. Contractor will review the technical documentation for the design of the hardware environment and provide an assessment of the hardware system's maintainability and upgrade capability. SLI will provide recommendations for areas of improvement.
- **System Software:** SLI will evaluate specifications and demonstrated performance of the new and existing system software's ability to meet the existing and proposed system requirements. Contractor will evaluate the current and projected support of the software by the Implementation Contractor and the State's software acquisition plan and procedures. Contractor will review the software's compatibility with the State's current environment, as well as its maintainability and upgradability characteristics. SLI will provide recommendations for areas of improvement.
- **Database Software:** SLI will evaluate specifications and demonstrated performance of the new and existing database products to determine if their capabilities are able to meet the existing and proposed system requirements. This evaluation will include factors such as scalability, refresh, and compatibility with the State's current software and hardware system environment. Contractor will evaluate the current and projected support of the database products by the Implementation Contractor and the State's software acquisition plan and procedures. SLI will provide recommendations for areas of improvement.
- **System Capacity:** SLI will assess the system's ability to meet the current and projected statewide needs for both batch and on-line processing. In order to provide an objective assessment, contractor will conduct a review of the system's capacity, availability, and reliability to create a baseline from which



contractor can compare the plans for the new BAM. In addition, contractor will also verify the results of any volume testing or stress testing performed to date. Contractor will review the selection of the volume/stress testing tools, the execution results, and the corrective action plans associated with issues that were identified. SLI IV&V staff will evaluate the new system's capacity to support future growth and work with the State to determine the growth target the new system needs. SLI will provide recommendations for proposed modifications to system architecture regarding processing hardware, storage, network systems, operating systems, COTS software, and software design to meet future growth and enhance system performance.

State Roles:

- Provide BAM system design, performance, and system architecture specifications for IV&V review and assessment
- Provide IV&V access to the BAM production environment hardware and software, and performance test documentation and data.
- Work with IV&V comprehend the production environment's evolution and the current configuration
- Review, provide feedback, and approve IV&V Findings and Recommendations for inclusion in project processes and product development

IV&V Contractor Roles:

- Configure the Production Environment
- Document and manage configuration control of the Production Environment
- Work with IV&V to ensure that IV&V Findings and Recommendations are clearly understood and actionable

This activity and its associated tasks provide input to IV&V Review(s). Activities are selected for IV&V review(s) depending on multiple factors, including project lifecycle phase, State concerns, and industry standards. Selected activities and tasks are incorporated into the IV&V Management Plan and updated prior to semi-annual reviews.

The SLI IV&V Team's approach to assessment of a production environment is as follows:

Task 6.1: System Hardware

IV&V will assess new and existing system hardware configurations to determine if the performance meets the existing and proposed system requirements, and determine if the hardware is compatible with the State's present hardware environment and is maintainable and easily upgradeable. This evaluation includes, but is not limited to the following:

- Local Area Network/Wide Area Network (LAN/WAN) architecture, connections and bandwidth
- CPUs and other processors
- Memory
- Storage Devices
- Printers
- End of Life (EOL) server and infrastructure components
- Communication controllers
- Telecommunications systems
- Security implementation
- Virus alerts and issues
- Power stability
- Network support
- Contractor support



An audit of the defined hardware and equipment needed to support the system is conducted. This audit includes production servers, database server, network hardware, storage hardware, as well as peripheral equipment needed for system operation.

Task 6.2: System Software

The SLI IV&V Team evaluates that new and existing System Software requirement capabilities are adequate to meet existing and proposed system requirements. Contractor determines the adequacy of current and projected development contractor's support of application software. At a minimum, the following should be identified:

- Operating systems, versions and configurations
- Middleware installation, versions and configurations
- Network software, versions and configurations
- Communications protocols
- File-sharing protocols

For any additional COTS software that is required, the following information should be gathered:

- Name of proposed COTS software
- Description of the software product
- Purpose of the software product
- Number of licenses to be purchased (if applicable)
- Date the software is needed
- Purchase date
- Delivery date

Listing of All COTS Review by SLI includes a methodology for identification and cataloging of COTS software. In the event that COTS has been identified and is not currently in the software inventory, some provision must be in place to identify a purchase plan for the software. A detailed listing of software that makes up the system should include the following:

- Name of the software product
- Description of the software product
- Purpose of the software product
- Any required interfaces
- Licensing information, including the number, expiration and location of license

Task 6.3: Database Software

SLI evaluates the design considerations for the logical and physical data models to determine if their capabilities are adequate to meet existing and proposed system requirements. Contractor also evaluates the current and projected capacity to support the database software.

- **Scalability.** In assessing the scalability of the database schema, the ability to easily convert to other formats and support the addition of new data, and the ease of refreshing the database while remaining compatible with the existing hardware and software, remain high in consideration; including any on-line transaction processing (OLTP) environments.
- **Database Sizing.** Sizing involves the estimation of the size of tables, indexes, partitions and other entities within the database. These estimates can be made by following the definition of the logical data model.

Task 6.4: System Capacity

This assessment includes reviewing the capacity requirements and the ability of the system performance to meet or exceed the DTMB requirements for both batch and on-line processing. The following is a list of items to be considered when evaluating capacity and performance:

- **Expected Workload.** This evaluation should take into consideration the availability expectations for the system (i.e., 24/7 availability to users), number of simultaneous users and their needs to use the system, server response and availability.



- **Execution Time.** Typically defined as the time between the request and the availability of data to the requesting client. This is closely related to the reliability of throughput and response time calculations.
- **Presentation Response Time.** The time it takes to fully present the requested information to the client. This can generally be considered the end-to-end time needed to respond to a user request.
- **System Scalability.** The ability of the system to grow in capacity while maintaining the performance reliability required. Of interest is how the system can adapt with regard to the user interface layer, business logic layer and database services layer.
- **Throughput.** Defined as the amount of work that can be reliably performed in a given period of time. This is typically presented in MIPS and is used as a basis for comparison of raw computational power between systems.
- **Resource Utilization.** In determining the optimal use of the resources comprising the system; network loading, availability, latency and bandwidth should be considered. Memory Resource utilization should also be considered (i.e., is there adequate memory for the servers to complete tasks in the specified time?). Additionally, there should be sufficient storage to accommodate the system and any backup requirements.

In the event of either planned or unplanned system outages there should be a plan to recover from data loss. This plan should include a plan for data backup of both the critical and non-critical components of the system. These components can be categorized as follows:

- Operating System Software Components
- Operating System Data Components
- Application Configuration Components
- Application Data Components

There should be a plan in place for the physical storage of these components, both onsite and off-site. The off-site storage is utilized in the case of catastrophic or natural disaster at the primary storage site. Typically a tape storage management system is defined that backs up pertinent components to tape at pre-defined intervals. The plan should address locking the system, the backup schedule, location and amount of data to be backed up, and the procedure to store, recycle, and replace the tapes.

If an automated system is to be employed to perform backups, its capacity and feasibility should be reviewed and evaluated. The backup schedule should also be reviewed for its applicability to the system and its ability to adequately perform the needed duties of backing up critical data.

The purpose of a recovery plan is to ensure that all of the system software components can be restored to a normal operating status in a timely manner without data loss. This is usually with respect to natural disaster (i.e., flood or earthquake) or technical disaster (i.e., hardware failure). A review should be done to assure that there are procedures in place to recover system data and allow the client to continue business as usual.

SLI will verify that processes and equipment are in place to back up client and project data, and file and archive them safely at appropriate intervals. This evaluation will include factors such as media, frequency, location of back-ups, and number of generations of data to maintain. Associated with this evaluation is the assessment of the testing of the recovery process to ensure that files can be restored individually or in total, in the event of a hardware failure or data corruption.

Activity 7 Development Environment

The development environment is critical to a successful development process for the BAM effort. Contractor will review the existing environment to determine any gaps for the development process for new releases. The IV&V Technical Analyst will also verify and validate the documented, as well as the actual, environment for proper hardware configuration, proper development software versions, compatibility, and completeness. A review and evaluation of the software for proper versioning, upgrade availability, and compatibility is done to ensure the proper environment and completeness of the environment.



Task 7.1: Development Hardware

In order to provide an assessment of the hardware system’s maintainability and upgrade capability, Contractor will review the technical documentation and evaluate components including (but not limited to) CPUs, memory, network connections and bandwidth, communication controllers, telecommunications systems (LAN/WAN), terminals, printers, and storage devices. Contractor will also use a combination of structured interviews, reviews of State and industry hardware standards, and assessments of the development hardware, to evaluate:

- The design of the hardware environment and system performance results
- The BAM Project hardware configuration plans and procedures
- The hardware configuration management plans and procedures
- If the Implementation Contractor is able to meet the existing and proposed business and performance requirements.
- Whether the development environment’s hardware is maintainable, easily upgradeable, and compatible with DTMB’s existing and projected hardware environment.
- If the hardware will meet current and future performance requirements.
- Current and projected support of the hardware

SLI will provide recommendations for areas of improvement.

Task 7.2: Development Software

The SLI IV&V Team’s evaluation efforts will include operating systems, network software, CASE tools, configuration management software, compilers, cross-compilers, linkers, loaders, debuggers, editors, and reporting software. Using a combination of structured interviews, reviews of State software and development standards, and assessments of the development software, SLI will determine if the software is maintainable, easily upgradeable, and compatible with DTMB’s existing and projected software environment. SLI will evaluate:

- The BAM Project software acquisition plans and procedures.
- Current and projected support of the software,
- Specifications and demonstrated performance of the system software’s ability to meet the existing and proposed system requirements,
- The current and projected software support by the Implementation Contractor,
- The software’s compatibility with the State’s current environment, as well as its maintainability and upgradability characteristics,
- The overall development environment, to verify its capability to properly integrate the various components, tools, and operating systems,
- The selected language and compiler for portability and reusability characteristics.

SLI will provide recommendations for areas of improvement.

The IV&V effort for reviewing the Development Environment focuses on evaluation of two sub-topics: Development Hardware and Development Software, and their eight sub-tasks.

Task #	Task Name	Subtask #	Subtask Description
7.1	Development Hardware	7.1.1	Evaluate new and existing development hardware configurations to determine if their performance is adequate to meet the needs of system development. Provide recommendations for improvement.
		7.1.2	Determine if hardware is maintainable, easily upgradeable, and compatible with the State’s existing development and processing environment. This evaluation will include, but is not limited to CPUs and other processors, memory, network connections and bandwidth, communication controllers, telecommunications systems (LAN/WAN), terminals, printers and storage devices.



Task #	Task Name	Subtask #	Subtask Description
		7.3	Current and projected vendor support of the hardware will also be evaluated, as well as the State's hardware configuration management plans and procedures. Provide recommendations for improvement.
7.2	Development Software	7.2.1	Evaluate new and existing development software to determine if its capabilities are adequate to meet system development requirements. Provide recommendations for improvement.
		7.2.2	Determine if the software is maintainable, easily upgradeable, and compatible with the State's existing hardware and software environment.
		7.2.3	Evaluate the environment as a whole to see if it shows a degree of integration compatible with good development. This evaluation will include, but is not limited to, operating systems, network software, CASE tools, project management software, configuration management software, compilers, cross-compilers, linkers, loaders, debuggers, editors, and reporting software. Provide recommendations for improvement.
		7.2.4	Language and compiler selection will be evaluated with regard to portability and reusability (ANSI standard language, non-standard extensions, etc.) Provide recommendations for improvement.
		7.2.5	Current and projected vendor support of the software will also be evaluated. Provide recommendations for improvement.

State Roles:

- Provide the BAM Development Environment system design specifications for IV&V review and assessment
- Provide IV&V access to the BAM Development Environment hardware, software, and data
- Work with IV&V comprehend the Development Environment's configuration and development process
- Review, provide feedback, and approve IV&V Findings and Recommendations for inclusion in project processes and product development

IV&V Contractor Roles:

- Configure and manage the Development Environment
- Document and manage configuration control of the Development Environment
- Work with IV&V to ensure that IV&V Findings and Recommendations are clearly understood and actionable

This activity and its associated tasks provide input to IV&V Review(s). Activities are selected for IV&V review(s) depending on multiple factors, including project lifecycle phase, State concerns, and industry standards. Selected activities and tasks are incorporated into the IV&V Management Plan and updated prior to semi-annual reviews.

Activity 8 Testing Environment

Testing is a critical activity and one that often is limited to a short duration, especially if earlier project phases put pressure on the overall project timeline to completion. SLI endeavors to ensure this does not occur by careful attention to test planning and thorough review of the detailed Test Plan that remains a living document throughout the life of the project. Recommendations will be provided for all IV&V review findings to support improvement of the testing environment.



Task #	Task Name	Subtask #	Subtask Description
8.1	Testing Hardware	8.1.1	Evaluate new and existing testing hardware configurations to determine if their performance is adequate to meet the needs of testing. Provide recommendations for improvement.
		8.1.2	Determine if hardware is maintainable, easily upgradeable, and compatible with the State's existing development and processing environment. This evaluation will include, but is not limited to CPUs and other processors, memory, network connections and bandwidth, communication controllers, telecommunications systems (LAN/WAN), terminals, printers and storage devices.
		8.1.3	Current and projected vendor support of the hardware will also be evaluated, as well as the State's hardware configuration management plans and procedures. Provide recommendations for improvement.
8.2	Testing Software	8.2.1	Evaluate new and existing testing software to determine if its capabilities are adequate to meet testing requirements. Provide recommendations for improvement.
		82.2	Determine if the software is maintainable, easily upgradeable, and compatible with the State's existing hardware and software environment.
		8.2.3	Evaluate the environment as a whole to see if it shows a degree of integration compatible with good testing practices. This evaluation will include, but is not limited to, operating systems, network software, CASE tools, project management software, configuration management software, compilers, cross-compilers, linkers, loaders, debuggers, editors, and reporting software. Provide recommendations for improvement.
		8.2.4	Current and projected vendor support of the software will also be evaluated, as well as the States software acquisition plans and procedures. Provide recommendations for improvement.

Task 8.1: Testing Hardware: SLI will evaluate the hardware configuration's ability to support all system test requirements. Contractor will evaluate the test hardware, as well as hardware configuration management plans and procedures, to determine if the hardware can be maintained, is easily upgradeable, and compatible with the State's development and processing environment. SLI will review the Environment technical documentation for the design of the hardware environment. SLI will provide feedback on the test environment capabilities and the documentation's accuracy and comprehensiveness. Evaluations will include but are not limited to:

- CPUs and other processors,
- memory, and network connections,
- bandwidth, and communication controllers,
- telecommunications systems (LAN/WAN),
- terminals and printer(s), and
- storage devices

Task 8.2: Testing Software: SLI will evaluate the Implementation Contractor's testing software's ability to support system test requirements. SLI will evaluate the overall test configuration and planning to ensure the accommodation of a thorough review of Testing Software effort. The Software must be maintainable, easily upgradable, and compatible with the State's existing system hardware and software environments. Planning for Contractor support for software maintenance will be evaluated, along with the State's software acquisition and configuration management plans. Evaluation will include, but not limited to:

- operating systems,
- network software,
- CASE tools, project management software,
- configuration management software, compilers, cross compilers,
- linkers, loaders, debuggers, editors,
- and reporting software



The Implementation Contractor is expected to provide an exhaustive Master Test Plan for BAM testing. The IV&V Team conducts an independent assessment of the testing process and test work products produced by the Implementation Contractor.

State Roles:

- Provide Hardware and Software configuration plans as well as accommodating artifacts.
- Provide project documentation, plans, procedures and other system documentation to IV&V in the evaluation of the BAM Hardware and Software testing configurations, approach, and processes.
- Work with IV&V to tailor and modify the standard hardware and software testing environment checklists to ensure full coverage for the BAM application.
- Review, provide feedback, and approve IV&V Findings and Recommendations for inclusion in project processes and product development.

IV&V Contractor Roles:

- Develop BAM Master Test Plan, test scenarios, and Test Environment Specifications.
- Provide Project Test Environment Hardware and Software, strategy, approach, and process understanding.
- Work with IV&V to ensure that IV&V Findings and Recommendations are clearly understood and actionable.

This activity and its associated tasks provide input to IV&V Review(s). Activities are selected for IV&V review(s) depending on multiple factors, including project lifecycle phase, State concerns, and industry standards. Selected activities and tasks are incorporated into the IV&V Management Plan and updated prior to semi-annual reviews.

Early evaluation and recommendations on the test plans, environments, data, and schedule are the goal of the IV&V Team. The execution of test requires preparation in several areas. The test phase is a pre-production phase for the project, where the system is expected to perform as designed. At the same time, the test process continually updates the environment with new software and test data, thus increasing the risk of error. In order to closely track the project test processes, the IV&V strategy ensures all details required to successfully configure the test environment are considered and in place for each stage of testing.

SLI’s detailed environment test knowledge and the careful planning that takes place as part of the IV&V tasks combine to provide you with an independent assessment of test environment readiness for the BAM Project that will ensure your system is delivered with the proper functionality. SLI review of the various test plans and scenarios is conducted to verify that the information contained within the BAM Test Environment artifacts are adequate to ensure a comprehensive, complete and repeatable project test effort.

Activity 9 Software Development

Task #	Task Name	Subtask #	Subtask Description
9.1	High Level Design	9.1.1	Evaluate and make recommendations on existing high level design products to verify the design is workable, efficient, and satisfies all system and system interface requirements.
		9.1.2	Evaluated the design products for adherence to the project design methodology and standards. Provide recommendations for improvement.
		9.1.3	Evaluate the design and analysis process used to develop the design and make recommendations for improvements. Evaluate design standards, methodology and CASE tools used will be evaluated and make recommendations. Provide recommendations for improvement.
		9.4	Verify that design requirements can be traced back to system requirements.
		9.1.5	Verify that all design products are under configuration control and formally approved before detailed design begins.



Task #	Task Name	Subtask #	Subtask Description
9.2	Detailed Design	9.2.1	Evaluate and make recommendations on existing detailed design products to verify that the design is workable, efficient, and satisfies all high level design requirements.
		9.2.2	The design products will also be evaluated for adherence to the project design methodology and standards. Provide recommendations for improvement.
		9.2.3	The design and analysis process used to develop the design will be evaluated and recommendations for improvements made.
		9.2.4	Design standards, methodology and CASE tools used will be evaluated and recommendations made.
		9.2.5	Verify that design requirements can be traced back to system requirements and high level design.
		9.2.6	Verify that all design products are under configuration control and formally approved before coding begins.
9.3	Job Control	9.3.1	Evaluation of existing job control and on the process for designing job control, and provide recommendations for improvement
		9.3.2	Evaluate the system's division between batch and on-line processing with regard to system performance and data integrity. Provide recommendations for improvement.
		9.3.3	Evaluate batch jobs for appropriate scheduling, timing and internal and external dependencies. Provide recommendations for improvement.
		9.3.4	Evaluate the appropriate use of OS scheduling software. Provide recommendations for improvement.
		9.3.5	Verify that job control language scripts are under an appropriate level of configuration control. Provide recommendations for improvement.
9.4	Code	9.4.1	Evaluate and make recommendations on the standards and process currently in place for code development.
		9.4.2	Evaluate the existing code base for portability and maintainability, taking software metrics including but not limited to modularity, complexity and source and object size. Ensure that the code conforms to objects form the original contract. Provide recommendations for improvement.
		9.4.3	Code documentation will be evaluated for quality, completeness (including maintenance history) and accessibility. Provide recommendations for improvement.
		9.4.4	Evaluate the coding standards and guidelines and the projects compliance with these standards and guidelines. This evaluation will include, but is not limited to, structure, documentation, modularity, naming conventions and format. Provide recommendations for improvement.
		9.4.5	Verify that developed code is kept under appropriate configuration control and is easily accessible by developers. Provide recommendations for improvement.
		9.4.6	Evaluate the project's use of software metrics in management and quality assurance. Provide recommendations for improvement.
9.5	Unit Test	9.5.1	Evaluate the plans, requirements, environment, tools, and procedures used for unit testing system modules. Provide recommendations for improvement.
		9.5.2	Evaluate the level of test automation, interactive testing and interactive debugging available in the test environment. Provide recommendations for improvement.
		9.5.3	Verify that an appropriate level of test coverage is achieved by the test process, that test results are verified, that the correct code configuration has been tested, and that the tests are appropriately documented. Provide recommendations for improvement.



For software development, IV&V focuses on the alignment of five key areas of the software development process. The alignment and flow of these five key areas, along with the development methodology to execute the key areas create a successful environment for implementation.

- **High Level Design:** SLI will evaluate the high level design products to verify the design is workable, efficient, and satisfies all system and interface requirements, and to verify that the design process adhered to project design methodologies and standards. SLI will verify that all software system requirements have been traced to design requirements and that all design products were under configuration control and formally approved before coding began. SLI will provide recommendations for areas of improvement.
- **Detailed Design:** SLI will evaluate the detailed design products to verify the design is workable, efficient, and satisfies all high level design requirements, and to verify that the design process adhered to project design methodologies and standards. SLI will verify that all software system and high level design requirements have been traced to detailed design requirements and that all design products were under configuration control and formally approved before detailed design began. Detailed design standards, methodologies, and CASE tools will be evaluated. SLI will provide recommendations for areas of improvement.
- **Job Control:** SLI will evaluate existing job control and the job control design process. SLI will evaluate batch jobs for appropriate scheduling, timing, and external and internal dependencies, and will evaluate the system's division between batch and on-line processing with regard to system performance and data integrity. Contractor will evaluate the appropriate use of OS scheduling software and verify that job control language scripts are under the appropriate level of configuration control. SLI will provide recommendations for areas of improvement.
- **Code:** SLI will evaluate and make recommendations on the standards and processes for code development and evaluate the existing code for portability and maintainability. Contractor will ensure that code conforms to the objects from the original contract. Code documentation will be evaluated for quality, completeness (including maintenance history) and accessibility. SLI will evaluate the coding standards and guidelines and the project compliance with those guidelines. This evaluation will include, but is not limited to, structure, documentation, modularity, naming conventions, and format. SLI will verify that developed code is maintained under configuration control and evaluate the use of software metrics in management and quality assurance assessments. SLI will provide recommendations for areas of improvement.
- **Unit Test:** SLI will evaluate the plans, requirements, environment, tools, and procedures used for unit testing system modules. Contractor will evaluate the level of test automation, interactive testing, and interactive debugging available in the test environment. SLI will review the level of test coverage achieved by the test process and determine that test results have been verified, that the correct code configuration was tested, and that tests were appropriately documented to include the formal logging of test discrepancies. SLI will provide recommendations for areas of improvement.

The SDLC and development methodology for each release cycle must be well defined and documented so the process can be followed and measured. Coding standards must be adhered to in a manner allowing for the development of efficient, workable code that satisfies all of the system and interface requirements.

For the software design and development effort, SLI expects the Implementation Contractor to apply an expert choice of technical tools to support the development process. The Implementation Contractor should also have strict standards in place calling for periodic design reviews that coincide with the SDLC milestones. Most design work is done in collaboration with small groups, but the SLI team will also be looking for formal procedures from the project level that require reviews at key points and include formal documented sign-off requirements. Each review should have its own set of acceptance criteria to be satisfied before transition is permitted to the subsequent project phase. SLI reviews the planned set of detailed deliverables to ensure that all appropriate models are planned for development.

Task 9.1: High Level Design

The SLI IV&V Team will evaluate the high-level design products for adherence to the project design methodology and standards and will also evaluate the project processes used to develop the design and make recommendations for improvements. Contractor will verify that design requirements can be traced back to system requirements and verify that all design products are under configuration control and formally approved



before detailed design begins.

The high-level design assessment ensures that the analysis and design artifacts transform system requirements into an architecture and detailed design for each software component:

- Design Specifications
- Use Cases
- Hardware and Software Architecture Documents
- Data Models, Schema, Dictionaries
- Interface Specifications
- Data Conversion and Migration Specifications
- Screen Layouts and/or Prototypes
- Report Layouts and/or Prototypes

The processes used for design assessments ensure that the system design meets software design criteria by being correct, consistent, complete, understandable, and testable with the following processes:

- Traceability Analysis
- Software Design Evaluation
- Interface Analysis
- Criticality Analysis
- Component IV&V Test Plan Generation and Verification
- Integration IV&V Test Plan Generation and Verification
- IV&V Test Design Generation and Verification

IV&V will review existing process documents, as well as the requirements, incident, and change request databases and will ensure the requirements database has been fully maintained throughout design phase, process documents are up-to-date, not duplicated, and easy to locate and use. Contractor will ensure there is a clearly defined traceability model in the Requirements Management Plan. It is essential that traceability be enforced.

Task 9.2: Detailed Design

SLI's IV&V Team will evaluate the detailed design products for adherence to the project design methodology and standards and will also evaluate the process used to develop the design and make recommendations for improvements. Contractor will verify that detailed design requirements can be traced back to the high-level design and contractor will verify that all design products are complete and under configuration control.

High-level design artifacts should be developed by exposing lower and lower levels of detail in an iterative development process, so that detailed design artifacts are developed from the high-level design and are sufficient to the degree that the development teams can develop the software from the documented designs.

The SLI approach to a detailed software design assessment is to validate the technical requirements and the BAM software architecture against the architectural standards as defined for the project. The activities include reviewing all pertinent documentation that established the standards for the software architecture. From the review, a quality checklist is developed and subsequently validated by a physical review of the software using the project software suite such as Microsoft's Integrated Development Environment (IDE), Visual Studio 2008. Deviations from the prescribed architecture are noted along with priority level assignments.

The first activity in the process is reviewing the BAM RFP, contractor proposal, and the Implementation Contractor's architecture deliverables. This software architecture design assessment will be performed prior to and subsequent to the software development phase. This allows for a validation of the appropriateness of the proposed architecture for the business solutions.



Secondly, from a review of the pertinent documents, a set or checklist of quality items is produced. The software solution will be analyzed against the quality checklist items. Depending on the quality item, a targeted inspection or scanning and spot checking is performed for validation.

The following is an example of the types of design verifications that are performed in an SLI detailed design assessment:

- Has the project implemented the architectural layers as prescribed in the State RFP?
- Has the project implemented a Service Orient Architecture as prescribed in the State RFP?
- Do the Detail Designs reflect consistent requirements traceability?
- Are the Detail Designs sufficiently documented to allow Code development?
- Is the Government Solutions Framework (GSF) implemented consistently within the project framework and used extensively throughout the application?
- Is Exception Handling implemented consistently throughout the application; does the implementation match the Architecture Document implementation description?

Task 9.3: Job Control

The IV&V Team reviews the Component Integration Testing and Batch Job Testing processes and results to verify the Job Control process is working as intended. Batch Job testing confirms the batch process tool and batch code perform as expected. The assessment of testing for this phase includes:

- Job Scheduling
- Verification of Error Logs
- Job Dependencies
- Batch Process Input/output
- User Alert Mechanisms on Failure of Program

SLI will work with the Implementation Contractor to ensure that all COTS products, third party software, network protocols, security requirements and other software that is to be used on the BAM Project are designed to allow for proper integration into the project environment and that the tools selected comply with State standards. SLI will confirm that proper integration testing is occurring that verifies that each of the modules and external data inputs and outputs within the project satisfy user requirements. SLI IV&V Analysts will validate that Component Integration is occurring by observing documentation that demonstrates that different system components “talk” to each other, pass data to each other as designed, and process return codes as designed.

Task 9.4: Code

The SLI IV&V Team will determine if the BAM Project software is developed in module structure, is maintainable and testable and follows the project’s coding standards. SLI will determine if the software is compatible with the project’s existing and projected hardware and software environment. Contractor will evaluate the environment to ensure there are clear integration paths and that the environment is compatible with good development. This assessment will include a detailed review of the target database and data model maintenance processes, security software, applications software and reporting software.

The SLI IV&V Team will perform code reviews for a subset of selected critical and/or complex code modules in order to assess the consistency of coding practices as compared to the projects coding standards and implemented across the project. The SLI process will use the projects coding standards and guidelines as the primary source documents for this code compliance review. SLI also incorporates industry acknowledged code development standards as guidelines for monitoring code conventions such as appropriate commenting formats and structures, reasonable levels of allowed complexity, appropriate sizing and modularization of code in terms of length and function, minimized points of entry and exit, and the omission of ‘dead’ or unused code



to enhance system performance and security. IV&V has created three code review checklists based on the criteria from several software code review engagements. They are:

- GUI Code Review Quality Checklist
- Code Review Quality Checklist
- User Interface Quality Checklist

SLI will perform a static review of a sample of the source code that comprises the BAM system. The criteria against which the source code will be compared are projects Coding Standards and Guidelines document. When a variance from the prescribed requirements is found, it will be noted within the review tracking spreadsheet. In addition, a comment of the identified finding will be entered to facilitate an understanding of the variance and the needed corrective action.

Code Review

The IV&V Team will perform code reviews for a subset of selected critical and/or complex code modules in order to assess the consistency of coding practices as compared to the State of Michigan and the Implementation Vendor's development and coding standards as implemented across the BAM project. The SLI process will use the BAM Enterprise Architecture documentation and any user interface guidelines and any BAM Coding Standards and Guidelines as the primary source documents for this code compliance review. SLI also incorporates industry acknowledged code development standards as guidelines for monitoring code conventions such as appropriate commenting formats and structures, reasonable levels of allowed complexity, appropriate sizing and modularization of code in terms of length and function, minimized points of entry and exit, and the omission of 'dead' or unused code to enhance system performance and security. IV&V has created three code review checklists based on the criteria from the above referenced documents. They are:

- GUI Code Review Checklist
- SLI Quality Coding Standards and Guidelines Checklist
- User Interface Guideline Checklist

SLI Global Solutions (SLI) will perform a static review of a sample of the source code that comprises the BAM system. The source code review will be performed in SLI's corporate offices in Denver, Colorado, USA, and include both manual and automated methods.

SLI's technicians typically perform manual source code reviews using their choice of text editors to display the code under review. When a variance from the prescribed requirements is found within the source code, it will be noted within the review tracking spreadsheet, in the cell at the intersection of the appropriate requirement's column on the offending function's row. In addition, a comment descriptive of the identified finding will be entered to facilitate an understanding of the discovery.

SLI employs a selection of automated source code review and analysis tool applications in its source code review. One of the tools employed is *Understand 2.6*, a source code analysis tool application created by Scientific Toolworks of St. George, Utah, USA. *Understand 2.6* is an effective tool for use in the analysis of large amounts of complex source code in all of the C, C++, C#, and Java programming languages. *Understand 2.6* is used in manual code reviews to aid reviewers in reverse-engineering large projects. The tool allows code to be visualized with color-coded differentiation of executable code instructions, comments, numerical variables, embedded text strings, and other programmatic artifacts. Features within the tool permit graphic representations of programmatic variable declarations, and of the caller and called-by relationships of functions, in addition to advanced graphics illustrative of executable functional call trees.

Additionally, dependency diagrams display the ways that class objects interact. Control flow diagrams aid in following the logic within the individual functions. The tool aids in quickly determining the class types of variables, and the inheritance trees of classes can be displayed. Pertinent information about each source code file is displayed in a contextual side bar as an individual file is selected for examination. The tool also permits the rapid search of all files in user-selected directories for words and phrases. In all cases, hyperlinks included in the display permit easy navigation through and between source code functions and files. *Understand 2.6* can also generate a wealth of informative metrics about the software under review at any of the source code.

**Task 9.5: Unit Test**

Unit testing verifies that processes and logic within a screen or a “unit of work” operate in accordance with the design. A unit is an identifiable product that can be explicitly defined, assembled, and tested separately from other units. Application team developers perform unit testing. The objective is to establish the successful execution of the logical paths throughout the application.

SLI recommends that developers complete a Unit Testing Checklist using a form to verify that each screen incorporates appropriate business rules, includes necessary features, meets accessibility requirements and passes user guidelines. One of the important objectives of unit testing is to “build quality in” by finding a majority of the incidents (defects) related to the look and feel, navigation, on-screen validation and behavior.

SLI’s Unit Testing Checklist guides the IV&V Analysts in verifying the accuracy of the Integration Contractor’s Unit Testing efforts. This is done to verify that the components of the system, including logic, procedures and database calls, meet the functional requirements currently under development. Contractor will review that testing individual services and procedures identify logic processing and test single points of failure. The objectives of the unit testing reviews are to help ensure that developers are:

- Validating internal business validation logic
- Validating that design specifications are met by completing the Unit Testing Checklist
- Confirming that error handling procedures have been included
- Accepting and handling expected and unexpected data for each individual component
- Validating the entire range of possible inputs/outputs

Prior to initiating unit test, SLI will ensure that the following activities are completed:

- Detailed System Design has been completed
- Unit Testing Checklist has been created and approved
- Developers have been on-board with the unit testing process
- Development Environment has been created
- Incident management process has been documented and communicated to the project team

State Roles:

- Provide BAM software design and performance specifications for IV&V review and assessment
- Provide IV&V access to the BAM software, development and job control records, and unit test records/results
- Work with IV&V comprehend the production environment’s evolution to current configuration
- Review, provide feedback, and approve IV&V Findings and Recommendations for inclusion in project processes and product development

IV&V Contractor Roles:

- Develop the BAM software, required existing software customizations, and integrate the components and modules into an operational system
- Review the software development methodologies and processes with IV&V
- Document and manage configuration control of the BAM software
- Work with IV&V to ensure that IV&V Findings and Recommendations are clearly understood and actionable

This activity and its associated tasks provide input to IV&V Review(s). Activities are selected for IV&V review(s) depending on multiple factors, including project lifecycle phase, State concerns, and industry standards. Selected activities and tasks are incorporated into the IV&V Management Plan and updated prior to semi-annual reviews.



Activity 10 System and Acceptance Testing

Task #	Task Name	Subtask #	Subtask Description
10.1	System Integration Test	10.1.1	Evaluate the plans, requirements, environment, tools, and procedures used for integration testing of system modules. Provide recommendations for improvement.
		10.1.2	Evaluate the level of automation and the availability of the system test environment. Provide recommendations for improvement.
		10.1.3	Verify that an appropriate level of test coverage is achieved by the test process, that test results are verified, that the correct code configuration has been tested, and that the tests are appropriately documented, including formal logging of errors found in testing. Provide recommendations for improvement.
		10.1.4	Verify that the test organization has an appropriate level of independence from the development organization. Provide recommendations for improvement.
10.2	Acceptance and Turnover	10.2.1	Acceptance procedures and acceptance criteria for each product must be defined, reviewed, and approved prior to test and the results of the test must be documented. Acceptance procedures must also address the process by which any software product that does not pass acceptance testing will be corrected.
		10.2.2	Verify that appropriate acceptance testing based on the defined acceptance criteria is performed satisfactorily before acceptance of software products. Provide recommendations for improvement.
		10.2.3	Verify that the acceptance test organization has an appropriate level of independence from the subcontractor. Provide recommendations for improvement.
		10.2.4	Verify that training in using the contractor-supplied software is be on-going throughout the development process, especially If the software is to be turned over to State staff for operation. Provide recommendations for improvement.
		10.2.5	Review and evaluate implementation plan. Provide recommendations for improvement.

System and Acceptance Testing Oversight

The IV&V assessment is primarily focused on Integration and System Testing. The goal of Integration and System testing is to demonstrate that the system is installed and configured, that integration is completed without errors, and that the resulting integrated modules function according to requirements and business processes. SLI expects Integration and System testing to cover a range of tests designed to provide assurance that all requirements and business processes have been accounted for in the implementation and customization. Recommendations will be provided for all IV&V review findings to support System and Acceptance Testing process improvements.

The RFP identifies the classes of testing that the Integration Contractor is required to complete. Contractor anticipates that these classes of testing will include System Integration Testing, Pilot Testing, Interface Testing, and Acceptance and Turnover. These are typical classes of testing required by a system of the size and complexity of the BAM Project.

The IV&V activities conducted by SLI apply to all aspects of BAM testing. SQM³ is SLI's comprehensive set of test methodologies based on industry standards and best practices. The specific SQM³ Standard Lab Procedure required to provide oversight and deliverable review guidelines is selected depending upon the class of testing which is being conducted.



Task 10.1: System Integration Test: SLI will evaluate the project plans, requirements, environments, tools, and procedures used for integration testing of system modules. Thorough test coverage must be provided for all integration requirements. Documented test processes and test results will be verified by the IV&V Team. All test automation tools will be evaluated to assure System Integration requirements are accomplished. The test organization must have an appropriate degree of independence from the development organization.

Task 10.2: Acceptance and Turnover: SLI will evaluate that Acceptance and Turnover procedures and acceptance criteria for each product is defined, reviewed, and approved prior to test and the test results are documented. SLI will work with the Implementation Contractor to assure each product that does not pass Acceptance and Turnover will be corrected prior to BAM implementation. IV&V will verify that appropriate acceptance testing based on the defined acceptance criteria is performed satisfactorily before acceptance of software products. SLI will verify that training is performed throughout the development and testing process using contractor -supplied software. SLI will verify that the acceptance test organization has the appropriate level of independence from the Implementation Contractor and will thoroughly review the BAM Implementation Plan.

IV&V will provide recommendations for improvement for improvement of any concerns identified during the System and Acceptance Testing process. SLI will also expect the following tests to be included in the Integration and System Test efforts:

- **Requirements Based Functional Testing.** Standard functional tests that demonstrate that all requirements have been implemented in the system and that all functionality performs as intended.
- **Security Testing.** Testing to ensure that all levels of application security have been implemented based on security requirements and design specifications.
- **End-to-End Testing.** Tests designed to simulate (as close as possible) actual workflow/operational conditions. End-to-end testing requires integrated application environments.
- **Performance Testing.** Tests that integrate system performance and anticipated future growth conditions. In addition, these tests can be used to help establish capacity planning requirements.
- **Regression Testing.** Testing on all areas that have been modified by changes/fixes for defects or bugs encountered during the course of testing.

Verification of System Integration Testing

For System Integration Testing, the SLI verification process ensures that the BAM system functions as designed when integrated into the overall environment in which it is expected to operate, and that interfaces with external systems are exchanging data as designed and intended. The oversight and verification of Integration Test demonstrates BAM system behavior within the context of the operational environment. IV&V review of Test Cases and Test Scenarios is conducted to verify that the information contained within these artifacts is adequate to ensure a comprehensive and repeatable test effort. A comprehensive IV&V effort typically verifies that there is a Test Case or Test Scenario for each business rule implemented to meet the agreed upon requirements. Because of the complexity and size of BAM, SLI may select a sample of Test Cases and Test Scenarios for review. This selection is not purely random, but is weighted such that the Test Cases and Scenarios selected for review are those that exercise business rules and requirements based upon the criticality of the requirement or rule. Typically, weighted selection criteria contain Test Cases and Scenarios from all business areas for review, but has a larger selection related to those business processes considered to have the greatest criticality.

Test Cases and Test Scenarios are reviewed to verify that when followed, the test will completely and adequately validate that a specific functionality of BAM is behaving as designed, and meets the agreed upon requirements. These artifacts must contain specific data elements to ensure that the results from the test are accurate and repeatable. At a high level, Test Cases and Test Scenarios are reviewed for the following mandatory items:

- Unique Test Case Identifier
- Test Case Description
- Test Case Evaluator/Date



- Functional Area (Name and/or number)
- Use case/Requirement subject to test
- Entry Criteria/Prerequisites to Test
- Test Execution Procedure
- Expected Test Results/ Pass/Fail Determination
- Final Exit Criteria
- Ability of tester to append ad-hoc test criteria

Validation of Acceptance Test

The SLI IV&V Team will conduct an in-depth review and assessment of the Acceptance Test materials, process, outcomes, and defect correction processes. The validation role of IV&V is to assure that the accepted BAM system successfully supports the end user objectives and requirements. The SLI strategy and approach to IV&V for Acceptance Testing efforts involves seven primary activities. The meetings and products included below represent the typical approach, and are refined for the specifics of the BAM project. After the Acceptance Testing management plans are finalized, appropriate changes to the SLI approach are documented and adjusted as needed. In supporting project validation SLI commonly refers to Acceptance Testing, as User Acceptance Testing, or UAT, to represent the operational perspective of the system end user. The seven (7) primary IV&V review activities are:

1. **Test Scenario Log:** Develop a Acceptance test scenario log of expected test scenarios for the work flows identified as high priority as determined by mutual agreement with the DTMB and Implementation Contractor . The scenario log provides a list of test conditions that are selected from the library of Acceptance test templates created for BAM. These scenarios represent critical areas of the BAM business process that are important to Acceptance Test. Additionally, the IV&V Team assists the Implementation Contractor and the State with the development of test scenarios to ensure the Acceptance Test process is comprehensive. This assistance is provided through facilitated discussions, review and comment on the formal methodology for defining and recording needed test scenarios during the preparations for the Acceptance Test effort.
2. **Accuracy and Completeness:** Review and assess a selected sample of UAT case templates developed by all participating parties to ensure that the contents of the test template conform to the conditions defined on the test scenario log. Assess the accuracy and completeness of the test case template. This IV&V review determines that all required and necessary elements of the templates are correctly recorded. SLI plans to begin the review of UAT case templates as early in the development lifecycle as possible.
3. **Adequacy:** Review the UAT case templates for cases that meet the conditions defined on the test scenario log to assess them for adequacy. Adequacy, for purposes of this review, means that the content of the test case fulfills the stated purpose of the test, and is achievable by the test scenario recorded on the template.
4. **Actual Results:** Verify that the test case template meets the conditions defined on the test scenario log to assess the adequacy of the documentation in supporting the actual test outcome as shown on the template. Each test case template should require that the expected results and the actual results are recorded. The documentation of results will be the focus of this level of review.
5. **Traceability:** Review the completed test case contents to provide traceability to the final, agreed upon requirements as defined by the RFP, and design change request activities. Each test case template requires that the appropriate requirement artifact be recorded. From this review, the IV&V Team compiles a report of all requirements that completed test during UAT. An additional outcome of this activity is the ability to quickly identify the test scenarios and test cases which can be reused for regression test activities required during post-implementation BAM maintenance.
6. **Test Reporting:** During the conduct of UAT it is anticipated that weekly UAT status reports are generated. SLI reviews these reports for thoroughness and coverage. It is important that these reports are descriptive of the defects, the resolutions, and the adherence to the plan and schedule. The reports are important in management decision making to determine the readiness of the project to



progress from UAT to the implementation phase of the project. The IV&V Team reviews the formally submitted reports, participates in the daily UAT outcome review and the weekly UAT Status Meetings, and reviews the formal deliverable provided for the UAT phase. Formal comments, findings, and recommendations are submitted to DTMB and to the Implementation Contractor as dictated by the review.

7. **Defect Reporting:** During the course of Acceptance Testing, defects are documented and submitted to the Implementation Contractor development teams for correction and then resubmitted to the test team for re-testing. The SLI IV&V Team reviews the reported defects, monitors the defect reporting in the periodic project status reports, and reviews the re-tested cases in an effort to assess the progress, adequacy and completeness of the defect correction process.

Review Deliverables

SLI will review draft and final test deliverables produced by the Integration Contractor related to the verification and tracking of project requirements. Further, the contractor will provide necessary oversight to verify that the Implementation Contractor applies methods and procedures that ensure delivered test artifacts are appropriate and complete.

State Roles:

- Provide project test documentation, plans, procedures and other system documentation to IV&V in the evaluation of the System and Acceptance Testing approach and processes for BAM.
- Provide access to and an understanding of the Interface system data structures, data model plans and configuration artifacts.
- Provide project documentation, plans, procedures and other BAM system documentation to IV&V in the evaluation of the Interface approach and processes for BAM.
- Provide access to and an understanding of the legacy system data structures and conversion plans, database and data model plans, and construction artifacts
- Work with IV&V to tailor the standard IV&V test verification processes and procedures for the BAM Project.
- Review, provide feedback, and approve IV&V Findings and Recommendations for inclusion in project process and product development

IV&V Contractor Roles:

- Develop BAM Master Test Plan and project test scenarios and test scripts.
- Provide an understanding of the test process approach, plans, and procedure for System Integration Test, Pilot Test, Interface Test, and Acceptance and Turnover.
- Work with IV&V to ensure that IV&V Findings and Recommendations are clearly understood and actionable.
- Provide an understating of and document on the approach, plans, and procedure for testing of the data migration effort.
- Review and manage the resolution of outstanding defects, and the timelines for corrective action of the defects.
- Work with IV&V to ensure that IV&V Findings and Recommendations are clearly understood and actionable.

This activity and its associated tasks provide input to IV&V Review(s). Activities are selected for IV&V review(s) depending on multiple factors, including project lifecycle phase, State concerns, and industry standards. Selected activities and tasks are incorporated into the IV&V Management Plan and updated prior to semi-annual reviews.



Activity 11 Data Management

Task #	Task Name	Subtask #	Subtask Description
11.1	Database Design	11.1.1	Evaluate new and existing database designs to determine if they meet existing and proposed system requirements. Provide recommendations for improvement.
		11.1.2	Recommend improvements to existing designs to improve data integrity and system performance.
		11.1.3	Evaluate the design for maintainability, scalability, refresh-ability, concurrence, normalization (where appropriate) and any other factors affecting performance and data integrity. Provide recommendations for improvement.
		11.1.4	Evaluate the project's process for administering the database, including backup, recovery, performance analysis and control of data item creation. Provide recommendations for improvement.

Task 11.1: Database Design

SLI will also include assess the database and data model in order to ensure that industry standard database design principles are being followed, that database performance, capacity, and hardware requirements are being considered, that database security is being properly applied, and that database backup and recovery plans are in place.

Specific areas included in the IV&V Database Design Assessment are:

- Physical Limitations Analysis – Identify the physical limitations of the Database. Review the maximum number of records, maximum record length, etc., and compare them to designated values. Determine how database growth is being monitored and review plans for data archival.
- Index vs. Storage Analysis – Analyze the use of multiple indexes compared to the use the volume of stored data to determine if the proposed approach meets the requirements for data retrieval performance and size constraints.
- Security Analysis – Review database architecture for common security threats including:
 - Are User account privileges appropriate?
 - Are unnecessary default accounts disabled and default passwords changed?
 - Are rules for minimum password length being enforced?
 - Does the framework enforce the use of bind variables that prevent SQL injection attacks?
- Backup and Recovery – Review backup and recovery procedures. Require database administrators to demonstrate that backups can be fully restored to a development or test environment.

The Database Design Assessment will also include a review of the data model. The data model review is designed to uncover common problems such as:

- Inconsistent naming and definitional standards/conventions
- Inconsistent or incorrect normalization
- Lack of referential integrity enforcement
- The existence of partially null primary keys
- Mandatory one-to-one relationships
- Entity pairs with many relationships



State Roles:

- Provide access to and an understanding of the legacy system data structures and conversion plans, database and data model plans and construction artifacts
- Provide project documentation, plans, procedures and other system documentation to IV&V in the evaluation of the Data Management approach and processes for BAM
- Work with IV&V to modify the standard Conversion and DBMS checklists to ensure full coverage for BAM
- Review, provide feedback, and approve IV&V Findings and Recommendations for inclusion in project process and product development

IV&V Contractor Roles:

- Provide an understanding of the project’s data management approach, data model and database design and maintenance strategies and process documentation
- Work with IV&V to ensure that IV&V Findings and Recommendations are clearly understood and actionable
- Provide an understating of and documentation on the approach, plans, and procedures to be used for testing of the data migration effort

This activity and its associated tasks provide input to IV&V Review(s). Activities are selected for IV&V review(s) depending on multiple factors, including project lifecycle phase, State concerns, and industry standards. Selected activities and tasks are incorporated into the IV&V Management Plan and updated prior to semi-annual reviews.

Activity 12 Production Oversight

Task #	Task Name	Subtask #	Subtask Description
12.1	Operational Change Tracking	12.1.1	Evaluate statewide system’s change request and defect tracking processes. Provide recommendations for improvement.
		12.1.2	Evaluate implementation of the process activities and request volumes to determine if processes are effective and are being followed. Provide recommendations for improvement.
12.2	Customer and User Operational Satisfaction		Evaluate user satisfaction with system to determine areas for improvement and provide recommendations for improvement.
12.3	Operational Goals		Evaluate impact of system on program goals and performance standards. Provide recommendations for improvement.
12.4	Operational Documentation		Evaluate operational plans and processes. Provide recommendations for improvement.

The IV&V role in Production Oversight includes:

- Reviewing processes associated with changes to software corrections, and promotions, and demotions of releases related to the production environment
- Determining whether the current processes are capable of handling the volume of change requests and proposed improvements
- Assessing customer and user satisfaction with surveys that focus on the user’s key quality requirements
- Assisting the project in defining and meeting operational and performance goals
- Evaluating operational documentation for structure and clarity and confirming the organization adheres to its own policies, objectives and procedures
- Verifying that processes and equipment are in place to handle both daily operations and back-up and recovery situations



The SLI IV&V Team will review the Implementation Contractor's Project Implementation Plans, Operations Plans, and System Implementation Reports on an ongoing basis to verify that all program goals and performance standards are being achieved. The primary documentation anticipated from the Implementation Contractor includes the System Implementation Plan, the System Implementation Report, an Operations Manual, and a Disaster Recovery and Business Continuity Plan. Operations Oversight is the umbrella covering the entire system and information for it is collected throughout the project.

The processes and activities associated with disaster recovery and business continuity are reviewed in full and assessed for their completeness. The impact to equipment and business processes are reviewed as well as the timeliness with which a planned recovery effort can be implemented is evaluated.

As part of the SQM³ methodology, SLI has documented and catalogued Operations Oversight checklists that are used to evaluate operations procedures before and after the roll-out of a new system. These checklists include the Disaster Recovery Quality Checklist, the Turnover Plan Quality Checklist and the Implementation Plan Quality Checklist.

Task 12.1: Operational Change Tracking

The SLI IV&V Team will review the project's integrated change control process and change request process as well as the project's defect management and reporting processes. IV&Vs approach to the assessment is to conduct interview sessions with team members who support operational change activities and to review any project documentation that may be related to change control and defect management.

IV&V will review how changes are approved, controlled and reported, and how the change process itself is audited to ensure the correct artifacts are being tracked correctly. The assessment will ensure that the processes and tools are in place for establishing and maintaining the integrity of various project and operational artifacts.

IV&V will also review the defect tracking processes and tools to determine if they adequately meet the operational needs of the project, can handle the volume of change requests that are being generated, and can provide the reports necessary to identify whether certain components are producing more defects than others.

Task 12.2: Customer and User Operational Satisfaction

The ultimate goal of the new BAM Project is to function properly in production. Beyond the obvious need to have a system that performs correctly for the end-user field staff, there are the production "back office" functions that need to operate smoothly. The Customer and User Operational Satisfaction review determines if the products, processes, and procedures associated with a successful post-implementation are completed and of high quality.

This is typically accomplished by the use of Customer-User Operational Satisfaction Surveys which are developed and distributed to the BAM Project stakeholders, customers or users. A formal assessment of the processes and survey results will then be reviewed by the IV&V Team to determine their satisfaction with the new system and contractor will document areas for improvement as appropriate.

Task 12.3: Operational Goals

The SLI IV&V Team will evaluate BAM to validate that it is meeting the operational program goals as defined in the BAM contract. This information will be gathered through a combination of stakeholder interviews and objective observations/review of system and user reports. IV&V will assist the operations team in defining service level agreements and monitoring that those agreements are being met.

IV&V will review that the alignment of the contractor's performance goals and objectives are aligned with the overall goals and objectives of the state. The SLI team will verify the contractor's project goals and performance standards remain intact and consistent throughout the development and implementation of the project. The SLI team will also identify any deficiencies or risks to achieving the operational goals and objectives.

**Task 12.4: Operational Documentation**

SLI will verify and validate that the operations plans and process are documented and in place. The project documentation will be reviewed to make sure that it reflects that the system as delivered and incorporates any final changes that were implemented as a result of UAT or performance tuning.

The IV&V Team comprehensively reviews the Contractor's Project Implementation Plan, Operations Plan, and System Implementation Reports on an ongoing basis to verify that all program goals and performance standards are being achieved. The primary documentation anticipated from the Contractor includes the System Implementation Plan, the System Implementation Report, an Operations Manual, and a Disaster Recovery and Business Continuity Plan.

State Roles:

- Provide project documentation, plans, procedures and other system documentation to IV&V in the evaluation of the operational approach and processes for BAM
- Work with IV&V to modify the standard Operational Readiness Quality Checklists to ensure full coverage for BAM
- Review, provide feedback, and approve IV&V Findings and Recommendations for inclusion in project process improvement
- Provide access to users and customers of the system in order to evaluate user and customer satisfaction

IV&V Contractor Roles:

- Provide access to performance testing results and service level agreements with the state
- Provide access to the technical staff supporting operational readiness
- Work with IV&V to ensure that IV&V Findings and Recommendations for Production Oversight are clearly understood and actionable
- Provide an understanding of the approach, plans, and procedure for testing the operational readiness of the system before go-live
- Provide operational documentation including the System Implementation Plan, the System Implementation Report, an Operations Manual, and a Disaster Recovery and Business Continuity Plan

This activity and its associated tasks provide input to IV&V Review(s). Activities are selected for IV&V review(s) depending on multiple factors, including project lifecycle phase, State concerns, and industry standards. Selected activities and tasks are incorporated into the IV&V Management Plan and updated prior to semi-annual reviews.

Activity 13: Other Services

SLI Global Solutions (SLI) understands and appreciates the need for large software project's to consider options for additional services. SLI would like to provide as part of this overall proposal effort, additional services that contractor believe offer considerable value-add to the BAM project.

With the new enabling technology the State is implementing for BAM, it is important that State ensure that the system is being built right, with standards based development practices. Contractor believe that offering additional services in the form of software architectural and code reviews and software test execution services are areas that SLI is uniquely positioned to offer:

- Test Execution
- Code Review

SLI is offering these additional services as point-in-time, on-going or phase appropriate services that are complimentary to the current IV&V scope of work by providing additional in-depth code review and test execution services as needed by the BAM project. Contractor believes the SLI is in unique position to offer these core services.



Requests for new activities and tasks or changes to services provided via this Contract may occur within the duration of this Contract. Such changes will be administered in accordance with Section 1.404 Change Management and Section 2.024 Change Request. The following information is intended to facilitate the handling of such requests so that only those with a solid business case acceptable to the State can be incorporated into the project.

Additional service(s) requested will be documented using a Statement of Work and be subject to a rigorous review process established by the MDOS DSA Director before being submitted to the Contractor for impact assessment and estimates. The State review process will help ensure that only requests with an obvious business case are forwarded to the Contractor for such assessments.

Requests that the State deems potentially viable pursuant to preliminary estimates will be passed on to the Contractor and authorized for impact assessment (impact on existing plans, approach, labor and cost proposal, etc.) for that request.

Note: The additional services or tasks must not impact the schedule, approach, service level, cost, or other activities and tasks requested in this Contract without the explicit acknowledgement and authorization of the MDOS DSA Director.

Tasks

- Provide preliminary estimates for additional services and tasks as approved by the MDOS DSA Director.
- Provide an impact assessment, with elements identified above, for additional tasks and services.
- Provide the services and tasks authorized.

Deliverable(s)

- To be determined in the Statement of Work.

Acceptance Criteria

- Acceptance criteria of additional services and tasks will be identified as part of the Statement of Work.

1.200 Roles and Responsibilities

1.201 CONTRACTOR STAFF, ROLES, AND RESPONSIBILITIES

A. Contractor Staff

SLI Global Solutions' Single Point of Contact (SPOC) for supporting the management of the Contract, facilitating dispute resolution, and advising the State of performance under the terms and conditions of the Contract shall be the Senior Vice President of Government Solutions, Mr. Steven Esposito. His contact information is:

Steven Esposito, PMP, CRISC – Senior Vice President of Government Solutions
SLI Global Solutions
216 16th Street, Suite 700, Denver, CO 80202
480.620.5907 direct
303.575.6881 x 118 office

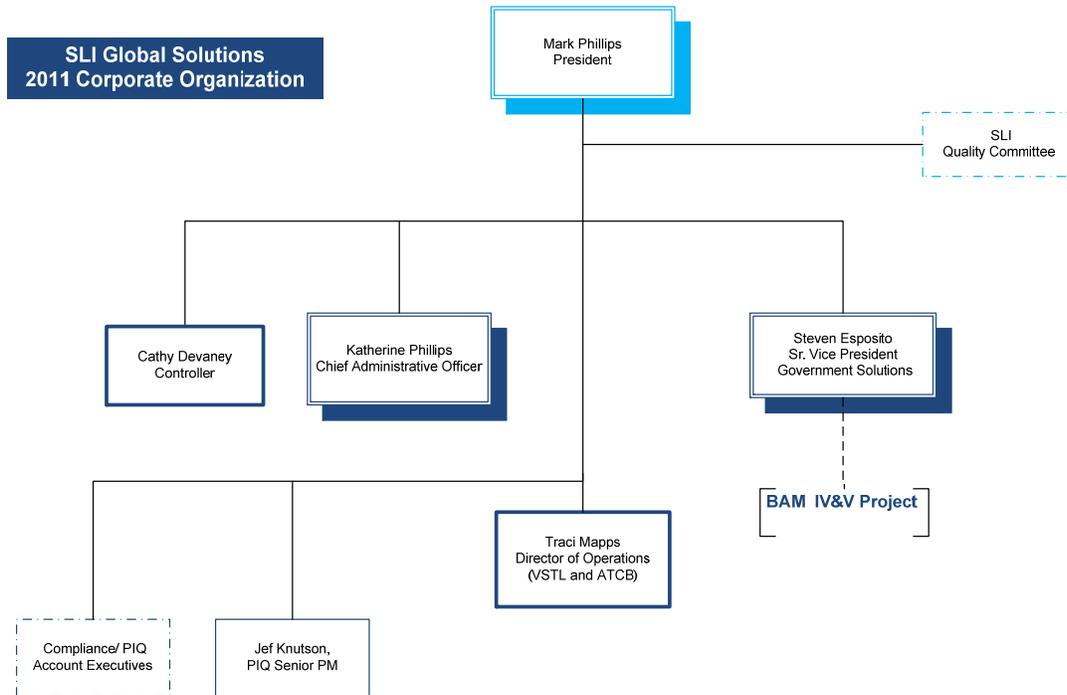
The duties of the SPOC shall include, but not be limited to:

- supporting the management of the Contract,
- facilitating dispute resolution, and
- advising the State of performance under the terms and conditions of the Contract.



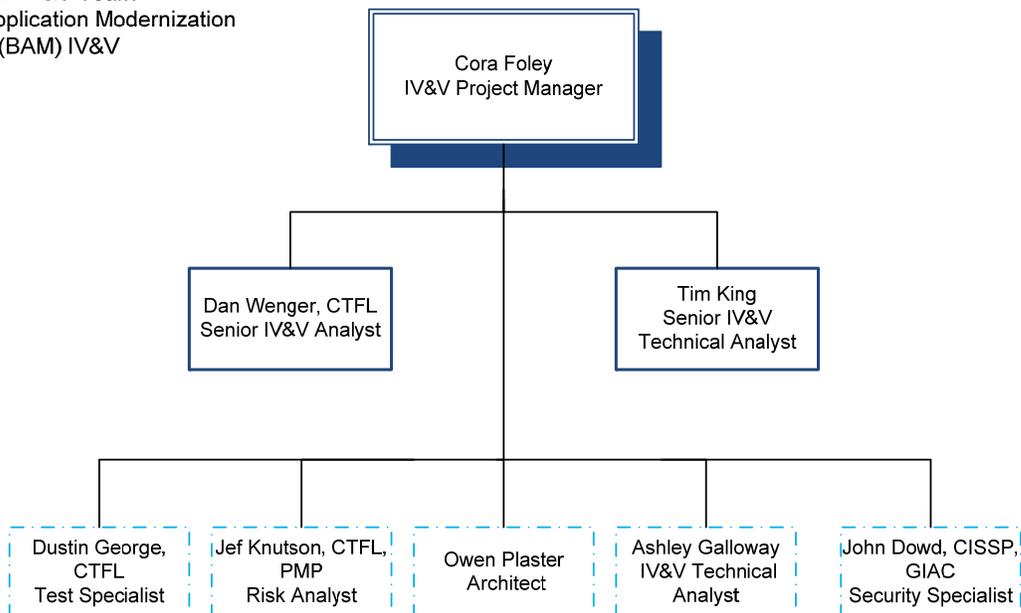
The State reserves the right to require a change in the current SPOC if the assigned SPOC is not, in the opinion of the State, adequately serving the needs of the State.

The following organizational chart shows the SLI Global Solutions corporate organization. The contractor will provide an updated organizational chart should there be changes to this organization.



The following diagram shows the IV&V team organization. The contractor will provide an updated diagram should there be changes to this organization.

SLI IV&V Team
Business Application Modernization
(BAM) IV&V





All personnel on this contract are considered key personnel and as such are subject to the State's interview and approval process. Any key staff substitution must have the prior approval of the State. The following key personnel will support the engagement:

- Cora Foley – IV&V Project Manager
- Tim King – Senior IV&V Technical Analyst
- Dan Wenger, CTFL – Senior IV&V Business Analyst

B. On Site Work Requirements

As described in Activity 1, Tasks 1.2 and 1.3, the IV&V Contractor will perform both on-site and off-site work. The contractor will describe in their Project Plan (see 1.104, Deliverable 1.1, Project Plan v1) both on-site and off-site work requirements. However, **no work will be performed offshore.**

1. Location of Work

On-site work is to be performed at a State facility located in Dimondale, Michigan. Off-site work is to be performed at the IV&V Contractor's place of business.

The HP personnel working on this contract are located in Dublin, Ohio. Trips to this location may be required.

2. Hours of Operation

- a. Normal State working hours are 8:00 a.m. to 5:00 p.m. EST, Monday through Friday, with work performed as necessary after those hours to meet project deadlines. No overtime will be authorized or paid. Key administrative, computing system, business, and contract decisions must be made within the context of the project's governance model, which is executed within normal state working hours.
- b. The State is not obligated to provide State management of assigned work outside of normal State working hours. The State reserves the right to modify the work hours in the best interest of the project.
- c. The Contractor shall observe the same standard holidays as State employees. The State does not compensate for holiday pay.

3. Travel/Housing Accommodations:

- a. No travel or expenses will be reimbursed, including travel costs related to training provided to the State by the Contractor.
- b. Travel time will not be reimbursed.
- c. The State is not responsible for providing the use of vehicles for the Contractor.
- d. The State is not responsible for providing housing accommodations to the Contractor.

4. Additional Security and Background Check Requirements:

Department of state data is highly sensitive. Before any Contractor staff may have access to State facilities and systems, they must submit to an enhanced level of background checks. The following checks will be required of the successful Contractor for any staff assigned to this project, and results will be used to determine Contractor staff eligibility for working within State facilities and systems.

- The Contractor must present certifications evidencing satisfactory Michigan State Police Background checks, ICHAT (Internet Criminal History Access Tool) and drug tests for all staff identified for assignment to this project.
- In addition, proposed Contractor personnel will be required to complete and submit an RI-8 Fingerprint Card for the National Crime Information Center (NCIC) Finger Prints, if required by project.

Contractor will pay for all costs associated with ensuring their staff meets all requirements.



1.202 STATE STAFF, ROLES, AND RESPONSIBILITIES

The State will provide the following resources for the Contractor’s use on this project:

- Work space
- Desk
- PC workstation
- Printer
- Access to copiers and fax machine
- Access to the state network

Note: The State reserves the right to inspect and scan any equipment supplied by the contractor that will be connected to the State’s network.

The Contractor is responsible for the return of all State issued equipment in the same condition as when provided by the State, reasonable wear and tear expected, upon Contractor staff release from the project.

Executive Committee Representatives

Executive Committee Representatives will provide key milestones, approval, and will be available on an as-needed basis. The Executive Committee Representatives will have the final responsibility for:

- Resolving major project issues escalated to their level
- Approving/signing off on key and final deliverables
- Ensuring timely availability of project resources

Name	Agency/Division	Title
David Behen	DTMB	CIO
Mike Senyko	MDOS	Chief of Staff

State Project Liaisons- (DTMB and MDOS)

The state will provide project managers who will be responsible for ensuring that the IV & V project manager has access to appropriate staff, information, and any other items required for the contractor to meet the terms of their contract. It will also be the liaison’s role to ensure coordination and cooperation between the development vendor and the IV & V staff.

The State’s Project Liaison will provide the following services:

- Review project plan, status, and issues
- Resolve deviations from project plan
- Provide acceptance sign-off
- Provide State facilities, as needed
- Coordinate the State resources necessary for the project
- Facilitate timely availability of State resources
- Facilitate coordination between various external contractors
- Escalate outstanding/high priority issues
- Conduct regular and ongoing review of the project to confirm that it meets original objectives and requirements
- Document and archive all important project decisions
- Arrange, schedule and facilitate State staff attendance at all project meetings.

Name	Agency/Division	Title
James McFarlane	DTMB	Information Officer for MDOS
Rose Jarois	MDOS	Director, Bureau of Business Integration



DTMB shall provide a Contract Administrator whose duties shall include, but not be limited to, supporting the management of the Contract.

Name	Agency/Division	Title
Joe Kelly	DTMB, Procurement	Buyer/Contract Administrator

1.203 OTHER ROLES AND RESPONSIBILITIES

Reserved.

1.300 Project Plan

1.301 PROJECT PLAN MANAGEMENT

Project Control

1. The Contractor will carry out this project under the direction and control of MDOS and DTMB.
2. Within five (5) working days of the execution of the Contract, the Contractor will submit to the State project manager(s) for final approval of the Project Plan V1 deliverable. This project plan must be in agreement with Article 1, Section 1.104 Work and Deliverables, and must include the following:
 - The Contractor’s project organizational structure.
 - The Contractor’s staffing table with names and title of personnel assigned to the project. This information must be in agreement with staffing of accepted proposal. Necessary substitutions due to change of employment status and other unforeseen circumstances may only be made with prior approval of the State.
 - The project work breakdown structure (WBS) showing sub-projects, activities and tasks, and resources required and allocated to each.
 - The time-phased plan in the form of a graphic display, showing each event, task, and decision point in the WBS.
3. The Contractor will manage the project in accordance with the State Unified Information Technology Environment (SUITE) methodology, which includes standards for project management, systems engineering, and associated forms and templates which is available at <http://michigan.gov/suite>
 - a. The Contractor will use an automated tool for planning, monitoring, and tracking the Contract’s progress and the level of effort of any Contractor personnel spent performing Services under the Contract. The tool shall have the capability to produce:
 - Staffing tables with names of personnel assigned to Contractor tasks.
 - Project plans showing tasks, subtasks, deliverables, and the resources required and allocated to each.
 - Updates must include actual time spent on each task and a revised estimate to complete.
 - Graphs showing critical events, dependencies and decision points during the course of the Contract.
 - b. Any tool(s) used by Contractor for such purposes must produce information of a type and in a manner and format that will support reporting in compliance with the State standards.

Orientation Meeting

Upon fifteen (15) calendar days from execution of the Contract, the Contractor will be required to attend an orientation meeting to discuss the content and procedures of the Contract. The meeting will be held in Lansing, Michigan, at a date and time mutually acceptable to the State and the Contractor. The State shall bear no cost for the time and travel of the Contractor for attendance at the meeting.

1.302 REPORTS

Reporting formats are addressed in Section 1.104 Work and Deliverables.



1.400 Project Management

1.401 ISSUE MANAGEMENT

An issue is an identified event that if not addressed may affect schedule, scope, quality, or budget.

The Contractor shall maintain an issue log for issues relating to the provision of services under this Contract. The issue management log must be communicated to the State's Project Manager on an agreed upon schedule, with email notifications and updates. The issue log must be updated and must contain the following minimum elements:

- Description of issue
- Issue identification date
- Responsibility for resolving issue.
- Priority for issue resolution (to be mutually agreed upon by the State and the Contractor)
- Resources assigned responsibility for resolution
- Resolution date
- Resolution description

Issues shall be escalated for resolution from level 1 through level 3, as defined below:

Level 1 – Business leads

Level 2 – Project Managers

Level 3 – Executive Subject Matter Experts (SME's)

1.402 RISK MANAGEMENT

A risk is an unknown circumstance or event that, if it occurs, may have a positive or negative impact on the project.

The Contractor is responsible for establishing a risk management plan and process, including the identification and recording of risk items, prioritization of risks, definition of mitigation strategies, monitoring of risk items, and periodic risk assessment reviews with the State.

A risk management plan format shall be submitted to the State for approval within twenty (20) business days after the effective date of the contract. The risk management plan will be developed during the initial planning phase of the project, and be in accordance with the State's PMM methodology. Once both parties have agreed to the format of the plan, it shall become the standard to follow for the duration of the contract. The plan must be updated bi-weekly, or as agreed upon.

The Contractor shall provide the tool to track risks. The Contractor will work with the State and allow input into the prioritization of risks.

The Contractor is responsible for identification of risks for each phase of the project. Mitigating and/or eliminating assigned risks will be the responsibility of the Contractor. The State will assume the same responsibility for risks assigned to them.

1.403 CHANGE MANAGEMENT

Change management is defined as the process to communicate, assess, monitor, and control all changes to system resources and processes. The State also employs change management in its administration of the Contract.

If a proposed contract change is approved by the Agency, the Contract Administrator will submit a request for change to the Department of Technology, Management and Budget, Procurement Buyer, who will make recommendations to the Director of Procurement regarding ultimate approval/disapproval of change request. If the DTMB Procurement Director agrees with the proposed modification, and all required approvals are obtained (including State Administrative Board), the Procurement Buyer will issue an addendum to the Contract, via a Contract Change Notice. **Contractors who provide products or services prior to the**



issuance of a Contract Change Notice by the DTMB Procurement, risk non-payment for the out-of-scope/pricing products and/or services.

The Contractor must employ change management procedures to handle such things as “out-of-scope” requests or changing business needs of the State while the migration is underway.

The Contractor will employ the change control methodologies to justify changes in the processing environment, and to ensure those changes will not adversely affect performance or availability.

1.500 Acceptance

1.501 CRITERIA

The specific criteria, processes and/or procedures for each deliverable are identified in Section 1.104 Work and Deliverables.

To the extent known, requirements for the deliverables have been documented in this contract. However, prior to the creation and submission of each deliverable, the Contractor will work with the MDOS Executive Project Sponsors and DTMB/MDOS Information Officer to determine and agree upon the final format, content, acceptance criteria, and review process for the deliverable. The result will be a Deliverables Expectation Document (DED) for each deliverable.

The Contractor shall propose a format for each deliverable and gain State approval prior to preparation of the deliverable. This approval process shall include submission of a DED. The sole purpose of the DED is to ensure that a common understanding exists between the State and the Contractor regarding the scope and content (depth and breadth) of the deliverable prior to the Contractor beginning work on the deliverable. The complexity of the DED should be proportional to the complexity of the deliverable. The DED will contain items such as:

- Deliverable objectives
- An outline of the deliverable, table of contents, sample format, sample pages, and a general description of the information that will be contained in the deliverable
- Deliverable acceptance criteria which is consistent with the requirements of the contract

1.502 FINAL ACCEPTANCE

Final acceptance is expressly conditioned upon completion of all tasks and deliverables in the project plan, as approved, and the certification by MDOS that the Contractor has met the defined requirements.

1.600 Compensation and Payment

1.601 COMPENSATION AND PAYMENT

Method of Payment

The Contractor will be paid upon the completion of project activities base on the firm fixed deliverable model provided below. The following activities and deliverables are optional and at the sole discretion of the State and may be executed individually or in whole. The contractor will provide appropriate staff according to each deliverable chosen by the State.



Activity	Tasks/Deliverables	Total Deliverable Cost (\$)	Comments
1. IV&V Project Management	1.1: IV&V Management Plan	\$ 19,770.00	Per review/report
	1.2: Initial Review	\$ 3,300.00	
	1.3: Periodic Review(s)	\$ 13,200.00	
	1.4: Executive Briefing(s)	\$ 14,760.00	
	1.5: Monthly Status Report(s)	\$113,860.00	
2. Planning Oversight	2.1: Verify obligations of vendor are clearly defined	\$9,618.33	Per review
3. Project Management	3.1: Project Sponsorship – Assess Only	\$16,490.00	Per review
	3.2.1 & 3.2.2: Management Assessment		
	3.3: Project Management		
	3.4: Communication Management		
	3.5: Configuration Management		
	3.6: Project Estimating and Scheduling		
	3.7: Project Personnel		
	3.8: Project Organization		
4. Quality Management	4.1: Quality Assurance	\$10,305.00	Per review
5. Requirements Management	5.1: Requirements Management	\$19,786.67	Per review
	5.2: Security Requirements		
	5.3: Requirements Analysis		
	5.4: Interface Requirements		
	5.5: Requirements Allocation and Specification		
6. Production	6.1: System Hardware	\$19,236.67	Per review
	6.2: System Software		
	6.3: Database Software		
	6.4: System Capacity		
7. Development Environment	7.1: Development Hardware	\$16,490.00	Per review
	7.2: Development Software		
8. Testing Environment	8.1: Testing Hardware	\$13,741.67	Per review
	8.2: Testing Software		
9. Software Development	9.1: High Level Design	\$27,481.67	Per review
	9.2: Detailed Design		
	9.3: Job Control		
	9.4: Code		
	9.5: Unit Test		
10. System and Acceptance Testing	10.1: System Integration Test	\$21,985.00	Per review
	10.2: Acceptance and Turnover		
11. Data Management	11.1: Database Design	\$8,250.00	Per review
12. Operational Oversight	12.1: Operational Change Tracking	\$12,366.33	Per review
	12.2: Customer and User Operational Satisfaction		
	12.3: Operational Goals		
	12.4: Operational Documentation		

Activity 14 Contingency Hours for Other Services

The State has identified staffing positions that may be utilized during this contract. The hourly rates for these positions are provided in the table below.

To the extent the parties agree that certain specific services must be provided on a time and materials basis, such services must be provided at the Labor Rates (Not to Exceed Hourly Rate cost column). Future amendments may utilize this rate structure, as agreed between the Contractor and State. Additionally the



Contractor may utilize the rates in order to provide the State with a not to exceed fixed price. Prices quoted here will be used for change, addition, and / or deletion of work associated with this contract.

Category	Not to Exceed Hourly Rate (Year 1-5)	Estimated Hours (Year 1-5)	Total Price Estimate Multiply NTE Hourly Rate x Estimated Hours
Configuration Management	\$ 150.00	4960	\$744,000.00
Comet Framework	\$175.00	4960	\$868,000.00
Resource Leveling	\$190.00	4960	\$942,400.00
Additional Professional Services Rate Card Estimated Cost	N/A	14,880	\$2,554,400.00

Notes:

1. Hourly Rates quoted are inclusive of vendor staff and management overhead, travel and all other expenses. Estimated Hours per year and Extended Price are nonbinding and will be used at the State’s discretion to determine best value to the State, and to estimate the Contract value for the awarded Bidder.
2. The State may choose to utilize some or all of the hours quoted. All hours shall to be billed monthly at actual hours utilizing the quoted.
3. Hourly rates quoted are firm, fixed rates for the duration of the contract.

Travel

The State will not pay for any travel expenses, including hotel, mileage, meals, parking, etc. Travel time will not be reimbursed.

Statements of Work and Issuance of Purchase Orders

- Unless otherwise agreed by the parties, each Statement of Work will include:
 1. Background
 2. Project Objective
 3. Scope of Work
 4. Deliverables
 5. Acceptance Criteria
 6. Project Control and Reports
 7. Specific Department Standards
 8. Payment Schedule
 9. Travel and Expenses
 10. Project Contacts
 11. Agency Responsibilities and Assumptions
 12. Location of Where the Work is to be performed
 13. Expected Contractor Work Hours and Conditions
- The parties agree that the Services/Deliverables to be rendered by Contractor pursuant to this Contract (and any future amendments of it) will be defined and described in detail in Statements of Work or Purchase Orders (PO) executed under this Contract. Contractor shall not be obliged or authorized to commence any work to implement a Statement of Work until authorized via a PO issued against this Contract. Contractor shall perform in accordance with this Contract, including the Statements of Work/Purchase Orders executed under it.

Invoicing

Contractor will submit properly itemized invoices to



DTMB – Financial Services
Accounts Payable
P.O. Box 30026
Lansing, MI 48909

or

DTMB-Accounts-Payable@michigan.gov

. Invoices must provide and itemize, as applicable:

- Contract number;
- Purchase Order number
- Contractor name, address, phone number, and Federal Tax Identification Number;
- Description of any commodities/hardware, including quantity ordered;
- Date(s) of delivery and/or date(s) of installation and set up;
- Price for each item, or Contractor's list price for each item and applicable discounts;
- Maintenance charges;
- Net invoice price for each item;
- Shipping costs;
- Other applicable charges;
- Total invoice price; and
- Payment terms, including any available prompt payment discount.

Incorrect or incomplete invoices will be returned to Contractor for correction and reissue.

1.602 HOLDBACK

The State shall have the right to hold back an amount equal to ten percent (10%) of all amounts invoiced by Contractor for Services/Deliverables. The amounts held back shall be released to Contractor after the State has granted Final Acceptance of the semi-annual reviews. No hold back will be applied to "IV&V Project Management" services as defined in Activity 1 or "Other Services" delivered under Activity 14.



Article 2, Terms and Conditions

2.000 Contract Structure and Term

2.001 CONTRACT TERM

This Contract is for a period of 3 years beginning September 1, 2012 through August 31, 2015. All outstanding Purchase Orders must also expire upon the termination for any of the reasons listed in **Section 2.150** of the Contract, unless otherwise extended under the Contract. Absent an early termination for any reason, Purchase Orders issued but not expired, by the end of the Contract's stated term, shall remain in effect for the balance of the fiscal year for which they were issued.

2.002 OPTIONS TO RENEW

This Contract may be renewed in writing by mutual agreement of the parties not less than 30 days before its expiration. The Contract may be renewed for up to 2 additional 1 year periods.

2.003 LEGAL EFFECT

Contractor accepts this Contract by signing two copies of the Contract and returning them to the Purchasing Operations. The Contractor shall not proceed with the performance of the work to be done under the Contract, including the purchase of necessary materials, until both parties have signed the Contract to show acceptance of its terms, and the Contractor receives a contract release/purchase order that authorizes and defines specific performance requirements.

Except as otherwise agreed in writing by the parties, the State shall not be liable for costs incurred by Contractor or payment under this Contract, until Contractor is notified in writing that this Contract or Change Order has been approved by the State Administrative Board (if required), signed by all the parties and a Purchase Order against the Contract has been issued.

2.004 ATTACHMENTS & EXHIBITS

All Attachments and Exhibits affixed to any and all Statement(s) of Work, or appended to or referencing this Contract, are incorporated in their entirety and form part of this Contract.

2.005 ORDERING

The State must issue an approved written Purchase Order, Blanket Purchase Order, Direct Voucher or Procurement Card Order to order any Services/Deliverables under this Contract. All orders are subject to the terms and conditions of this Contract. No additional terms and conditions contained on either a Purchase Order or Blanket Purchase Order apply unless they are specifically contained in that Purchase Order or Blanket Purchase Order's accompanying Statement of Work. Exact quantities to be purchased are unknown; however, the Contractor will be required to furnish all such materials and services as may be ordered during the Contract period. Quantities specified, if any, are estimates based on prior purchases, and the State is not obligated to purchase in these or any other quantities.

2.006 ORDER OF PRECEDENCE

The Contract, including any Statements of Work and Exhibits, to the extent not contrary to the Contract, each of which is incorporated for all purposes, constitutes the entire agreement between the parties with respect to the subject matter and supersedes all prior agreements, whether written or oral, with respect to the subject matter and as additional terms and conditions on the purchase order must apply as limited by **Section 2.005**.

In the event of any inconsistency between the terms of the Contract and a Statement of Work, the terms of the Statement of Work shall take precedence (as to that Statement of Work only); provided, however, that a Statement of Work may not modify or amend the terms of the Contract. The Contract may be modified or amended only by a formal Contract amendment.



2.007 HEADINGS

Captions and headings used in the Contract are for information and organization purposes. Captions and headings, including inaccurate references, do not, in any way, define or limit the requirements or terms and conditions of the Contract.

2.008 FORM, FUNCTION & UTILITY

If the Contract is for use of more than one State agency and if the Deliverable/Service does not meet the form, function, and utility required by that State agency, that agency may, subject to State purchasing policies, procure the Deliverable/Service from another source.

2.009 REFORMATION AND SEVERABILITY

Each provision of the Contract is severable from all other provisions of the Contract and, if one or more of the provisions of the Contract is declared invalid, the remaining provisions of the Contract remain in full force and effect.

2.010 Consents and Approvals

Except as expressly provided otherwise in the Contract, if either party requires the consent or approval of the other party for the taking of any action under the Contract, the consent or approval must be in writing and must not be unreasonably withheld or delayed.

2.011 NO WAIVER OF DEFAULT

If a party fails to insist upon strict adherence to any term of the Contract then the party has not waived the right to later insist upon strict adherence to that term, or any other term, of the Contract.

2.012 SURVIVAL

Any provisions of the Contract that impose continuing obligations on the parties, including without limitation the parties' respective warranty, indemnity and confidentiality obligations, survive the expiration or termination of the Contract for any reason. Specific references to survival in the Contract are solely for identification purposes and not meant to limit or prevent the survival of any other section

2.020 Contract Administration

2.021 ISSUING OFFICE

This Contract is issued by the Department of Technology, Management and Budget, Purchasing Operations and the Michigan Department of State (collectively, including all other relevant State of Michigan departments and agencies, the "State"). Purchasing Operations is the sole point of contact in the State with regard to all procurement and contractual matters relating to the Contract. The Purchasing Operations Contract Administrator for this Contract is:

Joe Kelly, Buyer
Procurement
Department of Technology, Management and Budget
Mason Bldg., 2nd Floor
PO Box 30026
Lansing, MI 48909
Email: hartt3@michigan.gov
Phone: 517-373-3993

2.022 CONTRACT COMPLIANCE INSPECTOR

The Director of Purchasing Operations directs the person named below, or his or her designee, to monitor and coordinate the activities for the Contract on a day-to-day basis during its term. **Monitoring Contract activities does not imply the authority to change, modify, clarify, amend, or otherwise alter the prices, terms, conditions and specifications of the Contract. Purchasing Operations is the only State office**



authorized to change, modify, amend, alter or clarify the prices, specifications, terms and conditions of this Contract. The Contract Compliance Inspector for this Contract is:

Linda Myers, DTMB Client Services Director for MDOS
MyersL@michigan.gov
Phone: 517-636-4028

2.023 PROJECT MANAGER

The following individual will oversee the project:

Linda Myers, DTMB Client Services Director for MDOS
MyersL@michigan.gov
Phone: 517-636-4028

2.024 CHANGE REQUESTS

The State reserves the right to request from time to time any changes to the requirements and specifications of the Contract and the work to be performed by the Contractor under the Contract. During the course of ordinary business, it may become necessary for the State to discontinue certain business practices or create Additional Services/Deliverables. At a minimum, to the extent applicable, Contractor shall provide a detailed outline of all work to be done, including tasks necessary to accomplish the Additional Services/Deliverables, timeframes, listing of key personnel assigned, estimated hours for each individual per task, and a complete and detailed cost justification.

If the State requests or directs the Contractor to perform any Services/Deliverables that are outside the scope of the Contractor's responsibilities under the Contract ("New Work"), the Contractor must notify the State promptly before commencing performance of the requested activities it believes are New Work. If the Contractor fails to notify the State before commencing performance of the requested activities, any such activities performed before the Contractor gives notice shall be conclusively considered to be in-scope Services/Deliverables and not New Work.

If the State requests or directs the Contractor to perform any services or provide deliverables that are consistent with and similar to the Services/Deliverables being provided by the Contractor under the Contract, but which the Contractor reasonably and in good faith believes are not included within the Statements of Work, then before performing such Services or providing such Deliverables, the Contractor shall notify the State in writing that it considers the Services or Deliverables to be an Additional Service/Deliverable for which the Contractor should receive additional compensation. If the Contractor does not so notify the State, the Contractor shall have no right to claim thereafter that it is entitled to additional compensation for performing that Service or providing that Deliverable. If the Contractor does so notify the State, then such a Service or Deliverable shall be governed by the Change Request procedure in this Section.

In the event prices or service levels are not acceptable to the State, the Additional Services or New Work shall be subject to competitive bidding based upon the specifications.

(1) **Change Request at State Request**

If the State requires Contractor to perform New Work, Additional Services or make changes to the Services that would affect the Contract completion schedule or the amount of compensation due Contractor (a "Change"), the State shall submit a written request for Contractor to furnish a proposal for carrying out the requested Change (a "Change Request").

(2) **Contractor Recommendation for Change Requests:**

Contractor shall be entitled to propose a Change to the State, on its own initiative, should Contractor believe the proposed Change would benefit the Contract.

(3) **Upon receipt of a Change Request or on its own initiative, Contractor shall examine the implications of the requested Change on the technical specifications, Contract schedule and price of the Deliverables and Services and shall submit to the State without undue delay a written proposal for carrying out the Change. Contractor's proposal shall include any associated changes in the technical specifications, Contract**



schedule and price and method of pricing of the Services. If the Change is to be performed on a time and materials basis, the Amendment Labor Rates shall apply to the provision of such Services. If Contractor provides a written proposal and should Contractor be of the opinion that a requested Change is not to be recommended, it shall communicate its opinion to the State but shall nevertheless carry out the Change as specified in the written proposal if the State directs it to do so.

- (4) By giving Contractor written notice within a reasonable time, the State shall be entitled to accept a Contractor proposal for Change, to reject it, or to reach another agreement with Contractor. Should the parties agree on carrying out a Change, a written Contract Change Notice must be prepared and issued under this Contract, describing the Change and its effects on the Services and any affected components of this Contract (a "Contract Change Notice").
- (5) No proposed Change shall be performed until the proposed Change has been specified in a duly executed Contract Change Notice issued by the Department of Technology, Management and Budget, Purchasing Operations.
- (6) If the State requests or directs the Contractor to perform any activities that Contractor believes constitute a Change, the Contractor must notify the State that it believes the requested activities are a Change before beginning to work on the requested activities. If the Contractor fails to notify the State before beginning to work on the requested activities, then the Contractor waives any right to assert any claim for additional compensation or time for performing the requested activities. If the Contractor commences performing work outside the scope of this Contract and then ceases performing that work, the Contractor must, at the request of the State, retract any out-of-scope work that would adversely affect the Contract.

2.025 NOTICES

Any notice given to a party under the Contract must be deemed effective, if addressed to the party as addressed below, upon: (i) delivery, if hand delivered; (ii) receipt of a confirmed transmission by facsimile if a copy of the notice is sent by another means specified in this Section; (iii) the third Business Day after being sent by U.S. mail, postage pre-paid, return receipt requested; or (iv) the next Business Day after being sent by a nationally recognized overnight express courier with a reliable tracking system.

State:

State of Michigan

Procurement

Attention: Joe Kelly

PO Box 30026

530 West Allegan

Lansing, Michigan 48909

Contractor: SLI Global Solutions, Inc.

Name: Steven J Esposito

Address: 216 16th Street, Suite 700

Denver, CO, 80202

Either party may change its address where notices are to be sent by giving notice according to this Section.

2.026 BINDING COMMITMENTS

Representatives of Contractor must have the authority to make binding commitments on Contractor's behalf within the bounds set forth in the Contract. Contractor may change the representatives from time to time upon giving written notice.

2.027 RELATIONSHIP OF THE PARTIES

The relationship between the State and Contractor is that of client and independent contractor. No agent, employee, or servant of Contractor or any of its Subcontractors shall be deemed to be an employee, agent or servant of the State for any reason. Contractor shall be solely and entirely responsible for its acts and the acts of its agents, employees, servants and Subcontractors during the performance of the Contract.



2.028 COVENANT OF GOOD FAITH

Each party shall act reasonably and in good faith. Unless stated otherwise in the Contract, the parties shall not unreasonably delay, condition or withhold the giving of any consent, decision or approval that is either requested or reasonably required of them in order for the other party to perform its responsibilities under the Contract.

2.029 ASSIGNMENTS

Neither party may assign the Contract, or assign or delegate any of its duties or obligations under the Contract, to any other party (whether by operation of law or otherwise), without the prior written consent of the other party; provided, however, that the State may assign the Contract to any other State agency, department, division or department without the prior consent of Contractor and Contractor may assign the Contract to an affiliate so long as the affiliate is adequately capitalized and can provide adequate assurances that the affiliate can perform the Contract. The State may withhold consent from proposed assignments, subcontracts, or novation's when the transfer of responsibility would operate to decrease the State's likelihood of receiving performance on the Contract or the State's ability to recover damages.

Contractor may not, without the prior written approval of the State, assign its right to receive payments due under the Contract. If the State permits an assignment, the Contractor is not relieved of its responsibility to perform any of its contractual duties and the requirement under the Contract that all payments must be made to one entity continues.

If the Contractor intends to assign the contract or any of the Contractor's rights or duties under the Contract, the Contractor must notify the State in writing at least 90 days before the assignment. The Contractor also must provide the State with adequate information about the assignee within a reasonable amount of time before the assignment for the State to determine whether to approve the assignment.

2.030 General Provisions

2.031 MEDIA RELEASES

News releases (including promotional literature and commercial advertisements) pertaining to the RFP and Contract or project to which it relates shall not be made without prior written State approval, and then only in accordance with the explicit written instructions from the State. No results of the activities associated with the RFP and Contract are to be released without prior written approval of the State and then only to persons designated.

2.032 CONTRACT DISTRIBUTION

Purchasing Operations retains the sole right of Contract distribution to all State agencies and local units of government unless other arrangements are authorized by Purchasing Operations.

2.033 PERMITS

Contractor must obtain and pay any associated costs for all required governmental permits, licenses and approvals for the delivery, installation and performance of the Services. The State shall pay for all costs and expenses incurred in obtaining and maintaining any necessary easements or right of way.

2.034 WEBSITE INCORPORATION

The State is not bound by any content on the Contractor's website, even if the Contractor's documentation specifically referenced that content and attempts to incorporate it into any other communication, unless the State has actual knowledge of the content and has expressly agreed to be bound by it in a writing that has been manually signed by an authorized representative of the State.

2.035 FUTURE BIDDING PRECLUSION

Contractor acknowledges that, to the extent this Contract involves the creation, research, investigation or generation of a future RFP; it may be precluded from bidding on the subsequent RFP. The State reserves the right to disqualify any Bidder if the State determines that the Bidder has used its position (whether as an



incumbent Contractor, or as a Contractor hired to assist with the RFP development, or as a Vendor offering free assistance) to gain a competitive advantage on the RFP

2.036 FREEDOM OF INFORMATION

All information in any proposal submitted to the State by Contractor and this Contract is subject to the provisions of the Michigan Freedom of Information Act, 1976 Public Act No. 442, as amended, MCL 15.231, et seq (the "FOIA").

2.037 DISASTER RECOVERY

Contractor and the State recognize that the State provides essential services in times of natural or man-made disasters. Therefore, except as so mandated by Federal disaster response requirements, Contractor personnel dedicated to providing Services/Deliverables under this Contract shall provide the State with priority service for repair and work around in the event of a natural or man-made disaster.

2.040 Financial Provisions

2.041 FIXED PRICES FOR SERVICES/DELIVERABLES

Each Statement of Work or Purchase Order issued under this Contract shall specify (or indicate by reference to the appropriate Contract Exhibit) the firm, fixed prices for all Services/Deliverables, and the associated payment milestones and payment amounts. The State may make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly, in amounts approved by the Contract Administrator, after negotiation. Contractor shall show verification of measurable progress at the time of requesting progress payments.

2.042 ADJUSTMENTS FOR REDUCTIONS IN SCOPE OF SERVICES/DELIVERABLES

If the scope of the Services/Deliverables under any Statement of Work issued under this Contract is subsequently reduced by the State, the parties shall negotiate an equitable reduction in Contractor's charges under such Statement of Work commensurate with the reduction in scope.

2.043 SERVICES/DELIVERABLES COVERED

The State shall not be obligated to pay any amounts in addition to the charges specified in this Contract for all Services/Deliverables to be provided by Contractor and its Subcontractors, if any, under this Contract.

2.044 INVOICING AND PAYMENT – IN GENERAL

- (a) Each Statement of Work issued under this Contract shall list (or indicate by reference to the appropriate Contract Exhibit) the prices for all Services/Deliverables, equipment and commodities to be provided, and the associated payment milestones and payment amounts.
- (b) Each Contractor invoice shall show details as to charges by Service/Deliverable component and location at a level of detail reasonably necessary to satisfy the State's accounting and charge-back requirements. Invoices for Services performed on a time and materials basis shall show, for each individual, the number of hours of Services performed during the billing period, the billable skill/labor category for such person and the applicable hourly billing rate. Prompt payment by the State is contingent on the Contractor's invoices showing the amount owed by the State minus any holdback amount to be retained by the State in accordance with **Section 1.600**.
- (c) Correct invoices shall be due and payable by the State, in accordance with the State's standard payment procedure as specified in 1984 Public Act No. 279, MCL 17.51 et seq., within 45 days after receipt, provided the State determines that the invoice was properly rendered.
- (d) All invoices should reflect actual work done. Specific details of invoices and payments shall be agreed upon between the Contract Administrator and the Contractor after the proposed Contract Agreement has been signed and accepted by both the Contractor and the Director of Purchasing Operations, Department of Management & Budget. This activity shall occur only upon the specific written direction from Purchasing Operations.



The specific payment schedule for any Contract(s) entered into, as the State and the Contractor(s) shall mutually agree upon. The schedule should show payment amount and should reflect actual work done by the payment dates, less any penalty cost charges accrued by those dates. As a general policy statements shall be forwarded to the designated representative by the 15th day of the following month.

The Government may make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly, in amounts approved by the Contract Administrator, after negotiation. Contractor must show verification of measurable progress at the time of requesting progress payments.

2.045 PRO-RATION

To the extent there are Services that are to be paid for on a monthly basis, the cost of such Services shall be pro-rated for any partial month.

2.046 ANTITRUST ASSIGNMENT

The Contractor assigns to the State any claim for overcharges resulting from antitrust violations to the extent that those violations concern materials or services supplied by third parties to the Contractor, toward fulfillment of this Contract.

2.047 FINAL PAYMENT

The making of final payment by the State to Contractor does not constitute a waiver by either party of any rights or other claims as to the other party's continuing obligations under the Contract, nor shall it constitute a waiver of any claims by one party against the other arising from unsettled claims or failure by a party to comply with this Contract, including claims for Services and Deliverables not reasonably known until after acceptance to be defective or substandard. Contractor's acceptance of final payment by the State under this Contract shall constitute a waiver of all claims by Contractor against the State for payment under this Contract, other than those claims previously filed in writing on a timely basis and still unsettled.

2.048 ELECTRONIC PAYMENT REQUIREMENT

Electronic transfer of funds is required for payments on State Contracts. Contractors are required to register with the State electronically at <http://www.cpexpress.state.mi.us>. As stated in Public Act 431 of 1984, all contracts that the State enters into for the purchase of goods and services shall provide that payment shall be made by electronic fund transfer (EFT).

2.050 Taxes

2.051 EMPLOYMENT TAXES

Contractor shall collect and pay all applicable federal, state, and local employment taxes, including the taxes.

2.052 SALES AND USE TAXES

Contractor shall register and remit sales and use taxes on taxable sales of tangible personal property or services delivered into the State. Contractors that lack sufficient presence in Michigan to be required to register and pay tax must do so as a volunteer. This requirement extends to: (1) all members of any controlled group as defined in § 1563(a) of the Internal Revenue Code and applicable regulations of which the company is a member, and (2) all organizations under common control as defined in § 414(c) of the Internal Revenue Code and applicable regulations of which the company is a member that make sales at retail for delivery into the State are registered with the State for the collection and remittance of sales and use taxes. In applying treasury regulations defining "two or more trades or businesses under common control" the term "organization" means sole proprietorship, a partnership (as defined in § 701(a) (2) of the Internal Revenue Code), a trust, an estate, a corporation, or a limited liability company.

2.060 Contract Management



2.061 CONTRACTOR PERSONNEL QUALIFICATIONS

All persons assigned by Contractor to the performance of Services under this Contract must be employees of Contractor or its majority-owned (directly or indirectly, at any tier) subsidiaries (or a State-approved Subcontractor) and must be fully qualified to perform the work assigned to them. Contractor must include a similar provision in any subcontract entered into with a Subcontractor. For the purposes of this Contract, independent contractors engaged by Contractor solely in a staff augmentation role must be treated by the State as if they were employees of Contractor for this Contract only; however, the State understands that the relationship between Contractor and Subcontractor is an independent contractor relationship.

2.062 CONTRACTOR KEY PERSONNEL

- (a) The Contractor must provide the Contract Compliance Inspector with the names of the Key Personnel.
- (b) Key Personnel must be dedicated as defined in the Statement of Work to the Project for its duration in the applicable Statement of Work with respect to other individuals designated as Key Personnel for that Statement of Work.
- (c) The State shall have the right to recommend and approve in writing the initial assignment, as well as any proposed reassignment or replacement, of any Key Personnel. Before assigning an individual to any Key Personnel position, Contractor shall notify the State of the proposed assignment, shall introduce the individual to the appropriate State representatives, and shall provide the State with a resume and any other information about the individual reasonably requested by the State. The State reserves the right to interview the individual before granting written approval. In the event the State finds a proposed individual unacceptable, the State shall provide a written explanation including reasonable detail outlining the reasons for the rejection.
- (d) Contractor must not remove any Key Personnel from their assigned roles on the Contract without the prior written consent of the State. The Contractor's removal of Key Personnel without the prior written consent of the State is an unauthorized removal ("Unauthorized Removal"). Unauthorized Removals does not include replacing Key Personnel for reasons beyond the reasonable control of Contractor, including illness, disability, leave of absence, personal emergency circumstances, resignation or for cause termination of the Key Personnel's employment. Unauthorized Removals does not include replacing Key Personnel because of promotions or other job movements allowed by Contractor personnel policies or Collective Bargaining Agreement(s) as long as the State receives prior written notice before shadowing occurs and Contractor provides 30 days of shadowing unless parties agree to a different time period. The Contractor with the State must review any Key Personnel replacements, and appropriate transition planning will be established. Any Unauthorized Removal may be considered by the State to be a material breach of the Contract, in respect of which the State may elect to exercise its termination and cancellation rights.
- (e) The Contractor must notify the Contract Compliance Inspector and the Contract Administrator at least 10 business days before redeploying non-Key Personnel, who are dedicated to primarily to the Project, to other projects. If the State does not object to the redeployment by its scheduled date, the Contractor may then redeploy the non-Key Personnel.

2.063 RE-ASSIGNMENT OF PERSONNEL AT THE STATE'S REQUEST

The State reserves the right to require the removal from the Project of Contractor personnel found, in the judgment of the State, to be unacceptable. The State's request must be written with reasonable detail outlining the reasons for the removal request. Additionally, the State's request must be based on legitimate, good faith reasons. Replacement personnel for the removed person must be fully qualified for the position. If the State exercises this right, and the Contractor cannot immediately replace the removed personnel, the State agrees to an equitable adjustment in schedule or other terms that may be affected by the State's required removal. If any incident with removed personnel results in delay not reasonably anticipatable under the circumstances and which is attributable to the State, the applicable SLAs for the affected Service shall not be counted for a time as agreed to by the parties.



2.064 CONTRACTOR PERSONNEL LOCATION

All staff assigned by Contractor to work on the Contract shall perform their duties either primarily at Contractor's offices and facilities or at State facilities. Without limiting the generality of the foregoing, Key Personnel shall, at a minimum, spend at least the amount of time on-site at State facilities as indicated in the applicable Statement of Work. Subject to availability, selected Contractor personnel may be assigned office space to be shared with State personnel.

2.065 CONTRACTOR IDENTIFICATION

Contractor employees must be clearly identifiable while on State property by wearing a State-issued badge, as required. Contractor employees are required to clearly identify themselves and the company they work for whenever making contact with State personnel by telephone or other means.

2.066 COOPERATION WITH THIRD PARTIES

Contractor agrees to cause its personnel and the personnel of any Subcontractors to cooperate with the State and its agents and other contractors including the State's Quality Assurance personnel. As reasonably requested by the State in writing, the Contractor shall provide to the State's agents and other contractors reasonable access to Contractor's Project personnel, systems and facilities to the extent the access relates to activities specifically associated with this Contract and shall not interfere or jeopardize the safety or operation of the systems or facilities. The State acknowledges that Contractor's time schedule for the Contract is very specific and agrees not to unnecessarily or unreasonably interfere with, delay or otherwise impeded Contractor's performance under this Contract with the requests for access.

2.067 CONTRACT MANAGEMENT RESPONSIBILITIES

Contractor shall be responsible for all acts and omissions of its employees, as well as the acts and omissions of any other personnel furnished by Contractor to perform the Services. Contractor shall have overall responsibility for managing and successfully performing and completing the Services/Deliverables, subject to the overall direction and supervision of the State and with the participation and support of the State as specified in this Contract. Contractor's duties shall include monitoring and reporting the State's performance of its participation and support responsibilities (as well as Contractor's own responsibilities) and providing timely notice to the State in Contractor's reasonable opinion if the State's failure to perform its responsibilities in accordance with the Project Plan is likely to delay the timely achievement of any Contract tasks.

The Contractor shall provide the Services/Deliverables directly or through its affiliates, subsidiaries, subcontractors or resellers. Regardless of the entity providing the Service/Deliverable, the Contractor shall act as a single point of contact coordinating these entities to meet the State's need for Services/Deliverables. Nothing in this Contract, however, shall be construed to authorize or require any party to violate any applicable law or regulation in its performance of this Contract.

2.068 CONTRACTOR RETURN OF STATE EQUIPMENT/RESOURCES

The Contractor shall return to the State any State-furnished equipment, facilities and other resources when no longer required for the Contract in the same condition as when provided by the State, reasonable wear and tear excepted.

2.070 Subcontracting by Contractor

2.071 CONTRACTOR FULL RESPONSIBILITY

Contractor shall have full responsibility for the successful performance and completion of all of the Services and Deliverables. The State shall consider Contractor to be the sole point of contact with regard to all contractual matters under this Contract, including payment of any and all charges for Services and Deliverables.



2.072 STATE CONSENT TO DELEGATION

Contractor shall not delegate any duties under this Contract to a Subcontractor unless the Department of Technology, Management and Budget, Purchasing Operations has given written consent to such delegation. The State shall have the right of prior written approval of all Subcontractors and to require Contractor to replace any Subcontractors found, in the reasonable judgment of the State, to be unacceptable. The State's request shall be written with reasonable detail outlining the reasons for the removal request. Additionally, the State's request shall be based on legitimate, good faith reasons. Replacement Subcontractor(s) for the removed Subcontractor shall be fully qualified for the position. If the State exercises this right, and the Contractor cannot immediately replace the removed Subcontractor, the State shall agree to an equitable adjustment in schedule or other terms that may be affected by the State's required removal. If any such incident with a removed Subcontractor results in delay not reasonable anticipatable under the circumstances and which is attributable to the State, the applicable SLA for the affected Work shall not be counted for a time agreed upon by the parties.

2.073 SUBCONTRACTOR BOUND TO CONTRACT

In any subcontracts entered into by Contractor for the performance of the Services, Contractor shall require the Subcontractor, to the extent of the Services to be performed by the Subcontractor, to be bound to Contractor by the terms of this Contract and to assume toward Contractor all of the obligations and responsibilities that Contractor, by this Contract, assumes toward the State. The State reserves the right to receive copies of and review all subcontracts, although Contractor may delete or mask any proprietary information, including pricing, contained in such contracts before providing them to the State. The management of any Subcontractor shall be the responsibility of Contractor, and Contractor shall remain responsible for the performance of its Subcontractors to the same extent as if Contractor had not subcontracted such performance. Contractor shall make all payments to Subcontractors or suppliers of Contractor. Except as otherwise agreed in writing by the State and Contractor, the State shall not be obligated to direct payments for the Services other than to Contractor. The State's written approval of any Subcontractor engaged by Contractor to perform any obligation under this Contract shall not relieve Contractor of any obligations or performance required under this Contract. A list of the Subcontractors, if any, approved by the State as of the execution of this Contract, together with a copy of the applicable subcontract is attached.

2.074 FLOW DOWN

Except where specifically approved in writing by the State on a case-by-case basis, Contractor shall flow down the obligations in **Sections 2.031, 2.060, 2.100, 2.110, 2.120, 2.130, and 2.200** in all of its agreements with any Subcontractors.

2.075 COMPETITIVE SELECTION

The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the Contract.

2.080 State Responsibilities

2.081 EQUIPMENT

The State shall provide only the equipment and resources identified in the Statement of Work and other Contract Exhibits.

2.082 FACILITIES

The State must designate space as long as it is available and as provided in the Statement of Work, to house the Contractor's personnel whom the parties agree will perform the Services/Deliverables at State facilities (collectively, the "State Facilities"). The Contractor shall have reasonable access to, and unless agreed otherwise by the parties in writing must observe and comply with all rules and regulations relating to each of the State Facilities (including hours of operation) used by the Contractor in the course of providing the Services. Contractor agrees that it shall not, without the prior written consent of the State, use any State



Facilities or access any State information systems provided for the Contractor's use, or to which the Contractor otherwise gains access in the course of performing the Services, for any purpose other than providing the Services to the State.

2.090 Security

2.091 BACKGROUND CHECKS

On a case-by-case basis, the State may investigate the Contractor's personnel before they may have access to State facilities and systems. The scope of the background check is at the discretion of the State and the results shall be used to determine Contractor personnel eligibility for working within State facilities and systems. The investigations shall include Michigan State Police Background checks (ICHAT) and may include the National Crime Information Center (NCIC) Finger Prints. Proposed Contractor personnel may be required to complete and submit an RI-8 Fingerprint Card for the NCIC Finger Print Check. Any request for background checks shall be initiated by the State and shall be reasonably related to the type of work requested.

All Contractor personnel shall also be expected to comply with the State's security and acceptable use policies for State IT equipment and resources. See <http://www.michigan.gov/dit>. Furthermore, Contractor personnel shall be expected to agree to the State's security and acceptable use policies before the Contractor personnel shall be accepted as a resource to perform work for the State. It is expected the Contractor shall present these documents to the prospective employee before the Contractor presents the individual to the State as a proposed resource. Contractor staff shall be expected to comply with all Physical Security procedures in place within the facilities where they are working.

2.092 SECURITY BREACH NOTIFICATION

If the Contractor breaches this Section, the Contractor must (i) promptly cure any deficiencies and (ii) comply with any applicable federal and state laws and regulations pertaining to unauthorized disclosures. Contractor and the State shall cooperate to mitigate, to the extent practicable, the effects of any breach, intrusion, or unauthorized use or disclosure. Contractor must report to the State in writing any use or disclosure of Confidential Information, whether suspected or actual, other than as provided for by the Contract within 10 days of becoming aware of the use or disclosure or the shorter time period as is reasonable under the circumstances.

2.093 PCI DATA SECURITY REQUIREMENTS

Contractors with access to credit/debit card cardholder data must adhere to the Payment Card Industry (PCI) Data Security requirements. Contractor agrees that they are responsible for security of cardholder data in their possession. Contractor agrees that data can ONLY be used for assisting the State in completing a transaction, supporting a loyalty program, supporting the State, providing fraud control services, or for other uses specifically required by law.

Contractor agrees to provide business continuity in the event of a major disruption, disaster or failure.

The Contractor shall contact the Department of Technology, Management and Budget, Financial Services immediately to advise them of any breaches in security where card data has been compromised. In the event of a security intrusion, the Contractor agrees the Payment Card Industry representative, or a Payment Card Industry approved third party, shall be provided with full cooperation and access to conduct a thorough security review. The review will validate compliance with the Payment Card Industry Data Security Standard for protecting cardholder data.

Contractor agrees to properly dispose sensitive cardholder data when no longer needed. The Contractor shall continue to treat cardholder data as confidential upon contract termination.

The Contractor shall provide the Department of Technology, Management and Budget, Financial Services documentation showing PCI Data Security certification has been achieved. The Contractor shall advise the Department of Technology, Management and Budget, Financial Services of all failures to comply with the PCI Data Security Requirements. Failures include, but are not limited to system scans and self-assessment questionnaires. The Contractor shall provide a time line for corrective action.



2.100 Confidentiality

2.101 CONFIDENTIALITY

Contractor and the State each acknowledge that the other possesses and shall continue to possess confidential information that has been developed or received by it. As used in this Section, "Confidential Information" of Contractor must mean all non-public proprietary information of Contractor (other than Confidential Information of the State as defined below), which is marked confidential, restricted, proprietary, or with a similar designation. "Confidential Information" of the State must mean any information which is retained in confidence by the State (or otherwise required to be held in confidence by the State under applicable federal, state and local laws and regulations) or which, in the case of tangible materials provided to Contractor by the State under its performance under this Contract, is marked as confidential, proprietary or with a similar designation by the State. "Confidential Information" excludes any information (including this Contract) that is publicly available under the Michigan FOIA.

2.102 PROTECTION AND DESTRUCTION OF CONFIDENTIAL INFORMATION

The State and Contractor shall each use at least the same degree of care to prevent disclosing to third parties the Confidential Information of the other as it employs to avoid unauthorized disclosure, publication or dissemination of its own confidential information of like character, but in no event less than reasonable care. Neither Contractor nor the State shall (i) make any use of the Confidential Information of the other except as contemplated by this Contract, (ii) acquire any right in or assert any lien against the Confidential Information of the other, or (iii) if requested to do so, refuse for any reason to promptly return the other party's Confidential Information to the other party. Each party shall limit disclosure of the other party's Confidential Information to employees and Subcontractors who must have access to fulfill the purposes of this Contract. Disclosure to, and use by, a Subcontractor is permissible where (A) use of a Subcontractor is authorized under this Contract, (B) the disclosure is necessary or otherwise naturally occurs in connection with work that is within the Subcontractor's scope of responsibility, and (C) Contractor obligates the Subcontractor in a written Contract to maintain the State's Confidential Information in confidence. At the State's request, any employee of Contractor and of any Subcontractor having access or continued access to the State's Confidential Information may be required to execute an acknowledgment that the employee has been advised of Contractor's and the Subcontractor's obligations under this Section and of the employee's obligation to Contractor or Subcontractor, as the case may be, to protect the Confidential Information from unauthorized use or disclosure.

Promptly upon termination or cancellation of the Contract for any reason, Contractor must certify to the State that Contractor has destroyed all State Confidential Information.

2.103 EXCLUSIONS

Notwithstanding the foregoing, the provisions in this Section shall not apply to any particular information which the State or Contractor can demonstrate (i) was, at the time of disclosure to it, in the public domain; (ii) after disclosure to it, is published or otherwise becomes part of the public domain through no fault of the receiving party; (iii) was in the possession of the receiving party at the time of disclosure to it without an obligation of confidentiality; (iv) was received after disclosure to it from a third party who had a lawful right to disclose the information to it without any obligation to restrict its further disclosure; or (v) was independently developed by the receiving party without reference to Confidential Information of the furnishing party. Further, the provisions of this Section shall not apply to any particular Confidential Information to the extent the receiving party is required by law to disclose the Confidential Information, provided that the receiving party (i) promptly provides the furnishing party with notice of the legal request, and (ii) assists the furnishing party in resisting or limiting the scope of the disclosure as reasonably requested by the furnishing party.

2.104 NO IMPLIED RIGHTS

Nothing contained in this Section must be construed as obligating a party to disclose any particular Confidential Information to the other party, or as granting to or conferring on a party, expressly or impliedly, any right or license to the Confidential Information of the other party.



2.105 RESPECTIVE OBLIGATIONS

The parties' respective obligations under this Section must survive the termination or expiration of this Contract for any reason.

2.110 Records and Inspections

2.111 INSPECTION OF WORK PERFORMED

The State's authorized representatives shall at all reasonable times and with 10 days prior written request, have the right to enter Contractor's premises, or any other places, where the Services are being performed, and shall have access, upon reasonable request, to interim drafts of Deliverables or work-in-progress. Upon 10 Days prior written notice and at all reasonable times, the State's representatives shall be allowed to inspect, monitor, or otherwise evaluate the work being performed and to the extent that the access will not reasonably interfere or jeopardize the safety or operation of the systems or facilities. Contractor shall provide all reasonable facilities and assistance for the State's representatives.

2.112 EXAMINATION OF RECORDS

For seven years after the Contractor provides any work under this Contract (the "Audit Period"), the State may examine and copy any of Contractor's books, records, documents and papers pertinent to establishing Contractor's compliance with the Contract and with applicable laws and rules. The State shall notify the Contractor 20 days before examining the Contractor's books and records. The State does not have the right to review any information deemed confidential by the Contractor to the extent access would require the confidential information to become publicly available. This provision also applies to the books, records, accounts, documents and papers, in print or electronic form, of any parent, affiliated or subsidiary organization of Contractor, or any Subcontractor of Contractor performing services in connection with the Contract.

2.113 RETENTION OF RECORDS

Contractor shall maintain at least until the end of the Audit Period all pertinent financial and accounting records (including time sheets and payroll records, and information pertaining to the Contract and to the Services, equipment, and commodities provided under the Contract) pertaining to the Contract according to generally accepted accounting principles and other procedures specified in this Section. Financial and accounting records shall be made available, upon request, to the State at any time during the Audit Period. If an audit, litigation, or other action involving Contractor's records is initiated before the end of the Audit Period, the records shall be retained until all issues arising out of the audit, litigation, or other action are resolved or until the end of the Audit Period, whichever is later.

2.114 AUDIT RESOLUTION

If necessary, the Contractor and the State shall meet to review each audit report promptly after issuance. The Contractor shall respond to each audit report in writing within 30 days from receipt of the report, unless a shorter response time is specified in the report. The Contractor and the State shall develop, agree upon and monitor an action plan to promptly address and resolve any deficiencies, concerns, and/or recommendations in the audit report.

2.115 ERRORS

If the audit demonstrates any errors in the documents provided to the State, then the amount in error shall be reflected as a credit or debit on the next invoice and in subsequent invoices until the amount is paid or refunded in full. However, a credit or debit may not be carried for more than four invoices. If a balance remains after four invoices, then the remaining amount shall be due as a payment or refund within 45 days of the last quarterly invoice that the balance appeared on or termination of the contract, whichever is earlier.

In addition to other available remedies, the difference between the payment received and the correct payment amount is greater than 10%, then the Contractor shall pay all of the reasonable costs of the audit.



2.120 Warranties

2.121 WARRANTIES AND REPRESENTATIONS

The Contractor represents and warrants:

- (a) It is capable in all respects of fulfilling and must fulfill all of its obligations under this Contract. The performance of all obligations under this Contract must be provided in a timely, professional, and workman-like manner and must meet the performance and operational standards required under this Contract.
- (b) The Contract Appendices, Attachments and Exhibits identify the equipment and software and services necessary for the Deliverable(s) to perform and Services to operate in compliance with the Contract's requirements and other standards of performance.
- (c) It is the lawful owner or licensee of any Deliverable licensed or sold to the State by Contractor or developed by Contractor under this Contract, and Contractor has all of the rights necessary to convey to the State the ownership rights or licensed use, as applicable, of any and all Deliverables. None of the Deliverables provided by Contractor to the State under neither this Contract, nor their use by the State shall infringe the patent, copyright, trade secret, or other proprietary rights of any third party.
- (d) If, under this Contract, Contractor procures any equipment, software or other Deliverable for the State (including equipment, software and other Deliverables manufactured, re-marketed or otherwise sold by Contractor under Contractor's name), then in addition to Contractor's other responsibilities with respect to the items in this Contract, Contractor must assign or otherwise transfer to the State or its designees, or afford the State the benefits of, any manufacturer's warranty for the Deliverable.
- (e) The contract signatory has the power and authority, including any necessary corporate authorizations, necessary to enter into this Contract, on behalf of Contractor.
- (f) It is qualified and registered to transact business in all locations where required.
- (g) Neither the Contractor nor any Affiliates, nor any employee of either, has, must have, or must acquire, any contractual, financial, business, or other interest, direct or indirect, that would conflict in any manner or degree with Contractor's performance of its duties and responsibilities to the State under this Contract or otherwise create an appearance of impropriety with respect to the award or performance of this Agreement. Contractor must notify the State about the nature of the conflict or appearance of impropriety within two days of learning about it.
- (h) Neither Contractor nor any Affiliates, nor any employee of either has accepted or must accept anything of value based on an understanding that the actions of the Contractor or Affiliates or employee on behalf of the State would be influenced. Contractor must not attempt to influence any State employee by the direct or indirect offer of anything of value.
- (i) Neither Contractor nor any Affiliates, nor any employee of either has paid or agreed to pay any person, other than bona fide employees and consultants working solely for Contractor or the Affiliate, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this Contract.
- (j) The prices proposed by Contractor were arrived at independently, without consultation, communication, or agreement with any other Bidder for the purpose of restricting competition; the prices quoted were not knowingly disclosed by Contractor to any other Bidder; and no attempt was made by Contractor to induce any other person to submit or not submit a proposal for the purpose of restricting competition.
- (k) All financial statements, reports, and other information furnished by Contractor to the State as part of its response to the RFP or otherwise in connection with the award of this Contract fairly and accurately represent the business, properties, financial condition, and results of operations of Contractor as of the respective dates, or for the respective periods, covered by the financial statements, reports, other information. Since the respective dates or periods covered by the financial statements, reports, or other information, there have been no material adverse changes in the business, properties, financial condition, or results of operations of Contractor.
- (l) All written information furnished to the State by or for the Contractor in connection with this Contract, including its bid, is true, accurate, and complete, and contains no untrue statement of material fact or omits any material fact necessary to make the information not misleading.
- (m) It is not in material default or breach of any other contract or agreement that it may have with the State or any of its departments, commissions, boards, or agencies. Contractor further represents and warrants



that it has not been a party to any contract with the State or any of its departments that was terminated by the State or the department within the previous five years for the reason that Contractor failed to perform or otherwise breached an obligation of the contract.

- (n) If any of the certifications, representations, or disclosures made in the Contractor's original bid response change after contract award, the Contractor is required to report those changes immediately to the Department of Technology, Management and Budget, Purchasing Operations.

2.122 WARRANTY OF MERCHANTABILITY

Goods provided by Contractor under this agreement shall be merchantable. All goods provided under this Contract shall be of good quality within the description given by the State, shall be fit for their ordinary purpose, shall be adequately contained and packaged within the description given by the State, shall conform to the agreed upon specifications, and shall conform to the affirmations of fact made by the Contractor or on the container or label.

2.123 WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE

When the Contractor has reason to know or knows any particular purpose for which the goods are required, and the State is relying on the Contractor's skill or judgment to select or furnish suitable goods, there is a warranty that the goods are fit for such purpose.

2.124 WARRANTY OF TITLE

Contractor shall, in providing goods to the State, convey good title in those goods, whose transfer is right and lawful. All goods provided by Contractor shall be delivered free from any security interest, lien, or encumbrance of which the State, at the time of contracting, has no knowledge. Goods provided by Contractor, under this Contract, shall be delivered free of any rightful claim of any third person by of infringement or the like.

2.125 EQUIPMENT WARRANTY

Not Applicable

2.126 EQUIPMENT TO BE NEW

Not Applicable

2.127 PROHIBITED PRODUCTS

The State will not accept salvage, distressed, outdated or discontinued merchandise. Shipping of such merchandise to any State agency, as a result of an order placed against the Contract, shall be considered default by the Contractor of the terms and conditions of the Contract and may result in cancellation of the Contract by the State. The brand and product number offered for all items shall remain consistent for the term of the Contract, unless Purchasing Operations has approved a change order pursuant to **Section 2.024**.

2.128 CONSEQUENCES FOR BREACH

In addition to any remedies available in law, if the Contractor breaches any of the warranties contained in this section, the breach may be considered as a default in the performance of a material obligation of this Contract.

2.130 Insurance

2.131 LIABILITY INSURANCE

The Contractor must provide proof of the minimum levels of insurance coverage as indicated below. The insurance must protect the State from claims that may arise out of or result from the Contractor's performance of services under the terms of this Contract, whether the services are performed by the Contractor, or by any subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.



The Contractor waives all rights against the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents for recovery of damages to the extent these damages are covered by the insurance policies the Contractor is required to maintain under this Contract.

All insurance coverage provided relative to this Contract/Purchase Order is PRIMARY and NON-CONTRIBUTING to any comparable liability insurance (including self-insurances) carried by the State.

The insurance must be written for not less than any minimum coverage specified in this Contract or required by law, whichever is greater.

The insurers selected by Contractor must have an A.M. Best rating of A or better, or as otherwise approved in writing by the State, or if the ratings are no longer available, with a comparable rating from a recognized insurance rating agency. All policies of insurance required in this Contract must be issued by companies that have been approved to do business in the State.

See www.michigan.gov/dleg.

Where specific limits are shown, they are the minimum acceptable limits. If Contractor's policy contains higher limits, the State must be entitled to coverage to the extent of the higher limits.

The Contractor is required to pay for and provide the type and amount of insurance checked below:

- 1. Commercial General Liability with the following minimum coverage:
 - \$2,000,000 General Aggregate Limit other than Products/Completed Operations
 - \$2,000,000 Products/Completed Operations Aggregate Limit
 - \$1,000,000 Personal & Advertising Injury Limit
 - \$1,000,000 Each Occurrence Limit

The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents as ADDITIONAL INSUREDS on the Commercial General Liability certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

- 2. If a motor vehicle is used to provide services or products under this Contract, the Contractor must have vehicle liability insurance on any auto including owned, hired and non-owned vehicles used in Contractor's business for bodily injury and property damage as required by law.

The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents as ADDITIONAL INSUREDS on the vehicle liability certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

- 3. Workers' compensation coverage must be provided according to applicable laws governing the employees and employers work activities in the state of the Contractor's domicile. If a self-insurer provides the applicable coverage, proof must be provided of approved self-insured authority by the jurisdiction of domicile. For employees working outside of the state of qualification, Contractor must provide appropriate certificates of insurance proving mandated coverage levels for the jurisdictions where the employees' activities occur.

Any certificates of insurance received must also provide a list of states where the coverage is applicable.

The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company. This provision must not be applicable where prohibited or limited by the laws of the jurisdiction in which the work is to be performed.

- 4. Employers liability insurance with the following minimum limits:
 - \$100,000 each accident
 - \$100,000 each employee by disease
 - \$500,000 aggregate disease



- 5. Employee Fidelity, including Computer Crimes, insurance naming the State as a loss payee, providing coverage for direct loss to the State and any legal liability of the State arising out of or related to fraudulent or dishonest acts committed by the employees of Contractor or its Subcontractors, acting alone or in collusion with others, in a minimum amount of one million dollars (\$1,000,000.00) with a maximum deductible of fifty thousand dollars (\$50,000.00).
- 6. Umbrella or Excess Liability Insurance in a minimum amount of ten million dollars (\$10,000,000.00), which must apply, at a minimum, to the insurance required in Subsection 1 (Commercial General Liability) above.
- 7. Professional Liability (Errors and Omissions) Insurance with the following minimum coverage: three million dollars (\$3,000,000.00) each occurrence and three million dollars (\$3,000,000.00) annual aggregate.
- 8. Fire and Personal Property Insurance covering against any loss or damage to the office space used by Contractor for any reason under this Contract, and the equipment, software and other contents of the office space, including without limitation, those contents used by Contractor to provide the Services to the State, up to its replacement value, where the office space and its contents are under the care, custody and control of Contractor. The policy must cover all risks of direct physical loss or damage, including without limitation, flood and earthquake coverage and coverage for computer hardware and software. The State must be endorsed on the policy as a loss payee as its interests appear.

2.132 SUBCONTRACTOR INSURANCE COVERAGE

Except where the State has approved in writing a Contractor subcontract with other insurance provisions, Contractor must require all of its Subcontractors under this Contract to purchase and maintain the insurance coverage as described in this Section for the Contractor in connection with the performance of work by those Subcontractors. Alternatively, Contractor may include any Subcontractors under Contractor's insurance on the coverage required in this Section. Subcontractor(s) must fully comply with the insurance coverage required in this Section. Failure of Subcontractor(s) to comply with insurance requirements does not limit Contractor's liability or responsibility.

2.133 CERTIFICATES OF INSURANCE AND OTHER REQUIREMENTS

Contractor must furnish to DTMB Purchasing Operations, certificate(s) of insurance verifying insurance coverage or providing satisfactory evidence of self-insurance as required in this Section (the "Certificates"). The Certificate must be on the standard "accord" form or equivalent. **The Contract Number or the Purchase Order Number must be shown on the Certificate Of Insurance To Assure Correct Filing.** All Certificate(s) are to be prepared and submitted by the Insurance Provider. All Certificate(s) must contain a provision indicating that coverage afforded under the policies SHALL NOT BE CANCELLED, MATERIALLY CHANGED, OR NOT RENEWED without 30 days prior written notice, except for 10 days for non-payment of premium, having been given to the Director of Purchasing Operations, Department of Technology, Management and Budget. The notice must include the Contract or Purchase Order number affected. Before the Contract is signed, and not less than 20 days before the insurance expiration date every year thereafter, the Contractor must provide evidence that the State and its agents, officers and employees are listed as additional insured under each commercial general liability and commercial automobile liability policy. In the event the State approves the representation of the State by the insurer's attorney, the attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.

The Contractor must maintain all required insurance coverage throughout the term of the Contract and any extensions and, in the case of claims-made Commercial General Liability policies, must secure tail coverage for at least three years following the expiration or termination for any reason of this Contract. The minimum limits of coverage specified above are not intended, and must not be construed; to limit any liability or indemnity of Contractor under this Contract to any indemnified party or other persons. Contractor is responsible for all deductibles with regard to the insurance. If the Contractor fails to pay any premium for required insurance as specified in this Contract, or if any insurer cancels or significantly reduces any required



insurance as specified in this Contract without the State's written consent, then the State may, after the State has given the Contractor at least 30 days written notice, pay the premium or procure similar insurance coverage from another company or companies. The State may deduct any part of the cost from any payment due the Contractor, or the Contractor must pay that cost upon demand by the State.

2.140 Indemnification

2.141 GENERAL INDEMNIFICATION

To the extent permitted by law, the Contractor must indemnify, defend and hold harmless the State from liability, including all claims and losses, and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties), accruing or resulting to any person, firm or corporation that may be injured or damaged by the Contractor in the performance of this Contract and that are attributable to the negligence or tortious acts of the Contractor or any of its subcontractors, or by anyone else for whose acts any of them may be liable.

2.142 CODE INDEMNIFICATION

To the extent permitted by law, the Contractor shall indemnify, defend and hold harmless the State from any claim, loss, or expense arising from Contractor's breach of the No Surreptitious Code Warranty.

2.143 EMPLOYEE INDEMNIFICATION

In any claims against the State of Michigan, its departments, divisions, agencies, sections, commissions, officers, employees and agents, by any employee of the Contractor or any of its subcontractors, the indemnification obligation under the Contract must not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the Contractor or any of its subcontractors under worker's disability compensation acts, disability benefit acts or other employee benefit acts. This indemnification clause is intended to be comprehensive. Any overlap in provisions, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other provisions.

2.144 PATENT/COPYRIGHT INFRINGEMENT INDEMNIFICATION

To the extent permitted by law, the Contractor must indemnify, defend and hold harmless the State from and against all losses, liabilities, damages (including taxes), and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties) incurred in connection with any action or proceeding threatened or brought against the State to the extent that the action or proceeding is based on a claim that any piece of equipment, software, commodity or service supplied by the Contractor or its subcontractors, or the operation of the equipment, software, commodity or service, or the use or reproduction of any documentation provided with the equipment, software, commodity or service infringes any United States patent, copyright, trademark or trade secret of any person or entity, which is enforceable under the laws of the United States.

In addition, should the equipment, software, commodity, or service, or its operation, become or in the State's or Contractor's opinion be likely to become the subject of a claim of infringement, the Contractor must at the Contractor's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if the option is not reasonably available to the Contractor, (ii) replace or modify to the State's satisfaction the same with equipment, software, commodity or service of equivalent function and performance so that it becomes non-infringing, or, if the option is not reasonably available to Contractor, (iii) accept its return by the State with appropriate credits to the State against the Contractor's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.

Notwithstanding the foregoing, the Contractor has no obligation to indemnify or defend the State for, or to pay any costs, damages or attorneys' fees related to, any claim based upon (i) equipment developed based on written specifications of the State; (ii) use of the equipment in a configuration other than implemented or approved in writing by the Contractor, including, but not limited to, any modification of the equipment by the



State; or (iii) the combination, operation, or use of the equipment with equipment or software not supplied by the Contractor under this Contract.

2.145 CONTINUATION OF INDEMNIFICATION OBLIGATIONS

The Contractor's duty to indemnify under this Section continues in full force and effect, notwithstanding the expiration or early cancellation of the Contract, with respect to any claims based on facts or conditions that occurred before expiration or cancellation.

2.146 INDEMNIFICATION PROCEDURES

The procedures set forth below must apply to all indemnity obligations under this Contract.

- (a) After the State receives notice of the action or proceeding involving a claim for which it shall seek indemnification, the State must promptly notify Contractor of the claim in writing and take or assist Contractor in taking, as the case may be, any reasonable action to avoid the imposition of a default judgment against Contractor. No failure to notify the Contractor relieves the Contractor of its indemnification obligations except to the extent that the Contractor can prove damages attributable to the failure. Within 10 days following receipt of written notice from the State relating to any claim, the Contractor must notify the State in writing whether Contractor agrees to assume control of the defense and settlement of that claim (a "Notice of Election"). After notifying Contractor of a claim and before the State receiving Contractor's Notice of Election, the State is entitled to defend against the claim, at the Contractor's expense, and the Contractor will be responsible for any reasonable costs incurred by the State in defending against the claim during that period.
- (b) If Contractor delivers a Notice of Election relating to any claim: (i) the State is entitled to participate in the defense of the claim and to employ counsel at its own expense to assist in the handling of the claim and to monitor and advise the State about the status and progress of the defense; (ii) the Contractor must, at the request of the State, demonstrate to the reasonable satisfaction of the State, the Contractor's financial ability to carry out its defense and indemnity obligations under this Contract; (iii) the Contractor must periodically advise the State about the status and progress of the defense and must obtain the prior written approval of the State before entering into any settlement of the claim or ceasing to defend against the claim and (iv) to the extent that any principles of Michigan governmental or public law may be involved or challenged, the State has the right, at its own expense, to control the defense of that portion of the claim involving the principles of Michigan governmental or public law. But the State may retain control of the defense and settlement of a claim by notifying the Contractor in writing within 10 days after the State's receipt of Contractor's information requested by the State under clause (ii) of this paragraph if the State determines that the Contractor has failed to demonstrate to the reasonable satisfaction of the State the Contractor's financial ability to carry out its defense and indemnity obligations under this Section. Any litigation activity on behalf of the State, or any of its subdivisions under this Section, must be coordinated with the Department of Attorney General. In the event the insurer's attorney represents the State under this Section, the insurer's attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.
- (c) If Contractor does not deliver a Notice of Election relating to any claim of which it is notified by the State as provided above, the State may defend the claim in the manner as it may deem appropriate, at the cost and expense of Contractor. If it is determined that the claim was one against which Contractor was required to indemnify the State, upon request of the State, Contractor must promptly reimburse the State for all the reasonable costs and expenses.

2.150 Termination/Cancellation

2.151 NOTICE AND RIGHT TO CURE

If the Contractor breaches the contract, and the State in its sole discretion determines that the breach is curable, then the State shall provide the Contractor with written notice of the breach and a time period (not less than 30 days) to cure the Breach. The notice of breach and opportunity to cure is inapplicable for successive or repeated breaches or if the State determines in its sole discretion that the breach poses a serious and imminent threat to the health or safety of any person or the imminent loss, damage, or destruction of any real or tangible personal property.



2.152 TERMINATION FOR CAUSE

- (a) The State may terminate this contract, for cause, by notifying the Contractor in writing, if the Contractor (i) breaches any of its material duties or obligations under this Contract (including a Chronic Failure to meet any particular SLA), or (ii) fails to cure a breach within the time period specified in the written notice of breach provided by the State
- (b) If this Contract is terminated for cause, the Contractor must pay all costs incurred by the State in terminating this Contract, including but not limited to, State administrative costs, reasonable attorneys' fees and court costs, and any reasonable additional costs the State may incur to procure the Services/Deliverables required by this Contract from other sources. Re-procurement costs are not consequential, indirect or incidental damages, and cannot be excluded by any other terms otherwise included in this Contract, provided the costs are not in excess of 50% more than the prices for the Service/Deliverables provided under this Contract.
- (c) If the State chooses to partially terminate this Contract for cause, charges payable under this Contract shall be equitably adjusted to reflect those Services/Deliverables that are terminated and the State must pay for all Services/Deliverables for which Final Acceptance has been granted provided up to the termination date. Services and related provisions of this Contract that are terminated for cause must cease on the effective date of the termination.
- (d) If the State terminates this Contract for cause under this Section, and it is determined, for any reason, that Contractor was not in breach of contract under the provisions of this section, that termination for cause must be deemed to have been a termination for convenience, effective as of the same date, and the rights and obligations of the parties must be limited to that otherwise provided in this Contract for a termination for convenience.

2.153 TERMINATION FOR CONVENIENCE

The State may terminate this Contract for its convenience, in whole or part, if the State determines that a termination is in the State's best interest. Reasons for the termination must be left to the sole discretion of the State and may include, but not necessarily be limited to (a) the State no longer needs the Services or products specified in the Contract, (b) relocation of office, program changes, changes in laws, rules, or regulations make implementation of the Services no longer practical or feasible, (c) unacceptable prices for Additional Services or New Work requested by the State, or (d) falsification or misrepresentation, by inclusion or non-inclusion, of information material to a response to any RFP issued by the State. The State may terminate this Contract for its convenience, in whole or in part, by giving Contractor written notice at least 30 days before the date of termination. If the State chooses to terminate this Contract in part, the charges payable under this Contract must be equitably adjusted to reflect those Services/Deliverables that are terminated. Services and related provisions of this Contract that are terminated for convenience must cease on the effective date of the termination.

2.154 TERMINATION FOR NON-APPROPRIATION

- (a) Contractor acknowledges that, if this Contract extends for several fiscal years, continuation of this Contract is subject to appropriation or availability of funds for this Contract. If funds to enable the State to effect continued payment under this Contract are not appropriated or otherwise made available, the State must terminate this Contract and all affected Statements of Work, in whole or in part, at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of termination to Contractor. The State must give Contractor at least 30 days advance written notice of termination for non-appropriation or unavailability (or the time as is available if the State receives notice of the final decision less than 30 days before the funding cutoff).
- (b) If funding for the Contract is reduced by law, or funds to pay Contractor for the agreed-to level of the Services or production of Deliverables to be provided by Contractor are not appropriated or otherwise unavailable, the State may, upon 30 days written notice to Contractor, reduce the level of the Services or change the production of Deliverables in the manner and for the periods of time as the State may elect. The charges payable under this Contract shall be equitably adjusted to reflect any equipment, services or commodities not provided by reason of the reduction.



- (c) If the State terminates this Contract, eliminates certain Deliverables, or reduces the level of Services to be provided by Contractor under this Section, the State must pay Contractor for all Work-in-Process performed through the effective date of the termination or reduction in level, as the case may be and as determined by the State, to the extent funds are available. This Section shall not preclude Contractor from reducing or stopping Services/Deliverables or raising against the State in a court of competent jurisdiction, any claim for a shortfall in payment for Services performed or Deliverables finally accepted before the effective date of termination.

2.155 TERMINATION FOR CRIMINAL CONVICTION

The State may terminate this Contract immediately and without further liability or penalty in the event Contractor, an officer of Contractor, or an owner of a 25% or greater share of Contractor is convicted of a criminal offense related to a State, public or private Contract or subcontract.

2.156 TERMINATION FOR APPROVALS RESCINDED

The State may terminate this Contract if any final administrative or judicial decision or adjudication disapproves a previously approved request for purchase of personal services under Constitution 1963, Article 11, § 5, and Civil Service Rule 7-1. In that case, the State shall pay the Contractor for only the work completed to that point under the Contract. Termination may be in whole or in part and may be immediate as of the date of the written notice to Contractor or may be effective as of the date stated in the written notice.

2.157 RIGHTS AND OBLIGATIONS UPON TERMINATION

- (a) If the State terminates this Contract for any reason, the Contractor must (a) stop all work as specified in the notice of termination, (b) take any action that may be necessary, or that the State may direct, for preservation and protection of Deliverables or other property derived or resulting from this Contract that may be in Contractor's possession, (c) return all materials and property provided directly or indirectly to Contractor by any entity, agent or employee of the State, (d) transfer title in, and deliver to, the State, unless otherwise directed, all Deliverables intended to be transferred to the State at the termination of the Contract and which are resulting from the Contract (which must be provided to the State on an "As-Is" basis except to the extent the amounts paid by the State in respect of the items included compensation to Contractor for the provision of warranty services in respect of the materials), and (e) take any action to mitigate and limit any potential damages, or requests for Contractor adjustment or termination settlement costs, to the maximum practical extent, including terminating or limiting as otherwise applicable those subcontracts and outstanding orders for material and supplies resulting from the terminated Contract.
- (b) If the State terminates this Contract before its expiration for its own convenience, the State must pay Contractor for all charges due for Services provided before the date of termination and, if applicable, as a separate item of payment under this Contract, for Work In Process, on a percentage of completion basis at the level of completion determined by the State. All completed or partially completed Deliverables prepared by Contractor under this Contract, at the option of the State, becomes the State's property, and Contractor is entitled to receive equitable fair compensation for the Deliverables. Regardless of the basis for the termination, the State is not obligated to pay, or otherwise compensate, Contractor for any lost expected future profits, costs or expenses incurred with respect to Services not actually performed for the State.
- (c) Upon a good faith termination, the State may assume, at its option, any subcontracts and agreements for services and deliverables provided under this Contract, and may further pursue completion of the Services/Deliverables under this Contract by replacement contract or otherwise as the State may in its sole judgment deem expedient.

2.158 RESERVATION OF RIGHTS

Any termination of this Contract or any Statement of Work issued under it by a party must be with full reservation of, and without prejudice to, any rights or remedies otherwise available to the party with respect to any claims arising before or as a result of the termination.



2.160 Termination by Contractor

2.161 TERMINATION BY CONTRACTOR

If the State breaches the Contract, and the Contractor in its sole discretion determines that the breach is curable, then the Contractor will provide the State with written notice of the breach and a time period (not less than 30 days) to cure the breach. The Notice of Breach and opportunity to cure is inapplicable for successive and repeated breaches.

The Contractor may terminate this Contract if the State (i) materially breaches its obligation to pay the Contractor undisputed amounts due and owing under this Contract, (ii) breaches its other obligations under this Contract to an extent that makes it impossible or commercially impractical for the Contractor to perform the Services, or (iii) does not cure the breach within the time period specified in a written notice of breach. But the Contractor must discharge its obligations under **Section 2.160** before it terminates the Contract.

2.170 Transition Responsibilities

2.171 CONTRACTOR TRANSITION RESPONSIBILITIES

If the State terminates this contract, for convenience or cause, or if the Contract is otherwise dissolved, voided, rescinded, nullified, expires or rendered unenforceable, the Contractor shall comply with direction provided by the State to assist in the orderly transition of equipment, services, software, leases, etc. to the State or a third party designated by the State. If this Contract expires or terminates, the Contractor agrees to make all reasonable efforts to effect an orderly transition of services within a reasonable period of time that in no event will exceed thirty (30) days. These efforts must include, but are not limited to, those listed in **Section 2.150**.

2.172 CONTRACTOR PERSONNEL TRANSITION

The Contractor shall work with the State, or a specified third party, to develop a transition plan setting forth the specific tasks and schedule to be accomplished by the parties, to effect an orderly transition. The Contractor must allow as many personnel as practicable to remain on the job to help the State, or a specified third party, maintain the continuity and consistency of the services required by this Contract. In addition, during or following the transition period, in the event the State requires the Services of the Contractor's subcontractors or vendors, as necessary to meet its needs, Contractor agrees to reasonably, and with good-faith, work with the State to use the Services of Contractor's subcontractors or vendors. Contractor will notify all of Contractor's subcontractors of procedures to be followed during transition.

2.173 CONTRACTOR INFORMATION TRANSITION

The Contractor shall provide reasonable detailed specifications for all Services/Deliverables needed by the State, or specified third party, to properly provide the Services/Deliverables required under this Contract. The Contractor will provide the State with asset management data generated from the inception of this Contract through the date on which this Contractor is terminated in a comma-delineated format unless otherwise requested by the State. The Contractor will deliver to the State any remaining owed reports and documentation still in Contractor's possession subject to appropriate payment by the State.

2.174 CONTRACTOR SOFTWARE TRANSITION

The Contractor shall reasonably assist the State in the acquisition of any Contractor software required to perform the Services/use the Deliverables under this Contract. This must include any documentation being used by the Contractor to perform the Services under this Contract. If the State transfers any software licenses to the Contractor, those licenses must, upon expiration of the Contract, transfer back to the State at their current revision level. Upon notification by the State, Contractor may be required to freeze all non-critical changes to Deliverables/Services.

2.175 TRANSITION PAYMENTS

If the transition results from a termination for any reason, the termination provisions of this Contract must govern reimbursement. If the transition results from expiration, the Contractor will be reimbursed for all



reasonable transition costs (i.e. costs incurred within the agreed period after contract expiration that result from transition operations) at the rates agreed upon by the State. The Contractor will prepare an accurate accounting from which the State and Contractor may reconcile all outstanding accounts.

2.176 STATE TRANSITION RESPONSIBILITIES

In the event that this Contract is terminated, dissolved, voided, rescinded, nullified, or otherwise rendered unenforceable, the State agrees to reconcile all accounts between the State and the Contractor, complete any pending post-project reviews and perform any others obligations upon which the State and the Contractor agree.

- (a) Reconciling all accounts between the State and the Contractor;
- (b) Completing any pending post-project reviews.

2.180 Stop Work

2.181 STOP WORK ORDERS

The State may, at any time, by written Stop Work Order to Contractor, require that Contractor stop all, or any part, of the work called for by the Contract for a period of up to 90 calendar days after the Stop Work Order is delivered to Contractor, and for any further period to which the parties may agree. The Stop Work Order must be identified as a Stop Work Order and must indicate that it is issued under this **Section**. Upon receipt of the stop work order, Contractor must immediately comply with its terms and take all reasonable steps to minimize incurring costs allocable to the work covered by the Stop Work Order during the period of work stoppage. Within the period of the stop work order, the State must either: (a) cancel the stop work order; or (b) terminate the work covered by the Stop Work Order as provided in **Section 2.182**.

2.182 CANCELLATION OR EXPIRATION OF STOP WORK ORDER

The Contractor shall resume work if the State cancels a Stop Work Order or if it expires. The parties shall agree upon an equitable adjustment in the delivery schedule, the Contract price, or both, and the Contract shall be modified, in writing, accordingly, if: (a) the Stop Work Order results in an increase in the time required for, or in Contractor's costs properly allocable to, the performance of any part of the Contract; and (b) Contractor asserts its right to an equitable adjustment within 30 calendar days after the end of the period of work stoppage; provided that, if the State decides the facts justify the action, the State may receive and act upon a Contractor proposal submitted at any time before final payment under the Contract. Any adjustment will conform to the requirements of **Section 2.024**.

2.183 ALLOWANCE OF CONTRACTOR COSTS

If the Stop Work Order is not canceled and the work covered by the Stop Work Order is terminated for reasons other than material breach, the termination shall be deemed to be a termination for convenience under **Section 2.153**, and the State shall pay reasonable costs resulting from the Stop Work Order in arriving at the termination settlement. For the avoidance of doubt, the State shall not be liable to Contractor for loss of profits because of a Stop Work Order issued under this Section.

2.190 Dispute Resolution

2.191 IN GENERAL

Any claim, counterclaim, or dispute between the State and Contractor arising out of or relating to the Contract or any Statement of Work must be resolved as follows. For all Contractor claims seeking an increase in the amounts payable to Contractor under the Contract, or the time for Contractor's performance, Contractor must submit a letter, together with all data supporting the claims, executed by Contractor's Contract Administrator or the Contract Administrator's designee certifying that (a) the claim is made in good faith, (b) the amount claimed accurately reflects the adjustments in the amounts payable to Contractor or the time for Contractor's performance for which Contractor believes the State is liable and covers all costs of every type to which Contractor is entitled from the occurrence of the claimed event, and (c) the claim and the supporting data are current and complete to Contractor's best knowledge and belief.



2.192 INFORMAL DISPUTE RESOLUTION

(a) All disputes between the parties shall be resolved under the Contract Management procedures in this Contract. If the parties are unable to resolve any dispute after compliance with the processes, the parties must meet with the Director of Purchasing Operations, DTMB, or designee, to resolve the dispute without the need for formal legal proceedings, as follows:

(1) The representatives of Contractor and the State must meet as often as the parties reasonably deem necessary to gather and furnish to each other all information with respect to the matter at issue which the parties believe to be appropriate and germane in connection with its resolution. The representatives shall discuss the problem and negotiate in good faith in an effort to resolve the dispute without the necessity of any formal proceeding.

(2) During the course of negotiations, all reasonable requests made by one party to another for non-privileged information reasonably related to the Contract shall be honored in order that each of the parties may be fully advised of the other's position.

(3) The specific format for the discussions shall be left to the discretion of the designated State and Contractor representatives, but may include the preparation of agreed upon statements of fact or written statements of position.

(4) Following the completion of this process within 60 calendar days, the Director of Purchasing Operations, DTMB, or designee, shall issue a written opinion regarding the issue(s) in dispute within 30 calendar days. The opinion regarding the dispute must be considered the State's final action and the exhaustion of administrative remedies.

(b) This Section shall not be construed to prevent either party from instituting, and a party is authorized to institute, formal proceedings earlier to avoid the expiration of any applicable limitations period, to preserve a superior position with respect to other creditors, or under Section 2.193.

(c) The State shall not mediate disputes between the Contractor and any other entity, except state agencies, concerning responsibility for performance of work under the Contract.

2.193 INJUNCTIVE RELIEF

The only circumstance in which disputes between the State and Contractor shall not be subject to the provisions of **Section 2.192** is where a party makes a good faith determination that a breach of the terms of the Contract by the other party is that the damages to the party resulting from the breach shall be so immediate, so large or severe and so incapable of adequate redress after the fact that a temporary restraining order or other immediate injunctive relief is the only adequate remedy.

2.194 CONTINUED PERFORMANCE

Each party agrees to continue performing its obligations under the Contract while a dispute is being resolved except to the extent the issue in dispute precludes performance (dispute over payment must not be deemed to preclude performance) and without limiting either party's right to terminate the Contract as provided in **Section 2.150**, as the case may be.

2.200 Federal and State Contract Requirements

2.201 NONDISCRIMINATION

In the performance of the Contract, Contractor agrees not to discriminate against any employee or applicant for employment, with respect to his or her hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, ancestry, age, sex, height, weight, and marital status, physical or mental disability. Contractor further agrees that every subcontract entered into for the performance of this Contract or any purchase order resulting from this Contract will contain a provision requiring non-discrimination in employment, as specified here, binding upon each Subcontractor. This covenant is required under the Elliot Larsen Civil Rights Act, 1976 PA 453, MCL 37.2101, et seq., and the Persons with Disabilities Civil Rights Act, 1976 PA 220, MCL 37.1101, et seq., and any breach of this provision may be regarded as a material breach of the Contract.



2.202 UNFAIR LABOR PRACTICES

Under 1980 PA 278, MCL 423.321, et seq., the State shall not award a Contract or subcontract to an employer whose name appears in the current register of employers failing to correct an unfair labor practice compiled under section 2 of the Act. This information is compiled by the United States National Labor Relations Board. A Contractor of the State, in relation to the Contract, shall not enter into a contract with a Subcontractor, manufacturer, or supplier whose name appears in this register. Under section 4 of 1980 PA 278, MCL 423.324, the State may void any Contract if, after award of the Contract, the name of Contractor as an employer or the name of the Subcontractor, manufacturer or supplier of Contractor appears in the register.

2.203 WORKPLACE SAFETY AND DISCRIMINATORY HARASSMENT

In performing Services for the State, the Contractor shall comply with the Department of Civil Services Rule 2-20 regarding Workplace Safety and Rule 1-8.3 regarding Discriminatory Harassment. In addition, the Contractor shall comply with Civil Service regulations and any applicable agency rules provided to the Contractor. For Civil Service Rules, see <http://www.mi.gov/mdcs/0,1607,7-147-6877---,00.html>.

2.204 PREVAILING WAGE

Wages rates and fringe benefits to be paid each class of individuals employed by the Contractor, its subcontractors, their subcontractors, and all persons involved with the performance of this Contract in privity of contract with the Contractor shall not be less than the wage rates and fringe benefits established by the Michigan Department of Labor and Economic Development, Wage and Hour Bureau, schedule of occupational classification and wage rates and fringe benefits for the local where the work is to be performed. The term Contractor shall include all general contractors, prime contractors, project managers, trade contractors, and all of their contractors or subcontractors and persons in privity of contract with them.

The Contractor, its subcontractors, their subcontractors and all persons involved with the performance of this contract in privity of contract with the Contractor shall keep posted on the work site, in a conspicuous place, a copy of all wage rates and fringe benefits as prescribed in the Contract. Contractor shall also post, in a conspicuous place, the address and telephone number of the Michigan Department of Labor and Economic Development, the agency responsible for enforcement of the wage rates and fringe benefits. Contractor shall keep an accurate record showing the name and occupation of the actual wage and benefits paid to each individual employed in connection with this contract. This record shall be available to the State upon request for reasonable inspection.

If any trade is omitted from the list of wage rates and fringe benefits to be paid to each class of individuals by the Contractor, it is understood that the trades omitted shall also be paid not less than the wage rate and fringe benefits prevailing in the local where the work is to be performed.

2.210 Governing Law

2.211 GOVERNING LAW

The Contract shall in all respects be governed by, and construed according to, the substantive laws of the State of Michigan without regard to any Michigan choice of law rules that would apply the substantive law of any other jurisdiction to the extent not inconsistent with, or pre-empted by federal law.

2.212 COMPLIANCE WITH LAWS

Contractor shall comply with all applicable state, federal and local laws and ordinances in providing the Services/Deliverables.

2.213 JURISDICTION

Any dispute arising from the Contract shall be resolved in the State of Michigan. With respect to any claim between the parties, Contractor consents to venue in Ingham County, Michigan, and irrevocably waives any objections it may have to the jurisdiction on the grounds of lack of personal jurisdiction of the court or the laying



of venue of the court or on the basis of forum non conveniens or otherwise. Contractor agrees to appoint agents in the State of Michigan to receive service of process.

2.220 Limitation of Liability

2.221 LIMITATION OF LIABILITY

Neither the Contractor nor the State shall be liable to each other, regardless of the form of action, for consequential, incidental, indirect, or special damages. This limitation of liability does not apply to claims for infringement of United States patent, copyright, trademark or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the Contractor; to claims covered by other specific provisions of this Contract calling for liquidated damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on this Contract.

The Contractor's liability for damages to the State is limited to two times the value of the Contract or \$500,000 whichever is higher. The foregoing limitation of liability does not apply to claims for infringement of United States patent, copyright, trademarks or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the Contractor; to claims covered by other specific provisions of this Contract calling for liquidated damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on this Contract.

The State's liability for damages to the Contractor is limited to the value of the Contract.

2.230 Disclosure Responsibilities

2.231 DISCLOSURE OF LITIGATION

Contractor shall disclose any material criminal litigation, investigations or proceedings involving the Contractor (and each Subcontractor) or any of its officers or directors or any litigation, investigations or proceedings under the Sarbanes-Oxley Act. In addition, each Contractor (and each Subcontractor) shall notify the State of any material civil litigation, arbitration or proceeding which arises during the term of the Contract and extensions, to which Contractor (or, to the extent Contractor is aware, any Subcontractor) is a party, and which involves: (i) disputes that might reasonably be expected to adversely affect the viability or financial stability of Contractor or any Subcontractor; or (ii) a claim or written allegation of fraud against Contractor or, to the extent Contractor is aware, any Subcontractor by a governmental or public entity arising out of their business dealings with governmental or public entities. The Contractor shall disclose in writing to the Contract Administrator any litigation, investigation, arbitration or other proceeding (collectively, "Proceeding") within 30 days of its occurrence. Details of settlements that are prevented from disclosure by the terms of the settlement may be annotated. Information provided to the State from Contractor's publicly filed documents referencing its material litigation shall be deemed to satisfy the requirements of this Section.

If any Proceeding disclosed to the State under this Section, or of which the State otherwise becomes aware, during the term of this Contract would cause a reasonable party to be concerned about:

- (a) the ability of Contractor (or a Subcontractor) to continue to perform this Contract according to its terms and conditions, or
- (b) whether Contractor (or a Subcontractor) in performing Services for the State is engaged in conduct which is similar in nature to conduct alleged in the Proceeding, which conduct would constitute a breach of this Contract or a violation of Michigan law, regulations or public policy, then the Contractor must provide the State all reasonable assurances requested by the State to demonstrate that:
 - (1) Contractor and its Subcontractors will be able to continue to perform this Contract and any Statements of Work according to its terms and conditions, and
 - (2) Contractor and its Subcontractors have not and will not engage in conduct in performing the Services which is similar in nature to the conduct alleged in the Proceeding.
- (c) Contractor shall make the following notifications in writing:



- (1) Within 30 days of Contractor becoming aware that a change in its ownership or officers has occurred, or is certain to occur, or a change that could result in changes in the valuation of its capitalized assets in the accounting records, Contractor must notify DTMB Purchasing Operations.
- (2) Contractor shall also notify DTMB Purchasing Operations within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership or officers.
- (3) Contractor shall also notify DTMB Purchase Operations within 30 days whenever changes to company affiliations occur.

2.232 CALL CENTER DISCLOSURE

Contractor and/or all subcontractors involved in the performance of this Contract providing call or contact center services to the State shall disclose the location of its call or contact center services to inbound callers. Failure to disclose this information is a material breach of this Contract.

2.233 BANKRUPTCY

The State may, without prejudice to any other right or remedy, terminate this Contract, in whole or in part, and, at its option, may take possession of the "Work in Process" and finish the Works in Process by whatever appropriate method the State may deem expedient if:

- (a) the Contractor files for protection under the bankruptcy laws;
- (b) an involuntary petition is filed against the Contractor and not removed within 30 days;
- (c) the Contractor becomes insolvent or if a receiver is appointed due to the Contractor's insolvency;
- (d) the Contractor makes a general assignment for the benefit of creditors; or
- (e) the Contractor or its affiliates are unable to provide reasonable assurances that the Contractor or its affiliates can deliver the services under this Contract.

Contractor will fix appropriate notices or labels on the Work in Process to indicate ownership by the State. To the extent reasonably possible, materials and Work in Process shall be stored separately from other stock and marked conspicuously with labels indicating ownership by the State.

2.240 Performance

2.241 TIME OF PERFORMANCE

- (a) Contractor shall use commercially reasonable efforts to provide the resources necessary to complete all Services and Deliverables according to the time schedules contained in the Statements of Work and other Exhibits governing the work, and with professional quality.
- (b) Without limiting the generality of **Section 2.241**, Contractor shall notify the State in a timely manner upon becoming aware of any circumstances that may reasonably be expected to jeopardize the timely and successful completion of any Deliverables/Services on the scheduled due dates in the latest State-approved delivery schedule and must inform the State of the projected actual delivery date.
- (c) If the Contractor believes that a delay in performance by the State has caused or will cause the Contractor to be unable to perform its obligations according to specified Contract time periods, the Contractor must notify the State in a timely manner and must use commercially reasonable efforts to perform its obligations according to the Contract time periods notwithstanding the State's failure. Contractor will not be in default for a delay in performance to the extent the delay is caused by the State.

2.242 SERVICE LEVEL AGREEMENT (SLA)

- (a) SLAs will be completed with the following operational considerations:
 - (1) SLAs will not be calculated for individual Incidents where any event of Excusable Failure has been determined; Incident means any interruption in Services.
 - (2) SLAs will not be calculated for individual Incidents where loss of service is planned and where the State has received prior notification or coordination.



- (3) SLAs will not apply if the applicable Incident could have been prevented through planning proposed by Contractor and not implemented at the request of the State. To invoke this consideration, complete documentation relevant to the denied planning proposal must be presented to substantiate the proposal.
- (4) Time period measurements will be based on the time Incidents are received by the Contractor and the time that the State receives notification of resolution based on 24x7x365 time period, except that the time period measurement will be suspended based on the following:
 - (i) Time period(s) will not apply where Contractor does not have access to a physical State Location and where access to the State Location is necessary for problem identification and resolution.
 - (ii) Time period(s) will not apply where Contractor needs to obtain timely and accurate information or appropriate feedback and is unable to obtain timely and accurate information or appropriate feedback from the State.
- (b) Chronic Failure for any Service(s) will be defined as three unscheduled outage(s) or interruption(s) on any individual Service for the same reason or cause or if the same reason or cause was reasonably discoverable in the first instance over a rolling 30 day period. Chronic Failure will result in the State's option to terminate the effected individual Service(s) and procure them from a different vendor for the chronic location(s) with Contractor to pay the difference in charges for up to three additional months. The termination of the Service will not affect any tiered pricing levels.
- (c) Root Cause Analysis will be performed on any Business Critical outage(s) or outage(s) on Services when requested by the Contract Administrator. Contractor will provide its analysis within two weeks of outage(s) and provide a recommendation for resolution.
- (d) All decimals must be rounded to two decimal places with five and greater rounding up and four and less rounding down unless otherwise specified.

2.243 LIQUIDATED DAMAGES

The parties acknowledge that late or improper completion of the Work will cause loss and damage to the State, and that it would be impracticable and extremely difficult to fix the actual damage sustained by the State as a result. Therefore, Contractor and the State agree that if there is late or improper completion of the Work and the State does not elect to exercise its rights under **Section 2.152**, the State is entitled to collect liquidated damages in the amount of \$5,000.00 and an additional \$100.00 per day for each day Contractor fails to remedy the late or improper completion of the Work.

Unauthorized Removal of any Key Personnel

It is acknowledged that an Unauthorized Removal will interfere with the timely and proper completion of the Contract, to the loss and damage of the State, and that it would be impracticable and extremely difficult to fix the actual damage sustained by the State as a result of any Unauthorized Removal. Therefore, Contractor and the State agree that in the case of any Unauthorized Removal in respect of which the State does not elect to exercise its rights under **Section 2.152**, the State may assess liquidated damages against Contractor as specified below.

For the Unauthorized Removal of any Key Personnel designated in the applicable Statement of Work, the liquidated damages amount is \$25,000.00 per individual if the Contractor identifies a replacement approved by the State under **Section 2.060** and assigns the replacement to the Project to shadow the Key Personnel who is leaving for a period of at least 30 days before the Key Personnel's removal.

If Contractor fails to assign a replacement to shadow the removed Key Personnel for at least 30 days, in addition to the \$25,000.00 liquidated damages for an Unauthorized Removal, Contractor must pay the amount of \$833.33 per day for each day of the 30 day shadow period that the replacement Key Personnel does not shadow the removed Key Personnel, up to \$25,000.00 maximum per individual. The total liquidated damages that may be assessed per Unauthorized Removal and failure to provide 30 days of shadowing must not exceed \$50,000.00 per individual.



2.244 EXCUSABLE FAILURE

Neither party will be liable for any default, damage or delay in the performance of its obligations under the Contract to the extent the default, damage or delay is caused by government regulations or requirements (executive, legislative, judicial, military or otherwise), power failure, electrical surges or current fluctuations, lightning, earthquake, war, water or other forces of nature or acts of God, delays or failures of transportation, equipment shortages, suppliers' failures, or acts or omissions of common carriers, fire; riots, civil disorders; strikes or other labor disputes, embargoes; injunctions (provided the injunction was not issued as a result of any fault or negligence of the party seeking to have its default or delay excused); or any other cause beyond the reasonable control of a party; provided the non-performing party and its Subcontractors are without fault in causing the default or delay, and the default or delay could not have been prevented by reasonable precautions and cannot reasonably be circumvented by the non-performing party through the use of alternate sources, workaround plans or other means, including disaster recovery plans.

If a party does not perform its contractual obligations for any of the reasons listed above, the non-performing party will be excused from any further performance of its affected obligation(s) for as long as the circumstances prevail. But the party must use commercially reasonable efforts to recommence performance whenever and to whatever extent possible without delay. A party must promptly notify the other party in writing immediately after the excusable failure occurs, and also when it abates or ends.

If any of the above-enumerated circumstances substantially prevent, hinder, or delay the Contractor's performance of the Services/provision of Deliverables for more than 10 Business Days, and the State determines that performance is not likely to be resumed within a period of time that is satisfactory to the State in its reasonable discretion, then at the State's option: (a) the State may procure the affected Services/Deliverables from an alternate source, and the State is not be liable for payment for the unperformed Services/ Deliverables not provided under the Contract for so long as the delay in performance continues; (b) the State may terminate any portion of the Contract so affected and the charges payable will be equitably adjusted to reflect those Services/Deliverables terminated; or (c) the State may terminate the affected Statement of Work without liability to Contractor as of a date specified by the State in a written notice of termination to the Contractor, except to the extent that the State must pay for Services/Deliverables provided through the date of termination.

The Contractor will not have the right to any additional payments from the State as a result of any Excusable Failure occurrence or to payments for Services not rendered/Deliverables not provided as a result of the Excusable Failure condition. Defaults or delays in performance by Contractor which are caused by acts or omissions of its Subcontractors will not relieve Contractor of its obligations under the Contract except to the extent that a Subcontractor is itself subject to an Excusable Failure condition described above and Contractor cannot reasonably circumvent the effect of the Subcontractor's default or delay in performance through the use of alternate sources, workaround plans or other means.

2.250 Approval of Deliverables

2.251 DELIVERY OF DELIVERABLES

A list of the Deliverables to be prepared and delivered by Contractor including, for each Deliverable, the scheduled delivery date. At the initial onsite visit, state and vendor representatives will discuss and finalize the reviewers for these deliverables. All Deliverables shall be completed and delivered for State review and written in accordance with the State-approved delivery schedule and any other applicable terms and conditions of this Contract.

Prior to delivering any Deliverable to the State, Contractor will first perform all required quality assurance activities.

2.252 CONTRACTOR SYSTEM TESTING - RESERVED



2.253 APPROVAL OF DELIVERABLES, IN GENERAL

All Deliverables require formal written approval by the State, in accordance with the following procedures. The parties acknowledge that the approval process set forth herein will be facilitated by ongoing consultation between the parties, visibility of interim and intermediate Deliverables and collaboration on key decisions.

The State's obligation to comply with any State Review Period is conditioned on the timely delivery of Deliverables being reviewed. If Contractor fails to provide a Deliverable to the State in a timely manner, the State will nevertheless use commercially reasonable efforts to complete its review within the applicable State Review Period.

Before commencement of its review or testing of a Deliverable, the State may inspect the Deliverable to confirm that all components of the Deliverable (e.g., associated documentation, and other materials) have been delivered. If the State determines that the Deliverable is incomplete, the State may refuse delivery of the Deliverable without performing any further inspection or testing of the Deliverable. Otherwise, the review period will be deemed to have started on the day the State receives the Deliverable and the applicable certification by Contractor in accordance with this Section.

The State will approve in writing a Deliverable upon confirming that it conforms to its specifications without material deficiency. The State may, but shall not be required to, conditionally approve in writing a Deliverable that contains material deficiencies if the State elects to permit Contractor to rectify them post-approval. In any case, Contractor will be responsible for working diligently to correct within a reasonable time at Contractor's expense all deficiencies in the Deliverable that remain outstanding at the time of State approval.

Approval in writing of a Deliverable by the State shall be provisional; that is, such approval shall not preclude the State from later identifying deficiencies in, and declining to accept, a subsequent Deliverable based on or which incorporates or inter-operates with an approved Deliverable, to the extent that the results of subsequent review or testing indicate the existence of deficiencies in the subsequent Deliverable, or if the Application of which the subsequent Deliverable is a component otherwise fails to be accepted pursuant to **Section 2.080**.

2.254 PROCESS FOR APPROVAL OF WRITTEN DELIVERABLES

The State Review Period for Written Deliverables will be the number of days set forth in the applicable Statement of Work following delivery of the final version of the Written Deliverable (failing which the State Review Period, by default, shall be five (5) Business Days for Written Deliverables of one hundred (100) pages or less and ten (10) Business Days for Written Deliverables of more than one hundred (100) pages). The duration of the State Review Periods will be doubled if the State has not had an opportunity to review an interim draft of the Written Deliverable prior to its submission to the State. The State agrees to notify Contractor in writing by the end of the State Review Period either stating that the Written Deliverable is approved in the form delivered by Contractor or describing any deficiencies that shall be corrected prior to approval of the Written Deliverable (or at the State's election, subsequent to approval of the Written Deliverable). If the State delivers to Contractor a notice of deficiencies, Contractor will correct the described deficiencies and within five (5) Business Days resubmit the Deliverable in a form that shows all revisions made to the original version delivered to the State. Contractor's correction efforts will be made at no additional charge. Upon receipt of a corrected Written Deliverable from Contractor, the State will have a reasonable additional period of time, not to exceed the length of the original State Review Period, to review the corrected Written Deliverable to confirm that the identified deficiencies have been corrected.

2.255 PROCESS FOR APPROVAL OF CUSTOM SOFTWARE DELIVERABLES - RESERVED

2.256 FINAL ACCEPTANCE

"Final Acceptance" shall be considered to occur when the Custom Software Deliverable to be delivered has been approved by the State and has been operating in production without any material deficiency for fourteen (14) consecutive days. If the State elects to defer putting a Custom Software Deliverable into live production for its own reasons, not based on concerns about outstanding material deficiencies in the Deliverable, the State shall nevertheless grant Final Acceptance of the Project.



2.260 Ownership

2.261 OWNERSHIP OF WORK PRODUCT BY STATE

The State owns all Deliverables, as they are work made for hire by the Contractor for the State. The State owns all United States and international copyrights, trademarks, patents or other proprietary rights in the Deliverables.

2.262 VESTING OF RIGHTS

With the sole exception of any preexisting licensed works identified in the SOW, the Contractor assigns, and upon creation of each Deliverable automatically assigns, to the State, ownership of all United States and international copyrights, trademarks, patents, or other proprietary rights in each and every Deliverable, whether or not registered by the Contractor, insofar as any the Deliverable, by operation of law, may not be considered work made for hire by the Contractor for the State. From time to time upon the State's request, the Contractor must confirm the assignment by execution and delivery of the assignments, confirmations of assignment, or other written instruments as the State may request. The State may obtain and hold in its own name all copyright, trademark, and patent registrations and other evidence of rights that may be available for Deliverables.

2.263 RIGHTS IN DATA

The State is the owner of all data made available by the State to the Contractor or its agents, Subcontractors or representatives under the Contract. The Contractor will not use the State's data for any purpose other than providing the Services, nor will any part of the State's data be disclosed, sold, assigned, leased or otherwise disposed of to the general public or to specific third parties or commercially exploited by or on behalf of the Contractor. No employees of the Contractor, other than those on a strictly need-to-know basis, have access to the State's data. Contractor will not possess or assert any lien or other right against the State's data. Without limiting the generality of this Section, the Contractor must only use personally identifiable information as strictly necessary to provide the Services and must disclose the information only to its employees who have a strict need-to-know the information. The Contractor must comply at all times with all laws and regulations applicable to the personally identifiable information.

The State is the owner of all State-specific data under the Contract. The State may use the data provided by the Contractor for any purpose. The State will not possess or assert any lien or other right against the Contractor's data. Without limiting the generality of this Section, the State may use personally identifiable information only as strictly necessary to utilize the Services and must disclose the information only to its employees who have a strict need to know the information, except as provided by law. The State must comply at all times with all laws and regulations applicable to the personally identifiable information. Other material developed and provided to the State remains the State's sole and exclusive property.

2.264 OWNERSHIP OF MATERIALS

The State and the Contractor will continue to own their respective proprietary technologies developed before entering into the Contract. Any hardware bought through the Contractor by the State, and paid for by the State, will be owned by the State. Any software licensed through the Contractor and sold to the State, will be licensed directly to the State.

2.270 State Standards

2.271 EXISTING TECHNOLOGY STANDARDS

The Contractor will adhere to all existing standards as described within the comprehensive listing of the State's existing technology standards at <http://www.michigan.gov/dit>.

2.272 ACCEPTABLE USE POLICY

To the extent that Contractor has access to the State computer system, Contractor must comply with the State's Acceptable Use Policy, see <http://www.michigan.gov/ditservice>. All Contractor employees must be



required, in writing, to agree to the State's Acceptable Use Policy before accessing the State system. The State reserves the right to terminate Contractor's access to the State system if a violation occurs.

2.273 SYSTEMS CHANGES

Contractor is not responsible for and not authorized to make changes to any State systems without written authorization from the Project Manager. Any changes Contractor makes to State systems with the State's approval must be done according to applicable State procedures, including security, access and configuration management procedures.

2.280 Extended Purchasing

2.281 MIDEAL (MICHIGAN DELIVERY EXTENDED AGREEMENTS LOCALLY

Act Number 431 of the Public Acts of 1984 permits the State of Michigan, Department of Technology, Management and Budget, to provide purchasing services to any city, village, county, township, school district, intermediate school district, non-profit hospital, institution of higher education, community, or junior college. As a result of the enactment of this legislation, the MIDEAL Program has been developed. This program extends the use of state contracts to program members. The governmental agency must enter into an agreement with the State of Michigan to become authorized to participate, thus ensuring that local units of government secure a greater return for the expenditure of public funds.

2.282 STATE EMPLOYEE PURCHASES

The State allows State employees to purchase from this Contract. Unless otherwise stated, it is the responsibility of the Contractor to ensure that the State employee is an authorized purchaser before extending the Contract pricing.

The Contractor will supply Contract Services and Deliverables at the established State of Michigan contract prices and terms to the extent applicable and where available. The Contractor shall send its invoices to and pay the State employee on a direct and individual basis.

To the extent that authorized State employees purchase quantities of Services or Deliverables under this Contract, the quantities of Services and/or Deliverables purchased will be included in determining the appropriate rate wherever tiered pricing based on quantity is provided.

2.290 Environmental Provision

2.291 ENVIRONMENTAL PROVISION

Energy Efficiency Purchasing Policy: The State seeks wherever possible to purchase energy efficient products. This includes giving preference to U.S. Environmental Protection Agency (EPA) certified 'Energy Star' products for any category of products for which EPA has established Energy Star certification. For other purchases, the State may include energy efficiency as one of the priority factors to consider when choosing among comparable products.

Environmental Purchasing Policy: The State of Michigan is committed to encouraging the use of products and services that impact the environment less than competing products. The State is accomplishing this by including environmental considerations in purchasing decisions, while remaining fiscally responsible, to promote practices that improve worker health, conserve natural resources, and prevent pollution. Environmental components that are to be considered include: recycled content and recyclables; energy efficiency; and the presence of undesirable materials in the products, especially those toxic chemicals which are persistent and bioaccumulative. The Contractor should be able to supply products containing recycled and environmentally preferable materials that meet performance requirements and is encouraged to offer such products throughout the duration of this Contract. Information on any relevant third party certification (such as Green Seal, Energy Star, etc.) should also be provided.



Hazardous Materials: For the purposes of this Section, “Hazardous Materials” is a generic term used to describe asbestos, ACBMs, PCBs, petroleum products, construction materials including paint thinners, solvents, gasoline, oil, and any other material the manufacture, use, treatment, storage, transportation or disposal of which is regulated by the federal, state or local laws governing the protection of the public health, natural resources or the environment. This includes, but is not limited to, materials the as batteries and circuit packs, and other materials that are regulated as (1) “Hazardous Materials” under the Hazardous Materials Transportation Act, (2) “chemical hazards” under the Occupational Safety and Health Administration standards, (3) “chemical substances or mixtures” under the Toxic Substances Control Act, (4) “pesticides” under the Federal Insecticide Fungicide and Rodenticide Act, and (5) “hazardous wastes” as defined or listed under the Resource Conservation and Recovery Act.

- (a) The Contractor shall use, handle, store, dispose of, process, transport and transfer any material considered a Hazardous Material according to all federal, State and local laws. The State shall provide a safe and suitable environment for performance of Contractor’s Work. Before the commencement of Work, the State shall advise the Contractor of the presence at the work site of any Hazardous Material to the extent that the State is aware of the Hazardous Material. If the Contractor encounters material reasonably believed to be a Hazardous Material and which may present a substantial danger, the Contractor shall immediately stop all affected Work, notify the State in writing about the conditions encountered, and take appropriate health and safety precautions.
- (b) Upon receipt of a written notice, the State will investigate the conditions. If (a) the material is a Hazardous Material that may present a substantial danger, and (b) the Hazardous Material was not brought to the site by the Contractor, or does not result in whole or in part from any violation by the Contractor of any laws covering the use, handling, storage, disposal of, processing, transport and transfer of Hazardous Materials, the State shall order a suspension of Work in writing. The State shall proceed to have the Hazardous Material removed or rendered harmless. In the alternative, the State shall terminate the affected Work for the State’s convenience.
- (c) Once the Hazardous Material has been removed or rendered harmless by the State, the Contractor shall resume Work as directed in writing by the State. Any determination by the Michigan Department of Community Health or the Michigan Department of Environmental Quality that the Hazardous Material has either been removed or rendered harmless is binding upon the State and Contractor for the purposes of resuming the Work. If any incident with Hazardous Material results in delay not reasonable anticipatable under the circumstances and which is attributable to the State, the applicable SLAs for the affected Work will not be counted in a time as mutually agreed by the parties.
- (d) If the Hazardous Material was brought to the site by the Contractor, or results in whole or in part from any violation by the Contractor of any laws covering the use, handling, storage, disposal of, processing, transport and transfer of Hazardous Material, or from any other act or omission within the control of the Contractor, the Contractor shall bear its proportionate share of the delay and costs involved in cleaning up the site and removing and rendering harmless the Hazardous Material according to Applicable Laws to the condition approved by applicable regulatory agency(ies).

Labeling: Michigan has a Consumer Products Rule pertaining to labeling of certain products containing volatile organic compounds. For specific details visit http://www.michigan.gov/deq/0,1607,7-135-3310_4108-173523--,00.html

Refrigeration and Air Conditioning: The Contractor shall comply with the applicable requirements of Sections 608 and 609 of the Clean Air Act (42 U.S.C. 7671g and 7671h) as each or both apply to this contract.

Environmental Performance: Waste Reduction Program - Contractor shall establish a program to promote cost-effective waste reduction in all operations and facilities covered by this contract. The Contractor's programs shall comply with applicable Federal, State, and local requirements, specifically including Section 6002 of the Resource Conservation and Recovery Act (42 U.S.C. 6962, et seq.).



2.300 Deliverables

2.301 SOFTWARE

A list of the items of software the State is required to purchase for executing the Contract is attached. The list includes all software required to complete the Contract and make the Deliverables operable; if any additional software is required in order for the Deliverables to meet the requirements of this Contract, such software shall be provided to the State by Contractor at no additional charge (except where agreed upon and specified in a Statement of Work or Contract Change Notice). The attachment also identifies certain items of software to be provided by the State.

2.302 HARDWARE

A list of the items of hardware the State is required to purchase for executing the Contract is attached. The list includes all hardware required to complete the Contract and make the Deliverables operable; if any additional hardware is required in order for the Deliverables to meet the requirements of this Contract, such hardware shall be provided to the State by Contractor at no additional charge (except where agreed upon and specified in a Contract Change Notice). The attachment also identifies certain items of hardware to be provided by the State.

2.310 Software Warranties

2.311 PERFORMANCE WARRANTY

The Contractor represents and warrants that Deliverables, after Final Acceptance, will perform and operate in compliance with the requirements and other standards of performance contained in this Contract (including all descriptions, specifications and drawings made a part of the Contract) for a period of (90) ninety days. In the event of a breach of this warranty, Contractor will promptly correct the affected Deliverable(s) at no charge to the State.

2.312 NO SURREPTITIOUS CODE WARRANTY

The Contractor represents and warrants that no copy of licensed Software provided to the State contains or will contain any Self-Help Code or any Unauthorized Code as defined below. This warranty is referred to in this Contract as the "No Surreptitious Code Warranty."

As used in this Contract, "Self-Help Code" means any back door, time bomb, drop dead device, or other software routine designed to disable a computer program automatically with the passage of time or under the positive control of a person other than the licensee of the software. Self-Help Code does not include Software routines in a computer program, if any, designed to permit an owner of the computer program (or other person acting by authority of the owner) to obtain access to a licensee's computer system(s) (e.g. remote access via modem) for purposes of maintenance or technical support.

As used in this Contract, "Unauthorized Code" means any virus, Trojan horse, spyware, worm or other Software routines or components designed to permit unauthorized access to disable, erase, or otherwise harm software, equipment, or data; or to perform any other such actions. The term Unauthorized Code does not include Self-Help Code. Unauthorized Code does not include Software routines in a computer program, if any, designed to permit an owner of the computer program (or other person acting by authority of the owner) to obtain access to a licensee's computer system(s) (e.g. remote access via modem) for purposes of maintenance or technical support.

In addition, Contractor will use up-to-date commercial virus detection software to detect and remove any viruses from any software prior to delivering it to the State.

2.313 CALENDAR WARRANTY

The Contractor represents and warrants that all software for which the Contractor either sells or licenses to the State of Michigan and used by the State prior to, during or after the calendar year 2000, includes or shall include, at no added cost to the State, design and performance so the State shall not experience software



abnormality and/or the generation of incorrect results from the software, due to date oriented processing, in the operation of the business of the State of Michigan.

The software design, to insure calendar year rollover compatibility, shall include, but is not limited to: data structures (databases, data files, etc.) that provide 4-digit date century; stored data that contain date century recognition, including, but not limited to, data stored in databases and hardware device internal system dates; calculations and program logic (e.g., sort algorithms, calendar generation, event recognition, and all processing actions that use or produce date values) that accommodates same century and multi-century formulas and date values; interfaces that supply data to and receive data from other systems or organizations that prevent non-compliant dates and data from entering any State system; user interfaces (i.e., screens, reports, etc.) that accurately show 4 digit years; and assurance that the year 2000 shall be correctly treated as a leap year within all calculation and calendar logic.

2.314 THIRD-PARTY SOFTWARE WARRANTY

The Contractor represents and warrants that it will disclose the use or incorporation of any third-party software into the Deliverables. At the time of Delivery, the Contractor shall provide in writing the name and use of any Third-party Software, including information regarding the Contractor's authorization to include and utilize such software. The notice shall include a copy of any ownership agreement or license that authorizes the Contractor to use the Third-party Software.

2.315 PHYSICAL MEDIA WARRANTY

Contractor represents and warrants that each licensed copy of the Software provided by the Contractor is free from physical defects in the media that tangibly embodies the copy. This warranty does not apply to defects discovered more than (30) thirty days after that date of Final Acceptance of the Software by the State. This warranty does not apply to defects arising from acts of Excusable Failure. If the Contractor breaches this warranty, then the State shall be entitled to replacement of the non-compliant copy by Contractor, at Contractor's expense (including shipping and handling).

2.320 Software Licensing

2.321 CROSS-LICENSE, DELIVERABLES ONLY, LICENSE TO CONTRACTOR

The State grants to the Contractor, the royalty-free, world-wide, non-exclusive right and license under any Deliverable now or in the future owned by the State, or with respect to which the State has a right to grant such rights or licenses, to the extent required by the Contractor to market the Deliverables and exercise its full rights in the Deliverables, including, without limitation, the right to make, use and sell products and services based on or incorporating such Deliverables.

2.322 CROSS-LICENSE, DELIVERABLES AND DERIVATIVE WORK, LICENSE TO CONTRACTOR

The State grants to the Contractor, the royalty-free, world-wide, non-exclusive right and license under any Deliverable and/or Derivative Work now or in the future owned by the State, or with respect to which the State has a right to grant such rights or licenses, to the extent required by the Contractor to market the Deliverables and/or Derivative Work and exercise its full rights in the Deliverables and/or Derivative Work, including, without limitation, the right to make, use and sell products and services based on or incorporating such Deliverables and/or Derivative Work.

2.323 LICENSE BACK TO THE STATE

Unless otherwise specifically agreed to by the State, before initiating the preparation of any Deliverable that is a Derivative of a preexisting work, the Contractor shall cause the State to have and obtain the irrevocable, nonexclusive, worldwide, royalty-free right and license to (1) use, execute, reproduce, display, perform, distribute internally or externally, sell copies of, and prepare Derivative Works based upon all preexisting works and Derivative Works thereof, and (2) authorize or sublicense others from time to time to do any or all of the foregoing.

**2.324 LICENSE RETAINED BY CONTRACTOR**

Contractor grants to the State a non-exclusive, royalty-free, site-wide, irrevocable, transferable license to use the Software and related documentation according to the terms and conditions of this Contract. For the purposes of this license, "site-wide" includes any State of Michigan office regardless of its physical location.

The State may modify the Software and may combine such with other programs or materials to form a derivative work. The State will own and hold all copyright, trademarks, patent and other intellectual property rights in any derivative work, excluding any rights or interest in Software other than those granted in this Contract.

The State may copy each item of Software to multiple hard drives or networks unless otherwise agreed by the parties.

The State will make and maintain no more than one archival copy of each item of Software, and each copy will contain all legends and notices and will be subject to the same conditions and restrictions as the original. The State may also make copies of the Software in the course of routine backups of hard drive(s) for the purpose of recovery of hard drive contents.

In the event that the Contractor shall, for any reason, cease to conduct business, or cease to support the Software, the State shall have the right to convert these licenses into perpetual licenses, with rights of quiet enjoyment, but subject to payment obligations not to exceed the then current rates.